Full wwPDB X-ray Structure Validation Report (i)

Sep 17, 2023 – 03:15 AM EDT

PDB ID	:	4V7S
Title	:	Crystal structure of the E. coli ribosome bound to telithromycin.
Authors	:	Dunkle, J.A.; Xiong, L.; Mankin, A.S.; Cate, J.H.D.
Deposited on	:	2010-08-05
Resolution	:	3.25 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/XrayValidationReportHelp
with specific help available everywhere you see the (i) symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

The following versions of software and data (see references (i)) were used in the production of this report:

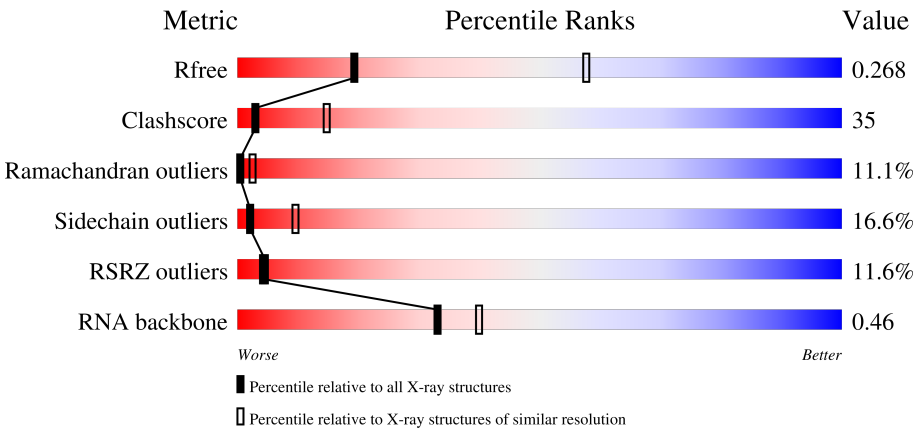
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.35.1
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.35.1

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

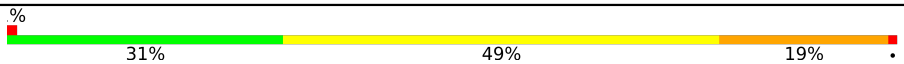
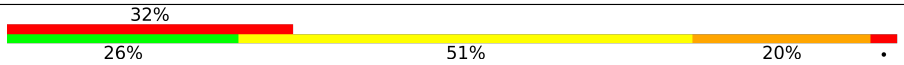
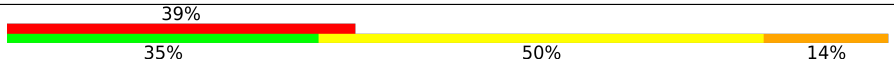
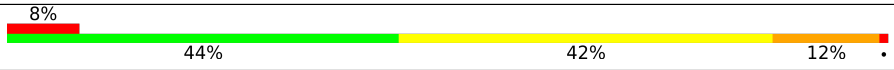
The reported resolution of this entry is 3.25 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	1191 (3.30-3.22)
Clashscore	141614	1251 (3.30-3.22)
Ramachandran outliers	138981	1229 (3.30-3.22)
Sidechain outliers	138945	1228 (3.30-3.22)
RSRZ outliers	127900	1154 (3.30-3.22)
RNA backbone	3102	1072 (3.62-2.90)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=5% The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	AA	1533	
2	AB	218	
2	CB	218	
3	AC	206	

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Mol	Chain	Length	Quality of chain
3	CC	206	15% 38% 47% 14%
4	AD	205	4% 35% 47% 17%
4	CD	205	39% 41% 17%
5	AE	150	% 31% 47% 19%
5	CE	150	% 37% 45% 17%
6	AF	100	4% 31% 51% 14%
6	CF	100	4% 42% 37% 20%
7	AG	151	11% 41% 46% 11%
8	AH	129	4% 39% 47% 14%
8	CH	129	10% 38% 50% 12%
9	AI	127	20% 36% 48% 14%
9	CI	127	31% 29% 57% 13%
10	AJ	98	14% 24% 58% 16%
10	CJ	98	51% 29% 54% 15%
11	AK	117	17% 44% 42% 12%
11	CK	117	12% 51% 34% 15%
12	AL	123	% 41% 43% 14%
12	CL	123	5% 33% 54% 13%
13	AM	114	10% 39% 51% 10%
14	AN	100	6% 33% 54% 9%
14	CN	100	36% 35% 50% 9% 5%
15	AO	88	% 52% 39% 9%
15	CO	88	2% 45% 47% 7%
16	AP	82	15% 38% 51% 11%
17	AQ	80	9% 26% 50% 20%

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Mol	Chain	Length	Quality of chain
17	CQ	80	14% 34% 46% 19%
18	AR	55	9% 42% 55%
18	CR	55	40% 53% 7%
19	AS	79	34% 34% 54% 8%
19	CS	79	63% 38% 48% 13%
20	AT	85	% 29% 51% 16%
20	CT	85	22% 45% 36% 18%
21	AU	51	57% 24% 51% 22%
21	CU	51	12% 25% 39% 27% 8%
22	BA	2903	% 36% 46% 16%
22	DA	2903	4% 20% 51% 25%
23	BB	118	43% 42% 15%
24	BC	271	3% 35% 44% 19%
24	DC	271	9% 30% 54% 15%
25	BD	209	32% 47% 17%
25	DD	209	19% 30% 52% 17%
26	BE	201	33% 47% 17%
26	DE	201	42% 27% 56% 16%
27	BF	177	11% 37% 49% 13%
28	BG	176	2% 33% 46% 19%
28	DG	176	40% 34% 47% 18%
29	BH	149	46% 36% 43% 16% 5%
29	DH	149	45% 35% 46% 16%
30	BI	141	55% 30% 53% 16%
30	DI	141	75% 40% 50% 9%

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Mol	Chain	Length	Quality of chain
31	BJ	142	32% 51% 14% •
31	DJ	142	23% 35% 48% 15% •
32	BK	122	20% 52% 28%
32	DK	122	22% 26% 47% 27%
33	BL	143	33% 45% 20% •
33	DL	143	26% 34% 45% 17% •
34	BM	136	40% 42% 16% •
34	DM	136	20% 35% 53% 12%
35	BN	120	34% 48% 16% •
35	DN	120	27% 32% 52% 16% •
36	BO	116	33% 52% 16%
36	DO	116	38% 35% 55% 9% •
37	BP	114	% 31% 40% 24% 5%
37	DP	114	16% 20% 61% 18% •
38	BQ	117	% 41% 40% 18% •
38	DQ	117	30% 31% 51% 18%
39	BR	103	% 33% 48% 18% •
39	DR	103	52% 29% 54% 17%
40	BS	110	% 42% 40% 17% •
40	DS	110	50% 43% 44% 13% •
41	BT	93	4% 27% 42% 27% •
41	DT	93	56% 24% 59% 14% •
42	BU	102	3% 37% 40% 20% •
42	DU	102	63% 29% 51% 17% •
43	BV	94	43% 41% 16%

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Mol	Chain	Length	Quality of chain
43	DV	94	33% 39% 49% 12%
44	BW	79	5% 14% 39% 38% 9%
44	DW	79	52% 32% 33% 28% 8%
45	BX	77	31% 58% 8%
45	DX	77	21% 23% 64% 10%
46	BY	63	3% 41% 33% 21% 5%
46	DY	63	27% 33% 56% 11%
47	BZ	58	43% 40% 14%
47	DZ	58	14% 36% 48% 14%
48	B0	56	41% 43% 16%
48	D0	56	27% 30% 48% 21%
49	B1	50	4% 36% 52% 10%
49	D1	50	42% 36% 52% 12%
50	B2	46	30% 54% 15%
50	D2	46	24% 46% 48% 7%
51	B3	64	45% 41% 11%
51	D3	64	47% 30% 52% 16%
52	B4	38	3% 42% 42% 13%
52	D4	38	68% 42% 39% 18%
53	CA	1530	2% 24% 51% 24%
54	CG	150	43% 29% 54% 16%
55	CM	113	50% 30% 58% 11%
56	CP	80	15% 29% 56% 14%
57	DB	117	22% 56% 21%
58	DF	178	55% 26% 49% 22%

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
59	MG	AA	1619	-	-	-	X
59	MG	DA	3002	-	-	-	X
59	MG	DA	3003	-	-	-	X
59	MG	DA	3005	-	-	-	X
59	MG	DA	3007	-	-	-	X
59	MG	DA	3010	-	-	-	X
59	MG	DA	3015	-	-	-	X
59	MG	DA	3016	-	-	-	X
59	MG	DA	3020	-	-	-	X
59	MG	DA	3026	-	-	-	X
59	MG	DA	3028	-	-	-	X
59	MG	DA	3036	-	-	-	X
59	MG	DA	3049	-	-	-	X
59	MG	DA	3060	-	-	-	X
59	MG	DA	3062	-	-	-	X
59	MG	DA	3063	-	-	-	X
59	MG	DA	3064	-	-	-	X
59	MG	DA	3074	-	-	-	X
59	MG	DA	3079	-	-	-	X
59	MG	DA	3106	-	-	-	X
59	MG	DA	3109	-	-	-	X
59	MG	DA	3127	-	-	-	X
59	MG	DA	3129	-	-	-	X
59	MG	DA	3130	-	-	-	X
59	MG	DA	3132	-	-	-	X
59	MG	DJ	201	-	-	-	X
60	TEL	BA	3135	X	-	-	-

2 Entry composition (i)

There are 62 unique types of molecules in this entry. The entry contains 284525 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a RNA chain called 16S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
1	AA	1533	32895	14671	6036	10655	1533	0	0	0

- Molecule 2 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
2	AB	218	1705	1081	305	312	7	0	0	0
2	CB	218	1705	1081	305	312	7	0	0	0

- Molecule 3 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
3	AC	206	1625	1028	305	289	3	0	0	0
3	CC	206	1625	1028	305	289	3	0	0	0

- Molecule 4 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
4	AD	205	1643	1026	315	298	4	0	0	0
4	CD	205	1643	1026	315	298	4	0	0	0

- Molecule 5 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
5	AE	150	1106	687	211	202	6	0	0	0

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
5	CE	150	1106	687	211	202	6	0	0	0

- Molecule 6 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
6	AF	100	818	515	148	149	6	0	0	0
6	CF	100	818	515	148	149	6	0	0	0

- Molecule 7 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
7	AG	151	1182	735	227	216	4	0	0	0

- Molecule 8 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
8	AH	129	979	616	173	184	6	0	0	0
8	CH	129	979	616	173	184	6	0	0	0

- Molecule 9 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
9	AI	127	1022	634	206	179	3	0	0	0
9	CI	127	1022	634	206	179	3	0	0	0

- Molecule 10 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
10	AJ	98	787	493	150	143	1	0	0	0
10	CJ	98	787	493	150	143	1	0	0	0

- Molecule 11 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
11	AK	117	877	540	174	160	3	0	0	0
11	CK	117	877	540	174	160	3	0	0	0

- Molecule 12 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
12	AL	123	955	590	196	165	4	0	0	0
12	CL	123	955	590	196	165	4	0	0	0

- Molecule 13 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
13	AM	114	884	546	178	157	3	0	0	0

- Molecule 14 is a protein called 30S ribosomal protein S14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
14	AN	96	774	483	160	128	3	0	0	0
14	CN	95	769	480	159	127	3	0	0	0

- Molecule 15 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
15	AO	88	714	439	144	130	1	0	0	0
15	CO	88	714	439	144	130	1	0	0	0

- Molecule 16 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
16	AP	82	649	406	128	114	1	0	0	0

- Molecule 17 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
17	AQ	80	649	411	121	114	3	0	0	0
17	CQ	80	649	411	121	114	3	0	0	0

- Molecule 18 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
			Total	C	N	O			
18	AR	55	456	288	86	82	0	0	0
18	CR	55	456	288	86	82	0	0	0

- Molecule 19 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
19	AS	79	638	408	120	108	2	0	0	0
19	CS	79	638	408	120	108	2	0	0	0

- Molecule 20 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
20	AT	85	665	411	137	114	3	0	0	0
20	CT	85	665	411	137	114	3	0	0	0

- Molecule 21 is a protein called 30S ribosomal protein S21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
21	AU	51	426	265	86	74	1	0	0	0
21	CU	51	426	265	86	74	1	0	0	0

- Molecule 22 is a RNA chain called 23S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
22	BA	2854	61274	27334	11279	19807	2854	0	0	0

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
22	DA	2841	60995	27210	11229	19715	2841	0	0	0

- Molecule 23 is a RNA chain called 5S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
23	BB	118	2529	1126	464	821	118	0	0	0

- Molecule 24 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
24	BC	271	2083	1288	423	365	7	0	0	0
24	DC	271	2083	1288	423	365	7	0	0	0

- Molecule 25 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
25	BD	209	1565	979	288	294	4	0	0	0
25	DD	209	1565	979	288	294	4	0	0	0

- Molecule 26 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
26	BE	201	1552	974	283	290	5	0	0	0
26	DE	201	1552	974	283	290	5	0	0	0

- Molecule 27 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
27	BF	177	1411	899	249	257	6	0	0	0

- Molecule 28 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
28	BG	176	1323	832	243	246	2	0	0	0
28	DG	176	1323	832	243	246	2	0	0	0

- Molecule 29 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
29	BH	149	1111	699	197	214	1	0	0	0
29	DH	149	1111	699	197	214	1	0	0	0

- Molecule 30 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
30	BI	141	1032	651	179	196	6	0	0	0
30	DI	141	1032	651	179	196	6	0	0	0

- Molecule 31 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
31	BJ	142	1129	714	212	199	4	0	0	0
31	DJ	142	1129	714	212	199	4	0	0	0

- Molecule 32 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
32	BK	122	939	587	180	166	6	0	0	0
32	DK	122	939	587	180	166	6	0	0	0

- Molecule 33 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
33	BL	143	1045	649	206	189	1	0	0	0

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
33	DL	143	1045	649	206	189	1	0	0	0

- Molecule 34 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
34	BM	136	1074	686	205	177	6	0	0	0
34	DM	136	1074	686	205	177	6	0	0	0

- Molecule 35 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
35	BN	120	961	593	196	167	5	0	0	0
35	DN	120	961	593	196	167	5	0	0	0

- Molecule 36 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
			Total	C	N	O			
36	BO	116	892	552	178	162	0	0	0
36	DO	116	892	552	178	162	0	0	0

- Molecule 37 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
37	BP	114	917	574	179	163	1	0	0	0
37	DP	114	917	574	179	163	1	0	0	0

- Molecule 38 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
			Total	C	N	O			
38	BQ	117	947	604	192	151	0	0	0
38	DQ	117	947	604	192	151	0	0	0

- Molecule 39 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
39	BR	103	816	516	153	145	2	0	0	0
39	DR	103	816	516	153	145	2	0	0	0

- Molecule 40 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
40	BS	110	857	532	166	156	3	0	0	0
40	DS	110	857	532	166	156	3	0	0	0

- Molecule 41 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
41	BT	93	739	466	139	132	2	0	0	0
41	DT	93	739	466	139	132	2	0	0	0

- Molecule 42 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
			Total	C	N	O			
42	BU	102	780	492	146	142	0	0	0
42	DU	102	780	492	146	142	0	0	0

- Molecule 43 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
43	BV	94	753	479	137	134	3	0	0	0
43	DV	94	753	479	137	134	3	0	0	0

- Molecule 44 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
44	BW	79	596	367	120	108	1	0	0	0
44	DW	79	596	367	120	108	1	0	0	0

- Molecule 45 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
45	BX	77	625	388	129	106	2	0	0	0
45	DX	77	625	388	129	106	2	0	0	0

- Molecule 46 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
46	BY	63	509	313	99	95	2	0	0	0
46	DY	63	509	313	99	95	2	0	0	0

- Molecule 47 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
47	BZ	58	449	281	87	79	2	0	0	0
47	DZ	58	449	281	87	79	2	0	0	0

- Molecule 48 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
48	B0	56	444	269	94	80	1	0	0	0
48	D0	56	444	269	94	80	1	0	0	0

- Molecule 49 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
			Total	C	N	O			
49	B1	50	410	263	75	72	0	0	0

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
			Total	C	N	O			
49	D1	50	410	263	75	72	0	0	0

- Molecule 50 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
50	B2	46	377	228	90	57	2	0	0	0
50	D2	46	377	228	90	57	2	0	0	0

- Molecule 51 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
51	B3	64	504	323	105	74	2	0	0	0
51	D3	64	504	323	105	74	2	0	0	0

- Molecule 52 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
52	B4	38	302	185	65	48	4	0	0	0
52	D4	38	302	185	65	48	4	0	0	0

- Molecule 53 is a RNA chain called 16S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
53	CA	1530	32831	14642	6024	10635	1530	0	0	0

- Molecule 54 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
54	CG	150	1175	730	226	215	4	0	0	0

- Molecule 55 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
55	CM	113	877	541	177	156	3	0	0	0

- Molecule 56 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
56	CP	80	639	400	126	112	1	0	0	0

- Molecule 57 is a RNA chain called 5S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
57	DB	117	2507	1116	459	815	117	0	0	0

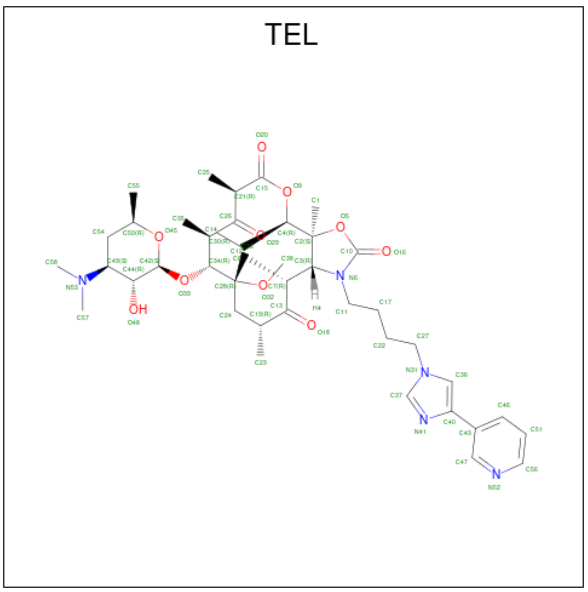
- Molecule 58 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
58	DF	178	1420	905	251	258	6	0	0	0

- Molecule 59 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
			Total	Mg		
59	AA	43	43	43	0	0
59	BA	134	134	134	0	0
59	BB	4	4	4	0	0
59	CA	41	41	41	0	0
59	CE	1	1	1	0	0
59	DA	133	133	133	0	0
59	DB	1	1	1	0	0
59	DC	2	2	2	0	0
59	DJ	1	1	1	0	0

- Molecule 60 is TELITHROMYCIN (three-letter code: TEL) (formula: $C_{43}H_{65}N_5O_{10}$).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
			Total	C	N	O		
60	BA	1	58	43	5	10	0	0

- Molecule 61 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
			Total	Zn		
61	B4	1	1	1	0	0
61	D4	1	1	1	0	0

- Molecule 62 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
			Total	O		
62	AA	198	198	198	0	0
62	AL	1	1	1	0	0
62	AN	6	6	6	0	0
62	AT	2	2	2	0	0
62	AU	1	1	1	0	0
62	BA	598	598	598	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
62	BB	20	Total O 20 20	0	0
62	BC	10	Total O 10 10	0	0
62	BD	2	Total O 2 2	0	0
62	BE	1	Total O 1 1	0	0
62	BL	2	Total O 2 2	0	0
62	BN	3	Total O 3 3	0	0
62	BQ	1	Total O 1 1	0	0
62	BR	1	Total O 1 1	0	0
62	BT	1	Total O 1 1	0	0
62	B2	1	Total O 1 1	0	0
62	B3	3	Total O 3 3	0	0
62	B4	1	Total O 1 1	0	0
62	CA	192	Total O 192 192	0	0
62	CE	5	Total O 5 5	0	0
62	CI	1	Total O 1 1	0	0
62	CL	1	Total O 1 1	0	0
62	CN	3	Total O 3 3	0	0
62	CT	3	Total O 3 3	0	0
62	CU	2	Total O 2 2	0	0
62	DA	595	Total O 595 595	0	0
62	DB	4	Total O 4 4	0	0

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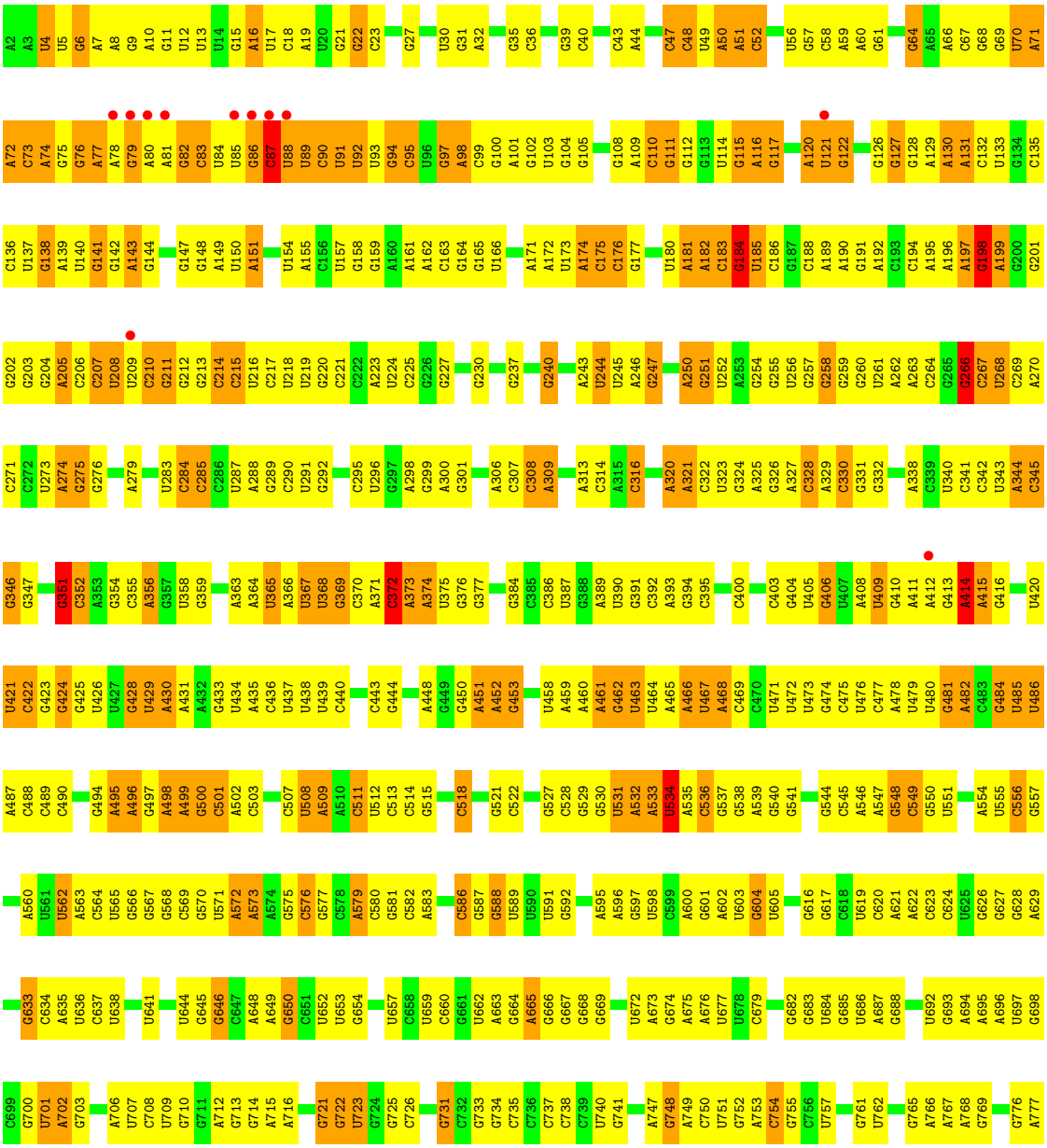
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
62	DC	13	Total O 13 13	0	0
62	DD	3	Total O 3 3	0	0
62	DE	3	Total O 3 3	0	0
62	DJ	6	Total O 6 6	0	0
62	DL	6	Total O 6 6	0	0
62	DN	2	Total O 2 2	0	0
62	DT	3	Total O 3 3	0	0
62	DU	2	Total O 2 2	0	0
62	DV	1	Total O 1 1	0	0
62	D2	1	Total O 1 1	0	0
62	D3	1	Total O 1 1	0	0
62	D4	3	Total O 3 3	0	0

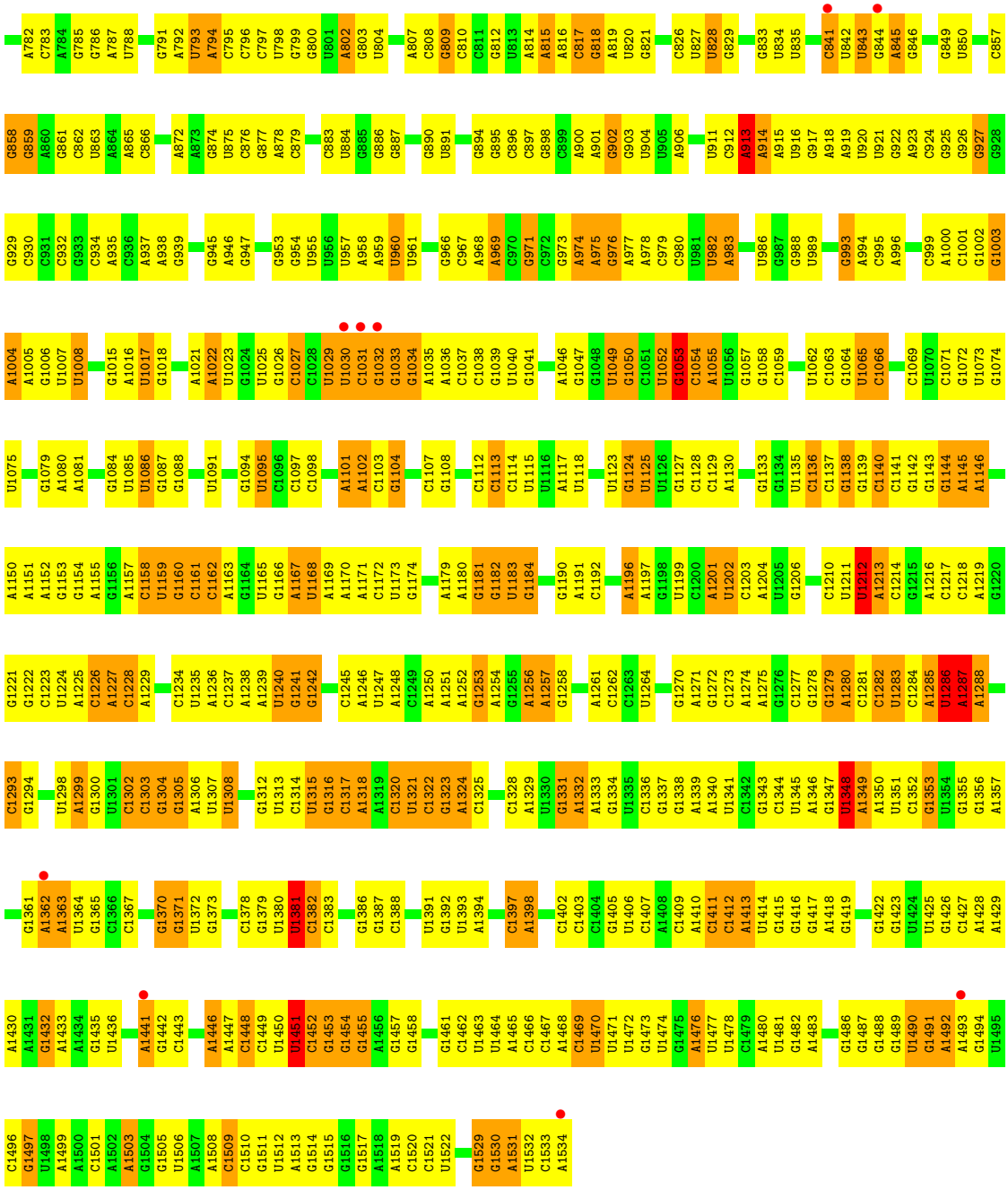
3 Residue-property plots (i)

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red dot above a residue indicates a poor fit to the electron density (RSRZ > 2). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

- Molecule 1: 16S rRNA

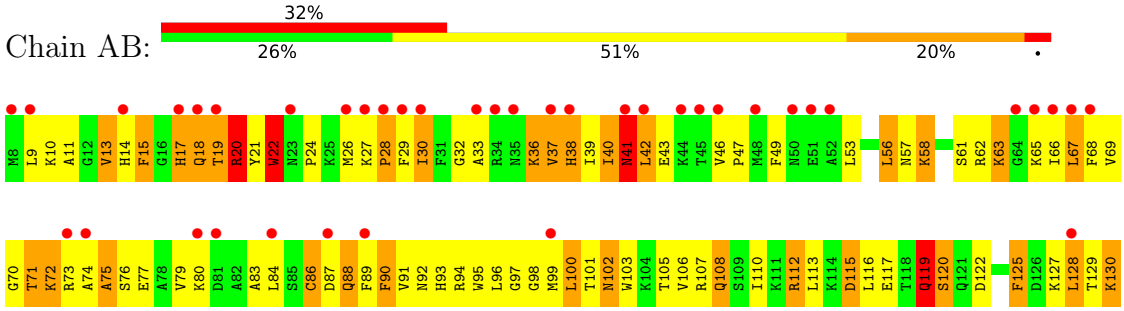
Chain AA: % 31% 49% 19%

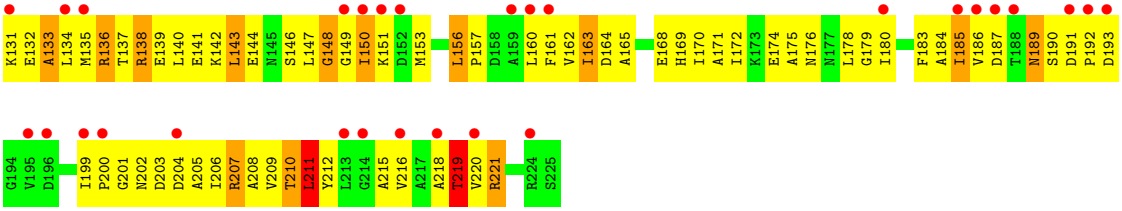




• Molecule 2: 30S ribosomal protein S2

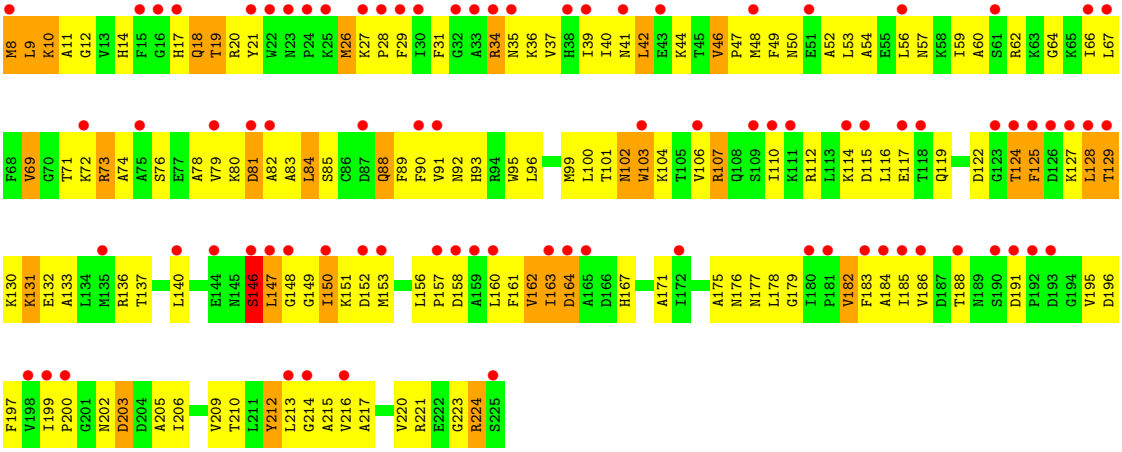
Chain AB:





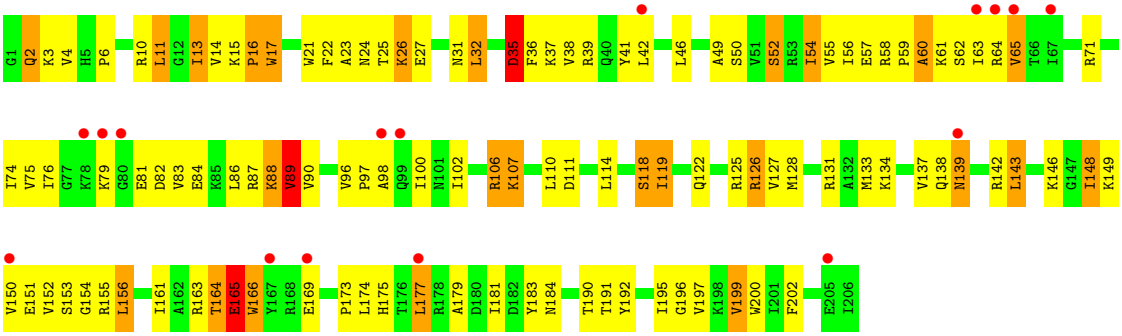
- Molecule 2: 30S ribosomal protein S2

Chain CB:



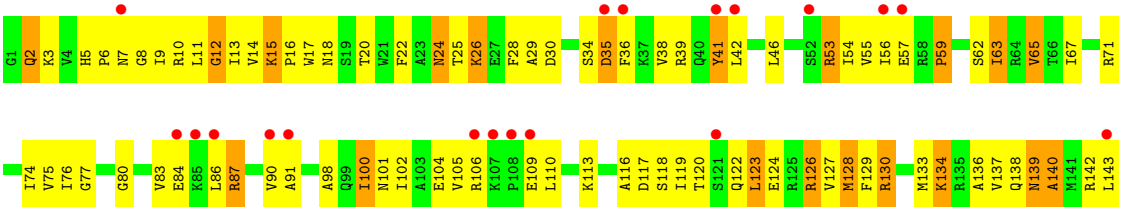
- Molecule 3: 30S ribosomal protein S3

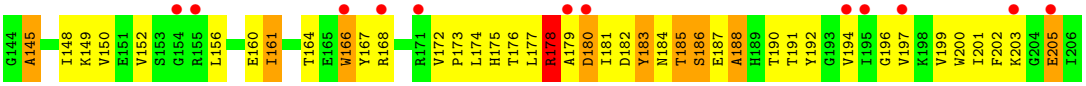
Chain AC:



- Molecule 3: 30S ribosomal protein S3

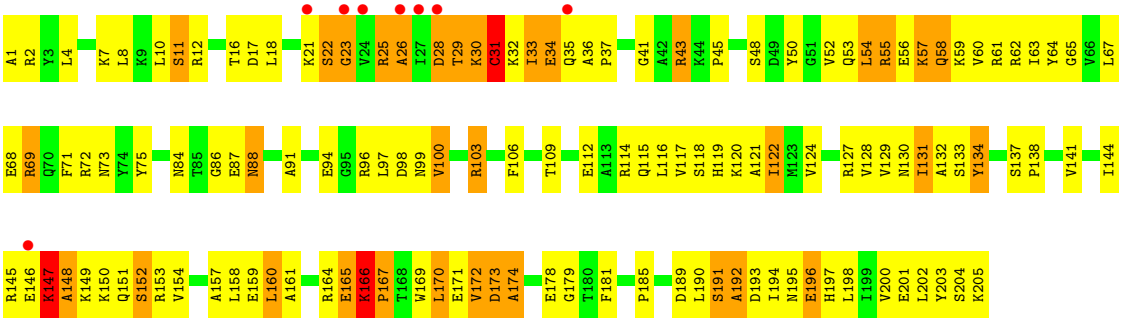
Chain CC:





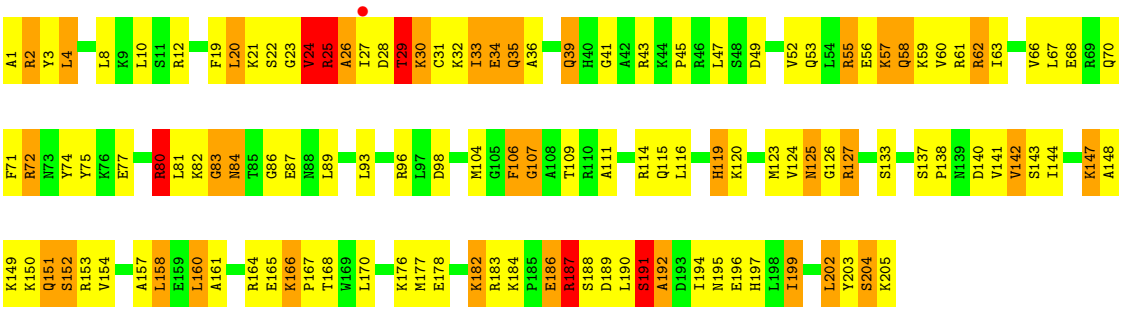
• Molecule 4: 30S ribosomal protein S4

Chain AD:



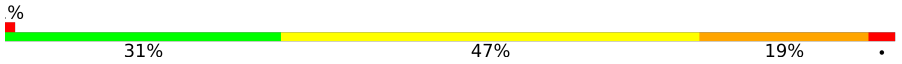
• Molecule 4: 30S ribosomal protein S4

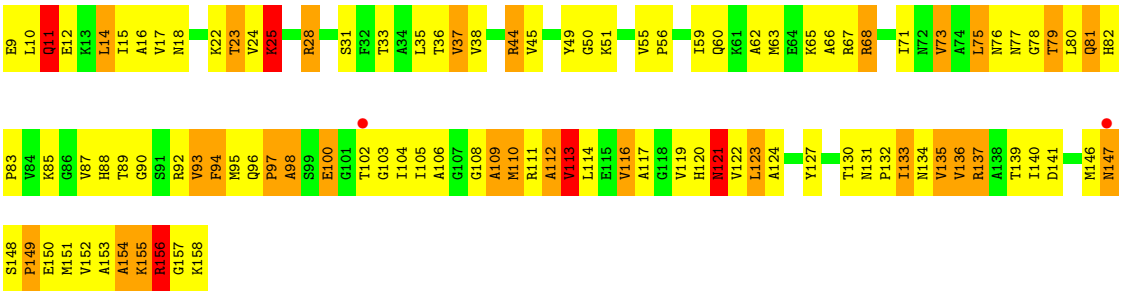
Chain CD:



• Molecule 5: 30S ribosomal protein S5

Chain AE:



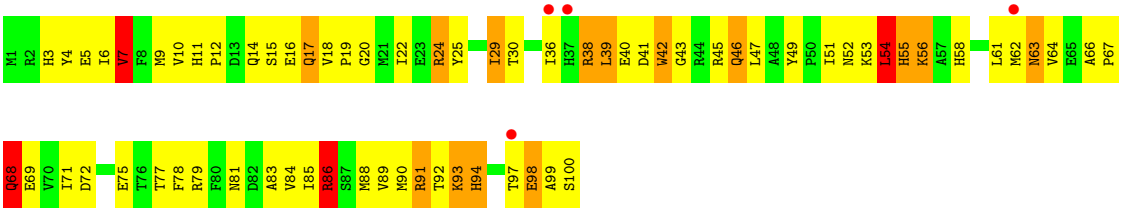


• Molecule 5: 30S ribosomal protein S5

Chain CE:

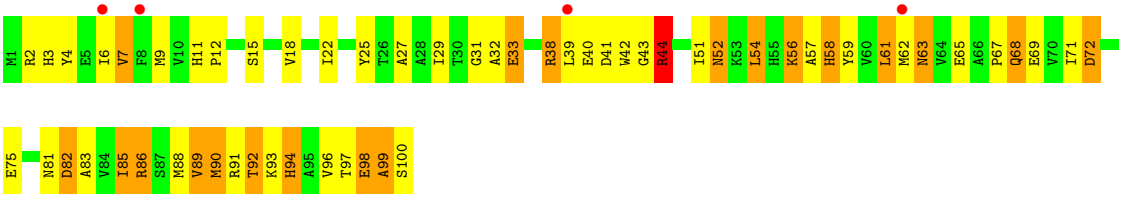
• Molecule 6: 30S ribosomal protein S6

Chain AF:



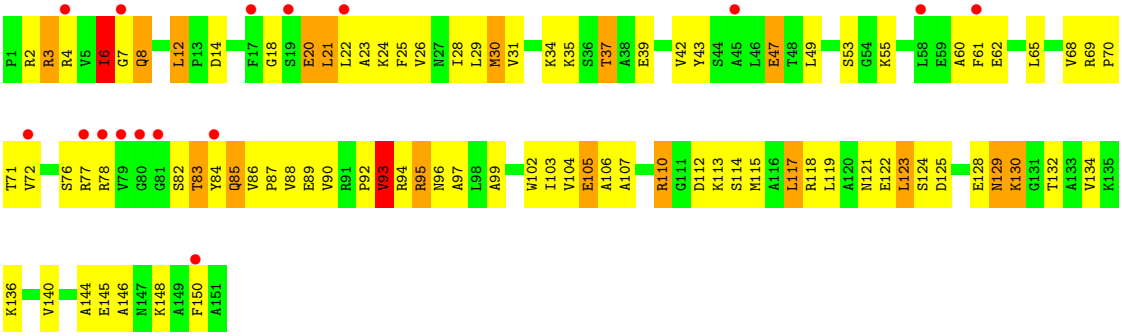
• Molecule 6: 30S ribosomal protein S6

Chain CF:



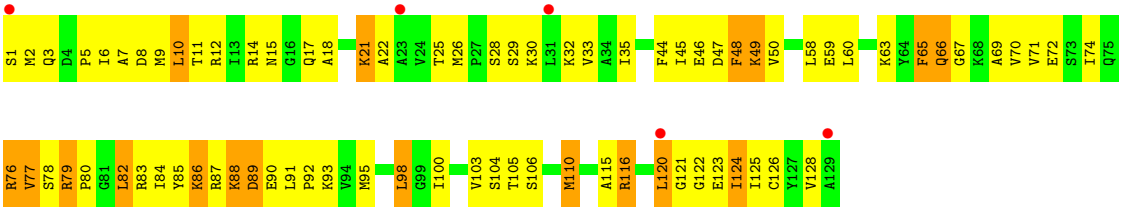
• Molecule 7: 30S ribosomal protein S7

Chain AG:



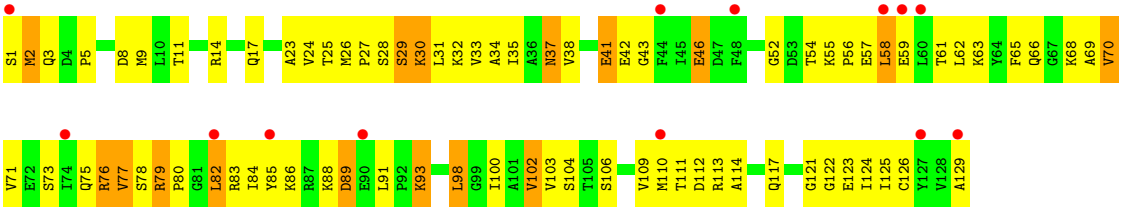
• Molecule 8: 30S ribosomal protein S8

Chain AH:



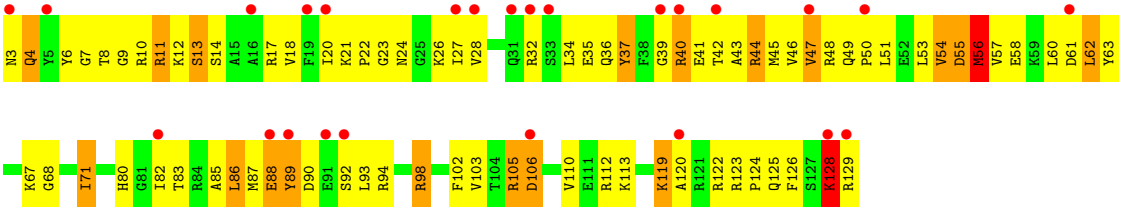
- Molecule 8: 30S ribosomal protein S8

Chain CH:



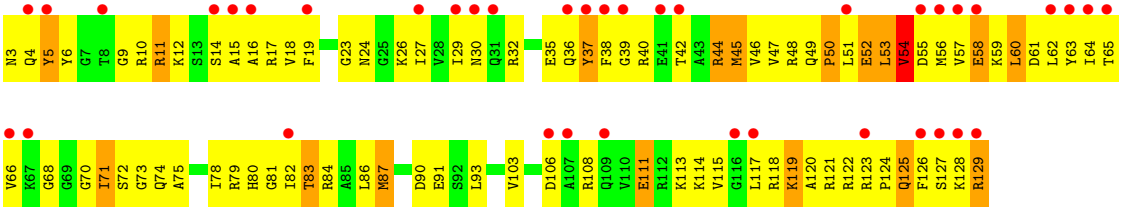
- Molecule 9: 30S ribosomal protein S9

Chain AI:



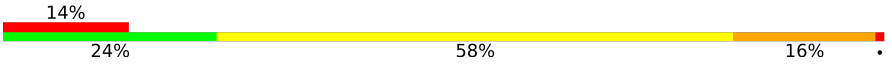
- Molecule 9: 30S ribosomal protein S9

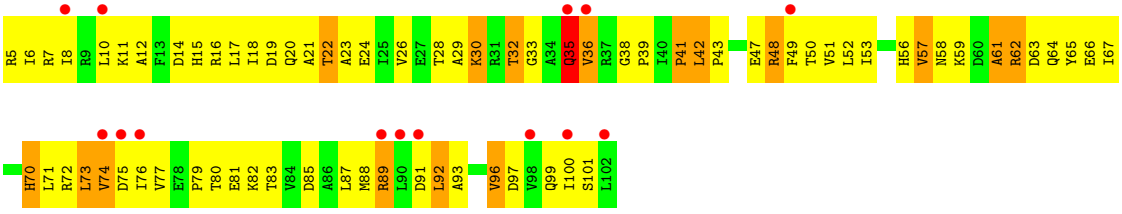
Chain CI:



- Molecule 10: 30S ribosomal protein S10

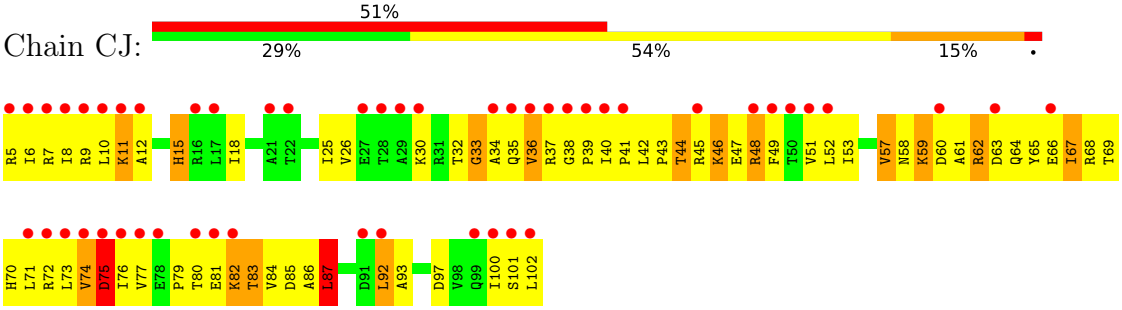
Chain AJ:





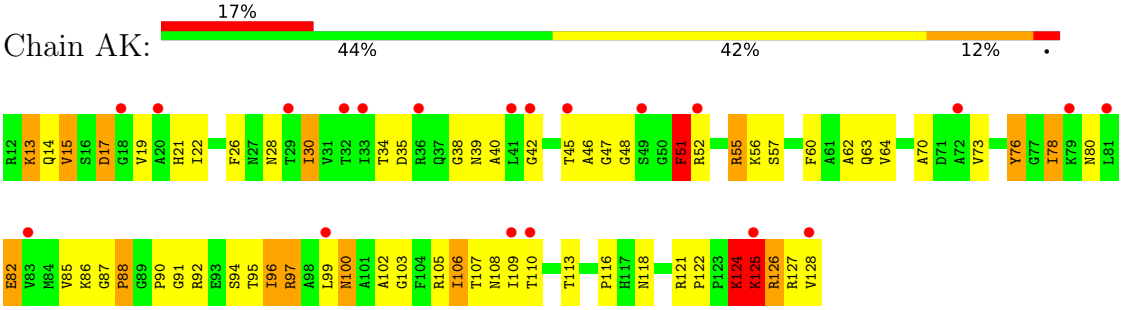
• Molecule 10: 30S ribosomal protein S10

Chain CJ:



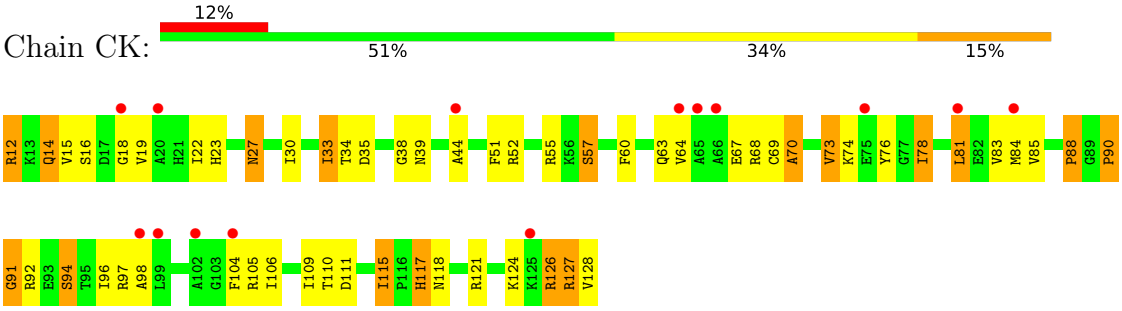
• Molecule 11: 30S ribosomal protein S11

Chain AK:



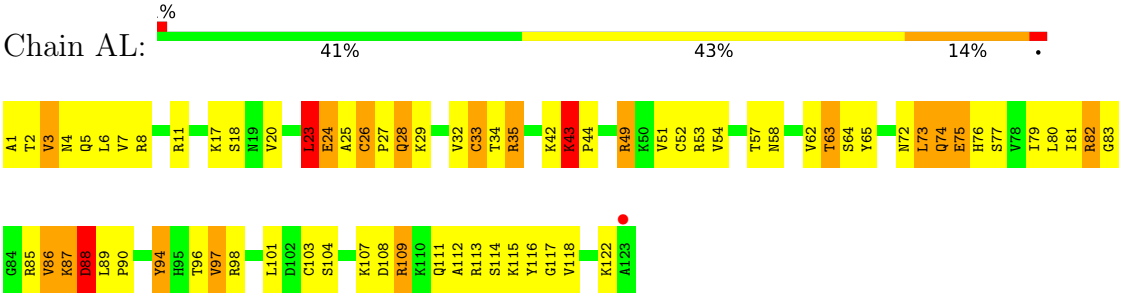
• Molecule 11: 30S ribosomal protein S11

Chain CK:



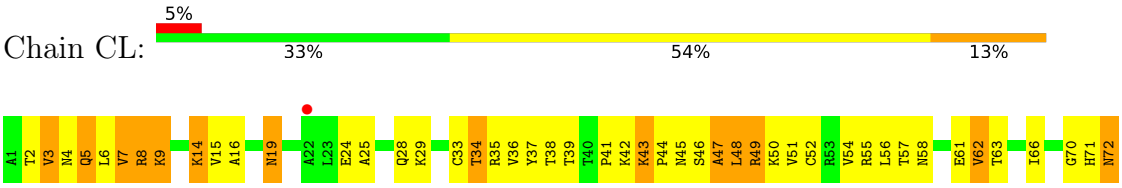
• Molecule 12: 30S ribosomal protein S12

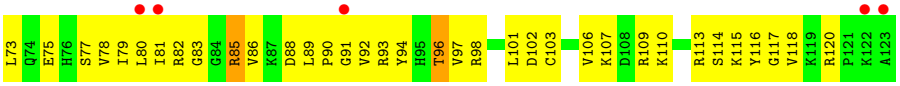
Chain AL:



• Molecule 12: 30S ribosomal protein S12

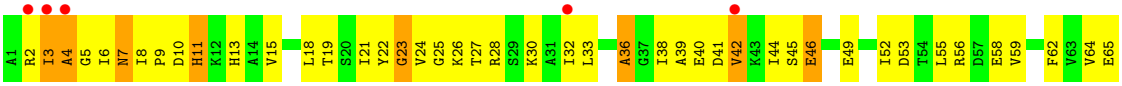
Chain CL:

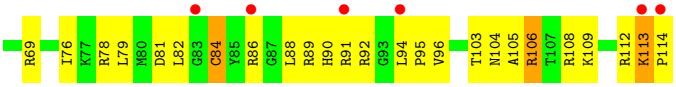




• Molecule 13: 30S ribosomal protein S13

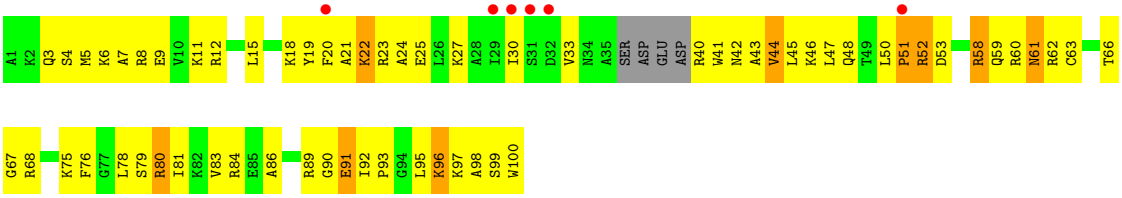
Chain AM:





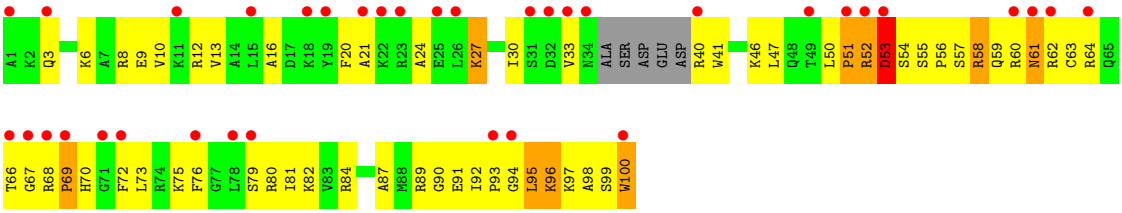
• Molecule 14: 30S ribosomal protein S14

Chain AN:



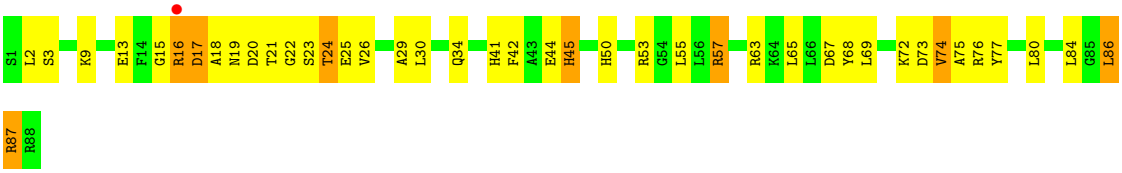
• Molecule 14: 30S ribosomal protein S14

Chain CN:



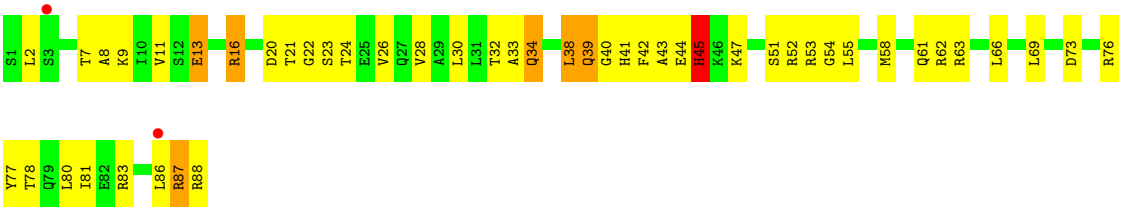
• Molecule 15: 30S ribosomal protein S15

Chain AO:



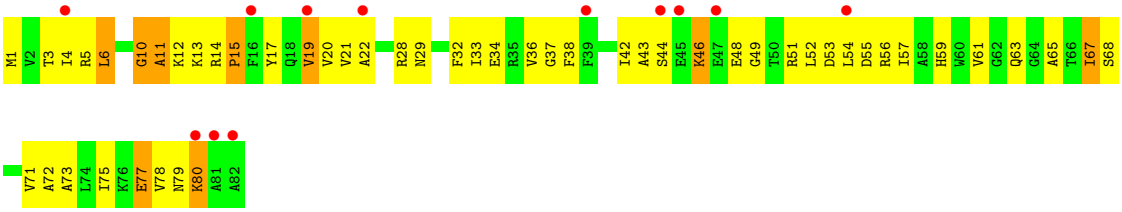
• Molecule 15: 30S ribosomal protein S15

Chain CO:



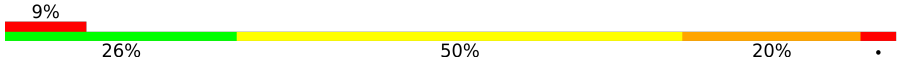
• Molecule 16: 30S ribosomal protein S16

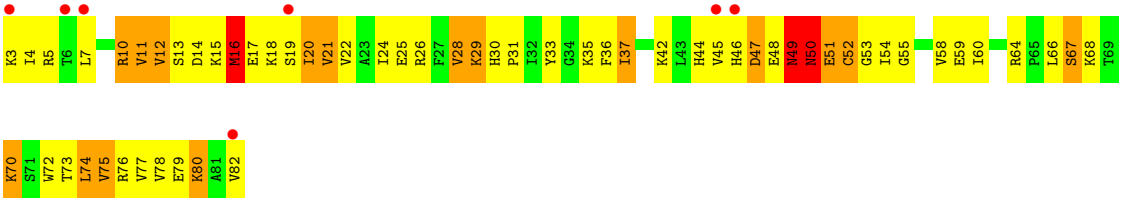
Chain AP:



• Molecule 17: 30S ribosomal protein S17

Chain AQ:





• Molecule 17: 30S ribosomal protein S17

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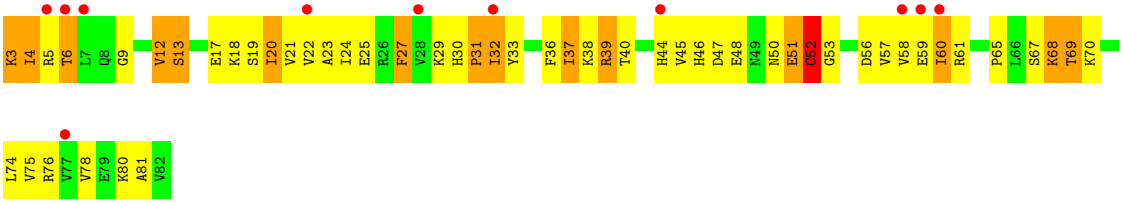
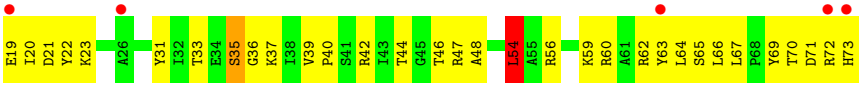


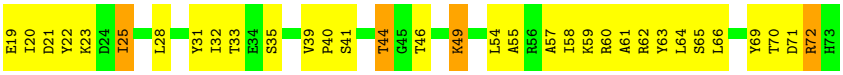
• Molecule 18: 30S ribosomal protein S18

Chain AR:



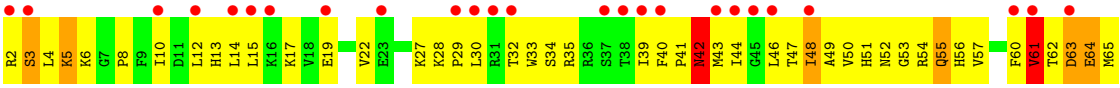
• Molecule 18: 30S ribosomal protein S18

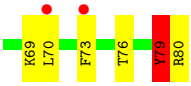
Chain CR:



• Molecule 19: 30S ribosomal protein S19

Chain AS:





• Molecule 19: 30S ribosomal protein S19

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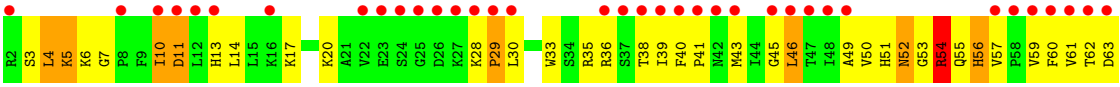
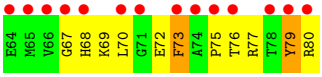
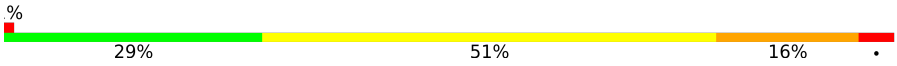
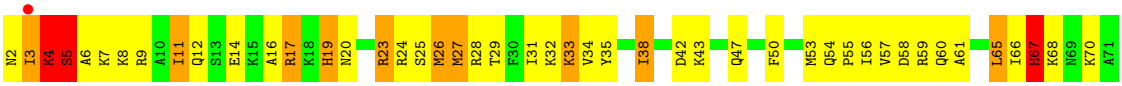




• Molecule 20: 30S ribosomal protein S20

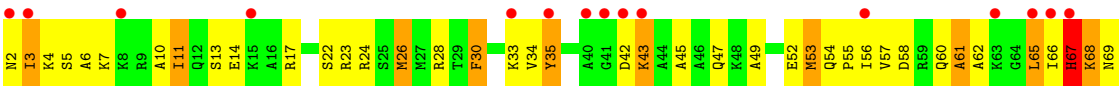
Chain AT:

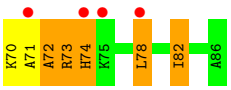




• Molecule 20: 30S ribosomal protein S20

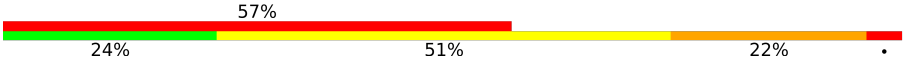
Chain CT:

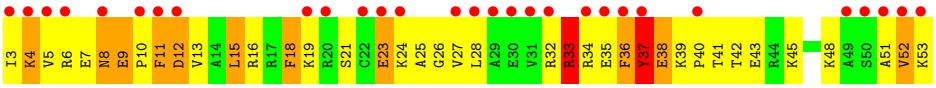




• Molecule 21: 30S ribosomal protein S21

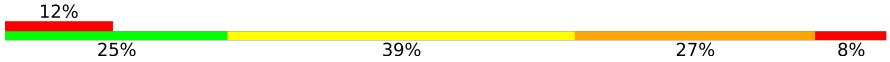
Chain AU:





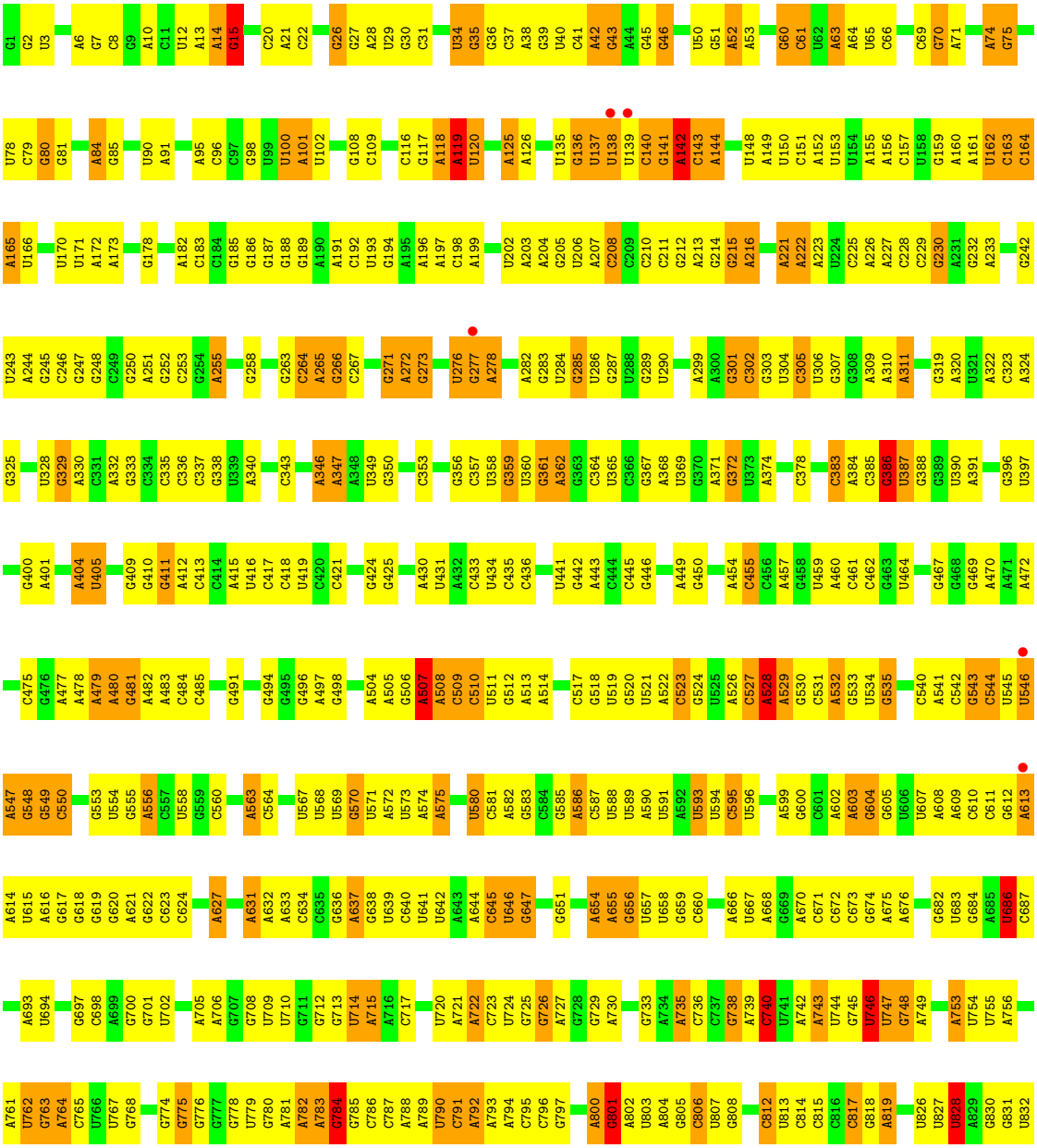
• Molecule 21: 30S ribosomal protein S21

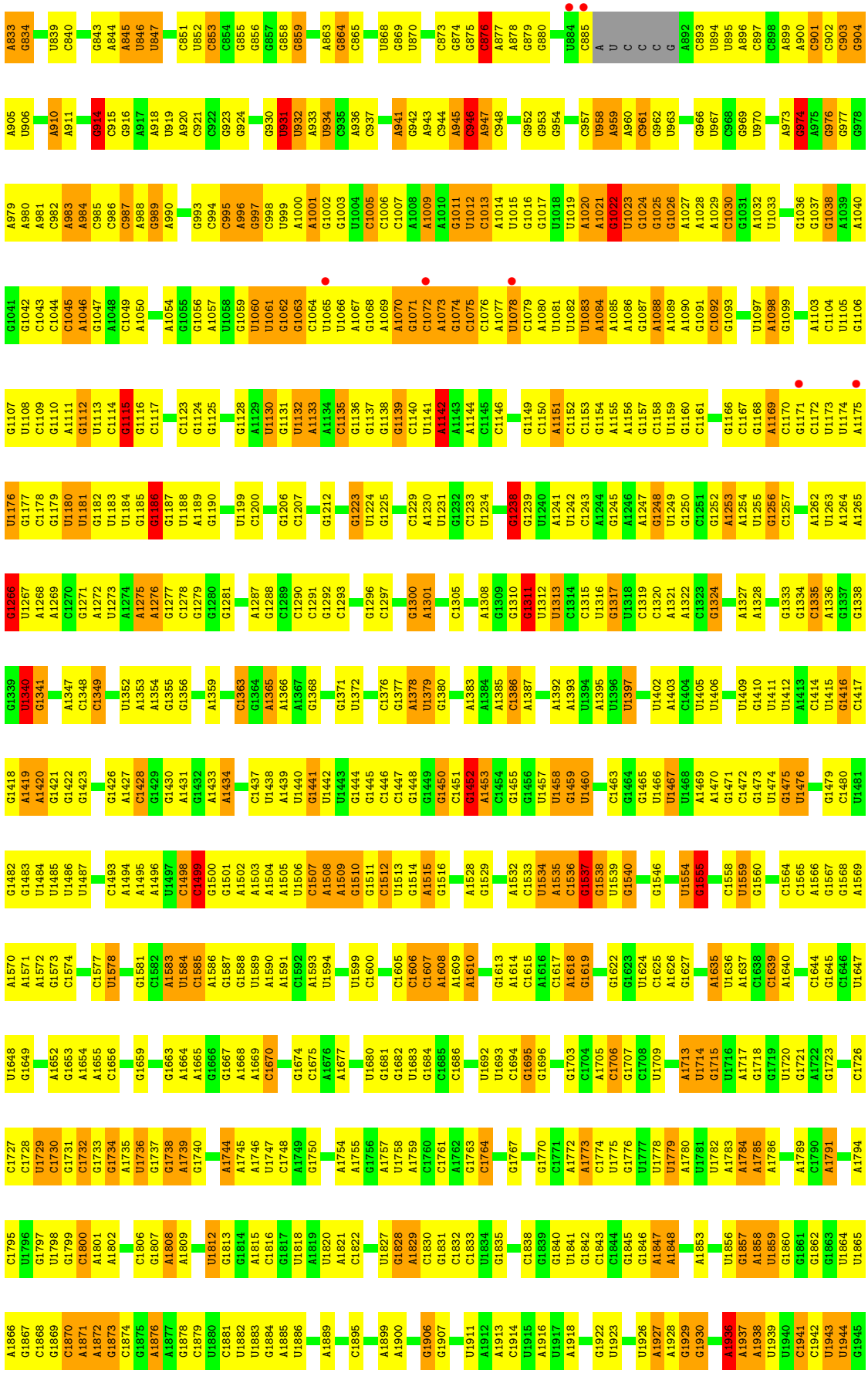
Chain CU:

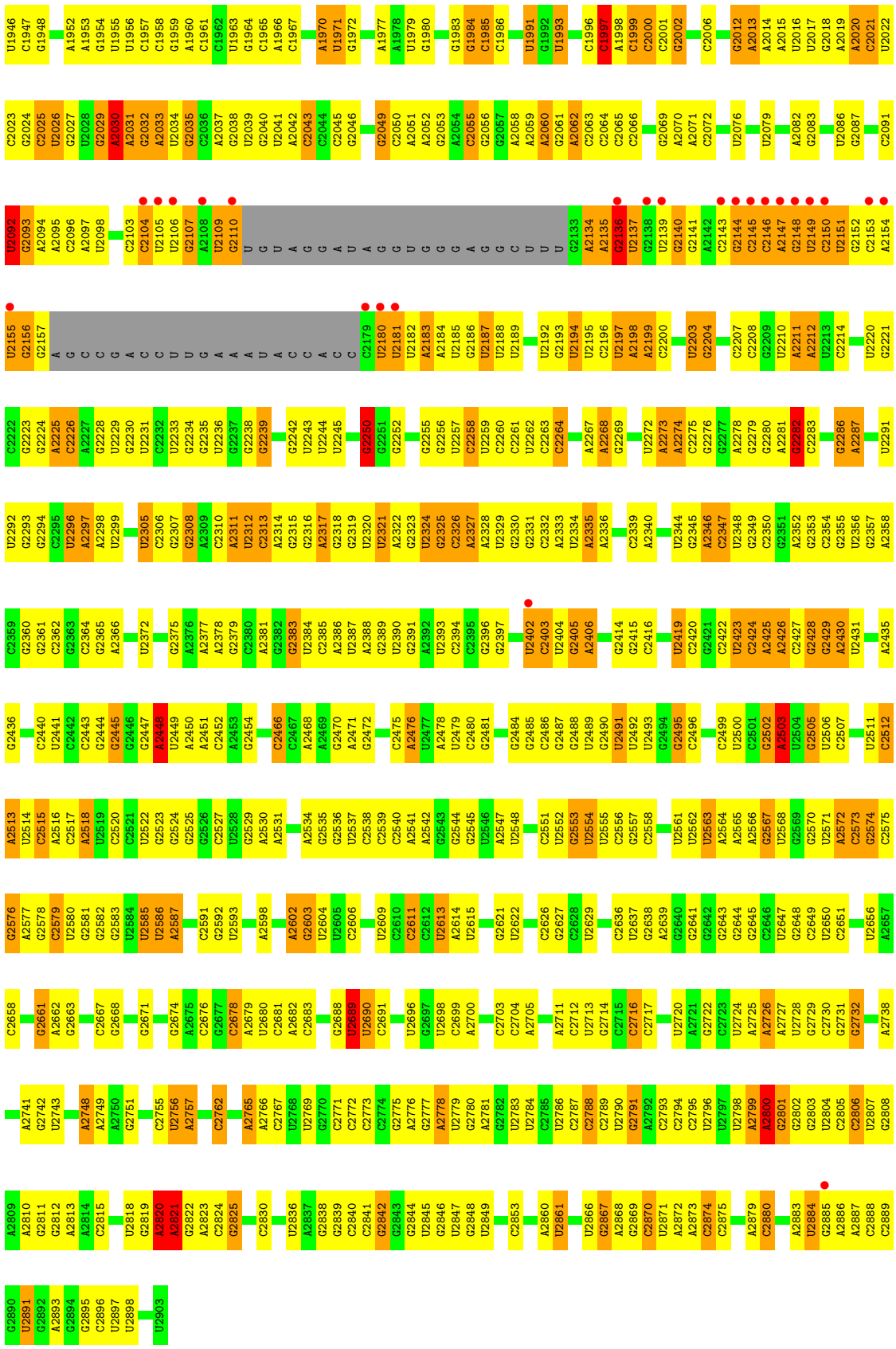


• Molecule 22: 23S rRNA

Chain BA:

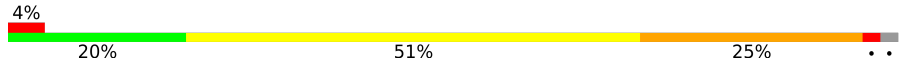






• Molecule 22: 23S rRNA

Chain DA: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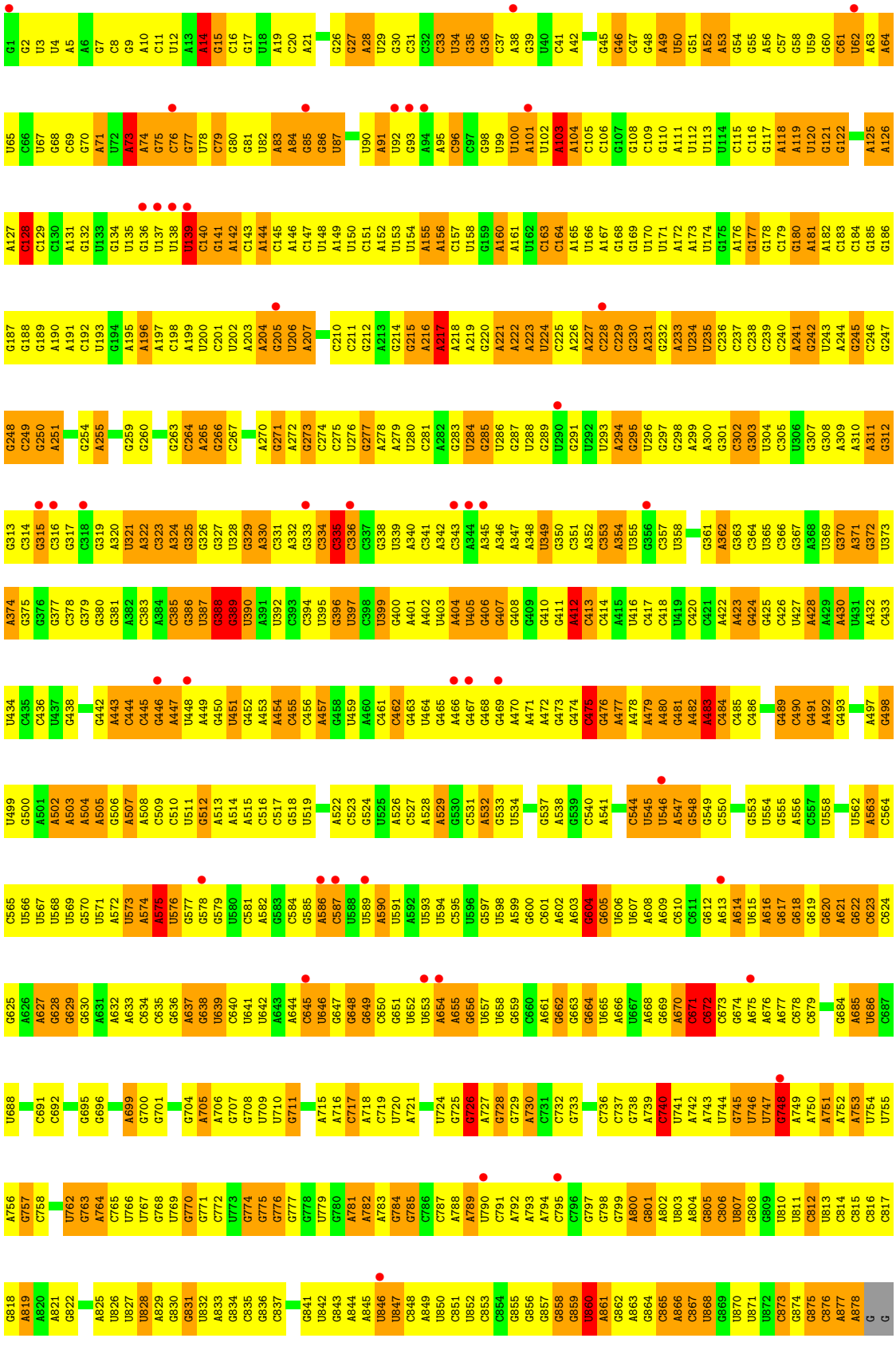
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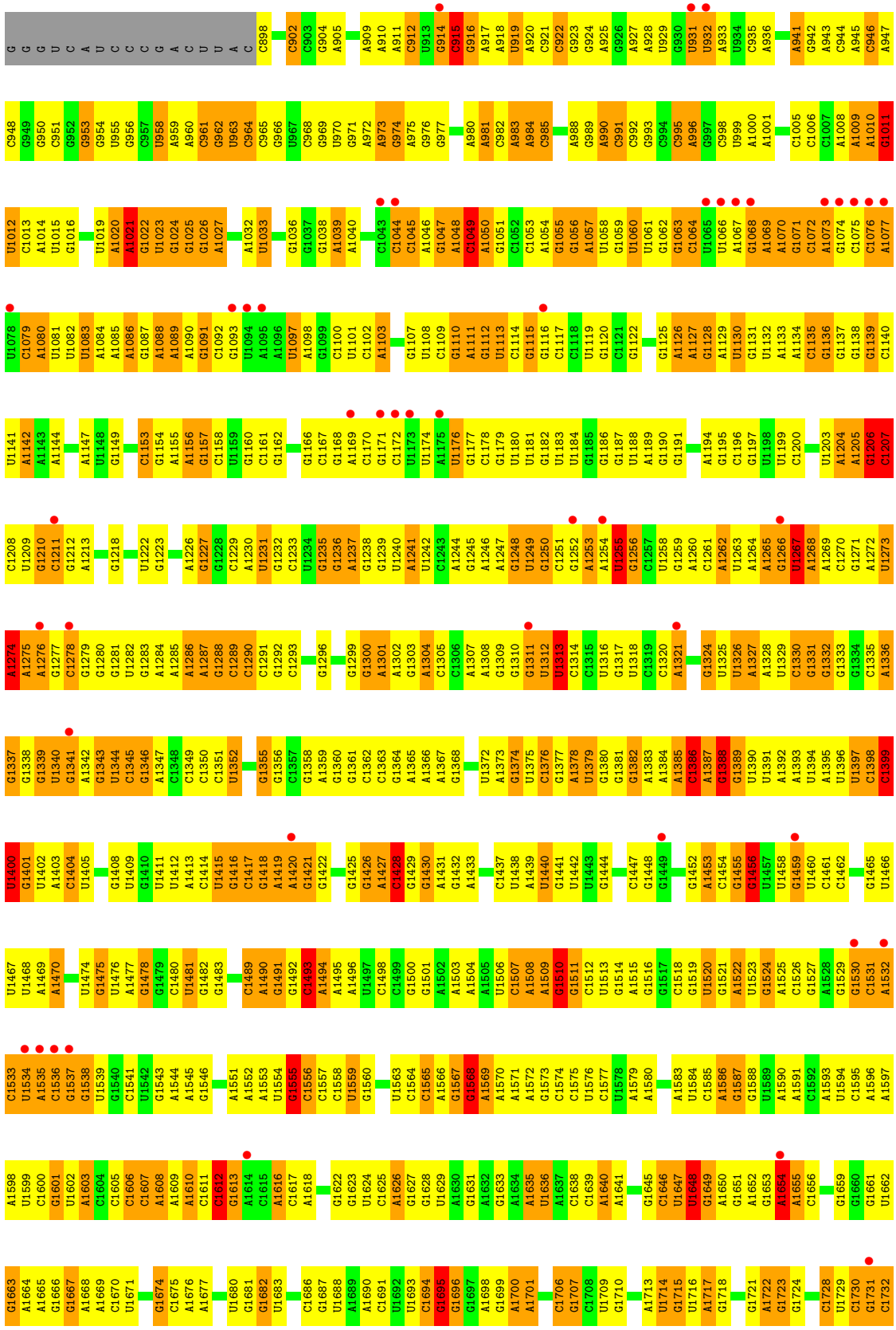
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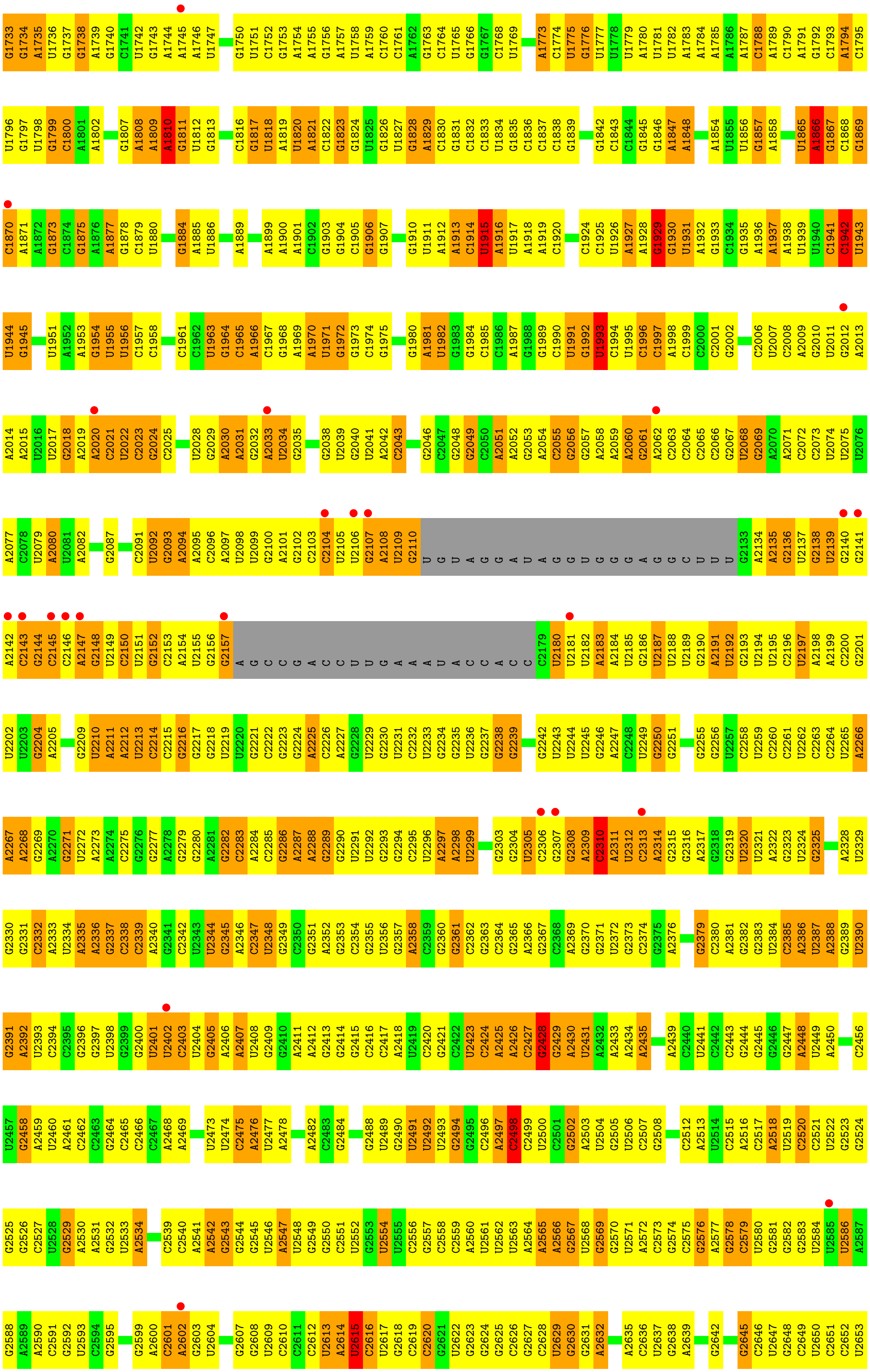
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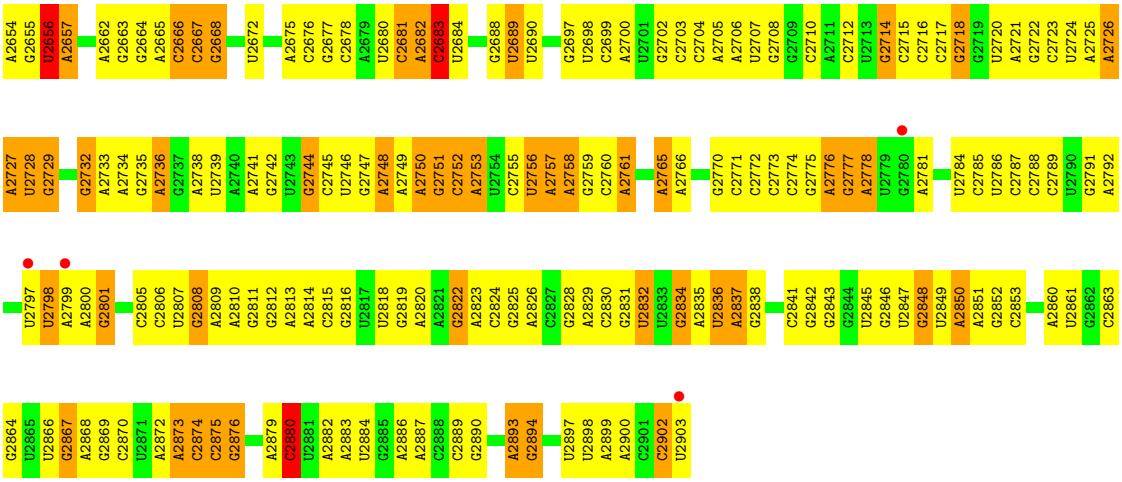
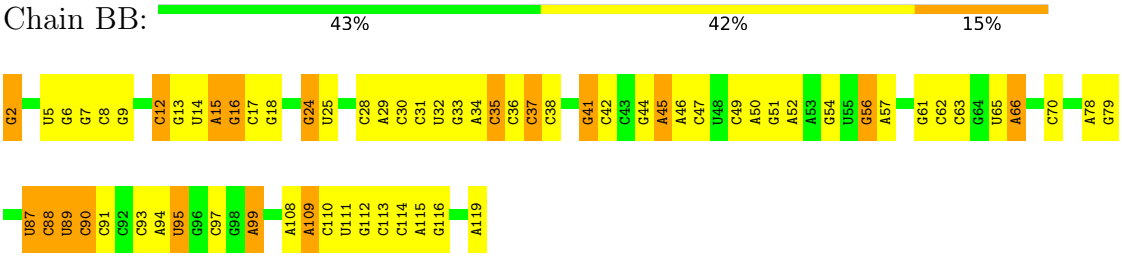


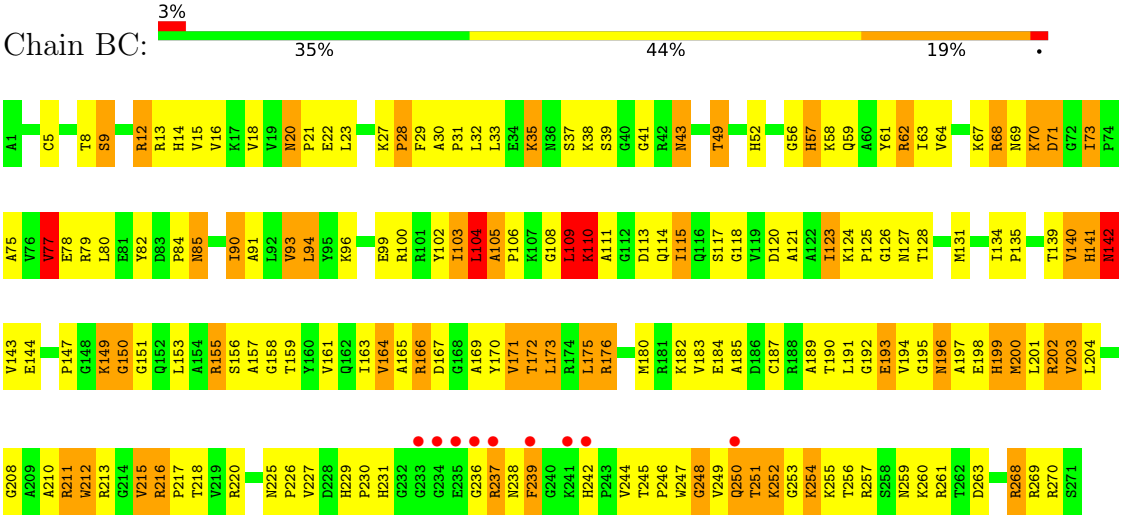
- Molecule 23: 5S rRNA

Chain BB:



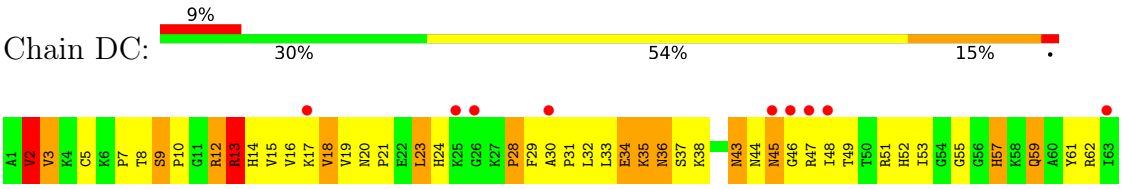
- Molecule 24: 50S ribosomal protein L2

Chain BC:



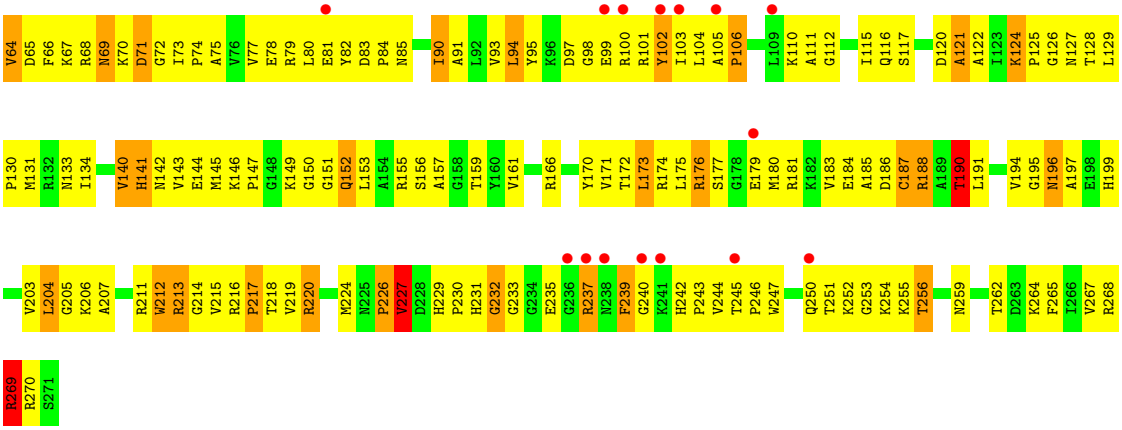
- Molecule 24: 50S ribosomal protein L2

Chain DC:



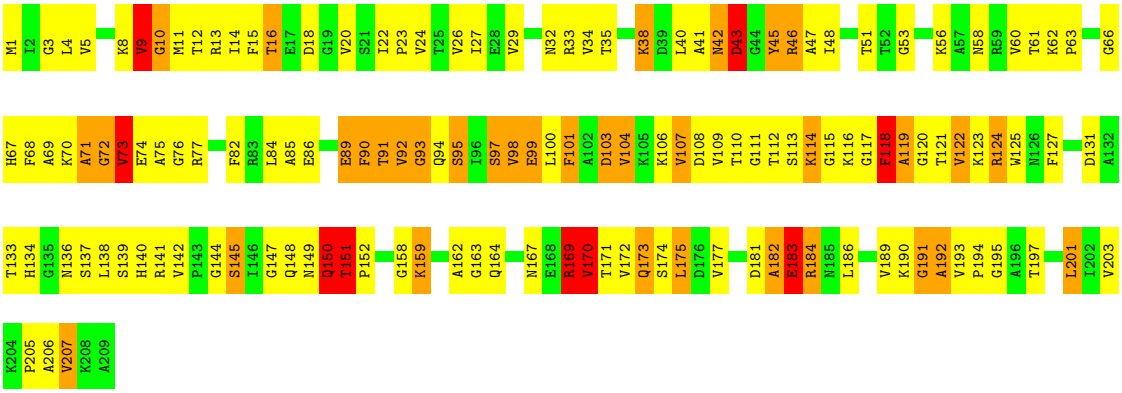
- Molecule 24: 50S ribosomal protein L2

Chain DC:



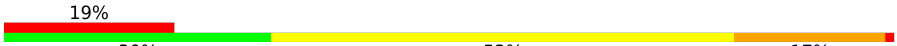
• Molecule 25: 50S ribosomal protein L3

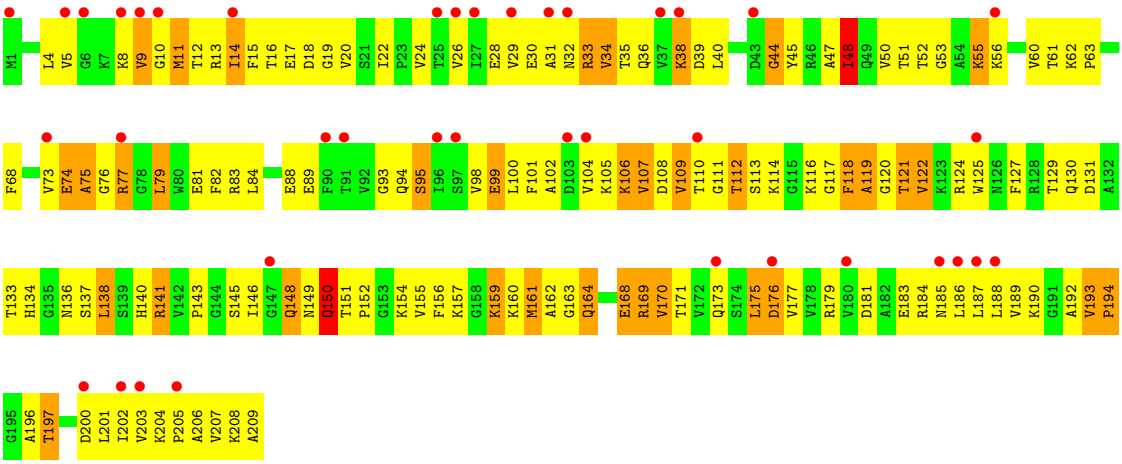
Chain BD:



• Molecule 25: 50S ribosomal protein L3

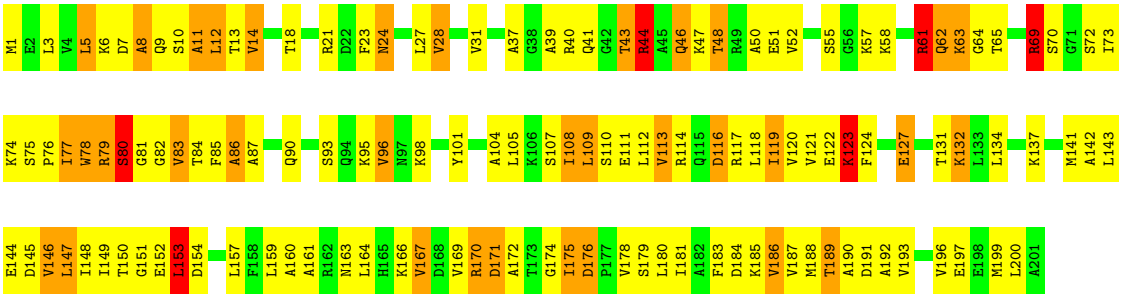
Chain DD:





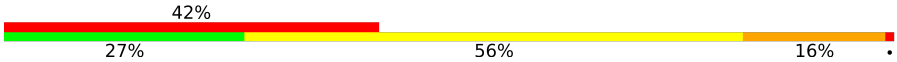
• Molecule 26: 50S ribosomal protein L4

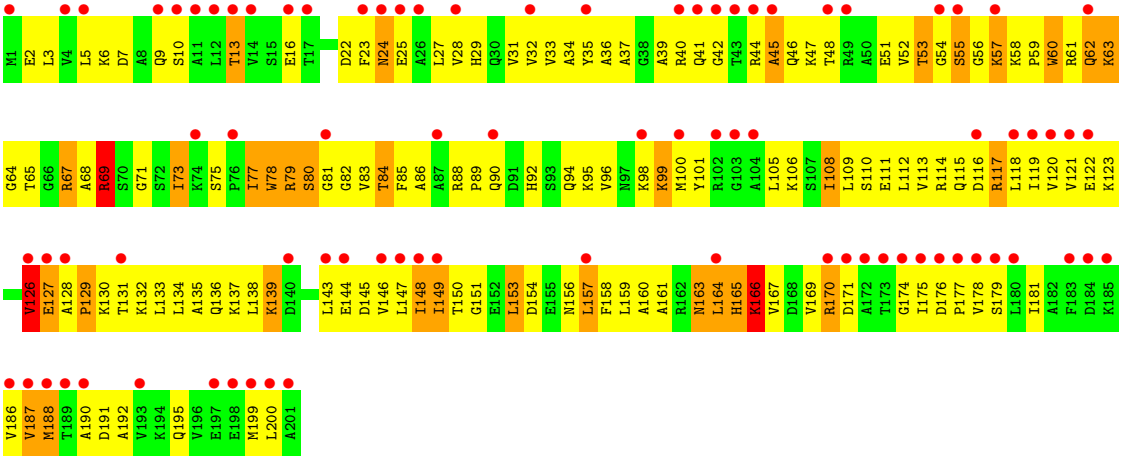
Chain BE:



- Molecule 26: 50S ribosomal protein L4

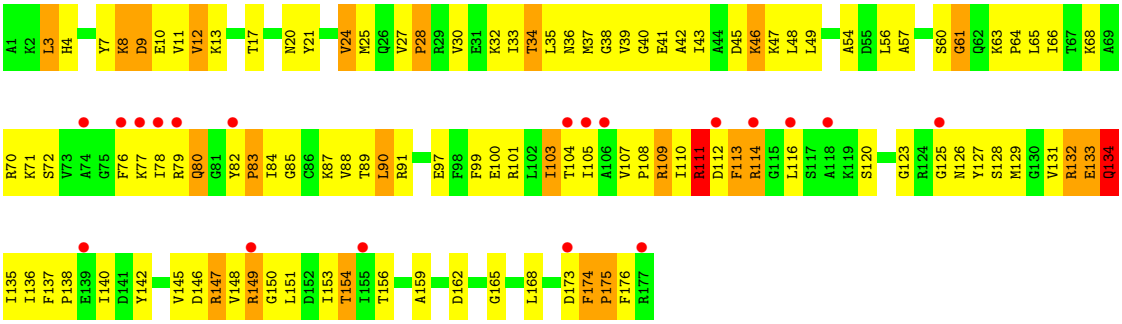
Chain DE:





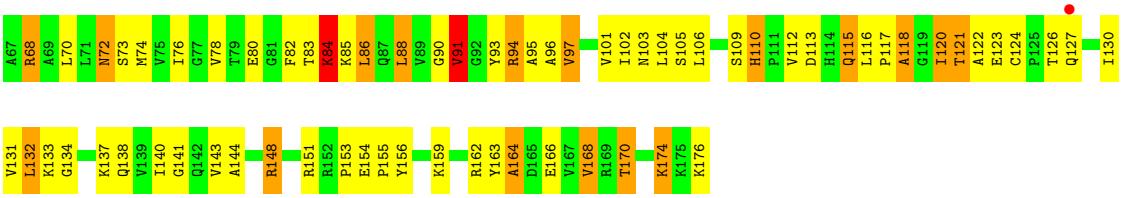
- Molecule 27: 50S ribosomal protein L5

Chain BF:



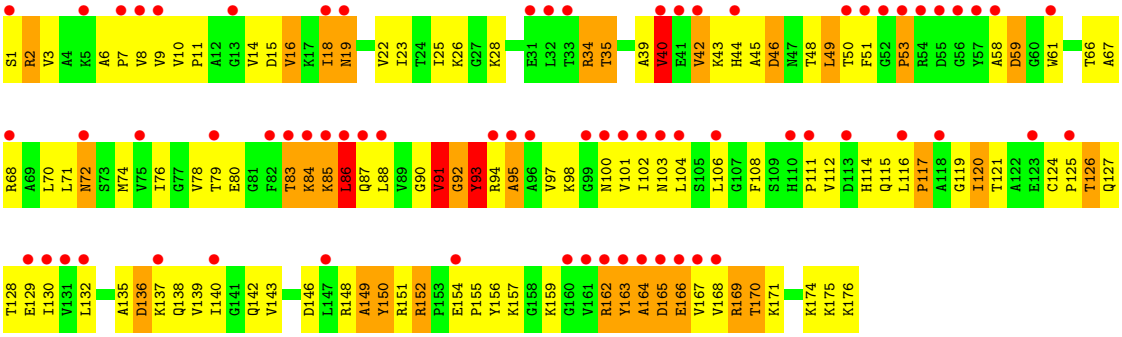
- Molecule 28: 50S ribosomal protein L6

Chain BG:



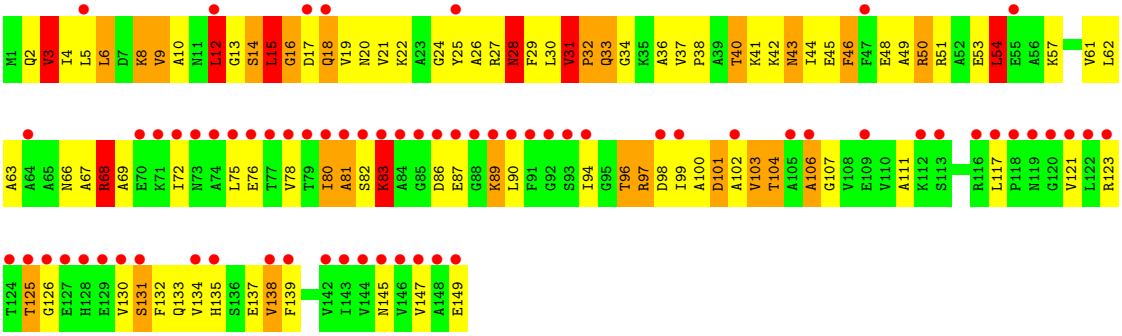
• Molecule 28: 50S ribosomal protein L6

Chain DG:



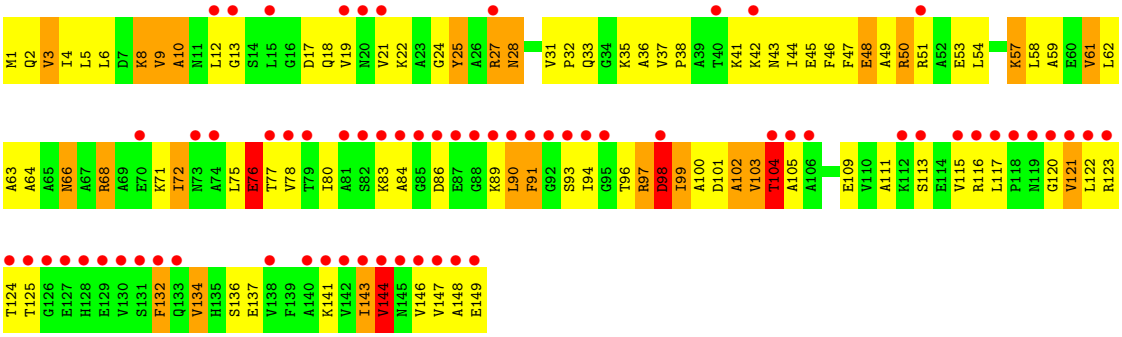
• Molecule 29: 50S ribosomal protein L9

Chain BH:



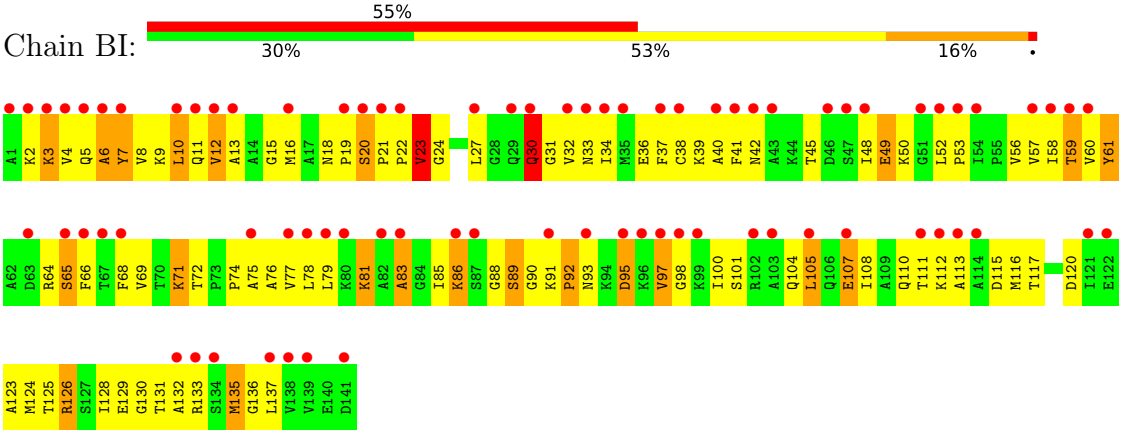
• Molecule 29: 50S ribosomal protein L9

Chain DH:



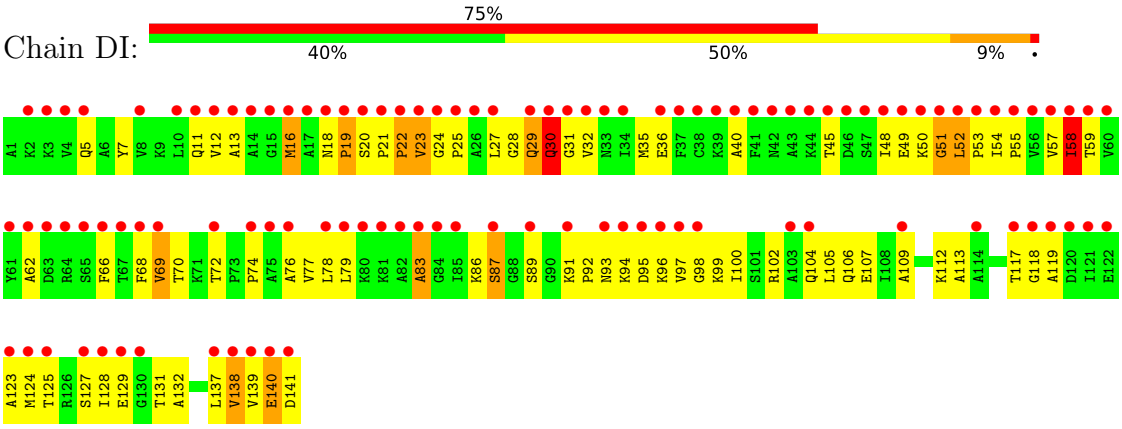
• Molecule 30: 50S ribosomal protein L11

Chain BI:



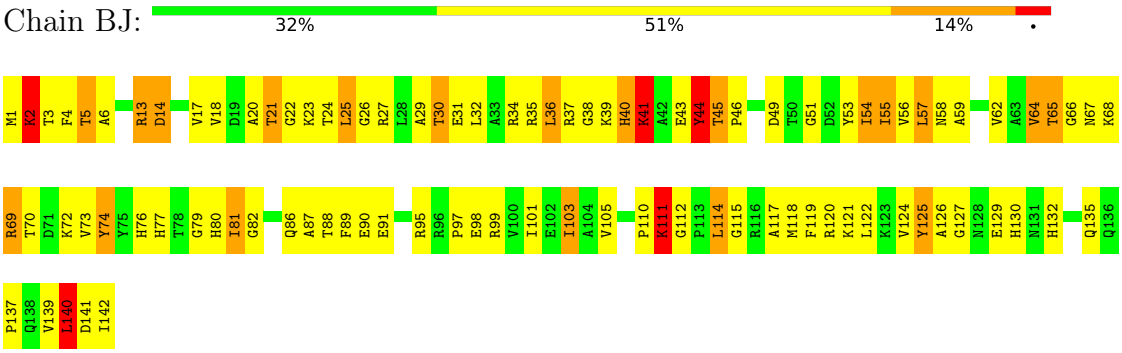
• Molecule 30: 50S ribosomal protein L11

Chain DI:



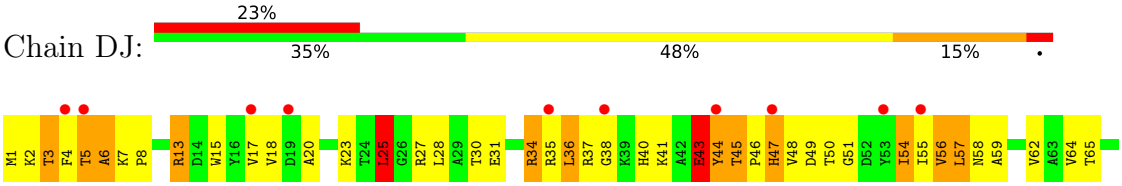
• Molecule 31: 50S ribosomal protein L13

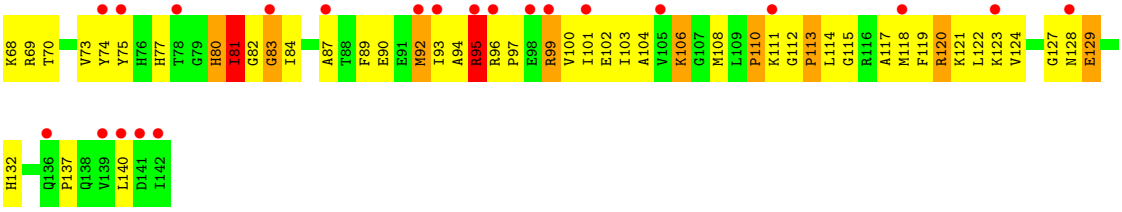
Chain BJ:



• Molecule 31: 50S ribosomal protein L13

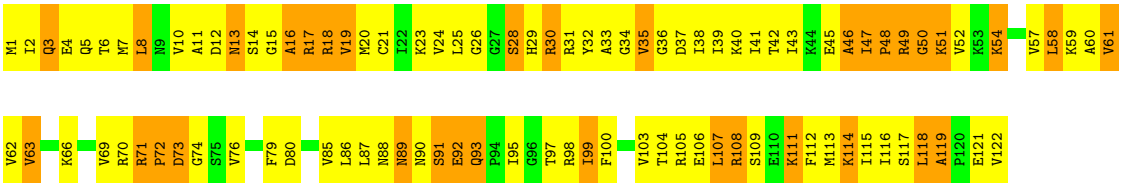
Chain DJ:





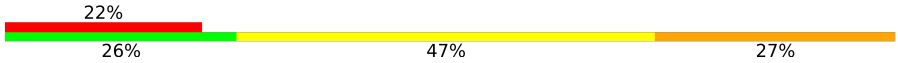
• Molecule 32: 50S ribosomal protein L14

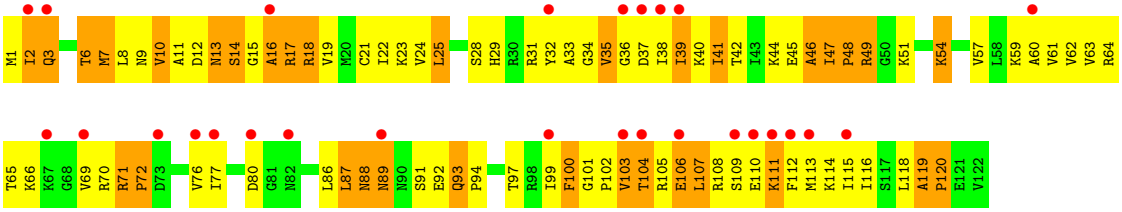
Chain BK:



• Molecule 32: 50S ribosomal protein L14

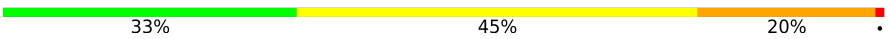
Chain DK:

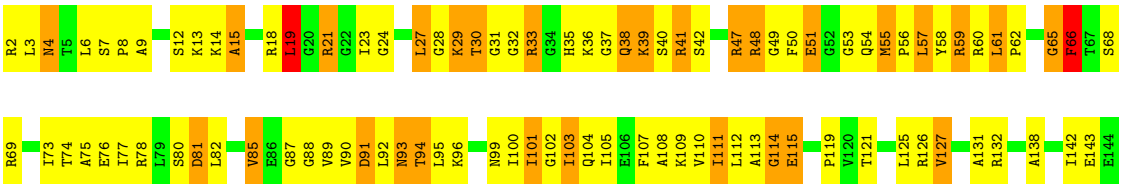




• Molecule 33: 50S ribosomal protein L15

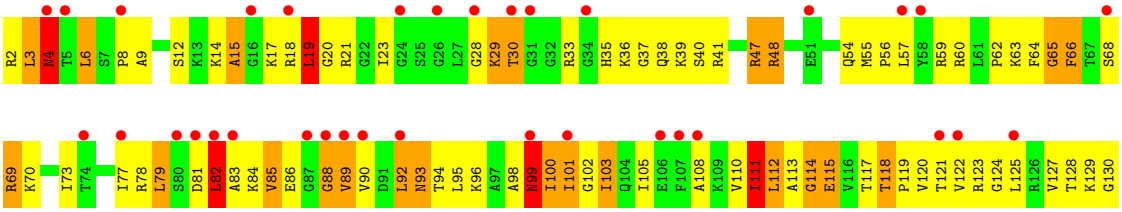
Chain BL:

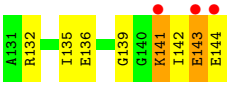




• Molecule 33: 50S ribosomal protein L15

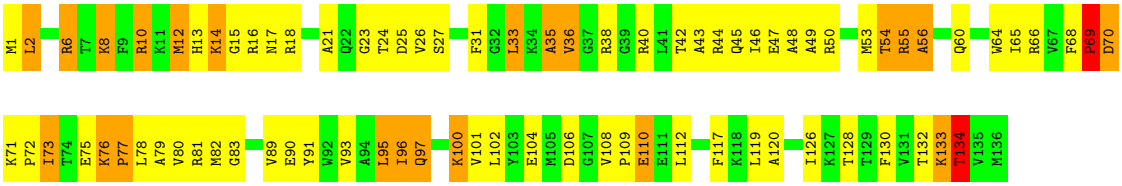
Chain DL:





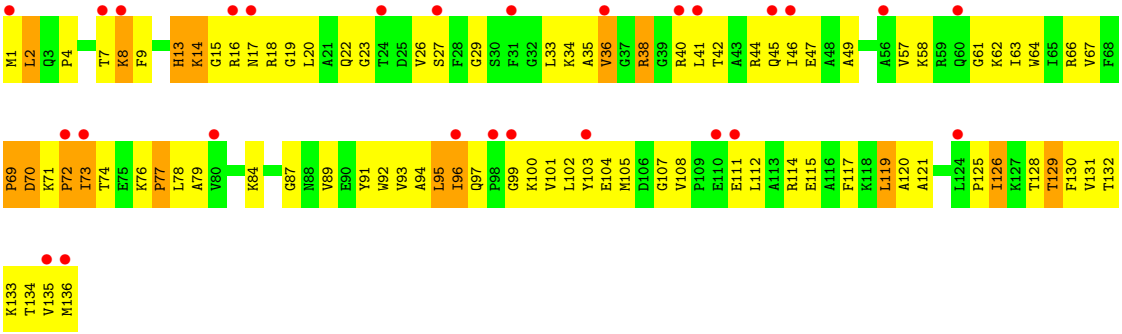
• Molecule 34: 50S ribosomal protein L16

Chain BM:



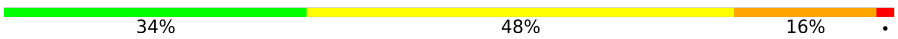
• Molecule 34: 50S ribosomal protein L16

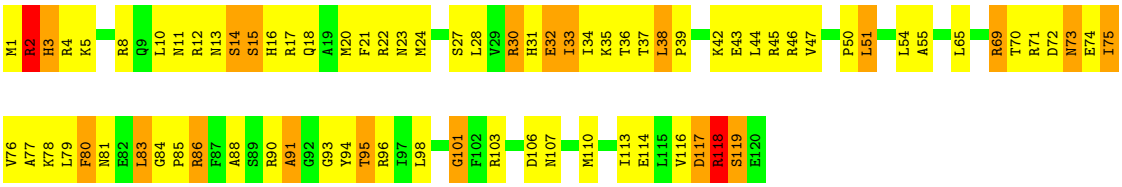
Chain DM:



• Molecule 35: 50S ribosomal protein L17

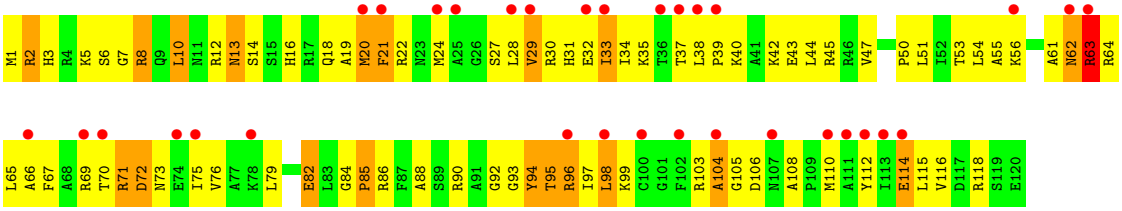
Chain BN:





• Molecule 35: 50S ribosomal protein L17

Chain DN:



• Molecule 36: 50S ribosomal protein L18

Chain BO: 33% 52% 16%

D2 K3 K4 S5 A6 R7 I8 R9 R10 A11 R15 R16 K17 L18 Q19 G22 A23 T24 V28 H29 R30 T31 P32 R33 H34 I35 Y36 A37 Q38 Y39 I40 A41 P42 N43 E46 V47 L48 V49 A50 A51 S52 T53 V54 E55 K56 A57 I58 A59 L62 T65 G66 N67 K68 D69

A70 A73 V74 G75 K76 A77 V78 A79 E80 R81 A82 L83 E84 K85 K88 D89 F92 D93 R94 S95 G96 F97 Q98 Y99 H100 G101 R102 V103 Q104 A105 L106 A109 A110 R111 E112 A113 Q116 F117

- Molecule 36: 50S ribosomal protein L18

Chain DO: 38% 35% 55% 9%

D2 K3 K4 S5 A6 R7 I8 R9 R10 A11 T12 R13 A14 R15 R16 K17 L18 Q19 E20 L21 G22 A23 T24 R25 L26 V27 V28 H29 R30 T31 P32 R33 H34 I35 Y36 A37 Q38 V39 I40 A41 P42 N43 G44 S45 E46 V47 L48 V49 A50 A51 S52 T53 V54 E55 K56 A57 I58 A59 E60 Q61

L62 K63 Y64 T65 G66 N67 K68 D69 A70 A71 A72 A73 V74 A77 V78 A79 E80 R81 I87 K88 D89 W90 S91 F92 D93 R94 S95 G96 F97 Q98 Y99 H100 G101 R102 V103 L106 A107 D108 A109 A110 R111 E112 A113 G114 L115 Q116 F117

- Molecule 37: 50S ribosomal protein L19

Chain BP: % 31% 40% 24% 5%

S1 N2 I3 I4 K5 Q6 L7 E8 Q9 E10 Q11 M12 K13 Q14 D15 V16 P17 S18 F19 R20 P21 T24 V25 K28 V31 V32 E33 G34 S35 K36 K37 R38 L39 V46 R50 N51 R52 S56 A57 F58 T59 V60 R61 K62 I63 S64 N65 G66 E67 G68 V69 E70 R71 V72

F73 Q74 T75 H76 S77 F78 V79 V80 D81 S82 I83 S84 V85 K86 R87 R88 V91 R92 K93 A94 K95 L96 Y97 Y98 L99 R100 E101 R102 T103 G104 K105 A106 A107 R108 E111 R112 L113 N114

- Molecule 37: 50S ribosomal protein L19

Chain DP: 16% 20% 61% 18%

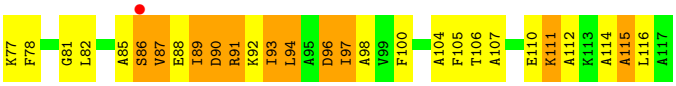
S1 N2 I3 I4 K5 Q6 L7 E8 Q9 E10 Q11 M12 K13 V16 P17 S18 F19 R20 P21 G22 D23 T24 V25 E26 V27 K28 V29 W30 V31 V32 E33 G34 K37 R38 L39 Q40 A41 F42 E43 G44 V45 V46 I47 A48 I49 R50 N51 R52 G53 L54 H55 S56 A57 F58 T59 V60 R61 K62

I63 S64 N65 G66 E67 G68 V69 E70 R71 V72 F73 Q74 T75 H76 S77 P78 V79 V80 D81 S82 I83 S84 V85 K86 R87 R88 G89 A90 V91 R92 K93 A94 K95 L96 Y97 R100 E101 R102 T103 G104 K105 A106 A107 R108 I109 K110 E111 R112 L113 N114

- Molecule 38: 50S ribosomal protein L20

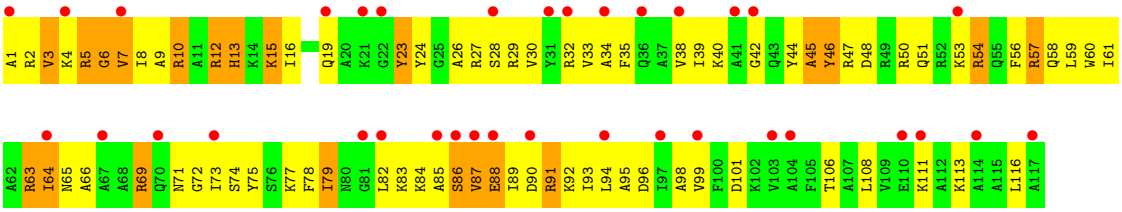
Chain BQ: % 41% 40% 18%

A1 R2 V3 K4 R5 G6 V7 I8 A9 R10 A11 R12 H13 L17 K18 Q19 A20 Y23 R27 S28 R29 V30 Y31 R32 I39 K40 Q43 Y44 A45 Y46 R47 D48 R49 R50 Q51 R52 K53 R54 R57 Q58 L59 W60 I61 A62 R63 I64 N65 A66 A67 A68 R69 Q70 N71



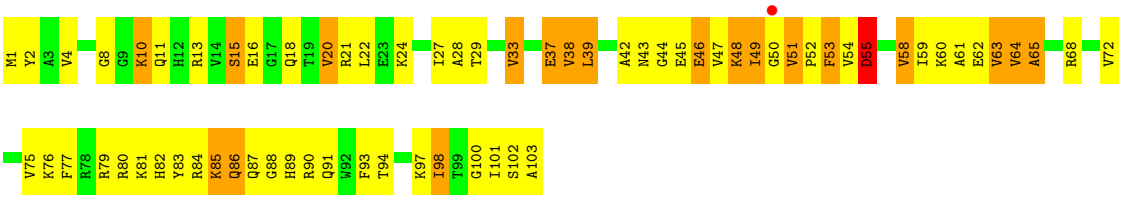
• Molecule 38: 50S ribosomal protein L20

Chain DQ:



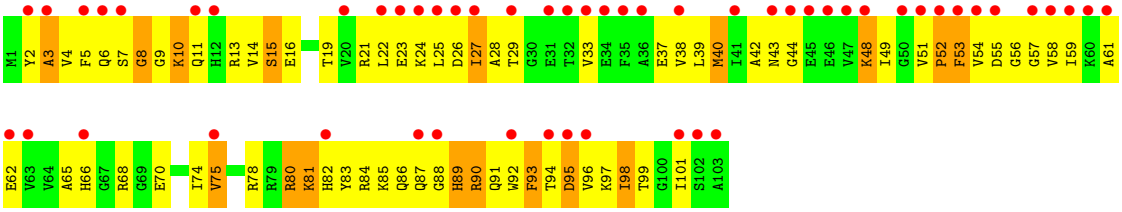
• Molecule 39: 50S ribosomal protein L21

Chain BR:



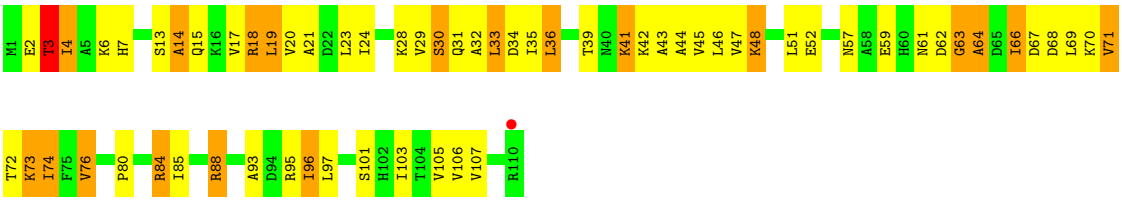
• Molecule 39: 50S ribosomal protein L21

Chain DR:



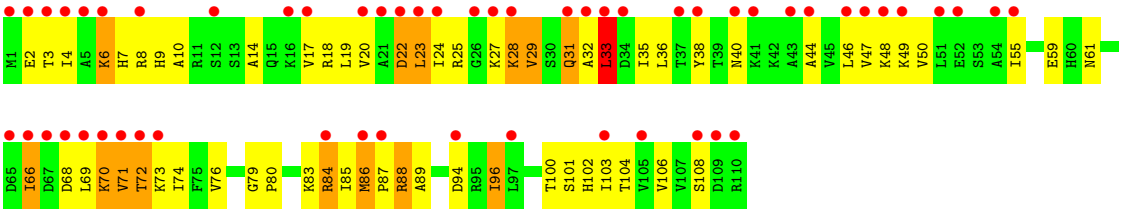
• Molecule 40: 50S ribosomal protein L22

Chain BS:



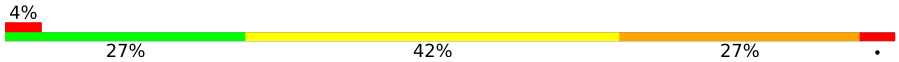
• Molecule 40: 50S ribosomal protein L22

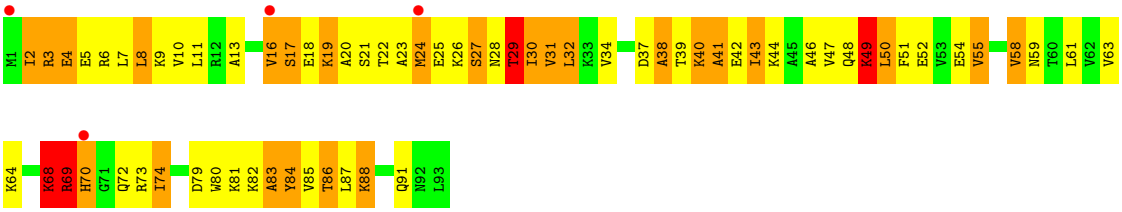
Chain DS:



- Molecule 41: 50S ribosomal protein L23

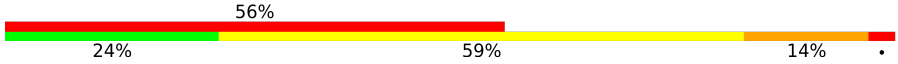
Chain BT:

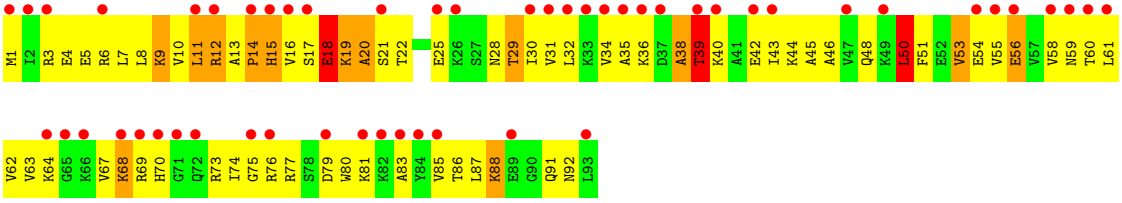




- Molecule 41: 50S ribosomal protein L23

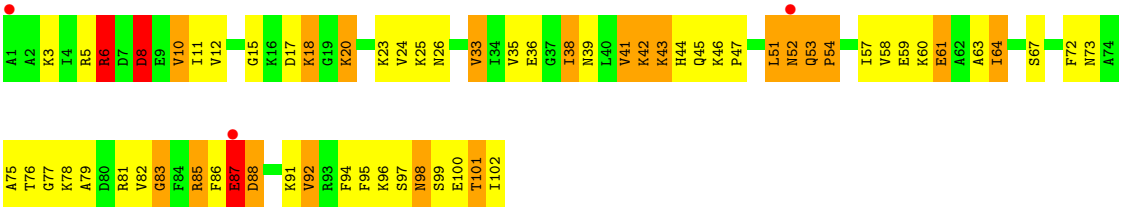
Chain DT:





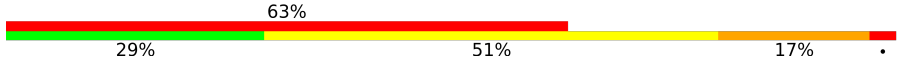
- Molecule 42: 50S ribosomal protein L24

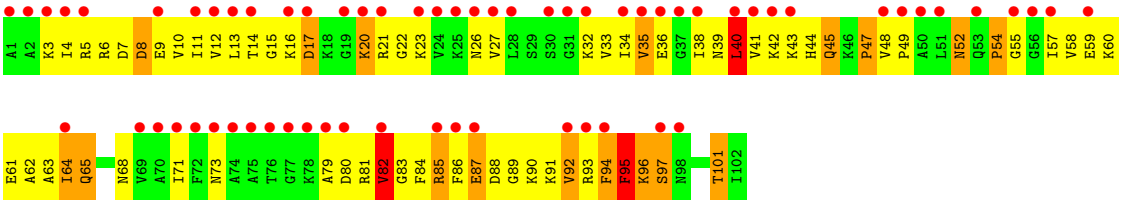
Chain BU:



- Molecule 42: 50S ribosomal protein L24

Chain DU:



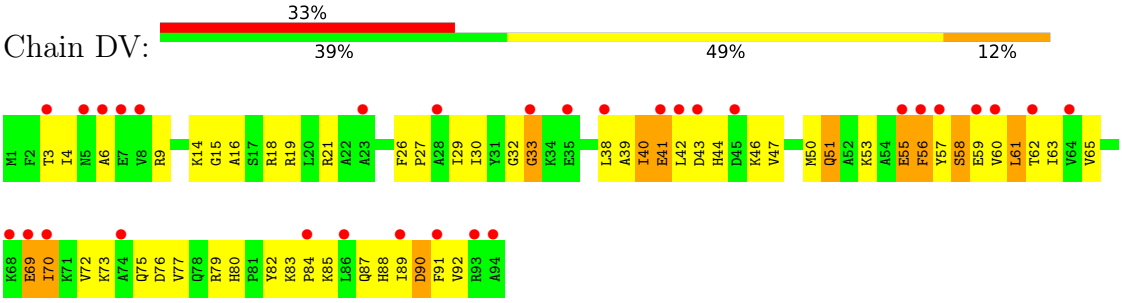


• Molecule 43: 50S ribosomal protein L25

Chain BV:

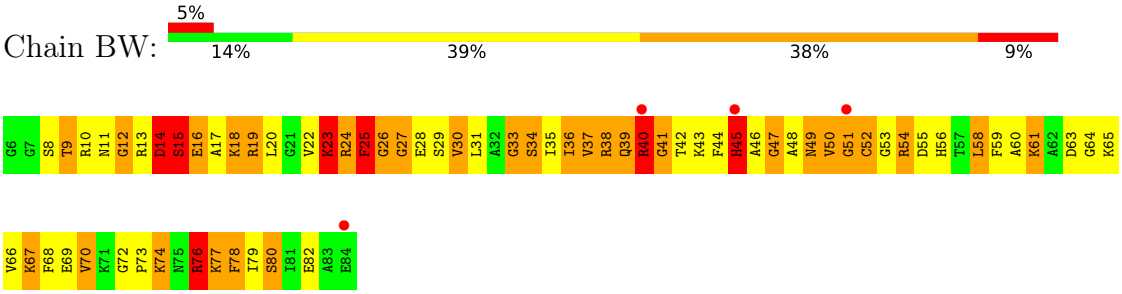
• Molecule 43: 50S ribosomal protein L25

Chain DV:



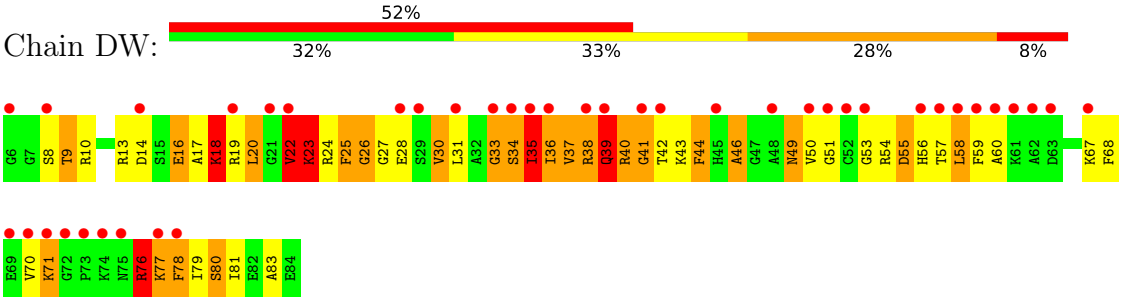
• Molecule 44: 50S ribosomal protein L27

Chain BW:



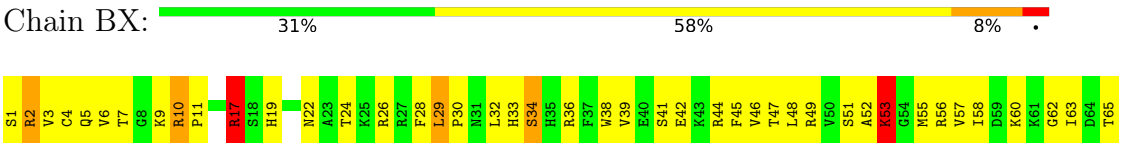
• Molecule 44: 50S ribosomal protein L27

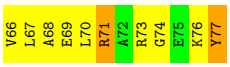
Chain DW:



• Molecule 45: 50S ribosomal protein L28

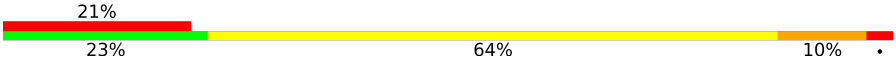
Chain BX:

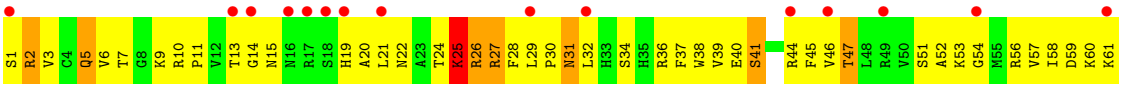




• Molecule 45: 50S ribosomal protein L28

Chain DX:



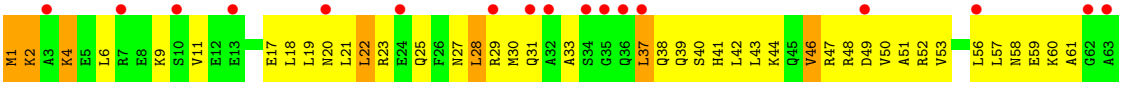


• Molecule 46: 50S ribosomal protein L29

Chain BY:

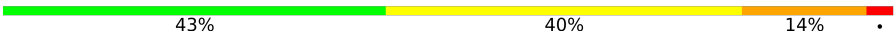
• Molecule 46: 50S ribosomal protein L29

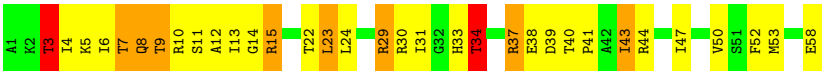
Chain DY:



• Molecule 47: 50S ribosomal protein L30

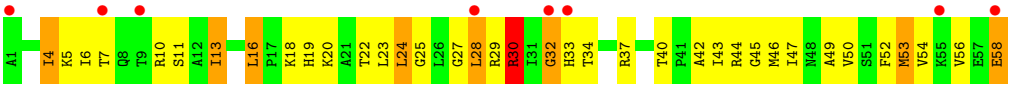
Chain BZ:





• Molecule 47: 50S ribosomal protein L30

Chain DZ:

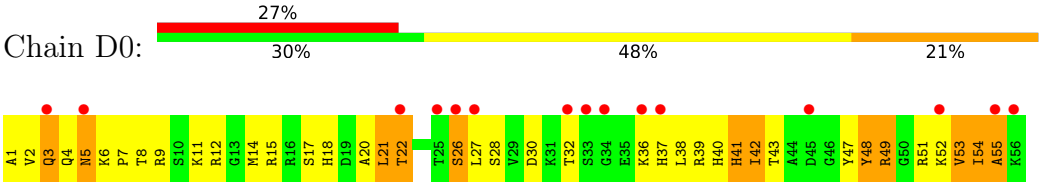


• Molecule 48: 50S ribosomal protein L32

Chain B0:

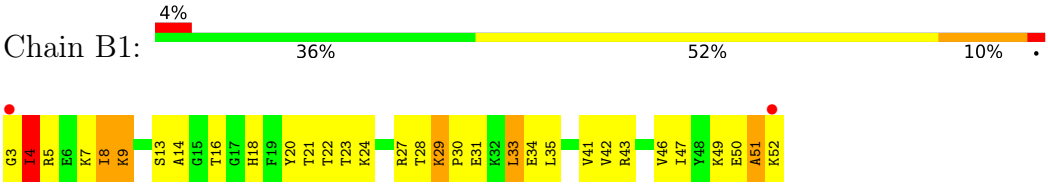
• Molecule 48: 50S ribosomal protein L32

Chain D0:



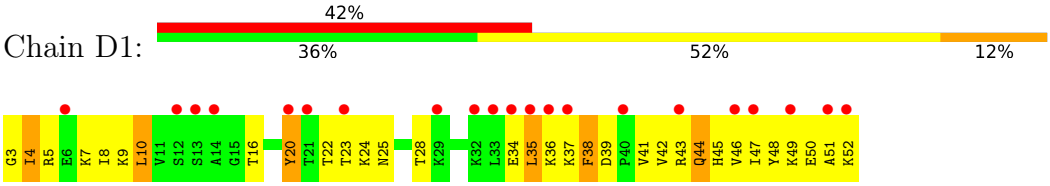
- Molecule 49: 50S ribosomal protein L33

Chain B1:



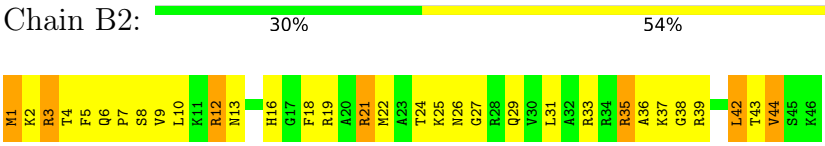
- Molecule 49: 50S ribosomal protein L33

Chain D1:



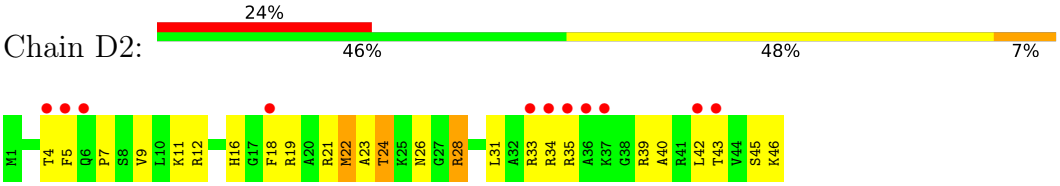
- Molecule 50: 50S ribosomal protein L34

Chain B2:



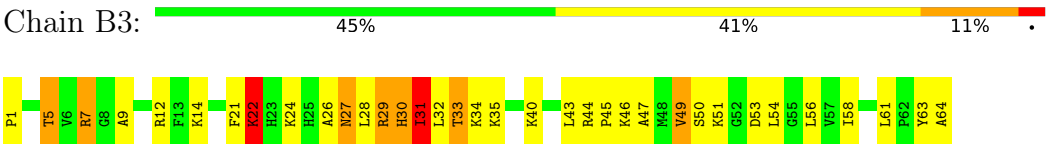
- Molecule 50: 50S ribosomal protein L34

Chain D2:



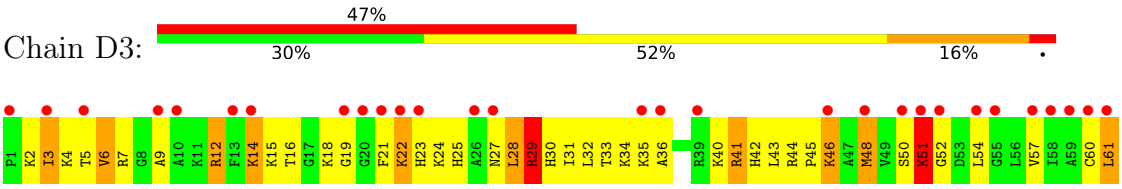
- Molecule 51: 50S ribosomal protein L35

Chain B3:



- Molecule 51: 50S ribosomal protein L35

Chain D3:

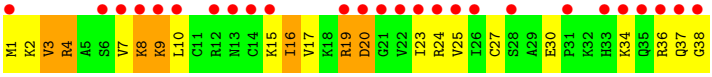


• Molecule 52: 50S ribosomal protein L36

Chain B4:

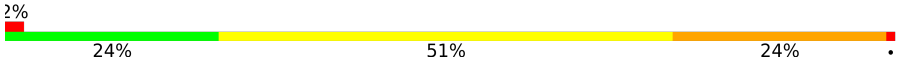
• Molecule 52: 50S ribosomal protein L36

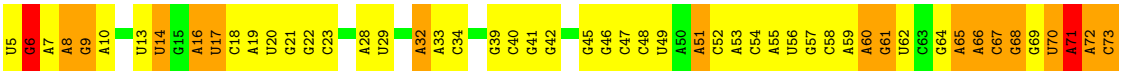
Chain D4:

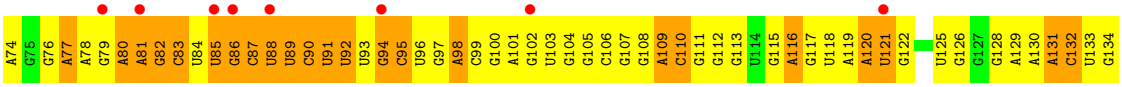


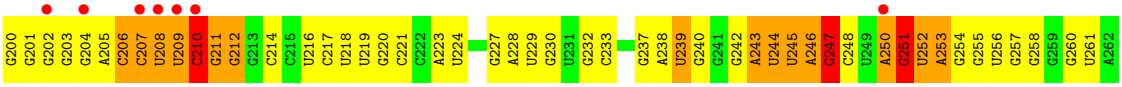
• Molecule 53: 16S rRNA

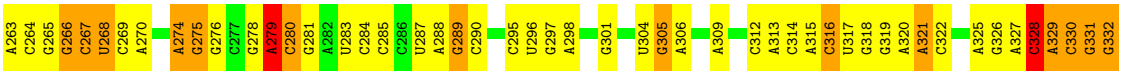
Chain CA:

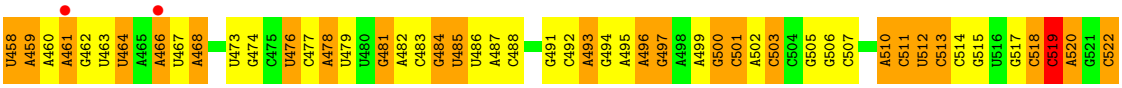


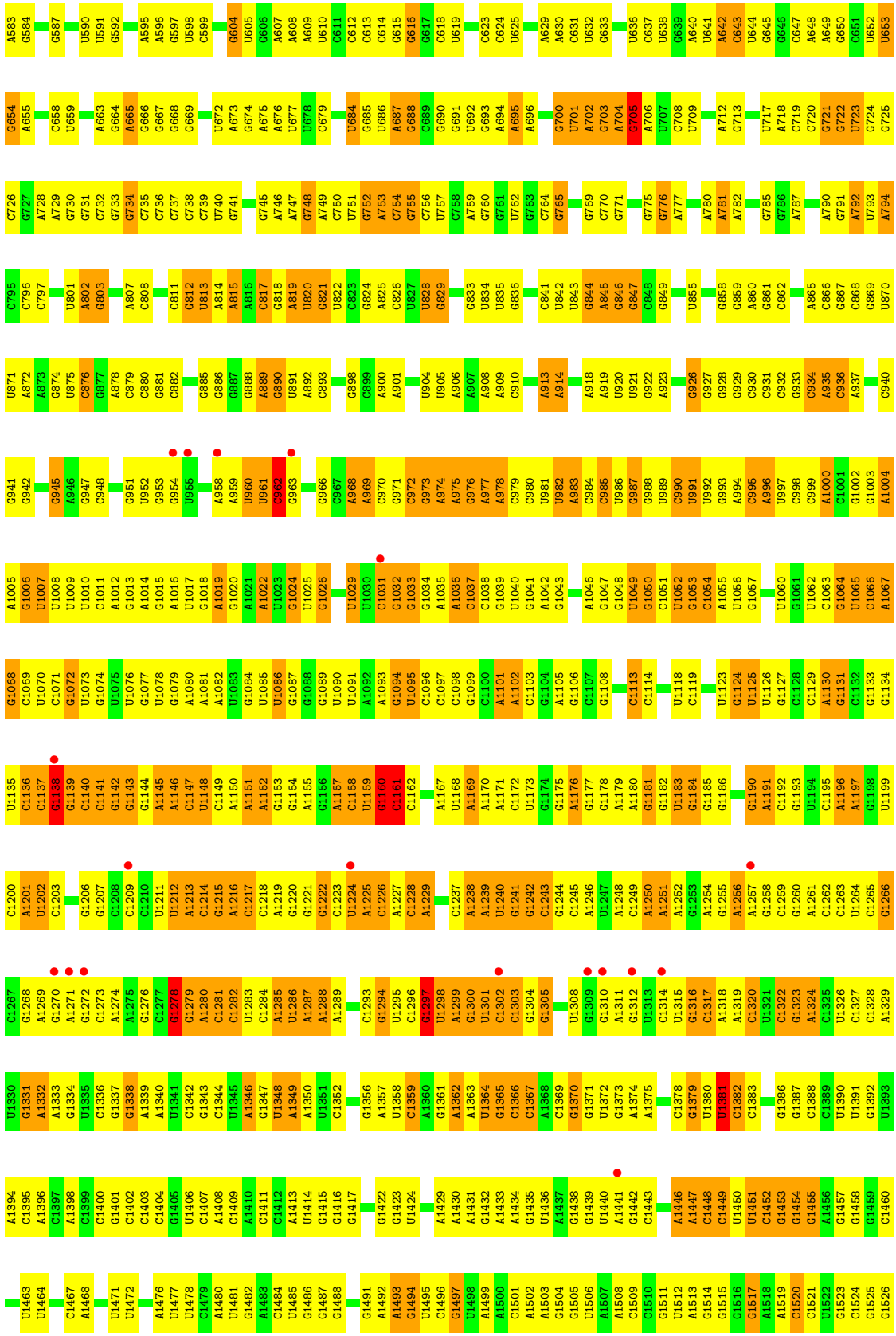








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G654 A655 C658 U659 A663 G664 A665 G666 G667 G668 G669 U672 A673 G674 A675 A676 U677 U678 C679 U684 G685 U686 A687 G688 C689 G690 G691 U692 G693 A694 A695 A696 G700 U701 A702 G703 A704 G705 A706 U707 C708 U709 A712 G713 U717 A718 C719 C720 G721 G722 U723 G724 G725
C726 G727 A728 A729 G730 G731 C732 G733 G734 C735 C736 C737 C738 C739 U740 G741 G745 A746 A747 G748 A749 C750 U751 G752 A753 C754 G755 C756 U757 C758 A759 G760 G761 U762 G763 C764 G765 G769 C770 G771 G775 G776 A777 A780 A781 A782 G785 G786 A787 A790 G791 G792 U793 A794
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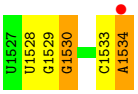
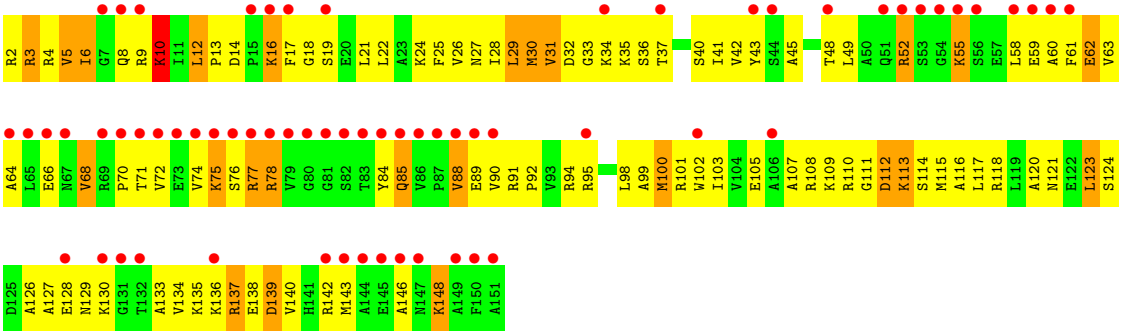
U871 A872 A873 G874 U875 C876 G877 A878 C879 C880 G881 C882 G885 G886 G887 G888 A889 G890 U891 A892 C893 G898 C899 A900 A901 U904 U905 A906 A907 A908 A909 C910 A913 A914 A918 A919 U920 U921 G922 A923 G926 G927 G928 G929 C930 C931 C932 G933 C934 A935 C936 A937 C940
G941 G942 G945 A946 G947 C948 G951 U952 G953 G954 U955 A958 A959 U960 U961 C962 G963 G966 C967 A968 A969 C970 G971 C972 G973 A974 A975 G976 A977 A978 C979 C980 U981 U982 A983 C984 C985 U986 G987 G988 U989 C990 U991 U992 G993 A994 C995 A996 U997 C998 C999 A1000 C1001 G1002 G1003 A1004
A1005 G1006 U1007 U1008 U1009 U1010 C1011 A1012 G1013 A1014 G1015 A1016 U1017 G1018 A1019 G1020 A1021 A1022 U1023 G1024 U1025 G1026 U1029 U1030 C1031 G1032 G1033 G1034 A1035 A1036 C1037 C1038 G1039 U1040 G1041 A1042 G1043 A1046 G1047 G1048 U1049 G1050 C1051 U1052 G1053 C1054 A1055 U1056 G1057 U1060 G1061 U1062 C1063 G1064 U1065 C1066 A1067
G1068 C1069 U1070 C1071 G1072 U1073 G1074 U1075 U1076 G1077 U1078 G1079 A1080 A1081 A1082 U1083 G1084 U1085 U1086 G1087 G1088 G1089 U1090 U1091 A1092 A1093 G1094 U1095 C1096 C1097 C1098 G1099 C1100 A1101 A1102 C1103 G1104 A1105 G1106 C1107 G1108 C1113 C1114 U1118 C1119 U1123 G1124 U1125 U1126 G1127 C1128 C1129 A1130 G1131 C1132 G1133 G1134
U1135 C1136 C1137 G1138 G1139 C1140 C1141 G1142 G1143 G1144 A1145 A1146 C1147 U1148 C1149 A1150 A1151 A1152 G1153 G1154 A1155 G1156 A1157 C1158 U1159 G1160 C1161 C1162 A1167 U1168 A1169 A1170 A1171 C1172 U1173 G1174 G1175 A1176 G1177 G1178 A1179 A1180 G1181 G1182 U1183 G1184 G1185 G1186 G1190 A1191 C1192 G1193 U1194 C1195 A1196 A1197 G1198 U1199
C1200 A1201 U1202 C1203 G1206 G1207 C1208 C1209 C1210 U1211 U1212 A1213 C1214 G1215 A1216 C1217 C1218 A1219 G1220 G1221 G1222 C1223 U1224 A1225 G1226 A1227 C1228 A1229 C1237 A1238 A1239 U1240 G1241 G1242 G1243 G1244 C1245 A1246 U1247 A1248 G1249 A1250 A1251 A1252 G1253 A1254 G1255 A1256 A1257 G1258 C1259 G1260 A1261 C1262 C1263 C1264 U1265 G1266
C1267 G1268 A1269 G1270 A1271 G1272 C1273 A1274 A1275 G1276 C1277 G1278 G1279 A1280 C1281 C1282 U1283 C1284 A1285 U1286 A1287 A1288 A1289 C1293 G1294 U1295 C1296 G1297 U1298 A1299 G1300 U1301 C1302 C1303 G1304 G1305 U1308 G1309 G1310 A1311 G1312 U1313 C1314 U1315 G1316 C1317 A1318 A1319 C1320 U1321 C1322 G1323 A1324 C1325 U1326 C1327 C1328 A1329
U1330 G1331 A1332 A1333 G1334 U1335 C1336 G1337 G1338 A1339 A1340 U1341 C1342 G1343 C1344 U1345 A1346 G1347 U1348 A1349 A1350 U1351 C1352 G1356 A1357 U1358 C1359 A1360 G1361 A1362 A1363 U1364 G1365 C1366 C1367 A1368 C1369 G1370 G1371 U1372 G1373 A1374 A1375 C1378 G1379 U1380 U1381 C1382 C1383 G1386 G1387 C1388 C1389 U1390 U1391 G1392 U1393
A1394 C1395 A1396 C1397 A1398 C1399 C1400 G1401 C1402 C1403 C1404 G1405 U1406 C1407 A1408 C1409 A1410 C1411 C1412 A1413 U1414 G1415 G1416 G1417 G1422 A1423 U1424 A1429 A1430 A1431 G1432 A1433 A1434 G1435 U1436 A1437 G1438 G1439 U1440 A1441 G1442 C1443 A1446 A1447 C1448 C1449 U1450 U1451 C1452 G1453 G1454 G1455 A1456 G1457 G1458 G1459 C1460
U1463 U1464 C1467 A1468 U1471 U1472 A1476 U1477 U1478 C1479 A1480 U1481 G1482 A1483 C1484 U1485 G1486 G1487 G1488 G1491 A1492 A1493 G1494 U1495 C1496 G1497 U1498 A1499 A1500 C1501 A1502 A1503 G1504 G1505 U1506 A1507 A1508 C1509 C1510 G1511 U1512 A1513 G1514 G1515 G1516 G1517 A1518 A1519 C1520 G1521 U1522 G1523 C1524 G1525 G1526



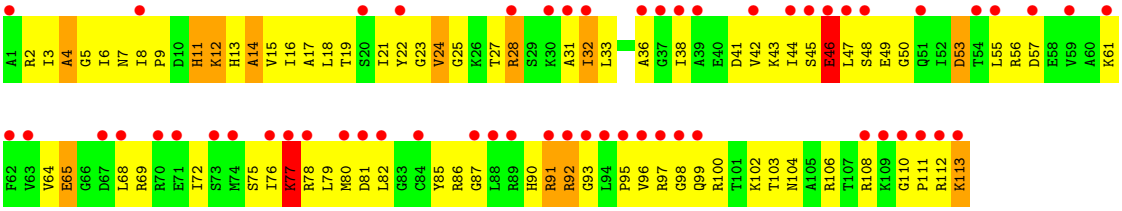
- Molecule 54: 30S ribosomal protein S7

Chain CG:



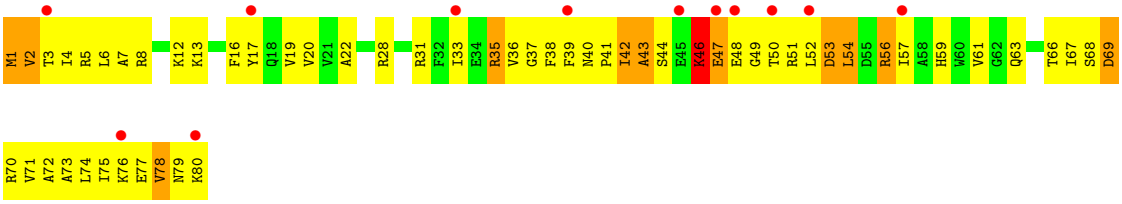
- Molecule 55: 30S ribosomal protein S13

Chain CM:



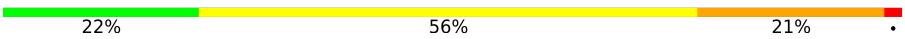
- Molecule 56: 30S ribosomal protein S16

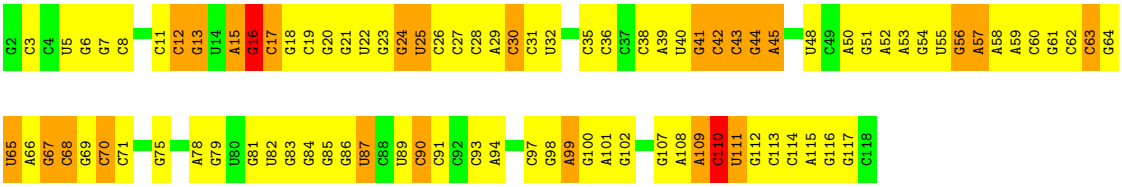
Chain CP:



- Molecule 57: 5S rRNA

Chain DB:





• Molecule 58: 50S ribosomal protein L5

Chain DF: 55% 26% 49% 22%

A1 K2 L3 H4 D5 Y6 Y7 K8 D9 E10 V11 V12 K13 K14 L15 M16 T17 E18 F19 N20 Y21 N22 S23 V24 M25 Q26 V27 P28 R29 V30 E31 K32 I33 T34 L35 N36 M37 G38 V39 G40 E41 A42 I43 A44 D45 K46 K47 L48 L49 D50 N51 A52 A53 A54 D55 L56 A57 A58 I59 S60

G61 Q62 K63 P64 L65 I66 T67 R70 K71 S72 V73 A74 G75 F76 K77 I78 R79 Y82 P83 I84 G85 C86 K87 V88 T89 L90 R91 G92 E93 R94 M95 W96 E97 F98 F99 E100 R101 L102 I103 T104 I105 A106 V107 P108 R109 I110 R111 D112 F113 R114 G115 L116 S117 A118 K119 S120 F121 D122

G123 R124 G125 N126 Y127 S128 M129 G130 V131 R132 E133 Q134 I135 I136 F137 P138 E139 I140 D141 Y142 D143 K144 V145 D146 R147 V148 R149 G150 L151 D152 I153 T154 I155 T156 T157 T158 A159 K160 S161 D162 E163 E164 G165 R166 A167 L168 L169 A170 A171 F172 D173 F174 P175 F176 R177 K178

4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	210.76Å 433.27Å 618.86Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	85.22 – 3.25 85.13 – 3.25	Depositor EDS
% Data completeness (in resolution range)	85.8 (85.22-3.25) 85.6 (85.13-3.25)	Depositor EDS
R_{merge}	0.08	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	2.27 (at 3.26Å)	Xtriage
Refinement program	PHENIX 1.6.1_357, PHENIX (phenix.refine: 1.6.1_357)	Depositor
R, R_{free}	0.193 , 0.245 0.224 , 0.268	Depositor DCC
R_{free} test set	16191 reflections (2.02%)	wwPDB-VP
Wilson B-factor (Å^2)	60.4	Xtriage
Anisotropy	0.387	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.23 , 73.3	EDS
L-test for twinning[2]	$< \|L\| > = 0.46$, $< L^2 > = 0.29$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.91	EDS
Total number of atoms	284525	wwPDB-VP
Average B, all atoms (Å^2)	104.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.50% of the height of the origin peak. No significant pseudotranslation is detected.*

[1]Intensities estimated from amplitudes.

[2]Theoretical values of $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality (i)

5.1 Standard geometry (i)

Bond lengths and bond angles in the following residue types are not validated in this section: TEL, MG, ZN

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\#\|Z\|>5$	RMSZ	$\#\|Z\|>5$
1	AA	0.45	2/36834 (0.0%)	0.87	33/57462 (0.1%)
2	AB	0.34	1/1736 (0.1%)	0.52	1/2338 (0.0%)
2	CB	0.30	1/1736 (0.1%)	0.58	4/2338 (0.2%)
3	AC	0.28	0/1652	0.50	0/2225
3	CC	0.25	0/1652	0.44	0/2225
4	AD	0.32	0/1665	0.53	0/2227
4	CD	0.39	0/1665	0.61	0/2227
5	AE	0.45	1/1119 (0.1%)	0.66	2/1504 (0.1%)
5	CE	0.36	0/1119	0.58	0/1504
6	AF	0.31	0/836	0.49	0/1128
6	CF	0.30	0/836	0.50	0/1128
7	AG	0.25	0/1196	0.45	0/1602
8	AH	0.33	0/989	0.55	0/1326
8	CH	0.30	0/989	0.52	0/1326
9	AI	0.26	0/1034	0.48	0/1375
9	CI	0.23	0/1034	0.43	0/1375
10	AJ	0.28	0/797	0.48	0/1077
10	CJ	0.24	0/797	0.47	0/1077
11	AK	0.30	0/893	0.53	0/1205
11	CK	0.28	0/893	0.52	0/1205
12	AL	0.38	0/969	0.69	1/1300 (0.1%)
12	CL	0.36	0/969	0.58	0/1300
13	AM	0.25	0/893	0.47	0/1193
14	AN	0.28	0/785	0.50	0/1043
14	CN	0.23	0/780	0.39	0/1036
15	AO	0.29	0/722	0.48	0/964
15	CO	0.39	1/722 (0.1%)	0.48	0/964
16	AP	0.31	0/659	0.51	0/884
17	AQ	0.40	0/658	0.62	0/881
17	CQ	0.34	0/658	0.52	0/881
18	AR	0.31	0/463	0.50	0/621
18	CR	0.31	0/463	0.47	0/621

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
19	AS	0.25	0/653	0.45	0/877
19	CS	0.21	0/653	0.42	0/877
20	AT	0.37	0/671	0.56	0/888
20	CT	0.28	0/671	0.50	0/888
21	AU	0.29	0/431	0.46	0/570
21	CU	0.34	0/431	0.59	0/570
22	BA	0.77	9/68626 (0.0%)	1.12	282/107056 (0.3%)
22	DA	0.39	1/68314 (0.0%)	0.86	83/106569 (0.1%)
23	BB	0.68	0/2828	1.04	4/4410 (0.1%)
24	BC	0.48	0/2122	0.73	1/2852 (0.0%)
24	DC	0.31	0/2122	0.54	0/2852
25	BD	0.55	0/1586	0.78	1/2134 (0.0%)
25	DD	0.31	0/1586	0.58	0/2134
26	BE	0.45	0/1571	0.68	1/2113 (0.0%)
26	DE	0.26	0/1571	0.48	0/2113
27	BF	0.34	0/1435	0.53	0/1926
28	BG	0.39	0/1343	0.62	0/1816
28	DG	0.24	0/1343	0.47	0/1816
29	BH	0.33	0/1122	0.52	0/1515
29	DH	0.38	1/1122 (0.1%)	0.52	0/1515
30	BI	0.23	0/1046	0.47	0/1410
30	DI	0.21	0/1046	0.42	0/1410
31	BJ	0.58	0/1152	0.84	1/1551 (0.1%)
31	DJ	0.29	0/1152	0.57	1/1551 (0.1%)
32	BK	0.55	0/948	0.80	0/1268
32	DK	0.35	0/948	0.57	0/1268
33	BL	0.46	0/1054	0.79	1/1403 (0.1%)
33	DL	0.27	0/1054	0.53	0/1403
34	BM	0.54	0/1093	0.73	0/1460
34	DM	0.30	0/1093	0.50	0/1460
35	BN	0.51	0/974	0.75	0/1301
35	DN	0.28	0/974	0.51	0/1301
36	BO	0.43	0/902	0.66	0/1209
36	DO	0.24	0/902	0.43	0/1209
37	BP	0.51	0/929	0.74	0/1242
37	DP	0.32	0/929	0.50	0/1242
38	BQ	0.61	0/960	0.78	0/1278
38	DQ	0.29	0/960	0.47	0/1278
39	BR	0.63	1/829 (0.1%)	0.79	0/1107
39	DR	0.29	0/829	0.51	0/1107
40	BS	0.57	0/864	0.78	0/1156
40	DS	0.28	0/864	0.52	0/1156
41	BT	0.45	0/745	0.70	0/994

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
41	DT	0.24	0/745	0.48	0/994
42	BU	0.43	0/788	0.70	0/1051
42	DU	0.24	0/788	0.46	0/1051
43	BV	0.44	0/766	0.61	0/1025
43	DV	0.25	0/766	0.43	0/1025
44	BW	0.61	0/603	0.89	0/797
44	DW	0.29	0/603	0.51	0/797
45	BX	0.41	0/635	0.70	0/848
45	DX	0.29	0/635	0.56	0/848
46	BY	0.37	0/510	0.64	0/677
46	DY	0.23	0/510	0.44	0/677
47	BZ	0.52	0/453	0.83	0/605
47	DZ	0.28	0/453	0.51	0/605
48	B0	0.48	0/450	0.73	0/599
48	D0	0.29	0/450	0.50	0/599
49	B1	0.38	0/417	0.62	0/554
49	D1	0.27	0/417	0.46	0/554
50	B2	0.53	0/380	0.78	0/498
50	D2	0.27	0/380	0.49	0/498
51	B3	0.49	0/513	0.70	0/676
51	D3	0.29	0/513	0.53	0/676
52	B4	0.53	0/303	0.70	0/397
52	D4	0.45	0/303	0.50	0/397
53	CA	0.41	2/36762 (0.0%)	0.83	32/57350 (0.1%)
54	CG	0.23	0/1188	0.44	0/1591
55	CM	0.20	0/885	0.40	0/1181
56	CP	0.29	0/649	0.53	0/870
57	DB	0.36	1/2803 (0.0%)	0.81	2/4371 (0.0%)
58	DF	0.23	0/1444	0.53	3/1937 (0.2%)
All	All	0.51	21/306773 (0.0%)	0.86	453/458565 (0.1%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand.A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
25	BD	0	1
35	BN	0	1
51	B3	0	1
All	All	0	3

All (21) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	BA	2092	U	O3'-P	-13.97	1.44	1.61
22	DA	2197	U	O3'-P	-13.44	1.45	1.61
53	CA	1396	A	O3'-P	-13.34	1.45	1.61
22	BA	1142	A	N9-C4	-9.96	1.31	1.37
57	DB	107	G	O3'-P	-9.89	1.49	1.61
1	AA	986	U	O3'-P	9.14	1.72	1.61
2	AB	146	SER	C-N	9.00	1.54	1.34
5	AE	73	VAL	C-N	8.78	1.54	1.34
22	BA	1115	G	O3'-P	8.71	1.71	1.61
29	DH	48	GLU	C-N	7.78	1.51	1.34
22	BA	2197	U	O3'-P	-6.42	1.53	1.61
2	CB	107	ARG	C-N	6.30	1.48	1.34
15	CO	78	THR	C-N	6.27	1.48	1.34
22	BA	2448	A	N9-C4	-5.77	1.34	1.37
39	BR	86	GLN	CB-CG	5.75	1.68	1.52
53	CA	562	U	O3'-P	-5.32	1.54	1.61
22	BA	984	A	N9-C4	-5.31	1.34	1.37
1	AA	913	A	O3'-P	5.27	1.67	1.61
22	BA	984	A	C5-C6	-5.25	1.36	1.41
22	BA	783	A	N9-C4	-5.16	1.34	1.37
22	BA	947	A	N3-C4	-5.09	1.31	1.34

All (453) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	783	A	C5-N7-C8	-11.37	98.22	103.90
22	BA	974	G	C5-N7-C8	-11.01	98.79	104.30
22	BA	974	G	C4-C5-N7	10.99	115.20	110.80
2	CB	146	SER	O-C-N	-10.79	105.44	122.70
22	BA	2499	C	N1-C2-O2	-10.28	112.73	118.90
22	BA	1142	A	C2-N3-C4	-9.96	105.62	110.60
22	BA	783	A	C4-C5-N7	9.57	115.49	110.70
53	CA	316	C	C6-N1-C2	-8.88	116.75	120.30
22	BA	974	G	N7-C8-N9	8.74	117.47	113.10
1	AA	365	U	C5-C6-N1	-8.62	118.39	122.70
22	BA	1142	A	N3-C4-C5	8.52	132.76	126.80
22	BA	2012	G	N9-C4-C5	-8.50	102.00	105.40
22	BA	2606	C	C6-N1-C2	8.42	123.67	120.30
22	BA	1779	U	C5-C6-N1	-8.41	118.50	122.70
22	BA	984	A	C4-C5-N7	8.38	114.89	110.70
22	BA	2250	G	C4-C5-N7	8.28	114.11	110.80
22	BA	2611	C	C6-N1-C2	8.16	123.57	120.30
22	BA	998	C	C6-N1-C2	-8.05	117.08	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	783	A	N7-C8-N9	7.97	117.79	113.80
22	BA	1985	C	C5-C6-N1	-7.97	117.02	121.00
22	BA	2499	C	N3-C2-O2	7.95	127.46	121.90
22	BA	529	A	C8-N9-C4	7.94	108.97	105.80
22	BA	984	A	C5-N7-C8	-7.85	99.97	103.90
22	BA	984	A	N1-C6-N6	7.84	123.30	118.60
22	BA	2250	G	C5-N7-C8	-7.77	100.42	104.30
53	CA	210	C	C2-N1-C1'	7.75	127.33	118.80
22	BA	535	G	C8-N9-C4	7.73	109.49	106.40
53	CA	251	G	C4-N9-C1'	7.67	136.48	126.50
22	BA	2676	C	C6-N1-C2	7.64	123.36	120.30
22	BA	1499	C	C6-N1-C2	-7.62	117.25	120.30
2	AB	146	SER	O-C-N	-7.53	110.65	122.70
2	CB	146	SER	CA-C-N	7.52	133.74	117.20
53	CA	962	C	C6-N1-C2	-7.51	117.30	120.30
22	BA	595	C	C6-N1-C2	7.49	123.30	120.30
53	CA	381	C	C2-N1-C1'	7.47	127.02	118.80
2	CB	107	ARG	O-C-N	-7.46	110.76	122.70
22	BA	2000	C	C6-N1-C2	7.40	123.26	120.30
58	DF	177	ARG	O-C-N	7.40	134.54	122.70
22	BA	974	G	C6-C5-N7	-7.32	126.01	130.40
58	DF	177	ARG	CA-C-N	-7.31	101.12	117.20
22	BA	1142	A	C5-N7-C8	-7.31	100.25	103.90
22	BA	673	C	C6-N1-C2	7.28	123.21	120.30
22	BA	974	G	N1-C6-O6	7.13	124.18	119.90
22	BA	523	C	N3-C4-C5	7.10	124.74	121.90
22	BA	2030	A	N1-C6-N6	-7.09	114.35	118.60
22	BA	2286	G	C5-N7-C8	-7.01	100.79	104.30
2	CB	146	SER	C-N-CA	7.01	139.23	121.70
22	BA	1266	G	N1-C2-N2	-7.01	109.89	116.20
22	BA	556	A	N1-C6-N6	6.97	122.78	118.60
1	AA	365	U	C2-N1-C1'	-6.95	109.36	117.70
22	BA	984	A	C2-N3-C4	-6.95	107.12	110.60
22	BA	2678	C	C6-N1-C2	6.92	123.07	120.30
22	BA	2606	C	N3-C4-C5	6.92	124.67	121.90
22	BA	1168	G	N3-C4-N9	6.90	130.14	126.00
22	BA	593	U	C5-C6-N1	-6.90	119.25	122.70
22	BA	2346	A	C8-N9-C4	-6.89	103.04	105.80
22	DA	776	G	C4-N9-C1'	6.86	135.42	126.50
22	BA	686	U	C2-N1-C1'	-6.85	109.47	117.70
22	BA	946	C	N1-C2-O2	-6.82	114.81	118.90
22	BA	2030	A	C5-C6-N6	6.82	129.16	123.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	4	U	C2-N1-C1'	6.81	125.88	117.70
22	BA	1663	G	C8-N9-C4	6.80	109.12	106.40
53	CA	328	C	C6-N1-C2	-6.80	117.58	120.30
53	CA	251	G	C8-N9-C1'	-6.78	118.19	127.00
22	BA	2611	C	N3-C4-C5	6.77	124.61	121.90
1	AA	1509	C	C6-N1-C2	6.74	123.00	120.30
22	BA	984	A	N9-C4-C5	-6.74	103.10	105.80
22	BA	1961	C	C6-N1-C2	6.71	122.98	120.30
22	BA	2092	U	P-O3'-C3'	6.68	127.72	119.70
22	BA	2419	U	C6-N1-C2	6.68	125.01	121.00
22	DA	774	G	C4-N9-C1'	-6.68	117.82	126.50
22	DA	1207	C	C6-N1-C2	-6.68	117.63	120.30
31	DJ	25	LEU	CA-CB-CG	6.67	130.64	115.30
22	BA	2445	G	N1-C6-O6	6.67	123.90	119.90
22	BA	1335	C	C6-N1-C2	6.64	122.95	120.30
22	BA	1763	G	C8-N9-C4	6.61	109.05	106.40
22	BA	984	A	C6-C5-N7	-6.58	127.70	132.30
22	BA	2286	G	C4-C5-N7	6.58	113.43	110.80
22	BA	1142	A	N3-C4-N9	-6.57	122.14	127.40
22	BA	530	G	C8-N9-C4	-6.55	103.78	106.40
22	DA	2197	U	P-O3'-C3'	6.55	127.56	119.70
1	AA	733	G	C4-N9-C1'	-6.54	117.99	126.50
22	BA	119	A	P-O3'-C3'	6.54	127.55	119.70
22	BA	1308	A	N1-C6-N6	-6.52	114.69	118.60
22	BA	2419	U	C5-C6-N1	-6.52	119.44	122.70
1	AA	16	A	C8-N9-C4	6.50	108.40	105.80
22	BA	2275	C	N3-C2-O2	-6.50	117.35	121.90
22	DA	1568	G	C8-N9-C1'	-6.49	118.56	127.00
22	BA	2012	G	N3-C4-N9	6.47	129.88	126.00
22	BA	1999	C	C6-N1-C2	6.46	122.89	120.30
5	AE	73	VAL	O-C-N	6.45	133.02	122.70
22	BA	1977	A	C8-N9-C4	6.43	108.37	105.80
22	BA	1266	G	N3-C2-N2	6.42	124.39	119.90
22	DA	1011	G	C4-N9-C1'	6.41	134.84	126.50
22	BA	1313	U	C2-N1-C1'	6.41	125.39	117.70
22	BA	2013	A	C8-N9-C4	6.41	108.36	105.80
22	BA	1670	C	C6-N1-C2	-6.38	117.75	120.30
22	BA	2512	C	N3-C2-O2	6.37	126.36	121.90
53	CA	210	C	C6-N1-C1'	-6.35	113.18	120.80
22	DA	1929	G	P-O3'-C3'	-6.35	112.08	119.70
22	DA	740	C	C6-N1-C2	6.34	122.83	120.30
22	BA	2250	G	C2-N3-C4	-6.33	108.74	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	998	C	N3-C2-O2	-6.33	117.47	121.90
22	BA	1997	C	N3-C4-C5	6.30	124.42	121.90
22	BA	208	C	C6-N1-C2	6.28	122.81	120.30
22	BA	2275	C	C2-N1-C1'	6.28	125.71	118.80
22	DA	1428	C	C2-N1-C1'	-6.27	111.90	118.80
22	BA	2515	C	N1-C2-O2	-6.27	115.14	118.90
22	BA	1001	A	C8-N9-C4	6.26	108.31	105.80
22	BA	974	G	C8-N9-C4	-6.25	103.90	106.40
22	BA	2250	G	N1-C6-O6	6.21	123.63	119.90
22	BA	1828	G	C5-C6-O6	6.21	132.33	128.60
22	BA	2197	U	P-O3'-C3'	-6.20	112.27	119.70
22	BA	2002	G	C4-C5-N7	6.19	113.27	110.80
22	BA	2275	C	C6-N1-C2	-6.17	117.83	120.30
53	CA	765	G	C4-N9-C1'	6.15	134.49	126.50
1	AA	400	C	C6-N1-C2	6.13	122.75	120.30
22	BA	523	C	N1-C2-O2	-6.13	115.22	118.90
22	BA	2512	C	N1-C2-O2	-6.12	115.23	118.90
22	BA	806	C	N3-C4-C5	6.11	124.34	121.90
22	BA	786	C	C6-N1-C2	6.10	122.74	120.30
22	BA	784	G	C8-N9-C4	-6.08	103.97	106.40
22	BA	530	G	N3-C4-C5	-6.06	125.57	128.60
22	BA	783	A	C6-C5-N7	-6.04	128.07	132.30
22	DA	2683	C	C6-N1-C2	-6.04	117.89	120.30
22	BA	2445	G	C5-C6-O6	-6.04	124.98	128.60
1	AA	368	U	C2-N1-C1'	6.02	124.92	117.70
22	BA	2030	A	N9-C4-C5	6.02	108.21	105.80
22	BA	2250	G	N3-C4-C5	6.02	131.61	128.60
22	DA	388	G	C4-N9-C1'	6.00	134.30	126.50
22	DA	1011	G	C8-N9-C1'	-6.00	119.21	127.00
22	BA	974	G	C5-C6-O6	-5.99	125.00	128.60
1	AA	1451	U	C2-N1-C1'	5.98	124.88	117.70
22	BA	2579	C	N3-C4-C5	5.98	124.29	121.90
22	DA	1568	G	C4-N9-C1'	5.98	134.28	126.50
1	AA	733	G	C8-N9-C1'	5.98	134.77	127.00
1	AA	1383	C	C6-N1-C2	5.96	122.68	120.30
22	BA	2645	G	C6-C5-N7	-5.95	126.83	130.40
1	AA	1053	G	C4-N9-C1'	-5.94	118.78	126.50
22	BA	1617	C	C6-N1-C2	5.93	122.67	120.30
22	BA	1785	A	C8-N9-C4	-5.93	103.43	105.80
22	BA	1997	C	C6-N1-C2	5.93	122.67	120.30
22	BA	2264	C	C6-N1-C2	5.93	122.67	120.30
22	BA	1764	C	N1-C2-O2	-5.90	115.36	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	2451	A	C8-N9-C4	-5.90	103.44	105.80
22	BA	1142	A	C4-C5-N7	5.89	113.65	110.70
22	BA	208	C	N3-C2-O2	5.89	126.02	121.90
22	BA	2021	C	C2-N1-C1'	5.87	125.26	118.80
58	DF	177	ARG	C-N-CA	-5.85	107.07	121.70
22	BA	1038	G	O3'-P-O5'	5.85	115.12	104.00
22	BA	987	C	C5-C6-N1	-5.85	118.08	121.00
22	BA	2821	A	C8-N9-C4	5.85	108.14	105.80
22	BA	1453	A	C8-N9-C4	5.84	108.14	105.80
22	DA	776	G	C8-N9-C1'	-5.83	119.42	127.00
22	BA	1452	G	C4-C5-N7	5.82	113.13	110.80
22	BA	2689	U	C2-N1-C1'	-5.82	110.72	117.70
53	CA	503	C	C6-N1-C2	-5.80	117.98	120.30
22	BA	567	U	N1-C2-O2	-5.79	118.75	122.80
22	BA	1936	A	C2-N3-C4	-5.79	107.70	110.60
22	DA	2405	G	C4-N9-C1'	5.78	134.01	126.50
22	BA	1985	C	C6-N1-C2	5.75	122.60	120.30
22	DA	726	G	N3-C2-N2	-5.75	115.88	119.90
22	BA	828	U	N3-C2-O2	5.74	126.22	122.20
22	BA	984	A	C8-N9-C1'	-5.74	117.37	127.70
22	BA	535	G	N7-C8-N9	-5.74	110.23	113.10
22	BA	740	C	C6-N1-C2	5.74	122.59	120.30
22	BA	1146	C	N1-C2-O2	-5.73	115.46	118.90
22	BA	2012	G	C8-N9-C4	5.72	108.69	106.40
22	DA	1942	C	C6-N1-C2	-5.70	118.02	120.30
22	DA	2197	U	O3'-P-O5'	-5.70	93.17	104.00
22	BA	2264	C	C5-C6-N1	-5.70	118.15	121.00
22	BA	2274	A	C8-N9-C4	5.69	108.08	105.80
22	BA	2806	C	C6-N1-C2	5.69	122.58	120.30
22	BA	2258	C	C6-N1-C2	5.69	122.57	120.30
53	CA	717	U	C2-N1-C1'	5.68	124.52	117.70
22	BA	2606	C	C2-N3-C4	-5.68	117.06	119.90
22	BA	801	G	C4-C5-N7	-5.67	108.53	110.80
22	BA	462	C	C6-N1-C2	5.67	122.57	120.30
22	DA	1049	C	C2-N1-C1'	5.67	125.03	118.80
22	DA	1386	C	C2-N1-C1'	5.66	125.02	118.80
1	AA	316	C	C6-N1-C2	-5.64	118.04	120.30
22	BA	1123	C	N3-C4-C5	5.64	124.16	121.90
53	CA	381	C	C5-C6-N1	5.64	123.82	121.00
22	BA	2503	A	C2-N3-C4	5.64	113.42	110.60
22	BA	2587	A	N1-C2-N3	5.64	132.12	129.30
22	BA	1117	C	N1-C2-O2	-5.63	115.52	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	2622	U	N1-C2-O2	-5.63	118.86	122.80
22	BA	833	A	C8-N9-C4	5.63	108.05	105.80
22	BA	2025	C	C5-C6-N1	-5.63	118.19	121.00
22	BA	2513	A	N1-C2-N3	5.63	132.11	129.30
22	BA	1036	G	C8-N9-C4	5.62	108.65	106.40
22	BA	906	U	C2-N1-C1'	-5.62	110.96	117.70
22	BA	1155	A	N9-C4-C5	5.62	108.05	105.80
22	BA	2263	C	C6-N1-C2	5.61	122.54	120.30
22	BA	208	C	C2-N1-C1'	-5.61	112.63	118.80
22	BA	2691	C	N3-C2-O2	5.61	125.82	121.90
25	BD	10	GLY	N-CA-C	5.60	127.11	113.10
22	BA	2275	C	N1-C2-O2	5.59	122.25	118.90
22	BA	2658	C	C6-N1-C2	5.58	122.53	120.30
22	BA	1223	G	N1-C6-O6	-5.57	116.56	119.90
22	BA	1452	G	C5-N7-C8	-5.57	101.51	104.30
22	BA	2286	G	N7-C8-N9	5.57	115.89	113.10
22	BA	529	A	N7-C8-N9	-5.57	111.02	113.80
1	AA	1212	U	C2-N1-C1'	5.57	124.38	117.70
22	BA	570	G	C5-N7-C8	5.56	107.08	104.30
22	DA	1255	U	C2-N1-C1'	5.56	124.38	117.70
22	DA	958	U	C2-N1-C1'	5.55	124.36	117.70
22	BA	1618	A	N1-C6-N6	-5.55	115.27	118.60
24	BC	109	LEU	CA-CB-CG	5.55	128.07	115.30
22	DA	1313	U	N3-C2-O2	-5.55	118.32	122.20
22	BA	2002	G	N7-C8-N9	5.54	115.87	113.10
22	BA	1555	G	C6-C5-N7	-5.54	127.07	130.40
22	BA	914	G	N1-C6-O6	5.54	123.22	119.90
22	BA	305	C	N1-C2-O2	-5.54	115.58	118.90
22	BA	2842	G	C5-C6-O6	-5.53	125.28	128.60
22	BA	2815	C	C6-N1-C2	5.53	122.51	120.30
1	AA	372	C	C6-N1-C2	5.52	122.51	120.30
22	DA	1654	A	C3'-C2'-C1'	5.52	105.92	101.50
22	BA	1779	U	C2-N1-C1'	-5.51	111.08	117.70
22	BA	2197	U	O3'-P-O5'	-5.51	93.52	104.00
22	BA	1617	C	C5-C6-N1	-5.51	118.25	121.00
22	BA	1784	A	C8-N9-C4	5.51	108.00	105.80
22	BA	853	C	C5-C6-N1	-5.50	118.25	121.00
22	BA	1537	G	C3'-C2'-C1'	5.50	105.90	101.50
22	DA	774	G	C8-N9-C1'	5.50	134.15	127.00
22	BA	528	A	C5-N7-C8	-5.50	101.15	103.90
22	BA	1168	G	C8-N9-C1'	-5.50	119.85	127.00
22	BA	1293	C	N1-C2-O2	-5.49	115.60	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	1137	G	C8-N9-C4	5.49	108.59	106.40
22	BA	783	A	N1-C6-N6	5.48	121.89	118.60
22	BA	2029	G	N3-C4-C5	5.47	131.34	128.60
22	BA	1238	G	C4-N9-C1'	-5.47	119.39	126.50
22	BA	817	C	N1-C2-O2	-5.46	115.62	118.90
22	BA	993	G	N1-C6-O6	-5.46	116.62	119.90
22	BA	1450	G	N3-C4-N9	5.46	129.28	126.00
53	CA	210	C	N1-C2-O2	5.45	122.17	118.90
22	BA	1555	G	N1-C6-O6	5.45	123.17	119.90
1	AA	16	A	N7-C8-N9	-5.44	111.08	113.80
22	BA	876	C	P-O3'-C3'	5.44	126.22	119.70
22	BA	756	A	C8-N9-C4	5.43	107.97	105.80
53	CA	328	C	C5-C6-N1	5.43	123.72	121.00
22	DA	1456	G	C8-N9-C4	-5.43	104.23	106.40
22	BA	386	G	P-O3'-C3'	5.42	126.20	119.70
22	BA	1186	G	C6-C5-N7	-5.42	127.15	130.40
22	BA	1001	A	N9-C4-C5	-5.41	103.63	105.80
22	BA	2035	G	N1-C6-O6	-5.41	116.65	119.90
53	CA	381	C	C6-N1-C1'	-5.41	114.31	120.80
22	BA	783	A	C8-N9-C4	-5.40	103.64	105.80
22	DA	217	A	C8-N9-C4	-5.40	103.64	105.80
22	DA	1021	A	C3'-C2'-C1'	5.40	105.82	101.50
1	AA	1053	G	C8-N9-C1'	5.40	134.02	127.00
22	DA	1667	G	C8-N9-C1'	-5.40	119.98	127.00
22	BA	985	C	C2-N1-C1'	5.39	124.73	118.80
22	BA	570	G	C4-C5-N7	-5.39	108.65	110.80
1	AA	266	G	C3'-C2'-C1'	5.38	105.81	101.50
22	BA	2579	C	N3-C4-N4	-5.38	114.23	118.00
22	BA	2820	A	C6-C5-N7	-5.38	128.53	132.30
22	DA	2498	C	C6-N1-C2	-5.38	118.15	120.30
22	DA	748	G	C4-N9-C1'	5.37	133.49	126.50
22	DA	1810	A	C8-N9-C4	-5.37	103.65	105.80
22	BA	2072	C	C6-N1-C2	5.37	122.45	120.30
33	BL	19	LEU	CA-CB-CG	5.37	127.64	115.30
22	DA	2405	G	C8-N9-C1'	-5.36	120.03	127.00
22	BA	1072	C	C2-N1-C1'	5.36	124.70	118.80
23	BB	2	G	C4-N9-C1'	5.36	133.47	126.50
22	DA	388	G	C8-N9-C1'	-5.36	120.03	127.00
22	BA	1168	G	C4-N9-C1'	5.36	133.46	126.50
22	BA	2606	C	C5-C6-N1	-5.35	118.32	121.00
22	BA	2778	A	C4-C5-C6	5.35	119.68	117.00
22	BA	834	G	N1-C6-O6	5.35	123.11	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	CA	1161	C	C6-N1-C2	-5.35	118.16	120.30
22	BA	1155	A	C8-N9-C4	-5.34	103.66	105.80
22	DA	1255	U	C5-C6-N1	5.34	125.37	122.70
22	BA	1670	C	N3-C4-C5	-5.34	119.77	121.90
1	AA	586	C	C6-N1-C2	5.34	122.44	120.30
22	BA	580	U	C5-C6-N1	-5.34	120.03	122.70
22	BA	1168	G	N3-C4-C5	-5.34	125.93	128.60
22	BA	1936	A	C3'-C2'-C1'	5.33	105.77	101.50
22	BA	2360	G	C2-N3-C4	-5.33	109.23	111.90
22	BA	984	A	C4-N9-C1'	5.33	135.89	126.30
22	BA	2866	U	N3-C2-O2	-5.33	118.47	122.20
22	DA	1206	G	C3'-C2'-C1'	5.33	105.76	101.50
22	DA	73	A	C3'-C2'-C1'	5.32	105.76	101.50
22	DA	2620	C	C6-N1-C2	5.32	122.43	120.30
22	BA	2002	G	C5-N7-C8	-5.32	101.64	104.30
53	CA	1138	G	C3'-C2'-C1'	5.32	105.76	101.50
22	BA	2553	G	N3-C4-C5	-5.32	125.94	128.60
22	BA	2362	C	C6-N1-C2	5.31	122.42	120.30
53	CA	279	A	C3'-C2'-C1'	5.31	105.75	101.50
22	BA	2250	G	C6-C5-N7	-5.31	127.22	130.40
22	BA	1022	G	N9-C4-C5	5.30	107.52	105.40
1	AA	1053	G	N3-C4-N9	-5.30	122.82	126.00
22	BA	2788	C	C6-N1-C2	5.30	122.42	120.30
22	BA	974	G	C4-N9-C1'	5.30	133.39	126.50
22	BA	1985	C	C2-N3-C4	-5.30	117.25	119.90
22	DA	1388	G	C3'-C2'-C1'	5.29	105.73	101.50
1	AA	414	A	C3'-C2'-C1'	5.29	105.73	101.50
53	CA	519	C	C3'-C2'-C1'	5.29	105.73	101.50
22	BA	70	G	C8-N9-C4	5.28	108.51	106.40
1	AA	351	G	C4-C5-N7	5.28	112.91	110.80
22	BA	523	C	N3-C2-O2	5.28	125.60	121.90
22	BA	1618	A	C5-C6-N6	5.28	127.92	123.70
22	BA	806	C	C4-C5-C6	-5.28	114.76	117.40
22	BA	2725	A	C8-N9-C4	5.28	107.91	105.80
22	BA	2197	U	OP1-P-O3'	5.27	116.80	105.20
22	BA	2362	C	C5-C6-N1	-5.27	118.37	121.00
22	DA	860	U	C3'-C2'-C1'	5.26	105.71	101.50
22	BA	1763	G	N3-C4-C5	5.26	131.23	128.60
22	BA	1293	C	C6-N1-C2	5.26	122.40	120.30
1	AA	1287	A	C3'-C2'-C1'	5.25	105.70	101.50
22	DA	412	A	C3'-C2'-C1'	5.25	105.70	101.50
22	BA	735	A	N1-C2-N3	5.25	131.92	129.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	CA	1297	G	C4-N9-C1'	-5.25	119.68	126.50
22	BA	1363	C	N1-C2-O2	-5.25	115.75	118.90
22	BA	2800	A	C3'-C2'-C1'	5.25	105.70	101.50
22	BA	2579	C	C6-N1-C2	5.24	122.40	120.30
53	CA	71	A	C3'-C2'-C1'	5.24	105.69	101.50
22	DA	671	C	C2-N1-C1'	5.24	124.57	118.80
22	BA	1779	U	C5-C4-O4	5.24	129.04	125.90
12	AL	23	LEU	N-CA-C	5.24	125.14	111.00
22	BA	529	A	N9-C4-C5	-5.23	103.71	105.80
53	CA	6	G	C3'-C2'-C1'	5.23	105.69	101.50
22	BA	753	A	C6-N1-C2	-5.23	115.46	118.60
22	DA	2021	C	C2-N1-C1'	5.23	124.55	118.80
22	BA	2778	A	N1-C2-N3	5.23	131.91	129.30
22	BA	957	C	C6-N1-C2	5.23	122.39	120.30
53	CA	428	G	C4-N9-C1'	-5.23	119.70	126.50
22	BA	746	U	N3-C4-C5	5.22	117.73	114.60
22	BA	1009	A	C8-N9-C4	5.22	107.89	105.80
22	BA	2136	G	C3'-C2'-C1'	5.22	105.68	101.50
22	BA	2587	A	C6-N1-C2	-5.22	115.47	118.60
1	AA	87	C	C3'-C2'-C1'	5.22	105.67	101.50
5	AE	73	VAL	CA-C-N	-5.22	105.72	117.20
22	DA	2310	C	C3'-C2'-C1'	5.22	105.68	101.50
1	AA	1286	U	C2-N1-C1'	5.22	123.96	117.70
22	BA	787	C	C6-N1-C2	5.21	122.38	120.30
22	DA	1993	U	N3-C2-O2	-5.21	118.55	122.20
22	BA	2313	C	C6-N1-C2	5.21	122.38	120.30
22	DA	1788	C	N3-C4-C5	5.21	123.98	121.90
22	DA	1866	A	C3'-C2'-C1'	5.21	105.67	101.50
22	DA	2565	A	C8-N9-C4	5.21	107.88	105.80
22	DA	1267	U	C3'-C2'-C1'	5.20	105.66	101.50
22	DA	1274	A	C3'-C2'-C1'	5.20	105.66	101.50
22	BA	743	A	C8-N9-C4	5.20	107.88	105.80
1	AA	1381	U	C3'-C2'-C1'	5.20	105.66	101.50
22	BA	876	C	O3'-P-O5'	-5.20	94.13	104.00
22	DA	2021	C	C5-C6-N1	5.19	123.59	121.00
22	BA	2466	C	C6-N1-C2	5.18	122.37	120.30
1	AA	184	G	C3'-C2'-C1'	5.18	105.64	101.50
22	BA	1615	C	C6-N1-C2	5.18	122.37	120.30
22	DA	1400	U	C3'-C2'-C1'	5.18	105.64	101.50
22	BA	1772	A	C8-N9-C4	5.18	107.87	105.80
23	BB	57	A	C8-N9-C4	-5.17	103.73	105.80
22	BA	914	G	C4-C5-N7	5.17	112.87	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	2020	A	C8-N9-C4	-5.17	103.73	105.80
22	BA	2870	C	C6-N1-C2	5.17	122.37	120.30
1	AA	1348	U	C3'-C2'-C1'	5.16	105.63	101.50
22	BA	1617	C	C2-N1-C1'	-5.16	113.12	118.80
22	BA	1293	C	N3-C2-O2	5.16	125.51	121.90
22	DA	575	A	C3'-C2'-C1'	5.16	105.63	101.50
22	BA	2452	C	C6-N1-C2	5.16	122.36	120.30
22	BA	1142	A	N1-C6-N6	5.16	121.69	118.60
22	BA	2258	C	C5-C6-N1	-5.16	118.42	121.00
22	DA	475	C	C2-N1-C1'	5.16	124.47	118.80
22	DA	2508	G	C8-N9-C4	5.16	108.46	106.40
22	DA	672	C	C6-N1-C2	-5.15	118.24	120.30
22	BA	142	A	C3'-C2'-C1'	5.15	105.62	101.50
22	BA	1340	U	N3-C4-O4	-5.15	115.80	119.40
22	BA	2282	G	N3-C4-C5	-5.14	126.03	128.60
22	BA	15	G	N3-C4-N9	-5.14	122.92	126.00
22	BA	2250	G	N9-C4-C5	-5.14	103.34	105.40
22	BA	1835	G	N1-C6-O6	5.13	122.98	119.90
22	DA	103	A	C3'-C2'-C1'	5.13	105.60	101.50
22	BA	2012	G	C4-C5-N7	5.12	112.85	110.80
22	BA	2538	C	N3-C4-C5	5.12	123.95	121.90
22	BA	686	U	C6-N1-C1'	5.12	128.37	121.20
22	BA	931	U	C2-N1-C1'	5.12	123.84	117.70
53	CA	247	G	C3'-C2'-C1'	5.12	105.59	101.50
23	BB	95	U	C5-C4-O4	-5.11	122.83	125.90
26	BE	44	ARG	NE-CZ-NH1	-5.11	117.74	120.30
23	BB	52	A	N9-C4-C5	-5.11	103.76	105.80
53	CA	765	G	C8-N9-C1'	-5.11	120.36	127.00
31	BJ	140	LEU	CA-CB-CG	5.11	127.04	115.30
53	CA	353	A	C8-N9-C4	-5.11	103.76	105.80
22	DA	2615	U	C3'-C2'-C1'	5.11	105.58	101.50
22	BA	1311	G	C5-N7-C8	-5.10	101.75	104.30
22	BA	1944	U	C5-C6-N1	-5.10	120.15	122.70
22	DA	1612	C	C3'-C2'-C1'	5.10	105.58	101.50
22	DA	389	G	C3'-C2'-C1'	5.10	105.58	101.50
22	DA	1695	G	C3'-C2'-C1'	5.10	105.58	101.50
22	BA	828	U	N1-C2-O2	-5.10	119.23	122.80
22	BA	26	G	N3-C4-C5	-5.09	126.05	128.60
1	AA	309	A	C8-N9-C4	5.09	107.84	105.80
53	CA	1381	U	C3'-C2'-C1'	5.09	105.57	101.50
22	DA	14	A	C3'-C2'-C1'	5.09	105.57	101.50
22	BA	507	A	C3'-C2'-C1'	5.09	105.57	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	1302	C	C2-N1-C1'	5.08	124.39	118.80
22	DA	1929	G	O3'-P-O5'	-5.08	94.34	104.00
22	DA	1996	C	C6-N1-C2	5.08	122.33	120.30
53	CA	251	G	C6-C5-N7	-5.08	127.35	130.40
22	DA	128	C	C3'-C2'-C1'	5.08	105.56	101.50
22	DA	2880	C	C6-N1-C2	-5.08	118.27	120.30
22	DA	139	U	C2-N1-C1'	5.08	123.80	117.70
1	AA	1079	G	N3-C4-C5	-5.08	126.06	128.60
22	DA	604	G	C3'-C2'-C1'	5.08	105.56	101.50
22	BA	1030	C	N1-C2-O2	-5.07	115.86	118.90
22	BA	1997	C	C2-N1-C1'	-5.07	113.22	118.80
22	DA	1555	G	C3'-C2'-C1'	5.07	105.56	101.50
22	DA	335	C	C3'-C2'-C1'	5.07	105.55	101.50
22	DA	1475	G	C4-N9-C1'	5.07	133.09	126.50
57	DB	16	G	C3'-C2'-C1'	5.07	105.55	101.50
22	BA	2676	C	C5-C6-N1	-5.07	118.47	121.00
22	BA	916	G	C6-C5-N7	-5.06	127.36	130.40
22	BA	2738	A	C8-N9-C4	5.06	107.83	105.80
53	CA	705	G	C8-N9-C4	-5.06	104.38	106.40
22	BA	2853	C	C6-N1-C2	5.06	122.32	120.30
22	DA	2458	G	C4-C5-N7	5.06	112.82	110.80
22	BA	2853	C	C5-C6-N1	-5.06	118.47	121.00
22	BA	864	G	C8-N9-C1'	-5.06	120.43	127.00
22	BA	467	G	C8-N9-C4	5.05	108.42	106.40
22	DA	1648	U	C3'-C2'-C1'	5.05	105.54	101.50
53	CA	1278	G	C3'-C2'-C1'	5.05	105.54	101.50
22	DA	483	A	C3'-C2'-C1'	5.05	105.54	101.50
53	CA	6	G	C8-N9-C1'	5.05	133.56	127.00
1	AA	198	G	C3'-C2'-C1'	5.04	105.54	101.50
22	BA	2252	G	C8-N9-C4	5.04	108.42	106.40
22	DA	2656	U	C3'-C2'-C1'	5.04	105.54	101.50
22	BA	2242	G	N1-C6-O6	5.04	122.93	119.90
22	DA	2428	G	C3'-C2'-C1'	5.04	105.53	101.50
53	CA	1160	G	C3'-C2'-C1'	5.04	105.53	101.50
22	BA	2092	U	OP2-P-O3'	5.04	116.28	105.20
22	BA	941	A	N1-C2-N3	5.04	131.82	129.30
22	BA	378	C	N3-C4-C5	5.03	123.91	121.90
22	BA	556	A	C5-C6-N6	-5.03	119.67	123.70
22	DA	1026	G	C3'-C2'-C1'	5.03	105.52	101.50
22	DA	1510	G	C3'-C2'-C1'	5.03	105.52	101.50
22	BA	2495	G	C8-N9-C4	5.03	108.41	106.40
22	DA	1399	C	C3'-C2'-C1'	5.03	105.52	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	AA	534	U	C3'-C2'-C1'	5.02	105.52	101.50
22	BA	2689	U	C5-C4-O4	5.02	128.91	125.90
22	BA	1984	G	N3-C4-N9	5.02	129.01	126.00
22	BA	2045	C	C2-N3-C4	-5.02	117.39	119.90
22	DA	1493	C	C2-N1-C1'	5.02	124.32	118.80
22	BA	1999	C	C5-C6-N1	-5.02	118.49	121.00
22	DA	2197	U	OP1-P-O3'	5.02	116.24	105.20
57	DB	110	C	C3'-C2'-C1'	5.02	105.52	101.50
22	DA	915	C	C3'-C2'-C1'	5.02	105.51	101.50
22	BA	1555	G	C5-C6-O6	-5.01	125.59	128.60
22	BA	2026	U	C5-C6-N1	-5.01	120.19	122.70
22	BA	2830	C	C5-C6-N1	-5.01	118.49	121.00
22	DA	1915	U	C3'-C2'-C1'	5.01	105.51	101.50
22	BA	2488	G	N1-C6-O6	5.01	122.90	119.90
22	BA	2762	C	N1-C2-O2	-5.01	115.90	118.90

There are no chirality outliers.

All (3) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
51	B3	29	ARG	Peptide
25	BD	9	VAL	Peptide
35	BN	101	GLY	Peptide

5.2 Too-close contacts (i)

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AA	32895	0	16553	1232	1
2	AB	1705	0	1732	183	0
2	CB	1705	0	1732	151	0
3	AC	1625	0	1699	109	0
3	CC	1625	0	1699	128	0
4	AD	1643	0	1710	145	0
4	CD	1643	0	1710	157	0
5	AE	1106	0	1148	148	0
5	CE	1106	0	1148	101	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
6	AF	818	0	808	87	0
6	CF	818	0	808	67	0
7	AG	1182	0	1240	86	0
8	AH	979	0	1034	99	0
8	CH	979	0	1034	92	0
9	AI	1022	0	1070	84	0
9	CI	1022	0	1070	107	0
10	AJ	787	0	828	78	0
10	CJ	787	0	828	91	0
11	AK	877	0	887	91	0
11	CK	877	0	887	71	0
12	AL	955	0	1019	90	0
12	CL	955	0	1019	100	0
13	AM	884	0	944	73	0
14	AN	774	0	827	69	0
14	CN	769	0	822	77	0
15	AO	714	0	737	46	0
15	CO	714	0	737	52	0
16	AP	649	0	666	50	0
17	AQ	649	0	691	71	0
17	CQ	649	0	691	66	0
18	AR	456	0	478	30	0
18	CR	456	0	478	39	0
19	AS	638	0	665	59	0
19	CS	638	0	665	65	0
20	AT	665	0	714	81	0
20	CT	665	0	714	45	0
21	AU	426	0	449	80	0
21	CU	426	0	449	80	0
22	BA	61274	0	30819	1937	6
22	DA	60995	0	30679	3516	8
23	BB	2529	0	1281	73	0
24	BC	2083	0	2157	217	0
24	DC	2083	0	2157	215	0
25	BD	1565	0	1616	196	1
25	DD	1565	0	1616	189	0
26	BE	1552	0	1619	151	0
26	DE	1552	0	1619	180	0
27	BF	1411	0	1447	135	0
28	BG	1323	0	1374	146	0
28	DG	1323	0	1374	126	0
29	BH	1111	0	1148	102	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
29	DH	1111	0	1148	96	0
30	BI	1032	0	1088	112	0
30	DI	1032	0	1088	65	0
31	BJ	1129	0	1162	156	0
31	DJ	1129	0	1162	140	0
32	BK	939	0	1012	121	0
32	DK	939	0	1012	109	0
33	BL	1045	0	1117	130	1
33	DL	1045	0	1117	128	0
34	BM	1074	0	1157	90	0
34	DM	1074	0	1157	94	0
35	BN	961	0	1000	89	0
35	DN	961	0	1000	122	0
36	BO	892	0	923	74	0
36	DO	892	0	923	79	0
37	BP	917	0	965	141	0
37	DP	917	0	965	121	0
38	BQ	947	0	1022	127	0
38	DQ	947	0	1022	121	0
39	BR	816	0	839	116	0
39	DR	816	0	839	93	0
40	BS	857	0	922	74	0
40	DS	857	0	922	60	0
41	BT	739	0	807	112	0
41	DT	739	0	807	99	0
42	BU	780	0	834	54	0
42	DU	780	0	834	92	0
43	BV	753	0	780	66	0
43	DV	753	0	780	60	0
44	BW	596	0	610	204	0
44	DW	596	0	610	115	0
45	BX	625	0	655	56	0
45	DX	625	0	655	75	0
46	BY	509	0	543	50	0
46	DY	509	0	543	63	0
47	BZ	449	0	491	33	0
47	DZ	449	0	491	40	1
48	B0	444	0	461	30	0
48	D0	444	0	461	57	0
49	B1	410	0	440	33	0
49	D1	410	0	440	36	0
50	B2	377	0	418	35	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
50	D2	377	0	418	42	0
51	B3	504	0	574	47	0
51	D3	504	0	574	57	0
52	B4	302	0	340	30	0
52	D4	302	0	342	27	0
53	CA	32831	0	16521	1619	0
54	CG	1175	0	1230	131	0
55	CM	877	0	937	91	0
56	CP	639	0	656	61	0
57	DB	2507	0	1270	159	0
58	DF	1420	0	1460	184	0
59	AA	43	0	0	0	0
59	BA	134	0	0	0	0
59	BB	4	0	0	0	0
59	CA	41	0	0	0	0
59	CE	1	0	0	0	0
59	DA	133	0	0	0	0
59	DB	1	0	0	0	0
59	DC	2	0	0	0	0
59	DJ	1	0	0	0	0
60	BA	58	0	64	8	0
61	B4	1	0	0	0	0
61	D4	1	0	0	0	0
62	AA	198	0	0	5	0
62	AL	1	0	0	0	0
62	AN	6	0	0	1	0
62	AT	2	0	0	0	0
62	AU	1	0	0	0	0
62	B2	1	0	0	0	0
62	B3	3	0	0	0	0
62	B4	1	0	0	0	0
62	BA	598	0	0	29	0
62	BB	20	0	0	1	0
62	BC	10	0	0	0	0
62	BD	2	0	0	0	0
62	BE	1	0	0	0	0
62	BL	2	0	0	1	0
62	BN	3	0	0	1	0
62	BQ	1	0	0	0	0
62	BR	1	0	0	0	0
62	BT	1	0	0	1	0
62	CA	192	0	0	6	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
62	CE	5	0	0	1	0
62	CI	1	0	0	0	0
62	CL	1	0	0	0	0
62	CN	3	0	0	0	0
62	CT	3	0	0	0	0
62	CU	2	0	0	0	0
62	D2	1	0	0	1	0
62	D3	1	0	0	0	0
62	D4	3	0	0	0	0
62	DA	595	0	0	28	0
62	DB	4	0	0	0	0
62	DC	13	0	0	1	0
62	DD	3	0	0	1	0
62	DE	3	0	0	0	0
62	DJ	6	0	0	0	0
62	DL	6	0	0	1	0
62	DN	2	0	0	0	0
62	DT	3	0	0	0	0
62	DU	2	0	0	0	0
62	DV	1	0	0	0	0
All	All	284525	0	190904	16341	9

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 35.

All (16341) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1157:A:H4'	53:CA:1158:C:O5'	1.38	1.20
22:DA:1808:A:H3'	22:DA:1809:A:H8	1.05	1.20
53:CA:120:A:C3'	53:CA:121:U:H5"	1.73	1.19
22:DA:2091:C:OP2	22:DA:2092:U:H3'	1.39	1.18
22:BA:900:A:C2'	22:BA:901:C:H5'	1.74	1.17
21:CU:16:ARG:HG3	21:CU:19:LYS:HG2	1.23	1.16
22:BA:1082:U:H5'	30:BI:117:THR:O	1.43	1.16
38:BQ:63:ARG:NH1	38:BQ:96:ASP:HA	1.59	1.16
1:AA:975:A:H4'	1:AA:976:G:H5'	1.28	1.16
12:CL:43:LYS:HB3	12:CL:44:PRO:HD2	1.26	1.15
22:DA:227:A:H4'	22:DA:228:C:OP1	1.46	1.15
22:DA:1385:A:H4'	22:DA:1386:C:OP1	1.37	1.15
1:AA:721:G:H4'	1:AA:722:G:O5'	1.44	1.15

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:31:VAL:HB	29:BH:32:PRO:HD2	1.19	1.14
22:BA:1179:G:H3'	22:BA:1180:U:H4'	1.25	1.13
1:AA:1129:C:H5"	9:AI:17:ARG:HH22	0.96	1.12
22:BA:2800:A:H4'	22:BA:2801:G:OP2	1.32	1.12
22:DA:454:A:H4'	22:DA:455:C:OP2	1.37	1.12
22:DA:2344:U:H4'	22:DA:2345:G:OP1	1.44	1.12
22:BA:1458:U:H4'	22:BA:1459:G:O5'	1.26	1.12
22:DA:1489:C:H4'	22:DA:1490:A:OP1	1.39	1.11
22:BA:900:A:H2'	22:BA:901:C:H5'	1.17	1.11
22:BA:1073:A:H3'	22:BA:1074:G:H5"	1.27	1.11
31:BJ:44:TYR:HB2	38:BQ:63:ARG:HB3	1.29	1.10
22:BA:904:G:H2'	22:BA:905:A:H8	1.08	1.10
22:BA:1025:G:H4'	22:BA:1026:G:OP2	1.44	1.10
1:AA:982:U:H4'	1:AA:983:A:O5'	1.43	1.10
44:BW:76:ARG:HH21	44:BW:76:ARG:HG3	1.10	1.09
43:BV:80:HIS:CD2	43:BV:83:LYS:H	1.70	1.09
57:DB:12:C:H4'	57:DB:13:G:OP1	1.30	1.09
38:DQ:61:ILE:HD11	38:DQ:92:LYS:HD3	1.25	1.09
22:DA:1913:A:H4'	22:DA:1914:C:OP1	1.28	1.09
4:CD:2:ARG:HH21	4:CD:114:ARG:HD3	1.06	1.09
12:AL:49:ARG:HH11	12:AL:49:ARG:HG2	1.05	1.08
6:AF:16:GLU:HG2	4:CD:191:SER:HB2	1.22	1.08
27:BF:35:LEU:HB3	27:BF:153:ILE:HG22	1.27	1.08
57:DB:56:G:H4'	57:DB:57:A:O5'	1.46	1.08
22:DA:241:A:H4'	22:DA:242:G:OP1	1.35	1.08
57:DB:112:G:H21	36:DO:45:SER:HA	1.18	1.08
22:DA:483:A:H2'	22:DA:484:C:H6	1.18	1.08
33:BL:93:ASN:HD22	33:BL:94:THR:N	1.53	1.07
6:AF:3:HIS:H	6:AF:92:THR:HG23	1.19	1.07
53:CA:1183:U:H3'	53:CA:1184:G:H5"	1.28	1.07
44:DW:40:ARG:HH11	44:DW:40:ARG:HG2	1.05	1.07
22:DA:2092:U:H4'	22:DA:2093:G:OP1	1.35	1.07
8:CH:103:VAL:HG12	8:CH:124:ILE:HA	1.35	1.07
22:DA:1032:A:H1'	52:D4:23:ILE:HD13	1.37	1.06
9:AI:98:ARG:HG2	9:AI:103:VAL:HG21	1.34	1.06
44:BW:9:THR:HG23	44:BW:10:ARG:HD3	1.35	1.06
22:DA:397:U:OP1	45:DX:30:PRO:HA	1.54	1.06
22:DA:1537:G:C2'	22:DA:1538:G:H4'	1.85	1.06
22:BA:902:C:C4	22:BA:903:C:N4	2.24	1.06
53:CA:120:A:H3'	53:CA:121:U:H5"	1.32	1.06
21:CU:24:LYS:HG3	21:CU:25:ALA:H	1.20	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DN:37:THR:HG22	35:DN:39:PRO:HD2	1.37	1.06
44:BW:28:GLU:HB3	44:BW:31:LEU:HD21	1.35	1.05
44:DW:27:GLY:HA2	44:DW:31:LEU:HD11	1.31	1.05
22:BA:636:G:C6	33:BL:111:ILE:HD11	1.91	1.05
22:DA:1126:A:H4'	22:DA:1127:A:O5'	1.44	1.05
2:AB:89:PHE:HB3	2:AB:149:GLY:HA2	1.34	1.05
30:BI:79:LEU:HA	30:BI:83:ALA:HB3	1.34	1.05
1:AA:204:G:H3'	1:AA:205:A:H5"	1.32	1.05
37:BP:50:ARG:CB	37:BP:57:ALA:H	1.69	1.05
1:AA:1468:A:H2'	1:AA:1469:C:H5"	1.39	1.04
22:DA:49:A:H4'	22:DA:50:U:O5'	1.56	1.04
22:DA:1537:G:H2'	22:DA:1538:G:H4'	1.36	1.04
22:DA:2091:C:H3'	22:DA:2092:U:H5"	1.39	1.04
22:DA:1915:U:H2'	22:DA:1916:A:C8	1.92	1.04
37:BP:4:ILE:HG22	37:BP:5:LYS:H	1.22	1.04
22:DA:1808:A:H3'	22:DA:1809:A:C8	1.92	1.04
22:BA:1060:U:H4'	22:BA:1061:U:H5'	1.34	1.04
22:BA:1179:G:C5	22:BA:1180:U:H1'	1.91	1.04
43:BV:80:HIS:HD2	43:BV:83:LYS:N	1.56	1.04
22:DA:491:G:H2'	22:DA:492:A:H8	1.22	1.04
34:DM:27:SER:H	34:DM:66:ARG:NH2	1.55	1.04
54:CG:22:LEU:HA	54:CG:25:PHE:HB3	1.40	1.03
12:CL:43:LYS:HB3	12:CL:44:PRO:CD	1.88	1.03
32:DK:71:ARG:HB3	32:DK:72:PRO:HD3	1.40	1.03
53:CA:1145:A:H4'	53:CA:1146:A:OP1	1.52	1.03
20:CT:73:ARG:HH11	20:CT:73:ARG:HG2	1.22	1.03
22:DA:302:C:O2'	22:DA:303:G:H8	1.39	1.03
38:DQ:87:VAL:HG21	39:DR:52:PRO:HD3	1.39	1.03
1:AA:451:A:H4'	1:AA:452:A:O5'	1.56	1.03
53:CA:330:C:O2'	53:CA:331:G:H8	1.38	1.03
41:BT:50:LEU:H	41:BT:50:LEU:HD12	1.24	1.02
37:BP:50:ARG:HB3	37:BP:57:ALA:H	1.17	1.02
22:DA:249:C:H5'	22:DA:2394:C:O2'	1.58	1.02
22:DA:1021:A:O2'	22:DA:1022:G:H4'	1.59	1.02
22:DA:1552:A:O2'	22:DA:1553:A:H5'	1.59	1.02
32:BK:18:ARG:HH11	32:BK:18:ARG:HG3	1.21	1.02
9:CI:51:LEU:HG	9:CI:86:LEU:HD22	1.42	1.02
22:DA:1817:G:O2'	22:DA:1818:U:H5'	1.59	1.02
32:DK:61:VAL:HG11	32:DK:112:PHE:HE2	1.22	1.02
22:BA:1654:A:O2'	25:BD:118:PHE:CG	2.13	1.02
20:AT:43:LYS:HB3	20:AT:86:ALA:HB1	1.42	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:147:PRO:HD3	24:DC:184:GLU:HG3	1.42	1.02
22:BA:855:G:H21	44:BW:23:LYS:HG2	1.21	1.01
29:DH:115:VAL:HG12	29:DH:132:PHE:HB2	1.37	1.01
37:DP:20:ARG:HG2	37:DP:112:ARG:HH12	1.25	1.01
53:CA:60:A:H4'	53:CA:61:G:O5'	1.58	1.01
22:DA:216:A:O2'	22:DA:217:A:H8	1.42	1.01
39:DR:27:ILE:HG22	39:DR:28:ALA:H	1.26	1.01
22:DA:491:G:H2'	22:DA:492:A:C8	1.95	1.01
22:DA:1693:U:H4'	22:DA:1694:C:OP2	1.60	1.01
22:DA:2346:A:H3'	22:DA:2347:C:H5"	1.38	1.01
22:DA:2389:G:H5"	22:DA:2390:U:H5'	1.42	1.01
22:DA:1565:C:H3'	24:DC:17:LYS:HE2	1.40	1.01
1:AA:1055:A:H1'	3:AC:155:ARG:HH21	1.24	1.01
22:DA:762:U:H4'	22:DA:763:G:O5'	1.57	1.01
28:BG:84:LYS:HG3	28:BG:132:LEU:N	1.75	1.00
22:DA:2800:A:H2'	22:DA:2801:G:H4'	1.42	1.00
17:AQ:18:LYS:HA	17:AQ:47:ASP:HB2	1.42	1.00
22:BA:271:G:H4'	22:BA:272:A:OP1	1.58	1.00
5:CE:29:ILE:HG23	5:CE:30:PHE:N	1.74	1.00
22:BA:904:G:O2'	22:BA:905:A:H5'	1.60	1.00
17:AQ:45:VAL:HG21	17:AQ:60:ILE:HD13	1.43	1.00
4:AD:145:ARG:HH11	4:AD:147:LYS:HE3	1.27	1.00
53:CA:209:U:H5"	53:CA:210:C:OP2	1.62	1.00
22:DA:1079:C:H41	22:DA:1088:A:H5"	1.24	1.00
45:DX:53:LYS:HA	45:DX:56:ARG:HB3	1.40	1.00
22:BA:1535:A:H4'	22:BA:1536:C:OP2	1.61	1.00
32:DK:13:ASN:HD21	32:DK:97:THR:H	1.03	1.00
1:AA:923:A:H5"	5:AE:25:LYS:HE2	1.44	0.99
57:DB:24:G:H1'	57:DB:27:C:H42	1.23	0.99
22:BA:1340:U:H4'	22:BA:1341:G:OP2	1.58	0.99
33:BL:74:THR:HG22	33:BL:107:PHE:HB2	1.39	0.99
1:AA:1239:A:H62	1:AA:1299:A:N6	1.59	0.99
51:B3:31:ILE:HD11	51:B3:34:LYS:HD2	1.41	0.99
22:DA:1508:A:H4'	22:DA:1509:A:OP1	1.61	0.99
53:CA:82:G:H2'	53:CA:83:C:H4'	1.41	0.99
22:DA:70:G:H4'	22:DA:71:A:OP1	1.61	0.99
22:DA:2776:A:H4'	22:DA:2777:G:O5'	1.55	0.99
37:DP:91:VAL:HG22	37:DP:109:ILE:HG21	1.40	0.99
41:BT:32:LEU:H	41:BT:83:ALA:HB3	1.27	0.99
22:DA:931:U:O2	22:DA:931:U:H2'	1.58	0.99
22:BA:904:G:N3	22:BA:905:A:C8	2.31	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:D4:16:ILE:HG12	52:D4:25:VAL:HG22	1.38	0.99
1:AA:1021:A:H2'	1:AA:1022:A:H5"	1.43	0.99
2:CB:114:LYS:HE3	2:CB:151:LYS:HB2	1.45	0.98
22:DA:1237:A:C2	22:DA:1238:G:H1'	1.98	0.98
31:DJ:44:TYR:HB2	38:DQ:63:ARG:CZ	1.93	0.98
2:AB:40:ILE:HD13	2:AB:201:GLY:HA2	1.46	0.98
22:BA:903:C:O2'	22:BA:904:G:H5'	1.62	0.98
10:CJ:84:VAL:HG23	10:CJ:85:ASP:H	1.25	0.98
57:DB:24:G:H1'	57:DB:27:C:N4	1.75	0.98
1:AA:486:U:C6	1:AA:486:U:H5"	1.99	0.98
5:AE:80:LEU:HD23	5:AE:122:VAL:HG11	1.44	0.98
31:BJ:77:HIS:CD2	31:BJ:79:GLY:H	1.80	0.98
22:BA:1734:G:H2'	22:BA:1735:A:H8	1.26	0.98
8:CH:76:ARG:HD3	8:CH:77:VAL:H	1.28	0.98
12:CL:80:LEU:HB3	12:CL:97:VAL:HG22	1.42	0.98
22:DA:2838:G:H1'	35:DN:45:ARG:HH22	1.28	0.98
1:AA:1129:C:H5"	9:AI:17:ARG:NH2	1.78	0.98
25:BD:97:SER:O	25:BD:99:GLU:HG2	1.60	0.98
53:CA:764:C:H2'	53:CA:765:G:H5'	1.45	0.98
22:DA:1386:C:HO2'	22:DA:1387:A:H8	1.03	0.98
22:DA:2321:U:O2	22:DA:2321:U:H3'	1.63	0.98
44:DW:37:VAL:HG12	44:DW:55:ASP:HB2	1.45	0.98
11:AK:126:ARG:HB2	21:AU:33:ARG:NH1	1.79	0.98
39:BR:49:ILE:HD12	39:BR:52:PRO:HA	1.41	0.98
41:DT:39:THR:HG21	41:DT:42:GLU:HB2	1.42	0.98
21:AU:9:GLU:HG3	21:AU:10:PRO:HD3	1.42	0.98
22:BA:161:A:H3'	22:BA:162:U:H5"	1.42	0.98
15:AO:63:ARG:HG2	15:AO:87:ARG:HH12	1.26	0.97
53:CA:752:G:H1'	53:CA:754:C:N4	1.79	0.97
53:CA:198:G:HO2'	53:CA:199:A:H8	0.98	0.97
53:CA:243:A:H4'	53:CA:244:U:H5'	1.46	0.97
4:CD:55:ARG:HA	4:CD:55:ARG:HH11	1.28	0.97
22:DA:2297:A:O2'	22:DA:2298:A:H8	1.43	0.97
26:BE:31:VAL:HG21	26:BE:104:ALA:HB2	1.42	0.97
44:BW:17:ALA:HA	44:BW:35:ILE:HG23	1.45	0.97
22:DA:1038:G:H2'	22:DA:1039:A:H5'	1.47	0.97
22:BA:636:G:C5	33:BL:111:ILE:HD11	1.99	0.97
22:BA:904:G:H2'	22:BA:905:A:C8	2.00	0.97
2:CB:99:MET:HA	2:CB:106:VAL:HG21	1.44	0.97
5:AE:152:VAL:HB	5:AE:155:LYS:HZ2	1.28	0.97
22:BA:2320:U:H4'	22:BA:2321:U:H5"	1.44	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1307:A:H62	22:DA:1606:C:H6	1.05	0.97
22:DA:1275:A:O2'	22:DA:1276:A:H1'	1.65	0.97
22:DA:2266:A:H4'	22:DA:2267:A:O5'	1.64	0.97
1:AA:1138:G:N3	1:AA:1138:G:H2'	1.80	0.96
5:CE:103:GLY:O	5:CE:104:ILE:HG22	1.65	0.96
22:DA:125:A:H4'	22:DA:126:A:OP2	1.64	0.96
22:DA:1300:G:H4'	22:DA:1301:A:O5'	1.60	0.96
33:BL:27:LEU:H	33:BL:27:LEU:HD12	1.23	0.96
53:CA:973:G:O2'	53:CA:974:A:H5'	1.63	0.96
22:BA:855:G:N3	44:BW:23:LYS:HD3	1.80	0.96
10:CJ:15:HIS:HA	10:CJ:18:ILE:HG22	1.46	0.96
25:BD:106:LYS:HB3	25:BD:206:ALA:HB3	1.43	0.96
53:CA:1129:C:H1'	53:CA:1146:A:H61	1.29	0.96
22:DA:482:A:N6	22:DA:506:G:C4	2.34	0.96
53:CA:1278:G:H4'	53:CA:1279:G:O5'	1.64	0.96
53:CA:1493:A:H8	22:DA:1913:A:H61	1.13	0.96
25:DD:8:LYS:HB2	25:DD:201:LEU:HD11	1.46	0.96
1:AA:747:A:H5'	1:AA:748:G:OP2	1.65	0.96
53:CA:1329:A:H5"	55:CM:25:GLY:H	1.30	0.96
22:BA:243:U:OP1	51:B3:5:THR:HG21	1.66	0.96
39:DR:39:LEU:HA	39:DR:49:ILE:HG21	1.47	0.96
3:AC:76:ILE:HA	3:AC:83:VAL:HG23	1.47	0.95
22:BA:904:G:N2	22:BA:905:A:C4	2.34	0.95
34:BM:35:ALA:O	34:BM:36:VAL:HB	1.64	0.95
58:DF:177:ARG:NE	58:DF:178:LYS:H	1.63	0.95
2:AB:108:GLN:HE21	2:AB:108:GLN:H	1.06	0.95
53:CA:245:U:O2'	53:CA:246:A:H5'	1.64	0.95
4:AD:109:THR:HG23	4:AD:112:GLU:H	1.28	0.95
21:AU:52:VAL:HG13	21:AU:53:LYS:H	1.31	0.95
37:BP:50:ARG:HG2	37:BP:57:ALA:N	1.81	0.95
41:BT:39:THR:HB	41:BT:42:GLU:HB2	1.45	0.95
4:CD:25:ARG:NH1	4:CD:30:LYS:HG2	1.82	0.95
39:BR:24:LYS:HA	39:BR:94:THR:HG23	1.47	0.95
47:BZ:29:ARG:HH21	47:BZ:29:ARG:HG3	1.31	0.95
5:CE:29:ILE:HG23	5:CE:30:PHE:H	1.22	0.95
22:DA:1954:G:O2'	22:DA:1955:U:OP2	1.85	0.95
22:DA:1965:C:H5'	22:DA:1966:A:H5"	1.45	0.95
1:AA:1441:A:H62	1:AA:1461:G:H21	1.11	0.95
53:CA:701:U:O2'	53:CA:702:A:OP2	1.84	0.95
53:CA:1182:G:H4'	53:CA:1183:U:H5'	1.47	0.95
54:CG:74:VAL:HG13	54:CG:140:VAL:HG13	1.47	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:867:C:O2'	22:DA:868:U:H6	1.49	0.95
22:BA:1509:A:H1'	22:BA:1510:G:H5'	1.48	0.95
22:DA:1458:U:O3'	22:DA:1459:G:H4'	1.64	0.95
22:DA:2875:C:O2'	22:DA:2876:G:H8	1.48	0.95
28:DG:93:TYR:H	28:DG:93:TYR:HD2	1.12	0.95
38:BQ:63:ARG:HH12	38:BQ:96:ASP:HA	1.16	0.95
53:CA:913:A:H4'	53:CA:914:A:O5'	1.66	0.95
22:BA:2328:A:H2'	22:BA:2329:U:C6	2.02	0.94
30:BI:15:GLY:HA2	30:BI:50:LYS:HB3	1.47	0.94
53:CA:990:C:H2'	53:CA:991:U:O4'	1.65	0.94
41:BT:39:THR:HG22	41:BT:41:ALA:HB3	1.49	0.94
1:AA:877:G:H21	8:AH:1:SER:HB2	1.29	0.94
15:AO:63:ARG:HD3	15:AO:87:ARG:HH22	1.33	0.94
22:BA:31:C:O3'	22:BA:1238:G:H5"	1.67	0.94
25:BD:174:SER:O	25:BD:175:LEU:HB2	1.63	0.94
22:DA:2666:C:O2'	22:DA:2667:C:H5'	1.65	0.94
53:CA:6:G:H2'	53:CA:6:G:N3	1.82	0.94
22:DA:33:C:H4'	22:DA:34:U:OP1	1.68	0.94
22:DA:310:A:O2'	22:DA:311:A:H8	1.50	0.94
5:AE:11:GLN:HE21	5:AE:11:GLN:HA	1.30	0.94
53:CA:1046:A:O2'	53:CA:1047:G:H5'	1.64	0.94
53:CA:1299:A:H2'	53:CA:1299:A:N3	1.81	0.94
10:CJ:57:VAL:HG22	10:CJ:58:ASN:H	1.32	0.94
1:AA:1101:A:H4'	1:AA:1102:A:O5'	1.64	0.94
1:AA:1046:A:O2'	1:AA:1047:G:H5'	1.68	0.94
28:BG:120:ILE:HD11	28:BG:132:LEU:HB2	1.47	0.94
22:DA:1391:U:H4'	41:DT:19:LYS:HZ1	1.31	0.94
1:AA:507:C:H3'	1:AA:508:U:H5"	1.46	0.94
37:BP:25:VAL:HG11	37:BP:46:VAL:HG23	1.49	0.94
22:DA:996:A:H4'	38:DQ:91:ARG:HD2	1.49	0.94
22:DA:1313:U:H2'	22:DA:1313:U:O2	1.66	0.94
22:DA:1935:G:H1'	22:DA:1964:G:N2	1.83	0.94
57:DB:75:G:H1	57:DB:102:G:H22	1.10	0.94
31:BJ:81:ILE:HG23	31:BJ:82:GLY:H	1.32	0.94
58:DF:137:PHE:HB2	58:DF:138:PRO:HD2	1.50	0.94
1:AA:484:G:H4'	1:AA:485:U:O5'	1.65	0.94
22:BA:2225:A:H4'	22:BA:2226:C:O5'	1.66	0.94
44:BW:24:ARG:HD2	44:BW:25:PHE:N	1.82	0.94
53:CA:94:G:H4'	53:CA:95:C:OP1	1.66	0.94
22:DA:1905:C:O4'	22:DA:1928:A:C2	2.21	0.94
53:CA:961:U:O2'	53:CA:962:C:H6	1.50	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:138:U:H2'	22:DA:140:C:H1'	1.51	0.93
34:DM:42:THR:HG22	34:DM:44:ARG:H	1.32	0.93
6:AF:38:ARG:HH11	6:AF:38:ARG:HG2	1.29	0.93
28:BG:85:LYS:HG2	28:BG:131:VAL:HG12	1.49	0.93
52:B4:9:LYS:HD3	52:B4:9:LYS:H	1.31	0.93
52:B4:36:ARG:HG2	52:B4:37:GLN:H	1.33	0.93
53:CA:120:A:C2'	53:CA:121:U:H5"	1.98	0.93
22:DA:1474:U:H2'	22:DA:1475:G:H5'	1.47	0.93
26:DE:130:LYS:HB3	26:DE:133:LEU:HB3	1.49	0.93
22:BA:1063:G:H2'	22:BA:1064:C:O4'	1.69	0.93
22:DA:215:G:H4'	22:DA:216:A:OP1	1.66	0.93
22:DA:2197:U:O2'	22:DA:2198:A:H2'	1.68	0.93
22:BA:119:A:H4'	22:BA:120:U:O5'	1.67	0.93
22:BA:869:G:H4'	34:BM:8:LYS:HE2	1.49	0.93
22:DA:206:U:H2'	22:DA:207:A:H8	1.30	0.93
22:DA:240:C:H3'	22:DA:241:A:H5"	1.48	0.93
57:DB:57:A:O2'	57:DB:58:A:H8	1.50	0.93
37:BP:51:ASN:O	37:BP:52:ARG:HG2	1.67	0.93
2:CB:114:LYS:HA	2:CB:117:GLU:HG2	1.50	0.93
6:CF:86:ARG:NH1	18:CR:63:TYR:HB3	1.84	0.93
22:BA:2336:A:N6	44:BW:40:ARG:HD2	1.82	0.92
1:AA:841:C:C2	1:AA:843:U:H5'	2.03	0.92
39:BR:42:ALA:HA	39:BR:46:GLU:HB2	1.51	0.92
29:BH:31:VAL:HB	29:BH:32:PRO:CD	1.98	0.92
30:BI:23:VAL:HB	30:BI:27:LEU:HB3	1.49	0.92
22:DA:479:A:H4'	22:DA:480:A:OP1	1.66	0.92
57:DB:40:U:O2	57:DB:43:C:H2'	1.69	0.92
35:DN:22:ARG:HG3	35:DN:70:THR:HA	1.51	0.92
35:DN:28:LEU:HD21	35:DN:115:LEU:HD21	1.47	0.92
22:BA:2502:G:H5'	22:BA:2503:A:H5"	1.47	0.92
28:BG:84:LYS:HG3	28:BG:132:LEU:H	1.31	0.92
4:CD:2:ARG:NH2	4:CD:114:ARG:HD3	1.84	0.92
11:CK:74:LYS:HA	11:CK:78:ILE:HD11	1.49	0.92
22:BA:931:U:H4'	22:BA:932:U:OP2	1.67	0.92
53:CA:519:C:H2'	53:CA:520:A:C8	2.05	0.92
22:DA:333:G:HO2'	22:DA:334:C:H6	0.92	0.92
22:DA:1716:U:O2'	22:DA:1717:A:H8	1.52	0.92
22:DA:1606:C:H5'	22:DA:1606:C:O2	1.70	0.92
1:AA:1277:C:O2'	1:AA:1279:G:H8	1.52	0.91
12:AL:49:ARG:HG2	12:AL:49:ARG:NH1	1.78	0.91
22:DA:647:G:H2'	22:DA:648:G:H8	1.35	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1847:A:HO2'	22:DA:1848:A:H8	1.07	0.91
33:DL:79:LEU:HB2	33:DL:113:ALA:H	1.35	0.91
35:DN:35:LYS:HZ2	35:DN:112:TYR:HE1	1.15	0.91
22:BA:2585:U:O2'	22:BA:2586:U:H5'	1.70	0.91
22:DA:811:U:H5"	22:DA:812:C:OP2	1.69	0.91
57:DB:42:C:O2'	57:DB:43:C:H5'	1.70	0.91
1:AA:204:G:H3'	1:AA:205:A:C5'	1.98	0.91
5:CE:44:ARG:HG2	5:CE:72:ASN:HA	1.52	0.91
22:DA:1341:G:O2'	22:DA:1398:C:H5'	1.70	0.91
53:CA:120:A:H3'	53:CA:121:U:C5'	2.00	0.91
22:DA:1915:U:H2'	22:DA:1916:A:H8	1.32	0.91
35:DN:62:ASN:O	35:DN:63:ARG:HB2	1.71	0.91
24:BC:246:PRO:HG2	24:BC:247:TRP:CZ3	2.05	0.91
39:BR:61:ALA:HB2	39:BR:98:ILE:HA	1.50	0.91
50:B2:24:THR:HG23	50:B2:27:GLY:H	1.34	0.91
3:AC:156:LEU:HD12	3:AC:156:LEU:H	1.35	0.91
22:DA:668:A:H2'	22:DA:670:A:H62	1.36	0.91
22:DA:876:C:H5"	22:DA:876:C:O2	1.70	0.91
24:DC:144:GLU:HA	24:DC:151:GLY:HA2	1.51	0.91
37:BP:50:ARG:HD3	37:BP:56:SER:HB3	1.50	0.91
44:BW:51:GLY:HA3	44:BW:59:PHE:CE2	2.06	0.91
5:CE:104:ILE:H	5:CE:122:VAL:H	1.14	0.91
22:DA:2023:C:O2'	22:DA:2024:G:H8	1.54	0.91
12:AL:33:CYS:HA	12:AL:54:VAL:HA	1.52	0.91
22:BA:902:C:N4	22:BA:903:C:N4	2.18	0.91
38:BQ:40:LYS:HA	38:BQ:43:GLN:HG3	1.53	0.91
22:DA:232:G:H4'	22:DA:233:A:OP1	1.67	0.91
25:BD:5:VAL:H	25:BD:32:ASN:HD21	0.92	0.91
25:BD:91:THR:O	25:BD:93:GLY:N	2.04	0.90
22:DA:617:G:O2'	22:DA:618:G:H8	1.54	0.90
1:AA:1007:U:H2'	1:AA:1008:U:H5"	1.51	0.90
31:BJ:77:HIS:HD2	31:BJ:79:GLY:H	0.98	0.90
22:DA:1345:C:HO2'	22:DA:1346:G:H8	0.96	0.90
22:BA:904:G:C2	22:BA:905:A:C5	2.58	0.90
29:DH:72:ILE:HD11	29:DH:141:LYS:H	1.36	0.90
22:DA:508:A:H62	40:DS:9:HIS:CE1	1.89	0.90
22:BA:1941:C:H5'	22:BA:1941:C:H6	1.34	0.90
24:DC:146:LYS:HB2	24:DC:149:LYS:HB2	1.52	0.90
44:DW:28:GLU:H	44:DW:31:LEU:HD21	1.37	0.90
34:BM:43:ALA:HA	34:BM:46:ILE:HG13	1.52	0.90
22:DA:503:A:H4'	22:DA:504:A:O5'	1.69	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:23:LEU:HB2	12:AL:58:ASN:HD22	1.37	0.90
22:BA:2135:A:O2'	22:BA:2136:G:H8	1.54	0.90
25:BD:16:THR:HG23	25:BD:18:ASP:OD1	1.71	0.90
53:CA:1141:C:HO2'	53:CA:1142:G:H8	0.93	0.90
54:CG:134:VAL:HB	54:CG:137:ARG:HH21	1.34	0.90
18:CR:72:ARG:HE	18:CR:72:ARG:H	1.15	0.90
22:DA:335:C:O2'	22:DA:336:C:H6	1.51	0.90
22:DA:604:G:O2'	22:DA:605:G:H5'	1.71	0.90
22:DA:2800:A:H2'	22:DA:2801:G:C4'	2.00	0.90
24:DC:16:VAL:H	24:DC:203:VAL:HG12	1.32	0.90
22:DA:483:A:H2'	22:DA:484:C:C6	2.05	0.90
22:DA:2822:G:H5"	25:DD:164:GLN:HE22	1.36	0.90
29:DH:48:GLU:HG2	29:DH:51:ARG:HH21	1.36	0.90
49:D1:7:LYS:HD3	51:D3:33:THR:HG21	1.52	0.90
1:AA:250:A:H4'	1:AA:251:G:O5'	1.70	0.90
22:BA:2346:A:H3'	22:BA:2347:C:H5"	1.52	0.90
53:CA:33:A:H2'	53:CA:34:C:H6	1.37	0.90
53:CA:373:A:O2'	53:CA:374:A:H5'	1.69	0.90
22:BA:265:A:H4'	22:BA:266:G:OP1	1.70	0.89
22:BA:1179:G:C6	22:BA:1180:U:H1'	2.06	0.89
28:BG:115:GLN:CD	28:BG:115:GLN:H	1.76	0.89
33:BL:109:LYS:HG2	33:BL:126:ARG:HB3	1.54	0.89
38:BQ:4:LYS:HG3	38:BQ:5:ARG:H	1.36	0.89
2:AB:42:LEU:HG	2:AB:43:GLU:HG3	1.55	0.89
53:CA:976:G:H5'	53:CA:977:A:OP2	1.71	0.89
22:BA:947:A:O2'	22:BA:984:A:H2	1.54	0.89
29:BH:89:LYS:HG2	29:BH:90:LEU:H	1.36	0.89
53:CA:247:G:O6	53:CA:278:G:C6	2.26	0.89
53:CA:1014:A:H4'	19:CS:13:HIS:CD2	2.06	0.89
22:DA:1126:A:H4'	22:DA:1127:A:C5'	2.02	0.89
22:DA:1447:C:H2'	22:DA:1448:G:C8	2.08	0.89
26:DE:148:ILE:HD13	26:DE:187:VAL:HG21	1.55	0.89
22:DA:464:U:H1'	22:DA:686:U:H5	1.37	0.89
40:DS:47:VAL:HG12	40:DS:103:ILE:HG12	1.53	0.89
4:CD:109:THR:HG22	4:CD:111:ALA:H	1.36	0.89
22:DA:216:A:HO2'	22:DA:217:A:H8	0.94	0.89
22:DA:972:A:H3'	22:DA:973:A:H5"	1.53	0.89
22:DA:2304:G:H22	22:DA:2312:U:H3	1.20	0.89
1:AA:1279:G:H1'	1:AA:1282:C:N4	1.88	0.89
44:BW:39:GLN:HG2	44:BW:41:GLY:H	1.37	0.89
22:DA:2214:C:O2'	22:DA:2215:C:H5'	1.73	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:110:ILE:CD1	2:AB:147:LEU:HD13	2.03	0.89
2:AB:163:ILE:HG23	2:AB:164:ASP:H	1.35	0.89
28:BG:83:THR:HA	28:BG:84:LYS:NZ	1.88	0.89
35:BN:33:ILE:HD11	35:BN:118:ARG:NH2	1.87	0.89
6:CF:92:THR:HG22	6:CF:94:HIS:H	1.36	0.89
22:DA:774:G:HO2'	22:DA:775:G:H8	1.21	0.89
3:AC:119:ILE:HG21	3:AC:197:VAL:HG11	1.50	0.89
3:AC:166:TRP:H	3:AC:166:TRP:HE3	1.16	0.89
53:CA:1172:C:O2'	53:CA:1173:U:H5'	1.72	0.89
22:DA:2216:G:H2'	22:DA:2217:G:H8	1.38	0.89
1:AA:974:A:H4'	1:AA:975:A:H5'	1.55	0.89
22:BA:903:C:H2'	22:BA:904:G:H8	1.38	0.89
22:BA:1813:G:N3	24:BC:49:THR:HG21	1.86	0.89
22:BA:2267:A:H5"	22:BA:2268:A:H5'	1.54	0.89
22:DA:1326:U:O2'	22:DA:1327:A:H8	1.54	0.89
44:DW:40:ARG:HH11	44:DW:40:ARG:CG	1.85	0.89
22:BA:904:G:C2	22:BA:905:A:C4	2.61	0.88
22:DA:1135:C:N4	22:DA:1139:G:C6	2.42	0.88
22:DA:2215:C:HO2'	22:DA:2216:G:H8	1.21	0.88
44:DW:18:LYS:HD3	44:DW:19:ARG:N	1.87	0.88
19:AS:28:LYS:HB3	19:AS:29:PRO:HD2	1.55	0.88
31:BJ:6:ALA:CB	31:BJ:45:THR:HG21	2.02	0.88
31:BJ:6:ALA:HB3	31:BJ:45:THR:HG21	1.55	0.88
48:B0:39:ARG:HB2	48:B0:39:ARG:HH11	1.37	0.88
55:CM:95:PRO:HD3	55:CM:108:ARG:HG2	1.55	0.88
22:DA:1654:A:O2'	22:DA:1655:A:H8	1.56	0.88
22:DA:2466:C:OP1	52:D4:4:ARG:HB3	1.73	0.88
1:AA:205:A:OP1	1:AA:205:A:H4'	1.74	0.88
33:BL:55:MET:HE3	33:BL:55:MET:HA	1.55	0.88
22:DA:2311:A:H5'	22:DA:2312:U:C6	2.07	0.88
41:DT:29:THR:HB	41:DT:87:LEU:H	1.38	0.88
1:AA:1468:A:C2'	1:AA:1469:C:H5"	2.03	0.88
2:CB:130:LYS:HA	2:CB:133:ALA:HB3	1.54	0.88
8:CH:76:ARG:HD3	8:CH:77:VAL:N	1.87	0.88
2:AB:69:VAL:HB	2:AB:162:VAL:HG12	1.55	0.88
54:CG:88:VAL:HG22	54:CG:89:GLU:H	1.38	0.88
22:DA:1429:G:HO2'	22:DA:1430:G:H8	0.94	0.88
22:BA:1590:A:H2'	22:BA:1591:A:C8	2.09	0.88
26:BE:44:ARG:HH21	26:BE:44:ARG:HG3	1.39	0.88
26:BE:119:ILE:HD11	26:BE:187:VAL:HG22	1.56	0.88
31:BJ:111:LYS:HD3	31:BJ:112:GLY:H	1.38	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:CG:110:ARG:HG3	54:CG:111:GLY:H	1.38	0.88
22:DA:2258:C:H4'	22:DA:2259:U:OP2	1.72	0.88
10:AJ:80:THR:HB	10:AJ:83:THR:HG22	1.55	0.88
22:BA:1590:A:H2'	22:BA:1591:A:H8	1.36	0.88
53:CA:575:G:H4'	53:CA:576:C:O5'	1.72	0.88
53:CA:753:A:H4'	53:CA:754:C:O5'	1.70	0.88
2:CB:89:PHE:HE2	2:CB:152:ASP:HB2	1.36	0.88
22:BA:1110:G:HO2'	22:BA:1111:A:H8	1.21	0.88
22:BA:2358:A:H61	33:BL:54:GLN:HE22	1.20	0.88
4:CD:151:GLN:HB3	4:CD:154:VAL:HG12	1.54	0.88
22:DA:975:A:O2'	22:DA:976:G:H8	1.56	0.88
1:AA:214:C:O2'	1:AA:215:C:H6	1.56	0.88
9:AI:51:LEU:HB3	9:AI:56:MET:HG2	1.55	0.88
22:BA:684:G:OP1	50:B2:16:HIS:HD2	1.56	0.88
22:BA:1060:U:O4'	22:BA:1062:G:H5"	1.74	0.88
22:BA:1238:G:O2'	22:BA:1239:G:H5'	1.73	0.88
57:DB:57:A:O2'	57:DB:58:A:C8	2.26	0.88
4:AD:43:ARG:O	4:AD:45:PRO:HD3	1.73	0.88
34:DM:42:THR:HB	34:DM:45:GLN:HG3	1.56	0.88
17:AQ:16:MET:HB2	17:AQ:19:SER:HB3	1.55	0.87
22:BA:1654:A:H2'	22:BA:1655:A:H8	1.39	0.87
27:BF:104:THR:HG22	27:BF:105:ILE:HG23	1.56	0.87
11:CK:27:ASN:N	11:CK:27:ASN:HD22	1.73	0.87
22:BA:1733:G:HO2'	22:BA:1734:G:H8	0.91	0.87
22:DA:2415:G:H4'	33:DL:66:PHE:HB2	1.56	0.87
22:DA:2752:C:H2'	22:DA:2753:A:C8	2.09	0.87
32:DK:61:VAL:HG11	32:DK:112:PHE:CE2	2.09	0.87
32:DK:69:VAL:HG11	32:DK:106:GLU:HG2	1.54	0.87
4:AD:167:PRO:HB2	4:AD:170:LEU:HD11	1.54	0.87
32:BK:18:ARG:H	32:BK:45:GLU:HB2	1.38	0.87
32:BK:71:ARG:HB2	32:BK:72:PRO:HD3	1.55	0.87
2:CB:46:VAL:HG13	2:CB:47:PRO:HD3	1.57	0.87
53:CA:279:A:H5"	53:CA:280:C:H3'	1.54	0.87
21:CU:24:LYS:CG	21:CU:25:ALA:H	1.86	0.87
22:BA:1131:G:OP1	31:BJ:82:GLY:HA2	1.75	0.87
25:BD:110:THR:HG23	25:BD:171:THR:HG22	1.57	0.87
29:DH:90:LEU:HB2	29:DH:123:ARG:HB3	1.54	0.87
32:DK:87:LEU:HD12	32:DK:92:GLU:HA	1.55	0.87
51:D3:35:LYS:HB2	51:D3:40:LYS:HD3	1.56	0.87
9:AI:23:GLY:H	9:AI:60:LEU:HA	1.40	0.87
22:DA:616:A:HO2'	22:DA:617:G:H8	1.19	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DX:31:ASN:HD22	45:DX:31:ASN:H	1.18	0.87
28:BG:96:ALA:HB3	28:BG:103:ASN:HB3	1.55	0.87
38:BQ:63:ARG:HH12	38:BQ:96:ASP:CA	1.86	0.87
28:DG:112:VAL:HG13	28:DG:150:TYR:HE1	1.40	0.87
17:AQ:22:VAL:HG21	17:AQ:60:ILE:HD11	1.55	0.86
24:BC:180:MET:HG3	24:BC:268:ARG:HH11	1.39	0.86
12:CL:79:ILE:HD12	12:CL:96:THR:HG21	1.56	0.86
22:DA:704:G:O2'	22:DA:726:G:N2	2.08	0.86
22:BA:276:U:O2'	22:BA:278:A:N7	2.08	0.86
42:BU:73:ASN:ND2	42:BU:76:THR:HG23	1.91	0.86
44:DW:40:ARG:HG2	44:DW:40:ARG:NH1	1.83	0.86
24:BC:123:ILE:O	24:BC:123:ILE:HG12	1.74	0.86
53:CA:668:G:O2'	15:CO:45:HIS:HB3	1.75	0.86
22:DA:647:G:O2'	22:DA:648:G:H5'	1.76	0.86
22:DA:873:C:H4'	34:DM:64:TRP:HE1	1.39	0.86
22:BA:923:G:N3	44:BW:23:LYS:HE2	1.90	0.86
58:DF:74:ALA:HB3	58:DF:78:ILE:HB	1.56	0.86
22:BA:84:A:H4'	22:BA:85:G:O5'	1.74	0.86
36:BO:49:VAL:HG21	36:BO:82:ALA:HA	1.58	0.86
22:DA:990:A:O2'	22:DA:991:C:H5"	1.74	0.86
24:BC:12:ARG:HH11	24:BC:12:ARG:CG	1.88	0.86
2:AB:9:LEU:HD12	2:AB:42:LEU:HD13	1.57	0.86
4:AD:69:ARG:HA	4:AD:69:ARG:HE	1.41	0.86
31:BJ:21:THR:HG22	31:BJ:22:GLY:N	1.88	0.86
34:BM:49:ALA:HB1	34:BM:120:ALA:HB1	1.56	0.86
36:BO:41:ALA:HB2	36:BO:48:LEU:HD21	1.55	0.86
22:BA:137:U:H5"	22:BA:140:C:C5	2.10	0.86
22:DA:616:A:O2'	22:DA:617:G:H8	1.59	0.86
22:DA:2389:G:C5'	22:DA:2390:U:H5'	2.05	0.86
40:DS:73:LYS:HB2	40:DS:106:VAL:HB	1.58	0.86
6:AF:29:ILE:HG12	6:AF:64:VAL:HG11	1.57	0.86
22:BA:272:A:HO2'	22:BA:273:G:H8	0.88	0.86
14:AN:15:LEU:HD23	14:AN:18:LYS:HD2	1.57	0.85
38:BQ:69:ARG:HH21	38:BQ:69:ARG:HB2	1.41	0.85
44:BW:18:LYS:HG3	44:BW:19:ARG:N	1.89	0.85
52:B4:10:LEU:HD12	52:B4:33:HIS:CD2	2.11	0.85
53:CA:1047:G:O2'	53:CA:1216:A:OP1	1.94	0.85
22:DA:648:G:O2'	22:DA:649:G:H8	1.58	0.85
22:DA:873:C:H4'	34:DM:64:TRP:NE1	1.90	0.85
22:DA:2748:A:H1'	28:DG:66:THR:HG22	1.58	0.85
26:DE:47:LYS:HB3	26:DE:51:GLU:HB2	1.57	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:66:ILE:HB	2:AB:88:GLN:HB3	1.57	0.85
8:AH:105:THR:HG21	8:AH:120:LEU:HD13	1.56	0.85
31:DJ:74:TYR:HE2	31:DJ:103:ILE:HD11	1.41	0.85
32:DK:39:ILE:HD11	32:DK:62:VAL:HG23	1.57	0.85
26:BE:189:THR:OG1	26:BE:191:ASP:HB3	1.76	0.85
50:B2:3:ARG:HH21	50:B2:3:ARG:HG2	1.41	0.85
53:CA:239:U:H4'	53:CA:239:U:OP1	1.77	0.85
53:CA:752:G:H1'	53:CA:754:C:H41	1.41	0.85
4:CD:143:SER:HB3	4:CD:178:GLU:HG3	1.58	0.85
22:DA:230:G:HO2'	22:DA:231:A:H8	0.90	0.85
22:BA:1022:G:N2	22:BA:1142:A:C2	2.45	0.85
45:BX:58:ILE:HG13	45:BX:66:VAL:HG21	1.58	0.85
46:BY:32:ALA:HB2	46:BY:37:LEU:HD12	1.57	0.85
22:DA:1387:A:H5'	22:DA:1469:A:H1'	1.56	0.85
47:DZ:16:LEU:H	47:DZ:16:LEU:HD22	1.40	0.85
1:AA:1241:G:O2'	1:AA:1242:G:H8	1.59	0.85
22:DA:197:A:H62	22:DA:2430:A:H2'	1.41	0.85
22:DA:593:U:H2'	22:DA:594:U:C6	2.11	0.85
35:DN:90:ARG:NH2	35:DN:116:VAL:HG11	1.91	0.85
10:AJ:53:ILE:HG22	10:AJ:61:ALA:HB1	1.58	0.85
22:BA:1063:G:OP1	30:BI:76:ALA:HB3	1.76	0.85
31:BJ:2:LYS:HD3	31:BJ:2:LYS:H	1.41	0.85
53:CA:373:A:H2'	53:CA:374:A:H8	1.39	0.85
53:CA:1151:A:O2'	53:CA:1152:A:H8	1.57	0.85
53:CA:1239:A:H5"	54:CG:118:ARG:HH12	1.39	0.85
22:DA:1038:G:C2'	22:DA:1039:A:H5'	2.07	0.85
22:BA:947:A:HO2'	22:BA:984:A:H2	0.88	0.85
25:BD:114:LYS:HE3	25:BD:114:LYS:N	1.92	0.85
33:BL:30:THR:O	33:BL:33:ARG:HG2	1.77	0.85
56:CP:70:ARG:O	56:CP:74:LEU:HG	1.77	0.85
22:DA:1024:G:H3'	22:DA:1025:G:H5"	1.56	0.85
22:BA:2092:U:H4'	22:BA:2093:G:O5'	1.76	0.85
28:BG:73:SER:HA	28:BG:76:ILE:HG22	1.59	0.85
53:CA:818:G:O2'	53:CA:819:A:H5"	1.77	0.85
53:CA:1221:G:H4'	19:CS:35:ARG:NH2	1.92	0.85
2:CB:206:ILE:HA	2:CB:209:VAL:HG22	1.58	0.85
22:DA:2091:C:OP2	22:DA:2092:U:C3'	2.23	0.85
25:BD:61:THR:OG1	25:BD:63:PRO:HD2	1.77	0.85
53:CA:814:A:H5'	53:CA:1511:G:H4'	1.57	0.85
6:CF:18:VAL:O	6:CF:22:ILE:HG12	1.75	0.85
22:DA:2319:G:O2'	22:DA:2321:U:O4	1.92	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BD:5:VAL:H	25:BD:32:ASN:ND2	1.74	0.85
22:DA:1181:U:H2'	22:DA:1182:G:H8	1.42	0.85
32:DK:70:ARG:HB3	32:DK:76:VAL:HG22	1.58	0.85
38:DQ:60:TRP:O	38:DQ:63:ARG:HG2	1.77	0.85
1:AA:198:G:O2'	1:AA:199:A:H8	1.58	0.84
22:BA:2328:A:H2'	22:BA:2329:U:H6	1.39	0.84
28:BG:22:VAL:HG22	28:BG:36:LEU:HD11	1.59	0.84
19:CS:40:PHE:HB3	19:CS:41:PRO:HD2	1.56	0.84
22:DA:2135:A:H2'	22:DA:2136:G:O4'	1.77	0.84
24:BC:20:ASN:HD21	24:BC:22:GLU:HG2	1.42	0.84
53:CA:764:C:C2'	53:CA:765:G:H5'	2.07	0.84
11:CK:55:ARG:H	11:CK:55:ARG:HD2	1.42	0.84
22:DA:320:A:H4'	22:DA:322:A:N7	1.92	0.84
29:DH:3:VAL:HG12	29:DH:38:PRO:HA	1.58	0.84
1:AA:198:G:HO2'	1:AA:199:A:H8	0.84	0.84
22:BA:747:U:C5	22:BA:2613:U:C5	2.66	0.84
22:DA:1816:C:H2'	24:DC:61:TYR:CZ	2.12	0.84
24:DC:144:GLU:HB3	24:DC:187:CYS:HB2	1.59	0.84
32:DK:13:ASN:HD21	32:DK:97:THR:N	1.74	0.84
33:DL:23:ILE:HG13	39:DR:82:HIS:CE1	2.12	0.84
1:AA:996:A:C2	1:AA:1046:A:H5'	2.12	0.84
22:DA:241:A:C4'	22:DA:242:G:OP1	2.25	0.84
22:DA:1662:U:H2'	22:DA:1663:G:H5"	1.59	0.84
22:DA:2091:C:H3'	22:DA:2092:U:C5'	2.07	0.84
1:AA:1299:A:H2'	1:AA:1299:A:N3	1.90	0.84
22:BA:545:U:H2'	22:BA:546:U:H4'	1.57	0.84
22:BA:1073:A:H3'	22:BA:1074:G:C5'	2.07	0.84
57:DB:42:C:H2'	57:DB:43:C:C6	2.12	0.84
1:AA:982:U:C4'	1:AA:983:A:O5'	2.26	0.84
53:CA:995:C:H42	53:CA:1046:A:H1'	1.42	0.84
5:CE:52:ALA:HB2	5:CE:61:LYS:HE3	1.59	0.84
22:DA:2091:C:P	22:DA:2092:U:H3'	2.18	0.84
2:AB:137:THR:HA	2:AB:140:LEU:HD13	1.59	0.84
22:DA:806:C:H2'	22:DA:807:U:H6	1.43	0.84
22:DA:834:G:H1'	22:DA:2358:A:N3	1.93	0.84
22:DA:1943:U:H4'	22:DA:1944:U:OP1	1.75	0.84
30:DI:45:THR:HG23	30:DI:54:ILE:HD13	1.59	0.84
12:AL:27:PRO:HB2	12:AL:28:GLN:OE1	1.76	0.84
22:BA:784:G:C6	24:BC:227:VAL:HG11	2.13	0.84
37:BP:63:ILE:HA	37:BP:68:GLY:HA2	1.59	0.84
1:AA:548:G:H2'	1:AA:549:C:C6	2.13	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:10:ARG:HH21	3:CC:181:ILE:HB	1.41	0.84
54:CG:14:ASP:HB3	54:CG:18:GLY:H	1.43	0.84
22:DA:67:U:H2'	22:DA:68:G:H8	1.43	0.84
22:DA:1049:C:O2'	22:DA:1050:A:H8	1.61	0.84
22:DA:1417:C:H2'	22:DA:1418:G:C8	2.13	0.84
22:DA:1847:A:O2'	22:DA:1848:A:H8	1.60	0.84
22:DA:2757:A:N1	28:DG:66:THR:HG21	1.92	0.84
1:AA:94:G:H4'	1:AA:95:C:H5"	1.60	0.84
35:BN:98:LEU:HD22	48:B0:42:ILE:HD11	1.58	0.84
20:CT:22:SER:O	20:CT:26:MET:HB2	1.78	0.84
24:DC:68:ARG:HH12	24:DC:115:ILE:HD12	1.42	0.84
44:DW:39:GLN:HE22	44:DW:58:LEU:HD23	1.42	0.84
1:AA:1123:U:H4'	10:AJ:39:PRO:HD2	1.60	0.83
22:BA:2269:G:H4'	44:BW:18:LYS:HE2	1.58	0.83
22:BA:2352:A:N1	44:BW:30:VAL:HG11	1.93	0.83
31:BJ:2:LYS:HD3	31:BJ:2:LYS:N	1.93	0.83
53:CA:1101:A:H4'	53:CA:1102:A:O5'	1.76	0.83
54:CG:45:ALA:HB1	54:CG:120:ALA:HB2	1.60	0.83
22:DA:1847:A:O2'	22:DA:1848:A:C8	2.31	0.83
24:DC:128:THR:HG22	24:DC:188:ARG:HB3	1.59	0.83
22:BA:1073:A:C3'	22:BA:1074:G:H5"	2.08	0.83
54:CG:91:ARG:HG2	54:CG:92:PRO:HD2	1.60	0.83
22:DA:1714:U:H3'	22:DA:1715:G:C5'	2.08	0.83
44:DW:27:GLY:CA	44:DW:31:LEU:HD11	2.07	0.83
1:AA:1227:A:N3	1:AA:1227:A:H2'	1.93	0.83
41:BT:32:LEU:H	41:BT:83:ALA:CB	1.90	0.83
53:CA:451:A:H4'	53:CA:452:A:O5'	1.77	0.83
53:CA:1182:G:C4'	53:CA:1183:U:H5'	2.06	0.83
53:CA:1241:G:H2'	53:CA:1242:G:H8	1.43	0.83
1:AA:6:G:O6	5:AE:98:ALA:HB1	1.77	0.83
22:BA:568:U:OP1	33:BL:36:LYS:HE3	1.78	0.83
3:CC:109:GLU:HG2	3:CC:139:ASN:HB2	1.60	0.83
55:CM:33:LEU:HB3	55:CM:38:ILE:HB	1.59	0.83
22:DA:279:A:H61	22:DA:361:G:H1'	1.43	0.83
22:DA:456:C:O2'	41:DT:73:ARG:HG3	1.76	0.83
28:DG:1:SER:HB2	28:DG:61:TRP:HB3	1.60	0.83
5:AE:155:LYS:HA	5:AE:158:LYS:NZ	1.94	0.83
24:BC:16:VAL:HB	24:BC:203:VAL:HB	1.61	0.83
44:BW:18:LYS:HA	44:BW:36:ILE:CG1	2.08	0.83
52:B4:9:LYS:H	52:B4:9:LYS:CD	1.85	0.83
53:CA:372:C:H1'	53:CA:373:A:OP2	1.78	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:181:A:H2	22:DA:434:U:H1'	1.44	0.83
22:DA:674:G:O2'	26:DE:69:ARG:HG2	1.79	0.83
22:DA:1929:G:H4'	22:DA:1930:G:OP1	1.76	0.83
2:CB:79:VAL:HA	2:CB:213:LEU:HD21	1.60	0.83
33:DL:124:GLY:H	33:DL:143:GLU:HG3	1.44	0.83
44:DW:17:ALA:O	44:DW:18:LYS:HB3	1.77	0.83
14:AN:40:ARG:HH12	14:AN:44:VAL:HG11	1.43	0.83
22:BA:284:U:H2'	22:BA:285:G:H8	1.43	0.83
22:BA:2203:U:H5"	22:BA:2204:G:OP1	1.79	0.83
22:BA:2352:A:C2	44:BW:30:VAL:HG11	2.13	0.83
53:CA:238:A:H2'	53:CA:239:U:H5"	1.61	0.83
22:DA:297:G:H5"	42:DU:84:PHE:HB2	1.60	0.83
22:DA:2286:G:H4'	22:DA:2287:A:O4'	1.77	0.83
50:D2:31:LEU:HA	50:D2:34:ARG:HB2	1.60	0.83
1:AA:428:G:H4'	1:AA:429:U:OP1	1.79	0.83
47:DZ:30:ARG:NH2	47:DZ:33:HIS:HB2	1.94	0.83
42:BU:38:ILE:HG22	42:BU:39:ASN:N	1.91	0.83
2:CB:127:LYS:HE3	2:CB:132:GLU:HG3	1.61	0.83
11:CK:111:ASP:H	21:CU:3:ILE:N	1.75	0.83
24:DC:75:ALA:HB2	24:DC:95:TYR:CD1	2.13	0.83
1:AA:486:U:H5"	1:AA:486:U:H6	1.34	0.83
1:AA:1279:G:H2'	1:AA:1279:G:N3	1.92	0.83
22:BA:1779:U:H5	22:BA:1784:A:N7	1.76	0.83
42:BU:73:ASN:HD22	42:BU:76:THR:H	1.23	0.83
10:CJ:52:LEU:HD23	10:CJ:62:ARG:HG2	1.59	0.83
22:DA:634:C:H2'	22:DA:635:C:C6	2.14	0.83
41:DT:3:ARG:HD2	41:DT:42:GLU:HG2	1.60	0.83
1:AA:16:A:O2'	1:AA:17:U:H5'	1.79	0.82
1:AA:71:A:O2'	1:AA:72:A:H5"	1.78	0.82
22:BA:84:A:H62	22:BA:101:A:H2	1.23	0.82
22:BA:289:G:H2'	22:BA:290:U:O4'	1.79	0.82
22:BA:2502:G:H5'	22:BA:2503:A:C5'	2.08	0.82
48:B0:42:ILE:HD12	48:B0:48:TYR:HB2	1.61	0.82
53:CA:87:C:O2'	53:CA:88:U:H4'	1.79	0.82
55:CM:64:VAL:HG12	55:CM:65:GLU:H	1.43	0.82
22:DA:2022:U:HO2'	22:DA:2616:C:HO2'	1.23	0.82
12:AL:24:GLU:HB2	12:AL:26:CYS:SG	2.19	0.82
23:BB:90:C:H5"	23:BB:90:C:H6	1.43	0.82
31:BJ:3:THR:HG21	38:BQ:60:TRP:HE1	1.42	0.82
43:BV:44:HIS:HE1	43:BV:86:LEU:H	1.26	0.82
20:CT:73:ARG:HH11	20:CT:73:ARG:CG	1.92	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BT:30:ILE:HG23	41:BT:85:VAL:HB	1.59	0.82
53:CA:252:U:H2'	53:CA:253:A:C8	2.15	0.82
22:DA:204:A:H4'	22:DA:205:G:OP1	1.80	0.82
22:DA:1204:A:H4'	22:DA:1205:A:O5'	1.78	0.82
22:DA:1905:C:O2'	22:DA:1929:G:H1'	1.78	0.82
22:DA:1931:U:H2'	22:DA:1932:A:H8	1.44	0.82
25:DD:106:LYS:HB3	25:DD:206:ALA:HB3	1.59	0.82
22:DA:1307:A:N6	22:DA:1606:C:H6	1.76	0.82
34:DM:96:ILE:HD13	34:DM:102:LEU:HD11	1.61	0.82
1:AA:143:A:H5'	1:AA:144:G:H5'	1.61	0.82
22:BA:902:C:O2'	22:BA:903:C:H5'	1.79	0.82
53:CA:1159:U:H5	53:CA:1182:G:HO2'	1.24	0.82
53:CA:1287:A:O2'	53:CA:1288:A:C8	2.33	0.82
53:CA:1348:U:HO2'	53:CA:1349:A:H8	0.85	0.82
22:DA:1857:G:H1'	22:DA:1884:G:H22	1.45	0.82
34:DM:27:SER:H	34:DM:66:ARG:HH22	1.23	0.82
1:AA:1239:A:H62	1:AA:1299:A:H62	1.25	0.82
28:BG:83:THR:HA	28:BG:84:LYS:HZ3	1.45	0.82
53:CA:522:C:H41	12:CL:49:ARG:HH22	1.27	0.82
10:AJ:51:VAL:HB	14:AN:80:ARG:HB2	1.60	0.82
14:AN:44:VAL:HG23	14:AN:45:LEU:H	1.44	0.82
22:BA:2148:G:H2'	22:BA:2149:U:O4'	1.78	0.82
22:DA:216:A:O2'	22:DA:217:A:C8	2.25	0.82
22:DA:322:A:H3'	26:DE:163:ASN:ND2	1.94	0.82
22:DA:443:A:H61	26:DE:36:ALA:HB1	1.45	0.82
22:DA:1913:A:C4'	22:DA:1914:C:OP1	2.22	0.82
26:DE:108:ILE:HD11	26:DE:181:ILE:HB	1.62	0.82
1:AA:267:C:H2'	1:AA:268:U:C6	2.15	0.82
2:AB:218:ALA:HA	2:AB:221:ARG:HH21	1.45	0.82
27:BF:132:ARG:O	27:BF:133:GLU:HB3	1.78	0.82
32:BK:113:MET:O	32:BK:116:ILE:HG13	1.79	0.82
53:CA:986:U:H2'	53:CA:987:G:C8	2.14	0.82
22:DA:1312:U:H4'	22:DA:1313:U:O5'	1.79	0.82
22:DA:2142:A:C3'	22:DA:2143:C:H4'	2.09	0.82
38:DQ:91:ARG:NH1	39:DR:10:LYS:HB3	1.93	0.82
42:DU:45:GLN:HA	42:DU:45:GLN:HE21	1.43	0.82
51:D3:32:LEU:HA	51:D3:35:LYS:HG3	1.60	0.82
1:AA:619:U:H3	4:AD:130:ASN:HB3	1.45	0.82
22:BA:386:G:H4'	22:BA:387:U:OP2	1.80	0.82
44:BW:23:LYS:HG3	44:BW:24:ARG:O	1.80	0.82
22:DA:1695:G:H2'	22:DA:1696:G:O4'	1.79	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DI:91:LYS:HB3	30:DI:94:LYS:HB2	1.61	0.82
31:DJ:35:ARG:HG2	31:DJ:40:HIS:CD2	2.15	0.82
32:DK:60:ALA:HA	32:DK:87:LEU:HD23	1.60	0.82
5:AE:133:ILE:H	5:AE:133:ILE:HD12	1.44	0.82
6:AF:3:HIS:N	6:AF:92:THR:HG23	1.95	0.82
12:AL:72:ASN:ND2	12:AL:73:LEU:H	1.78	0.82
37:BP:21:PRO:HA	37:BP:46:VAL:HG12	1.62	0.82
53:CA:90:C:O2'	53:CA:91:U:C6	2.32	0.82
53:CA:1299:A:O2'	53:CA:1300:G:H4'	1.79	0.82
22:DA:616:A:C2'	22:DA:617:G:H8	1.91	0.82
1:AA:1331:G:O2'	1:AA:1332:A:OP2	1.97	0.81
10:CJ:64:GLN:HB2	14:CN:98:ALA:HB3	1.62	0.81
25:DD:53:GLY:HA3	25:DD:77:ARG:HG3	1.62	0.81
24:BC:20:ASN:HB3	24:BC:23:LEU:HD23	1.61	0.81
49:B1:24:LYS:HE2	49:B1:52:LYS:HB2	1.61	0.81
53:CA:1135:U:H5'	53:CA:1136:C:OP2	1.79	0.81
4:CD:25:ARG:HH12	4:CD:30:LYS:HG2	1.45	0.81
22:DA:921:C:C2'	22:DA:922:C:H5'	2.10	0.81
22:DA:1056:G:H1'	22:DA:1103:A:H61	1.45	0.81
25:DD:124:ARG:HD3	25:DD:125:TRP:CD1	2.14	0.81
7:AG:110:ARG:NH1	7:AG:122:GLU:HG2	1.95	0.81
24:BC:52:HIS:NE2	24:BC:218:THR:HG23	1.96	0.81
40:BS:59:GLU:HA	40:BS:64:ALA:HB2	1.61	0.81
53:CA:79:G:H2'	53:CA:80:A:H8	1.45	0.81
53:CA:252:U:H5'	53:CA:252:U:H6	1.44	0.81
22:DA:379:G:C6	22:DA:396:G:O6	2.34	0.81
22:DA:502:A:H5'	22:DA:503:A:OP2	1.79	0.81
22:DA:627:A:H2'	33:DL:78:ARG:HH11	1.43	0.81
14:AN:19:TYR:O	14:AN:22:LYS:HB3	1.80	0.81
31:BJ:77:HIS:HD2	31:BJ:79:GLY:N	1.78	0.81
53:CA:1146:A:O2'	53:CA:1147:C:H5'	1.81	0.81
58:DF:39:VAL:HA	58:DF:49:LEU:HG	1.62	0.81
30:DI:74:PRO:HB2	30:DI:77:VAL:HG22	1.61	0.81
1:AA:620:C:C2	4:AD:131:ILE:HG21	2.14	0.81
1:AA:1303:C:H2'	1:AA:1304:G:C8	2.15	0.81
22:BA:137:U:O2'	22:BA:138:U:P	2.38	0.81
44:BW:37:VAL:HG12	44:BW:38:ARG:H	1.46	0.81
53:CA:1446:A:H2'	53:CA:1447:A:H5"	1.62	0.81
17:CQ:13:SER:HB3	17:CQ:21:VAL:HB	1.63	0.81
22:DA:1255:U:H3'	22:DA:1256:G:H5"	1.62	0.81
22:DA:1809:A:O2'	22:DA:1810:A:C8	2.32	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DF:49:LEU:HA	58:DF:52:ALA:HB3	1.62	0.81
24:BC:170:TYR:CD2	24:BC:184:GLU:HA	2.15	0.81
22:DA:1049:C:HO2'	22:DA:1050:A:H8	0.81	0.81
22:DA:1060:U:C4'	22:DA:1061:U:H2'	2.10	0.81
22:DA:1391:U:H4'	41:DT:19:LYS:NZ	1.95	0.81
25:DD:184:ARG:HH22	37:DP:6:GLN:HE21	1.27	0.81
32:DK:111:LYS:H	32:DK:111:LYS:HE3	1.46	0.81
1:AA:49:U:O4	1:AA:365:U:H5	1.64	0.81
1:AA:1441:A:N6	1:AA:1461:G:H21	1.78	0.81
2:AB:209:VAL:HG23	2:AB:210:THR:H	1.46	0.81
25:BD:169:ARG:O	25:BD:170:VAL:HG13	1.81	0.81
22:DA:831:G:H5"	33:DL:37:GLY:HA2	1.63	0.81
22:DA:1275:A:HO2'	22:DA:1276:A:C1'	1.94	0.81
22:DA:1303:G:HO2'	22:DA:1304:A:H8	0.84	0.81
22:DA:1429:G:O2'	22:DA:1430:G:H8	1.62	0.81
35:DN:71:ARG:HH21	35:DN:71:ARG:HB2	1.44	0.81
1:AA:206:C:H2'	1:AA:207:C:O4'	1.81	0.81
22:BA:903:C:C2'	22:BA:904:G:H5'	2.11	0.81
43:BV:10:LYS:HD3	43:BV:10:LYS:H	1.44	0.81
44:BW:8:SER:O	44:BW:9:THR:HG22	1.81	0.81
53:CA:374:A:H5"	53:CA:452:A:N1	1.96	0.81
53:CA:1105:A:H2'	53:CA:1106:G:H8	1.45	0.81
22:DA:2800:A:C4	22:DA:2801:G:H1'	2.16	0.81
25:DD:14:ILE:HG13	37:DP:11:GLN:HE22	1.45	0.81
33:DL:92:LEU:HD22	33:DL:124:GLY:HA3	1.62	0.81
1:AA:452:A:H2'	1:AA:453:G:O4'	1.81	0.81
1:AA:496:A:H2'	1:AA:496:A:N3	1.95	0.81
1:AA:975:A:H4'	1:AA:976:G:C5'	2.08	0.81
22:BA:228:C:H4'	22:BA:229:C:H5"	1.61	0.81
53:CA:496:A:N3	53:CA:496:A:H2'	1.95	0.81
5:AE:83:PRO:HB3	5:AE:96:GLN:NE2	1.96	0.81
53:CA:1201:A:H1'	53:CA:1202:U:OP2	1.81	0.81
53:CA:1493:A:H8	22:DA:1913:A:N6	1.79	0.81
22:DA:320:A:H2'	26:DE:131:THR:OG1	1.80	0.81
22:DA:627:A:H2'	33:DL:78:ARG:NH1	1.95	0.81
22:DA:1447:C:H2'	22:DA:1448:G:H8	1.46	0.81
20:AT:82:ILE:O	20:AT:86:ALA:HB3	1.81	0.80
39:BR:39:LEU:HA	39:BR:49:ILE:HG21	1.62	0.80
53:CA:973:G:C2'	53:CA:974:A:H5'	2.11	0.80
28:DG:124:CYS:HB3	28:DG:130:ILE:HA	1.60	0.80
1:AA:548:G:H2'	1:AA:549:C:H6	1.44	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1228:C:H2'	1:AA:1229:A:C8	2.16	0.80
6:AF:86:ARG:HD2	18:AR:63:TYR:O	1.81	0.80
29:BH:32:PRO:HB3	45:BX:38:TRP:HB3	1.62	0.80
4:CD:30:LYS:HD3	4:CD:30:LYS:N	1.96	0.80
5:CE:55:VAL:O	5:CE:59:ILE:HG22	1.81	0.80
22:DA:1275:A:O2'	22:DA:1276:A:C1'	2.29	0.80
22:BA:2577:A:H5"	22:BA:2578:G:H5'	1.61	0.80
53:CA:439:U:H4'	4:CD:120:LYS:HD2	1.60	0.80
4:CD:77:GLU:HG3	4:CD:81:LEU:HD11	1.61	0.80
22:DA:2387:U:H1'	44:DW:38:ARG:HH12	1.46	0.80
34:DM:7:THR:HG22	34:DM:9:PHE:H	1.46	0.80
1:AA:255:G:H4'	17:AQ:18:LYS:HE3	1.63	0.80
11:AK:22:ILE:HD13	11:AK:95:THR:HG21	1.63	0.80
28:BG:86:LEU:HD12	28:BG:86:LEU:N	1.97	0.80
22:DA:2665:A:H2'	22:DA:2666:C:O2	1.82	0.80
44:BW:37:VAL:HG12	44:BW:38:ARG:N	1.96	0.80
53:CA:1268:G:H21	53:CA:1327:C:H1'	1.47	0.80
22:DA:1205:A:H5"	22:DA:1206:G:C8	2.17	0.80
22:BA:900:A:H2'	22:BA:901:C:C5'	2.07	0.80
35:BN:85:PRO:HA	35:BN:88:ALA:HB2	1.63	0.80
22:DA:1399:C:O2'	22:DA:1400:U:H5'	1.82	0.80
28:DG:120:ILE:HG13	28:DG:140:ILE:HG22	1.62	0.80
37:DP:20:ARG:HD2	37:DP:21:PRO:HD2	1.63	0.80
44:DW:18:LYS:HD3	44:DW:19:ARG:H	1.46	0.80
22:BA:2136:G:H2'	22:BA:2137:U:H5	1.46	0.80
53:CA:14:U:H2'	53:CA:16:A:OP2	1.82	0.80
53:CA:994:A:N6	53:CA:1216:A:H5'	1.97	0.80
53:CA:1348:U:O2'	53:CA:1349:A:H8	1.63	0.80
5:CE:154:ALA:HB1	8:CH:65:PHE:HE2	1.45	0.80
1:AA:485:U:O2'	1:AA:486:U:OP1	1.99	0.80
2:AB:89:PHE:HB3	2:AB:149:GLY:CA	2.12	0.80
22:BA:2135:A:O2'	22:BA:2136:G:C8	2.33	0.80
29:BH:18:GLN:HE21	29:BH:18:GLN:HA	1.47	0.80
32:BK:88:ASN:HD22	32:BK:91:SER:H	1.30	0.80
44:BW:9:THR:CG2	44:BW:10:ARG:HD3	2.09	0.80
22:DA:45:G:H5'	22:DA:46:G:OP1	1.82	0.80
22:DA:616:A:H2'	22:DA:617:G:H8	1.47	0.80
1:AA:481:G:HO2'	1:AA:482:A:H8	1.27	0.80
10:AJ:36:VAL:HG22	10:AJ:76:ILE:HG23	1.64	0.80
53:CA:77:A:H2'	53:CA:78:A:C8	2.17	0.80
3:CC:63:ILE:HG12	3:CC:65:VAL:HG23	1.64	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:47:GLU:HB2	10:CJ:67:ILE:HG13	1.63	0.80
33:DL:79:LEU:HA	33:DL:82:LEU:HD11	1.64	0.80
5:CE:76:ASN:O	5:CE:79:THR:HG22	1.81	0.80
22:DA:989:G:H4'	22:DA:990:A:OP1	1.82	0.80
22:DA:1489:C:C4'	22:DA:1490:A:OP1	2.25	0.80
57:DB:5:U:H2'	57:DB:6:G:C8	2.16	0.80
36:DO:53:THR:HB	36:DO:65:THR:HG22	1.61	0.80
44:DW:23:LYS:HD2	44:DW:24:ARG:N	1.96	0.80
22:BA:1056:G:H5"	22:BA:1057:A:H5'	1.62	0.79
22:BA:1079:C:N4	22:BA:1088:A:H2	1.80	0.79
33:BL:93:ASN:ND2	33:BL:94:THR:N	2.30	0.79
8:CH:28:SER:HA	8:CH:58:LEU:HD12	1.63	0.79
22:DA:118:A:N3	22:DA:178:G:H1'	1.96	0.79
22:DA:1324:G:O2'	22:DA:1616:A:C6	2.34	0.79
41:DT:50:LEU:HD23	41:DT:51:PHE:H	1.47	0.79
1:AA:373:A:O2'	1:AA:374:A:H5'	1.82	0.79
4:AD:10:LEU:HD22	4:AD:62:ARG:HG3	1.63	0.79
22:BA:1062:G:O2'	22:BA:1063:G:C8	2.35	0.79
22:DA:762:U:C4'	22:DA:763:G:O5'	2.31	0.79
22:DA:1606:C:O2'	22:DA:1607:C:OP2	1.99	0.79
1:AA:89:U:O2'	1:AA:90:C:H5"	1.81	0.79
6:AF:3:HIS:H	6:AF:92:THR:CG2	1.93	0.79
45:BX:67:LEU:HD13	45:BX:77:TYR:CE1	2.18	0.79
53:CA:335:C:H2'	53:CA:336:A:C8	2.16	0.79
53:CA:491:G:O2'	53:CA:492:C:H5'	1.83	0.79
53:CA:1224:U:H5'	53:CA:1225:A:OP2	1.83	0.79
11:CK:27:ASN:HD22	11:CK:27:ASN:H	1.25	0.79
22:DA:279:A:N6	22:DA:361:G:H1'	1.97	0.79
22:DA:922:C:H1'	44:DW:22:VAL:HG21	1.64	0.79
28:DG:86:LEU:HA	28:DG:163:TYR:HB3	1.63	0.79
46:DY:20:ASN:HD22	46:DY:50:VAL:HG22	1.46	0.79
22:BA:272:A:O2'	22:BA:273:G:H8	1.64	0.79
22:BA:1458:U:C4'	22:BA:1459:G:O5'	2.19	0.79
30:BI:53:PRO:HD2	30:BI:77:VAL:HG21	1.64	0.79
3:CC:190:THR:HG22	3:CC:191:THR:H	1.48	0.79
22:DA:481:G:O2'	22:DA:507:A:N6	2.15	0.79
22:DA:616:A:H2'	22:DA:617:G:C8	2.17	0.79
22:DA:648:G:HO2'	22:DA:649:G:H8	0.82	0.79
31:DJ:17:VAL:HG23	31:DJ:137:PRO:HB2	1.63	0.79
49:D1:25:ASN:HB3	49:D1:28:THR:OG1	1.82	0.79
8:AH:86:LYS:HG3	8:AH:90:GLU:HB3	1.62	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1941:C:H5'	22:BA:1941:C:C6	2.16	0.79
35:BN:103:ARG:HD3	35:BN:110:MET:CE	2.13	0.79
10:CJ:15:HIS:CE1	10:CJ:68:ARG:HD3	2.18	0.79
22:DA:1714:U:H3'	22:DA:1715:G:H5'	1.63	0.79
22:DA:2358:A:H61	33:DL:54:GLN:HE22	1.27	0.79
22:DA:2750:A:H4'	22:DA:2751:G:OP2	1.82	0.79
31:DJ:99:ARG:HA	31:DJ:102:GLU:HB3	1.63	0.79
1:AA:1168:U:C6	1:AA:1168:U:OP1	2.34	0.79
4:AD:96:ARG:HB3	4:AD:98:ASP:OD1	1.81	0.79
22:BA:2757:A:N1	28:BG:66:THR:HG21	1.98	0.79
2:CB:103:TRP:HA	2:CB:106:VAL:HB	1.63	0.79
1:AA:1046:A:H2'	1:AA:1047:G:H8	1.48	0.79
1:AA:1241:G:HO2'	1:AA:1242:G:H8	0.80	0.79
11:AK:88:PRO:HD3	21:AU:28:LEU:HD13	1.65	0.79
22:BA:1733:G:O2'	22:BA:1734:G:H8	1.65	0.79
24:BC:144:GLU:HA	24:BC:151:GLY:HA2	1.62	0.79
51:B3:56:LEU:HD22	51:B3:56:LEU:H	1.47	0.79
53:CA:410:G:OP1	4:CD:25:ARG:HD2	1.81	0.79
53:CA:1329:A:H5"	55:CM:25:GLY:N	1.96	0.79
10:CJ:40:ILE:HG22	10:CJ:42:LEU:HD12	1.62	0.79
11:CK:74:LYS:HD2	11:CK:104:PHE:HE1	1.48	0.79
36:DO:115:LEU:H	36:DO:115:LEU:HD13	1.44	0.79
15:AO:63:ARG:HD3	15:AO:87:ARG:NH2	1.98	0.79
25:BD:5:VAL:N	25:BD:32:ASN:HD21	1.77	0.79
30:BI:100:ILE:HG22	30:BI:101:SER:H	1.47	0.79
39:BR:51:VAL:HB	39:BR:52:PRO:HD2	1.64	0.79
22:DA:647:G:H2'	22:DA:648:G:C8	2.17	0.79
37:DP:88:ARG:HE	37:DP:112:ARG:HH21	1.31	0.79
38:BQ:65:ASN:ND2	38:BQ:69:ARG:HH22	1.79	0.79
51:B3:22:LYS:HA	51:B3:47:ALA:O	1.83	0.79
9:CI:118:ARG:NH2	9:CI:122:ARG:HE	1.80	0.79
22:DA:1645:G:OP1	22:DA:1646:C:H5'	1.82	0.79
1:AA:1469:C:H6	1:AA:1469:C:H5'	1.47	0.79
7:AG:76:SER:HA	7:AG:85:GLN:HB2	1.65	0.79
22:DA:2216:G:H2'	22:DA:2217:G:C8	2.16	0.79
34:DM:36:VAL:HG22	43:DV:82:TYR:HB2	1.65	0.79
2:AB:127:LYS:HG3	2:AB:128:LEU:H	1.48	0.78
7:AG:26:VAL:HG12	7:AG:42:VAL:HG21	1.63	0.78
7:AG:114:SER:HB3	7:AG:117:LEU:HG	1.63	0.78
22:BA:1993:U:H4'	25:BD:133:THR:HG21	1.65	0.78
26:BE:146:VAL:HG23	26:BE:167:VAL:CG2	2.13	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BK:71:ARG:CB	32:BK:72:PRO:HD3	2.12	0.78
34:BM:73:ILE:HG21	34:BM:91:TYR:CZ	2.18	0.78
9:CI:17:ARG:HB2	9:CI:65:THR:HB	1.64	0.78
20:CT:23:ARG:HB3	20:CT:60:GLN:NE2	1.98	0.78
22:DA:1310:G:H2'	22:DA:1311:G:O4'	1.83	0.78
22:DA:1490:A:H8	24:DC:73:ILE:HD12	1.48	0.78
22:DA:2023:C:HO2'	22:DA:2024:G:H8	0.80	0.78
22:DA:2060:A:H62	26:DE:69:ARG:HH12	1.28	0.78
1:AA:1285:A:H5'	1:AA:1286:U:C4	2.18	0.78
22:BA:301:G:OP2	42:BU:81:ARG:NH1	2.16	0.78
22:BA:1654:A:O2'	25:BD:118:PHE:CD2	2.36	0.78
24:BC:244:VAL:HG12	24:BC:250:GLN:HA	1.65	0.78
28:BG:104:LEU:HB2	28:BG:112:VAL:CG2	2.13	0.78
53:CA:464:U:O4	53:CA:466:A:H4'	1.81	0.78
54:CG:71:THR:HG23	54:CG:72:VAL:HG23	1.65	0.78
9:CI:90:ASP:HB3	9:CI:93:LEU:HD23	1.65	0.78
22:DA:649:G:H2'	22:DA:650:C:C6	2.19	0.78
57:DB:42:C:H41	58:DF:87:LYS:NZ	1.81	0.78
1:AA:202:G:H21	1:AA:466:A:H61	1.30	0.78
53:CA:328:C:H1'	53:CA:329:A:OP2	1.83	0.78
53:CA:456:A:H2'	53:CA:457:G:H8	1.47	0.78
3:CC:166:TRP:O	3:CC:167:TYR:HB2	1.83	0.78
12:CL:82:ARG:HH11	12:CL:82:ARG:HG2	1.49	0.78
43:DV:30:ILE:HG12	43:DV:91:PHE:HB2	1.64	0.78
1:AA:973:G:H3'	1:AA:974:A:H5"	1.64	0.78
4:AD:25:ARG:HH11	4:AD:30:LYS:HE3	1.47	0.78
5:AE:152:VAL:HB	5:AE:155:LYS:NZ	1.97	0.78
22:BA:1778:U:H2'	22:BA:1784:A:N6	1.98	0.78
25:BD:45:TYR:N	25:BD:45:TYR:CD1	2.50	0.78
53:CA:563:A:H2'	53:CA:563:A:N3	1.95	0.78
53:CA:960:U:H4'	53:CA:961:U:H5"	1.65	0.78
5:CE:24:VAL:HG23	5:CE:26:GLY:H	1.48	0.78
33:DL:117:THR:HG22	33:DL:118:THR:H	1.49	0.78
10:AJ:57:VAL:HG22	10:AJ:58:ASN:H	1.47	0.78
22:BA:506:G:H4'	22:BA:507:A:H5'	1.65	0.78
29:BH:8:LYS:O	29:BH:9:VAL:HB	1.82	0.78
30:BI:33:ASN:HB3	30:BI:36:GLU:HB2	1.66	0.78
31:BJ:111:LYS:HD3	31:BJ:112:GLY:N	1.97	0.78
22:DA:1038:G:C2	22:DA:1039:A:C8	2.71	0.78
4:AD:34:GLU:O	4:AD:37:PRO:HD3	1.84	0.78
38:BQ:91:ARG:NH1	39:BR:10:LYS:HB3	1.99	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:17:U:H2'	53:CA:18:C:C6	2.19	0.78
53:CA:1195:C:H5"	53:CA:1196:A:OP2	1.83	0.78
53:CA:1422:G:H5"	32:DK:48:PRO:HB3	1.64	0.78
5:CE:29:ILE:CG2	5:CE:30:PHE:N	2.47	0.78
22:DA:1534:U:H6	22:DA:1538:G:H1	1.32	0.78
35:DN:38:LEU:HB3	35:DN:39:PRO:HD3	1.63	0.78
22:BA:1287:A:H5'	35:BN:103:ARG:HD2	1.65	0.78
25:BD:122:VAL:HG12	25:BD:123:LYS:N	1.97	0.78
28:BG:23:ILE:H	28:BG:23:ILE:HD12	1.49	0.78
41:BT:50:LEU:HD12	41:BT:50:LEU:N	1.98	0.78
53:CA:1218:C:H2'	53:CA:1219:A:C8	2.19	0.78
22:DA:1274:A:O2'	22:DA:1275:A:H5"	1.84	0.78
22:DA:1809:A:O2'	22:DA:1810:A:H8	1.67	0.78
22:DA:2544:G:H5'	22:DA:2645:G:N7	1.98	0.78
24:DC:145:MET:HE2	24:DC:181:ARG:HH22	1.49	0.78
37:DP:63:ILE:HA	37:DP:68:GLY:HA2	1.66	0.78
43:DV:61:LEU:HD23	43:DV:61:LEU:H	1.48	0.78
7:AG:12:LEU:H	7:AG:12:LEU:HD22	1.47	0.78
12:AL:28:GLN:HB2	12:AL:81:ILE:O	1.82	0.78
9:CI:51:LEU:HB2	9:CI:56:MET:SD	2.24	0.78
22:DA:71:A:H5"	22:DA:73:A:C8	2.18	0.78
22:DA:1237:A:H2	22:DA:1238:G:H1'	1.49	0.78
22:DA:1552:A:H2'	22:DA:1552:A:N3	1.99	0.78
22:DA:1568:G:H21	24:DC:57:HIS:CE1	2.01	0.78
22:DA:2324:U:H5'	22:DA:2325:G:C5'	2.14	0.78
31:DJ:20:ALA:HA	31:DJ:23:LYS:HG3	1.65	0.78
31:DJ:74:TYR:CE2	31:DJ:103:ILE:HD11	2.18	0.78
40:DS:14:ALA:O	40:DS:18:ARG:HB2	1.83	0.78
1:AA:188:C:O2	1:AA:188:C:H2'	1.83	0.78
22:BA:902:C:C2'	22:BA:903:C:H5'	2.12	0.78
24:BC:70:LYS:HE2	24:BC:73:ILE:HD12	1.65	0.78
17:CQ:3:LYS:NZ	17:CQ:6:THR:HG21	1.99	0.78
22:DA:777:G:N7	22:DA:793:A:H2	1.81	0.78
22:DA:1071:G:O2'	22:DA:1072:C:H5'	1.84	0.78
38:DQ:16:ILE:HG23	38:DQ:38:VAL:HG21	1.66	0.78
5:AE:153:ALA:HA	5:AE:156:ARG:HB2	1.65	0.78
22:BA:1257:C:H5'	26:BE:78:TRP:CZ3	2.18	0.78
30:BI:3:LYS:HD2	30:BI:4:VAL:HG23	1.66	0.78
44:BW:24:ARG:HD3	44:BW:65:LYS:HD3	1.66	0.78
53:CA:500:G:H5"	53:CA:500:G:C8	2.18	0.78
22:DA:740:C:H5'	22:DA:1784:A:H3'	1.64	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:55:ARG:HH12	4:AD:58:GLN:HG2	1.48	0.77
24:BC:68:ARG:HD3	24:BC:103:ILE:HD11	1.66	0.77
10:CJ:15:HIS:HE1	10:CJ:68:ARG:HD3	1.48	0.77
22:DA:1469:A:H2'	22:DA:1470:A:C8	2.19	0.77
22:DA:1734:G:HO2'	22:DA:1735:A:H8	1.29	0.77
45:DX:31:ASN:H	45:DX:31:ASN:ND2	1.81	0.77
3:CC:18:ASN:HA	3:CC:55:VAL:HG12	1.65	0.77
22:DA:226:A:C2	22:DA:230:G:O6	2.37	0.77
22:DA:686:U:O4	50:D2:12:ARG:HG3	1.83	0.77
22:DA:2190:G:H5'	22:DA:2191:A:OP2	1.84	0.77
25:DD:105:LYS:HA	25:DD:177:VAL:HG22	1.66	0.77
58:DF:43:ILE:HG23	58:DF:44:ALA:H	1.50	0.77
1:AA:92:U:H2'	1:AA:93:U:C6	2.19	0.77
6:AF:38:ARG:HG3	6:AF:39:LEU:N	1.98	0.77
22:BA:221:A:H4'	22:BA:222:A:O5'	1.84	0.77
30:BI:104:GLN:O	30:BI:105:LEU:HB2	1.84	0.77
53:CA:66:A:H2'	53:CA:66:A:N3	2.00	0.77
53:CA:500:G:H5"	53:CA:500:G:H8	1.47	0.77
53:CA:1452:C:H4'	53:CA:1453:G:O5'	1.84	0.77
2:CB:162:VAL:HG13	2:CB:184:ALA:HB2	1.66	0.77
22:DA:128:C:H2'	22:DA:129:C:C6	2.19	0.77
22:DA:1076:C:O2	30:DI:92:PRO:HG2	1.84	0.77
22:DA:2752:C:H2'	22:DA:2753:A:H8	1.48	0.77
58:DF:49:LEU:H	58:DF:49:LEU:HD22	1.47	0.77
42:DU:95:PHE:HD1	42:DU:95:PHE:H	1.32	0.77
1:AA:374:A:OP1	1:AA:452:A:N1	2.18	0.77
19:AS:50:VAL:HG21	19:AS:70:LEU:HB3	1.64	0.77
22:BA:1069:A:O2'	22:BA:1070:A:H5"	1.84	0.77
53:CA:16:A:C2'	53:CA:17:U:H5'	2.15	0.77
53:CA:1526:G:OP1	21:CU:38:GLU:HG3	1.84	0.77
54:CG:28:ILE:HG21	54:CG:100:MET:HG3	1.66	0.77
15:CO:47:LYS:HD2	15:CO:47:LYS:H	1.48	0.77
22:DA:1490:A:C8	24:DC:73:ILE:HD12	2.20	0.77
18:AR:44:THR:OG1	18:AR:46:THR:HG22	1.85	0.77
32:BK:38:ILE:HD11	32:BK:112:PHE:HZ	1.49	0.77
22:DA:2430:A:H5'	22:DA:2431:U:OP2	1.84	0.77
22:BA:855:G:N2	44:BW:23:LYS:HG2	1.98	0.77
22:BA:1190:G:OP1	33:BL:32:GLY:HA2	1.84	0.77
33:BL:114:GLY:C	33:BL:115:GLU:HG3	2.05	0.77
35:BN:96:ARG:HH22	35:BN:116:VAL:HG23	1.50	0.77
41:BT:32:LEU:N	41:BT:83:ALA:HB3	1.99	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1450:U:H4'	53:CA:1451:U:H5	1.50	0.77
22:DA:286:U:H2'	22:DA:287:G:C8	2.19	0.77
22:DA:2060:A:H62	26:DE:69:ARG:NH1	1.81	0.77
32:DK:13:ASN:ND2	32:DK:97:THR:H	1.81	0.77
52:D4:7:VAL:HG13	52:D4:8:LYS:H	1.49	0.77
9:AI:83:THR:HG21	9:AI:102:PHE:HB3	1.64	0.77
22:BA:873:C:H42	22:BA:904:G:H1	1.33	0.77
28:BG:73:SER:HA	28:BG:76:ILE:CG2	2.15	0.77
43:BV:72:VAL:HG12	43:BV:93:ARG:HA	1.66	0.77
53:CA:1299:A:C8	53:CA:1301:U:H1'	2.19	0.77
14:CN:76:PHE:HE2	14:CN:92:ILE:HG21	1.48	0.77
22:DA:1799:G:H8	24:DC:179:GLU:OE1	1.67	0.77
24:DC:15:VAL:HG22	24:DC:205:GLY:HA3	1.67	0.77
13:AM:2:ARG:O	13:AM:3:ILE:HG12	1.85	0.77
16:AP:59:HIS:CE1	16:AP:63:GLN:HE22	2.03	0.77
41:BT:50:LEU:H	41:BT:50:LEU:CD1	1.96	0.77
53:CA:346:G:H2'	53:CA:346:G:N3	1.99	0.77
53:CA:1450:U:H4'	53:CA:1451:U:C5	2.20	0.77
22:DA:445:C:H2'	22:DA:446:G:C8	2.19	0.77
22:DA:804:A:H2'	22:DA:806:C:C4	2.19	0.77
22:DA:1326:U:HO2'	22:DA:1327:A:H8	0.78	0.77
22:DA:1809:A:HO2'	22:DA:1810:A:H8	1.31	0.77
28:DG:112:VAL:HG12	28:DG:114:HIS:H	1.50	0.77
1:AA:87:C:H2'	1:AA:88:U:H6	1.49	0.77
1:AA:202:G:N2	1:AA:466:A:H61	1.83	0.77
8:AH:87:ARG:O	8:AH:121:GLY:HA3	1.85	0.77
13:AM:26:LYS:O	13:AM:30:LYS:HG3	1.85	0.77
44:BW:24:ARG:HD3	44:BW:65:LYS:CD	2.15	0.77
50:B2:3:ARG:HG2	50:B2:3:ARG:NH2	1.99	0.77
53:CA:820:U:H4'	53:CA:821:G:OP2	1.85	0.77
22:DA:322:A:H3'	26:DE:163:ASN:HD21	1.49	0.77
22:DA:614:A:H4'	22:DA:616:A:H62	1.50	0.77
22:DA:2291:U:H2'	22:DA:2292:U:C6	2.20	0.77
1:AA:214:C:HO2'	1:AA:215:C:H6	0.78	0.77
1:AA:1348:U:H2'	1:AA:1349:A:H8	1.50	0.77
27:BF:120:SER:HB2	27:BF:127:TYR:CE1	2.20	0.77
37:BP:50:ARG:CD	37:BP:51:ASN:H	1.97	0.77
38:BQ:48:ASP:HA	38:BQ:51:GLN:HB2	1.67	0.77
22:DA:163:C:O2'	22:DA:164:C:O4'	2.02	0.77
22:DA:396:G:O2'	22:DA:397:U:C6	2.36	0.77
41:DT:44:LYS:O	41:DT:48:GLN:HG2	1.84	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:100:ASN:HD22	11:AK:106:ILE:HG22	1.50	0.76
11:AK:122:PRO:HG2	21:AU:33:ARG:O	1.84	0.76
22:BA:1062:G:OP1	22:BA:1070:A:H4'	1.85	0.76
24:BC:16:VAL:H	24:BC:203:VAL:HG12	1.47	0.76
38:BQ:91:ARG:NH2	38:BQ:93:ILE:HD13	1.99	0.76
46:BY:17:GLU:HG3	46:BY:18:LEU:N	1.99	0.76
53:CA:1108:G:H5"	3:CC:175:HIS:CE1	2.19	0.76
15:CO:63:ARG:HH22	22:DA:715:A:H5'	1.49	0.76
22:DA:1340:U:H4'	22:DA:1340:U:OP1	1.83	0.76
22:DA:1345:C:H3'	22:DA:1345:C:OP2	1.85	0.76
22:DA:2601:C:H4'	22:DA:2602:A:OP2	1.83	0.76
57:DB:75:G:H1	57:DB:102:G:N2	1.82	0.76
35:DN:71:ARG:HB2	35:DN:71:ARG:NH2	2.01	0.76
1:AA:922:G:H4'	5:AE:24:VAL:HA	1.67	0.76
1:AA:1411:C:C2'	1:AA:1412:C:H5'	2.14	0.76
4:AD:145:ARG:NH1	4:AD:147:LYS:HE3	2.00	0.76
6:AF:19:PRO:HA	6:AF:22:ILE:HD12	1.68	0.76
22:BA:1475:G:H1'	22:BA:1476:U:OP2	1.84	0.76
24:BC:20:ASN:HD22	24:BC:20:ASN:C	1.87	0.76
28:BG:97:VAL:HG22	28:BG:102:ILE:HG12	1.66	0.76
44:BW:37:VAL:HG13	44:BW:55:ASP:O	1.85	0.76
45:BX:38:TRP:HB2	45:BX:45:PHE:HE2	1.49	0.76
53:CA:429:U:H3'	4:CD:8:LEU:HD23	1.65	0.76
53:CA:1245:C:H2'	53:CA:1246:A:H8	1.50	0.76
4:CD:34:GLU:O	4:CD:36:ALA:N	2.18	0.76
54:CG:68:VAL:HG22	54:CG:134:VAL:HG12	1.67	0.76
11:CK:23:HIS:HB3	11:CK:30:ILE:HB	1.68	0.76
37:DP:91:VAL:HG11	37:DP:96:LEU:HD11	1.66	0.76
42:DU:3:LYS:HG2	42:DU:84:PHE:HZ	1.50	0.76
50:D2:5:PHE:HZ	50:D2:12:ARG:HH11	1.31	0.76
35:BN:103:ARG:HD3	35:BN:110:MET:HE3	1.65	0.76
36:BO:31:THR:HG22	36:BO:34:HIS:O	1.86	0.76
44:BW:39:GLN:HG3	44:BW:42:THR:H	1.50	0.76
53:CA:990:C:C2'	53:CA:991:U:O4'	2.33	0.76
53:CA:1169:A:H2'	53:CA:1170:A:C8	2.21	0.76
11:CK:44:ALA:HB3	11:CK:69:CYS:HB2	1.67	0.76
22:DA:2612:C:H5"	22:DA:2613:U:OP1	1.85	0.76
29:DH:80:ILE:HB	29:DH:101:ASP:CB	2.16	0.76
38:DQ:40:LYS:HD2	38:DQ:44:TYR:HE2	1.49	0.76
22:BA:1469:A:H2'	22:BA:1470:A:C8	2.19	0.76
23:BB:13:G:O2'	23:BB:15:A:H5'	1.83	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BL:93:ASN:HD22	33:BL:94:THR:H	1.30	0.76
37:BP:28:LYS:HB2	37:BP:82:SER:HB3	1.68	0.76
38:BQ:111:LYS:HE2	39:BR:50:GLY:HA2	1.67	0.76
39:BR:51:VAL:HB	39:BR:52:PRO:CD	2.14	0.76
56:CP:8:ARG:HB3	56:CP:28:ARG:NH1	2.00	0.76
22:DA:15:G:OP1	48:D0:20:ALA:HB2	1.83	0.76
22:DA:2136:G:H2'	22:DA:2137:U:C6	2.21	0.76
26:DE:6:LYS:HB2	26:DE:121:VAL:HG12	1.66	0.76
2:AB:22:TRP:O	2:AB:22:TRP:CG	2.38	0.76
4:AD:25:ARG:NH1	4:AD:30:LYS:HE3	2.01	0.76
28:BG:88:LEU:HD11	28:BG:95:ALA:HB2	1.67	0.76
31:BJ:4:PHE:O	31:BJ:44:TYR:CE1	2.38	0.76
53:CA:1005:A:C5	53:CA:1006:G:H1'	2.20	0.76
22:DA:1062:G:H8	22:DA:1070:A:OP2	1.67	0.76
22:BA:1871:A:O2'	22:BA:1872:A:C8	2.39	0.76
25:BD:118:PHE:HD2	25:BD:119:ALA:H	1.34	0.76
30:BI:7:TYR:HB3	30:BI:58:ILE:H	1.50	0.76
53:CA:108:G:H5'	53:CA:109:A:H5"	1.67	0.76
17:CQ:46:HIS:HB2	17:CQ:70:LYS:HE3	1.67	0.76
37:DP:50:ARG:HB3	37:DP:57:ALA:N	2.00	0.76
12:AL:43:LYS:HB2	12:AL:44:PRO:HD3	1.68	0.76
21:AU:16:ARG:NH1	21:AU:19:LYS:HG3	2.01	0.76
22:BA:856:G:H1'	44:BW:23:LYS:HB3	1.65	0.76
22:BA:2813:A:H2	22:BA:2887:A:N6	1.83	0.76
26:BE:112:LEU:HD13	26:BE:186:VAL:HG11	1.68	0.76
22:DA:959:A:H2'	22:DA:960:A:C8	2.21	0.76
4:AD:172:VAL:HG22	4:AD:173:ASP:H	1.51	0.76
36:BO:31:THR:CG2	36:BO:34:HIS:H	1.98	0.76
22:DA:412:A:N7	22:DA:2412:A:H1'	2.01	0.76
22:DA:2618:G:H21	25:DD:155:VAL:HG21	1.50	0.76
25:DD:114:LYS:HD2	25:DD:116:LYS:NZ	2.01	0.76
25:DD:137:SER:HB3	25:DD:138:LEU:HD22	1.68	0.76
1:AA:1052:U:H5"	1:AA:1053:G:OP2	1.85	0.76
2:AB:99:MET:HA	2:AB:106:VAL:HG21	1.68	0.76
28:BG:60:GLY:O	28:BG:61:TRP:HB2	1.86	0.76
39:BR:16:GLU:HA	39:BR:98:ILE:HG22	1.67	0.76
39:BR:48:LYS:H	39:BR:48:LYS:HD2	1.51	0.76
44:BW:39:GLN:HG3	44:BW:42:THR:N	2.01	0.76
53:CA:33:A:H2'	53:CA:34:C:C6	2.19	0.76
53:CA:344:A:H5"	53:CA:345:C:C5	2.21	0.76
10:CJ:26:VAL:O	10:CJ:30:LYS:HB3	1.85	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CM:12:LYS:HA	55:CM:12:LYS:HE3	1.68	0.76
43:DV:80:HIS:CD2	43:DV:82:TYR:H	2.04	0.76
22:BA:357:C:H2'	22:BA:358:U:C6	2.21	0.76
25:BD:12:THR:HG22	25:BD:13:ARG:N	2.01	0.76
28:BG:8:VAL:HG11	28:BG:49:LEU:HB2	1.66	0.76
29:BH:94:ILE:HG21	29:BH:99:ILE:HG12	1.68	0.76
34:BM:43:ALA:HA	34:BM:46:ILE:CG1	2.15	0.76
43:BV:80:HIS:HD2	43:BV:83:LYS:H	0.81	0.76
46:BY:56:LEU:O	46:BY:57:LEU:HB3	1.85	0.76
21:CU:16:ARG:CG	21:CU:19:LYS:HG2	2.12	0.76
22:DA:388:G:N7	22:DA:390:U:H2'	2.01	0.76
22:DA:600:G:H5"	26:DE:27:LEU:HD22	1.67	0.76
22:DA:2458:G:H8	22:DA:2459:A:H62	1.34	0.76
25:DD:118:PHE:CD1	25:DD:119:ALA:N	2.54	0.76
26:DE:128:ALA:HB1	26:DE:129:PRO:HD2	1.68	0.76
58:DF:104:THR:HG22	58:DF:105:ILE:HG13	1.67	0.76
42:DU:14:THR:HG23	42:DU:15:GLY:H	1.51	0.76
22:BA:1082:U:C5'	30:BI:117:THR:O	2.31	0.75
37:BP:52:ARG:HG2	37:BP:52:ARG:HH11	1.51	0.75
44:BW:18:LYS:HA	44:BW:36:ILE:HG13	1.67	0.75
53:CA:157:U:O2'	53:CA:158:G:H5'	1.86	0.75
53:CA:1157:A:C4'	53:CA:1158:C:O5'	2.29	0.75
12:CL:2:THR:HG22	12:CL:4:ASN:H	1.51	0.75
22:DA:95:A:H1'	46:DY:40:SER:HB2	1.67	0.75
25:DD:114:LYS:HD2	25:DD:116:LYS:HZ2	1.50	0.75
38:DQ:34:ALA:O	38:DQ:38:VAL:HG23	1.85	0.75
42:DU:92:VAL:HB	42:DU:101:THR:CG2	2.15	0.75
44:DW:39:GLN:HG2	44:DW:42:THR:HB	1.67	0.75
1:AA:86:G:N2	1:AA:87:C:H41	1.84	0.75
1:AA:121:U:H6	1:AA:121:U:H5"	1.50	0.75
1:AA:1239:A:N6	1:AA:1299:A:H62	1.84	0.75
22:DA:874:G:H5'	22:DA:875:G:OP2	1.85	0.75
22:DA:1906:G:C8	22:DA:1929:G:H2'	2.20	0.75
22:DA:2746:U:H1'	28:DG:138:GLN:HE21	1.51	0.75
58:DF:147:ARG:HG2	58:DF:149:ARG:HH12	1.51	0.75
1:AA:1409:C:O2'	1:AA:1410:A:H5'	1.86	0.75
9:AI:28:VAL:HB	9:AI:63:TYR:HD2	1.49	0.75
22:BA:2104:C:H2'	22:BA:2105:U:O4'	1.87	0.75
38:BQ:85:ALA:O	38:BQ:86:SER:C	2.24	0.75
44:BW:76:ARG:HH21	44:BW:76:ARG:CG	1.95	0.75
3:CC:18:ASN:HD21	3:CC:53:ARG:NH1	1.83	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:126:ARG:HB2	21:CU:33:ARG:HD2	1.68	0.75
55:CM:78:ARG:HH21	55:CM:79:LEU:HD23	1.51	0.75
22:DA:1303:G:O2'	22:DA:1304:A:H8	1.66	0.75
22:DA:1379:U:O2	22:DA:1379:U:H2'	1.86	0.75
40:DS:20:VAL:HG23	40:DS:23:LEU:HD12	1.67	0.75
1:AA:464:U:N3	1:AA:466:A:H5'	2.00	0.75
5:AE:155:LYS:HD2	5:AE:156:ARG:H	1.50	0.75
22:BA:1605:C:C3'	22:BA:1606:C:H5"	2.15	0.75
26:BE:149:ILE:O	26:BE:188:MET:HA	1.87	0.75
31:BJ:130:HIS:HD2	31:BJ:132:HIS:H	1.33	0.75
53:CA:1239:A:H1'	53:CA:1241:G:C4	2.22	0.75
9:CI:75:ALA:HA	9:CI:78:ILE:HD12	1.67	0.75
20:CT:23:ARG:HB3	20:CT:60:GLN:HE22	1.50	0.75
22:DA:286:U:H2'	22:DA:287:G:H8	1.49	0.75
22:DA:335:C:HO2'	22:DA:336:C:H6	0.77	0.75
22:DA:1519:G:H5'	22:DA:1520:U:OP2	1.86	0.75
22:DA:2321:U:O2	22:DA:2321:U:C3'	2.34	0.75
25:DD:19:GLY:O	32:DK:72:PRO:HB2	1.87	0.75
1:AA:1066:C:H5"	1:AA:1066:C:H6	1.50	0.75
22:BA:1076:C:H2'	22:BA:1077:A:H8	1.50	0.75
33:BL:77:ILE:CD1	33:BL:108:ALA:HB1	2.16	0.75
37:BP:4:ILE:O	37:BP:6:GLN:N	2.19	0.75
53:CA:120:A:C3'	53:CA:121:U:C5'	2.58	0.75
53:CA:1366:C:O2'	53:CA:1367:C:C6	2.38	0.75
24:DC:70:LYS:HB2	24:DC:101:ARG:HH22	1.52	0.75
1:AA:1520:C:H2'	1:AA:1521:C:H6	1.51	0.75
2:AB:46:VAL:HB	2:AB:47:PRO:HD3	1.68	0.75
22:BA:1508:A:O2'	22:BA:1509:A:OP2	2.04	0.75
40:BS:20:VAL:HA	40:BS:23:LEU:HD12	1.68	0.75
43:BV:5:ASN:ND2	43:BV:5:ASN:H	1.84	0.75
50:B2:43:THR:O	50:B2:44:VAL:HB	1.84	0.75
53:CA:1322:C:H2'	53:CA:1322:C:O2	1.85	0.75
2:CB:49:PHE:HA	2:CB:52:ALA:HB3	1.68	0.75
6:CF:11:HIS:HD2	6:CF:12:PRO:HD2	1.52	0.75
22:DA:196:A:H61	22:DA:831:G:H21	1.34	0.75
22:DA:729:G:H3'	22:DA:730:A:C5'	2.17	0.75
22:DA:1255:U:H5'	22:DA:2502:G:H22	1.51	0.75
22:DA:1455:G:O2'	22:DA:1456:G:H8	1.70	0.75
22:DA:2356:U:H4'	44:DW:16:GLU:HG3	1.67	0.75
22:DA:2563:U:H1'	22:DA:2566:A:N6	2.01	0.75
22:DA:2773:C:H2'	22:DA:2774:C:H6	1.52	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DW:49:ASN:ND2	44:DW:81:ILE:HG23	2.00	0.75
53:CA:1458:G:O2'	20:CT:22:SER:HB3	1.87	0.75
12:CL:97:VAL:O	12:CL:97:VAL:HG23	1.87	0.75
15:CO:28:VAL:HG13	15:CO:62:ARG:HG3	1.67	0.75
22:DA:422:A:O2'	22:DA:423:A:C8	2.40	0.75
22:DA:1534:U:H6	22:DA:1538:G:N1	1.85	0.75
25:DD:119:ALA:HB3	25:DD:163:GLY:H	1.52	0.75
47:DZ:4:ILE:HD12	47:DZ:58:GLU:HA	1.69	0.75
18:AR:40:PRO:HB2	18:AR:42:ARG:HG2	1.68	0.75
22:BA:904:G:O2'	22:BA:905:A:C5'	2.35	0.75
22:BA:1084:A:H2'	22:BA:1085:A:C8	2.21	0.75
22:BA:1110:G:O2'	22:BA:1111:A:H8	1.68	0.75
28:BG:120:ILE:HD13	28:BG:121:THR:N	2.01	0.75
46:BY:47:ARG:HH21	46:BY:47:ARG:HG3	1.51	0.75
51:B3:21:PHE:HB2	51:B3:49:VAL:CG1	2.17	0.75
53:CA:93:U:H2'	53:CA:95:C:H5	1.51	0.75
53:CA:736:C:H2'	53:CA:737:C:C6	2.22	0.75
17:CQ:30:HIS:HE1	17:CQ:32:ILE:HG13	1.50	0.75
22:DA:389:G:O2'	22:DA:390:U:H5'	1.87	0.75
22:DA:984:A:O2'	22:DA:985:C:OP1	2.03	0.75
22:DA:2336:A:N7	44:DW:40:ARG:CZ	2.50	0.75
24:DC:159:THR:O	24:DC:194:VAL:HG12	1.86	0.75
41:DT:60:THR:HG22	41:DT:83:ALA:HA	1.68	0.75
4:AD:36:ALA:HA	4:AD:41:GLY:HA3	1.68	0.75
11:AK:87:GLY:H	11:AK:113:THR:HG22	1.50	0.75
11:AK:126:ARG:HB2	21:AU:33:ARG:HH12	1.50	0.75
22:BA:1020:A:H4'	22:BA:1021:A:O5'	1.86	0.75
31:BJ:53:TYR:CE1	31:BJ:121:LYS:HG2	2.22	0.75
31:BJ:117:ALA:HA	31:BJ:120:ARG:NH2	2.00	0.75
41:BT:87:LEU:HB2	41:BT:91:GLN:HG2	1.69	0.75
53:CA:135:C:O2	56:CP:1:MET:HB2	1.86	0.75
53:CA:266:G:O2'	53:CA:267:C:H3'	1.87	0.75
22:DA:2758:A:H2'	22:DA:2759:G:H5'	1.66	0.75
19:AS:6:LYS:HE2	19:AS:6:LYS:HA	1.69	0.74
21:AU:39:LYS:H	21:AU:40:PRO:HD2	1.51	0.74
30:BI:115:ASP:O	30:BI:116:MET:HG2	1.86	0.74
35:BN:31:HIS:O	35:BN:33:ILE:HD12	1.87	0.74
37:BP:50:ARG:CG	37:BP:57:ALA:N	2.50	0.74
53:CA:371:A:O2'	53:CA:372:C:H5'	1.87	0.74
3:CC:140:ALA:O	3:CC:145:ALA:HB3	1.87	0.74
22:DA:230:G:O2'	22:DA:231:A:H8	1.66	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1255:U:H2'	26:DE:68:ALA:HB2	1.69	0.74
47:DZ:30:ARG:HH21	47:DZ:33:HIS:HB2	1.50	0.74
1:AA:1225:A:H2'	1:AA:1226:C:C5	2.22	0.74
18:AR:56:ARG:O	18:AR:60:ARG:HB2	1.87	0.74
22:BA:588:U:H2'	22:BA:589:U:C6	2.22	0.74
22:BA:2267:A:H5"	22:BA:2268:A:C5'	2.16	0.74
37:BP:50:ARG:CD	37:BP:56:SER:HB3	2.17	0.74
41:BT:29:THR:HA	41:BT:86:THR:HA	1.69	0.74
53:CA:1264:U:H2'	53:CA:1265:C:C6	2.21	0.74
22:DA:333:G:O2'	22:DA:334:C:H6	1.70	0.74
29:DH:1:MET:HB3	29:DH:21:VAL:O	1.86	0.74
38:DQ:10:ARG:HA	38:DQ:13:HIS:HB2	1.69	0.74
1:AA:80:A:C2	1:AA:81:A:H1'	2.22	0.74
1:AA:1411:C:H2'	1:AA:1412:C:H5'	1.68	0.74
22:BA:1385:A:H1'	22:BA:1386:C:C6	2.21	0.74
53:CA:1038:C:H2'	53:CA:1039:G:C8	2.22	0.74
22:DA:2468:A:O2'	22:DA:2469:A:H8	1.70	0.74
7:AG:86:VAL:HG22	7:AG:150:PHE:HB3	1.68	0.74
30:BI:78:LEU:HD13	30:BI:108:ILE:HG23	1.69	0.74
42:BU:97:SER:O	42:BU:98:ASN:HB3	1.87	0.74
53:CA:597:G:H2'	53:CA:598:U:H5'	1.69	0.74
6:CF:42:TRP:HB2	6:CF:59:TYR:HB2	1.69	0.74
22:DA:654:A:H2'	22:DA:655:A:H5"	1.69	0.74
22:DA:1071:G:N7	22:DA:1089:A:C6	2.55	0.74
26:DE:61:ARG:O	26:DE:61:ARG:HD2	1.88	0.74
1:AA:1021:A:C2'	1:AA:1022:A:H5"	2.16	0.74
9:AI:40:ARG:HA	9:AI:44:ARG:HB3	1.69	0.74
27:BF:34:THR:HG23	27:BF:89:THR:HG23	1.68	0.74
31:BJ:88:THR:HG22	31:BJ:91:GLU:CG	2.17	0.74
32:BK:21:CYS:HB2	32:BK:39:ILE:HD11	1.70	0.74
44:BW:49:ASN:HA	44:BW:61:LYS:HB2	1.70	0.74
12:CL:43:LYS:CB	12:CL:44:PRO:HD2	2.12	0.74
21:CU:33:ARG:NH1	21:CU:34:ARG:HD3	2.02	0.74
22:DA:5:A:C2	22:DA:2899:A:C2	2.75	0.74
2:AB:71:THR:HG22	2:AB:72:LYS:H	1.52	0.74
44:BW:18:LYS:HG3	44:BW:19:ARG:H	1.49	0.74
53:CA:1081:A:H5'	5:CE:22:LYS:HD2	1.70	0.74
53:CA:1138:G:O2'	53:CA:1139:G:OP1	2.03	0.74
22:DA:414:C:H5"	22:DA:1879:C:O2'	1.88	0.74
22:DA:976:G:H2'	22:DA:977:G:H8	1.53	0.74
22:DA:1493:C:H2'	22:DA:1493:C:O2	1.86	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1521:G:C6	22:DA:1522:A:N6	2.55	0.74
22:DA:1809:A:C2	22:DA:1810:A:C4	2.75	0.74
22:DA:2425:A:H4'	22:DA:2426:A:O5'	1.85	0.74
31:DJ:73:VAL:HG23	31:DJ:74:TYR:H	1.52	0.74
6:AF:38:ARG:HG2	6:AF:38:ARG:NH1	1.96	0.74
7:AG:121:ASN:O	7:AG:125:ASP:HB2	1.87	0.74
8:AH:104:SER:HB2	8:AH:125:ILE:HD11	1.69	0.74
22:BA:923:G:H21	44:BW:23:LYS:HZ3	1.33	0.74
25:BD:114:LYS:HE3	25:BD:114:LYS:O	1.87	0.74
32:BK:111:LYS:HE2	32:BK:111:LYS:H	1.51	0.74
41:BT:59:ASN:O	41:BT:83:ALA:O	2.04	0.74
53:CA:79:G:H2'	53:CA:80:A:C8	2.22	0.74
53:CA:533:A:O2'	53:CA:535:A:OP2	2.05	0.74
22:DA:273:G:H2'	22:DA:274:C:O4'	1.87	0.74
22:DA:784:G:HO2'	22:DA:785:G:H8	1.34	0.74
22:DA:1012:U:O4	31:DJ:30:THR:HG21	1.86	0.74
26:DE:149:ILE:O	26:DE:188:MET:HA	1.87	0.74
32:DK:71:ARG:HB3	32:DK:72:PRO:CD	2.15	0.74
43:DV:77:VAL:HA	43:DV:89:ILE:HG22	1.67	0.74
10:AJ:53:ILE:CG2	10:AJ:61:ALA:HB1	2.18	0.74
22:BA:682:G:H5'	50:B2:26:ASN:OD1	1.86	0.74
24:BC:71:ASP:HA	24:BC:117:SER:O	1.88	0.74
30:BI:79:LEU:HD13	30:BI:135:MET:SD	2.28	0.74
30:BI:126:ARG:HA	30:BI:129:GLU:HB2	1.69	0.74
37:BP:83:ILE:HD13	37:BP:84:SER:N	2.03	0.74
4:CD:176:LYS:HG3	4:CD:178:GLU:HB2	1.69	0.74
22:DA:1127:A:O2'	22:DA:1128:G:H5'	1.88	0.74
1:AA:1239:A:N6	1:AA:1299:A:N6	2.35	0.74
2:AB:108:GLN:HE21	2:AB:108:GLN:N	1.85	0.74
53:CA:642:A:N7	8:CH:106:SER:HA	2.02	0.74
9:CI:11:ARG:HD3	9:CI:106:ASP:OD1	1.88	0.74
22:DA:96:C:H4'	46:DY:41:HIS:CD2	2.22	0.74
22:DA:1097:U:H2'	22:DA:1098:A:O4'	1.88	0.74
26:DE:170:ARG:HH22	26:DE:176:ASP:HB2	1.52	0.74
29:DH:84:ALA:H	29:DH:148:ALA:HA	1.52	0.74
6:AF:97:THR:O	6:AF:98:GLU:HG2	1.87	0.74
22:BA:100:U:H4'	22:BA:101:A:O5'	1.88	0.74
22:BA:2427:C:H5"	22:BA:2428:G:OP1	1.88	0.74
53:CA:1024:G:H2'	53:CA:1025:U:O4'	1.87	0.74
2:CB:163:ILE:HG23	2:CB:185:ILE:HD11	1.68	0.74
17:CQ:46:HIS:HB2	17:CQ:70:LYS:HZ1	1.50	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CU:35:GLU:HG3	21:CU:36:PHE:H	1.53	0.74
24:DC:173:LEU:HD22	24:DC:181:ARG:O	1.88	0.74
28:DG:16:VAL:HG11	28:DG:44:HIS:CD2	2.23	0.74
39:DR:62:GLU:HB3	39:DR:97:LYS:HB3	1.68	0.74
8:AH:17:GLN:HE21	8:AH:71:VAL:HG23	1.52	0.73
12:AL:113:ARG:HB3	12:AL:118:VAL:HB	1.70	0.73
22:BA:277:G:H4'	22:BA:278:A:N7	2.03	0.73
24:BC:28:PRO:HG2	24:BC:33:LEU:HD11	1.69	0.73
25:BD:51:THR:OG1	25:BD:76:GLY:HA3	1.87	0.73
35:BN:79:LEU:O	35:BN:80:PHE:HB2	1.88	0.73
53:CA:702:A:OP1	53:CA:702:A:H8	1.71	0.73
53:CA:1113:C:H2'	53:CA:1114:C:H6	1.53	0.73
6:CF:43:GLY:HA2	6:CF:58:HIS:CE1	2.22	0.73
22:DA:2776:A:C4'	22:DA:2777:G:O5'	2.36	0.73
31:DJ:59:ALA:O	31:DJ:62:VAL:HG12	1.88	0.73
1:AA:1218:C:H2'	1:AA:1219:A:C8	2.24	0.73
3:AC:152:VAL:HG12	3:AC:197:VAL:HG13	1.68	0.73
12:AL:23:LEU:CB	12:AL:58:ASN:HD22	2.00	0.73
22:BA:587:C:OP2	33:BL:21:ARG:NH1	2.21	0.73
24:BC:166:ARG:O	24:BC:166:ARG:HG3	1.87	0.73
22:DA:1125:G:H4'	52:D4:37:GLN:NE2	2.03	0.73
28:DG:103:ASN:HD22	28:DG:111:PRO:HB2	1.53	0.73
1:AA:499:A:H4'	1:AA:500:G:OP1	1.87	0.73
2:AB:17:HIS:CD2	2:AB:202:ASN:HD21	2.06	0.73
25:BD:172:VAL:O	25:BD:173:GLN:HB2	1.87	0.73
28:BG:86:LEU:HD11	28:BG:132:LEU:HD21	1.70	0.73
39:BR:58:VAL:HG13	39:BR:102:SER:HB2	1.68	0.73
46:BY:45:GLN:O	46:BY:46:VAL:HB	1.87	0.73
53:CA:405:U:O4	4:CD:1:ALA:HB1	1.87	0.73
53:CA:1011:C:H2'	53:CA:1012:A:H8	1.52	0.73
2:CB:110:ILE:HD13	2:CB:151:LYS:HA	1.70	0.73
3:CC:110:LEU:O	3:CC:110:LEU:HD23	1.88	0.73
6:CF:86:ARG:HD3	18:CR:63:TYR:O	1.87	0.73
22:DA:915:C:H2'	22:DA:916:G:C8	2.23	0.73
22:DA:975:A:HO2'	22:DA:976:G:H8	0.78	0.73
22:DA:1742:U:H2'	22:DA:1743:G:C8	2.23	0.73
22:DA:2143:C:H3'	22:DA:2144:G:C8	2.23	0.73
2:AB:20:ARG:HA	2:AB:20:ARG:NH1	2.02	0.73
3:AC:10:ARG:NH2	3:AC:181:ILE:HG13	2.03	0.73
5:AE:14:LEU:HD13	5:AE:14:LEU:O	1.88	0.73
22:BA:335:C:H5"	42:BU:81:ARG:HD3	1.70	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2281:A:O2'	22:BA:2282:G:H5'	1.89	0.73
28:BG:30:GLY:HA3	28:BG:78:VAL:HG12	1.68	0.73
40:BS:2:GLU:O	40:BS:107:VAL:O	2.06	0.73
53:CA:381:C:O2	53:CA:381:C:H2'	1.87	0.73
53:CA:721:G:H4'	53:CA:722:G:O5'	1.89	0.73
53:CA:1347:G:N2	53:CA:1373:G:H2'	2.03	0.73
3:CC:9:ILE:HD12	14:CN:97:LYS:HD3	1.70	0.73
5:CE:14:LEU:HD22	5:CE:59:ILE:HD13	1.70	0.73
22:DA:221:A:H5"	22:DA:222:A:OP1	1.88	0.73
22:DA:638:G:H2'	22:DA:639:U:C6	2.24	0.73
22:DA:962:G:H3'	22:DA:962:G:OP1	1.88	0.73
22:DA:1783:A:H5'	22:DA:2608:G:H4'	1.70	0.73
22:DA:1965:C:C5'	22:DA:1966:A:H5"	2.18	0.73
57:DB:67:G:HO2'	57:DB:68:C:H6	1.36	0.73
32:DK:2:ILE:HB	32:DK:33:ALA:HB3	1.68	0.73
45:DX:63:ILE:HD12	45:DX:64:ASP:H	1.53	0.73
22:BA:459:U:O2'	22:BA:460:A:H5'	1.88	0.73
22:BA:464:U:O2'	50:B2:16:HIS:CE1	2.41	0.73
22:BA:762:U:H4'	22:BA:763:G:O5'	1.88	0.73
22:BA:1277:G:H5'	35:BN:20:MET:CE	2.18	0.73
22:BA:1714:U:H2'	22:BA:1714:U:O2	1.88	0.73
40:BS:33:LEU:HD13	40:BS:51:LEU:HD23	1.70	0.73
43:BV:25:LYS:HD3	43:BV:43:ASP:HA	1.68	0.73
8:CH:11:THR:HG22	8:CH:14:ARG:HH12	1.52	0.73
8:CH:52:GLY:HA3	8:CH:56:PRO:HA	1.70	0.73
15:CO:39:GLN:OE1	22:DA:716:A:H1'	1.89	0.73
17:CQ:18:LYS:HD3	17:CQ:48:GLU:OE2	1.87	0.73
22:DA:1823:G:H5"	62:DC:409:HOH:O	1.87	0.73
50:D2:19:ARG:NH2	50:D2:19:ARG:HB3	2.04	0.73
1:AA:110:C:H2'	1:AA:111:G:C8	2.23	0.73
1:AA:1201:A:H1'	1:AA:1202:U:OP2	1.88	0.73
3:AC:150:VAL:HG12	3:AC:199:VAL:HB	1.70	0.73
11:AK:42:GLY:HA3	11:AK:73:VAL:HG12	1.70	0.73
22:BA:594:U:H2'	22:BA:595:C:C6	2.22	0.73
33:BL:81:ASP:O	33:BL:82:LEU:HB3	1.89	0.73
40:BS:70:LYS:N	40:BS:70:LYS:HD2	2.03	0.73
46:BY:39:GLN:HB2	46:BY:41:HIS:CD2	2.24	0.73
53:CA:279:A:H4'	53:CA:280:C:O5'	1.86	0.73
53:CA:1160:G:C6	53:CA:1181:G:O6	2.41	0.73
22:DA:397:U:OP2	45:DX:9:LYS:HE2	1.89	0.73
22:DA:422:A:O2'	22:DA:423:A:H8	1.71	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:675:A:OP1	26:DE:60:TRP:HZ2	1.71	0.73
24:DC:145:MET:CE	24:DC:181:ARG:HH22	2.02	0.73
1:AA:267:C:H5'	1:AA:267:C:H6	1.52	0.73
5:AE:110:MET:O	5:AE:114:LEU:HB2	1.89	0.73
22:BA:2264:C:H41	44:BW:11:ASN:HD21	1.35	0.73
24:BC:14:HIS:O	24:BC:203:VAL:HG11	1.89	0.73
32:BK:18:ARG:HG3	32:BK:18:ARG:NH1	1.99	0.73
34:BM:132:THR:HG22	34:BM:133:LYS:H	1.52	0.73
44:BW:28:GLU:HB3	44:BW:31:LEU:CD2	2.18	0.73
53:CA:412:A:H4'	53:CA:413:G:OP1	1.87	0.73
53:CA:664:G:H22	53:CA:741:G:H1	1.35	0.73
53:CA:977:A:O2'	53:CA:978:A:H5"	1.88	0.73
2:CB:74:ALA:HB1	2:CB:206:ILE:HD11	1.69	0.73
3:CC:76:ILE:HA	3:CC:83:VAL:HG13	1.71	0.73
41:DT:14:PRO:O	41:DT:15:HIS:HB2	1.87	0.73
44:DW:13:ARG:HG3	44:DW:14:ASP:H	1.53	0.73
1:AA:72:A:N6	1:AA:99:C:H1'	2.04	0.73
10:AJ:88:MET:HB3	10:AJ:89:ARG:HH12	1.52	0.73
24:BC:106:PRO:HB3	24:BC:141:HIS:CE1	2.23	0.73
29:BH:41:LYS:HA	29:BH:44:ILE:HG12	1.69	0.73
32:BK:85:VAL:HG11	32:BK:115:ILE:HD11	1.71	0.73
37:BP:4:ILE:HA	37:BP:7:LEU:HB2	1.70	0.73
53:CA:456:A:H2'	53:CA:457:G:C8	2.24	0.73
53:CA:1074:G:H4'	2:CB:101:THR:O	1.87	0.73
53:CA:1337:G:H5"	53:CA:1338:G:OP1	1.89	0.73
53:CA:1493:A:H3'	22:DA:1913:A:H62	1.52	0.73
4:CD:137:SER:O	4:CD:140:ASP:HB2	1.89	0.73
22:DA:2738:A:H2	22:DA:2766:A:H61	1.36	0.73
24:DC:79:ARG:HD3	24:DC:81:GLU:OE1	1.87	0.73
41:DT:29:THR:H	41:DT:87:LEU:HB2	1.53	0.73
53:CA:1224:U:C5'	53:CA:1225:A:OP2	2.36	0.73
9:CI:23:GLY:H	9:CI:60:LEU:HA	1.53	0.73
22:DA:127:A:N7	50:D2:46:LYS:HE3	2.04	0.73
22:DA:1474:U:C2'	22:DA:1475:G:H5'	2.19	0.73
22:DA:2311:A:H5'	22:DA:2312:U:C5	2.24	0.73
32:DK:21:CYS:HA	32:DK:41:ILE:HD12	1.70	0.73
44:DW:9:THR:HG23	44:DW:10:ARG:HG3	1.70	0.73
1:AA:94:G:H4'	1:AA:95:C:C5'	2.18	0.73
16:AP:22:ALA:HA	16:AP:33:ILE:HG13	1.71	0.73
24:BC:208:GLY:HA2	24:BC:211:ARG:HB2	1.69	0.73
31:BJ:44:TYR:HA	38:BQ:59:LEU:HD21	1.71	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BS:14:ALA:O	40:BS:18:ARG:HG3	1.88	0.73
53:CA:948:C:H5"	55:CM:104:ASN:HB3	1.70	0.73
2:CB:209:VAL:O	2:CB:213:LEU:HB2	1.89	0.73
6:CF:3:HIS:HD2	6:CF:65:GLU:HG2	1.53	0.73
11:CK:70:ALA:HA	11:CK:73:VAL:HG22	1.70	0.73
22:DA:590:A:H2'	22:DA:591:U:H6	1.53	0.73
22:DA:2056:G:C2	22:DA:2057:G:C8	2.77	0.73
37:DP:67:GLU:CD	37:DP:68:GLY:H	1.91	0.73
1:AA:439:U:H2'	1:AA:440:C:H5'	1.70	0.72
22:BA:137:U:O5'	22:BA:137:U:H6	1.71	0.72
23:BB:30:C:H2'	23:BB:31:C:H5'	1.71	0.72
30:BI:33:ASN:HD22	30:BI:64:ARG:NH2	1.85	0.72
34:BM:1:MET:O	34:BM:2:LEU:HB2	1.88	0.72
53:CA:274:A:H4'	53:CA:275:G:OP1	1.88	0.72
53:CA:510:A:H5"	53:CA:511:C:OP2	1.89	0.72
8:CH:82:LEU:HD12	12:CL:3:VAL:HG11	1.70	0.72
9:CI:18:VAL:HG11	9:CI:82:ILE:HA	1.71	0.72
9:CI:118:ARG:HH21	9:CI:122:ARG:HE	1.37	0.72
22:DA:1210:G:H4'	22:DA:1211:C:O5'	1.88	0.72
22:DA:1608:A:C8	22:DA:1611:C:N4	2.57	0.72
58:DF:103:ILE:HA	58:DF:107:VAL:HG21	1.70	0.72
33:DL:17:LYS:NZ	33:DL:19:LEU:HD22	2.03	0.72
6:AF:46:GLN:HE22	6:AF:55:HIS:HB2	1.52	0.72
17:AQ:80:LYS:HZ3	17:AQ:80:LYS:HB2	1.55	0.72
22:BA:2296:U:H4'	22:BA:2297:A:OP1	1.89	0.72
22:BA:2429:G:OP1	62:BA:3689:HOH:O	2.08	0.72
22:BA:2602:A:H4'	22:BA:2603:G:C5'	2.19	0.72
37:BP:3:ILE:HD13	37:BP:3:ILE:O	1.88	0.72
22:DA:321:U:O2'	22:DA:340:A:N3	2.22	0.72
22:DA:1387:A:N6	22:DA:1401:G:C6	2.56	0.72
1:AA:259:G:H2'	1:AA:260:G:H8	1.54	0.72
1:AA:1055:A:H1'	3:AC:155:ARG:NH2	2.02	0.72
12:AL:43:LYS:HB2	12:AL:44:PRO:CD	2.19	0.72
32:BK:5:GLN:O	32:BK:6:THR:HB	1.88	0.72
37:BP:83:ILE:HD13	37:BP:83:ILE:C	2.10	0.72
45:BX:5:GLN:NE2	45:BX:49:ARG:H	1.86	0.72
53:CA:1293:C:H2'	53:CA:1294:G:C8	2.24	0.72
22:DA:35:G:O2'	22:DA:36:G:O5'	2.05	0.72
22:BA:2136:G:H2'	22:BA:2137:U:C5	2.23	0.72
33:BL:110:VAL:O	33:BL:111:ILE:HB	1.88	0.72
38:BQ:63:ARG:CZ	38:BQ:96:ASP:HA	2.18	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:985:C:C4	53:CA:986:U:O4	2.41	0.72
54:CG:24:LYS:O	54:CG:28:ILE:HG12	1.88	0.72
22:DA:1905:C:O4'	22:DA:1928:A:H2	1.69	0.72
22:DA:1941:C:H2'	22:DA:1942:C:C6	2.23	0.72
22:DA:2492:U:H2'	22:DA:2493:U:H6	1.53	0.72
22:DA:2822:G:H2'	22:DA:2823:A:H5"	1.72	0.72
24:DC:2:VAL:O	24:DC:3:VAL:HB	1.88	0.72
25:DD:124:ARG:HD3	25:DD:125:TRP:NE1	2.04	0.72
48:D0:12:ARG:HG3	48:D0:15:ARG:HH11	1.54	0.72
17:AQ:18:LYS:CA	17:AQ:47:ASP:HB2	2.19	0.72
17:AQ:55:GLY:HA3	17:AQ:82:VAL:HG11	1.72	0.72
22:BA:855:G:H21	44:BW:23:LYS:CG	2.00	0.72
22:BA:876:C:H2'	22:BA:877:A:O4'	1.88	0.72
22:BA:1415:U:O2	22:BA:1415:U:H2'	1.88	0.72
22:BA:2841:C:H2'	22:BA:2842:G:C8	2.24	0.72
27:BF:72:SER:HB2	27:BF:80:GLN:HB2	1.71	0.72
53:CA:1046:A:C2'	53:CA:1047:G:H5'	2.19	0.72
53:CA:1047:G:C2'	53:CA:1048:G:H5'	2.19	0.72
22:DA:254:G:N7	51:D3:4:LYS:HE2	2.05	0.72
22:DA:1019:U:O2'	22:DA:1021:A:N1	2.18	0.72
22:DA:1311:G:H1'	22:DA:1313:U:O4	1.90	0.72
22:DA:1951:U:H2'	22:DA:1953:A:OP2	1.88	0.72
40:DS:8:ARG:O	40:DS:9:HIS:HB2	1.90	0.72
42:DU:92:VAL:HB	42:DU:101:THR:HG21	1.69	0.72
1:AA:667:G:H4'	15:AO:50:HIS:CE1	2.25	0.72
1:AA:1152:A:H5'	10:AJ:15:HIS:CD2	2.25	0.72
1:AA:1183:U:H3'	1:AA:1184:G:H5"	1.71	0.72
4:AD:33:ILE:O	4:AD:34:GLU:HB3	1.88	0.72
22:BA:2680:U:P	25:BD:114:LYS:HE2	2.29	0.72
30:BI:33:ASN:HD22	30:BI:64:ARG:HH22	1.36	0.72
31:BJ:44:TYR:CD2	38:BQ:63:ARG:HG2	2.24	0.72
39:BR:61:ALA:HB1	39:BR:98:ILE:H	1.54	0.72
53:CA:166:U:H2'	53:CA:167:A:H5'	1.70	0.72
53:CA:269:C:H2'	53:CA:270:A:C8	2.25	0.72
10:CJ:35:GLN:HG2	10:CJ:76:ILE:HG23	1.70	0.72
22:DA:538:A:H5"	31:DJ:7:LYS:NZ	2.05	0.72
22:DA:1567:G:H5"	24:DC:84:PRO:HG3	1.71	0.72
24:DC:77:VAL:HG23	24:DC:112:GLY:H	1.55	0.72
38:DQ:57:ARG:NH1	38:DQ:92:LYS:HE2	2.04	0.72
6:AF:86:ARG:NH1	18:AR:63:TYR:HB3	2.04	0.72
6:AF:91:ARG:HG3	6:AF:92:THR:H	1.55	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:790:U:H2'	62:BA:3746:HOH:O	1.88	0.72
34:BM:2:LEU:HD23	34:BM:69:PRO:HD2	1.72	0.72
46:BY:57:LEU:HA	46:BY:60:LYS:HB3	1.70	0.72
49:B1:33:LEU:N	49:B1:51:ALA:HB3	2.05	0.72
53:CA:1278:G:C4'	53:CA:1279:G:O5'	2.37	0.72
53:CA:1304:G:H1'	53:CA:1333:A:H61	1.54	0.72
54:CG:117:LEU:HA	54:CG:121:ASN:HB2	1.71	0.72
57:DB:83:G:OP1	47:DZ:16:LEU:HD21	1.89	0.72
57:DB:86:G:H2'	57:DB:87:U:H5"	1.71	0.72
1:AA:73:C:O2'	1:AA:74:A:O4'	2.06	0.72
22:BA:994:C:H3'	38:BQ:53:LYS:HE2	1.69	0.72
25:BD:8:LYS:HB2	25:BD:201:LEU:HD22	1.70	0.72
28:BG:140:ILE:HD12	28:BG:141:GLY:N	2.05	0.72
17:CQ:61:ARG:HG2	17:CQ:75:VAL:HG11	1.72	0.72
58:DF:64:PRO:HA	58:DF:88:VAL:HG22	1.72	0.72
29:DH:8:LYS:HD2	29:DH:9:VAL:N	2.05	0.72
35:DN:12:ARG:HG3	35:DN:13:ASN:H	1.54	0.72
41:DT:5:GLU:HA	41:DT:8:LEU:HD12	1.71	0.72
44:DW:19:ARG:HA	44:DW:34:SER:HA	1.72	0.72
1:AA:982:U:H4'	1:AA:983:A:C5'	2.20	0.72
2:AB:110:ILE:HD12	2:AB:147:LEU:HD13	1.70	0.72
22:BA:284:U:H2'	22:BA:285:G:C8	2.24	0.72
22:BA:1187:G:H5"	39:BR:83:TYR:CE2	2.25	0.72
41:BT:39:THR:O	41:BT:40:LYS:HB2	1.89	0.72
44:BW:19:ARG:HA	44:BW:34:SER:HA	1.72	0.72
22:DA:2295:C:O2'	22:DA:2296:U:H5'	1.90	0.72
31:DJ:25:LEU:HD12	31:DJ:64:VAL:HA	1.70	0.72
1:AA:737:C:H2'	1:AA:738:C:H6	1.53	0.72
2:AB:163:ILE:O	2:AB:185:ILE:HG12	1.90	0.72
11:AK:126:ARG:CB	21:AU:33:ARG:HH12	2.03	0.72
22:BA:714:U:H5'	22:BA:715:A:OP2	1.89	0.72
22:BA:962:G:H21	22:BA:2250:G:H1	1.37	0.72
32:BK:10:VAL:HG21	32:BK:16:ALA:HB1	1.72	0.72
35:BN:12:ARG:HD3	35:BN:16:HIS:CD2	2.25	0.72
53:CA:154:U:H2'	53:CA:155:A:H5'	1.72	0.72
53:CA:1029:U:H1'	53:CA:1033:G:O6	1.89	0.72
5:CE:13:LYS:HE2	5:CE:13:LYS:HA	1.71	0.72
9:CI:24:ASN:O	9:CI:61:ASP:HA	1.90	0.72
29:DH:59:ALA:HA	29:DH:63:ALA:HB3	1.70	0.72
39:DR:27:ILE:HG22	39:DR:28:ALA:N	2.03	0.72
42:DU:82:VAL:H	42:DU:96:LYS:HZ2	1.37	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:274:A:H4'	1:AA:275:G:OP1	1.90	0.71
2:AB:106:VAL:O	2:AB:110:ILE:HD13	1.88	0.71
25:BD:151:THR:HG22	25:BD:152:PRO:N	2.04	0.71
37:BP:50:ARG:CG	37:BP:57:ALA:H	2.02	0.71
51:B3:40:LYS:HA	51:B3:43:LEU:HD12	1.71	0.71
53:CA:78:A:H2'	53:CA:79:G:C8	2.25	0.71
22:DA:312:G:H5'	22:DA:331:C:O2'	1.89	0.71
38:DQ:87:VAL:HG11	39:DR:52:PRO:HG3	1.72	0.71
1:AA:461:A:H3'	1:AA:461:A:N3	2.04	0.71
1:AA:473:U:H2'	1:AA:474:G:H8	1.55	0.71
1:AA:817:C:H4'	1:AA:818:G:OP1	1.90	0.71
5:AE:155:LYS:HD2	5:AE:156:ARG:N	2.05	0.71
11:AK:91:GLY:HA2	11:AK:94:SER:HB3	1.71	0.71
14:AN:22:LYS:HG3	14:AN:23:ARG:H	1.55	0.71
17:AQ:12:VAL:HG13	17:AQ:13:SER:N	2.05	0.71
22:BA:996:A:H4'	38:BQ:91:ARG:HG2	1.71	0.71
22:BA:1378:A:H4'	22:BA:1379:U:OP1	1.88	0.71
62:BB:315:HOH:O	43:BV:14:LYS:HD2	1.89	0.71
24:BC:199:HIS:O	24:BC:201:LEU:N	2.23	0.71
33:BL:9:ALA:O	33:BL:12:SER:HB3	1.90	0.71
53:CA:1387:G:H2'	53:CA:1388:C:C6	2.25	0.71
5:CE:103:GLY:HA3	5:CE:121:ASN:HA	1.72	0.71
22:DA:475:C:H2'	22:DA:476:G:C8	2.26	0.71
22:DA:505:A:O2'	22:DA:506:G:H5'	1.89	0.71
22:DA:1166:G:N2	22:DA:1184:U:H1'	2.04	0.71
22:DA:1280:G:H2'	22:DA:1281:G:H5'	1.72	0.71
22:DA:2443:C:O2'	22:DA:2444:G:H5'	1.90	0.71
57:DB:11:C:H5'	44:DW:71:LYS:HD3	1.71	0.71
2:AB:131:LYS:O	2:AB:135:MET:HB2	1.90	0.71
8:AH:6:ILE:HB	8:AH:76:ARG:HH12	1.55	0.71
8:AH:9:MET:HE1	8:AH:32:LYS:HA	1.72	0.71
13:AM:10:ASP:CG	13:AM:11:HIS:N	2.43	0.71
35:BN:78:LYS:HG2	35:BN:83:LEU:HD22	1.70	0.71
44:BW:51:GLY:HA3	44:BW:59:PHE:CZ	2.25	0.71
50:B2:35:ARG:HG3	50:B2:42:LEU:HD11	1.72	0.71
2:CB:114:LYS:CA	2:CB:117:GLU:HG2	2.21	0.71
22:DA:1555:G:N2	22:DA:1556:C:C2	2.58	0.71
22:DA:2423:U:H5"	22:DA:2424:C:OP1	1.90	0.71
8:AH:17:GLN:NE2	8:AH:71:VAL:HG23	2.06	0.71
14:AN:22:LYS:HG3	14:AN:23:ARG:N	2.05	0.71
22:BA:560:C:O2	38:BQ:47:ARG:NH1	2.22	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1585:C:H2'	22:BA:1586:A:O4'	1.91	0.71
34:BM:23:GLY:O	34:BM:101:VAL:HG12	1.89	0.71
53:CA:983:A:O2'	53:CA:984:C:H5'	1.90	0.71
4:CD:109:THR:HG22	4:CD:111:ALA:N	2.05	0.71
8:CH:17:GLN:NE2	8:CH:69:ALA:HB1	2.05	0.71
30:DI:113:ALA:HB1	30:DI:124:MET:SD	2.30	0.71
1:AA:1392:G:C2'	1:AA:1393:U:H5'	2.21	0.71
22:BA:1858:A:H2'	22:BA:1859:U:C6	2.25	0.71
26:BE:31:VAL:HG21	26:BE:104:ALA:CB	2.18	0.71
26:BE:95:LYS:O	26:BE:96:VAL:HB	1.88	0.71
27:BF:99:PHE:O	27:BF:103:ILE:HG12	1.91	0.71
53:CA:93:U:H2'	53:CA:95:C:C5	2.26	0.71
53:CA:1215:G:O2'	53:CA:1216:A:H8	1.72	0.71
54:CG:142:ARG:O	54:CG:146:ALA:HB3	1.90	0.71
9:CI:71:ILE:HD12	9:CI:72:SER:H	1.55	0.71
10:CJ:11:LYS:HB3	10:CJ:71:LEU:HD13	1.72	0.71
21:CU:39:LYS:N	21:CU:40:PRO:HD2	2.05	0.71
22:DA:9:G:H1	22:DA:2629:U:H2'	1.56	0.71
22:DA:1071:G:N7	22:DA:1089:A:C5	2.59	0.71
22:DA:1341:G:H3'	22:DA:1397:U:O2	1.91	0.71
22:DA:1590:A:H2'	22:DA:1591:A:C8	2.25	0.71
22:DA:1607:C:H4'	22:DA:1608:A:C8	2.24	0.71
22:DA:2286:G:H4'	22:DA:2287:A:C1'	2.21	0.71
22:DA:2503:A:H4'	22:DA:2504:U:OP1	1.90	0.71
37:DP:56:SER:O	37:DP:75:THR:HG22	1.91	0.71
39:DR:81:LYS:HD3	39:DR:81:LYS:N	2.04	0.71
2:AB:36:LYS:HA	2:AB:36:LYS:HE3	1.72	0.71
3:AC:139:ASN:HA	3:AC:142:ARG:HB2	1.73	0.71
11:AK:28:ASN:OD1	11:AK:46:ALA:HB3	1.89	0.71
24:BC:108:GLY:O	24:BC:109:LEU:HD22	1.90	0.71
28:BG:84:LYS:CG	28:BG:132:LEU:H	2.01	0.71
33:BL:57:LEU:HD22	51:B3:53:ASP:HB3	1.72	0.71
53:CA:250:A:H1'	53:CA:252:U:C4	2.26	0.71
53:CA:351:G:H4'	53:CA:352:C:OP2	1.88	0.71
53:CA:642:A:O2'	53:CA:643:C:C6	2.44	0.71
53:CA:643:C:H5"	8:CH:31:LEU:HD22	1.72	0.71
22:DA:587:C:H1'	22:DA:671:C:H5'	1.72	0.71
22:DA:745:G:H5"	22:DA:746:U:OP2	1.90	0.71
22:DA:1181:U:H2'	22:DA:1182:G:C8	2.26	0.71
22:DA:1441:G:H2'	22:DA:1442:U:C6	2.26	0.71
22:DA:1476:U:H1'	22:DA:1732:C:C2	2.26	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DG:162:ARG:H	28:DG:162:ARG:HD2	1.55	0.71
6:AF:81:ASN:HB3	6:AF:84:VAL:HG12	1.71	0.71
27:BF:35:LEU:CB	27:BF:153:ILE:HG22	2.15	0.71
31:BJ:17:VAL:HG23	31:BJ:137:PRO:HB2	1.73	0.71
38:BQ:82:LEU:HD23	38:BQ:112:ALA:HB2	1.73	0.71
38:BQ:104:ALA:O	38:BQ:107:ALA:HB3	1.90	0.71
39:BR:39:LEU:HD23	39:BR:39:LEU:N	2.06	0.71
53:CA:60:A:C4'	53:CA:61:G:O5'	2.37	0.71
53:CA:72:A:N6	53:CA:99:C:H1'	2.06	0.71
53:CA:523:A:H61	12:CL:49:ARG:HH12	1.37	0.71
53:CA:892:A:O2'	53:CA:1415:G:H4'	1.90	0.71
53:CA:940:C:H5'	54:CG:101:ARG:NH2	2.05	0.71
22:DA:1258:U:H2'	22:DA:1259:G:C8	2.25	0.71
22:DA:2386:A:O2'	22:DA:2387:U:C6	2.42	0.71
26:DE:126:VAL:HG21	26:DE:134:LEU:HD13	1.73	0.71
31:DJ:18:VAL:HG13	31:DJ:56:VAL:HA	1.73	0.71
41:DT:67:VAL:HG23	41:DT:75:GLY:O	1.91	0.71
51:D3:33:THR:HG23	51:D3:34:LYS:N	2.06	0.71
1:AA:967:C:H1'	9:AI:129:ARG:HH22	1.55	0.71
22:BA:655:A:H4'	22:BA:656:G:OP1	1.90	0.71
22:BA:958:U:H5'	22:BA:958:U:H6	1.54	0.71
26:BE:24:ASN:O	26:BE:28:VAL:HG12	1.90	0.71
32:BK:47:ILE:HG13	32:BK:48:PRO:HD2	1.72	0.71
37:BP:4:ILE:HG22	37:BP:5:LYS:N	2.00	0.71
44:BW:46:ALA:HB3	44:BW:79:ILE:O	1.89	0.71
53:CA:67:C:OP1	53:CA:199:A:H5"	1.91	0.71
54:CG:137:ARG:CZ	54:CG:138:GLU:HG2	2.20	0.71
12:CL:3:VAL:HG23	12:CL:4:ASN:H	1.55	0.71
22:DA:995:C:O2	31:DJ:3:THR:HG23	1.90	0.71
22:DA:2631:G:H2'	22:DA:2632:A:H5"	1.73	0.71
34:DM:19:GLY:H	34:DM:38:ARG:NH2	1.89	0.71
22:BA:819:A:OP2	22:BA:1187:G:N2	2.24	0.71
22:BA:1090:A:O2'	22:BA:1091:G:H5'	1.91	0.71
22:BA:1746:A:H2'	22:BA:1747:U:C6	2.26	0.71
22:BA:2199:A:C8	22:BA:2199:A:C5'	2.74	0.71
24:BC:77:VAL:HA	24:BC:93:VAL:HA	1.73	0.71
25:BD:13:ARG:HH12	37:BP:74:GLN:NE2	1.89	0.71
27:BF:40:GLY:CA	27:BF:84:ILE:HD11	2.21	0.71
53:CA:1049:U:H4'	53:CA:1050:G:OP2	1.90	0.71
56:CP:74:LEU:O	56:CP:78:VAL:HG23	1.91	0.71
22:DA:84:A:H5'	42:DU:5:ARG:HD2	1.73	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:784:G:O2'	22:DA:785:G:H8	1.74	0.71
22:DA:806:C:H2'	22:DA:807:U:C6	2.25	0.71
22:DA:857:G:H1'	44:DW:19:ARG:NE	2.05	0.71
1:AA:555:U:H2'	1:AA:556:C:C6	2.26	0.71
1:AA:731:G:OP1	1:AA:766:A:H1'	1.91	0.71
6:AF:6:ILE:HG12	6:AF:89:VAL:HG23	1.73	0.71
22:BA:1105:U:H2'	22:BA:1106:G:H8	1.55	0.71
28:BG:22:VAL:HG22	28:BG:36:LEU:CD1	2.21	0.71
29:BH:67:ALA:HA	29:BH:138:VAL:HB	1.73	0.71
34:BM:35:ALA:O	34:BM:128:THR:HA	1.91	0.71
2:CB:96:LEU:H	2:CB:99:MET:HE3	1.56	0.71
2:CB:185:ILE:HG22	2:CB:199:ILE:HG13	1.72	0.71
22:DA:1313:U:O2	22:DA:1313:U:C2'	2.37	0.71
22:DA:2346:A:H3'	22:DA:2347:C:C5'	2.19	0.71
22:DA:2529:G:H4'	28:DG:174:LYS:HD3	1.72	0.71
58:DF:41:GLU:HG2	58:DF:42:ALA:H	1.56	0.71
41:DT:1:MET:HG2	41:DT:4:GLU:HA	1.72	0.71
46:DY:1:MET:HG2	46:DY:4:LYS:HZ1	1.56	0.71
1:AA:753:A:H4'	1:AA:754:C:O5'	1.90	0.70
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.26	0.70
2:AB:221:ARG:CZ	2:AB:221:ARG:HB3	2.21	0.70
5:AE:153:ALA:CA	5:AE:156:ARG:HB2	2.21	0.70
9:AI:32:ARG:HG2	9:AI:36:GLN:HB3	1.73	0.70
12:AL:23:LEU:HG	12:AL:24:GLU:H	1.56	0.70
22:BA:904:G:C4	22:BA:905:A:C8	2.79	0.70
26:BE:151:GLY:HA2	26:BE:192:ALA:HB2	1.72	0.70
31:BJ:31:GLU:HG3	31:BJ:142:ILE:HG21	1.72	0.70
49:B1:49:LYS:HG2	49:B1:50:GLU:H	1.55	0.70
53:CA:168:G:H2'	53:CA:169:C:H5'	1.72	0.70
22:DA:247:G:H4'	22:DA:386:G:C5	2.26	0.70
22:DA:1364:G:N7	45:DX:1:SER:HB2	2.06	0.70
22:DA:2230:G:H2'	22:DA:2231:U:C6	2.26	0.70
22:DA:2716:C:H2'	22:DA:2717:C:H6	1.56	0.70
57:DB:110:C:O2'	57:DB:111:U:H5'	1.90	0.70
51:D3:32:LEU:HD23	51:D3:35:LYS:HE2	1.72	0.70
53:CA:1242:G:C2	53:CA:1243:C:H1'	2.27	0.70
22:DA:921:C:H2'	22:DA:922:C:H5'	1.72	0.70
22:DA:1717:A:H2'	22:DA:1718:G:O4'	1.90	0.70
22:DA:2313:C:O2'	22:DA:2314:A:H8	1.73	0.70
22:DA:2426:A:H3'	22:DA:2427:C:C5'	2.21	0.70
22:DA:2515:C:OP1	31:DJ:81:ILE:HG22	1.91	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DB:116:G:H2'	57:DB:117:G:H8	1.57	0.70
25:DD:149:ASN:O	25:DD:152:PRO:HD2	1.91	0.70
9:AI:51:LEU:HB3	9:AI:56:MET:CG	2.21	0.70
12:AL:62:VAL:HG21	12:AL:94:TYR:CE2	2.26	0.70
21:AU:36:PHE:HA	21:AU:39:LYS:HE2	1.71	0.70
22:BA:215:G:H4'	22:BA:216:A:OP1	1.91	0.70
53:CA:1169:A:H2'	53:CA:1170:A:H8	1.56	0.70
4:CD:195:ASN:HB3	4:CD:197:HIS:CD2	2.24	0.70
22:DA:1009:A:O2'	22:DA:1010:A:C8	2.43	0.70
22:DA:1416:G:C6	22:DA:1417:C:N4	2.59	0.70
22:DA:1490:A:N3	22:DA:1490:A:H5'	2.06	0.70
22:DA:1799:G:H4'	22:DA:1800:C:O5'	1.89	0.70
58:DF:28:PRO:HB2	58:DF:168:LEU:HD21	1.73	0.70
38:DQ:101:ASP:HB2	39:DR:2:TYR:OH	1.92	0.70
50:D2:19:ARG:HB3	50:D2:19:ARG:HH21	1.56	0.70
1:AA:267:C:H5'	1:AA:267:C:C6	2.26	0.70
17:AQ:18:LYS:HA	17:AQ:47:ASP:CB	2.20	0.70
22:BA:902:C:H2'	22:BA:903:C:C6	2.26	0.70
22:BA:1786:A:H1'	22:BA:1938:A:N6	2.06	0.70
22:BA:2352:A:C6	44:BW:30:VAL:HG11	2.25	0.70
22:BA:2353:G:H1'	44:BW:30:VAL:HG13	1.74	0.70
24:BC:180:MET:HG3	24:BC:268:ARG:NH1	2.06	0.70
44:BW:50:VAL:O	44:BW:52:CYS:N	2.21	0.70
53:CA:51:A:H4'	53:CA:52:C:C5'	2.20	0.70
53:CA:1151:A:O2'	53:CA:1152:A:C8	2.39	0.70
53:CA:1347:G:H22	53:CA:1373:G:H2'	1.56	0.70
12:CL:43:LYS:CB	12:CL:44:PRO:CD	2.68	0.70
55:CM:13:HIS:HB2	55:CM:43:LYS:HE2	1.72	0.70
22:DA:332:A:C4	22:DA:335:C:N4	2.60	0.70
22:DA:352:A:C4	22:DA:353:C:H1'	2.27	0.70
22:DA:1439:A:N7	22:DA:1440:U:C1'	2.55	0.70
22:DA:1453:A:H4'	22:DA:1454:C:OP2	1.90	0.70
22:DA:1480:C:H2'	22:DA:1481:U:O4'	1.92	0.70
24:DC:122:ALA:HB3	24:DC:127:ASN:ND2	2.07	0.70
38:DQ:24:TYR:O	38:DQ:27:ARG:HB3	1.91	0.70
47:DZ:16:LEU:H	47:DZ:16:LEU:CD2	2.04	0.70
8:AH:5:PRO:HB2	8:AH:32:LYS:NZ	2.06	0.70
22:BA:1076:C:H2'	22:BA:1077:A:C8	2.26	0.70
22:BA:1085:A:H3'	22:BA:1086:A:C2	2.26	0.70
24:BC:12:ARG:HH11	24:BC:12:ARG:HG3	1.56	0.70
53:CA:1066:C:H2'	53:CA:1067:A:C8	2.26	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CM:12:LYS:HB3	55:CM:17:ALA:HB2	1.73	0.70
18:CR:32:ILE:HD12	18:CR:33:THR:O	1.92	0.70
22:DA:1605:C:H4'	22:DA:1610:A:C6	2.26	0.70
22:DA:1639:C:H2'	22:DA:1640:A:H5"	1.72	0.70
22:DA:2142:A:H2'	22:DA:2144:G:P	2.32	0.70
22:DA:2520:C:H2'	22:DA:2521:C:H6	1.55	0.70
24:DC:8:THR:O	24:DC:9:SER:HB3	1.89	0.70
24:DC:224:MET:SD	24:DC:229:HIS:HB2	2.32	0.70
28:DG:126:THR:HG22	28:DG:127:GLN:H	1.56	0.70
31:DJ:57:LEU:HG	31:DJ:128:ASN:H	1.56	0.70
32:DK:104:THR:OG1	32:DK:106:GLU:HB2	1.92	0.70
4:AD:117:VAL:N	4:AD:122:ILE:HD11	2.06	0.70
16:AP:19:VAL:HG13	16:AP:37:GLY:C	2.12	0.70
16:AP:79:ASN:O	16:AP:80:LYS:HB2	1.91	0.70
22:BA:1734:G:H2'	22:BA:1735:A:C8	2.19	0.70
24:BC:29:PHE:CE2	24:BC:31:PRO:HG2	2.26	0.70
27:BF:43:ILE:HG22	27:BF:82:TYR:CE1	2.27	0.70
29:BH:117:LEU:HD11	29:BH:130:VAL:HG11	1.74	0.70
53:CA:1130:A:C5	53:CA:1146:A:C6	2.79	0.70
4:CD:137:SER:HB2	4:CD:138:PRO:HD2	1.74	0.70
22:DA:410:G:C6	22:DA:2407:A:N6	2.59	0.70
22:DA:1178:C:H2'	22:DA:1179:G:O4'	1.92	0.70
22:DA:1651:G:N2	22:DA:2007:U:C2	2.59	0.70
1:AA:1458:G:H5'	20:AT:26:MET:HB3	1.73	0.70
20:AT:53:MET:CE	20:AT:57:VAL:HG21	2.21	0.70
22:BA:243:U:OP1	51:B3:5:THR:CG2	2.39	0.70
22:BA:404:A:H1'	22:BA:405:U:OP2	1.92	0.70
22:BA:481:G:C4	22:BA:507:A:C2	2.79	0.70
22:BA:1936:A:H2	22:BA:1943:U:C5	2.10	0.70
26:BE:46:GLN:HG3	26:BE:86:ALA:HA	1.72	0.70
33:BL:91:ASP:CB	33:BL:94:THR:HB	2.21	0.70
53:CA:89:U:O2'	53:CA:90:C:O4'	2.09	0.70
53:CA:1226:C:O2'	53:CA:1227:A:H5'	1.91	0.70
22:DA:45:G:H5'	22:DA:46:G:H5'	1.73	0.70
22:DA:846:U:O2'	22:DA:847:U:H5"	1.92	0.70
22:DA:931:U:O2	22:DA:931:U:C2'	2.36	0.70
34:DM:41:LEU:HD23	34:DM:46:ILE:HG22	1.74	0.70
1:AA:1441:A:H62	1:AA:1461:G:N2	1.87	0.70
2:AB:76:SER:HB2	2:AB:92:ASN:HB2	1.72	0.70
22:BA:574:A:H2	25:BD:150:GLN:HE22	1.37	0.70
25:BD:13:ARG:HH12	37:BP:74:GLN:HE21	1.39	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:175:ILE:HG23	26:BE:175:ILE:O	1.91	0.70
28:BG:85:LYS:HG2	28:BG:131:VAL:CG1	2.21	0.70
29:BH:27:ARG:NH1	29:BH:38:PRO:HG3	2.07	0.70
31:BJ:81:ILE:HG23	31:BJ:82:GLY:N	2.06	0.70
40:BS:59:GLU:HA	40:BS:64:ALA:CB	2.21	0.70
51:B3:31:ILE:CD1	51:B3:34:LYS:HD2	2.19	0.70
53:CA:512:U:O2'	53:CA:513:C:H5'	1.91	0.70
6:CF:18:VAL:HG21	6:CF:58:HIS:CD2	2.26	0.70
22:DA:674:G:H2'	22:DA:804:A:H61	1.57	0.70
22:DA:1056:G:N2	22:DA:1102:C:H5	1.89	0.70
22:DA:1324:G:H1'	22:DA:1616:A:N6	2.07	0.70
22:DA:1364:G:C5	45:DX:1:SER:HB2	2.26	0.70
24:DC:51:ARG:O	24:DC:53:ILE:HG22	1.91	0.70
24:DC:166:ARG:HB2	24:DC:171:VAL:HG22	1.72	0.70
35:DN:90:ARG:HH21	35:DN:116:VAL:HG11	1.55	0.70
36:DO:23:ALA:O	36:DO:42:PRO:HG3	1.91	0.70
1:AA:86:G:N2	1:AA:87:C:N4	2.39	0.70
1:AA:267:C:H2'	1:AA:268:U:H6	1.57	0.70
12:AL:74:GLN:HG3	12:AL:75:GLU:HG2	1.73	0.70
29:BH:8:LYS:O	29:BH:13:GLY:HA3	1.92	0.70
41:BT:64:LYS:HA	41:BT:79:ASP:OD1	1.92	0.70
3:CC:39:ARG:HG2	3:CC:54:ILE:HD13	1.72	0.70
54:CG:64:ALA:HB2	54:CG:126:ALA:HB1	1.72	0.70
55:CM:13:HIS:HB3	55:CM:16:ILE:HB	1.73	0.70
21:CU:37:TYR:O	21:CU:38:GLU:HG2	1.91	0.70
22:DA:17:G:H4'	38:DQ:24:TYR:HE1	1.56	0.70
41:DT:87:LEU:HD23	41:DT:88:LYS:N	2.07	0.70
20:AT:27:MET:O	20:AT:31:ILE:HG13	1.92	0.70
22:BA:26:G:H1'	22:BA:514:A:H61	1.57	0.70
22:BA:38:A:N3	26:BE:43:THR:HB	2.07	0.70
22:BA:1779:U:C5	22:BA:1784:A:N7	2.58	0.70
22:BA:2180:U:H2'	22:BA:2181:U:C5	2.26	0.70
22:BA:2897:U:H2'	22:BA:2898:U:C6	2.27	0.70
24:BC:141:HIS:HB2	24:BC:190:THR:HB	1.74	0.70
47:BZ:15:ARG:HA	47:BZ:15:ARG:HH11	1.57	0.70
53:CA:330:C:O2'	53:CA:331:G:O5'	2.09	0.70
53:CA:1067:A:H1'	53:CA:1068:G:C8	2.26	0.70
56:CP:44:SER:H	56:CP:46:LYS:NZ	1.89	0.70
22:DA:41:C:H2'	22:DA:42:A:C8	2.27	0.70
22:DA:1439:A:C2	22:DA:1553:A:N7	2.59	0.70
1:AA:1138:G:O2'	1:AA:1139:G:H4'	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1138:G:H5"	22:BA:1139:G:OP2	1.91	0.69
22:BA:1180:U:H2'	22:BA:1181:U:C6	2.27	0.69
53:CA:642:A:O2'	53:CA:643:C:H6	1.74	0.69
10:CJ:12:ALA:HB3	10:CJ:18:ILE:HB	1.73	0.69
22:DA:528:A:C2	22:DA:2042:A:H2'	2.26	0.69
22:DA:1507:C:H5'	22:DA:1508:A:OP2	1.92	0.69
24:DC:184:GLU:HB2	24:DC:187:CYS:SG	2.32	0.69
30:DI:57:VAL:HG12	30:DI:58:ILE:H	1.57	0.69
1:AA:1452:C:H5'	1:AA:1453:G:C6	2.26	0.69
2:AB:77:GLU:HB2	2:AB:80:LYS:HE2	1.74	0.69
19:AS:51:HIS:CD2	19:AS:53:GLY:H	2.10	0.69
22:BA:161:A:H3'	22:BA:162:U:C5'	2.22	0.69
22:BA:1150:C:C2'	22:BA:1151:A:O5'	2.39	0.69
22:BA:1414:C:C4	22:BA:1415:U:H5	2.09	0.69
24:BC:77:VAL:HG22	24:BC:77:VAL:O	1.91	0.69
30:BI:89:SER:HB3	30:BI:92:PRO:HG3	1.72	0.69
39:BR:39:LEU:HA	39:BR:49:ILE:CG2	2.21	0.69
53:CA:6:G:N3	53:CA:6:G:C2'	2.52	0.69
53:CA:210:C:O2	53:CA:210:C:H2'	1.92	0.69
53:CA:252:U:H2'	53:CA:253:A:H8	1.56	0.69
56:CP:44:SER:H	56:CP:46:LYS:HZ2	1.38	0.69
22:DA:79:C:H2'	22:DA:80:G:O4'	1.92	0.69
22:DA:85:G:HO2'	22:DA:86:G:H8	1.40	0.69
22:DA:275:C:H2'	22:DA:276:U:O4'	1.92	0.69
22:DA:2420:C:OP1	51:D3:33:THR:HB	1.92	0.69
22:DA:2875:C:O2'	22:DA:2876:G:C8	2.32	0.69
1:AA:111:G:O6	1:AA:330:C:N4	2.25	0.69
1:AA:344:A:H4'	1:AA:345:C:OP2	1.92	0.69
1:AA:390:U:H2'	1:AA:391:G:C8	2.28	0.69
1:AA:818:G:O2'	1:AA:819:A:H5'	1.91	0.69
1:AA:1101:A:C4'	1:AA:1102:A:O5'	2.40	0.69
2:AB:116:LEU:HD12	2:AB:140:LEU:HD11	1.74	0.69
22:BA:2547:A:H2'	22:BA:2548:U:C6	2.28	0.69
30:BI:74:PRO:O	30:BI:77:VAL:HG22	1.93	0.69
31:BJ:110:PRO:HB2	31:BJ:111:LYS:HG3	1.73	0.69
53:CA:536:C:OP1	62:CA:1882:HOH:O	2.09	0.69
53:CA:1279:G:H5'	10:CJ:9:ARG:HH12	1.56	0.69
53:CA:1514:G:H2'	53:CA:1515:G:H8	1.57	0.69
22:DA:1797:G:O3'	24:DC:255:LYS:O	2.10	0.69
22:DA:1904:G:H1'	22:DA:1927:A:N1	2.07	0.69
37:DP:50:ARG:HA	37:DP:57:ALA:O	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:156:ARG:O	5:AE:158:LYS:N	2.25	0.69
12:AL:23:LEU:HB2	12:AL:58:ASN:ND2	2.06	0.69
20:AT:6:ALA:HB1	20:AT:9:ARG:HB2	1.73	0.69
20:AT:66:ILE:HD11	20:AT:70:LYS:HE3	1.73	0.69
22:BA:2485:G:H5"	34:BM:45:GLN:HE21	1.56	0.69
30:BI:98:GLY:HA3	30:BI:137:LEU:HD23	1.74	0.69
35:BN:8:ARG:HD2	35:BN:43:GLU:HG3	1.73	0.69
44:BW:30:VAL:HG22	44:BW:30:VAL:O	1.93	0.69
53:CA:613:C:H2'	53:CA:614:C:C6	2.26	0.69
53:CA:1160:G:O6	53:CA:1181:G:O6	2.11	0.69
5:CE:135:VAL:O	5:CE:138:ALA:HB3	1.92	0.69
12:CL:33:CYS:HB3	12:CL:77:SER:O	1.93	0.69
22:DA:810:U:O4	33:DL:30:THR:HG22	1.92	0.69
22:DA:876:C:C2'	22:DA:877:A:OP1	2.40	0.69
22:DA:1866:A:H2'	22:DA:1867:G:C8	2.28	0.69
31:DJ:35:ARG:NH1	31:DJ:140:LEU:HD11	2.07	0.69
31:DJ:106:LYS:HB2	31:DJ:119:PHE:HE2	1.55	0.69
1:AA:408:A:OP1	4:AD:109:THR:HG21	1.93	0.69
13:AM:78:ARG:O	13:AM:82:LEU:HG	1.91	0.69
21:AU:16:ARG:HH11	21:AU:19:LYS:HG3	1.58	0.69
31:BJ:44:TYR:C	31:BJ:44:TYR:CD1	2.65	0.69
31:BJ:44:TYR:C	31:BJ:44:TYR:HD1	1.95	0.69
33:BL:38:GLN:O	33:BL:40:SER:O	2.11	0.69
53:CA:920:U:H2'	53:CA:921:U:C6	2.28	0.69
53:CA:1129:C:O2'	53:CA:1130:A:C8	2.45	0.69
15:CO:7:THR:O	15:CO:11:VAL:HG23	1.91	0.69
17:CQ:46:HIS:HB2	17:CQ:70:LYS:CE	2.21	0.69
22:DA:649:G:H2'	22:DA:650:C:H6	1.56	0.69
22:DA:1080:A:H2'	22:DA:1081:U:C6	2.27	0.69
22:DA:1245:G:H4'	26:DE:33:VAL:HG11	1.73	0.69
57:DB:50:A:C2	57:DB:51:G:H1'	2.27	0.69
29:DH:97:ARG:O	29:DH:98:ASP:HB2	1.92	0.69
31:DJ:45:THR:H	31:DJ:46:PRO:HD3	1.57	0.69
41:DT:20:ALA:HB1	41:DT:31:VAL:HG21	1.75	0.69
42:DU:81:ARG:HD2	42:DU:81:ARG:H	1.56	0.69
47:DZ:18:LYS:O	47:DZ:22:THR:HG23	1.93	0.69
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.28	0.69
2:AB:58:LYS:HZ1	2:AB:62:ARG:HG3	1.57	0.69
5:AE:120:HIS:O	5:AE:121:ASN:HB3	1.91	0.69
22:BA:1537:G:H2'	22:BA:1538:G:O4'	1.93	0.69
38:BQ:111:LYS:CE	39:BR:50:GLY:HA2	2.22	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:413:G:N1	4:CD:32:LYS:HE3	2.06	0.69
53:CA:704:A:H2'	53:CA:705:G:C8	2.28	0.69
53:CA:1225:A:H4'	19:CS:77:ARG:NH1	2.08	0.69
53:CA:1454:G:HO2'	53:CA:1455:G:H8	1.40	0.69
8:CH:54:THR:HG23	8:CH:55:LYS:H	1.55	0.69
12:CL:2:THR:HG22	12:CL:4:ASN:N	2.06	0.69
12:CL:2:THR:HB	12:CL:5:GLN:HB2	1.74	0.69
22:DA:206:U:H2'	22:DA:207:A:C8	2.21	0.69
22:DA:2353:G:H1'	44:DW:30:VAL:HG13	1.74	0.69
22:DA:2902:C:H2'	22:DA:2903:U:O4'	1.91	0.69
1:AA:374:A:H5"	1:AA:452:A:N1	2.08	0.69
22:BA:2703:C:H2'	22:BA:2704:C:H6	1.57	0.69
44:BW:40:ARG:H	44:BW:56:HIS:HB3	1.56	0.69
53:CA:974:A:O2'	53:CA:975:A:OP1	2.07	0.69
14:CN:40:ARG:NH1	19:CS:6:LYS:HB2	2.07	0.69
22:DA:12:U:O2	22:DA:12:U:H2'	1.93	0.69
22:DA:181:A:C2	22:DA:434:U:H1'	2.25	0.69
22:DA:412:A:N6	22:DA:2412:A:O4'	2.25	0.69
22:DA:642:U:H4'	22:DA:2349:G:O2'	1.93	0.69
22:DA:1245:G:OP1	33:DL:8:PRO:HG3	1.92	0.69
22:DA:1586:A:H2'	22:DA:1587:G:H8	1.57	0.69
22:DA:1904:G:O2'	22:DA:1927:A:N6	2.26	0.69
29:DH:27:ARG:NH1	45:DX:59:ASP:HA	2.08	0.69
34:DM:41:LEU:HD11	34:DM:126:ILE:HD11	1.75	0.69
43:DV:80:HIS:HD2	43:DV:82:TYR:H	1.40	0.69
1:AA:1160:G:O6	1:AA:1181:G:C6	2.45	0.69
2:AB:119:GLN:HA	2:AB:122:ASP:HB2	1.75	0.69
6:AF:55:HIS:O	6:AF:56:LYS:HB2	1.92	0.69
8:AH:88:LYS:HA	8:AH:91:LEU:HD12	1.75	0.69
10:AJ:42:LEU:HB3	10:AJ:43:PRO:HD2	1.73	0.69
22:BA:320:A:H4'	22:BA:322:A:N7	2.06	0.69
22:BA:1859:U:H2'	22:BA:1860:G:H8	1.58	0.69
22:BA:2180:U:H2'	22:BA:2181:U:H5	1.58	0.69
22:BA:2405:G:O2'	22:BA:2406:A:OP1	2.09	0.69
22:BA:2428:G:H5"	22:BA:2429:G:OP1	1.92	0.69
31:BJ:88:THR:HG22	31:BJ:91:GLU:HG3	1.74	0.69
40:BS:63:GLY:O	40:BS:64:ALA:HB3	1.93	0.69
43:BV:80:HIS:CD2	43:BV:82:TYR:H	2.11	0.69
52:B4:3:VAL:O	52:B4:4:ARG:O	2.10	0.69
53:CA:16:A:H2'	53:CA:17:U:H5'	1.74	0.69
53:CA:372:C:C1'	53:CA:373:A:OP2	2.39	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:374:A:OP1	53:CA:452:A:N1	2.26	0.69
53:CA:1242:G:O2'	53:CA:1243:C:O4'	2.10	0.69
53:CA:1250:A:H2'	53:CA:1251:A:O4'	1.92	0.69
3:CC:76:ILE:HD11	3:CC:102:ILE:HD11	1.74	0.69
17:CQ:30:HIS:CE1	17:CQ:32:ILE:HG13	2.27	0.69
22:DA:876:C:O2	22:DA:876:C:C5'	2.41	0.69
22:DA:1558:C:H4'	22:DA:1559:U:H5'	1.73	0.69
22:DA:2800:A:C2'	22:DA:2801:G:H4'	2.22	0.69
24:DC:128:THR:CG2	24:DC:188:ARG:HB3	2.22	0.69
58:DF:76:PHE:HD2	58:DF:76:PHE:H	1.39	0.69
39:DR:82:HIS:O	39:DR:82:HIS:CG	2.44	0.69
42:DU:58:VAL:HG13	42:DU:60:LYS:HG2	1.74	0.69
51:D3:22:LYS:H	51:D3:48:MET:HB3	1.55	0.69
1:AA:414:A:N6	1:AA:431:A:N3	2.41	0.69
53:CA:252:U:H5'	53:CA:252:U:C6	2.26	0.69
53:CA:692:U:O2'	53:CA:694:A:N7	2.23	0.69
2:CB:19:THR:HG22	2:CB:37:VAL:HG23	1.74	0.69
6:CF:54:LEU:HD12	6:CF:56:LYS:O	1.91	0.69
22:DA:633:A:O5'	22:DA:633:A:H8	1.76	0.69
22:DA:807:U:H1'	22:DA:2445:G:H5'	1.74	0.69
22:DA:973:A:OP1	22:DA:973:A:H8	1.75	0.69
22:DA:1206:G:H2'	22:DA:1207:C:C6	2.27	0.69
4:AD:100:VAL:HG12	4:AD:100:VAL:O	1.93	0.69
24:BC:131:MET:HA	24:BC:134:ILE:HD12	1.74	0.69
46:BY:7:ARG:H	46:BY:60:LYS:HZ1	1.38	0.69
53:CA:267:C:OP2	17:CQ:68:LYS:HD2	1.93	0.69
53:CA:1011:C:H2'	53:CA:1012:A:C8	2.28	0.69
14:CN:96:LYS:HD2	14:CN:96:LYS:H	1.57	0.69
21:CU:24:LYS:HG3	21:CU:25:ALA:N	2.02	0.69
22:DA:246:C:H2'	22:DA:247:G:H5'	1.75	0.69
22:DA:1388:G:H2'	22:DA:1389:G:H8	1.58	0.69
22:DA:1776:G:N2	22:DA:1789:A:H1'	2.09	0.69
22:DA:2401:U:H5"	22:DA:2402:U:OP2	1.93	0.69
22:DA:2838:G:H1'	35:DN:45:ARG:NH2	2.05	0.69
58:DF:42:ALA:HB2	58:DF:49:LEU:HD21	1.75	0.69
2:AB:71:THR:O	2:AB:72:LYS:HG2	1.93	0.68
22:BA:34:U:H1'	22:BA:35:G:OP1	1.93	0.68
25:BD:114:LYS:N	25:BD:114:LYS:CE	2.56	0.68
53:CA:90:C:O2'	53:CA:91:U:H5'	1.93	0.68
53:CA:532:A:C8	3:CC:192:TYR:CE2	2.81	0.68
53:CA:984:C:O2'	53:CA:985:C:C6	2.46	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1101:A:C4'	53:CA:1102:A:O5'	2.40	0.68
53:CA:1242:G:O2'	53:CA:1243:C:O5'	2.11	0.68
3:CC:110:LEU:HD21	3:CC:203:LYS:HD2	1.75	0.68
22:DA:78:U:O2'	22:DA:79:C:H5'	1.93	0.68
22:DA:1071:G:O2'	22:DA:1072:C:C5'	2.40	0.68
22:DA:2056:G:H21	48:D0:1:ALA:H3	1.41	0.68
34:DM:17:ASN:HB3	34:DM:38:ARG:NH2	2.08	0.68
39:DR:89:HIS:NE2	39:DR:91:GLN:HB2	2.08	0.68
46:DY:2:LYS:HD2	46:DY:4:LYS:HE3	1.75	0.68
1:AA:409:U:OP1	4:AD:23:GLY:HA3	1.94	0.68
1:AA:1003:G:N2	1:AA:1005:A:H5'	2.08	0.68
1:AA:1405:G:O4'	1:AA:1519:A:H4'	1.93	0.68
12:AL:79:ILE:HD12	12:AL:96:THR:HG21	1.74	0.68
21:AU:9:GLU:CG	21:AU:10:PRO:HD3	2.19	0.68
22:BA:1097:U:O2'	30:BI:8:VAL:HG12	1.93	0.68
37:BP:77:SER:OG	37:BP:79:VAL:HG13	1.92	0.68
44:BW:76:ARG:HG3	44:BW:76:ARG:NH2	1.91	0.68
53:CA:86:G:O2'	53:CA:87:C:P	2.50	0.68
53:CA:238:A:H2'	53:CA:239:U:C5'	2.22	0.68
14:CN:68:ARG:HG3	14:CN:69:PRO:HD2	1.73	0.68
22:DA:614:A:C4'	22:DA:616:A:H62	2.05	0.68
57:DB:12:C:C4'	57:DB:13:G:OP1	2.24	0.68
51:D3:15:LYS:NZ	51:D3:19:GLY:HA2	2.09	0.68
1:AA:706:A:O2'	11:AK:30:ILE:HD11	1.92	0.68
13:AM:10:ASP:CG	13:AM:11:HIS:H	1.95	0.68
21:AU:10:PRO:O	21:AU:11:PHE:HB3	1.93	0.68
27:BF:39:VAL:CG1	27:BF:49:LEU:HD13	2.24	0.68
30:BI:20:SER:HB3	30:BI:21:PRO:HD3	1.75	0.68
53:CA:518:C:H2'	53:CA:530:G:N7	2.08	0.68
53:CA:765:G:C5	53:CA:812:G:C5	2.81	0.68
53:CA:1054:C:O2'	53:CA:1055:A:H5"	1.92	0.68
53:CA:1520:C:H2'	53:CA:1521:C:C6	2.29	0.68
54:CG:59:GLU:OE2	54:CG:63:VAL:HG23	1.92	0.68
22:DA:225:C:H2'	22:DA:226:A:O4'	1.91	0.68
22:DA:2492:U:H2'	22:DA:2493:U:C6	2.29	0.68
22:DA:2519:U:C6	22:DA:2542:A:N6	2.61	0.68
58:DF:48:LEU:HD23	58:DF:48:LEU:H	1.57	0.68
58:DF:91:ARG:HH21	58:DF:91:ARG:HB3	1.59	0.68
32:DK:101:GLY:O	32:DK:120:PRO:HB3	1.92	0.68
38:DQ:90:ASP:O	38:DQ:94:LEU:HB2	1.93	0.68
41:DT:6:ARG:O	41:DT:9:LYS:HD2	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:141:G:H5'	22:BA:142:A:C8	2.28	0.68
22:BA:1068:G:H2'	22:BA:1069:A:H5'	1.74	0.68
24:BC:210:ALA:O	24:BC:215:VAL:HG23	1.94	0.68
36:BO:75:GLY:HA3	36:BO:109:ALA:HB3	1.74	0.68
22:DA:95:A:H4'	46:DY:38:GLN:O	1.92	0.68
22:DA:664:G:H4'	22:DA:941:A:OP1	1.93	0.68
22:DA:1062:G:O4'	22:DA:1088:A:N7	2.26	0.68
22:DA:1205:A:H5"	22:DA:1206:G:N7	2.08	0.68
22:DA:2798:U:H5'	22:DA:2800:A:C5	2.27	0.68
57:DB:42:C:H41	58:DF:87:LYS:HZ3	1.42	0.68
24:DC:9:SER:O	24:DC:12:ARG:HB2	1.93	0.68
29:DH:78:VAL:HB	29:DH:144:VAL:HA	1.74	0.68
31:DJ:44:TYR:O	31:DJ:45:THR:HB	1.92	0.68
34:DM:62:LYS:HG2	34:DM:64:TRP:CZ2	2.29	0.68
35:DN:114:GLU:HG3	35:DN:118:ARG:HD3	1.75	0.68
51:D3:31:ILE:HG21	51:D3:34:LYS:NZ	2.08	0.68
1:AA:877:G:N2	8:AH:1:SER:HB2	2.06	0.68
3:AC:128:MET:HB3	3:AC:131:ARG:HG3	1.74	0.68
9:AI:34:LEU:HD11	9:AI:47:VAL:HG21	1.73	0.68
21:AU:36:PHE:HD1	21:AU:39:LYS:HB3	1.58	0.68
22:BA:74:A:H4'	22:BA:75:G:O5'	1.94	0.68
22:BA:903:C:C2	22:BA:904:G:N7	2.62	0.68
53:CA:977:A:H8	53:CA:1223:C:N3	1.91	0.68
53:CA:1167:A:N7	53:CA:1169:A:N6	2.41	0.68
4:CD:57:LYS:HG3	4:CD:58:GLN:N	2.08	0.68
5:CE:131:ASN:O	5:CE:135:VAL:HG23	1.92	0.68
56:CP:52:LEU:HD21	56:CP:75:ILE:HG12	1.76	0.68
20:CT:24:ARG:HD3	20:CT:28:ARG:HH21	1.58	0.68
21:CU:33:ARG:HH12	21:CU:34:ARG:HD3	1.56	0.68
22:DA:482:A:N6	22:DA:506:G:N9	2.41	0.68
22:DA:1467:U:H2'	22:DA:1468:U:H5'	1.74	0.68
22:DA:1723:G:H2'	22:DA:1724:G:H8	1.57	0.68
22:DA:2195:U:H2'	22:DA:2196:C:H6	1.56	0.68
22:DA:2297:A:N3	22:DA:2298:A:C8	2.61	0.68
22:DA:2798:U:H5'	22:DA:2800:A:C6	2.29	0.68
33:DL:96:LYS:HD3	33:DL:103:ILE:HA	1.76	0.68
34:DM:108:VAL:HG21	34:DM:112:LEU:HB3	1.75	0.68
42:DU:14:THR:HB	42:DU:68:ASN:HB3	1.76	0.68
1:AA:430:A:OP1	4:AD:8:LEU:HB2	1.93	0.68
2:AB:185:ILE:HA	2:AB:199:ILE:HB	1.76	0.68
13:AM:106:ARG:HA	13:AM:106:ARG:HH11	1.59	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:743:A:O3'	62:BA:3643:HOH:O	2.11	0.68
22:BA:790:U:O2'	22:BA:791:C:O5'	2.11	0.68
22:BA:1256:G:C2'	26:BE:77:ILE:HD11	2.23	0.68
27:BF:131:VAL:HG22	27:BF:151:LEU:H	1.59	0.68
37:BP:21:PRO:HA	37:BP:46:VAL:CG1	2.23	0.68
53:CA:205:A:C6	53:CA:206:C:N4	2.61	0.68
53:CA:1278:G:H4'	53:CA:1279:G:C5'	2.23	0.68
6:CF:92:THR:O	6:CF:93:LYS:HG2	1.93	0.68
14:CN:60:ARG:HG2	14:CN:61:ASN:H	1.58	0.68
19:CS:35:ARG:HA	19:CS:70:LEU:HB2	1.76	0.68
22:DA:35:G:O2'	22:DA:36:G:O4'	2.11	0.68
22:DA:1079:C:O2'	22:DA:1080:A:O4'	2.12	0.68
22:DA:1635:A:H5'	22:DA:1635:A:H8	1.59	0.68
22:DA:1716:U:HO2'	22:DA:1717:A:H8	0.73	0.68
22:DA:2232:C:P	45:DX:26:ARG:HH12	2.17	0.68
22:DA:2847:U:H2'	22:DA:2848:G:H5'	1.74	0.68
43:DV:42:LEU:HD13	43:DV:47:VAL:HG21	1.76	0.68
5:AE:37:VAL:HG13	5:AE:116:VAL:HG21	1.76	0.68
22:BA:510:C:OP1	62:BA:3759:HOH:O	2.12	0.68
22:BA:2425:A:H5"	22:BA:2427:C:O4'	1.93	0.68
26:BE:149:ILE:HD11	26:BE:172:ALA:HA	1.76	0.68
30:BI:7:TYR:HA	30:BI:58:ILE:HB	1.75	0.68
53:CA:295:C:H2'	53:CA:296:U:H6	1.57	0.68
53:CA:1190:G:H5'	3:CC:175:HIS:NE2	2.08	0.68
53:CA:1363:A:C6	53:CA:1365:G:O6	2.47	0.68
22:DA:1248:G:H2'	38:DQ:1:ALA:O	1.94	0.68
22:DA:1742:U:H2'	22:DA:1743:G:H8	1.58	0.68
22:DA:2662:A:H2'	22:DA:2663:G:O4'	1.94	0.68
57:DB:58:A:H2'	57:DB:59:A:H8	1.58	0.68
32:DK:35:VAL:HG23	32:DK:36:GLY:H	1.57	0.68
33:DL:100:ILE:O	33:DL:101:ILE:HB	1.93	0.68
44:DW:18:LYS:H	44:DW:36:ILE:HG12	1.59	0.68
1:AA:1451:U:O2	1:AA:1451:U:H2'	1.92	0.68
1:AA:1453:G:N3	1:AA:1453:G:H2'	2.07	0.68
5:AE:12:GLU:HB2	5:AE:38:VAL:HG12	1.76	0.68
15:AO:26:VAL:HG12	15:AO:30:LEU:HD11	1.76	0.68
22:BA:1141:U:H4'	22:BA:1142:A:O4'	1.94	0.68
22:BA:1653:G:H1	35:BN:11:ASN:ND2	1.92	0.68
26:BE:76:PRO:HA	26:BE:82:GLY:HA3	1.75	0.68
28:BG:23:ILE:HD12	28:BG:23:ILE:N	2.09	0.68
29:BH:68:ARG:NH2	29:BH:72:ILE:HG21	2.08	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BJ:43:GLU:O	31:BJ:45:THR:HG22	1.92	0.68
37:BP:50:ARG:HB3	37:BP:57:ALA:N	2.01	0.68
39:BR:49:ILE:O	39:BR:49:ILE:HG13	1.94	0.68
53:CA:991:U:C5	53:CA:1212:U:H1'	2.28	0.68
53:CA:1328:C:H5"	55:CM:27:THR:HG21	1.76	0.68
6:CF:11:HIS:CD2	6:CF:54:LEU:HD21	2.28	0.68
14:CN:52:ARG:CZ	14:CN:52:ARG:HA	2.24	0.68
22:DA:27:G:N2	22:DA:512:G:H2'	2.09	0.68
22:DA:324:A:O2'	22:DA:325:G:O4'	2.08	0.68
22:DA:876:C:H3'	22:DA:877:A:C8	2.28	0.68
22:DA:2629:U:H5"	22:DA:2630:G:OP1	1.94	0.68
24:DC:16:VAL:N	24:DC:203:VAL:HG12	2.06	0.68
58:DF:47:LYS:HA	58:DF:50:ASP:HB3	1.76	0.68
46:DY:19:LEU:HA	46:DY:22:LEU:HB2	1.75	0.68
1:AA:114:U:O2'	1:AA:115:G:H5'	1.94	0.68
1:AA:596:A:N6	1:AA:645:G:C6	2.62	0.68
8:AH:88:LYS:HG3	8:AH:89:ASP:H	1.58	0.68
10:AJ:8:ILE:HG12	10:AJ:100:ILE:HG22	1.74	0.68
14:AN:60:ARG:O	14:AN:61:ASN:HB2	1.93	0.68
22:BA:588:U:H2'	22:BA:589:U:H6	1.57	0.68
22:BA:923:G:H21	44:BW:23:LYS:NZ	1.92	0.68
22:BA:1567:G:H2'	24:BC:84:PRO:HG3	1.74	0.68
25:BD:45:TYR:H	25:BD:45:TYR:HD1	1.39	0.68
38:BQ:63:ARG:HD2	38:BQ:64:ILE:N	2.09	0.68
40:BS:18:ARG:O	40:BS:19:LEU:HB2	1.93	0.68
53:CA:1074:G:H4'	2:CB:102:ASN:HB2	1.75	0.68
9:CI:49:GLN:N	9:CI:50:PRO:HD2	2.09	0.68
9:CI:59:LYS:HE3	9:CI:60:LEU:HG	1.76	0.68
10:CJ:44:THR:HG22	10:CJ:45:ARG:H	1.58	0.68
22:DA:2295:C:C2'	22:DA:2296:U:H5'	2.23	0.68
22:DA:2461:A:H1'	22:DA:2492:U:H3	1.59	0.68
30:DI:55:PRO:HG2	30:DI:70:THR:HG23	1.76	0.68
33:DL:62:PRO:O	51:D3:12:ARG:HB3	1.93	0.68
1:AA:174:A:H2'	1:AA:175:C:H5'	1.76	0.68
11:CK:64:VAL:O	11:CK:68:ARG:HB2	1.93	0.68
11:CK:126:ARG:O	21:CU:33:ARG:NH2	2.27	0.68
22:DA:565:C:H4'	22:DA:1253:A:N6	2.09	0.68
22:DA:1309:G:OP1	50:D2:9:VAL:HG12	1.94	0.68
22:DA:2269:G:O3'	44:DW:18:LYS:HE2	1.94	0.68
22:DA:2667:C:O2'	22:DA:2668:G:O4'	2.12	0.68
57:DB:90:C:H6	57:DB:90:C:H5"	1.59	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DF:12:VAL:HA	58:DF:15:LEU:HB2	1.77	0.68
58:DF:136:ILE:O	58:DF:137:PHE:O	2.12	0.68
31:DJ:110:PRO:HG2	31:DJ:111:LYS:HG2	1.74	0.68
1:AA:15:G:O4'	5:AE:28:ARG:NH1	2.28	0.67
5:AE:81:GLN:NE2	5:AE:81:GLN:H	1.92	0.67
15:AO:9:LYS:O	15:AO:13:GLU:HG3	1.94	0.67
22:BA:571:U:H4'	22:BA:572:A:OP1	1.94	0.67
24:BC:104:LEU:O	24:BC:105:ALA:HB2	1.93	0.67
36:BO:88:LYS:HE2	36:BO:116:GLN:HE22	1.59	0.67
38:BQ:65:ASN:HD21	38:BQ:69:ARG:HH22	1.40	0.67
53:CA:464:U:C4	53:CA:466:A:H4'	2.29	0.67
3:CC:36:PHE:HE1	14:CN:91:GLU:HB3	1.59	0.67
17:CQ:46:HIS:HE2	17:CQ:48:GLU:HG2	1.58	0.67
20:CT:60:GLN:HB3	20:CT:65:LEU:HD12	1.75	0.67
22:DA:301:G:H3'	42:DU:81:ARG:NH1	2.09	0.67
22:DA:1056:G:H1'	22:DA:1103:A:N6	2.09	0.67
22:DA:1060:U:O4'	22:DA:1061:U:H2'	1.93	0.67
57:DB:18:G:C2	57:DB:67:G:O6	2.47	0.67
28:DG:163:TYR:HD2	28:DG:163:TYR:N	1.93	0.67
34:DM:17:ASN:HB3	34:DM:38:ARG:HH22	1.59	0.67
1:AA:601:G:H2'	1:AA:602:A:C8	2.29	0.67
22:BA:568:U:O2	22:BA:570:G:C8	2.47	0.67
22:BA:1506:U:H2'	22:BA:1507:C:C6	2.28	0.67
23:BB:87:U:H3'	23:BB:88:C:H5'	1.76	0.67
36:BO:111:ARG:O	36:BO:113:ALA:N	2.26	0.67
41:BT:73:ARG:NH2	41:BT:74:ILE:H	1.93	0.67
53:CA:68:G:H5'	53:CA:171:A:O2'	1.95	0.67
53:CA:320:A:O2'	53:CA:1435:G:H1'	1.93	0.67
53:CA:818:G:H3'	53:CA:819:A:H5'	1.76	0.67
22:DA:1210:G:C6	22:DA:1237:A:N7	2.62	0.67
22:DA:2135:A:C2'	22:DA:2136:G:O4'	2.41	0.67
35:DN:103:ARG:HD3	35:DN:110:MET:SD	2.35	0.67
40:DS:70:LYS:H	40:DS:70:LYS:HE3	1.59	0.67
8:AH:93:LYS:HE3	8:AH:116:ARG:HH12	1.60	0.67
14:AN:40:ARG:NH1	14:AN:44:VAL:HG11	2.09	0.67
15:AO:73:ASP:CG	15:AO:76:ARG:HG3	2.15	0.67
22:BA:2311:A:H1'	27:BF:78:ILE:HD13	1.76	0.67
22:BA:2466:C:OP1	52:B4:4:ARG:HB2	1.95	0.67
46:BY:9:LYS:HA	46:BY:9:LYS:NZ	2.09	0.67
53:CA:1183:U:H3'	53:CA:1184:G:C5'	2.14	0.67
8:CH:1:SER:HB3	8:CH:3:GLN:HG3	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:822:G:O6	22:DA:943:A:H2	1.76	0.67
22:DA:867:C:HO2'	22:DA:868:U:H6	0.70	0.67
22:DA:989:G:OP2	47:DZ:11:SER:HB2	1.94	0.67
22:DA:1079:C:N4	22:DA:1088:A:H5"	2.06	0.67
22:DA:1343:G:O2'	22:DA:1344:U:C6	2.42	0.67
22:DA:1722:A:N6	22:DA:1739:A:C8	2.62	0.67
22:DA:1812:U:H2'	22:DA:1813:G:C8	2.28	0.67
26:DE:60:TRP:CZ2	26:DE:71:GLY:HA2	2.30	0.67
26:DE:166:LYS:HE2	26:DE:166:LYS:HA	1.77	0.67
35:DN:32:GLU:OE1	35:DN:115:LEU:HD12	1.95	0.67
39:DR:23:GLU:O	39:DR:25:LEU:HD22	1.95	0.67
49:D1:51:ALA:O	49:D1:52:LYS:HB2	1.94	0.67
1:AA:269:C:H2'	1:AA:270:A:C8	2.28	0.67
1:AA:683:G:N2	11:AK:39:ASN:HA	2.10	0.67
1:AA:1161:C:O2'	1:AA:1162:C:C6	2.46	0.67
22:BA:45:G:H5"	22:BA:46:G:OP1	1.94	0.67
23:BB:7:G:O2'	36:BO:38:GLN:NE2	2.27	0.67
29:BH:90:LEU:HB2	29:BH:123:ARG:HB3	1.75	0.67
32:BK:10:VAL:HG11	32:BK:16:ALA:CB	2.24	0.67
32:BK:63:VAL:CG1	32:BK:103:VAL:HG12	2.25	0.67
53:CA:337:G:H2'	53:CA:338:A:C8	2.30	0.67
53:CA:374:A:H5"	53:CA:452:A:C2	2.30	0.67
53:CA:935:A:O2'	53:CA:936:C:C6	2.47	0.67
22:DA:502:A:C5	22:DA:505:A:N7	2.62	0.67
22:DA:781:A:H5"	22:DA:782:A:OP1	1.94	0.67
22:DA:1327:A:H2'	22:DA:1328:A:O4'	1.95	0.67
22:DA:1870:C:H5"	22:DA:1871:A:C2	2.30	0.67
22:DA:2297:A:HO2'	22:DA:2298:A:H8	0.70	0.67
22:DA:2312:U:H2'	22:DA:2313:C:C6	2.30	0.67
22:DA:2394:C:H41	51:D3:30:HIS:CE1	2.13	0.67
1:AA:1314:C:C5	19:AS:5:LYS:HD3	2.30	0.67
10:AJ:35:GLN:HG2	10:AJ:77:VAL:HB	1.75	0.67
22:BA:1539:U:H2'	22:BA:1540:G:H8	1.59	0.67
22:BA:2573:C:OP1	62:BA:3702:HOH:O	2.10	0.67
25:BD:92:VAL:O	25:BD:93:GLY:C	2.33	0.67
37:BP:50:ARG:CB	37:BP:57:ALA:N	2.52	0.67
53:CA:769:G:O2'	53:CA:770:C:H5'	1.94	0.67
53:CA:978:A:O2'	53:CA:979:C:H5'	1.94	0.67
21:CU:3:ILE:HG21	21:CU:18:PHE:HB3	1.77	0.67
22:DA:876:C:H2'	22:DA:877:A:OP1	1.94	0.67
22:DA:1023:U:H5'	22:DA:1023:U:H6	1.58	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2060:A:H2'	26:DE:63:LYS:NZ	2.08	0.67
22:DA:2635:A:H5'	25:DD:79:LEU:HB2	1.75	0.67
26:DE:59:PRO:HB2	26:DE:67:ARG:NH2	2.09	0.67
28:DG:85:LYS:HG3	28:DG:163:TYR:HB2	1.76	0.67
46:DY:28:LEU:HD11	46:DY:43:LEU:HD13	1.74	0.67
2:AB:67:LEU:HD21	2:AB:91:VAL:HG23	1.74	0.67
6:AF:42:TRP:CZ2	6:AF:61:LEU:HD22	2.29	0.67
10:AJ:11:LYS:HG3	10:AJ:97:ASP:HB3	1.77	0.67
22:BA:526:A:H5"	22:BA:527:C:OP1	1.95	0.67
22:BA:873:C:N3	22:BA:904:G:N2	2.41	0.67
22:BA:2324:U:H3'	22:BA:2325:G:H5"	1.76	0.67
44:BW:23:LYS:NZ	44:BW:24:ARG:HG3	2.10	0.67
53:CA:432:A:C2'	53:CA:433:G:H5'	2.24	0.67
53:CA:1322:C:O2'	53:CA:1323:G:H5'	1.95	0.67
4:CD:25:ARG:HH11	4:CD:25:ARG:HG2	1.60	0.67
17:CQ:4:ILE:HG22	17:CQ:5:ARG:H	1.59	0.67
22:DA:187:G:C2	22:DA:210:C:C2	2.83	0.67
22:DA:1231:U:H2'	22:DA:1232:G:C8	2.29	0.67
22:DA:1275:A:C2'	22:DA:1275:A:N3	2.58	0.67
22:DA:2092:U:C4'	22:DA:2093:G:OP1	2.26	0.67
22:DA:2288:A:H4'	22:DA:2289:G:OP2	1.94	0.67
25:DD:11:MET:HE1	25:DD:192:ALA:HA	1.76	0.67
42:DU:83:GLY:O	42:DU:93:ARG:HA	1.94	0.67
1:AA:1038:C:H2'	1:AA:1039:G:C8	2.30	0.67
1:AA:1520:C:H2'	1:AA:1521:C:C6	2.30	0.67
5:AE:37:VAL:CG1	5:AE:116:VAL:HG21	2.25	0.67
11:AK:108:ASN:HB3	21:AU:6:ARG:HG2	1.76	0.67
20:AT:79:THR:O	20:AT:82:ILE:HG13	1.94	0.67
22:BA:137:U:O2'	22:BA:138:U:OP1	2.12	0.67
22:BA:902:C:O5'	22:BA:902:C:H6	1.76	0.67
25:BD:97:SER:C	25:BD:99:GLU:HG2	2.15	0.67
25:BD:99:GLU:HG3	25:BD:100:LEU:N	2.09	0.67
34:BM:42:THR:O	34:BM:44:ARG:N	2.28	0.67
34:BM:132:THR:HG22	34:BM:133:LYS:N	2.09	0.67
44:BW:19:ARG:NH2	44:BW:22:VAL:HG21	2.10	0.67
53:CA:86:G:O2'	53:CA:87:C:OP2	2.12	0.67
53:CA:1296:C:C4	53:CA:1297:G:N2	2.63	0.67
2:CB:89:PHE:CE2	2:CB:152:ASP:HB2	2.24	0.67
3:CC:36:PHE:CE1	14:CN:91:GLU:HB3	2.30	0.67
8:CH:11:THR:HG22	8:CH:14:ARG:NH1	2.10	0.67
22:DA:1210:G:H5"	22:DA:1211:C:H3'	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:33:LEU:O	24:DC:34:GLU:HB3	1.93	0.67
42:DU:17:ASP:HB2	42:DU:38:ILE:HA	1.77	0.67
1:AA:246:A:H4'	1:AA:247:G:OP1	1.95	0.67
1:AA:1287:A:H2'	1:AA:1288:A:C8	2.30	0.67
20:AT:27:MET:HE1	20:AT:57:VAL:HG22	1.75	0.67
22:BA:977:G:O6	62:BA:3576:HOH:O	2.11	0.67
22:BA:1223:G:OP2	39:BR:68:ARG:NH1	2.28	0.67
22:BA:1996:C:H4'	22:BA:1997:C:OP1	1.92	0.67
23:BB:28:C:C2'	23:BB:29:A:H5'	2.25	0.67
42:BU:91:LYS:O	42:BU:92:VAL:HB	1.94	0.67
53:CA:878:A:OP1	8:CH:79:ARG:HB2	1.95	0.67
53:CA:1069:C:H4'	53:CA:1192:C:O2	1.94	0.67
53:CA:1458:G:O3'	20:CT:22:SER:HA	1.94	0.67
4:CD:8:LEU:CD2	4:CD:21:LYS:HD2	2.25	0.67
12:CL:80:LEU:HB3	12:CL:97:VAL:CG2	2.23	0.67
22:DA:17:G:H4'	38:DQ:24:TYR:CE1	2.30	0.67
22:DA:612:G:N2	22:DA:614:A:HO2'	1.92	0.67
22:DA:1300:G:C4'	22:DA:1301:A:O5'	2.42	0.67
57:DB:13:G:H8	57:DB:13:G:H5"	1.59	0.67
26:DE:61:ARG:HE	26:DE:65:THR:HB	1.59	0.67
34:DM:27:SER:N	34:DM:66:ARG:HH22	1.92	0.67
46:DY:18:LEU:O	46:DY:22:LEU:HD13	1.94	0.67
1:AA:968:A:H4'	1:AA:969:A:OP2	1.95	0.67
22:BA:729:G:H4'	22:BA:763:G:H5'	1.75	0.67
22:BA:1450:G:C6	22:BA:1451:C:N4	2.63	0.67
27:BF:35:LEU:HD13	27:BF:56:LEU:HD22	1.77	0.67
41:BT:26:LYS:O	41:BT:27:SER:HB2	1.94	0.67
45:BX:58:ILE:HD11	45:BX:66:VAL:HG11	1.76	0.67
52:B4:9:LYS:O	52:B4:10:LEU:HD23	1.94	0.67
53:CA:344:A:H5"	53:CA:345:C:H5	1.59	0.67
53:CA:1250:A:N3	53:CA:1287:A:N6	2.42	0.67
53:CA:1386:G:O2'	53:CA:1387:G:H5'	1.95	0.67
5:CE:154:ALA:HB1	8:CH:65:PHE:CE2	2.30	0.67
54:CG:76:SER:HA	54:CG:85:GLN:HA	1.77	0.67
12:CL:98:ARG:HB2	12:CL:116:TYR:HA	1.76	0.67
14:CN:76:PHE:CE2	14:CN:92:ILE:HG21	2.30	0.67
19:CS:52:ASN:ND2	19:CS:54:ARG:HG2	2.09	0.67
22:DA:84:A:C5	22:DA:103:A:N6	2.63	0.67
22:DA:111:A:C2	22:DA:112:U:C2	2.82	0.67
22:DA:373:U:HO2'	22:DA:374:A:H8	1.43	0.67
22:DA:686:U:OP2	62:DA:3704:HOH:O	2.11	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:923:G:H1'	44:DW:23:LYS:HZ2	1.60	0.67
22:DA:999:U:O2'	22:DA:1000:A:H5'	1.95	0.67
22:DA:2574:G:O2'	25:DD:148:GLN:HB2	1.95	0.67
22:DA:2638:G:H1'	22:DA:2778:A:N6	2.10	0.67
28:DG:48:THR:O	28:DG:49:LEU:HB2	1.94	0.67
45:DX:31:ASN:HD22	45:DX:31:ASN:N	1.83	0.67
1:AA:414:A:O2'	1:AA:415:A:O4'	2.13	0.67
1:AA:1007:U:C2'	1:AA:1008:U:H5"	2.25	0.67
4:AD:1:ALA:O	4:AD:67:LEU:HD11	1.95	0.67
5:AE:155:LYS:HA	5:AE:158:LYS:HZ3	1.60	0.67
17:AQ:28:VAL:O	17:AQ:36:PHE:HA	1.94	0.67
22:BA:812:C:H4'	38:BQ:12:ARG:HH22	1.59	0.67
22:BA:1731:G:C4	22:BA:1733:G:N7	2.63	0.67
22:BA:2557:G:H2'	22:BA:2558:C:C6	2.30	0.67
28:BG:115:GLN:CD	28:BG:115:GLN:N	2.44	0.67
42:BU:73:ASN:HD22	42:BU:76:THR:N	1.93	0.67
53:CA:239:U:C5'	53:CA:239:U:H6	2.07	0.67
53:CA:663:A:O2'	53:CA:664:G:H5'	1.95	0.67
19:CS:35:ARG:HH21	19:CS:51:HIS:CD2	2.13	0.67
57:DB:67:G:O2'	57:DB:68:C:H6	1.78	0.67
5:AE:110:MET:H	5:AE:113:VAL:HG13	1.60	0.66
22:BA:1013:C:H2'	22:BA:1014:A:H8	1.60	0.66
24:BC:246:PRO:HG2	24:BC:247:TRP:CH2	2.29	0.66
39:BR:49:ILE:HG22	39:BR:54:VAL:HG12	1.77	0.66
53:CA:112:G:N3	53:CA:330:C:N4	2.44	0.66
22:DA:223:A:N6	22:DA:422:A:C6	2.63	0.66
22:DA:324:A:C2	22:DA:325:G:H1'	2.29	0.66
22:DA:1079:C:N4	22:DA:1088:A:N3	2.43	0.66
22:DA:2742:G:OP1	52:D4:36:ARG:HD3	1.94	0.66
28:DG:43:LYS:O	28:DG:49:LEU:HD12	1.95	0.66
35:DN:97:ILE:HG13	35:DN:98:LEU:N	2.09	0.66
22:BA:962:G:OP1	62:BA:3352:HOH:O	2.13	0.66
22:BA:1438:U:O2'	22:BA:1439:A:H5'	1.95	0.66
22:BA:2134:A:N6	22:BA:2135:A:N6	2.43	0.66
27:BF:68:LYS:HD2	27:BF:68:LYS:N	2.10	0.66
36:BO:67:ASN:O	36:BO:69:ASP:N	2.28	0.66
37:BP:95:LYS:HG2	37:BP:97:TYR:CE1	2.31	0.66
44:BW:46:ALA:O	44:BW:47:GLY:O	2.13	0.66
53:CA:560:A:H4'	53:CA:561:U:H5"	1.75	0.66
53:CA:1077:G:N2	53:CA:1080:A:OP2	2.29	0.66
8:CH:102:VAL:HG23	8:CH:125:ILE:HD12	1.75	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:34:THR:HG22	12:CL:35:ARG:HG2	1.76	0.66
56:CP:67:ILE:HG12	56:CP:72:ALA:HB2	1.77	0.66
22:DA:1125:G:H4'	52:D4:37:GLN:HE21	1.59	0.66
22:DA:1265:A:C8	22:DA:1267:U:C2	2.82	0.66
22:DA:2384:U:H3'	22:DA:2385:C:H3'	1.77	0.66
22:DA:2720:U:H5"	37:DP:52:ARG:NH2	2.10	0.66
31:DJ:5:THR:HA	31:DJ:44:TYR:CD2	2.29	0.66
36:DO:23:ALA:HB1	36:DO:90:VAL:HG12	1.77	0.66
40:DS:9:HIS:H	40:DS:102:HIS:CE1	2.13	0.66
52:D4:19:ARG:O	52:D4:20:ASP:HB2	1.94	0.66
1:AA:502:A:H2'	1:AA:503:C:O4'	1.95	0.66
1:AA:1320:C:OP1	19:AS:69:LYS:HE2	1.95	0.66
6:AF:4:TYR:HA	6:AF:91:ARG:O	1.95	0.66
28:BG:3:VAL:O	28:BG:68:ARG:HG3	1.95	0.66
31:BJ:55:ILE:O	31:BJ:55:ILE:HG13	1.93	0.66
31:BJ:99:ARG:O	31:BJ:103:ILE:HG23	1.95	0.66
32:BK:18:ARG:HH11	32:BK:18:ARG:CG	2.02	0.66
42:BU:38:ILE:HG22	42:BU:39:ASN:H	1.59	0.66
53:CA:157:U:C2'	53:CA:158:G:H5'	2.24	0.66
4:CD:187:ARG:NH2	4:CD:191:SER:HB3	2.09	0.66
12:CL:89:LEU:HB3	12:CL:92:VAL:HG21	1.78	0.66
22:DA:1281:G:C6	22:DA:1290:C:N4	2.63	0.66
22:DA:1345:C:H5"	22:DA:1396:U:O4	1.95	0.66
22:DA:1846:G:H5"	22:DA:1847:A:OP2	1.94	0.66
57:DB:57:A:HO2'	57:DB:58:A:H8	0.72	0.66
24:DC:52:HIS:HA	24:DC:216:ARG:HB2	1.77	0.66
11:AK:126:ARG:CB	21:AU:33:ARG:NH1	2.58	0.66
21:AU:10:PRO:HG2	3:CC:71:ARG:NH2	2.10	0.66
22:BA:2103:C:H2'	22:BA:2104:C:H5'	1.78	0.66
26:BE:108:ILE:HD13	26:BE:109:LEU:N	2.11	0.66
27:BF:7:TYR:O	27:BF:12:VAL:HG12	1.95	0.66
27:BF:68:LYS:HD2	27:BF:68:LYS:H	1.59	0.66
46:BY:2:LYS:HG3	46:BY:52:ARG:HD3	1.76	0.66
53:CA:1533:C:H2'	53:CA:1534:A:H5"	1.75	0.66
6:CF:3:HIS:ND1	6:CF:92:THR:HG23	2.11	0.66
9:CI:10:ARG:HG3	9:CI:14:SER:O	1.95	0.66
56:CP:4:ILE:HD12	56:CP:4:ILE:N	2.10	0.66
22:DA:870:U:H2'	22:DA:871:U:H5'	1.78	0.66
22:DA:1566:A:C2	24:DC:212:TRP:HB2	2.29	0.66
22:DA:2683:C:OP1	37:DP:55:HIS:HB3	1.95	0.66
57:DB:24:G:H5'	57:DB:25:U:C5	2.31	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DJ:75:TYR:CD1	31:DJ:84:ILE:HD11	2.29	0.66
38:DQ:4:LYS:HE3	38:DQ:7:VAL:HG13	1.77	0.66
1:AA:70:U:O2'	1:AA:71:A:C8	2.48	0.66
1:AA:338:A:N1	1:AA:351:G:O6	2.28	0.66
22:BA:2841:C:H2'	22:BA:2842:G:H8	1.61	0.66
26:BE:148:ILE:HA	26:BE:187:VAL:HB	1.77	0.66
29:BH:24:GLY:O	29:BH:28:ASN:HB2	1.96	0.66
35:BN:38:LEU:O	35:BN:38:LEU:HD12	1.95	0.66
39:BR:1:MET:HA	39:BR:42:ALA:O	1.95	0.66
44:BW:17:ALA:O	44:BW:18:LYS:HB3	1.94	0.66
53:CA:476:U:C6	53:CA:476:U:OP2	2.49	0.66
53:CA:1091:U:O2	53:CA:1093:A:H8	1.78	0.66
10:CJ:84:VAL:HG23	10:CJ:85:ASP:N	2.04	0.66
21:CU:36:PHE:HD1	21:CU:40:PRO:HB3	1.61	0.66
22:DA:125:A:C4'	22:DA:126:A:OP2	2.41	0.66
22:DA:172:A:H2'	22:DA:173:A:C8	2.30	0.66
22:DA:594:U:H2'	22:DA:595:C:C6	2.30	0.66
22:DA:2313:C:HO2'	22:DA:2314:A:H8	1.36	0.66
25:DD:106:LYS:HB3	25:DD:206:ALA:CB	2.24	0.66
39:DR:39:LEU:O	39:DR:40:MET:HB2	1.94	0.66
46:DY:28:LEU:HG	46:DY:42:LEU:HD22	1.77	0.66
2:AB:20:ARG:HH12	2:AB:38:HIS:CE1	2.14	0.66
11:AK:14:GLN:HA	11:AK:76:TYR:O	1.95	0.66
17:AQ:12:VAL:HG11	17:AQ:21:VAL:HG13	1.76	0.66
22:BA:933:A:H5'	22:BA:934:U:OP2	1.95	0.66
22:BA:1079:C:C4	22:BA:1088:A:H2	2.12	0.66
22:BA:2310:C:H2'	27:BF:76:PHE:HE1	1.58	0.66
22:BA:2637:U:C2'	22:BA:2638:G:H5'	2.25	0.66
29:BH:5:LEU:HD13	29:BH:13:GLY:HA2	1.78	0.66
34:BM:13:HIS:O	34:BM:14:LYS:HB2	1.96	0.66
35:BN:116:VAL:HG22	35:BN:116:VAL:O	1.96	0.66
41:BT:29:THR:HB	41:BT:86:THR:CG2	2.25	0.66
53:CA:1239:A:O2'	53:CA:1241:G:C5	2.47	0.66
19:CS:40:PHE:CB	19:CS:41:PRO:HD2	2.24	0.66
22:DA:2666:C:O2'	22:DA:2667:C:C5'	2.42	0.66
24:DC:67:LYS:HB3	24:DC:150:GLY:HA2	1.77	0.66
32:DK:7:MET:HA	32:DK:7:MET:CE	2.26	0.66
1:AA:439:U:C2'	1:AA:440:C:H5'	2.25	0.66
1:AA:725:G:H2'	1:AA:726:C:H6	1.60	0.66
20:AT:74:HIS:O	20:AT:78:LEU:HB2	1.96	0.66
22:BA:588:U:H1'	26:BE:85:PHE:CD1	2.31	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:611:C:C2'	22:BA:612:G:H5'	2.25	0.66
22:BA:784:G:H5"	24:BC:225:ASN:HD21	1.59	0.66
41:BT:28:ASN:HA	41:BT:91:GLN:NE2	2.10	0.66
41:BT:61:LEU:C	41:BT:61:LEU:HD12	2.15	0.66
8:CH:54:THR:O	8:CH:56:PRO:HD3	1.95	0.66
25:DD:10:GLY:O	25:DD:11:MET:HB2	1.96	0.66
29:DH:93:SER:CB	29:DH:121:VAL:HG21	2.26	0.66
32:DK:60:ALA:HA	32:DK:87:LEU:CD2	2.25	0.66
42:DU:26:ASN:O	42:DU:34:ILE:HB	1.96	0.66
22:BA:142:A:O2'	22:BA:143:C:O4'	2.12	0.66
26:BE:193:VAL:O	26:BE:197:GLU:HB2	1.96	0.66
31:BJ:111:LYS:CD	31:BJ:112:GLY:H	2.06	0.66
32:BK:70:ARG:HD3	32:BK:76:VAL:HG22	1.78	0.66
34:BM:31:PHE:CE2	34:BM:110:GLU:HG2	2.31	0.66
35:BN:2:ARG:HA	35:BN:5:LYS:HD2	1.76	0.66
39:BR:4:VAL:HG23	39:BR:39:LEU:HG	1.77	0.66
53:CA:1084:G:C8	53:CA:1085:U:C6	2.83	0.66
4:CD:57:LYS:HE2	4:CD:58:GLN:OE1	1.95	0.66
17:CQ:46:HIS:HB2	17:CQ:70:LYS:NZ	2.09	0.66
20:CT:3:ILE:O	20:CT:4:LYS:HG2	1.96	0.66
22:DA:229:C:O2'	22:DA:230:G:O4'	2.12	0.66
22:DA:287:G:O2'	22:DA:288:U:H5'	1.96	0.66
22:DA:956:G:C2	22:DA:962:G:O6	2.49	0.66
22:DA:1021:A:C2'	22:DA:1022:G:H4'	2.25	0.66
22:DA:2345:G:C6	22:DA:2347:C:N4	2.61	0.66
26:DE:105:LEU:HB3	26:DE:200:LEU:HD11	1.78	0.66
40:DS:49:LYS:HB3	40:DS:49:LYS:NZ	2.11	0.66
48:D0:28:SER:HB3	48:D0:39:ARG:HE	1.61	0.66
1:AA:1239:A:H2'	1:AA:1298:U:O4	1.96	0.66
22:BA:1070:A:H2'	22:BA:1097:U:OP1	1.95	0.66
22:BA:1780:A:OP1	62:BA:3680:HOH:O	2.13	0.66
22:BA:2500:U:O2	62:BA:3523:HOH:O	2.12	0.66
25:BD:133:THR:HG23	25:BD:134:HIS:CD2	2.30	0.66
30:BI:42:ASN:HA	30:BI:45:THR:HB	1.78	0.66
43:BV:21:ARG:HA	43:BV:25:LYS:O	1.95	0.66
53:CA:170:U:O2'	53:CA:171:A:H5'	1.96	0.66
53:CA:708:C:H2'	53:CA:709:U:H6	1.60	0.66
10:CJ:5:ARG:HG2	10:CJ:79:PRO:HG3	1.78	0.66
18:CR:21:ASP:HB3	18:CR:23:LYS:HG2	1.78	0.66
21:CU:35:GLU:O	21:CU:36:PHE:HD2	1.78	0.66
22:DA:644:A:O2'	22:DA:645:C:H5'	1.96	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1176:U:H2'	22:DA:1177:G:C8	2.30	0.66
22:DA:1965:C:H6	22:DA:1965:C:H5"	1.59	0.66
22:DA:2654:A:H4'	22:DA:2655:G:OP1	1.96	0.66
25:DD:107:VAL:H	25:DD:206:ALA:H	1.44	0.66
32:DK:76:VAL:HB	37:DP:72:VAL:HG22	1.77	0.66
22:BA:902:C:N3	22:BA:903:C:C4	2.64	0.66
22:BA:1319:C:O2'	22:BA:1320:C:H5'	1.96	0.66
22:BA:2879:A:H4'	22:BA:2880:C:OP1	1.94	0.66
25:BD:182:ALA:O	25:BD:184:ARG:N	2.29	0.66
31:BJ:111:LYS:CD	31:BJ:112:GLY:N	2.59	0.66
33:BL:77:ILE:HD11	33:BL:108:ALA:HB1	1.78	0.66
34:BM:133:LYS:O	34:BM:134:THR:HB	1.95	0.66
39:BR:90:ARG:O	39:BR:91:GLN:HB3	1.96	0.66
53:CA:17:U:H2'	53:CA:18:C:H6	1.59	0.66
53:CA:404:G:O6	4:CD:1:ALA:HB2	1.96	0.66
5:CE:80:LEU:HD13	5:CE:80:LEU:O	1.96	0.66
22:DA:915:C:H2'	22:DA:916:G:H8	1.60	0.66
22:DA:1070:A:H5'	22:DA:1071:G:H5"	1.78	0.66
22:DA:2021:C:H4'	22:DA:2022:U:OP2	1.95	0.66
22:DA:2060:A:H2'	26:DE:63:LYS:HZ2	1.61	0.66
57:DB:11:C:C5	57:DB:12:C:H5	2.14	0.66
26:DE:48:THR:O	26:DE:52:VAL:HG23	1.96	0.66
29:DH:68:ARG:CD	29:DH:71:LYS:HD3	2.26	0.66
31:DJ:57:LEU:HD11	31:DJ:129:GLU:H	1.60	0.66
36:DO:17:LYS:HE3	36:DO:17:LYS:O	1.96	0.66
48:D0:37:HIS:CG	48:D0:43:THR:HG22	2.31	0.66
5:AE:97:PRO:HA	5:AE:122:VAL:HG12	1.78	0.65
8:AH:28:SER:HB2	8:AH:58:LEU:HB2	1.76	0.65
22:BA:1019:U:C4	22:BA:1020:A:N6	2.64	0.65
22:BA:1813:G:N3	24:BC:49:THR:CG2	2.57	0.65
42:BU:100:GLU:O	42:BU:101:THR:HB	1.96	0.65
44:BW:23:LYS:HD2	44:BW:24:ARG:N	2.11	0.65
53:CA:256:U:H2'	53:CA:257:G:O4'	1.96	0.65
53:CA:1118:U:H1'	53:CA:1179:A:C4	2.31	0.65
53:CA:1138:G:N2	53:CA:1140:C:C4	2.64	0.65
53:CA:1239:A:H62	53:CA:1299:A:H61	1.44	0.65
2:CB:9:LEU:HD23	2:CB:9:LEU:H	1.60	0.65
3:CC:26:LYS:HA	3:CC:26:LYS:HE3	1.77	0.65
3:CC:126:ARG:HA	3:CC:126:ARG:HE	1.60	0.65
4:CD:66:VAL:HG22	4:CD:96:ARG:NH1	2.10	0.65
5:CE:107:GLY:O	5:CE:111:ARG:HB2	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:98:ARG:HD3	12:CL:103:CYS:SG	2.36	0.65
22:DA:628:G:C6	22:DA:636:G:C2	2.84	0.65
22:DA:729:G:H3'	22:DA:730:A:H5"	1.77	0.65
22:DA:1594:U:H2'	22:DA:1595:C:C6	2.31	0.65
22:DA:2333:A:C2	22:DA:2335:A:N6	2.64	0.65
36:DO:13:ARG:O	36:DO:17:LYS:HB2	1.96	0.65
48:D0:4:GLN:HG2	48:D0:4:GLN:O	1.96	0.65
1:AA:683:G:H21	11:AK:39:ASN:HA	1.60	0.65
10:AJ:53:ILE:HG22	10:AJ:61:ALA:CB	2.25	0.65
21:AU:3:ILE:HA	21:AU:19:LYS:NZ	2.10	0.65
22:BA:902:C:C4	22:BA:903:C:C4	2.83	0.65
22:BA:1045:C:C3'	22:BA:1046:A:H5'	2.26	0.65
38:BQ:69:ARG:HH21	38:BQ:69:ARG:CB	2.09	0.65
53:CA:615:G:H2'	53:CA:616:G:H8	1.60	0.65
53:CA:704:A:O2'	53:CA:705:G:H8	1.78	0.65
53:CA:738:C:H2'	53:CA:739:C:H6	1.59	0.65
53:CA:1533:C:C2'	53:CA:1534:A:H5"	2.26	0.65
22:DA:558:U:OP1	31:DJ:113:PRO:HD2	1.96	0.65
22:DA:2267:A:H61	22:DA:2272:U:H3	1.44	0.65
28:DG:162:ARG:HB2	28:DG:166:GLU:HB3	1.78	0.65
30:DI:104:GLN:HA	30:DI:107:GLU:HB2	1.78	0.65
38:DQ:50:ARG:HD2	38:DQ:50:ARG:N	2.11	0.65
50:D2:22:MET:HG2	50:D2:22:MET:O	1.96	0.65
51:D3:31:ILE:HG21	51:D3:34:LYS:HZ3	1.61	0.65
1:AA:1381:U:HO2'	1:AA:1382:C:H6	1.43	0.65
3:AC:56:ILE:HG12	3:AC:65:VAL:HG22	1.78	0.65
3:AC:119:ILE:HD11	3:AC:133:MET:HA	1.78	0.65
10:AJ:29:ALA:HB1	10:AJ:36:VAL:HG21	1.79	0.65
17:AQ:20:ILE:N	17:AQ:47:ASP:OD1	2.29	0.65
22:BA:1856:U:H2'	22:BA:1857:G:H5'	1.77	0.65
24:BC:140:VAL:CG1	24:BC:189:ALA:HB1	2.26	0.65
26:BE:147:LEU:HD23	26:BE:183:PHE:CD1	2.31	0.65
27:BF:45:ASP:HB3	27:BF:48:LEU:HB2	1.79	0.65
29:BH:96:THR:O	29:BH:97:ARG:HG3	1.95	0.65
32:BK:21:CYS:HA	32:BK:41:ILE:HD12	1.77	0.65
33:BL:55:MET:HA	33:BL:55:MET:CE	2.27	0.65
53:CA:642:A:HO2'	53:CA:643:C:H6	1.34	0.65
53:CA:954:G:H1	53:CA:1228:C:N4	1.93	0.65
53:CA:982:U:H4'	53:CA:983:A:C5'	2.25	0.65
9:CI:58:GLU:HG3	9:CI:59:LYS:H	1.61	0.65
22:DA:2624:G:C2	22:DA:2625:G:H1'	2.31	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DL:20:GLY:HA2	33:DL:28:GLY:HA2	1.79	0.65
34:DM:27:SER:N	34:DM:66:ARG:NH2	2.39	0.65
1:AA:408:A:P	4:AD:109:THR:HG21	2.36	0.65
1:AA:667:G:H4'	15:AO:50:HIS:ND1	2.11	0.65
1:AA:1386:G:H2'	1:AA:1387:G:H8	1.61	0.65
3:AC:134:LYS:HE3	3:AC:138:GLN:NE2	2.10	0.65
22:BA:666:A:H4'	33:BL:48:ARG:HD2	1.78	0.65
22:BA:1084:A:H2'	22:BA:1085:A:H8	1.60	0.65
24:BC:85:ASN:OD1	24:BC:85:ASN:N	2.30	0.65
26:BE:79:ARG:CG	26:BE:80:SER:H	2.09	0.65
28:BG:84:LYS:HD2	28:BG:133:LYS:HG2	1.78	0.65
41:BT:5:GLU:OE1	46:BY:18:LEU:HD11	1.96	0.65
53:CA:1146:A:O2'	53:CA:1147:C:C5'	2.44	0.65
53:CA:1458:G:O2'	20:CT:22:SER:CB	2.44	0.65
5:CE:148:SER:H	5:CE:151:MET:CE	2.09	0.65
21:CU:15:LEU:O	21:CU:15:LEU:HD12	1.96	0.65
22:DA:184:C:H2'	22:DA:185:G:C8	2.31	0.65
22:DA:686:U:H6	22:DA:788:A:N1	1.94	0.65
22:DA:2829:A:H2'	22:DA:2830:C:H5'	1.76	0.65
26:DE:105:LEU:HD12	26:DE:200:LEU:HD11	1.77	0.65
28:DG:167:VAL:HG23	28:DG:168:VAL:H	1.61	0.65
36:DO:30:ARG:HH12	36:DO:102:ARG:HB2	1.60	0.65
41:DT:29:THR:H	41:DT:87:LEU:CB	2.10	0.65
1:AA:1025:U:H5"	1:AA:1026:G:H5'	1.77	0.65
1:AA:1123:U:H5"	1:AA:1124:G:OP2	1.97	0.65
1:AA:1348:U:H2'	1:AA:1349:A:C8	2.29	0.65
9:AI:119:LYS:HG3	9:AI:122:ARG:HB3	1.79	0.65
14:AN:42:ASN:HD21	14:AN:46:LYS:NZ	1.95	0.65
20:AT:14:GLU:HA	20:AT:17:ARG:HB2	1.79	0.65
22:BA:136:G:H2'	22:BA:137:U:C5	2.30	0.65
22:BA:364:C:H2'	22:BA:365:U:C6	2.31	0.65
22:BA:923:G:N2	44:BW:23:LYS:HZ3	1.93	0.65
22:BA:994:C:H1'	39:BR:10:LYS:HZ1	1.61	0.65
22:BA:1970:A:H4'	22:BA:1971:U:O5'	1.95	0.65
22:BA:2199:A:H8	22:BA:2199:A:H5"	1.62	0.65
28:BG:82:PHE:CE2	28:BG:137:LYS:HB2	2.31	0.65
36:BO:30:ARG:HG2	36:BO:31:THR:N	2.11	0.65
53:CA:1038:C:H2'	53:CA:1039:G:H8	1.58	0.65
4:CD:61:ARG:HH21	4:CD:67:LEU:HA	1.62	0.65
20:CT:30:PHE:HE2	20:CT:52:GLU:HG2	1.61	0.65
22:DA:354:A:H2'	22:DA:355:U:O4'	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1817:G:HO2'	22:DA:1818:U:H5'	1.61	0.65
22:DA:1830:C:H5'	24:DC:14:HIS:CE1	2.32	0.65
22:DA:2197:U:C5	22:DA:2224:G:C6	2.84	0.65
22:DA:2324:U:H5'	22:DA:2325:G:H5"	1.78	0.65
22:DA:2331:G:H1'	44:DW:40:ARG:HB3	1.78	0.65
22:DA:2392:A:C8	22:DA:2429:G:C2	2.85	0.65
1:AA:98:A:H2'	1:AA:99:C:H6	1.61	0.65
1:AA:464:U:C2	1:AA:466:A:H5'	2.31	0.65
1:AA:1343:G:H4'	9:AI:123:ARG:HB3	1.78	0.65
5:AE:80:LEU:HD23	5:AE:122:VAL:CG1	2.24	0.65
24:BC:70:LYS:HE2	24:BC:73:ILE:CD1	2.26	0.65
24:BC:141:HIS:NE2	24:BC:194:VAL:HA	2.12	0.65
28:BG:10:VAL:O	28:BG:10:VAL:HG23	1.96	0.65
29:BH:82:SER:O	29:BH:83:LYS:HB2	1.97	0.65
35:BN:24:MET:HG2	35:BN:44:LEU:HD22	1.78	0.65
41:BT:51:PHE:O	41:BT:52:GLU:HG2	1.96	0.65
53:CA:818:G:C2'	53:CA:819:A:H5"	2.26	0.65
53:CA:1382:C:O2'	53:CA:1383:C:H5'	1.95	0.65
3:CC:134:LYS:HD3	3:CC:138:GLN:OE1	1.96	0.65
10:CJ:63:ASP:OD2	14:CN:84:ARG:NH1	2.30	0.65
14:CN:47:LEU:O	14:CN:50:LEU:HG	1.96	0.65
20:CT:74:HIS:O	20:CT:78:LEU:HB2	1.96	0.65
22:DA:63:A:N6	22:DA:91:A:N6	2.45	0.65
22:DA:1537:G:H2'	22:DA:1538:G:C4'	2.23	0.65
22:DA:2093:G:H21	22:DA:2198:A:N6	1.95	0.65
22:DA:2307:G:H1'	22:DA:2308:G:C5	2.32	0.65
22:DA:2423:U:O2'	22:DA:2425:A:H2'	1.97	0.65
22:DA:2504:U:H5"	62:DA:3510:HOH:O	1.95	0.65
25:DD:12:THR:HG22	25:DD:13:ARG:O	1.96	0.65
26:DE:130:LYS:CB	26:DE:133:LEU:HB3	2.25	0.65
34:DM:49:ALA:O	34:DM:120:ALA:HB1	1.96	0.65
42:DU:81:ARG:HD2	42:DU:81:ARG:N	2.11	0.65
1:AA:115:G:H4'	1:AA:116:A:O5'	1.96	0.65
1:AA:484:G:C4'	1:AA:485:U:O5'	2.41	0.65
1:AA:1072:G:H2'	1:AA:1073:U:C6	2.32	0.65
13:AM:18:LEU:O	13:AM:24:VAL:HG21	1.96	0.65
22:BA:930:G:H1'	47:BZ:24:LEU:HD21	1.79	0.65
22:BA:1161:C:H1'	39:BR:8:GLY:O	1.97	0.65
22:BA:1847:A:H4'	22:BA:1848:A:OP2	1.92	0.65
22:BA:2492:U:H2'	22:BA:2493:U:H6	1.62	0.65
27:BF:134:GLN:HE22	27:BF:149:ARG:HB3	1.61	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BG:83:THR:HA	28:BG:84:LYS:CE	2.27	0.65
29:BH:38:PRO:HB2	29:BH:40:THR:HG23	1.76	0.65
53:CA:112:G:C2	53:CA:330:C:N4	2.65	0.65
53:CA:696:A:H8	53:CA:696:A:O5'	1.80	0.65
53:CA:1144:G:H21	53:CA:1146:A:H62	1.44	0.65
53:CA:1430:A:H2'	53:CA:1431:A:O4'	1.96	0.65
17:CQ:59:GLU:HB3	17:CQ:76:ARG:O	1.97	0.65
22:DA:797:G:OP1	26:DE:57:LYS:HG2	1.96	0.65
22:DA:1555:G:H2'	22:DA:1556:C:C6	2.30	0.65
22:DA:1635:A:H2'	22:DA:1636:U:O4'	1.96	0.65
22:DA:1666:G:O3'	32:DK:6:THR:HG23	1.97	0.65
25:DD:113:SER:HB2	25:DD:168:GLU:OE1	1.96	0.65
6:AF:71:ILE:HD11	6:AF:89:VAL:HG21	1.78	0.65
7:AG:4:ARG:HA	7:AG:4:ARG:NE	2.12	0.65
11:AK:126:ARG:CA	21:AU:33:ARG:HH12	2.09	0.65
22:BA:826:U:O2'	33:BL:53:GLY:HA3	1.96	0.65
22:BA:2135:A:HO2'	22:BA:2136:G:H8	0.73	0.65
23:BB:33:G:O2'	23:BB:34:A:H5'	1.97	0.65
37:BP:112:ARG:C	37:BP:113:LEU:HD23	2.17	0.65
53:CA:1217:C:H2'	53:CA:1218:C:H6	1.62	0.65
22:DA:455:C:H42	22:DA:473:G:H5'	1.61	0.65
22:DA:974:G:H1'	22:DA:975:A:C8	2.31	0.65
22:DA:1258:U:H2'	22:DA:1259:G:H8	1.59	0.65
22:DA:1277:G:H5'	35:DN:20:MET:HE3	1.79	0.65
40:DS:24:ILE:HG21	40:DS:36:LEU:HD21	1.79	0.65
40:DS:84:ARG:HB3	40:DS:96:ILE:HG23	1.78	0.65
1:AA:633:G:H2'	1:AA:634:C:H6	1.61	0.65
1:AA:807:A:H2'	1:AA:808:C:C6	2.31	0.65
1:AA:1370:G:O5'	9:AI:110:VAL:HG21	1.97	0.65
2:AB:202:ASN:ND2	2:AB:205:ALA:HB2	2.10	0.65
3:AC:21:TRP:HB3	3:AC:58:ARG:H	1.62	0.65
22:BA:894:U:H2'	22:BA:895:U:C6	2.31	0.65
22:BA:1288:G:C4	22:BA:1327:A:C2	2.85	0.65
24:BC:16:VAL:H	24:BC:203:VAL:CG1	2.10	0.65
44:BW:28:GLU:HG3	44:BW:29:SER:H	1.61	0.65
53:CA:982:U:H4'	53:CA:983:A:H5'	1.77	0.65
53:CA:1170:A:H2'	53:CA:1171:A:O4'	1.96	0.65
4:CD:29:THR:HG22	4:CD:30:LYS:HD3	1.78	0.65
54:CG:128:GLU:HG3	54:CG:130:LYS:H	1.61	0.65
10:CJ:38:GLY:O	10:CJ:40:ILE:HD12	1.95	0.65
11:CK:92:ARG:HH22	21:CU:19:LYS:HD2	1.61	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:142:A:O2'	22:DA:143:C:C6	2.49	0.65
22:DA:503:A:N3	22:DA:505:A:H2'	2.12	0.65
22:DA:1359:A:C2	22:DA:1360:G:H1'	2.32	0.65
22:DA:1399:C:H2'	22:DA:1400:U:C6	2.32	0.65
22:DA:2058:A:N6	22:DA:2059:A:N6	2.45	0.65
22:DA:2617:U:H2'	22:DA:2618:G:H5'	1.78	0.65
57:DB:17:C:O2'	57:DB:18:G:H5'	1.97	0.65
30:DI:51:GLY:O	30:DI:52:LEU:HB2	1.95	0.65
43:DV:16:ALA:HA	43:DV:19:ARG:CZ	2.27	0.65
1:AA:210:C:H4'	1:AA:211:G:N2	2.12	0.65
22:BA:26:G:H1'	22:BA:514:A:N6	2.11	0.65
22:BA:90:U:H2'	22:BA:91:A:C8	2.32	0.65
62:BA:3286:HOH:O	26:BE:98:LYS:HE2	1.96	0.65
39:BR:68:ARG:HH11	39:BR:90:ARG:HH11	1.45	0.65
49:B1:49:LYS:O	49:B1:50:GLU:HB3	1.96	0.65
53:CA:113:G:H21	53:CA:353:A:H8	1.43	0.65
53:CA:1514:G:H2'	53:CA:1515:G:C8	2.31	0.65
12:CL:19:ASN:H	12:CL:19:ASN:HD22	1.43	0.65
22:DA:192:C:OP1	62:DA:3720:HOH:O	2.14	0.65
22:DA:922:C:H2'	22:DA:923:G:H8	1.62	0.65
22:DA:1590:A:H2'	22:DA:1591:A:H8	1.62	0.65
44:DW:18:LYS:HD3	44:DW:19:ARG:HG2	1.79	0.65
1:AA:76:G:H2'	1:AA:76:G:N3	2.13	0.64
5:AE:155:LYS:HA	5:AE:158:LYS:HZ2	1.61	0.64
8:AH:17:GLN:HE21	8:AH:71:VAL:CG2	2.09	0.64
8:AH:21:LYS:HE2	8:AH:21:LYS:HA	1.78	0.64
22:BA:725:G:C6	22:BA:726:G:N1	2.65	0.64
22:BA:1009:A:P	31:BJ:39:LYS:HZ1	2.20	0.64
22:BA:2577:A:H5"	22:BA:2578:G:C5'	2.27	0.64
27:BF:134:GLN:H	27:BF:134:GLN:NE2	1.95	0.64
28:BG:11:PRO:O	28:BG:14:VAL:HG22	1.97	0.64
28:BG:15:ASP:CG	28:BG:16:VAL:N	2.50	0.64
29:BH:12:LEU:HD12	29:BH:19:VAL:HG11	1.78	0.64
32:BK:21:CYS:SG	32:BK:39:ILE:HD11	2.36	0.64
34:BM:21:ALA:HA	34:BM:97:GLN:HG2	1.79	0.64
45:BX:52:ALA:O	45:BX:53:LYS:CB	2.42	0.64
53:CA:1134:G:C6	53:CA:1135:U:H1'	2.31	0.64
53:CA:1303:C:H2'	53:CA:1303:C:O2	1.97	0.64
11:CK:96:ILE:HG21	11:CK:109:ILE:HD11	1.79	0.64
55:CM:13:HIS:HB3	55:CM:16:ILE:HD13	1.80	0.64
17:CQ:46:HIS:NE2	17:CQ:48:GLU:HG2	2.12	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:36:G:C6	22:DA:445:C:N4	2.65	0.64
22:DA:1737:G:H5'	22:DA:1738:G:OP2	1.96	0.64
22:DA:2147:A:OP1	22:DA:2147:A:H4'	1.96	0.64
28:DG:72:ASN:O	28:DG:76:ILE:HG12	1.98	0.64
42:DU:3:LYS:HG2	42:DU:84:PHE:CZ	2.30	0.64
12:AL:33:CYS:HB3	12:AL:54:VAL:HG22	1.80	0.64
22:BA:372:G:O2'	22:BA:400:G:O6	2.10	0.64
22:BA:587:C:H42	33:BL:33:ARG:HD3	1.63	0.64
22:BA:903:C:H2'	22:BA:904:G:C8	2.28	0.64
22:BA:1278:C:H2'	22:BA:1279:G:H8	1.61	0.64
22:BA:2355:G:H4'	44:BW:20:LEU:HD13	1.78	0.64
22:BA:2478:A:H5'	52:B4:32:LYS:HD3	1.79	0.64
31:BJ:130:HIS:CD2	31:BJ:132:HIS:H	2.14	0.64
53:CA:263:A:OP1	20:CT:73:ARG:NH1	2.27	0.64
53:CA:971:G:H5"	53:CA:972:C:H5"	1.79	0.64
12:CL:19:ASN:H	12:CL:19:ASN:ND2	1.95	0.64
17:CQ:3:LYS:HZ3	17:CQ:6:THR:HG21	1.60	0.64
22:DA:279:A:N6	22:DA:361:G:O2'	2.30	0.64
22:DA:1338:G:H2'	22:DA:1339:G:H5'	1.79	0.64
22:DA:1440:U:O2'	22:DA:1441:G:H5'	1.98	0.64
22:DA:1706:C:H4'	22:DA:1707:G:OP2	1.96	0.64
22:DA:2226:C:H2'	22:DA:2227:A:O4'	1.98	0.64
1:AA:921:U:O2	5:AE:23:THR:HB	1.97	0.64
1:AA:1251:A:H2'	1:AA:1252:A:C8	2.33	0.64
4:AD:106:PHE:CG	4:AD:144:ILE:HD11	2.32	0.64
14:AN:12:ARG:HG2	14:AN:53:ASP:HB3	1.79	0.64
23:BB:28:C:O2'	23:BB:29:A:H5'	1.96	0.64
32:BK:116:ILE:HD12	32:BK:117:SER:N	2.11	0.64
34:BM:77:PRO:HD2	34:BM:80:VAL:HG11	1.79	0.64
40:BS:88:ARG:HH21	40:BS:88:ARG:CG	2.10	0.64
41:BT:39:THR:CG2	41:BT:41:ALA:HB3	2.26	0.64
41:BT:49:LYS:HB2	41:BT:50:LEU:HD12	1.78	0.64
53:CA:1072:G:H2'	53:CA:1073:U:C6	2.32	0.64
53:CA:1520:C:H2'	53:CA:1521:C:H6	1.60	0.64
22:DA:1241:A:N3	22:DA:1241:A:H5'	2.12	0.64
22:DA:1510:G:O2'	22:DA:1511:G:O4'	2.16	0.64
22:DA:2461:A:H1'	22:DA:2492:U:N3	2.12	0.64
57:DB:16:G:O6	57:DB:69:G:C5	2.51	0.64
57:DB:57:A:C6	58:DF:25:MET:HG2	2.33	0.64
26:DE:110:SER:O	26:DE:113:VAL:HG12	1.97	0.64
58:DF:5:ASP:C	58:DF:7:TYR:H	2.01	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:133:ALA:O	2:AB:137:THR:HG23	1.97	0.64
4:AD:129:VAL:HG13	4:AD:131:ILE:HD12	1.80	0.64
22:BA:2520:C:C6	22:BA:2567:G:H1'	2.33	0.64
25:BD:12:THR:CG2	25:BD:13:ARG:N	2.60	0.64
25:BD:106:LYS:H	25:BD:106:LYS:HD2	1.60	0.64
37:BP:33:GLU:HA	37:BP:38:ARG:HH11	1.61	0.64
53:CA:961:U:O4	53:CA:983:A:N6	2.30	0.64
53:CA:1215:G:HO2'	53:CA:1216:A:H8	1.42	0.64
9:CI:71:ILE:CD1	9:CI:72:SER:H	2.11	0.64
56:CP:48:GLU:HG3	56:CP:51:ARG:HH21	1.62	0.64
22:DA:2298:A:O2'	22:DA:2299:U:O4'	2.16	0.64
57:DB:5:U:H2'	57:DB:6:G:H8	1.60	0.64
30:DI:76:ALA:HB2	30:DI:131:THR:HB	1.80	0.64
31:DJ:65:THR:O	31:DJ:68:LYS:NZ	2.27	0.64
32:DK:13:ASN:H	32:DK:13:ASN:HD22	1.44	0.64
34:DM:35:ALA:HB3	34:DM:99:GLY:H	1.62	0.64
36:DO:11:ALA:HB2	36:DO:96:GLY:N	2.13	0.64
42:DU:58:VAL:HG12	42:DU:60:LYS:H	1.61	0.64
1:AA:72:A:H61	1:AA:99:C:H1'	1.61	0.64
7:AG:30:MET:HG2	7:AG:31:VAL:N	2.12	0.64
8:AH:88:LYS:HG3	8:AH:89:ASP:N	2.12	0.64
19:AS:41:PRO:O	19:AS:44:ILE:HG13	1.97	0.64
22:BA:2282:G:H4'	22:BA:2389:G:O2'	1.98	0.64
24:BC:61:TYR:HD2	24:BC:85:ASN:HD22	1.44	0.64
33:BL:87:GLY:O	33:BL:89:VAL:N	2.30	0.64
35:BN:38:LEU:HB3	35:BN:39:PRO:HD3	1.77	0.64
47:BZ:13:ILE:HG22	47:BZ:14:GLY:N	2.12	0.64
8:CH:68:LYS:HD3	8:CH:69:ALA:H	1.60	0.64
22:DA:332:A:C5	22:DA:335:C:N4	2.66	0.64
22:DA:507:A:H2'	22:DA:507:A:OP2	1.97	0.64
22:DA:1275:A:N3	22:DA:1275:A:H2'	2.12	0.64
24:DC:68:ARG:HH12	24:DC:115:ILE:CD1	2.10	0.64
26:DE:111:GLU:HA	26:DE:114:ARG:HE	1.63	0.64
58:DF:65:LEU:HD23	58:DF:65:LEU:H	1.63	0.64
35:DN:2:ARG:HG2	35:DN:5:LYS:HD3	1.80	0.64
46:DY:4:LYS:HD3	46:DY:4:LYS:H	1.62	0.64
47:DZ:20:LYS:O	47:DZ:24:LEU:HD13	1.97	0.64
51:D3:6:VAL:HG12	51:D3:9:ALA:H	1.62	0.64
1:AA:204:G:H1'	1:AA:465:A:C2	2.33	0.64
1:AA:1279:G:H1'	1:AA:1282:C:H42	1.61	0.64
1:AA:1452:C:H5'	1:AA:1453:G:C5	2.33	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:22:ILE:HD11	11:AK:85:VAL:HG13	1.78	0.64
15:AO:23:SER:HB3	15:AO:26:VAL:HG23	1.78	0.64
22:BA:1149:G:O2'	22:BA:1150:C:H5'	1.97	0.64
22:BA:2276:G:OP2	34:BM:83:GLY:O	2.16	0.64
22:BA:2484:G:OP1	34:BM:44:ARG:HD3	1.97	0.64
25:BD:90:PHE:HB2	25:BD:92:VAL:HG23	1.79	0.64
31:BJ:6:ALA:HB2	31:BJ:45:THR:HG21	1.78	0.64
33:BL:55:MET:HE2	33:BL:56:PRO:CD	2.28	0.64
38:BQ:114:ALA:C	38:BQ:116:LEU:H	1.99	0.64
46:BY:5:GLU:O	46:BY:8:GLU:HB2	1.97	0.64
51:B3:53:ASP:HA	51:B3:56:LEU:HD23	1.78	0.64
53:CA:198:G:O6	53:CA:220:G:C4	2.51	0.64
53:CA:844:G:O2'	53:CA:845:A:H5"	1.98	0.64
2:CB:47:PRO:HA	2:CB:50:ASN:HB2	1.80	0.64
4:CD:25:ARG:NH1	4:CD:25:ARG:HG2	2.13	0.64
19:CS:54:ARG:HG2	19:CS:55:GLN:H	1.62	0.64
22:DA:454:A:C4'	22:DA:455:C:OP2	2.29	0.64
22:DA:675:A:OP1	26:DE:60:TRP:CZ2	2.49	0.64
22:DA:1682:G:H2'	22:DA:1683:U:C5	2.32	0.64
22:DA:1954:G:O2'	22:DA:1955:U:P	2.56	0.64
22:DA:2822:G:H5"	25:DD:164:GLN:NE2	2.11	0.64
24:DC:140:VAL:HG22	24:DC:161:VAL:O	1.98	0.64
25:DD:33:ARG:HH21	25:DD:51:THR:HG22	1.63	0.64
32:DK:10:VAL:HG13	32:DK:12:ASP:OD1	1.96	0.64
35:DN:97:ILE:HD11	35:DN:99:LYS:NZ	2.13	0.64
5:AE:11:GLN:HA	5:AE:11:GLN:NE2	2.09	0.64
12:AL:6:LEU:HD23	17:AQ:33:TYR:CE2	2.32	0.64
22:BA:2390:U:OP2	51:B3:34:LYS:HE2	1.98	0.64
26:BE:44:ARG:HG3	26:BE:44:ARG:NH2	2.03	0.64
27:BF:40:GLY:HA2	27:BF:84:ILE:HD11	1.77	0.64
38:BQ:91:ARG:CZ	39:BR:11:GLN:H	2.11	0.64
51:B3:54:LEU:O	51:B3:58:ILE:HG13	1.97	0.64
53:CA:876:C:H1'	8:CH:11:THR:HG21	1.80	0.64
53:CA:1105:A:H2'	53:CA:1106:G:C8	2.31	0.64
53:CA:1219:A:OP1	14:CN:52:ARG:HG3	1.98	0.64
53:CA:1409:C:H5'	22:DA:1916:A:N1	2.12	0.64
17:CQ:29:LYS:HE2	17:CQ:36:PHE:CE1	2.33	0.64
22:DA:125:A:H5"	50:D2:19:ARG:HD3	1.79	0.64
22:DA:668:A:C5	22:DA:670:A:N7	2.65	0.64
22:DA:1054:A:C4	22:DA:1055:G:H1'	2.32	0.64
22:DA:2348:U:H2'	22:DA:2349:G:H8	1.62	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:89:GLU:HG2	25:DD:94:GLN:HE22	1.62	0.64
34:DM:34:LYS:HD3	34:DM:131:VAL:HG21	1.80	0.64
35:DN:37:THR:HB	35:DN:40:LYS:HB2	1.80	0.64
41:DT:67:VAL:HB	41:DT:76:ARG:HG3	1.80	0.64
1:AA:666:G:H5'	1:AA:726:C:H1'	1.78	0.64
1:AA:715:A:H2'	1:AA:716:A:C8	2.33	0.64
1:AA:1256:A:H5"	3:AC:26:LYS:HE2	1.79	0.64
22:BA:587:C:N3	33:BL:33:ARG:NH2	2.43	0.64
22:BA:904:G:C2	22:BA:905:A:C8	2.86	0.64
22:BA:1179:G:H3'	22:BA:1180:U:C4'	2.14	0.64
22:BA:1248:G:OP2	26:BE:44:ARG:NH1	2.31	0.64
22:BA:2211:A:O2'	22:BA:2212:A:OP1	2.16	0.64
22:BA:2804:U:H2'	22:BA:2805:C:C6	2.33	0.64
62:BA:3241:HOH:O	26:BE:81:GLY:HA2	1.97	0.64
38:BQ:4:LYS:NZ	38:BQ:7:VAL:HG13	2.12	0.64
53:CA:205:A:C5	53:CA:206:C:N4	2.65	0.64
53:CA:251:G:H4'	53:CA:252:U:C5'	2.28	0.64
53:CA:1336:C:H1'	53:CA:1337:G:C2	2.33	0.64
21:CU:39:LYS:N	21:CU:40:PRO:CD	2.61	0.64
22:DA:67:U:H2'	22:DA:68:G:C8	2.30	0.64
22:DA:150:U:H2'	22:DA:151:C:C6	2.32	0.64
22:DA:172:A:H2'	22:DA:173:A:H8	1.61	0.64
26:DE:119:ILE:O	26:DE:119:ILE:HG13	1.97	0.64
38:DQ:78:PHE:CZ	38:DQ:82:LEU:HD11	2.33	0.64
1:AA:843:U:H2'	1:AA:844:G:H5'	1.80	0.64
1:AA:1016:A:C8	1:AA:1017:U:H1'	2.33	0.64
5:AE:109:ALA:O	5:AE:110:MET:HG2	1.97	0.64
12:AL:85:ARG:CZ	12:AL:87:LYS:HB3	2.27	0.64
20:AT:53:MET:HE1	20:AT:57:VAL:HG21	1.79	0.64
22:BA:170:U:H2'	22:BA:171:U:H6	1.63	0.64
22:BA:923:G:N3	44:BW:23:LYS:CE	2.59	0.64
22:BA:996:A:O2'	38:BQ:91:ARG:HG3	1.98	0.64
22:BA:2136:G:O2'	22:BA:2137:U:C6	2.51	0.64
22:BA:2220:U:H2'	22:BA:2221:G:H8	1.62	0.64
22:BA:2233:U:H2'	22:BA:2234:G:C8	2.33	0.64
31:BJ:74:TYR:HB2	31:BJ:87:ALA:O	1.98	0.64
34:BM:43:ALA:CA	34:BM:46:ILE:HG13	2.25	0.64
41:BT:2:ILE:HG13	41:BT:3:ARG:NH2	2.13	0.64
53:CA:931:C:H2'	53:CA:932:C:H6	1.63	0.64
2:CB:56:LEU:HD22	2:CB:59:ILE:HD11	1.80	0.64
54:CG:107:ALA:O	54:CG:118:ARG:HB3	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CQ:29:LYS:HB2	17:CQ:36:PHE:CE1	2.33	0.64
21:CU:36:PHE:HB3	21:CU:40:PRO:HD3	1.78	0.64
22:DA:298:G:H2'	22:DA:339:U:O4	1.97	0.64
22:DA:992:C:H4'	39:DR:74:ILE:HD13	1.80	0.64
22:DA:1387:A:C5'	22:DA:1469:A:H1'	2.26	0.64
34:DM:61:GLY:HA2	34:DM:107:GLY:HA3	1.79	0.64
1:AA:182:A:N3	1:AA:184:G:C8	2.66	0.64
1:AA:198:G:C2'	1:AA:199:A:H8	2.10	0.64
1:AA:1285:A:H5'	1:AA:1286:U:O4	1.98	0.64
3:AC:15:LYS:HG3	3:AC:16:PRO:HD2	1.80	0.64
3:AC:52:SER:HB2	3:AC:111:ASP:OD2	1.98	0.64
5:AE:100:GLU:HB3	5:AE:121:ASN:HA	1.80	0.64
5:AE:114:LEU:HG	5:AE:119:VAL:CG2	2.28	0.64
7:AG:68:VAL:HB	7:AG:99:ALA:HB1	1.79	0.64
9:AI:112:ARG:HH22	10:AJ:64:GLN:HE22	1.46	0.64
22:BA:2353:G:H1'	44:BW:30:VAL:CG1	2.28	0.64
27:BF:39:VAL:HG11	27:BF:49:LEU:HD13	1.79	0.64
53:CA:87:C:O2'	53:CA:88:U:C4'	2.46	0.64
53:CA:532:A:C8	3:CC:192:TYR:HE2	2.15	0.64
53:CA:989:U:H2'	53:CA:990:C:H5'	1.79	0.64
4:CD:89:LEU:HD23	4:CD:199:ILE:HD11	1.80	0.64
22:DA:83:A:H61	22:DA:101:A:H5'	1.62	0.64
22:DA:185:G:C6	22:DA:212:G:C2	2.86	0.64
22:DA:301:G:C6	22:DA:302:C:N4	2.66	0.64
22:DA:991:C:OP2	22:DA:1186:G:OP2	2.15	0.64
22:DA:1522:A:H1'	22:DA:1524:G:C4	2.33	0.64
22:DA:1611:C:HO2'	22:DA:1612:C:H6	1.40	0.64
32:DK:21:CYS:SG	32:DK:39:ILE:CG2	2.86	0.64
32:DK:76:VAL:O	37:DP:71:ARG:HG3	1.98	0.64
1:AA:467:U:O2'	1:AA:468:A:O5'	2.11	0.63
1:AA:858:G:O2'	1:AA:859:G:H5'	1.98	0.63
1:AA:1088:G:H21	1:AA:1167:A:H62	1.44	0.63
2:AB:89:PHE:CZ	2:AB:153:MET:HB2	2.33	0.63
3:AC:76:ILE:HD11	3:AC:102:ILE:HG12	1.80	0.63
3:AC:146:LYS:HB2	3:AC:202:PHE:CD2	2.32	0.63
5:AE:114:LEU:HD21	5:AE:122:VAL:CG2	2.28	0.63
16:AP:4:ILE:HG12	16:AP:21:VAL:HG22	1.79	0.63
18:AR:22:TYR:CZ	18:AR:23:LYS:HE3	2.33	0.63
21:AU:13:VAL:HG13	21:AU:15:LEU:HG	1.80	0.63
22:BA:995:C:H5'	22:BA:995:C:H6	1.62	0.63
22:BA:1420:A:C8	22:BA:2211:A:N6	2.66	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2339:C:H2'	22:BA:2340:A:C8	2.33	0.63
22:BA:2555:U:C5	22:BA:2556:C:C2	2.86	0.63
24:BC:12:ARG:HH11	24:BC:12:ARG:HG2	1.62	0.63
24:BC:13:ARG:HG2	24:BC:14:HIS:CD2	2.33	0.63
26:BE:119:ILE:HD13	26:BE:187:VAL:HA	1.80	0.63
34:BM:73:ILE:HG21	34:BM:91:TYR:CE2	2.33	0.63
35:BN:73:ASN:HA	35:BN:76:VAL:HG12	1.80	0.63
37:BP:51:ASN:C	37:BP:52:ARG:HG2	2.18	0.63
39:BR:97:LYS:O	39:BR:98:ILE:HB	1.98	0.63
53:CA:801:U:H2'	53:CA:802:A:C8	2.33	0.63
53:CA:1052:U:H5"	53:CA:1053:G:OP2	1.98	0.63
53:CA:1071:C:H2'	53:CA:1072:G:C8	2.33	0.63
53:CA:1147:C:O2'	53:CA:1148:U:H6	1.80	0.63
53:CA:1349:A:OP1	9:CI:121:ARG:HB2	1.97	0.63
9:CI:48:ARG:HH21	9:CI:57:VAL:HG21	1.62	0.63
10:CJ:5:ARG:HH21	10:CJ:77:VAL:HG13	1.61	0.63
10:CJ:80:THR:O	10:CJ:84:VAL:HG22	1.99	0.63
12:CL:72:ASN:HD22	12:CL:72:ASN:H	1.45	0.63
14:CN:33:VAL:HG22	14:CN:40:ARG:HH21	1.61	0.63
14:CN:62:ARG:HE	14:CN:69:PRO:HA	1.63	0.63
22:DA:684:G:H5'	50:D2:16:HIS:CE1	2.32	0.63
22:DA:876:C:C2	22:DA:877:A:N7	2.66	0.63
22:DA:1308:A:H2'	22:DA:1309:G:O4'	1.98	0.63
22:DA:1352:U:C5	22:DA:1377:G:C6	2.86	0.63
22:DA:2230:G:H2'	22:DA:2231:U:H6	1.63	0.63
28:DG:10:VAL:HB	28:DG:14:VAL:HG21	1.80	0.63
28:DG:163:TYR:N	28:DG:163:TYR:CD2	2.65	0.63
31:DJ:30:THR:HG23	31:DJ:31:GLU:N	2.13	0.63
35:DN:56:LYS:HD3	35:DN:88:ALA:HA	1.79	0.63
41:DT:28:ASN:HB2	41:DT:87:LEU:HB3	1.79	0.63
42:DU:10:VAL:HG12	42:DU:71:ILE:HA	1.79	0.63
1:AA:186:C:O4'	20:AT:75:LYS:HD2	1.97	0.63
1:AA:344:A:O3'	37:BP:36:LYS:HE3	1.98	0.63
1:AA:842:U:H3'	1:AA:843:U:C5'	2.28	0.63
5:AE:80:LEU:HD12	5:AE:146:MET:CE	2.28	0.63
10:AJ:88:MET:HB3	10:AJ:89:ARG:NH1	2.13	0.63
12:AL:81:ILE:HD11	12:AL:94:TYR:CG	2.34	0.63
22:BA:675:A:OP1	26:BE:58:LYS:HE2	1.97	0.63
22:BA:1842:G:H2'	22:BA:1843:C:C6	2.34	0.63
22:BA:2355:G:H4'	44:BW:20:LEU:CD1	2.28	0.63
25:BD:69:ALA:HA	25:BD:73:VAL:HG13	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BJ:21:THR:O	31:BJ:23:LYS:N	2.32	0.63
43:BV:80:HIS:CD2	43:BV:83:LYS:N	2.46	0.63
49:B1:33:LEU:H	49:B1:51:ALA:HB3	1.62	0.63
53:CA:313:A:H2'	53:CA:314:C:C6	2.33	0.63
53:CA:996:A:H2'	53:CA:997:U:C6	2.33	0.63
3:CC:180:ASP:OD2	3:CC:203:LYS:HB2	1.99	0.63
19:CS:35:ARG:HH21	19:CS:51:HIS:HD2	1.44	0.63
21:CU:35:GLU:O	21:CU:36:PHE:CD2	2.52	0.63
22:DA:228:C:H5'	22:DA:229:C:H5	1.63	0.63
22:DA:586:A:O2'	22:DA:671:C:O2	2.16	0.63
22:DA:1024:G:C3'	22:DA:1025:G:H5"	2.26	0.63
22:DA:1607:C:H4'	22:DA:1608:A:H8	1.63	0.63
22:DA:1813:G:N3	24:DC:49:THR:HB	2.14	0.63
28:DG:44:HIS:HA	28:DG:49:LEU:HA	1.80	0.63
29:DH:32:PRO:HA	45:DX:38:TRP:HD1	1.62	0.63
41:DT:29:THR:HB	41:DT:87:LEU:N	2.12	0.63
41:DT:43:ILE:HG21	41:DT:58:VAL:HG11	1.79	0.63
49:D1:5:ARG:HD2	49:D1:25:ASN:HB2	1.79	0.63
1:AA:662:U:H2'	1:AA:663:A:C8	2.33	0.63
4:AD:31:CYS:O	4:AD:32:LYS:HB2	1.97	0.63
8:AH:85:TYR:CD2	8:AH:123:GLU:HB2	2.34	0.63
11:AK:124:LYS:CE	21:AU:33:ARG:HH21	2.12	0.63
14:AN:90:GLY:O	14:AN:92:ILE:N	2.30	0.63
15:AO:18:ALA:O	15:AO:19:ASN:HB2	1.97	0.63
22:BA:2292:U:O2'	22:BA:2293:G:H5'	1.98	0.63
22:BA:2444:G:OP2	26:BE:63:LYS:HE2	1.98	0.63
25:BD:66:GLY:O	25:BD:69:ALA:HB3	1.98	0.63
29:BH:130:VAL:HG23	29:BH:131:SER:H	1.63	0.63
36:BO:3:LYS:HG3	36:BO:4:LYS:H	1.63	0.63
36:BO:59:ALA:HA	36:BO:62:LEU:HD12	1.80	0.63
38:BQ:10:ARG:HB2	38:BQ:10:ARG:HH11	1.64	0.63
40:BS:73:LYS:HE3	40:BS:74:ILE:H	1.63	0.63
47:BZ:29:ARG:HH21	47:BZ:29:ARG:CG	2.08	0.63
53:CA:140:U:H2'	53:CA:141:G:O4'	1.97	0.63
53:CA:961:U:O4	53:CA:983:A:C6	2.52	0.63
53:CA:1318:A:O2'	19:CS:36:ARG:HD3	1.98	0.63
2:CB:76:SER:O	2:CB:79:VAL:HG12	1.98	0.63
54:CG:22:LEU:HA	54:CG:25:PHE:CB	2.24	0.63
22:DA:963:U:HO2'	22:DA:964:C:H6	1.45	0.63
22:DA:1197:G:H5'	22:DA:1227:G:O2'	1.97	0.63
22:DA:1744:A:H3'	22:DA:1745:A:H8	1.62	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1816:C:H2'	24:DC:61:TYR:CE2	2.32	0.63
22:DA:2141:G:H2'	22:DA:2142:A:C8	2.33	0.63
28:DG:93:TYR:CD2	28:DG:93:TYR:N	2.64	0.63
32:DK:38:ILE:HG12	32:DK:61:VAL:HG12	1.80	0.63
34:DM:38:ARG:O	34:DM:126:ILE:HG21	1.98	0.63
43:DV:80:HIS:CD2	43:DV:83:LYS:N	2.66	0.63
1:AA:214:C:O2'	1:AA:215:C:C6	2.37	0.63
1:AA:737:C:H2'	1:AA:738:C:C6	2.34	0.63
1:AA:1454:G:H2'	1:AA:1455:G:H8	1.63	0.63
4:AD:166:LYS:HB3	4:AD:166:LYS:NZ	2.14	0.63
6:AF:42:TRP:HZ2	6:AF:61:LEU:HD22	1.61	0.63
8:AH:35:ILE:HD11	8:AH:125:ILE:HG21	1.80	0.63
22:BA:528:A:C2	22:BA:2043:C:H4'	2.33	0.63
22:BA:1150:C:O2'	22:BA:1151:A:O5'	2.15	0.63
22:BA:1199:U:H2'	22:BA:1200:C:C6	2.33	0.63
22:BA:2291:U:H2'	22:BA:2292:U:C6	2.34	0.63
28:BG:104:LEU:HB2	28:BG:112:VAL:HG22	1.80	0.63
31:BJ:54:ILE:C	31:BJ:54:ILE:HD12	2.19	0.63
37:BP:24:THR:HG22	37:BP:87:ARG:H	1.63	0.63
40:BS:34:ASP:OD1	48:B0:36:LYS:HE2	1.99	0.63
40:BS:71:VAL:HG22	40:BS:71:VAL:O	1.97	0.63
40:BS:73:LYS:HA	40:BS:73:LYS:CE	2.27	0.63
53:CA:403:C:O2'	53:CA:404:G:H5'	1.98	0.63
53:CA:1145:A:C4'	53:CA:1146:A:OP1	2.39	0.63
53:CA:1366:C:O2'	53:CA:1367:C:H6	1.82	0.63
22:DA:1023:U:H5'	22:DA:1023:U:C6	2.34	0.63
22:DA:1286:A:C4	22:DA:1289:C:N4	2.66	0.63
22:DA:1515:A:H4'	22:DA:1556:C:O2'	1.99	0.63
22:DA:2104:C:O2	22:DA:2105:U:H5	1.82	0.63
22:DA:2142:A:H2'	22:DA:2143:C:O3'	1.97	0.63
22:DA:2212:A:C8	22:DA:2214:C:N4	2.67	0.63
25:DD:68:PHE:HB3	25:DD:73:VAL:HA	1.80	0.63
26:DE:29:HIS:HA	26:DE:32:VAL:HG22	1.81	0.63
48:D0:28:SER:HB3	48:D0:39:ARG:NE	2.14	0.63
1:AA:1331:G:C2'	1:AA:1332:A:OP2	2.46	0.63
2:AB:67:LEU:HD22	2:AB:69:VAL:HG23	1.79	0.63
4:AD:147:LYS:HE2	4:AD:147:LYS:H	1.63	0.63
8:AH:48:PHE:O	8:AH:49:LYS:HB2	1.97	0.63
9:AI:88:GLU:HG3	9:AI:89:TYR:H	1.62	0.63
22:BA:672:C:OP2	33:BL:42:SER:OG	2.16	0.63
22:BA:1867:G:C2'	22:BA:1868:C:H5'	2.29	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2703:C:H2'	22:BA:2704:C:C6	2.34	0.63
24:BC:117:SER:HB2	24:BC:128:THR:HB	1.80	0.63
25:BD:111:GLY:O	25:BD:169:ARG:O	2.16	0.63
25:BD:151:THR:HG22	25:BD:152:PRO:CD	2.28	0.63
30:BI:71:LYS:HG2	30:BI:72:THR:H	1.63	0.63
32:BK:18:ARG:N	32:BK:45:GLU:HB2	2.12	0.63
41:BT:43:ILE:O	41:BT:47:VAL:HG23	1.99	0.63
53:CA:93:U:O5'	53:CA:93:U:H6	1.82	0.63
53:CA:451:A:H61	53:CA:481:G:H5'	1.63	0.63
53:CA:1183:U:C3'	53:CA:1184:G:H5"	2.17	0.63
3:CC:29:ALA:HB1	14:CN:64:ARG:NH1	2.13	0.63
11:CK:63:GLN:HB2	11:CK:98:ALA:HB2	1.79	0.63
12:CL:42:LYS:HG2	12:CL:43:LYS:N	2.12	0.63
22:DA:386:G:H4'	22:DA:387:U:OP2	1.97	0.63
22:DA:749:A:C5	22:DA:750:A:N7	2.66	0.63
22:DA:2882:A:H4'	35:DN:97:ILE:HG12	1.79	0.63
34:DM:34:LYS:HB2	34:DM:131:VAL:CG2	2.29	0.63
39:DR:4:VAL:HG23	39:DR:39:LEU:HG	1.78	0.63
9:AI:11:ARG:HA	9:AI:105:ARG:NH1	2.13	0.63
22:BA:1238:G:C2'	22:BA:1239:G:H5'	2.28	0.63
22:BA:1605:C:H3'	22:BA:1606:C:H5"	1.81	0.63
32:BK:57:VAL:C	32:BK:58:LEU:HD23	2.18	0.63
53:CA:808:C:OP1	15:CO:47:LYS:HE2	1.98	0.63
53:CA:1183:U:O2'	53:CA:1184:G:OP1	2.17	0.63
3:CC:119:ILE:O	3:CC:123:LEU:HB2	1.99	0.63
54:CG:10:LYS:HE3	54:CG:10:LYS:N	2.14	0.63
11:CK:27:ASN:N	11:CK:27:ASN:ND2	2.46	0.63
22:DA:279:A:C2	22:DA:362:A:H4'	2.32	0.63
22:DA:533:G:H21	38:DQ:44:TYR:HD1	1.47	0.63
22:DA:2060:A:O2'	62:DA:3512:HOH:O	2.16	0.63
24:DC:166:ARG:HG3	24:DC:166:ARG:O	1.97	0.63
25:DD:89:GLU:HG2	25:DD:94:GLN:NE2	2.14	0.63
58:DF:177:ARG:CZ	58:DF:178:LYS:HB3	2.28	0.63
33:DL:73:ILE:O	33:DL:105:ILE:HG23	1.99	0.63
47:DZ:16:LEU:HD22	47:DZ:16:LEU:N	2.11	0.63
1:AA:261:U:OP2	20:AT:73:ARG:NH2	2.32	0.63
24:BC:230:PRO:HD2	24:BC:246:PRO:HA	1.79	0.63
26:BE:150:THR:HG21	26:BE:153:LEU:HA	1.80	0.63
31:BJ:13:ARG:O	31:BJ:14:ASP:HB2	1.99	0.63
39:BR:28:ALA:O	39:BR:63:VAL:HG21	1.98	0.63
48:B0:43:THR:HG23	48:B0:47:TYR:O	1.99	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:177:G:O2'	53:CA:1448:C:H4'	1.98	0.63
53:CA:328:C:H2'	53:CA:328:C:O2	1.98	0.63
17:CQ:19:SER:HB3	17:CQ:70:LYS:HZ2	1.64	0.63
22:DA:84:A:C4	22:DA:103:A:N6	2.66	0.63
22:DA:118:A:C8	22:DA:119:A:C8	2.86	0.63
22:DA:240:C:OP2	22:DA:241:A:H3'	1.98	0.63
22:DA:620:G:H8	22:DA:622:G:O6	1.81	0.63
22:DA:738:G:H2'	22:DA:739:A:C8	2.34	0.63
22:DA:975:A:O2'	22:DA:976:G:C8	2.40	0.63
22:DA:2261:C:C2	22:DA:2280:G:N2	2.67	0.63
22:DA:2310:C:H42	58:DF:76:PHE:HE1	1.46	0.63
25:DD:110:THR:HA	25:DD:171:THR:HA	1.81	0.63
26:DE:5:LEU:HA	26:DE:120:VAL:HG13	1.81	0.63
58:DF:48:LEU:HG	58:DF:49:LEU:HD22	1.81	0.63
29:DH:116:ARG:O	29:DH:117:LEU:HG	1.99	0.63
31:DJ:2:LYS:HB2	31:DJ:2:LYS:NZ	2.14	0.63
32:DK:61:VAL:HG13	32:DK:87:LEU:CD2	2.29	0.63
42:DU:47:PRO:HB3	42:DU:54:PRO:HG2	1.80	0.63
43:DV:44:HIS:NE2	43:DV:85:LYS:HB2	2.14	0.63
45:DX:52:ALA:O	45:DX:53:LYS:HB3	1.97	0.63
1:AA:722:G:H5"	1:AA:722:G:N3	2.13	0.63
1:AA:1533:C:H3'	1:AA:1534:A:H5"	1.79	0.63
2:AB:13:VAL:HG22	2:AB:207:ARG:HH22	1.64	0.63
7:AG:61:PHE:CE1	7:AG:65:LEU:HD22	2.33	0.63
12:AL:33:CYS:HA	12:AL:53:ARG:O	1.99	0.63
22:BA:31:C:O2'	22:BA:1238:G:H5'	1.99	0.63
22:BA:409:G:O2'	22:BA:410:G:H5'	1.99	0.63
38:BQ:91:ARG:HH12	39:BR:10:LYS:HB3	1.63	0.63
41:BT:38:ALA:HB1	41:BT:43:ILE:CG2	2.29	0.63
53:CA:1268:G:N2	53:CA:1327:C:H1'	2.14	0.63
53:CA:1301:U:H2'	53:CA:1301:U:O2	1.97	0.63
2:CB:59:ILE:HA	2:CB:62:ARG:HD3	1.81	0.63
3:CC:133:MET:HE3	3:CC:152:VAL:HG13	1.79	0.63
5:CE:129:SER:HA	62:CE:304:HOH:O	1.98	0.63
12:CL:56:LEU:HB2	12:CL:58:ASN:OD1	1.99	0.63
56:CP:75:ILE:HA	56:CP:78:VAL:HG23	1.80	0.63
22:DA:27:G:H1'	22:DA:513:A:N6	2.14	0.63
22:DA:1040:A:C2	22:DA:1116:G:N1	2.66	0.63
22:DA:1231:U:H2'	22:DA:1232:G:H8	1.64	0.63
22:DA:1265:A:H4'	22:DA:1266:G:O5'	1.98	0.63
22:DA:1345:C:C5'	22:DA:1396:U:O4	2.47	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1784:A:H4'	22:DA:1785:A:O5'	1.97	0.63
22:DA:2014:A:H5'	40:DS:94:ASP:OD2	1.98	0.63
22:DA:2336:A:N7	44:DW:40:ARG:NH2	2.47	0.63
22:DA:2345:G:H4'	22:DA:2346:A:H5"	1.79	0.63
22:DA:2822:G:C5'	25:DD:164:GLN:HE22	2.09	0.63
24:DC:94:LEU:HD13	24:DC:100:ARG:HD3	1.79	0.63
25:DD:34:VAL:HG12	25:DD:48:ILE:HD11	1.79	0.63
36:DO:30:ARG:HA	36:DO:35:ILE:HD13	1.79	0.63
39:DR:43:ASN:HD22	39:DR:44:GLY:H	1.47	0.63
50:D2:35:ARG:HG3	50:D2:42:LEU:HD21	1.80	0.63
1:AA:1447:A:H5'	1:AA:1448:C:OP2	1.99	0.63
8:AH:9:MET:HE2	8:AH:32:LYS:HG2	1.80	0.63
12:AL:72:ASN:OD1	12:AL:104:SER:HB3	1.98	0.63
22:BA:545:U:H2'	22:BA:546:U:C4'	2.28	0.63
23:BB:42:C:OP1	27:BF:63:LYS:HE2	1.99	0.63
25:BD:149:ASN:OD1	25:BD:150:GLN:N	2.30	0.63
44:BW:31:LEU:N	44:BW:31:LEU:HD23	2.14	0.63
46:BY:7:ARG:H	46:BY:60:LYS:NZ	1.97	0.63
53:CA:613:C:H2'	53:CA:614:C:H6	1.64	0.63
53:CA:801:U:H2'	53:CA:802:A:H8	1.64	0.63
53:CA:818:G:H3'	53:CA:819:A:C5'	2.29	0.63
53:CA:1296:C:O2'	53:CA:1302:C:C4	2.52	0.63
6:CF:68:GLN:O	6:CF:71:ILE:HG22	1.98	0.63
9:CI:35:GLU:HA	9:CI:39:GLY:HA3	1.80	0.63
22:DA:185:G:H2'	22:DA:186:G:C8	2.34	0.63
22:DA:240:C:P	22:DA:241:A:H3'	2.38	0.63
22:DA:2001:C:H4'	22:DA:2689:U:O2'	1.99	0.63
22:DA:2339:C:H2'	22:DA:2340:A:C8	2.33	0.63
22:DA:2683:C:O2'	37:DP:74:GLN:NE2	2.31	0.63
32:DK:21:CYS:SG	32:DK:39:ILE:HG21	2.38	0.63
33:DL:142:ILE:HG22	33:DL:144:GLU:H	1.63	0.63
43:DV:63:ILE:O	43:DV:70:ILE:HD11	1.98	0.63
52:D4:7:VAL:HG13	52:D4:8:LYS:N	2.13	0.63
1:AA:82:G:N2	1:AA:84:U:H3	1.97	0.62
1:AA:996:A:C2	1:AA:1046:A:C5'	2.81	0.62
11:AK:87:GLY:N	11:AK:113:THR:HG22	2.14	0.62
22:BA:815:C:OP1	39:BR:85:LYS:HE2	1.98	0.62
22:BA:924:G:H4'	44:BW:24:ARG:HH21	1.63	0.62
22:BA:1858:A:O2'	22:BA:1859:U:O4'	2.14	0.62
53:CA:319:G:H5'	53:CA:1468:A:H4'	1.80	0.62
53:CA:432:A:H2'	53:CA:433:G:H5'	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:547:A:H4'	53:CA:548:G:O5'	1.99	0.62
53:CA:1319:A:N6	53:CA:1323:G:C2	2.67	0.62
54:CG:32:ASP:HB2	54:CG:34:LYS:HD3	1.80	0.62
56:CP:5:ARG:HA	56:CP:71:VAL:HG11	1.81	0.62
22:DA:1917:U:H2'	22:DA:1918:A:H5'	1.79	0.62
22:DA:2337:G:H2'	22:DA:2337:G:N3	2.13	0.62
24:DC:183:VAL:HG22	24:DC:184:GLU:H	1.64	0.62
25:DD:38:LYS:HB3	25:DD:38:LYS:NZ	2.14	0.62
25:DD:113:SER:HB3	25:DD:168:GLU:H	1.64	0.62
28:DG:115:GLN:HG2	28:DG:116:LEU:N	2.13	0.62
29:DH:132:PHE:CZ	29:DH:134:VAL:HB	2.33	0.62
32:DK:54:LYS:H	32:DK:54:LYS:HD2	1.64	0.62
1:AA:340:U:H2'	1:AA:341:C:C6	2.34	0.62
1:AA:481:G:O2'	1:AA:482:A:H8	1.82	0.62
1:AA:1062:U:H2'	1:AA:1063:C:C6	2.34	0.62
1:AA:1373:G:H5"	7:AG:35:LYS:HD2	1.80	0.62
5:AE:132:PRO:HG2	5:AE:133:ILE:HD12	1.81	0.62
13:AM:106:ARG:HH21	13:AM:112:ARG:HB3	1.64	0.62
20:AT:53:MET:O	20:AT:56:ILE:HG22	2.00	0.62
22:BA:2264:C:H41	44:BW:11:ASN:ND2	1.96	0.62
28:BG:61:TRP:O	28:BG:65:GLY:N	2.24	0.62
41:BT:19:LYS:O	41:BT:23:ALA:N	2.25	0.62
47:BZ:7:THR:HG23	47:BZ:34:THR:N	2.13	0.62
53:CA:254:G:H21	17:CQ:17:GLU:HG3	1.64	0.62
53:CA:335:C:H2'	53:CA:336:A:H8	1.59	0.62
53:CA:960:U:H4'	53:CA:961:U:C5'	2.29	0.62
2:CB:146:SER:HB2	2:CB:147:LEU:HD12	1.81	0.62
17:CQ:61:ARG:HG2	17:CQ:75:VAL:CG1	2.28	0.62
22:DA:538:A:H5"	31:DJ:7:LYS:HZ3	1.64	0.62
22:DA:1734:G:H2'	22:DA:1735:A:C8	2.34	0.62
22:DA:2683:C:OP1	37:DP:55:HIS:CB	2.47	0.62
22:DA:2720:U:H5"	37:DP:52:ARG:HH21	1.64	0.62
25:DD:125:TRP:CG	25:DD:160:LYS:HB3	2.34	0.62
35:DN:35:LYS:NZ	35:DN:112:TYR:HE1	1.95	0.62
43:DV:44:HIS:CE1	43:DV:85:LYS:HD3	2.34	0.62
45:DX:6:VAL:HG22	45:DX:7:THR:HG23	1.81	0.62
1:AA:4:U:O2	1:AA:4:U:H2'	1.99	0.62
1:AA:250:A:C4'	1:AA:251:G:O5'	2.45	0.62
1:AA:546:A:P	4:AD:68:GLU:HB2	2.39	0.62
1:AA:1069:C:H4'	1:AA:1192:C:O2	1.99	0.62
5:AE:89:THR:HG22	5:AE:90:GLY:N	2.14	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:10:LEU:HD11	8:AH:126:CYS:CB	2.30	0.62
9:AI:32:ARG:HG2	9:AI:36:GLN:CB	2.28	0.62
11:AK:109:ILE:HB	21:AU:5:VAL:HG23	1.81	0.62
16:AP:22:ALA:HB2	16:AP:32:PHE:HA	1.81	0.62
22:BA:277:G:H4'	22:BA:278:A:C8	2.34	0.62
22:BA:641:U:H5"	22:BA:642:U:OP2	1.99	0.62
22:BA:1023:U:H5'	22:BA:1023:U:H6	1.63	0.62
22:BA:2272:U:H5"	22:BA:2273:A:OP1	1.99	0.62
22:BA:2611:C:C5	60:BA:3135:TEL:H352	2.34	0.62
26:BE:44:ARG:HH21	26:BE:44:ARG:CG	2.10	0.62
27:BF:107:VAL:HG11	27:BF:175:PRO:HG2	1.82	0.62
28:BG:126:THR:HG22	28:BG:127:GLN:H	1.64	0.62
29:BH:18:GLN:HE21	29:BH:18:GLN:CA	2.11	0.62
35:BN:72:ASP:OD1	35:BN:75:ILE:HG23	1.99	0.62
39:BR:49:ILE:HD12	39:BR:52:PRO:CA	2.23	0.62
53:CA:961:U:HO2'	53:CA:962:C:H6	0.70	0.62
54:CG:92:PRO:HA	54:CG:95:ARG:HB2	1.81	0.62
56:CP:71:VAL:O	56:CP:74:LEU:HB2	1.99	0.62
22:DA:481:G:HO2'	22:DA:507:A:H61	1.47	0.62
22:DA:1040:A:C2	22:DA:1116:G:C6	2.87	0.62
22:DA:1439:A:N7	22:DA:1440:U:H1'	2.15	0.62
22:DA:2755:C:O2'	22:DA:2756:U:H2'	1.99	0.62
28:DG:164:ALA:O	28:DG:165:ASP:HB2	1.99	0.62
37:DP:5:LYS:HE2	37:DP:9:GLN:HE22	1.64	0.62
38:DQ:42:GLY:O	38:DQ:45:ALA:HB3	1.98	0.62
1:AA:795:C:H5"	1:AA:796:C:OP2	1.99	0.62
15:AO:69:LEU:HD21	15:AO:76:ARG:HB2	1.82	0.62
22:BA:2239:G:H5'	24:BC:248:GLY:HA3	1.81	0.62
26:BE:111:GLU:HG2	26:BE:114:ARG:NH1	2.14	0.62
37:BP:50:ARG:CD	37:BP:51:ASN:N	2.61	0.62
44:BW:23:LYS:O	44:BW:66:VAL:HB	1.99	0.62
44:BW:23:LYS:HZ1	44:BW:24:ARG:HG3	1.64	0.62
48:B0:29:VAL:HG13	48:B0:34:GLY:O	1.98	0.62
53:CA:142:G:C2	53:CA:143:A:H1'	2.35	0.62
53:CA:1047:G:H2'	53:CA:1048:G:H5'	1.81	0.62
5:CE:148:SER:O	5:CE:151:MET:N	2.31	0.62
19:CS:46:LEU:HD23	19:CS:46:LEU:H	1.63	0.62
22:DA:118:A:H1'	22:DA:178:G:O4'	1.99	0.62
22:DA:774:G:O2'	22:DA:775:G:H8	1.82	0.62
22:DA:1055:G:H2'	22:DA:1055:G:N3	2.14	0.62
22:DA:2311:A:H3'	22:DA:2312:U:O4'	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DK:118:LEU:C	32:DK:120:PRO:HD2	2.19	0.62
38:DQ:4:LYS:NZ	38:DQ:6:GLY:HA3	2.13	0.62
43:DV:70:ILE:N	43:DV:70:ILE:HD13	2.15	0.62
1:AA:51:A:H4'	1:AA:52:C:O5'	1.99	0.62
7:AG:69:ARG:HG3	7:AG:95:ARG:HG2	1.80	0.62
8:AH:5:PRO:HB2	8:AH:32:LYS:HZ1	1.64	0.62
9:AI:7:GLY:HA3	9:AI:85:ALA:HB2	1.81	0.62
20:AT:43:LYS:NZ	20:AT:86:ALA:HA	2.15	0.62
22:BA:1682:G:C8	22:BA:1757:A:C2	2.87	0.62
22:BA:2422:C:H5'	22:BA:2423:U:OP2	1.99	0.62
35:BN:93:GLY:C	35:BN:95:THR:H	2.01	0.62
53:CA:168:G:C2'	53:CA:169:C:H5'	2.30	0.62
53:CA:649:A:H2'	53:CA:650:G:O4'	2.00	0.62
53:CA:1095:U:H2'	53:CA:1096:C:C6	2.35	0.62
53:CA:1206:G:H4'	3:CC:191:THR:O	2.00	0.62
10:CJ:15:HIS:HA	10:CJ:18:ILE:CG2	2.26	0.62
22:DA:782:A:H5'	22:DA:783:A:C2	2.34	0.62
22:DA:1255:U:H3'	22:DA:1256:G:C5'	2.29	0.62
22:DA:2718:G:OP1	37:DP:97:TYR:HD1	1.80	0.62
57:DB:38:C:O2'	57:DB:39:A:H5'	1.98	0.62
57:DB:69:G:C8	57:DB:70:C:C5	2.87	0.62
24:DC:66:PHE:HB3	24:DC:150:GLY:O	1.99	0.62
32:DK:13:ASN:HD22	32:DK:13:ASN:N	1.97	0.62
41:DT:38:ALA:HB1	41:DT:81:LYS:NZ	2.14	0.62
51:D3:15:LYS:HZ1	51:D3:19:GLY:HA2	1.63	0.62
22:BA:26:G:OP1	40:BS:80:PRO:HB3	1.99	0.62
22:BA:65:U:H2'	22:BA:66:C:H6	1.64	0.62
22:BA:693:A:O2'	22:BA:694:U:H5'	1.99	0.62
22:BA:2199:A:H3'	22:BA:2200:C:H6	1.65	0.62
22:BA:2344:U:H4'	22:BA:2345:G:OP1	1.98	0.62
22:BA:2680:U:OP1	25:BD:114:LYS:HE2	1.98	0.62
24:BC:61:TYR:HA	24:BC:85:ASN:HD21	1.65	0.62
27:BF:32:LYS:HD3	27:BF:91:ARG:NH1	2.14	0.62
28:BG:85:LYS:HA	28:BG:130:ILE:O	1.98	0.62
41:BT:39:THR:HB	41:BT:42:GLU:CB	2.25	0.62
41:BT:40:LYS:O	41:BT:44:LYS:N	2.31	0.62
44:BW:18:LYS:HA	44:BW:36:ILE:HG12	1.80	0.62
53:CA:968:A:C4	53:CA:1062:U:H4'	2.34	0.62
53:CA:1305:G:H22	53:CA:1331:G:H2'	1.64	0.62
3:CC:10:ARG:O	3:CC:15:LYS:HB2	2.00	0.62
22:DA:729:G:O2'	22:DA:1775:U:H1'	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:876:C:N4	22:DA:902:C:N3	2.46	0.62
22:DA:1048:A:N6	22:DA:1111:A:C4	2.68	0.62
22:DA:1196:C:H1'	22:DA:1226:A:C4	2.34	0.62
22:DA:1399:C:H2'	22:DA:1400:U:C5	2.34	0.62
22:DA:2756:U:H4'	22:DA:2757:A:O5'	2.00	0.62
57:DB:13:G:N2	57:DB:16:G:C4	2.67	0.62
57:DB:52:A:N6	36:DO:33:ARG:HE	1.95	0.62
29:DH:83:LYS:HE2	29:DH:149:GLU:HB3	1.81	0.62
38:DQ:60:TRP:CH2	38:DQ:93:ILE:HB	2.34	0.62
41:DT:13:ALA:O	41:DT:32:LEU:HB2	2.00	0.62
6:AF:7:VAL:HG22	6:AF:7:VAL:O	1.98	0.62
8:AH:45:ILE:HA	8:AH:63:LYS:HG3	1.81	0.62
10:AJ:19:ASP:HA	10:AJ:22:THR:HB	1.82	0.62
11:AK:109:ILE:HB	21:AU:5:VAL:CG2	2.30	0.62
22:BA:125:A:OP2	50:B2:19:ARG:NH2	2.32	0.62
22:BA:1872:A:H2'	22:BA:1873:G:O4'	1.99	0.62
29:BH:125:THR:HG23	29:BH:126:GLY:H	1.63	0.62
31:BJ:95:ARG:O	31:BJ:95:ARG:HG3	1.98	0.62
32:BK:51:LYS:HE3	32:BK:52:VAL:HG12	1.81	0.62
33:BL:14:LYS:HG3	33:BL:15:ALA:N	2.15	0.62
40:BS:66:ILE:HA	40:BS:69:LEU:HD22	1.81	0.62
52:B4:10:LEU:HD12	52:B4:33:HIS:HD2	1.61	0.62
10:CJ:51:VAL:HB	14:CN:80:ARG:HB2	1.82	0.62
12:CL:89:LEU:HB3	12:CL:92:VAL:CG2	2.30	0.62
55:CM:64:VAL:HG12	55:CM:65:GLU:HG3	1.81	0.62
22:DA:464:U:H1'	22:DA:686:U:C5	2.28	0.62
22:DA:1361:G:C2'	22:DA:1362:C:H5'	2.29	0.62
22:DA:2385:C:HO2'	22:DA:2386:A:H8	1.47	0.62
57:DB:52:A:O2'	57:DB:53:A:C8	2.52	0.62
26:DE:75:SER:O	26:DE:78:TRP:HB2	2.00	0.62
58:DF:147:ARG:O	58:DF:148:VAL:HG22	2.00	0.62
32:DK:64:ARG:HD2	32:DK:102:PRO:O	1.99	0.62
42:DU:47:PRO:HB3	42:DU:54:PRO:CG	2.29	0.62
1:AA:1282:C:H2'	1:AA:1283:U:C6	2.35	0.62
14:AN:46:LYS:HD2	19:AS:12:LEU:HD21	1.82	0.62
14:AN:51:PRO:O	14:AN:52:ARG:HB2	1.99	0.62
22:BA:1169:A:C2	22:BA:1181:U:O2	2.52	0.62
22:BA:1437:C:H2'	22:BA:1438:U:C6	2.35	0.62
22:BA:2014:A:H2'	22:BA:2015:A:C8	2.35	0.62
24:BC:165:ALA:HB3	24:BC:172:THR:HG23	1.80	0.62
33:BL:27:LEU:HD12	33:BL:27:LEU:N	2.06	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BL:93:ASN:O	33:BL:95:LEU:N	2.33	0.62
38:BQ:10:ARG:HB2	38:BQ:10:ARG:NH1	2.15	0.62
39:BR:49:ILE:CD1	39:BR:52:PRO:HA	2.22	0.62
41:BT:28:ASN:HA	41:BT:91:GLN:HE22	1.65	0.62
41:BT:70:HIS:HB2	41:BT:73:ARG:O	1.99	0.62
52:B4:30:GLU:HB3	52:B4:33:HIS:ND1	2.15	0.62
53:CA:366:A:O2'	53:CA:394:G:N2	2.33	0.62
53:CA:397:A:H5'	53:CA:398:U:OP1	2.00	0.62
53:CA:1051:C:O2'	53:CA:1052:U:O5'	2.17	0.62
54:CG:63:VAL:HG11	54:CG:127:ALA:HB2	1.81	0.62
19:CS:49:ALA:HB1	19:CS:56:HIS:HB3	1.81	0.62
22:DA:27:G:H22	22:DA:512:G:H2'	1.65	0.62
22:DA:389:G:C8	22:DA:2413:G:H4'	2.35	0.62
22:DA:990:A:H61	39:DR:78:ARG:NH1	1.97	0.62
22:DA:1611:C:O2'	22:DA:1612:C:H6	1.82	0.62
22:DA:2285:C:H2'	22:DA:2286:G:H5"	1.81	0.62
22:DA:2335:A:C4	22:DA:2337:G:N7	2.68	0.62
28:DG:18:ILE:HD12	28:DG:42:VAL:HG13	1.80	0.62
29:DH:41:LYS:HA	29:DH:44:ILE:HG12	1.82	0.62
32:DK:2:ILE:HG22	32:DK:3:GLN:N	2.14	0.62
33:DL:56:PRO:O	33:DL:60:ARG:HG3	1.98	0.62
34:DM:19:GLY:H	34:DM:38:ARG:HH21	1.46	0.62
38:DQ:78:PHE:CE1	38:DQ:82:LEU:HD11	2.34	0.62
52:D4:3:VAL:O	52:D4:4:ARG:HB2	1.99	0.62
1:AA:423:G:H2'	1:AA:424:G:O4'	2.00	0.62
3:AC:166:TRP:HE3	3:AC:166:TRP:N	1.94	0.62
5:AE:105:ILE:HD11	5:AE:123:LEU:HD23	1.80	0.62
22:BA:1182:G:H2'	22:BA:1183:U:O4'	1.98	0.62
22:BA:1654:A:H2'	22:BA:1655:A:C8	2.28	0.62
22:BA:2059:A:N1	60:BA:3135:TEL:H44	2.15	0.62
24:BC:156:SER:O	24:BC:194:VAL:HG11	2.00	0.62
26:BE:161:ALA:HA	26:BE:164:LEU:HB2	1.81	0.62
32:BK:36:GLY:HA2	32:BK:62:VAL:O	1.99	0.62
44:BW:23:LYS:HD2	44:BW:24:ARG:H	1.63	0.62
47:BZ:40:THR:HG23	47:BZ:43:ILE:H	1.64	0.62
53:CA:1064:G:H4'	53:CA:1065:U:OP1	1.97	0.62
53:CA:1150:A:N6	53:CA:1151:A:N6	2.48	0.62
53:CA:1284:C:H5"	53:CA:1285:A:C5'	2.29	0.62
53:CA:1451:U:C2	53:CA:1453:G:O6	2.53	0.62
3:CC:179:ALA:HB1	3:CC:202:PHE:CE1	2.35	0.62
19:CS:50:VAL:HG11	19:CS:70:LEU:HB3	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:28:A:H2'	22:DA:29:U:O4'	1.99	0.62
22:DA:128:C:H6	22:DA:128:C:H5"	1.65	0.62
22:DA:528:A:N1	22:DA:2043:C:O5'	2.33	0.62
22:DA:612:G:N2	22:DA:614:A:O2'	2.33	0.62
22:DA:1068:G:C8	22:DA:1069:A:N7	2.68	0.62
22:DA:1157:G:H2'	22:DA:1158:C:C6	2.34	0.62
22:DA:2056:G:N2	48:D0:1:ALA:N	2.48	0.62
22:DA:2771:C:H2'	22:DA:2772:C:H6	1.65	0.62
29:DH:61:VAL:HG13	29:DH:62:LEU:HG	1.81	0.62
1:AA:601:G:H2'	1:AA:602:A:H8	1.64	0.62
1:AA:1251:A:H2'	1:AA:1252:A:H8	1.65	0.62
1:AA:1414:U:H2'	1:AA:1415:G:H8	1.65	0.62
3:AC:35:ASP:O	3:AC:38:VAL:HG22	1.99	0.62
10:AJ:65:TYR:HB3	14:AN:95:LEU:HD11	1.81	0.62
22:BA:332:A:C2	22:BA:335:C:C5	2.88	0.62
22:BA:627:A:C6	22:BA:637:A:C8	2.88	0.62
22:BA:2674:G:H4'	32:BK:30:ARG:HG3	1.82	0.62
25:BD:101:PHE:HD1	25:BD:101:PHE:N	1.98	0.62
28:BG:9:VAL:O	28:BG:11:PRO:HD3	1.99	0.62
29:BH:97:ARG:HG2	29:BH:111:ALA:HB1	1.81	0.62
44:BW:28:GLU:OE2	44:BW:28:GLU:HA	1.98	0.62
45:BX:39:VAL:HG21	45:BX:42:GLU:HB2	1.82	0.62
53:CA:140:U:O2	53:CA:183:C:N4	2.32	0.62
53:CA:392:C:H2'	53:CA:393:A:H8	1.64	0.62
53:CA:1493:A:C8	22:DA:1913:A:N6	2.65	0.62
2:CB:122:ASP:HB3	2:CB:124:THR:HG22	1.82	0.62
4:CD:116:LEU:HD21	4:CD:153:ARG:HD3	1.82	0.62
22:DA:53:A:C2	22:DA:179:C:H4'	2.35	0.62
22:DA:574:A:H2	22:DA:2032:G:HO2'	1.48	0.62
22:DA:919:U:H2'	22:DA:920:A:C8	2.35	0.62
22:DA:1131:G:O6	22:DA:2024:G:O2'	2.17	0.62
22:DA:1870:C:H5"	22:DA:1871:A:H2	1.64	0.62
22:DA:2232:C:P	45:DX:26:ARG:NH1	2.73	0.62
22:DA:2426:A:H3'	22:DA:2427:C:H5'	1.81	0.62
57:DB:112:G:N2	36:DO:45:SER:HA	2.02	0.62
34:DM:126:ILE:O	34:DM:128:THR:HG23	1.99	0.62
42:DU:58:VAL:CG1	42:DU:60:LYS:HG2	2.29	0.62
1:AA:807:A:H2'	1:AA:808:C:H6	1.65	0.61
1:AA:1183:U:H3'	1:AA:1184:G:C5'	2.28	0.61
1:AA:1236:A:H4'	1:AA:1304:G:H4'	1.81	0.61
22:BA:7:G:H2'	22:BA:8:C:C6	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:285:G:N3	22:BA:285:G:H2'	2.13	0.61
22:BA:632:A:O2'	22:BA:633:A:H5'	2.00	0.61
22:BA:1317:G:C2	22:BA:1336:A:C2	2.88	0.61
22:BA:2134:A:O2'	22:BA:2135:A:H8	1.83	0.61
27:BF:131:VAL:HG21	27:BF:151:LEU:HG	1.82	0.61
28:BG:86:LEU:HB3	28:BG:162:ARG:O	2.00	0.61
32:BK:21:CYS:CB	32:BK:39:ILE:HD11	2.28	0.61
34:BM:70:ASP:OD1	34:BM:70:ASP:C	2.39	0.61
37:BP:50:ARG:HD3	37:BP:51:ASN:H	1.65	0.61
38:BQ:60:TRP:CZ2	38:BQ:93:ILE:HB	2.35	0.61
43:BV:75:GLN:HA	43:BV:75:GLN:OE1	1.98	0.61
51:B3:28:LEU:CD1	51:B3:40:LYS:HB3	2.30	0.61
53:CA:433:G:C2'	53:CA:434:U:H5'	2.30	0.61
53:CA:631:C:H3'	53:CA:632:U:H5'	1.81	0.61
53:CA:765:G:C8	53:CA:812:G:C2	2.88	0.61
53:CA:818:G:C3'	53:CA:819:A:C5'	2.78	0.61
18:CR:59:LYS:O	18:CR:63:TYR:CD1	2.53	0.61
21:CU:8:ASN:ND2	21:CU:9:GLU:H	1.97	0.61
21:CU:35:GLU:CG	21:CU:36:PHE:H	2.13	0.61
22:DA:301:G:C6	22:DA:317:G:C6	2.87	0.61
22:DA:627:A:H5"	33:DL:78:ARG:HH12	1.64	0.61
22:DA:1238:G:O2'	22:DA:1239:G:H5'	1.99	0.61
22:DA:2401:U:H3'	22:DA:2402:U:H5"	1.82	0.61
35:DN:73:ASN:HA	35:DN:76:VAL:HG22	1.81	0.61
1:AA:98:A:H2'	1:AA:99:C:C6	2.35	0.61
1:AA:922:G:H1'	5:AE:23:THR:HG22	1.82	0.61
2:AB:40:ILE:HG21	2:AB:201:GLY:HA2	1.83	0.61
16:AP:28:ARG:NE	16:AP:29:ASN:HD21	1.98	0.61
22:BA:1159:U:C2'	22:BA:1160:G:H5'	2.30	0.61
22:BA:1476:U:OP2	22:BA:1476:U:H6	1.82	0.61
22:BA:2311:A:H3'	22:BA:2312:U:C6	2.34	0.61
25:BD:101:PHE:HE2	25:BD:203:VAL:HG22	1.64	0.61
38:BQ:86:SER:O	39:BR:51:VAL:HA	2.01	0.61
40:BS:30:SER:OG	40:BS:31:GLN:N	2.32	0.61
44:BW:9:THR:OG1	44:BW:10:ARG:N	2.29	0.61
53:CA:423:G:H2'	53:CA:424:G:O4'	2.00	0.61
53:CA:994:A:C6	53:CA:1216:A:C5'	2.83	0.61
53:CA:1176:A:H2'	53:CA:1177:G:O4'	2.00	0.61
53:CA:1326:U:H2'	53:CA:1327:C:C6	2.35	0.61
12:CL:42:LYS:HG2	12:CL:43:LYS:H	1.64	0.61
21:CU:24:LYS:CG	21:CU:25:ALA:N	2.59	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:158:U:H1'	22:DA:169:G:N2	2.14	0.61
22:DA:311:A:O2'	22:DA:312:G:OP1	2.18	0.61
22:DA:816:C:H2'	22:DA:817:C:H6	1.64	0.61
22:DA:1166:G:H22	22:DA:1184:U:H1'	1.64	0.61
22:DA:2729:G:H5"	25:DD:190:LYS:NZ	2.15	0.61
22:DA:2746:U:H2'	22:DA:2747:G:H5'	1.81	0.61
58:DF:32:LYS:HB3	58:DF:156:THR:HB	1.82	0.61
32:DK:40:LYS:NZ	32:DK:89:ASN:HD21	1.98	0.61
2:AB:165:ALA:HB2	2:AB:186:VAL:HG12	1.82	0.61
4:AD:62:ARG:NE	4:AD:62:ARG:HA	2.14	0.61
6:AF:5:GLU:OE1	18:AR:22:TYR:HE2	1.84	0.61
11:AK:13:LYS:O	11:AK:14:GLN:HB3	2.00	0.61
13:AM:113:LYS:H	13:AM:114:PRO:CD	2.12	0.61
15:AO:63:ARG:HG2	15:AO:87:ARG:NH1	2.08	0.61
22:BA:357:C:H2'	22:BA:358:U:H6	1.63	0.61
32:BK:63:VAL:HG13	32:BK:103:VAL:HG12	1.82	0.61
53:CA:644:U:H2'	53:CA:645:G:H8	1.64	0.61
5:CE:55:VAL:N	5:CE:56:PRO:HD2	2.16	0.61
54:CG:148:LYS:NZ	54:CG:148:LYS:HB2	2.16	0.61
22:DA:30:G:OP1	38:DQ:4:LYS:HG3	2.00	0.61
22:DA:63:A:N6	22:DA:91:A:H62	1.98	0.61
57:DB:65:U:H3'	57:DB:108:A:N6	2.15	0.61
58:DF:33:ILE:HB	58:DF:90:LEU:HB2	1.82	0.61
33:DL:73:ILE:O	33:DL:105:ILE:HA	2.00	0.61
38:DQ:8:ILE:HG12	38:DQ:8:ILE:O	1.98	0.61
40:DS:71:VAL:O	40:DS:71:VAL:HG13	2.01	0.61
50:D2:34:ARG:HB3	50:D2:42:LEU:HD11	1.81	0.61
1:AA:206:C:C2	1:AA:207:C:H1'	2.35	0.61
1:AA:1361:G:H2'	1:AA:1362:A:H5"	1.82	0.61
2:AB:53:LEU:HA	2:AB:56:LEU:HB3	1.82	0.61
4:AD:29:THR:C	4:AD:30:LYS:HD3	2.21	0.61
5:AE:67:ARG:HB2	5:AE:68:ARG:HE	1.63	0.61
5:AE:153:ALA:HA	5:AE:156:ARG:CB	2.30	0.61
12:AL:23:LEU:O	12:AL:25:ALA:N	2.32	0.61
15:AO:57:ARG:HH11	15:AO:57:ARG:HB3	1.66	0.61
17:AQ:51:GLU:HG2	17:AQ:52:CYS:SG	2.40	0.61
32:BK:107:LEU:O	32:BK:109:SER:N	2.33	0.61
34:BM:132:THR:CG2	34:BM:133:LYS:H	2.12	0.61
51:B3:49:VAL:HG23	51:B3:53:ASP:HB2	1.81	0.61
53:CA:1151:A:O2'	53:CA:1152:A:O5'	2.18	0.61
53:CA:1460:C:O5'	53:CA:1460:C:H6	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:31:PHE:HB2	2:CB:41:ASN:HB2	1.81	0.61
2:CB:78:ALA:O	2:CB:213:LEU:HD23	2.01	0.61
2:CB:160:LEU:HB2	2:CB:182:VAL:HG12	1.82	0.61
54:CG:136:LYS:O	54:CG:140:VAL:HG23	2.00	0.61
9:CI:27:ILE:HD13	9:CI:62:LEU:HB3	1.81	0.61
22:DA:37:C:H2'	22:DA:38:A:O4'	1.99	0.61
22:DA:184:C:H2'	22:DA:185:G:H8	1.62	0.61
22:DA:234:U:H2'	22:DA:235:U:C6	2.35	0.61
22:DA:247:G:H4'	22:DA:386:G:C4	2.35	0.61
22:DA:284:U:H2'	22:DA:285:G:H8	1.65	0.61
22:DA:1040:A:N1	22:DA:1116:G:O6	2.34	0.61
22:DA:1081:U:H4'	30:DI:123:ALA:HA	1.83	0.61
22:DA:1437:C:H2'	22:DA:1438:U:C6	2.36	0.61
22:DA:2324:U:C5'	22:DA:2325:G:H5"	2.30	0.61
22:DA:2512:C:H2'	22:DA:2513:A:O4'	2.00	0.61
22:DA:2850:A:N7	22:DA:2868:A:O2'	2.25	0.61
25:DD:51:THR:HG21	25:DD:75:ALA:O	2.00	0.61
30:DI:106:GLN:HA	30:DI:109:ALA:HB3	1.82	0.61
31:DJ:6:ALA:HB3	31:DJ:45:THR:HB	1.81	0.61
31:DJ:111:LYS:HB2	31:DJ:115:GLY:N	2.16	0.61
37:DP:50:ARG:HB3	37:DP:57:ALA:H	1.63	0.61
37:DP:77:SER:OG	37:DP:79:VAL:HG22	2.00	0.61
1:AA:157:U:O2'	1:AA:158:G:H5'	2.00	0.61
5:AE:81:GLN:HG2	5:AE:149:PRO:HG3	1.82	0.61
9:AI:50:PRO:HG3	9:AI:82:ILE:HD12	1.82	0.61
10:AJ:52:LEU:HD23	10:AJ:62:ARG:HG2	1.82	0.61
22:BA:142:A:H2'	22:BA:143:C:C6	2.36	0.61
22:BA:242:G:H5"	51:B3:63:TYR:CE2	2.35	0.61
22:BA:1747:U:H2'	22:BA:1748:C:C6	2.35	0.61
22:BA:1956:U:H2'	22:BA:1957:C:H5'	1.81	0.61
29:BH:31:VAL:CB	29:BH:32:PRO:HD2	2.13	0.61
37:BP:59:THR:OG1	37:BP:72:VAL:HG12	2.00	0.61
53:CA:112:G:C2	53:CA:330:C:C4	2.88	0.61
3:CC:10:ARG:NH2	3:CC:181:ILE:HB	2.13	0.61
56:CP:22:ALA:HA	56:CP:33:ILE:HG13	1.82	0.61
22:DA:1494:A:H2'	22:DA:1495:A:C8	2.35	0.61
22:DA:2898:U:H2'	22:DA:2899:A:C8	2.35	0.61
35:DN:24:MET:HG2	35:DN:44:LEU:HD22	1.82	0.61
46:DY:49:ASP:HA	46:DY:52:ARG:HD2	1.82	0.61
3:AC:154:GLY:O	3:AC:195:ILE:HG12	2.01	0.61
4:AD:151:GLN:H	4:AD:154:VAL:CG1	2.13	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:50:PRO:HB3	9:AI:83:THR:HG23	1.83	0.61
22:BA:1178:C:H2'	22:BA:1179:G:N7	2.16	0.61
22:BA:1268:A:C2	22:BA:2013:A:C4	2.88	0.61
22:BA:1847:A:N3	22:BA:1847:A:H2'	2.15	0.61
22:BA:1993:U:H4'	25:BD:133:THR:CG2	2.30	0.61
28:BG:8:VAL:O	28:BG:9:VAL:HG12	2.01	0.61
32:BK:71:ARG:HG3	32:BK:106:GLU:OE2	2.01	0.61
35:BN:1:MET:O	35:BN:2:ARG:HB2	2.00	0.61
44:BW:37:VAL:CG1	44:BW:38:ARG:H	2.13	0.61
53:CA:190:A:O5'	53:CA:190:A:H8	1.83	0.61
53:CA:972:C:O2'	10:CJ:57:VAL:HG23	2.01	0.61
53:CA:1228:C:HO2'	53:CA:1229:A:H8	1.46	0.61
53:CA:1242:G:N2	53:CA:1243:C:H1'	2.16	0.61
53:CA:1304:G:H1'	53:CA:1333:A:N6	2.15	0.61
8:CH:5:PRO:O	8:CH:8:ASP:HB3	2.01	0.61
8:CH:114:ALA:O	8:CH:117:GLN:HB3	2.01	0.61
17:CQ:19:SER:HB3	17:CQ:70:LYS:NZ	2.16	0.61
22:DA:532:A:N1	22:DA:2020:A:O2'	2.30	0.61
22:DA:1060:U:H4'	22:DA:1061:U:H2'	1.80	0.61
22:DA:1388:G:N1	22:DA:1400:U:N3	2.48	0.61
22:DA:2197:U:O2'	22:DA:2198:A:C8	2.51	0.61
22:DA:2893:A:H4'	22:DA:2894:G:O5'	2.00	0.61
26:DE:126:VAL:HG11	26:DE:134:LEU:HD22	1.82	0.61
26:DE:133:LEU:O	26:DE:137:LYS:HB2	2.01	0.61
28:DG:70:LEU:O	28:DG:74:MET:HB2	1.99	0.61
28:DG:94:ARG:NH2	28:DG:111:PRO:HB3	2.16	0.61
33:DL:93:ASN:CG	33:DL:94:THR:H	2.01	0.61
39:DR:49:ILE:HB	39:DR:51:VAL:O	2.01	0.61
49:D1:8:ILE:HD11	49:D1:52:LYS:HE3	1.83	0.61
1:AA:723:U:OP1	21:AU:48:LYS:HD3	1.99	0.61
1:AA:1314:C:O2'	1:AA:1315:U:H5'	1.99	0.61
1:AA:1491:G:H5'	1:AA:1492:A:OP1	2.00	0.61
4:AD:55:ARG:HH12	4:AD:58:GLN:CG	2.14	0.61
11:AK:60:PHE:O	11:AK:63:GLN:HB3	2.00	0.61
19:AS:17:LYS:HB3	19:AS:30:LEU:HD23	1.82	0.61
22:BA:20:C:O2'	22:BA:21:A:H5'	2.01	0.61
22:BA:2388:A:H5'	22:BA:2389:G:OP2	2.01	0.61
37:BP:63:ILE:HG22	37:BP:63:ILE:O	2.01	0.61
38:BQ:93:ILE:HG23	38:BQ:94:LEU:H	1.66	0.61
53:CA:736:C:H2'	53:CA:737:C:H6	1.65	0.61
54:CG:91:ARG:CG	54:CG:92:PRO:HD2	2.29	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CM:106:ARG:HH21	55:CM:112:ARG:CZ	2.14	0.61
22:DA:139:U:H2'	22:DA:139:U:O2	2.00	0.61
22:DA:217:A:H2'	22:DA:218:A:O4'	2.00	0.61
22:DA:412:A:O2'	22:DA:413:C:H5'	2.00	0.61
22:DA:1611:C:O2'	22:DA:1612:C:C6	2.54	0.61
22:DA:1654:A:O2'	22:DA:1655:A:O5'	2.18	0.61
22:DA:1695:G:C8	24:DC:7:PRO:HB2	2.35	0.61
22:DA:1794:A:H1'	22:DA:1900:A:C2	2.35	0.61
22:DA:1993:U:H4'	25:DD:133:THR:CG2	2.31	0.61
22:DA:2336:A:N1	44:DW:56:HIS:HE1	1.98	0.61
31:DJ:4:PHE:O	31:DJ:44:TYR:CZ	2.54	0.61
32:DK:39:ILE:HB	32:DK:41:ILE:HD13	1.80	0.61
35:DN:70:THR:HG22	35:DN:70:THR:O	2.00	0.61
1:AA:112:G:C6	1:AA:330:C:N4	2.68	0.61
4:AD:55:ARG:HA	4:AD:55:ARG:HH11	1.65	0.61
6:AF:41:ASP:O	6:AF:43:GLY:N	2.34	0.61
22:BA:484:C:H2'	22:BA:485:C:H6	1.66	0.61
22:BA:742:A:H2'	22:BA:743:A:C8	2.36	0.61
22:BA:1936:A:C2	22:BA:1943:U:C5	2.89	0.61
22:BA:2472:G:H2'	22:BA:2475:C:H42	1.64	0.61
23:BB:78:A:C2	23:BB:99:A:C4	2.88	0.61
31:BJ:4:PHE:O	31:BJ:44:TYR:HE1	1.81	0.61
36:BO:24:THR:HG22	36:BO:42:PRO:HD3	1.83	0.61
53:CA:330:C:O2'	53:CA:331:G:C8	2.26	0.61
53:CA:373:A:C8	53:CA:373:A:H5'	2.35	0.61
53:CA:976:G:C5'	53:CA:977:A:OP2	2.49	0.61
4:CD:2:ARG:NH2	4:CD:114:ARG:HH11	1.99	0.61
4:CD:23:GLY:O	4:CD:24:VAL:O	2.19	0.61
10:CJ:57:VAL:HG22	10:CJ:58:ASN:N	2.11	0.61
21:CU:39:LYS:O	21:CU:43:GLU:HB2	2.01	0.61
22:DA:309:A:H1'	22:DA:329:G:C4	2.36	0.61
22:DA:1265:A:C8	22:DA:1267:U:N3	2.68	0.61
22:DA:2074:U:O2'	22:DA:2075:U:H5'	1.99	0.61
22:DA:2145:C:O2'	22:DA:2146:C:H3'	2.01	0.61
25:DD:121:THR:HG21	25:DD:127:PHE:CD1	2.35	0.61
29:DH:93:SER:HB3	29:DH:121:VAL:HG21	1.81	0.61
36:DO:70:ALA:O	36:DO:74:VAL:HG23	2.01	0.61
45:DX:19:HIS:C	45:DX:21:LEU:H	2.04	0.61
47:DZ:23:LEU:HD12	47:DZ:28:LEU:HD21	1.83	0.61
1:AA:1452:C:H4'	1:AA:1453:G:C4	2.35	0.61
22:BA:747:U:C4	22:BA:2613:U:C5	2.89	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1070:A:C2	30:BI:9:LYS:HG2	2.35	0.61
22:BA:1371:G:N7	62:BA:3400:HOH:O	2.31	0.61
22:BA:1830:C:H2'	22:BA:1831:G:H8	1.66	0.61
22:BA:2591:C:H2'	22:BA:2592:G:C8	2.34	0.61
22:BA:2790:U:H4'	22:BA:2791:G:OP1	1.99	0.61
33:BL:95:LEU:HD13	33:BL:100:ILE:HD11	1.83	0.61
38:BQ:40:LYS:HG2	38:BQ:44:TYR:CE1	2.36	0.61
39:BR:62:GLU:O	39:BR:64:VAL:HG23	2.01	0.61
53:CA:350:G:C6	53:CA:351:G:C6	2.88	0.61
53:CA:1254:A:H2'	53:CA:1255:G:C8	2.36	0.61
9:CI:29:ILE:HA	9:CI:64:ILE:O	2.00	0.61
55:CM:82:LEU:HD21	19:CS:60:PHE:HB3	1.82	0.61
15:CO:24:THR:HG21	15:CO:69:LEU:HB2	1.83	0.61
22:DA:624:C:O2'	22:DA:657:U:H5"	2.01	0.61
22:DA:833:A:H2'	22:DA:834:G:C8	2.35	0.61
22:DA:946:C:H2'	22:DA:947:A:H8	1.65	0.61
22:DA:1275:A:N7	35:DN:16:HIS:HB2	2.16	0.61
22:DA:1655:A:H5'	25:DD:118:PHE:CE1	2.36	0.61
22:DA:1944:U:O4'	22:DA:1955:U:H1'	2.01	0.61
22:DA:1993:U:H4'	25:DD:133:THR:HG22	1.83	0.61
22:DA:2285:C:H5	49:D1:5:ARG:NH2	1.98	0.61
22:DA:2563:U:C1'	22:DA:2566:A:N6	2.64	0.61
22:DA:2638:G:O2'	22:DA:2639:A:C8	2.52	0.61
25:DD:29:VAL:HB	25:DD:98:VAL:HG12	1.83	0.61
28:DG:83:THR:C	28:DG:84:LYS:HD3	2.21	0.61
44:DW:8:SER:O	44:DW:9:THR:HB	2.01	0.61
1:AA:684:U:H1'	11:AK:39:ASN:O	2.01	0.61
1:AA:820:U:H4'	1:AA:821:G:OP2	2.01	0.61
3:AC:156:LEU:H	3:AC:156:LEU:CD1	2.10	0.61
11:AK:91:GLY:O	11:AK:95:THR:HB	2.01	0.61
13:AM:45:SER:O	13:AM:46:GLU:HB2	2.01	0.61
16:AP:52:LEU:O	16:AP:54:LEU:HD12	2.00	0.61
17:AQ:10:ARG:O	17:AQ:22:VAL:HG13	2.01	0.61
17:AQ:46:HIS:HA	17:AQ:70:LYS:HE3	1.81	0.61
22:BA:843:G:O2'	22:BA:844:A:H5'	2.01	0.61
22:BA:1009:A:OP2	31:BJ:39:LYS:NZ	2.32	0.61
22:BA:2207:C:H2'	22:BA:2208:C:C6	2.35	0.61
22:BA:2292:U:H2'	22:BA:2293:G:H8	1.65	0.61
22:BA:2602:A:H4'	22:BA:2603:G:O5'	2.01	0.61
22:BA:2804:U:H2'	22:BA:2805:C:H6	1.66	0.61
23:BB:90:C:H5"	23:BB:90:C:C6	2.32	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:251:THR:HG22	24:BC:252:LYS:H	1.66	0.61
28:BG:33:THR:HA	28:BG:34:ARG:HH11	1.66	0.61
28:BG:82:PHE:HB2	28:BG:134:GLY:O	2.01	0.61
36:BO:75:GLY:HA2	36:BO:106:LEU:HD13	1.81	0.61
36:BO:105:ALA:O	36:BO:106:LEU:HB3	1.99	0.61
41:BT:24:MET:HG3	41:BT:29:THR:HG23	1.81	0.61
44:BW:41:GLY:HA2	44:BW:44:PHE:CE2	2.36	0.61
53:CA:251:G:H21	53:CA:253:A:H62	1.48	0.61
53:CA:995:C:N4	53:CA:1046:A:H1'	2.16	0.61
53:CA:1400:C:H4'	53:CA:1401:G:OP2	2.00	0.61
2:CB:127:LYS:HE2	2:CB:136:ARG:HH21	1.66	0.61
17:CQ:25:GLU:HG2	17:CQ:40:THR:HG22	1.82	0.61
22:DA:242:G:H8	51:D3:3:ILE:O	1.84	0.61
22:DA:379:G:C6	22:DA:380:G:C5	2.89	0.61
22:DA:410:G:N1	22:DA:2407:A:N6	2.48	0.61
22:DA:1062:G:H22	22:DA:1077:A:H2	1.49	0.61
22:DA:1998:A:H2'	22:DA:1999:C:H6	1.66	0.61
24:DC:13:ARG:HG2	24:DC:14:HIS:CD2	2.36	0.61
58:DF:16:MET:HA	58:DF:21:TYR:HB2	1.81	0.61
35:DN:103:ARG:HB2	35:DN:110:MET:CG	2.30	0.61
45:DX:30:PRO:HG2	45:DX:32:LEU:HD21	1.82	0.61
2:AB:58:LYS:NZ	2:AB:62:ARG:HG3	2.16	0.60
5:AE:158:LYS:HE2	8:AH:63:LYS:NZ	2.16	0.60
7:AG:53:SER:C	7:AG:55:LYS:H	2.04	0.60
9:AI:112:ARG:HH22	10:AJ:64:GLN:NE2	1.99	0.60
10:AJ:29:ALA:CB	10:AJ:36:VAL:HG21	2.30	0.60
21:AU:33:ARG:HE	21:AU:34:ARG:HG3	1.66	0.60
25:BD:121:THR:O	25:BD:122:VAL:HB	2.00	0.60
31:BJ:54:ILE:HD11	31:BJ:56:VAL:CG2	2.30	0.60
31:BJ:55:ILE:HD11	31:BJ:57:LEU:HD22	1.82	0.60
31:BJ:73:VAL:HG23	31:BJ:74:TYR:N	2.16	0.60
32:BK:10:VAL:HG11	32:BK:16:ALA:HB2	1.83	0.60
36:BO:88:LYS:HE2	36:BO:116:GLN:NE2	2.15	0.60
53:CA:801:U:O2'	53:CA:802:A:H5'	2.01	0.60
53:CA:920:U:H2'	53:CA:921:U:H6	1.63	0.60
53:CA:932:C:H5"	54:CG:2:ARG:HD3	1.81	0.60
5:CE:44:ARG:NH2	5:CE:70:MET:HB2	2.15	0.60
8:CH:93:LYS:HD3	8:CH:93:LYS:N	2.15	0.60
14:CN:9:GLU:HA	14:CN:12:ARG:HD2	1.83	0.60
17:CQ:25:GLU:HA	17:CQ:39:ARG:O	2.00	0.60
22:DA:151:C:H2'	22:DA:152:A:C8	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:867:C:O2'	22:DA:868:U:O5'	2.17	0.60
22:DA:1395:A:H4'	22:DA:1397:U:C5	2.36	0.60
22:DA:2215:C:O2'	22:DA:2216:G:H8	1.84	0.60
57:DB:108:A:O2'	57:DB:109:A:OP1	2.14	0.60
24:DC:183:VAL:HG13	24:DC:185:ALA:H	1.64	0.60
31:DJ:64:VAL:HG22	31:DJ:68:LYS:HE2	1.83	0.60
34:DM:36:VAL:HG13	43:DV:82:TYR:CD1	2.36	0.60
1:AA:212:G:H2'	1:AA:213:G:H8	1.66	0.60
3:AC:21:TRP:CD1	3:AC:58:ARG:HG2	2.36	0.60
22:BA:163:C:H6	22:BA:163:C:OP1	1.84	0.60
22:BA:675:A:H4'	26:BE:62:GLN:NE2	2.16	0.60
22:BA:2211:A:O2'	22:BA:2212:A:P	2.58	0.60
22:BA:2292:U:H2'	22:BA:2293:G:C8	2.36	0.60
22:BA:2325:G:C6	22:BA:2326:C:N4	2.69	0.60
25:BD:99:GLU:CG	25:BD:100:LEU:N	2.64	0.60
33:BL:47:ARG:HG3	33:BL:50:PHE:HB2	1.82	0.60
35:BN:33:ILE:HD11	35:BN:118:ARG:HH21	1.64	0.60
37:BP:91:VAL:O	37:BP:92:ARG:HG2	2.01	0.60
48:B0:50:GLY:O	48:B0:51:ARG:O	2.19	0.60
53:CA:206:C:H2'	53:CA:207:C:H4'	1.83	0.60
53:CA:409:U:H2'	53:CA:410:G:O4'	2.00	0.60
53:CA:1136:C:C5	53:CA:1138:G:O6	2.54	0.60
53:CA:1323:G:H2'	53:CA:1324:A:C8	2.36	0.60
4:CD:111:ALA:O	4:CD:114:ARG:HB3	2.00	0.60
10:CJ:30:LYS:CG	10:CJ:36:VAL:HG22	2.31	0.60
15:CO:63:ARG:HH22	22:DA:715:A:C5'	2.13	0.60
22:DA:394:C:C2'	22:DA:395:U:H5'	2.30	0.60
22:DA:1510:G:N2	22:DA:1511:G:C4	2.69	0.60
22:DA:1568:G:H21	24:DC:57:HIS:HE1	1.45	0.60
22:DA:1965:C:H5"	22:DA:1966:A:H2'	1.82	0.60
24:DC:77:VAL:HG23	24:DC:111:ALA:HA	1.82	0.60
58:DF:36:ASN:O	58:DF:37:MET:HB3	2.00	0.60
30:DI:50:LYS:HA	30:DI:50:LYS:HE2	1.83	0.60
31:DJ:36:LEU:HD21	31:DJ:122:LEU:HD13	1.81	0.60
33:DL:96:LYS:HE2	33:DL:102:GLY:O	2.01	0.60
36:DO:20:GLU:HG3	44:DW:50:VAL:HG11	1.82	0.60
1:AA:201:G:H2'	1:AA:202:G:O4'	2.01	0.60
1:AA:404:G:N7	4:AD:1:ALA:HB2	2.16	0.60
1:AA:1329:A:H5"	13:AM:25:GLY:H	1.65	0.60
3:AC:110:LEU:HD21	3:AC:143:LEU:HD23	1.82	0.60
20:AT:5:SER:OG	20:AT:6:ALA:N	2.34	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2648:G:H2'	22:BA:2649:C:C6	2.36	0.60
24:BC:158:GLY:H	24:BC:194:VAL:HG13	1.66	0.60
30:BI:15:GLY:CA	30:BI:50:LYS:HB3	2.28	0.60
39:BR:61:ALA:CB	39:BR:98:ILE:HA	2.26	0.60
40:BS:48:LYS:O	40:BS:52:GLU:HG3	2.01	0.60
44:BW:22:VAL:O	44:BW:25:PHE:HD2	1.84	0.60
53:CA:32:A:H2'	53:CA:33:A:C8	2.35	0.60
53:CA:121:U:OP1	53:CA:121:U:H3'	2.01	0.60
3:CC:84:GLU:C	3:CC:86:LEU:H	2.04	0.60
10:CJ:52:LEU:CD2	10:CJ:62:ARG:HG2	2.30	0.60
22:DA:2:G:C6	22:DA:3:U:C4	2.89	0.60
22:DA:265:A:N7	22:DA:427:U:O2'	2.35	0.60
22:DA:1135:C:H2'	22:DA:1137:G:OP2	2.01	0.60
22:DA:1352:U:H5	22:DA:1377:G:C6	2.19	0.60
22:DA:1616:A:OP1	22:DA:1616:A:H8	1.84	0.60
22:DA:1779:U:H5	22:DA:1784:A:N7	1.99	0.60
22:DA:2439:A:C8	22:DA:2586:U:H4'	2.36	0.60
22:DA:2716:C:O2'	22:DA:2717:C:H5'	2.01	0.60
22:DA:2882:A:H5"	35:DN:96:ARG:HD3	1.84	0.60
28:DG:84:LYS:O	28:DG:85:LYS:HB3	2.01	0.60
31:DJ:44:TYR:HB2	38:DQ:63:ARG:NH1	2.16	0.60
32:DK:104:THR:C	32:DK:106:GLU:H	2.05	0.60
42:DU:35:VAL:HG12	42:DU:36:GLU:H	1.67	0.60
1:AA:299:G:H2'	1:AA:300:A:C8	2.36	0.60
1:AA:539:A:H2'	1:AA:540:G:C8	2.36	0.60
1:AA:842:U:H3'	1:AA:843:U:H5"	1.84	0.60
5:AE:83:PRO:HB3	5:AE:96:GLN:HE21	1.65	0.60
22:BA:569:U:H1'	22:BA:947:A:O4'	2.01	0.60
22:BA:2821:A:OP2	25:BD:115:GLY:N	2.34	0.60
31:BJ:17:VAL:CG2	31:BJ:137:PRO:HB2	2.31	0.60
31:BJ:21:THR:HG22	31:BJ:22:GLY:H	1.64	0.60
53:CA:392:C:H2'	53:CA:393:A:C8	2.36	0.60
53:CA:828:U:H2'	53:CA:829:G:O5'	2.00	0.60
53:CA:1057:G:H4'	3:CC:196:GLY:H	1.67	0.60
53:CA:1493:A:H3'	22:DA:1913:A:N6	2.16	0.60
17:CQ:19:SER:CB	17:CQ:70:LYS:HZ2	2.13	0.60
22:DA:234:U:O2'	22:DA:235:U:H5'	2.00	0.60
22:DA:1056:G:C1'	22:DA:1103:A:H61	2.14	0.60
22:DA:1079:C:N3	22:DA:1088:A:H2	1.99	0.60
22:DA:1552:A:N3	22:DA:1552:A:C2'	2.65	0.60
22:DA:1790:C:O2'	24:DC:207:ALA:HB2	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1821:A:H5'	24:DC:156:SER:OG	2.01	0.60
24:DC:131:MET:HG2	24:DC:134:ILE:HD11	1.84	0.60
25:DD:29:VAL:HB	25:DD:98:VAL:CG1	2.31	0.60
29:DH:49:ALA:O	29:DH:53:GLU:HB2	2.01	0.60
38:DQ:4:LYS:HZ2	38:DQ:6:GLY:HA3	1.66	0.60
44:DW:77:LYS:O	44:DW:78:PHE:HB2	2.01	0.60
1:AA:834:U:OP1	18:AR:48:ALA:HB2	2.02	0.60
1:AA:1469:C:H6	1:AA:1469:C:C5'	2.12	0.60
6:AF:52:ASN:O	6:AF:53:LYS:HB3	2.01	0.60
32:BK:59:LYS:HE2	32:BK:89:ASN:O	2.01	0.60
33:BL:77:ILE:HG12	33:BL:95:LEU:HD13	1.82	0.60
33:BL:89:VAL:HA	33:BL:121:THR:HG23	1.84	0.60
35:BN:47:VAL:O	35:BN:50:PRO:HD2	2.02	0.60
37:BP:24:THR:CG2	37:BP:86:LYS:HB2	2.30	0.60
37:BP:105:LYS:HA	37:BP:108:ARG:HH21	1.67	0.60
38:BQ:81:GLY:HA2	38:BQ:116:LEU:HD13	1.81	0.60
43:BV:65:VAL:HG22	43:BV:65:VAL:O	2.01	0.60
44:BW:37:VAL:CG1	44:BW:38:ARG:N	2.65	0.60
53:CA:268:U:H2'	53:CA:269:C:C6	2.35	0.60
53:CA:701:U:O2'	53:CA:702:A:P	2.58	0.60
8:CH:28:SER:HB2	8:CH:57:GLU:O	2.01	0.60
8:CH:104:SER:O	8:CH:122:GLY:HA3	2.02	0.60
17:CQ:47:ASP:HB3	17:CQ:74:LEU:HB3	1.82	0.60
22:DA:54:G:H2'	22:DA:55:G:O4'	2.00	0.60
22:DA:156:A:H2'	22:DA:157:C:H6	1.67	0.60
22:DA:1338:G:C2'	22:DA:1339:G:H5'	2.31	0.60
22:DA:2142:A:O3'	22:DA:2143:C:H4'	2.01	0.60
22:DA:2758:A:C2'	22:DA:2759:G:H5'	2.30	0.60
25:DD:47:ALA:HB2	25:DD:83:ARG:HD2	1.83	0.60
31:DJ:56:VAL:HG11	31:DJ:101:ILE:HG21	1.82	0.60
33:DL:79:LEU:HB3	33:DL:114:GLY:H	1.65	0.60
1:AA:1225:A:H2'	1:AA:1226:C:C6	2.37	0.60
1:AA:1303:C:H2'	1:AA:1304:G:H8	1.67	0.60
2:AB:49:PHE:HB2	2:AB:53:LEU:HD23	1.84	0.60
8:AH:63:LYS:O	8:AH:70:VAL:HG23	2.02	0.60
8:AH:103:VAL:HG12	8:AH:124:ILE:HG22	1.84	0.60
14:AN:50:LEU:HB3	14:AN:51:PRO:HD2	1.82	0.60
19:AS:46:LEU:H	19:AS:61:VAL:HG23	1.66	0.60
22:BA:1354:A:H2'	22:BA:1355:G:O4'	2.00	0.60
22:BA:1730:C:H1'	22:BA:1731:G:C2	2.36	0.60
22:BA:1856:U:H3	22:BA:1886:U:H3	1.49	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:134:GLN:HG2	27:BF:135:ILE:N	2.17	0.60
32:BK:34:GLY:O	32:BK:35:VAL:C	2.40	0.60
33:BL:100:ILE:HD12	33:BL:101:ILE:HD13	1.84	0.60
53:CA:160:A:H2'	53:CA:161:A:O4'	2.01	0.60
53:CA:373:A:N3	53:CA:374:A:C8	2.70	0.60
2:CB:90:PHE:CE2	2:CB:149:GLY:HA3	2.36	0.60
2:CB:125:PHE:CD1	2:CB:137:THR:HG22	2.36	0.60
54:CG:110:ARG:HG3	54:CG:111:GLY:N	2.15	0.60
22:DA:110:G:N2	22:DA:111:A:H1'	2.17	0.60
22:DA:120:U:H4'	22:DA:121:G:H5'	1.83	0.60
22:DA:686:U:C6	22:DA:788:A:N1	2.70	0.60
22:DA:777:G:N7	22:DA:793:A:C2	2.67	0.60
22:DA:855:G:N3	44:DW:23:LYS:HE3	2.16	0.60
22:DA:1285:A:N6	22:DA:1329:U:C5	2.70	0.60
22:DA:1676:A:H2'	22:DA:1677:A:O4'	2.00	0.60
22:DA:1827:U:H2'	22:DA:1828:G:O4'	2.02	0.60
22:DA:2716:C:H2'	22:DA:2717:C:C6	2.35	0.60
35:DN:92:GLY:H	35:DN:94:TYR:HE1	1.47	0.60
37:DP:9:GLN:HB3	37:DP:12:MET:CE	2.31	0.60
51:D3:61:LEU:HB2	51:D3:64:ALA:HB3	1.84	0.60
1:AA:279:A:H8	1:AA:279:A:H5'	1.66	0.60
1:AA:1180:A:H5"	1:AA:1181:G:OP2	2.01	0.60
1:AA:1234:C:C2'	1:AA:1235:U:H5'	2.31	0.60
2:AB:132:GLU:O	2:AB:132:GLU:HG3	2.00	0.60
3:AC:137:VAL:HA	3:AC:148:ILE:HD13	1.83	0.60
17:AQ:30:HIS:HB2	17:AQ:37:ILE:HD11	1.84	0.60
21:AU:35:GLU:O	21:AU:36:PHE:HB2	2.01	0.60
22:BA:729:G:C4	22:BA:1775:U:O2	2.53	0.60
22:BA:1233:C:C4	22:BA:1234:U:C5	2.89	0.60
22:BA:1475:G:HO2'	22:BA:1476:U:P	2.24	0.60
22:BA:1585:C:C2'	22:BA:1586:A:H5'	2.32	0.60
35:BN:23:ASN:N	35:BN:23:ASN:HD22	2.00	0.60
36:BO:76:LYS:O	36:BO:80:GLU:HG2	2.01	0.60
39:BR:45:GLU:OE2	39:BR:45:GLU:HA	2.01	0.60
40:BS:73:LYS:HB2	40:BS:106:VAL:HB	1.84	0.60
53:CA:71:A:C6	53:CA:100:G:C5	2.89	0.60
53:CA:129:A:O2'	53:CA:130:A:C8	2.54	0.60
53:CA:704:A:O2'	53:CA:705:G:C8	2.52	0.60
53:CA:704:A:O2'	53:CA:705:G:O5'	2.19	0.60
53:CA:998:C:H2'	53:CA:999:C:H6	1.65	0.60
2:CB:9:LEU:HD12	2:CB:11:ALA:C	2.22	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:8:LEU:HD22	4:CD:21:LYS:HD2	1.83	0.60
4:CD:190:LEU:O	4:CD:191:SER:O	2.20	0.60
18:CR:31:TYR:CD2	18:CR:54:LEU:HD21	2.35	0.60
22:DA:204:A:C5	22:DA:206:U:O4	2.54	0.60
22:DA:489:G:H2'	22:DA:491:G:C8	2.36	0.60
22:DA:1734:G:O2'	22:DA:1735:A:H8	1.83	0.60
22:DA:1810:A:H2'	22:DA:1811:G:O4'	2.01	0.60
22:DA:2333:A:H1'	22:DA:2335:A:C8	2.36	0.60
57:DB:54:G:O2'	58:DF:24:VAL:HG21	2.01	0.60
35:DN:33:ILE:HG23	35:DN:114:GLU:HB2	1.82	0.60
51:D3:28:LEU:HA	51:D3:32:LEU:HD21	1.82	0.60
1:AA:657:U:O2	15:AO:21:THR:HG23	2.01	0.60
21:AU:48:LYS:HA	21:AU:51:ALA:HB3	1.84	0.60
22:BA:172:A:O2'	22:BA:173:A:H5'	2.01	0.60
22:BA:904:G:C4	22:BA:905:A:N7	2.70	0.60
22:BA:1159:U:O2'	22:BA:1160:G:H5'	2.01	0.60
22:BA:1171:G:C6	22:BA:1172:C:C4	2.89	0.60
22:BA:1256:G:H21	26:BE:77:ILE:HG13	1.65	0.60
25:BD:24:VAL:HA	25:BD:191:GLY:H	1.67	0.60
27:BF:116:LEU:O	27:BF:176:PHE:HA	2.01	0.60
34:BM:21:ALA:CB	34:BM:100:LYS:N	2.64	0.60
46:BY:23:ARG:O	46:BY:24:GLU:C	2.39	0.60
53:CA:369:G:OP2	53:CA:388:G:N2	2.33	0.60
53:CA:423:G:H2'	53:CA:423:G:N3	2.17	0.60
53:CA:484:G:H4'	53:CA:485:U:O5'	1.98	0.60
53:CA:599:C:H4'	8:CH:121:GLY:C	2.21	0.60
53:CA:1071:C:H2'	53:CA:1072:G:H8	1.66	0.60
53:CA:1446:A:C2'	53:CA:1447:A:H5"	2.32	0.60
5:CE:95:MET:HB3	5:CE:124:ALA:HB2	1.83	0.60
22:DA:234:U:H2'	22:DA:235:U:H6	1.67	0.60
22:DA:249:C:H4'	22:DA:250:G:O5'	2.01	0.60
22:DA:616:A:C2'	22:DA:617:G:C8	2.78	0.60
22:DA:1394:U:H4'	22:DA:1603:A:H4'	1.84	0.60
22:DA:1469:A:H2'	22:DA:1470:A:H8	1.66	0.60
22:DA:1536:C:OP2	22:DA:1536:C:C2	2.55	0.60
22:DA:1808:A:N7	45:DX:27:ARG:NH1	2.49	0.60
29:DH:31:VAL:HB	29:DH:32:PRO:HD3	1.83	0.60
32:DK:88:ASN:CB	32:DK:91:SER:HB2	2.32	0.60
34:DM:8:LYS:HA	34:DM:8:LYS:HE3	1.82	0.60
38:DQ:111:LYS:HE3	39:DR:48:LYS:HD3	1.83	0.60
41:DT:43:ILE:CG2	41:DT:58:VAL:HG11	2.32	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1124:G:H3'	1:AA:1145:A:N6	2.17	0.60
1:AA:1218:C:H2'	1:AA:1219:A:H8	1.65	0.60
16:AP:5:ARG:HA	16:AP:68:SER:OG	2.02	0.60
22:BA:520:G:H2'	22:BA:521:U:C6	2.37	0.60
22:BA:1568:G:H4'	24:BC:58:LYS:HB3	1.84	0.60
25:BD:11:MET:HE1	25:BD:192:ALA:HA	1.83	0.60
30:BI:10:LEU:HD13	30:BI:27:LEU:HA	1.84	0.60
34:BM:33:LEU:HD22	34:BM:128:THR:HB	1.84	0.60
38:BQ:65:ASN:ND2	38:BQ:69:ARG:NH2	2.48	0.60
38:BQ:96:ASP:C	38:BQ:98:ALA:H	2.05	0.60
40:BS:4:ILE:HG22	40:BS:106:VAL:HG13	1.84	0.60
53:CA:519:C:O2'	53:CA:520:A:H5'	2.02	0.60
53:CA:958:A:H62	19:CS:54:ARG:NH1	2.00	0.60
3:CC:14:VAL:HG12	3:CC:14:VAL:O	2.01	0.60
54:CG:78:ARG:HA	54:CG:84:TYR:HB2	1.83	0.60
14:CN:80:ARG:HH11	14:CN:80:ARG:HG2	1.67	0.60
22:DA:104:A:H2'	22:DA:105:C:O4'	2.02	0.60
22:DA:125:A:C5'	50:D2:19:ARG:HD3	2.32	0.60
22:DA:1535:A:H2'	22:DA:1535:A:N3	2.16	0.60
22:DA:1809:A:C2	22:DA:1810:A:C5	2.90	0.60
22:DA:2303:G:H5'	58:DF:121:PHE:CE1	2.37	0.60
32:DK:88:ASN:HB2	32:DK:91:SER:HB2	1.84	0.60
33:DL:92:LEU:CD2	33:DL:124:GLY:HA3	2.32	0.60
39:DR:68:ARG:HD2	39:DR:92:TRP:CH2	2.37	0.60
1:AA:109:A:H2'	1:AA:326:G:N2	2.15	0.60
1:AA:451:A:C4'	1:AA:452:A:O5'	2.44	0.60
3:AC:10:ARG:HH21	3:AC:181:ILE:HG13	1.66	0.60
5:AE:24:VAL:O	5:AE:25:LYS:C	2.39	0.60
12:AL:29:LYS:O	12:AL:81:ILE:HG22	2.02	0.60
17:AQ:79:GLU:C	17:AQ:80:LYS:HD3	2.23	0.60
22:BA:64:A:H2'	22:BA:65:U:C6	2.37	0.60
22:BA:893:C:H2'	22:BA:894:U:O4'	2.01	0.60
22:BA:974:G:H8	22:BA:990:A:H62	1.49	0.60
22:BA:1062:G:O2'	22:BA:1063:G:O4'	2.20	0.60
22:BA:1414:C:C4	22:BA:1415:U:C5	2.89	0.60
22:BA:2134:A:HO2'	22:BA:2135:A:H8	1.50	0.60
22:BA:2681:C:H4'	22:BA:2682:A:OP1	2.00	0.60
24:BC:90:ILE:CG2	24:BC:102:TYR:CD1	2.85	0.60
26:BE:108:ILE:HB	33:BL:2:ARG:HH22	1.67	0.60
26:BE:150:THR:HA	26:BE:189:THR:HG23	1.84	0.60
28:BG:8:VAL:HG12	28:BG:9:VAL:N	2.17	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BJ:45:THR:O	31:BJ:45:THR:HG23	2.02	0.60
32:BK:18:ARG:H	32:BK:45:GLU:CB	2.11	0.60
37:BP:50:ARG:O	37:BP:51:ASN:HB2	2.01	0.60
53:CA:247:G:C6	53:CA:278:G:C2	2.90	0.60
53:CA:963:G:C6	53:CA:973:G:O6	2.54	0.60
53:CA:982:U:H4'	53:CA:983:A:O5'	2.01	0.60
53:CA:1067:A:H4'	53:CA:1068:G:O5'	1.98	0.60
53:CA:1416:G:N2	53:CA:1485:U:H1'	2.17	0.60
2:CB:212:TYR:O	2:CB:212:TYR:HD2	1.84	0.60
5:CE:155:LYS:HB3	8:CH:70:VAL:HG23	1.84	0.60
11:CK:81:LEU:HD11	11:CK:104:PHE:CD2	2.36	0.60
55:CM:111:PRO:HG2	55:CM:113:LYS:HG3	1.83	0.60
22:DA:28:A:C6	22:DA:513:A:C8	2.90	0.60
22:DA:729:G:H2'	22:DA:729:G:N3	2.16	0.60
22:DA:749:A:C4	22:DA:750:A:C8	2.89	0.60
22:DA:960:A:H2'	22:DA:962:G:H5'	1.84	0.60
22:DA:982:C:H5"	22:DA:983:A:OP1	2.02	0.60
22:DA:1342:A:C5	22:DA:1345:C:N4	2.70	0.60
22:DA:1774:C:O2	24:DC:10:PRO:HB2	2.02	0.60
22:DA:1819:A:H4'	22:DA:1820:U:H5'	1.84	0.60
22:DA:2331:G:N1	22:DA:2385:C:N4	2.49	0.60
57:DB:15:A:C8	57:DB:109:A:N6	2.70	0.60
26:DE:130:LYS:HG3	26:DE:133:LEU:HD13	1.84	0.60
28:DG:139:VAL:HA	28:DG:142:GLN:HB3	1.83	0.60
35:DN:2:ARG:HD2	35:DN:5:LYS:HB3	1.83	0.60
37:DP:50:ARG:HB3	37:DP:56:SER:HB3	1.83	0.60
38:DQ:91:ARG:HG3	39:DR:11:GLN:CD	2.21	0.60
51:D3:23:HIS:O	51:D3:46:LYS:HB2	2.02	0.60
1:AA:8:A:H62	4:AD:204:SER:HB2	1.67	0.59
1:AA:538:G:OP2	12:AL:111:GLN:HB2	2.02	0.59
4:AD:160:LEU:H	4:AD:160:LEU:HD13	1.65	0.59
5:AE:82:HIS:HB2	5:AE:83:PRO:HD2	1.85	0.59
22:BA:654:A:N3	22:BA:654:A:H5'	2.16	0.59
22:BA:996:A:H4'	38:BQ:91:ARG:CG	2.32	0.59
22:BA:2636:C:H2'	22:BA:2637:U:C6	2.36	0.59
28:BG:38:ASP:OD1	28:BG:38:ASP:N	2.35	0.59
29:BH:147:VAL:HG12	29:BH:149:GLU:HG3	1.84	0.59
32:BK:63:VAL:HG22	32:BK:107:LEU:HD21	1.84	0.59
32:BK:76:VAL:HB	37:BP:72:VAL:CG2	2.32	0.59
33:BL:29:LYS:HG2	33:BL:30:THR:HG23	1.83	0.59
33:BL:77:ILE:O	33:BL:110:VAL:O	2.19	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BX:65:THR:O	45:BX:68:ALA:HB3	2.02	0.59
46:BY:45:GLN:O	46:BY:46:VAL:CB	2.49	0.59
53:CA:814:A:C5'	53:CA:1511:G:H4'	2.29	0.59
53:CA:928:G:C2	53:CA:1390:U:O2	2.55	0.59
53:CA:1363:A:C5	53:CA:1365:G:C6	2.90	0.59
6:CF:88:MET:HG2	6:CF:90:MET:SD	2.42	0.59
9:CI:6:TYR:HE2	9:CI:17:ARG:HA	1.67	0.59
14:CN:52:ARG:HA	14:CN:52:ARG:NE	2.17	0.59
18:CR:63:TYR:CE2	18:CR:69:TYR:OH	2.54	0.59
22:DA:36:G:N1	22:DA:445:C:C4	2.70	0.59
22:DA:70:G:C4'	22:DA:71:A:OP1	2.43	0.59
22:DA:304:U:H2'	22:DA:305:C:C6	2.37	0.59
22:DA:1343:G:C5	22:DA:1597:A:N6	2.70	0.59
22:DA:1838:C:H4'	22:DA:1839:G:C8	2.36	0.59
57:DB:86:G:C2'	57:DB:87:U:H5"	2.30	0.59
58:DF:91:ARG:HA	58:DF:95:MET:SD	2.42	0.59
33:DL:17:LYS:HZ3	33:DL:19:LEU:HD22	1.67	0.59
34:DM:17:ASN:O	34:DM:18:ARG:HG2	2.02	0.59
46:DY:1:MET:HE2	46:DY:1:MET:H3	1.67	0.59
3:AC:21:TRP:CG	3:AC:58:ARG:HG2	2.38	0.59
22:BA:194:G:N7	62:BA:3749:HOH:O	2.31	0.59
22:BA:1110:G:O2'	22:BA:1111:A:C8	2.49	0.59
22:BA:2305:U:H2'	22:BA:2306:C:O4'	2.02	0.59
22:BA:2793:C:H2'	22:BA:2794:C:H6	1.67	0.59
24:BC:141:HIS:CD2	24:BC:192:GLY:O	2.54	0.59
27:BF:97:GLU:O	27:BF:101:ARG:HG2	2.01	0.59
35:BN:55:ALA:HA	35:BN:80:PHE:CE1	2.37	0.59
53:CA:1361:G:H2'	53:CA:1362:A:H5'	1.84	0.59
3:CC:120:THR:HG22	3:CC:120:THR:O	2.03	0.59
12:CL:82:ARG:HG2	12:CL:82:ARG:NH1	2.17	0.59
20:CT:2:ASN:N	20:CT:7:LYS:HZ3	2.00	0.59
22:DA:607:U:O4	22:DA:619:G:H2'	2.02	0.59
22:DA:729:G:N3	22:DA:729:G:C2'	2.65	0.59
22:DA:763:G:O2'	22:DA:764:A:H3'	2.02	0.59
22:DA:1009:A:H2'	62:DA:3759:HOH:O	2.02	0.59
22:DA:1038:G:C2	22:DA:1039:A:N7	2.70	0.59
22:DA:1252:G:H5"	62:DA:3286:HOH:O	2.02	0.59
22:DA:1279:G:OP1	35:DN:35:LYS:HG3	2.01	0.59
22:DA:2550:G:C2	22:DA:2559:C:O2	2.55	0.59
25:DD:107:VAL:CG1	25:DD:109:VAL:HG23	2.32	0.59
2:AB:19:THR:HG23	2:AB:20:ARG:H	1.66	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:110:MET:HB3	5:AE:139:THR:HG21	1.84	0.59
6:AF:86:ARG:CZ	18:AR:63:TYR:HB3	2.33	0.59
11:AK:121:ARG:CZ	21:AU:35:GLU:HG3	2.32	0.59
22:BA:622:G:H2'	22:BA:623:C:H6	1.67	0.59
22:BA:999:U:C5	22:BA:1154:G:C5	2.89	0.59
22:BA:1045:C:H3'	22:BA:1046:A:H5'	1.83	0.59
22:BA:1277:G:H5'	35:BN:20:MET:HE1	1.83	0.59
22:BA:1731:G:C2	22:BA:1733:G:C5	2.90	0.59
22:BA:1731:G:O2'	22:BA:1732:C:H3'	2.02	0.59
22:BA:1867:G:O2'	22:BA:1868:C:H5'	2.03	0.59
25:BD:107:VAL:O	25:BD:174:SER:O	2.19	0.59
37:BP:80:VAL:HG12	37:BP:81:ASP:N	2.17	0.59
41:BT:29:THR:HB	41:BT:86:THR:HG23	1.84	0.59
41:BT:50:LEU:O	41:BT:51:PHE:HB2	2.02	0.59
50:B2:43:THR:O	50:B2:44:VAL:CB	2.50	0.59
53:CA:91:U:O2'	53:CA:92:U:H6	1.85	0.59
53:CA:247:G:OP1	53:CA:247:G:H4'	2.01	0.59
53:CA:345:C:H4'	53:CA:346:G:H5"	1.84	0.59
53:CA:1365:G:O2'	53:CA:1366:C:C6	2.55	0.59
2:CB:80:LYS:HD3	2:CB:90:PHE:CZ	2.38	0.59
3:CC:59:PRO:HG2	3:CC:62:SER:HB3	1.84	0.59
6:CF:41:ASP:OD2	6:CF:58:HIS:HE1	1.85	0.59
55:CM:12:LYS:H	55:CM:44:ILE:HG13	1.67	0.59
15:CO:16:ARG:HB2	15:CO:23:SER:HB2	1.84	0.59
18:CR:72:ARG:H	18:CR:72:ARG:NE	1.95	0.59
22:DA:612:G:C2	22:DA:617:G:O6	2.55	0.59
22:DA:1141:U:H4'	22:DA:1142:A:O5'	2.02	0.59
22:DA:1204:A:O4'	22:DA:1206:G:N7	2.36	0.59
22:DA:1901:A:OP2	24:DC:252:LYS:HE3	2.02	0.59
22:DA:2617:U:C2'	22:DA:2618:G:H5'	2.32	0.59
28:DG:143:VAL:HA	28:DG:146:ASP:OD2	2.03	0.59
35:DN:5:LYS:HG2	35:DN:6:SER:H	1.66	0.59
37:DP:25:VAL:HA	37:DP:85:VAL:HA	1.84	0.59
38:DQ:48:ASP:HA	38:DQ:51:GLN:HB2	1.84	0.59
44:DW:67:LYS:HB3	44:DW:80:SER:HB2	1.84	0.59
1:AA:1053:G:O6	1:AA:1199:U:H2'	2.01	0.59
10:AJ:14:ASP:HB3	10:AJ:17:LEU:HB3	1.84	0.59
13:AM:19:THR:HA	13:AM:24:VAL:HG23	1.84	0.59
22:BA:544:C:N3	22:BA:548:G:OP1	2.35	0.59
22:BA:1853:A:N1	22:BA:2087:G:H1'	2.17	0.59
22:BA:2148:G:C2'	22:BA:2149:U:O4'	2.50	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:189:THR:HG1	26:BE:191:ASP:HB3	1.66	0.59
28:BG:109:SER:O	28:BG:110:HIS:HB3	2.01	0.59
30:BI:105:LEU:HA	30:BI:108:ILE:HB	1.84	0.59
31:BJ:3:THR:HG21	38:BQ:60:TRP:NE1	2.15	0.59
40:BS:43:ALA:HA	40:BS:46:LEU:HD12	1.83	0.59
44:BW:22:VAL:HG13	44:BW:25:PHE:CE2	2.37	0.59
53:CA:66:A:N6	53:CA:67:C:N4	2.50	0.59
53:CA:1093:A:C5	53:CA:1095:U:O4'	2.55	0.59
53:CA:1151:A:HO2'	53:CA:1152:A:H8	0.75	0.59
5:CE:132:PRO:O	5:CE:136:VAL:HG12	2.01	0.59
55:CM:21:ILE:HB	55:CM:24:VAL:HG23	1.84	0.59
21:CU:35:GLU:OE2	21:CU:35:GLU:HA	2.01	0.59
22:DA:28:A:C6	22:DA:29:U:O2	2.55	0.59
22:DA:477:A:H2'	22:DA:478:A:H8	1.67	0.59
22:DA:612:G:C2	22:DA:614:A:H1'	2.38	0.59
22:DA:1491:G:O6	22:DA:1500:G:C2	2.56	0.59
22:DA:1812:U:H2'	22:DA:1813:G:H8	1.66	0.59
22:DA:1865:U:C4	22:DA:1875:G:C2	2.90	0.59
22:DA:2015:A:C4	48:D0:2:VAL:HG11	2.37	0.59
22:DA:2402:U:O2'	22:DA:2403:C:OP1	2.20	0.59
24:DC:173:LEU:HD22	24:DC:173:LEU:H	1.66	0.59
28:DG:106:LEU:HB2	28:DG:108:PHE:HE1	1.65	0.59
29:DH:32:PRO:HA	45:DX:38:TRP:CD1	2.37	0.59
34:DM:66:ARG:CZ	34:DM:101:VAL:HG11	2.32	0.59
38:DQ:79:ILE:HD13	38:DQ:79:ILE:C	2.23	0.59
42:DU:73:ASN:HB3	42:DU:95:PHE:HE2	1.67	0.59
1:AA:507:C:C3'	1:AA:508:U:H5"	2.28	0.59
1:AA:569:C:H5"	1:AA:570:G:OP1	2.01	0.59
1:AA:1002:G:H2'	1:AA:1003:G:O4'	2.01	0.59
1:AA:1142:G:C2	1:AA:1143:G:H1'	2.38	0.59
4:AD:133:SER:O	4:AD:134:TYR:C	2.38	0.59
22:BA:666:A:H2'	22:BA:667:U:H6	1.66	0.59
22:BA:1392:A:H61	41:BT:18:GLU:CD	2.05	0.59
22:BA:1654:A:O2'	25:BD:118:PHE:CD1	2.46	0.59
22:BA:1847:A:N3	22:BA:1847:A:C2'	2.65	0.59
22:BA:2897:U:H2'	22:BA:2898:U:H6	1.67	0.59
25:BD:56:LYS:HD3	25:BD:58:ASN:HD21	1.68	0.59
36:BO:75:GLY:HA3	36:BO:106:LEU:HA	1.84	0.59
38:BQ:82:LEU:CD2	38:BQ:112:ALA:HB2	2.32	0.59
41:BT:38:ALA:HB1	41:BT:43:ILE:HG22	1.85	0.59
44:BW:40:ARG:HB2	44:BW:56:HIS:ND1	2.17	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:219:U:H2'	53:CA:220:G:H8	1.67	0.59
53:CA:858:G:O2'	53:CA:859:G:H5'	2.03	0.59
53:CA:888:G:H3'	53:CA:889:A:H5"	1.84	0.59
3:CC:39:ARG:HE	3:CC:54:ILE:HG23	1.67	0.59
4:CD:32:LYS:HB3	4:CD:35:GLN:OE1	2.01	0.59
54:CG:75:LYS:HE3	54:CG:76:SER:H	1.67	0.59
14:CN:66:THR:HG23	14:CN:82:LYS:HE3	1.85	0.59
22:DA:126:A:O5'	50:D2:19:ARG:HG3	2.02	0.59
22:DA:413:C:H4'	22:DA:1880:U:H4'	1.84	0.59
22:DA:503:A:C4	22:DA:506:G:N7	2.70	0.59
22:DA:878:A:H4'	22:DA:898:C:H42	1.67	0.59
22:DA:2053:G:H2'	22:DA:2054:A:O4'	2.03	0.59
22:DA:2135:A:H3'	22:DA:2136:G:H5"	1.84	0.59
57:DB:8:C:O2'	36:DO:40:ILE:HD13	2.03	0.59
57:DB:42:C:O2'	57:DB:43:C:C5'	2.49	0.59
25:DD:38:LYS:HB3	25:DD:38:LYS:HZ3	1.67	0.59
35:DN:1:MET:O	35:DN:2:ARG:HB2	2.02	0.59
38:DQ:57:ARG:C	38:DQ:59:LEU:H	2.06	0.59
42:DU:35:VAL:HB	42:DU:38:ILE:HD13	1.85	0.59
45:DX:53:LYS:HA	45:DX:56:ARG:CB	2.24	0.59
1:AA:1247:U:O2'	1:AA:1248:A:H5'	2.03	0.59
6:AF:81:ASN:HB3	6:AF:84:VAL:CG1	2.32	0.59
15:AO:77:TYR:OH	15:AO:87:ARG:HG2	2.02	0.59
22:BA:946:C:O2'	22:BA:947:A:H5'	2.02	0.59
22:BA:1269:A:H8	22:BA:1269:A:O5'	1.84	0.59
22:BA:1652:A:H62	35:BN:11:ASN:HD21	1.51	0.59
22:BA:2887:A:H5'	22:BA:2888:C:OP2	2.02	0.59
31:BJ:44:TYR:CD1	38:BQ:59:LEU:HD11	2.38	0.59
37:BP:56:SER:O	37:BP:75:THR:HG23	2.02	0.59
40:BS:73:LYS:HE3	40:BS:74:ILE:N	2.18	0.59
43:BV:6:ALA:HB2	43:BV:42:LEU:HD22	1.85	0.59
44:BW:14:ASP:O	44:BW:15:SER:HB2	2.01	0.59
44:BW:30:VAL:HA	44:BW:60:ALA:HB3	1.84	0.59
45:BX:38:TRP:HB2	45:BX:45:PHE:CE2	2.35	0.59
53:CA:175:C:O2	53:CA:1447:A:C2	2.56	0.59
53:CA:981:U:OP2	53:CA:982:U:H3'	2.01	0.59
53:CA:1217:C:OP1	14:CN:8:ARG:HB2	2.01	0.59
5:CE:98:ALA:HB2	5:CE:123:LEU:HG	1.84	0.59
11:CK:126:ARG:N	21:CU:33:ARG:HE	2.01	0.59
12:CL:2:THR:HB	12:CL:5:GLN:H	1.67	0.59
22:DA:68:G:N2	22:DA:74:A:OP2	2.35	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:128:C:H2'	22:DA:129:C:C5	2.38	0.59
22:DA:186:G:N2	22:DA:211:C:C2	2.70	0.59
22:DA:511:U:H5"	22:DA:512:G:OP2	2.03	0.59
22:DA:2239:G:OP2	62:DA:3528:HOH:O	2.17	0.59
22:DA:2448:A:HO2'	22:DA:2449:U:H5	1.50	0.59
22:DA:2461:A:H1'	22:DA:2492:U:C2	2.37	0.59
25:DD:28:GLU:OE2	25:DD:30:GLU:HG3	2.02	0.59
25:DD:148:GLN:OE1	25:DD:152:PRO:HG2	2.02	0.59
26:DE:122:GLU:HA	26:DE:190:ALA:HB2	1.84	0.59
43:DV:43:ASP:HB3	43:DV:46:LYS:HB2	1.85	0.59
1:AA:1136:C:O2	1:AA:1136:C:H2'	2.03	0.59
3:AC:179:ALA:HB1	3:AC:202:PHE:HE1	1.67	0.59
6:AF:93:LYS:O	6:AF:94:HIS:HB2	2.02	0.59
10:AJ:52:LEU:HD23	10:AJ:62:ARG:CG	2.33	0.59
12:AL:33:CYS:H	12:AL:54:VAL:HG13	1.68	0.59
20:AT:73:ARG:O	20:AT:76:ALA:HB3	2.03	0.59
21:AU:52:VAL:HG13	21:AU:53:LYS:N	2.10	0.59
22:BA:528:A:H2	22:BA:2043:C:H5'	1.68	0.59
22:BA:1509:A:O2'	22:BA:1510:G:OP2	2.18	0.59
22:BA:2393:U:H5'	33:BL:60:ARG:O	2.02	0.59
22:BA:2808:G:N2	22:BA:2891:U:C6	2.71	0.59
24:BC:75:ALA:HB1	24:BC:93:VAL:HG13	1.84	0.59
25:BD:107:VAL:HG13	25:BD:203:VAL:HG23	1.83	0.59
40:BS:72:THR:O	40:BS:73:LYS:HD2	2.01	0.59
53:CA:238:A:C2'	53:CA:239:U:H5"	2.31	0.59
53:CA:898:G:N2	53:CA:901:A:OP2	2.34	0.59
53:CA:1256:A:N1	53:CA:1278:G:H2'	2.17	0.59
12:CL:42:LYS:HD3	12:CL:43:LYS:NZ	2.18	0.59
22:DA:729:G:C6	24:DC:206:LYS:HB2	2.38	0.59
22:DA:769:U:HO2'	22:DA:1379:U:H6	1.50	0.59
22:DA:873:C:H4'	34:DM:64:TRP:CD1	2.37	0.59
22:DA:1240:U:O2'	22:DA:1241:A:H5"	2.01	0.59
22:DA:1252:G:N3	38:DQ:32:ARG:HG2	2.18	0.59
22:DA:2255:G:H2'	22:DA:2256:G:O4'	2.03	0.59
22:DA:2543:G:H2'	22:DA:2544:G:C8	2.36	0.59
57:DB:69:G:H3'	57:DB:70:C:C6	2.38	0.59
25:DD:112:THR:HG22	25:DD:113:SER:N	2.18	0.59
25:DD:208:LYS:O	25:DD:209:ALA:HB2	2.02	0.59
58:DF:30:VAL:HA	58:DF:157:THR:HG22	1.84	0.59
29:DH:12:LEU:HD12	29:DH:12:LEU:O	2.03	0.59
31:DJ:111:LYS:HB2	31:DJ:115:GLY:CA	2.32	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DP:50:ARG:HA	37:DP:57:ALA:H	1.68	0.59
1:AA:116:A:H61	1:AA:313:A:H1'	1.68	0.59
1:AA:340:U:H2'	1:AA:341:C:H6	1.68	0.59
1:AA:373:A:H2'	1:AA:374:A:H8	1.68	0.59
1:AA:1004:A:H2'	1:AA:1005:A:O4'	2.02	0.59
8:AH:104:SER:O	8:AH:122:GLY:HA3	2.03	0.59
21:AU:33:ARG:HE	21:AU:34:ARG:CG	2.16	0.59
22:BA:527:C:H4'	22:BA:528:A:O5'	2.02	0.59
22:BA:594:U:H2'	22:BA:595:C:H6	1.64	0.59
22:BA:2552:U:H2'	22:BA:2554:U:OP2	2.03	0.59
24:BC:245:THR:OG1	24:BC:249:VAL:HB	2.03	0.59
26:BE:169:VAL:O	26:BE:170:ARG:HD2	2.03	0.59
28:BG:163:TYR:O	28:BG:164:ALA:HB2	2.03	0.59
31:BJ:54:ILE:HD11	31:BJ:56:VAL:HG23	1.83	0.59
38:BQ:85:ALA:O	38:BQ:87:VAL:O	2.20	0.59
52:B4:15:LYS:O	52:B4:16:ILE:O	2.20	0.59
52:B4:36:ARG:HG2	52:B4:37:GLN:N	2.12	0.59
53:CA:1239:A:H62	53:CA:1299:A:N6	2.00	0.59
2:CB:66:ILE:H	2:CB:88:GLN:HB3	1.67	0.59
4:CD:89:LEU:CD2	4:CD:199:ILE:HD11	2.33	0.59
11:CK:121:ARG:HH21	21:CU:35:GLU:HB2	1.68	0.59
22:DA:323:C:H6	26:DE:165:HIS:CE1	2.21	0.59
22:DA:574:A:H2	22:DA:2032:G:O2'	1.85	0.59
22:DA:852:U:H2'	22:DA:853:C:C6	2.37	0.59
22:DA:871:U:OP1	34:DM:4:PRO:HA	2.03	0.59
22:DA:923:G:H1'	44:DW:23:LYS:NZ	2.17	0.59
22:DA:1140:C:OP2	31:DJ:68:LYS:HE3	2.03	0.59
22:DA:2339:C:H2'	22:DA:2340:A:H8	1.67	0.59
22:DA:2592:G:C5	22:DA:2593:U:C5	2.91	0.59
22:DA:2699:C:H2'	22:DA:2700:A:C8	2.38	0.59
22:DA:2825:G:H3'	22:DA:2826:A:H8	1.66	0.59
22:DA:2880:C:H1'	35:DN:93:GLY:H	1.67	0.59
58:DF:177:ARG:CD	58:DF:178:LYS:H	2.14	0.59
39:DR:2:TYR:CD2	39:DR:42:ALA:HB2	2.37	0.59
40:DS:6:LYS:NZ	40:DS:104:THR:HG23	2.18	0.59
47:DZ:7:THR:O	47:DZ:54:VAL:HA	2.02	0.59
1:AA:284:C:H2'	1:AA:285:C:H6	1.67	0.59
1:AA:862:C:C2'	1:AA:863:U:H5'	2.32	0.59
2:AB:53:LEU:HD21	2:AB:212:TYR:OH	2.01	0.59
2:AB:148:GLY:O	2:AB:151:LYS:HG2	2.03	0.59
4:AD:11:SER:HA	4:AD:18:LEU:HD12	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:68:VAL:HG12	7:AG:102:TRP:HE3	1.68	0.59
12:AL:86:VAL:HG11	12:AL:89:LEU:HD23	1.83	0.59
21:AU:39:LYS:N	21:AU:40:PRO:HD2	2.18	0.59
22:BA:1728:C:O2'	22:BA:1729:U:C6	2.55	0.59
22:BA:2377:A:O2'	22:BA:2378:A:H5'	2.03	0.59
22:BA:2887:A:H2'	22:BA:2887:A:N3	2.16	0.59
29:BH:14:SER:OG	29:BH:17:ASP:HB2	2.03	0.59
29:BH:31:VAL:O	29:BH:32:PRO:C	2.41	0.59
30:BI:120:ASP:HB3	30:BI:123:ALA:HB3	1.83	0.59
32:BK:2:ILE:HG21	32:BK:39:ILE:HD12	1.85	0.59
32:BK:26:GLY:HA3	32:BK:30:ARG:HE	1.67	0.59
33:BL:91:ASP:HB2	33:BL:94:THR:HB	1.85	0.59
39:BR:60:LYS:H	39:BR:100:GLY:HA3	1.68	0.59
53:CA:332:G:OP2	20:CT:4:LYS:HG3	2.02	0.59
53:CA:415:A:H3'	53:CA:416:G:H8	1.66	0.59
53:CA:644:U:H2'	53:CA:645:G:C8	2.38	0.59
53:CA:1206:G:C6	53:CA:1207:G:C5	2.91	0.59
2:CB:26:MET:HG2	2:CB:188:THR:HA	1.85	0.59
15:CO:23:SER:O	15:CO:26:VAL:HB	2.02	0.59
22:DA:1079:C:H41	22:DA:1088:A:C5'	2.08	0.59
22:DA:1416:G:C4	22:DA:1417:C:C5	2.91	0.59
22:DA:1597:A:O3'	22:DA:1598:A:H8	1.85	0.59
22:DA:1957:C:H5'	22:DA:1984:G:O2'	2.03	0.59
31:DJ:94:ALA:O	31:DJ:95:ARG:HB3	2.03	0.59
37:DP:22:GLY:HA3	37:DP:91:VAL:HG21	1.84	0.59
39:DR:87:GLN:HG2	39:DR:88:GLY:N	2.18	0.59
52:D4:36:ARG:HG2	52:D4:37:GLN:N	2.18	0.59
7:AG:92:PRO:O	7:AG:93:VAL:HG13	2.02	0.59
22:BA:34:U:C1'	22:BA:35:G:OP1	2.51	0.59
22:BA:494:G:H21	40:BS:57:ASN:HD21	1.51	0.59
22:BA:514:A:H1'	22:BA:581:C:O2'	2.02	0.59
22:BA:2786:U:H2'	22:BA:2787:C:H6	1.68	0.59
24:BC:106:PRO:CA	24:BC:141:HIS:CE1	2.86	0.59
25:BD:110:THR:CG2	25:BD:171:THR:HG22	2.29	0.59
26:BE:131:THR:CG2	26:BE:160:ALA:HA	2.32	0.59
27:BF:131:VAL:CG2	27:BF:151:LEU:H	2.16	0.59
27:BF:134:GLN:HE22	27:BF:150:GLY:H	1.49	0.59
39:BR:39:LEU:HB3	39:BR:49:ILE:HD13	1.84	0.59
49:B1:3:GLY:O	49:B1:4:ILE:HG12	2.02	0.59
50:B2:18:PHE:HA	50:B2:43:THR:HG21	1.83	0.59
53:CA:177:G:O2'	53:CA:1448:C:H5"	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1159:U:O4'	53:CA:1182:G:N2	2.36	0.59
2:CB:81:ASP:CG	2:CB:82:ALA:H	2.06	0.59
4:CD:191:SER:O	4:CD:192:ALA:HB2	2.03	0.59
12:CL:49:ARG:HG2	12:CL:89:LEU:HD21	1.84	0.59
55:CM:78:ARG:NH2	55:CM:79:LEU:HD23	2.18	0.59
21:CU:38:GLU:HA	21:CU:41:THR:OG1	2.02	0.59
22:DA:85:G:O2'	22:DA:86:G:H8	1.85	0.59
22:DA:303:G:H2'	22:DA:304:U:C6	2.38	0.59
22:DA:614:A:H4'	22:DA:616:A:N6	2.18	0.59
22:DA:661:A:H2'	22:DA:662:G:O4'	2.03	0.59
22:DA:746:U:H5"	22:DA:748:G:H5'	1.83	0.59
22:DA:851:C:H2'	22:DA:852:U:C6	2.37	0.59
22:DA:1161:C:H2'	22:DA:1162:G:H8	1.68	0.59
22:DA:1249:U:OP1	22:DA:1249:U:H3'	2.03	0.59
22:DA:1968:G:H5'	62:DA:3481:HOH:O	2.03	0.59
29:DH:84:ALA:HA	29:DH:89:LYS:O	2.01	0.59
31:DJ:4:PHE:HB3	38:DQ:63:ARG:HH22	1.68	0.59
1:AA:322:C:O2'	20:AT:17:ARG:HG2	2.03	0.58
1:AA:480:U:H5"	1:AA:481:G:OP2	2.03	0.58
1:AA:499:A:H1'	1:AA:500:G:C8	2.37	0.58
5:AE:76:ASN:HB3	5:AE:81:GLN:HG3	1.84	0.58
22:BA:958:U:H5'	22:BA:958:U:C6	2.36	0.58
22:BA:2086:U:H2'	22:BA:2087:G:C8	2.38	0.58
22:BA:2149:U:HO2'	22:BA:2150:C:C4'	2.15	0.58
24:BC:8:THR:O	24:BC:9:SER:HB3	2.02	0.58
25:BD:113:SER:O	25:BD:167:ASN:HA	2.03	0.58
26:BE:175:ILE:HD11	26:BE:180:LEU:HD11	1.84	0.58
28:BG:33:THR:C	28:BG:34:ARG:HD3	2.23	0.58
41:BT:32:LEU:N	41:BT:32:LEU:HD23	2.18	0.58
51:B3:28:LEU:HD11	51:B3:40:LYS:HB3	1.85	0.58
53:CA:327:A:O2'	53:CA:328:C:H6	1.86	0.58
53:CA:1053:G:N7	53:CA:1200:C:H5"	2.18	0.58
53:CA:1240:U:O2'	54:CG:37:THR:HB	2.03	0.58
3:CC:83:VAL:HA	3:CC:86:LEU:HD12	1.84	0.58
55:CM:36:ALA:HB2	55:CM:55:LEU:HD21	1.84	0.58
55:CM:81:ASP:HB3	55:CM:82:LEU:HD12	1.85	0.58
14:CN:8:ARG:HD2	14:CN:12:ARG:CZ	2.32	0.58
56:CP:12:LYS:HG2	56:CP:13:LYS:HG2	1.85	0.58
22:DA:321:U:H5'	26:DE:129:PRO:HB3	1.85	0.58
22:DA:922:C:H2'	22:DA:923:G:C8	2.37	0.58
22:DA:1342:A:C4	22:DA:1345:C:N4	2.71	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1635:A:O2'	22:DA:1636:U:H5'	2.03	0.58
22:DA:2337:G:C3'	22:DA:2338:C:H5'	2.32	0.58
22:DA:2360:G:H1'	33:DL:60:ARG:HH21	1.67	0.58
25:DD:4:LEU:HD23	25:DD:101:PHE:CE1	2.37	0.58
25:DD:114:LYS:HB2	25:DD:116:LYS:HE3	1.85	0.58
26:DE:147:LEU:O	26:DE:148:ILE:HB	2.02	0.58
31:DJ:37:ARG:HG3	31:DJ:118:MET:SD	2.43	0.58
33:DL:117:THR:HG22	33:DL:118:THR:N	2.16	0.58
39:DR:43:ASN:ND2	39:DR:44:GLY:H	1.99	0.58
44:DW:37:VAL:CG1	44:DW:55:ASP:HB2	2.28	0.58
1:AA:82:G:N2	1:AA:84:U:N3	2.51	0.58
1:AA:978:A:HO2'	1:AA:1322:C:H5	1.44	0.58
1:AA:1103:C:H2'	1:AA:1104:G:O4'	2.03	0.58
2:AB:71:THR:HG22	2:AB:72:LYS:N	2.18	0.58
5:AE:158:LYS:HE2	8:AH:63:LYS:HZ1	1.68	0.58
12:AL:109:ARG:NH2	12:AL:116:TYR:CE2	2.71	0.58
22:BA:229:C:H2'	22:BA:230:G:O4'	2.03	0.58
22:BA:470:A:H61	41:BT:72:GLN:HE22	1.52	0.58
22:BA:1656:C:OP1	25:BD:141:ARG:NH1	2.36	0.58
22:BA:2358:A:N6	33:BL:54:GLN:HE22	1.97	0.58
22:BA:2553:G:N1	22:BA:2554:U:O2	2.35	0.58
22:BA:2641:G:OP1	31:BJ:76:HIS:HE1	1.86	0.58
24:BC:255:LYS:O	24:BC:257:ARG:N	2.35	0.58
25:BD:45:TYR:N	25:BD:45:TYR:HD1	1.94	0.58
27:BF:114:ARG:HD2	27:BF:114:ARG:H	1.69	0.58
31:BJ:3:THR:HB	31:BJ:44:TYR:OH	2.03	0.58
31:BJ:43:GLU:O	31:BJ:44:TYR:C	2.41	0.58
32:BK:97:THR:O	32:BK:118:LEU:HD21	2.03	0.58
33:BL:55:MET:HE2	33:BL:56:PRO:HD3	1.84	0.58
35:BN:73:ASN:HD22	35:BN:76:VAL:HG11	1.68	0.58
36:BO:30:ARG:HG3	36:BO:102:ARG:HH11	1.68	0.58
53:CA:668:G:O2'	53:CA:669:G:H5'	2.03	0.58
53:CA:765:G:C4	53:CA:812:G:C6	2.91	0.58
53:CA:1167:A:C2'	53:CA:1168:U:OP1	2.51	0.58
53:CA:1451:U:O2'	53:CA:1452:C:OP1	2.15	0.58
4:CD:2:ARG:HH21	4:CD:114:ARG:CD	1.98	0.58
12:CL:41:PRO:HD2	12:CL:47:ALA:O	2.02	0.58
17:CQ:25:GLU:CG	17:CQ:40:THR:HG22	2.34	0.58
22:DA:85:G:O2'	22:DA:86:G:H5"	2.03	0.58
22:DA:120:U:O4	22:DA:177:G:C8	2.56	0.58
22:DA:353:C:N4	22:DA:354:A:N6	2.50	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:720:U:H2'	22:DA:721:A:C8	2.39	0.58
22:DA:1682:G:H2'	22:DA:1683:U:C6	2.38	0.58
22:DA:1956:U:O2	22:DA:1985:C:H4'	2.03	0.58
22:DA:2056:G:N2	48:D0:1:ALA:H3	2.01	0.58
57:DB:15:A:C4	57:DB:109:A:C6	2.90	0.58
26:DE:126:VAL:HG22	26:DE:127:GLU:OE2	2.03	0.58
28:DG:28:LYS:HG3	28:DG:79:THR:HG22	1.85	0.58
29:DH:77:THR:HG22	29:DH:143:ILE:HD11	1.85	0.58
50:D2:45:SER:C	50:D2:46:LYS:HD2	2.22	0.58
4:AD:53:GLN:HE21	4:AD:202:LEU:HA	1.67	0.58
4:AD:191:SER:OG	4:AD:192:ALA:N	2.31	0.58
9:AI:46:VAL:HA	9:AI:49:GLN:HG3	1.84	0.58
10:AJ:14:ASP:CB	10:AJ:17:LEU:HB3	2.33	0.58
12:AL:64:SER:OG	12:AL:96:THR:HG23	2.03	0.58
12:AL:115:LYS:O	12:AL:116:TYR:HB2	2.03	0.58
22:BA:483:A:H2'	22:BA:484:C:H5'	1.85	0.58
22:BA:954:G:OP2	34:BM:16:ARG:NH2	2.36	0.58
22:BA:2149:U:O2'	22:BA:2150:C:O4'	2.21	0.58
23:BB:46:A:H2'	23:BB:47:C:H6	1.68	0.58
26:BE:160:ALA:O	26:BE:161:ALA:HB3	2.03	0.58
29:BH:62:LEU:HD12	29:BH:63:ALA:N	2.18	0.58
44:BW:72:GLY:N	44:BW:73:PRO:HD2	2.17	0.58
53:CA:791:G:C2'	53:CA:792:A:H5'	2.33	0.58
53:CA:859:G:H2'	53:CA:860:A:C8	2.38	0.58
53:CA:920:U:C2	53:CA:921:U:C5	2.91	0.58
53:CA:1297:G:C8	53:CA:1297:G:OP2	2.56	0.58
53:CA:1348:U:H4'	9:CI:121:ARG:HG3	1.84	0.58
18:CR:59:LYS:O	18:CR:63:TYR:HD1	1.85	0.58
21:CU:53:LYS:HB2	21:CU:53:LYS:NZ	2.18	0.58
22:DA:49:A:C4'	22:DA:50:U:O5'	2.44	0.58
22:DA:475:C:H4'	22:DA:509:C:O2'	2.03	0.58
22:DA:553:G:H2'	22:DA:554:U:O4'	2.03	0.58
22:DA:804:A:H2'	22:DA:806:C:N4	2.16	0.58
22:DA:995:C:O2'	38:DQ:93:ILE:HD12	2.04	0.58
22:DA:1393:A:N6	41:DT:19:LYS:HB2	2.18	0.58
22:DA:1438:U:O2'	22:DA:1439:A:H5'	2.03	0.58
22:DA:1515:A:H2'	22:DA:1516:G:O4'	2.04	0.58
22:DA:2387:U:H1'	44:DW:38:ARG:NH1	2.17	0.58
22:DA:2842:G:H2'	22:DA:2843:G:O4'	2.03	0.58
24:DC:171:VAL:N	24:DC:185:ALA:HB2	2.17	0.58
28:DG:88:LEU:HD13	28:DG:93:TYR:HB3	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DH:84:ALA:N	29:DH:148:ALA:HA	2.18	0.58
33:DL:88:GLY:O	33:DL:89:VAL:HG12	2.02	0.58
35:DN:33:ILE:HA	35:DN:114:GLU:HB2	1.86	0.58
38:DQ:6:GLY:C	38:DQ:8:ILE:H	2.05	0.58
40:DS:2:GLU:HA	40:DS:2:GLU:OE2	2.03	0.58
49:D1:47:ILE:H	49:D1:47:ILE:HD12	1.69	0.58
1:AA:138:G:O2'	1:AA:139:A:H5'	2.04	0.58
1:AA:1387:G:H2'	1:AA:1388:C:C6	2.39	0.58
1:AA:1468:A:C3'	1:AA:1469:C:H5"	2.33	0.58
2:AB:13:VAL:CG2	2:AB:207:ARG:HH22	2.16	0.58
13:AM:89:ARG:HH11	13:AM:94:LEU:HB3	1.68	0.58
22:BA:973:A:O4'	22:BA:1188:U:C6	2.56	0.58
22:BA:1026:G:H2'	22:BA:1027:A:C8	2.38	0.58
22:BA:1996:C:OP1	32:BK:31:ARG:NE	2.35	0.58
22:BA:2394:C:OP2	51:B3:29:ARG:HD3	2.03	0.58
26:BE:151:GLY:CA	26:BE:192:ALA:HB2	2.33	0.58
27:BF:129:MET:SD	27:BF:153:ILE:HD11	2.44	0.58
28:BG:54:ARG:HD3	28:BG:54:ARG:C	2.23	0.58
31:BJ:65:THR:HG22	31:BJ:68:LYS:CE	2.34	0.58
39:BR:64:VAL:O	39:BR:65:ALA:HB3	2.04	0.58
44:BW:24:ARG:HD3	44:BW:65:LYS:CE	2.34	0.58
53:CA:247:G:C6	53:CA:278:G:N1	2.72	0.58
53:CA:1316:G:N2	53:CA:1318:A:H3'	2.17	0.58
2:CB:125:PHE:HD1	2:CB:137:THR:HG22	1.68	0.58
6:CF:41:ASP:OD2	6:CF:58:HIS:CE1	2.57	0.58
9:CI:114:LYS:HB2	9:CI:117:LEU:HD12	1.85	0.58
14:CN:46:LYS:HE3	19:CS:10:ILE:HB	1.85	0.58
15:CO:66:LEU:HB3	15:CO:77:TYR:HE1	1.67	0.58
19:CS:45:GLY:H	19:CS:61:VAL:HB	1.68	0.58
22:DA:125:A:H3'	50:D2:19:ARG:CD	2.33	0.58
22:DA:301:G:H3'	42:DU:81:ARG:HH12	1.66	0.58
22:DA:308:G:C6	22:DA:309:A:C6	2.92	0.58
22:DA:674:G:H4'	26:DE:69:ARG:HB3	1.84	0.58
22:DA:976:G:H5'	22:DA:1156:A:C6	2.38	0.58
22:DA:1400:U:O2'	22:DA:1401:G:O4'	2.21	0.58
22:DA:1989:G:H2'	22:DA:1990:C:H5'	1.85	0.58
22:DA:2197:U:C5	22:DA:2224:G:C5	2.92	0.58
22:DA:2287:A:O2'	22:DA:2288:A:H2'	2.03	0.58
22:DA:2629:U:C5'	22:DA:2630:G:OP1	2.51	0.58
57:DB:54:G:H21	58:DF:25:MET:HE2	1.67	0.58
24:DC:239:PHE:HD1	24:DC:240:GLY:H	1.50	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DN:63:ARG:O	35:DN:67:PHE:HB2	2.03	0.58
1:AA:148:G:N3	1:AA:1446:A:H2	2.02	0.58
1:AA:374:A:H5"	1:AA:452:A:C2	2.39	0.58
1:AA:769:G:H4'	1:AA:1513:A:H4'	1.85	0.58
6:AF:4:TYR:O	6:AF:63:ASN:HA	2.02	0.58
7:AG:4:ARG:HA	7:AG:4:ARG:HE	1.68	0.58
7:AG:24:LYS:O	7:AG:28:ILE:HG12	2.04	0.58
22:BA:358:U:H2'	22:BA:359:G:O4'	2.04	0.58
22:BA:1061:U:H1'	22:BA:1070:A:O4'	2.03	0.58
22:BA:2358:A:H61	33:BL:54:GLN:NE2	1.97	0.58
24:BC:103:ILE:O	24:BC:104:LEU:O	2.21	0.58
26:BE:152:GLU:O	26:BE:153:LEU:HG	2.03	0.58
28:BG:84:LYS:HZ1	28:BG:133:LYS:HE3	1.68	0.58
32:BK:18:ARG:HB2	32:BK:45:GLU:CG	2.34	0.58
33:BL:94:THR:HG22	33:BL:95:LEU:N	2.19	0.58
36:BO:79:ALA:HB2	36:BO:110:ALA:HA	1.86	0.58
37:BP:25:VAL:CG1	37:BP:46:VAL:HG23	2.31	0.58
42:BU:6:ARG:O	42:BU:24:VAL:HB	2.03	0.58
42:BU:82:VAL:O	42:BU:94:PHE:O	2.21	0.58
53:CA:162:A:H2'	53:CA:163:C:O4'	2.04	0.58
53:CA:209:U:C5'	53:CA:210:C:OP2	2.45	0.58
53:CA:747:A:H2'	53:CA:748:G:O4'	2.02	0.58
53:CA:1288:A:N6	53:CA:1289:A:N6	2.52	0.58
53:CA:1380:U:H4'	53:CA:1381:U:OP1	2.03	0.58
53:CA:1408:A:C2	53:CA:1492:A:N6	2.71	0.58
4:CD:24:VAL:HG23	4:CD:25:ARG:N	2.17	0.58
22:DA:240:C:C3'	22:DA:241:A:H5"	2.28	0.58
22:DA:241:A:C8	22:DA:243:U:N3	2.72	0.58
22:DA:590:A:H2'	22:DA:591:U:C6	2.35	0.58
22:DA:615:U:O4	26:DE:39:ALA:HB2	2.03	0.58
22:DA:1709:U:H2'	22:DA:1710:G:C8	2.39	0.58
25:DD:110:THR:OG1	25:DD:171:THR:HG22	2.04	0.58
37:DP:22:GLY:HA3	37:DP:91:VAL:CG2	2.34	0.58
38:DQ:71:ASN:HD21	38:DQ:106:THR:HG23	1.67	0.58
40:DS:86:MET:SD	40:DS:87:PRO:HD2	2.44	0.58
1:AA:918:A:H2'	1:AA:919:A:C8	2.38	0.58
5:AE:148:SER:HB2	5:AE:151:MET:HB2	1.84	0.58
20:AT:67:HIS:HB3	20:AT:68:LYS:NZ	2.19	0.58
22:BA:855:G:N3	44:BW:23:LYS:CD	2.63	0.58
22:BA:1509:A:O2'	22:BA:1510:G:P	2.61	0.58
22:BA:1870:C:H2'	22:BA:1871:A:C2	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2207:C:H2'	22:BA:2208:C:H6	1.69	0.58
22:BA:2680:U:OP2	25:BD:114:LYS:CE	2.51	0.58
22:BA:2800:A:C4'	22:BA:2801:G:OP2	2.26	0.58
27:BF:134:GLN:O	27:BF:136:ILE:N	2.29	0.58
34:BM:40:ARG:HB2	34:BM:93:VAL:CG2	2.33	0.58
39:BR:24:LYS:CA	39:BR:94:THR:HG23	2.29	0.58
43:BV:40:ILE:HG22	43:BV:41:GLU:N	2.18	0.58
44:BW:28:GLU:CG	44:BW:29:SER:H	2.16	0.58
44:BW:39:GLN:HG2	44:BW:41:GLY:N	2.14	0.58
47:BZ:23:LEU:HD21	47:BZ:53:MET:CE	2.33	0.58
53:CA:461:A:P	53:CA:462:G:OP2	2.61	0.58
53:CA:1226:C:H41	55:CM:102:LYS:HA	1.68	0.58
53:CA:1350:A:H2	54:CG:33:GLY:HA3	1.68	0.58
9:CI:40:ARG:H	9:CI:44:ARG:HD3	1.69	0.58
22:DA:70:G:H3'	22:DA:113:U:H4'	1.83	0.58
22:DA:445:C:O2'	22:DA:449:A:N3	2.35	0.58
22:DA:1335:C:H2'	22:DA:1336:A:C1'	2.34	0.58
22:DA:1338:G:H4'	41:DT:18:GLU:OE2	2.04	0.58
22:DA:1351:C:H2'	22:DA:1352:U:O4'	2.03	0.58
22:DA:1721:G:H1'	22:DA:1739:A:N6	2.19	0.58
22:DA:1954:G:HO2'	22:DA:1955:U:P	2.20	0.58
41:DT:10:VAL:HG23	41:DT:11:LEU:HD12	1.85	0.58
51:D3:41:ARG:HG3	51:D3:41:ARG:HH21	1.69	0.58
1:AA:980:C:OP2	62:AA:1835:HOH:O	2.17	0.58
1:AA:1356:G:H2'	1:AA:1357:A:H8	1.66	0.58
4:AD:29:THR:HG22	4:AD:30:LYS:HD3	1.86	0.58
9:AI:3:ASN:ND2	9:AI:4:GLN:H	2.01	0.58
10:AJ:71:LEU:O	10:AJ:72:ARG:HD3	2.03	0.58
14:AN:47:LEU:O	14:AN:47:LEU:HD23	2.04	0.58
22:BA:263:G:H1'	22:BA:430:A:N3	2.19	0.58
22:BA:1027:A:H8	22:BA:1027:A:O5'	1.85	0.58
22:BA:1818:U:OP2	24:BC:155:ARG:NH1	2.36	0.58
22:BA:2134:A:N6	22:BA:2157:G:C5	2.72	0.58
23:BB:34:A:H2'	23:BB:35:C:OP2	2.03	0.58
26:BE:131:THR:HG22	26:BE:161:ALA:H	1.68	0.58
34:BM:2:LEU:HD23	34:BM:69:PRO:CD	2.33	0.58
36:BO:55:GLU:OE1	36:BO:58:ILE:HD11	2.04	0.58
37:BP:24:THR:HG22	37:BP:86:LYS:HB2	1.86	0.58
44:BW:13:ARG:O	44:BW:14:ASP:C	2.42	0.58
51:B3:26:ALA:O	51:B3:27:ASN:HB2	2.03	0.58
52:B4:25:VAL:C	52:B4:26:ILE:HD13	2.24	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:260:G:C6	53:CA:261:U:C4	2.92	0.58
53:CA:1300:G:H22	53:CA:1334:G:H2'	1.68	0.58
2:CB:160:LEU:HD22	2:CB:175:ALA:HB2	1.86	0.58
5:CE:148:SER:H	5:CE:151:MET:HE3	1.68	0.58
22:DA:836:G:C5	22:DA:837:C:C4	2.92	0.58
22:DA:1237:A:N3	22:DA:1238:G:H1'	2.17	0.58
22:DA:1648:U:O2'	22:DA:1649:G:O4'	2.14	0.58
22:DA:2601:C:C4'	22:DA:2602:A:OP2	2.50	0.58
25:DD:133:THR:HG23	25:DD:134:HIS:N	2.18	0.58
32:DK:39:ILE:HD11	32:DK:62:VAL:CG2	2.32	0.58
35:DN:103:ARG:HG3	35:DN:104:ALA:N	2.19	0.58
36:DO:94:ARG:HD2	36:DO:97:PHE:O	2.03	0.58
12:AL:34:THR:HG22	12:AL:35:ARG:NE	2.19	0.58
12:AL:85:ARG:NH2	12:AL:87:LYS:HD2	2.18	0.58
22:BA:1073:A:H8	22:BA:1073:A:OP1	1.87	0.58
22:BA:1936:A:C2	22:BA:1943:U:H5	2.21	0.58
24:BC:5:CYS:HB3	24:BC:12:ARG:NH1	2.18	0.58
25:BD:124:ARG:HG2	25:BD:125:TRP:CD1	2.38	0.58
26:BE:57:LYS:HG3	26:BE:58:LYS:N	2.17	0.58
27:BF:128:SER:OG	27:BF:154:THR:HB	2.04	0.58
37:BP:67:GLU:HG3	37:BP:68:GLY:H	1.67	0.58
42:BU:5:ARG:O	42:BU:8:ASP:HB2	2.04	0.58
53:CA:328:C:C1'	53:CA:329:A:OP2	2.52	0.58
53:CA:812:G:HO2'	53:CA:813:U:H6	1.43	0.58
53:CA:1258:G:O2'	53:CA:1259:C:H5'	2.04	0.58
53:CA:1378:C:H3'	53:CA:1379:G:H5"	1.86	0.58
53:CA:1493:A:C8	53:CA:1493:A:OP1	2.57	0.58
4:CD:28:ASP:O	4:CD:29:THR:O	2.21	0.58
22:DA:7:G:H2'	22:DA:8:C:O4'	2.04	0.58
22:DA:50:U:C6	22:DA:50:U:OP1	2.56	0.58
22:DA:1183:U:H2'	22:DA:1184:U:C6	2.39	0.58
22:DA:1286:A:C6	22:DA:1289:C:N3	2.71	0.58
22:DA:1338:G:H5"	41:DT:17:SER:HB3	1.85	0.58
22:DA:2860:A:H8	22:DA:2860:A:O5'	1.87	0.58
31:DJ:45:THR:H	31:DJ:46:PRO:CD	2.16	0.58
32:DK:94:PRO:HG3	32:DK:115:ILE:HD12	1.85	0.58
36:DO:62:LEU:HD11	36:DO:65:THR:N	2.19	0.58
37:DP:22:GLY:H	37:DP:46:VAL:HB	1.68	0.58
38:DQ:69:ARG:HB2	38:DQ:69:ARG:HH21	1.68	0.58
44:DW:20:LEU:HD11	44:DW:35:ILE:HG13	1.85	0.58
1:AA:582:C:C2	1:AA:583:A:C8	2.92	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2356:U:H4'	44:BW:16:GLU:HG3	1.86	0.58
25:BD:9:VAL:HG22	25:BD:26:VAL:HB	1.86	0.58
27:BF:131:VAL:C	27:BF:132:ARG:HG3	2.24	0.58
28:BG:25:ILE:HG22	28:BG:78:VAL:HG21	1.85	0.58
30:BI:48:ILE:HG13	30:BI:49:GLU:H	1.68	0.58
34:BM:72:PRO:O	34:BM:91:TYR:O	2.21	0.58
37:BP:104:GLY:O	37:BP:106:ALA:N	2.37	0.58
41:BT:26:LYS:O	41:BT:27:SER:CB	2.52	0.58
41:BT:29:THR:N	41:BT:91:GLN:HE22	2.02	0.58
47:BZ:8:GLN:O	47:BZ:10:ARG:N	2.37	0.58
53:CA:280:C:H4'	53:CA:281:G:OP2	2.02	0.58
53:CA:457:G:C8	53:CA:457:G:OP2	2.56	0.58
53:CA:1091:U:O2	53:CA:1093:A:C8	2.56	0.58
53:CA:1134:G:N1	53:CA:1141:C:C4	2.72	0.58
53:CA:1381:U:C4	54:CG:77:ARG:NH1	2.72	0.58
53:CA:1471:U:O2'	53:CA:1472:U:H5'	2.04	0.58
22:DA:228:C:C5'	22:DA:229:C:C5	2.87	0.58
42:DU:43:LYS:HG2	42:DU:45:GLN:HG2	1.86	0.58
1:AA:429:U:H1'	1:AA:430:A:H5"	1.86	0.58
1:AA:501:C:H1'	1:AA:549:C:H1'	1.86	0.58
1:AA:1210:C:H2'	1:AA:1211:U:H5'	1.85	0.58
1:AA:1328:C:H5"	13:AM:27:THR:HG21	1.86	0.58
4:AD:173:ASP:O	4:AD:174:ALA:HB2	2.04	0.58
7:AG:3:ARG:HG3	7:AG:4:ARG:H	1.69	0.58
12:AL:98:ARG:HD2	12:AL:103:CYS:SG	2.44	0.58
20:AT:34:VAL:O	20:AT:38:ILE:HG12	2.04	0.58
22:BA:141:G:H5'	22:BA:142:A:N7	2.18	0.58
22:BA:819:A:C4	22:BA:1189:A:C2	2.91	0.58
22:BA:1015:U:O2'	22:BA:1016:G:H5'	2.03	0.58
22:BA:1475:G:O2'	22:BA:1476:U:P	2.61	0.58
22:BA:2134:A:C6	22:BA:2135:A:N6	2.72	0.58
22:BA:2199:A:C8	22:BA:2199:A:H5'	2.39	0.58
22:BA:2776:A:H4'	22:BA:2777:G:H5"	1.86	0.58
26:BE:108:ILE:CD1	26:BE:180:LEU:HD13	2.34	0.58
32:BK:8:LEU:HD23	32:BK:8:LEU:N	2.19	0.58
40:BS:88:ARG:HH21	40:BS:88:ARG:HG3	1.68	0.58
53:CA:356:A:H2'	53:CA:357:G:O4'	2.04	0.58
53:CA:555:U:H2'	53:CA:556:C:C6	2.39	0.58
53:CA:995:C:N3	53:CA:1046:A:O2'	2.31	0.58
53:CA:1447:A:O3'	53:CA:1448:C:H6	1.86	0.58
54:CG:4:ARG:HH11	54:CG:4:ARG:HG2	1.67	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:42:LYS:HD3	12:CL:43:LYS:HZ2	1.68	0.58
20:CT:34:VAL:HG21	20:CT:53:MET:HG2	1.86	0.58
22:DA:481:G:O2'	22:DA:482:A:OP2	2.19	0.58
22:DA:1386:C:O2'	22:DA:1387:A:H8	1.79	0.58
22:DA:1797:G:H4'	24:DC:254:LYS:O	2.04	0.58
22:DA:2008:C:H2'	22:DA:2009:A:C8	2.39	0.58
22:DA:2184:A:H2'	22:DA:2185:U:O4'	2.04	0.58
22:DA:2365:G:OP1	44:DW:54:ARG:HG3	2.04	0.58
22:DA:2808:G:O2'	22:DA:2809:A:C8	2.57	0.58
25:DD:4:LEU:HD12	25:DD:32:ASN:OD1	2.03	0.58
33:DL:119:PRO:HB3	33:DL:139:GLY:O	2.03	0.58
38:DQ:40:LYS:HD2	38:DQ:44:TYR:CE2	2.35	0.58
1:AA:560:A:H5'	1:AA:566:G:N2	2.18	0.57
1:AA:1160:G:O6	1:AA:1181:G:O6	2.22	0.57
2:AB:20:ARG:HA	2:AB:20:ARG:HH11	1.69	0.57
3:AC:156:LEU:HD12	3:AC:156:LEU:N	2.13	0.57
9:AI:11:ARG:HD2	9:AI:106:ASP:HB2	1.86	0.57
13:AM:40:GLU:HG3	13:AM:41:ASP:N	2.19	0.57
19:AS:46:LEU:H	19:AS:61:VAL:CG2	2.17	0.57
21:AU:10:PRO:HG2	3:CC:71:ARG:CZ	2.34	0.57
22:BA:1510:G:H2'	22:BA:1511:G:O4'	2.04	0.57
22:BA:2134:A:C6	22:BA:2135:A:C6	2.92	0.57
23:BB:28:C:OP1	36:BO:31:THR:HG21	2.04	0.57
27:BF:9:ASP:O	27:BF:10:GLU:HB2	2.04	0.57
28:BG:163:TYR:O	28:BG:164:ALA:CB	2.51	0.57
32:BK:14:SER:OG	32:BK:86:LEU:HD12	2.04	0.57
32:BK:25:LEU:HD12	32:BK:38:ILE:HG22	1.85	0.57
33:BL:40:SER:O	33:BL:41:ARG:HB2	2.04	0.57
33:BL:68:SER:O	33:BL:69:ARG:HB2	2.04	0.57
40:BS:63:GLY:O	40:BS:64:ALA:CB	2.52	0.57
45:BX:11:PRO:HB3	45:BX:29:LEU:HB3	1.87	0.57
53:CA:367:U:OP1	53:CA:395:C:H1'	2.03	0.57
53:CA:523:A:N6	12:CL:49:ARG:HH12	2.01	0.57
53:CA:812:G:O2'	53:CA:813:U:C6	2.53	0.57
53:CA:1090:U:H2'	53:CA:1091:U:H6	1.68	0.57
2:CB:91:VAL:HG11	2:CB:95:TRP:HD1	1.67	0.57
10:CJ:37:ARG:HB3	10:CJ:74:VAL:O	2.04	0.57
10:CJ:44:THR:OG1	10:CJ:70:HIS:CE1	2.57	0.57
11:CK:70:ALA:HB1	11:CK:104:PHE:CZ	2.39	0.57
22:DA:1008:A:H4'	22:DA:1009:A:OP1	2.04	0.57
22:DA:1213:A:H1'	22:DA:1237:A:C2	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2324:U:C5'	22:DA:2325:G:C5'	2.82	0.57
24:DC:72:GLY:O	24:DC:73:ILE:HD13	2.04	0.57
30:DI:109:ALA:HB1	30:DI:125:THR:HA	1.84	0.57
31:DJ:20:ALA:HA	31:DJ:23:LYS:CG	2.34	0.57
37:DP:5:LYS:HE2	37:DP:9:GLN:NE2	2.19	0.57
37:DP:26:GLU:HB2	37:DP:86:LYS:HD3	1.86	0.57
39:DR:48:LYS:HD2	39:DR:48:LYS:H	1.68	0.57
46:DY:39:GLN:O	46:DY:42:LEU:HB2	2.04	0.57
2:AB:100:LEU:HD12	2:AB:178:LEU:HD23	1.85	0.57
5:AE:104:ILE:O	5:AE:104:ILE:HG23	2.04	0.57
8:AH:85:TYR:CE2	8:AH:123:GLU:HB2	2.39	0.57
22:BA:729:G:H2'	22:BA:1775:U:H1'	1.86	0.57
22:BA:1179:G:C3'	22:BA:1180:U:H4'	2.16	0.57
22:BA:1206:G:C6	22:BA:1207:C:C4	2.93	0.57
22:BA:1409:U:O2'	22:BA:1410:G:H5'	2.04	0.57
22:BA:1476:U:OP2	22:BA:1476:U:C6	2.57	0.57
22:BA:1873:G:O2'	22:BA:1874:C:H5'	2.04	0.57
22:BA:2020:A:H5'	48:B0:8:THR:HG22	1.86	0.57
22:BA:2572:A:OP2	25:BD:151:THR:HB	2.03	0.57
24:BC:109:LEU:HD23	24:BC:110:LYS:H	1.69	0.57
31:BJ:88:THR:HG22	31:BJ:91:GLU:CD	2.24	0.57
53:CA:72:A:O2'	53:CA:73:C:H5'	2.04	0.57
53:CA:130:A:N7	17:CQ:65:PRO:HD2	2.19	0.57
53:CA:537:G:H5"	12:CL:109:ARG:NH1	2.19	0.57
53:CA:824:G:O2'	53:CA:825:A:H5'	2.04	0.57
53:CA:1013:G:N2	53:CA:1015:G:H3'	2.19	0.57
53:CA:1134:G:C5	53:CA:1135:U:H1'	2.39	0.57
2:CB:184:ALA:O	2:CB:199:ILE:HG12	2.03	0.57
9:CI:30:ASN:O	9:CI:32:ARG:HG2	2.04	0.57
11:CK:121:ARG:NH2	21:CU:35:GLU:HB2	2.18	0.57
20:CT:4:LYS:HB3	20:CT:6:ALA:H	1.69	0.57
22:DA:617:G:HO2'	22:DA:618:G:H8	0.71	0.57
22:DA:727:A:H2'	22:DA:728:G:C8	2.39	0.57
22:DA:945:A:H3'	22:DA:946:C:H5"	1.86	0.57
22:DA:1605:C:H3'	22:DA:1606:C:C5'	2.34	0.57
22:DA:2305:U:O2'	58:DF:132:ARG:HA	2.05	0.57
22:DA:2563:U:H2'	22:DA:2565:A:OP2	2.04	0.57
22:DA:2626:C:O2'	22:DA:2627:G:H5'	2.03	0.57
22:DA:2683:C:H4'	25:DD:13:ARG:NH2	2.19	0.57
35:DN:56:LYS:HA	35:DN:84:GLY:HA2	1.86	0.57
41:DT:29:THR:CB	41:DT:86:THR:H	2.17	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:D1:47:ILE:HD12	49:D1:47:ILE:N	2.19	0.57
1:AA:64:G:C8	1:AA:99:C:N4	2.72	0.57
1:AA:664:G:H22	1:AA:741:G:H1	1.51	0.57
1:AA:740:U:O2'	1:AA:741:G:H5'	2.04	0.57
6:AF:46:GLN:NE2	6:AF:55:HIS:HB2	2.19	0.57
7:AG:112:ASP:HB2	7:AG:118:ARG:CG	2.33	0.57
22:BA:1032:A:H1'	52:B4:23:ILE:HD13	1.86	0.57
22:BA:1056:G:O2'	22:BA:1086:A:H1'	2.04	0.57
22:BA:2517:C:C6	22:BA:2542:A:N7	2.72	0.57
22:BA:2773:C:OP1	25:BD:171:THR:HG23	2.05	0.57
24:BC:94:LEU:HB2	24:BC:100:ARG:HD3	1.85	0.57
29:BH:67:ALA:C	29:BH:69:ALA:H	2.07	0.57
38:BQ:20:ALA:HA	38:BQ:23:TYR:CE1	2.39	0.57
41:BT:39:THR:HG22	41:BT:39:THR:O	2.04	0.57
45:BX:34:SER:HA	45:BX:48:LEU:O	2.03	0.57
53:CA:257:G:C2	53:CA:270:A:N1	2.72	0.57
53:CA:888:G:O3'	53:CA:1488:G:H4'	2.03	0.57
2:CB:69:VAL:HB	2:CB:162:VAL:HB	1.86	0.57
2:CB:128:LEU:HD22	2:CB:132:GLU:HG2	1.87	0.57
5:CE:104:ILE:HA	5:CE:122:VAL:HB	1.86	0.57
54:CG:12:LEU:HD22	54:CG:13:PRO:O	2.04	0.57
8:CH:1:SER:C	8:CH:3:GLN:H	2.08	0.57
8:CH:91:LEU:HB3	8:CH:112:ASP:OD2	2.04	0.57
55:CM:77:LYS:HA	55:CM:80:MET:HE2	1.86	0.57
17:CQ:59:GLU:HG3	17:CQ:75:VAL:HG22	1.84	0.57
22:DA:243:U:O2'	22:DA:244:A:H8	1.86	0.57
22:DA:381:G:C5'	45:DX:15:ASN:HD22	2.16	0.57
22:DA:574:A:C2	22:DA:2032:G:O2'	2.57	0.57
22:DA:876:C:H3'	22:DA:877:A:H8	1.67	0.57
22:DA:1249:U:O2'	22:DA:1250:G:OP2	2.19	0.57
22:DA:1275:A:H4'	22:DA:1276:A:OP1	2.03	0.57
22:DA:1635:A:H5'	22:DA:1635:A:C8	2.39	0.57
24:DC:28:PRO:HG3	24:DC:62:ARG:NH1	2.20	0.57
25:DD:149:ASN:O	25:DD:151:THR:N	2.36	0.57
31:DJ:18:VAL:HG12	31:DJ:54:ILE:HD11	1.86	0.57
33:DL:48:ARG:HG3	33:DL:48:ARG:HH11	1.69	0.57
38:DQ:87:VAL:HG12	38:DQ:88:GLU:H	1.69	0.57
42:DU:95:PHE:O	42:DU:97:SER:N	2.36	0.57
1:AA:761:G:H2'	1:AA:762:U:H6	1.69	0.57
2:AB:40:ILE:HG21	2:AB:201:GLY:CA	2.34	0.57
4:AD:196:GLU:C	4:AD:198:LEU:H	2.08	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:2:THR:HG22	12:AL:4:ASN:H	1.69	0.57
22:BA:2562:U:C2'	22:BA:2563:U:H5'	2.34	0.57
25:BD:101:PHE:N	25:BD:101:PHE:CD1	2.70	0.57
27:BF:47:LYS:HB3	27:BF:47:LYS:NZ	2.19	0.57
29:BH:96:THR:C	29:BH:97:ARG:HG3	2.25	0.57
33:BL:91:ASP:HB3	33:BL:94:THR:HB	1.86	0.57
36:BO:36:TYR:CD2	36:BO:36:TYR:N	2.72	0.57
44:BW:18:LYS:HE3	44:BW:19:ARG:HG3	1.86	0.57
53:CA:579:A:H2'	53:CA:580:C:C6	2.39	0.57
53:CA:1047:G:O2'	53:CA:1048:G:H5'	2.03	0.57
53:CA:1279:G:H5"	10:CJ:9:ARG:HH22	1.69	0.57
53:CA:1495:U:O2'	53:CA:1496:C:H5'	2.05	0.57
53:CA:1528:U:O2'	53:CA:1530:G:H5"	2.05	0.57
5:CE:38:VAL:HG12	5:CE:39:GLY:N	2.18	0.57
19:CS:52:ASN:HD21	19:CS:54:ARG:HG2	1.69	0.57
22:DA:508:A:N6	40:DS:9:HIS:CE1	2.69	0.57
22:DA:1919:A:H2'	22:DA:1920:C:H5'	1.86	0.57
22:DA:2259:U:H1'	22:DA:2427:C:C2	2.39	0.57
22:DA:2285:C:OP2	49:D1:5:ARG:HD3	2.03	0.57
22:DA:2345:G:C5	22:DA:2347:C:N4	2.72	0.57
57:DB:38:C:H4'	36:DO:100:HIS:NE2	2.19	0.57
28:DG:112:VAL:HG13	28:DG:150:TYR:CE1	2.29	0.57
30:DI:74:PRO:O	30:DI:78:LEU:HG	2.04	0.57
31:DJ:58:ASN:OD1	31:DJ:127:GLY:HA2	2.05	0.57
38:DQ:60:TRP:CZ2	38:DQ:93:ILE:HB	2.40	0.57
46:DY:19:LEU:HG	46:DY:22:LEU:HD22	1.86	0.57
50:D2:31:LEU:CA	50:D2:34:ARG:HB2	2.33	0.57
1:AA:194:C:O2'	1:AA:195:A:H5'	2.05	0.57
3:AC:32:LEU:HD21	14:AN:92:ILE:HG12	1.85	0.57
9:AI:6:TYR:HE2	9:AI:17:ARG:HB2	1.70	0.57
14:AN:15:LEU:HD23	14:AN:18:LYS:CD	2.33	0.57
20:AT:43:LYS:CB	20:AT:86:ALA:HB1	2.27	0.57
22:BA:7:G:H2'	22:BA:8:C:H6	1.68	0.57
22:BA:775:G:C4	22:BA:794:A:C8	2.92	0.57
22:BA:783:A:H8	22:BA:784:G:H4'	1.68	0.57
22:BA:1802:A:N1	22:BA:1822:C:H1'	2.18	0.57
22:BA:1856:U:C2'	22:BA:1857:G:H5'	2.34	0.57
22:BA:2000:C:H2'	22:BA:2001:C:H6	1.70	0.57
25:BD:72:GLY:O	25:BD:73:VAL:O	2.22	0.57
26:BE:117:ARG:HA	26:BE:185:LYS:HD3	1.86	0.57
30:BI:53:PRO:O	30:BI:74:PRO:HD2	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BK:111:LYS:H	32:BK:111:LYS:CE	2.16	0.57
37:BP:96:LEU:HB3	37:BP:99:LEU:HD22	1.87	0.57
42:BU:46:LYS:HG2	42:BU:47:PRO:HD2	1.86	0.57
53:CA:119:A:H4'	53:CA:120:A:O5'	2.04	0.57
53:CA:429:U:H1'	53:CA:430:A:H5"	1.87	0.57
53:CA:537:G:H2'	53:CA:538:G:C8	2.39	0.57
53:CA:994:A:O2'	53:CA:995:C:H6	1.87	0.57
53:CA:1279:G:OP2	53:CA:1279:G:N2	2.37	0.57
21:CU:38:GLU:N	21:CU:40:PRO:HD2	2.20	0.57
22:DA:320:A:H5"	22:DA:321:U:OP1	2.04	0.57
22:DA:563:A:C4	22:DA:2018:G:C2	2.92	0.57
22:DA:1087:G:C5	22:DA:1089:A:C2	2.91	0.57
22:DA:1912:A:H62	22:DA:1917:U:H3	1.53	0.57
22:DA:1914:C:O2'	22:DA:1915:U:O4'	2.21	0.57
22:DA:1965:C:H3'	22:DA:1966:A:C5'	2.34	0.57
22:DA:2337:G:C2'	22:DA:2338:C:H5'	2.34	0.57
24:DC:44:ASN:C	24:DC:46:GLY:H	2.07	0.57
43:DV:29:ILE:HG22	43:DV:39:ALA:HA	1.87	0.57
1:AA:164:G:C2'	1:AA:165:G:H5'	2.35	0.57
1:AA:259:G:C4	1:AA:260:G:C8	2.93	0.57
1:AA:797:C:OP2	11:AK:125:LYS:HG3	2.03	0.57
1:AA:1392:G:O2'	1:AA:1393:U:H5'	2.05	0.57
5:AE:79:THR:OG1	5:AE:80:LEU:N	2.37	0.57
9:AI:10:ARG:HB2	9:AI:14:SER:O	2.04	0.57
10:AJ:41:PRO:O	10:AJ:42:LEU:HB2	2.05	0.57
12:AL:73:LEU:HD11	12:AL:79:ILE:HG21	1.86	0.57
15:AO:26:VAL:HG12	15:AO:30:LEU:CD1	2.34	0.57
17:AQ:46:HIS:HB2	17:AQ:66:LEU:HD12	1.86	0.57
21:AU:36:PHE:HB3	21:AU:40:PRO:HD3	1.86	0.57
22:BA:995:C:O2	31:BJ:3:THR:HG23	2.05	0.57
22:BA:1106:G:C2	22:BA:1107:G:C8	2.92	0.57
22:BA:1252:G:N3	38:BQ:32:ARG:HG2	2.18	0.57
27:BF:72:SER:OG	27:BF:79:ARG:HA	2.04	0.57
32:BK:112:PHE:O	32:BK:115:ILE:HG22	2.04	0.57
35:BN:117:ASP:O	35:BN:119:SER:N	2.37	0.57
37:BP:80:VAL:O	37:BP:81:ASP:HB3	2.03	0.57
40:BS:18:ARG:HA	40:BS:21:ALA:HB3	1.86	0.57
53:CA:81:A:O2'	53:CA:82:G:C8	2.57	0.57
53:CA:263:A:P	20:CT:73:ARG:HH12	2.28	0.57
53:CA:327:A:H4'	53:CA:328:C:OP2	2.03	0.57
53:CA:735:C:H5'	18:CR:59:LYS:HD3	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1328:C:H2'	53:CA:1329:A:H8	1.69	0.57
2:CB:150:ILE:HD11	2:CB:153:MET:HE2	1.85	0.57
5:CE:148:SER:O	5:CE:151:MET:HB3	2.04	0.57
10:CJ:8:ILE:HG22	10:CJ:100:ILE:HG12	1.86	0.57
15:CO:44:GLU:HG2	15:CO:45:HIS:CD2	2.40	0.57
22:DA:558:U:H5"	31:DJ:111:LYS:HD2	1.86	0.57
22:DA:726:G:O2'	22:DA:727:A:OP2	2.19	0.57
22:DA:2353:G:H21	44:DW:30:VAL:HG21	1.70	0.57
24:DC:106:PRO:HB3	24:DC:141:HIS:CE1	2.39	0.57
25:DD:9:VAL:HG22	37:DP:4:ILE:HD11	1.85	0.57
25:DD:36:GLN:NE2	25:DD:38:LYS:HZ1	2.02	0.57
29:DH:2:GLN:O	29:DH:3:VAL:O	2.23	0.57
34:DM:72:PRO:O	34:DM:73:ILE:HB	2.04	0.57
46:DY:17:GLU:OE1	46:DY:53:VAL:HB	2.04	0.57
1:AA:1521:C:O2'	1:AA:1522:U:H5'	2.04	0.57
4:AD:21:LYS:O	4:AD:21:LYS:HD3	2.05	0.57
4:AD:72:ARG:HD3	4:AD:203:TYR:CZ	2.39	0.57
8:AH:21:LYS:HE2	8:AH:22:ALA:H	1.68	0.57
12:AL:88:ASP:HB3	12:AL:89:LEU:HD22	1.86	0.57
14:AN:42:ASN:C	14:AN:44:VAL:H	2.07	0.57
20:AT:68:LYS:NZ	20:AT:68:LYS:HB2	2.18	0.57
22:BA:65:U:H2'	22:BA:66:C:C6	2.39	0.57
22:BA:78:U:H2'	22:BA:79:C:C6	2.40	0.57
38:BQ:6:GLY:HA2	38:BQ:9:ALA:HB3	1.86	0.57
41:BT:40:LYS:HG2	41:BT:58:VAL:O	2.04	0.57
45:BX:46:VAL:HG21	45:BX:67:LEU:HD11	1.86	0.57
52:B4:2:LYS:HB2	52:B4:4:ARG:HD3	1.87	0.57
53:CA:68:G:N2	53:CA:152:A:H1'	2.20	0.57
53:CA:338:A:N1	53:CA:351:G:N2	2.53	0.57
53:CA:636:U:H2'	53:CA:637:C:C6	2.40	0.57
53:CA:1451:U:C2'	53:CA:1452:C:OP1	2.52	0.57
4:CD:70:GLN:HE22	4:CD:133:SER:HB3	1.70	0.57
9:CI:51:LEU:HG	9:CI:86:LEU:CD2	2.26	0.57
11:CK:96:ILE:HD13	11:CK:109:ILE:HD13	1.86	0.57
55:CM:32:ILE:HD13	55:CM:32:ILE:O	2.04	0.57
21:CU:39:LYS:H	21:CU:40:PRO:HD2	1.67	0.57
22:DA:246:C:C2'	22:DA:247:G:H5'	2.34	0.57
22:DA:377:G:C6	22:DA:378:C:C4	2.93	0.57
22:DA:523:C:O2'	22:DA:524:G:H5'	2.04	0.57
22:DA:617:G:H21	22:DA:618:G:H1'	1.68	0.57
22:DA:963:U:OP1	22:DA:2497:A:H5"	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1553:A:N7	22:DA:1555:G:C5	2.73	0.57
25:DD:51:THR:CG2	25:DD:76:GLY:HA3	2.35	0.57
31:DJ:89:PHE:HE2	31:DJ:100:VAL:HG11	1.68	0.57
38:DQ:27:ARG:HA	38:DQ:33:VAL:CG1	2.34	0.57
38:DQ:60:TRP:O	38:DQ:64:ILE:HG12	2.04	0.57
43:DV:55:GLU:O	43:DV:57:TYR:N	2.38	0.57
1:AA:57:G:H2'	1:AA:58:C:C6	2.40	0.57
1:AA:439:U:H1'	4:AD:118:SER:O	2.04	0.57
5:AE:105:ILE:O	5:AE:105:ILE:HG13	2.05	0.57
22:BA:282:A:H2'	22:BA:283:G:C8	2.40	0.57
22:BA:988:A:OP2	47:BZ:11:SER:HB3	2.05	0.57
22:BA:1011:G:H4'	22:BA:1012:U:OP1	2.03	0.57
22:BA:1929:G:H4'	22:BA:1930:G:OP1	2.05	0.57
22:BA:2813:A:C2	22:BA:2887:A:N6	2.71	0.57
41:BT:8:LEU:HD13	41:BT:46:ALA:HA	1.85	0.57
53:CA:983:A:O2'	53:CA:984:C:C5'	2.53	0.57
53:CA:1372:U:H5"	9:CI:71:ILE:HD11	1.85	0.57
22:DA:223:A:C4	22:DA:408:G:H1'	2.39	0.57
22:DA:508:A:H3'	22:DA:509:C:H5'	1.85	0.57
22:DA:784:G:C2	24:DC:227:VAL:HG21	2.40	0.57
22:DA:1857:G:O2'	22:DA:1884:G:N2	2.37	0.57
22:DA:2051:A:H4'	22:DA:2052:A:OP1	2.03	0.57
22:DA:2235:G:H2'	22:DA:2236:U:H6	1.68	0.57
22:DA:2345:G:H4'	22:DA:2346:A:C5'	2.34	0.57
22:DA:2542:A:H4'	22:DA:2543:G:H5'	1.86	0.57
25:DD:33:ARG:HD2	25:DD:33:ARG:H	1.70	0.57
58:DF:31:GLU:C	58:DF:95:MET:HE1	2.25	0.57
32:DK:107:LEU:C	32:DK:109:SER:H	2.08	0.57
38:DQ:27:ARG:HA	38:DQ:33:VAL:HG12	1.87	0.57
1:AA:35:G:H2'	1:AA:36:C:C6	2.39	0.57
1:AA:351:G:H4'	1:AA:352:C:OP2	2.02	0.57
1:AA:597:G:C2	1:AA:644:U:C2	2.93	0.57
1:AA:1055:A:C6	1:AA:1206:G:C5	2.93	0.57
1:AA:1293:C:H2'	1:AA:1294:G:C8	2.40	0.57
1:AA:1293:C:H2'	1:AA:1294:G:H8	1.69	0.57
22:BA:902:C:H2'	22:BA:903:C:H5'	1.86	0.57
22:BA:1059:G:O2'	30:BI:128:ILE:HD13	2.05	0.57
22:BA:1288:G:C5	22:BA:1327:A:C2	2.93	0.57
22:BA:1654:A:H4'	25:BD:118:PHE:CZ	2.39	0.57
22:BA:1958:C:C2'	22:BA:1959:G:H5'	2.35	0.57
22:BA:2312:U:OP1	27:BF:70:ARG:HB3	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BR:49:ILE:CG2	39:BR:54:VAL:HG12	2.35	0.57
43:BV:75:GLN:HB2	43:BV:92:VAL:HG23	1.87	0.57
53:CA:275:G:O2'	53:CA:276:G:H8	1.88	0.57
53:CA:373:A:H2'	53:CA:374:A:C8	2.30	0.57
53:CA:1073:U:H2'	53:CA:1074:G:H8	1.70	0.57
53:CA:1130:A:N7	53:CA:1146:A:C6	2.73	0.57
53:CA:1448:C:O2'	53:CA:1449:C:C6	2.58	0.57
2:CB:44:LYS:O	2:CB:48:MET:HG3	2.04	0.57
6:CF:6:ILE:H	6:CF:6:ILE:HD12	1.70	0.57
9:CI:49:GLN:N	9:CI:50:PRO:CD	2.68	0.57
18:CR:31:TYR:CG	18:CR:54:LEU:HD21	2.40	0.57
19:CS:36:ARG:O	19:CS:69:LYS:HD2	2.03	0.57
22:DA:7:G:H4'	31:DJ:15:TRP:CH2	2.40	0.57
22:DA:75:G:HO2'	22:DA:76:C:H6	1.46	0.57
22:DA:85:G:OP2	42:DU:6:ARG:HB2	2.04	0.57
22:DA:538:A:O2'	31:DJ:8:PRO:HG3	2.04	0.57
22:DA:1181:U:O2'	22:DA:1182:G:H5'	2.05	0.57
22:DA:1309:G:H4'	50:D2:7:PRO:HB2	1.87	0.57
22:DA:1680:U:O2'	22:DA:1763:G:N7	2.32	0.57
22:DA:1963:U:O2'	22:DA:1964:G:H5'	2.05	0.57
22:DA:1981:A:O2'	22:DA:1982:U:H5"	2.05	0.57
22:DA:2332:C:H5"	22:DA:2333:A:OP2	2.05	0.57
22:DA:2625:G:H5'	22:DA:2626:C:OP2	2.05	0.57
57:DB:109:A:O2'	57:DB:110:C:C6	2.55	0.57
26:DE:108:ILE:O	26:DE:112:LEU:HB2	2.05	0.57
36:DO:7:ARG:HA	36:DO:10:ARG:NH2	2.20	0.57
42:DU:26:ASN:OD1	42:DU:34:ILE:HD12	2.04	0.57
46:DY:17:GLU:HG2	46:DY:50:VAL:HG13	1.87	0.57
1:AA:89:U:O2'	1:AA:90:C:C5'	2.51	0.57
1:AA:174:A:C2'	1:AA:175:C:H5'	2.34	0.57
1:AA:545:C:H5'	4:AD:68:GLU:HG3	1.87	0.57
1:AA:994:A:C2	14:AN:4:SER:HB2	2.40	0.57
1:AA:1324:A:H2'	1:AA:1325:C:C6	2.40	0.57
7:AG:30:MET:HG2	7:AG:31:VAL:H	1.69	0.57
8:AH:91:LEU:HD23	8:AH:92:PRO:HD2	1.85	0.57
10:AJ:49:PHE:HE1	10:AJ:67:ILE:HG13	1.69	0.57
22:BA:644:A:H2'	22:BA:645:C:O4'	2.05	0.57
22:BA:833:A:H2'	22:BA:834:G:C8	2.40	0.57
22:BA:2109:U:C4	22:BA:2181:U:O4	2.57	0.57
22:BA:2182:U:C2'	22:BA:2183:A:OP1	2.53	0.57
31:BJ:72:LYS:HB2	31:BJ:89:PHE:HB2	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BJ:77:HIS:CD2	31:BJ:79:GLY:N	2.62	0.57
33:BL:27:LEU:H	33:BL:27:LEU:CD1	2.01	0.57
36:BO:53:THR:HB	36:BO:65:THR:HG22	1.85	0.57
40:BS:66:ILE:HG12	40:BS:66:ILE:O	2.05	0.57
41:BT:73:ARG:HB3	41:BT:73:ARG:CZ	2.34	0.57
45:BX:76:LYS:HG3	45:BX:77:TYR:H	1.69	0.57
51:B3:35:LYS:O	51:B3:40:LYS:HE2	2.05	0.57
53:CA:83:C:N4	53:CA:85:U:C4	2.73	0.57
53:CA:629:A:H2'	53:CA:630:A:O4'	2.05	0.57
53:CA:1084:G:C8	53:CA:1085:U:C5	2.92	0.57
2:CB:90:PHE:HE1	2:CB:92:ASN:HD22	1.53	0.57
6:CF:3:HIS:HB2	6:CF:92:THR:HA	1.87	0.57
54:CG:27:ASN:O	54:CG:30:MET:HB2	2.04	0.57
8:CH:57:GLU:HG3	8:CH:58:LEU:H	1.70	0.57
9:CI:56:MET:HG3	9:CI:57:VAL:HG23	1.86	0.57
11:CK:27:ASN:HA	11:CK:57:SER:HB3	1.87	0.57
22:DA:77:G:N2	22:DA:110:G:H1'	2.20	0.57
22:DA:132:G:N2	22:DA:148:U:C2	2.72	0.57
22:DA:526:A:N6	22:DA:2626:C:H4'	2.20	0.57
22:DA:1199:U:H2'	22:DA:1200:C:C6	2.40	0.57
22:DA:1388:G:O2'	22:DA:1389:G:H5'	2.05	0.57
22:DA:1568:G:N2	24:DC:57:HIS:CE1	2.71	0.57
22:DA:1808:A:H4'	22:DA:1809:A:OP2	2.04	0.57
22:DA:2072:C:C2'	22:DA:2073:C:H5'	2.35	0.57
22:DA:2408:U:H5	62:DA:3596:HOH:O	1.87	0.57
57:DB:26:C:H1'	57:DB:117:G:H1'	1.86	0.57
24:DC:82:TYR:O	24:DC:84:PRO:HD3	2.05	0.57
58:DF:91:ARG:HB3	58:DF:91:ARG:NH2	2.20	0.57
58:DF:103:ILE:HG12	58:DF:175:PRO:HD3	1.85	0.57
29:DH:96:THR:HG22	29:DH:113:SER:OG	2.05	0.57
34:DM:42:THR:HG22	34:DM:44:ARG:N	2.14	0.57
1:AA:164:G:H2'	1:AA:165:G:H5'	1.87	0.56
1:AA:923:A:OP1	5:AE:25:LYS:HG2	2.05	0.56
1:AA:1239:A:H62	1:AA:1299:A:H61	1.51	0.56
2:AB:101:THR:HG22	2:AB:174:GLU:OE1	2.05	0.56
7:AG:23:ALA:O	7:AG:26:VAL:HG22	2.05	0.56
9:AI:128:LYS:CD	9:AI:129:ARG:H	2.18	0.56
21:AU:24:LYS:O	21:AU:28:LEU:HB2	2.05	0.56
22:BA:197:A:N6	22:BA:2430:A:H2'	2.20	0.56
22:BA:418:C:H2'	22:BA:419:U:O4'	2.05	0.56
22:BA:792:A:H5"	22:BA:793:A:H5'	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:873:C:N4	22:BA:904:G:H1	1.99	0.56
22:BA:1059:G:C8	22:BA:1060:U:H2'	2.40	0.56
22:BA:1188:U:O2'	22:BA:1189:A:H5'	2.05	0.56
22:BA:1266:G:H5"	40:BS:15:GLN:HE22	1.69	0.56
22:BA:1845:G:O2'	22:BA:1846:G:H5'	2.04	0.56
22:BA:2332:C:OP1	44:BW:44:PHE:HZ	1.87	0.56
22:BA:2553:G:C2	22:BA:2554:U:O2	2.57	0.56
22:BA:2800:A:C2	22:BA:2895:G:H1'	2.40	0.56
25:BD:148:GLN:OE1	25:BD:152:PRO:HG2	2.04	0.56
26:BE:61:ARG:NH1	26:BE:64:GLY:HA3	2.20	0.56
30:BI:3:LYS:CD	30:BI:4:VAL:HG23	2.35	0.56
31:BJ:56:VAL:O	31:BJ:124:VAL:O	2.21	0.56
35:BN:33:ILE:CD1	35:BN:118:ARG:NH2	2.66	0.56
41:BT:31:VAL:HA	41:BT:83:ALA:HB3	1.87	0.56
41:BT:44:LYS:HG3	41:BT:55:VAL:HG11	1.86	0.56
44:BW:39:GLN:HG3	44:BW:42:THR:HB	1.87	0.56
48:B0:36:LYS:O	48:B0:37:HIS:HB3	2.04	0.56
53:CA:218:U:H2'	53:CA:219:U:O4'	2.05	0.56
53:CA:499:A:C6	53:CA:547:A:C8	2.92	0.56
53:CA:728:A:H2'	53:CA:729:A:C8	2.40	0.56
3:CC:129:PHE:CE1	3:CC:156:LEU:HB3	2.40	0.56
10:CJ:7:ARG:NH1	10:CJ:102:LEU:HG	2.20	0.56
18:CR:19:GLU:CD	18:CR:20:ILE:N	2.58	0.56
22:DA:170:U:H2'	22:DA:171:U:H6	1.70	0.56
22:DA:1439:A:C8	22:DA:1440:U:O4'	2.59	0.56
33:DL:110:VAL:HB	33:DL:127:VAL:HA	1.87	0.56
37:DP:50:ARG:CA	37:DP:57:ALA:H	2.17	0.56
41:DT:62:VAL:HG12	41:DT:63:VAL:N	2.20	0.56
46:DY:50:VAL:HA	46:DY:53:VAL:HG23	1.86	0.56
48:D0:38:LEU:HB2	48:D0:41:HIS:NE2	2.20	0.56
1:AA:49:U:C4	1:AA:364:A:C6	2.94	0.56
1:AA:390:U:H2'	1:AA:391:G:H8	1.67	0.56
1:AA:1210:C:C2'	1:AA:1211:U:H5'	2.35	0.56
13:AM:84:CYS:HA	19:AS:73:PHE:HD2	1.69	0.56
17:AQ:18:LYS:C	17:AQ:47:ASP:OD2	2.44	0.56
22:BA:1062:G:C8	22:BA:1088:A:C8	2.93	0.56
22:BA:1083:U:H2'	22:BA:1084:A:O5'	2.06	0.56
22:BA:2199:A:C8	22:BA:2199:A:H5"	2.39	0.56
24:BC:61:TYR:HD2	24:BC:85:ASN:ND2	2.02	0.56
24:BC:77:VAL:HG22	24:BC:111:ALA:HA	1.87	0.56
31:BJ:21:THR:C	31:BJ:23:LYS:H	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BJ:43:GLU:O	31:BJ:45:THR:CG2	2.52	0.56
32:BK:59:LYS:HG3	32:BK:89:ASN:ND2	2.20	0.56
33:BL:40:SER:O	33:BL:41:ARG:CB	2.53	0.56
40:BS:96:ILE:O	40:BS:96:ILE:HG13	2.05	0.56
53:CA:702:A:H5'	53:CA:703:G:N7	2.21	0.56
53:CA:791:G:H2'	53:CA:792:A:H5'	1.87	0.56
53:CA:951:G:H2'	53:CA:952:U:C6	2.39	0.56
54:CG:14:ASP:HB3	54:CG:18:GLY:N	2.16	0.56
54:CG:68:VAL:O	54:CG:70:PRO:HD3	2.04	0.56
14:CN:20:PHE:HA	14:CN:24:ALA:HB2	1.86	0.56
22:DA:71:A:H5"	22:DA:73:A:C4	2.40	0.56
22:DA:569:U:H5"	22:DA:821:A:C2	2.40	0.56
22:DA:718:A:H5'	22:DA:719:C:OP2	2.04	0.56
22:DA:2296:U:H4'	22:DA:2297:A:OP1	2.03	0.56
22:DA:2529:G:H4'	28:DG:174:LYS:CD	2.34	0.56
22:DA:2882:A:C5'	35:DN:96:ARG:HD3	2.35	0.56
58:DF:35:LEU:HA	58:DF:152:ASP:O	2.05	0.56
58:DF:147:ARG:HD3	58:DF:149:ARG:HH22	1.70	0.56
34:DM:40:ARG:HB2	34:DM:93:VAL:CG2	2.35	0.56
34:DM:133:LYS:NZ	34:DM:133:LYS:HB3	2.20	0.56
1:AA:115:G:H1'	1:AA:116:A:N7	2.19	0.56
1:AA:259:G:H2'	1:AA:260:G:C8	2.36	0.56
1:AA:1049:U:H4'	1:AA:1050:G:OP2	2.03	0.56
1:AA:1261:A:N1	1:AA:1274:A:C2	2.73	0.56
1:AA:1398:A:H8	1:AA:1398:A:H5"	1.70	0.56
4:AD:169:TRP:CD1	4:AD:170:LEU:HG	2.40	0.56
5:AE:106:ALA:HB2	5:AE:124:ALA:HB3	1.87	0.56
5:AE:152:VAL:CB	5:AE:155:LYS:HZ2	2.11	0.56
15:AO:16:ARG:O	15:AO:17:ASP:HB3	2.05	0.56
15:AO:72:LYS:HE2	15:AO:72:LYS:HA	1.88	0.56
22:BA:346:A:C2	22:BA:347:A:H1'	2.40	0.56
22:BA:1287:A:C5'	35:BN:103:ARG:HD2	2.33	0.56
22:BA:1767:G:N2	22:BA:1985:C:O2	2.38	0.56
22:BA:1842:G:H2'	22:BA:1843:C:H6	1.69	0.56
22:BA:2154:A:H2'	22:BA:2155:U:O4'	2.05	0.56
22:BA:2485:G:C5'	34:BM:45:GLN:HE21	2.18	0.56
22:BA:2683:C:O2	32:BK:70:ARG:NH2	2.31	0.56
24:BC:77:VAL:O	24:BC:77:VAL:CG2	2.53	0.56
24:BC:159:THR:O	24:BC:194:VAL:HG12	2.05	0.56
24:BC:169:ALA:O	24:BC:185:ALA:HB3	2.06	0.56
25:BD:70:LYS:O	25:BD:71:ALA:HB3	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BD:114:LYS:HE3	25:BD:114:LYS:CA	2.35	0.56
26:BE:24:ASN:C	26:BE:24:ASN:HD22	2.07	0.56
27:BF:30:VAL:O	27:BF:30:VAL:HG13	2.05	0.56
27:BF:133:GLU:H	27:BF:150:GLY:CA	2.17	0.56
29:BH:8:LYS:O	29:BH:13:GLY:CA	2.54	0.56
31:BJ:65:THR:HG23	31:BJ:66:GLY:N	2.20	0.56
31:BJ:81:ILE:CG2	31:BJ:82:GLY:H	2.03	0.56
32:BK:19:VAL:HG23	32:BK:43:ILE:HA	1.87	0.56
33:BL:14:LYS:HG3	33:BL:15:ALA:H	1.70	0.56
37:BP:13:LYS:HE3	37:BP:76:HIS:HA	1.88	0.56
39:BR:52:PRO:O	39:BR:53:PHE:HB2	2.05	0.56
44:BW:35:ILE:O	44:BW:37:VAL:N	2.38	0.56
44:BW:72:GLY:C	44:BW:74:LYS:H	2.07	0.56
46:BY:17:GLU:HB2	46:BY:53:VAL:HG11	1.87	0.56
53:CA:491:G:C2'	53:CA:492:C:H5'	2.35	0.56
53:CA:538:G:H5"	12:CL:110:LYS:HB2	1.87	0.56
53:CA:667:G:C2	53:CA:740:U:O2	2.59	0.56
53:CA:1014:A:C2	19:CS:33:TRP:HB2	2.40	0.56
53:CA:1144:G:H21	53:CA:1146:A:N6	2.02	0.56
53:CA:1363:A:C5	53:CA:1365:G:O6	2.58	0.56
6:CF:59:TYR:HE2	18:CR:66:LEU:HD21	1.69	0.56
8:CH:17:GLN:NE2	8:CH:71:VAL:HG23	2.20	0.56
14:CN:20:PHE:CA	14:CN:24:ALA:HB2	2.35	0.56
17:CQ:13:SER:O	17:CQ:20:ILE:HB	2.05	0.56
20:CT:73:ARG:HG2	20:CT:73:ARG:NH1	2.04	0.56
22:DA:37:C:H1'	26:DE:45:ALA:HB2	1.86	0.56
22:DA:176:A:H3'	22:DA:177:G:N2	2.21	0.56
22:DA:195:A:C4	22:DA:198:C:N4	2.73	0.56
22:DA:201:C:C5	22:DA:202:U:H5	2.23	0.56
22:DA:332:A:H61	42:DU:68:ASN:HD21	1.52	0.56
22:DA:529:A:C8	22:DA:2023:C:N4	2.73	0.56
22:DA:574:A:C8	22:DA:2055:C:H5"	2.41	0.56
22:DA:587:C:H1'	22:DA:671:C:C5'	2.35	0.56
22:DA:627:A:H5"	33:DL:78:ARG:NH1	2.21	0.56
22:DA:639:U:H2'	22:DA:640:C:H6	1.70	0.56
22:DA:822:G:H5"	62:DA:3358:HOH:O	2.05	0.56
22:DA:1049:C:O2'	22:DA:1050:A:O5'	2.23	0.56
22:DA:1090:A:H3'	22:DA:1091:G:H5"	1.86	0.56
22:DA:1412:U:H2'	22:DA:1413:A:O4'	2.05	0.56
22:DA:1417:C:H4'	22:DA:1587:G:H21	1.68	0.56
22:DA:1536:C:H4'	22:DA:1537:G:C5'	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1857:G:O2'	22:DA:1858:A:N7	2.38	0.56
22:DA:2271:G:H2'	22:DA:2272:U:H6	1.70	0.56
22:DA:2550:G:C6	22:DA:2551:C:C4	2.93	0.56
22:DA:2571:U:C4	22:DA:2574:G:C8	2.94	0.56
22:DA:2672:U:H6	22:DA:2672:U:O5'	1.87	0.56
22:DA:2728:U:HO2'	22:DA:2729:G:H8	1.52	0.56
22:DA:2816:G:O3'	35:DN:99:LYS:HE3	2.06	0.56
25:DD:120:GLY:O	25:DD:124:ARG:HB2	2.05	0.56
25:DD:202:ILE:HD12	25:DD:202:ILE:N	2.21	0.56
26:DE:47:LYS:O	26:DE:83:VAL:HB	2.05	0.56
58:DF:111:ARG:HG3	58:DF:135:ILE:HG12	1.87	0.56
32:DK:6:THR:O	32:DK:8:LEU:HD12	2.06	0.56
38:DQ:9:ALA:O	38:DQ:12:ARG:HG2	2.06	0.56
41:DT:34:VAL:HG12	41:DT:34:VAL:O	2.06	0.56
43:DV:80:HIS:HD2	43:DV:83:LYS:N	2.02	0.56
46:DY:20:ASN:ND2	46:DY:50:VAL:HG22	2.18	0.56
48:D0:37:HIS:HB2	48:D0:41:HIS:HE1	1.69	0.56
1:AA:922:G:H2'	1:AA:923:A:C8	2.40	0.56
1:AA:1240:U:H3'	1:AA:1241:G:H5'	1.86	0.56
1:AA:1392:G:H2'	1:AA:1393:U:H5'	1.86	0.56
4:AD:146:GLU:HB3	4:AD:147:LYS:NZ	2.20	0.56
22:BA:1338:G:O2'	22:BA:1393:A:N1	2.37	0.56
22:BA:1568:G:H4'	24:BC:58:LYS:CG	2.36	0.56
22:BA:2269:G:O2'	44:BW:18:LYS:HG2	2.05	0.56
22:BA:2812:G:H2'	22:BA:2813:A:O4'	2.06	0.56
27:BF:64:PRO:HA	27:BF:88:VAL:HG23	1.88	0.56
35:BN:38:LEU:HD12	35:BN:38:LEU:C	2.26	0.56
35:BN:78:LYS:HG2	35:BN:83:LEU:CD2	2.35	0.56
41:BT:29:THR:CA	41:BT:86:THR:HA	2.35	0.56
44:BW:22:VAL:CG1	44:BW:25:PHE:CE2	2.89	0.56
44:BW:23:LYS:CE	44:BW:24:ARG:HG3	2.35	0.56
50:B2:12:ARG:CZ	50:B2:12:ARG:HB2	2.34	0.56
53:CA:764:C:H3'	53:CA:765:G:H21	1.71	0.56
53:CA:858:G:O6	53:CA:869:G:C8	2.59	0.56
4:CD:125:ASN:N	4:CD:141:VAL:O	2.38	0.56
54:CG:30:MET:O	54:CG:31:VAL:HB	2.04	0.56
55:CM:106:ARG:HA	55:CM:110:GLY:O	2.06	0.56
21:CU:33:ARG:CZ	21:CU:34:ARG:HD3	2.35	0.56
22:DA:108:G:H2'	22:DA:109:C:C6	2.40	0.56
22:DA:202:U:H2'	22:DA:202:U:O2	2.04	0.56
22:DA:244:A:H2'	22:DA:245:G:O4'	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:830:G:H4'	22:DA:831:G:OP2	2.05	0.56
22:DA:1552:A:C2'	22:DA:1553:A:H5'	2.33	0.56
24:DC:143:VAL:HB	24:DC:153:LEU:HB3	1.88	0.56
25:DD:106:LYS:O	25:DD:107:VAL:HB	2.05	0.56
58:DF:177:ARG:NH1	58:DF:178:LYS:HB3	2.21	0.56
29:DH:72:ILE:HD11	29:DH:141:LYS:N	2.16	0.56
34:DM:35:ALA:HB3	34:DM:99:GLY:N	2.20	0.56
34:DM:112:LEU:HD13	34:DM:112:LEU:O	2.05	0.56
35:DN:97:ILE:HD11	35:DN:99:LYS:HZ3	1.70	0.56
46:DY:4:LYS:HB2	46:DY:4:LYS:NZ	2.18	0.56
1:AA:1472:U:O2'	1:AA:1473:G:H5'	2.05	0.56
3:AC:6:PRO:HG2	3:AC:183:TYR:CD2	2.41	0.56
6:AF:38:ARG:HB3	6:AF:63:ASN:HB2	1.86	0.56
13:AM:40:GLU:HG3	13:AM:41:ASP:H	1.71	0.56
17:AQ:4:ILE:HD12	17:AQ:4:ILE:N	2.20	0.56
19:AS:14:LEU:HD13	19:AS:32:THR:HG21	1.87	0.56
22:BA:744:U:H2'	22:BA:745:G:O4'	2.05	0.56
22:BA:1071:G:C8	22:BA:1089:A:N6	2.73	0.56
22:BA:1452:G:H2'	22:BA:1457:U:O4	2.05	0.56
22:BA:2813:A:H8	22:BA:2813:A:O5'	1.88	0.56
22:BA:2820:A:OP1	35:BN:2:ARG:NH2	2.39	0.56
24:BC:16:VAL:N	24:BC:203:VAL:CG1	2.68	0.56
44:BW:37:VAL:HG11	44:BW:55:ASP:HB2	1.88	0.56
52:B4:10:LEU:CD1	52:B4:33:HIS:CD2	2.86	0.56
53:CA:425:G:H2'	53:CA:426:U:O4'	2.06	0.56
53:CA:666:G:C6	53:CA:741:G:C6	2.94	0.56
53:CA:932:C:H5'	54:CG:3:ARG:HG2	1.88	0.56
53:CA:1195:C:H2'	53:CA:1197:A:O4'	2.05	0.56
53:CA:1417:G:C6	53:CA:1482:G:C6	2.93	0.56
54:CG:135:LYS:O	54:CG:139:ASP:HB2	2.06	0.56
9:CI:114:LYS:HD2	9:CI:120:ALA:O	2.05	0.56
56:CP:8:ARG:HB3	56:CP:28:ARG:HH11	1.70	0.56
22:DA:242:G:C5	51:D3:4:LYS:HE3	2.40	0.56
22:DA:684:G:C2	22:DA:794:A:C2	2.94	0.56
22:DA:1537:G:O2'	22:DA:1538:G:H4'	2.06	0.56
22:DA:1695:G:H8	24:DC:7:PRO:O	1.87	0.56
22:DA:2140:G:C6	22:DA:2152:G:C6	2.93	0.56
22:DA:2148:G:N2	22:DA:2149:U:O4	2.32	0.56
22:DA:2259:U:O4'	22:DA:2427:C:H2'	2.05	0.56
24:DC:93:VAL:CG1	24:DC:101:ARG:H	2.19	0.56
25:DD:137:SER:C	25:DD:138:LEU:HD22	2.26	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DG:162:ARG:HB2	28:DG:166:GLU:CB	2.36	0.56
38:DQ:63:ARG:O	38:DQ:64:ILE:C	2.43	0.56
39:DR:33:VAL:HG23	39:DR:61:ALA:HB3	1.87	0.56
41:DT:9:LYS:HG3	46:DY:21:LEU:HD13	1.86	0.56
1:AA:184:G:C6	1:AA:194:C:N4	2.73	0.56
21:AU:10:PRO:HB3	3:CC:74:ILE:HD12	1.88	0.56
22:BA:923:G:H1'	44:BW:23:LYS:HE2	1.87	0.56
24:BC:20:ASN:HD21	24:BC:22:GLU:CG	2.16	0.56
26:BE:196:VAL:HG13	26:BE:200:LEU:HD23	1.88	0.56
31:BJ:41:LYS:N	38:BQ:66:ALA:HB1	2.21	0.56
34:BM:71:LYS:HB3	34:BM:93:VAL:O	2.05	0.56
37:BP:4:ILE:HG22	37:BP:8:GLU:HG3	1.87	0.56
43:BV:42:LEU:N	43:BV:42:LEU:HD23	2.20	0.56
45:BX:4:CYS:HB2	45:BX:51:SER:HB3	1.88	0.56
53:CA:181:A:H4'	53:CA:182:A:OP1	2.04	0.56
53:CA:227:G:H2'	53:CA:228:A:O4'	2.05	0.56
53:CA:461:A:N3	53:CA:461:A:H2'	2.20	0.56
3:CC:34:SER:O	3:CC:38:VAL:HG13	2.05	0.56
4:CD:151:GLN:CB	4:CD:154:VAL:HG12	2.32	0.56
5:CE:68:ARG:O	5:CE:69:ASN:C	2.44	0.56
17:CQ:27:PHE:CD1	17:CQ:36:PHE:HB3	2.39	0.56
21:CU:19:LYS:HZ3	21:CU:19:LYS:N	2.04	0.56
22:DA:1287:A:H5'	35:DN:103:ARG:HD2	1.88	0.56
22:DA:1573:G:H2'	22:DA:1574:C:H5'	1.88	0.56
22:DA:1605:C:H5"	22:DA:1606:C:OP2	2.06	0.56
22:DA:1649:G:N1	22:DA:2009:A:C6	2.74	0.56
22:DA:1654:A:HO2'	22:DA:1655:A:H8	0.73	0.56
22:DA:1734:G:H2'	22:DA:1735:A:H8	1.70	0.56
22:DA:2235:G:H2'	22:DA:2236:U:C6	2.41	0.56
22:DA:2714:G:O2'	22:DA:2715:C:H5'	2.06	0.56
26:DE:109:LEU:O	26:DE:112:LEU:HB3	2.06	0.56
44:DW:22:VAL:O	44:DW:23:LYS:HG3	2.05	0.56
44:DW:23:LYS:HD2	44:DW:24:ARG:H	1.68	0.56
1:AA:211:G:C2	1:AA:212:G:H1'	2.40	0.56
1:AA:924:C:H2'	1:AA:925:G:H8	1.70	0.56
1:AA:1124:G:H2'	1:AA:1145:A:H61	1.69	0.56
1:AA:1228:C:H2'	1:AA:1229:A:H8	1.71	0.56
2:AB:163:ILE:HG23	2:AB:164:ASP:N	2.13	0.56
11:AK:51:PHE:HB2	11:AK:55:ARG:HB3	1.88	0.56
15:AO:57:ARG:HB3	15:AO:57:ARG:NH1	2.21	0.56
16:AP:22:ALA:CB	16:AP:32:PHE:HA	2.36	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:580:U:H2'	22:BA:581:C:H6	1.71	0.56
22:BA:611:C:H2'	22:BA:612:G:H5'	1.88	0.56
22:BA:622:G:H2'	22:BA:623:C:C6	2.41	0.56
22:BA:2637:U:H2'	22:BA:2638:G:H5'	1.86	0.56
25:BD:182:ALA:C	25:BD:184:ARG:N	2.58	0.56
28:BG:33:THR:H	28:BG:34:ARG:NH1	2.04	0.56
31:BJ:44:TYR:CD1	31:BJ:44:TYR:O	2.59	0.56
32:BK:70:ARG:CD	32:BK:76:VAL:HG22	2.36	0.56
32:BK:91:SER:O	32:BK:93:GLN:HB2	2.05	0.56
33:BL:61:LEU:O	51:B3:12:ARG:HD3	2.05	0.56
35:BN:103:ARG:NH1	35:BN:110:MET:HE1	2.20	0.56
44:BW:37:VAL:HG22	44:BW:55:ASP:O	2.06	0.56
53:CA:177:G:O2'	53:CA:1448:C:C5'	2.54	0.56
53:CA:204:G:H2'	53:CA:205:A:O4'	2.06	0.56
53:CA:266:G:HO2'	53:CA:267:C:H3'	1.70	0.56
53:CA:537:G:H2'	53:CA:538:G:H8	1.70	0.56
53:CA:1154:G:H2'	53:CA:1155:A:H8	1.71	0.56
53:CA:1239:A:H3'	54:CG:118:ARG:HH22	1.70	0.56
53:CA:1372:U:H5"	9:CI:71:ILE:CD1	2.36	0.56
53:CA:1387:G:C6	53:CA:1388:C:N4	2.73	0.56
5:CE:89:THR:OG1	5:CE:90:GLY:N	2.37	0.56
5:CE:104:ILE:N	5:CE:122:VAL:H	1.95	0.56
6:CF:25:TYR:O	6:CF:29:ILE:HD13	2.05	0.56
9:CI:78:ILE:O	9:CI:82:ILE:HG13	2.06	0.56
12:CL:109:ARG:HB2	12:CL:118:VAL:HG21	1.87	0.56
22:DA:71:A:H5"	22:DA:73:A:N9	2.20	0.56
22:DA:192:C:H2'	22:DA:193:U:H5'	1.88	0.56
22:DA:708:G:H2'	22:DA:709:U:H6	1.71	0.56
22:DA:1036:G:C6	22:DA:1120:G:C6	2.94	0.56
22:DA:1716:U:O2'	22:DA:1717:A:C8	2.39	0.56
22:DA:2142:A:C2'	22:DA:2143:C:H4'	2.35	0.56
22:DA:2229:U:H2'	22:DA:2230:G:H8	1.70	0.56
22:DA:2319:G:O2'	22:DA:2320:U:O5'	2.24	0.56
57:DB:69:G:H2'	57:DB:70:C:H5'	1.87	0.56
24:DC:179:GLU:HA	24:DC:269:ARG:O	2.06	0.56
58:DF:46:LYS:HD3	58:DF:50:ASP:HB2	1.86	0.56
58:DF:107:VAL:N	58:DF:108:PRO:CD	2.69	0.56
29:DH:5:LEU:HD11	29:DH:13:GLY:HA3	1.88	0.56
29:DH:24:GLY:O	29:DH:25:TYR:C	2.43	0.56
31:DJ:99:ARG:HG2	31:DJ:102:GLU:OE2	2.05	0.56
42:DU:33:VAL:O	42:DU:34:ILE:HG13	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:D3:36:ALA:O	51:D3:40:LYS:HG3	2.06	0.56
1:AA:184:G:H2'	1:AA:185:U:C5	2.40	0.56
1:AA:725:G:O2'	1:AA:726:C:H5'	2.06	0.56
1:AA:914:A:H2'	1:AA:915:A:H8	1.70	0.56
1:AA:1159:U:O4'	1:AA:1159:U:O2	2.23	0.56
1:AA:1331:G:O2'	1:AA:1332:A:P	2.62	0.56
7:AG:34:LYS:HB3	7:AG:37:THR:HG23	1.86	0.56
10:AJ:8:ILE:HA	10:AJ:99:GLN:O	2.05	0.56
17:AQ:46:HIS:HB2	17:AQ:66:LEU:CD1	2.35	0.56
19:AS:52:ASN:O	19:AS:76:THR:HG22	2.05	0.56
22:BA:212:G:O2'	22:BA:213:A:H5'	2.06	0.56
22:BA:570:G:H2'	22:BA:2030:A:N7	2.21	0.56
22:BA:864:G:O2'	22:BA:865:C:H5'	2.05	0.56
22:BA:952:G:H2'	22:BA:953:G:O5'	2.06	0.56
22:BA:1050:A:C2	22:BA:2751:G:C5	2.94	0.56
22:BA:1070:A:C2	22:BA:1097:U:H4'	2.41	0.56
22:BA:1113:U:H2'	22:BA:1114:C:H6	1.70	0.56
22:BA:2149:U:O2'	22:BA:2150:C:O5'	2.23	0.56
22:BA:2314:A:O2'	22:BA:2315:G:H5'	2.06	0.56
22:BA:2823:A:H2'	22:BA:2824:C:H5'	1.88	0.56
24:BC:106:PRO:CB	24:BC:141:HIS:CE1	2.89	0.56
25:BD:121:THR:O	25:BD:122:VAL:CB	2.54	0.56
26:BE:108:ILE:HD11	26:BE:180:LEU:HB3	1.88	0.56
31:BJ:43:GLU:O	31:BJ:45:THR:N	2.39	0.56
31:BJ:64:VAL:HG13	31:BJ:65:THR:O	2.06	0.56
32:BK:72:PRO:O	32:BK:74:GLY:N	2.36	0.56
38:BQ:69:ARG:HB2	38:BQ:69:ARG:NH2	2.18	0.56
53:CA:188:C:H42	53:CA:189:A:N6	2.04	0.56
53:CA:954:G:N1	53:CA:1228:C:N4	2.52	0.56
53:CA:1239:A:N6	53:CA:1299:A:N6	2.53	0.56
53:CA:1454:G:O2'	53:CA:1455:G:H8	1.87	0.56
53:CA:1458:G:H4'	20:CT:22:SER:HB2	1.87	0.56
54:CG:35:LYS:O	9:CI:42:THR:HG21	2.06	0.56
54:CG:88:VAL:HG22	54:CG:89:GLU:N	2.16	0.56
9:CI:17:ARG:NH1	9:CI:65:THR:HG21	2.21	0.56
10:CJ:44:THR:HG23	10:CJ:70:HIS:CD2	2.41	0.56
22:DA:64:A:H2'	22:DA:65:U:O4'	2.05	0.56
22:DA:223:A:C5	22:DA:422:A:N7	2.74	0.56
22:DA:482:A:N6	22:DA:506:G:C5	2.73	0.56
22:DA:622:G:H2'	22:DA:623:C:C5	2.40	0.56
22:DA:850:U:O2'	47:DZ:22:THR:HG22	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1156:A:OP1	22:DA:1156:A:H8	1.88	0.56
22:DA:1751:U:H2'	22:DA:1752:C:C6	2.41	0.56
22:DA:1826:G:OP2	24:DC:220:ARG:HB3	2.05	0.56
22:DA:2135:A:H8	22:DA:2135:A:OP2	1.88	0.56
22:DA:2297:A:C2	22:DA:2298:A:N7	2.74	0.56
22:DA:2614:A:H4'	22:DA:2615:U:OP1	2.06	0.56
24:DC:19:VAL:O	24:DC:21:PRO:HD3	2.05	0.56
24:DC:43:ASN:ND2	24:DC:44:ASN:H	2.04	0.56
25:DD:10:GLY:HA3	25:DD:26:VAL:HB	1.86	0.56
25:DD:36:GLN:HG3	25:DD:38:LYS:HZ1	1.71	0.56
39:DR:70:GLU:CD	39:DR:70:GLU:H	2.08	0.56
45:DX:30:PRO:HG2	45:DX:32:LEU:CD2	2.36	0.56
45:DX:51:SER:OG	45:DX:54:GLY:HA3	2.06	0.56
46:DY:17:GLU:HG3	46:DY:53:VAL:HG11	1.88	0.56
1:AA:243:A:H4'	1:AA:244:U:H5"	1.88	0.56
1:AA:254:G:O2'	1:AA:255:G:H5'	2.04	0.56
1:AA:673:A:H1'	18:AR:63:TYR:HE1	1.71	0.56
1:AA:1053:G:C6	1:AA:1199:U:C2	2.94	0.56
1:AA:1320:C:N3	19:AS:35:ARG:NH1	2.53	0.56
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.41	0.56
2:AB:9:LEU:HD23	2:AB:11:ALA:N	2.21	0.56
5:AE:152:VAL:CB	5:AE:155:LYS:NZ	2.68	0.56
8:AH:63:LYS:CB	8:AH:70:VAL:HG21	2.35	0.56
12:AL:7:VAL:HG13	17:AQ:30:HIS:CD2	2.41	0.56
22:BA:191:A:H2'	22:BA:192:C:C6	2.41	0.56
22:BA:528:A:C2	22:BA:2042:A:H2'	2.41	0.56
22:BA:879:G:H2'	22:BA:880:G:C8	2.41	0.56
22:BA:903:C:H2'	22:BA:904:G:H5'	1.87	0.56
22:BA:1798:U:OP1	24:BC:255:LYS:O	2.22	0.56
22:BA:2058:A:N1	60:BA:3135:TEL:O48	2.32	0.56
22:BA:2680:U:OP2	25:BD:114:LYS:HE2	2.06	0.56
22:BA:2793:C:H2'	22:BA:2794:C:C6	2.40	0.56
23:BB:30:C:C2'	23:BB:31:C:H5'	2.34	0.56
25:BD:184:ARG:HH11	37:BP:6:GLN:HE22	1.53	0.56
28:BG:1:SER:O	28:BG:3:VAL:N	2.38	0.56
28:BG:33:THR:CA	28:BG:34:ARG:HH11	2.19	0.56
29:BH:26:ALA:O	29:BH:31:VAL:HG23	2.06	0.56
30:BI:23:VAL:HG23	30:BI:24:GLY:H	1.71	0.56
31:BJ:111:LYS:HE2	31:BJ:115:GLY:H	1.71	0.56
36:BO:88:LYS:O	36:BO:89:ASP:HB2	2.06	0.56
40:BS:88:ARG:CG	40:BS:88:ARG:NH2	2.68	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:B4:9:LYS:CD	52:B4:9:LYS:N	2.64	0.56
53:CA:5:U:H4'	53:CA:6:G:C5'	2.36	0.56
53:CA:246:A:N3	53:CA:279:A:N6	2.54	0.56
53:CA:994:A:HO2'	53:CA:995:C:H6	1.53	0.56
53:CA:1013:G:H22	53:CA:1015:G:H3'	1.71	0.56
53:CA:1179:A:H2'	53:CA:1180:A:O4'	2.06	0.56
53:CA:1296:C:C5	53:CA:1297:G:N2	2.74	0.56
6:CF:98:GLU:O	6:CF:99:ALA:HB3	2.05	0.56
54:CG:100:MET:CE	54:CG:100:MET:H	2.19	0.56
55:CM:18:LEU:HD22	55:CM:32:ILE:HG21	1.88	0.56
21:CU:16:ARG:HG3	21:CU:19:LYS:CG	2.16	0.56
21:CU:28:LEU:O	21:CU:28:LEU:HD23	2.06	0.56
22:DA:98:G:O2'	22:DA:103:A:C8	2.59	0.56
22:DA:111:A:N1	22:DA:112:U:C2	2.74	0.56
22:DA:154:U:H2'	22:DA:155:A:O4'	2.05	0.56
22:DA:845:A:N6	22:DA:932:U:N3	2.53	0.56
22:DA:1525:A:C6	22:DA:1526:C:C2	2.94	0.56
22:DA:1915:U:O2'	22:DA:1916:A:H5'	2.06	0.56
26:DE:88:ARG:HB3	26:DE:89:PRO:HD2	1.87	0.56
58:DF:110:ILE:HD13	58:DF:110:ILE:H	1.70	0.56
28:DG:53:PRO:HB3	28:DG:61:TRP:H	1.71	0.56
36:DO:30:ARG:HG2	36:DO:31:THR:N	2.20	0.56
1:AA:532:A:H4'	1:AA:533:A:OP2	2.06	0.56
7:AG:146:ALA:C	7:AG:148:LYS:H	2.08	0.56
11:AK:39:ASN:O	11:AK:40:ALA:HB3	2.06	0.56
19:AS:4:LEU:HD22	19:AS:8:PRO:HA	1.86	0.56
23:BB:15:A:O2'	23:BB:16:G:H5'	2.06	0.56
24:BC:229:HIS:O	24:BC:231:HIS:O	2.24	0.56
37:BP:52:ARG:HH11	37:BP:52:ARG:CG	2.17	0.56
37:BP:105:LYS:HA	37:BP:108:ARG:NH2	2.21	0.56
47:BZ:40:THR:CG2	47:BZ:43:ILE:HG23	2.35	0.56
53:CA:71:A:C2	53:CA:72:A:C8	2.94	0.56
53:CA:109:A:H4'	53:CA:110:C:OP2	2.06	0.56
53:CA:750:C:H4'	15:CO:20:ASP:HB2	1.86	0.56
53:CA:1125:U:C5	10:CJ:40:ILE:HG12	2.41	0.56
53:CA:1217:C:H2'	53:CA:1218:C:C6	2.39	0.56
9:CI:51:LEU:C	9:CI:53:LEU:H	2.10	0.56
10:CJ:25:ILE:HG22	10:CJ:25:ILE:O	2.06	0.56
22:DA:70:G:H3'	22:DA:113:U:C4'	2.36	0.56
22:DA:381:G:H5"	45:DX:15:ASN:HD22	1.71	0.56
22:DA:443:A:N6	26:DE:36:ALA:HB1	2.18	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:758:C:O2	22:DA:1981:A:H2	1.89	0.56
22:DA:935:C:H2'	22:DA:936:A:H8	1.70	0.56
22:DA:1204:A:C4	22:DA:1206:G:C6	2.94	0.56
22:DA:1553:A:N7	22:DA:1555:G:C6	2.74	0.56
22:DA:1723:G:O2'	22:DA:1724:G:H5'	2.06	0.56
22:DA:2093:G:O6	22:DA:2225:A:N7	2.39	0.56
22:DA:2478:A:N7	22:DA:2529:G:C6	2.74	0.56
22:DA:2562:U:H1'	32:DK:23:LYS:HE2	1.87	0.56
22:DA:2884:U:P	48:D0:40:HIS:HE2	2.29	0.56
26:DE:151:GLY:HA3	26:DE:191:ASP:OD1	2.06	0.56
58:DF:92:GLY:O	58:DF:95:MET:HB3	2.06	0.56
35:DN:39:PRO:O	35:DN:43:GLU:HG2	2.06	0.56
40:DS:22:ASP:HA	40:DS:25:ARG:HH12	1.71	0.56
46:DY:48:ARG:O	46:DY:51:ALA:HB3	2.06	0.56
1:AA:429:U:H4'	1:AA:430:A:OP1	2.06	0.55
1:AA:1026:G:C6	1:AA:1027:C:N4	2.74	0.55
4:AD:16:THR:HG22	4:AD:17:ASP:N	2.21	0.55
17:AQ:12:VAL:HG12	17:AQ:21:VAL:O	2.06	0.55
22:BA:364:C:H2'	22:BA:365:U:H6	1.70	0.55
22:BA:1459:G:O2'	22:BA:1460:U:H3'	2.07	0.55
26:BE:73:ILE:O	26:BE:73:ILE:HG12	2.05	0.55
32:BK:111:LYS:HE2	32:BK:111:LYS:N	2.21	0.55
44:BW:39:GLN:C	44:BW:41:GLY:N	2.58	0.55
53:CA:238:A:H2'	53:CA:239:U:C4'	2.36	0.55
53:CA:998:C:H2'	53:CA:999:C:C6	2.41	0.55
53:CA:1026:G:H1	53:CA:1036:A:N6	2.04	0.55
53:CA:1042:A:H2'	53:CA:1043:G:O4'	2.06	0.55
3:CC:161:ILE:HD13	3:CC:161:ILE:H	1.72	0.55
4:CD:20:LEU:HD23	4:CD:20:LEU:N	2.21	0.55
5:CE:37:VAL:HG12	5:CE:38:VAL:N	2.22	0.55
10:CJ:42:LEU:HB3	10:CJ:43:PRO:HD2	1.89	0.55
55:CM:78:ARG:HH21	55:CM:79:LEU:CD2	2.19	0.55
18:CR:22:TYR:HA	18:CR:57:ALA:HB1	1.89	0.55
22:DA:125:A:H5"	50:D2:19:ARG:HB2	1.87	0.55
22:DA:226:A:H2'	22:DA:227:A:C8	2.41	0.55
22:DA:532:A:N1	22:DA:2020:A:H1'	2.21	0.55
22:DA:574:A:H4'	22:DA:575:A:C5'	2.35	0.55
22:DA:575:A:N3	22:DA:576:U:C5	2.74	0.55
22:DA:727:A:O2'	22:DA:728:G:C8	2.51	0.55
22:DA:1301:A:C4	22:DA:1303:G:N7	2.74	0.55
22:DA:1311:G:H21	22:DA:1603:A:H62	1.52	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2813:A:H2'	22:DA:2814:A:C8	2.41	0.55
39:DR:27:ILE:CG2	39:DR:28:ALA:H	2.06	0.55
39:DR:49:ILE:HG22	39:DR:54:VAL:N	2.21	0.55
46:DY:60:LYS:HG2	46:DY:60:LYS:O	2.06	0.55
1:AA:269:C:H2'	1:AA:270:A:H8	1.71	0.55
1:AA:358:U:H2'	1:AA:359:G:H8	1.70	0.55
1:AA:1084:G:C5	1:AA:1085:U:C4	2.94	0.55
3:AC:6:PRO:O	3:AC:10:ARG:HG2	2.07	0.55
4:AD:131:ILE:HD13	4:AD:134:TYR:HB2	1.89	0.55
22:BA:558:U:H5"	31:BJ:111:LYS:HE3	1.88	0.55
25:BD:114:LYS:HZ2	25:BD:116:LYS:HE2	1.70	0.55
28:BG:70:LEU:O	28:BG:74:MET:HG3	2.06	0.55
33:BL:91:ASP:H	33:BL:94:THR:HG21	1.71	0.55
40:BS:41:LYS:O	40:BS:44:ALA:N	2.39	0.55
53:CA:86:G:H1'	53:CA:87:C:O5'	2.06	0.55
53:CA:151:A:H2'	53:CA:152:A:O4'	2.06	0.55
53:CA:287:U:O2'	53:CA:288:A:H5'	2.06	0.55
53:CA:704:A:C2'	53:CA:705:G:C8	2.89	0.55
53:CA:1146:A:H2'	53:CA:1147:C:C6	2.41	0.55
53:CA:1182:G:C3'	53:CA:1183:U:H5'	2.36	0.55
53:CA:1375:A:O2'	54:CG:101:ARG:NH2	2.39	0.55
2:CB:128:LEU:HB3	2:CB:131:LYS:HB3	1.88	0.55
6:CF:2:ARG:NH2	6:CF:91:ARG:HB2	2.20	0.55
8:CH:28:SER:HB3	8:CH:56:PRO:HB2	1.89	0.55
12:CL:97:VAL:O	12:CL:97:VAL:CG2	2.54	0.55
22:DA:223:A:C6	22:DA:422:A:N7	2.74	0.55
22:DA:1045:C:H4'	22:DA:1047:G:C4	2.40	0.55
22:DA:1338:G:O2'	41:DT:18:GLU:HG3	2.07	0.55
22:DA:1439:A:H1'	22:DA:1553:A:N6	2.21	0.55
22:DA:1537:G:C3'	22:DA:1538:G:H4'	2.36	0.55
22:DA:1639:C:C2'	22:DA:1640:A:H5"	2.37	0.55
22:DA:2015:A:C5	48:D0:2:VAL:HG11	2.41	0.55
22:DA:2258:C:C4'	22:DA:2259:U:OP2	2.49	0.55
24:DC:70:LYS:HB2	24:DC:101:ARG:NH2	2.18	0.55
25:DD:12:THR:OG1	37:DP:4:ILE:HG23	2.06	0.55
25:DD:208:LYS:O	25:DD:209:ALA:CB	2.55	0.55
28:DG:22:VAL:HG12	28:DG:23:ILE:H	1.72	0.55
29:DH:57:LYS:O	29:DH:57:LYS:HD2	2.06	0.55
33:DL:81:ASP:O	33:DL:83:ALA:N	2.39	0.55
33:DL:112:LEU:O	33:DL:112:LEU:HD23	2.06	0.55
40:DS:9:HIS:H	40:DS:102:HIS:HE1	1.54	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:47:C:H4'	1:AA:48:C:O5'	2.05	0.55
1:AA:129:A:H1'	1:AA:130:A:C8	2.41	0.55
1:AA:389:A:C6	1:AA:390:U:H1'	2.41	0.55
2:AB:103:TRP:CH2	2:AB:107:ARG:HD3	2.41	0.55
9:AI:6:TYR:CG	9:AI:7:GLY:N	2.75	0.55
22:BA:372:G:H5"	45:BX:60:LYS:HE3	1.89	0.55
22:BA:585:G:H5"	22:BA:586:A:OP1	2.07	0.55
24:BC:106:PRO:HA	24:BC:141:HIS:CE1	2.41	0.55
29:BH:4:ILE:HG23	29:BH:17:ASP:O	2.06	0.55
33:BL:14:LYS:CG	33:BL:15:ALA:N	2.68	0.55
38:BQ:93:ILE:HG23	38:BQ:94:LEU:N	2.21	0.55
49:B1:24:LYS:NZ	49:B1:51:ALA:O	2.39	0.55
53:CA:13:U:O2'	53:CA:14:U:H5'	2.07	0.55
53:CA:284:C:H2'	53:CA:285:C:C6	2.42	0.55
53:CA:951:G:H2'	53:CA:952:U:H6	1.71	0.55
53:CA:996:A:N1	53:CA:1046:A:H5'	2.21	0.55
4:CD:58:GLN:OE1	4:CD:58:GLN:HA	2.06	0.55
5:CE:59:ILE:O	5:CE:59:ILE:HG13	2.05	0.55
18:CR:62:ARG:HB3	18:CR:69:TYR:CE1	2.41	0.55
22:DA:167:A:C2	22:DA:168:G:H1'	2.41	0.55
22:DA:185:G:C5	22:DA:212:G:N2	2.75	0.55
22:DA:1731:G:H4'	22:DA:1732:C:OP1	2.06	0.55
22:DA:1776:G:C2	22:DA:1789:A:N3	2.74	0.55
22:DA:2651:C:O2'	22:DA:2652:C:H5'	2.07	0.55
22:DA:2766:A:H2'	22:DA:2766:A:N3	2.21	0.55
25:DD:9:VAL:O	37:DP:4:ILE:HD11	2.05	0.55
26:DE:147:LEU:HB3	26:DE:186:VAL:HG23	1.88	0.55
58:DF:74:ALA:HB1	58:DF:76:PHE:CD2	2.42	0.55
40:DS:28:LYS:HA	40:DS:70:LYS:HA	1.88	0.55
1:AA:624:C:H4'	16:AP:10:GLY:O	2.06	0.55
4:AD:16:THR:HG22	4:AD:17:ASP:H	1.72	0.55
13:AM:49:GLU:O	13:AM:52:ILE:HG22	2.05	0.55
16:AP:73:ALA:O	16:AP:77:GLU:HB2	2.06	0.55
20:AT:8:LYS:HA	20:AT:11:ILE:HG23	1.88	0.55
22:BA:14:A:H5"	22:BA:15:G:OP2	2.07	0.55
22:BA:39:G:H2'	22:BA:40:U:C6	2.41	0.55
22:BA:1731:G:N1	22:BA:1733:G:C6	2.75	0.55
22:BA:2415:G:H4'	33:BL:66:PHE:HB2	1.88	0.55
22:BA:2478:A:C2'	22:BA:2479:U:H5'	2.37	0.55
22:BA:2755:C:O2'	22:BA:2756:U:H2'	2.05	0.55
23:BB:49:C:OP1	36:BO:102:ARG:HG3	2.05	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:170:TYR:CE2	24:BC:184:GLU:HA	2.41	0.55
29:BH:49:ALA:HB3	29:BH:50:ARG:NH2	2.21	0.55
38:BQ:96:ASP:C	38:BQ:98:ALA:N	2.59	0.55
40:BS:13:SER:O	40:BS:14:ALA:CB	2.53	0.55
43:BV:61:LEU:O	43:BV:71:LYS:HA	2.05	0.55
49:B1:47:ILE:HD12	49:B1:47:ILE:H	1.71	0.55
53:CA:994:A:C6	53:CA:1216:A:H5'	2.41	0.55
53:CA:1350:A:C2	54:CG:33:GLY:HA3	2.41	0.55
8:CH:100:ILE:C	8:CH:100:ILE:HD12	2.27	0.55
15:CO:58:MET:O	15:CO:61:GLN:HB2	2.06	0.55
21:CU:14:ALA:O	21:CU:15:LEU:O	2.25	0.55
22:DA:206:U:H5'	22:DA:206:U:H6	1.71	0.55
22:DA:396:G:O2'	22:DA:397:U:H6	1.85	0.55
22:DA:1387:A:N3	22:DA:1388:G:C8	2.75	0.55
22:DA:1508:A:C4'	22:DA:1509:A:OP1	2.45	0.55
22:DA:1998:A:H2'	22:DA:1999:C:C6	2.42	0.55
22:DA:2144:G:N3	22:DA:2147:A:OP1	2.40	0.55
22:DA:2726:A:O2'	22:DA:2727:A:H5'	2.06	0.55
22:DA:2756:U:H1'	22:DA:2757:A:C5'	2.36	0.55
57:DB:15:A:OP1	57:DB:108:A:H5'	2.06	0.55
57:DB:42:C:H2'	57:DB:43:C:C5	2.41	0.55
28:DG:167:VAL:HG23	28:DG:168:VAL:N	2.21	0.55
32:DK:9:ASN:HD21	32:DK:17:ARG:NH2	2.05	0.55
35:DN:35:LYS:HG2	35:DN:112:TYR:CE1	2.41	0.55
43:DV:75:GLN:HG3	43:DV:92:VAL:CG1	2.36	0.55
1:AA:1240:U:H3'	1:AA:1241:G:C5'	2.37	0.55
2:AB:14:HIS:HB2	2:AB:208:ALA:HB2	1.87	0.55
2:AB:14:HIS:O	2:AB:14:HIS:CG	2.60	0.55
2:AB:20:ARG:O	2:AB:22:TRP:N	2.40	0.55
2:AB:40:ILE:HG21	2:AB:201:GLY:H	1.70	0.55
4:AD:56:GLU:O	4:AD:59:LYS:HB3	2.07	0.55
17:AQ:22:VAL:HG21	17:AQ:60:ILE:CD1	2.32	0.55
17:AQ:58:VAL:HG22	17:AQ:59:GLU:N	2.22	0.55
18:AR:35:SER:HA	18:AR:71:ASP:HB3	1.89	0.55
20:AT:73:ARG:O	20:AT:77:ASN:ND2	2.40	0.55
22:BA:784:G:C5	24:BC:227:VAL:HG11	2.42	0.55
22:BA:904:G:N2	22:BA:905:A:N3	2.53	0.55
22:BA:910:A:H2'	22:BA:911:A:C8	2.41	0.55
22:BA:1806:C:H1'	24:BC:43:ASN:OD1	2.06	0.55
22:BA:2092:U:C4'	22:BA:2093:G:O5'	2.52	0.55
22:BA:2354:C:C4'	44:BW:31:LEU:HD22	2.37	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:20:ASN:C	24:BC:20:ASN:ND2	2.59	0.55
25:BD:48:ILE:HG23	25:BD:84:LEU:HD11	1.87	0.55
30:BI:104:GLN:O	30:BI:105:LEU:CB	2.54	0.55
31:BJ:44:TYR:O	31:BJ:45:THR:HB	2.05	0.55
33:BL:104:GLN:HA	33:BL:104:GLN:NE2	2.22	0.55
38:BQ:4:LYS:HG3	38:BQ:5:ARG:N	2.13	0.55
46:BY:9:LYS:HB3	46:BY:12:GLU:HG3	1.86	0.55
47:BZ:6:ILE:O	47:BZ:34:THR:HA	2.07	0.55
53:CA:120:A:O2'	53:CA:121:U:H4'	2.05	0.55
53:CA:166:U:C2'	53:CA:167:A:H5'	2.37	0.55
53:CA:194:C:O2'	53:CA:195:A:H5'	2.06	0.55
53:CA:243:A:C4'	53:CA:244:U:OP2	2.54	0.55
53:CA:375:U:C2	53:CA:376:G:C8	2.94	0.55
53:CA:695:A:H61	53:CA:797:C:H1'	1.71	0.55
53:CA:1047:G:N2	53:CA:1213:A:H2	2.04	0.55
4:CD:149:LYS:HB2	4:CD:150:LYS:HE2	1.88	0.55
5:CE:35:LEU:HD11	5:CE:136:VAL:HG11	1.88	0.55
6:CF:90:MET:HE2	18:CR:60:ARG:HD3	1.88	0.55
54:CG:74:VAL:HG11	54:CG:143:MET:HB2	1.87	0.55
19:CS:79:TYR:O	19:CS:80:ARG:HB2	2.05	0.55
22:DA:394:C:H2'	22:DA:395:U:H5'	1.89	0.55
22:DA:609:A:H2'	22:DA:610:C:O4'	2.05	0.55
22:DA:832:U:OP1	33:DL:39:LYS:N	2.39	0.55
22:DA:942:G:H4'	22:DA:1190:G:H5'	1.87	0.55
22:DA:1361:G:O2'	22:DA:1362:C:H5'	2.06	0.55
22:DA:1518:C:H2'	22:DA:1519:G:O4'	2.06	0.55
22:DA:1625:C:H5"	22:DA:1626:A:OP2	2.06	0.55
22:DA:2138:G:H8	22:DA:2138:G:OP2	1.88	0.55
22:DA:2330:G:N1	22:DA:2386:A:C6	2.73	0.55
22:DA:2636:C:H4'	25:DD:81:GLU:OE1	2.06	0.55
24:DC:70:LYS:HD3	24:DC:101:ARG:HH12	1.71	0.55
30:DI:32:VAL:HG22	30:DI:58:ILE:HG21	1.88	0.55
1:AA:414:A:H2'	1:AA:415:A:C8	2.41	0.55
1:AA:865:A:H2'	1:AA:866:C:H6	1.72	0.55
1:AA:1410:A:H2'	1:AA:1411:C:H6	1.72	0.55
13:AM:5:GLY:HA3	13:AM:65:GLU:HG3	1.88	0.55
13:AM:7:ASN:HD22	13:AM:8:ILE:N	2.05	0.55
22:BA:455:C:N3	22:BA:472:A:H2'	2.22	0.55
22:BA:1056:G:H21	22:BA:1103:A:H62	1.54	0.55
22:BA:1535:A:C4'	22:BA:1536:C:OP2	2.45	0.55
22:BA:2346:A:H3'	22:BA:2347:C:C5'	2.33	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BD:12:THR:CG2	25:BD:13:ARG:H	2.20	0.55
30:BI:58:ILE:O	30:BI:60:VAL:HG23	2.06	0.55
32:BK:121:GLU:HG2	32:BK:122:VAL:H	1.70	0.55
36:BO:31:THR:HG22	36:BO:34:HIS:H	1.68	0.55
47:BZ:29:ARG:HG3	47:BZ:29:ARG:NH2	2.10	0.55
53:CA:261:U:H2'	53:CA:263:A:OP2	2.06	0.55
53:CA:765:G:N7	53:CA:812:G:C4	2.74	0.55
53:CA:1068:G:C2'	53:CA:1069:C:H5'	2.36	0.55
53:CA:1249:C:H2'	53:CA:1250:A:H5"	1.88	0.55
6:CF:11:HIS:NE2	6:CF:54:LEU:HD21	2.21	0.55
11:CK:78:ILE:H	11:CK:78:ILE:HD13	1.71	0.55
12:CL:5:GLN:HG3	12:CL:9:LYS:NZ	2.22	0.55
22:DA:484:C:N4	22:DA:497:A:C2	2.75	0.55
22:DA:604:G:C2	22:DA:605:G:C5	2.94	0.55
22:DA:642:U:H2'	22:DA:644:A:OP2	2.05	0.55
22:DA:815:C:OP1	39:DR:85:LYS:HE2	2.07	0.55
22:DA:1346:G:H2'	22:DA:1347:A:C8	2.41	0.55
22:DA:1455:G:N7	35:DN:64:ARG:NH1	2.55	0.55
22:DA:1510:G:N2	22:DA:1511:G:N3	2.55	0.55
22:DA:1746:A:H2'	22:DA:1747:U:H6	1.71	0.55
22:DA:2048:G:C6	22:DA:2049:G:C5	2.95	0.55
22:DA:2200:C:O2	22:DA:2226:C:N4	2.39	0.55
22:DA:2310:C:O2'	22:DA:2311:A:H4'	2.06	0.55
22:DA:2331:G:O2'	44:DW:40:ARG:HB3	2.05	0.55
22:DA:2448:A:H61	33:DL:36:LYS:NZ	2.05	0.55
22:DA:2808:G:HO2'	22:DA:2809:A:H8	1.51	0.55
24:DC:5:CYS:HB3	24:DC:12:ARG:HH11	1.72	0.55
25:DD:181:ASP:C	25:DD:183:GLU:H	2.10	0.55
58:DF:8:LYS:HB2	58:DF:8:LYS:NZ	2.21	0.55
58:DF:52:ALA:HA	58:DF:55:ASP:HB2	1.88	0.55
58:DF:113:PHE:HE2	58:DF:116:LEU:HB2	1.70	0.55
28:DG:112:VAL:CG1	28:DG:114:HIS:HB3	2.37	0.55
31:DJ:77:HIS:CE1	31:DJ:83:GLY:HA3	2.41	0.55
36:DO:26:LEU:HD23	36:DO:92:PHE:CE1	2.41	0.55
37:DP:28:LYS:HB2	37:DP:28:LYS:HZ2	1.71	0.55
44:DW:43:LYS:HD2	44:DW:79:ILE:HD11	1.89	0.55
51:D3:33:THR:HG23	51:D3:34:LYS:H	1.71	0.55
1:AA:473:U:H2'	1:AA:474:G:C8	2.40	0.55
2:AB:32:GLY:HA3	2:AB:39:ILE:HG12	1.88	0.55
3:AC:59:PRO:HD2	3:AC:62:SER:O	2.06	0.55
7:AG:145:GLU:CA	7:AG:148:LYS:HB2	2.37	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:128:LYS:HD2	9:AI:129:ARG:H	1.71	0.55
10:AJ:21:ALA:HA	10:AJ:24:GLU:OE2	2.06	0.55
20:AT:43:LYS:HD3	20:AT:86:ALA:O	2.05	0.55
22:BA:245:G:H2'	22:BA:246:C:H6	1.71	0.55
22:BA:619:G:H5"	22:BA:620:G:OP2	2.07	0.55
22:BA:994:C:H1'	39:BR:10:LYS:NZ	2.22	0.55
22:BA:1105:U:H2'	22:BA:1106:G:C8	2.38	0.55
22:BA:2230:G:H2'	22:BA:2231:U:H6	1.72	0.55
22:BA:2330:G:H21	44:BW:38:ARG:HA	1.71	0.55
26:BE:79:ARG:HG2	26:BE:80:SER:N	2.21	0.55
29:BH:2:GLN:HA	29:BH:20:ASN:HA	1.88	0.55
31:BJ:64:VAL:CG1	31:BJ:68:LYS:HB2	2.36	0.55
37:BP:20:ARG:HG3	37:BP:20:ARG:NH2	2.20	0.55
41:BT:31:VAL:C	41:BT:32:LEU:HD23	2.27	0.55
42:BU:43:LYS:O	42:BU:57:ILE:HA	2.06	0.55
44:BW:8:SER:O	44:BW:9:THR:CG2	2.53	0.55
53:CA:60:A:N3	53:CA:61:G:H1'	2.21	0.55
53:CA:513:C:H2'	53:CA:514:C:C6	2.42	0.55
53:CA:821:G:H2'	53:CA:822:U:C6	2.42	0.55
53:CA:1279:G:H2'	10:CJ:45:ARG:HH21	1.72	0.55
3:CC:84:GLU:HA	3:CC:87:ARG:HB2	1.89	0.55
54:CG:124:SER:O	54:CG:128:GLU:HG2	2.07	0.55
9:CI:19:PHE:O	9:CI:63:TYR:HB3	2.07	0.55
12:CL:48:LEU:HD23	12:CL:48:LEU:N	2.22	0.55
20:CT:26:MET:HE1	20:CT:56:ILE:HD13	1.89	0.55
22:DA:243:U:HO2'	22:DA:244:A:H8	1.54	0.55
22:DA:249:C:C5'	22:DA:2394:C:O2'	2.44	0.55
22:DA:416:U:H2'	22:DA:417:C:C6	2.42	0.55
22:DA:616:A:H4'	26:DE:101:TYR:CZ	2.41	0.55
22:DA:674:G:O3'	26:DE:60:TRP:HH2	1.90	0.55
22:DA:677:A:O2'	22:DA:2071:A:H5'	2.06	0.55
22:DA:740:C:O2'	22:DA:741:U:H5'	2.06	0.55
22:DA:749:A:C6	22:DA:750:A:N7	2.75	0.55
22:DA:915:C:O2'	22:DA:916:G:H5'	2.06	0.55
22:DA:1651:G:C2	22:DA:2007:U:N3	2.74	0.55
22:DA:1746:A:H2'	22:DA:1747:U:C6	2.42	0.55
22:DA:2185:U:H2'	22:DA:2186:G:C8	2.41	0.55
22:DA:2234:G:C6	22:DA:2235:G:N7	2.75	0.55
22:DA:2331:G:C1'	44:DW:40:ARG:HB3	2.36	0.55
22:DA:2707:U:H2'	22:DA:2708:G:C8	2.41	0.55
57:DB:55:U:H1'	58:DF:25:MET:SD	2.47	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DJ:43:GLU:O	31:DJ:45:THR:N	2.38	0.55
35:DN:1:MET:O	35:DN:2:ARG:CB	2.55	0.55
40:DS:14:ALA:HB1	40:DS:18:ARG:NH2	2.22	0.55
52:D4:19:ARG:O	52:D4:20:ASP:CB	2.54	0.55
1:AA:481:G:O2'	1:AA:482:A:C8	2.56	0.55
1:AA:913:A:H4'	1:AA:914:A:O5'	2.06	0.55
1:AA:954:G:H21	1:AA:1227:A:H2	1.53	0.55
2:AB:161:PHE:HA	2:AB:183:PHE:O	2.06	0.55
4:AD:61:ARG:HH21	4:AD:67:LEU:HD23	1.72	0.55
6:AF:17:GLN:HG2	4:CD:188:SER:HB2	1.89	0.55
6:AF:47:LEU:HD13	6:AF:51:ILE:HG22	1.88	0.55
9:AI:88:GLU:HG3	9:AI:89:TYR:N	2.21	0.55
10:AJ:12:ALA:HB2	10:AJ:96:VAL:HG13	1.88	0.55
21:AU:52:VAL:CG1	21:AU:53:LYS:H	2.13	0.55
22:BA:544:C:H3'	22:BA:545:U:O2	2.06	0.55
22:BA:1483:G:C2	22:BA:1484:U:C2	2.95	0.55
22:BA:2615:U:C2	48:B0:3:GLN:HA	2.41	0.55
25:BD:27:ILE:HG12	25:BD:201:LEU:HD23	1.88	0.55
38:BQ:60:TRP:CE2	38:BQ:93:ILE:HB	2.41	0.55
44:BW:24:ARG:HD2	44:BW:24:ARG:C	2.27	0.55
53:CA:406:G:H5'	4:CD:4:LEU:HD22	1.88	0.55
53:CA:501:C:H2'	53:CA:502:A:C8	2.42	0.55
53:CA:513:C:H2'	53:CA:514:C:H6	1.72	0.55
53:CA:519:C:O2'	53:CA:520:A:C5'	2.55	0.55
53:CA:640:A:O2'	8:CH:106:SER:HB2	2.06	0.55
53:CA:807:A:H2'	53:CA:808:C:C6	2.41	0.55
53:CA:1171:A:O2'	53:CA:1172:C:H5'	2.07	0.55
54:CG:4:ARG:HD2	54:CG:5:VAL:H	1.71	0.55
54:CG:9:ARG:HD3	54:CG:24:LYS:NZ	2.21	0.55
54:CG:117:LEU:HG	54:CG:121:ASN:HD22	1.70	0.55
12:CL:50:LYS:HD2	12:CL:50:LYS:N	2.22	0.55
55:CM:57:ASP:O	55:CM:61:LYS:HG3	2.06	0.55
56:CP:78:VAL:C	56:CP:80:LYS:H	2.09	0.55
22:DA:119:A:H4'	22:DA:120:U:OP1	2.07	0.55
22:DA:141:G:H3'	22:DA:142:A:O4'	2.06	0.55
22:DA:160:A:N6	22:DA:167:A:H1'	2.21	0.55
22:DA:236:C:H2'	22:DA:237:C:H6	1.70	0.55
22:DA:446:G:H4'	22:DA:447:A:OP1	2.07	0.55
22:DA:1628:G:H2'	22:DA:1629:U:H6	1.70	0.55
22:DA:1780:A:OP1	62:DA:3675:HOH:O	2.18	0.55
22:DA:2439:A:N7	22:DA:2586:U:H4'	2.20	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2624:G:H2'	22:DA:2625:G:O4'	2.07	0.55
22:DA:2823:A:C5	22:DA:2824:C:C5	2.95	0.55
24:DC:170:TYR:HD2	24:DC:183:VAL:O	1.88	0.55
25:DD:36:GLN:HE21	25:DD:38:LYS:HZ1	1.53	0.55
26:DE:149:ILE:HG23	26:DE:188:MET:CA	2.36	0.55
33:DL:65:GLY:O	33:DL:66:PHE:HB2	2.07	0.55
36:DO:31:THR:HG21	36:DO:36:TYR:HE2	1.72	0.55
40:DS:27:LYS:O	40:DS:71:VAL:HG12	2.06	0.55
44:DW:31:LEU:C	44:DW:33:GLY:H	2.09	0.55
1:AA:68:G:H5'	1:AA:171:A:O2'	2.07	0.55
1:AA:821:G:H4'	62:AA:1741:HOH:O	2.07	0.55
1:AA:1071:C:H2'	1:AA:1072:G:C8	2.42	0.55
1:AA:1091:U:H1'	1:AA:1095:U:O2	2.07	0.55
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.42	0.55
2:AB:106:VAL:O	2:AB:106:VAL:HG12	2.06	0.55
4:AD:169:TRP:CE3	4:AD:185:PRO:HB3	2.42	0.55
5:AE:12:GLU:CB	5:AE:38:VAL:HG12	2.36	0.55
5:AE:121:ASN:N	5:AE:121:ASN:HD22	2.03	0.55
6:AF:98:GLU:HG3	6:AF:99:ALA:N	2.22	0.55
13:AM:113:LYS:H	13:AM:114:PRO:HD2	1.71	0.55
22:BA:1024:G:N2	22:BA:1142:A:H2	2.05	0.55
22:BA:2017:U:H4'	48:B0:4:GLN:O	2.05	0.55
22:BA:2308:G:HO2'	22:BA:2310:C:H5	1.53	0.55
24:BC:156:SER:O	24:BC:159:THR:HG23	2.06	0.55
28:BG:61:TRP:O	28:BG:62:ALA:C	2.44	0.55
34:BM:117:PHE:HD2	34:BM:130:PHE:CD1	2.24	0.55
38:BQ:43:GLN:NE2	39:BR:77:PHE:HB3	2.21	0.55
38:BQ:69:ARG:HH21	38:BQ:69:ARG:CG	2.20	0.55
40:BS:84:ARG:HB2	40:BS:96:ILE:HD11	1.89	0.55
50:B2:12:ARG:HB2	50:B2:12:ARG:NH2	2.22	0.55
51:B3:31:ILE:HD11	51:B3:34:LYS:CD	2.27	0.55
53:CA:209:U:O2	53:CA:209:U:H2'	2.05	0.55
53:CA:988:G:H2'	53:CA:989:U:O4'	2.06	0.55
53:CA:1284:C:P	53:CA:1285:A:H3'	2.47	0.55
53:CA:1391:U:H2'	53:CA:1392:G:C8	2.41	0.55
2:CB:103:TRP:HB2	2:CB:106:VAL:HB	1.88	0.55
2:CB:221:ARG:HA	2:CB:224:ARG:CZ	2.37	0.55
4:CD:25:ARG:HH11	4:CD:25:ARG:CG	2.19	0.55
5:CE:74:ALA:O	5:CE:75:LEU:HB2	2.05	0.55
54:CG:74:VAL:CG1	54:CG:143:MET:HB2	2.37	0.55
22:DA:82:U:H2'	22:DA:83:A:O4'	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:558:U:OP2	31:DJ:113:PRO:HG2	2.06	0.55
22:DA:1441:G:H2'	22:DA:1442:U:H6	1.69	0.55
22:DA:1455:G:O2'	22:DA:1456:G:C8	2.50	0.55
22:DA:1555:G:C2	22:DA:1556:C:C2	2.93	0.55
22:DA:1688:U:C4	22:DA:1698:A:C2	2.95	0.55
22:DA:2213:U:O2'	22:DA:2214:C:H5'	2.06	0.55
33:DL:57:LEU:HA	33:DL:60:ARG:HG3	1.88	0.55
38:DQ:64:ILE:HD12	38:DQ:95:ALA:CB	2.37	0.55
40:DS:17:VAL:HG11	40:DS:103:ILE:HG13	1.87	0.55
41:DT:9:LYS:HG2	41:DT:9:LYS:O	2.07	0.55
41:DT:29:THR:N	41:DT:87:LEU:HB2	2.20	0.55
43:DV:59:GLU:HG2	43:DV:60:VAL:H	1.70	0.55
46:DY:1:MET:HE2	46:DY:1:MET:N	2.21	0.55
1:AA:8:A:N6	4:AD:201:GLU:O	2.40	0.55
1:AA:799:G:H2'	1:AA:800:G:O4'	2.07	0.55
12:AL:62:VAL:HG21	12:AL:94:TYR:CD2	2.42	0.55
21:AU:4:LYS:O	21:AU:4:LYS:HD2	2.07	0.55
22:BA:232:G:H4'	22:BA:233:A:OP1	2.05	0.55
22:BA:460:A:C2	22:BA:470:A:C4	2.94	0.55
22:BA:550:C:H2'	22:BA:550:C:O2	2.07	0.55
22:BA:1229:C:H2'	22:BA:1230:A:C8	2.42	0.55
22:BA:1252:G:O2'	22:BA:1253:A:C8	2.60	0.55
22:BA:1501:G:O2'	22:BA:1502:A:H5'	2.07	0.55
22:BA:2032:G:C2	25:BD:150:GLN:HG2	2.41	0.55
28:BG:53:PRO:HD3	28:BG:61:TRP:CE3	2.42	0.55
28:BG:86:LEU:N	28:BG:86:LEU:CD1	2.69	0.55
32:BK:15:GLY:O	32:BK:46:ALA:HA	2.06	0.55
46:BY:39:GLN:HB2	46:BY:41:HIS:NE2	2.20	0.55
48:B0:14:MET:O	48:B0:17:SER:HB3	2.06	0.55
48:B0:39:ARG:HB2	48:B0:39:ARG:NH1	2.17	0.55
53:CA:612:C:H2'	53:CA:613:C:H6	1.72	0.55
53:CA:769:G:H4'	53:CA:1513:A:H4'	1.88	0.55
53:CA:1124:G:H1'	53:CA:1125:U:H5	1.71	0.55
53:CA:1124:G:H4'	53:CA:1125:U:OP1	2.05	0.55
2:CB:8:MET:HB2	2:CB:9:LEU:HD23	1.88	0.55
55:CM:69:ARG:HA	55:CM:72:ILE:HG22	1.89	0.55
14:CN:76:PHE:CE2	14:CN:95:LEU:HD22	2.42	0.55
19:CS:13:HIS:O	19:CS:17:LYS:HG2	2.06	0.55
22:DA:228:C:H5"	22:DA:229:C:C5	2.42	0.55
22:DA:1432:G:O2'	22:DA:1433:A:H5'	2.06	0.55
22:DA:2023:C:O2'	22:DA:2024:G:O5'	2.25	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2056:G:N3	22:DA:2056:G:H2'	2.21	0.55
22:DA:2237:G:H5"	22:DA:2238:G:OP1	2.06	0.55
22:DA:2304:G:N2	22:DA:2312:U:H3	1.98	0.55
22:DA:2331:G:N1	22:DA:2385:C:C4	2.75	0.55
22:DA:2725:A:C4	22:DA:2727:A:N7	2.75	0.55
22:DA:2728:U:O2'	22:DA:2729:G:H8	1.90	0.55
57:DB:58:A:H2'	57:DB:59:A:C8	2.39	0.55
24:DC:120:ASP:CG	24:DC:121:ALA:H	2.10	0.55
26:DE:24:ASN:HB3	26:DE:27:LEU:HB3	1.89	0.55
26:DE:112:LEU:HD11	26:DE:186:VAL:HG11	1.88	0.55
29:DH:61:VAL:HG13	29:DH:62:LEU:N	2.21	0.55
31:DJ:44:TYR:HB2	38:DQ:63:ARG:NH2	2.22	0.55
37:DP:86:LYS:HA	37:DP:86:LYS:HZ2	1.71	0.55
38:DQ:46:TYR:CZ	38:DQ:50:ARG:NH1	2.76	0.55
1:AA:370:C:C2'	1:AA:371:A:H5'	2.37	0.54
1:AA:782:A:H2'	1:AA:783:C:H5'	1.88	0.54
1:AA:1038:C:H2'	1:AA:1039:G:H8	1.70	0.54
1:AA:1049:U:C4'	1:AA:1050:G:OP2	2.55	0.54
2:AB:86:CYS:HB2	2:AB:88:GLN:HG3	1.89	0.54
2:AB:134:LEU:HA	2:AB:137:THR:OG1	2.07	0.54
3:AC:174:LEU:O	3:AC:174:LEU:HD12	2.07	0.54
16:AP:77:GLU:C	16:AP:79:ASN:H	2.10	0.54
22:BA:914:G:C8	22:BA:914:G:H5"	2.43	0.54
22:BA:958:U:H6	22:BA:958:U:C5'	2.20	0.54
22:BA:1045:C:H3'	22:BA:1046:A:C5'	2.36	0.54
22:BA:1085:A:H2'	22:BA:1086:A:N3	2.22	0.54
22:BA:1287:A:O2'	22:BA:1288:G:H5'	2.06	0.54
22:BA:1956:U:C2'	22:BA:1957:C:H5'	2.36	0.54
22:BA:2210:U:C2	22:BA:2212:A:N7	2.75	0.54
22:BA:2562:U:H2'	22:BA:2563:U:H5'	1.89	0.54
22:BA:2649:C:H2'	22:BA:2650:U:H6	1.71	0.54
26:BE:119:ILE:HG12	26:BE:119:ILE:O	2.07	0.54
27:BF:12:VAL:HG22	27:BF:13:LYS:N	2.22	0.54
28:BG:166:GLU:OE2	28:BG:168:VAL:HG22	2.06	0.54
30:BI:126:ARG:HA	30:BI:129:GLU:CB	2.36	0.54
33:BL:35:HIS:O	33:BL:36:LYS:HB2	2.08	0.54
34:BM:17:ASN:O	34:BM:38:ARG:HD3	2.07	0.54
44:BW:50:VAL:HB	44:BW:61:LYS:NZ	2.22	0.54
53:CA:439:U:H5"	53:CA:440:C:OP2	2.06	0.54
53:CA:457:G:N3	53:CA:457:G:H2'	2.22	0.54
53:CA:834:U:H2'	53:CA:835:U:C6	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:990:C:H2'	53:CA:991:U:C1'	2.37	0.54
53:CA:1050:G:O2'	53:CA:1051:C:C6	2.53	0.54
53:CA:1279:G:C8	53:CA:1282:C:N4	2.75	0.54
2:CB:130:LYS:HD3	2:CB:133:ALA:HB3	1.90	0.54
6:CF:99:ALA:O	6:CF:100:SER:HB2	2.08	0.54
12:CL:7:VAL:HG12	12:CL:7:VAL:O	2.07	0.54
22:DA:45:G:C5'	22:DA:46:G:OP1	2.53	0.54
22:DA:179:C:H2'	22:DA:180:G:O4'	2.07	0.54
22:DA:568:U:H2'	22:DA:570:G:OP2	2.07	0.54
22:DA:828:U:H4'	22:DA:831:G:N1	2.22	0.54
22:DA:1062:G:C8	22:DA:1088:A:C8	2.95	0.54
22:DA:1351:C:H4'	22:DA:1572:A:O4'	2.06	0.54
22:DA:1608:A:C5	22:DA:1611:C:N4	2.75	0.54
22:DA:2468:A:O2'	22:DA:2469:A:C8	2.50	0.54
22:DA:2729:G:H5"	25:DD:190:LYS:HZ3	1.71	0.54
22:DA:2829:A:C2'	22:DA:2830:C:H5'	2.37	0.54
57:DB:41:G:H3'	57:DB:42:C:C5'	2.36	0.54
25:DD:28:GLU:HA	25:DD:185:ASN:O	2.08	0.54
25:DD:122:VAL:HA	25:DD:127:PHE:H	1.72	0.54
28:DG:8:VAL:HB	28:DG:49:LEU:HB3	1.89	0.54
28:DG:148:ARG:HB2	28:DG:152:ARG:NH2	2.22	0.54
31:DJ:58:ASN:CG	31:DJ:127:GLY:HA2	2.27	0.54
31:DJ:73:VAL:HG23	31:DJ:74:TYR:N	2.22	0.54
34:DM:42:THR:HB	34:DM:45:GLN:CG	2.33	0.54
39:DR:87:GLN:HG2	39:DR:88:GLY:H	1.71	0.54
40:DS:66:ILE:HD13	40:DS:66:ILE:H	1.72	0.54
41:DT:39:THR:HG21	41:DT:42:GLU:CB	2.26	0.54
45:DX:52:ALA:C	45:DX:54:GLY:H	2.11	0.54
1:AA:16:A:C2'	1:AA:17:U:H5'	2.38	0.54
1:AA:60:A:H4'	1:AA:61:G:O5'	2.06	0.54
1:AA:140:U:H2'	1:AA:141:G:O4'	2.07	0.54
1:AA:674:G:H4'	18:AR:69:TYR:CD1	2.43	0.54
2:AB:102:ASN:O	2:AB:106:VAL:HG23	2.06	0.54
3:AC:71:ARG:O	3:AC:74:ILE:HG22	2.07	0.54
4:AD:48:SER:O	4:AD:52:VAL:HG13	2.07	0.54
4:AD:61:ARG:HH21	4:AD:67:LEU:HA	1.72	0.54
22:BA:603:A:H4'	22:BA:604:G:OP1	2.07	0.54
22:BA:702:U:H2'	22:BA:702:U:O2	2.06	0.54
22:BA:1348:C:H2'	22:BA:1349:C:H5'	1.88	0.54
22:BA:2188:U:H2'	22:BA:2189:U:H6	1.72	0.54
22:BA:2334:U:H4'	22:BA:2335:A:OP2	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BD:136:ASN:HD21	25:BD:139:SER:HB2	1.72	0.54
26:BE:131:THR:HG22	26:BE:160:ALA:HA	1.88	0.54
26:BE:187:VAL:O	26:BE:188:MET:HB3	2.07	0.54
28:BG:73:SER:CA	28:BG:76:ILE:HG22	2.35	0.54
30:BI:19:PRO:HG2	30:BI:23:VAL:CG2	2.37	0.54
34:BM:54:THR:O	34:BM:56:ALA:N	2.39	0.54
53:CA:935:A:O2'	53:CA:936:C:H6	1.89	0.54
53:CA:1003:G:N2	53:CA:1005:A:H5"	2.22	0.54
53:CA:1323:G:H2'	53:CA:1324:A:H8	1.72	0.54
2:CB:9:LEU:HG	2:CB:10:LYS:H	1.73	0.54
2:CB:67:LEU:CD1	2:CB:157:PRO:HG3	2.37	0.54
9:CI:51:LEU:HD11	9:CI:82:ILE:HG22	1.89	0.54
56:CP:44:SER:HB2	56:CP:46:LYS:CG	2.36	0.54
22:DA:142:A:H2'	22:DA:143:C:C5	2.42	0.54
22:DA:167:A:H2'	22:DA:168:G:O4'	2.07	0.54
22:DA:233:A:O2'	22:DA:234:U:C6	2.60	0.54
22:DA:310:A:O2'	22:DA:311:A:C8	2.37	0.54
22:DA:477:A:H2'	22:DA:478:A:C8	2.41	0.54
22:DA:480:A:H3'	22:DA:481:G:C5'	2.37	0.54
22:DA:516:C:H2'	22:DA:517:C:H6	1.72	0.54
22:DA:841:G:O2'	22:DA:842:U:H5'	2.07	0.54
22:DA:876:C:O2'	22:DA:877:A:P	2.65	0.54
22:DA:998:C:OP2	38:DQ:57:ARG:NH2	2.40	0.54
22:DA:1156:A:C8	38:DQ:50:ARG:HG2	2.43	0.54
22:DA:2234:G:C5	22:DA:2235:G:C8	2.95	0.54
22:DA:2360:G:H5"	22:DA:2361:G:OP2	2.06	0.54
22:DA:2459:A:C5	22:DA:2460:U:C5	2.94	0.54
57:DB:57:A:C5	58:DF:25:MET:HB2	2.42	0.54
24:DC:245:THR:C	24:DC:247:TRP:H	2.10	0.54
25:DD:16:THR:HG23	25:DD:18:ASP:H	1.71	0.54
25:DD:17:GLU:CD	25:DD:17:GLU:H	2.10	0.54
34:DM:57:VAL:HA	34:DM:112:LEU:HD11	1.89	0.54
1:AA:184:G:H2'	1:AA:185:U:C6	2.43	0.54
1:AA:787:A:C5	1:AA:788:U:C5	2.96	0.54
1:AA:890:G:O2'	1:AA:906:A:N6	2.40	0.54
1:AA:1361:G:C2'	1:AA:1362:A:H5"	2.37	0.54
13:AM:4:ALA:H	13:AM:56:ARG:HG3	1.72	0.54
20:AT:53:MET:HE3	20:AT:57:VAL:HG21	1.89	0.54
20:AT:66:ILE:CD1	20:AT:70:LYS:HE3	2.36	0.54
22:BA:397:U:OP2	45:BX:9:LYS:NZ	2.37	0.54
22:BA:784:G:H5"	24:BC:225:ASN:ND2	2.23	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1154:G:OP2	38:BQ:57:ARG:NH1	2.37	0.54
22:BA:1784:A:H4'	22:BA:1785:A:O5'	2.07	0.54
22:BA:2517:C:C5	22:BA:2542:A:C5	2.95	0.54
22:BA:2773:C:OP1	25:BD:171:THR:CG2	2.55	0.54
28:BG:68:ARG:HD2	28:BG:68:ARG:C	2.26	0.54
37:BP:99:LEU:HA	37:BP:102:ARG:HG3	1.89	0.54
38:BQ:63:ARG:HH12	38:BQ:96:ASP:CB	2.20	0.54
41:BT:32:LEU:N	41:BT:83:ALA:CB	2.65	0.54
44:BW:24:ARG:O	44:BW:25:PHE:HB2	2.07	0.54
53:CA:91:U:C6	53:CA:92:U:C5	2.95	0.54
53:CA:328:C:O2	53:CA:328:C:C2'	2.55	0.54
53:CA:532:A:H62	3:CC:191:THR:HG21	1.71	0.54
3:CC:6:PRO:HG3	3:CC:200:TRP:HE1	1.71	0.54
22:DA:142:A:H2'	22:DA:143:C:C6	2.42	0.54
22:DA:315:G:H2'	22:DA:316:C:O4'	2.07	0.54
22:DA:379:G:C6	22:DA:396:G:C6	2.95	0.54
22:DA:503:A:C6	22:DA:506:G:C6	2.95	0.54
22:DA:637:A:O5'	33:DL:112:LEU:HD21	2.07	0.54
22:DA:947:A:HO2'	22:DA:984:A:H2	1.55	0.54
22:DA:1906:G:N7	22:DA:1929:G:H2'	2.21	0.54
22:DA:2264:C:C2	22:DA:2277:G:N2	2.76	0.54
22:DA:2269:G:O2'	44:DW:18:LYS:HG2	2.08	0.54
22:DA:2619:C:H5'	25:DD:157:LYS:HA	1.88	0.54
22:DA:2638:G:N1	22:DA:2775:G:H2'	2.22	0.54
58:DF:34:THR:O	58:DF:35:LEU:HB2	2.07	0.54
58:DF:122:ASP:HB2	58:DF:126:ASN:HB2	1.89	0.54
58:DF:129:MET:HG3	58:DF:153:ILE:HD12	1.88	0.54
30:DI:52:LEU:O	30:DI:54:ILE:HD12	2.08	0.54
41:DT:4:GLU:HG3	41:DT:6:ARG:NH2	2.22	0.54
51:D3:28:LEU:O	51:D3:29:ARG:HB3	2.07	0.54
1:AA:30:U:H4'	1:AA:31:G:OP2	2.07	0.54
1:AA:184:G:HO2'	1:AA:185:U:H6	1.55	0.54
1:AA:363:A:OP1	12:AL:57:THR:HG21	2.07	0.54
1:AA:919:A:O2'	1:AA:920:U:H5'	2.07	0.54
1:AA:1352:C:H2'	1:AA:1353:G:C8	2.41	0.54
3:AC:142:ARG:HB3	3:AC:143:LEU:HD13	1.90	0.54
9:AI:90:ASP:OD2	9:AI:93:LEU:HG	2.06	0.54
22:BA:754:U:H2'	22:BA:755:U:H6	1.72	0.54
22:BA:1057:A:C2	22:BA:1082:U:C2	2.95	0.54
22:BA:1475:G:O2'	22:BA:1476:U:OP1	2.25	0.54
22:BA:1680:U:H2'	22:BA:1681:G:O4'	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BG:88:LEU:HD11	28:BG:95:ALA:CB	2.37	0.54
28:BG:132:LEU:N	28:BG:132:LEU:HD23	2.23	0.54
36:BO:6:ALA:O	36:BO:10:ARG:HB2	2.06	0.54
41:BT:2:ILE:HG13	41:BT:3:ARG:CZ	2.37	0.54
41:BT:54:GLU:O	41:BT:55:VAL:HB	2.06	0.54
42:BU:24:VAL:HG22	42:BU:35:VAL:HG22	1.90	0.54
44:BW:17:ALA:O	44:BW:18:LYS:CB	2.56	0.54
53:CA:1009:U:H2'	53:CA:1010:U:C6	2.42	0.54
53:CA:1053:G:O6	53:CA:1199:U:H2'	2.08	0.54
53:CA:1142:G:H2'	53:CA:1143:G:C8	2.43	0.54
53:CA:1346:A:N1	54:CG:9:ARG:NH2	2.56	0.54
5:CE:100:GLU:O	5:CE:102:THR:HG23	2.06	0.54
6:CF:6:ILE:HD12	6:CF:6:ILE:N	2.22	0.54
55:CM:64:VAL:HG12	55:CM:65:GLU:N	2.18	0.54
22:DA:61:C:H6	22:DA:61:C:OP1	1.91	0.54
22:DA:233:A:H61	22:DA:428:A:N6	2.05	0.54
22:DA:781:A:H2'	22:DA:1777:U:H1'	1.89	0.54
22:DA:1033:U:O2'	22:DA:2750:A:N6	2.41	0.54
22:DA:1048:A:C4	22:DA:1049:C:N4	2.76	0.54
22:DA:1807:G:H2'	22:DA:1808:A:H5'	1.89	0.54
22:DA:2516:A:O2'	22:DA:2517:C:H5'	2.06	0.54
25:DD:48:ILE:HG22	25:DD:84:LEU:HD23	1.89	0.54
26:DE:79:ARG:O	26:DE:80:SER:C	2.46	0.54
28:DG:74:MET:O	28:DG:78:VAL:HG13	2.07	0.54
28:DG:85:LYS:O	28:DG:86:LEU:HG	2.08	0.54
32:DK:87:LEU:HB2	32:DK:92:GLU:O	2.08	0.54
35:DN:12:ARG:HB3	35:DN:16:HIS:ND1	2.22	0.54
42:DU:22:GLY:HA3	42:DU:36:GLU:HB3	1.87	0.54
45:DX:58:ILE:HG12	45:DX:66:VAL:HG21	1.89	0.54
1:AA:10:A:OP2	5:AE:130:THR:OG1	2.15	0.54
1:AA:1054:C:O4'	1:AA:1054:C:O2	2.25	0.54
2:AB:165:ALA:HB3	2:AB:190:SER:HB3	1.89	0.54
9:AI:123:ARG:HD3	9:AI:124:PRO:HD2	1.90	0.54
22:BA:1405:U:H2'	22:BA:1406:U:C6	2.42	0.54
22:BA:1782:U:C4	22:BA:2587:A:C2	2.95	0.54
22:BA:2353:G:O2'	44:BW:31:LEU:CD2	2.56	0.54
22:BA:2573:C:H3'	62:BA:3701:HOH:O	2.08	0.54
30:BI:24:GLY:O	30:BI:27:LEU:HG	2.07	0.54
30:BI:60:VAL:HG22	30:BI:66:PHE:HB2	1.90	0.54
30:BI:64:ARG:HG3	30:BI:65:SER:N	2.22	0.54
33:BL:93:ASN:ND2	33:BL:94:THR:H	2.02	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BR:49:ILE:HG21	39:BR:53:PHE:H	1.73	0.54
40:BS:73:LYS:CB	40:BS:106:VAL:HB	2.38	0.54
43:BV:5:ASN:ND2	43:BV:5:ASN:N	2.51	0.54
47:BZ:39:ASP:OD2	47:BZ:44:ARG:NH1	2.40	0.54
53:CA:53:A:N1	53:CA:359:G:C6	2.75	0.54
53:CA:110:C:H2'	53:CA:111:G:O4'	2.07	0.54
53:CA:878:A:C5	53:CA:879:C:C5	2.96	0.54
53:CA:940:C:H5'	54:CG:101:ARG:HH22	1.72	0.54
2:CB:10:LYS:HA	2:CB:10:LYS:HE3	1.88	0.54
54:CG:4:ARG:HG2	54:CG:4:ARG:NH1	2.22	0.54
9:CI:9:GLY:HA3	9:CI:16:ALA:HB3	1.89	0.54
12:CL:62:VAL:HG21	12:CL:94:TYR:CD2	2.43	0.54
17:CQ:9:GLY:O	17:CQ:57:VAL:HG13	2.07	0.54
18:CR:61:ALA:HB1	18:CR:66:LEU:HB2	1.90	0.54
19:CS:28:LYS:O	19:CS:30:LEU:HD12	2.08	0.54
22:DA:335:C:O2'	22:DA:336:C:O5'	2.25	0.54
22:DA:475:C:C2'	22:DA:476:G:C8	2.90	0.54
22:DA:575:A:C2	22:DA:576:U:C5	2.94	0.54
22:DA:663:G:O6	22:DA:664:G:C6	2.61	0.54
22:DA:727:A:O2'	22:DA:728:G:O5'	2.26	0.54
22:DA:1734:G:C2'	22:DA:1735:A:H8	2.19	0.54
22:DA:1737:G:C5'	22:DA:1738:G:OP2	2.55	0.54
22:DA:1842:G:O4'	24:DC:242:HIS:CE1	2.60	0.54
22:DA:2008:C:H2'	22:DA:2009:A:H8	1.71	0.54
22:DA:2345:G:C4	22:DA:2347:C:H5	2.24	0.54
22:DA:2636:C:H2'	22:DA:2637:U:C6	2.41	0.54
58:DF:113:PHE:O	58:DF:114:ARG:CB	2.55	0.54
28:DG:94:ARG:HH21	28:DG:111:PRO:HB3	1.72	0.54
34:DM:72:PRO:O	34:DM:92:TRP:HA	2.07	0.54
35:DN:62:ASN:O	35:DN:63:ARG:CB	2.49	0.54
35:DN:82:GLU:C	35:DN:85:PRO:HD2	2.28	0.54
39:DR:68:ARG:HD2	39:DR:92:TRP:CZ2	2.42	0.54
42:DU:11:ILE:HG21	42:DU:79:ALA:HB2	1.89	0.54
1:AA:137:U:H1'	1:AA:227:G:N2	2.22	0.54
1:AA:182:A:C2	1:AA:184:G:C8	2.96	0.54
1:AA:575:G:H4'	1:AA:576:C:OP1	2.06	0.54
1:AA:818:G:HO2'	1:AA:820:U:H6	1.54	0.54
1:AA:1227:A:N3	1:AA:1227:A:C2'	2.70	0.54
1:AA:1257:A:H4'	1:AA:1258:G:OP2	2.07	0.54
3:AC:119:ILE:CG2	3:AC:197:VAL:HG11	2.33	0.54
4:AD:69:ARG:HA	4:AD:69:ARG:NE	2.18	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:29:LYS:HB2	17:AQ:36:PHE:CE1	2.43	0.54
22:BA:383:C:H5'	22:BA:384:A:H5"	1.88	0.54
22:BA:479:A:H4'	22:BA:480:A:OP1	2.06	0.54
22:BA:902:C:H2'	22:BA:903:C:H6	1.71	0.54
22:BA:902:C:C2	22:BA:903:C:C5	2.95	0.54
22:BA:2134:A:O2'	22:BA:2135:A:C8	2.58	0.54
22:BA:2149:U:O2'	22:BA:2150:C:C4'	2.56	0.54
22:BA:2228:G:H2'	22:BA:2229:U:C6	2.43	0.54
24:BC:32:LEU:O	24:BC:63:ILE:HG12	2.07	0.54
31:BJ:49:ASP:HA	31:BJ:118:MET:HE3	1.89	0.54
34:BM:31:PHE:CZ	34:BM:110:GLU:HG2	2.42	0.54
35:BN:77:ALA:O	35:BN:81:ASN:HB2	2.07	0.54
38:BQ:91:ARG:HD3	39:BR:11:GLN:CG	2.37	0.54
41:BT:4:GLU:OE1	41:BT:6:ARG:HG3	2.07	0.54
44:BW:40:ARG:HH11	44:BW:45:HIS:CE1	2.26	0.54
53:CA:239:U:C5'	53:CA:239:U:C6	2.89	0.54
53:CA:375:U:N3	53:CA:376:G:N7	2.55	0.54
53:CA:690:G:H2'	53:CA:691:G:O4'	2.08	0.54
53:CA:1269:A:H2	53:CA:1312:G:H21	1.56	0.54
53:CA:1284:C:H5"	53:CA:1285:A:H5"	1.89	0.54
53:CA:1446:A:H2'	53:CA:1447:A:C5'	2.35	0.54
4:CD:84:ASN:CG	5:CE:101:GLY:HA3	2.28	0.54
4:CD:98:ASP:CG	4:CD:114:ARG:HH21	2.10	0.54
8:CH:68:LYS:HD3	8:CH:69:ALA:N	2.23	0.54
14:CN:87:ALA:HB2	14:CN:92:ILE:HD12	1.89	0.54
22:DA:46:G:C2	22:DA:47:C:C5	2.95	0.54
22:DA:59:U:O2'	22:DA:73:A:H2'	2.08	0.54
22:DA:972:A:C3'	22:DA:973:A:H5"	2.33	0.54
22:DA:1989:G:C2'	22:DA:1990:C:H5'	2.38	0.54
22:DA:2145:C:C2'	22:DA:2146:C:H3'	2.38	0.54
22:DA:2667:C:H2'	22:DA:2668:G:C8	2.43	0.54
57:DB:29:A:OP2	36:DO:32:PRO:HD2	2.07	0.54
24:DC:38:LYS:HE2	24:DC:55:GLY:H	1.72	0.54
24:DC:122:ALA:HB3	24:DC:127:ASN:HD22	1.70	0.54
25:DD:40:LEU:HA	25:DD:44:GLY:HA2	1.90	0.54
34:DM:71:LYS:HD3	34:DM:95:LEU:HD13	1.90	0.54
34:DM:74:THR:HB	34:DM:87:GLY:O	2.08	0.54
34:DM:114:ARG:HA	34:DM:130:PHE:CE1	2.41	0.54
37:DP:48:ALA:HB3	37:DP:59:THR:OG1	2.08	0.54
52:D4:7:VAL:CG1	52:D4:8:LYS:H	2.18	0.54
1:AA:475:C:H2'	1:AA:476:U:H6	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:723:U:H5'	21:AU:48:LYS:HE2	1.89	0.54
1:AA:826:C:H5'	8:AH:12:ARG:HH21	1.72	0.54
1:AA:1123:U:O3'	10:AJ:38:GLY:HA3	2.08	0.54
2:AB:27:LYS:HB3	2:AB:28:PRO:HD3	1.88	0.54
2:AB:95:TRP:HZ3	2:AB:98:GLY:H	1.55	0.54
11:AK:87:GLY:H	11:AK:113:THR:CG2	2.20	0.54
16:AP:59:HIS:CE1	16:AP:63:GLN:NE2	2.74	0.54
22:BA:580:U:O3'	38:BQ:30:VAL:CG1	2.55	0.54
22:BA:1881:C:H2'	22:BA:1882:U:O4'	2.07	0.54
22:BA:1906:G:H2'	22:BA:1907:G:O5'	2.07	0.54
22:BA:2415:G:H2'	22:BA:2416:C:H6	1.72	0.54
22:BA:2765:A:H2'	22:BA:2765:A:N3	2.22	0.54
28:BG:120:ILE:HD11	28:BG:132:LEU:CB	2.29	0.54
29:BH:2:GLN:O	29:BH:3:VAL:HG22	2.07	0.54
33:BL:101:ILE:CG2	33:BL:102:GLY:N	2.71	0.54
36:BO:43:ASN:HD21	36:BO:46:GLU:HG2	1.72	0.54
37:BP:31:VAL:O	37:BP:31:VAL:HG13	2.06	0.54
41:BT:18:GLU:HA	41:BT:18:GLU:OE2	2.08	0.54
42:BU:42:LYS:HA	42:BU:58:VAL:O	2.07	0.54
45:BX:5:GLN:HE21	45:BX:49:ARG:HB3	1.72	0.54
53:CA:284:C:H2'	53:CA:285:C:H6	1.72	0.54
53:CA:570:G:H1'	53:CA:820:U:C4	2.42	0.54
53:CA:1241:G:C4	53:CA:1242:G:N7	2.75	0.54
53:CA:1297:G:H5'	53:CA:1299:A:N7	2.23	0.54
3:CC:22:PHE:CD2	10:CJ:97:ASP:HB2	2.43	0.54
6:CF:42:TRP:HB2	6:CF:59:TYR:CB	2.36	0.54
6:CF:43:GLY:O	6:CF:44:ARG:C	2.46	0.54
8:CH:82:LEU:HD12	12:CL:3:VAL:CG1	2.38	0.54
12:CL:33:CYS:HA	12:CL:54:VAL:HA	1.90	0.54
56:CP:75:ILE:CG2	56:CP:80:LYS:HD2	2.37	0.54
22:DA:293:U:H5"	22:DA:294:A:OP2	2.08	0.54
22:DA:300:A:H1'	22:DA:333:G:N2	2.23	0.54
22:DA:506:G:H4'	22:DA:507:A:H5'	1.90	0.54
22:DA:528:A:H2	22:DA:2042:A:H2'	1.71	0.54
22:DA:647:G:C5	22:DA:648:G:N7	2.76	0.54
22:DA:1340:U:O2'	22:DA:1341:G:OP1	2.19	0.54
22:DA:1440:U:H2'	22:DA:1441:G:H8	1.72	0.54
22:DA:1737:G:C5	22:DA:1738:G:C6	2.96	0.54
22:DA:1965:C:H3'	22:DA:1966:A:H5"	1.89	0.54
22:DA:1973:G:C6	22:DA:1974:C:C4	2.96	0.54
22:DA:2259:U:H4'	22:DA:2427:C:O2'	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2550:G:O6	22:DA:2551:C:N4	2.41	0.54
25:DD:107:VAL:HG13	25:DD:203:VAL:HG23	1.88	0.54
58:DF:39:VAL:HG22	58:DF:49:LEU:HG	1.89	0.54
30:DI:132:ALA:HA	30:DI:137:LEU:HD12	1.90	0.54
33:DL:17:LYS:HZ1	33:DL:19:LEU:HD22	1.69	0.54
37:DP:105:LYS:HA	37:DP:108:ARG:NE	2.23	0.54
41:DT:38:ALA:HB1	41:DT:81:LYS:HZ3	1.72	0.54
43:DV:30:ILE:HG12	43:DV:91:PHE:CB	2.33	0.54
45:DX:14:GLY:HA3	45:DX:28:PHE:HE1	1.72	0.54
1:AA:367:U:OP1	1:AA:395:C:H1'	2.08	0.54
1:AA:587:G:H4'	8:AH:3:GLN:HA	1.90	0.54
2:AB:117:GLU:HA	2:AB:120:SER:HB2	1.90	0.54
6:AF:16:GLU:CG	4:CD:191:SER:HB2	2.16	0.54
9:AI:93:LEU:HD12	9:AI:94:ARG:N	2.23	0.54
14:AN:60:ARG:O	14:AN:61:ASN:CB	2.54	0.54
22:BA:278:A:C2	22:BA:362:A:C8	2.95	0.54
22:BA:983:A:C6	22:BA:984:A:C2	2.96	0.54
22:BA:1057:A:N7	22:BA:1086:A:H2'	2.22	0.54
22:BA:1085:A:H3'	22:BA:1086:A:H2	1.70	0.54
25:BD:34:VAL:HG22	25:BD:94:GLN:H	1.72	0.54
26:BE:101:TYR:O	26:BE:104:ALA:HB3	2.08	0.54
28:BG:124:CYS:HB3	28:BG:126:THR:O	2.07	0.54
31:BJ:40:HIS:H	31:BJ:40:HIS:CD2	2.26	0.54
31:BJ:64:VAL:HG13	31:BJ:68:LYS:HB2	1.90	0.54
31:BJ:73:VAL:HG23	31:BJ:74:TYR:H	1.71	0.54
43:BV:41:GLU:C	43:BV:42:LEU:HD23	2.28	0.54
50:B2:3:ARG:HH21	50:B2:3:ARG:CG	2.16	0.54
53:CA:775:G:C2'	53:CA:776:G:H5'	2.38	0.54
53:CA:961:U:C4	53:CA:983:A:C6	2.95	0.54
53:CA:1017:U:OP2	53:CA:1017:U:H6	1.91	0.54
53:CA:1054:C:OP2	53:CA:1197:A:OP2	2.26	0.54
53:CA:1160:G:O6	53:CA:1181:G:C6	2.61	0.54
2:CB:131:LYS:O	2:CB:131:LYS:HE3	2.07	0.54
15:CO:62:ARG:HH22	15:CO:88:ARG:HH21	1.54	0.54
17:CQ:45:VAL:HG21	17:CQ:60:ILE:HG21	1.88	0.54
19:CS:54:ARG:CG	19:CS:55:GLN:H	2.20	0.54
22:DA:176:A:H3'	22:DA:177:G:H21	1.71	0.54
22:DA:481:G:H1'	22:DA:506:G:H21	1.73	0.54
22:DA:671:C:O2'	22:DA:672:C:P	2.66	0.54
22:DA:789:A:N1	62:DA:3320:HOH:O	2.34	0.54
22:DA:1274:A:C6	22:DA:1302:A:C2	2.95	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1515:A:H5'	22:DA:1557:C:H5'	1.88	0.54
22:DA:1788:C:O5'	22:DA:1788:C:H6	1.91	0.54
22:DA:2271:G:H2'	22:DA:2272:U:C6	2.43	0.54
22:DA:2760:C:H2'	22:DA:2761:A:H5'	1.90	0.54
57:DB:16:G:H2'	57:DB:17:C:C6	2.43	0.54
24:DC:125:PRO:HA	24:DC:191:LEU:HB2	1.90	0.54
26:DE:29:HIS:HD1	33:DL:6:LEU:HD22	1.72	0.54
58:DF:66:ILE:HG13	58:DF:83:PRO:HB3	1.90	0.54
31:DJ:80:HIS:HB3	31:DJ:81:ILE:HG13	1.90	0.54
31:DJ:106:LYS:HB2	31:DJ:119:PHE:CE2	2.40	0.54
32:DK:87:LEU:HD12	32:DK:92:GLU:CA	2.33	0.54
33:DL:90:VAL:HG13	33:DL:95:LEU:HD21	1.88	0.54
37:DP:50:ARG:CB	37:DP:57:ALA:H	2.21	0.54
39:DR:39:LEU:HB2	39:DR:49:ILE:HG12	1.89	0.54
43:DV:80:HIS:CD2	43:DV:83:LYS:H	2.26	0.54
45:DX:39:VAL:O	45:DX:41:SER:N	2.36	0.54
1:AA:143:A:N3	1:AA:143:A:H2'	2.22	0.54
1:AA:1001:C:H2'	1:AA:1002:G:H8	1.72	0.54
1:AA:1488:G:O2'	1:AA:1489:G:H5'	2.08	0.54
15:AO:23:SER:HB3	15:AO:26:VAL:CG2	2.38	0.54
16:AP:20:VAL:HG21	16:AP:32:PHE:CG	2.43	0.54
22:BA:668:A:H2'	22:BA:670:A:H62	1.73	0.54
22:BA:996:A:H4'	38:BQ:91:ARG:CD	2.38	0.54
22:BA:1013:C:H2'	22:BA:1014:A:C8	2.40	0.54
22:BA:1082:U:H5'	30:BI:117:THR:C	2.23	0.54
23:BB:94:A:H2'	23:BB:95:U:C6	2.42	0.54
24:BC:18:VAL:O	24:BC:18:VAL:HG13	2.07	0.54
25:BD:68:PHE:HB3	25:BD:73:VAL:HG12	1.90	0.54
28:BG:96:ALA:O	28:BG:97:VAL:HB	2.07	0.54
31:BJ:117:ALA:HA	31:BJ:120:ARG:HH21	1.71	0.54
37:BP:33:GLU:C	37:BP:33:GLU:OE1	2.46	0.54
41:BT:8:LEU:N	41:BT:8:LEU:HD23	2.23	0.54
43:BV:93:ARG:O	43:BV:94:ALA:HB2	2.07	0.54
44:BW:22:VAL:O	44:BW:23:LYS:O	2.26	0.54
44:BW:67:LYS:HB3	44:BW:80:SER:H	1.73	0.54
53:CA:372:C:H4'	53:CA:373:A:C5'	2.38	0.54
53:CA:702:A:OP1	53:CA:702:A:C8	2.55	0.54
53:CA:935:A:N6	54:CG:2:ARG:CZ	2.70	0.54
53:CA:1066:C:H2'	53:CA:1067:A:N7	2.23	0.54
53:CA:1147:C:H4'	9:CI:6:TYR:CE1	2.43	0.54
53:CA:1299:A:N3	53:CA:1299:A:C2'	2.63	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1387:G:H2'	53:CA:1388:C:H6	1.72	0.54
53:CA:1477:U:H2'	53:CA:1478:U:C6	2.43	0.54
4:CD:25:ARG:HH12	4:CD:30:LYS:HE2	1.73	0.54
6:CF:67:PRO:O	6:CF:69:GLU:N	2.41	0.54
21:CU:31:VAL:O	21:CU:33:ARG:N	2.41	0.54
22:DA:250:G:OP1	33:DL:59:ARG:NH1	2.41	0.54
22:DA:716:A:H3'	22:DA:717:C:H5"	1.89	0.54
22:DA:962:G:O2'	22:DA:963:U:C6	2.59	0.54
22:DA:1265:A:N7	22:DA:1267:U:N3	2.56	0.54
22:DA:1286:A:O2'	22:DA:1288:G:N2	2.41	0.54
22:DA:1388:G:H2'	22:DA:1389:G:C8	2.41	0.54
22:DA:2230:G:H1'	45:DX:31:ASN:HB3	1.90	0.54
22:DA:2310:C:H2'	22:DA:2311:A:H5"	1.89	0.54
22:DA:2572:A:C8	25:DD:149:ASN:ND2	2.67	0.54
22:DA:2757:A:O2'	22:DA:2758:A:H5'	2.08	0.54
33:DL:17:LYS:HE2	33:DL:19:LEU:HD13	1.90	0.54
38:DQ:111:LYS:CE	39:DR:48:LYS:HD3	2.38	0.54
46:DY:18:LEU:O	46:DY:18:LEU:HD13	2.07	0.54
1:AA:485:U:O2'	1:AA:486:U:P	2.66	0.54
1:AA:508:U:H4'	1:AA:509:A:OP1	2.08	0.54
1:AA:896:C:O2'	1:AA:897:C:H5'	2.08	0.54
1:AA:1151:A:H5'	10:AJ:42:LEU:O	2.08	0.54
1:AA:1414:U:H2'	1:AA:1415:G:C8	2.42	0.54
3:AC:134:LYS:HE3	3:AC:138:GLN:HE22	1.71	0.54
11:AK:87:GLY:O	11:AK:92:ARG:HD2	2.08	0.54
11:AK:96:ILE:HG13	11:AK:97:ARG:N	2.22	0.54
12:AL:79:ILE:HD12	12:AL:96:THR:CG2	2.37	0.54
19:AS:62:THR:HB	19:AS:65:MET:HG3	1.88	0.54
22:BA:540:C:O2'	22:BA:541:A:H5'	2.08	0.54
22:BA:1040:A:H2	22:BA:1115:G:H22	1.54	0.54
22:BA:1277:G:C5'	35:BN:20:MET:CE	2.86	0.54
22:BA:1789:A:OP1	24:BC:220:ARG:HD3	2.08	0.54
22:BA:2199:A:H3'	22:BA:2200:C:C6	2.43	0.54
22:BA:2454:G:H1'	62:BA:3524:HOH:O	2.07	0.54
22:BA:2564:A:C2	22:BA:2647:U:H4'	2.43	0.54
23:BB:78:A:H2'	23:BB:79:G:O4'	2.08	0.54
24:BC:180:MET:CG	24:BC:268:ARG:HH11	2.17	0.54
25:BD:38:LYS:O	25:BD:46:ARG:HA	2.08	0.54
25:BD:100:LEU:HD23	25:BD:101:PHE:HE1	1.72	0.54
31:BJ:44:TYR:O	31:BJ:45:THR:CB	2.55	0.54
31:BJ:124:VAL:HG23	31:BJ:125:TYR:H	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BM:33:LEU:CD2	34:BM:128:THR:HB	2.38	0.54
38:BQ:63:ARG:NH1	38:BQ:96:ASP:CA	2.48	0.54
40:BS:17:VAL:HG12	40:BS:76:VAL:HG11	1.90	0.54
43:BV:38:LEU:HD23	43:BV:40:ILE:HD11	1.89	0.54
44:BW:22:VAL:CG1	44:BW:25:PHE:HE2	2.20	0.54
53:CA:274:A:N3	53:CA:275:G:C8	2.76	0.54
53:CA:1051:C:O2'	53:CA:1052:U:C6	2.59	0.54
53:CA:1130:A:N7	53:CA:1146:A:N6	2.56	0.54
53:CA:1365:G:O2'	53:CA:1366:C:C5'	2.54	0.54
2:CB:67:LEU:HG	2:CB:157:PRO:HG3	1.90	0.54
54:CG:42:VAL:O	54:CG:43:TYR:HB2	2.07	0.54
8:CH:89:ASP:OD1	8:CH:89:ASP:N	2.40	0.54
9:CI:59:LYS:HE3	9:CI:60:LEU:CG	2.37	0.54
9:CI:61:ASP:O	9:CI:62:LEU:HD22	2.08	0.54
56:CP:16:PHE:CE2	56:CP:40:ASN:HB2	2.43	0.54
22:DA:300:A:H1'	22:DA:333:G:H21	1.73	0.54
22:DA:605:G:H1'	22:DA:657:U:O2'	2.07	0.54
22:DA:1512:C:H2'	22:DA:1513:U:O4'	2.08	0.54
22:DA:1531:C:H2'	22:DA:1532:A:O4'	2.08	0.54
22:DA:1810:A:H3'	22:DA:1811:G:H8	1.72	0.54
22:DA:1914:C:H3'	22:DA:1914:C:OP2	2.07	0.54
22:DA:2615:U:C2	48:D0:3:GLN:HA	2.43	0.54
22:DA:2616:C:HO2'	22:DA:2617:U:H5'	1.73	0.54
24:DC:177:SER:O	24:DC:270:ARG:HG3	2.07	0.54
58:DF:103:ILE:HG21	58:DF:173:ASP:O	2.08	0.54
29:DH:5:LEU:O	29:DH:6:LEU:HD12	2.07	0.54
37:DP:28:LYS:HB3	37:DP:39:LEU:HD23	1.90	0.54
41:DT:50:LEU:HD23	41:DT:51:PHE:N	2.19	0.54
1:AA:270:A:H2'	1:AA:271:C:C6	2.43	0.53
1:AA:537:G:H5"	12:AL:109:ARG:HH12	1.72	0.53
1:AA:708:C:O2'	1:AA:709:U:H5'	2.07	0.53
1:AA:924:C:H2'	1:AA:925:G:C8	2.43	0.53
1:AA:1125:U:OP2	1:AA:1145:A:N6	2.42	0.53
2:AB:174:GLU:O	2:AB:178:LEU:HB2	2.08	0.53
13:AM:10:ASP:OD1	13:AM:44:ILE:HD13	2.09	0.53
21:AU:3:ILE:HA	21:AU:19:LYS:HZ1	1.71	0.53
22:BA:595:C:H2'	22:BA:596:U:C6	2.43	0.53
22:BA:1290:C:H2'	22:BA:1291:C:H6	1.73	0.53
22:BA:2092:U:C2	22:BA:2225:A:O2'	2.62	0.53
22:BA:2396:G:O2'	22:BA:2397:G:H5'	2.08	0.53
23:BB:46:A:H2'	23:BB:47:C:C6	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BJ:44:TYR:O	31:BJ:45:THR:HG22	2.08	0.53
39:BR:54:VAL:O	39:BR:55:ASP:C	2.46	0.53
41:BT:39:THR:HB	41:BT:42:GLU:H	1.73	0.53
45:BX:6:VAL:HG13	45:BX:7:THR:HG23	1.90	0.53
53:CA:413:G:C6	4:CD:32:LYS:HE3	2.43	0.53
53:CA:960:U:C5	53:CA:1225:A:H1'	2.43	0.53
53:CA:1339:A:H2'	53:CA:1340:A:O4'	2.08	0.53
3:CC:133:MET:CE	3:CC:152:VAL:HG13	2.36	0.53
6:CF:61:LEU:HD13	6:CF:62:MET:H	1.73	0.53
54:CG:30:MET:HE1	54:CG:33:GLY:HA2	1.90	0.53
9:CI:58:GLU:HG3	9:CI:59:LYS:N	2.22	0.53
14:CN:66:THR:CG2	14:CN:82:LYS:HE3	2.38	0.53
22:DA:64:A:OP1	41:DT:77:ARG:HG2	2.07	0.53
22:DA:90:U:H3'	22:DA:91:A:C5'	2.38	0.53
22:DA:676:A:H2	22:DA:2069:G:N3	2.05	0.53
22:DA:1056:G:N2	22:DA:1102:C:C5	2.74	0.53
22:DA:1475:G:O2'	22:DA:1476:U:C6	2.61	0.53
22:DA:1519:G:N1	22:DA:1520:U:C2	2.75	0.53
33:DL:77:ILE:HG12	33:DL:101:ILE:HD11	1.90	0.53
35:DN:94:TYR:N	35:DN:94:TYR:CD1	2.72	0.53
37:DP:9:GLN:HA	37:DP:12:MET:HG3	1.88	0.53
40:DS:8:ARG:HA	40:DS:102:HIS:ND1	2.23	0.53
42:DU:3:LYS:HD3	42:DU:82:VAL:HG21	1.90	0.53
49:D1:34:GLU:HG3	49:D1:49:LYS:HB2	1.90	0.53
51:D3:15:LYS:HG2	51:D3:16:THR:H	1.73	0.53
1:AA:71:A:N6	1:AA:100:G:N7	2.56	0.53
1:AA:677:U:H3	1:AA:713:G:H22	1.55	0.53
3:AC:143:LEU:H	3:AC:143:LEU:HD22	1.74	0.53
3:AC:156:LEU:HD13	3:AC:163:ARG:HB2	1.89	0.53
4:AD:171:GLU:O	4:AD:179:GLY:HA2	2.07	0.53
5:AE:81:GLN:HG2	5:AE:149:PRO:HB3	1.91	0.53
7:AG:112:ASP:HB2	7:AG:118:ARG:HG2	1.89	0.53
12:AL:49:ARG:HH11	12:AL:49:ARG:CG	1.94	0.53
17:AQ:51:GLU:O	17:AQ:52:CYS:O	2.26	0.53
21:AU:16:ARG:HH11	21:AU:19:LYS:CG	2.21	0.53
22:BA:875:G:C2'	22:BA:876:C:H5'	2.37	0.53
22:BA:2327:A:H2'	22:BA:2328:A:C8	2.44	0.53
25:BD:114:LYS:NZ	25:BD:116:LYS:HE2	2.22	0.53
28:BG:84:LYS:HB2	28:BG:132:LEU:HG	1.90	0.53
32:BK:40:LYS:HD2	32:BK:58:LEU:O	2.08	0.53
36:BO:11:ALA:HB2	36:BO:96:GLY:CA	2.37	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BT:87:LEU:O	41:BT:88:LYS:C	2.46	0.53
44:BW:67:LYS:O	44:BW:68:PHE:HB2	2.08	0.53
53:CA:321:A:N7	53:CA:328:C:C2	2.76	0.53
53:CA:411:A:N7	53:CA:413:G:C4	2.76	0.53
53:CA:701:U:C2'	53:CA:702:A:OP2	2.55	0.53
53:CA:790:A:N6	53:CA:791:G:C6	2.76	0.53
53:CA:876:C:O2'	8:CH:11:THR:HG21	2.08	0.53
54:CG:91:ARG:NH2	54:CG:92:PRO:HB2	2.23	0.53
10:CJ:52:LEU:HD21	10:CJ:59:LYS:HA	1.90	0.53
55:CM:22:TYR:HB2	55:CM:65:GLU:HG2	1.90	0.53
14:CN:63:CYS:HB3	14:CN:67:GLY:H	1.73	0.53
17:CQ:3:LYS:HZ2	17:CQ:6:THR:HG21	1.73	0.53
22:DA:373:U:O2'	22:DA:374:A:H8	1.91	0.53
22:DA:608:A:C5	22:DA:621:A:N7	2.76	0.53
22:DA:665:U:H2'	22:DA:666:A:H8	1.73	0.53
22:DA:704:G:H1'	22:DA:727:A:N6	2.23	0.53
22:DA:991:C:H6	22:DA:991:C:O5'	1.91	0.53
22:DA:1773:A:H2'	22:DA:1774:C:O4'	2.08	0.53
22:DA:2298:A:H2'	22:DA:2299:U:C6	2.43	0.53
25:DD:108:ASP:N	25:DD:204:LYS:O	2.40	0.53
26:DE:128:ALA:O	26:DE:130:LYS:HG2	2.08	0.53
29:DH:33:GLN:O	29:DH:35:LYS:HG2	2.08	0.53
29:DH:80:ILE:HB	29:DH:101:ASP:HB3	1.89	0.53
32:DK:11:ALA:O	32:DK:99:ILE:HG23	2.08	0.53
33:DL:3:LEU:C	33:DL:3:LEU:HD12	2.28	0.53
33:DL:90:VAL:HB	33:DL:122:VAL:HA	1.89	0.53
35:DN:54:LEU:HD11	35:DN:66:ALA:HB2	1.90	0.53
39:DR:4:VAL:HG22	39:DR:40:MET:HB3	1.90	0.53
44:DW:18:LYS:CD	44:DW:19:ARG:HG2	2.38	0.53
1:AA:87:C:H2'	1:AA:88:U:O4'	2.07	0.53
1:AA:370:C:O2'	1:AA:371:A:H5'	2.08	0.53
2:AB:75:ALA:O	2:AB:79:VAL:HG23	2.07	0.53
3:AC:39:ARG:HG2	3:AC:54:ILE:HG12	1.89	0.53
4:AD:117:VAL:CA	4:AD:122:ILE:HD11	2.38	0.53
9:AI:41:GLU:O	9:AI:44:ARG:HG2	2.08	0.53
14:AN:60:ARG:HA	62:AN:202:HOH:O	2.08	0.53
22:BA:931:U:O4	22:BA:1166:G:N2	2.40	0.53
22:BA:1254:A:H5"	22:BA:1255:U:H5"	1.90	0.53
22:BA:1300:G:H4'	22:BA:1301:A:H5'	1.89	0.53
22:BA:1513:U:C2'	22:BA:1514:G:H5'	2.38	0.53
22:BA:1667:G:O2'	22:BA:1991:U:O4	2.17	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2895:G:H2'	22:BA:2896:C:C6	2.43	0.53
23:BB:46:A:C5	23:BB:47:C:C5	2.95	0.53
28:BG:83:THR:C	28:BG:84:LYS:HD3	2.28	0.53
29:BH:21:VAL:HG21	29:BH:25:TYR:HD2	1.74	0.53
34:BM:46:ILE:HD12	34:BM:47:GLU:N	2.23	0.53
53:CA:197:A:H4'	53:CA:198:G:OP1	2.05	0.53
53:CA:216:U:H4'	53:CA:464:U:H4'	1.90	0.53
53:CA:458:U:H6	53:CA:458:U:OP2	1.91	0.53
53:CA:1298:U:H5	54:CG:113:LYS:HA	1.73	0.53
53:CA:1319:A:N6	53:CA:1323:G:N3	2.56	0.53
11:CK:51:PHE:O	11:CK:52:ARG:HD2	2.07	0.53
22:DA:14:A:N6	22:DA:526:A:C4	2.76	0.53
22:DA:468:G:H5"	26:DE:55:SER:CB	2.38	0.53
22:DA:1139:G:O2'	22:DA:1140:C:H5'	2.09	0.53
22:DA:1796:U:H2'	22:DA:1797:G:C8	2.44	0.53
22:DA:1937:A:H5"	62:DA:3714:HOH:O	2.08	0.53
22:DA:2353:G:H1'	44:DW:30:VAL:CG1	2.38	0.53
22:DA:2578:G:H21	25:DD:130:GLN:NE2	2.07	0.53
22:DA:2619:C:H4'	25:DD:156:PHE:O	2.07	0.53
22:DA:2847:U:C2'	22:DA:2848:G:H5'	2.38	0.53
25:DD:94:GLN:HG2	25:DD:94:GLN:O	2.09	0.53
26:DE:28:VAL:O	26:DE:31:VAL:HG22	2.08	0.53
58:DF:131:VAL:C	58:DF:133:GLU:H	2.11	0.53
32:DK:61:VAL:HG13	32:DK:87:LEU:HD22	1.90	0.53
34:DM:40:ARG:HB2	34:DM:93:VAL:HG21	1.90	0.53
37:DP:9:GLN:HB3	37:DP:12:MET:HE3	1.90	0.53
46:DY:31:GLN:C	46:DY:33:ALA:H	2.11	0.53
47:DZ:6:ILE:HD12	47:DZ:47:ILE:HD11	1.90	0.53
1:AA:71:A:O2'	1:AA:72:A:C5'	2.51	0.53
1:AA:562:U:H1'	12:AL:11:ARG:HB3	1.90	0.53
1:AA:1152:A:H5'	10:AJ:15:HIS:HD2	1.72	0.53
1:AA:1314:C:OP2	19:AS:5:LYS:HD2	2.08	0.53
2:AB:9:LEU:HD23	2:AB:11:ALA:H	1.72	0.53
4:AD:191:SER:O	4:AD:192:ALA:HB2	2.09	0.53
5:AE:114:LEU:HD21	5:AE:122:VAL:HG21	1.89	0.53
13:AM:92:ARG:CZ	13:AM:92:ARG:HB3	2.37	0.53
16:AP:6:LEU:HG	16:AP:17:TYR:HB3	1.91	0.53
17:AQ:12:VAL:CG1	17:AQ:13:SER:N	2.71	0.53
21:AU:32:ARG:HG2	21:AU:32:ARG:O	2.08	0.53
22:BA:163:C:O2'	22:BA:164:C:P	2.65	0.53
22:BA:969:G:H2'	22:BA:970:U:C6	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1773:A:H2'	22:BA:1774:C:H5'	1.90	0.53
22:BA:2195:U:H2'	22:BA:2196:C:H6	1.73	0.53
22:BA:2491:U:H5"	22:BA:2570:G:H5"	1.89	0.53
24:BC:147:PRO:HD3	24:BC:187:CYS:SG	2.47	0.53
28:BG:10:VAL:HB	28:BG:14:VAL:HG21	1.91	0.53
28:BG:84:LYS:CB	28:BG:132:LEU:H	2.21	0.53
31:BJ:38:GLY:O	31:BJ:43:GLU:HB2	2.09	0.53
32:BK:91:SER:O	32:BK:92:GLU:C	2.46	0.53
33:BL:92:LEU:HA	33:BL:125:LEU:HD21	1.90	0.53
44:BW:30:VAL:HG23	44:BW:59:PHE:HD1	1.74	0.53
46:BY:56:LEU:O	46:BY:57:LEU:CB	2.55	0.53
53:CA:203:G:H8	53:CA:203:G:O5'	1.91	0.53
53:CA:652:U:O2'	53:CA:653:U:OP2	2.26	0.53
53:CA:976:G:O5'	53:CA:1358:U:O2'	2.26	0.53
53:CA:977:A:H8	53:CA:1223:C:C4	2.26	0.53
3:CC:13:ILE:HG22	3:CC:14:VAL:HG23	1.90	0.53
5:CE:131:ASN:HD22	5:CE:132:PRO:CD	2.21	0.53
6:CF:3:HIS:HB2	6:CF:92:THR:HG23	1.89	0.53
6:CF:15:SER:OG	6:CF:58:HIS:CD2	2.61	0.53
22:DA:55:G:N2	22:DA:116:C:C2	2.76	0.53
22:DA:196:A:N6	22:DA:831:G:H21	2.02	0.53
22:DA:565:C:H2'	22:DA:566:U:O4'	2.08	0.53
22:DA:995:C:HO2'	38:DQ:60:TRP:HZ2	1.46	0.53
22:DA:1248:G:O2'	38:DQ:2:ARG:HA	2.08	0.53
22:DA:1865:U:H2'	22:DA:1866:A:H8	1.72	0.53
22:DA:1996:C:H4'	22:DA:1997:C:OP1	2.08	0.53
22:DA:2212:A:N7	22:DA:2214:C:N4	2.57	0.53
22:DA:2229:U:H2'	22:DA:2230:G:C8	2.43	0.53
22:DA:2721:A:H2'	22:DA:2722:G:O4'	2.09	0.53
57:DB:44:G:H3'	58:DF:91:ARG:NE	2.23	0.53
26:DE:53:THR:OG1	26:DE:54:GLY:N	2.42	0.53
58:DF:59:ILE:HD13	58:DF:137:PHE:HZ	1.73	0.53
28:DG:120:ILE:HD13	28:DG:120:ILE:O	2.09	0.53
36:DO:51:ALA:HB3	36:DO:78:VAL:HG22	1.91	0.53
37:DP:59:THR:OG1	37:DP:72:VAL:HG12	2.08	0.53
1:AA:181:A:N6	1:AA:195:A:OP2	2.41	0.53
1:AA:579:A:O2'	15:AO:53:ARG:NH1	2.41	0.53
1:AA:829:G:O2'	2:AB:24:PRO:HG3	2.08	0.53
2:AB:49:PHE:HB2	2:AB:53:LEU:CD2	2.39	0.53
4:AD:61:ARG:NH1	4:AD:68:GLU:HG2	2.23	0.53
5:AE:120:HIS:C	5:AE:121:ASN:HD22	2.12	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:20:GLU:O	7:AG:24:LYS:HG3	2.08	0.53
9:AI:24:ASN:H	9:AI:61:ASP:HB2	1.74	0.53
20:AT:25:SER:O	20:AT:28:ARG:HG3	2.09	0.53
20:AT:53:MET:HE3	20:AT:57:VAL:CG2	2.39	0.53
22:BA:155:A:H2'	22:BA:156:A:C8	2.44	0.53
22:BA:1402:U:H2'	22:BA:1403:A:O5'	2.09	0.53
22:BA:1820:U:C2	24:BC:200:MET:HB2	2.44	0.53
22:BA:2109:U:H2'	22:BA:2110:G:H5'	1.90	0.53
22:BA:2544:G:O2'	22:BA:2545:G:H5'	2.08	0.53
24:BC:57:HIS:ND1	24:BC:58:LYS:N	2.45	0.53
29:BH:131:SER:HB2	29:BH:139:PHE:HD2	1.72	0.53
37:BP:57:ALA:HB1	37:BP:73:PHE:O	2.07	0.53
53:CA:545:C:H2'	53:CA:546:A:H5'	1.90	0.53
3:CC:137:VAL:O	3:CC:140:ALA:HB3	2.08	0.53
4:CD:58:GLN:O	4:CD:62:ARG:HG2	2.09	0.53
55:CM:68:LEU:HD22	55:CM:69:ARG:HH11	1.73	0.53
22:DA:83:A:P	42:DU:91:LYS:HZ2	2.32	0.53
22:DA:197:A:H4'	22:DA:2068:U:H2'	1.91	0.53
22:DA:234:U:O2'	22:DA:235:U:C5'	2.56	0.53
22:DA:305:C:C2	22:DA:313:G:C2	2.96	0.53
22:DA:621:A:O2'	22:DA:622:G:O4'	2.24	0.53
22:DA:655:A:H4'	22:DA:656:G:OP1	2.07	0.53
22:DA:1255:U:H5'	22:DA:2502:G:N2	2.22	0.53
22:DA:1476:U:H2'	22:DA:1477:A:H8	1.73	0.53
22:DA:1519:G:C6	22:DA:1520:U:N3	2.76	0.53
22:DA:1565:C:H5"	24:DC:17:LYS:HE2	1.90	0.53
22:DA:1574:C:O5'	22:DA:1574:C:H6	1.91	0.53
22:DA:1605:C:C3'	22:DA:1606:C:C5'	2.87	0.53
22:DA:1607:C:C4'	22:DA:1608:A:C8	2.92	0.53
22:DA:1667:G:H8	22:DA:1667:G:O5'	1.91	0.53
22:DA:1799:G:C8	24:DC:179:GLU:OE1	2.55	0.53
22:DA:2039:U:H2'	22:DA:2040:G:C8	2.43	0.53
22:DA:2360:G:C1'	33:DL:60:ARG:HH21	2.22	0.53
22:DA:2725:A:C4	22:DA:2727:A:C8	2.95	0.53
57:DB:54:G:H21	58:DF:25:MET:CE	2.20	0.53
35:DN:16:HIS:O	35:DN:20:MET:HB2	2.09	0.53
40:DS:80:PRO:HD2	40:DS:100:THR:OG1	2.09	0.53
46:DY:57:LEU:HD13	46:DY:57:LEU:O	2.08	0.53
1:AA:189:A:O2'	1:AA:190:A:H5'	2.08	0.53
1:AA:443:C:O2'	1:AA:444:G:H5'	2.08	0.53
1:AA:844:G:H2'	1:AA:844:G:N3	2.22	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:46:LEU:HB3	3:AC:49:ALA:HB3	1.91	0.53
9:AI:28:VAL:HB	9:AI:63:TYR:CD2	2.38	0.53
10:AJ:57:VAL:HG22	10:AJ:58:ASN:N	2.18	0.53
10:AJ:65:TYR:CB	14:AN:95:LEU:HD11	2.39	0.53
19:AS:10:ILE:HD11	19:AS:15:LEU:HB2	1.91	0.53
22:BA:517:C:OP2	48:B0:9:ARG:NH2	2.36	0.53
22:BA:1183:U:H2'	22:BA:1184:U:C6	2.43	0.53
22:BA:2813:A:H2	22:BA:2887:A:H62	1.54	0.53
25:BD:122:VAL:HG12	25:BD:123:LYS:H	1.73	0.53
26:BE:154:ASP:OD2	26:BE:157:LEU:HB3	2.09	0.53
27:BF:84:ILE:O	27:BF:84:ILE:HG13	2.08	0.53
30:BI:123:ALA:C	30:BI:125:THR:H	2.10	0.53
36:BO:3:LYS:HG3	36:BO:4:LYS:N	2.23	0.53
37:BP:79:VAL:HG23	37:BP:79:VAL:O	2.07	0.53
42:BU:17:ASP:HB3	42:BU:20:LYS:HD3	1.91	0.53
44:BW:17:ALA:HA	44:BW:35:ILE:CG2	2.30	0.53
44:BW:41:GLY:O	44:BW:42:THR:C	2.47	0.53
53:CA:197:A:H4'	53:CA:198:G:O5'	2.08	0.53
53:CA:346:G:N3	53:CA:346:G:C2'	2.71	0.53
53:CA:1067:A:H1'	53:CA:1068:G:H8	1.73	0.53
53:CA:1073:U:C2	53:CA:1074:G:C8	2.96	0.53
53:CA:1161:C:O2	53:CA:1176:A:C2	2.61	0.53
53:CA:1365:G:C2	53:CA:1366:C:C2	2.97	0.53
4:CD:148:ALA:O	4:CD:151:GLN:HB2	2.08	0.53
55:CM:86:ARG:NH1	55:CM:90:HIS:HD2	2.06	0.53
15:CO:38:LEU:HD12	15:CO:41:HIS:HB3	1.90	0.53
17:CQ:46:HIS:CB	17:CQ:70:LYS:HZ1	2.20	0.53
22:DA:57:C:O2'	41:DT:36:LYS:HE2	2.08	0.53
22:DA:319:G:C6	22:DA:333:G:C6	2.96	0.53
22:DA:489:G:H4'	22:DA:490:C:OP1	2.05	0.53
22:DA:655:A:H4'	22:DA:656:G:H5'	1.91	0.53
22:DA:1045:C:H1'	22:DA:1047:G:C2	2.44	0.53
22:DA:1071:G:O6	22:DA:1089:A:C2	2.62	0.53
22:DA:1087:G:C4	22:DA:1089:A:C2	2.96	0.53
22:DA:1413:A:C6	22:DA:1414:C:N4	2.77	0.53
22:DA:1609:A:N6	22:DA:1616:A:C2	2.76	0.53
22:DA:2443:C:C2'	22:DA:2444:G:H5'	2.38	0.53
22:DA:2458:G:H8	22:DA:2459:A:N6	2.01	0.53
22:DA:2607:G:H2'	22:DA:2608:G:O4'	2.08	0.53
22:DA:2638:G:O2'	22:DA:2639:A:H8	1.91	0.53
24:DC:8:THR:O	24:DC:9:SER:CB	2.57	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:44:ASN:O	24:DC:46:GLY:N	2.42	0.53
26:DE:73:ILE:O	26:DE:73:ILE:HG13	2.09	0.53
58:DF:43:ILE:HG12	58:DF:77:LYS:HD3	1.91	0.53
31:DJ:69:ARG:CZ	31:DJ:89:PHE:HE1	2.22	0.53
33:DL:9:ALA:HB3	33:DL:12:SER:HB3	1.89	0.53
33:DL:123:ARG:HA	33:DL:143:GLU:HB3	1.89	0.53
48:D0:30:ASP:OD1	48:D0:47:TYR:HB3	2.09	0.53
1:AA:358:U:H2'	1:AA:359:G:C8	2.43	0.53
1:AA:1031:C:C2'	1:AA:1032:G:OP2	2.56	0.53
1:AA:1469:C:H5'	1:AA:1469:C:C6	2.38	0.53
4:AD:145:ARG:HD2	4:AD:147:LYS:HE2	1.90	0.53
8:AH:6:ILE:HB	8:AH:76:ARG:NH1	2.22	0.53
22:BA:962:G:N2	22:BA:2250:G:H1	2.06	0.53
22:BA:1607:C:N4	22:BA:1622:G:C5	2.77	0.53
23:BB:65:U:C4	23:BB:108:A:C4	2.97	0.53
31:BJ:49:ASP:OD1	31:BJ:121:LYS:HE2	2.07	0.53
39:BR:49:ILE:HG22	39:BR:54:VAL:N	2.23	0.53
44:BW:16:GLU:OE2	44:BW:16:GLU:CA	2.57	0.53
53:CA:59:A:H2'	53:CA:59:A:N3	2.24	0.53
53:CA:106:C:O2	53:CA:379:C:H4'	2.09	0.53
53:CA:1346:A:C8	53:CA:1348:U:N3	2.77	0.53
2:CB:147:LEU:HD12	2:CB:147:LEU:N	2.24	0.53
2:CB:161:PHE:HA	2:CB:183:PHE:O	2.09	0.53
4:CD:12:ARG:NH2	4:CD:36:ALA:O	2.33	0.53
12:CL:80:LEU:HD23	12:CL:97:VAL:HG21	1.90	0.53
22:DA:140:C:H5'	22:DA:141:G:N2	2.24	0.53
22:DA:203:A:O5'	22:DA:204:A:H2'	2.09	0.53
22:DA:223:A:N6	22:DA:422:A:N6	2.57	0.53
22:DA:639:U:H2'	22:DA:640:C:C6	2.43	0.53
22:DA:674:G:H1'	26:DE:69:ARG:HE	1.74	0.53
22:DA:953:G:H5"	34:DM:16:ARG:CZ	2.38	0.53
22:DA:1373:A:H2'	22:DA:1374:G:O4'	2.09	0.53
22:DA:1511:G:O2'	22:DA:1512:C:H5'	2.08	0.53
22:DA:1737:G:C6	22:DA:1738:G:N1	2.76	0.53
22:DA:2391:G:O2'	22:DA:2392:A:O5'	2.27	0.53
22:DA:2577:A:H5"	22:DA:2578:G:H5'	1.91	0.53
22:DA:2636:C:H2'	22:DA:2637:U:H6	1.72	0.53
24:DC:166:ARG:CB	24:DC:171:VAL:HG22	2.37	0.53
41:DT:4:GLU:HG3	41:DT:6:ARG:HH21	1.74	0.53
45:DX:19:HIS:O	45:DX:20:ALA:HB3	2.09	0.53
1:AA:414:A:H2'	1:AA:415:A:H8	1.72	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:433:G:C2'	1:AA:434:U:H5'	2.38	0.53
1:AA:1355:G:O2'	1:AA:1356:G:H5'	2.09	0.53
2:AB:202:ASN:HB3	2:AB:208:ALA:CB	2.39	0.53
11:AK:57:SER:O	11:AK:90:PRO:HG3	2.08	0.53
22:BA:545:U:O2	22:BA:545:U:O4'	2.23	0.53
22:BA:817:C:O2'	22:BA:839:U:H5"	2.08	0.53
22:BA:1014:A:O2'	22:BA:1015:U:H5'	2.09	0.53
22:BA:1045:C:C4'	22:BA:1046:A:H5'	2.38	0.53
22:BA:2145:C:OP1	22:BA:2148:G:C5	2.62	0.53
24:BC:67:LYS:HG2	24:BC:150:GLY:HA2	1.90	0.53
28:BG:29:ASN:CG	28:BG:30:GLY:N	2.61	0.53
29:BH:43:ASN:N	29:BH:43:ASN:HD22	2.06	0.53
30:BI:126:ARG:HA	30:BI:129:GLU:CG	2.39	0.53
31:BJ:40:HIS:CD2	31:BJ:41:LYS:HG2	2.44	0.53
34:BM:13:HIS:O	34:BM:14:LYS:CB	2.56	0.53
36:BO:51:ALA:HB3	36:BO:78:VAL:HG13	1.91	0.53
37:BP:33:GLU:HB3	37:BP:36:LYS:H	1.74	0.53
44:BW:39:GLN:O	44:BW:40:ARG:C	2.46	0.53
53:CA:745:G:H2'	53:CA:746:A:C8	2.44	0.53
53:CA:764:C:C4	53:CA:812:G:O6	2.62	0.53
53:CA:1481:U:H2'	53:CA:1482:G:C8	2.43	0.53
10:CJ:41:PRO:O	10:CJ:42:LEU:HB2	2.08	0.53
11:CK:74:LYS:O	11:CK:74:LYS:HG2	2.09	0.53
14:CN:33:VAL:HG22	14:CN:40:ARG:NH2	2.23	0.53
21:CU:25:ALA:O	21:CU:29:ALA:N	2.40	0.53
22:DA:173:A:H2'	22:DA:174:U:H6	1.72	0.53
22:DA:204:A:C4	22:DA:206:U:O4	2.61	0.53
22:DA:406:G:O2'	22:DA:407:G:C8	2.60	0.53
22:DA:478:A:C6	22:DA:480:A:C5	2.97	0.53
22:DA:571:U:C4	22:DA:2030:A:C6	2.96	0.53
22:DA:763:G:HO2'	22:DA:764:A:H3'	1.72	0.53
22:DA:1240:U:H2'	22:DA:1240:U:O2	2.08	0.53
22:DA:1384:A:H1'	22:DA:1405:U:H1'	1.91	0.53
22:DA:1429:G:O2'	22:DA:1430:G:C8	2.45	0.53
22:DA:1992:G:N2	22:DA:1995:U:C5	2.77	0.53
22:DA:2025:C:OP1	25:DD:154:LYS:HE2	2.09	0.53
22:DA:2069:G:N2	22:DA:2443:C:C2	2.77	0.53
22:DA:2286:G:O6	49:D1:22:THR:HG21	2.08	0.53
22:DA:2591:C:OP1	24:DC:237:ARG:HD2	2.08	0.53
57:DB:28:C:OP1	36:DO:31:THR:HG21	2.09	0.53
57:DB:85:G:O2'	57:DB:86:G:H5'	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:45:TYR:HE2	25:DD:47:ALA:HB3	1.74	0.53
25:DD:125:TRP:CD1	25:DD:160:LYS:HB3	2.43	0.53
26:DE:130:LYS:H	26:DE:160:ALA:HB2	1.74	0.53
30:DI:96:LYS:HE2	30:DI:138:VAL:HG11	1.91	0.53
31:DJ:13:ARG:HG2	31:DJ:51:GLY:O	2.09	0.53
37:DP:102:ARG:HD2	37:DP:106:ALA:O	2.09	0.53
41:DT:7:LEU:O	41:DT:7:LEU:HD23	2.09	0.53
42:DU:44:HIS:HD2	42:DU:57:ILE:HG21	1.74	0.53
1:AA:250:A:C8	1:AA:252:U:C4	2.97	0.53
3:AC:148:ILE:HG13	3:AC:200:TRP:O	2.09	0.53
4:AD:99:ASN:O	4:AD:103:ARG:HB2	2.09	0.53
5:AE:55:VAL:N	5:AE:56:PRO:HD2	2.23	0.53
7:AG:99:ALA:O	7:AG:103:ILE:HG13	2.09	0.53
19:AS:13:HIS:O	19:AS:17:LYS:HG3	2.09	0.53
22:BA:1252:G:C2	38:BQ:32:ARG:HG2	2.44	0.53
22:BA:1486:U:H2'	22:BA:1487:U:C6	2.44	0.53
24:BC:242:HIS:O	24:BC:244:VAL:HG13	2.08	0.53
27:BF:45:ASP:CB	27:BF:48:LEU:HB2	2.38	0.53
27:BF:71:LYS:HD3	27:BF:80:GLN:HG3	1.91	0.53
29:BH:44:ILE:O	29:BH:48:GLU:HB2	2.09	0.53
34:BM:64:TRP:CZ3	34:BM:106:ASP:HB2	2.44	0.53
53:CA:512:U:O2'	53:CA:513:C:C5'	2.57	0.53
53:CA:545:C:C2'	53:CA:546:A:H5'	2.39	0.53
53:CA:876:C:C1'	8:CH:11:THR:HG21	2.39	0.53
53:CA:1327:C:C4	53:CA:1328:C:N4	2.77	0.53
53:CA:1328:C:H2'	53:CA:1329:A:C8	2.44	0.53
53:CA:1442:G:H2'	53:CA:1443:C:C6	2.43	0.53
2:CB:100:LEU:O	2:CB:103:TRP:HE3	1.92	0.53
54:CG:59:GLU:HG3	54:CG:60:ALA:N	2.24	0.53
8:CH:85:TYR:CD2	8:CH:123:GLU:HB2	2.44	0.53
14:CN:6:LYS:O	14:CN:10:VAL:HG23	2.08	0.53
18:CR:72:ARG:HA	21:CU:4:LYS:HE3	1.90	0.53
20:CT:73:ARG:CG	20:CT:73:ARG:NH1	2.57	0.53
22:DA:125:A:H3'	50:D2:19:ARG:HD2	1.90	0.53
22:DA:518:G:H2'	22:DA:519:U:H6	1.74	0.53
22:DA:1534:U:C6	22:DA:1538:G:N1	2.73	0.53
57:DB:11:C:C5	57:DB:12:C:C5	2.96	0.53
57:DB:69:G:H3'	57:DB:70:C:H6	1.74	0.53
25:DD:117:GLY:O	25:DD:119:ALA:N	2.41	0.53
29:DH:120:GLY:O	29:DH:121:VAL:HB	2.09	0.53
35:DN:103:ARG:HB2	35:DN:110:MET:SD	2.49	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DO:51:ALA:HB3	36:DO:78:VAL:CG2	2.38	0.53
42:DU:34:ILE:HG12	42:DU:62:ALA:O	2.09	0.53
45:DX:29:LEU:HB2	45:DX:30:PRO:HD2	1.90	0.53
1:AA:328:C:O2	1:AA:328:C:H2'	2.08	0.53
1:AA:723:U:H5'	21:AU:48:LYS:HG2	1.91	0.53
1:AA:1277:C:HO2'	1:AA:1279:G:H8	0.70	0.53
2:AB:212:TYR:O	2:AB:216:VAL:HG23	2.09	0.53
4:AD:55:ARG:HH12	4:AD:58:GLN:CB	2.22	0.53
4:AD:117:VAL:HA	4:AD:122:ILE:HD11	1.91	0.53
4:AD:147:LYS:O	4:AD:149:LYS:N	2.42	0.53
7:AG:145:GLU:HA	7:AG:148:LYS:HB2	1.90	0.53
9:AI:112:ARG:NH2	10:AJ:64:GLN:HE22	2.07	0.53
20:AT:77:ASN:HD22	20:AT:77:ASN:N	2.06	0.53
22:BA:513:A:O2'	22:BA:514:A:H5'	2.09	0.53
22:BA:528:A:H3'	22:BA:528:A:C8	2.44	0.53
22:BA:1254:A:H5"	22:BA:1255:U:C5'	2.39	0.53
22:BA:1434:A:OP1	22:BA:1434:A:H4'	2.08	0.53
22:BA:1857:G:H1'	22:BA:1858:A:OP2	2.09	0.53
22:BA:2667:C:C2'	22:BA:2668:G:H5'	2.38	0.53
22:BA:2823:A:C2'	22:BA:2824:C:H5'	2.39	0.53
27:BF:134:GLN:CG	27:BF:135:ILE:H	2.21	0.53
28:BG:33:THR:N	28:BG:34:ARG:HH11	2.06	0.53
38:BQ:94:LEU:C	38:BQ:96:ASP:H	2.12	0.53
53:CA:143:A:H2'	53:CA:143:A:N3	2.24	0.53
53:CA:598:U:H4'	8:CH:85:TYR:CD1	2.43	0.53
53:CA:802:A:H2'	53:CA:803:G:O5'	2.09	0.53
53:CA:1018:G:H2'	53:CA:1019:A:O4'	2.09	0.53
5:CE:48:GLY:HA3	5:CE:66:ALA:HB2	1.90	0.53
14:CN:50:LEU:HB2	14:CN:51:PRO:HD3	1.91	0.53
15:CO:52:ARG:O	15:CO:55:LEU:HB3	2.09	0.53
22:DA:142:A:O2'	22:DA:143:C:O4'	2.26	0.53
22:DA:422:A:C2	22:DA:423:A:C5	2.97	0.53
22:DA:691:C:O2'	22:DA:692:C:H5'	2.09	0.53
22:DA:826:U:H5'	22:DA:2428:G:O2'	2.09	0.53
22:DA:1387:A:C4	22:DA:1388:G:N7	2.77	0.53
22:DA:1545:A:H2'	22:DA:1546:G:O4'	2.09	0.53
22:DA:2096:C:H2'	22:DA:2097:A:C8	2.43	0.53
22:DA:2287:A:N6	22:DA:2289:G:C4	2.77	0.53
22:DA:2577:A:C2	48:D0:1:ALA:N	2.77	0.53
22:DA:2788:C:H2'	22:DA:2789:C:C6	2.44	0.53
24:DC:74:PRO:HA	24:DC:116:GLN:HG3	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:33:ARG:NH2	25:DD:51:THR:HG22	2.24	0.53
25:DD:141:ARG:HH11	25:DD:141:ARG:HB3	1.73	0.53
26:DE:108:ILE:O	26:DE:108:ILE:HD13	2.08	0.53
26:DE:128:ALA:HB1	26:DE:129:PRO:CD	2.38	0.53
1:AA:495:A:C6	1:AA:496:A:N6	2.77	0.52
1:AA:1224:U:O2'	1:AA:1322:C:OP1	2.26	0.52
2:AB:65:LYS:HG2	2:AB:153:MET:HG3	1.90	0.52
5:AE:123:LEU:H	5:AE:123:LEU:HD12	1.74	0.52
6:AF:47:LEU:CD1	6:AF:51:ILE:HG22	2.39	0.52
8:AH:44:PHE:HE2	8:AH:100:ILE:HG12	1.75	0.52
12:AL:1:ALA:HB3	12:AL:5:GLN:OE1	2.09	0.52
12:AL:2:THR:HG22	12:AL:4:ASN:N	2.24	0.52
15:AO:29:ALA:HA	15:AO:84:LEU:HD21	1.90	0.52
22:BA:1859:U:H2'	22:BA:1860:G:C8	2.41	0.52
22:BA:2063:C:O2	22:BA:2450:A:N1	2.42	0.52
22:BA:2182:U:H2'	22:BA:2183:A:OP1	2.09	0.52
25:BD:114:LYS:HE3	25:BD:114:LYS:C	2.29	0.52
26:BE:23:PHE:CD1	26:BE:111:GLU:HG3	2.43	0.52
26:BE:132:LYS:NZ	26:BE:132:LYS:HB3	2.24	0.52
35:BN:65:LEU:HD11	35:BN:69:ARG:NH2	2.24	0.52
37:BP:37:LYS:HD3	37:BP:37:LYS:H	1.73	0.52
39:BR:8:GLY:C	39:BR:10:LYS:HD2	2.30	0.52
43:BV:10:LYS:H	43:BV:10:LYS:CD	2.07	0.52
44:BW:19:ARG:HH22	44:BW:22:VAL:HG21	1.73	0.52
44:BW:28:GLU:HG3	44:BW:29:SER:N	2.24	0.52
49:B1:33:LEU:H	49:B1:51:ALA:CB	2.23	0.52
53:CA:251:G:N2	53:CA:253:A:H62	2.07	0.52
53:CA:913:A:C4'	53:CA:914:A:O5'	2.49	0.52
53:CA:1129:C:HO2'	53:CA:1130:A:H8	1.49	0.52
2:CB:137:THR:O	2:CB:140:LEU:HB3	2.09	0.52
9:CI:49:GLN:HA	9:CI:52:GLU:HG2	1.91	0.52
9:CI:74:GLN:O	9:CI:78:ILE:HG13	2.09	0.52
10:CJ:65:TYR:HD2	14:CN:96:LYS:O	1.92	0.52
14:CN:20:PHE:HE1	14:CN:54:SER:HB2	1.74	0.52
15:CO:2:LEU:HD22	15:CO:34:GLN:HG2	1.91	0.52
56:CP:52:LEU:O	56:CP:53:ASP:HB2	2.09	0.52
22:DA:35:G:C5	22:DA:454:A:C2	2.97	0.52
22:DA:55:G:C2	22:DA:116:C:C2	2.97	0.52
22:DA:443:A:H2'	26:DE:40:ARG:NE	2.23	0.52
22:DA:447:A:H5'	22:DA:449:A:C8	2.44	0.52
22:DA:466:A:P	50:D2:34:ARG:HH21	2.32	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:607:U:H5	22:DA:619:G:C5	2.26	0.52
22:DA:670:A:H4'	22:DA:671:C:O5'	2.09	0.52
22:DA:1056:G:OP2	22:DA:1056:G:H3'	2.08	0.52
22:DA:1069:A:O2'	22:DA:1072:C:OP2	2.25	0.52
22:DA:1313:U:OP1	62:DA:3405:HOH:O	2.19	0.52
22:DA:1438:U:H2'	22:DA:1439:A:O4'	2.09	0.52
22:DA:2331:G:H4'	44:DW:41:GLY:N	2.24	0.52
22:DA:2531:A:C5'	28:DG:156:TYR:CZ	2.93	0.52
22:DA:2847:U:H2'	22:DA:2848:G:C5'	2.39	0.52
30:DI:112:LYS:HZ3	30:DI:128:ILE:HD12	1.73	0.52
38:DQ:10:ARG:CZ	38:DQ:10:ARG:HB2	2.39	0.52
47:DZ:32:GLY:C	47:DZ:34:THR:H	2.11	0.52
1:AA:1510:C:H2'	1:AA:1511:G:C8	2.44	0.52
2:AB:218:ALA:HA	2:AB:221:ARG:NH2	2.20	0.52
4:AD:106:PHE:CD1	4:AD:144:ILE:HD11	2.43	0.52
5:AE:136:VAL:HG22	5:AE:136:VAL:O	2.08	0.52
7:AG:49:LEU:HD12	7:AG:60:ALA:HB1	1.91	0.52
12:AL:76:HIS:O	12:AL:77:SER:HB2	2.09	0.52
22:BA:150:U:H2'	22:BA:151:C:C6	2.44	0.52
22:BA:563:A:C2	22:BA:564:C:C2	2.96	0.52
22:BA:885:C:H6	22:BA:885:C:O5'	1.92	0.52
22:BA:995:C:H5'	22:BA:995:C:C6	2.43	0.52
22:BA:1319:C:C2'	22:BA:1320:C:H5'	2.39	0.52
22:BA:1644:C:H2'	22:BA:1645:G:H5'	1.91	0.52
22:BA:1726:C:H2'	22:BA:1727:C:H6	1.74	0.52
22:BA:1794:A:H2'	22:BA:1795:C:C6	2.44	0.52
22:BA:1964:G:H4'	22:BA:1965:C:OP2	2.09	0.52
22:BA:2727:A:O2'	22:BA:2728:U:H5'	2.09	0.52
25:BD:62:LYS:HB2	25:BD:63:PRO:HD3	1.90	0.52
25:BD:133:THR:HG23	25:BD:134:HIS:N	2.24	0.52
28:BG:8:VAL:CG1	28:BG:9:VAL:N	2.73	0.52
30:BI:78:LEU:HD23	30:BI:81:LYS:HE3	1.90	0.52
30:BI:105:LEU:HD23	30:BI:108:ILE:HG21	1.91	0.52
31:BJ:32:LEU:O	31:BJ:36:LEU:HB2	2.08	0.52
32:BK:10:VAL:HG12	32:BK:12:ASP:H	1.74	0.52
33:BL:18:ARG:O	33:BL:19:LEU:HB3	2.08	0.52
35:BN:38:LEU:CD1	35:BN:42:LYS:HD2	2.39	0.52
53:CA:9:G:N2	53:CA:10:A:C4	2.78	0.52
53:CA:83:C:C2	53:CA:87:C:N4	2.77	0.52
53:CA:269:C:H2'	53:CA:270:A:H8	1.72	0.52
53:CA:1284:C:C5'	53:CA:1285:A:H5"	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:185:THR:O	3:CC:186:SER:HB2	2.09	0.52
54:CG:9:ARG:HD3	54:CG:24:LYS:HZ1	1.75	0.52
11:CK:33:ILE:HG13	11:CK:73:VAL:HG21	1.90	0.52
22:DA:223:A:C6	22:DA:422:A:C5	2.98	0.52
22:DA:329:G:H4'	22:DA:330:A:OP2	2.08	0.52
22:DA:453:A:H4'	22:DA:472:A:H62	1.74	0.52
22:DA:784:G:O2'	22:DA:785:G:H5"	2.10	0.52
22:DA:1051:G:H5'	22:DA:2752:C:H1'	1.91	0.52
22:DA:1059:G:O2'	30:DI:131:THR:HG21	2.08	0.52
22:DA:1275:A:C4	35:DN:16:HIS:HD2	2.26	0.52
22:DA:1324:G:O2'	22:DA:1616:A:N6	2.42	0.52
22:DA:1373:A:C5'	22:DA:2212:A:H1'	2.38	0.52
22:DA:1769:U:H1'	22:DA:1984:G:N2	2.23	0.52
22:DA:2266:A:C4'	22:DA:2267:A:O5'	2.49	0.52
26:DE:112:LEU:HD12	26:DE:118:LEU:HD13	1.91	0.52
26:DE:149:ILE:O	26:DE:149:ILE:HG12	2.09	0.52
29:DH:41:LYS:H	29:DH:44:ILE:HG23	1.75	0.52
44:DW:20:LEU:HD11	44:DW:35:ILE:CG1	2.38	0.52
44:DW:25:PHE:O	44:DW:27:GLY:N	2.38	0.52
44:DW:33:GLY:O	44:DW:34:SER:CB	2.57	0.52
44:DW:44:PHE:HB3	44:DW:78:PHE:CD1	2.45	0.52
1:AA:386:C:C2'	1:AA:387:U:H5'	2.40	0.52
1:AA:1063:C:H2'	1:AA:1064:G:C8	2.44	0.52
1:AA:1081:A:H5'	5:AE:22:LYS:HG3	1.92	0.52
2:AB:18:GLN:O	2:AB:37:VAL:HG23	2.09	0.52
8:AH:48:PHE:O	8:AH:49:LYS:CB	2.58	0.52
8:AH:93:LYS:CE	8:AH:116:ARG:HH12	2.23	0.52
11:AK:124:LYS:O	21:AU:33:ARG:CZ	2.58	0.52
16:AP:28:ARG:HE	16:AP:29:ASN:HD21	1.55	0.52
22:BA:39:G:H2'	22:BA:40:U:H6	1.73	0.52
22:BA:789:A:OP1	22:BA:790:U:C5	2.62	0.52
22:BA:1032:A:H1'	52:B4:23:ILE:CD1	2.39	0.52
22:BA:1277:G:C5'	35:BN:20:MET:HE1	2.39	0.52
25:BD:158:GLY:O	25:BD:159:LYS:C	2.48	0.52
26:BE:119:ILE:O	26:BE:187:VAL:O	2.26	0.52
27:BF:127:TYR:O	27:BF:128:SER:HB2	2.09	0.52
28:BG:8:VAL:HG12	28:BG:49:LEU:H	1.74	0.52
28:BG:86:LEU:CD1	28:BG:132:LEU:HD21	2.39	0.52
29:BH:2:GLN:HG2	29:BH:20:ASN:HD22	1.74	0.52
30:BI:75:ALA:HB3	30:BI:131:THR:HG21	1.91	0.52
33:BL:93:ASN:HD22	33:BL:94:THR:CA	2.23	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BO:28:VAL:HG23	36:BO:36:TYR:O	2.09	0.52
38:BQ:63:ARG:HH22	38:BQ:96:ASP:CA	2.21	0.52
38:BQ:63:ARG:HH22	38:BQ:96:ASP:CB	2.20	0.52
40:BS:74:ILE:HD12	40:BS:105:VAL:HG22	1.91	0.52
44:BW:9:THR:HG23	44:BW:10:ARG:CD	2.24	0.52
46:BY:9:LYS:HA	46:BY:9:LYS:HZ2	1.74	0.52
53:CA:460:A:O3'	53:CA:462:G:OP2	2.27	0.52
53:CA:734:G:N2	18:CR:63:TYR:CE2	2.78	0.52
53:CA:1186:G:H4'	9:CI:111:GLU:CD	2.30	0.52
53:CA:1241:G:C2	53:CA:1242:G:N7	2.78	0.52
53:CA:1245:C:H2'	53:CA:1246:A:C8	2.37	0.52
2:CB:133:ALA:HA	2:CB:137:THR:HG21	1.91	0.52
9:CI:35:GLU:HA	9:CI:39:GLY:CA	2.38	0.52
10:CJ:84:VAL:CG2	10:CJ:85:ASP:H	2.08	0.52
11:CK:74:LYS:HG3	11:CK:78:ILE:HG12	1.91	0.52
14:CN:53:ASP:HA	14:CN:58:ARG:HD3	1.91	0.52
22:DA:126:A:H2'	50:D2:46:LYS:CE	2.39	0.52
22:DA:233:A:HO2'	22:DA:234:U:H6	1.54	0.52
22:DA:296:U:C2	22:DA:297:G:C8	2.97	0.52
22:DA:349:U:H2'	22:DA:350:G:H8	1.73	0.52
22:DA:464:U:C1'	22:DA:686:U:H5	2.17	0.52
22:DA:478:A:N1	22:DA:480:A:C4	2.77	0.52
22:DA:502:A:N6	22:DA:505:A:C6	2.78	0.52
22:DA:602:A:H1'	22:DA:656:G:N2	2.24	0.52
22:DA:2185:U:H2'	22:DA:2186:G:H8	1.74	0.52
22:DA:2335:A:C2	22:DA:2337:G:C8	2.97	0.52
22:DA:2376:A:N3	36:DO:99:TYR:CE2	2.77	0.52
57:DB:59:A:H2'	57:DB:60:C:O4'	2.10	0.52
57:DB:69:G:C2'	57:DB:70:C:H5'	2.39	0.52
57:DB:81:G:C5	57:DB:82:U:C5	2.98	0.52
25:DD:73:VAL:O	25:DD:74:GLU:HB2	2.08	0.52
26:DE:98:LYS:O	26:DE:99:LYS:HB2	2.09	0.52
31:DJ:55:ILE:O	31:DJ:55:ILE:HG13	2.08	0.52
31:DJ:92:MET:CE	31:DJ:92:MET:HA	2.40	0.52
32:DK:61:VAL:HG13	32:DK:87:LEU:HD21	1.91	0.52
39:DR:24:LYS:HA	39:DR:94:THR:HG23	1.91	0.52
39:DR:80:ARG:HB3	39:DR:81:LYS:HD3	1.91	0.52
44:DW:23:LYS:HD2	44:DW:24:ARG:HB2	1.92	0.52
1:AA:1361:G:C3'	1:AA:1362:A:H5"	2.40	0.52
2:AB:112:ARG:O	2:AB:116:LEU:HD23	2.09	0.52
4:AD:173:ASP:O	4:AD:174:ALA:CB	2.57	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:94:ARG:O	7:AG:95:ARG:C	2.47	0.52
9:AI:83:THR:HG21	9:AI:102:PHE:CB	2.36	0.52
14:AN:20:PHE:C	14:AN:22:LYS:H	2.13	0.52
15:AO:63:ARG:HD3	15:AO:67:ASP:OD1	2.08	0.52
21:AU:33:ARG:NE	21:AU:34:ARG:HG3	2.23	0.52
22:BA:26:G:C6	22:BA:27:G:N1	2.77	0.52
22:BA:693:A:C2'	22:BA:694:U:H5'	2.39	0.52
22:BA:904:G:N1	22:BA:905:A:C5	2.78	0.52
22:BA:1014:A:H2'	22:BA:1015:U:C6	2.44	0.52
22:BA:1554:U:H4'	22:BA:1555:G:OP2	2.09	0.52
22:BA:1798:U:OP1	24:BC:257:ARG:HB2	2.09	0.52
22:BA:1864:U:C2'	22:BA:1865:U:H5'	2.39	0.52
22:BA:2151:U:N3	22:BA:2152:G:C5	2.77	0.52
22:BA:2318:G:C6	22:BA:2319:G:N1	2.77	0.52
22:BA:2840:C:O2'	22:BA:2841:C:H5'	2.09	0.52
24:BC:20:ASN:CB	24:BC:23:LEU:HD23	2.33	0.52
24:BC:139:THR:O	24:BC:161:VAL:O	2.28	0.52
24:BC:161:VAL:HG13	24:BC:175:LEU:HD12	1.91	0.52
26:BE:172:ALA:O	26:BE:175:ILE:HG22	2.09	0.52
27:BF:113:PHE:HE1	27:BF:116:LEU:HD22	1.75	0.52
29:BH:9:VAL:O	29:BH:13:GLY:N	2.38	0.52
30:BI:86:LYS:HD2	30:BI:86:LYS:H	1.74	0.52
32:BK:10:VAL:CG2	32:BK:16:ALA:HB1	2.38	0.52
33:BL:19:LEU:HB2	33:BL:27:LEU:HD22	1.92	0.52
34:BM:8:LYS:CD	34:BM:8:LYS:N	2.68	0.52
43:BV:77:VAL:CG2	43:BV:86:LEU:HD22	2.39	0.52
44:BW:19:ARG:CZ	44:BW:22:VAL:HB	2.39	0.52
46:BY:32:ALA:CB	46:BY:37:LEU:HD12	2.34	0.52
53:CA:20:U:C2'	53:CA:21:G:H5'	2.40	0.52
53:CA:496:A:O2'	53:CA:497:G:C8	2.59	0.52
53:CA:566:G:H4'	53:CA:567:G:OP1	2.09	0.52
53:CA:642:A:C8	8:CH:106:SER:HA	2.45	0.52
53:CA:994:A:N3	53:CA:995:C:C6	2.78	0.52
53:CA:1356:G:H2'	53:CA:1357:A:C8	2.45	0.52
3:CC:53:ARG:HH11	3:CC:53:ARG:HB2	1.73	0.52
4:CD:3:TYR:O	4:CD:4:LEU:HB2	2.08	0.52
17:CQ:30:HIS:CG	17:CQ:31:PRO:HD2	2.44	0.52
19:CS:62:THR:HG22	19:CS:63:ASP:H	1.73	0.52
20:CT:42:ASP:HB3	20:CT:45:ALA:HB3	1.91	0.52
22:DA:160:A:N1	22:DA:161:A:C2	2.77	0.52
22:DA:183:C:H2'	22:DA:184:C:H5'	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:183:C:O5'	22:DA:183:C:H6	1.93	0.52
22:DA:601:C:H4'	26:DE:99:LYS:HE2	1.91	0.52
22:DA:845:A:N1	22:DA:932:U:O2	2.42	0.52
22:DA:1038:G:N1	22:DA:1039:A:C5	2.77	0.52
22:DA:1264:A:H5'	48:D0:7:PRO:HG2	1.91	0.52
22:DA:1631:G:H1'	22:DA:1635:A:H61	1.75	0.52
22:DA:1759:A:O2'	22:DA:2714:G:H1'	2.09	0.52
22:DA:1865:U:O4	22:DA:1875:G:N3	2.42	0.52
22:DA:2305:U:H5	22:DA:2312:U:C4	2.28	0.52
22:DA:2310:C:C2'	22:DA:2311:A:H5"	2.39	0.52
22:DA:2324:U:HO2'	22:DA:2385:C:H5	1.57	0.52
22:DA:2577:A:H2	48:D0:1:ALA:N	2.07	0.52
24:DC:95:TYR:C	24:DC:97:ASP:H	2.13	0.52
26:DE:6:LYS:HE3	26:DE:7:ASP:OD2	2.09	0.52
26:DE:139:LYS:HB2	26:DE:139:LYS:NZ	2.24	0.52
26:DE:150:THR:O	26:DE:192:ALA:HB2	2.09	0.52
58:DF:59:ILE:HG23	58:DF:137:PHE:HE1	1.75	0.52
31:DJ:47:HIS:O	31:DJ:114:LEU:HD22	2.09	0.52
31:DJ:111:LYS:HB2	31:DJ:115:GLY:H	1.73	0.52
39:DR:21:ARG:HB2	39:DR:93:PHE:HD1	1.73	0.52
39:DR:39:LEU:O	39:DR:49:ILE:HG12	2.10	0.52
48:D0:27:LEU:N	48:D0:27:LEU:HD22	2.25	0.52
1:AA:267:C:O2'	1:AA:268:U:C5'	2.57	0.52
1:AA:688:G:H5'	11:AK:48:GLY:HA2	1.92	0.52
1:AA:1161:C:O2'	1:AA:1162:C:H6	1.90	0.52
1:AA:1241:G:C2	1:AA:1242:G:C5	2.98	0.52
1:AA:1338:G:H2'	1:AA:1339:A:C8	2.44	0.52
1:AA:1521:C:N3	1:AA:1522:U:C4	2.78	0.52
3:AC:89:VAL:HG23	3:AC:90:VAL:H	1.75	0.52
4:AD:121:ALA:C	4:AD:122:ILE:HD13	2.29	0.52
4:AD:151:GLN:O	4:AD:152:SER:C	2.48	0.52
5:AE:14:LEU:HB2	5:AE:36:THR:HG22	1.92	0.52
9:AI:50:PRO:HB3	9:AI:83:THR:CG2	2.39	0.52
9:AI:56:MET:CE	9:AI:57:VAL:H	2.22	0.52
10:AJ:48:ARG:NH2	14:AN:100:TRP:CD2	2.77	0.52
19:AS:79:TYR:CG	19:AS:80:ARG:N	2.78	0.52
22:BA:778:G:C5	22:BA:779:U:C4	2.98	0.52
22:BA:1092:C:H2'	22:BA:1093:G:O4'	2.09	0.52
22:BA:1414:C:C5	22:BA:1415:U:H5	2.27	0.52
22:BA:2531:A:OP1	28:BG:174:LYS:HG3	2.10	0.52
26:BE:146:VAL:HA	26:BE:185:LYS:O	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:42:ALA:HA	27:BF:45:ASP:O	2.10	0.52
28:BG:84:LYS:HB3	28:BG:132:LEU:O	2.10	0.52
30:BI:107:GLU:O	30:BI:111:THR:HG23	2.10	0.52
31:BJ:97:PRO:O	31:BJ:99:ARG:N	2.42	0.52
37:BP:17:PRO:HD2	37:BP:83:ILE:HG23	1.92	0.52
53:CA:1097:C:H2'	53:CA:1098:C:H6	1.75	0.52
53:CA:1349:A:H1'	53:CA:1374:A:N6	2.25	0.52
3:CC:24:ASN:O	3:CC:28:PHE:HB2	2.09	0.52
9:CI:5:TYR:N	9:CI:5:TYR:HD2	2.08	0.52
10:CJ:64:GLN:CB	14:CN:98:ALA:HB3	2.38	0.52
12:CL:6:LEU:C	12:CL:8:ARG:H	2.13	0.52
12:CL:36:VAL:HG23	12:CL:36:VAL:O	2.08	0.52
22:DA:319:G:C6	22:DA:333:G:N1	2.78	0.52
22:DA:546:U:H5'	22:DA:547:A:OP1	2.09	0.52
22:DA:668:A:H2'	22:DA:670:A:N6	2.15	0.52
22:DA:1083:U:H1'	22:DA:1086:A:C2	2.45	0.52
22:DA:1207:C:H2'	22:DA:1208:C:H6	1.75	0.52
22:DA:1809:A:C2'	22:DA:1810:A:C8	2.92	0.52
22:DA:2091:C:C3'	22:DA:2092:U:C5'	2.84	0.52
22:DA:2619:C:H5'	25:DD:157:LYS:HG2	1.91	0.52
22:DA:2773:C:C2	22:DA:2774:C:C5	2.97	0.52
22:DA:2848:G:OP2	37:DP:94:ALA:CB	2.57	0.52
24:DC:161:VAL:CG1	24:DC:173:LEU:HB2	2.39	0.52
30:DI:48:ILE:HG13	30:DI:49:GLU:N	2.25	0.52
31:DJ:94:ALA:O	31:DJ:95:ARG:CB	2.56	0.52
32:DK:45:GLU:OE2	32:DK:45:GLU:HA	2.09	0.52
35:DN:7:GLY:O	35:DN:8:ARG:HB2	2.10	0.52
37:DP:87:ARG:NH2	37:DP:110:LYS:O	2.42	0.52
1:AA:21:G:H2'	1:AA:22:G:C8	2.44	0.52
1:AA:92:U:O2'	1:AA:93:U:H5'	2.10	0.52
1:AA:330:C:H6	1:AA:330:C:H5"	1.74	0.52
1:AA:346:G:OP1	37:BP:33:GLU:OE1	2.26	0.52
1:AA:406:G:C8	1:AA:495:A:C2	2.97	0.52
1:AA:633:G:H2'	1:AA:634:C:C6	2.42	0.52
1:AA:697:U:H2'	1:AA:698:G:H5'	1.92	0.52
1:AA:903:G:C5	1:AA:904:U:C4	2.98	0.52
1:AA:953:G:H2'	1:AA:954:G:O4'	2.10	0.52
1:AA:957:U:O2	1:AA:959:A:H8	1.93	0.52
1:AA:974:A:P	14:AN:68:ARG:HH22	2.33	0.52
1:AA:983:A:H2	1:AA:1222:G:H22	1.55	0.52
1:AA:1417:G:C6	1:AA:1482:G:C6	2.98	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:79:VAL:O	2:AB:83:ALA:HB3	2.10	0.52
4:AD:28:ASP:OD1	4:AD:33:ILE:HG12	2.09	0.52
4:AD:194:ILE:O	4:AD:194:ILE:HG13	2.10	0.52
13:AM:15:VAL:HA	13:AM:33:LEU:CD1	2.40	0.52
15:AO:63:ARG:HH11	15:AO:67:ASP:CG	2.13	0.52
20:AT:27:MET:CE	20:AT:57:VAL:HG22	2.37	0.52
20:AT:34:VAL:HG12	20:AT:38:ILE:HD11	1.92	0.52
22:BA:309:A:H4'	42:BU:15:GLY:HA2	1.91	0.52
22:BA:547:A:C8	22:BA:548:G:N3	2.78	0.52
22:BA:1071:G:N7	22:BA:1089:A:N6	2.57	0.52
22:BA:1952:A:C6	22:BA:1953:A:N1	2.77	0.52
23:BB:2:G:C6	23:BB:119:A:C2	2.97	0.52
23:BB:94:A:C5	23:BB:95:U:C4	2.97	0.52
31:BJ:32:LEU:HD22	31:BJ:54:ILE:HG12	1.90	0.52
33:BL:91:ASP:HB2	33:BL:94:THR:CB	2.39	0.52
34:BM:78:LEU:HD23	34:BM:79:ALA:N	2.24	0.52
37:BP:103:THR:O	37:BP:104:GLY:O	2.28	0.52
38:BQ:60:TRP:O	38:BQ:61:ILE:C	2.48	0.52
38:BQ:91:ARG:HD3	39:BR:11:GLN:HG3	1.91	0.52
43:BV:62:THR:HA	43:BV:71:LYS:HA	1.91	0.52
53:CA:672:U:H2'	53:CA:673:A:H8	1.75	0.52
53:CA:824:G:H1'	8:CH:1:SER:N	2.24	0.52
53:CA:1014:A:H5'	19:CS:17:LYS:HE3	1.90	0.52
2:CB:112:ARG:O	2:CB:112:ARG:HG3	2.09	0.52
54:CG:49:LEU:O	54:CG:49:LEU:HD13	2.10	0.52
15:CO:54:GLY:O	15:CO:58:MET:HG3	2.10	0.52
22:DA:417:C:H2'	22:DA:418:C:H6	1.75	0.52
22:DA:607:U:H5	22:DA:619:G:C4	2.27	0.52
22:DA:1080:A:H2'	22:DA:1081:U:H6	1.75	0.52
22:DA:2415:G:C6	22:DA:2416:C:C4	2.98	0.52
22:DA:2531:A:C4	22:DA:2532:G:C8	2.98	0.52
22:DA:2622:U:O2'	22:DA:2825:G:N7	2.41	0.52
22:DA:2748:A:H1'	28:DG:66:THR:CG2	2.34	0.52
57:DB:16:G:O2'	57:DB:17:C:H5'	2.09	0.52
57:DB:16:G:C6	57:DB:69:G:C4	2.97	0.52
26:DE:136:GLN:HA	26:DE:139:LYS:HG2	1.92	0.52
26:DE:148:ILE:HA	26:DE:187:VAL:HB	1.92	0.52
26:DE:158:PHE:HA	26:DE:169:VAL:HG11	1.91	0.52
58:DF:58:ALA:HB1	58:DF:139:GLU:HG2	1.90	0.52
35:DN:20:MET:C	35:DN:22:ARG:H	2.11	0.52
36:DO:31:THR:HG23	36:DO:34:HIS:C	2.30	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DP:54:LEU:HA	37:DP:76:HIS:CD2	2.45	0.52
38:DQ:83:LYS:HE3	38:DQ:89:ILE:HD11	1.92	0.52
41:DT:58:VAL:HG23	41:DT:85:VAL:HA	1.92	0.52
43:DV:56:PHE:C	43:DV:58:SER:H	2.13	0.52
1:AA:579:A:H2'	1:AA:580:C:H6	1.74	0.52
1:AA:1348:U:C2'	1:AA:1349:A:H8	2.21	0.52
2:AB:86:CYS:SG	2:AB:221:ARG:HB2	2.50	0.52
2:AB:141:GLU:HA	2:AB:144:GLU:HB2	1.92	0.52
5:AE:103:GLY:HA2	5:AE:121:ASN:HA	1.91	0.52
10:AJ:80:THR:HG22	10:AJ:82:LYS:H	1.75	0.52
22:BA:118:A:C8	22:BA:119:A:C8	2.98	0.52
22:BA:1028:A:N6	22:BA:1125:G:H2'	2.23	0.52
22:BA:1062:G:C8	22:BA:1088:A:H8	2.26	0.52
22:BA:1310:G:C2'	22:BA:1311:G:H5'	2.40	0.52
22:BA:2415:G:H2'	22:BA:2416:C:C6	2.44	0.52
22:BA:2748:A:H1'	28:BG:66:THR:HG22	1.92	0.52
22:BA:2766:A:N3	22:BA:2766:A:H2'	2.25	0.52
24:BC:68:ARG:NH2	24:BC:126:GLY:O	2.43	0.52
25:BD:34:VAL:CG2	25:BD:94:GLN:H	2.22	0.52
26:BE:142:ALA:O	26:BE:143:LEU:HD23	2.10	0.52
28:BG:37:ASN:OD1	28:BG:37:ASN:N	2.43	0.52
29:BH:6:LEU:O	29:BH:15:LEU:HA	2.10	0.52
29:BH:76:GLU:HG2	29:BH:106:ALA:HB2	1.92	0.52
35:BN:90:ARG:O	35:BN:91:ALA:C	2.48	0.52
44:BW:44:PHE:O	44:BW:78:PHE:HA	2.09	0.52
49:B1:27:ARG:O	49:B1:30:PRO:HD3	2.10	0.52
50:B2:5:PHE:CE1	50:B2:7:PRO:HB3	2.44	0.52
53:CA:251:G:H4'	53:CA:252:U:H5"	1.91	0.52
53:CA:372:C:H4'	53:CA:373:A:H5'	1.91	0.52
53:CA:373:A:C2	53:CA:374:A:C8	2.97	0.52
53:CA:677:U:H3	53:CA:713:G:H22	1.57	0.52
53:CA:982:U:C4	53:CA:983:A:N6	2.78	0.52
53:CA:1346:A:N6	54:CG:9:ARG:HH22	2.07	0.52
3:CC:136:ALA:HA	3:CC:139:ASN:HD21	1.74	0.52
10:CJ:37:ARG:HG2	10:CJ:75:ASP:HB3	1.91	0.52
22:DA:9:G:N2	22:DA:10:A:H62	2.08	0.52
22:DA:71:A:H5"	22:DA:73:A:C5	2.44	0.52
22:DA:229:C:HO2'	22:DA:230:G:C4'	2.22	0.52
22:DA:573:U:H4'	22:DA:574:A:OP1	2.10	0.52
22:DA:755:U:O2'	22:DA:756:A:H5'	2.10	0.52
22:DA:1048:A:C6	22:DA:1111:A:C2	2.98	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1059:G:N3	30:DI:131:THR:HG22	2.25	0.52
22:DA:1062:G:OP1	22:DA:1070:A:H4'	2.10	0.52
22:DA:1593:A:C6	22:DA:1594:U:C4	2.98	0.52
22:DA:1605:C:C3'	22:DA:1606:C:H5"	2.40	0.52
22:DA:1857:G:C1'	22:DA:1884:G:H22	2.19	0.52
22:DA:2099:U:O2	22:DA:2099:U:H2'	2.10	0.52
22:DA:2747:G:O6	22:DA:2755:C:H5"	2.10	0.52
22:DA:2800:A:N3	22:DA:2801:G:H1'	2.23	0.52
57:DB:78:A:H2'	57:DB:79:G:H8	1.74	0.52
24:DC:130:PRO:HG2	24:DC:133:ASN:ND2	2.25	0.52
58:DF:45:ASP:C	58:DF:47:LYS:H	2.12	0.52
58:DF:137:PHE:CB	58:DF:138:PRO:HD2	2.30	0.52
28:DG:112:VAL:HG12	28:DG:114:HIS:HB3	1.92	0.52
30:DI:21:PRO:N	30:DI:22:PRO:HD2	2.25	0.52
36:DO:58:ILE:O	36:DO:62:LEU:HB2	2.10	0.52
44:DW:37:VAL:C	44:DW:39:GLN:H	2.13	0.52
1:AA:100:G:O6	1:AA:101:A:C6	2.62	0.52
1:AA:1381:U:O2'	1:AA:1382:C:C5'	2.58	0.52
3:AC:118:SER:O	3:AC:122:GLN:HG2	2.10	0.52
6:AF:41:ASP:C	6:AF:43:GLY:H	2.13	0.52
22:BA:323:C:C4	22:BA:333:G:C8	2.97	0.52
22:BA:417:C:H2'	22:BA:418:C:H6	1.75	0.52
22:BA:449:A:H4'	38:BQ:2:ARG:NH1	2.24	0.52
22:BA:511:U:C5	22:BA:512:G:C5	2.98	0.52
22:BA:659:G:H4'	26:BE:95:LYS:HD3	1.91	0.52
22:BA:1078:U:H4'	22:BA:1079:C:C6	2.45	0.52
22:BA:1079:C:N4	22:BA:1088:A:C2	2.70	0.52
22:BA:1153:C:OP2	62:BA:3355:HOH:O	2.18	0.52
22:BA:1341:G:H3'	22:BA:1397:U:O2	2.10	0.52
22:BA:1421:G:C2	22:BA:1422:G:C8	2.98	0.52
22:BA:1513:U:O2'	22:BA:1514:G:H5'	2.10	0.52
22:BA:2220:U:H2'	22:BA:2221:G:C8	2.44	0.52
22:BA:2391:G:O2'	22:BA:2424:C:N4	2.40	0.52
23:BB:14:U:OP2	23:BB:70:C:O2'	2.27	0.52
23:BB:90:C:H5'	34:BM:18:ARG:HG2	1.92	0.52
25:BD:106:LYS:HB2	25:BD:206:ALA:H	1.74	0.52
31:BJ:4:PHE:N	31:BJ:44:TYR:OH	2.42	0.52
31:BJ:59:ALA:HB3	31:BJ:126:ALA:HA	1.92	0.52
32:BK:61:VAL:HG22	32:BK:87:LEU:HD11	1.92	0.52
34:BM:1:MET:O	34:BM:2:LEU:CB	2.57	0.52
37:BP:32:VAL:O	37:BP:33:GLU:O	2.28	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BP:102:ARG:O	37:BP:103:THR:CG2	2.57	0.52
48:B0:35:GLU:OE1	48:B0:45:ASP:HB2	2.10	0.52
53:CA:17:U:C2	53:CA:18:C:C5	2.98	0.52
53:CA:104:G:C2	53:CA:105:G:C8	2.98	0.52
53:CA:1004:A:H2'	53:CA:1005:A:O4'	2.10	0.52
53:CA:1056:U:OP1	53:CA:1196:A:H2	1.93	0.52
53:CA:1095:U:H2'	53:CA:1096:C:H6	1.74	0.52
53:CA:1108:G:OP1	3:CC:175:HIS:ND1	2.28	0.52
3:CC:120:THR:HG23	3:CC:187:GLU:O	2.09	0.52
4:CD:72:ARG:O	4:CD:75:TYR:N	2.42	0.52
54:CG:4:ARG:NH2	54:CG:6:ILE:HB	2.25	0.52
22:DA:380:G:O3'	45:DX:15:ASN:HB2	2.09	0.52
22:DA:406:G:O2'	22:DA:407:G:H8	1.92	0.52
22:DA:1075:C:HO2'	22:DA:1076:C:H6	1.58	0.52
22:DA:1084:A:H2'	22:DA:1085:A:H5'	1.92	0.52
22:DA:1108:U:H2'	22:DA:1109:C:O4'	2.09	0.52
22:DA:1378:A:N7	22:DA:1380:G:C5	2.78	0.52
22:DA:1387:A:O2'	22:DA:1388:G:H8	1.93	0.52
22:DA:1661:G:C5	22:DA:1662:U:C5	2.97	0.52
22:DA:2051:A:C2	22:DA:2052:A:N6	2.77	0.52
22:DA:2372:U:H1'	49:D1:45:HIS:CE1	2.45	0.52
22:DA:2522:U:C2'	22:DA:2523:G:H5'	2.40	0.52
57:DB:44:G:OP1	58:DF:91:ARG:NH1	2.42	0.52
24:DC:44:ASN:C	24:DC:46:GLY:N	2.63	0.52
24:DC:94:LEU:HA	24:DC:100:ARG:HG2	1.92	0.52
29:DH:54:LEU:HA	29:DH:57:LYS:HG3	1.91	0.52
30:DI:52:LEU:HD12	30:DI:53:PRO:HD2	1.92	0.52
32:DK:17:ARG:CG	32:DK:18:ARG:H	2.22	0.52
32:DK:25:LEU:HD23	32:DK:25:LEU:H	1.75	0.52
40:DS:29:VAL:O	40:DS:33:LEU:HB2	2.10	0.52
40:DS:33:LEU:HA	40:DS:36:LEU:HD23	1.92	0.52
45:DX:65:THR:O	45:DX:68:ALA:HB3	2.10	0.52
1:AA:198:G:O6	1:AA:220:G:C6	2.63	0.52
1:AA:511:C:H2'	1:AA:534:U:O2	2.10	0.52
1:AA:725:G:H2'	1:AA:726:C:C6	2.41	0.52
1:AA:807:A:C5	1:AA:808:C:C5	2.97	0.52
1:AA:1006:G:H2'	1:AA:1007:U:C6	2.45	0.52
1:AA:1159:U:H4'	1:AA:1160:G:OP1	2.10	0.52
1:AA:1416:G:H2'	1:AA:1417:G:H5'	1.91	0.52
7:AG:43:TYR:O	7:AG:47:GLU:HB2	2.10	0.52
13:AM:88:LEU:HD23	13:AM:91:ARG:HH21	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AU:38:GLU:OE2	21:AU:41:THR:HG21	2.09	0.52
22:BA:276:U:H2'	22:BA:276:U:O2	2.08	0.52
22:BA:319:G:C4	22:BA:333:G:N2	2.78	0.52
22:BA:980:A:C6	22:BA:981:A:N1	2.78	0.52
22:BA:1081:U:N3	22:BA:1082:U:C5	2.78	0.52
22:BA:1115:G:HO2'	22:BA:1116:G:P	2.31	0.52
22:BA:1224:U:H4'	39:BR:88:GLY:O	2.10	0.52
22:BA:1266:G:H5"	40:BS:15:GLN:NE2	2.25	0.52
22:BA:1794:A:H2'	22:BA:1795:C:H6	1.75	0.52
22:BA:2286:G:H4'	22:BA:2287:A:O4'	2.10	0.52
27:BF:134:GLN:HG2	27:BF:135:ILE:H	1.73	0.52
28:BG:33:THR:H	28:BG:34:ARG:HH11	1.58	0.52
28:BG:95:ALA:HB2	28:BG:104:LEU:HD23	1.91	0.52
34:BM:108:VAL:HG13	34:BM:112:LEU:HB3	1.92	0.52
38:BQ:71:ASN:OD1	38:BQ:106:THR:HG23	2.10	0.52
38:BQ:78:PHE:CZ	38:BQ:82:LEU:HD11	2.45	0.52
53:CA:71:A:C5	53:CA:100:G:C5	2.97	0.52
53:CA:818:G:C3'	53:CA:819:A:H5"	2.38	0.52
53:CA:1050:G:C2	53:CA:1051:C:C4	2.97	0.52
53:CA:1298:U:C5	54:CG:113:LYS:HA	2.45	0.52
4:CD:26:ALA:HA	4:CD:31:CYS:SG	2.50	0.52
5:CE:98:ALA:O	5:CE:121:ASN:HB2	2.10	0.52
5:CE:104:ILE:H	5:CE:122:VAL:N	1.95	0.52
10:CJ:40:ILE:HG22	10:CJ:42:LEU:CD1	2.35	0.52
11:CK:57:SER:C	11:CK:90:PRO:HG3	2.31	0.52
15:CO:40:GLY:O	15:CO:43:ALA:HB3	2.10	0.52
56:CP:66:THR:HG22	56:CP:67:ILE:N	2.25	0.52
20:CT:58:ASP:O	20:CT:61:ALA:HB3	2.10	0.52
22:DA:64:A:H8	22:DA:64:A:O5'	1.92	0.52
22:DA:204:A:C5	22:DA:206:U:C4	2.98	0.52
22:DA:338:G:H2'	22:DA:339:U:H5'	1.90	0.52
22:DA:412:A:O2'	22:DA:413:C:C5'	2.57	0.52
22:DA:547:A:H8	22:DA:548:G:H5'	1.75	0.52
22:DA:581:C:OP1	38:DQ:32:ARG:HB2	2.09	0.52
22:DA:637:A:OP2	33:DL:128:THR:HG21	2.09	0.52
22:DA:1413:A:H2'	22:DA:1414:C:C6	2.44	0.52
22:DA:1527:G:H1'	22:DA:1546:G:N2	2.25	0.52
22:DA:1737:G:N7	22:DA:1738:G:C6	2.78	0.52
22:DA:1737:G:N7	22:DA:1738:G:O6	2.43	0.52
22:DA:2022:U:O2'	22:DA:2617:U:H5'	2.09	0.52
22:DA:2244:U:H2'	22:DA:2245:U:O4'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2714:G:H2'	22:DA:2715:C:H6	1.74	0.52
29:DH:4:ILE:HG23	29:DH:17:ASP:O	2.09	0.52
31:DJ:111:LYS:HB2	31:DJ:115:GLY:HA3	1.90	0.52
33:DL:64:PHE:HD2	51:D3:24:LYS:HG2	1.74	0.52
42:DU:9:GLU:OE1	42:DU:23:LYS:HA	2.10	0.52
46:DY:4:LYS:HB2	46:DY:4:LYS:HZ2	1.75	0.52
1:AA:327:A:O3'	1:AA:328:C:C4'	2.59	0.52
1:AA:566:G:H4'	1:AA:567:G:OP1	2.10	0.52
1:AA:620:C:H2'	1:AA:621:A:O4'	2.10	0.52
1:AA:792:A:C2	1:AA:794:A:C2	2.98	0.52
1:AA:1370:G:C5'	9:AI:110:VAL:HG21	2.39	0.52
2:AB:56:LEU:HB2	2:AB:183:PHE:CE1	2.45	0.52
6:AF:62:MET:HG3	6:AF:64:VAL:HG23	1.92	0.52
11:AK:124:LYS:HE2	21:AU:33:ARG:HH21	1.75	0.52
22:BA:638:G:C5	22:BA:651:G:C2	2.98	0.52
22:BA:900:A:O2'	22:BA:901:C:H5'	2.10	0.52
22:BA:974:G:C4	22:BA:1186:G:C2	2.98	0.52
22:BA:1444:G:H2'	22:BA:1445:G:H8	1.75	0.52
22:BA:1728:C:O2'	22:BA:1729:U:H6	1.92	0.52
22:BA:1829:A:N3	24:BC:14:HIS:HE1	2.08	0.52
22:BA:2070:A:O2'	22:BA:2071:A:H5'	2.10	0.52
22:BA:2079:U:O2'	45:BX:22:ASN:ND2	2.43	0.52
22:BA:2103:C:C2'	22:BA:2104:C:H5'	2.39	0.52
24:BC:153:LEU:N	24:BC:153:LEU:HD23	2.25	0.52
25:BD:118:PHE:O	25:BD:119:ALA:HB3	2.10	0.52
33:BL:55:MET:HE2	33:BL:56:PRO:HD2	1.91	0.52
37:BP:61:ARG:CG	37:BP:70:GLU:HG2	2.39	0.52
44:BW:37:VAL:HG13	44:BW:55:ASP:C	2.30	0.52
46:BY:39:GLN:HG3	46:BY:42:LEU:HD22	1.92	0.52
53:CA:692:U:H2'	53:CA:694:A:OP2	2.10	0.52
53:CA:919:A:O2'	53:CA:920:U:H5'	2.09	0.52
53:CA:1442:G:H2'	53:CA:1443:C:H6	1.75	0.52
53:CA:1524:C:OP2	11:CK:124:LYS:NZ	2.42	0.52
9:CI:59:LYS:HG2	9:CI:60:LEU:HG	1.92	0.52
55:CM:36:ALA:HB3	55:CM:55:LEU:HD11	1.92	0.52
55:CM:106:ARG:HH21	55:CM:112:ARG:NE	2.08	0.52
15:CO:69:LEU:HD22	15:CO:69:LEU:O	2.10	0.52
17:CQ:59:GLU:O	17:CQ:75:VAL:HG22	2.10	0.52
20:CT:3:ILE:HD12	20:CT:3:ILE:H	1.75	0.52
22:DA:804:A:C2'	22:DA:806:C:C4	2.92	0.52
22:DA:1263:U:O4'	48:D0:6:LYS:HE3	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1380:G:H1'	22:DA:1569:A:N6	2.25	0.52
22:DA:1381:G:H2'	22:DA:1382:G:H5"	1.92	0.52
22:DA:1415:U:O3'	22:DA:1416:G:H4'	2.09	0.52
22:DA:2267:A:N6	22:DA:2272:U:H3	2.08	0.52
22:DA:2284:A:OP1	49:D1:5:ARG:HG3	2.10	0.52
57:DB:13:G:H5"	57:DB:13:G:C8	2.43	0.52
57:DB:19:C:H2'	57:DB:20:G:H8	1.74	0.52
57:DB:44:G:H5"	58:DF:91:ARG:CZ	2.40	0.52
57:DB:110:C:O2'	57:DB:111:U:C5'	2.58	0.52
25:DD:118:PHE:CG	25:DD:119:ALA:N	2.77	0.52
26:DE:85:PHE:O	26:DE:86:ALA:C	2.48	0.52
26:DE:146:VAL:O	26:DE:167:VAL:HA	2.10	0.52
58:DF:60:SER:C	58:DF:62:GLN:H	2.14	0.52
43:DV:72:VAL:HA	43:DV:92:VAL:O	2.09	0.52
44:DW:16:GLU:OE2	44:DW:16:GLU:HA	2.10	0.52
1:AA:299:G:C6	1:AA:300:A:C6	2.97	0.51
1:AA:313:A:H2'	1:AA:314:C:C6	2.45	0.51
1:AA:761:G:H2'	1:AA:762:U:C6	2.45	0.51
1:AA:1221:G:H2'	1:AA:1222:G:H8	1.75	0.51
4:AD:144:ILE:N	4:AD:144:ILE:HD13	2.24	0.51
5:AE:59:ILE:O	5:AE:63:MET:HG2	2.10	0.51
5:AE:132:PRO:O	5:AE:134:ASN:N	2.42	0.51
12:AL:43:LYS:HD3	12:AL:43:LYS:N	2.25	0.51
13:AM:84:CYS:HA	19:AS:73:PHE:CD2	2.45	0.51
22:BA:207:A:H2'	22:BA:208:C:O4'	2.10	0.51
22:BA:545:U:H2'	22:BA:546:U:O3'	2.10	0.51
22:BA:721:A:H2'	22:BA:722:A:C8	2.45	0.51
22:BA:794:A:H2'	22:BA:795:C:C6	2.44	0.51
22:BA:1059:G:H5"	22:BA:1060:U:H3'	1.91	0.51
22:BA:1709:U:C2	22:BA:1750:G:N2	2.78	0.51
22:BA:1778:U:H2'	22:BA:1784:A:H62	1.74	0.51
22:BA:2602:A:H4'	22:BA:2603:G:H5'	1.92	0.51
22:BA:2727:A:C2'	22:BA:2728:U:H5'	2.40	0.51
24:BC:158:GLY:N	24:BC:194:VAL:HG13	2.25	0.51
24:BC:199:HIS:O	24:BC:202:ARG:HG3	2.10	0.51
25:BD:118:PHE:CD2	25:BD:119:ALA:N	2.74	0.51
25:BD:121:THR:HB	25:BD:127:PHE:CD1	2.45	0.51
25:BD:124:ARG:HG2	25:BD:125:TRP:NE1	2.25	0.51
26:BE:46:GLN:HB2	26:BE:83:VAL:HG11	1.91	0.51
26:BE:146:VAL:HG23	26:BE:167:VAL:HG23	1.89	0.51
27:BF:107:VAL:N	27:BF:108:PRO:CD	2.73	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BJ:97:PRO:C	31:BJ:99:ARG:N	2.61	0.51
32:BK:98:ARG:HA	32:BK:118:LEU:HD23	1.90	0.51
35:BN:33:ILE:HD12	35:BN:33:ILE:N	2.25	0.51
36:BO:106:LEU:C	36:BO:106:LEU:HD12	2.29	0.51
43:BV:10:LYS:NZ	43:BV:10:LYS:HB2	2.25	0.51
45:BX:17:ARG:HD2	45:BX:17:ARG:N	2.25	0.51
45:BX:39:VAL:C	45:BX:41:SER:H	2.13	0.51
49:B1:9:LYS:HD3	49:B1:9:LYS:N	2.26	0.51
53:CA:418:C:H1'	53:CA:540:G:O2'	2.09	0.51
53:CA:575:G:C4'	53:CA:576:C:O5'	2.51	0.51
53:CA:704:A:C2'	53:CA:705:G:H8	2.22	0.51
53:CA:1159:U:H5	53:CA:1182:G:O2'	1.88	0.51
53:CA:1447:A:P	53:CA:1448:C:H5	2.33	0.51
2:CB:84:LEU:HG	2:CB:84:LEU:O	2.10	0.51
3:CC:5:HIS:NE2	3:CC:183:TYR:HE2	2.07	0.51
4:CD:19:PHE:O	4:CD:22:SER:HB2	2.10	0.51
9:CI:5:TYR:N	9:CI:5:TYR:CD2	2.78	0.51
22:DA:353:C:N4	22:DA:354:A:H62	2.08	0.51
22:DA:747:U:O2	22:DA:2014:A:H1'	2.10	0.51
22:DA:1303:G:O2'	22:DA:1304:A:O5'	2.28	0.51
22:DA:2072:C:H2'	22:DA:2073:C:H5'	1.92	0.51
22:DA:2197:U:C6	22:DA:2224:G:C6	2.98	0.51
22:DA:2352:A:C6	44:DW:30:VAL:HG11	2.45	0.51
22:DA:2474:U:O2	22:DA:2474:U:O4'	2.28	0.51
22:DA:2578:G:OP2	22:DA:2578:G:H4'	2.10	0.51
57:DB:30:C:H2'	57:DB:30:C:O2	2.09	0.51
57:DB:62:C:H2'	57:DB:63:C:O4'	2.10	0.51
58:DF:139:GLU:HB3	58:DF:142:TYR:HB3	1.93	0.51
28:DG:149:ALA:O	28:DG:151:ARG:N	2.43	0.51
33:DL:93:ASN:CG	33:DL:94:THR:N	2.63	0.51
34:DM:41:LEU:O	34:DM:93:VAL:HG23	2.09	0.51
38:DQ:91:ARG:CZ	39:DR:11:GLN:H	2.24	0.51
42:DU:20:LYS:HD2	42:DU:38:ILE:HD11	1.92	0.51
45:DX:39:VAL:O	45:DX:40:GLU:HB2	2.10	0.51
46:DY:53:VAL:O	46:DY:57:LEU:HB2	2.10	0.51
1:AA:109:A:H3'	1:AA:110:C:H5'	1.90	0.51
1:AA:1190:G:OP2	3:AC:4:VAL:HB	2.10	0.51
1:AA:1371:G:C6	1:AA:1372:U:C4	2.99	0.51
1:AA:1371:G:H5"	1:AA:1372:U:OP2	2.10	0.51
2:AB:71:THR:HG23	2:AB:93:HIS:C	2.31	0.51
6:AF:38:ARG:O	6:AF:39:LEU:HB2	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AS:3:SER:O	19:AS:5:LYS:HG3	2.11	0.51
19:AS:6:LYS:HA	19:AS:6:LYS:CE	2.38	0.51
19:AS:43:MET:O	19:AS:61:VAL:HG21	2.09	0.51
22:BA:1019:U:H3	22:BA:1142:A:H62	1.56	0.51
22:BA:1115:G:O2'	22:BA:1116:G:O5'	2.28	0.51
22:BA:1494:A:C2	22:BA:1495:A:C4	2.98	0.51
22:BA:2021:C:P	48:B0:8:THR:HG21	2.50	0.51
22:BA:2024:G:OP2	22:BA:2034:U:H4'	2.10	0.51
22:BA:2332:C:OP1	44:BW:44:PHE:CZ	2.62	0.51
26:BE:108:ILE:HD11	26:BE:180:LEU:HD13	1.91	0.51
27:BF:126:ASN:OD1	27:BF:156:THR:HA	2.10	0.51
27:BF:146:ASP:O	27:BF:147:ARG:HB2	2.11	0.51
32:BK:18:ARG:HB2	32:BK:45:GLU:HG2	1.93	0.51
32:BK:43:ILE:HG21	32:BK:46:ALA:HB2	1.91	0.51
37:BP:28:LYS:HE3	37:BP:28:LYS:H	1.75	0.51
37:BP:92:ARG:O	37:BP:93:LYS:HB2	2.09	0.51
53:CA:246:A:C2	53:CA:279:A:N6	2.78	0.51
53:CA:371:A:C2'	53:CA:372:C:H5'	2.40	0.51
53:CA:495:A:C6	53:CA:496:A:N6	2.79	0.51
53:CA:821:G:H2'	53:CA:822:U:H6	1.75	0.51
53:CA:1049:U:C4'	53:CA:1050:G:OP2	2.58	0.51
3:CC:35:ASP:OD2	3:CC:56:ILE:HD12	2.10	0.51
3:CC:80:GLY:O	3:CC:83:VAL:HG22	2.11	0.51
6:CF:11:HIS:CD2	6:CF:12:PRO:HD2	2.39	0.51
9:CI:115:VAL:HG21	10:CJ:61:ALA:O	2.10	0.51
10:CJ:6:ILE:HG23	10:CJ:100:ILE:HG23	1.92	0.51
12:CL:52:CYS:HB3	12:CL:66:ILE:HD11	1.92	0.51
22:DA:137:U:C4	22:DA:138:U:C2	2.98	0.51
22:DA:1056:G:H1'	22:DA:1103:A:N1	2.26	0.51
22:DA:1142:A:H4'	31:DJ:27:ARG:HH22	1.75	0.51
22:DA:1674:G:H21	22:DA:1677:A:H61	1.58	0.51
22:DA:1973:G:C5	22:DA:1974:C:C5	2.98	0.51
22:DA:1992:G:N2	22:DA:1996:C:O2'	2.43	0.51
22:DA:2093:G:C6	22:DA:2225:A:N7	2.78	0.51
24:DC:124:LYS:NZ	24:DC:124:LYS:HB3	2.25	0.51
25:DD:22:ILE:HD12	25:DD:190:LYS:HD2	1.92	0.51
26:DE:131:THR:HG22	26:DE:161:ALA:H	1.74	0.51
58:DF:56:LEU:O	58:DF:60:SER:HB3	2.10	0.51
31:DJ:55:ILE:HG22	31:DJ:123:LYS:HB2	1.93	0.51
31:DJ:123:LYS:N	31:DJ:123:LYS:HD2	2.25	0.51
34:DM:22:GLN:HB2	34:DM:100:LYS:HZ3	1.74	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DR:25:LEU:H	39:DR:94:THR:HG21	1.75	0.51
46:DY:28:LEU:HD23	46:DY:42:LEU:HD13	1.91	0.51
1:AA:92:U:H2'	1:AA:93:U:H6	1.72	0.51
1:AA:495:A:H4'	1:AA:496:A:OP1	2.08	0.51
1:AA:1066:C:H5"	1:AA:1066:C:C6	2.38	0.51
1:AA:1234:C:O2'	1:AA:1235:U:H5'	2.11	0.51
5:AE:44:ARG:HA	5:AE:71:ILE:O	2.11	0.51
12:AL:86:VAL:CG1	12:AL:89:LEU:HD23	2.41	0.51
13:AM:36:ALA:HB3	13:AM:38:ILE:HG12	1.91	0.51
21:AU:18:PHE:O	21:AU:21:SER:HB3	2.10	0.51
22:BA:95:A:O2'	46:BY:41:HIS:CD2	2.64	0.51
22:BA:616:A:H4'	26:BE:101:TYR:CE2	2.45	0.51
22:BA:747:U:C4	22:BA:2613:U:C4	2.97	0.51
22:BA:1574:C:O5'	22:BA:1574:C:H6	1.94	0.51
22:BA:2052:A:O4'	25:BD:147:GLY:HA3	2.10	0.51
22:BA:2281:A:C2	22:BA:2282:G:C5	2.99	0.51
24:BC:15:VAL:HA	24:BC:203:VAL:CG1	2.41	0.51
25:BD:112:THR:O	25:BD:195:GLY:HA2	2.10	0.51
31:BJ:54:ILE:HD12	31:BJ:55:ILE:C	2.29	0.51
33:BL:57:LEU:CD2	51:B3:53:ASP:HB3	2.39	0.51
43:BV:39:ALA:C	43:BV:40:ILE:HD13	2.30	0.51
44:BW:73:PRO:CG	44:BW:76:ARG:HD2	2.41	0.51
47:BZ:3:THR:HA	47:BZ:37:ARG:O	2.11	0.51
53:CA:433:G:O2'	53:CA:434:U:H5'	2.10	0.51
53:CA:989:U:C2'	53:CA:990:C:H5'	2.39	0.51
53:CA:1137:C:H4'	53:CA:1138:G:C2	2.45	0.51
53:CA:1201:A:H4'	53:CA:1202:U:O5'	2.10	0.51
53:CA:1319:A:C2'	53:CA:1320:C:OP2	2.59	0.51
53:CA:1511:G:C5	53:CA:1512:U:C5	2.99	0.51
4:CD:195:ASN:HB3	4:CD:197:HIS:NE2	2.26	0.51
54:CG:134:VAL:HB	54:CG:137:ARG:NH2	2.15	0.51
8:CH:11:THR:CG2	8:CH:14:ARG:HH22	2.22	0.51
10:CJ:5:ARG:C	10:CJ:6:ILE:HD12	2.31	0.51
12:CL:2:THR:H	12:CL:5:GLN:HB2	1.75	0.51
17:CQ:37:ILE:HD11	17:CQ:39:ARG:NH1	2.25	0.51
19:CS:35:ARG:NH2	19:CS:53:GLY:H	2.08	0.51
22:DA:765:C:H2'	22:DA:766:U:H6	1.76	0.51
22:DA:1038:G:N3	22:DA:1039:A:C8	2.78	0.51
22:DA:1040:A:N1	22:DA:1116:G:C6	2.78	0.51
22:DA:1180:U:C4	22:DA:1181:U:C4	2.98	0.51
22:DA:1267:U:H2'	22:DA:1268:A:H8	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1867:G:O6	22:DA:1875:G:N2	2.44	0.51
22:DA:2096:C:H2'	22:DA:2097:A:H8	1.74	0.51
22:DA:2756:U:H1'	22:DA:2757:A:H5'	1.92	0.51
57:DB:41:G:H3'	57:DB:42:C:H5"	1.92	0.51
25:DD:148:GLN:HG2	25:DD:149:ASN:H	1.75	0.51
58:DF:42:ALA:CB	58:DF:49:LEU:HD21	2.40	0.51
31:DJ:25:LEU:O	31:DJ:27:ARG:N	2.40	0.51
34:DM:1:MET:O	34:DM:2:LEU:O	2.27	0.51
34:DM:119:LEU:O	34:DM:119:LEU:HD23	2.10	0.51
37:DP:37:LYS:O	37:DP:38:ARG:HB3	2.10	0.51
37:DP:67:GLU:OE1	37:DP:68:GLY:N	2.44	0.51
1:AA:858:G:C2'	1:AA:859:G:H5'	2.40	0.51
1:AA:978:A:OP2	1:AA:1362:A:N6	2.30	0.51
1:AA:1003:G:C6	1:AA:1036:A:N6	2.79	0.51
3:AC:54:ILE:C	3:AC:54:ILE:HD12	2.31	0.51
6:AF:51:ILE:CD1	6:AF:86:ARG:HG3	2.41	0.51
8:AH:46:GLU:O	8:AH:47:ASP:HB3	2.10	0.51
22:BA:1263:U:H2'	22:BA:1264:A:C8	2.46	0.51
23:BB:89:U:H3'	23:BB:90:C:C5'	2.40	0.51
24:BC:71:ASP:OD1	24:BC:118:GLY:HA2	2.09	0.51
25:BD:169:ARG:O	25:BD:170:VAL:CG1	2.57	0.51
25:BD:191:GLY:O	25:BD:192:ALA:HB3	2.10	0.51
27:BF:33:ILE:O	27:BF:90:LEU:HB2	2.10	0.51
27:BF:128:SER:HA	27:BF:154:THR:HA	1.92	0.51
30:BI:33:ASN:HB3	30:BI:36:GLU:CB	2.38	0.51
30:BI:89:SER:OG	30:BI:135:MET:HA	2.11	0.51
31:BJ:58:ASN:N	31:BJ:127:GLY:O	2.43	0.51
43:BV:68:LYS:O	43:BV:69:GLU:O	2.28	0.51
52:B4:9:LYS:HD3	52:B4:9:LYS:N	2.13	0.51
53:CA:71:A:C2	53:CA:72:A:N7	2.79	0.51
53:CA:102:G:H2'	53:CA:103:U:C6	2.46	0.51
53:CA:109:A:C8	53:CA:327:A:O4'	2.63	0.51
53:CA:560:A:C5	5:CE:127:TYR:CE2	2.98	0.51
53:CA:597:G:C2'	53:CA:598:U:H5'	2.39	0.51
53:CA:752:G:C1'	53:CA:754:C:N4	2.65	0.51
53:CA:834:U:H2'	53:CA:835:U:H6	1.75	0.51
53:CA:868:C:H2'	53:CA:869:G:O4'	2.09	0.51
53:CA:1118:U:H5'	9:CI:10:ARG:HH21	1.75	0.51
53:CA:1215:G:O2'	53:CA:1216:A:C8	2.55	0.51
6:CF:41:ASP:O	6:CF:42:TRP:C	2.49	0.51
54:CG:10:LYS:HE3	54:CG:10:LYS:H	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CU:19:LYS:HB3	21:CU:24:LYS:HB2	1.92	0.51
22:DA:332:A:O2'	22:DA:333:G:H3'	2.10	0.51
22:DA:401:A:H2'	22:DA:402:A:C8	2.44	0.51
22:DA:1027:A:N7	22:DA:1126:A:C2	2.78	0.51
22:DA:1053:C:N4	22:DA:1054:A:N6	2.59	0.51
22:DA:1055:G:H2'	22:DA:1056:G:H5'	1.93	0.51
22:DA:1259:G:H2'	22:DA:1260:A:H8	1.75	0.51
22:DA:1455:G:O2'	22:DA:1456:G:O5'	2.28	0.51
22:DA:1534:U:H3'	22:DA:1534:U:O2	2.10	0.51
22:DA:1868:C:N4	22:DA:1869:G:O6	2.44	0.51
22:DA:2039:U:H2'	22:DA:2040:G:H8	1.74	0.51
22:DA:2093:G:O2'	22:DA:2094:A:P	2.68	0.51
22:DA:2144:G:O2'	22:DA:2145:C:H3'	2.10	0.51
22:DA:2402:U:O2'	22:DA:2403:C:P	2.68	0.51
24:DC:77:VAL:CG2	24:DC:112:GLY:H	2.21	0.51
25:DD:138:LEU:N	25:DD:138:LEU:HD13	2.26	0.51
58:DF:28:PRO:CB	58:DF:168:LEU:HD21	2.40	0.51
28:DG:117:PRO:HD2	28:DG:120:ILE:CG2	2.41	0.51
29:DH:46:PHE:CD2	29:DH:50:ARG:NH2	2.79	0.51
31:DJ:43:GLU:O	31:DJ:45:THR:HG22	2.11	0.51
33:DL:141:LYS:HD2	33:DL:142:ILE:N	2.24	0.51
43:DV:30:ILE:HB	43:DV:38:LEU:HB3	1.93	0.51
1:AA:414:A:N6	1:AA:431:A:C4	2.78	0.51
1:AA:721:G:C4'	1:AA:722:G:O5'	2.35	0.51
1:AA:1127:G:C2'	1:AA:1128:C:H5'	2.41	0.51
1:AA:1409:C:H2'	1:AA:1410:A:H8	1.74	0.51
2:AB:40:ILE:O	2:AB:41:ASN:HB2	2.10	0.51
6:AF:43:GLY:HA2	6:AF:58:HIS:CE1	2.45	0.51
6:AF:92:THR:HG22	6:AF:93:LYS:N	2.25	0.51
14:AN:11:LYS:HB2	14:AN:11:LYS:NZ	2.24	0.51
20:AT:26:MET:CE	20:AT:56:ILE:HD11	2.41	0.51
22:BA:729:G:C4	22:BA:1775:U:C2	2.99	0.51
22:BA:740:C:H5'	22:BA:1784:A:H3'	1.92	0.51
22:BA:904:G:C2	22:BA:905:A:N7	2.79	0.51
22:BA:1131:G:C4	31:BJ:77:HIS:ND1	2.79	0.51
22:BA:2038:G:H2'	22:BA:2039:U:O4'	2.11	0.51
22:BA:2199:A:H5'	22:BA:2200:C:C5	2.46	0.51
22:BA:2530:A:N6	28:BG:155:PRO:HG3	2.26	0.51
25:BD:118:PHE:HD2	25:BD:119:ALA:N	2.04	0.51
26:BE:75:SER:O	26:BE:78:TRP:HB2	2.11	0.51
26:BE:79:ARG:CG	26:BE:80:SER:N	2.73	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BL:77:ILE:HG12	33:BL:95:LEU:CD1	2.40	0.51
34:BM:42:THR:O	34:BM:43:ALA:HB3	2.10	0.51
46:BY:43:LEU:O	46:BY:47:ARG:HB2	2.10	0.51
53:CA:322:C:C2	53:CA:332:G:N2	2.79	0.51
2:CB:119:GLN:HG3	2:CB:124:THR:HG21	1.93	0.51
4:CD:187:ARG:NH2	4:CD:191:SER:CB	2.74	0.51
5:CE:80:LEU:N	5:CE:121:ASN:HD21	2.09	0.51
6:CF:27:ALA:O	6:CF:31:GLY:HA3	2.09	0.51
11:CK:90:PRO:O	11:CK:91:GLY:C	2.47	0.51
11:CK:96:ILE:HD13	11:CK:109:ILE:CD1	2.41	0.51
15:CO:38:LEU:HD12	15:CO:41:HIS:CB	2.40	0.51
56:CP:46:LYS:HE2	56:CP:47:GLU:N	2.25	0.51
20:CT:54:GLN:N	20:CT:55:PRO:HD2	2.25	0.51
22:DA:75:G:O2'	22:DA:76:C:H6	1.93	0.51
22:DA:118:A:O5'	22:DA:119:A:H5"	2.11	0.51
22:DA:202:U:H3'	22:DA:203:A:C8	2.46	0.51
22:DA:475:C:O2'	22:DA:476:G:C8	2.58	0.51
22:DA:483:A:C8	42:DU:44:HIS:CD2	2.99	0.51
22:DA:674:G:O3'	26:DE:60:TRP:CH2	2.63	0.51
22:DA:708:G:H2'	22:DA:709:U:C6	2.46	0.51
22:DA:775:G:O6	22:DA:787:C:H2'	2.10	0.51
22:DA:1161:C:H2'	22:DA:1162:G:C8	2.46	0.51
22:DA:1338:G:H4'	41:DT:18:GLU:CD	2.31	0.51
22:DA:2236:U:H2'	22:DA:2237:G:O4'	2.10	0.51
22:DA:2583:G:C6	22:DA:2584:U:C2	2.99	0.51
22:DA:2613:U:H4'	22:DA:2614:A:OP2	2.07	0.51
26:DE:5:LEU:HD13	26:DE:122:GLU:HB2	1.91	0.51
58:DF:103:ILE:HG22	58:DF:103:ILE:O	2.11	0.51
32:DK:23:LYS:O	32:DK:25:LEU:HD23	2.10	0.51
34:DM:76:LYS:NZ	34:DM:84:LYS:H	2.08	0.51
37:DP:109:ILE:O	37:DP:110:LYS:HG3	2.11	0.51
51:D3:33:THR:CG2	51:D3:34:LYS:N	2.72	0.51
1:AA:735:C:H5'	18:AR:59:LYS:HD3	1.92	0.51
1:AA:1046:A:C4	1:AA:1047:G:C8	2.98	0.51
1:AA:1203:C:H2'	1:AA:1204:A:O4'	2.11	0.51
11:AK:76:TYR:CD1	11:AK:76:TYR:N	2.79	0.51
13:AM:84:CYS:HB3	19:AS:73:PHE:HE2	1.74	0.51
13:AM:94:LEU:HB3	13:AM:95:PRO:HD2	1.93	0.51
13:AM:105:ALA:O	13:AM:109:LYS:HB2	2.11	0.51
16:AP:10:GLY:O	16:AP:11:ALA:HB2	2.11	0.51
21:AU:19:LYS:HE2	21:AU:19:LYS:N	2.24	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:148:U:H5"	22:BA:149:A:OP2	2.10	0.51
22:BA:571:U:C5	22:BA:575:A:C6	2.99	0.51
22:BA:775:G:C5	22:BA:794:A:C8	2.98	0.51
22:BA:945:A:C4	22:BA:2448:A:C2	2.99	0.51
22:BA:1257:C:H5'	26:BE:78:TRP:CH2	2.44	0.51
22:BA:1515:A:H2'	22:BA:1516:G:O4'	2.10	0.51
22:BA:1605:C:H5"	22:BA:1606:C:OP2	2.11	0.51
22:BA:1655:A:H3'	22:BA:1656:C:C6	2.46	0.51
22:BA:1693:U:O2'	24:BC:13:ARG:NH2	2.44	0.51
22:BA:2585:U:O2'	22:BA:2586:U:C5'	2.49	0.51
24:BC:20:ASN:HD22	24:BC:21:PRO:N	2.09	0.51
25:BD:186:LEU:HD11	37:BP:3:ILE:CD1	2.40	0.51
26:BE:137:LYS:O	26:BE:141:MET:HG3	2.09	0.51
29:BH:8:LYS:O	29:BH:9:VAL:CB	2.57	0.51
32:BK:10:VAL:CB	32:BK:16:ALA:HB1	2.41	0.51
37:BP:50:ARG:HD2	37:BP:51:ASN:N	2.26	0.51
42:BU:73:ASN:C	42:BU:75:ALA:H	2.14	0.51
53:CA:54:C:H41	53:CA:352:C:H2'	1.76	0.51
53:CA:93:U:C2	53:CA:95:C:N4	2.79	0.51
53:CA:325:A:N6	53:CA:326:G:C6	2.79	0.51
53:CA:491:G:HO2'	53:CA:492:C:H5'	1.72	0.51
53:CA:579:A:H2'	53:CA:580:C:H6	1.74	0.51
53:CA:1331:G:H2'	53:CA:1332:A:OP2	2.11	0.51
4:CD:29:THR:HG22	4:CD:30:LYS:CD	2.40	0.51
5:CE:147:ASN:HA	5:CE:151:MET:HE3	1.92	0.51
15:CO:16:ARG:HB2	15:CO:23:SER:CB	2.41	0.51
20:CT:62:ALA:HA	20:CT:67:HIS:CE1	2.45	0.51
21:CU:33:ARG:NH2	21:CU:34:ARG:HD3	2.26	0.51
22:DA:138:U:H2'	22:DA:140:C:C1'	2.33	0.51
22:DA:249:C:H3'	22:DA:2394:C:H4'	1.92	0.51
22:DA:1000:A:N1	22:DA:1001:A:C2	2.78	0.51
22:DA:1055:G:C3'	22:DA:1056:G:H5'	2.40	0.51
22:DA:1087:G:H1'	22:DA:1089:A:H1'	1.92	0.51
22:DA:1931:U:H2'	22:DA:1932:A:C8	2.35	0.51
22:DA:2104:C:O2	22:DA:2105:U:C5	2.63	0.51
22:DA:2232:C:OP2	45:DX:26:ARG:NH1	2.41	0.51
22:DA:2308:G:C2'	22:DA:2309:A:OP1	2.58	0.51
22:DA:2392:A:H2	33:DL:55:MET:SD	2.34	0.51
22:DA:2677:G:H2'	22:DA:2678:C:C6	2.46	0.51
22:DA:2816:G:C2	22:DA:2831:G:C2	2.99	0.51
22:DA:2875:C:O2'	22:DA:2876:G:O5'	2.28	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:29:PHE:CE2	24:DC:31:PRO:HG2	2.45	0.51
25:DD:33:ARG:HB3	25:DD:95:SER:OG	2.11	0.51
28:DG:162:ARG:HG3	28:DG:166:GLU:HG3	1.93	0.51
30:DI:12:VAL:HG12	30:DI:13:ALA:N	2.26	0.51
30:DI:83:ALA:HB2	30:DI:99:LYS:O	2.11	0.51
33:DL:127:VAL:HG13	33:DL:132:ARG:HB2	1.93	0.51
35:DN:21:PHE:N	35:DN:21:PHE:CD1	2.78	0.51
41:DT:45:ALA:HA	41:DT:48:GLN:CG	2.40	0.51
1:AA:109:A:C6	1:AA:326:G:C6	2.99	0.51
1:AA:842:U:H2'	1:AA:844:G:P	2.50	0.51
1:AA:872:A:C4	1:AA:874:G:N7	2.78	0.51
1:AA:1065:U:H5"	1:AA:1190:G:N2	2.26	0.51
1:AA:1333:A:H2'	1:AA:1334:G:O4'	2.11	0.51
1:AA:1491:G:C5'	1:AA:1492:A:OP1	2.59	0.51
5:AE:133:ILE:H	5:AE:133:ILE:CD1	2.20	0.51
5:AE:152:VAL:HG12	5:AE:155:LYS:HZ1	1.76	0.51
8:AH:63:LYS:HB3	8:AH:70:VAL:HG21	1.91	0.51
17:AQ:13:SER:HB3	17:AQ:16:MET:HE1	1.93	0.51
17:AQ:46:HIS:N	17:AQ:72:TRP:O	2.37	0.51
22:BA:483:A:C2'	22:BA:484:C:H5'	2.41	0.51
22:BA:613:A:C8	22:BA:616:A:N1	2.79	0.51
22:BA:1062:G:C2'	22:BA:1063:G:C8	2.94	0.51
22:BA:1098:A:H5'	22:BA:1099:G:OP2	2.09	0.51
22:BA:1106:G:N3	22:BA:1107:G:C8	2.79	0.51
22:BA:1387:A:H5'	22:BA:1469:A:H1'	1.93	0.51
22:BA:1437:C:H2'	22:BA:1438:U:H6	1.75	0.51
22:BA:2308:G:C5	27:BF:76:PHE:HE2	2.29	0.51
22:BA:2402:U:H2'	22:BA:2403:C:OP2	2.11	0.51
22:BA:2818:U:O2'	22:BA:2819:G:H5'	2.11	0.51
26:BE:7:ASP:O	26:BE:9:GLN:N	2.44	0.51
30:BI:135:MET:HG2	30:BI:137:LEU:HG	1.92	0.51
39:BR:49:ILE:O	39:BR:51:VAL:O	2.28	0.51
41:BT:37:ASP:O	41:BT:38:ALA:O	2.29	0.51
41:BT:40:LYS:CA	41:BT:43:ILE:HG23	2.40	0.51
49:B1:24:LYS:HE2	49:B1:52:LYS:CB	2.36	0.51
52:B4:23:ILE:HB	52:B4:38:GLY:HA3	1.92	0.51
53:CA:68:G:H21	53:CA:152:A:H1'	1.75	0.51
53:CA:219:U:H2'	53:CA:220:G:C8	2.45	0.51
53:CA:239:U:C6	53:CA:239:U:H5'	2.45	0.51
53:CA:245:U:H6	53:CA:245:U:H5"	1.76	0.51
53:CA:493:A:H5"	53:CA:494:G:OP2	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:2:ARG:HE	4:CD:114:ARG:CD	2.24	0.51
54:CG:91:ARG:HG2	54:CG:92:PRO:CD	2.36	0.51
22:DA:53:A:H2'	22:DA:54:G:O4'	2.10	0.51
22:DA:377:G:C6	22:DA:378:C:N3	2.79	0.51
22:DA:469:G:OP2	26:DE:55:SER:HB3	2.11	0.51
22:DA:483:A:O2'	22:DA:484:C:H5'	2.10	0.51
22:DA:628:G:O6	22:DA:636:G:N1	2.44	0.51
22:DA:819:A:OP2	22:DA:1187:G:N2	2.43	0.51
22:DA:968:C:O2'	22:DA:969:G:H5'	2.11	0.51
22:DA:995:C:O2'	38:DQ:60:TRP:CZ2	2.61	0.51
22:DA:1062:G:O2'	22:DA:1063:G:H8	1.93	0.51
22:DA:1261:C:OP2	40:DS:83:LYS:NZ	2.44	0.51
22:DA:1492:G:H3'	22:DA:1493:C:C5'	2.40	0.51
22:DA:1739:A:C6	22:DA:1740:G:C5	2.99	0.51
22:DA:2345:G:C6	22:DA:2381:A:C6	2.99	0.51
22:DA:2663:G:H2'	22:DA:2664:G:H8	1.76	0.51
22:DA:2836:U:O2'	22:DA:2837:A:H8	1.94	0.51
22:DA:2875:C:HO2'	22:DA:2876:G:H8	0.66	0.51
26:DE:34:ALA:HB1	26:DE:94:GLN:HB2	1.93	0.51
26:DE:129:PRO:HD3	26:DE:156:ASN:OD1	2.11	0.51
58:DF:177:ARG:CZ	58:DF:178:LYS:H	2.22	0.51
28:DG:15:ASP:HB3	28:DG:26:LYS:H	1.76	0.51
30:DI:104:GLN:HA	30:DI:107:GLU:CB	2.39	0.51
35:DN:14:SER:C	35:DN:16:HIS:H	2.13	0.51
38:DQ:77:LYS:HE2	38:DQ:116:LEU:HD11	1.92	0.51
38:DQ:84:LYS:C	38:DQ:86:SER:H	2.14	0.51
42:DU:95:PHE:CD1	42:DU:95:PHE:N	2.73	0.51
46:DY:18:LEU:HD13	46:DY:22:LEU:HD13	1.92	0.51
1:AA:154:U:O2'	1:AA:155:A:H5'	2.11	0.51
1:AA:475:C:H2'	1:AA:476:U:C6	2.45	0.51
1:AA:903:G:C5	1:AA:904:U:C5	2.99	0.51
1:AA:1006:G:H2'	1:AA:1007:U:O4'	2.11	0.51
1:AA:1054:C:O2'	1:AA:1055:A:OP2	2.27	0.51
1:AA:1306:A:H2'	1:AA:1307:U:H5'	1.93	0.51
1:AA:1533:C:H3'	1:AA:1534:A:C5'	2.40	0.51
2:AB:42:LEU:HG	2:AB:43:GLU:N	2.26	0.51
3:AC:148:ILE:HG12	3:AC:149:LYS:N	2.24	0.51
15:AO:16:ARG:HD3	15:AO:20:ASP:OD2	2.11	0.51
22:BA:742:A:H2'	22:BA:743:A:H8	1.76	0.51
22:BA:2788:C:H2'	22:BA:2789:C:C6	2.46	0.51
29:BH:14:SER:O	29:BH:16:GLY:N	2.43	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BR:27:ILE:HG21	39:BR:33:VAL:HG12	1.92	0.51
49:B1:8:ILE:HG23	49:B1:51:ALA:HA	1.91	0.51
53:CA:604:G:H2'	53:CA:605:U:O4'	2.11	0.51
53:CA:719:C:H3'	53:CA:720:C:C6	2.46	0.51
53:CA:1181:G:O2'	53:CA:1182:G:O4'	2.25	0.51
5:CE:131:ASN:HD22	5:CE:132:PRO:HD2	1.75	0.51
22:DA:100:U:C6	22:DA:100:U:OP1	2.64	0.51
22:DA:121:G:C4	22:DA:131:A:C6	2.98	0.51
22:DA:533:G:C2	22:DA:534:U:C2	2.99	0.51
22:DA:608:A:H2'	22:DA:609:A:C8	2.45	0.51
22:DA:742:A:H2'	22:DA:743:A:C8	2.46	0.51
22:DA:811:U:H1'	22:DA:1251:C:C2	2.45	0.51
22:DA:1038:G:N1	22:DA:1039:A:N7	2.58	0.51
22:DA:1364:G:H1'	22:DA:1368:G:N2	2.26	0.51
22:DA:1378:A:C8	22:DA:1380:G:C5	2.99	0.51
22:DA:1467:U:C2'	22:DA:1468:U:H5'	2.39	0.51
22:DA:2635:A:C5'	25:DD:79:LEU:HB2	2.40	0.51
22:DA:2874:C:H2'	22:DA:2875:C:C5	2.46	0.51
57:DB:94:A:OP1	43:DV:19:ARG:HD3	2.11	0.51
28:DG:1:SER:C	28:DG:3:VAL:H	2.13	0.51
28:DG:84:LYS:HB2	28:DG:132:LEU:H	1.75	0.51
32:DK:80:ASP:HB2	37:DP:67:GLU:OE1	2.11	0.51
34:DM:34:LYS:HB3	34:DM:129:THR:HG22	1.93	0.51
36:DO:24:THR:OG1	36:DO:90:VAL:HG11	2.11	0.51
37:DP:87:ARG:HG2	37:DP:88:ARG:H	1.75	0.51
42:DU:34:ILE:HG12	42:DU:63:ALA:HA	1.93	0.51
42:DU:90:LYS:HE2	42:DU:92:VAL:HG12	1.93	0.51
47:DZ:10:ARG:HB2	47:DZ:53:MET:HB3	1.92	0.51
1:AA:267:C:O2'	1:AA:268:U:H5'	2.10	0.51
1:AA:645:G:C2'	1:AA:646:G:H5'	2.41	0.51
1:AA:707:U:OP1	11:AK:86:LYS:HE3	2.10	0.51
1:AA:1046:A:O2'	1:AA:1047:G:C5'	2.50	0.51
1:AA:1112:C:N4	3:AC:177:LEU:HD22	2.26	0.51
1:AA:1211:U:H1'	1:AA:1213:A:C2	2.46	0.51
1:AA:1284:C:H6	1:AA:1284:C:O5'	1.93	0.51
1:AA:1457:G:H2'	1:AA:1458:G:O4'	2.11	0.51
7:AG:119:LEU:CD2	7:AG:123:LEU:HD23	2.41	0.51
8:AH:83:ARG:O	8:AH:84:ILE:HD13	2.11	0.51
10:AJ:57:VAL:O	10:AJ:58:ASN:HB2	2.10	0.51
10:AJ:81:GLU:O	10:AJ:85:ASP:HB2	2.11	0.51
13:AM:21:ILE:HB	13:AM:24:VAL:HG22	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:67:HIS:HB3	20:AT:68:LYS:HZ2	1.76	0.51
22:BA:50:U:H4'	22:BA:51:G:OP2	2.10	0.51
22:BA:1071:G:C5	22:BA:1089:A:C6	2.98	0.51
22:BA:1441:G:H2'	22:BA:1442:U:C6	2.46	0.51
22:BA:1479:G:O2'	22:BA:1480:C:H5'	2.11	0.51
22:BA:1936:A:H2	22:BA:1943:U:C4	2.27	0.51
22:BA:2352:A:N1	44:BW:30:VAL:HG21	2.25	0.51
22:BA:2580:U:C5	22:BA:2581:G:C6	2.99	0.51
24:BC:106:PRO:CA	24:BC:141:HIS:HE1	2.24	0.51
25:BD:107:VAL:HG13	25:BD:203:VAL:CG2	2.41	0.51
25:BD:149:ASN:O	25:BD:152:PRO:HD2	2.11	0.51
25:BD:151:THR:O	25:BD:152:PRO:C	2.45	0.51
28:BG:102:ILE:HG22	28:BG:104:LEU:HG	1.93	0.51
35:BN:93:GLY:C	35:BN:95:THR:N	2.63	0.51
37:BP:50:ARG:HB2	37:BP:56:SER:HA	1.92	0.51
44:BW:39:GLN:CG	44:BW:42:THR:H	2.23	0.51
53:CA:439:U:O2	53:CA:439:U:H2'	2.11	0.51
53:CA:615:G:H2'	53:CA:616:G:C8	2.45	0.51
53:CA:1175:G:O2'	53:CA:1176:A:H5'	2.11	0.51
53:CA:1239:A:H3'	54:CG:118:ARG:NH2	2.26	0.51
53:CA:1343:G:H4'	9:CI:123:ARG:HB3	1.93	0.51
6:CF:68:GLN:HG2	6:CF:69:GLU:H	1.76	0.51
9:CI:79:ARG:O	9:CI:83:THR:HG22	2.10	0.51
12:CL:106:VAL:HG23	12:CL:116:TYR:HB3	1.92	0.51
22:DA:100:U:OP1	22:DA:100:U:H2'	2.11	0.51
22:DA:121:G:C2	22:DA:131:A:C5	2.99	0.51
22:DA:156:A:H2'	22:DA:157:C:O4'	2.11	0.51
22:DA:186:G:N2	22:DA:211:C:O2	2.44	0.51
22:DA:503:A:C2	22:DA:505:A:H2'	2.46	0.51
22:DA:604:G:C6	22:DA:625:G:C6	2.99	0.51
22:DA:1036:G:C5	22:DA:1120:G:C6	2.99	0.51
22:DA:1130:U:HO2'	22:DA:1131:G:H8	1.56	0.51
22:DA:1171:G:C2	22:DA:1179:G:N3	2.78	0.51
22:DA:1210:G:H5'	22:DA:1212:G:O4'	2.11	0.51
22:DA:1553:A:C8	22:DA:1555:G:C6	2.98	0.51
22:DA:1651:G:C2	22:DA:2007:U:C2	2.98	0.51
22:DA:1654:A:N3	22:DA:1655:A:C8	2.79	0.51
22:DA:1789:A:OP1	24:DC:219:VAL:HA	2.11	0.51
22:DA:2620:C:O4'	25:DD:161:MET:HG3	2.11	0.51
22:DA:2836:U:HO2'	22:DA:2837:A:H8	1.58	0.51
22:DA:2887:A:H1'	48:D0:39:ARG:HH22	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DB:69:G:C4	57:DB:70:C:C6	2.99	0.51
24:DC:196:ASN:OD1	24:DC:199:HIS:HB2	2.11	0.51
25:DD:40:LEU:H	25:DD:40:LEU:HD12	1.75	0.51
58:DF:5:ASP:C	58:DF:7:TYR:N	2.63	0.51
58:DF:11:VAL:HG12	58:DF:12:VAL:N	2.25	0.51
58:DF:177:ARG:CD	58:DF:178:LYS:N	2.74	0.51
28:DG:90:GLY:HA3	28:DG:93:TYR:CZ	2.46	0.51
31:DJ:70:THR:HG22	31:DJ:90:GLU:OE2	2.11	0.51
36:DO:7:ARG:HH21	36:DO:95:SER:HB3	1.75	0.51
38:DQ:42:GLY:HA3	39:DR:75:VAL:HG21	1.93	0.51
39:DR:97:LYS:HG2	39:DR:97:LYS:O	2.11	0.51
41:DT:29:THR:HA	41:DT:87:LEU:HB2	1.92	0.51
42:DU:43:LYS:HE3	42:DU:45:GLN:CD	2.30	0.51
1:AA:19:A:N3	1:AA:917:G:C2	2.79	0.51
1:AA:132:C:H5"	20:AT:68:LYS:HD2	1.91	0.51
1:AA:512:U:H2'	1:AA:513:C:C6	2.46	0.51
1:AA:679:C:O2	1:AA:712:A:C2	2.64	0.51
1:AA:1386:G:H2'	1:AA:1387:G:C8	2.44	0.51
2:AB:40:ILE:HG21	2:AB:201:GLY:N	2.26	0.51
3:AC:55:VAL:O	3:AC:65:VAL:HA	2.11	0.51
5:AE:94:PHE:CZ	5:AE:96:GLN:HG2	2.46	0.51
9:AI:44:ARG:HB2	9:AI:45:MET:HE3	1.92	0.51
22:BA:329:G:O4'	22:BA:477:A:H1'	2.11	0.51
22:BA:496:G:H1'	40:BS:61:ASN:HD21	1.76	0.51
22:BA:780:G:H21	22:BA:783:A:H62	1.59	0.51
22:BA:1078:U:H4'	22:BA:1079:C:H6	1.75	0.51
22:BA:1277:G:H4'	35:BN:20:MET:HE2	1.92	0.51
22:BA:1385:A:C4	22:BA:1386:C:C5	2.99	0.51
22:BA:1867:G:H2'	22:BA:1868:C:H5'	1.92	0.51
22:BA:2204:G:O5'	24:BC:149:LYS:HE3	2.11	0.51
22:BA:2799:A:O2'	22:BA:2800:A:OP2	2.25	0.51
25:BD:4:LEU:HD23	25:BD:29:VAL:HG11	1.93	0.51
35:BN:96:ARG:NH2	35:BN:116:VAL:HG23	2.23	0.51
39:BR:39:LEU:CB	39:BR:49:ILE:HD13	2.41	0.51
39:BR:46:GLU:HG2	39:BR:47:VAL:N	2.26	0.51
41:BT:28:ASN:CA	41:BT:91:GLN:HE22	2.23	0.51
44:BW:72:GLY:C	44:BW:74:LYS:N	2.64	0.51
45:BX:1:SER:O	45:BX:3:VAL:N	2.44	0.51
47:BZ:23:LEU:HD21	47:BZ:53:MET:HE1	1.92	0.51
53:CA:106:C:O2'	53:CA:107:G:H5'	2.11	0.51
53:CA:732:C:H2'	53:CA:733:G:H5"	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:987:G:H8	53:CA:987:G:O5'	1.94	0.51
53:CA:1073:U:C4	53:CA:1074:G:N7	2.78	0.51
53:CA:1113:C:O2'	53:CA:1114:C:H5'	2.12	0.51
2:CB:103:TRP:CA	2:CB:106:VAL:HB	2.37	0.51
4:CD:33:ILE:O	4:CD:35:GLN:HG2	2.10	0.51
6:CF:62:MET:O	6:CF:63:ASN:HB2	2.11	0.51
6:CF:92:THR:HG22	6:CF:93:LYS:N	2.26	0.51
9:CI:45:MET:HB3	9:CI:49:GLN:HG3	1.93	0.51
11:CK:74:LYS:HA	11:CK:78:ILE:CD1	2.30	0.51
14:CN:55:SER:C	14:CN:57:SER:H	2.14	0.51
22:DA:1039:A:C6	22:DA:1117:C:N3	2.79	0.51
22:DA:1292:G:C6	22:DA:1293:C:N4	2.79	0.51
22:DA:1387:A:C4	22:DA:1388:G:C8	2.99	0.51
22:DA:1924:C:O2'	22:DA:1925:C:H5'	2.11	0.51
22:DA:2218:G:H2'	22:DA:2219:U:H6	1.76	0.51
22:DA:2347:C:O2'	22:DA:2348:U:C6	2.58	0.51
22:DA:2732:G:H5"	22:DA:2733:A:O4'	2.11	0.51
22:DA:2771:C:H2'	22:DA:2772:C:C6	2.45	0.51
28:DG:7:PRO:O	28:DG:8:VAL:HB	2.11	0.51
30:DI:49:GLU:HG3	30:DI:54:ILE:HD11	1.91	0.51
32:DK:108:ARG:HB2	32:DK:116:ILE:HD13	1.93	0.51
38:DQ:23:TYR:HB3	38:DQ:27:ARG:HD3	1.92	0.51
50:D2:46:LYS:HD2	50:D2:46:LYS:N	2.24	0.51
1:AA:147:G:H2'	1:AA:148:G:C8	2.46	0.50
1:AA:489:C:O2'	1:AA:490:C:H5'	2.11	0.50
1:AA:596:A:C6	1:AA:645:G:C2	2.99	0.50
1:AA:714:G:H2'	1:AA:715:A:C8	2.46	0.50
1:AA:957:U:O2	1:AA:959:A:C8	2.64	0.50
1:AA:1171:A:C2	1:AA:1172:C:C2	2.99	0.50
1:AA:1461:G:O2'	1:AA:1462:C:H5'	2.10	0.50
2:AB:42:LEU:CG	2:AB:43:GLU:HG3	2.34	0.50
7:AG:70:PRO:HD2	7:AG:95:ARG:HG3	1.93	0.50
7:AG:113:LYS:HB2	7:AG:117:LEU:HD12	1.92	0.50
13:AM:24:VAL:HG23	13:AM:24:VAL:O	2.11	0.50
13:AM:28:ARG:O	13:AM:32:ILE:HG12	2.10	0.50
19:AS:48:ILE:HD12	19:AS:48:ILE:O	2.11	0.50
19:AS:50:VAL:CG2	19:AS:70:LEU:HB3	2.36	0.50
21:AU:40:PRO:HA	21:AU:43:GLU:HB2	1.93	0.50
22:BA:202:U:H2'	22:BA:203:A:C8	2.45	0.50
22:BA:1005:C:O2'	31:BJ:30:THR:HG21	2.11	0.50
22:BA:1081:U:H2'	22:BA:1081:U:O2	2.09	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1278:C:H2'	22:BA:1279:G:C8	2.45	0.50
22:BA:1509:A:N3	22:BA:1510:G:C8	2.79	0.50
22:BA:1720:U:H2'	22:BA:1721:G:O4'	2.10	0.50
22:BA:1882:U:O2'	22:BA:1883:U:H5'	2.10	0.50
22:BA:2383:G:O2'	22:BA:2384:U:H5'	2.10	0.50
22:BA:2536:G:C5	22:BA:2537:U:C5	2.99	0.50
22:BA:2571:U:O2'	25:BD:151:THR:HG21	2.10	0.50
22:BA:2766:A:H5"	22:BA:2767:C:OP2	2.12	0.50
23:BB:61:G:H2'	23:BB:62:C:H6	1.75	0.50
29:BH:2:GLN:HG2	29:BH:20:ASN:ND2	2.26	0.50
35:BN:75:ILE:C	35:BN:75:ILE:HD12	2.31	0.50
37:BP:20:ARG:HH21	37:BP:20:ARG:CG	2.24	0.50
38:BQ:40:LYS:HD3	38:BQ:44:TYR:CZ	2.46	0.50
39:BR:29:THR:HG22	39:BR:29:THR:O	2.12	0.50
40:BS:73:LYS:HE3	40:BS:73:LYS:HA	1.91	0.50
41:BT:10:VAL:HG23	41:BT:11:LEU:HD23	1.92	0.50
43:BV:80:HIS:ND1	43:BV:81:PRO:HD2	2.26	0.50
53:CA:51:A:H4'	53:CA:52:C:H5"	1.93	0.50
53:CA:264:C:H2'	53:CA:265:G:O4'	2.10	0.50
53:CA:1129:C:O2'	53:CA:1130:A:H8	1.91	0.50
53:CA:1129:C:C4	53:CA:1139:G:C5	2.99	0.50
53:CA:1130:A:C6	53:CA:1146:A:C5	2.98	0.50
53:CA:1154:G:H2'	53:CA:1155:A:C8	2.45	0.50
53:CA:1356:G:N2	53:CA:1367:C:O2	2.44	0.50
3:CC:20:THR:HG23	3:CC:57:GLU:HG2	1.92	0.50
5:CE:17:VAL:HA	5:CE:33:THR:O	2.10	0.50
56:CP:1:MET:HE2	56:CP:2:VAL:N	2.26	0.50
22:DA:339:U:H2'	22:DA:340:A:C8	2.45	0.50
22:DA:518:G:H2'	22:DA:519:U:C6	2.45	0.50
22:DA:531:C:H4'	22:DA:532:A:C8	2.46	0.50
22:DA:538:A:O2'	31:DJ:8:PRO:CG	2.60	0.50
22:DA:740:C:O2'	22:DA:741:U:C5'	2.59	0.50
22:DA:1301:A:C8	22:DA:1303:G:C8	2.99	0.50
22:DA:1593:A:C5	22:DA:1594:U:C4	3.00	0.50
22:DA:1744:A:H3'	22:DA:1745:A:C8	2.45	0.50
22:DA:1857:G:C4	22:DA:1884:G:N1	2.79	0.50
22:DA:2147:A:N3	22:DA:2147:A:H2'	2.26	0.50
22:DA:2379:G:H2'	22:DA:2380:C:C6	2.45	0.50
24:DC:24:HIS:N	24:DC:80:LEU:O	2.42	0.50
24:DC:64:VAL:HG11	24:DC:66:PHE:CZ	2.46	0.50
24:DC:216:ARG:HH11	24:DC:216:ARG:HG3	1.75	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:10:GLY:O	25:DD:11:MET:CB	2.58	0.50
58:DF:174:PHE:CG	58:DF:175:PRO:HD2	2.46	0.50
29:DH:84:ALA:HB3	29:DH:148:ALA:HB2	1.93	0.50
30:DI:5:GLN:OE1	30:DI:59:THR:HG21	2.10	0.50
30:DI:18:ASN:HB3	30:DI:19:PRO:HD3	1.93	0.50
35:DN:16:HIS:O	35:DN:20:MET:N	2.43	0.50
38:DQ:39:ILE:O	38:DQ:42:GLY:N	2.43	0.50
38:DQ:59:LEU:O	38:DQ:63:ARG:HD3	2.11	0.50
42:DU:95:PHE:HD1	42:DU:95:PHE:N	2.06	0.50
1:AA:149:A:C2	1:AA:150:U:C2	2.99	0.50
1:AA:414:A:C2	1:AA:415:A:C4	2.99	0.50
1:AA:466:A:H4'	1:AA:467:U:OP2	2.11	0.50
1:AA:579:A:H2'	1:AA:580:C:C6	2.46	0.50
1:AA:652:U:O4	1:AA:752:G:O2'	2.19	0.50
1:AA:683:G:C2	1:AA:708:C:O2	2.64	0.50
1:AA:819:A:N7	1:AA:1529:G:C2	2.79	0.50
1:AA:1088:G:H21	1:AA:1167:A:N6	2.08	0.50
1:AA:1157:A:H1'	1:AA:1181:G:N2	2.26	0.50
1:AA:1489:G:O2'	1:AA:1490:U:H5'	2.12	0.50
2:AB:20:ARG:HA	2:AB:20:ARG:CZ	2.41	0.50
2:AB:187:ASP:HB2	2:AB:203:ASP:CG	2.31	0.50
3:AC:166:TRP:N	3:AC:166:TRP:CE3	2.74	0.50
16:AP:71:VAL:O	16:AP:75:ILE:HG13	2.11	0.50
20:AT:2:ASN:O	20:AT:3:ILE:C	2.49	0.50
22:BA:2276:G:P	34:BM:83:GLY:O	2.68	0.50
24:BC:165:ALA:HB3	24:BC:172:THR:CG2	2.40	0.50
25:BD:133:THR:CG2	25:BD:134:HIS:CD2	2.94	0.50
27:BF:37:MET:CE	27:BF:151:LEU:HB3	2.41	0.50
28:BG:59:ASP:HB2	28:BG:63:GLN:HG2	1.91	0.50
30:BI:32:VAL:HG13	30:BI:66:PHE:CE2	2.46	0.50
33:BL:101:ILE:HG22	33:BL:102:GLY:N	2.26	0.50
34:BM:132:THR:CG2	34:BM:133:LYS:N	2.71	0.50
42:BU:12:VAL:O	42:BU:18:LYS:O	2.28	0.50
45:BX:30:PRO:O	45:BX:32:LEU:HD12	2.12	0.50
53:CA:251:G:N2	53:CA:253:A:N6	2.59	0.50
53:CA:764:C:H2'	53:CA:765:G:C5'	2.31	0.50
53:CA:1134:G:C6	53:CA:1141:C:N4	2.79	0.50
53:CA:1138:G:H5"	53:CA:1138:G:N3	2.26	0.50
53:CA:1146:A:C6	53:CA:1147:C:N4	2.79	0.50
3:CC:63:ILE:O	3:CC:63:ILE:HG23	2.10	0.50
4:CD:104:MET:SD	4:CD:142:VAL:HG13	2.51	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:149:LYS:HZ1	4:CD:176:LYS:CE	2.24	0.50
5:CE:103:GLY:O	5:CE:104:ILE:CG2	2.51	0.50
8:CH:24:VAL:HG12	8:CH:62:LEU:HD21	1.93	0.50
8:CH:46:GLU:HB3	8:CH:61:THR:HB	1.93	0.50
11:CK:94:SER:O	11:CK:97:ARG:HB2	2.11	0.50
14:CN:89:ARG:HG3	14:CN:91:GLU:HG3	1.93	0.50
22:DA:233:A:O2'	22:DA:234:U:H6	1.94	0.50
22:DA:263:G:H4'	22:DA:430:A:O4'	2.11	0.50
22:DA:815:C:P	39:DR:85:LYS:HE2	2.52	0.50
22:DA:828:U:C5	22:DA:829:A:N6	2.79	0.50
22:DA:1183:U:H2'	22:DA:1184:U:H6	1.75	0.50
22:DA:1270:C:H2'	22:DA:1648:U:H5"	1.93	0.50
22:DA:1398:C:O2'	22:DA:1399:C:O5'	2.23	0.50
22:DA:1422:G:H4'	22:DA:1493:C:OP1	2.11	0.50
22:DA:1535:A:C5'	22:DA:1536:C:OP2	2.59	0.50
22:DA:1663:G:C6	22:DA:1998:A:N6	2.79	0.50
22:DA:1716:U:C4	22:DA:1745:A:N6	2.79	0.50
22:DA:1835:G:H2'	22:DA:1836:C:H6	1.75	0.50
22:DA:2147:A:OP1	22:DA:2147:A:C4'	2.59	0.50
22:DA:2540:C:C2	22:DA:2541:A:C8	2.99	0.50
22:DA:2550:G:C6	22:DA:2551:C:N4	2.79	0.50
57:DB:26:C:H1'	57:DB:117:G:C1'	2.41	0.50
26:DE:28:VAL:O	26:DE:32:VAL:HG13	2.11	0.50
26:DE:170:ARG:NH2	26:DE:176:ASP:HB2	2.23	0.50
31:DJ:93:ILE:HA	31:DJ:97:PRO:HB3	1.93	0.50
32:DK:28:SER:O	32:DK:29:HIS:HB3	2.12	0.50
33:DL:47:ARG:HH21	33:DL:47:ARG:HG2	1.75	0.50
34:DM:41:LEU:HD23	34:DM:46:ILE:CG2	2.41	0.50
37:DP:32:VAL:HA	37:DP:37:LYS:HA	1.93	0.50
37:DP:47:ILE:HD13	37:DP:61:ARG:HB2	1.91	0.50
45:DX:1:SER:O	45:DX:3:VAL:N	2.44	0.50
1:AA:71:A:N7	1:AA:100:G:C6	2.79	0.50
1:AA:792:A:H4'	1:AA:793:U:O5'	2.11	0.50
2:AB:110:ILE:HD11	2:AB:147:LEU:HD13	1.86	0.50
21:AU:8:ASN:O	21:AU:11:PHE:HE2	1.93	0.50
22:BA:388:G:N7	22:BA:390:U:H2'	2.25	0.50
22:BA:623:C:H2'	22:BA:624:C:C6	2.46	0.50
22:BA:1378:A:O2'	22:BA:1379:U:H3'	2.11	0.50
22:BA:1444:G:H2'	22:BA:1445:G:C8	2.45	0.50
22:BA:1475:G:C1'	22:BA:1476:U:OP2	2.58	0.50
22:BA:1644:C:C2'	22:BA:1645:G:H5'	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2093:G:O2'	22:BA:2094:A:H5'	2.12	0.50
22:BA:2109:U:O4	22:BA:2110:G:C5	2.64	0.50
22:BA:2250:G:H8	22:BA:2250:G:O5'	1.94	0.50
25:BD:150:GLN:O	25:BD:150:GLN:HG3	2.01	0.50
27:BF:24:VAL:O	27:BF:27:VAL:HG12	2.10	0.50
28:BG:84:LYS:O	28:BG:85:LYS:HB2	2.12	0.50
30:BI:56:VAL:HG23	30:BI:69:VAL:O	2.10	0.50
31:BJ:44:TYR:HA	38:BQ:59:LEU:CD2	2.39	0.50
34:BM:40:ARG:HB2	34:BM:93:VAL:HG22	1.93	0.50
37:BP:67:GLU:OE1	37:BP:67:GLU:HA	2.10	0.50
39:BR:89:HIS:NE2	39:BR:91:GLN:HB2	2.27	0.50
53:CA:97:G:C6	53:CA:98:A:H1'	2.47	0.50
53:CA:106:C:C2'	53:CA:107:G:H5'	2.41	0.50
53:CA:211:G:C2'	53:CA:211:G:N3	2.74	0.50
53:CA:525:C:N4	53:CA:526:C:N4	2.59	0.50
53:CA:1048:G:H21	53:CA:1214:C:H5	1.60	0.50
53:CA:1152:A:OP2	10:CJ:70:HIS:NE2	2.44	0.50
53:CA:1228:C:O2'	53:CA:1229:A:H8	1.93	0.50
53:CA:1308:U:H5	55:CM:97:ARG:CZ	2.24	0.50
3:CC:185:THR:HG22	3:CC:186:SER:H	1.76	0.50
5:CE:14:LEU:HD13	5:CE:59:ILE:CD1	2.41	0.50
5:CE:131:ASN:HD22	5:CE:131:ASN:C	2.14	0.50
8:CH:33:VAL:C	8:CH:35:ILE:H	2.13	0.50
55:CM:3:ILE:O	55:CM:4:ALA:HB2	2.12	0.50
20:CT:57:VAL:HG12	20:CT:71:ALA:HB2	1.92	0.50
22:DA:397:U:OP1	45:DX:30:PRO:CA	2.45	0.50
22:DA:636:G:H5'	22:DA:639:U:OP1	2.12	0.50
22:DA:685:A:H1'	22:DA:688:U:O4	2.11	0.50
22:DA:748:G:O2'	22:DA:749:A:H3'	2.10	0.50
22:DA:1109:C:C5	22:DA:1110:G:C6	2.99	0.50
22:DA:1249:U:H3'	22:DA:1249:U:P	2.52	0.50
22:DA:1249:U:H4'	38:DQ:3:VAL:HG21	1.93	0.50
22:DA:1476:U:H1'	22:DA:1732:C:O2	2.12	0.50
22:DA:1667:G:OP1	32:DK:6:THR:HA	2.11	0.50
22:DA:2310:C:O2'	22:DA:2311:A:C4'	2.58	0.50
22:DA:2332:C:O2'	44:DW:40:ARG:NH2	2.44	0.50
22:DA:2712:C:OP1	22:DA:2714:G:H4'	2.11	0.50
57:DB:11:C:H5'	44:DW:71:LYS:CD	2.40	0.50
57:DB:110:C:H2'	57:DB:111:U:H6	1.75	0.50
24:DC:34:GLU:HG3	24:DC:35:LYS:N	2.26	0.50
24:DC:144:GLU:HG3	24:DC:151:GLY:N	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DE:46:GLN:HB3	26:DE:86:ALA:HB1	1.93	0.50
30:DI:16:MET:SD	30:DI:19:PRO:HG2	2.52	0.50
32:DK:119:ALA:N	32:DK:120:PRO:HD2	2.24	0.50
33:DL:98:ALA:O	33:DL:100:ILE:HG22	2.11	0.50
37:DP:87:ARG:NH1	37:DP:111:GLU:HG3	2.27	0.50
40:DS:66:ILE:HA	40:DS:69:LEU:HD13	1.92	0.50
44:DW:20:LEU:HD12	44:DW:20:LEU:N	2.26	0.50
44:DW:81:ILE:C	44:DW:81:ILE:HD12	2.32	0.50
46:DY:57:LEU:O	46:DY:60:LYS:HB3	2.12	0.50
1:AA:198:G:C2'	1:AA:199:A:C8	2.94	0.50
1:AA:765:G:H2'	1:AA:812:G:N2	2.27	0.50
1:AA:865:A:H2'	1:AA:866:C:C6	2.46	0.50
9:AI:90:ASP:CG	9:AI:92:SER:HB3	2.31	0.50
16:AP:12:LYS:O	16:AP:13:LYS:HB2	2.12	0.50
16:AP:46:LYS:HZ3	16:AP:48:GLU:HB3	1.76	0.50
22:BA:631:A:P	51:B3:46:LYS:HZ2	2.34	0.50
22:BA:1062:G:O2'	22:BA:1063:G:O5'	2.30	0.50
22:BA:1113:U:H2'	22:BA:1114:C:C6	2.47	0.50
22:BA:1812:U:H2'	22:BA:1813:G:C8	2.47	0.50
22:BA:2197:U:OP1	4:CD:150:LYS:HE3	2.12	0.50
22:BA:2365:G:H4'	44:BW:59:PHE:CZ	2.46	0.50
22:BA:2636:C:H2'	22:BA:2637:U:H6	1.77	0.50
24:BC:91:ALA:HB3	24:BC:103:ILE:HG22	1.94	0.50
29:BH:78:VAL:HG11	29:BH:145:ASN:HB3	1.93	0.50
30:BI:6:ALA:HB3	30:BI:60:VAL:H	1.77	0.50
35:BN:3:HIS:O	35:BN:4:ARG:HB2	2.10	0.50
35:BN:36:THR:HG23	35:BN:37:THR:O	2.10	0.50
38:BQ:20:ALA:HA	38:BQ:23:TYR:CD1	2.46	0.50
41:BT:51:PHE:C	41:BT:52:GLU:HG2	2.31	0.50
42:BU:17:ASP:O	42:BU:18:LYS:C	2.49	0.50
42:BU:97:SER:O	42:BU:98:ASN:CB	2.58	0.50
44:BW:19:ARG:NH2	44:BW:22:VAL:CG2	2.74	0.50
44:BW:28:GLU:H	44:BW:31:LEU:CD1	2.24	0.50
45:BX:30:PRO:HD2	45:BX:32:LEU:HD11	1.94	0.50
53:CA:71:A:N3	53:CA:72:A:C8	2.80	0.50
53:CA:580:C:H2'	53:CA:581:G:O4'	2.10	0.50
53:CA:631:C:H5"	53:CA:632:U:O4'	2.12	0.50
53:CA:1084:G:OP1	53:CA:1086:U:C6	2.64	0.50
53:CA:1261:A:N7	53:CA:1274:A:H2	2.10	0.50
2:CB:212:TYR:CD2	2:CB:215:ALA:HB3	2.46	0.50
12:CL:91:GLY:O	12:CL:93:ARG:HG3	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CM:68:LEU:O	55:CM:72:ILE:HG22	2.12	0.50
55:CM:103:THR:HG22	55:CM:104:ASN:N	2.27	0.50
14:CN:80:ARG:HG2	14:CN:80:ARG:NH1	2.25	0.50
22:DA:26:G:H5'	22:DA:27:G:OP2	2.12	0.50
22:DA:106:C:O2'	22:DA:294:A:O2'	2.27	0.50
22:DA:183:C:O2'	22:DA:432:A:H1'	2.11	0.50
22:DA:465:G:H4'	50:D2:16:HIS:HD2	1.77	0.50
22:DA:492:A:H2'	22:DA:493:G:O4'	2.12	0.50
22:DA:740:C:H5'	22:DA:1784:A:C3'	2.37	0.50
22:DA:851:C:C4'	47:DZ:46:MET:HG2	2.41	0.50
22:DA:1529:G:H2'	22:DA:1530:G:O4'	2.12	0.50
22:DA:1789:A:H5"	24:DC:218:THR:O	2.11	0.50
22:DA:1830:C:C4'	24:DC:14:HIS:HE1	2.25	0.50
22:DA:2056:G:N2	22:DA:2057:G:C8	2.79	0.50
22:DA:2151:U:H2'	22:DA:2152:G:H8	1.75	0.50
22:DA:2282:G:N3	22:DA:2425:A:N6	2.59	0.50
22:DA:2305:U:H4'	58:DF:132:ARG:HG2	1.93	0.50
22:DA:2639:A:C2	22:DA:2778:A:C8	2.99	0.50
22:DA:2748:A:C4	22:DA:2757:A:N6	2.80	0.50
24:DC:52:HIS:NE2	24:DC:218:THR:HG23	2.27	0.50
26:DE:105:LEU:HD12	26:DE:200:LEU:HD21	1.92	0.50
33:DL:63:LYS:HB3	51:D3:12:ARG:HD2	1.94	0.50
33:DL:111:ILE:HA	33:DL:128:THR:OG1	2.12	0.50
37:DP:16:VAL:HG13	37:DP:19:PHE:HE2	1.77	0.50
38:DQ:89:ILE:HG22	38:DQ:91:ARG:H	1.77	0.50
44:DW:77:LYS:N	44:DW:77:LYS:HZ2	2.09	0.50
47:DZ:40:THR:H	47:DZ:43:ILE:HD11	1.75	0.50
1:AA:183:C:O2'	1:AA:184:G:H5'	2.11	0.50
1:AA:198:G:N2	1:AA:220:G:H1'	2.27	0.50
1:AA:327:A:O3'	1:AA:328:C:H4'	2.11	0.50
1:AA:479:U:O2'	1:AA:480:U:H5'	2.12	0.50
1:AA:604:G:C2	1:AA:635:A:C2	3.00	0.50
2:AB:74:ALA:O	2:AB:75:ALA:HB2	2.11	0.50
5:AE:77:ASN:CG	5:AE:78:GLY:N	2.64	0.50
9:AI:11:ARG:HA	9:AI:105:ARG:HH12	1.75	0.50
14:AN:42:ASN:HD21	14:AN:46:LYS:HZ1	1.57	0.50
22:BA:1079:C:C4	22:BA:1080:A:N7	2.79	0.50
22:BA:1564:C:O2'	22:BA:1565:C:H5'	2.12	0.50
22:BA:1820:U:O2	24:BC:199:HIS:HB3	2.12	0.50
22:BA:2489:U:O2	22:BA:2491:U:C4	2.64	0.50
22:BA:2495:G:O2'	22:BA:2496:C:H5'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2527:C:O5'	22:BA:2527:C:H6	1.93	0.50
22:BA:2572:A:N7	25:BD:150:GLN:HB3	2.25	0.50
34:BM:64:TRP:CH2	34:BM:106:ASP:HB2	2.47	0.50
35:BN:79:LEU:O	35:BN:80:PHE:CB	2.58	0.50
41:BT:13:ALA:O	41:BT:32:LEU:HB2	2.11	0.50
44:BW:76:ARG:CG	44:BW:76:ARG:NH2	2.62	0.50
48:B0:53:VAL:O	48:B0:54:ILE:O	2.29	0.50
51:B3:56:LEU:H	51:B3:56:LEU:CD2	2.21	0.50
53:CA:102:G:H2'	53:CA:103:U:H6	1.76	0.50
53:CA:322:C:O2	53:CA:332:G:N2	2.44	0.50
53:CA:1146:A:C6	53:CA:1147:C:C4	2.99	0.50
53:CA:1241:G:H2'	53:CA:1242:G:C8	2.35	0.50
10:CJ:30:LYS:HG3	10:CJ:36:VAL:HG22	1.91	0.50
10:CJ:33:GLY:O	10:CJ:35:GLN:N	2.43	0.50
22:DA:169:G:H2'	22:DA:170:U:C6	2.46	0.50
22:DA:750:A:H5"	22:DA:751:A:OP2	2.11	0.50
22:DA:1009:A:C2	22:DA:1010:A:C2	2.99	0.50
22:DA:1475:G:N3	22:DA:1475:G:H2'	2.26	0.50
22:DA:1865:U:O4	22:DA:1875:G:C2	2.65	0.50
22:DA:2009:A:N6	62:DA:3384:HOH:O	2.45	0.50
22:DA:2353:G:H2'	22:DA:2354:C:O4'	2.11	0.50
22:DA:2356:U:H2'	22:DA:2357:G:O4'	2.12	0.50
22:DA:2726:A:O2'	22:DA:2727:A:C5'	2.59	0.50
22:DA:2752:C:O2'	22:DA:2753:A:O4'	2.21	0.50
57:DB:17:C:H2'	57:DB:18:G:H8	1.77	0.50
24:DC:68:ARG:HD3	24:DC:103:ILE:HD13	1.93	0.50
28:DG:95:ALA:HB3	28:DG:127:GLN:HA	1.93	0.50
35:DN:31:HIS:O	35:DN:33:ILE:HG13	2.11	0.50
38:DQ:91:ARG:HH11	39:DR:10:LYS:HB3	1.73	0.50
39:DR:78:ARG:HB3	39:DR:83:TYR:CD1	2.46	0.50
40:DS:4:ILE:HG22	40:DS:106:VAL:HG13	1.92	0.50
42:DU:35:VAL:HG12	42:DU:36:GLU:N	2.26	0.50
43:DV:27:PRO:O	43:DV:88:HIS:HA	2.12	0.50
44:DW:51:GLY:HA2	44:DW:59:PHE:HD2	1.75	0.50
45:DX:13:THR:HA	45:DX:27:ARG:HA	1.94	0.50
1:AA:76:G:C2	1:AA:95:C:N3	2.79	0.50
1:AA:112:G:N1	1:AA:330:C:C4	2.80	0.50
1:AA:433:G:H2'	1:AA:434:U:H5'	1.93	0.50
1:AA:920:U:H2'	1:AA:921:U:C6	2.46	0.50
1:AA:1449:C:C2'	1:AA:1450:U:H5'	2.41	0.50
1:AA:1461:G:H2'	1:AA:1462:C:H6	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:19:THR:HB	2:AB:37:VAL:HB	1.92	0.50
5:AE:85:LYS:HG3	5:AE:94:PHE:HB2	1.93	0.50
6:AF:9:MET:HE1	18:AR:64:LEU:HB3	1.92	0.50
6:AF:66:ALA:HB1	6:AF:67:PRO:HD2	1.94	0.50
10:AJ:42:LEU:HB3	10:AJ:43:PRO:CD	2.40	0.50
12:AL:74:GLN:O	12:AL:75:GLU:C	2.50	0.50
22:BA:141:G:N1	41:BT:2:ILE:HG23	2.27	0.50
22:BA:2296:U:C4'	22:BA:2297:A:OP1	2.58	0.50
22:BA:2492:U:O2'	22:BA:2493:U:H5'	2.11	0.50
22:BA:2563:U:O2	22:BA:2565:A:H8	1.95	0.50
23:BB:8:C:H2'	23:BB:9:G:O5'	2.10	0.50
24:BC:203:VAL:O	24:BC:204:LEU:HB2	2.12	0.50
24:BC:259:ASN:O	24:BC:260:LYS:HB2	2.11	0.50
25:BD:140:HIS:N	25:BD:140:HIS:CD2	2.79	0.50
28:BG:117:PRO:HD2	28:BG:120:ILE:HG21	1.94	0.50
29:BH:16:GLY:C	29:BH:51:ARG:HH21	2.14	0.50
29:BH:68:ARG:HH22	29:BH:72:ILE:HG21	1.76	0.50
35:BN:73:ASN:HA	35:BN:76:VAL:CG1	2.41	0.50
37:BP:111:GLU:CD	37:BP:111:GLU:H	2.15	0.50
38:BQ:18:LYS:O	38:BQ:18:LYS:HG3	2.11	0.50
46:BY:41:HIS:NE2	46:BY:42:LEU:HD13	2.27	0.50
47:BZ:29:ARG:CG	47:BZ:29:ARG:NH2	2.72	0.50
53:CA:211:G:N3	53:CA:211:G:H2'	2.27	0.50
53:CA:255:G:H4'	17:CQ:18:LYS:HB2	1.94	0.50
53:CA:1406:U:H2'	53:CA:1407:C:H5'	1.92	0.50
2:CB:101:THR:O	2:CB:102:ASN:HB2	2.12	0.50
6:CF:81:ASN:O	6:CF:83:ALA:N	2.45	0.50
6:CF:86:ARG:HH11	18:CR:63:TYR:HB3	1.71	0.50
12:CL:3:VAL:HG23	12:CL:4:ASN:N	2.24	0.50
55:CM:16:ILE:HD12	55:CM:16:ILE:N	2.27	0.50
55:CM:18:LEU:H	55:CM:18:LEU:HD12	1.75	0.50
19:CS:28:LYS:HB3	19:CS:29:PRO:HD2	1.94	0.50
20:CT:14:GLU:HA	20:CT:17:ARG:HB2	1.93	0.50
22:DA:74:A:H4'	22:DA:75:G:O5'	2.11	0.50
22:DA:163:C:O2'	22:DA:164:C:O5'	2.29	0.50
22:DA:204:A:C4	22:DA:206:U:C4	3.00	0.50
22:DA:311:A:C2	22:DA:328:U:O4	2.64	0.50
22:DA:605:G:N3	22:DA:657:U:O2'	2.44	0.50
22:DA:628:G:O2'	22:DA:629:G:C8	2.61	0.50
22:DA:767:U:O2'	22:DA:768:G:H5'	2.12	0.50
22:DA:1156:A:P	38:DQ:54:ARG:HE	2.34	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1171:G:N2	22:DA:1179:G:H1'	2.27	0.50
22:DA:2232:C:OP1	45:DX:26:ARG:NH1	2.44	0.50
22:DA:2234:G:C4	22:DA:2235:G:C8	3.00	0.50
22:DA:2307:G:O2'	22:DA:2308:G:C8	2.61	0.50
22:DA:2531:A:H5"	28:DG:156:TYR:CZ	2.46	0.50
22:DA:2700:A:C2	22:DA:2708:G:C2	2.99	0.50
58:DF:160:LYS:HD3	58:DF:161:SER:N	2.27	0.50
29:DH:103:VAL:C	29:DH:105:ALA:H	2.15	0.50
31:DJ:44:TYR:CD2	31:DJ:44:TYR:C	2.85	0.50
31:DJ:45:THR:C	31:DJ:47:HIS:N	2.65	0.50
45:DX:63:ILE:CD1	45:DX:64:ASP:H	2.21	0.50
52:D4:3:VAL:O	52:D4:4:ARG:CB	2.59	0.50
1:AA:214:C:O2'	1:AA:215:C:O5'	2.29	0.50
1:AA:279:A:H5'	1:AA:279:A:C8	2.46	0.50
1:AA:563:A:C8	1:AA:567:G:O4'	2.64	0.50
1:AA:757:U:O2'	1:AA:879:C:H1'	2.12	0.50
1:AA:1138:G:N3	1:AA:1138:G:C2'	2.61	0.50
1:AA:1532:U:H2'	1:AA:1534:A:H5'	1.93	0.50
2:AB:68:PHE:CD2	2:AB:83:ALA:HB1	2.47	0.50
18:AR:66:LEU:O	18:AR:67:LEU:HD23	2.11	0.50
19:AS:79:TYR:CZ	19:AS:80:ARG:HB2	2.46	0.50
22:BA:278:A:N3	22:BA:278:A:H2'	2.27	0.50
22:BA:1000:A:H62	22:BA:1154:G:H2'	1.77	0.50
22:BA:2470:G:O2'	22:BA:2471:A:H5'	2.11	0.50
23:BB:94:A:H2'	23:BB:95:U:H6	1.77	0.50
28:BG:126:THR:HG22	28:BG:127:GLN:N	2.27	0.50
30:BI:72:THR:HB	30:BI:112:LYS:NZ	2.27	0.50
33:BL:7:SER:HB2	33:BL:8:PRO:HD2	1.94	0.50
33:BL:78:ARG:HB3	33:BL:113:ALA:HB3	1.93	0.50
37:BP:33:GLU:CA	37:BP:38:ARG:HH11	2.24	0.50
40:BS:43:ALA:O	40:BS:47:VAL:HG12	2.11	0.50
42:BU:94:PHE:O	42:BU:94:PHE:CD1	2.65	0.50
53:CA:191:G:H2'	53:CA:192:A:C8	2.47	0.50
53:CA:1084:G:C5	53:CA:1085:U:C4	3.00	0.50
3:CC:104:GLU:HG2	3:CC:105:VAL:N	2.26	0.50
5:CE:25:LYS:HB2	5:CE:25:LYS:NZ	2.27	0.50
9:CI:15:ALA:O	9:CI:66:VAL:HG23	2.12	0.50
12:CL:24:GLU:O	12:CL:25:ALA:HB3	2.12	0.50
20:CT:2:ASN:O	20:CT:3:ILE:C	2.50	0.50
22:DA:64:A:OP1	41:DT:77:ARG:HA	2.10	0.50
22:DA:229:C:O2'	22:DA:230:G:C4'	2.60	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:329:G:O6	42:DU:16:LYS:HB2	2.11	0.50
22:DA:532:A:H4'	22:DA:533:G:C8	2.47	0.50
22:DA:570:G:C5	22:DA:2030:A:N7	2.80	0.50
22:DA:716:A:C3'	22:DA:717:C:H5"	2.42	0.50
22:DA:1053:C:N4	22:DA:1054:A:H62	2.09	0.50
22:DA:1349:C:H2'	22:DA:1350:C:C5	2.46	0.50
22:DA:1877:A:H2'	22:DA:1878:G:C8	2.47	0.50
22:DA:2182:U:H2'	22:DA:2183:A:C8	2.47	0.50
22:DA:2262:U:H1'	22:DA:2328:A:H1'	1.94	0.50
22:DA:2285:C:C5	49:D1:5:ARG:NH2	2.79	0.50
22:DA:2415:G:H4'	33:DL:65:GLY:O	2.12	0.50
22:DA:2533:U:H4'	22:DA:2664:G:H4'	1.94	0.50
22:DA:2808:G:O2'	22:DA:2809:A:H8	1.92	0.50
25:DD:48:ILE:CG2	25:DD:84:LEU:HD23	2.41	0.50
30:DI:105:LEU:HD21	30:DI:129:GLU:OE2	2.12	0.50
32:DK:1:MET:HB2	32:DK:32:TYR:HB3	1.93	0.50
32:DK:21:CYS:SG	32:DK:39:ILE:HG22	2.52	0.50
32:DK:38:ILE:C	32:DK:39:ILE:HD13	2.32	0.50
34:DM:136:MET:HE1	43:DV:57:TYR:HD2	1.76	0.50
37:DP:31:VAL:HG12	37:DP:38:ARG:HG2	1.92	0.50
44:DW:49:ASN:HB2	44:DW:60:ALA:HA	1.93	0.50
47:DZ:43:ILE:HD12	47:DZ:44:ARG:N	2.27	0.50
49:D1:10:LEU:HD23	49:D1:20:TYR:HB3	1.94	0.50
51:D3:23:HIS:ND1	51:D3:24:LYS:O	2.45	0.50
1:AA:72:A:HO2'	1:AA:73:C:H6	1.60	0.50
1:AA:276:G:O3'	17:AQ:44:HIS:HE1	1.95	0.50
1:AA:767:A:H2'	1:AA:768:A:O4'	2.12	0.50
1:AA:1157:A:C5	1:AA:1180:A:C6	3.00	0.50
1:AA:1316:G:H5"	1:AA:1317:C:OP2	2.12	0.50
1:AA:1323:G:H2'	1:AA:1324:A:H8	1.76	0.50
1:AA:1349:A:OP1	9:AI:122:ARG:N	2.44	0.50
1:AA:1477:U:H2'	1:AA:1478:U:C6	2.46	0.50
9:AI:21:LYS:HG2	9:AI:22:PRO:HD2	1.94	0.50
12:AL:2:THR:HB	12:AL:5:GLN:HG3	1.94	0.50
13:AM:2:ARG:HA	13:AM:7:ASN:O	2.12	0.50
16:AP:67:ILE:CG2	16:AP:72:ALA:HB2	2.42	0.50
22:BA:387:U:H4'	22:BA:388:G:O5'	2.10	0.50
22:BA:780:G:H2'	22:BA:782:A:N7	2.27	0.50
22:BA:807:U:H2'	22:BA:808:G:H8	1.76	0.50
22:BA:1075:C:C4	22:BA:1076:C:N4	2.80	0.50
22:BA:1786:A:C4	22:BA:1938:A:C6	2.99	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2294:G:H5"	36:BO:10:ARG:HD3	1.94	0.50
25:BD:99:GLU:CG	25:BD:100:LEU:H	2.24	0.50
26:BE:79:ARG:HG2	26:BE:80:SER:H	1.74	0.50
26:BE:145:ASP:HB3	26:BE:184:ASP:HB2	1.94	0.50
28:BG:82:PHE:CZ	28:BG:137:LYS:HB2	2.46	0.50
29:BH:53:GLU:HG2	29:BH:53:GLU:O	2.11	0.50
30:BI:58:ILE:HG22	30:BI:60:VAL:HG23	1.92	0.50
32:BK:58:LEU:HA	32:BK:89:ASN:OD1	2.11	0.50
32:BK:103:VAL:O	32:BK:122:VAL:HB	2.12	0.50
33:BL:104:GLN:HA	33:BL:104:GLN:HE21	1.76	0.50
35:BN:28:LEU:O	35:BN:32:GLU:N	2.43	0.50
39:BR:49:ILE:O	39:BR:49:ILE:CG1	2.59	0.50
49:B1:34:GLU:HG2	49:B1:49:LYS:HG3	1.92	0.50
53:CA:243:A:H4'	53:CA:244:U:OP2	2.12	0.50
53:CA:1124:G:N2	53:CA:1127:G:N2	2.60	0.50
2:CB:9:LEU:C	2:CB:11:ALA:H	2.15	0.50
3:CC:181:ILE:HG12	3:CC:202:PHE:HB2	1.93	0.50
4:CD:137:SER:CB	4:CD:138:PRO:HD2	2.39	0.50
55:CM:28:ARG:O	55:CM:28:ARG:HD2	2.12	0.50
17:CQ:67:SER:OG	17:CQ:70:LYS:HB2	2.11	0.50
19:CS:52:ASN:HD21	19:CS:55:GLN:N	2.10	0.50
22:DA:49:A:C6	22:DA:177:G:C6	3.00	0.50
22:DA:90:U:H3'	22:DA:91:A:H5"	1.93	0.50
22:DA:109:C:H4'	22:DA:348:A:H4'	1.94	0.50
22:DA:242:G:C8	51:D3:4:LYS:HG3	2.47	0.50
22:DA:638:G:O2'	22:DA:639:U:O4'	2.22	0.50
22:DA:678:C:H2'	22:DA:679:C:C6	2.47	0.50
22:DA:836:G:C6	22:DA:837:C:C4	3.00	0.50
22:DA:995:C:H5"	38:DQ:53:LYS:HG2	1.93	0.50
22:DA:1186:G:H2'	22:DA:1187:G:O4'	2.12	0.50
22:DA:1244:A:HO2'	26:DE:29:HIS:CE1	2.30	0.50
22:DA:1478:G:C6	22:DA:1514:G:C2	3.00	0.50
22:DA:1936:A:H2	22:DA:1943:U:O4	1.94	0.50
22:DA:2191:A:H5"	22:DA:2192:U:OP2	2.12	0.50
24:DC:152:GLN:HA	24:DC:155:ARG:HD3	1.94	0.50
24:DC:166:ARG:HA	24:DC:171:VAL:HA	1.93	0.50
40:DS:32:ALA:O	40:DS:33:LEU:HB2	2.11	0.50
1:AA:198:G:H2'	1:AA:199:A:C8	2.46	0.50
1:AA:393:A:OP2	16:AP:12:LYS:HD2	2.12	0.50
1:AA:1022:A:H2'	1:AA:1023:U:O4'	2.12	0.50
1:AA:1167:A:C8	1:AA:1169:A:C6	3.00	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1449:C:H2'	1:AA:1450:U:H5'	1.93	0.50
2:AB:148:GLY:HA2	2:AB:151:LYS:HB3	1.93	0.50
4:AD:29:THR:HG22	4:AD:30:LYS:N	2.27	0.50
10:AJ:70:HIS:CD2	10:AJ:70:HIS:H	2.29	0.50
17:AQ:49:ASN:O	17:AQ:50:ASN:C	2.49	0.50
22:BA:790:U:O2'	22:BA:791:C:C5'	2.60	0.50
22:BA:900:A:C3'	22:BA:901:C:H5'	2.41	0.50
22:BA:1411:U:C4	22:BA:1412:U:C4	3.00	0.50
22:BA:1605:C:H3'	22:BA:1606:C:C5'	2.42	0.50
22:BA:1858:A:O2'	22:BA:1859:U:C5'	2.60	0.50
22:BA:2199:A:H5'	22:BA:2200:C:H5	1.77	0.50
22:BA:2257:U:O2'	22:BA:2258:C:H5'	2.12	0.50
22:BA:2515:C:O2'	22:BA:2516:A:H5'	2.12	0.50
22:BA:2531:A:P	28:BG:174:LYS:HG3	2.52	0.50
24:BC:12:ARG:CG	24:BC:12:ARG:NH1	2.59	0.50
25:BD:110:THR:HA	25:BD:171:THR:HA	1.93	0.50
25:BD:177:VAL:HG23	25:BD:177:VAL:O	2.11	0.50
27:BF:87:LYS:HG3	27:BF:88:VAL:N	2.26	0.50
27:BF:134:GLN:NE2	27:BF:150:GLY:H	2.10	0.50
28:BG:117:PRO:O	28:BG:118:ALA:O	2.29	0.50
38:BQ:68:ALA:O	38:BQ:71:ASN:N	2.44	0.50
38:BQ:114:ALA:C	38:BQ:116:LEU:N	2.65	0.50
42:BU:42:LYS:N	42:BU:42:LYS:HD3	2.26	0.50
44:BW:22:VAL:O	44:BW:25:PHE:HB2	2.11	0.50
44:BW:51:GLY:HA3	44:BW:59:PHE:HE2	1.72	0.50
53:CA:410:G:P	4:CD:25:ARG:HD2	2.52	0.50
53:CA:693:G:OP1	11:CK:126:ARG:NH1	2.37	0.50
53:CA:828:U:C2'	53:CA:829:G:O5'	2.59	0.50
53:CA:930:C:H2'	53:CA:931:C:H5'	1.92	0.50
53:CA:936:C:H2'	53:CA:937:A:H8	1.77	0.50
53:CA:1243:C:N4	53:CA:1244:G:O6	2.45	0.50
53:CA:1268:G:H21	53:CA:1327:C:C1'	2.23	0.50
2:CB:127:LYS:HE2	2:CB:136:ARG:NH2	2.27	0.50
5:CE:105:ILE:HG22	5:CE:105:ILE:O	2.10	0.50
54:CG:16:LYS:HE2	9:CI:45:MET:SD	2.51	0.50
8:CH:9:MET:HG3	8:CH:26:MET:SD	2.52	0.50
22:DA:8:C:O2'	22:DA:9:G:H5'	2.11	0.50
22:DA:526:A:C6	22:DA:2626:C:H4'	2.47	0.50
22:DA:752:A:O2'	22:DA:753:A:OP2	2.19	0.50
22:DA:870:U:C2'	22:DA:871:U:H5'	2.42	0.50
22:DA:1063:G:H2'	22:DA:1064:C:C6	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1229:C:H2'	22:DA:1230:A:C8	2.47	0.50
22:DA:1237:A:O2'	22:DA:1238:G:H4'	2.11	0.50
22:DA:1563:U:H2'	22:DA:1564:C:C6	2.46	0.50
22:DA:1608:A:N7	22:DA:1611:C:N4	2.60	0.50
22:DA:1754:A:C6	22:DA:1755:A:C6	3.00	0.50
22:DA:2151:U:H2'	22:DA:2152:G:C8	2.47	0.50
22:DA:2250:G:H21	22:DA:2496:C:H5"	1.76	0.50
22:DA:2688:G:H1'	22:DA:2721:A:N6	2.27	0.50
22:DA:2899:A:O2'	22:DA:2900:A:H5'	2.11	0.50
26:DE:126:VAL:HG13	26:DE:127:GLU:N	2.27	0.50
28:DG:98:LYS:HB2	28:DG:101:VAL:HB	1.93	0.50
34:DM:13:HIS:O	34:DM:14:LYS:HB2	2.12	0.50
35:DN:103:ARG:HG3	35:DN:104:ALA:H	1.77	0.50
36:DO:88:LYS:O	36:DO:89:ASP:HB3	2.12	0.50
42:DU:73:ASN:HB3	42:DU:95:PHE:CE2	2.47	0.50
45:DX:58:ILE:HG12	45:DX:66:VAL:HG11	1.92	0.50
1:AA:66:A:O4'	1:AA:173:U:C4	2.65	0.49
1:AA:72:A:O2'	1:AA:73:C:O4'	2.28	0.49
1:AA:307:C:H6	1:AA:307:C:O5'	1.95	0.49
6:AF:46:GLN:HE21	6:AF:46:GLN:HA	1.77	0.49
8:AH:15:ASN:O	8:AH:18:ALA:HB3	2.12	0.49
10:AJ:22:THR:HG22	10:AJ:23:ALA:N	2.26	0.49
12:AL:23:LEU:C	12:AL:25:ALA:H	2.14	0.49
12:AL:115:LYS:O	12:AL:116:TYR:CB	2.60	0.49
16:AP:67:ILE:HG23	16:AP:68:SER:O	2.11	0.49
22:BA:271:G:C4	22:BA:272:A:N7	2.80	0.49
22:BA:807:U:C2	22:BA:808:G:C8	3.00	0.49
22:BA:1079:C:C4	22:BA:1088:A:C2	2.97	0.49
22:BA:1179:G:C5	22:BA:1180:U:C1'	2.81	0.49
22:BA:1830:C:H2'	22:BA:1831:G:C8	2.46	0.49
22:BA:2049:G:C2'	22:BA:2050:C:H5'	2.42	0.49
22:BA:2389:G:H5"	22:BA:2390:U:O4'	2.12	0.49
24:BC:29:PHE:CZ	24:BC:31:PRO:HG2	2.46	0.49
25:BD:190:LYS:O	25:BD:191:GLY:O	2.29	0.49
27:BF:35:LEU:HD12	27:BF:35:LEU:O	2.11	0.49
27:BF:37:MET:HE3	27:BF:151:LEU:HB3	1.93	0.49
27:BF:120:SER:O	27:BF:127:TYR:CD1	2.65	0.49
30:BI:21:PRO:HB2	30:BI:22:PRO:HD3	1.94	0.49
36:BO:31:THR:HG23	36:BO:34:HIS:H	1.76	0.49
36:BO:36:TYR:N	36:BO:36:TYR:HD2	2.10	0.49
38:BQ:85:ALA:O	38:BQ:87:VAL:C	2.51	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BU:25:LYS:O	42:BU:26:ASN:HB3	2.12	0.49
53:CA:69:G:H2'	53:CA:70:U:C6	2.47	0.49
53:CA:72:A:H2'	53:CA:73:C:C6	2.47	0.49
53:CA:239:U:H5"	53:CA:239:U:H6	1.75	0.49
53:CA:360:G:O2'	53:CA:361:G:H5'	2.13	0.49
53:CA:612:C:H2'	53:CA:613:C:C6	2.46	0.49
53:CA:1050:G:O6	53:CA:1209:C:N3	2.45	0.49
53:CA:1087:G:N2	53:CA:1099:G:H1'	2.27	0.49
53:CA:1152:A:H2'	53:CA:1153:G:C8	2.47	0.49
53:CA:1264:U:H2'	53:CA:1265:C:H6	1.72	0.49
53:CA:1391:U:O2'	53:CA:1392:G:H5'	2.12	0.49
53:CA:1480:A:C5	53:CA:1481:U:C5	3.00	0.49
5:CE:56:PRO:O	5:CE:59:ILE:HG23	2.11	0.49
10:CJ:45:ARG:O	10:CJ:46:LYS:C	2.49	0.49
19:CS:68:HIS:HB3	19:CS:72:GLU:HG3	1.93	0.49
21:CU:33:ARG:HH22	21:CU:34:ARG:HH11	1.59	0.49
22:DA:78:U:H2'	22:DA:79:C:C6	2.46	0.49
22:DA:270:A:N1	22:DA:369:U:H1'	2.26	0.49
22:DA:332:A:C8	22:DA:335:C:N4	2.80	0.49
22:DA:476:G:O2'	22:DA:477:A:H3'	2.10	0.49
22:DA:1062:G:OP1	22:DA:1070:A:OP2	2.30	0.49
22:DA:1304:A:C6	22:DA:1305:C:C4	3.00	0.49
22:DA:1475:G:O2'	22:DA:1476:U:H6	1.95	0.49
22:DA:1722:A:O2'	22:DA:1723:G:O4'	2.29	0.49
22:DA:2502:G:H5'	22:DA:2503:A:H5"	1.94	0.49
22:DA:2748:A:C2	22:DA:2757:A:C5	3.00	0.49
22:DA:2798:U:H5'	22:DA:2800:A:N6	2.27	0.49
57:DB:84:G:N2	57:DB:93:C:C2	2.79	0.49
24:DC:65:ASP:OD2	24:DC:68:ARG:HG2	2.12	0.49
24:DC:127:ASN:O	24:DC:190:THR:HA	2.12	0.49
58:DF:13:LYS:HD2	58:DF:13:LYS:N	2.27	0.49
32:DK:115:ILE:HG22	32:DK:116:ILE:N	2.27	0.49
35:DN:98:LEU:HD21	48:D0:53:VAL:HG11	1.93	0.49
36:DO:67:ASN:H	36:DO:70:ALA:HB3	1.76	0.49
37:DP:7:LEU:O	37:DP:7:LEU:HD12	2.12	0.49
39:DR:8:GLY:HA3	39:DR:23:GLU:HG2	1.92	0.49
45:DX:58:ILE:O	45:DX:58:ILE:HG22	2.12	0.49
46:DY:57:LEU:HD13	46:DY:60:LYS:HE3	1.94	0.49
52:D4:3:VAL:HB	52:D4:37:GLN:OE1	2.11	0.49
1:AA:213:G:N7	1:AA:214:C:C4	2.80	0.49
1:AA:258:G:N2	1:AA:259:G:H1'	2.26	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:500:G:H2'	1:AA:501:C:C6	2.46	0.49
5:AE:45:VAL:CG2	5:AE:117:ALA:HA	2.42	0.49
11:AK:62:ALA:CB	11:AK:91:GLY:HA3	2.41	0.49
22:BA:21:A:O2'	22:BA:22:C:H5'	2.12	0.49
22:BA:149:A:H2'	22:BA:150:U:H6	1.77	0.49
22:BA:228:C:H4'	22:BA:229:C:C5'	2.38	0.49
22:BA:1256:G:H2'	26:BE:77:ILE:HD11	1.91	0.49
22:BA:1498:C:O2'	22:BA:1499:C:C6	2.63	0.49
22:BA:1568:G:H4'	24:BC:58:LYS:HG2	1.94	0.49
22:BA:1799:G:H4'	22:BA:1800:C:O5'	2.11	0.49
22:BA:1858:A:O2'	22:BA:1859:U:O5'	2.30	0.49
22:BA:1998:A:O2'	22:BA:1999:C:H5'	2.12	0.49
24:BC:15:VAL:HA	24:BC:203:VAL:HG11	1.94	0.49
24:BC:140:VAL:HG11	24:BC:189:ALA:HB1	1.93	0.49
26:BE:27:LEU:O	26:BE:31:VAL:HG23	2.12	0.49
30:BI:27:LEU:C	30:BI:27:LEU:HD12	2.33	0.49
35:BN:13:ASN:O	35:BN:14:SER:C	2.50	0.49
41:BT:23:ALA:C	41:BT:25:GLU:H	2.15	0.49
41:BT:69:ARG:NE	41:BT:70:HIS:H	2.11	0.49
43:BV:20:LEU:HD23	43:BV:25:LYS:HB2	1.94	0.49
53:CA:502:A:H2'	53:CA:503:C:O4'	2.12	0.49
53:CA:1317:C:OP1	14:CN:56:PRO:HD2	2.12	0.49
2:CB:186:VAL:O	2:CB:186:VAL:HG23	2.12	0.49
5:CE:68:ARG:O	5:CE:70:MET:HG2	2.12	0.49
22:DA:81:G:H2'	22:DA:82:U:O4'	2.13	0.49
22:DA:197:A:N6	22:DA:2430:A:H2'	2.19	0.49
22:DA:357:C:H2'	22:DA:358:U:H6	1.77	0.49
22:DA:379:G:N1	22:DA:380:G:C4	2.80	0.49
22:DA:503:A:C5	22:DA:506:G:C5	3.00	0.49
22:DA:668:A:C5	22:DA:670:A:C8	3.00	0.49
22:DA:876:C:N4	22:DA:902:C:C4	2.80	0.49
22:DA:1351:C:O2'	22:DA:1571:A:H1'	2.12	0.49
22:DA:1416:G:C2	22:DA:1417:C:C4	3.00	0.49
22:DA:1416:G:N1	22:DA:1417:C:C4	2.80	0.49
22:DA:2316:G:H2'	22:DA:2317:A:H8	1.77	0.49
22:DA:2550:G:C5	22:DA:2551:C:C4	3.00	0.49
22:DA:2571:U:H2'	22:DA:2572:A:OP1	2.11	0.49
22:DA:2682:A:O2'	22:DA:2683:C:O5'	2.30	0.49
26:DE:178:VAL:HG13	26:DE:179:SER:N	2.27	0.49
58:DF:36:ASN:O	58:DF:37:MET:CB	2.60	0.49
29:DH:89:LYS:HD2	29:DH:124:THR:HA	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DL:93:ASN:O	33:DL:95:LEU:N	2.40	0.49
38:DQ:63:ARG:O	38:DQ:66:ALA:N	2.39	0.49
38:DQ:77:LYS:CE	38:DQ:116:LEU:HD11	2.42	0.49
38:DQ:87:VAL:HG11	39:DR:52:PRO:CG	2.42	0.49
41:DT:39:THR:CG2	41:DT:42:GLU:HB2	2.29	0.49
43:DV:75:GLN:HG3	43:DV:92:VAL:HG13	1.93	0.49
45:DX:36:ARG:HG2	45:DX:47:THR:HB	1.94	0.49
49:D1:43:ARG:NH2	49:D1:43:ARG:HB2	2.27	0.49
51:D3:18:LYS:HD2	51:D3:19:GLY:H	1.77	0.49
1:AA:198:G:C6	1:AA:220:G:C2	3.00	0.49
1:AA:1005:A:H2'	1:AA:1006:G:O4'	2.12	0.49
1:AA:1052:U:C5'	1:AA:1053:G:OP2	2.59	0.49
1:AA:1160:G:N2	1:AA:1161:C:C2	2.81	0.49
1:AA:1226:C:H4'	1:AA:1227:A:OP1	2.11	0.49
1:AA:1381:U:H2'	1:AA:1382:C:C6	2.48	0.49
8:AH:9:MET:CE	8:AH:32:LYS:HA	2.42	0.49
8:AH:105:THR:HG22	8:AH:121:GLY:O	2.13	0.49
11:AK:22:ILE:O	11:AK:22:ILE:HG13	2.11	0.49
11:AK:126:ARG:C	21:AU:33:ARG:HH12	2.15	0.49
15:AO:16:ARG:O	15:AO:17:ASP:CB	2.60	0.49
17:AQ:45:VAL:O	17:AQ:47:ASP:OD1	2.30	0.49
21:AU:7:GLU:HB2	21:AU:11:PHE:CE1	2.47	0.49
22:BA:580:U:H2'	22:BA:581:C:C6	2.47	0.49
22:BA:904:G:C2	22:BA:905:A:N9	2.80	0.49
22:BA:1494:A:O2'	22:BA:1495:A:H5'	2.12	0.49
22:BA:2436:G:N3	22:BA:2598:A:H2	2.11	0.49
23:BB:94:A:O2'	23:BB:95:U:H5'	2.11	0.49
25:BD:91:THR:C	25:BD:93:GLY:N	2.63	0.49
26:BE:5:LEU:HD12	26:BE:10:SER:HB3	1.94	0.49
31:BJ:45:THR:H	31:BJ:46:PRO:HD3	1.77	0.49
33:BL:127:VAL:HG23	33:BL:131:ALA:HB3	1.93	0.49
35:BN:23:ASN:HD22	35:BN:23:ASN:H	1.58	0.49
35:BN:74:GLU:O	35:BN:77:ALA:HB3	2.12	0.49
39:BR:81:LYS:HD3	39:BR:81:LYS:N	2.25	0.49
44:BW:58:LEU:HD13	44:BW:58:LEU:N	2.27	0.49
51:B3:31:ILE:O	51:B3:31:ILE:HG13	2.11	0.49
53:CA:21:G:H1'	53:CA:914:A:N6	2.27	0.49
53:CA:496:A:N3	53:CA:496:A:C2'	2.73	0.49
53:CA:527:G:C2	53:CA:528:C:C6	3.00	0.49
53:CA:865:A:C2	53:CA:918:A:H4'	2.47	0.49
53:CA:866:C:C4	53:CA:867:G:H1'	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:888:G:H3'	53:CA:889:A:C5'	2.41	0.49
53:CA:1316:G:H22	53:CA:1318:A:H3'	1.76	0.49
3:CC:118:SER:O	3:CC:122:GLN:HG2	2.13	0.49
5:CE:11:GLN:HG3	5:CE:40:ASP:O	2.12	0.49
22:DA:380:G:H4'	45:DX:15:ASN:O	2.11	0.49
22:DA:670:A:H1'	22:DA:671:C:OP2	2.13	0.49
22:DA:945:A:C8	22:DA:2448:A:C2	2.99	0.49
22:DA:1071:G:O6	22:DA:1091:G:N7	2.46	0.49
22:DA:1112:G:O2'	22:DA:1113:U:C5'	2.60	0.49
22:DA:1303:G:O2'	22:DA:1304:A:C8	2.50	0.49
22:DA:1326:U:O2'	22:DA:1327:A:O5'	2.30	0.49
22:DA:1390:U:O2'	22:DA:1391:U:H5'	2.12	0.49
22:DA:1810:A:H3'	22:DA:1811:G:C8	2.46	0.49
22:DA:1816:C:O2'	22:DA:1817:G:P	2.70	0.49
22:DA:1973:G:C6	22:DA:1974:C:N4	2.80	0.49
22:DA:1998:A:H4'	22:DA:2724:U:O2'	2.12	0.49
22:DA:2295:C:H2'	22:DA:2296:U:H5'	1.93	0.49
22:DA:2305:U:OP1	58:DF:132:ARG:HG3	2.12	0.49
22:DA:2750:A:H1'	22:DA:2752:C:H41	1.77	0.49
29:DH:90:LEU:HB3	29:DH:123:ARG:HD2	1.94	0.49
35:DN:98:LEU:O	35:DN:112:TYR:HB2	2.12	0.49
40:DS:10:ALA:HB3	40:DS:101:SER:O	2.12	0.49
47:DZ:28:LEU:HD23	47:DZ:28:LEU:N	2.28	0.49
48:D0:41:HIS:C	48:D0:41:HIS:ND1	2.66	0.49
1:AA:213:G:C8	1:AA:214:C:C5	3.00	0.49
1:AA:322:C:O2'	20:AT:17:ARG:CG	2.60	0.49
1:AA:591:U:H2'	1:AA:592:G:H8	1.77	0.49
1:AA:1159:U:N3	1:AA:1182:G:C5	2.81	0.49
1:AA:1305:G:HO2'	1:AA:1306:A:H8	1.61	0.49
1:AA:1489:G:C2'	1:AA:1490:U:H5'	2.42	0.49
4:AD:167:PRO:HB2	4:AD:170:LEU:CD1	2.35	0.49
7:AG:39:GLU:HB2	7:AG:43:TYR:CE2	2.47	0.49
7:AG:49:LEU:CD1	7:AG:60:ALA:HB1	2.42	0.49
7:AG:114:SER:H	7:AG:117:LEU:HD12	1.78	0.49
8:AH:48:PHE:HA	8:AH:60:LEU:HD23	1.93	0.49
22:BA:14:A:N7	22:BA:15:G:C8	2.81	0.49
22:BA:457:A:O4'	22:BA:459:U:C6	2.66	0.49
22:BA:475:C:C4	22:BA:481:G:O6	2.65	0.49
22:BA:1060:U:O4'	22:BA:1062:G:C5'	2.54	0.49
22:BA:1082:U:H5'	30:BI:117:THR:HB	1.94	0.49
22:BA:1327:A:N6	22:BA:1328:A:C2	2.80	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1485:U:C2	22:BA:1505:A:C2	3.00	0.49
22:BA:2847:U:C2'	22:BA:2848:G:H5'	2.42	0.49
25:BD:74:GLU:O	25:BD:75:ALA:C	2.51	0.49
31:BJ:97:PRO:C	31:BJ:99:ARG:H	2.14	0.49
32:BK:7:MET:SD	32:BK:20:MET:HB2	2.52	0.49
35:BN:2:ARG:NH1	35:BN:5:LYS:O	2.46	0.49
36:BO:55:GLU:HB2	36:BO:58:ILE:HG13	1.93	0.49
37:BP:96:LEU:HD12	37:BP:98:TYR:HE1	1.77	0.49
38:BQ:46:TYR:CZ	38:BQ:50:ARG:NH1	2.80	0.49
44:BW:39:GLN:O	44:BW:41:GLY:N	2.45	0.49
53:CA:85:U:O4'	53:CA:85:U:O2	2.31	0.49
53:CA:510:A:H5"	53:CA:511:C:P	2.52	0.49
53:CA:989:U:C4	53:CA:990:C:N4	2.80	0.49
3:CC:5:HIS:CD2	3:CC:183:TYR:HE2	2.29	0.49
9:CI:44:ARG:HH21	9:CI:48:ARG:NH1	2.10	0.49
12:CL:46:SER:O	12:CL:47:ALA:HB2	2.12	0.49
55:CM:2:ARG:HA	55:CM:7:ASN:O	2.12	0.49
14:CN:68:ARG:NH1	14:CN:80:ARG:HH12	2.10	0.49
15:CO:23:SER:HB3	15:CO:26:VAL:CG2	2.43	0.49
22:DA:320:A:N7	26:DE:132:LYS:HB2	2.28	0.49
22:DA:432:A:O2'	22:DA:433:C:H5'	2.12	0.49
22:DA:657:U:H2'	22:DA:658:U:C6	2.48	0.49
22:DA:736:C:O5'	22:DA:736:C:H6	1.95	0.49
22:DA:811:U:C5'	22:DA:812:C:OP2	2.52	0.49
22:DA:862:G:H2'	22:DA:863:A:O4'	2.13	0.49
22:DA:984:A:HO2'	22:DA:985:C:P	2.31	0.49
22:DA:1071:G:N2	22:DA:1090:A:OP2	2.44	0.49
22:DA:1075:C:O2'	22:DA:1076:C:H6	1.95	0.49
22:DA:1236:G:O2'	22:DA:1237:A:C8	2.65	0.49
22:DA:1652:A:C2	22:DA:2006:C:N3	2.80	0.49
22:DA:1992:G:N2	22:DA:1995:U:H5	2.11	0.49
22:DA:2223:G:H2'	22:DA:2224:G:H5'	1.94	0.49
22:DA:2506:U:H3'	22:DA:2506:U:H6	1.78	0.49
22:DA:2746:U:C2'	22:DA:2747:G:H5'	2.41	0.49
22:DA:2852:G:H2'	22:DA:2853:C:O4'	2.13	0.49
22:DA:2898:U:H2'	22:DA:2899:A:H8	1.76	0.49
57:DB:75:G:H1'	43:DV:29:ILE:HG12	1.94	0.49
24:DC:259:ASN:OD1	24:DC:262:THR:HG23	2.12	0.49
28:DG:83:THR:O	28:DG:140:ILE:HD12	2.13	0.49
29:DH:147:VAL:O	29:DH:148:ALA:HB3	2.13	0.49
39:DR:3:ALA:HB2	39:DR:101:ILE:HD13	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DW:54:ARG:C	44:DW:56:HIS:H	2.16	0.49
49:D1:8:ILE:HG22	49:D1:9:LYS:N	2.27	0.49
1:AA:518:C:OP2	1:AA:530:G:H1'	2.12	0.49
1:AA:548:G:H8	1:AA:548:G:H5"	1.78	0.49
1:AA:685:G:O2'	1:AA:686:U:H5'	2.13	0.49
1:AA:953:G:C2	1:AA:954:G:H1'	2.47	0.49
2:AB:41:ASN:HD22	2:AB:42:LEU:N	2.10	0.49
7:AG:145:GLU:HA	7:AG:148:LYS:HD2	1.94	0.49
22:BA:686:U:H1'	50:B2:6:GLN:O	2.12	0.49
22:BA:733:G:C8	22:BA:761:A:N6	2.81	0.49
22:BA:1340:U:H2'	22:BA:1340:U:O2	2.12	0.49
22:BA:1566:A:H5'	24:BC:213:ARG:NH1	2.28	0.49
22:BA:1705:A:N6	22:BA:1706:C:H42	2.10	0.49
24:BC:69:ASN:O	24:BC:70:LYS:C	2.50	0.49
26:BE:46:GLN:CG	26:BE:87:ALA:H	2.24	0.49
26:BE:119:ILE:CD1	26:BE:187:VAL:HA	2.42	0.49
29:BH:81:ALA:HB2	29:BH:147:VAL:HG23	1.94	0.49
29:BH:89:LYS:HG2	29:BH:90:LEU:N	2.16	0.49
35:BN:15:SER:HB3	62:BN:201:HOH:O	2.12	0.49
36:BO:55:GLU:OE1	36:BO:81:ARG:NH1	2.45	0.49
37:BP:77:SER:HG	37:BP:79:VAL:HG13	1.77	0.49
41:BT:11:LEU:HG	41:BT:46:ALA:HB1	1.93	0.49
41:BT:44:LYS:O	41:BT:48:GLN:HG2	2.13	0.49
42:BU:25:LYS:HG2	42:BU:36:GLU:HB3	1.95	0.49
45:BX:39:VAL:O	45:BX:41:SER:N	2.40	0.49
46:BY:59:GLU:O	46:BY:63:ALA:HB3	2.12	0.49
47:BZ:43:ILE:HG13	47:BZ:44:ARG:N	2.26	0.49
53:CA:546:A:P	4:CD:68:GLU:HB3	2.52	0.49
53:CA:770:C:O2'	53:CA:771:G:H5'	2.11	0.49
53:CA:951:G:H1'	53:CA:970:C:O2'	2.11	0.49
3:CC:133:MET:HB2	3:CC:150:VAL:HG21	1.94	0.49
8:CH:77:VAL:HG12	8:CH:84:ILE:HG13	1.93	0.49
9:CI:5:TYR:O	9:CI:19:PHE:HA	2.13	0.49
12:CL:51:VAL:HG12	12:CL:52:CYS:N	2.26	0.49
19:CS:35:ARG:NH1	19:CS:76:THR:HG22	2.27	0.49
22:DA:311:A:O2'	22:DA:332:A:O4'	2.23	0.49
22:DA:673:C:C2'	22:DA:674:G:H5'	2.42	0.49
22:DA:1426:G:H8	22:DA:1426:G:OP2	1.95	0.49
22:DA:1652:A:OP1	35:DN:8:ARG:HD3	2.12	0.49
22:DA:1688:U:O2	22:DA:1700:A:H5'	2.13	0.49
22:DA:2142:A:H2'	22:DA:2143:C:H4'	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DB:54:G:N2	58:DF:25:MET:HE1	2.28	0.49
24:DC:161:VAL:HG13	24:DC:174:ARG:O	2.12	0.49
25:DD:101:PHE:HE2	25:DD:205:PRO:HD3	1.78	0.49
25:DD:196:ALA:O	25:DD:197:THR:C	2.50	0.49
26:DE:111:GLU:HB2	26:DE:114:ARG:HH21	1.77	0.49
28:DG:19:ASN:N	28:DG:19:ASN:HD22	2.11	0.49
30:DI:28:GLY:O	30:DI:29:GLN:C	2.50	0.49
33:DL:3:LEU:O	33:DL:4:ASN:C	2.51	0.49
33:DL:79:LEU:CA	33:DL:82:LEU:HD11	2.40	0.49
44:DW:49:ASN:OD1	44:DW:80:SER:HA	2.13	0.49
47:DZ:16:LEU:HD23	47:DZ:19:HIS:CD2	2.48	0.49
6:AF:12:PRO:HA	6:AF:15:SER:HB2	1.94	0.49
6:AF:91:ARG:CG	6:AF:92:THR:H	2.23	0.49
9:AI:9:GLY:HA2	9:AI:80:HIS:HD2	1.77	0.49
11:AK:22:ILE:HG21	11:AK:95:THR:HG21	1.95	0.49
13:AM:13:HIS:HB3	13:AM:41:ASP:HA	1.93	0.49
17:AQ:18:LYS:O	17:AQ:47:ASP:OD2	2.31	0.49
20:AT:33:LYS:HE2	20:AT:33:LYS:N	2.28	0.49
21:AU:41:THR:O	21:AU:45:LYS:HB2	2.11	0.49
22:BA:164:C:H2'	22:BA:165:A:O4'	2.13	0.49
22:BA:182:A:C6	22:BA:183:C:C4	3.00	0.49
22:BA:2148:G:HO2'	22:BA:2149:U:P	2.36	0.49
22:BA:2365:G:H2'	22:BA:2366:A:C8	2.48	0.49
24:BC:171:VAL:O	24:BC:182:LYS:HA	2.12	0.49
27:BF:60:SER:O	27:BF:61:GLY:C	2.49	0.49
27:BF:76:PHE:O	27:BF:77:LYS:HB2	2.12	0.49
33:BL:132:ARG:HG3	33:BL:142:ILE:HD12	1.94	0.49
36:BO:116:GLN:O	36:BO:117:PHE:HB3	2.12	0.49
38:BQ:51:GLN:HA	38:BQ:54:ARG:HD2	1.94	0.49
38:BQ:63:ARG:NH2	38:BQ:96:ASP:CA	2.76	0.49
40:BS:19:LEU:O	48:B0:21:LEU:HD12	2.12	0.49
53:CA:54:C:N4	53:CA:352:C:H2'	2.27	0.49
53:CA:83:C:O2	53:CA:83:C:H2'	2.13	0.49
53:CA:708:C:H4'	11:CK:38:GLY:HA3	1.94	0.49
53:CA:872:A:C5	53:CA:874:G:C8	3.01	0.49
53:CA:1215:G:C2'	53:CA:1216:A:H8	2.25	0.49
53:CA:1314:C:H2'	53:CA:1315:U:O4'	2.13	0.49
53:CA:1336:C:O2'	53:CA:1337:G:C4	2.62	0.49
2:CB:114:LYS:HA	2:CB:117:GLU:CG	2.33	0.49
2:CB:128:LEU:O	2:CB:129:THR:C	2.51	0.49
4:CD:93:LEU:O	4:CD:96:ARG:HG3	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:40:ASP:CG	5:CE:41:GLY:H	2.15	0.49
11:CK:84:MET:HG2	11:CK:110:THR:OG1	2.12	0.49
18:CR:19:GLU:CD	18:CR:20:ILE:H	2.15	0.49
19:CS:10:ILE:HG22	19:CS:14:LEU:HD21	1.95	0.49
22:DA:340:A:H2'	22:DA:341:C:O4'	2.11	0.49
22:DA:470:A:C2	22:DA:471:A:C4	3.00	0.49
22:DA:489:G:H2'	22:DA:491:G:H8	1.78	0.49
22:DA:948:C:O5'	22:DA:948:C:H6	1.96	0.49
22:DA:976:G:H5'	22:DA:1156:A:N6	2.28	0.49
22:DA:1826:G:P	24:DC:220:ARG:HB3	2.51	0.49
22:DA:1926:U:H1'	22:DA:1929:G:C6	2.48	0.49
22:DA:2336:A:C8	44:DW:40:ARG:NH2	2.81	0.49
22:DA:2394:C:N4	51:D3:30:HIS:CE1	2.80	0.49
57:DB:6:G:H4'	57:DB:28:C:H4'	1.95	0.49
31:DJ:45:THR:O	31:DJ:45:THR:HG23	2.13	0.49
38:DQ:50:ARG:O	38:DQ:54:ARG:HD3	2.11	0.49
41:DT:10:VAL:HG23	41:DT:11:LEU:H	1.76	0.49
43:DV:61:LEU:HD23	43:DV:61:LEU:N	2.22	0.49
45:DX:32:LEU:N	45:DX:32:LEU:HD22	2.27	0.49
45:DX:36:ARG:HA	45:DX:47:THR:HA	1.94	0.49
47:DZ:46:MET:O	47:DZ:49:ALA:HB3	2.13	0.49
1:AA:71:A:C2	1:AA:72:A:C5	3.01	0.49
1:AA:100:G:C6	1:AA:101:A:C6	3.01	0.49
1:AA:521:G:O2'	1:AA:522:C:H5'	2.13	0.49
1:AA:588:G:C2	1:AA:589:U:C2	3.01	0.49
1:AA:782:A:H2'	1:AA:783:C:C5'	2.42	0.49
1:AA:1428:A:H2'	1:AA:1429:A:O4'	2.13	0.49
5:AE:45:VAL:HG22	5:AE:117:ALA:HA	1.93	0.49
10:AJ:53:ILE:HG13	14:AN:84:ARG:CZ	2.42	0.49
11:AK:15:VAL:HG13	11:AK:78:ILE:HG23	1.95	0.49
19:AS:55:GLN:CD	19:AS:56:HIS:H	2.15	0.49
22:BA:36:G:O2'	22:BA:450:G:H2'	2.12	0.49
22:BA:812:C:H1'	22:BA:1250:G:C2	2.47	0.49
22:BA:918:A:H4'	23:BB:97:C:O2	2.12	0.49
22:BA:1296:G:H2'	22:BA:1297:C:H6	1.77	0.49
25:BD:98:VAL:O	25:BD:99:GLU:C	2.51	0.49
25:BD:184:ARG:HH11	37:BP:6:GLN:NE2	2.10	0.49
26:BE:111:GLU:HG2	26:BE:114:ARG:HH12	1.78	0.49
30:BI:32:VAL:HG22	30:BI:66:PHE:CG	2.47	0.49
30:BI:90:GLY:O	30:BI:92:PRO:HD3	2.12	0.49
32:BK:33:ALA:HB1	32:BK:37:ASP:HB2	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BR:18:GLN:O	39:BR:97:LYS:O	2.31	0.49
51:B3:14:LYS:O	51:B3:21:PHE:O	2.30	0.49
53:CA:243:A:C2	53:CA:246:A:C8	3.00	0.49
53:CA:251:G:H4'	53:CA:252:U:O5'	2.13	0.49
53:CA:289:G:C6	53:CA:290:C:N4	2.81	0.49
53:CA:1139:G:H4'	53:CA:1140:C:O5'	2.11	0.49
53:CA:1408:A:N1	53:CA:1494:G:C6	2.81	0.49
2:CB:216:VAL:O	2:CB:220:VAL:HG23	2.13	0.49
4:CD:84:ASN:HD22	4:CD:84:ASN:C	2.15	0.49
4:CD:127:ARG:CZ	4:CD:127:ARG:HB2	2.39	0.49
54:CG:32:ASP:CB	54:CG:34:LYS:HD3	2.42	0.49
54:CG:59:GLU:HB2	54:CG:62:GLU:HB2	1.93	0.49
8:CH:9:MET:SD	8:CH:32:LYS:HG3	2.52	0.49
11:CK:14:GLN:HA	11:CK:76:TYR:O	2.13	0.49
12:CL:29:LYS:O	12:CL:80:LEU:HD12	2.12	0.49
12:CL:79:ILE:HD12	12:CL:96:THR:CG2	2.37	0.49
14:CN:63:CYS:SG	14:CN:82:LYS:HG3	2.52	0.49
17:CQ:23:ALA:C	17:CQ:24:ILE:HD12	2.32	0.49
18:CR:64:LEU:O	18:CR:66:LEU:HD23	2.12	0.49
19:CS:40:PHE:HB3	19:CS:41:PRO:CD	2.32	0.49
22:DA:99:U:H5'	22:DA:100:U:OP1	2.12	0.49
22:DA:201:C:C5	22:DA:202:U:C5	3.01	0.49
22:DA:564:C:O2	22:DA:578:G:N2	2.39	0.49
22:DA:581:C:C2	22:DA:582:A:N7	2.81	0.49
22:DA:630:G:N2	22:DA:633:A:OP2	2.43	0.49
22:DA:1401:G:C5	22:DA:1402:U:C4	3.00	0.49
22:DA:1878:G:H2'	22:DA:1879:C:O4'	2.13	0.49
22:DA:2142:A:H3'	22:DA:2143:C:H4'	1.90	0.49
22:DA:2321:U:O2	22:DA:2321:U:O5'	2.30	0.49
22:DA:2431:U:O2'	22:DA:2433:A:N7	2.40	0.49
57:DB:50:A:OP1	36:DO:68:LYS:HB2	2.13	0.49
24:DC:120:ASP:O	24:DC:121:ALA:O	2.30	0.49
28:DG:8:VAL:HG11	28:DG:49:LEU:HD23	1.94	0.49
29:DH:84:ALA:HB3	29:DH:148:ALA:CB	2.43	0.49
34:DM:71:LYS:HG3	34:DM:72:PRO:HD2	1.93	0.49
35:DN:28:LEU:O	35:DN:32:GLU:N	2.38	0.49
38:DQ:26:ALA:O	38:DQ:30:VAL:HB	2.12	0.49
42:DU:40:LEU:HA	42:DU:61:GLU:HA	1.94	0.49
42:DU:81:ARG:HB2	42:DU:96:LYS:HD2	1.95	0.49
48:D0:11:LYS:HD2	48:D0:14:MET:HB2	1.95	0.49
1:AA:84:U:O2	1:AA:84:U:H2'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:877:G:N3	8:AH:1:SER:N	2.58	0.49
1:AA:912:C:O2'	1:AA:913:A:H5'	2.12	0.49
1:AA:978:A:O2'	1:AA:1322:C:H5	1.94	0.49
1:AA:1001:C:H2'	1:AA:1002:G:C8	2.47	0.49
1:AA:1409:C:C2'	1:AA:1410:A:H5'	2.43	0.49
1:AA:1496:C:H2'	1:AA:1497:G:O4'	2.13	0.49
2:AB:127:LYS:HG3	2:AB:128:LEU:N	2.23	0.49
11:AK:109:ILE:HG22	11:AK:110:THR:N	2.28	0.49
12:AL:23:LEU:CG	12:AL:24:GLU:H	2.21	0.49
14:AN:51:PRO:O	14:AN:52:ARG:CB	2.60	0.49
15:AO:44:GLU:O	15:AO:45:HIS:HB2	2.12	0.49
22:BA:306:U:H2'	22:BA:307:G:O4'	2.13	0.49
22:BA:720:U:H2'	22:BA:721:A:C8	2.48	0.49
22:BA:1104:C:H2'	22:BA:1105:U:C6	2.48	0.49
22:BA:1250:G:OP2	33:BL:21:ARG:NH2	2.46	0.49
22:BA:1322:A:O3'	40:BS:84:ARG:NH1	2.46	0.49
22:BA:1327:A:OP2	62:BA:3599:HOH:O	2.20	0.49
22:BA:2204:G:H4'	24:BC:149:LYS:HG3	1.94	0.49
22:BA:2561:U:O3'	32:BK:40:LYS:HE2	2.11	0.49
22:BA:2649:C:H2'	22:BA:2650:U:C6	2.47	0.49
23:BB:46:A:C5	23:BB:47:C:C4	3.01	0.49
25:BD:97:SER:H	25:BD:99:GLU:CD	2.15	0.49
29:BH:21:VAL:HG22	29:BH:22:LYS:N	2.28	0.49
37:BP:3:ILE:HD13	37:BP:3:ILE:C	2.32	0.49
42:BU:11:ILE:HG23	42:BU:11:ILE:O	2.13	0.49
42:BU:44:HIS:O	42:BU:45:GLN:C	2.49	0.49
45:BX:32:LEU:O	45:BX:33:HIS:CG	2.65	0.49
53:CA:41:G:H2'	53:CA:42:G:C8	2.48	0.49
53:CA:62:U:O2'	53:CA:379:C:O2	2.28	0.49
53:CA:309:A:O2'	53:CA:607:A:N1	2.38	0.49
53:CA:330:C:HO2'	53:CA:331:G:H8	0.59	0.49
53:CA:347:G:H2'	53:CA:348:G:H8	1.77	0.49
53:CA:961:U:O2'	53:CA:962:C:O5'	2.30	0.49
53:CA:1172:C:H2'	53:CA:1173:U:C6	2.48	0.49
3:CC:117:ASP:HA	3:CC:120:THR:HB	1.95	0.49
3:CC:148:ILE:HD13	3:CC:201:ILE:HG12	1.94	0.49
14:CN:13:VAL:HG22	14:CN:59:GLN:OE1	2.12	0.49
14:CN:16:ALA:HA	14:CN:20:PHE:CD1	2.48	0.49
56:CP:54:LEU:HD23	56:CP:54:LEU:H	1.78	0.49
22:DA:229:C:O2'	22:DA:230:G:O5'	2.30	0.49
22:DA:279:A:C6	22:DA:361:G:O2'	2.66	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:319:G:O6	22:DA:333:G:C6	2.66	0.49
22:DA:370:G:N1	22:DA:424:G:C5	2.81	0.49
22:DA:402:A:H2'	22:DA:403:U:O4'	2.12	0.49
22:DA:480:A:H5'	42:DU:43:LYS:HD2	1.94	0.49
22:DA:489:G:N7	22:DA:1284:A:C2	2.81	0.49
22:DA:670:A:H4'	22:DA:671:C:H3'	1.94	0.49
22:DA:1059:G:N1	22:DA:1088:A:C2	2.81	0.49
22:DA:1278:C:O2'	35:DN:27:SER:HB3	2.12	0.49
22:DA:1281:G:H2'	22:DA:1282:U:O4'	2.12	0.49
22:DA:1965:C:C3'	22:DA:1966:A:H5"	2.43	0.49
22:DA:2331:G:H1	22:DA:2385:C:N4	2.09	0.49
22:DA:2666:C:O2	22:DA:2666:C:O4'	2.31	0.49
22:DA:2812:G:N2	22:DA:2889:C:C2	2.81	0.49
24:DC:245:THR:O	24:DC:247:TRP:N	2.45	0.49
25:DD:117:GLY:HA2	25:DD:164:GLN:OE1	2.13	0.49
25:DD:118:PHE:O	25:DD:119:ALA:HB3	2.12	0.49
26:DE:35:TYR:CE2	26:DE:177:PRO:HD2	2.47	0.49
29:DH:24:GLY:O	29:DH:28:ASN:HB2	2.13	0.49
31:DJ:92:MET:HA	31:DJ:92:MET:HE3	1.94	0.49
32:DK:92:GLU:O	32:DK:93:GLN:O	2.31	0.49
33:DL:120:VAL:HG12	33:DL:121:THR:N	2.28	0.49
34:DM:41:LEU:C	34:DM:93:VAL:HG23	2.33	0.49
37:DP:13:LYS:HD2	37:DP:13:LYS:H	1.78	0.49
37:DP:56:SER:HB2	37:DP:75:THR:HG21	1.95	0.49
39:DR:51:VAL:HB	39:DR:52:PRO:HD2	1.94	0.49
45:DX:63:ILE:O	45:DX:67:LEU:HD12	2.12	0.49
48:D0:27:LEU:HD12	48:D0:38:LEU:HD23	1.94	0.49
1:AA:49:U:O4	1:AA:365:U:C5	2.56	0.49
1:AA:56:U:H2'	1:AA:57:G:C8	2.47	0.49
1:AA:161:A:N6	1:AA:162:A:C6	2.80	0.49
1:AA:173:U:C2	1:AA:197:A:N1	2.81	0.49
1:AA:204:G:C1'	1:AA:465:A:C2	2.95	0.49
1:AA:255:G:H2'	1:AA:256:U:C6	2.48	0.49
1:AA:1015:G:H1'	1:AA:1218:C:O2'	2.13	0.49
1:AA:1039:G:C6	1:AA:1040:U:C4	3.01	0.49
1:AA:1163:A:C2	1:AA:1174:G:C2	3.01	0.49
1:AA:1453:G:N3	1:AA:1453:G:C2'	2.74	0.49
1:AA:1466:C:H2'	1:AA:1467:C:O4'	2.13	0.49
2:AB:67:LEU:HB3	2:AB:160:LEU:CD1	2.43	0.49
5:AE:15:ILE:HG22	5:AE:16:ALA:N	2.27	0.49
5:AE:113:VAL:HG21	5:AE:140:ILE:HD12	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:39:ALA:HB3	13:AM:42:VAL:HG13	1.94	0.49
14:AN:5:MET:HA	14:AN:8:ARG:HD2	1.95	0.49
16:AP:61:VAL:HA	16:AP:65:ALA:H	1.77	0.49
19:AS:28:LYS:HB3	19:AS:29:PRO:CD	2.35	0.49
21:AU:3:ILE:N	21:AU:19:LYS:HZ1	2.10	0.49
22:BA:335:C:C5'	42:BU:81:ARG:HD3	2.41	0.49
22:BA:534:U:H2'	22:BA:535:G:C8	2.48	0.49
22:BA:675:A:H4'	26:BE:62:GLN:HE22	1.78	0.49
22:BA:923:G:H5'	44:BW:25:PHE:CZ	2.48	0.49
22:BA:1176:U:H2'	22:BA:1177:G:C4	2.47	0.49
22:BA:1445:G:H2'	22:BA:1446:C:H6	1.78	0.49
22:BA:1794:A:O4'	22:BA:1900:A:C2	2.66	0.49
22:BA:2060:A:O4'	22:BA:2502:G:H1'	2.13	0.49
22:BA:2136:G:O6	22:BA:2156:G:C2	2.66	0.49
23:BB:34:A:C2'	23:BB:35:C:OP2	2.60	0.49
24:BC:195:GLY:O	24:BC:196:ASN:HB3	2.12	0.49
26:BE:157:LEU:O	26:BE:157:LEU:HG	2.11	0.49
27:BF:4:HIS:O	27:BF:8:LYS:HG2	2.12	0.49
27:BF:87:LYS:O	27:BF:88:VAL:HG23	2.12	0.49
31:BJ:6:ALA:HB3	31:BJ:45:THR:CG2	2.36	0.49
31:BJ:40:HIS:C	31:BJ:41:LYS:CG	2.79	0.49
33:BL:19:LEU:HD23	33:BL:19:LEU:C	2.33	0.49
34:BM:26:VAL:HG13	34:BM:104:GLU:HG2	1.94	0.49
34:BM:77:PRO:CD	34:BM:80:VAL:HG11	2.42	0.49
37:BP:37:LYS:HD3	37:BP:37:LYS:N	2.28	0.49
38:BQ:97:ILE:HD11	38:BQ:105:PHE:HA	1.94	0.49
49:B1:13:SER:HB3	49:B1:47:ILE:O	2.12	0.49
53:CA:321:A:O2'	53:CA:1436:U:H5'	2.12	0.49
53:CA:337:G:H2'	53:CA:338:A:H8	1.75	0.49
53:CA:632:U:H3'	53:CA:633:G:H5'	1.94	0.49
53:CA:685:G:O2'	53:CA:686:U:H5'	2.13	0.49
53:CA:1135:U:O2	53:CA:1135:U:H2'	2.11	0.49
53:CA:1480:A:H2'	53:CA:1481:U:O4'	2.13	0.49
2:CB:164:ASP:HB3	2:CB:167:HIS:HB3	1.95	0.49
4:CD:81:LEU:O	4:CD:83:GLY:N	2.46	0.49
5:CE:79:THR:HA	5:CE:121:ASN:CG	2.34	0.49
10:CJ:5:ARG:CG	10:CJ:79:PRO:HG3	2.43	0.49
14:CN:16:ALA:HA	14:CN:20:PHE:HD1	1.77	0.49
21:CU:16:ARG:HD2	21:CU:19:LYS:NZ	2.27	0.49
22:DA:502:A:C6	22:DA:505:A:C5	3.01	0.49
22:DA:708:G:N2	22:DA:724:U:H1'	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1048:A:C5	22:DA:1049:C:N4	2.81	0.49
22:DA:1613:G:N1	22:DA:1617:C:C2	2.81	0.49
22:DA:1784:A:H4'	22:DA:1785:A:C5'	2.43	0.49
22:DA:2282:G:H1'	22:DA:2390:U:C5	2.48	0.49
22:DA:2477:U:O4	52:D4:10:LEU:HD22	2.13	0.49
22:DA:2665:A:C2	22:DA:2666:C:N3	2.81	0.49
22:DA:2760:C:C2'	22:DA:2761:A:H5'	2.43	0.49
22:DA:2836:U:O2'	22:DA:2837:A:O5'	2.30	0.49
57:DB:70:C:H2'	57:DB:71:C:C6	2.48	0.49
26:DE:42:GLY:HA2	26:DE:92:HIS:HE1	1.78	0.49
28:DG:7:PRO:HB3	28:DG:48:THR:HB	1.94	0.49
29:DH:102:ALA:C	29:DH:104:THR:H	2.16	0.49
34:DM:69:PRO:O	34:DM:70:ASP:HB3	2.12	0.49
34:DM:96:ILE:CD1	34:DM:102:LEU:HD11	2.38	0.49
35:DN:55:ALA:CB	35:DN:79:LEU:HD22	2.43	0.49
36:DO:89:ASP:O	36:DO:90:VAL:HG13	2.13	0.49
37:DP:25:VAL:O	37:DP:25:VAL:HG23	2.13	0.49
41:DT:48:GLN:HA	41:DT:48:GLN:HE21	1.77	0.49
47:DZ:4:ILE:CG2	47:DZ:56:VAL:HG13	2.42	0.49
52:D4:19:ARG:HD2	52:D4:24:ARG:HD2	1.95	0.49
1:AA:575:G:C6	1:AA:821:G:N7	2.81	0.49
2:AB:165:ALA:HA	2:AB:172:ILE:HD11	1.95	0.49
3:AC:122:GLN:HB3	3:AC:127:VAL:CG2	2.43	0.49
5:AE:114:LEU:HD21	5:AE:122:VAL:HG23	1.95	0.49
11:AK:34:THR:OG1	11:AK:39:ASN:N	2.41	0.49
12:AL:72:ASN:HD22	12:AL:73:LEU:H	1.59	0.49
14:AN:91:GLU:O	14:AN:93:PRO:HD3	2.13	0.49
20:AT:3:ILE:HA	20:AT:7:LYS:NZ	2.27	0.49
20:AT:33:LYS:HE2	20:AT:33:LYS:H	1.78	0.49
22:BA:37:C:O2'	22:BA:38:A:H5'	2.12	0.49
22:BA:118:A:N3	22:BA:178:G:H1'	2.28	0.49
22:BA:364:C:O2'	22:BA:365:U:H5'	2.11	0.49
22:BA:608:A:C6	22:BA:609:A:C6	3.01	0.49
22:BA:609:A:H2'	22:BA:610:C:O4'	2.13	0.49
22:BA:684:G:OP1	50:B2:16:HIS:CD2	2.48	0.49
22:BA:1069:A:O2'	22:BA:1070:A:C5'	2.58	0.49
22:BA:1665:A:H5"	32:BK:66:LYS:HG3	1.95	0.49
22:BA:1713:A:OP1	22:BA:1713:A:H8	1.95	0.49
22:BA:1714:U:O2	22:BA:1714:U:C2'	2.60	0.49
22:BA:2591:C:OP1	24:BC:237:ARG:HG3	2.12	0.49
22:BA:2722:G:H4'	35:BN:4:ARG:HB2	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:80:ILE:HG23	29:BH:147:VAL:HG21	1.94	0.49
33:BL:58:TYR:C	33:BL:59:ARG:HG2	2.33	0.49
33:BL:95:LEU:HD22	33:BL:100:ILE:HG12	1.95	0.49
42:BU:82:VAL:HG12	42:BU:83:GLY:N	2.28	0.49
45:BX:29:LEU:HB2	45:BX:30:PRO:HD3	1.95	0.49
53:CA:202:G:O2'	53:CA:468:A:H8	1.95	0.49
53:CA:295:C:H2'	53:CA:296:U:C6	2.43	0.49
53:CA:501:C:H2'	53:CA:502:A:H8	1.77	0.49
53:CA:505:G:H2'	53:CA:506:G:H8	1.78	0.49
53:CA:791:G:C6	53:CA:792:A:N7	2.81	0.49
53:CA:865:A:H2	53:CA:918:A:H4'	1.78	0.49
53:CA:1067:A:C4'	53:CA:1068:G:O5'	2.60	0.49
53:CA:1262:C:H2'	53:CA:1263:C:H5'	1.94	0.49
53:CA:1363:A:C6	53:CA:1365:G:C6	3.00	0.49
2:CB:95:TRP:CH2	2:CB:171:ALA:HA	2.48	0.49
14:CN:63:CYS:HB3	14:CN:68:ARG:H	1.76	0.49
15:CO:42:PHE:HB3	15:CO:52:ARG:NH2	2.28	0.49
22:DA:192:C:C4	22:DA:193:U:C2	3.01	0.49
22:DA:324:A:N6	22:DA:338:G:O2'	2.44	0.49
22:DA:410:G:N2	22:DA:418:C:C2	2.81	0.49
22:DA:727:A:C2'	22:DA:728:G:C8	2.96	0.49
22:DA:758:C:O2	22:DA:1981:A:C2	2.66	0.49
22:DA:764:A:C2	22:DA:781:A:C2	3.01	0.49
22:DA:857:G:H2'	22:DA:858:G:C4'	2.43	0.49
22:DA:921:C:O2'	22:DA:922:C:H5'	2.12	0.49
22:DA:975:A:O2'	22:DA:976:G:O5'	2.31	0.49
22:DA:1063:G:C6	22:DA:1064:C:N4	2.80	0.49
22:DA:1069:A:H2	22:DA:1097:U:OP1	1.96	0.49
22:DA:1262:A:H2	48:D0:6:LYS:HD2	1.78	0.49
22:DA:1567:G:H1'	22:DA:1568:G:C6	2.47	0.49
22:DA:1662:U:H2'	22:DA:1662:U:O2	2.12	0.49
22:DA:1663:G:C6	22:DA:1992:G:N7	2.81	0.49
22:DA:1680:U:H2'	22:DA:1681:G:O4'	2.12	0.49
22:DA:2082:A:H8	22:DA:2082:A:O5'	1.96	0.49
22:DA:2415:G:C2	22:DA:2416:C:C2	3.01	0.49
22:DA:2751:G:H5'	28:DG:2:ARG:HD2	1.95	0.49
57:DB:42:C:H5	58:DF:65:LEU:HD13	1.78	0.49
33:DL:35:HIS:HB2	62:DL:3102:HOH:O	2.13	0.49
34:DM:19:GLY:O	34:DM:20:LEU:HB2	2.13	0.49
37:DP:47:ILE:HD11	37:DP:70:GLU:HG2	1.94	0.49
39:DR:15:SER:OG	39:DR:16:GLU:N	2.44	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DT:8:LEU:HD22	41:DT:46:ALA:HA	1.94	0.49
41:DT:55:VAL:HG21	41:DT:85:VAL:O	2.13	0.49
42:DU:52:ASN:HD21	42:DU:54:PRO:HG3	1.78	0.49
44:DW:39:GLN:O	44:DW:56:HIS:HB3	2.13	0.49
44:DW:77:LYS:O	44:DW:78:PHE:CB	2.61	0.49
46:DY:28:LEU:O	46:DY:28:LEU:HD22	2.13	0.49
1:AA:43:C:H2'	1:AA:44:A:O4'	2.12	0.48
1:AA:71:A:C6	1:AA:100:G:C8	3.01	0.48
1:AA:237:G:H5"	17:AQ:26:ARG:NH2	2.28	0.48
1:AA:460:A:O3'	1:AA:462:G:OP2	2.31	0.48
1:AA:545:C:H5'	4:AD:68:GLU:CG	2.42	0.48
1:AA:636:U:O2'	1:AA:637:C:H5'	2.13	0.48
1:AA:913:A:H8	1:AA:913:A:O5'	1.95	0.48
1:AA:967:C:C1'	9:AI:129:ARG:HH22	2.24	0.48
1:AA:1074:G:H2'	1:AA:1075:U:C6	2.48	0.48
1:AA:1281:C:O2'	1:AA:1282:C:H5'	2.13	0.48
1:AA:1381:U:O2'	1:AA:1382:C:H6	1.96	0.48
11:AK:35:ASP:OD2	11:AK:39:ASN:HB2	2.13	0.48
11:AK:70:ALA:O	11:AK:73:VAL:HG22	2.13	0.48
14:AN:42:ASN:O	14:AN:44:VAL:N	2.46	0.48
22:BA:571:U:C5	22:BA:575:A:C5	3.01	0.48
22:BA:952:G:C2'	22:BA:953:G:O5'	2.60	0.48
22:BA:1050:A:C2	22:BA:2751:G:C4	3.01	0.48
22:BA:1071:G:H8	22:BA:1071:G:OP2	1.97	0.48
22:BA:1445:G:H2'	22:BA:1446:C:C6	2.48	0.48
22:BA:2052:A:C2	22:BA:2053:G:C8	3.01	0.48
22:BA:2511:U:O4	22:BA:2575:C:N3	2.46	0.48
22:BA:2730:C:O3'	25:BD:174:SER:HB3	2.13	0.48
25:BD:106:LYS:HD2	25:BD:106:LYS:N	2.27	0.48
25:BD:121:THR:HG22	25:BD:125:TRP:HD1	1.78	0.48
26:BE:146:VAL:HG23	26:BE:167:VAL:HG21	1.94	0.48
28:BG:61:TRP:O	28:BG:64:ALA:N	2.45	0.48
28:BG:95:ALA:CB	28:BG:104:LEU:HD23	2.43	0.48
32:BK:7:MET:C	32:BK:8:LEU:HD23	2.33	0.48
32:BK:19:VAL:HG22	32:BK:41:ILE:HG13	1.95	0.48
33:BL:85:VAL:HG22	33:BL:94:THR:HG23	1.96	0.48
38:BQ:110:GLU:O	38:BQ:111:LYS:C	2.51	0.48
38:BQ:114:ALA:O	38:BQ:116:LEU:N	2.45	0.48
39:BR:49:ILE:HG21	39:BR:53:PHE:N	2.28	0.48
39:BR:64:VAL:O	39:BR:64:VAL:HG12	2.13	0.48
41:BT:24:MET:HG3	41:BT:29:THR:CG2	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BX:32:LEU:HA	45:BX:51:SER:HA	1.95	0.48
46:BY:57:LEU:HD12	46:BY:57:LEU:O	2.13	0.48
53:CA:751:U:H1'	15:CO:22:GLY:O	2.13	0.48
53:CA:892:A:C6	53:CA:893:C:C4	3.00	0.48
53:CA:994:A:C5	53:CA:1216:A:H4'	2.48	0.48
53:CA:1140:C:H2'	53:CA:1141:C:C5	2.48	0.48
53:CA:1327:C:N4	53:CA:1328:C:N4	2.60	0.48
53:CA:1409:C:H6	53:CA:1409:C:O5'	1.95	0.48
3:CC:84:GLU:C	3:CC:86:LEU:N	2.67	0.48
3:CC:187:GLU:O	3:CC:188:ALA:HB2	2.13	0.48
54:CG:19:SER:HB3	54:CG:22:LEU:HB3	1.95	0.48
11:CK:124:LYS:HG3	21:CU:34:ARG:HD2	1.93	0.48
22:DA:503:A:C4'	22:DA:504:A:O5'	2.51	0.48
22:DA:851:C:H4'	47:DZ:46:MET:HG2	1.95	0.48
22:DA:1062:G:C8	22:DA:1088:A:H8	2.29	0.48
22:DA:1103:A:H8	22:DA:1103:A:O5'	1.95	0.48
22:DA:1544:A:C6	22:DA:1545:A:C6	3.01	0.48
22:DA:2093:G:H21	22:DA:2198:A:H62	1.61	0.48
22:DA:2366:A:H2'	22:DA:2367:G:O4'	2.11	0.48
22:DA:2469:A:C6	22:DA:2482:A:C8	3.01	0.48
22:DA:2576:G:C8	22:DA:2580:U:O4	2.66	0.48
22:DA:2756:U:C4'	22:DA:2757:A:O5'	2.61	0.48
57:DB:69:G:N7	57:DB:70:C:C4	2.81	0.48
24:DC:211:ARG:HD2	24:DC:215:VAL:O	2.12	0.48
31:DJ:84:ILE:O	31:DJ:84:ILE:HG23	2.13	0.48
32:DK:42:THR:HG22	32:DK:44:LYS:HG3	1.95	0.48
33:DL:23:ILE:HD12	33:DL:23:ILE:N	2.28	0.48
33:DL:79:LEU:HD12	33:DL:112:LEU:HB2	1.94	0.48
37:DP:52:ARG:HB3	37:DP:55:HIS:HB2	1.95	0.48
1:AA:81:A:O2'	1:AA:89:U:O2	2.27	0.48
1:AA:82:G:H2'	1:AA:83:C:H4'	1.94	0.48
1:AA:174:A:C6	1:AA:175:C:C4	3.01	0.48
1:AA:438:U:C4	1:AA:494:G:C5	3.01	0.48
3:AC:21:TRP:CZ3	3:AC:23:ALA:HB3	2.48	0.48
3:AC:125:ARG:O	3:AC:126:ARG:CB	2.61	0.48
3:AC:146:LYS:HB2	3:AC:202:PHE:HD2	1.76	0.48
14:AN:9:GLU:OE1	14:AN:60:ARG:HB3	2.12	0.48
18:AR:36:GLY:O	18:AR:62:ARG:NH2	2.46	0.48
22:BA:258:G:H8	22:BA:258:G:O5'	1.96	0.48
22:BA:602:A:N3	22:BA:655:A:C2	2.81	0.48
22:BA:1019:U:O4	22:BA:1020:A:N6	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1705:A:C5	22:BA:1706:C:C4	3.01	0.48
22:BA:1733:G:N2	22:BA:1734:G:C4	2.81	0.48
22:BA:2540:C:C2'	22:BA:2541:A:H5'	2.42	0.48
24:BC:216:ARG:HB3	24:BC:217:PRO:HD2	1.95	0.48
25:BD:151:THR:HG22	25:BD:152:PRO:HD3	1.95	0.48
27:BF:120:SER:O	27:BF:127:TYR:HD1	1.96	0.48
29:BH:137:GLU:HG3	29:BH:138:VAL:N	2.28	0.48
34:BM:66:ARG:HD3	34:BM:104:GLU:OE1	2.12	0.48
37:BP:111:GLU:CD	37:BP:111:GLU:N	2.66	0.48
39:BR:76:LYS:HB2	39:BR:85:LYS:HG3	1.94	0.48
44:BW:22:VAL:O	44:BW:25:PHE:CD2	2.65	0.48
45:BX:52:ALA:O	45:BX:53:LYS:HB2	2.12	0.48
53:CA:46:G:O2'	53:CA:365:U:H1'	2.13	0.48
53:CA:406:G:N7	53:CA:495:A:O2'	2.34	0.48
53:CA:738:C:H2'	53:CA:739:C:C6	2.44	0.48
53:CA:973:G:H2'	53:CA:974:A:H5'	1.95	0.48
53:CA:1068:G:N3	53:CA:1191:A:C2	2.81	0.48
6:CF:38:ARG:HG3	6:CF:63:ASN:HB2	1.94	0.48
55:CM:28:ARG:HA	55:CM:31:ALA:HB3	1.94	0.48
56:CP:4:ILE:N	56:CP:4:ILE:CD1	2.76	0.48
56:CP:35:ARG:HH12	56:CP:38:PHE:HB3	1.78	0.48
22:DA:45:G:C5'	22:DA:46:G:H5'	2.40	0.48
22:DA:118:A:P	22:DA:119:A:H5"	2.52	0.48
22:DA:332:A:O2'	22:DA:334:C:OP2	2.30	0.48
22:DA:489:G:HO2'	22:DA:491:G:H8	1.60	0.48
22:DA:600:G:C5'	26:DE:27:LEU:HD22	2.41	0.48
22:DA:857:G:H2'	22:DA:858:G:H4'	1.95	0.48
22:DA:876:C:N4	22:DA:902:C:C2	2.81	0.48
22:DA:965:C:H5"	62:DA:3345:HOH:O	2.12	0.48
22:DA:1313:U:OP2	22:DA:1314:C:H5	1.96	0.48
22:DA:1373:A:H4'	22:DA:2212:A:H1'	1.94	0.48
22:DA:1809:A:H2'	22:DA:1810:A:C8	2.48	0.48
22:DA:1914:C:O2'	22:DA:1915:U:C6	2.66	0.48
22:DA:2260:C:H2'	22:DA:2261:C:H6	1.77	0.48
22:DA:2549:G:N2	22:DA:2560:A:C4	2.82	0.48
57:DB:113:C:H1'	36:DO:45:SER:O	2.13	0.48
24:DC:226:PRO:O	24:DC:227:VAL:C	2.50	0.48
26:DE:45:ALA:O	26:DE:46:GLN:HB2	2.12	0.48
28:DG:87:GLN:HA	28:DG:129:GLU:HA	1.94	0.48
28:DG:117:PRO:HG2	28:DG:143:VAL:HG11	1.94	0.48
28:DG:175:LYS:HD3	28:DG:175:LYS:C	2.34	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DH:143:ILE:O	29:DH:144:VAL:HG13	2.13	0.48
32:DK:16:ALA:HB3	32:DK:46:ALA:N	2.28	0.48
32:DK:19:VAL:HG12	32:DK:41:ILE:HG13	1.94	0.48
32:DK:113:MET:O	32:DK:116:ILE:HG13	2.13	0.48
34:DM:69:PRO:HA	34:DM:94:ALA:HB2	1.96	0.48
39:DR:48:LYS:H	39:DR:48:LYS:CD	2.25	0.48
41:DT:69:ARG:HD2	41:DT:70:HIS:H	1.77	0.48
1:AA:75:G:C5	1:AA:76:G:C8	3.00	0.48
1:AA:702:A:C4	22:BA:1847:A:H2	2.32	0.48
1:AA:1508:A:H2'	1:AA:1509:C:O4'	2.12	0.48
1:AA:1530:G:O2'	1:AA:1531:A:C8	2.66	0.48
4:AD:158:LEU:O	4:AD:161:ALA:HB3	2.13	0.48
9:AI:6:TYR:CE2	9:AI:17:ARG:HB2	2.48	0.48
22:BA:1049:C:C2'	22:BA:1050:A:H5'	2.44	0.48
23:BB:5:U:H2'	23:BB:6:G:C8	2.49	0.48
23:BB:12:C:C5	44:BW:72:GLY:HA3	2.48	0.48
23:BB:32:U:C2	23:BB:51:G:N2	2.82	0.48
24:BC:259:ASN:C	24:BC:261:ARG:H	2.16	0.48
34:BM:65:ILE:HG22	34:BM:65:ILE:O	2.13	0.48
37:BP:52:ARG:CG	37:BP:52:ARG:NH1	2.72	0.48
40:BS:57:ASN:O	40:BS:61:ASN:HB2	2.12	0.48
43:BV:49:ASN:O	43:BV:52:ALA:HB3	2.13	0.48
44:BW:33:GLY:O	44:BW:34:SER:HB3	2.13	0.48
44:BW:47:GLY:C	44:BW:49:ASN:H	2.15	0.48
53:CA:345:C:H5'	53:CA:346:G:C5	2.48	0.48
53:CA:512:U:H2'	53:CA:513:C:C6	2.48	0.48
53:CA:755:G:C2	53:CA:756:C:C6	3.02	0.48
53:CA:861:G:C6	53:CA:862:C:C4	3.01	0.48
2:CB:103:TRP:HD1	2:CB:107:ARG:HB3	1.77	0.48
2:CB:162:VAL:HG13	2:CB:184:ALA:CB	2.42	0.48
3:CC:10:ARG:HD3	3:CC:177:LEU:HA	1.93	0.48
3:CC:86:LEU:O	3:CC:90:VAL:HG22	2.13	0.48
54:CG:41:ILE:HG21	54:CG:115:MET:HE2	1.94	0.48
8:CH:75:GLN:O	8:CH:126:CYS:HB2	2.13	0.48
55:CM:68:LEU:HD22	55:CM:69:ARG:NH1	2.27	0.48
15:CO:44:GLU:O	15:CO:45:HIS:C	2.51	0.48
15:CO:83:ARG:HG2	15:CO:83:ARG:O	2.13	0.48
17:CQ:29:LYS:HE2	17:CQ:36:PHE:CZ	2.48	0.48
22:DA:3:U:H2'	22:DA:4:U:H6	1.79	0.48
22:DA:226:A:H2'	22:DA:227:A:H8	1.78	0.48
22:DA:323:C:H2'	26:DE:163:ASN:CG	2.33	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:394:C:O2'	22:DA:395:U:H5'	2.13	0.48
22:DA:1019:U:O4	22:DA:1020:A:N6	2.45	0.48
22:DA:1377:G:H8	22:DA:1377:G:O5'	1.95	0.48
22:DA:1378:A:N7	22:DA:1380:G:C6	2.82	0.48
22:DA:1387:A:O2'	22:DA:1388:G:OP2	2.30	0.48
22:DA:2144:G:C2	22:DA:2148:G:O6	2.67	0.48
22:DA:2336:A:N7	44:DW:40:ARG:NE	2.62	0.48
25:DD:105:LYS:HA	25:DD:177:VAL:CG2	2.38	0.48
31:DJ:36:LEU:HD12	31:DJ:121:LYS:HB2	1.95	0.48
31:DJ:44:TYR:HD1	38:DQ:63:ARG:NH2	2.11	0.48
37:DP:32:VAL:O	37:DP:32:VAL:HG13	2.14	0.48
40:DS:44:ALA:O	40:DS:48:LYS:HB2	2.13	0.48
46:DY:47:ARG:O	46:DY:50:VAL:N	2.45	0.48
1:AA:71:A:C5	1:AA:100:G:C5	3.01	0.48
1:AA:208:U:H3	1:AA:212:G:N2	2.11	0.48
1:AA:572:A:H5'	1:AA:573:A:OP2	2.13	0.48
1:AA:626:G:H2'	1:AA:627:G:C8	2.49	0.48
1:AA:895:G:H2'	1:AA:896:C:C6	2.48	0.48
1:AA:1181:G:O2'	1:AA:1182:G:C5	2.66	0.48
1:AA:1250:A:N3	1:AA:1370:G:O2'	2.44	0.48
7:AG:49:LEU:CD2	7:AG:124:SER:HB2	2.44	0.48
11:AK:108:ASN:CB	21:AU:6:ARG:HG2	2.40	0.48
12:AL:72:ASN:CG	12:AL:73:LEU:H	2.13	0.48
13:AM:86:ARG:HA	13:AM:96:VAL:HG13	1.95	0.48
22:BA:445:C:H5"	38:BQ:2:ARG:HB2	1.95	0.48
24:BC:90:ILE:HD12	24:BC:103:ILE:O	2.14	0.48
27:BF:57:ALA:O	27:BF:60:SER:O	2.32	0.48
27:BF:134:GLN:HG3	27:BF:140:ILE:HG12	1.95	0.48
28:BG:61:TRP:CE3	28:BG:61:TRP:HA	2.48	0.48
28:BG:115:GLN:H	28:BG:115:GLN:NE2	2.11	0.48
30:BI:61:TYR:N	30:BI:61:TYR:CD2	2.81	0.48
32:BK:63:VAL:HG11	32:BK:103:VAL:HG12	1.95	0.48
33:BL:23:ILE:HG12	39:BR:82:HIS:CE1	2.49	0.48
33:BL:91:ASP:H	33:BL:94:THR:CG2	2.27	0.48
37:BP:88:ARG:HG2	37:BP:112:ARG:NH1	2.28	0.48
41:BT:29:THR:HA	41:BT:86:THR:CA	2.43	0.48
47:BZ:40:THR:OG1	47:BZ:41:PRO:HD2	2.14	0.48
51:B3:30:HIS:O	51:B3:31:ILE:C	2.52	0.48
53:CA:183:C:HO2'	53:CA:184:G:C5'	2.26	0.48
53:CA:346:G:O2'	53:CA:347:G:O4'	2.30	0.48
53:CA:506:G:C6	53:CA:507:C:C4	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:73:ARG:HG3	2:CB:74:ALA:N	2.28	0.48
3:CC:67:ILE:H	3:CC:102:ILE:HA	1.78	0.48
4:CD:164:ARG:HB3	4:CD:165:GLU:H	1.39	0.48
5:CE:56:PRO:HA	5:CE:59:ILE:CG2	2.43	0.48
9:CI:53:LEU:O	9:CI:54:VAL:HG13	2.13	0.48
12:CL:37:TYR:O	12:CL:38:THR:HG23	2.13	0.48
12:CL:75:GLU:C	12:CL:77:SER:H	2.17	0.48
19:CS:38:THR:OG1	19:CS:67:GLY:HA2	2.14	0.48
22:DA:479:A:C2	22:DA:480:A:C6	3.01	0.48
22:DA:511:U:H4'	22:DA:1235:G:H4'	1.95	0.48
22:DA:513:A:H2'	22:DA:514:A:C8	2.48	0.48
22:DA:992:C:H2'	22:DA:993:G:H8	1.78	0.48
22:DA:1527:G:H1'	22:DA:1546:G:H22	1.78	0.48
22:DA:1608:A:C5	22:DA:1611:C:C4	3.01	0.48
22:DA:1827:U:O4'	22:DA:1970:A:O2'	2.31	0.48
22:DA:2478:A:C8	22:DA:2529:G:C6	3.02	0.48
22:DA:2726:A:O2'	22:DA:2727:A:O5'	2.31	0.48
57:DB:109:A:C2	57:DB:110:C:C2	3.02	0.48
24:DC:35:LYS:O	24:DC:36:ASN:CB	2.60	0.48
24:DC:67:LYS:CB	24:DC:150:GLY:HA2	2.43	0.48
29:DH:8:LYS:HD2	29:DH:8:LYS:C	2.32	0.48
29:DH:94:ILE:HB	29:DH:98:ASP:HB2	1.96	0.48
30:DI:58:ILE:HG23	30:DI:66:PHE:CD2	2.48	0.48
35:DN:71:ARG:HH21	35:DN:71:ARG:CB	2.23	0.48
36:DO:26:LEU:HA	36:DO:38:GLN:O	2.13	0.48
36:DO:79:ALA:HB1	36:DO:114:GLY:HA3	1.94	0.48
38:DQ:15:LYS:HD2	38:DQ:19:GLN:HE21	1.77	0.48
40:DS:47:VAL:O	40:DS:50:VAL:HB	2.13	0.48
43:DV:4:ILE:HB	43:DV:63:ILE:HG13	1.94	0.48
46:DY:37:LEU:HD13	46:DY:42:LEU:CD1	2.44	0.48
51:D3:22:LYS:H	51:D3:48:MET:CB	2.25	0.48
1:AA:1170:A:H2'	1:AA:1171:A:O4'	2.14	0.48
1:AA:1240:U:H3	7:AG:29:LEU:CD2	2.27	0.48
1:AA:1348:U:O2'	1:AA:1349:A:O4'	2.29	0.48
1:AA:1530:G:O2'	1:AA:1531:A:H8	1.96	0.48
3:AC:153:SER:CB	3:AC:164:THR:HA	2.44	0.48
4:AD:60:VAL:HA	4:AD:63:ILE:HG22	1.95	0.48
4:AD:195:ASN:O	4:AD:196:GLU:HG3	2.14	0.48
5:AE:154:ALA:HB1	8:AH:65:PHE:CE2	2.49	0.48
8:AH:110:MET:SD	8:AH:115:ALA:HA	2.54	0.48
15:AO:73:ASP:O	15:AO:74:VAL:C	2.51	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:60:GLN:NE2	20:AT:65:LEU:HD21	2.28	0.48
22:BA:666:A:C4	22:BA:667:U:C5	3.02	0.48
22:BA:846:U:C2'	22:BA:847:U:OP2	2.62	0.48
22:BA:923:G:N3	44:BW:23:LYS:NZ	2.61	0.48
22:BA:1132:U:H3'	22:BA:1133:A:H5"	1.95	0.48
24:BC:144:GLU:HA	24:BC:151:GLY:CA	2.38	0.48
26:BE:176:ASP:OD1	26:BE:176:ASP:C	2.52	0.48
28:BG:59:ASP:HB2	28:BG:63:GLN:CG	2.44	0.48
29:BH:26:ALA:HA	29:BH:30:LEU:HB2	1.95	0.48
31:BJ:21:THR:C	31:BJ:23:LYS:N	2.66	0.48
34:BM:10:ARG:NH2	34:BM:89:VAL:HB	2.27	0.48
34:BM:27:SER:N	34:BM:104:GLU:OE2	2.46	0.48
36:BO:31:THR:HG23	36:BO:33:ARG:H	1.77	0.48
37:BP:61:ARG:HG2	37:BP:70:GLU:HG2	1.95	0.48
37:BP:64:SER:O	37:BP:65:ASN:C	2.51	0.48
37:BP:112:ARG:O	37:BP:113:LEU:HD23	2.13	0.48
44:BW:39:GLN:HG2	44:BW:40:ARG:N	2.28	0.48
47:BZ:6:ILE:HD11	47:BZ:47:ILE:HD11	1.96	0.48
53:CA:80:A:H3'	53:CA:81:A:C4'	2.44	0.48
53:CA:1097:C:H2'	53:CA:1098:C:C6	2.48	0.48
53:CA:1130:A:C5	53:CA:1146:A:C5	3.00	0.48
53:CA:1348:U:C2'	53:CA:1349:A:H8	2.25	0.48
3:CC:35:ASP:CG	3:CC:56:ILE:HD12	2.33	0.48
3:CC:126:ARG:HE	3:CC:126:ARG:CA	2.26	0.48
54:CG:37:THR:HA	54:CG:40:SER:HB2	1.96	0.48
9:CI:119:LYS:O	9:CI:119:LYS:HG3	2.13	0.48
11:CK:126:ARG:HB2	21:CU:33:ARG:CD	2.39	0.48
15:CO:47:LYS:HD2	15:CO:47:LYS:N	2.23	0.48
22:DA:80:G:H2'	22:DA:80:G:N3	2.28	0.48
22:DA:170:U:H2'	22:DA:171:U:C6	2.49	0.48
22:DA:188:G:H2'	22:DA:189:G:H5'	1.95	0.48
22:DA:274:C:H2'	22:DA:275:C:O4'	2.14	0.48
22:DA:302:C:O2'	22:DA:303:G:O5'	2.31	0.48
22:DA:323:C:C4	22:DA:333:G:N7	2.81	0.48
22:DA:476:G:O2'	22:DA:477:A:C5'	2.61	0.48
22:DA:620:G:C8	22:DA:622:G:O6	2.65	0.48
22:DA:836:G:C6	22:DA:837:C:N3	2.81	0.48
22:DA:942:G:H2'	22:DA:943:A:H5'	1.95	0.48
22:DA:1069:A:H4'	22:DA:1070:A:O5'	2.13	0.48
22:DA:1316:U:O2'	22:DA:1317:G:H5'	2.13	0.48
22:DA:1342:A:C6	22:DA:1397:U:C5	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1388:G:O2'	22:DA:1389:G:C5'	2.62	0.48
22:DA:1439:A:N7	22:DA:1440:U:N1	2.61	0.48
22:DA:1551:A:C4	22:DA:1552:A:C8	3.02	0.48
22:DA:1965:C:H3'	22:DA:1966:A:H8	1.78	0.48
22:DA:2603:G:C6	22:DA:2604:U:C4	3.01	0.48
57:DB:15:A:H1'	57:DB:109:A:N7	2.29	0.48
25:DD:50:VAL:HG21	25:DD:82:PHE:CE2	2.49	0.48
58:DF:73:VAL:O	58:DF:73:VAL:HG12	2.13	0.48
35:DN:73:ASN:CA	35:DN:76:VAL:HG22	2.43	0.48
46:DY:23:ARG:HB3	46:DY:27:ASN:OD1	2.13	0.48
1:AA:188:C:O2	1:AA:188:C:C2'	2.59	0.48
1:AA:283:U:C2'	1:AA:284:C:H5'	2.43	0.48
1:AA:325:A:H2'	1:AA:326:G:O4'	2.13	0.48
1:AA:1312:G:N7	19:AS:2:ARG:HA	2.29	0.48
2:AB:130:LYS:HA	2:AB:130:LYS:NZ	2.28	0.48
3:AC:110:LEU:CD2	3:AC:143:LEU:HD23	2.44	0.48
4:AD:137:SER:HB3	4:AD:138:PRO:HD2	1.96	0.48
6:AF:90:MET:HB3	6:AF:91:ARG:H	1.41	0.48
7:AG:86:VAL:HG13	7:AG:87:PRO:HD2	1.95	0.48
8:AH:7:ALA:HB2	8:AH:76:ARG:HH11	1.77	0.48
8:AH:28:SER:CB	8:AH:58:LEU:HB2	2.42	0.48
8:AH:105:THR:CG2	8:AH:120:LEU:HD13	2.34	0.48
11:AK:30:ILE:HB	11:AK:45:THR:HG22	1.95	0.48
13:AM:89:ARG:HH11	13:AM:94:LEU:CB	2.27	0.48
22:BA:528:A:C8	22:BA:528:A:C3'	2.96	0.48
22:BA:761:A:P	62:BA:3682:HOH:O	2.71	0.48
22:BA:1140:C:OP1	31:BJ:25:LEU:O	2.31	0.48
22:BA:1422:G:C4	22:BA:1423:G:C8	3.01	0.48
22:BA:1668:A:O4'	22:BA:1669:A:C2	2.66	0.48
22:BA:2109:U:N3	22:BA:2181:U:C4	2.81	0.48
22:BA:2419:U:OP2	51:B3:32:LEU:HD13	2.14	0.48
23:BB:116:G:H4'	36:BO:54:VAL:O	2.14	0.48
24:BC:140:VAL:HA	24:BC:190:THR:O	2.14	0.48
27:BF:123:GLY:HA2	27:BF:162:ASP:OD2	2.13	0.48
29:BH:32:PRO:O	29:BH:33:GLN:HB2	2.13	0.48
30:BI:16:MET:O	30:BI:19:PRO:HD3	2.12	0.48
39:BR:10:LYS:HD2	39:BR:10:LYS:N	2.28	0.48
43:BV:42:LEU:CD1	43:BV:47:VAL:HG21	2.43	0.48
43:BV:44:HIS:CE1	43:BV:85:LYS:HB2	2.48	0.48
44:BW:16:GLU:OE2	44:BW:16:GLU:HA	2.13	0.48
44:BW:40:ARG:HD3	44:BW:45:HIS:CE1	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BW:46:ALA:HB3	44:BW:79:ILE:C	2.32	0.48
53:CA:265:G:O3'	17:CQ:67:SER:HA	2.14	0.48
53:CA:591:U:H2'	53:CA:592:G:C8	2.49	0.48
53:CA:1036:A:C2'	53:CA:1037:C:H5'	2.44	0.48
53:CA:1040:U:O2'	53:CA:1041:G:H5'	2.13	0.48
53:CA:1271:A:H2'	53:CA:1272:G:C8	2.49	0.48
53:CA:1293:C:H2'	53:CA:1294:G:H8	1.74	0.48
53:CA:1365:G:O2'	53:CA:1366:C:H5'	2.13	0.48
4:CD:84:ASN:OD1	5:CE:101:GLY:HA3	2.12	0.48
12:CL:42:LYS:HG2	12:CL:43:LYS:HG2	1.95	0.48
56:CP:73:ALA:HA	56:CP:76:LYS:HB2	1.95	0.48
17:CQ:52:CYS:HB2	17:CQ:53:GLY:H	1.53	0.48
18:CR:66:LEU:HD23	18:CR:66:LEU:N	2.28	0.48
19:CS:39:ILE:HG12	19:CS:68:HIS:O	2.13	0.48
22:DA:228:C:C5'	22:DA:229:C:H5	2.26	0.48
22:DA:417:C:H2'	22:DA:418:C:C6	2.48	0.48
22:DA:571:U:C5	22:DA:575:A:C6	3.01	0.48
22:DA:747:U:H3'	22:DA:748:G:C5'	2.43	0.48
22:DA:988:A:C8	47:DZ:13:ILE:HD12	2.48	0.48
22:DA:1616:A:H4'	22:DA:1617:C:OP2	2.14	0.48
22:DA:1626:A:C2'	22:DA:1627:G:OP2	2.62	0.48
22:DA:1794:A:H2'	22:DA:1795:C:H6	1.78	0.48
22:DA:1930:G:HO2'	22:DA:1968:G:H1	1.60	0.48
22:DA:2038:G:H2'	22:DA:2039:U:O4'	2.14	0.48
24:DC:71:ASP:O	24:DC:73:ILE:HG12	2.13	0.48
25:DD:108:ASP:OD1	25:DD:207:VAL:HG23	2.14	0.48
29:DH:41:LYS:HA	29:DH:44:ILE:CG1	2.43	0.48
29:DH:104:THR:O	29:DH:104:THR:HG23	2.13	0.48
32:DK:57:VAL:O	32:DK:57:VAL:HG13	2.14	0.48
33:DL:128:THR:HG22	33:DL:130:GLY:H	1.78	0.48
36:DO:62:LEU:HD11	36:DO:65:THR:HG23	1.96	0.48
44:DW:70:VAL:HG22	44:DW:70:VAL:O	2.14	0.48
50:D2:24:THR:O	50:D2:24:THR:HG23	2.14	0.48
1:AA:27:G:C5	1:AA:557:G:C2	3.02	0.48
1:AA:57:G:H2'	1:AA:58:C:O4'	2.14	0.48
1:AA:428:G:C4'	1:AA:429:U:OP1	2.55	0.48
1:AA:649:A:H2'	1:AA:650:G:O4'	2.13	0.48
1:AA:1031:C:O2'	1:AA:1032:G:H5"	2.13	0.48
2:AB:207:ARG:O	2:AB:211:LEU:HB2	2.13	0.48
3:AC:122:GLN:HB3	3:AC:127:VAL:HG22	1.96	0.48
4:AD:22:SER:O	4:AD:23:GLY:C	2.52	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:49:TYR:HB2	18:AR:73:HIS:CD2	2.49	0.48
7:AG:61:PHE:HE1	7:AG:65:LEU:HD22	1.76	0.48
10:AJ:52:LEU:HB2	14:AN:80:ARG:HD2	1.95	0.48
11:AK:85:VAL:HG11	11:AK:92:ARG:HG3	1.96	0.48
11:AK:110:THR:HG22	21:AU:4:LYS:CB	2.43	0.48
22:BA:186:G:O2'	22:BA:187:G:H5'	2.14	0.48
22:BA:443:A:H2	22:BA:1245:G:N3	2.12	0.48
22:BA:1057:A:N3	22:BA:1082:U:C2	2.82	0.48
22:BA:1664:A:H1'	22:BA:2726:A:N1	2.29	0.48
22:BA:1954:G:N3	22:BA:2551:C:H5"	2.28	0.48
22:BA:2051:A:H8	22:BA:2051:A:OP2	1.96	0.48
22:BA:2699:C:H2'	22:BA:2700:A:O4'	2.13	0.48
25:BD:70:LYS:O	25:BD:71:ALA:CB	2.61	0.48
25:BD:89:GLU:HG3	25:BD:94:GLN:OE1	2.13	0.48
25:BD:117:GLY:C	25:BD:118:PHE:CD1	2.87	0.48
25:BD:117:GLY:C	25:BD:118:PHE:CG	2.86	0.48
28:BG:153:PRO:HA	28:BG:159:LYS:O	2.14	0.48
29:BH:147:VAL:CG1	29:BH:149:GLU:HG3	2.44	0.48
30:BI:19:PRO:HG2	30:BI:23:VAL:HG22	1.95	0.48
32:BK:51:LYS:O	32:BK:51:LYS:HD2	2.13	0.48
41:BT:4:GLU:CD	41:BT:5:GLU:H	2.16	0.48
41:BT:69:ARG:CZ	41:BT:70:HIS:HA	2.44	0.48
44:BW:23:LYS:HE3	44:BW:24:ARG:O	2.14	0.48
46:BY:7:ARG:N	46:BY:60:LYS:HZ1	2.08	0.48
46:BY:18:LEU:HD22	46:BY:18:LEU:HA	1.60	0.48
46:BY:47:ARG:HG3	46:BY:47:ARG:NH2	2.26	0.48
49:B1:29:LYS:HD2	49:B1:31:GLU:OE1	2.14	0.48
53:CA:64:G:C8	53:CA:99:C:N4	2.82	0.48
53:CA:312:C:H2'	53:CA:313:A:C8	2.49	0.48
53:CA:802:A:C2'	53:CA:803:G:O5'	2.62	0.48
53:CA:933:G:OP1	54:CG:3:ARG:HD3	2.14	0.48
53:CA:1004:A:N3	53:CA:1026:G:C5	2.81	0.48
53:CA:1215:G:O2'	53:CA:1216:A:H5'	2.13	0.48
53:CA:1285:A:H4'	53:CA:1286:U:OP1	2.14	0.48
53:CA:1499:A:H1'	53:CA:1520:C:H5'	1.96	0.48
3:CC:12:GLY:O	3:CC:13:ILE:HD13	2.14	0.48
5:CE:82:HIS:HB2	5:CE:83:PRO:HD2	1.94	0.48
12:CL:83:GLY:HA2	12:CL:94:TYR:HD1	1.79	0.48
55:CM:11:HIS:CE1	55:CM:43:LYS:HD2	2.48	0.48
55:CM:11:HIS:N	55:CM:44:ILE:HD12	2.28	0.48
56:CP:44:SER:HB2	56:CP:46:LYS:HG3	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:142:A:C2'	22:DA:143:C:C6	2.97	0.48
22:DA:405:U:H3'	22:DA:406:G:H5'	1.94	0.48
22:DA:468:G:H5'	22:DA:797:G:OP1	2.13	0.48
22:DA:538:A:N6	22:DA:555:G:O2'	2.43	0.48
22:DA:571:U:C6	22:DA:575:A:N6	2.82	0.48
22:DA:942:G:C2'	22:DA:943:A:H5'	2.44	0.48
22:DA:976:G:C4	22:DA:977:G:C8	3.01	0.48
22:DA:1056:G:H1'	22:DA:1103:A:C6	2.48	0.48
22:DA:1171:G:C4	22:DA:1179:G:N2	2.82	0.48
22:DA:1239:G:C5	22:DA:1240:U:C6	3.02	0.48
22:DA:1278:C:O2'	22:DA:1279:G:H5'	2.12	0.48
22:DA:1317:G:H2'	22:DA:1318:U:O4'	2.14	0.48
22:DA:1359:A:N1	22:DA:1360:G:H1'	2.27	0.48
22:DA:1421:G:H8	22:DA:1421:G:OP2	1.95	0.48
22:DA:1506:U:H2'	22:DA:1507:C:O4'	2.13	0.48
22:DA:1537:G:H3'	22:DA:1537:G:OP2	2.12	0.48
22:DA:1635:A:H2'	22:DA:1636:U:H6	1.78	0.48
22:DA:1721:G:H1'	22:DA:1739:A:H61	1.79	0.48
22:DA:1843:C:O2'	24:DC:253:GLY:HA3	2.13	0.48
22:DA:2100:G:N2	22:DA:2190:G:H1'	2.29	0.48
22:DA:2106:U:C4	22:DA:2107:G:N7	2.82	0.48
22:DA:2145:C:H2'	22:DA:2146:C:H3'	1.96	0.48
57:DB:42:C:C5	58:DF:65:LEU:HD13	2.48	0.48
24:DC:57:HIS:O	24:DC:59:GLN:HG3	2.14	0.48
24:DC:181:ARG:HG3	24:DC:265:PHE:O	2.13	0.48
26:DE:58:LYS:HD3	26:DE:58:LYS:N	2.28	0.48
28:DG:90:GLY:HA2	28:DG:159:LYS:HE3	1.96	0.48
40:DS:31:GLN:O	40:DS:35:ILE:HG12	2.14	0.48
40:DS:69:LEU:HG	40:DS:108:SER:O	2.13	0.48
41:DT:13:ALA:HB1	41:DT:14:PRO:HD2	1.96	0.48
43:DV:40:ILE:N	43:DV:40:ILE:HD13	2.29	0.48
1:AA:21:G:N2	1:AA:22:G:C6	2.81	0.48
1:AA:22:G:H2'	1:AA:23:C:H6	1.78	0.48
1:AA:80:A:C2	1:AA:90:C:N3	2.81	0.48
1:AA:372:C:H4'	1:AA:373:A:OP1	2.14	0.48
1:AA:695:A:C6	1:AA:696:A:C6	3.01	0.48
1:AA:1057:G:H4'	3:AC:196:GLY:H	1.77	0.48
1:AA:1299:A:O2'	1:AA:1300:G:H4'	2.14	0.48
1:AA:1410:A:C2'	1:AA:1411:C:O5'	2.61	0.48
2:AB:162:VAL:HG22	2:AB:184:ALA:HB2	1.94	0.48
3:AC:125:ARG:O	3:AC:126:ARG:HB3	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:59:ILE:O	5:AE:62:ALA:HB3	2.14	0.48
11:AK:125:LYS:O	11:AK:126:ARG:HB2	2.13	0.48
13:AM:28:ARG:NH2	13:AM:62:PHE:HB2	2.29	0.48
14:AN:3:GLN:O	14:AN:6:LYS:HB3	2.14	0.48
17:AQ:12:VAL:HG13	17:AQ:13:SER:H	1.77	0.48
17:AQ:80:LYS:HB2	17:AQ:80:LYS:NZ	2.19	0.48
22:BA:80:G:C2'	22:BA:81:G:H5'	2.44	0.48
22:BA:323:C:N4	22:BA:333:G:N7	2.62	0.48
22:BA:494:G:N2	40:BS:57:ASN:HD21	2.11	0.48
22:BA:1054:A:C6	22:BA:1106:G:O6	2.67	0.48
22:BA:1496:A:H2'	22:BA:1498:C:C4	2.48	0.48
22:BA:2260:C:H2'	22:BA:2261:C:H6	1.78	0.48
22:BA:2544:G:C2'	22:BA:2545:G:H5'	2.44	0.48
24:BC:236:GLY:O	24:BC:237:ARG:HB2	2.14	0.48
27:BF:120:SER:HB2	27:BF:127:TYR:HE1	1.74	0.48
30:BI:85:ILE:HD13	30:BI:88:GLY:HA2	1.96	0.48
32:BK:1:MET:HE2	32:BK:32:TYR:CE1	2.49	0.48
34:BM:49:ALA:O	34:BM:50:ARG:C	2.52	0.48
41:BT:63:VAL:HG21	41:BT:80:TRP:CZ2	2.49	0.48
45:BX:33:HIS:O	45:BX:34:SER:O	2.30	0.48
53:CA:154:U:C2'	53:CA:155:A:H5'	2.41	0.48
53:CA:254:G:OP1	17:CQ:68:LYS:O	2.31	0.48
53:CA:557:G:C6	53:CA:558:G:N1	2.82	0.48
53:CA:979:C:OP1	53:CA:1222:G:N7	2.47	0.48
53:CA:1094:G:C2'	53:CA:1095:U:OP2	2.61	0.48
53:CA:1140:C:O2'	53:CA:1141:C:C6	2.62	0.48
53:CA:1158:C:O2	53:CA:1158:C:H5"	2.13	0.48
2:CB:156:LEU:HD23	2:CB:156:LEU:H	1.78	0.48
3:CC:126:ARG:HA	3:CC:126:ARG:NE	2.28	0.48
3:CC:179:ALA:HB1	3:CC:202:PHE:CD1	2.48	0.48
6:CF:81:ASN:O	6:CF:82:ASP:C	2.52	0.48
12:CL:41:PRO:HG2	12:CL:45:ASN:O	2.13	0.48
55:CM:85:TYR:HE2	55:CM:96:VAL:HG13	1.79	0.48
15:CO:62:ARG:NH2	15:CO:88:ARG:HH21	2.12	0.48
22:DA:17:G:C6	22:DA:524:G:C6	3.02	0.48
22:DA:140:C:O2'	22:DA:141:G:OP2	2.27	0.48
22:DA:196:A:H61	22:DA:831:G:N2	2.06	0.48
22:DA:480:A:H3'	22:DA:481:G:H5"	1.96	0.48
22:DA:736:C:C4	22:DA:737:C:C5	3.02	0.48
22:DA:802:A:C5	22:DA:803:U:C4	3.02	0.48
22:DA:1091:G:C2	22:DA:1101:U:N3	2.82	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1355:G:C6	22:DA:1377:G:N2	2.81	0.48
22:DA:1551:A:C6	22:DA:1552:A:N7	2.82	0.48
22:DA:1611:C:O2'	22:DA:1612:C:O5'	2.30	0.48
22:DA:1760:C:H2'	22:DA:1761:C:O4'	2.14	0.48
22:DA:1799:G:C5	24:DC:175:LEU:HD13	2.49	0.48
22:DA:2214:C:H2'	22:DA:2215:C:C6	2.48	0.48
22:DA:2443:C:H2'	22:DA:2444:G:H8	1.78	0.48
22:DA:2461:A:N1	22:DA:2490:G:N2	2.61	0.48
22:DA:2544:G:H2'	22:DA:2545:G:O4'	2.14	0.48
22:DA:2675:A:C2	22:DA:2676:C:C2	3.02	0.48
22:DA:2889:C:N4	22:DA:2890:G:C6	2.81	0.48
57:DB:100:G:H2'	57:DB:101:A:O4'	2.14	0.48
24:DC:83:ASP:CB	24:DC:90:ILE:HD12	2.44	0.48
24:DC:93:VAL:HG12	24:DC:101:ARG:H	1.78	0.48
25:DD:141:ARG:HB3	25:DD:141:ARG:NH1	2.29	0.48
58:DF:37:MET:N	58:DF:151:LEU:HB3	2.28	0.48
28:DG:78:VAL:HG23	28:DG:79:THR:HG23	1.96	0.48
32:DK:28:SER:O	32:DK:29:HIS:CB	2.60	0.48
37:DP:9:GLN:HB3	37:DP:12:MET:HE2	1.95	0.48
37:DP:24:THR:HA	37:DP:44:GLY:O	2.13	0.48
37:DP:29:VAL:HG11	37:DP:73:PHE:HE1	1.78	0.48
37:DP:103:THR:O	37:DP:106:ALA:HB3	2.13	0.48
38:DQ:64:ILE:HD12	38:DQ:95:ALA:HB1	1.95	0.48
1:AA:901:A:N7	1:AA:902:G:H1'	2.28	0.48
1:AA:988:G:O6	1:AA:989:U:C4	2.67	0.48
1:AA:1282:C:H2'	1:AA:1283:U:H6	1.77	0.48
1:AA:1425:U:O2'	1:AA:1426:G:H5'	2.14	0.48
3:AC:21:TRP:CB	3:AC:58:ARG:HG2	2.44	0.48
4:AD:2:ARG:HB2	4:AD:4:LEU:CD1	2.44	0.48
5:AE:23:THR:HA	5:AE:28:ARG:HA	1.94	0.48
5:AE:81:GLN:NE2	5:AE:81:GLN:N	2.60	0.48
7:AG:105:GLU:HG2	7:AG:105:GLU:O	2.13	0.48
8:AH:77:VAL:HG23	8:AH:126:CYS:HA	1.96	0.48
22:BA:285:G:C5	22:BA:356:G:C2	3.02	0.48
22:BA:320:A:O2'	22:BA:322:A:H8	1.97	0.48
22:BA:745:G:H2'	22:BA:746:U:H5'	1.96	0.48
22:BA:1140:C:P	31:BJ:68:LYS:HZ3	2.37	0.48
22:BA:1507:C:C2	22:BA:1508:A:C2	3.01	0.48
22:BA:1559:U:H4'	22:BA:1560:G:OP2	2.14	0.48
22:BA:1779:U:H2'	62:BA:3680:HOH:O	2.12	0.48
22:BA:1820:U:OP1	24:BC:176:ARG:HG2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2037:A:H2'	22:BA:2038:G:C8	2.48	0.48
22:BA:2315:G:H2'	22:BA:2316:G:H8	1.78	0.48
22:BA:2403:C:H2'	22:BA:2404:U:H6	1.79	0.48
22:BA:2425:A:C5'	22:BA:2427:C:O4'	2.61	0.48
25:BD:186:LEU:HD11	37:BP:3:ILE:HD12	1.94	0.48
31:BJ:20:ALA:O	31:BJ:21:THR:O	2.32	0.48
33:BL:125:LEU:HD23	33:BL:125:LEU:N	2.29	0.48
34:BM:36:VAL:HG22	43:BV:82:TYR:CD1	2.49	0.48
53:CA:247:G:C6	53:CA:278:G:C6	3.00	0.48
53:CA:328:C:C2'	53:CA:329:A:OP2	2.61	0.48
53:CA:505:G:H2'	53:CA:506:G:C8	2.48	0.48
53:CA:936:C:H1'	53:CA:1382:C:H42	1.78	0.48
53:CA:994:A:C6	53:CA:1216:A:H5"	2.49	0.48
53:CA:1068:G:H2'	53:CA:1069:C:H5'	1.95	0.48
53:CA:1359:C:H5"	62:CA:1776:HOH:O	2.13	0.48
2:CB:99:MET:O	2:CB:103:TRP:HB3	2.14	0.48
4:CD:80:ARG:HB2	4:CD:81:LEU:H	1.51	0.48
5:CE:37:VAL:HG12	5:CE:38:VAL:H	1.78	0.48
55:CM:82:LEU:HB2	19:CS:73:PHE:CE2	2.49	0.48
15:CO:2:LEU:HD13	15:CO:34:GLN:HG2	1.96	0.48
19:CS:38:THR:HA	19:CS:69:LYS:HA	1.95	0.48
22:DA:277:G:O2'	22:DA:278:A:C5	2.64	0.48
22:DA:284:U:H2'	22:DA:285:G:C8	2.45	0.48
22:DA:303:G:C2	22:DA:304:U:C2	3.01	0.48
22:DA:464:U:C6	22:DA:788:A:C2	3.02	0.48
22:DA:1059:G:H1	22:DA:1088:A:H2	1.62	0.48
22:DA:1093:G:H5"	28:DG:171:LYS:NZ	2.29	0.48
22:DA:1287:A:N6	22:DA:1649:G:H1'	2.28	0.48
22:DA:1623:G:C2	22:DA:1624:U:C6	3.02	0.48
22:DA:1730:C:O2'	22:DA:1731:G:H5'	2.13	0.48
22:DA:2230:G:C1'	45:DX:31:ASN:HB3	2.43	0.48
22:DA:2285:C:H1'	22:DA:2288:A:O2'	2.14	0.48
22:DA:2564:A:OP1	22:DA:2648:G:H4'	2.14	0.48
22:DA:2637:U:H5'	25:DD:45:TYR:CE1	2.49	0.48
57:DB:19:C:H2'	57:DB:20:G:C8	2.49	0.48
24:DC:75:ALA:HB1	24:DC:93:VAL:HG22	1.96	0.48
25:DD:148:GLN:HG2	25:DD:152:PRO:HG2	1.96	0.48
25:DD:185:ASN:O	25:DD:186:LEU:HD12	2.13	0.48
58:DF:101:ARG:HH11	58:DF:138:PRO:HB3	1.79	0.48
29:DH:54:LEU:HA	29:DH:57:LYS:CG	2.44	0.48
33:DL:62:PRO:HG2	51:D3:24:LYS:HB3	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DN:62:ASN:OD1	35:DN:62:ASN:N	2.47	0.48
37:DP:31:VAL:CG1	37:DP:38:ARG:HG2	2.44	0.48
41:DT:74:ILE:HG13	41:DT:75:GLY:H	1.77	0.48
45:DX:70:LEU:O	45:DX:74:GLY:N	2.47	0.48
1:AA:903:G:H2'	1:AA:904:U:C6	2.49	0.48
1:AA:903:G:H2'	1:AA:904:U:H6	1.78	0.48
1:AA:971:G:H1'	1:AA:1365:G:O2'	2.14	0.48
4:AD:33:ILE:O	4:AD:33:ILE:HG23	2.14	0.48
6:AF:85:ILE:O	6:AF:86:ARG:C	2.52	0.48
8:AH:5:PRO:HB2	8:AH:32:LYS:HZ2	1.79	0.48
9:AI:39:GLY:O	9:AI:40:ARG:HB2	2.13	0.48
11:AK:13:LYS:O	11:AK:14:GLN:CB	2.62	0.48
13:AM:55:LEU:O	13:AM:59:VAL:HG12	2.13	0.48
16:AP:20:VAL:CG2	16:AP:32:PHE:HB2	2.43	0.48
17:AQ:28:VAL:HG23	17:AQ:29:LYS:N	2.29	0.48
18:AR:21:ASP:OD2	18:AR:23:LYS:HD2	2.14	0.48
22:BA:322:A:H5'	22:BA:340:A:H1'	1.96	0.48
22:BA:593:U:H2'	22:BA:594:U:C6	2.49	0.48
22:BA:603:A:C8	22:BA:655:A:C6	3.02	0.48
22:BA:671:C:O2'	22:BA:672:C:H5'	2.14	0.48
22:BA:1011:G:C4'	22:BA:1012:U:OP1	2.62	0.48
22:BA:1266:G:OP1	48:B0:15:ARG:NE	2.39	0.48
22:BA:1501:G:C2'	22:BA:1502:A:H5'	2.43	0.48
22:BA:1654:A:H4'	25:BD:118:PHE:CE1	2.49	0.48
22:BA:1746:A:C2	22:BA:1747:U:C2	3.01	0.48
22:BA:2198:A:H4'	22:BA:2199:A:OP1	2.13	0.48
22:BA:2820:A:C2'	22:BA:2821:A:OP1	2.62	0.48
24:BC:257:ARG:NE	24:BC:269:ARG:HH22	2.12	0.48
27:BF:3:LEU:HD13	27:BF:3:LEU:HA	1.60	0.48
27:BF:38:GLY:HA2	27:BF:85:GLY:HA3	1.96	0.48
30:BI:12:VAL:HG23	30:BI:13:ALA:H	1.78	0.48
34:BM:40:ARG:HB2	34:BM:93:VAL:HG21	1.95	0.48
35:BN:1:MET:O	35:BN:2:ARG:CB	2.61	0.48
37:BP:113:LEU:O	37:BP:113:LEU:HG	2.13	0.48
38:BQ:27:ARG:HG3	38:BQ:27:ARG:HH11	1.77	0.48
43:BV:5:ASN:N	43:BV:5:ASN:HD22	2.12	0.48
44:BW:28:GLU:CG	44:BW:29:SER:N	2.77	0.48
44:BW:72:GLY:N	44:BW:73:PRO:CD	2.76	0.48
51:B3:26:ALA:O	51:B3:27:ASN:CB	2.61	0.48
53:CA:198:G:O6	53:CA:220:G:C5	2.66	0.48
53:CA:765:G:C6	53:CA:812:G:C5	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:908:A:H2'	53:CA:909:A:C8	2.49	0.48
53:CA:935:A:H61	54:CG:2:ARG:CZ	2.27	0.48
53:CA:1007:U:O2	53:CA:1007:U:H2'	2.13	0.48
53:CA:1047:G:C2	53:CA:1213:A:H2	2.32	0.48
53:CA:1062:U:H2'	53:CA:1063:C:C6	2.49	0.48
53:CA:1102:A:H2'	53:CA:1103:C:H6	1.79	0.48
53:CA:1133:G:C6	53:CA:1134:G:N7	2.82	0.48
53:CA:1137:C:O2'	53:CA:1138:G:N2	2.47	0.48
53:CA:1148:U:H2'	53:CA:1149:C:O4'	2.14	0.48
53:CA:1346:A:C4	53:CA:1348:U:C4	3.02	0.48
3:CC:42:LEU:HD12	3:CC:46:LEU:HD12	1.95	0.48
4:CD:2:ARG:NH2	4:CD:114:ARG:CD	2.68	0.48
5:CE:131:ASN:C	5:CE:135:VAL:HG23	2.34	0.48
54:CG:59:GLU:C	54:CG:61:PHE:H	2.16	0.48
22:DA:2:G:C5	22:DA:3:U:C4	3.01	0.48
22:DA:86:G:HO2'	22:DA:87:U:H6	1.56	0.48
22:DA:327:G:H2'	22:DA:328:U:O4'	2.13	0.48
22:DA:659:G:H4'	26:DE:95:LYS:HD3	1.95	0.48
22:DA:669:G:C2	22:DA:801:G:C6	3.02	0.48
22:DA:684:G:OP1	50:D2:16:HIS:CD2	2.67	0.48
22:DA:748:G:H2'	22:DA:750:A:OP2	2.14	0.48
22:DA:749:A:C5	22:DA:750:A:C8	3.02	0.48
22:DA:1014:A:O2'	22:DA:1015:U:H5'	2.14	0.48
22:DA:1087:G:N2	22:DA:1103:A:H1'	2.28	0.48
22:DA:1112:G:H2'	22:DA:1113:U:C6	2.48	0.48
22:DA:2093:G:C6	22:DA:2197:U:O2	2.66	0.48
22:DA:2262:U:H5"	44:DW:38:ARG:NH2	2.28	0.48
22:DA:2392:A:C2	33:DL:55:MET:SD	3.07	0.48
22:DA:2429:G:OP2	22:DA:2430:A:OP2	2.32	0.48
31:DJ:30:THR:CG2	31:DJ:31:GLU:N	2.77	0.48
31:DJ:110:PRO:O	31:DJ:115:GLY:HA3	2.14	0.48
31:DJ:127:GLY:O	31:DJ:129:GLU:HG3	2.14	0.48
34:DM:35:ALA:O	34:DM:128:THR:HA	2.13	0.48
35:DN:45:ARG:HG2	35:DN:95:THR:HG21	1.96	0.48
37:DP:1:SER:HB3	37:DP:4:ILE:HB	1.94	0.48
37:DP:92:ARG:HG2	37:DP:92:ARG:O	2.14	0.48
42:DU:94:PHE:HD2	42:DU:94:PHE:O	1.95	0.48
45:DX:58:ILE:HA	45:DX:66:VAL:HG21	1.96	0.48
1:AA:120:A:C5	1:AA:122:G:C6	3.02	0.47
1:AA:198:G:C6	1:AA:220:G:C4	3.02	0.47
1:AA:1279:G:N3	1:AA:1279:G:C2'	2.70	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1338:G:C6	1:AA:1339:A:C6	3.02	0.47
4:AD:157:ALA:O	4:AD:160:LEU:HD22	2.14	0.47
8:AH:74:ILE:HD12	8:AH:128:VAL:HG22	1.96	0.47
12:AL:32:VAL:O	12:AL:33:CYS:SG	2.72	0.47
12:AL:111:GLN:O	12:AL:112:ALA:HB3	2.14	0.47
13:AM:7:ASN:HD22	13:AM:8:ILE:H	1.62	0.47
18:AR:19:GLU:HG3	18:AR:54:LEU:HD22	1.95	0.47
19:AS:19:GLU:HA	19:AS:19:GLU:OE2	2.12	0.47
20:AT:23:ARG:O	20:AT:27:MET:HB3	2.14	0.47
22:BA:60:G:H1'	22:BA:61:C:OP1	2.14	0.47
22:BA:141:G:H3'	22:BA:142:A:O4'	2.14	0.47
22:BA:142:A:O2'	22:BA:143:C:O5'	2.31	0.47
22:BA:944:C:H2'	62:BA:3348:HOH:O	2.13	0.47
22:BA:2016:U:H2'	22:BA:2017:U:C6	2.49	0.47
22:BA:2196:C:O2'	22:BA:2197:U:H5'	2.14	0.47
22:BA:2273:A:H2'	22:BA:2274:A:C8	2.49	0.47
25:BD:12:THR:HG22	25:BD:13:ARG:H	1.75	0.47
25:BD:120:GLY:HA2	25:BD:162:ALA:CB	2.44	0.47
26:BE:12:LEU:O	26:BE:13:THR:HB	2.13	0.47
26:BE:150:THR:HA	26:BE:189:THR:CG2	2.44	0.47
27:BF:147:ARG:HG3	27:BF:148:VAL:N	2.27	0.47
30:BI:126:ARG:HA	30:BI:129:GLU:CD	2.35	0.47
36:BO:34:HIS:HD2	36:BO:53:THR:OG1	1.97	0.47
43:BV:10:LYS:HD3	43:BV:10:LYS:N	2.19	0.47
53:CA:5:U:H4'	53:CA:6:G:H5"	1.96	0.47
53:CA:51:A:H4'	53:CA:52:C:H5'	1.95	0.47
53:CA:86:G:C2	53:CA:87:C:C5	3.02	0.47
53:CA:672:U:H2'	53:CA:673:A:C8	2.48	0.47
53:CA:882:C:H41	12:CL:5:GLN:HE21	1.62	0.47
53:CA:1012:A:C5	53:CA:1013:G:N7	2.82	0.47
53:CA:1029:U:H4'	53:CA:1032:G:H1	1.79	0.47
3:CC:142:ARG:HG2	3:CC:143:LEU:HD12	1.96	0.47
11:CK:70:ALA:HB1	11:CK:104:PHE:HZ	1.79	0.47
11:CK:121:ARG:NH2	21:CU:35:GLU:HG2	2.29	0.47
22:DA:174:U:H2'	22:DA:174:U:O2	2.13	0.47
22:DA:345:A:O2'	22:DA:346:A:C2	2.65	0.47
22:DA:804:A:H5"	22:DA:805:G:OP1	2.14	0.47
22:DA:1328:A:H2'	22:DA:1330:C:C4	2.49	0.47
22:DA:1345:C:H5'	22:DA:1396:U:O4	2.14	0.47
22:DA:1361:G:C5	22:DA:1362:C:C5	3.02	0.47
22:DA:1385:A:C4'	22:DA:1386:C:OP1	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1936:A:H2	22:DA:1943:U:C4	2.32	0.47
22:DA:2097:A:H2'	22:DA:2098:U:C6	2.49	0.47
22:DA:2314:A:C2	22:DA:2315:G:C5	3.02	0.47
22:DA:2655:G:H1'	22:DA:2656:U:H5	1.79	0.47
26:DE:119:ILE:HD13	26:DE:143:LEU:HD21	1.96	0.47
29:DH:37:VAL:HG23	29:DH:38:PRO:HD2	1.94	0.47
31:DJ:25:LEU:C	31:DJ:27:ARG:H	2.16	0.47
34:DM:41:LEU:HD13	34:DM:96:ILE:HG12	1.96	0.47
41:DT:67:VAL:O	41:DT:68:LYS:HG3	2.13	0.47
47:DZ:4:ILE:CD1	47:DZ:58:GLU:HA	2.40	0.47
47:DZ:10:ARG:HD2	47:DZ:52:PHE:O	2.13	0.47
48:D0:27:LEU:CD1	48:D0:38:LEU:HD23	2.44	0.47
1:AA:886:G:H2'	1:AA:887:G:O4'	2.14	0.47
1:AA:1514:G:O2'	1:AA:1515:G:H5'	2.14	0.47
4:AD:98:ASP:HB3	4:AD:114:ARG:HG2	1.96	0.47
9:AI:49:GLN:N	9:AI:50:PRO:HD2	2.28	0.47
13:AM:3:ILE:O	13:AM:5:GLY:N	2.47	0.47
13:AM:84:CYS:HB3	19:AS:73:PHE:CE2	2.49	0.47
22:BA:119:A:C4'	22:BA:120:U:O5'	2.52	0.47
22:BA:155:A:H2'	22:BA:156:A:H8	1.77	0.47
22:BA:441:U:H2'	22:BA:442:G:C8	2.50	0.47
22:BA:528:A:H3'	22:BA:528:A:H8	1.78	0.47
22:BA:1585:C:O5'	22:BA:1585:C:H6	1.97	0.47
22:BA:1866:A:C2	22:BA:1876:A:C4	3.02	0.47
22:BA:2262:U:H4'	22:BA:2328:A:C2	2.49	0.47
22:BA:2514:U:H2'	22:BA:2515:C:C6	2.50	0.47
25:BD:85:ALA:O	25:BD:86:GLU:HB2	2.14	0.47
25:BD:139:SER:HA	25:BD:142:VAL:HG13	1.96	0.47
29:BH:40:THR:O	29:BH:42:LYS:N	2.44	0.47
33:BL:29:LYS:C	33:BL:31:GLY:H	2.18	0.47
37:BP:25:VAL:HA	37:BP:84:SER:O	2.13	0.47
37:BP:101:GLU:C	37:BP:102:ARG:HG2	2.34	0.47
40:BS:73:LYS:HE3	40:BS:73:LYS:CA	2.44	0.47
42:BU:41:VAL:O	42:BU:59:GLU:HA	2.14	0.47
44:BW:22:VAL:HG13	44:BW:25:PHE:CD2	2.49	0.47
44:BW:49:ASN:ND2	44:BW:49:ASN:C	2.67	0.47
53:CA:182:A:O2'	53:CA:183:C:H2'	2.14	0.47
53:CA:358:U:H2'	53:CA:359:G:H8	1.79	0.47
53:CA:389:A:N3	53:CA:389:A:H2'	2.29	0.47
53:CA:802:A:H2'	53:CA:803:G:C5'	2.44	0.47
53:CA:978:A:C6	53:CA:1319:A:C5	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1050:G:O2'	53:CA:1051:C:H6	1.95	0.47
53:CA:1213:A:C4	53:CA:1215:G:C8	3.02	0.47
53:CA:1221:G:C2	53:CA:1222:G:H1'	2.48	0.47
53:CA:1496:C:H2'	53:CA:1497:G:O4'	2.13	0.47
53:CA:1502:A:H5'	53:CA:1504:G:N7	2.29	0.47
2:CB:91:VAL:HG11	2:CB:95:TRP:CD1	2.49	0.47
4:CD:71:PHE:O	4:CD:74:TYR:HB2	2.13	0.47
4:CD:115:GLN:NE2	4:CD:153:ARG:NH2	2.62	0.47
54:CG:37:THR:HA	54:CG:40:SER:OG	2.14	0.47
9:CI:87:MET:SD	9:CI:87:MET:N	2.87	0.47
55:CM:106:ARG:CZ	55:CM:112:ARG:HB3	2.44	0.47
14:CN:55:SER:HB3	14:CN:58:ARG:HG2	1.97	0.47
17:CQ:46:HIS:CG	17:CQ:70:LYS:HZ1	2.31	0.47
22:DA:16:C:H2'	22:DA:17:G:H8	1.79	0.47
22:DA:270:A:H2'	22:DA:271:G:OP1	2.14	0.47
22:DA:277:G:O2'	22:DA:278:A:C4	2.67	0.47
22:DA:311:A:O2'	22:DA:312:G:P	2.72	0.47
22:DA:632:A:H5"	33:DL:68:SER:OG	2.14	0.47
22:DA:748:G:O5'	40:DS:89:ALA:HB2	2.14	0.47
22:DA:834:G:H2'	22:DA:835:C:O4'	2.14	0.47
22:DA:1512:C:C4	22:DA:1513:U:C4	3.02	0.47
22:DA:1653:G:O6	35:DN:10:LEU:O	2.32	0.47
22:DA:1667:G:O2'	22:DA:1991:U:O4	2.20	0.47
22:DA:1969:A:H2'	22:DA:1972:G:H21	1.78	0.47
22:DA:2386:A:H2	44:DW:38:ARG:HG2	1.79	0.47
22:DA:2556:C:H2'	22:DA:2557:G:O4'	2.14	0.47
22:DA:2741:A:H2'	22:DA:2742:G:O4'	2.14	0.47
22:DA:2746:U:H5"	28:DG:137:LYS:HG2	1.96	0.47
22:DA:2847:U:H3'	37:DP:94:ALA:HB2	1.97	0.47
25:DD:121:THR:CG2	25:DD:127:PHE:CD1	2.97	0.47
58:DF:11:VAL:O	58:DF:12:VAL:HB	2.14	0.47
30:DI:109:ALA:HB1	30:DI:125:THR:HG22	1.94	0.47
32:DK:69:VAL:HG11	32:DK:106:GLU:CG	2.34	0.47
35:DN:35:LYS:HD3	35:DN:112:TYR:OH	2.14	0.47
37:DP:50:ARG:CB	37:DP:56:SER:HB3	2.44	0.47
37:DP:51:ASN:H	37:DP:56:SER:HB3	1.78	0.47
42:DU:86:PHE:CG	42:DU:87:GLU:N	2.82	0.47
1:AA:212:G:H2'	1:AA:213:G:C8	2.46	0.47
1:AA:807:A:C8	1:AA:808:C:C5	3.02	0.47
2:AB:22:TRP:HA	2:AB:189:ASN:HA	1.96	0.47
3:AC:59:PRO:O	3:AC:60:ALA:O	2.32	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:79:ARG:HB2	8:AH:80:PRO:HD2	1.96	0.47
9:AI:129:ARG:NH1	9:AI:129:ARG:HA	2.30	0.47
16:AP:10:GLY:HA3	16:AP:15:PRO:HA	1.95	0.47
20:AT:25:SER:O	20:AT:29:THR:HG23	2.15	0.47
22:BA:250:G:C6	22:BA:251:A:C6	3.03	0.47
22:BA:1150:C:H2'	22:BA:1151:A:O5'	2.12	0.47
22:BA:1181:U:H2'	22:BA:1182:G:C8	2.49	0.47
22:BA:1315:C:O2'	22:BA:1316:U:H5'	2.14	0.47
22:BA:1820:U:O2	24:BC:200:MET:HB2	2.15	0.47
22:BA:2518:A:N3	22:BA:2518:A:H2'	2.29	0.47
22:BA:2562:U:H2'	22:BA:2562:U:O2	2.14	0.47
22:BA:2820:A:O2'	22:BA:2821:A:P	2.72	0.47
24:BC:196:ASN:OD1	24:BC:197:ALA:N	2.47	0.47
26:BE:110:SER:O	26:BE:113:VAL:HG12	2.14	0.47
30:BI:56:VAL:HG22	30:BI:57:VAL:N	2.29	0.47
31:BJ:13:ARG:HD3	31:BJ:51:GLY:O	2.15	0.47
31:BJ:31:GLU:OE2	31:BJ:35:ARG:HD2	2.15	0.47
35:BN:44:LEU:HD23	35:BN:113:ILE:HG21	1.96	0.47
36:BO:85:LYS:HE3	36:BO:85:LYS:HB3	1.63	0.47
39:BR:42:ALA:CA	39:BR:46:GLU:HB2	2.32	0.47
39:BR:49:ILE:HB	39:BR:51:VAL:O	2.14	0.47
46:BY:21:LEU:HA	46:BY:25:GLN:HB3	1.95	0.47
50:B2:18:PHE:O	50:B2:22:MET:HB2	2.14	0.47
53:CA:501:C:H1'	53:CA:549:C:H1'	1.96	0.47
53:CA:542:G:H2'	53:CA:543:U:H6	1.79	0.47
53:CA:563:A:N3	53:CA:563:A:C2'	2.73	0.47
53:CA:1158:C:O2'	53:CA:1159:U:H4'	2.14	0.47
53:CA:1251:A:H2'	53:CA:1369:C:O2'	2.14	0.47
53:CA:1258:G:H2'	53:CA:1259:C:C6	2.49	0.47
53:CA:1370:G:C2	53:CA:1371:G:C5	3.01	0.47
4:CD:72:ARG:HA	4:CD:203:TYR:HE1	1.80	0.47
8:CH:85:TYR:CE2	8:CH:123:GLU:HB2	2.49	0.47
9:CI:48:ARG:C	9:CI:50:PRO:HD2	2.35	0.47
9:CI:125:GLN:H	9:CI:125:GLN:NE2	2.12	0.47
10:CJ:77:VAL:O	10:CJ:79:PRO:HD3	2.13	0.47
12:CL:81:ILE:HD11	12:CL:94:TYR:CB	2.45	0.47
21:CU:25:ALA:O	21:CU:26:GLY:C	2.52	0.47
22:DA:11:C:H2'	22:DA:12:U:H5'	1.97	0.47
22:DA:26:G:C5'	22:DA:27:G:OP2	2.62	0.47
22:DA:27:G:H1'	22:DA:513:A:H62	1.77	0.47
22:DA:49:A:C8	22:DA:51:G:C2	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:233:A:H61	22:DA:428:A:H61	1.61	0.47
22:DA:249:C:HO2'	22:DA:250:G:P	2.35	0.47
22:DA:301:G:C5	22:DA:302:C:N4	2.82	0.47
22:DA:575:A:H2'	22:DA:576:U:C5	2.48	0.47
22:DA:617:G:O2'	22:DA:618:G:O5'	2.32	0.47
22:DA:621:A:H3'	22:DA:621:A:OP2	2.14	0.47
22:DA:1019:U:O2	22:DA:1144:A:C2	2.68	0.47
22:DA:1039:A:H2	22:DA:1116:G:H22	1.61	0.47
22:DA:1280:G:C2'	22:DA:1281:G:H5'	2.40	0.47
22:DA:1339:G:H5'	22:DA:1393:A:N1	2.28	0.47
22:DA:1500:G:N1	22:DA:1501:G:C5	2.82	0.47
22:DA:1606:C:O2'	22:DA:1607:C:P	2.72	0.47
22:DA:2053:G:N2	22:DA:2054:A:H1'	2.30	0.47
22:DA:2054:A:C2	22:DA:2616:C:N3	2.82	0.47
22:DA:2060:A:N6	26:DE:69:ARG:HH12	2.05	0.47
22:DA:2093:G:O6	22:DA:2225:A:C8	2.68	0.47
22:DA:2307:G:C8	22:DA:2312:U:C5	3.03	0.47
22:DA:2322:A:H3'	22:DA:2323:G:H8	1.79	0.47
22:DA:2591:C:H2'	22:DA:2592:G:C8	2.49	0.47
22:DA:2612:C:O2	48:D0:1:ALA:HB2	2.14	0.47
57:DB:17:C:C2'	57:DB:18:G:H5'	2.44	0.47
57:DB:109:A:C6	57:DB:110:C:N4	2.82	0.47
25:DD:131:ASP:N	25:DD:131:ASP:OD2	2.47	0.47
58:DF:76:PHE:CD2	58:DF:76:PHE:N	2.77	0.47
28:DG:25:ILE:CG2	28:DG:78:VAL:HG21	2.44	0.47
28:DG:120:ILE:O	28:DG:120:ILE:HG23	2.13	0.47
29:DH:6:LEU:HD13	29:DH:36:ALA:HA	1.96	0.47
29:DH:46:PHE:HA	29:DH:50:ARG:HH21	1.78	0.47
33:DL:23:ILE:HG13	39:DR:82:HIS:ND1	2.28	0.47
36:DO:49:VAL:HG11	36:DO:81:ARG:HB3	1.95	0.47
37:DP:107:ALA:O	37:DP:108:ARG:C	2.52	0.47
37:DP:113:LEU:HD23	37:DP:113:LEU:C	2.34	0.47
39:DR:10:LYS:N	39:DR:10:LYS:HD2	2.29	0.47
40:DS:55:ILE:O	40:DS:59:GLU:HG2	2.15	0.47
44:DW:37:VAL:HG23	44:DW:38:ARG:HD2	1.94	0.47
47:DZ:6:ILE:O	47:DZ:34:THR:HA	2.14	0.47
1:AA:67:C:H4'	1:AA:172:A:O4'	2.14	0.47
1:AA:819:A:H4'	1:AA:820:U:OP2	2.15	0.47
1:AA:914:A:C4	1:AA:915:A:C8	3.02	0.47
1:AA:1229:A:H62	13:AM:103:THR:CG2	2.27	0.47
5:AE:45:VAL:HG21	5:AE:117:ALA:CB	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:149:PRO:HG2	5:AE:150:GLU:H	1.79	0.47
6:AF:40:GLU:HB2	6:AF:42:TRP:HE1	1.78	0.47
7:AG:29:LEU:O	7:AG:29:LEU:HD23	2.14	0.47
8:AH:45:ILE:C	8:AH:63:LYS:HD2	2.35	0.47
10:AJ:56:HIS:O	10:AJ:57:VAL:HG12	2.14	0.47
15:AO:63:ARG:CD	15:AO:87:ARG:HH22	2.16	0.47
22:BA:1135:C:H6	22:BA:1135:C:H5"	1.80	0.47
22:BA:1568:G:H1'	24:BC:57:HIS:HE1	1.80	0.47
22:BA:2352:A:C2	44:BW:30:VAL:CG1	2.92	0.47
23:BB:15:A:O2'	23:BB:16:G:OP1	2.32	0.47
31:BJ:43:GLU:O	31:BJ:45:THR:O	2.32	0.47
31:BJ:64:VAL:HG11	31:BJ:69:ARG:N	2.30	0.47
32:BK:107:LEU:C	32:BK:109:SER:H	2.17	0.47
34:BM:21:ALA:HB2	34:BM:97:GLN:O	2.14	0.47
35:BN:73:ASN:O	35:BN:76:VAL:HG12	2.14	0.47
43:BV:80:HIS:CE1	43:BV:81:PRO:HD2	2.49	0.47
43:BV:80:HIS:CG	43:BV:81:PRO:HD2	2.48	0.47
46:BY:7:ARG:N	46:BY:60:LYS:NZ	2.62	0.47
51:B3:44:ARG:N	51:B3:45:PRO:HD2	2.29	0.47
53:CA:451:A:C4'	53:CA:452:A:O5'	2.55	0.47
53:CA:812:G:H4'	53:CA:812:G:OP1	2.13	0.47
53:CA:1310:G:C6	53:CA:1311:A:C6	3.03	0.47
5:CE:22:LYS:O	5:CE:29:ILE:HB	2.14	0.47
5:CE:55:VAL:N	5:CE:56:PRO:CD	2.77	0.47
54:CG:112:ASP:HB3	54:CG:117:LEU:HB3	1.96	0.47
54:CG:117:LEU:HG	54:CG:121:ASN:ND2	2.30	0.47
9:CI:129:ARG:CZ	9:CI:129:ARG:HA	2.44	0.47
56:CP:20:VAL:HG23	56:CP:35:ARG:HA	1.97	0.47
22:DA:99:U:O2	22:DA:99:U:O4'	2.32	0.47
22:DA:116:C:H5"	22:DA:128:C:H41	1.78	0.47
22:DA:352:A:N3	22:DA:353:C:H1'	2.28	0.47
22:DA:453:A:N3	22:DA:457:A:O2'	2.47	0.47
22:DA:636:G:H3'	33:DL:128:THR:HG21	1.96	0.47
22:DA:1060:U:H4'	22:DA:1061:U:O5'	2.13	0.47
22:DA:1358:G:H2'	22:DA:1372:U:O4	2.15	0.47
22:DA:1494:A:H2'	22:DA:1495:A:H8	1.79	0.47
22:DA:1521:G:C6	22:DA:1522:A:C6	3.02	0.47
22:DA:1773:A:N7	22:DA:1829:A:H1'	2.30	0.47
22:DA:2092:U:H5	22:DA:2226:C:OP2	1.97	0.47
22:DA:2145:C:H3'	22:DA:2147:A:OP2	2.14	0.47
22:DA:2188:U:H2'	22:DA:2189:U:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2286:G:H5”	22:DA:2287:A:H1’	1.95	0.47
22:DA:2506:U:H3’	22:DA:2506:U:C6	2.48	0.47
22:DA:2615:U:C4	48:D0:2:VAL:C	2.87	0.47
22:DA:2748:A:C2	22:DA:2749:A:C4	3.03	0.47
57:DB:90:C:H2’	57:DB:91:C:O4’	2.14	0.47
24:DC:229:HIS:ND1	24:DC:230:PRO:HD2	2.30	0.47
25:DD:175:LEU:O	25:DD:176:ASP:HB2	2.12	0.47
58:DF:155:ILE:H	58:DF:155:ILE:HD12	1.78	0.47
29:DH:136:SER:C	29:DH:137:GLU:HG3	2.35	0.47
30:DI:86:LYS:O	30:DI:87:SER:HB2	2.14	0.47
32:DK:18:ARG:HB2	32:DK:45:GLU:HB2	1.96	0.47
35:DN:33:ILE:CD1	35:DN:118:ARG:HH21	2.27	0.47
38:DQ:87:VAL:HG12	38:DQ:88:GLU:N	2.29	0.47
41:DT:40:LYS:HA	41:DT:43:ILE:HG22	1.97	0.47
43:DV:61:LEU:O	43:DV:72:VAL:HG22	2.14	0.47
44:DW:46:ALA:HA	44:DW:50:VAL:HG12	1.96	0.47
45:DX:52:ALA:C	45:DX:54:GLY:N	2.68	0.47
45:DX:67:LEU:O	45:DX:77:TYR:OH	2.32	0.47
51:D3:23:HIS:O	51:D3:46:LYS:HE3	2.14	0.47
1:AA:74:A:H1’	1:AA:97:G:N2	2.29	0.47
1:AA:684:U:H3	1:AA:706:A:H61	1.61	0.47
1:AA:687:A:C5	1:AA:701:U:H5	2.32	0.47
1:AA:843:U:H3	2:CB:114:LYS:HB3	1.79	0.47
1:AA:862:C:H2’	1:AA:863:U:H5’	1.96	0.47
1:AA:921:U:H2’	1:AA:922:G:O4’	2.15	0.47
1:AA:927:G:N1	1:AA:1391:U:C2	2.83	0.47
1:AA:1380:U:C5	7:AG:2:ARG:HA	2.49	0.47
5:AE:81:GLN:HG2	5:AE:149:PRO:CB	2.44	0.47
10:AJ:10:LEU:O	10:AJ:71:LEU:HD13	2.14	0.47
11:AK:21:HIS:CD2	11:AK:34:THR:CG2	2.98	0.47
13:AM:89:ARG:HD2	13:AM:95:PRO:O	2.14	0.47
22:BA:522:A:C6	22:BA:523:C:N4	2.83	0.47
22:BA:709:U:H2’	22:BA:710:U:C6	2.49	0.47
22:BA:948:C:H6	22:BA:948:C:O5’	1.98	0.47
22:BA:1355:G:C2	22:BA:1356:G:C8	3.03	0.47
22:BA:1733:G:O2’	22:BA:1734:G:O5’	2.33	0.47
22:BA:2046:G:OP1	48:B0:11:LYS:HE3	2.14	0.47
22:BA:2188:U:H2’	22:BA:2189:U:C6	2.49	0.47
22:BA:2678:C:H2’	22:BA:2679:A:O4’	2.14	0.47
22:BA:2824:C:H2’	22:BA:2825:G:O5’	2.14	0.47
24:BC:78:GLU:OE1	24:BC:100:ARG:NE	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:190:THR:CG2	24:BC:191:LEU:N	2.77	0.47
24:BC:190:THR:HG22	24:BC:191:LEU:N	2.28	0.47
25:BD:182:ALA:C	25:BD:183:GLU:HG3	2.35	0.47
26:BE:48:THR:O	26:BE:52:VAL:HG23	2.15	0.47
27:BF:39:VAL:HG11	27:BF:42:ALA:HB2	1.96	0.47
28:BG:29:ASN:H	28:BG:29:ASN:HD22	1.63	0.47
28:BG:109:SER:O	28:BG:110:HIS:CB	2.62	0.47
30:BI:91:LYS:O	30:BI:97:VAL:HG21	2.14	0.47
31:BJ:44:TYR:HB2	38:BQ:63:ARG:CB	2.22	0.47
34:BM:134:THR:HG23	43:BV:79:ARG:HH21	1.80	0.47
35:BN:33:ILE:HG12	35:BN:118:ARG:CZ	2.45	0.47
40:BS:42:LYS:O	40:BS:45:VAL:HG13	2.15	0.47
44:BW:28:GLU:O	44:BW:30:VAL:N	2.47	0.47
49:B1:29:LYS:NZ	49:B1:29:LYS:HB3	2.30	0.47
53:CA:175:C:O2	53:CA:1447:A:H2	1.98	0.47
53:CA:675:A:H1'	11:CK:117:HIS:ND1	2.30	0.47
53:CA:811:C:H4'	53:CA:900:A:N6	2.29	0.47
53:CA:1005:A:N7	53:CA:1006:G:H1'	2.29	0.47
53:CA:1130:A:C6	53:CA:1131:G:N7	2.82	0.47
53:CA:1201:A:C5'	53:CA:1203:C:OP2	2.62	0.47
53:CA:1239:A:H1'	53:CA:1241:G:N3	2.29	0.47
53:CA:1484:C:H2'	53:CA:1485:U:O4'	2.14	0.47
2:CB:60:ALA:C	2:CB:62:ARG:H	2.18	0.47
11:CK:88:PRO:HD3	21:CU:28:LEU:HD11	1.97	0.47
12:CL:82:ARG:HB2	12:CL:97:VAL:HG12	1.96	0.47
55:CM:15:VAL:O	55:CM:19:THR:HG23	2.14	0.47
22:DA:30:G:H2'	22:DA:31:C:C6	2.48	0.47
22:DA:36:G:H4'	22:DA:451:U:C2	2.50	0.47
22:DA:155:A:C2	22:DA:172:A:C6	3.03	0.47
22:DA:164:C:H2'	22:DA:165:A:H5'	1.96	0.47
22:DA:177:G:N2	22:DA:177:G:OP2	2.40	0.47
22:DA:1157:G:H2'	22:DA:1158:C:H6	1.80	0.47
22:DA:1308:A:N6	22:DA:1309:G:C2	2.83	0.47
22:DA:2102:G:H2'	22:DA:2103:C:H5'	1.97	0.47
22:DA:2571:U:C2'	22:DA:2572:A:OP1	2.62	0.47
22:DA:2648:G:H2'	22:DA:2649:C:O4'	2.15	0.47
57:DB:70:C:H2'	57:DB:71:C:H6	1.79	0.47
57:DB:116:G:H2'	57:DB:117:G:C8	2.42	0.47
24:DC:120:ASP:CG	24:DC:121:ALA:N	2.68	0.47
26:DE:23:PHE:HB2	26:DE:114:ARG:HH22	1.78	0.47
26:DE:129:PRO:HG3	26:DE:159:LEU:HD23	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DF:32:LYS:HD2	58:DF:156:THR:HG21	1.97	0.47
58:DF:46:LYS:HD3	58:DF:46:LYS:O	2.15	0.47
58:DF:113:PHE:CE2	58:DF:116:LEU:HD22	2.50	0.47
28:DG:84:LYS:O	28:DG:85:LYS:CB	2.62	0.47
30:DI:28:GLY:O	30:DI:30:GLN:HG3	2.15	0.47
31:DJ:104:ALA:O	31:DJ:108:MET:HG3	2.14	0.47
32:DK:24:VAL:HG13	32:DK:33:ALA:HB2	1.97	0.47
33:DL:94:THR:O	33:DL:98:ALA:N	2.46	0.47
33:DL:103:ILE:HD12	33:DL:103:ILE:N	2.29	0.47
34:DM:76:LYS:HZ1	34:DM:84:LYS:H	1.62	0.47
36:DO:108:ASP:C	36:DO:110:ALA:H	2.17	0.47
40:DS:7:HIS:HB2	40:DS:50:VAL:CG2	2.44	0.47
47:DZ:40:THR:HG22	47:DZ:42:ALA:H	1.80	0.47
48:D0:26:SER:O	48:D0:27:LEU:HD13	2.13	0.47
48:D0:37:HIS:CB	48:D0:43:THR:HG22	2.45	0.47
1:AA:128:G:O2'	1:AA:129:A:H5'	2.14	0.47
1:AA:1080:A:OP1	5:AE:51:LYS:HE3	2.14	0.47
2:AB:66:ILE:HG13	2:AB:220:VAL:HG11	1.96	0.47
2:AB:202:ASN:HB3	2:AB:208:ALA:HB2	1.96	0.47
5:AE:89:THR:HG22	5:AE:90:GLY:H	1.79	0.47
5:AE:104:ILE:HG13	5:AE:114:LEU:HD23	1.96	0.47
11:AK:100:ASN:HB2	11:AK:106:ILE:HG21	1.97	0.47
17:AQ:15:LYS:O	17:AQ:16:MET:SD	2.73	0.47
22:BA:2:G:O2'	22:BA:3:U:H5'	2.14	0.47
22:BA:211:C:O2'	22:BA:212:G:H5'	2.14	0.47
22:BA:572:A:OP2	39:BR:80:ARG:NH2	2.47	0.47
22:BA:633:A:OP1	33:BL:68:SER:OG	2.24	0.47
22:BA:813:U:H2'	22:BA:814:C:C6	2.50	0.47
22:BA:1045:C:C3'	22:BA:1046:A:C5'	2.93	0.47
22:BA:2136:G:C2'	22:BA:2137:U:C5	2.95	0.47
22:BA:2801:G:H2'	22:BA:2802:G:C8	2.50	0.47
23:BB:33:G:C2'	23:BB:34:A:H5'	2.44	0.47
24:BC:131:MET:HA	24:BC:134:ILE:CD1	2.44	0.47
25:BD:24:VAL:HA	25:BD:189:VAL:O	2.14	0.47
27:BF:142:TYR:O	27:BF:145:VAL:HG22	2.14	0.47
39:BR:38:VAL:O	39:BR:54:VAL:HG13	2.15	0.47
39:BR:75:VAL:HG22	39:BR:86:GLN:HG2	1.97	0.47
41:BT:19:LYS:O	41:BT:20:ALA:C	2.51	0.47
44:BW:69:GLU:O	44:BW:77:LYS:O	2.33	0.47
50:B2:24:THR:O	50:B2:25:LYS:C	2.53	0.47
53:CA:113:G:N2	53:CA:353:A:H8	2.09	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:275:G:O2'	53:CA:276:G:C8	2.63	0.47
53:CA:322:C:O2'	20:CT:17:ARG:HG3	2.13	0.47
53:CA:343:U:HO2'	53:CA:344:A:H8	1.63	0.47
53:CA:376:G:O3'	56:CP:5:ARG:HD2	2.14	0.47
53:CA:433:G:H2'	53:CA:434:U:H5'	1.96	0.47
53:CA:529:G:O6	12:CL:45:ASN:HA	2.14	0.47
53:CA:888:G:H4'	53:CA:1488:G:O2'	2.15	0.47
53:CA:969:A:C5	53:CA:970:C:O2	2.68	0.47
53:CA:1190:G:O2'	3:CC:2:GLN:HA	2.14	0.47
53:CA:1226:C:C5	55:CM:102:LYS:HA	2.49	0.47
2:CB:104:LYS:HD2	2:CB:104:LYS:N	2.29	0.47
54:CG:41:ILE:HG21	54:CG:115:MET:CE	2.45	0.47
9:CI:128:LYS:O	9:CI:129:ARG:HB2	2.14	0.47
10:CJ:66:GLU:HG3	14:CN:100:TRP:HZ3	1.79	0.47
55:CM:16:ILE:HD12	55:CM:16:ILE:H	1.80	0.47
55:CM:75:SER:C	55:CM:77:LYS:H	2.17	0.47
56:CP:41:PRO:O	56:CP:42:ILE:HD13	2.14	0.47
22:DA:295:G:N3	22:DA:295:G:H2'	2.29	0.47
22:DA:364:C:H2'	22:DA:365:U:O4'	2.13	0.47
22:DA:479:A:C4'	22:DA:480:A:OP1	2.50	0.47
22:DA:482:A:N6	22:DA:506:G:C8	2.82	0.47
22:DA:575:A:H2'	22:DA:576:U:H5	1.79	0.47
22:DA:1010:A:OP1	38:DQ:61:ILE:HG22	2.15	0.47
22:DA:1210:G:N7	22:DA:1237:A:N6	2.63	0.47
22:DA:1259:G:H2'	22:DA:1260:A:C8	2.49	0.47
22:DA:1535:A:H5"	22:DA:1536:C:OP2	2.14	0.47
22:DA:2328:A:H2'	22:DA:2329:U:C6	2.49	0.47
22:DA:2376:A:H1'	36:DO:99:TYR:CZ	2.50	0.47
22:DA:2557:G:H2'	22:DA:2558:C:C6	2.49	0.47
22:DA:2832:U:H5"	22:DA:2834:G:H5'	1.95	0.47
57:DB:23:G:N2	57:DB:61:G:C2	2.83	0.47
24:DC:156:SER:O	24:DC:157:ALA:C	2.51	0.47
25:DD:184:ARG:HH22	37:DP:6:GLN:NE2	2.04	0.47
26:DE:144:GLU:O	26:DE:145:ASP:C	2.53	0.47
31:DJ:38:GLY:O	31:DJ:43:GLU:HB2	2.15	0.47
31:DJ:45:THR:C	31:DJ:47:HIS:H	2.17	0.47
32:DK:104:THR:C	32:DK:106:GLU:N	2.67	0.47
34:DM:71:LYS:HD3	34:DM:95:LEU:CD1	2.44	0.47
37:DP:91:VAL:HG11	37:DP:96:LEU:HD21	1.97	0.47
39:DR:66:HIS:CD2	39:DR:94:THR:HG22	2.50	0.47
40:DS:22:ASP:HA	40:DS:25:ARG:NH1	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DS:79:GLY:HA3	40:DS:100:THR:OG1	2.14	0.47
49:D1:16:THR:CG2	49:D1:42:VAL:HG23	2.45	0.47
1:AA:15:G:C6	1:AA:16:A:C5	3.02	0.47
1:AA:58:C:O2'	1:AA:59:A:H5'	2.15	0.47
1:AA:184:G:O2'	1:AA:185:U:H6	1.97	0.47
1:AA:195:A:O2'	1:AA:196:A:H5'	2.14	0.47
1:AA:206:C:H2'	1:AA:207:C:C4'	2.44	0.47
1:AA:244:U:O4	1:AA:906:A:H1'	2.14	0.47
1:AA:556:C:H2'	1:AA:557:G:O4'	2.15	0.47
1:AA:628:G:H2'	1:AA:629:A:C8	2.50	0.47
1:AA:641:U:H4'	8:AH:106:SER:O	2.15	0.47
1:AA:672:U:H2'	1:AA:673:A:C8	2.50	0.47
1:AA:929:G:C6	1:AA:930:C:C4	3.02	0.47
1:AA:1039:G:O2'	1:AA:1040:U:H5'	2.14	0.47
1:AA:1201:A:C1'	1:AA:1202:U:OP2	2.61	0.47
1:AA:1262:C:N4	1:AA:1274:A:C2	2.83	0.47
2:AB:66:ILE:HB	2:AB:88:GLN:CB	2.37	0.47
2:AB:103:TRP:NE1	2:AB:150:ILE:HD11	2.29	0.47
3:AC:63:ILE:O	3:AC:98:ALA:HA	2.14	0.47
4:AD:68:GLU:O	4:AD:72:ARG:HG2	2.15	0.47
4:AD:98:ASP:CB	4:AD:114:ARG:HG2	2.45	0.47
7:AG:129:ASN:HA	7:AG:134:VAL:HG11	1.97	0.47
10:AJ:18:ILE:CG2	10:AJ:72:ARG:HE	2.28	0.47
11:AK:116:PRO:C	11:AK:118:ASN:H	2.17	0.47
12:AL:54:VAL:HG21	12:AL:79:ILE:HD11	1.95	0.47
17:AQ:74:LEU:C	17:AQ:74:LEU:HD13	2.35	0.47
18:AR:33:THR:CG2	18:AR:37:LYS:HB2	2.44	0.47
21:AU:36:PHE:CD1	21:AU:39:LYS:HB3	2.45	0.47
22:BA:163:C:O2'	22:BA:164:C:O5'	2.32	0.47
22:BA:242:G:O2'	51:B3:5:THR:HG23	2.14	0.47
22:BA:271:G:C6	22:BA:367:G:C6	3.02	0.47
22:BA:374:A:C2	22:BA:401:A:C4	3.03	0.47
22:BA:483:A:C8	22:BA:484:C:C5	3.02	0.47
22:BA:494:G:H4'	40:BS:6:LYS:O	2.15	0.47
22:BA:591:U:H1'	51:B3:1:PRO:H3	1.79	0.47
22:BA:745:G:C2'	22:BA:746:U:H5'	2.45	0.47
22:BA:877:A:C6	22:BA:899:A:C6	3.03	0.47
22:BA:904:G:N3	22:BA:905:A:N7	2.61	0.47
22:BA:976:G:C2	22:BA:977:G:C8	3.02	0.47
22:BA:1142:A:C4	22:BA:1144:A:C8	3.03	0.47
22:BA:1152:C:H3'	62:BA:3357:HOH:O	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1371:G:O2'	22:BA:1372:U:H5'	2.14	0.47
22:BA:1609:A:H5"	62:BA:3635:HOH:O	2.14	0.47
22:BA:1747:U:H2'	22:BA:1748:C:H6	1.75	0.47
22:BA:2026:U:H2'	22:BA:2027:G:O4'	2.15	0.47
22:BA:2058:A:H5"	22:BA:2059:A:OP2	2.14	0.47
22:BA:2211:A:OP2	22:BA:2211:A:H4'	2.15	0.47
22:BA:2364:C:OP1	44:BW:54:ARG:HD2	2.14	0.47
22:BA:2502:G:C5'	22:BA:2503:A:O5'	2.62	0.47
22:BA:2820:A:HO2'	22:BA:2821:A:P	2.38	0.47
22:BA:2884:U:H2'	22:BA:2885:G:C8	2.49	0.47
23:BB:112:G:H2'	23:BB:113:C:C6	2.50	0.47
25:BD:107:VAL:H	25:BD:206:ALA:H	1.63	0.47
25:BD:139:SER:HA	25:BD:142:VAL:CG1	2.45	0.47
25:BD:182:ALA:O	25:BD:183:GLU:C	2.53	0.47
26:BE:72:SER:C	26:BE:74:LYS:H	2.17	0.47
27:BF:114:ARG:HD2	27:BF:114:ARG:N	2.30	0.47
28:BG:4:ALA:HB2	28:BG:65:GLY:HA2	1.96	0.47
28:BG:104:LEU:HB2	28:BG:112:VAL:HG21	1.96	0.47
28:BG:174:LYS:HE2	28:BG:176:LYS:OXT	2.15	0.47
30:BI:60:VAL:HG22	30:BI:66:PHE:CB	2.45	0.47
31:BJ:37:ARG:HA	31:BJ:118:MET:CE	2.45	0.47
31:BJ:111:LYS:HE2	31:BJ:114:LEU:HB3	1.97	0.47
32:BK:85:VAL:CG1	32:BK:115:ILE:HD11	2.42	0.47
32:BK:108:ARG:HG3	32:BK:108:ARG:HH11	1.80	0.47
37:BP:50:ARG:HD3	37:BP:56:SER:CB	2.33	0.47
37:BP:87:ARG:NH2	37:BP:111:GLU:HG3	2.30	0.47
39:BR:38:VAL:HG11	39:BR:59:ILE:HG13	1.97	0.47
39:BR:49:ILE:C	39:BR:51:VAL:O	2.53	0.47
40:BS:45:VAL:HG22	40:BS:46:LEU:N	2.28	0.47
42:BU:15:GLY:O	42:BU:17:ASP:N	2.42	0.47
42:BU:60:LYS:HD2	42:BU:60:LYS:HA	1.63	0.47
42:BU:85:ARG:HA	42:BU:91:LYS:O	2.15	0.47
45:BX:44:ARG:HG2	45:BX:45:PHE:N	2.28	0.47
53:CA:28:A:H2'	53:CA:29:U:O4'	2.15	0.47
53:CA:57:G:H2'	53:CA:58:C:C6	2.50	0.47
53:CA:158:G:C5	53:CA:164:G:C6	3.03	0.47
53:CA:220:G:O2'	53:CA:221:C:H5'	2.15	0.47
53:CA:255:G:O3'	17:CQ:18:LYS:HD2	2.15	0.47
53:CA:340:U:C2	53:CA:350:G:N2	2.83	0.47
53:CA:358:U:H2'	53:CA:359:G:C8	2.49	0.47
53:CA:484:G:C4'	53:CA:485:U:O5'	2.63	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:973:G:H2'	53:CA:974:A:H2'	1.95	0.47
53:CA:986:U:H2'	53:CA:987:G:H8	1.77	0.47
53:CA:990:C:O2'	53:CA:991:U:O4'	2.30	0.47
53:CA:1133:G:C2	53:CA:1142:G:C5	3.03	0.47
53:CA:1276:G:H21	53:CA:1282:C:H1'	1.78	0.47
3:CC:46:LEU:HD22	3:CC:75:VAL:HG22	1.96	0.47
4:CD:29:THR:C	4:CD:30:LYS:HD3	2.34	0.47
54:CG:59:GLU:HG3	54:CG:60:ALA:H	1.78	0.47
54:CG:75:LYS:CE	54:CG:76:SER:H	2.26	0.47
8:CH:80:PRO:HA	8:CH:83:ARG:HE	1.79	0.47
55:CM:18:LEU:HD12	55:CM:18:LEU:N	2.30	0.47
55:CM:87:GLY:O	55:CM:91:ARG:HD2	2.14	0.47
14:CN:30:ILE:O	14:CN:40:ARG:HA	2.14	0.47
15:CO:39:GLN:OE1	22:DA:716:A:C1'	2.60	0.47
56:CP:7:ALA:O	56:CP:17:TYR:HA	2.13	0.47
17:CQ:45:VAL:HG11	17:CQ:60:ILE:CG2	2.45	0.47
21:CU:23:GLU:HA	21:CU:27:VAL:HG23	1.96	0.47
21:CU:39:LYS:H	21:CU:40:PRO:CD	2.26	0.47
22:DA:425:G:H2'	22:DA:426:C:H6	1.80	0.47
22:DA:478:A:N6	22:DA:480:A:C6	2.82	0.47
22:DA:519:U:H5"	40:DS:25:ARG:NH2	2.30	0.47
22:DA:608:A:C6	22:DA:621:A:C8	3.03	0.47
22:DA:614:A:H4'	22:DA:616:A:N7	2.30	0.47
22:DA:653:U:H2'	22:DA:653:U:O2	2.14	0.47
22:DA:657:U:H2'	22:DA:658:U:H6	1.80	0.47
22:DA:1066:U:H3	22:DA:1069:A:P	2.38	0.47
22:DA:1069:A:C2	22:DA:1097:U:OP1	2.68	0.47
22:DA:1073:A:OP2	22:DA:1073:A:H4'	2.15	0.47
22:DA:1153:C:H2'	22:DA:1154:G:C8	2.50	0.47
22:DA:1262:A:C6	22:DA:1263:U:C2	3.03	0.47
22:DA:1364:G:C8	45:DX:1:SER:HB2	2.49	0.47
22:DA:1411:U:H2'	22:DA:1412:U:C6	2.49	0.47
22:DA:1462:C:C1'	22:DA:2702:G:H21	2.27	0.47
22:DA:1519:G:N3	22:DA:1519:G:H2'	2.29	0.47
22:DA:1532:A:C5	22:DA:1533:C:C4	3.03	0.47
22:DA:1572:A:H2'	22:DA:1573:G:H8	1.79	0.47
22:DA:1649:G:C6	22:DA:2009:A:C6	3.03	0.47
22:DA:1655:A:C6	22:DA:1656:C:C2	3.01	0.47
22:DA:1731:G:C2	22:DA:1733:G:N7	2.83	0.47
22:DA:1734:G:C2'	22:DA:1735:A:C8	2.94	0.47
22:DA:1736:U:H2'	22:DA:1737:G:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2053:G:O2'	22:DA:2054:A:H5'	2.15	0.47
22:DA:2079:U:O2'	45:DX:22:ASN:ND2	2.47	0.47
22:DA:2286:G:H4'	22:DA:2287:A:N9	2.29	0.47
22:DA:2547:A:C2	22:DA:2562:U:C2	3.03	0.47
22:DA:2699:C:H2'	22:DA:2700:A:H8	1.78	0.47
22:DA:2846:G:OP1	37:DP:51:ASN:HB2	2.13	0.47
22:DA:2899:A:H2'	22:DA:2900:A:C8	2.49	0.47
57:DB:11:C:H2'	57:DB:15:A:N6	2.30	0.47
24:DC:17:LYS:HD3	24:DC:18:VAL:N	2.29	0.47
24:DC:78:GLU:OE2	24:DC:94:LEU:HD22	2.15	0.47
24:DC:224:MET:SD	24:DC:229:HIS:CB	3.02	0.47
25:DD:175:LEU:HB3	25:DD:176:ASP:H	1.54	0.47
26:DE:44:ARG:H	26:DE:89:PRO:HA	1.79	0.47
26:DE:79:ARG:CG	26:DE:80:SER:H	2.27	0.47
58:DF:58:ALA:HB1	58:DF:139:GLU:CG	2.45	0.47
28:DG:91:VAL:N	28:DG:93:TYR:CD2	2.83	0.47
29:DH:99:ILE:HG22	29:DH:100:ALA:N	2.30	0.47
31:DJ:57:LEU:HD21	31:DJ:128:ASN:HA	1.97	0.47
31:DJ:123:LYS:HG2	31:DJ:132:HIS:NE2	2.29	0.47
33:DL:9:ALA:HB3	33:DL:12:SER:CB	2.44	0.47
33:DL:17:LYS:CE	33:DL:19:LEU:HD13	2.45	0.47
34:DM:15:GLY:O	34:DM:16:ARG:HB3	2.15	0.47
34:DM:76:LYS:O	34:DM:77:PRO:O	2.32	0.47
35:DN:22:ARG:HG2	35:DN:22:ARG:O	2.14	0.47
35:DN:99:LYS:O	48:D0:41:HIS:HB2	2.15	0.47
36:DO:31:THR:HG23	36:DO:34:HIS:O	2.14	0.47
38:DQ:23:TYR:HB2	38:DQ:28:SER:HB3	1.97	0.47
41:DT:63:VAL:HG21	41:DT:80:TRP:CE2	2.50	0.47
44:DW:8:SER:O	44:DW:9:THR:CB	2.62	0.47
48:D0:54:ILE:HG13	48:D0:55:ALA:H	1.80	0.47
52:D4:8:LYS:HA	52:D4:16:ILE:HD11	1.96	0.47
1:AA:186:C:H4'	20:AT:75:LYS:HG3	1.97	0.47
1:AA:604:G:H2'	1:AA:605:U:O4'	2.15	0.47
2:AB:66:ILE:CG1	2:AB:220:VAL:HG11	2.45	0.47
3:AC:22:PHE:CD1	10:AJ:12:ALA:HA	2.50	0.47
4:AD:25:ARG:O	4:AD:26:ALA:HB2	2.15	0.47
5:AE:83:PRO:HB3	5:AE:96:GLN:HE22	1.76	0.47
7:AG:112:ASP:HB2	7:AG:118:ARG:HG3	1.96	0.47
11:AK:22:ILE:HD11	11:AK:85:VAL:HG22	1.97	0.47
11:AK:26:PHE:CE1	11:AK:88:PRO:HG2	2.50	0.47
13:AM:10:ASP:OD1	13:AM:11:HIS:N	2.33	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AS:43:MET:HE2	19:AS:48:ILE:HG12	1.96	0.47
22:BA:646:U:H2'	22:BA:647:G:OP1	2.14	0.47
22:BA:859:G:H8	22:BA:859:G:OP2	1.96	0.47
22:BA:996:A:C2	22:BA:997:G:C8	3.02	0.47
22:BA:1386:C:H2'	22:BA:1387:A:C8	2.49	0.47
22:BA:1498:C:O2'	22:BA:1499:C:H6	1.97	0.47
22:BA:2065:C:H2'	22:BA:2066:C:H6	1.80	0.47
22:BA:2146:C:H4'	22:BA:2147:A:OP1	2.14	0.47
22:BA:2152:G:H2'	22:BA:2153:C:O4'	2.14	0.47
22:BA:2316:G:H2'	22:BA:2317:A:H8	1.79	0.47
22:BA:2406:A:OP2	22:BA:2406:A:H2'	2.15	0.47
22:BA:2496:C:OP1	34:BM:82:MET:HB2	2.14	0.47
22:BA:2808:G:C2	22:BA:2891:U:C6	3.03	0.47
24:BC:159:THR:HA	24:BC:176:ARG:HD3	1.97	0.47
27:BF:21:TYR:CE2	27:BF:27:VAL:HA	2.50	0.47
30:BI:40:ALA:HB3	30:BI:68:PHE:CE1	2.50	0.47
32:BK:13:ASN:O	32:BK:15:GLY:N	2.48	0.47
32:BK:43:ILE:N	32:BK:43:ILE:HD13	2.29	0.47
32:BK:121:GLU:O	32:BK:122:VAL:C	2.53	0.47
33:BL:55:MET:CE	33:BL:56:PRO:HD3	2.44	0.47
35:BN:20:MET:CG	35:BN:21:PHE:N	2.78	0.47
37:BP:39:LEU:HD12	37:BP:39:LEU:N	2.28	0.47
38:BQ:97:ILE:HD11	38:BQ:105:PHE:N	2.30	0.47
40:BS:20:VAL:HG11	40:BS:44:ALA:HA	1.97	0.47
42:BU:53:GLN:N	42:BU:54:PRO:CD	2.77	0.47
45:BX:67:LEU:O	45:BX:69:GLU:O	2.32	0.47
46:BY:14:LEU:HD13	46:BY:17:GLU:HG2	1.95	0.47
50:B2:36:ALA:C	50:B2:38:GLY:H	2.18	0.47
53:CA:71:A:C8	53:CA:100:G:C2	3.03	0.47
53:CA:183:C:H2'	53:CA:183:C:O2	2.13	0.47
53:CA:740:U:O2'	15:CO:51:SER:HB3	2.15	0.47
53:CA:985:C:N4	53:CA:986:U:O4	2.47	0.47
53:CA:1070:U:H2'	53:CA:1071:C:H6	1.79	0.47
53:CA:1172:C:HO2'	53:CA:1173:U:H5'	1.78	0.47
53:CA:1342:C:H2'	53:CA:1343:G:C8	2.50	0.47
53:CA:1372:U:C5'	9:CI:71:ILE:HD11	2.45	0.47
53:CA:1481:U:H2'	53:CA:1482:G:H8	1.79	0.47
4:CD:84:ASN:CG	4:CD:87:GLU:HG3	2.35	0.47
5:CE:21:SER:OG	5:CE:28:ARG:HG3	2.15	0.47
5:CE:76:ASN:HD22	5:CE:76:ASN:HA	1.57	0.47
9:CI:11:ARG:HH22	9:CI:108:ARG:NH2	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:44:THR:HG23	10:CJ:70:HIS:CG	2.49	0.47
12:CL:72:ASN:H	12:CL:72:ASN:ND2	2.13	0.47
15:CO:81:ILE:HG22	15:CO:86:LEU:HB2	1.96	0.47
20:CT:49:ALA:O	20:CT:52:GLU:HB3	2.15	0.47
22:DA:28:A:C6	22:DA:29:U:C2	3.02	0.47
22:DA:56:A:C2	22:DA:57:C:C2	3.02	0.47
22:DA:185:G:H2'	22:DA:186:G:H8	1.78	0.47
22:DA:249:C:O2'	22:DA:250:G:OP2	2.31	0.47
22:DA:297:G:H5"	42:DU:84:PHE:CB	2.40	0.47
22:DA:309:A:N3	22:DA:329:G:H1'	2.30	0.47
22:DA:406:G:O2'	22:DA:407:G:O5'	2.32	0.47
22:DA:432:A:H2'	22:DA:433:C:O4'	2.15	0.47
22:DA:743:A:O2'	22:DA:744:U:H5'	2.15	0.47
22:DA:981:A:H5"	22:DA:982:C:OP2	2.15	0.47
22:DA:1211:C:H5"	22:DA:1212:G:C8	2.50	0.47
22:DA:1314:C:OP1	22:DA:1332:G:OP1	2.33	0.47
22:DA:1416:G:C6	22:DA:1417:C:C4	3.03	0.47
22:DA:1668:A:O4'	22:DA:1669:A:C2	2.68	0.47
22:DA:2285:C:C2'	22:DA:2286:G:H5"	2.42	0.47
22:DA:2309:A:H3'	22:DA:2310:C:C6	2.50	0.47
22:DA:2385:C:O2'	22:DA:2386:A:H8	1.98	0.47
22:DA:2744:G:C4	22:DA:2761:A:C2	3.02	0.47
24:DC:264:LYS:HG3	24:DC:265:PHE:CD2	2.50	0.47
26:DE:44:ARG:HH21	26:DE:44:ARG:HG3	1.80	0.47
58:DF:27:VAL:O	58:DF:27:VAL:HG23	2.15	0.47
28:DG:58:ALA:O	28:DG:59:ASP:C	2.53	0.47
31:DJ:56:VAL:HG22	31:DJ:124:VAL:HA	1.97	0.47
38:DQ:87:VAL:CG1	38:DQ:88:GLU:H	2.26	0.47
41:DT:61:LEU:C	41:DT:61:LEU:HD12	2.36	0.47
48:D0:5:ASN:HD22	48:D0:6:LYS:N	2.13	0.47
1:AA:436:C:O2'	1:AA:437:U:H5'	2.15	0.47
1:AA:809:G:C6	1:AA:810:C:C5	3.03	0.47
1:AA:1005:A:C2	1:AA:1006:G:H1'	2.49	0.47
1:AA:1464:U:O2'	1:AA:1465:A:H5'	2.15	0.47
1:AA:1486:G:H2'	1:AA:1487:G:O4'	2.15	0.47
1:AA:1511:G:C5	1:AA:1512:U:C5	3.02	0.47
2:AB:187:ASP:HB2	2:AB:203:ASP:HB3	1.96	0.47
5:AE:38:VAL:HG22	5:AE:66:ALA:HB1	1.96	0.47
5:AE:81:GLN:H	5:AE:81:GLN:CD	2.17	0.47
5:AE:136:VAL:O	5:AE:137:ARG:HB2	2.14	0.47
10:AJ:18:ILE:HG23	10:AJ:72:ARG:HE	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:100:U:C4'	22:BA:101:A:O5'	2.60	0.47
22:BA:1290:C:H2'	22:BA:1291:C:C6	2.50	0.47
22:BA:1539:U:C2	22:BA:1540:G:C8	3.03	0.47
22:BA:1669:A:H5"	22:BA:1670:C:OP2	2.15	0.47
22:BA:1731:G:C4	22:BA:1733:G:C8	3.03	0.47
22:BA:2280:G:H2'	22:BA:2281:A:H5'	1.96	0.47
24:BC:141:HIS:O	24:BC:143:VAL:HG23	2.14	0.47
24:BC:156:SER:O	24:BC:157:ALA:C	2.52	0.47
26:BE:121:VAL:O	26:BE:189:THR:HA	2.15	0.47
27:BF:3:LEU:HD23	27:BF:100:GLU:HB2	1.96	0.47
31:BJ:30:THR:HG22	31:BJ:31:GLU:N	2.28	0.47
31:BJ:37:ARG:HG2	31:BJ:37:ARG:O	2.14	0.47
34:BM:47:GLU:O	34:BM:48:ALA:C	2.53	0.47
34:BM:50:ARG:O	34:BM:53:MET:HB3	2.14	0.47
34:BM:71:LYS:HD3	34:BM:95:LEU:HD13	1.96	0.47
38:BQ:97:ILE:HD11	38:BQ:105:PHE:CA	2.45	0.47
39:BR:39:LEU:HD23	39:BR:39:LEU:H	1.80	0.47
49:B1:8:ILE:CG2	49:B1:9:LYS:N	2.78	0.47
49:B1:33:LEU:N	49:B1:51:ALA:CB	2.77	0.47
53:CA:87:C:H2'	53:CA:88:U:O4'	2.15	0.47
53:CA:420:U:C2'	53:CA:421:U:H5"	2.44	0.47
53:CA:1279:G:H2'	53:CA:1279:G:N3	2.28	0.47
53:CA:1406:U:C2'	53:CA:1407:C:H5'	2.45	0.47
3:CC:91:ALA:HB2	3:CC:98:ALA:HB3	1.96	0.47
5:CE:33:THR:HG1	5:CE:49:TYR:HH	1.62	0.47
5:CE:39:GLY:HA2	5:CE:45:VAL:HA	1.95	0.47
9:CI:38:PHE:CE2	9:CI:71:ILE:HG22	2.50	0.47
11:CK:84:MET:HA	11:CK:110:THR:O	2.15	0.47
14:CN:76:PHE:CE2	14:CN:92:ILE:HD13	2.50	0.47
15:CO:63:ARG:NH2	22:DA:715:A:H5'	2.25	0.47
18:CR:44:THR:OG1	18:CR:46:THR:HG22	2.15	0.47
22:DA:28:A:O2'	22:DA:29:U:H5'	2.15	0.47
22:DA:76:C:O2'	22:DA:77:G:H8	1.97	0.47
22:DA:224:U:OP2	22:DA:408:G:N2	2.48	0.47
22:DA:405:U:H3'	22:DA:406:G:C5'	2.44	0.47
22:DA:597:G:H2'	22:DA:598:U:O4'	2.15	0.47
22:DA:795:C:O5'	22:DA:795:C:H6	1.97	0.47
22:DA:822:G:O6	22:DA:943:A:C2	2.64	0.47
22:DA:834:G:H1'	22:DA:2358:A:C2	2.50	0.47
22:DA:876:C:O2	22:DA:876:C:O4'	2.31	0.47
22:DA:962:G:O2'	22:DA:963:U:C5'	2.63	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1079:C:N3	22:DA:1088:A:C2	2.82	0.47
22:DA:1252:G:C2	38:DQ:32:ARG:HG2	2.50	0.47
22:DA:1341:G:HO2'	22:DA:1398:C:H5'	1.76	0.47
22:DA:1492:G:H3'	22:DA:1493:C:H5'	1.97	0.47
22:DA:1609:A:C6	22:DA:1616:A:C4	3.03	0.47
22:DA:1765:U:O2'	22:DA:1766:G:H5'	2.15	0.47
22:DA:2033:A:H2'	22:DA:2033:A:OP1	2.14	0.47
22:DA:2287:A:N7	22:DA:2289:G:C8	2.82	0.47
22:DA:2376:A:H2	36:DO:92:PHE:HD2	1.63	0.47
22:DA:2403:C:H2'	22:DA:2404:U:H6	1.80	0.47
22:DA:2497:A:O2'	62:DA:3668:HOH:O	2.20	0.47
22:DA:2682:A:O2'	22:DA:2683:C:C6	2.68	0.47
22:DA:2726:A:HO2'	22:DA:2727:A:C5'	2.27	0.47
57:DB:111:U:H2'	57:DB:112:G:C8	2.50	0.47
28:DG:103:ASN:O	28:DG:104:LEU:HD23	2.15	0.47
29:DH:28:ASN:HD22	29:DH:28:ASN:HA	1.52	0.47
31:DJ:99:ARG:HA	31:DJ:102:GLU:CB	2.40	0.47
35:DN:28:LEU:HD23	35:DN:29:VAL:N	2.30	0.47
40:DS:49:LYS:HB3	40:DS:49:LYS:HZ3	1.80	0.47
40:DS:96:ILE:HG12	40:DS:96:ILE:O	2.14	0.47
41:DT:7:LEU:O	41:DT:10:VAL:HG13	2.15	0.47
41:DT:64:LYS:HA	41:DT:79:ASP:OD1	2.15	0.47
43:DV:14:LYS:HG3	43:DV:18:ARG:HD2	1.97	0.47
43:DV:41:GLU:HG2	43:DV:42:LEU:N	2.30	0.47
48:D0:37:HIS:CD2	48:D0:43:THR:HG22	2.49	0.47
1:AA:131:A:H2'	1:AA:132:C:C6	2.50	0.47
1:AA:1142:G:H2'	1:AA:1143:G:O4'	2.14	0.47
1:AA:1168:U:H4'	1:AA:1169:A:OP2	2.15	0.47
1:AA:1521:C:C2	1:AA:1522:U:C5	3.03	0.47
3:AC:10:ARG:O	3:AC:11:LEU:C	2.53	0.47
5:AE:110:MET:N	5:AE:113:VAL:HG13	2.28	0.47
5:AE:112:ALA:O	5:AE:113:VAL:C	2.53	0.47
6:AF:92:THR:O	6:AF:93:LYS:HG2	2.14	0.47
11:AK:107:THR:HG22	11:AK:108:ASN:ND2	2.30	0.47
15:AO:23:SER:O	15:AO:24:THR:C	2.53	0.47
22:BA:6:A:O2'	22:BA:7:G:H5'	2.15	0.47
22:BA:204:A:H4'	22:BA:205:G:OP1	2.16	0.47
22:BA:417:C:O2'	22:BA:418:C:H5'	2.15	0.47
22:BA:657:U:H2'	22:BA:658:U:C6	2.50	0.47
22:BA:902:C:HO2'	22:BA:903:C:H5'	1.76	0.47
22:BA:973:A:H5'	22:BA:1188:U:H1'	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1415:U:O2	22:BA:1415:U:C2'	2.61	0.47
22:BA:1469:A:H2'	22:BA:1470:A:H8	1.78	0.47
22:BA:1733:G:N3	22:BA:1734:G:C8	2.83	0.47
22:BA:1791:A:H5"	24:BC:204:LEU:HD23	1.97	0.47
22:BA:1857:G:N2	22:BA:1884:G:O2'	2.47	0.47
22:BA:2148:G:O2'	22:BA:2149:U:C4'	2.63	0.47
22:BA:2186:G:C6	22:BA:2187:U:C2	3.02	0.47
22:BA:2354:C:H4'	44:BW:31:LEU:HD22	1.97	0.47
22:BA:2516:A:O2'	22:BA:2517:C:H5'	2.15	0.47
22:BA:2698:U:H2'	22:BA:2699:C:C6	2.50	0.47
23:BB:90:C:H6	23:BB:90:C:C5'	2.21	0.47
24:BC:104:LEU:O	24:BC:105:ALA:CB	2.57	0.47
28:BG:33:THR:N	28:BG:34:ARG:NH1	2.63	0.47
29:BH:50:ARG:O	29:BH:54:LEU:HB2	2.14	0.47
32:BK:113:MET:SD	32:BK:116:ILE:HD11	2.54	0.47
33:BL:127:VAL:HG11	33:BL:142:ILE:HD13	1.97	0.47
38:BQ:57:ARG:HA	38:BQ:60:TRP:CE3	2.50	0.47
38:BQ:89:ILE:O	38:BQ:90:ASP:HB2	2.15	0.47
41:BT:32:LEU:O	41:BT:83:ALA:HB2	2.15	0.47
45:BX:52:ALA:O	45:BX:53:LYS:HB3	2.15	0.47
53:CA:369:G:OP2	53:CA:388:G:N1	2.46	0.47
53:CA:695:A:C6	53:CA:696:A:C2	3.02	0.47
53:CA:765:G:C5	53:CA:812:G:C6	3.03	0.47
53:CA:1175:G:H2'	53:CA:1176:A:C8	2.49	0.47
2:CB:71:THR:O	2:CB:72:LYS:C	2.53	0.47
4:CD:32:LYS:O	4:CD:33:ILE:HG22	2.14	0.47
4:CD:106:PHE:CD1	4:CD:106:PHE:N	2.77	0.47
4:CD:204:SER:HB2	5:CE:105:ILE:HD11	1.97	0.47
5:CE:14:LEU:HD13	5:CE:59:ILE:HD12	1.97	0.47
5:CE:17:VAL:O	5:CE:17:VAL:HG13	2.15	0.47
9:CI:106:ASP:OD1	9:CI:106:ASP:N	2.48	0.47
56:CP:48:GLU:CD	56:CP:51:ARG:HE	2.19	0.47
22:DA:78:U:C2'	22:DA:79:C:H5'	2.45	0.47
22:DA:112:U:H5'	46:DY:58:ASN:HD21	1.79	0.47
22:DA:309:A:H1'	22:DA:329:G:N3	2.30	0.47
22:DA:404:A:N3	22:DA:406:G:C6	2.83	0.47
22:DA:589:U:O2'	22:DA:590:A:OP2	2.23	0.47
22:DA:744:U:H2'	22:DA:745:G:O5'	2.15	0.47
22:DA:983:A:N6	22:DA:984:A:C2	2.83	0.47
22:DA:1021:A:H2'	22:DA:1022:G:H4'	1.95	0.47
22:DA:1208:C:O2'	22:DA:1209:U:H5'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1313:U:OP2	22:DA:1314:C:C5	2.68	0.47
22:DA:1356:G:C6	22:DA:1376:C:N3	2.83	0.47
22:DA:1570:A:H8	22:DA:1570:A:O5'	1.98	0.47
22:DA:2406:A:C2	33:DL:69:ARG:NH2	2.83	0.47
22:DA:2416:C:N4	22:DA:2417:C:N4	2.62	0.47
22:DA:2749:A:P	22:DA:2750:A:H3'	2.55	0.47
22:DA:2869:G:H2'	22:DA:2870:C:O4'	2.15	0.47
58:DF:19:PHE:HB3	58:DF:21:TYR:CE2	2.50	0.47
28:DG:154:GLU:O	28:DG:156:TYR:N	2.48	0.47
31:DJ:17:VAL:HG23	31:DJ:137:PRO:CB	2.40	0.47
31:DJ:45:THR:HG21	31:DJ:50:THR:HG23	1.96	0.47
32:DK:100:PHE:N	32:DK:100:PHE:CD1	2.82	0.47
36:DO:71:ALA:CB	36:DO:102:ARG:HB3	2.44	0.47
37:DP:86:LYS:HA	37:DP:86:LYS:NZ	2.30	0.47
44:DW:36:ILE:HG22	44:DW:39:GLN:HB2	1.97	0.47
46:DY:30:MET:SD	46:DY:30:MET:O	2.73	0.47
49:D1:16:THR:CG2	49:D1:41:VAL:HB	2.44	0.47
1:AA:77:A:N6	1:AA:90:C:C5	2.83	0.46
1:AA:112:G:C5	1:AA:330:C:N4	2.83	0.46
1:AA:116:A:H2'	1:AA:117:G:C8	2.50	0.46
1:AA:224:U:O2'	1:AA:225:C:H5'	2.14	0.46
1:AA:405:U:O2'	1:AA:498:A:C8	2.65	0.46
1:AA:751:U:H4'	15:AO:23:SER:HA	1.97	0.46
1:AA:1046:A:C2'	1:AA:1047:G:O5'	2.64	0.46
2:AB:70:GLY:HA2	2:AB:163:ILE:HG22	1.97	0.46
6:AF:25:TYR:CE1	6:AF:78:PHE:HE2	2.33	0.46
7:AG:114:SER:HB3	7:AG:117:LEU:CG	2.40	0.46
9:AI:44:ARG:HG3	9:AI:45:MET:HE1	1.98	0.46
10:AJ:8:ILE:O	10:AJ:73:LEU:O	2.33	0.46
10:AJ:17:LEU:HD23	10:AJ:17:LEU:C	2.36	0.46
10:AJ:87:LEU:HD13	10:AJ:88:MET:N	2.30	0.46
13:AM:106:ARG:HH12	13:AM:109:LYS:HD3	1.79	0.46
17:AQ:11:VAL:HG12	17:AQ:12:VAL:HG12	1.96	0.46
20:AT:54:GLN:N	20:AT:55:PRO:HD2	2.30	0.46
22:BA:683:U:H2'	22:BA:684:G:O5'	2.15	0.46
22:BA:782:A:H4'	22:BA:783:A:O5'	2.15	0.46
22:BA:1916:A:H8	22:BA:1916:A:O5'	1.98	0.46
22:BA:1943:U:O2	22:BA:1943:U:O5'	2.33	0.46
22:BA:2015:A:C2'	22:BA:2016:U:H5'	2.45	0.46
22:BA:2478:A:H2'	22:BA:2479:U:H5'	1.98	0.46
22:BA:2801:G:H2'	22:BA:2802:G:H8	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2868:A:C6	22:BA:2869:G:C6	3.03	0.46
23:BB:61:G:C5	23:BB:62:C:C5	3.03	0.46
24:BC:90:ILE:HG21	24:BC:102:TYR:CD1	2.50	0.46
24:BC:211:ARG:HA	24:BC:211:ARG:HD2	1.49	0.46
25:BD:108:ASP:OD2	25:BD:173:GLN:HA	2.14	0.46
26:BE:146:VAL:CG1	26:BE:185:LYS:HB2	2.46	0.46
27:BF:47:LYS:HB3	27:BF:47:LYS:HZ3	1.78	0.46
27:BF:134:GLN:H	27:BF:134:GLN:HE21	1.63	0.46
28:BG:36:LEU:HD22	28:BG:36:LEU:N	2.29	0.46
28:BG:93:TYR:O	28:BG:105:SER:O	2.33	0.46
30:BI:18:ASN:ND2	30:BI:38:CYS:HB3	2.29	0.46
32:BK:5:GLN:O	32:BK:21:CYS:HB3	2.15	0.46
37:BP:12:MET:HE2	37:BP:12:MET:HB3	1.66	0.46
39:BR:48:LYS:H	39:BR:48:LYS:CD	2.20	0.46
41:BT:39:THR:O	41:BT:39:THR:CG2	2.63	0.46
41:BT:48:GLN:HB2	41:BT:49:LYS:HE3	1.95	0.46
45:BX:10:ARG:HB2	45:BX:11:PRO:CD	2.44	0.46
49:B1:3:GLY:C	49:B1:5:ARG:H	2.17	0.46
53:CA:86:G:O2'	53:CA:87:C:O5'	2.33	0.46
53:CA:313:A:H2'	53:CA:314:C:H6	1.80	0.46
53:CA:428:G:H4'	53:CA:429:U:OP1	2.14	0.46
53:CA:703:G:H4'	53:CA:704:A:H5'	1.97	0.46
53:CA:791:G:C5	53:CA:792:A:N7	2.83	0.46
53:CA:962:C:H2'	53:CA:963:G:H8	1.79	0.46
53:CA:1217:C:O2'	53:CA:1218:C:H5'	2.15	0.46
53:CA:1279:G:H2'	10:CJ:45:ARG:NH2	2.29	0.46
4:CD:39:GLN:C	4:CD:41:GLY:H	2.17	0.46
5:CE:79:THR:HG23	5:CE:81:GLN:H	1.79	0.46
54:CG:17:PHE:HB2	54:CG:43:TYR:OH	2.15	0.46
54:CG:29:LEU:O	54:CG:30:MET:O	2.33	0.46
9:CI:26:LYS:O	9:CI:62:LEU:HB2	2.14	0.46
9:CI:80:HIS:O	9:CI:84:ARG:HB2	2.15	0.46
12:CL:6:LEU:HB3	17:CQ:33:TYR:CZ	2.51	0.46
22:DA:84:A:H2	22:DA:98:G:N3	2.13	0.46
22:DA:85:G:C6	22:DA:98:G:C2	3.02	0.46
22:DA:185:G:C4	22:DA:212:G:N2	2.83	0.46
22:DA:201:C:C4	22:DA:202:U:C5	3.03	0.46
22:DA:425:G:C2	22:DA:426:C:C4	3.03	0.46
22:DA:684:G:H5'	50:D2:16:HIS:NE2	2.31	0.46
22:DA:1039:A:N6	22:DA:1117:C:N4	2.62	0.46
22:DA:1115:G:H2'	22:DA:1116:G:H8	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1352:U:C5	22:DA:1377:G:O6	2.68	0.46
22:DA:1534:U:H2'	22:DA:1536:C:O2	2.15	0.46
22:DA:1594:U:H2'	22:DA:1595:C:H6	1.79	0.46
22:DA:1997:C:P	25:DD:129:THR:HG1	2.37	0.46
22:DA:2210:U:H4'	22:DA:2211:A:O5'	2.15	0.46
22:DA:2344:U:H2'	49:D1:35:LEU:O	2.14	0.46
22:DA:2571:U:O4	22:DA:2574:G:C8	2.68	0.46
22:DA:2600:A:C6	22:DA:2601:C:N4	2.84	0.46
22:DA:2760:C:H2'	22:DA:2760:C:O2	2.14	0.46
57:DB:58:A:C8	57:DB:59:A:N7	2.83	0.46
25:DD:39:ASP:CG	25:DD:40:LEU:H	2.18	0.46
58:DF:4:HIS:CE1	58:DF:96:TRP:CZ2	3.03	0.46
30:DI:20:SER:OG	30:DI:25:PRO:HG2	2.15	0.46
31:DJ:43:GLU:O	31:DJ:43:GLU:CG	2.63	0.46
31:DJ:95:ARG:O	31:DJ:96:ARG:C	2.53	0.46
32:DK:62:VAL:HG12	32:DK:63:VAL:N	2.30	0.46
33:DL:48:ARG:HG3	33:DL:48:ARG:NH1	2.30	0.46
1:AA:109:A:C6	1:AA:327:A:C6	3.03	0.46
1:AA:211:G:N1	1:AA:212:G:N3	2.62	0.46
1:AA:409:U:H2'	1:AA:410:G:C8	2.50	0.46
1:AA:436:C:H2'	1:AA:437:U:C6	2.50	0.46
1:AA:462:G:H3'	1:AA:463:U:C6	2.50	0.46
1:AA:500:G:C6	1:AA:546:A:C2	3.03	0.46
1:AA:654:G:H4'	8:AH:2:MET:CE	2.45	0.46
1:AA:1032:G:N2	1:AA:1033:G:C8	2.83	0.46
1:AA:1064:G:O4'	1:AA:1066:C:C6	2.69	0.46
1:AA:1136:C:O2	1:AA:1136:C:C2'	2.62	0.46
1:AA:1302:C:H6	1:AA:1302:C:H2'	1.49	0.46
2:AB:26:MET:HE3	2:AB:192:PRO:HG3	1.97	0.46
7:AG:71:THR:O	7:AG:90:VAL:HG12	2.15	0.46
11:AK:86:LYS:HA	11:AK:113:THR:HG22	1.96	0.46
12:AL:65:TYR:CD2	12:AL:86:VAL:HG21	2.50	0.46
14:AN:96:LYS:HD2	14:AN:97:LYS:O	2.15	0.46
22:BA:223:A:O4'	22:BA:421:C:H4'	2.15	0.46
22:BA:286:U:H2'	22:BA:287:G:O4'	2.14	0.46
22:BA:417:C:H2'	22:BA:418:C:C6	2.51	0.46
22:BA:812:C:H1'	22:BA:1250:G:N2	2.29	0.46
22:BA:920:A:C6	22:BA:921:C:C4	3.02	0.46
22:BA:1717:A:H2'	22:BA:1718:G:O4'	2.15	0.46
22:BA:1853:A:C5	22:BA:1889:A:C6	3.03	0.46
22:BA:1956:U:O2	22:BA:1985:C:H4'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1963:U:O5'	22:BA:1963:U:H6	1.98	0.46
22:BA:2193:G:H2'	22:BA:2194:U:C6	2.50	0.46
22:BA:2348:U:O2'	22:BA:2349:G:H5'	2.15	0.46
23:BB:37:C:C5	23:BB:38:C:C5	3.03	0.46
24:BC:247:TRP:C	24:BC:249:VAL:H	2.19	0.46
26:BE:48:THR:OG1	26:BE:50:ALA:HB3	2.15	0.46
26:BE:131:THR:HG22	26:BE:161:ALA:N	2.30	0.46
27:BF:135:ILE:C	27:BF:137:PHE:N	2.68	0.46
28:BG:23:ILE:H	28:BG:23:ILE:CD1	2.23	0.46
28:BG:148:ARG:HD2	28:BG:163:TYR:CE2	2.49	0.46
37:BP:33:GLU:HB3	37:BP:36:LYS:O	2.15	0.46
38:BQ:4:LYS:HZ3	38:BQ:7:VAL:HG13	1.78	0.46
39:BR:2:TYR:CE1	39:BR:42:ALA:HB3	2.51	0.46
41:BT:28:ASN:C	41:BT:91:GLN:HE22	2.19	0.46
41:BT:38:ALA:HB1	41:BT:43:ILE:HG21	1.97	0.46
41:BT:39:THR:CB	41:BT:42:GLU:HB2	2.31	0.46
43:BV:43:ASP:OD1	43:BV:43:ASP:C	2.53	0.46
43:BV:48:MET:O	43:BV:51:GLN:HG3	2.15	0.46
43:BV:68:LYS:O	43:BV:69:GLU:C	2.53	0.46
44:BW:16:GLU:O	44:BW:17:ALA:HB3	2.16	0.46
45:BX:34:SER:HA	45:BX:49:ARG:HA	1.98	0.46
53:CA:8:A:C5	4:CD:205:LYS:HG3	2.50	0.46
53:CA:149:A:C2	53:CA:150:U:C2	3.03	0.46
53:CA:684:U:H3	53:CA:706:A:H61	1.63	0.46
53:CA:825:A:H2'	53:CA:826:C:H6	1.79	0.46
53:CA:960:U:H2'	53:CA:960:U:O2	2.15	0.46
53:CA:1272:G:H2'	53:CA:1273:C:H5'	1.97	0.46
54:CG:37:THR:HA	54:CG:40:SER:CB	2.44	0.46
8:CH:37:ASN:O	8:CH:41:GLU:HG2	2.16	0.46
55:CM:8:ILE:N	55:CM:9:PRO:HD3	2.30	0.46
17:CQ:61:ARG:CG	17:CQ:75:VAL:HG11	2.44	0.46
19:CS:54:ARG:HG2	19:CS:55:GLN:N	2.29	0.46
22:DA:7:G:HO2'	31:DJ:15:TRP:HZ2	1.63	0.46
22:DA:26:G:C6	22:DA:27:G:N1	2.83	0.46
22:DA:58:G:N3	22:DA:73:A:H2	2.13	0.46
22:DA:365:U:H2'	22:DA:366:C:O4'	2.15	0.46
22:DA:744:U:C2'	22:DA:745:G:O5'	2.63	0.46
22:DA:769:U:O2'	22:DA:1379:U:H6	1.99	0.46
22:DA:849:A:C6	22:DA:850:U:C4	3.04	0.46
22:DA:950:G:C6	22:DA:951:C:N3	2.83	0.46
22:DA:1566:A:H2	24:DC:212:TRP:HB2	1.75	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1768:C:H2'	22:DA:1769:U:O4'	2.15	0.46
22:DA:2418:A:OP1	51:D3:44:ARG:HD3	2.15	0.46
22:DA:2431:U:N3	22:DA:2434:A:OP2	2.38	0.46
22:DA:2516:A:C2'	22:DA:2517:C:H5'	2.45	0.46
22:DA:2519:U:N1	22:DA:2542:A:N6	2.62	0.46
22:DA:2654:A:N6	22:DA:2667:C:H41	2.14	0.46
22:DA:2714:G:H2'	22:DA:2715:C:C6	2.49	0.46
22:DA:2788:C:O2	22:DA:2809:A:H2	1.99	0.46
22:DA:2843:G:C2	22:DA:2875:C:N3	2.83	0.46
57:DB:63:C:O2	57:DB:63:C:H2'	2.14	0.46
57:DB:69:G:C6	57:DB:70:C:C2	3.03	0.46
57:DB:81:G:C6	57:DB:82:U:C4	3.03	0.46
25:DD:99:GLU:HG3	25:DD:100:LEU:N	2.31	0.46
26:DE:153:LEU:HB2	26:DE:171:ASP:HB3	1.97	0.46
28:DG:106:LEU:HB2	28:DG:108:PHE:CE1	2.48	0.46
37:DP:3:ILE:O	37:DP:7:LEU:HB2	2.16	0.46
39:DR:68:ARG:NH1	39:DR:90:ARG:HG2	2.30	0.46
45:DX:29:LEU:HB2	45:DX:30:PRO:CD	2.44	0.46
51:D3:33:THR:CG2	51:D3:34:LYS:H	2.28	0.46
1:AA:531:U:H4'	1:AA:532:A:O5'	2.15	0.46
1:AA:1057:G:O3'	3:AC:196:GLY:HA3	2.16	0.46
2:AB:134:LEU:HD12	2:AB:137:THR:OG1	2.14	0.46
5:AE:79:THR:HB	5:AE:121:ASN:ND2	2.30	0.46
11:AK:42:GLY:HA3	11:AK:73:VAL:CG1	2.43	0.46
20:AT:66:ILE:O	20:AT:70:LYS:HB3	2.16	0.46
22:BA:320:A:H4'	22:BA:322:A:C8	2.50	0.46
22:BA:343:C:H2'	22:BA:343:C:O2	2.15	0.46
22:BA:357:C:O2'	22:BA:358:U:H5'	2.15	0.46
22:BA:845:A:H3'	22:BA:845:A:N3	2.31	0.46
22:BA:988:A:P	47:BZ:11:SER:HB3	2.55	0.46
22:BA:1857:G:C1'	22:BA:1858:A:OP2	2.64	0.46
22:BA:2336:A:H61	44:BW:40:ARG:HB3	1.79	0.46
22:BA:2795:C:H2'	22:BA:2796:U:C6	2.50	0.46
27:BF:21:TYR:HE2	27:BF:28:PRO:HD2	1.80	0.46
31:BJ:56:VAL:HG12	31:BJ:57:LEU:N	2.30	0.46
33:BL:21:ARG:HD3	33:BL:21:ARG:HA	1.52	0.46
39:BR:102:SER:O	39:BR:103:ALA:O	2.33	0.46
53:CA:148:G:C2	53:CA:149:A:C4	3.03	0.46
53:CA:193:C:O2'	53:CA:194:C:H5'	2.15	0.46
53:CA:740:U:H4'	15:CO:38:LEU:HD11	1.97	0.46
53:CA:1320:C:O2'	19:CS:72:GLU:HA	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:103:GLY:HA3	5:CE:121:ASN:CA	2.43	0.46
6:CF:9:MET:HE1	18:CR:64:LEU:O	2.14	0.46
10:CJ:42:LEU:HD22	10:CJ:71:LEU:HD23	1.97	0.46
11:CK:124:LYS:O	21:CU:33:ARG:CZ	2.63	0.46
19:CS:57:VAL:HG21	19:CS:75:PRO:HD2	1.98	0.46
22:DA:595:C:O2	22:DA:663:G:C2	2.69	0.46
22:DA:963:U:O2'	22:DA:964:C:H6	1.98	0.46
22:DA:1130:U:O2'	22:DA:1131:G:H8	1.97	0.46
22:DA:1511:G:H2'	22:DA:1512:C:C6	2.51	0.46
22:DA:1638:C:H1'	22:DA:2698:U:O2'	2.16	0.46
22:DA:1907:G:C2	22:DA:1924:C:C2	3.04	0.46
22:DA:1930:G:O2'	22:DA:1931:U:P	2.74	0.46
22:DA:2221:G:C5	22:DA:2222:C:C5	3.04	0.46
22:DA:2489:U:C4	22:DA:2490:G:C6	3.04	0.46
22:DA:2603:G:C5	22:DA:2604:U:C5	3.03	0.46
22:DA:2880:C:H1'	35:DN:92:GLY:HA3	1.95	0.46
24:DC:77:VAL:CG2	24:DC:111:ALA:HA	2.45	0.46
26:DE:106:LYS:HG3	26:DE:200:LEU:HD12	1.98	0.46
26:DE:149:ILE:HG23	26:DE:188:MET:N	2.29	0.46
28:DG:103:ASN:HA	28:DG:112:VAL:HB	1.98	0.46
31:DJ:44:TYR:O	31:DJ:45:THR:CB	2.59	0.46
31:DJ:56:VAL:CG2	31:DJ:124:VAL:HG23	2.45	0.46
31:DJ:70:THR:HG22	31:DJ:90:GLU:CD	2.36	0.46
32:DK:88:ASN:O	32:DK:89:ASN:HB3	2.15	0.46
35:DN:75:ILE:HD12	35:DN:79:LEU:HD12	1.96	0.46
42:DU:64:ILE:HG23	42:DU:64:ILE:O	2.15	0.46
45:DX:14:GLY:HA3	45:DX:28:PHE:CE1	2.49	0.46
45:DX:26:ARG:HG3	45:DX:27:ARG:N	2.30	0.46
45:DX:69:GLU:O	45:DX:71:ARG:N	2.48	0.46
45:DX:76:LYS:HG3	45:DX:77:TYR:N	2.31	0.46
1:AA:67:C:H2'	1:AA:68:G:C8	2.51	0.46
1:AA:355:C:C4	1:AA:356:A:N7	2.83	0.46
1:AA:878:A:H5"	8:AH:80:PRO:HG2	1.97	0.46
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.51	0.46
4:AD:52:VAL:HG22	4:AD:53:GLN:N	2.30	0.46
5:AE:152:VAL:HB	5:AE:156:ARG:HG3	1.97	0.46
7:AG:78:ARG:HD2	7:AG:83:THR:HA	1.98	0.46
11:AK:76:TYR:N	11:AK:76:TYR:HD1	2.13	0.46
20:AT:38:ILE:HG12	20:AT:38:ILE:H	1.52	0.46
22:BA:38:A:O2'	26:BE:43:THR:HA	2.15	0.46
22:BA:831:G:C6	22:BA:832:U:C4	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1062:G:H2'	22:BA:1063:G:C8	2.50	0.46
22:BA:1248:G:C4	38:BQ:2:ARG:HG2	2.51	0.46
22:BA:1585:C:O2'	22:BA:1586:A:H5'	2.14	0.46
22:BA:2479:U:OP1	22:BA:2537:U:H1'	2.16	0.46
22:BA:2786:U:O2'	22:BA:2787:C:H5'	2.15	0.46
23:BB:65:U:O4	23:BB:108:A:H1'	2.15	0.46
28:BG:31:GLU:O	28:BG:31:GLU:HG3	2.15	0.46
30:BI:56:VAL:HG11	30:BI:68:PHE:HD2	1.80	0.46
30:BI:79:LEU:HD11	30:BI:132:ALA:HA	1.97	0.46
32:BK:24:VAL:HG12	32:BK:30:ARG:HD2	1.97	0.46
36:BO:48:LEU:HD23	36:BO:48:LEU:N	2.30	0.46
38:BQ:63:ARG:HH12	38:BQ:96:ASP:HB2	1.80	0.46
39:BR:43:ASN:HB3	39:BR:44:GLY:H	1.42	0.46
41:BT:7:LEU:O	41:BT:10:VAL:HG13	2.14	0.46
41:BT:24:MET:O	41:BT:28:ASN:O	2.32	0.46
41:BT:30:ILE:HG23	41:BT:30:ILE:O	2.16	0.46
43:BV:25:LYS:NZ	43:BV:43:ASP:HB2	2.31	0.46
43:BV:35:GLU:H	43:BV:35:GLU:HG2	1.44	0.46
44:BW:77:LYS:O	44:BW:78:PHE:HB2	2.16	0.46
53:CA:45:G:O2'	53:CA:46:G:H5'	2.16	0.46
53:CA:198:G:O6	53:CA:220:G:C2	2.67	0.46
53:CA:583:A:H3'	53:CA:584:G:H8	1.80	0.46
53:CA:708:C:H2'	53:CA:709:U:C6	2.46	0.46
53:CA:1279:G:C5'	10:CJ:9:ARG:HH22	2.29	0.46
53:CA:1453:G:H2'	53:CA:1453:G:N3	2.29	0.46
4:CD:187:ARG:CZ	4:CD:191:SER:OG	2.63	0.46
12:CL:85:ARG:HA	12:CL:93:ARG:HA	1.96	0.46
55:CM:13:HIS:NE2	55:CM:41:ASP:HA	2.29	0.46
56:CP:68:SER:HB3	56:CP:71:VAL:HG13	1.97	0.46
17:CQ:18:LYS:HA	17:CQ:50:ASN:OD1	2.15	0.46
21:CU:28:LEU:HD23	21:CU:28:LEU:C	2.36	0.46
22:DA:157:C:O2	22:DA:157:C:H2'	2.15	0.46
22:DA:167:A:H3'	22:DA:168:G:H8	1.80	0.46
22:DA:228:C:H5'	22:DA:229:C:C5	2.45	0.46
22:DA:410:G:C2	22:DA:2407:A:C6	3.04	0.46
22:DA:502:A:C6	22:DA:505:A:N7	2.84	0.46
22:DA:586:A:H5'	26:DE:84:THR:HG21	1.98	0.46
22:DA:590:A:C5	22:DA:591:U:C5	3.03	0.46
22:DA:1000:A:C6	22:DA:1001:A:C6	3.03	0.46
22:DA:1047:G:C2'	22:DA:1048:A:OP2	2.63	0.46
22:DA:1179:G:N2	22:DA:1180:U:C2	2.84	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1288:G:H2'	22:DA:1288:G:N3	2.30	0.46
22:DA:1345:C:H3'	22:DA:1345:C:P	2.55	0.46
22:DA:1394:U:H3'	22:DA:1394:U:H6	1.80	0.46
22:DA:1525:A:H2'	22:DA:1526:C:O4'	2.14	0.46
22:DA:1693:U:OP2	22:DA:1694:C:N4	2.42	0.46
22:DA:2233:U:H2'	22:DA:2234:G:C8	2.50	0.46
22:DA:2295:C:N4	22:DA:2296:U:O4	2.48	0.46
22:DA:2345:G:C5	22:DA:2381:A:C2	3.04	0.46
22:DA:2429:G:OP2	22:DA:2429:G:H3'	2.15	0.46
22:DA:2755:C:O3'	22:DA:2756:U:H6	1.97	0.46
57:DB:24:G:H5'	57:DB:25:U:C4	2.50	0.46
57:DB:54:G:N2	58:DF:25:MET:CE	2.78	0.46
57:DB:109:A:O2'	57:DB:110:C:H6	1.94	0.46
25:DD:8:LYS:HB2	25:DD:201:LEU:CD1	2.32	0.46
25:DD:107:VAL:N	25:DD:206:ALA:H	2.13	0.46
25:DD:119:ALA:HB3	25:DD:163:GLY:N	2.25	0.46
29:DH:125:THR:HG22	29:DH:146:VAL:HG11	1.97	0.46
32:DK:2:ILE:O	32:DK:3:GLN:HG2	2.15	0.46
37:DP:88:ARG:HH11	37:DP:112:ARG:NH2	2.12	0.46
39:DR:2:TYR:HD2	39:DR:42:ALA:HB2	1.78	0.46
41:DT:19:LYS:O	41:DT:20:ALA:HB2	2.15	0.46
43:DV:44:HIS:CD2	43:DV:85:LYS:HB2	2.51	0.46
43:DV:50:MET:O	43:DV:53:LYS:HB2	2.15	0.46
43:DV:77:VAL:O	43:DV:77:VAL:HG13	2.16	0.46
47:DZ:4:ILE:HG21	47:DZ:56:VAL:HG13	1.98	0.46
1:AA:191:G:H2'	1:AA:192:A:H8	1.80	0.46
1:AA:263:A:H2'	1:AA:264:C:C6	2.50	0.46
1:AA:896:C:H2'	1:AA:897:C:H6	1.81	0.46
1:AA:1418:A:C2	1:AA:1483:A:C2	3.04	0.46
1:AA:1458:G:OP1	20:AT:29:THR:HG21	2.15	0.46
2:AB:138:ARG:HB2	2:AB:138:ARG:HH11	1.81	0.46
5:AE:81:GLN:HG2	5:AE:149:PRO:CG	2.44	0.46
5:AE:82:HIS:NE2	8:AH:95:MET:HE2	2.30	0.46
7:AG:136:LYS:O	7:AG:140:VAL:HG23	2.16	0.46
13:AM:21:ILE:H	13:AM:21:ILE:HD12	1.81	0.46
14:AN:83:VAL:HG12	14:AN:84:ARG:N	2.30	0.46
17:AQ:66:LEU:O	17:AQ:67:SER:HB3	2.15	0.46
22:BA:435:C:H2'	22:BA:436:C:H5'	1.96	0.46
22:BA:522:A:C6	22:BA:523:C:C4	3.04	0.46
22:BA:709:U:H2'	22:BA:710:U:H6	1.80	0.46
22:BA:947:A:O2'	22:BA:984:A:C2	2.41	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1002:G:H2'	22:BA:1003:G:O5'	2.16	0.46
22:BA:2308:G:N7	27:BF:76:PHE:CE2	2.83	0.46
22:BA:2485:G:H5"	34:BM:45:GLN:NE2	2.27	0.46
22:BA:2742:G:OP1	52:B4:36:ARG:HD3	2.16	0.46
23:BB:62:C:O2'	23:BB:63:C:H5'	2.16	0.46
26:BE:134:LEU:HD21	26:BE:161:ALA:HB2	1.98	0.46
28:BG:59:ASP:O	28:BG:62:ALA:HB3	2.16	0.46
32:BK:118:LEU:O	32:BK:119:ALA:HB3	2.15	0.46
33:BL:74:THR:HA	33:BL:107:PHE:O	2.16	0.46
37:BP:87:ARG:HH11	37:BP:87:ARG:HG2	1.81	0.46
39:BR:48:LYS:O	39:BR:49:ILE:C	2.51	0.46
45:BX:29:LEU:CD2	45:BX:29:LEU:N	2.78	0.46
53:CA:350:G:C6	53:CA:351:G:O6	2.68	0.46
53:CA:408:A:C2	53:CA:435:A:C2	3.04	0.46
53:CA:708:C:O2'	53:CA:709:U:H5'	2.15	0.46
53:CA:728:A:C8	15:CO:53:ARG:CZ	2.98	0.46
53:CA:764:C:N4	53:CA:812:G:N1	2.64	0.46
53:CA:1241:G:N3	53:CA:1242:G:N7	2.63	0.46
4:CD:86:GLY:HA3	4:CD:196:GLU:HG3	1.97	0.46
5:CE:112:ALA:O	5:CE:113:VAL:C	2.54	0.46
12:CL:52:CYS:O	12:CL:54:VAL:HG23	2.15	0.46
55:CM:12:LYS:HA	55:CM:12:LYS:CE	2.42	0.46
55:CM:53:ASP:HA	55:CM:56:ARG:CZ	2.46	0.46
22:DA:77:G:H2'	22:DA:78:U:O4'	2.15	0.46
22:DA:142:A:HO2'	22:DA:143:C:H6	1.50	0.46
22:DA:379:G:C5	22:DA:396:G:C6	3.03	0.46
22:DA:442:G:C6	22:DA:444:C:N4	2.83	0.46
22:DA:764:A:N1	22:DA:1789:A:O2'	2.48	0.46
22:DA:768:G:N2	22:DA:1379:U:O2'	2.44	0.46
22:DA:1167:C:O2'	22:DA:1168:G:H5'	2.15	0.46
22:DA:1361:G:H2'	22:DA:1362:C:H5'	1.98	0.46
22:DA:1465:G:H2'	22:DA:1466:U:O4'	2.15	0.46
22:DA:1912:A:N6	22:DA:1917:U:H3	2.12	0.46
22:DA:2052:A:OP1	25:DD:146:ILE:HG12	2.16	0.46
22:DA:2297:A:O2'	22:DA:2298:A:C8	2.33	0.46
57:DB:42:C:N4	58:DF:87:LYS:NZ	2.58	0.46
24:DC:131:MET:HA	24:DC:134:ILE:HG12	1.98	0.46
25:DD:51:THR:HG23	25:DD:76:GLY:HA3	1.97	0.46
26:DE:34:ALA:HA	26:DE:94:GLN:HG3	1.98	0.46
26:DE:79:ARG:HG2	26:DE:80:SER:N	2.31	0.46
58:DF:137:PHE:HB2	58:DF:138:PRO:CD	2.34	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DI:118:GLY:O	30:DI:123:ALA:HB3	2.16	0.46
33:DL:3:LEU:O	33:DL:6:LEU:HB2	2.16	0.46
34:DM:36:VAL:HG13	43:DV:82:TYR:HD1	1.80	0.46
41:DT:76:ARG:HG2	41:DT:77:ARG:N	2.31	0.46
42:DU:42:LYS:HB2	42:DU:42:LYS:NZ	2.31	0.46
42:DU:85:ARG:HA	42:DU:85:ARG:HE	1.80	0.46
51:D3:41:ARG:HH21	51:D3:41:ARG:CG	2.28	0.46
1:AA:49:U:O2'	1:AA:50:A:H2'	2.15	0.46
1:AA:182:A:C4	1:AA:184:G:N7	2.83	0.46
1:AA:603:U:H2'	1:AA:604:G:H8	1.80	0.46
1:AA:626:G:H2'	1:AA:627:G:H8	1.79	0.46
1:AA:872:A:C8	1:AA:874:G:C8	3.03	0.46
1:AA:898:G:N2	1:AA:901:A:OP2	2.46	0.46
1:AA:1314:C:C2'	1:AA:1315:U:H5'	2.46	0.46
5:AE:114:LEU:HG	5:AE:119:VAL:HG21	1.97	0.46
10:AJ:91:ASP:C	10:AJ:92:LEU:HD23	2.35	0.46
13:AM:106:ARG:HH21	13:AM:112:ARG:CB	2.27	0.46
14:AN:50:LEU:O	14:AN:51:PRO:C	2.53	0.46
22:BA:528:A:H2'	22:BA:529:A:H5"	1.97	0.46
22:BA:1568:G:H4'	24:BC:58:LYS:CB	2.46	0.46
22:BA:1682:G:C8	22:BA:1757:A:N3	2.83	0.46
22:BA:1845:G:C2'	22:BA:1846:G:H5'	2.45	0.46
22:BA:1846:G:C2	22:BA:1895:C:C2	3.03	0.46
28:BG:164:ALA:C	28:BG:166:GLU:H	2.19	0.46
30:BI:79:LEU:HD22	30:BI:137:LEU:CD1	2.46	0.46
30:BI:105:LEU:HA	30:BI:108:ILE:HD12	1.97	0.46
33:BL:110:VAL:O	33:BL:111:ILE:CB	2.56	0.46
34:BM:8:LYS:HD2	34:BM:8:LYS:HA	1.41	0.46
37:BP:37:LYS:HG2	37:BP:37:LYS:O	2.16	0.46
38:BQ:86:SER:HB2	39:BR:50:GLY:O	2.15	0.46
46:BY:57:LEU:CA	46:BY:60:LYS:HB3	2.44	0.46
53:CA:304:U:H2'	53:CA:305:G:C8	2.50	0.46
53:CA:533:A:H2'	62:CA:1850:HOH:O	2.15	0.46
53:CA:647:C:H2'	53:CA:648:A:H8	1.80	0.46
53:CA:1523:G:P	11:CK:124:LYS:HZ3	2.38	0.46
9:CI:61:ASP:C	9:CI:62:LEU:HD22	2.36	0.46
19:CS:50:VAL:CG1	19:CS:70:LEU:HB3	2.46	0.46
22:DA:224:U:H5	22:DA:420:C:H4'	1.80	0.46
22:DA:241:A:C4	22:DA:243:U:O4	2.69	0.46
22:DA:249:C:C4'	22:DA:250:G:O5'	2.63	0.46
22:DA:301:G:C2	22:DA:317:G:C4	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:364:C:H2'	22:DA:365:U:C6	2.50	0.46
22:DA:378:C:O2'	22:DA:379:G:H5'	2.15	0.46
22:DA:484:C:O2'	22:DA:485:C:H5'	2.15	0.46
22:DA:567:U:O4	22:DA:568:U:C4	2.69	0.46
22:DA:876:C:O2	22:DA:876:C:C4'	2.63	0.46
22:DA:1317:G:C2	22:DA:1336:A:C2	3.03	0.46
22:DA:1419:A:C2	22:DA:1579:A:C2	3.04	0.46
22:DA:1420:A:C4	22:DA:2211:A:N7	2.84	0.46
22:DA:2074:U:H2'	22:DA:2075:U:C6	2.51	0.46
22:DA:2193:G:H2'	22:DA:2194:U:H6	1.80	0.46
22:DA:2379:G:H2'	22:DA:2380:C:H6	1.78	0.46
22:DA:2461:A:H1'	22:DA:2492:U:O2	2.15	0.46
22:DA:2523:G:C2'	22:DA:2524:G:H5'	2.46	0.46
22:DA:2773:C:H2'	22:DA:2774:C:C6	2.41	0.46
22:DA:2850:A:C6	22:DA:2869:G:H4'	2.50	0.46
24:DC:269:ARG:HA	24:DC:269:ARG:HE	1.81	0.46
25:DD:30:GLU:HG2	25:DD:185:ASN:ND2	2.30	0.46
25:DD:88:GLU:O	25:DD:89:GLU:HG3	2.16	0.46
58:DF:1:ALA:HB2	58:DF:93:GLU:O	2.16	0.46
58:DF:11:VAL:HG22	58:DF:171:ALA:HA	1.97	0.46
29:DH:83:LYS:HZ1	29:DH:91:PHE:HD2	1.64	0.46
36:DO:62:LEU:CD1	36:DO:65:THR:HG23	2.45	0.46
37:DP:5:LYS:O	37:DP:9:GLN:HG2	2.15	0.46
42:DU:7:ASP:O	42:DU:8:ASP:HB2	2.14	0.46
50:D2:31:LEU:HA	50:D2:34:ARG:CB	2.40	0.46
1:AA:404:G:N7	4:AD:1:ALA:CB	2.79	0.46
1:AA:654:G:H4'	8:AH:2:MET:HE2	1.97	0.46
1:AA:697:U:O2	1:AA:798:U:H1'	2.15	0.46
1:AA:912:C:H6	1:AA:912:C:O5'	1.98	0.46
1:AA:1173:U:H2'	1:AA:1174:G:C8	2.51	0.46
1:AA:1429:A:H4'	22:BA:1703:G:O2'	2.15	0.46
2:AB:27:LYS:C	2:AB:29:PHE:H	2.17	0.46
4:AD:185:PRO:HB2	4:AD:190:LEU:HD23	1.98	0.46
5:AE:120:HIS:O	5:AE:121:ASN:CB	2.59	0.46
5:AE:158:LYS:HG3	8:AH:63:LYS:NZ	2.31	0.46
10:AJ:51:VAL:O	10:AJ:62:ARG:HA	2.15	0.46
12:AL:107:LYS:O	12:AL:108:ASP:HB2	2.16	0.46
14:AN:78:LEU:HB2	14:AN:83:VAL:HG23	1.97	0.46
15:AO:69:LEU:HD22	15:AO:77:TYR:HB2	1.97	0.46
20:AT:19:HIS:O	20:AT:20:ASN:C	2.53	0.46
22:BA:686:U:H2'	22:BA:788:A:N1	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:807:U:O2'	22:BA:808:G:H5'	2.15	0.46
22:BA:1183:U:O2'	22:BA:1184:U:H5'	2.16	0.46
22:BA:1534:U:H5'	22:BA:1535:A:OP1	2.16	0.46
22:BA:1692:U:H2'	22:BA:1694:C:C5	2.51	0.46
22:BA:1731:G:C5	22:BA:1733:G:N7	2.84	0.46
22:BA:1830:C:O5'	22:BA:1830:C:H6	1.99	0.46
22:BA:2264:C:N4	44:BW:11:ASN:ND2	2.63	0.46
22:BA:2286:G:O6	49:B1:22:THR:HG21	2.16	0.46
22:BA:2648:G:O2'	22:BA:2649:C:H5'	2.16	0.46
24:BC:20:ASN:ND2	24:BC:22:GLU:H	2.13	0.46
24:BC:56:GLY:O	24:BC:57:HIS:O	2.34	0.46
27:BF:105:ILE:C	27:BF:108:PRO:HD2	2.36	0.46
29:BH:21:VAL:HG21	29:BH:25:TYR:CD2	2.51	0.46
30:BI:126:ARG:CA	30:BI:129:GLU:HB2	2.43	0.46
31:BJ:40:HIS:C	31:BJ:41:LYS:HG2	2.35	0.46
33:BL:80:SER:C	33:BL:81:ASP:O	2.54	0.46
37:BP:37:LYS:N	37:BP:37:LYS:CD	2.79	0.46
42:BU:87:GLU:O	42:BU:88:ASP:O	2.34	0.46
44:BW:28:GLU:OE2	44:BW:28:GLU:CA	2.64	0.46
47:BZ:9:THR:HG22	47:BZ:10:ARG:N	2.30	0.46
53:CA:247:G:C5	53:CA:278:G:C2	3.03	0.46
53:CA:729:A:H2'	53:CA:730:G:O4'	2.16	0.46
53:CA:846:G:O2'	53:CA:847:G:H5'	2.16	0.46
53:CA:1147:C:O2'	53:CA:1148:U:C6	2.58	0.46
53:CA:1167:A:H2'	53:CA:1168:U:OP1	2.15	0.46
5:CE:136:VAL:O	5:CE:140:ILE:HG13	2.16	0.46
22:DA:74:A:H5'	46:DY:48:ARG:HH22	1.80	0.46
22:DA:117:G:C6	22:DA:119:A:C6	3.04	0.46
22:DA:120:U:C2	22:DA:149:A:C6	3.03	0.46
22:DA:1011:G:H4'	22:DA:1012:U:OP2	2.15	0.46
22:DA:1439:A:H8	22:DA:1440:U:O4'	1.98	0.46
22:DA:1493:C:O2	22:DA:1493:C:C2'	2.58	0.46
22:DA:1553:A:C8	22:DA:1555:G:C5	3.03	0.46
22:DA:1568:G:N2	24:DC:57:HIS:HE1	2.09	0.46
22:DA:1570:A:C6	22:DA:1571:A:C6	3.03	0.46
22:DA:1661:G:N3	22:DA:1662:U:C6	2.84	0.46
22:DA:1728:C:H2'	22:DA:1730:C:O2	2.16	0.46
22:DA:1753:G:N2	22:DA:1756:G:OP2	2.48	0.46
22:DA:2337:G:OP1	22:DA:2385:C:OP2	2.34	0.46
22:DA:2461:A:C2	22:DA:2490:G:N2	2.84	0.46
22:DA:2507:C:H1'	22:DA:2583:G:C2	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:128:THR:HG22	24:DC:188:ARG:CB	2.40	0.46
25:DD:4:LEU:HD23	25:DD:101:PHE:CZ	2.49	0.46
58:DF:12:VAL:CG1	58:DF:16:MET:HG3	2.45	0.46
31:DJ:117:ALA:HA	31:DJ:120:ARG:HD2	1.97	0.46
33:DL:100:ILE:O	33:DL:101:ILE:CB	2.63	0.46
35:DN:73:ASN:O	35:DN:76:VAL:HG22	2.16	0.46
41:DT:12:ARG:HG3	46:DY:29:ARG:NH1	2.31	0.46
42:DU:94:PHE:O	42:DU:95:PHE:C	2.53	0.46
44:DW:20:LEU:HD12	44:DW:34:SER:H	1.81	0.46
47:DZ:40:THR:C	47:DZ:42:ALA:N	2.68	0.46
51:D3:18:LYS:CD	51:D3:19:GLY:H	2.27	0.46
1:AA:182:A:C4	1:AA:184:G:C8	3.04	0.46
1:AA:320:A:H5”	1:AA:321:A:OP2	2.16	0.46
1:AA:476:U:O2’	1:AA:477:C:H5’	2.16	0.46
1:AA:480:U:C5’	1:AA:481:G:OP2	2.63	0.46
1:AA:1343:G:O3’	9:AI:123:ARG:HB3	2.16	0.46
1:AA:1453:G:N2	1:AA:1454:G:C8	2.84	0.46
2:AB:209:VAL:O	2:AB:211:LEU:N	2.49	0.46
3:AC:164:THR:O	3:AC:165:GLU:C	2.55	0.46
8:AH:10:LEU:HD11	8:AH:126:CYS:HB3	1.98	0.46
14:AN:53:ASP:HA	14:AN:58:ARG:HH11	1.81	0.46
22:BA:847:U:O2	22:BA:847:U:H2’	2.15	0.46
22:BA:1112:G:C6	22:BA:1113:U:C4	3.04	0.46
22:BA:1131:G:OP1	31:BJ:82:GLY:CA	2.58	0.46
22:BA:1420:A:C5	22:BA:2211:A:C6	3.04	0.46
22:BA:1427:A:H4’	22:BA:1428:C:O5’	2.14	0.46
22:BA:1605:C:C2’	22:BA:1606:C:H5”	2.45	0.46
22:BA:1624:U:H2’	22:BA:1625:C:H6	1.81	0.46
22:BA:1946:U:O2’	22:BA:1947:C:H5’	2.15	0.46
22:BA:2233:U:H2’	22:BA:2234:G:H8	1.75	0.46
22:BA:2356:U:C5’	44:BW:16:GLU:HG3	2.46	0.46
24:BC:90:ILE:HD13	24:BC:90:ILE:HA	1.56	0.46
25:BD:33:ARG:NH2	25:BD:74:GLU:O	2.49	0.46
29:BH:31:VAL:HG13	29:BH:36:ALA:O	2.16	0.46
29:BH:66:ASN:C	29:BH:68:ARG:H	2.18	0.46
32:BK:104:THR:O	32:BK:107:LEU:HB2	2.15	0.46
34:BM:55:ARG:O	34:BM:56:ALA:HB2	2.15	0.46
35:BN:18:GLN:HE21	35:BN:22:ARG:NH1	2.14	0.46
36:BO:57:ALA:C	36:BO:59:ALA:H	2.20	0.46
37:BP:19:PHE:HB2	37:BP:20:ARG:H	1.51	0.46
37:BP:102:ARG:O	37:BP:103:THR:HG22	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BV:5:ASN:H	43:BV:5:ASN:HD22	1.59	0.46
43:BV:77:VAL:HG21	43:BV:86:LEU:HD22	1.96	0.46
45:BX:39:VAL:HG22	45:BX:44:ARG:O	2.16	0.46
48:B0:38:LEU:O	48:B0:41:HIS:HB2	2.16	0.46
48:B0:40:HIS:HA	48:B0:48:TYR:OH	2.16	0.46
53:CA:80:A:H3'	53:CA:81:A:H4'	1.98	0.46
53:CA:216:U:H2'	53:CA:217:C:C6	2.50	0.46
53:CA:243:A:H4'	53:CA:244:U:C5'	2.29	0.46
53:CA:328:C:O2'	53:CA:329:A:OP2	2.28	0.46
53:CA:1108:G:H5"	3:CC:175:HIS:ND1	2.30	0.46
53:CA:1142:G:C2	53:CA:1143:G:H1'	2.51	0.46
53:CA:1240:U:H5"	54:CG:108:ARG:HH21	1.81	0.46
2:CB:103:TRP:HA	2:CB:106:VAL:CB	2.41	0.46
3:CC:29:ALA:HB1	14:CN:64:ARG:HH12	1.77	0.46
3:CC:172:VAL:O	3:CC:174:LEU:N	2.49	0.46
9:CI:11:ARG:NH2	9:CI:108:ARG:NH2	2.63	0.46
9:CI:14:SER:HA	9:CI:68:GLY:O	2.15	0.46
10:CJ:79:PRO:HA	10:CJ:84:VAL:HG11	1.97	0.46
15:CO:38:LEU:O	15:CO:41:HIS:HB3	2.15	0.46
22:DA:9:G:N2	22:DA:10:A:N6	2.63	0.46
22:DA:83:A:N6	22:DA:101:A:H5'	2.30	0.46
22:DA:146:A:C2	22:DA:147:C:C2	3.03	0.46
22:DA:275:C:H1'	22:DA:363:G:N2	2.31	0.46
22:DA:347:A:H2'	22:DA:348:A:H8	1.80	0.46
22:DA:1006:C:H6	22:DA:1006:C:O5'	1.97	0.46
22:DA:1047:G:H2'	22:DA:1048:A:OP2	2.16	0.46
22:DA:1408:G:H2'	22:DA:1409:U:C6	2.51	0.46
22:DA:1754:A:OP1	37:DP:93:LYS:HE3	2.16	0.46
22:DA:2262:U:O2'	22:DA:2263:C:H5'	2.15	0.46
22:DA:2345:G:H4'	22:DA:2346:A:O5'	2.16	0.46
22:DA:2345:G:C4	22:DA:2347:C:C5	3.04	0.46
22:DA:2819:G:H5"	62:DA:3791:HOH:O	2.16	0.46
57:DB:54:G:C2	58:DF:25:MET:HE1	2.51	0.46
24:DC:15:VAL:HG13	24:DC:204:LEU:O	2.16	0.46
25:DD:16:THR:HG22	25:DD:20:VAL:HB	1.98	0.46
58:DF:39:VAL:HG13	58:DF:49:LEU:CD2	2.45	0.46
58:DF:60:SER:OG	58:DF:88:VAL:HG11	2.16	0.46
29:DH:78:VAL:HG22	29:DH:100:ALA:HA	1.98	0.46
30:DI:20:SER:N	30:DI:21:PRO:CD	2.79	0.46
33:DL:23:ILE:HD13	39:DR:84:ARG:CZ	2.46	0.46
35:DN:33:ILE:HD13	35:DN:118:ARG:NH2	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DU:58:VAL:HG12	42:DU:59:GLU:N	2.31	0.46
44:DW:43:LYS:HA	44:DW:43:LYS:HD3	1.64	0.46
45:DX:24:THR:O	45:DX:25:LYS:C	2.54	0.46
47:DZ:23:LEU:HD21	47:DZ:53:MET:HE1	1.98	0.46
48:D0:42:ILE:HD11	48:D0:48:TYR:HB2	1.97	0.46
1:AA:104:G:O2'	1:AA:105:G:H5'	2.16	0.46
1:AA:150:U:H2'	1:AA:151:A:H8	1.81	0.46
1:AA:184:G:H4'	1:AA:224:U:O3'	2.16	0.46
1:AA:421:U:H2'	1:AA:422:C:OP1	2.16	0.46
1:AA:582:C:C4	1:AA:583:A:N7	2.84	0.46
1:AA:600:A:H2'	1:AA:601:G:H8	1.81	0.46
2:AB:49:PHE:CG	2:AB:212:TYR:OH	2.68	0.46
2:AB:116:LEU:CD1	2:AB:140:LEU:HD11	2.45	0.46
2:AB:136:ARG:HD2	2:AB:136:ARG:O	2.16	0.46
2:AB:139:GLU:O	2:AB:143:LEU:HD23	2.15	0.46
6:AF:20:GLY:O	6:AF:24:ARG:HD3	2.15	0.46
7:AG:7:GLY:O	7:AG:8:GLN:HB3	2.16	0.46
12:AL:42:LYS:O	12:AL:44:PRO:HD2	2.16	0.46
15:AO:9:LYS:HB3	15:AO:9:LYS:NZ	2.31	0.46
19:AS:40:PHE:HB2	19:AS:42:ASN:ND2	2.31	0.46
19:AS:62:THR:HG22	19:AS:63:ASP:N	2.31	0.46
19:AS:79:TYR:CE1	19:AS:80:ARG:HB2	2.51	0.46
21:AU:13:VAL:HG13	21:AU:15:LEU:CG	2.45	0.46
22:BA:544:C:C4	22:BA:550:C:N4	2.84	0.46
22:BA:708:G:N2	22:BA:724:U:H1'	2.31	0.46
22:BA:1319:C:O2	22:BA:1334:G:C2	2.68	0.46
22:BA:1906:G:C2'	22:BA:1907:G:O5'	2.64	0.46
22:BA:2013:A:OP1	40:BS:96:ILE:HA	2.15	0.46
22:BA:2307:G:O6	27:BF:40:GLY:HA3	2.15	0.46
22:BA:2486:C:H2'	22:BA:2487:G:O5'	2.16	0.46
22:BA:2848:G:H1'	22:BA:2867:G:N2	2.30	0.46
25:BD:9:VAL:HG13	25:BD:26:VAL:O	2.14	0.46
26:BE:47:LYS:HD3	26:BE:51:GLU:O	2.16	0.46
27:BF:8:LYS:O	27:BF:12:VAL:CG1	2.63	0.46
27:BF:128:SER:HA	27:BF:154:THR:HB	1.98	0.46
28:BG:143:VAL:O	28:BG:144:ALA:C	2.53	0.46
29:BH:29:PHE:O	29:BH:33:GLN:HB3	2.16	0.46
31:BJ:88:THR:CG2	31:BJ:91:GLU:HG3	2.44	0.46
32:BK:38:ILE:HD11	32:BK:112:PHE:CZ	2.39	0.46
36:BO:103:VAL:O	36:BO:105:ALA:O	2.33	0.46
40:BS:21:ALA:HB1	40:BS:74:ILE:HG12	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BW:18:LYS:CG	44:BW:19:ARG:N	2.69	0.46
50:B2:1:MET:CE	50:B2:2:LYS:H	2.27	0.46
53:CA:501:C:H1'	53:CA:549:C:O2'	2.16	0.46
53:CA:532:A:N6	3:CC:191:THR:HG21	2.30	0.46
53:CA:725:G:H2'	53:CA:726:C:H6	1.79	0.46
53:CA:922:G:C6	53:CA:923:A:C6	3.04	0.46
53:CA:940:C:H2'	53:CA:941:G:O4'	2.15	0.46
53:CA:979:C:OP2	53:CA:981:U:O4	2.34	0.46
53:CA:1287:A:O2'	53:CA:1288:A:H8	1.92	0.46
53:CA:1331:G:C2'	53:CA:1332:A:OP2	2.64	0.46
53:CA:1365:G:O2'	53:CA:1366:C:H6	1.99	0.46
3:CC:11:LEU:O	3:CC:13:ILE:N	2.49	0.46
3:CC:149:LYS:HG3	3:CC:168:ARG:HB2	1.98	0.46
6:CF:51:ILE:O	6:CF:54:LEU:HB2	2.16	0.46
54:CG:21:LEU:O	54:CG:25:PHE:N	2.49	0.46
10:CJ:52:LEU:CD2	10:CJ:59:LYS:HA	2.46	0.46
55:CM:113:LYS:OXT	55:CM:113:LYS:HD3	2.16	0.46
15:CO:73:ASP:OD2	15:CO:76:ARG:HD3	2.16	0.46
21:CU:52:VAL:HG22	21:CU:52:VAL:O	2.16	0.46
22:DA:71:A:C5'	22:DA:73:A:C8	2.97	0.46
22:DA:75:G:H4'	46:DY:48:ARG:NH2	2.31	0.46
22:DA:126:A:C8	22:DA:127:A:C6	3.04	0.46
22:DA:172:A:O2'	22:DA:173:A:H5'	2.15	0.46
22:DA:247:G:N7	22:DA:249:C:C2	2.83	0.46
22:DA:425:G:C2	22:DA:426:C:C5	3.04	0.46
22:DA:1218:G:C2	22:DA:1232:G:C5	3.03	0.46
22:DA:1627:G:C2	22:DA:1628:G:N7	2.84	0.46
22:DA:1670:C:C5	22:DA:1671:U:C4	3.04	0.46
22:DA:2067:G:H4'	22:DA:2068:U:OP2	2.16	0.46
22:DA:2282:G:H4'	22:DA:2283:C:OP2	2.15	0.46
22:DA:2311:A:O2'	58:DF:84:ILE:HD13	2.16	0.46
22:DA:2448:A:H61	33:DL:36:LYS:CE	2.29	0.46
22:DA:2688:G:H1'	22:DA:2721:A:H61	1.80	0.46
22:DA:2738:A:C2	22:DA:2766:A:N6	2.83	0.46
26:DE:154:ASP:C	26:DE:156:ASN:H	2.18	0.46
31:DJ:80:HIS:O	31:DJ:81:ILE:C	2.53	0.46
31:DJ:106:LYS:HE2	31:DJ:106:LYS:HA	1.98	0.46
36:DO:49:VAL:CG1	36:DO:81:ARG:HB3	2.45	0.46
37:DP:21:PRO:HA	37:DP:46:VAL:HG12	1.98	0.46
37:DP:62:LYS:O	37:DP:63:ILE:HB	2.16	0.46
39:DR:98:ILE:HD12	39:DR:98:ILE:N	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DS:4:ILE:CG2	40:DS:106:VAL:HG22	2.46	0.46
41:DT:21:SER:HA	41:DT:25:GLU:HB2	1.98	0.46
42:DU:86:PHE:HB2	42:DU:92:VAL:HG22	1.97	0.46
43:DV:56:PHE:CE1	43:DV:61:LEU:HD13	2.51	0.46
44:DW:36:ILE:CG2	44:DW:39:GLN:HB2	2.45	0.46
51:D3:6:VAL:HG12	51:D3:6:VAL:O	2.16	0.46
51:D3:14:LYS:O	51:D3:21:PHE:O	2.34	0.46
1:AA:217:C:O2'	1:AA:218:U:H5'	2.16	0.46
1:AA:345:C:H3'	37:BP:33:GLU:OE1	2.16	0.46
1:AA:1450:U:H2'	1:AA:1452:C:C5	2.51	0.46
3:AC:25:THR:HG23	14:AN:75:LYS:HD3	1.98	0.46
8:AH:66:GLN:HB3	8:AH:67:GLY:H	1.52	0.46
8:AH:76:ARG:NE	8:AH:78:SER:O	2.37	0.46
12:AL:7:VAL:HG13	17:AQ:30:HIS:HD2	1.80	0.46
17:AQ:37:ILE:H	17:AQ:37:ILE:HD12	1.81	0.46
22:BA:621:A:OP2	33:BL:99:ASN:OD1	2.33	0.46
22:BA:999:U:P	62:BA:3356:HOH:O	2.74	0.46
22:BA:1600:C:OP1	41:BT:81:LYS:NZ	2.49	0.46
22:BA:2244:U:H2'	22:BA:2245:U:O4'	2.16	0.46
22:BA:2259:U:C6	22:BA:2427:C:C4	3.04	0.46
22:BA:2345:G:C4	22:BA:2381:A:C2	3.03	0.46
22:BA:2525:G:C2	22:BA:2539:C:C2	3.04	0.46
22:BA:2574:G:C6	22:BA:2575:C:C4	3.04	0.46
22:BA:2783:U:H2'	22:BA:2784:U:C6	2.51	0.46
22:BA:2886:A:C2	22:BA:2887:A:H1'	2.51	0.46
23:BB:109:A:C6	23:BB:110:C:C4	3.04	0.46
27:BF:134:GLN:CG	27:BF:135:ILE:N	2.77	0.46
28:BG:122:ALA:HB2	28:BG:132:LEU:HB3	1.96	0.46
29:BH:3:VAL:HB	29:BH:37:VAL:O	2.17	0.46
39:BR:49:ILE:HG13	39:BR:51:VAL:O	2.16	0.46
43:BV:42:LEU:HD12	43:BV:47:VAL:HG21	1.97	0.46
53:CA:58:C:O2'	53:CA:59:A:H5'	2.15	0.46
53:CA:81:A:N3	53:CA:89:U:O4	2.49	0.46
53:CA:267:C:H2'	53:CA:268:U:O5'	2.16	0.46
53:CA:288:A:H2'	53:CA:289:G:H4'	1.98	0.46
53:CA:530:G:H5"	53:CA:531:U:H5"	1.98	0.46
53:CA:794:A:H4'	53:CA:1521:C:O2'	2.16	0.46
53:CA:982:U:C5	53:CA:983:A:N6	2.83	0.46
53:CA:985:C:H2'	53:CA:986:U:C6	2.51	0.46
53:CA:1004:A:C4	53:CA:1026:G:N7	2.84	0.46
53:CA:1006:G:N2	53:CA:1007:U:H1'	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1225:A:H2'	53:CA:1225:A:N3	2.30	0.46
2:CB:209:VAL:HG23	2:CB:210:THR:N	2.30	0.46
3:CC:8:GLY:HA2	3:CC:11:LEU:HG	1.98	0.46
3:CC:100:ILE:HD12	3:CC:101:ASN:N	2.31	0.46
4:CD:147:LYS:O	4:CD:147:LYS:HD3	2.16	0.46
4:CD:157:ALA:O	4:CD:160:LEU:HB2	2.15	0.46
4:CD:161:ALA:O	4:CD:164:ARG:HB2	2.16	0.46
4:CD:166:LYS:HA	4:CD:167:PRO:HD2	1.69	0.46
11:CK:19:VAL:N	11:CK:34:THR:O	2.48	0.46
14:CN:27:LYS:HD2	14:CN:27:LYS:C	2.36	0.46
19:CS:38:THR:HG1	19:CS:40:PHE:HD1	1.63	0.46
22:DA:9:G:H21	22:DA:10:A:N6	2.13	0.46
22:DA:230:G:O2'	22:DA:231:A:O5'	2.33	0.46
22:DA:251:A:H8	22:DA:251:A:O5'	1.99	0.46
22:DA:311:A:O2'	22:DA:332:A:H5'	2.16	0.46
22:DA:576:U:H4'	22:DA:2502:G:C8	2.51	0.46
22:DA:743:A:C2'	22:DA:744:U:H5'	2.46	0.46
22:DA:752:A:C6	22:DA:1781:U:H1'	2.51	0.46
22:DA:999:U:C2'	22:DA:1000:A:H5'	2.46	0.46
22:DA:1083:U:H1'	22:DA:1086:A:N1	2.30	0.46
22:DA:1317:G:N2	22:DA:1336:A:N3	2.64	0.46
22:DA:1326:U:O2'	22:DA:1327:A:C8	2.43	0.46
22:DA:1337:G:N2	22:DA:1338:G:H1'	2.30	0.46
22:DA:1338:G:H4'	41:DT:18:GLU:CG	2.46	0.46
22:DA:1722:A:C6	22:DA:1739:A:C8	3.03	0.46
22:DA:1731:G:C2	22:DA:1733:G:C8	3.04	0.46
22:DA:1869:G:C2	22:DA:1873:G:C6	3.04	0.46
22:DA:2143:C:C2	22:DA:2148:G:N1	2.80	0.46
22:DA:2209:G:C2	22:DA:2216:G:C2	3.04	0.46
22:DA:2348:U:O2'	22:DA:2349:G:H5'	2.16	0.46
22:DA:2376:A:C1'	36:DO:99:TYR:CE1	2.99	0.46
22:DA:2391:G:HO2'	22:DA:2392:A:P	2.39	0.46
22:DA:2724:U:P	25:DD:116:LYS:HZ3	2.38	0.46
22:DA:2735:G:C4	22:DA:2736:A:C8	3.04	0.46
24:DC:144:GLU:HG2	24:DC:146:LYS:O	2.15	0.46
25:DD:112:THR:HG22	25:DD:113:SER:H	1.81	0.46
58:DF:134:GLN:HG3	58:DF:149:ARG:O	2.16	0.46
58:DF:147:ARG:HD2	58:DF:147:ARG:H	1.81	0.46
29:DH:49:ALA:HB3	29:DH:50:ARG:NH2	2.30	0.46
29:DH:94:ILE:HG13	29:DH:98:ASP:CB	2.46	0.46
32:DK:22:ILE:HD11	32:DK:40:LYS:HG3	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DM:49:ALA:HB3	34:DM:103:TYR:OH	2.15	0.46
35:DN:67:PHE:HE2	35:DN:73:ASN:HD21	1.64	0.46
36:DO:18:LEU:HD13	36:DO:25:ARG:HG2	1.97	0.46
39:DR:19:THR:HA	39:DR:96:VAL:O	2.15	0.46
39:DR:26:ASP:O	39:DR:27:ILE:HD13	2.16	0.46
41:DT:14:PRO:O	41:DT:32:LEU:HA	2.15	0.46
41:DT:18:GLU:HB2	41:DT:19:LYS:H	1.51	0.46
42:DU:54:PRO:HG2	42:DU:55:GLY:H	1.81	0.46
45:DX:10:ARG:HB3	45:DX:11:PRO:HD2	1.97	0.46
46:DY:22:LEU:HG	46:DY:23:ARG:H	1.80	0.46
49:D1:16:THR:HG21	49:D1:42:VAL:HG23	1.97	0.46
1:AA:376:G:H5"	16:AP:5:ARG:HB2	1.98	0.45
1:AA:439:U:H4'	4:AD:120:LYS:HG3	1.97	0.45
1:AA:596:A:N6	1:AA:645:G:N1	2.63	0.45
1:AA:979:C:OP2	1:AA:980:C:H5	1.98	0.45
4:AD:28:ASP:C	4:AD:29:THR:O	2.54	0.45
5:AE:15:ILE:HG21	5:AE:35:LEU:HD23	1.97	0.45
5:AE:110:MET:CB	5:AE:139:THR:HG21	2.46	0.45
5:AE:148:SER:O	5:AE:152:VAL:HG13	2.16	0.45
10:AJ:18:ILE:CG2	10:AJ:19:ASP:N	2.79	0.45
16:AP:56:ARG:HA	16:AP:56:ARG:HD2	1.76	0.45
20:AT:58:ASP:O	20:AT:61:ALA:HB3	2.16	0.45
22:BA:27:G:N2	22:BA:512:G:H1'	2.31	0.45
22:BA:1152:C:H2'	22:BA:1153:C:H6	1.80	0.45
22:BA:1570:A:C6	22:BA:1571:A:C6	3.04	0.45
22:BA:1821:A:H2'	22:BA:1822:C:C6	2.51	0.45
22:BA:2255:G:H2'	22:BA:2256:G:O4'	2.16	0.45
22:BA:2259:U:C5	22:BA:2427:C:N4	2.84	0.45
22:BA:2331:G:O2'	44:BW:39:GLN:O	2.34	0.45
23:BB:54:G:H21	27:BF:25:MET:CE	2.29	0.45
24:BC:106:PRO:HA	24:BC:141:HIS:NE2	2.30	0.45
26:BE:134:LEU:CD2	26:BE:161:ALA:HB2	2.47	0.45
30:BI:24:GLY:O	30:BI:34:ILE:HD12	2.17	0.45
35:BN:30:ARG:HE	35:BN:30:ARG:HB2	1.46	0.45
39:BR:21:ARG:NH2	39:BR:93:PHE:CE1	2.85	0.45
41:BT:55:VAL:O	41:BT:55:VAL:HG12	2.16	0.45
42:BU:3:LYS:O	42:BU:82:VAL:HG21	2.15	0.45
45:BX:32:LEU:O	45:BX:33:HIS:CD2	2.69	0.45
49:B1:3:GLY:O	49:B1:5:ARG:N	2.44	0.45
52:B4:10:LEU:CD1	52:B4:33:HIS:HD2	2.26	0.45
53:CA:20:U:O2'	53:CA:21:G:H5'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:116:A:H8	53:CA:116:A:O5'	1.98	0.45
53:CA:408:A:OP1	4:CD:111:ALA:HB3	2.16	0.45
53:CA:517:G:H5'	53:CA:519:C:C2	2.51	0.45
53:CA:1078:U:C5	53:CA:1079:G:C5	3.04	0.45
53:CA:1449:C:H2'	53:CA:1450:U:O4'	2.16	0.45
2:CB:119:GLN:HG2	2:CB:119:GLN:O	2.16	0.45
4:CD:143:SER:CB	4:CD:178:GLU:HG3	2.38	0.45
8:CH:17:GLN:OE1	8:CH:62:LEU:HB3	2.16	0.45
10:CJ:49:PHE:CE2	14:CN:73:LEU:HD13	2.51	0.45
10:CJ:101:SER:O	10:CJ:102:LEU:HB2	2.16	0.45
55:CM:80:MET:HE2	55:CM:80:MET:HB2	1.90	0.45
22:DA:9:G:N1	22:DA:2629:U:H2'	2.28	0.45
22:DA:227:A:C4'	22:DA:228:C:OP1	2.38	0.45
22:DA:701:G:N3	22:DA:701:G:H2'	2.30	0.45
22:DA:1587:G:N2	22:DA:1588:G:H1'	2.31	0.45
22:DA:1635:A:H2'	22:DA:1636:U:C6	2.51	0.45
22:DA:1980:G:O2'	22:DA:1982:U:OP2	2.32	0.45
22:DA:2100:G:C6	22:DA:2101:A:C6	3.04	0.45
22:DA:2331:G:C2	22:DA:2385:C:N3	2.84	0.45
22:DA:2873:A:H4'	62:DA:3790:HOH:O	2.16	0.45
25:DD:187:LEU:O	25:DD:188:LEU:HD23	2.16	0.45
58:DF:101:ARG:HH11	58:DF:138:PRO:CB	2.29	0.45
31:DJ:44:TYR:CD1	38:DQ:63:ARG:NH2	2.84	0.45
38:DQ:91:ARG:NE	39:DR:11:GLN:HB2	2.31	0.45
39:DR:48:LYS:HD2	39:DR:48:LYS:N	2.31	0.45
42:DU:81:ARG:O	42:DU:82:VAL:HG13	2.17	0.45
46:DY:6:LEU:HD21	46:DY:56:LEU:HD12	1.98	0.45
50:D2:23:ALA:O	50:D2:24:THR:HB	2.16	0.45
1:AA:17:U:H2'	1:AA:18:C:C6	2.51	0.45
1:AA:86:G:N3	1:AA:87:C:H5	2.15	0.45
1:AA:251:G:H4'	1:AA:252:U:O5'	2.17	0.45
1:AA:497:G:O2'	1:AA:498:A:H5'	2.16	0.45
1:AA:1144:G:OP2	1:AA:1144:G:C8	2.69	0.45
1:AA:1286:U:O2	1:AA:1286:U:H2'	2.16	0.45
1:AA:1447:A:H5"	1:AA:1448:C:H5	1.81	0.45
1:AA:1453:G:H2'	1:AA:1454:G:O4'	2.15	0.45
4:AD:57:LYS:HG3	4:AD:58:GLN:N	2.31	0.45
7:AG:77:ARG:NE	7:AG:77:ARG:HA	2.31	0.45
9:AI:40:ARG:O	9:AI:44:ARG:HD3	2.16	0.45
11:AK:100:ASN:HD22	11:AK:106:ILE:CG2	2.25	0.45
14:AN:20:PHE:HA	14:AN:24:ALA:HB3	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:12:VAL:CG1	17:AQ:21:VAL:O	2.64	0.45
17:AQ:48:GLU:HA	17:AQ:48:GLU:OE1	2.15	0.45
22:BA:748:G:OP2	40:BS:88:ARG:HG3	2.16	0.45
22:BA:852:U:H2'	22:BA:853:C:C6	2.51	0.45
22:BA:1190:G:OP1	33:BL:32:GLY:CA	2.60	0.45
22:BA:1224:U:C4	22:BA:1225:G:C6	3.04	0.45
22:BA:1759:A:C8	22:BA:2696:U:H1'	2.52	0.45
22:BA:2210:U:H4'	22:BA:2211:A:H5'	1.99	0.45
22:BA:2512:C:H2'	22:BA:2513:A:O4'	2.17	0.45
22:BA:2742:G:O2'	22:BA:2743:U:H5'	2.16	0.45
22:BA:2888:C:H2'	22:BA:2889:C:C6	2.51	0.45
28:BG:35:THR:C	28:BG:36:LEU:HD22	2.36	0.45
29:BH:76:GLU:HB3	29:BH:103:VAL:HG12	1.98	0.45
30:BI:123:ALA:HA	30:BI:126:ARG:CZ	2.46	0.45
31:BJ:32:LEU:CD2	31:BJ:54:ILE:HG12	2.46	0.45
38:BQ:94:LEU:O	38:BQ:96:ASP:N	2.47	0.45
42:BU:78:LYS:HG2	42:BU:79:ALA:H	1.81	0.45
53:CA:32:A:C2	53:CA:33:A:C5	3.05	0.45
53:CA:65:A:C5	53:CA:200:G:O2'	2.69	0.45
53:CA:163:C:H2'	53:CA:164:G:O5'	2.16	0.45
53:CA:229:U:H2'	53:CA:230:G:O4'	2.16	0.45
53:CA:555:U:H2'	53:CA:556:C:H6	1.79	0.45
53:CA:748:G:H2'	53:CA:749:A:C8	2.51	0.45
53:CA:764:C:N4	53:CA:812:G:C6	2.84	0.45
53:CA:781:A:H2	53:CA:1514:G:H4'	1.81	0.45
53:CA:1271:A:O2'	14:CN:33:VAL:HG21	2.16	0.45
53:CA:1319:A:C6	53:CA:1323:G:C4	3.04	0.45
2:CB:19:THR:OG1	2:CB:20:ARG:N	2.47	0.45
4:CD:154:VAL:O	4:CD:157:ALA:HB3	2.16	0.45
6:CF:90:MET:CE	18:CR:60:ARG:HD3	2.47	0.45
55:CM:69:ARG:HA	55:CM:72:ILE:CG2	2.46	0.45
21:CU:8:ASN:CG	21:CU:9:GLU:H	2.19	0.45
21:CU:9:GLU:HB3	21:CU:10:PRO:HD2	1.97	0.45
22:DA:259:G:C2'	22:DA:260:G:H5'	2.47	0.45
22:DA:379:G:C5	22:DA:396:G:O6	2.69	0.45
22:DA:604:G:C6	22:DA:625:G:N1	2.84	0.45
22:DA:748:G:HO2'	22:DA:749:A:H3'	1.81	0.45
22:DA:962:G:O2'	22:DA:963:U:O5'	2.33	0.45
22:DA:973:A:O5'	39:DR:81:LYS:HE3	2.16	0.45
22:DA:983:A:H2'	22:DA:984:A:H5'	1.98	0.45
22:DA:1207:C:H2'	22:DA:1208:C:C6	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1255:U:O2'	22:DA:1256:G:OP1	2.33	0.45
22:DA:1264:A:H1'	22:DA:2015:A:N6	2.31	0.45
22:DA:1273:U:H4'	22:DA:1275:A:OP2	2.16	0.45
22:DA:1328:A:H2'	22:DA:1330:C:C5	2.51	0.45
22:DA:1904:G:OP2	22:DA:1971:U:O4	2.33	0.45
22:DA:1910:G:C6	22:DA:1911:U:C4	3.05	0.45
22:DA:2144:G:O2'	22:DA:2145:C:O5'	2.34	0.45
22:DA:2332:C:H4'	44:DW:40:ARG:CZ	2.46	0.45
22:DA:2348:U:H2'	22:DA:2349:G:C8	2.48	0.45
22:DA:2561:U:H2'	22:DA:2562:U:O5'	2.15	0.45
22:DA:2595:G:N1	22:DA:2599:G:C6	2.84	0.45
24:DC:191:LEU:HD22	24:DC:191:LEU:N	2.32	0.45
25:DD:149:ASN:OD1	25:DD:150:GLN:N	2.49	0.45
58:DF:41:GLU:CG	58:DF:42:ALA:H	2.26	0.45
58:DF:41:GLU:O	58:DF:43:ILE:N	2.49	0.45
58:DF:102:LEU:HB3	58:DF:103:ILE:HD12	1.99	0.45
58:DF:169:LEU:HB3	58:DF:174:PHE:HB2	1.98	0.45
28:DG:86:LEU:HA	28:DG:163:TYR:CB	2.40	0.45
33:DL:103:ILE:HD12	33:DL:103:ILE:H	1.81	0.45
40:DS:36:LEU:C	40:DS:38:TYR:N	2.70	0.45
48:D0:37:HIS:HB3	48:D0:43:THR:HG22	1.99	0.45
1:AA:68:G:C5	1:AA:69:G:H1'	2.50	0.45
1:AA:73:C:O2'	1:AA:74:A:C5'	2.64	0.45
1:AA:298:A:H2'	1:AA:299:G:O4'	2.16	0.45
1:AA:436:C:H2'	1:AA:437:U:H6	1.81	0.45
1:AA:807:A:C5	1:AA:808:C:C4	3.04	0.45
1:AA:826:C:H5'	8:AH:12:ARG:NH2	2.31	0.45
1:AA:1281:C:H2'	1:AA:1282:C:H5	1.80	0.45
1:AA:1348:U:HO2'	1:AA:1349:A:H8	1.63	0.45
2:AB:67:LEU:HD22	2:AB:69:VAL:CG2	2.44	0.45
5:AE:108:GLY:O	5:AE:109:ALA:HB3	2.17	0.45
6:AF:38:ARG:NH1	6:AF:38:ARG:CG	2.72	0.45
9:AI:12:LYS:H	9:AI:105:ARG:HH12	1.64	0.45
14:AN:22:LYS:CG	14:AN:23:ARG:H	2.25	0.45
15:AO:15:GLY:C	15:AO:17:ASP:H	2.20	0.45
20:AT:82:ILE:HD12	20:AT:83:ASN:N	2.31	0.45
21:AU:3:ILE:CA	21:AU:19:LYS:HZ1	2.29	0.45
22:BA:767:U:O2'	22:BA:768:G:H5'	2.16	0.45
22:BA:1188:U:C2'	22:BA:1189:A:H5'	2.46	0.45
22:BA:1539:U:H2'	22:BA:1540:G:C8	2.47	0.45
22:BA:1613:G:C2	22:BA:1619:G:C5	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2151:U:N3	22:BA:2152:G:N7	2.64	0.45
22:BA:2353:G:O2'	44:BW:31:LEU:HD23	2.17	0.45
22:BA:2838:G:H2'	22:BA:2839:G:O4'	2.16	0.45
24:BC:94:LEU:O	24:BC:94:LEU:HG	2.16	0.45
24:BC:247:TRP:O	24:BC:249:VAL:N	2.50	0.45
24:BC:251:THR:CG2	24:BC:252:LYS:H	2.25	0.45
25:BD:53:GLY:HA3	25:BD:77:ARG:H	1.81	0.45
25:BD:163:GLY:O	25:BD:164:GLN:C	2.54	0.45
25:BD:182:ALA:C	25:BD:184:ARG:H	2.17	0.45
26:BE:1:MET:HG3	26:BE:14:VAL:HG23	1.97	0.45
34:BM:71:LYS:HD3	34:BM:95:LEU:CD1	2.47	0.45
36:BO:34:HIS:CD2	36:BO:53:THR:OG1	2.69	0.45
38:BQ:59:LEU:HD22	38:BQ:59:LEU:O	2.17	0.45
39:BR:93:PHE:C	39:BR:93:PHE:CD1	2.90	0.45
41:BT:29:THR:HB	41:BT:86:THR:HG22	1.99	0.45
46:BY:26:PHE:HD1	46:BY:27:ASN:ND2	2.14	0.45
53:CA:237:G:C6	53:CA:238:A:C6	3.04	0.45
53:CA:495:A:C2	53:CA:496:A:C6	3.05	0.45
53:CA:624:C:H2'	53:CA:625:U:O4'	2.16	0.45
53:CA:737:C:H2'	53:CA:738:C:C6	2.52	0.45
53:CA:890:G:O2'	53:CA:906:A:N6	2.49	0.45
53:CA:953:G:H2'	53:CA:954:G:C8	2.52	0.45
53:CA:971:G:H5"	53:CA:972:C:C5'	2.46	0.45
53:CA:1190:G:HO2'	53:CA:1191:A:P	2.38	0.45
6:CF:99:ALA:O	6:CF:100:SER:CB	2.64	0.45
54:CG:100:MET:H	54:CG:100:MET:HE3	1.81	0.45
9:CI:16:ALA:HA	9:CI:65:THR:O	2.16	0.45
21:CU:34:ARG:O	21:CU:35:GLU:O	2.34	0.45
22:DA:33:C:O2'	22:DA:446:G:N2	2.44	0.45
22:DA:125:A:OP2	50:D2:19:ARG:NH2	2.49	0.45
22:DA:855:G:O2'	44:DW:23:LYS:HD3	2.16	0.45
22:DA:1342:A:H5'	22:DA:1398:C:OP1	2.15	0.45
22:DA:1607:C:N4	22:DA:1622:G:N7	2.64	0.45
22:DA:1693:U:C4'	22:DA:1694:C:OP2	2.46	0.45
22:DA:1794:A:H2'	22:DA:1795:C:C6	2.52	0.45
22:DA:1869:G:N1	22:DA:1873:G:C6	2.84	0.45
22:DA:2210:U:O2	22:DA:2212:A:H5"	2.16	0.45
22:DA:2297:A:C2	22:DA:2298:A:C8	3.04	0.45
22:DA:2344:U:O2'	49:D1:37:LYS:HE2	2.16	0.45
22:DA:2413:G:H2'	22:DA:2414:G:H8	1.81	0.45
22:DA:2494:G:O2'	34:DM:79:ALA:HA	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2667:C:HO2'	22:DA:2668:G:H8	1.63	0.45
22:DA:2756:U:H4'	22:DA:2757:A:OP1	2.15	0.45
22:DA:2868:A:C6	22:DA:2869:G:C6	3.04	0.45
57:DB:24:G:H4'	57:DB:26:C:H5	1.80	0.45
57:DB:32:U:C2	57:DB:51:G:N2	2.84	0.45
24:DC:140:VAL:CG2	24:DC:161:VAL:HB	2.46	0.45
24:DC:140:VAL:HG23	24:DC:141:HIS:H	1.82	0.45
24:DC:144:GLU:HB3	24:DC:187:CYS:CB	2.37	0.45
25:DD:61:THR:HB	25:DD:63:PRO:HD2	1.99	0.45
26:DE:134:LEU:O	26:DE:138:LEU:HG	2.17	0.45
29:DH:90:LEU:CB	29:DH:123:ARG:HB3	2.36	0.45
29:DH:96:THR:O	29:DH:97:ARG:HG3	2.15	0.45
34:DM:45:GLN:OE1	34:DM:125:PRO:HG3	2.16	0.45
35:DN:51:LEU:HA	35:DN:54:LEU:CD2	2.47	0.45
37:DP:50:ARG:CA	37:DP:57:ALA:O	2.62	0.45
37:DP:90:ALA:HB3	37:DP:110:LYS:HB2	1.99	0.45
1:AA:210:C:H4'	1:AA:211:G:C2	2.52	0.45
1:AA:502:A:H2'	1:AA:503:C:C6	2.52	0.45
1:AA:967:C:O5'	1:AA:967:C:H6	1.99	0.45
1:AA:993:G:H2'	1:AA:993:G:N3	2.31	0.45
1:AA:1346:A:C4	1:AA:1348:U:C4	3.05	0.45
5:AE:153:ALA:O	5:AE:154:ALA:C	2.54	0.45
6:AF:29:ILE:HG12	6:AF:64:VAL:CG1	2.38	0.45
7:AG:14:ASP:HB3	7:AG:18:GLY:H	1.81	0.45
8:AH:5:PRO:O	8:AH:8:ASP:HB3	2.16	0.45
8:AH:93:LYS:HE3	8:AH:116:ARG:NH1	2.31	0.45
10:AJ:15:HIS:CG	10:AJ:16:ARG:N	2.84	0.45
14:AN:61:ASN:HD22	14:AN:61:ASN:HA	1.58	0.45
15:AO:84:LEU:HB3	15:AO:86:LEU:HD22	1.98	0.45
16:AP:51:ARG:HG2	16:AP:52:LEU:N	2.31	0.45
22:BA:189:G:H2'	22:BA:205:G:N2	2.32	0.45
22:BA:553:G:H2'	22:BA:554:U:O4'	2.16	0.45
22:BA:587:C:C2	33:BL:33:ARG:NH2	2.84	0.45
22:BA:607:U:O4	22:BA:620:G:O4'	2.35	0.45
22:BA:826:U:H2'	22:BA:828:U:O4'	2.17	0.45
22:BA:1241:A:C2'	22:BA:1242:U:H5'	2.47	0.45
22:BA:1593:A:H2'	22:BA:1594:U:O4'	2.17	0.45
22:BA:1783:A:C2	22:BA:2587:A:C4	3.04	0.45
22:BA:2140:G:C2	22:BA:2141:G:C4	3.04	0.45
22:BA:2230:G:H2'	22:BA:2231:U:C6	2.50	0.45
24:BC:227:VAL:O	24:BC:227:VAL:HG23	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:257:ARG:HG3	24:BC:269:ARG:HH12	1.80	0.45
26:BE:12:LEU:O	26:BE:12:LEU:HD13	2.17	0.45
29:BH:132:PHE:CG	29:BH:133:GLN:N	2.84	0.45
32:BK:28:SER:O	32:BK:30:ARG:N	2.50	0.45
34:BM:40:ARG:HD3	34:BM:93:VAL:HG21	1.99	0.45
35:BN:70:THR:HG21	35:BN:75:ILE:HD11	1.97	0.45
37:BP:58:PHE:CD2	37:BP:58:PHE:N	2.80	0.45
37:BP:85:VAL:HG13	37:BP:86:LYS:N	2.32	0.45
38:BQ:60:TRP:CH2	38:BQ:93:ILE:HB	2.52	0.45
39:BR:48:LYS:HD2	39:BR:48:LYS:N	2.24	0.45
40:BS:23:LEU:HD11	48:B0:21:LEU:HD13	1.99	0.45
40:BS:36:LEU:HA	40:BS:36:LEU:HD12	1.52	0.45
40:BS:41:LYS:O	40:BS:42:LYS:C	2.54	0.45
44:BW:24:ARG:HB2	44:BW:65:LYS:HD3	1.99	0.45
45:BX:5:GLN:HE21	45:BX:49:ARG:CB	2.29	0.45
53:CA:335:C:O2	53:CA:1433:A:H2	1.99	0.45
53:CA:1248:A:O2'	9:CI:37:TYR:HD1	1.98	0.45
53:CA:1367:C:H5'	10:CJ:62:ARG:NH1	2.31	0.45
2:CB:103:TRP:O	2:CB:107:ARG:HG2	2.16	0.45
3:CC:11:LEU:C	3:CC:13:ILE:N	2.70	0.45
4:CD:144:ILE:CD1	4:CD:154:VAL:HG21	2.46	0.45
4:CD:186:GLU:O	4:CD:187:ARG:HB2	2.16	0.45
5:CE:81:GLN:HB3	5:CE:82:HIS:H	1.61	0.45
9:CI:126:PHE:O	9:CI:126:PHE:CG	2.69	0.45
10:CJ:48:ARG:HB3	14:CN:100:TRP:HZ2	1.82	0.45
17:CQ:27:PHE:HD1	17:CQ:36:PHE:HB3	1.80	0.45
22:DA:26:G:H1'	22:DA:515:A:H61	1.81	0.45
22:DA:28:A:C2	22:DA:29:U:H1'	2.52	0.45
22:DA:54:G:C5	22:DA:55:G:C8	3.04	0.45
22:DA:86:G:C2	22:DA:87:U:C4	3.05	0.45
22:DA:142:A:O2'	22:DA:143:C:H6	1.97	0.45
22:DA:156:A:H2'	22:DA:157:C:C6	2.50	0.45
22:DA:191:A:O2'	22:DA:192:C:H5'	2.15	0.45
22:DA:219:A:C5	22:DA:220:G:C5	3.05	0.45
22:DA:279:A:H61	22:DA:361:G:C1'	2.23	0.45
22:DA:653:U:OP1	22:DA:653:U:H4'	2.16	0.45
22:DA:732:C:H2'	22:DA:733:G:O4'	2.17	0.45
22:DA:1244:A:C2'	22:DA:1245:G:H5'	2.46	0.45
22:DA:1286:A:C4	22:DA:1289:C:C4	3.04	0.45
22:DA:1400:U:H2'	22:DA:1401:G:O4'	2.17	0.45
22:DA:1665:A:C2'	22:DA:1666:G:H5'	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1686:C:H2'	22:DA:1687:G:O4'	2.16	0.45
22:DA:1866:A:H2'	22:DA:1867:G:O4'	2.16	0.45
22:DA:2013:A:N6	22:DA:2014:A:C2	2.85	0.45
22:DA:2106:U:H2'	22:DA:2107:G:O4'	2.17	0.45
22:DA:2233:U:H2'	22:DA:2234:G:H8	1.81	0.45
22:DA:2234:G:C6	22:DA:2235:G:C5	3.04	0.45
22:DA:2474:U:H2'	22:DA:2475:C:O5'	2.15	0.45
22:DA:2708:G:H1'	35:DN:71:ARG:CZ	2.47	0.45
57:DB:30:C:H2'	57:DB:31:C:H5'	1.97	0.45
25:DD:200:ASP:O	25:DD:201:LEU:HD23	2.16	0.45
26:DE:9:GLN:O	26:DE:9:GLN:HG3	2.17	0.45
58:DF:8:LYS:HG3	58:DF:12:VAL:HG21	1.97	0.45
58:DF:103:ILE:H	58:DF:107:VAL:CG1	2.30	0.45
30:DI:57:VAL:HG12	30:DI:58:ILE:N	2.29	0.45
30:DI:102:ARG:CZ	30:DI:105:LEU:HD22	2.45	0.45
31:DJ:23:LYS:HB3	31:DJ:28:LEU:HD13	1.98	0.45
31:DJ:64:VAL:CG1	31:DJ:65:THR:N	2.79	0.45
40:DS:68:ASP:OD1	40:DS:68:ASP:N	2.48	0.45
43:DV:32:GLY:O	43:DV:33:GLY:C	2.54	0.45
43:DV:63:ILE:O	43:DV:63:ILE:HG22	2.17	0.45
44:DW:40:ARG:CG	44:DW:40:ARG:NH1	2.56	0.45
1:AA:77:A:N6	1:AA:90:C:C4	2.85	0.45
1:AA:180:U:H2'	1:AA:181:A:O5'	2.16	0.45
1:AA:287:U:H2'	1:AA:288:A:H8	1.82	0.45
1:AA:497:G:N2	1:AA:498:A:C6	2.84	0.45
1:AA:622:A:C8	1:AA:623:C:C6	3.04	0.45
1:AA:903:G:C6	1:AA:904:U:C4	3.05	0.45
1:AA:1071:C:H2'	1:AA:1072:G:H8	1.81	0.45
1:AA:1299:A:N3	1:AA:1299:A:C2'	2.70	0.45
2:AB:119:GLN:C	2:AB:119:GLN:HE21	2.20	0.45
7:AG:29:LEU:HD23	7:AG:29:LEU:C	2.36	0.45
7:AG:88:VAL:HG22	7:AG:89:GLU:N	2.31	0.45
16:AP:46:LYS:NZ	16:AP:48:GLU:H	2.13	0.45
20:AT:16:ALA:O	20:AT:17:ARG:C	2.55	0.45
22:BA:221:A:C4	22:BA:266:G:N7	2.85	0.45
22:BA:264:C:O2'	22:BA:265:A:H2'	2.17	0.45
22:BA:859:G:OP2	22:BA:859:G:C8	2.69	0.45
22:BA:1534:U:H5'	22:BA:1535:A:P	2.56	0.45
22:BA:1567:G:C2'	24:BC:84:PRO:HG3	2.42	0.45
22:BA:1735:A:C2	22:BA:1736:U:C2	3.05	0.45
22:BA:2318:G:C5	22:BA:2319:G:C6	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2365:G:C2'	22:BA:2366:A:C8	3.00	0.45
22:BA:2530:A:C8	28:BG:156:TYR:OH	2.67	0.45
22:BA:2756:U:H1'	22:BA:2757:A:H5"	1.97	0.45
22:BA:2780:G:H4'	22:BA:2781:A:OP2	2.17	0.45
31:BJ:25:LEU:HB2	31:BJ:62:VAL:HG21	1.98	0.45
31:BJ:27:ARG:HH11	31:BJ:27:ARG:HG2	1.80	0.45
33:BL:28:GLY:O	33:BL:29:LYS:HB3	2.17	0.45
35:BN:51:LEU:HD21	35:BN:70:THR:HG22	1.97	0.45
38:BQ:85:ALA:HA	38:BQ:115:ALA:CB	2.47	0.45
41:BT:68:LYS:O	41:BT:69:ARG:O	2.33	0.45
44:BW:23:LYS:HE3	44:BW:24:ARG:HG3	1.99	0.45
53:CA:98:A:H2'	53:CA:99:C:C6	2.51	0.45
53:CA:560:A:H5'	53:CA:566:G:N2	2.32	0.45
53:CA:976:G:N7	53:CA:1359:C:O4'	2.49	0.45
53:CA:1364:U:O2'	53:CA:1365:G:H5'	2.15	0.45
3:CC:122:GLN:HB2	3:CC:127:VAL:HG21	1.99	0.45
3:CC:166:TRP:N	3:CC:166:TRP:CE3	2.84	0.45
6:CF:9:MET:HB2	6:CF:85:ILE:HG13	1.98	0.45
9:CI:46:VAL:O	9:CI:79:ARG:HG3	2.17	0.45
10:CJ:92:LEU:N	10:CJ:92:LEU:HD13	2.31	0.45
19:CS:4:LEU:HB3	19:CS:5:LYS:H	1.53	0.45
22:DA:86:G:O2'	22:DA:87:U:H6	2.00	0.45
22:DA:481:G:OP2	42:DU:43:LYS:HA	2.17	0.45
22:DA:877:A:H2'	22:DA:877:A:N3	2.31	0.45
22:DA:920:A:H2'	22:DA:921:C:C6	2.52	0.45
22:DA:1127:A:O2'	22:DA:1128:G:C5'	2.63	0.45
22:DA:1314:C:OP1	22:DA:1332:G:H5"	2.15	0.45
22:DA:2054:A:C2	22:DA:2616:C:C2	3.04	0.45
22:DA:2069:G:C2	22:DA:2443:C:C2	3.04	0.45
22:DA:2741:A:C8	22:DA:2742:G:C8	3.05	0.45
22:DA:2751:G:N3	22:DA:2751:G:H2'	2.32	0.45
57:DB:8:C:H5'	36:DO:27:VAL:HG11	1.98	0.45
57:DB:109:A:C5	57:DB:110:C:C4	3.04	0.45
58:DF:67:THR:O	58:DF:84:ILE:HG22	2.17	0.45
58:DF:110:ILE:HA	58:DF:111:ARG:HH11	1.82	0.45
30:DI:57:VAL:O	30:DI:58:ILE:HG13	2.16	0.45
34:DM:62:LYS:C	34:DM:63:ILE:HD12	2.37	0.45
35:DN:38:LEU:HB3	35:DN:39:PRO:CD	2.43	0.45
36:DO:18:LEU:HD13	36:DO:25:ARG:HD2	1.98	0.45
37:DP:112:ARG:O	37:DP:113:LEU:HB3	2.16	0.45
41:DT:5:GLU:CD	46:DY:18:LEU:HD21	2.37	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DT:10:VAL:HG23	41:DT:11:LEU:CD1	2.46	0.45
42:DU:91:LYS:O	42:DU:92:VAL:HG22	2.16	0.45
51:D3:51:LYS:O	51:D3:54:LEU:HB3	2.17	0.45
52:D4:7:VAL:CG1	52:D4:8:LYS:N	2.80	0.45
52:D4:27:CYS:SG	52:D4:30:GLU:O	2.75	0.45
1:AA:374:A:C6	1:AA:375:U:C4	3.04	0.45
1:AA:1241:G:O2'	1:AA:1242:G:O5'	2.35	0.45
1:AA:1379:G:C6	1:AA:1380:U:C4	3.04	0.45
1:AA:1425:U:O2	1:AA:1476:A:C2	2.70	0.45
1:AA:1451:U:O5'	1:AA:1452:C:H5	2.00	0.45
2:AB:113:LEU:HB2	2:AB:143:LEU:HD12	1.97	0.45
3:AC:75:VAL:O	3:AC:82:ASP:HB3	2.16	0.45
4:AD:63:ILE:HG23	4:AD:64:TYR:CD1	2.51	0.45
5:AE:132:PRO:O	5:AE:136:VAL:HG13	2.17	0.45
6:AF:10:VAL:CG1	6:AF:11:HIS:N	2.80	0.45
11:AK:113:THR:HB	21:AU:28:LEU:HD11	1.97	0.45
19:AS:4:LEU:HD12	19:AS:4:LEU:N	2.31	0.45
22:BA:250:G:OP2	51:B3:12:ARG:NH1	2.50	0.45
22:BA:404:A:C1'	22:BA:405:U:OP2	2.62	0.45
22:BA:571:U:H3'	39:BR:80:ARG:NH2	2.32	0.45
22:BA:796:C:H2'	22:BA:797:G:C8	2.52	0.45
22:BA:817:C:H2'	22:BA:818:G:O4'	2.17	0.45
22:BA:869:G:H2'	22:BA:870:U:O4'	2.16	0.45
22:BA:1097:U:H3'	22:BA:1098:A:H4'	1.98	0.45
22:BA:1157:G:N2	22:BA:1158:C:C2	2.84	0.45
22:BA:1419:A:C5	22:BA:1421:G:C4	3.05	0.45
22:BA:1599:U:H2'	22:BA:1600:C:C6	2.52	0.45
22:BA:2378:A:N7	22:BA:2379:G:H1'	2.32	0.45
22:BA:2425:A:H4'	22:BA:2426:A:O5'	2.14	0.45
22:BA:2502:G:C5'	22:BA:2503:A:C5'	2.87	0.45
22:BA:2821:A:H2'	22:BA:2822:G:O4'	2.16	0.45
28:BG:23:ILE:N	28:BG:23:ILE:CD1	2.80	0.45
29:BH:99:ILE:HG22	29:BH:99:ILE:O	2.16	0.45
35:BN:23:ASN:N	35:BN:23:ASN:ND2	2.65	0.45
36:BO:52:SER:OG	36:BO:54:VAL:HG12	2.17	0.45
36:BO:94:ARG:H	36:BO:94:ARG:HG3	1.51	0.45
37:BP:4:ILE:CG2	37:BP:5:LYS:H	2.07	0.45
37:BP:5:LYS:O	37:BP:9:GLN:HG2	2.17	0.45
51:B3:61:LEU:HB3	51:B3:64:ALA:HB2	1.98	0.45
53:CA:780:A:O2'	53:CA:781:A:H5"	2.17	0.45
53:CA:787:A:C2	53:CA:796:C:N3	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:978:A:C5	53:CA:1319:A:C2	3.05	0.45
53:CA:995:C:O2'	53:CA:996:A:H5"	2.17	0.45
53:CA:1072:G:C6	53:CA:1073:U:C4	3.05	0.45
53:CA:1211:U:O2'	53:CA:1213:A:C2	2.66	0.45
3:CC:124:GLU:CD	3:CC:124:GLU:N	2.70	0.45
4:CD:190:LEU:O	4:CD:190:LEU:HD23	2.17	0.45
8:CH:29:SER:OG	8:CH:32:LYS:HB3	2.17	0.45
11:CK:92:ARG:HD2	11:CK:92:ARG:HA	1.79	0.45
18:CR:32:ILE:HA	18:CR:39:VAL:HG23	1.97	0.45
22:DA:30:G:H2'	22:DA:31:C:O4'	2.17	0.45
22:DA:46:G:N1	22:DA:47:C:C4	2.85	0.45
22:DA:289:G:C2	22:DA:352:A:C2	3.05	0.45
22:DA:347:A:H2'	22:DA:348:A:C8	2.51	0.45
22:DA:1048:A:C2	22:DA:1049:C:N4	2.85	0.45
22:DA:1109:C:N4	22:DA:1110:G:N1	2.65	0.45
22:DA:1264:A:H1'	22:DA:2015:A:H61	1.81	0.45
22:DA:1285:A:C6	22:DA:1329:U:C5	3.05	0.45
22:DA:1654:A:O2'	22:DA:1655:A:O4'	2.35	0.45
22:DA:1655:A:H5'	25:DD:118:PHE:CD1	2.52	0.45
22:DA:2019:A:H4'	38:DQ:33:VAL:HG21	1.98	0.45
22:DA:2067:G:C6	22:DA:2444:G:N1	2.84	0.45
22:DA:2285:C:H2'	22:DA:2286:G:C5'	2.45	0.45
22:DA:2330:G:H1'	44:DW:38:ARG:HB3	1.97	0.45
22:DA:2403:C:O2'	22:DA:2404:U:H5'	2.17	0.45
22:DA:2595:G:C6	22:DA:2599:G:C6	3.04	0.45
22:DA:2623:G:H4'	22:DA:2825:G:C8	2.51	0.45
22:DA:2819:G:H1'	22:DA:2828:G:N2	2.32	0.45
57:DB:7:G:O2'	36:DO:38:GLN:NE2	2.49	0.45
25:DD:179:ARG:NH1	37:DP:7:LEU:HD11	2.32	0.45
26:DE:148:ILE:CD1	26:DE:187:VAL:HG21	2.38	0.45
29:DH:117:LEU:HD22	29:DH:122:LEU:HD12	1.98	0.45
31:DJ:18:VAL:CG1	31:DJ:54:ILE:HD11	2.46	0.45
33:DL:20:GLY:CA	33:DL:28:GLY:HA2	2.46	0.45
33:DL:84:LYS:O	33:DL:85:VAL:HB	2.17	0.45
33:DL:95:LEU:HB3	33:DL:100:ILE:HG23	1.98	0.45
39:DR:49:ILE:HG22	39:DR:54:VAL:H	1.82	0.45
40:DS:27:LYS:O	40:DS:28:LYS:O	2.35	0.45
40:DS:29:VAL:HG23	40:DS:69:LEU:O	2.17	0.45
43:DV:73:LYS:O	43:DV:92:VAL:HG22	2.16	0.45
46:DY:21:LEU:HA	46:DY:25:GLN:HB3	1.99	0.45
48:D0:28:SER:O	48:D0:36:LYS:HA	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:22:G:H2'	1:AA:23:C:C6	2.51	0.45
1:AA:367:U:C6	1:AA:394:G:N2	2.85	0.45
1:AA:428:G:O4'	1:AA:430:A:C8	2.70	0.45
1:AA:833:G:O2'	1:AA:834:U:H5'	2.16	0.45
1:AA:1046:A:H2'	1:AA:1047:G:O5'	2.16	0.45
1:AA:1212:U:H2'	1:AA:1212:U:O2	2.15	0.45
1:AA:1324:A:H2'	1:AA:1325:C:H6	1.81	0.45
4:AD:100:VAL:O	4:AD:100:VAL:CG1	2.64	0.45
5:AE:56:PRO:O	5:AE:59:ILE:HG13	2.16	0.45
5:AE:109:ALA:C	5:AE:111:ARG:H	2.19	0.45
6:AF:93:LYS:O	6:AF:94:HIS:CB	2.65	0.45
10:AJ:28:THR:O	10:AJ:32:THR:HG23	2.17	0.45
17:AQ:14:ASP:HA	17:AQ:20:ILE:HD11	1.98	0.45
20:AT:50:PHE:HE2	20:AT:75:LYS:HA	1.82	0.45
21:AU:16:ARG:HG2	21:AU:19:LYS:HG2	1.98	0.45
22:BA:497:A:H2'	22:BA:498:G:O4'	2.16	0.45
22:BA:532:A:H2'	22:BA:532:A:N3	2.31	0.45
22:BA:723:C:H2'	22:BA:724:U:C6	2.52	0.45
22:BA:1185:G:H5"	22:BA:1186:G:OP2	2.17	0.45
22:BA:1744:A:C2	22:BA:1745:A:H1'	2.52	0.45
22:BA:2293:G:H2'	22:BA:2294:G:O4'	2.17	0.45
22:BA:2415:G:H4'	33:BL:65:GLY:O	2.16	0.45
22:BA:2492:U:H2'	22:BA:2493:U:C6	2.47	0.45
22:BA:2790:U:H5'	22:BA:2893:A:N7	2.32	0.45
22:BA:2884:U:O2	22:BA:2884:U:O4'	2.34	0.45
24:BC:144:GLU:CA	24:BC:151:GLY:HA2	2.39	0.45
25:BD:1:MET:HG2	25:BD:205:PRO:HG3	1.98	0.45
25:BD:4:LEU:HD13	25:BD:100:LEU:HD23	1.99	0.45
25:BD:193:VAL:HG21	25:BD:201:LEU:HD21	1.98	0.45
26:BE:8:ALA:O	26:BE:9:GLN:C	2.54	0.45
27:BF:111:ARG:HB3	27:BF:112:ASP:H	1.37	0.45
27:BF:129:MET:HG3	27:BF:153:ILE:CD1	2.46	0.45
27:BF:134:GLN:O	27:BF:135:ILE:HB	2.17	0.45
30:BI:52:LEU:HD12	30:BI:52:LEU:N	2.32	0.45
32:BK:11:ALA:O	32:BK:99:ILE:HA	2.17	0.45
37:BP:20:ARG:HG3	37:BP:20:ARG:HH21	1.80	0.45
37:BP:83:ILE:C	37:BP:83:ILE:CD1	2.81	0.45
46:BY:1:MET:HG2	46:BY:5:GLU:OE1	2.17	0.45
53:CA:261:U:O2'	53:CA:263:A:N7	2.42	0.45
53:CA:448:A:C4	53:CA:487:A:C2	3.04	0.45
53:CA:676:A:H2'	53:CA:677:U:C6	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:977:A:C8	53:CA:1223:C:N3	2.78	0.45
53:CA:1089:G:H2'	53:CA:1090:U:O4'	2.17	0.45
53:CA:1113:C:H2'	53:CA:1114:C:C6	2.42	0.45
53:CA:1158:C:O2	53:CA:1158:C:H2'	2.17	0.45
53:CA:1319:A:OP2	19:CS:4:LEU:HD21	2.16	0.45
53:CA:1343:G:C6	53:CA:1344:C:C4	3.05	0.45
2:CB:151:LYS:HG3	2:CB:152:ASP:N	2.32	0.45
2:CB:185:ILE:HA	2:CB:199:ILE:HG13	1.98	0.45
5:CE:132:PRO:O	5:CE:135:VAL:N	2.50	0.45
6:CF:43:GLY:HA2	6:CF:58:HIS:ND1	2.31	0.45
54:CG:48:THR:O	54:CG:52:ARG:HD3	2.17	0.45
10:CJ:37:ARG:CG	10:CJ:75:ASP:HB3	2.46	0.45
55:CM:11:HIS:HA	55:CM:44:ILE:HB	1.99	0.45
22:DA:197:A:C4'	22:DA:2068:U:H2'	2.46	0.45
22:DA:503:A:C5	22:DA:506:G:C6	3.05	0.45
22:DA:581:C:N3	22:DA:582:A:N7	2.65	0.45
22:DA:1000:A:N6	22:DA:1001:A:N1	2.64	0.45
22:DA:1287:A:O2'	22:DA:1288:G:H5'	2.17	0.45
22:DA:1376:C:H5"	62:DA:3411:HOH:O	2.15	0.45
22:DA:1571:A:H8	22:DA:1571:A:O5'	2.00	0.45
22:DA:1638:C:H4'	22:DA:2710:C:O2	2.17	0.45
22:DA:1766:G:C6	22:DA:1987:A:C6	3.05	0.45
22:DA:1826:G:C6	22:DA:1827:U:C4	3.05	0.45
22:DA:1856:U:O4	22:DA:1857:G:C2	2.69	0.45
22:DA:2061:G:C2	22:DA:2063:C:C4	3.05	0.45
22:DA:2413:G:O2'	22:DA:2414:G:H5'	2.17	0.45
22:DA:2540:C:H2'	22:DA:2541:A:H8	1.82	0.45
24:DC:64:VAL:O	24:DC:64:VAL:HG12	2.16	0.45
25:DD:11:MET:CE	25:DD:192:ALA:HA	2.45	0.45
28:DG:88:LEU:N	28:DG:128:THR:O	2.49	0.45
28:DG:112:VAL:HG12	28:DG:114:HIS:N	2.23	0.45
37:DP:50:ARG:O	37:DP:51:ASN:HB2	2.15	0.45
37:DP:52:ARG:HH11	37:DP:52:ARG:HG2	1.82	0.45
37:DP:61:ARG:CZ	37:DP:100:ARG:HA	2.46	0.45
39:DR:90:ARG:O	39:DR:91:GLN:HB3	2.17	0.45
46:DY:25:GLN:HA	46:DY:28:LEU:HB3	1.98	0.45
49:D1:20:TYR:HE2	49:D1:37:LYS:HZ2	1.65	0.45
52:D4:7:VAL:HG22	52:D4:25:VAL:CG2	2.47	0.45
1:AA:11:G:C6	1:AA:12:U:C4	3.05	0.45
1:AA:35:G:N2	12:AL:114:SER:OG	2.43	0.45
1:AA:1221:G:H2'	1:AA:1222:G:C8	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1329:A:H5"	13:AM:25:GLY:N	2.29	0.45
2:AB:80:LYS:HG3	2:AB:90:PHE:CE1	2.51	0.45
4:AD:151:GLN:H	4:AD:154:VAL:HG13	1.82	0.45
5:AE:149:PRO:O	5:AE:152:VAL:HG22	2.16	0.45
6:AF:5:GLU:OE1	18:AR:22:TYR:CE2	2.67	0.45
8:AH:17:GLN:CD	8:AH:69:ALA:HB1	2.38	0.45
13:AM:10:ASP:OD1	13:AM:44:ILE:HB	2.16	0.45
14:AN:40:ARG:HH22	14:AN:44:VAL:HG21	1.81	0.45
16:AP:43:ALA:O	16:AP:44:SER:OG	2.31	0.45
18:AR:62:ARG:HD3	18:AR:69:TYR:CD2	2.51	0.45
19:AS:41:PRO:C	19:AS:43:MET:H	2.21	0.45
19:AS:80:ARG:O	19:AS:80:ARG:HG3	2.16	0.45
22:BA:171:U:O2'	22:BA:172:A:H5'	2.17	0.45
22:BA:336:C:O2'	22:BA:337:C:H5'	2.17	0.45
22:BA:359:G:C6	22:BA:360:U:C2	3.05	0.45
22:BA:528:A:C2	22:BA:2043:C:C5'	2.99	0.45
22:BA:572:A:C2	22:BA:2033:A:C2	3.04	0.45
22:BA:590:A:H2'	22:BA:591:U:C6	2.52	0.45
22:BA:832:U:H2'	22:BA:833:A:C8	2.52	0.45
22:BA:966:G:C5	22:BA:967:U:C4	3.05	0.45
22:BA:1022:G:C6	22:BA:1140:C:C4	3.05	0.45
22:BA:1157:G:O2'	47:BZ:31:ILE:CD1	2.64	0.45
22:BA:2076:U:O4'	22:BA:2076:U:O2	2.31	0.45
22:BA:2468:A:C2	22:BA:2481:G:C2	3.05	0.45
26:BE:109:LEU:HD13	26:BE:109:LEU:HA	1.74	0.45
26:BE:127:GLU:CD	26:BE:127:GLU:N	2.71	0.45
26:BE:174:GLY:O	26:BE:175:ILE:C	2.55	0.45
32:BK:28:SER:C	32:BK:30:ARG:H	2.21	0.45
33:BL:95:LEU:HD22	33:BL:100:ILE:CD1	2.47	0.45
37:BP:52:ARG:HG2	37:BP:52:ARG:NH1	2.25	0.45
46:BY:42:LEU:O	46:BY:45:GLN:O	2.35	0.45
53:CA:132:C:O2'	53:CA:133:U:H5'	2.16	0.45
53:CA:267:C:C2'	53:CA:268:U:O5'	2.64	0.45
53:CA:632:U:H2'	53:CA:632:U:O2	2.17	0.45
53:CA:952:U:H5	55:CM:102:LYS:HZ1	1.65	0.45
53:CA:1037:C:O2	53:CA:1037:C:H2'	2.17	0.45
53:CA:1060:U:H5'	10:CJ:53:ILE:HG12	1.99	0.45
53:CA:1139:G:OP1	53:CA:1140:C:H5'	2.16	0.45
53:CA:1184:G:C2	53:CA:1185:G:C8	3.04	0.45
2:CB:29:PHE:O	2:CB:40:ILE:HG23	2.16	0.45
5:CE:75:LEU:HD13	5:CE:79:THR:O	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:CG:116:ALA:O	54:CG:120:ALA:HB3	2.17	0.45
12:CL:71:HIS:ND1	12:CL:73:LEU:N	2.64	0.45
14:CN:76:PHE:HE2	14:CN:95:LEU:HD22	1.81	0.45
17:CQ:27:PHE:CE1	17:CQ:36:PHE:HB3	2.52	0.45
22:DA:46:G:C2	22:DA:47:C:C6	3.04	0.45
22:DA:118:A:OP2	22:DA:119:A:H2'	2.16	0.45
22:DA:153:U:O2'	22:DA:154:U:H5'	2.17	0.45
22:DA:211:C:H2'	22:DA:212:G:O4'	2.17	0.45
22:DA:238:C:H2'	22:DA:239:C:O4'	2.16	0.45
22:DA:426:C:O2'	22:DA:427:U:H5'	2.17	0.45
22:DA:622:G:O2'	22:DA:623:C:C6	2.68	0.45
22:DA:739:A:H1'	22:DA:740:C:H5	1.81	0.45
22:DA:815:C:OP1	39:DR:85:LYS:CE	2.65	0.45
22:DA:866:A:O2'	22:DA:867:C:H6	1.97	0.45
22:DA:1087:G:C6	22:DA:1089:A:C2	3.05	0.45
22:DA:1122:G:H2'	22:DA:1122:G:N3	2.32	0.45
22:DA:1342:A:N6	22:DA:1397:U:C5	2.84	0.45
22:DA:1374:G:H2'	22:DA:1375:U:O4'	2.16	0.45
22:DA:1830:C:H5'	24:DC:14:HIS:HE1	1.80	0.45
22:DA:1843:C:H6	22:DA:1843:C:O5'	2.00	0.45
22:DA:1918:A:O2'	22:DA:1920:C:N4	2.50	0.45
22:DA:2059:A:O3'	26:DE:64:GLY:HA2	2.17	0.45
22:DA:2077:A:C5	22:DA:2435:A:C6	3.05	0.45
22:DA:2144:G:N3	22:DA:2148:G:N7	2.65	0.45
22:DA:2201:G:H2'	22:DA:2202:U:H6	1.82	0.45
22:DA:2345:G:C5	22:DA:2347:C:C5	3.04	0.45
22:DA:2345:G:C8	22:DA:2347:C:C5	3.04	0.45
22:DA:2850:A:OP2	22:DA:2866:U:N3	2.38	0.45
26:DE:5:LEU:HD12	26:DE:10:SER:HB2	1.98	0.45
58:DF:12:VAL:HG12	58:DF:16:MET:HG3	1.98	0.45
58:DF:134:GLN:HB2	58:DF:137:PHE:HE2	1.82	0.45
28:DG:91:VAL:O	28:DG:93:TYR:N	2.50	0.45
31:DJ:45:THR:OG1	31:DJ:48:VAL:HB	2.17	0.45
31:DJ:48:VAL:HG12	31:DJ:49:ASP:N	2.31	0.45
33:DL:29:LYS:HG2	33:DL:30:THR:HG23	1.99	0.45
34:DM:94:ALA:O	34:DM:96:ILE:HG23	2.17	0.45
35:DN:21:PHE:HD1	35:DN:21:PHE:H	1.64	0.45
37:DP:64:SER:O	37:DP:66:GLY:N	2.50	0.45
38:DQ:6:GLY:C	38:DQ:8:ILE:N	2.69	0.45
41:DT:68:LYS:HB3	41:DT:69:ARG:H	1.51	0.45
42:DU:81:ARG:CB	42:DU:96:LYS:HD2	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:100:G:C6	1:AA:101:A:C5	3.05	0.45
1:AA:210:C:H5"	1:AA:211:G:OP1	2.17	0.45
1:AA:211:G:C6	1:AA:212:G:H1'	2.51	0.45
1:AA:375:U:H4'	16:AP:17:TYR:CE2	2.52	0.45
1:AA:575:G:O3'	62:AA:1739:HOH:O	2.21	0.45
1:AA:826:C:C5'	8:AH:12:ARG:HH21	2.30	0.45
1:AA:872:A:C5	1:AA:874:G:C8	3.05	0.45
1:AA:1058:G:C5	1:AA:1059:C:C5	3.05	0.45
1:AA:1150:A:N6	1:AA:1151:A:N6	2.65	0.45
1:AA:1332:A:H5'	1:AA:1333:A:OP2	2.16	0.45
2:AB:15:PHE:O	2:AB:40:ILE:HG12	2.16	0.45
3:AC:52:SER:HB2	3:AC:114:LEU:HG	1.99	0.45
3:AC:190:THR:HG21	3:AC:195:ILE:HG13	1.98	0.45
4:AD:147:LYS:O	4:AD:149:LYS:HB2	2.16	0.45
15:AO:17:ASP:O	15:AO:20:ASP:HB3	2.16	0.45
17:AQ:7:LEU:HD22	17:AQ:72:TRP:CZ3	2.52	0.45
19:AS:3:SER:HB2	19:AS:4:LEU:HD12	1.98	0.45
20:AT:29:THR:HA	20:AT:32:LYS:HG2	1.97	0.45
22:BA:63:A:C2	22:BA:64:A:C5	3.04	0.45
22:BA:108:G:O2'	22:BA:109:C:H5'	2.16	0.45
22:BA:581:C:H2'	22:BA:582:A:C8	2.51	0.45
22:BA:1011:G:C2	22:BA:1151:A:C2	3.05	0.45
22:BA:1014:A:C6	22:BA:1015:U:C4	3.04	0.45
22:BA:1587:G:C2	22:BA:1588:G:C8	3.05	0.45
22:BA:1858:A:C8	22:BA:1885:A:C5	3.05	0.45
22:BA:2402:U:C2'	22:BA:2403:C:OP2	2.64	0.45
22:BA:2449:U:H4'	22:BA:2450:A:OP1	2.17	0.45
23:BB:45:A:C4	23:BB:46:A:C8	3.05	0.45
24:BC:29:PHE:CZ	24:BC:31:PRO:CG	3.00	0.45
27:BF:39:VAL:HG13	27:BF:40:GLY:N	2.32	0.45
30:BI:95:ASP:O	30:BI:97:VAL:N	2.46	0.45
31:BJ:69:ARG:O	31:BJ:89:PHE:HB3	2.17	0.45
32:BK:4:GLU:O	32:BK:5:GLN:HB2	2.17	0.45
44:BW:43:LYS:HZ2	44:BW:43:LYS:HG2	1.36	0.45
46:BY:19:LEU:HD12	46:BY:22:LEU:HD23	1.99	0.45
50:B2:29:GLN:O	50:B2:33:ARG:HG3	2.17	0.45
53:CA:49:U:O2	53:CA:362:G:H1'	2.16	0.45
53:CA:66:A:C6	53:CA:67:C:C4	3.04	0.45
53:CA:188:C:N4	53:CA:189:A:C6	2.81	0.45
53:CA:444:G:C2'	53:CA:445:G:H5'	2.47	0.45
53:CA:460:A:O2'	53:CA:462:G:H5'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:673:A:H2'	53:CA:674:G:C8	2.52	0.45
53:CA:765:G:C8	53:CA:812:G:N3	2.85	0.45
53:CA:978:A:C8	53:CA:1319:A:C2	3.04	0.45
53:CA:1005:A:C4	53:CA:1006:G:H1'	2.50	0.45
53:CA:1162:C:C2	53:CA:1175:G:N2	2.85	0.45
53:CA:1213:A:C8	53:CA:1215:G:C5	3.05	0.45
53:CA:1336:C:O2'	53:CA:1337:G:C5	2.69	0.45
5:CE:79:THR:HA	5:CE:121:ASN:OD1	2.16	0.45
5:CE:110:MET:HG2	5:CE:139:THR:HG21	1.99	0.45
54:CG:4:ARG:HG3	54:CG:5:VAL:N	2.32	0.45
9:CI:49:GLN:HA	9:CI:52:GLU:CG	2.47	0.45
12:CL:2:THR:O	12:CL:3:VAL:C	2.54	0.45
15:CO:39:GLN:HE21	15:CO:39:GLN:HB2	1.52	0.45
22:DA:45:G:N2	22:DA:434:U:C2	2.85	0.45
22:DA:145:C:O5'	22:DA:145:C:H6	1.98	0.45
22:DA:200:U:C5	22:DA:201:C:C4	3.04	0.45
22:DA:228:C:H5"	22:DA:229:C:C6	2.51	0.45
22:DA:969:G:H2'	22:DA:970:U:C6	2.52	0.45
22:DA:996:A:C5	22:DA:1160:G:C2	3.05	0.45
22:DA:1067:A:H2'	22:DA:1068:G:H5"	1.98	0.45
22:DA:1069:A:N6	22:DA:1073:A:H5"	2.30	0.45
22:DA:1071:G:O4'	22:DA:1088:A:O2'	2.34	0.45
22:DA:1206:G:H2'	22:DA:1207:C:C5	2.52	0.45
22:DA:1340:U:C4	22:DA:1603:A:C8	3.05	0.45
22:DA:1606:C:O2	22:DA:1606:C:C5'	2.52	0.45
22:DA:1661:G:C4	22:DA:1662:U:C5	3.04	0.45
22:DA:1735:A:C6	22:DA:1736:U:C4	3.05	0.45
22:DA:2107:G:H2'	22:DA:2108:A:C8	2.52	0.45
22:DA:2283:C:C5	22:DA:2389:G:C4	3.05	0.45
22:DA:2414:G:C2'	22:DA:2415:G:H5'	2.47	0.45
22:DA:2443:C:C2	22:DA:2444:G:C8	3.04	0.45
26:DE:132:LYS:O	26:DE:132:LYS:HG2	2.17	0.45
30:DI:69:VAL:O	30:DI:69:VAL:HG13	2.17	0.45
30:DI:98:GLY:HA3	30:DI:137:LEU:HA	1.99	0.45
36:DO:63:LYS:C	36:DO:63:LYS:HD3	2.37	0.45
36:DO:111:ARG:HA	36:DO:115:LEU:O	2.16	0.45
37:DP:50:ARG:H	37:DP:50:ARG:HG3	1.48	0.45
45:DX:39:VAL:HG22	45:DX:44:ARG:O	2.17	0.45
51:D3:44:ARG:N	51:D3:45:PRO:HD2	2.31	0.45
52:D4:36:ARG:HG2	52:D4:37:GLN:H	1.81	0.45
1:AA:40:C:H2'	1:AA:40:C:O2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:92:U:OP2	1:AA:92:U:H6	1.99	0.45
1:AA:580:C:H2'	1:AA:581:G:O4'	2.17	0.45
1:AA:600:A:H2'	1:AA:601:G:C8	2.51	0.45
1:AA:695:A:H61	1:AA:797:C:H1'	1.81	0.45
1:AA:782:A:C2'	1:AA:783:C:H5'	2.46	0.45
1:AA:791:G:C5	1:AA:792:A:N7	2.85	0.45
1:AA:1053:G:O2'	1:AA:1054:C:OP2	2.29	0.45
1:AA:1057:G:H4'	3:AC:196:GLY:N	2.32	0.45
1:AA:1323:G:H4'	1:AA:1362:A:C2	2.52	0.45
4:AD:109:THR:HG22	4:AD:112:GLU:HB2	1.99	0.45
8:AH:10:LEU:HD11	8:AH:126:CYS:HB2	1.99	0.45
15:AO:74:VAL:O	15:AO:77:TYR:HB3	2.16	0.45
16:AP:11:ALA:O	16:AP:12:LYS:C	2.55	0.45
16:AP:46:LYS:NZ	16:AP:48:GLU:HB3	2.31	0.45
22:BA:480:A:H2'	22:BA:481:G:OP1	2.17	0.45
22:BA:675:A:C6	22:BA:676:A:C6	3.05	0.45
22:BA:1291:C:O2'	22:BA:1292:G:H5'	2.17	0.45
22:BA:1313:U:H2'	22:BA:1610:A:C2	2.52	0.45
22:BA:1583:A:N3	22:BA:1583:A:O4'	2.49	0.45
22:BA:2192:U:O2'	22:BA:2193:G:H5'	2.16	0.45
22:BA:2311:A:H5'	22:BA:2312:U:OP2	2.17	0.45
22:BA:2611:C:C6	60:BA:3135:TEL:H352	2.52	0.45
22:BA:2712:C:O2'	22:BA:2713:U:H5'	2.17	0.45
22:BA:2844:G:O2'	22:BA:2845:U:H5'	2.17	0.45
62:BA:3644:HOH:O	25:BD:140:HIS:CE1	2.70	0.45
23:BB:8:C:C2'	23:BB:9:G:O5'	2.65	0.45
23:BB:93:C:O2'	23:BB:94:A:H5'	2.16	0.45
23:BB:114:C:H2'	23:BB:115:A:H8	1.82	0.45
26:BE:196:VAL:HG13	26:BE:200:LEU:CD2	2.47	0.45
27:BF:151:LEU:C	27:BF:151:LEU:HD12	2.37	0.45
28:BG:72:ASN:C	28:BG:72:ASN:HD22	2.20	0.45
31:BJ:32:LEU:HA	31:BJ:32:LEU:HD23	1.73	0.45
32:BK:47:ILE:HD12	32:BK:47:ILE:HA	1.85	0.45
33:BL:96:LYS:HD3	33:BL:103:ILE:HA	1.97	0.45
34:BM:76:LYS:O	34:BM:77:PRO:O	2.35	0.45
44:BW:18:LYS:CA	44:BW:36:ILE:HG12	2.45	0.45
44:BW:26:GLY:O	44:BW:27:GLY:O	2.35	0.45
50:B2:5:PHE:CZ	50:B2:7:PRO:HB3	2.51	0.45
50:B2:42:LEU:H	50:B2:42:LEU:HD22	1.82	0.45
53:CA:64:G:N7	53:CA:99:C:C4	2.85	0.45
53:CA:245:U:HO2'	53:CA:246:A:H5'	1.77	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:464:U:O4	53:CA:466:A:C4'	2.59	0.45
53:CA:591:U:OP1	8:CH:30:LYS:HE3	2.18	0.45
53:CA:759:A:H2'	53:CA:760:G:H5'	1.99	0.45
53:CA:765:G:C6	53:CA:812:G:N7	2.85	0.45
53:CA:769:G:C2'	53:CA:770:C:H5'	2.47	0.45
53:CA:890:G:HO2'	53:CA:891:U:P	2.40	0.45
53:CA:934:C:H4'	53:CA:935:A:OP1	2.17	0.45
53:CA:1031:C:H5'	53:CA:1032:G:O5'	2.17	0.45
53:CA:1114:C:O2	14:CN:99:SER:HB3	2.17	0.45
53:CA:1227:A:N3	53:CA:1227:A:H5"	2.31	0.45
53:CA:1347:G:H1'	53:CA:1348:U:H5	1.82	0.45
2:CB:80:LYS:O	2:CB:81:ASP:C	2.56	0.45
6:CF:97:THR:O	6:CF:98:GLU:HG3	2.18	0.45
8:CH:1:SER:C	8:CH:3:GLN:N	2.71	0.45
8:CH:24:VAL:HG22	8:CH:25:THR:N	2.32	0.45
10:CJ:80:THR:C	10:CJ:84:VAL:HG22	2.37	0.45
12:CL:6:LEU:C	12:CL:8:ARG:N	2.70	0.45
15:CO:42:PHE:CE1	15:CO:55:LEU:HD22	2.52	0.45
22:DA:105:C:H2'	22:DA:106:C:C6	2.51	0.45
22:DA:294:A:N1	22:DA:346:A:N1	2.64	0.45
22:DA:465:G:H4'	50:D2:16:HIS:CD2	2.52	0.45
22:DA:538:A:O2'	31:DJ:8:PRO:CD	2.65	0.45
22:DA:785:G:O2'	22:DA:1779:U:H5"	2.17	0.45
22:DA:858:G:C4	22:DA:2268:A:C2	3.05	0.45
22:DA:1039:A:N6	22:DA:1117:C:H42	2.15	0.45
22:DA:1057:A:N3	22:DA:1082:U:C2	2.85	0.45
22:DA:1085:A:H2'	22:DA:1086:A:N3	2.32	0.45
22:DA:1206:G:C2	22:DA:1207:C:C2	3.05	0.45
22:DA:1440:U:H2'	22:DA:1441:G:C8	2.52	0.45
22:DA:1532:A:H2'	22:DA:1533:C:C6	2.51	0.45
22:DA:1565:C:H3'	24:DC:17:LYS:CE	2.29	0.45
22:DA:2313:C:H5'	58:DF:87:LYS:HD3	1.99	0.45
22:DA:2543:G:C6	22:DA:2765:A:C5	3.05	0.45
22:DA:2590:A:H5"	24:DC:237:ARG:HG3	1.99	0.45
24:DC:52:HIS:HD2	24:DC:217:PRO:O	2.00	0.45
25:DD:113:SER:CB	25:DD:168:GLU:H	2.27	0.45
26:DE:47:LYS:CB	26:DE:51:GLU:HB2	2.39	0.45
26:DE:115:GLN:O	26:DE:117:ARG:N	2.50	0.45
58:DF:135:ILE:O	58:DF:137:PHE:N	2.48	0.45
31:DJ:35:ARG:HH11	31:DJ:140:LEU:HD11	1.79	0.45
32:DK:13:ASN:ND2	32:DK:13:ASN:H	2.10	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DK:107:LEU:C	32:DK:109:SER:N	2.70	0.45
34:DM:17:ASN:OD1	34:DM:95:LEU:HB3	2.17	0.45
35:DN:8:ARG:HG2	35:DN:10:LEU:HD22	1.98	0.45
37:DP:45:VAL:O	37:DP:60:VAL:HA	2.17	0.45
46:DY:22:LEU:HG	46:DY:23:ARG:NH1	2.32	0.45
48:D0:53:VAL:HG23	48:D0:54:ILE:H	1.81	0.45
50:D2:5:PHE:HZ	50:D2:12:ARG:NH1	2.06	0.45
1:AA:71:A:C6	1:AA:100:G:N7	2.85	0.44
1:AA:126:G:H2'	1:AA:127:G:O4'	2.17	0.44
1:AA:263:A:P	20:AT:73:ARG:HH11	2.40	0.44
1:AA:414:A:O2'	1:AA:415:A:C5'	2.65	0.44
1:AA:598:U:H4'	8:AH:85:TYR:CD1	2.52	0.44
1:AA:923:A:OP1	5:AE:25:LYS:CG	2.63	0.44
1:AA:1240:U:H3	7:AG:29:LEU:HD23	1.82	0.44
1:AA:1323:G:O2'	1:AA:1324:A:O4'	2.31	0.44
1:AA:1394:A:C5	1:AA:1501:C:H4'	2.51	0.44
1:AA:1461:G:C5	1:AA:1462:C:C5	3.04	0.44
2:AB:9:LEU:HB2	2:AB:42:LEU:HD13	1.99	0.44
2:AB:49:PHE:C	2:AB:49:PHE:CD1	2.90	0.44
2:AB:71:THR:HG21	2:AB:94:ARG:HD3	1.99	0.44
12:AL:43:LYS:HB2	12:AL:43:LYS:NZ	2.32	0.44
14:AN:48:GLN:HA	14:AN:48:GLN:NE2	2.32	0.44
20:AT:80:ALA:O	20:AT:84:LYS:HB2	2.17	0.44
22:BA:368:A:C2'	22:BA:369:U:H5'	2.47	0.44
22:BA:540:C:C2'	22:BA:541:A:H5'	2.48	0.44
22:BA:613:A:H8	22:BA:616:A:N1	2.14	0.44
22:BA:754:U:C2	22:BA:755:U:C5	3.06	0.44
22:BA:796:C:H2'	22:BA:797:G:H8	1.81	0.44
22:BA:1130:U:O2'	22:BA:1131:G:H2'	2.17	0.44
22:BA:1250:G:OP2	33:BL:18:ARG:NH2	2.50	0.44
22:BA:1473:G:H2'	22:BA:1474:U:O4'	2.17	0.44
22:BA:1798:U:P	24:BC:255:LYS:O	2.75	0.44
22:BA:2144:G:H3'	22:BA:2144:G:N3	2.32	0.44
22:BA:2235:G:O2'	22:BA:2236:U:H5'	2.17	0.44
22:BA:2592:G:C5	22:BA:2593:U:C4	3.05	0.44
22:BA:2720:U:C2	22:BA:2872:A:C6	3.05	0.44
22:BA:2765:A:N3	22:BA:2765:A:C2'	2.79	0.44
22:BA:2849:U:O4	37:BP:20:ARG:NH1	2.50	0.44
24:BC:245:THR:HG1	24:BC:249:VAL:HB	1.81	0.44
25:BD:68:PHE:CB	25:BD:73:VAL:HG12	2.47	0.44
26:BE:131:THR:HG23	26:BE:160:ALA:HA	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:146:VAL:HG12	26:BE:185:LYS:HB2	1.97	0.44
27:BF:82:TYR:HD2	27:BF:83:PRO:HD2	1.82	0.44
28:BG:30:GLY:O	28:BG:32:LEU:N	2.49	0.44
31:BJ:40:HIS:O	31:BJ:41:LYS:HG2	2.17	0.44
32:BK:10:VAL:HG11	32:BK:16:ALA:HB1	1.98	0.44
33:BL:95:LEU:HD22	33:BL:100:ILE:HD11	1.99	0.44
36:BO:31:THR:O	36:BO:102:ARG:NH1	2.50	0.44
44:BW:73:PRO:O	44:BW:74:LYS:HB3	2.16	0.44
45:BX:69:GLU:O	45:BX:71:ARG:N	2.48	0.44
46:BY:26:PHE:HD1	46:BY:27:ASN:HD22	1.64	0.44
50:B2:1:MET:HE3	50:B2:2:LYS:N	2.32	0.44
53:CA:441:A:C2	53:CA:497:G:C6	3.05	0.44
53:CA:904:U:C4	53:CA:905:U:C4	3.05	0.44
53:CA:926:G:C6	53:CA:1505:G:C5	3.06	0.44
53:CA:1172:C:H2'	53:CA:1173:U:H6	1.83	0.44
53:CA:1525:G:H5"	21:CU:37:TYR:CE1	2.52	0.44
3:CC:161:ILE:H	3:CC:161:ILE:CD1	2.30	0.44
3:CC:166:TRP:N	3:CC:166:TRP:HE3	2.15	0.44
5:CE:13:LYS:HB2	5:CE:116:VAL:HG11	1.99	0.44
54:CG:9:ARG:C	54:CG:10:LYS:HG3	2.37	0.44
54:CG:70:PRO:HB3	54:CG:98:LEU:HD12	1.98	0.44
10:CJ:30:LYS:HG2	10:CJ:36:VAL:HG22	1.98	0.44
10:CJ:37:ARG:HB3	10:CJ:75:ASP:HB3	1.99	0.44
22:DA:38:A:C2	22:DA:442:G:C6	3.05	0.44
22:DA:56:A:C2	22:DA:115:C:C2	3.05	0.44
22:DA:61:C:H5'	46:DY:43:LEU:HB2	1.99	0.44
22:DA:83:A:N6	22:DA:101:A:O5'	2.50	0.44
22:DA:95:A:HO2'	46:DY:39:GLN:HA	1.82	0.44
22:DA:508:A:H3'	22:DA:509:C:C5'	2.47	0.44
22:DA:579:G:C8	22:DA:2017:U:C4	3.05	0.44
22:DA:852:U:H5'	47:DZ:45:GLY:HA3	1.98	0.44
22:DA:1021:A:H2'	22:DA:1021:A:H8	1.65	0.44
22:DA:1044:C:C4	22:DA:1112:G:O6	2.69	0.44
22:DA:1107:G:H2'	22:DA:1108:U:H5'	1.99	0.44
22:DA:1109:C:H5"	22:DA:1110:G:OP2	2.17	0.44
22:DA:1251:C:C6	38:DQ:5:ARG:NH1	2.85	0.44
22:DA:1324:G:O2'	22:DA:1616:A:N1	2.49	0.44
22:DA:1431:A:H2'	22:DA:1432:G:O4'	2.17	0.44
22:DA:2011:U:H2'	22:DA:2012:G:O4'	2.17	0.44
22:DA:2020:A:H5'	48:D0:8:THR:HG22	1.99	0.44
22:DA:2065:C:N4	22:DA:2066:C:N4	2.64	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2663:G:H2'	22:DA:2664:G:C8	2.51	0.44
22:DA:2666:C:C2'	22:DA:2667:C:H5'	2.46	0.44
57:DB:8:C:O3'	36:DO:25:ARG:NH1	2.50	0.44
24:DC:20:ASN:HB2	24:DC:23:LEU:HD22	1.99	0.44
58:DF:131:VAL:O	58:DF:132:ARG:HB2	2.17	0.44
58:DF:147:ARG:HG2	58:DF:149:ARG:NH1	2.26	0.44
30:DI:22:PRO:HB2	30:DI:23:VAL:H	1.61	0.44
38:DQ:77:LYS:HE2	38:DQ:116:LEU:HD21	1.99	0.44
39:DR:51:VAL:HB	39:DR:52:PRO:CD	2.48	0.44
44:DW:44:PHE:HE2	44:DW:76:ARG:NE	2.14	0.44
1:AA:21:G:C2	1:AA:22:G:C6	3.05	0.44
1:AA:137:U:O2	1:AA:137:U:H2'	2.16	0.44
1:AA:220:G:C2	1:AA:221:C:C6	3.05	0.44
1:AA:601:G:O2'	1:AA:602:A:H5'	2.17	0.44
1:AA:877:G:H21	8:AH:1:SER:CB	2.15	0.44
1:AA:927:G:C2	1:AA:1391:U:O2	2.70	0.44
1:AA:1157:A:C2	1:AA:1181:G:C4	3.06	0.44
1:AA:1157:A:C4	1:AA:1181:G:C6	3.04	0.44
1:AA:1305:G:H22	1:AA:1331:G:H2'	1.82	0.44
1:AA:1321:U:H5"	1:AA:1322:C:OP2	2.17	0.44
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.51	0.44
5:AE:152:VAL:O	5:AE:156:ARG:HB2	2.16	0.44
9:AI:57:VAL:HG12	9:AI:58:GLU:HG2	1.99	0.44
13:AM:45:SER:O	13:AM:46:GLU:CB	2.66	0.44
16:AP:20:VAL:HG23	16:AP:34:GLU:O	2.17	0.44
22:BA:41:C:H2'	22:BA:42:A:O5'	2.17	0.44
22:BA:304:U:H2'	22:BA:305:C:C6	2.52	0.44
22:BA:528:A:H2	22:BA:2043:C:C5'	2.30	0.44
22:BA:976:G:H2'	22:BA:976:G:N3	2.31	0.44
22:BA:1157:G:O2'	47:BZ:31:ILE:HD11	2.17	0.44
22:BA:1300:G:C4'	22:BA:1301:A:H5'	2.47	0.44
22:BA:1465:G:C6	22:BA:1466:U:N3	2.85	0.44
22:BA:1878:G:O2'	22:BA:1879:C:H5'	2.16	0.44
22:BA:1939:U:OP1	22:BA:2604:U:O2'	2.33	0.44
22:BA:2522:U:H2'	22:BA:2523:G:H5'	1.99	0.44
22:BA:2720:U:OP1	37:BP:52:ARG:NH2	2.50	0.44
23:BB:49:C:OP1	36:BO:101:GLY:HA3	2.18	0.44
23:BB:49:C:O2'	23:BB:50:A:H5'	2.17	0.44
24:BC:252:LYS:HA	24:BC:252:LYS:HZ2	1.82	0.44
25:BD:149:ASN:CG	25:BD:150:GLN:H	2.17	0.44
25:BD:181:ASP:OD2	25:BD:184:ARG:HD2	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:178:VAL:HG13	26:BE:179:SER:H	1.81	0.44
26:BE:178:VAL:O	26:BE:181:ILE:N	2.47	0.44
27:BF:125:GLY:HA3	27:BF:159:ALA:HB3	1.98	0.44
28:BG:51:PHE:N	28:BG:51:PHE:CD2	2.85	0.44
31:BJ:25:LEU:HB2	31:BJ:62:VAL:CG2	2.47	0.44
37:BP:33:GLU:HA	37:BP:38:ARG:NH1	2.31	0.44
38:BQ:13:HIS:HD2	38:BQ:31:TYR:CE1	2.35	0.44
42:BU:100:GLU:O	42:BU:101:THR:CB	2.65	0.44
44:BW:73:PRO:HG2	44:BW:76:ARG:HD2	1.99	0.44
45:BX:77:TYR:O	45:BX:77:TYR:CG	2.70	0.44
46:BY:59:GLU:HG3	46:BY:60:LYS:N	2.33	0.44
53:CA:68:G:H5'	53:CA:171:A:H1'	1.99	0.44
53:CA:91:U:O2'	53:CA:92:U:C6	2.68	0.44
53:CA:131:A:C6	53:CA:232:G:C6	3.05	0.44
53:CA:375:U:C4	53:CA:376:G:N7	2.85	0.44
53:CA:530:G:H3'	53:CA:530:G:N3	2.33	0.44
53:CA:926:G:C6	53:CA:1505:G:C6	3.05	0.44
53:CA:1346:A:C8	53:CA:1348:U:C2	3.05	0.44
4:CD:53:GLN:HB2	4:CD:202:LEU:HD12	1.99	0.44
54:CG:100:MET:HA	54:CG:103:ILE:HD12	2.00	0.44
9:CI:12:LYS:HG2	9:CI:12:LYS:O	2.17	0.44
11:CK:126:ARG:O	21:CU:33:ARG:CZ	2.64	0.44
12:CL:14:LYS:HG3	12:CL:14:LYS:O	2.16	0.44
22:DA:310:A:H1'	22:DA:311:A:C8	2.52	0.44
22:DA:338:G:C2'	22:DA:339:U:H5'	2.47	0.44
22:DA:585:G:C2'	22:DA:1254:A:H61	2.30	0.44
22:DA:745:G:C5'	22:DA:746:U:OP2	2.64	0.44
22:DA:845:A:N3	22:DA:847:U:H1'	2.31	0.44
22:DA:857:G:H4'	44:DW:43:LYS:HE2	1.98	0.44
22:DA:878:A:H4'	22:DA:898:C:N4	2.31	0.44
22:DA:1006:C:C2	22:DA:1138:G:N2	2.86	0.44
22:DA:1188:U:O2'	22:DA:1189:A:H5'	2.17	0.44
22:DA:1788:C:O2'	22:DA:1789:A:H5'	2.17	0.44
22:DA:1965:C:H5"	22:DA:1965:C:C6	2.46	0.44
22:DA:2046:G:OP1	48:D0:11:LYS:HE3	2.17	0.44
22:DA:2080:A:H4'	45:DX:22:ASN:HD22	1.82	0.44
22:DA:2347:C:O2'	22:DA:2348:U:O5'	2.36	0.44
22:DA:2667:C:H2'	22:DA:2668:G:H8	1.83	0.44
24:DC:75:ALA:HA	24:DC:95:TYR:HA	1.98	0.44
24:DC:174:ARG:HA	24:DC:180:MET:HG2	2.00	0.44
26:DE:25:GLU:HG2	33:DL:6:LEU:HD23	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DE:164:LEU:HD12	26:DE:167:VAL:HG12	1.98	0.44
29:DH:83:LYS:HZ2	29:DH:90:LEU:HD23	1.82	0.44
33:DL:54:GLN:O	33:DL:55:MET:C	2.55	0.44
34:DM:26:VAL:HA	34:DM:66:ARG:NH2	2.31	0.44
36:DO:11:ALA:O	36:DO:15:ARG:HG3	2.17	0.44
38:DQ:46:TYR:CD2	38:DQ:46:TYR:C	2.91	0.44
38:DQ:96:ASP:C	38:DQ:98:ALA:H	2.21	0.44
39:DR:49:ILE:HD13	39:DR:53:PHE:H	1.81	0.44
41:DT:30:ILE:O	41:DT:85:VAL:HG23	2.18	0.44
47:DZ:32:GLY:C	47:DZ:34:THR:N	2.70	0.44
49:D1:5:ARG:NH2	49:D1:23:THR:HB	2.31	0.44
1:AA:394:G:H2'	1:AA:395:C:H6	1.82	0.44
1:AA:450:G:H2'	1:AA:451:A:OP1	2.17	0.44
1:AA:518:C:H2'	1:AA:530:G:C8	2.53	0.44
1:AA:994:A:C5	1:AA:1216:A:H4'	2.52	0.44
2:AB:19:THR:HA	2:AB:37:VAL:HG23	1.98	0.44
2:AB:185:ILE:HD11	2:AB:203:ASP:HA	1.98	0.44
3:AC:41:TYR:OH	3:AC:89:VAL:HG21	2.17	0.44
5:AE:114:LEU:HG	5:AE:119:VAL:HG22	1.99	0.44
6:AF:29:ILE:HG22	6:AF:30:THR:N	2.32	0.44
6:AF:40:GLU:HB2	6:AF:42:TRP:NE1	2.32	0.44
9:AI:26:LYS:O	9:AI:62:LEU:HD23	2.16	0.44
9:AI:51:LEU:HA	9:AI:54:VAL:HG23	2.00	0.44
11:AK:52:ARG:HD2	11:AK:56:LYS:HD3	1.98	0.44
12:AL:24:GLU:O	12:AL:25:ALA:C	2.55	0.44
12:AL:34:THR:HB	12:AL:35:ARG:HG2	2.00	0.44
13:AM:23:GLY:HA3	13:AM:64:VAL:HG12	1.99	0.44
21:AU:8:ASN:N	21:AU:8:ASN:HD22	2.15	0.44
21:AU:33:ARG:HD3	21:AU:34:ARG:HG3	1.98	0.44
22:BA:243:U:O2'	22:BA:244:A:H5'	2.16	0.44
22:BA:247:G:H4'	22:BA:386:G:C5	2.52	0.44
22:BA:633:A:H8	22:BA:633:A:O5'	1.99	0.44
22:BA:683:U:C2'	22:BA:684:G:O5'	2.65	0.44
22:BA:1059:G:C2	22:BA:1080:A:N3	2.86	0.44
22:BA:1141:U:OP2	31:BJ:65:THR:HG21	2.18	0.44
22:BA:1392:A:C6	22:BA:1393:A:C6	3.05	0.44
22:BA:2149:U:C2'	22:BA:2150:C:O5'	2.65	0.44
22:BA:2280:G:C2'	22:BA:2281:A:H5'	2.47	0.44
22:BA:2505:G:HO2'	22:BA:2506:U:H5	1.59	0.44
23:BB:24:G:C6	23:BB:56:G:C2	3.05	0.44
25:BD:16:THR:HG22	25:BD:20:VAL:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BD:169:ARG:C	25:BD:170:VAL:CG1	2.85	0.44
26:BE:48:THR:C	26:BE:50:ALA:N	2.69	0.44
26:BE:61:ARG:H	26:BE:61:ARG:HG2	1.49	0.44
26:BE:147:LEU:HB3	26:BE:186:VAL:HG23	2.00	0.44
31:BJ:65:THR:HG22	31:BJ:68:LYS:HE3	1.98	0.44
35:BN:24:MET:HE3	35:BN:44:LEU:HB2	1.99	0.44
35:BN:32:GLU:OE1	35:BN:118:ARG:HA	2.16	0.44
40:BS:39:THR:HG22	40:BS:44:ALA:HB2	1.98	0.44
40:BS:85:ILE:CG2	40:BS:93:ALA:HB1	2.47	0.44
44:BW:47:GLY:O	44:BW:49:ASN:N	2.49	0.44
46:BY:42:LEU:HD12	46:BY:42:LEU:HA	1.66	0.44
53:CA:518:C:H2'	53:CA:530:G:C8	2.51	0.44
53:CA:909:A:H2'	53:CA:910:C:O4'	2.18	0.44
53:CA:1077:G:C2	53:CA:1081:A:C2	3.05	0.44
53:CA:1332:A:H2'	53:CA:1333:A:H5'	2.00	0.44
2:CB:48:MET:O	2:CB:199:ILE:HG22	2.17	0.44
4:CD:2:ARG:HE	4:CD:114:ARG:HD2	1.83	0.44
4:CD:59:LYS:O	4:CD:63:ILE:HG13	2.17	0.44
4:CD:60:VAL:O	4:CD:63:ILE:HB	2.17	0.44
10:CJ:47:GLU:HB2	10:CJ:67:ILE:CG1	2.40	0.44
55:CM:47:LEU:HD23	55:CM:48:SER:N	2.32	0.44
17:CQ:59:GLU:HB3	17:CQ:76:ARG:HG3	2.00	0.44
22:DA:90:U:C4	22:DA:91:A:C5	3.05	0.44
22:DA:388:G:O2'	22:DA:389:G:H3'	2.18	0.44
22:DA:665:U:H2'	22:DA:666:A:C8	2.52	0.44
22:DA:927:A:H2'	22:DA:928:A:C8	2.52	0.44
22:DA:1044:C:O2	22:DA:1044:C:H2'	2.17	0.44
22:DA:1432:G:H2'	22:DA:1433:A:C8	2.52	0.44
22:DA:1520:U:O4	22:DA:1521:G:C6	2.70	0.44
22:DA:1567:G:H5"	24:DC:84:PRO:CG	2.46	0.44
22:DA:1609:A:O2'	22:DA:1610:A:H5"	2.18	0.44
22:DA:1833:C:C4	22:DA:1834:U:C4	3.05	0.44
22:DA:1918:A:O2'	22:DA:1920:C:C4	2.70	0.44
22:DA:2033:A:H4'	22:DA:2034:U:OP1	2.16	0.44
22:DA:2056:G:N2	22:DA:2057:G:N9	2.65	0.44
22:DA:2234:G:C5	22:DA:2235:G:N7	2.84	0.44
22:DA:2316:G:H2'	22:DA:2317:A:C8	2.53	0.44
22:DA:2478:A:C8	22:DA:2529:G:C5	3.05	0.44
22:DA:2583:G:H2'	22:DA:2584:U:H5'	1.99	0.44
57:DB:16:G:O6	57:DB:69:G:C6	2.70	0.44
24:DC:251:THR:HG22	24:DC:252:LYS:N	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DH:45:GLU:C	29:DH:47:PHE:H	2.19	0.44
29:DH:96:THR:HA	29:DH:113:SER:OG	2.17	0.44
33:DL:85:VAL:O	33:DL:86:GLU:HB2	2.18	0.44
33:DL:103:ILE:H	33:DL:103:ILE:CD1	2.29	0.44
34:DM:57:VAL:HG23	34:DM:58:LYS:O	2.16	0.44
40:DS:6:LYS:NZ	40:DS:6:LYS:HB3	2.33	0.44
42:DU:14:THR:HG23	42:DU:15:GLY:N	2.28	0.44
42:DU:45:GLN:HA	42:DU:45:GLN:NE2	2.21	0.44
1:AA:393:A:O2'	1:AA:394:G:H5'	2.18	0.44
1:AA:485:U:O2	1:AA:485:U:O4'	2.36	0.44
1:AA:486:U:O2'	1:AA:487:A:H5'	2.17	0.44
1:AA:540:G:H2'	1:AA:541:G:O4'	2.16	0.44
1:AA:753:A:H4'	1:AA:754:C:C5'	2.47	0.44
1:AA:829:G:C6	1:AA:858:G:C2	3.05	0.44
1:AA:841:C:N3	1:AA:843:U:H5'	2.32	0.44
1:AA:1165:U:C4	1:AA:1166:G:C5	3.06	0.44
2:AB:30:ILE:HD11	2:AB:38:HIS:CD2	2.53	0.44
7:AG:6:ILE:HB	7:AG:7:GLY:H	1.60	0.44
7:AG:94:ARG:O	7:AG:97:ALA:N	2.50	0.44
9:AI:45:MET:SD	9:AI:45:MET:N	2.91	0.44
10:AJ:26:VAL:O	10:AJ:30:LYS:HG2	2.17	0.44
13:AM:15:VAL:HG13	13:AM:40:GLU:O	2.18	0.44
13:AM:81:ASP:OD2	27:BF:111:ARG:HD2	2.18	0.44
16:AP:20:VAL:HG21	16:AP:32:PHE:HB2	1.99	0.44
17:AQ:45:VAL:HG22	17:AQ:72:TRP:HB2	2.00	0.44
17:AQ:60:ILE:HG22	17:AQ:72:TRP:HE3	1.83	0.44
22:BA:118:A:H2'	22:BA:120:U:O4	2.17	0.44
22:BA:508:A:H4'	22:BA:509:C:OP2	2.17	0.44
22:BA:611:C:O2'	22:BA:612:G:H5'	2.16	0.44
22:BA:729:G:H2'	22:BA:1775:U:O2	2.17	0.44
22:BA:1073:A:H8	22:BA:1073:A:P	2.40	0.44
22:BA:1107:G:H2'	22:BA:1108:U:C6	2.53	0.44
22:BA:1333:G:C2	22:BA:1334:G:C8	3.05	0.44
22:BA:1584:U:O2	22:BA:1584:U:H2'	2.16	0.44
22:BA:1754:A:C6	22:BA:1755:A:C6	3.06	0.44
22:BA:1784:A:H4'	22:BA:1785:A:C5'	2.48	0.44
22:BA:1789:A:OP2	24:BC:220:ARG:NH1	2.50	0.44
22:BA:1858:A:N6	22:BA:1884:G:H1'	2.33	0.44
22:BA:2049:G:H2'	22:BA:2050:C:H5'	2.00	0.44
22:BA:2136:G:C2	22:BA:2137:U:C4	3.05	0.44
23:BB:87:U:H3'	23:BB:88:C:C5'	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:170:TYR:HD2	24:BC:183:VAL:C	2.21	0.44
34:BM:76:LYS:HG3	34:BM:77:PRO:HD2	1.99	0.44
37:BP:33:GLU:CG	37:BP:34:GLY:N	2.80	0.44
42:BU:72:PHE:CZ	42:BU:77:GLY:HA2	2.53	0.44
44:BW:24:ARG:O	44:BW:25:PHE:CB	2.65	0.44
53:CA:28:A:O2'	53:CA:296:U:H5"	2.17	0.44
53:CA:178:C:O2'	53:CA:179:A:H5'	2.18	0.44
53:CA:204:G:H2'	53:CA:205:A:C8	2.53	0.44
53:CA:653:U:H5'	8:CH:55:LYS:HE3	1.99	0.44
53:CA:833:G:O2'	53:CA:834:U:H5'	2.17	0.44
53:CA:878:A:C6	53:CA:879:C:C4	3.05	0.44
53:CA:976:G:C2	53:CA:1363:A:C2	3.05	0.44
53:CA:1046:A:C2'	53:CA:1047:G:C5'	2.92	0.44
8:CH:73:SER:HB2	8:CH:129:ALA:HB3	1.99	0.44
55:CM:64:VAL:O	55:CM:65:GLU:C	2.56	0.44
14:CN:94:GLY:O	14:CN:95:LEU:C	2.55	0.44
56:CP:19:VAL:HG13	56:CP:37:GLY:CA	2.48	0.44
22:DA:266:G:N2	22:DA:427:U:H1'	2.32	0.44
22:DA:565:C:H4'	22:DA:1253:A:C6	2.52	0.44
22:DA:1232:G:H2'	22:DA:1233:C:H6	1.83	0.44
22:DA:1378:A:C8	22:DA:1380:G:C6	3.05	0.44
22:DA:1807:G:C2'	22:DA:1808:A:H5'	2.48	0.44
22:DA:1865:U:O4	22:DA:1875:G:C4	2.70	0.44
22:DA:2191:A:C5'	22:DA:2192:U:OP2	2.65	0.44
22:DA:2221:G:C6	22:DA:2222:C:C4	3.06	0.44
22:DA:2261:C:H41	44:DW:10:ARG:HB3	1.83	0.44
22:DA:2286:G:H4'	22:DA:2287:A:C4	2.52	0.44
22:DA:2384:U:H6	22:DA:2384:U:OP2	2.01	0.44
22:DA:2815:C:H2'	22:DA:2816:G:C8	2.52	0.44
57:DB:23:G:C2	57:DB:61:G:C2	3.05	0.44
57:DB:78:A:H2'	57:DB:79:G:C8	2.52	0.44
24:DC:196:ASN:O	24:DC:197:ALA:HB3	2.18	0.44
25:DD:181:ASP:C	25:DD:183:GLU:N	2.70	0.44
26:DE:130:LYS:O	26:DE:134:LEU:HB3	2.17	0.44
29:DH:47:PHE:O	29:DH:51:ARG:HG3	2.17	0.44
30:DI:49:GLU:OE2	30:DI:54:ILE:HG13	2.17	0.44
30:DI:52:LEU:HD11	30:DI:78:LEU:CD2	2.48	0.44
30:DI:95:ASP:CG	30:DI:96:LYS:H	2.20	0.44
31:DJ:64:VAL:HG13	31:DJ:65:THR:N	2.33	0.44
32:DK:1:MET:HA	32:DK:33:ALA:O	2.17	0.44
38:DQ:73:ILE:HG13	38:DQ:74:SER:N	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DQ:91:ARG:HG3	39:DR:11:GLN:NE2	2.32	0.44
47:DZ:37:ARG:NE	47:DZ:37:ARG:HA	2.32	0.44
51:D3:50:SER:O	51:D3:52:GLY:N	2.50	0.44
1:AA:834:U:H2'	1:AA:835:U:C6	2.53	0.44
1:AA:993:G:N2	1:AA:996:A:N6	2.66	0.44
1:AA:1003:G:H22	1:AA:1005:A:H5'	1.80	0.44
1:AA:1167:A:C8	1:AA:1169:A:N6	2.86	0.44
1:AA:1406:U:C5	1:AA:1407:C:C5	3.05	0.44
2:AB:72:LYS:HZ2	2:AB:204:ASP:HB3	1.83	0.44
2:AB:128:LEU:HB3	2:AB:129:THR:H	1.68	0.44
3:AC:61:LYS:HD2	3:AC:61:LYS:HA	1.47	0.44
4:AD:34:GLU:C	4:AD:36:ALA:H	2.21	0.44
5:AE:73:VAL:CG1	5:AE:75:LEU:HD12	2.48	0.44
7:AG:25:PHE:CE1	7:AG:104:VAL:HG23	2.52	0.44
7:AG:53:SER:C	7:AG:55:LYS:N	2.71	0.44
7:AG:96:ASN:N	7:AG:96:ASN:OD1	2.50	0.44
8:AH:63:LYS:C	8:AH:70:VAL:HG23	2.38	0.44
9:AI:54:VAL:O	9:AI:55:ASP:O	2.36	0.44
11:AK:124:LYS:O	21:AU:33:ARG:NE	2.51	0.44
15:AO:41:HIS:HD2	15:AO:42:PHE:CE2	2.35	0.44
16:AP:3:THR:O	16:AP:21:VAL:HA	2.18	0.44
16:AP:51:ARG:O	16:AP:52:LEU:HD12	2.18	0.44
21:AU:33:ARG:HD3	21:AU:34:ARG:H	1.82	0.44
22:BA:323:C:N4	22:BA:333:G:C5	2.86	0.44
22:BA:430:A:H5"	22:BA:431:U:OP2	2.18	0.44
22:BA:550:C:O2	22:BA:550:C:C2'	2.66	0.44
22:BA:666:A:H2'	22:BA:667:U:C6	2.50	0.44
22:BA:1068:G:C2'	22:BA:1069:A:H5'	2.43	0.44
22:BA:1131:G:C8	31:BJ:77:HIS:CE1	3.05	0.44
22:BA:1178:C:C4	22:BA:1180:U:C4	3.05	0.44
22:BA:1275:A:H4'	22:BA:1276:A:OP1	2.13	0.44
22:BA:1433:A:H2'	22:BA:1434:A:O4'	2.17	0.44
22:BA:1739:A:H2'	22:BA:1740:G:O4'	2.18	0.44
22:BA:1858:A:H2'	22:BA:1859:U:H6	1.80	0.44
22:BA:1858:A:H62	22:BA:1884:G:H1'	1.82	0.44
22:BA:2064:C:H2'	22:BA:2065:C:C6	2.52	0.44
23:BB:5:U:H2'	23:BB:6:G:H8	1.82	0.44
25:BD:186:LEU:HD12	25:BD:186:LEU:HA	1.67	0.44
33:BL:65:GLY:O	33:BL:66:PHE:HB3	2.17	0.44
33:BL:75:ALA:O	33:BL:108:ALA:HA	2.17	0.44
38:BQ:67:ALA:HB1	38:BQ:105:PHE:CE1	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BQ:77:LYS:HB3	38:BQ:77:LYS:HE2	1.81	0.44
41:BT:7:LEU:C	41:BT:9:LYS:H	2.20	0.44
41:BT:69:ARG:NH2	41:BT:70:HIS:HA	2.33	0.44
42:BU:52:ASN:C	42:BU:54:PRO:HD2	2.38	0.44
46:BY:46:VAL:O	46:BY:47:ARG:C	2.56	0.44
53:CA:186:C:O2'	53:CA:187:G:H5'	2.17	0.44
53:CA:442:G:C6	53:CA:443:C:C4	3.06	0.44
53:CA:587:G:H4'	8:CH:3:GLN:HA	1.98	0.44
53:CA:972:C:H4'	10:CJ:59:LYS:HG2	2.00	0.44
53:CA:1014:A:H4'	19:CS:13:HIS:HD2	1.75	0.44
53:CA:1298:U:H4'	53:CA:1299:A:O5'	2.17	0.44
2:CB:17:HIS:CG	2:CB:18:GLN:N	2.84	0.44
4:CD:29:THR:C	4:CD:31:CYS:N	2.70	0.44
4:CD:71:PHE:HZ	4:CD:199:ILE:HD12	1.82	0.44
6:CF:75:GLU:OE2	6:CF:89:VAL:HG11	2.17	0.44
9:CI:45:MET:O	9:CI:49:GLN:HG3	2.17	0.44
11:CK:67:GLU:C	11:CK:69:CYS:H	2.21	0.44
12:CL:109:ARG:NH2	12:CL:116:TYR:HE2	2.15	0.44
17:CQ:46:HIS:CE1	17:CQ:48:GLU:HG2	2.53	0.44
21:CU:19:LYS:N	21:CU:19:LYS:NZ	2.65	0.44
22:DA:151:C:H2'	22:DA:152:A:H8	1.82	0.44
22:DA:204:A:C8	22:DA:206:U:C4	3.05	0.44
22:DA:226:A:N6	22:DA:227:A:N6	2.66	0.44
22:DA:372:G:P	45:DX:61:LYS:NZ	2.90	0.44
22:DA:566:U:C5	22:DA:567:U:C5	3.05	0.44
22:DA:866:A:O2'	22:DA:867:C:C6	2.71	0.44
22:DA:929:U:H1'	47:DZ:25:GLY:O	2.17	0.44
22:DA:963:U:O2'	22:DA:964:C:P	2.75	0.44
22:DA:1187:G:H8	22:DA:1187:G:O5'	2.00	0.44
22:DA:1527:G:C2	22:DA:1546:G:N1	2.85	0.44
22:DA:1792:G:H5"	24:DC:203:VAL:HG22	2.00	0.44
22:DA:2243:U:OP1	62:DA:3720:HOH:O	2.20	0.44
22:DA:2363:G:O2'	22:DA:2364:C:H5'	2.17	0.44
22:DA:2714:G:H2'	22:DA:2715:C:O4'	2.18	0.44
22:DA:2750:A:C4'	22:DA:2751:G:OP2	2.60	0.44
22:DA:2756:U:C1'	22:DA:2757:A:C5'	2.95	0.44
58:DF:48:LEU:O	58:DF:52:ALA:HB2	2.17	0.44
28:DG:116:LEU:HA	28:DG:117:PRO:HD3	1.75	0.44
30:DI:79:LEU:HD13	30:DI:100:ILE:HG13	1.99	0.44
32:DK:66:LYS:HG2	32:DK:66:LYS:O	2.17	0.44
33:DL:79:LEU:HD23	33:DL:82:LEU:CD1	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DL:79:LEU:HD23	33:DL:82:LEU:HD11	1.98	0.44
34:DM:117:PHE:O	34:DM:121:ALA:HB2	2.18	0.44
41:DT:64:LYS:HD2	41:DT:64:LYS:N	2.33	0.44
44:DW:37:VAL:CG2	44:DW:38:ARG:NH1	2.81	0.44
47:DZ:53:MET:O	47:DZ:54:VAL:HG13	2.17	0.44
49:D1:8:ILE:CG1	49:D1:24:LYS:HB3	2.47	0.44
1:AA:36:C:H4'	12:AL:118:VAL:O	2.17	0.44
1:AA:345:C:H4'	37:BP:33:GLU:CD	2.37	0.44
1:AA:448:A:C4	1:AA:487:A:C2	3.06	0.44
1:AA:665:A:H2'	1:AA:725:G:N2	2.33	0.44
1:AA:1241:G:N2	1:AA:1242:G:C5	2.85	0.44
1:AA:1316:G:N2	1:AA:1318:A:H3'	2.32	0.44
1:AA:1321:U:H3'	1:AA:1322:C:O2	2.18	0.44
1:AA:1430:A:C2	1:AA:1471:U:C2	3.06	0.44
1:AA:1503:A:C8	1:AA:1531:A:H1'	2.53	0.44
1:AA:1511:G:C6	1:AA:1512:U:C4	3.06	0.44
2:AB:61:SER:C	2:AB:63:LYS:H	2.20	0.44
3:AC:22:PHE:CD2	3:AC:22:PHE:C	2.90	0.44
3:AC:151:GLU:HA	3:AC:166:TRP:HA	1.99	0.44
5:AE:14:LEU:CB	5:AE:36:THR:HG22	2.48	0.44
8:AH:12:ARG:HH11	8:AH:26:MET:HB2	1.82	0.44
8:AH:58:LEU:HD13	8:AH:59:GLU:N	2.32	0.44
8:AH:74:ILE:HD13	8:AH:128:VAL:HG13	1.99	0.44
8:AH:78:SER:OG	8:AH:83:ARG:HA	2.18	0.44
8:AH:95:MET:HB2	8:AH:98:LEU:O	2.18	0.44
14:AN:15:LEU:N	14:AN:18:LYS:HE2	2.33	0.44
17:AQ:58:VAL:HG21	17:AQ:74:LEU:HD23	1.99	0.44
22:BA:415:A:C5	22:BA:416:U:C5	3.05	0.44
22:BA:1124:G:H1'	52:B4:38:GLY:OXT	2.17	0.44
22:BA:1177:G:H2'	22:BA:1178:C:O4'	2.18	0.44
22:BA:1411:U:O2'	22:BA:1412:U:H5'	2.18	0.44
22:BA:1566:A:C6	24:BC:212:TRP:CZ3	3.06	0.44
22:BA:1635:A:C6	22:BA:1636:U:C2	3.05	0.44
22:BA:1682:G:H2'	22:BA:1683:U:C6	2.53	0.44
22:BA:1838:C:N4	22:BA:1899:A:C4	2.86	0.44
24:BC:90:ILE:HG23	24:BC:102:TYR:CD1	2.53	0.44
24:BC:238:ASN:O	24:BC:239:PHE:HB2	2.18	0.44
25:BD:106:LYS:HB3	25:BD:206:ALA:CB	2.30	0.44
25:BD:207:VAL:O	25:BD:207:VAL:HG23	2.18	0.44
27:BF:43:ILE:HA	27:BF:82:TYR:CZ	2.53	0.44
27:BF:82:TYR:HA	27:BF:83:PRO:HD2	1.77	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BG:34:ARG:HD3	28:BG:34:ARG:N	2.33	0.44
30:BI:30:GLN:NE2	30:BI:32:VAL:HB	2.33	0.44
30:BI:100:ILE:HG22	30:BI:101:SER:N	2.23	0.44
31:BJ:44:TYR:O	31:BJ:45:THR:CG2	2.66	0.44
31:BJ:49:ASP:C	31:BJ:49:ASP:OD2	2.56	0.44
31:BJ:141:ASP:HB3	31:BJ:142:ILE:H	1.48	0.44
36:BO:66:GLY:C	36:BO:102:ARG:NH2	2.71	0.44
50:B2:36:ALA:C	50:B2:38:GLY:N	2.71	0.44
53:CA:83:C:O2	53:CA:87:C:N3	2.51	0.44
53:CA:106:C:O2'	53:CA:379:C:OP1	2.34	0.44
53:CA:473:U:OP1	56:CP:76:LYS:HE3	2.18	0.44
53:CA:737:C:OP1	6:CF:91:ARG:HD2	2.17	0.44
53:CA:932:C:H2'	53:CA:932:C:O2	2.17	0.44
53:CA:986:U:C2	53:CA:1220:G:N2	2.86	0.44
53:CA:1279:G:OP2	53:CA:1279:G:C2	2.71	0.44
53:CA:1401:G:H2'	53:CA:1402:C:O4'	2.18	0.44
53:CA:1414:U:H2'	53:CA:1415:G:H8	1.83	0.44
53:CA:1467:C:H2'	53:CA:1468:A:C8	2.52	0.44
3:CC:76:ILE:HA	3:CC:83:VAL:CG1	2.42	0.44
3:CC:127:VAL:O	3:CC:128:MET:HB2	2.18	0.44
4:CD:2:ARG:NH2	4:CD:114:ARG:NH1	2.65	0.44
4:CD:71:PHE:O	4:CD:72:ARG:C	2.55	0.44
5:CE:114:LEU:HD23	5:CE:143:LEU:HD11	2.00	0.44
9:CI:118:ARG:HG3	9:CI:124:PRO:HG3	2.00	0.44
14:CN:89:ARG:HG3	14:CN:91:GLU:CG	2.48	0.44
18:CR:71:ASP:HB3	18:CR:72:ARG:HH21	1.83	0.44
22:DA:223:A:O2'	22:DA:408:G:N3	2.50	0.44
22:DA:576:U:OP1	22:DA:2503:A:OP1	2.36	0.44
22:DA:996:A:C6	22:DA:1160:G:C2	3.05	0.44
22:DA:1267:U:HO2'	22:DA:1268:A:C5'	2.31	0.44
22:DA:1537:G:H2'	22:DA:1537:G:N3	2.33	0.44
22:DA:1566:A:C2	24:DC:212:TRP:CB	2.99	0.44
22:DA:1695:G:H8	24:DC:7:PRO:HB2	1.78	0.44
22:DA:2308:G:O6	22:DA:2311:A:N7	2.50	0.44
22:DA:2428:G:OP1	22:DA:2428:G:H3'	2.18	0.44
22:DA:2649:C:H2'	22:DA:2650:U:C6	2.53	0.44
22:DA:2811:G:H2'	22:DA:2812:G:O4'	2.17	0.44
24:DC:83:ASP:HB2	24:DC:90:ILE:HD12	1.99	0.44
24:DC:243:PRO:O	24:DC:244:VAL:HG13	2.18	0.44
26:DE:135:ALA:C	26:DE:137:LYS:H	2.20	0.44
58:DF:111:ARG:H	58:DF:111:ARG:NE	2.15	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DJ:45:THR:N	31:DJ:46:PRO:CD	2.81	0.44
32:DK:17:ARG:HD3	32:DK:18:ARG:HG3	1.99	0.44
45:DX:37:PHE:O	45:DX:45:PHE:HA	2.18	0.44
45:DX:53:LYS:CA	45:DX:56:ARG:HB3	2.29	0.44
1:AA:27:G:C4	1:AA:557:G:N2	2.85	0.44
1:AA:285:C:O2	1:AA:285:C:H2'	2.18	0.44
1:AA:592:G:C6	1:AA:648:A:C6	3.06	0.44
1:AA:602:A:O2'	1:AA:603:U:H5'	2.18	0.44
1:AA:734:G:N2	18:AR:63:TYR:CE1	2.81	0.44
1:AA:1245:C:H2'	1:AA:1246:A:H8	1.82	0.44
1:AA:1285:A:C5'	1:AA:1286:U:C4	2.96	0.44
1:AA:1381:U:O2'	1:AA:1382:C:H5'	2.18	0.44
3:AC:39:ARG:HG2	3:AC:54:ILE:CG1	2.47	0.44
3:AC:137:VAL:CG1	3:AC:169:GLU:HB3	2.48	0.44
4:AD:94:GLU:HG2	4:AD:185:PRO:HG3	1.99	0.44
5:AE:100:GLU:HB3	5:AE:121:ASN:CA	2.47	0.44
6:AF:91:ARG:HG3	6:AF:92:THR:N	2.27	0.44
7:AG:115:MET:HA	7:AG:118:ARG:HD3	2.00	0.44
10:AJ:11:LYS:CG	10:AJ:97:ASP:HB3	2.46	0.44
13:AM:4:ALA:N	13:AM:56:ARG:HG3	2.32	0.44
16:AP:3:THR:HG22	16:AP:4:ILE:N	2.32	0.44
16:AP:6:LEU:HD12	16:AP:6:LEU:HA	1.77	0.44
19:AS:43:MET:CE	19:AS:48:ILE:HG12	2.48	0.44
22:BA:137:U:HO2'	22:BA:138:U:P	2.23	0.44
22:BA:141:G:C5'	22:BA:142:A:C8	2.99	0.44
22:BA:764:A:C6	22:BA:781:A:C2	3.06	0.44
22:BA:873:C:C2	22:BA:904:G:N2	2.83	0.44
22:BA:1131:G:O2'	22:BA:2026:U:H5'	2.18	0.44
22:BA:1157:G:O2'	47:BZ:31:ILE:HG12	2.18	0.44
22:BA:1256:G:O2'	26:BE:77:ILE:HD11	2.17	0.44
22:BA:1347:A:O2'	22:BA:1348:C:H5'	2.17	0.44
22:BA:1348:C:H2'	22:BA:1349:C:C5'	2.47	0.44
22:BA:1495:A:C6	22:BA:1496:A:C6	3.06	0.44
22:BA:1694:C:H4'	22:BA:1695:G:H5"	2.00	0.44
22:BA:1812:U:H2'	22:BA:1813:G:H8	1.83	0.44
22:BA:2555:U:H5	22:BA:2556:C:C2	2.36	0.44
24:BC:124:LYS:HG3	24:BC:125:PRO:HD2	1.98	0.44
27:BF:41:GLU:HB2	27:BF:48:LEU:HD23	2.00	0.44
29:BH:43:ASN:HA	29:BH:46:PHE:HB3	2.00	0.44
31:BJ:38:GLY:C	31:BJ:40:HIS:H	2.21	0.44
31:BJ:114:LEU:O	31:BJ:117:ALA:HB3	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BK:108:ARG:HH21	37:BP:34:GLY:HA3	1.82	0.44
33:BL:37:GLY:O	33:BL:38:GLN:C	2.56	0.44
33:BL:73:ILE:HA	33:BL:105:ILE:HD13	2.00	0.44
36:BO:15:ARG:NE	36:BO:93:ASP:OD1	2.46	0.44
38:BQ:23:TYR:O	38:BQ:28:SER:HB3	2.18	0.44
41:BT:61:LEU:C	41:BT:61:LEU:CD1	2.85	0.44
43:BV:80:HIS:CD2	43:BV:83:LYS:HB2	2.52	0.44
47:BZ:7:THR:HG23	47:BZ:34:THR:OG1	2.17	0.44
52:B4:16:ILE:HA	52:B4:24:ARG:O	2.18	0.44
53:CA:327:A:C2	53:CA:329:A:N3	2.86	0.44
53:CA:718:A:H5'	11:CK:118:ASN:OD1	2.18	0.44
53:CA:1140:C:H2'	53:CA:1141:C:H5	1.83	0.44
53:CA:1287:A:O2'	53:CA:1288:A:O5'	2.36	0.44
53:CA:1356:G:N2	53:CA:1367:C:C2	2.85	0.44
53:CA:1423:G:H2'	53:CA:1424:U:H6	1.81	0.44
53:CA:1439:G:C2	53:CA:1463:U:O2	2.70	0.44
3:CC:176:THR:HG22	3:CC:178:ARG:HG3	2.00	0.44
4:CD:43:ARG:O	4:CD:45:PRO:HD3	2.18	0.44
5:CE:151:MET:O	5:CE:154:ALA:HB3	2.18	0.44
54:CG:10:LYS:O	54:CG:10:LYS:HD2	2.18	0.44
8:CH:82:LEU:CD1	12:CL:3:VAL:HG11	2.46	0.44
9:CI:49:GLN:O	9:CI:52:GLU:HG2	2.17	0.44
10:CJ:52:LEU:HB2	14:CN:80:ARG:HE	1.81	0.44
14:CN:13:VAL:HA	14:CN:59:GLN:NE2	2.33	0.44
56:CP:6:LEU:HB2	56:CP:17:TYR:HB3	2.00	0.44
56:CP:20:VAL:HA	56:CP:36:VAL:HG12	2.00	0.44
22:DA:151:C:OP1	22:DA:1359:A:O2'	2.32	0.44
22:DA:182:A:H2'	22:DA:183:C:C6	2.53	0.44
22:DA:249:C:C3'	22:DA:2394:C:H4'	2.46	0.44
22:DA:449:A:H2'	22:DA:450:G:H5'	2.00	0.44
22:DA:489:G:C2'	22:DA:491:G:C8	3.01	0.44
22:DA:828:U:P	22:DA:2068:U:C5	3.11	0.44
22:DA:848:C:H2'	22:DA:849:A:C8	2.53	0.44
22:DA:1062:G:C4	22:DA:1063:G:C8	3.05	0.44
22:DA:1286:A:C5	22:DA:1289:C:N4	2.85	0.44
22:DA:1661:G:C4	22:DA:1662:U:C6	3.06	0.44
22:DA:1668:A:H4'	22:DA:1669:A:O5'	2.17	0.44
22:DA:1991:U:H2'	22:DA:1992:G:H5'	2.00	0.44
22:DA:2330:G:N3	44:DW:38:ARG:HB3	2.33	0.44
22:DA:2391:G:O2'	22:DA:2392:A:P	2.75	0.44
22:DA:2550:G:N2	22:DA:2559:C:H1'	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2656:U:H2'	22:DA:2657:A:H8	1.83	0.44
26:DE:90:GLN:HG3	26:DE:92:HIS:NE2	2.33	0.44
58:DF:65:LEU:HG	58:DF:67:THR:HG23	2.00	0.44
28:DG:115:GLN:HG2	28:DG:116:LEU:H	1.80	0.44
28:DG:132:LEU:HD12	28:DG:132:LEU:N	2.33	0.44
33:DL:79:LEU:HD22	33:DL:115:GLU:O	2.18	0.44
35:DN:72:ASP:O	35:DN:76:VAL:HG13	2.18	0.44
35:DN:106:ASP:O	35:DN:106:ASP:OD1	2.35	0.44
41:DT:39:THR:OG1	41:DT:42:GLU:HG3	2.17	0.44
46:DY:48:ARG:HG3	46:DY:48:ARG:HH11	1.82	0.44
50:D2:11:LYS:NZ	62:D2:101:HOH:O	2.51	0.44
1:AA:258:G:H4'	20:AT:81:GLN:HE22	1.82	0.44
1:AA:844:G:H5"	1:AA:845:A:OP1	2.18	0.44
1:AA:878:A:C5'	8:AH:80:PRO:HG2	2.48	0.44
1:AA:958:A:C5	1:AA:959:A:C6	3.06	0.44
1:AA:1055:A:C6	1:AA:1206:G:C4	3.06	0.44
1:AA:1138:G:N2	1:AA:1140:C:N4	2.66	0.44
1:AA:1168:U:OP1	1:AA:1168:U:H6	1.98	0.44
1:AA:1350:A:C6	1:AA:1351:U:N3	2.86	0.44
12:AL:80:LEU:HB3	12:AL:97:VAL:HB	1.99	0.44
13:AM:3:ILE:HA	13:AM:56:ARG:NH1	2.32	0.44
15:AO:55:LEU:HD21	22:BA:715:A:C2	2.53	0.44
16:AP:38:PHE:CE2	16:AP:51:ARG:HB3	2.53	0.44
19:AS:62:THR:HG22	19:AS:64:GLU:OE1	2.17	0.44
21:AU:24:LYS:CG	21:AU:25:ALA:H	2.30	0.44
22:BA:108:G:C2'	22:BA:109:C:H5'	2.48	0.44
22:BA:125:A:C6	50:B2:10:LEU:HD13	2.53	0.44
22:BA:361:G:HO2'	22:BA:362:A:C5'	2.31	0.44
22:BA:666:A:C5	22:BA:667:U:C5	3.06	0.44
22:BA:784:G:O6	24:BC:227:VAL:HG11	2.16	0.44
22:BA:910:A:C6	22:BA:911:A:C6	3.06	0.44
22:BA:931:U:C4'	22:BA:932:U:OP2	2.53	0.44
22:BA:1083:U:C2'	22:BA:1084:A:O5'	2.65	0.44
22:BA:1746:A:H2'	22:BA:1747:U:H6	1.81	0.44
22:BA:2015:A:H2'	22:BA:2016:U:H5'	2.00	0.44
23:BB:8:C:O2'	36:BO:40:ILE:HD12	2.18	0.44
24:BC:80:LEU:CD1	24:BC:109:LEU:HG	2.48	0.44
24:BC:90:ILE:HG23	24:BC:102:TYR:HD1	1.83	0.44
25:BD:9:VAL:HG22	25:BD:10:GLY:N	2.32	0.44
25:BD:184:ARG:HD3	25:BD:186:LEU:HD22	1.98	0.44
26:BE:150:THR:CG2	26:BE:153:LEU:HA	2.46	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:89:LYS:O	29:BH:90:LEU:HD12	2.18	0.44
34:BM:109:PRO:O	34:BM:110:GLU:C	2.56	0.44
36:BO:78:VAL:HG23	36:BO:79:ALA:N	2.33	0.44
38:BQ:63:ARG:HH22	38:BQ:96:ASP:HB3	1.81	0.44
38:BQ:63:ARG:NH2	38:BQ:96:ASP:N	2.66	0.44
39:BR:68:ARG:NH1	39:BR:90:ARG:HD3	2.33	0.44
44:BW:17:ALA:CA	44:BW:35:ILE:HG23	2.32	0.44
49:B1:8:ILE:N	49:B1:22:THR:O	2.51	0.44
51:B3:32:LEU:O	51:B3:33:THR:C	2.56	0.44
53:CA:166:U:OP2	53:CA:166:U:H6	2.01	0.44
53:CA:515:G:N7	62:CA:1853:HOH:O	2.36	0.44
53:CA:1008:U:C4	53:CA:1022:A:C2	3.06	0.44
53:CA:1451:U:O2	53:CA:1453:G:N7	2.50	0.44
3:CC:120:THR:O	3:CC:120:THR:CG2	2.65	0.44
3:CC:129:PHE:CE2	3:CC:156:LEU:HD13	2.53	0.44
4:CD:22:SER:OG	4:CD:23:GLY:N	2.50	0.44
5:CE:45:VAL:HG22	5:CE:46:GLY:N	2.32	0.44
9:CI:113:LYS:HG3	9:CI:119:LYS:HA	2.00	0.44
21:CU:19:LYS:C	21:CU:21:SER:H	2.21	0.44
22:DA:52:A:H2	22:DA:179:C:O4'	2.00	0.44
22:DA:108:G:H2'	22:DA:109:C:H6	1.83	0.44
22:DA:170:U:H6	22:DA:170:U:O5'	2.01	0.44
22:DA:189:G:C2'	22:DA:190:A:O5'	2.65	0.44
22:DA:528:A:C2	22:DA:2043:C:O5'	2.70	0.44
22:DA:538:A:H5"	31:DJ:7:LYS:HZ2	1.82	0.44
22:DA:565:C:H1'	22:DA:577:G:N2	2.33	0.44
22:DA:628:G:O6	22:DA:636:G:C6	2.71	0.44
22:DA:808:G:O2'	22:DA:1254:A:H4'	2.18	0.44
22:DA:859:G:N2	22:DA:916:G:H2'	2.33	0.44
22:DA:966:G:H5'	22:DA:2272:U:O2	2.17	0.44
22:DA:1049:C:C6	22:DA:1050:A:C8	3.05	0.44
22:DA:1053:C:H2'	22:DA:1054:A:C8	2.52	0.44
22:DA:1232:G:H2'	22:DA:1233:C:C6	2.52	0.44
22:DA:1401:G:C4	22:DA:1402:U:C5	3.06	0.44
22:DA:1606:C:C2'	22:DA:1607:C:OP2	2.66	0.44
22:DA:1837:C:C2	22:DA:1904:G:C2	3.05	0.44
22:DA:1875:G:H8	22:DA:1875:G:OP2	2.01	0.44
22:DA:2305:U:H5	22:DA:2312:U:O4	2.00	0.44
22:DA:2344:U:C4'	22:DA:2345:G:OP1	2.36	0.44
22:DA:2423:U:H1'	22:DA:2425:A:C5	2.53	0.44
22:DA:2464:G:H2'	22:DA:2465:C:O4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2744:G:C4	22:DA:2761:A:N1	2.85	0.44
22:DA:2770:G:H8	22:DA:2770:G:O5'	2.01	0.44
57:DB:16:G:H2'	57:DB:17:C:H6	1.83	0.44
57:DB:109:A:C6	57:DB:110:C:C4	3.06	0.44
25:DD:140:HIS:CE1	62:DD:303:HOH:O	2.71	0.44
32:DK:17:ARG:O	32:DK:18:ARG:C	2.55	0.44
33:DL:81:ASP:C	33:DL:82:LEU:HD12	2.38	0.44
35:DN:84:GLY:O	35:DN:88:ALA:HB2	2.18	0.44
42:DU:16:LYS:HB3	42:DU:17:ASP:H	1.51	0.44
48:D0:54:ILE:O	48:D0:55:ALA:HB2	2.18	0.44
1:AA:71:A:C2	1:AA:72:A:C8	3.06	0.44
1:AA:73:C:H2'	1:AA:74:A:H8	1.83	0.44
1:AA:496:A:N3	1:AA:496:A:C2'	2.76	0.44
1:AA:748:G:C6	1:AA:749:A:C6	3.06	0.44
1:AA:815:A:H4'	1:AA:817:C:C4	2.53	0.44
1:AA:890:G:HO2'	1:AA:891:U:P	2.41	0.44
1:AA:900:A:C6	1:AA:901:A:C2	3.06	0.44
1:AA:1034:G:H2'	1:AA:1035:A:C8	2.52	0.44
1:AA:1234:C:H2'	1:AA:1235:U:H5'	2.00	0.44
3:AC:96:VAL:HB	3:AC:97:PRO:HD2	1.99	0.44
6:AF:61:LEU:HD12	6:AF:62:MET:H	1.81	0.44
8:AH:105:THR:HG22	8:AH:121:GLY:C	2.38	0.44
11:AK:21:HIS:HD2	11:AK:34:THR:HG22	1.82	0.44
12:AL:52:CYS:O	12:AL:54:VAL:HG23	2.18	0.44
14:AN:20:PHE:C	14:AN:22:LYS:N	2.71	0.44
14:AN:42:ASN:HD21	14:AN:46:LYS:HZ3	1.65	0.44
16:AP:79:ASN:O	16:AP:80:LYS:CB	2.62	0.44
17:AQ:76:ARG:HG2	17:AQ:77:VAL:H	1.82	0.44
18:AR:70:THR:OG1	18:AR:72:ARG:HG2	2.17	0.44
22:BA:464:U:O2'	50:B2:16:HIS:HE1	1.98	0.44
22:BA:479:A:N3	22:BA:481:G:H5"	2.33	0.44
22:BA:818:G:H5'	22:BA:839:U:OP1	2.18	0.44
22:BA:904:G:C2'	22:BA:905:A:O5'	2.66	0.44
22:BA:919:U:C3'	22:BA:919:U:C6	3.01	0.44
22:BA:1078:U:H5"	22:BA:1079:C:O5'	2.18	0.44
22:BA:1108:U:H2'	22:BA:1109:C:O4'	2.18	0.44
22:BA:1300:G:H5"	22:BA:1301:A:H5'	2.00	0.44
22:BA:1419:A:C6	22:BA:1421:G:C4	3.05	0.44
22:BA:1846:G:N2	22:BA:1895:C:C2	2.85	0.44
22:BA:2025:C:H2'	22:BA:2026:U:C6	2.52	0.44
22:BA:2536:G:C6	22:BA:2537:U:C4	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2742:G:C2'	22:BA:2743:U:H5'	2.48	0.44
24:BC:134:ILE:O	24:BC:135:PRO:C	2.56	0.44
25:BD:114:LYS:CE	25:BD:114:LYS:H	2.29	0.44
26:BE:95:LYS:O	26:BE:96:VAL:CB	2.59	0.44
26:BE:127:GLU:CD	26:BE:127:GLU:H	2.20	0.44
27:BF:46:LYS:HD2	27:BF:46:LYS:N	2.33	0.44
27:BF:129:MET:CG	27:BF:153:ILE:HD11	2.48	0.44
29:BH:24:GLY:O	29:BH:25:TYR:C	2.56	0.44
30:BI:107:GLU:HA	30:BI:110:GLN:HB3	1.98	0.44
35:BN:8:ARG:HD2	35:BN:43:GLU:CG	2.45	0.44
35:BN:12:ARG:HH21	35:BN:12:ARG:HG3	1.83	0.44
36:BO:75:GLY:HA2	36:BO:106:LEU:CD1	2.48	0.44
39:BR:15:SER:O	39:BR:18:GLN:HB3	2.17	0.44
39:BR:37:GLU:OE1	39:BR:37:GLU:O	2.36	0.44
40:BS:84:ARG:O	40:BS:95:ARG:O	2.35	0.44
53:CA:16:A:N1	53:CA:919:A:H2	2.15	0.44
53:CA:120:A:O2'	53:CA:121:U:C4'	2.66	0.44
53:CA:327:A:O3'	53:CA:328:C:C4'	2.66	0.44
53:CA:376:G:H5"	56:CP:5:ARG:HB2	2.00	0.44
53:CA:631:C:C3'	53:CA:632:U:H5'	2.47	0.44
53:CA:658:C:H1'	15:CO:21:THR:HG21	2.00	0.44
53:CA:704:A:H2'	53:CA:705:G:H8	1.78	0.44
53:CA:762:U:H6	53:CA:762:U:O5'	2.01	0.44
53:CA:937:A:C2	53:CA:1379:G:C6	3.06	0.44
53:CA:989:U:O4	53:CA:990:C:N4	2.51	0.44
53:CA:1222:G:H5'	19:CS:77:ARG:HH21	1.82	0.44
53:CA:1381:U:N3	54:CG:77:ARG:CZ	2.81	0.44
53:CA:1386:G:C2	53:CA:1387:G:C8	3.06	0.44
53:CA:1517:G:C8	22:DA:1920:C:OP1	2.71	0.44
2:CB:27:LYS:N	2:CB:28:PRO:CD	2.81	0.44
2:CB:46:VAL:HG13	2:CB:47:PRO:CD	2.38	0.44
4:CD:144:ILE:HD12	4:CD:177:MET:HB3	1.99	0.44
6:CF:98:GLU:O	6:CF:99:ALA:CB	2.66	0.44
15:CO:34:GLN:O	15:CO:38:LEU:HB2	2.18	0.44
19:CS:10:ILE:HD12	19:CS:10:ILE:N	2.33	0.44
22:DA:242:G:C6	51:D3:4:LYS:HE3	2.53	0.44
22:DA:372:G:N2	22:DA:400:G:H2'	2.32	0.44
22:DA:498:G:C6	22:DA:499:U:C4	3.05	0.44
22:DA:600:G:H5'	26:DE:27:LEU:HD13	2.00	0.44
22:DA:857:G:O2'	44:DW:19:ARG:CZ	2.66	0.44
22:DA:1327:A:C6	22:DA:1328:A:C4	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1628:G:H2'	22:DA:1629:U:C6	2.49	0.44
22:DA:1662:U:C2'	22:DA:1663:G:H5"	2.37	0.44
22:DA:1734:G:O2'	22:DA:1735:A:C8	2.58	0.44
22:DA:1998:A:O3'	22:DA:2724:U:H4'	2.17	0.44
22:DA:2096:C:O2'	22:DA:2097:A:H5'	2.17	0.44
22:DA:2157:G:OP2	22:DA:2157:G:N2	2.51	0.44
22:DA:2654:A:C4	22:DA:2656:U:N3	2.86	0.44
22:DA:2683:C:C5	22:DA:2684:U:C5	3.06	0.44
22:DA:2751:G:N3	28:DG:2:ARG:NH2	2.65	0.44
22:DA:2866:U:H4'	22:DA:2867:G:OP1	2.18	0.44
57:DB:57:A:C4	58:DF:25:MET:HB2	2.52	0.44
58:DF:28:PRO:HB2	58:DF:168:LEU:CD2	2.44	0.44
28:DG:102:ILE:HB	28:DG:114:HIS:O	2.18	0.44
29:DH:62:LEU:C	29:DH:64:ALA:H	2.19	0.44
32:DK:104:THR:O	32:DK:107:LEU:HD22	2.17	0.44
34:DM:23:GLY:O	34:DM:101:VAL:HG12	2.18	0.44
37:DP:16:VAL:HA	37:DP:17:PRO:HD3	1.62	0.44
42:DU:39:ASN:OD1	42:DU:64:ILE:HB	2.18	0.44
43:DV:75:GLN:HB2	43:DV:90:ASP:O	2.17	0.44
48:D0:42:ILE:HD13	48:D0:42:ILE:HA	1.75	0.44
1:AA:19:A:C2	1:AA:917:G:C2	3.06	0.43
1:AA:78:A:N6	1:AA:79:G:N1	2.66	0.43
1:AA:211:G:N1	1:AA:212:G:H1'	2.33	0.43
1:AA:721:G:H4'	1:AA:722:G:C5'	2.42	0.43
1:AA:901:A:C5	1:AA:902:G:H1'	2.53	0.43
1:AA:995:C:H4'	14:AN:7:ALA:HB2	2.00	0.43
1:AA:1108:G:H5"	3:AC:175:HIS:ND1	2.33	0.43
4:AD:52:VAL:CG2	4:AD:53:GLN:N	2.80	0.43
4:AD:63:ILE:O	4:AD:63:ILE:HG12	2.18	0.43
5:AE:62:ALA:O	5:AE:65:LYS:HB2	2.17	0.43
7:AG:146:ALA:C	7:AG:148:LYS:N	2.71	0.43
9:AI:3:ASN:HD22	9:AI:4:GLN:H	1.65	0.43
10:AJ:18:ILE:HG13	10:AJ:96:VAL:CG1	2.48	0.43
14:AN:20:PHE:O	14:AN:21:ALA:HB3	2.17	0.43
14:AN:75:LYS:HB3	14:AN:76:PHE:CE1	2.53	0.43
20:AT:24:ARG:O	20:AT:28:ARG:HG2	2.18	0.43
20:AT:72:ALA:O	20:AT:73:ARG:C	2.57	0.43
20:AT:84:LYS:O	20:AT:84:LYS:HD2	2.18	0.43
22:BA:14:A:C8	22:BA:15:G:C8	3.06	0.43
22:BA:187:G:C2	22:BA:210:C:O2	2.71	0.43
22:BA:445:C:O2'	22:BA:446:G:H5'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:480:A:OP2	42:BU:43:LYS:HD2	2.18	0.43
22:BA:543:G:C2	22:BA:544:C:H1'	2.53	0.43
22:BA:548:G:O2'	22:BA:549:G:C5	2.70	0.43
22:BA:659:G:C6	22:BA:660:C:C4	3.06	0.43
22:BA:847:U:O2	22:BA:934:U:H1'	2.18	0.43
22:BA:900:A:C2'	22:BA:901:C:C5'	2.68	0.43
22:BA:919:U:C4	22:BA:920:A:N7	2.86	0.43
22:BA:959:A:N6	22:BA:960:A:N1	2.66	0.43
22:BA:1061:U:O4'	30:BI:9:LYS:HD2	2.18	0.43
22:BA:1062:G:HO2'	22:BA:1063:G:H8	1.41	0.43
22:BA:1499:C:H2'	22:BA:1500:G:H8	1.83	0.43
22:BA:1505:A:C6	22:BA:1506:U:N3	2.86	0.43
22:BA:1832:C:N4	22:BA:1833:C:C4	2.86	0.43
22:BA:2097:A:C2	22:BA:2193:G:C2	3.06	0.43
22:BA:2443:C:O2'	22:BA:2444:G:H5'	2.19	0.43
22:BA:2822:G:OP2	25:BD:115:GLY:O	2.36	0.43
22:BA:2839:G:OP1	35:BN:46:ARG:HD2	2.17	0.43
22:BA:2874:C:H2'	22:BA:2875:C:C6	2.53	0.43
26:BE:75:SER:OG	26:BE:77:ILE:HG23	2.18	0.43
26:BE:122:GLU:O	26:BE:123:LYS:O	2.36	0.43
26:BE:147:LEU:O	26:BE:148:ILE:C	2.54	0.43
28:BG:7:PRO:HB2	28:BG:8:VAL:H	1.61	0.43
28:BG:59:ASP:O	28:BG:60:GLY:C	2.56	0.43
33:BL:94:THR:HG22	33:BL:95:LEU:H	1.83	0.43
37:BP:101:GLU:O	37:BP:102:ARG:HG2	2.18	0.43
39:BR:49:ILE:HG22	39:BR:53:PHE:C	2.38	0.43
40:BS:3:THR:HB	40:BS:62:ASP:OD2	2.18	0.43
41:BT:8:LEU:HD22	41:BT:8:LEU:HA	1.75	0.43
41:BT:16:VAL:C	41:BT:17:SER:OG	2.56	0.43
43:BV:40:ILE:CG2	43:BV:41:GLU:N	2.81	0.43
44:BW:14:ASP:HB3	44:BW:15:SER:H	1.22	0.43
47:BZ:8:GLN:O	47:BZ:8:GLN:HG2	2.18	0.43
49:B1:8:ILE:HG22	49:B1:9:LYS:N	2.33	0.43
53:CA:164:G:H2'	53:CA:165:G:H5'	1.99	0.43
53:CA:183:C:O2'	53:CA:184:G:C5'	2.66	0.43
53:CA:345:C:H5'	53:CA:346:G:C6	2.52	0.43
53:CA:442:G:C6	53:CA:443:C:N4	2.86	0.43
53:CA:930:C:C2'	53:CA:931:C:H5'	2.47	0.43
53:CA:935:A:O2'	53:CA:936:C:O5'	2.35	0.43
53:CA:1004:A:C8	53:CA:1025:U:O2'	2.71	0.43
53:CA:1072:G:H2'	53:CA:1073:U:H6	1.81	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1076:U:C2	53:CA:1082:A:C2	3.05	0.43
53:CA:1098:C:H2'	53:CA:1099:G:O4'	2.18	0.43
53:CA:1249:C:H4'	9:CI:74:GLN:HE22	1.84	0.43
53:CA:1403:C:H2'	53:CA:1404:C:C6	2.53	0.43
4:CD:29:THR:O	4:CD:31:CYS:N	2.43	0.43
54:CG:116:ALA:C	54:CG:120:ALA:HB3	2.39	0.43
8:CH:30:LYS:O	8:CH:33:VAL:N	2.51	0.43
12:CL:55:ARG:HA	12:CL:61:GLU:HA	1.99	0.43
55:CM:77:LYS:O	55:CM:77:LYS:HD3	2.18	0.43
18:CR:55:ALA:HA	18:CR:58:ILE:HD12	2.00	0.43
21:CU:3:ILE:HG23	21:CU:3:ILE:O	2.18	0.43
22:DA:136:G:N2	22:DA:144:A:C2	2.85	0.43
22:DA:412:A:H61	22:DA:2411:A:C2'	2.31	0.43
22:DA:673:C:H5"	26:DE:75:SER:HB2	1.99	0.43
22:DA:927:A:C6	22:DA:928:A:C6	3.06	0.43
22:DA:1330:C:O2'	22:DA:1331:G:O5'	2.32	0.43
22:DA:1491:G:C6	22:DA:1500:G:C2	3.06	0.43
22:DA:1905:C:O5'	22:DA:1905:C:H6	2.00	0.43
22:DA:2267:A:N6	22:DA:2272:U:N3	2.58	0.43
22:DA:2298:A:H5'	22:DA:2322:A:O2'	2.18	0.43
22:DA:2312:U:O2	22:DA:2312:U:C2'	2.66	0.43
22:DA:2369:A:O2'	22:DA:2370:G:H5'	2.18	0.43
22:DA:2682:A:O2'	22:DA:2683:C:H6	2.01	0.43
22:DA:2703:C:H2'	22:DA:2704:C:C6	2.53	0.43
22:DA:2724:U:O2'	22:DA:2725:A:H5'	2.18	0.43
25:DD:114:LYS:CD	25:DD:116:LYS:NZ	2.78	0.43
58:DF:104:THR:H	58:DF:107:VAL:HG22	1.83	0.43
28:DG:8:VAL:HA	28:DG:68:ARG:HH21	1.83	0.43
31:DJ:30:THR:HG23	31:DJ:31:GLU:H	1.82	0.43
31:DJ:97:PRO:C	31:DJ:99:ARG:H	2.22	0.43
32:DK:60:ALA:HB2	32:DK:86:LEU:HA	2.00	0.43
37:DP:26:GLU:OE1	37:DP:28:LYS:HE3	2.17	0.43
39:DR:55:ASP:CG	39:DR:56:GLY:H	2.20	0.43
43:DV:21:ARG:NH2	43:DV:87:GLN:O	2.51	0.43
46:DY:58:ASN:C	46:DY:60:LYS:N	2.71	0.43
1:AA:116:A:H2'	1:AA:117:G:H8	1.82	0.43
1:AA:284:C:H2'	1:AA:285:C:C6	2.50	0.43
1:AA:750:C:O2	15:AO:22:GLY:HA3	2.18	0.43
1:AA:973:G:C3'	1:AA:974:A:H5"	2.44	0.43
1:AA:1145:A:O2'	1:AA:1146:A:H8	2.00	0.43
2:AB:68:PHE:HE2	2:AB:88:GLN:HB2	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:76:ILE:HA	3:AC:83:VAL:CG2	2.33	0.43
4:AD:129:VAL:HG13	4:AD:131:ILE:CD1	2.47	0.43
5:AE:93:VAL:HG21	5:AE:139:THR:CG2	2.48	0.43
5:AE:149:PRO:C	5:AE:151:MET:H	2.22	0.43
6:AF:36:ILE:HG22	6:AF:64:VAL:HG22	1.99	0.43
9:AI:27:ILE:N	9:AI:27:ILE:HD12	2.32	0.43
10:AJ:66:GLU:HG2	14:AN:98:ALA:HB2	2.00	0.43
11:AK:21:HIS:CD2	11:AK:34:THR:HG21	2.53	0.43
12:AL:89:LEU:HD22	12:AL:89:LEU:N	2.32	0.43
19:AS:14:LEU:HD22	19:AS:34:SER:HB3	1.99	0.43
20:AT:66:ILE:O	20:AT:67:HIS:O	2.36	0.43
22:BA:80:G:O2'	22:BA:81:G:H5'	2.17	0.43
22:BA:149:A:C5	22:BA:150:U:C5	3.07	0.43
22:BA:830:G:C4	22:BA:2448:A:C5	3.06	0.43
22:BA:1022:G:C5	22:BA:1140:C:C4	3.06	0.43
22:BA:1467:U:C4	22:BA:1546:G:C2	3.07	0.43
22:BA:1832:C:H2'	22:BA:1833:C:O5'	2.18	0.43
22:BA:2107:G:O6	22:BA:2183:A:C6	2.71	0.43
22:BA:2356:U:H5"	44:BW:16:GLU:HG3	1.99	0.43
22:BA:2471:A:H2'	22:BA:2472:G:H5'	1.98	0.43
24:BC:35:LYS:HE3	24:BC:35:LYS:HB3	1.46	0.43
28:BG:117:PRO:HD2	28:BG:120:ILE:CG2	2.48	0.43
29:BH:45:GLU:HA	29:BH:48:GLU:HB3	2.01	0.43
29:BH:94:ILE:HG23	29:BH:98:ASP:HB3	2.00	0.43
31:BJ:21:THR:CG2	31:BJ:22:GLY:N	2.61	0.43
31:BJ:44:TYR:CE1	38:BQ:59:LEU:HD11	2.53	0.43
32:BK:1:MET:HE3	32:BK:32:TYR:CD2	2.54	0.43
40:BS:2:GLU:O	40:BS:3:THR:HG23	2.18	0.43
41:BT:22:THR:O	41:BT:25:GLU:HB3	2.18	0.43
41:BT:40:LYS:N	41:BT:43:ILE:HG23	2.32	0.43
46:BY:9:LYS:HB3	46:BY:12:GLU:HB2	1.98	0.43
48:B0:39:ARG:HH11	48:B0:39:ARG:CB	2.19	0.43
50:B2:24:THR:HG23	50:B2:27:GLY:N	2.16	0.43
53:CA:546:A:OP1	4:CD:68:GLU:HB3	2.18	0.43
53:CA:618:C:H5"	53:CA:619:U:H5"	2.00	0.43
53:CA:909:A:H2	53:CA:1413:A:N3	2.15	0.43
53:CA:1049:U:H4'	53:CA:1050:G:C5'	2.47	0.43
53:CA:1072:G:C5	53:CA:1073:U:C4	3.06	0.43
53:CA:1271:A:H5'	53:CA:1314:C:H5"	2.00	0.43
53:CA:1435:G:H2'	53:CA:1436:U:C6	2.54	0.43
4:CD:96:ARG:HE	4:CD:96:ARG:HB3	1.69	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:106:PHE:CD1	4:CD:158:LEU:HD21	2.53	0.43
4:CD:107:GLY:N	4:CD:157:ALA:HB1	2.33	0.43
4:CD:149:LYS:NZ	4:CD:176:LYS:HD2	2.33	0.43
10:CJ:32:THR:HG23	10:CJ:83:THR:OG1	2.18	0.43
55:CM:19:THR:HA	55:CM:25:GLY:O	2.18	0.43
55:CM:91:ARG:HD3	55:CM:91:ARG:O	2.18	0.43
17:CQ:59:GLU:HG3	17:CQ:75:VAL:CG2	2.49	0.43
19:CS:35:ARG:NH2	19:CS:51:HIS:CD2	2.84	0.43
22:DA:621:A:O2'	22:DA:622:G:O5'	2.36	0.43
22:DA:641:U:C5	22:DA:642:U:C4	3.06	0.43
22:DA:718:A:C3'	22:DA:719:C:H5'	2.49	0.43
22:DA:946:C:H2'	22:DA:947:A:C8	2.50	0.43
22:DA:996:A:C4'	38:DQ:91:ARG:HD2	2.33	0.43
22:DA:1244:A:O2'	26:DE:29:HIS:CE1	2.70	0.43
22:DA:1255:U:H2'	22:DA:1255:U:H6	1.61	0.43
22:DA:1552:A:HO2'	22:DA:1553:A:H5'	1.72	0.43
22:DA:1565:C:H5"	24:DC:17:LYS:CE	2.48	0.43
22:DA:1915:U:O2'	22:DA:1916:A:C5'	2.66	0.43
22:DA:1926:U:H2'	22:DA:1928:A:N7	2.33	0.43
22:DA:2342:C:O2'	22:DA:2374:C:H5"	2.18	0.43
22:DA:2358:A:H8	22:DA:2358:A:OP1	2.01	0.43
22:DA:2723:C:H5'	35:DN:3:HIS:HB2	2.00	0.43
22:DA:2818:U:H2'	22:DA:2819:G:C8	2.53	0.43
24:DC:141:HIS:HB3	24:DC:190:THR:HB	2.00	0.43
25:DD:111:GLY:HA3	25:DD:194:PRO:HG2	2.00	0.43
25:DD:116:LYS:HA	35:DN:1:MET:HE1	2.00	0.43
26:DE:117:ARG:NH2	33:DL:2:ARG:HB3	2.33	0.43
28:DG:67:ALA:O	28:DG:71:LEU:HB2	2.18	0.43
34:DM:46:ILE:HD11	34:DM:69:PRO:HG3	1.98	0.43
48:D0:53:VAL:O	48:D0:54:ILE:O	2.36	0.43
1:AA:295:C:H2'	1:AA:296:U:O4'	2.19	0.43
1:AA:683:G:C6	1:AA:708:C:N3	2.86	0.43
1:AA:923:A:O4'	1:AA:1398:A:C2	2.71	0.43
1:AA:959:A:C2	1:AA:1222:G:O4'	2.72	0.43
2:AB:205:ALA:O	2:AB:209:VAL:HG22	2.18	0.43
3:AC:119:ILE:HA	3:AC:122:GLN:HG3	2.00	0.43
4:AD:189:ASP:O	4:AD:190:LEU:HB3	2.18	0.43
6:AF:71:ILE:HG23	6:AF:72:ASP:N	2.33	0.43
9:AI:80:HIS:HE1	9:AI:103:VAL:O	2.01	0.43
10:AJ:7:ARG:HD3	10:AJ:75:ASP:OD1	2.17	0.43
12:AL:3:VAL:O	12:AL:7:VAL:HG23	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:3:ILE:O	20:AT:4:LYS:HB2	2.17	0.43
22:BA:96:C:H4'	46:BY:41:HIS:ND1	2.34	0.43
22:BA:311:A:C8	22:BA:332:A:C5	3.06	0.43
22:BA:496:G:H1'	40:BS:61:ASN:ND2	2.33	0.43
22:BA:674:G:H1'	26:BE:69:ARG:HE	1.83	0.43
22:BA:686:U:H4'	22:BA:687:C:OP2	2.18	0.43
22:BA:1082:U:C4'	30:BI:117:THR:HB	2.49	0.43
22:BA:1624:U:H2'	22:BA:1625:C:C6	2.53	0.43
22:BA:1761:C:O5'	22:BA:1761:C:H6	2.01	0.43
22:BA:2155:U:O2	22:BA:2155:U:H2'	2.18	0.43
22:BA:2648:G:H2'	22:BA:2649:C:H6	1.83	0.43
22:BA:2860:A:H5"	22:BA:2861:U:OP2	2.19	0.43
23:BB:13:G:HO2'	23:BB:15:A:H5'	1.82	0.43
23:BB:42:C:P	27:BF:63:LYS:HE2	2.58	0.43
24:BC:30:ALA:N	24:BC:31:PRO:HD2	2.34	0.43
27:BF:12:VAL:HG13	27:BF:13:LYS:H	1.83	0.43
29:BH:100:ALA:O	29:BH:102:ALA:N	2.52	0.43
29:BH:134:VAL:HG21	29:BH:139:PHE:O	2.18	0.43
31:BJ:13:ARG:O	31:BJ:14:ASP:CB	2.64	0.43
31:BJ:70:THR:HA	31:BJ:90:GLU:HG2	2.00	0.43
32:BK:92:GLU:O	32:BK:93:GLN:O	2.37	0.43
34:BM:12:MET:HB2	34:BM:72:PRO:HD2	2.00	0.43
38:BQ:112:ALA:O	38:BQ:116:LEU:HB2	2.18	0.43
42:BU:52:ASN:C	42:BU:54:PRO:CD	2.87	0.43
43:BV:51:GLN:HG2	43:BV:86:LEU:HD11	1.99	0.43
43:BV:66:ASP:O	43:BV:66:ASP:CG	2.55	0.43
43:BV:75:GLN:HB3	43:BV:90:ASP:HB3	2.00	0.43
49:B1:46:VAL:HG12	49:B1:47:ILE:N	2.34	0.43
53:CA:148:G:N1	53:CA:149:A:C5	2.86	0.43
53:CA:254:G:O2'	53:CA:255:G:H5'	2.18	0.43
53:CA:296:U:C2	53:CA:297:G:C8	3.06	0.43
53:CA:407:U:H2'	53:CA:408:A:C8	2.54	0.43
53:CA:878:A:O2'	53:CA:879:C:H5'	2.18	0.43
53:CA:978:A:OP1	53:CA:980:C:N4	2.51	0.43
53:CA:1014:A:C6	19:CS:33:TRP:CE3	3.06	0.43
53:CA:1343:G:H4'	9:CI:123:ARG:O	2.17	0.43
2:CB:214:GLY:HA2	2:CB:217:ALA:HB3	1.99	0.43
3:CC:122:GLN:O	3:CC:127:VAL:HG22	2.18	0.43
54:CG:41:ILE:O	54:CG:45:ALA:HB3	2.18	0.43
11:CK:85:VAL:HG11	11:CK:92:ARG:NH1	2.33	0.43
17:CQ:20:ILE:HG12	17:CQ:22:VAL:HG23	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CQ:29:LYS:HE2	17:CQ:36:PHE:CD1	2.53	0.43
21:CU:41:THR:O	21:CU:45:LYS:HB2	2.17	0.43
22:DA:301:G:N1	22:DA:317:G:C5	2.87	0.43
22:DA:446:G:C4'	22:DA:447:A:OP1	2.66	0.43
22:DA:449:A:OP2	62:DA:3240:HOH:O	2.21	0.43
22:DA:623:C:H2'	22:DA:624:C:O4'	2.18	0.43
22:DA:924:G:O2'	22:DA:925:A:H5'	2.17	0.43
22:DA:970:U:O2	22:DA:984:A:O2'	2.36	0.43
22:DA:992:C:H4'	39:DR:74:ILE:CD1	2.47	0.43
22:DA:1055:G:C2'	22:DA:1056:G:H5'	2.49	0.43
22:DA:1239:G:C5	22:DA:1240:U:C5	3.05	0.43
22:DA:1324:G:N2	22:DA:1328:A:N1	2.66	0.43
22:DA:1335:C:H2'	22:DA:1336:A:O4'	2.18	0.43
22:DA:1425:G:H2'	22:DA:1426:G:C8	2.52	0.43
22:DA:1820:U:OP1	24:DC:176:ARG:HB3	2.18	0.43
22:DA:1833:C:C2	22:DA:1834:U:C5	3.06	0.43
22:DA:1854:A:H2	22:DA:2087:G:N3	2.16	0.43
22:DA:1965:C:C5'	22:DA:1965:C:H6	2.28	0.43
22:DA:2204:G:C2	22:DA:2205:A:C8	3.06	0.43
22:DA:2282:G:C4	22:DA:2425:A:N6	2.86	0.43
22:DA:2353:G:H21	44:DW:30:VAL:CG2	2.29	0.43
22:DA:2473:U:P	22:DA:2473:U:H6	2.41	0.43
22:DA:2563:U:H1'	22:DA:2566:A:C6	2.52	0.43
22:DA:2619:C:H5'	25:DD:157:LYS:CG	2.47	0.43
22:DA:2626:C:C2'	22:DA:2627:G:H5'	2.48	0.43
22:DA:2681:C:H4'	22:DA:2682:A:O5'	2.16	0.43
22:DA:2784:U:H2'	22:DA:2785:C:H6	1.83	0.43
22:DA:2863:C:O2'	22:DA:2864:G:H5'	2.18	0.43
57:DB:18:G:C2	57:DB:67:G:C6	3.06	0.43
57:DB:31:C:H5"	58:DF:29:ARG:HH12	1.82	0.43
57:DB:109:A:O2'	57:DB:110:C:O5'	2.36	0.43
24:DC:129:LEU:HD21	24:DC:191:LEU:HD21	2.00	0.43
26:DE:29:HIS:ND1	33:DL:6:LEU:HD22	2.31	0.43
26:DE:42:GLY:HA3	26:DE:90:GLN:O	2.18	0.43
58:DF:48:LEU:HG	58:DF:49:LEU:CD2	2.48	0.43
30:DI:58:ILE:HG12	30:DI:66:PHE:CB	2.48	0.43
35:DN:56:LYS:HA	35:DN:84:GLY:CA	2.48	0.43
36:DO:74:VAL:HB	36:DO:106:LEU:HD11	1.99	0.43
37:DP:86:LYS:HD2	37:DP:86:LYS:N	2.34	0.43
39:DR:39:LEU:CA	39:DR:49:ILE:HG21	2.34	0.43
41:DT:29:THR:HB	41:DT:86:THR:CA	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:D1:10:LEU:CD2	49:D1:20:TYR:HB3	2.49	0.43
51:D3:51:LYS:O	51:D3:52:GLY:C	2.56	0.43
1:AA:550:G:H2'	1:AA:551:U:H6	1.82	0.43
1:AA:604:G:C6	1:AA:635:A:N1	2.86	0.43
1:AA:633:G:O2'	1:AA:634:C:H5'	2.18	0.43
1:AA:1162:C:H2'	1:AA:1163:A:O4'	2.18	0.43
7:AG:70:PRO:HD2	7:AG:95:ARG:CG	2.48	0.43
12:AL:87:LYS:HB2	12:AL:87:LYS:NZ	2.33	0.43
16:AP:51:ARG:NH2	16:AP:53:ASP:HB2	2.33	0.43
17:AQ:7:LEU:HD23	17:AQ:24:ILE:CD1	2.48	0.43
17:AQ:80:LYS:NZ	17:AQ:80:LYS:N	2.66	0.43
22:BA:705:A:C8	22:BA:727:A:C4	3.07	0.43
22:BA:1402:U:C2'	22:BA:1403:A:O5'	2.66	0.43
22:BA:1411:U:H2'	22:BA:1412:U:O4'	2.19	0.43
22:BA:1487:U:C2	22:BA:1503:A:C2	3.06	0.43
22:BA:1639:C:O2'	22:BA:1640:A:H5'	2.17	0.43
22:BA:2742:G:OP2	52:B4:24:ARG:NH1	2.52	0.43
25:BD:29:VAL:HB	25:BD:98:VAL:HG22	2.00	0.43
28:BG:84:LYS:HB2	28:BG:132:LEU:H	1.82	0.43
29:BH:67:ALA:HA	29:BH:138:VAL:CB	2.46	0.43
29:BH:100:ALA:O	29:BH:101:ASP:C	2.56	0.43
31:BJ:80:HIS:HB3	31:BJ:81:ILE:HG22	1.99	0.43
32:BK:59:LYS:HG3	32:BK:89:ASN:HD22	1.82	0.43
32:BK:95:ILE:HD12	32:BK:95:ILE:O	2.18	0.43
34:BM:76:LYS:HA	34:BM:77:PRO:HD3	1.85	0.43
34:BM:134:THR:HG23	43:BV:79:ARG:NH2	2.33	0.43
36:BO:7:ARG:HA	36:BO:10:ARG:NH2	2.32	0.43
37:BP:3:ILE:C	37:BP:4:ILE:O	2.55	0.43
37:BP:13:LYS:HE3	37:BP:76:HIS:C	2.38	0.43
39:BR:21:ARG:NH2	39:BR:93:PHE:CZ	2.86	0.43
41:BT:37:ASP:C	41:BT:38:ALA:O	2.55	0.43
46:BY:8:GLU:O	46:BY:12:GLU:HB2	2.18	0.43
53:CA:5:U:H4'	53:CA:6:G:H5'	2.00	0.43
53:CA:178:C:H2'	53:CA:179:A:O4'	2.18	0.43
53:CA:576:C:OP2	53:CA:576:C:H3'	2.19	0.43
53:CA:666:G:C4	53:CA:741:G:C2	3.07	0.43
53:CA:981:U:O4	53:CA:1222:G:O6	2.35	0.43
53:CA:1089:G:C6	53:CA:1090:U:N3	2.86	0.43
53:CA:1151:A:C2	53:CA:1152:A:C5	3.07	0.43
53:CA:1255:G:O2'	53:CA:1258:G:H1'	2.18	0.43
53:CA:1303:C:N4	53:CA:1304:G:C2	2.85	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1316:G:N1	53:CA:1319:A:OP2	2.45	0.43
8:CH:86:LYS:HB2	8:CH:124:ILE:HD11	2.00	0.43
10:CJ:11:LYS:HB3	10:CJ:71:LEU:CD1	2.44	0.43
10:CJ:40:ILE:HB	10:CJ:73:LEU:HD12	2.00	0.43
14:CN:80:ARG:NH1	14:CN:81:ILE:HG13	2.33	0.43
22:DA:2:G:H2'	22:DA:3:U:O4'	2.19	0.43
22:DA:48:G:H2'	22:DA:48:G:N3	2.33	0.43
22:DA:241:A:C8	22:DA:243:U:C4	3.06	0.43
22:DA:325:G:H2'	22:DA:326:G:H8	1.83	0.43
22:DA:475:C:H2'	22:DA:476:G:N7	2.33	0.43
22:DA:533:G:H5'	38:DQ:23:TYR:CE2	2.53	0.43
22:DA:860:U:HO2'	22:DA:861:A:C5'	2.30	0.43
22:DA:1342:A:C6	22:DA:1397:U:C6	3.06	0.43
22:DA:1453:A:C8	35:DN:73:ASN:HB3	2.54	0.43
22:DA:1563:U:H2'	22:DA:1564:C:H6	1.83	0.43
22:DA:1594:U:H2'	22:DA:1595:C:O4'	2.19	0.43
22:DA:1661:G:C2	22:DA:1662:U:C6	3.06	0.43
22:DA:1681:G:H2'	22:DA:1757:A:N1	2.33	0.43
22:DA:1734:G:O2'	22:DA:1735:A:O4'	2.37	0.43
22:DA:1854:A:O4'	22:DA:2233:U:H4'	2.18	0.43
22:DA:2393:U:C2'	22:DA:2394:C:H5'	2.48	0.43
22:DA:2492:U:O2'	22:DA:2493:U:H5'	2.18	0.43
22:DA:2756:U:C1'	22:DA:2757:A:H5"	2.49	0.43
24:DC:103:ILE:HD12	24:DC:104:LEU:H	1.83	0.43
24:DC:131:MET:HE2	24:DC:187:CYS:O	2.18	0.43
25:DD:56:LYS:NZ	25:DD:56:LYS:HB3	2.32	0.43
26:DE:175:ILE:O	26:DE:175:ILE:HG23	2.17	0.43
58:DF:14:LYS:NZ	58:DF:18:GLU:HG3	2.33	0.43
28:DG:104:LEU:HG	28:DG:112:VAL:HG21	2.00	0.43
29:DH:2:GLN:O	29:DH:19:VAL:O	2.35	0.43
29:DH:68:ARG:HD2	29:DH:71:LYS:HD3	1.97	0.43
31:DJ:55:ILE:CG2	31:DJ:123:LYS:HB2	2.48	0.43
32:DK:59:LYS:HE3	32:DK:89:ASN:ND2	2.33	0.43
33:DL:14:LYS:NZ	33:DL:14:LYS:HB3	2.34	0.43
38:DQ:4:LYS:CE	38:DQ:7:VAL:H	2.30	0.43
1:AA:70:U:H5	1:AA:94:G:HO2'	1.64	0.43
1:AA:546:A:OP2	4:AD:68:GLU:HB2	2.19	0.43
1:AA:570:G:O6	1:AA:865:A:N6	2.52	0.43
1:AA:1442:G:H2'	1:AA:1443:C:C6	2.54	0.43
4:AD:61:ARG:NH2	4:AD:67:LEU:HD23	2.33	0.43
8:AH:105:THR:HG21	8:AH:120:LEU:CD1	2.37	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AN:40:ARG:HH12	14:AN:44:VAL:HG21	1.83	0.43
14:AN:63:CYS:HB3	14:AN:67:GLY:H	1.83	0.43
21:AU:4:LYS:HD2	21:AU:4:LYS:C	2.39	0.43
21:AU:23:GLU:HB3	21:AU:24:LYS:H	1.53	0.43
22:BA:187:G:C2	22:BA:210:C:C2	3.07	0.43
22:BA:528:A:C2	22:BA:2043:C:H5'	2.52	0.43
22:BA:563:A:OP2	39:BR:79:ARG:NH2	2.48	0.43
22:BA:697:G:H2'	22:BA:698:C:C6	2.54	0.43
22:BA:826:U:OP1	22:BA:2428:G:H3'	2.18	0.43
22:BA:1731:G:C6	22:BA:1733:G:O6	2.71	0.43
22:BA:1797:G:O3'	24:BC:255:LYS:HA	2.18	0.43
22:BA:2019:A:H2	22:BA:2035:G:H22	1.66	0.43
22:BA:2262:U:H4'	22:BA:2328:A:H2	1.84	0.43
24:BC:109:LEU:HD23	24:BC:110:LYS:N	2.33	0.43
28:BG:86:LEU:HD13	28:BG:130:ILE:HB	1.99	0.43
28:BG:106:LEU:O	28:BG:151:ARG:NH2	2.44	0.43
30:BI:79:LEU:HD21	30:BI:132:ALA:HB1	2.01	0.43
31:BJ:27:ARG:HG2	31:BJ:27:ARG:NH1	2.33	0.43
31:BJ:38:GLY:O	31:BJ:40:HIS:N	2.51	0.43
32:BK:17:ARG:HG3	32:BK:47:ILE:HD13	1.99	0.43
34:BM:119:LEU:HD23	34:BM:119:LEU:HA	1.91	0.43
39:BR:38:VAL:O	39:BR:53:PHE:HA	2.18	0.43
40:BS:19:LEU:HD12	40:BS:19:LEU:HA	1.66	0.43
44:BW:29:SER:O	44:BW:30:VAL:HB	2.19	0.43
44:BW:50:VAL:HB	44:BW:61:LYS:HZ1	1.82	0.43
46:BY:41:HIS:CD2	46:BY:42:LEU:HD13	2.53	0.43
53:CA:21:G:H1'	53:CA:914:A:H61	1.82	0.43
53:CA:131:A:N6	53:CA:232:G:O6	2.52	0.43
53:CA:283:U:C4	53:CA:284:C:C4	3.06	0.43
53:CA:687:A:C2	53:CA:704:A:C5	3.07	0.43
53:CA:1138:G:O2'	53:CA:1139:G:P	2.76	0.43
53:CA:1183:U:H6	53:CA:1183:U:H2'	1.67	0.43
53:CA:1440:U:OP2	53:CA:1440:U:H6	2.02	0.43
2:CB:59:ILE:HD12	2:CB:59:ILE:C	2.38	0.43
2:CB:80:LYS:O	2:CB:83:ALA:N	2.52	0.43
2:CB:89:PHE:HB3	2:CB:149:GLY:O	2.19	0.43
2:CB:163:ILE:HA	2:CB:185:ILE:HG12	2.01	0.43
4:CD:62:ARG:HA	4:CD:62:ARG:HE	1.82	0.43
4:CD:148:ALA:HB1	4:CD:151:GLN:NE2	2.33	0.43
54:CG:129:ASN:OD1	54:CG:134:VAL:HG11	2.18	0.43
14:CN:80:ARG:HG2	14:CN:81:ILE:N	2.32	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:CP:44:SER:N	56:CP:46:LYS:HZ2	2.10	0.43
17:CQ:68:LYS:O	17:CQ:69:THR:HG23	2.18	0.43
22:DA:20:C:O2'	22:DA:21:A:H5'	2.19	0.43
22:DA:137:U:O5'	22:DA:137:U:H6	2.02	0.43
22:DA:247:G:C5	22:DA:249:C:H1'	2.53	0.43
22:DA:251:A:H4'	33:DL:47:ARG:NH2	2.33	0.43
22:DA:372:G:N2	22:DA:401:A:OP2	2.49	0.43
22:DA:410:G:C2	22:DA:2407:A:C5	3.06	0.43
22:DA:455:C:N3	22:DA:473:G:H4'	2.33	0.43
22:DA:571:U:C4	22:DA:575:A:C5	3.07	0.43
22:DA:961:C:H5	22:DA:2456:C:C4'	2.32	0.43
22:DA:1425:G:H2'	22:DA:1426:G:O4'	2.18	0.43
22:DA:1656:C:OP1	25:DD:141:ARG:NH1	2.51	0.43
22:DA:1661:G:C6	22:DA:1662:U:C5	3.06	0.43
22:DA:1866:A:H2'	22:DA:1867:G:H8	1.79	0.43
22:DA:2886:A:N7	48:D0:39:ARG:NE	2.66	0.43
25:DD:169:ARG:O	25:DD:170:VAL:HG22	2.19	0.43
26:DE:134:LEU:HA	26:DE:137:LYS:CB	2.49	0.43
28:DG:43:LYS:HB2	28:DG:50:THR:O	2.19	0.43
31:DJ:5:THR:HA	31:DJ:44:TYR:CE2	2.53	0.43
31:DJ:51:GLY:C	31:DJ:121:LYS:HE3	2.39	0.43
33:DL:47:ARG:HG2	33:DL:47:ARG:NH2	2.34	0.43
36:DO:8:ILE:H	36:DO:8:ILE:HD12	1.82	0.43
36:DO:77:ALA:O	36:DO:81:ARG:HG3	2.19	0.43
39:DR:62:GLU:CD	39:DR:97:LYS:HD2	2.38	0.43
40:DS:7:HIS:CE1	40:DS:10:ALA:HA	2.53	0.43
42:DU:80:ASP:N	42:DU:80:ASP:OD1	2.50	0.43
43:DV:9:ARG:HD3	43:DV:39:ALA:HB1	2.00	0.43
1:AA:430:A:OP2	4:AD:7:LYS:HG2	2.18	0.43
1:AA:734:G:H2'	1:AA:735:C:H6	1.83	0.43
1:AA:1113:C:H2'	1:AA:1114:C:C6	2.53	0.43
1:AA:1210:C:H2'	1:AA:1211:U:C5'	2.48	0.43
1:AA:1340:A:H2'	1:AA:1341:U:O4'	2.19	0.43
1:AA:1409:C:H2'	1:AA:1410:A:C8	2.52	0.43
1:AA:1462:C:H2'	1:AA:1463:U:O4'	2.18	0.43
2:AB:20:ARG:O	2:AB:22:TRP:HB3	2.19	0.43
4:AD:50:TYR:CD2	4:AD:50:TYR:C	2.92	0.43
7:AG:21:LEU:HD21	7:AG:96:ASN:HD22	1.84	0.43
9:AI:9:GLY:HA2	9:AI:80:HIS:CD2	2.54	0.43
19:AS:48:ILE:HD11	19:AS:61:VAL:HG13	2.00	0.43
21:AU:10:PRO:O	21:AU:11:PHE:CB	2.64	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:226:A:C6	22:BA:227:A:C6	3.07	0.43
22:BA:356:G:O2'	22:BA:357:C:H5'	2.17	0.43
22:BA:1049:C:H2'	22:BA:1050:A:H5'	2.00	0.43
22:BA:1467:U:C5	22:BA:1546:G:N3	2.86	0.43
22:BA:1885:A:H2'	22:BA:1886:U:O4'	2.18	0.43
22:BA:2345:G:C5	22:BA:2381:A:C2	3.06	0.43
22:BA:2626:C:H2'	22:BA:2627:G:O4'	2.19	0.43
22:BA:2783:U:H2'	22:BA:2784:U:H6	1.84	0.43
22:BA:2884:U:O2'	22:BA:2885:G:O4'	2.30	0.43
23:BB:66:A:C2	23:BB:108:A:C2	3.06	0.43
24:BC:171:VAL:HG22	24:BC:185:ALA:HA	2.00	0.43
24:BC:257:ARG:NE	24:BC:269:ARG:NH2	2.66	0.43
26:BE:12:LEU:HD22	26:BE:12:LEU:HA	1.80	0.43
26:BE:153:LEU:C	26:BE:153:LEU:HD12	2.39	0.43
26:BE:200:LEU:N	26:BE:200:LEU:HD22	2.33	0.43
27:BF:4:HIS:O	27:BF:7:TYR:HB3	2.19	0.43
27:BF:133:GLU:H	27:BF:150:GLY:HA3	1.83	0.43
27:BF:173:ASP:O	27:BF:174:PHE:C	2.57	0.43
28:BG:154:GLU:OE2	28:BG:156:TYR:N	2.43	0.43
34:BM:68:PHE:C	34:BM:68:PHE:CD2	2.92	0.43
37:BP:50:ARG:HG2	37:BP:57:ALA:CA	2.48	0.43
39:BR:63:VAL:C	39:BR:64:VAL:HG23	2.39	0.43
42:BU:42:LYS:HB3	42:BU:57:ILE:HG23	2.01	0.43
43:BV:76:ASP:OD1	43:BV:77:VAL:N	2.52	0.43
49:B1:22:THR:OG1	49:B1:23:THR:N	2.51	0.43
52:B4:24:ARG:NH2	52:B4:24:ARG:HG2	2.32	0.43
53:CA:16:A:O4'	5:CE:21:SER:HB3	2.19	0.43
53:CA:283:U:H2'	53:CA:284:C:C6	2.53	0.43
53:CA:935:A:H61	54:CG:2:ARG:NE	2.15	0.43
53:CA:948:C:OP2	55:CM:104:ASN:HB3	2.18	0.43
53:CA:1000:A:H1'	53:CA:1041:G:N2	2.34	0.43
53:CA:1215:G:O2'	53:CA:1216:A:C5'	2.66	0.43
2:CB:9:LEU:O	2:CB:10:LYS:HB3	2.19	0.43
4:CD:123:MET:CE	4:CD:126:GLY:O	2.66	0.43
8:CH:78:SER:HB2	8:CH:124:ILE:O	2.18	0.43
9:CI:63:TYR:C	9:CI:64:ILE:HD12	2.39	0.43
10:CJ:6:ILE:HG23	10:CJ:100:ILE:CG2	2.48	0.43
11:CK:74:LYS:HD2	11:CK:104:PHE:CE1	2.39	0.43
11:CK:115:ILE:O	11:CK:115:ILE:HG12	2.18	0.43
15:CO:8:ALA:O	15:CO:11:VAL:HB	2.19	0.43
15:CO:30:LEU:HD23	15:CO:30:LEU:HA	1.76	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:7:LYS:O	20:CT:10:ALA:HB3	2.18	0.43
21:CU:9:GLU:HB3	21:CU:10:PRO:CD	2.48	0.43
21:CU:16:ARG:HD3	21:CU:16:ARG:HA	1.66	0.43
22:DA:36:G:N1	22:DA:445:C:N4	2.67	0.43
22:DA:221:A:C2	22:DA:233:A:C5	3.07	0.43
22:DA:265:A:C6	22:DA:428:A:O4'	2.70	0.43
22:DA:381:G:H5'	45:DX:15:ASN:HD22	1.83	0.43
22:DA:504:A:O2'	22:DA:505:A:P	2.77	0.43
22:DA:675:A:N6	22:DA:676:A:N6	2.66	0.43
22:DA:752:A:C2'	22:DA:753:A:OP2	2.67	0.43
22:DA:855:G:N2	44:DW:23:LYS:HG2	2.33	0.43
22:DA:874:G:C2	22:DA:904:G:C2	3.07	0.43
22:DA:971:G:OP2	22:DA:974:G:N2	2.51	0.43
22:DA:983:A:C6	22:DA:984:A:C2	3.06	0.43
22:DA:1014:A:C2	22:DA:1149:G:C2	3.07	0.43
22:DA:1205:A:N7	26:DE:165:HIS:CG	2.86	0.43
22:DA:1380:G:H1'	22:DA:1569:A:H61	1.82	0.43
22:DA:1401:G:H2'	22:DA:1402:U:C6	2.53	0.43
22:DA:1586:A:H2'	22:DA:1587:G:C8	2.45	0.43
22:DA:1612:C:C2'	22:DA:1613:G:O5'	2.67	0.43
22:DA:1783:A:C2	22:DA:2588:G:O4'	2.71	0.43
22:DA:1914:C:O2	22:DA:1914:C:O4'	2.35	0.43
22:DA:2298:A:H2'	22:DA:2299:U:C5	2.54	0.43
22:DA:2371:G:C2	22:DA:2372:U:C6	3.07	0.43
22:DA:2552:U:C2	22:DA:2554:U:H5'	2.54	0.43
22:DA:2575:C:H4'	25:DD:148:GLN:O	2.19	0.43
22:DA:2577:A:H2	48:D0:1:ALA:H2	1.66	0.43
22:DA:2652:C:C4	22:DA:2653:U:C4	3.07	0.43
57:DB:78:A:C6	57:DB:99:A:C8	3.07	0.43
26:DE:37:ALA:HB1	26:DE:92:HIS:O	2.19	0.43
58:DF:177:ARG:CZ	58:DF:178:LYS:CB	2.96	0.43
30:DI:127:SER:O	30:DI:131:THR:HG23	2.19	0.43
31:DJ:25:LEU:C	31:DJ:27:ARG:N	2.72	0.43
31:DJ:80:HIS:CB	31:DJ:81:ILE:HG13	2.49	0.43
36:DO:26:LEU:HD23	36:DO:92:PHE:HE1	1.84	0.43
36:DO:30:ARG:NH1	36:DO:102:ARG:HB2	2.31	0.43
38:DQ:40:LYS:O	38:DQ:44:TYR:HD2	2.02	0.43
44:DW:67:LYS:CB	44:DW:80:SER:HB2	2.47	0.43
49:D1:3:GLY:O	49:D1:4:ILE:HB	2.18	0.43
49:D1:5:ARG:HH21	49:D1:23:THR:HB	1.83	0.43
1:AA:97:G:H2'	1:AA:98:A:O4'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:111:G:C6	1:AA:330:C:N4	2.87	0.43
1:AA:149:A:N1	1:AA:150:U:C2	2.86	0.43
1:AA:466:A:O2'	1:AA:467:U:C6	2.70	0.43
1:AA:496:A:O2'	1:AA:497:G:C8	2.59	0.43
1:AA:514:C:O2'	1:AA:515:G:H5'	2.18	0.43
1:AA:570:G:H2'	1:AA:571:U:C6	2.54	0.43
1:AA:960:U:H1'	1:AA:1222:G:O2'	2.19	0.43
1:AA:1091:U:C2	1:AA:1095:U:N3	2.87	0.43
1:AA:1422:G:C2'	1:AA:1423:G:H5'	2.49	0.43
3:AC:13:ILE:N	3:AC:13:ILE:HD13	2.34	0.43
5:AE:100:GLU:HB2	5:AE:103:GLY:CA	2.49	0.43
6:AF:40:GLU:CB	6:AF:42:TRP:HE1	2.32	0.43
11:AK:22:ILE:CD1	11:AK:85:VAL:HG22	2.49	0.43
12:AL:94:TYR:CD2	12:AL:94:TYR:N	2.86	0.43
13:AM:21:ILE:HB	13:AM:24:VAL:CG2	2.49	0.43
20:AT:27:MET:HG3	20:AT:28:ARG:N	2.32	0.43
20:AT:33:LYS:HD3	20:AT:33:LYS:HA	1.59	0.43
22:BA:1363:C:O2'	22:BA:1809:A:N3	2.41	0.43
22:BA:1728:C:O2'	22:BA:1729:U:C5	2.71	0.43
22:BA:1857:G:O2'	22:BA:1858:A:P	2.75	0.43
22:BA:2136:G:O2'	22:BA:2137:U:H6	1.98	0.43
22:BA:2375:G:N2	22:BA:2378:A:OP2	2.47	0.43
22:BA:2475:C:C2'	22:BA:2476:A:H5'	2.48	0.43
22:BA:2480:C:C2'	22:BA:2481:G:H5'	2.49	0.43
22:BA:2523:G:C2'	22:BA:2524:G:H5'	2.49	0.43
22:BA:2756:U:H4'	22:BA:2757:A:OP1	2.18	0.43
25:BD:175:LEU:HD23	25:BD:175:LEU:HA	1.75	0.43
26:BE:172:ALA:O	26:BE:175:ILE:CG2	2.66	0.43
28:BG:10:VAL:HG11	28:BG:16:VAL:HG21	2.01	0.43
29:BH:67:ALA:O	29:BH:69:ALA:N	2.43	0.43
32:BK:71:ARG:CB	32:BK:72:PRO:CD	2.86	0.43
34:BM:42:THR:H	34:BM:45:GLN:HB2	1.83	0.43
36:BO:74:VAL:O	36:BO:77:ALA:HB3	2.19	0.43
39:BR:90:ARG:O	39:BR:91:GLN:CB	2.61	0.43
40:BS:97:LEU:N	40:BS:97:LEU:HD22	2.33	0.43
41:BT:27:SER:O	41:BT:28:ASN:CG	2.57	0.43
51:B3:21:PHE:O	51:B3:22:LYS:O	2.36	0.43
53:CA:18:C:C2	53:CA:19:A:C8	3.07	0.43
53:CA:110:C:H2'	53:CA:110:C:O2	2.18	0.43
53:CA:142:G:C5	53:CA:143:A:C8	3.07	0.43
53:CA:321:A:O2'	53:CA:322:C:H5'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:458:U:H2'	53:CA:459:A:C8	2.53	0.43
53:CA:874:G:C6	53:CA:875:U:C4	3.07	0.43
53:CA:885:G:O2'	53:CA:886:G:H5'	2.18	0.43
2:CB:213:LEU:HD12	2:CB:213:LEU:HA	1.87	0.43
4:CD:20:LEU:HD23	4:CD:20:LEU:H	1.82	0.43
8:CH:23:ALA:HA	8:CH:62:LEU:CD2	2.48	0.43
8:CH:26:MET:HB2	8:CH:27:PRO:HD2	2.00	0.43
9:CI:47:VAL:C	9:CI:50:PRO:HD2	2.39	0.43
11:CK:15:VAL:O	11:CK:16:SER:HB2	2.19	0.43
11:CK:60:PHE:O	11:CK:64:VAL:HG13	2.19	0.43
56:CP:56:ARG:O	56:CP:59:HIS:HB3	2.19	0.43
17:CQ:51:GLU:H	17:CQ:51:GLU:HG2	1.58	0.43
18:CR:41:SER:HA	18:CR:46:THR:HG22	2.01	0.43
19:CS:20:LYS:C	19:CS:20:LYS:HD3	2.39	0.43
19:CS:35:ARG:NE	19:CS:51:HIS:HB3	2.34	0.43
20:CT:30:PHE:CE2	20:CT:52:GLU:HG2	2.49	0.43
22:DA:83:A:N6	22:DA:101:A:C5'	2.81	0.43
22:DA:142:A:C2	22:DA:143:C:C2	3.07	0.43
22:DA:547:A:H3'	22:DA:548:G:C5'	2.49	0.43
22:DA:604:G:O6	22:DA:625:G:C6	2.72	0.43
22:DA:656:G:H2'	22:DA:657:U:O4'	2.18	0.43
22:DA:805:G:H3'	22:DA:806:C:C5'	2.48	0.43
22:DA:1179:G:C2	22:DA:1180:U:C2	3.06	0.43
22:DA:1286:A:C5	22:DA:1289:C:C4	3.06	0.43
22:DA:1328:A:H2'	22:DA:1330:C:N4	2.33	0.43
22:DA:1638:C:H5"	22:DA:2710:C:O2'	2.19	0.43
22:DA:1835:G:C4	22:DA:1836:C:C5	3.06	0.43
22:DA:1868:C:N4	22:DA:1869:G:C6	2.86	0.43
22:DA:2031:A:C6	22:DA:2498:C:H1'	2.53	0.43
22:DA:2066:C:O2'	22:DA:2067:G:H5'	2.17	0.43
22:DA:2264:C:H2'	22:DA:2265:U:O4'	2.19	0.43
22:DA:2400:G:H2'	22:DA:2401:U:O4'	2.18	0.43
22:DA:2460:U:H2'	22:DA:2461:A:O4'	2.19	0.43
22:DA:2583:G:C2'	22:DA:2584:U:H5'	2.49	0.43
24:DC:94:LEU:HB2	24:DC:100:ARG:HD2	2.00	0.43
25:DD:159:LYS:HE2	25:DD:160:LYS:H	1.83	0.43
29:DH:42:LYS:NZ	29:DH:42:LYS:HB3	2.34	0.43
32:DK:34:GLY:H	32:DK:37:ASP:HB2	1.82	0.43
35:DN:5:LYS:HG2	35:DN:6:SER:N	2.32	0.43
35:DN:67:PHE:HE2	35:DN:73:ASN:ND2	2.16	0.43
39:DR:78:ARG:HB3	39:DR:83:TYR:HD1	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DU:39:ASN:HD21	42:DU:64:ILE:HG22	1.83	0.43
44:DW:14:ASP:C	44:DW:16:GLU:H	2.21	0.43
45:DX:1:SER:C	45:DX:3:VAL:N	2.68	0.43
1:AA:112:G:C6	1:AA:330:C:C4	3.07	0.43
1:AA:425:G:C6	1:AA:426:U:N3	2.87	0.43
1:AA:443:C:C2'	1:AA:444:G:H5'	2.49	0.43
1:AA:579:A:C4	1:AA:580:C:C5	3.06	0.43
1:AA:1241:G:O2'	1:AA:1242:G:C8	2.47	0.43
1:AA:1347:G:O6	9:AI:11:ARG:NH2	2.51	0.43
1:AA:1373:G:H5"	7:AG:35:LYS:HB2	2.01	0.43
3:AC:38:VAL:O	3:AC:42:LEU:HB2	2.19	0.43
4:AD:65:GLY:HA3	4:AD:114:ARG:HH22	1.84	0.43
4:AD:191:SER:HA	4:AD:194:ILE:HD11	2.01	0.43
7:AG:21:LEU:HD23	7:AG:21:LEU:HA	1.73	0.43
8:AH:63:LYS:HB2	8:AH:70:VAL:HG21	1.99	0.43
13:AM:112:ARG:C	13:AM:113:LYS:HG3	2.38	0.43
14:AN:42:ASN:C	14:AN:44:VAL:N	2.70	0.43
17:AQ:11:VAL:HG21	17:AQ:53:GLY:O	2.19	0.43
22:BA:52:A:O2'	22:BA:53:A:H5'	2.18	0.43
22:BA:962:G:H2'	22:BA:963:U:H6	1.83	0.43
22:BA:999:U:C5	22:BA:1154:G:C6	3.06	0.43
22:BA:1185:G:H5"	22:BA:1186:G:P	2.59	0.43
22:BA:1245:G:OP1	33:BL:13:LYS:HE3	2.18	0.43
22:BA:1498:C:O2'	22:BA:1499:C:O4'	2.37	0.43
22:BA:2029:G:H2'	22:BA:2031:A:OP1	2.19	0.43
22:BA:2428:G:H5"	22:BA:2429:G:P	2.59	0.43
22:BA:2703:C:O5'	22:BA:2703:C:H6	2.02	0.43
24:BC:124:LYS:HB3	24:BC:127:ASN:ND2	2.34	0.43
24:BC:141:HIS:N	24:BC:190:THR:O	2.40	0.43
24:BC:229:HIS:CD2	24:BC:246:PRO:HB3	2.54	0.43
27:BF:79:ARG:O	27:BF:82:TYR:HB2	2.19	0.43
29:BH:18:GLN:CA	29:BH:18:GLN:NE2	2.81	0.43
29:BH:68:ARG:NH2	29:BH:69:ALA:HA	2.34	0.43
31:BJ:17:VAL:HG13	31:BJ:55:ILE:HG13	2.00	0.43
35:BN:54:LEU:HA	35:BN:54:LEU:HD12	1.68	0.43
37:BP:96:LEU:HD12	37:BP:98:TYR:CE1	2.54	0.43
39:BR:20:VAL:CG2	39:BR:22:LEU:HD21	2.48	0.43
39:BR:51:VAL:CB	39:BR:52:PRO:CD	2.94	0.43
39:BR:64:VAL:O	39:BR:65:ALA:CB	2.67	0.43
43:BV:65:VAL:O	43:BV:65:VAL:CG2	2.65	0.43
45:BX:44:ARG:CG	45:BX:45:PHE:N	2.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:42:VAL:O	49:B1:42:VAL:CG1	2.67	0.43
51:B3:21:PHE:HB2	51:B3:49:VAL:HG11	1.99	0.43
53:CA:363:A:N6	53:CA:364:A:C6	2.86	0.43
53:CA:502:A:P	12:CL:114:SER:HG	2.42	0.43
53:CA:582:C:C2	53:CA:583:A:C8	3.07	0.43
53:CA:679:C:O2	53:CA:712:A:C2	2.71	0.43
53:CA:968:A:N3	53:CA:1062:U:H4'	2.32	0.43
53:CA:1025:U:O2'	53:CA:1026:G:OP2	2.27	0.43
53:CA:1066:C:C2'	53:CA:1067:A:C8	2.99	0.43
53:CA:1138:G:C2'	53:CA:1139:G:OP1	2.65	0.43
53:CA:1284:C:H5"	53:CA:1285:A:H5'	1.99	0.43
53:CA:1288:A:H2'	53:CA:1289:A:C8	2.53	0.43
53:CA:1395:C:H5"	53:CA:1402:C:O2'	2.19	0.43
2:CB:9:LEU:HB2	2:CB:11:ALA:H	1.83	0.43
2:CB:49:PHE:HB3	2:CB:199:ILE:CG2	2.49	0.43
2:CB:66:ILE:O	2:CB:88:GLN:HB2	2.19	0.43
3:CC:148:ILE:HD12	3:CC:149:LYS:H	1.83	0.43
3:CC:179:ALA:HB1	3:CC:202:PHE:HE1	1.83	0.43
6:CF:72:ASP:O	6:CF:75:GLU:HB2	2.19	0.43
54:CG:2:ARG:HG2	54:CG:3:ARG:N	2.33	0.43
8:CH:80:PRO:HA	8:CH:83:ARG:NE	2.34	0.43
9:CI:39:GLY:O	9:CI:40:ARG:HB2	2.19	0.43
9:CI:56:MET:O	9:CI:58:GLU:HG2	2.18	0.43
9:CI:125:GLN:H	9:CI:125:GLN:HE21	1.66	0.43
10:CJ:81:GLU:O	10:CJ:86:ALA:HB3	2.17	0.43
11:CK:111:ASP:N	21:CU:3:ILE:N	2.57	0.43
12:CL:9:LYS:HE2	12:CL:9:LYS:HB2	1.73	0.43
56:CP:78:VAL:HG12	56:CP:78:VAL:O	2.19	0.43
20:CT:61:ALA:HA	20:CT:67:HIS:HA	2.00	0.43
21:CU:33:ARG:HG2	21:CU:34:ARG:N	2.34	0.43
22:DA:15:G:H2'	22:DA:16:C:O4'	2.18	0.43
22:DA:136:G:H8	22:DA:136:G:O5'	2.02	0.43
22:DA:574:A:H4'	22:DA:575:A:H5'	2.00	0.43
22:DA:617:G:O2'	22:DA:618:G:C8	2.42	0.43
22:DA:629:G:O2'	22:DA:630:G:H5'	2.19	0.43
22:DA:637:A:O5'	33:DL:112:LEU:CD2	2.67	0.43
22:DA:686:U:C4	50:D2:12:ARG:HG3	2.53	0.43
22:DA:814:C:C2	22:DA:1194:A:C2	3.07	0.43
22:DA:1071:G:C5	22:DA:1089:A:C5	3.07	0.43
22:DA:1251:C:O2'	62:DA:3286:HOH:O	2.21	0.43
22:DA:1455:G:O6	22:DA:2705:A:C2	2.71	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1640:A:H3'	22:DA:1641:A:H8	1.82	0.43
22:DA:1775:U:H2'	22:DA:1776:G:O5'	2.18	0.43
22:DA:1831:G:C6	22:DA:1832:C:C4	3.06	0.43
22:DA:1838:C:C5	22:DA:1899:A:C6	3.06	0.43
22:DA:1867:G:O2'	22:DA:1868:C:H5'	2.18	0.43
22:DA:1884:G:H2'	22:DA:1884:G:N3	2.33	0.43
22:DA:2149:U:O2'	22:DA:2150:C:C6	2.71	0.43
22:DA:2150:C:H2'	22:DA:2151:U:O4'	2.18	0.43
22:DA:2331:G:C6	22:DA:2385:C:N4	2.87	0.43
22:DA:2371:G:O3'	49:D1:44:GLN:NE2	2.52	0.43
22:DA:2458:G:H1'	22:DA:2459:A:N7	2.33	0.43
22:DA:2497:A:H4'	22:DA:2498:C:O5'	2.18	0.43
22:DA:2680:U:OP2	25:DD:114:LYS:HD3	2.17	0.43
22:DA:2819:G:N3	22:DA:2828:G:C2	2.87	0.43
58:DF:90:LEU:HB3	58:DF:95:MET:HG3	2.00	0.43
28:DG:34:ARG:O	28:DG:35:THR:HG23	2.19	0.43
28:DG:88:LEU:HD11	28:DG:128:THR:HA	2.00	0.43
30:DI:89:SER:HB3	30:DI:97:VAL:HG11	1.99	0.43
37:DP:47:ILE:HD13	37:DP:61:ARG:CB	2.49	0.43
38:DQ:82:LEU:O	38:DQ:85:ALA:HB3	2.18	0.43
41:DT:25:GLU:HA	41:DT:29:THR:O	2.18	0.43
43:DV:21:ARG:HE	43:DV:87:GLN:CB	2.31	0.43
1:AA:51:A:H4'	1:AA:52:C:C5'	2.48	0.43
1:AA:307:C:H5"	1:AA:308:C:OP2	2.18	0.43
1:AA:429:U:H3'	4:AD:8:LEU:HD23	2.00	0.43
1:AA:828:U:H2'	1:AA:829:G:O5'	2.19	0.43
1:AA:914:A:H2'	1:AA:915:A:C8	2.52	0.43
1:AA:1027:C:H6	1:AA:1027:C:O5'	2.02	0.43
1:AA:1033:G:H2'	1:AA:1034:G:H5"	2.01	0.43
2:AB:89:PHE:CE1	2:AB:153:MET:HB2	2.53	0.43
2:AB:168:GLU:HB3	2:AB:171:ALA:HB3	2.01	0.43
4:AD:1:ALA:O	4:AD:67:LEU:CD1	2.65	0.43
8:AH:1:SER:C	8:AH:3:GLN:N	2.71	0.43
10:AJ:18:ILE:HG23	10:AJ:19:ASP:N	2.33	0.43
11:AK:34:THR:HG1	11:AK:39:ASN:N	2.15	0.43
11:AK:80:ASN:HB3	11:AK:105:ARG:HB3	2.01	0.43
12:AL:4:ASN:ND2	12:AL:8:ARG:HH12	2.16	0.43
13:AM:76:ILE:O	13:AM:79:LEU:HB2	2.18	0.43
14:AN:30:ILE:HG23	14:AN:44:VAL:HG12	2.01	0.43
22:BA:588:U:C2	22:BA:589:U:C5	3.07	0.43
22:BA:904:G:N3	22:BA:905:A:N9	2.64	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1376:C:C4	22:BA:1377:G:C6	3.07	0.43
22:BA:1447:C:H2'	22:BA:1448:G:C8	2.53	0.43
22:BA:1659:G:C6	22:BA:2002:G:C6	3.07	0.43
22:BA:2006:C:O5'	22:BA:2006:C:H6	2.02	0.43
22:BA:2293:G:C2	22:BA:2340:A:C2	3.07	0.43
22:BA:2808:G:C2	22:BA:2891:U:C5	3.07	0.43
24:BC:57:HIS:CG	24:BC:58:LYS:H	2.31	0.43
29:BH:41:LYS:O	29:BH:44:ILE:HG12	2.18	0.43
30:BI:56:VAL:CG2	30:BI:68:PHE:HB2	2.49	0.43
31:BJ:18:VAL:HG22	31:BJ:140:LEU:CD1	2.48	0.43
31:BJ:36:LEU:HD21	31:BJ:122:LEU:HB2	2.01	0.43
32:BK:60:ALA:HA	32:BK:87:LEU:HG	2.01	0.43
33:BL:119:PRO:HA	33:BL:138:ALA:O	2.19	0.43
36:BO:3:LYS:CG	36:BO:4:LYS:H	2.30	0.43
40:BS:24:ILE:HD12	40:BS:32:ALA:HA	2.01	0.43
42:BU:61:GLU:H	42:BU:61:GLU:HG2	1.25	0.43
44:BW:30:VAL:O	44:BW:30:VAL:CG2	2.66	0.43
44:BW:43:LYS:HE2	44:BW:68:PHE:HE1	1.84	0.43
45:BX:62:GLY:O	45:BX:66:VAL:HG23	2.19	0.43
53:CA:223:A:C6	53:CA:224:U:C4	3.07	0.43
53:CA:258:G:O3'	20:CT:35:TYR:OH	2.37	0.43
53:CA:612:C:C2	53:CA:613:C:C5	3.07	0.43
53:CA:933:G:P	54:CG:3:ARG:HD3	2.59	0.43
53:CA:990:C:H42	53:CA:1216:A:H61	1.66	0.43
53:CA:1160:G:O2'	53:CA:1161:C:O5'	2.37	0.43
53:CA:1299:A:N9	53:CA:1301:U:H1'	2.34	0.43
2:CB:164:ASP:HB3	2:CB:167:HIS:CB	2.49	0.43
4:CD:8:LEU:HD13	4:CD:8:LEU:HA	1.86	0.43
55:CM:82:LEU:HD12	55:CM:82:LEU:N	2.34	0.43
19:CS:43:MET:O	19:CS:61:VAL:HG11	2.19	0.43
22:DA:30:G:C5	22:DA:31:C:C4	3.07	0.43
22:DA:46:G:N2	22:DA:47:C:C2	2.87	0.43
22:DA:242:G:C8	51:D3:3:ILE:O	2.70	0.43
22:DA:372:G:H5"	45:DX:60:LYS:HD3	2.01	0.43
22:DA:581:C:C2	22:DA:582:A:C8	3.07	0.43
22:DA:637:A:P	33:DL:128:THR:HG21	2.59	0.43
22:DA:670:A:C1'	22:DA:671:C:OP2	2.66	0.43
22:DA:976:G:O2'	22:DA:977:G:H5'	2.19	0.43
22:DA:1049:C:H6	22:DA:1049:C:H2'	1.57	0.43
22:DA:1075:C:O2'	22:DA:1076:C:C6	2.68	0.43
22:DA:1107:G:C2'	22:DA:1108:U:H5'	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1204:A:O4'	22:DA:1206:G:C5	2.71	0.43
22:DA:1287:A:H5'	35:DN:103:ARG:NH1	2.34	0.43
22:DA:1700:A:H2'	22:DA:1701:A:H5'	2.01	0.43
22:DA:1739:A:N6	22:DA:1740:G:C6	2.87	0.43
22:DA:1885:A:C6	22:DA:1886:U:C2	3.06	0.43
22:DA:2056:G:C2	22:DA:2057:G:N7	2.87	0.43
22:DA:2152:G:N3	22:DA:2152:G:H2'	2.33	0.43
22:DA:2361:G:OP1	51:D3:25:HIS:HA	2.19	0.43
22:DA:2361:G:H2'	22:DA:2362:C:H6	1.84	0.43
22:DA:2415:G:C5	22:DA:2416:C:C4	3.07	0.43
22:DA:2591:C:P	24:DC:237:ARG:HD2	2.59	0.43
22:DA:2771:C:H5"	25:DD:207:VAL:HG11	2.01	0.43
22:DA:2848:G:OP2	37:DP:94:ALA:N	2.43	0.43
22:DA:2893:A:O4'	22:DA:2894:G:C2	2.71	0.43
58:DF:3:LEU:HG	58:DF:100:GLU:CD	2.39	0.43
28:DG:39:ALA:O	28:DG:40:VAL:HG13	2.19	0.43
28:DG:53:PRO:HG3	28:DG:61:TRP:CE2	2.54	0.43
29:DH:80:ILE:HB	29:DH:101:ASP:HB2	1.95	0.43
32:DK:15:GLY:O	32:DK:16:ALA:O	2.36	0.43
36:DO:15:ARG:HG2	36:DO:93:ASP:OD1	2.19	0.43
36:DO:24:THR:H	36:DO:90:VAL:CG1	2.31	0.43
37:DP:3:ILE:C	37:DP:5:LYS:H	2.21	0.43
37:DP:19:PHE:O	37:DP:20:ARG:HB3	2.19	0.43
38:DQ:96:ASP:C	38:DQ:98:ALA:N	2.71	0.43
42:DU:92:VAL:CB	42:DU:101:THR:HG21	2.43	0.43
45:DX:19:HIS:C	45:DX:21:LEU:N	2.70	0.43
48:D0:38:LEU:N	48:D0:41:HIS:CE1	2.87	0.43
49:D1:8:ILE:CG2	49:D1:9:LYS:N	2.82	0.43
51:D3:3:ILE:HG21	51:D3:62:PRO:HG2	2.00	0.43
1:AA:7:A:N6	5:AE:96:GLN:OE1	2.52	0.43
1:AA:72:A:H61	1:AA:99:C:C1'	2.31	0.43
1:AA:175:C:O2'	1:AA:176:C:O4'	2.36	0.43
1:AA:198:G:O6	1:AA:220:G:C5	2.72	0.43
1:AA:274:A:C4'	1:AA:275:G:OP1	2.65	0.43
1:AA:330:C:H5"	1:AA:330:C:C6	2.54	0.43
1:AA:536:C:H2'	1:AA:537:G:C8	2.54	0.43
1:AA:555:U:H2'	1:AA:556:C:H6	1.81	0.43
1:AA:637:C:O2'	1:AA:638:U:H5'	2.19	0.43
1:AA:676:A:H1'	11:AK:116:PRO:HB3	2.01	0.43
1:AA:922:G:HO2'	1:AA:1398:A:H2	1.62	0.43
1:AA:1016:A:H3'	1:AA:1017:U:O4'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1273:C:H2'	1:AA:1274:A:O4'	2.18	0.43
1:AA:1328:C:C2	1:AA:1329:A:C8	3.07	0.43
4:AD:190:LEU:O	4:AD:191:SER:HB2	2.18	0.43
5:AE:80:LEU:HD12	5:AE:146:MET:HE1	1.99	0.43
9:AI:20:ILE:HG23	9:AI:60:LEU:HD12	2.01	0.43
20:AT:55:PRO:O	20:AT:59:ARG:HB3	2.18	0.43
21:AU:37:TYR:HB3	21:AU:38:GLU:H	1.62	0.43
21:AU:45:LYS:HA	21:AU:45:LYS:HE3	2.01	0.43
22:BA:478:A:C6	22:BA:480:A:C6	3.07	0.43
22:BA:754:U:H2'	22:BA:755:U:C6	2.52	0.43
22:BA:833:A:OP2	33:BL:39:LYS:HE3	2.19	0.43
22:BA:902:C:N4	22:BA:903:C:H41	1.99	0.43
22:BA:979:A:H2'	22:BA:982:C:H42	1.84	0.43
22:BA:1037:G:O2'	22:BA:1038:G:H5'	2.19	0.43
22:BA:1334:G:C6	22:BA:1335:C:C4	3.06	0.43
22:BA:1797:G:H5'	24:BC:253:GLY:HA2	2.01	0.43
22:BA:2097:A:H2'	22:BA:2098:U:C6	2.54	0.43
24:BC:104:LEU:HD12	24:BC:104:LEU:HA	1.52	0.43
24:BC:173:LEU:O	24:BC:180:MET:HA	2.18	0.43
25:BD:67:HIS:O	25:BD:68:PHE:C	2.56	0.43
26:BE:105:LEU:HA	26:BE:108:ILE:HG23	2.01	0.43
27:BF:110:ILE:O	27:BF:111:ARG:C	2.57	0.43
30:BI:3:LYS:HD2	30:BI:4:VAL:H	1.82	0.43
39:BR:20:VAL:HG21	39:BR:22:LEU:HD21	2.01	0.43
39:BR:68:ARG:HH11	39:BR:90:ARG:NH1	2.14	0.43
40:BS:36:LEU:HD23	40:BS:48:LYS:HA	2.00	0.43
44:BW:37:VAL:HG12	44:BW:38:ARG:HG2	2.00	0.43
45:BX:11:PRO:HB3	45:BX:29:LEU:CB	2.49	0.43
50:B2:36:ALA:O	50:B2:38:GLY:N	2.51	0.43
53:CA:183:C:O2'	53:CA:184:G:O5'	2.27	0.43
53:CA:208:U:C4	53:CA:212:G:N1	2.87	0.43
53:CA:315:A:C5	53:CA:330:C:H5"	2.54	0.43
53:CA:695:A:N1	53:CA:696:A:C2	2.87	0.43
53:CA:974:A:H8	14:CN:70:HIS:CE1	2.37	0.43
53:CA:1005:A:C8	53:CA:1006:G:H1'	2.54	0.43
53:CA:1215:G:C4	53:CA:1216:A:N7	2.87	0.43
53:CA:1301:U:H5"	53:CA:1302:C:P	2.58	0.43
53:CA:1457:G:OP1	20:CT:33:LYS:NZ	2.49	0.43
2:CB:9:LEU:HD12	2:CB:12:GLY:N	2.33	0.43
2:CB:64:GLY:HA2	2:CB:158:ASP:OD2	2.18	0.43
2:CB:119:GLN:HE22	2:CB:136:ARG:HH12	1.67	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:34:GLU:HB3	4:CD:35:GLN:H	1.54	0.43
5:CE:52:ALA:HB2	5:CE:61:LYS:CE	2.41	0.43
6:CF:32:ALA:O	6:CF:33:GLU:HB2	2.18	0.43
6:CF:39:LEU:HD12	6:CF:40:GLU:N	2.34	0.43
54:CG:94:ARG:HB3	54:CG:98:LEU:HG	2.00	0.43
54:CG:124:SER:C	54:CG:126:ALA:H	2.22	0.43
11:CK:57:SER:O	11:CK:90:PRO:HG3	2.18	0.43
11:CK:81:LEU:HD11	11:CK:104:PHE:CG	2.53	0.43
11:CK:110:THR:HG22	21:CU:4:LYS:HA	2.01	0.43
12:CL:81:ILE:HD11	12:CL:94:TYR:CG	2.54	0.43
15:CO:9:LYS:O	15:CO:13:GLU:OE2	2.37	0.43
56:CP:75:ILE:HA	56:CP:78:VAL:CG2	2.47	0.43
19:CS:62:THR:HG22	19:CS:63:ASP:N	2.34	0.43
20:CT:66:ILE:HD12	20:CT:70:LYS:HG2	2.01	0.43
21:CU:35:GLU:HG3	21:CU:36:PHE:N	2.28	0.43
22:DA:3:U:C4	22:DA:4:U:C5	3.07	0.43
22:DA:30:G:C6	22:DA:31:C:N3	2.87	0.43
22:DA:70:G:H5'	22:DA:112:U:O2	2.19	0.43
22:DA:71:A:OP2	22:DA:71:A:H3'	2.19	0.43
22:DA:191:A:H2'	22:DA:192:C:C6	2.54	0.43
22:DA:214:G:H1'	22:DA:217:A:H5'	2.00	0.43
22:DA:449:A:H4'	38:DQ:2:ARG:HH22	1.83	0.43
22:DA:492:A:N1	40:DS:49:LYS:HE2	2.33	0.43
22:DA:584:C:N4	22:DA:585:G:C6	2.87	0.43
22:DA:657:U:O2'	22:DA:658:U:H5'	2.19	0.43
22:DA:867:C:O2'	22:DA:868:U:C6	2.37	0.43
22:DA:1420:A:N3	22:DA:2211:A:N7	2.66	0.43
22:DA:1439:A:H2	22:DA:1553:A:N7	2.15	0.43
22:DA:1533:C:C2'	22:DA:1534:U:H5'	2.49	0.43
22:DA:1598:A:O2'	22:DA:1599:U:H5'	2.19	0.43
22:DA:1784:A:P	62:DA:3680:HOH:O	2.77	0.43
22:DA:1798:U:C5	24:DC:270:ARG:NH1	2.87	0.43
22:DA:1980:G:C2	22:DA:1982:U:C4	3.07	0.43
22:DA:2351:G:O6	51:D3:42:HIS:HE1	2.02	0.43
22:DA:2738:A:H2	22:DA:2766:A:N6	2.11	0.43
22:DA:2744:G:N2	22:DA:2745:C:C2	2.87	0.43
22:DA:2800:A:H2'	22:DA:2801:G:O4'	2.18	0.43
24:DC:73:ILE:O	24:DC:116:GLN:HG2	2.18	0.43
32:DK:87:LEU:HD23	32:DK:87:LEU:N	2.34	0.43
35:DN:2:ARG:CD	35:DN:5:LYS:HB3	2.46	0.43
36:DO:24:THR:HG22	36:DO:41:ALA:HA	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DV:75:GLN:HG3	43:DV:92:VAL:HG11	2.01	0.43
44:DW:9:THR:OG1	44:DW:10:ARG:N	2.50	0.43
1:AA:102:G:C4	1:AA:103:U:C5	3.07	0.42
1:AA:184:G:O4'	1:AA:224:U:H4'	2.18	0.42
1:AA:495:A:C4'	1:AA:496:A:O5'	2.66	0.42
1:AA:554:A:H5"	12:AL:25:ALA:HB1	2.02	0.42
1:AA:692:U:H1'	1:AA:695:A:N7	2.34	0.42
1:AA:792:A:N3	1:AA:794:A:C5	2.87	0.42
1:AA:1394:A:C6	1:AA:1501:C:H4'	2.54	0.42
1:AA:1473:G:C2'	1:AA:1474:U:H5'	2.49	0.42
2:AB:130:LYS:NZ	2:AB:133:ALA:HB2	2.34	0.42
2:AB:148:GLY:HA2	2:AB:151:LYS:HE3	2.01	0.42
5:AE:110:MET:HA	5:AE:113:VAL:HG13	2.00	0.42
8:AH:30:LYS:HD2	8:AH:30:LYS:HA	1.75	0.42
9:AI:62:LEU:HD23	9:AI:62:LEU:N	2.34	0.42
12:AL:83:GLY:HA2	12:AL:94:TYR:HA	2.00	0.42
19:AS:4:LEU:HD12	19:AS:4:LEU:H	1.83	0.42
20:AT:79:THR:O	20:AT:80:ALA:C	2.56	0.42
22:BA:738:G:C6	22:BA:739:A:C2	3.07	0.42
22:BA:855:G:H1'	44:BW:23:LYS:HD3	2.01	0.42
22:BA:874:G:C6	22:BA:904:G:C6	3.07	0.42
22:BA:1353:A:O2'	22:BA:1354:A:H5'	2.19	0.42
22:BA:2643:G:H2'	22:BA:2644:G:O4'	2.19	0.42
22:BA:2689:U:H4'	22:BA:2690:U:OP2	2.19	0.42
22:BA:2860:A:H8	22:BA:2860:A:O5'	2.02	0.42
24:BC:115:ILE:HD12	24:BC:115:ILE:HA	1.72	0.42
24:BC:254:LYS:O	24:BC:256:THR:N	2.49	0.42
24:BC:259:ASN:C	24:BC:261:ARG:N	2.73	0.42
25:BD:42:ASN:O	25:BD:43:ASP:O	2.36	0.42
26:BE:3:LEU:O	26:BE:11:ALA:HA	2.19	0.42
26:BE:48:THR:HG22	26:BE:86:ALA:HB3	1.99	0.42
26:BE:154:ASP:OD2	26:BE:154:ASP:C	2.58	0.42
27:BF:165:GLY:O	27:BF:168:LEU:HB3	2.19	0.42
28:BG:90:GLY:O	28:BG:91:VAL:C	2.57	0.42
29:BH:66:ASN:C	29:BH:68:ARG:N	2.72	0.42
30:BI:59:THR:HG22	30:BI:61:TYR:CE2	2.53	0.42
31:BJ:54:ILE:HD12	31:BJ:55:ILE:N	2.34	0.42
31:BJ:124:VAL:O	31:BJ:125:TYR:HB2	2.18	0.42
35:BN:45:ARG:HG2	35:BN:95:THR:HG21	2.01	0.42
35:BN:106:ASP:OD1	35:BN:106:ASP:C	2.57	0.42
39:BR:61:ALA:CB	39:BR:98:ILE:H	2.29	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BR:80:ARG:C	39:BR:81:LYS:HD3	2.40	0.42
44:BW:28:GLU:CB	44:BW:31:LEU:HD11	2.49	0.42
45:BX:70:LEU:O	45:BX:74:GLY:N	2.51	0.42
53:CA:120:A:O2'	53:CA:121:U:H5"	2.17	0.42
53:CA:188:C:N4	53:CA:189:A:N6	2.67	0.42
53:CA:338:A:H61	53:CA:351:G:H1	1.67	0.42
53:CA:444:G:C2	53:CA:445:G:C8	3.06	0.42
53:CA:694:A:H3'	53:CA:695:A:H5"	2.01	0.42
53:CA:825:A:H2'	53:CA:826:C:C6	2.54	0.42
53:CA:962:C:H2'	53:CA:963:G:C8	2.54	0.42
53:CA:1035:A:H2'	53:CA:1036:A:C8	2.54	0.42
53:CA:1054:C:H1'	53:CA:1196:A:C5	2.54	0.42
53:CA:1142:G:N2	53:CA:1143:G:H1'	2.33	0.42
53:CA:1486:G:H2'	53:CA:1487:G:O4'	2.19	0.42
3:CC:113:LYS:HG3	3:CC:184:ASN:ND2	2.34	0.42
5:CE:154:ALA:C	5:CE:156:ARG:H	2.21	0.42
54:CG:8:GLN:CD	54:CG:9:ARG:H	2.22	0.42
10:CJ:66:GLU:O	14:CN:95:LEU:HA	2.19	0.42
12:CL:35:ARG:HD3	12:CL:35:ARG:HA	1.75	0.42
12:CL:62:VAL:HG23	12:CL:63:THR:N	2.34	0.42
55:CM:12:LYS:HB3	55:CM:17:ALA:CB	2.47	0.42
55:CM:23:GLY:HA3	55:CM:64:VAL:HG13	2.00	0.42
55:CM:64:VAL:CG1	55:CM:65:GLU:H	2.23	0.42
14:CN:100:TRP:CD1	14:CN:100:TRP:C	2.92	0.42
56:CP:19:VAL:HG13	56:CP:37:GLY:HA3	2.01	0.42
22:DA:95:A:O2'	46:DY:40:SER:N	2.52	0.42
22:DA:126:A:OP2	50:D2:19:ARG:HB2	2.19	0.42
22:DA:216:A:N6	22:DA:432:A:C1'	2.82	0.42
22:DA:235:U:N3	22:DA:236:C:C5	2.85	0.42
22:DA:294:A:N1	22:DA:346:A:C6	2.87	0.42
22:DA:374:A:C4	22:DA:401:A:C6	3.07	0.42
22:DA:388:G:H8	22:DA:388:G:H2'	1.68	0.42
22:DA:486:C:O5'	22:DA:486:C:H6	2.01	0.42
22:DA:491:G:N2	22:DA:492:A:H1'	2.33	0.42
22:DA:782:A:N7	24:DC:219:VAL:HG21	2.33	0.42
22:DA:798:G:OP2	26:DE:56:GLY:HA3	2.19	0.42
22:DA:799:G:P	22:DA:800:A:H3'	2.59	0.42
22:DA:1255:U:HO2'	22:DA:1256:G:P	2.41	0.42
22:DA:1408:G:H22	22:DA:1595:C:H1'	1.84	0.42
22:DA:1551:A:H2'	22:DA:1552:A:O4'	2.19	0.42
22:DA:1647:U:H3'	22:DA:1647:U:P	2.59	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1792:G:O2'	22:DA:1793:C:H5'	2.19	0.42
22:DA:2149:U:HO2'	22:DA:2150:C:H6	1.64	0.42
22:DA:2287:A:N6	22:DA:2289:G:N3	2.67	0.42
22:DA:2344:U:H6	22:DA:2344:U:O5'	2.01	0.42
22:DA:2390:U:O2	22:DA:2390:U:H2'	2.19	0.42
22:DA:2474:U:C2'	22:DA:2475:C:O5'	2.67	0.42
22:DA:2484:G:OP1	34:DM:44:ARG:HD3	2.19	0.42
22:DA:2493:U:H2'	22:DA:2494:G:O4'	2.19	0.42
24:DC:161:VAL:HG11	24:DC:173:LEU:HB2	1.99	0.42
25:DD:22:ILE:HD13	25:DD:22:ILE:HA	1.92	0.42
26:DE:77:ILE:H	26:DE:77:ILE:HG12	1.39	0.42
26:DE:153:LEU:HD21	26:DE:157:LEU:HG	2.00	0.42
32:DK:9:ASN:ND2	32:DK:17:ARG:CZ	2.82	0.42
33:DL:90:VAL:HG12	33:DL:90:VAL:O	2.19	0.42
33:DL:122:VAL:O	33:DL:122:VAL:HG23	2.19	0.42
35:DN:14:SER:C	35:DN:16:HIS:N	2.72	0.42
39:DR:14:VAL:HG22	39:DR:15:SER:O	2.19	0.42
39:DR:49:ILE:HG22	39:DR:54:VAL:HB	2.01	0.42
41:DT:69:ARG:NE	41:DT:70:HIS:CD2	2.87	0.42
46:DY:31:GLN:OE1	46:DY:37:LEU:HB2	2.19	0.42
47:DZ:33:HIS:O	47:DZ:33:HIS:CG	2.71	0.42
1:AA:536:C:H2'	1:AA:537:G:H8	1.84	0.42
1:AA:616:G:O2'	1:AA:617:G:H5'	2.20	0.42
1:AA:751:U:C5	1:AA:752:G:C6	3.08	0.42
1:AA:946:A:H2'	1:AA:947:G:C8	2.54	0.42
1:AA:958:A:C6	1:AA:959:A:N1	2.87	0.42
2:AB:95:TRP:O	2:AB:95:TRP:HE3	2.02	0.42
4:AD:34:GLU:O	4:AD:36:ALA:N	2.52	0.42
4:AD:57:LYS:HG2	4:AD:202:LEU:HD23	2.02	0.42
8:AH:21:LYS:HE2	8:AH:21:LYS:CA	2.47	0.42
11:AK:21:HIS:HD2	11:AK:34:THR:CG2	2.32	0.42
13:AM:18:LEU:O	13:AM:21:ILE:HD13	2.19	0.42
13:AM:90:HIS:HA	13:AM:108:ARG:NH2	2.33	0.42
22:BA:244:A:C2	22:BA:255:A:C4	3.06	0.42
22:BA:570:G:H2'	22:BA:2030:A:C8	2.54	0.42
22:BA:666:A:H4'	33:BL:48:ARG:CD	2.49	0.42
22:BA:919:U:C6	22:BA:919:U:H3'	2.54	0.42
22:BA:1014:A:H2'	22:BA:1015:U:H6	1.83	0.42
22:BA:1664:A:C2	22:BA:2726:A:C8	3.07	0.42
22:BA:1797:G:O3'	24:BC:255:LYS:O	2.36	0.42
22:BA:1922:G:H2'	22:BA:1923:U:O4'	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1983:G:C6	22:BA:1984:G:N7	2.87	0.42
22:BA:2298:A:H2'	22:BA:2299:U:O4'	2.18	0.42
22:BA:2704:C:C4	22:BA:2705:A:C5	3.07	0.42
24:BC:61:TYR:CD2	24:BC:85:ASN:ND2	2.85	0.42
28:BG:159:LYS:HB3	28:BG:159:LYS:HE2	1.76	0.42
29:BH:42:LYS:HG2	29:BH:43:ASN:HD22	1.83	0.42
29:BH:67:ALA:C	29:BH:69:ALA:N	2.71	0.42
29:BH:81:ALA:O	29:BH:102:ALA:HB2	2.20	0.42
30:BI:19:PRO:HB2	30:BI:22:PRO:HD2	2.02	0.42
31:BJ:26:GLY:HA2	31:BJ:29:ALA:HB3	2.01	0.42
31:BJ:119:PHE:CD1	31:BJ:119:PHE:O	2.72	0.42
34:BM:96:ILE:C	34:BM:96:ILE:HD12	2.40	0.42
38:BQ:110:GLU:O	38:BQ:112:ALA:N	2.52	0.42
42:BU:38:ILE:HD13	42:BU:38:ILE:HA	1.88	0.42
43:BV:72:VAL:HG12	43:BV:93:ARG:CA	2.42	0.42
48:B0:11:LYS:HA	48:B0:11:LYS:HD2	1.67	0.42
49:B1:16:THR:CG2	49:B1:41:VAL:HG22	2.49	0.42
53:CA:66:A:C8	53:CA:66:A:H5"	2.54	0.42
53:CA:92:U:H2'	53:CA:93:U:C6	2.54	0.42
53:CA:142:G:N3	53:CA:196:A:H2	2.17	0.42
53:CA:567:G:N2	62:CA:1818:HOH:O	2.43	0.42
53:CA:908:A:H2'	53:CA:909:A:H8	1.84	0.42
53:CA:996:A:H2'	53:CA:997:U:H6	1.83	0.42
53:CA:1238:A:N6	53:CA:1302:C:N4	2.67	0.42
2:CB:34:ARG:HD3	2:CB:35:ASN:N	2.34	0.42
2:CB:42:LEU:H	2:CB:42:LEU:HG	1.51	0.42
2:CB:122:ASP:HB3	2:CB:124:THR:CG2	2.49	0.42
3:CC:22:PHE:CE2	10:CJ:97:ASP:HB2	2.55	0.42
3:CC:25:THR:HG23	14:CN:75:LYS:HD2	2.00	0.42
4:CD:153:ARG:HG2	4:CD:154:VAL:N	2.34	0.42
4:CD:187:ARG:C	4:CD:189:ASP:H	2.22	0.42
6:CF:6:ILE:HG22	6:CF:7:VAL:N	2.34	0.42
54:CG:49:LEU:HG	54:CG:123:LEU:HB3	2.00	0.42
14:CN:79:SER:HB2	14:CN:81:ILE:HD11	2.02	0.42
56:CP:52:LEU:O	56:CP:53:ASP:CB	2.66	0.42
22:DA:73:A:H8	22:DA:73:A:O5'	2.02	0.42
22:DA:126:A:H2'	50:D2:46:LYS:HE2	2.01	0.42
22:DA:686:U:H3	50:D2:12:ARG:HB2	1.84	0.42
22:DA:1387:A:N6	22:DA:1401:G:N1	2.68	0.42
22:DA:1574:C:H2'	22:DA:1575:C:O4'	2.18	0.42
22:DA:1973:G:C4	22:DA:1974:C:C5	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2144:G:O2'	22:DA:2147:A:OP2	2.21	0.42
22:DA:2261:C:N4	44:DW:10:ARG:HB3	2.34	0.42
22:DA:2429:G:C8	33:DL:55:MET:HE3	2.53	0.42
22:DA:2507:C:H1'	22:DA:2583:G:N2	2.33	0.42
22:DA:2657:A:O3'	28:DG:159:LYS:NZ	2.52	0.42
22:DA:2734:A:C2'	22:DA:2735:G:H5'	2.49	0.42
24:DC:30:ALA:C	24:DC:32:LEU:H	2.22	0.42
24:DC:105:ALA:HA	24:DC:106:PRO:HD3	1.76	0.42
25:DD:108:ASP:OD2	25:DD:173:GLN:HA	2.19	0.42
25:DD:110:THR:HG23	25:DD:171:THR:HG22	2.01	0.42
26:DE:58:LYS:HA	26:DE:59:PRO:HD3	1.79	0.42
58:DF:32:LYS:HB2	58:DF:32:LYS:NZ	2.34	0.42
58:DF:105:ILE:HG22	58:DF:105:ILE:O	2.19	0.42
28:DG:53:PRO:HB3	28:DG:61:TRP:N	2.34	0.42
28:DG:70:LEU:HD12	28:DG:71:LEU:N	2.34	0.42
28:DG:117:PRO:HG2	28:DG:143:VAL:CG1	2.48	0.42
28:DG:154:GLU:C	28:DG:156:TYR:H	2.22	0.42
29:DH:62:LEU:HD12	29:DH:63:ALA:N	2.34	0.42
30:DI:36:GLU:HB2	30:DI:40:ALA:HB3	2.00	0.42
31:DJ:3:THR:HG21	38:DQ:60:TRP:HE1	1.83	0.42
31:DJ:43:GLU:O	31:DJ:44:TYR:C	2.58	0.42
32:DK:119:ALA:O	32:DK:120:PRO:C	2.58	0.42
33:DL:111:ILE:N	33:DL:111:ILE:HD13	2.34	0.42
34:DM:29:GLY:CA	34:DM:64:TRP:HZ3	2.32	0.42
35:DN:96:ARG:HG3	35:DN:97:ILE:N	2.34	0.42
36:DO:17:LYS:HE2	36:DO:21:LEU:HD11	2.01	0.42
36:DO:26:LEU:HB3	36:DO:92:PHE:CD1	2.54	0.42
37:DP:102:ARG:HD2	37:DP:106:ALA:C	2.40	0.42
43:DV:9:ARG:HG2	43:DV:39:ALA:O	2.19	0.42
1:AA:82:G:H2'	1:AA:83:C:C4'	2.49	0.42
1:AA:550:G:H2'	1:AA:551:U:C6	2.54	0.42
1:AA:673:A:H1'	18:AR:63:TYR:CE1	2.52	0.42
11:AK:17:ASP:HB3	11:AK:80:ASN:OD1	2.17	0.42
17:AQ:12:VAL:HB	17:AQ:21:VAL:HG22	2.02	0.42
19:AS:62:THR:O	19:AS:64:GLU:N	2.52	0.42
22:BA:800:A:H4'	22:BA:801:G:OP1	2.20	0.42
22:BA:833:A:H2'	22:BA:834:G:H8	1.82	0.42
22:BA:858:G:H3'	22:BA:859:G:C8	2.54	0.42
22:BA:1016:G:C2'	22:BA:1017:G:O5'	2.67	0.42
22:BA:1029:A:C8	22:BA:1030:C:C6	3.07	0.42
22:BA:1107:G:H2'	22:BA:1108:U:H6	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1693:U:H4'	22:BA:1694:C:OP2	2.19	0.42
22:BA:1815:A:OP1	22:BA:1822:C:H4'	2.19	0.42
22:BA:1827:U:H2'	22:BA:1828:G:O4'	2.19	0.42
22:BA:2311:A:H1'	27:BF:78:ILE:CD1	2.47	0.42
22:BA:2383:G:H2'	22:BA:2384:U:C6	2.54	0.42
22:BA:2704:C:N4	22:BA:2705:A:C6	2.88	0.42
22:BA:2741:A:H2'	22:BA:2742:G:O4'	2.19	0.42
22:BA:2846:G:H2'	22:BA:2847:U:O4'	2.18	0.42
24:BC:199:HIS:C	24:BC:201:LEU:H	2.21	0.42
25:BD:90:PHE:C	25:BD:92:VAL:N	2.73	0.42
26:BE:46:GLN:HG2	26:BE:87:ALA:H	1.84	0.42
26:BE:175:ILE:O	26:BE:175:ILE:CG2	2.63	0.42
28:BG:168:VAL:HG23	28:BG:168:VAL:O	2.19	0.42
29:BH:86:ASP:O	29:BH:87:GLU:C	2.57	0.42
30:BI:53:PRO:HB2	30:BI:74:PRO:CG	2.49	0.42
31:BJ:37:ARG:HA	31:BJ:118:MET:HE2	2.00	0.42
31:BJ:64:VAL:O	31:BJ:68:LYS:HD2	2.19	0.42
31:BJ:97:PRO:O	31:BJ:98:GLU:C	2.57	0.42
32:BK:49:ARG:HD2	32:BK:50:GLY:H	1.85	0.42
36:BO:2:ASP:O	36:BO:3:LYS:HB3	2.19	0.42
39:BR:61:ALA:HB1	39:BR:98:ILE:N	2.27	0.42
41:BT:28:ASN:HA	41:BT:91:GLN:CD	2.40	0.42
48:B0:45:ASP:O	48:B0:52:LYS:HE3	2.20	0.42
51:B3:21:PHE:O	51:B3:22:LYS:HG2	2.20	0.42
52:B4:26:ILE:HD13	52:B4:26:ILE:N	2.34	0.42
53:CA:14:U:N3	53:CA:17:U:OP2	2.52	0.42
53:CA:398:U:H2'	53:CA:399:G:H8	1.84	0.42
53:CA:437:U:O2'	4:CD:119:HIS:HD2	2.02	0.42
53:CA:1090:U:H2'	53:CA:1091:U:C6	2.50	0.42
53:CA:1133:G:C5	53:CA:1134:G:N7	2.87	0.42
53:CA:1343:G:C5	53:CA:1344:C:C4	3.06	0.42
2:CB:82:ALA:HB1	2:CB:217:ALA:HB1	2.02	0.42
4:CD:57:LYS:HE3	4:CD:61:ARG:HD3	2.01	0.42
5:CE:132:PRO:O	5:CE:134:ASN:N	2.52	0.42
6:CF:52:ASN:C	6:CF:54:LEU:H	2.22	0.42
8:CH:77:VAL:N	8:CH:125:ILE:O	2.52	0.42
9:CI:70:GLY:O	9:CI:71:ILE:C	2.58	0.42
10:CJ:39:PRO:HA	10:CJ:74:VAL:H	1.83	0.42
11:CK:70:ALA:N	11:CK:73:VAL:HG13	2.33	0.42
12:CL:115:LYS:O	12:CL:116:TYR:CB	2.67	0.42
56:CP:57:ILE:O	56:CP:61:VAL:HG23	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CR:58:ILE:O	18:CR:62:ARG:HG3	2.19	0.42
22:DA:216:A:N6	22:DA:432:A:H1'	2.34	0.42
22:DA:307:G:N1	22:DA:310:A:OP2	2.53	0.42
22:DA:532:A:N3	22:DA:532:A:C2'	2.82	0.42
22:DA:570:G:N7	22:DA:2030:A:N6	2.67	0.42
22:DA:589:U:O2'	22:DA:590:A:H8	2.02	0.42
22:DA:646:U:H6	22:DA:646:U:OP2	2.02	0.42
22:DA:857:G:H1'	44:DW:19:ARG:HE	1.81	0.42
22:DA:1054:A:H2'	22:DA:1055:G:O4'	2.19	0.42
22:DA:1264:A:H2'	22:DA:2014:A:N6	2.34	0.42
22:DA:1596:A:N6	22:DA:1597:A:N6	2.66	0.42
22:DA:1616:A:OP1	22:DA:1616:A:H2'	2.19	0.42
22:DA:1627:G:N2	22:DA:1628:G:C8	2.87	0.42
22:DA:1857:G:N3	22:DA:1884:G:C2	2.87	0.42
22:DA:1904:G:HO2'	22:DA:1927:A:N6	2.15	0.42
22:DA:2079:U:H2'	22:DA:2080:A:O4'	2.19	0.42
22:DA:2109:U:H2'	22:DA:2110:G:OP1	2.19	0.42
22:DA:2187:U:O2'	22:DA:2188:U:H5'	2.19	0.42
22:DA:2518:A:H4'	22:DA:2519:U:OP2	2.19	0.42
22:DA:2591:C:H2'	22:DA:2592:G:H8	1.83	0.42
22:DA:2628:C:H1'	22:DA:2781:A:C4	2.53	0.42
22:DA:2653:U:OP2	22:DA:2654:A:O2'	2.32	0.42
22:DA:2727:A:O2'	22:DA:2728:U:C5'	2.67	0.42
22:DA:2727:A:O2'	22:DA:2728:U:H5'	2.20	0.42
22:DA:2797:U:O2	22:DA:2797:U:H2'	2.20	0.42
57:DB:40:U:O2	57:DB:43:C:C2'	2.55	0.42
24:DC:2:VAL:HB	24:DC:3:VAL:H	1.47	0.42
24:DC:94:LEU:CD1	24:DC:100:ARG:HD3	2.49	0.42
25:DD:193:VAL:CB	25:DD:194:PRO:HD2	2.49	0.42
26:DE:29:HIS:HA	26:DE:32:VAL:CG2	2.48	0.42
26:DE:79:ARG:HG2	26:DE:80:SER:H	1.83	0.42
26:DE:147:LEU:HD12	26:DE:149:ILE:HG22	2.01	0.42
58:DF:41:GLU:HG2	58:DF:42:ALA:N	2.31	0.42
58:DF:107:VAL:N	58:DF:108:PRO:HD2	2.34	0.42
58:DF:113:PHE:O	58:DF:114:ARG:HB3	2.19	0.42
29:DH:75:LEU:O	29:DH:76:GLU:HB2	2.18	0.42
33:DL:21:ARG:CZ	33:DL:21:ARG:HB3	2.49	0.42
34:DM:26:VAL:HG21	34:DM:132:THR:O	2.19	0.42
35:DN:21:PHE:N	35:DN:21:PHE:HD1	2.17	0.42
35:DN:103:ARG:HB2	35:DN:110:MET:HG3	2.00	0.42
38:DQ:4:LYS:CD	38:DQ:7:VAL:HG22	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DQ:64:ILE:HD12	38:DQ:95:ALA:HB3	2.01	0.42
41:DT:5:GLU:HA	41:DT:8:LEU:HB2	2.00	0.42
41:DT:69:ARG:O	41:DT:74:ILE:HD12	2.20	0.42
42:DU:96:LYS:O	42:DU:97:SER:HB3	2.18	0.42
1:AA:191:G:C4	1:AA:192:A:C8	3.07	0.42
1:AA:723:U:C5'	21:AU:48:LYS:HG2	2.50	0.42
1:AA:1054:C:H5"	1:AA:1196:A:O2'	2.19	0.42
1:AA:1241:G:N2	1:AA:1242:G:C4	2.87	0.42
1:AA:1248:A:H2	9:AI:71:ILE:HD11	1.85	0.42
3:AC:13:ILE:O	3:AC:15:LYS:N	2.51	0.42
3:AC:41:TYR:CZ	3:AC:89:VAL:HG21	2.54	0.42
3:AC:179:ALA:HB1	3:AC:202:PHE:CE1	2.52	0.42
4:AD:166:LYS:HB3	4:AD:166:LYS:HZ3	1.84	0.42
14:AN:22:LYS:O	14:AN:25:GLU:HG2	2.19	0.42
14:AN:45:LEU:O	14:AN:45:LEU:HG	2.19	0.42
14:AN:62:ARG:O	14:AN:63:CYS:C	2.58	0.42
22:BA:324:A:H2'	22:BA:325:G:O4'	2.18	0.42
22:BA:544:C:O2	22:BA:544:C:H2'	2.19	0.42
22:BA:618:G:O6	22:BA:619:G:C2	2.72	0.42
22:BA:1655:A:H5'	25:BD:118:PHE:CD2	2.54	0.42
22:BA:1705:A:C5	22:BA:1706:C:N4	2.87	0.42
24:BC:12:ARG:HG2	24:BC:12:ARG:NH1	2.31	0.42
24:BC:39:SER:C	24:BC:41:GLY:H	2.22	0.42
26:BE:120:VAL:HA	26:BE:188:MET:O	2.20	0.42
26:BE:196:VAL:O	26:BE:197:GLU:C	2.57	0.42
27:BF:43:ILE:HG22	27:BF:82:TYR:CD1	2.54	0.42
27:BF:71:LYS:HA	27:BF:80:GLN:HG2	2.01	0.42
28:BG:39:ALA:HB1	28:BG:57:TYR:CG	2.54	0.42
28:BG:68:ARG:HD2	28:BG:68:ARG:O	2.20	0.42
30:BI:49:GLU:HG2	30:BI:50:LYS:H	1.83	0.42
32:BK:2:ILE:HD12	32:BK:2:ILE:N	2.34	0.42
32:BK:66:LYS:HA	32:BK:79:PHE:O	2.19	0.42
33:BL:109:LYS:HA	33:BL:126:ARG:O	2.19	0.42
35:BN:20:MET:HG3	35:BN:21:PHE:N	2.34	0.42
35:BN:76:VAL:O	35:BN:79:LEU:O	2.38	0.42
36:BO:66:GLY:O	36:BO:67:ASN:HB3	2.19	0.42
40:BS:18:ARG:HG2	40:BS:76:VAL:HG13	2.01	0.42
40:BS:66:ILE:HD13	40:BS:67:ASP:N	2.34	0.42
40:BS:103:ILE:HD12	40:BS:103:ILE:N	2.34	0.42
44:BW:40:ARG:HD3	44:BW:45:HIS:HE1	1.85	0.42
45:BX:28:PHE:N	45:BX:28:PHE:CD1	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BY:22:LEU:O	46:BY:23:ARG:O	2.36	0.42
47:BZ:12:ALA:HA	47:BZ:15:ARG:HD3	2.02	0.42
49:B1:21:THR:HG23	49:B1:21:THR:O	2.18	0.42
53:CA:23:C:H5	53:CA:561:U:O4	2.03	0.42
53:CA:637:C:H2'	53:CA:638:U:C6	2.55	0.42
53:CA:885:G:C2	53:CA:886:G:C8	3.07	0.42
53:CA:947:G:P	55:CM:106:ARG:HG3	2.60	0.42
53:CA:1033:G:O2'	53:CA:1034:G:H5"	2.19	0.42
53:CA:1221:G:N2	53:CA:1222:G:H1'	2.34	0.42
53:CA:1319:A:H2'	53:CA:1320:C:OP2	2.19	0.42
53:CA:1382:C:H4'	54:CG:78:ARG:HH21	1.85	0.42
2:CB:164:ASP:OD2	2:CB:203:ASP:HB2	2.19	0.42
2:CB:185:ILE:CG2	2:CB:199:ILE:HG13	2.47	0.42
2:CB:202:ASN:HB3	2:CB:203:ASP:H	1.72	0.42
4:CD:32:LYS:CB	4:CD:35:GLN:OE1	2.67	0.42
4:CD:150:LYS:HA	4:CD:150:LYS:HD3	1.69	0.42
5:CE:79:THR:HA	5:CE:121:ASN:ND2	2.35	0.42
6:CF:3:HIS:O	6:CF:4:TYR:CD1	2.72	0.42
11:CK:22:ILE:O	11:CK:22:ILE:HG22	2.19	0.42
15:CO:32:THR:O	15:CO:33:ALA:C	2.58	0.42
15:CO:62:ARG:HH22	15:CO:88:ARG:NH2	2.16	0.42
56:CP:19:VAL:CG1	56:CP:37:GLY:HA3	2.49	0.42
17:CQ:12:VAL:HG22	17:CQ:12:VAL:O	2.20	0.42
19:CS:40:PHE:CB	19:CS:41:PRO:CD	2.96	0.42
20:CT:72:ALA:C	20:CT:74:HIS:H	2.22	0.42
22:DA:42:A:C2	22:DA:438:G:C2	3.08	0.42
22:DA:64:A:O2'	41:DT:69:ARG:HG2	2.19	0.42
22:DA:219:A:N6	22:DA:220:G:N1	2.67	0.42
22:DA:233:A:N6	22:DA:428:A:H61	2.17	0.42
22:DA:270:A:C2'	22:DA:271:G:OP1	2.66	0.42
22:DA:590:A:OP1	26:DE:90:GLN:NE2	2.52	0.42
22:DA:595:C:O5'	22:DA:595:C:H6	2.02	0.42
22:DA:637:A:P	33:DL:112:LEU:HD22	2.60	0.42
22:DA:750:A:H2'	22:DA:750:A:N3	2.34	0.42
22:DA:843:G:C6	22:DA:844:A:N6	2.88	0.42
22:DA:856:G:O4'	44:DW:23:LYS:HB3	2.20	0.42
22:DA:861:A:H2'	22:DA:862:G:O4'	2.20	0.42
22:DA:920:A:C6	22:DA:921:C:C4	3.07	0.42
22:DA:959:A:C6	22:DA:960:A:C6	3.07	0.42
22:DA:995:C:O2'	38:DQ:60:TRP:CH2	2.66	0.42
22:DA:1068:G:H2'	22:DA:1069:A:C8	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1363:C:H2'	22:DA:1364:G:C8	2.55	0.42
22:DA:1398:C:O2'	22:DA:1399:C:C6	2.72	0.42
22:DA:1571:A:H2'	22:DA:1572:A:C8	2.54	0.42
22:DA:1731:G:N3	22:DA:1733:G:C8	2.87	0.42
22:DA:2109:U:C2'	22:DA:2110:G:OP1	2.67	0.42
22:DA:2290:G:H4'	22:DA:2381:A:O2'	2.20	0.42
22:DA:2697:G:H2'	22:DA:2698:U:O4'	2.20	0.42
22:DA:2746:U:C5'	28:DG:137:LYS:HG2	2.49	0.42
22:DA:2756:U:H5"	52:D4:19:ARG:HA	2.01	0.42
22:DA:2788:C:O2'	22:DA:2809:A:N3	2.34	0.42
22:DA:2810:A:H2'	22:DA:2811:G:O4'	2.19	0.42
22:DA:2825:G:H2'	22:DA:2826:A:O4'	2.19	0.42
22:DA:2880:C:C1'	35:DN:93:GLY:H	2.31	0.42
57:DB:44:G:H3'	58:DF:91:ARG:HE	1.83	0.42
57:DB:57:A:C6	58:DF:25:MET:CG	3.02	0.42
24:DC:69:ASN:O	24:DC:70:LYS:C	2.56	0.42
24:DC:140:VAL:HG23	24:DC:141:HIS:N	2.35	0.42
26:DE:3:LEU:HD11	26:DE:113:VAL:HG21	2.00	0.42
33:DL:108:ALA:HB3	33:DL:125:LEU:HD22	2.01	0.42
44:DW:18:LYS:CD	44:DW:19:ARG:N	2.72	0.42
46:DY:59:GLU:C	46:DY:61:ALA:H	2.23	0.42
48:D0:17:SER:OG	48:D0:18:HIS:HD2	2.02	0.42
49:D1:51:ALA:O	49:D1:52:LYS:CB	2.65	0.42
1:AA:95:C:H5"	1:AA:95:C:C6	2.55	0.42
1:AA:191:G:H2'	1:AA:192:A:C8	2.54	0.42
1:AA:586:C:O2'	8:AH:3:GLN:NE2	2.50	0.42
1:AA:927:G:N2	1:AA:1391:U:H1'	2.34	0.42
1:AA:960:U:O2'	1:AA:1223:C:H5'	2.19	0.42
1:AA:1272:G:C5	1:AA:1273:C:C4	3.08	0.42
1:AA:1280:A:O4'	10:AJ:43:PRO:HG3	2.19	0.42
1:AA:1348:U:O2'	1:AA:1349:A:C5'	2.67	0.42
1:AA:1410:A:H2'	1:AA:1411:C:C6	2.53	0.42
3:AC:137:VAL:HG11	3:AC:169:GLU:HB3	2.01	0.42
6:AF:39:LEU:O	6:AF:40:GLU:HG2	2.20	0.42
6:AF:52:ASN:O	6:AF:53:LYS:CB	2.67	0.42
6:AF:53:LYS:HG3	6:AF:54:LEU:N	2.34	0.42
10:AJ:6:ILE:HD11	10:AJ:79:PRO:CA	2.49	0.42
11:AK:47:GLY:HA3	11:AK:52:ARG:HH11	1.84	0.42
14:AN:63:CYS:HB2	14:AN:79:SER:OG	2.20	0.42
16:AP:57:ILE:O	16:AP:61:VAL:HG23	2.20	0.42
21:AU:39:LYS:N	21:AU:40:PRO:CD	2.82	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:301:G:H1'	22:BA:302:C:O5'	2.19	0.42
22:BA:415:A:H2'	22:BA:416:U:H6	1.85	0.42
22:BA:534:U:H2'	22:BA:535:G:H8	1.85	0.42
22:BA:735:A:H3'	22:BA:736:C:H6	1.85	0.42
22:BA:782:A:H5'	22:BA:783:A:C2	2.54	0.42
22:BA:960:A:C8	22:BA:962:G:C8	3.08	0.42
22:BA:1000:A:C6	22:BA:1001:A:C6	3.08	0.42
22:BA:1262:A:C6	22:BA:1263:U:C4	3.07	0.42
22:BA:1774:C:O5'	22:BA:1774:C:H6	2.03	0.42
22:BA:1937:A:H5"	62:BA:3461:HOH:O	2.19	0.42
22:BA:1965:C:C4	22:BA:1966:A:C5	3.08	0.42
22:BA:2062:A:N6	60:BA:3135:TEL:H553	2.34	0.42
22:BA:2230:G:C5	22:BA:2231:U:C5	3.07	0.42
24:BC:199:HIS:C	24:BC:201:LEU:N	2.73	0.42
25:BD:53:GLY:HA3	25:BD:77:ARG:HB2	2.01	0.42
25:BD:184:ARG:HE	37:BP:6:GLN:HE22	1.68	0.42
32:BK:6:THR:HG22	32:BK:8:LEU:HD22	2.01	0.42
34:BM:78:LEU:HD23	34:BM:78:LEU:C	2.39	0.42
38:BQ:63:ARG:CZ	38:BQ:96:ASP:CA	2.94	0.42
38:BQ:90:ASP:O	38:BQ:91:ARG:O	2.36	0.42
41:BT:19:LYS:HB3	41:BT:19:LYS:HE2	1.80	0.42
41:BT:61:LEU:HA	62:BT:101:HOH:O	2.19	0.42
43:BV:51:GLN:HE22	43:BV:79:ARG:HH12	1.68	0.42
44:BW:64:GLY:HA3	44:BW:82:GLU:O	2.19	0.42
51:B3:31:ILE:C	51:B3:31:ILE:HD12	2.39	0.42
53:CA:55:A:C6	53:CA:56:U:C2	3.08	0.42
53:CA:97:G:C5	53:CA:98:A:H1'	2.54	0.42
53:CA:120:A:O5'	53:CA:120:A:C8	2.73	0.42
53:CA:409:U:C4	53:CA:410:G:C5	3.08	0.42
53:CA:623:C:H6	53:CA:623:C:O5'	2.03	0.42
53:CA:737:C:OP1	6:CF:91:ARG:HB3	2.19	0.42
53:CA:770:C:C2'	53:CA:771:G:H5'	2.49	0.42
53:CA:815:A:H4'	53:CA:817:C:C4	2.55	0.42
53:CA:1006:G:N3	53:CA:1006:G:H2'	2.34	0.42
2:CB:92:ASN:OD1	2:CB:93:HIS:ND1	2.52	0.42
3:CC:17:TRP:CD1	14:CN:90:GLY:HA2	2.55	0.42
3:CC:130:ARG:O	3:CC:133:MET:HG2	2.20	0.42
8:CH:17:GLN:CD	8:CH:69:ALA:HB1	2.39	0.42
8:CH:29:SER:OG	8:CH:32:LYS:CB	2.67	0.42
10:CJ:87:LEU:HD22	10:CJ:87:LEU:HA	1.89	0.42
17:CQ:22:VAL:HG21	17:CQ:58:VAL:HG21	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:30:PHE:HE2	20:CT:52:GLU:CG	2.30	0.42
22:DA:128:C:C2'	22:DA:129:C:C6	2.96	0.42
22:DA:146:A:C6	22:DA:147:C:C4	3.08	0.42
22:DA:188:G:C2'	22:DA:189:G:H5'	2.49	0.42
22:DA:191:A:C2	22:DA:192:C:C2	3.08	0.42
22:DA:370:G:C6	22:DA:424:G:N7	2.87	0.42
22:DA:450:G:N1	22:DA:454:A:OP2	2.45	0.42
22:DA:459:U:C5	22:DA:469:G:N2	2.88	0.42
22:DA:623:C:H2'	22:DA:624:C:C6	2.54	0.42
22:DA:845:A:C2	22:DA:847:U:C6	3.07	0.42
22:DA:847:U:H5'	22:DA:848:C:OP2	2.20	0.42
22:DA:914:G:O2'	22:DA:915:C:O5'	2.30	0.42
22:DA:982:C:O2	22:DA:982:C:O5'	2.36	0.42
22:DA:1190:G:O2'	22:DA:1191:G:H5'	2.19	0.42
22:DA:1266:G:O2'	22:DA:2012:G:O6	2.29	0.42
22:DA:1330:C:O2'	22:DA:1331:G:H8	2.02	0.42
22:DA:1343:G:N2	22:DA:1344:U:C2	2.88	0.42
22:DA:1565:C:C3'	24:DC:17:LYS:HE2	2.29	0.42
22:DA:1608:A:O3'	22:DA:1609:A:H3'	2.20	0.42
22:DA:1789:A:OP2	24:DC:220:ARG:NH1	2.48	0.42
22:DA:1936:A:C2	22:DA:1943:U:C5	3.08	0.42
22:DA:2449:U:H3'	62:DA:3668:HOH:O	2.19	0.42
22:DA:2718:G:O2'	37:DP:95:LYS:HG3	2.20	0.42
22:DA:2733:A:C5	25:DD:208:LYS:NZ	2.82	0.42
22:DA:2748:A:N1	22:DA:2757:A:N7	2.68	0.42
25:DD:187:LEU:HD12	25:DD:188:LEU:H	1.85	0.42
26:DE:118:LEU:HD11	26:DE:188:MET:HE2	2.01	0.42
58:DF:65:LEU:H	58:DF:65:LEU:CD2	2.30	0.42
58:DF:105:ILE:C	58:DF:108:PRO:HD2	2.40	0.42
30:DI:27:LEU:HD13	30:DI:32:VAL:HG11	2.02	0.42
31:DJ:4:PHE:HB3	38:DQ:63:ARG:NH2	2.32	0.42
31:DJ:4:PHE:CD2	38:DQ:99:VAL:HG11	2.55	0.42
31:DJ:35:ARG:HA	31:DJ:40:HIS:HD2	1.84	0.42
31:DJ:73:VAL:HB	31:DJ:75:TYR:CE2	2.55	0.42
32:DK:69:VAL:O	32:DK:76:VAL:HG13	2.19	0.42
35:DN:47:VAL:C	35:DN:50:PRO:HD2	2.39	0.42
39:DR:49:ILE:CG2	39:DR:54:VAL:N	2.82	0.42
43:DV:4:ILE:HD11	43:DV:50:MET:CE	2.50	0.42
48:D0:6:LYS:HA	48:D0:7:PRO:HD3	1.94	0.42
1:AA:77:A:H8	1:AA:77:A:OP2	2.02	0.42
1:AA:91:U:H2'	1:AA:92:U:H1'	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:114:U:H2'	1:AA:115:G:C8	2.55	0.42
1:AA:300:A:H2'	1:AA:301:G:O4'	2.19	0.42
1:AA:376:G:H2'	1:AA:377:G:H8	1.84	0.42
1:AA:420:U:C2'	1:AA:421:U:H5"	2.49	0.42
1:AA:471:U:H2'	1:AA:472:U:O4'	2.20	0.42
1:AA:488:C:O2'	1:AA:489:C:H5'	2.19	0.42
1:AA:999:C:H2'	1:AA:1000:A:C8	2.55	0.42
1:AA:1145:A:C2'	1:AA:1146:A:OP2	2.67	0.42
1:AA:1157:A:C6	1:AA:1180:A:C6	3.07	0.42
1:AA:1157:A:H4'	1:AA:1158:C:H5"	2.02	0.42
1:AA:1227:A:O2'	1:AA:1228:C:O5'	2.37	0.42
1:AA:1254:A:OP1	10:AJ:47:GLU:HG2	2.20	0.42
1:AA:1402:C:H2'	1:AA:1403:C:O4'	2.19	0.42
2:AB:148:GLY:CA	2:AB:151:LYS:HE3	2.50	0.42
3:AC:86:LEU:O	3:AC:87:ARG:C	2.58	0.42
3:AC:106:ARG:O	3:AC:106:ARG:HG2	2.20	0.42
4:AD:54:LEU:C	4:AD:54:LEU:CD2	2.88	0.42
6:AF:51:ILE:HD11	6:AF:86:ARG:HG3	2.02	0.42
7:AG:78:ARG:HA	7:AG:82:SER:O	2.19	0.42
8:AH:9:MET:HG3	8:AH:26:MET:SD	2.60	0.42
11:AK:125:LYS:O	11:AK:126:ARG:CB	2.68	0.42
13:AM:89:ARG:NH1	13:AM:94:LEU:HB3	2.34	0.42
16:AP:10:GLY:HA3	16:AP:15:PRO:C	2.40	0.42
17:AQ:13:SER:O	17:AQ:16:MET:HE2	2.20	0.42
17:AQ:30:HIS:ND1	17:AQ:31:PRO:HD2	2.35	0.42
22:BA:31:C:O3'	22:BA:1238:G:C5'	2.53	0.42
22:BA:149:A:C4	22:BA:150:U:C5	3.08	0.42
22:BA:400:G:O6	45:BX:56:ARG:NH1	2.53	0.42
22:BA:435:C:H2'	22:BA:436:C:C5'	2.50	0.42
22:BA:480:A:C2'	22:BA:481:G:OP1	2.67	0.42
22:BA:802:A:C2	22:BA:803:U:C2	3.08	0.42
22:BA:875:G:H2'	22:BA:876:C:H5'	2.00	0.42
22:BA:902:C:N3	22:BA:903:C:N4	2.60	0.42
22:BA:923:G:C1'	44:BW:23:LYS:HE2	2.49	0.42
22:BA:996:A:H4'	38:BQ:91:ARG:HD2	2.01	0.42
22:BA:1206:G:C5	22:BA:1207:C:C5	3.07	0.42
22:BA:1347:A:C2'	22:BA:1348:C:H5'	2.50	0.42
22:BA:1419:A:C5	22:BA:1421:G:C5	3.06	0.42
22:BA:1421:G:C2	22:BA:1422:G:N7	2.88	0.42
22:BA:1607:C:H4'	22:BA:1608:A:C8	2.55	0.42
22:BA:1717:A:C2	22:BA:1718:G:H1'	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1799:G:OP1	24:BC:257:ARG:HG2	2.20	0.42
22:BA:2195:U:O2'	22:BA:2196:C:H5'	2.19	0.42
22:BA:2506:U:OP2	22:BA:2576:G:N1	2.47	0.42
22:BA:2551:C:H2'	22:BA:2552:U:C6	2.54	0.42
22:BA:2567:G:H2'	22:BA:2568:U:H6	1.85	0.42
22:BA:2650:U:O2'	22:BA:2651:C:H5'	2.20	0.42
22:BA:2786:U:H2'	22:BA:2787:C:C6	2.52	0.42
24:BC:254:LYS:HE3	24:BC:254:LYS:HB3	1.67	0.42
27:BF:27:VAL:O	27:BF:27:VAL:HG13	2.19	0.42
28:BG:93:TYR:O	28:BG:94:ARG:O	2.37	0.42
32:BK:40:LYS:HG3	32:BK:41:ILE:N	2.35	0.42
32:BK:99:ILE:HG22	32:BK:119:ALA:HA	2.02	0.42
34:BM:96:ILE:O	34:BM:96:ILE:HG13	2.19	0.42
37:BP:33:GLU:CB	37:BP:38:ARG:HH11	2.32	0.42
39:BR:39:LEU:C	39:BR:49:ILE:HG23	2.40	0.42
40:BS:42:LYS:O	40:BS:42:LYS:HD3	2.19	0.42
44:BW:23:LYS:CD	44:BW:24:ARG:N	2.81	0.42
49:B1:18:HIS:HE1	49:B1:20:TYR:CE2	2.37	0.42
53:CA:71:A:C5	53:CA:100:G:C4	3.08	0.42
53:CA:237:G:C6	53:CA:238:A:C5	3.07	0.42
53:CA:558:G:H2'	53:CA:559:A:H2	1.84	0.42
53:CA:756:C:C2'	53:CA:757:U:H5'	2.50	0.42
53:CA:860:A:H2'	53:CA:861:G:O4'	2.19	0.42
53:CA:1026:G:H22	53:CA:1036:A:H61	1.65	0.42
53:CA:1047:G:N2	53:CA:1213:A:C2	2.87	0.42
53:CA:1074:G:C4'	2:CB:102:ASN:HB2	2.46	0.42
53:CA:1297:G:O2'	54:CG:113:LYS:HE3	2.19	0.42
53:CA:1320:C:N4	19:CS:36:ARG:HG3	2.34	0.42
53:CA:1343:G:H1'	9:CI:122:ARG:NH1	2.35	0.42
53:CA:1430:A:N6	53:CA:1431:A:C2	2.87	0.42
54:CG:55:LYS:H	54:CG:55:LYS:HD2	1.84	0.42
54:CG:105:GLU:O	54:CG:109:LYS:HD3	2.20	0.42
8:CH:11:THR:HG22	8:CH:14:ARG:NH2	2.35	0.42
8:CH:38:VAL:HA	8:CH:41:GLU:CG	2.50	0.42
8:CH:104:SER:HA	8:CH:109:VAL:HG22	2.01	0.42
9:CI:51:LEU:C	9:CI:53:LEU:N	2.71	0.42
10:CJ:44:THR:HG23	10:CJ:70:HIS:CE1	2.55	0.42
12:CL:2:THR:CB	12:CL:5:GLN:HB2	2.47	0.42
17:CQ:60:ILE:O	17:CQ:60:ILE:HG12	2.19	0.42
19:CS:59:VAL:HB	19:CS:73:PHE:HD2	1.85	0.42
20:CT:61:ALA:O	20:CT:67:HIS:HA	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CU:18:PHE:HA	21:CU:21:SER:HB3	2.01	0.42
22:DA:246:C:H4'	22:DA:385:C:O2'	2.19	0.42
22:DA:481:G:H1'	22:DA:506:G:N2	2.34	0.42
22:DA:622:G:H2'	22:DA:623:C:C6	2.54	0.42
22:DA:756:A:H2'	22:DA:757:G:O4'	2.20	0.42
22:DA:758:C:O2	22:DA:758:C:H2'	2.19	0.42
22:DA:996:A:C5	22:DA:1160:G:N2	2.88	0.42
22:DA:1054:A:N3	22:DA:1055:G:H1'	2.35	0.42
22:DA:1087:G:C4	22:DA:1089:A:N3	2.88	0.42
22:DA:1343:G:N7	22:DA:1597:A:N6	2.68	0.42
22:DA:1398:C:O2'	22:DA:1399:C:H6	2.03	0.42
22:DA:1661:G:H2'	22:DA:1662:U:H6	1.84	0.42
22:DA:2028:U:H2'	22:DA:2029:G:C8	2.55	0.42
22:DA:2055:C:H2'	22:DA:2504:U:H4'	2.01	0.42
22:DA:2093:G:N2	22:DA:2198:A:N6	2.65	0.42
22:DA:2333:A:C1'	22:DA:2335:A:C8	3.03	0.42
22:DA:2646:C:H2'	22:DA:2647:U:O4'	2.20	0.42
57:DB:21:G:H2'	57:DB:22:U:O4'	2.18	0.42
24:DC:166:ARG:HB2	24:DC:171:VAL:CG2	2.45	0.42
25:DD:19:GLY:HA2	37:DP:78:PRO:HG2	2.02	0.42
26:DE:131:THR:HG22	26:DE:161:ALA:N	2.33	0.42
58:DF:3:LEU:O	58:DF:6:TYR:HB3	2.19	0.42
58:DF:65:LEU:HD11	58:DF:87:LYS:NZ	2.35	0.42
28:DG:10:VAL:HB	28:DG:14:VAL:HG11	2.00	0.42
28:DG:28:LYS:H	28:DG:79:THR:HG22	1.84	0.42
31:DJ:57:LEU:HG	31:DJ:128:ASN:N	2.29	0.42
32:DK:31:ARG:HH11	32:DK:31:ARG:HG3	1.84	0.42
34:DM:33:LEU:CD2	34:DM:128:THR:HB	2.50	0.42
37:DP:28:LYS:HZ2	37:DP:82:SER:HB2	1.85	0.42
38:DQ:10:ARG:HB2	38:DQ:10:ARG:NH1	2.34	0.42
41:DT:29:THR:CA	41:DT:87:LEU:HB2	2.50	0.42
42:DU:39:ASN:O	42:DU:40:LEU:C	2.58	0.42
47:DZ:23:LEU:HD21	47:DZ:53:MET:CE	2.50	0.42
50:D2:18:PHE:O	50:D2:21:ARG:N	2.53	0.42
50:D2:22:MET:HA	50:D2:28:ARG:HB2	2.02	0.42
1:AA:223:A:H2'	1:AA:224:U:C6	2.55	0.42
1:AA:266:G:H4'	1:AA:267:C:OP1	2.18	0.42
1:AA:323:U:H4'	20:AT:16:ALA:HB3	2.02	0.42
1:AA:405:U:OP1	1:AA:406:G:O2'	2.27	0.42
1:AA:874:G:C6	1:AA:875:U:C4	3.07	0.42
4:AD:97:LEU:HD22	4:AD:117:VAL:HG11	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:69:ARG:HG3	7:AG:95:ARG:CG	2.48	0.42
15:AO:2:LEU:O	15:AO:3:SER:C	2.58	0.42
15:AO:25:GLU:HG3	15:AO:69:LEU:HD11	2.02	0.42
19:AS:39:ILE:HD11	19:AS:70:LEU:HD23	2.02	0.42
22:BA:225:C:H2'	22:BA:226:A:O4'	2.19	0.42
22:BA:839:U:H2'	22:BA:840:C:C6	2.55	0.42
22:BA:966:G:C6	22:BA:967:U:C4	3.08	0.42
22:BA:976:G:OP2	62:BA:3578:HOH:O	2.22	0.42
22:BA:1071:G:C4	22:BA:1089:A:C6	3.08	0.42
22:BA:1075:C:N4	22:BA:1076:C:N4	2.68	0.42
22:BA:1310:G:H3'	22:BA:1311:G:C8	2.54	0.42
22:BA:1392:A:N6	22:BA:1393:A:N6	2.67	0.42
22:BA:1430:G:H2'	22:BA:1431:A:O4'	2.19	0.42
22:BA:1847:A:C4'	22:BA:1848:A:OP2	2.65	0.42
22:BA:1858:A:C8	22:BA:1885:A:C6	3.08	0.42
22:BA:1871:A:O2'	22:BA:1872:A:N9	2.53	0.42
22:BA:2152:G:O2'	22:BA:2153:C:H5'	2.19	0.42
22:BA:2414:G:O2'	22:BA:2415:G:H5'	2.20	0.42
22:BA:2614:A:O4'	48:B0:1:ALA:HB3	2.19	0.42
22:BA:2681:C:C2	22:BA:2724:U:O4	2.72	0.42
24:BC:16:VAL:N	24:BC:203:VAL:HG11	2.33	0.42
25:BD:3:GLY:C	25:BD:82:PHE:CE1	2.92	0.42
26:BE:145:ASP:HA	26:BE:166:LYS:O	2.18	0.42
26:BE:146:VAL:H	26:BE:167:VAL:HG23	1.85	0.42
29:BH:42:LYS:HG2	29:BH:43:ASN:ND2	2.34	0.42
30:BI:111:THR:O	30:BI:113:ALA:N	2.47	0.42
30:BI:123:ALA:C	30:BI:125:THR:N	2.72	0.42
31:BJ:5:THR:O	31:BJ:5:THR:HG22	2.19	0.42
33:BL:4:ASN:H	33:BL:4:ASN:HD22	1.67	0.42
37:BP:5:LYS:HD2	37:BP:5:LYS:HA	1.87	0.42
37:BP:33:GLU:OE2	37:BP:38:ARG:NH1	2.52	0.42
39:BR:87:GLN:HG2	39:BR:88:GLY:N	2.35	0.42
44:BW:18:LYS:CG	44:BW:19:ARG:H	2.25	0.42
44:BW:45:HIS:HB2	44:BW:50:VAL:HG13	2.00	0.42
49:B1:5:ARG:HG2	49:B1:23:THR:HB	2.02	0.42
53:CA:178:C:C4	53:CA:179:A:N7	2.88	0.42
53:CA:242:G:C6	53:CA:245:U:O4	2.73	0.42
53:CA:251:G:C4'	53:CA:252:U:O5'	2.66	0.42
53:CA:384:G:H2'	53:CA:385:C:C6	2.54	0.42
53:CA:401:C:O2'	53:CA:402:G:H5'	2.19	0.42
53:CA:607:A:H2'	53:CA:608:A:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1265:C:C4	53:CA:1266:G:N7	2.88	0.42
53:CA:1303:C:O2	53:CA:1303:C:C2'	2.67	0.42
2:CB:115:ASP:O	2:CB:119:GLN:HB2	2.19	0.42
3:CC:5:HIS:CE1	3:CC:7:ASN:HB3	2.54	0.42
4:CD:49:ASP:O	4:CD:53:GLN:HG3	2.19	0.42
4:CD:203:TYR:C	4:CD:205:LYS:H	2.23	0.42
5:CE:88:HIS:CE1	5:CE:89:THR:HG23	2.55	0.42
5:CE:103:GLY:HA3	5:CE:120:HIS:O	2.20	0.42
5:CE:149:PRO:HG3	8:CH:98:LEU:HD21	2.00	0.42
8:CH:11:THR:HG23	8:CH:14:ARG:HH22	1.84	0.42
10:CJ:65:TYR:HB3	14:CN:95:LEU:CD1	2.50	0.42
11:CK:35:ASP:OD1	11:CK:39:ASN:HB3	2.20	0.42
19:CS:52:ASN:HD22	19:CS:52:ASN:C	2.22	0.42
22:DA:82:U:H5"	22:DA:296:U:H5"	2.02	0.42
22:DA:119:A:C4'	22:DA:120:U:OP1	2.67	0.42
22:DA:241:A:O3'	51:D3:2:LYS:NZ	2.52	0.42
22:DA:456:C:HO2'	41:DT:73:ARG:HG3	1.82	0.42
22:DA:593:U:H2'	22:DA:594:U:H6	1.75	0.42
22:DA:706:A:H2'	22:DA:707:G:O4'	2.19	0.42
22:DA:711:G:C2	22:DA:721:A:C2	3.08	0.42
22:DA:1071:G:C8	22:DA:1071:G:OP1	2.73	0.42
22:DA:1131:G:N7	22:DA:2025:C:H4'	2.35	0.42
22:DA:1168:G:C6	22:DA:1182:G:C6	3.08	0.42
22:DA:1203:U:H2'	22:DA:1204:A:C2	2.55	0.42
22:DA:1236:G:O2'	22:DA:1237:A:H8	2.02	0.42
22:DA:1310:G:N2	22:DA:1605:C:C2	2.88	0.42
22:DA:1340:U:C2	22:DA:1603:A:O4'	2.73	0.42
22:DA:1491:G:N2	22:DA:1492:G:C4	2.88	0.42
22:DA:1667:G:P	32:DK:6:THR:HA	2.60	0.42
22:DA:1817:G:C2'	22:DA:1818:U:H5'	2.47	0.42
22:DA:1838:C:H4'	22:DA:1839:G:N7	2.34	0.42
22:DA:2060:A:C8	26:DE:63:LYS:NZ	2.86	0.42
22:DA:2108:A:C8	22:DA:2108:A:OP2	2.73	0.42
22:DA:2886:A:H62	48:D0:39:ARG:HD3	1.85	0.42
22:DA:2897:U:H2'	22:DA:2898:U:O4'	2.18	0.42
28:DG:116:LEU:HD13	28:DG:120:ILE:O	2.19	0.42
28:DG:138:GLN:HG2	28:DG:138:GLN:O	2.20	0.42
34:DM:17:ASN:C	34:DM:18:ARG:HG2	2.39	0.42
34:DM:71:LYS:HB3	34:DM:93:VAL:O	2.19	0.42
35:DN:33:ILE:HD13	35:DN:118:ARG:HH21	1.85	0.42
36:DO:12:THR:HG23	36:DO:16:ARG:HH11	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DS:8:ARG:HB3	40:DS:102:HIS:CE1	2.54	0.42
41:DT:9:LYS:O	41:DT:9:LYS:CG	2.68	0.42
48:D0:47:TYR:CE2	48:D0:52:LYS:HG3	2.54	0.42
1:AA:76:G:N1	1:AA:95:C:N4	2.67	0.42
1:AA:254:G:OP1	17:AQ:68:LYS:O	2.38	0.42
1:AA:437:U:H4'	4:AD:153:ARG:NH2	2.35	0.42
1:AA:767:A:H2'	1:AA:768:A:C8	2.55	0.42
1:AA:1097:C:H2'	1:AA:1098:C:C6	2.55	0.42
1:AA:1113:C:H2'	1:AA:1114:C:H6	1.85	0.42
1:AA:1250:A:O3'	9:AI:68:GLY:HA2	2.20	0.42
1:AA:1307:U:H2'	1:AA:1308:U:C6	2.54	0.42
1:AA:1371:G:OP2	9:AI:12:LYS:HD3	2.20	0.42
1:AA:1452:C:H2'	1:AA:1452:C:OP2	2.20	0.42
2:AB:67:LEU:O	2:AB:160:LEU:HD12	2.19	0.42
2:AB:84:LEU:O	2:AB:84:LEU:HG	2.19	0.42
2:AB:212:TYR:HA	2:AB:215:ALA:HB3	2.01	0.42
4:AD:191:SER:O	4:AD:192:ALA:CB	2.67	0.42
5:AE:80:LEU:HD12	5:AE:146:MET:SD	2.60	0.42
7:AG:21:LEU:HD23	7:AG:24:LYS:HD2	2.02	0.42
7:AG:128:GLU:O	7:AG:129:ASN:C	2.57	0.42
7:AG:130:LYS:N	7:AG:134:VAL:HG21	2.35	0.42
9:AI:60:LEU:HD23	9:AI:60:LEU:H	1.85	0.42
11:AK:124:LYS:NZ	21:AU:33:ARG:HH21	2.17	0.42
11:AK:125:LYS:C	21:AU:33:ARG:NH2	2.73	0.42
12:AL:73:LEU:HD11	12:AL:79:ILE:CG2	2.49	0.42
22:BA:116:C:H2'	22:BA:117:G:O4'	2.19	0.42
22:BA:523:C:O2	22:BA:554:U:O2'	2.32	0.42
22:BA:523:C:O2'	22:BA:524:G:H5'	2.20	0.42
22:BA:851:C:O2'	22:BA:852:U:H5'	2.20	0.42
22:BA:1315:C:OP2	62:BA:3752:HOH:O	2.22	0.42
22:BA:1417:C:H2'	22:BA:1418:G:O4'	2.20	0.42
22:BA:1572:A:O2'	22:BA:1573:G:H5'	2.19	0.42
22:BA:1773:A:C2'	22:BA:1774:C:H5'	2.50	0.42
22:BA:2040:G:H2'	22:BA:2041:U:O4'	2.18	0.42
22:BA:2336:A:N6	44:BW:40:ARG:HB3	2.34	0.42
22:BA:2698:U:H2'	22:BA:2699:C:H6	1.85	0.42
22:BA:2807:U:H6	22:BA:2807:U:O5'	2.03	0.42
24:BC:70:LYS:NZ	24:BC:99:GLU:OE1	2.42	0.42
24:BC:184:GLU:O	24:BC:185:ALA:HB3	2.20	0.42
24:BC:198:GLU:O	24:BC:199:HIS:C	2.58	0.42
27:BF:40:GLY:C	27:BF:84:ILE:HD11	2.40	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:137:PHE:HA	27:BF:138:PRO:HD3	1.89	0.42
29:BH:5:LEU:HD11	29:BH:19:VAL:HG11	2.02	0.42
31:BJ:56:VAL:CG1	31:BJ:57:LEU:N	2.82	0.42
34:BM:68:PHE:O	34:BM:69:PRO:O	2.38	0.42
37:BP:95:LYS:HG2	37:BP:97:TYR:CZ	2.53	0.42
38:BQ:82:LEU:O	38:BQ:85:ALA:HB3	2.19	0.42
43:BV:1:MET:HG3	43:BV:2:PHE:N	2.34	0.42
43:BV:10:LYS:HB2	43:BV:10:LYS:HZ3	1.84	0.42
43:BV:30:ILE:HA	43:BV:91:PHE:O	2.19	0.42
44:BW:16:GLU:HB2	44:BW:17:ALA:H	1.47	0.42
51:B3:31:ILE:CG1	51:B3:34:LYS:HD2	2.50	0.42
53:CA:21:G:H2'	53:CA:22:G:C8	2.55	0.42
53:CA:66:A:C6	53:CA:67:C:N4	2.88	0.42
53:CA:484:G:H4'	53:CA:485:U:OP1	2.13	0.42
53:CA:995:C:O2'	53:CA:996:A:C5'	2.68	0.42
53:CA:1143:G:H2'	53:CA:1144:G:H8	1.85	0.42
53:CA:1144:G:N2	53:CA:1146:A:H62	2.12	0.42
53:CA:1191:A:H5"	3:CC:3:LYS:HE3	2.02	0.42
53:CA:1271:A:C6	53:CA:1272:G:C6	3.07	0.42
4:CD:138:PRO:C	4:CD:140:ASP:H	2.23	0.42
4:CD:191:SER:O	4:CD:192:ALA:CB	2.67	0.42
4:CD:202:LEU:HD23	4:CD:203:TYR:CD2	2.55	0.42
9:CI:71:ILE:HD12	9:CI:72:SER:N	2.28	0.42
10:CJ:8:ILE:O	10:CJ:8:ILE:HG13	2.19	0.42
11:CK:12:ARG:N	11:CK:12:ARG:HD3	2.34	0.42
12:CL:6:LEU:O	12:CL:8:ARG:N	2.41	0.42
20:CT:42:ASP:O	20:CT:43:LYS:C	2.58	0.42
21:CU:35:GLU:CG	21:CU:36:PHE:N	2.82	0.42
22:DA:33:C:O2	22:DA:454:A:C2	2.73	0.42
22:DA:121:G:N2	22:DA:131:A:C4	2.88	0.42
22:DA:244:A:C2	22:DA:255:A:C4	3.07	0.42
22:DA:270:A:N1	22:DA:369:U:O2'	2.36	0.42
22:DA:593:U:H2'	22:DA:594:U:C5	2.53	0.42
22:DA:696:G:C2	22:DA:767:U:O2	2.73	0.42
22:DA:709:U:O2'	22:DA:710:U:H5'	2.20	0.42
22:DA:747:U:H2'	22:DA:2613:U:O4	2.20	0.42
22:DA:765:C:H2'	22:DA:766:U:C6	2.54	0.42
22:DA:818:G:N7	22:DA:1187:G:C6	2.88	0.42
22:DA:825:A:C2	22:DA:826:U:C2	3.08	0.42
22:DA:832:U:P	33:DL:38:GLN:H	2.43	0.42
22:DA:845:A:C2	22:DA:847:U:N1	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:858:G:C6	22:DA:2268:A:C6	3.08	0.42
22:DA:980:A:C4	22:DA:1136:G:O4'	2.73	0.42
22:DA:1400:U:C2'	22:DA:1401:G:O4'	2.67	0.42
22:DA:1438:U:C2'	22:DA:1439:A:H5'	2.50	0.42
22:DA:1608:A:C4	22:DA:1611:C:N4	2.87	0.42
22:DA:1612:C:O2'	22:DA:1613:G:O5'	2.37	0.42
22:DA:1627:G:C2	22:DA:1628:G:C8	3.07	0.42
22:DA:1666:G:H4'	32:DK:6:THR:HG23	2.01	0.42
22:DA:1675:C:N3	25:DD:133:THR:HG21	2.35	0.42
22:DA:1769:U:O2'	22:DA:1958:C:OP1	2.38	0.42
22:DA:1993:U:H2'	22:DA:1994:C:O4'	2.19	0.42
22:DA:1998:A:OP2	25:DD:141:ARG:NH2	2.53	0.42
22:DA:2506:U:C6	22:DA:2506:U:C3'	3.03	0.42
57:DB:42:C:H2'	57:DB:43:C:H6	1.76	0.42
57:DB:52:A:N6	36:DO:33:ARG:NE	2.67	0.42
24:DC:45:ASN:C	24:DC:47:ARG:H	2.23	0.42
24:DC:77:VAL:HG21	24:DC:110:LYS:O	2.20	0.42
25:DD:4:LEU:HB3	25:DD:32:ASN:HD21	1.84	0.42
26:DE:60:TRP:CE3	26:DE:62:GLN:HB2	2.55	0.42
29:DH:4:ILE:HG12	29:DH:18:GLN:HB2	2.01	0.42
29:DH:71:LYS:CD	29:DH:71:LYS:N	2.82	0.42
31:DJ:80:HIS:O	31:DJ:81:ILE:O	2.38	0.42
33:DL:79:LEU:HD12	33:DL:112:LEU:HA	2.01	0.42
34:DM:136:MET:OXT	34:DM:136:MET:HG2	2.20	0.42
37:DP:19:PHE:O	37:DP:23:ASP:OD1	2.38	0.42
39:DR:7:SER:HB2	39:DR:22:LEU:HB2	2.02	0.42
40:DS:70:LYS:O	40:DS:72:THR:N	2.52	0.42
48:D0:39:ARG:O	48:D0:40:HIS:HB2	2.20	0.42
1:AA:290:C:O2'	1:AA:291:U:H5'	2.20	0.42
1:AA:747:A:C6	1:AA:748:G:C6	3.08	0.42
1:AA:803:G:C6	1:AA:804:U:N3	2.88	0.42
1:AA:863:U:H2'	1:AA:865:A:OP2	2.20	0.42
1:AA:1030:U:OP2	1:AA:1031:C:O2	2.38	0.42
1:AA:1107:C:C4	1:AA:1108:G:C8	3.07	0.42
1:AA:1143:G:H2'	1:AA:1144:G:H8	1.85	0.42
1:AA:1229:A:N6	13:AM:103:THR:CG2	2.82	0.42
1:AA:1237:C:O5'	1:AA:1237:C:H6	2.03	0.42
2:AB:17:HIS:CE1	2:AB:202:ASN:HD21	2.37	0.42
2:AB:40:ILE:HG13	2:AB:41:ASN:H	1.84	0.42
3:AC:133:MET:HB3	3:AC:150:VAL:HG21	2.02	0.42
5:AE:113:VAL:HG21	5:AE:140:ILE:CD1	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:47:LEU:HB3	18:AR:65:SER:OG	2.19	0.42
8:AH:25:THR:O	8:AH:26:MET:HB3	2.19	0.42
10:AJ:20:GLN:O	10:AJ:24:GLU:HG3	2.20	0.42
11:AK:76:TYR:HD1	11:AK:76:TYR:H	1.68	0.42
12:AL:82:ARG:O	12:AL:82:ARG:HG3	2.20	0.42
13:AM:13:HIS:CG	13:AM:41:ASP:HB2	2.55	0.42
20:AT:55:PRO:O	20:AT:59:ARG:CB	2.68	0.42
22:BA:30:G:C5	22:BA:31:C:C4	3.08	0.42
22:BA:368:A:H2'	22:BA:369:U:H5'	2.02	0.42
22:BA:942:G:C2'	22:BA:943:A:H5'	2.50	0.42
22:BA:996:A:O2'	38:BQ:91:ARG:CG	2.68	0.42
22:BA:1301:A:N3	22:BA:1301:A:H2'	2.35	0.42
22:BA:1324:G:C4	22:BA:1328:A:N6	2.87	0.42
22:BA:1714:U:H5'	22:BA:1715:G:H5'	2.02	0.42
22:BA:1797:G:C6	22:BA:1798:U:C4	3.08	0.42
22:BA:1808:A:O2'	45:BX:2:ARG:NH1	2.53	0.42
22:BA:1979:U:C2'	22:BA:1980:G:H5'	2.50	0.42
22:BA:2307:G:N2	22:BA:2311:A:C8	2.87	0.42
22:BA:2389:G:H5"	22:BA:2390:U:H5'	2.01	0.42
22:BA:2544:G:H2'	22:BA:2545:G:O4'	2.19	0.42
22:BA:2667:C:H2'	22:BA:2668:G:H5'	2.01	0.42
22:BA:2731:G:O2'	22:BA:2732:G:H5'	2.19	0.42
23:BB:46:A:C4	23:BB:47:C:C6	3.07	0.42
24:BC:104:LEU:HB3	24:BC:105:ALA:H	1.67	0.42
30:BI:56:VAL:CG2	30:BI:57:VAL:N	2.83	0.42
30:BI:58:ILE:HG22	30:BI:60:VAL:CG2	2.50	0.42
32:BK:18:ARG:HA	32:BK:18:ARG:HD2	1.82	0.42
32:BK:88:ASN:ND2	32:BK:90:ASN:H	2.18	0.42
33:BL:94:THR:CG2	33:BL:95:LEU:N	2.83	0.42
38:BQ:111:LYS:NZ	39:BR:50:GLY:HA2	2.35	0.42
45:BX:51:SER:O	45:BX:52:ALA:C	2.57	0.42
52:B4:9:LYS:HB2	52:B4:9:LYS:HE2	1.86	0.42
52:B4:25:VAL:O	52:B4:26:ILE:HD13	2.19	0.42
53:CA:78:A:H2'	53:CA:79:G:H8	1.79	0.42
53:CA:91:U:C4	53:CA:92:U:C4	3.07	0.42
53:CA:117:G:H2'	53:CA:118:U:O4'	2.20	0.42
53:CA:296:U:N3	53:CA:297:G:C5	2.88	0.42
53:CA:386:C:C2'	53:CA:387:U:H5'	2.49	0.42
53:CA:510:A:C5'	53:CA:511:C:OP2	2.64	0.42
53:CA:688:G:C4	53:CA:700:G:C2	3.08	0.42
53:CA:1003:G:N3	53:CA:1005:A:OP1	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1050:G:N1	53:CA:1209:C:C2	2.88	0.42
53:CA:1142:G:O2'	53:CA:1143:G:O4'	2.22	0.42
53:CA:1146:A:C2	53:CA:1147:C:C2	3.08	0.42
53:CA:1150:A:H1'	53:CA:1280:A:N6	2.35	0.42
53:CA:1158:C:O2	53:CA:1158:C:C2'	2.68	0.42
53:CA:1168:U:O2	53:CA:1168:U:H2'	2.20	0.42
53:CA:1241:G:C2	53:CA:1242:G:C5	3.08	0.42
53:CA:1328:C:OP1	55:CM:27:THR:HG21	2.20	0.42
53:CA:1346:A:C4	53:CA:1348:U:O4	2.73	0.42
53:CA:1453:G:H2'	53:CA:1454:G:O4'	2.20	0.42
3:CC:190:THR:HG22	3:CC:191:THR:N	2.25	0.42
4:CD:115:GLN:NE2	4:CD:153:ARG:HH22	2.18	0.42
4:CD:176:LYS:CG	4:CD:178:GLU:HB2	2.46	0.42
8:CH:11:THR:HG22	8:CH:14:ARG:CZ	2.50	0.42
8:CH:23:ALA:HA	8:CH:62:LEU:HD23	2.01	0.42
8:CH:38:VAL:O	8:CH:38:VAL:HG12	2.19	0.42
8:CH:102:VAL:CG2	8:CH:125:ILE:HD12	2.47	0.42
11:CK:18:GLY:O	11:CK:81:LEU:HA	2.20	0.42
55:CM:17:ALA:HB3	55:CM:18:LEU:HD12	2.02	0.42
15:CO:2:LEU:HD13	15:CO:34:GLN:HE21	1.84	0.42
17:CQ:30:HIS:CD2	17:CQ:31:PRO:HD2	2.55	0.42
17:CQ:37:ILE:HG13	17:CQ:38:LYS:O	2.19	0.42
18:CR:25:ILE:HA	18:CR:28:LEU:HB2	2.02	0.42
22:DA:60:G:O2'	22:DA:61:C:O5'	2.36	0.42
22:DA:432:A:H8	22:DA:432:A:O5'	2.01	0.42
22:DA:462:C:C2'	22:DA:463:G:H5'	2.49	0.42
22:DA:545:U:H2'	22:DA:547:A:H5'	2.01	0.42
22:DA:651:G:C6	22:DA:652:U:C4	3.08	0.42
22:DA:779:U:OP1	24:DC:48:ILE:HG13	2.20	0.42
22:DA:1038:G:C2	22:DA:1039:A:C5	3.07	0.42
22:DA:1075:C:O2'	22:DA:1076:C:H5'	2.19	0.42
22:DA:1259:G:H2'	22:DA:1260:A:O4'	2.20	0.42
22:DA:1282:U:H2'	22:DA:1283:G:O4'	2.20	0.42
22:DA:1343:G:H2'	22:DA:1344:U:C5	2.54	0.42
22:DA:1570:A:C6	22:DA:1571:A:N1	2.87	0.42
22:DA:1631:G:H1'	22:DA:1635:A:N6	2.35	0.42
22:DA:2185:U:H6	22:DA:2185:U:O5'	2.03	0.42
22:DA:2259:U:H2'	22:DA:2260:C:C6	2.54	0.42
22:DA:2259:U:C6	22:DA:2427:C:C4	3.08	0.42
22:DA:2293:G:H2'	22:DA:2294:G:O4'	2.20	0.42
22:DA:2321:U:OP2	22:DA:2322:A:OP2	2.38	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2603:G:H2'	22:DA:2604:U:O4'	2.20	0.42
22:DA:2744:G:C6	22:DA:2761:A:C6	3.06	0.42
22:DA:2849:U:O4	22:DA:2867:G:C8	2.72	0.42
24:DC:93:VAL:HG13	24:DC:94:LEU:N	2.34	0.42
25:DD:179:ARG:H	25:DD:188:LEU:HB2	1.85	0.42
26:DE:134:LEU:HA	26:DE:137:LYS:HB2	2.01	0.42
30:DI:54:ILE:HG23	30:DI:70:THR:HG21	2.02	0.42
32:DK:59:LYS:HG2	32:DK:89:ASN:HA	2.01	0.42
35:DN:72:ASP:O	35:DN:75:ILE:HG13	2.20	0.42
39:DR:5:PHE:HB3	39:DR:59:ILE:HD12	2.02	0.42
39:DR:24:LYS:HA	39:DR:94:THR:CG2	2.49	0.42
46:DY:44:LYS:HZ2	46:DY:48:ARG:NE	2.18	0.42
49:D1:34:GLU:HG3	49:D1:49:LYS:CB	2.49	0.42
1:AA:257:G:H2'	1:AA:258:G:H8	1.85	0.42
1:AA:674:G:H4'	18:AR:69:TYR:CE1	2.54	0.42
1:AA:1072:G:C5	1:AA:1073:U:C4	3.08	0.42
1:AA:1306:A:C2'	1:AA:1307:U:H5'	2.49	0.42
1:AA:1426:G:O2'	1:AA:1427:C:H5'	2.19	0.42
2:AB:116:LEU:HB3	2:AB:140:LEU:HG	2.02	0.42
2:AB:138:ARG:HG3	2:AB:139:GLU:N	2.35	0.42
2:AB:179:GLY:O	2:AB:180:ILE:HD13	2.19	0.42
3:AC:35:ASP:C	3:AC:37:LYS:H	2.22	0.42
5:AE:77:ASN:CG	5:AE:78:GLY:H	2.23	0.42
6:AF:11:HIS:HD2	6:AF:12:PRO:CD	2.32	0.42
6:AF:68:GLN:HA	6:AF:71:ILE:CG2	2.49	0.42
9:AI:41:GLU:HB3	9:AI:42:THR:H	1.57	0.42
9:AI:51:LEU:CB	9:AI:56:MET:HG2	2.39	0.42
11:AK:121:ARG:NH2	21:AU:35:GLU:HG3	2.34	0.42
12:AL:33:CYS:CA	12:AL:54:VAL:HA	2.35	0.42
14:AN:50:LEU:O	14:AN:52:ARG:N	2.53	0.42
14:AN:86:ALA:O	14:AN:91:GLU:HB2	2.20	0.42
16:AP:20:VAL:HG21	16:AP:32:PHE:CB	2.50	0.42
19:AS:33:TRP:CD1	19:AS:51:HIS:CG	3.08	0.42
21:AU:9:GLU:CB	21:AU:10:PRO:HD3	2.50	0.42
22:BA:245:G:H2'	22:BA:246:C:C6	2.54	0.42
22:BA:252:G:N2	22:BA:253:C:H1'	2.35	0.42
22:BA:328:U:H2'	22:BA:329:G:OP1	2.20	0.42
22:BA:670:A:H4'	22:BA:671:C:O5'	2.19	0.42
22:BA:946:C:H2'	22:BA:947:A:H8	1.85	0.42
22:BA:988:A:P	47:BZ:11:SER:CB	3.08	0.42
22:BA:1498:C:O2'	22:BA:1499:C:O5'	2.38	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1626:A:O2'	22:BA:1627:G:OP2	2.31	0.42
22:BA:2095:A:C6	22:BA:2096:C:C4	3.08	0.42
22:BA:2307:G:H22	22:BA:2311:A:H2'	1.85	0.42
22:BA:2333:A:H5'	22:BA:2335:A:H1'	2.02	0.42
22:BA:2571:U:O2'	25:BD:151:THR:CG2	2.67	0.42
22:BA:2592:G:C6	22:BA:2593:U:C4	3.08	0.42
22:BA:2667:C:H2'	22:BA:2668:G:O4'	2.20	0.42
22:BA:2771:C:H2'	22:BA:2772:C:C6	2.55	0.42
60:BA:3135:TEL:H242	60:BA:3135:TEL:H30	1.85	0.42
23:BB:35:C:H2'	23:BB:36:C:O4'	2.20	0.42
24:BC:164:VAL:O	24:BC:165:ALA:HB2	2.20	0.42
24:BC:202:ARG:HG3	24:BC:202:ARG:H	1.68	0.42
27:BF:133:GLU:H	27:BF:150:GLY:HA2	1.83	0.42
28:BG:39:ALA:HB1	28:BG:57:TYR:HB3	2.02	0.42
28:BG:59:ASP:O	28:BG:60:GLY:O	2.37	0.42
29:BH:54:LEU:N	29:BH:57:LYS:HB3	2.34	0.42
34:BM:21:ALA:CA	34:BM:97:GLN:HG2	2.47	0.42
36:BO:70:ALA:O	36:BO:73:ALA:HB3	2.20	0.42
38:BQ:81:GLY:O	38:BQ:85:ALA:N	2.40	0.42
39:BR:59:ILE:HG23	39:BR:101:ILE:HD13	2.01	0.42
41:BT:18:GLU:O	41:BT:19:LYS:C	2.57	0.42
44:BW:8:SER:O	44:BW:9:THR:CB	2.67	0.42
44:BW:23:LYS:CG	44:BW:24:ARG:N	2.80	0.42
53:CA:201:G:H2'	53:CA:202:G:C8	2.55	0.42
53:CA:352:C:H6	53:CA:352:C:H5"	1.84	0.42
53:CA:495:A:N1	53:CA:496:A:N6	2.68	0.42
53:CA:559:A:H4'	53:CA:560:A:O5'	2.20	0.42
53:CA:749:A:C2	53:CA:750:C:C2	3.07	0.42
53:CA:1002:G:C6	53:CA:1003:G:C6	3.07	0.42
53:CA:1073:U:H2'	53:CA:1074:G:C8	2.52	0.42
53:CA:1250:A:C6	53:CA:1251:A:C5	3.08	0.42
53:CA:1284:C:H3'	53:CA:1285:A:H5"	2.02	0.42
53:CA:1346:A:N6	54:CG:9:ARG:HH12	2.18	0.42
53:CA:1387:G:C6	53:CA:1388:C:C4	3.07	0.42
53:CA:1434:A:H2'	53:CA:1435:G:O4'	2.20	0.42
2:CB:49:PHE:HB3	2:CB:199:ILE:HG21	2.01	0.42
3:CC:187:GLU:HB3	3:CC:188:ALA:H	1.62	0.42
4:CD:29:THR:C	4:CD:30:LYS:HZ2	2.22	0.42
6:CF:3:HIS:CG	6:CF:92:THR:HG23	2.55	0.42
54:CG:148:LYS:HB2	54:CG:148:LYS:HZ3	1.85	0.42
12:CL:70:GLY:C	12:CL:98:ARG:HH22	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CM:5:GLY:C	55:CM:6:ILE:HG13	2.40	0.42
14:CN:68:ARG:HG3	14:CN:69:PRO:CD	2.46	0.42
56:CP:75:ILE:HG22	56:CP:80:LYS:HD2	2.02	0.42
56:CP:77:GLU:C	56:CP:79:ASN:H	2.22	0.42
17:CQ:68:LYS:HG2	17:CQ:69:THR:HG23	2.02	0.42
18:CR:39:VAL:HA	18:CR:40:PRO:HD3	1.94	0.42
19:CS:11:ASP:H	19:CS:14:LEU:HD21	1.84	0.42
22:DA:19:A:C2	22:DA:522:A:C2	3.07	0.42
22:DA:135:U:H2'	22:DA:136:G:C8	2.54	0.42
22:DA:235:U:C4	22:DA:236:C:C5	3.07	0.42
22:DA:310:A:C2	22:DA:330:A:C5	3.08	0.42
22:DA:452:G:OP1	26:DE:53:THR:HG23	2.20	0.42
22:DA:599:A:N3	22:DA:659:G:C2	2.88	0.42
22:DA:1210:G:C4'	22:DA:1211:C:O5'	2.64	0.42
22:DA:1265:A:C5	22:DA:1267:U:N3	2.88	0.42
22:DA:1394:U:C4	22:DA:1395:A:C6	3.07	0.42
22:DA:1462:C:H1'	22:DA:2702:G:H21	1.84	0.42
22:DA:1529:G:O6	22:DA:1543:G:C2	2.73	0.42
22:DA:1551:A:N3	22:DA:1552:A:H8	2.18	0.42
22:DA:1590:A:C6	22:DA:1591:A:N6	2.88	0.42
22:DA:2305:U:H4'	58:DF:132:ARG:CG	2.50	0.42
22:DA:2397:G:O2'	22:DA:2398:U:H5'	2.20	0.42
22:DA:2407:A:C2	22:DA:2408:U:N3	2.88	0.42
22:DA:2525:G:C2	22:DA:2539:C:C2	3.08	0.42
22:DA:2592:G:C6	22:DA:2593:U:C4	3.08	0.42
24:DC:30:ALA:N	24:DC:31:PRO:CD	2.83	0.42
24:DC:141:HIS:HB3	24:DC:142:ASN:H	1.63	0.42
24:DC:183:VAL:HG22	24:DC:184:GLU:N	2.34	0.42
58:DF:4:HIS:CE1	58:DF:96:TRP:CH2	3.08	0.42
58:DF:35:LEU:O	58:DF:87:LYS:HA	2.19	0.42
58:DF:45:ASP:OD2	58:DF:47:LYS:HB2	2.20	0.42
36:DO:39:VAL:HB	36:DO:49:VAL:H	1.85	0.42
41:DT:5:GLU:OE2	46:DY:18:LEU:HD21	2.20	0.42
41:DT:53:VAL:HG21	41:DT:92:ASN:HD22	1.84	0.42
42:DU:85:ARG:HA	42:DU:85:ARG:NE	2.35	0.42
43:DV:56:PHE:C	43:DV:58:SER:N	2.73	0.42
44:DW:18:LYS:H	44:DW:36:ILE:CG1	2.27	0.42
46:DY:25:GLN:O	46:DY:29:ARG:HD3	2.20	0.42
51:D3:18:LYS:HG3	51:D3:19:GLY:N	2.35	0.42
52:D4:9:LYS:O	52:D4:9:LYS:HD3	2.20	0.42
1:AA:142:G:N3	1:AA:142:G:H2'	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:342:C:C2'	1:AA:343:U:H5'	2.50	0.41
1:AA:486:U:C6	1:AA:486:U:C5'	2.87	0.41
1:AA:528:C:H5'	1:AA:529:G:OP2	2.20	0.41
1:AA:849:G:N1	1:AA:850:U:C2	2.88	0.41
1:AA:1142:G:H3'	1:AA:1143:G:H8	1.85	0.41
2:AB:32:GLY:HA3	2:AB:39:ILE:H	1.85	0.41
2:AB:100:LEU:HB3	2:AB:174:GLU:HG2	2.01	0.41
2:AB:113:LEU:O	2:AB:117:GLU:HG3	2.20	0.41
2:AB:185:ILE:O	2:AB:185:ILE:CG1	2.68	0.41
2:AB:191:ASP:HA	2:AB:192:PRO:HD2	1.88	0.41
3:AC:153:SER:CB	3:AC:164:THR:HG22	2.49	0.41
4:AD:54:LEU:C	4:AD:54:LEU:HD23	2.41	0.41
4:AD:196:GLU:C	4:AD:198:LEU:N	2.72	0.41
5:AE:112:ALA:O	5:AE:114:LEU:N	2.52	0.41
6:AF:18:VAL:HG11	6:AF:58:HIS:CD2	2.55	0.41
7:AG:92:PRO:C	7:AG:93:VAL:HG22	2.40	0.41
7:AG:107:ALA:CA	7:AG:122:GLU:HG3	2.50	0.41
12:AL:85:ARG:HH21	12:AL:87:LYS:HD2	1.83	0.41
15:AO:50:HIS:O	15:AO:53:ARG:HB3	2.20	0.41
15:AO:68:TYR:O	15:AO:69:LEU:C	2.58	0.41
17:AQ:13:SER:O	17:AQ:16:MET:SD	2.78	0.41
22:BA:74:A:C4'	22:BA:75:G:O5'	2.61	0.41
22:BA:149:A:C4	22:BA:150:U:C6	3.08	0.41
22:BA:307:G:N2	22:BA:309:A:H3'	2.34	0.41
22:BA:391:A:C6	22:BA:411:G:C2	3.08	0.41
22:BA:575:A:OP2	22:BA:2055:C:H5	2.03	0.41
22:BA:587:C:C6	22:BA:671:C:H1'	2.55	0.41
22:BA:687:C:O2	22:BA:687:C:H2'	2.20	0.41
22:BA:936:A:H2'	22:BA:937:C:C6	2.55	0.41
22:BA:986:C:H2'	22:BA:987:C:H6	1.84	0.41
22:BA:1067:A:OP2	22:BA:1067:A:H8	2.03	0.41
22:BA:1105:U:C2'	22:BA:1106:G:H8	2.30	0.41
22:BA:1172:C:N3	22:BA:1173:U:H1'	2.35	0.41
22:BA:2043:C:C4	22:BA:2777:G:C2	3.08	0.41
22:BA:2082:A:H2'	22:BA:2083:G:O4'	2.20	0.41
22:BA:2339:C:H2'	22:BA:2340:A:H8	1.80	0.41
22:BA:2506:U:O2'	22:BA:2507:C:O5'	2.38	0.41
22:BA:2517:C:C6	22:BA:2542:A:C5	3.07	0.41
22:BA:2636:C:HO2'	25:BD:45:TYR:HH	1.60	0.41
22:BA:2680:U:OP2	25:BD:114:LYS:NZ	2.52	0.41
22:BA:2748:A:H1'	28:BG:66:THR:CG2	2.49	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2749:A:OP1	28:BG:3:VAL:HG12	2.20	0.41
24:BC:96:LYS:HD3	24:BC:96:LYS:HA	1.87	0.41
25:BD:24:VAL:HA	25:BD:191:GLY:N	2.33	0.41
29:BH:8:LYS:C	29:BH:13:GLY:HA3	2.41	0.41
30:BI:93:ASN:OD1	30:BI:136:GLY:HA2	2.20	0.41
33:BL:29:LYS:HG2	33:BL:30:THR:CG2	2.49	0.41
33:BL:49:GLY:O	33:BL:51:GLU:HG2	2.20	0.41
35:BN:16:HIS:O	35:BN:17:ARG:C	2.59	0.41
36:BO:16:ARG:HD2	36:BO:19:GLN:NE2	2.35	0.41
37:BP:105:LYS:CA	37:BP:108:ARG:HH21	2.31	0.41
40:BS:28:LYS:O	40:BS:30:SER:N	2.52	0.41
41:BT:4:GLU:CD	41:BT:5:GLU:N	2.73	0.41
41:BT:61:LEU:HD12	41:BT:61:LEU:O	2.20	0.41
44:BW:70:VAL:HG13	44:BW:70:VAL:O	2.20	0.41
45:BX:53:LYS:O	45:BX:57:VAL:HG23	2.20	0.41
47:BZ:52:PHE:CD2	47:BZ:52:PHE:C	2.94	0.41
49:B1:27:ARG:C	49:B1:29:LYS:H	2.22	0.41
50:B2:12:ARG:HG3	50:B2:13:ASN:ND2	2.35	0.41
50:B2:35:ARG:CG	50:B2:42:LEU:HD11	2.46	0.41
53:CA:398:U:H2'	53:CA:399:G:C8	2.54	0.41
53:CA:415:A:H3'	53:CA:416:G:C8	2.52	0.41
53:CA:444:G:O2'	53:CA:445:G:H5'	2.20	0.41
53:CA:704:A:O2'	53:CA:705:G:O4'	2.37	0.41
53:CA:757:U:OP1	53:CA:822:U:O2'	2.27	0.41
53:CA:1072:G:H2'	53:CA:1073:U:O4'	2.19	0.41
53:CA:1087:G:C6	53:CA:1099:G:C2	3.08	0.41
53:CA:1172:C:C2'	53:CA:1173:U:H5'	2.50	0.41
53:CA:1308:U:OP1	55:CM:95:PRO:HB3	2.19	0.41
53:CA:1366:C:O2'	53:CA:1367:C:O5'	2.38	0.41
53:CA:1458:G:O2'	20:CT:22:SER:HB2	2.18	0.41
2:CB:221:ARG:C	2:CB:223:GLY:H	2.23	0.41
3:CC:76:ILE:HG12	3:CC:83:VAL:HG11	2.02	0.41
3:CC:152:VAL:HA	3:CC:197:VAL:HG22	2.00	0.41
4:CD:106:PHE:HD1	4:CD:158:LEU:HD21	1.85	0.41
54:CG:41:ILE:O	54:CG:41:ILE:HG22	2.20	0.41
12:CL:72:ASN:HD22	12:CL:72:ASN:N	2.13	0.41
55:CM:111:PRO:HG2	55:CM:113:LYS:CG	2.50	0.41
19:CS:5:LYS:HE3	19:CS:6:LYS:H	1.83	0.41
20:CT:11:ILE:C	20:CT:13:SER:H	2.23	0.41
21:CU:19:LYS:HA	21:CU:19:LYS:HD3	1.91	0.41
22:DA:75:G:O2'	22:DA:76:C:O5'	2.38	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:116:C:N4	22:DA:117:G:C6	2.88	0.41
22:DA:263:G:H2'	22:DA:264:C:O4'	2.19	0.41
22:DA:301:G:C4	22:DA:302:C:C4	3.08	0.41
22:DA:489:G:C2'	22:DA:491:G:H8	2.33	0.41
22:DA:538:A:C2	22:DA:556:A:C4	3.08	0.41
22:DA:584:C:C4	22:DA:585:G:C5	3.07	0.41
22:DA:864:G:C6	22:DA:865:C:C4	3.08	0.41
22:DA:1008:A:OP1	22:DA:1008:A:H8	2.03	0.41
22:DA:1016:G:C2	22:DA:1147:A:C2	3.07	0.41
22:DA:1070:A:C5	22:DA:1097:U:H4'	2.55	0.41
22:DA:1081:U:O2'	22:DA:1082:U:H5'	2.20	0.41
22:DA:1222:U:H2'	22:DA:1223:G:C8	2.56	0.41
22:DA:1999:C:H5"	22:DA:2723:C:O2'	2.20	0.41
22:DA:2040:G:C6	22:DA:2041:U:C4	3.08	0.41
22:DA:2638:G:H1'	22:DA:2778:A:H61	1.83	0.41
22:DA:2841:C:H2'	22:DA:2842:G:H8	1.85	0.41
57:DB:110:C:H2'	57:DB:111:U:C6	2.53	0.41
24:DC:52:HIS:HB3	24:DC:216:ARG:O	2.20	0.41
25:DD:101:PHE:HD2	25:DD:104:VAL:HG11	1.85	0.41
25:DD:168:GLU:HB2	25:DD:169:ARG:H	1.63	0.41
26:DE:46:GLN:HB3	26:DE:86:ALA:CB	2.50	0.41
26:DE:90:GLN:HG3	26:DE:92:HIS:CE1	2.55	0.41
58:DF:65:LEU:HD11	58:DF:87:LYS:HZ1	1.85	0.41
28:DG:157:LYS:C	28:DG:159:LYS:N	2.73	0.41
32:DK:14:SER:OG	32:DK:51:LYS:N	2.53	0.41
34:DM:41:LEU:HB3	34:DM:46:ILE:HG23	2.02	0.41
35:DN:2:ARG:HD2	35:DN:2:ARG:O	2.20	0.41
38:DQ:89:ILE:O	38:DQ:91:ARG:N	2.53	0.41
39:DR:27:ILE:CG2	39:DR:28:ALA:N	2.73	0.41
41:DT:18:GLU:HA	41:DT:22:THR:HG21	2.02	0.41
51:D3:57:VAL:O	51:D3:60:CYS:HB2	2.19	0.41
1:AA:13:U:C4	1:AA:916:U:O4	2.73	0.41
1:AA:215:C:O2'	1:AA:216:U:H5'	2.20	0.41
1:AA:451:A:O4'	1:AA:452:A:C8	2.73	0.41
1:AA:466:A:C3'	1:AA:467:U:H5"	2.50	0.41
1:AA:537:G:H5"	12:AL:109:ARG:NH1	2.35	0.41
1:AA:577:G:C8	1:AA:816:A:C6	3.08	0.41
1:AA:620:C:N3	4:AD:131:ILE:HG21	2.34	0.41
1:AA:874:G:O2'	1:AA:875:U:H5'	2.20	0.41
1:AA:1222:G:O6	62:AA:1835:HOH:O	2.21	0.41
2:AB:156:LEU:HG	2:AB:156:LEU:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:165:ALA:CB	2:AB:186:VAL:HG12	2.48	0.41
4:AD:146:GLU:HB3	4:AD:147:LYS:HZ3	1.82	0.41
6:AF:79:ARG:HA	6:AF:79:ARG:NE	2.35	0.41
8:AH:65:PHE:HD1	8:AH:65:PHE:HA	1.74	0.41
11:AK:97:ARG:C	11:AK:99:LEU:H	2.23	0.41
13:AM:10:ASP:O	13:AM:11:HIS:HB2	2.20	0.41
16:AP:19:VAL:HG13	16:AP:37:GLY:O	2.19	0.41
17:AQ:80:LYS:N	17:AQ:80:LYS:HZ2	2.17	0.41
18:AR:31:TYR:O	18:AR:39:VAL:HG23	2.20	0.41
22:BA:143:C:H2'	22:BA:144:A:C8	2.55	0.41
22:BA:226:A:N6	22:BA:227:A:C6	2.87	0.41
22:BA:545:U:C2'	22:BA:546:U:O3'	2.68	0.41
22:BA:569:U:OP1	22:BA:945:A:O2'	2.24	0.41
22:BA:639:U:H2'	22:BA:640:C:C6	2.55	0.41
22:BA:684:G:OP1	50:B2:21:ARG:NH1	2.53	0.41
22:BA:753:A:H2'	22:BA:754:U:H6	1.85	0.41
22:BA:815:C:OP1	39:BR:85:LYS:CE	2.66	0.41
22:BA:1416:G:O2'	22:BA:1417:C:OP2	2.30	0.41
22:BA:1684:G:C2	22:BA:1705:A:C2	3.08	0.41
22:BA:1734:G:C4	22:BA:1735:A:C8	3.07	0.41
22:BA:2140:G:H8	22:BA:2140:G:OP2	2.03	0.41
22:BA:2364:C:H4'	44:BW:55:ASP:OD1	2.20	0.41
22:BA:2582:G:C2	22:BA:2583:G:C8	3.08	0.41
22:BA:2840:C:H2'	22:BA:2841:C:H6	1.85	0.41
23:BB:110:C:C4	23:BB:111:U:C5	3.08	0.41
24:BC:108:GLY:C	24:BC:109:LEU:HD22	2.40	0.41
24:BC:225:ASN:O	24:BC:226:PRO:C	2.59	0.41
25:BD:184:ARG:NH1	37:BP:6:GLN:HE22	2.15	0.41
26:BE:83:VAL:O	26:BE:83:VAL:HG12	2.18	0.41
27:BF:56:LEU:HD23	27:BF:56:LEU:HA	1.75	0.41
27:BF:72:SER:HB2	27:BF:80:GLN:N	2.35	0.41
27:BF:107:VAL:N	27:BF:108:PRO:HD2	2.36	0.41
28:BG:26:LYS:HB3	28:BG:32:LEU:HA	2.02	0.41
30:BI:78:LEU:HD13	30:BI:108:ILE:CG2	2.46	0.41
32:BK:115:ILE:O	32:BK:115:ILE:HG23	2.19	0.41
37:BP:4:ILE:C	37:BP:7:LEU:H	2.24	0.41
37:BP:61:ARG:HG3	37:BP:70:GLU:HG2	2.02	0.41
39:BR:24:LYS:HB3	39:BR:24:LYS:HE2	1.70	0.41
41:BT:29:THR:HA	41:BT:86:THR:H	1.84	0.41
41:BT:69:ARG:HB3	41:BT:70:HIS:H	1.57	0.41
44:BW:25:PHE:O	44:BW:26:GLY:C	2.57	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BW:43:LYS:HD3	44:BW:77:LYS:HB3	2.02	0.41
53:CA:22:G:H2'	53:CA:23:C:C6	2.55	0.41
53:CA:320:A:C2	53:CA:334:C:N3	2.88	0.41
53:CA:428:G:C5	53:CA:430:A:C6	3.08	0.41
53:CA:455:G:N2	53:CA:478:A:C2	2.88	0.41
53:CA:604:G:C6	53:CA:605:U:N3	2.88	0.41
53:CA:658:C:O2'	53:CA:659:U:H5'	2.20	0.41
53:CA:1136:C:H6	53:CA:1136:C:H2'	1.71	0.41
53:CA:1294:G:C8	53:CA:1294:G:OP2	2.73	0.41
53:CA:1319:A:H5"	19:CS:4:LEU:CD1	2.50	0.41
2:CB:9:LEU:HD23	2:CB:9:LEU:N	2.30	0.41
2:CB:67:LEU:CG	2:CB:157:PRO:HG3	2.50	0.41
2:CB:182:VAL:O	2:CB:195:VAL:HG13	2.20	0.41
4:CD:29:THR:C	4:CD:31:CYS:H	2.21	0.41
5:CE:38:VAL:HG12	5:CE:39:GLY:H	1.84	0.41
5:CE:153:ALA:O	5:CE:156:ARG:HG2	2.20	0.41
6:CF:4:TYR:O	6:CF:63:ASN:HA	2.20	0.41
8:CH:75:GLN:O	8:CH:126:CYS:CB	2.68	0.41
22:DA:41:C:H2'	22:DA:42:A:H8	1.78	0.41
22:DA:200:U:O4	22:DA:248:G:C2	2.73	0.41
22:DA:201:C:H6	22:DA:201:C:O5'	2.03	0.41
22:DA:271:G:N2	22:DA:367:G:H1'	2.35	0.41
22:DA:283:G:N2	22:DA:358:U:C2	2.88	0.41
22:DA:581:C:P	38:DQ:32:ARG:HE	2.42	0.41
22:DA:799:G:C6	22:DA:800:A:C6	3.08	0.41
22:DA:864:G:C6	22:DA:865:C:N4	2.87	0.41
22:DA:960:A:C2'	22:DA:962:G:H5'	2.48	0.41
22:DA:1139:G:C2'	22:DA:1140:C:H5'	2.50	0.41
22:DA:1409:U:O5'	22:DA:1409:U:H6	2.02	0.41
22:DA:1512:C:C4	22:DA:1513:U:C5	3.08	0.41
22:DA:1525:A:C6	22:DA:1526:C:N3	2.88	0.41
22:DA:1568:G:N3	24:DC:57:HIS:HE1	2.17	0.41
22:DA:1605:C:O2'	22:DA:1610:A:H2'	2.19	0.41
22:DA:1813:G:C2	24:DC:49:THR:HB	2.55	0.41
22:DA:2192:U:O2	22:DA:2192:U:H2'	2.21	0.41
22:DA:2246:G:H2'	22:DA:2247:A:C8	2.55	0.41
22:DA:2287:A:C6	22:DA:2289:G:C4	3.08	0.41
22:DA:2331:G:H2'	22:DA:2332:C:O4'	2.21	0.41
22:DA:2874:C:H2'	22:DA:2875:C:C6	2.55	0.41
24:DC:99:GLU:HG2	24:DC:100:ARG:N	2.34	0.41
58:DF:94:ARG:HA	58:DF:97:GLU:OE2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DJ:119:PHE:C	31:DJ:121:LYS:N	2.74	0.41
32:DK:16:ALA:HB1	32:DK:45:GLU:HG3	2.03	0.41
32:DK:21:CYS:HA	32:DK:41:ILE:CD1	2.47	0.41
33:DL:128:THR:HG22	33:DL:129:LYS:N	2.35	0.41
37:DP:4:ILE:HG22	37:DP:4:ILE:O	2.21	0.41
37:DP:28:LYS:O	37:DP:80:VAL:O	2.38	0.41
39:DR:93:PHE:CE1	39:DR:95:ASP:OD1	2.73	0.41
41:DT:34:VAL:O	41:DT:35:ALA:HB3	2.21	0.41
42:DU:20:LYS:HD2	42:DU:38:ILE:CD1	2.50	0.41
43:DV:69:GLU:C	43:DV:70:ILE:HD13	2.41	0.41
45:DX:44:ARG:HB3	45:DX:44:ARG:NH1	2.35	0.41
48:D0:12:ARG:HG3	48:D0:15:ARG:NH1	2.29	0.41
1:AA:132:C:H2'	1:AA:133:U:O4'	2.20	0.41
1:AA:133:U:H1'	1:AA:230:G:N2	2.36	0.41
1:AA:324:G:N2	1:AA:326:G:H3'	2.34	0.41
1:AA:340:U:O2'	1:AA:341:C:H5'	2.20	0.41
1:AA:596:A:H2'	1:AA:597:G:H8	1.85	0.41
1:AA:645:G:H2'	1:AA:646:G:H5'	2.01	0.41
1:AA:723:U:OP1	21:AU:48:LYS:HB2	2.21	0.41
1:AA:841:C:H1'	2:CB:152:ASP:OD1	2.20	0.41
1:AA:937:A:N6	1:AA:1345:U:O4	2.53	0.41
2:AB:110:ILE:HD12	2:AB:147:LEU:CD1	2.45	0.41
4:AD:12:ARG:HG2	4:AD:33:ILE:HD12	2.02	0.41
10:AJ:74:VAL:HG12	10:AJ:75:ASP:N	2.35	0.41
16:AP:5:ARG:HA	16:AP:68:SER:HG	1.84	0.41
19:AS:79:TYR:CD1	19:AS:80:ARG:N	2.89	0.41
20:AT:11:ILE:HG12	20:AT:12:GLN:N	2.35	0.41
22:BA:558:U:OP1	31:BJ:111:LYS:HE3	2.20	0.41
22:BA:675:A:C4	22:BA:804:A:C2	3.08	0.41
22:BA:1002:G:C2'	22:BA:1003:G:O5'	2.68	0.41
22:BA:1063:G:C6	22:BA:1064:C:C2	3.09	0.41
22:BA:1115:G:O2'	22:BA:1116:G:P	2.77	0.41
22:BA:1154:G:O5'	22:BA:1154:G:H8	2.03	0.41
22:BA:1471:G:H2'	22:BA:1472:C:H6	1.84	0.41
22:BA:1614:A:C2	40:BS:93:ALA:HB2	2.56	0.41
22:BA:1926:U:H2'	22:BA:1928:A:N7	2.35	0.41
22:BA:1947:C:H2'	22:BA:1948:G:H8	1.86	0.41
22:BA:2365:G:O2'	22:BA:2366:A:C8	2.65	0.41
22:BA:2567:G:H2'	22:BA:2568:U:C6	2.55	0.41
24:BC:250:GLN:H	24:BC:250:GLN:NE2	2.18	0.41
26:BE:196:VAL:HA	26:BE:199:MET:HB2	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:113:PHE:CE1	27:BF:116:LEU:HD22	2.54	0.41
28:BG:39:ALA:HB1	28:BG:57:TYR:CB	2.49	0.41
30:BI:115:ASP:OD1	30:BI:115:ASP:C	2.59	0.41
32:BK:76:VAL:H	37:BP:72:VAL:HG23	1.85	0.41
33:BL:55:MET:HA	33:BL:56:PRO:HD3	1.70	0.41
36:BO:98:GLN:O	36:BO:103:VAL:HG21	2.20	0.41
37:BP:32:VAL:O	37:BP:33:GLU:C	2.59	0.41
39:BR:49:ILE:CG2	39:BR:53:PHE:N	2.83	0.41
53:CA:71:A:C6	53:CA:100:G:N7	2.88	0.41
53:CA:73:C:H2'	53:CA:74:A:H8	1.85	0.41
53:CA:115:G:H1'	53:CA:116:A:N7	2.35	0.41
53:CA:134:G:H2'	53:CA:135:C:O4'	2.20	0.41
53:CA:552:U:C2	53:CA:553:A:C8	3.08	0.41
53:CA:1227:A:O2'	53:CA:1228:C:H5'	2.20	0.41
53:CA:1237:C:OP1	53:CA:1238:A:H1'	2.20	0.41
2:CB:9:LEU:O	2:CB:10:LYS:CB	2.67	0.41
3:CC:41:TYR:HD2	3:CC:41:TYR:HA	1.76	0.41
4:CD:56:GLU:OE1	4:CD:56:GLU:HA	2.20	0.41
9:CI:70:GLY:O	9:CI:73:GLY:N	2.46	0.41
10:CJ:10:LEU:HB2	10:CJ:72:ARG:HB2	2.01	0.41
12:CL:106:VAL:CG2	12:CL:116:TYR:HB3	2.51	0.41
55:CM:69:ARG:HD2	55:CM:69:ARG:N	2.34	0.41
56:CP:39:PHE:HD1	56:CP:50:THR:HG1	1.66	0.41
56:CP:46:LYS:HB2	56:CP:47:GLU:H	1.49	0.41
56:CP:57:ILE:HD13	56:CP:57:ILE:HA	1.92	0.41
22:DA:62:U:O2	22:DA:62:U:H2'	2.20	0.41
22:DA:126:A:P	50:D2:19:ARG:HG3	2.60	0.41
22:DA:219:A:N7	22:DA:220:G:C5	2.88	0.41
22:DA:249:C:H3'	22:DA:2394:C:O3'	2.20	0.41
22:DA:308:G:H21	22:DA:329:G:H21	1.67	0.41
22:DA:499:U:O4	22:DA:500:G:C6	2.73	0.41
22:DA:1048:A:C2	22:DA:1049:C:N3	2.88	0.41
22:DA:1091:G:O2'	22:DA:1092:C:H5'	2.19	0.41
22:DA:1112:G:O2'	22:DA:1113:U:H5'	2.19	0.41
22:DA:1394:U:H3'	22:DA:1394:U:C6	2.55	0.41
22:DA:1576:U:H2'	22:DA:1577:C:C6	2.56	0.41
22:DA:1613:G:C2	22:DA:1617:C:C2	3.09	0.41
22:DA:1652:A:H3'	22:DA:1653:G:C8	2.54	0.41
22:DA:1654:A:N7	22:DA:2823:A:H1'	2.36	0.41
22:DA:1791:A:N6	22:DA:1828:G:O2'	2.54	0.41
22:DA:2067:G:C4'	22:DA:2068:U:OP2	2.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2094:A:H2'	22:DA:2095:A:O4'	2.19	0.41
22:DA:2394:C:OP1	33:DL:63:LYS:HG2	2.20	0.41
22:DA:2429:G:N7	33:DL:55:MET:HE3	2.36	0.41
22:DA:2546:U:O4'	22:DA:2565:A:C2	2.73	0.41
22:DA:2787:C:O2'	22:DA:2788:C:H5'	2.20	0.41
58:DF:30:VAL:HG13	58:DF:168:LEU:HD23	2.01	0.41
58:DF:113:PHE:CE2	58:DF:116:LEU:HB2	2.52	0.41
30:DI:11:GLN:OE1	30:DI:74:PRO:HG2	2.21	0.41
32:DK:93:GLN:HA	32:DK:94:PRO:HD2	1.87	0.41
33:DL:57:LEU:CA	33:DL:60:ARG:HG3	2.49	0.41
35:DN:35:LYS:HD3	35:DN:112:TYR:CZ	2.55	0.41
35:DN:82:GLU:O	35:DN:85:PRO:HD2	2.21	0.41
39:DR:62:GLU:HB2	39:DR:99:THR:CG2	2.50	0.41
41:DT:55:VAL:HG22	41:DT:56:GLU:N	2.35	0.41
41:DT:58:VAL:HG22	41:DT:59:ASN:N	2.35	0.41
42:DU:32:LYS:HD2	42:DU:65:GLN:H	1.85	0.41
43:DV:4:ILE:HD11	43:DV:50:MET:HE2	2.03	0.41
45:DX:2:ARG:HH21	45:DX:32:LEU:HD23	1.85	0.41
49:D1:42:VAL:O	49:D1:42:VAL:HG12	2.20	0.41
1:AA:35:G:N3	12:AL:114:SER:OG	2.53	0.41
1:AA:116:A:C2'	1:AA:117:G:O5'	2.68	0.41
1:AA:345:C:C3'	37:BP:33:GLU:OE1	2.68	0.41
1:AA:434:U:H2'	1:AA:435:A:O4'	2.20	0.41
1:AA:568:G:N2	1:AA:883:C:C2	2.88	0.41
1:AA:626:G:H2'	1:AA:627:G:O4'	2.20	0.41
1:AA:734:G:H2'	1:AA:735:C:C6	2.56	0.41
1:AA:802:A:H5"	1:AA:803:G:OP2	2.20	0.41
1:AA:919:A:O5'	1:AA:919:A:H8	2.04	0.41
1:AA:1253:G:N1	1:AA:1285:A:N6	2.68	0.41
1:AA:1270:G:H2'	1:AA:1271:A:H8	1.85	0.41
1:AA:1470:U:O2'	1:AA:1471:U:H5'	2.19	0.41
2:AB:63:LYS:HD3	2:AB:63:LYS:C	2.41	0.41
6:AF:18:VAL:N	6:AF:19:PRO:HD2	2.35	0.41
11:AK:34:THR:OG1	11:AK:38:GLY:HA2	2.21	0.41
11:AK:124:LYS:HE2	11:AK:124:LYS:C	2.40	0.41
12:AL:88:ASP:O	12:AL:90:PRO:HD3	2.20	0.41
13:AM:4:ALA:HB2	13:AM:59:VAL:HG13	2.01	0.41
15:AO:80:LEU:O	15:AO:84:LEU:N	2.47	0.41
19:AS:47:THR:O	19:AS:48:ILE:C	2.59	0.41
20:AT:57:VAL:O	20:AT:58:ASP:C	2.57	0.41
21:AU:33:ARG:CD	21:AU:34:ARG:HG3	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:28:A:C2	22:BA:513:A:C8	3.09	0.41
22:BA:359:G:H3'	22:BA:360:U:C6	2.55	0.41
22:BA:523:C:H5"	22:BA:540:C:O2'	2.21	0.41
22:BA:1512:C:OP2	22:BA:1512:C:H6	2.03	0.41
22:BA:1590:A:C6	22:BA:1591:A:N6	2.88	0.41
22:BA:1770:G:C5	22:BA:1983:G:C6	3.08	0.41
22:BA:1911:U:C2	22:BA:1918:A:C2	3.07	0.41
22:BA:1983:G:C2	22:BA:1984:G:C8	3.08	0.41
22:BA:2140:G:H2'	22:BA:2141:G:C8	2.55	0.41
22:BA:2318:G:C6	22:BA:2319:G:C6	3.08	0.41
22:BA:2555:U:C5	22:BA:2556:C:N1	2.88	0.41
22:BA:2656:U:O2	22:BA:2656:U:H2'	2.20	0.41
22:BA:2716:C:C2	22:BA:2717:C:C5	3.08	0.41
22:BA:2847:U:O2'	22:BA:2848:G:H5'	2.21	0.41
26:BE:41:GLN:OE1	26:BE:43:THR:HG21	2.21	0.41
27:BF:84:ILE:O	27:BF:84:ILE:CG1	2.67	0.41
27:BF:134:GLN:C	27:BF:136:ILE:N	2.72	0.41
28:BG:3:VAL:HG13	28:BG:4:ALA:N	2.35	0.41
28:BG:27:GLY:O	28:BG:28:LYS:C	2.58	0.41
29:BH:33:GLN:HB2	29:BH:33:GLN:HE21	1.75	0.41
31:BJ:31:GLU:O	31:BJ:32:LEU:C	2.57	0.41
34:BM:6:ARG:HD2	34:BM:8:LYS:NZ	2.34	0.41
35:BN:83:LEU:HD11	35:BN:86:ARG:NH2	2.35	0.41
36:BO:2:ASP:O	36:BO:3:LYS:CB	2.68	0.41
36:BO:2:ASP:OD1	36:BO:3:LYS:HG2	2.20	0.41
38:BQ:91:ARG:HB2	39:BR:11:GLN:OE1	2.21	0.41
41:BT:38:ALA:HB3	41:BT:81:LYS:HE2	2.01	0.41
53:CA:260:G:C5	53:CA:261:U:C5	3.08	0.41
53:CA:390:U:O2'	53:CA:391:G:H5'	2.20	0.41
53:CA:397:A:H3'	53:CA:397:A:N3	2.36	0.41
53:CA:976:G:N2	53:CA:1363:A:N3	2.69	0.41
53:CA:1072:G:C2	53:CA:1073:U:C2	3.07	0.41
53:CA:1218:C:H2'	53:CA:1219:A:H8	1.78	0.41
53:CA:1261:A:N7	53:CA:1274:A:C2	2.88	0.41
53:CA:1508:A:H2'	53:CA:1509:C:O4'	2.20	0.41
2:CB:59:ILE:HD12	2:CB:60:ALA:N	2.35	0.41
2:CB:176:ASN:C	2:CB:178:LEU:H	2.23	0.41
3:CC:172:VAL:CG1	3:CC:181:ILE:HD13	2.51	0.41
54:CG:22:LEU:HD23	54:CG:22:LEU:C	2.40	0.41
54:CG:114:SER:O	54:CG:118:ARG:HG3	2.20	0.41
9:CI:11:ARG:NH2	9:CI:108:ARG:HH21	2.18	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:19:VAL:HB	11:CK:34:THR:HG23	2.01	0.41
12:CL:5:GLN:HG3	12:CL:9:LYS:HZ1	1.85	0.41
12:CL:47:ALA:C	12:CL:48:LEU:HD23	2.41	0.41
12:CL:86:VAL:HG11	12:CL:89:LEU:HD23	2.03	0.41
55:CM:77:LYS:HD3	55:CM:77:LYS:C	2.41	0.41
22:DA:192:C:N4	22:DA:193:U:O2	2.54	0.41
22:DA:216:A:C5	22:DA:432:A:C2	3.08	0.41
22:DA:295:G:C2	22:DA:296:U:C6	3.08	0.41
22:DA:345:A:H2'	22:DA:346:A:OP2	2.21	0.41
22:DA:374:A:H2'	22:DA:375:G:O4'	2.21	0.41
22:DA:662:G:H4'	33:DL:15:ALA:O	2.21	0.41
22:DA:754:U:H2'	22:DA:755:U:C6	2.55	0.41
22:DA:803:U:C2'	22:DA:804:A:H5'	2.50	0.41
22:DA:956:G:N3	22:DA:962:G:O6	2.53	0.41
22:DA:1048:A:N6	22:DA:1111:A:C5	2.89	0.41
22:DA:1182:G:H2'	22:DA:1183:U:O4'	2.19	0.41
22:DA:1274:A:O2'	22:DA:1275:A:C5'	2.63	0.41
22:DA:1366:A:H2'	22:DA:1367:A:C8	2.55	0.41
22:DA:1437:C:C2	22:DA:1438:U:C5	3.08	0.41
22:DA:1645:G:H5"	22:DA:1646:C:O5'	2.19	0.41
22:DA:1723:G:C2'	22:DA:1724:G:H5'	2.50	0.41
22:DA:1816:C:O2'	22:DA:1817:G:OP1	2.38	0.41
22:DA:1831:G:C6	22:DA:1832:C:N4	2.88	0.41
22:DA:1837:C:O2	22:DA:1927:A:H2	2.03	0.41
22:DA:1932:A:C2	22:DA:1933:G:H1'	2.56	0.41
22:DA:2093:G:H4'	29:DH:24:GLY:HA3	2.02	0.41
22:DA:2491:U:H5"	22:DA:2570:G:H5"	2.02	0.41
57:DB:42:C:N4	58:DF:87:LYS:HZ2	2.19	0.41
57:DB:69:G:H3'	57:DB:70:C:C5	2.55	0.41
24:DC:93:VAL:HG12	24:DC:101:ARG:N	2.34	0.41
25:DD:60:VAL:O	25:DD:60:VAL:HG13	2.19	0.41
26:DE:16:GLU:O	26:DE:16:GLU:HG3	2.20	0.41
26:DE:40:ARG:CZ	26:DE:92:HIS:CD2	3.04	0.41
58:DF:97:GLU:O	58:DF:97:GLU:HG2	2.19	0.41
28:DG:6:ALA:HA	28:DG:7:PRO:HD3	1.71	0.41
31:DJ:34:ARG:HE	31:DJ:34:ARG:HB3	1.72	0.41
31:DJ:44:TYR:HD1	38:DQ:63:ARG:HH21	1.68	0.41
34:DM:73:ILE:HG21	34:DM:91:TYR:CZ	2.56	0.41
39:DR:21:ARG:HB2	39:DR:93:PHE:CD1	2.53	0.41
42:DU:33:VAL:O	42:DU:34:ILE:CG1	2.69	0.41
44:DW:25:PHE:CG	44:DW:26:GLY:N	2.87	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DW:35:ILE:HB	44:DW:36:ILE:H	1.49	0.41
1:AA:507:C:OP2	1:AA:508:U:H3'	2.20	0.41
1:AA:595:A:C5	1:AA:641:U:C5	3.08	0.41
1:AA:1114:C:C4	1:AA:1115:U:C5	3.09	0.41
1:AA:1157:A:C6	1:AA:1180:A:C5	3.08	0.41
1:AA:1190:G:O2'	3:AC:2:GLN:HB2	2.21	0.41
1:AA:1314:C:C6	19:AS:5:LYS:HD3	2.55	0.41
2:AB:17:HIS:CD2	2:AB:202:ASN:ND2	2.82	0.41
2:AB:115:ASP:O	2:AB:119:GLN:HB3	2.20	0.41
4:AD:57:LYS:HG2	4:AD:202:LEU:CD2	2.50	0.41
4:AD:61:ARG:HG2	4:AD:71:PHE:CD2	2.56	0.41
4:AD:88:ASN:HA	4:AD:91:ALA:HB3	2.03	0.41
5:AE:60:GLN:C	5:AE:62:ALA:N	2.74	0.41
6:AF:41:ASP:OD2	6:AF:58:HIS:NE2	2.51	0.41
8:AH:21:LYS:HE2	8:AH:22:ALA:N	2.34	0.41
12:AL:43:LYS:HZ2	12:AL:44:PRO:HD2	1.84	0.41
12:AL:72:ASN:O	12:AL:73:LEU:O	2.38	0.41
12:AL:109:ARG:HH21	12:AL:116:TYR:HE2	1.60	0.41
14:AN:63:CYS:SG	14:AN:66:THR:OG1	2.72	0.41
19:AS:55:GLN:NE2	19:AS:56:HIS:H	2.19	0.41
20:AT:4:LYS:O	20:AT:5:SER:C	2.58	0.41
20:AT:29:THR:O	20:AT:33:LYS:HE2	2.20	0.41
20:AT:47:GLN:HE21	20:AT:82:ILE:HD13	1.86	0.41
20:AT:77:ASN:HD22	20:AT:78:LEU:H	1.69	0.41
22:BA:182:A:H2	22:BA:433:C:O2	2.03	0.41
22:BA:272:A:O2'	22:BA:273:G:O5'	2.38	0.41
22:BA:479:A:C2	22:BA:480:A:C4	3.09	0.41
22:BA:599:A:O2'	22:BA:600:G:H5'	2.20	0.41
22:BA:604:G:O2'	22:BA:605:G:H5'	2.20	0.41
22:BA:874:G:N1	22:BA:904:G:C6	2.89	0.41
22:BA:960:A:N7	22:BA:962:G:C8	2.89	0.41
22:BA:974:G:C8	22:BA:989:G:C2	3.09	0.41
22:BA:1106:G:C4	22:BA:1107:G:C8	3.08	0.41
22:BA:1941:C:C5	22:BA:1965:C:C6	3.09	0.41
22:BA:2805:C:C4	22:BA:2806:C:C4	3.08	0.41
24:BC:67:LYS:O	24:BC:68:ARG:HB2	2.20	0.41
28:BG:53:PRO:HD3	28:BG:61:TRP:CZ3	2.55	0.41
29:BH:28:ASN:HD22	29:BH:28:ASN:HA	1.53	0.41
29:BH:46:PHE:HD2	29:BH:46:PHE:O	2.04	0.41
30:BI:49:GLU:HG2	30:BI:50:LYS:N	2.35	0.41
30:BI:57:VAL:HG12	30:BI:58:ILE:N	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BL:99:ASN:OD1	62:BL:201:HOH:O	2.22	0.41
34:BM:117:PHE:CD2	34:BM:130:PHE:CE1	3.08	0.41
35:BN:24:MET:HG2	35:BN:44:LEU:CD2	2.47	0.41
37:BP:69:VAL:HG22	37:BP:69:VAL:O	2.20	0.41
38:BQ:5:ARG:O	38:BQ:5:ARG:HG2	2.20	0.41
41:BT:8:LEU:HD13	41:BT:46:ALA:CA	2.50	0.41
41:BT:11:LEU:HD11	41:BT:47:VAL:HG22	2.03	0.41
42:BU:10:VAL:HG23	42:BU:11:ILE:N	2.35	0.41
43:BV:72:VAL:HB	43:BV:92:VAL:O	2.21	0.41
44:BW:18:LYS:N	44:BW:36:ILE:HG12	2.35	0.41
45:BX:58:ILE:CD1	45:BX:66:VAL:HG11	2.48	0.41
53:CA:197:A:C6	53:CA:221:C:H4'	2.55	0.41
53:CA:260:G:C5	53:CA:261:U:C4	3.09	0.41
53:CA:461:A:O5'	53:CA:462:G:OP2	2.38	0.41
53:CA:590:U:O2'	53:CA:591:U:H5'	2.20	0.41
53:CA:609:A:N7	62:CA:1855:HOH:O	2.37	0.41
53:CA:610:U:O2	53:CA:610:U:O4'	2.38	0.41
53:CA:665:A:N3	53:CA:732:C:H2'	2.36	0.41
53:CA:666:G:C5	53:CA:741:G:N1	2.88	0.41
53:CA:865:A:H2'	53:CA:866:C:O4'	2.20	0.41
53:CA:1200:C:HO2'	53:CA:1201:A:P	2.42	0.41
53:CA:1251:A:H2	53:CA:1369:C:O2	2.03	0.41
53:CA:1301:U:O2	53:CA:1301:U:C2'	2.67	0.41
53:CA:1371:G:OP1	9:CI:12:LYS:HG2	2.21	0.41
53:CA:1513:A:H2'	53:CA:1514:G:C8	2.55	0.41
2:CB:122:ASP:CB	2:CB:124:THR:HG22	2.50	0.41
2:CB:132:GLU:OE1	2:CB:136:ARG:HG3	2.20	0.41
54:CG:63:VAL:HG11	54:CG:127:ALA:CB	2.50	0.41
11:CK:106:ILE:O	11:CK:106:ILE:HG12	2.21	0.41
12:CL:89:LEU:HA	12:CL:90:PRO:HD2	1.58	0.41
12:CL:98:ARG:HA	12:CL:103:CYS:SG	2.60	0.41
55:CM:46:GLU:O	55:CM:47:LEU:HB2	2.20	0.41
18:CR:33:THR:C	18:CR:35:SER:H	2.24	0.41
22:DA:8:C:C2'	22:DA:9:G:H5'	2.51	0.41
22:DA:226:A:C4	22:DA:227:A:N7	2.88	0.41
22:DA:476:G:O2'	22:DA:477:A:H5"	2.19	0.41
22:DA:515:A:H1'	22:DA:581:C:H1'	2.02	0.41
22:DA:581:C:H2'	22:DA:582:A:C8	2.56	0.41
22:DA:616:A:O2'	22:DA:617:G:O5'	2.38	0.41
22:DA:633:A:H5"	33:DL:70:LYS:HD3	2.01	0.41
22:DA:771:G:C2	22:DA:772:C:C6	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:818:G:C2'	22:DA:819:A:H5"	2.51	0.41
22:DA:911:A:O5'	22:DA:911:A:H8	2.04	0.41
22:DA:968:C:H2'	22:DA:969:G:H8	1.86	0.41
22:DA:1059:G:C6	22:DA:1080:A:N1	2.88	0.41
22:DA:1255:U:O2'	22:DA:1256:G:P	2.78	0.41
22:DA:1317:G:C6	22:DA:1318:U:C4	3.09	0.41
22:DA:1346:G:H2'	22:DA:1347:A:H8	1.81	0.41
22:DA:1417:C:C2'	22:DA:1418:G:C8	2.96	0.41
22:DA:1476:U:O2	22:DA:1516:G:C2	2.73	0.41
22:DA:1572:A:H2'	22:DA:1573:G:C8	2.55	0.41
22:DA:1628:G:O2'	22:DA:1629:U:H5'	2.20	0.41
22:DA:1817:G:H4'	24:DC:85:ASN:O	2.20	0.41
22:DA:1917:U:H6	22:DA:1917:U:O5'	2.02	0.41
22:DA:2110:G:N2	22:DA:2180:U:H3	2.19	0.41
22:DA:2149:U:O2'	22:DA:2150:C:H6	2.03	0.41
22:DA:2201:G:C4	22:DA:2202:U:C6	3.09	0.41
22:DA:2307:G:N7	22:DA:2312:U:C5	2.89	0.41
22:DA:2459:A:C4	22:DA:2460:U:C6	3.08	0.41
22:DA:2461:A:H2'	22:DA:2462:C:C6	2.56	0.41
22:DA:2561:U:C2'	22:DA:2562:U:O5'	2.69	0.41
22:DA:2631:G:H2'	22:DA:2632:A:C5'	2.48	0.41
22:DA:2845:U:H2'	22:DA:2846:G:O4'	2.21	0.41
57:DB:108:A:H8	57:DB:108:A:H2'	1.69	0.41
25:DD:32:ASN:HB3	25:DD:52:THR:OG1	2.20	0.41
26:DE:147:LEU:CB	26:DE:186:VAL:HG23	2.50	0.41
58:DF:57:ALA:HB2	58:DF:64:PRO:HG2	2.03	0.41
58:DF:146:ASP:HB3	58:DF:147:ARG:H	1.62	0.41
28:DG:92:GLY:O	28:DG:93:TYR:C	2.58	0.41
28:DG:100:ASN:O	28:DG:115:GLN:HB2	2.21	0.41
28:DG:135:ALA:O	28:DG:136:ASP:HB2	2.21	0.41
33:DL:135:ILE:HG23	33:DL:136:GLU:N	2.35	0.41
35:DN:19:ALA:HA	35:DN:22:ARG:HB3	2.03	0.41
42:DU:39:ASN:HB3	42:DU:62:ALA:HB3	2.02	0.41
46:DY:57:LEU:O	46:DY:60:LYS:HE3	2.20	0.41
48:D0:21:LEU:HB3	48:D0:22:THR:H	1.55	0.41
51:D3:18:LYS:CG	51:D3:19:GLY:N	2.84	0.41
1:AA:198:G:N1	1:AA:220:G:C4	2.88	0.41
1:AA:369:G:C2	1:AA:370:C:C6	3.08	0.41
1:AA:461:A:N3	1:AA:461:A:C3'	2.78	0.41
1:AA:1031:C:H2'	1:AA:1032:G:OP2	2.21	0.41
1:AA:1143:G:O2'	1:AA:1144:G:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1154:G:N1	1:AA:1155:A:C5	2.89	0.41
1:AA:1159:U:N3	1:AA:1182:G:C4	2.88	0.41
1:AA:1306:A:C6	1:AA:1307:U:C2	3.09	0.41
1:AA:1432:G:O2'	1:AA:1433:A:OP2	2.33	0.41
2:AB:71:THR:CG2	2:AB:72:LYS:N	2.83	0.41
2:AB:163:ILE:CG2	2:AB:164:ASP:H	2.18	0.41
2:AB:172:ILE:O	2:AB:175:ALA:HB3	2.21	0.41
3:AC:10:ARG:O	3:AC:13:ILE:O	2.38	0.41
4:AD:68:GLU:O	4:AD:69:ARG:C	2.58	0.41
10:AJ:28:THR:O	10:AJ:32:THR:CG2	2.68	0.41
17:AQ:25:GLU:HA	17:AQ:25:GLU:OE1	2.21	0.41
17:AQ:46:HIS:HB3	17:AQ:73:THR:HA	2.03	0.41
22:BA:42:A:H3'	22:BA:43:G:H5"	2.03	0.41
22:BA:372:G:O4'	45:BX:60:LYS:HE3	2.21	0.41
22:BA:469:G:O6	50:B2:37:LYS:HE2	2.20	0.41
22:BA:919:U:H2'	22:BA:920:A:O4'	2.20	0.41
22:BA:1006:C:O2'	22:BA:1007:C:H5'	2.20	0.41
22:BA:1042:G:C2'	22:BA:1043:C:H5'	2.50	0.41
22:BA:1059:G:C6	22:BA:1080:A:N1	2.88	0.41
22:BA:1087:G:C6	22:BA:1089:A:C2	3.09	0.41
22:BA:1178:C:C5	22:BA:1180:U:C4	3.09	0.41
22:BA:2323:G:C6	22:BA:2324:U:C4	3.09	0.41
22:BA:2638:G:O2'	22:BA:2775:G:N2	2.40	0.41
22:BA:2661:G:O2'	22:BA:2662:A:H5'	2.20	0.41
22:BA:2810:A:H2'	22:BA:2811:G:O4'	2.20	0.41
24:BC:193:GLU:H	24:BC:193:GLU:HG3	1.71	0.41
25:BD:13:ARG:NE	25:BD:15:PHE:CZ	2.89	0.41
25:BD:67:HIS:HD1	25:BD:67:HIS:C	2.23	0.41
27:BF:64:PRO:HA	27:BF:88:VAL:CG2	2.50	0.41
30:BI:41:PHE:CE2	30:BI:45:THR:HG21	2.56	0.41
32:BK:113:MET:O	32:BK:114:LYS:C	2.59	0.41
33:BL:76:GLU:C	33:BL:77:ILE:HD12	2.41	0.41
33:BL:131:ALA:O	33:BL:132:ARG:C	2.59	0.41
36:BO:43:ASN:OD1	36:BO:43:ASN:C	2.58	0.41
36:BO:92:PHE:HB2	36:BO:117:PHE:CD1	2.56	0.41
38:BQ:100:PHE:HD1	39:BR:13:ARG:NH2	2.18	0.41
43:BV:40:ILE:HD13	43:BV:40:ILE:N	2.34	0.41
44:BW:22:VAL:HG13	44:BW:25:PHE:HE2	1.79	0.41
53:CA:69:G:N2	53:CA:71:A:H62	2.17	0.41
53:CA:112:G:C2'	53:CA:113:G:H5'	2.51	0.41
53:CA:245:U:H6	53:CA:245:U:C5'	2.33	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:427:U:OP1	4:CD:12:ARG:NH2	2.52	0.41
53:CA:855:U:OP2	53:CA:871:U:N3	2.46	0.41
53:CA:919:A:C2	53:CA:920:U:C5	3.09	0.41
53:CA:929:G:C5	53:CA:930:C:C5	3.09	0.41
53:CA:1048:G:N2	53:CA:1209:C:O2	2.52	0.41
53:CA:1053:G:O5'	53:CA:1054:C:H5'	2.21	0.41
53:CA:1076:U:N3	53:CA:1082:A:C2	2.89	0.41
53:CA:1348:U:O2'	53:CA:1349:A:O4'	2.38	0.41
2:CB:103:TRP:HA	2:CB:106:VAL:H	1.85	0.41
3:CC:15:LYS:HG3	3:CC:16:PRO:HD2	2.02	0.41
3:CC:18:ASN:HD21	3:CC:53:ARG:CZ	2.33	0.41
3:CC:18:ASN:ND2	3:CC:53:ARG:NH1	2.60	0.41
4:CD:25:ARG:O	4:CD:26:ALA:C	2.58	0.41
4:CD:33:ILE:O	4:CD:33:ILE:HG23	2.21	0.41
55:CM:13:HIS:CD2	55:CM:14:ALA:H	2.38	0.41
14:CN:92:ILE:HA	14:CN:93:PRO:HD3	1.88	0.41
21:CU:37:TYR:O	21:CU:37:TYR:HD2	2.03	0.41
22:DA:36:G:O6	22:DA:445:C:N4	2.53	0.41
22:DA:49:A:C5	22:DA:177:G:O6	2.73	0.41
22:DA:84:A:C4	22:DA:99:U:H1'	2.55	0.41
22:DA:141:G:H2'	22:DA:142:A:O4'	2.21	0.41
22:DA:266:G:H2'	22:DA:267:C:O5'	2.20	0.41
22:DA:374:A:C6	22:DA:401:A:N7	2.89	0.41
22:DA:448:U:H5"	62:DA:3240:HOH:O	2.21	0.41
22:DA:457:A:N1	22:DA:470:A:H5"	2.35	0.41
22:DA:570:G:C5	22:DA:2030:A:C5	3.09	0.41
22:DA:570:G:O6	22:DA:2499:C:OP1	2.38	0.41
22:DA:724:U:H2'	22:DA:725:G:O4'	2.20	0.41
22:DA:974:G:OP1	22:DA:1187:G:H4'	2.20	0.41
22:DA:1000:A:C6	22:DA:1001:A:N1	2.88	0.41
22:DA:1038:G:C6	22:DA:1039:A:N7	2.89	0.41
22:DA:1130:U:O2'	22:DA:1131:G:C8	2.73	0.41
22:DA:1264:A:N7	22:DA:1265:A:C5	2.88	0.41
22:DA:1427:A:H4'	22:DA:1428:C:OP1	2.17	0.41
22:DA:1476:U:H1'	22:DA:1732:C:N3	2.34	0.41
22:DA:1609:A:O2'	22:DA:1610:A:C5'	2.69	0.41
22:DA:1650:A:O2'	35:DN:108:ALA:HB1	2.21	0.41
22:DA:1828:G:O2'	22:DA:1829:A:H5'	2.20	0.41
22:DA:1914:C:O2'	22:DA:1915:U:C5'	2.68	0.41
22:DA:2155:U:O2	22:DA:2155:U:H2'	2.20	0.41
22:DA:2250:G:OP1	22:DA:2275:C:O2'	2.25	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2468:A:N7	22:DA:2476:A:N1	2.68	0.41
22:DA:2523:G:O2'	22:DA:2524:G:H5'	2.20	0.41
22:DA:2876:G:OP1	37:DP:1:SER:N	2.54	0.41
57:DB:75:G:H22	57:DB:102:G:N2	2.19	0.41
24:DC:255:LYS:C	24:DC:256:THR:HG23	2.40	0.41
25:DD:5:VAL:HG23	25:DD:82:PHE:CZ	2.55	0.41
25:DD:55:LYS:HB3	25:DD:75:ALA:HB1	2.03	0.41
25:DD:151:THR:O	25:DD:152:PRO:C	2.54	0.41
26:DE:149:ILE:HG23	26:DE:188:MET:HA	2.03	0.41
31:DJ:3:THR:CG2	38:DQ:60:TRP:HE1	2.33	0.41
31:DJ:49:ASP:HB2	31:DJ:121:LYS:HZ2	1.85	0.41
32:DK:47:ILE:HA	32:DK:48:PRO:HD2	1.81	0.41
34:DM:34:LYS:O	34:DM:128:THR:HB	2.20	0.41
35:DN:16:HIS:O	35:DN:20:MET:CB	2.68	0.41
35:DN:45:ARG:C	35:DN:47:VAL:H	2.23	0.41
36:DO:4:LYS:HG3	36:DO:8:ILE:CD1	2.50	0.41
36:DO:41:ALA:O	36:DO:43:ASN:N	2.52	0.41
36:DO:112:GLU:HG3	36:DO:113:ALA:H	1.85	0.41
42:DU:32:LYS:HE2	42:DU:65:GLN:OE1	2.21	0.41
42:DU:73:ASN:CB	42:DU:95:PHE:HE2	2.34	0.41
42:DU:94:PHE:O	42:DU:94:PHE:CD2	2.74	0.41
46:DY:11:VAL:HG12	46:DY:11:VAL:O	2.21	0.41
1:AA:181:A:N6	1:AA:195:A:C8	2.89	0.41
1:AA:244:U:C2	1:AA:894:G:C2	3.08	0.41
1:AA:290:C:C2'	1:AA:291:U:H5'	2.50	0.41
1:AA:685:G:H5'	11:AK:40:ALA:O	2.19	0.41
1:AA:693:G:C2'	1:AA:694:A:H5'	2.51	0.41
1:AA:900:A:N6	1:AA:901:A:N1	2.69	0.41
1:AA:973:G:H2'	1:AA:974:A:OP1	2.21	0.41
1:AA:975:A:C8	1:AA:1357:A:N3	2.89	0.41
1:AA:1152:A:O2'	1:AA:1153:G:H5'	2.20	0.41
1:AA:1191:A:H5"	3:AC:3:LYS:HE3	2.02	0.41
1:AA:1397:C:OP2	5:AE:28:ARG:NH2	2.50	0.41
1:AA:1521:C:N3	1:AA:1522:U:C5	2.89	0.41
2:AB:77:GLU:HA	2:AB:80:LYS:HB3	2.02	0.41
2:AB:153:MET:CE	2:AB:157:PRO:HG3	2.51	0.41
2:AB:186:VAL:O	2:AB:186:VAL:HG23	2.21	0.41
3:AC:35:ASP:OD1	3:AC:56:ILE:HG21	2.21	0.41
3:AC:88:LYS:O	3:AC:89:VAL:C	2.59	0.41
3:AC:107:LYS:HB2	3:AC:107:LYS:HZ2	1.86	0.41
3:AC:153:SER:HB3	3:AC:164:THR:HA	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:86:GLY:CA	4:AD:200:VAL:HG21	2.51	0.41
5:AE:17:VAL:HG23	5:AE:33:THR:O	2.20	0.41
5:AE:133:ILE:O	5:AE:133:ILE:HG22	2.21	0.41
5:AE:148:SER:O	5:AE:152:VAL:N	2.53	0.41
6:AF:38:ARG:HG3	6:AF:39:LEU:H	1.79	0.41
20:AT:61:ALA:HA	20:AT:66:ILE:HG22	2.02	0.41
22:BA:142:A:C2	22:BA:143:C:O2	2.73	0.41
22:BA:544:C:H3'	22:BA:545:U:C2	2.55	0.41
22:BA:569:U:C4	22:BA:570:G:C6	3.08	0.41
22:BA:712:G:C2	22:BA:713:G:H1'	2.56	0.41
22:BA:721:A:H2'	22:BA:722:A:H8	1.85	0.41
22:BA:999:U:H5	22:BA:1154:G:C5	2.34	0.41
22:BA:1074:G:N3	22:BA:1074:G:H2'	2.35	0.41
22:BA:1441:G:H2'	22:BA:1442:U:H6	1.86	0.41
22:BA:1471:G:H2'	22:BA:1472:C:C6	2.56	0.41
22:BA:2344:U:C4'	22:BA:2345:G:OP1	2.67	0.41
22:BA:2887:A:H3'	22:BA:2888:C:H6	1.86	0.41
23:BB:94:A:C6	23:BB:95:U:C4	3.09	0.41
24:BC:33:LEU:HD21	24:BC:62:ARG:HD3	2.03	0.41
26:BE:124:PHE:CD1	26:BE:124:PHE:C	2.93	0.41
26:BE:127:GLU:N	26:BE:127:GLU:OE1	2.54	0.41
27:BF:142:TYR:HA	27:BF:145:VAL:HG13	2.03	0.41
28:BG:3:VAL:O	28:BG:6:ALA:HB3	2.20	0.41
29:BH:45:GLU:O	29:BH:49:ALA:N	2.41	0.41
30:BI:130:GLY:HA2	30:BI:133:ARG:HB3	2.01	0.41
31:BJ:57:LEU:HD12	31:BJ:57:LEU:HA	1.78	0.41
32:BK:17:ARG:HE	32:BK:17:ARG:HB3	1.74	0.41
32:BK:107:LEU:HA	32:BK:107:LEU:HD12	1.64	0.41
33:BL:90:VAL:O	33:BL:90:VAL:HG12	2.21	0.41
34:BM:117:PHE:C	34:BM:119:LEU:N	2.74	0.41
35:BN:69:ARG:H	35:BN:69:ARG:HG2	1.20	0.41
37:BP:25:VAL:N	37:BP:85:VAL:O	2.53	0.41
41:BT:40:LYS:O	41:BT:43:ILE:N	2.53	0.41
42:BU:73:ASN:ND2	42:BU:75:ALA:HB3	2.36	0.41
53:CA:77:A:C2	53:CA:93:U:C2	3.09	0.41
53:CA:238:A:C5	53:CA:239:U:C5	3.08	0.41
53:CA:315:A:H5"	53:CA:317:U:OP2	2.21	0.41
53:CA:318:G:C2	53:CA:336:A:C2	3.09	0.41
53:CA:1168:U:O2	53:CA:1168:U:C2'	2.69	0.41
53:CA:1252:A:H4'	53:CA:1369:C:H4'	2.03	0.41
53:CA:1270:G:H2'	53:CA:1271:A:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1279:G:C8	53:CA:1282:C:C4	3.09	0.41
53:CA:1304:G:C1'	53:CA:1333:A:H61	2.29	0.41
53:CA:1318:A:H8	53:CA:1318:A:O5'	2.03	0.41
53:CA:1408:A:C2	53:CA:1494:G:C4	3.09	0.41
53:CA:1416:G:C2'	53:CA:1417:G:H5'	2.50	0.41
53:CA:1525:G:H5"	21:CU:37:TYR:CD1	2.56	0.41
53:CA:1525:G:OP1	21:CU:37:TYR:HD1	2.04	0.41
2:CB:53:LEU:O	2:CB:57:ASN:HB2	2.21	0.41
2:CB:130:LYS:HA	2:CB:130:LYS:HD3	1.80	0.41
4:CD:124:VAL:O	4:CD:125:ASN:C	2.59	0.41
54:CG:85:GLN:HE21	54:CG:85:GLN:HB3	1.61	0.41
8:CH:11:THR:HG22	8:CH:14:ARG:HH22	1.85	0.41
8:CH:30:LYS:O	8:CH:33:VAL:HB	2.21	0.41
55:CM:11:HIS:O	55:CM:12:LYS:HG2	2.20	0.41
56:CP:54:LEU:O	56:CP:57:ILE:HB	2.20	0.41
21:CU:13:VAL:HG22	21:CU:15:LEU:HD23	2.03	0.41
22:DA:52:A:C5	22:DA:118:A:C2	3.08	0.41
22:DA:61:C:OP1	22:DA:61:C:C6	2.72	0.41
22:DA:243:U:OP2	51:D3:7:ARG:NH1	2.54	0.41
22:DA:280:U:O2	22:DA:280:U:O4'	2.38	0.41
22:DA:300:A:N6	62:DA:3591:HOH:O	2.53	0.41
22:DA:637:A:OP2	33:DL:112:LEU:HD22	2.21	0.41
22:DA:646:U:OP2	22:DA:646:U:C6	2.74	0.41
22:DA:813:U:H2'	22:DA:814:C:H6	1.86	0.41
22:DA:965:C:H4'	22:DA:2273:A:H1'	2.03	0.41
22:DA:1079:C:N4	22:DA:1088:A:C2	2.88	0.41
22:DA:1168:G:C2	22:DA:1182:G:C2	3.08	0.41
22:DA:1204:A:N9	22:DA:1206:G:C6	2.88	0.41
22:DA:1277:G:H5'	35:DN:20:MET:CE	2.49	0.41
22:DA:1388:G:O6	22:DA:1400:U:O4	2.38	0.41
22:DA:1413:A:C5	22:DA:1414:C:N4	2.89	0.41
22:DA:1605:C:H3'	22:DA:1606:C:H5'	2.01	0.41
22:DA:1709:U:H2'	22:DA:1710:G:H8	1.85	0.41
22:DA:1837:C:H2'	22:DA:1899:A:H61	1.85	0.41
22:DA:1914:C:O2'	22:DA:1915:U:H6	2.02	0.41
22:DA:2064:C:H1'	22:DA:2450:A:C6	2.56	0.41
22:DA:2232:C:H6	22:DA:2232:C:O5'	2.03	0.41
22:DA:2288:A:C4'	22:DA:2289:G:OP2	2.65	0.41
22:DA:2533:U:H2'	22:DA:2534:A:O4'	2.21	0.41
22:DA:2642:G:H5'	31:DJ:80:HIS:NE2	2.35	0.41
22:DA:2683:C:H4'	25:DD:13:ARG:HH22	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:71:ASP:HA	24:DC:117:SER:O	2.20	0.41
25:DD:106:LYS:HB3	25:DD:206:ALA:H	1.86	0.41
25:DD:193:VAL:HB	25:DD:194:PRO:HD2	2.02	0.41
25:DD:204:LYS:HD3	25:DD:205:PRO:O	2.20	0.41
58:DF:122:ASP:HB3	58:DF:123:GLY:H	1.59	0.41
58:DF:177:ARG:HD3	58:DF:178:LYS:N	2.35	0.41
29:DH:125:THR:HB	29:DH:146:VAL:HG11	2.02	0.41
30:DI:139:VAL:O	30:DI:140:GLU:HB2	2.21	0.41
31:DJ:81:ILE:HB	31:DJ:82:GLY:H	1.38	0.41
33:DL:99:ASN:O	33:DL:100:ILE:HB	2.21	0.41
35:DN:61:ALA:O	35:DN:65:LEU:HD13	2.21	0.41
37:DP:16:VAL:CG1	37:DP:19:PHE:HE2	2.34	0.41
38:DQ:65:ASN:HA	38:DQ:75:TYR:HB2	2.01	0.41
39:DR:38:VAL:HG22	39:DR:40:MET:H	1.86	0.41
39:DR:39:LEU:H	39:DR:39:LEU:HD23	1.85	0.41
39:DR:49:ILE:CG2	39:DR:54:VAL:H	2.34	0.41
40:DS:24:ILE:HG22	40:DS:35:ILE:HD11	2.03	0.41
41:DT:19:LYS:HD3	41:DT:19:LYS:HA	1.72	0.41
41:DT:38:ALA:C	41:DT:39:THR:HG22	2.41	0.41
43:DV:6:ALA:HB1	43:DV:40:ILE:HB	2.02	0.41
43:DV:30:ILE:HG13	43:DV:40:ILE:HD11	2.02	0.41
1:AA:88:U:O2'	1:AA:89:U:O5'	2.31	0.41
1:AA:135:C:H2'	1:AA:136:C:H5'	2.03	0.41
1:AA:300:A:H1'	1:AA:565:U:O2	2.21	0.41
1:AA:710:G:H5"	6:AF:53:LYS:NZ	2.36	0.41
1:AA:849:G:C6	1:AA:850:U:N3	2.88	0.41
1:AA:857:C:H2'	1:AA:858:G:O4'	2.21	0.41
1:AA:895:G:C6	1:AA:896:C:C4	3.09	0.41
1:AA:954:G:C6	1:AA:955:U:N3	2.88	0.41
1:AA:1101:A:N3	1:AA:1102:A:H1'	2.36	0.41
1:AA:1127:G:O2'	1:AA:1128:C:H5'	2.21	0.41
1:AA:1245:C:H2'	1:AA:1246:A:C8	2.55	0.41
1:AA:1281:C:H2'	1:AA:1282:C:C5	2.55	0.41
1:AA:1367:C:H5'	10:AJ:62:ARG:NH1	2.36	0.41
2:AB:95:TRP:CZ3	2:AB:97:GLY:HA2	2.56	0.41
3:AC:31:ASN:O	3:AC:35:ASP:HB2	2.20	0.41
5:AE:10:LEU:HG	5:AE:11:GLN:N	2.36	0.41
5:AE:131:ASN:O	5:AE:135:VAL:HG12	2.21	0.41
6:AF:3:HIS:CB	6:AF:92:THR:HG23	2.51	0.41
6:AF:45:ARG:O	6:AF:56:LYS:HA	2.21	0.41
6:AF:81:ASN:OD1	6:AF:83:ALA:HB3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:86:ARG:CD	18:AR:63:TYR:O	2.63	0.41
7:AG:113:LYS:O	7:AG:118:ARG:HD2	2.21	0.41
8:AH:50:VAL:O	8:AH:50:VAL:HG13	2.21	0.41
12:AL:53:ARG:HA	12:AL:63:THR:HA	2.02	0.41
14:AN:89:ARG:O	14:AN:91:GLU:HG2	2.20	0.41
22:BA:28:A:C5	22:BA:29:U:C5	3.08	0.41
22:BA:41:C:C2'	22:BA:42:A:O5'	2.69	0.41
22:BA:289:G:C5	22:BA:290:U:C4	3.08	0.41
22:BA:705:A:C2	22:BA:706:A:C4	3.09	0.41
22:BA:749:A:N3	22:BA:1618:A:H2'	2.35	0.41
22:BA:806:C:H2'	22:BA:807:U:H6	1.84	0.41
22:BA:864:G:C6	22:BA:865:C:N4	2.88	0.41
22:BA:942:G:H2'	22:BA:943:A:H5'	2.02	0.41
22:BA:1045:C:O5'	22:BA:1046:A:H5'	2.21	0.41
22:BA:1426:G:C8	22:BA:1427:A:H2'	2.56	0.41
22:BA:1588:G:C2	22:BA:1589:U:C5	3.08	0.41
22:BA:1840:G:C2	22:BA:1841:U:C2	3.09	0.41
22:BA:1958:C:H2'	22:BA:1959:G:H5'	2.01	0.41
22:BA:2180:U:H2'	22:BA:2181:U:C6	2.55	0.41
22:BA:2365:G:OP1	44:BW:53:GLY:HA2	2.21	0.41
22:BA:2647:U:O2'	22:BA:2648:G:H5'	2.20	0.41
60:BA:3135:TEL:H143	60:BA:3135:TEL:C15	2.50	0.41
25:BD:15:PHE:N	37:BP:11:GLN:HE22	2.19	0.41
25:BD:137:SER:O	25:BD:138:LEU:HB2	2.20	0.41
27:BF:39:VAL:C	27:BF:41:GLU:H	2.23	0.41
27:BF:66:ILE:O	27:BF:66:ILE:HG13	2.21	0.41
27:BF:109:ARG:O	27:BF:136:ILE:HG22	2.21	0.41
29:BH:41:LYS:HA	29:BH:44:ILE:CG1	2.46	0.41
29:BH:86:ASP:CB	29:BH:89:LYS:HB3	2.51	0.41
31:BJ:40:HIS:CD2	31:BJ:40:HIS:N	2.89	0.41
40:BS:107:VAL:O	40:BS:107:VAL:CG1	2.68	0.41
46:BY:46:VAL:O	46:BY:50:VAL:HG23	2.20	0.41
48:B0:53:VAL:O	48:B0:54:ILE:C	2.58	0.41
53:CA:327:A:C4'	53:CA:328:C:OP2	2.64	0.41
53:CA:329:A:C8	53:CA:332:G:C6	3.08	0.41
53:CA:414:A:H2'	53:CA:415:A:O4'	2.21	0.41
53:CA:473:U:OP1	56:CP:76:LYS:CE	2.68	0.41
53:CA:543:U:O2'	53:CA:544:G:H5'	2.20	0.41
53:CA:663:A:C2'	53:CA:664:G:H5'	2.50	0.41
53:CA:978:A:H8	53:CA:978:A:O5'	2.04	0.41
53:CA:996:A:C2	53:CA:1046:A:H5'	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:163:ILE:CG2	2:CB:203:ASP:HA	2.51	0.41
6:CF:9:MET:HE3	18:CR:64:LEU:HD22	2.03	0.41
9:CI:30:ASN:OD1	9:CI:65:THR:HG23	2.20	0.41
11:CK:83:VAL:HB	11:CK:109:ILE:HG12	2.02	0.41
11:CK:117:HIS:O	11:CK:118:ASN:HB2	2.21	0.41
15:CO:88:ARG:HD3	15:CO:88:ARG:N	2.35	0.41
22:DA:50:U:OP1	22:DA:50:U:H6	2.01	0.41
22:DA:71:A:O4'	22:DA:73:A:C5	2.73	0.41
22:DA:121:G:H2'	22:DA:122:G:H8	1.86	0.41
22:DA:301:G:C3'	42:DU:81:ARG:HH12	2.33	0.41
22:DA:540:C:O2'	22:DA:541:A:H5'	2.21	0.41
22:DA:570:G:H2'	22:DA:571:U:H5'	2.02	0.41
22:DA:770:G:H1'	22:DA:1379:U:C4	2.55	0.41
22:DA:855:G:C2	44:DW:23:LYS:HG2	2.56	0.41
22:DA:918:A:H5"	57:DB:97:C:O2'	2.21	0.41
22:DA:947:A:H2'	22:DA:948:C:C6	2.56	0.41
22:DA:959:A:C5	22:DA:960:A:C6	3.09	0.41
22:DA:1006:C:C2	22:DA:1138:G:C2	3.09	0.41
22:DA:1049:C:O2	22:DA:1113:U:H4'	2.21	0.41
22:DA:1208:C:N3	22:DA:1209:U:C5	2.89	0.41
22:DA:1299:G:H22	22:DA:1640:A:H5'	1.86	0.41
22:DA:1308:A:C6	22:DA:1309:G:C2	3.09	0.41
22:DA:1324:G:C2	22:DA:1328:A:C6	3.08	0.41
22:DA:1425:G:H8	22:DA:1425:G:O5'	2.04	0.41
22:DA:1667:G:OP1	32:DK:7:MET:N	2.42	0.41
22:DA:1833:C:C2	22:DA:1834:U:C6	3.09	0.41
22:DA:2333:A:H1'	22:DA:2335:A:N7	2.35	0.41
22:DA:2337:G:N3	22:DA:2337:G:C2'	2.81	0.41
22:DA:2530:A:H3'	28:DG:156:TYR:OH	2.21	0.41
22:DA:2706:A:N6	62:DA:3666:HOH:O	2.51	0.41
57:DB:114:C:O2'	57:DB:115:A:H5'	2.21	0.41
25:DD:101:PHE:HA	25:DD:104:VAL:HB	2.03	0.41
26:DE:195:GLN:O	26:DE:199:MET:HB2	2.21	0.41
30:DI:24:GLY:HA3	30:DI:25:PRO:HD3	1.92	0.41
31:DJ:97:PRO:C	31:DJ:99:ARG:N	2.73	0.41
33:DL:33:ARG:HD3	33:DL:40:SER:HA	2.02	0.41
34:DM:103:TYR:O	34:DM:104:GLU:HG3	2.21	0.41
35:DN:67:PHE:C	35:DN:67:PHE:CD1	2.94	0.41
38:DQ:12:ARG:HD2	38:DQ:12:ARG:H	1.85	0.41
39:DR:9:GLY:H	39:DR:10:LYS:HD2	1.86	0.41
44:DW:31:LEU:C	44:DW:33:GLY:N	2.72	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DY:52:ARG:HB3	46:DY:56:LEU:HD23	2.03	0.41
52:D4:1:MET:HB3	52:D4:34:LYS:HE3	2.02	0.41
1:AA:180:U:C2'	1:AA:181:A:O5'	2.69	0.41
1:AA:198:G:C4	1:AA:199:A:N7	2.88	0.41
1:AA:203:G:H4'	1:AA:466:A:H2	1.85	0.41
1:AA:450:G:N7	1:AA:481:G:O6	2.54	0.41
1:AA:462:G:H5"	1:AA:463:U:OP2	2.21	0.41
1:AA:675:A:OP1	18:AR:70:THR:HG21	2.21	0.41
1:AA:895:G:C5	1:AA:896:C:C4	3.09	0.41
1:AA:938:A:C6	1:AA:939:G:C5	3.09	0.41
1:AA:973:G:O2'	14:AN:68:ARG:NH2	2.54	0.41
1:AA:978:A:HO2'	1:AA:1322:C:H41	1.69	0.41
1:AA:1118:U:O4'	1:AA:1179:A:H1'	2.21	0.41
1:AA:1229:A:OP2	13:AM:112:ARG:CD	2.68	0.41
1:AA:1248:A:C2	9:AI:71:ILE:HD11	2.56	0.41
1:AA:1277:C:H2'	1:AA:1278:G:H5"	2.03	0.41
1:AA:1378:C:N4	1:AA:1379:G:C4	2.89	0.41
1:AA:1452:C:O4'	1:AA:1453:G:C2	2.74	0.41
1:AA:1480:A:C6	1:AA:1481:U:C4	3.09	0.41
1:AA:1492:A:H2'	1:AA:1493:A:H5"	2.03	0.41
2:AB:105:THR:HG22	2:AB:105:THR:O	2.20	0.41
4:AD:84:ASN:HB3	4:AD:87:GLU:HG2	2.02	0.41
4:AD:97:LEU:HD13	4:AD:129:VAL:HG11	2.03	0.41
4:AD:147:LYS:O	4:AD:148:ALA:C	2.59	0.41
4:AD:164:ARG:O	4:AD:165:GLU:C	2.59	0.41
5:AE:10:LEU:HD23	5:AE:10:LEU:H	1.85	0.41
5:AE:155:LYS:HB2	8:AH:70:VAL:HG13	2.02	0.41
7:AG:55:LYS:HE3	7:AG:55:LYS:HB3	1.88	0.41
7:AG:83:THR:CG2	7:AG:85:GLN:HB3	2.50	0.41
7:AG:144:ALA:C	7:AG:146:ALA:H	2.24	0.41
8:AH:11:THR:HA	8:AH:14:ARG:HB3	2.03	0.41
8:AH:104:SER:HB2	8:AH:125:ILE:CD1	2.43	0.41
9:AI:49:GLN:C	9:AI:51:LEU:N	2.73	0.41
10:AJ:7:ARG:O	10:AJ:100:ILE:HA	2.20	0.41
10:AJ:36:VAL:HA	10:AJ:76:ILE:HA	2.03	0.41
10:AJ:49:PHE:CE1	14:AN:76:PHE:HZ	2.39	0.41
11:AK:21:HIS:CD2	11:AK:34:THR:HG22	2.56	0.41
11:AK:85:VAL:CG1	11:AK:92:ARG:HG3	2.51	0.41
13:AM:22:TYR:CE2	13:AM:69:ARG:HG2	2.56	0.41
17:AQ:35:LYS:HG2	17:AQ:36:PHE:N	2.36	0.41
20:AT:3:ILE:HA	20:AT:7:LYS:HZ2	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:69:C:O2'	22:BA:70:G:H5'	2.21	0.41
22:BA:384:A:H2'	22:BA:385:C:H5'	2.01	0.41
22:BA:434:U:H4'	22:BA:435:C:OP1	2.20	0.41
22:BA:435:C:C2'	22:BA:436:C:H5'	2.50	0.41
22:BA:496:G:C5	22:BA:497:A:C8	3.09	0.41
22:BA:580:U:H4'	38:BQ:30:VAL:HG11	2.01	0.41
22:BA:581:C:OP1	38:BQ:32:ARG:HB2	2.20	0.41
22:BA:616:A:H4'	26:BE:101:TYR:CZ	2.56	0.41
22:BA:700:G:H2'	22:BA:701:G:O4'	2.21	0.41
22:BA:723:C:H2'	22:BA:724:U:O4'	2.20	0.41
22:BA:783:A:C8	22:BA:784:G:H4'	2.53	0.41
22:BA:846:U:H2'	22:BA:847:U:OP2	2.20	0.41
22:BA:1174:U:O2	22:BA:1174:U:O4'	2.39	0.41
22:BA:1253:A:C5	62:BA:3329:HOH:O	2.74	0.41
22:BA:1365:A:N6	22:BA:1366:A:C6	2.89	0.41
22:BA:1440:U:H2'	22:BA:1441:G:O4'	2.21	0.41
22:BA:1528:A:H2'	22:BA:1529:G:O4'	2.21	0.41
22:BA:1537:G:HO2'	22:BA:1538:G:P	2.41	0.41
22:BA:1577:C:H2'	22:BA:1578:U:O4'	2.20	0.41
22:BA:1588:G:C2	22:BA:1589:U:C6	3.09	0.41
22:BA:1686:C:H6	22:BA:1686:C:O5'	2.04	0.41
22:BA:2091:C:H4'	45:BX:55:MET:SD	2.61	0.41
22:BA:2092:U:O2	22:BA:2225:A:O2'	2.39	0.41
22:BA:2193:G:H2'	22:BA:2194:U:H6	1.86	0.41
22:BA:2281:A:C2'	22:BA:2282:G:H5'	2.50	0.41
22:BA:2523:G:O2'	22:BA:2524:G:H5'	2.21	0.41
22:BA:2571:U:H2'	22:BA:2572:A:OP1	2.21	0.41
22:BA:2572:A:OP1	22:BA:2574:G:H4'	2.20	0.41
22:BA:2575:C:H5"	22:BA:2576:G:OP2	2.21	0.41
22:BA:2868:A:C2	22:BA:2869:G:C4	3.09	0.41
22:BA:2870:C:O2'	22:BA:2871:U:H5'	2.21	0.41
23:BB:17:C:H2'	23:BB:18:G:O4'	2.21	0.41
23:BB:46:A:C4	23:BB:47:C:C5	3.09	0.41
24:BC:141:HIS:CB	24:BC:190:THR:HB	2.48	0.41
24:BC:142:ASN:CG	24:BC:142:ASN:O	2.58	0.41
25:BD:22:ILE:HA	25:BD:23:PRO:HD3	1.92	0.41
25:BD:40:LEU:O	25:BD:41:ALA:C	2.59	0.41
25:BD:47:ALA:HA	25:BD:84:LEU:HG	2.03	0.41
25:BD:97:SER:OG	25:BD:99:GLU:HB3	2.21	0.41
25:BD:103:ASP:O	25:BD:104:VAL:C	2.58	0.41
25:BD:170:VAL:HG22	25:BD:194:PRO:HG3	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:8:LYS:HB2	27:BF:9:ASP:H	1.62	0.41
28:BG:70:LEU:HD23	28:BG:70:LEU:HA	1.77	0.41
32:BK:11:ALA:HB1	32:BK:100:PHE:O	2.21	0.41
32:BK:12:ASP:C	32:BK:100:PHE:HE1	2.24	0.41
32:BK:114:LYS:O	32:BK:118:LEU:HD13	2.21	0.41
33:BL:23:ILE:HG22	33:BL:24:GLY:N	2.34	0.41
33:BL:62:PRO:HG2	51:B3:24:LYS:HB3	2.03	0.41
34:BM:46:ILE:HD12	34:BM:46:ILE:C	2.41	0.41
35:BN:38:LEU:N	35:BN:39:PRO:CD	2.83	0.41
35:BN:96:ARG:HD2	35:BN:114:GLU:OE1	2.21	0.41
36:BO:55:GLU:OE1	36:BO:58:ILE:CD1	2.68	0.41
37:BP:87:ARG:HG2	37:BP:87:ARG:NH1	2.35	0.41
39:BR:76:LYS:O	39:BR:84:ARG:HA	2.21	0.41
41:BT:2:ILE:HB	41:BT:3:ARG:NH1	2.36	0.41
41:BT:31:VAL:HA	41:BT:84:TYR:H	1.84	0.41
42:BU:33:VAL:O	42:BU:64:ILE:HG22	2.20	0.41
43:BV:70:ILE:HD12	43:BV:93:ARG:NH2	2.36	0.41
44:BW:11:ASN:C	44:BW:12:GLY:O	2.58	0.41
45:BX:29:LEU:HB2	45:BX:30:PRO:CD	2.51	0.41
45:BX:39:VAL:C	45:BX:41:SER:N	2.74	0.41
48:B0:33:SER:OG	48:B0:35:GLU:HG3	2.21	0.41
51:B3:9:ALA:HB3	51:B3:61:LEU:HD21	2.02	0.41
51:B3:28:LEU:HD12	51:B3:28:LEU:HA	1.89	0.41
53:CA:79:G:H8	53:CA:79:G:O5'	2.04	0.41
53:CA:257:G:C2	53:CA:270:A:C6	3.08	0.41
53:CA:380:G:N2	53:CA:382:A:H3'	2.36	0.41
53:CA:444:G:C2	53:CA:445:G:C4	3.09	0.41
53:CA:599:C:H4'	8:CH:121:GLY:CA	2.51	0.41
53:CA:631:C:O3'	53:CA:632:U:H6	2.03	0.41
53:CA:654:G:C6	53:CA:753:A:C5	3.09	0.41
53:CA:775:G:H2'	53:CA:776:G:H5'	2.03	0.41
53:CA:817:C:O4'	53:CA:819:A:H4'	2.20	0.41
53:CA:836:G:OP1	18:CR:49:LYS:NZ	2.47	0.41
53:CA:1026:G:H1	53:CA:1036:A:H61	1.69	0.41
53:CA:1126:U:O4'	53:CA:1281:C:C2	2.74	0.41
53:CA:1134:G:C2	53:CA:1141:C:N3	2.89	0.41
53:CA:1438:G:C2	53:CA:1464:U:O2	2.74	0.41
4:CD:77:GLU:HG3	4:CD:81:LEU:CD1	2.44	0.41
4:CD:148:ALA:HB1	4:CD:151:GLN:HE22	1.85	0.41
4:CD:165:GLU:O	4:CD:166:LYS:HB3	2.20	0.41
5:CE:157:GLY:HA3	8:CH:63:LYS:HE3	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:3:HIS:CD2	6:CF:65:GLU:HG2	2.44	0.41
6:CF:67:PRO:O	6:CF:68:GLN:C	2.59	0.41
54:CG:112:ASP:HB3	54:CG:117:LEU:CB	2.50	0.41
9:CI:18:VAL:HG21	9:CI:81:GLY:HA3	2.03	0.41
9:CI:37:TYR:HD2	9:CI:37:TYR:N	2.19	0.41
10:CJ:76:ILE:HG22	10:CJ:77:VAL:N	2.35	0.41
12:CL:78:VAL:HG23	12:CL:101:LEU:HD12	2.03	0.41
12:CL:113:ARG:HB3	12:CL:118:VAL:HB	2.02	0.41
55:CM:95:PRO:HG2	55:CM:99:GLN:HB3	2.03	0.41
56:CP:43:ALA:HB1	56:CP:46:LYS:HZ1	1.86	0.41
56:CP:46:LYS:NZ	56:CP:46:LYS:H	2.18	0.41
18:CR:70:THR:OG1	18:CR:71:ASP:N	2.52	0.41
19:CS:36:ARG:O	19:CS:36:ARG:HG2	2.20	0.41
22:DA:69:C:H2'	22:DA:70:G:C8	2.56	0.41
22:DA:75:G:O2'	22:DA:76:C:C6	2.63	0.41
22:DA:242:G:P	51:D3:2:LYS:HZ1	2.43	0.41
22:DA:287:G:N1	22:DA:354:A:C6	2.88	0.41
22:DA:371:A:N6	22:DA:402:A:OP2	2.45	0.41
22:DA:425:G:H2'	22:DA:426:C:C6	2.56	0.41
22:DA:616:A:O2'	22:DA:617:G:C8	2.44	0.41
22:DA:628:G:O2'	22:DA:629:G:H8	2.04	0.41
22:DA:644:A:H61	22:DA:2349:G:H21	1.69	0.41
22:DA:785:G:O2'	22:DA:1779:U:C5'	2.69	0.41
22:DA:813:U:C2	22:DA:1195:G:N2	2.89	0.41
22:DA:851:C:O4'	47:DZ:46:MET:HG2	2.21	0.41
22:DA:863:A:C2	22:DA:864:G:C4	3.09	0.41
22:DA:919:U:H2'	22:DA:920:A:H8	1.81	0.41
22:DA:962:G:O2'	22:DA:963:U:H6	2.03	0.41
22:DA:974:G:H1'	22:DA:975:A:N7	2.36	0.41
22:DA:1057:A:C6	22:DA:1058:U:C4	3.08	0.41
22:DA:1076:C:O2'	22:DA:1077:A:C8	2.74	0.41
22:DA:1091:G:N2	22:DA:1101:U:C2	2.89	0.41
22:DA:1204:A:C8	22:DA:1206:G:O6	2.74	0.41
22:DA:1245:G:H4'	26:DE:33:VAL:CG1	2.47	0.41
22:DA:1286:A:C8	22:DA:1289:C:N4	2.88	0.41
22:DA:1286:A:N9	22:DA:1289:C:N4	2.68	0.41
22:DA:1338:G:O2'	22:DA:1393:A:N1	2.49	0.41
22:DA:1394:U:C4	22:DA:1395:A:N6	2.89	0.41
22:DA:1400:U:HO2'	22:DA:1401:G:C1'	2.30	0.41
22:DA:1417:C:O2'	22:DA:1418:G:C5'	2.69	0.41
22:DA:1555:G:O2'	22:DA:1556:C:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1569:A:N1	22:DA:1570:A:C2	2.89	0.41
22:DA:1659:G:C4	22:DA:2002:G:N2	2.89	0.41
22:DA:1716:U:N3	22:DA:1745:A:N6	2.69	0.41
22:DA:1936:A:C2	22:DA:1945:G:C4	3.09	0.41
22:DA:1973:G:O2'	22:DA:1974:C:H5'	2.20	0.41
22:DA:2010:G:C6	22:DA:2011:U:C4	3.09	0.41
22:DA:2064:C:O3'	22:DA:2251:G:N2	2.54	0.41
22:DA:2249:U:O5'	22:DA:2249:U:H6	2.04	0.41
22:DA:2330:G:C6	22:DA:2386:A:N6	2.89	0.41
22:DA:2330:G:H21	44:DW:38:ARG:HA	1.86	0.41
22:DA:2353:G:N3	44:DW:30:VAL:HG13	2.36	0.41
22:DA:2526:G:C5	22:DA:2527:C:C5	3.09	0.41
22:DA:2625:G:C5'	22:DA:2626:C:OP2	2.68	0.41
22:DA:2654:A:C4'	22:DA:2655:G:OP1	2.68	0.41
22:DA:2765:A:H3'	22:DA:2766:A:H5'	2.02	0.41
22:DA:2805:C:H2'	22:DA:2806:C:O4'	2.21	0.41
22:DA:2837:A:N6	22:DA:2882:A:N6	2.69	0.41
57:DB:53:A:N3	57:DB:53:A:H2'	2.36	0.41
57:DB:70:C:O2'	57:DB:71:C:H5'	2.21	0.41
24:DC:115:ILE:HB	24:DC:126:GLY:O	2.21	0.41
25:DD:15:PHE:CE2	37:DP:77:SER:HA	2.56	0.41
25:DD:94:GLN:O	25:DD:95:SER:C	2.58	0.41
25:DD:137:SER:CB	25:DD:138:LEU:HD22	2.44	0.41
26:DE:5:LEU:HD23	26:DE:120:VAL:HG13	2.02	0.41
26:DE:111:GLU:CB	26:DE:114:ARG:HH21	2.33	0.41
58:DF:67:THR:HG21	58:DF:87:LYS:HG2	2.03	0.41
58:DF:135:ILE:HD12	58:DF:135:ILE:N	2.36	0.41
28:DG:44:HIS:CE1	28:DG:46:ASP:O	2.74	0.41
28:DG:94:ARG:HG2	28:DG:104:LEU:HA	2.03	0.41
28:DG:169:ARG:O	28:DG:170:THR:HB	2.21	0.41
29:DH:78:VAL:HG11	29:DH:144:VAL:HG12	2.02	0.41
29:DH:84:ALA:HB3	29:DH:148:ALA:HA	2.02	0.41
30:DI:29:GLN:O	30:DI:30:GLN:HB3	2.20	0.41
31:DJ:41:LYS:C	31:DJ:43:GLU:N	2.75	0.41
35:DN:82:GLU:O	35:DN:86:ARG:HG3	2.21	0.41
37:DP:52:ARG:HA	37:DP:52:ARG:HD3	1.75	0.41
37:DP:62:LYS:HD3	37:DP:64:SER:HB2	2.03	0.41
38:DQ:40:LYS:O	38:DQ:44:TYR:CD2	2.74	0.41
40:DS:19:LEU:HD12	40:DS:19:LEU:HA	1.92	0.41
42:DU:64:ILE:O	42:DU:65:GLN:O	2.39	0.41
43:DV:51:GLN:HA	43:DV:56:PHE:CD2	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DV:61:LEU:H	43:DV:61:LEU:CD2	2.18	0.41
44:DW:18:LYS:N	44:DW:36:ILE:HG12	2.31	0.41
49:D1:37:LYS:O	49:D1:48:TYR:CD2	2.74	0.41
49:D1:38:PHE:CD2	49:D1:39:ASP:N	2.89	0.41
52:D4:7:VAL:HG22	52:D4:25:VAL:HG23	2.02	0.41
1:AA:198:G:C6	1:AA:220:G:N3	2.88	0.41
1:AA:263:A:P	20:AT:73:ARG:NH1	2.94	0.41
1:AA:325:A:N6	1:AA:326:G:N1	2.69	0.41
1:AA:425:G:C2'	1:AA:426:U:H5'	2.51	0.41
1:AA:785:G:O2'	1:AA:786:G:H5'	2.20	0.41
1:AA:961:U:OP2	1:AA:1223:C:H1'	2.20	0.41
1:AA:1040:U:H2'	1:AA:1041:G:C8	2.55	0.41
1:AA:1190:G:OP1	3:AC:4:VAL:HG12	2.21	0.41
1:AA:1328:C:OP1	13:AM:27:THR:OG1	2.33	0.41
2:AB:219:THR:HG23	2:AB:220:VAL:H	1.86	0.41
3:AC:21:TRP:HB3	3:AC:58:ARG:HG2	2.03	0.41
5:AE:33:THR:HG21	5:AE:49:TYR:OH	2.20	0.41
5:AE:147:ASN:OD1	5:AE:147:ASN:N	2.54	0.41
6:AF:75:GLU:O	6:AF:78:PHE:HB2	2.21	0.41
13:AM:44:ILE:HD12	13:AM:44:ILE:N	2.35	0.41
17:AQ:22:VAL:O	17:AQ:42:LYS:HA	2.21	0.41
19:AS:30:LEU:O	19:AS:49:ALA:HB3	2.21	0.41
22:BA:152:A:H2'	22:BA:153:U:C6	2.56	0.41
22:BA:454:A:H4'	22:BA:455:C:OP2	2.21	0.41
22:BA:1016:G:H2'	22:BA:1017:G:O5'	2.20	0.41
22:BA:1059:G:C6	22:BA:1060:U:N3	2.89	0.41
22:BA:1104:C:H2'	22:BA:1105:U:H6	1.86	0.41
22:BA:1166:G:C2'	22:BA:1167:C:H5'	2.51	0.41
22:BA:1179:G:N7	22:BA:1180:U:H1'	2.30	0.41
22:BA:1206:G:C5	22:BA:1207:C:C4	3.09	0.41
22:BA:1496:A:H2'	22:BA:1498:C:N4	2.35	0.41
22:BA:1730:C:H6	22:BA:1730:C:H2'	1.72	0.41
22:BA:1738:G:O2'	22:BA:1739:A:O5'	2.36	0.41
22:BA:1927:A:H2'	22:BA:1928:A:C8	2.56	0.41
22:BA:1966:A:C2	22:BA:2593:U:O4'	2.73	0.41
22:BA:1979:U:H2'	22:BA:1980:G:H5'	2.03	0.41
22:BA:1998:A:H2'	22:BA:1999:C:C6	2.56	0.41
22:BA:2150:C:C5	22:BA:2151:U:O4	2.74	0.41
22:BA:2315:G:O2'	22:BA:2316:G:H5'	2.21	0.41
22:BA:2364:C:O2'	22:BA:2365:G:H5'	2.21	0.41
22:BA:2578:G:C5	25:BD:145:SER:HB2	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:114:C:O4'	36:BO:47:VAL:HG22	2.21	0.41
26:BE:37:ALA:C	26:BE:39:ALA:H	2.23	0.41
26:BE:145:ASP:OD1	26:BE:183:PHE:HD2	2.04	0.41
33:BL:80:SER:HB3	33:BL:115:GLU:OE2	2.21	0.41
34:BM:73:ILE:HB	34:BM:91:TYR:O	2.21	0.41
35:BN:31:HIS:O	35:BN:33:ILE:N	2.52	0.41
42:BU:38:ILE:CG2	42:BU:39:ASN:N	2.65	0.41
42:BU:94:PHE:O	42:BU:94:PHE:CG	2.73	0.41
44:BW:30:VAL:HA	44:BW:60:ALA:O	2.20	0.41
44:BW:37:VAL:CG1	44:BW:55:ASP:HB2	2.50	0.41
46:BY:9:LYS:HA	46:BY:9:LYS:HZ1	1.82	0.41
51:B3:30:HIS:ND1	51:B3:31:ILE:HG22	2.36	0.41
53:CA:121:U:H3'	53:CA:121:U:P	2.61	0.41
53:CA:251:G:C2	53:CA:266:G:O6	2.74	0.41
53:CA:327:A:HO2'	53:CA:328:C:H6	1.69	0.41
53:CA:372:C:C4'	53:CA:373:A:OP2	2.67	0.41
53:CA:487:A:H2'	53:CA:488:C:O4'	2.20	0.41
53:CA:654:G:H2'	53:CA:655:A:O4'	2.21	0.41
53:CA:892:A:C5	53:CA:893:C:C5	3.09	0.41
53:CA:980:C:O3'	14:CN:12:ARG:NH2	2.54	0.41
53:CA:994:A:O2'	53:CA:995:C:C6	2.67	0.41
53:CA:1055:A:C8	53:CA:1206:G:N2	2.89	0.41
53:CA:1125:U:C6	10:CJ:40:ILE:HG12	2.56	0.41
53:CA:1129:C:C5	53:CA:1139:G:C5	3.09	0.41
53:CA:1149:C:N4	53:CA:1150:A:N6	2.68	0.41
53:CA:1394:A:H4'	53:CA:1395:C:OP2	2.20	0.41
2:CB:103:TRP:CD1	2:CB:107:ARG:HB3	2.55	0.41
5:CE:39:GLY:HA2	5:CE:44:ARG:O	2.21	0.41
5:CE:57:ALA:O	5:CE:61:LYS:HG3	2.20	0.41
54:CG:30:MET:HE2	54:CG:30:MET:HB3	1.99	0.41
9:CI:51:LEU:HB2	9:CI:56:MET:HB3	2.03	0.41
9:CI:91:GLU:O	9:CI:91:GLU:HG3	2.21	0.41
55:CM:92:ARG:HD2	19:CS:79:TYR:OH	2.21	0.41
55:CM:97:ARG:HG2	55:CM:97:ARG:O	2.21	0.41
14:CN:60:ARG:NH2	14:CN:70:HIS:HB3	2.35	0.41
56:CP:78:VAL:C	56:CP:80:LYS:N	2.74	0.41
19:CS:79:TYR:CG	19:CS:80:ARG:N	2.89	0.41
22:DA:58:G:N3	22:DA:73:A:C2	2.89	0.41
22:DA:99:U:C5	42:DU:6:ARG:NH2	2.89	0.41
22:DA:121:G:N3	22:DA:131:A:C2	2.89	0.41
22:DA:217:A:H2'	22:DA:218:A:C8	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:223:A:H61	22:DA:422:A:N6	2.18	0.41
22:DA:288:U:H2'	22:DA:289:G:C8	2.55	0.41
22:DA:291:G:N1	22:DA:350:G:C5	2.89	0.41
22:DA:295:G:N2	22:DA:296:U:C6	2.89	0.41
22:DA:308:G:N1	22:DA:309:A:C2	2.88	0.41
22:DA:333:G:O2'	22:DA:334:C:O5'	2.39	0.41
22:DA:352:A:C2	22:DA:353:C:H1'	2.56	0.41
22:DA:576:U:O2'	22:DA:2502:G:C6	2.74	0.41
22:DA:954:G:C5	22:DA:955:U:C5	3.09	0.41
22:DA:1019:U:C4	22:DA:1020:A:N6	2.89	0.41
22:DA:1071:G:O2'	22:DA:1072:C:O5'	2.39	0.41
22:DA:1082:U:H4'	30:DI:117:THR:O	2.21	0.41
22:DA:1269:A:H2'	22:DA:1270:C:C6	2.56	0.41
22:DA:1358:G:N2	22:DA:1374:G:C6	2.89	0.41
22:DA:1601:G:C5	22:DA:1602:U:C4	3.09	0.41
22:DA:1655:A:H4'	25:DD:118:PHE:CD1	2.56	0.41
22:DA:1731:G:C2	22:DA:1733:G:C5	3.08	0.41
22:DA:1973:G:H2'	22:DA:1974:C:H6	1.86	0.41
22:DA:2024:G:H2'	22:DA:2025:C:O4'	2.21	0.41
22:DA:2201:G:C5	22:DA:2202:U:C5	3.09	0.41
22:DA:2314:A:H2'	22:DA:2315:G:H8	1.85	0.41
22:DA:2314:A:H2'	22:DA:2315:G:C8	2.56	0.41
22:DA:2337:G:C2	22:DA:2338:C:C2	3.09	0.41
22:DA:2347:C:H2'	22:DA:2348:U:C5	2.56	0.41
22:DA:2443:C:H2'	22:DA:2444:G:C8	2.56	0.41
22:DA:2504:U:O2'	22:DA:2572:A:N1	2.49	0.41
22:DA:2540:C:H2'	22:DA:2541:A:C8	2.55	0.41
22:DA:2548:U:H2'	22:DA:2549:G:O4'	2.21	0.41
57:DB:16:G:C6	57:DB:69:G:C5	3.09	0.41
57:DB:81:G:C5	57:DB:82:U:C4	3.09	0.41
57:DB:98:G:H1	43:DV:14:LYS:HB2	1.85	0.41
24:DC:102:TYR:HD1	24:DC:102:TYR:HA	1.81	0.41
24:DC:213:ARG:HB3	24:DC:214:GLY:H	1.52	0.41
25:DD:113:SER:OG	25:DD:114:LYS:N	2.54	0.41
58:DF:30:VAL:HG12	58:DF:157:THR:HG21	2.03	0.41
58:DF:110:ILE:HB	58:DF:113:PHE:HB2	2.03	0.41
58:DF:128:SER:HA	58:DF:153:ILE:O	2.21	0.41
28:DG:48:THR:O	28:DG:49:LEU:CB	2.65	0.41
29:DH:4:ILE:HG22	29:DH:5:LEU:N	2.36	0.41
34:DM:38:ARG:CZ	34:DM:38:ARG:HB3	2.51	0.41
36:DO:56:LYS:HD3	36:DO:56:LYS:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DP:21:PRO:HA	37:DP:46:VAL:CG1	2.51	0.41
42:DU:48:VAL:HA	42:DU:49:PRO:HD3	1.89	0.41
50:D2:24:THR:O	50:D2:28:ARG:HB3	2.21	0.41
50:D2:24:THR:HG23	50:D2:28:ARG:H	1.86	0.41
52:D4:37:GLN:HG2	52:D4:38:GLY:N	2.35	0.41
1:AA:189:A:H2'	1:AA:190:A:C8	2.56	0.40
1:AA:668:G:O2'	1:AA:669:G:H5'	2.21	0.40
1:AA:807:A:C8	1:AA:808:C:H5	2.39	0.40
1:AA:1062:U:H2'	1:AA:1063:C:C5	2.56	0.40
1:AA:1216:A:C6	1:AA:1217:C:N4	2.89	0.40
1:AA:1261:A:N1	1:AA:1274:A:N3	2.68	0.40
1:AA:1533:C:C3'	1:AA:1534:A:H5"	2.47	0.40
2:AB:49:PHE:CD1	2:AB:53:LEU:HD23	2.56	0.40
2:AB:100:LEU:HD12	2:AB:178:LEU:CD2	2.50	0.40
2:AB:103:TRP:CZ3	2:AB:107:ARG:HD3	2.56	0.40
4:AD:122:ILE:HD13	4:AD:122:ILE:N	2.37	0.40
5:AE:97:PRO:HB2	5:AE:98:ALA:H	1.62	0.40
6:AF:99:ALA:O	6:AF:100:SER:CB	2.68	0.40
8:AH:48:PHE:CD2	8:AH:49:LYS:N	2.88	0.40
11:AK:125:LYS:O	21:AU:33:ARG:NH1	2.53	0.40
19:AS:79:TYR:O	19:AS:80:ARG:HB3	2.21	0.40
20:AT:34:VAL:HG11	20:AT:78:LEU:HD22	2.02	0.40
22:BA:28:A:H2'	22:BA:29:U:O4'	2.21	0.40
22:BA:156:A:C6	22:BA:157:C:C4	3.08	0.40
22:BA:520:G:H2'	22:BA:521:U:H6	1.83	0.40
22:BA:522:A:N6	22:BA:523:C:N4	2.69	0.40
22:BA:582:A:H2'	22:BA:583:G:C8	2.56	0.40
22:BA:616:A:H2'	22:BA:617:G:O4'	2.21	0.40
22:BA:745:G:C3'	22:BA:746:U:H5'	2.51	0.40
22:BA:879:G:H2'	22:BA:880:G:H8	1.82	0.40
22:BA:1187:G:HO2'	22:BA:1188:U:H6	1.67	0.40
22:BA:1243:C:H1'	33:BL:4:ASN:O	2.22	0.40
22:BA:1455:G:OP2	62:BA:3411:HOH:O	2.22	0.40
22:BA:1508:A:O2'	22:BA:1509:A:P	2.79	0.40
22:BA:2021:C:OP1	48:B0:8:THR:HG21	2.22	0.40
22:BA:2386:A:H2'	22:BA:2387:U:C6	2.56	0.40
26:BE:119:ILE:O	26:BE:119:ILE:CG1	2.69	0.40
32:BK:71:ARG:HB2	32:BK:72:PRO:CD	2.36	0.40
37:BP:13:LYS:HE3	37:BP:76:HIS:CA	2.51	0.40
37:BP:96:LEU:HD12	37:BP:96:LEU:HA	1.68	0.40
38:BQ:63:ARG:HH22	38:BQ:96:ASP:N	2.19	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BQ:91:ARG:HB2	38:BQ:94:LEU:HB2	2.04	0.40
38:BQ:94:LEU:HA	38:BQ:94:LEU:HD22	1.77	0.40
43:BV:38:LEU:HD12	43:BV:38:LEU:HA	1.94	0.40
44:BW:63:ASP:OD1	44:BW:63:ASP:N	2.53	0.40
44:BW:67:LYS:HG3	44:BW:69:GLU:HG3	2.02	0.40
53:CA:71:A:O2'	53:CA:72:A:O4'	2.22	0.40
53:CA:423:G:N3	53:CA:423:G:C2'	2.83	0.40
53:CA:599:C:O3'	8:CH:121:GLY:HA3	2.21	0.40
53:CA:756:C:O2'	53:CA:757:U:H5'	2.21	0.40
53:CA:985:C:C4	53:CA:986:U:C4	3.08	0.40
53:CA:1084:G:OP1	53:CA:1086:U:C2	2.75	0.40
53:CA:1343:G:H2'	53:CA:1344:C:C6	2.55	0.40
2:CB:80:LYS:O	2:CB:84:LEU:N	2.45	0.40
3:CC:129:PHE:O	3:CC:130:ARG:C	2.59	0.40
8:CH:29:SER:O	8:CH:31:LEU:N	2.55	0.40
56:CP:75:ILE:HG23	56:CP:80:LYS:HD2	2.02	0.40
22:DA:16:C:H2'	22:DA:17:G:C8	2.56	0.40
22:DA:85:G:OP2	42:DU:27:VAL:HG11	2.20	0.40
22:DA:191:A:N6	22:DA:203:A:H2'	2.36	0.40
22:DA:203:A:OP2	22:DA:204:A:O2'	2.32	0.40
22:DA:444:C:O2'	22:DA:445:C:P	2.79	0.40
22:DA:717:C:N4	22:DA:718:A:C8	2.89	0.40
22:DA:857:G:H1'	44:DW:19:ARG:CZ	2.51	0.40
22:DA:1071:G:OP1	22:DA:1071:G:H8	2.04	0.40
22:DA:1248:G:C5	26:DE:46:GLN:NE2	2.89	0.40
22:DA:1263:U:O2'	48:D0:7:PRO:HD2	2.21	0.40
22:DA:1300:G:H5'	22:DA:1301:A:C2	2.56	0.40
22:DA:1392:A:H61	41:DT:18:GLU:HG3	1.85	0.40
22:DA:1394:U:C6	22:DA:1394:U:C3'	3.04	0.40
22:DA:1395:A:C4	22:DA:1398:C:C5	3.09	0.40
22:DA:1404:C:O2'	22:DA:1405:U:H5'	2.21	0.40
22:DA:1417:C:O5'	22:DA:1587:G:N2	2.54	0.40
22:DA:1492:G:C5	22:DA:1496:A:N6	2.89	0.40
22:DA:1593:A:C6	22:DA:1594:U:N3	2.89	0.40
22:DA:1723:G:H2'	22:DA:1724:G:C8	2.46	0.40
22:DA:1944:U:C4	22:DA:1955:U:C5	3.09	0.40
22:DA:2259:U:C4'	22:DA:2427:C:H2'	2.50	0.40
22:DA:2298:A:O2'	22:DA:2299:U:C6	2.70	0.40
22:DA:2373:G:O2'	22:DA:2374:C:H5'	2.21	0.40
22:DA:2396:G:C2	22:DA:2421:G:C2	3.09	0.40
57:DB:7:G:N2	36:DO:47:VAL:HG21	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:129:THR:HG22	25:DD:130:GLN:O	2.21	0.40
26:DE:2:GLU:HA	26:DE:13:THR:HA	2.03	0.40
58:DF:1:ALA:HA	58:DF:97:GLU:HB3	2.03	0.40
29:DH:9:VAL:O	29:DH:10:ALA:O	2.39	0.40
31:DJ:114:LEU:O	31:DJ:117:ALA:HB3	2.21	0.40
35:DN:42:LYS:HA	35:DN:45:ARG:HD3	2.02	0.40
36:DO:4:LYS:HG3	36:DO:8:ILE:HD11	2.03	0.40
39:DR:4:VAL:O	39:DR:38:VAL:HG23	2.21	0.40
41:DT:11:LEU:H	41:DT:11:LEU:CD1	2.35	0.40
44:DW:44:PHE:HB3	44:DW:78:PHE:HD1	1.84	0.40
45:DX:26:ARG:O	45:DX:27:ARG:HB3	2.21	0.40
1:AA:7:A:C8	5:AE:123:LEU:HD22	2.55	0.40
1:AA:240:G:H4'	1:AA:240:G:OP1	2.22	0.40
1:AA:299:G:O6	62:AA:1843:HOH:O	2.19	0.40
1:AA:513:C:N3	1:AA:539:A:C2	2.89	0.40
1:AA:544:G:C5	1:AA:545:C:C5	3.09	0.40
1:AA:791:G:C6	1:AA:792:A:N7	2.89	0.40
1:AA:978:A:H1'	1:AA:1322:C:H5	1.86	0.40
1:AA:1143:G:H2'	1:AA:1144:G:C8	2.56	0.40
1:AA:1373:G:C5'	7:AG:35:LYS:HB2	2.51	0.40
2:AB:207:ARG:HB3	2:AB:207:ARG:HH11	1.87	0.40
3:AC:57:GLU:HG2	3:AC:64:ARG:HB3	2.04	0.40
9:AI:18:VAL:HG11	9:AI:82:ILE:HA	2.03	0.40
10:AJ:14:ASP:HB2	10:AJ:17:LEU:HB3	2.03	0.40
12:AL:62:VAL:HG22	12:AL:63:THR:O	2.21	0.40
17:AQ:12:VAL:CG1	17:AQ:13:SER:H	2.34	0.40
22:BA:337:C:H2'	22:BA:338:G:O4'	2.21	0.40
22:BA:571:U:C4	22:BA:575:A:C5	3.09	0.40
22:BA:588:U:O4	22:BA:670:A:H1'	2.21	0.40
22:BA:1265:A:O4'	22:BA:1267:U:C6	2.74	0.40
22:BA:1675:C:O2	22:BA:1675:C:H2'	2.21	0.40
22:BA:1864:U:H2'	22:BA:1865:U:H5'	2.03	0.40
22:BA:1936:A:H4'	22:BA:1937:A:OP2	2.18	0.40
22:BA:2016:U:C4	22:BA:2017:U:C4	3.10	0.40
22:BA:2032:G:N3	25:BD:150:GLN:HG2	2.36	0.40
22:BA:2308:G:C5	27:BF:76:PHE:CE2	3.09	0.40
22:BA:2578:G:N3	22:BA:2578:G:H2'	2.36	0.40
23:BB:49:C:O3'	36:BO:68:LYS:HE2	2.21	0.40
25:BD:62:LYS:CB	25:BD:63:PRO:HD3	2.52	0.40
25:BD:120:GLY:HA2	25:BD:162:ALA:HB1	2.04	0.40
26:BE:48:THR:C	26:BE:50:ALA:H	2.24	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:104:THR:O	29:BH:104:THR:HG23	2.20	0.40
30:BI:41:PHE:N	30:BI:68:PHE:HZ	2.19	0.40
33:BL:78:ARG:HB3	33:BL:113:ALA:CB	2.51	0.40
38:BQ:60:TRP:O	38:BQ:63:ARG:HG3	2.21	0.40
39:BR:39:LEU:N	39:BR:39:LEU:CD2	2.78	0.40
42:BU:51:LEU:O	42:BU:52:ASN:HB2	2.21	0.40
47:BZ:29:ARG:H	47:BZ:33:HIS:CD2	2.39	0.40
51:B3:7:ARG:HA	51:B3:7:ARG:HD2	1.43	0.40
53:CA:185:U:H6	53:CA:185:U:O5'	2.04	0.40
53:CA:320:A:C2	53:CA:334:C:C2	3.09	0.40
53:CA:367:U:C6	53:CA:394:G:N2	2.89	0.40
53:CA:429:U:H4'	53:CA:430:A:O5'	2.18	0.40
53:CA:728:A:C6	53:CA:729:A:C6	3.09	0.40
53:CA:728:A:N1	53:CA:729:A:C6	2.89	0.40
53:CA:1003:G:N2	53:CA:1038:C:C2	2.89	0.40
53:CA:1146:A:H2'	53:CA:1147:C:C5	2.56	0.40
53:CA:1213:A:O2'	53:CA:1214:C:H5'	2.21	0.40
4:CD:84:ASN:HB3	4:CD:87:GLU:HG3	2.03	0.40
9:CI:37:TYR:N	9:CI:37:TYR:CD2	2.89	0.40
10:CJ:37:ARG:CB	10:CJ:75:ASP:HB3	2.51	0.40
14:CN:62:ARG:HB3	14:CN:68:ARG:O	2.20	0.40
56:CP:38:PHE:CE2	56:CP:51:ARG:HB3	2.56	0.40
56:CP:48:GLU:CD	56:CP:51:ARG:HB2	2.42	0.40
18:CR:21:ASP:HB3	18:CR:23:LYS:CG	2.48	0.40
22:DA:2:G:C5	22:DA:3:U:C5	3.09	0.40
22:DA:128:C:O2'	22:DA:129:C:O4'	2.39	0.40
22:DA:476:G:O2'	22:DA:477:A:O5'	2.39	0.40
22:DA:476:G:HO2'	22:DA:477:A:P	2.44	0.40
22:DA:537:G:C2	22:DA:555:G:C2	3.10	0.40
22:DA:632:A:H2'	22:DA:633:A:C8	2.56	0.40
22:DA:668:A:C2	22:DA:670:A:C6	3.09	0.40
22:DA:764:A:N3	22:DA:781:A:C6	2.90	0.40
22:DA:876:C:HO2'	22:DA:877:A:P	2.43	0.40
22:DA:1022:G:C6	22:DA:1140:C:C5	3.09	0.40
22:DA:1056:G:O5'	22:DA:1085:A:C2	2.74	0.40
22:DA:1079:C:C4	22:DA:1088:A:C2	3.10	0.40
22:DA:1379:U:O2	22:DA:1379:U:C2'	2.62	0.40
22:DA:1607:C:H4'	22:DA:1608:A:O5'	2.20	0.40
22:DA:1652:A:C2	22:DA:2006:C:C2	3.09	0.40
22:DA:1690:A:H2'	22:DA:1691:C:O4'	2.21	0.40
22:DA:1865:U:O2	22:DA:1877:A:N1	2.54	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2298:A:O2'	22:DA:2299:U:O5'	2.39	0.40
22:DA:2310:C:O2'	22:DA:2311:A:C5'	2.69	0.40
22:DA:2376:A:C2	36:DO:99:TYR:CE2	3.10	0.40
22:DA:2388:A:N7	22:DA:2389:G:C6	2.89	0.40
22:DA:2540:C:H2'	22:DA:2541:A:O4'	2.21	0.40
57:DB:55:U:H5'	58:DF:24:VAL:CG2	2.52	0.40
24:DC:66:PHE:HD2	24:DC:142:ASN:HD21	1.69	0.40
24:DC:180:MET:CE	24:DC:268:ARG:HE	2.34	0.40
26:DE:3:LEU:HD12	26:DE:3:LEU:HA	1.96	0.40
26:DE:5:LEU:CD1	26:DE:10:SER:HB2	2.51	0.40
26:DE:31:VAL:HG11	26:DE:100:MET:O	2.21	0.40
26:DE:90:GLN:CG	26:DE:92:HIS:NE2	2.84	0.40
26:DE:119:ILE:CD1	26:DE:143:LEU:HD21	2.51	0.40
58:DF:37:MET:CA	58:DF:151:LEU:HB3	2.52	0.40
34:DM:93:VAL:HG22	34:DM:94:ALA:N	2.36	0.40
37:DP:102:ARG:O	37:DP:103:THR:CB	2.70	0.40
39:DR:38:VAL:O	39:DR:53:PHE:HA	2.20	0.40
39:DR:98:ILE:HG22	39:DR:98:ILE:O	2.21	0.40
40:DS:24:ILE:HB	40:DS:32:ALA:HB1	2.03	0.40
1:AA:4:U:O2	1:AA:4:U:C2'	2.69	0.40
1:AA:21:G:H1'	1:AA:914:A:H61	1.87	0.40
1:AA:108:G:H2'	1:AA:109:A:OP1	2.21	0.40
1:AA:292:G:C2	1:AA:309:A:C2	3.10	0.40
1:AA:403:C:H2'	1:AA:404:G:H8	1.87	0.40
1:AA:617:G:H21	16:AP:14:ARG:NH1	2.19	0.40
1:AA:659:U:O2'	1:AA:660:C:H5'	2.21	0.40
1:AA:1117:A:O3'	9:AI:105:ARG:NE	2.50	0.40
1:AA:1264:U:O2	1:AA:1272:G:C2	2.75	0.40
1:AA:1313:U:OP2	19:AS:5:LYS:HA	2.21	0.40
1:AA:1371:G:OP1	9:AI:13:SER:HB3	2.21	0.40
3:AC:21:TRP:HZ3	3:AC:23:ALA:HB3	1.83	0.40
4:AD:75:TYR:CD1	4:AD:75:TYR:C	2.94	0.40
4:AD:145:ARG:C	4:AD:147:LYS:N	2.72	0.40
5:AE:92:ARG:HB2	5:AE:127:TYR:HB2	2.03	0.40
5:AE:100:GLU:HB3	5:AE:121:ASN:CB	2.52	0.40
6:AF:16:GLU:C	6:AF:18:VAL:H	2.24	0.40
7:AG:72:VAL:HG12	7:AG:89:GLU:HA	2.03	0.40
7:AG:106:ALA:HB1	7:AG:132:THR:HB	2.03	0.40
9:AI:53:LEU:HD12	9:AI:53:LEU:N	2.35	0.40
10:AJ:35:GLN:HG2	10:AJ:77:VAL:CB	2.46	0.40
10:AJ:91:ASP:O	10:AJ:92:LEU:O	2.39	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:39:ALA:HB3	13:AM:42:VAL:CG1	2.50	0.40
17:AQ:58:VAL:CG2	17:AQ:59:GLU:N	2.84	0.40
19:AS:10:ILE:HD11	19:AS:15:LEU:HD13	2.04	0.40
20:AT:32:LYS:O	20:AT:33:LYS:C	2.58	0.40
22:BA:162:U:H4'	22:BA:163:C:OP2	2.21	0.40
22:BA:666:A:C5'	33:BL:48:ARG:HD2	2.51	0.40
22:BA:831:G:C5	22:BA:832:U:C5	3.10	0.40
22:BA:863:A:H2'	22:BA:864:G:C8	2.57	0.40
22:BA:960:A:C5'	22:BA:961:C:OP2	2.68	0.40
22:BA:974:G:N3	22:BA:1186:G:N2	2.69	0.40
22:BA:1009:A:OP2	31:BJ:39:LYS:CE	2.70	0.40
22:BA:1230:A:H2'	22:BA:1231:U:O4'	2.21	0.40
22:BA:1459:G:H5"	22:BA:1459:G:C8	2.56	0.40
22:BA:2155:U:C4	22:BA:2156:G:C6	3.10	0.40
22:BA:2331:G:O2'	22:BA:2336:A:N1	2.35	0.40
22:BA:2420:C:OP1	51:B3:33:THR:HB	2.20	0.40
22:BA:2423:U:O2'	22:BA:2424:C:OP2	2.29	0.40
22:BA:2802:G:H2'	22:BA:2803:G:O4'	2.21	0.40
23:BB:2:G:C5	23:BB:119:A:C2	3.09	0.40
23:BB:15:A:N3	23:BB:15:A:O4'	2.53	0.40
24:BC:30:ALA:HA	24:BC:33:LEU:HD12	2.03	0.40
24:BC:134:ILE:O	24:BC:166:ARG:NH1	2.55	0.40
24:BC:257:ARG:NH1	24:BC:263:ASP:OD2	2.54	0.40
29:BH:94:ILE:HG13	29:BH:99:ILE:HD11	2.03	0.40
30:BI:5:GLN:O	30:BI:6:ALA:HB2	2.21	0.40
30:BI:52:LEU:HD11	30:BI:81:LYS:HE2	2.03	0.40
33:BL:19:LEU:HA	33:BL:27:LEU:O	2.22	0.40
35:BN:84:GLY:N	35:BN:85:PRO:HD2	2.37	0.40
41:BT:34:VAL:HG21	41:BT:43:ILE:HD12	2.02	0.40
41:BT:40:LYS:O	41:BT:41:ALA:C	2.59	0.40
44:BW:35:ILE:HG23	44:BW:35:ILE:O	2.20	0.40
44:BW:36:ILE:O	44:BW:39:GLN:CB	2.70	0.40
44:BW:36:ILE:O	44:BW:39:GLN:HB2	2.21	0.40
47:BZ:22:THR:HG21	47:BZ:50:VAL:HG13	2.02	0.40
49:B1:8:ILE:N	49:B1:8:ILE:HD13	2.35	0.40
51:B3:54:LEU:HD12	51:B3:54:LEU:HA	1.72	0.40
53:CA:198:G:C4	53:CA:199:A:C8	3.09	0.40
53:CA:647:C:H2'	53:CA:648:A:C8	2.56	0.40
53:CA:790:A:C6	53:CA:791:G:C6	3.09	0.40
53:CA:945:G:N2	53:CA:1334:G:H4'	2.36	0.40
53:CA:959:A:N6	53:CA:1222:G:H4'	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1040:U:C2'	53:CA:1041:G:H5'	2.52	0.40
53:CA:1086:U:O2'	53:CA:1087:G:H5'	2.22	0.40
53:CA:1102:A:H2'	53:CA:1103:C:C6	2.56	0.40
53:CA:1359:C:H2'	53:CA:1361:G:OP2	2.21	0.40
53:CA:1408:A:C2	53:CA:1494:G:C2	3.09	0.40
2:CB:54:ALA:HA	2:CB:57:ASN:HB3	2.03	0.40
2:CB:116:LEU:HD13	2:CB:140:LEU:HB2	2.02	0.40
2:CB:132:GLU:O	2:CB:137:THR:HG23	2.22	0.40
2:CB:133:ALA:HA	2:CB:137:THR:CG2	2.51	0.40
2:CB:183:PHE:CE2	2:CB:197:PHE:CD2	3.09	0.40
3:CC:116:ALA:HB2	3:CC:199:VAL:CG2	2.51	0.40
3:CC:116:ALA:HB2	3:CC:199:VAL:HG21	2.04	0.40
3:CC:133:MET:O	3:CC:137:VAL:HG23	2.21	0.40
4:CD:151:GLN:O	4:CD:152:SER:C	2.59	0.40
6:CF:56:LYS:O	6:CF:57:ALA:HB2	2.20	0.40
6:CF:96:VAL:HG12	6:CF:97:THR:N	2.36	0.40
54:CG:88:VAL:CG2	54:CG:89:GLU:H	2.20	0.40
8:CH:54:THR:HG23	8:CH:55:LYS:N	2.30	0.40
8:CH:102:VAL:HG22	8:CH:125:ILE:HB	2.03	0.40
12:CL:5:GLN:HG3	12:CL:9:LYS:HZ3	1.87	0.40
12:CL:14:LYS:HE2	12:CL:15:VAL:C	2.41	0.40
12:CL:19:ASN:HD22	12:CL:19:ASN:N	2.15	0.40
21:CU:35:GLU:OE2	21:CU:35:GLU:CA	2.68	0.40
22:DA:67:U:C2	22:DA:68:G:C8	3.10	0.40
22:DA:92:U:C6	22:DA:93:G:C8	3.10	0.40
22:DA:116:C:C4	22:DA:117:G:C5	3.09	0.40
22:DA:247:G:H5"	22:DA:386:G:O2'	2.22	0.40
22:DA:279:A:N6	22:DA:361:G:C1'	2.79	0.40
22:DA:298:G:OP1	42:DU:83:GLY:HA2	2.21	0.40
22:DA:324:A:O2'	22:DA:325:G:O5'	2.38	0.40
22:DA:399:U:H5"	45:DX:56:ARG:NH1	2.36	0.40
22:DA:483:A:OP2	22:DA:484:C:C5	2.74	0.40
22:DA:632:A:H4'	33:DL:68:SER:HA	2.02	0.40
22:DA:813:U:H2'	22:DA:814:C:C6	2.56	0.40
22:DA:845:A:N6	22:DA:932:U:H3	2.20	0.40
22:DA:876:C:N3	22:DA:877:A:N7	2.69	0.40
22:DA:909:A:C6	22:DA:912:C:C2	3.09	0.40
22:DA:1045:C:H5"	22:DA:1047:G:H1'	2.02	0.40
22:DA:1055:G:H3'	22:DA:1056:G:H5'	2.02	0.40
22:DA:1112:G:H2'	22:DA:1113:U:C5	2.56	0.40
22:DA:1127:A:N7	22:DA:2488:G:O2'	2.43	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1296:G:H1'	22:DA:1645:G:N2	2.37	0.40
22:DA:1345:C:O2'	22:DA:1346:G:P	2.80	0.40
22:DA:1437:C:H2'	22:DA:1438:U:H6	1.86	0.40
22:DA:1694:C:H4'	22:DA:1695:G:H5"	2.03	0.40
22:DA:1773:A:H2'	22:DA:1774:C:C5'	2.51	0.40
22:DA:1884:G:OP2	22:DA:1884:G:H8	2.04	0.40
22:DA:1993:U:H4'	25:DD:133:THR:HG21	2.02	0.40
22:DA:2060:A:H2'	26:DE:63:LYS:HZ3	1.86	0.40
22:DA:2191:A:H3'	22:DA:2192:U:H6	1.87	0.40
22:DA:2307:G:H1	58:DF:38:GLY:HA3	1.86	0.40
22:DA:2389:G:H5"	22:DA:2390:U:C5'	2.30	0.40
22:DA:2786:U:O2'	22:DA:2787:C:H5'	2.21	0.40
57:DB:83:G:C6	57:DB:94:A:C6	3.09	0.40
24:DC:91:ALA:HB3	24:DC:103:ILE:HG23	2.02	0.40
58:DF:71:LYS:O	58:DF:72:SER:HB3	2.21	0.40
29:DH:43:ASN:O	29:DH:47:PHE:CD2	2.74	0.40
30:DI:105:LEU:O	30:DI:105:LEU:HD23	2.22	0.40
32:DK:69:VAL:HG12	32:DK:70:ARG:N	2.36	0.40
38:DQ:4:LYS:HE3	38:DQ:7:VAL:HG22	2.04	0.40
40:DS:33:LEU:CA	40:DS:36:LEU:HD23	2.51	0.40
41:DT:25:GLU:OE1	41:DT:30:ILE:HD13	2.22	0.40
46:DY:25:GLN:HB2	46:DY:46:VAL:HG11	2.03	0.40
1:AA:71:A:C2	1:AA:72:A:N7	2.89	0.40
1:AA:129:A:O2'	1:AA:130:A:H5"	2.20	0.40
1:AA:213:G:H2'	1:AA:214:C:H5'	2.04	0.40
1:AA:466:A:C4'	1:AA:467:U:OP2	2.70	0.40
1:AA:903:G:C4	1:AA:904:U:C5	3.09	0.40
1:AA:976:G:N1	1:AA:1363:A:C2	2.90	0.40
1:AA:1180:A:O5'	1:AA:1180:A:H8	2.05	0.40
2:AB:103:TRP:HE1	2:AB:150:ILE:HD11	1.86	0.40
2:AB:209:VAL:O	2:AB:210:THR:C	2.58	0.40
3:AC:81:GLU:O	3:AC:84:GLU:HB3	2.20	0.40
4:AD:116:LEU:C	4:AD:122:ILE:HD11	2.40	0.40
4:AD:119:HIS:O	4:AD:120:LYS:C	2.59	0.40
5:AE:104:ILE:HD11	5:AE:114:LEU:HB3	2.01	0.40
7:AG:68:VAL:HG21	7:AG:103:ILE:CG1	2.52	0.40
8:AH:74:ILE:CD1	8:AH:128:VAL:HG22	2.51	0.40
11:AK:19:VAL:HG22	11:AK:82:GLU:HG2	2.03	0.40
11:AK:19:VAL:HB	11:AK:34:THR:HG23	2.02	0.40
17:AQ:50:ASN:OD1	17:AQ:50:ASN:N	2.54	0.40
19:AS:62:THR:O	19:AS:63:ASP:C	2.60	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:43:LYS:HZ3	20:AT:86:ALA:HA	1.86	0.40
22:BA:28:A:C4	22:BA:29:U:C6	3.10	0.40
22:BA:137:U:C5	22:BA:137:U:OP2	2.74	0.40
22:BA:160:A:C6	22:BA:161:A:C6	3.09	0.40
22:BA:185:G:C6	22:BA:186:G:C5	3.09	0.40
22:BA:460:A:C2	22:BA:470:A:C5	3.09	0.40
22:BA:513:A:C2'	22:BA:514:A:H5'	2.51	0.40
22:BA:612:G:O2'	22:BA:613:A:C8	2.74	0.40
22:BA:684:G:C6	22:BA:774:G:C4	3.10	0.40
22:BA:790:U:O2'	22:BA:791:C:H5'	2.21	0.40
22:BA:1105:U:O2	22:BA:1106:G:C8	2.75	0.40
22:BA:1131:G:N7	22:BA:2025:C:H4'	2.37	0.40
22:BA:1312:U:H4'	22:BA:1313:U:O5'	2.21	0.40
22:BA:1637:A:H4'	22:BA:2711:A:O2'	2.21	0.40
22:BA:1838:C:C4	22:BA:1899:A:C4	3.09	0.40
22:BA:2134:A:H8	22:BA:2134:A:OP1	2.05	0.40
22:BA:2197:U:C6	22:BA:2224:G:C6	3.10	0.40
22:BA:2313:C:O2'	22:BA:2314:A:H5'	2.21	0.40
22:BA:2391:G:N2	22:BA:2429:G:O4'	2.55	0.40
22:BA:2808:G:N1	22:BA:2891:U:C5	2.90	0.40
25:BD:35:THR:CG2	25:BD:51:THR:HG22	2.51	0.40
25:BD:106:LYS:O	25:BD:175:LEU:O	2.40	0.40
25:BD:133:THR:HG23	25:BD:134:HIS:CG	2.57	0.40
26:BE:153:LEU:HB3	26:BE:171:ASP:HB2	2.03	0.40
28:BG:166:GLU:OE2	28:BG:166:GLU:C	2.60	0.40
29:BH:31:VAL:CG1	29:BH:36:ALA:O	2.70	0.40
29:BH:57:LYS:O	29:BH:61:VAL:HG23	2.21	0.40
30:BI:56:VAL:HG22	30:BI:68:PHE:HB2	2.03	0.40
32:BK:70:ARG:HD3	32:BK:76:VAL:CG2	2.48	0.40
33:BL:66:PHE:CD1	33:BL:66:PHE:C	2.92	0.40
35:BN:93:GLY:O	35:BN:95:THR:N	2.54	0.40
36:BO:59:ALA:HA	36:BO:62:LEU:CD1	2.51	0.40
36:BO:76:LYS:N	36:BO:109:ALA:HB1	2.36	0.40
38:BQ:91:ARG:NE	39:BR:11:GLN:H	2.18	0.40
43:BV:27:PRO:HD2	43:BV:87:GLN:O	2.21	0.40
44:BW:73:PRO:HG2	44:BW:76:ARG:HB2	2.04	0.40
46:BY:61:ALA:C	46:BY:63:ALA:H	2.24	0.40
47:BZ:43:ILE:HD12	47:BZ:47:ILE:HG13	2.04	0.40
53:CA:125:U:O2'	53:CA:126:G:H5'	2.20	0.40
53:CA:232:G:H2'	53:CA:233:C:O4'	2.22	0.40
53:CA:242:G:N2	53:CA:285:C:C2	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:411:A:O3'	53:CA:412:A:O4'	2.39	0.40
53:CA:413:G:C2	4:CD:32:LYS:HE3	2.56	0.40
53:CA:599:C:H4'	8:CH:121:GLY:HA3	2.03	0.40
53:CA:796:C:OP1	11:CK:127:ARG:HB3	2.21	0.40
53:CA:881:G:C6	53:CA:882:C:C4	3.10	0.40
53:CA:892:A:C5	53:CA:893:C:C4	3.08	0.40
53:CA:1130:A:C8	53:CA:1146:A:N1	2.90	0.40
53:CA:1255:G:H2'	53:CA:1278:G:H21	1.86	0.40
53:CA:1394:A:C5	53:CA:1501:C:H4'	2.56	0.40
53:CA:1434:A:N6	53:CA:1435:G:C6	2.90	0.40
53:CA:1476:A:H2'	53:CA:1477:U:O4'	2.21	0.40
2:CB:103:TRP:CB	2:CB:106:VAL:HB	2.49	0.40
3:CC:179:ALA:HA	3:CC:205:GLU:O	2.21	0.40
54:CG:41:ILE:HD13	54:CG:115:MET:HB3	2.04	0.40
8:CH:111:THR:HG22	8:CH:113:ARG:H	1.86	0.40
21:CU:28:LEU:C	21:CU:28:LEU:CD2	2.90	0.40
22:DA:297:G:C2	22:DA:342:A:C2	3.10	0.40
22:DA:324:A:N3	22:DA:325:G:H1'	2.36	0.40
22:DA:410:G:N2	22:DA:418:C:O2	2.54	0.40
22:DA:416:U:C4	22:DA:417:C:C4	3.09	0.40
22:DA:469:G:OP2	26:DE:54:GLY:O	2.39	0.40
22:DA:533:G:H5'	38:DQ:23:TYR:CD2	2.56	0.40
22:DA:699:A:H2'	22:DA:700:G:O4'	2.22	0.40
22:DA:705:A:C2	22:DA:727:A:O4'	2.74	0.40
22:DA:727:A:O2'	22:DA:728:G:O4'	2.40	0.40
22:DA:748:G:OP2	40:DS:88:ARG:HG3	2.21	0.40
22:DA:1068:G:O2'	22:DA:1069:A:H5'	2.20	0.40
22:DA:1324:G:C2	22:DA:1328:A:N6	2.90	0.40
22:DA:1553:A:C8	22:DA:1555:G:O6	2.75	0.40
22:DA:1651:G:C6	22:DA:1652:A:C5	3.10	0.40
22:DA:1845:G:C5	22:DA:1846:G:N7	2.90	0.40
22:DA:1866:A:O2'	22:DA:1867:G:H5'	2.22	0.40
22:DA:2210:U:C4'	22:DA:2211:A:H5'	2.52	0.40
22:DA:2332:C:H5"	44:DW:76:ARG:HH12	1.87	0.40
22:DA:2355:G:H5"	44:DW:20:LEU:HD22	2.03	0.40
22:DA:2568:U:H2'	22:DA:2569:G:O4'	2.22	0.40
22:DA:2579:C:H2'	22:DA:2580:U:O4'	2.21	0.40
57:DB:40:U:H1'	57:DB:45:A:N6	2.36	0.40
24:DC:144:GLU:HG3	24:DC:151:GLY:CA	2.51	0.40
24:DC:250:GLN:H	24:DC:250:GLN:HG2	1.50	0.40
25:DD:20:VAL:HG12	25:DD:22:ILE:HG12	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DF:37:MET:HE3	58:DF:56:LEU:HB2	2.02	0.40
58:DF:166:ARG:H	58:DF:166:ARG:HG2	1.72	0.40
28:DG:22:VAL:HG12	28:DG:23:ILE:N	2.35	0.40
28:DG:94:ARG:O	28:DG:95:ALA:HB2	2.21	0.40
29:DH:5:LEU:HA	29:DH:36:ALA:CB	2.51	0.40
29:DH:58:LEU:O	29:DH:61:VAL:HG12	2.22	0.40
29:DH:58:LEU:HG	29:DH:62:LEU:HD11	2.03	0.40
31:DJ:1:MET:SD	31:DJ:2:LYS:HE3	2.61	0.40
32:DK:92:GLU:O	32:DK:93:GLN:C	2.60	0.40
33:DL:132:ARG:HA	33:DL:135:ILE:HG22	2.02	0.40
36:DO:57:ALA:C	36:DO:58:ILE:HD12	2.42	0.40
36:DO:62:LEU:C	36:DO:62:LEU:HD13	2.42	0.40
38:DQ:27:ARG:O	38:DQ:27:ARG:HG2	2.22	0.40
38:DQ:72:GLY:HA3	38:DQ:113:LYS:NZ	2.37	0.40
41:DT:85:VAL:O	41:DT:86:THR:OG1	2.36	0.40
44:DW:37:VAL:O	44:DW:38:ARG:HB2	2.21	0.40
48:D0:49:ARG:HG3	48:D0:51:ARG:HH21	1.85	0.40
1:AA:421:U:C2'	1:AA:422:C:OP1	2.69	0.40
1:AA:597:G:C2	1:AA:644:U:O2	2.73	0.40
1:AA:731:G:OP1	1:AA:766:A:C1'	2.67	0.40
1:AA:945:G:C2	1:AA:946:A:C8	3.10	0.40
1:AA:983:A:N3	1:AA:983:A:C2'	2.84	0.40
1:AA:1029:U:N3	1:AA:1033:G:C6	2.90	0.40
1:AA:1055:A:H8	1:AA:1055:A:O5'	2.05	0.40
1:AA:1086:U:O2'	1:AA:1087:G:H5'	2.22	0.40
1:AA:1145:A:HO2'	1:AA:1146:A:P	2.45	0.40
2:AB:32:GLY:HA3	2:AB:39:ILE:CG1	2.50	0.40
2:AB:138:ARG:HB2	2:AB:138:ARG:NH1	2.36	0.40
3:AC:154:GLY:H	3:AC:156:LEU:HD11	1.87	0.40
4:AD:55:ARG:HH12	4:AD:58:GLN:HB3	1.86	0.40
5:AE:110:MET:H	5:AE:113:VAL:CG1	2.31	0.40
6:AF:3:HIS:CA	6:AF:92:THR:HG23	2.52	0.40
7:AG:119:LEU:HD21	7:AG:123:LEU:HD23	2.02	0.40
7:AG:144:ALA:C	7:AG:146:ALA:N	2.75	0.40
9:AI:86:LEU:O	9:AI:93:LEU:HD11	2.20	0.40
9:AI:113:LYS:HG3	9:AI:119:LYS:HA	2.02	0.40
12:AL:82:ARG:HB2	12:AL:97:VAL:HG23	2.04	0.40
15:AO:73:ASP:OD1	15:AO:75:ALA:HB3	2.21	0.40
17:AQ:20:ILE:H	17:AQ:47:ASP:CG	2.22	0.40
22:BA:120:U:H3'	22:BA:120:U:OP2	2.22	0.40
22:BA:197:A:C6	22:BA:198:C:C2	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:443:A:C2	22:BA:1245:G:N3	2.89	0.40
22:BA:518:G:H2'	22:BA:519:U:C6	2.57	0.40
22:BA:792:A:C6	22:BA:2440:C:C6	3.10	0.40
22:BA:960:A:H5"	22:BA:961:C:OP2	2.21	0.40
22:BA:1054:A:C6	22:BA:1106:G:C6	3.10	0.40
22:BA:1105:U:C2	22:BA:1106:G:N7	2.89	0.40
22:BA:1176:U:H2'	22:BA:1177:G:N9	2.36	0.40
22:BA:1266:G:O2'	22:BA:2012:G:O6	2.18	0.40
22:BA:1509:A:C2	22:BA:1510:G:C8	3.09	0.40
22:BA:1767:G:C2	22:BA:1986:C:C2	3.10	0.40
22:BA:2151:U:H2'	22:BA:2152:G:O4'	2.22	0.40
22:BA:2534:A:C2'	22:BA:2535:G:O5'	2.69	0.40
22:BA:2720:U:H5"	37:BP:52:ARG:NH2	2.37	0.40
60:BA:3135:TEL:H583	60:BA:3135:TEL:H542	1.83	0.40
23:BB:41:G:H3'	23:BB:42:C:H5"	2.04	0.40
23:BB:114:C:H2'	23:BB:115:A:C8	2.57	0.40
25:BD:51:THR:HG21	25:BD:68:PHE:HE2	1.85	0.40
25:BD:121:THR:O	25:BD:122:VAL:HG23	2.20	0.40
26:BE:141:MET:HB2	26:BE:143:LEU:HG	2.03	0.40
26:BE:190:ALA:C	26:BE:192:ALA:N	2.73	0.40
30:BI:126:ARG:HD3	30:BI:126:ARG:H	1.87	0.40
31:BJ:44:TYR:C	31:BJ:45:THR:HG22	2.42	0.40
32:BK:42:THR:O	32:BK:42:THR:HG23	2.22	0.40
32:BK:117:SER:C	32:BK:118:LEU:O	2.58	0.40
33:BL:18:ARG:HH11	33:BL:18:ARG:HD3	1.74	0.40
33:BL:55:MET:HE3	33:BL:55:MET:CA	2.35	0.40
35:BN:38:LEU:HD11	35:BN:42:LYS:HD2	2.03	0.40
38:BQ:57:ARG:NH2	38:BQ:92:LYS:HD2	2.37	0.40
39:BR:28:ALA:O	39:BR:63:VAL:CG2	2.69	0.40
39:BR:49:ILE:CB	39:BR:51:VAL:O	2.69	0.40
40:BS:85:ILE:HG23	40:BS:93:ALA:HB1	2.04	0.40
41:BT:29:THR:HA	41:BT:86:THR:N	2.36	0.40
42:BU:94:PHE:O	42:BU:95:PHE:C	2.58	0.40
50:B2:21:ARG:HG2	50:B2:31:LEU:HG	2.03	0.40
52:B4:1:MET:HB3	52:B4:34:LYS:HG2	2.03	0.40
53:CA:80:A:H3'	53:CA:81:A:C5'	2.51	0.40
53:CA:82:G:C5	53:CA:89:U:C5	3.09	0.40
53:CA:128:G:N2	53:CA:129:A:C2	2.90	0.40
53:CA:171:A:N1	53:CA:172:A:C2	2.90	0.40
53:CA:295:C:C4	53:CA:296:U:C5	3.09	0.40
53:CA:429:U:H4'	53:CA:430:A:OP1	2.17	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:722:G:O3'	53:CA:723:U:C5	2.75	0.40
53:CA:963:G:N1	53:CA:973:G:O6	2.54	0.40
53:CA:1119:C:OP1	9:CI:10:ARG:NH2	2.54	0.40
53:CA:1123:U:H4'	10:CJ:39:PRO:HD2	2.02	0.40
53:CA:1223:C:H5"	53:CA:1224:U:OP2	2.22	0.40
53:CA:1352:C:O2	53:CA:1371:G:C2	2.75	0.40
53:CA:1386:G:N2	53:CA:1387:G:C4	2.90	0.40
2:CB:212:TYR:CD2	2:CB:216:VAL:HG23	2.57	0.40
54:CG:22:LEU:O	54:CG:26:VAL:HG22	2.20	0.40
54:CG:26:VAL:HG23	54:CG:27:ASN:OD1	2.21	0.40
55:CM:96:VAL:C	55:CM:98:GLY:H	2.25	0.40
15:CO:87:ARG:HA	15:CO:87:ARG:HD2	1.68	0.40
22:DA:139:U:N3	41:DT:1:MET:HA	2.37	0.40
22:DA:141:G:HO2'	22:DA:142:A:P	2.41	0.40
22:DA:372:G:P	45:DX:61:LYS:HZ3	2.44	0.40
22:DA:489:G:O2'	22:DA:491:G:H8	2.04	0.40
22:DA:544:C:C4	22:DA:545:U:N3	2.90	0.40
22:DA:545:U:C4	22:DA:547:A:H4'	2.56	0.40
22:DA:917:A:H5"	22:DA:2268:A:H61	1.87	0.40
22:DA:1049:C:C6	22:DA:1050:A:N7	2.90	0.40
22:DA:1189:A:H2'	22:DA:1190:G:O4'	2.21	0.40
22:DA:1320:C:HO2'	22:DA:1321:A:H8	1.65	0.40
22:DA:1331:G:C4	22:DA:1333:G:C8	3.09	0.40
22:DA:1355:G:O2'	22:DA:1356:G:H5'	2.21	0.40
22:DA:1494:A:O2'	22:DA:1495:A:H5'	2.21	0.40
22:DA:1579:A:C6	22:DA:1580:A:C6	3.10	0.40
22:DA:2193:G:H2'	22:DA:2194:U:C6	2.56	0.40
22:DA:2283:C:N4	22:DA:2389:G:C5	2.89	0.40
22:DA:2294:G:OP1	36:DO:10:ARG:HD3	2.22	0.40
22:DA:2337:G:C6	22:DA:2338:C:N4	2.89	0.40
22:DA:2567:G:H2'	22:DA:2568:U:C6	2.57	0.40
22:DA:2714:G:C2'	22:DA:2715:C:H5'	2.52	0.40
22:DA:2734:A:H2'	22:DA:2735:G:H5'	2.02	0.40
22:DA:2807:U:H3'	22:DA:2808:G:H5"	2.03	0.40
24:DC:212:TRP:C	24:DC:212:TRP:CD1	2.95	0.40
24:DC:231:HIS:O	24:DC:232:GLY:C	2.60	0.40
25:DD:179:ARG:HH12	37:DP:7:LEU:HD11	1.86	0.40
58:DF:43:ILE:HG23	58:DF:44:ALA:N	2.26	0.40
28:DG:116:LEU:HD13	28:DG:121:THR:HA	2.04	0.40
29:DH:35:LYS:O	29:DH:36:ALA:HB2	2.20	0.40
30:DI:102:ARG:HG2	30:DI:141:ASP:O	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DI:106:GLN:O	30:DI:106:GLN:HG3	2.22	0.40
32:DK:31:ARG:HG3	32:DK:31:ARG:NH1	2.36	0.40
34:DM:67:VAL:HG21	34:DM:102:LEU:HD12	2.04	0.40
34:DM:69:PRO:CA	34:DM:94:ALA:HB2	2.51	0.40
35:DN:73:ASN:HA	35:DN:76:VAL:HG13	2.03	0.40
37:DP:72:VAL:HG23	37:DP:72:VAL:O	2.21	0.40
41:DT:3:ARG:O	41:DT:4:GLU:C	2.59	0.40
43:DV:3:THR:HA	43:DV:62:THR:O	2.22	0.40
49:D1:46:VAL:HG22	49:D1:47:ILE:H	1.86	0.40
51:D3:5:THR:O	51:D3:7:ARG:N	2.55	0.40

All (9) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:138:U:O4	22:DA:305:C:OP1[3_545]	1.58	0.62
22:BA:138:U:O4	22:DA:305:C:P[3_545]	1.90	0.30
1:AA:416:G:OP1	22:DA:2139:U:O4'[4_455]	1.91	0.29
25:BD:181:ASP:OD1	22:DA:2903:U:O4[2_454]	1.97	0.23
22:BA:138:U:C4	22:DA:304:U:O3'[3_545]	1.98	0.22
22:BA:138:U:N3	22:DA:304:U:O3'[3_545]	2.05	0.15
33:BL:143:GLU:OE1	47:DZ:5:LYS:NZ[3_445]	2.07	0.13
22:BA:138:U:O4	22:DA:305:C:O5'[3_545]	2.16	0.04
22:BA:138:U:O4	22:DA:304:U:O3'[3_545]	2.17	0.03

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
2	AB	216/218 (99%)	132 (61%)	52 (24%)	32 (15%)	0 1
2	CB	216/218 (99%)	155 (72%)	46 (21%)	15 (7%)	1 8

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
3	AC	204/206 (99%)	156 (76%)	32 (16%)	16 (8%)	1	6
3	CC	204/206 (99%)	147 (72%)	37 (18%)	20 (10%)	0	3
4	AD	203/205 (99%)	138 (68%)	37 (18%)	28 (14%)	0	1
4	CD	203/205 (99%)	140 (69%)	43 (21%)	20 (10%)	0	3
5	AE	148/150 (99%)	105 (71%)	23 (16%)	20 (14%)	0	1
5	CE	148/150 (99%)	112 (76%)	21 (14%)	15 (10%)	0	3
6	AF	98/100 (98%)	73 (74%)	13 (13%)	12 (12%)	0	2
6	CF	98/100 (98%)	65 (66%)	24 (24%)	9 (9%)	1	4
7	AG	149/151 (99%)	111 (74%)	32 (22%)	6 (4%)	3	17
8	AH	127/129 (98%)	92 (72%)	28 (22%)	7 (6%)	2	11
8	CH	127/129 (98%)	94 (74%)	22 (17%)	11 (9%)	1	5
9	AI	125/127 (98%)	89 (71%)	26 (21%)	10 (8%)	1	6
9	CI	125/127 (98%)	89 (71%)	25 (20%)	11 (9%)	1	5
10	AJ	96/98 (98%)	70 (73%)	13 (14%)	13 (14%)	0	1
10	CJ	96/98 (98%)	55 (57%)	28 (29%)	13 (14%)	0	1
11	AK	115/117 (98%)	85 (74%)	20 (17%)	10 (9%)	1	5
11	CK	115/117 (98%)	89 (77%)	19 (16%)	7 (6%)	1	10
12	AL	121/123 (98%)	88 (73%)	22 (18%)	11 (9%)	1	4
12	CL	121/123 (98%)	86 (71%)	27 (22%)	8 (7%)	1	9
13	AM	112/114 (98%)	88 (79%)	13 (12%)	11 (10%)	0	3
14	AN	92/100 (92%)	60 (65%)	20 (22%)	12 (13%)	0	2
14	CN	91/100 (91%)	59 (65%)	27 (30%)	5 (6%)	2	11
15	AO	86/88 (98%)	59 (69%)	23 (27%)	4 (5%)	2	14
15	CO	86/88 (98%)	67 (78%)	16 (19%)	3 (4%)	3	21
16	AP	80/82 (98%)	58 (72%)	14 (18%)	8 (10%)	0	3
17	AQ	78/80 (98%)	51 (65%)	15 (19%)	12 (15%)	0	1
17	CQ	78/80 (98%)	62 (80%)	8 (10%)	8 (10%)	0	3
18	AR	53/55 (96%)	46 (87%)	5 (9%)	2 (4%)	3	19
18	CR	53/55 (96%)	42 (79%)	11 (21%)	0	100	100
19	AS	77/79 (98%)	58 (75%)	10 (13%)	9 (12%)	0	2
19	CS	77/79 (98%)	46 (60%)	24 (31%)	7 (9%)	1	4

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
20	AT	83/85 (98%)	58 (70%)	19 (23%)	6 (7%)	1	7
20	CT	83/85 (98%)	63 (76%)	12 (14%)	8 (10%)	0	4
21	AU	49/51 (96%)	25 (51%)	15 (31%)	9 (18%)	0	1
21	CU	49/51 (96%)	22 (45%)	8 (16%)	19 (39%)	0	0
24	BC	269/271 (99%)	203 (76%)	40 (15%)	26 (10%)	0	4
24	DC	269/271 (99%)	183 (68%)	54 (20%)	32 (12%)	0	2
25	BD	207/209 (99%)	148 (72%)	31 (15%)	28 (14%)	0	1
25	DD	207/209 (99%)	136 (66%)	40 (19%)	31 (15%)	0	1
26	BE	199/201 (99%)	149 (75%)	32 (16%)	18 (9%)	1	4
26	DE	199/201 (99%)	125 (63%)	46 (23%)	28 (14%)	0	1
27	BF	175/177 (99%)	130 (74%)	30 (17%)	15 (9%)	1	5
28	BG	174/176 (99%)	118 (68%)	32 (18%)	24 (14%)	0	1
28	DG	174/176 (99%)	102 (59%)	41 (24%)	31 (18%)	0	1
29	BH	147/149 (99%)	67 (46%)	52 (35%)	28 (19%)	0	1
29	DH	147/149 (99%)	76 (52%)	53 (36%)	18 (12%)	0	2
30	BI	139/141 (99%)	84 (60%)	41 (30%)	14 (10%)	0	3
30	DI	139/141 (99%)	84 (60%)	38 (27%)	17 (12%)	0	2
31	BJ	140/142 (99%)	103 (74%)	26 (19%)	11 (8%)	1	6
31	DJ	140/142 (99%)	96 (69%)	29 (21%)	15 (11%)	0	3
32	BK	120/122 (98%)	88 (73%)	12 (10%)	20 (17%)	0	1
32	DK	120/122 (98%)	82 (68%)	18 (15%)	20 (17%)	0	1
33	BL	141/143 (99%)	103 (73%)	28 (20%)	10 (7%)	1	7
33	DL	141/143 (99%)	80 (57%)	41 (29%)	20 (14%)	0	1
34	BM	134/136 (98%)	100 (75%)	21 (16%)	13 (10%)	0	4
34	DM	134/136 (98%)	95 (71%)	27 (20%)	12 (9%)	1	4
35	BN	118/120 (98%)	92 (78%)	14 (12%)	12 (10%)	0	3
35	DN	118/120 (98%)	70 (59%)	36 (30%)	12 (10%)	0	3
36	BO	114/116 (98%)	88 (77%)	17 (15%)	9 (8%)	1	6
36	DO	114/116 (98%)	81 (71%)	26 (23%)	7 (6%)	1	10
37	BP	112/114 (98%)	74 (66%)	21 (19%)	17 (15%)	0	1
37	DP	112/114 (98%)	64 (57%)	29 (26%)	19 (17%)	0	1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
38	BQ	115/117 (98%)	90 (78%)	17 (15%)	8 (7%)	1	7
38	DQ	115/117 (98%)	83 (72%)	20 (17%)	12 (10%)	0	3
39	BR	101/103 (98%)	80 (79%)	14 (14%)	7 (7%)	1	8
39	DR	101/103 (98%)	71 (70%)	18 (18%)	12 (12%)	0	2
40	BS	108/110 (98%)	84 (78%)	17 (16%)	7 (6%)	1	9
40	DS	108/110 (98%)	74 (68%)	25 (23%)	9 (8%)	1	5
41	BT	91/93 (98%)	49 (54%)	26 (29%)	16 (18%)	0	1
41	DT	91/93 (98%)	48 (53%)	28 (31%)	15 (16%)	0	1
42	BU	100/102 (98%)	67 (67%)	17 (17%)	16 (16%)	0	1
42	DU	100/102 (98%)	51 (51%)	28 (28%)	21 (21%)	0	0
43	BV	92/94 (98%)	80 (87%)	11 (12%)	1 (1%)	14	46
43	DV	92/94 (98%)	64 (70%)	21 (23%)	7 (8%)	1	6
44	BW	77/79 (98%)	28 (36%)	22 (29%)	27 (35%)	0	0
44	DW	77/79 (98%)	33 (43%)	23 (30%)	21 (27%)	0	0
45	BX	75/77 (97%)	62 (83%)	9 (12%)	4 (5%)	2	12
45	DX	75/77 (97%)	50 (67%)	17 (23%)	8 (11%)	0	3
46	BY	61/63 (97%)	44 (72%)	11 (18%)	6 (10%)	0	3
46	DY	61/63 (97%)	44 (72%)	12 (20%)	5 (8%)	1	6
47	BZ	56/58 (97%)	47 (84%)	7 (12%)	2 (4%)	3	20
47	DZ	56/58 (97%)	34 (61%)	17 (30%)	5 (9%)	1	4
48	B0	54/56 (96%)	41 (76%)	9 (17%)	4 (7%)	1	7
48	D0	54/56 (96%)	40 (74%)	8 (15%)	6 (11%)	0	2
49	B1	48/50 (96%)	39 (81%)	5 (10%)	4 (8%)	1	5
49	D1	48/50 (96%)	36 (75%)	8 (17%)	4 (8%)	1	5
50	B2	44/46 (96%)	36 (82%)	6 (14%)	2 (4%)	2	15
50	D2	44/46 (96%)	29 (66%)	11 (25%)	4 (9%)	1	4
51	B3	62/64 (97%)	50 (81%)	7 (11%)	5 (8%)	1	6
51	D3	62/64 (97%)	39 (63%)	18 (29%)	5 (8%)	1	6
52	B4	36/38 (95%)	29 (81%)	3 (8%)	4 (11%)	0	2
52	D4	36/38 (95%)	23 (64%)	8 (22%)	5 (14%)	0	1
54	CG	148/150 (99%)	100 (68%)	36 (24%)	12 (8%)	1	6

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
55	CM	111/113 (98%)	64 (58%)	35 (32%)	12 (11%)	0 3
56	CP	78/80 (98%)	50 (64%)	18 (23%)	10 (13%)	0 2
58	DF	176/178 (99%)	98 (56%)	46 (26%)	32 (18%)	0 1
All	All	11238/11447 (98%)	7713 (69%)	2283 (20%)	1242 (11%)	0 2

All (1242) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	18	GLN
2	AB	20	ARG
2	AB	33	ALA
2	AB	40	ILE
2	AB	72	LYS
2	AB	75	ALA
2	AB	119	GLN
2	AB	133	ALA
3	AC	60	ALA
3	AC	165	GLU
4	AD	26	ALA
4	AD	29	THR
4	AD	31	CYS
4	AD	34	GLU
4	AD	147	LYS
4	AD	173	ASP
4	AD	191	SER
4	AD	192	ALA
5	AE	44	ARG
5	AE	97	PRO
5	AE	121	ASN
5	AE	137	ARG
5	AE	154	ALA
5	AE	157	GLY
6	AF	42	TRP
7	AG	93	VAL
7	AG	129	ASN
8	AH	49	LYS
8	AH	66	GLN
9	AI	8	THR
9	AI	40	ARG
9	AI	43	ALA
9	AI	55	ASP

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Mol	Chain	Res	Type
9	AI	71	ILE
10	AJ	57	VAL
10	AJ	61	ALA
10	AJ	92	LEU
11	AK	51	PHE
11	AK	125	LYS
11	AK	126	ARG
12	AL	23	LEU
12	AL	43	LYS
12	AL	73	LEU
12	AL	75	GLU
12	AL	88	ASP
13	AM	46	GLU
14	AN	22	LYS
14	AN	27	LYS
14	AN	33	VAL
14	AN	51	PRO
14	AN	52	ARG
14	AN	61	ASN
14	AN	81	ILE
15	AO	17	ASP
16	AP	11	ALA
16	AP	80	LYS
17	AQ	12	VAL
17	AQ	16	MET
17	AQ	52	CYS
18	AR	47	ARG
19	AS	63	ASP
20	AT	3	ILE
20	AT	4	LYS
20	AT	5	SER
20	AT	67	HIS
20	AT	76	ALA
21	AU	11	PHE
21	AU	12	ASP
21	AU	23	GLU
24	BC	9	SER
24	BC	57	HIS
24	BC	104	LEU
24	BC	105	ALA
24	BC	121	ALA
24	BC	199	HIS

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Mol	Chain	Res	Type
24	BC	200	MET
24	BC	239	PHE
25	BD	43	ASP
25	BD	73	VAL
25	BD	92	VAL
25	BD	99	GLU
25	BD	103	ASP
25	BD	104	VAL
25	BD	122	VAL
25	BD	183	GLU
25	BD	191	GLY
25	BD	192	ALA
26	BE	8	ALA
26	BE	46	GLN
26	BE	79	ARG
26	BE	123	LYS
26	BE	175	ILE
27	BF	134	GLN
28	BG	7	PRO
28	BG	8	VAL
28	BG	31	GLU
28	BG	33	THR
28	BG	84	LYS
28	BG	94	ARG
28	BG	110	HIS
28	BG	118	ALA
28	BG	168	VAL
28	BG	170	THR
29	BH	3	VAL
29	BH	8	LYS
29	BH	9	VAL
29	BH	10	ALA
29	BH	14	SER
29	BH	32	PRO
29	BH	33	GLN
30	BI	65	SER
30	BI	92	PRO
31	BJ	21	THR
31	BJ	44	TYR
31	BJ	45	THR
32	BK	16	ALA
32	BK	35	VAL

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Mol	Chain	Res	Type
32	BK	49	ARG
32	BK	71	ARG
32	BK	72	PRO
32	BK	73	ASP
32	BK	93	GLN
32	BK	108	ARG
33	BL	15	ALA
33	BL	66	PHE
33	BL	88	GLY
34	BM	2	LEU
34	BM	14	LYS
34	BM	35	ALA
34	BM	36	VAL
34	BM	55	ARG
34	BM	56	ALA
34	BM	69	PRO
34	BM	77	PRO
35	BN	14	SER
35	BN	117	ASP
36	BO	3	LYS
36	BO	68	LYS
36	BO	112	GLU
37	BP	25	VAL
37	BP	33	GLU
37	BP	50	ARG
37	BP	105	LYS
38	BQ	91	ARG
39	BR	49	ILE
39	BR	55	ASP
39	BR	64	VAL
40	BS	3	THR
40	BS	14	ALA
40	BS	19	LEU
41	BT	27	SER
41	BT	29	THR
41	BT	69	ARG
41	BT	86	THR
41	BT	88	LYS
42	BU	6	ARG
42	BU	51	LEU
42	BU	88	ASP
42	BU	98	ASN

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Mol	Chain	Res	Type
43	BV	69	GLU
44	BW	9	THR
44	BW	18	LYS
44	BW	23	LYS
44	BW	30	VAL
44	BW	33	GLY
44	BW	40	ARG
44	BW	47	GLY
44	BW	50	VAL
44	BW	51	GLY
45	BX	34	SER
45	BX	53	LYS
46	BY	22	LEU
46	BY	23	ARG
46	BY	24	GLU
47	BZ	3	THR
48	B0	35	GLU
48	B0	51	ARG
49	B1	51	ALA
51	B3	31	ILE
52	B4	4	ARG
2	CB	81	ASP
2	CB	84	LEU
2	CB	102	ASN
2	CB	129	THR
2	CB	150	ILE
3	CC	59	PRO
3	CC	63	ILE
3	CC	130	ARG
3	CC	145	ALA
3	CC	164	THR
4	CD	24	VAL
4	CD	26	ALA
4	CD	29	THR
4	CD	35	GLN
4	CD	80	ARG
4	CD	82	LYS
4	CD	182	LYS
4	CD	187	ARG
4	CD	191	SER
4	CD	192	ALA
5	CE	31	SER

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Mol	Chain	Res	Type
5	CE	69	ASN
5	CE	100	GLU
6	CF	68	GLN
6	CF	82	ASP
6	CF	85	ILE
6	CF	98	GLU
54	CG	29	LEU
54	CG	30	MET
54	CG	31	VAL
54	CG	52	ARG
9	CI	71	ILE
10	CJ	57	VAL
11	CK	14	GLN
11	CK	70	ALA
11	CK	126	ARG
11	CK	127	ARG
12	CL	34	THR
55	CM	4	ALA
14	CN	53	ASP
14	CN	95	LEU
56	CP	63	GLN
20	CT	3	ILE
20	CT	43	LYS
21	CU	4	LYS
21	CU	15	LEU
21	CU	23	GLU
21	CU	32	ARG
21	CU	34	ARG
21	CU	35	GLU
21	CU	36	PHE
21	CU	38	GLU
24	DC	9	SER
24	DC	28	PRO
24	DC	69	ASN
24	DC	121	ALA
24	DC	140	VAL
24	DC	141	HIS
24	DC	186	ASP
24	DC	269	ARG
25	DD	11	MET
25	DD	14	ILE
25	DD	31	ALA

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Mol	Chain	Res	Type
25	DD	74	GLU
25	DD	102	ALA
25	DD	150	GLN
25	DD	164	GLN
25	DD	170	VAL
25	DD	194	PRO
26	DE	41	GLN
26	DE	62	GLN
26	DE	79	ARG
26	DE	99	LYS
26	DE	116	ASP
58	DF	10	GLU
58	DF	12	VAL
58	DF	32	LYS
58	DF	36	ASN
58	DF	41	GLU
58	DF	42	ALA
58	DF	112	ASP
58	DF	114	ARG
58	DF	120	SER
58	DF	122	ASP
58	DF	137	PHE
28	DG	49	LEU
28	DG	95	ALA
28	DG	149	ALA
28	DG	164	ALA
28	DG	165	ASP
29	DH	3	VAL
29	DH	9	VAL
29	DH	10	ALA
29	DH	61	VAL
29	DH	76	GLU
29	DH	98	ASP
29	DH	102	ALA
30	DI	22	PRO
30	DI	23	VAL
30	DI	29	GLN
30	DI	69	VAL
31	DJ	45	THR
31	DJ	81	ILE
31	DJ	95	ARG
32	DK	16	ALA

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Mol	Chain	Res	Type
32	DK	18	ARG
32	DK	49	ARG
32	DK	71	ARG
32	DK	93	GLN
32	DK	110	GLU
32	DK	120	PRO
33	DL	4	ASN
33	DL	41	ARG
33	DL	82	LEU
33	DL	85	VAL
33	DL	89	VAL
33	DL	101	ILE
33	DL	111	ILE
34	DM	2	LEU
34	DM	14	LYS
34	DM	72	PRO
34	DM	77	PRO
34	DM	135	VAL
35	DN	63	ARG
35	DN	104	ALA
36	DO	90	VAL
37	DP	25	VAL
37	DP	50	ARG
37	DP	83	ILE
37	DP	85	VAL
37	DP	112	ARG
40	DS	28	LYS
40	DS	33	LEU
40	DS	72	THR
41	DT	14	PRO
41	DT	15	HIS
41	DT	20	ALA
41	DT	29	THR
41	DT	56	GLU
41	DT	88	LYS
42	DU	65	GLN
42	DU	82	VAL
42	DU	92	VAL
42	DU	95	PHE
42	DU	96	LYS
42	DU	97	SER
43	DV	56	PHE

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Mol	Chain	Res	Type
43	DV	58	SER
44	DW	9	THR
44	DW	34	SER
44	DW	35	ILE
44	DW	71	LYS
48	D0	54	ILE
51	D3	3	ILE
51	D3	29	ARG
51	D3	51	LYS
52	D4	3	VAL
52	D4	20	ASP
2	AB	21	TYR
2	AB	37	VAL
2	AB	63	LYS
2	AB	96	LEU
2	AB	125	PHE
2	AB	176	ASN
2	AB	200	PRO
3	AC	16	PRO
3	AC	126	ARG
4	AD	23	GLY
4	AD	28	ASP
4	AD	33	ILE
4	AD	35	GLN
4	AD	124	VAL
4	AD	148	ALA
4	AD	150	LYS
4	AD	174	ALA
5	AE	11	GLN
6	AF	86	ARG
6	AF	91	ARG
7	AG	95	ARG
8	AH	48	PHE
8	AH	88	LYS
9	AI	128	LYS
10	AJ	74	VAL
10	AJ	101	SER
11	AK	13	LYS
12	AL	24	GLU
13	AM	4	ALA
13	AM	84	CYS
14	AN	43	ALA

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Mol	Chain	Res	Type
16	AP	10	GLY
16	AP	49	GLY
17	AQ	50	ASN
17	AQ	70	LYS
19	AS	48	ILE
20	AT	19	HIS
24	BC	77	VAL
24	BC	140	VAL
24	BC	196	ASN
25	BD	72	GLY
25	BD	118	PHE
25	BD	144	GLY
25	BD	175	LEU
25	BD	182	ALA
26	BE	70	SER
26	BE	80	SER
26	BE	153	LEU
27	BF	8	LYS
27	BF	11	VAL
27	BF	61	GLY
27	BF	175	PRO
28	BG	28	LYS
28	BG	30	GLY
28	BG	44	HIS
28	BG	60	GLY
28	BG	91	VAL
28	BG	164	ALA
29	BH	15	LEU
29	BH	28	ASN
29	BH	54	LEU
29	BH	81	ALA
29	BH	83	LYS
29	BH	101	ASP
29	BH	107	GLY
29	BH	121	VAL
29	BH	131	SER
30	BI	30	GLN
30	BI	105	LEU
31	BJ	41	LYS
31	BJ	74	TYR
31	BJ	81	ILE
32	BK	13	ASN

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Mol	Chain	Res	Type
32	BK	46	ALA
32	BK	92	GLU
33	BL	29	LYS
33	BL	81	ASP
33	BL	111	ILE
33	BL	114	GLY
34	BM	60	GLN
35	BN	80	PHE
35	BN	101	GLY
35	BN	118	ARG
36	BO	22	GLY
36	BO	113	ALA
37	BP	2	ASN
37	BP	4	ILE
37	BP	5	LYS
37	BP	65	ASN
37	BP	93	LYS
37	BP	103	THR
37	BP	104	GLY
38	BQ	86	SER
38	BQ	87	VAL
38	BQ	90	ASP
40	BS	64	ALA
40	BS	96	ILE
41	BT	38	ALA
41	BT	68	LYS
41	BT	70	HIS
42	BU	8	ASP
42	BU	18	LYS
42	BU	38	ILE
42	BU	63	ALA
42	BU	87	GLU
42	BU	92	VAL
44	BW	14	ASP
44	BW	15	SER
44	BW	25	PHE
44	BW	26	GLY
44	BW	27	GLY
45	BX	2	ARG
48	B0	54	ILE
49	B1	4	ILE
49	B1	28	THR

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Mol	Chain	Res	Type
50	B2	44	VAL
51	B3	22	LYS
52	B4	16	ILE
2	CB	148	GLY
3	CC	24	ASN
3	CC	140	ALA
3	CC	188	ALA
4	CD	25	ARG
4	CD	39	GLN
5	CE	38	VAL
5	CE	68	ARG
5	CE	75	LEU
5	CE	111	ARG
5	CE	144	GLU
6	CF	44	ARG
6	CF	99	ALA
54	CG	62	GLU
54	CG	113	LYS
8	CH	30	LYS
8	CH	88	LYS
9	CI	44	ARG
9	CI	54	VAL
9	CI	55	ASP
9	CI	58	GLU
9	CI	127	SER
10	CJ	34	ALA
10	CJ	44	THR
10	CJ	46	LYS
10	CJ	93	ALA
11	CK	88	PRO
11	CK	90	PRO
11	CK	91	GLY
12	CL	7	VAL
12	CL	43	LYS
55	CM	11	HIS
55	CM	14	ALA
55	CM	45	SER
55	CM	49	GLU
55	CM	65	GLU
55	CM	76	ILE
14	CN	21	ALA
56	CP	47	GLU

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Mol	Chain	Res	Type
17	CQ	12	VAL
17	CQ	69	THR
17	CQ	81	ALA
19	CS	46	LEU
20	CT	65	LEU
21	CU	7	GLU
21	CU	8	ASN
21	CU	9	GLU
21	CU	26	GLY
21	CU	31	VAL
24	DC	3	VAL
24	DC	13	ARG
24	DC	34	GLU
24	DC	36	ASN
24	DC	37	SER
24	DC	45	ASN
24	DC	94	LEU
24	DC	195	GLY
24	DC	217	PRO
24	DC	227	VAL
24	DC	232	GLY
25	DD	48	ILE
25	DD	93	GLY
25	DD	99	GLU
25	DD	118	PHE
25	DD	119	ALA
25	DD	143	PRO
25	DD	162	ALA
25	DD	175	LEU
25	DD	197	THR
26	DE	55	SER
26	DE	69	ARG
26	DE	80	SER
26	DE	96	VAL
26	DE	127	GLU
26	DE	153	LEU
26	DE	165	HIS
58	DF	43	ILE
58	DF	67	THR
58	DF	76	PHE
58	DF	138	PRO
58	DF	145	VAL

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Mol	Chain	Res	Type
58	DF	148	VAL
28	DG	59	ASP
28	DG	85	LYS
28	DG	86	LEU
28	DG	93	TYR
28	DG	125	PRO
28	DG	126	THR
28	DG	150	TYR
29	DH	66	ASN
29	DH	72	ILE
29	DH	97	ARG
29	DH	99	ILE
30	DI	30	GLN
30	DI	58	ILE
30	DI	62	ALA
30	DI	140	GLU
31	DJ	6	ALA
31	DJ	120	ARG
32	DK	17	ARG
32	DK	35	VAL
32	DK	46	ALA
32	DK	48	PRO
32	DK	72	PRO
34	DM	73	ILE
35	DN	2	ARG
35	DN	10	LEU
35	DN	13	ASN
35	DN	30	ARG
35	DN	82	GLU
35	DN	105	GLY
36	DO	27	VAL
36	DO	72	ALA
37	DP	51	ASN
37	DP	93	LYS
37	DP	108	ARG
37	DP	109	ILE
38	DQ	86	SER
38	DQ	88	GLU
38	DQ	91	ARG
39	DR	3	ALA
39	DR	8	GLY
39	DR	29	THR

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Mol	Chain	Res	Type
39	DR	65	ALA
39	DR	98	ILE
40	DS	40	ASN
40	DS	71	VAL
41	DT	39	THR
41	DT	68	LYS
42	DU	4	ILE
42	DU	8	ASP
42	DU	54	PRO
42	DU	64	ILE
42	DU	87	GLU
42	DU	88	ASP
42	DU	89	GLY
43	DV	33	GLY
43	DV	55	GLU
44	DW	18	LYS
44	DW	33	GLY
44	DW	36	ILE
44	DW	39	GLN
44	DW	46	ALA
44	DW	53	GLY
44	DW	83	ALA
45	DX	2	ARG
45	DX	34	SER
46	DY	9	LYS
46	DY	22	LEU
46	DY	37	LEU
47	DZ	4	ILE
47	DZ	13	ILE
48	D0	21	LEU
48	D0	53	VAL
48	D0	55	ALA
49	D1	36	LYS
50	D2	24	THR
50	D2	40	ALA
51	D3	6	VAL
51	D3	22	LYS
52	D4	8	LYS
2	AB	17	HIS
2	AB	22	TRP
2	AB	41	ASN
2	AB	58	LYS

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Mol	Chain	Res	Type
2	AB	148	GLY
2	AB	189	ASN
2	AB	210	THR
2	AB	219	THR
3	AC	11	LEU
3	AC	17	TRP
3	AC	35	ASP
3	AC	65	VAL
3	AC	100	ILE
3	AC	173	PRO
4	AD	152	SER
4	AD	159	GLU
5	AE	23	THR
5	AE	25	LYS
5	AE	98	ALA
5	AE	109	ALA
5	AE	149	PRO
5	AE	156	ARG
6	AF	54	LEU
6	AF	98	GLU
7	AG	6	ILE
9	AI	119	LYS
12	AL	33	CYS
13	AM	3	ILE
13	AM	113	LYS
14	AN	80	ARG
14	AN	91	GLU
17	AQ	11	VAL
17	AQ	49	ASN
17	AQ	67	SER
18	AR	54	LEU
19	AS	27	LYS
19	AS	79	TYR
21	AU	8	ASN
21	AU	37	TYR
24	BC	64	VAL
24	BC	94	LEU
24	BC	113	ASP
24	BC	149	LYS
24	BC	150	GLY
24	BC	167	ASP
25	BD	93	GLY

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Mol	Chain	Res	Type
25	BD	107	VAL
25	BD	169	ARG
25	BD	170	VAL
25	BD	184	ARG
26	BE	11	ALA
26	BE	69	ARG
26	BE	86	ALA
27	BF	20	ASN
27	BF	54	ALA
27	BF	174	PHE
28	BG	2	ARG
28	BG	9	VAL
28	BG	45	ALA
28	BG	61	TRP
29	BH	34	GLY
29	BH	40	THR
29	BH	106	ALA
30	BI	59	THR
31	BJ	13	ARG
32	BK	54	LYS
32	BK	118	LEU
32	BK	119	ALA
33	BL	38	GLN
34	BM	15	GLY
34	BM	54	THR
35	BN	2	ARG
35	BN	94	TYR
37	BP	51	ASN
38	BQ	4	LYS
38	BQ	115	ALA
44	BW	34	SER
44	BW	39	GLN
44	BW	45	HIS
44	BW	76	ARG
45	BX	17	ARG
46	BY	37	LEU
49	B1	14	ALA
50	B2	42	LEU
51	B3	27	ASN
51	B3	33	THR
52	B4	8	LYS
52	B4	37	GLN

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Mol	Chain	Res	Type
2	CB	85	SER
2	CB	128	LEU
2	CB	203	ASP
2	CB	205	ALA
3	CC	87	ARG
3	CC	173	PRO
3	CC	178	ARG
3	CC	180	ASP
3	CC	186	SER
3	CC	205	GLU
4	CD	33	ILE
4	CD	72	ARG
6	CF	92	THR
6	CF	94	HIS
54	CG	36	SER
54	CG	133	ALA
8	CH	34	ALA
8	CH	43	GLY
9	CI	11	ARG
10	CJ	82	LYS
10	CJ	83	THR
10	CJ	87	LEU
12	CL	8	ARG
12	CL	16	ALA
55	CM	46	GLU
55	CM	77	LYS
15	CO	13	GLU
15	CO	87	ARG
56	CP	31	ARG
56	CP	46	LYS
56	CP	49	GLY
56	CP	53	ASP
17	CQ	31	PRO
17	CQ	52	CYS
17	CQ	68	LYS
17	CQ	78	VAL
19	CS	4	LEU
20	CT	72	ALA
21	CU	11	PHE
24	DC	59	GLN
24	DC	98	GLY
24	DC	239	PHE

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Mol	Chain	Res	Type
25	DD	77	ARG
25	DD	107	VAL
25	DD	112	THR
25	DD	145	SER
25	DD	169	ARG
25	DD	176	ASP
26	DE	13	THR
26	DE	24	ASN
26	DE	63	LYS
26	DE	166	LYS
26	DE	188	MET
58	DF	8	LYS
58	DF	37	MET
58	DF	116	LEU
58	DF	133	GLU
28	DG	11	PRO
28	DG	40	VAL
28	DG	45	ALA
28	DG	80	GLU
28	DG	83	THR
28	DG	91	VAL
28	DG	136	ASP
29	DH	104	THR
29	DH	144	VAL
30	DI	19	PRO
30	DI	35	MET
30	DI	51	GLY
30	DI	52	LEU
31	DJ	44	TYR
31	DJ	87	ALA
31	DJ	113	PRO
32	DK	14	SER
33	DL	29	LYS
33	DL	48	ARG
33	DL	66	PHE
33	DL	88	GLY
33	DL	99	ASN
33	DL	115	GLU
34	DM	69	PRO
34	DM	95	LEU
35	DN	8	ARG
35	DN	71	ARG

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Mol	Chain	Res	Type
37	DP	33	GLU
37	DP	42	PHE
37	DP	94	ALA
38	DQ	29	ARG
38	DQ	58	GLN
39	DR	15	SER
40	DS	61	ASN
41	DT	18	GLU
41	DT	19	LYS
41	DT	38	ALA
42	DU	40	LEU
43	DV	15	GLY
44	DW	26	GLY
45	DX	69	GLU
48	D0	32	THR
49	D1	38	PHE
52	D4	4	ARG
3	AC	88	LYS
3	AC	191	THR
3	AC	192	TYR
4	AD	132	ALA
4	AD	134	TYR
4	AD	167	PRO
4	AD	181	PHE
4	AD	197	HIS
5	AE	102	THR
5	AE	112	ALA
6	AF	88	MET
6	AF	94	HIS
7	AG	130	LYS
9	AI	37	TYR
9	AI	120	ALA
11	AK	97	ARG
11	AK	124	LYS
13	AM	36	ALA
14	AN	41	TRP
15	AO	24	THR
15	AO	45	HIS
16	AP	36	VAL
17	AQ	5	ARG
17	AQ	10	ARG
19	AS	5	LYS

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Mol	Chain	Res	Type
19	AS	42	ASN
21	AU	36	PHE
24	BC	59	GLN
24	BC	237	ARG
25	BD	71	ALA
25	BD	95	SER
25	BD	145	SER
25	BD	173	GLN
26	BE	5	LEU
26	BE	6	LYS
26	BE	43	THR
26	BE	61	ARG
26	BE	116	ASP
27	BF	83	PRO
27	BF	111	ARG
27	BF	113	PHE
27	BF	133	GLU
27	BF	147	ARG
27	BF	149	ARG
28	BG	113	ASP
29	BH	12	LEU
29	BH	16	GLY
29	BH	31	VAL
30	BI	6	ALA
30	BI	83	ALA
30	BI	89	SER
31	BJ	2	LYS
31	BJ	111	LYS
32	BK	3	GLN
32	BK	17	ARG
32	BK	50	GLY
35	BN	15	SER
35	BN	91	ALA
36	BO	66	GLY
36	BO	67	ASN
37	BP	15	ASP
37	BP	20	ARG
37	BP	52	ARG
38	BQ	5	ARG
39	BR	53	PHE
39	BR	98	ILE
41	BT	40	LYS

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Mol	Chain	Res	Type
41	BT	41	ALA
41	BT	84	TYR
42	BU	83	GLY
42	BU	85	ARG
42	BU	96	LYS
44	BW	12	GLY
44	BW	37	VAL
44	BW	52	CYS
44	BW	78	PHE
46	BY	46	VAL
46	BY	57	LEU
47	BZ	34	THR
2	CB	18	GLN
2	CB	200	PRO
3	CC	2	GLN
4	CD	47	LEU
5	CE	29	ILE
5	CE	104	ILE
54	CG	10	LYS
8	CH	2	MET
8	CH	29	SER
8	CH	58	LEU
9	CI	52	GLU
9	CI	103	VAL
9	CI	119	LYS
12	CL	47	ALA
12	CL	85	ARG
55	CM	42	VAL
55	CM	93	GLY
15	CO	45	HIS
56	CP	69	ASP
56	CP	78	VAL
19	CS	3	SER
19	CS	7	GLY
19	CS	79	TYR
20	CT	61	ALA
20	CT	68	LYS
20	CT	82	ILE
21	CU	10	PRO
21	CU	30	GLU
21	CU	43	GLU
24	DC	196	ASN

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Mol	Chain	Res	Type
24	DC	204	LEU
24	DC	237	ARG
25	DD	95	SER
25	DD	161	MET
26	DE	22	ASP
26	DE	45	ALA
26	DE	81	GLY
26	DE	123	LYS
26	DE	126	VAL
26	DE	148	ILE
58	DF	70	ARG
58	DF	86	CYS
58	DF	104	THR
58	DF	113	PHE
28	DG	9	VAL
28	DG	46	ASP
28	DG	92	GLY
28	DG	117	PRO
28	DG	169	ARG
29	DH	111	ALA
29	DH	121	VAL
30	DI	119	ALA
31	DJ	13	ARG
31	DJ	43	GLU
31	DJ	112	GLY
32	DK	6	THR
32	DK	88	ASN
32	DK	89	ASN
32	DK	103	VAL
33	DL	15	ALA
33	DL	19	LEU
33	DL	93	ASN
33	DL	100	ILE
34	DM	111	GLU
34	DM	134	THR
35	DN	72	ASP
36	DO	3	LYS
36	DO	8	ILE
37	DP	20	ARG
38	DQ	5	ARG
38	DQ	45	ALA
38	DQ	87	VAL

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Mol	Chain	Res	Type
39	DR	40	MET
39	DR	53	PHE
39	DR	57	GLY
39	DR	89	HIS
40	DS	3	THR
40	DS	96	ILE
41	DT	11	LEU
42	DU	101	THR
43	DV	79	ARG
44	DW	16	GLU
44	DW	23	LYS
44	DW	41	GLY
44	DW	76	ARG
45	DX	5	GLN
45	DX	25	LYS
46	DY	2	LYS
46	DY	46	VAL
47	DZ	30	ARG
48	D0	26	SER
49	D1	4	ILE
49	D1	50	GLU
50	D2	39	ARG
50	D2	43	THR
52	D4	16	ILE
2	AB	71	THR
2	AB	120	SER
2	AB	136	ARG
2	AB	142	LYS
2	AB	150	ILE
2	AB	211	LEU
3	AC	107	LYS
4	AD	22	SER
4	AD	100	VAL
4	AD	165	GLU
4	AD	166	LYS
5	AE	50	GLY
5	AE	88	HIS
5	AE	110	MET
5	AE	133	ILE
6	AF	7	VAL
6	AF	39	LEU
6	AF	56	LYS

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Mol	Chain	Res	Type
6	AF	63	ASN
6	AF	68	GLN
7	AG	30	MET
8	AH	33	VAL
10	AJ	30	LYS
10	AJ	35	GLN
10	AJ	36	VAL
10	AJ	93	ALA
11	AK	15	VAL
11	AK	88	PRO
11	AK	102	ALA
12	AL	122	LYS
13	AM	11	HIS
13	AM	104	ASN
14	AN	44	VAL
17	AQ	17	GLU
19	AS	3	SER
19	AS	22	VAL
21	AU	33	ARG
24	BC	28	PRO
24	BC	37	SER
24	BC	109	LEU
24	BC	110	LYS
25	BD	109	VAL
25	BD	150	GLN
26	BE	83	VAL
26	BE	96	VAL
27	BF	28	PRO
28	BG	16	VAL
28	BG	38	ASP
28	BG	97	VAL
29	BH	89	LYS
29	BH	125	THR
30	BI	3	LYS
30	BI	20	SER
31	BJ	14	ASP
31	BJ	125	TYR
32	BK	29	HIS
32	BK	48	PRO
34	BM	73	ILE
34	BM	134	THR
35	BN	30	ARG

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Mol	Chain	Res	Type
35	BN	119	SER
36	BO	100	HIS
39	BR	51	VAL
39	BR	65	ALA
41	BT	55	VAL
41	BT	83	ALA
42	BU	53	GLN
42	BU	101	THR
44	BW	36	ILE
44	BW	48	ALA
44	BW	74	LYS
51	B3	30	HIS
2	CB	73	ARG
2	CB	179	GLY
3	CC	65	VAL
4	CD	4	LEU
4	CD	27	ILE
4	CD	107	GLY
5	CE	81	GLN
5	CE	112	ALA
54	CG	99	ALA
8	CH	41	GLU
8	CH	66	GLN
8	CH	98	LEU
10	CJ	36	VAL
10	CJ	62	ARG
10	CJ	74	VAL
10	CJ	75	ASP
14	CN	69	PRO
19	CS	54	ARG
20	CT	67	HIS
21	CU	22	CYS
24	DC	64	VAL
24	DC	106	PRO
24	DC	190	THR
24	DC	226	PRO
25	DD	44	GLY
25	DD	109	VAL
25	DD	136	ASN
26	DE	60	TRP
26	DE	187	VAL
58	DF	31	GLU

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Mol	Chain	Res	Type
58	DF	82	TYR
58	DF	94	ARG
58	DF	156	THR
28	DG	152	ARG
29	DH	103	VAL
30	DI	31	GLY
30	DI	83	ALA
31	DJ	25	LEU
31	DJ	83	GLY
32	DK	104	THR
32	DK	119	ALA
34	DM	70	ASP
35	DN	85	PRO
36	DO	42	PRO
36	DO	43	ASN
37	DP	63	ILE
37	DP	65	ASN
37	DP	113	LEU
38	DQ	23	TYR
41	DT	50	LEU
42	DU	17	ASP
42	DU	41	VAL
43	DV	84	PRO
44	DW	55	ASP
44	DW	78	PHE
45	DX	27	ARG
45	DX	41	SER
47	DZ	27	GLY
2	AB	163	ILE
2	AB	169	HIS
8	AH	82	LEU
9	AI	56	MET
10	AJ	41	PRO
10	AJ	62	ARG
12	AL	86	VAL
16	AP	15	PRO
16	AP	42	ILE
24	BC	141	HIS
24	BC	142	ASN
24	BC	248	GLY
25	BD	119	ALA
29	BH	68	ARG

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Mol	Chain	Res	Type
29	BH	103	VAL
30	BI	7	TYR
32	BK	69	VAL
33	BL	57	LEU
35	BN	32	GLU
36	BO	77	ALA
38	BQ	111	LYS
41	BT	24	MET
41	BT	49	LYS
44	BW	41	GLY
48	B0	37	HIS
2	CB	163	ILE
3	CC	128	MET
4	CD	166	LYS
6	CF	63	ASN
12	CL	117	GLY
14	CN	51	PRO
56	CP	43	ALA
21	CU	37	TYR
25	DD	75	ALA
58	DF	125	GLY
58	DF	175	PRO
28	DG	170	THR
29	DH	143	ILE
30	DI	87	SER
33	DL	30	THR
37	DP	32	VAL
37	DP	34	GLY
37	DP	104	GLY
38	DQ	6	GLY
38	DQ	64	ILE
42	DU	12	VAL
42	DU	35	VAL
42	DU	52	ASN
44	DW	49	ASN
44	DW	57	THR
45	DX	63	ILE
4	AD	172	VAL
8	AH	77	VAL
17	AQ	75	VAL
21	AU	52	VAL
30	BI	97	VAL

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Mol	Chain	Res	Type
37	BP	34	GLY
37	BP	91	VAL
3	CC	100	ILE
4	CD	83	GLY
5	CE	113	VAL
24	DC	2	VAL
24	DC	233	GLY
25	DD	122	VAL
26	DE	129	PRO
58	DF	88	VAL
3	AC	14	VAL
5	AE	113	VAL
15	AO	74	VAL
29	BH	80	ILE
29	BH	138	VAL
33	BL	65	GLY
40	BS	29	VAL
41	BT	16	VAL
3	CC	12	GLY
55	CM	50	GLY
24	DC	246	PRO
26	DE	82	GLY
28	DG	155	PRO
30	DI	138	VAL
33	DL	65	GLY
41	DT	16	VAL
2	AB	28	PRO
10	AJ	33	GLY
10	AJ	42	LEU
12	AL	117	GLY
30	BI	23	VAL
54	CG	88	VAL
10	CJ	33	GLY
56	CP	42	ILE
19	CS	29	PRO
26	DE	174	GLY
28	DG	53	PRO
28	DG	119	GLY
29	DH	134	VAL
31	DJ	110	PRO
32	DK	2	ILE
39	DR	27	ILE

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Mol	Chain	Res	Type
39	DR	52	PRO
40	DS	29	VAL
41	DT	53	VAL
42	DU	47	PRO
44	DW	22	VAL
3	AC	89	VAL
12	AL	97	VAL
13	AM	42	VAL
16	AP	78	VAL
19	AS	61	VAL
21	AU	26	GLY
25	BD	151	THR
30	BI	31	GLY
42	BU	54	PRO
44	BW	70	VAL
3	CC	77	GLY
5	CE	132	PRO
5	CE	133	ILE
54	CG	68	VAL
8	CH	77	VAL
17	CQ	4	ILE
31	DJ	56	VAL
33	DL	114	GLY
34	DM	36	VAL
47	DZ	32	GLY
11	AK	103	GLY
13	AM	9	PRO
13	AM	23	GLY
40	BS	63	GLY
9	CI	50	PRO
28	DG	16	VAL
28	DG	97	VAL
38	DQ	7	VAL

5.3.2 Protein sidechains (i)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
2	AB	180/180 (100%)	141 (78%)	39 (22%)	1 4
2	CB	180/180 (100%)	152 (84%)	28 (16%)	2 11
3	AC	170/170 (100%)	142 (84%)	28 (16%)	2 10
3	CC	170/170 (100%)	151 (89%)	19 (11%)	6 23
4	AD	172/172 (100%)	145 (84%)	27 (16%)	2 11
4	CD	172/172 (100%)	135 (78%)	37 (22%)	1 4
5	AE	113/113 (100%)	86 (76%)	27 (24%)	0 2
5	CE	113/113 (100%)	90 (80%)	23 (20%)	1 4
6	AF	87/87 (100%)	73 (84%)	14 (16%)	2 10
6	CF	87/87 (100%)	74 (85%)	13 (15%)	3 12
7	AG	124/124 (100%)	106 (86%)	18 (14%)	3 14
8	AH	104/104 (100%)	89 (86%)	15 (14%)	3 14
8	CH	104/104 (100%)	91 (88%)	13 (12%)	4 19
9	AI	105/105 (100%)	83 (79%)	22 (21%)	1 4
9	CI	105/105 (100%)	91 (87%)	14 (13%)	4 16
10	AJ	86/86 (100%)	74 (86%)	12 (14%)	3 15
10	CJ	86/86 (100%)	75 (87%)	11 (13%)	4 18
11	AK	90/90 (100%)	75 (83%)	15 (17%)	2 9
11	CK	90/90 (100%)	78 (87%)	12 (13%)	4 16
12	AL	103/103 (100%)	85 (82%)	18 (18%)	2 8
12	CL	103/103 (100%)	86 (84%)	17 (16%)	2 10
13	AM	92/92 (100%)	87 (95%)	5 (5%)	22 53
14	AN	79/83 (95%)	75 (95%)	4 (5%)	24 54
14	CN	79/83 (95%)	69 (87%)	10 (13%)	4 18
15	AO	76/76 (100%)	70 (92%)	6 (8%)	12 37
15	CO	76/76 (100%)	70 (92%)	6 (8%)	12 37
16	AP	65/65 (100%)	58 (89%)	7 (11%)	6 24
17	AQ	74/74 (100%)	57 (77%)	17 (23%)	1 3
17	CQ	74/74 (100%)	60 (81%)	14 (19%)	1 6
18	AR	48/48 (100%)	45 (94%)	3 (6%)	18 47
18	CR	48/48 (100%)	43 (90%)	5 (10%)	7 25
19	AS	70/70 (100%)	62 (89%)	8 (11%)	5 22

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
19	CS	70/70 (100%)	63 (90%)	7 (10%)	7	27
20	AT	65/65 (100%)	49 (75%)	16 (25%)	0	2
20	CT	65/65 (100%)	51 (78%)	14 (22%)	1	4
21	AU	44/44 (100%)	34 (77%)	10 (23%)	1	3
21	CU	44/44 (100%)	36 (82%)	8 (18%)	1	7
24	BC	216/216 (100%)	167 (77%)	49 (23%)	1	3
24	DC	216/216 (100%)	189 (88%)	27 (12%)	4	19
25	BD	164/164 (100%)	134 (82%)	30 (18%)	1	7
25	DD	164/164 (100%)	144 (88%)	20 (12%)	5	20
26	BE	165/165 (100%)	122 (74%)	43 (26%)	0	1
26	DE	165/165 (100%)	147 (89%)	18 (11%)	6	24
27	BF	148/148 (100%)	130 (88%)	18 (12%)	5	20
28	BG	137/137 (100%)	105 (77%)	32 (23%)	1	3
28	DG	137/137 (100%)	119 (87%)	18 (13%)	4	17
29	BH	114/114 (100%)	96 (84%)	18 (16%)	2	11
29	DH	114/114 (100%)	96 (84%)	18 (16%)	2	11
30	BI	109/109 (100%)	91 (84%)	18 (16%)	2	10
30	DI	109/109 (100%)	102 (94%)	7 (6%)	17	47
31	BJ	116/116 (100%)	88 (76%)	28 (24%)	0	2
31	DJ	116/116 (100%)	100 (86%)	16 (14%)	3	16
32	BK	103/103 (100%)	81 (79%)	22 (21%)	1	4
32	DK	103/103 (100%)	83 (81%)	20 (19%)	1	5
33	BL	102/102 (100%)	76 (74%)	26 (26%)	0	1
33	DL	102/102 (100%)	85 (83%)	17 (17%)	2	9
34	BM	109/109 (100%)	87 (80%)	22 (20%)	1	5
34	DM	109/109 (100%)	96 (88%)	13 (12%)	5	20
35	BN	100/100 (100%)	82 (82%)	18 (18%)	1	7
35	DN	100/100 (100%)	85 (85%)	15 (15%)	3	12
36	BO	86/86 (100%)	69 (80%)	17 (20%)	1	5
36	DO	86/86 (100%)	77 (90%)	9 (10%)	7	25
37	BP	99/99 (100%)	73 (74%)	26 (26%)	0	1

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
37	DP	99/99 (100%)	89 (90%)	10 (10%)	7	27
38	BQ	89/89 (100%)	71 (80%)	18 (20%)	1	5
38	DQ	89/89 (100%)	74 (83%)	15 (17%)	2	9
39	BR	84/84 (100%)	70 (83%)	14 (17%)	2	9
39	DR	84/84 (100%)	71 (84%)	13 (16%)	2	11
40	BS	93/93 (100%)	74 (80%)	19 (20%)	1	4
40	DS	93/93 (100%)	79 (85%)	14 (15%)	3	12
41	BT	80/80 (100%)	61 (76%)	19 (24%)	0	2
41	DT	80/80 (100%)	73 (91%)	7 (9%)	10	33
42	BU	83/83 (100%)	66 (80%)	17 (20%)	1	4
42	DU	83/83 (100%)	74 (89%)	9 (11%)	6	24
43	BV	78/78 (100%)	59 (76%)	19 (24%)	0	2
43	DV	78/78 (100%)	68 (87%)	10 (13%)	4	18
44	BW	59/59 (100%)	41 (70%)	18 (30%)	0	1
44	DW	59/59 (100%)	42 (71%)	17 (29%)	0	1
45	BX	67/67 (100%)	54 (81%)	13 (19%)	1	5
45	DX	67/67 (100%)	58 (87%)	9 (13%)	4	16
46	BY	55/55 (100%)	41 (74%)	14 (26%)	0	1
46	DY	55/55 (100%)	52 (94%)	3 (6%)	21	52
47	BZ	48/48 (100%)	33 (69%)	15 (31%)	0	1
47	DZ	48/48 (100%)	40 (83%)	8 (17%)	2	9
48	B0	47/47 (100%)	39 (83%)	8 (17%)	2	9
48	D0	47/47 (100%)	39 (83%)	8 (17%)	2	9
49	B1	45/45 (100%)	37 (82%)	8 (18%)	2	7
49	D1	45/45 (100%)	41 (91%)	4 (9%)	9	32
50	B2	38/38 (100%)	29 (76%)	9 (24%)	1	2
50	D2	38/38 (100%)	33 (87%)	5 (13%)	4	17
51	B3	51/51 (100%)	44 (86%)	7 (14%)	3	16
51	D3	51/51 (100%)	40 (78%)	11 (22%)	1	4
52	B4	34/34 (100%)	28 (82%)	6 (18%)	2	8
52	D4	34/34 (100%)	29 (85%)	5 (15%)	3	13

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
54	CG	123/123 (100%)	102 (83%)	21 (17%)	2 9
55	CM	91/91 (100%)	80 (88%)	11 (12%)	5 20
56	CP	65/65 (100%)	57 (88%)	8 (12%)	4 20
58	DF	149/149 (100%)	123 (83%)	26 (17%)	2 8
All	All	9331/9339 (100%)	7786 (83%)	1545 (17%)	2 9

All (1545) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AB	10	LYS
2	AB	13	VAL
2	AB	15	PHE
2	AB	19	THR
2	AB	20	ARG
2	AB	22	TRP
2	AB	30	ILE
2	AB	36	LYS
2	AB	38	HIS
2	AB	41	ASN
2	AB	42	LEU
2	AB	56	LEU
2	AB	57	ASN
2	AB	67	LEU
2	AB	73	ARG
2	AB	86	CYS
2	AB	87	ASP
2	AB	88	GLN
2	AB	90	PHE
2	AB	100	LEU
2	AB	102	ASN
2	AB	108	GLN
2	AB	112	ARG
2	AB	115	ASP
2	AB	119	GLN
2	AB	125	PHE
2	AB	128	LEU
2	AB	130	LYS
2	AB	138	ARG
2	AB	143	LEU
2	AB	156	LEU
2	AB	170	ILE

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Mol	Chain	Res	Type
2	AB	185	ILE
2	AB	193	ASP
2	AB	206	ILE
2	AB	207	ARG
2	AB	211	LEU
2	AB	219	THR
2	AB	221	ARG
3	AC	2	GLN
3	AC	13	ILE
3	AC	17	TRP
3	AC	24	ASN
3	AC	26	LYS
3	AC	27	GLU
3	AC	32	LEU
3	AC	35	ASP
3	AC	36	PHE
3	AC	50	SER
3	AC	52	SER
3	AC	54	ILE
3	AC	79	LYS
3	AC	89	VAL
3	AC	106	ARG
3	AC	118	SER
3	AC	119	ILE
3	AC	139	ASN
3	AC	143	LEU
3	AC	148	ILE
3	AC	156	LEU
3	AC	161	ILE
3	AC	164	THR
3	AC	165	GLU
3	AC	166	TRP
3	AC	177	LEU
3	AC	184	ASN
3	AC	199	VAL
4	AD	11	SER
4	AD	25	ARG
4	AD	30	LYS
4	AD	31	CYS
4	AD	43	ARG
4	AD	54	LEU
4	AD	55	ARG

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Mol	Chain	Res	Type
4	AD	57	LYS
4	AD	58	GLN
4	AD	69	ARG
4	AD	73	ASN
4	AD	88	ASN
4	AD	103	ARG
4	AD	115	GLN
4	AD	122	ILE
4	AD	127	ARG
4	AD	128	VAL
4	AD	131	ILE
4	AD	141	VAL
4	AD	147	LYS
4	AD	160	LEU
4	AD	166	LYS
4	AD	170	LEU
4	AD	178	GLU
4	AD	193	ASP
4	AD	196	GLU
4	AD	205	LYS
5	AE	9	GLU
5	AE	11	GLN
5	AE	14	LEU
5	AE	18	ASN
5	AE	25	LYS
5	AE	28	ARG
5	AE	31	SER
5	AE	37	VAL
5	AE	68	ARG
5	AE	75	LEU
5	AE	79	THR
5	AE	81	GLN
5	AE	87	VAL
5	AE	93	VAL
5	AE	94	PHE
5	AE	95	MET
5	AE	100	GLU
5	AE	113	VAL
5	AE	116	VAL
5	AE	121	ASN
5	AE	123	LEU
5	AE	135	VAL

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Mol	Chain	Res	Type
5	AE	136	VAL
5	AE	141	ASP
5	AE	147	ASN
5	AE	155	LYS
5	AE	156	ARG
6	AF	7	VAL
6	AF	14	GLN
6	AF	17	GLN
6	AF	24	ARG
6	AF	29	ILE
6	AF	38	ARG
6	AF	46	GLN
6	AF	54	LEU
6	AF	55	HIS
6	AF	68	GLN
6	AF	69	GLU
6	AF	77	THR
6	AF	86	ARG
6	AF	93	LYS
7	AG	3	ARG
7	AG	6	ILE
7	AG	8	GLN
7	AG	12	LEU
7	AG	20	GLU
7	AG	21	LEU
7	AG	22	LEU
7	AG	37	THR
7	AG	47	GLU
7	AG	62	GLU
7	AG	83	THR
7	AG	84	TYR
7	AG	85	GLN
7	AG	93	VAL
7	AG	105	GLU
7	AG	110	ARG
7	AG	117	LEU
7	AG	123	LEU
8	AH	10	LEU
8	AH	21	LYS
8	AH	29	SER
8	AH	65	PHE
8	AH	72	GLU

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Mol	Chain	Res	Type
8	AH	76	ARG
8	AH	79	ARG
8	AH	82	LEU
8	AH	86	LYS
8	AH	89	ASP
8	AH	98	LEU
8	AH	110	MET
8	AH	116	ARG
8	AH	120	LEU
8	AH	124	ILE
9	AI	4	GLN
9	AI	11	ARG
9	AI	13	SER
9	AI	35	GLU
9	AI	37	TYR
9	AI	44	ARG
9	AI	47	VAL
9	AI	48	ARG
9	AI	54	VAL
9	AI	56	MET
9	AI	62	LEU
9	AI	67	LYS
9	AI	86	LEU
9	AI	87	MET
9	AI	88	GLU
9	AI	89	TYR
9	AI	98	ARG
9	AI	105	ARG
9	AI	106	ASP
9	AI	125	GLN
9	AI	126	PHE
9	AI	128	LYS
10	AJ	5	ARG
10	AJ	22	THR
10	AJ	32	THR
10	AJ	35	GLN
10	AJ	48	ARG
10	AJ	50	THR
10	AJ	59	LYS
10	AJ	63	ASP
10	AJ	70	HIS
10	AJ	73	LEU

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Mol	Chain	Res	Type
10	AJ	89	ARG
10	AJ	96	VAL
11	AK	17	ASP
11	AK	30	ILE
11	AK	51	PHE
11	AK	55	ARG
11	AK	64	VAL
11	AK	76	TYR
11	AK	78	ILE
11	AK	82	GLU
11	AK	96	ILE
11	AK	100	ASN
11	AK	106	ILE
11	AK	124	LYS
11	AK	125	LYS
11	AK	127	ARG
11	AK	128	VAL
12	AL	3	VAL
12	AL	17	LYS
12	AL	18	SER
12	AL	20	VAL
12	AL	26	CYS
12	AL	28	GLN
12	AL	35	ARG
12	AL	43	LYS
12	AL	49	ARG
12	AL	51	VAL
12	AL	63	THR
12	AL	74	GLN
12	AL	82	ARG
12	AL	87	LYS
12	AL	88	ASP
12	AL	94	TYR
12	AL	101	LEU
12	AL	109	ARG
13	AM	6	ILE
13	AM	7	ASN
13	AM	53	ASP
13	AM	58	GLU
13	AM	106	ARG
14	AN	58	ARG
14	AN	59	GLN

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Mol	Chain	Res	Type
14	AN	96	LYS
14	AN	99	SER
15	AO	16	ARG
15	AO	34	GLN
15	AO	57	ARG
15	AO	65	LEU
15	AO	86	LEU
15	AO	87	ARG
16	AP	1	MET
16	AP	6	LEU
16	AP	19	VAL
16	AP	46	LYS
16	AP	55	ASP
16	AP	67	ILE
16	AP	77	GLU
17	AQ	3	LYS
17	AQ	16	MET
17	AQ	20	ILE
17	AQ	21	VAL
17	AQ	28	VAL
17	AQ	29	LYS
17	AQ	37	ILE
17	AQ	47	ASP
17	AQ	49	ASN
17	AQ	50	ASN
17	AQ	51	GLU
17	AQ	54	ILE
17	AQ	64	ARG
17	AQ	74	LEU
17	AQ	75	VAL
17	AQ	78	VAL
17	AQ	80	LYS
18	AR	20	ILE
18	AR	35	SER
18	AR	54	LEU
19	AS	42	ASN
19	AS	54	ARG
19	AS	55	GLN
19	AS	57	VAL
19	AS	60	PHE
19	AS	61	VAL
19	AS	64	GLU

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Mol	Chain	Res	Type
19	AS	79	TYR
20	AT	4	LYS
20	AT	5	SER
20	AT	11	ILE
20	AT	17	ARG
20	AT	23	ARG
20	AT	26	MET
20	AT	27	MET
20	AT	33	LYS
20	AT	35	TYR
20	AT	38	ILE
20	AT	42	ASP
20	AT	65	LEU
20	AT	67	HIS
20	AT	75	LYS
20	AT	77	ASN
20	AT	78	LEU
21	AU	4	LYS
21	AU	9	GLU
21	AU	12	ASP
21	AU	15	LEU
21	AU	18	PHE
21	AU	27	VAL
21	AU	33	ARG
21	AU	37	TYR
21	AU	38	GLU
21	AU	42	THR
24	BC	12	ARG
24	BC	20	ASN
24	BC	27	LYS
24	BC	35	LYS
24	BC	38	LYS
24	BC	43	ASN
24	BC	49	THR
24	BC	62	ARG
24	BC	68	ARG
24	BC	70	LYS
24	BC	71	ASP
24	BC	73	ILE
24	BC	77	VAL
24	BC	79	ARG
24	BC	82	TYR

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Mol	Chain	Res	Type
24	BC	85	ASN
24	BC	90	ILE
24	BC	93	VAL
24	BC	103	ILE
24	BC	104	LEU
24	BC	109	LEU
24	BC	110	LYS
24	BC	114	GLN
24	BC	115	ILE
24	BC	120	ASP
24	BC	123	ILE
24	BC	142	ASN
24	BC	155	ARG
24	BC	163	ILE
24	BC	164	VAL
24	BC	166	ARG
24	BC	171	VAL
24	BC	172	THR
24	BC	173	LEU
24	BC	175	LEU
24	BC	176	ARG
24	BC	193	GLU
24	BC	202	ARG
24	BC	203	VAL
24	BC	211	ARG
24	BC	212	TRP
24	BC	215	VAL
24	BC	216	ARG
24	BC	250	GLN
24	BC	251	THR
24	BC	252	LYS
24	BC	254	LYS
24	BC	268	ARG
24	BC	270	ARG
25	BD	9	VAL
25	BD	14	ILE
25	BD	16	THR
25	BD	38	LYS
25	BD	42	ASN
25	BD	43	ASP
25	BD	45	TYR
25	BD	46	ARG

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Mol	Chain	Res	Type
25	BD	60	VAL
25	BD	73	VAL
25	BD	89	GLU
25	BD	90	PHE
25	BD	91	THR
25	BD	95	SER
25	BD	97	SER
25	BD	98	VAL
25	BD	101	PHE
25	BD	114	LYS
25	BD	118	PHE
25	BD	124	ARG
25	BD	131	ASP
25	BD	150	GLN
25	BD	151	THR
25	BD	159	LYS
25	BD	169	ARG
25	BD	170	VAL
25	BD	183	GLU
25	BD	197	THR
25	BD	201	LEU
25	BD	207	VAL
26	BE	12	LEU
26	BE	14	VAL
26	BE	18	THR
26	BE	21	ARG
26	BE	24	ASN
26	BE	28	VAL
26	BE	40	ARG
26	BE	44	ARG
26	BE	48	THR
26	BE	55	SER
26	BE	61	ARG
26	BE	62	GLN
26	BE	63	LYS
26	BE	65	THR
26	BE	69	ARG
26	BE	77	ILE
26	BE	78	TRP
26	BE	80	SER
26	BE	84	THR
26	BE	90	GLN

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Mol	Chain	Res	Type
26	BE	93	SER
26	BE	107	SER
26	BE	108	ILE
26	BE	109	LEU
26	BE	113	VAL
26	BE	116	ASP
26	BE	118	LEU
26	BE	119	ILE
26	BE	123	LYS
26	BE	127	GLU
26	BE	132	LYS
26	BE	144	GLU
26	BE	146	VAL
26	BE	147	LEU
26	BE	153	LEU
26	BE	159	LEU
26	BE	163	ASN
26	BE	167	VAL
26	BE	170	ARG
26	BE	171	ASP
26	BE	176	ASP
26	BE	186	VAL
26	BE	189	THR
27	BF	3	LEU
27	BF	9	ASP
27	BF	12	VAL
27	BF	17	THR
27	BF	24	VAL
27	BF	34	THR
27	BF	36	ASN
27	BF	46	LYS
27	BF	65	LEU
27	BF	80	GLN
27	BF	90	LEU
27	BF	103	ILE
27	BF	109	ARG
27	BF	111	ARG
27	BF	114	ARG
27	BF	132	ARG
27	BF	134	GLN
27	BF	154	THR
28	BG	2	ARG

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Mol	Chain	Res	Type
28	BG	8	VAL
28	BG	9	VAL
28	BG	15	ASP
28	BG	21	GLN
28	BG	29	ASN
28	BG	34	ARG
28	BG	35	THR
28	BG	37	ASN
28	BG	40	VAL
28	BG	42	VAL
28	BG	50	THR
28	BG	55	ASP
28	BG	59	ASP
28	BG	68	ARG
28	BG	72	ASN
28	BG	80	GLU
28	BG	84	LYS
28	BG	86	LEU
28	BG	88	LEU
28	BG	91	VAL
28	BG	101	VAL
28	BG	115	GLN
28	BG	116	LEU
28	BG	120	ILE
28	BG	121	THR
28	BG	123	GLU
28	BG	132	LEU
28	BG	138	GLN
28	BG	148	ARG
28	BG	170	THR
28	BG	174	LYS
29	BH	3	VAL
29	BH	6	LEU
29	BH	12	LEU
29	BH	15	LEU
29	BH	18	GLN
29	BH	28	ASN
29	BH	31	VAL
29	BH	43	ASN
29	BH	46	PHE
29	BH	50	ARG
29	BH	54	LEU

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Mol	Chain	Res	Type
29	BH	68	ARG
29	BH	75	LEU
29	BH	83	LYS
29	BH	96	THR
29	BH	97	ARG
29	BH	104	THR
29	BH	135	HIS
30	BI	2	LYS
30	BI	10	LEU
30	BI	11	GLN
30	BI	12	VAL
30	BI	23	VAL
30	BI	30	GLN
30	BI	37	PHE
30	BI	39	LYS
30	BI	49	GLU
30	BI	61	TYR
30	BI	71	LYS
30	BI	81	LYS
30	BI	86	LYS
30	BI	95	ASP
30	BI	107	GLU
30	BI	124	MET
30	BI	126	ARG
30	BI	135	MET
31	BJ	1	MET
31	BJ	2	LYS
31	BJ	5	THR
31	BJ	24	THR
31	BJ	25	LEU
31	BJ	30	THR
31	BJ	34	ARG
31	BJ	36	LEU
31	BJ	40	HIS
31	BJ	41	LYS
31	BJ	44	TYR
31	BJ	54	ILE
31	BJ	55	ILE
31	BJ	57	LEU
31	BJ	64	VAL
31	BJ	65	THR
31	BJ	67	ASN

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Mol	Chain	Res	Type
31	BJ	69	ARG
31	BJ	86	GLN
31	BJ	101	ILE
31	BJ	103	ILE
31	BJ	105	VAL
31	BJ	111	LYS
31	BJ	114	LEU
31	BJ	129	GLU
31	BJ	135	GLN
31	BJ	139	VAL
31	BJ	140	LEU
32	BK	3	GLN
32	BK	8	LEU
32	BK	18	ARG
32	BK	19	VAL
32	BK	23	LYS
32	BK	28	SER
32	BK	30	ARG
32	BK	47	ILE
32	BK	51	LYS
32	BK	54	LYS
32	BK	58	LEU
32	BK	61	VAL
32	BK	63	VAL
32	BK	73	ASP
32	BK	80	ASP
32	BK	89	ASN
32	BK	91	SER
32	BK	99	ILE
32	BK	105	ARG
32	BK	107	LEU
32	BK	111	LYS
32	BK	114	LYS
33	BL	3	LEU
33	BL	4	ASN
33	BL	6	LEU
33	BL	19	LEU
33	BL	21	ARG
33	BL	27	LEU
33	BL	30	THR
33	BL	33	ARG
33	BL	39	LYS

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Mol	Chain	Res	Type
33	BL	41	ARG
33	BL	47	ARG
33	BL	48	ARG
33	BL	51	GLU
33	BL	55	MET
33	BL	59	ARG
33	BL	61	LEU
33	BL	66	PHE
33	BL	85	VAL
33	BL	91	ASP
33	BL	93	ASN
33	BL	94	THR
33	BL	101	ILE
33	BL	103	ILE
33	BL	112	LEU
33	BL	115	GLU
33	BL	127	VAL
34	BM	6	ARG
34	BM	8	LYS
34	BM	10	ARG
34	BM	12	MET
34	BM	24	THR
34	BM	25	ASP
34	BM	33	LEU
34	BM	69	PRO
34	BM	70	ASP
34	BM	75	GLU
34	BM	76	LYS
34	BM	81	ARG
34	BM	90	GLU
34	BM	95	LEU
34	BM	96	ILE
34	BM	97	GLN
34	BM	100	LYS
34	BM	102	LEU
34	BM	110	GLU
34	BM	126	ILE
34	BM	133	LYS
34	BM	134	THR
35	BN	2	ARG
35	BN	3	HIS
35	BN	10	LEU

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Mol	Chain	Res	Type
35	BN	27	SER
35	BN	33	ILE
35	BN	34	ILE
35	BN	35	LYS
35	BN	38	LEU
35	BN	51	LEU
35	BN	69	ARG
35	BN	71	ARG
35	BN	73	ASN
35	BN	75	ILE
35	BN	83	LEU
35	BN	86	ARG
35	BN	95	THR
35	BN	107	ASN
35	BN	118	ARG
36	BO	9	ARG
36	BO	16	ARG
36	BO	17	LYS
36	BO	36	TYR
36	BO	56	LYS
36	BO	65	THR
36	BO	80	GLU
36	BO	83	LEU
36	BO	84	GLU
36	BO	89	ASP
36	BO	94	ARG
36	BO	100	HIS
36	BO	103	VAL
36	BO	106	LEU
36	BO	111	ARG
36	BO	112	GLU
36	BO	116	GLN
37	BP	3	ILE
37	BP	5	LYS
37	BP	6	GLN
37	BP	7	LEU
37	BP	14	GLN
37	BP	20	ARG
37	BP	24	THR
37	BP	28	LYS
37	BP	33	GLU
37	BP	35	SER

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Mol	Chain	Res	Type
37	BP	36	LYS
37	BP	37	LYS
37	BP	38	ARG
37	BP	52	ARG
37	BP	58	PHE
37	BP	61	ARG
37	BP	64	SER
37	BP	75	THR
37	BP	79	VAL
37	BP	83	ILE
37	BP	91	VAL
37	BP	92	ARG
37	BP	93	LYS
37	BP	95	LYS
37	BP	96	LEU
37	BP	99	LEU
38	BQ	2	ARG
38	BQ	4	LYS
38	BQ	10	ARG
38	BQ	17	LEU
38	BQ	39	ILE
38	BQ	40	LYS
38	BQ	47	ARG
38	BQ	50	ARG
38	BQ	59	LEU
38	BQ	63	ARG
38	BQ	65	ASN
38	BQ	69	ARG
38	BQ	88	GLU
38	BQ	89	ILE
38	BQ	93	ILE
38	BQ	94	LEU
38	BQ	96	ASP
38	BQ	97	ILE
39	BR	10	LYS
39	BR	15	SER
39	BR	20	VAL
39	BR	33	VAL
39	BR	37	GLU
39	BR	38	VAL
39	BR	39	LEU
39	BR	46	GLU

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Mol	Chain	Res	Type
39	BR	48	LYS
39	BR	55	ASP
39	BR	58	VAL
39	BR	63	VAL
39	BR	72	VAL
39	BR	85	LYS
40	BS	3	THR
40	BS	4	ILE
40	BS	7	HIS
40	BS	18	ARG
40	BS	30	SER
40	BS	33	LEU
40	BS	35	ILE
40	BS	36	LEU
40	BS	41	LYS
40	BS	48	LYS
40	BS	66	ILE
40	BS	68	ASP
40	BS	71	VAL
40	BS	73	LYS
40	BS	74	ILE
40	BS	76	VAL
40	BS	84	ARG
40	BS	88	ARG
40	BS	101	SER
41	BT	2	ILE
41	BT	3	ARG
41	BT	4	GLU
41	BT	8	LEU
41	BT	17	SER
41	BT	19	LYS
41	BT	21	SER
41	BT	29	THR
41	BT	30	ILE
41	BT	31	VAL
41	BT	32	LEU
41	BT	43	ILE
41	BT	49	LYS
41	BT	50	LEU
41	BT	58	VAL
41	BT	68	LYS
41	BT	69	ARG

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Mol	Chain	Res	Type
41	BT	74	ILE
41	BT	82	LYS
42	BU	6	ARG
42	BU	8	ASP
42	BU	10	VAL
42	BU	20	LYS
42	BU	23	LYS
42	BU	33	VAL
42	BU	41	VAL
42	BU	42	LYS
42	BU	43	LYS
42	BU	52	ASN
42	BU	61	GLU
42	BU	64	ILE
42	BU	67	SER
42	BU	86	PHE
42	BU	87	GLU
42	BU	99	SER
42	BU	102	ILE
43	BV	1	MET
43	BV	3	THR
43	BV	5	ASN
43	BV	8	VAL
43	BV	10	LYS
43	BV	20	LEU
43	BV	29	ILE
43	BV	35	GLU
43	BV	41	GLU
43	BV	42	LEU
43	BV	43	ASP
43	BV	46	LYS
43	BV	51	GLN
43	BV	55	GLU
43	BV	61	LEU
43	BV	65	VAL
43	BV	66	ASP
43	BV	71	LYS
43	BV	93	ARG
44	BW	14	ASP
44	BW	15	SER
44	BW	16	GLU
44	BW	19	ARG

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Mol	Chain	Res	Type
44	BW	23	LYS
44	BW	24	ARG
44	BW	25	PHE
44	BW	38	ARG
44	BW	40	ARG
44	BW	45	HIS
44	BW	49	ASN
44	BW	54	ARG
44	BW	58	LEU
44	BW	61	LYS
44	BW	67	LYS
44	BW	76	ARG
44	BW	77	LYS
44	BW	80	SER
45	BX	10	ARG
45	BX	17	ARG
45	BX	19	HIS
45	BX	24	THR
45	BX	26	ARG
45	BX	29	LEU
45	BX	36	ARG
45	BX	47	THR
45	BX	53	LYS
45	BX	63	ILE
45	BX	71	ARG
45	BX	73	ARG
45	BX	77	TYR
46	BY	9	LYS
46	BY	10	SER
46	BY	14	LEU
46	BY	17	GLU
46	BY	18	LEU
46	BY	19	LEU
46	BY	22	LEU
46	BY	37	LEU
46	BY	39	GLN
46	BY	42	LEU
46	BY	47	ARG
46	BY	56	LEU
46	BY	57	LEU
46	BY	59	GLU
47	BZ	3	THR

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Mol	Chain	Res	Type
47	BZ	4	ILE
47	BZ	5	LYS
47	BZ	7	THR
47	BZ	8	GLN
47	BZ	9	THR
47	BZ	15	ARG
47	BZ	23	LEU
47	BZ	29	ARG
47	BZ	30	ARG
47	BZ	34	THR
47	BZ	37	ARG
47	BZ	38	GLU
47	BZ	43	ILE
47	BZ	58	GLU
48	B0	5	ASN
48	B0	9	ARG
48	B0	17	SER
48	B0	26	SER
48	B0	27	LEU
48	B0	39	ARG
48	B0	42	ILE
48	B0	43	THR
49	B1	4	ILE
49	B1	7	LYS
49	B1	8	ILE
49	B1	9	LYS
49	B1	29	LYS
49	B1	33	LEU
49	B1	35	LEU
49	B1	43	ARG
50	B2	1	MET
50	B2	3	ARG
50	B2	4	THR
50	B2	8	SER
50	B2	9	VAL
50	B2	12	ARG
50	B2	21	ARG
50	B2	35	ARG
50	B2	39	ARG
51	B3	5	THR
51	B3	7	ARG
51	B3	22	LYS

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Mol	Chain	Res	Type
51	B3	31	ILE
51	B3	49	VAL
51	B3	50	SER
51	B3	51	LYS
52	B4	2	LYS
52	B4	3	VAL
52	B4	4	ARG
52	B4	6	SER
52	B4	9	LYS
52	B4	27	CYS
2	CB	8	MET
2	CB	9	LEU
2	CB	10	LYS
2	CB	14	HIS
2	CB	19	THR
2	CB	21	TYR
2	CB	26	MET
2	CB	34	ARG
2	CB	36	LYS
2	CB	39	ILE
2	CB	42	LEU
2	CB	46	VAL
2	CB	69	VAL
2	CB	88	GLN
2	CB	103	TRP
2	CB	124	THR
2	CB	125	PHE
2	CB	131	LYS
2	CB	146	SER
2	CB	147	LEU
2	CB	162	VAL
2	CB	164	ASP
2	CB	177	ASN
2	CB	182	VAL
2	CB	191	ASP
2	CB	196	ASP
2	CB	212	TYR
2	CB	224	ARG
3	CC	15	LYS
3	CC	26	LYS
3	CC	30	ASP
3	CC	35	ASP

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Mol	Chain	Res	Type
3	CC	41	TYR
3	CC	53	ARG
3	CC	106	ARG
3	CC	123	LEU
3	CC	126	ARG
3	CC	134	LYS
3	CC	139	ASN
3	CC	160	GLU
3	CC	161	ILE
3	CC	166	TRP
3	CC	178	ARG
3	CC	182	ASP
3	CC	183	TYR
3	CC	185	THR
3	CC	194	VAL
4	CD	2	ARG
4	CD	10	LEU
4	CD	20	LEU
4	CD	24	VAL
4	CD	25	ARG
4	CD	29	THR
4	CD	30	LYS
4	CD	34	GLU
4	CD	52	VAL
4	CD	55	ARG
4	CD	57	LYS
4	CD	58	GLN
4	CD	62	ARG
4	CD	80	ARG
4	CD	84	ASN
4	CD	106	PHE
4	CD	119	HIS
4	CD	125	ASN
4	CD	127	ARG
4	CD	142	VAL
4	CD	147	LYS
4	CD	151	GLN
4	CD	152	SER
4	CD	158	LEU
4	CD	160	LEU
4	CD	168	THR
4	CD	170	LEU

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Mol	Chain	Res	Type
4	CD	182	LYS
4	CD	183	ARG
4	CD	184	LYS
4	CD	186	GLU
4	CD	187	ARG
4	CD	191	SER
4	CD	194	ILE
4	CD	199	ILE
4	CD	202	LEU
4	CD	204	SER
5	CE	11	GLN
5	CE	13	LYS
5	CE	25	LYS
5	CE	29	ILE
5	CE	31	SER
5	CE	51	LYS
5	CE	59	ILE
5	CE	75	LEU
5	CE	76	ASN
5	CE	80	LEU
5	CE	84	VAL
5	CE	87	VAL
5	CE	92	ARG
5	CE	95	MET
5	CE	99	SER
5	CE	105	ILE
5	CE	119	VAL
5	CE	131	ASN
5	CE	133	ILE
5	CE	134	ASN
5	CE	136	VAL
5	CE	139	THR
5	CE	144	GLU
6	CF	7	VAL
6	CF	33	GLU
6	CF	38	ARG
6	CF	44	ARG
6	CF	52	ASN
6	CF	54	LEU
6	CF	56	LYS
6	CF	58	HIS
6	CF	61	LEU

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Mol	Chain	Res	Type
6	CF	72	ASP
6	CF	86	ARG
6	CF	89	VAL
6	CF	90	MET
54	CG	3	ARG
54	CG	5	VAL
54	CG	6	ILE
54	CG	10	LYS
54	CG	12	LEU
54	CG	16	LYS
54	CG	55	LYS
54	CG	58	LEU
54	CG	66	GLU
54	CG	75	LYS
54	CG	77	ARG
54	CG	78	ARG
54	CG	85	GLN
54	CG	90	VAL
54	CG	100	MET
54	CG	102	TRP
54	CG	112	ASP
54	CG	123	LEU
54	CG	137	ARG
54	CG	139	ASP
54	CG	148	LYS
8	CH	2	MET
8	CH	37	ASN
8	CH	42	GLU
8	CH	46	GLU
8	CH	59	GLU
8	CH	70	VAL
8	CH	76	ARG
8	CH	79	ARG
8	CH	82	LEU
8	CH	89	ASP
8	CH	93	LYS
8	CH	102	VAL
8	CH	110	MET
9	CI	3	ASN
9	CI	4	GLN
9	CI	5	TYR
9	CI	36	GLN

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Mol	Chain	Res	Type
9	CI	37	TYR
9	CI	45	MET
9	CI	53	LEU
9	CI	54	VAL
9	CI	60	LEU
9	CI	83	THR
9	CI	87	MET
9	CI	111	GLU
9	CI	125	GLN
9	CI	129	ARG
10	CJ	11	LYS
10	CJ	15	HIS
10	CJ	48	ARG
10	CJ	59	LYS
10	CJ	60	ASP
10	CJ	67	ILE
10	CJ	69	THR
10	CJ	75	ASP
10	CJ	82	LYS
10	CJ	87	LEU
10	CJ	92	LEU
11	CK	12	ARG
11	CK	27	ASN
11	CK	33	ILE
11	CK	57	SER
11	CK	73	VAL
11	CK	78	ILE
11	CK	81	LEU
11	CK	94	SER
11	CK	105	ARG
11	CK	115	ILE
11	CK	117	HIS
11	CK	128	VAL
12	CL	3	VAL
12	CL	5	GLN
12	CL	9	LYS
12	CL	14	LYS
12	CL	19	ASN
12	CL	28	GLN
12	CL	39	THR
12	CL	48	LEU
12	CL	49	ARG

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Mol	Chain	Res	Type
12	CL	57	THR
12	CL	62	VAL
12	CL	72	ASN
12	CL	88	ASP
12	CL	96	THR
12	CL	102	ASP
12	CL	107	LYS
12	CL	120	ARG
55	CM	12	LYS
55	CM	24	VAL
55	CM	28	ARG
55	CM	32	ILE
55	CM	46	GLU
55	CM	53	ASP
55	CM	77	LYS
55	CM	91	ARG
55	CM	92	ARG
55	CM	100	ARG
55	CM	113	LYS
14	CN	3	GLN
14	CN	27	LYS
14	CN	41	TRP
14	CN	52	ARG
14	CN	53	ASP
14	CN	58	ARG
14	CN	61	ASN
14	CN	72	PHE
14	CN	96	LYS
14	CN	100	TRP
15	CO	16	ARG
15	CO	34	GLN
15	CO	38	LEU
15	CO	39	GLN
15	CO	45	HIS
15	CO	80	LEU
56	CP	1	MET
56	CP	2	VAL
56	CP	3	THR
56	CP	35	ARG
56	CP	46	LYS
56	CP	54	LEU
56	CP	56	ARG

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Mol	Chain	Res	Type
56	CP	69	ASP
17	CQ	3	LYS
17	CQ	6	THR
17	CQ	13	SER
17	CQ	20	ILE
17	CQ	27	PHE
17	CQ	32	ILE
17	CQ	37	ILE
17	CQ	39	ARG
17	CQ	44	HIS
17	CQ	51	GLU
17	CQ	52	CYS
17	CQ	56	ASP
17	CQ	60	ILE
17	CQ	80	LYS
18	CR	25	ILE
18	CR	44	THR
18	CR	49	LYS
18	CR	65	SER
18	CR	72	ARG
19	CS	5	LYS
19	CS	10	ILE
19	CS	11	ASP
19	CS	52	ASN
19	CS	54	ARG
19	CS	56	HIS
19	CS	73	PHE
20	CT	5	SER
20	CT	11	ILE
20	CT	26	MET
20	CT	30	PHE
20	CT	35	TYR
20	CT	47	GLN
20	CT	53	MET
20	CT	67	HIS
20	CT	68	LYS
20	CT	69	ASN
20	CT	73	ARG
20	CT	74	HIS
20	CT	78	LEU
20	CT	82	ILE
21	CU	4	LYS

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Mol	Chain	Res	Type
21	CU	9	GLU
21	CU	24	LYS
21	CU	27	VAL
21	CU	32	ARG
21	CU	36	PHE
21	CU	37	TYR
21	CU	53	LYS
24	DC	2	VAL
24	DC	12	ARG
24	DC	13	ARG
24	DC	18	VAL
24	DC	23	LEU
24	DC	35	LYS
24	DC	43	ASN
24	DC	57	HIS
24	DC	71	ASP
24	DC	90	ILE
24	DC	102	TYR
24	DC	124	LYS
24	DC	152	GLN
24	DC	172	THR
24	DC	173	LEU
24	DC	176	ARG
24	DC	187	CYS
24	DC	188	ARG
24	DC	190	THR
24	DC	212	TRP
24	DC	213	ARG
24	DC	220	ARG
24	DC	227	VAL
24	DC	235	GLU
24	DC	256	THR
24	DC	267	VAL
24	DC	269	ARG
25	DD	9	VAL
25	DD	24	VAL
25	DD	33	ARG
25	DD	34	VAL
25	DD	35	THR
25	DD	38	LYS
25	DD	48	ILE
25	DD	55	LYS

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Mol	Chain	Res	Type
25	DD	62	LYS
25	DD	79	LEU
25	DD	106	LYS
25	DD	121	THR
25	DD	138	LEU
25	DD	141	ARG
25	DD	148	GLN
25	DD	150	GLN
25	DD	159	LYS
25	DD	168	GLU
25	DD	189	VAL
25	DD	193	VAL
26	DE	53	THR
26	DE	57	LYS
26	DE	67	ARG
26	DE	69	ARG
26	DE	73	ILE
26	DE	77	ILE
26	DE	78	TRP
26	DE	84	THR
26	DE	108	ILE
26	DE	117	ARG
26	DE	126	VAL
26	DE	139	LYS
26	DE	149	ILE
26	DE	157	LEU
26	DE	163	ASN
26	DE	164	LEU
26	DE	166	LYS
26	DE	170	ARG
58	DF	13	LYS
58	DF	47	LYS
58	DF	48	LEU
58	DF	49	LEU
58	DF	76	PHE
58	DF	77	LYS
58	DF	82	TYR
58	DF	87	LYS
58	DF	91	ARG
58	DF	94	ARG
58	DF	97	GLU
58	DF	110	ILE

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Mol	Chain	Res	Type
58	DF	111	ARG
58	DF	113	PHE
58	DF	119	LYS
58	DF	133	GLU
58	DF	134	GLN
58	DF	135	ILE
58	DF	139	GLU
58	DF	142	TYR
58	DF	147	ARG
58	DF	151	LEU
58	DF	160	LYS
58	DF	166	ARG
58	DF	172	PHE
58	DF	177	ARG
28	DG	2	ARG
28	DG	18	ILE
28	DG	19	ASN
28	DG	34	ARG
28	DG	35	THR
28	DG	40	VAL
28	DG	42	VAL
28	DG	51	PHE
28	DG	72	ASN
28	DG	84	LYS
28	DG	86	LEU
28	DG	91	VAL
28	DG	93	TYR
28	DG	120	ILE
28	DG	162	ARG
28	DG	163	TYR
28	DG	166	GLU
28	DG	176	LYS
29	DH	8	LYS
29	DH	22	LYS
29	DH	25	TYR
29	DH	27	ARG
29	DH	28	ASN
29	DH	50	ARG
29	DH	57	LYS
29	DH	66	ASN
29	DH	68	ARG
29	DH	76	GLU

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Mol	Chain	Res	Type
29	DH	86	ASP
29	DH	90	LEU
29	DH	91	PHE
29	DH	98	ASP
29	DH	104	THR
29	DH	109	GLU
29	DH	132	PHE
29	DH	144	VAL
30	DI	7	TYR
30	DI	16	MET
30	DI	30	GLN
30	DI	58	ILE
30	DI	68	PHE
30	DI	72	THR
30	DI	93	ASN
31	DJ	3	THR
31	DJ	5	THR
31	DJ	25	LEU
31	DJ	34	ARG
31	DJ	36	LEU
31	DJ	43	GLU
31	DJ	47	HIS
31	DJ	54	ILE
31	DJ	57	LEU
31	DJ	80	HIS
31	DJ	81	ILE
31	DJ	92	MET
31	DJ	95	ARG
31	DJ	99	ARG
31	DJ	106	LYS
31	DJ	129	GLU
32	DK	3	GLN
32	DK	7	MET
32	DK	10	VAL
32	DK	13	ASN
32	DK	25	LEU
32	DK	39	ILE
32	DK	41	ILE
32	DK	47	ILE
32	DK	49	ARG
32	DK	54	LYS
32	DK	65	THR

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Mol	Chain	Res	Type
32	DK	77	ILE
32	DK	87	LEU
32	DK	100	PHE
32	DK	103	VAL
32	DK	105	ARG
32	DK	106	GLU
32	DK	107	LEU
32	DK	111	LYS
32	DK	114	LYS
33	DL	3	LEU
33	DL	4	ASN
33	DL	6	LEU
33	DL	18	ARG
33	DL	19	LEU
33	DL	47	ARG
33	DL	69	ARG
33	DL	79	LEU
33	DL	82	LEU
33	DL	92	LEU
33	DL	99	ASN
33	DL	103	ILE
33	DL	111	ILE
33	DL	112	LEU
33	DL	118	THR
33	DL	141	LYS
33	DL	143	GLU
34	DM	8	LYS
34	DM	13	HIS
34	DM	38	ARG
34	DM	47	GLU
34	DM	78	LEU
34	DM	89	VAL
34	DM	96	ILE
34	DM	97	GLN
34	DM	105	MET
34	DM	115	GLU
34	DM	119	LEU
34	DM	126	ILE
34	DM	129	THR
35	DN	18	GLN
35	DN	20	MET
35	DN	21	PHE

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Mol	Chain	Res	Type
35	DN	29	VAL
35	DN	33	ILE
35	DN	34	ILE
35	DN	53	THR
35	DN	62	ASN
35	DN	63	ARG
35	DN	69	ARG
35	DN	94	TYR
35	DN	95	THR
35	DN	96	ARG
35	DN	98	LEU
35	DN	114	GLU
36	DO	17	LYS
36	DO	31	THR
36	DO	63	LYS
36	DO	65	THR
36	DO	68	LYS
36	DO	90	VAL
36	DO	98	GLN
36	DO	115	LEU
36	DO	117	PHE
37	DP	6	GLN
37	DP	7	LEU
37	DP	13	LYS
37	DP	28	LYS
37	DP	31	VAL
37	DP	83	ILE
37	DP	86	LYS
37	DP	93	LYS
37	DP	95	LYS
37	DP	101	GLU
38	DQ	3	VAL
38	DQ	10	ARG
38	DQ	12	ARG
38	DQ	13	HIS
38	DQ	15	LYS
38	DQ	35	PHE
38	DQ	46	TYR
38	DQ	47	ARG
38	DQ	54	ARG
38	DQ	56	PHE
38	DQ	57	ARG

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Mol	Chain	Res	Type
38	DQ	63	ARG
38	DQ	69	ARG
38	DQ	79	ILE
38	DQ	108	LEU
39	DR	6	GLN
39	DR	10	LYS
39	DR	13	ARG
39	DR	37	GLU
39	DR	48	LYS
39	DR	58	VAL
39	DR	75	VAL
39	DR	80	ARG
39	DR	81	LYS
39	DR	86	GLN
39	DR	90	ARG
39	DR	93	PHE
39	DR	95	ASP
40	DS	6	LYS
40	DS	22	ASP
40	DS	23	LEU
40	DS	31	GLN
40	DS	33	LEU
40	DS	46	LEU
40	DS	66	ILE
40	DS	70	LYS
40	DS	74	ILE
40	DS	76	VAL
40	DS	84	ARG
40	DS	85	ILE
40	DS	86	MET
40	DS	88	ARG
41	DT	9	LYS
41	DT	12	ARG
41	DT	18	GLU
41	DT	39	THR
41	DT	50	LEU
41	DT	54	GLU
41	DT	91	GLN
42	DU	13	LEU
42	DU	20	LYS
42	DU	21	ARG
42	DU	40	LEU

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Mol	Chain	Res	Type
42	DU	45	GLN
42	DU	82	VAL
42	DU	85	ARG
42	DU	94	PHE
42	DU	95	PHE
43	DV	26	PHE
43	DV	40	ILE
43	DV	41	GLU
43	DV	51	GLN
43	DV	61	LEU
43	DV	65	VAL
43	DV	69	GLU
43	DV	70	ILE
43	DV	76	ASP
43	DV	90	ASP
44	DW	18	LYS
44	DW	20	LEU
44	DW	22	VAL
44	DW	23	LYS
44	DW	25	PHE
44	DW	30	VAL
44	DW	35	ILE
44	DW	37	VAL
44	DW	38	ARG
44	DW	39	GLN
44	DW	40	ARG
44	DW	44	PHE
44	DW	58	LEU
44	DW	68	PHE
44	DW	76	ARG
44	DW	77	LYS
44	DW	80	SER
45	DX	5	GLN
45	DX	25	LYS
45	DX	26	ARG
45	DX	31	ASN
45	DX	46	VAL
45	DX	47	THR
45	DX	57	VAL
45	DX	63	ILE
45	DX	73	ARG
46	DY	1	MET

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Mol	Chain	Res	Type
46	DY	4	LYS
46	DY	28	LEU
47	DZ	16	LEU
47	DZ	24	LEU
47	DZ	28	LEU
47	DZ	29	ARG
47	DZ	30	ARG
47	DZ	50	VAL
47	DZ	53	MET
47	DZ	58	GLU
48	D0	3	GLN
48	D0	5	ASN
48	D0	9	ARG
48	D0	22	THR
48	D0	41	HIS
48	D0	42	ILE
48	D0	48	TYR
48	D0	49	ARG
49	D1	10	LEU
49	D1	20	TYR
49	D1	35	LEU
49	D1	44	GLN
50	D2	4	THR
50	D2	22	MET
50	D2	26	ASN
50	D2	28	ARG
50	D2	33	ARG
51	D3	12	ARG
51	D3	14	LYS
51	D3	27	ASN
51	D3	28	LEU
51	D3	29	ARG
51	D3	41	ARG
51	D3	43	LEU
51	D3	46	LYS
51	D3	48	MET
51	D3	51	LYS
51	D3	61	LEU
52	D4	2	LYS
52	D4	9	LYS
52	D4	15	LYS
52	D4	17	VAL

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Mol	Chain	Res	Type
52	D4	19	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (331) such sidechains are listed below:

Mol	Chain	Res	Type
2	AB	38	HIS
2	AB	41	ASN
2	AB	57	ASN
2	AB	102	ASN
2	AB	108	GLN
2	AB	119	GLN
2	AB	167	HIS
3	AC	5	HIS
3	AC	24	ASN
3	AC	68	HIS
3	AC	138	GLN
3	AC	139	ASN
4	AD	40	HIS
4	AD	53	GLN
4	AD	58	GLN
4	AD	70	GLN
4	AD	73	ASN
4	AD	84	ASN
4	AD	151	GLN
4	AD	163	GLN
5	AE	11	GLN
5	AE	42	ASN
5	AE	72	ASN
5	AE	81	GLN
5	AE	121	ASN
6	AF	11	HIS
6	AF	46	GLN
6	AF	68	GLN
7	AG	85	GLN
7	AG	121	ASN
7	AG	147	ASN
8	AH	3	GLN
8	AH	17	GLN
8	AH	117	GLN
9	AI	3	ASN
9	AI	4	GLN
9	AI	74	GLN

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Mol	Chain	Res	Type
9	AI	80	HIS
9	AI	125	GLN
10	AJ	15	HIS
10	AJ	20	GLN
10	AJ	35	GLN
10	AJ	64	GLN
10	AJ	99	GLN
11	AK	21	HIS
11	AK	100	ASN
11	AK	108	ASN
12	AL	4	ASN
12	AL	45	ASN
13	AM	7	ASN
14	AN	42	ASN
14	AN	48	GLN
14	AN	61	ASN
15	AO	19	ASN
15	AO	45	HIS
16	AP	9	HIS
16	AP	26	ASN
16	AP	29	ASN
16	AP	59	HIS
17	AQ	44	HIS
17	AQ	49	ASN
18	AR	53	GLN
18	AR	73	HIS
19	AS	42	ASN
20	AT	12	GLN
20	AT	47	GLN
20	AT	54	GLN
20	AT	60	GLN
20	AT	77	ASN
21	AU	8	ASN
24	BC	14	HIS
24	BC	20	ASN
24	BC	43	ASN
24	BC	89	ASN
24	BC	114	GLN
24	BC	141	HIS
24	BC	152	GLN
24	BC	225	ASN
24	BC	242	HIS

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Mol	Chain	Res	Type
24	BC	250	GLN
24	BC	259	ASN
25	BD	32	ASN
25	BD	58	ASN
25	BD	126	ASN
25	BD	130	GLN
25	BD	150	GLN
26	BE	24	ASN
26	BE	29	HIS
26	BE	30	GLN
26	BE	62	GLN
26	BE	97	ASN
27	BF	20	ASN
27	BF	22	ASN
27	BF	26	GLN
27	BF	134	GLN
28	BG	29	ASN
28	BG	72	ASN
28	BG	114	HIS
28	BG	138	GLN
29	BH	18	GLN
29	BH	20	ASN
29	BH	28	ASN
29	BH	33	GLN
29	BH	43	ASN
29	BH	145	ASN
30	BI	5	GLN
30	BI	30	GLN
30	BI	110	GLN
31	BJ	40	HIS
31	BJ	58	ASN
31	BJ	76	HIS
31	BJ	77	HIS
31	BJ	128	ASN
31	BJ	130	HIS
32	BK	88	ASN
32	BK	89	ASN
33	BL	4	ASN
33	BL	54	GLN
33	BL	93	ASN
33	BL	99	ASN
33	BL	104	GLN

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Mol	Chain	Res	Type
34	BM	13	HIS
34	BM	88	ASN
35	BN	9	GLN
35	BN	11	ASN
35	BN	23	ASN
35	BN	62	ASN
35	BN	73	ASN
35	BN	107	ASN
36	BO	19	GLN
36	BO	34	HIS
36	BO	38	GLN
36	BO	116	GLN
37	BP	6	GLN
37	BP	9	GLN
37	BP	74	GLN
38	BQ	13	HIS
38	BQ	51	GLN
38	BQ	65	ASN
39	BR	6	GLN
39	BR	18	GLN
39	BR	43	ASN
39	BR	82	HIS
40	BS	15	GLN
40	BS	57	ASN
40	BS	61	ASN
41	BT	48	GLN
41	BT	70	HIS
41	BT	72	GLN
41	BT	91	GLN
42	BU	52	ASN
42	BU	65	GLN
42	BU	73	ASN
43	BV	5	ASN
43	BV	44	HIS
43	BV	51	GLN
43	BV	80	HIS
43	BV	88	HIS
44	BW	11	ASN
44	BW	39	GLN
45	BX	5	GLN
45	BX	16	ASN
45	BX	22	ASN

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Mol	Chain	Res	Type
46	BY	15	ASN
46	BY	25	GLN
46	BY	27	ASN
46	BY	31	GLN
46	BY	41	HIS
47	BZ	33	HIS
48	B0	3	GLN
48	B0	4	GLN
50	B2	13	ASN
50	B2	16	HIS
51	B3	27	ASN
52	B4	33	HIS
52	B4	35	GLN
52	B4	37	GLN
2	CB	18	GLN
2	CB	23	ASN
2	CB	108	GLN
2	CB	169	HIS
2	CB	176	ASN
2	CB	177	ASN
3	CC	2	GLN
3	CC	18	ASN
3	CC	31	ASN
3	CC	68	HIS
3	CC	139	ASN
3	CC	184	ASN
4	CD	70	GLN
4	CD	84	ASN
4	CD	115	GLN
4	CD	119	HIS
4	CD	125	ASN
4	CD	163	GLN
5	CE	69	ASN
5	CE	76	ASN
5	CE	121	ASN
5	CE	131	ASN
6	CF	11	HIS
6	CF	58	HIS
6	CF	81	ASN
54	CG	67	ASN
54	CG	85	GLN
8	CH	3	GLN

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Mol	Chain	Res	Type
8	CH	17	GLN
9	CI	3	ASN
9	CI	4	GLN
9	CI	49	GLN
9	CI	74	GLN
9	CI	109	GLN
9	CI	125	GLN
10	CJ	70	HIS
11	CK	21	HIS
11	CK	27	ASN
12	CL	5	GLN
12	CL	19	ASN
12	CL	72	ASN
12	CL	74	GLN
12	CL	111	GLN
55	CM	90	HIS
14	CN	59	GLN
14	CN	65	GLN
15	CO	19	ASN
15	CO	27	GLN
15	CO	36	ASN
15	CO	45	HIS
56	CP	26	ASN
56	CP	63	GLN
17	CQ	49	ASN
18	CR	53	GLN
19	CS	51	HIS
19	CS	52	ASN
20	CT	12	GLN
20	CT	81	GLN
21	CU	8	ASN
24	DC	43	ASN
24	DC	52	HIS
24	DC	57	HIS
24	DC	59	GLN
24	DC	85	ASN
24	DC	89	ASN
24	DC	116	GLN
24	DC	133	ASN
24	DC	141	HIS
25	DD	36	GLN
25	DD	49	GLN

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Mol	Chain	Res	Type
25	DD	58	ASN
25	DD	130	GLN
25	DD	136	ASN
25	DD	140	HIS
25	DD	150	GLN
25	DD	164	GLN
26	DE	30	GLN
26	DE	41	GLN
26	DE	62	GLN
58	DF	4	HIS
28	DG	19	ASN
28	DG	21	GLN
28	DG	37	ASN
28	DG	44	HIS
28	DG	103	ASN
28	DG	138	GLN
29	DH	2	GLN
29	DH	28	ASN
29	DH	66	ASN
30	DI	42	ASN
30	DI	93	ASN
30	DI	106	GLN
31	DJ	40	HIS
31	DJ	138	GLN
32	DK	9	ASN
32	DK	13	ASN
32	DK	89	ASN
33	DL	4	ASN
33	DL	54	GLN
34	DM	3	GLN
34	DM	13	HIS
35	DN	3	HIS
35	DN	16	HIS
35	DN	73	ASN
36	DO	29	HIS
36	DO	38	GLN
37	DP	6	GLN
37	DP	9	GLN
37	DP	65	ASN
37	DP	74	GLN
37	DP	76	HIS
37	DP	114	ASN

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Mol	Chain	Res	Type
38	DQ	19	GLN
38	DQ	71	ASN
39	DR	6	GLN
39	DR	12	HIS
39	DR	43	ASN
39	DR	66	HIS
39	DR	82	HIS
39	DR	86	GLN
39	DR	87	GLN
40	DS	9	HIS
40	DS	31	GLN
41	DT	15	HIS
41	DT	48	GLN
41	DT	70	HIS
41	DT	91	GLN
41	DT	92	ASN
42	DU	44	HIS
42	DU	45	GLN
42	DU	52	ASN
42	DU	53	GLN
42	DU	68	ASN
43	DV	51	GLN
43	DV	80	HIS
43	DV	88	HIS
44	DW	56	HIS
45	DX	15	ASN
45	DX	22	ASN
45	DX	31	ASN
45	DX	35	HIS
46	DY	15	ASN
46	DY	20	ASN
46	DY	41	HIS
46	DY	58	ASN
47	DZ	19	HIS
48	D0	5	ASN
48	D0	18	HIS
48	D0	41	HIS
50	D2	6	GLN
50	D2	16	HIS
50	D2	26	ASN
50	D2	29	GLN
51	D3	42	HIS

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1532/1533 (99%)	363 (23%)	63 (4%)
22	BA	2850/2903 (98%)	554 (19%)	87 (3%)
22	DA	2837/2903 (97%)	869 (30%)	183 (6%)
23	BB	117/118 (99%)	19 (16%)	0
53	CA	1529/1530 (99%)	445 (29%)	81 (5%)
57	DB	116/117 (99%)	33 (28%)	7 (6%)
All	All	8981/9104 (98%)	2283 (25%)	421 (4%)

All (2283) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	5	U
1	AA	6	G
1	AA	9	G
1	AA	22	G
1	AA	32	A
1	AA	39	G
1	AA	47	C
1	AA	48	C
1	AA	50	A
1	AA	51	A
1	AA	52	C
1	AA	64	G
1	AA	70	U
1	AA	71	A
1	AA	72	A
1	AA	73	C
1	AA	74	A
1	AA	76	G
1	AA	77	A
1	AA	79	G
1	AA	82	G
1	AA	83	C
1	AA	85	U
1	AA	86	G
1	AA	87	C
1	AA	88	U
1	AA	89	U
1	AA	90	C
1	AA	91	U
1	AA	92	U

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Mol	Chain	Res	Type
1	AA	94	G
1	AA	95	C
1	AA	97	G
1	AA	98	A
1	AA	111	G
1	AA	116	A
1	AA	117	G
1	AA	120	A
1	AA	121	U
1	AA	122	G
1	AA	127	G
1	AA	130	A
1	AA	131	A
1	AA	138	G
1	AA	141	G
1	AA	143	A
1	AA	151	A
1	AA	159	G
1	AA	163	C
1	AA	166	U
1	AA	174	A
1	AA	175	C
1	AA	176	C
1	AA	177	G
1	AA	181	A
1	AA	182	A
1	AA	183	C
1	AA	184	G
1	AA	185	U
1	AA	197	A
1	AA	198	G
1	AA	199	A
1	AA	205	A
1	AA	207	C
1	AA	208	U
1	AA	209	U
1	AA	210	C
1	AA	211	G
1	AA	214	C
1	AA	215	C
1	AA	219	U
1	AA	240	G

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Mol	Chain	Res	Type
1	AA	244	U
1	AA	245	U
1	AA	247	G
1	AA	250	A
1	AA	251	G
1	AA	258	G
1	AA	262	A
1	AA	266	G
1	AA	267	C
1	AA	268	U
1	AA	273	U
1	AA	275	G
1	AA	284	C
1	AA	285	C
1	AA	289	G
1	AA	306	A
1	AA	308	C
1	AA	316	C
1	AA	320	A
1	AA	321	A
1	AA	328	C
1	AA	329	A
1	AA	330	C
1	AA	331	G
1	AA	332	G
1	AA	345	C
1	AA	346	G
1	AA	347	G
1	AA	352	C
1	AA	354	G
1	AA	356	A
1	AA	366	A
1	AA	367	U
1	AA	368	U
1	AA	369	G
1	AA	372	C
1	AA	373	A
1	AA	374	A
1	AA	384	G
1	AA	392	C
1	AA	406	G
1	AA	409	U

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Mol	Chain	Res	Type
1	AA	411	A
1	AA	412	A
1	AA	413	G
1	AA	414	A
1	AA	415	A
1	AA	421	U
1	AA	422	C
1	AA	424	G
1	AA	429	U
1	AA	430	A
1	AA	451	A
1	AA	452	A
1	AA	453	G
1	AA	458	U
1	AA	459	A
1	AA	461	A
1	AA	462	G
1	AA	463	U
1	AA	466	A
1	AA	467	U
1	AA	468	A
1	AA	469	C
1	AA	478	A
1	AA	481	G
1	AA	482	A
1	AA	485	U
1	AA	486	U
1	AA	496	A
1	AA	498	A
1	AA	499	A
1	AA	500	G
1	AA	501	C
1	AA	508	U
1	AA	509	A
1	AA	511	C
1	AA	518	C
1	AA	527	G
1	AA	531	U
1	AA	532	A
1	AA	533	A
1	AA	534	U
1	AA	535	A

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Mol	Chain	Res	Type
1	AA	536	C
1	AA	547	A
1	AA	548	G
1	AA	549	C
1	AA	556	C
1	AA	562	U
1	AA	564	C
1	AA	572	A
1	AA	573	A
1	AA	576	C
1	AA	579	A
1	AA	588	G
1	AA	604	G
1	AA	633	G
1	AA	646	G
1	AA	650	G
1	AA	653	U
1	AA	665	A
1	AA	682	G
1	AA	700	G
1	AA	701	U
1	AA	702	A
1	AA	703	G
1	AA	721	G
1	AA	722	G
1	AA	723	U
1	AA	731	G
1	AA	748	G
1	AA	754	C
1	AA	755	G
1	AA	776	G
1	AA	777	A
1	AA	793	U
1	AA	794	A
1	AA	802	A
1	AA	809	G
1	AA	814	A
1	AA	815	A
1	AA	817	C
1	AA	818	G
1	AA	827	U
1	AA	828	U

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Mol	Chain	Res	Type
1	AA	841	C
1	AA	843	U
1	AA	845	A
1	AA	846	G
1	AA	858	G
1	AA	859	G
1	AA	861	G
1	AA	876	C
1	AA	884	U
1	AA	902	G
1	AA	911	U
1	AA	914	A
1	AA	926	G
1	AA	927	G
1	AA	932	C
1	AA	934	C
1	AA	935	A
1	AA	960	U
1	AA	966	G
1	AA	969	A
1	AA	971	G
1	AA	974	A
1	AA	975	A
1	AA	976	G
1	AA	977	A
1	AA	983	A
1	AA	993	G
1	AA	1003	G
1	AA	1004	A
1	AA	1008	U
1	AA	1017	U
1	AA	1018	G
1	AA	1022	A
1	AA	1027	C
1	AA	1029	U
1	AA	1030	U
1	AA	1031	C
1	AA	1032	G
1	AA	1033	G
1	AA	1034	G
1	AA	1037	C
1	AA	1049	U

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Mol	Chain	Res	Type
1	AA	1050	G
1	AA	1052	U
1	AA	1053	G
1	AA	1054	C
1	AA	1055	A
1	AA	1065	U
1	AA	1066	C
1	AA	1086	U
1	AA	1094	G
1	AA	1095	U
1	AA	1101	A
1	AA	1102	A
1	AA	1104	G
1	AA	1113	C
1	AA	1124	G
1	AA	1125	U
1	AA	1130	A
1	AA	1133	G
1	AA	1135	U
1	AA	1136	C
1	AA	1137	C
1	AA	1138	G
1	AA	1140	C
1	AA	1141	C
1	AA	1144	G
1	AA	1145	A
1	AA	1146	A
1	AA	1158	C
1	AA	1159	U
1	AA	1160	G
1	AA	1161	C
1	AA	1162	C
1	AA	1167	A
1	AA	1168	U
1	AA	1181	G
1	AA	1182	G
1	AA	1183	U
1	AA	1184	G
1	AA	1196	A
1	AA	1197	A
1	AA	1202	U
1	AA	1212	U

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Mol	Chain	Res	Type
1	AA	1213	A
1	AA	1214	C
1	AA	1226	C
1	AA	1227	A
1	AA	1228	C
1	AA	1238	A
1	AA	1240	U
1	AA	1241	G
1	AA	1242	G
1	AA	1253	G
1	AA	1256	A
1	AA	1257	A
1	AA	1275	A
1	AA	1279	G
1	AA	1280	A
1	AA	1282	C
1	AA	1283	U
1	AA	1285	A
1	AA	1286	U
1	AA	1287	A
1	AA	1288	A
1	AA	1293	C
1	AA	1299	A
1	AA	1303	C
1	AA	1304	G
1	AA	1305	G
1	AA	1308	U
1	AA	1315	U
1	AA	1316	G
1	AA	1317	C
1	AA	1318	A
1	AA	1320	C
1	AA	1321	U
1	AA	1322	C
1	AA	1323	G
1	AA	1324	A
1	AA	1331	G
1	AA	1332	A
1	AA	1336	C
1	AA	1337	G
1	AA	1348	U
1	AA	1349	A

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Mol	Chain	Res	Type
1	AA	1353	G
1	AA	1362	A
1	AA	1363	A
1	AA	1364	U
1	AA	1370	G
1	AA	1371	G
1	AA	1381	U
1	AA	1382	C
1	AA	1397	C
1	AA	1398	A
1	AA	1411	C
1	AA	1412	C
1	AA	1413	A
1	AA	1419	G
1	AA	1432	G
1	AA	1441	A
1	AA	1446	A
1	AA	1448	C
1	AA	1451	U
1	AA	1452	C
1	AA	1453	G
1	AA	1454	G
1	AA	1455	G
1	AA	1469	C
1	AA	1470	U
1	AA	1476	A
1	AA	1490	U
1	AA	1491	G
1	AA	1492	A
1	AA	1494	G
1	AA	1497	G
1	AA	1499	A
1	AA	1503	A
1	AA	1505	G
1	AA	1506	U
1	AA	1517	G
1	AA	1529	G
1	AA	1530	G
1	AA	1531	A
22	BA	10	A
22	BA	12	U
22	BA	13	A

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Mol	Chain	Res	Type
22	BA	14	A
22	BA	15	G
22	BA	34	U
22	BA	35	G
22	BA	42	A
22	BA	43	G
22	BA	46	G
22	BA	52	A
22	BA	61	C
22	BA	63	A
22	BA	71	A
22	BA	74	A
22	BA	75	G
22	BA	80	G
22	BA	84	A
22	BA	98	G
22	BA	100	U
22	BA	101	A
22	BA	102	U
22	BA	118	A
22	BA	119	A
22	BA	120	U
22	BA	125	A
22	BA	126	A
22	BA	135	U
22	BA	136	G
22	BA	137	U
22	BA	138	U
22	BA	139	U
22	BA	140	C
22	BA	141	G
22	BA	142	A
22	BA	143	C
22	BA	144	A
22	BA	159	G
22	BA	162	U
22	BA	163	C
22	BA	164	C
22	BA	165	A
22	BA	166	U
22	BA	188	G
22	BA	193	U

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Mol	Chain	Res	Type
22	BA	196	A
22	BA	206	U
22	BA	214	G
22	BA	215	G
22	BA	216	A
22	BA	221	A
22	BA	222	A
22	BA	230	G
22	BA	248	G
22	BA	255	A
22	BA	264	C
22	BA	265	A
22	BA	266	G
22	BA	267	C
22	BA	271	G
22	BA	272	A
22	BA	273	G
22	BA	276	U
22	BA	277	G
22	BA	278	A
22	BA	285	G
22	BA	299	A
22	BA	302	C
22	BA	303	G
22	BA	311	A
22	BA	329	G
22	BA	330	A
22	BA	346	A
22	BA	347	A
22	BA	349	U
22	BA	350	G
22	BA	353	C
22	BA	359	G
22	BA	361	G
22	BA	362	A
22	BA	371	A
22	BA	372	G
22	BA	383	C
22	BA	386	G
22	BA	387	U
22	BA	396	G
22	BA	404	A

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Mol	Chain	Res	Type
22	BA	405	U
22	BA	411	G
22	BA	412	A
22	BA	413	C
22	BA	424	G
22	BA	425	G
22	BA	455	C
22	BA	461	C
22	BA	480	A
22	BA	481	G
22	BA	482	A
22	BA	491	G
22	BA	504	A
22	BA	505	A
22	BA	507	A
22	BA	508	A
22	BA	509	C
22	BA	510	C
22	BA	527	C
22	BA	528	A
22	BA	531	C
22	BA	532	A
22	BA	533	G
22	BA	542	C
22	BA	543	G
22	BA	544	C
22	BA	546	U
22	BA	547	A
22	BA	548	G
22	BA	549	G
22	BA	550	C
22	BA	555	G
22	BA	556	A
22	BA	563	A
22	BA	573	U
22	BA	575	A
22	BA	586	A
22	BA	603	A
22	BA	604	G
22	BA	613	A
22	BA	614	A
22	BA	615	U

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Mol	Chain	Res	Type
22	BA	627	A
22	BA	631	A
22	BA	634	C
22	BA	637	A
22	BA	645	C
22	BA	646	U
22	BA	647	G
22	BA	654	A
22	BA	655	A
22	BA	656	G
22	BA	686	U
22	BA	714	U
22	BA	715	A
22	BA	717	C
22	BA	722	A
22	BA	726	G
22	BA	730	A
22	BA	738	G
22	BA	740	C
22	BA	746	U
22	BA	747	U
22	BA	748	G
22	BA	762	U
22	BA	763	G
22	BA	764	A
22	BA	765	C
22	BA	775	G
22	BA	776	G
22	BA	782	A
22	BA	784	G
22	BA	785	G
22	BA	791	C
22	BA	792	A
22	BA	801	G
22	BA	805	G
22	BA	812	C
22	BA	819	A
22	BA	827	U
22	BA	828	U
22	BA	845	A
22	BA	846	U
22	BA	847	U

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Mol	Chain	Res	Type
22	BA	859	G
22	BA	868	U
22	BA	876	C
22	BA	878	A
22	BA	896	A
22	BA	897	C
22	BA	901	C
22	BA	903	C
22	BA	904	G
22	BA	910	A
22	BA	914	G
22	BA	915	C
22	BA	932	U
22	BA	934	U
22	BA	941	A
22	BA	945	A
22	BA	946	C
22	BA	958	U
22	BA	959	A
22	BA	961	C
22	BA	974	G
22	BA	976	G
22	BA	983	A
22	BA	989	G
22	BA	995	C
22	BA	996	A
22	BA	997	G
22	BA	1005	C
22	BA	1011	G
22	BA	1012	U
22	BA	1013	C
22	BA	1021	A
22	BA	1022	G
22	BA	1023	U
22	BA	1024	G
22	BA	1026	G
22	BA	1033	U
22	BA	1044	C
22	BA	1045	C
22	BA	1046	A
22	BA	1047	G
22	BA	1060	U

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Mol	Chain	Res	Type
22	BA	1061	U
22	BA	1062	G
22	BA	1063	G
22	BA	1065	U
22	BA	1066	U
22	BA	1070	A
22	BA	1071	G
22	BA	1072	C
22	BA	1073	A
22	BA	1074	G
22	BA	1075	C
22	BA	1078	U
22	BA	1083	U
22	BA	1084	A
22	BA	1088	A
22	BA	1092	C
22	BA	1098	A
22	BA	1112	G
22	BA	1115	G
22	BA	1128	G
22	BA	1130	U
22	BA	1132	U
22	BA	1133	A
22	BA	1135	C
22	BA	1136	G
22	BA	1139	G
22	BA	1142	A
22	BA	1151	A
22	BA	1156	A
22	BA	1169	A
22	BA	1170	C
22	BA	1175	A
22	BA	1176	U
22	BA	1180	U
22	BA	1181	U
22	BA	1186	G
22	BA	1212	G
22	BA	1238	G
22	BA	1247	A
22	BA	1248	G
22	BA	1249	U
22	BA	1253	A

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Mol	Chain	Res	Type
22	BA	1256	G
22	BA	1266	G
22	BA	1271	G
22	BA	1272	A
22	BA	1273	U
22	BA	1276	A
22	BA	1281	G
22	BA	1300	G
22	BA	1301	A
22	BA	1305	C
22	BA	1311	G
22	BA	1317	G
22	BA	1321	A
22	BA	1324	G
22	BA	1341	G
22	BA	1349	C
22	BA	1352	U
22	BA	1359	A
22	BA	1365	A
22	BA	1368	G
22	BA	1378	A
22	BA	1379	U
22	BA	1380	G
22	BA	1383	A
22	BA	1386	C
22	BA	1395	A
22	BA	1397	U
22	BA	1416	G
22	BA	1419	A
22	BA	1420	A
22	BA	1428	C
22	BA	1434	A
22	BA	1441	G
22	BA	1452	G
22	BA	1453	A
22	BA	1459	G
22	BA	1460	U
22	BA	1463	C
22	BA	1467	U
22	BA	1475	G
22	BA	1476	U
22	BA	1482	G

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Mol	Chain	Res	Type
22	BA	1493	C
22	BA	1498	C
22	BA	1499	C
22	BA	1504	A
22	BA	1507	C
22	BA	1508	A
22	BA	1509	A
22	BA	1510	G
22	BA	1512	C
22	BA	1515	A
22	BA	1532	A
22	BA	1533	C
22	BA	1534	U
22	BA	1535	A
22	BA	1536	C
22	BA	1537	G
22	BA	1538	G
22	BA	1540	G
22	BA	1554	U
22	BA	1555	G
22	BA	1558	C
22	BA	1559	U
22	BA	1569	A
22	BA	1578	U
22	BA	1581	G
22	BA	1583	A
22	BA	1584	U
22	BA	1585	C
22	BA	1606	C
22	BA	1607	C
22	BA	1608	A
22	BA	1610	A
22	BA	1619	G
22	BA	1635	A
22	BA	1639	C
22	BA	1647	U
22	BA	1648	U
22	BA	1649	G
22	BA	1674	G
22	BA	1677	A
22	BA	1696	G
22	BA	1707	G

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Mol	Chain	Res	Type
22	BA	1714	U
22	BA	1715	G
22	BA	1723	G
22	BA	1729	U
22	BA	1730	C
22	BA	1732	C
22	BA	1734	G
22	BA	1736	U
22	BA	1737	G
22	BA	1738	G
22	BA	1739	A
22	BA	1744	A
22	BA	1758	U
22	BA	1764	C
22	BA	1773	A
22	BA	1776	G
22	BA	1791	A
22	BA	1800	C
22	BA	1801	A
22	BA	1807	G
22	BA	1808	A
22	BA	1812	U
22	BA	1816	C
22	BA	1829	A
22	BA	1848	A
22	BA	1858	A
22	BA	1859	U
22	BA	1862	G
22	BA	1869	G
22	BA	1870	C
22	BA	1871	A
22	BA	1872	A
22	BA	1873	G
22	BA	1876	A
22	BA	1906	G
22	BA	1913	A
22	BA	1914	C
22	BA	1927	A
22	BA	1929	G
22	BA	1930	G
22	BA	1937	A
22	BA	1938	A

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Mol	Chain	Res	Type
22	BA	1941	C
22	BA	1942	C
22	BA	1944	U
22	BA	1955	U
22	BA	1960	A
22	BA	1967	C
22	BA	1970	A
22	BA	1971	U
22	BA	1972	G
22	BA	1991	U
22	BA	1993	U
22	BA	1997	C
22	BA	2018	G
22	BA	2022	U
22	BA	2023	C
22	BA	2030	A
22	BA	2031	A
22	BA	2032	G
22	BA	2033	A
22	BA	2043	C
22	BA	2049	G
22	BA	2055	C
22	BA	2056	G
22	BA	2060	A
22	BA	2061	G
22	BA	2062	A
22	BA	2069	G
22	BA	2093	G
22	BA	2104	C
22	BA	2106	U
22	BA	2107	G
22	BA	2109	U
22	BA	2110	G
22	BA	2134	A
22	BA	2135	A
22	BA	2136	G
22	BA	2137	U
22	BA	2139	U
22	BA	2140	G
22	BA	2143	C
22	BA	2144	G
22	BA	2145	C

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Mol	Chain	Res	Type
22	BA	2146	C
22	BA	2147	A
22	BA	2148	G
22	BA	2149	U
22	BA	2150	C
22	BA	2151	U
22	BA	2155	U
22	BA	2156	G
22	BA	2180	U
22	BA	2181	U
22	BA	2183	A
22	BA	2184	A
22	BA	2185	U
22	BA	2187	U
22	BA	2194	U
22	BA	2198	A
22	BA	2199	A
22	BA	2203	U
22	BA	2204	G
22	BA	2211	A
22	BA	2212	A
22	BA	2214	C
22	BA	2223	G
22	BA	2225	A
22	BA	2226	C
22	BA	2238	G
22	BA	2239	G
22	BA	2243	U
22	BA	2250	G
22	BA	2268	A
22	BA	2273	A
22	BA	2278	A
22	BA	2279	G
22	BA	2282	G
22	BA	2283	C
22	BA	2287	A
22	BA	2296	U
22	BA	2297	A
22	BA	2305	U
22	BA	2308	G
22	BA	2312	U
22	BA	2317	A

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Mol	Chain	Res	Type
22	BA	2321	U
22	BA	2322	A
22	BA	2325	G
22	BA	2326	C
22	BA	2327	A
22	BA	2335	A
22	BA	2347	C
22	BA	2350	C
22	BA	2357	G
22	BA	2361	G
22	BA	2372	U
22	BA	2383	G
22	BA	2385	C
22	BA	2402	U
22	BA	2403	C
22	BA	2406	A
22	BA	2423	U
22	BA	2424	C
22	BA	2425	A
22	BA	2426	A
22	BA	2428	G
22	BA	2429	G
22	BA	2430	A
22	BA	2431	U
22	BA	2435	A
22	BA	2441	U
22	BA	2445	G
22	BA	2447	G
22	BA	2448	A
22	BA	2476	A
22	BA	2490	G
22	BA	2491	U
22	BA	2502	G
22	BA	2503	A
22	BA	2505	G
22	BA	2518	A
22	BA	2529	G
22	BA	2554	U
22	BA	2563	U
22	BA	2566	A
22	BA	2567	G
22	BA	2572	A

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Mol	Chain	Res	Type
22	BA	2573	C
22	BA	2574	G
22	BA	2576	G
22	BA	2579	C
22	BA	2585	U
22	BA	2586	U
22	BA	2603	G
22	BA	2609	U
22	BA	2613	U
22	BA	2621	G
22	BA	2629	U
22	BA	2639	A
22	BA	2661	G
22	BA	2663	G
22	BA	2671	G
22	BA	2688	G
22	BA	2689	U
22	BA	2690	U
22	BA	2714	G
22	BA	2716	C
22	BA	2726	A
22	BA	2729	G
22	BA	2732	G
22	BA	2748	A
22	BA	2757	A
22	BA	2762	C
22	BA	2765	A
22	BA	2769	U
22	BA	2778	A
22	BA	2779	U
22	BA	2791	G
22	BA	2798	U
22	BA	2799	A
22	BA	2800	A
22	BA	2801	G
22	BA	2820	A
22	BA	2821	A
22	BA	2825	G
22	BA	2836	U
22	BA	2861	U
22	BA	2867	G
22	BA	2873	A

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Mol	Chain	Res	Type
22	BA	2874	C
22	BA	2880	C
22	BA	2883	A
22	BA	2884	U
22	BA	2891	U
23	BB	12	C
23	BB	15	A
23	BB	16	G
23	BB	24	G
23	BB	25	U
23	BB	35	C
23	BB	37	C
23	BB	41	G
23	BB	44	G
23	BB	45	A
23	BB	56	G
23	BB	66	A
23	BB	87	U
23	BB	88	C
23	BB	89	U
23	BB	90	C
23	BB	91	C
23	BB	99	A
23	BB	109	A
53	CA	6	G
53	CA	7	A
53	CA	8	A
53	CA	9	G
53	CA	14	U
53	CA	16	A
53	CA	17	U
53	CA	32	A
53	CA	39	G
53	CA	40	C
53	CA	47	C
53	CA	48	C
53	CA	51	A
53	CA	61	G
53	CA	65	A
53	CA	66	A
53	CA	67	C
53	CA	68	G

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Mol	Chain	Res	Type
53	CA	70	U
53	CA	71	A
53	CA	72	A
53	CA	73	C
53	CA	76	G
53	CA	77	A
53	CA	80	A
53	CA	81	A
53	CA	82	G
53	CA	83	C
53	CA	84	U
53	CA	85	U
53	CA	86	G
53	CA	87	C
53	CA	88	U
53	CA	89	U
53	CA	90	C
53	CA	91	U
53	CA	92	U
53	CA	94	G
53	CA	95	C
53	CA	96	U
53	CA	98	A
53	CA	101	A
53	CA	109	A
53	CA	110	C
53	CA	116	A
53	CA	120	A
53	CA	121	U
53	CA	122	G
53	CA	131	A
53	CA	132	C
53	CA	141	G
53	CA	143	A
53	CA	144	G
53	CA	154	U
53	CA	155	A
53	CA	164	G
53	CA	166	U
53	CA	169	C
53	CA	177	G
53	CA	178	C

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Mol	Chain	Res	Type
53	CA	181	A
53	CA	182	A
53	CA	184	G
53	CA	191	G
53	CA	195	A
53	CA	198	G
53	CA	199	A
53	CA	206	C
53	CA	207	C
53	CA	208	U
53	CA	209	U
53	CA	210	C
53	CA	211	G
53	CA	212	G
53	CA	214	C
53	CA	239	U
53	CA	240	G
53	CA	243	A
53	CA	244	U
53	CA	245	U
53	CA	246	A
53	CA	247	G
53	CA	248	C
53	CA	250	A
53	CA	251	G
53	CA	252	U
53	CA	253	A
53	CA	266	G
53	CA	267	C
53	CA	268	U
53	CA	275	G
53	CA	279	A
53	CA	280	C
53	CA	289	G
53	CA	298	A
53	CA	301	G
53	CA	305	G
53	CA	306	A
53	CA	316	C
53	CA	321	A
53	CA	328	C
53	CA	329	A

Continued on next page...

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Mol	Chain	Res	Type
53	CA	330	C
53	CA	331	G
53	CA	332	G
53	CA	338	A
53	CA	339	C
53	CA	345	C
53	CA	346	G
53	CA	347	G
53	CA	348	G
53	CA	351	G
53	CA	352	C
53	CA	353	A
53	CA	354	G
53	CA	366	A
53	CA	367	U
53	CA	369	G
53	CA	372	C
53	CA	373	A
53	CA	374	A
53	CA	376	G
53	CA	381	C
53	CA	382	A
53	CA	384	G
53	CA	397	A
53	CA	398	U
53	CA	406	G
53	CA	411	A
53	CA	412	A
53	CA	413	G
53	CA	414	A
53	CA	415	A
53	CA	421	U
53	CA	422	C
53	CA	423	G
53	CA	424	G
53	CA	429	U
53	CA	430	A
53	CA	435	A
53	CA	436	C
53	CA	440	C
53	CA	451	A
53	CA	452	A

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Mol	Chain	Res	Type
53	CA	456	A
53	CA	457	G
53	CA	458	U
53	CA	459	A
53	CA	461	A
53	CA	463	U
53	CA	464	U
53	CA	466	A
53	CA	467	U
53	CA	468	A
53	CA	474	G
53	CA	476	U
53	CA	477	C
53	CA	478	A
53	CA	479	U
53	CA	481	G
53	CA	482	A
53	CA	483	C
53	CA	484	G
53	CA	485	U
53	CA	486	U
53	CA	493	A
53	CA	496	A
53	CA	497	G
53	CA	500	G
53	CA	501	C
53	CA	511	C
53	CA	512	U
53	CA	513	C
53	CA	518	C
53	CA	519	C
53	CA	520	A
53	CA	522	C
53	CA	527	G
53	CA	530	G
53	CA	531	U
53	CA	532	A
53	CA	533	A
53	CA	534	U
53	CA	535	A
53	CA	536	C
53	CA	547	A

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Mol	Chain	Res	Type
53	CA	550	G
53	CA	559	A
53	CA	562	U
53	CA	563	A
53	CA	564	C
53	CA	568	G
53	CA	572	A
53	CA	573	A
53	CA	576	C
53	CA	577	G
53	CA	595	A
53	CA	596	A
53	CA	604	G
53	CA	616	G
53	CA	641	U
53	CA	642	A
53	CA	643	C
53	CA	653	U
53	CA	654	G
53	CA	665	A
53	CA	684	U
53	CA	687	A
53	CA	688	G
53	CA	695	A
53	CA	700	G
53	CA	701	U
53	CA	702	A
53	CA	703	G
53	CA	704	A
53	CA	705	G
53	CA	721	G
53	CA	722	G
53	CA	723	U
53	CA	724	G
53	CA	731	G
53	CA	734	G
53	CA	748	G
53	CA	752	G
53	CA	753	A
53	CA	754	C
53	CA	755	G
53	CA	776	G

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Mol	Chain	Res	Type
53	CA	777	A
53	CA	781	A
53	CA	782	A
53	CA	785	G
53	CA	792	A
53	CA	793	U
53	CA	794	A
53	CA	803	G
53	CA	812	G
53	CA	813	U
53	CA	815	A
53	CA	817	C
53	CA	819	A
53	CA	820	U
53	CA	821	G
53	CA	828	U
53	CA	829	G
53	CA	841	C
53	CA	842	U
53	CA	843	U
53	CA	844	G
53	CA	845	A
53	CA	846	G
53	CA	847	G
53	CA	849	G
53	CA	870	U
53	CA	876	C
53	CA	880	C
53	CA	889	A
53	CA	890	G
53	CA	913	A
53	CA	914	A
53	CA	926	G
53	CA	927	G
53	CA	934	C
53	CA	935	A
53	CA	936	C
53	CA	942	G
53	CA	945	G
53	CA	960	U
53	CA	961	U
53	CA	962	C

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Mol	Chain	Res	Type
53	CA	966	G
53	CA	968	A
53	CA	969	A
53	CA	972	C
53	CA	974	A
53	CA	975	A
53	CA	976	G
53	CA	977	A
53	CA	978	A
53	CA	982	U
53	CA	983	A
53	CA	985	C
53	CA	987	G
53	CA	990	C
53	CA	991	U
53	CA	992	U
53	CA	993	G
53	CA	995	C
53	CA	996	A
53	CA	1000	A
53	CA	1004	A
53	CA	1006	G
53	CA	1007	U
53	CA	1016	A
53	CA	1019	A
53	CA	1020	G
53	CA	1022	A
53	CA	1024	G
53	CA	1026	G
53	CA	1029	U
53	CA	1031	C
53	CA	1032	G
53	CA	1033	G
53	CA	1036	A
53	CA	1037	C
53	CA	1049	U
53	CA	1050	G
53	CA	1052	U
53	CA	1053	G
53	CA	1054	C
53	CA	1065	U
53	CA	1066	C

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Mol	Chain	Res	Type
53	CA	1067	A
53	CA	1068	G
53	CA	1072	G
53	CA	1086	U
53	CA	1094	G
53	CA	1095	U
53	CA	1101	A
53	CA	1102	A
53	CA	1113	C
53	CA	1124	G
53	CA	1125	U
53	CA	1130	A
53	CA	1131	G
53	CA	1136	C
53	CA	1137	C
53	CA	1138	G
53	CA	1139	G
53	CA	1140	C
53	CA	1141	C
53	CA	1142	G
53	CA	1143	G
53	CA	1145	A
53	CA	1146	A
53	CA	1147	C
53	CA	1148	U
53	CA	1151	A
53	CA	1152	A
53	CA	1158	C
53	CA	1159	U
53	CA	1160	G
53	CA	1161	C
53	CA	1169	A
53	CA	1176	A
53	CA	1178	G
53	CA	1181	G
53	CA	1183	U
53	CA	1184	G
53	CA	1191	A
53	CA	1193	G
53	CA	1196	A
53	CA	1197	A
53	CA	1201	A

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Mol	Chain	Res	Type
53	CA	1202	U
53	CA	1212	U
53	CA	1213	A
53	CA	1214	C
53	CA	1215	G
53	CA	1216	A
53	CA	1217	C
53	CA	1222	G
53	CA	1224	U
53	CA	1225	A
53	CA	1226	C
53	CA	1228	C
53	CA	1229	A
53	CA	1238	A
53	CA	1239	A
53	CA	1240	U
53	CA	1241	G
53	CA	1243	C
53	CA	1250	A
53	CA	1251	A
53	CA	1256	A
53	CA	1257	A
53	CA	1260	G
53	CA	1266	G
53	CA	1278	G
53	CA	1279	G
53	CA	1280	A
53	CA	1281	C
53	CA	1282	C
53	CA	1283	U
53	CA	1285	A
53	CA	1286	U
53	CA	1287	A
53	CA	1288	A
53	CA	1294	G
53	CA	1295	U
53	CA	1297	G
53	CA	1298	U
53	CA	1299	A
53	CA	1300	G
53	CA	1301	U
53	CA	1302	C

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Mol	Chain	Res	Type
53	CA	1303	C
53	CA	1305	G
53	CA	1316	G
53	CA	1317	C
53	CA	1320	C
53	CA	1322	C
53	CA	1323	G
53	CA	1324	A
53	CA	1332	A
53	CA	1338	G
53	CA	1346	A
53	CA	1348	U
53	CA	1349	A
53	CA	1359	C
53	CA	1362	A
53	CA	1364	U
53	CA	1365	G
53	CA	1366	C
53	CA	1367	C
53	CA	1370	G
53	CA	1379	G
53	CA	1381	U
53	CA	1382	C
53	CA	1398	A
53	CA	1411	C
53	CA	1429	A
53	CA	1432	G
53	CA	1441	A
53	CA	1446	A
53	CA	1447	A
53	CA	1448	C
53	CA	1449	C
53	CA	1451	U
53	CA	1452	C
53	CA	1453	G
53	CA	1454	G
53	CA	1455	G
53	CA	1491	G
53	CA	1493	A
53	CA	1494	G
53	CA	1497	G
53	CA	1503	A

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Mol	Chain	Res	Type
53	CA	1506	U
53	CA	1517	G
53	CA	1519	A
53	CA	1520	C
53	CA	1529	G
53	CA	1530	G
53	CA	1534	A
22	DA	14	A
22	DA	15	G
22	DA	27	G
22	DA	28	A
22	DA	34	U
22	DA	35	G
22	DA	36	G
22	DA	39	G
22	DA	46	G
22	DA	49	A
22	DA	50	U
22	DA	52	A
22	DA	53	A
22	DA	61	C
22	DA	62	U
22	DA	64	A
22	DA	71	A
22	DA	73	A
22	DA	74	A
22	DA	75	G
22	DA	76	C
22	DA	77	G
22	DA	79	C
22	DA	83	A
22	DA	84	A
22	DA	85	G
22	DA	86	G
22	DA	87	U
22	DA	91	A
22	DA	96	C
22	DA	100	U
22	DA	101	A
22	DA	102	U
22	DA	103	A
22	DA	104	A

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Mol	Chain	Res	Type
22	DA	118	A
22	DA	119	A
22	DA	120	U
22	DA	121	G
22	DA	122	G
22	DA	126	A
22	DA	128	C
22	DA	134	G
22	DA	139	U
22	DA	140	C
22	DA	141	G
22	DA	142	A
22	DA	144	A
22	DA	155	A
22	DA	156	A
22	DA	160	A
22	DA	163	C
22	DA	164	C
22	DA	166	U
22	DA	177	G
22	DA	180	G
22	DA	181	A
22	DA	196	A
22	DA	199	A
22	DA	204	A
22	DA	205	G
22	DA	206	U
22	DA	207	A
22	DA	216	A
22	DA	217	A
22	DA	221	A
22	DA	222	A
22	DA	223	A
22	DA	224	U
22	DA	227	A
22	DA	228	C
22	DA	229	C
22	DA	230	G
22	DA	231	A
22	DA	233	A
22	DA	234	U
22	DA	235	U

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Mol	Chain	Res	Type
22	DA	241	A
22	DA	242	G
22	DA	245	G
22	DA	248	G
22	DA	249	C
22	DA	250	G
22	DA	251	A
22	DA	255	A
22	DA	264	C
22	DA	265	A
22	DA	266	G
22	DA	271	G
22	DA	272	A
22	DA	273	G
22	DA	277	G
22	DA	281	C
22	DA	284	U
22	DA	285	G
22	DA	294	A
22	DA	295	G
22	DA	299	A
22	DA	302	C
22	DA	303	G
22	DA	311	A
22	DA	312	G
22	DA	314	C
22	DA	315	G
22	DA	321	U
22	DA	322	A
22	DA	323	C
22	DA	324	A
22	DA	325	G
22	DA	329	G
22	DA	330	A
22	DA	334	C
22	DA	335	C
22	DA	336	C
22	DA	343	C
22	DA	349	U
22	DA	351	C
22	DA	353	C
22	DA	354	A

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Mol	Chain	Res	Type
22	DA	362	A
22	DA	370	G
22	DA	371	A
22	DA	372	G
22	DA	374	A
22	DA	383	C
22	DA	385	C
22	DA	386	G
22	DA	387	U
22	DA	388	G
22	DA	389	G
22	DA	390	U
22	DA	392	U
22	DA	396	G
22	DA	397	U
22	DA	399	U
22	DA	404	A
22	DA	405	U
22	DA	406	G
22	DA	407	G
22	DA	411	G
22	DA	412	A
22	DA	413	C
22	DA	423	A
22	DA	424	G
22	DA	428	A
22	DA	430	A
22	DA	436	C
22	DA	443	A
22	DA	444	C
22	DA	445	C
22	DA	446	G
22	DA	447	A
22	DA	451	U
22	DA	455	C
22	DA	457	A
22	DA	461	C
22	DA	462	C
22	DA	467	G
22	DA	474	G
22	DA	475	C
22	DA	476	G

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Mol	Chain	Res	Type
22	DA	477	A
22	DA	480	A
22	DA	481	G
22	DA	482	A
22	DA	483	A
22	DA	484	C
22	DA	489	G
22	DA	490	C
22	DA	491	G
22	DA	492	A
22	DA	498	G
22	DA	502	A
22	DA	503	A
22	DA	504	A
22	DA	505	A
22	DA	507	A
22	DA	510	C
22	DA	512	G
22	DA	527	C
22	DA	529	A
22	DA	532	A
22	DA	544	C
22	DA	545	U
22	DA	546	U
22	DA	547	A
22	DA	548	G
22	DA	549	G
22	DA	550	C
22	DA	562	U
22	DA	563	A
22	DA	572	A
22	DA	573	U
22	DA	574	A
22	DA	575	A
22	DA	576	U
22	DA	586	A
22	DA	587	C
22	DA	590	A
22	DA	603	A
22	DA	604	G
22	DA	605	G
22	DA	606	U

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Mol	Chain	Res	Type
22	DA	613	A
22	DA	614	A
22	DA	616	A
22	DA	617	G
22	DA	618	G
22	DA	620	G
22	DA	621	A
22	DA	622	G
22	DA	623	C
22	DA	627	A
22	DA	628	G
22	DA	629	G
22	DA	637	A
22	DA	638	G
22	DA	639	U
22	DA	645	C
22	DA	646	U
22	DA	649	G
22	DA	654	A
22	DA	655	A
22	DA	656	G
22	DA	662	G
22	DA	664	G
22	DA	671	C
22	DA	672	C
22	DA	685	A
22	DA	686	U
22	DA	695	G
22	DA	699	A
22	DA	705	A
22	DA	711	G
22	DA	717	C
22	DA	726	G
22	DA	728	G
22	DA	730	A
22	DA	740	C
22	DA	745	G
22	DA	746	U
22	DA	747	U
22	DA	748	G
22	DA	751	A
22	DA	753	A

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Mol	Chain	Res	Type
22	DA	757	G
22	DA	762	U
22	DA	763	G
22	DA	764	A
22	DA	770	G
22	DA	775	G
22	DA	776	G
22	DA	781	A
22	DA	782	A
22	DA	784	G
22	DA	785	G
22	DA	789	A
22	DA	790	U
22	DA	791	C
22	DA	792	A
22	DA	801	G
22	DA	805	G
22	DA	806	C
22	DA	807	U
22	DA	812	C
22	DA	819	A
22	DA	827	U
22	DA	828	U
22	DA	831	G
22	DA	846	U
22	DA	847	U
22	DA	858	G
22	DA	859	G
22	DA	860	U
22	DA	861	A
22	DA	866	A
22	DA	867	C
22	DA	868	U
22	DA	873	C
22	DA	875	G
22	DA	877	A
22	DA	878	A
22	DA	902	C
22	DA	905	A
22	DA	910	A
22	DA	912	C
22	DA	914	G

Continued on next page...

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Mol	Chain	Res	Type
22	DA	915	C
22	DA	916	G
22	DA	919	U
22	DA	922	C
22	DA	931	U
22	DA	932	U
22	DA	933	A
22	DA	941	A
22	DA	944	C
22	DA	946	C
22	DA	953	G
22	DA	958	U
22	DA	961	C
22	DA	962	G
22	DA	963	U
22	DA	964	C
22	DA	973	A
22	DA	974	G
22	DA	981	A
22	DA	983	A
22	DA	985	C
22	DA	990	A
22	DA	991	C
22	DA	995	C
22	DA	996	A
22	DA	1005	C
22	DA	1009	A
22	DA	1010	A
22	DA	1012	U
22	DA	1013	C
22	DA	1020	A
22	DA	1021	A
22	DA	1022	G
22	DA	1023	U
22	DA	1024	G
22	DA	1025	G
22	DA	1026	G
22	DA	1027	A
22	DA	1033	U
22	DA	1039	A
22	DA	1044	C
22	DA	1045	C

Continued on next page...

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Mol	Chain	Res	Type
22	DA	1046	A
22	DA	1047	G
22	DA	1048	A
22	DA	1049	C
22	DA	1050	A
22	DA	1055	G
22	DA	1056	G
22	DA	1057	A
22	DA	1060	U
22	DA	1063	G
22	DA	1064	C
22	DA	1068	G
22	DA	1069	A
22	DA	1070	A
22	DA	1071	G
22	DA	1072	C
22	DA	1073	A
22	DA	1074	G
22	DA	1076	C
22	DA	1077	A
22	DA	1079	C
22	DA	1080	A
22	DA	1083	U
22	DA	1086	A
22	DA	1088	A
22	DA	1089	A
22	DA	1091	G
22	DA	1097	U
22	DA	1100	C
22	DA	1103	A
22	DA	1110	G
22	DA	1111	A
22	DA	1112	G
22	DA	1113	U
22	DA	1114	C
22	DA	1115	G
22	DA	1119	U
22	DA	1127	A
22	DA	1128	G
22	DA	1129	A
22	DA	1130	U
22	DA	1132	U

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Mol	Chain	Res	Type
22	DA	1133	A
22	DA	1134	A
22	DA	1135	C
22	DA	1136	G
22	DA	1139	G
22	DA	1142	A
22	DA	1153	C
22	DA	1155	A
22	DA	1157	G
22	DA	1169	A
22	DA	1170	C
22	DA	1172	C
22	DA	1174	U
22	DA	1176	U
22	DA	1204	A
22	DA	1205	A
22	DA	1206	G
22	DA	1207	C
22	DA	1210	G
22	DA	1211	C
22	DA	1227	G
22	DA	1231	U
22	DA	1235	G
22	DA	1236	G
22	DA	1237	A
22	DA	1241	A
22	DA	1242	U
22	DA	1246	A
22	DA	1247	A
22	DA	1248	G
22	DA	1249	U
22	DA	1250	G
22	DA	1253	A
22	DA	1255	U
22	DA	1256	G
22	DA	1262	A
22	DA	1265	A
22	DA	1266	G
22	DA	1267	U
22	DA	1268	A
22	DA	1271	G
22	DA	1272	A

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Mol	Chain	Res	Type
22	DA	1273	U
22	DA	1274	A
22	DA	1275	A
22	DA	1276	A
22	DA	1278	C
22	DA	1286	A
22	DA	1287	A
22	DA	1288	G
22	DA	1290	C
22	DA	1291	C
22	DA	1300	G
22	DA	1301	A
22	DA	1304	A
22	DA	1311	G
22	DA	1312	U
22	DA	1313	U
22	DA	1321	A
22	DA	1324	G
22	DA	1325	U
22	DA	1326	U
22	DA	1327	A
22	DA	1330	C
22	DA	1331	G
22	DA	1332	G
22	DA	1336	A
22	DA	1337	G
22	DA	1340	U
22	DA	1341	G
22	DA	1343	G
22	DA	1344	U
22	DA	1345	C
22	DA	1346	G
22	DA	1352	U
22	DA	1355	G
22	DA	1365	A
22	DA	1374	G
22	DA	1376	C
22	DA	1378	A
22	DA	1379	U
22	DA	1382	G
22	DA	1383	A
22	DA	1386	C

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Mol	Chain	Res	Type
22	DA	1387	A
22	DA	1388	G
22	DA	1389	G
22	DA	1397	U
22	DA	1398	C
22	DA	1399	C
22	DA	1400	U
22	DA	1401	G
22	DA	1403	A
22	DA	1404	C
22	DA	1416	G
22	DA	1417	C
22	DA	1418	G
22	DA	1419	A
22	DA	1420	A
22	DA	1421	G
22	DA	1426	G
22	DA	1427	A
22	DA	1428	C
22	DA	1430	G
22	DA	1440	U
22	DA	1444	G
22	DA	1452	G
22	DA	1453	A
22	DA	1455	G
22	DA	1456	G
22	DA	1459	G
22	DA	1460	U
22	DA	1461	C
22	DA	1470	A
22	DA	1478	G
22	DA	1481	U
22	DA	1482	G
22	DA	1483	G
22	DA	1489	C
22	DA	1490	A
22	DA	1491	G
22	DA	1493	C
22	DA	1494	A
22	DA	1498	C
22	DA	1503	A
22	DA	1504	A

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Mol	Chain	Res	Type
22	DA	1507	C
22	DA	1508	A
22	DA	1509	A
22	DA	1510	G
22	DA	1511	G
22	DA	1520	U
22	DA	1522	A
22	DA	1523	U
22	DA	1524	G
22	DA	1530	G
22	DA	1531	C
22	DA	1532	A
22	DA	1533	C
22	DA	1534	U
22	DA	1535	A
22	DA	1536	C
22	DA	1537	G
22	DA	1538	G
22	DA	1539	U
22	DA	1541	C
22	DA	1554	U
22	DA	1555	G
22	DA	1556	C
22	DA	1559	U
22	DA	1560	G
22	DA	1565	C
22	DA	1567	G
22	DA	1568	G
22	DA	1569	A
22	DA	1583	A
22	DA	1584	U
22	DA	1585	C
22	DA	1586	A
22	DA	1587	G
22	DA	1600	C
22	DA	1601	G
22	DA	1603	A
22	DA	1606	C
22	DA	1607	C
22	DA	1608	A
22	DA	1610	A
22	DA	1612	C

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Mol	Chain	Res	Type
22	DA	1613	G
22	DA	1616	A
22	DA	1618	A
22	DA	1626	A
22	DA	1633	G
22	DA	1635	A
22	DA	1636	U
22	DA	1640	A
22	DA	1646	C
22	DA	1647	U
22	DA	1648	U
22	DA	1649	G
22	DA	1654	A
22	DA	1655	A
22	DA	1663	G
22	DA	1664	A
22	DA	1674	G
22	DA	1694	C
22	DA	1695	G
22	DA	1696	G
22	DA	1699	G
22	DA	1700	A
22	DA	1701	A
22	DA	1706	C
22	DA	1707	G
22	DA	1714	U
22	DA	1715	G
22	DA	1717	A
22	DA	1722	A
22	DA	1723	G
22	DA	1728	C
22	DA	1729	U
22	DA	1730	C
22	DA	1731	G
22	DA	1732	C
22	DA	1733	G
22	DA	1734	G
22	DA	1735	A
22	DA	1738	G
22	DA	1750	G
22	DA	1758	U
22	DA	1764	C

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Mol	Chain	Res	Type
22	DA	1773	A
22	DA	1776	G
22	DA	1782	U
22	DA	1787	A
22	DA	1794	A
22	DA	1800	C
22	DA	1802	A
22	DA	1808	A
22	DA	1809	A
22	DA	1810	A
22	DA	1811	G
22	DA	1817	G
22	DA	1818	U
22	DA	1820	U
22	DA	1821	A
22	DA	1822	C
22	DA	1823	G
22	DA	1824	G
22	DA	1828	G
22	DA	1829	A
22	DA	1847	A
22	DA	1848	A
22	DA	1857	G
22	DA	1865	U
22	DA	1866	A
22	DA	1867	G
22	DA	1869	G
22	DA	1870	C
22	DA	1873	G
22	DA	1875	G
22	DA	1877	A
22	DA	1884	G
22	DA	1889	A
22	DA	1903	G
22	DA	1906	G
22	DA	1913	A
22	DA	1914	C
22	DA	1915	U
22	DA	1916	A
22	DA	1927	A
22	DA	1929	G
22	DA	1930	G

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Mol	Chain	Res	Type
22	DA	1931	U
22	DA	1937	A
22	DA	1938	A
22	DA	1939	U
22	DA	1941	C
22	DA	1942	C
22	DA	1943	U
22	DA	1944	U
22	DA	1945	G
22	DA	1955	U
22	DA	1956	U
22	DA	1961	C
22	DA	1963	U
22	DA	1964	G
22	DA	1965	C
22	DA	1966	A
22	DA	1967	C
22	DA	1970	A
22	DA	1971	U
22	DA	1972	G
22	DA	1975	G
22	DA	1982	U
22	DA	1991	U
22	DA	1992	G
22	DA	1993	U
22	DA	1997	C
22	DA	2018	G
22	DA	2020	A
22	DA	2022	U
22	DA	2023	C
22	DA	2024	G
22	DA	2030	A
22	DA	2031	A
22	DA	2033	A
22	DA	2034	U
22	DA	2035	G
22	DA	2043	C
22	DA	2049	G
22	DA	2051	A
22	DA	2055	C
22	DA	2056	G
22	DA	2060	A

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Mol	Chain	Res	Type
22	DA	2061	G
22	DA	2062	A
22	DA	2068	U
22	DA	2069	G
22	DA	2080	A
22	DA	2092	U
22	DA	2093	G
22	DA	2094	A
22	DA	2104	C
22	DA	2107	G
22	DA	2108	A
22	DA	2109	U
22	DA	2110	G
22	DA	2134	A
22	DA	2135	A
22	DA	2136	G
22	DA	2138	G
22	DA	2139	U
22	DA	2143	C
22	DA	2144	G
22	DA	2145	C
22	DA	2147	A
22	DA	2148	G
22	DA	2150	C
22	DA	2152	G
22	DA	2153	C
22	DA	2154	A
22	DA	2156	G
22	DA	2157	G
22	DA	2180	U
22	DA	2181	U
22	DA	2183	A
22	DA	2187	U
22	DA	2191	A
22	DA	2192	U
22	DA	2199	A
22	DA	2204	G
22	DA	2210	U
22	DA	2211	A
22	DA	2212	A
22	DA	2213	U
22	DA	2216	G

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Mol	Chain	Res	Type
22	DA	2225	A
22	DA	2238	G
22	DA	2239	G
22	DA	2242	G
22	DA	2250	G
22	DA	2267	A
22	DA	2268	A
22	DA	2271	G
22	DA	2279	G
22	DA	2282	G
22	DA	2283	C
22	DA	2286	G
22	DA	2287	A
22	DA	2289	G
22	DA	2297	A
22	DA	2298	A
22	DA	2299	U
22	DA	2305	U
22	DA	2306	C
22	DA	2308	G
22	DA	2309	A
22	DA	2310	C
22	DA	2311	A
22	DA	2312	U
22	DA	2313	C
22	DA	2314	A
22	DA	2320	U
22	DA	2325	G
22	DA	2332	C
22	DA	2334	U
22	DA	2335	A
22	DA	2336	A
22	DA	2337	G
22	DA	2338	C
22	DA	2339	C
22	DA	2345	G
22	DA	2347	C
22	DA	2348	U
22	DA	2358	A
22	DA	2361	G
22	DA	2379	G
22	DA	2382	G

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Mol	Chain	Res	Type
22	DA	2383	G
22	DA	2385	C
22	DA	2386	A
22	DA	2387	U
22	DA	2388	A
22	DA	2390	U
22	DA	2392	A
22	DA	2401	U
22	DA	2402	U
22	DA	2403	C
22	DA	2405	G
22	DA	2407	A
22	DA	2409	G
22	DA	2423	U
22	DA	2424	C
22	DA	2425	A
22	DA	2426	A
22	DA	2427	C
22	DA	2428	G
22	DA	2429	G
22	DA	2430	A
22	DA	2431	U
22	DA	2435	A
22	DA	2441	U
22	DA	2447	G
22	DA	2448	A
22	DA	2475	C
22	DA	2476	A
22	DA	2491	U
22	DA	2494	G
22	DA	2498	C
22	DA	2500	U
22	DA	2502	G
22	DA	2505	G
22	DA	2518	A
22	DA	2520	C
22	DA	2529	G
22	DA	2534	A
22	DA	2542	A
22	DA	2547	A
22	DA	2554	U
22	DA	2566	A

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Mol	Chain	Res	Type
22	DA	2567	G
22	DA	2569	G
22	DA	2573	C
22	DA	2576	G
22	DA	2578	G
22	DA	2579	C
22	DA	2581	G
22	DA	2582	G
22	DA	2586	U
22	DA	2602	A
22	DA	2609	U
22	DA	2610	C
22	DA	2613	U
22	DA	2614	A
22	DA	2615	U
22	DA	2616	C
22	DA	2629	U
22	DA	2630	G
22	DA	2632	A
22	DA	2645	G
22	DA	2656	U
22	DA	2657	A
22	DA	2666	C
22	DA	2667	C
22	DA	2668	G
22	DA	2681	C
22	DA	2682	A
22	DA	2683	C
22	DA	2689	U
22	DA	2690	U
22	DA	2714	G
22	DA	2718	G
22	DA	2726	A
22	DA	2727	A
22	DA	2728	U
22	DA	2729	G
22	DA	2732	G
22	DA	2736	A
22	DA	2739	U
22	DA	2744	G
22	DA	2748	A
22	DA	2751	G

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Mol	Chain	Res	Type
22	DA	2752	C
22	DA	2753	A
22	DA	2757	A
22	DA	2758	A
22	DA	2761	A
22	DA	2765	A
22	DA	2777	G
22	DA	2778	A
22	DA	2791	G
22	DA	2792	A
22	DA	2798	U
22	DA	2799	A
22	DA	2801	G
22	DA	2808	G
22	DA	2820	A
22	DA	2822	G
22	DA	2832	U
22	DA	2834	G
22	DA	2835	A
22	DA	2836	U
22	DA	2837	A
22	DA	2848	G
22	DA	2850	A
22	DA	2851	A
22	DA	2861	U
22	DA	2867	G
22	DA	2872	A
22	DA	2873	A
22	DA	2874	C
22	DA	2875	C
22	DA	2876	G
22	DA	2879	A
22	DA	2880	C
22	DA	2883	A
22	DA	2894	G
22	DA	2902	C
57	DB	3	C
57	DB	12	C
57	DB	13	G
57	DB	15	A
57	DB	16	G
57	DB	17	C

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Mol	Chain	Res	Type
57	DB	24	G
57	DB	25	U
57	DB	30	C
57	DB	35	C
57	DB	36	C
57	DB	41	G
57	DB	42	C
57	DB	43	C
57	DB	44	G
57	DB	45	A
57	DB	48	U
57	DB	56	G
57	DB	57	A
57	DB	63	C
57	DB	64	G
57	DB	65	U
57	DB	66	A
57	DB	67	G
57	DB	68	C
57	DB	70	C
57	DB	87	U
57	DB	89	U
57	DB	90	C
57	DB	99	A
57	DB	109	A
57	DB	110	C
57	DB	111	U

All (421) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	47	C
1	AA	51	A
1	AA	72	A
1	AA	87	C
1	AA	95	C
1	AA	110	C
1	AA	115	G
1	AA	175	C
1	AA	184	G
1	AA	198	G
1	AA	250	A

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Mol	Chain	Res	Type
1	AA	251	G
1	AA	266	G
1	AA	267	C
1	AA	274	A
1	AA	330	C
1	AA	344	A
1	AA	346	G
1	AA	351	G
1	AA	366	A
1	AA	368	U
1	AA	373	A
1	AA	414	A
1	AA	428	G
1	AA	429	U
1	AA	451	A
1	AA	452	A
1	AA	466	A
1	AA	484	G
1	AA	486	U
1	AA	495	A
1	AA	499	A
1	AA	500	G
1	AA	534	U
1	AA	548	G
1	AA	701	U
1	AA	722	G
1	AA	754	C
1	AA	817	C
1	AA	884	U
1	AA	913	A
1	AA	976	G
1	AA	982	U
1	AA	1049	U
1	AA	1066	C
1	AA	1101	A
1	AA	1136	C
1	AA	1158	C
1	AA	1201	A
1	AA	1228	C
1	AA	1241	G
1	AA	1282	C
1	AA	1287	A

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Mol	Chain	Res	Type
1	AA	1303	C
1	AA	1323	G
1	AA	1331	G
1	AA	1336	C
1	AA	1348	U
1	AA	1381	U
1	AA	1453	G
1	AA	1454	G
1	AA	1505	G
1	AA	1530	G
22	BA	34	U
22	BA	60	G
22	BA	100	U
22	BA	119	A
22	BA	125	A
22	BA	137	U
22	BA	142	A
22	BA	164	C
22	BA	199	A
22	BA	221	A
22	BA	271	G
22	BA	301	G
22	BA	302	C
22	BA	310	A
22	BA	386	G
22	BA	404	A
22	BA	479	A
22	BA	504	A
22	BA	507	A
22	BA	527	C
22	BA	555	G
22	BA	603	A
22	BA	655	A
22	BA	746	U
22	BA	764	A
22	BA	790	U
22	BA	800	A
22	BA	914	G
22	BA	931	U
22	BA	958	U
22	BA	995	C
22	BA	1011	G

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Mol	Chain	Res	Type
22	BA	1020	A
22	BA	1023	U
22	BA	1025	G
22	BA	1062	G
22	BA	1247	A
22	BA	1275	A
22	BA	1324	G
22	BA	1340	U
22	BA	1378	A
22	BA	1379	U
22	BA	1458	U
22	BA	1459	G
22	BA	1475	G
22	BA	1493	C
22	BA	1498	C
22	BA	1535	A
22	BA	1537	G
22	BA	1554	U
22	BA	1606	C
22	BA	1695	G
22	BA	1706	C
22	BA	1713	A
22	BA	1714	U
22	BA	1738	G
22	BA	1847	A
22	BA	1857	G
22	BA	1858	A
22	BA	1871	A
22	BA	1929	G
22	BA	1936	A
22	BA	1941	C
22	BA	1943	U
22	BA	2092	U
22	BA	2136	G
22	BA	2146	C
22	BA	2148	G
22	BA	2149	U
22	BA	2199	A
22	BA	2211	A
22	BA	2225	A
22	BA	2282	G
22	BA	2296	U

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Mol	Chain	Res	Type
22	BA	2311	A
22	BA	2321	U
22	BA	2324	U
22	BA	2326	C
22	BA	2405	G
22	BA	2406	A
22	BA	2425	A
22	BA	2430	A
22	BA	2602	A
22	BA	2756	U
22	BA	2800	A
22	BA	2820	A
22	BA	2873	A
53	CA	6	G
53	CA	14	U
53	CA	60	A
53	CA	66	A
53	CA	71	A
53	CA	72	A
53	CA	86	G
53	CA	87	C
53	CA	89	U
53	CA	95	C
53	CA	109	A
53	CA	131	A
53	CA	173	U
53	CA	197	A
53	CA	239	U
53	CA	243	A
53	CA	245	U
53	CA	247	G
53	CA	251	G
53	CA	252	U
53	CA	274	A
53	CA	279	A
53	CA	305	G
53	CA	328	C
53	CA	347	G
53	CA	351	G
53	CA	352	C
53	CA	366	A
53	CA	368	U

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Mol	Chain	Res	Type
53	CA	372	C
53	CA	373	A
53	CA	382	A
53	CA	423	G
53	CA	424	G
53	CA	429	U
53	CA	451	A
53	CA	484	G
53	CA	496	A
53	CA	500	G
53	CA	510	A
53	CA	512	U
53	CA	519	C
53	CA	534	U
53	CA	559	A
53	CA	563	A
53	CA	575	G
53	CA	701	U
53	CA	704	A
53	CA	753	A
53	CA	802	A
53	CA	819	A
53	CA	913	A
53	CA	973	G
53	CA	975	A
53	CA	977	A
53	CA	978	A
53	CA	1049	U
53	CA	1064	G
53	CA	1066	C
53	CA	1067	A
53	CA	1086	U
53	CA	1101	A
53	CA	1138	G
53	CA	1142	G
53	CA	1145	A
53	CA	1147	C
53	CA	1157	A
53	CA	1160	G
53	CA	1190	G
53	CA	1201	A
53	CA	1242	G

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Mol	Chain	Res	Type
53	CA	1278	G
53	CA	1282	C
53	CA	1299	A
53	CA	1300	G
53	CA	1331	G
53	CA	1381	U
53	CA	1447	A
53	CA	1451	U
53	CA	1452	C
53	CA	1453	G
22	DA	14	A
22	DA	33	C
22	DA	35	G
22	DA	49	A
22	DA	52	A
22	DA	73	A
22	DA	86	G
22	DA	103	A
22	DA	121	G
22	DA	125	A
22	DA	128	C
22	DA	196	A
22	DA	204	A
22	DA	206	U
22	DA	215	G
22	DA	221	A
22	DA	223	A
22	DA	227	A
22	DA	229	C
22	DA	230	G
22	DA	234	U
22	DA	241	A
22	DA	249	C
22	DA	311	A
22	DA	321	U
22	DA	324	A
22	DA	329	G
22	DA	335	C
22	DA	386	G
22	DA	389	G
22	DA	406	G
22	DA	412	A

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Mol	Chain	Res	Type
22	DA	423	A
22	DA	454	A
22	DA	474	G
22	DA	476	G
22	DA	479	A
22	DA	483	A
22	DA	489	G
22	DA	491	G
22	DA	503	A
22	DA	505	A
22	DA	575	A
22	DA	604	G
22	DA	617	G
22	DA	621	A
22	DA	622	G
22	DA	628	G
22	DA	638	G
22	DA	648	G
22	DA	670	A
22	DA	740	C
22	DA	746	U
22	DA	762	U
22	DA	763	G
22	DA	800	A
22	DA	806	C
22	DA	860	U
22	DA	865	C
22	DA	867	C
22	DA	876	C
22	DA	915	C
22	DA	931	U
22	DA	962	G
22	DA	984	A
22	DA	990	A
22	DA	1009	A
22	DA	1011	G
22	DA	1021	A
22	DA	1023	U
22	DA	1026	G
22	DA	1047	G
22	DA	1069	A
22	DA	1079	C

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Mol	Chain	Res	Type
22	DA	1112	G
22	DA	1126	A
22	DA	1135	C
22	DA	1156	A
22	DA	1157	G
22	DA	1204	A
22	DA	1206	G
22	DA	1210	G
22	DA	1265	A
22	DA	1267	U
22	DA	1274	A
22	DA	1275	A
22	DA	1289	C
22	DA	1300	G
22	DA	1312	U
22	DA	1313	U
22	DA	1325	U
22	DA	1339	G
22	DA	1385	A
22	DA	1388	G
22	DA	1399	C
22	DA	1400	U
22	DA	1415	U
22	DA	1417	C
22	DA	1427	A
22	DA	1455	G
22	DA	1482	G
22	DA	1489	C
22	DA	1491	G
22	DA	1508	A
22	DA	1510	G
22	DA	1537	G
22	DA	1554	U
22	DA	1555	G
22	DA	1568	G
22	DA	1606	C
22	DA	1612	C
22	DA	1635	A
22	DA	1648	U
22	DA	1654	A
22	DA	1663	G
22	DA	1682	G

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Mol	Chain	Res	Type
22	DA	1695	G
22	DA	1700	A
22	DA	1706	C
22	DA	1713	A
22	DA	1722	A
22	DA	1731	G
22	DA	1733	G
22	DA	1734	G
22	DA	1775	U
22	DA	1799	G
22	DA	1802	A
22	DA	1810	A
22	DA	1817	G
22	DA	1828	G
22	DA	1866	A
22	DA	1913	A
22	DA	1915	U
22	DA	1941	C
22	DA	1943	U
22	DA	1954	G
22	DA	1965	C
22	DA	1981	A
22	DA	2023	C
22	DA	2068	U
22	DA	2092	U
22	DA	2143	C
22	DA	2148	G
22	DA	2214	C
22	DA	2266	A
22	DA	2282	G
22	DA	2286	G
22	DA	2288	A
22	DA	2298	A
22	DA	2310	C
22	DA	2311	A
22	DA	2337	G
22	DA	2344	U
22	DA	2347	C
22	DA	2386	A
22	DA	2391	G
22	DA	2425	A
22	DA	2428	G

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Mol	Chain	Res	Type
22	DA	2492	U
22	DA	2497	A
22	DA	2543	G
22	DA	2566	A
22	DA	2581	G
22	DA	2601	C
22	DA	2613	U
22	DA	2615	U
22	DA	2656	U
22	DA	2666	C
22	DA	2667	C
22	DA	2682	A
22	DA	2727	A
22	DA	2750	A
22	DA	2752	C
22	DA	2756	U
22	DA	2757	A
22	DA	2776	A
22	DA	2777	G
22	DA	2798	U
22	DA	2836	U
22	DA	2850	A
22	DA	2874	C
22	DA	2875	C
22	DA	2893	A
57	DB	12	C
57	DB	13	G
57	DB	16	G
57	DB	56	G
57	DB	66	A
57	DB	90	C
57	DB	110	C

5.4 Non-standard residues in protein, DNA, RNA chains (i)

There are no non-standard protein/DNA/RNA residues in this entry.

5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

Of 363 ligands modelled in this entry, 362 are monoatomic - leaving 1 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
60	TEL	BA	3135	-	59,62,62	2.30	11 (18%)	77,92,92	3.45	30 (38%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
60	TEL	BA	3135	-	1/1/19/19	10/73/108/108	0/4/5/5

All (11) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
60	BA	3135	TEL	O16-C10	10.86	1.37	1.21
60	BA	3135	TEL	C10-N6	8.50	1.51	1.35
60	BA	3135	TEL	O5-C10	4.45	1.42	1.35
60	BA	3135	TEL	O9-C4	-4.21	1.39	1.46
60	BA	3135	TEL	O45-C50	-3.39	1.38	1.44
60	BA	3135	TEL	C37-N41	-3.20	1.29	1.35
60	BA	3135	TEL	C7-C13	-2.56	1.48	1.52
60	BA	3135	TEL	C7-C3	-2.49	1.51	1.54
60	BA	3135	TEL	C43-C40	-2.46	1.45	1.48
60	BA	3135	TEL	C56-N52	2.19	1.40	1.33
60	BA	3135	TEL	C47-N52	2.03	1.38	1.34

All (30) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
60	BA	3135	TEL	C3-N6-C10	-13.95	93.00	111.69
60	BA	3135	TEL	O5-C10-N6	-10.64	101.29	109.81

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
60	BA	3135	TEL	O5-C10-O16	-10.15	110.75	122.46
60	BA	3135	TEL	O16-C10-N6	-7.97	117.54	128.01
60	BA	3135	TEL	O5-C2-C3	-7.40	95.68	103.16
60	BA	3135	TEL	C12-C7-C3	-7.28	101.45	112.49
60	BA	3135	TEL	C1-C2-C3	-7.26	107.96	116.69
60	BA	3135	TEL	C42-C44-C49	-5.19	100.69	109.19
60	BA	3135	TEL	O48-C44-C42	-4.40	99.36	110.05
60	BA	3135	TEL	O9-C15-C21	-4.19	106.63	110.88
60	BA	3135	TEL	C23-C19-C24	-4.03	102.40	109.81
60	BA	3135	TEL	C58-N53-C57	-3.82	99.10	110.38
60	BA	3135	TEL	C14-C8-C4	-3.68	103.96	113.13
60	BA	3135	TEL	O45-C50-C54	3.48	114.46	109.14
60	BA	3135	TEL	C4-O9-C15	3.46	124.32	118.18
60	BA	3135	TEL	O9-C4-C8	-3.41	100.91	107.40
60	BA	3135	TEL	C24-C28-C34	-3.35	106.20	110.25
60	BA	3135	TEL	C25-C21-C26	-3.26	105.27	111.63
60	BA	3135	TEL	C23-C19-C13	-2.99	102.26	109.44
60	BA	3135	TEL	C33-C28-C24	2.70	115.36	111.12
60	BA	3135	TEL	O9-C4-C2	2.65	111.47	105.48
60	BA	3135	TEL	C58-N53-C49	-2.65	105.14	113.11
60	BA	3135	TEL	C12-C7-C13	-2.65	103.47	108.08
60	BA	3135	TEL	C1-C2-C4	2.39	116.62	112.36
60	BA	3135	TEL	C35-C30-C34	2.31	116.08	112.90
60	BA	3135	TEL	O29-C26-C30	2.26	123.81	120.60
60	BA	3135	TEL	C25-C21-C15	-2.23	106.13	110.40
60	BA	3135	TEL	C47-C43-C40	-2.10	117.84	121.22
60	BA	3135	TEL	C44-C49-N53	2.07	116.83	110.83
60	BA	3135	TEL	C40-C36-N31	-2.07	105.74	107.91

All (1) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
60	BA	3135	TEL	C3

All (10) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
60	BA	3135	TEL	C2-C3-C7-C12
60	BA	3135	TEL	C2-C3-C7-C13
60	BA	3135	TEL	O18-C13-C19-C23
60	BA	3135	TEL	N6-C11-C17-C22
60	BA	3135	TEL	C17-C22-C27-N31

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Mol	Chain	Res	Type	Atoms
60	BA	3135	TEL	O29-C26-C30-C35
60	BA	3135	TEL	C7-C13-C19-C23
60	BA	3135	TEL	O29-C26-C30-C34
60	BA	3135	TEL	O45-C42-O39-C34
60	BA	3135	TEL	C44-C42-O39-C34

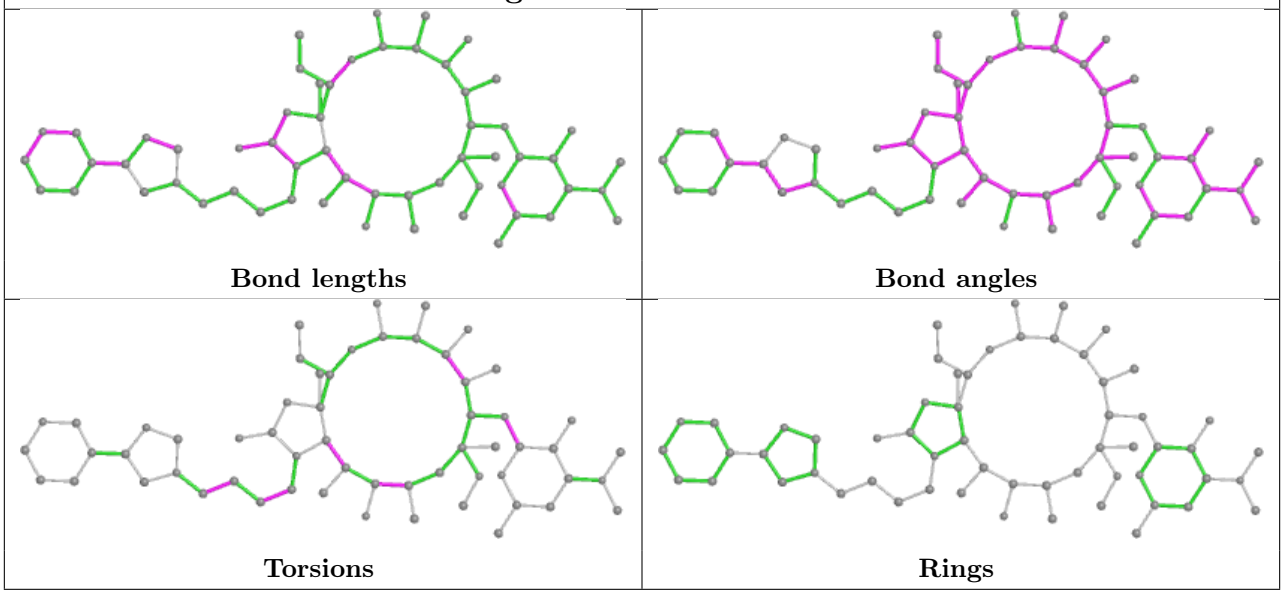
There are no ring outliers.

1 monomer is involved in 8 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
60	BA	3135	TEL	8	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less then 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

Ligand TEL BA 3135



5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

6 Fit of model and data (i)

6.1 Protein, DNA and RNA chains (i)

In the following table, the column labelled '#RSRZ> 2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95th percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled 'Q< 0.9' lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å^2)	Q<0.9
1	AA	1533/1533 (100%)	-0.42	20 (1%)	77	75	31, 83, 185, 422	0
2	AB	218/218 (100%)	1.61	69 (31%)	0	0	67, 161, 222, 300	0
2	CB	218/218 (100%)	1.74	86 (39%)	0	0	76, 168, 231, 274	0
3	AC	206/206 (100%)	0.79	16 (7%)	13	12	53, 101, 156, 201	0
3	CC	206/206 (100%)	0.97	31 (15%)	2	2	76, 138, 202, 264	0
4	AD	205/205 (100%)	0.30	8 (3%)	39	36	48, 93, 168, 305	0
4	CD	205/205 (100%)	-0.16	1 (0%)	91	90	26, 60, 114, 257	0
5	AE	150/150 (100%)	0.14	2 (1%)	77	75	38, 76, 150, 231	0
5	CE	150/150 (100%)	0.24	2 (1%)	77	75	34, 85, 143, 282	0
6	AF	100/100 (100%)	0.20	4 (4%)	38	35	52, 100, 147, 188	0
6	CF	100/100 (100%)	0.25	4 (4%)	38	35	69, 109, 169, 214	0
7	AG	151/151 (100%)	0.67	16 (10%)	6	6	77, 131, 195, 217	0
8	AH	129/129 (100%)	0.37	5 (3%)	39	36	45, 82, 133, 191	0
8	CH	129/129 (100%)	0.66	13 (10%)	7	7	60, 101, 151, 212	0
9	AI	127/127 (100%)	1.06	25 (19%)	1	1	64, 137, 207, 266	0
9	CI	127/127 (100%)	1.51	39 (30%)	0	0	98, 168, 246, 283	0
10	AJ	98/98 (100%)	0.83	14 (14%)	2	2	65, 111, 196, 260	0
10	CJ	98/98 (100%)	2.69	50 (51%)	0	0	94, 178, 248, 272	0
11	AK	117/117 (100%)	0.91	20 (17%)	1	1	44, 108, 190, 238	0
11	CK	117/117 (100%)	0.78	14 (11%)	4	4	49, 112, 169, 192	0
12	AL	123/123 (100%)	-0.03	1 (0%)	86	86	24, 62, 106, 208	0
12	CL	123/123 (100%)	0.44	6 (4%)	29	27	37, 73, 124, 211	0
13	AM	114/114 (100%)	0.51	11 (9%)	8	8	86, 135, 206, 262	0
14	AN	96/100 (96%)	0.54	6 (6%)	20	19	58, 105, 187, 274	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
14	CN	95/100 (95%)	1.83	36 (37%) 0 0	95, 187, 280, 335	0
15	AO	88/88 (100%)	-0.21	1 (1%) 80 80	43, 81, 124, 170	0
15	CO	88/88 (100%)	0.16	2 (2%) 60 58	57, 107, 153, 265	0
16	AP	82/82 (100%)	0.77	12 (14%) 2 2	56, 80, 166, 241	0
17	AQ	80/80 (100%)	0.67	7 (8%) 10 10	44, 78, 145, 219	0
17	CQ	80/80 (100%)	1.01	11 (13%) 2 2	57, 106, 146, 163	0
18	AR	55/55 (100%)	0.42	5 (9%) 9 10	60, 88, 151, 212	0
18	CR	55/55 (100%)	0.05	0 100 100	55, 88, 179, 249	0
19	AS	79/79 (100%)	1.62	27 (34%) 0 0	96, 137, 193, 233	0
19	CS	79/79 (100%)	3.10	50 (63%) 0 0	183, 316, 391, 403	0
20	AT	85/85 (100%)	-0.02	1 (1%) 79 77	47, 84, 131, 157	0
20	CT	85/85 (100%)	1.30	19 (22%) 0 1	66, 115, 191, 210	0
21	AU	51/51 (100%)	2.20	29 (56%) 0 0	96, 152, 206, 217	0
21	CU	51/51 (100%)	0.78	6 (11%) 4 4	66, 117, 183, 253	0
22	BA	2854/2903 (98%)	-0.38	36 (1%) 77 75	5, 32, 160, 403	0
22	DA	2841/2903 (97%)	0.52	117 (4%) 37 34	53, 122, 250, 469	0
23	BB	118/118 (100%)	-0.41	0 100 100	13, 44, 74, 101	0
24	BC	271/271 (100%)	-0.15	9 (3%) 46 43	12, 42, 93, 209	0
24	DC	271/271 (100%)	0.72	24 (8%) 9 10	59, 93, 144, 185	0
25	BD	209/209 (100%)	-0.30	0 100 100	4, 26, 73, 178	0
25	DD	209/209 (100%)	1.17	39 (18%) 1 1	58, 109, 173, 246	0
26	BE	201/201 (100%)	-0.26	0 100 100	5, 43, 103, 156	0
26	DE	201/201 (100%)	2.12	84 (41%) 0 0	65, 192, 378, 459	0
27	BF	177/177 (100%)	0.48	19 (10%) 6 6	27, 75, 156, 242	0
28	BG	176/176 (100%)	0.15	4 (2%) 60 58	22, 62, 121, 186	0
28	DG	176/176 (100%)	1.79	70 (39%) 0 0	100, 185, 264, 328	0
29	BH	149/149 (100%)	3.03	69 (46%) 0 0	49, 179, 279, 375	0
29	DH	149/149 (100%)	2.64	67 (44%) 0 0	93, 184, 287, 326	0
30	BI	141/141 (100%)	2.93	78 (55%) 0 0	136, 253, 308, 367	0
30	DI	141/141 (100%)	3.80	106 (75%) 0 0	167, 294, 351, 377	0
31	BJ	142/142 (100%)	-0.43	0 100 100	7, 23, 64, 143	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
31	DJ	142/142 (100%)	1.14	32 (22%) 0 1	52, 106, 159, 195	0
32	BK	122/122 (100%)	-0.26	0 100 100	10, 31, 80, 254	0
32	DK	122/122 (100%)	1.23	27 (22%) 0 1	57, 91, 150, 229	0
33	BL	143/143 (100%)	-0.24	0 100 100	7, 38, 74, 111	0
33	DL	143/143 (100%)	1.35	37 (25%) 0 0	69, 149, 262, 337	0
34	BM	136/136 (100%)	-0.34	0 100 100	6, 29, 76, 120	0
34	DM	136/136 (100%)	0.99	27 (19%) 1 1	46, 107, 161, 204	0
35	BN	120/120 (100%)	-0.49	0 100 100	9, 25, 46, 155	0
35	DN	120/120 (100%)	1.39	32 (26%) 0 0	73, 124, 194, 293	0
36	BO	116/116 (100%)	-0.02	0 100 100	24, 44, 83, 116	0
36	DO	116/116 (100%)	1.73	44 (37%) 0 0	113, 162, 224, 259	0
37	BP	114/114 (100%)	-0.13	1 (0%) 84 84	11, 41, 104, 161	0
37	DP	114/114 (100%)	0.98	18 (15%) 2 2	63, 105, 164, 195	0
38	BQ	117/117 (100%)	-0.52	1 (0%) 84 84	4, 20, 47, 206	0
38	DQ	117/117 (100%)	1.58	35 (29%) 0 0	67, 108, 191, 312	0
39	BR	103/103 (100%)	-0.35	1 (0%) 82 82	5, 30, 80, 109	0
39	DR	103/103 (100%)	2.45	54 (52%) 0 0	80, 138, 239, 291	0
40	BS	110/110 (100%)	-0.41	1 (0%) 84 84	6, 21, 61, 178	0
40	DS	110/110 (100%)	2.29	55 (50%) 0 0	70, 133, 241, 285	0
41	BT	93/93 (100%)	0.19	4 (4%) 35 33	23, 51, 121, 235	0
41	DT	93/93 (100%)	2.69	52 (55%) 0 0	110, 202, 299, 369	0
42	BU	102/102 (100%)	0.08	3 (2%) 51 50	19, 55, 136, 246	0
42	DU	102/102 (100%)	3.23	64 (62%) 0 0	122, 287, 418, 543	0
43	BV	94/94 (100%)	-0.05	0 100 100	13, 43, 85, 124	0
43	DV	94/94 (100%)	1.67	31 (32%) 0 0	100, 144, 196, 226	0
44	BW	79/79 (100%)	0.14	4 (5%) 28 26	10, 36, 110, 208	0
44	DW	79/79 (100%)	2.30	41 (51%) 0 0	87, 141, 230, 253	0
45	BX	77/77 (100%)	-0.25	0 100 100	15, 46, 88, 135	0
45	DX	77/77 (100%)	1.17	16 (20%) 1 1	67, 118, 172, 239	0
46	BY	63/63 (100%)	0.12	2 (3%) 47 45	34, 75, 134, 210	0
46	DY	63/63 (100%)	1.55	17 (26%) 0 0	130, 305, 419, 450	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å^2)	Q<0.9
47	BZ	58/58 (100%)	-0.31	0	100	100	6, 24, 74, 116	0
47	DZ	58/58 (100%)	0.96	8 (13%)	2	2	86, 123, 190, 236	0
48	B0	56/56 (100%)	-0.56	0	100	100	3, 22, 75, 168	0
48	D0	56/56 (100%)	1.58	15 (26%)	0	0	66, 132, 242, 278	0
49	B1	50/50 (100%)	0.34	2 (4%)	38	35	30, 50, 98, 178	0
49	D1	50/50 (100%)	1.77	21 (42%)	0	0	98, 155, 211, 275	0
50	B2	46/46 (100%)	-0.47	0	100	100	13, 27, 51, 183	0
50	D2	46/46 (100%)	1.40	11 (23%)	0	0	78, 118, 155, 203	0
51	B3	64/64 (100%)	-0.31	0	100	100	9, 27, 46, 71	0
51	D3	64/64 (100%)	1.92	30 (46%)	0	0	90, 125, 198, 250	0
52	B4	38/38 (100%)	0.34	1 (2%)	56	52	28, 49, 87, 112	0
52	D4	38/38 (100%)	2.88	26 (68%)	0	0	78, 141, 210, 225	0
53	CA	1530/1530 (100%)	0.04	36 (2%)	59	55	38, 100, 272, 376	0
54	CG	150/150 (100%)	2.29	65 (43%)	0	0	118, 209, 283, 333	0
55	CM	113/113 (100%)	2.30	57 (50%)	0	0	196, 344, 437, 471	0
56	CP	80/80 (100%)	0.91	12 (15%)	2	2	59, 91, 145, 249	0
57	DB	117/117 (100%)	0.12	0	100	100	95, 167, 229, 249	0
58	DF	178/178 (100%)	2.30	98 (55%)	0	0	135, 220, 279, 350	0
All	All	20431/20551 (99%)	0.51	2372 (11%)	4	4	3, 97, 258, 543	0

All (2372) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
19	CS	29	PRO	18.4
29	DH	124	THR	17.9
29	DH	91	PHE	17.5
29	BH	118	PRO	15.2
29	DH	105	ALA	15.2
29	DH	92	GLY	14.2
30	DI	51	GLY	14.0
9	CI	42	THR	13.8
29	DH	123	ARG	13.4
29	BH	80	ILE	13.3
29	BH	92	GLY	13.0
46	DY	63	ALA	12.9
29	BH	84	ALA	12.4

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Mol	Chain	Res	Type	RSRZ
29	BH	93	SER	12.3
14	CN	33	VAL	12.2
29	BH	79	THR	12.2
29	BH	123	ARG	12.1
41	DT	83	ALA	12.1
29	DH	119	ASN	12.1
16	AP	81	ALA	12.1
29	BH	122	LEU	11.7
30	BI	67	THR	11.7
54	CG	87	PRO	11.4
30	BI	52	LEU	11.1
29	DH	93	SER	11.1
29	BH	86	ASP	10.9
26	DE	144	GLU	10.9
30	DI	15	GLY	10.7
54	CG	150	PHE	10.7
30	BI	2	LYS	10.7
29	BH	90	LEU	10.5
19	CS	73	PHE	10.3
22	BA	2154	A	10.2
29	BH	143	ILE	10.2
17	AQ	82	VAL	10.1
29	BH	98	ASP	10.1
29	DH	127	GLU	10.1
58	DF	129	MET	10.0
40	DS	68	ASP	9.9
30	DI	93	ASN	9.8
22	BA	2179	C	9.8
54	CG	83	THR	9.6
54	CG	58	LEU	9.6
30	BI	11	GLN	9.5
29	DH	131	SER	9.5
10	CJ	71	LEU	9.4
39	DR	50	GLY	9.3
54	CG	84	TYR	9.2
26	DE	127	GLU	9.0
54	CG	143	MET	8.9
29	BH	105	ALA	8.9
29	BH	89	LYS	8.9
22	DA	1067	A	8.8
42	DU	59	GLU	8.8
41	DT	55	VAL	8.7

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Mol	Chain	Res	Type	RSRZ
19	CS	23	GLU	8.7
42	DU	70	ALA	8.7
30	BI	1	ALA	8.6
30	DI	95	ASP	8.6
10	CJ	72	ARG	8.6
29	BH	145	ASN	8.6
42	DU	76	THR	8.5
30	DI	2	LYS	8.5
29	BH	117	LEU	8.5
30	DI	56	VAL	8.4
19	CS	28	LYS	8.4
42	DU	75	ALA	8.3
10	CJ	8	ILE	8.3
29	DH	88	GLY	8.3
29	BH	128	HIS	8.0
26	DE	175	ILE	8.0
41	DT	60	THR	8.0
29	BH	85	GLY	8.0
30	BI	66	PHE	8.0
30	DI	72	THR	8.0
29	DH	87	GLU	8.0
9	CI	127	SER	8.0
19	CS	60	PHE	8.0
41	DT	43	ILE	8.0
29	DH	86	ASP	7.9
29	BH	81	ALA	7.9
58	DF	10	GLU	7.8
30	BI	68	PHE	7.8
30	BI	78	LEU	7.8
22	BA	2147	A	7.7
29	BH	124	THR	7.7
30	BI	13	ALA	7.7
22	BA	2146	C	7.7
42	DU	86	PHE	7.7
54	CG	72	VAL	7.6
9	AI	42	THR	7.6
55	CM	108	ARG	7.6
29	BH	126	GLY	7.6
29	DH	121	VAL	7.6
30	DI	12	VAL	7.6
30	BI	3	LYS	7.6
53	CA	209	U	7.6

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Mol	Chain	Res	Type	RSRZ
30	DI	55	PRO	7.5
9	CI	56	MET	7.5
10	CJ	6	ILE	7.5
10	CJ	75	ASP	7.4
22	DA	613	A	7.4
4	AD	35	GLN	7.4
30	DI	17	ALA	7.3
26	DE	187	VAL	7.3
29	BH	87	GLU	7.3
10	CJ	34	ALA	7.3
30	DI	33	ASN	7.3
19	CS	38	THR	7.3
30	BI	139	VAL	7.3
53	CA	461	A	7.3
30	DI	98	GLY	7.3
43	DV	35	GLU	7.3
30	BI	141	ASP	7.3
19	CS	26	ASP	7.2
54	CG	74	VAL	7.2
40	DS	26	GLY	7.2
53	CA	1224	U	7.2
37	DP	109	ILE	7.2
29	BH	74	ALA	7.2
44	DW	29	SER	7.2
42	DU	31	GLY	7.2
12	AL	123	ALA	7.2
55	CM	94	LEU	7.1
29	DH	125	THR	7.1
10	AJ	102	LEU	7.1
29	BH	91	PHE	7.1
58	DF	115	GLY	7.1
29	BH	88	GLY	7.0
30	BI	47	SER	7.0
54	CG	151	ALA	7.0
30	DI	58	ILE	7.0
55	CM	37	GLY	7.0
19	CS	39	ILE	7.0
29	DH	120	GLY	7.0
49	D1	35	LEU	7.0
30	DI	66	PHE	7.0
29	DH	143	ILE	7.0
49	D1	52	LYS	7.0

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Mol	Chain	Res	Type	RSRZ
46	DY	35	GLY	7.0
28	DG	83	THR	6.9
30	DI	97	VAL	6.9
39	DR	103	ALA	6.9
42	DU	4	ILE	6.9
30	BI	46	ASP	6.9
58	DF	141	ASP	6.9
16	AP	80	LYS	6.9
19	CS	58	PRO	6.8
53	CA	210	C	6.8
41	DT	15	HIS	6.8
32	DK	89	ASN	6.8
55	CM	46	GLU	6.8
30	DI	57	VAL	6.8
42	DU	69	VAL	6.8
19	CS	25	GLY	6.8
58	DF	171	ALA	6.8
52	D4	38	GLY	6.8
46	DY	62	GLY	6.7
42	DU	35	VAL	6.7
51	D3	13	PHE	6.7
42	DU	37	GLY	6.7
29	BH	149	GLU	6.7
9	AI	89	TYR	6.7
29	BH	121	VAL	6.7
29	BH	125	THR	6.6
9	CI	57	VAL	6.6
22	BA	138	U	6.6
54	CG	55	LYS	6.6
30	BI	12	VAL	6.6
10	CJ	12	ALA	6.5
40	DS	47	VAL	6.5
44	DW	34	SER	6.5
54	CG	8	GLN	6.5
2	CB	147	LEU	6.5
12	CL	123	ALA	6.5
22	BA	2143	C	6.5
41	DT	42	GLU	6.5
30	DI	3	LYS	6.4
55	CM	111	PRO	6.4
30	DI	119	ALA	6.4
54	CG	7	GLY	6.4

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Mol	Chain	Res	Type	RSRZ
14	CN	19	TYR	6.4
41	DT	59	ASN	6.3
10	CJ	91	ASP	6.3
21	CU	8	ASN	6.3
55	CM	98	GLY	6.3
30	DI	43	ALA	6.3
30	DI	18	ASN	6.3
30	BI	99	LYS	6.3
30	DI	75	ALA	6.3
30	DI	22	PRO	6.2
21	AU	3	ILE	6.2
29	BH	148	ALA	6.2
42	DU	85	ARG	6.2
14	CN	34	ASN	6.2
26	DE	24	ASN	6.2
10	CJ	80	THR	6.1
19	CS	59	VAL	6.1
40	DS	110	ARG	6.1
7	AG	80	GLY	6.1
17	CQ	7	LEU	6.1
30	DI	21	PRO	6.1
46	DY	36	GLN	6.1
10	CJ	76	ILE	6.1
52	D4	1	MET	6.1
28	DG	7	PRO	6.1
30	DI	139	VAL	6.1
30	DI	81	LYS	6.1
26	DE	157	LEU	6.1
29	DH	95	GLY	6.1
30	DI	4	VAL	6.1
58	DF	39	VAL	6.1
26	DE	119	ILE	6.1
19	CS	47	THR	6.1
42	DU	5	ARG	6.1
55	CM	97	ARG	6.1
44	DW	71	LYS	6.1
42	DU	77	GLY	6.0
22	DA	2157	G	6.0
29	BH	146	VAL	6.0
30	BI	138	VAL	6.0
39	DR	96	VAL	6.0
29	BH	116	ARG	6.0

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Mol	Chain	Res	Type	RSRZ
39	DR	38	VAL	6.0
39	DR	26	ASP	6.0
55	CM	67	ASP	6.0
30	DI	13	ALA	5.9
35	DN	63	ARG	5.9
2	AB	29	PHE	5.9
28	DG	165	ASP	5.9
30	DI	138	VAL	5.9
22	DA	1075	C	5.9
29	DH	112	LYS	5.9
40	DS	3	THR	5.9
2	AB	26	MET	5.9
26	DE	171	ASP	5.9
54	CG	54	GLY	5.9
22	DA	2799	A	5.9
22	DA	1536	C	5.9
30	DI	50	LYS	5.9
51	D3	21	PHE	5.9
30	DI	16	MET	5.8
14	CN	32	ASP	5.8
10	CJ	73	LEU	5.8
10	CJ	7	ARG	5.8
39	DR	34	GLU	5.8
54	CG	71	THR	5.8
22	BA	2180	U	5.8
10	CJ	74	VAL	5.8
29	DH	90	LEU	5.8
30	DI	140	GLU	5.8
43	DV	42	LEU	5.7
30	DI	5	GLN	5.7
56	CP	47	GLU	5.7
42	DU	11	ILE	5.7
22	DA	139	U	5.7
30	BI	38	CYS	5.7
48	D0	56	LYS	5.7
26	DE	172	ALA	5.7
30	BI	33	ASN	5.7
30	DI	120	ASP	5.7
40	DS	34	ASP	5.7
41	DT	3	ARG	5.7
10	CJ	10	LEU	5.7
22	DA	345	A	5.7

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Mol	Chain	Res	Type	RSRZ
30	BI	4	VAL	5.6
3	CC	106	ARG	5.6
40	DS	5	ALA	5.6
31	DJ	74	TYR	5.6
22	DA	1870	C	5.6
29	BH	144	VAL	5.6
25	DD	91	THR	5.6
30	BI	86	LYS	5.6
41	DT	2	ILE	5.6
16	AP	45	GLU	5.6
44	DW	52	CYS	5.6
28	DG	61	TRP	5.6
26	DE	121	VAL	5.6
30	DI	121	ILE	5.6
42	DU	51	LEU	5.6
30	BI	98	GLY	5.6
38	DQ	90	ASP	5.6
46	DY	13	GLU	5.6
39	DR	6	GLN	5.6
39	DR	22	LEU	5.6
26	DE	201	ALA	5.6
29	DH	126	GLY	5.5
29	DH	133	GLN	5.5
29	BH	147	VAL	5.5
29	DH	145	ASN	5.5
30	BI	77	VAL	5.5
40	DS	48	LYS	5.5
42	DU	17	ASP	5.5
26	DE	193	VAL	5.5
22	DA	1171	G	5.5
58	DF	172	PHE	5.5
43	DV	69	GLU	5.5
19	CS	64	GLU	5.5
30	BI	16	MET	5.5
42	DU	12	VAL	5.5
51	D3	23	HIS	5.5
41	DT	33	LYS	5.5
40	DS	70	LYS	5.5
54	CG	88	VAL	5.4
22	DA	1077	A	5.4
30	DI	123	ALA	5.4
55	CM	70	ARG	5.4

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Mol	Chain	Res	Type	RSRZ
39	DR	43	ASN	5.4
2	CB	129	THR	5.4
28	DG	55	ASP	5.4
28	DG	140	ILE	5.4
58	DF	105	ILE	5.4
22	DA	1172	C	5.4
52	D4	35	GLN	5.4
43	DV	5	ASN	5.4
35	DN	38	LEU	5.4
39	DR	51	VAL	5.4
52	D4	10	LEU	5.4
21	AU	4	LYS	5.4
39	DR	27	ILE	5.4
54	CG	17	PHE	5.4
54	CG	61	PHE	5.4
36	DO	61	GLN	5.3
30	DI	68	PHE	5.3
10	CJ	11	LYS	5.3
22	DA	1078	U	5.3
29	BH	73	ASN	5.3
14	CN	26	LEU	5.3
2	AB	220	VAL	5.3
39	DR	20	VAL	5.3
53	CA	1534	A	5.3
22	DA	1535	A	5.3
38	DQ	86	SER	5.3
46	DY	24	GLU	5.3
34	DM	136	MET	5.2
51	D3	22	LYS	5.2
1	AA	86	G	5.2
42	DU	72	PHE	5.2
29	BH	82	SER	5.2
54	CG	90	VAL	5.2
26	DE	190	ALA	5.2
36	DO	60	GLU	5.2
41	DT	35	ALA	5.2
30	DI	30	GLN	5.2
54	CG	75	LYS	5.2
19	CS	63	ASP	5.2
58	DF	110	ILE	5.2
43	DV	94	ALA	5.1
58	DF	83	PRO	5.1

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Mol	Chain	Res	Type	RSRZ
22	BA	2138	G	5.1
3	AC	80	GLY	5.1
58	DF	153	ILE	5.1
29	BH	119	ASN	5.1
30	DI	103	ALA	5.1
42	DU	30	SER	5.1
30	BI	132	ALA	5.1
54	CG	82	SER	5.1
41	DT	34	VAL	5.1
52	D4	25	VAL	5.1
42	DU	74	ALA	5.1
38	DQ	82	LEU	5.1
2	AB	66	ILE	5.1
42	DU	80	ASP	5.1
55	CM	63	VAL	5.1
32	DK	110	GLU	5.0
20	CT	2	ASN	5.0
42	DU	50	ALA	5.0
55	CM	87	GLY	5.0
26	DE	180	LEU	5.0
52	D4	33	HIS	5.0
30	DI	48	ILE	5.0
33	DL	5	THR	5.0
21	AU	51	ALA	5.0
47	DZ	33	HIS	5.0
39	DR	25	LEU	5.0
42	DU	2	ALA	5.0
26	DE	25	GLU	5.0
14	AN	51	PRO	5.0
29	DH	118	PRO	5.0
54	CG	73	GLU	5.0
22	DA	1173	U	5.0
42	DU	97	SER	5.0
4	AD	26	ALA	5.0
36	DO	65	THR	5.0
30	BI	65	SER	5.0
49	D1	49	LYS	5.0
14	CN	52	ARG	5.0
39	DR	52	PRO	5.0
42	DU	78	LYS	5.0
2	CB	165	ALA	4.9
29	BH	113	SER	4.9

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Mol	Chain	Res	Type	RSRZ
35	DN	98	LEU	4.9
16	AP	82	ALA	4.9
58	DF	155	ILE	4.9
44	DW	62	ALA	4.9
11	AK	49	SER	4.9
2	AB	50	ASN	4.9
29	DH	142	VAL	4.9
54	CG	70	PRO	4.9
30	DI	59	THR	4.9
26	DE	122	GLU	4.9
20	CT	3	ILE	4.9
22	BA	2139	U	4.9
29	DH	146	VAL	4.9
40	DS	37	THR	4.9
52	D4	9	LYS	4.9
36	DO	25	ARG	4.9
29	DH	122	LEU	4.8
20	CT	40	ALA	4.8
56	CP	57	ILE	4.8
10	CJ	30	LYS	4.8
14	CN	22	LYS	4.8
18	AR	19	GLU	4.8
2	CB	150	ILE	4.8
19	CS	36	ARG	4.8
30	DI	83	ALA	4.8
39	DR	55	ASP	4.8
42	DU	9	GLU	4.8
19	CS	66	VAL	4.8
43	DV	23	ALA	4.8
29	DH	82	SER	4.8
33	DL	83	ALA	4.8
21	AU	22	CYS	4.8
30	BI	96	LYS	4.8
29	BH	134	VAL	4.8
35	DN	70	THR	4.8
2	CB	17	HIS	4.8
2	CB	128	LEU	4.8
25	DD	97	SER	4.8
39	DR	63	VAL	4.8
55	CM	39	ALA	4.8
26	DE	103	GLY	4.7
19	CS	65	MET	4.7

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Mol	Chain	Res	Type	RSRZ
19	AS	23	GLU	4.7
40	DS	44	ALA	4.7
33	DL	101	ILE	4.7
26	DE	164	LEU	4.7
38	DQ	94	LEU	4.7
1	AA	1030	U	4.7
8	CH	1	SER	4.7
9	CI	67	LYS	4.7
48	D0	36	LYS	4.7
10	CJ	39	PRO	4.7
48	D0	34	GLY	4.7
19	AS	48	ILE	4.7
58	DF	41	GLU	4.7
33	DL	89	VAL	4.7
19	AS	38	THR	4.7
54	CG	85	GLN	4.7
41	DT	70	HIS	4.7
22	DA	2146	C	4.7
42	DU	34	ILE	4.6
58	DF	9	ASP	4.6
58	DF	38	GLY	4.6
56	CP	39	PHE	4.6
10	AJ	35	GLN	4.6
30	DI	62	ALA	4.6
19	CS	30	LEU	4.6
39	DR	88	GLY	4.6
22	DA	1175	A	4.6
2	CB	67	LEU	4.6
26	DE	147	LEU	4.6
14	CN	1	ALA	4.6
42	DU	40	LEU	4.6
30	DI	11	GLN	4.6
2	AB	89	PHE	4.6
26	DE	173	THR	4.6
24	DC	109	LEU	4.6
38	DQ	28	SER	4.6
30	DI	46	ASP	4.6
21	AU	52	VAL	4.5
10	CJ	37	ARG	4.5
38	DQ	1	ALA	4.5
22	BA	2110	G	4.5
33	DL	122	VAL	4.5

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Mol	Chain	Res	Type	RSRZ
36	DO	27	VAL	4.5
30	DI	10	LEU	4.5
42	DU	28	LEU	4.5
8	AH	129	ALA	4.5
19	CS	41	PRO	4.5
17	AQ	19	SER	4.5
22	BA	884	U	4.5
10	AJ	75	ASP	4.5
58	DF	131	VAL	4.5
19	CS	40	PHE	4.5
58	DF	67	THR	4.5
22	DA	1066	U	4.5
19	CS	24	SER	4.5
3	AC	79	LYS	4.5
2	AB	14	HIS	4.5
41	DT	12	ARG	4.5
54	CG	52	ARG	4.5
54	CG	65	LEU	4.5
2	AB	87	ASP	4.5
54	CG	146	ALA	4.5
25	DD	103	ASP	4.5
41	DT	58	VAL	4.5
9	CI	126	PHE	4.5
36	DO	87	ILE	4.4
28	DG	84	LYS	4.4
44	DW	51	GLY	4.4
30	BI	10	LEU	4.4
30	BI	48	ILE	4.4
2	AB	186	VAL	4.4
31	DJ	128	ASN	4.4
30	DI	25	PRO	4.4
39	DR	46	GLU	4.4
55	CM	42	VAL	4.4
30	BI	37	PHE	4.4
2	AB	150	ILE	4.4
29	BH	71	LYS	4.4
54	CG	147	ASN	4.4
32	DK	112	PHE	4.4
10	CJ	66	GLU	4.4
11	AK	41	LEU	4.4
28	DG	19	ASN	4.4
40	DS	27	LYS	4.4

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Mol	Chain	Res	Type	RSRZ
29	BH	127	GLU	4.4
42	DU	38	ILE	4.3
42	DU	26	ASN	4.3
9	AI	61	ASP	4.3
58	DF	146	ASP	4.3
30	BI	35	MET	4.3
14	CN	61	ASN	4.3
38	DQ	114	ALA	4.3
29	DH	128	HIS	4.3
44	DW	70	VAL	4.3
30	DI	122	GLU	4.3
29	BH	106	ALA	4.3
2	AB	64	GLY	4.3
20	CT	33	LYS	4.3
55	CM	61	LYS	4.3
55	CM	62	PHE	4.3
22	DA	137	U	4.3
30	DI	14	ALA	4.3
19	CS	45	GLY	4.3
26	DE	28	VAL	4.3
42	DU	19	GLY	4.3
52	D4	20	ASP	4.3
29	DH	141	LYS	4.3
58	DF	152	ASP	4.3
30	DI	41	PHE	4.3
21	CU	9	GLU	4.3
3	CC	154	GLY	4.3
29	DH	106	ALA	4.3
42	DU	27	VAL	4.3
30	BI	53	PRO	4.3
2	AB	51	GLU	4.3
54	CG	44	SER	4.3
22	DA	546	U	4.3
30	DI	47	SER	4.3
26	DE	48	THR	4.3
38	DQ	117	ALA	4.3
43	DV	8	VAL	4.3
29	DH	73	ASN	4.3
30	DI	130	GLY	4.3
40	DS	43	ALA	4.3
39	DR	7	SER	4.3
40	DS	1	MET	4.3

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Mol	Chain	Res	Type	RSRZ
29	DH	147	VAL	4.2
51	D3	19	GLY	4.2
52	D4	8	LYS	4.2
25	DD	187	LEU	4.2
26	DE	9	GLN	4.2
42	DU	1	ALA	4.2
30	BI	7	TYR	4.2
2	AB	135	MET	4.2
25	DD	27	ILE	4.2
40	DS	32	ALA	4.2
36	DO	95	SER	4.2
22	DA	228	C	4.2
26	DE	188	MET	4.2
22	DA	846	U	4.2
27	BF	77	LYS	4.2
30	BI	114	ALA	4.2
14	CN	25	GLU	4.2
28	DG	57	TYR	4.2
50	D2	33	ARG	4.2
30	DI	20	SER	4.2
43	DV	6	ALA	4.2
42	DU	13	LEU	4.2
55	CM	82	LEU	4.2
6	CF	8	PHE	4.2
44	DW	45	HIS	4.2
30	DI	54	ILE	4.2
40	DS	2	GLU	4.2
2	AB	33	ALA	4.2
2	AB	45	THR	4.2
3	CC	42	LEU	4.1
2	CB	181	PRO	4.1
41	DT	16	VAL	4.1
21	AU	30	GLU	4.1
42	DU	71	ILE	4.1
7	AG	81	GLY	4.1
24	DC	240	GLY	4.1
44	DW	33	GLY	4.1
39	DR	102	SER	4.1
14	CN	62	ARG	4.1
19	CS	22	VAL	4.1
54	CG	67	ASN	4.1
33	DL	82	LEU	4.1

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Mol	Chain	Res	Type	RSRZ
58	DF	130	GLY	4.1
29	BH	75	LEU	4.1
30	DI	27	LEU	4.1
38	DQ	41	ALA	4.1
54	CG	78	ARG	4.1
7	AG	79	VAL	4.1
9	AI	50	PRO	4.1
56	CP	52	LEU	4.1
9	AI	88	GLU	4.1
41	DT	14	PRO	4.1
26	DE	131	THR	4.1
58	DF	145	VAL	4.1
30	DI	63	ASP	4.1
2	AB	28	PRO	4.1
11	CK	104	PHE	4.1
33	DL	4	ASN	4.1
24	BC	234	GLY	4.1
55	CM	28	ARG	4.1
3	AC	65	VAL	4.1
39	BR	50	GLY	4.1
42	DU	36	GLU	4.1
29	BH	94	ILE	4.1
30	DI	45	THR	4.1
37	DP	110	LYS	4.1
2	CB	106	VAL	4.1
21	AU	31	VAL	4.1
26	DE	186	VAL	4.1
30	DI	23	VAL	4.1
41	DT	56	GLU	4.1
58	DF	96	TRP	4.1
58	DF	112	ASP	4.1
25	DD	73	VAL	4.1
42	DU	24	VAL	4.0
52	D4	34	LYS	4.0
40	DS	4	ILE	4.0
58	DF	44	ALA	4.0
9	CI	31	GLN	4.0
26	DE	12	LEU	4.0
28	DG	147	LEU	4.0
29	BH	130	VAL	4.0
55	CM	74	MET	4.0
28	DG	32	LEU	4.0

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Mol	Chain	Res	Type	RSRZ
34	DM	56	ALA	4.0
2	CB	87	ASP	4.0
29	DH	89	LYS	4.0
55	CM	54	THR	4.0
9	CI	15	ALA	4.0
24	BC	236	GLY	4.0
10	CJ	9	ARG	4.0
44	DW	31	LEU	4.0
55	CM	38	ILE	4.0
22	BA	1065	U	4.0
21	AU	53	LYS	4.0
41	DT	76	ARG	4.0
38	DQ	97	ILE	4.0
26	DE	32	VAL	4.0
26	DE	104	ALA	4.0
10	CJ	100	ILE	4.0
22	DA	1537	G	4.0
10	CJ	36	VAL	4.0
54	CG	149	ALA	4.0
35	DN	75	ILE	4.0
17	AQ	6	THR	4.0
28	DG	101	VAL	4.0
58	DF	75	GLY	4.0
58	DF	168	LEU	4.0
26	DE	198	GLU	4.0
3	CC	91	ALA	4.0
29	BH	131	SER	4.0
42	DU	41	VAL	4.0
11	CK	18	GLY	4.0
48	D0	55	ALA	4.0
58	DF	170	ALA	4.0
31	DJ	98	GLU	3.9
30	DI	44	LYS	3.9
35	DN	113	ILE	3.9
10	CJ	51	VAL	3.9
28	DG	33	THR	3.9
30	DI	32	VAL	3.9
19	AS	10	ILE	3.9
39	DR	87	GLN	3.9
2	AB	8	MET	3.9
28	DG	102	ILE	3.9
26	DE	126	VAL	3.9

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Mol	Chain	Res	Type	RSRZ
36	DO	64	TYR	3.9
30	BI	79	LEU	3.9
31	DJ	118	MET	3.9
29	BH	135	HIS	3.9
22	BA	546	U	3.9
46	DY	31	GLN	3.9
28	DG	79	THR	3.9
22	DA	136	G	3.9
50	D2	34	ARG	3.9
30	BI	95	ASP	3.9
30	BI	80	LYS	3.9
28	DG	82	PHE	3.9
42	DU	79	ALA	3.9
11	AK	81	LEU	3.9
2	CB	109	SER	3.9
24	DC	26	GLY	3.9
45	DX	17	ARG	3.9
21	CU	23	GLU	3.9
30	BI	40	ALA	3.9
30	DI	42	ASN	3.9
22	BA	2145	C	3.8
28	DG	104	LEU	3.8
28	DG	131	VAL	3.8
35	DN	62	ASN	3.8
58	DF	174	PHE	3.8
35	DN	114	GLU	3.8
10	CJ	99	GLN	3.8
41	DT	32	LEU	3.8
58	DF	142	TYR	3.8
41	DT	30	ILE	3.8
25	DD	104	VAL	3.8
36	DO	103	VAL	3.8
10	CJ	49	PHE	3.8
18	AR	73	HIS	3.8
30	DI	94	LYS	3.8
36	DO	56	LYS	3.8
54	CG	136	LYS	3.8
29	BH	70	GLU	3.8
42	DU	53	GLN	3.8
52	D4	15	LYS	3.8
19	AS	2	ARG	3.8
55	CM	110	GLY	3.8

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Mol	Chain	Res	Type	RSRZ
30	DI	61	TYR	3.8
2	CB	22	TRP	3.8
47	DZ	1	ALA	3.8
26	DE	35	TYR	3.8
28	DG	85	LYS	3.8
30	BI	58	ILE	3.8
19	CS	37	SER	3.8
38	DQ	111	LYS	3.8
54	CG	77	ARG	3.8
36	DO	19	GLN	3.8
3	AC	167	TYR	3.8
24	DC	241	LYS	3.8
2	CB	38	HIS	3.8
13	AM	3	ILE	3.8
22	DA	138	U	3.8
38	DQ	87	VAL	3.8
30	DI	24	GLY	3.8
30	DI	109	ALA	3.8
9	AI	91	GLU	3.8
2	CB	180	ILE	3.8
54	CG	53	SER	3.8
2	CB	148	GLY	3.8
44	DW	35	ILE	3.8
41	DT	81	LYS	3.7
10	AJ	91	ASP	3.7
22	BA	139	U	3.7
55	CM	31	ALA	3.7
9	AI	128	LYS	3.7
10	AJ	98	VAL	3.7
44	DW	56	HIS	3.7
16	AP	47	GLU	3.7
46	BY	63	ALA	3.7
54	CG	64	ALA	3.7
54	CG	102	TRP	3.7
36	DO	62	LEU	3.7
55	CM	8	ILE	3.7
58	DF	178	LYS	3.7
37	DP	42	PHE	3.7
2	CB	144	GLU	3.7
51	D3	20	GLY	3.7
9	AI	31	GLN	3.7
42	DU	57	ILE	3.7

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Mol	Chain	Res	Type	RSRZ
51	D3	58	ILE	3.7
2	AB	38	HIS	3.7
33	DL	28	GLY	3.7
41	DT	72	GLN	3.7
26	DE	170	ARG	3.7
2	CB	124	THR	3.7
2	AB	192	PRO	3.7
7	AG	17	PHE	3.7
25	DD	185	ASN	3.7
28	DG	100	ASN	3.7
29	DH	13	GLY	3.7
39	DR	45	GLU	3.7
58	DF	116	LEU	3.7
39	DR	44	GLY	3.7
22	DA	318	C	3.7
33	DL	92	LEU	3.7
10	CJ	28	THR	3.7
25	DD	14	ILE	3.7
19	CS	12	LEU	3.7
43	DV	56	PHE	3.7
55	CM	45	SER	3.7
18	AR	72	ARG	3.7
28	DG	72	ASN	3.7
54	CG	130	LYS	3.7
17	CQ	6	THR	3.7
54	CG	76	SER	3.7
55	CM	96	VAL	3.7
21	AU	23	GLU	3.7
38	DQ	42	GLY	3.7
19	CS	70	LEU	3.7
37	DP	111	GLU	3.7
55	CM	57	ASP	3.6
7	AG	4	ARG	3.6
3	CC	203	LYS	3.6
14	CN	60	ARG	3.6
16	AP	44	SER	3.6
26	DE	128	ALA	3.6
43	DV	74	ALA	3.6
42	DU	48	VAL	3.6
58	DF	51	ASN	3.6
21	AU	10	PRO	3.6
25	DD	31	ALA	3.6

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Mol	Chain	Res	Type	RSRZ
36	DO	57	ALA	3.6
53	CA	208	U	3.6
30	DI	96	LYS	3.6
33	DL	81	ASP	3.6
9	AI	40	ARG	3.6
10	CJ	40	ILE	3.6
10	CJ	101	SER	3.6
8	CH	129	ALA	3.6
10	AJ	76	ILE	3.6
51	D3	60	CYS	3.6
33	DL	88	GLY	3.6
9	CI	38	PHE	3.6
40	DS	71	VAL	3.6
58	DF	43	ILE	3.6
52	D4	21	GLY	3.6
33	DL	30	THR	3.6
2	CB	30	ILE	3.6
10	CJ	77	VAL	3.6
28	DG	164	ALA	3.6
58	DF	59	ILE	3.6
3	CC	143	LEU	3.6
24	BC	233	GLY	3.6
42	DU	20	LYS	3.6
40	DS	52	GLU	3.6
51	D3	59	ALA	3.6
58	DF	93	GLU	3.6
30	DI	31	GLY	3.6
28	DG	51	PHE	3.6
2	CB	66	ILE	3.6
28	DG	129	GLU	3.6
28	DG	166	GLU	3.6
41	DT	79	ASP	3.6
52	D4	24	ARG	3.6
41	DT	36	LYS	3.6
2	AB	67	LEU	3.6
2	AB	35	ASN	3.6
52	D4	36	ARG	3.6
9	CI	58	GLU	3.6
26	DE	148	ILE	3.6
32	DK	76	VAL	3.6
38	DQ	7	VAL	3.6
34	DM	41	LEU	3.6

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Mol	Chain	Res	Type	RSRZ
1	AA	88	U	3.6
9	AI	129	ARG	3.6
9	CI	66	VAL	3.6
10	AJ	74	VAL	3.6
29	BH	142	VAL	3.6
2	CB	75	ALA	3.6
54	CG	56	SER	3.6
10	CJ	41	PRO	3.5
51	D3	1	PRO	3.5
53	CA	1271	A	3.5
19	AS	15	LEU	3.5
2	CB	190	SER	3.5
3	CC	41	TYR	3.5
39	DR	95	ASP	3.5
10	AJ	89	ARG	3.5
30	DI	69	VAL	3.5
32	DK	38	ILE	3.5
55	CM	51	GLN	3.5
8	CH	58	LEU	3.5
9	CI	128	LYS	3.5
44	DW	63	ASP	3.5
3	CC	108	PRO	3.5
37	DP	37	LYS	3.5
2	CB	191	ASP	3.5
20	CT	67	HIS	3.5
29	BH	83	LYS	3.5
31	DJ	92	MET	3.5
34	DM	45	GLN	3.5
3	CC	180	ASP	3.5
10	CJ	50	THR	3.5
30	DI	89	SER	3.5
30	BI	29	GLN	3.5
29	BH	139	PHE	3.5
35	DN	104	ALA	3.5
36	DO	37	ALA	3.5
43	DV	91	PHE	3.5
19	CS	11	ASP	3.5
25	DD	25	THR	3.5
29	BH	77	THR	3.5
29	BH	120	GLY	3.5
30	DI	19	PRO	3.5
39	DR	36	ALA	3.5

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Mol	Chain	Res	Type	RSRZ
44	BW	51	GLY	3.5
22	DA	1044	C	3.5
22	DA	2602	A	3.5
22	DA	1094	U	3.5
24	DC	238	ASN	3.5
55	CM	81	ASP	3.5
8	AH	1	SER	3.5
30	BI	57	VAL	3.5
30	BI	133	ARG	3.5
36	DO	93	ASP	3.5
45	DX	14	GLY	3.5
51	D3	57	VAL	3.5
14	AN	29	ILE	3.5
30	DI	118	GLY	3.5
53	CA	1312	G	3.5
9	CI	8	THR	3.5
8	CH	60	LEU	3.5
19	AS	12	LEU	3.5
36	DO	26	LEU	3.5
58	DF	94	ARG	3.5
30	BI	41	PHE	3.5
3	CC	194	VAL	3.4
26	DE	23	PHE	3.4
20	CT	74	HIS	3.4
3	AC	99	GLN	3.4
29	DH	84	ALA	3.4
13	AM	32	ILE	3.4
28	BG	25	ILE	3.4
36	DO	5	SER	3.4
47	DZ	9	THR	3.4
11	CK	102	ALA	3.4
26	DE	11	ALA	3.4
38	DQ	85	ALA	3.4
56	CP	45	GLU	3.4
2	AB	73	ARG	3.4
39	DR	75	VAL	3.4
14	CN	51	PRO	3.4
19	CS	48	ILE	3.4
30	DI	128	ILE	3.4
44	DW	58	LEU	3.4
10	CJ	81	GLU	3.4
20	CT	43	LYS	3.4

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Mol	Chain	Res	Type	RSRZ
49	D1	21	THR	3.4
58	DF	154	THR	3.4
22	BA	2150	C	3.4
29	DH	130	VAL	3.4
8	CH	90	GLU	3.4
11	CK	125	LYS	3.4
30	DI	64	ARG	3.4
30	DI	91	LYS	3.4
36	DO	52	SER	3.4
42	DU	87	GLU	3.4
22	DA	2181	U	3.4
32	DK	60	ALA	3.4
1	AA	87	C	3.4
30	DI	38	CYS	3.4
26	DE	55	SER	3.4
44	DW	42	THR	3.4
3	AC	63	ILE	3.4
43	DV	59	GLU	3.4
14	CN	11	LYS	3.4
54	CG	34	LYS	3.4
26	DE	42	GLY	3.4
20	CT	65	LEU	3.4
28	DG	40	VAL	3.4
4	AD	27	ILE	3.4
38	DQ	36	GLN	3.4
2	CB	103	TRP	3.4
25	DD	186	LEU	3.4
7	AG	61	PHE	3.4
22	DA	1076	C	3.4
28	DG	130	ILE	3.4
55	CM	93	GLY	3.4
51	D3	35	LYS	3.4
17	CQ	77	VAL	3.4
30	BI	19	PRO	3.4
33	DL	125	LEU	3.4
2	CB	158	ASP	3.4
10	CJ	63	ASP	3.4
28	DG	18	ILE	3.4
45	DX	16	ASN	3.4
2	CB	32	GLY	3.4
52	D4	28	SER	3.4
35	DN	24	MET	3.4

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Mol	Chain	Res	Type	RSRZ
51	D3	9	ALA	3.3
54	CG	106	ALA	3.3
29	DH	129	GLU	3.3
38	DQ	38	VAL	3.3
2	AB	74	ALA	3.3
44	DW	19	ARG	3.3
21	AU	8	ASN	3.3
30	DI	137	LEU	3.3
26	DE	41	GLN	3.3
14	CN	78	LEU	3.3
49	D1	33	LEU	3.3
26	DE	178	VAL	3.3
39	DR	54	VAL	3.3
22	DA	1	G	3.3
46	DY	49	ASP	3.3
55	CM	88	LEU	3.3
3	AC	64	ARG	3.3
24	DC	100	ARG	3.3
55	CM	92	ARG	3.3
9	AI	16	ALA	3.3
10	AJ	100	ILE	3.3
49	D1	20	TYR	3.3
58	DF	163	GLU	3.3
9	CI	4	GLN	3.3
30	BI	60	VAL	3.3
42	DU	94	PHE	3.3
42	DU	98	ASN	3.3
48	D0	22	THR	3.3
51	D3	50	SER	3.3
26	DE	177	PRO	3.3
22	DA	914	G	3.3
22	DA	2062	A	3.3
31	DJ	136	GLN	3.3
40	DS	109	ASP	3.3
30	DI	40	ALA	3.3
49	D1	34	GLU	3.3
34	DM	103	TYR	3.3
38	DQ	81	GLY	3.3
42	DU	42	LYS	3.3
2	AB	204	ASP	3.3
11	AK	18	GLY	3.3
11	AK	20	ALA	3.3

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Mol	Chain	Res	Type	RSRZ
42	DU	64	ILE	3.3
10	CJ	102	LEU	3.3
19	AS	30	LEU	3.3
22	BA	885	C	3.3
30	DI	29	GLN	3.3
19	AS	43	MET	3.3
29	BH	129	GLU	3.3
30	DI	129	GLU	3.3
19	CS	79	TYR	3.3
22	DA	2142	A	3.3
17	CQ	58	VAL	3.3
29	DH	42	LYS	3.3
30	BI	5	GLN	3.3
14	CN	23	ARG	3.3
19	CS	80	ARG	3.3
22	DA	2104	C	3.3
28	DG	113	ASP	3.3
36	DO	59	ALA	3.3
38	DQ	22	GLY	3.3
48	D0	27	LEU	3.3
41	DT	26	LYS	3.3
46	BY	7	ARG	3.2
51	D3	5	THR	3.2
2	CB	21	TYR	3.2
30	DI	53	PRO	3.2
1	AA	1534	A	3.2
12	CL	91	GLY	3.2
24	DC	46	GLY	3.2
38	DQ	34	ALA	3.2
41	DT	65	GLY	3.2
55	CM	55	LEU	3.2
30	BI	32	VAL	3.2
33	DL	143	GLU	3.2
30	BI	54	ILE	3.2
14	CN	18	LYS	3.2
37	DP	30	TRP	3.2
44	DW	60	ALA	3.2
19	AS	46	LEU	3.2
58	DF	114	ARG	3.2
2	AB	195	VAL	3.2
2	CB	146	SER	3.2
9	AI	92	SER	3.2

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Mol	Chain	Res	Type	RSRZ
26	DE	197	GLU	3.2
2	AB	27	LYS	3.2
36	DO	63	LYS	3.2
39	DR	24	LYS	3.2
32	DK	103	VAL	3.2
41	DT	47	VAL	3.2
34	DM	110	GLU	3.2
9	CI	37	TYR	3.2
2	CB	41	ASN	3.2
26	DE	200	LEU	3.2
32	DK	37	ASP	3.2
28	DG	110	HIS	3.2
44	DW	21	GLY	3.2
19	AS	60	PHE	3.2
29	BH	78	VAL	3.2
53	CA	81	A	3.2
14	CN	64	ARG	3.2
2	CB	140	LEU	3.2
40	DS	69	LEU	3.2
48	D0	45	ASP	3.2
22	DA	790	U	3.2
30	DI	37	PHE	3.2
26	DE	102	ARG	3.2
19	AS	39	ILE	3.2
54	CG	19	SER	3.2
26	DE	98	LYS	3.2
29	DH	79	THR	3.2
30	DI	67	THR	3.2
40	DS	72	THR	3.2
21	AU	27	VAL	3.2
29	DH	140	ALA	3.2
52	D4	26	ILE	3.2
58	DF	135	ILE	3.2
7	AG	45	ALA	3.2
11	AK	29	THR	3.2
14	CN	53	ASP	3.2
31	DJ	44	TYR	3.2
40	DS	105	VAL	3.2
4	CD	27	ILE	3.2
19	CS	27	LYS	3.2
27	BF	105	ILE	3.2
13	AM	4	ALA	3.2

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Mol	Chain	Res	Type	RSRZ
29	DH	144	VAL	3.2
35	DN	112	TYR	3.2
20	CT	66	ILE	3.1
22	DA	645	C	3.1
36	DO	88	LYS	3.1
11	AK	36	ARG	3.1
22	DA	62	U	3.1
27	BF	79	ARG	3.1
26	DE	90	GLN	3.1
28	DG	95	ALA	3.1
43	DV	3	THR	3.1
25	DD	96	ILE	3.1
2	CB	29	PHE	3.1
22	BA	2885	G	3.1
22	DA	2106	U	3.1
19	CS	74	ALA	3.1
28	DG	58	ALA	3.1
41	DT	40	LYS	3.1
41	DT	64	LYS	3.1
44	DW	75	ASN	3.1
25	DD	205	PRO	3.1
40	BS	110	ARG	3.1
17	AQ	3	LYS	3.1
28	DG	41	GLU	3.1
41	DT	17	SER	3.1
38	DQ	53	LYS	3.1
2	CB	82	ALA	3.1
29	DH	74	ALA	3.1
22	BA	2149	U	3.1
26	DE	143	LEU	3.1
10	CJ	38	GLY	3.1
39	DR	94	THR	3.1
4	AD	24	VAL	3.1
29	BH	138	VAL	3.1
2	AB	52	ALA	3.1
28	DG	56	GLY	3.1
30	DI	84	GLY	3.1
33	DL	87	GLY	3.1
58	DF	150	GLY	3.1
19	AS	63	ASP	3.1
24	DC	99	GLU	3.1
29	DH	115	VAL	3.1

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Mol	Chain	Res	Type	RSRZ
31	DJ	141	ASP	3.1
35	DN	74	GLU	3.1
41	DT	85	VAL	3.1
30	DI	26	ALA	3.1
30	DI	79	LEU	3.1
55	CM	109	LYS	3.1
26	DE	81	GLY	3.1
36	DO	66	GLY	3.1
26	DE	146	VAL	3.1
37	DP	114	ASN	3.1
41	BT	70	HIS	3.1
54	CG	142	ARG	3.1
2	AB	9	LEU	3.1
20	CT	8	LYS	3.1
53	CA	202	G	3.1
39	DR	47	VAL	3.1
44	DW	50	VAL	3.1
28	DG	1	SER	3.1
40	DS	108	SER	3.1
48	D0	33	SER	3.1
26	DE	26	ALA	3.1
30	BI	137	LEU	3.1
7	AG	150	PHE	3.1
9	CI	129	ARG	3.1
22	DA	2307	G	3.1
30	DI	39	LYS	3.1
45	DX	29	LEU	3.1
31	DJ	75	TYR	3.1
58	DF	158	THR	3.1
25	DD	9	VAL	3.1
41	DT	61	LEU	3.1
18	AR	63	TYR	3.1
52	B4	13	ASN	3.1
22	BA	2155	U	3.1
29	DH	85	GLY	3.1
58	DF	34	THR	3.1
24	BC	235	GLU	3.1
19	CS	43	MET	3.1
30	DI	124	MET	3.1
50	D2	35	ARG	3.1
30	DI	74	PRO	3.0
12	CL	122	LYS	3.0

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Mol	Chain	Res	Type	RSRZ
20	CT	63	LYS	3.0
44	DW	6	GLY	3.0
22	DA	931	U	3.0
34	DM	135	VAL	3.0
37	DP	32	VAL	3.0
54	CG	66	GLU	3.0
22	BA	2148	G	3.0
58	DF	53	ALA	3.0
13	AM	83	GLY	3.0
14	AN	30	ILE	3.0
38	DQ	73	ILE	3.0
52	D4	31	PRO	3.0
30	BI	20	SER	3.0
39	DR	11	GLN	3.0
40	DS	67	ASP	3.0
54	CG	59	GLU	3.0
9	CI	65	THR	3.0
35	DN	66	ALA	3.0
39	DR	66	HIS	3.0
19	CS	75	PRO	3.0
53	CA	86	G	3.0
7	AG	77	ARG	3.0
22	DA	1420	A	3.0
7	AG	22	LEU	3.0
51	D3	61	LEU	3.0
11	AK	83	VAL	3.0
55	CM	112	ARG	3.0
28	DG	87	GLN	3.0
33	DL	80	SER	3.0
22	DA	1211	C	3.0
30	BI	75	ALA	3.0
40	DS	8	ARG	3.0
55	CM	78	ARG	3.0
35	DN	29	VAL	3.0
39	DR	5	PHE	3.0
36	DO	24	THR	3.0
22	DA	1252	G	3.0
47	DZ	32	GLY	3.0
19	CS	68	HIS	3.0
51	D3	51	LYS	3.0
21	AU	28	LEU	3.0
30	DI	65	SER	3.0

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Mol	Chain	Res	Type	RSRZ
41	DT	89	GLU	3.0
44	DW	72	GLY	3.0
54	CG	131	GLY	3.0
10	CJ	92	LEU	3.0
22	DA	2402	U	3.0
58	DF	148	VAL	3.0
13	AM	2	ARG	3.0
36	DO	16	ARG	3.0
52	D4	14	CYS	3.0
9	AI	39	GLY	3.0
30	BI	107	GLU	3.0
36	DO	20	GLU	3.0
39	DR	62	GLU	3.0
40	DS	16	LYS	3.0
22	BA	2153	C	3.0
2	CB	27	LYS	3.0
3	CC	166	TRP	3.0
10	CJ	27	GLU	3.0
11	CK	64	VAL	3.0
19	AS	37	SER	3.0
19	CS	46	LEU	3.0
22	DA	316	C	3.0
30	BI	51	GLY	3.0
25	DD	200	ASP	3.0
29	BH	64	ALA	3.0
38	DQ	67	ALA	3.0
54	CG	144	ALA	3.0
29	DH	20	ASN	3.0
30	DI	52	LEU	3.0
50	D2	42	LEU	3.0
52	D4	6	SER	3.0
19	AS	40	PHE	3.0
58	DF	37	MET	3.0
2	CB	117	GLU	3.0
9	CI	116	GLY	3.0
29	DH	116	ARG	3.0
43	DV	38	LEU	3.0
14	CN	66	THR	3.0
33	DL	144	GLU	3.0
22	DA	1093	G	2.9
27	BF	118	ALA	2.9
55	CM	91	ARG	2.9

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Mol	Chain	Res	Type	RSRZ
40	DS	6	LYS	2.9
29	DH	113	SER	2.9
45	DX	1	SER	2.9
2	CB	110	ILE	2.9
14	CN	93	PRO	2.9
19	CS	62	THR	2.9
47	DZ	7	THR	2.9
11	CK	99	LEU	2.9
35	DN	28	LEU	2.9
9	CI	30	ASN	2.9
28	DG	103	ASN	2.9
22	DA	2145	C	2.9
58	DF	85	GLY	2.9
25	DD	110	THR	2.9
26	DE	118	LEU	2.9
28	DG	167	VAL	2.9
34	DM	24	THR	2.9
58	DF	35	LEU	2.9
41	DT	69	ARG	2.9
33	DL	68	SER	2.9
41	DT	75	GLY	2.9
54	CG	89	GLU	2.9
34	DM	80	VAL	2.9
36	DO	40	ILE	2.9
58	DF	20	ASN	2.9
13	AM	42	VAL	2.9
9	CI	63	TYR	2.9
54	CG	48	THR	2.9
14	CN	40	ARG	2.9
10	CJ	78	GLU	2.9
32	DK	111	LYS	2.9
2	AB	30	ILE	2.9
19	CS	61	VAL	2.9
26	DE	120	VAL	2.9
55	CM	76	ILE	2.9
19	CS	49	ALA	2.9
44	DW	38	ARG	2.9
44	DW	28	GLU	2.9
39	DR	58	VAL	2.9
35	DN	39	PRO	2.9
36	DO	42	PRO	2.9
48	D0	37	HIS	2.9

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Mol	Chain	Res	Type	RSRZ
53	CA	1441	A	2.9
28	DG	52	GLY	2.9
10	CJ	5	ARG	2.9
39	DR	33	VAL	2.9
41	BT	1	MET	2.9
44	BW	40	ARG	2.9
14	AN	20	PHE	2.9
24	BC	239	PHE	2.9
36	DO	117	PHE	2.9
2	AB	17	HIS	2.9
21	AU	50	SER	2.9
22	DA	344	A	2.9
22	DA	1095	A	2.9
4	AD	23	GLY	2.9
21	AU	6	ARG	2.9
35	DN	36	THR	2.9
43	DV	70	ILE	2.9
26	DE	116	ASP	2.9
58	DF	173	ASP	2.9
35	DN	96	ARG	2.9
42	DU	73	ASN	2.9
9	CI	82	ILE	2.9
26	DE	5	LEU	2.9
58	DF	104	THR	2.9
26	DE	10	SER	2.9
56	CP	80	LYS	2.9
58	DF	128	SER	2.9
1	AA	85	U	2.9
2	CB	186	VAL	2.9
10	AJ	8	ILE	2.9
31	DJ	101	ILE	2.9
54	CG	86	VAL	2.9
2	AB	68	PHE	2.9
35	DN	21	PHE	2.9
10	CJ	35	GLN	2.9
7	AG	84	TYR	2.9
11	CK	65	ALA	2.9
22	BA	2144	G	2.9
37	DP	11	GLN	2.9
2	CB	115	ASP	2.9
26	DE	185	LYS	2.9
27	BF	112	ASP	2.9

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Mol	Chain	Res	Type	RSRZ
28	DG	132	LEU	2.9
58	DF	99	PHE	2.8
28	DG	123	GLU	2.8
35	DN	78	LYS	2.8
42	DU	32	LYS	2.8
1	AA	412	A	2.8
2	AB	42	LEU	2.8
22	DA	1074	G	2.8
24	DC	236	GLY	2.8
53	CA	79	G	2.8
17	CQ	22	VAL	2.8
10	CJ	45	ARG	2.8
46	DY	10	SER	2.8
30	BI	30	GLN	2.8
38	DQ	4	LYS	2.8
9	CI	5	TYR	2.8
40	DS	54	ALA	2.8
44	DW	39	GLN	2.8
51	D3	10	ALA	2.8
54	CG	43	TYR	2.8
2	AB	193	ASP	2.8
46	DY	37	LEU	2.8
2	CB	163	ILE	2.8
17	CQ	60	ILE	2.8
29	BH	72	ILE	2.8
43	DV	60	VAL	2.8
44	DW	73	PRO	2.8
2	AB	44	LYS	2.8
30	BI	91	LYS	2.8
45	DX	61	LYS	2.8
30	DI	49	GLU	2.8
53	CA	1270	G	2.8
2	CB	79	VAL	2.8
8	CH	74	ILE	2.8
21	AU	32	ARG	2.8
22	DA	343	C	2.8
30	BI	34	ILE	2.8
53	CA	207	C	2.8
53	CA	1209	C	2.8
24	BC	242	HIS	2.8
19	AS	61	VAL	2.8
29	DH	27	ARG	2.8

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Mol	Chain	Res	Type	RSRZ
22	DA	2585	U	2.8
34	DM	36	VAL	2.8
22	DA	795	C	2.8
44	DW	69	GLU	2.8
53	CA	1031	C	2.8
30	BI	134	SER	2.8
10	CJ	82	LYS	2.8
36	DO	28	VAL	2.8
48	D0	25	THR	2.8
4	AD	146	GLU	2.8
21	AU	35	GLU	2.8
22	DA	2107	G	2.8
44	BW	84	GLU	2.8
54	CG	128	GLU	2.8
35	DN	111	ALA	2.8
39	DR	60	LYS	2.8
40	DS	84	ARG	2.8
2	CB	199	ILE	2.8
9	CI	64	ILE	2.8
16	AP	19	VAL	2.8
26	DE	4	VAL	2.8
30	BI	42	ASN	2.8
35	DN	107	ASN	2.8
30	DI	125	THR	2.8
55	CM	71	GLU	2.8
17	CQ	5	ARG	2.8
30	DI	76	ALA	2.8
2	CB	91	VAL	2.8
2	AB	200	PRO	2.8
20	CT	42	ASP	2.8
49	D1	46	VAL	2.8
35	DN	100	CYS	2.8
22	DA	1731	G	2.8
51	D3	46	LYS	2.8
5	AE	102	THR	2.8
35	DN	37	THR	2.8
11	CK	98	ALA	2.8
51	D3	55	GLY	2.8
11	AK	125	LYS	2.8
25	DD	8	LYS	2.8
28	DG	31	GLU	2.8
51	D3	14	LYS	2.8

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Mol	Chain	Res	Type	RSRZ
14	CN	79	SER	2.8
13	AM	114	PRO	2.8
28	DG	125	PRO	2.8
28	DG	160	GLY	2.8
35	DN	25	ALA	2.8
58	DF	108	PRO	2.8
14	CN	3	GLN	2.8
28	DG	161	VAL	2.8
29	DH	94	ILE	2.8
26	DE	189	THR	2.8
29	DH	138	VAL	2.8
55	CM	95	PRO	2.8
2	AB	199	ILE	2.7
35	DN	20	MET	2.7
28	DG	116	LEU	2.7
2	CB	33	ALA	2.7
5	CE	157	GLY	2.7
22	DA	101	A	2.7
29	BH	112	LYS	2.7
10	AJ	36	VAL	2.7
25	DD	90	PHE	2.7
43	DV	57	TYR	2.7
2	CB	188	THR	2.7
30	BI	22	PRO	2.7
31	DJ	142	ILE	2.7
2	CB	153	MET	2.7
21	AU	37	TYR	2.7
30	BI	87	SER	2.7
58	DF	76	PHE	2.7
33	DL	121	THR	2.7
36	DO	46	GLU	2.7
38	DQ	88	GLU	2.7
43	DV	41	GLU	2.7
26	DE	176	ASP	2.7
49	D1	23	THR	2.7
2	AB	213	LEU	2.7
2	AB	216	VAL	2.7
8	AH	23	ALA	2.7
25	DD	26	VAL	2.7
26	DE	45	ALA	2.7
38	DQ	104	ALA	2.7
3	AC	169	GLU	2.7

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Mol	Chain	Res	Type	RSRZ
19	AS	3	SER	2.7
10	CJ	22	THR	2.7
22	DA	1068	G	2.7
36	DO	12	THR	2.7
10	CJ	17	LEU	2.7
28	DG	106	LEU	2.7
19	CS	71	GLY	2.7
29	DH	21	VAL	2.7
30	DI	8	VAL	2.7
58	DF	22	ASN	2.7
40	DS	94	ASP	2.7
28	DG	163	TYR	2.7
53	CA	250	A	2.7
58	DF	127	TYR	2.7
32	DK	77	ILE	2.7
49	B1	52	LYS	2.7
49	D1	36	LYS	2.7
2	CB	225	SER	2.7
40	DS	31	GLN	2.7
45	DX	32	LEU	2.7
52	D4	37	GLN	2.7
40	DS	40	ASN	2.7
44	DW	53	GLY	2.7
58	DF	40	GLY	2.7
58	DF	55	ASP	2.7
24	DC	30	ALA	2.7
36	DO	51	ALA	2.7
42	DU	82	VAL	2.7
41	DT	6	ARG	2.7
22	BA	2136	G	2.7
53	CA	1310	G	2.7
58	DF	23	SER	2.7
31	DJ	5	THR	2.7
40	DS	49	LYS	2.7
54	CG	95	ARG	2.7
2	CB	24	PRO	2.7
49	D1	43	ARG	2.7
32	DK	106	GLU	2.7
56	CP	50	THR	2.7
33	DL	24	GLY	2.7
29	BH	102	ALA	2.7
41	DT	25	GLU	2.7

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Mol	Chain	Res	Type	RSRZ
49	D1	6	GLU	2.7
54	CG	145	GLU	2.7
32	DK	99	ILE	2.7
1	AA	844	G	2.7
2	CB	160	LEU	2.7
58	DF	77	LYS	2.7
33	DL	107	PHE	2.7
54	CG	79	VAL	2.7
2	CB	39	ILE	2.7
38	DQ	64	ILE	2.7
39	DR	3	ALA	2.7
58	DF	120	SER	2.7
2	AB	19	THR	2.7
2	AB	48	MET	2.7
6	CF	62	MET	2.7
29	BH	76	GLU	2.7
30	DI	87	SER	2.6
54	CG	9	ARG	2.6
29	DH	40	THR	2.6
55	CM	99	GLN	2.6
35	DN	56	LYS	2.6
19	AS	70	LEU	2.6
34	DM	27	SER	2.6
2	CB	126	ASP	2.6
32	DK	104	THR	2.6
42	DU	56	GLY	2.6
38	DQ	110	GLU	2.6
44	DW	77	LYS	2.6
2	AB	185	ILE	2.6
27	BF	177	ARG	2.6
33	DL	108	ALA	2.6
58	DF	56	LEU	2.6
58	DF	140	ILE	2.6
2	CB	61	SER	2.6
44	DW	78	PHE	2.6
50	D2	18	PHE	2.6
3	CC	85	LYS	2.6
24	DC	45	ASN	2.6
36	DO	2	ASP	2.6
22	DA	1534	U	2.6
3	CC	179	ALA	2.6
40	DS	21	ALA	2.6

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Mol	Chain	Res	Type	RSRZ
40	DS	33	LEU	2.6
1	AA	78	A	2.6
9	AI	47	VAL	2.6
14	CN	94	GLY	2.6
19	AS	45	GLY	2.6
28	DG	68	ARG	2.6
58	DF	27	VAL	2.6
19	AS	14	LEU	2.6
30	DI	82	ALA	2.6
36	DO	50	ALA	2.6
32	DK	69	VAL	2.6
9	AI	106	ASP	2.6
2	AB	134	LEU	2.6
19	AS	32	THR	2.6
37	DP	39	LEU	2.6
39	DR	61	ALA	2.6
3	CC	57	GLU	2.6
22	BA	277	G	2.6
22	DA	446	G	2.6
26	DE	14	VAL	2.6
31	DJ	17	VAL	2.6
34	DM	60	GLN	2.6
58	DF	117	SER	2.6
40	DS	51	LEU	2.6
12	CL	22	ALA	2.6
29	DH	148	ALA	2.6
34	DM	17	ASN	2.6
51	D3	36	ALA	2.6
9	CI	19	PHE	2.6
2	CB	214	GLY	2.6
10	CJ	52	LEU	2.6
25	DD	202	ILE	2.6
27	BF	155	ILE	2.6
40	DS	97	LEU	2.6
55	CM	44	ILE	2.6
51	D3	63	TYR	2.6
26	DE	13	THR	2.6
33	DL	31	GLY	2.6
5	CE	158	LYS	2.6
26	DE	1	MET	2.6
41	DT	68	LYS	2.6
9	AI	32	ARG	2.6

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Mol	Chain	Res	Type	RSRZ
36	DO	38	GLN	2.6
58	DF	62	GLN	2.6
3	CC	36	PHE	2.6
27	BF	173	ASP	2.6
29	DH	98	ASP	2.6
44	DW	48	ALA	2.6
50	D2	36	ALA	2.6
2	AB	41	ASN	2.6
26	DE	76	PRO	2.6
39	DR	48	LYS	2.6
40	DS	20	VAL	2.6
41	DT	31	VAL	2.6
43	DV	68	LYS	2.6
53	CA	1138	G	2.6
22	DA	1321	A	2.6
2	AB	160	LEU	2.6
7	AG	78	ARG	2.6
32	DK	113	MET	2.6
14	CN	67	GLY	2.6
30	DI	36	GLU	2.6
43	DV	64	VAL	2.6
3	CC	86	LEU	2.6
17	AQ	46	HIS	2.6
29	DH	117	LEU	2.6
54	CG	132	THR	2.6
22	BA	613	A	2.6
22	DA	587	C	2.6
26	DE	62	GLN	2.6
19	CS	16	LYS	2.6
26	DE	57	LYS	2.6
49	D1	37	LYS	2.6
3	CC	35	ASP	2.6
33	DL	16	GLY	2.6
2	CB	35	ASN	2.6
51	D3	27	ASN	2.6
30	BI	111	THR	2.6
52	D4	23	ILE	2.6
24	BC	241	LYS	2.5
28	DG	137	LYS	2.5
40	DS	38	TYR	2.5
41	DT	54	GLU	2.5
56	CP	48	GLU	2.5

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Mol	Chain	Res	Type	RSRZ
3	AC	42	LEU	2.5
28	DG	88	LEU	2.5
34	DM	73	ILE	2.5
39	DR	101	ILE	2.5
58	DF	156	THR	2.5
3	CC	109	GLU	2.5
29	DH	81	ALA	2.5
28	DG	9	VAL	2.5
28	DG	75	VAL	2.5
34	DM	99	GLY	2.5
22	DA	653	U	2.5
37	BP	1	SER	2.5
49	D1	29	LYS	2.5
24	DC	81	GLU	2.5
54	CG	69	ARG	2.5
58	DF	149	ARG	2.5
19	CS	67	GLY	2.5
20	CT	78	LEU	2.5
37	DP	96	LEU	2.5
3	CC	195	ILE	2.5
19	CS	10	ILE	2.5
3	CC	155	ARG	2.5
55	CM	1	ALA	2.5
58	DF	31	GLU	2.5
2	CB	118	THR	2.5
27	BF	104	THR	2.5
30	DI	117	THR	2.5
31	DJ	78	THR	2.5
31	DJ	139	VAL	2.5
25	DD	38	LYS	2.5
55	CM	77	LYS	2.5
2	AB	214	GLY	2.5
11	AK	99	LEU	2.5
22	DA	1276	A	2.5
25	DD	203	VAL	2.5
44	BW	45	HIS	2.5
52	D4	7	VAL	2.5
28	DG	86	LEU	2.5
40	DS	46	LEU	2.5
41	DT	11	LEU	2.5
58	DF	17	THR	2.5
22	DA	1116	G	2.5

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Mol	Chain	Res	Type	RSRZ
31	DJ	93	ILE	2.5
43	DV	89	ILE	2.5
53	CA	954	G	2.5
2	AB	152	ASP	2.5
3	AC	205	GLU	2.5
22	DA	1065	U	2.5
22	DA	2797	U	2.5
26	DE	74	LYS	2.5
31	DJ	105	VAL	2.5
3	AC	139	ASN	2.5
39	DR	35	PHE	2.5
2	CB	114	LYS	2.5
9	CI	41	GLU	2.5
2	CB	193	ASP	2.5
24	DC	102	TYR	2.5
36	DO	96	GLY	2.5
55	CM	22	TYR	2.5
10	AJ	90	LEU	2.5
17	CQ	44	HIS	2.5
21	AU	34	ARG	2.5
14	CN	100	TRP	2.5
6	AF	62	MET	2.5
41	DT	82	LYS	2.5
2	CB	34	ARG	2.5
2	CB	159	ALA	2.5
21	AU	29	ALA	2.5
36	DO	41	ALA	2.5
3	CC	52	SER	2.5
1	AA	79	G	2.5
2	AB	131	LYS	2.5
2	CB	23	ASN	2.5
9	AI	27	ILE	2.5
19	AS	44	ILE	2.5
22	DA	2141	G	2.5
29	DH	83	LYS	2.5
8	AH	120	LEU	2.5
31	DJ	38	GLY	2.5
53	CA	958	A	2.5
2	CB	185	ILE	2.5
6	CF	6	ILE	2.5
34	DM	46	ILE	2.5
19	CS	2	ARG	2.5

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Mol	Chain	Res	Type	RSRZ
11	CK	66	ALA	2.5
25	DD	180	VAL	2.5
41	DT	93	LEU	2.5
53	CA	102	G	2.5
58	DF	7	TYR	2.5
4	AD	28	ASP	2.5
10	CJ	60	ASP	2.5
24	DC	25	LYS	2.5
54	CG	16	LYS	2.5
55	CM	113	LYS	2.5
1	AA	1031	C	2.5
22	DA	1532	A	2.5
11	CK	84	MET	2.5
11	AK	110	THR	2.5
21	AU	5	VAL	2.5
29	DH	19	VAL	2.5
31	DJ	53	TYR	2.5
31	DJ	111	LYS	2.5
36	DO	77	ALA	2.5
54	CG	60	ALA	2.5
11	AK	52	ARG	2.5
30	DI	34	ILE	2.5
40	DS	12	SER	2.5
41	DT	1	MET	2.4
28	DG	168	VAL	2.4
41	BT	16	VAL	2.4
44	DW	67	LYS	2.4
47	DZ	55	LYS	2.4
27	BF	114	ARG	2.4
10	AJ	10	LEU	2.4
28	BG	16	VAL	2.4
30	DI	60	VAL	2.4
22	DA	38	A	2.4
28	DG	50	THR	2.4
42	BU	52	ASN	2.4
42	DU	14	THR	2.4
46	DY	29	ARG	2.4
20	AT	3	ILE	2.4
32	DK	39	ILE	2.4
58	DF	33	ILE	2.4
33	DL	34	GLY	2.4
8	CH	127	TYR	2.4

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Mol	Chain	Res	Type	RSRZ
10	CJ	29	ALA	2.4
55	CM	36	ALA	2.4
20	CT	56	ILE	2.4
22	BA	1078	U	2.4
24	DC	63	ILE	2.4
22	BA	1175	A	2.4
25	DD	173	GLN	2.4
30	DI	85	ILE	2.4
35	DN	32	GLU	2.4
39	DR	23	GLU	2.4
42	DU	49	PRO	2.4
6	AF	37	HIS	2.4
17	CQ	28	VAL	2.4
28	DG	8	VAL	2.4
29	BH	17	ASP	2.4
31	DJ	140	LEU	2.4
40	DS	23	LEU	2.4
16	AP	39	PHE	2.4
48	D0	26	SER	2.4
2	CB	172	ILE	2.4
40	DS	103	ILE	2.4
43	DV	55	GLU	2.4
58	DF	2	LYS	2.4
1	AA	209	U	2.4
22	DA	932	U	2.4
40	DS	22	ASP	2.4
2	CB	127	LYS	2.4
3	CC	121	SER	2.4
20	CT	35	TYR	2.4
26	DE	183	PHE	2.4
21	AU	24	LYS	2.4
58	DF	74	ALA	2.4
29	BH	5	LEU	2.4
29	DH	15	LEU	2.4
2	CB	16	GLY	2.4
3	CC	90	VAL	2.4
30	BI	105	LEU	2.4
50	D2	43	THR	2.4
25	DD	6	GLY	2.4
43	DV	33	GLY	2.4
2	CB	164	ASP	2.4
42	DU	25	LYS	2.4

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Mol	Chain	Res	Type	RSRZ
16	AP	22	ALA	2.4
28	DG	118	ALA	2.4
46	DY	32	ALA	2.4
37	DP	71	ARG	2.4
42	DU	93	ARG	2.4
9	AI	3	ASN	2.4
28	DG	53	PRO	2.4
30	BI	83	ALA	2.4
45	DX	49	ARG	2.4
11	AK	42	GLY	2.4
58	DF	24	VAL	2.4
30	BI	93	ASN	2.4
58	DF	45	ASP	2.4
17	AQ	45	VAL	2.4
22	DA	1043	C	2.4
30	BI	97	VAL	2.4
44	DW	22	VAL	2.4
58	DF	176	PHE	2.4
26	DE	49	ARG	2.4
29	DH	77	THR	2.4
38	DQ	31	TYR	2.4
39	DR	2	TYR	2.4
39	DR	32	THR	2.4
22	DA	93	G	2.4
2	CB	213	LEU	2.4
55	CM	47	LEU	2.4
9	AI	33	SER	2.4
25	DD	1	MET	2.4
41	DT	71	GLY	2.4
44	DW	8	SER	2.4
49	D1	12	SER	2.4
40	DS	87	PRO	2.4
1	AA	80	A	2.4
3	CC	107	LYS	2.4
45	DX	13	THR	2.4
50	D2	4	THR	2.4
25	DD	43	ASP	2.4
37	DP	27	VAL	2.4
9	CI	109	GLN	2.4
22	DA	290	U	2.4
22	DA	2903	U	2.4
44	DW	41	GLY	2.4

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Mol	Chain	Res	Type	RSRZ
34	DM	40	ARG	2.4
53	CA	1309	G	2.4
22	BA	1072	C	2.4
36	DO	67	ASN	2.4
30	DI	141	ASP	2.3
58	DF	143	ASP	2.3
2	CB	111	LYS	2.3
27	BF	139	GLU	2.3
2	CB	28	PRO	2.3
17	CQ	32	ILE	2.3
22	DA	1341	G	2.3
28	DG	111	PRO	2.3
2	AB	188	THR	2.3
11	AK	45	THR	2.3
53	CA	1302	C	2.3
58	DF	79	ARG	2.3
2	AB	191	ASP	2.3
20	CT	75	LYS	2.3
44	DW	14	ASP	2.3
1	AA	1493	A	2.3
22	BA	2106	U	2.3
22	DA	92	U	2.3
30	DI	127	SER	2.3
55	CM	73	SER	2.3
33	DL	57	LEU	2.3
34	DM	124	LEU	2.3
40	DS	24	ILE	2.3
43	DV	84	PRO	2.3
58	DF	82	TYR	2.3
3	CC	168	ARG	2.3
6	CF	39	LEU	2.3
21	CU	32	ARG	2.3
32	DK	82	ASN	2.3
45	DX	46	VAL	2.3
22	DA	1266	G	2.3
53	CA	204	G	2.3
3	CC	205	GLU	2.3
22	DA	2313	C	2.3
37	DP	40	GLN	2.3
38	DQ	70	GLN	2.3
2	CB	184	ALA	2.3
26	DE	40	ARG	2.3

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Mol	Chain	Res	Type	RSRZ
29	BH	99	ILE	2.3
41	DT	84	TYR	2.3
42	BU	1	ALA	2.3
58	DF	175	PRO	2.3
2	AB	80	LYS	2.3
29	DH	78	VAL	2.3
55	CM	30	LYS	2.3
58	DF	98	PHE	2.3
9	CI	36	GLN	2.3
58	DF	86	CYS	2.3
10	CJ	16	ARG	2.3
22	DA	205	G	2.3
42	DU	21	ARG	2.3
43	DV	86	LEU	2.3
2	AB	151	LYS	2.3
11	AK	79	LYS	2.3
25	DD	56	LYS	2.3
49	D1	32	LYS	2.3
35	DN	102	PHE	2.3
13	AM	86	ARG	2.3
36	DO	89	ASP	2.3
4	AD	21	LYS	2.3
32	DK	32	TYR	2.3
2	CB	125	PHE	2.3
22	DA	1459	G	2.3
53	CA	94	G	2.3
25	DD	77	ARG	2.3
28	DG	94	ARG	2.3
33	DL	106	GLU	2.3
7	AG	58	LEU	2.3
12	CL	80	LEU	2.3
14	CN	15	LEU	2.3
52	D4	13	ASN	2.3
9	CI	16	ALA	2.3
14	CN	21	ALA	2.3
39	DR	59	ILE	2.3
31	DJ	96	ARG	2.3
34	DM	16	ARG	2.3
58	DF	109	ARG	2.3
27	BF	78	ILE	2.3
9	AI	19	PHE	2.3
29	DH	132	PHE	2.3

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Mol	Chain	Res	Type	RSRZ
32	DK	16	ALA	2.3
40	DS	17	VAL	2.3
41	DT	37	ASP	2.3
2	CB	192	PRO	2.3
19	AS	29	PRO	2.3
34	DM	98	PRO	2.3
40	DS	28	LYS	2.3
44	DW	61	LYS	2.3
30	DI	78	LEU	2.3
33	DL	77	ILE	2.3
49	D1	47	ILE	2.3
51	D3	3	ILE	2.3
2	CB	183	PHE	2.3
14	CN	76	PHE	2.3
21	AU	49	ALA	2.3
49	D1	51	ALA	2.3
1	AA	1032	G	2.3
22	DA	467	G	2.3
25	DD	10	GLY	2.3
27	BF	125	GLY	2.3
32	DK	36	GLY	2.3
33	DL	51	GLU	2.3
36	DO	55	GLU	2.3
9	CI	62	LEU	2.3
26	DE	179	SER	2.3
9	AI	82	ILE	2.3
29	BH	18	GLN	2.3
21	CU	34	ARG	2.3
25	DD	29	VAL	2.3
30	BI	113	ALA	2.3
44	DW	59	PHE	2.3
2	AB	23	ASN	2.3
54	CG	80	GLY	2.3
22	BA	1171	G	2.3
22	DA	2012	G	2.3
3	AC	67	ILE	2.3
26	DE	44	ARG	2.3
32	DK	109	SER	2.3
9	AI	28	VAL	2.3
31	DJ	47	HIS	2.3
33	DL	26	GLY	2.3
42	DU	55	GLY	2.3

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Mol	Chain	Res	Type	RSRZ
31	DJ	35	ARG	2.3
31	DJ	95	ARG	2.3
27	BF	76	PHE	2.3
32	DK	115	ILE	2.3
50	D2	5	PHE	2.3
58	DF	66	ILE	2.3
9	CI	107	ALA	2.3
11	AK	72	ALA	2.3
20	CT	71	ALA	2.3
26	DE	87	ALA	2.3
36	DO	70	ALA	2.3
29	DH	70	GLU	2.2
2	AB	196	ASP	2.2
24	DC	47	ARG	2.2
29	DH	104	THR	2.2
44	DW	57	THR	2.2
38	DQ	21	LYS	2.2
41	DT	49	LYS	2.2
55	CM	80	MET	2.2
2	AB	161	PHE	2.2
2	CB	15	PHE	2.2
56	CP	33	ILE	2.2
32	DK	3	GLN	2.2
38	DQ	99	VAL	2.2
52	D4	22	VAL	2.2
7	AG	7	GLY	2.2
56	CP	17	TYR	2.2
38	BQ	86	SER	2.2
58	DF	54	ALA	2.2
1	AA	1362	A	2.2
22	BA	2108	A	2.2
2	CB	56	LEU	2.2
9	CI	55	ASP	2.2
26	DE	199	MET	2.2
48	D0	32	THR	2.2
58	DF	36	ASN	2.2
22	BA	2105	U	2.2
28	DG	99	GLY	2.2
30	BI	103	ALA	2.2
58	DF	118	ALA	2.2
39	DR	82	HIS	2.2
21	AU	11	PHE	2.2

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Mol	Chain	Res	Type	RSRZ
28	BG	23	ILE	2.2
2	CB	216	VAL	2.2
58	DF	11	VAL	2.2
9	AI	5	TYR	2.2
9	AI	120	ALA	2.2
11	CK	75	GLU	2.2
24	BC	237	ARG	2.2
28	DG	54	ARG	2.2
29	DH	51	ARG	2.2
34	DM	8	LYS	2.2
26	DE	100	MET	2.2
3	AC	98	ALA	2.2
14	CN	69	PRO	2.2
26	DE	17	THR	2.2
46	DY	20	ASN	2.2
24	DC	250	GLN	2.2
53	CA	88	U	2.2
53	CA	121	U	2.2
46	DY	56	LEU	2.2
2	CB	135	MET	2.2
9	CI	14	SER	2.2
22	DA	469	G	2.2
41	BT	24	MET	2.2
55	CM	48	SER	2.2
2	CB	43	GLU	2.2
5	AE	147	ASN	2.2
30	BI	21	PRO	2.2
43	DV	43	ASP	2.2
58	DF	92	GLY	2.2
37	DP	6	GLN	2.2
2	AB	37	VAL	2.2
2	AB	180	ILE	2.2
19	CS	57	VAL	2.2
52	D4	12	ARG	2.2
2	AB	159	ALA	2.2
14	AN	32	ASP	2.2
21	AU	12	ASP	2.2
28	BG	127	GLN	2.2
51	D3	26	ALA	2.2
54	CG	51	GLN	2.2
2	AB	34	ARG	2.2
3	CC	84	GLU	2.2

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Mol	Chain	Res	Type	RSRZ
24	DC	105	ALA	2.2
33	DL	58	TYR	2.2
15	CO	86	LEU	2.2
22	BA	2104	C	2.2
22	DA	2306	C	2.2
29	DH	12	LEU	2.2
31	DJ	19	ASP	2.2
58	DF	50	ASP	2.2
22	DA	85	G	2.2
32	DK	67	LYS	2.2
7	AG	72	VAL	2.2
22	BA	2181	U	2.2
22	BA	2402	U	2.2
29	BH	55	GLU	2.2
29	DH	149	GLU	2.2
42	DU	92	VAL	2.2
47	DZ	58	GLU	2.2
22	DA	1254	A	2.2
9	CI	106	ASP	2.2
30	DI	104	GLN	2.2
34	DM	72	PRO	2.2
40	DS	65	ASP	2.2
2	CB	90	PHE	2.2
43	DV	7	GLU	2.2
58	DF	164	GLU	2.2
22	DA	748	G	2.2
53	CA	1272	G	2.2
9	CI	123	ARG	2.2
11	CK	20	ALA	2.2
16	AP	54	LEU	2.2
27	BF	74	ALA	2.2
28	DG	96	ALA	2.2
43	DV	28	ALA	2.2
19	AS	73	PHE	2.2
2	CB	48	MET	2.2
3	CC	56	ILE	2.2
11	AK	128	VAL	2.2
30	BI	59	THR	2.2
39	DR	31	GLU	2.2
24	DC	237	ARG	2.2
30	DI	114	ALA	2.2
49	D1	14	ALA	2.2

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Mol	Chain	Res	Type	RSRZ
55	CM	68	LEU	2.2
14	AN	31	SER	2.2
22	DA	315	G	2.2
22	DA	1311	G	2.2
10	CJ	48	ARG	2.2
22	DA	94	A	2.2
22	DA	1169	A	2.2
26	DE	43	THR	2.2
26	DE	54	GLY	2.2
30	BI	102	ARG	2.2
39	DR	92	TRP	2.1
40	DS	73	LYS	2.2
2	AB	84	LEU	2.1
36	DO	113	ALA	2.1
2	CB	157	PRO	2.1
22	DA	589	U	2.1
9	CI	39	GLY	2.1
21	AU	19	LYS	2.1
26	DE	16	GLU	2.1
31	DJ	123	LYS	2.1
43	DV	45	ASP	2.1
22	DA	333	G	2.1
25	DD	147	GLY	2.1
45	DX	54	GLY	2.1
1	AA	81	A	2.1
1	AA	1441	A	2.1
30	BI	6	ALA	2.1
14	CN	72	PHE	2.1
48	D0	3	GLN	2.1
2	AB	65	LYS	2.1
46	DY	7	ARG	2.1
54	CG	15	PRO	2.1
2	AB	187	ASP	2.1
32	DK	80	ASP	2.1
54	CG	81	GLY	2.1
58	DF	49	LEU	2.1
19	CS	42	ASN	2.1
19	AS	16	LYS	2.1
22	DA	578	G	2.1
31	DJ	55	ILE	2.1
45	DX	66	VAL	2.1
31	DJ	83	GLY	2.1

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Mol	Chain	Res	Type	RSRZ
34	DM	1	MET	2.1
49	B1	3	GLY	2.1
55	CM	20	SER	2.1
58	DF	16	MET	2.1
22	DA	76	C	2.1
22	DA	1278	C	2.1
53	CA	1314	C	2.1
15	AO	16	ARG	2.1
38	DQ	32	ARG	2.1
45	DX	44	ARG	2.1
55	CM	84	CYS	2.1
2	AB	18	GLN	2.1
9	CI	29	ILE	2.1
24	DC	48	ILE	2.1
39	DR	41	ILE	2.1
13	AM	94	LEU	2.1
19	CS	8	PRO	2.1
20	CT	41	GLY	2.1
22	DA	2140	G	2.1
39	DR	57	GLY	2.1
53	CA	466	A	2.1
2	CB	72	LYS	2.1
13	AM	91	ARG	2.1
27	BF	82	TYR	2.1
27	BF	149	ARG	2.1
32	DK	73	ASP	2.1
11	AK	32	THR	2.1
24	DC	245	THR	2.1
25	DD	37	VAL	2.1
42	BU	87	GLU	2.1
50	D2	6	GLN	2.1
8	CH	110	MET	2.1
27	BF	116	LEU	2.1
35	DN	110	MET	2.1
37	DP	12	MET	2.1
33	DL	141	LYS	2.1
52	D4	19	ARG	2.1
18	AR	26	ALA	2.1
22	DA	654	A	2.1
22	DA	1530	G	2.1
26	DE	140	ASP	2.1
30	BI	82	ALA	2.1

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Mol	Chain	Res	Type	RSRZ
24	BC	250	GLN	2.1
33	DL	74	THR	2.1
2	CB	25	LYS	2.1
9	CI	117	LEU	2.1
29	BH	12	LEU	2.1
31	DJ	99	ARG	2.1
40	DS	41	LYS	2.1
42	DU	3	LYS	2.1
16	AP	16	PHE	2.1
29	BH	47	PHE	2.1
41	DT	21	SER	2.1
30	BI	122	GLU	2.1
58	DF	1	ALA	2.1
1	AA	121	U	2.1
9	AI	20	ILE	2.1
22	DA	2147	A	2.1
39	DR	12	HIS	2.1
40	DS	66	ILE	2.1
44	DW	36	ILE	2.1
3	CC	7	ASN	2.1
14	CN	68	ARG	2.1
19	AS	31	ARG	2.1
25	DD	188	LEU	2.1
28	DG	5	LYS	2.1
37	DP	7	LEU	2.1
38	DQ	19	GLN	2.1
42	DU	43	LYS	2.1
51	D3	48	MET	2.1
53	CA	963	G	2.1
37	DP	73	PHE	2.1
39	DR	53	PHE	2.1
11	CK	44	ALA	2.1
24	DC	179	GLU	2.1
29	BH	109	GLU	2.1
46	DY	34	SER	2.1
13	AM	113	LYS	2.1
38	DQ	103	VAL	2.1
3	AC	177	LEU	2.1
9	CI	51	LEU	2.1
11	CK	81	LEU	2.1
14	CN	71	GLY	2.1
26	DE	174	GLY	2.1

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Mol	Chain	Res	Type	RSRZ
58	DF	111	ARG	2.1
22	DA	448	U	2.1
22	DA	586	A	2.1
25	DD	32	ASN	2.1
40	DS	86	MET	2.1
34	DM	31	PHE	2.1
48	D0	5	ASN	2.1
21	CU	37	TYR	2.1
22	DA	356	G	2.1
3	CC	197	VAL	2.1
42	DU	23	LYS	2.1
2	CB	81	ASP	2.1
30	BI	27	LEU	2.1
30	BI	63	ASP	2.1
51	D3	39	ARG	2.1
8	CH	82	LEU	2.1
28	DG	44	HIS	2.1
45	DX	19	HIS	2.1
47	DZ	28	LEU	2.1
2	CB	8	MET	2.1
8	CH	44	PHE	2.1
39	DR	29	THR	2.1
41	DT	39	THR	2.1
22	DA	675	A	2.1
22	DA	1745	A	2.1
22	DA	2020	A	2.1
2	AB	46	VAL	2.1
10	CJ	21	ALA	2.1
21	AU	20	ARG	2.1
33	DL	8	PRO	2.1
34	DM	111	GLU	2.1
35	DN	69	ARG	2.1
41	DT	66	LYS	2.1
11	AK	33	ILE	2.1
16	AP	4	ILE	2.1
22	DA	336	C	2.1
32	DK	2	ILE	2.1
2	AB	149	GLY	2.1
2	CB	152	ASP	2.1
45	DX	21	LEU	2.1
51	D3	54	LEU	2.1
21	AU	36	PHE	2.1

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Mol	Chain	Res	Type	RSRZ
3	CC	171	ARG	2.1
28	DG	154	GLU	2.1
30	DI	80	LYS	2.1
30	BI	43	ALA	2.1
31	DJ	87	ALA	2.1
34	DM	7	THR	2.1
55	CM	89	ARG	2.1
2	AB	218	ALA	2.1
2	CB	198	VAL	2.1
25	DD	5	VAL	2.1
36	DO	107	ALA	2.1
55	CM	59	VAL	2.1
6	AF	36	ILE	2.1
9	CI	27	ILE	2.1
2	CB	123	GLY	2.1
22	DA	1614	A	2.1
1	AA	841	C	2.1
25	DD	125	TRP	2.0
26	DE	184	ASP	2.1
31	DJ	4	PHE	2.0
43	DV	93	ARG	2.0
48	D0	52	LYS	2.0
6	AF	97	THR	2.0
19	CS	76	THR	2.0
46	DY	3	ALA	2.0
24	DC	103	ILE	2.0
35	DN	33	ILE	2.0
53	CA	85	U	2.0
53	CA	955	U	2.0
3	AC	78	LYS	2.0
2	AB	224	ARG	2.0
10	AJ	49	PHE	2.0
22	DA	466	A	2.0
22	DA	2033	A	2.0
25	DD	176	ASP	2.0
49	D1	13	SER	2.0
53	CA	1257	A	2.0
33	DL	90	VAL	2.0
2	CB	200	PRO	2.0
11	AK	109	ILE	2.0
17	AQ	7	LEU	2.0
26	DE	149	ILE	2.0

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Mol	Chain	Res	Type	RSRZ
33	DL	99	ASN	2.0
40	DS	55	ILE	2.0
54	CG	37	THR	2.0
20	CT	15	LYS	2.0
22	DA	1449	G	2.0
42	DU	16	LYS	2.0
50	D2	37	LYS	2.0
8	CH	48	PHE	2.0
33	DL	18	ARG	2.0
2	AB	81	ASP	2.0
2	CB	51	GLU	2.0
7	AG	19	SER	2.0
8	CH	59	GLU	2.0
14	CN	31	SER	2.0
2	AB	128	LEU	2.0
12	CL	81	ILE	2.0
30	BI	112	LYS	2.0
34	DM	96	ILE	2.0
14	CN	49	THR	2.0
19	CS	78	THR	2.0
17	CQ	59	GLU	2.0
19	CS	13	HIS	2.0
45	DX	18	SER	2.0
28	DG	42	VAL	2.0
27	BF	106	ALA	2.0
29	BH	25	TYR	2.0
30	BI	121	ILE	2.0
44	DW	74	LYS	2.0
22	DA	1073	A	2.0
28	DG	162	ARG	2.0
55	CM	32	ILE	2.0
49	D1	40	PRO	2.0
19	AS	19	GLU	2.0
3	AC	150	VAL	2.0
24	DC	17	LYS	2.0
8	AH	31	LEU	2.0
15	CO	3	SER	2.0
56	CP	76	LYS	2.0
22	DA	2780	G	2.0
28	DG	13	GLY	2.0
51	D3	52	GLY	2.0
21	AU	40	PRO	2.0

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Mol	Chain	Res	Type	RSRZ
2	AB	99	MET	2.0
22	DA	1654	A	2.0
22	DA	2143	C	2.0
43	DV	62	THR	2.0
56	CP	3	THR	2.0
8	CH	85	TYR	2.0
58	DF	15	LEU	2.0

6.2 Non-standard residues in protein, DNA, RNA chains (i)

There are no non-standard protein/DNA/RNA residues in this entry.

6.3 Carbohydrates (i)

There are no monosaccharides in this entry.

6.4 Ligands (i)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	DJ	201	1/1	-0.24	1.05	312,312,312,312	0
59	MG	DA	3002	1/1	-0.04	0.64	225,225,225,225	0
59	MG	DA	3005	1/1	-0.03	0.50	284,284,284,284	0
59	MG	DA	3016	1/1	0.07	1.14	214,214,214,214	0
59	MG	DA	3074	1/1	0.10	0.96	247,247,247,247	0
59	MG	DA	3018	1/1	0.16	0.17	125,125,125,125	0
59	MG	DA	3092	1/1	0.25	0.25	119,119,119,119	0
59	MG	DA	3091	1/1	0.30	0.37	154,154,154,154	0
59	MG	DA	3111	1/1	0.35	0.19	179,179,179,179	0
59	MG	DA	3004	1/1	0.35	0.17	122,122,122,122	0
59	MG	DA	3063	1/1	0.37	2.20	213,213,213,213	0
59	MG	DA	3130	1/1	0.41	3.18	280,280,280,280	0
59	MG	DA	3060	1/1	0.41	0.61	198,198,198,198	0
59	MG	DA	3133	1/1	0.43	0.38	198,198,198,198	0
59	MG	DA	3020	1/1	0.44	0.63	240,240,240,240	0
59	MG	CA	1618	1/1	0.45	0.30	146,146,146,146	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	DA	3106	1/1	0.45	0.74	316,316,316,316	0
59	MG	DA	3039	1/1	0.45	0.17	79,79,79,79	0
59	MG	DA	3043	1/1	0.47	0.28	179,179,179,179	0
59	MG	DA	3110	1/1	0.48	0.38	146,146,146,146	0
59	MG	DA	3109	1/1	0.49	0.48	184,184,184,184	0
59	MG	DA	3045	1/1	0.50	0.25	160,160,160,160	0
59	MG	DA	3027	1/1	0.51	0.27	157,157,157,157	0
59	MG	DA	3047	1/1	0.51	0.21	142,142,142,142	0
59	MG	DA	3129	1/1	0.52	0.53	210,210,210,210	0
59	MG	CA	1619	1/1	0.53	0.34	210,210,210,210	0
59	MG	DA	3028	1/1	0.54	0.63	222,222,222,222	0
59	MG	DA	3084	1/1	0.55	0.17	201,201,201,201	0
59	MG	DA	3007	1/1	0.56	0.62	248,248,248,248	0
59	MG	DA	3090	1/1	0.56	0.11	78,78,78,78	0
59	MG	CA	1628	1/1	0.56	0.16	165,165,165,165	0
59	MG	DA	3022	1/1	0.56	0.37	173,173,173,173	0
59	MG	DA	3097	1/1	0.57	0.39	137,137,137,137	0
59	MG	DA	3049	1/1	0.58	0.63	192,192,192,192	0
59	MG	DA	3127	1/1	0.58	0.87	228,228,228,228	0
59	MG	DA	3024	1/1	0.58	0.20	100,100,100,100	0
59	MG	AA	1629	1/1	0.59	0.11	84,84,84,84	0
59	MG	DA	3077	1/1	0.59	0.19	123,123,123,123	0
59	MG	DA	3120	1/1	0.60	0.20	91,91,91,91	0
59	MG	CA	1603	1/1	0.60	0.34	177,177,177,177	0
59	MG	DA	3019	1/1	0.61	0.18	192,192,192,192	0
59	MG	CA	1617	1/1	0.61	0.12	214,214,214,214	0
59	MG	DA	3026	1/1	0.62	0.91	258,258,258,258	0
59	MG	DA	3132	1/1	0.62	0.87	185,185,185,185	0
59	MG	DA	3015	1/1	0.63	0.74	176,176,176,176	0
59	MG	DA	3083	1/1	0.63	0.29	204,204,204,204	0
59	MG	DA	3010	1/1	0.63	0.57	195,195,195,195	0
59	MG	DA	3003	1/1	0.65	0.82	229,229,229,229	0
59	MG	DA	3079	1/1	0.66	0.89	200,200,200,200	0
59	MG	DA	3064	1/1	0.66	0.66	280,280,280,280	0
59	MG	DA	3014	1/1	0.66	0.37	133,133,133,133	0
59	MG	DA	3099	1/1	0.66	0.19	164,164,164,164	0
59	MG	DA	3001	1/1	0.66	0.09	149,149,149,149	0
59	MG	DA	3038	1/1	0.67	0.12	203,203,203,203	0
59	MG	DA	3082	1/1	0.67	0.19	132,132,132,132	0
59	MG	DA	3126	1/1	0.67	0.24	112,112,112,112	0
59	MG	DA	3088	1/1	0.68	0.17	170,170,170,170	0
59	MG	DA	3125	1/1	0.68	0.36	152,152,152,152	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	AA	1616	1/1	0.68	0.14	106,106,106,106	0
59	MG	DA	3078	1/1	0.69	0.24	182,182,182,182	0
59	MG	CA	1615	1/1	0.70	0.30	170,170,170,170	0
59	MG	CA	1613	1/1	0.70	0.15	107,107,107,107	0
59	MG	DA	3006	1/1	0.70	0.10	176,176,176,176	0
59	MG	DA	3089	1/1	0.71	0.18	100,100,100,100	0
59	MG	DA	3123	1/1	0.71	0.30	183,183,183,183	0
59	MG	DA	3058	1/1	0.71	0.32	202,202,202,202	0
59	MG	BA	3117	1/1	0.71	0.26	173,173,173,173	0
59	MG	DA	3102	1/1	0.71	0.21	87,87,87,87	0
59	MG	DA	3062	1/1	0.72	0.56	213,213,213,213	0
59	MG	DA	3050	1/1	0.72	0.28	160,160,160,160	0
59	MG	CA	1610	1/1	0.72	0.06	151,151,151,151	0
59	MG	DA	3032	1/1	0.72	0.19	131,131,131,131	0
59	MG	CA	1620	1/1	0.73	0.15	164,164,164,164	0
59	MG	DA	3044	1/1	0.73	0.17	92,92,92,92	0
59	MG	DA	3086	1/1	0.73	0.39	84,84,84,84	0
59	MG	DA	3098	1/1	0.73	0.33	151,151,151,151	0
59	MG	DA	3011	1/1	0.74	0.39	145,145,145,145	0
59	MG	DA	3008	1/1	0.74	0.17	112,112,112,112	0
59	MG	DA	3030	1/1	0.74	0.31	104,104,104,104	0
59	MG	DA	3071	1/1	0.75	0.18	74,74,74,74	0
59	MG	AA	1627	1/1	0.75	0.37	137,137,137,137	0
59	MG	DA	3035	1/1	0.75	0.14	79,79,79,79	0
59	MG	CA	1637	1/1	0.75	0.11	170,170,170,170	0
59	MG	DA	3041	1/1	0.76	0.15	110,110,110,110	0
59	MG	DA	3087	1/1	0.76	0.28	152,152,152,152	0
59	MG	DA	3059	1/1	0.76	0.39	197,197,197,197	0
59	MG	DA	3113	1/1	0.76	0.12	121,121,121,121	0
59	MG	DA	3116	1/1	0.76	0.12	54,54,54,54	0
59	MG	DA	3056	1/1	0.77	0.18	72,72,72,72	0
59	MG	DA	3033	1/1	0.77	0.32	132,132,132,132	0
59	MG	AA	1619	1/1	0.77	0.69	209,209,209,209	0
59	MG	DA	3036	1/1	0.77	0.58	222,222,222,222	0
59	MG	BA	3068	1/1	0.77	0.09	151,151,151,151	0
59	MG	DA	3053	1/1	0.77	0.25	98,98,98,98	0
61	ZN	D4	101	1/1	0.77	0.10	157,157,157,157	0
59	MG	DA	3040	1/1	0.78	0.15	65,65,65,65	0
59	MG	DA	3072	1/1	0.78	0.16	131,131,131,131	0
59	MG	DA	3104	1/1	0.78	0.16	33,33,33,33	0
59	MG	DA	3021	1/1	0.78	0.15	83,83,83,83	0
59	MG	AA	1626	1/1	0.79	0.10	52,52,52,52	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	CA	1601	1/1	0.79	0.10	120,120,120,120	0
59	MG	DC	301	1/1	0.79	0.25	155,155,155,155	0
59	MG	AA	1617	1/1	0.79	0.16	147,147,147,147	0
59	MG	DA	3037	1/1	0.79	0.11	97,97,97,97	0
59	MG	DA	3115	1/1	0.80	0.21	126,126,126,126	0
59	MG	AA	1603	1/1	0.80	0.14	131,131,131,131	0
59	MG	CA	1623	1/1	0.80	0.17	121,121,121,121	0
59	MG	CA	1608	1/1	0.80	0.17	44,44,44,44	0
59	MG	BA	3007	1/1	0.80	0.15	104,104,104,104	0
59	MG	BA	3018	1/1	0.80	0.14	44,44,44,44	0
59	MG	DA	3048	1/1	0.80	0.15	95,95,95,95	0
59	MG	CA	1626	1/1	0.81	0.40	196,196,196,196	0
59	MG	CA	1607	1/1	0.81	0.23	134,134,134,134	0
59	MG	DA	3067	1/1	0.81	0.21	64,64,64,64	0
59	MG	CA	1602	1/1	0.81	0.16	145,145,145,145	0
59	MG	CA	1614	1/1	0.81	0.71	245,245,245,245	0
59	MG	DA	3108	1/1	0.81	0.67	212,212,212,212	0
59	MG	DA	3017	1/1	0.82	0.13	51,51,51,51	0
59	MG	CA	1612	1/1	0.82	0.41	113,113,113,113	0
59	MG	DB	201	1/1	0.82	0.10	88,88,88,88	0
59	MG	AA	1623	1/1	0.82	0.12	89,89,89,89	0
59	MG	DA	3031	1/1	0.82	0.18	76,76,76,76	0
59	MG	CA	1616	1/1	0.82	0.39	203,203,203,203	0
59	MG	DA	3124	1/1	0.83	0.18	70,70,70,70	0
59	MG	DA	3096	1/1	0.83	0.14	93,93,93,93	0
59	MG	BA	3089	1/1	0.83	0.13	95,95,95,95	0
59	MG	DA	3013	1/1	0.83	0.38	189,189,189,189	0
59	MG	DA	3122	1/1	0.83	0.15	94,94,94,94	0
59	MG	DA	3095	1/1	0.83	0.20	122,122,122,122	0
59	MG	AA	1630	1/1	0.84	0.37	189,189,189,189	0
59	MG	DA	3094	1/1	0.84	0.26	134,134,134,134	0
59	MG	DA	3076	1/1	0.84	0.25	149,149,149,149	0
59	MG	CE	201	1/1	0.84	0.27	132,132,132,132	0
59	MG	AA	1638	1/1	0.84	0.17	47,47,47,47	0
59	MG	DA	3069	1/1	0.84	0.57	233,233,233,233	0
59	MG	BA	3021	1/1	0.84	0.34	158,158,158,158	0
59	MG	CA	1635	1/1	0.84	0.14	201,201,201,201	0
59	MG	DA	3070	1/1	0.85	0.13	60,60,60,60	0
59	MG	CA	1625	1/1	0.85	0.17	48,48,48,48	0
59	MG	DA	3118	1/1	0.85	0.10	59,59,59,59	0
59	MG	BA	3085	1/1	0.85	0.20	124,124,124,124	0
59	MG	AA	1602	1/1	0.85	0.12	152,152,152,152	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	AA	1639	1/1	0.85	0.12	109,109,109,109	0
59	MG	DA	3055	1/1	0.85	0.11	72,72,72,72	0
59	MG	DA	3046	1/1	0.85	0.24	125,125,125,125	0
59	MG	BB	201	1/1	0.85	0.28	228,228,228,228	0
59	MG	BA	3057	1/1	0.86	0.14	147,147,147,147	0
59	MG	DA	3128	1/1	0.86	0.31	116,116,116,116	0
59	MG	CA	1636	1/1	0.87	0.30	119,119,119,119	0
59	MG	BA	3004	1/1	0.87	0.24	156,156,156,156	0
59	MG	BA	3045	1/1	0.87	0.14	30,30,30,30	0
59	MG	DA	3042	1/1	0.87	0.20	99,99,99,99	0
59	MG	AA	1625	1/1	0.87	0.08	64,64,64,64	0
59	MG	BA	3003	1/1	0.87	0.10	58,58,58,58	0
59	MG	DA	3051	1/1	0.87	0.15	91,91,91,91	0
59	MG	DA	3073	1/1	0.87	0.08	148,148,148,148	0
59	MG	BA	3059	1/1	0.88	0.33	129,129,129,129	0
59	MG	AA	1637	1/1	0.88	0.12	96,96,96,96	0
59	MG	DA	3121	1/1	0.88	0.13	122,122,122,122	0
59	MG	CA	1627	1/1	0.88	1.25	237,237,237,237	0
59	MG	DA	3075	1/1	0.88	0.41	172,172,172,172	0
59	MG	DA	3100	1/1	0.88	0.33	105,105,105,105	0
59	MG	CA	1631	1/1	0.89	0.10	160,160,160,160	0
59	MG	DA	3057	1/1	0.89	0.54	185,185,185,185	0
59	MG	BA	3025	1/1	0.89	0.56	165,165,165,165	0
59	MG	BA	3090	1/1	0.89	0.14	120,120,120,120	0
59	MG	BA	3055	1/1	0.89	0.35	215,215,215,215	0
59	MG	DA	3061	1/1	0.89	0.12	131,131,131,131	0
59	MG	DA	3085	1/1	0.89	0.44	132,132,132,132	0
59	MG	BB	202	1/1	0.90	0.06	64,64,64,64	0
59	MG	DA	3012	1/1	0.90	0.21	41,41,41,41	0
59	MG	AA	1628	1/1	0.90	0.35	136,136,136,136	0
59	MG	BA	3031	1/1	0.90	0.11	26,26,26,26	0
59	MG	AA	1614	1/1	0.90	0.17	156,156,156,156	0
59	MG	DA	3117	1/1	0.90	0.20	73,73,73,73	0
59	MG	CA	1606	1/1	0.90	0.16	54,54,54,54	0
59	MG	DA	3103	1/1	0.90	0.17	76,76,76,76	0
59	MG	DA	3081	1/1	0.90	0.28	78,78,78,78	0
59	MG	CA	1638	1/1	0.90	0.09	141,141,141,141	0
59	MG	BA	3131	1/1	0.90	0.40	184,184,184,184	0
59	MG	BA	3005	1/1	0.90	0.11	75,75,75,75	0
59	MG	BA	3070	1/1	0.91	0.21	135,135,135,135	0
59	MG	AA	1607	1/1	0.91	0.07	105,105,105,105	0
59	MG	DA	3009	1/1	0.91	0.14	100,100,100,100	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	AA	1621	1/1	0.91	0.17	143,143,143,143	0
59	MG	BA	3034	1/1	0.91	0.28	197,197,197,197	0
59	MG	CA	1611	1/1	0.91	0.19	111,111,111,111	0
59	MG	CA	1629	1/1	0.91	0.24	126,126,126,126	0
59	MG	BA	3103	1/1	0.91	0.17	21,21,21,21	0
59	MG	DA	3119	1/1	0.91	0.11	67,67,67,67	0
59	MG	AA	1641	1/1	0.91	0.23	148,148,148,148	0
59	MG	CA	1621	1/1	0.91	0.18	50,50,50,50	0
59	MG	DC	302	1/1	0.91	0.31	159,159,159,159	0
59	MG	DA	3029	1/1	0.91	0.94	142,142,142,142	0
59	MG	DA	3080	1/1	0.91	0.11	152,152,152,152	0
59	MG	BA	3023	1/1	0.92	0.10	16,16,16,16	0
59	MG	AA	1620	1/1	0.92	0.10	126,126,126,126	0
59	MG	DA	3112	1/1	0.92	0.14	80,80,80,80	0
59	MG	BA	3028	1/1	0.92	0.20	49,49,49,49	0
59	MG	DA	3114	1/1	0.92	0.10	147,147,147,147	0
59	MG	BA	3108	1/1	0.92	0.09	83,83,83,83	0
59	MG	DA	3052	1/1	0.92	0.12	56,56,56,56	0
59	MG	DA	3023	1/1	0.92	0.14	111,111,111,111	0
59	MG	CA	1639	1/1	0.92	0.22	161,161,161,161	0
59	MG	DA	3068	1/1	0.92	0.16	67,67,67,67	0
59	MG	BA	3114	1/1	0.92	0.15	8,8,8,8	0
59	MG	BA	3115	1/1	0.92	0.10	7,7,7,7	0
59	MG	DA	3093	1/1	0.92	0.17	234,234,234,234	0
59	MG	BA	3010	1/1	0.92	0.07	17,17,17,17	0
59	MG	BA	3067	1/1	0.93	0.12	17,17,17,17	0
59	MG	DA	3065	1/1	0.93	0.17	77,77,77,77	0
59	MG	BB	204	1/1	0.93	0.08	23,23,23,23	0
59	MG	BA	3077	1/1	0.93	0.13	38,38,38,38	0
59	MG	CA	1633	1/1	0.93	0.14	138,138,138,138	0
59	MG	BA	3118	1/1	0.93	0.14	23,23,23,23	0
59	MG	DA	3131	1/1	0.93	0.17	91,91,91,91	0
59	MG	DA	3105	1/1	0.93	0.20	61,61,61,61	0
59	MG	CA	1622	1/1	0.93	0.13	190,190,190,190	0
59	MG	DA	3107	1/1	0.93	0.24	91,91,91,91	0
59	MG	BA	3129	1/1	0.93	1.07	243,243,243,243	0
59	MG	BA	3001	1/1	0.93	0.09	117,117,117,117	0
59	MG	BA	3134	1/1	0.93	0.36	196,196,196,196	0
59	MG	BA	3069	1/1	0.93	0.25	136,136,136,136	0
59	MG	BA	3127	1/1	0.94	0.14	2,2,2,2	0
59	MG	BA	3073	1/1	0.94	0.17	17,17,17,17	0
59	MG	BA	3074	1/1	0.94	0.17	85,85,85,85	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	BA	3133	1/1	0.94	0.26	146,146,146,146	0
59	MG	BA	3076	1/1	0.94	0.10	119,119,119,119	0
59	MG	BA	3047	1/1	0.94	0.09	151,151,151,151	0
59	MG	BA	3078	1/1	0.94	0.20	31,31,31,31	0
59	MG	BB	203	1/1	0.94	0.11	34,34,34,34	0
59	MG	DA	3101	1/1	0.94	0.13	75,75,75,75	0
59	MG	BA	3081	1/1	0.94	0.18	92,92,92,92	0
59	MG	BA	3048	1/1	0.94	0.17	101,101,101,101	0
59	MG	BA	3088	1/1	0.94	0.10	62,62,62,62	0
59	MG	AA	1618	1/1	0.94	0.18	87,87,87,87	0
59	MG	BA	3024	1/1	0.94	0.12	18,18,18,18	0
59	MG	CA	1630	1/1	0.94	0.27	126,126,126,126	0
59	MG	AA	1624	1/1	0.94	0.15	102,102,102,102	0
59	MG	BA	3060	1/1	0.94	0.30	188,188,188,188	0
59	MG	AA	1631	1/1	0.94	0.17	168,168,168,168	0
59	MG	AA	1633	1/1	0.94	0.10	62,62,62,62	0
59	MG	AA	1635	1/1	0.94	0.14	73,73,73,73	0
59	MG	AA	1636	1/1	0.94	0.32	199,199,199,199	0
59	MG	BA	3121	1/1	0.94	0.13	35,35,35,35	0
59	MG	BA	3122	1/1	0.94	0.71	155,155,155,155	0
59	MG	BA	3095	1/1	0.95	0.19	117,117,117,117	0
59	MG	CA	1634	1/1	0.95	0.09	74,74,74,74	0
59	MG	CA	1604	1/1	0.95	0.05	57,57,57,57	0
59	MG	BA	3097	1/1	0.95	0.10	33,33,33,33	0
59	MG	BA	3101	1/1	0.95	0.09	18,18,18,18	0
59	MG	BA	3063	1/1	0.95	0.13	12,12,12,12	0
59	MG	AA	1610	1/1	0.95	0.11	201,201,201,201	0
59	MG	CA	1641	1/1	0.95	0.12	82,82,82,82	0
59	MG	BA	3110	1/1	0.95	0.16	89,89,89,89	0
59	MG	BA	3033	1/1	0.95	0.21	14,14,14,14	0
59	MG	AA	1640	1/1	0.95	0.04	84,84,84,84	0
59	MG	BA	3036	1/1	0.95	0.34	187,187,187,187	0
59	MG	BA	3071	1/1	0.95	0.11	7,7,7,7	0
59	MG	DA	3034	1/1	0.95	0.17	78,78,78,78	0
59	MG	BA	3037	1/1	0.95	0.17	24,24,24,24	0
59	MG	BA	3017	1/1	0.95	0.11	33,33,33,33	0
59	MG	BA	3124	1/1	0.95	0.14	33,33,33,33	0
59	MG	BA	3046	1/1	0.95	0.08	12,12,12,12	0
59	MG	AA	1612	1/1	0.95	0.10	85,85,85,85	0
59	MG	AA	1643	1/1	0.95	0.12	43,43,43,43	0
59	MG	BA	3132	1/1	0.95	0.13	1,1,1,1	0
59	MG	AA	1613	1/1	0.95	0.08	50,50,50,50	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	BA	3083	1/1	0.95	0.17	37,37,37,37	0
59	MG	AA	1605	1/1	0.95	0.12	52,52,52,52	0
59	MG	BA	3086	1/1	0.95	0.12	134,134,134,134	0
59	MG	AA	1604	1/1	0.95	0.09	121,121,121,121	0
59	MG	AA	1609	1/1	0.95	0.12	54,54,54,54	0
59	MG	BA	3062	1/1	0.95	0.18	5,5,5,5	0
59	MG	BA	3091	1/1	0.95	0.07	49,49,49,49	0
59	MG	BA	3011	1/1	0.96	0.21	126,126,126,126	0
59	MG	BA	3032	1/1	0.96	0.12	25,25,25,25	0
59	MG	DA	3066	1/1	0.96	0.14	61,61,61,61	0
59	MG	BA	3015	1/1	0.96	0.17	95,95,95,95	0
59	MG	BA	3016	1/1	0.96	0.09	4,4,4,4	0
59	MG	AA	1615	1/1	0.96	0.10	128,128,128,128	0
59	MG	AA	1632	1/1	0.96	0.07	90,90,90,90	0
59	MG	CA	1640	1/1	0.96	0.16	80,80,80,80	0
59	MG	BA	3043	1/1	0.96	0.06	18,18,18,18	0
59	MG	BA	3092	1/1	0.96	0.07	70,70,70,70	0
59	MG	AA	1601	1/1	0.96	0.10	77,77,77,77	0
59	MG	DA	3025	1/1	0.96	0.18	104,104,104,104	0
59	MG	BA	3096	1/1	0.96	0.14	93,93,93,93	0
59	MG	BA	3022	1/1	0.96	0.16	5,5,5,5	0
59	MG	AA	1606	1/1	0.96	0.08	72,72,72,72	0
59	MG	BA	3102	1/1	0.96	0.21	9,9,9,9	0
59	MG	BA	3008	1/1	0.96	0.16	12,12,12,12	0
59	MG	BA	3106	1/1	0.96	0.22	5,5,5,5	0
59	MG	BA	3049	1/1	0.96	0.13	6,6,6,6	0
59	MG	BA	3109	1/1	0.96	0.16	112,112,112,112	0
59	MG	BA	3051	1/1	0.96	0.17	24,24,24,24	0
59	MG	BA	3113	1/1	0.96	0.09	138,138,138,138	0
59	MG	BA	3009	1/1	0.96	0.17	38,38,38,38	0
59	MG	BA	3002	1/1	0.96	0.10	85,85,85,85	0
61	ZN	B4	101	1/1	0.96	0.07	118,118,118,118	0
59	MG	BA	3116	1/1	0.96	0.14	71,71,71,71	0
59	MG	BA	3027	1/1	0.97	0.17	119,119,119,119	0
59	MG	BA	3056	1/1	0.97	0.31	219,219,219,219	0
59	MG	BA	3012	1/1	0.97	0.13	1,1,1,1	0
59	MG	BA	3111	1/1	0.97	0.15	38,38,38,38	0
59	MG	BA	3058	1/1	0.97	0.04	47,47,47,47	0
59	MG	BA	3035	1/1	0.97	0.10	5,5,5,5	0
59	MG	BA	3072	1/1	0.97	0.21	97,97,97,97	0
59	MG	CA	1624	1/1	0.97	0.26	128,128,128,128	0
59	MG	BA	3029	1/1	0.97	0.10	52,52,52,52	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	BA	3061	1/1	0.97	0.17	11,11,11,11	0
59	MG	DA	3054	1/1	0.97	0.14	70,70,70,70	0
59	MG	BA	3075	1/1	0.97	0.06	26,26,26,26	0
59	MG	BA	3119	1/1	0.97	0.07	47,47,47,47	0
59	MG	BA	3120	1/1	0.97	0.21	3,3,3,3	0
59	MG	AA	1634	1/1	0.97	0.08	62,62,62,62	0
59	MG	CA	1609	1/1	0.97	0.12	97,97,97,97	0
59	MG	CA	1632	1/1	0.97	0.09	65,65,65,65	0
59	MG	BA	3098	1/1	0.97	0.13	26,26,26,26	0
59	MG	BA	3026	1/1	0.97	0.08	32,32,32,32	0
59	MG	BA	3064	1/1	0.97	0.13	5,5,5,5	0
59	MG	BA	3065	1/1	0.97	0.11	20,20,20,20	0
59	MG	BA	3130	1/1	0.97	0.14	108,108,108,108	0
60	TEL	BA	3135	58/58	0.97	0.22	0,23,68,74	0
59	MG	BA	3066	1/1	0.97	0.10	21,21,21,21	0
59	MG	BA	3107	1/1	0.97	0.16	12,12,12,12	0
59	MG	BA	3052	1/1	0.98	0.16	46,46,46,46	0
59	MG	BA	3126	1/1	0.98	0.15	18,18,18,18	0
59	MG	BA	3100	1/1	0.98	0.13	85,85,85,85	0
59	MG	BA	3128	1/1	0.98	0.12	15,15,15,15	0
59	MG	BA	3079	1/1	0.98	0.17	11,11,11,11	0
59	MG	BA	3080	1/1	0.98	0.04	26,26,26,26	0
59	MG	BA	3053	1/1	0.98	0.15	6,6,6,6	0
59	MG	BA	3104	1/1	0.98	0.16	13,13,13,13	0
59	MG	BA	3105	1/1	0.98	0.17	27,27,27,27	0
59	MG	BA	3082	1/1	0.98	0.11	109,109,109,109	0
59	MG	BA	3054	1/1	0.98	0.09	58,58,58,58	0
59	MG	BA	3084	1/1	0.98	0.16	3,3,3,3	0
59	MG	BA	3040	1/1	0.98	0.18	13,13,13,13	0
59	MG	BA	3041	1/1	0.98	0.17	21,21,21,21	0
59	MG	BA	3087	1/1	0.98	0.12	36,36,36,36	0
59	MG	BA	3112	1/1	0.98	0.09	41,41,41,41	0
59	MG	BA	3006	1/1	0.98	0.07	31,31,31,31	0
59	MG	AA	1611	1/1	0.98	0.07	60,60,60,60	0
59	MG	CA	1605	1/1	0.98	0.14	32,32,32,32	0
59	MG	AA	1608	1/1	0.98	0.22	47,47,47,47	0
59	MG	BA	3013	1/1	0.98	0.19	1,1,1,1	0
59	MG	BA	3014	1/1	0.98	0.21	44,44,44,44	0
59	MG	BA	3093	1/1	0.98	0.07	35,35,35,35	0
59	MG	BA	3094	1/1	0.98	0.06	22,22,22,22	0
59	MG	AA	1642	1/1	0.98	0.14	36,36,36,36	0
59	MG	BA	3050	1/1	0.98	0.09	33,33,33,33	0

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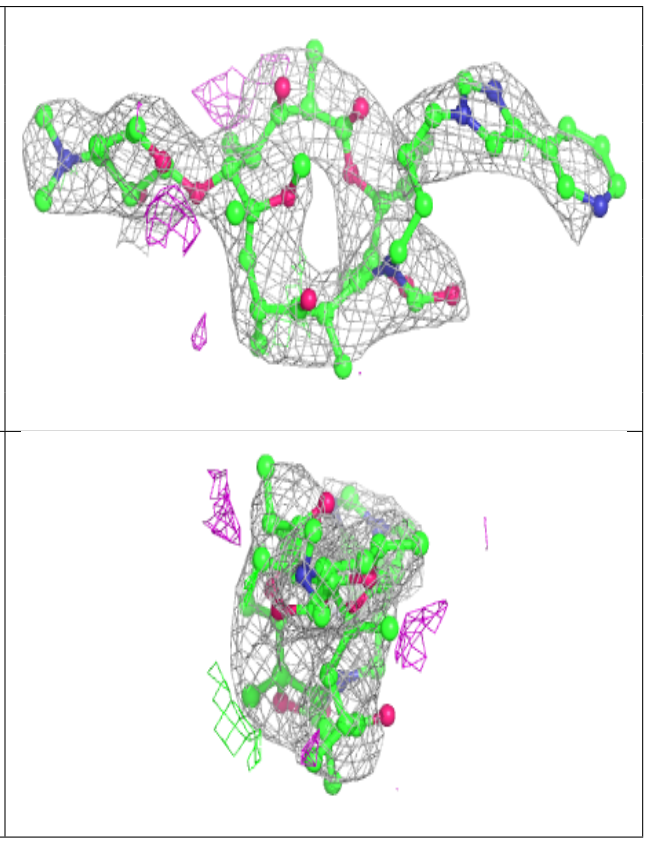
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	MG	BA	3030	1/1	0.98	0.17	9,9,9,9	0
59	MG	BA	3123	1/1	0.98	0.14	11,11,11,11	0
59	MG	BA	3039	1/1	0.99	0.16	8,8,8,8	0
59	MG	BA	3019	1/1	0.99	0.18	13,13,13,13	0
59	MG	AA	1622	1/1	0.99	0.19	40,40,40,40	0
59	MG	BA	3042	1/1	0.99	0.11	16,16,16,16	0
59	MG	BA	3125	1/1	0.99	0.14	16,16,16,16	0
59	MG	BA	3038	1/1	0.99	0.10	12,12,12,12	0
59	MG	BA	3044	1/1	0.99	0.06	43,43,43,43	0
59	MG	BA	3099	1/1	0.99	0.20	8,8,8,8	0
59	MG	BA	3020	1/1	1.00	0.12	11,11,11,11	0

The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.

Electron density around TEL BA 3135:

2mF$_o$-DF$_c$ (at 0.7 rmsd) in gray
mF$_o$-DF$_c$ (at 3 rmsd) in purple (negative)
and green (positive)



6.5 Other polymers (i)

There are no such residues in this entry.