Full wwPDB EM Validation Report (i)

Apr 23, 2024 – 03:17 pm BST

PDB ID	:	6ZQB
EMDB ID	:	EMD-11358
Title	:	Cryo-EM structure of the 90S pre-ribosome from Saccharomyces cerevisiae, state B2
Authors	:	Cheng, J.; Lau, B.; Venuta, G.L.; Berninghausen, O.; Hurt, E.; Beckmann, R.
Deposited on	:	2020-07-09
Resolution	:	3.90 Å(reported)

This is a Full wwPDB EM 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/EMValidationReportHelp
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 (1)) were used in the production of this report:

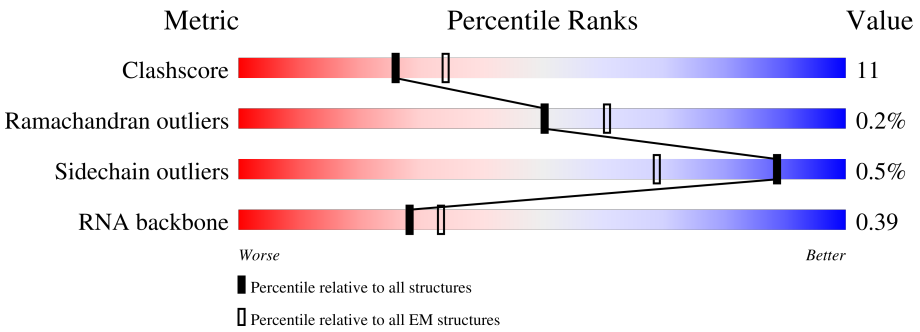
EMDB validation analysis	:	0.0.1.dev92
Mogul	:	1.8.4, CSD as541be (2020)
MolProbity	:	4.02b-467
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36.2

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
ELECTRON MICROSCOPY

The reported resolution of this entry is 3.90 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)	EM structures (#Entries)
Clashscore	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826
RNA backbone	4643	859

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the 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 EM map (all-atom inclusion < 40%). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	UA	923	60% 27% • 10%
2	UB	810	• 49% 13% 37%
3	UC	610	15% 6% 79%
4	UD	776	57% 29% • 13%
5	UE	643	53% 20% • 26%
6	UF	440	48% 18% • 33%
7	UG	554	65% 29% • •

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Mol	Chain	Length	Quality of chain
8	UH	713	44% 17% 38%
9	UI	575	11% 6% 82%
10	UJ	1769	55% 7% 37%
11	UK	250	64% 30%
12	UL	943	59% 30% 11%
13	UM	817	62% 30% 7%
14	UN	145	73% 25%
15	UO	513	68% 26%
16	UP	214	19% 9% 72%
17	UQ	896	62% 29% 7%
18	UR	594	58% 20% 19%
19	US	552	63% 23% 13%
20	UT	2493	5% 88% 10%
21	UU	939	67% 21% 10%
22	UV	1237	64% 24% 13%
23	UX	189	61% 28% 8%
24	UZ	274	62% 28% 10%
25	CA	327	57% 14% 26%
25	CB	327	47% 22% 30%
26	CD	504	55% 19% 25%
27	CE	511	72% 13% 15%
28	CF	126	73% 21%
28	CG	126	64% 32%
29	CH	573	51% 27% 21%
30	CI	183	62% 32% 5%

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Mol	Chain	Length	Quality of chain
31	CJ	290	66% 27%
32	CK	593	26% 8% 65%
33	CL	1183	46% 19% 34%
34	CM	367	70% 28%
35	CN	297	57% 21% 22%
36	JA	1056	57% 20% 23%
36	JB	1056	15% 76% 21%
37	JC	707	31% 19% 50%
38	JE	357	24% 14% 62%
39	JF	252	62% 24% 14%
39	JG	252	65% 25% 9%
40	JH	483	8% 53% 46%
41	JJ	274	47% 18% 34%
42	JK	534	5% 92%
43	JM	217	46% 17% 38%
44	JN	346	42% 11% 46%
45	JO	316	59% 15% 25%
46	JP	489	59% 30% 7%
47	JQ	206	28% 69%
48	DA	255	69% 24% 6%
49	DE	261	59% 34% 6%
50	DF	225	75% 19% 5%
51	DG	236	56% 36% 8%
52	DH	190	65% 31%
53	DI	200	64% 24% 12%

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Mol	Chain	Length	Quality of chain
54	DJ	197	61% 27% 10%
55	DL	156	57% 33% 10%
56	DN	151	75% 23%
57	DO	137	69% 19% 12%
58	DQ	143	61% 24% 13%
59	DS	147	67% 29%
60	DW	130	74% 25%
61	DX	145	49% 19% 29%
62	DY	135	38% 33% 28%
63	Db	82	96%
64	Dc	67	90% 6%
65	D2	700	20% 33% 17% 25%
66	D3	1808	18% 29% 16% 34%
67	D4	175	26% 39% 27% 8%

2 Entry composition (i)

There are 69 unique types of molecules in this entry. The entry contains 223151 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, 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 protein called Periodic tryptophan protein 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	UA	834	6635	4223	1140	1253	19	0	0

- Molecule 2 is a protein called Nucleolar complex protein 14.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	UB	508	3743	2373	665	696	9	0	0

- Molecule 3 is a protein called Something about silencing protein 10.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
3	UC	128	1026	633	204	189	0	0

- Molecule 4 is a protein called U3 small nucleolar RNA-associated protein 4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	UD	675	5361	3395	929	1015	22	0	0

- Molecule 5 is a protein called U3 small nucleolar RNA-associated protein 5.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	UE	475	3772	2400	649	710	13	0	0

- Molecule 6 is a protein called U3 small nucleolar RNA-associated protein 6.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	UF	293	2487	1605	435	434	13	0	0

- Molecule 7 is a protein called U3 small nucleolar RNA-associated protein 7.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
7	UG	533	4218	2646	758	802	12	0	0

- Molecule 8 is a protein called U3 small nucleolar RNA-associated protein 8.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
8	UH	441	2690	1672	492	523	3	0	0

- Molecule 9 is a protein called U3 small nucleolar RNA-associated protein 9.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
9	UI	102	846	547	149	148	2	0	0

- Molecule 10 is a protein called U3 small nucleolar RNA-associated protein 10.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
10	UJ	1117	6857	4267	1252	1326	12	0	0

- Molecule 11 is a protein called U3 small nucleolar RNA-associated protein 11.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
11	UK	241	2016	1251	388	370	7	0	0

- Molecule 12 is a protein called U3 small nucleolar RNA-associated protein 12.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
12	UL	842	6720	4300	1126	1267	27	0	0

- Molecule 13 is a protein called U3 small nucleolar RNA-associated protein 13.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
13	UM	762	5957	3779	1006	1144	28	0	0

- Molecule 14 is a protein called U3 small nucleolar RNA-associated protein 14,U3 small nucleolar RNA-associated protein 14.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
14	UN	145	1207	750	230	225	2	0	0

- Molecule 15 is a protein called U3 small nucleolar RNA-associated protein 15.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
15	UO	493	3911	2462	702	735	12	0	0

- Molecule 16 is a protein called Bud site selection protein 21.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
16	UP	60	495	310	101	84	0	0

- Molecule 17 is a protein called NET1-associated nuclear protein 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
17	UQ	832	6662	4236	1124	1283	19	0	0

- Molecule 18 is a protein called U3 small nucleolar RNA-associated protein 18.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
18	UR	481	3791	2399	668	714	10	0	0

- Molecule 19 is a protein called Nucleolar complex protein 4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
19	US	481	3650	2355	611	672	12	0	0

- Molecule 20 is a protein called U3 small nucleolar RNA-associated protein 20.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
20	UT	2234	11108	6640	2234	2234	0	0

- Molecule 21 is a protein called U3 small nucleolar RNA-associated protein 21.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
21	UU	848	6678	4241	1149	1267	21	0	0

- Molecule 22 is a protein called U3 small nucleolar RNA-associated protein 22.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
22	UV	1080	8725	5672	1439	1590	24	0	0

- Molecule 23 is a protein called rRNA-processing protein FCF1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
23	UX	174	1395	890	255	240	10	0	0

- Molecule 24 is a protein called Ribosome biogenesis protein UTP30.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
24	UZ	247	2006	1284	356	358	8	0	0

- Molecule 25 is a protein called rRNA 2'-O-methyltransferase fibrillarin.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
25	CA	242	1881	1193	338	340	10	0	0
25	CB	228	1782	1131	320	321	10	0	0

- Molecule 26 is a protein called Nucleolar protein 56.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
26	CD	380	2994	1898	513	574	9	0	0

- Molecule 27 is a protein called Nucleolar protein 58.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
27	CE	435	2985	1852	543	582	8	0	0

- Molecule 28 is a protein called 13 kDa ribonucleoprotein-associated protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
28	CF	123	931	594	160	173	4	0	0
28	CG	123	928	591	160	173	4	0	0

- Molecule 29 is a protein called Ribosomal RNA-processing protein 9.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
29	CH	454	3634	2311	638	675	10	0	0

- Molecule 30 is a protein called U3 small nucleolar ribonucleoprotein protein IMP3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
30	CI	182	1530	967	287	269	7	0	0

- Molecule 31 is a protein called U3 small nucleolar ribonucleoprotein protein IMP4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
31	CJ	282	2296	1441	430	418	7	0	0

- Molecule 32 is a protein called U3 small nucleolar RNA-associated protein MPP10.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
32	CK	207	1667	1034	297	332	4	0	0

- Molecule 33 is a protein called Ribosome biogenesis protein BMS1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
33	CL	781	6332	4063	1122	1117	30	0	0

- Molecule 34 is a protein called RNA 3'-terminal phosphate cyclase-like protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
34	CM	360	2781	1781	473	516	11	0	0

- Molecule 35 is a protein called Ribosomal RNA-processing protein 7.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
35	CN	232	1893	1213	322	351	7	0	0

- Molecule 36 is a protein called RNA cytidine acetyltransferase.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
36	JA	812	5892	3727	1041	1099	25	0	0
			Total	C	N	O			
36	JB	835	4132	2462	835	835		0	0

- Molecule 37 is a protein called Ribosome biogenesis protein ENP2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
37	JC	354	2845	1795	489	552	9	0	0

- Molecule 38 is a protein called U3 small nucleolar ribonucleoprotein protein LCP5.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
38	JE	136	1125	674	231	217	3	0	0

- Molecule 39 is a protein called Ribosomal RNA small subunit methyltransferase NEP1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
39	JF	216	1701	1079	296	315	11	0	0
			Total	C	N	O	S		
39	JG	230	1799	1142	313	333	11	0	0

- Molecule 40 is a protein called Essential nuclear protein 1.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
40	JH	261	1295	773	261	261	0	0

- Molecule 41 is a protein called Pre-rRNA-processing protein PNO1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
41	JJ	182	1448	926	262	256	4	0	0

- Molecule 42 is a protein called Protein BFR2.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
42	JK	42	334	213	54	67	0	0

- Molecule 43 is a protein called rRNA-processing protein FCF2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
43	JM	135	1137	721	211	201	4	0	0

- Molecule 44 is a protein called Protein FAF1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
44	JN	186	1428	879	287	259	3	0	0

- Molecule 45 is a protein called KRR1 small subunit processome component.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
45	JO	236	1930	1231	342	345	12	0	0

- Molecule 46 is a protein called Protein SOF1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
46	JP	457	3725	2328	679	702	16	0	0

- Molecule 47 is a protein called Regulator of rDNA transcription protein 14.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
47	JQ	63	381	234	69	78	0	0

- Molecule 48 is a protein called 40S ribosomal protein S1-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
48	DA	240	1912	1209	354	345	4	0	0

- Molecule 49 is a protein called 40S ribosomal protein S4-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
49	DE	245	1944	1245	360	336	3	0	0

- Molecule 50 is a protein called Rps5p.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
50	DF	213	1669	1045	307	314	3	0	0

- Molecule 51 is a protein called 40S ribosomal protein S6-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
51	DG	218	1755	1102	337	313	3	0	0

- Molecule 52 is a protein called 40S ribosomal protein S7-A.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
52	DH	184	1477	949	265	263	0	0

- Molecule 53 is a protein called 40S ribosomal protein S8-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
53	DI	177	1399	869	279	249	2	0	0

- Molecule 54 is a protein called 40S ribosomal protein S9-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
54	DJ	177	1428	902	275	250	1	0	0

- Molecule 55 is a protein called 40S ribosomal protein S11-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
55	DL	140	1129	724	215	187	3	0	0

- Molecule 56 is a protein called 40S ribosomal protein S13.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
56	DN	150	1192	759	224	207	2	0	0

- Molecule 57 is a protein called 40S ribosomal protein S14-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
57	DO	120	881	544	167	167	3	0	0

- Molecule 58 is a protein called 40S ribosomal protein S16-A.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
58	DQ	125	973	625	174	174	0	0

- Molecule 59 is a protein called 40S ribosomal protein S18-A,40S ribosomal protein S18-A,Rps18.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
59	DS	104	516	308	104	104	0	0

- Molecule 60 is a protein called 40S ribosomal protein S22-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
60	DW	129	1021	650	188	180	3	0	0

- Molecule 61 is a protein called 40S ribosomal protein S23-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
61	DX	103	786	503	144	137	2	0	0

- Molecule 62 is a protein called 40S ribosomal protein S24-A.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
62	DY	97	767	490	138	139	0	0

- Molecule 63 is a protein called 40S ribosomal protein S27-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
63	Db	81	610	382	110	113	5	0	0

- Molecule 64 is a protein called 40S ribosomal protein S28-A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
64	Dc	63	497	306	99	91	1	0	0

- Molecule 65 is a RNA chain called 5ETS RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
65	D2	522	11138	4977	1976	3663	522	0	0

- Molecule 66 is a RNA chain called 18S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
66	D3	1198	25549	11417	4548	8386	1198	0	0

- Molecule 67 is a RNA chain called U3 snoRNA.

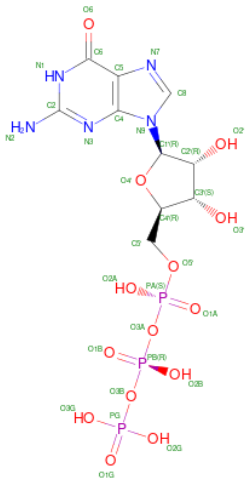
Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
67	D4	175	3712	1661	648	1228	175	0	0

- Molecule 68 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
			Total	Zn	
68	UX	1	1	1	0
68	Db	1	1	1	0

- Molecule 69 is GUANOSINE-5'-TRIPHOSPHATE (three-letter code: GTP) (formula: $C_{10}H_{16}N_5O_{14}P_3$).

GTP



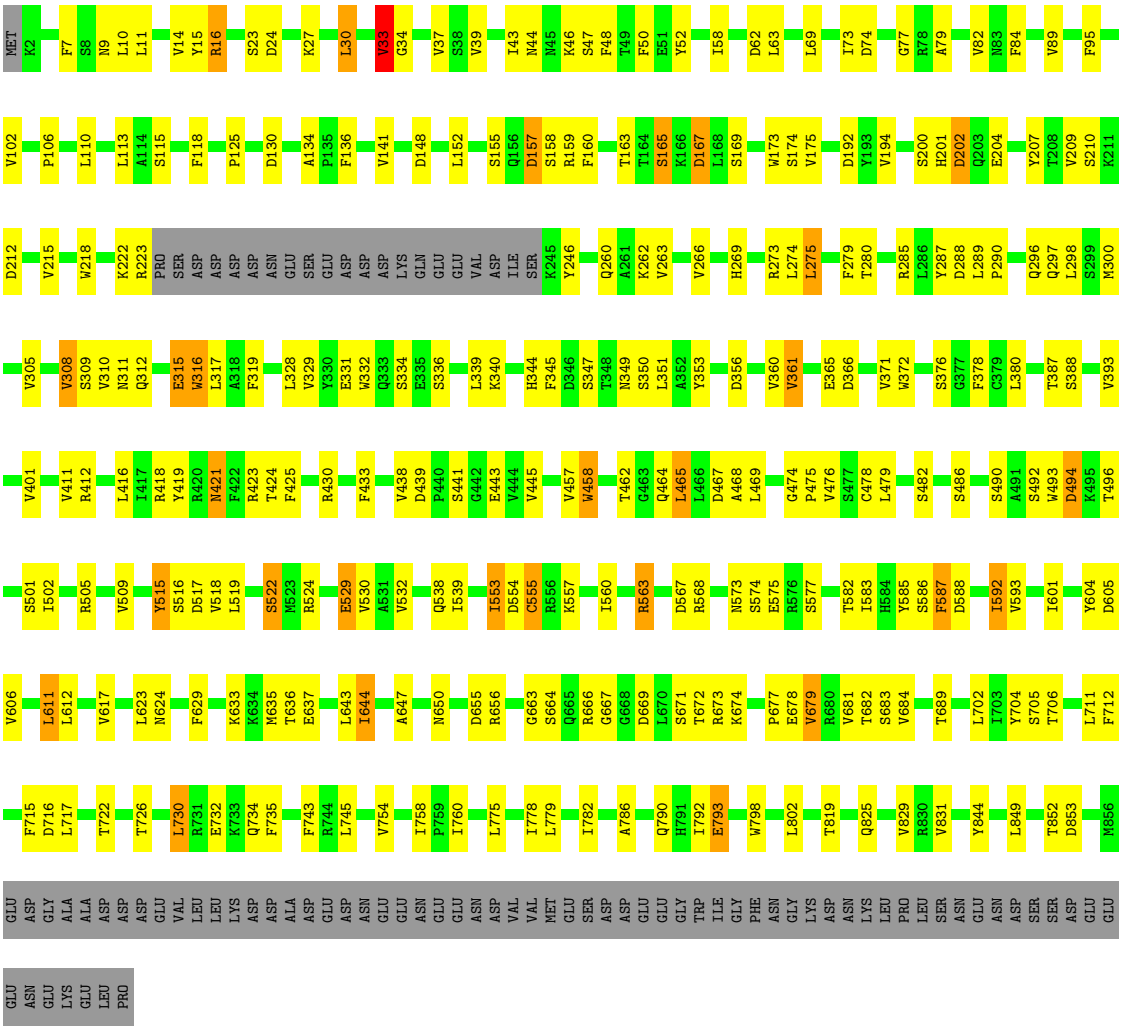
Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
69	CL	1	32	10	5	14	3	0

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 atom inclusion in map 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 diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). 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.

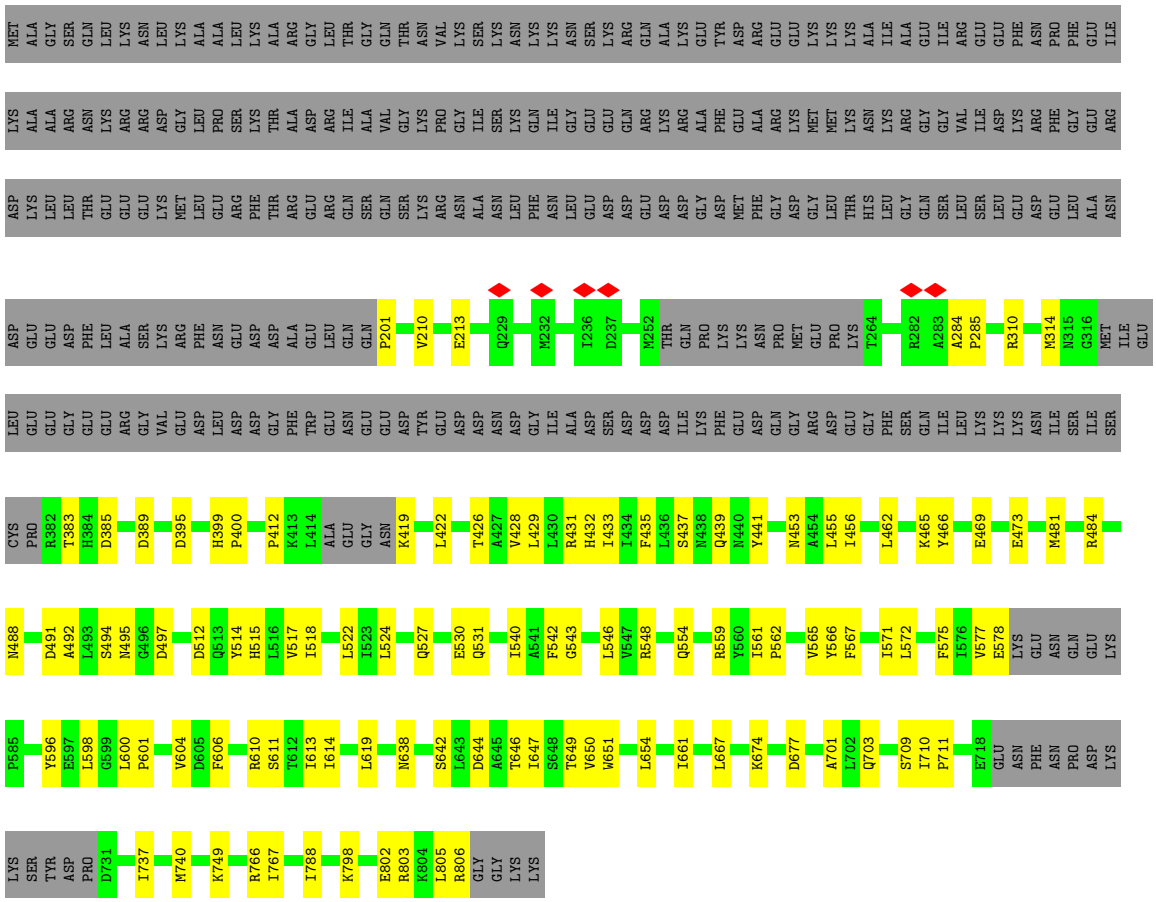
• Molecule 1: Periodic tryptophan protein 2

Chain UA: 60% 27% • 10%



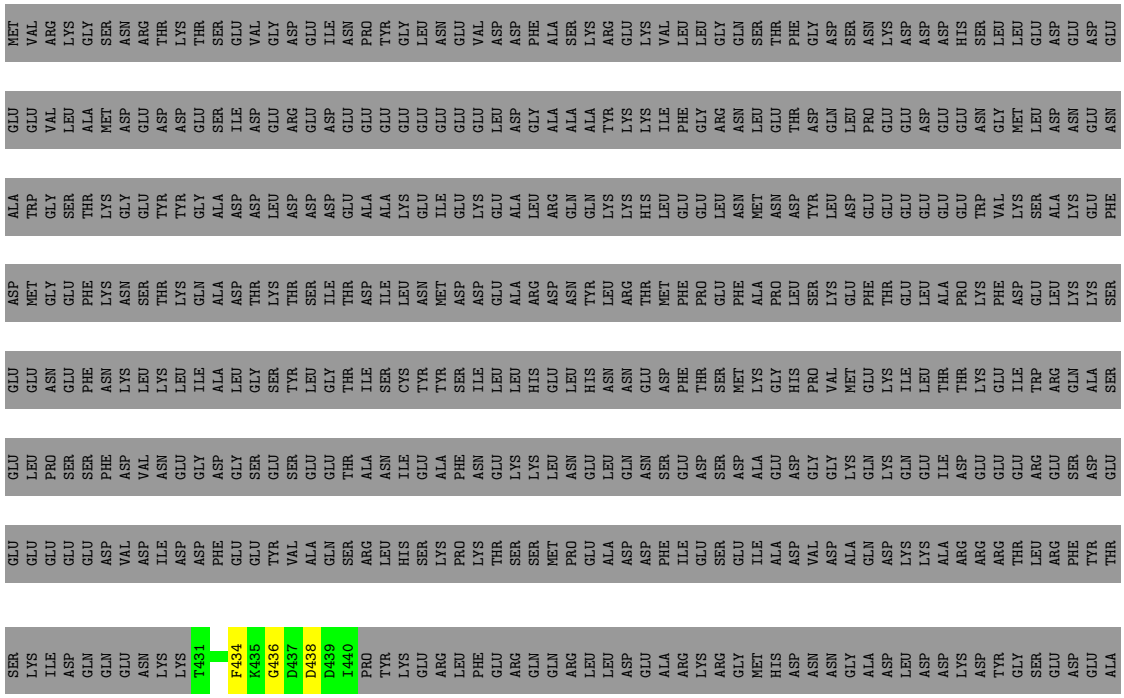
• Molecule 2: Nucleolar complex protein 14

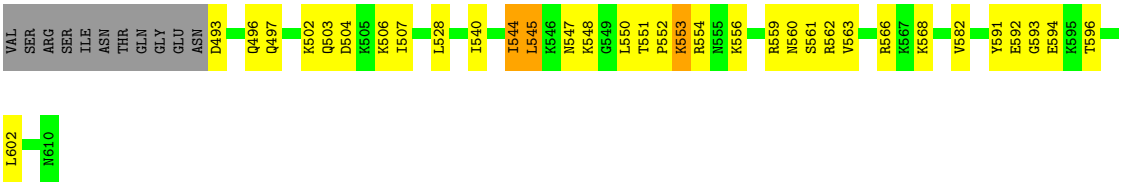
Chain UB: 49% 13% 37%



• Molecule 3: Something about silencing protein 10

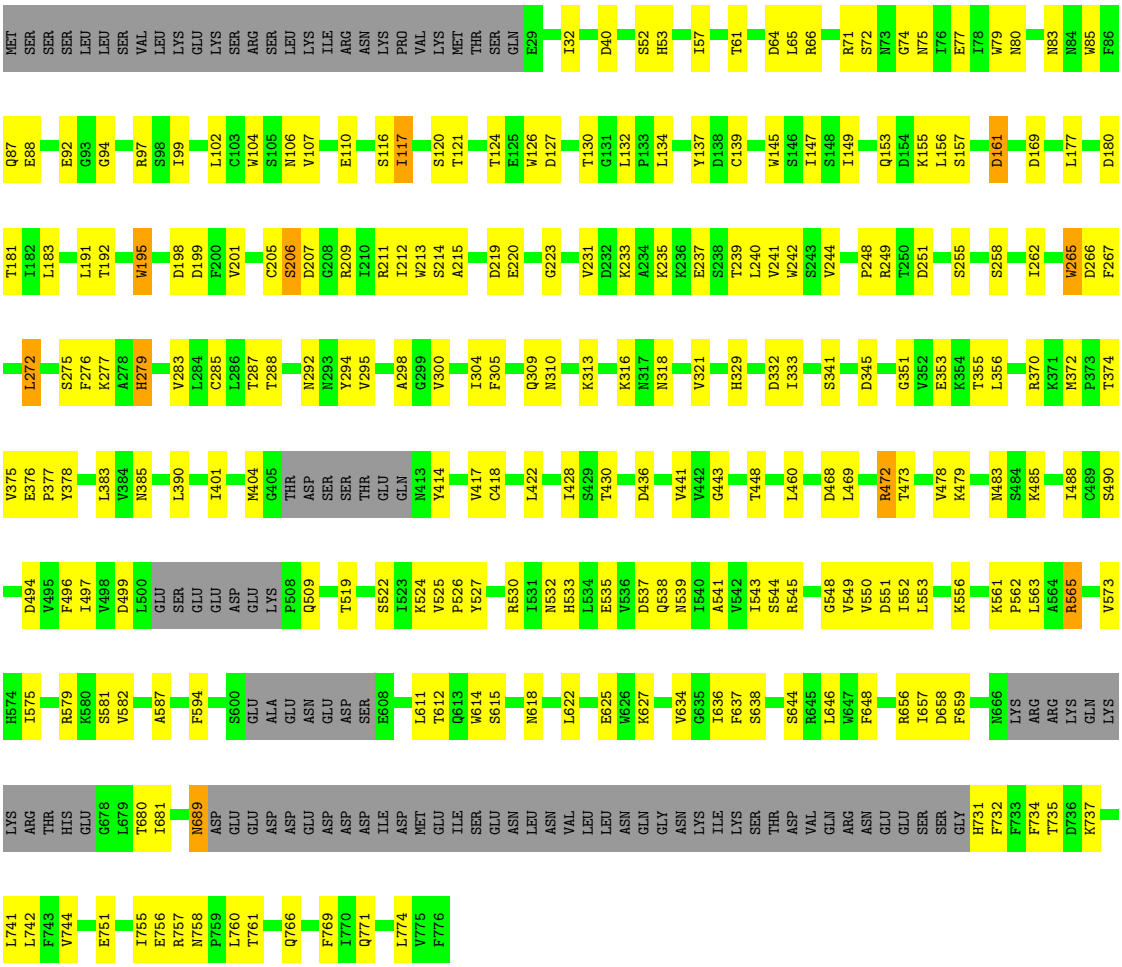
Chain UC: 15% 6% 79%





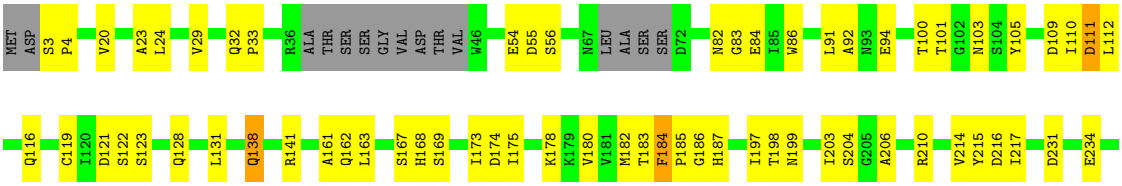
• Molecule 4: U3 small nucleolar RNA-associated protein 4

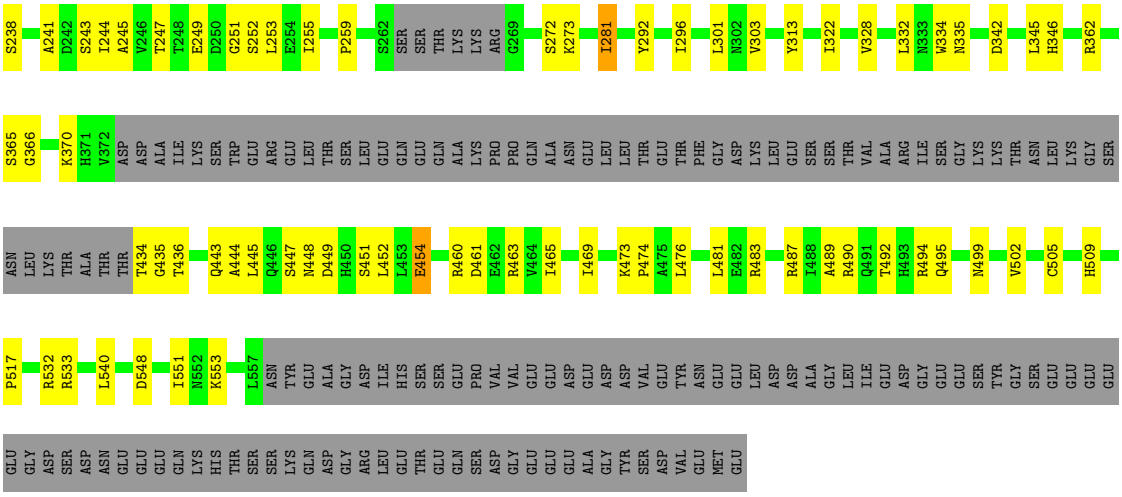
Chain UD: 57% 29% • 13%



• Molecule 5: U3 small nucleolar RNA-associated protein 5

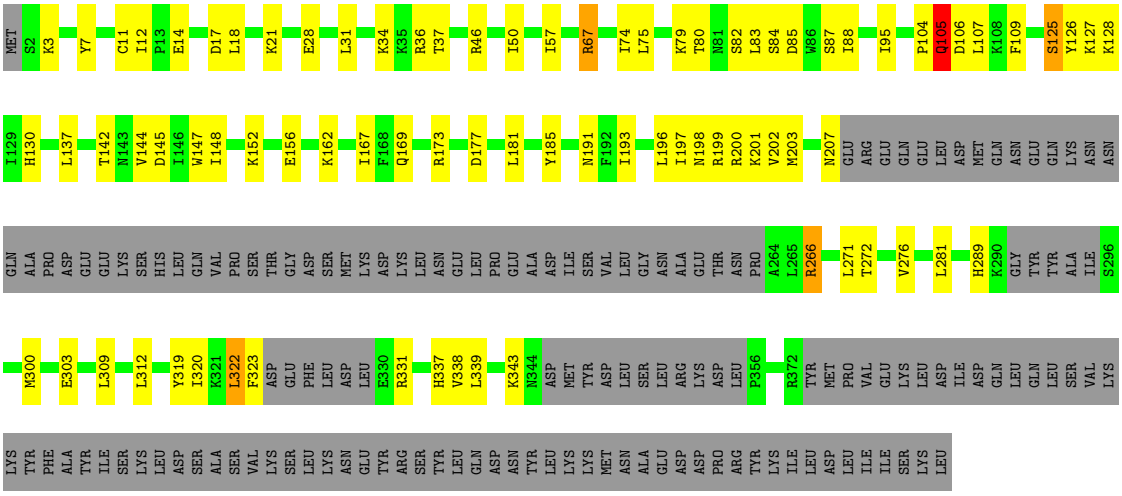
Chain UE: 53% 20% • 26%





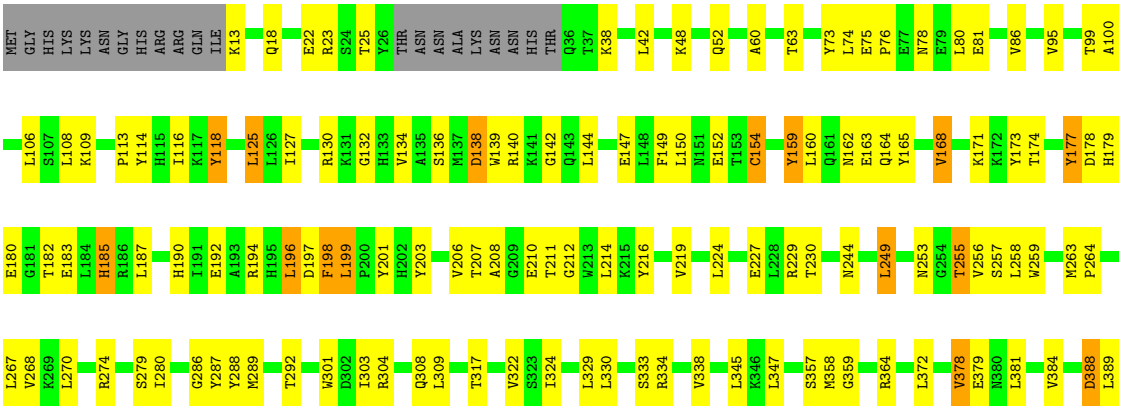
- Molecule 6: U3 small nucleolar RNA-associated protein 6

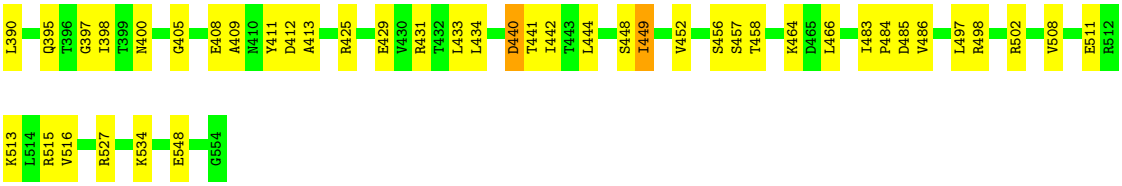
Chain UF:



- Molecule 7: U3 small nucleolar RNA-associated protein 7

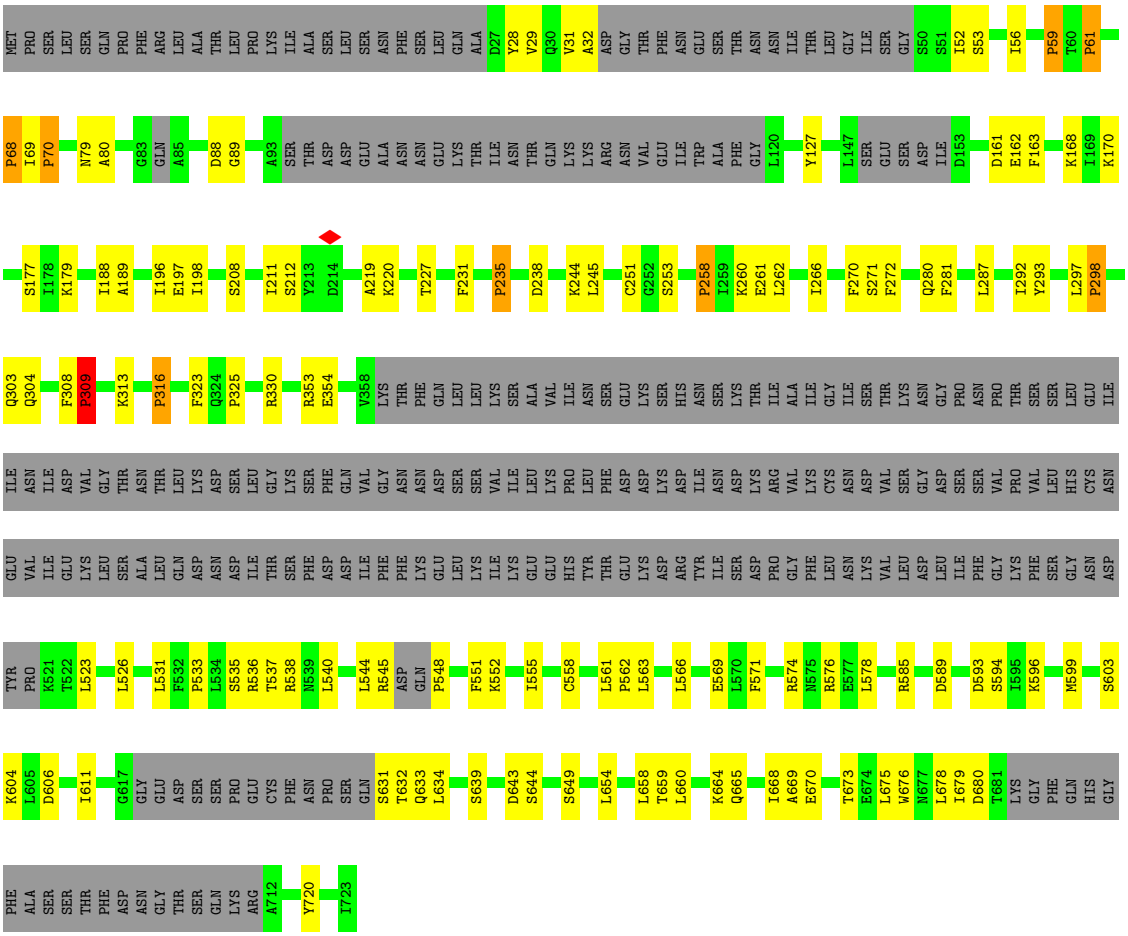
Chain UG:





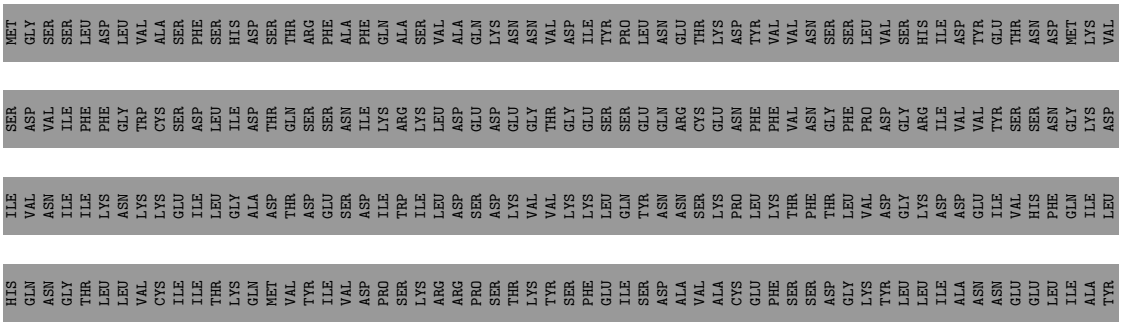
• Molecule 8: U3 small nucleolar RNA-associated protein 8

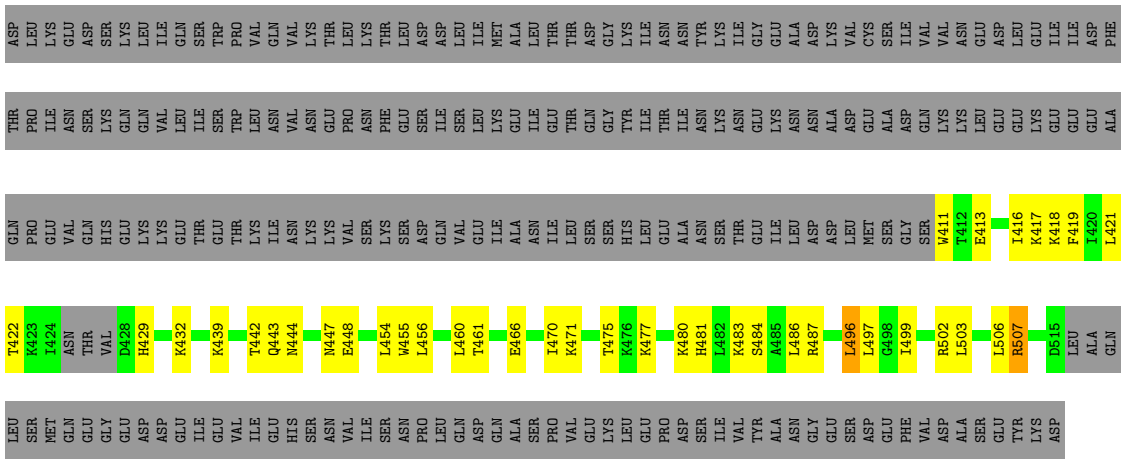
Chain UH: 44% 17% • 38%



• Molecule 9: U3 small nucleolar RNA-associated protein 9

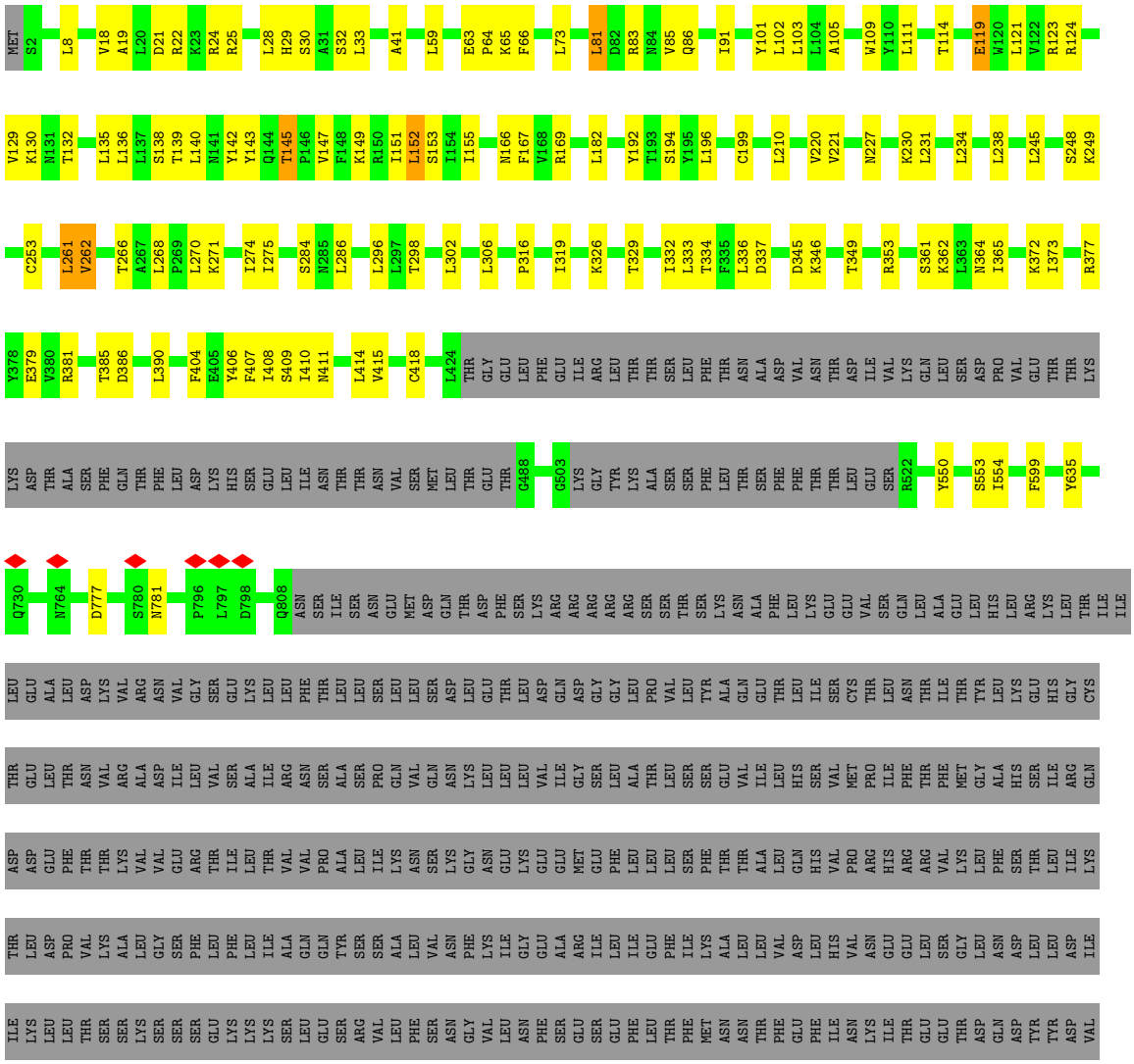
Chain UI: 11% 6% 82%

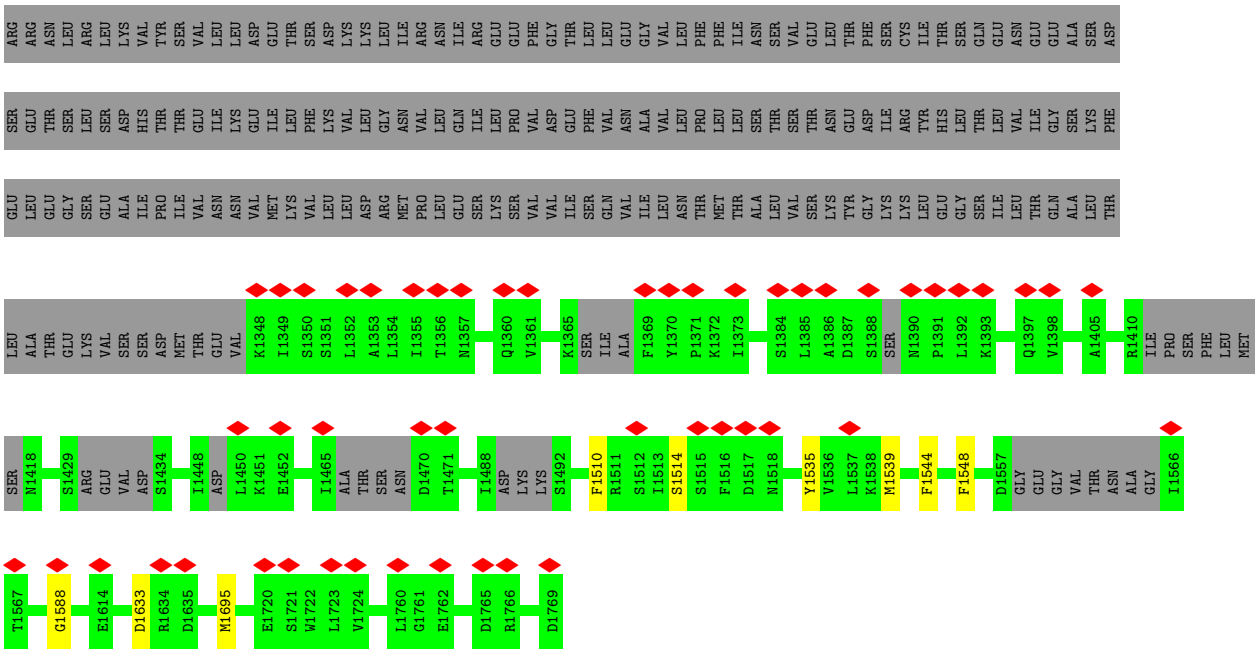




• Molecule 10: U3 small nucleolar RNA-associated protein 10

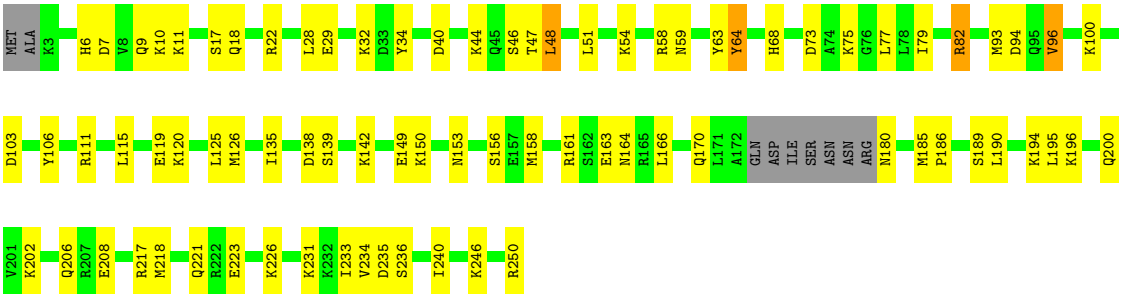
Chain UJ:





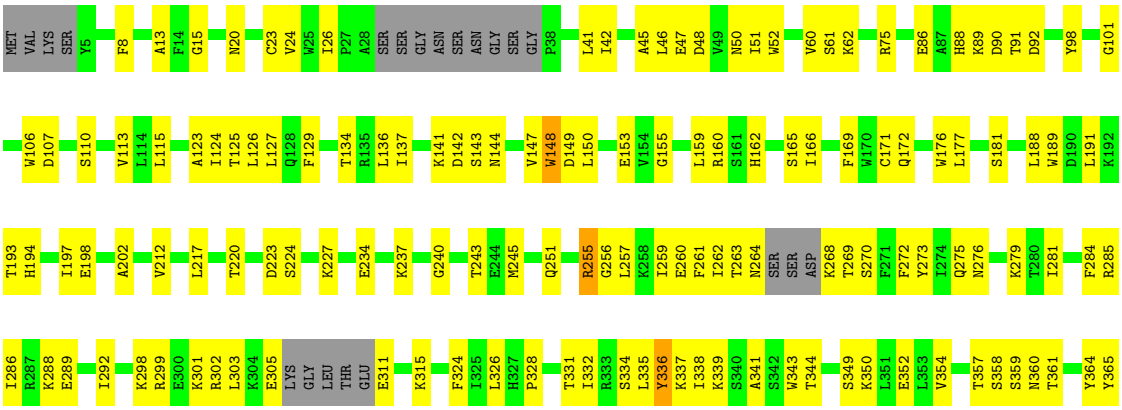
• Molecule 11: U3 small nucleolar RNA-associated protein 11

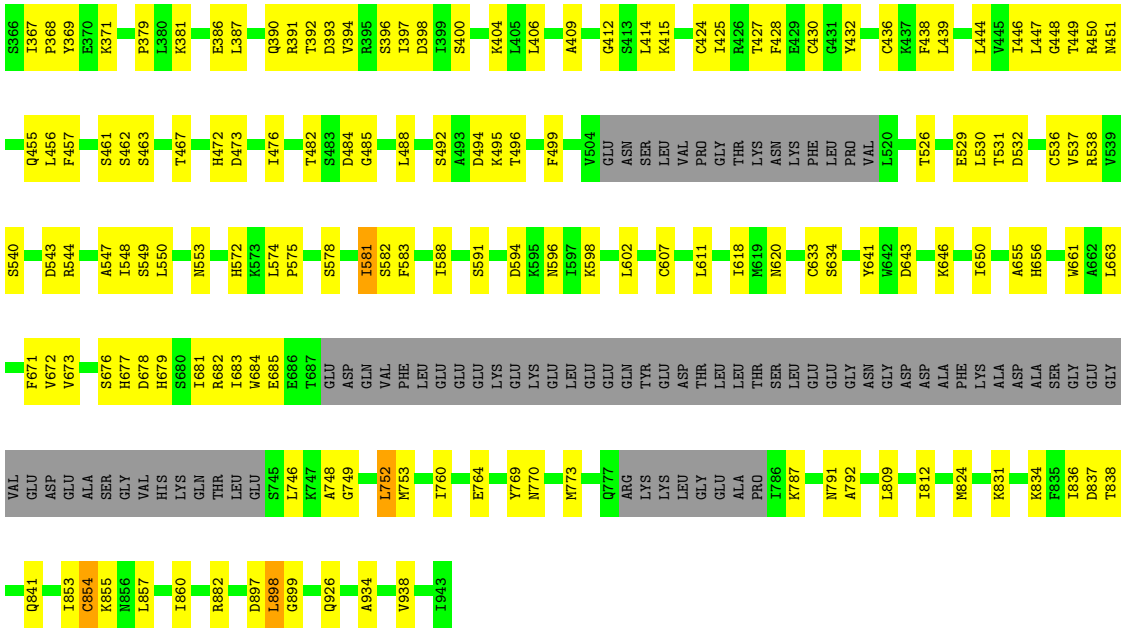
Chain UK: 64% 30%



• Molecule 12: U3 small nucleolar RNA-associated protein 12

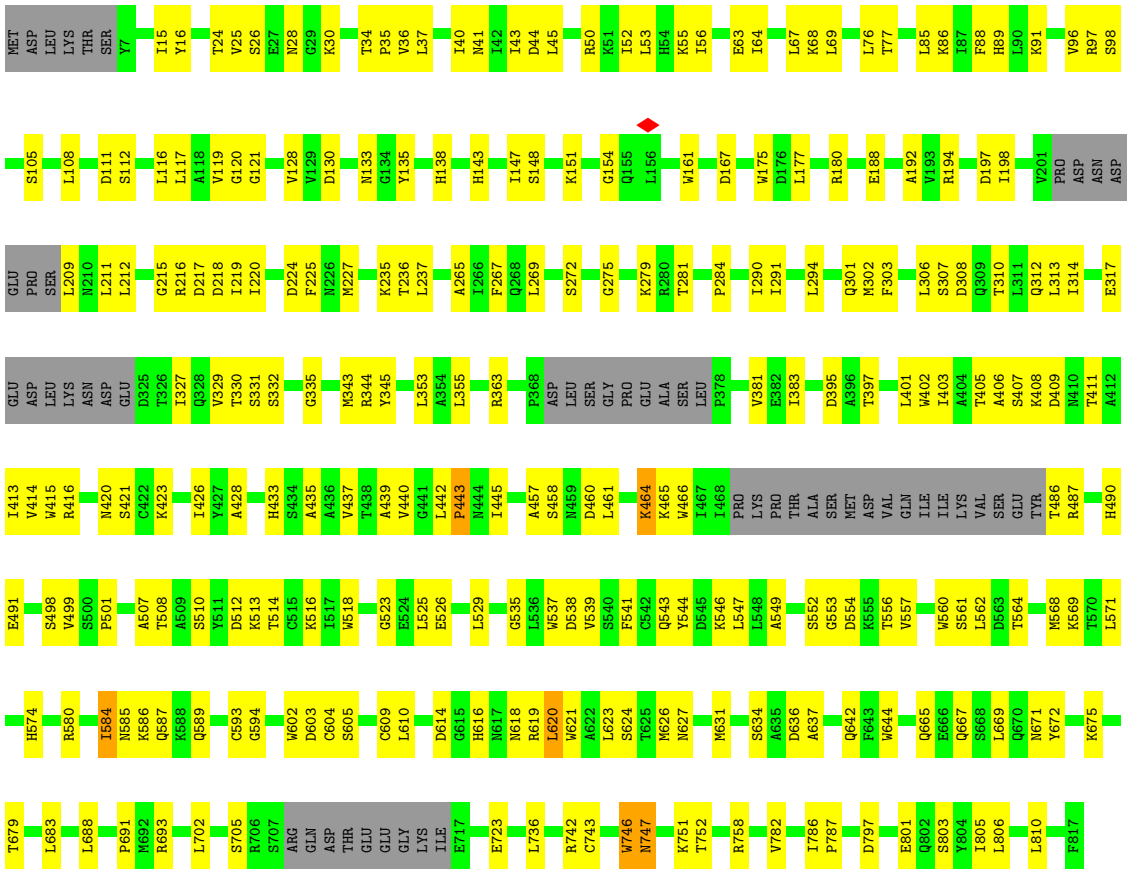
Chain UL: 59% 30% 11%





• Molecule 13: U3 small nucleolar RNA-associated protein 13

Chain UM: 62% 30% • 7%



• Molecule 14: U3 small nucleolar RNA-associated protein 14,U3 small nucleolar RNA-associated protein 14

Chain UN: 73% 25% •

Q276 R277 Q280 E294 K297 W298 Q303 R306 R307 A308 D309 F313 K317 E320 H323 F327 Q331 K837 K838 N839 L840 K841 Y842 Q843 S844 S845 A846 V847 R854 L861 R862 M863 P864 E868 R872 Q876 I879 K880 P881 M884 T885

K886 V890 I891 L894 K895 A896 P897

• Molecule 15: U3 small nucleolar RNA-associated protein 15

Chain UO: 68% 26% • •

MET S2 T3 S11 L16 Q19 T20 T21 P22 E23 Q24 R25 Y26 W27 R28 Q29 Y30 T31 S32 A33 Q34 T43 H44 H51 P52 H53 S60 S67 S68 R69 T70 R71 K75 T76 F77 V83 V84 Y85 S86 R90 S91 D92 G93 K94 L95 L96 C97 A98 A101

Y108 D109 S110 Y111 R114 L117 P126 T127 H128 K131 F132 H133 D136 N137 K138 I139 T142 A143 S144 D145 T149 L164 R172 S175 F176 I177 P178 G191 S200 S201 I206 H211 D212 N217 A220 V221 I226 C229 F234 K235

V236 W237 D238 L239 K244 E247 V255 T256 C257 L258 D259 Y260 V261 E262 M268 I273 S276 L277 D278 G279 H280 V283 F284 D285 P286 L287 V292 K293 F298 P301 V302 L303 N315 V319 S323 I329 R330 K334 GLU LYS ARG SER SER ASP LYS

GLU ASN ALA PRO ALA SER PHE ASN LYS ASN ALA K353 N356 M361 Y366 D369 I373 I374 H375 N376 D377 K378 M385 N393 A404 F405 E412 L413 V417 E420 L421 R422 K423 L431 R434 D435 T438 L439 L442 K448 G449 I450 E451 D452

V453 R454 I495 H496 K497 S498 K499 E500 Q509 T512 SER

• Molecule 16: Bud site selection protein 21

Chain UP: 19% 9% 72%

MET SER ASN GLY HIS VAL LYS PHE ASP ALA ASP GLU SER GLN ALA SER ALA SER ALA VAL THR ASP ARG GLN ASP ASP VAL LEU VAL ILE SER LYS LYS ASP LYS GLU VAL HIS SER SER SER ASP GLU GLU SER ASP ASP ASP ASP ALA PRO GLN GLU GLU GLY LEU HIS SER GLY LYS

SER GLU VAL GLU SER GLN ILE THR GLN ARG GLU GLU ALA ILE ARG LEU GLU GLN SER GLN LEU ARG SER LYS ARG ARG LYS GLN ASN GLU LEU TYR ALA LYS GLN LYS LYS SER VAL ASN GLU THR GLU VAL THR ASP GLU VAL ILE ALA ALA GLU LEU PRO GLU GLU LEU LEU LEU LYS ASN ILE

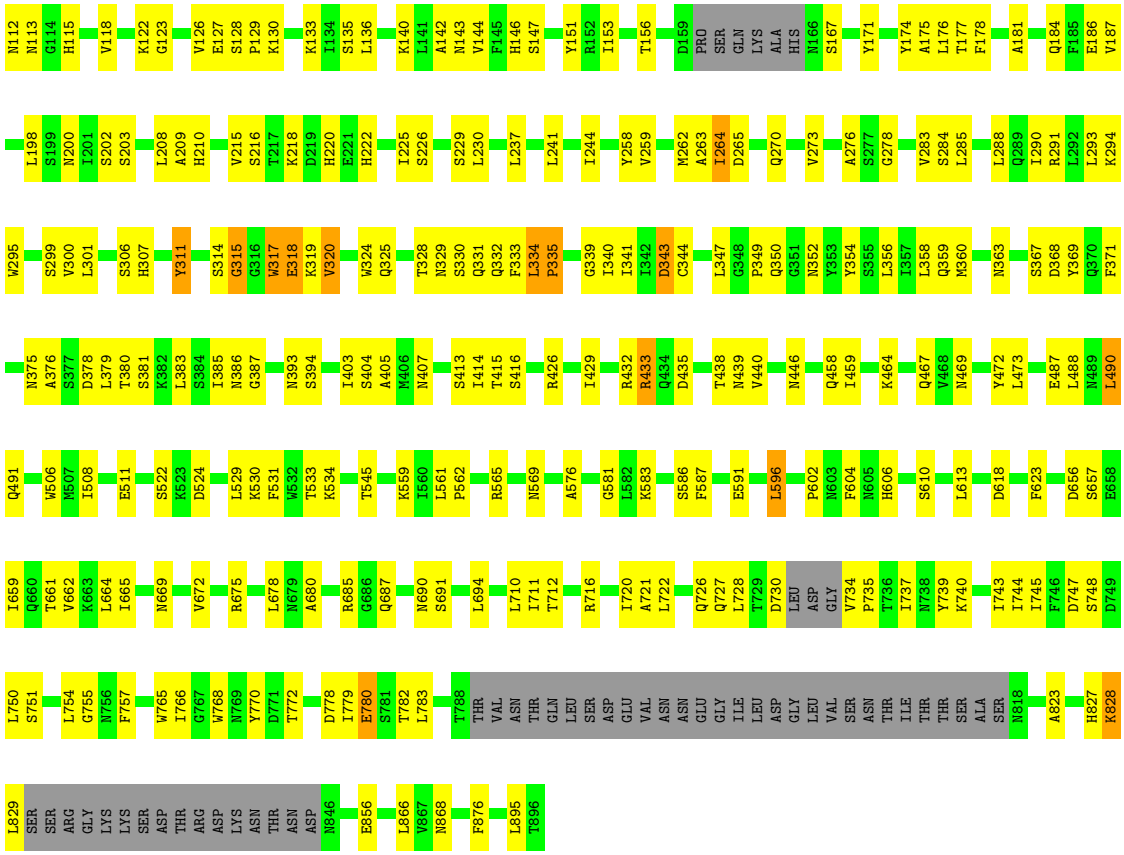
ASP GLN LYS ASP GLU GLY SER THR GLN TYR SER SER SER ARG HIS VAL THR PHE ASP LYS LEU ASP GLU SER ASP GLU ASN GLU GLU ALA LEU ALA LYS ALA I155 K159 R160 K161 T162 L163 R167 L181 S182 T183 D186 T189 L190 P191 P192 K193 K194 E195 S196 I199

R200 R208 L211 G214

• Molecule 17: NET1-associated nuclear protein 1

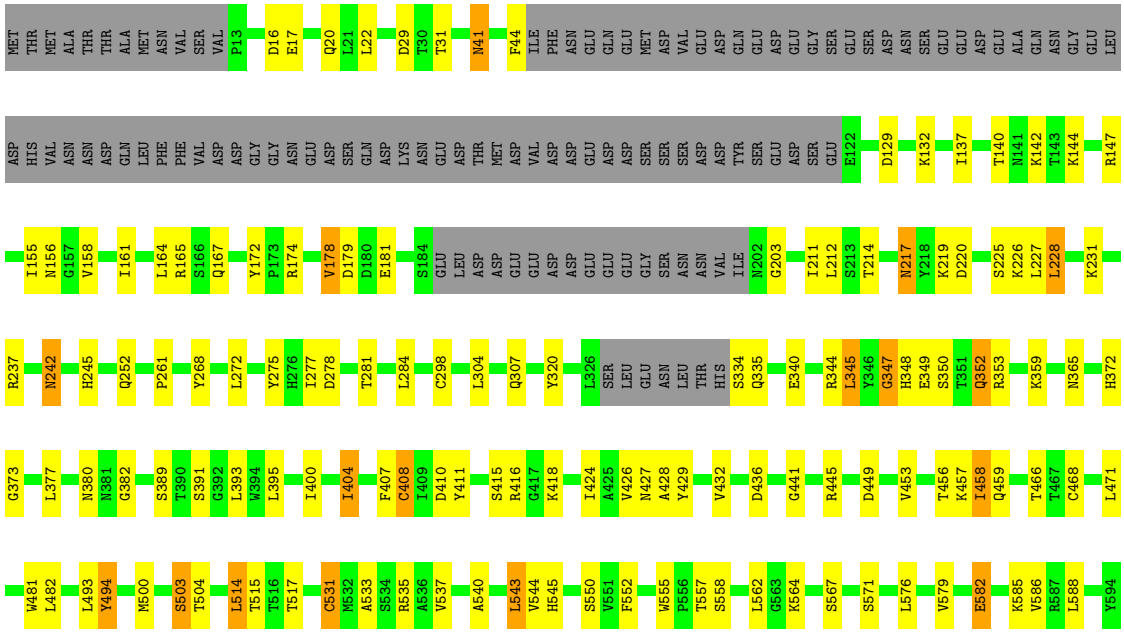
Chain UQ: 62% 29% • 7%

MET THR GLN SER LEU GLY ILE GLU Q9 S16 K19 L22 N23 N24 L25 S26 S27 K32 A35 R36 L37 S38 Q39 D40 Q41 R42 N43 I46 V57 K64 N71 S72 L73 S87 I88 L92 I96 Q101 GLU ASP A104 H105 T108 V109 F110 T111



- Molecule 18: U3 small nucleolar RNA-associated protein 18

Chain UR:



- Molecule 19: Nucleolar complex protein 4

Chain US: 63% 23% • 13%

M1 V2 L3 L4 I5 S6 E7 K13 ARG LEU THR ALA ALA GLY ASP ARG K22 P37 E44 GLU ASP GLU THR GLU LYS ASN LEU ARG F54 T73 LEU PRO SER SER LYS LYS SER THR LEU GLU K84 E85 F98 L102 S107 ASP ILE PRO PHE GLU T113 L124

E130 F134 P144 F148 I152 L155 W156 K167 E179 F180 K183 Y184 A189 D190 I191 Q192 Y193 Y194 F195 Q196 S197 E198 F199 N200 Q201 E204 D210 L211 L212 L213 K214 N215 K218 L222 V223 N224 H225 D226 S230 Q245 E248 S251

K252 F253 K254 S255 N256 N260 W261 L262 S263 S270 L271 Q272 Q273 Y274 K275 S276 I280 L281 R284 I285 H288 K294 L295 M296 D297 Y303 V314 L320 N321 F324 E325 L326 M327 F330 N331 L332 E333 Y334 K340 L341 I344 I345 N346 P347 D348 L349 M350

H351 V352 A356 R357 F365 L366 L371 F379 I380 K381 K382 R385 L386 T387 L388 E389 S390 T397 V398 I399 P400 F401 I402 R407 H417 N418 P419 I422 F446 D447 V448 H449 E450 S451 D452 P453 T456 H457 A458 L459 D460 S461 S462 E465 L466 A467 S468 L469

M470 E471 H472 Y473 L480 P487 L491 S492 Y493 N494 M495 L499 L507 R513 LYS LEU LYS THR LEU PRO THR LEU GLU PHE GLU ALA PHE THR ASN VAL PHE ASP ASN GLU ASP GLY ASP SER GLU ALA SER SER GLN GLY ASN VAL TYR LEU PRO GLY VAL ALA TRP

- Molecule 20: U3 small nucleolar RNA-associated protein 20

Chain UT: 5% 88% • 10%

MET ALA LYS Q4 D40 A139 F142 A156 K160 H248 A251 F323 E348 ASN CYS ALA SER LEU SER Q355 F464 A468 E469 I470 N471 D472 K528 GLU ASP ASP ALA SER GLY N535 L706 P707 F804 LYS THR TYR LYS ASP GLU GLU ASP MET

GLU ASN GLU ARG VAL ILE THR GLY S822 L896 E900 S969 L972 K1188 LEU SER D1191 E1297 D1334 G1335 Y1336 K1337 S1338 Y1339 S1340 W1344 N1357 K1358 N1383 L1384 N1385 E1386 A1387 S1388 K1389 S1390 I1391 S1392 Q1414 K1429 Y1430 F1431 T1432 D1433 F1434 E1435 D1436 M1437

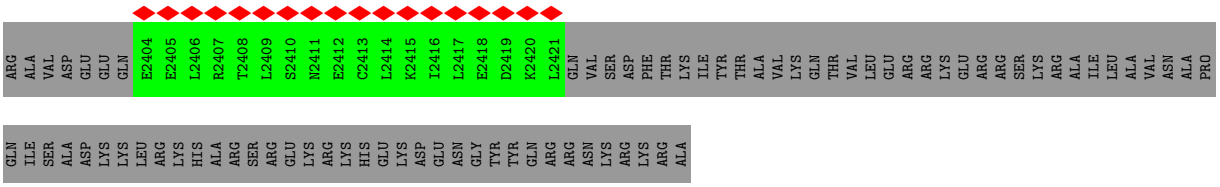
A1438 I1439 L1440 L1441 TYR ASN GLY ASP GLU GLU ALA ASP PHE PHE THR ASN VAL ASN HIS ILE Q1458 K1467 H1472 A1473 S1495 ASP ASP GLU ARG TYR R1501 R1563 ASP GLY ALA GLU SER LYS LEU THR LEU SER LYS PHE PRO SER ASN LEU ASP GLU PRO SER N1584 I1661 S1662

L1665 S1714 G1730 K1733 E1736 M1737 A1775 N1787 M1824 S1825 ASN SER PRO GLN ILE PRO LYS LYS LYS VAL LYS ASP GLN VAL ASP GLU LYS GLU ASP PHE PHE LEU VAL ASN LEU E1841 SER LYS SER TYR THR ILE ASN SER ASN SER LEU LEU LEU N1865 S1905

GLU N1907 E1908 L1921 L1924 D1925 N2091 L2095 M2121 L2149 LYS GLN VAL ASP N2154 A2155 S2156 S2171 ILE GLY PHE E2175 T2195 SER VAL GLY SER GLU HIS Q2202 E2218 A2219 T2220 GLU SER VAL TYR LYS HIS G2227 Y2241 PRO H2243 S2244 W2245 Q2248 S2249 N2252

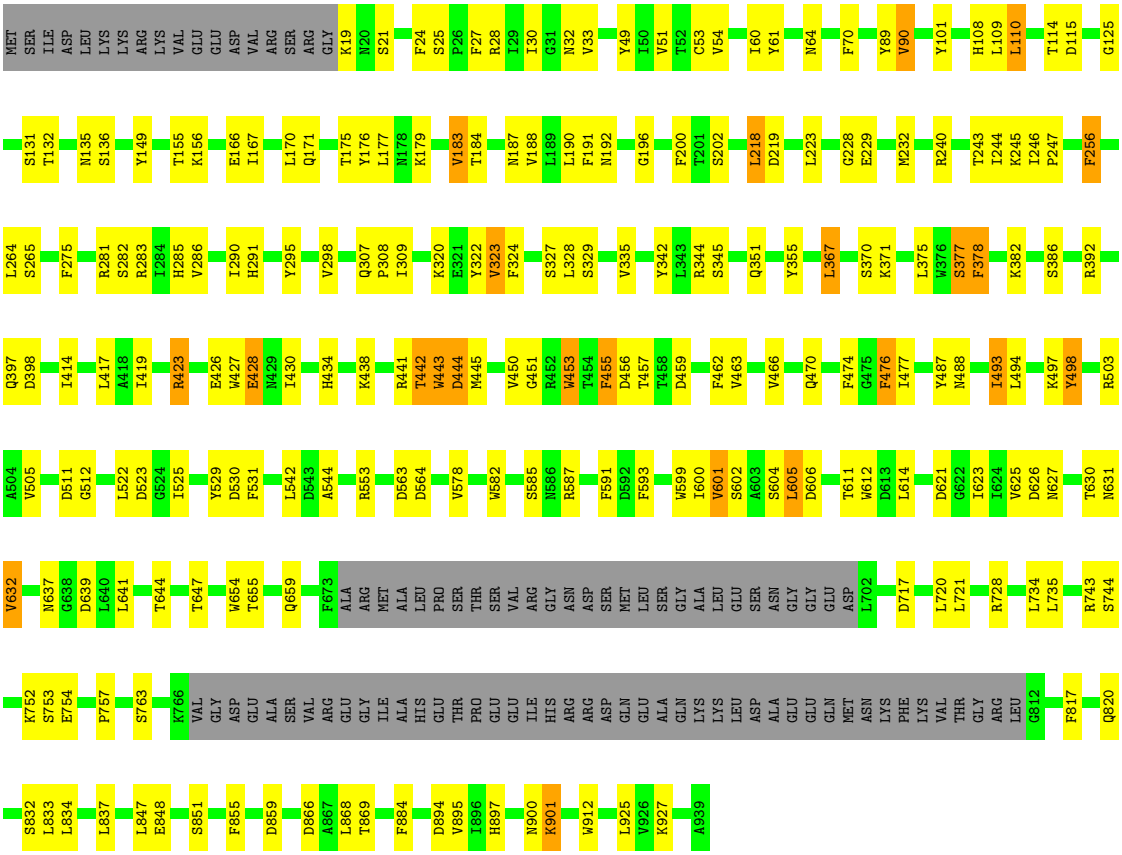
H2255 Q2256 L2257 I2258 A2259 N2260 K2261 ASP LYS LEU GLU ILE SER LEU THR N2270 L2271 P2287 SER ILE PRO E2291 N2292 L2293 A2294 N2295 V2296 S2297 I2298 K2299 T2300 L2301 V2302 N2303 I2304 S2305 I2306 L2307 W2308 K2309 E2310 Q2311 R2312 THR PRO PHE ILE MET ASP VAL SER LYS GLN THR GLY GLU ASP LEU

LYS TYR THR THR ALA I2333 D2334 R2345 S2346 ASP GLU HIS ARG MET ASP S2353 F2354 M2355 S2356 K2357 K2358 A2359 C2360 I2361 Q2362 L2363 L2364 A2365 L2366 L2367 V2368 Q2369 V2370 LEU ASP E2373 D2374 E2375 V2376 I2377 A2378 E2379 GLY E2381 K2382 I2383 L2384 L2385 P2386 L2387 Y2388 G2389 Y2390 LEU GLU THR TYR TYR SER



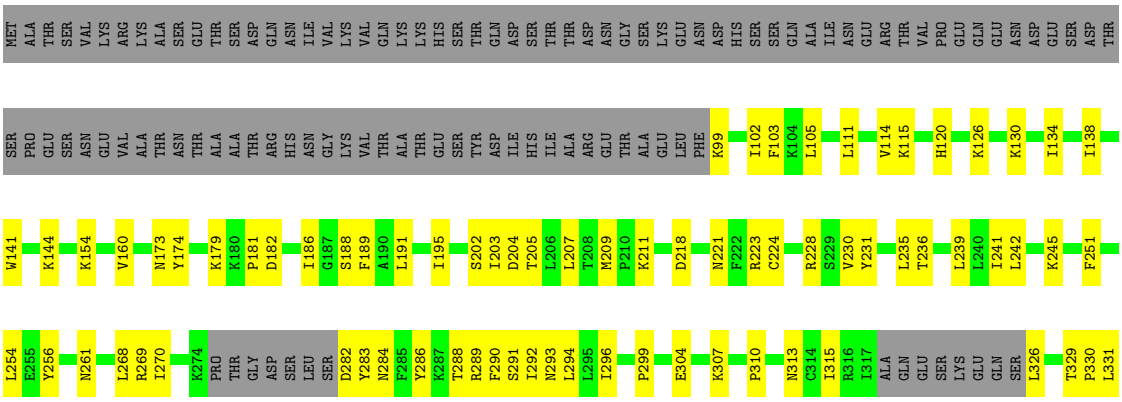
- Molecule 21: U3 small nucleolar RNA-associated protein 21

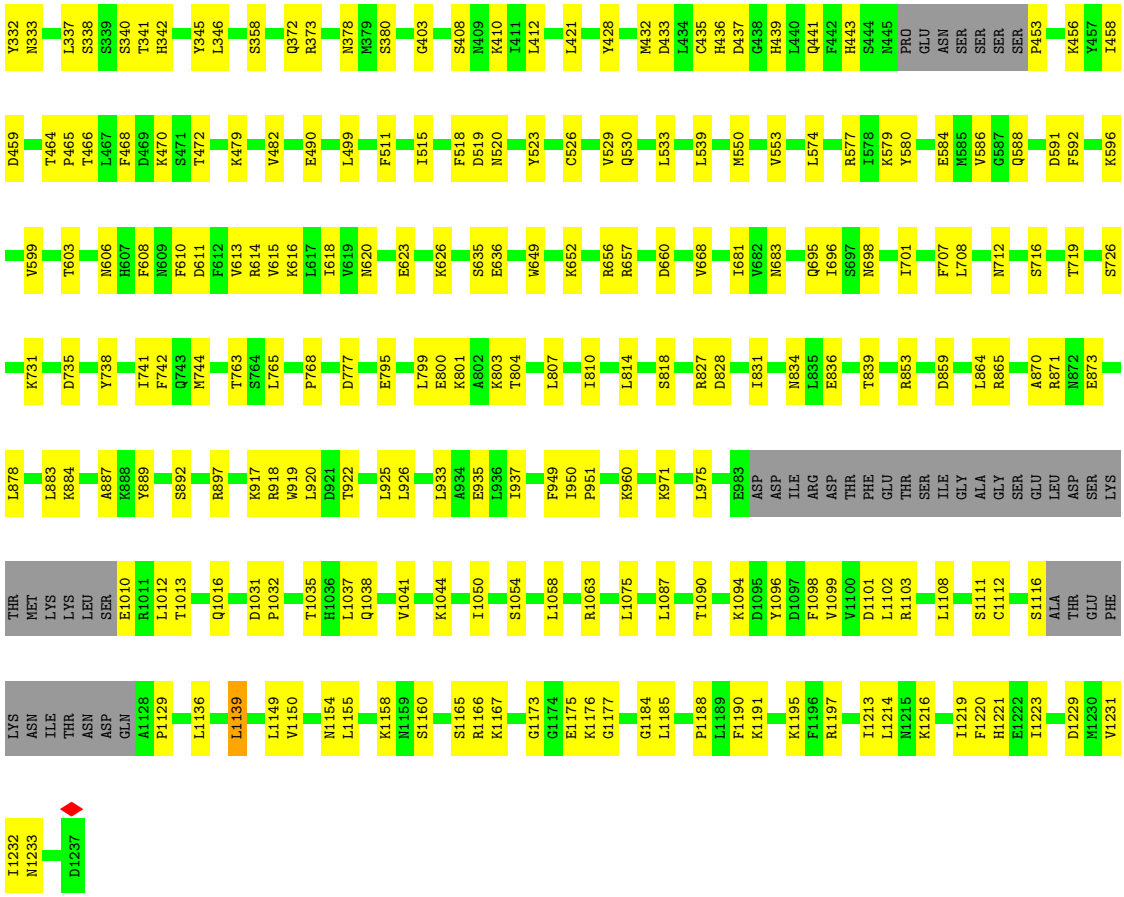
Chain UU:



- Molecule 22: U3 small nucleolar RNA-associated protein 22

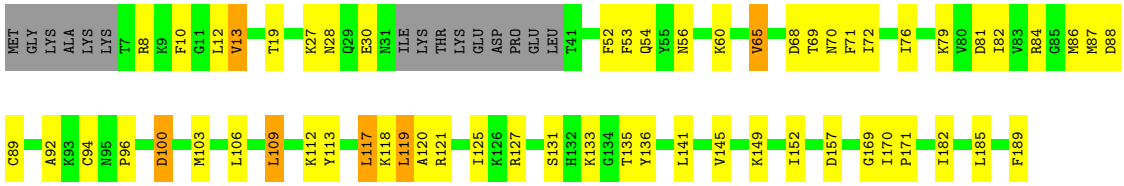
Chain UV:





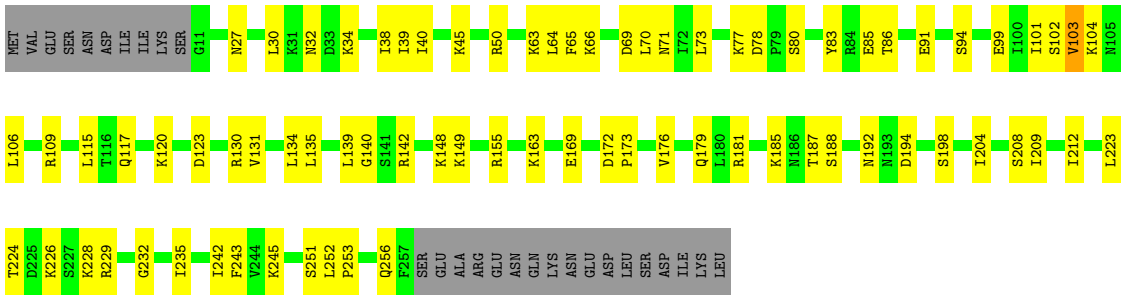
- Molecule 23: rRNA-processing protein FCF1

Chain UX: 61% 28% • 8%



- Molecule 24: Ribosome biogenesis protein UTP30

Chain UZ: 62% 28% 10%



- Molecule 25: rRNA 2'-O-methyltransferase fibrillarin

Chain CA: 57% 14% • 26%

MET SER PHE ARG PRO GLY SER ARG GLY GLY SER ARG GLY GLY SER ARG GLY GLY PHE GLY GLY ARG GLY GLY SER ARG GLY GLY SER ARG GLY GLY ALA ARG GLY GLY SER ARG GLY GLY PHE GLY GLY ARG GLY GLY

SER ARG GLY GLY ALA ARG GLY GLY SER ARG GLY GLY ARG GLY GLY ALA ALA GLY GLY A80 V96 G101 K102 E103 N110 M111 G114 R122 V125 P128 SER LYS GLU ASP GLY V134 P135 P136 T137 K138 R142 V143 I155 L162 K168 L171 Y172 L173

G174 A175 A176 S177 G178 V181 G192 V193 V194 E198 F199 S200 K212 D223 A224 R225 Q228 K229 Y230 R231 M236 V237 D238 C239 V240 Q246 R251 I252 I253 Q264 I269 S270 L301 T305 L306 E307 P308 Y309 H313 C314 I315 Y320 K326 LYS

- Molecule 25: rRNA 2'-O-methyltransferase fibrillarin

Chain CB: 47% 22% 30%

MET SER PHE ARG PRO GLY SER ARG GLY GLY SER ARG GLY GLY SER ARG GLY GLY PHE GLY GLY ARG GLY GLY SER ARG GLY GLY SER ARG GLY GLY ALA ARG GLY GLY SER ARG GLY GLY PHE GLY GLY ARG GLY GLY

SER ARG GLY GLY ALA ARG GLY GLY SER ARG GLY GLY ARG GLY GLY ALA ALA GLY GLY ALA ARG GLY GLY ARG GLY GLY ALA K85 H91 R92 H93 V96 Y97 I98 K109 N110 M111 S116 V117 Y118 R122 V125 GLU GLU PRO SER LYS GLU ASP GLY VAL PRO PRO THR K138 V139 E140

Y141 W144 N145 P146 F147 R148 A152 L159 L162 F163 I164 G167 V170 L171 Y172 A175 H183 V184 V187 E191 V197 E198 F199 S200 H201 G204 M210 A211 K212 K213 R214 P215 N216 I217 I220 I221 P227 Y230 R231 C239 V240 F241

V244 Q249 H258 K262 D263 Q264 V267 V268 K272 C275 V280 D281 E289 K292 L293 R294 I298 E302 H313 C314 I315 V316 V317 G318 R319 Y320 S323 G324 LEU LYS LYS

- Molecule 26: Nucleolar protein 56

Chain CD: 55% 19% • 25%

MET ALA P3 I4 L7 L8 F9 E10 V20 Q23 S29 R30 V34 Q35 I38 N39 D40 I48 S52 F53 N67 S70 V74 L78 L82 D83 K88 N95 I96 S101 D102 K103 K110 D117 D126 L127 I128 V131 R132 L133

H134 K137 L138 L142 Q143 L147 E148 R149 L154 S166 K169 N170 D171 L180 D185 K186 D187 I188 N189 R194 W198 Y199 H202 F203 P204 E205 L206 L221 D225 D231 L234 L237 L240 S245 A248 Q249 R250 V251 I252 D253 N254

A255 R256 I257 S258 M259 I263 T266 D267 M268 E269 N270 V271 F274 A275 Q276 R277 L281 R285 S321 L322 Q328 A329 T332 L336 GLY ALA GLU LYS ALA LEU PHE ARG ALA LEU LYS THR LYS GLY ASN THR PRO LYS TYR GLY LEU ILE TYR HIS SER GLY PHE

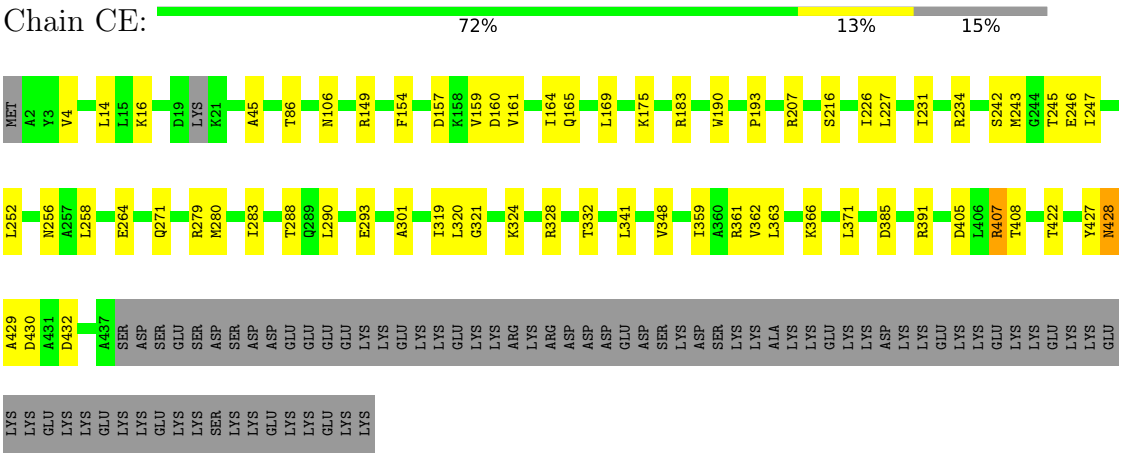
ILE SER LYS ALA SER ALA K370 N371 K372 R377 N381 K382 C383 S384 M385 A386 S387 R388 N391 Y392 S393 E394 V399 S402 V403 L404 R411 Y415 ASN THR GLY LYS PRO THR LEU LYS ASN GLU LEU ALA ILE GLN GLU ALA MET GLU LEU TYR ASN LYS ASP LYS PRO

ALA ALA GLU VAL GLU GLU THR LYS GLU LYS GLU SER SER LYS LYS ARG LYS LEU GLU ASP ASP ASP GLU GLU LYS LYS GLU LYS LYS LYS LYS LYS SER LYS LYS GLU LYS LYS GLU LYS LYS GLU LYS LYS ASP LYS LYS GLU LYS LYS ASP LYS LYS LYS

LYS SER LYS ASP

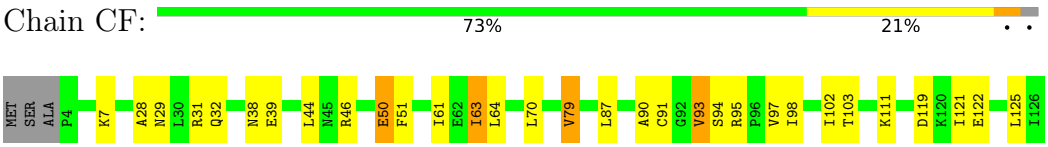
• Molecule 27: Nucleolar protein 58

Chain CE:



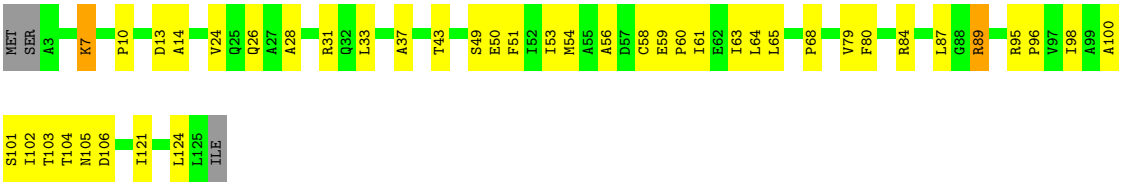
• Molecule 28: 13 kDa ribonucleoprotein-associated protein

Chain CF:



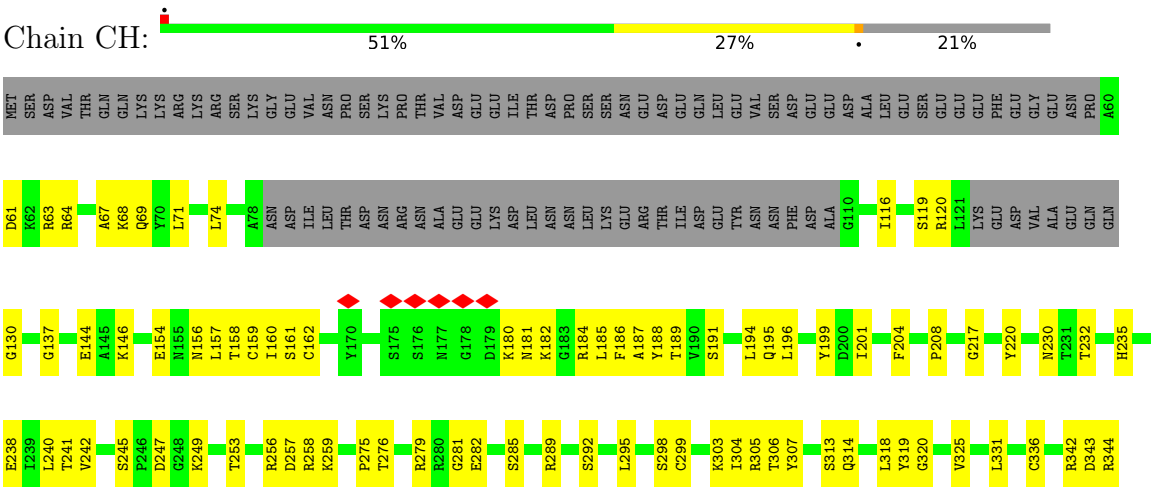
• Molecule 28: 13 kDa ribonucleoprotein-associated protein

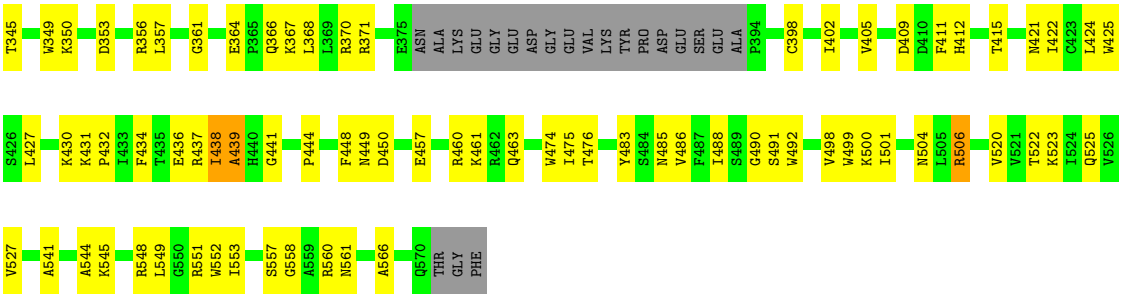
Chain CG:



• Molecule 29: Ribosomal RNA-processing protein 9

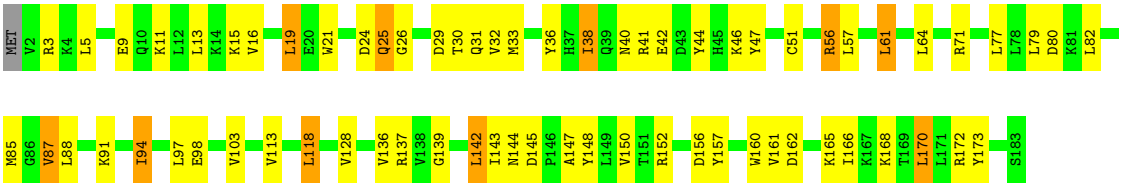
Chain CH:





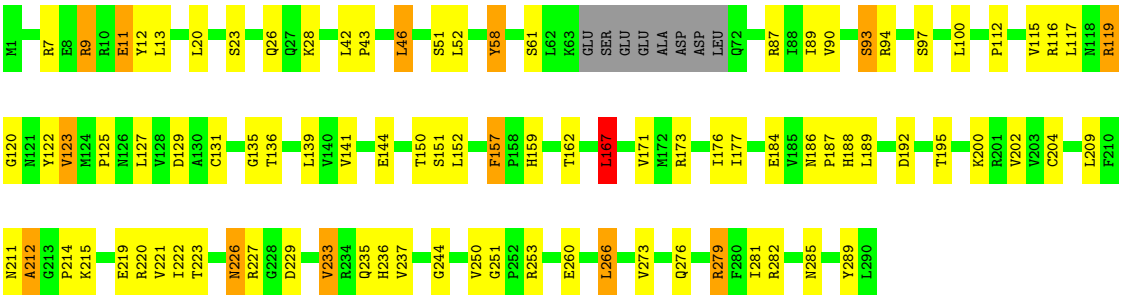
- Molecule 30: U3 small nucleolar ribonucleoprotein protein IMP3

Chain CI:



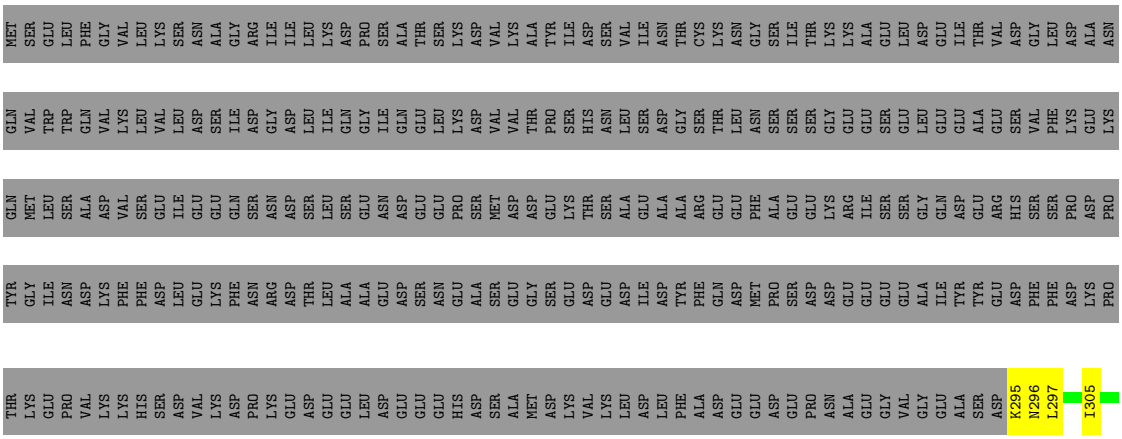
- Molecule 31: U3 small nucleolar ribonucleoprotein protein IMP4

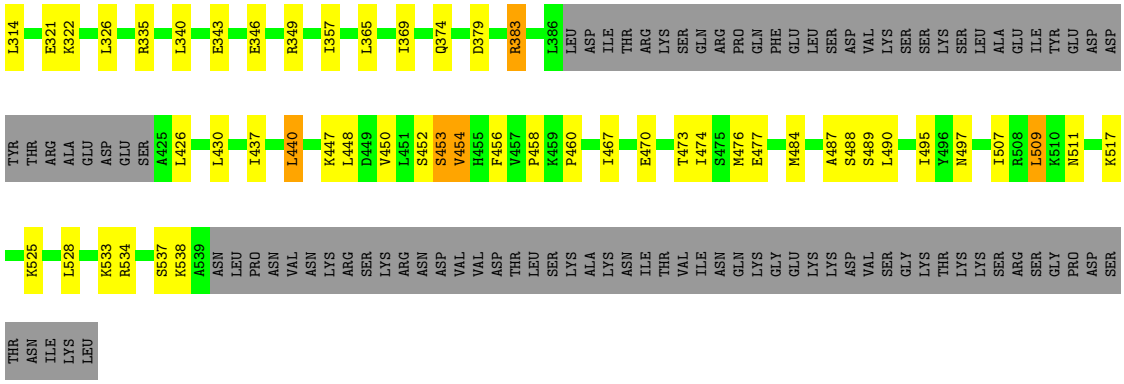
Chain CJ:



- Molecule 32: U3 small nucleolar RNA-associated protein MPP10

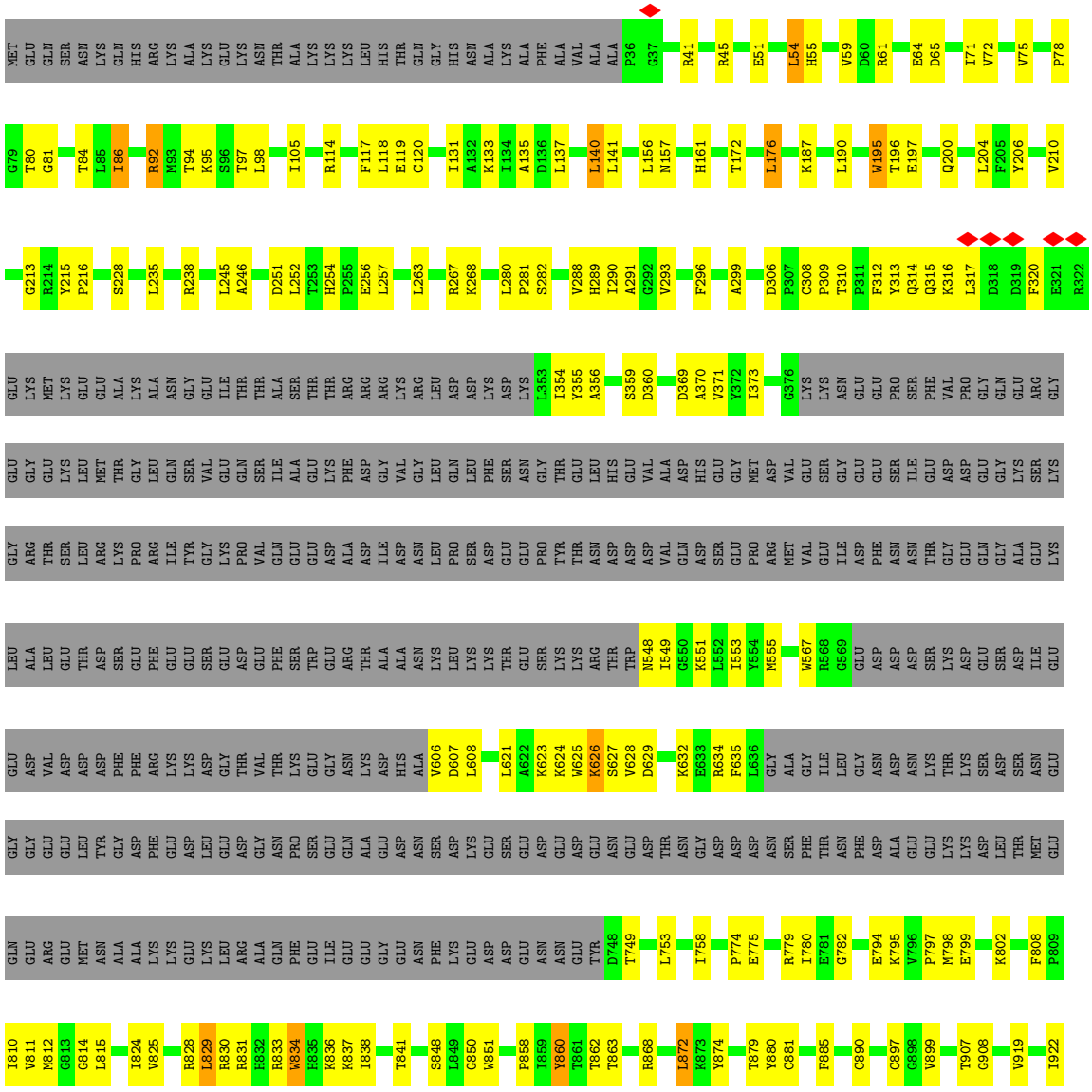
Chain CK:

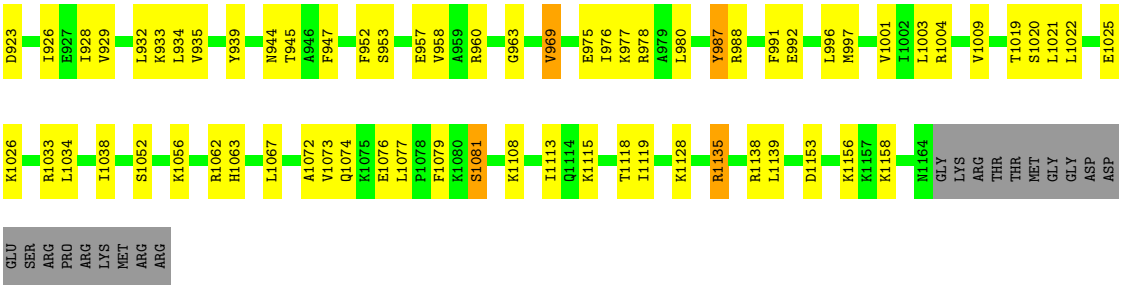




• Molecule 33: Ribosome biogenesis protein BMS1

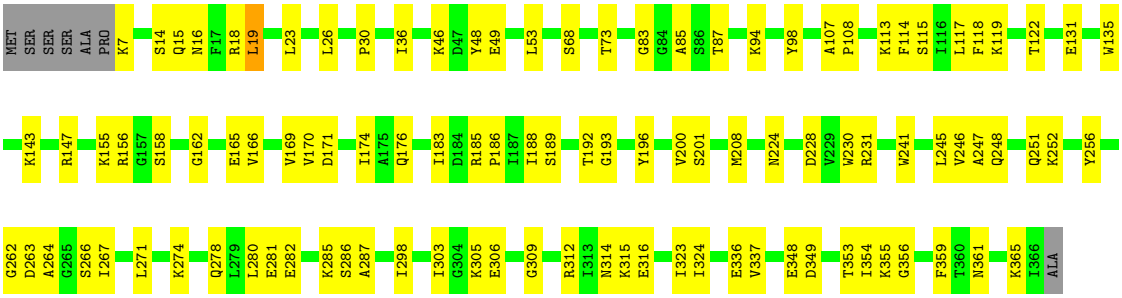
Chain CL:





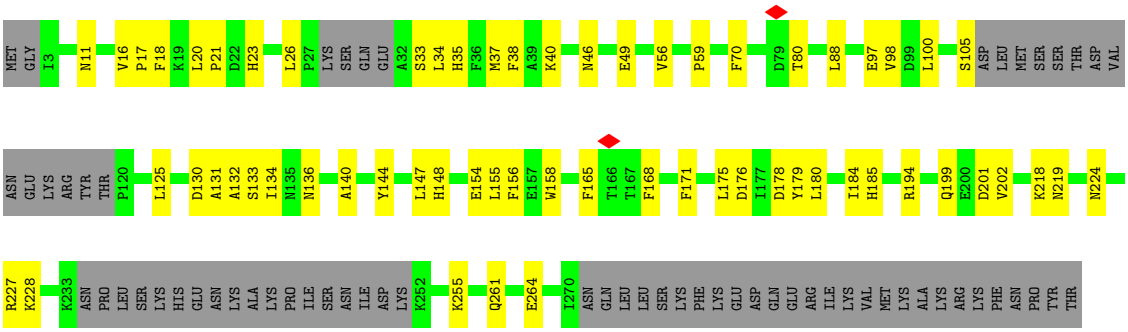
• Molecule 34: RNA 3'-terminal phosphate cyclase-like protein

Chain CM:



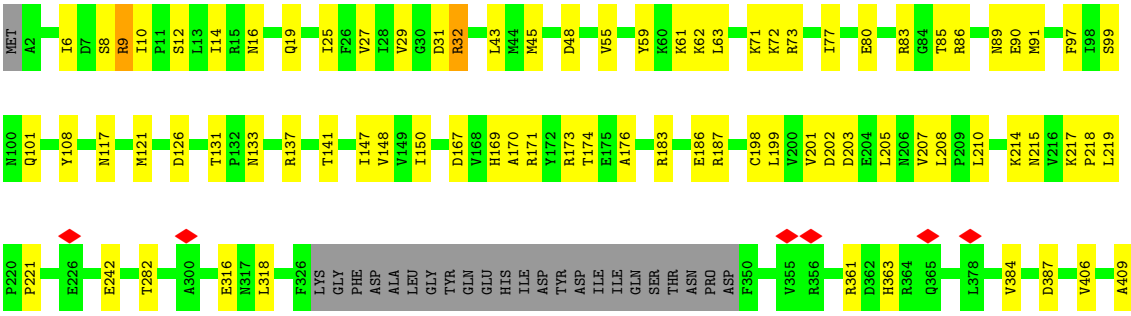
• Molecule 35: Ribosomal RNA-processing protein 7

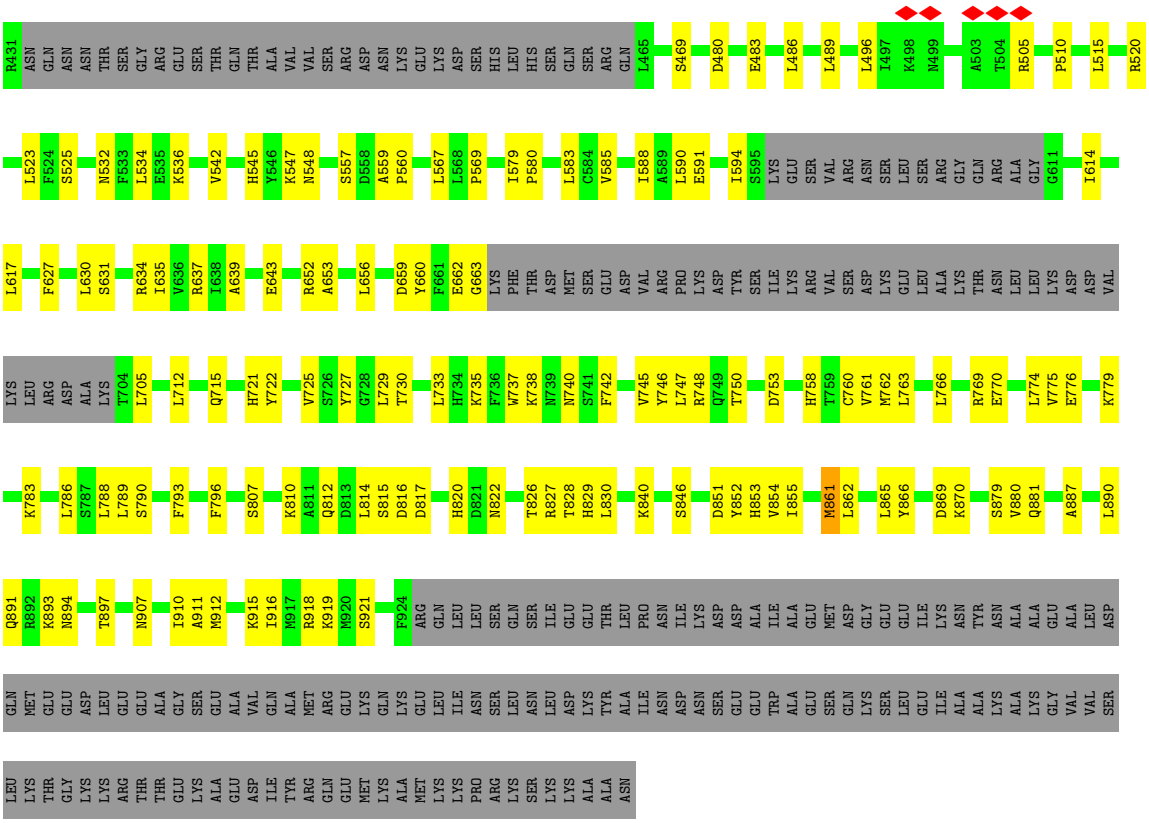
Chain CN:



• Molecule 36: RNA cytidine acetyltransferase

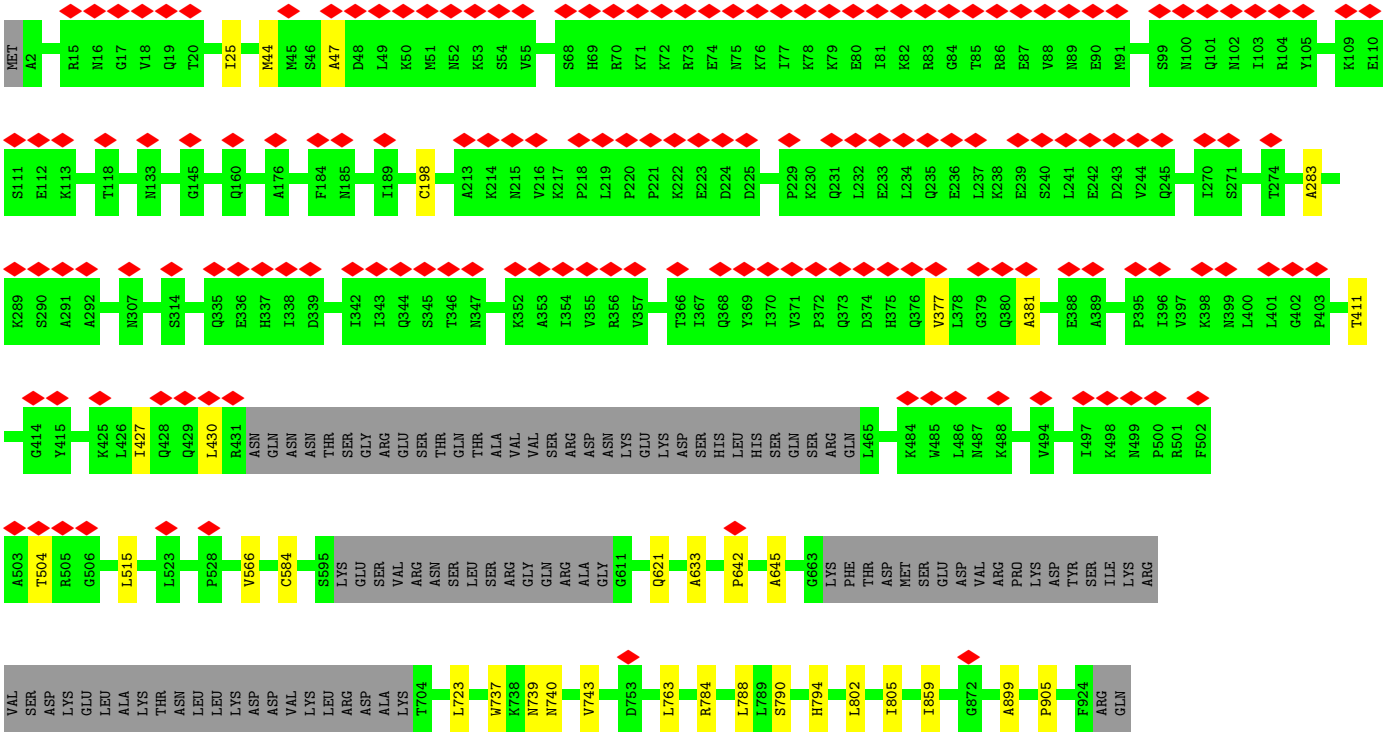
Chain JA:

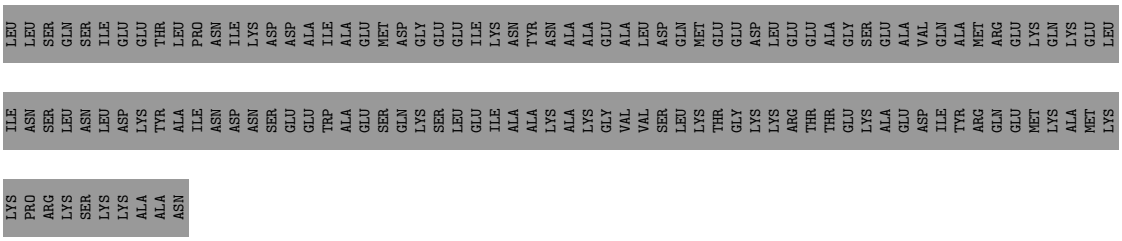




- Molecule 36: RNA cytidine acetyltransferase

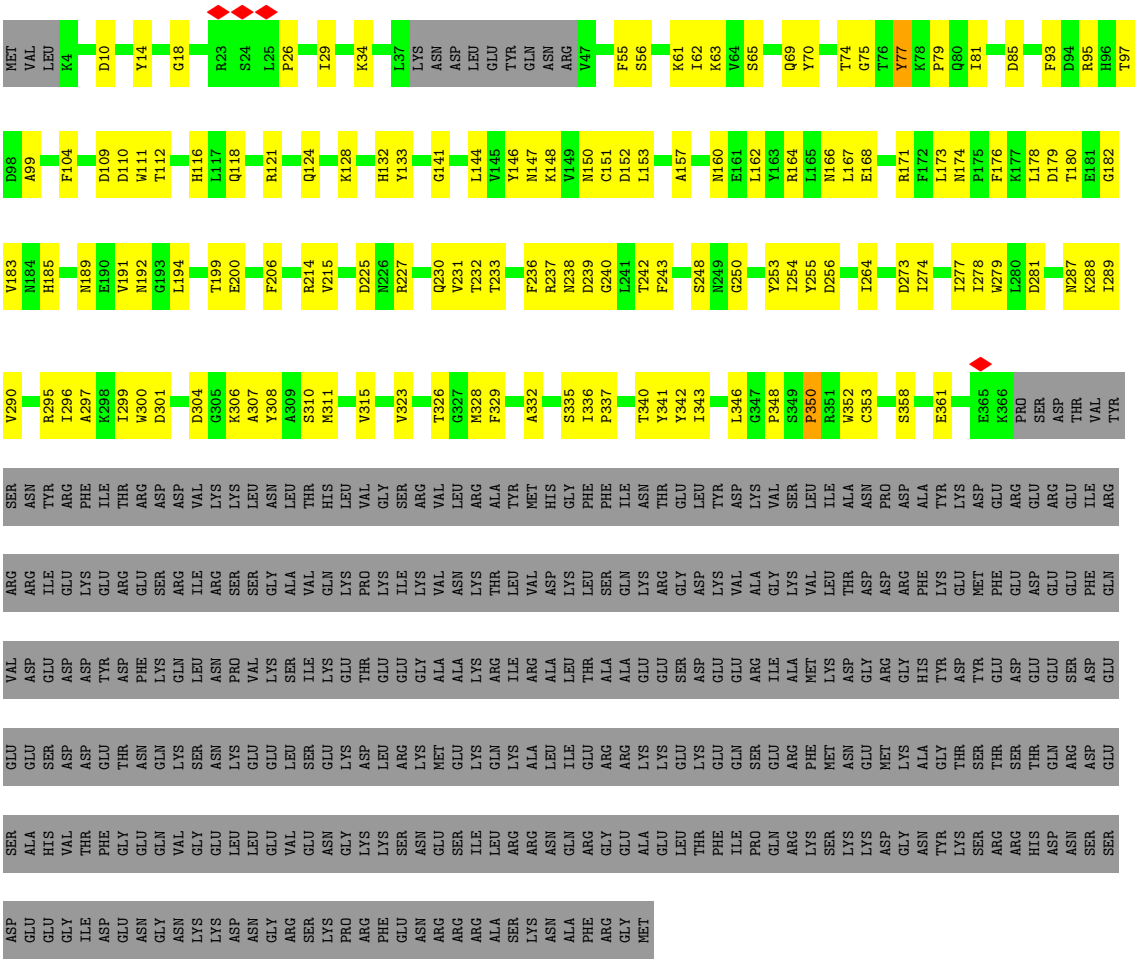
Chain JB:





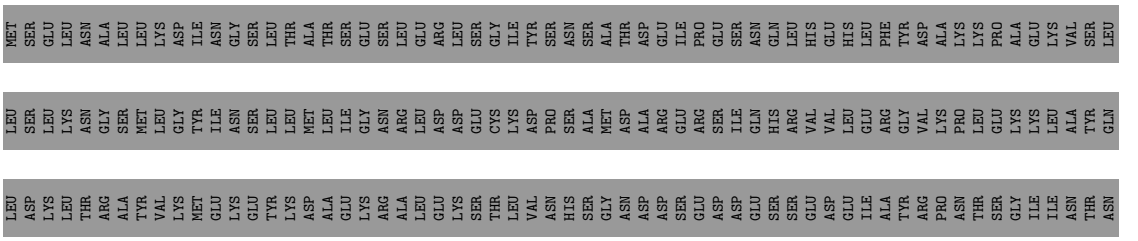
• Molecule 37: Ribosome biogenesis protein ENP2

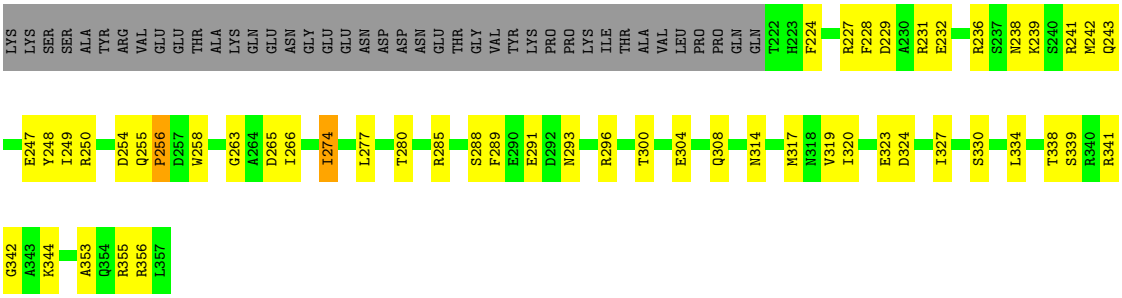
Chain JC: 31% 19% 50%



• Molecule 38: U3 small nucleolar ribonucleoprotein protein LCP5

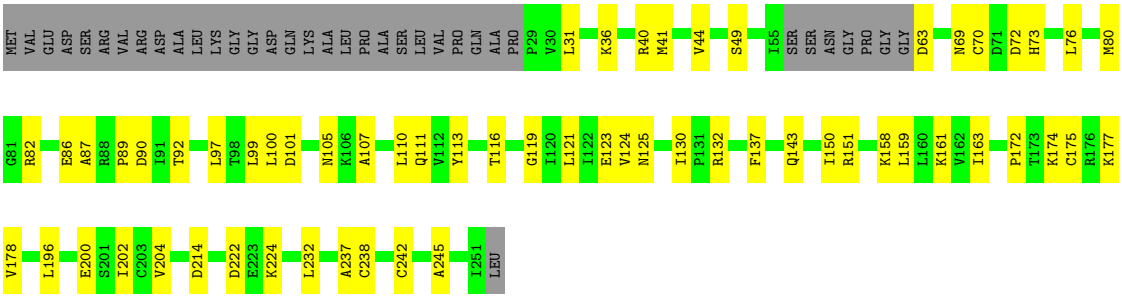
Chain JE: 24% 14% • 62%





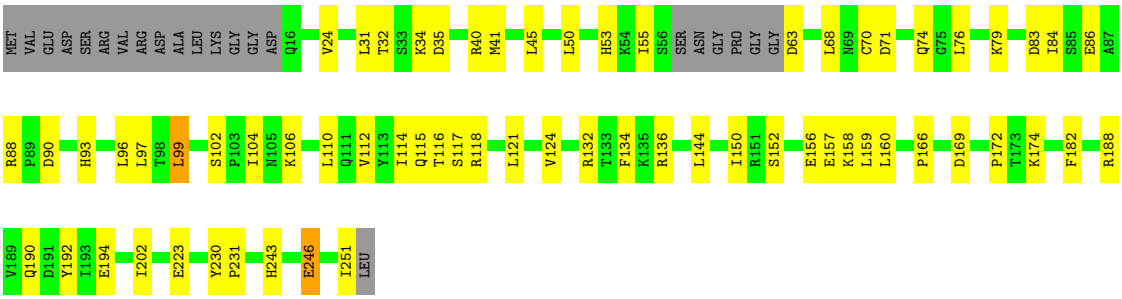
- Molecule 39: Ribosomal RNA small subunit methyltransferase NEP1

Chain JF:



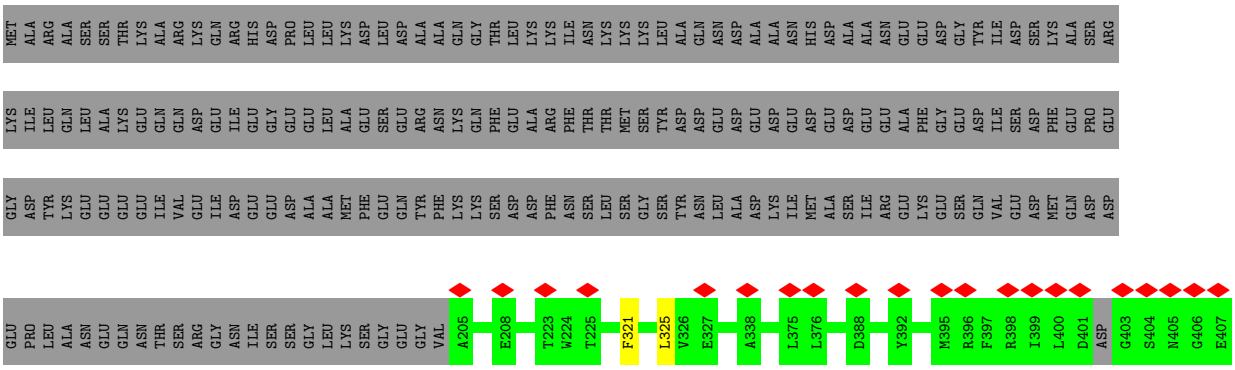
- Molecule 39: Ribosomal RNA small subunit methyltransferase NEP1

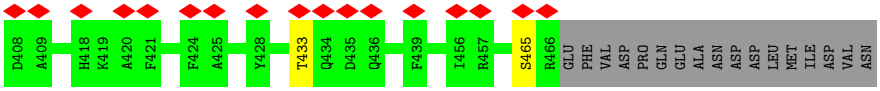
Chain JG:



- Molecule 40: Essential nuclear protein 1

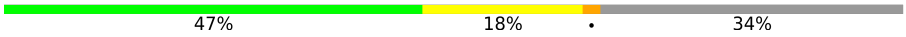
Chain JH:

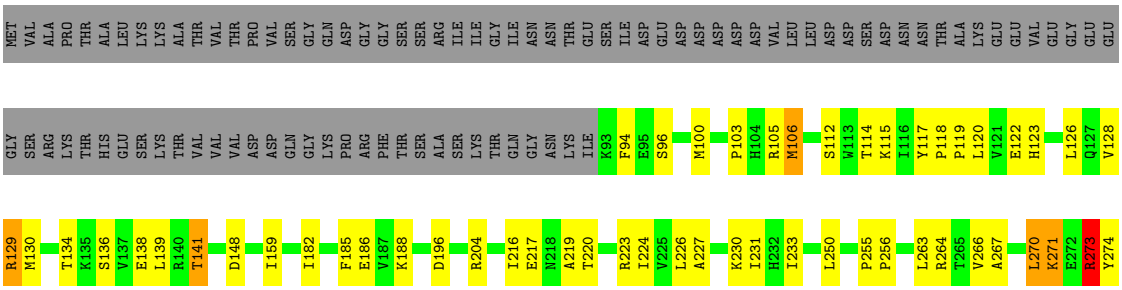




- Molecule 41: Pre-rRNA-processing protein PNO1

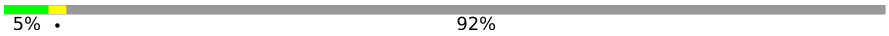
Chain JJ:

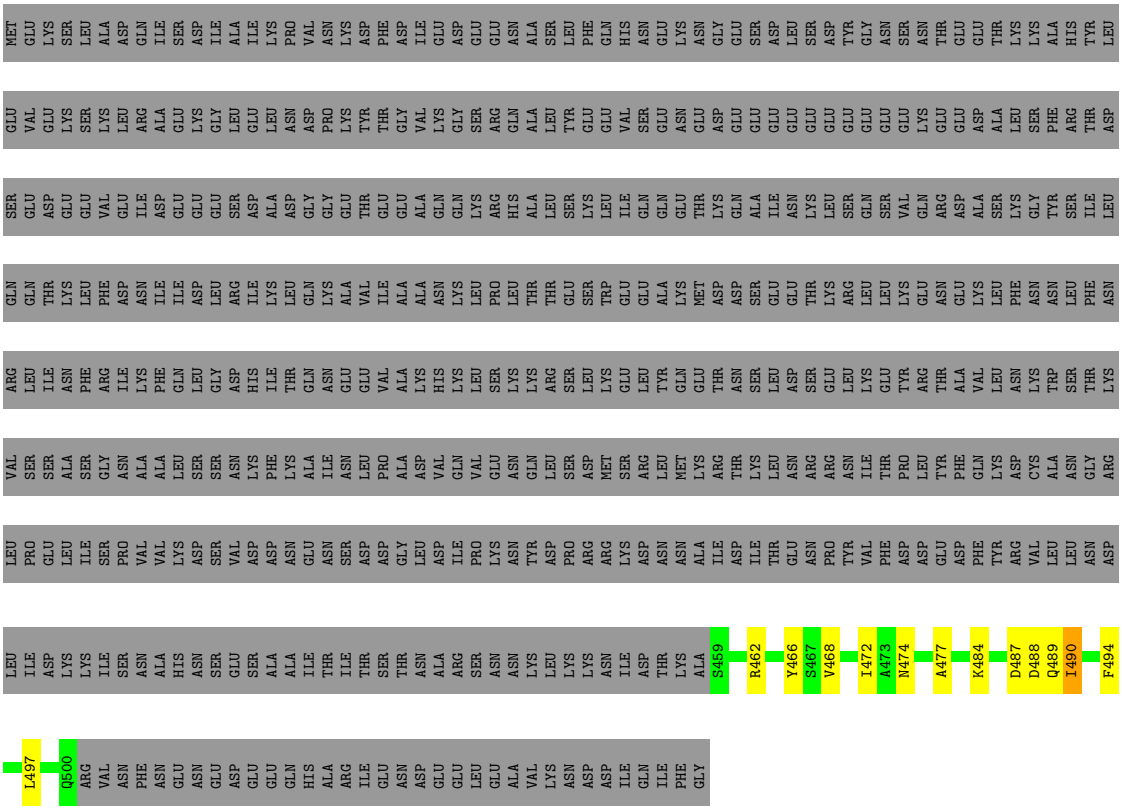




- Molecule 42: Protein BFR2

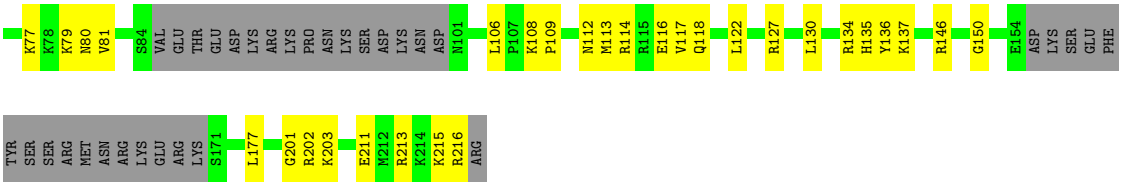
Chain JK:





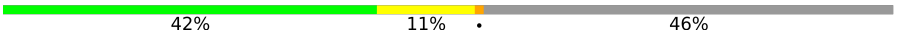
- Molecule 43: rRNA-processing protein FCF2

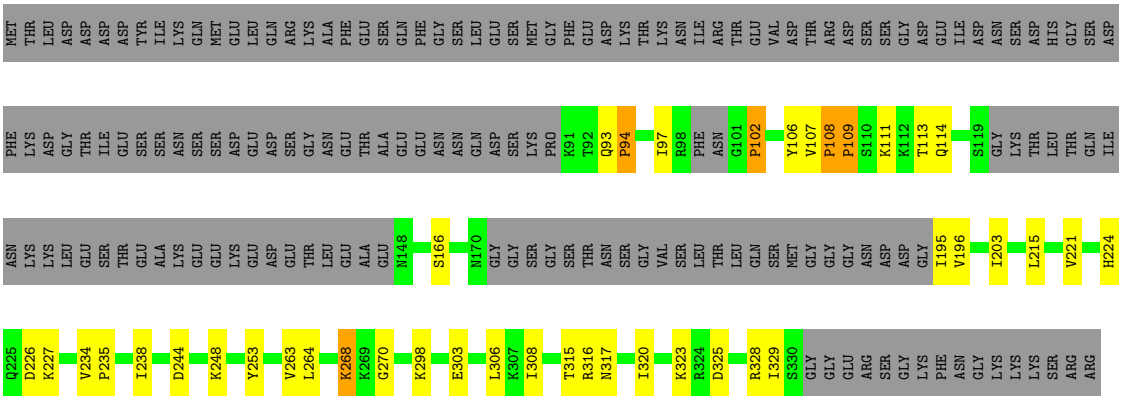
Chain JM:



- Molecule 44: Protein FAF1

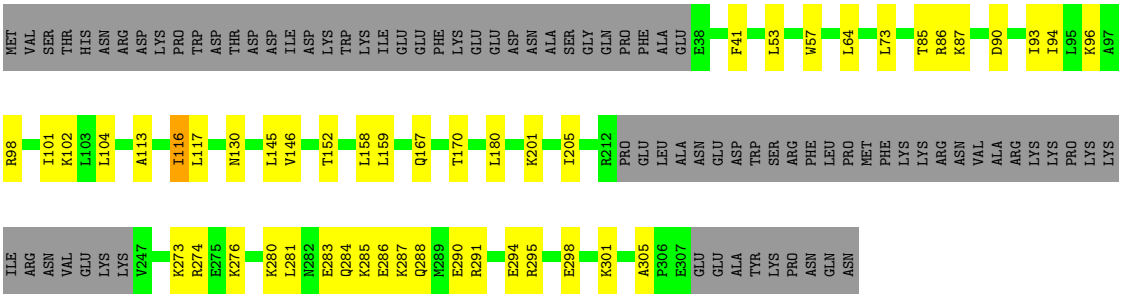
Chain JN:





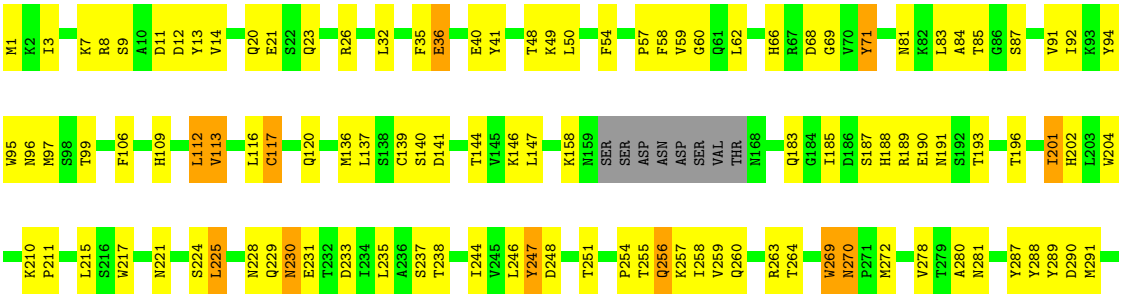
- Molecule 45: KRR1 small subunit processome component

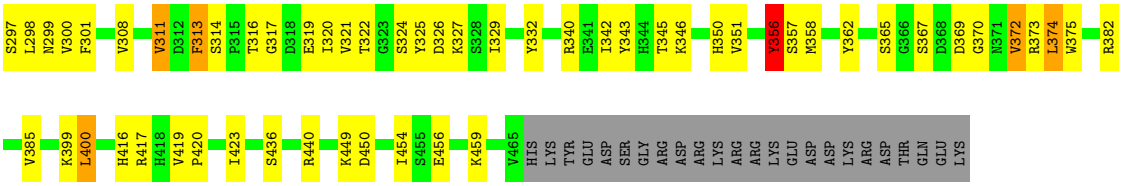
Chain JO:



- Molecule 46: Protein SOF1

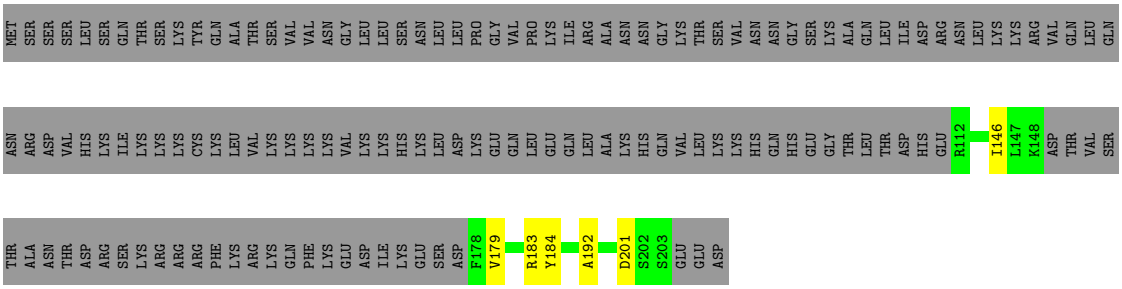
Chain JP:





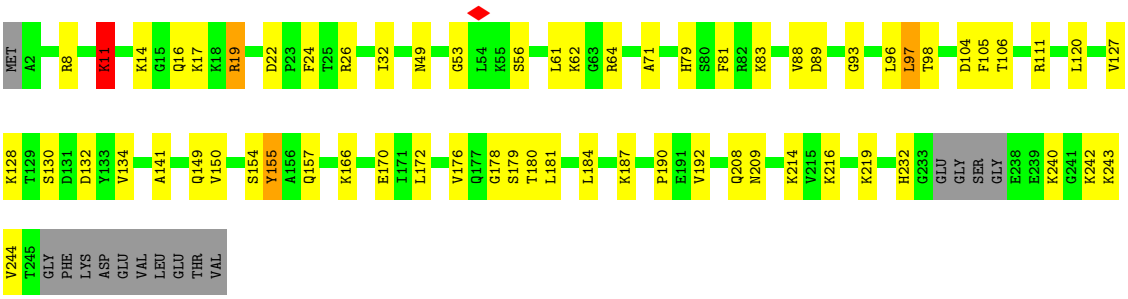
• Molecule 47: Regulator of rDNA transcription protein 14

Chain JQ:



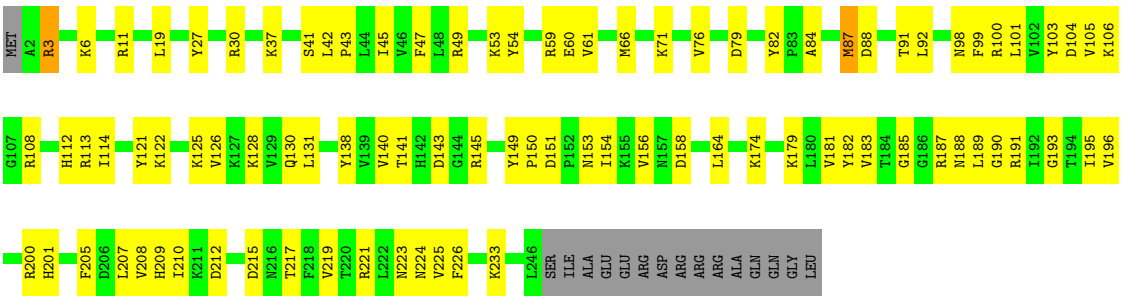
• Molecule 48: 40S ribosomal protein S1-A

Chain DA:



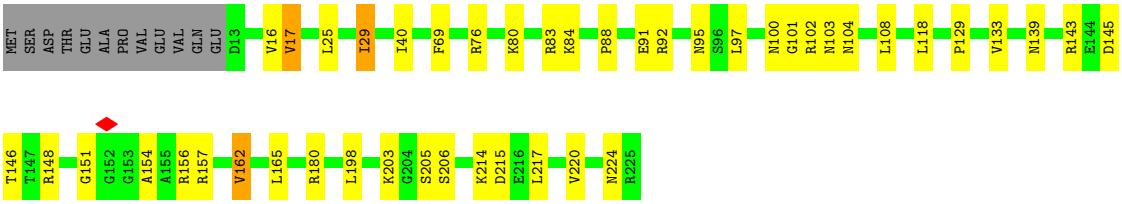
• Molecule 49: 40S ribosomal protein S4-A

Chain DE:



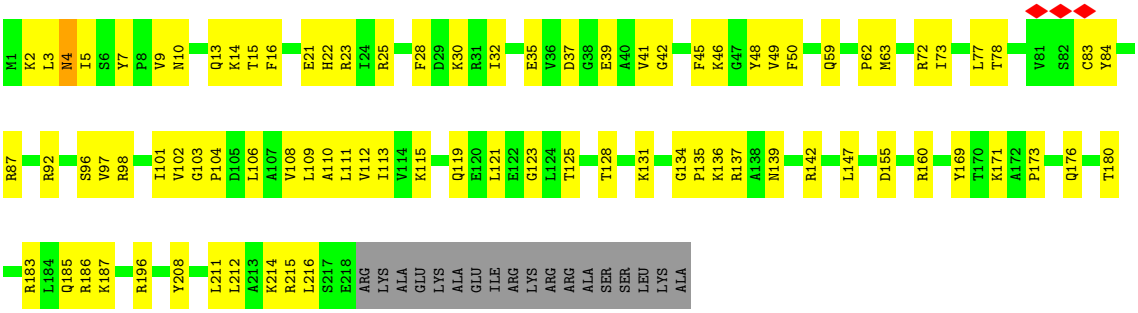
• Molecule 50: Rps5p

Chain DF:



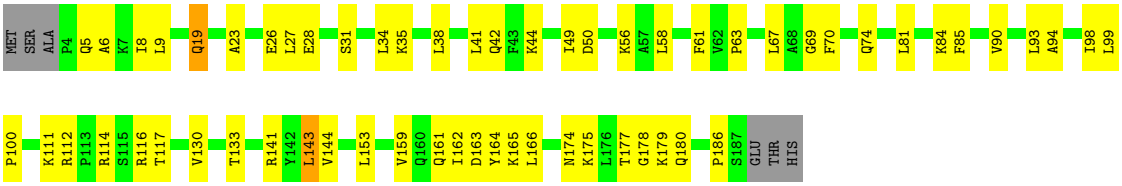
• Molecule 51: 40S ribosomal protein S6-A

Chain DG:



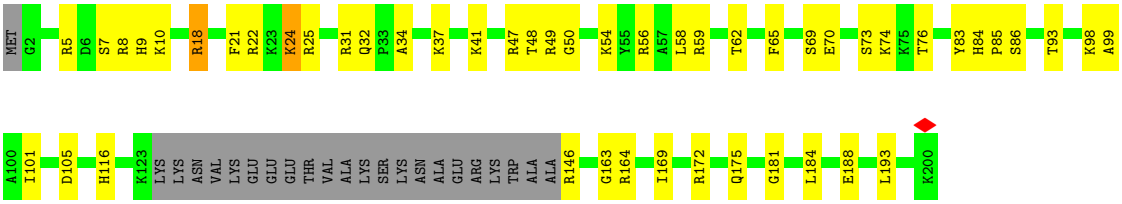
• Molecule 52: 40S ribosomal protein S7-A

Chain DH:



• Molecule 53: 40S ribosomal protein S8-A

Chain DI:



• Molecule 54: 40S ribosomal protein S9-A

Chain DJ:

R108 L109 Q110 V113 Y114 K115 V122 V127 L128 Q131 R132 H133 I134 A135 V136 G137 K138 Q139 F146 D151 S152 E153 K154 H155 I156 S162 P169 G170 R171 R174 R175 N176 E186 ALA ALA ASP GLU ALA ASP GLU ALA ASP GLU GLU

• Molecule 55: 40S ribosomal protein S11-A

Chain DL: 57% 33% 10%

MET SER THR GLU LEU T6 V7 Q8 S9 E10 R11 Q14 K26 T27 S28 K29 R30 R33 P45 K46 T47 Y53 I54 D55 K56 K57 C58 R67 G68 T72 G73 T74 V75 V85 I86 R87 R88 A89 Y90 I94 N98 R99 R103 H104 K105 P108 A114

F115 V119 T124 V125 G126 Q127 C128 R129 P130 I131 S132 K133 T134 V135 R136 V139 V140 K141 V142 A145 ALA GLY LYS ALA ASN LYS GLN PHE ALA LYS PHE

• Molecule 56: 40S ribosomal protein S13

Chain DN: 75% 23%

MET G2 R3 A7 R20 S29 S32 E35 V38 K43 T46 P47 S48 Q49 I50 G51 V52 L53 L54 T61 Q62 A63 R64 N69 K70 I71 M72 R73 I74 L75 I84 P85 E86 D87 V96 K100 K112 F113 R114 S120 L125 Y128

A146 S147 A148 L149 V150 N151

• Molecule 57: 40S ribosomal protein S14-A

Chain DO: 69% 19% 12%

MET SER ASN VAL VAL GLN ALA ARG ASP ASN S11 G15 Y20 A21 S22 F23 N24 D25 T26 E37 R41 V42 T43 M46 K47 V48 K49 A50 D53 E54 L62 D66 I76 V79 I112 G113 E116 D117 D124 R127 K128 K129 G130 GLY ARG ARG

GLY ARG ARG LEU

• Molecule 58: 40S ribosomal protein S16-A

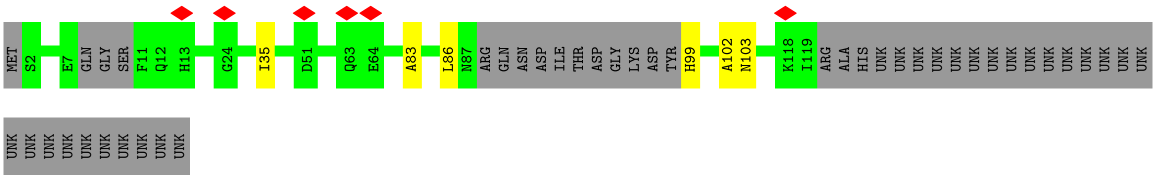
Chain DQ: 61% 24% 13%

MET SER A3 V7 K13 K14 S15 V19 V22 G25 L28 V31 T37 L38 V39 R45 E50 D58 K59 F60 S61 D64 I65 R66 V69 Y79 R82 L89 V90 A91 Y92 H93 Q94 K95 Y96 V97 D98 K102 K106 T110 S111

Y112 D113 R114 L117 I118 R122 K127 LYS PHE GLY GLY LYS GLY ALA ARG SER ARG PHE GLN LYS SER TYR ARG

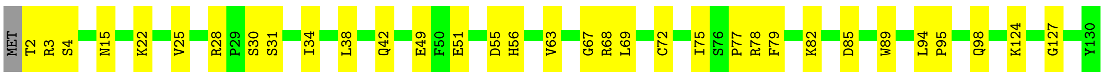
• Molecule 59: 40S ribosomal protein S18-A,40S ribosomal protein S18-A,Rps18

Chain DS: 67% 29%



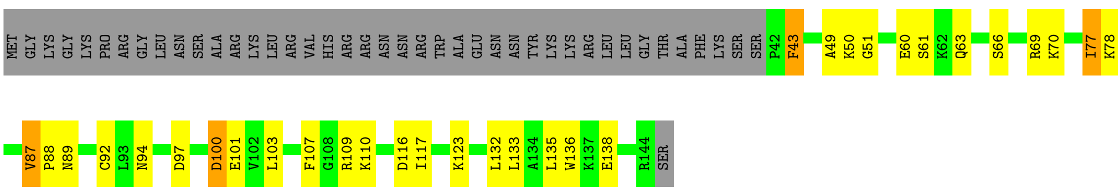
• Molecule 60: 40S ribosomal protein S22-A

Chain DW:



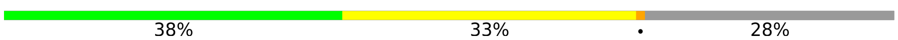
• Molecule 61: 40S ribosomal protein S23-A

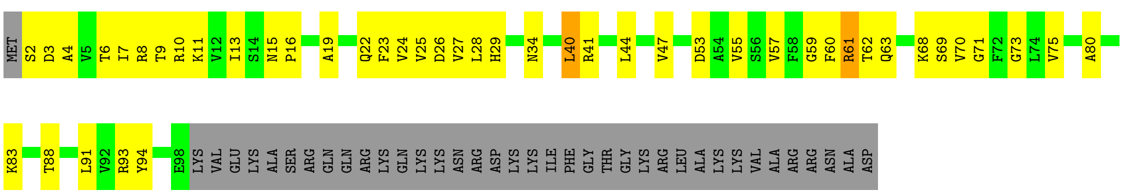
Chain DX:



• Molecule 62: 40S ribosomal protein S24-A

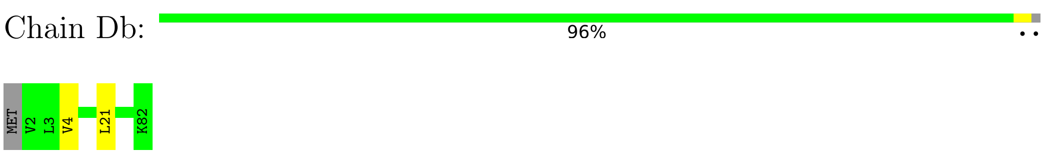
Chain DY:





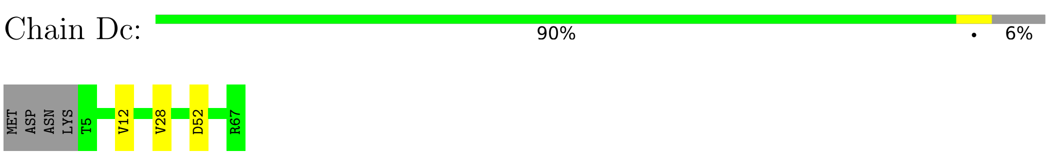
• Molecule 63: 40S ribosomal protein S27-A

Chain Db:



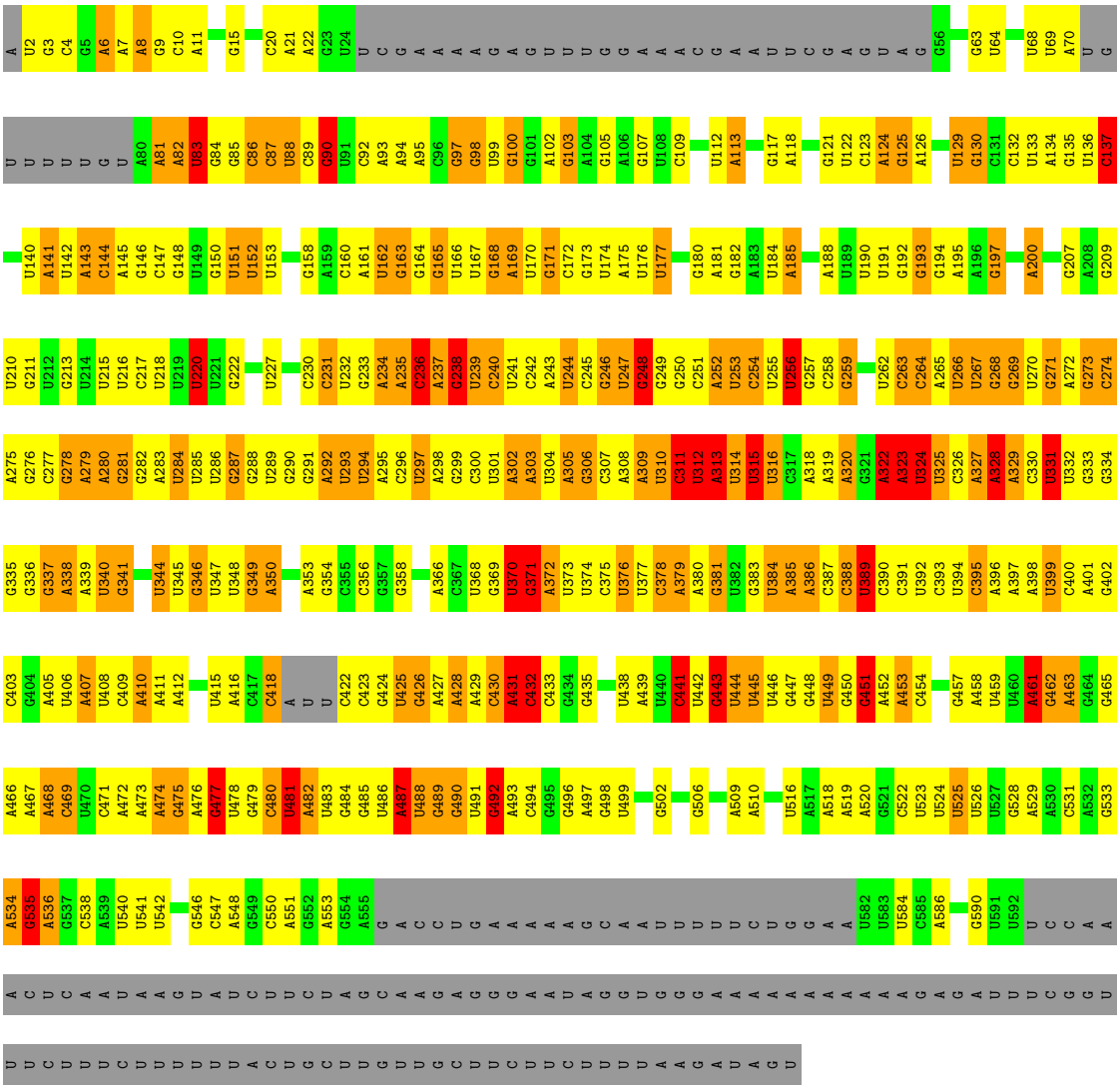
• Molecule 64: 40S ribosomal protein S28-A

Chain Dc:



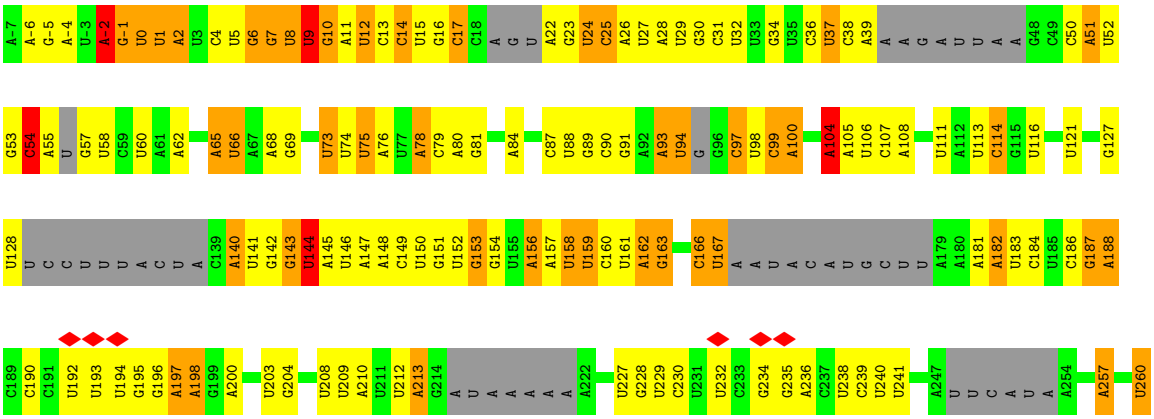
• Molecule 65: 5ETS RNA

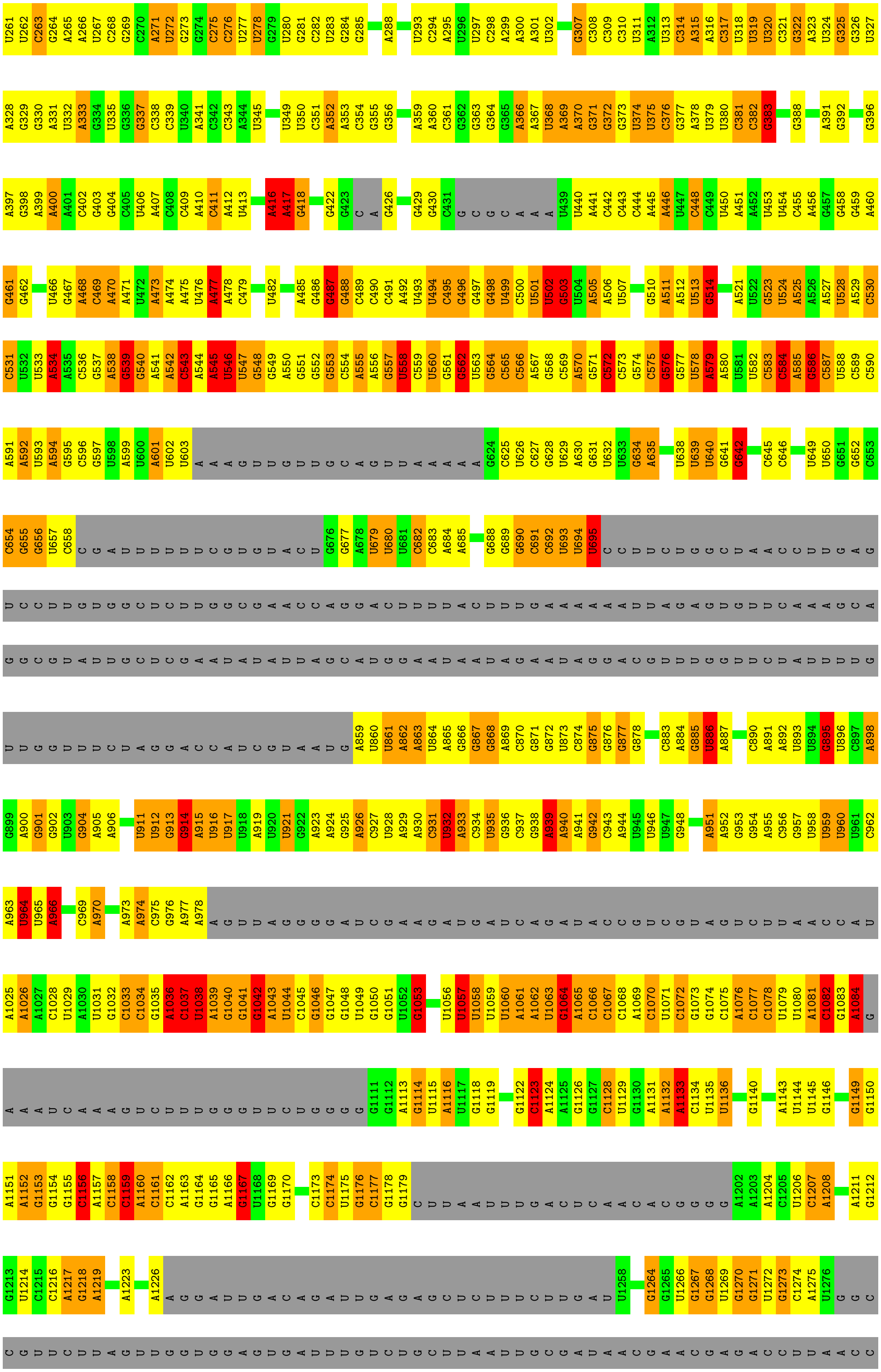
Chain D2: 20% 33% 17% • 25%



- Molecule 66: 18S rRNA

Chain D3: 18% 29% 16% • 34%

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A328 G329 G330 A331 U332 A333 G334 U335 G336 G337 C338 C339 U340 A341 C342 C343 A344 U345 U349 U350 C351 A352 A353 C354 G355 G356 A359 A360 C361 G362 G363 G364 G365 A366 A367 U368 A369 A370 G371 C372 G373 U374 U375 C376 G377 A378 U379 U380 C381 C382 G383 G388 A391 G392 G396
A397 G398 A399 A400 A401 C402 G403 G404 C405 U406 A407 C408 C409 A410 C411 A412 U413 A416 A417 G418 G422 G423 C A G426 G429 G430 C431 G C G C A A A U439 U440 A441 C442 C443 C444 A445 A446 U447 C448 C449 U450 A451 A452 U453 U454 C455 A456 G457 G458 G459 A460
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C531 U532 U533 A534 A535 C536 G537 A538 G539 G540 A541 A542 C543 A544 A545 U546 U547 G548 G549 A550 G551 G552 G553 C554 A555 A556 G557 U558 C559 U560 G561 G562 U563 G564 C565 C566 A567 G568 C569 A570 G571 C572 C573 G574 C575 G576 G577 U578 A579 A580 U581 U582 C583 C584 A585 G586 C587 U588 C589 C590
A591 A592 U593 A594 G595 C596 G597 U598 A599 U600 A601 U602 U603 A A A G U U G U U G C A G U U A A A A A G624 C625 U626 C627 G628 U629 A630 G631 U632 U633 G634 A635 U638 U639 U640 G641 G642 C645 C646 U649 U650 G651 G652 C653
C654 G655 G656 U657 C658 C G A U U U U U C G U G U A C U G676 G677 A678 U679 U680 U681 C682 C683 A684 A685 G688 G689 G690 C691 C692 U693 U694 U695 C C U U C U G G C U A A C C U U G A G
U C C U U G U G G C U C U U G G C G A A C C A G G A C U U U U A C U U U G A A A A A A U U A G A G U G U U C A A A G C A
G G C G U A U U G C U C G A A U A U A U U A G C A U G G A A U A A U A G A A U A G G A C G U U U G G U U C U A U U U U G
U U G G U U U C U A G G A C C A U C G U A A U G A859 U860 U861 A862 A863 U864 A865 G866 G867 G868 A869 C870 G871 G872 U873 C874 G875 G876 G877 G878 C883 A884 G885 U886 A887 C890 A891 A892 U893 U894 G895 U896 C897 A898
G899 A900 G901 G902 U903 G904 A905 A906 U911 U912 G913 G914 A915 U916 U917 U918 A919 U920 U921 G922 A923 A924 G925 A926 C927 U928 A929 A930 C931 U932 A933 C934 U935 G936 C937 G938 A939 A940 A941 G942 C943 A944 U945 U946 U947 G948 A951 A952 G953 G954 A955 C956 G957 U958 U959 U960 U961 C962
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A1025 A1026 A1027 C1028 U1029 A1030 U1031 G1032 C1033 C1034 G1035 A1036 C1037 U1038 A1039 G1040 G1041 G1042 A1043 U1044 C1045 G1046 G1047 G1048 U1049 G1050 G1051 U1052 G1053 U1056 U1057 U1058 U1059 U1060 A1061 A1062 U1063 G1064 A1065 C1066 C1067 C1068 A1069 C1070 U1071 C1072 G1073 G1074 C1075 A1076 C1077 C1078 U1079 U1080 A1081 C1082 G1083 A1084 G
A A A U C A A A G U C U U U G G G U U C U G G G G1111 G1112 A1113 G1114 U1115 A1116 U1117 G1118 G1119 G1122 C1123 A1124 A1125 G1126 G1127 C1128 U1129 G1130 A1131 A1132 A1133 C1134 U1135 U1136 G1140 A1143 U1144 U1145 G1146 G1149 G1150
A1151 A1152 G1153 G1154 G1155 C1156 A1157 C1158 C1159 A1160 C1161 C1162 A1163 G1164 G1165 A1166 G1167 U1168 G1169 G1170 C1173 C1174 U1175 G1176 C1177 G1178 G1179 C U U A A U U U G A C U U C A A C A C G G G G A1202 A1203 A1204 C1205 U1206 C1207 A1208 A1211 G1212
G1213 U1214 C1215 C1216 A1217 G1218 A1219 A1223 A1226 A G G A U U G A C A G A U U G A G A G C U C U U U C U U G A U U1258 G1264 G1265 U1266 G1267 G1268 U1269 G1270 G1271 U1272 G1273 C1274 A1275 U1276 G G C
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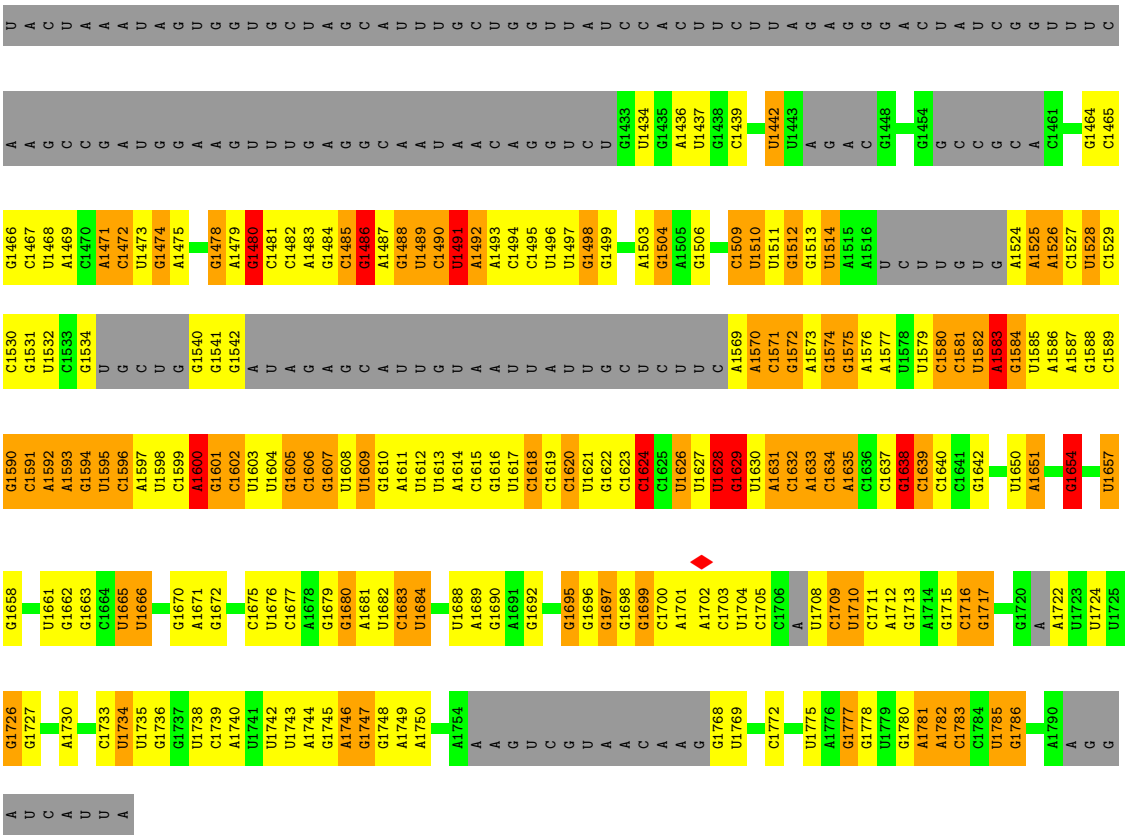
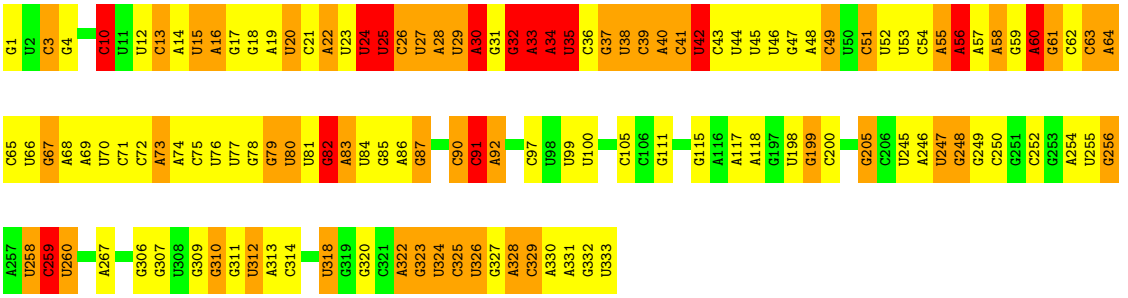


• Molecule 67: U3 snoRNA

Chain D4: 26% 39% 27% 8%



4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	32213	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	44	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	0.206	Depositor
Minimum map value	-0.126	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.006	Depositor
Recommended contour level	0.01	Depositor
Map size (Å)	508.32, 508.32, 508.32	wwPDB
Map dimensions	480, 480, 480	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.059, 1.059, 1.059	Depositor

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: ZN, GTP

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	UA	1.71	109/6780 (1.6%)	1.08	35/9175 (0.4%)
2	UB	0.51	0/3796	0.61	6/5137 (0.1%)
3	UC	1.03	1/1034 (0.1%)	0.86	2/1365 (0.1%)
4	UD	0.95	15/5461 (0.3%)	0.82	6/7395 (0.1%)
5	UE	1.07	8/3840 (0.2%)	0.88	6/5208 (0.1%)
6	UF	1.03	4/2538 (0.2%)	0.84	5/3405 (0.1%)
7	UG	1.60	70/4302 (1.6%)	1.11	26/5805 (0.4%)
8	UH	0.39	0/2703	0.68	11/3703 (0.3%)
9	UI	0.50	0/861	0.80	2/1156 (0.2%)
10	UJ	0.85	11/6903 (0.2%)	0.75	14/9474 (0.1%)
11	UK	1.26	14/2042 (0.7%)	0.96	1/2704 (0.0%)
12	UL	0.76	2/6851 (0.0%)	0.79	6/9246 (0.1%)
13	UM	0.71	5/6058 (0.1%)	0.80	6/8201 (0.1%)
14	UN	1.22	8/1231 (0.6%)	0.93	6/1661 (0.4%)
15	UO	1.10	12/3993 (0.3%)	0.90	10/5413 (0.2%)
16	UP	0.56	0/499	0.84	0/659
17	UQ	0.96	10/6794 (0.1%)	0.86	12/9203 (0.1%)
18	UR	1.50	36/3875 (0.9%)	1.02	17/5254 (0.3%)
19	US	0.61	0/3736	0.75	7/5086 (0.1%)
20	UT	0.28	0/11085	0.52	0/15445
21	UU	1.49	68/6815 (1.0%)	0.98	17/9213 (0.2%)
22	UV	0.50	0/8933	0.60	3/12081 (0.0%)
23	UX	1.50	16/1418 (1.1%)	1.07	5/1906 (0.3%)
24	UZ	0.70	1/2041 (0.0%)	0.74	1/2745 (0.0%)
25	CA	1.43	14/1917 (0.7%)	1.00	6/2588 (0.2%)
25	CB	0.73	0/1815	0.77	1/2448 (0.0%)
26	CD	0.96	3/3041 (0.1%)	0.85	7/4098 (0.2%)
27	CE	0.88	4/3012 (0.1%)	0.79	0/4091
28	CF	1.33	6/944 (0.6%)	0.97	5/1284 (0.4%)
28	CG	0.93	0/941	1.00	5/1281 (0.4%)
29	CH	0.61	1/3705 (0.0%)	0.68	1/4983 (0.0%)
30	CI	1.84	39/1559 (2.5%)	1.21	19/2097 (0.9%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
31	CJ	1.36	21/2337 (0.9%)	1.04	13/3148 (0.4%)
32	CK	1.06	2/1685 (0.1%)	0.98	6/2261 (0.3%)
33	CL	1.18	27/6471 (0.4%)	0.92	19/8708 (0.2%)
34	CM	0.85	0/2832	0.78	3/3825 (0.1%)
35	CN	0.44	0/1934	0.59	1/2604 (0.0%)
36	JA	0.48	0/5994	0.65	1/8139 (0.0%)
36	JB	0.30	0/4128	0.57	0/5747
37	JC	0.51	0/2908	0.71	1/3938 (0.0%)
38	JE	0.55	0/1139	0.75	2/1512 (0.1%)
39	JF	0.51	0/1727	0.70	1/2329 (0.0%)
39	JG	0.82	0/1828	0.83	3/2470 (0.1%)
40	JH	0.24	0/1293	0.37	0/1801
41	JJ	0.65	1/1475 (0.1%)	0.77	4/1987 (0.2%)
42	JK	0.49	0/342	0.71	1/462 (0.2%)
43	JM	1.02	2/1156 (0.2%)	0.88	2/1536 (0.1%)
44	JN	1.15	4/1435 (0.3%)	0.96	4/1907 (0.2%)
45	JO	1.01	3/1961 (0.2%)	0.89	3/2631 (0.1%)
46	JP	1.64	70/3802 (1.8%)	1.06	17/5118 (0.3%)
47	JQ	0.41	0/385	0.57	0/529
48	DA	1.00	2/1937 (0.1%)	0.90	2/2593 (0.1%)
49	DE	0.46	0/1985	0.63	1/2675 (0.0%)
50	DF	1.23	4/1690 (0.2%)	0.93	7/2285 (0.3%)
51	DG	0.45	0/1779	0.62	0/2379
52	DH	0.58	0/1502	0.74	2/2023 (0.1%)
53	DI	0.46	0/1422	0.63	1/1899 (0.1%)
54	DJ	1.14	5/1450 (0.3%)	0.92	1/1941 (0.1%)
55	DL	0.40	0/1155	0.60	0/1557
56	DN	0.82	0/1215	0.70	1/1638 (0.1%)
57	DO	0.98	0/892	0.79	0/1202
58	DQ	1.70	18/990 (1.8%)	1.04	2/1335 (0.1%)
59	DS	0.31	0/513	0.59	0/711
60	DW	1.18	3/1038 (0.3%)	0.93	1/1395 (0.1%)
61	DX	1.27	1/798 (0.1%)	0.99	2/1065 (0.2%)
62	DY	0.60	0/780	0.88	2/1049 (0.2%)
63	Db	0.91	0/620	0.84	2/838 (0.2%)
64	Dc	1.26	2/499 (0.4%)	1.05	2/670 (0.3%)
65	D2	2.24	658/12457 (5.3%)	1.69	374/19407 (1.9%)
66	D3	1.84	889/28553 (3.1%)	1.49	518/44437 (1.2%)
67	D4	2.61	329/4142 (7.9%)	1.84	155/6435 (2.4%)
All	All	1.26	2498/230772 (1.1%)	1.04	1402/321696 (0.4%)

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
1	UA	0	4
4	UD	0	7
5	UE	0	1
6	UF	0	3
7	UG	0	4
10	UJ	0	3
12	UL	0	4
13	UM	0	2
14	UN	0	1
15	UO	0	1
17	UQ	0	4
18	UR	0	3
20	UT	0	7
21	UU	0	4
23	UX	0	1
26	CD	0	1
27	CE	0	1
30	CI	0	1
31	CJ	0	2
32	CK	0	1
34	CM	0	1
36	JA	0	1
36	JB	0	3
37	JC	0	2
38	JE	0	2
43	JM	0	1
44	JN	0	1
46	JP	0	4
48	DA	0	3
49	DE	0	1
52	DH	0	1
58	DQ	0	2
59	DS	0	1
60	DW	0	1
61	DX	0	3
All	All	0	82

All (2498) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
33	CL	1081	SER	CA-CB	-16.22	1.28	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
65	D2	280	A	N9-C4	-13.97	1.29	1.37
67	D4	61	G	C5-C4	-12.91	1.29	1.38
66	D3	584	C	N1-C6	-12.87	1.29	1.37
67	D4	61	G	N7-C5	-12.51	1.31	1.39
65	D2	305	A	N9-C4	-12.39	1.30	1.37
13	UM	443	PRO	CG-CD	-12.23	1.10	1.50
65	D2	233	G	N9-C4	-11.98	1.28	1.38
7	UG	154	CYS	CB-SG	-11.87	1.62	1.82
65	D2	341	G	N7-C5	-11.84	1.32	1.39
66	D3	1606	C	N1-C6	-11.78	1.30	1.37
65	D2	280	A	N3-C4	-11.68	1.27	1.34
11	UK	223	GLU	CB-CG	-11.46	1.30	1.52
66	D3	1525	A	N9-C4	-11.45	1.30	1.37
67	D4	30	A	N7-C5	-11.36	1.32	1.39
67	D4	62	C	C4-C5	-11.31	1.33	1.43
65	D2	298	A	C5-C4	-11.29	1.30	1.38
66	D3	1603	U	N1-C2	-11.24	1.28	1.38
66	D3	1593	A	N9-C4	-11.23	1.31	1.37
18	UR	408	CYS	CB-SG	-11.18	1.63	1.82
65	D2	387	C	N3-C4	-11.13	1.26	1.33
66	D3	1166	A	N9-C4	-11.05	1.31	1.37
65	D2	473	A	N9-C4	-11.01	1.31	1.37
66	D3	1482	C	N1-C6	-11.00	1.30	1.37
66	D3	6	G	C5-C4	-10.98	1.30	1.38
67	D4	85	G	C5-C4	-10.93	1.30	1.38
66	D3	554	C	N1-C6	-10.88	1.30	1.37
65	D2	338	A	N3-C4	-10.78	1.28	1.34
66	D3	1525	A	C5-C4	-10.78	1.31	1.38
67	D4	331	A	N9-C4	-10.77	1.31	1.37
65	D2	233	G	N7-C5	-10.76	1.32	1.39
66	D3	1618	C	N1-C6	-10.76	1.30	1.37
67	D4	60	A	N3-C4	-10.70	1.28	1.34
65	D2	387	C	N1-C6	-10.67	1.30	1.37
67	D4	22	A	N9-C4	-10.62	1.31	1.37
65	D2	291	G	C5-C4	-10.58	1.30	1.38
66	D3	1596	C	N1-C6	-10.50	1.30	1.37
65	D2	473	A	C5-C4	-10.47	1.31	1.38
67	D4	22	A	N3-C4	-10.40	1.28	1.34
66	D3	590	C	N3-C4	-10.40	1.26	1.33
67	D4	54	C	N1-C6	-10.34	1.30	1.37
65	D2	293	U	N1-C2	-10.33	1.29	1.38
65	D2	296	C	N1-C6	-10.32	1.30	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
65	D2	333	G	C5-C4	-10.30	1.31	1.38
66	D3	1604	U	N1-C2	-10.19	1.29	1.38
65	D2	309	A	N3-C4	-10.15	1.28	1.34
11	UK	223	GLU	CG-CD	-10.13	1.36	1.51
66	D3	1610	G	C6-N1	-10.13	1.32	1.39
66	D3	1604	U	C2-N3	-10.12	1.30	1.37
65	D2	301	U	N1-C2	-10.10	1.29	1.38
1	UA	617	VAL	CB-CG2	-10.09	1.31	1.52
65	D2	312	U	N3-C4	-9.97	1.29	1.38
66	D3	1584	G	N3-C4	-9.97	1.28	1.35
65	D2	311	C	N3-C4	-9.96	1.26	1.33
66	D3	1069	A	N7-C5	-9.90	1.33	1.39
46	JP	356	TYR	CE1-CZ	-9.88	1.25	1.38
65	D2	387	C	C4-C5	-9.89	1.35	1.43
65	D2	474	A	N3-C4	-9.88	1.28	1.34
66	D3	1163	A	N9-C4	-9.86	1.31	1.37
67	D4	62	C	N1-C6	-9.86	1.31	1.37
66	D3	1465	C	N1-C6	-9.83	1.31	1.37
67	D4	60	A	C6-N1	-9.83	1.28	1.35
67	D4	30	A	C5-C4	-9.81	1.31	1.38
65	D2	310	U	C2-N3	-9.80	1.30	1.37
66	D3	1158	C	N1-C6	-9.80	1.31	1.37
66	D3	564	G	N9-C4	-9.79	1.30	1.38
65	D2	380	A	N9-C4	-9.77	1.31	1.37
67	D4	26	C	N3-C4	-9.71	1.27	1.33
65	D2	398	A	N9-C4	-9.71	1.32	1.37
66	D3	1607	G	C5-C4	-9.69	1.31	1.38
66	D3	1585	U	C4-C5	-9.66	1.34	1.43
66	D3	565	C	N1-C6	-9.65	1.31	1.37
67	D4	61	G	N1-C2	-9.65	1.30	1.37
67	D4	85	G	N1-C2	-9.60	1.30	1.37
66	D3	572	C	N1-C6	-9.60	1.31	1.37
65	D2	299	G	C5-C4	-9.59	1.31	1.38
1	UA	102	VAL	CB-CG2	-9.56	1.32	1.52
66	D3	1610	G	N1-C2	-9.54	1.30	1.37
65	D2	295	A	N7-C5	-9.54	1.33	1.39
66	D3	550	A	N9-C4	-9.52	1.32	1.37
65	D2	275	A	N7-C5	-9.52	1.33	1.39
67	D4	57	A	N3-C4	-9.48	1.29	1.34
65	D2	143	A	N9-C4	-9.48	1.32	1.37
66	D3	590	C	N1-C6	-9.47	1.31	1.37
65	D2	298	A	N9-C4	-9.46	1.32	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
65	D2	291	G	N1-C2	-9.45	1.30	1.37
66	D3	1046	G	C5-C4	-9.41	1.31	1.38
66	D3	1605	G	C6-N1	-9.39	1.32	1.39
65	D2	386	A	N7-C5	-9.37	1.33	1.39
66	D3	1607	G	N3-C4	-9.37	1.28	1.35
66	D3	573	C	N1-C6	-9.36	1.31	1.37
67	D4	28	A	C5-C4	-9.35	1.32	1.38
66	D3	592	A	N9-C4	-9.34	1.32	1.37
65	D2	333	G	C2-N3	-9.34	1.25	1.32
67	D4	55	A	N7-C5	-9.31	1.33	1.39
65	D2	164	G	C5-C4	-9.30	1.31	1.38
65	D2	289	U	N1-C2	-9.29	1.30	1.38
65	D2	282	G	C5-C4	-9.29	1.31	1.38
65	D2	338	A	C6-N1	-9.28	1.29	1.35
67	D4	75	C	N1-C2	-9.27	1.30	1.40
66	D3	555	A	N9-C4	-9.26	1.32	1.37
65	D2	287	G	C5-C4	-9.26	1.31	1.38
65	D2	233	G	C5-C6	-9.24	1.33	1.42
65	D2	86	C	N1-C6	-9.24	1.31	1.37
65	D2	311	C	N1-C6	-9.22	1.31	1.37
67	D4	61	G	N9-C8	-9.22	1.31	1.37
65	D2	389	U	N1-C2	-9.19	1.30	1.38
67	D4	63	C	N3-C4	-9.16	1.27	1.33
66	D3	1599	C	N1-C6	-9.16	1.31	1.37
67	D4	330	A	N7-C5	-9.15	1.33	1.39
66	D3	1604	U	N3-C4	-9.13	1.30	1.38
67	D4	32	G	N1-C2	-9.13	1.30	1.37
67	D4	73	A	N9-C4	-9.13	1.32	1.37
65	D2	309	A	C6-N1	-9.13	1.29	1.35
67	D4	32	G	C5-C4	-9.13	1.31	1.38
65	D2	336	G	C5-C4	-9.12	1.31	1.38
46	JP	351	VAL	CB-CG1	-9.11	1.33	1.52
66	D3	1490	C	N1-C6	-9.11	1.31	1.37
1	UA	593	VAL	CB-CG2	-9.09	1.33	1.52
67	D4	61	G	C5-C6	-9.07	1.33	1.42
65	D2	282	G	N9-C8	-9.07	1.31	1.37
67	D4	70	U	C2-N3	-9.07	1.31	1.37
58	DQ	97	VAL	CB-CG2	-9.07	1.33	1.52
66	D3	1590	G	N7-C5	-9.05	1.33	1.39
66	D3	1602	C	N1-C6	-9.04	1.31	1.37
67	D4	60	A	N7-C5	-9.04	1.33	1.39
66	D3	559	C	N1-C6	-9.03	1.31	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
66	D3	1527	C	N1-C6	-9.02	1.31	1.37
67	D4	73	A	N7-C5	-9.02	1.33	1.39
67	D4	326	U	C2-N3	-9.00	1.31	1.37
65	D2	341	G	C5-C6	-8.99	1.33	1.42
65	D2	291	G	C6-N1	-8.98	1.33	1.39
67	D4	27	U	N3-C4	-8.96	1.30	1.38
65	D2	291	G	N9-C8	-8.95	1.31	1.37
23	UX	13	VAL	CB-CG2	-8.94	1.34	1.52
65	D2	298	A	N3-C4	-8.94	1.29	1.34
65	D2	389	U	C2-N3	-8.94	1.31	1.37
65	D2	269	G	C6-N1	-8.89	1.33	1.39
67	D4	57	A	N9-C4	-8.88	1.32	1.37
66	D3	1483	A	C5-C6	-8.86	1.33	1.41
67	D4	26	C	N1-C6	-8.84	1.31	1.37
67	D4	65	C	N3-C4	-8.82	1.27	1.33
65	D2	309	A	C5-C4	-8.81	1.32	1.38
65	D2	237	A	C5-C4	-8.78	1.32	1.38
66	D3	6	G	N9-C8	-8.78	1.31	1.37
21	UU	443	TRP	CB-CG	-8.77	1.34	1.50
66	D3	10	G	N7-C5	-8.77	1.33	1.39
65	D2	336	G	N1-C2	-8.77	1.30	1.37
66	D3	1158	C	C4-C5	-8.77	1.35	1.43
66	D3	887	A	N9-C4	-8.74	1.32	1.37
65	D2	344	U	N1-C2	-8.73	1.30	1.38
65	D2	312	U	C2-N3	-8.72	1.31	1.37
65	D2	94	A	N9-C4	-8.72	1.32	1.37
65	D2	299	G	N1-C2	-8.72	1.30	1.37
67	D4	60	A	C5-C4	-8.71	1.32	1.38
67	D4	21	C	N1-C6	-8.71	1.31	1.37
66	D3	1524	A	N9-C4	-8.70	1.32	1.37
65	D2	301	U	C4-C5	-8.69	1.35	1.43
67	D4	27	U	C2-N3	-8.69	1.31	1.37
7	UG	159	TYR	CE1-CZ	-8.68	1.27	1.38
66	D3	1615	C	N1-C6	-8.67	1.31	1.37
65	D2	474	A	N9-C4	-8.67	1.32	1.37
28	CF	91	CYS	CB-SG	-8.65	1.67	1.82
65	D2	288	G	N7-C5	-8.65	1.34	1.39
66	D3	1600	A	N7-C5	-8.65	1.34	1.39
67	D4	59	G	N3-C4	-8.64	1.29	1.35
66	D3	1047	G	N9-C8	-8.63	1.31	1.37
65	D2	323	A	C5-C6	-8.61	1.33	1.41
67	D4	69	A	N9-C4	-8.60	1.32	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
64	Dc	12	VAL	CB-CG1	-8.59	1.34	1.52
66	D3	1607	G	N7-C5	-8.58	1.34	1.39
65	D2	309	A	N7-C5	-8.58	1.34	1.39
7	UG	216	TYR	CD2-CE2	-8.56	1.26	1.39
65	D2	234	A	N9-C4	-8.55	1.32	1.37
65	D2	472	A	N9-C4	-8.54	1.32	1.37
65	D2	474	A	C5-C6	-8.50	1.33	1.41
65	D2	386	A	C5-C4	-8.49	1.32	1.38
66	D3	557	G	N7-C5	-8.47	1.34	1.39
66	D3	1586	A	C5-C4	-8.47	1.32	1.38
30	CI	87	VAL	CB-CG2	-8.47	1.35	1.52
65	D2	240	C	N3-C4	-8.46	1.28	1.33
65	D2	291	G	N7-C5	-8.45	1.34	1.39
66	D3	1584	G	C5-C4	-8.45	1.32	1.38
66	D3	-1	G	N7-C5	-8.45	1.34	1.39
65	D2	391	C	C4-C5	-8.44	1.36	1.43
66	D3	1068	C	N1-C6	-8.43	1.32	1.37
65	D2	289	U	C2-N3	-8.40	1.31	1.37
30	CI	32	VAL	CB-CG1	-8.40	1.35	1.52
67	D4	63	C	N1-C2	-8.40	1.31	1.40
7	UG	168	VAL	CB-CG2	-8.40	1.35	1.52
66	D3	1605	G	N9-C8	-8.39	1.31	1.37
67	D4	32	G	C6-N1	-8.39	1.33	1.39
66	D3	1490	C	N3-C4	-8.37	1.28	1.33
66	D3	489	C	N1-C6	-8.37	1.32	1.37
65	D2	298	A	N7-C5	-8.36	1.34	1.39
66	D3	1584	G	N9-C4	-8.36	1.31	1.38
67	D4	64	A	C5-C4	-8.36	1.32	1.38
67	D4	63	C	C4-C5	-8.34	1.36	1.43
66	D3	6	G	N7-C5	-8.34	1.34	1.39
65	D2	306	G	C5-C4	-8.34	1.32	1.38
65	D2	388	C	N1-C6	-8.32	1.32	1.37
66	D3	1581	C	N1-C6	-8.32	1.32	1.37
66	D3	562	G	C5-C4	-8.29	1.32	1.38
67	D4	62	C	C5-C6	-8.29	1.27	1.34
67	D4	34	A	N9-C4	-8.28	1.32	1.37
65	D2	290	G	N7-C5	-8.28	1.34	1.39
66	D3	497	G	C5-C4	-8.28	1.32	1.38
67	D4	85	G	N7-C5	-8.27	1.34	1.39
66	D3	1465	C	N3-C4	-8.25	1.28	1.33
66	D3	1492	A	N7-C5	-8.25	1.34	1.39
18	UR	298	CYS	CB-SG	-8.25	1.68	1.82

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
66	D3	-4	A	N9-C4	-8.24	1.32	1.37
67	D4	58	A	C5-C4	-8.24	1.32	1.38
67	D4	329	C	N1-C2	-8.24	1.31	1.40
67	D4	29	U	C2-N3	-8.22	1.31	1.37
65	D2	292	A	N7-C5	-8.22	1.34	1.39
66	D3	1614	A	N3-C4	-8.22	1.29	1.34
65	D2	282	G	N7-C5	-8.22	1.34	1.39
66	D3	1586	A	N7-C5	-8.22	1.34	1.39
65	D2	306	G	C2-N3	-8.21	1.26	1.32
66	D3	1490	C	C2-N3	-8.21	1.29	1.35
65	D2	237	A	N7-C5	-8.20	1.34	1.39
66	D3	1166	A	N3-C4	-8.20	1.29	1.34
67	D4	83	A	N9-C4	-8.19	1.32	1.37
67	D4	61	G	C8-N7	-8.19	1.26	1.30
65	D2	307	C	C4-C5	-8.18	1.36	1.43
66	D3	953	G	C5-C4	-8.18	1.32	1.38
66	D3	1586	A	C6-N1	-8.17	1.29	1.35
67	D4	33	A	C5-C4	-8.17	1.33	1.38
46	JP	59	VAL	CB-CG1	-8.16	1.35	1.52
1	UA	393	VAL	CB-CG1	-8.16	1.35	1.52
67	D4	64	A	N9-C8	-8.15	1.31	1.37
66	D3	567	A	N3-C4	-8.14	1.29	1.34
67	D4	326	U	N3-C4	-8.13	1.31	1.38
65	D2	338	A	N9-C4	-8.13	1.32	1.37
65	D2	283	A	N9-C4	-8.13	1.32	1.37
66	D3	955	A	C5-C6	-8.13	1.33	1.41
65	D2	161	A	N3-C4	-8.12	1.29	1.34
65	D2	299	G	C6-N1	-8.12	1.33	1.39
65	D2	92	C	N1-C6	-8.10	1.32	1.37
65	D2	335	G	C5-C4	-8.10	1.32	1.38
1	UA	585	TYR	CD1-CE1	-8.10	1.27	1.39
67	D4	75	C	N3-C4	-8.10	1.28	1.33
66	D3	1605	G	C5-C4	-8.09	1.32	1.38
65	D2	336	G	N7-C5	-8.08	1.34	1.39
67	D4	30	A	C5-C6	-8.08	1.33	1.41
67	D4	25	U	C4-C5	-8.07	1.36	1.43
21	UU	323	VAL	CB-CG1	-8.07	1.35	1.52
66	D3	1613	U	C4-C5	-8.07	1.36	1.43
65	D2	341	G	C8-N7	-8.06	1.26	1.30
67	D4	39	C	N1-C6	-8.05	1.32	1.37
65	D2	280	A	N7-C5	-8.05	1.34	1.39
66	D3	955	A	N7-C5	-8.05	1.34	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
66	D3	1593	A	N7-C5	-8.05	1.34	1.39
67	D4	328	A	C5-C4	-8.04	1.33	1.38
67	D4	85	G	C6-N1	-8.03	1.33	1.39
66	D3	1590	G	C6-N1	-8.02	1.33	1.39
65	D2	307	C	N1-C2	-8.01	1.32	1.40
66	D3	1599	C	C4-C5	-8.01	1.36	1.43
65	D2	88	U	N1-C2	-8.01	1.31	1.38
65	D2	233	G	N3-C4	-8.01	1.29	1.35
65	D2	296	C	N3-C4	-8.00	1.28	1.33
66	D3	1607	G	N1-C2	-8.00	1.31	1.37
31	CJ	141	VAL	CB-CG1	-7.99	1.36	1.52
65	D2	241	U	N1-C2	-7.99	1.31	1.38
66	D3	10	G	C5-C4	-7.99	1.32	1.38
67	D4	329	C	N1-C6	-7.99	1.32	1.37
65	D2	292	A	N9-C4	-7.98	1.33	1.37
66	D3	-1	G	C5-C4	-7.96	1.32	1.38
65	D2	273	G	C6-N1	-7.96	1.33	1.39
66	D3	942	G	C5-C4	-7.96	1.32	1.38
66	D3	1633	A	N3-C4	-7.95	1.30	1.34
65	D2	248	G	C5-C4	-7.95	1.32	1.38
66	D3	8	U	C2-N3	-7.94	1.32	1.37
66	D3	478	A	N9-C4	-7.94	1.33	1.37
66	D3	1484	G	C5-C4	-7.94	1.32	1.38
65	D2	242	C	N3-C4	-7.94	1.28	1.33
65	D2	474	A	C6-N1	-7.94	1.29	1.35
66	D3	1488	G	N1-C2	-7.94	1.31	1.37
65	D2	477	G	N3-C4	-7.93	1.29	1.35
67	D4	21	C	C4-C5	-7.93	1.36	1.43
66	D3	951	A	N9-C4	-7.93	1.33	1.37
65	D2	300	C	N1-C6	-7.92	1.32	1.37
66	D3	1609	U	C4-C5	-7.92	1.36	1.43
65	D2	333	G	N7-C5	-7.91	1.34	1.39
58	DQ	90	VAL	CB-CG1	-7.91	1.36	1.52
65	D2	474	A	C5-C4	-7.90	1.33	1.38
67	D4	54	C	C4-C5	-7.90	1.36	1.43
58	DQ	69	VAL	CB-CG1	-7.89	1.36	1.52
65	D2	467	A	N9-C4	-7.89	1.33	1.37
65	D2	340	U	C4-C5	-7.89	1.36	1.43
65	D2	482	A	C5-C4	-7.89	1.33	1.38
65	D2	401	A	N7-C5	-7.89	1.34	1.39
66	D3	1592	A	N7-C5	-7.89	1.34	1.39
66	D3	1482	C	N3-C4	-7.88	1.28	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	CA	314	CYS	CB-SG	-7.88	1.68	1.82
67	D4	34	A	C5-C4	-7.88	1.33	1.38
66	D3	1069	A	C5-C6	-7.87	1.33	1.41
65	D2	278	G	C5-C4	-7.86	1.32	1.38
65	D2	476	A	N9-C4	-7.86	1.33	1.37
67	D4	67	G	C5-C4	-7.86	1.32	1.38
67	D4	75	C	C2-N3	-7.86	1.29	1.35
46	JP	308	VAL	CB-CG2	-7.85	1.36	1.52
65	D2	397	A	N7-C5	-7.85	1.34	1.39
66	D3	1466	G	N7-C5	-7.83	1.34	1.39
7	UG	206	VAL	CB-CG2	-7.82	1.36	1.52
66	D3	1605	G	N3-C4	-7.82	1.29	1.35
66	D3	500	C	N1-C2	-7.82	1.32	1.40
67	D4	82	G	C5-C4	-7.81	1.32	1.38
67	D4	26	C	N1-C2	-7.80	1.32	1.40
1	UA	263	VAL	CB-CG1	-7.80	1.36	1.52
66	D3	931	C	N1-C6	-7.80	1.32	1.37
66	D3	1485	C	N1-C6	-7.80	1.32	1.37
65	D2	269	G	N1-C2	-7.79	1.31	1.37
65	D2	272	A	N9-C4	-7.79	1.33	1.37
67	D4	331	A	N7-C5	-7.79	1.34	1.39
66	D3	1158	C	N3-C4	-7.79	1.28	1.33
66	D3	5	U	C2-N3	-7.78	1.32	1.37
66	D3	590	C	C2-N3	-7.78	1.29	1.35
66	D3	1586	A	N3-C4	-7.78	1.30	1.34
60	DW	25	VAL	CB-CG2	-7.78	1.36	1.52
66	D3	1074	G	N7-C5	-7.78	1.34	1.39
67	D4	18	G	C5-C4	-7.78	1.32	1.38
67	D4	68	A	N9-C4	-7.78	1.33	1.37
67	D4	85	G	N3-C4	-7.78	1.30	1.35
7	UG	256	VAL	CB-CG1	-7.77	1.36	1.52
67	D4	329	C	C4-C5	-7.77	1.36	1.43
21	UU	453	TRP	CB-CG	-7.76	1.36	1.50
65	D2	340	U	N1-C2	-7.76	1.31	1.38
66	D3	1076	A	N9-C4	-7.75	1.33	1.37
66	D3	1525	A	N3-C4	-7.75	1.30	1.34
65	D2	244	U	C2-N3	-7.74	1.32	1.37
65	D2	277	C	N3-C4	-7.74	1.28	1.33
65	D2	305	A	C6-N6	-7.74	1.27	1.33
65	D2	333	G	N9-C4	-7.73	1.31	1.38
65	D2	291	G	C2-N3	-7.72	1.26	1.32
66	D3	1037	C	C4-C5	-7.72	1.36	1.43

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	UA	518	VAL	CB-CG2	-7.72	1.36	1.52
66	D3	1162	C	C4-C5	-7.72	1.36	1.43
66	D3	1584	G	C2-N3	-7.71	1.26	1.32
66	D3	551	G	C5-C4	-7.70	1.32	1.38
66	D3	1610	G	C5-C4	-7.70	1.32	1.38
66	D3	1081	A	N9-C4	-7.70	1.33	1.37
66	D3	887	A	N3-C4	-7.70	1.30	1.34
67	D4	325	C	N1-C6	-7.70	1.32	1.37
66	D3	545	A	N3-C4	-7.69	1.30	1.34
66	D3	937	C	N3-C4	-7.69	1.28	1.33
10	UJ	199	CYS	CB-SG	-7.69	1.69	1.82
65	D2	392	U	N1-C2	-7.69	1.31	1.38
65	D2	290	G	N1-C2	-7.69	1.31	1.37
66	D3	1047	G	C5-C4	-7.69	1.32	1.38
67	D4	77	U	C2-N3	-7.68	1.32	1.37
65	D2	292	A	N9-C8	-7.67	1.31	1.37
65	D2	387	C	C2-N3	-7.67	1.29	1.35
65	D2	301	U	N1-C6	-7.67	1.31	1.38
65	D2	473	A	N3-C4	-7.67	1.30	1.34
65	D2	345	U	C2-N3	-7.67	1.32	1.37
66	D3	554	C	N3-C4	-7.67	1.28	1.33
66	D3	1046	G	N9-C8	-7.67	1.32	1.37
66	D3	1607	G	C6-N1	-7.67	1.34	1.39
67	D4	32	G	C2-N3	-7.66	1.26	1.32
67	D4	24	U	N1-C6	-7.65	1.31	1.38
67	D4	65	C	N1-C2	-7.65	1.32	1.40
67	D4	330	A	N9-C4	-7.64	1.33	1.37
23	UX	65	VAL	CB-CG2	-7.64	1.36	1.52
65	D2	380	A	C5-C4	-7.64	1.33	1.38
65	D2	390	C	N1-C6	-7.64	1.32	1.37
67	D4	64	A	N9-C4	-7.64	1.33	1.37
46	JP	343	TYR	CD2-CE2	-7.63	1.27	1.39
66	D3	1072	C	C4-C5	-7.63	1.36	1.43
21	UU	487	TYR	CD2-CE2	-7.63	1.27	1.39
65	D2	278	G	N1-C2	-7.63	1.31	1.37
65	D2	308	A	C5-C4	-7.63	1.33	1.38
65	D2	349	G	N3-C4	-7.62	1.30	1.35
66	D3	1162	C	N1-C6	-7.62	1.32	1.37
65	D2	274	C	N1-C2	-7.61	1.32	1.40
17	UQ	320	VAL	CB-CG2	-7.61	1.36	1.52
67	D4	34	A	N3-C4	-7.60	1.30	1.34
66	D3	489	C	N3-C4	-7.60	1.28	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
67	D4	34	A	C5-C6	-7.60	1.34	1.41
66	D3	416	A	N9-C4	-7.60	1.33	1.37
65	D2	303	A	C6-N1	-7.59	1.30	1.35
66	D3	1593	A	C5-C4	-7.59	1.33	1.38
66	D3	1045	C	N3-C4	-7.58	1.28	1.33
67	D4	331	A	N3-C4	-7.58	1.30	1.34
67	D4	55	A	N9-C8	-7.58	1.31	1.37
65	D2	292	A	C5-C4	-7.57	1.33	1.38
66	D3	1633	A	C5-C4	-7.56	1.33	1.38
67	D4	73	A	N3-C4	-7.56	1.30	1.34
67	D4	71	C	N1-C2	-7.56	1.32	1.40
1	UA	522	SER	CA-CB	-7.56	1.41	1.52
66	D3	590	C	C4-C5	-7.56	1.36	1.43
66	D3	1485	C	C4-C5	-7.56	1.36	1.43
46	JP	289	TYR	CD2-CE2	-7.55	1.28	1.39
30	CI	150	VAL	CB-CG1	-7.55	1.36	1.52
65	D2	296	C	C4-C5	-7.55	1.36	1.43
65	D2	245	C	N1-C6	-7.54	1.32	1.37
7	UG	203	TYR	CD2-CE2	-7.54	1.28	1.39
65	D2	339	A	N7-C5	-7.54	1.34	1.39
66	D3	1043	A	N7-C5	-7.53	1.34	1.39
65	D2	334	G	N7-C5	-7.53	1.34	1.39
65	D2	311	C	C2-N3	-7.53	1.29	1.35
65	D2	300	C	N1-C2	-7.53	1.32	1.40
67	D4	64	A	N7-C5	-7.53	1.34	1.39
18	UR	242	ASN	CB-CG	-7.52	1.33	1.51
66	D3	552	G	N7-C5	-7.51	1.34	1.39
30	CI	136	VAL	CB-CG1	-7.51	1.37	1.52
66	D3	550	A	N3-C4	-7.51	1.30	1.34
7	UG	384	VAL	CB-CG2	-7.51	1.37	1.52
66	D3	500	C	C2-N3	-7.50	1.29	1.35
66	D3	867	G	N7-C5	-7.50	1.34	1.39
66	D3	487	G	C5-C4	-7.50	1.33	1.38
65	D2	335	G	N9-C4	-7.49	1.31	1.38
66	D3	942	G	N7-C5	-7.49	1.34	1.39
66	D3	1592	A	C5-C4	-7.49	1.33	1.38
65	D2	406	U	N1-C2	-7.48	1.31	1.38
33	CL	919	VAL	CB-CG1	-7.48	1.37	1.52
67	D4	328	A	C6-N1	-7.48	1.30	1.35
46	JP	356	TYR	CG-CD2	-7.48	1.29	1.39
66	D3	1490	C	C4-C5	-7.47	1.36	1.43
30	CI	113	VAL	CB-CG1	-7.47	1.37	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
65	D2	286	U	C2-N3	-7.47	1.32	1.37
65	D2	288	G	C5-C4	-7.47	1.33	1.38
66	D3	1157	A	N9-C4	-7.46	1.33	1.37
66	D3	1588	G	C5-C4	-7.46	1.33	1.38
66	D3	559	C	N1-C2	-7.46	1.32	1.40
65	D2	333	G	C5-C6	-7.45	1.34	1.42
66	D3	13	C	N1-C6	-7.45	1.32	1.37
67	D4	66	U	C2-N3	-7.44	1.32	1.37
66	D3	1613	U	N1-C2	-7.43	1.31	1.38
65	D2	86	C	C4-C5	-7.42	1.37	1.43
67	D4	34	A	N7-C5	-7.42	1.34	1.39
65	D2	273	G	N1-C2	-7.42	1.31	1.37
66	D3	1163	A	N3-C4	-7.42	1.30	1.34
65	D2	281	G	C5-C6	-7.42	1.34	1.42
65	D2	269	G	C5-C4	-7.42	1.33	1.38
65	D2	392	U	N1-C6	-7.42	1.31	1.38
66	D3	937	C	N1-C6	-7.42	1.32	1.37
64	Dc	28	VAL	CB-CG1	-7.42	1.37	1.52
67	D4	82	G	C6-N1	-7.42	1.34	1.39
65	D2	385	A	C6-N1	-7.41	1.30	1.35
66	D3	1633	A	C6-N1	-7.41	1.30	1.35
7	UG	268	VAL	CB-CG1	-7.40	1.37	1.52
65	D2	482	A	N3-C4	-7.40	1.30	1.34
65	D2	487	A	N7-C5	-7.39	1.34	1.39
65	D2	87	C	N1-C6	-7.39	1.32	1.37
65	D2	381	G	N3-C4	-7.39	1.30	1.35
65	D2	338	A	C5-C4	-7.39	1.33	1.38
67	D4	68	A	N7-C5	-7.39	1.34	1.39
65	D2	387	C	N1-C2	-7.38	1.32	1.40
65	D2	300	C	N3-C4	-7.38	1.28	1.33
21	UU	463	VAL	CB-CG2	-7.38	1.37	1.52
65	D2	388	C	N3-C4	-7.38	1.28	1.33
67	D4	22	A	C6-N1	-7.38	1.30	1.35
65	D2	320	A	C5-C4	-7.38	1.33	1.38
65	D2	471	C	N1-C6	-7.37	1.32	1.37
1	UA	266	VAL	CB-CG2	-7.37	1.37	1.52
21	UU	53	CYS	CB-SG	-7.37	1.69	1.82
7	UG	178	ASP	CB-CG	-7.36	1.36	1.51
65	D2	410	A	N9-C4	-7.35	1.33	1.37
46	JP	289	TYR	CD1-CE1	-7.35	1.28	1.39
65	D2	287	G	N1-C2	-7.34	1.31	1.37
66	D3	1635	A	C5-C4	-7.34	1.33	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
65	D2	386	A	C5-C6	-7.34	1.34	1.41
66	D3	486	G	N3-C4	-7.34	1.30	1.35
66	D3	953	G	N7-C5	-7.34	1.34	1.39
1	UA	316	TRP	CB-CG	-7.33	1.37	1.50
66	D3	557	G	C5-C4	-7.33	1.33	1.38
65	D2	334	G	C5-C4	-7.33	1.33	1.38
66	D3	10	G	C5-C6	-7.32	1.35	1.42
66	D3	1604	U	C4-C5	-7.32	1.36	1.43
66	D3	589	C	N3-C4	-7.31	1.28	1.33
66	D3	930	A	N7-C5	-7.31	1.34	1.39
7	UG	177	TYR	CD2-CE2	-7.30	1.28	1.39
66	D3	490	C	N1-C6	-7.30	1.32	1.37
66	D3	497	G	N9-C4	-7.30	1.32	1.38
65	D2	397	A	C5-C6	-7.30	1.34	1.41
67	D4	72	C	N3-C4	-7.29	1.28	1.33
67	D4	84	U	C2-N3	-7.29	1.32	1.37
67	D4	329	C	N3-C4	-7.28	1.28	1.33
46	JP	308	VAL	CB-CG1	-7.28	1.37	1.52
58	DQ	7	VAL	CB-CG2	-7.28	1.37	1.52
65	D2	233	G	C2-N3	-7.28	1.26	1.32
66	D3	584	C	N3-C4	-7.26	1.28	1.33
18	UR	586	VAL	CB-CG2	-7.26	1.37	1.52
65	D2	234	A	N3-C4	-7.26	1.30	1.34
30	CI	32	VAL	CB-CG2	-7.25	1.37	1.52
66	D3	500	C	N3-C4	-7.25	1.28	1.33
65	D2	292	A	C5-C6	-7.25	1.34	1.41
67	D4	28	A	N7-C5	-7.25	1.34	1.39
65	D2	487	A	N3-C4	-7.25	1.30	1.34
67	D4	29	U	N3-C4	-7.25	1.31	1.38
46	JP	300	VAL	CB-CG1	-7.24	1.37	1.52
65	D2	388	C	C4-C5	-7.24	1.37	1.43
65	D2	472	A	C5-C4	-7.24	1.33	1.38
66	D3	489	C	C4-C5	-7.23	1.37	1.43
65	D2	293	U	C2-N3	-7.23	1.32	1.37
66	D3	952	A	N9-C4	-7.22	1.33	1.37
67	D4	55	A	C8-N7	-7.22	1.26	1.31
18	UR	582	GLU	CB-CG	-7.22	1.38	1.52
65	D2	310	U	N3-C4	-7.22	1.31	1.38
65	D2	234	A	N7-C5	-7.22	1.34	1.39
66	D3	-1	G	N3-C4	-7.21	1.30	1.35
66	D3	1042	G	C5-C4	-7.21	1.33	1.38
1	UA	530	VAL	CB-CG2	-7.20	1.37	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
7	UG	378	VAL	CB-CG2	-7.20	1.37	1.52
65	D2	293	U	N1-C6	-7.20	1.31	1.38
66	D3	1600	A	N9-C4	-7.20	1.33	1.37
14	UN	847	VAL	CB-CG2	-7.19	1.37	1.52
65	D2	306	G	N3-C4	-7.19	1.30	1.35
66	D3	552	G	C5-C4	-7.19	1.33	1.38
67	D4	25	U	C2-N3	-7.19	1.32	1.37
65	D2	246	G	C6-N1	-7.18	1.34	1.39
67	D4	31	G	C5-C4	-7.18	1.33	1.38
66	D3	1606	C	C4-C5	-7.18	1.37	1.43
66	D3	554	C	C2-N3	-7.17	1.30	1.35
67	D4	21	C	N1-C2	-7.17	1.32	1.40
66	D3	572	C	N1-C2	-7.17	1.32	1.40
66	D3	488	G	C5-C4	-7.17	1.33	1.38
66	D3	1634	C	N1-C6	-7.17	1.32	1.37
65	D2	305	A	N7-C5	-7.16	1.34	1.39
66	D3	1525	A	C6-N1	-7.16	1.30	1.35
1	UA	393	VAL	CB-CG2	-7.16	1.37	1.52
65	D2	306	G	N1-C2	-7.16	1.32	1.37
66	D3	497	G	N3-C4	-7.15	1.30	1.35
65	D2	474	A	N7-C5	-7.14	1.34	1.39
65	D2	235	A	N3-C4	-7.14	1.30	1.34
67	D4	63	C	N1-C6	-7.14	1.32	1.37
21	UU	487	TYR	CD1-CE1	-7.14	1.28	1.39
30	CI	47	TYR	CD2-CE2	-7.14	1.28	1.39
66	D3	569	C	C4-C5	-7.14	1.37	1.43
67	D4	79	G	N3-C4	-7.14	1.30	1.35
66	D3	477	A	N9-C4	-7.13	1.33	1.37
66	D3	567	A	C6-N1	-7.13	1.30	1.35
25	CA	172	TYR	CE1-CZ	-7.13	1.29	1.38
66	D3	498	G	N9-C8	-7.13	1.32	1.37
66	D3	572	C	C4-C5	-7.12	1.37	1.43
67	D4	322	A	N9-C4	-7.12	1.33	1.37
65	D2	266	U	C2-N3	-7.12	1.32	1.37
67	D4	86	A	N7-C5	-7.12	1.34	1.39
65	D2	274	C	C2-N3	-7.12	1.30	1.35
65	D2	273	G	C5-C4	-7.12	1.33	1.38
1	UA	360	VAL	CB-CG2	-7.12	1.38	1.52
66	D3	574	G	C5-C4	-7.12	1.33	1.38
65	D2	278	G	N9-C8	-7.11	1.32	1.37
65	D2	303	A	C5-C6	-7.11	1.34	1.41
26	CD	34	VAL	CB-CG1	-7.10	1.38	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
67	D4	53	U	N1-C2	-7.10	1.32	1.38
65	D2	341	G	C5-C4	-7.10	1.33	1.38
67	D4	84	U	N3-C4	-7.10	1.32	1.38
66	D3	1043	A	N9-C4	-7.09	1.33	1.37
65	D2	458	A	N3-C4	-7.09	1.30	1.34
66	D3	1587	A	C5-C4	-7.09	1.33	1.38
67	D4	83	A	N7-C5	-7.09	1.34	1.39
66	D3	574	G	N9-C8	-7.09	1.32	1.37
66	D3	1174	C	C5-C6	-7.08	1.28	1.34
66	D3	1605	G	N1-C2	-7.08	1.32	1.37
4	UD	265	TRP	CB-CG	-7.08	1.37	1.50
17	UQ	318	GLU	CB-CG	-7.08	1.38	1.52
67	D4	32	G	N3-C4	-7.08	1.30	1.35
1	UA	89	VAL	CB-CG2	-7.08	1.38	1.52
1	UA	679	VAL	CB-CG1	-7.08	1.38	1.52
65	D2	409	C	N3-C4	-7.08	1.28	1.33
67	D4	85	G	C8-N7	-7.08	1.26	1.30
67	D4	325	C	C4-C5	-7.07	1.37	1.43
66	D3	1174	C	N1-C6	-7.07	1.32	1.37
67	D4	29	U	C4-C5	-7.07	1.37	1.43
46	JP	351	VAL	CB-CG2	-7.06	1.38	1.52
65	D2	400	C	N1-C2	-7.06	1.33	1.40
65	D2	296	C	N1-C2	-7.06	1.33	1.40
65	D2	411	A	N9-C4	-7.06	1.33	1.37
66	D3	1078	C	N1-C6	-7.06	1.32	1.37
67	D4	35	U	C2-N3	-7.06	1.32	1.37
65	D2	305	A	C6-N1	-7.06	1.30	1.35
66	D3	1071	U	C2-N3	-7.06	1.32	1.37
14	UN	879	ILE	CB-CG2	-7.05	1.30	1.52
66	D3	8	U	N3-C4	-7.05	1.32	1.38
66	D3	885	G	C6-N1	-7.05	1.34	1.39
66	D3	944	A	C5-C4	-7.05	1.33	1.38
65	D2	162	U	C2-N3	-7.04	1.32	1.37
66	D3	15	U	C2-N3	-7.04	1.32	1.37
66	D3	559	C	C4-C5	-7.04	1.37	1.43
7	UG	147	GLU	CB-CG	-7.04	1.38	1.52
67	D4	86	A	N9-C4	-7.04	1.33	1.37
66	D3	1588	G	N7-C5	-7.03	1.35	1.39
67	D4	84	U	N1-C2	-7.02	1.32	1.38
67	D4	85	G	N9-C8	-7.02	1.32	1.37
66	D3	1589	C	N3-C4	-7.01	1.29	1.33
66	D3	1590	G	C5-C4	-7.01	1.33	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
66	D3	1478	G	C6-N1	-7.00	1.34	1.39
67	D4	26	C	C2-N3	-7.00	1.30	1.35
66	D3	886	U	C2-N3	-7.00	1.32	1.37
66	D3	560	U	N1-C2	-7.00	1.32	1.38
66	D3	1073	G	N9-C8	-7.00	1.32	1.37
65	D2	273	G	N3-C4	-6.99	1.30	1.35
65	D2	386	A	C6-N1	-6.99	1.30	1.35
65	D2	392	U	C4-C5	-6.99	1.37	1.43
65	D2	296	C	C2-N3	-6.99	1.30	1.35
30	CI	103	VAL	CB-CG1	-6.98	1.38	1.52
66	D3	874	C	N1-C6	-6.98	1.32	1.37
65	D2	146	G	C2-N3	-6.98	1.27	1.32
66	D3	6	G	C5-C6	-6.98	1.35	1.42
67	D4	17	G	C5-C4	-6.98	1.33	1.38
28	CF	79	VAL	CB-CG2	-6.97	1.38	1.52
66	D3	552	G	C8-N7	-6.97	1.26	1.30
65	D2	383	G	C2-N3	-6.97	1.27	1.32
1	UA	585	TYR	CD2-CE2	-6.97	1.28	1.39
65	D2	336	G	C6-N1	-6.97	1.34	1.39
66	D3	477	A	N3-C4	-6.97	1.30	1.34
66	D3	1606	C	N3-C4	-6.97	1.29	1.33
7	UG	159	TYR	CD1-CE1	-6.96	1.28	1.39
66	D3	1483	A	N7-C5	-6.96	1.35	1.39
66	D3	548	G	C5-C4	-6.96	1.33	1.38
65	D2	279	A	N9-C4	-6.95	1.33	1.37
66	D3	1489	U	C4-C5	-6.95	1.37	1.43
66	D3	1590	G	C5-C6	-6.95	1.35	1.42
67	D4	55	A	C5-C6	-6.95	1.34	1.41
66	D3	1037	C	N1-C6	-6.94	1.32	1.37
66	D3	1607	G	N9-C8	-6.94	1.32	1.37
66	D3	635	A	N9-C4	-6.94	1.33	1.37
66	D3	1600	A	C6-N1	-6.94	1.30	1.35
67	D4	67	G	N7-C5	-6.93	1.35	1.39
67	D4	26	C	C4-C5	-6.93	1.37	1.43
21	UU	428	GLU	CB-CG	-6.93	1.39	1.52
65	D2	337	G	C5-C4	-6.93	1.33	1.38
1	UA	555	CYS	CB-SG	-6.92	1.70	1.82
65	D2	236	C	N1-C6	-6.92	1.32	1.37
66	D3	584	C	C4-C5	-6.92	1.37	1.43
66	D3	936	G	N9-C4	-6.92	1.32	1.38
67	D4	66	U	N1-C2	-6.92	1.32	1.38
5	UE	303	VAL	CB-CG1	-6.92	1.38	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
21	UU	487	TYR	CE1-CZ	-6.91	1.29	1.38
66	D3	553	G	N7-C5	-6.91	1.35	1.39
66	D3	1528	U	N1-C2	-6.91	1.32	1.38
67	D4	29	U	N1-C6	-6.90	1.31	1.38
65	D2	249	G	C5-C4	-6.90	1.33	1.38
21	UU	529	TYR	CD2-CE2	-6.89	1.29	1.39
67	D4	30	A	N9-C4	-6.89	1.33	1.37
66	D3	1607	G	C2-N3	-6.89	1.27	1.32
7	UG	134	VAL	CB-CG2	-6.89	1.38	1.52
65	D2	163	G	C5-C4	-6.89	1.33	1.38
66	D3	1047	G	N7-C5	-6.89	1.35	1.39
65	D2	244	U	N1-C2	-6.88	1.32	1.38
65	D2	402	G	C6-N1	-6.88	1.34	1.39
65	D2	164	G	N7-C5	-6.88	1.35	1.39
65	D2	162	U	N1-C6	-6.87	1.31	1.38
66	D3	1618	C	C4-C5	-6.87	1.37	1.43
67	D4	79	G	C5-C4	-6.87	1.33	1.38
7	UG	201	TYR	CD2-CE2	-6.87	1.29	1.39
13	UM	443	PRO	CB-CG	-6.87	1.15	1.50
18	UR	275	TYR	CD2-CE2	-6.87	1.29	1.39
65	D2	398	A	C6-N1	-6.86	1.30	1.35
1	UA	518	VAL	CB-CG1	-6.86	1.38	1.52
66	D3	1159	C	C4-C5	-6.85	1.37	1.43
65	D2	396	A	N9-C4	-6.85	1.33	1.37
7	UG	177	TYR	CE2-CZ	-6.84	1.29	1.38
1	UA	679	VAL	CB-CG2	-6.84	1.38	1.52
6	UF	7	TYR	CE1-CZ	-6.84	1.29	1.38
66	D3	545	A	C5-C4	-6.84	1.33	1.38
66	D3	13	C	N1-C2	-6.84	1.33	1.40
67	D4	30	A	N3-C4	-6.84	1.30	1.34
5	UE	454	GLU	CD-OE2	-6.83	1.18	1.25
65	D2	313	A	N7-C5	-6.83	1.35	1.39
66	D3	1609	U	C2-N3	-6.83	1.32	1.37
66	D3	557	G	C5-C6	-6.83	1.35	1.42
65	D2	283	A	N3-C4	-6.83	1.30	1.34
66	D3	1584	G	N1-C2	-6.83	1.32	1.37
65	D2	387	C	C5-C6	-6.83	1.28	1.34
66	D3	550	A	C5-C4	-6.83	1.33	1.38
67	D4	33	A	N9-C4	-6.83	1.33	1.37
66	D3	1492	A	C6-N1	-6.82	1.30	1.35
67	D4	34	A	N9-C8	-6.82	1.32	1.37
65	D2	245	C	C4-C5	-6.82	1.37	1.43

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	UA	421	ASN	CB-CG	-6.82	1.35	1.51
65	D2	243	A	C5-C4	-6.81	1.33	1.38
66	D3	555	A	C5-C4	-6.81	1.33	1.38
65	D2	290	G	C5-C4	-6.81	1.33	1.38
65	D2	482	A	C6-N1	-6.81	1.30	1.35
66	D3	1082	C	N3-C4	-6.80	1.29	1.33
21	UU	256	PHE	CB-CG	-6.80	1.39	1.51
46	JP	321	VAL	CB-CG2	-6.80	1.38	1.52
67	D4	69	A	N7-C5	-6.80	1.35	1.39
66	D3	1484	G	N9-C4	-6.79	1.32	1.38
66	D3	1167	G	N9-C4	-6.79	1.32	1.38
67	D4	333	U	N1-C2	-6.79	1.32	1.38
65	D2	235	A	C5-C4	-6.79	1.34	1.38
66	D3	7	G	C5-C4	-6.79	1.33	1.38
66	D3	956	C	C4-C5	-6.79	1.37	1.43
1	UA	82	VAL	CB-CG2	-6.78	1.38	1.52
66	D3	954	G	N9-C4	-6.78	1.32	1.38
67	D4	22	A	N7-C5	-6.78	1.35	1.39
65	D2	307	C	N1-C6	-6.78	1.33	1.37
21	UU	377	SER	CA-CB	-6.78	1.42	1.52
66	D3	1585	U	C4-O4	-6.78	1.18	1.23
65	D2	339	A	C5-C4	-6.78	1.34	1.38
65	D2	398	A	N3-C4	-6.78	1.30	1.34
65	D2	289	U	C4-C5	-6.77	1.37	1.43
66	D3	1586	A	C5-C6	-6.77	1.34	1.41
65	D2	237	A	N3-C4	-6.77	1.30	1.34
65	D2	298	A	N9-C8	-6.77	1.32	1.37
66	D3	1524	A	N3-C4	-6.77	1.30	1.34
67	D4	25	U	N1-C2	-6.77	1.32	1.38
67	D4	54	C	N1-C2	-6.77	1.33	1.40
23	UX	65	VAL	CB-CG1	-6.76	1.38	1.52
24	UZ	103	VAL	CB-CG2	-6.76	1.38	1.52
65	D2	160	C	N1-C6	-6.76	1.33	1.37
65	D2	292	A	P-O5'	-6.76	1.52	1.59
1	UA	37	VAL	CB-CG1	-6.76	1.38	1.52
1	UA	14	VAL	CB-CG1	-6.75	1.38	1.52
65	D2	237	A	C6-N1	-6.75	1.30	1.35
66	D3	551	G	N9-C4	-6.75	1.32	1.38
67	D4	69	A	C5-C4	-6.75	1.34	1.38
1	UA	353	TYR	CE2-CZ	-6.75	1.29	1.38
11	UK	96	VAL	CB-CG1	-6.75	1.38	1.52
67	D4	28	A	C6-N1	-6.75	1.30	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
65	D2	388	C	N1-C2	-6.75	1.33	1.40
66	D3	498	G	C6-N1	-6.74	1.34	1.39
65	D2	275	A	N3-C4	-6.74	1.30	1.34
66	D3	942	G	N9-C8	-6.74	1.33	1.37
66	D3	931	C	N1-C2	-6.74	1.33	1.40
1	UA	501	SER	CA-CB	-6.73	1.42	1.52
66	D3	1068	C	N3-C4	-6.73	1.29	1.33
67	D4	54	C	N3-C4	-6.73	1.29	1.33
67	D4	61	G	C2-N3	-6.73	1.27	1.32
65	D2	468	A	N9-C4	-6.73	1.33	1.37
65	D2	237	A	C5-C6	-6.72	1.34	1.41
66	D3	546	U	N1-C2	-6.72	1.32	1.38
67	D4	32	G	C5-C6	-6.72	1.35	1.42
65	D2	288	G	N9-C8	-6.72	1.33	1.37
65	D2	290	G	C8-N7	-6.72	1.26	1.30
65	D2	164	G	N9-C8	-6.72	1.33	1.37
66	D3	499	U	C2-N3	-6.72	1.33	1.37
65	D2	238	G	C5-C4	-6.72	1.33	1.38
65	D2	243	A	N9-C4	-6.72	1.33	1.37
65	D2	288	G	C8-N7	-6.72	1.26	1.30
30	CI	51	CYS	CB-SG	-6.71	1.70	1.82
67	D4	31	G	N3-C4	-6.71	1.30	1.35
67	D4	330	A	C5-C4	-6.71	1.34	1.38
67	D4	65	C	C4-C5	-6.71	1.37	1.43
66	D3	1483	A	N9-C4	-6.71	1.33	1.37
66	D3	551	G	N3-C4	-6.71	1.30	1.35
67	D4	31	G	N9-C4	-6.71	1.32	1.38
67	D4	45	U	N1-C2	-6.71	1.32	1.38
65	D2	275	A	N9-C4	-6.71	1.33	1.37
66	D3	1594	G	C5-C4	-6.71	1.33	1.38
65	D2	241	U	N1-C6	-6.70	1.31	1.38
65	D2	390	C	N1-C2	-6.70	1.33	1.40
66	D3	571	G	N9-C8	-6.70	1.33	1.37
66	D3	561	G	C5-C4	-6.70	1.33	1.38
66	D3	926	A	N9-C4	-6.70	1.33	1.37
66	D3	1633	A	N7-C5	-6.69	1.35	1.39
66	D3	9	U	N1-C2	-6.69	1.32	1.38
65	D2	380	A	N3-C4	-6.69	1.30	1.34
7	UG	429	GLU	CG-CD	-6.68	1.42	1.51
65	D2	242	C	C4-C5	-6.68	1.37	1.43
65	D2	397	A	N9-C4	-6.68	1.33	1.37
67	D4	326	U	N1-C6	-6.68	1.31	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
11	UK	64	TYR	CD2-CE2	-6.68	1.29	1.39
66	D3	488	G	N1-C2	-6.68	1.32	1.37
65	D2	323	A	N7-C5	-6.68	1.35	1.39
1	UA	305	VAL	CB-CG1	-6.67	1.38	1.52
65	D2	236	C	C4-C5	-6.67	1.37	1.43
65	D2	484	G	C2-N3	-6.67	1.27	1.32
65	D2	281	G	N7-C5	-6.67	1.35	1.39
67	D4	322	A	N3-C4	-6.67	1.30	1.34
65	D2	329	A	C5-C4	-6.67	1.34	1.38
66	D3	1072	C	N3-C4	-6.67	1.29	1.33
66	D3	1617	U	N3-C4	-6.67	1.32	1.38
65	D2	143	A	C5-C6	-6.66	1.35	1.41
65	D2	383	G	N3-C4	-6.66	1.30	1.35
67	D4	327	G	C6-N1	-6.66	1.34	1.39
18	UR	426	VAL	CB-CG2	-6.65	1.38	1.52
65	D2	466	A	N9-C4	-6.65	1.33	1.37
65	D2	241	U	C2-N3	-6.65	1.33	1.37
66	D3	1637	C	N1-C6	-6.65	1.33	1.37
18	UR	275	TYR	CE2-CZ	-6.65	1.29	1.38
66	D3	1	U	N1-C6	-6.65	1.31	1.38
66	D3	1584	G	N9-C8	-6.64	1.33	1.37
67	D4	328	A	C5-C6	-6.64	1.35	1.41
65	D2	242	C	N1-C2	-6.64	1.33	1.40
7	UG	180	GLU	CB-CG	-6.64	1.39	1.52
65	D2	291	G	C8-N7	-6.64	1.26	1.30
65	D2	445	U	N1-C2	-6.64	1.32	1.38
31	CJ	90	VAL	CB-CG1	-6.64	1.39	1.52
65	D2	376	U	N1-C2	-6.64	1.32	1.38
66	D3	1486	G	N7-C5	-6.64	1.35	1.39
1	UA	793	GLU	CB-CG	-6.63	1.39	1.52
21	UU	450	VAL	CB-CG2	-6.63	1.39	1.52
66	D3	862	A	N9-C4	-6.63	1.33	1.37
67	D4	58	A	N9-C8	-6.63	1.32	1.37
65	D2	161	A	C5-C4	-6.63	1.34	1.38
46	JP	40	GLU	CB-CG	-6.63	1.39	1.52
65	D2	391	C	N1-C6	-6.63	1.33	1.37
46	JP	332	TYR	CD2-CE2	-6.63	1.29	1.39
66	D3	562	G	C8-N7	-6.63	1.26	1.30
65	D2	349	G	N7-C5	-6.62	1.35	1.39
65	D2	336	G	C8-N7	-6.62	1.26	1.30
66	D3	6	G	N3-C4	-6.61	1.30	1.35
66	D3	591	A	N3-C4	-6.61	1.30	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
21	UU	529	TYR	CE2-CZ	-6.61	1.29	1.38
65	D2	235	A	C6-N1	-6.61	1.30	1.35
67	D4	25	U	N1-C6	-6.61	1.32	1.38
65	D2	380	A	N7-C5	-6.60	1.35	1.39
66	D3	1046	G	N7-C5	-6.60	1.35	1.39
65	D2	297	U	C2-N3	-6.60	1.33	1.37
67	D4	20	U	N1-C2	-6.60	1.32	1.38
67	D4	62	C	C2-N3	-6.60	1.30	1.35
65	D2	303	A	C6-N6	-6.60	1.28	1.33
66	D3	1160	A	C5-C6	-6.60	1.35	1.41
65	D2	309	A	N9-C4	-6.59	1.33	1.37
67	D4	32	G	C8-N7	-6.59	1.26	1.30
33	CL	1001	VAL	CB-CG2	-6.59	1.39	1.52
66	D3	1606	C	N1-C2	-6.59	1.33	1.40
66	D3	1614	A	N7-C5	-6.59	1.35	1.39
66	D3	1617	U	N1-C2	-6.59	1.32	1.38
11	UK	63	TYR	CD2-CE2	-6.58	1.29	1.39
65	D2	300	C	C2-N3	-6.58	1.30	1.35
66	D3	512	A	N9-C4	-6.58	1.33	1.37
67	D4	59	G	N9-C4	-6.58	1.32	1.38
67	D4	67	G	C6-N1	-6.58	1.34	1.39
66	D3	963	A	N9-C4	-6.58	1.33	1.37
65	D2	333	G	N3-C4	-6.58	1.30	1.35
65	D2	381	G	C2-N3	-6.58	1.27	1.32
7	UG	431	ARG	CB-CG	-6.57	1.34	1.52
65	D2	294	U	C2-N3	-6.57	1.33	1.37
46	JP	288	TYR	CD2-CE2	-6.57	1.29	1.39
65	D2	282	G	N9-C4	-6.57	1.32	1.38
30	CI	136	VAL	CB-CG2	-6.57	1.39	1.52
66	D3	1527	C	N3-C4	-6.57	1.29	1.33
14	UN	298	TRP	CB-CG	-6.57	1.38	1.50
30	CI	36	TYR	CD2-CE2	-6.57	1.29	1.39
66	D3	549	G	C2-N3	-6.57	1.27	1.32
65	D2	242	C	N1-C6	-6.56	1.33	1.37
66	D3	1028	C	N3-C4	-6.56	1.29	1.33
1	UA	831	VAL	CB-CG1	-6.56	1.39	1.52
66	D3	1074	G	C8-N7	-6.56	1.27	1.30
66	D3	1525	A	C5-C6	-6.56	1.35	1.41
66	D3	1638	G	N7-C5	-6.56	1.35	1.39
66	D3	1582	U	N1-C2	-6.56	1.32	1.38
66	D3	1151	A	N3-C4	-6.56	1.30	1.34
1	UA	681	VAL	CB-CG1	-6.55	1.39	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
65	D2	284	U	C4-C5	-6.55	1.37	1.43
65	D2	307	C	N3-C4	-6.55	1.29	1.33
67	D4	72	C	N1-C6	-6.55	1.33	1.37
65	D2	248	G	N7-C5	-6.55	1.35	1.39
66	D3	1581	C	N3-C4	-6.55	1.29	1.33
65	D2	459	U	N1-C2	-6.55	1.32	1.38
66	D3	487	G	C5-C6	-6.54	1.35	1.42
66	D3	566	C	C4-C5	-6.54	1.37	1.43
65	D2	298	A	C5-C6	-6.54	1.35	1.41
46	JP	95	TRP	CB-CG	-6.53	1.38	1.50
17	UQ	472	TYR	CD1-CE1	-6.53	1.29	1.39
66	D3	565	C	N3-C4	-6.53	1.29	1.33
66	D3	1582	U	C2-N3	-6.53	1.33	1.37
65	D2	341	G	C6-N1	-6.53	1.34	1.39
65	D2	453	A	N9-C4	-6.52	1.33	1.37
33	CL	851	TRP	CB-CG	-6.52	1.38	1.50
65	D2	291	G	N3-C4	-6.52	1.30	1.35
65	D2	473	A	C6-N1	-6.52	1.30	1.35
65	D2	334	G	C5-C6	-6.52	1.35	1.42
21	UU	463	VAL	CB-CG1	-6.52	1.39	1.52
7	UG	177	TYR	CE1-CZ	-6.51	1.30	1.38
66	D3	953	G	N9-C8	-6.51	1.33	1.37
66	D3	1484	G	N7-C5	-6.51	1.35	1.39
65	D2	459	U	C2-N3	-6.51	1.33	1.37
66	D3	500	C	C4-C5	-6.51	1.37	1.43
7	UG	177	TYR	CD1-CE1	-6.51	1.29	1.39
65	D2	271	G	C2-N3	-6.51	1.27	1.32
66	D3	577	G	N3-C4	-6.51	1.30	1.35
30	CI	47	TYR	CD1-CE1	-6.51	1.29	1.39
65	D2	350	A	N3-C4	-6.51	1.30	1.34
66	D3	1074	G	N9-C8	-6.51	1.33	1.37
67	D4	78	G	N1-C2	-6.51	1.32	1.37
66	D3	953	G	N3-C4	-6.50	1.30	1.35
1	UA	89	VAL	CB-CG1	-6.50	1.39	1.52
13	UM	746	TRP	CB-CG	-6.50	1.38	1.50
66	D3	943	C	N1-C6	-6.50	1.33	1.37
67	D4	86	A	N3-C4	-6.50	1.30	1.34
66	D3	573	C	N1-C2	-6.50	1.33	1.40
11	UK	34	TYR	CD2-CE2	-6.50	1.29	1.39
66	D3	974	A	N9-C4	-6.50	1.33	1.37
1	UA	218	TRP	CB-CG	-6.49	1.38	1.50
66	D3	497	G	N7-C5	-6.49	1.35	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
67	D4	68	A	N9-C8	-6.49	1.32	1.37
65	D2	398	A	C5-C4	-6.49	1.34	1.38
65	D2	335	G	C5-C6	-6.48	1.35	1.42
67	D4	79	G	N7-C5	-6.48	1.35	1.39
66	D3	1635	A	N7-C5	-6.47	1.35	1.39
66	D3	1592	A	N9-C4	-6.47	1.33	1.37
67	D4	37	G	C5-C4	-6.47	1.33	1.38
65	D2	295	A	N9-C4	-6.47	1.33	1.37
65	D2	386	A	N3-C4	-6.47	1.30	1.34
66	D3	1594	G	C6-N1	-6.47	1.35	1.39
67	D4	18	G	N7-C5	-6.47	1.35	1.39
67	D4	62	C	N1-C2	-6.47	1.33	1.40
67	D4	52	U	C2-N3	-6.46	1.33	1.37
6	UF	127	LYS	CB-CG	-6.46	1.35	1.52
18	UR	481	TRP	CB-CG	-6.46	1.38	1.50
65	D2	269	G	N7-C5	-6.46	1.35	1.39
66	D3	1610	G	N3-C4	-6.46	1.30	1.35
7	UG	216	TYR	CE2-CZ	-6.46	1.30	1.38
65	D2	275	A	N9-C8	-6.46	1.32	1.37
4	UD	206	SER	CA-C	-6.46	1.36	1.52
65	D2	270	U	C2-N3	-6.46	1.33	1.37
66	D3	1587	A	N9-C4	-6.46	1.33	1.37
33	CL	929	VAL	CB-CG2	-6.45	1.39	1.52
65	D2	472	A	N3-C4	-6.45	1.30	1.34
66	D3	951	A	C5-C4	-6.45	1.34	1.38
65	D2	288	G	N1-C2	-6.45	1.32	1.37
66	D3	592	A	N3-C4	-6.45	1.30	1.34
66	D3	1075	C	N3-C4	-6.45	1.29	1.33
66	D3	560	U	N1-C6	-6.45	1.32	1.38
18	UR	586	VAL	CB-CG1	-6.44	1.39	1.52
58	DQ	96	TYR	CE2-CZ	-6.44	1.30	1.38
65	D2	329	A	C5-C6	-6.44	1.35	1.41
67	D4	18	G	C6-N1	-6.44	1.35	1.39
67	D4	58	A	N7-C5	-6.44	1.35	1.39
66	D3	1592	A	N3-C4	-6.43	1.30	1.34
46	JP	343	TYR	CE2-CZ	-6.43	1.30	1.38
65	D2	444	U	N1-C2	-6.43	1.32	1.38
67	D4	83	A	C5-C4	-6.43	1.34	1.38
67	D4	18	G	N9-C8	-6.43	1.33	1.37
66	D3	594	A	N9-C4	-6.43	1.33	1.37
66	D3	1077	C	N1-C6	-6.42	1.33	1.37
66	D3	1492	A	C5-C4	-6.42	1.34	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	UA	585	TYR	CE2-CZ	-6.42	1.30	1.38
46	JP	40	GLU	CG-CD	-6.42	1.42	1.51
65	D2	237	A	N9-C4	-6.42	1.33	1.37
65	D2	288	G	C5-C6	-6.42	1.35	1.42
46	JP	313	PHE	CB-CG	-6.42	1.40	1.51
65	D2	245	C	N1-C2	-6.42	1.33	1.40
67	D4	82	G	C5-C6	-6.42	1.35	1.42
67	D4	72	C	C4-C5	-6.41	1.37	1.43
66	D3	1600	A	N3-C4	-6.41	1.31	1.34
65	D2	462	G	C5-C4	-6.41	1.33	1.38
66	D3	589	C	C2-N3	-6.41	1.30	1.35
66	D3	486	G	C6-N1	-6.40	1.35	1.39
66	D3	1584	G	C6-N1	-6.40	1.35	1.39
1	UA	411	VAL	CB-CG1	-6.40	1.39	1.52
65	D2	390	C	C4-C5	-6.40	1.37	1.43
33	CL	881	CYS	CB-SG	-6.40	1.71	1.82
66	D3	1167	G	N3-C4	-6.40	1.30	1.35
7	UG	244	ASN	CB-CG	-6.39	1.36	1.51
65	D2	463	A	N3-C4	-6.39	1.31	1.34
66	D3	7	G	N1-C2	-6.39	1.32	1.37
11	UK	64	TYR	CE2-CZ	-6.39	1.30	1.38
13	UM	743	CYS	CB-SG	-6.39	1.71	1.82
66	D3	627	C	N1-C6	-6.39	1.33	1.37
66	D3	952	A	N3-C4	-6.39	1.31	1.34
65	D2	452	A	N7-C5	-6.39	1.35	1.39
67	D4	332	G	N9-C4	-6.39	1.32	1.38
65	D2	237	A	N9-C8	-6.38	1.32	1.37
66	D3	-1	G	C5-C6	-6.38	1.35	1.42
65	D2	320	A	N3-C4	-6.38	1.31	1.34
67	D4	58	A	C6-N1	-6.38	1.31	1.35
66	D3	591	A	N9-C4	-6.38	1.34	1.37
7	UG	165	TYR	CD1-CE1	-6.38	1.29	1.39
67	D4	24	U	C2-N3	-6.38	1.33	1.37
67	D4	69	A	C5-C6	-6.38	1.35	1.41
66	D3	564	G	N3-C4	-6.38	1.30	1.35
66	D3	937	C	N1-C2	-6.37	1.33	1.40
66	D3	1525	A	N7-C5	-6.37	1.35	1.39
65	D2	240	C	N1-C2	-6.37	1.33	1.40
65	D2	289	U	C2-O2	-6.37	1.16	1.22
66	D3	10	G	N9-C8	-6.37	1.33	1.37
67	D4	78	G	C5-C4	-6.37	1.33	1.38
66	D3	8	U	C4-C5	-6.37	1.37	1.43

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
66	D3	599	A	N3-C4	-6.37	1.31	1.34
65	D2	481	U	N3-C4	-6.36	1.32	1.38
58	DQ	19	VAL	CB-CG1	-6.36	1.39	1.52
65	D2	339	A	C5-C6	-6.36	1.35	1.41
66	D3	1603	U	C4-C5	-6.36	1.37	1.43
65	D2	100	G	C5-C4	-6.35	1.33	1.38
66	D3	1157	A	N3-C4	-6.35	1.31	1.34
66	D3	1590	G	N3-C4	-6.35	1.31	1.35
18	UR	494	TYR	CD2-CE2	-6.35	1.29	1.39
66	D3	1040	G	N9-C4	-6.35	1.32	1.38
65	D2	461	A	C6-N1	-6.34	1.31	1.35
66	D3	562	G	N9-C8	-6.34	1.33	1.37
66	D3	1529	C	N1-C6	-6.34	1.33	1.37
46	JP	332	TYR	CD1-CE1	-6.34	1.29	1.39
66	D3	552	G	C6-N1	-6.34	1.35	1.39
67	D4	67	G	N1-C2	-6.34	1.32	1.37
30	CI	144	ASN	CB-CG	-6.34	1.36	1.51
66	D3	1156	C	C4-C5	-6.33	1.37	1.43
21	UU	428	GLU	CG-CD	-6.33	1.42	1.51
65	D2	391	C	N3-C4	-6.33	1.29	1.33
65	D2	277	C	N1-C6	-6.33	1.33	1.37
7	UG	384	VAL	CB-CG1	-6.33	1.39	1.52
66	D3	1065	A	N3-C4	-6.33	1.31	1.34
65	D2	385	A	N3-C4	-6.33	1.31	1.34
1	UA	458	TRP	CB-CG	-6.32	1.38	1.50
30	CI	21	TRP	CB-CG	-6.32	1.38	1.50
65	D2	452	A	N9-C4	-6.32	1.34	1.37
18	UR	535	ARG	CB-CG	-6.32	1.35	1.52
30	CI	148	TYR	CD2-CE2	-6.32	1.29	1.39
67	D4	33	A	N7-C5	-6.32	1.35	1.39
67	D4	70	U	N1-C2	-6.32	1.32	1.38
46	JP	117	CYS	CB-SG	-6.32	1.71	1.82
65	D2	385	A	C5-C4	-6.32	1.34	1.38
65	D2	243	A	N7-C5	-6.31	1.35	1.39
28	CF	93	VAL	CB-CG1	-6.31	1.39	1.52
65	D2	276	G	N9-C8	-6.31	1.33	1.37
66	D3	1599	C	N3-C4	-6.31	1.29	1.33
66	D3	473	A	N9-C4	-6.31	1.34	1.37
66	D3	497	G	N9-C8	-6.30	1.33	1.37
7	UG	114	TYR	CD1-CE1	-6.30	1.29	1.39
65	D2	397	A	C5-C4	-6.30	1.34	1.38
66	D3	928	U	N1-C2	-6.30	1.32	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
66	D3	1069	A	N9-C4	-6.30	1.34	1.37
66	D3	557	G	N3-C4	-6.29	1.31	1.35
65	D2	475	G	C8-N7	-6.29	1.27	1.30
66	D3	9	U	C2-N3	-6.29	1.33	1.37
66	D3	592	A	N7-C5	-6.29	1.35	1.39
66	D3	1633	A	N9-C8	-6.29	1.32	1.37
65	D2	340	U	C2-N3	-6.29	1.33	1.37
65	D2	82	A	N7-C5	-6.29	1.35	1.39
65	D2	246	G	C5-C4	-6.28	1.33	1.38
66	D3	2	A	N9-C4	-6.28	1.34	1.37
66	D3	940	A	N9-C4	-6.28	1.34	1.37
4	UD	265	TRP	CE3-CZ3	-6.28	1.27	1.38
1	UA	329	VAL	CB-CG2	-6.28	1.39	1.52
66	D3	1482	C	C2-N3	-6.28	1.30	1.35
1	UA	445	VAL	CB-CG2	-6.28	1.39	1.52
7	UG	440	ASP	CB-CG	-6.28	1.38	1.51
7	UG	203	TYR	CE2-CZ	-6.28	1.30	1.38
21	UU	61	TYR	CD1-CE1	-6.28	1.29	1.39
66	D3	1485	C	N1-C2	-6.27	1.33	1.40
66	D3	1488	G	C6-N1	-6.27	1.35	1.39
66	D3	558	U	C2-N3	-6.27	1.33	1.37
67	D4	65	C	N1-C6	-6.27	1.33	1.37
66	D3	562	G	C6-N1	-6.27	1.35	1.39
65	D2	331	U	N1-C2	-6.27	1.32	1.38
66	D3	1039	A	N7-C5	-6.27	1.35	1.39
1	UA	52	TYR	CE1-CZ	-6.26	1.30	1.38
65	D2	384	U	C2-N3	-6.26	1.33	1.37
66	D3	590	C	N1-C2	-6.26	1.33	1.40
15	UO	108	TYR	CD1-CE1	-6.26	1.29	1.39
30	CI	103	VAL	CB-CG2	-6.26	1.39	1.52
66	D3	12	U	N1-C2	-6.26	1.32	1.38
66	D3	548	G	N7-C5	-6.26	1.35	1.39
65	D2	240	C	C2-N3	-6.25	1.30	1.35
65	D2	240	C	N1-C6	-6.25	1.33	1.37
65	D2	397	A	N3-C4	-6.25	1.31	1.34
66	D3	1632	C	N1-C6	-6.25	1.33	1.37
58	DQ	7	VAL	CB-CG1	-6.25	1.39	1.52
65	D2	278	G	C6-N1	-6.25	1.35	1.39
7	UG	118	TYR	CD1-CE1	-6.25	1.29	1.39
21	UU	487	TYR	CE2-CZ	-6.25	1.30	1.38
65	D2	375	C	C4-C5	-6.25	1.38	1.43
67	D4	24	U	N3-C4	-6.25	1.32	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
66	D3	965	U	C2-N3	-6.24	1.33	1.37
7	UG	411	TYR	CE1-CZ	-6.24	1.30	1.38
66	D3	553	G	C5-C4	-6.24	1.33	1.38
67	D4	21	C	N3-C4	-6.24	1.29	1.33
67	D4	30	A	N9-C8	-6.24	1.32	1.37
46	JP	289	TYR	CE1-CZ	-6.24	1.30	1.38
65	D2	161	A	N9-C4	-6.24	1.34	1.37
65	D2	281	G	N9-C4	-6.23	1.32	1.38
67	D4	325	C	N3-C4	-6.23	1.29	1.33
65	D2	337	G	N1-C2	-6.23	1.32	1.37
66	D3	548	G	N9-C4	-6.23	1.32	1.38
31	CJ	157	PHE	CD1-CE1	-6.23	1.26	1.39
67	D4	92	A	N9-C4	-6.23	1.34	1.37
66	D3	562	G	N7-C5	-6.22	1.35	1.39
66	D3	1577	A	N7-C5	-6.22	1.35	1.39
66	D3	1047	G	N3-C4	-6.22	1.31	1.35
65	D2	247	U	N1-C2	-6.22	1.32	1.38
65	D2	90	G	C5-C4	-6.21	1.34	1.38
65	D2	291	G	C5-C6	-6.21	1.36	1.42
66	D3	1604	U	N1-C6	-6.21	1.32	1.38
66	D3	10	G	N9-C4	-6.21	1.32	1.38
66	D3	1077	C	N3-C4	-6.21	1.29	1.33
66	D3	1466	G	C5-C4	-6.21	1.34	1.38
25	CA	172	TYR	CD1-CE1	-6.21	1.30	1.39
46	JP	59	VAL	CB-CG2	-6.21	1.39	1.52
66	D3	575	C	C5-C6	-6.21	1.29	1.34
66	D3	1577	A	N9-C4	-6.21	1.34	1.37
66	D3	512	A	N7-C5	-6.20	1.35	1.39
66	D3	956	C	N1-C6	-6.20	1.33	1.37
65	D2	290	G	N9-C8	-6.20	1.33	1.37
65	D2	298	A	C6-N1	-6.20	1.31	1.35
1	UA	353	TYR	CD2-CE2	-6.20	1.30	1.39
66	D3	567	A	N9-C4	-6.20	1.34	1.37
66	D3	485	A	N7-C5	-6.19	1.35	1.39
65	D2	384	U	C4-C5	-6.19	1.38	1.43
66	D3	1607	G	C5-C6	-6.19	1.36	1.42
1	UA	490	SER	CA-CB	-6.19	1.43	1.52
65	D2	482	A	C5-C6	-6.19	1.35	1.41
66	D3	156	A	N9-C4	-6.19	1.34	1.37
66	D3	870	C	N3-C4	-6.19	1.29	1.33
21	UU	487	TYR	CG-CD1	-6.18	1.31	1.39
66	D3	566	C	N3-C4	-6.18	1.29	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
65	D2	331	U	C4-C5	-6.18	1.38	1.43
65	D2	389	U	N1-C6	-6.18	1.32	1.38
65	D2	412	A	N9-C4	-6.18	1.34	1.37
21	UU	498	TYR	CE2-CZ	-6.18	1.30	1.38
33	CL	860	TYR	CE2-CZ	-6.18	1.30	1.38
65	D2	323	A	N3-C4	-6.18	1.31	1.34
67	D4	79	G	C5-C6	-6.18	1.36	1.42
65	D2	286	U	N3-C4	-6.17	1.32	1.38
66	D3	555	A	N7-C5	-6.17	1.35	1.39
66	D3	1116	A	N7-C5	-6.17	1.35	1.39
66	D3	1586	A	N9-C4	-6.17	1.34	1.37
66	D3	1151	A	N7-C5	-6.17	1.35	1.39
17	UQ	472	TYR	CD2-CE2	-6.17	1.30	1.39
65	D2	238	G	N1-C2	-6.17	1.32	1.37
1	UA	401	VAL	CB-CG2	-6.17	1.39	1.52
65	D2	381	G	N7-C5	-6.17	1.35	1.39
66	D3	497	G	C6-N1	-6.17	1.35	1.39
65	D2	451	G	N3-C4	-6.17	1.31	1.35
65	D2	82	A	C5-C6	-6.16	1.35	1.41
66	D3	549	G	N9-C4	-6.16	1.33	1.38
1	UA	684	VAL	CB-CG1	-6.16	1.40	1.52
18	UR	172	TYR	CD1-CE1	-6.16	1.30	1.39
66	D3	1	U	N1-C2	-6.16	1.33	1.38
66	D3	1525	A	N9-C8	-6.16	1.32	1.37
66	D3	1615	C	C4-C5	-6.16	1.38	1.43
66	D3	496	G	N7-C5	-6.16	1.35	1.39
66	D3	1609	U	N3-C4	-6.16	1.32	1.38
66	D3	500	C	N1-C6	-6.15	1.33	1.37
66	D3	550	A	C5-C6	-6.15	1.35	1.41
66	D3	1066	C	N1-C6	-6.15	1.33	1.37
66	D3	871	G	N9-C8	-6.15	1.33	1.37
27	CE	427	TYR	CD2-CE2	-6.15	1.30	1.39
66	D3	1587	A	N3-C4	-6.15	1.31	1.34
67	D4	60	A	N9-C8	-6.14	1.32	1.37
1	UA	37	VAL	CB-CG2	-6.14	1.40	1.52
65	D2	100	G	N7-C5	-6.14	1.35	1.39
65	D2	482	A	N1-C2	-6.14	1.28	1.34
66	D3	936	G	C5-C4	-6.14	1.34	1.38
7	UG	114	TYR	CE1-CZ	-6.14	1.30	1.38
66	D3	1484	G	N9-C8	-6.14	1.33	1.37
67	D4	86	A	C5-C4	-6.14	1.34	1.38
18	UR	494	TYR	CD1-CE1	-6.13	1.30	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
66	D3	1600	A	N9-C8	-6.13	1.32	1.37
66	D3	1481	C	C4-C5	-6.13	1.38	1.43
30	CI	161	VAL	CB-CG1	-6.13	1.40	1.52
65	D2	161	A	C5-C6	-6.13	1.35	1.41
66	D3	560	U	C2-N3	-6.13	1.33	1.37
25	CA	239	CYS	CB-SG	-6.13	1.71	1.82
65	D2	284	U	C5-C6	-6.13	1.28	1.34
67	D4	28	A	C5-C6	-6.13	1.35	1.41
65	D2	399	U	N1-C2	-6.13	1.33	1.38
46	JP	343	TYR	CE1-CZ	-6.12	1.30	1.38
65	D2	385	A	N7-C5	-6.12	1.35	1.39
66	D3	565	C	C2-N3	-6.12	1.30	1.35
67	D4	58	A	N9-C4	-6.12	1.34	1.37
66	D3	584	C	C2-N3	-6.12	1.30	1.35
67	D4	324	U	N1-C2	-6.12	1.33	1.38
21	UU	89	TYR	CD1-CE1	-6.12	1.30	1.39
65	D2	392	U	C2-N3	-6.12	1.33	1.37
65	D2	349	G	C6-N1	-6.12	1.35	1.39
66	D3	1046	G	N9-C4	-6.12	1.33	1.38
66	D3	1163	A	C6-N1	-6.12	1.31	1.35
21	UU	599	TRP	CB-CG	-6.11	1.39	1.50
67	D4	18	G	N3-C4	-6.11	1.31	1.35
66	D3	872	G	C5-C6	-6.11	1.36	1.42
4	UD	300	VAL	CB-CG1	-6.11	1.40	1.52
21	UU	441	ARG	CB-CG	-6.11	1.36	1.52
65	D2	309	A	N9-C8	-6.11	1.32	1.37
65	D2	344	U	C2-N3	-6.11	1.33	1.37
65	D2	334	G	C2-N3	-6.10	1.27	1.32
67	D4	22	A	C5-C4	-6.10	1.34	1.38
65	D2	381	G	C5-C4	-6.10	1.34	1.38
67	D4	78	G	C8-N7	-6.10	1.27	1.30
65	D2	268	G	C8-N7	-6.10	1.27	1.30
67	D4	20	U	C2-N3	-6.10	1.33	1.37
65	D2	409	C	N1-C6	-6.09	1.33	1.37
66	D3	931	C	N3-C4	-6.09	1.29	1.33
66	D3	560	U	N3-C4	-6.09	1.32	1.38
65	D2	402	G	N1-C2	-6.09	1.32	1.37
65	D2	411	A	C5-C4	-6.09	1.34	1.38
66	D3	878	G	C6-N1	-6.09	1.35	1.39
1	UA	419	TYR	CD2-CE2	-6.08	1.30	1.39
67	D4	78	G	N9-C8	-6.08	1.33	1.37
66	D3	572	C	N3-C4	-6.08	1.29	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
66	D3	1165	G	C5-C4	-6.08	1.34	1.38
66	D3	867	G	C5-C4	-6.08	1.34	1.38
66	D3	974	A	N3-C4	-6.08	1.31	1.34
65	D2	481	U	N1-C2	-6.08	1.33	1.38
66	D3	588	U	N1-C2	-6.07	1.33	1.38
17	UQ	506	TRP	CB-CG	-6.07	1.39	1.50
66	D3	577	G	N9-C4	-6.07	1.33	1.38
66	D3	591	A	C5-C4	-6.07	1.34	1.38
66	D3	1635	A	C5-C6	-6.07	1.35	1.41
65	D2	308	A	N9-C4	-6.07	1.34	1.37
66	D3	1482	C	C4-C5	-6.07	1.38	1.43
66	D3	1528	U	C2-N3	-6.07	1.33	1.37
21	UU	444	ASP	CB-CG	-6.07	1.39	1.51
23	UX	10	PHE	CD1-CE1	-6.07	1.27	1.39
67	D4	56	A	N3-C4	-6.07	1.31	1.34
66	D3	866	G	N9-C4	-6.06	1.33	1.38
65	D2	389	U	C4-C5	-6.06	1.38	1.43
66	D3	551	G	C6-N1	-6.06	1.35	1.39
7	UG	388	ASP	CB-CG	-6.06	1.39	1.51
65	D2	287	G	C6-N1	-6.06	1.35	1.39
66	D3	1042	G	N9-C4	-6.05	1.33	1.38
66	D3	1590	G	N1-C2	-6.05	1.32	1.37
7	UG	139	TRP	CB-CG	-6.05	1.39	1.50
66	D3	1067	C	N1-C6	-6.05	1.33	1.37
31	CJ	233	VAL	CB-CG1	-6.05	1.40	1.52
65	D2	89	C	C4-C5	-6.05	1.38	1.43
66	D3	955	A	C5-C4	-6.05	1.34	1.38
66	D3	1160	A	C6-N1	-6.05	1.31	1.35
65	D2	308	A	C6-N1	-6.04	1.31	1.35
66	D3	573	C	C4-C5	-6.04	1.38	1.43
30	CI	36	TYR	CB-CG	-6.04	1.42	1.51
66	D3	926	A	N3-C4	-6.04	1.31	1.34
7	UG	201	TYR	CE2-CZ	-6.04	1.30	1.38
66	D3	1072	C	C2-N3	-6.04	1.30	1.35
66	D3	878	G	C5-C4	-6.04	1.34	1.38
66	D3	1596	C	N3-C4	-6.04	1.29	1.33
1	UA	353	TYR	CE1-CZ	-6.03	1.30	1.38
65	D2	333	G	C6-N1	-6.03	1.35	1.39
66	D3	577	G	C5-C4	-6.03	1.34	1.38
66	D3	566	C	N1-C2	-6.03	1.34	1.40
66	D3	885	G	N1-C2	-6.03	1.32	1.37
65	D2	481	U	C2-N3	-6.02	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
65	D2	234	A	C5-C6	-6.02	1.35	1.41
65	D2	484	G	C5-C4	-6.02	1.34	1.38
66	D3	558	U	N3-C4	-6.02	1.33	1.38
46	JP	270	ASN	CB-CG	-6.02	1.37	1.51
66	D3	557	G	C6-N1	-6.01	1.35	1.39
7	UG	449	ILE	CB-CG2	-6.01	1.34	1.52
67	D4	330	A	N9-C8	-6.01	1.32	1.37
65	D2	281	G	C5-C4	-6.01	1.34	1.38
65	D2	412	A	N3-C4	-6.01	1.31	1.34
18	UR	537	VAL	CB-CG1	-6.01	1.40	1.52
30	CI	173	TYR	CE1-CZ	-6.01	1.30	1.38
65	D2	161	A	C6-N1	-6.01	1.31	1.35
67	D4	68	A	C5-C4	-6.01	1.34	1.38
66	D3	599	A	N9-C4	-6.01	1.34	1.37
65	D2	396	A	N3-C4	-6.00	1.31	1.34
4	UD	213	TRP	CB-CG	-6.00	1.39	1.50
46	JP	113	VAL	CB-CG2	-6.00	1.40	1.52
65	D2	82	A	C6-N6	-6.00	1.29	1.33
65	D2	410	A	N3-C4	-6.00	1.31	1.34
66	D3	478	A	N7-C5	-6.00	1.35	1.39
67	D4	25	U	C5-C6	-6.00	1.28	1.34
65	D2	238	G	C2-N3	-6.00	1.27	1.32
67	D4	72	C	N1-C2	-6.00	1.34	1.40
67	D4	78	G	N7-C5	-6.00	1.35	1.39
15	UO	366	TYR	CE2-CZ	-6.00	1.30	1.38
25	CA	194	VAL	CB-CG1	-6.00	1.40	1.52
21	UU	505	VAL	CB-CG2	-6.00	1.40	1.52
66	D3	5	U	N3-C4	-6.00	1.33	1.38
66	D3	1589	C	N1-C6	-6.00	1.33	1.37
46	JP	321	VAL	CB-CG1	-5.99	1.40	1.52
65	D2	164	G	N9-C4	-5.99	1.33	1.38
67	D4	47	G	C5-C4	-5.99	1.34	1.38
65	D2	84	G	C5-C4	-5.99	1.34	1.38
65	D2	335	G	N1-C2	-5.99	1.32	1.37
66	D3	498	G	C5-C4	-5.99	1.34	1.38
66	D3	577	G	N7-C5	-5.99	1.35	1.39
66	D3	15	U	N3-C4	-5.99	1.33	1.38
67	D4	329	C	C2-N3	-5.99	1.30	1.35
66	D3	31	C	C4-C5	-5.98	1.38	1.43
18	UR	544	VAL	CB-CG1	-5.98	1.40	1.52
65	D2	246	G	N1-C2	-5.98	1.32	1.37
67	D4	79	G	N9-C4	-5.98	1.33	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	UO	361	MET	CA-CB	-5.98	1.40	1.53
21	UU	450	VAL	CB-CG1	-5.98	1.40	1.52
65	D2	250	G	C6-N1	-5.98	1.35	1.39
67	D4	40	A	N7-C5	-5.98	1.35	1.39
30	CI	160	TRP	CB-CG	-5.98	1.39	1.50
65	D2	407	A	C6-N1	-5.98	1.31	1.35
65	D2	477	G	N7-C5	-5.98	1.35	1.39
58	DQ	96	TYR	CE1-CZ	-5.97	1.30	1.38
66	D3	486	G	N9-C4	-5.97	1.33	1.38
66	D3	924	A	N9-C4	-5.97	1.34	1.37
66	D3	1073	G	N9-C4	-5.97	1.33	1.38
12	UL	148	TRP	CB-CG	-5.97	1.39	1.50
66	D3	1525	A	N1-C2	-5.97	1.28	1.34
65	D2	232	U	N1-C2	-5.97	1.33	1.38
66	D3	1603	U	N1-C6	-5.97	1.32	1.38
67	D4	30	A	C6-N1	-5.97	1.31	1.35
66	D3	514	G	C5-C4	-5.96	1.34	1.38
66	D3	1576	A	N9-C4	-5.96	1.34	1.37
67	D4	76	U	N3-C4	-5.96	1.33	1.38
30	CI	157	TYR	CE1-CZ	-5.96	1.30	1.38
1	UA	372	TRP	CE3-CZ3	-5.96	1.28	1.38
65	D2	389	U	N3-C4	-5.96	1.33	1.38
66	D3	512	A	C5-C6	-5.96	1.35	1.41
66	D3	1613	U	C2-N3	-5.96	1.33	1.37
67	D4	85	G	C2-N3	-5.96	1.27	1.32
7	UG	256	VAL	CB-CG2	-5.96	1.40	1.52
21	UU	612	TRP	CB-CG	-5.96	1.39	1.50
65	D2	381	G	N1-C2	-5.96	1.32	1.37
66	D3	1078	C	C4-C5	-5.96	1.38	1.43
66	D3	1597	A	N7-C5	-5.96	1.35	1.39
66	D3	1618	C	C5-C6	-5.96	1.29	1.34
23	UX	94	CYS	CB-SG	-5.95	1.72	1.81
66	D3	1465	C	C4-C5	-5.95	1.38	1.43
1	UA	529	GLU	CB-CG	-5.94	1.40	1.52
65	D2	411	A	C5-C6	-5.94	1.35	1.41
65	D2	477	G	N9-C4	-5.94	1.33	1.38
4	UD	241	VAL	CB-CG2	-5.94	1.40	1.52
10	UJ	119	GLU	CG-CD	-5.94	1.43	1.51
65	D2	103	G	N7-C5	-5.94	1.35	1.39
66	D3	560	U	C4-C5	-5.94	1.38	1.43
65	D2	338	A	N7-C5	-5.94	1.35	1.39
7	UG	411	TYR	CE2-CZ	-5.93	1.30	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
21	UU	342	TYR	CE2-CZ	-5.93	1.30	1.38
65	D2	269	G	N9-C8	-5.93	1.33	1.37
1	UA	210	SER	CA-CB	-5.93	1.44	1.52
66	D3	564	G	C5-C4	-5.93	1.34	1.38
66	D3	872	G	N7-C5	-5.93	1.35	1.39
67	D4	51	C	N1-C6	-5.93	1.33	1.37
65	D2	308	A	N3-C4	-5.93	1.31	1.34
66	D3	915	A	N7-C5	-5.93	1.35	1.39
65	D2	99	U	N1-C6	-5.93	1.32	1.38
66	D3	591	A	C6-N1	-5.93	1.31	1.35
66	D3	1041	G	N9-C4	-5.93	1.33	1.38
66	D3	9	U	C4-C5	-5.92	1.38	1.43
67	D4	73	A	C6-N1	-5.92	1.31	1.35
67	D4	332	G	C5-C4	-5.92	1.34	1.38
21	UU	498	TYR	CE1-CZ	-5.92	1.30	1.38
65	D2	334	G	N3-C4	-5.92	1.31	1.35
66	D3	589	C	N1-C2	-5.92	1.34	1.40
65	D2	248	G	C8-N7	-5.92	1.27	1.30
66	D3	569	C	C2-N3	-5.92	1.31	1.35
66	D3	1590	G	N9-C8	-5.92	1.33	1.37
21	UU	101	TYR	CD2-CE2	-5.92	1.30	1.39
66	D3	1077	C	C4-C5	-5.92	1.38	1.43
1	UA	681	VAL	CB-CG2	-5.91	1.40	1.52
66	D3	1157	A	N7-C5	-5.91	1.35	1.39
65	D2	162	U	N1-C2	-5.91	1.33	1.38
66	D3	867	G	N3-C4	-5.91	1.31	1.35
66	D3	1612	U	N1-C2	-5.91	1.33	1.38
65	D2	281	G	N1-C2	-5.91	1.33	1.37
67	D4	325	C	C2-N3	-5.91	1.31	1.35
1	UA	530	VAL	CB-CG1	-5.91	1.40	1.52
21	UU	442	THR	CB-CG2	-5.91	1.32	1.52
5	UE	292	TYR	CE1-CZ	-5.90	1.30	1.38
67	D4	79	G	C6-N1	-5.90	1.35	1.39
65	D2	271	G	N3-C4	-5.90	1.31	1.35
65	D2	335	G	C2-N3	-5.90	1.28	1.32
66	D3	943	C	N1-C2	-5.90	1.34	1.40
65	D2	90	G	C6-N1	-5.90	1.35	1.39
25	CA	181	VAL	CB-CG2	-5.90	1.40	1.52
66	D3	1599	C	C2-N3	-5.90	1.31	1.35
23	UX	131	SER	CA-CB	-5.90	1.44	1.52
21	UU	90	VAL	CB-CG1	-5.89	1.40	1.52
65	D2	257	G	C5-C4	-5.89	1.34	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
65	D2	277	C	C2-N3	-5.89	1.31	1.35
21	UU	632	VAL	CB-CG1	-5.89	1.40	1.52
27	CE	427	TYR	CE2-CZ	-5.89	1.30	1.38
65	D2	243	A	N3-C4	-5.88	1.31	1.34
65	D2	385	A	C5-C6	-5.88	1.35	1.41
7	UG	201	TYR	CD1-CE1	-5.88	1.30	1.39
65	D2	271	G	C6-N1	-5.88	1.35	1.39
65	D2	248	G	C5-C6	-5.88	1.36	1.42
21	UU	27	PHE	CB-CG	-5.88	1.41	1.51
31	CJ	119	ARG	CG-CD	-5.88	1.37	1.51
66	D3	1466	G	C8-N7	-5.88	1.27	1.30
46	JP	113	VAL	CB-CG1	-5.88	1.40	1.52
18	UR	172	TYR	CE1-CZ	-5.88	1.30	1.38
66	D3	571	G	C5-C4	-5.87	1.34	1.38
66	D3	877	G	N7-C5	-5.87	1.35	1.39
66	D3	1038	U	C2-N3	-5.87	1.33	1.37
54	DJ	106	GLU	CB-CG	-5.87	1.41	1.52
65	D2	320	A	C5-C6	-5.87	1.35	1.41
65	D2	331	U	N1-C6	-5.87	1.32	1.38
31	CJ	58	TYR	CD2-CE2	-5.87	1.30	1.39
66	D3	875	G	C5-C4	-5.87	1.34	1.38
66	D3	930	A	N9-C8	-5.87	1.33	1.37
65	D2	287	G	N9-C8	-5.87	1.33	1.37
66	D3	1166	A	C5-C4	-5.87	1.34	1.38
65	D2	386	A	C6-N6	-5.87	1.29	1.33
66	D3	1604	U	C4-O4	-5.87	1.19	1.23
46	JP	311	VAL	CB-CG1	-5.86	1.40	1.52
58	DQ	90	VAL	CB-CG2	-5.86	1.40	1.52
67	D4	59	G	C2-N3	-5.86	1.28	1.32
21	UU	33	VAL	CB-CG2	-5.86	1.40	1.52
66	D3	11	A	N3-C4	-5.86	1.31	1.34
67	D4	70	U	N3-C4	-5.86	1.33	1.38
65	D2	331	U	C4-O4	-5.86	1.19	1.23
66	D3	547	U	C2-N3	-5.86	1.33	1.37
14	UN	891	ILE	C-N	-5.85	1.20	1.34
18	UR	411	TYR	CE2-CZ	-5.85	1.30	1.38
46	JP	81	ASN	CB-CG	-5.85	1.37	1.51
65	D2	384	U	N3-C4	-5.85	1.33	1.38
65	D2	386	A	N9-C8	-5.85	1.33	1.37
65	D2	471	C	N3-C4	-5.85	1.29	1.33
1	UA	476	VAL	CB-CG1	-5.85	1.40	1.52
23	UX	89	CYS	CB-SG	-5.85	1.72	1.81

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
66	D3	486	G	N1-C2	-5.85	1.33	1.37
7	UG	219	VAL	CB-CG1	-5.84	1.40	1.52
66	D3	1489	U	N1-C2	-5.84	1.33	1.38
7	UG	227	GLU	CB-CG	-5.84	1.41	1.52
30	CI	128	VAL	CB-CG2	-5.84	1.40	1.52
50	DF	162	VAL	CB-CG1	-5.84	1.40	1.52
46	JP	288	TYR	CE1-CZ	-5.84	1.30	1.38
65	D2	449	U	C2-N3	-5.84	1.33	1.37
66	D3	943	C	C4-C5	-5.84	1.38	1.43
66	D3	1574	G	C5-C4	-5.84	1.34	1.38
67	D4	33	A	C6-N1	-5.84	1.31	1.35
66	D3	1049	U	C2-N3	-5.84	1.33	1.37
67	D4	27	U	N1-C6	-5.84	1.32	1.38
5	UE	20	VAL	CB-CG1	-5.83	1.40	1.52
65	D2	336	G	N9-C4	-5.83	1.33	1.38
1	UA	331	GLU	CG-CD	-5.83	1.43	1.51
18	UR	268	TYR	CE2-CZ	-5.83	1.30	1.38
23	UX	136	TYR	CD2-CE2	-5.83	1.30	1.39
33	CL	825	VAL	CB-CG2	-5.83	1.40	1.52
1	UA	165	SER	CA-CB	-5.83	1.44	1.52
66	D3	1068	C	N1-C2	-5.83	1.34	1.40
7	UG	378	VAL	CB-CG1	-5.83	1.40	1.52
1	UA	575	GLU	CB-CG	-5.83	1.41	1.52
66	D3	1614	A	N9-C4	-5.83	1.34	1.37
21	UU	101	TYR	CD1-CE1	-5.83	1.30	1.39
65	D2	340	U	N1-C6	-5.83	1.32	1.38
66	D3	1485	C	N3-C4	-5.83	1.29	1.33
46	JP	288	TYR	CD1-CE1	-5.82	1.30	1.39
66	D3	510	G	C5-C4	-5.82	1.34	1.38
46	JP	325	TYR	CE1-CZ	-5.82	1.30	1.38
58	DQ	79	TYR	CE2-CZ	-5.82	1.30	1.38
66	D3	559	C	N3-C4	-5.82	1.29	1.33
66	D3	1043	A	C5-C4	-5.82	1.34	1.38
66	D3	1044	U	N3-C4	-5.82	1.33	1.38
46	JP	356	TYR	CD1-CE1	-5.82	1.30	1.39
65	D2	273	G	N9-C8	-5.82	1.33	1.37
67	D4	47	G	N3-C4	-5.82	1.31	1.35
17	UQ	354	TYR	CD2-CE2	-5.82	1.30	1.39
67	D4	22	A	C5-C6	-5.81	1.35	1.41
44	JN	234	VAL	CB-CG1	-5.81	1.40	1.52
65	D2	396	A	C5-C6	-5.81	1.35	1.41
66	D3	333	A	N9-C4	-5.81	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
66	D3	478	A	N3-C4	-5.81	1.31	1.34
67	D4	81	U	N1-C2	-5.81	1.33	1.38
30	CI	31	GLN	CB-CG	-5.81	1.36	1.52
66	D3	486	G	C5-C4	-5.81	1.34	1.38
66	D3	1041	G	N7-C5	-5.81	1.35	1.39
66	D3	1490	C	C5-C6	-5.81	1.29	1.34
67	D4	72	C	C2-N3	-5.81	1.31	1.35
67	D4	332	G	N3-C4	-5.81	1.31	1.35
66	D3	29	U	N1-C2	-5.81	1.33	1.38
1	UA	494	ASP	CA-C	-5.80	1.37	1.52
66	D3	1609	U	N1-C6	-5.80	1.32	1.38
65	D2	82	A	C5-C4	-5.80	1.34	1.38
65	D2	292	A	C6-N1	-5.80	1.31	1.35
65	D2	329	A	N7-C5	-5.80	1.35	1.39
66	D3	1151	A	N9-C4	-5.80	1.34	1.37
66	D3	552	G	N1-C2	-5.80	1.33	1.37
67	D4	328	A	N9-C8	-5.80	1.33	1.37
66	D3	874	C	N3-C4	-5.80	1.29	1.33
66	D3	931	C	C4-C5	-5.80	1.38	1.43
66	D3	32	U	N1-C2	-5.80	1.33	1.38
31	CJ	157	PHE	CB-CG	-5.79	1.41	1.51
67	D4	84	U	C4-C5	-5.79	1.38	1.43
67	D4	330	A	C5-C6	-5.79	1.35	1.41
66	D3	1160	A	N7-C5	-5.79	1.35	1.39
66	D3	1173	C	C4-C5	-5.79	1.38	1.43
67	D4	37	G	N7-C5	-5.79	1.35	1.39
65	D2	443	G	C5-C4	-5.79	1.34	1.38
66	D3	498	G	N1-C2	-5.79	1.33	1.37
66	D3	15	U	N1-C6	-5.79	1.32	1.38
66	D3	599	A	C5-C4	-5.79	1.34	1.38
66	D3	1622	G	C5-C4	-5.79	1.34	1.38
67	D4	52	U	N1-C2	-5.79	1.33	1.38
1	UA	433	PHE	CD1-CE1	-5.78	1.27	1.39
65	D2	164	G	N3-C4	-5.78	1.31	1.35
15	UO	417	VAL	CB-CG1	-5.78	1.40	1.52
46	JP	13	TYR	CD2-CE2	-5.78	1.30	1.39
65	D2	311	C	C4-N4	-5.78	1.28	1.33
65	D2	337	G	N7-C5	-5.78	1.35	1.39
66	D3	1158	C	C2-N3	-5.78	1.31	1.35
7	UG	118	TYR	CE1-CZ	-5.78	1.31	1.38
66	D3	1638	G	C5-C6	-5.78	1.36	1.42
66	D3	571	G	C6-N1	-5.77	1.35	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	UA	704	TYR	CE1-CZ	-5.77	1.31	1.38
65	D2	320	A	N9-C4	-5.77	1.34	1.37
46	JP	58	PHE	CD1-CE1	-5.77	1.27	1.39
65	D2	307	C	C2-N3	-5.77	1.31	1.35
1	UA	457	VAL	CB-CG2	-5.77	1.40	1.52
11	UK	223	GLU	CD-OE2	-5.77	1.19	1.25
65	D2	290	G	C2-N3	-5.76	1.28	1.32
66	D3	512	A	C5-C4	-5.76	1.34	1.38
66	D3	928	U	C2-N3	-5.76	1.33	1.37
66	D3	9	U	N1-C6	-5.76	1.32	1.38
65	D2	345	U	N1-C2	-5.76	1.33	1.38
66	D3	584	C	C5-C6	-5.76	1.29	1.34
66	D3	1593	A	N3-C4	-5.76	1.31	1.34
67	D4	63	C	C2-N3	-5.76	1.31	1.35
67	D4	86	A	C6-N1	-5.76	1.31	1.35
65	D2	268	G	N7-C5	-5.76	1.35	1.39
66	D3	975	C	N3-C4	-5.76	1.29	1.33
67	D4	67	G	C8-N7	-5.75	1.27	1.30
67	D4	42	U	C2-N3	-5.75	1.33	1.37
17	UQ	317	TRP	CB-CG	-5.75	1.40	1.50
54	DJ	122	VAL	CB-CG1	-5.75	1.40	1.52
65	D2	452	A	N3-C4	-5.75	1.31	1.34
66	D3	867	G	C8-N7	-5.75	1.27	1.30
11	UK	106	TYR	CD1-CE1	-5.75	1.30	1.39
65	D2	293	U	N3-C4	-5.75	1.33	1.38
65	D2	471	C	C2-N3	-5.75	1.31	1.35
66	D3	578	U	C2-N3	-5.75	1.33	1.37
66	D3	1165	G	C2-N3	-5.75	1.28	1.32
65	D2	95	A	C5-C6	-5.74	1.35	1.41
67	D4	28	A	N1-C2	-5.74	1.29	1.34
65	D2	89	C	C5-C6	-5.74	1.29	1.34
66	D3	962	C	N1-C6	-5.74	1.33	1.37
66	D3	626	U	N1-C2	-5.74	1.33	1.38
66	D3	1043	A	N9-C8	-5.74	1.33	1.37
7	UG	165	TYR	CE1-CZ	-5.74	1.31	1.38
66	D3	6	G	N9-C4	-5.74	1.33	1.38
65	D2	272	A	C5-C4	-5.74	1.34	1.38
66	D3	1466	G	N9-C8	-5.73	1.33	1.37
7	UG	201	TYR	CG-CD2	-5.73	1.31	1.39
46	JP	48	THR	CB-CG2	-5.73	1.33	1.52
66	D3	939	A	N9-C4	-5.73	1.34	1.37
67	D4	324	U	C2-N3	-5.73	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
48	DA	154	SER	CA-CB	-5.73	1.44	1.52
1	UA	509	VAL	CB-CG1	-5.73	1.40	1.52
66	D3	593	U	N1-C2	-5.72	1.33	1.38
67	D4	23	U	C2-N3	-5.72	1.33	1.37
67	D4	83	A	N3-C4	-5.72	1.31	1.34
66	D3	574	G	N1-C2	-5.72	1.33	1.37
66	D3	1169	G	N7-C5	-5.72	1.35	1.39
66	D3	936	G	N9-C8	-5.72	1.33	1.37
66	D3	962	C	N3-C4	-5.72	1.29	1.33
67	D4	19	A	C5-C4	-5.72	1.34	1.38
67	D4	41	C	N3-C4	-5.72	1.29	1.33
66	D3	576	G	C6-N1	-5.71	1.35	1.39
50	DF	17	VAL	CB-CG2	-5.71	1.40	1.52
65	D2	388	C	C2-N3	-5.71	1.31	1.35
65	D2	406	U	C4-C5	-5.71	1.38	1.43
21	UU	355	TYR	CD1-CE1	-5.71	1.30	1.39
21	UU	455	PHE	CD2-CE2	-5.71	1.27	1.39
67	D4	57	A	C6-N1	-5.71	1.31	1.35
65	D2	411	A	N3-C4	-5.71	1.31	1.34
65	D2	475	G	N7-C5	-5.71	1.35	1.39
66	D3	887	A	N7-C5	-5.71	1.35	1.39
66	D3	1587	A	C6-N1	-5.71	1.31	1.35
7	UG	159	TYR	CD2-CE2	-5.70	1.30	1.39
66	D3	924	A	N7-C5	-5.70	1.35	1.39
66	D3	1072	C	N1-C2	-5.70	1.34	1.40
66	D3	1072	C	N1-C6	-5.70	1.33	1.37
66	D3	1610	G	C2-N3	-5.70	1.28	1.32
67	D4	60	A	C5-C6	-5.70	1.35	1.41
65	D2	408	U	N1-C2	-5.70	1.33	1.38
14	UN	842	TYR	CD1-CE1	-5.70	1.30	1.39
21	UU	61	TYR	CD2-CE2	-5.70	1.30	1.39
65	D2	146	G	C6-N1	-5.70	1.35	1.39
66	D3	555	A	N9-C8	-5.70	1.33	1.37
21	UU	426	GLU	CB-CG	-5.70	1.41	1.52
66	D3	942	G	C5-C6	-5.70	1.36	1.42
1	UA	515	TYR	CD2-CE2	-5.70	1.30	1.39
66	D3	13	C	C4-C5	-5.70	1.38	1.43
66	D3	1046	G	C8-N7	-5.70	1.27	1.30
66	D3	1622	G	C5-C6	-5.70	1.36	1.42
67	D4	65	C	C2-N3	-5.70	1.31	1.35
65	D2	453	A	N3-C4	-5.69	1.31	1.34
65	D2	487	A	C5-C6	-5.69	1.35	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
66	D3	577	G	C6-N1	-5.69	1.35	1.39
67	D4	55	A	N9-C4	-5.69	1.34	1.37
30	CI	150	VAL	CB-CG2	-5.69	1.41	1.52
66	D3	1592	A	N9-C8	-5.69	1.33	1.37
67	D4	79	G	N1-C2	-5.69	1.33	1.37
45	JO	146	VAL	CB-CG1	-5.68	1.41	1.52
66	D3	553	G	N3-C4	-5.68	1.31	1.35
66	D3	587	C	N1-C2	-5.68	1.34	1.40
67	D4	33	A	N3-C4	-5.68	1.31	1.34
67	D4	71	C	C4-C5	-5.68	1.38	1.43
65	D2	235	A	N9-C4	-5.68	1.34	1.37
66	D3	1152	A	N7-C5	-5.68	1.35	1.39
65	D2	254	C	N1-C6	-5.68	1.33	1.37
66	D3	1605	G	C2-N3	-5.68	1.28	1.32
65	D2	249	G	C6-N1	-5.68	1.35	1.39
66	D3	487	G	C8-N7	-5.68	1.27	1.30
66	D3	941	A	C5-C4	-5.68	1.34	1.38
67	D4	85	G	N9-C4	-5.68	1.33	1.38
65	D2	147	C	N1-C6	-5.67	1.33	1.37
66	D3	878	G	N7-C5	-5.67	1.35	1.39
66	D3	951	A	C5-C6	-5.67	1.35	1.41
66	D3	1588	G	C6-N1	-5.67	1.35	1.39
65	D2	278	G	C8-N7	-5.67	1.27	1.30
66	D3	1161	C	N3-C4	-5.67	1.29	1.33
66	D3	941	A	N3-C4	-5.67	1.31	1.34
66	D3	1080	U	C2-N3	-5.67	1.33	1.37
67	D4	327	G	N9-C8	-5.67	1.33	1.37
7	UG	206	VAL	CB-CG1	-5.67	1.41	1.52
66	D3	11	A	C6-N1	-5.67	1.31	1.35
67	D4	69	A	N3-C4	-5.67	1.31	1.34
21	UU	149	TYR	CD1-CE1	-5.67	1.30	1.39
65	D2	475	G	C5-C4	-5.67	1.34	1.38
66	D3	594	A	N3-C4	-5.67	1.31	1.34
66	D3	1588	G	C5-C6	-5.67	1.36	1.42
33	CL	899	VAL	CB-CG2	-5.66	1.41	1.52
65	D2	279	A	C6-N1	-5.66	1.31	1.35
65	D2	281	G	N3-C4	-5.66	1.31	1.35
65	D2	381	G	C5-C6	-5.66	1.36	1.42
65	D2	412	A	C5-C6	-5.66	1.35	1.41
66	D3	1068	C	C2-N3	-5.66	1.31	1.35
7	UG	86	VAL	CB-CG1	-5.66	1.41	1.52
21	UU	322	TYR	CE1-CZ	-5.66	1.31	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
65	D2	233	G	C5-C4	-5.66	1.34	1.38
66	D3	496	G	C5-C6	-5.66	1.36	1.42
66	D3	1635	A	N3-C4	-5.66	1.31	1.34
67	D4	77	U	N3-C4	-5.66	1.33	1.38
43	JM	136	TYR	CD2-CE2	-5.66	1.30	1.39
23	UX	53	PHE	CD1-CE1	-5.65	1.27	1.39
46	JP	247	TYR	CD1-CE1	-5.65	1.30	1.39
66	D3	549	G	N7-C5	-5.65	1.35	1.39
13	UM	801	GLU	CB-CG	-5.65	1.41	1.52
65	D2	249	G	N3-C4	-5.65	1.31	1.35
66	D3	948	G	N7-C5	-5.65	1.35	1.39
18	UR	275	TYR	CD1-CE1	-5.64	1.30	1.39
66	D3	1082	C	N1-C6	-5.64	1.33	1.37
66	D3	1616	G	N9-C8	-5.64	1.33	1.37
65	D2	336	G	C5-C6	-5.64	1.36	1.42
1	UA	585	TYR	CE1-CZ	-5.64	1.31	1.38
66	D3	477	A	N7-C5	-5.64	1.35	1.39
66	D3	1157	A	C5-C6	-5.64	1.35	1.41
65	D2	392	U	C2-O2	-5.64	1.17	1.22
66	D3	1466	G	N3-C4	-5.64	1.31	1.35
67	D4	45	U	C2-N3	-5.64	1.33	1.37
46	JP	287	TYR	CD1-CE1	-5.64	1.30	1.39
66	D3	877	G	C5-C6	-5.64	1.36	1.42
67	D4	67	G	N9-C8	-5.64	1.33	1.37
65	D2	299	G	N9-C4	-5.63	1.33	1.38
67	D4	82	G	N1-C2	-5.63	1.33	1.37
66	D3	562	G	N1-C2	-5.63	1.33	1.37
66	D3	886	U	N1-C2	-5.63	1.33	1.38
66	D3	1039	A	C5-C4	-5.63	1.34	1.38
33	CL	991	PHE	CB-CG	-5.63	1.41	1.51
66	D3	1575	G	C6-N1	-5.63	1.35	1.39
66	D3	1620	C	N3-C4	-5.63	1.30	1.33
67	D4	17	G	N1-C2	-5.63	1.33	1.37
21	UU	342	TYR	CD1-CE1	-5.62	1.30	1.39
66	D3	1750	A	N9-C4	-5.62	1.34	1.37
33	CL	195	TRP	CB-CG	-5.62	1.40	1.50
65	D2	445	U	C4-C5	-5.62	1.38	1.43
66	D3	1589	C	C4-C5	-5.62	1.38	1.43
66	D3	1596	C	C4-C5	-5.62	1.38	1.43
25	CA	270	SER	CA-CB	-5.62	1.44	1.52
46	JP	13	TYR	CD1-CE1	-5.62	1.30	1.39
65	D2	299	G	C2-N3	-5.62	1.28	1.32

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
66	D3	928	U	N1-C6	-5.62	1.32	1.38
66	D3	1082	C	N1-C2	-5.62	1.34	1.40
67	D4	55	A	C2'-C1'	-5.62	1.47	1.53
66	D3	1170	G	N1-C2	-5.62	1.33	1.37
66	D3	1174	C	C4-C5	-5.62	1.38	1.43
66	D3	488	G	C6-N1	-5.61	1.35	1.39
67	D4	28	A	N3-C4	-5.61	1.31	1.34
66	D3	1114	G	N1-C2	-5.61	1.33	1.37
65	D2	292	A	C4'-C3'	-5.61	1.47	1.52
1	UA	604	TYR	CB-CG	-5.61	1.43	1.51
21	UU	455	PHE	CE1-CZ	-5.61	1.26	1.37
67	D4	64	A	C8-N7	-5.61	1.27	1.31
67	D4	82	G	C6-O6	-5.61	1.19	1.24
18	UR	172	TYR	CE2-CZ	-5.61	1.31	1.38
18	UR	531	CYS	CB-SG	-5.61	1.72	1.81
66	D3	933	A	C5-C6	-5.61	1.36	1.41
66	D3	1161	C	N1-C6	-5.61	1.33	1.37
66	D3	1469	A	N7-C5	-5.61	1.35	1.39
66	D3	1051	G	N7-C5	-5.61	1.35	1.39
66	D3	1580	C	N3-C4	-5.61	1.30	1.33
66	D3	1594	G	N1-C2	-5.61	1.33	1.37
1	UA	167	ASP	CB-CG	-5.60	1.40	1.51
66	D3	1113	A	N3-C4	-5.60	1.31	1.34
66	D3	498	G	N7-C5	-5.60	1.35	1.39
66	D3	499	U	N1-C2	-5.60	1.33	1.38
66	D3	955	A	N3-C4	-5.60	1.31	1.34
65	D2	391	C	N1-C2	-5.60	1.34	1.40
65	D2	299	G	C8-N7	-5.60	1.27	1.30
33	CL	1073	VAL	CB-CG2	-5.60	1.41	1.52
66	D3	6	G	C6-N1	-5.60	1.35	1.39
66	D3	1614	A	C6-N1	-5.60	1.31	1.35
67	D4	49	C	N1-C2	-5.60	1.34	1.40
65	D2	234	A	C6-N1	-5.60	1.31	1.35
66	D3	1113	A	N9-C4	-5.60	1.34	1.37
7	UG	322	VAL	CB-CG2	-5.59	1.41	1.52
21	UU	593	PHE	CD1-CE1	-5.59	1.28	1.39
65	D2	319	A	N9-C4	-5.59	1.34	1.37
65	D2	349	G	C5-C4	-5.59	1.34	1.38
66	D3	514	G	N3-C4	-5.59	1.31	1.35
7	UG	408	GLU	CG-CD	-5.59	1.43	1.51
66	D3	548	G	N9-C8	-5.59	1.33	1.37
66	D3	553	G	C6-N1	-5.59	1.35	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
67	D4	30	A	C8-N7	-5.59	1.27	1.31
66	D3	955	A	C6-N1	-5.59	1.31	1.35
66	D3	1526	A	N9-C4	-5.59	1.34	1.37
32	CK	477	GLU	CG-CD	-5.58	1.43	1.51
31	CJ	123	VAL	CB-CG1	-5.58	1.41	1.52
31	CJ	157	PHE	C-N	-5.58	1.23	1.34
66	D3	548	G	C5-C6	-5.58	1.36	1.42
66	D3	1482	C	N1-C2	-5.58	1.34	1.40
65	D2	298	A	N1-C2	-5.58	1.29	1.34
67	D4	82	G	N9-C8	-5.58	1.33	1.37
7	UG	168	VAL	CB-CG1	-5.58	1.41	1.52
65	D2	278	G	N9-C4	-5.58	1.33	1.38
67	D4	322	A	N7-C5	-5.58	1.35	1.39
66	D3	564	G	C5-C6	-5.58	1.36	1.42
66	D3	884	A	N7-C5	-5.58	1.35	1.39
1	UA	194	VAL	CB-CG1	-5.58	1.41	1.52
1	UA	604	TYR	CE2-CZ	-5.58	1.31	1.38
66	D3	1484	G	C6-N1	-5.58	1.35	1.39
67	D4	78	G	C6-N1	-5.58	1.35	1.39
18	UR	494	TYR	CE1-CZ	-5.57	1.31	1.38
30	CI	173	TYR	CD2-CE2	-5.57	1.30	1.39
66	D3	1075	C	C4-C5	-5.57	1.38	1.43
66	D3	1577	A	C5-C6	-5.57	1.36	1.41
65	D2	477	G	C5-C4	-5.57	1.34	1.38
21	UU	61	TYR	CE1-CZ	-5.57	1.31	1.38
65	D2	457	G	N7-C5	-5.57	1.35	1.39
65	D2	451	G	C5-C4	-5.57	1.34	1.38
1	UA	353	TYR	CD1-CE1	-5.57	1.30	1.39
66	D3	6	G	N1-C2	-5.57	1.33	1.37
66	D3	1074	G	C5-C4	-5.57	1.34	1.38
66	D3	1482	C	C5-C6	-5.57	1.29	1.34
66	D3	1616	G	N7-C5	-5.57	1.35	1.39
33	CL	947	PHE	CD2-CE2	-5.57	1.28	1.39
66	D3	591	A	N7-C5	-5.57	1.35	1.39
65	D2	271	G	C5-C4	-5.56	1.34	1.38
66	D3	565	C	N1-C2	-5.56	1.34	1.40
66	D3	1077	C	N1-C2	-5.56	1.34	1.40
33	CL	897	CYS	CB-SG	-5.56	1.72	1.81
65	D2	411	A	N7-C5	-5.56	1.35	1.39
66	D3	887	A	C5-C4	-5.56	1.34	1.38
66	D3	1604	U	C5-C6	-5.56	1.29	1.34
7	UG	159	TYR	CG-CD1	-5.56	1.31	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
15	UO	237	TRP	CB-CG	-5.56	1.40	1.50
65	D2	472	A	C5-C6	-5.56	1.36	1.41
66	D3	1044	U	C2-N3	-5.56	1.33	1.37
67	D4	49	C	N1-C6	-5.56	1.33	1.37
21	UU	912	TRP	CB-CG	-5.56	1.40	1.50
30	CI	36	TYR	CE1-CZ	-5.56	1.31	1.38
31	CJ	58	TYR	CD1-CE1	-5.56	1.31	1.39
50	DF	162	VAL	CB-CG2	-5.56	1.41	1.52
65	D2	480	C	N1-C6	-5.56	1.33	1.37
1	UA	7	PHE	CD1-CE1	-5.56	1.28	1.39
31	CJ	204	CYS	CB-SG	-5.56	1.72	1.81
65	D2	397	A	C6-N1	-5.56	1.31	1.35
18	UR	555	TRP	CZ3-CH2	-5.56	1.31	1.40
65	D2	381	G	C2-N2	-5.55	1.28	1.34
65	D2	481	U	C4-C5	-5.55	1.38	1.43
66	D3	871	G	C6-N1	-5.55	1.35	1.39
66	D3	1609	U	C5-C6	-5.55	1.29	1.34
66	D3	1614	A	C5-C6	-5.55	1.36	1.41
67	D4	46	U	C2-N3	-5.55	1.33	1.37
28	CF	50	GLU	CG-CD	-5.55	1.43	1.51
65	D2	334	G	C6-N1	-5.55	1.35	1.39
66	D3	567	A	C5-C6	-5.55	1.36	1.41
28	CF	39	GLU	CG-CD	-5.55	1.43	1.51
65	D2	146	G	C5-C4	-5.55	1.34	1.38
65	D2	297	U	C4-C5	-5.55	1.38	1.43
66	D3	1588	G	N3-C4	-5.54	1.31	1.35
67	D4	35	U	N1-C6	-5.54	1.32	1.38
65	D2	274	C	C2-O2	-5.54	1.19	1.24
65	D2	375	C	N3-C4	-5.54	1.30	1.33
66	D3	1047	G	C6-N1	-5.54	1.35	1.39
4	UD	195	TRP	CB-CG	-5.54	1.40	1.50
27	CE	362	VAL	CB-CG1	-5.54	1.41	1.52
66	D3	1613	U	C5-C6	-5.54	1.29	1.34
67	D4	80	U	P-O5'	-5.54	1.54	1.59
67	D4	56	A	N9-C4	-5.54	1.34	1.37
23	UX	145	VAL	CB-CG1	-5.54	1.41	1.52
66	D3	499	U	N3-C4	-5.53	1.33	1.38
66	D3	550	A	N7-C5	-5.53	1.35	1.39
67	D4	29	U	N1-C2	-5.53	1.33	1.38
66	D3	1049	U	N3-C4	-5.53	1.33	1.38
1	UA	476	VAL	CB-CG2	-5.53	1.41	1.52
66	D3	1048	G	N3-C4	-5.53	1.31	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
67	D4	331	A	C5-C4	-5.53	1.34	1.38
66	D3	549	G	N3-C4	-5.53	1.31	1.35
66	D3	875	G	N1-C2	-5.53	1.33	1.37
1	UA	606	VAL	CB-CG2	-5.52	1.41	1.52
31	CJ	11	GLU	CB-CG	-5.52	1.41	1.52
65	D2	86	C	N1-C2	-5.52	1.34	1.40
66	D3	1083	G	N7-C5	-5.52	1.35	1.39
44	JN	253	TYR	CB-CG	-5.52	1.43	1.51
65	D2	281	G	C6-N1	-5.52	1.35	1.39
65	D2	333	G	N9-C8	-5.52	1.33	1.37
66	D3	1605	G	N9-C4	-5.52	1.33	1.38
66	D3	551	G	N9-C8	-5.52	1.33	1.37
65	D2	412	A	C5-C4	-5.52	1.34	1.38
66	D3	545	A	C6-N1	-5.52	1.31	1.35
66	D3	954	G	N7-C5	-5.52	1.35	1.39
66	D3	1642	G	N9-C4	-5.52	1.33	1.38
21	UU	466	VAL	CB-CG2	-5.51	1.41	1.52
66	D3	1485	C	C5-C6	-5.51	1.29	1.34
15	UO	30	TYR	CE2-CZ	-5.51	1.31	1.38
65	D2	243	A	C6-N1	-5.51	1.31	1.35
66	D3	867	G	N9-C8	-5.51	1.33	1.37
1	UA	84	PHE	CD1-CE1	-5.51	1.28	1.39
1	UA	308	VAL	CB-CG2	-5.51	1.41	1.52
58	DQ	97	VAL	CB-CG1	-5.51	1.41	1.52
66	D3	1071	U	N1-C2	-5.51	1.33	1.38
66	D3	1603	U	C2-N3	-5.51	1.33	1.37
65	D2	384	U	N1-C2	-5.50	1.33	1.38
66	D3	1588	G	N9-C8	-5.50	1.33	1.37
66	D3	568	G	C5-C6	-5.50	1.36	1.42
7	UG	216	TYR	CD1-CE1	-5.50	1.31	1.39
18	UR	320	TYR	CD2-CE2	-5.50	1.31	1.39
65	D2	238	G	N3-C4	-5.50	1.31	1.35
65	D2	391	C	C5-C6	-5.50	1.29	1.34
66	D3	1488	G	N7-C5	-5.50	1.35	1.39
67	D4	34	A	C6-N1	-5.50	1.31	1.35
66	D3	1	U	C2-N3	-5.50	1.33	1.37
65	D2	232	U	C4-C5	-5.50	1.38	1.43
65	D2	162	U	N3-C4	-5.49	1.33	1.38
31	CJ	11	GLU	CG-CD	-5.49	1.43	1.51
11	UK	106	TYR	CD2-CE2	-5.49	1.31	1.39
23	UX	136	TYR	CD1-CE1	-5.49	1.31	1.39
66	D3	1037	C	C5-C6	-5.49	1.29	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
65	D2	90	G	N1-C2	-5.49	1.33	1.37
65	D2	309	A	N1-C2	-5.49	1.29	1.34
66	D3	1157	A	C6-N1	-5.49	1.31	1.35
66	D3	1466	G	C5-C6	-5.49	1.36	1.42
1	UA	515	TYR	CD1-CE1	-5.49	1.31	1.39
65	D2	83	U	N3-C4	-5.49	1.33	1.38
65	D2	308	A	N9-C8	-5.48	1.33	1.37
65	D2	396	A	C5-C4	-5.48	1.34	1.38
66	D3	562	G	N3-C4	-5.48	1.31	1.35
66	D3	944	A	C6-N1	-5.48	1.31	1.35
65	D2	480	C	N1-C2	-5.48	1.34	1.40
18	UR	579	VAL	CB-CG2	-5.48	1.41	1.52
65	D2	291	G	P-O5'	-5.48	1.54	1.59
66	D3	1167	G	C5-C4	-5.48	1.34	1.38
66	D3	1484	G	N3-C4	-5.48	1.31	1.35
66	D3	5	U	N1-C6	-5.48	1.33	1.38
66	D3	863	A	N3-C4	-5.48	1.31	1.34
21	UU	378	PHE	CE1-CZ	-5.48	1.26	1.37
65	D2	378	C	N1-C6	-5.48	1.33	1.37
65	D2	401	A	C5-C4	-5.48	1.34	1.38
65	D2	398	A	C5-C6	-5.47	1.36	1.41
66	D3	543	C	N1-C6	-5.47	1.33	1.37
66	D3	927	C	N1-C2	-5.47	1.34	1.40
66	D3	939	A	N7-C5	-5.47	1.35	1.39
67	D4	19	A	C6-N1	-5.47	1.31	1.35
25	CA	320	TYR	CD1-CE1	-5.47	1.31	1.39
26	CD	131	VAL	CB-CG2	-5.47	1.41	1.52
65	D2	454	C	C4-C5	-5.47	1.38	1.43
66	D3	1618	C	N3-C4	-5.47	1.30	1.33
46	JP	289	TYR	CE2-CZ	-5.47	1.31	1.38
65	D2	287	G	N7-C5	-5.47	1.35	1.39
66	D3	876	G	N1-C2	-5.47	1.33	1.37
66	D3	952	A	C6-N1	-5.47	1.31	1.35
66	D3	1040	G	N3-C4	-5.47	1.31	1.35
66	D3	1083	G	C6-N1	-5.47	1.35	1.39
66	D3	1164	G	C5-C4	-5.47	1.34	1.38
67	D4	56	A	N7-C5	-5.47	1.35	1.39
1	UA	684	VAL	CB-CG2	-5.47	1.41	1.52
7	UG	165	TYR	CD2-CE2	-5.47	1.31	1.39
11	UK	63	TYR	CE2-CZ	-5.47	1.31	1.38
23	UX	100	ASP	CB-CG	-5.47	1.40	1.51
65	D2	230	C	N1-C6	-5.47	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
65	D2	282	G	C8-N7	-5.47	1.27	1.30
66	D3	546	U	C4-C5	-5.47	1.38	1.43
66	D3	1635	A	N9-C8	-5.46	1.33	1.37
1	UA	331	GLU	CB-CG	-5.46	1.41	1.52
54	DJ	96	VAL	CB-CG1	-5.46	1.41	1.52
65	D2	290	G	C5-C6	-5.46	1.36	1.42
65	D2	248	G	N9-C8	-5.46	1.34	1.37
1	UA	361	VAL	CB-CG1	-5.46	1.41	1.52
66	D3	938	G	N7-C5	-5.46	1.35	1.39
30	CI	36	TYR	CD1-CE1	-5.46	1.31	1.39
65	D2	409	C	C4-C5	-5.46	1.38	1.43
66	D3	561	G	C6-N1	-5.46	1.35	1.39
66	D3	578	U	N1-C2	-5.46	1.33	1.38
66	D3	877	G	C5-C4	-5.46	1.34	1.38
66	D3	1610	G	N9-C8	-5.46	1.34	1.37
66	D3	1484	G	C8-N7	-5.45	1.27	1.30
67	D4	42	U	N3-C4	-5.45	1.33	1.38
1	UA	509	VAL	CB-CG2	-5.45	1.41	1.52
18	UR	432	VAL	CB-CG2	-5.45	1.41	1.52
54	DJ	85	VAL	CB-CG2	-5.45	1.41	1.52
65	D2	299	G	N9-C8	-5.45	1.34	1.37
65	D2	396	A	N7-C5	-5.45	1.35	1.39
65	D2	310	U	N1-C6	-5.45	1.33	1.38
66	D3	590	C	C5-C6	-5.45	1.29	1.34
21	UU	423	ARG	CG-CD	-5.44	1.38	1.51
21	UU	601	VAL	CB-CG2	-5.44	1.41	1.52
46	JP	14	VAL	CB-CG2	-5.44	1.41	1.52
25	CA	96	VAL	CB-CG1	-5.44	1.41	1.52
46	JP	372	VAL	CB-CG1	-5.44	1.41	1.52
65	D2	268	G	N9-C8	-5.44	1.34	1.37
66	D3	939	A	C5-C6	-5.44	1.36	1.41
30	CI	173	TYR	CE2-CZ	-5.44	1.31	1.38
46	JP	35	PHE	CD2-CE2	-5.44	1.28	1.39
65	D2	84	G	N7-C5	-5.44	1.35	1.39
66	D3	511	A	N9-C4	-5.44	1.34	1.37
66	D3	1041	G	N1-C2	-5.44	1.33	1.37
1	UA	411	VAL	CB-CG2	-5.44	1.41	1.52
65	D2	275	A	C5-C4	-5.44	1.34	1.38
66	D3	1041	G	C5-C4	-5.44	1.34	1.38
65	D2	295	A	C5-C4	-5.44	1.34	1.38
66	D3	513	U	C2-N3	-5.44	1.33	1.37
67	D4	56	A	C5-C6	-5.44	1.36	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
67	D4	57	A	C5-C4	-5.44	1.34	1.38
66	D3	1484	G	N1-C2	-5.43	1.33	1.37
66	D3	1597	A	C5-C4	-5.43	1.34	1.38
14	UN	313	PHE	CB-CG	-5.43	1.42	1.51
58	DQ	22	VAL	CB-CG2	-5.43	1.41	1.52
66	D3	31	C	N1-C2	-5.43	1.34	1.40
21	UU	342	TYR	CD2-CE2	-5.43	1.31	1.39
33	CL	935	VAL	CB-CG2	-5.43	1.41	1.52
66	D3	1591	C	N3-C4	-5.43	1.30	1.33
66	D3	478	A	C5-C4	-5.43	1.34	1.38
66	D3	1613	U	N3-C4	-5.43	1.33	1.38
46	JP	230	ASN	CB-CG	-5.42	1.38	1.51
66	D3	1156	C	N1-C2	-5.42	1.34	1.40
6	UF	7	TYR	CD1-CE1	-5.42	1.31	1.39
66	D3	416	A	N3-C4	-5.42	1.31	1.34
66	D3	588	U	C2-N3	-5.42	1.33	1.37
46	JP	54	PHE	CD2-CE2	-5.42	1.28	1.39
65	D2	162	U	C4-C5	-5.42	1.38	1.43
66	D3	1588	G	N9-C4	-5.42	1.33	1.38
10	UJ	129	VAL	CB-CG1	-5.42	1.41	1.52
14	UN	842	TYR	CE1-CZ	-5.42	1.31	1.38
30	CI	161	VAL	CB-CG2	-5.41	1.41	1.52
66	D3	1582	U	N1-C6	-5.41	1.33	1.38
67	D4	29	U	C4-O4	-5.41	1.19	1.23
66	D3	1592	A	C6-N1	-5.41	1.31	1.35
5	UE	29	VAL	CB-CG2	-5.41	1.41	1.52
66	D3	8	U	C4-O4	-5.41	1.19	1.23
66	D3	930	A	C5-C4	-5.41	1.34	1.38
66	D3	1750	A	N3-C4	-5.41	1.31	1.34
21	UU	441	ARG	CG-CD	-5.41	1.38	1.51
65	D2	302	A	C5-C4	-5.41	1.34	1.38
66	D3	936	G	N3-C4	-5.41	1.31	1.35
67	D4	51	C	N3-C4	-5.41	1.30	1.33
65	D2	412	A	N7-C5	-5.41	1.36	1.39
65	D2	476	A	N3-C4	-5.41	1.31	1.34
65	D2	250	G	C5-C4	-5.40	1.34	1.38
66	D3	-1	G	C6-N1	-5.40	1.35	1.39
66	D3	14	C	N1-C2	-5.40	1.34	1.40
18	UR	320	TYR	CE2-CZ	-5.40	1.31	1.38
65	D2	259	G	N7-C5	-5.40	1.36	1.39
65	D2	449	U	N1-C2	-5.40	1.33	1.38
66	D3	940	A	N3-C4	-5.40	1.31	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
66	D3	1064	G	N7-C5	-5.40	1.36	1.39
65	D2	447	G	N9-C4	-5.40	1.33	1.38
28	CF	97	VAL	CB-CG1	-5.40	1.41	1.52
30	CI	44	TYR	CE2-CZ	-5.40	1.31	1.38
67	D4	20	U	C4-C5	-5.40	1.38	1.43
66	D3	941	A	N9-C4	-5.40	1.34	1.37
66	D3	884	A	N9-C4	-5.39	1.34	1.37
1	UA	173	TRP	CB-CG	-5.39	1.40	1.50
15	UO	366	TYR	CD2-CE2	-5.39	1.31	1.39
65	D2	458	A	C6-N1	-5.39	1.31	1.35
65	D2	482	A	N7-C5	-5.39	1.36	1.39
30	CI	36	TYR	CE2-CZ	-5.39	1.31	1.38
65	D2	479	G	C5-C4	-5.39	1.34	1.38
66	D3	1632	C	N3-C4	-5.39	1.30	1.33
67	D4	83	A	N9-C8	-5.39	1.33	1.37
65	D2	248	G	N9-C4	-5.39	1.33	1.38
65	D2	273	G	N7-C5	-5.39	1.36	1.39
66	D3	1617	U	C4-C5	-5.39	1.38	1.43
30	CI	128	VAL	CB-CG1	-5.39	1.41	1.52
66	D3	956	C	N1-C2	-5.39	1.34	1.40
67	D4	62	C	N3-C4	-5.39	1.30	1.33
7	UG	139	TRP	CE3-CZ3	-5.38	1.29	1.38
50	DF	95	ASN	CB-CG	-5.38	1.38	1.51
58	DQ	92	TYR	CD1-CE1	-5.38	1.31	1.39
65	D2	476	A	N7-C5	-5.38	1.36	1.39
4	UD	321	VAL	CB-CG1	-5.38	1.41	1.52
67	D4	45	U	N3-C4	-5.38	1.33	1.38
7	UG	196	LEU	CG-CD2	-5.38	1.31	1.51
65	D2	88	U	C2-N3	-5.38	1.33	1.37
65	D2	244	U	N3-C4	-5.38	1.33	1.38
66	D3	559	C	C2-N3	-5.38	1.31	1.35
66	D3	566	C	N1-C6	-5.38	1.33	1.37
18	UR	555	TRP	CD2-CE2	-5.38	1.34	1.41
65	D2	320	A	N7-C5	-5.38	1.36	1.39
66	D3	1042	G	N9-C8	-5.38	1.34	1.37
12	UL	854	CYS	CB-SG	-5.38	1.73	1.81
65	D2	272	A	N3-C4	-5.38	1.31	1.34
65	D2	473	A	N7-C5	-5.38	1.36	1.39
18	UR	429	TYR	CE2-CZ	-5.38	1.31	1.38
66	D3	561	G	N7-C5	-5.37	1.36	1.39
66	D3	1494	C	N1-C6	-5.37	1.33	1.37
65	D2	160	C	N1-C2	-5.37	1.34	1.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
66	D3	944	A	N3-C4	-5.37	1.31	1.34
66	D3	1153	G	C5-C4	-5.37	1.34	1.38
66	D3	1471	A	C5-C6	-5.37	1.36	1.41
67	D4	333	U	C2-N3	-5.37	1.33	1.37
65	D2	273	G	C2-N3	-5.37	1.28	1.32
65	D2	446	U	C2-N3	-5.37	1.33	1.37
65	D2	459	U	C4-C5	-5.37	1.38	1.43
66	D3	575	C	N1-C2	-5.37	1.34	1.40
1	UA	577	SER	CA-CB	-5.36	1.45	1.52
66	D3	929	A	N3-C4	-5.36	1.31	1.34
66	D3	1038	U	N1-C6	-5.36	1.33	1.38
66	D3	1607	G	N9-C4	-5.36	1.33	1.38
66	D3	569	C	N3-C4	-5.36	1.30	1.33
66	D3	936	G	N7-C5	-5.36	1.36	1.39
65	D2	298	A	C6-N6	-5.36	1.29	1.33
65	D2	396	A	C6-N1	-5.36	1.31	1.35
65	D2	447	G	C2-N3	-5.36	1.28	1.32
46	JP	362	TYR	CD1-CE1	-5.36	1.31	1.39
66	D3	867	G	C6-N1	-5.35	1.35	1.39
25	CA	143	VAL	CB-CG1	-5.35	1.41	1.52
44	JN	221	VAL	CB-CG1	-5.35	1.41	1.52
1	UA	425	PHE	CD2-CE2	-5.35	1.28	1.39
21	UU	443	TRP	CE3-CZ3	-5.35	1.29	1.38
21	UU	149	TYR	CD2-CE2	-5.35	1.31	1.39
66	D3	553	G	N1-C2	-5.35	1.33	1.37
33	CL	939	TYR	CE1-CZ	-5.35	1.31	1.38
41	JJ	130	MET	CA-CB	5.35	1.65	1.53
66	D3	868	G	C5-C4	-5.35	1.34	1.38
65	D2	89	C	C2-N3	-5.34	1.31	1.35
66	D3	973	A	N9-C4	-5.34	1.34	1.37
67	D4	32	G	N7-C5	-5.34	1.36	1.39
67	D4	331	A	C5-C6	-5.34	1.36	1.41
21	UU	593	PHE	CE1-CZ	-5.34	1.27	1.37
1	UA	52	TYR	CE2-CZ	-5.34	1.31	1.38
10	UJ	101	TYR	CE2-CZ	-5.34	1.31	1.38
1	UA	207	TYR	CD1-CE1	-5.34	1.31	1.39
65	D2	390	C	N3-C4	-5.34	1.30	1.33
66	D3	1580	C	N1-C6	-5.34	1.33	1.37
31	CJ	58	TYR	CE2-CZ	-5.34	1.31	1.38
46	JP	58	PHE	CB-CG	-5.34	1.42	1.51
30	CI	87	VAL	CB-CG1	-5.33	1.41	1.52
46	JP	288	TYR	CE2-CZ	-5.33	1.31	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
66	D3	1066	C	N1-C2	-5.33	1.34	1.40
66	D3	1590	G	N9-C4	-5.33	1.33	1.38
3	UC	582	VAL	CB-CG2	-5.33	1.41	1.52
21	UU	443	TRP	CG-CD1	-5.33	1.29	1.36
65	D2	487	A	C6-N1	-5.33	1.31	1.35
65	D2	452	A	C6-N1	-5.33	1.31	1.35
66	D3	1072	C	C5-C6	-5.33	1.30	1.34
33	CL	1074	GLN	CB-CG	-5.33	1.38	1.52
18	UR	515	THR	CB-CG2	-5.32	1.34	1.52
65	D2	387	C	C4-N4	-5.32	1.29	1.33
66	D3	597	G	C6-N1	-5.32	1.35	1.39
21	UU	183	VAL	CB-CG2	-5.32	1.41	1.52
65	D2	341	G	N1-C2	-5.32	1.33	1.37
65	D2	345	U	N3-C4	-5.32	1.33	1.38
66	D3	953	G	N1-C2	-5.32	1.33	1.37
10	UJ	221	VAL	CB-CG1	-5.32	1.41	1.52
46	JP	362	TYR	CD2-CE2	-5.32	1.31	1.39
58	DQ	92	TYR	CE2-CZ	-5.32	1.31	1.38
21	UU	654	TRP	CE3-CZ3	-5.32	1.29	1.38
31	CJ	131	CYS	CB-SG	-5.32	1.73	1.81
65	D2	392	U	N3-C4	-5.32	1.33	1.38
66	D3	11	A	C5-C4	-5.32	1.35	1.38
67	D4	328	A	N3-C4	-5.32	1.31	1.34
25	CA	240	VAL	CB-CG2	-5.31	1.41	1.52
66	D3	1478	G	N7-C5	-5.31	1.36	1.39
65	D2	254	C	N1-C2	-5.31	1.34	1.40
65	D2	339	A	N9-C4	-5.31	1.34	1.37
67	D4	37	G	C2-N3	-5.31	1.28	1.32
66	D3	919	A	N3-C4	-5.31	1.31	1.34
15	UO	108	TYR	CE1-CZ	-5.30	1.31	1.38
65	D2	299	G	N3-C4	-5.30	1.31	1.35
66	D3	11	A	N9-C4	-5.30	1.34	1.37
66	D3	1466	G	C6-N1	-5.30	1.35	1.39
66	D3	1582	U	C4-C5	-5.30	1.38	1.43
66	D3	953	G	C6-N1	-5.30	1.35	1.39
66	D3	1613	U	C4-O4	-5.30	1.19	1.23
66	D3	552	G	C5-C6	-5.30	1.37	1.42
67	D4	31	G	C2-N3	-5.30	1.28	1.32
10	UJ	262	VAL	CB-CG1	-5.30	1.41	1.52
43	JM	136	TYR	CD1-CE1	-5.30	1.31	1.39
46	JP	332	TYR	CE2-CZ	-5.30	1.31	1.38
65	D2	100	G	C5-C6	-5.30	1.37	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
65	D2	450	G	C6-N1	-5.30	1.35	1.39
65	D2	348	U	C2-N3	-5.29	1.34	1.37
4	UD	201	VAL	CB-CG1	-5.29	1.41	1.52
4	UD	244	VAL	CB-CG2	-5.29	1.41	1.52
67	D4	40	A	C5-C6	-5.29	1.36	1.41
30	CI	44	TYR	CE1-CZ	-5.29	1.31	1.38
1	UA	279	PHE	CD2-CE2	-5.29	1.28	1.39
1	UA	704	TYR	CD1-CE1	-5.29	1.31	1.39
65	D2	274	C	N3-C4	-5.29	1.30	1.33
67	D4	325	C	N1-C2	-5.29	1.34	1.40
46	JP	375	TRP	CD2-CE2	-5.28	1.35	1.41
65	D2	410	A	N7-C5	-5.28	1.36	1.39
66	D3	939	A	N3-C4	-5.28	1.31	1.34
1	UA	401	VAL	CB-CG1	-5.28	1.41	1.52
21	UU	101	TYR	CE2-CZ	-5.28	1.31	1.38
65	D2	271	G	N1-C2	-5.28	1.33	1.37
66	D3	929	A	N7-C5	-5.28	1.36	1.39
66	D3	1593	A	C6-N1	-5.28	1.31	1.35
7	UG	173	TYR	CD1-CE1	-5.28	1.31	1.39
66	D3	938	G	N9-C8	-5.28	1.34	1.37
66	D3	1488	G	N9-C8	-5.28	1.34	1.37
65	D2	246	G	N9-C8	-5.27	1.34	1.37
65	D2	276	G	C5-C4	-5.27	1.34	1.38
65	D2	473	A	C5-C6	-5.27	1.36	1.41
66	D3	1167	G	C2-N3	-5.27	1.28	1.32
65	D2	85	G	C5-C4	-5.27	1.34	1.38
66	D3	601	A	N9-C4	-5.27	1.34	1.37
66	D3	1042	G	C5-C6	-5.27	1.37	1.42
65	D2	270	U	C4-C5	-5.27	1.38	1.43
1	UA	601	ILE	CB-CG2	-5.27	1.36	1.52
66	D3	1069	A	N3-C4	-5.27	1.31	1.34
66	D3	866	G	N7-C5	-5.26	1.36	1.39
66	D3	1612	U	C2-N3	-5.26	1.34	1.37
65	D2	258	C	N3-C4	-5.26	1.30	1.33
1	UA	50	PHE	CB-CG	-5.26	1.42	1.51
18	UR	178	VAL	CB-CG2	-5.26	1.41	1.52
18	UR	352	GLN	CB-CG	-5.26	1.38	1.52
66	D3	556	A	C5-C4	-5.26	1.35	1.38
66	D3	584	C	N1-C2	-5.26	1.34	1.40
66	D3	976	G	N7-C5	-5.26	1.36	1.39
66	D3	574	G	N7-C5	-5.26	1.36	1.39
1	UA	617	VAL	CB-CG1	-5.26	1.41	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
66	D3	568	G	N7-C5	-5.26	1.36	1.39
66	D3	938	G	C6-N1	-5.26	1.35	1.39
66	D3	554	C	N1-C2	-5.25	1.34	1.40
66	D3	572	C	C2-N3	-5.25	1.31	1.35
66	D3	1047	G	N1-C2	-5.25	1.33	1.37
7	UG	452	VAL	CB-CG1	-5.25	1.41	1.52
65	D2	163	G	C5-C6	-5.25	1.37	1.42
65	D2	259	G	C5-C4	-5.25	1.34	1.38
66	D3	1465	C	N1-C2	-5.25	1.34	1.40
66	D3	935	U	C2-N3	-5.25	1.34	1.37
31	CJ	157	PHE	CD2-CE2	-5.25	1.28	1.39
46	JP	287	TYR	CE2-CZ	-5.25	1.31	1.38
65	D2	334	G	N9-C8	-5.25	1.34	1.37
66	D3	1026	A	N9-C4	-5.25	1.34	1.37
30	CI	148	TYR	CD1-CE1	-5.25	1.31	1.39
66	D3	878	G	N9-C8	-5.24	1.34	1.37
66	D3	1034	C	C4-C5	-5.24	1.38	1.43
66	D3	1067	C	N1-C2	-5.24	1.34	1.40
66	D3	1074	G	N9-C4	-5.24	1.33	1.38
67	D4	43	C	C4-C5	-5.24	1.38	1.43
67	D4	83	A	C5-C6	-5.24	1.36	1.41
44	JN	263	VAL	CB-CG2	-5.24	1.41	1.52
66	D3	1485	C	C2-N3	-5.24	1.31	1.35
15	UO	85	TYR	CD1-CE1	-5.24	1.31	1.39
65	D2	380	A	C5-C6	-5.24	1.36	1.41
67	D4	57	A	N7-C5	-5.24	1.36	1.39
15	UO	420	GLU	CB-CG	-5.24	1.42	1.52
66	D3	1170	G	C5-C4	-5.24	1.34	1.38
5	UE	204	SER	CA-CB	-5.23	1.45	1.52
65	D2	458	A	N9-C4	-5.23	1.34	1.37
66	D3	926	A	C5-C4	-5.23	1.35	1.38
66	D3	1153	G	N7-C5	-5.23	1.36	1.39
65	D2	308	A	N1-C2	-5.23	1.29	1.34
65	D2	335	G	N3-C4	-5.23	1.31	1.35
65	D2	381	G	N9-C4	-5.23	1.33	1.38
7	UG	149	PHE	CB-CG	-5.23	1.42	1.51
1	UA	438	VAL	CB-CG1	-5.23	1.41	1.52
65	D2	100	G	N9-C4	-5.23	1.33	1.38
65	D2	263	C	N1-C6	-5.23	1.34	1.37
66	D3	485	A	N3-C4	-5.22	1.31	1.34
66	D3	556	A	N7-C5	-5.22	1.36	1.39
66	D3	878	G	N1-C2	-5.22	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
66	D3	1151	A	C5-C6	-5.22	1.36	1.41
67	D4	63	C	C5-C6	-5.22	1.30	1.34
65	D2	87	C	N3-C4	-5.22	1.30	1.33
65	D2	332	U	N3-C4	-5.22	1.33	1.38
1	UA	372	TRP	CD2-CE2	-5.22	1.35	1.41
66	D3	28	A	N3-C4	-5.22	1.31	1.34
66	D3	1166	A	C2-N3	-5.22	1.28	1.33
66	D3	1632	C	N1-C2	-5.22	1.34	1.40
21	UU	474	PHE	CB-CG	-5.22	1.42	1.51
65	D2	246	G	N3-C4	-5.22	1.31	1.35
66	D3	576	G	N9-C8	-5.22	1.34	1.37
66	D3	594	A	C5-C6	-5.22	1.36	1.41
66	D3	11	A	C5-C6	-5.21	1.36	1.41
60	DW	49	GLU	CG-CD	-5.21	1.44	1.51
30	CI	160	TRP	CD2-CE2	-5.21	1.35	1.41
65	D2	146	G	N3-C4	-5.21	1.31	1.35
65	D2	253	U	N1-C2	-5.21	1.33	1.38
65	D2	268	G	C5-C4	-5.21	1.34	1.38
66	D3	957	G	N7-C5	-5.21	1.36	1.39
46	JP	94	TYR	CE2-CZ	-5.21	1.31	1.38
65	D2	246	G	C8-N7	-5.21	1.27	1.30
65	D2	266	U	N1-C2	-5.21	1.33	1.38
1	UA	315	GLU	CB-CG	-5.21	1.42	1.52
1	UA	567	ASP	CB-CG	-5.21	1.40	1.51
65	D2	242	C	C2-N3	-5.21	1.31	1.35
65	D2	302	A	N9-C4	-5.21	1.34	1.37
67	D4	69	A	N9-C8	-5.21	1.33	1.37
33	CL	987	TYR	CD2-CE2	-5.21	1.31	1.39
66	D3	957	G	N9-C8	-5.20	1.34	1.37
67	D4	323	G	C5-C4	-5.20	1.34	1.38
66	D3	1586	A	N1-C2	-5.20	1.29	1.34
66	D3	-4	A	C5-C6	-5.20	1.36	1.41
66	D3	1592	A	C5-C6	-5.20	1.36	1.41
46	JP	71	TYR	CE1-CZ	-5.20	1.31	1.38
66	D3	944	A	N9-C4	-5.20	1.34	1.37
65	D2	371	G	C5-C4	-5.19	1.34	1.38
1	UA	7	PHE	CD2-CE2	-5.19	1.28	1.39
66	D3	315	A	N9-C4	-5.19	1.34	1.37
67	D4	84	U	C4-O4	-5.19	1.19	1.23
1	UA	433	PHE	CD2-CE2	-5.19	1.28	1.39
4	UD	139	CYS	CB-SG	-5.19	1.73	1.81
65	D2	305	A	N3-C4	-5.19	1.31	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
66	D3	930	A	C8-N7	-5.19	1.27	1.31
21	UU	578	VAL	CB-CG2	-5.19	1.42	1.52
66	D3	1749	A	N9-C4	-5.19	1.34	1.37
67	D4	19	A	N9-C4	-5.19	1.34	1.37
66	D3	6	G	C2-N3	-5.19	1.28	1.32
46	JP	58	PHE	CD2-CE2	-5.18	1.28	1.39
65	D2	250	G	N7-C5	-5.18	1.36	1.39
66	D3	478	A	C5-C6	-5.18	1.36	1.41
66	D3	1527	C	C4-C5	-5.18	1.38	1.43
66	D3	1617	U	N1-C6	-5.18	1.33	1.38
67	D4	79	G	C2-N3	-5.18	1.28	1.32
7	UG	198	PHE	CE2-CZ	-5.18	1.27	1.37
23	UX	71	PHE	CB-CG	-5.18	1.42	1.51
46	JP	58	PHE	CG-CD2	-5.18	1.30	1.38
66	D3	1465	C	C2-N3	-5.18	1.31	1.35
67	D4	82	G	N7-C5	-5.18	1.36	1.39
31	CJ	123	VAL	CB-CG2	-5.18	1.42	1.52
21	UU	49	TYR	CE2-CZ	-5.18	1.31	1.38
33	CL	939	TYR	CD2-CE2	-5.18	1.31	1.39
65	D2	243	A	N9-C8	-5.18	1.33	1.37
65	D2	386	A	N9-C4	-5.18	1.34	1.37
66	D3	16	G	N3-C4	-5.18	1.31	1.35
66	D3	578	U	N3-C4	-5.18	1.33	1.38
66	D3	1480	G	C5-C4	-5.18	1.34	1.38
10	UJ	192	TYR	CE1-CZ	-5.17	1.31	1.38
65	D2	290	G	C6-N1	-5.17	1.35	1.39
66	D3	593	U	C4-C5	-5.17	1.38	1.43
46	JP	287	TYR	CG-CD1	-5.17	1.32	1.39
66	D3	1048	G	C6-N1	-5.17	1.35	1.39
21	UU	443	TRP	CD2-CE2	-5.17	1.35	1.41
66	D3	1083	G	N1-C2	-5.17	1.33	1.37
67	D4	18	G	N9-C4	-5.17	1.33	1.38
65	D2	164	G	C8-N7	-5.17	1.27	1.30
65	D2	303	A	N9-C4	-5.17	1.34	1.37
65	D2	334	G	N1-C2	-5.17	1.33	1.37
30	CI	36	TYR	CG-CD2	-5.16	1.32	1.39
65	D2	84	G	N3-C4	-5.16	1.31	1.35
65	D2	296	C	C4-N4	-5.16	1.29	1.33
66	D3	946	U	C2-N3	-5.16	1.34	1.37
67	D4	329	C	C5-C6	-5.16	1.30	1.34
10	UJ	220	VAL	CB-CG2	-5.16	1.42	1.52
66	D3	561	G	N9-C4	-5.16	1.33	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
66	D3	942	G	C8-N7	-5.16	1.27	1.30
65	D2	143	A	N7-C5	-5.16	1.36	1.39
66	D3	1598	U	C4-C5	-5.16	1.39	1.43
67	D4	29	U	C5-C6	-5.16	1.29	1.34
66	D3	574	G	C6-N1	-5.16	1.35	1.39
66	D3	1479	A	N9-C4	-5.16	1.34	1.37
1	UA	118	PHE	CD2-CE2	-5.16	1.28	1.39
45	JO	146	VAL	CB-CG2	-5.16	1.42	1.52
65	D2	287	G	C8-N7	-5.16	1.27	1.30
66	D3	1039	A	N3-C4	-5.15	1.31	1.34
29	CH	444	PRO	C-N	-5.15	1.22	1.34
46	JP	36	GLU	CB-CG	-5.15	1.42	1.52
65	D2	289	U	N3-C4	-5.15	1.33	1.38
66	D3	1082	C	C2-N3	-5.15	1.31	1.35
1	UA	587	PHE	CD2-CE2	-5.15	1.28	1.39
65	D2	160	C	C4-C5	-5.15	1.38	1.43
65	D2	392	U	C5-C6	-5.15	1.29	1.34
66	D3	488	G	N9-C8	-5.15	1.34	1.37
66	D3	940	A	N7-C5	-5.15	1.36	1.39
67	D4	23	U	N3-C4	-5.15	1.33	1.38
7	UG	95	VAL	CB-CG1	-5.15	1.42	1.52
33	CL	992	GLU	CB-CG	-5.15	1.42	1.52
4	UD	283	VAL	CB-CG1	-5.15	1.42	1.52
27	CE	428	ASN	CB-CG	-5.15	1.39	1.51
66	D3	490	C	N1-C2	-5.15	1.35	1.40
17	UQ	876	PHE	CD2-CE2	-5.15	1.28	1.39
18	UR	172	TYR	CD2-CE2	-5.15	1.31	1.39
31	CJ	122	TYR	CB-CG	-5.15	1.44	1.51
23	UX	10	PHE	CD2-CE2	-5.14	1.28	1.39
66	D3	874	C	C2-N3	-5.14	1.31	1.35
66	D3	1065	A	C5-C4	-5.14	1.35	1.38
7	UG	338	VAL	CB-CG2	-5.14	1.42	1.52
31	CJ	115	VAL	CB-CG1	-5.14	1.42	1.52
65	D2	244	U	N1-C6	-5.14	1.33	1.38
66	D3	1166	A	N7-C5	-5.14	1.36	1.39
33	CL	860	TYR	CD2-CE2	-5.14	1.31	1.39
66	D3	942	G	N9-C4	-5.14	1.33	1.38
1	UA	360	VAL	CB-CG1	-5.14	1.42	1.52
21	UU	27	PHE	CD2-CE2	-5.14	1.28	1.39
66	D3	1575	G	C5-C4	-5.14	1.34	1.38
26	CD	20	VAL	CB-CG2	-5.14	1.42	1.52
65	D2	473	A	N1-C2	-5.14	1.29	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
65	D2	375	C	N1-C6	-5.14	1.34	1.37
4	UD	214	SER	CA-CB	-5.13	1.45	1.52
23	UX	13	VAL	CB-CG1	-5.13	1.42	1.52
1	UA	329	VAL	CB-CG1	-5.13	1.42	1.52
5	UE	292	TYR	CD1-CE1	-5.13	1.31	1.39
61	DX	136	TRP	CB-CG	-5.13	1.41	1.50
66	D3	553	G	C8-N7	-5.13	1.27	1.30
66	D3	587	C	N1-C6	-5.13	1.34	1.37
67	D4	28	A	N9-C4	-5.13	1.34	1.37
65	D2	99	U	C4-C5	-5.13	1.39	1.43
66	D3	940	A	C5-C4	-5.13	1.35	1.38
66	D3	1114	G	C6-N1	-5.13	1.35	1.39
67	D4	84	U	N1-C6	-5.13	1.33	1.38
46	JP	419	VAL	CB-CG2	-5.13	1.42	1.52
58	DQ	112	TYR	CE2-CZ	-5.13	1.31	1.38
65	D2	257	G	N7-C5	-5.13	1.36	1.39
66	D3	1157	A	C5-C4	-5.13	1.35	1.38
67	D4	21	C	C5-C6	-5.13	1.30	1.34
7	UG	255	THR	C-N	-5.13	1.22	1.34
46	JP	287	TYR	CD2-CE2	-5.13	1.31	1.39
65	D2	245	C	C5-C6	-5.13	1.30	1.34
67	D4	37	G	C5-C6	-5.13	1.37	1.42
67	D4	74	A	N7-C5	-5.13	1.36	1.39
66	D3	545	A	N9-C4	-5.12	1.34	1.37
67	D4	16	A	N9-C4	-5.12	1.34	1.37
11	UK	106	TYR	CE1-CZ	-5.12	1.31	1.38
46	JP	58	PHE	CE1-CZ	-5.12	1.27	1.37
65	D2	383	G	N9-C4	-5.12	1.33	1.38
66	D3	1468	U	N1-C2	-5.12	1.33	1.38
66	D3	1587	A	N1-C2	-5.12	1.29	1.34
5	UE	313	TYR	CD2-CE2	-5.12	1.31	1.39
66	D3	955	A	N9-C4	-5.12	1.34	1.37
67	D4	47	G	N9-C4	-5.12	1.33	1.38
11	UK	63	TYR	CD1-CE1	-5.12	1.31	1.39
17	UQ	876	PHE	CB-CG	-5.12	1.42	1.51
21	UU	529	TYR	CD1-CE1	-5.12	1.31	1.39
45	JO	57	TRP	CB-CG	-5.12	1.41	1.50
4	UD	267	PHE	CB-CG	-5.12	1.42	1.51
1	UA	644	ILE	CB-CG2	-5.12	1.36	1.52
18	UR	458	ILE	CB-CG2	-5.12	1.36	1.52
33	CL	899	VAL	CB-CG1	-5.12	1.42	1.52
66	D3	8	U	N1-C2	-5.12	1.33	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
66	D3	514	G	C6-N1	-5.12	1.35	1.39
67	D4	39	C	C4-C5	-5.12	1.38	1.43
10	UJ	262	VAL	CB-CG2	-5.11	1.42	1.52
46	JP	201	ILE	CB-CG2	-5.11	1.36	1.52
65	D2	285	U	C2-N3	-5.11	1.34	1.37
65	D2	309	A	C5-C6	-5.11	1.36	1.41
66	D3	1471	A	N7-C5	-5.11	1.36	1.39
67	D4	85	G	C5-C6	-5.11	1.37	1.42
67	D4	328	A	N7-C5	-5.11	1.36	1.39
46	JP	41	TYR	CD2-CE2	-5.11	1.31	1.39
46	JP	217	TRP	CB-CG	-5.11	1.41	1.50
65	D2	471	C	C4-C5	-5.11	1.38	1.43
66	D3	1617	U	C2-N3	-5.11	1.34	1.37
66	D3	1494	C	N3-C4	-5.11	1.30	1.33
67	D4	68	A	C8-N7	-5.11	1.27	1.31
65	D2	163	G	N7-C5	-5.11	1.36	1.39
66	D3	914	G	N9-C4	-5.11	1.33	1.38
66	D3	1480	G	N3-C4	-5.11	1.31	1.35
1	UA	532	VAL	CB-CG1	-5.11	1.42	1.52
33	CL	992	GLU	CG-CD	-5.11	1.44	1.51
65	D2	103	G	C8-N7	-5.11	1.27	1.30
66	D3	957	G	C5-C4	-5.11	1.34	1.38
14	UN	847	VAL	CB-CG1	-5.10	1.42	1.52
1	UA	141	VAL	CB-CG2	-5.10	1.42	1.52
1	UA	340	LYS	CA-CB	-5.10	1.42	1.53
1	UA	419	TYR	CD1-CE1	-5.10	1.31	1.39
65	D2	393	C	N3-C4	-5.10	1.30	1.33
66	D3	966	A	N7-C5	-5.10	1.36	1.39
66	D3	1634	C	C4-C5	-5.10	1.38	1.43
33	CL	969	VAL	CB-CG1	-5.10	1.42	1.52
60	DW	63	VAL	CB-CG2	-5.10	1.42	1.52
66	D3	931	C	C2-N3	-5.10	1.31	1.35
66	D3	1748	G	N7-C5	-5.10	1.36	1.39
67	D4	326	U	N1-C2	-5.10	1.33	1.38
25	CA	230	TYR	CD2-CE2	-5.10	1.31	1.39
65	D2	275	A	C8-N7	-5.10	1.27	1.31
66	D3	953	G	C8-N7	-5.10	1.27	1.30
66	D3	1615	C	N1-C2	-5.10	1.35	1.40
65	D2	328	A	C5-C4	-5.10	1.35	1.38
7	UG	73	TYR	CD2-CE2	-5.09	1.31	1.39
7	UG	408	GLU	CB-CG	-5.09	1.42	1.52
54	DJ	113	VAL	CB-CG1	-5.09	1.42	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
65	D2	311	C	C5-C6	-5.09	1.30	1.34
66	D3	635	A	C5-C4	-5.09	1.35	1.38
66	D3	923	A	N9-C4	-5.09	1.34	1.37
4	UD	276	PHE	CB-CG	-5.09	1.42	1.51
21	UU	582	TRP	CB-CG	-5.09	1.41	1.50
66	D3	548	G	C2-N3	-5.09	1.28	1.32
46	JP	385	VAL	CB-CG2	-5.09	1.42	1.52
65	D2	297	U	N3-C4	-5.09	1.33	1.38
66	D3	555	A	N3-C4	-5.09	1.31	1.34
66	D3	1083	G	C5-C4	-5.09	1.34	1.38
66	D3	1133	A	N7-C5	-5.09	1.36	1.39
25	CA	309	TYR	CD1-CE1	-5.09	1.31	1.39
65	D2	100	G	N9-C8	-5.09	1.34	1.37
11	UK	63	TYR	CE1-CZ	-5.09	1.31	1.38
65	D2	379	A	N9-C4	-5.09	1.34	1.37
66	D3	7	G	C2-N3	-5.09	1.28	1.32
66	D3	7	G	N9-C4	-5.09	1.33	1.38
66	D3	553	G	C5-C6	-5.08	1.37	1.42
10	UJ	142	TYR	CE2-CZ	-5.08	1.31	1.38
25	CA	193	VAL	CB-CG2	-5.08	1.42	1.52
46	JP	356	TYR	CD2-CE2	-5.08	1.31	1.39
66	D3	877	G	C2-N3	-5.08	1.28	1.32
67	D4	80	U	N1-C6	-5.08	1.33	1.38
7	UG	198	PHE	CG-CD1	-5.08	1.31	1.38
66	D3	545	A	N9-C8	-5.08	1.33	1.37
66	D3	937	C	C4-C5	-5.08	1.38	1.43
66	D3	1583	A	N7-C5	-5.08	1.36	1.39
65	D2	297	U	N1-C2	-5.07	1.33	1.38
66	D3	1598	U	C2-N3	-5.07	1.34	1.37
65	D2	305	A	N9-C8	-5.07	1.33	1.37
66	D3	578	U	N1-C6	-5.07	1.33	1.38
66	D3	1069	A	C8-N7	-5.07	1.28	1.31
67	D4	31	G	N9-C8	-5.07	1.34	1.37
1	UA	15	TYR	CD1-CE1	-5.07	1.31	1.39
67	D4	64	A	P-O5'	-5.07	1.54	1.59
1	UA	458	TRP	CE3-CZ3	-5.07	1.29	1.38
65	D2	235	A	C5-C6	-5.07	1.36	1.41
66	D3	1583	A	C5-C4	-5.07	1.35	1.38
67	D4	64	A	C6-N1	-5.07	1.32	1.35
15	UO	255	VAL	CB-CG2	-5.06	1.42	1.52
66	D3	1583	A	C6-N1	-5.06	1.32	1.35
65	D2	145	A	N3-C4	-5.06	1.31	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
65	D2	254	C	N3-C4	-5.06	1.30	1.33
65	D2	337	G	N9-C8	-5.06	1.34	1.37
66	D3	551	G	N1-C2	-5.06	1.33	1.37
66	D3	1067	C	N3-C4	-5.06	1.30	1.33
66	D3	1596	C	C2-N3	-5.06	1.31	1.35
66	D3	1589	C	C2-N3	-5.06	1.31	1.35
33	CL	811	VAL	CB-CG2	-5.06	1.42	1.52
66	D3	564	G	N7-C5	-5.06	1.36	1.39
66	D3	15	U	C5-C6	-5.06	1.29	1.34
66	D3	485	A	N9-C4	-5.06	1.34	1.37
67	D4	40	A	N9-C4	-5.06	1.34	1.37
1	UA	33	VAL	CB-CG1	-5.05	1.42	1.52
7	UG	185	HIS	CA-CB	-5.05	1.42	1.53
65	D2	85	G	C2-N3	-5.05	1.28	1.32
65	D2	338	A	N1-C2	-5.05	1.29	1.34
65	D2	453	A	N7-C5	-5.05	1.36	1.39
66	D3	568	G	N3-C4	-5.05	1.31	1.35
66	D3	1530	C	N3-C4	-5.05	1.30	1.33
67	D4	36	C	N1-C6	-5.05	1.34	1.37
1	UA	629	PHE	CD2-CE2	-5.05	1.29	1.39
6	UF	105	GLN	CB-CG	-5.05	1.39	1.52
17	UQ	311	TYR	CE1-CZ	-5.05	1.31	1.38
1	UA	287	TYR	CD2-CE2	-5.05	1.31	1.39
66	D3	31	C	N1-C6	-5.05	1.34	1.37
66	D3	969	C	N3-C4	-5.05	1.30	1.33
67	D4	37	G	N1-C2	-5.05	1.33	1.37
65	D2	336	G	C2-N3	-5.05	1.28	1.32
65	D2	337	G	C6-N1	-5.05	1.36	1.39
65	D2	353	A	C5-C6	-5.05	1.36	1.41
7	UG	147	GLU	CG-CD	-5.05	1.44	1.51
66	D3	1039	A	N9-C4	-5.05	1.34	1.37
7	UG	118	TYR	CD2-CE2	-5.05	1.31	1.39
66	D3	-4	A	N3-C4	-5.05	1.31	1.34
66	D3	30	G	N7-C5	-5.05	1.36	1.39
33	CL	991	PHE	CD1-CE1	-5.04	1.29	1.39
58	DQ	60	PHE	CD1-CE1	-5.04	1.29	1.39
65	D2	448	G	N7-C5	-5.04	1.36	1.39
58	DQ	96	TYR	CG-CD1	-5.04	1.32	1.39
66	D3	557	G	N9-C4	-5.04	1.33	1.38
65	D2	463	A	C6-N1	-5.04	1.32	1.35
30	CI	5	LEU	CG-CD1	-5.04	1.33	1.51
65	D2	294	U	N3-C4	-5.04	1.33	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
67	D4	56	A	C5-C4	-5.04	1.35	1.38
66	D3	927	C	N1-C6	-5.04	1.34	1.37
67	D4	44	U	N1-C2	-5.04	1.34	1.38
66	D3	589	C	C4-C5	-5.04	1.39	1.43
66	D3	915	A	C5-C6	-5.04	1.36	1.41
66	D3	1046	G	C6-N1	-5.04	1.36	1.39
46	JP	35	PHE	CD1-CE1	-5.03	1.29	1.39
66	D3	592	A	C5-C4	-5.03	1.35	1.38
66	D3	1078	C	C5-C6	-5.03	1.30	1.34
58	DQ	31	VAL	CB-CG1	-5.03	1.42	1.52
66	D3	926	A	C6-N1	-5.03	1.32	1.35
7	UG	134	VAL	CB-CG1	-5.03	1.42	1.52
30	CI	173	TYR	CD1-CE1	-5.03	1.31	1.39
65	D2	395	C	N3-C4	-5.03	1.30	1.33
65	D2	448	G	C2-N3	-5.03	1.28	1.32
65	D2	461	A	N3-C4	-5.03	1.31	1.34
65	D2	477	G	C2-N3	-5.03	1.28	1.32
65	D2	370	U	C2-N3	-5.03	1.34	1.37
66	D3	14	C	N1-C6	-5.03	1.34	1.37
66	D3	489	C	C2-N3	-5.03	1.31	1.35
66	D3	1586	A	N9-C8	-5.03	1.33	1.37
67	D4	326	U	C5-C6	-5.03	1.29	1.34
65	D2	306	G	C6-N1	-5.02	1.36	1.39
67	D4	25	U	N3-C4	-5.02	1.33	1.38
15	UO	283	VAL	CB-CG2	-5.02	1.42	1.52
31	CJ	273	VAL	CB-CG1	-5.02	1.42	1.52
33	CL	939	TYR	CD1-CE1	-5.02	1.31	1.39
66	D3	10	G	C8-N7	-5.02	1.27	1.30
66	D3	503	G	C6-N1	-5.02	1.36	1.39
67	D4	53	U	C2-N3	-5.02	1.34	1.37
65	D2	303	A	N7-C5	-5.02	1.36	1.39
21	UU	298	VAL	CB-CG1	-5.02	1.42	1.52
31	CJ	202	VAL	CB-CG1	-5.02	1.42	1.52
46	JP	362	TYR	CE1-CZ	-5.02	1.32	1.38
65	D2	485	G	N7-C5	-5.02	1.36	1.39
48	DA	155	TYR	CD1-CE1	-5.02	1.31	1.39
66	D3	941	A	N7-C5	-5.02	1.36	1.39
1	UA	677	PRO	CB-CG	-5.02	1.24	1.50
46	JP	57	PRO	CB-CG	-5.02	1.24	1.50
65	D2	285	U	N1-C2	-5.01	1.34	1.38
10	UJ	109	TRP	CB-CG	-5.01	1.41	1.50
66	D3	1622	G	C2-N3	-5.01	1.28	1.32

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
18	UR	268	TYR	CD2-CE2	-5.01	1.31	1.39
23	UX	10	PHE	CB-CG	-5.01	1.42	1.51
66	D3	868	G	N7-C5	-5.01	1.36	1.39
66	D3	567	A	N7-C5	-5.01	1.36	1.39
66	D3	1605	G	N7-C5	-5.01	1.36	1.39
67	D4	30	A	P-O5'	-5.01	1.54	1.59
65	D2	280	A	C5-C6	-5.01	1.36	1.41
67	D4	40	A	C6-N1	-5.01	1.32	1.35
66	D3	570	A	C5-C6	-5.01	1.36	1.41
1	UA	606	VAL	CB-CG1	-5.00	1.42	1.52
32	CK	477	GLU	CB-CG	-5.00	1.42	1.52
65	D2	327	A	N9-C4	-5.00	1.34	1.37
66	D3	1488	G	C5-C4	-5.00	1.34	1.38
65	D2	93	A	C5-C6	-5.00	1.36	1.41
66	D3	877	G	C6-N1	-5.00	1.36	1.39
66	D3	1075	C	N1-C6	-5.00	1.34	1.37
65	D2	244	U	C2-O2	-5.00	1.17	1.22
66	D3	551	G	C2-N3	-5.00	1.28	1.32
66	D3	1582	U	N3-C4	-5.00	1.33	1.38

All (1402) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
65	D2	312	U	O4'-C1'-N1	19.10	123.48	108.20
13	UM	443	PRO	N-CD-CG	-16.65	78.23	103.20
67	D4	27	U	N3-C2-O2	-15.30	111.49	122.20
65	D2	233	G	N3-C4-C5	14.71	135.96	128.60
21	UU	494	LEU	CB-CG-CD2	-14.58	86.21	111.00
67	D4	62	C	C5-C6-N1	14.55	128.28	121.00
65	D2	233	G	N3-C4-N9	-14.18	117.49	126.00
66	D3	1527	C	C6-N1-C2	-13.97	114.71	120.30
7	UG	160	LEU	CA-CB-CG	13.86	147.18	115.30
65	D2	233	G	C2-N3-C4	-13.66	105.07	111.90
66	D3	1481	C	C5-C6-N1	13.58	127.79	121.00
67	D4	55	A	C6-C5-N7	-13.54	122.83	132.30
67	D4	55	A	N1-C6-N6	13.37	126.62	118.60
65	D2	341	G	C4-C5-N7	13.25	116.10	110.80
66	D3	1159	C	C5-C6-N1	13.24	127.62	121.00
65	D2	311	C	C2-N3-C4	-13.17	113.32	119.90
67	D4	55	A	N9-C4-C5	-13.10	100.56	105.80
65	D2	311	C	N3-C4-C5	12.78	127.01	121.90
66	D3	1527	C	N3-C2-O2	-12.61	113.08	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
67	D4	61	G	C4-C5-N7	12.20	115.68	110.80
67	D4	61	G	C5-C6-O6	-12.09	121.34	128.60
13	UM	443	PRO	CA-CB-CG	-12.05	81.11	104.00
65	D2	341	G	C6-C5-N7	-12.01	123.20	130.40
65	D2	301	U	O5'-P-OP2	-11.89	95.00	105.70
66	D3	959	U	N3-C2-O2	-11.77	113.96	122.20
65	D2	310	U	N3-C2-O2	-11.64	114.05	122.20
65	D2	284	U	C5-C6-N1	11.59	128.49	122.70
66	D3	1602	C	O5'-P-OP1	-11.57	95.28	105.70
67	D4	55	A	C8-N9-C1'	-11.42	107.15	127.70
65	D2	312	U	N1-C1'-C2'	11.40	128.83	114.00
65	D2	89	C	N3-C4-C5	11.40	126.46	121.90
66	D3	564	G	C5-N7-C8	-11.31	98.64	104.30
13	UM	443	PRO	CB-CG-CD	11.19	150.14	106.50
65	D2	311	C	C5-C6-N1	-11.19	115.41	121.00
65	D2	311	C	P-O3'-C3'	10.98	132.88	119.70
65	D2	281	G	C4-C5-N7	10.96	115.18	110.80
66	D3	1490	C	N3-C4-C5	10.93	126.27	121.90
66	D3	564	G	C4-C5-N7	10.91	115.17	110.80
67	D4	27	U	N1-C2-O2	10.90	130.43	122.80
66	D3	575	C	N3-C4-C5	10.88	126.25	121.90
65	D2	233	G	C5-N7-C8	-10.86	98.87	104.30
67	D4	90	C	N1-C2-O2	10.75	125.35	118.90
65	D2	524	U	OP1-P-O3'	-10.74	81.57	105.20
67	D4	61	G	C2-N3-C4	10.73	117.27	111.90
66	D3	1605	G	O5'-P-OP1	-10.66	96.11	105.70
66	D3	1069	A	C5-N7-C8	-10.49	98.65	103.90
66	D3	1483	A	N1-C6-N6	10.49	124.89	118.60
66	D3	1069	A	N7-C8-N9	10.48	119.04	113.80
67	D4	63	C	C6-N1-C2	-10.47	116.11	120.30
28	CG	89	ARG	NE-CZ-NH2	-10.43	115.09	120.30
65	D2	388	C	C6-N1-C2	-10.39	116.14	120.30
65	D2	86	C	O5'-P-OP1	-10.35	96.39	105.70
66	D3	1069	A	C8-N9-C4	-10.34	101.67	105.80
66	D3	1585	U	C5-C6-N1	10.32	127.86	122.70
66	D3	487	G	C5-C6-O6	-10.30	122.42	128.60
66	D3	575	C	C4-C5-C6	-10.29	112.25	117.40
65	D2	305	A	N1-C6-N6	-10.24	112.46	118.60
65	D2	328	A	C8-N9-C4	10.21	109.89	105.80
7	UG	372	LEU	CA-CB-CG	10.20	138.76	115.30
67	D4	62	C	C6-N1-C2	-10.19	116.22	120.30
67	D4	62	C	C5-C4-N4	-10.19	113.07	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
67	D4	55	A	C4-N9-C1'	10.18	144.63	126.30
66	D3	1159	C	C6-N1-C2	-10.10	116.26	120.30
1	UA	519	LEU	CA-CB-CG	10.05	138.41	115.30
46	JP	50	LEU	CB-CG-CD2	-10.02	93.96	111.00
66	D3	638	U	N3-C2-O2	-10.01	115.19	122.20
65	D2	239	U	C5-C6-N1	-9.92	117.74	122.70
66	D3	9	U	O5'-P-OP1	-9.92	96.78	105.70
65	D2	310	U	N1-C2-O2	9.91	129.74	122.80
67	D4	59	G	C5-N7-C8	-9.89	99.36	104.30
66	D3	268	C	N1-C2-O2	9.87	124.82	118.90
65	D2	332	U	N3-C2-O2	-9.78	115.36	122.20
66	D3	1481	C	C4-C5-C6	-9.77	112.52	117.40
67	D4	62	C	C4-C5-C6	-9.76	112.52	117.40
46	JP	201	ILE	CG1-CB-CG2	-9.74	89.96	111.40
67	D4	55	A	C4-C5-N7	9.72	115.56	110.70
66	D3	1483	A	C4-C5-N7	9.72	115.56	110.70
65	D2	314	U	N1-C2-O2	9.70	129.59	122.80
66	D3	489	C	C6-N1-C2	-9.70	116.42	120.30
67	D4	55	A	N3-C4-N9	9.64	135.12	127.40
66	D3	1084	A	C8-N9-C4	-9.64	101.94	105.80
66	D3	1527	C	C2-N1-C1'	9.61	129.37	118.80
10	UJ	234	LEU	CB-CG-CD2	-9.56	94.75	111.00
66	D3	1581	C	N3-C2-O2	-9.50	115.25	121.90
66	D3	1481	C	C6-N1-C2	-9.50	116.50	120.30
66	D3	1599	C	C6-N1-C2	-9.49	116.50	120.30
67	D4	57	A	C8-N9-C4	-9.45	102.02	105.80
65	D2	233	G	N1-C6-O6	9.42	125.55	119.90
66	D3	1174	C	N3-C2-O2	-9.38	115.33	121.90
65	D2	137	C	C6-N1-C2	-9.35	116.56	120.30
67	D4	24	U	N3-C2-O2	-9.35	115.66	122.20
66	D3	1633	A	N1-C6-N6	-9.34	112.99	118.60
65	D2	323	A	N1-C6-N6	9.29	124.17	118.60
65	D2	312	U	C6-N1-C1'	9.27	134.18	121.20
67	D4	61	G	N3-C4-N9	9.21	131.53	126.00
65	D2	393	C	O5'-P-OP2	-9.16	97.45	105.70
66	D3	374	U	C2-N1-C1'	9.16	128.69	117.70
67	D4	55	A	C4-C5-C6	9.16	121.58	117.00
66	D3	1174	C	N1-C2-O2	9.12	124.37	118.90
65	D2	341	G	N3-C4-N9	9.09	131.45	126.00
65	D2	323	A	C4-C5-N7	9.08	115.24	110.70
66	D3	496	G	C4-C5-N7	9.08	114.43	110.80
30	CI	77	LEU	CB-CG-CD2	-9.05	95.62	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
67	D4	57	A	N9-C4-C5	9.02	109.41	105.80
65	D2	298	A	C5-C6-N1	9.01	122.21	117.70
65	D2	289	U	C5-C6-N1	9.00	127.20	122.70
43	JM	81	VAL	C-N-CA	8.99	144.17	121.70
65	D2	233	G	C4-C5-N7	8.97	114.39	110.80
67	D4	55	A	C5-C6-N6	-8.93	116.55	123.70
65	D2	341	G	C5-C6-O6	-8.93	123.24	128.60
67	D4	58	A	N1-C6-N6	-8.91	113.26	118.60
67	D4	24	U	C5-C6-N1	-8.90	118.25	122.70
65	D2	314	U	N3-C2-O2	-8.87	115.99	122.20
65	D2	280	A	C5-N7-C8	-8.83	99.48	103.90
32	CK	440	LEU	CA-CB-CG	8.81	135.56	115.30
67	D4	58	A	C5-C6-N1	8.81	122.10	117.70
66	D3	374	U	N1-C2-O2	8.79	128.96	122.80
65	D2	314	U	C2-N1-C1'	8.78	128.24	117.70
65	D2	312	U	C2-N1-C1'	-8.76	107.19	117.70
66	D3	638	U	N1-C2-O2	8.76	128.93	122.80
25	CA	306	LEU	CA-CB-CG	8.76	135.44	115.30
65	D2	309	A	O5'-P-OP2	-8.75	97.82	105.70
66	D3	583	C	N1-C2-O2	8.71	124.13	118.90
65	D2	524	U	OP2-P-O3'	-8.71	86.03	105.20
67	D4	75	C	O5'-P-OP2	-8.71	97.86	105.70
65	D2	233	G	N3-C2-N2	-8.70	113.81	119.90
46	JP	300	VAL	CG1-CB-CG2	-8.63	97.09	110.90
66	D3	1486	G	C8-N9-C4	-8.61	102.95	106.40
66	D3	1486	G	N7-C8-N9	8.61	117.41	113.10
67	D4	63	C	C5-C6-N1	8.61	125.31	121.00
66	D3	956	C	C5-C6-N1	8.61	125.30	121.00
65	D2	277	C	N3-C2-O2	-8.61	115.88	121.90
66	D3	1069	A	C4-C5-N7	8.61	115.00	110.70
66	D3	583	C	N3-C2-O2	-8.57	115.90	121.90
65	D2	323	A	C6-C5-N7	-8.55	126.32	132.30
66	D3	934	C	C6-N1-C2	-8.54	116.88	120.30
65	D2	273	G	N1-C6-O6	-8.53	114.78	119.90
65	D2	338	A	N9-C4-C5	8.52	109.21	105.80
67	D4	27	U	C2-N1-C1'	8.52	127.92	117.70
66	D3	1581	C	N1-C2-O2	8.51	124.01	118.90
67	D4	24	U	N1-C2-O2	8.51	128.75	122.80
65	D2	299	G	N1-C6-O6	-8.50	114.80	119.90
65	D2	338	A	N1-C6-N6	-8.49	113.51	118.60
21	UU	522	LEU	CA-CB-CG	8.49	134.82	115.30
65	D2	394	U	C2-N1-C1'	8.49	127.89	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
65	D2	312	U	C3'-C2'-C1'	-8.46	94.73	101.50
66	D3	1492	A	N1-C6-N6	-8.44	113.53	118.60
67	D4	59	G	N7-C8-N9	8.43	117.32	113.10
66	D3	1483	A	C5-C6-N6	-8.43	116.96	123.70
65	D2	312	U	N1-C2-N3	8.43	119.96	114.90
45	JO	116	ILE	CG1-CB-CG2	-8.41	92.89	111.40
66	D3	1037	C	C5-C4-N4	-8.41	114.31	120.20
65	D2	143	A	C4-C5-N7	8.40	114.90	110.70
66	D3	1040	G	O5'-P-OP2	-8.39	98.15	105.70
66	D3	489	C	N3-C2-O2	-8.39	116.03	121.90
67	D4	61	G	C4-N9-C1'	8.38	137.40	126.50
64	Dc	12	VAL	CG1-CB-CG2	-8.37	97.50	110.90
66	D3	1611	A	C8-N9-C4	8.37	109.15	105.80
65	D2	310	U	N3-C4-O4	-8.36	113.55	119.40
67	D4	55	A	O4'-C1'-N9	8.35	114.88	108.20
66	D3	1173	C	C5-C6-N1	8.35	125.17	121.00
65	D2	403	C	C6-N1-C2	-8.30	116.98	120.30
67	D4	30	A	O5'-P-OP2	-8.30	98.23	105.70
46	JP	400	LEU	CB-CG-CD2	-8.30	96.90	111.00
1	UA	560	ILE	CG1-CB-CG2	-8.29	93.16	111.40
66	D3	1628	U	C5-C4-O4	-8.28	120.94	125.90
65	D2	143	A	C5-N7-C8	-8.27	99.76	103.90
1	UA	110	LEU	CA-CB-CG	8.26	134.29	115.30
65	D2	341	G	N7-C8-N9	8.26	117.23	113.10
66	D3	1483	A	N9-C4-C5	-8.24	102.50	105.80
67	D4	59	G	C4-C5-N7	8.22	114.09	110.80
65	D2	278	G	C8-N9-C4	8.21	109.68	106.40
65	D2	280	A	C2-N3-C4	-8.21	106.49	110.60
65	D2	311	C	C6-N1-C2	8.21	123.58	120.30
66	D3	542	A	O4'-C1'-N9	8.20	114.76	108.20
66	D3	554	C	C2-N3-C4	-8.18	115.81	119.90
66	D3	487	G	C6-C5-N7	-8.18	125.49	130.40
31	CJ	157	PHE	N-CA-C	8.17	133.06	111.00
65	D2	525	U	OP1-P-OP2	8.17	131.85	119.60
66	D3	374	U	N3-C2-O2	-8.16	116.49	122.20
66	D3	1037	C	C5-C6-N1	8.16	125.08	121.00
65	D2	284	U	C4-C5-C6	-8.16	114.81	119.70
65	D2	333	G	N3-C2-N2	-8.16	114.19	119.90
66	D3	870	C	N3-C4-C5	8.15	125.16	121.90
66	D3	872	G	C4-C5-N7	8.14	114.06	110.80
66	D3	1069	A	C6-C5-N7	-8.13	126.61	132.30
66	D3	1589	C	C6-N1-C2	-8.12	117.05	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
7	UG	224	LEU	CB-CG-CD2	-8.09	97.25	111.00
66	D3	487	G	N9-C4-C5	-8.07	102.17	105.40
65	D2	311	C	N3-C4-N4	-8.06	112.36	118.00
66	D3	632	U	C5-C6-N1	8.06	126.73	122.70
67	D4	75	C	C4-C5-C6	-8.06	113.37	117.40
66	D3	1527	C	C4-C5-C6	8.05	121.43	117.40
66	D3	1604	U	O5'-P-OP1	-8.05	98.45	105.70
65	D2	535	G	N3-C4-N9	-8.04	121.17	126.00
66	D3	1490	C	C2-N3-C4	-8.03	115.88	119.90
67	D4	90	C	N3-C2-O2	-8.03	116.28	121.90
65	D2	341	G	C5-N7-C8	-8.03	100.29	104.30
67	D4	77	U	N3-C2-O2	-8.03	116.58	122.20
65	D2	341	G	C4-N9-C1'	8.02	136.93	126.50
65	D2	264	C	C6-N1-C2	-8.02	117.09	120.30
17	UQ	343	ASP	CB-CG-OD1	8.01	125.51	118.30
65	D2	400	C	C4-C5-C6	-8.01	113.40	117.40
18	UR	404	ILE	CG1-CB-CG2	-8.00	93.80	111.40
66	D3	583	C	C2-N1-C1'	8.00	127.60	118.80
67	D4	64	A	O5'-P-OP1	-8.00	98.50	105.70
30	CI	19	LEU	CB-CG-CD2	-7.99	97.41	111.00
1	UA	113	LEU	CB-CG-CD1	-7.99	97.42	111.00
65	D2	312	U	C5-C4-O4	7.99	130.69	125.90
66	D3	642	G	N3-C2-N2	-7.97	114.32	119.90
65	D2	281	G	C5-N7-C8	-7.97	100.31	104.30
66	D3	1620	C	C6-N1-C2	-7.96	117.12	120.30
36	JA	753	ASP	CB-CG-OD1	7.93	125.44	118.30
31	CJ	9	ARG	NE-CZ-NH2	-7.92	116.34	120.30
10	UJ	182	LEU	CB-CG-CD2	-7.91	97.55	111.00
7	UG	199	LEU	CA-CB-CG	7.90	133.48	115.30
1	UA	439	ASP	CB-CG-OD1	7.88	125.39	118.30
66	D3	31	C	C6-N1-C2	-7.87	117.15	120.30
66	D3	584	C	O5'-P-OP1	-7.87	98.61	105.70
65	D2	394	U	C5-C6-N1	7.86	126.63	122.70
65	D2	240	C	O5'-P-OP1	-7.86	98.63	105.70
65	D2	280	A	C8-N9-C4	-7.86	102.66	105.80
66	D3	959	U	N1-C2-O2	7.85	128.30	122.80
65	D2	280	A	N3-C4-N9	-7.81	121.15	127.40
66	D3	1159	C	N3-C4-N4	7.78	123.45	118.00
65	D2	323	A	C5-N7-C8	-7.77	100.02	103.90
65	D2	333	G	O5'-P-OP2	-7.76	98.71	105.70
66	D3	1037	C	C4-C5-C6	-7.76	113.52	117.40
66	D3	596	C	C6-N1-C2	-7.76	117.19	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
66	D3	1174	C	C2-N1-C1'	7.74	127.31	118.80
66	D3	1488	G	N1-C6-O6	-7.73	115.26	119.90
66	D3	13	C	O5'-P-OP1	-7.72	98.75	105.70
66	D3	554	C	C5-C6-N1	-7.70	117.15	121.00
65	D2	472	A	C8-N9-C4	7.69	108.88	105.80
7	UG	330	LEU	CB-CG-CD2	-7.69	97.92	111.00
65	D2	444	U	O5'-P-OP1	-7.69	98.78	105.70
14	UN	277	ARG	NE-CZ-NH2	7.68	124.14	120.30
6	UF	127	LYS	CD-CE-NZ	-7.67	94.06	111.70
67	D4	62	C	N3-C4-N4	7.67	123.37	118.00
66	D3	890	C	N1-C2-O2	7.65	123.49	118.90
65	D2	313	A	O5'-P-OP1	-7.65	98.81	105.70
66	D3	24	U	C5-C6-N1	7.65	126.52	122.70
66	D3	564	G	N3-C4-C5	7.63	132.42	128.60
65	D2	275	A	C8-N9-C4	-7.62	102.75	105.80
65	D2	291	G	O5'-P-OP1	-7.62	98.85	105.70
66	D3	495	C	C2-N1-C1'	7.60	127.16	118.80
66	D3	933	A	C4-C5-N7	7.58	114.49	110.70
66	D3	1599	C	C5-C6-N1	7.58	124.79	121.00
66	D3	1610	G	N1-C6-O6	-7.57	115.36	119.90
67	D4	41	C	C2-N1-C1'	-7.57	110.48	118.80
66	D3	566	C	C5-C6-N1	7.56	124.78	121.00
67	D4	52	U	O5'-P-OP1	-7.56	98.90	105.70
66	D3	487	G	N1-C6-O6	7.55	124.43	119.90
65	D2	341	G	C8-N9-C4	-7.53	103.39	106.40
7	UG	138	ASP	CB-CG-OD1	7.52	125.06	118.30
9	UI	507	ARG	CA-CB-CG	7.52	129.93	113.40
50	DF	162	VAL	C-N-CA	7.51	140.47	121.70
66	D3	933	A	N9-C4-C5	-7.51	102.80	105.80
18	UR	514	LEU	CB-CG-CD1	-7.51	98.24	111.00
65	D2	143	A	C2-N3-C4	-7.51	106.85	110.60
1	UA	465	LEU	CA-CB-CG	7.50	132.54	115.30
1	UA	611	LEU	CB-CG-CD2	-7.49	98.26	111.00
7	UG	125	LEU	CB-CG-CD2	-7.48	98.28	111.00
66	D3	1527	C	N3-C4-C5	-7.48	118.91	121.90
66	D3	1078	C	C6-N1-C2	-7.47	117.31	120.30
65	D2	375	C	C6-N1-C2	-7.45	117.32	120.30
66	D3	487	G	C4-C5-N7	7.45	113.78	110.80
66	D3	1594	G	N1-C6-O6	-7.44	115.43	119.90
66	D3	1042	G	C8-N9-C4	7.43	109.37	106.40
66	D3	579	A	P-O3'-C3'	7.42	128.61	119.70
67	D4	61	G	C6-C5-N7	-7.42	125.95	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
10	UJ	261	LEU	CB-CG-CD2	-7.42	98.39	111.00
65	D2	418	C	C6-N1-C2	-7.41	117.33	120.30
66	D3	539	G	C4-C5-N7	7.40	113.76	110.80
7	UG	249	LEU	CB-CG-CD2	-7.40	98.42	111.00
65	D2	312	U	C5-C6-N1	-7.39	119.00	122.70
65	D2	488	U	N3-C2-O2	-7.38	117.03	122.20
66	D3	1084	A	N7-C8-N9	7.38	117.49	113.80
67	D4	65	C	C6-N1-C2	-7.37	117.35	120.30
67	D4	73	A	N7-C8-N9	7.36	117.48	113.80
67	D4	73	A	C5-N7-C8	-7.35	100.23	103.90
65	D2	314	U	C5-C6-N1	7.34	126.37	122.70
15	UO	273	ILE	CG1-CB-CG2	-7.33	95.29	111.40
66	D3	586	G	N1-C6-O6	-7.32	115.51	119.90
65	D2	303	A	C5-C6-N1	7.31	121.35	117.70
65	D2	284	U	O5'-P-OP1	-7.30	99.13	105.70
65	D2	335	G	C4-C5-N7	7.30	113.72	110.80
65	D2	89	C	C4-C5-C6	-7.29	113.75	117.40
65	D2	535	G	C8-N9-C1'	7.29	136.48	127.00
65	D2	82	A	C5-C6-N1	7.29	121.34	117.70
67	D4	260	U	N1-C2-O2	7.26	127.89	122.80
10	UJ	73	LEU	CA-CB-CG	7.26	132.00	115.30
65	D2	296	C	N3-C4-C5	7.25	124.80	121.90
66	D3	487	G	N3-C4-N9	7.25	130.35	126.00
67	D4	33	A	P-O3'-C3'	7.25	128.40	119.70
66	D3	1584	G	N3-C4-N9	-7.24	121.66	126.00
67	D4	73	A	C8-N9-C4	-7.24	102.91	105.80
66	D3	1070	C	O5'-P-OP1	-7.23	99.19	105.70
66	D3	489	C	C2-N1-C1'	7.23	126.75	118.80
67	D4	60	A	C8-N9-C4	-7.23	102.91	105.80
44	JN	109	PRO	N-CA-CB	7.22	111.97	103.30
66	D3	870	C	N3-C4-N4	-7.22	112.94	118.00
65	D2	295	A	C8-N9-C4	-7.22	102.91	105.80
25	CB	268	VAL	CG1-CB-CG2	-7.21	99.36	110.90
25	CA	171	LEU	CB-CG-CD2	7.19	123.22	111.00
65	D2	469	C	C6-N1-C2	-7.18	117.43	120.30
65	D2	395	C	N3-C2-O2	-7.17	116.88	121.90
65	D2	273	G	N9-C4-C5	7.16	108.26	105.40
67	D4	260	U	C2-N1-C1'	7.16	126.29	117.70
66	D3	1495	C	C6-N1-C2	-7.16	117.44	120.30
7	UG	466	LEU	CB-CG-CD2	-7.15	98.84	111.00
66	D3	966	A	C8-N9-C4	-7.15	102.94	105.80
66	D3	268	C	N3-C2-O2	-7.15	116.90	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
30	CI	64	LEU	CB-CG-CD2	-7.14	98.86	111.00
67	D4	59	G	C2-N3-C4	-7.14	108.33	111.90
26	CD	38	ILE	CG1-CB-CG2	-7.14	95.69	111.40
66	D3	496	G	N1-C6-O6	7.14	124.18	119.90
65	D2	143	A	N3-C4-C5	7.13	131.79	126.80
67	D4	61	G	C5-C6-N1	7.13	115.07	111.50
66	D3	1060	U	C2-N1-C1'	7.13	126.26	117.70
66	D3	1483	A	C5-N7-C8	-7.13	100.33	103.90
65	D2	333	G	N1-C2-N2	7.12	122.61	116.20
65	D2	482	A	C5-C6-N1	7.09	121.25	117.70
65	D2	289	U	C4-C5-C6	-7.09	115.45	119.70
4	UD	272	LEU	CB-CG-CD2	-7.08	98.96	111.00
17	UQ	356	LEU	CA-CB-CG	7.08	131.59	115.30
65	D2	431	A	N9-C4-C5	-7.07	102.97	105.80
65	D2	535	G	C4-N9-C1'	-7.06	117.32	126.50
65	D2	461	A	N1-C6-N6	-7.05	114.37	118.60
66	D3	1159	C	C5-C4-N4	-7.05	115.27	120.20
65	D2	328	A	N7-C8-N9	-7.05	110.28	113.80
67	D4	57	A	N1-C6-N6	-7.04	114.38	118.60
12	UL	809	LEU	CB-CG-CD2	-7.03	99.05	111.00
66	D3	1613	U	C5-C6-N1	7.03	126.22	122.70
67	D4	61	G	C8-N9-C1'	-7.03	117.86	127.00
65	D2	325	U	N1-C2-O2	7.03	127.72	122.80
65	D2	331	U	O5'-P-OP1	-7.03	99.38	105.70
67	D4	24	U	C4-C5-C6	7.03	123.92	119.70
46	JP	83	LEU	CA-CB-CG	7.02	131.45	115.30
66	D3	639	U	O4'-C1'-N1	7.02	113.82	108.20
66	D3	1486	G	C6-C5-N7	-7.00	126.20	130.40
67	D4	27	U	C5-C4-O4	6.99	130.10	125.90
66	D3	864	U	C2-N1-C1'	6.99	126.09	117.70
66	D3	583	C	C6-N1-C1'	-6.99	112.41	120.80
30	CI	61	LEU	CA-CB-CG	6.99	131.37	115.30
65	D2	302	A	C8-N9-C4	6.98	108.59	105.80
35	CN	201	ASP	CB-CG-OD1	6.97	124.58	118.30
65	D2	274	C	C4-C5-C6	-6.97	113.91	117.40
66	D3	638	U	C2-N1-C1'	6.97	126.07	117.70
65	D2	391	C	C5-C6-N1	6.97	124.49	121.00
65	D2	331	U	C5-C4-O4	-6.97	121.72	125.90
31	CJ	9	ARG	NE-CZ-NH1	6.94	123.77	120.30
66	D3	1654	G	C8-N9-C4	6.94	109.18	106.40
21	UU	417	LEU	CA-CB-CG	6.94	131.26	115.30
66	D3	1069	A	C5-C6-N6	-6.94	118.15	123.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
67	D4	65	C	C6-N1-C1'	6.94	129.12	120.80
66	D3	579	A	OP2-P-O3'	6.93	120.45	105.20
66	D3	948	G	C6-C5-N7	-6.93	126.24	130.40
67	D4	57	A	N7-C8-N9	6.92	117.26	113.80
65	D2	173	G	N3-C4-C5	6.92	132.06	128.60
66	D3	1629	G	C6-C5-N7	-6.92	126.25	130.40
67	D4	58	A	C6-N1-C2	-6.92	114.45	118.60
65	D2	309	A	N9-C4-C5	6.91	108.57	105.80
66	D3	1594	G	P-O3'-C3'	6.91	127.99	119.70
67	D4	22	A	C2-N3-C4	-6.91	107.14	110.60
66	D3	552	G	C4-C5-N7	6.91	113.56	110.80
65	D2	233	G	N7-C8-N9	6.90	116.55	113.10
65	D2	325	U	C5-C6-N1	6.90	126.15	122.70
65	D2	233	G	C8-N9-C4	-6.89	103.64	106.40
65	D2	220	U	N1-C2-O2	6.89	127.62	122.80
67	D4	26	C	C6-N1-C2	-6.89	117.54	120.30
65	D2	341	G	C5-C6-N1	6.89	114.94	111.50
66	D3	934	C	C5-C6-N1	6.89	124.44	121.00
65	D2	144	C	C6-N1-C2	-6.88	117.55	120.30
41	JJ	141	THR	C-N-CA	6.88	138.90	121.70
66	D3	1471	A	N1-C6-N6	6.88	122.73	118.60
66	D3	1628	U	C5-C6-N1	6.88	126.14	122.70
17	UQ	347	LEU	CA-CB-CG	6.87	131.10	115.30
22	UV	1139	LEU	CA-CB-CG	6.87	131.09	115.30
65	D2	242	C	O5'-P-OP1	-6.86	99.52	105.70
65	D2	278	G	C5-C6-N1	6.85	114.92	111.50
66	D3	1471	A	C5-C6-N6	-6.84	118.23	123.70
21	UU	493	ILE	CG1-CB-CG2	-6.83	96.38	111.40
66	D3	1527	C	N1-C2-O2	6.83	123.00	118.90
66	D3	1069	A	N1-C6-N6	6.83	122.70	118.60
67	D4	87	G	C4-N9-C1'	-6.82	117.63	126.50
33	CL	872	LEU	CA-CB-CG	6.82	130.99	115.30
66	D3	959	U	C2-N1-C1'	6.82	125.89	117.70
66	D3	1593	A	N3-C4-N9	-6.82	121.95	127.40
66	D3	8	U	N3-C2-O2	-6.81	117.43	122.20
65	D2	287	G	N3-C2-N2	6.80	124.66	119.90
66	D3	593	U	C5-C4-O4	-6.80	121.82	125.90
1	UA	617	VAL	CG1-CB-CG2	-6.79	100.03	110.90
18	UR	588	LEU	CB-CG-CD1	-6.77	99.49	111.00
66	D3	1159	C	C2-N1-C1'	6.77	126.24	118.80
23	UX	117	LEU	CA-CB-CG	6.76	130.86	115.30
7	UG	329	LEU	CA-CB-CG	6.76	130.85	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
66	D3	8	U	C6-N1-C2	-6.75	116.95	121.00
66	D3	1037	C	N1-C1'-C2'	-6.75	104.57	112.00
67	D4	59	G	C6-C5-N7	-6.75	126.35	130.40
8	UH	258	PRO	N-CA-CB	6.75	111.39	103.30
66	D3	54	C	N1-C2-O2	6.75	122.95	118.90
66	D3	1527	C	N1-C2-N3	6.75	123.92	119.20
65	D2	535	G	N3-C2-N2	-6.74	115.18	119.90
66	D3	1638	G	C8-N9-C4	-6.74	103.70	106.40
67	D4	73	A	O5'-P-OP1	-6.74	99.63	105.70
67	D4	326	U	C2-N3-C4	-6.73	122.96	127.00
65	D2	280	A	N7-C8-N9	6.72	117.16	113.80
66	D3	976	G	C4-N9-C1'	6.72	135.24	126.50
66	D3	1483	A	C6-C5-N7	-6.70	127.61	132.30
66	D3	548	G	C4-C5-N7	6.70	113.48	110.80
30	CI	94	ILE	CG1-CB-CG2	-6.70	96.67	111.40
65	D2	296	C	C6-N1-C2	6.70	122.98	120.30
10	UJ	182	LEU	CA-CB-CG	6.69	130.69	115.30
66	D3	976	G	N3-C4-N9	6.69	130.01	126.00
66	D3	1488	G	N1-C2-N2	-6.68	110.19	116.20
65	D2	244	U	N1-C2-N3	6.67	118.91	114.90
66	D3	1638	G	C6-C5-N7	-6.67	126.40	130.40
44	JN	94	PRO	N-CA-CB	6.67	111.30	103.30
65	D2	461	A	N9-C4-C5	6.66	108.46	105.80
66	D3	1611	A	N1-C2-N3	-6.66	125.97	129.30
66	D3	885	G	N3-C4-C5	-6.65	125.27	128.60
10	UJ	28	LEU	CB-CG-CD1	-6.65	99.69	111.00
46	JP	137	LEU	CB-CG-CD2	-6.65	99.69	111.00
5	UE	281	ILE	CG1-CB-CG2	-6.65	96.78	111.40
66	D3	543	C	C2-N3-C4	-6.64	116.58	119.90
67	D4	48	A	O5'-P-OP2	-6.64	99.72	105.70
65	D2	248	G	C4-C5-N7	6.64	113.46	110.80
13	UM	443	PRO	CA-N-CD	-6.63	102.21	111.50
65	D2	418	C	C5-C6-N1	6.63	124.32	121.00
65	D2	453	A	O5'-P-OP1	-6.63	99.73	105.70
67	D4	326	U	C5-C6-N1	-6.63	119.39	122.70
1	UA	493	TRP	C-N-CA	6.62	138.26	121.70
65	D2	346	G	C4-C5-N7	6.62	113.45	110.80
65	D2	312	U	C4-C5-C6	6.62	123.67	119.70
10	UJ	234	LEU	CA-CB-CG	6.62	130.53	115.30
65	D2	403	C	C5-C6-N1	6.62	124.31	121.00
65	D2	473	A	C4-C5-C6	-6.62	113.69	117.00
66	D3	489	C	N1-C2-O2	6.62	122.87	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
67	D4	55	A	C5-N7-C8	-6.62	100.59	103.90
67	D4	59	G	N1-C2-N3	6.62	127.87	123.90
38	JE	254	ASP	CB-CG-OD1	6.61	124.25	118.30
8	UH	298	PRO	N-CA-CB	6.60	111.22	103.30
2	UB	400	PRO	N-CA-CB	6.60	111.22	103.30
1	UA	274	LEU	CA-CB-CG	6.59	130.46	115.30
66	D3	564	G	O5'-P-OP2	-6.59	99.77	105.70
66	D3	932	U	C2-N1-C1'	6.59	125.61	117.70
66	D3	1490	C	C5-C4-N4	-6.59	115.59	120.20
66	D3	1492	A	C8-N9-C4	-6.59	103.17	105.80
66	D3	1593	A	N1-C6-N6	-6.59	114.65	118.60
14	UN	309	ASP	CB-CG-OD1	6.58	124.23	118.30
65	D2	332	U	N1-C2-O2	6.58	127.41	122.80
66	D3	569	C	C4-C5-C6	-6.58	114.11	117.40
66	D3	542	A	OP1-P-O3'	6.58	119.67	105.20
66	D3	933	A	C5-C6-N6	-6.57	118.44	123.70
66	D3	1629	G	N1-C6-O6	6.57	123.84	119.90
66	D3	864	U	N1-C2-O2	6.56	127.39	122.80
67	D4	87	G	C6-C5-N7	6.55	134.33	130.40
65	D2	371	G	O5'-P-OP2	-6.55	99.80	105.70
66	D3	564	G	C2-N3-C4	-6.54	108.63	111.90
67	D4	61	G	N1-C2-N3	-6.54	119.97	123.90
46	JP	225	LEU	CB-CG-CD2	-6.54	99.88	111.00
65	D2	256	U	C5-C6-N1	-6.54	119.43	122.70
65	D2	296	C	C2-N1-C1'	-6.53	111.61	118.80
66	D3	552	G	C5-C6-N1	6.52	114.76	111.50
65	D2	340	U	C5-C6-N1	6.52	125.96	122.70
66	D3	1638	G	C4-C5-N7	6.52	113.41	110.80
65	D2	277	C	C6-N1-C2	-6.52	117.69	120.30
21	UU	494	LEU	CB-CG-CD1	6.51	122.07	111.00
62	DY	61	ARG	NE-CZ-NH2	-6.50	117.05	120.30
66	D3	1064	G	C6-C5-N7	-6.50	126.50	130.40
5	UE	111	ASP	CB-CG-OD1	6.49	124.14	118.30
30	CI	38	ILE	CG1-CB-CG2	-6.49	97.12	111.40
15	UO	277	LEU	CA-CB-CG	6.49	130.22	115.30
65	D2	220	U	C2-N1-C1'	6.48	125.48	117.70
66	D3	1785	U	N1-C2-O2	6.48	127.34	122.80
65	D2	298	A	C6-N1-C2	-6.48	114.71	118.60
66	D3	954	G	N3-C4-N9	-6.47	122.12	126.00
66	D3	584	C	C6-N1-C2	6.47	122.89	120.30
66	D3	1608	U	O5'-P-OP1	-6.46	99.89	105.70
66	D3	272	U	P-O3'-C3'	6.46	127.45	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
66	D3	901	G	C4-C5-N7	6.45	113.38	110.80
66	D3	1159	C	C4-C5-C6	-6.44	114.18	117.40
21	UU	110	LEU	CB-CG-CD2	-6.44	100.05	111.00
65	D2	252	A	C8-N9-C4	6.44	108.38	105.80
66	D3	1162	C	C5-C6-N1	6.44	124.22	121.00
67	D4	41	C	C6-N1-C1'	6.44	128.53	120.80
21	UU	605	LEU	CB-CG-CD1	-6.44	100.05	111.00
65	D2	103	G	C4-C5-N7	6.44	113.38	110.80
66	D3	1638	G	C5-N7-C8	-6.44	101.08	104.30
65	D2	458	A	C8-N9-C4	-6.43	103.23	105.80
65	D2	281	G	C6-C5-N7	-6.43	126.54	130.40
33	CL	54	LEU	CB-CG-CD2	-6.43	100.07	111.00
65	D2	143	A	N1-C6-N6	6.43	122.46	118.60
19	US	326	LEU	CB-CG-CD1	-6.42	100.08	111.00
66	D3	948	G	C4-C5-N7	6.42	113.37	110.80
26	CD	7	LEU	CA-CB-CG	6.42	130.06	115.30
66	D3	1173	C	C6-N1-C2	-6.41	117.73	120.30
65	D2	312	U	C1'-O4'-C4'	-6.41	104.77	109.90
65	D2	336	G	C4-C5-N7	6.41	113.36	110.80
8	UH	325	PRO	N-CA-CB	6.40	110.98	103.30
66	D3	542	A	P-O3'-C3'	6.40	127.38	119.70
66	D3	1060	U	N1-C2-O2	6.40	127.28	122.80
65	D2	84	G	N3-C4-N9	6.39	129.84	126.00
21	UU	522	LEU	CB-CG-CD1	-6.39	100.14	111.00
50	DF	108	LEU	CA-CB-CG	-6.39	100.61	115.30
7	UG	434	LEU	CB-CG-CD1	-6.39	100.14	111.00
65	D2	459	U	C5-C4-O4	-6.38	122.07	125.90
65	D2	82	A	O5'-P-OP1	-6.38	99.96	105.70
12	UL	543	ASP	CB-CG-OD1	6.38	124.04	118.30
65	D2	103	G	C6-C5-N7	-6.38	126.57	130.40
28	CG	64	LEU	CB-CG-CD2	-6.38	100.16	111.00
26	CD	142	LEU	CB-CG-CD2	-6.37	100.17	111.00
67	D4	63	C	OP1-P-OP2	-6.37	110.04	119.60
46	JP	32	LEU	CB-CG-CD1	-6.36	100.18	111.00
7	UG	381	LEU	CB-CG-CD1	-6.35	100.20	111.00
66	D3	487	G	N9-C1'-C2'	-6.35	105.02	112.00
65	D2	290	G	C4-C5-N7	6.35	113.34	110.80
66	D3	34	G	N3-C4-C5	6.35	131.77	128.60
10	UJ	81	LEU	CA-CB-CG	6.34	129.88	115.30
66	D3	1525	A	N1-C2-N3	-6.34	126.13	129.30
66	D3	890	C	N3-C2-O2	-6.33	117.47	121.90
65	D2	90	G	N1-C6-O6	-6.33	116.10	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
66	D3	1628	U	N3-C4-O4	6.33	123.83	119.40
18	UR	408	CYS	CA-CB-SG	-6.32	102.62	114.00
65	D2	312	U	N3-C2-O2	-6.32	117.77	122.20
66	D3	1581	C	C2-N1-C1'	6.32	125.75	118.80
67	D4	61	G	N9-C4-C5	-6.32	102.87	105.40
66	D3	1633	A	C2-N3-C4	6.32	113.76	110.60
65	D2	287	G	C5-C6-N1	6.31	114.66	111.50
66	D3	572	C	C6-N1-C2	6.31	122.83	120.30
65	D2	310	U	C5-C4-O4	6.31	129.69	125.90
66	D3	1530	C	N3-C4-N4	-6.31	113.58	118.00
65	D2	255	U	O5'-P-OP2	-6.31	100.03	105.70
65	D2	388	C	N3-C4-C5	-6.31	119.38	121.90
67	D4	29	U	OP2-P-O3'	6.31	119.07	105.20
66	D3	1072	C	C6-N1-C2	-6.30	117.78	120.30
66	D3	956	C	C6-N1-C2	-6.30	117.78	120.30
66	D3	591	A	N1-C6-N6	-6.29	114.83	118.60
1	UA	411	VAL	CG1-CB-CG2	-6.28	100.84	110.90
8	UH	70	PRO	N-CA-CB	6.28	110.84	103.30
66	D3	562	G	C6-N1-C2	-6.28	121.33	125.10
8	UH	235	PRO	N-CA-CB	6.27	110.83	103.30
65	D2	328	A	N9-C4-C5	-6.27	103.29	105.80
66	D3	1638	G	N7-C8-N9	6.27	116.24	113.10
66	D3	503	G	N1-C6-O6	-6.26	116.14	119.90
21	UU	110	LEU	CB-CG-CD1	-6.26	100.36	111.00
19	US	37	PRO	N-CA-CB	6.25	110.81	103.30
66	D3	1604	U	OP1-P-O3'	6.25	118.96	105.20
66	D3	1525	A	C4-C5-C6	-6.25	113.87	117.00
30	CI	142	LEU	CB-CG-CD2	-6.25	100.38	111.00
7	UG	433	LEU	CB-CG-CD1	-6.25	100.38	111.00
4	UD	191	LEU	CB-CG-CD1	-6.25	100.38	111.00
66	D3	965	U	N3-C2-O2	-6.24	117.83	122.20
34	CM	208	MET	CB-CG-SD	-6.23	93.71	112.40
65	D2	293	U	C2-N1-C1'	-6.23	110.22	117.70
66	D3	867	G	C4-N9-C1'	6.23	134.60	126.50
65	D2	315	U	C2-N1-C1'	6.22	125.16	117.70
67	D4	60	A	O5'-P-OP2	-6.22	100.11	105.70
66	D3	1632	C	N3-C4-N4	-6.21	113.66	118.00
2	UB	285	PRO	N-CA-CB	6.20	110.74	103.30
66	D3	1153	G	C4-C5-N7	6.20	113.28	110.80
1	UA	339	LEU	CA-CB-CG	6.20	129.56	115.30
18	UR	345	LEU	CB-CG-CD1	-6.20	100.46	111.00
65	D2	386	A	O5'-P-OP1	-6.20	100.12	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
65	D2	447	G	N3-C4-N9	-6.20	122.28	126.00
66	D3	976	G	C6-C5-N7	-6.20	126.68	130.40
15	UO	421	LEU	CB-CG-CD1	-6.19	100.47	111.00
10	UJ	238	LEU	CB-CG-CD2	-6.19	100.47	111.00
14	UN	277	ARG	NE-CZ-NH1	-6.19	117.20	120.30
1	UA	702	LEU	CB-CG-CD1	-6.18	100.49	111.00
65	D2	335	G	O5'-P-OP1	-6.18	100.14	105.70
66	D3	1049	U	N3-C2-O2	-6.18	117.88	122.20
65	D2	452	A	C8-N9-C4	-6.17	103.33	105.80
33	CL	86	ILE	CG1-CB-CG2	-6.17	97.82	111.40
66	D3	864	U	N3-C2-O2	-6.17	117.88	122.20
66	D3	325	G	C8-N9-C4	6.17	108.87	106.40
65	D2	341	G	N9-C4-C5	-6.16	102.94	105.40
8	UH	61	PRO	N-CA-CB	6.15	110.68	103.30
28	CF	87	LEU	CB-CG-CD2	-6.15	100.55	111.00
65	D2	315	U	O5'-P-OP2	-6.15	100.17	105.70
67	D4	61	G	N1-C6-O6	6.15	123.59	119.90
31	CJ	20	LEU	CA-CB-CG	6.14	129.43	115.30
65	D2	294	U	N1-C2-N3	6.14	118.59	114.90
65	D2	387	C	C6-N1-C2	-6.14	117.84	120.30
66	D3	569	C	N3-C4-C5	6.14	124.36	121.90
65	D2	487	A	C8-N9-C4	-6.14	103.34	105.80
65	D2	535	G	N9-C4-C5	6.14	107.86	105.40
67	D4	67	G	N1-C6-O6	-6.14	116.22	119.90
65	D2	82	A	C4-C5-N7	6.13	113.77	110.70
65	D2	248	G	C5-C6-O6	-6.13	124.92	128.60
66	D3	471	A	C8-N9-C4	-6.13	103.35	105.80
21	UU	28	ARG	NE-CZ-NH1	-6.13	117.23	120.30
8	UH	59	PRO	N-CA-CB	6.13	110.66	103.30
66	D3	1036	A	C5-C6-N1	6.13	120.76	117.70
66	D3	487	G	C8-N9-C4	6.12	108.85	106.40
33	CL	988	ARG	NE-CZ-NH1	-6.12	117.24	120.30
66	D3	1609	U	N3-C2-O2	-6.12	117.92	122.20
8	UH	68	PRO	N-CA-CB	6.12	110.64	103.30
21	UU	367	LEU	CB-CG-CD2	-6.12	100.60	111.00
65	D2	311	C	C2-N1-C1'	-6.11	112.08	118.80
67	D4	90	C	C2-N1-C1'	6.11	125.52	118.80
65	D2	305	A	N3-C4-N9	-6.10	122.52	127.40
65	D2	331	U	N3-C2-O2	6.10	126.47	122.20
31	CJ	120	GLY	N-CA-C	-6.09	97.86	113.10
65	D2	309	A	N1-C6-N6	-6.09	114.94	118.60
65	D2	233	G	C8-N9-C1'	6.09	134.92	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
65	D2	307	C	C5-C6-N1	6.09	124.04	121.00
18	UR	228	LEU	CB-CG-CD2	-6.09	100.65	111.00
66	D3	1604	U	C2-N1-C1'	-6.09	110.40	117.70
39	JF	124	VAL	C-N-CA	6.08	136.91	121.70
66	D3	1474	G	N3-C4-N9	-6.08	122.35	126.00
67	D4	82	G	C5-C6-N1	6.08	114.54	111.50
23	UX	141	LEU	CB-CG-CD2	-6.08	100.67	111.00
66	D3	1060	U	N3-C2-O2	-6.08	117.95	122.20
66	D3	6	G	C5-C6-O6	-6.07	124.96	128.60
2	UB	412	PRO	N-CA-CB	6.07	110.59	103.30
67	D4	25	U	C5-C4-O4	-6.07	122.26	125.90
18	UR	164	LEU	CB-CG-CD1	-6.07	100.68	111.00
66	D3	976	G	N3-C4-C5	-6.07	125.56	128.60
44	JN	108	PRO	N-CA-CB	6.07	110.58	103.30
66	D3	1062	A	C8-N9-C4	6.07	108.23	105.80
19	US	466	LEU	CB-CG-CD1	-6.06	100.70	111.00
46	JP	269	TRP	C-N-CA	-6.06	106.56	121.70
26	CD	40	ASP	CB-CG-OD1	6.05	123.75	118.30
66	D3	951	A	C4-C5-N7	6.05	113.73	110.70
66	D3	1123	C	N3-C2-O2	-6.05	117.67	121.90
66	D3	1167	G	N3-C4-N9	-6.05	122.37	126.00
65	D2	346	G	C6-C5-N7	-6.05	126.77	130.40
25	CA	223	ASP	CB-CG-OD1	6.05	123.74	118.30
50	DF	25	LEU	CA-CB-CG	6.05	129.21	115.30
66	D3	1513	G	C5-C6-O6	-6.05	124.97	128.60
66	D3	1616	G	C5-C6-N1	6.05	114.52	111.50
65	D2	283	A	N3-C4-C5	6.04	131.03	126.80
18	UR	272	LEU	CB-CG-CD2	-6.04	100.73	111.00
66	D3	1464	G	C6-C5-N7	-6.04	126.78	130.40
67	D4	39	C	C6-N1-C2	-6.04	117.89	120.30
65	D2	431	A	C5-C6-N6	-6.04	118.87	123.70
52	DH	143	LEU	CA-CB-CG	-6.04	101.42	115.30
66	D3	495	C	C5-C6-N1	6.04	124.02	121.00
66	D3	1114	G	C4-C5-N7	6.03	113.21	110.80
66	D3	1584	G	C6-C5-N7	6.03	134.02	130.40
65	D2	412	A	C5-N7-C8	-6.03	100.89	103.90
65	D2	305	A	C5-C6-N6	6.03	128.52	123.70
2	UB	201	PRO	N-CA-CB	6.03	110.53	103.30
65	D2	392	U	C5-C4-O4	-6.03	122.28	125.90
65	D2	238	G	C2-N3-C4	6.02	114.91	111.90
65	D2	383	G	C2-N3-C4	-6.02	108.89	111.90
66	D3	931	C	O5'-P-OP1	-6.02	100.28	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
65	D2	172	C	N3-C2-O2	-6.01	117.69	121.90
67	D4	27	U	N3-C4-O4	-6.01	115.19	119.40
66	D3	572	C	N3-C4-C5	6.01	124.31	121.90
67	D4	35	U	C5-C4-O4	-6.01	122.29	125.90
67	D4	60	A	N1-C6-N6	-6.01	115.00	118.60
11	UK	48	LEU	CB-CG-CD2	-6.00	100.79	111.00
66	D3	1466	G	C6-C5-N7	-6.00	126.80	130.40
1	UA	592	ILE	CG1-CB-CG2	-6.00	98.19	111.40
65	D2	402	G	N3-C4-C5	-6.00	125.60	128.60
67	D4	61	G	N3-C4-C5	-6.00	125.60	128.60
48	DA	120	LEU	CB-CG-CD2	-6.00	100.80	111.00
15	UO	499	LYS	CA-CB-CG	6.00	126.59	113.40
66	D3	54	C	N3-C2-O2	-6.00	117.70	121.90
66	D3	1084	A	C5-C6-N1	-5.99	114.70	117.70
66	D3	1606	C	N3-C4-C5	-5.99	119.51	121.90
65	D2	341	G	N3-C4-C5	-5.98	125.61	128.60
66	D3	1084	A	C4-C5-C6	5.98	119.99	117.00
21	UU	223	LEU	CB-CG-CD2	-5.98	100.84	111.00
6	UF	12	ILE	CG1-CB-CG2	-5.98	98.25	111.40
67	D4	31	G	N3-C4-N9	-5.98	122.41	126.00
46	JP	83	LEU	CB-CG-CD2	-5.98	100.84	111.00
66	D3	1072	C	C5-C6-N1	5.98	123.99	121.00
22	UV	591	ASP	CB-CG-OD1	5.97	123.68	118.30
65	D2	348	U	C5-C6-N1	5.97	125.69	122.70
66	D3	564	G	N7-C8-N9	5.97	116.09	113.10
66	D3	1167	G	N3-C2-N2	-5.97	115.72	119.90
66	D3	638	U	C6-N1-C2	-5.97	117.42	121.00
66	D3	1510	U	N3-C2-O2	-5.97	118.02	122.20
1	UA	717	LEU	CB-CG-CD2	-5.96	100.86	111.00
19	US	296	MET	CG-SD-CE	-5.96	90.66	100.20
65	D2	284	U	N1-C2-N3	-5.96	111.32	114.90
30	CI	32	VAL	CG1-CB-CG2	-5.96	101.36	110.90
65	D2	467	A	N3-C4-C5	5.96	130.97	126.80
66	D3	471	A	N7-C8-N9	5.96	116.78	113.80
66	D3	494	U	C6-N1-C2	-5.96	117.43	121.00
66	D3	547	U	N3-C2-O2	-5.96	118.03	122.20
18	UR	353	ARG	NE-CZ-NH2	5.96	123.28	120.30
46	JP	259	VAL	CG1-CB-CG2	-5.96	101.37	110.90
65	D2	100	G	C4-C5-N7	5.95	113.18	110.80
46	JP	351	VAL	CG1-CB-CG2	-5.94	101.40	110.90
66	D3	566	C	C6-N1-C2	-5.93	117.93	120.30
66	D3	163	G	N3-C4-C5	5.93	131.56	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
66	D3	1513	G	N1-C6-O6	5.93	123.46	119.90
66	D3	1603	U	C5-C6-N1	5.93	125.67	122.70
8	UH	316	PRO	N-CA-CB	5.93	110.41	103.30
66	D3	28	A	C8-N9-C4	-5.93	103.43	105.80
66	D3	542	A	C6-C5-N7	-5.92	128.15	132.30
65	D2	84	G	C8-N9-C1'	-5.92	119.30	127.00
65	D2	371	G	C8-N9-C4	5.92	108.77	106.40
66	D3	1064	G	C4-C5-N7	5.92	113.17	110.80
65	D2	286	U	N3-C2-O2	-5.92	118.06	122.20
66	D3	1177	C	C4-C5-C6	-5.92	114.44	117.40
44	JN	102	PRO	N-CA-CB	5.92	110.40	103.30
65	D2	392	U	N1-C2-N3	5.92	118.45	114.90
66	D3	591	A	N9-C4-C5	5.92	108.17	105.80
65	D2	449	U	C5-C6-N1	5.91	125.66	122.70
65	D2	171	G	C8-N9-C4	-5.91	104.03	106.40
32	CK	383	ARG	CA-CB-CG	-5.91	100.41	113.40
66	D3	495	C	C6-N1-C2	-5.91	117.94	120.30
65	D2	488	U	N1-C2-O2	5.90	126.93	122.80
66	D3	917	U	N3-C4-C5	-5.90	111.06	114.60
66	D3	1584	G	N9-C4-C5	5.90	107.76	105.40
32	CK	509	LEU	CA-CB-CG	-5.90	101.74	115.30
66	D3	374	U	C6-N1-C1'	-5.89	112.95	121.20
67	D4	36	C	C6-N1-C2	5.89	122.66	120.30
66	D3	1472	C	C6-N1-C2	-5.89	117.94	120.30
66	D3	1633	A	N9-C4-C5	5.89	108.16	105.80
66	D3	1620	C	P-O3'-C3'	5.89	126.77	119.70
34	CM	280	LEU	CB-CG-CD1	5.88	121.00	111.00
67	D4	86	A	C8-N9-C4	-5.88	103.45	105.80
46	JP	313	PHE	CB-CG-CD1	-5.88	116.69	120.80
66	D3	163	G	N3-C4-N9	-5.87	122.48	126.00
66	D3	1474	G	N3-C4-C5	5.87	131.53	128.60
8	UH	309	PRO	N-CA-CB	5.86	110.34	103.30
12	UL	898	LEU	CA-CB-CG	-5.86	101.82	115.30
65	D2	402	G	N1-C6-O6	-5.86	116.38	119.90
66	D3	1036	A	C6-N1-C2	-5.86	115.08	118.60
66	D3	1158	C	O5'-P-OP1	-5.86	100.43	105.70
66	D3	111	U	N1-C2-O2	5.85	126.90	122.80
65	D2	280	A	N9-C4-C5	5.85	108.14	105.80
65	D2	301	U	C5-C6-N1	5.85	125.62	122.70
65	D2	381	G	C4-C5-N7	5.85	113.14	110.80
66	D3	976	G	N7-C8-N9	5.85	116.03	113.10
66	D3	1472	C	C2-N1-C1'	5.85	125.23	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
66	D3	1589	C	C6-N1-C1'	5.84	127.81	120.80
65	D2	273	G	C5-C6-O6	5.84	132.10	128.60
65	D2	279	A	O5'-P-OP2	-5.84	100.45	105.70
65	D2	99	U	N1-C2-O2	5.83	126.88	122.80
66	D3	895	G	C5-C6-N1	-5.83	108.59	111.50
2	UB	598	LEU	CA-CB-CG	5.82	128.69	115.30
66	D3	1045	C	C2-N1-C1'	-5.82	112.39	118.80
65	D2	315	U	C5-C4-O4	-5.82	122.41	125.90
66	D3	1064	G	N3-C4-N9	5.82	129.49	126.00
67	D4	61	G	C5-N7-C8	-5.82	101.39	104.30
58	DQ	117	LEU	CB-CG-CD2	-5.82	101.11	111.00
67	D4	76	U	O5'-P-OP2	-5.82	100.47	105.70
65	D2	240	C	C2-N1-C1'	-5.81	112.41	118.80
65	D2	341	G	C8-N9-C1'	-5.81	119.44	127.00
65	D2	432	C	C6-N1-C2	5.81	122.62	120.30
65	D2	473	A	N1-C6-N6	-5.81	115.11	118.60
67	D4	59	G	C5-C6-N1	-5.81	108.59	111.50
1	UA	274	LEU	CB-CG-CD1	-5.81	101.12	111.00
67	D4	38	U	C2-N1-C1'	-5.81	110.73	117.70
7	UG	108	LEU	CA-CB-CG	5.81	128.66	115.30
7	UG	280	ILE	CG1-CB-CG2	-5.81	98.62	111.40
65	D2	433	C	N1-C2-O2	5.81	122.38	118.90
66	D3	575	C	C5-C6-N1	5.81	123.90	121.00
65	D2	288	G	N3-C2-N2	5.80	123.96	119.90
1	UA	152	LEU	CB-CG-CD2	-5.80	101.14	111.00
65	D2	431	A	N1-C6-N6	5.80	122.08	118.60
66	D3	867	G	C6-C5-N7	-5.80	126.92	130.40
67	D4	25	U	C5-C6-N1	5.80	125.60	122.70
65	D2	247	U	C2-N1-C1'	-5.79	110.75	117.70
65	D2	84	G	C4-C5-N7	5.79	113.12	110.80
65	D2	165	G	O5'-P-OP1	-5.79	100.49	105.70
65	D2	300	C	C6-N1-C1'	5.79	127.75	120.80
66	D3	1056	U	N3-C2-O2	-5.79	118.15	122.20
65	D2	303	A	C4-C5-C6	-5.79	114.11	117.00
65	D2	473	A	C5-C6-N1	5.79	120.59	117.70
65	D2	385	A	O4'-C1'-N9	-5.79	103.57	108.20
66	D3	111	U	C2-N1-C1'	5.79	124.65	117.70
66	D3	1624	C	C6-N1-C2	-5.79	117.98	120.30
65	D2	338	A	C8-N9-C4	-5.79	103.49	105.80
66	D3	1599	C	C5-C4-N4	-5.78	116.15	120.20
65	D2	288	G	C5-C6-N1	5.78	114.39	111.50
66	D3	538	A	C5-C6-N1	5.78	120.59	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
66	D3	1056	U	N1-C2-O2	5.77	126.84	122.80
65	D2	94	A	C8-N9-C4	5.77	108.11	105.80
1	UA	11	LEU	CB-CG-CD1	-5.77	101.19	111.00
1	UA	517	ASP	CB-CG-OD1	-5.77	113.11	118.30
1	UA	356	ASP	C-N-CA	-5.76	110.19	122.30
66	D3	1174	C	C6-N1-C1'	-5.76	113.88	120.80
66	D3	1061	A	O4'-C1'-N9	5.75	112.80	108.20
66	D3	1114	G	N3-C2-N2	5.75	123.93	119.90
66	D3	1510	U	C2-N1-C1'	5.75	124.60	117.70
66	D3	542	A	N9-C1'-C2'	5.75	121.47	114.00
67	D4	260	U	C5-C6-N1	5.75	125.57	122.70
28	CG	7	LYS	CD-CE-NZ	-5.74	98.49	111.70
13	UM	620	LEU	CA-CB-CG	5.74	128.50	115.30
65	D2	332	U	N3-C4-O4	-5.74	115.38	119.40
66	D3	1150	G	C8-N9-C4	5.74	108.69	106.40
65	D2	239	U	N1-C2-N3	5.73	118.34	114.90
66	D3	566	C	C4-C5-C6	-5.73	114.53	117.40
66	D3	965	U	N1-C2-O2	5.73	126.81	122.80
41	JJ	106	MET	CA-CB-CG	5.73	123.04	113.30
67	D4	87	G	N7-C8-N9	-5.73	110.24	113.10
66	D3	557	G	OP2-P-O3'	5.72	117.79	105.20
66	D3	1467	C	C2-N1-C1'	-5.72	112.50	118.80
50	DF	97	LEU	CB-CG-CD1	-5.72	101.28	111.00
54	DJ	99	LEU	CB-CG-CD2	-5.72	101.28	111.00
65	D2	381	G	C5-N7-C8	-5.72	101.44	104.30
66	D3	596	C	C6-N1-C1'	5.72	127.66	120.80
66	D3	1632	C	C6-N1-C2	5.72	122.59	120.30
15	UO	373	ILE	CG1-CB-CG2	-5.71	98.83	111.40
66	D3	573	C	N3-C4-N4	5.71	122.00	118.00
65	D2	399	U	C5-C6-N1	5.71	125.56	122.70
66	D3	496	G	C6-C5-N7	-5.71	126.97	130.40
65	D2	336	G	C5-C6-N1	5.71	114.35	111.50
66	D3	10	G	C4-C5-N7	5.71	113.08	110.80
66	D3	872	G	C2-N3-C4	-5.71	109.05	111.90
65	D2	318	A	C4-C5-N7	5.71	113.55	110.70
65	D2	239	U	C2-N3-C4	-5.70	123.58	127.00
67	D4	13	C	N3-C4-C5	5.70	124.18	121.90
66	D3	1605	G	N1-C6-O6	-5.70	116.48	119.90
67	D4	27	U	C6-N1-C1'	-5.70	113.22	121.20
65	D2	295	A	N7-C8-N9	5.70	116.65	113.80
66	D3	1078	C	N1-C2-O2	-5.70	115.48	118.90
66	D3	1616	G	C6-N1-C2	-5.70	121.68	125.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
65	D2	392	U	N3-C4-O4	5.70	123.39	119.40
56	DN	72	MET	CB-CG-SD	-5.70	95.32	112.40
66	D3	543	C	N3-C4-C5	5.70	124.18	121.90
61	DX	87	VAL	N-CA-C	-5.69	95.63	111.00
65	D2	372	A	N1-C6-N6	-5.69	115.19	118.60
66	D3	1078	C	C5-C4-N4	-5.69	116.22	120.20
67	D4	41	C	OP2-P-O3'	5.68	117.70	105.20
66	D3	1657	U	P-O3'-C3'	5.68	126.51	119.70
65	D2	461	A	C8-N9-C4	-5.68	103.53	105.80
66	D3	690	G	C8-N9-C4	-5.68	104.13	106.40
67	D4	62	C	C2-N1-C1'	5.67	125.04	118.80
32	CK	426	LEU	CB-CG-CD2	-5.67	101.36	111.00
33	CL	834	TRP	CA-CB-CG	5.67	124.47	113.70
60	DW	55	ASP	CB-CG-OD1	5.67	123.40	118.30
66	D3	933	A	N1-C6-N6	5.67	122.00	118.60
66	D3	37	U	N1-C2-O2	5.67	126.77	122.80
65	D2	479	G	N1-C6-O6	-5.66	116.50	119.90
33	CL	872	LEU	CB-CG-CD1	-5.66	101.38	111.00
66	D3	583	C	P-O3'-C3'	5.66	126.49	119.70
66	D3	374	U	C5-C6-N1	5.66	125.53	122.70
66	D3	534	A	C5-N7-C8	-5.66	101.07	103.90
7	UG	390	LEU	CB-CG-CD2	-5.65	101.39	111.00
10	UJ	103	LEU	CB-CG-CD2	-5.65	101.39	111.00
65	D2	275	A	N7-C8-N9	5.65	116.63	113.80
66	D3	1466	G	C4-C5-N7	5.65	113.06	110.80
66	D3	426	G	N9-C4-C5	-5.65	103.14	105.40
65	D2	344	U	C2-N1-C1'	-5.65	110.92	117.70
66	D3	543	C	O5'-P-OP1	-5.65	100.62	105.70
32	CK	343	GLU	CA-CB-CG	5.64	125.82	113.40
65	D2	335	G	C5-N7-C8	-5.64	101.48	104.30
65	D2	409	C	N3-C4-C5	5.64	124.16	121.90
66	D3	1471	A	C4-C5-N7	5.64	113.52	110.70
7	UG	270	LEU	CB-CG-CD2	-5.64	101.41	111.00
67	D4	35	U	C2-N1-C1'	5.64	124.47	117.70
23	UX	119	LEU	CB-CG-CD1	-5.64	101.41	111.00
7	UG	390	LEU	CA-CB-CG	5.64	128.27	115.30
66	D3	1624	C	C6-N1-C1'	5.64	127.56	120.80
65	D2	300	C	N3-C4-C5	-5.63	119.65	121.90
50	DF	108	LEU	CB-CG-CD2	-5.63	101.43	111.00
65	D2	319	A	C5-N7-C8	-5.63	101.09	103.90
65	D2	323	A	C5-C6-N6	-5.63	119.20	123.70
65	D2	319	A	C8-N9-C4	-5.62	103.55	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
66	D3	549	G	C5-N7-C8	-5.62	101.49	104.30
66	D3	496	G	C5-N7-C8	-5.62	101.49	104.30
7	UG	442	ILE	CG1-CB-CG2	-5.62	99.03	111.40
65	D2	251	C	C6-N1-C2	-5.62	118.05	120.30
65	D2	288	G	C4-C5-N7	5.62	113.05	110.80
66	D3	864	U	C5-C6-N1	5.62	125.51	122.70
38	JE	334	LEU	CA-CB-CG	5.61	128.21	115.30
66	D3	539	G	C2-N3-C4	-5.61	109.09	111.90
65	D2	233	G	C6-C5-N7	-5.61	127.03	130.40
66	D3	1123	C	N1-C2-O2	5.61	122.27	118.90
18	UR	242	ASN	CB-CA-C	-5.61	99.18	110.40
17	UQ	315	GLY	N-CA-C	5.61	127.12	113.10
33	CL	932	LEU	CA-CB-CG	5.61	128.20	115.30
12	UL	752	LEU	CB-CG-CD2	5.61	120.53	111.00
67	D4	55	A	C8-N9-C4	5.61	108.04	105.80
65	D2	158	G	C8-N9-C4	5.60	108.64	106.40
66	D3	1616	G	N3-C4-C5	-5.60	125.80	128.60
23	UX	8	ARG	NE-CZ-NH2	5.60	123.10	120.30
26	CD	154	LEU	CB-CG-CD2	-5.60	101.48	111.00
65	D2	490	G	O4'-C1'-N9	5.60	112.68	108.20
65	D2	220	U	C5-C6-N1	5.60	125.50	122.70
67	D4	84	U	N3-C4-O4	-5.60	115.48	119.40
66	D3	34	G	N3-C4-N9	-5.59	122.64	126.00
48	DA	97	LEU	CA-CB-CG	-5.59	102.44	115.30
30	CI	77	LEU	CA-CB-CG	5.59	128.16	115.30
65	D2	305	A	C2-N3-C4	-5.59	107.80	110.60
66	D3	482	U	N3-C2-O2	-5.59	118.29	122.20
25	CA	251	ARG	CG-CD-NE	5.59	123.54	111.80
33	CL	829	LEU	CA-CB-CG	5.59	128.16	115.30
65	D2	246	G	C6-N1-C2	-5.59	121.75	125.10
7	UG	258	LEU	CB-CG-CD2	-5.58	101.51	111.00
65	D2	234	A	C2-N3-C4	-5.58	107.81	110.60
46	JP	147	LEU	CB-CG-CD2	-5.58	101.51	111.00
65	D2	490	G	C4-N9-C1'	-5.58	119.24	126.50
66	D3	513	U	C2-N1-C1'	-5.58	111.00	117.70
66	D3	1076	A	O5'-P-OP2	-5.58	100.67	105.70
66	D3	1584	G	C4-C5-N7	-5.58	108.57	110.80
67	D4	57	A	O5'-P-OP1	-5.58	100.68	105.70
67	D4	80	U	O5'-P-OP2	-5.58	100.68	105.70
66	D3	24	U	N1-C2-O2	5.58	126.71	122.80
65	D2	280	A	N3-C4-C5	5.58	130.71	126.80
67	D4	260	U	N3-C2-O2	-5.57	118.30	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
13	UM	584	ILE	CG1-CB-CG2	5.57	123.65	111.40
66	D3	6	G	C5-C6-N1	5.57	114.28	111.50
33	CL	1135	ARG	CA-CB-CG	5.57	125.64	113.40
67	D4	59	G	N1-C6-O6	5.56	123.24	119.90
50	DF	29	ILE	CG1-CB-CG2	-5.56	99.16	111.40
33	CL	996	LEU	CA-CB-CG	5.56	128.09	115.30
65	D2	472	A	O5'-P-OP1	-5.56	100.70	105.70
66	D3	1114	G	N9-C4-C5	-5.56	103.18	105.40
66	D3	1611	A	C4-C5-C6	-5.55	114.22	117.00
65	D2	84	G	C6-C5-N7	-5.55	127.07	130.40
67	D4	67	G	O5'-P-OP2	-5.55	100.70	105.70
49	DE	87	MET	CA-CB-CG	5.55	122.73	113.30
65	D2	310	U	O5'-P-OP1	-5.55	100.71	105.70
7	UG	381	LEU	CA-CB-CG	5.55	128.06	115.30
66	D3	496	G	C5-C6-O6	-5.55	125.27	128.60
67	D4	58	A	C2-N3-C4	5.54	113.37	110.60
65	D2	423	C	C2-N1-C1'	5.54	124.90	118.80
66	D3	938	G	N1-C2-N2	-5.54	111.21	116.20
66	D3	1777	G	C4-C5-N7	5.54	113.02	110.80
67	D4	60	A	N9-C4-C5	5.54	108.02	105.80
21	UU	218	LEU	CB-CG-CD2	-5.54	101.58	111.00
65	D2	231	C	C6-N1-C1'	5.54	127.45	120.80
65	D2	314	U	C6-N1-C2	-5.54	117.68	121.00
66	D3	1491	U	O5'-P-OP1	-5.54	100.72	105.70
50	DF	97	LEU	CB-CG-CD2	-5.54	101.59	111.00
66	D3	1040	G	N3-C4-N9	-5.54	122.68	126.00
66	D3	1575	G	N1-C6-O6	-5.53	116.58	119.90
66	D3	1638	G	N1-C6-O6	5.53	123.22	119.90
28	CF	70	LEU	CB-CG-CD2	-5.53	101.60	111.00
30	CI	79	LEU	CB-CG-CD2	-5.53	101.60	111.00
66	D3	307	G	N3-C4-N9	5.53	129.32	126.00
66	D3	1471	A	C5-N7-C8	-5.53	101.14	103.90
67	D4	331	A	C5-N7-C8	-5.53	101.14	103.90
65	D2	324	U	N1-C2-O2	5.53	126.67	122.80
65	D2	289	U	C6-N1-C2	-5.53	117.68	121.00
66	D3	642	G	N1-C2-N2	5.53	121.17	116.20
66	D3	1487	A	C8-N9-C4	-5.52	103.59	105.80
1	UA	563	ARG	CG-CD-NE	5.52	123.39	111.80
41	JJ	100	MET	CA-CB-CG	5.52	122.68	113.30
65	D2	389	U	O5'-P-OP1	-5.52	100.73	105.70
65	D2	477	G	N3-C4-N9	-5.52	122.69	126.00
66	D3	1488	G	C5-C6-O6	5.52	131.91	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
31	CJ	129	ASP	CB-CG-OD1	5.52	123.27	118.30
65	D2	309	A	C8-N9-C4	-5.52	103.59	105.80
66	D3	10	G	C5-C6-O6	-5.52	125.29	128.60
66	D3	1618	C	C6-N1-C1'	-5.52	114.18	120.80
66	D3	1492	A	C2-N3-C4	5.51	113.36	110.60
65	D2	438	U	C5-C6-N1	5.51	125.45	122.70
65	D2	400	C	N3-C4-C5	5.51	124.10	121.90
67	D4	21	C	C5-C6-N1	5.51	123.75	121.00
66	D3	-2	A	O4'-C1'-N9	5.51	112.61	108.20
67	D4	70	U	O5'-P-OP1	-5.51	100.74	105.70
46	JP	62	LEU	CA-CB-CG	5.50	127.96	115.30
65	D2	535	G	O4'-C1'-N9	5.50	112.60	108.20
1	UA	275	LEU	CB-CG-CD1	-5.50	101.65	111.00
65	D2	287	G	N1-C2-N2	-5.50	111.25	116.20
65	D2	98	G	N3-C4-C5	-5.50	125.85	128.60
66	D3	1068	C	C2-N1-C1'	-5.50	112.75	118.80
65	D2	347	U	C5-C6-N1	5.50	125.45	122.70
66	D3	1037	C	N3-C4-C5	5.50	124.10	121.90
10	UJ	152	LEU	CB-CG-CD1	-5.49	101.67	111.00
65	D2	332	U	C5-C4-O4	5.49	129.19	125.90
6	UF	322	LEU	CA-CB-CG	5.49	127.92	115.30
65	D2	431	A	C4-C5-N7	5.49	113.44	110.70
66	D3	17	C	N1-C2-O2	5.49	122.19	118.90
66	D3	539	G	C6-C5-N7	-5.49	127.11	130.40
66	D3	557	G	C8-N9-C4	-5.49	104.21	106.40
66	D3	1063	U	C5-C6-N1	5.49	125.44	122.70
66	D3	1472	C	N3-C2-O2	-5.49	118.06	121.90
46	JP	374	LEU	CA-CB-CG	5.48	127.91	115.30
66	D3	867	G	C8-N9-C1'	-5.48	119.87	127.00
66	D3	494	U	N3-C2-O2	-5.48	118.36	122.20
66	D3	937	C	C6-N1-C1'	5.48	127.38	120.80
67	D4	332	G	O5'-P-OP1	-5.48	100.77	105.70
67	D4	55	A	C3'-C2'-C1'	-5.48	97.12	101.50
1	UA	588	ASP	CB-CG-OD1	5.48	123.23	118.30
65	D2	302	A	N7-C8-N9	-5.48	111.06	113.80
14	UN	313	PHE	N-CA-C	5.47	125.78	111.00
66	D3	500	C	C4-C5-C6	-5.47	114.66	117.40
66	D3	1612	U	O5'-P-OP1	-5.47	100.77	105.70
65	D2	348	U	C6-N1-C2	-5.47	117.72	121.00
33	CL	263	LEU	CA-CB-CG	5.47	127.87	115.30
65	D2	312	U	N3-C4-O4	-5.47	115.57	119.40
62	DY	40	LEU	CB-CG-CD1	-5.46	101.71	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
66	D3	1057	U	P-O3'-C3'	5.46	126.26	119.70
5	UE	452	LEU	CB-CG-CD1	-5.46	101.71	111.00
21	UU	494	LEU	CD1-CG-CD2	-5.46	94.12	110.50
37	JC	350	PRO	C-N-CA	5.46	135.35	121.70
65	D2	137	C	N3-C2-O2	-5.46	118.08	121.90
17	UQ	264	ILE	CG1-CB-CG2	-5.46	99.40	111.40
67	D4	70	U	C2-N1-C1'	-5.46	111.16	117.70
65	D2	318	A	C5-C6-N6	-5.45	119.34	123.70
67	D4	22	A	N3-C4-N9	-5.45	123.04	127.40
21	UU	183	VAL	CG1-CB-CG2	-5.45	102.18	110.90
18	UR	212	LEU	CB-CG-CD1	-5.45	101.74	111.00
67	D4	57	A	C5-N7-C8	-5.45	101.17	103.90
28	CG	64	LEU	CB-CG-CD1	5.45	120.26	111.00
66	D3	883	C	C6-N1-C2	-5.45	118.12	120.30
66	D3	954	G	N3-C4-C5	5.45	131.32	128.60
65	D2	335	G	C5-C6-O6	-5.45	125.33	128.60
1	UA	30	LEU	CB-CG-CD2	-5.44	101.75	111.00
66	D3	577	G	N9-C4-C5	5.44	107.58	105.40
66	D3	1777	G	C6-C5-N7	-5.44	127.13	130.40
67	D4	85	G	N1-C6-O6	-5.44	116.64	119.90
67	D4	87	G	C8-N9-C1'	5.44	134.07	127.00
15	UO	164	LEU	CB-CG-CD2	-5.44	101.75	111.00
15	UO	431	LEU	CA-CB-CG	5.44	127.81	115.30
65	D2	319	A	N7-C8-N9	5.44	116.52	113.80
66	D3	1076	A	C2-N3-C4	-5.44	107.88	110.60
65	D2	89	C	C5-C4-N4	-5.44	116.39	120.20
65	D2	315	U	C6-N1-C1'	-5.44	113.59	121.20
65	D2	407	A	N1-C6-N6	-5.43	115.34	118.60
66	D3	1487	A	N1-C6-N6	-5.43	115.34	118.60
65	D2	444	U	C2-N1-C1'	-5.43	111.18	117.70
39	JG	97	LEU	CB-CG-CD1	-5.43	101.77	111.00
66	D3	901	G	C4-N9-C1'	5.43	133.56	126.50
66	D3	1038	U	N1-C2-N3	5.43	118.16	114.90
63	Db	4	VAL	CG1-CB-CG2	-5.43	102.22	110.90
66	D3	54	C	C6-N1-C2	-5.43	118.13	120.30
66	D3	499	U	C2-N1-C1'	-5.43	111.19	117.70
65	D2	240	C	C6-N1-C1'	5.42	127.31	120.80
66	D3	964	U	C5-C6-N1	-5.42	119.99	122.70
66	D3	32	U	C2-N1-C1'	-5.42	111.19	117.70
39	JG	99	LEU	CA-CB-CG	-5.42	102.84	115.30
65	D2	433	C	N3-C2-O2	-5.42	118.11	121.90
66	D3	564	G	C8-N9-C1'	5.42	134.04	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
67	D4	19	A	C8-N9-C4	5.41	107.97	105.80
66	D3	583	C	OP1-P-O3'	5.41	117.11	105.20
65	D2	231	C	C2-N1-C1'	-5.41	112.85	118.80
66	D3	569	C	C5-C6-N1	5.41	123.70	121.00
31	CJ	167	LEU	CA-CB-CG	5.41	127.73	115.30
66	D3	589	C	C6-N1-C1'	5.41	127.29	120.80
66	D3	1166	A	N3-C4-N9	-5.40	123.08	127.40
33	CL	919	VAL	CG1-CB-CG2	-5.40	102.26	110.90
17	UQ	529	LEU	CB-CG-CD2	-5.40	101.82	111.00
66	D3	639	U	P-O3'-C3'	5.40	126.18	119.70
66	D3	1488	G	N3-C2-N2	5.40	123.68	119.90
65	D2	265	A	N1-C6-N6	-5.39	115.36	118.60
66	D3	1478	G	N3-C4-C5	-5.39	125.90	128.60
66	D3	31	C	C5-C6-N1	5.39	123.69	121.00
66	D3	534	A	C4-C5-N7	5.39	113.39	110.70
66	D3	1165	G	C8-N9-C1'	5.39	134.00	127.00
67	D4	25	U	C4-C5-C6	-5.39	116.47	119.70
66	D3	1161	C	N3-C4-C5	5.38	124.05	121.90
67	D4	26	C	OP1-P-O3'	5.38	117.05	105.20
66	D3	1584	G	C5-C6-O6	5.38	131.83	128.60
1	UA	16	ARG	NE-CZ-NH2	5.38	122.99	120.30
5	UE	251	GLY	N-CA-C	-5.38	99.65	113.10
66	D3	144	U	O4'-C1'-N1	5.38	112.51	108.20
66	D3	1530	C	N3-C2-O2	-5.38	118.13	121.90
66	D3	1604	U	N3-C4-O4	-5.38	115.63	119.40
65	D2	271	G	N3-C2-N2	-5.38	116.14	119.90
66	D3	530	C	C6-N1-C2	-5.38	118.15	120.30
66	D3	1065	A	N1-C6-N6	-5.38	115.37	118.60
31	CJ	266	LEU	CB-CG-CD2	-5.38	101.86	111.00
33	CL	934	LEU	CB-CG-CD1	-5.37	101.86	111.00
65	D2	394	U	C6-N1-C1'	-5.37	113.68	121.20
66	D3	1618	C	C5-C4-N4	-5.37	116.44	120.20
66	D3	564	G	C6-C5-N7	-5.37	127.18	130.40
67	D4	80	U	C5-C6-N1	5.37	125.39	122.70
1	UA	643	LEU	CB-CG-CD1	-5.37	101.88	111.00
18	UR	543	LEU	CB-CG-CD1	-5.37	101.88	111.00
66	D3	948	G	C4-N9-C1'	5.37	133.47	126.50
66	D3	1611	A	N7-C8-N9	-5.37	111.12	113.80
7	UG	347	LEU	CB-CG-CD1	-5.36	101.88	111.00
17	UQ	37	LEU	CA-CB-CG	5.36	127.64	115.30
66	D3	547	U	N1-C2-O2	5.36	126.55	122.80
66	D3	539	G	C5-N7-C8	-5.36	101.62	104.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
30	CI	56	ARG	NE-CZ-NH1	-5.36	117.62	120.30
63	Db	21	LEU	CA-CB-CG	5.36	127.62	115.30
65	D2	165	G	OP2-P-O3'	5.36	116.98	105.20
66	D3	866	G	C4-C5-N7	5.36	112.94	110.80
5	UE	301	LEU	CB-CG-CD2	-5.36	101.90	111.00
67	D4	10	C	C5-C4-N4	-5.36	116.45	120.20
67	D4	33	A	N1-C6-N6	-5.35	115.39	118.60
29	CH	320	GLY	N-CA-C	5.35	126.48	113.10
66	D3	951	A	C5-N7-C8	-5.35	101.23	103.90
65	D2	294	U	C6-N1-C1'	5.35	128.69	121.20
23	UX	12	LEU	CA-CB-CG	5.34	127.59	115.30
32	CK	326	LEU	CB-CG-CD1	-5.34	101.92	111.00
65	D2	344	U	C6-N1-C1'	5.34	128.68	121.20
65	D2	163	G	C4-C5-N7	5.34	112.94	110.80
65	D2	488	U	C6-N1-C2	-5.34	117.80	121.00
65	D2	283	A	N3-C4-N9	-5.34	123.13	127.40
65	D2	423	C	C6-N1-C2	-5.34	118.17	120.30
66	D3	1045	C	C6-N1-C1'	5.33	127.20	120.80
15	UO	303	LEU	CB-CG-CD1	-5.33	101.93	111.00
28	CG	89	ARG	NE-CZ-NH1	5.33	122.97	120.30
31	CJ	229	ASP	CB-CG-OD1	5.33	123.10	118.30
66	D3	914	G	N3-C4-C5	5.33	131.26	128.60
66	D3	1534	G	C8-N9-C4	-5.33	104.27	106.40
65	D2	300	C	C6-N1-C2	-5.33	118.17	120.30
65	D2	306	G	C5-C6-O6	5.33	131.80	128.60
66	D3	1604	U	C4-C5-C6	-5.33	116.50	119.70
17	UQ	596	LEU	CB-CG-CD2	-5.32	101.95	111.00
65	D2	336	G	C5-N7-C8	-5.32	101.64	104.30
65	D2	458	A	C2-N3-C4	-5.32	107.94	110.60
66	D3	534	A	N7-C8-N9	5.32	116.46	113.80
66	D3	1611	A	N9-C4-C5	-5.32	103.67	105.80
28	CF	44	LEU	CB-CG-CD1	-5.32	101.96	111.00
65	D2	281	G	N9-C4-C5	-5.32	103.27	105.40
65	D2	328	A	N1-C6-N6	5.32	121.79	118.60
67	D4	325	C	N3-C4-C5	5.32	124.03	121.90
19	US	470	MET	CA-CB-CG	5.31	122.33	113.30
66	D3	121	U	N3-C2-O2	-5.31	118.48	122.20
66	D3	959	U	C5-C4-O4	5.31	129.09	125.90
65	D2	254	C	N1-C2-O2	-5.31	115.71	118.90
66	D3	25	C	C2-N1-C1'	5.31	124.64	118.80
66	D3	554	C	N1-C2-N3	5.31	122.92	119.20
66	D3	499	U	C5-C6-N1	-5.31	120.05	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
66	D3	577	G	N3-C4-N9	-5.31	122.82	126.00
12	UL	581	ILE	CG1-CB-CG2	-5.31	99.73	111.40
17	UQ	473	LEU	CA-CB-CG	5.30	127.50	115.30
66	D3	1	U	C5-C6-N1	-5.30	120.05	122.70
66	D3	691	C	C2-N1-C1'	5.30	124.64	118.80
66	D3	959	U	C6-N1-C2	-5.30	117.82	121.00
66	D3	1080	U	C5-C6-N1	5.30	125.35	122.70
66	D3	528	U	C5-C6-N1	5.30	125.35	122.70
66	D3	494	U	C5-C6-N1	5.29	125.35	122.70
66	D3	928	U	C5-C6-N1	-5.29	120.05	122.70
66	D3	938	G	N3-C2-N2	5.29	123.61	119.90
66	D3	1151	A	C2-N3-C4	-5.29	107.95	110.60
66	D3	1070	C	O5'-P-OP2	-5.29	100.94	105.70
67	D4	27	U	N1-C2-N3	5.29	118.08	114.90
66	D3	1060	U	O4'-C1'-N1	5.29	112.43	108.20
18	UR	493	LEU	CB-CG-CD2	-5.29	102.01	111.00
66	D3	426	G	C4-C5-N7	5.29	112.92	110.80
1	UA	416	LEU	CA-CB-CG	5.29	127.46	115.30
65	D2	308	A	N1-C2-N3	-5.29	126.66	129.30
65	D2	492	G	P-O3'-C3'	5.29	126.04	119.70
66	D3	0	U	P-O3'-C3'	5.29	126.04	119.70
46	JP	116	LEU	CB-CG-CD2	-5.28	102.02	111.00
66	D3	502	U	O4'-C1'-N1	5.28	112.43	108.20
18	UR	426	VAL	CG1-CB-CG2	-5.28	102.45	110.90
30	CI	57	LEU	CB-CG-CD2	-5.28	102.02	111.00
67	D4	56	A	C5-N7-C8	-5.28	101.26	103.90
65	D2	391	C	C6-N1-C2	-5.28	118.19	120.30
30	CI	88	LEU	CA-CB-CG	5.28	127.44	115.30
66	D3	921	U	C2-N1-C1'	-5.28	111.37	117.70
1	UA	635	MET	CG-SD-CE	5.27	108.64	100.20
65	D2	378	C	C2-N1-C1'	5.27	124.60	118.80
66	D3	1629	G	C4-C5-N7	5.27	112.91	110.80
31	CJ	209	LEU	CB-CG-CD1	-5.27	102.04	111.00
65	D2	168	G	C5-C6-O6	5.27	131.76	128.60
66	D3	567	A	C2-N3-C4	-5.27	107.96	110.60
67	D4	59	G	O4'-C1'-N9	-5.27	103.98	108.20
6	UF	74	ILE	CG1-CB-CG2	-5.27	99.81	111.40
7	UG	433	LEU	CA-CB-CG	5.27	127.42	115.30
66	D3	1599	C	N3-C2-O2	-5.27	118.21	121.90
67	D4	326	U	N3-C2-O2	-5.27	118.51	122.20
33	CL	140	LEU	CB-CG-CD2	-5.26	102.05	111.00
66	D3	562	G	N1-C2-N3	5.26	127.06	123.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
66	D3	1043	A	N1-C6-N6	-5.26	115.44	118.60
65	D2	383	G	N3-C4-C5	5.26	131.23	128.60
65	D2	173	G	C4-N9-C1'	-5.26	119.67	126.50
65	D2	290	G	N3-C2-N2	5.26	123.58	119.90
66	D3	22	A	C2-N3-C4	5.26	113.23	110.60
14	UN	861	LEU	CB-CG-CD1	-5.25	102.07	111.00
65	D2	447	G	C8-N9-C1'	5.25	133.83	127.00
15	UO	283	VAL	CG1-CB-CG2	-5.25	102.50	110.90
66	D3	104	A	N1-C2-N3	5.25	131.93	129.30
66	D3	579	A	O5'-P-OP2	-5.25	100.97	105.70
61	DX	43	PHE	CB-CG-CD1	5.25	124.47	120.80
10	UJ	102	LEU	CB-CG-CD1	-5.25	102.08	111.00
66	D3	554	C	N3-C2-O2	-5.25	118.23	121.90
2	UB	481	MET	CG-SD-CE	-5.24	91.81	100.20
18	UR	228	LEU	CA-CB-CG	5.24	127.36	115.30
22	UV	209	MET	CB-CG-SD	5.24	128.12	112.40
65	D2	388	C	C5-C6-N1	5.24	123.62	121.00
66	D3	500	C	C2-N1-C1'	-5.24	113.03	118.80
66	D3	885	G	N1-C2-N2	-5.24	111.48	116.20
66	D3	1657	U	OP2-P-O3'	5.24	116.73	105.20
66	D3	1491	U	OP1-P-O3'	5.24	116.72	105.20
30	CI	170	LEU	CB-CG-CD1	-5.24	102.10	111.00
30	CI	170	LEU	CB-CG-CD2	-5.24	102.10	111.00
45	JO	53	LEU	CB-CG-CD2	-5.24	102.10	111.00
65	D2	474	A	O5'-P-OP1	-5.24	100.99	105.70
66	D3	1166	A	N3-C4-C5	5.24	130.47	126.80
65	D2	305	A	N3-C4-C5	5.23	130.46	126.80
66	D3	976	G	C4-C5-N7	5.23	112.89	110.80
15	UO	108	TYR	CA-CB-CG	5.23	123.34	113.40
65	D2	84	G	C4-N9-C1'	5.23	133.30	126.50
65	D2	322	A	C8-N9-C4	5.23	107.89	105.80
66	D3	87	C	N1-C2-O2	5.23	122.04	118.90
67	D4	38	U	C5-C4-O4	5.23	129.04	125.90
65	D2	259	G	O5'-P-OP2	-5.23	100.99	105.70
66	D3	584	C	C2-N3-C4	-5.23	117.28	119.90
66	D3	496	G	N3-C4-C5	5.23	131.21	128.60
3	UC	602	LEU	CA-CB-CG	5.23	127.32	115.30
66	D3	555	A	N1-C6-N6	-5.22	115.47	118.60
65	D2	173	G	N3-C4-N9	-5.22	122.87	126.00
66	D3	1	U	C2-N3-C4	-5.22	123.87	127.00
53	DI	18	ARG	NE-CZ-NH1	5.22	122.91	120.30
66	D3	901	G	C6-C5-N7	-5.22	127.27	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
66	D3	1078	C	C2-N3-C4	-5.22	117.29	119.90
31	CJ	209	LEU	CB-CG-CD2	-5.21	102.14	111.00
66	D3	1581	C	C6-N1-C2	-5.21	118.22	120.30
65	D2	89	C	OP1-P-OP2	-5.21	111.78	119.60
66	D3	976	G	C8-N9-C4	-5.21	104.32	106.40
66	D3	8	U	C5-C6-N1	5.21	125.30	122.70
66	D3	475	A	N1-C6-N6	5.21	121.72	118.60
67	D4	60	A	C6-N1-C2	-5.21	115.48	118.60
65	D2	259	G	C6-C5-N7	-5.21	127.28	130.40
66	D3	536	C	N1-C2-O2	5.21	122.02	118.90
66	D3	956	C	N3-C4-N4	5.21	121.64	118.00
26	CD	234	LEU	CA-CB-CG	5.20	127.27	115.30
66	D3	1594	G	OP2-P-O3'	5.20	116.64	105.20
66	D3	1472	C	N1-C2-O2	5.20	122.02	118.90
41	JJ	270	LEU	CB-CG-CD2	-5.20	102.17	111.00
66	D3	1064	G	C8-N9-C1'	-5.20	120.25	127.00
67	D4	65	C	N3-C4-C5	-5.20	119.82	121.90
65	D2	287	G	C4-C5-N7	5.19	112.88	110.80
65	D2	459	U	N3-C4-O4	5.19	123.03	119.40
4	UD	774	LEU	CA-CB-CG	5.19	127.24	115.30
66	D3	542	A	C4-C5-C6	5.19	119.59	117.00
65	D2	441	C	C6-N1-C2	5.19	122.38	120.30
67	D4	85	G	C4-C5-N7	5.19	112.88	110.80
5	UE	540	LEU	CA-CB-CG	5.19	127.23	115.30
65	D2	233	G	C5-C6-N1	-5.18	108.91	111.50
67	D4	32	G	C4-C5-N7	5.18	112.87	110.80
66	D3	-4	A	C5-N7-C8	-5.18	101.31	103.90
66	D3	493	U	C5-C6-N1	5.18	125.29	122.70
7	UG	144	LEU	CA-CB-CG	5.18	127.21	115.30
65	D2	278	G	N9-C4-C5	-5.18	103.33	105.40
67	D4	28	A	C5-C6-N1	5.18	120.29	117.70
66	D3	307	G	N9-C4-C5	-5.17	103.33	105.40
65	D2	444	U	C6-N1-C1'	5.17	128.44	121.20
66	D3	1626	U	N1-C2-N3	5.17	118.00	114.90
1	UA	730	LEU	CB-CG-CD2	-5.17	102.21	111.00
66	D3	632	U	C2-N1-C1'	5.17	123.90	117.70
67	D4	56	A	O5'-P-OP2	-5.17	101.05	105.70
33	CL	1135	ARG	CB-CG-CD	-5.17	98.17	111.60
28	CF	79	VAL	CG1-CB-CG2	-5.16	102.64	110.90
66	D3	586	G	C6-C5-N7	5.16	133.50	130.40
19	US	344	ILE	CG1-CB-CG2	-5.16	100.05	111.40
65	D2	386	A	OP1-P-O3'	5.16	116.55	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
67	D4	259	C	C2-N1-C1'	5.16	124.47	118.80
3	UC	602	LEU	CB-CG-CD2	-5.16	102.23	111.00
65	D2	394	U	N1-C2-O2	5.16	126.41	122.80
65	D2	98	G	C8-N9-C4	-5.15	104.34	106.40
66	D3	1580	C	C6-N1-C2	-5.15	118.24	120.30
30	CI	13	LEU	CB-CG-CD2	-5.15	102.24	111.00
42	JK	490	ILE	CG1-CB-CG2	-5.15	100.06	111.40
64	Dc	52	ASP	CB-CG-OD1	5.15	122.94	118.30
65	D2	307	C	C4-C5-C6	-5.15	114.83	117.40
67	D4	72	C	C6-N1-C2	-5.15	118.24	120.30
1	UA	298	LEU	CB-CG-CD1	-5.15	102.25	111.00
65	D2	81	A	OP1-P-O3'	5.15	116.52	105.20
65	D2	299	G	C5-C6-N1	5.15	114.07	111.50
66	D3	1600	A	C3'-C2'-C1'	5.15	105.62	101.50
1	UA	624	ASN	C-N-CA	-5.14	111.50	122.30
58	DQ	28	LEU	CA-CB-CG	5.14	127.13	115.30
65	D2	400	C	C2-N1-C1'	-5.14	113.14	118.80
66	D3	539	G	N9-C4-C5	-5.14	103.34	105.40
21	UU	423	ARG	NE-CZ-NH1	-5.14	117.73	120.30
66	D3	6	G	C6-N1-C2	-5.14	122.02	125.10
6	UF	75	LEU	CA-CB-CG	5.14	127.11	115.30
17	UQ	490	LEU	CB-CG-CD2	-5.14	102.27	111.00
67	D4	330	A	C5-C6-N6	-5.14	119.59	123.70
67	D4	33	A	C5-C6-N1	5.13	120.27	117.70
65	D2	323	A	N9-C4-C5	-5.13	103.75	105.80
65	D2	271	G	O5'-P-OP2	-5.13	101.08	105.70
28	CF	63	ILE	CG1-CB-CG2	-5.13	100.12	111.40
65	D2	314	U	C6-N1-C1'	-5.13	114.02	121.20
67	D4	85	G	C6-N1-C2	-5.13	122.02	125.10
66	D3	1037	C	N3-C4-N4	5.12	121.59	118.00
66	D3	1599	C	C2-N1-C1'	5.12	124.44	118.80
67	D4	42	U	N1-C2-N3	5.12	117.97	114.90
4	UD	422	LEU	CA-CB-CG	-5.12	103.52	115.30
65	D2	294	U	N3-C4-O4	-5.12	115.82	119.40
65	D2	329	A	C4-C5-N7	5.12	113.26	110.70
66	D3	548	G	C5-N7-C8	-5.12	101.74	104.30
67	D4	71	C	C4-C5-C6	-5.12	114.84	117.40
8	UH	531	LEU	CA-CB-CG	5.12	127.07	115.30
18	UR	178	VAL	CG1-CB-CG2	-5.12	102.71	110.90
19	US	469	LEU	CA-CB-CG	-5.12	103.53	115.30
66	D3	584	C	C5-C6-N1	-5.12	118.44	121.00
66	D3	541	A	C2-N3-C4	5.12	113.16	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
67	D4	42	U	N3-C2-O2	-5.12	118.62	122.20
1	UA	568	ARG	CG-CD-NE	-5.12	101.06	111.80
30	CI	118	LEU	CA-CB-CG	5.12	127.06	115.30
66	D3	976	G	C8-N9-C1'	-5.12	120.35	127.00
66	D3	1618	C	C2-N1-C1'	5.12	124.43	118.80
66	D3	1620	C	N3-C2-O2	-5.12	118.32	121.90
66	D3	911	U	N1-C2-O2	5.11	126.38	122.80
65	D2	331	U	C6-N1-C2	5.11	124.07	121.00
67	D4	91	C	C5-C6-N1	5.11	123.56	121.00
1	UA	469	LEU	CA-CB-CG	5.11	127.05	115.30
65	D2	220	U	N3-C2-O2	-5.11	118.62	122.20
66	D3	34	G	C2-N3-C4	-5.11	109.34	111.90
65	D2	233	G	C5-C6-O6	-5.11	125.53	128.60
66	D3	1584	G	N7-C8-N9	-5.11	110.55	113.10
66	D3	545	A	N9-C1'-C2'	5.10	120.64	114.00
33	CL	1135	ARG	CG-CD-NE	5.10	122.52	111.80
1	UA	167	ASP	N-CA-CB	-5.10	101.42	110.60
4	UD	205	CYS	C-N-CA	5.10	134.45	121.70
25	CA	173	LEU	CA-CB-CG	5.10	127.03	115.30
66	D3	1585	U	C4-C5-C6	-5.10	116.64	119.70
66	D3	1076	A	C5-N7-C8	-5.10	101.35	103.90
65	D2	295	A	C5-N7-C8	-5.10	101.35	103.90
66	D3	594	A	N3-C4-N9	-5.10	123.32	127.40
4	UD	272	LEU	CA-CB-CG	5.10	127.02	115.30
65	D2	395	C	C2-N3-C4	-5.10	117.35	119.90
65	D2	337	G	C4-C5-N7	5.09	112.84	110.80
66	D3	1062	A	C4-C5-C6	-5.09	114.45	117.00
66	D3	1064	G	C4-N9-C1'	5.09	133.12	126.50
67	D4	318	U	C5-C6-N1	5.09	125.25	122.70
10	UJ	302	LEU	CB-CG-CD2	-5.09	102.35	111.00
12	UL	303	LEU	CA-CB-CG	5.09	127.00	115.30
65	D2	350	A	N9-C4-C5	5.09	107.84	105.80
66	D3	307	G	C5-C6-O6	-5.09	125.55	128.60
66	D3	1165	G	N3-C4-N9	-5.09	122.95	126.00
10	UJ	245	LEU	CB-CG-CD2	-5.08	102.36	111.00
65	D2	452	A	N7-C8-N9	5.08	116.34	113.80
66	D3	593	U	N3-C4-O4	5.08	122.96	119.40
9	UI	496	LEU	CA-CB-CG	5.08	126.98	115.30
30	CI	19	LEU	CB-CG-CD1	5.08	119.63	111.00
45	JO	146	VAL	CG1-CB-CG2	-5.08	102.78	110.90
65	D2	462	G	C5-C6-N1	5.08	114.04	111.50
31	CJ	279	ARG	NE-CZ-NH2	-5.08	117.76	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
33	CL	988	ARG	CG-CD-NE	-5.08	101.14	111.80
66	D3	1053	G	O4'-C1'-N9	5.08	112.26	108.20
66	D3	530	C	N1-C2-O2	5.07	121.94	118.90
66	D3	1614	A	C5-N7-C8	-5.07	101.36	103.90
1	UA	553	ILE	CG1-CB-CG2	-5.07	100.25	111.40
66	D3	416	A	C8-N9-C4	5.07	107.83	105.80
66	D3	1510	U	N1-C2-O2	5.07	126.35	122.80
33	CL	829	LEU	CB-CG-CD2	-5.07	102.38	111.00
66	D3	1149	G	C4-N9-C1'	5.07	133.09	126.50
66	D3	1062	A	N7-C8-N9	-5.07	111.27	113.80
31	CJ	46	LEU	CB-CG-CD2	-5.06	102.39	111.00
65	D2	323	A	N7-C8-N9	5.06	116.33	113.80
66	D3	872	G	N9-C4-C5	-5.06	103.38	105.40
66	D3	1593	A	N3-C4-C5	5.06	130.34	126.80
67	D4	57	A	C5-C6-N6	5.06	127.75	123.70
21	UU	542	LEU	CA-CB-CG	-5.06	103.67	115.30
66	D3	1080	U	N3-C2-O2	-5.06	118.66	122.20
66	D3	383	G	N3-C4-C5	5.05	131.13	128.60
52	DH	34	LEU	CA-CB-CG	5.05	126.92	115.30
66	D3	507	U	N1-C2-O2	5.05	126.34	122.80
66	D3	559	C	C5-C4-N4	-5.05	116.66	120.20
66	D3	695	U	C2-N1-C1'	5.05	123.76	117.70
66	D3	1039	A	C8-N9-C4	-5.05	103.78	105.80
66	D3	1584	G	C4-N9-C1'	-5.05	119.93	126.50
65	D2	239	U	C4-C5-C6	5.05	122.73	119.70
65	D2	259	G	C4-C5-N7	5.05	112.82	110.80
66	D3	1513	G	C4-C5-N7	5.05	112.82	110.80
65	D2	406	U	C4-C5-C6	-5.05	116.67	119.70
66	D3	1585	U	C2-N1-C1'	5.05	123.76	117.70
65	D2	290	G	C6-C5-N7	-5.05	127.37	130.40
66	D3	489	C	C5-C6-N1	5.05	123.52	121.00
65	D2	269	G	C4-N9-C1'	5.04	133.06	126.50
66	D3	937	C	C6-N1-C2	-5.04	118.28	120.30
67	D4	10	C	N3-C4-C5	5.04	123.92	121.90
14	UN	847	VAL	CG1-CB-CG2	-5.04	102.83	110.90
65	D2	298	A	C5-C6-N6	-5.04	119.67	123.70
66	D3	1531	G	C6-C5-N7	-5.04	127.38	130.40
66	D3	495	C	C6-N1-C1'	-5.04	114.75	120.80
7	UG	329	LEU	CB-CG-CD1	-5.03	102.44	111.00
66	D3	553	G	C6-C5-N7	-5.03	127.38	130.40
66	D3	1591	C	C5-C6-N1	5.03	123.52	121.00
26	CD	138	LEU	CB-CG-CD1	-5.03	102.44	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
18	UR	237	ARG	NE-CZ-NH1	5.03	122.81	120.30
65	D2	474	A	C2-N3-C4	-5.03	108.08	110.60
65	D2	489	G	C8-N9-C4	5.03	108.41	106.40
17	UQ	895	LEU	CA-CB-CG	-5.03	103.73	115.30
65	D2	82	A	C5-N7-C8	-5.03	101.39	103.90
65	D2	99	U	C2-N1-C1'	5.03	123.73	117.70
66	D3	872	G	N3-C4-C5	5.03	131.11	128.60
67	D4	53	U	C2-N1-C1'	-5.03	111.67	117.70
7	UG	229	ARG	NE-CZ-NH1	-5.03	117.79	120.30
65	D2	248	G	N9-C4-C5	-5.03	103.39	105.40
66	D3	1486	G	C4-N9-C1'	5.03	133.03	126.50
66	D3	468	A	C2-N3-C4	5.02	113.11	110.60
66	D3	872	G	C6-C5-N7	-5.02	127.39	130.40
33	CL	54	LEU	CA-CB-CG	5.02	126.85	115.30
67	D4	259	C	N3-C2-O2	-5.02	118.39	121.90
25	CA	301	LEU	CA-CB-CG	5.02	126.84	115.30
66	D3	381	C	C6-N1-C2	-5.02	118.29	120.30
66	D3	1638	G	C5-C6-O6	-5.02	125.59	128.60
39	JG	246	GLU	C-N-CA	-5.02	109.16	121.70
66	D3	307	G	C4-C5-N7	5.02	112.81	110.80
66	D3	417	A	P-O3'-C3'	5.02	125.72	119.70
66	D3	1492	A	C5-C6-N1	5.02	120.21	117.70
24	UZ	134	LEU	CA-CB-CG	5.01	126.83	115.30
65	D2	477	G	C2-N3-C4	-5.01	109.39	111.90
43	JM	211	GLU	N-CA-CB	5.01	119.62	110.60
65	D2	346	G	N9-C4-C5	-5.01	103.39	105.40
66	D3	885	G	C4-N9-C1'	5.01	133.02	126.50
65	D2	392	U	C6-N1-C2	-5.01	117.99	121.00
66	D3	1166	A	C5-N7-C8	-5.01	101.39	103.90
66	D3	1492	A	N3-C4-C5	-5.01	123.29	126.80
65	D2	338	A	C6-N1-C2	-5.01	115.60	118.60
66	D3	448	C	N3-C2-O2	-5.01	118.39	121.90
66	D3	1594	G	C5-C6-N1	5.01	114.00	111.50
17	UQ	613	LEU	CA-CB-CG	5.00	126.81	115.30
34	CM	19	LEU	CA-CB-CG	-5.00	103.79	115.30
30	CI	46	LYS	CA-CB-CG	5.00	124.40	113.40
66	D3	531	C	C6-N1-C2	-5.00	118.30	120.30
66	D3	549	G	C4-C5-N7	5.00	112.80	110.80
66	D3	1073	G	N3-C4-N9	-5.00	123.00	126.00

There are no chirality outliers.

All (82) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
26	CD	134	HIS	Peptide
27	CE	407	ARG	Peptide
30	CI	16	VAL	Peptide
31	CJ	167	LEU	Peptide
31	CJ	212	ALA	Peptide
32	CK	453	SER	Peptide
34	CM	365	LYS	Peptide
48	DA	11	LYS	Peptide
48	DA	208	GLN	Peptide
48	DA	24	PHE	Peptide
49	DE	66	MET	Peptide
52	DH	8	ILE	Peptide
58	DQ	13	LYS	Peptide
58	DQ	39	VAL	Peptide
59	DS	35	ILE	Peptide
60	DW	67	GLY	Peptide
61	DX	100	ASP	Peptide
61	DX	77	ILE	Peptide
61	DX	88	PRO	Peptide
36	JA	242	GLU	Peptide
36	JB	504	THR	Peptide
36	JB	739	ASN	Peptide
36	JB	859	ILE	Peptide
37	JC	132	HIS	Peptide
37	JC	77	TYR	Peptide
38	JE	242	MET	Peptide
38	JE	256	PRO	Peptide
43	JM	134	ARG	Peptide
44	JN	268	LYS	Peptide
46	JP	112	LEU	Peptide
46	JP	256	GLN	Peptide
46	JP	301	PHE	Peptide
46	JP	356	TYR	Peptide
1	UA	157	ASP	Peptide
1	UA	202	ASP	Peptide
1	UA	288	ASP	Peptide
1	UA	516	SER	Peptide
4	UD	117	ILE	Peptide
4	UD	161	ASP	Peptide
4	UD	198	ASP	Peptide
4	UD	251	ASP	Peptide
4	UD	266	ASP	Peptide
4	UD	279	HIS	Peptide

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Mol	Chain	Res	Type	Group
4	UD	771	GLN	Peptide
5	UE	138	GLN	Peptide
6	UF	105	GLN	Peptide
6	UF	125	SER	Peptide
6	UF	142	THR	Peptide
7	UG	199	LEU	Peptide
7	UG	208	ALA	Peptide
7	UG	405	GLY	Peptide
7	UG	441	THR	Peptide
10	UJ	1695	MET	Peptide
10	UJ	554	ILE	Peptide
10	UJ	599	PHE	Peptide
12	UL	142	ASP	Peptide
12	UL	193	THR	Peptide
12	UL	194	HIS	Peptide
12	UL	243	THR	Peptide
13	UM	215	GLY	Peptide
13	UM	426	ILE	Peptide
14	UN	886	LYS	Peptide
15	UO	51	HIS	Peptide
17	UQ	317	TRP	Peptide
17	UQ	358	LEU	Peptide
17	UQ	394	SER	Peptide
17	UQ	780	GLU	Peptide
18	UR	347	GLY	Peptide
18	UR	468	CYS	Peptide
18	UR	503	SER	Peptide
20	UT	1357	ASN	Peptide
20	UT	1358	LYS	Peptide
20	UT	1714	SER	Peptide
20	UT	1925	ASP	Peptide
20	UT	323	PHE	Peptide
20	UT	706	LEU	Peptide
20	UT	707	PRO	Peptide
21	UU	637	ASN	Peptide
21	UU	757	PRO	Peptide
21	UU	855	PHE	Peptide
21	UU	901	LYS	Peptide
23	UX	109	LEU	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	UA	6635	0	6524	147	0
2	UB	3743	0	3445	80	0
3	UC	1026	0	1080	40	0
4	UD	5361	0	5364	141	0
5	UE	3772	0	3806	99	0
6	UF	2487	0	2533	59	0
7	UG	4218	0	4223	94	0
8	UH	2690	0	1931	69	0
9	UI	846	0	904	39	0
10	UJ	6857	0	5023	85	0
11	UK	2016	0	2093	59	0
12	UL	6720	0	6753	196	0
13	UM	5957	0	5992	182	0
14	UN	1207	0	1201	26	0
15	UO	3911	0	3906	119	0
16	UP	495	0	561	13	0
17	UQ	6662	0	6588	173	0
18	UR	3791	0	3772	89	0
19	US	3650	0	3365	102	0
20	UT	11108	0	4748	16	0
21	UU	6678	0	6652	131	0
22	UV	8725	0	8841	190	0
23	UX	1395	0	1474	40	0
24	UZ	2006	0	2118	54	0
25	CA	1881	0	1928	31	0
25	CB	1782	0	1826	54	0
26	CD	2994	0	3018	81	0
27	CE	2985	0	2703	59	0
28	CF	931	0	983	18	0
28	CG	928	0	976	34	0
29	CH	3634	0	3662	112	0
30	CI	1530	0	1572	36	0
31	CJ	2296	0	2325	64	0
32	CK	1667	0	1701	50	0
33	CL	6332	0	6516	190	0
34	CM	2781	0	2878	73	0
35	CN	1893	0	1875	37	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
36	JA	5892	0	5420	146	0
36	JB	4132	0	1819	17	0
37	JC	2845	0	2761	91	0
38	JE	1125	0	1101	46	0
39	JF	1701	0	1767	42	0
39	JG	1799	0	1872	48	0
40	JH	1295	0	570	2	0
41	JJ	1448	0	1524	43	0
42	JK	334	0	313	12	0
43	JM	1137	0	1187	28	0
44	JN	1428	0	1425	25	0
45	JO	1930	0	2025	38	0
46	JP	3725	0	3679	100	0
47	JQ	381	0	255	4	0
48	DA	1912	0	2023	53	0
49	DE	1944	0	2030	69	0
50	DF	1669	0	1724	31	0
51	DG	1755	0	1846	68	0
52	DH	1477	0	1568	49	0
53	DI	1399	0	1431	47	0
54	DJ	1428	0	1506	48	0
55	DL	1129	0	1196	35	0
56	DN	1192	0	1255	27	0
57	DO	881	0	910	21	0
58	DQ	973	0	1029	23	0
59	DS	516	0	222	12	0
60	DW	1021	0	1060	24	0
61	DX	786	0	843	20	0
62	DY	767	0	787	53	0
63	Db	610	0	629	0	0
64	Dc	497	0	535	0	0
65	D2	11138	0	5569	138	0
66	D3	25549	0	12882	423	0
67	D4	3712	0	1876	51	0
68	Db	1	0	0	0	0
68	UX	1	0	0	0	0
69	CL	32	0	12	3	0
All	All	223151	0	191511	4355	0

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 11.

All (4355) 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)
33:CL:80:THR:CG2	33:CL:141:LEU:CD2	2.05	1.33
12:UL:349:SER:HA	12:UL:369:TYR:O	1.21	1.30
1:UA:315:GLU:OE1	41:JJ:273:ARG:HG3	1.34	1.28
7:UG:132:GLY:HA3	7:UG:150:LEU:O	1.24	1.26
13:UM:30:LYS:HA	13:UM:45:LEU:O	1.37	1.21
29:CH:162:CYS:HA	29:CH:186:PHE:O	1.38	1.20
33:CL:80:THR:HG22	33:CL:141:LEU:CD2	1.70	1.18
2:UB:740:MET:CE	59:DS:103:ASN:HA	1.74	1.17
17:UQ:332:GLN:NE2	18:UR:344:ARG:HD3	1.60	1.14
33:CL:80:THR:HG21	33:CL:141:LEU:CD2	1.73	1.12
33:CL:80:THR:HG21	33:CL:141:LEU:HD23	1.29	1.09
69:CL:2001:GTP:H5"	69:CL:2001:GTP:H8	1.05	1.07
33:CL:80:THR:CG2	33:CL:141:LEU:HD23	1.76	1.07
2:UB:740:MET:HE3	59:DS:103:ASN:HA	1.37	1.06
7:UG:132:GLY:CA	7:UG:150:LEU:O	2.07	1.02
33:CL:80:THR:CG2	33:CL:141:LEU:HD22	1.86	1.01
18:UR:382:GLY:HA3	18:UR:400:ILE:O	1.60	1.01
17:UQ:332:GLN:HE21	18:UR:344:ARG:HD3	0.86	1.01
33:CL:625:TRP:CZ2	34:CM:281:GLU:OE1	2.13	1.01
69:CL:2001:GTP:H5"	69:CL:2001:GTP:C8	1.95	1.01
62:DY:11:LYS:O	62:DY:23:PHE:HA	1.61	1.01
24:UZ:39:ILE:O	24:UZ:242:ILE:HA	1.62	1.00
12:UL:349:SER:CA	12:UL:369:TYR:O	2.10	0.99
52:DH:70:PHE:O	52:DH:74:GLN:HB2	1.62	0.98
21:UU:228:GLY:HA3	21:UU:246:ILE:O	1.64	0.97
62:DY:6:THR:HB	62:DY:28:LEU:O	1.64	0.97
4:UD:614:TRP:O	4:UD:618:ASN:HB2	1.63	0.97
17:UQ:332:GLN:HE21	18:UR:344:ARG:CD	1.77	0.96
13:UM:30:LYS:CA	13:UM:45:LEU:O	2.13	0.96
15:UO:279:GLY:CA	15:UO:298:PHE:O	2.15	0.94
24:UZ:38:ILE:O	24:UZ:198:SER:HA	1.68	0.94
1:UA:311:ASN:ND2	41:JJ:273:ARG:HH21	1.66	0.93
52:DH:81:LEU:O	52:DH:85:PHE:HD1	1.51	0.92
1:UA:315:GLU:OE1	41:JJ:273:ARG:CG	2.17	0.92
65:D2:502:G:H1	65:D2:535:G:H22	1.13	0.92
2:UB:740:MET:HE1	59:DS:103:ASN:HA	1.52	0.91
15:UO:191:GLY:CA	15:UO:211:HIS:O	2.19	0.91
15:UO:279:GLY:HA3	15:UO:298:PHE:O	1.72	0.90
8:UH:536:ARG:O	8:UH:540:LEU:HB3	1.71	0.89
33:CL:1138:ARG:HH11	66:D3:492:A:H62	1.19	0.89
18:UR:278:ASP:HB2	18:UR:281:THR:O	1.72	0.88
15:UO:191:GLY:HA3	15:UO:211:HIS:O	1.72	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:CL:625:TRP:CE2	34:CM:281:GLU:OE1	2.25	0.88
1:UA:77:GLY:HA3	1:UA:95:PHE:O	1.74	0.88
19:US:191:ILE:O	19:US:195:PHE:HB2	1.74	0.87
2:UB:740:MET:CE	59:DS:103:ASN:CA	2.53	0.86
41:JJ:103:PRO:HA	41:JJ:106:MET:HG2	1.57	0.86
15:UO:19:GLN:OE1	15:UO:19:GLN:N	2.08	0.85
1:UA:311:ASN:ND2	41:JJ:273:ARG:NH2	2.23	0.85
29:CH:160:ILE:HA	29:CH:188:TYR:O	1.77	0.85
19:US:215:ASN:HB3	19:US:218:LYS:HD3	1.59	0.85
33:CL:1138:ARG:NH1	66:D3:492:A:N7	2.24	0.84
21:UU:125:GLY:HA2	27:CE:430:ASP:HA	1.58	0.84
52:DH:84:LYS:HG3	52:DH:85:PHE:CE1	2.11	0.84
3:UC:545:LEU:O	3:UC:545:LEU:HD12	1.77	0.83
2:UB:740:MET:HE1	59:DS:103:ASN:CA	2.08	0.83
24:UZ:192:ASN:HD21	66:D3:1510:U:H5'	1.42	0.83
66:D3:1775:U:H3	66:D3:1786:G:H1	1.24	0.83
33:CL:80:THR:HG22	33:CL:141:LEU:HD21	1.58	0.83
33:CL:625:TRP:NE1	34:CM:281:GLU:OE1	2.11	0.83
46:JP:12:ASP:O	46:JP:23:GLN:NE2	2.11	0.82
39:JF:121:LEU:HB3	39:JF:163:ILE:O	1.80	0.82
33:CL:625:TRP:O	33:CL:627:SER:N	2.13	0.82
36:JA:282:THR:O	36:JA:469:SER:HA	1.79	0.82
13:UM:414:VAL:O	13:UM:428:ALA:HB3	1.80	0.81
31:CJ:9:ARG:HH22	31:CJ:12:TYR:HD2	1.27	0.81
15:UO:279:GLY:HA2	15:UO:298:PHE:O	1.79	0.81
43:JM:114:ARG:O	43:JM:118:GLN:HB2	1.81	0.81
66:D3:895:G:H1	66:D3:917:U:H3	1.26	0.81
65:D2:344:U:O2	65:D2:381:G:N2	2.15	0.80
33:CL:624:LYS:NZ	33:CL:625:TRP:HE1	1.80	0.80
37:JC:277:ILE:HA	37:JC:289:ILE:O	1.82	0.80
5:UE:101:THR:HG23	5:UE:103:ASN:H	1.46	0.79
33:CL:624:LYS:NZ	33:CL:625:TRP:NE1	2.29	0.79
30:CI:61:LEU:HD22	32:CK:437:ILE:HD11	1.65	0.79
29:CH:357:LEU:HD12	38:JE:256:PRO:HB2	1.65	0.79
52:DH:23:ALA:CB	52:DH:85:PHE:HZ	1.95	0.79
55:DL:124:THR:HB	55:DL:141:LYS:HB2	1.62	0.79
66:D3:1114:G:H1	67:D4:10:C:H42	1.31	0.79
15:UO:53:HIS:O	15:UO:68:SER:HB3	1.83	0.78
21:UU:488:ASN:ND2	58:DQ:98:ASP:OD2	2.16	0.78
62:DY:27:VAL:H	62:DY:69:SER:H	1.30	0.78
7:UG:502:ARG:NH1	65:D2:369:G:N7	2.26	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DA:19:ARG:HH12	48:DA:22:ASP:H	1.32	0.77
17:UQ:96:ILE:HG12	17:UQ:108:THR:HG21	1.66	0.77
52:DH:84:LYS:CG	52:DH:85:PHE:CE1	2.67	0.77
15:UO:20:THR:HG21	15:UO:28:ARG:HH12	1.49	0.77
10:UJ:166:ASN:ND2	27:CE:408:THR:O	2.17	0.77
17:UQ:680:ALA:HB2	17:UQ:750:LEU:HD23	1.64	0.77
39:JF:151:ARG:HA	39:JF:158:LYS:HA	1.64	0.77
1:UA:666:ARG:NH2	1:UA:678:GLU:OE1	2.17	0.77
49:DE:87:MET:HA	49:DE:101:LEU:O	1.86	0.76
62:DY:63:GLN:HB2	62:DY:68:LYS:HB3	1.67	0.76
33:CL:1135:ARG:HH21	66:D3:495:C:H5'	1.50	0.76
52:DH:81:LEU:O	52:DH:85:PHE:CD1	2.39	0.76
12:UL:897:ASP:OD2	13:UM:758:ARG:NH1	2.17	0.76
33:CL:625:TRP:HZ2	34:CM:281:GLU:OE1	1.67	0.76
33:CL:80:THR:HG22	33:CL:141:LEU:HD22	1.54	0.76
26:CD:377:ARG:NH2	67:D4:111:G:N7	2.32	0.75
1:UA:412:ARG:HD3	1:UA:421:ASN:HD21	1.50	0.75
28:CG:14:ALA:HB1	29:CH:398:CYS:HB3	1.67	0.75
2:UB:740:MET:HE1	59:DS:103:ASN:N	2.02	0.75
22:UV:120:HIS:HB3	22:UV:288:THR:HG23	1.67	0.75
62:DY:26:ASP:HA	62:DY:69:SER:O	1.87	0.74
10:UJ:22:ARG:NH1	46:JP:20:GLN:O	2.20	0.74
21:UU:455:PHE:HB3	21:UU:477:ILE:HD12	1.69	0.74
38:JE:289:PHE:O	38:JE:293:ASN:HB2	1.87	0.74
36:JA:912:MET:HA	36:JA:915:LYS:HE2	1.70	0.74
66:D3:104:A:H61	66:D3:307:G:H3'	1.53	0.74
12:UL:448:GLY:HA3	12:UL:476:ILE:HD11	1.69	0.74
33:CL:267:ARG:HH12	33:CL:798:MET:HG2	1.51	0.74
49:DE:201:HIS:HB2	49:DE:205:PHE:O	1.87	0.74
38:JE:229:ASP:HB3	38:JE:232:GLU:HB2	1.70	0.74
65:D2:425:U:O4	65:D2:431:A:N6	2.20	0.74
1:UA:350:SER:OG	1:UA:351:LEU:N	2.20	0.74
13:UM:161:TRP:HB3	13:UM:177:LEU:HD12	1.69	0.74
23:UX:133:LYS:NZ	67:D4:33:A:OP1	2.19	0.74
3:UC:559:ARG:NH2	66:D3:544:A:O2'	2.21	0.73
7:UG:194:ARG:NH2	7:UG:210:GLU:OE2	2.21	0.73
22:UV:403:GLY:HA2	22:UV:410:LYS:HA	1.68	0.73
49:DE:210:ILE:O	49:DE:217:THR:HA	1.87	0.73
5:UE:490:ARG:NH2	65:D2:102:A:OP2	2.22	0.73
48:DA:19:ARG:HH22	48:DA:22:ASP:HA	1.53	0.73
66:D3:62:A:N1	66:D3:288:A:O2'	2.21	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:UG:464:LYS:NZ	66:D3:-2:A:N7	2.28	0.73
15:UO:77:PHE:HE2	15:UO:96:LEU:HD13	1.54	0.73
35:CN:97:GLU:HG3	35:CN:98:VAL:HG23	1.70	0.73
53:DI:65:PHE:HA	53:DI:181:GLY:O	1.89	0.73
66:D3:545:A:O2'	66:D3:546:U:O4'	2.07	0.73
17:UQ:458:GLN:HE21	17:UQ:467:GLN:HG3	1.54	0.73
32:CK:507:ILE:HD13	32:CK:528:LEU:HD23	1.71	0.73
5:UE:162:GLN:HA	5:UE:173:ILE:O	1.87	0.73
66:D3:642:G:N2	66:D3:692:C:O2	2.20	0.73
25:CB:210:MET:HA	25:CB:213:LYS:HD2	1.71	0.72
8:UH:643:ASP:OD1	9:UI:502:ARG:NH2	2.23	0.72
1:UA:586:SER:OG	1:UA:587:PHE:N	2.20	0.72
15:UO:83:VAL:HG13	15:UO:85:TYR:HE1	1.54	0.72
34:CM:114:PHE:O	34:CM:169:VAL:HA	1.89	0.72
53:DI:8:ARG:HH21	53:DI:21:PHE:H	1.37	0.72
6:UF:67:ARG:NH1	6:UF:84:SER:OG	2.23	0.72
43:JM:215:LYS:HG2	43:JM:216:ARG:HE	1.53	0.72
58:DQ:66:ARG:HH11	65:D2:267:U:H3	1.37	0.72
21:UU:455:PHE:HB3	21:UU:477:ILE:CD1	2.20	0.72
66:D3:1155:G:N2	66:D3:1624:C:O2	2.23	0.72
10:UJ:18:VAL:O	10:UJ:24:ARG:NH1	2.22	0.72
8:UH:552:LYS:HB2	8:UH:576:ARG:HH12	1.55	0.72
13:UM:313:LEU:HB3	13:UM:331:SER:HB3	1.72	0.72
15:UO:2:SER:OG	15:UO:3:THR:N	2.23	0.72
19:US:130:GLU:O	19:US:134:PHE:HB2	1.88	0.72
53:DI:116:HIS:O	53:DI:146:ARG:NH1	2.23	0.72
10:UJ:153:SER:O	10:UJ:169:ARG:NH1	2.23	0.72
18:UR:345:LEU:HD11	18:UR:352:GLN:HE21	1.54	0.72
23:UX:189:PHE:HE1	54:DJ:15:PRO:HB3	1.55	0.72
46:JP:440:ARG:NH2	66:D3:1042:G:OP1	2.23	0.72
29:CH:560:ARG:NH2	67:D4:249:G:N7	2.37	0.71
36:JA:16:ASN:HD21	36:JA:218:PRO:HA	1.55	0.71
1:UA:478:CYS:SG	1:UA:479:LEU:N	2.63	0.71
2:UB:740:MET:HE3	59:DS:103:ASN:CA	2.15	0.71
30:CI:143:ILE:HG22	30:CI:145:ASP:H	1.55	0.71
32:CK:335:ARG:NH2	33:CL:957:GLU:OE2	2.22	0.71
52:DH:19:GLN:OE1	52:DH:85:PHE:HE2	1.73	0.71
15:UO:211:HIS:CE1	15:UO:235:LYS:HE2	2.25	0.71
22:UV:270:ILE:HB	22:UV:292:ILE:HB	1.72	0.71
27:CE:231:ILE:HA	27:CE:234:ARG:HD2	1.72	0.71
66:D3:1115:U:H2'	66:D3:1116:A:H8	1.55	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:UC:560:ASN:HB3	3:UC:563:VAL:HG12	1.72	0.71
34:CM:306:GLU:HA	34:CM:356:GLY:O	1.90	0.71
48:DA:64:ARG:NH2	57:DO:37:GLU:OE1	2.23	0.71
13:UM:133:ASN:ND2	66:D3:1785:U:O2'	2.23	0.71
36:JA:887:ALA:HA	36:JA:891:GLN:HB2	1.73	0.71
1:UA:209:VAL:HG22	1:UA:215:VAL:HG22	1.73	0.71
33:CL:105:ILE:HG13	33:CL:356:ALA:HB2	1.71	0.71
9:UI:480:LYS:NZ	65:D2:11:A:OP2	2.23	0.71
12:UL:177:LEU:HD23	12:UL:191:LEU:HD21	1.73	0.71
29:CH:448:PHE:HB2	29:CH:460:ARG:HB3	1.72	0.71
26:CD:198:TRP:NE1	27:CE:165:GLN:OE1	2.23	0.70
4:UD:374:THR:HB	4:UD:757:ARG:HH12	1.57	0.70
22:UV:99:LYS:O	22:UV:103:PHE:HB2	1.90	0.70
9:UI:471:LYS:HE2	9:UI:475:THR:HG23	1.72	0.70
15:UO:51:HIS:O	15:UO:53:HIS:ND1	2.25	0.70
39:JG:112:VAL:HG23	39:JG:124:VAL:HB	1.74	0.70
11:UK:164:ASN:HB3	11:UK:166:LEU:HD23	1.72	0.70
51:DG:13:GLN:NE2	66:D3:151:G:N3	2.38	0.70
2:UB:213:GLU:HA	66:D3:1207:C:H1'	1.72	0.70
34:CM:200:VAL:HG12	34:CM:201:SER:H	1.57	0.70
36:JA:742:PHE:HB3	36:JA:762:MET:HB3	1.74	0.70
38:JE:266:ILE:HD11	54:DJ:139:GLN:HB2	1.74	0.70
38:JE:324:ASP:OD1	54:DJ:79:ARG:NH1	2.24	0.70
66:D3:523:G:H21	66:D3:529:A:H62	1.40	0.70
4:UD:370:ARG:NH2	4:UD:372:MET:SD	2.65	0.70
15:UO:277:LEU:HA	15:UO:302:VAL:H	1.55	0.70
1:UA:311:ASN:HD21	41:JJ:273:ARG:HH21	1.36	0.70
17:UQ:332:GLN:NE2	18:UR:344:ARG:CD	2.47	0.70
22:UV:173:ASN:HB2	66:D3:1700:C:H5'	1.74	0.70
39:JG:158:LYS:HE3	66:D3:1572:G:H21	1.57	0.70
19:US:189:ALA:HA	19:US:192:GLN:HG3	1.74	0.70
31:CJ:112:PRO:HB2	31:CJ:211:ASN:HD22	1.57	0.70
58:DQ:37:THR:O	58:DQ:45:ARG:NH1	2.25	0.70
12:UL:13:ALA:HA	12:UL:681:ILE:O	1.92	0.69
21:UU:625:VAL:HG12	21:UU:627:ASN:H	1.54	0.69
12:UL:581:ILE:HG22	12:UL:588:ILE:HG12	1.74	0.69
16:UP:190:LEU:HD12	16:UP:191:PRO:HD2	1.71	0.69
18:UR:564:LYS:HB2	18:UR:582:GLU:HG3	1.72	0.69
24:UZ:142:ARG:NH2	66:D3:1514:U:OP2	2.25	0.69
25:CB:267:VAL:HG11	25:CB:298:ILE:HD13	1.74	0.69
14:UN:890:VAL:HG23	46:JP:358:MET:HB3	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:JA:183:ARG:NH1	36:JA:557:SER:O	2.25	0.69
45:JO:288:GLN:OE1	45:JO:291:ARG:NH2	2.24	0.69
15:UO:16:LEU:HD13	15:UO:454:ARG:HH11	1.58	0.69
15:UO:191:GLY:HA2	15:UO:211:HIS:O	1.92	0.69
17:UQ:283:VAL:HG12	17:UQ:290:ILE:HG22	1.74	0.69
22:UV:186:ILE:HG12	22:UV:346:LEU:HD22	1.75	0.69
31:CJ:151:SER:OG	31:CJ:152:LEU:N	2.23	0.69
33:CL:72:VAL:HG22	33:CL:137:LEU:HB3	1.74	0.69
34:CM:113:LYS:HD2	34:CM:171:ASP:HA	1.75	0.69
15:UO:21:THR:OG1	15:UO:22:PRO:HD2	1.92	0.69
31:CJ:260:GLU:OE2	31:CJ:276:GLN:NE2	2.25	0.69
4:UD:32:ILE:HA	8:UH:720:TYR:HB3	1.73	0.69
7:UG:25:THR:OG1	14:UN:862:ARG:NH2	2.24	0.69
8:UH:599:MET:HG3	8:UH:644:SER:HB2	1.73	0.69
10:UJ:377:ARG:HE	10:UJ:414:LEU:HD12	1.57	0.69
10:UJ:407:PHE:O	10:UJ:410:ILE:O	2.11	0.69
13:UM:401:LEU:HD21	13:UM:416:ARG:HG3	1.73	0.69
25:CB:91:HIS:HB3	25:CB:96:VAL:O	1.93	0.69
33:CL:80:THR:HG21	33:CL:141:LEU:HD22	1.55	0.69
35:CN:88:LEU:HB2	35:CN:125:LEU:HB2	1.75	0.69
39:JF:232:LEU:HD13	39:JF:237:ALA:HB2	1.75	0.69
62:DY:93:ARG:NH2	66:D3:524:U:OP2	2.26	0.69
22:UV:1010:GLU:OE2	22:UV:1044:LYS:NZ	2.26	0.69
7:UG:183:GLU:OE2	30:CI:41:ARG:NH2	2.26	0.69
17:UQ:24:ASN:ND2	17:UQ:369:TYR:OH	2.25	0.69
54:DJ:133:HIS:ND1	54:DJ:162:SER:OG	2.24	0.69
13:UM:626:MET:HB3	13:UM:631:MET:HB3	1.75	0.68
36:JA:916:ILE:HA	36:JA:919:LYS:HD2	1.74	0.68
4:UD:83:ASN:ND2	4:UD:587:ALA:O	2.25	0.68
12:UL:134:THR:HB	12:UL:150:LEU:HB2	1.75	0.68
26:CD:393:SER:OG	26:CD:394:GLU:N	2.25	0.68
3:UC:503:GLN:HA	3:UC:506:LYS:HZ3	1.58	0.68
7:UG:498:ARG:HH22	7:UG:502:ARG:HH11	1.40	0.68
19:US:224:ASN:O	19:US:284:ARG:NH2	2.26	0.68
11:UK:22:ARG:NH1	33:CL:997:MET:O	2.26	0.68
13:UM:584:ILE:HG13	13:UM:586:LYS:H	1.58	0.68
33:CL:41:ARG:NH2	66:D3:27:U:OP1	2.25	0.68
34:CM:196:TYR:HA	34:CM:228:ASP:O	1.93	0.68
22:UV:1012:LEU:HD21	22:UV:1044:LYS:HB3	1.76	0.68
55:DL:73:GLY:HA3	55:DL:86:ILE:HD12	1.76	0.68
8:UH:535:SER:HA	8:UH:538:ARG:HH21	1.59	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:CM:315:LYS:HD3	34:CM:348:GLU:HB3	1.74	0.68
36:JA:133:ASN:OD1	36:JA:137:ARG:NH1	2.26	0.68
52:DH:144:VAL:HA	60:DW:42:GLN:HE22	1.56	0.68
66:D3:229:U:O2	66:D3:239:C:N4	2.26	0.68
14:UN:331:GLN:HA	26:CD:88:LYS:HE2	1.75	0.68
29:CH:160:ILE:O	29:CH:525:GLN:NE2	2.27	0.68
33:CL:551:LYS:O	33:CL:555:MET:HB2	1.94	0.68
46:JP:117:CYS:HG	46:JP:187:SER:HG	1.36	0.68
7:UG:164:GLN:HA	7:UG:179:HIS:HB3	1.74	0.68
26:CD:95:ASN:ND2	26:CD:117:ASP:OD2	2.27	0.68
31:CJ:176:ILE:HG22	31:CJ:177:ILE:HG12	1.75	0.68
10:UJ:166:ASN:HD21	27:CE:407:ARG:HD2	1.59	0.68
19:US:191:ILE:O	19:US:195:PHE:CB	2.41	0.68
21:UU:307:GLN:NE2	27:CE:422:THR:O	2.27	0.68
46:JP:327:LYS:HG2	46:JP:350:HIS:H	1.59	0.68
5:UE:489:ALA:HB1	15:UO:16:LEU:HD23	1.76	0.68
12:UL:412:GLY:HA3	12:UL:430:CYS:H	1.59	0.67
13:UM:787:PRO:HG3	32:CK:495:ILE:HD11	1.75	0.67
15:UO:31:THR:HG22	15:UO:32:SER:H	1.59	0.67
22:UV:865:ARG:NH2	66:D3:1060:U:OP2	2.27	0.67
29:CH:161:SER:H	29:CH:188:TYR:H	1.40	0.67
33:CL:841:THR:HG22	33:CL:860:TYR:HD2	1.58	0.67
37:JC:162:LEU:HB2	37:JC:176:PHE:HB2	1.76	0.67
37:JC:200:GLU:HA	37:JC:231:VAL:H	1.58	0.67
66:D3:694:U:O2'	66:D3:695:U:O2	2.12	0.67
66:D3:868:G:H1	66:D3:960:U:H3	1.41	0.67
15:UO:34:GLN:HG2	15:UO:71:ARG:HH21	1.59	0.67
18:UR:144:LYS:O	18:UR:147:ARG:NH1	2.27	0.67
6:UF:319:TYR:HA	6:UF:322:LEU:HD13	1.76	0.67
22:UV:1013:THR:HG23	22:UV:1016:GLN:H	1.59	0.67
22:UV:1108:LEU:O	22:UV:1112:CYS:HB2	1.94	0.67
33:CL:61:ARG:NH2	34:CM:306:GLU:O	2.28	0.67
37:JC:180:THR:HG22	37:JC:182:GLY:H	1.60	0.67
39:JG:31:LEU:HD13	39:JG:40:ARG:HE	1.59	0.67
49:DE:100:ARG:NH2	49:DE:121:TYR:O	2.27	0.67
53:DI:22:ARG:HD2	53:DI:25:ARG:HE	1.59	0.67
6:UF:191:ASN:HD22	43:JM:62:LEU:HG	1.59	0.67
13:UM:691:PRO:HB3	13:UM:742:ARG:HE	1.59	0.67
62:DY:27:VAL:HB	62:DY:69:SER:HB3	1.76	0.67
66:D3:88:U:H2'	66:D3:89:G:H8	1.60	0.67
15:UO:496:HIS:NE2	15:UO:500:GLU:OE1	2.28	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DG:2:LYS:O	51:DG:108:VAL:HA	1.93	0.67
58:DQ:13:LYS:HG3	58:DQ:14:LYS:H	1.60	0.67
65:D2:477:G:N2	67:D4:42:U:O2	2.27	0.67
18:UR:453:VAL:HG21	28:CF:90:ALA:HB2	1.77	0.67
23:UX:121:ARG:NH2	46:JP:66:HIS:O	2.28	0.67
3:UC:554:ARG:NH1	66:D3:547:U:OP2	2.27	0.67
11:UK:100:LYS:NZ	11:UK:221:GLN:OE1	2.28	0.67
13:UM:667:GLN:NE2	13:UM:671:ASN:OD1	2.28	0.67
24:UZ:208:SER:OG	24:UZ:209:ILE:N	2.27	0.67
25:CB:264:GLN:HB3	25:CB:319:ARG:HH21	1.60	0.67
38:JE:291:GLU:HG3	62:DY:11:LYS:HE2	1.76	0.67
13:UM:15:ILE:HG13	13:UM:34:THR:HG21	1.77	0.67
17:UQ:678:LEU:HB2	17:UQ:694:LEU:HD11	1.77	0.67
48:DA:11:LYS:NZ	66:D3:912:U:OP2	2.28	0.67
50:DF:154:ALA:O	50:DF:156:ARG:NH1	2.28	0.67
51:DG:180:THR:HG23	51:DG:183:ARG:H	1.61	0.67
29:CH:159:CYS:SG	29:CH:523:LYS:NZ	2.65	0.66
33:CL:316:LYS:O	33:CL:320:PHE:HB2	1.95	0.66
46:JP:140:SER:OG	46:JP:141:ASP:N	2.28	0.66
66:D3:148:A:N6	66:D3:167:U:O4	2.28	0.66
66:D3:152:U:O2	66:D3:163:G:N2	2.28	0.66
5:UE:111:ASP:OD1	5:UE:112:LEU:N	2.27	0.66
22:UV:660:ASP:HB3	48:DA:93:GLY:HA2	1.77	0.66
36:JA:585:VAL:O	36:JA:639:ALA:HB3	1.95	0.66
8:UH:293:TYR:HA	8:UH:304:GLN:HA	1.76	0.66
12:UL:275:GLN:NE2	12:UL:276:ASN:O	2.27	0.66
29:CH:491:SER:OG	29:CH:492:TRP:N	2.27	0.66
30:CI:137:ARG:NH2	30:CI:139:GLY:O	2.28	0.66
66:D3:524:U:N3	66:D3:527:A:OP2	2.28	0.66
16:UP:200:ARG:HH12	65:D2:220:U:H5'	1.60	0.66
17:UQ:38:SER:OG	17:UQ:39:GLN:N	2.28	0.66
22:UV:586:VAL:O	22:UV:611:ASP:N	2.26	0.66
23:UX:103:MET:HG3	23:UX:127:ARG:HH21	1.59	0.66
34:CM:131:GLU:OE2	34:CM:156:ARG:NH2	2.29	0.66
54:DJ:127:VAL:O	54:DJ:131:GLN:HB2	1.95	0.66
33:CL:195:TRP:HB3	33:CL:200:GLN:HG3	1.76	0.66
33:CL:879:THR:OG1	66:D3:572:C:N4	2.29	0.66
60:DW:22:LYS:NZ	66:D3:1038:U:O2'	2.28	0.66
65:D2:182:G:H1	65:D2:215:U:H3	1.44	0.66
7:UG:152:GLU:HB3	7:UG:171:LYS:HB2	1.77	0.66
25:CB:197:VAL:HA	25:CB:220:ILE:O	1.96	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DE:122:LYS:HB3	49:DE:164:LEU:HD21	1.78	0.66
50:DF:76:ARG:HE	58:DQ:122:ARG:HG2	1.59	0.66
52:DH:23:ALA:CB	52:DH:85:PHE:CZ	2.78	0.66
5:UE:444:ALA:O	5:UE:447:SER:O	2.13	0.66
46:JP:357:SER:OG	46:JP:358:MET:N	2.29	0.66
5:UE:553:LYS:NZ	9:UI:461:THR:O	2.22	0.66
7:UG:502:ARG:HD3	65:D2:370:U:H5	1.61	0.66
15:UO:20:THR:HG23	15:UO:28:ARG:HH22	1.59	0.66
21:UU:232:MET:HE1	21:UU:256:PHE:HZ	1.61	0.66
24:UZ:163:LYS:NZ	65:D2:256:U:OP1	2.28	0.66
18:UR:304:LEU:O	18:UR:307:GLN:NE2	2.29	0.66
25:CA:225:ARG:NH2	25:CA:246:GLN:OE1	2.28	0.66
61:DX:63:GLN:O	61:DX:66:SER:OG	2.09	0.66
6:UF:11:CYS:SG	6:UF:36:ARG:NH2	2.69	0.66
15:UO:301:PRO:HG2	15:UO:323:SER:HB3	1.76	0.66
36:JA:510:PRO:HB2	36:JA:652:ARG:HD3	1.77	0.66
36:JA:569:PRO:HD3	36:JA:583:LEU:HG	1.76	0.66
53:DI:10:LYS:O	53:DI:18:ARG:NH1	2.29	0.66
7:UG:274:ARG:NH1	65:D2:322:A:N7	2.44	0.65
11:UK:158:MET:SD	11:UK:161:ARG:NH2	2.68	0.65
17:UQ:561:LEU:HD12	17:UQ:562:PRO:HD2	1.78	0.65
19:US:467:ALA:HA	19:US:470:MET:HG2	1.78	0.65
17:UQ:375:ASN:ND2	18:UR:340:GLU:OE1	2.29	0.65
24:UZ:27:ASN:HB2	24:UZ:30:LEU:HB2	1.78	0.65
29:CH:201:ILE:HG22	29:CH:208:PRO:HB3	1.77	0.65
39:JG:32:THR:HG23	39:JG:34:LYS:H	1.61	0.65
58:DQ:58:ASP:OD1	58:DQ:58:ASP:N	2.27	0.65
62:DY:61:ARG:HH12	66:D3:523:G:H4'	1.61	0.65
65:D2:547:C:O2	65:D2:590:G:N2	2.29	0.65
19:US:461:SER:OG	19:US:462:SER:N	2.29	0.65
24:UZ:77:LYS:HG2	24:UZ:78:ASP:H	1.60	0.65
48:DA:214:LYS:NZ	66:D3:886:U:OP1	2.29	0.65
12:UL:171:CYS:SG	12:UL:172:GLN:N	2.69	0.65
18:UR:174:ARG:NH1	18:UR:179:ASP:OD1	2.27	0.65
29:CH:191:SER:O	29:CH:194:LEU:N	2.29	0.65
1:UA:33:VAL:HG12	1:UA:34:GLY:H	1.61	0.65
4:UD:124:THR:HG21	16:UP:191:PRO:HB3	1.78	0.65
7:UG:409:ALA:O	46:JP:8:ARG:NH2	2.27	0.65
12:UL:42:ILE:HG12	12:UL:51:ILE:HG22	1.76	0.65
13:UM:589:GLN:HA	13:UM:603:ASP:HA	1.78	0.65
31:CJ:112:PRO:HG2	31:CJ:211:ASN:HB2	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DO:54:GLU:OE2	66:D3:901:G:N2	2.29	0.65
60:DW:3:ARG:NH2	66:D3:865:A:OP2	2.29	0.65
21:UU:894:ASP:OD1	21:UU:895:VAL:N	2.30	0.65
55:DL:129:ARG:NH1	66:D3:335:U:O2'	2.30	0.65
66:D3:1042:G:N2	66:D3:1077:C:O2	2.28	0.65
66:D3:1697:G:H1	66:D3:1704:U:H3	1.45	0.65
12:UL:349:SER:O	12:UL:368:PRO:HA	1.97	0.65
23:UX:81:ASP:HB3	23:UX:84:ARG:HB3	1.77	0.65
29:CH:457:GLU:OE2	29:CH:461:LYS:NZ	2.28	0.65
35:CN:80:THR:HB	35:CN:136:ASN:HB3	1.79	0.65
36:JA:861:MET:N	36:JA:861:MET:SD	2.66	0.65
11:UK:164:ASN:OD1	25:CB:91:HIS:ND1	2.26	0.65
15:UO:356:ASN:ND2	65:D2:236:C:OP1	2.30	0.65
20:UT:1921:LEU:O	20:UT:1924:LEU:C	2.35	0.65
43:JM:106:LEU:O	43:JM:146:ARG:NH1	2.29	0.65
5:UE:182:MET:HG2	5:UE:183:THR:N	2.11	0.65
11:UK:202:LYS:HD3	11:UK:206:GLN:HE21	1.62	0.65
18:UR:410:ASP:N	18:UR:410:ASP:OD1	2.25	0.65
33:CL:51:GLU:OE1	61:DX:50:LYS:N	2.20	0.65
4:UD:417:VAL:HG13	4:UD:460:LEU:HD13	1.79	0.65
4:UD:550:VAL:HG23	4:UD:563:LEU:HB2	1.78	0.65
11:UK:200:GLN:NE2	65:D2:424:G:OP1	2.27	0.65
22:UV:656:ARG:HD3	48:DA:243:LYS:H	1.61	0.65
23:UX:56:ASN:ND2	23:UX:169:GLY:O	2.28	0.65
51:DG:196:ARG:NH1	66:D3:285:G:OP1	2.30	0.65
62:DY:10:ARG:O	62:DY:24:VAL:N	2.24	0.65
3:UC:550:LEU:HD13	11:UK:6:HIS:CE1	2.33	0.64
18:UR:16:ASP:OD1	18:UR:17:GLU:N	2.30	0.64
36:JA:510:PRO:O	36:JA:652:ARG:NE	2.30	0.64
48:DA:216:LYS:NZ	66:D3:885:G:OP1	2.30	0.64
66:D3:1692:G:N2	66:D3:1710:U:O2	2.30	0.64
1:UA:582:THR:HG21	1:UA:683:SER:HA	1.79	0.64
27:CE:429:ALA:O	27:CE:432:ASP:N	2.30	0.64
31:CJ:94:ARG:NH2	66:D3:1606:C:OP2	2.30	0.64
33:CL:210:VAL:HG22	33:CL:215:TYR:HE1	1.60	0.64
33:CL:252:LEU:O	33:CL:268:LYS:HB2	1.97	0.64
36:JA:630:LEU:HB3	36:JA:722:TYR:HE2	1.62	0.64
15:UO:244:LYS:NZ	15:UO:247:GLU:OE2	2.30	0.64
39:JG:192:TYR:OH	39:JG:223:GLU:OE2	2.15	0.64
48:DA:71:ALA:HB2	48:DA:79:HIS:HA	1.79	0.64
8:UH:545:ARG:HH21	8:UH:569:GLU:HG2	1.62	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:UI:439:LYS:O	9:UI:443:GLN:NE2	2.30	0.64
12:UL:938:VAL:HG12	32:CK:467:ILE:HG12	1.78	0.64
17:UQ:71:ASN:ND2	17:UQ:127:GLU:OE1	2.30	0.64
65:D2:174:U:H3	65:D2:222:G:H1	1.46	0.64
3:UC:568:LYS:NZ	66:D3:592:A:OP2	2.26	0.64
25:CA:171:LEU:HB2	25:CA:237:VAL:HG11	1.79	0.64
4:UD:385:ASN:HB3	4:UD:390:LEU:HB2	1.80	0.64
36:JA:725:VAL:HG22	36:JA:762:MET:HB2	1.78	0.64
53:DI:172:ARG:HE	53:DI:175:GLN:HG3	1.62	0.64
18:UR:449:ASP:OD1	18:UR:494:TYR:OH	2.16	0.64
21:UU:392:ARG:NH2	67:D4:64:A:OP2	2.30	0.64
24:UZ:228:LYS:O	24:UZ:232:GLY:N	2.26	0.64
30:CI:98:GLU:OE2	31:CJ:58:TYR:OH	2.16	0.64
39:JF:196:LEU:HD11	39:JF:202:ILE:HD13	1.78	0.64
51:DG:78:THR:HG22	51:DG:92:ARG:HG3	1.79	0.64
54:DJ:151:ASP:N	54:DJ:151:ASP:OD1	2.26	0.64
66:D3:445:A:H1'	66:D3:525:A:H5"	1.78	0.64
19:US:196:GLN:HA	19:US:199:PHE:HD2	1.63	0.64
25:CB:144:TRP:HE3	25:CB:152:ALA:HB2	1.63	0.64
27:CE:86:THR:HA	27:CE:106:ASN:O	1.97	0.64
39:JG:35:ASP:O	39:JG:40:ARG:NH2	2.22	0.64
2:UB:610:ARG:HE	2:UB:611:SER:H	1.46	0.64
11:UK:7:ASP:O	11:UK:10:LYS:N	2.31	0.64
19:US:466:LEU:HD13	19:US:469:LEU:HD12	1.79	0.64
8:UH:659:THR:HG21	9:UI:507:ARG:HH21	1.63	0.64
12:UL:424:CYS:SG	12:UL:425:ILE:N	2.71	0.64
29:CH:157:LEU:HD12	29:CH:189:THR:HB	1.78	0.64
33:CL:156:LEU:HD13	33:CL:197:GLU:HG2	1.80	0.64
51:DG:7:TYR:HB2	51:DG:113:ILE:HD12	1.79	0.64
58:DQ:50:GLU:OE2	58:DQ:82:ARG:NH2	2.31	0.64
1:UA:636:THR:OG1	1:UA:637:GLU:N	2.31	0.63
3:UC:560:ASN:OD1	3:UC:561:SER:N	2.30	0.63
4:UD:199:ASP:HA	4:UD:215:ALA:O	1.98	0.63
5:UE:532:ARG:HH22	15:UO:16:LEU:HD11	1.64	0.63
13:UM:30:LYS:CB	13:UM:45:LEU:O	2.47	0.63
18:UR:382:GLY:CA	18:UR:400:ILE:O	2.43	0.63
21:UU:309:ILE:HG12	21:UU:323:VAL:HG12	1.80	0.63
22:UV:138:ILE:HD11	22:UV:239:LEU:HD13	1.79	0.63
29:CH:304:ILE:HB	29:CH:318:LEU:HB2	1.80	0.63
53:DI:5:ARG:NH1	66:D3:332:U:O2'	2.31	0.63
7:UG:253:ASN:HB2	7:UG:255:THR:HG23	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:UM:96:VAL:HG12	13:UM:97:ARG:HG3	1.79	0.63
15:UO:91:SER:OG	15:UO:92:ASP:N	2.32	0.63
19:US:495:MET:O	19:US:499:LEU:HB2	1.98	0.63
35:CN:218:LYS:NZ	66:D3:1064:G:O6	2.31	0.63
8:UH:31:VAL:HA	8:UH:354:GLU:HA	1.81	0.63
17:UQ:200:ASN:ND2	17:UQ:262:MET:O	2.27	0.63
21:UU:228:GLY:CA	21:UU:246:ILE:O	2.44	0.63
36:JA:198:CYS:SG	36:JA:199:LEU:N	2.72	0.63
50:DF:206:SER:O	50:DF:206:SER:OG	2.16	0.63
66:D3:75:U:O4	66:D3:80:A:N6	2.30	0.63
2:UB:383:THR:O	2:UB:431:ARG:NH2	2.32	0.63
13:UM:25:VAL:HG22	13:UM:294:LEU:HD23	1.81	0.63
22:UV:211:LYS:HB3	22:UV:299:PRO:HG2	1.80	0.63
28:CF:38:ASN:ND2	67:D4:82:G:N7	2.44	0.63
28:CG:24:VAL:HG12	28:CG:102:ILE:HD11	1.79	0.63
33:CL:1158:LYS:NZ	67:D4:12:U:O4	2.31	0.63
57:DO:25:ASP:OD1	57:DO:26:THR:N	2.28	0.63
4:UD:294:TYR:OH	4:UD:310:ASN:ND2	2.31	0.63
21:UU:170:LEU:O	21:UU:171:GLN:NE2	2.32	0.63
26:CD:198:TRP:HE3	26:CD:271:VAL:HG22	1.64	0.63
38:JE:277:LEU:O	38:JE:280:THR:OG1	2.17	0.63
46:JP:92:ILE:HD12	46:JP:136:MET:HE2	1.80	0.63
7:UG:74:LEU:HD12	46:JP:3:ILE:HG12	1.81	0.63
7:UG:483:ILE:HG23	7:UG:516:VAL:HG22	1.79	0.63
8:UH:665:GLN:HB3	9:UI:496:LEU:HD11	1.80	0.63
22:UV:603:THR:O	22:UV:606:ASN:ND2	2.32	0.63
23:UX:54:GLN:HG3	54:DJ:21:SER:HB3	1.79	0.63
24:UZ:148:LYS:HG3	24:UZ:149:LYS:HE2	1.81	0.63
33:CL:373:ILE:HB	36:JA:6:ILE:HD11	1.81	0.63
3:UC:438:ASP:O	39:JG:136:ARG:NH1	2.32	0.63
10:UJ:132:THR:HB	10:UJ:155:ILE:HD11	1.80	0.63
12:UL:449:THR:OG1	12:UL:451:ASN:O	2.16	0.63
17:UQ:747:ASP:OD1	17:UQ:748:SER:N	2.29	0.63
18:UR:415:SER:H	18:UR:418:LYS:HB2	1.62	0.63
22:UV:102:ILE:HA	22:UV:105:LEU:HD12	1.80	0.63
22:UV:707:PHE:O	22:UV:918:ARG:NH1	2.31	0.63
27:CE:324:LYS:NZ	67:D4:91:C:OP2	2.29	0.63
31:CJ:211:ASN:O	32:CK:383:ARG:NH1	2.31	0.63
54:DJ:152:SER:O	54:DJ:155:HIS:N	2.32	0.63
65:D2:426:G:C2	65:D2:428:A:H5”	2.33	0.63
12:UL:677:HIS:NE2	66:D3:1654:G:O2’	2.27	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:UU:626:ASP:N	21:UU:626:ASP:OD1	2.31	0.63
33:CL:1052:SER:O	66:D3:575:C:N4	2.31	0.63
36:JA:171:ARG:HH22	36:JA:525:SER:HA	1.63	0.63
57:DO:41:ARG:NH2	66:D3:916:U:O4	2.32	0.63
24:UZ:101:ILE:HG21	24:UZ:106:LEU:HD13	1.81	0.62
28:CF:28:ALA:O	28:CF:31:ARG:NH2	2.31	0.62
33:CL:624:LYS:NZ	34:CM:281:GLU:OE1	2.32	0.62
33:CL:944:ASN:HB3	66:D3:1595:U:H5"	1.80	0.62
48:DA:49:ASN:ND2	66:D3:895:G:OP1	2.32	0.62
6:UF:203:MET:O	6:UF:207:ASN:ND2	2.32	0.62
12:UL:51:ILE:HG13	12:UL:60:VAL:HB	1.81	0.62
12:UL:676:SER:OG	12:UL:678:ASP:OD1	2.15	0.62
22:UV:1221:HIS:NE2	35:CN:21:PRO:O	2.24	0.62
23:UX:88:ASP:OD1	54:DJ:57:ARG:NE	2.28	0.62
25:CA:231:ARG:NE	26:CD:10:GLU:OE2	2.31	0.62
59:DS:83:ALA:O	59:DS:86:LEU:C	2.38	0.62
5:UE:449:ASP:OD2	15:UO:280:HIS:NE2	2.29	0.62
22:UV:1103:ARG:HH11	22:UV:1232:ILE:HB	1.63	0.62
24:UZ:226:LYS:O	24:UZ:229:ARG:NH1	2.32	0.62
29:CH:364:GLU:HB3	29:CH:366:GLN:HG3	1.81	0.62
39:JF:214:ASP:O	39:JF:224:LYS:NZ	2.29	0.62
46:JP:365:SER:O	46:JP:365:SER:OG	2.14	0.62
32:CK:538:LYS:HG2	66:D3:1628:U:H3	1.64	0.62
33:CL:625:TRP:O	33:CL:626:LYS:C	2.35	0.62
65:D2:349:G:N2	65:D2:350:A:N3	2.47	0.62
11:UK:32:LYS:NZ	66:D3:555:A:OP1	2.32	0.62
17:UQ:403:ILE:HD11	17:UQ:414:ILE:HG13	1.81	0.62
18:UR:571:SER:HB3	18:UR:576:LEU:H	1.64	0.62
19:US:192:GLN:O	19:US:196:GLN:NE2	2.33	0.62
27:CE:290:LEU:O	27:CE:391:ARG:NH1	2.32	0.62
53:DI:32:GLN:O	53:DI:56:ARG:NH1	2.33	0.62
4:UD:543:ILE:O	4:UD:550:VAL:HA	2.00	0.62
6:UF:82:SER:OG	6:UF:83:LEU:N	2.33	0.62
13:UM:108:LEU:HD23	13:UM:119:VAL:HG12	1.82	0.62
29:CH:160:ILE:CA	29:CH:188:TYR:O	2.48	0.62
36:JB:899:ALA:HB1	36:JB:905:PRO:HA	1.82	0.62
49:DE:151:ASP:HB3	49:DE:154:ILE:HG13	1.80	0.62
52:DH:23:ALA:HB1	52:DH:85:PHE:HZ	1.63	0.62
10:UJ:81:LEU:O	10:UJ:124:ARG:NH1	2.33	0.62
22:UV:949:PHE:O	22:UV:960:LYS:NZ	2.32	0.62
33:CL:1004:ARG:NH2	66:D3:558:U:OP1	2.33	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:JC:77:TYR:OH	53:DI:56:ARG:NH1	2.32	0.62
38:JE:231:ARG:NH2	66:D3:368:U:OP2	2.33	0.62
39:JG:182:PHE:HE1	39:JG:231:PRO:HA	1.64	0.62
46:JP:324:SER:OG	46:JP:326:ASP:OD1	2.17	0.62
50:DF:118:LEU:HD22	50:DF:129:PRO:HB2	1.80	0.62
51:DG:134:GLY:N	66:D3:66:U:O4	2.32	0.62
12:UL:770:ASN:HA	12:UL:773:MET:HE3	1.82	0.62
17:UQ:662:VAL:HG12	17:UQ:672:VAL:HG22	1.80	0.62
22:UV:1175:GLU:OE2	22:UV:1176:LYS:NZ	2.32	0.62
49:DE:221:ARG:HG3	49:DE:223:ASN:H	1.64	0.62
66:D3:65:A:N6	66:D3:84:A:OP2	2.30	0.62
66:D3:442:C:O2'	66:D3:525:A:N1	2.28	0.62
5:UE:169:SER:HA	5:UE:186:GLY:HA3	1.81	0.62
5:UE:448:ASN:OD1	5:UE:483:ARG:NH2	2.32	0.62
17:UQ:113:ASN:O	17:UQ:133:LYS:NZ	2.32	0.62
17:UQ:730:ASP:O	17:UQ:734:VAL:N	2.33	0.62
41:JJ:94:PHE:HA	41:JJ:141:THR:O	1.98	0.62
52:DH:114:ARG:O	52:DH:117:THR:OG1	2.18	0.62
7:UG:364:ARG:NH2	65:D2:316:U:OP1	2.33	0.62
15:UO:60:SER:HA	15:UO:83:VAL:HG23	1.82	0.62
15:UO:435:ASP:H	15:UO:438:THR:HG1	1.45	0.62
31:CJ:212:ALA:HA	32:CK:383:ARG:CZ	2.30	0.62
51:DG:139:ASN:OD1	51:DG:142:ARG:NH1	2.32	0.62
66:D3:275:C:O2	66:D3:281:G:N2	2.33	0.62
1:UA:285:ARG:HG2	1:UA:297:GLN:HG3	1.82	0.61
1:UA:538:GLN:NE2	1:UA:554:ASP:OD1	2.33	0.61
13:UM:510:SER:HG	13:UM:514:THR:HG1	1.45	0.61
37:JC:121:ARG:NH1	66:D3:341:A:OP1	2.32	0.61
39:JG:74:GLN:HB3	39:JG:84:ILE:HD13	1.82	0.61
65:D2:415:U:H2'	65:D2:416:A:H8	1.64	0.61
66:D3:891:A:H2'	66:D3:892:A:H8	1.65	0.61
11:UK:139:SER:HB3	11:UK:142:LYS:HG2	1.82	0.61
22:UV:526:CYS:HA	22:UV:615:VAL:O	1.99	0.61
26:CD:4:ILE:HG22	26:CD:23:GLN:HE21	1.63	0.61
29:CH:560:ARG:NH2	67:D4:248:G:N7	2.47	0.61
35:CN:224:ASN:HA	35:CN:227:ARG:HD3	1.82	0.61
66:D3:104:A:OP2	66:D3:308:C:N4	2.33	0.61
2:UB:604:VAL:HG22	2:UB:606:PHE:H	1.65	0.61
4:UD:231:VAL:HG22	4:UD:265:TRP:HH2	1.65	0.61
4:UD:538:GLN:OE1	4:UD:539:ASN:ND2	2.33	0.61
8:UH:555:ILE:O	8:UH:585:ARG:NH2	2.32	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:UM:40:ILE:HB	13:UM:56:ILE:HG23	1.83	0.61
22:UV:268:LEU:HB3	22:UV:294:LEU:HB2	1.82	0.61
22:UV:871:ARG:HE	22:UV:873:GLU:HB3	1.65	0.61
25:CB:268:VAL:HG12	25:CB:317:VAL:HG12	1.82	0.61
36:JA:769:ARG:NH2	36:JA:770:GLU:O	2.33	0.61
41:JJ:134:THR:HG23	41:JJ:136:SER:HB3	1.81	0.61
44:JN:224:HIS:NE2	67:D4:15:U:OP2	2.30	0.61
48:DA:106:THR:OG1	57:DO:116:GLU:OE2	2.18	0.61
50:DF:103:ASN:OD1	50:DF:180:ARG:NH1	2.32	0.61
51:DG:131:LYS:HE2	66:D3:166:C:H4'	1.81	0.61
58:DQ:122:ARG:NH2	66:D3:1583:A:O2'	2.30	0.61
6:UF:173:ARG:NH1	26:CD:83:ASP:OD2	2.32	0.61
12:UL:473:ASP:N	12:UL:494:ASP:OD2	2.33	0.61
20:UT:464:PHE:O	20:UT:468:ALA:HB2	1.99	0.61
51:DG:23:ARG:HB3	51:DG:41:VAL:HG23	1.82	0.61
53:DI:24:LYS:NZ	66:D3:400:A:N7	2.37	0.61
62:DY:61:ARG:O	62:DY:70:VAL:N	2.23	0.61
29:CH:69:GLN:NE2	38:JE:338:THR:O	2.33	0.61
33:CL:953:SER:OG	33:CL:957:GLU:OE1	2.17	0.61
65:D2:405:A:N6	65:D2:451:G:O2'	2.34	0.61
65:D2:506:G:N2	65:D2:531:C:O2	2.33	0.61
66:D3:655:G:N2	66:D3:679:U:O4'	2.33	0.61
3:UC:544:ILE:HG22	33:CL:834:TRP:CE2	2.36	0.61
12:UL:350:LYS:HA	12:UL:367:ILE:O	2.00	0.61
22:UV:99:LYS:NZ	22:UV:499:LEU:O	2.34	0.61
22:UV:897:ARG:NH1	48:DA:178:GLY:O	2.33	0.61
31:CJ:187:PRO:HB3	31:CJ:220:ARG:HE	1.65	0.61
4:UD:94:GLY:HA2	4:UD:428:ILE:HG13	1.82	0.61
5:UE:182:MET:HG2	5:UE:183:THR:H	1.63	0.61
8:UH:603:SER:OG	8:UH:604:LYS:N	2.33	0.61
12:UL:8:PHE:HA	12:UL:685:GLU:O	2.00	0.61
15:UO:200:SER:OG	15:UO:201:SER:N	2.33	0.61
19:US:245:GLN:HB3	19:US:248:GLU:HB3	1.82	0.61
25:CA:264:GLN:HA	25:CA:320:TYR:O	1.99	0.61
30:CI:56:ARG:HD2	32:CK:440:LEU:HD11	1.83	0.61
37:JC:328:MET:HA	37:JC:341:TYR:O	2.01	0.61
39:JG:55:ILE:O	39:JG:63:ASP:N	2.34	0.61
46:JP:228:ASN:ND2	46:JP:230:ASN:O	2.33	0.61
49:DE:11:ARG:NH1	49:DE:27:TYR:O	2.33	0.61
49:DE:212:ASP:O	49:DE:215:ASP:N	2.34	0.61
66:D3:1041:G:N2	66:D3:1078:C:O2	2.33	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:US:156:TRP:HE1	19:US:199:PHE:HE1	1.49	0.61
21:UU:397:GLN:NE2	21:UU:398:ASP:OD1	2.34	0.61
35:CN:105:SER:OG	35:CN:194:ARG:NH2	2.33	0.61
37:JC:164:ARG:HH22	37:JC:174:ASN:HB3	1.65	0.61
51:DG:42:GLY:HA3	51:DG:45:PHE:HD2	1.63	0.61
55:DL:8:GLN:NE2	55:DL:14:GLN:O	2.33	0.61
57:DO:116:GLU:OE1	57:DO:117:ASP:N	2.33	0.61
61:DX:116:ASP:OD1	61:DX:117:ILE:N	2.34	0.61
3:UC:550:LEU:HD13	11:UK:6:HIS:NE2	2.15	0.61
12:UL:302:ARG:HA	12:UL:305:GLU:HG2	1.83	0.61
12:UL:415:LYS:HG2	12:UL:427:THR:HG22	1.82	0.61
13:UM:43:ILE:HA	13:UM:53:LEU:H	1.66	0.61
24:UZ:50:ARG:NH2	66:D3:1510:U:OP1	2.33	0.61
39:JF:151:ARG:HG2	39:JF:158:LYS:HG2	1.83	0.61
6:UF:193:ILE:HG12	6:UF:266:ARG:HG3	1.83	0.61
12:UL:15:GLY:O	12:UL:360:ASN:ND2	2.32	0.61
33:CL:92:ARG:NH1	33:CL:92:ARG:O	2.33	0.61
5:UE:185:PRO:O	5:UE:215:TYR:OH	2.16	0.60
7:UG:527:ARG:HH12	65:D2:366:A:P	2.23	0.60
8:UH:80:ALA:HA	8:UH:88:ASP:HA	1.82	0.60
11:UK:149:GLU:O	11:UK:153:ASN:HA	2.01	0.60
12:UL:311:GLU:O	12:UL:315:LYS:NZ	2.29	0.60
13:UM:705:SER:O	13:UM:705:SER:OG	2.17	0.60
15:UO:92:ASP:N	15:UO:92:ASP:OD1	2.32	0.60
51:DG:142:ARG:HG3	51:DG:147:LEU:HB2	1.83	0.60
5:UE:434:THR:O	5:UE:463:ARG:NH2	2.34	0.60
8:UH:251:CYS:HA	8:UH:262:LEU:HA	1.81	0.60
24:UZ:224:THR:O	24:UZ:226:LYS:NZ	2.29	0.60
34:CM:251:GLN:HG2	34:CM:252:LYS:HG3	1.83	0.60
43:JM:79:LYS:NZ	43:JM:80:ASN:OD1	2.34	0.60
65:D2:177:U:H3	65:D2:220:U:H3	1.49	0.60
66:D3:628:G:N1	66:D3:970:A:OP2	2.29	0.60
17:UQ:118:VAL:HB	17:UQ:130:LYS:HB2	1.82	0.60
19:US:144:PRO:O	19:US:148:PHE:HB2	2.01	0.60
33:CL:775:GLU:OE1	33:CL:779:ARG:NH2	2.34	0.60
49:DE:105:VAL:HA	49:DE:190:GLY:HA3	1.84	0.60
53:DI:37:LYS:NZ	53:DI:93:THR:O	2.33	0.60
53:DI:98:LYS:NZ	66:D3:329:G:OP1	2.26	0.60
54:DJ:176:ASN:ND2	66:D3:511:A:OP2	2.33	0.60
4:UD:304:ILE:HD11	4:UD:329:HIS:HE1	1.66	0.60
22:UV:620:ASN:ND2	22:UV:623:GLU:OE2	2.35	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:CD:103:LYS:NZ	46:JP:158:LYS:O	2.29	0.60
48:DA:150:VAL:HG22	66:D3:1067:C:H5"	1.84	0.60
49:DE:188:ASN:OD1	49:DE:191:ARG:NE	2.31	0.60
55:DL:88:ARG:O	55:DL:104:HIS:HA	2.01	0.60
62:DY:13:ILE:HG13	62:DY:22:GLN:HB2	1.82	0.60
1:UA:760:ILE:HG21	21:UU:720:LEU:HD21	1.84	0.60
12:UL:24:VAL:HG21	12:UL:86:GLU:HA	1.83	0.60
12:UL:88:HIS:O	12:UL:92:ASP:N	2.34	0.60
13:UM:539:VAL:HA	13:UM:549:ALA:O	2.02	0.60
13:UM:702:LEU:HD21	13:UM:758:ARG:HD3	1.84	0.60
14:UN:320:GLU:OE1	14:UN:323:HIS:NE2	2.28	0.60
18:UR:344:ARG:HH21	65:D2:88:U:H3	1.49	0.60
23:UX:100:ASP:HA	23:UX:127:ARG:HH22	1.66	0.60
36:JA:80:GLU:OE2	36:JA:83:ARG:NH1	2.34	0.60
49:DE:153:ASN:OD1	51:DG:215:ARG:NH2	2.34	0.60
51:DG:185:GLN:OE1	66:D3:271:A:N6	2.31	0.60
55:DL:67:ARG:O	55:DL:127:GLN:NE2	2.34	0.60
2:UB:613:ILE:HG13	2:UB:614:ILE:H	1.66	0.60
17:UQ:404:SER:OG	17:UQ:405:ALA:N	2.35	0.60
39:JF:80:MET:SD	39:JF:82:ARG:NH1	2.74	0.60
66:D3:1744:A:H2'	66:D3:1745:G:H8	1.66	0.60
3:UC:591:TYR:CZ	3:UC:593:GLY:HA2	2.36	0.60
5:UE:494:ARG:NH2	65:D2:135:G:O3'	2.26	0.60
33:CL:621:LEU:O	33:CL:625:TRP:HD1	1.84	0.60
34:CM:87:THR:HG23	34:CM:117:LEU:HB3	1.82	0.60
36:JA:27:VAL:HG12	36:JA:150:ILE:HB	1.83	0.60
46:JP:144:THR:HG21	46:JP:146:LYS:HE3	1.83	0.60
62:DY:63:GLN:N	62:DY:68:LYS:O	2.31	0.60
65:D2:197:G:O2'	65:D2:200:A:N6	2.35	0.60
1:UA:730:LEU:HD21	1:UA:754:VAL:HG13	1.84	0.60
4:UD:249:ARG:NH2	4:UD:309:GLN:OE1	2.35	0.60
11:UK:73:ASP:HB3	11:UK:75:LYS:H	1.65	0.60
19:US:446:PHE:HB2	19:US:461:SER:HB2	1.83	0.60
21:UU:21:SER:HB3	21:UU:623:ILE:HG12	1.83	0.60
22:UV:412:LEU:HD12	22:UV:421:LEU:HD23	1.84	0.60
22:UV:1173:GLY:HA3	22:UV:1177:GLY:HA2	1.84	0.60
25:CA:155:ILE:HD11	25:CA:162:LEU:HD22	1.82	0.60
36:JA:737:TRP:HA	36:JA:740:ASN:HB2	1.84	0.60
39:JG:41:MET:O	39:JG:110:LEU:HA	2.02	0.60
49:DE:87:MET:CA	49:DE:101:LEU:O	2.50	0.60
52:DH:58:LEU:HB2	52:DH:90:VAL:HG12	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:D3:57:G:H1	66:D3:90:C:H42	1.48	0.60
66:D3:367:A:H2	66:D3:378:A:H61	1.48	0.60
66:D3:683:C:H2'	66:D3:684:A:H8	1.65	0.60
3:UC:528:LEU:HD22	66:D3:579:A:H62	1.67	0.60
7:UG:388:ASP:OD1	7:UG:388:ASP:N	2.32	0.60
12:UL:115:LEU:HD22	12:UL:153:GLU:HB3	1.83	0.60
17:UQ:623:PHE:HE2	17:UQ:664:LEU:HD13	1.65	0.60
18:UR:557:THR:OG1	18:UR:558:SER:N	2.35	0.60
28:CG:54:MET:O	28:CG:80:PHE:HA	2.02	0.60
66:D3:645:C:O2	66:D3:690:G:N2	2.32	0.60
66:D3:1268:G:N2	66:D3:1442:U:O2	2.35	0.60
2:UB:802:GLU:OE2	2:UB:806:ARG:NH2	2.33	0.59
10:UJ:30:SER:HB3	10:UJ:41:ALA:HB2	1.83	0.59
15:UO:127:THR:HA	15:UO:144:SER:HA	1.83	0.59
21:UU:444:ASP:OD1	21:UU:445:MET:N	2.35	0.59
21:UU:470:GLN:OE1	21:UU:553:ARG:NH1	2.35	0.59
21:UU:477:ILE:O	21:UU:477:ILE:HG22	2.01	0.59
26:CD:166:SER:OG	26:CD:169:LYS:NZ	2.35	0.59
28:CG:84:ARG:NH1	67:D4:255:U:O4	2.35	0.59
36:JA:735:LYS:HA	36:JA:738:LYS:HE2	1.83	0.59
37:JC:277:ILE:HG22	37:JC:290:VAL:HG22	1.83	0.59
39:JG:40:ARG:NH1	39:JG:172:PRO:HG3	2.16	0.59
43:JM:108:LYS:HG3	43:JM:109:PRO:HD2	1.84	0.59
66:D3:1124:A:O2'	67:D4:1:G:N2	2.35	0.59
1:UA:671:SER:O	1:UA:671:SER:OG	2.19	0.59
3:UC:544:ILE:CG2	33:CL:834:TRP:CD2	2.85	0.59
8:UH:261:GLU:HA	8:UH:271:SER:HA	1.82	0.59
12:UL:414:LEU:HD22	12:UL:447:LEU:HD11	1.84	0.59
21:UU:370:SER:OG	21:UU:371:LYS:N	2.35	0.59
36:JA:635:ILE:HB	36:JA:725:VAL:HG12	1.83	0.59
36:JB:790:SER:HA	36:JB:794:HIS:HA	1.83	0.59
39:JF:31:LEU:HD22	39:JF:40:ARG:HH21	1.66	0.59
48:DA:88:VAL:HG22	48:DA:98:THR:HG22	1.83	0.59
62:DY:44:LEU:HA	62:DY:47:VAL:HG12	1.83	0.59
9:UI:444:ASN:HB3	9:UI:447:ASN:HB2	1.85	0.59
13:UM:343:MET:O	13:UM:624:SER:OG	2.20	0.59
21:UU:327:SER:OG	21:UU:328:LEU:N	2.32	0.59
33:CL:1020:SER:OG	33:CL:1021:LEU:N	2.30	0.59
34:CM:306:GLU:OE1	34:CM:355:LYS:NZ	2.27	0.59
49:DE:196:VAL:N	49:DE:209:HIS:O	2.33	0.59
53:DI:172:ARG:NH2	66:D3:331:A:N7	2.49	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:D3:1744:A:H2'	66:D3:1745:G:C8	2.37	0.59
7:UG:357:SER:O	7:UG:359:GLY:N	2.35	0.59
17:UQ:181:ALA:H	17:UQ:184:GLN:HB2	1.66	0.59
19:US:252:LYS:O	19:US:256:ASN:ND2	2.35	0.59
21:UU:282:SER:OG	21:UU:283:ARG:N	2.32	0.59
42:JK:466:TYR:HD2	45:JO:305:ALA:H	1.50	0.59
46:JP:256:GLN:HG2	46:JP:257:LYS:H	1.66	0.59
7:UG:211:THR:OG1	7:UG:212:GLY:N	2.35	0.59
13:UM:143:HIS:ND1	13:UM:167:ASP:OD1	2.35	0.59
13:UM:602:TRP:HB3	13:UM:610:LEU:H	1.68	0.59
18:UR:517:THR:O	18:UR:517:THR:OG1	2.19	0.59
21:UU:753:SER:OG	21:UU:754:GLU:N	2.36	0.59
34:CM:231:ARG:NH1	66:D3:1132:A:O2'	2.36	0.59
36:JA:852:TYR:HA	36:JA:855:ILE:HG22	1.84	0.59
1:UA:273:ARG:HD2	1:UA:290:PRO:HG2	1.83	0.59
11:UK:234:VAL:HG22	11:UK:240:ILE:HG22	1.84	0.59
13:UM:85:LEU:O	13:UM:98:SER:HA	2.03	0.59
17:UQ:156:THR:HG22	17:UQ:171:TYR:HE1	1.67	0.59
28:CF:64:LEU:HD23	28:CF:98:ILE:HD12	1.83	0.59
30:CI:152:ARG:NH1	31:CJ:11:GLU:OE2	2.36	0.59
33:CL:290:ILE:HD13	33:CL:296:PHE:HD2	1.68	0.59
37:JC:296:ILE:HD11	37:JC:310:SER:HB3	1.84	0.59
52:DH:84:LYS:HG3	52:DH:85:PHE:CD1	2.38	0.59
54:DJ:108:ARG:HH12	54:DJ:110:GLN:HE21	1.51	0.59
8:UH:253:SER:HA	8:UH:260:LYS:HA	1.83	0.59
17:UQ:176:LEU:HA	17:UQ:186:GLU:O	2.01	0.59
19:US:346:ASN:OD1	19:US:347:PRO:HD2	2.03	0.59
19:US:380:ILE:HG23	19:US:402:ILE:HD12	1.84	0.59
26:CD:382:LYS:NZ	67:D4:256:G:OP1	2.34	0.59
29:CH:68:LYS:HA	29:CH:71:LEU:HD12	1.85	0.59
39:JF:90:ASP:N	39:JF:90:ASP:OD1	2.32	0.59
2:UB:649:THR:HG23	2:UB:650:VAL:HG23	1.84	0.59
12:UL:396:SER:OG	12:UL:397:ILE:N	2.35	0.59
19:US:388:LEU:HD12	19:US:465:GLU:HG2	1.85	0.59
22:UV:919:TRP:HE3	22:UV:920:LEU:HD22	1.67	0.59
31:CJ:97:SER:OG	31:CJ:144:GLU:OE1	2.15	0.59
31:CJ:184:GLU:OE2	66:D3:1159:C:N4	2.35	0.59
36:JB:743:VAL:N	36:JB:763:LEU:O	2.27	0.59
55:DL:55:ASP:HB3	55:DL:58:CYS:HB2	1.83	0.59
65:D2:112:U:H2'	65:D2:113:A:C8	2.38	0.59
10:UJ:138:SER:OG	10:UJ:139:THR:N	2.34	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:UL:338:ILE:HA	12:UL:357:THR:HA	1.85	0.59
23:UX:76:ILE:HD11	23:UX:119:LEU:HD22	1.83	0.59
36:JB:633:ALA:O	36:JB:723:LEU:HA	2.02	0.59
38:JE:238:ASN:OD1	38:JE:241:ARG:NH2	2.36	0.59
38:JE:296:ARG:NH2	62:DY:71:GLY:O	2.36	0.59
56:DN:69:ASN:OD1	56:DN:70:LYS:N	2.35	0.59
62:DY:7:ILE:HG13	62:DY:40:LEU:HD11	1.84	0.59
62:DY:27:VAL:HG12	62:DY:29:HIS:ND1	2.17	0.59
62:DY:62:THR:HA	62:DY:69:SER:HA	1.83	0.59
17:UQ:828:LYS:HD2	17:UQ:829:LEU:HG	1.83	0.59
33:CL:371:VAL:HG13	36:JA:6:ILE:HD12	1.84	0.59
38:JE:323:GLU:OE2	54:DJ:82:ARG:NE	2.31	0.59
67:D4:312:U:H2'	67:D4:313:A:H8	1.68	0.59
1:UA:782:ILE:O	1:UA:786:ALA:HB2	2.03	0.58
4:UD:436:ASP:O	4:UD:483:ASN:ND2	2.35	0.58
6:UF:85:ASP:OD1	6:UF:85:ASP:N	2.31	0.58
9:UI:429:HIS:HA	9:UI:432:LYS:HD2	1.85	0.58
13:UM:148:SER:OG	13:UM:194:ARG:NH2	2.35	0.58
18:UR:278:ASP:OD2	18:UR:281:THR:OG1	2.21	0.58
26:CD:110:LYS:NZ	26:CD:117:ASP:OD1	2.36	0.58
33:CL:945:THR:OG1	66:D3:1595:U:OP1	2.16	0.58
66:D3:325:G:H2'	66:D3:326:G:H8	1.68	0.58
4:UD:207:ASP:OD1	4:UD:211:ARG:NH2	2.36	0.58
5:UE:128:GLN:HB3	5:UE:138:GLN:HG2	1.85	0.58
5:UE:443:GLN:NE2	19:US:333:GLU:O	2.36	0.58
15:UO:285:ASP:OD1	15:UO:285:ASP:N	2.35	0.58
18:UR:359:LYS:HD3	18:UR:466:THR:HG21	1.85	0.58
29:CH:159:CYS:SG	29:CH:160:ILE:N	2.76	0.58
36:JA:790:SER:OG	36:JA:890:LEU:O	2.20	0.58
52:DH:84:LYS:CG	52:DH:85:PHE:CD1	2.85	0.58
53:DI:7:SER:O	53:DI:18:ARG:NH2	2.36	0.58
66:D3:683:C:H2'	66:D3:684:A:C8	2.38	0.58
66:D3:1153:G:N2	66:D3:1626:U:O2	2.36	0.58
6:UF:14:GLU:O	6:UF:18:LEU:HB2	2.03	0.58
11:UK:77:LEU:HD23	11:UK:77:LEU:H	1.68	0.58
15:UO:378:LYS:NZ	65:D2:90:G:OP1	2.29	0.58
17:UQ:393:ASN:ND2	17:UQ:435:ASP:OD1	2.35	0.58
17:UQ:426:ARG:NH1	65:D2:68:U:O2	2.36	0.58
25:CB:289:GLU:HA	25:CB:292:LYS:HG2	1.85	0.58
29:CH:146:LYS:NZ	29:CH:204:PHE:O	2.33	0.58
46:JP:188:HIS:ND1	46:JP:190:GLU:O	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:UU:290:ILE:O	21:UU:291:HIS:ND1	2.36	0.58
25:CA:269:ILE:O	25:CA:315:ILE:HA	2.03	0.58
26:CD:149:ARG:HH22	27:CE:242:SER:HA	1.68	0.58
27:CE:160:ASP:OD1	27:CE:160:ASP:N	2.35	0.58
33:CL:306:ASP:N	33:CL:306:ASP:OD1	2.33	0.58
36:JA:520:ARG:HH22	36:JA:560:PRO:HA	1.68	0.58
37:JC:242:THR:HG22	37:JC:256:ASP:HA	1.84	0.58
51:DG:14:LYS:HD2	51:DG:123:GLY:HA3	1.86	0.58
56:DN:114:ARG:NH2	66:D3:939:A:OP1	2.36	0.58
65:D2:192:G:H2'	65:D2:193:G:C8	2.38	0.58
11:UK:82:ARG:NH1	65:D2:248:G:OP2	2.29	0.58
16:UP:196:SER:HA	16:UP:199:ILE:HG22	1.85	0.58
22:UV:189:PHE:HB2	22:UV:203:ILE:HD13	1.84	0.58
22:UV:870:ALA:HB2	22:UV:878:LEU:HD12	1.84	0.58
25:CB:111:MET:SD	25:CB:216:ASN:ND2	2.76	0.58
36:JB:377:VAL:O	36:JB:381:ALA:HB2	2.03	0.58
37:JC:69:GLN:NE2	37:JC:85:ASP:OD1	2.37	0.58
38:JE:243:GLN:HB2	38:JE:327:ILE:HD11	1.84	0.58
45:JO:281:LEU:HD12	45:JO:284:GLN:HE21	1.68	0.58
49:DE:113:ARG:NH1	49:DE:114:ILE:O	2.37	0.58
7:UG:197:ASP:OD1	7:UG:198:PHE:N	2.37	0.58
12:UL:344:THR:HB	12:UL:352:GLU:HB2	1.84	0.58
13:UM:585:ASN:ND2	13:UM:627:ASN:O	2.36	0.58
14:UN:844:SER:OG	14:UN:845:SER:N	2.34	0.58
15:UO:175:SER:OG	15:UO:176:PHE:N	2.36	0.58
17:UQ:142:ALA:HB2	17:UQ:156:THR:HG23	1.84	0.58
29:CH:405:VAL:HG23	29:CH:415:THR:HG22	1.84	0.58
31:CJ:93:SER:OG	31:CJ:94:ARG:N	2.32	0.58
33:CL:824:ILE:HD11	33:CL:926:ILE:HG23	1.85	0.58
37:JC:97:THR:O	53:DI:32:GLN:NE2	2.36	0.58
37:JC:206:PHE:O	37:JC:215:VAL:N	2.27	0.58
37:JC:250:GLY:HA2	37:JC:274:ILE:HG13	1.85	0.58
49:DE:79:ASP:HB3	49:DE:82:TYR:HB2	1.85	0.58
55:DL:133:LYS:NZ	66:D3:324:U:OP1	2.27	0.58
1:UA:269:HIS:NE2	1:UA:312:GLN:O	2.34	0.58
3:UC:545:LEU:HD12	3:UC:545:LEU:C	2.21	0.58
7:UG:23:ARG:O	14:UN:862:ARG:NH1	2.37	0.58
25:CB:244:VAL:O	25:CB:249:GLN:NE2	2.37	0.58
26:CD:231:ASP:HA	26:CD:234:LEU:HD23	1.86	0.58
26:CD:377:ARG:NH1	67:D4:111:G:O6	2.37	0.58
33:CL:928:ILE:HG23	33:CL:1009:VAL:HG13	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:DF:203:LYS:HD2	50:DF:205:SER:HB2	1.86	0.58
52:DH:67:LEU:HD22	52:DH:94:ALA:HB2	1.85	0.58
1:UA:202:ASP:O	1:UA:204:GLU:N	2.37	0.58
2:UB:488:ASN:HB3	2:UB:491:ASP:HB2	1.85	0.58
4:UD:468:ASP:OD2	4:UD:472:ARG:NH1	2.37	0.58
5:UE:345:LEU:HB2	5:UE:346:HIS:HD2	1.69	0.58
5:UE:494:ARG:HH12	65:D2:136:U:H5'	1.68	0.58
12:UL:361:THR:HG22	12:UL:386:GLU:HB3	1.85	0.58
13:UM:120:GLY:HA3	13:UM:147:ILE:HG21	1.86	0.58
20:UT:156:ALA:O	20:UT:160:LYS:N	2.37	0.58
28:CG:49:SER:HA	28:CG:103:THR:HA	1.84	0.58
46:JP:69:GLY:HA2	46:JP:370:GLY:HA2	1.85	0.58
52:DH:162:ILE:HA	52:DH:165:LYS:HB2	1.83	0.58
4:UD:401:ILE:HD13	4:UD:418:CYS:HB3	1.86	0.58
4:UD:469:LEU:HD22	4:UD:472:ARG:HH12	1.68	0.58
9:UI:413:GLU:HB3	9:UI:416:ILE:HG12	1.85	0.58
17:UQ:367:SER:OG	17:UQ:367:SER:O	2.22	0.58
38:JE:339:SER:HB3	38:JE:342:GLY:HA2	1.86	0.58
45:JO:201:LYS:HE3	45:JO:205:ILE:HD11	1.86	0.58
46:JP:244:ILE:HD11	46:JP:264:THR:HG21	1.85	0.58
66:D3:1677:C:H42	66:D3:1724:U:H3	1.52	0.58
10:UJ:1535:TYR:O	10:UJ:1539:MET:CB	2.52	0.58
13:UM:192:ALA:HB3	13:UM:216:ARG:HD2	1.84	0.58
28:CG:49:SER:OG	28:CG:101:SER:OG	2.19	0.58
32:CK:517:LYS:O	32:CK:525:LYS:NZ	2.35	0.58
46:JP:225:LEU:HD22	46:JP:235:LEU:HD11	1.86	0.58
54:DJ:171:ARG:NH1	66:D3:538:A:OP2	2.33	0.58
1:UA:423:ARG:NH2	66:D3:1632:C:O2'	2.37	0.57
1:UA:650:ASN:HD22	1:UA:655:ASP:HB3	1.69	0.57
9:UI:477:LYS:HG3	9:UI:481:HIS:HE1	1.69	0.57
12:UL:165:SER:OG	12:UL:166:ILE:N	2.37	0.57
13:UM:294:LEU:HB2	13:UM:303:PHE:HB2	1.86	0.57
13:UM:538:ASP:OD2	13:UM:580:ARG:NE	2.36	0.57
22:UV:372:GLN:NE2	22:UV:511:PHE:O	2.31	0.57
24:UZ:115:LEU:HD21	24:UZ:140:GLY:HA3	1.86	0.57
27:CE:164:ILE:HG22	27:CE:301:ALA:HA	1.86	0.57
29:CH:232:THR:OG1	29:CH:259:LYS:NZ	2.36	0.57
33:CL:799:GLU:OE2	33:CL:799:GLU:N	2.37	0.57
35:CN:38:PHE:HB2	35:CN:56:VAL:HB	1.85	0.57
45:JO:291:ARG:NE	66:D3:316:A:OP2	2.25	0.57
55:DL:33:ARG:NH1	55:DL:53:TYR:O	2.37	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:UH:679:ILE:HD12	9:UI:483:LYS:HD3	1.87	0.57
17:UQ:181:ALA:HB3	17:UQ:184:GLN:HG3	1.85	0.57
22:UV:228:ARG:HH21	22:UV:296:ILE:H	1.51	0.57
26:CD:185:ASP:O	26:CD:189:ASN:ND2	2.37	0.57
37:JC:254:ILE:HB	37:JC:264:ILE:HB	1.84	0.57
48:DA:157:GLN:NE2	66:D3:1046:G:OP1	2.36	0.57
48:DA:243:LYS:NZ	48:DA:244:VAL:O	2.37	0.57
53:DI:172:ARG:NH1	66:D3:330:G:OP2	2.37	0.57
1:UA:623:LEU:HD13	1:UA:679:VAL:HG22	1.86	0.57
4:UD:72:SER:O	4:UD:72:SER:OG	2.22	0.57
5:UE:167:SER:OG	5:UE:168:HIS:N	2.37	0.57
36:JA:627:PHE:HA	36:JA:630:LEU:HD12	1.86	0.57
37:JC:56:SER:HA	37:JC:336:ILE:HG23	1.86	0.57
37:JC:189:ASN:HD22	37:JC:243:PHE:HE1	1.52	0.57
49:DE:104:ASP:OD2	49:DE:106:LYS:NZ	2.37	0.57
55:DL:132:SER:OG	55:DL:133:LYS:N	2.36	0.57
57:DO:124:ASP:OD2	66:D3:885:G:N2	2.31	0.57
62:DY:27:VAL:O	62:DY:68:LYS:CA	2.52	0.57
1:UA:852:THR:OG1	1:UA:853:ASP:N	2.37	0.57
5:UE:23:ALA:HB1	18:UR:261:PRO:HG3	1.84	0.57
11:UK:17:SER:OG	11:UK:18:GLN:N	2.28	0.57
17:UQ:429:ILE:HG13	17:UQ:737:ILE:HD11	1.85	0.57
17:UQ:690:ASN:OD1	17:UQ:751:SER:OG	2.22	0.57
18:UR:129:ASP:HA	18:UR:132:LYS:HG2	1.84	0.57
20:UT:1661:ILE:O	20:UT:1665:LEU:CB	2.53	0.57
33:CL:933:LYS:HA	33:CL:1003:LEU:O	2.04	0.57
52:DH:23:ALA:HB1	52:DH:85:PHE:CZ	2.39	0.57
52:DH:50:ASP:HA	52:DH:56:LYS:HG2	1.85	0.57
66:D3:319:U:H5'	66:D3:320:U:H5"	1.87	0.57
2:UB:514:TYR:OH	19:US:513:ARG:NH1	2.37	0.57
4:UD:612:THR:HG23	4:UD:615:SER:H	1.68	0.57
6:UF:79:LYS:NZ	65:D2:492:G:O6	2.35	0.57
12:UL:643:ASP:HB2	12:UL:650:ILE:HD11	1.85	0.57
22:UV:828:ASP:OD2	22:UV:853:ARG:NH1	2.35	0.57
29:CH:361:GLY:O	29:CH:431:LYS:NZ	2.24	0.57
49:DE:195:ILE:HA	49:DE:210:ILE:HA	1.85	0.57
66:D3:1629:G:O2'	66:D3:1631:A:N6	2.37	0.57
1:UA:27:LYS:NZ	41:JJ:274:TYR:OH	2.38	0.57
1:UA:351:LEU:HA	1:UA:361:VAL:O	2.04	0.57
4:UD:120:SER:OG	4:UD:121:THR:N	2.32	0.57
8:UH:593:ASP:OD1	8:UH:594:SER:N	2.38	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:UJ:145:THR:HB	10:UJ:147:VAL:HG12	1.87	0.57
12:UL:51:ILE:HD11	12:UL:61:SER:HB2	1.86	0.57
13:UM:180:ARG:NH1	66:D3:1778:G:OP1	2.37	0.57
15:UO:23:GLU:OE1	15:UO:293:LYS:HE2	2.03	0.57
33:CL:975:GLU:OE2	33:CL:977:LYS:NZ	2.31	0.57
36:JA:748:ARG:NH2	36:JA:750:THR:O	2.33	0.57
48:DA:97:LEU:HD22	48:DA:232:HIS:CG	2.39	0.57
60:DW:28:ARG:NH1	66:D3:865:A:OP1	2.35	0.57
66:D3:1219:A:H62	66:D3:1264:G:H21	1.51	0.57
2:UB:803:ARG:NH2	2:UB:806:ARG:O	2.36	0.57
6:UF:67:ARG:HH11	6:UF:84:SER:HG	1.50	0.57
13:UM:420:ASN:HB2	13:UM:423:LYS:HZ1	1.68	0.57
15:UO:27:TRP:NE1	15:UO:268:MET:SD	2.66	0.57
22:UV:592:PHE:HB3	22:UV:599:VAL:HG22	1.85	0.57
22:UV:871:ARG:NH2	22:UV:873:GLU:OE1	2.38	0.57
25:CA:175:ALA:HB1	25:CA:181:VAL:HG21	1.87	0.57
41:JJ:105:ARG:NH2	66:D3:1772:C:O2'	2.38	0.57
51:DG:2:LYS:NZ	66:D3:154:G:OP1	2.28	0.57
11:UK:111:ARG:NE	11:UK:208:GLU:OE2	2.38	0.57
12:UL:409:ALA:O	12:UL:412:GLY:N	2.32	0.57
17:UQ:381:SER:O	17:UQ:381:SER:OG	2.18	0.57
21:UU:859:ASP:N	21:UU:859:ASP:OD1	2.37	0.57
31:CJ:123:VAL:HG22	31:CJ:125:PRO:HD2	1.87	0.57
33:CL:282:SER:HB3	33:CL:782:GLY:HA2	1.86	0.57
39:JG:53:HIS:HB2	39:JG:68:LEU:HD11	1.85	0.57
60:DW:75:ILE:HG12	60:DW:127:GLY:HA2	1.87	0.57
65:D2:21:A:H2'	65:D2:22:A:C8	2.39	0.57
4:UD:248:PRO:HD2	4:UD:292:ASN:ND2	2.20	0.57
7:UG:214:LEU:HD22	7:UG:249:LEU:HD11	1.86	0.57
12:UL:26:ILE:HG23	12:UL:89:LYS:HE3	1.87	0.57
17:UQ:352:ASN:O	17:UQ:376:ALA:HB2	2.04	0.57
22:UV:286:TYR:O	22:UV:289:ARG:NH1	2.35	0.57
22:UV:1063:ARG:HH21	22:UV:1185:LEU:HD11	1.69	0.57
22:UV:1101:ASP:HB2	22:UV:1233:ASN:HB3	1.87	0.57
27:CE:207:ARG:HD2	27:CE:226:ILE:HG21	1.86	0.57
38:JE:227:ARG:O	49:DE:187:ARG:NH2	2.38	0.57
39:JG:76:LEU:HD12	39:JG:79:LYS:HB2	1.86	0.57
39:JG:124:VAL:HG22	39:JG:160:LEU:HD22	1.85	0.57
51:DG:160:ARG:NH2	66:D3:66:U:O2'	2.37	0.57
1:UA:380:LEU:HD13	32:CK:484:MET:HB3	1.85	0.57
1:UA:538:GLN:HG3	1:UA:554:ASP:HA	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:UH:562:PRO:O	8:UH:566:LEU:HB2	2.05	0.57
15:UO:67:SER:OG	15:UO:68:SER:N	2.37	0.57
23:UX:82:ILE:O	23:UX:86:MET:HB2	2.04	0.57
24:UZ:173:PRO:HA	24:UZ:176:VAL:HG12	1.86	0.57
31:CJ:235:GLN:HB3	31:CJ:250:VAL:O	2.05	0.57
48:DA:128:LYS:NZ	48:DA:132:ASP:OD1	2.27	0.57
1:UA:27:LYS:HD3	1:UA:43:ILE:HD12	1.86	0.56
2:UB:512:ASP:OD2	2:UB:515:HIS:ND1	2.32	0.56
4:UD:80:ASN:ND2	4:UD:88:GLU:OE2	2.33	0.56
5:UE:184:PHE:N	5:UE:184:PHE:CD2	2.73	0.56
7:UG:130:ARG:NH2	7:UG:379:GLU:OE2	2.38	0.56
8:UH:69:ILE:HA	8:UH:79:ASN:HA	1.87	0.56
15:UO:385:MET:SD	15:UO:393:ASN:ND2	2.73	0.56
22:UV:1087:LEU:O	22:UV:1090:THR:OG1	2.22	0.56
34:CM:156:ARG:HE	34:CM:230:TRP:HE1	1.53	0.56
37:JC:65:SER:OG	37:JC:109:ASP:O	2.20	0.56
53:DI:56:ARG:NH2	66:D3:332:U:OP1	2.38	0.56
66:D3:869:A:H61	66:D3:958:U:H3	1.51	0.56
66:D3:891:A:H2'	66:D3:892:A:C8	2.40	0.56
8:UH:675:LEU:HD12	9:UI:456:LEU:HD22	1.87	0.56
12:UL:549:SER:OG	12:UL:550:LEU:N	2.33	0.56
13:UM:314:ILE:HD13	13:UM:329:VAL:HA	1.86	0.56
17:UQ:278:GLY:HA2	17:UQ:300:VAL:HG23	1.87	0.56
17:UQ:306:SER:OG	17:UQ:307:HIS:N	2.36	0.56
17:UQ:618:ASP:OD1	17:UQ:618:ASP:N	2.38	0.56
22:UV:827:ARG:HH12	35:CN:175:LEU:HD11	1.69	0.56
36:JA:542:VAL:HA	36:JA:548:ASN:HD21	1.70	0.56
39:JF:100:LEU:O	39:JF:105:ASN:ND2	2.37	0.56
44:JN:108:PRO:O	44:JN:113:THR:N	2.27	0.56
1:UA:505:ARG:NH1	66:D3:1156:C:OP2	2.38	0.56
3:UC:493:ASP:OD2	3:UC:497:GLN:NE2	2.37	0.56
3:UC:544:ILE:HG23	33:CL:834:TRP:CD2	2.39	0.56
4:UD:561:LYS:HD3	4:UD:562:PRO:HD2	1.87	0.56
5:UE:342:ASP:OD1	5:UE:342:ASP:N	2.37	0.56
8:UH:632:THR:OG1	8:UH:633:GLN:N	2.37	0.56
9:UI:477:LYS:O	9:UI:481:HIS:ND1	2.39	0.56
10:UJ:362:LYS:HB3	10:UJ:365:ILE:HD12	1.86	0.56
12:UL:461:SER:OG	12:UL:462:SER:N	2.38	0.56
20:UT:1921:LEU:O	20:UT:1924:LEU:O	2.23	0.56
21:UU:717:ASP:HB2	21:UU:720:LEU:HD23	1.88	0.56
22:UV:1155:LEU:O	22:UV:1158:LYS:NZ	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:UX:113:TYR:HD1	44:JN:306:LEU:HD22	1.68	0.56
27:CE:288:THR:HG23	27:CE:293:GLU:HB3	1.87	0.56
33:CL:97:THR:OG1	33:CL:98:LEU:N	2.35	0.56
33:CL:293:VAL:HG13	33:CL:1022:LEU:HD21	1.87	0.56
33:CL:309:PRO:O	33:CL:314:GLN:NE2	2.27	0.56
33:CL:567:TRP:HH2	34:CM:315:LYS:HG3	1.69	0.56
34:CM:192:THR:HA	34:CM:224:ASN:O	2.04	0.56
38:JE:285:ARG:NH2	66:D3:371:G:O6	2.31	0.56
38:JE:330:SER:OG	66:D3:372:G:N3	2.37	0.56
39:JF:101:ASP:OD2	39:JF:132:ARG:NH1	2.34	0.56
41:JJ:129:ARG:NE	41:JJ:138:GLU:OE2	2.29	0.56
46:JP:201:ILE:HG22	46:JP:215:LEU:O	2.05	0.56
5:UE:163:LEU:HD23	5:UE:163:LEU:H	1.70	0.56
8:UH:604:LYS:HE2	8:UH:649:SER:HB3	1.86	0.56
26:CD:38:ILE:HD12	26:CD:126:ASP:OD1	2.05	0.56
29:CH:63:ARG:HD3	38:JE:248:TYR:CZ	2.40	0.56
29:CH:299:CYS:SG	29:CH:305:ARG:NH1	2.73	0.56
56:DN:72:MET:HA	56:DN:75:LEU:HB2	1.88	0.56
7:UG:324:ILE:HD12	7:UG:345:LEU:HD11	1.87	0.56
8:UH:678:LEU:HB3	9:UI:460:LEU:HD23	1.88	0.56
12:UL:223:ASP:N	12:UL:223:ASP:OD1	2.39	0.56
12:UL:237:LYS:HD2	13:UM:671:ASN:HD22	1.69	0.56
13:UM:616:HIS:NE2	13:UM:634:SER:OG	2.30	0.56
22:UV:288:THR:HG22	22:UV:290:PHE:HD2	1.70	0.56
30:CI:29:ASP:OD1	30:CI:30:THR:N	2.34	0.56
46:JP:311:VAL:HG23	46:JP:322:THR:HG22	1.88	0.56
1:UA:849:LEU:HD22	21:UU:897:HIS:HB2	1.86	0.56
8:UH:303:GLN:HA	8:UH:313:LYS:HA	1.87	0.56
12:UL:398:ASP:HB3	12:UL:406:LEU:HD12	1.88	0.56
18:UR:533:ALA:HA	18:UR:540:ALA:O	2.05	0.56
21:UU:476:PHE:N	21:UU:476:PHE:CD1	2.73	0.56
31:CJ:282:ARG:NH2	66:D3:560:U:OP2	2.39	0.56
33:CL:608:LEU:HB3	34:CM:16:ASN:HB3	1.87	0.56
36:JA:737:TRP:O	36:JA:740:ASN:C	2.43	0.56
37:JC:301:ASP:N	37:JC:306:LYS:O	2.32	0.56
38:JE:314:ASN:HA	38:JE:317:MET:HG2	1.88	0.56
39:JF:36:LYS:HB3	39:JF:172:PRO:HA	1.88	0.56
55:DL:57:LYS:NZ	66:D3:327:U:OP2	2.34	0.56
57:DO:79:VAL:O	57:DO:113:GLY:N	2.31	0.56
66:D3:460:A:H3'	66:D3:461:G:H8	1.69	0.56
4:UD:65:LEU:O	4:UD:66:ARG:NH1	2.31	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:UK:28:LEU:HD21	33:CL:969:VAL:HG11	1.87	0.56
12:UL:677:HIS:HE2	66:D3:1654:G:HO2'	1.52	0.56
13:UM:580:ARG:HG2	13:UM:623:LEU:HB3	1.88	0.56
17:UQ:522:SER:O	17:UQ:522:SER:OG	2.24	0.56
23:UX:109:LEU:HD12	23:UX:113:TYR:HE2	1.71	0.56
29:CH:421:ASN:HA	29:CH:436:GLU:O	2.06	0.56
31:CJ:244:GLY:HA2	32:CK:374:GLN:HE22	1.71	0.56
44:JN:317:ASN:OD1	60:DW:4:SER:OG	2.23	0.56
46:JP:367:SER:OG	46:JP:373:ARG:NH1	2.39	0.56
50:DF:151:GLY:HA3	50:DF:156:ARG:HH12	1.71	0.56
53:DI:99:ALA:N	53:DI:169:ILE:O	2.38	0.56
55:DL:10:GLU:HG3	55:DL:11:ARG:H	1.70	0.56
62:DY:34:ASN:O	66:D3:521:A:O2'	2.24	0.56
66:D3:153:G:H1	66:D3:161:U:H3	1.54	0.56
1:UA:311:ASN:HD21	41:JJ:273:ARG:NH2	1.96	0.56
12:UL:285:ARG:NH1	12:UL:371:LYS:O	2.39	0.56
12:UL:472:HIS:CG	12:UL:492:SER:HG	2.24	0.56
17:UQ:135:SER:OG	17:UQ:136:LEU:N	2.39	0.56
17:UQ:320:VAL:HG12	17:UQ:335:PRO:HA	1.86	0.56
21:UU:228:GLY:O	21:UU:245:LYS:HA	2.05	0.56
36:JA:72:LYS:NZ	66:D3:158:U:OP1	2.37	0.56
66:D3:1540:G:N2	66:D3:1571:C:O2	2.39	0.56
6:UF:169:GLN:NE2	6:UF:185:TYR:OH	2.39	0.56
20:UT:139:ALA:O	20:UT:142:PHE:C	2.44	0.56
22:UV:603:THR:OG1	22:UV:610:PHE:O	2.24	0.56
28:CF:7:LYS:HG3	28:CF:61:ILE:HG21	1.88	0.56
33:CL:135:ALA:O	33:CL:238:ARG:NH2	2.39	0.56
49:DE:174:LYS:O	49:DE:179:LYS:NZ	2.39	0.56
66:D3:1688:U:H3	66:D3:1713:G:H1	1.54	0.56
1:UA:222:LYS:HD2	1:UA:246:TYR:HB3	1.88	0.56
4:UD:742:LEU:N	4:UD:755:ILE:O	2.22	0.56
22:UV:529:VAL:HB	22:UV:613:VAL:HB	1.87	0.56
25:CA:114:GLY:O	25:CA:122:ARG:NH2	2.39	0.56
26:CD:101:SER:HB3	26:CD:128:ILE:HD13	1.88	0.56
44:JN:166:SER:HB2	45:JO:158:LEU:HD11	1.86	0.56
49:DE:45:ILE:HG13	49:DE:61:VAL:HG11	1.88	0.56
54:DJ:169:PRO:O	54:DJ:174:ARG:NH2	2.39	0.56
66:D3:148:A:N6	66:D3:166:C:N3	2.53	0.56
8:UH:189:ALA:HA	8:UH:196:ILE:HA	1.87	0.55
11:UK:164:ASN:HD21	25:CB:98:ILE:HD12	1.71	0.55
12:UL:101:GLY:HA2	12:UL:124:ILE:HG13	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:UX:117:LEU:O	23:UX:120:ALA:N	2.38	0.55
39:JG:41:MET:HG3	39:JG:202:ILE:HG23	1.88	0.55
51:DG:187:LYS:NZ	66:D3:140:A:OP2	2.38	0.55
66:D3:276:C:O2'	66:D3:278:U:OP2	2.23	0.55
66:D3:641:G:O6	66:D3:693:U:O2'	2.21	0.55
3:UC:562:ARG:HB3	54:DJ:37:LYS:HB3	1.88	0.55
4:UD:87:GLN:H	4:UD:378:TYR:HE2	1.52	0.55
4:UD:240:LEU:H	4:UD:258:SER:HB3	1.71	0.55
14:UN:894:LEU:O	46:JP:230:ASN:ND2	2.40	0.55
25:CB:109:LYS:HG2	25:CB:141:TYR:HE1	1.70	0.55
25:CB:144:TRP:CZ2	25:CB:183:HIS:HB3	2.41	0.55
26:CD:234:LEU:HD21	26:CD:252:ILE:HG13	1.87	0.55
34:CM:185:ARG:NH2	34:CM:349:ASP:OD2	2.32	0.55
41:JJ:216:ILE:O	41:JJ:220:THR:OG1	2.22	0.55
52:DH:41:LEU:HD11	52:DH:69:GLY:HA3	1.88	0.55
66:D3:50:C:H2'	66:D3:51:A:H8	1.71	0.55
4:UD:57:ILE:HA	4:UD:341:SER:HA	1.87	0.55
13:UM:344:ARG:NH1	13:UM:395:ASP:OD2	2.39	0.55
17:UQ:208:LEU:HD23	17:UQ:230:LEU:HD21	1.88	0.55
22:UV:920:LEU:HD12	22:UV:925:LEU:HB2	1.87	0.55
24:UZ:63:LYS:HG2	24:UZ:185:LYS:HE3	1.88	0.55
37:JC:147:ASN:ND2	37:JC:150:ASN:OD1	2.39	0.55
48:DA:179:SER:OG	48:DA:180:THR:O	2.23	0.55
1:UA:611:LEU:H	1:UA:611:LEU:HD23	1.72	0.55
12:UL:334:SER:OG	12:UL:335:LEU:N	2.36	0.55
12:UL:336:TYR:OH	12:UL:361:THR:OG1	2.14	0.55
17:UQ:258:TYR:CE2	17:UQ:414:ILE:HG12	2.41	0.55
21:UU:817:PHE:CE1	21:UU:833:LEU:HD11	2.42	0.55
22:UV:698:ASN:HB3	22:UV:701:ILE:HG22	1.88	0.55
33:CL:54:LEU:HD21	61:DX:77:ILE:HG13	1.87	0.55
33:CL:830:ARG:HB3	33:CL:880:TYR:HD1	1.71	0.55
53:DI:54:LYS:NZ	66:D3:333:A:OP2	2.33	0.55
1:UA:793:GLU:HG2	21:UU:721:LEU:HB2	1.88	0.55
4:UD:277:LYS:NZ	18:UR:347:GLY:O	2.39	0.55
4:UD:551:ASP:OD1	4:UD:561:LYS:N	2.39	0.55
5:UE:487:ARG:NH1	5:UE:487:ARG:HB2	2.21	0.55
10:UJ:286:LEU:O	10:UJ:326:LYS:NZ	2.34	0.55
12:UL:578:SER:OG	12:UL:591:SER:OG	2.21	0.55
15:UO:127:THR:O	15:UO:127:THR:OG1	2.24	0.55
17:UQ:26:SER:OG	17:UQ:27:SER:N	2.39	0.55
19:US:321:ASN:HB3	19:US:357:ARG:HH21	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:JF:73:HIS:HD2	39:JF:76:LEU:HB3	1.70	0.55
49:DE:185:GLY:H	49:DE:224:ASN:HB3	1.72	0.55
62:DY:60:PHE:CD1	62:DY:71:GLY:HA3	2.42	0.55
16:UP:182:SER:OG	16:UP:183:THR:N	2.40	0.55
38:JE:263:GLY:HA3	54:DJ:138:LYS:HB3	1.87	0.55
41:JJ:114:THR:HG23	41:JJ:115:LYS:HD3	1.88	0.55
49:DE:3:ARG:NH2	66:D3:94:U:OP2	2.40	0.55
11:UK:9:GLN:HE21	66:D3:572:C:H5	1.55	0.55
11:UK:59:ASN:ND2	30:CI:118:LEU:O	2.39	0.55
13:UM:593:CYS:HB2	13:UM:620:LEU:HG	1.89	0.55
15:UO:86:SER:O	15:UO:98:ALA:HA	2.06	0.55
15:UO:136:ASP:OD1	15:UO:137:ASN:N	2.39	0.55
18:UR:242:ASN:HD22	18:UR:585:LYS:HA	1.72	0.55
28:CG:59:GLU:OE2	28:CG:84:ARG:NH1	2.38	0.55
36:JA:840:LYS:NZ	36:JB:621:GLN:O	2.40	0.55
1:UA:334:SER:O	1:UA:334:SER:OG	2.20	0.55
8:UH:170:LYS:HA	8:UH:177:SER:HA	1.89	0.55
14:UN:277:ARG:HH11	52:DH:166:LEU:HB2	1.72	0.55
21:UU:51:VAL:HG22	21:UU:60:ILE:HG12	1.89	0.55
21:UU:188:VAL:H	21:UU:202:SER:HG	1.54	0.55
23:UX:70:ASN:ND2	23:UX:157:ASP:HB2	2.22	0.55
26:CD:388:ARG:NH1	28:CG:63:ILE:O	2.36	0.55
29:CH:187:ALA:HB2	29:CH:201:ILE:HD13	1.88	0.55
39:JF:70:CYS:N	39:JF:87:ALA:O	2.40	0.55
60:DW:98:GLN:N	60:DW:98:GLN:OE1	2.40	0.55
1:UA:200:SER:OG	1:UA:201:HIS:N	2.38	0.55
2:UB:737:ILE:HD12	59:DS:99:HIS:CB	2.36	0.55
5:UE:182:MET:CG	5:UE:183:THR:H	2.20	0.55
5:UE:231:ASP:HB2	5:UE:249:GLU:HG2	1.87	0.55
10:UJ:361:SER:HB3	10:UJ:362:LYS:HE3	1.88	0.55
13:UM:569:LYS:NZ	13:UM:604:CYS:O	2.37	0.55
21:UU:377:SER:O	21:UU:377:SER:OG	2.20	0.55
22:UV:182:ASP:O	22:UV:207:LEU:HA	2.07	0.55
25:CA:253:ILE:HD13	25:CA:269:ILE:HD12	1.89	0.55
25:CB:91:HIS:CB	25:CB:96:VAL:O	2.55	0.55
32:CK:533:LYS:O	32:CK:537:SER:HB3	2.07	0.55
34:CM:266:SER:OG	34:CM:267:ILE:N	2.39	0.55
46:JP:246:LEU:O	46:JP:255:THR:OG1	2.25	0.55
51:DG:136:LYS:HG2	51:DG:176:GLN:HB2	1.89	0.55
66:D3:1785:U:H2'	66:D3:1786:G:C8	2.42	0.55
2:UB:540:ILE:HD13	2:UB:575:PHE:HE1	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:UM:209:LEU:HB3	13:UM:225:PHE:O	2.06	0.55
21:UU:600:ILE:HG13	21:UU:614:LEU:HD11	1.89	0.55
25:CA:168:LYS:O	25:CA:192:GLY:HA3	2.07	0.55
25:CB:172:TYR:HD2	25:CB:175:ALA:HB2	1.72	0.55
36:JA:851:ASP:HB3	36:JA:854:VAL:HG23	1.88	0.55
39:JG:190:GLN:NE2	39:JG:194:GLU:OE2	2.39	0.55
45:JO:291:ARG:CZ	66:D3:316:A:H5"	2.37	0.55
65:D2:426:G:N2	65:D2:429:A:OP2	2.40	0.55
66:D3:396:G:N1	66:D3:399:A:OP2	2.40	0.55
66:D3:1777:G:H2'	66:D3:1778:G:H8	1.72	0.55
1:UA:174:SER:OG	1:UA:175:VAL:N	2.38	0.54
7:UG:113:PRO:HA	7:UG:395:GLN:HA	1.88	0.54
12:UL:202:ALA:O	12:UL:227:LYS:NZ	2.28	0.54
13:UM:406:ALA:HB2	13:UM:440:VAL:HG13	1.88	0.54
17:UQ:73:LEU:HD13	17:UQ:129:PRO:HD2	1.88	0.54
18:UR:245:HIS:HB2	18:UR:284:LEU:HD21	1.87	0.54
19:US:156:TRP:CZ3	19:US:215:ASN:HB2	2.42	0.54
21:UU:295:TYR:OH	21:UU:351:GLN:OE1	2.21	0.54
22:UV:550:MET:HA	22:UV:553:VAL:HG12	1.89	0.54
25:CB:167:GLY:HA2	25:CB:191:GLU:HG2	1.89	0.54
33:CL:72:VAL:HA	33:CL:137:LEU:O	2.06	0.54
33:CL:775:GLU:OE2	33:CL:779:ARG:NE	2.39	0.54
44:JN:244:ASP:OD1	44:JN:248:LYS:NZ	2.39	0.54
50:DF:139:ASN:O	50:DF:214:LYS:NZ	2.37	0.54
2:UB:767:ILE:HD11	32:CK:349:ARG:HB2	1.88	0.54
4:UD:52:SER:HA	4:UD:104:TRP:CD1	2.42	0.54
4:UD:377:PRO:HD2	4:UD:634:VAL:HG21	1.90	0.54
6:UF:144:VAL:HG12	6:UF:181:LEU:HD22	1.89	0.54
6:UF:323:PHE:O	6:UF:331:ARG:NH1	2.40	0.54
7:UG:412:ASP:OD1	7:UG:413:ALA:N	2.41	0.54
8:UH:227:THR:HA	8:UH:244:LYS:H	1.72	0.54
10:UJ:65:LYS:HD2	18:UR:44:PHE:HD1	1.72	0.54
14:UN:881:PRO:HG2	14:UN:884:MET:HG2	1.90	0.54
22:UV:202:SER:HB2	22:UV:291:SER:HB3	1.89	0.54
28:CF:93:VAL:HG23	28:CF:95:ARG:H	1.72	0.54
29:CH:185:LEU:HD13	29:CH:527:VAL:HG11	1.89	0.54
31:CJ:195:THR:O	31:CJ:200:LYS:NZ	2.37	0.54
46:JP:244:ILE:O	46:JP:257:LYS:HA	2.07	0.54
49:DE:128:LYS:HA	49:DE:156:VAL:HG12	1.89	0.54
55:DL:140:VAL:HG23	55:DL:141:LYS:HG2	1.89	0.54
1:UA:47:SER:OG	1:UA:48:PHE:N	2.40	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:UL:289:GLU:HA	12:UL:292:ILE:HD12	1.89	0.54
13:UM:421:SER:O	13:UM:423:LYS:N	2.40	0.54
13:UM:797:ASP:OD1	21:UU:927:LYS:NZ	2.30	0.54
15:UO:51:HIS:O	15:UO:53:HIS:N	2.37	0.54
19:US:230:SER:HB2	19:US:288:HIS:HD2	1.72	0.54
33:CL:251:ASP:OD1	33:CL:251:ASP:N	2.36	0.54
35:CN:35:HIS:CE1	35:CN:59:PRO:HG3	2.42	0.54
37:JC:232:THR:HG21	37:JC:273:ASP:HB2	1.88	0.54
46:JP:382:ARG:NE	67:D4:34:A:OP1	2.34	0.54
54:DJ:40:LYS:NZ	66:D3:473:A:OP2	2.40	0.54
66:D3:366:A:H2	66:D3:379:U:H3	1.53	0.54
4:UD:469:LEU:O	4:UD:473:THR:OG1	2.17	0.54
8:UH:639:SER:HB2	9:UI:499:ILE:HD11	1.90	0.54
12:UL:45:ALA:HB3	12:UL:48:ASP:HB3	1.88	0.54
26:CD:188:ILE:HD11	26:CD:281:LEU:HB3	1.88	0.54
27:CE:159:VAL:HG22	27:CE:279:ARG:HH22	1.72	0.54
31:CJ:222:ILE:HG12	31:CJ:235:GLN:HG3	1.90	0.54
33:CL:830:ARG:HD2	33:CL:880:TYR:HE1	1.73	0.54
49:DE:193:GLY:HA3	49:DE:212:ASP:HA	1.89	0.54
51:DG:87:ARG:NH2	66:D3:159:U:O3'	2.40	0.54
52:DH:23:ALA:HB3	52:DH:85:PHE:HZ	1.73	0.54
65:D2:6:A:N6	65:D2:8:A:N3	2.56	0.54
1:UA:300:MET:HG3	1:UA:328:LEU:HD13	1.88	0.54
2:UB:766:ARG:NE	32:CK:346:GLU:OE2	2.41	0.54
11:UK:196:LYS:NZ	65:D2:424:G:OP2	2.31	0.54
15:UO:32:SER:O	15:UO:32:SER:OG	2.23	0.54
31:CJ:188:HIS:HB2	31:CJ:221:VAL:HG12	1.90	0.54
36:JA:851:ASP:OD1	36:JA:853:HIS:ND1	2.41	0.54
66:D3:1650:U:H2'	66:D3:1651:A:C8	2.43	0.54
8:UH:28:TYR:O	17:UQ:685:ARG:NH1	2.32	0.54
13:UM:209:LEU:HD23	13:UM:225:PHE:HD2	1.73	0.54
13:UM:619:ARG:HB2	13:UM:637:ALA:HB2	1.89	0.54
13:UM:751:LYS:NZ	66:D3:1638:G:OP2	2.32	0.54
15:UO:23:GLU:HG2	15:UO:268:MET:CG	2.38	0.54
19:US:400:PRO:HB3	19:US:493:TYR:HD2	1.72	0.54
25:CA:223:ASP:OD1	25:CA:224:ALA:N	2.40	0.54
28:CG:50:GLU:N	28:CG:102:ILE:O	2.40	0.54
35:CN:16:VAL:HB	35:CN:37:MET:HB2	1.90	0.54
37:JC:74:THR:HG22	37:JC:81:ILE:HG22	1.90	0.54
37:JC:343:ILE:HG22	37:JC:346:LEU:H	1.73	0.54
45:JO:284:GLN:HA	45:JO:287:LYS:HG2	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:DE:143:ASP:OD1	49:DE:143:ASP:N	2.41	0.54
62:DY:7:ILE:HG23	62:DY:27:VAL:HG22	1.89	0.54
1:UA:148:ASP:O	1:UA:165:SER:HB2	2.08	0.54
1:UA:524:ARG:NH2	1:UA:529:GLU:OE1	2.40	0.54
12:UL:537:VAL:HG22	12:UL:548:ILE:HG12	1.90	0.54
15:UO:20:THR:HG21	15:UO:28:ARG:NH1	2.20	0.54
17:UQ:64:LYS:NZ	17:UQ:123:GLY:O	2.40	0.54
17:UQ:743:ILE:HD11	17:UQ:757:PHE:HD2	1.73	0.54
24:UZ:71:ASN:ND2	24:UZ:123:ASP:OD2	2.39	0.54
25:CB:171:LEU:HB3	25:CB:240:VAL:HG22	1.90	0.54
29:CH:488:ILE:HG12	29:CH:498:VAL:HG22	1.90	0.54
34:CM:285:LYS:HG2	34:CM:316:GLU:HB3	1.90	0.54
37:JC:110:ASP:OD2	37:JC:112:THR:OG1	2.18	0.54
53:DI:10:LYS:NZ	66:D3:337:G:O3'	2.41	0.54
66:D3:104:A:N6	66:D3:308:C:OP2	2.41	0.54
2:UB:453:ASN:HA	2:UB:456:ILE:HD12	1.89	0.54
2:UB:701:ALA:HA	19:US:417:HIS:HB2	1.89	0.54
12:UL:148:TRP:CD1	12:UL:155:GLY:HA2	2.43	0.54
12:UL:854:CYS:SG	12:UL:855:LYS:N	2.80	0.54
17:UQ:511:GLU:OE2	17:UQ:530:LYS:NZ	2.28	0.54
19:US:419:PRO:HA	19:US:422:ILE:HG13	1.90	0.54
22:UV:435:CYS:SG	22:UV:436:HIS:N	2.80	0.54
22:UV:441:GLN:HE21	22:UV:456:LYS:HB3	1.72	0.54
22:UV:726:SER:OG	22:UV:768:PRO:O	2.25	0.54
26:CD:194:ARG:HG2	27:CE:169:LEU:HD12	1.89	0.54
36:JA:131:THR:HG22	36:JA:133:ASN:H	1.73	0.54
36:JA:387:ASP:HA	36:JA:409:ALA:HB3	1.89	0.54
48:DA:127:VAL:HG21	48:DA:176:VAL:HG11	1.89	0.54
53:DI:31:ARG:HH11	66:D3:332:U:H5"	1.71	0.54
17:UQ:745:ILE:O	17:UQ:754:LEU:N	2.41	0.54
26:CD:254:ASN:HA	26:CD:257:ILE:HG12	1.88	0.54
26:CD:277:ARG:HH12	27:CE:264:GLU:C	2.11	0.54
28:CF:50:GLU:HG3	28:CF:51:PHE:HD1	1.72	0.54
32:CK:321:GLU:OE2	32:CK:322:LYS:N	2.41	0.54
39:JF:49:SER:OG	39:JF:86:GLU:O	2.23	0.54
65:D2:323:A:H2'	65:D2:324:U:H4'	1.89	0.54
1:UA:441:SER:O	1:UA:443:GLU:N	2.40	0.54
4:UD:544:SER:HA	4:UD:549:VAL:O	2.07	0.54
8:UH:665:GLN:HA	8:UH:668:ILE:HG22	1.88	0.54
13:UM:433:HIS:HE1	13:UM:437:VAL:HB	1.72	0.54
17:UQ:352:ASN:O	17:UQ:376:ALA:CB	2.55	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:UQ:359:GLN:O	17:UQ:368:ASP:O	2.25	0.54
21:UU:455:PHE:CB	21:UU:477:ILE:CD1	2.85	0.54
21:UU:820:GLN:HE21	21:UU:832:SER:HB3	1.73	0.54
22:UV:530:GLN:HB2	22:UV:695:GLN:HB2	1.90	0.54
25:CB:314:CYS:SG	25:CB:315:ILE:N	2.81	0.54
39:JF:97:LEU:HD21	39:JF:132:ARG:HA	1.88	0.54
39:JG:174:LYS:NZ	50:DF:215:ASP:OD2	2.37	0.54
66:D3:188:A:N1	66:D3:197:A:O2'	2.34	0.54
66:D3:369:A:H2'	66:D3:370:A:H8	1.73	0.54
66:D3:553:G:N2	66:D3:584:C:N3	2.56	0.54
3:UC:547:ASN:ND2	33:CL:196:THR:HG21	2.23	0.53
4:UD:127:ASP:HB2	4:UD:134:LEU:HB2	1.90	0.53
6:UF:17:ASP:OD2	6:UF:82:SER:OG	2.24	0.53
6:UF:162:LYS:NZ	65:D2:533:G:OP2	2.41	0.53
7:UG:257:SER:HG	7:UG:259:TRP:HE1	1.57	0.53
13:UM:36:VAL:HG12	13:UM:37:LEU:H	1.72	0.53
17:UQ:710:LEU:HD12	17:UQ:722:LEU:HD23	1.89	0.53
29:CH:258:ARG:NH2	29:CH:279:ARG:O	2.37	0.53
30:CI:24:ASP:O	30:CI:26:GLY:N	2.41	0.53
38:JE:224:PHE:HZ	49:DE:207:LEU:HD21	1.71	0.53
39:JG:144:LEU:HD13	39:JG:150:ILE:HG12	1.91	0.53
66:D3:1272:U:H2'	66:D3:1273:G:H8	1.73	0.53
66:D3:1569:A:H2'	66:D3:1570:A:C8	2.43	0.53
2:UB:527:GLN:HG3	2:UB:531:GLN:HG3	1.90	0.53
2:UB:644:ASP:HA	2:UB:647:ILE:HD12	1.91	0.53
3:UC:544:ILE:CG2	33:CL:834:TRP:CE2	2.91	0.53
6:UF:191:ASN:ND2	43:JM:63:PRO:O	2.40	0.53
7:UG:163:GLU:OE2	7:UG:425:ARG:NH1	2.41	0.53
12:UL:358:SER:OG	12:UL:359:SER:N	2.41	0.53
16:UP:186:ASP:HA	16:UP:189:THR:HG22	1.89	0.53
17:UQ:146:HIS:ND1	17:UQ:147:SER:O	2.30	0.53
31:CJ:119:ARG:NH1	66:D3:1605:G:OP1	2.41	0.53
36:JA:10:ILE:HD13	36:JA:205:LEU:HD23	1.90	0.53
46:JP:84:ALA:HB1	46:JP:136:MET:HE3	1.89	0.53
48:DA:134:VAL:HB	48:DA:219:LYS:HB2	1.90	0.53
4:UD:265:TRP:HA	4:UD:272:LEU:HA	1.89	0.53
6:UF:3:LYS:HG3	65:D2:487:A:H62	1.73	0.53
7:UG:267:LEU:HD13	7:UG:444:LEU:HD12	1.90	0.53
17:UQ:610:SER:OG	17:UQ:659:ILE:O	2.25	0.53
22:UV:337:LEU:O	22:UV:340:SER:OG	2.22	0.53
27:CE:366:LYS:NZ	67:D4:82:G:OP1	2.35	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:CI:15:LYS:HB2	67:D4:24:U:C5	2.43	0.53
31:CJ:87:ARG:NH2	31:CJ:135:GLY:O	2.30	0.53
36:JA:746:TYR:O	36:JA:760:CYS:HA	2.08	0.53
46:JP:71:TYR:OH	60:DW:68:ARG:NH1	2.39	0.53
50:DF:148:ARG:HH21	50:DF:157:ARG:HH22	1.55	0.53
51:DG:39:GLU:HG3	51:DG:46:LYS:HA	1.90	0.53
53:DI:8:ARG:HE	53:DI:21:PHE:HB3	1.72	0.53
66:D3:1496:U:H3	66:D3:1511:U:H3	1.55	0.53
4:UD:145:TRP:CD1	4:UD:161:ASP:HB3	2.44	0.53
5:UE:109:ASP:OD1	5:UE:110:ILE:N	2.38	0.53
12:UL:144:ASN:HB3	12:UL:160:ARG:HG3	1.90	0.53
21:UU:602:SER:O	21:UU:602:SER:OG	2.25	0.53
29:CH:557:SER:OG	29:CH:558:GLY:N	2.41	0.53
39:JG:99:LEU:O	39:JG:102:SER:OG	2.25	0.53
43:JM:62:LEU:HD12	43:JM:63:PRO:HD2	1.90	0.53
49:DE:141:THR:OG1	49:DE:143:ASP:OD1	2.20	0.53
5:UE:100:THR:OG1	5:UE:101:THR:O	2.19	0.53
13:UM:143:HIS:HD2	13:UM:175:TRP:HH2	1.57	0.53
13:UM:604:CYS:SG	13:UM:605:SER:N	2.82	0.53
15:UO:20:THR:CG2	15:UO:28:ARG:HH22	2.21	0.53
16:UP:181:LEU:HD13	25:CB:294:ARG:HD2	1.89	0.53
19:US:167:LYS:O	19:US:272:GLN:NE2	2.41	0.53
48:DA:32:ILE:HG22	48:DA:96:LEU:HD12	1.90	0.53
58:DQ:94:GLN:HB2	58:DQ:102:LYS:HG3	1.89	0.53
60:DW:38:LEU:O	60:DW:42:GLN:HB2	2.08	0.53
6:UF:145:ASP:OD1	43:JM:69:PHE:HB2	2.09	0.53
7:UG:358:MET:HA	65:D2:315:U:OP1	2.09	0.53
13:UM:464:LYS:HA	13:UM:486:THR:HA	1.89	0.53
17:UQ:335:PRO:HG2	65:D2:87:C:C5	2.44	0.53
17:UQ:716:ARG:HH21	17:UQ:772:THR:HB	1.73	0.53
22:UV:99:LYS:O	22:UV:103:PHE:CB	2.57	0.53
26:CD:237:LEU:HD22	26:CD:248:ALA:HB2	1.90	0.53
33:CL:299:ALA:HB2	33:CL:794:GLU:HG2	1.90	0.53
33:CL:1153:ASP:OD1	33:CL:1156:LYS:NZ	2.33	0.53
1:UA:27:LYS:HZ3	1:UA:43:ILE:CD1	2.21	0.53
1:UA:467:ASP:OD1	1:UA:468:ALA:N	2.41	0.53
2:UB:703:GLN:H	19:US:417:HIS:HB3	1.74	0.53
4:UD:355:THR:OG1	4:UD:356:LEU:N	2.41	0.53
12:UL:88:HIS:CE1	12:UL:90:ASP:HB2	2.43	0.53
15:UO:229:CYS:HB2	15:UO:258:LEU:HD22	1.90	0.53
22:UV:338:SER:O	22:UV:342:HIS:ND1	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:UZ:40:ILE:HG13	24:UZ:242:ILE:HG22	1.89	0.53
32:CK:454:VAL:O	32:CK:456:PHE:N	2.42	0.53
33:CL:118:LEU:HD22	33:CL:245:LEU:HD11	1.90	0.53
33:CL:246:ALA:HB3	33:CL:810:ILE:HG13	1.89	0.53
36:JA:167:ASP:OD2	36:JA:170:ALA:N	2.32	0.53
37:JC:168:GLU:HA	42:JK:477:ALA:HB2	1.91	0.53
37:JC:230:GLN:HB2	37:JC:248:SER:HB3	1.91	0.53
39:JF:111:GLN:OE1	39:JF:113:TYR:OH	2.22	0.53
46:JP:224:SER:OG	46:JP:225:LEU:N	2.40	0.53
46:JP:238:THR:HG1	46:JP:264:THR:HG1	1.57	0.53
51:DG:59:GLN:OE1	51:DG:72:ARG:NH1	2.42	0.53
65:D2:129:U:H4'	65:D2:130:G:H5"	1.89	0.53
66:D3:1665:U:OP2	66:D3:1665:U:H6	1.91	0.53
2:UB:600:LEU:HD12	2:UB:601:PRO:HD2	1.91	0.53
5:UE:451:SER:O	5:UE:454:GLU:HB3	2.09	0.53
10:UJ:29:HIS:O	10:UJ:123:ARG:NH2	2.41	0.53
13:UM:421:SER:O	13:UM:423:LYS:NZ	2.34	0.53
13:UM:518:TRP:HA	13:UM:526:GLU:HG2	1.91	0.53
17:UQ:229:SER:OG	17:UQ:230:LEU:N	2.42	0.53
17:UQ:778:ASP:OD1	17:UQ:779:ILE:N	2.41	0.53
18:UR:214:THR:HG22	21:UU:247:PRO:HG3	1.90	0.53
19:US:366:LEU:HD23	19:US:371:LEU:HD13	1.90	0.53
24:UZ:34:LYS:HA	24:UZ:204:ILE:HG12	1.91	0.53
25:CA:306:LEU:HD11	25:CA:313:HIS:HB2	1.89	0.53
26:CD:202:HIS:ND1	26:CD:203:PHE:HB2	2.23	0.53
29:CH:298:SER:OG	29:CH:325:VAL:O	2.27	0.53
29:CH:303:LYS:HE3	29:CH:319:TYR:HE2	1.73	0.53
38:JE:291:GLU:HA	62:DY:11:LYS:HD3	1.91	0.53
49:DE:42:LEU:HD12	49:DE:43:PRO:HD2	1.91	0.53
52:DH:111:LYS:HE2	66:D3:859:A:H5"	1.91	0.53
65:D2:194:G:H2'	65:D2:195:A:H8	1.73	0.53
1:UA:376:SER:O	1:UA:376:SER:OG	2.20	0.53
2:UB:562:PRO:HA	2:UB:565:VAL:HG12	1.90	0.53
6:UF:46:ARG:NH2	65:D2:480:C:O2	2.41	0.53
12:UL:176:TRP:CD1	12:UL:188:LEU:HD21	2.43	0.53
13:UM:636:ASP:OD1	13:UM:636:ASP:N	2.42	0.53
20:UT:969:SER:O	20:UT:972:LEU:C	2.47	0.53
34:CM:174:ILE:O	34:CM:361:ASN:ND2	2.42	0.53
34:CM:241:TRP:NE1	34:CM:262:GLY:HA3	2.24	0.53
36:JA:631:SER:O	36:JA:721:HIS:ND1	2.29	0.53
37:JC:171:ARG:HH11	42:JK:468:VAL:HG13	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:JN:328:ARG:HG3	44:JN:329:ILE:HG23	1.90	0.53
49:DE:99:PHE:HA	49:DE:112:HIS:O	2.09	0.53
52:DH:153:LEU:HD23	52:DH:186:PRO:HG3	1.91	0.53
54:DJ:107:ARG:NH1	54:DJ:153:GLU:OE2	2.33	0.53
65:D2:430:C:H41	65:D2:432:C:H41	1.57	0.53
66:D3:106:U:O4	66:D3:308:C:N4	2.41	0.53
66:D3:1511:U:H2'	66:D3:1512:G:C8	2.44	0.53
9:UI:497:LEU:HD22	15:UO:499:LYS:HZ3	1.74	0.53
11:UK:221:GLN:NE2	65:D2:244:U:OP1	2.42	0.53
12:UL:390:GLN:HG2	12:UL:394:VAL:HG22	1.91	0.53
13:UM:89:HIS:HE1	13:UM:91:LYS:HB2	1.74	0.53
15:UO:217:ASN:HD22	15:UO:257:CYS:HA	1.73	0.53
18:UR:407:PHE:HA	18:UR:424:ILE:O	2.08	0.53
19:US:210:ASP:HA	19:US:213:LEU:HD12	1.91	0.53
22:UV:443:HIS:HB2	22:UV:453:PRO:HA	1.91	0.53
24:UZ:192:ASN:ND2	66:D3:1509:C:O2'	2.42	0.53
29:CH:61:ASP:OD1	29:CH:64:ARG:NH1	2.42	0.53
33:CL:627:SER:OG	33:CL:628:VAL:N	2.41	0.53
34:CM:107:ALA:HA	34:CM:114:PHE:CE2	2.43	0.53
37:JC:323:VAL:HG21	37:JC:350:PRO:HG2	1.90	0.53
39:JF:99:LEU:HD21	39:JF:238:CYS:HB3	1.91	0.53
50:DF:146:THR:HG21	50:DF:220:VAL:HG12	1.91	0.53
54:DJ:105:LEU:HD23	54:DJ:108:ARG:HD2	1.91	0.53
58:DQ:22:VAL:HG22	58:DQ:65:ILE:HG12	1.90	0.53
66:D3:228:G:N2	66:D3:240:U:O4	2.41	0.53
5:UE:451:SER:HA	5:UE:454:GLU:OE1	2.09	0.52
5:UE:469:ILE:HG21	5:UE:505:CYS:HA	1.92	0.52
6:UF:145:ASP:OD2	43:JM:68:GLY:N	2.24	0.52
8:UH:670:GLU:O	8:UH:673:THR:OG1	2.20	0.52
13:UM:188:GLU:HG3	22:UV:657:ARG:HH22	1.74	0.52
13:UM:313:LEU:O	13:UM:330:THR:OG1	2.25	0.52
13:UM:512:ASP:OD1	13:UM:514:THR:OG1	2.27	0.52
17:UQ:332:GLN:NE2	18:UR:344:ARG:HB2	2.25	0.52
19:US:270:SER:O	19:US:274:TYR:HB2	2.08	0.52
21:UU:108:HIS:ND1	21:UU:109:LEU:O	2.33	0.52
22:UV:765:LEU:HD12	22:UV:917:LYS:HB3	1.91	0.52
24:UZ:243:PHE:CD1	24:UZ:253:PRO:HA	2.43	0.52
31:CJ:157:PHE:O	31:CJ:159:HIS:N	2.42	0.52
33:CL:359:SER:OG	33:CL:360:ASP:N	2.42	0.52
39:JF:44:VAL:HA	39:JF:113:TYR:O	2.08	0.52
39:JG:104:ILE:HG23	39:JG:110:LEU:HD22	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DG:72:ARG:HG3	51:DG:98:ARG:HD3	1.91	0.52
65:D2:388:C:N4	65:D2:389:U:O4	2.41	0.52
66:D3:523:G:N1	66:D3:528:U:OP2	2.41	0.52
66:D3:1131:A:N3	66:D3:1136:U:N3	2.57	0.52
13:UM:45:LEU:HA	13:UM:50:ARG:HG2	1.91	0.52
13:UM:407:SER:OG	13:UM:408:LYS:N	2.42	0.52
17:UQ:727:GLN:HE22	17:UQ:740:LYS:HB3	1.74	0.52
33:CL:629:ASP:HA	33:CL:632:LYS:NZ	2.24	0.52
36:JA:907:ASN:HB2	36:JA:910:ILE:HG22	1.90	0.52
55:DL:132:SER:HB3	55:DL:135:VAL:HG22	1.90	0.52
56:DN:96:VAL:HG22	56:DN:100:LYS:HE3	1.90	0.52
66:D3:147:A:H62	66:D3:167:U:H3	1.57	0.52
66:D3:1155:G:N2	66:D3:1623:C:O2	2.36	0.52
66:D3:1268:G:O2'	66:D3:1270:G:O4'	2.27	0.52
1:UA:27:LYS:CG	1:UA:43:ILE:HD12	2.39	0.52
2:UB:426:THR:HA	2:UB:429:LEU:HD12	1.92	0.52
4:UD:287:THR:OG1	4:UD:288:THR:N	2.41	0.52
7:UG:18:GLN:O	7:UG:22:GLU:HB2	2.08	0.52
10:UJ:248:SER:OG	10:UJ:249:LYS:N	2.39	0.52
13:UM:746:TRP:O	13:UM:752:THR:OG1	2.26	0.52
15:UO:11:SER:O	15:UO:11:SER:OG	2.25	0.52
15:UO:114:ARG:NH2	66:D3:1532:U:OP2	2.33	0.52
17:UQ:407:ASN:HB2	17:UQ:413:SER:H	1.74	0.52
17:UQ:728:LEU:HB3	17:UQ:735:PRO:HA	1.90	0.52
21:UU:25:SER:OG	21:UU:655:THR:OG1	2.26	0.52
22:UV:975:LEU:HB3	22:UV:1041:VAL:HA	1.91	0.52
24:UZ:223:LEU:HD23	24:UZ:235:ILE:HD11	1.90	0.52
28:CG:89:ARG:HH11	29:CH:474:TRP:HH2	1.58	0.52
37:JC:299:ILE:O	37:JC:308:TYR:N	2.42	0.52
41:JJ:217:GLU:OE2	41:JJ:224:ILE:N	2.33	0.52
53:DI:86:SER:O	66:D3:341:A:O2'	2.21	0.52
54:DJ:58:ASP:O	54:DJ:61:THR:OG1	2.24	0.52
65:D2:174:U:H2'	65:D2:175:A:C8	2.44	0.52
66:D3:209:U:H2'	66:D3:210:A:C8	2.45	0.52
13:UM:439:ALA:HB3	13:UM:457:ALA:HB3	1.92	0.52
13:UM:665:GLN:HG3	13:UM:688:LEU:HD21	1.91	0.52
19:US:130:GLU:O	19:US:134:PHE:CB	2.57	0.52
21:UU:192:ASN:O	21:UU:196:GLY:N	2.42	0.52
22:UV:236:THR:HG21	22:UV:256:TYR:HE1	1.73	0.52
28:CF:46:ARG:NH1	67:D4:326:U:OP1	2.33	0.52
32:CK:295:LYS:NZ	32:CK:296:ASN:O	2.42	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:JE:324:ASP:O	54:DJ:79:ARG:NH1	2.42	0.52
55:DL:103:ARG:NH1	66:D3:352:A:OP1	2.39	0.52
5:UE:533:ARG:O	15:UO:498:SER:OG	2.27	0.52
6:UF:198:ASN:OD1	6:UF:201:LYS:NZ	2.35	0.52
10:UJ:284:SER:OG	18:UR:203:GLY:O	2.18	0.52
12:UL:836:ILE:HG13	12:UL:857:LEU:HD13	1.90	0.52
22:UV:580:TYR:HB2	22:UV:618:ILE:HD13	1.91	0.52
26:CD:277:ARG:CZ	27:CE:264:GLU:HB3	2.40	0.52
31:CJ:162:THR:O	31:CJ:162:THR:OG1	2.25	0.52
33:CL:625:TRP:O	33:CL:627:SER:O	2.27	0.52
33:CL:829:LEU:HD11	33:CL:860:TYR:HE1	1.74	0.52
34:CM:46:LYS:N	34:CM:49:GLU:OE1	2.41	0.52
35:CN:148:HIS:HB2	35:CN:155:LEU:HD21	1.91	0.52
37:JC:128:LYS:NZ	66:D3:409:C:OP1	2.35	0.52
46:JP:280:ALA:HB2	46:JP:311:VAL:HB	1.90	0.52
50:DF:76:ARG:NE	58:DQ:122:ARG:HG2	2.25	0.52
65:D2:20:C:H2'	65:D2:21:A:H8	1.75	0.52
66:D3:1540:G:H2'	66:D3:1541:G:H8	1.74	0.52
66:D3:1662:G:H2'	66:D3:1663:G:H8	1.72	0.52
5:UE:495:GLN:O	5:UE:499:ASN:HB2	2.09	0.52
9:UI:480:LYS:O	9:UI:483:LYS:HB2	2.10	0.52
12:UL:365:TYR:OH	12:UL:381:LYS:NZ	2.43	0.52
17:UQ:343:ASP:OD1	17:UQ:344:CYS:N	2.42	0.52
19:US:327:MET:O	19:US:330:PHE:O	2.28	0.52
29:CH:357:LEU:HD13	38:JE:258:TRP:H	1.74	0.52
33:CL:54:LEU:O	33:CL:55:HIS:ND1	2.42	0.52
36:JA:12:SER:O	36:JA:16:ASN:ND2	2.42	0.52
39:JG:83:ASP:HB3	39:JG:86:GLU:HG3	1.91	0.52
57:DO:48:VAL:HG21	57:DO:53:ASP:HB2	1.91	0.52
66:D3:443:C:O2	66:D3:445:A:N6	2.38	0.52
66:D3:1689:A:H2'	66:D3:1690:G:C8	2.44	0.52
3:UC:496:GLN:NE2	3:UC:497:GLN:OE1	2.43	0.52
3:UC:556:LYS:HA	3:UC:559:ARG:HB2	1.90	0.52
5:UE:161:ALA:HA	5:UE:175:ILE:HD12	1.92	0.52
5:UE:346:HIS:ND1	5:UE:346:HIS:O	2.43	0.52
10:UJ:334:THR:HA	10:UJ:337:ASP:HB2	1.92	0.52
13:UM:24:THR:HG21	13:UM:68:LYS:HD2	1.91	0.52
13:UM:26:SER:OG	13:UM:28:ASN:OD1	2.28	0.52
22:UV:971:LYS:NZ	22:UV:1032:PRO:O	2.31	0.52
27:CE:247:ILE:HD11	27:CE:252:LEU:HD12	1.92	0.52
35:CN:168:PHE:HA	35:CN:171:PHE:CD2	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DH:159:VAL:O	52:DH:163:ASP:HB2	2.09	0.52
55:DL:74:THR:OG1	55:DL:87:ARG:O	2.28	0.52
66:D3:527:A:H2'	66:D3:528:U:H6	1.75	0.52
1:UA:376:SER:O	1:UA:378:PHE:N	2.43	0.52
4:UD:207:ASP:HB2	4:UD:209:ARG:HG2	1.92	0.52
6:UF:126:TYR:O	6:UF:130:HIS:ND1	2.37	0.52
18:UR:29:ASP:OD2	18:UR:31:THR:N	2.43	0.52
21:UU:265:SER:O	21:UU:265:SER:OG	2.25	0.52
29:CH:504:ASN:HB2	29:CH:506:ARG:HH21	1.73	0.52
32:CK:452:SER:O	32:CK:452:SER:OG	2.21	0.52
34:CM:85:ALA:HA	34:CM:115:SER:O	2.10	0.52
35:CN:46:ASN:HB3	35:CN:49:GLU:HB2	1.92	0.52
36:JA:208:LEU:HB3	36:JA:210:LEU:HG	1.92	0.52
43:JM:114:ARG:HA	43:JM:117:VAL:HG12	1.92	0.52
53:DI:184:LEU:HD12	53:DI:188:GLU:HB3	1.91	0.52
4:UD:581:SER:OG	4:UD:582:VAL:N	2.43	0.52
10:UJ:21:ASP:OD1	10:UJ:22:ARG:N	2.42	0.52
12:UL:197:ILE:HG22	12:UL:198:GLU:HG3	1.91	0.52
17:UQ:665:ILE:HG22	17:UQ:669:ASN:HB2	1.91	0.52
18:UR:181:GLU:HB3	21:UU:281:ARG:HH21	1.75	0.52
21:UU:176:TYR:OH	21:UU:219:ASP:OD1	2.23	0.52
22:UV:1035:THR:HA	22:UV:1058:LEU:HD22	1.92	0.52
24:UZ:39:ILE:HD11	24:UZ:245:LYS:HE2	1.91	0.52
25:CB:116:SER:HB3	25:CB:122:ARG:HH21	1.75	0.52
29:CH:159:CYS:HB3	29:CH:242:VAL:HG12	1.91	0.52
33:CL:95:LYS:NZ	36:JA:89:ASN:OD1	2.31	0.52
36:JA:316:GLU:O	36:JA:318:LEU:N	2.36	0.52
39:JF:121:LEU:CB	39:JF:163:ILE:O	2.55	0.52
46:JP:260:GLN:OE1	46:JP:281:ASN:ND2	2.43	0.52
1:UA:157:ASP:OD1	1:UA:157:ASP:N	2.43	0.52
3:UC:552:PRO:HA	11:UK:7:ASP:OD2	2.10	0.52
5:UE:32:GLN:HG3	5:UE:33:PRO:HD2	1.92	0.52
8:UH:313:LYS:N	8:UH:323:PHE:O	2.42	0.52
19:US:98:PHE:O	19:US:102:LEU:N	2.43	0.52
30:CI:11:LYS:NZ	67:D4:26:C:OP1	2.41	0.52
36:JB:784:ARG:O	36:JB:788:LEU:CB	2.58	0.52
37:JC:287:ASN:ND2	37:JC:301:ASP:OD1	2.33	0.52
49:DE:60:GLU:OE1	49:DE:60:GLU:N	2.43	0.52
11:UK:125:LEU:HD12	11:UK:126:MET:H	1.74	0.51
15:UO:33:ALA:HA	15:UO:329:ILE:O	2.10	0.51
21:UU:285:HIS:ND1	21:UU:286:VAL:O	2.43	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:CH:241:THR:HG21	29:CH:285:SER:HA	1.92	0.51
37:JC:295:ARG:HH11	37:JC:315:VAL:HA	1.75	0.51
41:JJ:114:THR:HA	41:JJ:117:TYR:HE1	1.75	0.51
41:JJ:186:GLU:HB3	41:JJ:188:LYS:HG2	1.92	0.51
45:JO:130:ASN:HD21	57:DO:127:ARG:HH21	1.58	0.51
48:DA:155:TYR:OH	66:D3:932:U:OP2	2.23	0.51
62:DY:80:ALA:HA	62:DY:83:LYS:HG2	1.92	0.51
4:UD:441:VAL:HG11	4:UD:478:VAL:HG21	1.93	0.51
5:UE:116:GLN:OE1	5:UE:128:GLN:NE2	2.43	0.51
6:UF:320:ILE:HD11	6:UF:338:VAL:HG11	1.92	0.51
12:UL:760:ILE:HG13	12:UL:831:LYS:HB3	1.92	0.51
17:UQ:508:ILE:HG22	17:UQ:531:PHE:HD1	1.75	0.51
18:UR:349:GLU:O	18:UR:352:GLN:O	2.27	0.51
19:US:180:PHE:HD1	19:US:184:TYR:HD2	1.57	0.51
21:UU:544:ALA:HB1	21:UU:563:ASP:HB3	1.92	0.51
29:CH:120:ARG:HH22	62:DY:15:ASN:HA	1.75	0.51
33:CL:157:ASN:O	33:CL:161:HIS:ND1	2.43	0.51
34:CM:107:ALA:HB1	34:CM:170:VAL:HG11	1.92	0.51
39:JG:93:HIS:NE2	39:JG:132:ARG:O	2.44	0.51
43:JM:113:MET:O	43:JM:116:GLU:N	2.42	0.51
1:UA:555:CYS:O	1:UA:557:LYS:N	2.44	0.51
2:UB:515:HIS:CD2	2:UB:518:ILE:H	2.28	0.51
10:UJ:262:VAL:HG23	10:UJ:298:THR:HG23	1.92	0.51
12:UL:337:LYS:NZ	66:D3:1654:G:OP2	2.43	0.51
17:UQ:16:SER:HB2	17:UQ:783:LEU:HB2	1.92	0.51
51:DG:139:ASN:ND2	66:D3:143:G:OP2	2.40	0.51
51:DG:173:PRO:HA	66:D3:66:U:H5”	1.91	0.51
60:DW:56:HIS:O	66:D3:861:U:O2’	2.27	0.51
65:D2:430:C:H5”	65:D2:431:A:H5”	1.92	0.51
1:UA:134:ALA:HB1	65:D2:297:U:C4	2.45	0.51
2:UB:749:LYS:NZ	66:D3:1176:G:N7	2.50	0.51
10:UJ:194:SER:HB3	21:UU:335:VAL:HG11	1.93	0.51
12:UL:392:THR:O	12:UL:679:HIS:ND1	2.38	0.51
12:UL:837:ASP:OD1	12:UL:882:ARG:NH1	2.43	0.51
13:UM:236:THR:HB	48:DA:244:VAL:HG23	1.92	0.51
13:UM:546:LYS:HB3	13:UM:562:LEU:HD22	1.92	0.51
13:UM:642:GLN:HB2	13:UM:644:TRP:HE1	1.74	0.51
26:CD:328:GLN:HE21	26:CD:332:THR:HG23	1.74	0.51
36:JA:173:ARG:NH2	36:JA:186:GLU:OE1	2.43	0.51
36:JA:515:LEU:HB2	36:JA:712:LEU:HD22	1.92	0.51
39:JF:89:PRO:O	39:JF:92:THR:OG1	2.24	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:DI:50:GLY:HA2	66:D3:397:A:H4'	1.92	0.51
55:DL:26:LYS:HZ2	55:DL:30:ARG:HH22	1.57	0.51
56:DN:70:LYS:HB2	56:DN:73:ARG:HE	1.74	0.51
57:DO:47:LYS:NZ	57:DO:66:ASP:OD2	2.42	0.51
65:D2:21:A:H2'	65:D2:22:A:H8	1.73	0.51
66:D3:429:G:H2'	66:D3:430:G:C8	2.45	0.51
66:D3:1679:G:H2'	66:D3:1722:A:H61	1.76	0.51
4:UD:248:PRO:HD2	4:UD:292:ASN:HD21	1.76	0.51
4:UD:625:GLU:HG3	4:UD:734:PHE:HE2	1.74	0.51
5:UE:182:MET:CG	5:UE:183:THR:N	2.72	0.51
8:UH:574:ARG:HD2	8:UH:578:LEU:HD12	1.93	0.51
12:UL:162:HIS:ND1	12:UL:181:SER:OG	2.44	0.51
12:UL:270:SER:HB3	12:UL:286:ILE:HD11	1.92	0.51
12:UL:582:SER:OG	12:UL:583:PHE:N	2.43	0.51
13:UM:116:LEU:HD12	13:UM:128:VAL:HG22	1.93	0.51
13:UM:279:LYS:NZ	13:UM:317:GLU:O	2.44	0.51
13:UM:458:SER:OG	13:UM:460:ASP:O	2.27	0.51
17:UQ:768:TRP:CZ3	17:UQ:770:TYR:HA	2.46	0.51
18:UR:389:SER:O	18:UR:389:SER:OG	2.28	0.51
21:UU:632:VAL:HG13	21:UU:641:LEU:HD11	1.93	0.51
22:UV:1031:ASP:OD2	22:UV:1035:THR:N	2.43	0.51
34:CM:246:VAL:HA	34:CM:256:TYR:O	2.10	0.51
52:DH:44:LYS:HG3	52:DH:63:PRO:HD3	1.93	0.51
52:DH:161:GLN:HA	52:DH:164:TYR:CZ	2.46	0.51
62:DY:27:VAL:O	62:DY:68:LYS:N	2.43	0.51
66:D3:322:G:O6	66:D3:343:C:N4	2.43	0.51
66:D3:501:U:O2'	66:D3:502:U:OP2	2.28	0.51
4:UD:637:PHE:HE2	4:UD:744:VAL:HG12	1.75	0.51
5:UE:334:TRP:CD1	5:UE:335:ASN:HB2	2.46	0.51
10:UJ:550:TYR:O	10:UJ:553:SER:C	2.48	0.51
13:UM:235:LYS:NZ	13:UM:272:SER:O	2.40	0.51
13:UM:679:THR:HG21	13:UM:723:GLU:HB2	1.91	0.51
19:US:447:ASP:OD1	19:US:448:VAL:N	2.43	0.51
21:UU:264:LEU:O	21:UU:275:PHE:HA	2.11	0.51
29:CH:343:ASP:OD2	29:CH:345:THR:OG1	2.28	0.51
36:JA:567:LEU:HD22	36:JA:653:ALA:HB2	1.93	0.51
55:DL:75:VAL:HA	55:DL:86:ILE:HA	1.93	0.51
66:D3:90:C:H2'	66:D3:91:G:H8	1.75	0.51
2:UB:515:HIS:HD2	2:UB:518:ILE:H	1.58	0.51
6:UF:125:SER:HB2	6:UF:128:LYS:H	1.75	0.51
7:UG:511:GLU:OE1	7:UG:515:ARG:NH2	2.43	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:UL:129:PHE:HB3	12:UL:136:LEU:HD12	1.92	0.51
12:UL:574:LEU:HD12	12:UL:594:ASP:HB3	1.93	0.51
18:UR:334:SER:N	18:UR:335:GLN:OE1	2.44	0.51
22:UV:236:THR:HG22	22:UV:268:LEU:HD22	1.93	0.51
26:CD:185:ASP:OD2	26:CD:285:ARG:NH2	2.41	0.51
29:CH:194:LEU:HD11	29:CH:238:GLU:H	1.74	0.51
30:CI:82:LEU:HD22	30:CI:87:VAL:HG21	1.93	0.51
36:JA:862:LEU:O	36:JA:866:TYR:HB2	2.10	0.51
36:JB:427:ILE:O	36:JB:430:LEU:C	2.48	0.51
38:JE:296:ARG:HH22	62:DY:70:VAL:HG22	1.75	0.51
39:JF:41:MET:O	39:JF:110:LEU:HA	2.10	0.51
39:JG:45:LEU:HD12	39:JG:114:ILE:HG12	1.92	0.51
46:JP:436:SER:OG	46:JP:440:ARG:NH1	2.44	0.51
49:DE:183:VAL:HG13	49:DE:190:GLY:H	1.74	0.51
51:DG:48:TYR:OH	51:DG:119:GLN:O	2.24	0.51
60:DW:30:SER:OG	60:DW:31:SER:N	2.44	0.51
66:D3:575:C:O2'	66:D3:576:G:O5'	2.28	0.51
66:D3:1122:G:C2	66:D3:1123:C:H1'	2.46	0.51
5:UE:443:GLN:HE22	19:US:333:GLU:H	1.58	0.51
7:UG:106:LEU:O	7:UG:397:GLY:HA3	2.11	0.51
13:UM:487:ARG:HE	13:UM:523:GLY:HA3	1.76	0.51
13:UM:747:ASN:O	13:UM:747:ASN:ND2	2.44	0.51
15:UO:260:TYR:OH	15:UO:262:GLU:OE1	2.23	0.51
15:UO:375:HIS:NE2	15:UO:377:ASP:OD2	2.38	0.51
17:UQ:711:ILE:HG12	17:UQ:721:ALA:HA	1.92	0.51
22:UV:130:LYS:HE3	22:UV:134:ILE:HD11	1.92	0.51
22:UV:606:ASN:HB2	22:UV:608:PHE:HD2	1.75	0.51
22:UV:716:SER:O	22:UV:719:THR:OG1	2.23	0.51
22:UV:1220:PHE:HA	22:UV:1223:ILE:HD12	1.91	0.51
28:CG:7:LYS:NZ	29:CH:463:GLN:HE21	2.09	0.51
29:CH:485:ASN:HA	29:CH:501:ILE:HD12	1.93	0.51
33:CL:86:ILE:HD11	33:CL:117:PHE:HB3	1.93	0.51
36:JA:730:THR:HG23	36:JA:733:LEU:H	1.74	0.51
38:JE:250:ARG:NH1	38:JE:255:GLN:H	2.08	0.51
66:D3:1777:G:H2'	66:D3:1778:G:C8	2.46	0.51
67:D4:312:U:H2'	67:D4:313:A:C8	2.45	0.51
1:UA:16:ARG:NH2	1:UA:345:PHE:HB2	2.25	0.51
1:UA:311:ASN:HD22	41:JJ:273:ARG:NH2	2.05	0.51
7:UG:182:THR:O	7:UG:182:THR:OG1	2.23	0.51
7:UG:249:LEU:HD12	7:UG:259:TRP:CD1	2.46	0.51
13:UM:544:TYR:HB2	13:UM:587:GLN:HG2	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:UM:621:TRP:HH2	48:DA:14:LYS:HA	1.76	0.51
15:UO:53:HIS:O	15:UO:68:SER:CB	2.57	0.51
22:UV:683:ASN:HA	22:UV:696:ILE:HG13	1.93	0.51
24:UZ:187:THR:OG1	24:UZ:188:SER:N	2.42	0.51
30:CI:137:ARG:HA	30:CI:142:LEU:HA	1.92	0.51
33:CL:1081:SER:O	33:CL:1081:SER:OG	2.21	0.51
46:JP:237:SER:OG	46:JP:238:THR:N	2.43	0.51
51:DG:5:ILE:HA	51:DG:111:LEU:O	2.11	0.51
1:UA:664:SER:OG	32:CK:450:VAL:O	2.20	0.51
12:UL:281:ILE:HG22	12:UL:332:ILE:HB	1.93	0.51
13:UM:561:SER:HB3	13:UM:564:THR:HG22	1.93	0.51
15:UO:220:ALA:HA	15:UO:226:ILE:HG22	1.93	0.51
19:US:251:SER:HA	19:US:254:LYS:HG2	1.93	0.51
21:UU:308:PRO:HB2	21:UU:324:PHE:HB2	1.93	0.51
23:UX:79:LYS:NZ	60:DW:94:LEU:O	2.32	0.51
28:CG:95:ARG:HG2	67:D4:254:A:OP2	2.10	0.51
30:CI:15:LYS:HB2	67:D4:24:U:H5	1.76	0.51
35:CN:11:ASN:O	35:CN:40:LYS:NZ	2.44	0.51
37:JC:278:ILE:O	37:JC:289:ILE:HB	2.10	0.51
41:JJ:112:SER:O	41:JJ:112:SER:OG	2.25	0.51
43:JM:127:ARG:HA	43:JM:130:LEU:HD23	1.92	0.51
48:DA:104:ASP:OD1	48:DA:105:PHE:N	2.44	0.51
53:DI:8:ARG:NH2	53:DI:22:ARG:H	2.09	0.51
55:DL:45:PRO:HB2	55:DL:47:THR:HG22	1.93	0.51
65:D2:210:U:H2'	65:D2:211:G:H8	1.75	0.51
1:UA:711:LEU:HD12	1:UA:712:PHE:H	1.76	0.50
4:UD:206:SER:O	4:UD:206:SER:OG	2.28	0.50
7:UG:23:ARG:NH2	46:JP:36:GLU:OE2	2.43	0.50
12:UL:149:ASP:OD1	12:UL:149:ASP:N	2.41	0.50
12:UL:263:THR:OG1	12:UL:264:ASN:N	2.44	0.50
13:UM:584:ILE:HG21	13:UM:589:GLN:N	2.26	0.50
17:UQ:330:SER:OG	17:UQ:331:GLN:N	2.44	0.50
17:UQ:722:LEU:HD13	17:UQ:743:ILE:HG22	1.93	0.50
18:UR:550:SER:O	18:UR:550:SER:OG	2.28	0.50
21:UU:382:LYS:NZ	65:D2:293:U:OP1	2.41	0.50
24:UZ:181:ARG:NH1	47:JQ:201:ASP:O	2.44	0.50
28:CG:37:ALA:HB2	28:CG:98:ILE:HD11	1.92	0.50
33:CL:313:TYR:O	33:CL:317:LEU:HB2	2.10	0.50
35:CN:144:TYR:OH	35:CN:156:PHE:N	2.37	0.50
36:JA:45:MET:O	36:JA:48:ASP:C	2.49	0.50
36:JA:55:VAL:HG23	36:JA:121:MET:HB3	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:JE:296:ARG:HH12	62:DY:70:VAL:HG22	1.76	0.50
44:JN:226:ASP:N	44:JN:226:ASP:OD1	2.44	0.50
48:DA:16:GLN:OE1	66:D3:912:U:N3	2.44	0.50
53:DI:34:ALA:HB2	53:DI:56:ARG:HD3	1.92	0.50
53:DI:62:THR:HA	53:DI:76:THR:O	2.10	0.50
54:DJ:35:GLY:O	54:DJ:110:GLN:NE2	2.43	0.50
55:DL:47:THR:HG23	55:DL:114:ALA:HB1	1.92	0.50
56:DN:49:GLN:HA	56:DN:52:VAL:HG12	1.93	0.50
4:UD:92:GLU:OE2	4:UD:430:THR:OG1	2.25	0.50
13:UM:197:ASP:OD1	13:UM:197:ASP:N	2.43	0.50
13:UM:291:ILE:HG23	13:UM:307:SER:HB2	1.94	0.50
17:UQ:265:ASP:OD2	17:UQ:270:GLN:N	2.44	0.50
17:UQ:371:PHE:HB2	17:UQ:385:ILE:HB	1.92	0.50
21:UU:414:ILE:HG12	21:UU:434:HIS:HD1	1.76	0.50
24:UZ:172:ASP:OD1	24:UZ:172:ASP:N	2.45	0.50
29:CH:116:ILE:O	29:CH:119:SER:OG	2.24	0.50
29:CH:549:LEU:HB2	29:CH:552:TRP:CZ3	2.46	0.50
32:CK:497:ASN:OD1	32:CK:497:ASN:N	2.45	0.50
36:JA:31:ASP:N	36:JA:203:ASP:OD2	2.44	0.50
36:JA:775:VAL:HG13	36:JA:812:GLN:HA	1.93	0.50
49:DE:188:ASN:HA	49:DE:191:ARG:HH21	1.77	0.50
52:DH:84:LYS:HG2	52:DH:85:PHE:CD1	2.46	0.50
62:DY:27:VAL:O	62:DY:68:LYS:HA	2.11	0.50
1:UA:310:VAL:HG12	1:UA:317:LEU:HG	1.93	0.50
2:UB:484:ARG:HB3	2:UB:492:ALA:HB1	1.93	0.50
4:UD:644:SER:OG	4:UD:658:ASP:OD1	2.17	0.50
12:UL:262:ILE:O	12:UL:270:SER:OG	2.26	0.50
17:UQ:459:ILE:HD12	17:UQ:469:ASN:HB3	1.93	0.50
19:US:296:MET:HG3	19:US:326:LEU:HD22	1.94	0.50
19:US:341:LEU:HD11	19:US:365:PHE:HD2	1.76	0.50
21:UU:611:THR:HB	21:UU:621:ASP:HB3	1.91	0.50
22:UV:803:LYS:NZ	22:UV:859:ASP:OD1	2.31	0.50
24:UZ:135:LEU:HD21	24:UZ:139:LEU:HD23	1.92	0.50
25:CA:110:ASN:OD1	25:CA:111:MET:N	2.45	0.50
33:CL:1025:GLU:OE1	33:CL:1025:GLU:N	2.45	0.50
34:CM:183:ILE:O	34:CM:312:ARG:NH1	2.44	0.50
36:JA:783:LYS:HA	36:JA:786:LEU:HD12	1.94	0.50
42:JK:474:ASN:HA	42:JK:477:ALA:HB3	1.92	0.50
52:DH:130:VAL:O	52:DH:133:THR:OG1	2.22	0.50
66:D3:107:C:H2'	66:D3:108:A:C8	2.46	0.50
2:UB:437:SER:O	2:UB:495:ASN:ND2	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:UD:149:ILE:HG22	4:UD:156:LEU:HB3	1.92	0.50
4:UD:565:ARG:HH12	10:UJ:635:TYR:H	1.60	0.50
8:UH:544:LEU:HB3	8:UH:551:PHE:HD1	1.76	0.50
13:UM:547:LEU:HD11	13:UM:568:MET:HG3	1.94	0.50
21:UU:51:VAL:HG11	21:UU:90:VAL:HG21	1.93	0.50
28:CG:95:ARG:HG3	28:CG:96:PRO:HD2	1.93	0.50
33:CL:830:ARG:HB3	33:CL:880:TYR:CD1	2.46	0.50
35:CN:20:LEU:HD12	35:CN:33:SER:HB2	1.92	0.50
61:DX:51:GLY:O	61:DX:101:GLU:HA	2.12	0.50
66:D3:505:A:N6	66:D3:585:A:O2'	2.44	0.50
67:D4:258:U:H2'	67:D4:259:C:C6	2.47	0.50
1:UA:758:ILE:HD11	1:UA:798:TRP:HZ2	1.76	0.50
2:UB:515:HIS:HB3	2:UB:518:ILE:HB	1.93	0.50
4:UD:116:SER:HB3	4:UD:126:TRP:HE1	1.77	0.50
4:UD:485:LYS:HD2	4:UD:499:ASP:HA	1.94	0.50
4:UD:535:GLU:O	4:UD:541:ALA:HA	2.11	0.50
5:UE:495:GLN:O	5:UE:499:ASN:CB	2.59	0.50
6:UF:198:ASN:HA	6:UF:201:LYS:HG2	1.91	0.50
12:UL:269:THR:OG1	12:UL:288:LYS:NZ	2.42	0.50
13:UM:269:LEU:HD23	13:UM:279:LYS:HD3	1.92	0.50
18:UR:436:ASP:O	18:UR:441:GLY:HA2	2.11	0.50
21:UU:459:ASP:N	21:UU:459:ASP:OD1	2.45	0.50
49:DE:151:ASP:OD2	51:DG:215:ARG:NH1	2.45	0.50
66:D3:300:A:H2'	66:D3:301:A:C8	2.47	0.50
66:D3:458:G:H2'	66:D3:460:A:C8	2.47	0.50
1:UA:130:ASP:N	1:UA:130:ASP:OD1	2.42	0.50
12:UL:245:MET:N	12:UL:245:MET:SD	2.85	0.50
15:UO:126:PRO:O	15:UO:145:ASP:N	2.44	0.50
17:UQ:295:TRP:CH2	17:UQ:320:VAL:HG21	2.47	0.50
21:UU:631:ASN:HB2	21:UU:644:THR:HG22	1.93	0.50
28:CG:50:GLU:OE2	28:CG:104:THR:HA	2.12	0.50
33:CL:553:ILE:HG12	34:CM:323:ILE:HD12	1.93	0.50
37:JC:147:ASN:HB3	37:JC:152:ASP:HB2	1.94	0.50
37:JC:238:ASN:HB2	37:JC:279:TRP:CZ2	2.47	0.50
44:JN:102:PRO:O	44:JN:106:TYR:N	2.43	0.50
46:JP:228:ASN:N	46:JP:228:ASN:OD1	2.41	0.50
1:UA:260:GLN:NE2	65:D2:330:C:C6	2.80	0.50
1:UA:309:SER:OG	1:UA:310:VAL:N	2.44	0.50
4:UD:71:ARG:HB2	4:UD:75:ASN:HB2	1.94	0.50
4:UD:92:GLU:HB2	4:UD:428:ILE:HB	1.93	0.50
4:UD:258:SER:O	4:UD:258:SER:OG	2.30	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:UJ:407:PHE:O	10:UJ:410:ILE:C	2.50	0.50
12:UL:212:VAL:HG22	12:UL:217:LEU:HD13	1.94	0.50
12:UL:259:ILE:HA	12:UL:273:TYR:O	2.12	0.50
15:UO:319:VAL:HG12	15:UO:329:ILE:HG12	1.93	0.50
21:UU:639:ASP:OD1	21:UU:659:GLN:NE2	2.40	0.50
26:CD:48:ILE:HD11	26:CD:127:LEU:HD13	1.94	0.50
38:JE:247:GLU:OE2	54:DJ:78:ARG:NH1	2.34	0.50
45:JO:291:ARG:NH2	66:D3:316:A:H5"	2.27	0.50
66:D3:182:A:H2'	66:D3:183:U:C6	2.47	0.50
1:UA:730:LEU:HD11	1:UA:754:VAL:HG22	1.94	0.50
2:UB:554:GLN:HE22	2:UB:559:ARG:HD2	1.77	0.50
6:UF:197:ILE:HG22	6:UF:201:LYS:NZ	2.27	0.50
12:UL:641:TYR:O	12:UL:650:ILE:N	2.44	0.50
13:UM:308:ASP:OD2	13:UM:310:THR:OG1	2.29	0.50
17:UQ:244:ILE:HD12	17:UQ:283:VAL:HG11	1.94	0.50
17:UQ:360:MET:HB3	17:UQ:368:ASP:HB2	1.94	0.50
19:US:253:PHE:HA	19:US:256:ASN:HD22	1.77	0.50
22:UV:887:ALA:O	22:UV:892:SER:OG	2.29	0.50
24:UZ:228:LYS:HB2	24:UZ:232:GLY:HA3	1.94	0.50
27:CE:226:ILE:HG13	27:CE:227:LEU:HD12	1.92	0.50
30:CI:71:ARG:CZ	31:CJ:61:SER:HB2	2.42	0.50
33:CL:798:MET:SD	33:CL:802:LYS:NZ	2.75	0.50
48:DA:62:LYS:NZ	48:DA:89:ASP:O	2.39	0.50
50:DF:100:ASN:O	50:DF:103:ASN:N	2.41	0.50
51:DG:142:ARG:HA	51:DG:147:LEU:HD12	1.94	0.50
52:DH:99:LEU:HB2	52:DH:116:ARG:HB3	1.94	0.50
60:DW:77:PRO:O	60:DW:79:PHE:N	2.44	0.50
66:D3:153:G:H2'	66:D3:154:G:H8	1.77	0.50
66:D3:311:U:H3	66:D3:355:G:H1	1.60	0.50
1:UA:27:LYS:HG2	1:UA:43:ILE:CD1	2.42	0.50
7:UG:190:HIS:HD1	7:UG:207:THR:HG21	1.77	0.50
17:UQ:202:SER:OG	17:UQ:203:SER:N	2.44	0.50
17:UQ:583:LYS:HD3	17:UQ:596:LEU:HD21	1.93	0.50
29:CH:257:ASP:N	29:CH:257:ASP:OD1	2.37	0.50
37:JC:237:ARG:HD3	37:JC:288:LYS:NZ	2.27	0.50
37:JC:352:TRP:CE3	37:JC:353:CYS:HB2	2.46	0.50
51:DG:186:ARG:NH2	66:D3:269:G:OP2	2.45	0.50
66:D3:78:A:H2'	66:D3:79:C:C6	2.46	0.50
66:D3:107:C:H2'	66:D3:108:A:H8	1.77	0.50
8:UH:669:ALA:O	8:UH:673:THR:HG23	2.12	0.49
10:UJ:345:ASP:OD1	10:UJ:346:LYS:N	2.44	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:UJ:345:ASP:O	10:UJ:349:THR:HG22	2.11	0.49
12:UL:127:LEU:HD12	12:UL:136:LEU:HD11	1.93	0.49
13:UM:209:LEU:HD23	13:UM:225:PHE:CD2	2.46	0.49
43:JM:112:ASN:O	43:JM:114:ARG:NE	2.43	0.49
1:UA:344:HIS:NE2	1:UA:366:ASP:OD2	2.31	0.49
1:UA:735:PHE:HD2	1:UA:758:ILE:HG22	1.77	0.49
7:UG:127:ILE:HD13	7:UG:398:ILE:HD11	1.94	0.49
7:UG:498:ARG:HH22	7:UG:502:ARG:NH1	2.07	0.49
8:UH:272:PHE:HA	8:UH:280:GLN:H	1.76	0.49
10:UJ:353:ARG:NE	10:UJ:386:ASP:OD2	2.40	0.49
12:UL:335:LEU:HB3	12:UL:336:TYR:CD2	2.47	0.49
12:UL:400:SER:O	12:UL:404:LYS:HB3	2.11	0.49
12:UL:748:ALA:HB1	12:UL:812:ILE:HG13	1.94	0.49
13:UM:782:VAL:O	13:UM:786:ILE:HD12	2.11	0.49
17:UQ:438:THR:OG1	17:UQ:439:ASN:N	2.44	0.49
18:UR:391:SER:O	18:UR:391:SER:OG	2.26	0.49
22:UV:777:ASP:OD1	22:UV:777:ASP:N	2.40	0.49
23:UX:87:MET:HG3	23:UX:92:ALA:O	2.12	0.49
27:CE:385:ASP:N	27:CE:385:ASP:OD1	2.44	0.49
29:CH:285:SER:HB2	29:CH:298:SER:HB3	1.94	0.49
30:CI:33:MET:HG2	30:CI:38:ILE:HG13	1.93	0.49
33:CL:625:TRP:C	33:CL:627:SER:N	2.65	0.49
44:JN:195:ILE:HG13	44:JN:196:VAL:H	1.76	0.49
62:DY:57:VAL:O	62:DY:94:TYR:OH	2.29	0.49
66:D3:1735:U:O5'	66:D3:1735:U:H6	1.95	0.49
1:UA:192:ASP:HB2	1:UA:212:ASP:HB2	1.95	0.49
4:UD:231:VAL:HG22	4:UD:265:TRP:CH2	2.45	0.49
4:UD:760:LEU:HD11	4:UD:766:GLN:HB2	1.93	0.49
5:UE:460:ARG:NE	65:D2:112:U:O2'	2.45	0.49
10:UJ:167:PHE:HA	27:CE:407:ARG:HH12	1.76	0.49
12:UL:332:ILE:HG12	12:UL:379:PRO:HG3	1.93	0.49
13:UM:420:ASN:HB2	13:UM:423:LYS:NZ	2.28	0.49
13:UM:443:PRO:HD3	13:UM:499:VAL:HG11	1.94	0.49
14:UN:303:GLN:O	14:UN:307:ARG:HG2	2.12	0.49
18:UR:167:GLN:HG2	65:D2:309:A:C2	2.47	0.49
19:US:303:TYR:CZ	19:US:320:LEU:HD13	2.47	0.49
25:CA:228:GLN:O	25:CA:231:ARG:NH2	2.38	0.49
28:CG:26:GLN:HG3	54:DJ:154:LYS:HZ1	1.77	0.49
29:CH:180:LYS:O	29:CH:184:ARG:NH1	2.45	0.49
31:CJ:28:LYS:HG2	31:CJ:46:LEU:HD21	1.94	0.49
35:CN:178:ASP:OD1	35:CN:179:TYR:N	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:JA:187:ARG:NH1	36:JA:489:LEU:O	2.45	0.49
36:JA:826:THR:HG22	36:JA:828:THR:H	1.77	0.49
36:JA:894:ASN:HB3	36:JA:897:THR:HG23	1.93	0.49
37:JC:183:VAL:HG13	37:JC:199:THR:HG22	1.94	0.49
41:JJ:204:ARG:NH1	41:JJ:250:LEU:O	2.45	0.49
51:DG:102:VAL:HG21	51:DG:109:LEU:HD21	1.94	0.49
56:DN:48:SER:OG	56:DN:86:GLU:OE2	2.28	0.49
65:D2:123:C:H3'	65:D2:124:A:C8	2.47	0.49
4:UD:130:THR:HG23	4:UD:132:LEU:H	1.76	0.49
8:UH:561:LEU:HB3	8:UH:566:LEU:HD22	1.93	0.49
11:UK:64:TYR:CD2	33:CL:1079:PHE:HD2	2.30	0.49
12:UL:45:ALA:N	12:UL:48:ASP:O	2.45	0.49
12:UL:432:TYR:HB3	12:UL:450:ARG:HG2	1.93	0.49
12:UL:673:VAL:HG22	12:UL:683:ILE:HG12	1.95	0.49
13:UM:227:MET:N	13:UM:227:MET:SD	2.86	0.49
24:UZ:66:LYS:O	24:UZ:69:ASP:N	2.44	0.49
26:CD:8:LEU:HD11	26:CD:78:LEU:HD11	1.93	0.49
26:CD:67:ASN:O	26:CD:70:SER:OG	2.26	0.49
34:CM:118:PHE:HB2	34:CM:166:VAL:HG22	1.95	0.49
36:JA:614:ILE:HD13	36:JA:617:LEU:HD21	1.94	0.49
48:DA:53:GLY:HA3	48:DA:56:SER:HB2	1.93	0.49
65:D2:528:G:H2'	65:D2:529:A:C8	2.47	0.49
3:UC:592:GLU:HG2	3:UC:593:GLY:H	1.76	0.49
4:UD:61:THR:HG21	4:UD:681:ILE:HG21	1.93	0.49
7:UG:449:ILE:HD12	14:UN:842:TYR:HB3	1.93	0.49
8:UH:548:PRO:O	8:UH:576:ARG:NH2	2.45	0.49
12:UL:392:THR:HG22	12:UL:393:ASP:H	1.78	0.49
18:UR:404:ILE:H	18:UR:404:ILE:HD12	1.77	0.49
21:UU:455:PHE:CB	21:UU:477:ILE:HD11	2.42	0.49
23:UX:109:LEU:HB3	23:UX:113:TYR:CD2	2.48	0.49
34:CM:83:GLY:HA3	34:CM:114:PHE:HE1	1.78	0.49
36:JA:822:ASN:HD22	36:JA:869:ASP:H	1.60	0.49
46:JP:314:SER:HA	46:JP:356:TYR:CD2	2.48	0.49
49:DE:130:GLN:HB3	49:DE:138:TYR:CZ	2.48	0.49
58:DQ:38:LEU:HA	58:DQ:45:ARG:HH12	1.76	0.49
66:D3:1580:C:H2'	66:D3:1581:C:H6	1.76	0.49
1:UA:349:ASN:HA	1:UA:682:THR:HG21	1.93	0.49
1:UA:633:LYS:NZ	65:D2:293:U:O4	2.40	0.49
2:UB:578:GLU:OE1	2:UB:674:LYS:NZ	2.39	0.49
4:UD:579:ARG:NH1	4:UD:644:SER:OG	2.44	0.49
7:UG:456:SER:OG	7:UG:457:SER:N	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:US:195:PHE:HE2	19:US:222:LEU:HD21	1.78	0.49
23:UX:118:LYS:NZ	46:JP:68:ASP:OD1	2.44	0.49
24:UZ:65:PHE:HD2	24:UZ:70:LEU:HD21	1.76	0.49
24:UZ:77:LYS:O	24:UZ:102:SER:OG	2.29	0.49
28:CG:28:ALA:HB2	28:CG:33:LEU:HD23	1.94	0.49
34:CM:193:GLY:HA3	34:CM:245:LEU:HD13	1.93	0.49
37:JC:112:THR:HG23	37:JC:128:LYS:HB3	1.95	0.49
49:DE:179:LYS:H	49:DE:195:ILE:HG12	1.77	0.49
66:D3:450:U:H3	66:D3:456:A:H61	1.60	0.49
66:D3:1114:G:H1	67:D4:10:C:N4	2.05	0.49
66:D3:1671:A:H3'	66:D3:1672:G:H8	1.77	0.49
1:UA:782:ILE:O	1:UA:786:ALA:CB	2.61	0.49
2:UB:518:ILE:O	2:UB:522:LEU:N	2.42	0.49
5:UE:365:SER:OG	5:UE:366:GLY:N	2.45	0.49
6:UF:28:GLU:OE1	6:UF:28:GLU:N	2.46	0.49
12:UL:234:GLU:HB3	12:UL:240:GLY:HA3	1.94	0.49
13:UM:403:ILE:HB	13:UM:415:TRP:HB2	1.95	0.49
17:UQ:87:SER:O	17:UQ:112:ASN:N	2.46	0.49
19:US:487:PRO:HB2	39:JG:24:VAL:HG22	1.95	0.49
21:UU:523:ASP:OD1	21:UU:523:ASP:N	2.27	0.49
36:JA:662:GLU:HG2	36:JA:766:LEU:O	2.12	0.49
38:JE:324:ASP:OD1	38:JE:324:ASP:N	2.41	0.49
49:DE:103:TYR:O	49:DE:182:TYR:OH	2.29	0.49
53:DI:41:LYS:NZ	66:D3:260:U:OP1	2.37	0.49
55:DL:85:VAL:HG12	55:DL:108:PRO:HB3	1.95	0.49
55:DL:94:ILE:O	55:DL:98:ASN:N	2.45	0.49
65:D2:516:U:N3	65:D2:519:A:OP2	2.44	0.49
1:UA:27:LYS:CD	1:UA:43:ILE:HD12	2.43	0.49
4:UD:275:SER:O	4:UD:275:SER:OG	2.28	0.49
4:UD:614:TRP:O	4:UD:618:ASN:CB	2.50	0.49
7:UG:192:GLU:OE1	7:UG:194:ARG:NH1	2.46	0.49
9:UI:418:LYS:HA	9:UI:421:LEU:HD12	1.94	0.49
17:UQ:40:ASP:O	17:UQ:42:ARG:N	2.46	0.49
18:UR:41:ASN:O	18:UR:41:ASN:ND2	2.41	0.49
18:UR:350:SER:O	18:UR:380:ASN:ND2	2.45	0.49
23:UX:19:THR:O	23:UX:19:THR:OG1	2.28	0.49
25:CB:258:HIS:ND1	25:CB:320:TYR:OH	2.35	0.49
45:JO:295:ARG:HH12	66:D3:317:C:P	2.36	0.49
46:JP:244:ILE:HB	46:JP:258:ILE:HG22	1.94	0.49
61:DX:43:PHE:CD1	61:DX:49:ALA:HB2	2.47	0.49
66:D3:90:C:H2'	66:D3:91:G:C8	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:D3:1057:U:O2'	66:D3:1058:U:O5'	2.27	0.49
66:D3:1124:A:H1'	67:D4:1:G:H22	1.78	0.49
67:D4:199:G:H2'	67:D4:200:C:H6	1.78	0.49
13:UM:557:VAL:HB	13:UM:571:LEU:HB2	1.94	0.49
17:UQ:866:LEU:HD13	18:UR:231:LYS:HE3	1.94	0.49
30:CI:156:ASP:OD1	31:CJ:7:ARG:NH1	2.45	0.49
33:CL:837:LYS:NZ	66:D3:579:A:OP2	2.45	0.49
35:CN:17:PRO:HB3	35:CN:34:LEU:HB3	1.95	0.49
36:JA:659:ASP:O	36:JA:663:GLY:C	2.51	0.49
37:JC:63:LYS:HB3	37:JC:104:PHE:CE2	2.48	0.49
38:JE:341:ARG:HH22	38:JE:344:LYS:HE2	1.77	0.49
39:JF:123:GLU:HG3	39:JF:161:LYS:HB2	1.95	0.49
43:JM:60:LYS:NZ	65:D2:553:A:OP1	2.45	0.49
53:DI:83:TYR:HB3	53:DI:101:ILE:HB	1.94	0.49
54:DJ:38:ASN:HB3	54:DJ:40:LYS:H	1.76	0.49
58:DQ:94:GLN:HG3	58:DQ:102:LYS:HE2	1.95	0.49
65:D2:182:G:N2	65:D2:215:U:O2	2.35	0.49
66:D3:527:A:H2'	66:D3:528:U:C6	2.47	0.49
66:D3:679:U:H2'	66:D3:680:U:C2	2.48	0.49
66:D3:1782:A:OP2	66:D3:1783:C:N4	2.46	0.49
67:D4:199:G:H1	67:D4:250:C:H42	1.60	0.49
4:UD:769:PHE:HE1	16:UP:211:LEU:HD12	1.78	0.49
5:UE:92:ALA:O	5:UE:94:GLU:N	2.46	0.49
12:UL:553:ASN:OD1	12:UL:553:ASN:N	2.44	0.49
13:UM:209:LEU:CB	13:UM:225:PHE:O	2.61	0.49
13:UM:397:THR:HB	13:UM:402:TRP:HB2	1.95	0.49
13:UM:803:SER:O	13:UM:803:SER:OG	2.24	0.49
22:UV:186:ILE:HG23	22:UV:346:LEU:HD13	1.93	0.49
26:CD:270:ASN:OD1	27:CE:271:GLN:NE2	2.35	0.49
33:CL:629:ASP:HA	33:CL:632:LYS:HZ1	1.76	0.49
37:JC:300:TRP:HA	37:JC:307:ALA:HA	1.94	0.49
52:DH:114:ARG:HA	52:DH:117:THR:HG23	1.95	0.49
61:DX:89:ASN:O	61:DX:92:CYS:N	2.46	0.49
66:D3:50:C:H2'	66:D3:51:A:C8	2.48	0.49
66:D3:450:U:H2'	66:D3:451:A:C8	2.48	0.49
66:D3:502:U:H2'	66:D3:503:G:C8	2.48	0.49
66:D3:1211:A:H2'	66:D3:1212:G:C8	2.48	0.49
1:UA:73:ILE:HG22	1:UA:74:ASP:O	2.13	0.48
8:UH:680:ASP:OD1	9:UI:483:LYS:NZ	2.29	0.48
11:UK:166:LEU:HD21	25:CB:91:HIS:HA	1.95	0.48
15:UO:255:VAL:HA	15:UO:276:SER:HA	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:UQ:720:ILE:HG22	17:UQ:745:ILE:HG12	1.94	0.48
21:UU:438:LYS:HZ3	21:UU:462:PHE:HE1	1.59	0.48
27:CE:280:MET:HA	27:CE:283:ILE:HG22	1.95	0.48
29:CH:549:LEU:HB2	29:CH:552:TRP:HZ3	1.78	0.48
33:CL:114:ARG:HH11	33:CL:310:THR:HG23	1.78	0.48
36:JA:793:PHE:HB2	36:JA:796:PHE:CD1	2.48	0.48
51:DG:23:ARG:HG2	51:DG:41:VAL:HA	1.95	0.48
53:DI:65:PHE:O	53:DI:73:SER:HA	2.13	0.48
58:DQ:106:LYS:HG3	58:DQ:117:LEU:HD21	1.95	0.48
65:D2:141:A:H2	65:D2:143:A:H4'	1.78	0.48
1:UA:647:ALA:O	1:UA:656:ARG:HG2	2.13	0.48
2:UB:433:ILE:HG12	2:UB:455:LEU:HD13	1.95	0.48
5:UE:197:ILE:HG12	5:UE:241:ALA:HB2	1.94	0.48
6:UF:128:LYS:HE2	6:UF:128:LYS:HB2	1.61	0.48
7:UG:483:ILE:HD11	7:UG:515:ARG:HE	1.77	0.48
8:UH:585:ARG:NE	8:UH:589:ASP:OD2	2.37	0.48
10:UJ:85:VAL:HG13	46:JP:7:LYS:HB2	1.95	0.48
13:UM:464:LYS:NZ	13:UM:466:TRP:HB2	2.28	0.48
17:UQ:311:TYR:CE2	17:UQ:325:GLN:HB3	2.48	0.48
29:CH:188:TYR:HD2	29:CH:196:LEU:HD11	1.77	0.48
35:CN:130:ASP:OD1	35:CN:133:SER:N	2.39	0.48
39:JF:69:ASN:HB2	39:JF:72:ASP:HB2	1.95	0.48
40:JH:433:THR:HA	40:JH:465:SER:HA	1.94	0.48
54:DJ:93:LEU:HA	54:DJ:96:VAL:HG12	1.95	0.48
66:D3:113:U:H5"	66:D3:114:C:H5'	1.93	0.48
66:D3:1739:C:H2'	66:D3:1740:A:H8	1.78	0.48
1:UA:347:SER:OG	1:UA:365:GLU:HB2	2.13	0.48
1:UA:605:ASP:HB2	1:UA:612:LEU:HD11	1.95	0.48
4:UD:497:ILE:N	4:UD:509:GLN:O	2.43	0.48
8:UH:271:SER:N	8:UH:281:PHE:O	2.46	0.48
13:UM:290:ILE:HG22	13:UM:306:LEU:HG	1.95	0.48
19:US:179:GLU:O	19:US:183:LYS:HG2	2.13	0.48
27:CE:361:ARG:NH1	67:D4:83:A:OP2	2.46	0.48
29:CH:230:ASN:HB3	29:CH:275:PRO:HB3	1.94	0.48
31:CJ:212:ALA:HA	32:CK:383:ARG:NH1	2.28	0.48
36:JA:19:GLN:HE22	36:JA:219:LEU:HD12	1.78	0.48
39:JF:175:CYS:O	39:JF:177:LYS:NZ	2.47	0.48
39:JF:177:LYS:N	39:JF:222:ASP:OD2	2.40	0.48
46:JP:224:SER:HB3	46:JP:238:THR:HG22	1.95	0.48
50:DF:145:ASP:OD1	50:DF:146:THR:N	2.47	0.48
55:DL:68:GLY:HA3	55:DL:127:GLN:HE21	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:UA:563:ARG:NH2	67:D4:60:A:OP2	2.47	0.48
5:UE:105:TYR:HB2	5:UE:121:ASP:OD1	2.13	0.48
5:UE:128:GLN:OE1	5:UE:138:GLN:NE2	2.37	0.48
12:UL:655:ALA:HB3	12:UL:656:HIS:HD1	1.79	0.48
13:UM:130:ASP:OD2	13:UM:133:ASN:N	2.33	0.48
13:UM:409:ASP:HB3	13:UM:411:THR:HG22	1.96	0.48
18:UR:531:CYS:HB3	18:UR:543:LEU:HD23	1.95	0.48
29:CH:545:LYS:N	29:CH:561:ASN:OD1	2.42	0.48
34:CM:201:SER:HA	66:D3:1133:A:H2	1.78	0.48
39:JG:96:LEU:HD21	39:JG:114:ILE:HD11	1.94	0.48
49:DE:87:MET:N	49:DE:101:LEU:O	2.47	0.48
51:DG:50:PHE:HA	51:DG:112:VAL:O	2.13	0.48
1:UA:743:PHE:HZ	1:UA:778:ILE:HD13	1.77	0.48
24:UZ:83:TYR:OH	24:UZ:169:GLU:OE2	2.30	0.48
26:CD:186:LYS:HA	26:CD:189:ASN:HD21	1.79	0.48
27:CE:321:GLY:HA3	27:CE:341:LEU:HB2	1.96	0.48
29:CH:276:THR:HG21	29:CH:281:GLY:HA3	1.96	0.48
29:CH:344:ARG:HA	29:CH:402:ILE:HG13	1.96	0.48
31:CJ:219:GLU:O	31:CJ:237:VAL:HA	2.12	0.48
36:JA:77:ILE:HD11	36:JA:86:ARG:CZ	2.43	0.48
39:JG:152:SER:HB3	39:JG:159:LEU:HD21	1.95	0.48
65:D2:2:U:H2'	65:D2:3:G:C8	2.48	0.48
65:D2:210:U:H2'	65:D2:211:G:C8	2.48	0.48
1:UA:758:ILE:HD11	1:UA:798:TRP:CZ2	2.48	0.48
2:UB:419:LYS:HA	2:UB:422:LEU:HB2	1.95	0.48
10:UJ:329:THR:HA	10:UJ:332:ILE:HG22	1.95	0.48
13:UM:407:SER:OG	13:UM:409:ASP:N	2.39	0.48
15:UO:496:HIS:O	15:UO:499:LYS:HB3	2.13	0.48
17:UQ:88:ILE:HA	17:UQ:111:THR:HA	1.95	0.48
17:UQ:334:LEU:N	17:UQ:335:PRO:CD	2.76	0.48
22:UV:141:TRP:HZ3	22:UV:144:LYS:HB2	1.78	0.48
22:UV:181:PRO:HG2	22:UV:207:LEU:HD12	1.94	0.48
22:UV:345:TYR:OH	22:UV:472:THR:OG1	2.28	0.48
22:UV:649:TRP:HH2	22:UV:681:ILE:HD11	1.79	0.48
22:UV:1195:LYS:HZ2	22:UV:1197:ARG:HG2	1.77	0.48
25:CB:214:ARG:HB2	25:CB:217:ILE:HD12	1.95	0.48
29:CH:430:LYS:HB2	38:JE:256:PRO:HG3	1.96	0.48
31:CJ:150:THR:HA	31:CJ:167:LEU:O	2.13	0.48
36:JA:384:VAL:O	36:JA:406:VAL:HA	2.13	0.48
41:JJ:226:LEU:HD13	41:JJ:231:ILE:HG22	1.95	0.48
42:JK:487:ASP:HA	42:JK:490:ILE:HG12	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DA:166:LYS:O	48:DA:170:GLU:HG2	2.13	0.48
66:D3:93:A:H61	66:D3:396:G:H1'	1.77	0.48
66:D3:539:G:N3	66:D3:540:G:N2	2.61	0.48
3:UC:504:ASP:HA	3:UC:507:ILE:HG12	1.96	0.48
4:UD:255:SER:O	4:UD:262:ILE:HA	2.13	0.48
12:UL:256:GLY:HA2	12:UL:276:ASN:HA	1.96	0.48
12:UL:406:LEU:HD11	12:UL:438:PHE:CD1	2.48	0.48
17:UQ:726:GLN:HB3	17:UQ:739:TYR:CE1	2.48	0.48
18:UR:415:SER:OG	18:UR:416:ARG:N	2.46	0.48
31:CJ:9:ARG:NH2	31:CJ:12:TYR:HD2	2.04	0.48
33:CL:548:ASN:OD1	33:CL:549:ILE:N	2.47	0.48
34:CM:188:ILE:HD11	34:CM:247:ALA:HB1	1.95	0.48
36:JA:660:TYR:OH	36:JA:715:GLN:O	2.30	0.48
39:JF:242:CYS:O	39:JF:245:ALA:N	2.45	0.48
45:JO:291:ARG:HH22	66:D3:316:A:H8	1.61	0.48
48:DA:88:VAL:HG11	48:DA:96:LEU:HD13	1.94	0.48
51:DG:73:ILE:O	51:DG:96:SER:HA	2.13	0.48
53:DI:22:ARG:HD2	53:DI:25:ARG:NE	2.26	0.48
55:DL:90:TYR:HE1	55:DL:105:LYS:HG3	1.79	0.48
66:D3:323:A:H61	66:D3:345:U:H3	1.62	0.48
66:D3:654:C:H42	66:D3:680:U:H3	1.61	0.48
1:UA:475:PRO:O	1:UA:492:SER:OG	2.32	0.48
4:UD:313:LYS:HZ2	4:UD:316:LYS:HD2	1.78	0.48
8:UH:571:PHE:HD2	8:UH:606:ASP:HB3	1.78	0.48
11:UK:46:SER:OG	11:UK:47:THR:N	2.47	0.48
13:UM:406:ALA:HB1	13:UM:437:VAL:HG13	1.96	0.48
13:UM:460:ASP:OD1	13:UM:460:ASP:N	2.39	0.48
17:UQ:105:HIS:ND1	17:UQ:122:LYS:HD2	2.28	0.48
19:US:194:TYR:O	19:US:197:SER:OG	2.27	0.48
33:CL:862:THR:HB	33:CL:872:LEU:HD11	1.94	0.48
36:JA:588:ILE:HG22	36:JA:635:ILE:HG13	1.96	0.48
37:JC:151:CYS:HB2	37:JC:167:LEU:HB2	1.95	0.48
41:JJ:148:ASP:N	41:JJ:148:ASP:OD1	2.44	0.48
46:JP:9:SER:OG	46:JP:11:ASP:OD1	2.28	0.48
46:JP:264:THR:HA	46:JP:281:ASN:HA	1.94	0.48
65:D2:502:G:H1	65:D2:535:G:N2	1.96	0.48
66:D3:514:G:N7	66:D3:537:G:N2	2.62	0.48
2:UB:515:HIS:HD2	2:UB:517:VAL:H	1.62	0.48
4:UD:545:ARG:O	4:UD:548:GLY:N	2.40	0.48
6:UF:197:ILE:HD13	6:UF:200:ARG:HD3	1.96	0.48
10:UJ:777:ASP:O	10:UJ:781:ASN:CB	2.61	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:UL:159:LEU:HD23	12:UL:189:TRP:CD2	2.49	0.48
12:UL:531:THR:OG1	12:UL:532:ASP:OD1	2.20	0.48
19:US:333:GLU:OE2	19:US:334:TYR:N	2.46	0.48
19:US:386:LEU:O	19:US:390:SER:OG	2.19	0.48
21:UU:430:ILE:HB	21:UU:443:TRP:HB2	1.94	0.48
21:UU:456:ASP:OD1	21:UU:457:THR:N	2.47	0.48
28:CF:79:VAL:HG21	28:CF:121:ILE:HG12	1.96	0.48
33:CL:1072:ALA:O	33:CL:1076:GLU:HG2	2.13	0.48
37:JC:18:GLY:HA2	37:JC:337:PRO:HB2	1.96	0.48
37:JC:99:ALA:O	37:JC:118:GLN:NE2	2.45	0.48
38:JE:293:ASN:HA	49:DE:53:LYS:HE3	1.94	0.48
51:DG:35:GLU:OE2	51:DG:50:PHE:N	2.47	0.48
51:DG:83:CYS:SG	66:D3:162:A:H5”	2.53	0.48
62:DY:61:ARG:N	62:DY:70:VAL:O	2.40	0.48
2:UB:530:GLU:OE1	2:UB:531:GLN:NE2	2.36	0.48
2:UB:740:MET:HE1	59:DS:102:ALA:C	2.33	0.48
3:UC:547:ASN:HD22	33:CL:196:THR:HG21	1.78	0.48
10:UJ:19:ALA:HB1	10:UJ:25:ARG:HB2	1.96	0.48
12:UL:359:SER:OG	12:UL:391:ARG:O	2.31	0.48
13:UM:433:HIS:CD2	13:UM:435:ALA:H	2.32	0.48
13:UM:580:ARG:HB3	13:UM:593:CYS:SG	2.53	0.48
29:CH:217:GLY:H	29:CH:220:TYR:HE2	1.62	0.48
30:CI:168:LYS:HB3	30:CI:172:ARG:HH21	1.78	0.48
31:CJ:192:ASP:OD2	31:CJ:227:ARG:NH1	2.46	0.48
36:JA:789:LEU:HD23	36:JA:890:LEU:HG	1.95	0.48
37:JC:164:ARG:NH2	37:JC:174:ASN:HB3	2.29	0.48
51:DG:3:LEU:O	51:DG:15:THR:HA	2.14	0.48
51:DG:42:GLY:HA3	51:DG:45:PHE:CD2	2.47	0.48
53:DI:49:ARG:NH2	66:D3:398:G:O3’	2.46	0.48
56:DN:125:LEU:HD12	56:DN:125:LEU:HA	1.68	0.48
56:DN:146:ALA:HA	56:DN:149:LEU:HD12	1.95	0.48
7:UG:464:LYS:HZ1	66:D3:-2:A:H62	1.62	0.47
12:UL:98:TYR:O	12:UL:101:GLY:N	2.46	0.47
13:UM:281:THR:HG22	13:UM:327:ILE:HB	1.95	0.47
13:UM:571:LEU:HB3	13:UM:602:TRP:HZ2	1.79	0.47
15:UO:25:ARG:NH2	65:D2:100:G:N7	2.62	0.47
15:UO:69:ARG:HG3	15:UO:70:THR:HG23	1.95	0.47
17:UQ:661:THR:O	17:UQ:672:VAL:HA	2.14	0.47
21:UU:476:PHE:HD1	21:UU:476:PHE:H	1.62	0.47
21:UU:848:GLU:O	21:UU:851:SER:N	2.47	0.47
23:UX:121:ARG:NH1	46:JP:369:ASP:O	2.46	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:CD:399:VAL:O	26:CD:402:SER:OG	2.22	0.47
28:CG:10:PRO:HB2	28:CG:124:LEU:HD21	1.96	0.47
39:JG:90:ASP:OD1	39:JG:90:ASP:N	2.46	0.47
41:JJ:128:VAL:HG22	41:JJ:139:LEU:HG	1.96	0.47
41:JJ:196:ASP:OD1	41:JJ:196:ASP:N	2.47	0.47
47:JQ:184:TYR:OH	65:D2:254:C:OP2	2.28	0.47
49:DE:54:TYR:O	62:DY:15:ASN:ND2	2.45	0.47
51:DG:62:PRO:HG2	51:DG:97:VAL:HG23	1.94	0.47
1:UA:9:ASN:OD1	1:UA:10:LEU:N	2.46	0.47
4:UD:77:GLU:OE1	4:UD:79:TRP:NE1	2.37	0.47
4:UD:345:ASP:N	4:UD:345:ASP:OD1	2.47	0.47
5:UE:82:ASN:ND2	5:UE:84:GLU:OE2	2.47	0.47
7:UG:287:TYR:HD2	7:UG:288:TYR:CE1	2.32	0.47
13:UM:332:SER:OG	13:UM:381:VAL:O	2.31	0.47
17:UQ:487:GLU:HA	17:UQ:490:LEU:HD13	1.95	0.47
19:US:356:ALA:HA	19:US:499:LEU:HD21	1.96	0.47
27:CE:227:LEU:HD23	27:CE:231:ILE:HG22	1.95	0.47
33:CL:749:THR:OG1	61:DX:78:LYS:O	2.32	0.47
35:CN:218:LYS:HE3	35:CN:219:ASN:HD21	1.79	0.47
44:JN:329:ILE:HD11	60:DW:89:TRP:CZ3	2.49	0.47
45:JO:145:LEU:O	45:JO:152:THR:OG1	2.32	0.47
46:JP:247:TYR:HA	46:JP:254:PRO:HA	1.95	0.47
49:DE:181:VAL:HG23	49:DE:225:VAL:HG13	1.96	0.47
50:DF:157:ARG:HB2	50:DF:224:ASN:HD21	1.78	0.47
51:DG:10:ASN:HA	51:DG:128:THR:HG23	1.96	0.47
54:DJ:171:ARG:HA	54:DJ:174:ARG:HG2	1.96	0.47
55:DL:75:VAL:HG13	55:DL:119:VAL:HA	1.96	0.47
65:D2:550:C:H2'	65:D2:551:A:H8	1.79	0.47
66:D3:209:U:H2'	66:D3:210:A:H8	1.79	0.47
66:D3:376:C:O2'	66:D3:377:G:O4'	2.29	0.47
66:D3:539:G:H1'	66:D3:540:G:H21	1.79	0.47
4:UD:656:ARG:NH2	4:UD:731:HIS:O	2.47	0.47
6:UF:57:ILE:HD11	6:UF:95:ILE:HB	1.95	0.47
10:UJ:124:ARG:HA	10:UJ:124:ARG:HD2	1.76	0.47
11:UK:235:ASP:OD1	11:UK:236:SER:N	2.44	0.47
12:UL:455:GLN:HG2	12:UL:467:THR:HG23	1.97	0.47
15:UO:97:CYS:HB3	15:UO:132:PHE:CE2	2.49	0.47
15:UO:285:ASP:OD1	15:UO:293:LYS:NZ	2.48	0.47
20:UT:1340:SER:O	20:UT:1344:TRP:N	2.41	0.47
21:UU:184:THR:OG1	21:UU:187:ASN:OD1	2.31	0.47
21:UU:423:ARG:HG3	21:UU:427:TRP:CZ2	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:UV:529:VAL:HA	22:UV:695:GLN:O	2.14	0.47
25:CB:93:HIS:HE1	25:CB:162:LEU:H	1.60	0.47
29:CH:130:GLY:N	29:CH:483:TYR:HH	2.12	0.47
29:CH:256:ARG:HA	29:CH:282:GLU:HG3	1.95	0.47
33:CL:808:PHE:HE2	33:CL:1026:LYS:HB3	1.78	0.47
37:JC:79:PRO:O	37:JC:97:THR:OG1	2.27	0.47
37:JC:153:LEU:HD23	37:JC:167:LEU:HD13	1.95	0.47
40:JH:321:PHE:O	40:JH:325:LEU:N	2.41	0.47
41:JJ:266:VAL:O	41:JJ:270:LEU:HB2	2.14	0.47
44:JN:109:PRO:O	44:JN:114:GLN:N	2.48	0.47
48:DA:26:ARG:NH2	66:D3:896:U:OP1	2.47	0.47
48:DA:176:VAL:HG23	48:DA:184:LEU:HD12	1.96	0.47
49:DE:125:LYS:HB2	49:DE:226:PHE:HD1	1.78	0.47
51:DG:212:LEU:HD23	51:DG:216:LEU:HD23	1.95	0.47
56:DN:29:SER:OG	56:DN:32:SER:OG	2.21	0.47
58:DQ:15:SER:O	58:DQ:15:SER:OG	2.29	0.47
67:D4:313:A:H2'	67:D4:314:C:C6	2.49	0.47
8:UH:676:TRP:HB2	9:UI:486:LEU:HB3	1.96	0.47
12:UL:749:GLY:O	12:UL:753:MET:HG3	2.14	0.47
12:UL:769:TYR:CE2	12:UL:787:LYS:HG2	2.49	0.47
13:UM:501:PRO:HG2	13:UM:543:GLN:HB3	1.96	0.47
13:UM:552:SER:OG	13:UM:554:ASP:OD1	2.33	0.47
13:UM:552:SER:OG	13:UM:556:THR:O	2.30	0.47
18:UR:217:ASN:O	18:UR:217:ASN:ND2	2.47	0.47
18:UR:400:ILE:HD11	18:UR:404:ILE:HA	1.97	0.47
21:UU:743:ARG:HD3	32:CK:474:ILE:O	2.14	0.47
25:CB:93:HIS:NE2	25:CB:159:LEU:O	2.43	0.47
26:CD:171:ASP:N	26:CD:171:ASP:OD1	2.48	0.47
31:CJ:281:ILE:HG23	66:D3:562:G:C5	2.49	0.47
36:JA:9:ARG:NH1	36:JA:214:LYS:O	2.47	0.47
36:JB:283:ALA:O	36:JB:411:THR:HA	2.14	0.47
42:JK:488:ASP:OD1	42:JK:489:GLN:N	2.42	0.47
45:JO:273:LYS:HA	45:JO:276:LYS:HZ2	1.79	0.47
45:JO:285:LYS:O	45:JO:288:GLN:HB2	2.15	0.47
49:DE:208:VAL:O	49:DE:219:VAL:HA	2.14	0.47
55:DL:98:ASN:O	55:DL:99:ARG:NH1	2.47	0.47
65:D2:167:U:H2'	65:D2:168:G:O4'	2.14	0.47
65:D2:329:A:O2'	65:D2:331:U:OP2	2.31	0.47
66:D3:1216:C:H2'	66:D3:1217:A:H4'	1.95	0.47
66:D3:1715:G:H2'	66:D3:1716:C:C6	2.49	0.47
6:UF:34:LYS:O	6:UF:37:THR:OG1	2.32	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:UG:458:THR:HG23	14:UN:854:ARG:HG2	1.95	0.47
12:UL:496:THR:HG22	12:UL:529:GLU:HA	1.96	0.47
17:UQ:780:GLU:O	17:UQ:782:THR:N	2.48	0.47
33:CL:215:TYR:HB3	33:CL:216:PRO:HD2	1.95	0.47
36:JA:86:ARG:NH2	36:JA:90:GLU:O	2.48	0.47
41:JJ:119:PRO:HA	41:JJ:123:HIS:HB2	1.97	0.47
61:DX:132:LEU:HD23	61:DX:132:LEU:HA	1.71	0.47
65:D2:97:G:C2	65:D2:148:G:C2	3.03	0.47
66:D3:235:G:H2'	66:D3:236:A:C8	2.49	0.47
4:UD:192:THR:OG1	4:UD:242:TRP:O	2.28	0.47
4:UD:519:THR:N	4:UD:522:SER:OG	2.47	0.47
9:UI:477:LYS:HG3	9:UI:481:HIS:CE1	2.48	0.47
12:UL:387:LEU:O	12:UL:415:LYS:NZ	2.32	0.47
13:UM:265:ALA:HA	13:UM:290:ILE:HG23	1.95	0.47
13:UM:301:GLN:HB3	13:UM:313:LEU:HD11	1.97	0.47
13:UM:614:ASP:N	13:UM:614:ASP:OD1	2.47	0.47
18:UR:144:LYS:HD3	65:D2:311:C:N4	2.30	0.47
18:UR:372:HIS:ND1	18:UR:373:GLY:O	2.34	0.47
19:US:450:GLU:HG3	19:US:452:ASP:H	1.80	0.47
21:UU:834:LEU:HA	21:UU:834:LEU:HD23	1.68	0.47
25:CA:125:VAL:HG12	43:JM:150:GLY:HA3	1.95	0.47
30:CI:3:ARG:NH2	30:CI:9:GLU:OE2	2.47	0.47
34:CM:189:SER:OG	34:CM:248:GLN:O	2.27	0.47
35:CN:80:THR:HG21	35:CN:140:ALA:HB2	1.97	0.47
35:CN:131:ALA:HA	35:CN:134:ILE:HG22	1.96	0.47
37:JC:133:TYR:HE1	42:JK:472:ILE:HG12	1.80	0.47
56:DN:148:ALA:HA	56:DN:151:ASN:HB2	1.96	0.47
66:D3:363:G:H2'	66:D3:364:G:C8	2.50	0.47
66:D3:1270:G:O6	66:D3:1439:C:N4	2.47	0.47
66:D3:1680:G:H5'	66:D3:1722:A:H61	1.79	0.47
4:UD:107:VAL:HG23	4:UD:110:GLU:HB2	1.95	0.47
4:UD:288:THR:HG22	4:UD:295:VAL:HG22	1.97	0.47
4:UD:689:ASN:HD22	4:UD:689:ASN:C	2.17	0.47
10:UJ:404:PHE:O	10:UJ:408:ILE:HG12	2.15	0.47
12:UL:596:ASN:N	12:UL:596:ASN:OD1	2.45	0.47
12:UL:678:ASP:OD1	12:UL:678:ASP:N	2.46	0.47
13:UM:574:HIS:HE2	13:UM:594:GLY:HA3	1.79	0.47
17:UQ:167:SER:OG	65:D2:64:U:OP2	2.32	0.47
18:UR:228:LEU:O	18:UR:545:HIS:NE2	2.48	0.47
21:UU:64:ASN:O	21:UU:344:ARG:NH1	2.47	0.47
22:UV:242:LEU:HD12	22:UV:245:LYS:HZ3	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:CH:437:ARG:HD3	29:CH:437:ARG:HA	1.66	0.47
29:CH:523:LYS:O	29:CH:541:ALA:HA	2.15	0.47
33:CL:824:ILE:HD11	33:CL:926:ILE:HG12	1.97	0.47
33:CL:963:GLY:N	33:CL:976:ILE:O	2.46	0.47
36:JA:174:THR:HG22	36:JA:176:ALA:H	1.79	0.47
38:JE:288:SER:HA	38:JE:291:GLU:HB2	1.95	0.47
41:JJ:118:PRO:O	41:JJ:122:GLU:HG3	2.14	0.47
45:JO:130:ASN:ND2	57:DO:127:ARG:HH21	2.13	0.47
46:JP:221:ASN:OD1	46:JP:221:ASN:N	2.47	0.47
49:DE:47:PHE:HE2	49:DE:101:LEU:HD11	1.80	0.47
51:DG:10:ASN:HB3	51:DG:128:THR:HA	1.97	0.47
51:DG:22:HIS:HA	51:DG:25:ARG:NH1	2.30	0.47
51:DG:103:GLY:H	51:DG:106:LEU:HD23	1.80	0.47
62:DY:16:PRO:HA	62:DY:19:ALA:HA	1.97	0.47
1:UA:430:ARG:HG3	32:CK:460:PRO:O	2.15	0.47
1:UA:462:THR:O	1:UA:464:GLN:N	2.47	0.47
1:UA:539:ILE:HD12	1:UA:553:ILE:HD11	1.96	0.47
4:UD:106:ASN:H	4:UD:153:GLN:HG2	1.80	0.47
5:UE:187:HIS:CG	5:UE:206:ALA:HB2	2.50	0.47
8:UH:537:THR:HA	8:UH:540:LEU:HD23	1.97	0.47
8:UH:611:ILE:HD11	8:UH:654:LEU:HD21	1.96	0.47
10:UJ:268:LEU:HD11	18:UR:219:LYS:HD2	1.96	0.47
12:UL:136:LEU:HD23	12:UL:148:TRP:HE3	1.78	0.47
13:UM:105:SER:HA	13:UM:121:GLY:HA2	1.95	0.47
15:UO:128:HIS:CD2	15:UO:172:ARG:HE	2.33	0.47
17:UQ:678:LEU:O	17:UQ:691:SER:HA	2.14	0.47
17:UQ:685:ARG:HB2	17:UQ:687:GLN:HE22	1.80	0.47
17:UQ:722:LEU:HD22	17:UQ:766:ILE:HD11	1.96	0.47
21:UU:183:VAL:HG12	21:UU:188:VAL:HG22	1.97	0.47
22:UV:433:ASP:HB3	22:UV:437:ASP:HB2	1.96	0.47
23:UX:65:VAL:HA	23:UX:152:ILE:O	2.15	0.47
23:UX:86:MET:HB3	23:UX:86:MET:HE2	1.53	0.47
23:UX:182:ILE:HG21	23:UX:185:LEU:HD12	1.97	0.47
24:UZ:91:GLU:HA	24:UZ:94:SER:HB2	1.96	0.47
25:CB:323:SER:OG	25:CB:324:GLY:N	2.48	0.47
26:CD:221:LEU:HD11	26:CD:276:GLN:HA	1.97	0.47
36:JA:29:VAL:O	36:JA:202:ASP:HA	2.14	0.47
65:D2:262:U:H2'	65:D2:263:C:C6	2.50	0.47
66:D3:97:C:H2'	66:D3:98:U:C6	2.50	0.47
4:UD:277:LYS:NZ	18:UR:348:HIS:HB3	2.29	0.47
7:UG:116:ILE:HG23	7:UG:116:ILE:HD12	1.68	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:UQ:319:LYS:HD3	17:UQ:339:GLY:H	1.79	0.47
17:UQ:334:LEU:HD23	17:UQ:334:LEU:HA	1.75	0.47
18:UR:458:ILE:HD11	18:UR:482:LEU:HD11	1.96	0.47
20:UT:248:HIS:H	20:UT:251:ALA:HB3	1.79	0.47
22:UV:205:THR:OG1	22:UV:293:ASN:O	2.23	0.47
23:UX:72:ILE:HD12	23:UX:72:ILE:HG23	1.70	0.47
26:CD:82:LEU:HA	26:CD:82:LEU:HD23	1.71	0.47
28:CF:50:GLU:N	28:CF:102:ILE:O	2.44	0.47
29:CH:424:LEU:HB3	29:CH:434:PHE:HB3	1.97	0.47
31:CJ:9:ARG:HD2	31:CJ:9:ARG:HA	1.51	0.47
33:CL:795:LYS:HE3	33:CL:795:LYS:HB2	1.73	0.47
35:CN:176:ASP:N	35:CN:176:ASP:OD1	2.47	0.47
36:JA:591:GLU:OE2	36:JA:614:ILE:N	2.35	0.47
36:JA:738:LYS:O	36:JA:810:LYS:NZ	2.48	0.47
46:JP:189:ARG:NH2	46:JP:229:GLN:OE1	2.48	0.47
46:JP:416:HIS:O	46:JP:417:ARG:NH2	2.45	0.47
49:DE:100:ARG:HH12	49:DE:122:LYS:HA	1.79	0.47
57:DO:20:TYR:HE1	57:DO:22:SER:HB3	1.79	0.47
66:D3:1650:U:H2'	66:D3:1651:A:H8	1.80	0.47
66:D3:1739:C:H2'	66:D3:1740:A:C8	2.50	0.47
67:D4:248:G:H2'	67:D4:249:G:C8	2.49	0.47
1:UA:296:GLN:NE2	1:UA:332:TRP:O	2.48	0.47
2:UB:709:SER:HB2	39:JG:106:LYS:HB3	1.96	0.47
4:UD:237:GLU:OE2	16:UP:208:ARG:NH2	2.42	0.47
13:UM:89:HIS:CE1	13:UM:91:LYS:HB2	2.50	0.47
18:UR:252:GLN:O	18:UR:567:SER:OG	2.32	0.47
21:UU:135:ASN:HD21	21:UU:166:GLU:HA	1.80	0.47
33:CL:59:VAL:HG12	33:CL:758:ILE:HD11	1.97	0.47
52:DH:84:LYS:HG3	52:DH:85:PHE:CZ	2.50	0.47
56:DN:54:LEU:HD23	56:DN:54:LEU:HA	1.68	0.47
56:DN:87:ASP:N	56:DN:87:ASP:OD1	2.44	0.47
65:D2:165:G:N2	65:D2:231:C:O2	2.48	0.47
66:D3:57:G:H1'	66:D3:91:G:H22	1.80	0.47
66:D3:1699:G:N2	66:D3:1702:A:OP2	2.45	0.47
1:UA:418:ARG:NH2	32:CK:488:SER:O	2.47	0.46
1:UA:458:TRP:CD1	1:UA:465:LEU:HB3	2.50	0.46
2:UB:805:LEU:HD22	2:UB:806:ARG:HD3	1.96	0.46
4:UD:680:THR:OG1	4:UD:681:ILE:N	2.49	0.46
5:UE:244:ILE:O	5:UE:255:ILE:HA	2.15	0.46
7:UG:286:GLY:O	7:UG:304:ARG:NH2	2.48	0.46
9:UI:419:PHE:O	9:UI:422:THR:OG1	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:UL:341:ALA:HA	12:UL:354:VAL:O	2.14	0.46
15:UO:21:THR:HG23	15:UO:24:GLN:HB2	1.98	0.46
15:UO:75:LYS:HD3	15:UO:111:TYR:HA	1.96	0.46
17:UQ:291:ARG:NH1	17:UQ:329:ASN:OD1	2.44	0.46
18:UR:391:SER:O	18:UR:393:LEU:N	2.48	0.46
19:US:350:MET:SD	19:US:390:SER:OG	2.73	0.46
22:UV:1038:GLN:OE1	22:UV:1038:GLN:N	2.48	0.46
29:CH:242:VAL:HG23	29:CH:253:THR:HG22	1.97	0.46
33:CL:874:TYR:OH	66:D3:578:U:OP2	2.30	0.46
36:JA:520:ARG:NH1	36:JA:559:ALA:O	2.48	0.46
36:JA:579:ILE:HD12	36:JA:580:PRO:HD2	1.96	0.46
43:JM:135:HIS:CE1	66:D3:487:G:C5	3.03	0.46
43:JM:213:ARG:NH1	66:D3:1491:U:OP2	2.48	0.46
46:JP:314:SER:O	46:JP:317:GLY:N	2.46	0.46
49:DE:19:LEU:HB2	49:DE:108:ARG:HD2	1.97	0.46
53:DI:48:THR:HG21	53:DI:54:LYS:HE3	1.96	0.46
54:DJ:139:GLN:OE1	54:DJ:139:GLN:N	2.49	0.46
57:DO:24:ASN:ND2	66:D3:902:G:OP2	2.48	0.46
65:D2:238:G:N3	65:D2:238:G:H5'	2.30	0.46
66:D3:152:U:H3	66:D3:162:A:H61	1.62	0.46
4:UD:309:GLN:HE21	4:UD:318:ASN:HA	1.80	0.46
5:UE:54:GLU:HG2	5:UE:55:ASP:H	1.79	0.46
6:UF:144:VAL:O	6:UF:147:TRP:N	2.48	0.46
9:UI:470:ILE:HG22	9:UI:471:LYS:HB2	1.98	0.46
10:UJ:227:ASN:ND2	10:UJ:230:LYS:HZ3	2.13	0.46
11:UK:138:ASP:OD1	11:UK:139:SER:N	2.46	0.46
12:UL:581:ILE:HG21	12:UL:581:ILE:HD13	1.65	0.46
15:UO:142:THR:O	15:UO:149:THR:OG1	2.22	0.46
17:UQ:113:ASN:O	17:UQ:115:HIS:ND1	2.48	0.46
17:UQ:209:ALA:HB2	17:UQ:264:ILE:HD11	1.97	0.46
17:UQ:293:LEU:HD23	17:UQ:324:TRP:CE3	2.50	0.46
17:UQ:314:SER:HG	17:UQ:324:TRP:HE1	1.62	0.46
17:UQ:868:ASN:OD1	17:UQ:868:ASN:N	2.43	0.46
22:UV:242:LEU:HA	22:UV:245:LYS:HZ3	1.80	0.46
25:CB:184:VAL:HA	25:CB:187:VAL:HG12	1.98	0.46
27:CE:16:LYS:H	27:CE:45:ALA:HB2	1.80	0.46
29:CH:158:THR:HG21	29:CH:240:LEU:HD12	1.98	0.46
29:CH:181:ASN:OD1	29:CH:182:LYS:N	2.48	0.46
54:DJ:136:VAL:HG22	54:DJ:156:ILE:HG12	1.97	0.46
54:DJ:152:SER:HA	54:DJ:155:HIS:HB2	1.96	0.46
55:DL:125:VAL:HG12	55:DL:139:VAL:HA	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:DY:41:ARG:HD2	62:DY:94:TYR:CD2	2.50	0.46
66:D3:99:C:H2'	66:D3:100:A:C8	2.50	0.46
66:D3:151:G:H2'	66:D3:152:U:H6	1.81	0.46
66:D3:1704:U:H2'	66:D3:1705:C:C6	2.50	0.46
5:UE:436:THR:OG1	19:US:297:ASP:OD2	2.25	0.46
12:UL:88:HIS:ND1	12:UL:91:THR:OG1	2.35	0.46
12:UL:123:ALA:HB3	12:UL:141:LYS:HD2	1.98	0.46
13:UM:188:GLU:OE2	48:DA:242:LYS:NZ	2.32	0.46
13:UM:518:TRP:HB3	13:UM:525:LEU:HA	1.97	0.46
16:UP:163:LEU:HD23	16:UP:167:ARG:HH22	1.80	0.46
17:UQ:378:ASP:HB3	17:UQ:380:THR:HG22	1.95	0.46
18:UR:156:ASN:N	18:UR:156:ASN:OD1	2.41	0.46
18:UR:408:CYS:SG	18:UR:459:GLN:HA	2.54	0.46
19:US:260:ASN:O	19:US:263:SER:OG	2.31	0.46
22:UV:373:ARG:HG2	22:UV:515:ILE:HD11	1.98	0.46
24:UZ:253:PRO:HB2	24:UZ:256:GLN:NE2	2.30	0.46
29:CH:349:TRP:CZ3	29:CH:356:ARG:HB3	2.50	0.46
32:CK:470:GLU:HA	32:CK:490:LEU:HD23	1.98	0.46
34:CM:122:THR:HG21	34:CM:156:ARG:HG3	1.98	0.46
36:JA:815:SER:OG	36:JA:816:ASP:N	2.47	0.46
36:JA:881:GLN:HB2	36:JA:916:ILE:HG21	1.97	0.46
36:JB:515:LEU:HA	36:JB:566:VAL:O	2.15	0.46
37:JC:194:LEU:HD11	37:JC:243:PHE:HE2	1.79	0.46
55:DL:128:CYS:HB2	55:DL:131:ILE:HD11	1.97	0.46
57:DO:43:THR:HB	57:DO:46:MET:HG2	1.96	0.46
66:D3:315:A:N6	66:D3:349:U:HO2'	2.13	0.46
66:D3:904:G:H8	66:D3:905:A:C8	2.33	0.46
66:D3:1167:G:N2	66:D3:1579:U:O2	2.48	0.46
1:UA:115:SER:O	1:UA:115:SER:OG	2.29	0.46
5:UE:238:SER:HB3	5:UE:243:SER:HB2	1.96	0.46
11:UK:51:LEU:HD12	33:CL:1077:LEU:HD11	1.97	0.46
13:UM:461:LEU:HD21	13:UM:491:GLU:HA	1.96	0.46
17:UQ:111:THR:OG1	17:UQ:112:ASN:N	2.48	0.46
19:US:156:TRP:CZ3	19:US:212:LEU:HA	2.49	0.46
20:UT:2091:ASN:O	20:UT:2095:LEU:N	2.35	0.46
25:CA:171:LEU:HD22	25:CA:173:LEU:HD12	1.96	0.46
26:CD:203:PHE:HE1	26:CD:255:ALA:HA	1.80	0.46
29:CH:437:ARG:O	29:CH:439:ALA:N	2.36	0.46
33:CL:288:VAL:HG12	33:CL:814:GLY:HA2	1.96	0.46
33:CL:838:ILE:HD12	33:CL:874:TYR:HB3	1.98	0.46
37:JC:70:TYR:CZ	37:JC:111:TRP:HD1	2.33	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:JO:41:PHE:CD2	45:JO:98:ARG:HG3	2.51	0.46
62:DY:59:GLY:O	62:DY:71:GLY:HA2	2.16	0.46
66:D3:442:C:H42	66:D3:462:G:H1	1.63	0.46
4:UD:298:ALA:HB1	4:UD:333:ILE:HG21	1.97	0.46
4:UD:376:GLU:HA	4:UD:377:PRO:HD3	1.78	0.46
12:UL:224:SER:HA	12:UL:251:GLN:HE21	1.81	0.46
12:UL:898:LEU:HD23	12:UL:898:LEU:HA	1.66	0.46
13:UM:198:ILE:HG12	13:UM:211:LEU:HD13	1.96	0.46
13:UM:224:ASP:OD1	13:UM:225:PHE:N	2.49	0.46
16:UP:159:LYS:O	16:UP:162:THR:OG1	2.26	0.46
19:US:124:LEU:HD11	19:US:184:TYR:CZ	2.51	0.46
21:UU:564:ASP:N	21:UU:564:ASP:OD1	2.46	0.46
22:UV:241:ILE:HG22	22:UV:245:LYS:NZ	2.30	0.46
22:UV:1214:LEU:HD21	22:UV:1216:LYS:HE2	1.96	0.46
24:UZ:32:ASN:O	24:UZ:34:LYS:NZ	2.49	0.46
28:CF:95:ARG:NH1	67:D4:79:G:N7	2.63	0.46
28:CF:111:LYS:HB3	28:CF:111:LYS:HE2	1.66	0.46
34:CM:26:LEU:HD23	34:CM:26:LEU:HA	1.69	0.46
36:JA:61:LYS:HE3	36:JA:62:LYS:HE3	1.97	0.46
36:JA:862:LEU:O	36:JA:866:TYR:CB	2.64	0.46
39:JG:50:LEU:HD13	39:JG:116:THR:HG22	1.98	0.46
41:JJ:126:LEU:HD21	41:JJ:139:LEU:HB3	1.98	0.46
46:JP:66:HIS:ND1	46:JP:87:SER:HB3	2.30	0.46
46:JP:225:LEU:HD23	46:JP:225:LEU:HA	1.65	0.46
46:JP:449:LYS:NZ	66:D3:1053:G:OP1	2.28	0.46
50:DF:102:ARG:HD2	50:DF:102:ARG:N	2.30	0.46
53:DI:47:ARG:NH2	66:D3:396:G:N7	2.64	0.46
60:DW:82:LYS:H	60:DW:85:ASP:HB2	1.80	0.46
66:D3:538:A:H8	66:D3:543:C:N4	2.12	0.46
66:D3:1503:A:N1	66:D3:1504:G:N2	2.63	0.46
66:D3:1671:A:H3'	66:D3:1672:G:C8	2.51	0.46
4:UD:285:CYS:HB2	4:UD:298:ALA:HB3	1.98	0.46
10:UJ:139:THR:HG21	10:UJ:151:ILE:HD13	1.97	0.46
12:UL:50:ASN:HB3	12:UL:52:TRP:HZ3	1.81	0.46
22:UV:533:LEU:HD21	22:UV:539:LEU:HD12	1.97	0.46
22:UV:741:ILE:HA	22:UV:744:MET:HE2	1.97	0.46
22:UV:884:LYS:HA	22:UV:884:LYS:HD2	1.73	0.46
22:UV:1050:ILE:O	22:UV:1054:SER:HB3	2.15	0.46
23:UX:13:VAL:HG21	65:D2:461:A:N1	2.31	0.46
26:CD:149:ARG:NH2	27:CE:242:SER:HA	2.31	0.46
29:CH:485:ASN:O	29:CH:500:LYS:HA	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:JA:63:LEU:HA	36:JA:63:LEU:HD23	1.73	0.46
37:JC:281:ASP:OD1	37:JC:281:ASP:N	2.46	0.46
44:JN:308:ILE:HG21	60:DW:95:PRO:HG3	1.98	0.46
45:JO:283:GLU:O	45:JO:286:GLU:HG3	2.15	0.46
50:DF:84:LYS:O	50:DF:92:ARG:NH2	2.43	0.46
7:UG:548:GLU:OE1	35:CN:185:HIS:ND1	2.42	0.46
10:UJ:33:LEU:HB2	10:UJ:119:GLU:HG2	1.97	0.46
12:UL:671:PHE:HA	12:UL:684:TRP:O	2.16	0.46
13:UM:43:ILE:HG22	13:UM:52:ILE:HG22	1.97	0.46
15:UO:21:THR:O	15:UO:24:GLN:HB2	2.15	0.46
15:UO:284:PHE:CE1	15:UO:292:VAL:HG22	2.50	0.46
17:UQ:656:ASP:N	17:UQ:656:ASP:OD1	2.44	0.46
22:UV:408:SER:HB3	22:UV:456:LYS:HD2	1.98	0.46
26:CD:35:GLN:O	26:CD:38:ILE:HG22	2.15	0.46
29:CH:438:ILE:O	29:CH:441:GLY:N	2.30	0.46
36:JA:591:GLU:OE1	36:JA:634:ARG:NH1	2.49	0.46
41:JJ:103:PRO:O	41:JJ:106:MET:N	2.49	0.46
60:DW:15:ASN:ND2	60:DW:72:CYS:O	2.47	0.46
65:D2:2:U:H2'	65:D2:3:G:H8	1.81	0.46
4:UD:40:ASP:OD1	4:UD:40:ASP:N	2.43	0.46
11:UK:68:HIS:CE1	67:D4:56:A:H4'	2.51	0.46
12:UL:752:LEU:HD22	12:UL:824:MET:HE1	1.98	0.46
13:UM:76:LEU:HB3	13:UM:88:PHE:HD2	1.81	0.46
15:UO:452:ASP:OD1	15:UO:453:VAL:N	2.39	0.46
17:UQ:315:GLY:HA2	17:UQ:341:ILE:HD11	1.97	0.46
20:UT:139:ALA:O	20:UT:142:PHE:O	2.33	0.46
21:UU:627:ASN:ND2	21:UU:647:THR:OG1	2.31	0.46
22:UV:428:TYR:CZ	22:UV:432:MET:HG3	2.51	0.46
23:UX:96:PRO:HG2	23:UX:125:ILE:HD13	1.97	0.46
25:CB:272:LYS:HE2	25:CB:275:CYS:HB2	1.97	0.46
33:CL:976:ILE:HD13	33:CL:976:ILE:HG21	1.79	0.46
34:CM:287:ALA:HB2	34:CM:314:ASN:HB2	1.97	0.46
36:JA:496:LEU:HG	36:JA:536:LYS:HA	1.97	0.46
43:JM:177:LEU:HD12	43:JM:177:LEU:HA	1.75	0.46
50:DF:101:GLY:HA2	50:DF:104:ASN:OD1	2.15	0.46
53:DI:84:HIS:ND1	53:DI:85:PRO:HD2	2.31	0.46
54:DJ:20:GLU:HB3	54:DJ:23:ARG:HG2	1.98	0.46
66:D3:328:A:H2'	66:D3:329:G:C8	2.50	0.46
2:UB:646:THR:HA	2:UB:649:THR:HG22	1.96	0.46
2:UB:651:TRP:CD1	2:UB:661:ILE:HD13	2.51	0.46
5:UE:548:ASP:HA	5:UE:551:ILE:HG22	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:UJ:149:LYS:HE2	10:UJ:149:LYS:HB3	1.64	0.46
10:UJ:274:ILE:HG12	18:UR:211:ILE:HD12	1.97	0.46
13:UM:212:LEU:HG	13:UM:220:ILE:HD11	1.96	0.46
14:UN:868:GLU:HA	46:JP:26:ARG:HH12	1.81	0.46
15:UO:423:LYS:HB3	15:UO:423:LYS:HE2	1.72	0.46
15:UO:495:ILE:O	15:UO:499:LYS:HB2	2.16	0.46
17:UQ:458:GLN:NE2	17:UQ:467:GLN:HG3	2.28	0.46
17:UQ:533:THR:OG1	17:UQ:534:LYS:N	2.48	0.46
21:UU:60:ILE:HD12	21:UU:70:PHE:HB2	1.98	0.46
22:UV:577:ARG:NH2	22:UV:626:LYS:O	2.36	0.46
25:CB:172:TYR:HE1	25:CB:241:PHE:CD2	2.34	0.46
45:JO:291:ARG:HA	45:JO:294:GLU:HG3	1.97	0.46
46:JP:183:GLN:HE21	46:JP:183:GLN:HB2	1.55	0.46
48:DA:149:GLN:HG2	66:D3:1066:C:H4'	1.97	0.46
53:DI:105:ASP:N	53:DI:105:ASP:OD1	2.49	0.46
1:UA:157:ASP:O	1:UA:159:ARG:N	2.48	0.46
5:UE:362:ARG:NH1	17:UQ:591:GLU:OE2	2.34	0.46
6:UF:177:ASP:N	6:UF:177:ASP:OD1	2.48	0.46
7:UG:301:TRP:HA	7:UG:308:GLN:HA	1.98	0.46
8:UH:188:ILE:O	8:UH:197:GLU:N	2.48	0.46
12:UL:261:PHE:CD1	12:UL:272:PHE:HB3	2.51	0.46
20:UT:1662:SER:O	20:UT:1665:LEU:C	2.54	0.46
21:UU:187:ASN:OD1	21:UU:187:ASN:N	2.47	0.46
25:CB:280:VAL:HG22	25:CB:281:ASP:H	1.81	0.46
26:CD:329:ALA:HB3	26:CD:332:THR:HG22	1.98	0.46
28:CG:13:ASP:OD1	28:CG:14:ALA:N	2.49	0.46
28:CG:79:VAL:HG21	28:CG:121:ILE:HG12	1.98	0.46
33:CL:308:CYS:SG	33:CL:355:TYR:HB2	2.56	0.46
33:CL:808:PHE:CE2	33:CL:1026:LYS:HB3	2.51	0.46
36:JA:738:LYS:HE2	36:JA:738:LYS:HB3	1.76	0.46
37:JC:315:VAL:HG11	37:JC:335:SER:HB2	1.98	0.46
41:JJ:271:LYS:HB2	41:JJ:271:LYS:HE2	1.34	0.46
46:JP:109:HIS:HD2	46:JP:113:VAL:HG12	1.81	0.46
62:DY:61:ARG:HH22	66:D3:523:G:C4'	2.28	0.46
65:D2:123:C:H3'	65:D2:124:A:H8	1.81	0.46
66:D3:271:A:N1	66:D3:284:G:H2'	2.31	0.46
66:D3:469:C:H3'	66:D3:470:A:C8	2.51	0.46
1:UA:275:LEU:HB2	1:UA:289:LEU:HD22	1.97	0.45
2:UB:524:LEU:HD13	19:US:507:LEU:HD11	1.98	0.45
5:UE:198:THR:HG22	5:UE:199:ASN:H	1.81	0.45
6:UF:105:GLN:HE21	6:UF:105:GLN:HB3	1.53	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:UF:107:LEU:HD12	43:JM:69:PHE:HE1	1.81	0.45
8:UH:211:ILE:N	8:UH:220:LYS:O	2.40	0.45
10:UJ:1510:PHE:O	10:UJ:1514:SER:CB	2.63	0.45
19:US:467:ALA:O	19:US:470:MET:HB2	2.17	0.45
21:UU:530:ASP:OD1	21:UU:531:PHE:N	2.48	0.45
22:UV:313:ASN:HD22	22:UV:326:LEU:HB3	1.81	0.45
22:UV:652:LYS:HD2	22:UV:652:LYS:HA	1.72	0.45
27:CE:428:ASN:HB3	27:CE:430:ASP:OD1	2.15	0.45
39:JG:70:CYS:SG	39:JG:71:ASP:N	2.88	0.45
44:JN:298:LYS:NZ	66:D3:1033:C:OP2	2.49	0.45
48:DA:61:LEU:HD23	48:DA:61:LEU:HA	1.78	0.45
48:DA:79:HIS:O	48:DA:81:PHE:N	2.42	0.45
65:D2:217:C:H2'	65:D2:218:U:H6	1.80	0.45
2:UB:788:ILE:HD13	2:UB:788:ILE:HA	1.80	0.45
3:UC:493:ASP:HA	3:UC:496:GLN:HE22	1.81	0.45
4:UD:497:ILE:HB	4:UD:509:GLN:HB2	1.97	0.45
4:UD:581:SER:HG	4:UD:594:PHE:C	2.19	0.45
11:UK:11:LYS:HB2	11:UK:11:LYS:HE2	1.81	0.45
12:UL:284:PHE:CD1	12:UL:328:PRO:HA	2.51	0.45
12:UL:588:ILE:HG13	12:UL:602:LEU:HD12	1.98	0.45
22:UV:114:VAL:HG22	22:UV:195:ILE:HB	1.98	0.45
22:UV:668:VAL:HG21	48:DA:240:LYS:HZ2	1.81	0.45
33:CL:975:GLU:CD	33:CL:977:LYS:HZ3	2.17	0.45
39:JF:177:LYS:O	39:JF:222:ASP:N	2.32	0.45
39:JG:115:GLN:HG2	39:JG:121:LEU:HD13	1.98	0.45
45:JO:64:LEU:HA	45:JO:64:LEU:HD23	1.77	0.45
49:DE:6:LYS:O	49:DE:30:ARG:NH1	2.33	0.45
56:DN:61:THR:OG1	56:DN:62:GLN:N	2.49	0.45
56:DN:69:ASN:OD1	56:DN:73:ARG:HB2	2.16	0.45
62:DY:55:VAL:HA	62:DY:75:VAL:HG23	1.98	0.45
65:D2:498:G:H2'	65:D2:499:U:C6	2.51	0.45
66:D3:381:C:H2'	66:D3:382:C:H4'	1.98	0.45
66:D3:1124:A:H1'	67:D4:1:G:H1	1.81	0.45
67:D4:306:G:H2'	67:D4:307:G:H8	1.81	0.45
1:UA:262:LYS:H	1:UA:280:THR:HG22	1.82	0.45
3:UC:592:GLU:HG2	3:UC:593:GLY:N	2.31	0.45
5:UE:532:ARG:HE	5:UE:532:ARG:HB2	1.53	0.45
6:UF:137:LEU:HA	6:UF:137:LEU:HD23	1.77	0.45
7:UG:109:LYS:HB2	7:UG:109:LYS:HE3	1.67	0.45
7:UG:502:ARG:HD3	65:D2:370:U:C5	2.48	0.45
12:UL:88:HIS:HB2	12:UL:129:PHE:CZ	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:UL:126:LEU:HB2	12:UL:169:PHE:HE1	1.81	0.45
12:UL:934:ALA:HB1	32:CK:470:GLU:HG3	1.98	0.45
17:UQ:140:LYS:HB2	17:UQ:156:THR:OG1	2.17	0.45
17:UQ:334:LEU:HA	17:UQ:335:PRO:HD2	1.71	0.45
22:UV:228:ARG:NH2	22:UV:296:ILE:H	2.13	0.45
24:UZ:103:VAL:HG21	24:UZ:131:VAL:HG11	1.98	0.45
27:CE:319:ILE:HD12	27:CE:319:ILE:HG23	1.76	0.45
32:CK:476:MET:HE1	32:CK:489:SER:HB2	1.97	0.45
33:CL:131:ILE:HA	33:CL:131:ILE:HD13	1.73	0.45
33:CL:824:ILE:HG21	33:CL:824:ILE:HD13	1.74	0.45
33:CL:890:CYS:O	33:CL:922:ILE:HD11	2.16	0.45
33:CL:980:LEU:H	33:CL:987:TYR:HA	1.81	0.45
36:JA:505:ARG:NE	36:JA:643:GLU:O	2.46	0.45
37:JC:191:VAL:HG22	42:JK:484:LYS:HE3	1.98	0.45
39:JG:31:LEU:HD13	39:JG:40:ARG:NE	2.28	0.45
46:JP:139:CYS:SG	46:JP:185:ILE:HB	2.56	0.45
48:DA:141:ALA:HA	48:DA:209:ASN:O	2.16	0.45
48:DA:190:PRO:HG2	48:DA:192:VAL:HG13	1.97	0.45
51:DG:25:ARG:HA	51:DG:28:PHE:CD2	2.52	0.45
59:DS:83:ALA:O	59:DS:86:LEU:O	2.33	0.45
61:DX:132:LEU:HD23	61:DX:135:LEU:HD12	1.97	0.45
66:D3:505:A:N6	66:D3:586:G:H2'	2.32	0.45
66:D3:1592:A:N3	66:D3:1605:G:N2	2.64	0.45
4:UD:87:GLN:HB3	4:UD:378:TYR:CD2	2.51	0.45
4:UD:149:ILE:HA	4:UD:156:LEU:HA	1.98	0.45
4:UD:527:TYR:HA	4:UD:530:ARG:HD3	1.99	0.45
4:UD:611:LEU:HD12	4:UD:615:SER:HB2	1.98	0.45
6:UF:21:LYS:NZ	6:UF:80:THR:OG1	2.34	0.45
6:UF:289:HIS:NE2	27:CE:216:SER:OG	2.42	0.45
9:UI:481:HIS:O	9:UI:484:SER:OG	2.23	0.45
10:UJ:59:LEU:HD23	10:UJ:59:LEU:HA	1.77	0.45
15:UO:229:CYS:SG	15:UO:258:LEU:HD13	2.57	0.45
15:UO:323:SER:O	15:UO:323:SER:OG	2.34	0.45
19:US:345:ILE:HD12	19:US:349:LEU:HD12	1.99	0.45
20:UT:896:LEU:O	20:UT:900:GLU:CB	2.64	0.45
22:UV:574:LEU:HD23	22:UV:574:LEU:HA	1.75	0.45
22:UV:744:MET:HE1	22:UV:810:ILE:HG23	1.98	0.45
22:UV:1096:TYR:HD2	22:UV:1099:VAL:HG22	1.82	0.45
26:CD:277:ARG:NH2	27:CE:264:GLU:HB3	2.32	0.45
31:CJ:173:ARG:HD2	31:CJ:251:GLY:HA2	1.97	0.45
33:CL:1115:LYS:O	33:CL:1119:ILE:HG12	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:CL:1118:THR:OG1	65:D2:445:U:O2'	2.33	0.45
36:JA:121:MET:HG3	36:JA:147:ILE:HB	1.99	0.45
36:JA:520:ARG:HA	36:JA:523:LEU:HB3	1.98	0.45
38:JE:319:VAL:HG22	38:JE:324:ASP:HB3	1.97	0.45
51:DG:137:ARG:HH12	66:D3:143:G:H8	1.65	0.45
61:DX:60:GLU:OE1	61:DX:60:GLU:N	2.49	0.45
62:DY:6:THR:HB	62:DY:28:LEU:HB2	1.97	0.45
65:D2:105:G:N2	65:D2:140:U:O2	2.48	0.45
66:D3:655:G:H1'	66:D3:656:G:N7	2.31	0.45
1:UA:705:SER:OG	1:UA:706:THR:N	2.49	0.45
2:UB:310:ARG:O	2:UB:314:MET:N	2.49	0.45
4:UD:404:MET:HA	4:UD:414:TYR:HA	1.99	0.45
7:UG:99:THR:OG1	7:UG:100:ALA:N	2.50	0.45
8:UH:537:THR:OG1	8:UH:538:ARG:N	2.49	0.45
12:UL:260:GLU:HB3	12:UL:273:TYR:CE1	2.51	0.45
12:UL:400:SER:HB2	12:UL:404:LYS:HB3	1.98	0.45
13:UM:490:HIS:NE2	13:UM:508:THR:OG1	2.44	0.45
22:UV:251:PHE:HE2	22:UV:284:ASN:HA	1.82	0.45
22:UV:1150:VAL:O	22:UV:1154:ASN:ND2	2.50	0.45
25:CA:198:GLU:OE2	25:CA:200:SER:N	2.47	0.45
25:CA:236:MET:HG3	26:CD:133:LEU:HA	1.98	0.45
25:CB:97:TYR:OH	25:CB:109:LYS:NZ	2.29	0.45
26:CD:221:LEU:HD21	26:CD:276:GLN:HB2	1.98	0.45
28:CG:56:ALA:HB2	28:CG:80:PHE:HD2	1.82	0.45
30:CI:162:ASP:OD1	30:CI:162:ASP:N	2.37	0.45
31:CJ:211:ASN:OD1	31:CJ:212:ALA:N	2.49	0.45
33:CL:190:LEU:HD23	33:CL:190:LEU:HA	1.66	0.45
48:DA:19:ARG:NH1	48:DA:22:ASP:H	2.07	0.45
48:DA:187:LYS:O	48:DA:190:PRO:HD2	2.17	0.45
51:DG:121:LEU:N	51:DG:125:THR:OG1	2.50	0.45
66:D3:235:G:H2'	66:D3:236:A:H8	1.82	0.45
66:D3:460:A:H3'	66:D3:461:G:C8	2.51	0.45
66:D3:1781:A:H3'	66:D3:1782:A:O4'	2.17	0.45
1:UA:167:ASP:OD2	1:UA:169:SER:OG	2.31	0.45
1:UA:732:GLU:HG3	1:UA:734:GLN:HE22	1.80	0.45
2:UB:385:ASP:O	2:UB:389:ASP:N	2.44	0.45
3:UC:434:PHE:HD1	39:JG:132:ARG:HH11	1.64	0.45
8:UH:271:SER:O	8:UH:281:PHE:N	2.46	0.45
12:UL:764:GLU:HG2	12:UL:834:LYS:HE2	1.98	0.45
13:UM:63:GLU:OE1	13:UM:64:ILE:N	2.49	0.45
13:UM:363:ARG:HG2	13:UM:383:ILE:HG22	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:UM:810:LEU:HA	13:UM:810:LEU:HD23	1.73	0.45
15:UO:33:ALA:HB2	15:UO:330:ARG:HG2	1.98	0.45
15:UO:178:PRO:HD3	15:UO:220:ALA:HB1	1.99	0.45
17:UQ:332:GLN:HE22	18:UR:344:ARG:HB2	1.79	0.45
19:US:273:GLN:O	19:US:276:SER:N	2.49	0.45
21:UU:414:ILE:HG12	21:UU:434:HIS:ND1	2.32	0.45
25:CA:101:GLY:O	43:JM:127:ARG:NH1	2.50	0.45
28:CF:119:ASP:O	28:CF:122:GLU:HG3	2.16	0.45
33:CL:828:ARG:NH1	61:DX:94:ASN:OD1	2.49	0.45
33:CL:828:ARG:NH1	61:DX:94:ASN:O	2.50	0.45
37:JC:329:PHE:O	37:JC:340:THR:HA	2.16	0.45
66:D3:328:A:H2'	66:D3:329:G:H8	1.82	0.45
66:D3:538:A:H8	66:D3:543:C:H42	1.65	0.45
66:D3:1746:A:H2'	66:D3:1747:G:H8	1.80	0.45
6:UF:199:ARG:HA	6:UF:202:VAL:HG12	1.98	0.45
10:UJ:121:LEU:HD23	10:UJ:121:LEU:HA	1.71	0.45
13:UM:507:ALA:HA	13:UM:516:LYS:O	2.17	0.45
15:UO:217:ASN:ND2	15:UO:257:CYS:HA	2.32	0.45
15:UO:285:ASP:CG	15:UO:293:LYS:HZ3	2.20	0.45
15:UO:405:PHE:HE2	15:UO:442:LEU:HD12	1.81	0.45
17:UQ:237:LEU:HD21	17:UQ:285:LEU:HD12	1.99	0.45
17:UQ:284:SER:O	17:UQ:288:LEU:HA	2.17	0.45
17:UQ:415:THR:OG1	17:UQ:416:SER:N	2.50	0.45
17:UQ:488:LEU:HA	17:UQ:488:LEU:HD23	1.70	0.45
19:US:344:ILE:HG12	19:US:349:LEU:HD21	1.98	0.45
21:UU:378:PHE:HA	21:UU:386:SER:HB2	1.99	0.45
22:UV:160:VAL:HG11	22:UV:230:VAL:HG12	1.98	0.45
22:UV:763:THR:HG21	22:UV:935:GLU:HG2	1.98	0.45
22:UV:919:TRP:O	22:UV:922:THR:OG1	2.30	0.45
24:UZ:64:LEU:HB3	24:UZ:65:PHE:HD1	1.81	0.45
25:CB:212:LYS:HA	26:CD:259:MET:HE3	1.99	0.45
29:CH:249:LYS:HA	29:CH:249:LYS:HD2	1.75	0.45
29:CH:409:ASP:OD1	29:CH:412:HIS:N	2.46	0.45
31:CJ:23:SER:O	31:CJ:26:GLN:HB3	2.17	0.45
33:CL:80:THR:HG23	33:CL:172:THR:HG21	1.98	0.45
33:CL:1056:LYS:HA	33:CL:1056:LYS:HD3	1.75	0.45
36:JA:19:GLN:NE2	36:JA:219:LEU:HD12	2.31	0.45
36:JA:545:HIS:ND1	36:JA:547:LYS:O	2.50	0.45
38:JE:247:GLU:CD	54:DJ:78:ARG:HH11	2.19	0.45
44:JN:315:THR:HG21	44:JN:320:ILE:HD12	1.98	0.45
46:JP:96:ASN:OD1	46:JP:97:MET:N	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DG:169:TYR:HE2	66:D3:73:U:C4	2.35	0.45
52:DH:28:GLU:O	52:DH:35:LYS:HB2	2.15	0.45
52:DH:70:PHE:O	52:DH:74:GLN:CB	2.50	0.45
66:D3:149:C:H2'	66:D3:150:U:H6	1.82	0.45
66:D3:364:G:H2'	66:D3:366:A:C8	2.52	0.45
66:D3:450:U:H2'	66:D3:451:A:H8	1.82	0.45
66:D3:1498:G:H2'	66:D3:1499:G:H8	1.81	0.45
66:D3:1688:U:H3	66:D3:1713:G:H22	1.65	0.45
2:UB:465:LYS:HG2	2:UB:466:TYR:CZ	2.52	0.45
4:UD:636:ILE:HG12	4:UD:648:PHE:CD1	2.51	0.45
6:UF:196:LEU:HD12	6:UF:196:LEU:HA	1.81	0.45
10:UJ:381:ARG:NH1	17:UQ:856:GLU:OE1	2.49	0.45
12:UL:436:CYS:HA	12:UL:447:LEU:HD23	1.99	0.45
13:UM:41:ASN:OD1	13:UM:55:LYS:HG2	2.17	0.45
17:UQ:215:VAL:HA	17:UQ:218:LYS:HB2	1.99	0.45
21:UU:428:GLU:HG2	21:UU:451:GLY:HA3	1.99	0.45
24:UZ:104:LYS:HE2	24:UZ:104:LYS:HB2	1.73	0.45
27:CE:149:ARG:HH21	27:CE:154:PHE:HB2	1.80	0.45
27:CE:193:PRO:HD2	27:CE:242:SER:HB2	1.98	0.45
28:CG:105:ASN:OD1	28:CG:106:ASP:N	2.50	0.45
31:CJ:139:LEU:HD23	31:CJ:266:LEU:HD21	1.98	0.45
33:CL:210:VAL:HG12	33:CL:213:GLY:H	1.82	0.45
33:CL:830:ARG:HG3	33:CL:831:ARG:O	2.16	0.45
37:JC:185:HIS:CD2	37:JC:233:THR:HA	2.52	0.45
51:DG:160:ARG:NH1	66:D3:68:A:OP1	2.30	0.45
52:DH:38:LEU:HA	52:DH:41:LEU:HB2	1.99	0.45
56:DN:20:ARG:NH2	66:D3:861:U:O3'	2.50	0.45
62:DY:88:THR:HA	62:DY:91:LEU:HB2	1.99	0.45
65:D2:377:U:H2'	65:D2:378:C:H6	1.81	0.45
66:D3:912:U:H4'	66:D3:913:G:H5'	1.98	0.45
66:D3:1216:C:O2'	66:D3:1218:G:N2	2.50	0.45
66:D3:1486:G:H8	66:D3:1486:G:H5"	1.81	0.45
1:UA:163:THR:O	1:UA:163:THR:OG1	2.35	0.45
2:UB:441:TYR:CE2	2:UB:619:LEU:HB2	2.52	0.45
6:UF:106:ASP:O	6:UF:109:PHE:N	2.49	0.45
11:UK:93:MET:HA	11:UK:96:VAL:HG12	1.97	0.45
11:UK:103:ASP:HB3	11:UK:218:MET:HE1	1.98	0.45
13:UM:77:THR:HG21	13:UM:117:LEU:HD22	1.98	0.45
15:UO:431:LEU:O	15:UO:434:ARG:HG2	2.17	0.45
17:UQ:64:LYS:HZ3	17:UQ:123:GLY:H	1.65	0.45
17:UQ:440:VAL:HB	17:UQ:765:TRP:CE2	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:US:472:HIS:CG	19:US:473:TYR:H	2.34	0.45
21:UU:240:ARG:HH21	21:UU:243:THR:HB	1.81	0.45
22:UV:523:TYR:CD2	22:UV:616:LYS:HD2	2.52	0.45
22:UV:579:LYS:HB2	22:UV:618:ILE:HG22	1.99	0.45
28:CG:51:PHE:CZ	28:CG:102:ILE:HD13	2.52	0.45
29:CH:476:THR:OG1	29:CH:490:GLY:O	2.26	0.45
32:CK:340:LEU:HD12	32:CK:340:LEU:HA	1.73	0.45
32:CK:538:LYS:HG2	66:D3:1628:U:N3	2.31	0.45
34:CM:108:PRO:HB2	34:CM:174:ILE:HG12	1.99	0.45
37:JC:62:ILE:HG13	37:JC:332:ALA:HB2	1.98	0.45
39:JG:40:ARG:HH11	39:JG:172:PRO:HG3	1.79	0.45
39:JG:90:ASP:HA	39:JG:134:PHE:HE2	1.82	0.45
46:JP:196:THR:HG22	46:JP:204:TRP:HE1	1.82	0.45
51:DG:214:LYS:HA	51:DG:214:LYS:HD2	1.77	0.45
54:DJ:23:ARG:HH21	54:DJ:23:ARG:HD3	1.62	0.45
66:D3:914:G:H5'	66:D3:914:G:C8	2.51	0.45
66:D3:1708:U:H2'	66:D3:1709:C:C2	2.52	0.45
1:UA:592:ILE:HD13	1:UA:592:ILE:HG21	1.72	0.45
4:UD:235:LYS:HE3	4:UD:235:LYS:HB3	1.85	0.45
4:UD:479:LYS:HD3	4:UD:479:LYS:HA	1.86	0.45
16:UP:194:LYS:HB3	16:UP:194:LYS:HE2	1.57	0.45
17:UQ:216:SER:HA	17:UQ:222:HIS:HA	1.99	0.45
17:UQ:379:LEU:HD23	17:UQ:379:LEU:HA	1.67	0.45
18:UR:352:GLN:HE22	18:UR:377:LEU:HD13	1.82	0.45
25:CB:264:GLN:N	25:CB:320:TYR:O	2.50	0.45
26:CD:372:LYS:HD2	26:CD:372:LYS:H	1.82	0.45
31:CJ:281:ILE:HG23	66:D3:562:G:C6	2.51	0.45
32:CK:430:LEU:HD13	44:JN:203:ILE:HD12	1.99	0.45
34:CM:298:ILE:HD13	34:CM:298:ILE:HA	1.79	0.45
37:JC:180:THR:HG21	37:JC:199:THR:HB	1.99	0.45
37:JC:253:TYR:HB3	37:JC:255:TYR:CE1	2.52	0.45
41:JJ:96:SER:HA	41:JJ:139:LEU:O	2.17	0.45
49:DE:98:ASN:H	49:DE:113:ARG:NH1	2.15	0.45
50:DF:165:LEU:HA	50:DF:165:LEU:HD12	1.76	0.45
60:DW:3:ARG:HH21	66:D3:865:A:H4'	1.81	0.45
66:D3:1684:U:H3	66:D3:1717:G:H1	1.64	0.45
4:UD:488:ILE:HB	4:UD:496:PHE:HB2	1.99	0.44
4:UD:579:ARG:NH2	4:UD:659:PHE:HB2	2.32	0.44
4:UD:622:LEU:O	4:UD:627:LYS:NZ	2.50	0.44
5:UE:169:SER:O	5:UE:169:SER:OG	2.32	0.44
8:UH:161:ASP:O	8:UH:163:PHE:N	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:UI:487:ARG:NH1	65:D2:8:A:O2'	2.50	0.44
10:UJ:1544:PHE:O	10:UJ:1548:PHE:N	2.48	0.44
10:UJ:1588:GLY:HA2	10:UJ:1633:ASP:HA	1.99	0.44
11:UK:180:ASN:HB2	11:UK:186:PRO:HG3	1.98	0.44
12:UL:298:LYS:O	12:UL:301:LYS:HG2	2.17	0.44
13:UM:602:TRP:CG	13:UM:609:CYS:HA	2.52	0.44
15:UO:51:HIS:HB3	15:UO:53:HIS:CE1	2.52	0.44
17:UQ:586:SER:OG	17:UQ:587:PHE:N	2.49	0.44
18:UR:514:LEU:HD22	18:UR:540:ALA:HB1	1.99	0.44
19:US:456:THR:O	19:US:458:ALA:N	2.43	0.44
21:UU:177:LEU:O	21:UU:179:LYS:HG3	2.17	0.44
22:UV:519:ASP:N	22:UV:519:ASP:OD1	2.50	0.44
25:CB:145:ASN:HB2	25:CB:148:ARG:HB2	1.98	0.44
28:CF:32:GLN:O	28:CF:103:THR:HG22	2.17	0.44
29:CH:415:THR:HG1	29:CH:425:TRP:HE1	1.64	0.44
31:CJ:89:ILE:HD11	31:CJ:136:THR:HG21	1.99	0.44
31:CJ:186:ASN:HB3	31:CJ:214:PRO:HB3	1.99	0.44
33:CL:280:LEU:HD12	33:CL:281:PRO:HD2	1.97	0.44
37:JC:189:ASN:ND2	37:JC:236:PHE:HB2	2.33	0.44
51:DG:7:TYR:CE1	51:DG:9:VAL:HB	2.53	0.44
51:DG:37:ASP:N	51:DG:37:ASP:OD1	2.50	0.44
57:DO:47:LYS:HD3	57:DO:47:LYS:HA	1.77	0.44
65:D2:132:C:H2'	65:D2:133:U:C6	2.52	0.44
65:D2:180:G:H2'	65:D2:181:A:C8	2.51	0.44
5:UE:203:ILE:HG12	5:UE:214:VAL:HG22	1.98	0.44
6:UF:152:LYS:O	6:UF:156:GLU:HG2	2.18	0.44
7:UG:106:LEU:HA	7:UG:106:LEU:HD23	1.77	0.44
10:UJ:271:LYS:HA	18:UR:220:ASP:HB2	1.99	0.44
10:UJ:333:LEU:HD12	10:UJ:333:LEU:HA	1.73	0.44
11:UK:58:ARG:HD3	33:CL:1076:GLU:O	2.17	0.44
13:UM:111:ASP:OD1	13:UM:112:SER:N	2.50	0.44
13:UM:442:LEU:HD13	13:UM:445:ILE:HD11	1.99	0.44
17:UQ:210:HIS:CE1	17:UQ:226:SER:HB3	2.53	0.44
18:UR:408:CYS:SG	18:UR:458:ILE:HG23	2.57	0.44
18:UR:471:LEU:HD23	18:UR:471:LEU:HA	1.72	0.44
21:UU:21:SER:OG	21:UU:24:PHE:O	2.35	0.44
25:CA:212:LYS:HZ3	27:CE:243:MET:HG3	1.83	0.44
27:CE:245:THR:OG1	27:CE:246:GLU:N	2.50	0.44
29:CH:307:TYR:HD2	29:CH:314:GLN:HA	1.82	0.44
32:CK:453:SER:O	32:CK:453:SER:OG	2.31	0.44
33:CL:228:SER:O	33:CL:228:SER:OG	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:CL:753:LEU:HD12	33:CL:753:LEU:HA	1.69	0.44
33:CL:978:ARG:HE	33:CL:978:ARG:HB3	1.56	0.44
38:JE:320:ILE:HD11	54:DJ:48:GLN:OE1	2.17	0.44
46:JP:297:SER:OG	46:JP:299:ASN:O	2.33	0.44
51:DG:77:LEU:HB3	51:DG:84:TYR:CG	2.53	0.44
53:DI:101:ILE:HD13	53:DI:101:ILE:HA	1.82	0.44
66:D3:682:C:H2'	66:D3:683:C:C6	2.52	0.44
1:UA:663:GLY:HA3	30:CI:147:ALA:O	2.17	0.44
4:UD:525:VAL:HA	4:UD:526:PRO:HD3	1.80	0.44
5:UE:436:THR:C	19:US:294:LYS:HZ3	2.21	0.44
9:UI:417:LYS:O	9:UI:421:LEU:HG	2.18	0.44
11:UK:54:LYS:HE3	65:D2:453:A:H5"	1.98	0.44
12:UL:553:ASN:HA	12:UL:575:PRO:HA	2.00	0.44
15:UO:221:VAL:HG23	15:UO:260:TYR:CG	2.53	0.44
17:UQ:220:HIS:ND1	65:D2:21:A:H5"	2.33	0.44
17:UQ:744:ILE:HA	17:UQ:755:GLY:O	2.17	0.44
22:UV:310:PRO:HB3	22:UV:330:PRO:HA	1.98	0.44
22:UV:315:ILE:HB	22:UV:553:VAL:HG23	1.99	0.44
22:UV:378:ASN:N	22:UV:378:ASN:OD1	2.50	0.44
22:UV:1116:SER:O	22:UV:1116:SER:OG	2.33	0.44
23:UX:112:LYS:NZ	44:JN:303:GLU:O	2.51	0.44
25:CB:93:HIS:CE1	25:CB:162:LEU:H	2.35	0.44
25:CB:302:GLU:HB3	25:CB:317:VAL:HG22	1.99	0.44
26:CD:251:VAL:HA	26:CD:254:ASN:HB2	1.98	0.44
28:CG:33:LEU:HD11	28:CG:100:ALA:HB1	1.99	0.44
28:CG:58:CYS:HG	28:CG:61:ILE:HA	1.82	0.44
28:CG:65:LEU:O	28:CG:68:PRO:HD2	2.17	0.44
29:CH:295:LEU:O	29:CH:306:THR:HA	2.17	0.44
30:CI:38:ILE:HG21	30:CI:38:ILE:HD13	1.64	0.44
36:JA:737:TRP:O	36:JA:740:ASN:O	2.34	0.44
36:JA:827:ARG:HA	36:JA:830:LEU:HD12	1.98	0.44
44:JN:268:LYS:O	44:JN:270:GLY:N	2.50	0.44
46:JP:456:GLU:HA	46:JP:459:LYS:HE2	1.98	0.44
53:DI:74:LYS:HA	53:DI:74:LYS:HD3	1.81	0.44
56:DN:46:THR:O	56:DN:50:ILE:HG12	2.17	0.44
66:D3:406:U:H2'	66:D3:407:A:C8	2.53	0.44
66:D3:533:U:H2'	66:D3:534:A:H8	1.82	0.44
67:D4:310:G:H2'	67:D4:311:G:H8	1.81	0.44
1:UA:27:LYS:HG2	1:UA:43:ILE:HD12	1.99	0.44
1:UA:125:PRO:HD3	1:UA:136:PHE:HE1	1.83	0.44
1:UA:315:GLU:HA	1:UA:332:TRP:HE1	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:UD:279:HIS:HB3	4:UD:305:PHE:CE1	2.53	0.44
5:UE:252:SER:OG	5:UE:253:LEU:N	2.51	0.44
5:UE:492:THR:HB	5:UE:533:ARG:HH21	1.82	0.44
7:UG:48:LYS:O	7:UG:52:GLN:HG3	2.18	0.44
8:UH:168:LYS:HA	8:UH:179:LYS:HA	2.00	0.44
8:UH:659:THR:CG2	9:UI:507:ARG:HH21	2.30	0.44
11:UK:185:MET:HG3	11:UK:189:SER:HB3	2.00	0.44
12:UL:125:THR:OG1	12:UL:126:LEU:N	2.49	0.44
12:UL:446:ILE:HD13	12:UL:456:LEU:HB3	2.00	0.44
12:UL:860:ILE:HD12	12:UL:860:ILE:HA	1.75	0.44
13:UM:405:THR:HB	13:UM:413:ILE:HG23	1.99	0.44
17:UQ:259:VAL:HG23	17:UQ:273:VAL:HG13	2.00	0.44
19:US:254:LYS:HZ1	19:US:288:HIS:CD2	2.35	0.44
21:UU:367:LEU:HA	21:UU:367:LEU:HD23	1.81	0.44
22:UV:439:HIS:CE1	22:UV:458:ILE:HB	2.52	0.44
22:UV:459:ASP:OD1	22:UV:459:ASP:N	2.42	0.44
27:CE:348:VAL:HG22	27:CE:359:ILE:HG22	1.98	0.44
32:CK:509:LEU:HD23	32:CK:509:LEU:HA	1.74	0.44
32:CK:534:ARG:NH2	66:D3:1628:U:OP2	2.50	0.44
33:CL:830:ARG:HD2	33:CL:880:TYR:CE1	2.51	0.44
33:CL:1019:THR:O	33:CL:1019:THR:OG1	2.24	0.44
37:JC:225:ASP:OD2	37:JC:227:ARG:NH2	2.50	0.44
39:JG:182:PHE:CE1	39:JG:231:PRO:HA	2.47	0.44
42:JK:489:GLN:NE2	42:JK:490:ILE:HG22	2.33	0.44
65:D2:496:G:O6	65:D2:497:A:N6	2.51	0.44
66:D3:309:C:H2'	66:D3:310:C:H6	1.82	0.44
1:UA:106:PRO:HG2	1:UA:158:SER:HB3	2.00	0.44
4:UD:532:ASN:HB3	4:UD:533:HIS:CE1	2.52	0.44
5:UE:435:GLY:O	19:US:294:LYS:NZ	2.37	0.44
10:UJ:86:GLN:HB2	10:UJ:91:ILE:HD11	2.00	0.44
12:UL:279:LYS:HG2	12:UL:336:TYR:O	2.17	0.44
12:UL:661:TRP:NE1	12:UL:677:HIS:HB2	2.32	0.44
13:UM:16:TYR:HB3	13:UM:335:GLY:HA3	2.00	0.44
22:UV:518:PHE:CE2	22:UV:1075:LEU:HB3	2.53	0.44
22:UV:584:GLU:OE1	22:UV:614:ARG:NH1	2.50	0.44
22:UV:933:LEU:O	22:UV:937:ILE:HG12	2.17	0.44
24:UZ:73:LEU:HD13	24:UZ:99:GLU:HB3	1.98	0.44
26:CD:74:VAL:HG13	26:CD:78:LEU:HD23	1.98	0.44
26:CD:225:ASP:N	26:CD:225:ASP:OD1	2.51	0.44
31:CJ:51:SER:OG	31:CJ:52:LEU:N	2.51	0.44
34:CM:303:ILE:HD11	34:CM:359:PHE:CD1	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:JA:746:TYR:HB3	36:JA:761:VAL:HG12	1.98	0.44
45:JO:117:LEU:HD12	45:JO:117:LEU:HA	1.82	0.44
46:JP:290:ASP:OD1	46:JP:291:MET:N	2.51	0.44
66:D3:1174:C:O2'	66:D3:1175:U:O4'	2.36	0.44
66:D3:1274:C:H2'	66:D3:1275:A:C8	2.53	0.44
1:UA:745:LEU:HD12	1:UA:745:LEU:HA	1.80	0.44
2:UB:512:ASP:OD1	2:UB:512:ASP:N	2.50	0.44
5:UE:174:ASP:O	5:UE:178:LYS:HA	2.16	0.44
5:UE:245:ALA:HB2	5:UE:296:ILE:HD12	1.99	0.44
5:UE:469:ILE:O	5:UE:509:HIS:NE2	2.49	0.44
7:UG:485:ASP:OD1	7:UG:486:VAL:N	2.50	0.44
9:UI:439:LYS:HA	9:UI:442:THR:HG22	1.98	0.44
12:UL:137:ILE:HG23	12:UL:147:VAL:HG22	1.99	0.44
12:UL:488:LEU:HD23	12:UL:488:LEU:HA	1.80	0.44
15:UO:212:ASP:N	15:UO:212:ASP:OD1	2.50	0.44
15:UO:315:ASN:N	15:UO:315:ASN:OD1	2.50	0.44
17:UQ:175:ALA:O	17:UQ:187:VAL:HA	2.17	0.44
19:US:340:LYS:HA	19:US:340:LYS:HD2	1.70	0.44
21:UU:155:THR:OG1	21:UU:156:LYS:N	2.51	0.44
21:UU:735:LEU:HD23	21:UU:735:LEU:HA	1.74	0.44
22:UV:731:LYS:NZ	22:UV:735:ASP:OD1	2.47	0.44
24:UZ:85:GLU:OE2	24:UZ:86:THR:OG1	2.34	0.44
24:UZ:163:LYS:HA	24:UZ:163:LYS:HD2	1.82	0.44
26:CD:96:ILE:HA	26:CD:96:ILE:HD13	1.76	0.44
29:CH:522:THR:HG23	29:CH:548:ARG:HG2	1.99	0.44
34:CM:23:LEU:HD23	34:CM:23:LEU:HA	1.73	0.44
34:CM:53:LEU:HA	34:CM:53:LEU:HD23	1.73	0.44
36:JA:817:ASP:HB2	36:JA:820:HIS:HD1	1.82	0.44
37:JC:166:ASN:OD1	37:JC:167:LEU:N	2.51	0.44
37:JC:200:GLU:OE1	37:JC:230:GLN:NE2	2.48	0.44
39:JF:63:ASP:OD1	39:JF:63:ASP:N	2.50	0.44
46:JP:66:HIS:HD1	46:JP:87:SER:HB3	1.82	0.44
51:DG:30:LYS:H	51:DG:102:VAL:HG12	1.81	0.44
55:DL:115:PHE:HB3	55:DL:142:VAL:HG21	1.99	0.44
61:DX:61:SER:O	61:DX:69:ARG:HD3	2.17	0.44
66:D3:157:A:O2'	66:D3:158:U:O4'	2.27	0.44
66:D3:369:A:H2'	66:D3:370:A:C8	2.53	0.44
2:UB:428:VAL:O	2:UB:432:HIS:HB2	2.17	0.44
3:UC:502:LYS:NZ	66:D3:1499:G:OP1	2.50	0.44
3:UC:503:GLN:OE1	3:UC:506:LYS:NZ	2.49	0.44
4:UD:117:ILE:HD11	4:UD:147:ILE:HB	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:UE:487:ARG:HB2	5:UE:487:ARG:HH11	1.82	0.44
10:UJ:32:SER:OG	10:UJ:33:LEU:N	2.51	0.44
11:UK:166:LEU:HD12	11:UK:170:GLN:HB3	2.00	0.44
17:UQ:581:GLY:HA2	17:UQ:602:PRO:HD2	1.99	0.44
18:UR:562:LEU:HA	18:UR:562:LEU:HD23	1.77	0.44
19:US:1:MET:O	19:US:5:ILE:N	2.47	0.44
19:US:345:ILE:HG23	19:US:382:LYS:HE2	1.99	0.44
33:CL:64:GLU:N	33:CL:64:GLU:OE2	2.49	0.44
33:CL:815:LEU:HA	33:CL:815:LEU:HD23	1.72	0.44
36:JA:14:ILE:HD12	36:JA:43:LEU:HD22	2.00	0.44
36:JA:545:HIS:HB2	36:JA:637:ARG:NH2	2.33	0.44
39:JG:156:GLU:OE1	39:JG:157:GLU:HG2	2.17	0.44
43:JM:203:LYS:HE2	43:JM:203:LYS:HB2	1.78	0.44
45:JO:295:ARG:HH22	66:D3:317:C:P	2.41	0.44
48:DA:130:SER:HB2	48:DA:180:THR:HG22	2.00	0.44
52:DH:5:GLN:HG2	52:DH:6:ALA:H	1.82	0.44
65:D2:193:G:H2'	65:D2:194:G:H8	1.83	0.44
66:D3:1688:U:H2'	66:D3:1689:A:C8	2.53	0.44
4:UD:552:ILE:HB	4:UD:563:LEU:HD11	1.98	0.44
7:UG:230:THR:O	7:UG:230:THR:OG1	2.32	0.44
10:UJ:210:LEU:HD21	10:UJ:253:CYS:HA	1.99	0.44
12:UL:495:LYS:HE2	12:UL:495:LYS:HB2	1.74	0.44
12:UL:655:ALA:HB2	12:UL:684:TRP:CH2	2.53	0.44
13:UM:154:GLY:HA3	13:UM:161:TRP:CD1	2.52	0.44
15:UO:21:THR:HG22	15:UO:24:GLN:CD	2.38	0.44
15:UO:413:LEU:HD23	15:UO:413:LEU:HA	1.80	0.44
19:US:407:ARG:HE	19:US:491:LEU:HD13	1.83	0.44
21:UU:503:ARG:HD2	21:UU:523:ASP:HB3	1.98	0.44
21:UU:866:ASP:O	21:UU:869:THR:OG1	2.30	0.44
22:UV:800:GLU:O	22:UV:804:THR:HG23	2.18	0.44
22:UV:1160:SER:HA	22:UV:1190:PHE:HD2	1.83	0.44
25:CA:212:LYS:NZ	27:CE:243:MET:O	2.45	0.44
26:CD:52:SER:OG	26:CD:53:PHE:N	2.50	0.44
27:CE:371:LEU:HD23	27:CE:371:LEU:HA	1.66	0.44
28:CG:58:CYS:SG	28:CG:61:ILE:HA	2.58	0.44
31:CJ:171:VAL:HG21	31:CJ:253:ARG:HD3	1.99	0.44
33:CL:780:ILE:HG22	34:CM:336:GLU:HB3	1.99	0.44
33:CL:1113:ILE:HA	33:CL:1113:ILE:HD13	1.80	0.44
36:JA:45:MET:O	36:JA:48:ASP:O	2.36	0.44
37:JC:297:ALA:HB3	37:JC:311:MET:HG3	2.00	0.44
38:JE:263:GLY:HA3	54:DJ:138:LYS:HE3	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:JJ:120:LEU:HD11	41:JJ:159:ILE:HD11	2.00	0.44
43:JM:122:LEU:HD23	43:JM:122:LEU:HA	1.78	0.44
49:DE:71:LYS:HG2	49:DE:76:VAL:HG22	1.99	0.44
52:DH:98:ILE:HG13	52:DH:100:PRO:HD3	1.98	0.44
56:DN:3:ARG:HD3	56:DN:3:ARG:HA	1.84	0.44
62:DY:57:VAL:HG12	62:DY:73:GLY:HA3	2.00	0.44
66:D3:412:A:N3	66:D3:422:G:N2	2.65	0.44
66:D3:1266:U:H5"	66:D3:1267:G:H5'	1.99	0.44
2:UB:515:HIS:CD2	2:UB:517:VAL:H	2.36	0.44
5:UE:109:ASP:O	5:UE:119:CYS:HA	2.17	0.44
5:UE:210:ARG:HH21	5:UE:210:ARG:HD2	1.68	0.44
5:UE:481:LEU:HD22	5:UE:502:VAL:HG23	1.99	0.44
7:UG:142:GLY:O	10:UJ:8:LEU:HB3	2.18	0.44
9:UI:484:SER:HB3	65:D2:10:C:OP1	2.18	0.44
11:UK:94:ASP:OD1	11:UK:94:ASP:N	2.50	0.44
12:UL:530:LEU:HD13	12:UL:550:LEU:HD21	1.99	0.44
30:CI:40:ASN:HB3	30:CI:42:GLU:HG2	1.99	0.44
31:CJ:43:PRO:HD2	31:CJ:46:LEU:HD12	1.98	0.44
33:CL:623:LYS:HB3	33:CL:623:LYS:HE3	1.74	0.44
34:CM:14:SER:HB3	34:CM:36:ILE:HG23	1.99	0.44
37:JC:179:ASP:OD1	37:JC:179:ASP:N	2.37	0.44
60:DW:2:THR:OG1	66:D3:634:G:O2'	2.34	0.44
62:DY:2:SER:OG	62:DY:3:ASP:N	2.51	0.44
66:D3:1662:G:H2'	66:D3:1663:G:C8	2.51	0.44
1:UA:44:ASN:O	1:UA:46:LYS:HG2	2.18	0.43
5:UE:24:LEU:HD23	5:UE:24:LEU:HA	1.66	0.43
5:UE:131:LEU:HA	5:UE:131:LEU:HD23	1.76	0.43
6:UF:167:ILE:HD11	14:UN:327:PHE:CE1	2.53	0.43
10:UJ:63:GLU:HA	10:UJ:64:PRO:HD3	1.82	0.43
12:UL:537:VAL:HA	12:UL:547:ALA:O	2.17	0.43
15:UO:133:HIS:HB2	15:UO:139:ILE:HG13	1.99	0.43
17:UQ:363:ASN:ND2	17:UQ:368:ASP:OD2	2.43	0.43
22:UV:188:SER:HA	22:UV:191:LEU:HD12	1.99	0.43
22:UV:380:SER:OG	22:UV:479:LYS:O	2.26	0.43
22:UV:853:ARG:HD3	22:UV:889:TYR:CZ	2.53	0.43
22:UV:1213:ILE:HG12	22:UV:1214:LEU:HD23	1.99	0.43
29:CH:551:ARG:O	29:CH:553:ILE:N	2.51	0.43
30:CI:56:ARG:HH11	30:CI:56:ARG:HD3	1.61	0.43
33:CL:75:VAL:HG22	33:CL:120:CYS:SG	2.58	0.43
36:JA:879:SER:HB3	36:JA:881:GLN:HG2	2.00	0.43
39:JF:125:ASN:OD1	39:JF:125:ASN:N	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:JM:215:LYS:HG2	43:JM:216:ARG:HH11	1.83	0.43
45:JO:96:LYS:HA	45:JO:96:LYS:HD2	1.80	0.43
54:DJ:109:LEU:HB2	54:DJ:146:PHE:HB3	1.99	0.43
65:D2:194:G:H2'	65:D2:195:A:C8	2.52	0.43
66:D3:1034:C:O2	66:D3:1084:A:N6	2.51	0.43
66:D3:1272:U:H2'	66:D3:1273:G:C8	2.52	0.43
1:UA:424:THR:O	1:UA:424:THR:OG1	2.29	0.43
4:UD:199:ASP:CA	4:UD:215:ALA:O	2.65	0.43
4:UD:332:ASP:N	4:UD:332:ASP:OD1	2.51	0.43
12:UL:75:ARG:HE	12:UL:75:ARG:HB2	1.62	0.43
12:UL:656:HIS:HB3	12:UL:682:ARG:NH1	2.33	0.43
14:UN:294:GLU:O	14:UN:297:LYS:HB3	2.18	0.43
15:UO:278:ASP:HA	19:US:331:ASN:HD21	1.82	0.43
18:UR:22:LEU:HA	18:UR:22:LEU:HD23	1.76	0.43
19:US:201:GLN:O	19:US:204:GLU:HG3	2.18	0.43
21:UU:114:THR:OG1	21:UU:115:ASP:N	2.52	0.43
22:UV:864:LEU:HD23	22:UV:864:LEU:HA	1.87	0.43
23:UX:68:ASP:OD1	23:UX:69:THR:N	2.49	0.43
26:CD:248:ALA:O	26:CD:252:ILE:HG12	2.18	0.43
34:CM:118:PHE:O	34:CM:165:GLU:HA	2.18	0.43
35:CN:147:LEU:HD21	35:CN:154:GLU:HB2	2.00	0.43
36:JA:788:LEU:HB3	36:JA:793:PHE:CZ	2.53	0.43
37:JC:93:PHE:HE2	37:JC:95:ARG:HB2	1.83	0.43
38:JE:236:ARG:HB3	38:JE:239:LYS:HD3	1.99	0.43
39:JF:143:GLN:HE22	39:JF:150:ILE:HG13	1.83	0.43
44:JN:316:ARG:HD3	66:D3:1036:A:H1'	1.98	0.43
46:JP:49:LYS:NZ	67:D4:25:U:OP2	2.40	0.43
46:JP:263:ARG:HG2	46:JP:264:THR:O	2.18	0.43
51:DG:101:ILE:HD13	51:DG:101:ILE:HA	1.88	0.43
58:DQ:110:THR:HG23	58:DQ:114:ARG:HG3	1.99	0.43
66:D3:52:U:H2'	66:D3:53:G:C8	2.53	0.43
66:D3:105:A:H62	66:D3:308:C:N4	2.17	0.43
66:D3:355:G:H2'	66:D3:356:G:C8	2.53	0.43
66:D3:380:U:H2'	66:D3:381:C:C6	2.52	0.43
66:D3:1270:G:H2'	66:D3:1271:G:C8	2.53	0.43
3:UC:540:ILE:HD12	3:UC:540:ILE:HG23	1.79	0.43
7:UG:138:ASP:O	7:UG:140:ARG:N	2.49	0.43
7:UG:497:LEU:HD22	7:UG:516:VAL:HG13	2.00	0.43
10:UJ:136:LEU:O	10:UJ:140:LEU:HB2	2.18	0.43
10:UJ:270:LEU:HD23	10:UJ:270:LEU:HA	1.78	0.43
10:UJ:372:LYS:HD3	10:UJ:372:LYS:HA	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:UM:209:LEU:HD12	13:UM:209:LEU:HA	1.85	0.43
13:UM:343:MET:HG3	13:UM:353:LEU:HD21	1.99	0.43
13:UM:498:SER:HB3	13:UM:541:PHE:HD2	1.83	0.43
15:UO:21:THR:HG22	15:UO:24:GLN:NE2	2.33	0.43
15:UO:448:LYS:O	15:UO:451:GLU:HB3	2.18	0.43
17:UQ:712:THR:HG22	17:UQ:720:ILE:HD11	2.00	0.43
22:UV:174:TYR:HB3	22:UV:223:ARG:HH11	1.82	0.43
22:UV:708:LEU:HD12	22:UV:708:LEU:HA	1.72	0.43
26:CD:149:ARG:HH12	27:CE:242:SER:C	2.21	0.43
29:CH:545:LYS:HA	29:CH:545:LYS:HD3	1.85	0.43
30:CI:80:ASP:HA	30:CI:91:LYS:HD3	2.00	0.43
33:CL:204:LEU:HD23	33:CL:204:LEU:H	1.83	0.43
34:CM:155:LYS:O	34:CM:165:GLU:N	2.48	0.43
38:JE:304:GLU:O	38:JE:308:GLN:HB2	2.19	0.43
49:DE:59:ARG:NH2	66:D3:446:A:OP2	2.51	0.43
54:DJ:45:ILE:HD13	54:DJ:45:ILE:HA	1.87	0.43
55:DL:85:VAL:HA	55:DL:108:PRO:HA	2.01	0.43
56:DN:120:SER:OG	66:D3:628:G:OP1	2.36	0.43
65:D2:20:C:H2'	65:D2:21:A:C8	2.53	0.43
65:D2:376:U:H2'	65:D2:377:U:H6	1.84	0.43
66:D3:898:A:N1	66:D3:911:U:O2'	2.41	0.43
66:D3:1665:U:OP2	66:D3:1665:U:C6	2.70	0.43
4:UD:32:ILE:HD11	4:UD:751:GLU:HG2	1.99	0.43
5:UE:473:LYS:HA	5:UE:474:PRO:HD3	1.82	0.43
6:UF:167:ILE:HD11	14:UN:327:PHE:CD1	2.53	0.43
6:UF:339:LEU:HB2	6:UF:343:LYS:HZ3	1.83	0.43
12:UL:607:CYS:HB3	66:D3:1133:A:C8	2.53	0.43
17:UQ:143:ASN:OD1	17:UQ:144:VAL:N	2.51	0.43
25:CB:125:VAL:C	25:CB:139:VAL:H	2.21	0.43
25:CB:262:LYS:HB2	25:CB:262:LYS:HE3	1.81	0.43
26:CD:171:ASP:OD2	26:CD:321:SER:OG	2.34	0.43
26:CD:386:ALA:HB2	26:CD:404:LEU:HD22	2.01	0.43
29:CH:162:CYS:CA	29:CH:186:PHE:O	2.33	0.43
33:CL:1021:LEU:HB2	33:CL:1026:LYS:NZ	2.33	0.43
34:CM:274:LYS:O	34:CM:278:GLN:HG2	2.18	0.43
36:JA:72:LYS:HB2	36:JA:72:LYS:HE3	1.85	0.43
39:JF:174:LYS:HG2	39:JF:200:GLU:HG3	2.00	0.43
48:DA:181:LEU:HD12	48:DA:181:LEU:HA	1.69	0.43
49:DE:49:ARG:NH2	66:D3:448:C:OP1	2.51	0.43
50:DF:100:ASN:O	50:DF:102:ARG:N	2.51	0.43
52:DH:27:LEU:O	52:DH:31:SER:OG	2.26	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:DI:163:GLY:O	53:DI:164:ARG:NE	2.49	0.43
56:DN:128:TYR:OH	66:D3:964:U:OP1	2.23	0.43
65:D2:117:G:H2'	65:D2:118:A:C8	2.53	0.43
65:D2:215:U:H2'	65:D2:216:U:C6	2.53	0.43
66:D3:376:C:H2'	66:D3:377:G:H8	1.83	0.43
66:D3:575:C:O2'	66:D3:576:G:H8	2.00	0.43
66:D3:1666:U:H3'	66:D3:1666:U:C6	2.53	0.43
66:D3:1683:C:O2'	66:D3:1684:U:O5'	2.36	0.43
4:UD:53:HIS:NE2	4:UD:64:ASP:O	2.43	0.43
6:UF:104:PRO:HG2	26:CD:142:LEU:HD11	2.00	0.43
8:UH:558:CYS:O	8:UH:585:ARG:NH1	2.34	0.43
8:UH:631:SER:HA	8:UH:634:LEU:HD12	2.01	0.43
10:UJ:130:LYS:HD3	10:UJ:130:LYS:HA	1.65	0.43
10:UJ:136:LEU:HD23	10:UJ:136:LEU:HA	1.76	0.43
11:UK:6:HIS:O	11:UK:9:GLN:HB2	2.19	0.43
11:UK:40:ASP:OD2	11:UK:44:LYS:NZ	2.49	0.43
13:UM:672:TYR:HA	13:UM:675:LYS:HG2	1.99	0.43
22:UV:218:ASP:HB3	22:UV:224:CYS:HB3	2.00	0.43
22:UV:584:GLU:HB3	22:UV:614:ARG:HB3	1.99	0.43
22:UV:1188:PRO:HA	22:UV:1191:LYS:HB2	2.01	0.43
24:UZ:243:PHE:HA	24:UZ:252:LEU:O	2.18	0.43
29:CH:313:SER:HB2	62:DY:4:ALA:HA	2.00	0.43
29:CH:425:TRP:CH2	29:CH:432:PRO:HG3	2.53	0.43
31:CJ:123:VAL:HG23	66:D3:1606:C:OP1	2.18	0.43
33:CL:1063:HIS:NE2	43:JM:201:GLY:HA3	2.33	0.43
33:CL:1067:LEU:HD23	33:CL:1067:LEU:H	1.82	0.43
36:JA:590:LEU:HD21	36:JA:594:ILE:HG12	2.00	0.43
36:JB:642:PRO:O	36:JB:645:ALA:HB3	2.17	0.43
37:JC:279:TRP:HZ3	37:JC:281:ASP:HB3	1.83	0.43
41:JJ:105:ARG:HH22	66:D3:1772:C:H4'	1.83	0.43
44:JN:325:ASP:HA	44:JN:328:ARG:HG2	2.00	0.43
49:DE:91:THR:OG1	49:DE:92:LEU:N	2.51	0.43
49:DE:150:PRO:HB2	49:DE:154:ILE:HD12	2.00	0.43
50:DF:29:ILE:HD13	50:DF:29:ILE:HG21	1.76	0.43
54:DJ:30:LEU:HA	54:DJ:30:LEU:HD23	1.75	0.43
62:DY:6:THR:CB	62:DY:28:LEU:O	2.50	0.43
65:D2:522:C:H2'	65:D2:523:U:C6	2.54	0.43
66:D3:187:G:H1'	66:D3:198:A:H61	1.84	0.43
66:D3:327:U:H2'	66:D3:328:A:H8	1.84	0.43
67:D4:198:U:O2'	67:D4:200:C:OP2	2.29	0.43
1:UA:574:SER:O	1:UA:574:SER:OG	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:UL:661:TRP:HE1	12:UL:677:HIS:HB2	1.82	0.43
17:UQ:340:ILE:HG12	17:UQ:359:GLN:HB3	2.01	0.43
19:US:195:PHE:CZ	19:US:222:LEU:HD11	2.54	0.43
21:UU:179:LYS:HA	21:UU:191:PHE:O	2.19	0.43
25:CB:164:ILE:HG12	25:CB:170:VAL:HG21	2.00	0.43
27:CE:405:ASP:OD1	27:CE:405:ASP:N	2.50	0.43
28:CG:7:LYS:HD2	28:CG:65:LEU:HD21	2.01	0.43
29:CH:137:GLY:HA3	29:CH:500:LYS:HG3	1.99	0.43
33:CL:290:ILE:HG13	33:CL:812:MET:HG3	2.00	0.43
34:CM:135:TRP:HB3	34:CM:246:VAL:HG11	2.01	0.43
36:JA:219:LEU:O	36:JA:221:PRO:HD3	2.19	0.43
37:JC:358:SER:O	37:JC:361:GLU:HB3	2.19	0.43
41:JJ:216:ILE:HA	41:JJ:263:LEU:HD21	2.01	0.43
43:JM:114:ARG:NH2	43:JM:117:VAL:HG11	2.33	0.43
45:JO:295:ARG:NH1	66:D3:317:C:OP2	2.51	0.43
46:JP:201:ILE:HG21	46:JP:201:ILE:HD13	1.68	0.43
46:JP:228:ASN:HB3	46:JP:269:TRP:CD2	2.54	0.43
62:DY:26:ASP:OD1	62:DY:27:VAL:N	2.52	0.43
65:D2:197:G:N2	65:D2:200:A:OP2	2.51	0.43
66:D3:294:C:H2'	66:D3:295:A:H8	1.84	0.43
66:D3:1496:U:H2'	66:D3:1497:U:H6	1.82	0.43
2:UB:654:LEU:HA	19:US:471:GLU:OE2	2.19	0.43
3:UC:592:GLU:HB2	25:CA:103:GLU:OE2	2.18	0.43
5:UE:121:ASP:OD1	5:UE:122:SER:N	2.51	0.43
7:UG:333:SER:HB2	7:UG:378:VAL:HG21	1.99	0.43
10:UJ:83:ARG:NE	10:UJ:130:LYS:HG3	2.33	0.43
11:UK:246:LYS:HE2	11:UK:246:LYS:HB3	1.94	0.43
12:UL:457:PHE:HA	12:UL:463:SER:O	2.18	0.43
13:UM:53:LEU:HD23	13:UM:53:LEU:HA	1.73	0.43
14:UN:277:ARG:HA	14:UN:280:GLN:HB2	2.00	0.43
15:UO:234:PHE:HE2	15:UO:284:PHE:HE2	1.66	0.43
17:UQ:531:PHE:HD2	17:UQ:545:THR:HB	1.84	0.43
22:UV:307:LYS:HA	22:UV:307:LYS:HD3	1.85	0.43
22:UV:358:SER:O	22:UV:358:SER:OG	2.34	0.43
22:UV:926:LEU:HD23	22:UV:1167:LYS:HD3	2.01	0.43
24:UZ:149:LYS:HD3	24:UZ:149:LYS:HA	1.60	0.43
24:UZ:245:LYS:HB3	24:UZ:251:SER:HA	2.00	0.43
26:CD:137:LYS:NZ	65:D2:481:U:OP2	2.38	0.43
27:CE:159:VAL:HB	27:CE:161:VAL:HG12	2.00	0.43
28:CG:43:THR:HG22	28:CG:49:SER:HB2	2.00	0.43
29:CH:187:ALA:HB3	29:CH:199:TYR:HB2	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:CI:97:LEU:HD23	30:CI:97:LEU:HA	1.79	0.43
31:CJ:189:LEU:HB2	32:CK:379:ASP:O	2.19	0.43
33:CL:606:VAL:O	34:CM:15:GLN:NE2	2.50	0.43
33:CL:836:LYS:HB2	33:CL:836:LYS:HE2	1.83	0.43
36:JA:480:ASP:HB3	36:JA:483:GLU:HB3	2.00	0.43
36:JA:630:LEU:HB3	36:JA:722:TYR:CE2	2.50	0.43
39:JG:243:HIS:HA	39:JG:246:GLU:OE1	2.19	0.43
49:DE:92:LEU:HD12	49:DE:92:LEU:HA	1.75	0.43
53:DI:58:LEU:O	53:DI:59:ARG:NH1	2.47	0.43
65:D2:217:C:H2'	65:D2:218:U:C6	2.53	0.43
66:D3:153:G:H2'	66:D3:154:G:C8	2.53	0.43
66:D3:912:U:O2	66:D3:914:G:N1	2.51	0.43
4:UD:537:ASP:HB2	4:UD:575:ILE:HD13	2.01	0.43
5:UE:259:PRO:O	5:UE:273:LYS:NZ	2.39	0.43
5:UE:332:LEU:O	5:UE:334:TRP:N	2.52	0.43
5:UE:345:LEU:H	5:UE:345:LEU:HD12	1.84	0.43
5:UE:445:LEU:HB3	5:UE:476:LEU:HD12	2.01	0.43
7:UG:513:LYS:HE3	7:UG:513:LYS:HB2	1.65	0.43
8:UH:523:LEU:HD23	8:UH:526:LEU:HD12	2.01	0.43
10:UJ:135:LEU:O	10:UJ:139:THR:HG22	2.18	0.43
11:UK:29:GLU:OE2	33:CL:1062:ARG:NH1	2.50	0.43
14:UN:895:LYS:HE3	14:UN:895:LYS:HB2	1.81	0.43
18:UR:427:ASN:OD1	18:UR:428:ALA:N	2.52	0.43
19:US:281:LEU:HA	19:US:285:ILE:HD12	2.00	0.43
21:UU:179:LYS:HD3	21:UU:190:LEU:HD21	2.01	0.43
22:UV:179:LYS:O	22:UV:231:TYR:OH	2.36	0.43
22:UV:465:PRO:HD3	22:UV:482:VAL:HG22	1.99	0.43
26:CD:274:PHE:CE1	27:CE:169:LEU:HD11	2.54	0.43
31:CJ:223:THR:O	31:CJ:233:VAL:HA	2.18	0.43
33:CL:289:HIS:CE1	33:CL:291:ALA:HA	2.54	0.43
34:CM:282:GLU:O	34:CM:286:SER:HB3	2.18	0.43
35:CN:132:ALA:O	35:CN:136:ASN:ND2	2.52	0.43
36:JA:738:LYS:HG3	36:JA:807:SER:HB3	1.99	0.43
36:JA:776:GLU:HA	36:JA:779:LYS:HZ2	1.83	0.43
36:JB:566:VAL:HA	36:JB:584:CYS:O	2.19	0.43
37:JC:10:ASP:N	37:JC:10:ASP:OD1	2.51	0.43
41:JJ:217:GLU:OE1	41:JJ:223:ARG:HA	2.19	0.43
42:JK:462:ARG:HH21	66:D3:341:A:H5"	1.83	0.43
56:DN:35:GLU:HA	56:DN:38:VAL:HG22	2.01	0.43
58:DQ:25:GLY:HA3	58:DQ:64:ASP:OD2	2.19	0.43
65:D2:534:A:N3	65:D2:536:A:N6	2.67	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:D3:875:G:O2'	66:D3:877:G:OP2	2.32	0.43
66:D3:1733:C:H2'	66:D3:1734:U:C6	2.54	0.43
1:UA:361:VAL:HG22	1:UA:371:VAL:HG22	2.01	0.43
3:UC:436:GLY:HA3	39:JG:132:ARG:NH2	2.33	0.43
4:UD:97:ARG:NE	16:UP:193:LYS:HD2	2.34	0.43
4:UD:137:TYR:HB2	4:UD:177:LEU:HD13	1.99	0.43
5:UE:370:LYS:HE3	5:UE:370:LYS:HB2	1.82	0.43
6:UF:31:LEU:HD23	6:UF:31:LEU:HA	1.77	0.43
6:UF:300:MET:HA	6:UF:303:GLU:HB3	2.00	0.43
8:UH:658:LEU:HD23	9:UI:503:LEU:HD21	2.01	0.43
10:UJ:296:LEU:HD12	10:UJ:296:LEU:HA	1.74	0.43
10:UJ:390:LEU:HD12	10:UJ:390:LEU:HA	1.86	0.43
10:UJ:411:ASN:O	10:UJ:415:VAL:HG23	2.19	0.43
11:UK:161:ARG:HD3	11:UK:163:GLU:HG2	2.00	0.43
12:UL:255:ARG:NH1	12:UL:257:LEU:HD11	2.34	0.43
12:UL:326:LEU:HA	12:UL:326:LEU:HD23	1.74	0.43
15:UO:11:SER:OG	15:UO:412:GLU:OE2	2.30	0.43
15:UO:94:LYS:O	15:UO:110:SER:OG	2.21	0.43
17:UQ:225:ILE:HD11	17:UQ:241:LEU:HD12	2.00	0.43
19:US:459:LEU:HD12	19:US:459:LEU:HA	1.75	0.43
21:UU:498:TYR:HD1	50:DF:16:VAL:HG22	1.84	0.43
21:UU:585:SER:OG	21:UU:606:ASP:OD2	2.34	0.43
21:UU:604:SER:OG	21:UU:606:ASP:OD1	2.30	0.43
22:UV:254:LEU:HD11	22:UV:268:LEU:HD21	2.00	0.43
29:CH:144:GLU:N	29:CH:144:GLU:OE2	2.51	0.43
29:CH:548:ARG:H	29:CH:548:ARG:HG3	1.53	0.43
32:CK:297:LEU:HD12	32:CK:297:LEU:HA	1.84	0.43
32:CK:473:THR:OG1	32:CK:487:ALA:O	2.27	0.43
33:CL:1021:LEU:HD23	33:CL:1021:LEU:H	1.83	0.43
34:CM:143:LYS:HB2	34:CM:143:LYS:HE2	1.67	0.43
36:JA:532:ASN:O	36:JA:536:LYS:HG3	2.19	0.43
36:JA:745:VAL:HG21	36:JA:763:LEU:HB2	2.01	0.43
49:DE:201:HIS:CB	49:DE:205:PHE:O	2.62	0.43
51:DG:4:ASN:O	51:DG:110:ALA:HA	2.18	0.43
54:DJ:16:LYS:HB2	54:DJ:16:LYS:HE2	1.84	0.43
55:DL:8:GLN:OE1	55:DL:14:GLN:N	2.52	0.43
56:DN:62:GLN:HE21	56:DN:62:GLN:HB3	1.59	0.43
65:D2:168:G:C6	65:D2:169:A:H2	2.36	0.43
66:D3:382:C:H3'	66:D3:383:G:H8	1.83	0.43
66:D3:640:U:OP2	66:D3:640:U:H4'	2.15	0.43
66:D3:645:C:H2'	66:D3:646:C:C6	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:D3:1785:U:H2'	66:D3:1786:G:H8	1.81	0.43
1:UA:387:THR:OG1	1:UA:388:SER:N	2.52	0.43
1:UA:715:PHE:HD1	1:UA:716:ASP:HB2	1.84	0.43
4:UD:443:GLY:HA2	4:UD:448:THR:HG23	2.00	0.43
9:UI:417:LYS:HD2	9:UI:455:TRP:CD2	2.54	0.43
10:UJ:152:LEU:HA	10:UJ:152:LEU:HD23	1.86	0.43
12:UL:273:TYR:HB3	12:UL:343:TRP:CZ2	2.54	0.43
12:UL:538:ARG:HH11	12:UL:581:ILE:H	1.67	0.43
12:UL:836:ILE:HD12	12:UL:853:ILE:HG23	2.01	0.43
13:UM:44:ASP:OD1	13:UM:44:ASP:N	2.50	0.43
13:UM:465:LYS:HE2	13:UM:465:LYS:HB3	1.77	0.43
13:UM:529:LEU:HD12	13:UM:560:TRP:CZ3	2.54	0.43
17:UQ:19:LYS:HE2	17:UQ:19:LYS:HB3	1.82	0.43
17:UQ:156:THR:HG22	17:UQ:171:TYR:CE1	2.51	0.43
21:UU:606:ASP:OD1	21:UU:606:ASP:N	2.39	0.43
21:UU:734:LEU:HA	21:UU:734:LEU:HD23	1.73	0.43
26:CD:180:LEU:HD12	27:CE:183:ARG:HG2	2.00	0.43
26:CD:382:LYS:HD3	26:CD:382:LYS:HA	1.74	0.43
33:CL:65:ASP:OD1	33:CL:65:ASP:N	2.48	0.43
34:CM:303:ILE:HD12	34:CM:303:ILE:HA	1.76	0.43
36:JA:891:GLN:HB3	36:JA:893:LYS:HE3	2.01	0.43
37:JC:146:TYR:CZ	37:JC:148:LYS:HA	2.53	0.43
37:JC:236:PHE:HA	37:JC:243:PHE:CD1	2.54	0.43
44:JN:226:ASP:OD1	44:JN:227:LYS:N	2.52	0.43
45:JO:113:ALA:O	45:JO:116:ILE:N	2.51	0.43
46:JP:109:HIS:CD2	46:JP:140:SER:HB2	2.54	0.43
46:JP:210:LYS:HD3	46:JP:210:LYS:HA	1.66	0.43
46:JP:231:GLU:C	46:JP:233:ASP:H	2.21	0.43
46:JP:420:PRO:HD2	46:JP:423:ILE:HD12	2.01	0.43
51:DG:2:LYS:HA	51:DG:16:PHE:O	2.18	0.43
67:D4:99:U:H2'	67:D4:100:U:C6	2.54	0.43
67:D4:246:A:H2'	67:D4:247:U:H4'	2.01	0.43
1:UA:222:LYS:HG3	1:UA:223:ARG:H	1.84	0.42
1:UA:689:THR:O	1:UA:819:THR:OG1	2.36	0.42
7:UG:289:MET:HB2	7:UG:303:ILE:HD11	2.00	0.42
9:UI:417:LYS:NZ	9:UI:454:LEU:HG	2.34	0.42
14:UN:863:MET:HE3	14:UN:864:PRO:HD2	2.00	0.42
15:UO:404:ALA:HB1	15:UO:417:VAL:HG11	2.00	0.42
17:UQ:153:ILE:HB	17:UQ:174:TYR:HB2	2.01	0.42
17:UQ:328:THR:O	17:UQ:328:THR:OG1	2.32	0.42
19:US:341:LEU:HD11	19:US:365:PHE:CD2	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:UV:1229:ASP:OD1	22:UV:1229:ASP:N	2.52	0.42
23:UX:72:ILE:HA	23:UX:72:ILE:HD13	1.78	0.42
25:CB:144:TRP:CE2	25:CB:183:HIS:HB3	2.54	0.42
28:CG:59:GLU:HA	28:CG:60:PRO:HA	1.90	0.42
29:CH:235:HIS:ND1	29:CH:257:ASP:OD2	2.52	0.42
31:CJ:226:ASN:O	31:CJ:227:ARG:HD3	2.19	0.42
33:CL:140:LEU:HD12	33:CL:140:LEU:HA	1.82	0.42
33:CL:923:ASP:N	33:CL:923:ASP:OD1	2.52	0.42
33:CL:1135:ARG:HH21	66:D3:495:C:C5'	2.25	0.42
34:CM:176:GLN:HG3	34:CM:305:LYS:HB3	2.00	0.42
35:CN:18:PHE:H	35:CN:35:HIS:H	1.67	0.42
36:JA:201:VAL:HG23	36:JA:207:VAL:HA	1.99	0.42
39:JG:188:ARG:NH1	39:JG:190:GLN:OE1	2.52	0.42
49:DE:37:LYS:HG2	66:D3:297:U:H5"	2.00	0.42
65:D2:151:U:O2'	65:D2:152:U:O4'	2.36	0.42
66:D3:293:U:H2'	66:D3:294:C:C6	2.54	0.42
1:UA:430:ARG:O	32:CK:458:PRO:HD2	2.19	0.42
5:UE:84:GLU:OE1	5:UE:86:TRP:NE1	2.39	0.42
12:UL:791:ASN:OD1	12:UL:792:ALA:N	2.50	0.42
17:UQ:265:ASP:CG	17:UQ:270:GLN:H	2.22	0.42
25:CB:272:LYS:HG3	25:CB:275:CYS:HB3	2.01	0.42
26:CD:185:ASP:OD1	26:CD:285:ARG:NE	2.52	0.42
28:CG:95:ARG:HD3	29:CH:551:ARG:HB2	2.00	0.42
29:CH:486:VAL:HA	29:CH:499:TRP:O	2.19	0.42
36:JA:199:LEU:HA	36:JA:199:LEU:HD23	1.80	0.42
36:JA:827:ARG:HA	36:JA:830:LEU:HB2	2.00	0.42
39:JF:107:ALA:HB2	39:JG:230:TYR:HE2	1.83	0.42
39:JF:132:ARG:HD3	39:JG:88:ARG:HH22	1.83	0.42
45:JO:85:THR:OG1	45:JO:86:ARG:N	2.53	0.42
52:DH:84:LYS:HD3	52:DH:85:PHE:CE1	2.54	0.42
65:D2:125:G:H2'	65:D2:126:A:H8	1.83	0.42
66:D3:151:G:H2'	66:D3:152:U:C6	2.55	0.42
66:D3:355:G:H2'	66:D3:356:G:H8	1.84	0.42
66:D3:1634:C:H2'	66:D3:1635:A:O4'	2.19	0.42
1:UA:515:TYR:CD1	58:DQ:118:ILE:HD13	2.54	0.42
1:UA:802:LEU:HD23	1:UA:802:LEU:HA	1.84	0.42
6:UF:50:ILE:HD12	6:UF:50:ILE:HA	1.83	0.42
8:UH:571:PHE:CD2	8:UH:606:ASP:HB3	2.55	0.42
10:UJ:66:PHE:HZ	10:UJ:105:ALA:HB2	1.83	0.42
12:UL:284:PHE:HD1	12:UL:328:PRO:HA	1.84	0.42
13:UM:267:PHE:HB3	13:UM:281:THR:HG23	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:UQ:276:ALA:O	17:UQ:299:SER:OG	2.24	0.42
19:US:155:LEU:HD23	19:US:155:LEU:HA	1.80	0.42
19:US:254:LYS:HE3	19:US:288:HIS:O	2.20	0.42
21:UU:132:THR:OG1	21:UU:136:SER:OG	2.24	0.42
22:UV:518:PHE:HE2	22:UV:1075:LEU:HB3	1.84	0.42
22:UV:1094:LYS:HD3	22:UV:1094:LYS:HA	1.81	0.42
22:UV:1108:LEU:HD23	22:UV:1108:LEU:HA	1.89	0.42
23:UX:152:ILE:HG13	23:UX:171:PRO:HB2	2.02	0.42
25:CB:146:PRO:HA	25:CB:152:ALA:HB3	2.00	0.42
25:CB:227:PRO:HA	25:CB:230:TYR:CE1	2.54	0.42
33:CL:94:THR:HG21	33:CL:354:ILE:HG22	2.02	0.42
33:CL:848:SER:O	33:CL:848:SER:OG	2.35	0.42
34:CM:68:SER:HB3	34:CM:73:THR:HB	2.00	0.42
36:JA:25:ILE:HA	36:JA:148:VAL:O	2.19	0.42
36:JA:846:SER:HB3	36:JA:918:ARG:CZ	2.49	0.42
37:JC:26:PRO:HB2	37:JC:29:ILE:HG12	2.01	0.42
39:JF:130:ILE:HD11	39:JF:137:PHE:CE1	2.55	0.42
42:JK:497:LEU:HA	42:JK:497:LEU:HD23	1.78	0.42
46:JP:270:ASN:HB3	46:JP:313:PHE:CE1	2.53	0.42
50:DF:88:PRO:O	50:DF:91:GLU:N	2.48	0.42
53:DI:193:LEU:HA	53:DI:193:LEU:HD23	1.85	0.42
56:DN:64:ARG:HH11	56:DN:70:LYS:HE3	1.84	0.42
58:DQ:60:PHE:CZ	58:DQ:89:LEU:HD22	2.54	0.42
60:DW:34:ILE:HG21	60:DW:34:ILE:HD13	1.78	0.42
61:DX:103:LEU:HA	61:DX:103:LEU:HD12	1.82	0.42
66:D3:1666:U:C6	66:D3:1666:U:C3'	3.02	0.42
67:D4:30:A:O2'	67:D4:32:G:O6	2.38	0.42
67:D4:205:G:H1	67:D4:245:U:H1'	1.83	0.42
1:UA:494:ASP:OD2	1:UA:496:THR:OG1	2.37	0.42
2:UB:462:LEU:HD23	2:UB:462:LEU:HA	1.82	0.42
2:UB:469:GLU:O	2:UB:473:GLU:HG3	2.19	0.42
2:UB:548:ARG:HE	2:UB:642:SER:HB2	1.84	0.42
2:UB:798:LYS:HE2	2:UB:798:LYS:HB3	1.95	0.42
4:UD:375:VAL:HG12	4:UD:757:ARG:HH11	1.84	0.42
7:UG:13:LYS:HB2	7:UG:13:LYS:HE3	1.87	0.42
7:UG:42:LEU:HD12	7:UG:42:LEU:HA	1.74	0.42
9:UI:506:LEU:HD23	9:UI:506:LEU:HA	1.69	0.42
12:UL:349:SER:CB	12:UL:369:TYR:O	2.66	0.42
12:UL:611:LEU:HA	12:UL:611:LEU:HD23	1.78	0.42
12:UL:618:ILE:HA	12:UL:634:SER:HA	2.01	0.42
15:UO:21:THR:HG23	15:UO:24:GLN:H	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:UQ:490:LEU:HB3	17:UQ:491:GLN:H	1.70	0.42
18:UR:165:ARG:HA	21:UU:175:THR:HG21	2.02	0.42
18:UR:225:SER:O	18:UR:227:LEU:N	2.52	0.42
18:UR:503:SER:O	18:UR:504:THR:OG1	2.33	0.42
19:US:183:LYS:HG3	19:US:184:TYR:CD1	2.54	0.42
21:UU:30:ILE:HG21	21:UU:30:ILE:HD13	1.74	0.42
21:UU:131:SER:OG	21:UU:167:ILE:HD13	2.19	0.42
22:UV:126:LYS:HA	22:UV:126:LYS:HD2	1.74	0.42
22:UV:202:SER:OG	22:UV:203:ILE:N	2.53	0.42
26:CD:29:SER:O	26:CD:29:SER:OG	2.32	0.42
27:CE:363:LEU:HD12	27:CE:363:LEU:HA	1.79	0.42
30:CI:165:LYS:HB3	30:CI:165:LYS:HE3	1.74	0.42
33:CL:551:LYS:O	33:CL:555:MET:CB	2.65	0.42
35:CN:165:PHE:HA	35:CN:168:PHE:CD2	2.55	0.42
39:JF:31:LEU:HD13	39:JF:40:ARG:HE	1.84	0.42
39:JF:178:VAL:O	39:JF:204:VAL:HA	2.20	0.42
41:JJ:255:PRO:HA	41:JJ:256:PRO:HD3	1.82	0.42
45:JO:298:GLU:HA	45:JO:301:LYS:HZ2	1.85	0.42
48:DA:11:LYS:HZ1	66:D3:911:U:H3'	1.84	0.42
50:DF:133:VAL:HG22	50:DF:198:LEU:HD13	2.01	0.42
53:DI:69:SER:OG	53:DI:70:GLU:OE1	2.35	0.42
54:DJ:36:LEU:HD23	54:DJ:36:LEU:HA	1.80	0.42
60:DW:69:LEU:HD11	60:DW:72:CYS:HB3	2.01	0.42
65:D2:134:A:H2'	65:D2:135:G:H8	1.84	0.42
65:D2:193:G:H2'	65:D2:194:G:C8	2.54	0.42
1:UA:46:LYS:HB3	1:UA:46:LYS:HE2	1.81	0.42
2:UB:432:HIS:HA	2:UB:435:PHE:HB3	2.00	0.42
3:UC:559:ARG:NH2	66:D3:545:A:H5'	2.35	0.42
5:UE:461:ASP:O	5:UE:465:ILE:HG12	2.20	0.42
7:UG:185:HIS:HE1	30:CI:19:LEU:O	2.03	0.42
8:UH:212:SER:HA	8:UH:219:ALA:HA	2.01	0.42
12:UL:331:THR:OG1	12:UL:332:ILE:N	2.53	0.42
13:UM:593:CYS:HB3	13:UM:623:LEU:HD22	2.01	0.42
13:UM:669:LEU:HD22	13:UM:693:ARG:NH2	2.35	0.42
13:UM:683:LEU:HD23	13:UM:683:LEU:HA	1.81	0.42
15:UO:43:THR:HG22	15:UO:44:HIS:CE1	2.54	0.42
18:UR:140:THR:HG21	18:UR:142:LYS:HZ1	1.84	0.42
21:UU:605:LEU:HA	21:UU:605:LEU:HD12	1.83	0.42
21:UU:763:SER:O	21:UU:763:SER:OG	2.31	0.42
22:UV:801:LYS:NZ	22:UV:836:GLU:OE1	2.33	0.42
22:UV:975:LEU:HD12	22:UV:975:LEU:HA	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:UX:27:LYS:NZ	23:UX:28:ASN:OD1	2.52	0.42
23:UX:149:LYS:HG2	23:UX:170:ILE:HD11	2.00	0.42
24:UZ:226:LYS:HA	24:UZ:226:LYS:HD3	1.87	0.42
26:CD:199:TYR:O	26:CD:203:PHE:HB3	2.20	0.42
26:CD:205:GLU:HG3	26:CD:254:ASN:HB3	2.01	0.42
29:CH:161:SER:HB3	29:CH:188:TYR:HB2	2.02	0.42
31:CJ:279:ARG:HA	31:CJ:279:ARG:HD2	1.79	0.42
33:CL:1139:LEU:HD12	33:CL:1139:LEU:HA	1.70	0.42
69:CL:2001:GTP:C8	69:CL:2001:GTP:C5'	2.86	0.42
34:CM:263:ASP:OD1	34:CM:264:ALA:N	2.45	0.42
36:JA:747:LEU:HD11	36:JA:758:HIS:HB2	2.01	0.42
36:JA:879:SER:OG	36:JA:880:VAL:N	2.53	0.42
39:JG:88:ARG:HB3	39:JG:90:ASP:OD1	2.20	0.42
44:JN:235:PRO:HD2	44:JN:238:ILE:HD12	2.01	0.42
46:JP:270:ASN:HB3	46:JP:313:PHE:CD1	2.54	0.42
48:DA:17:LYS:HA	48:DA:17:LYS:HD3	1.89	0.42
49:DE:207:LEU:HD23	49:DE:207:LEU:HA	1.80	0.42
51:DG:135:PRO:HA	66:D3:167:U:H5'	2.02	0.42
51:DG:155:ASP:N	51:DG:155:ASP:OD1	2.35	0.42
51:DG:160:ARG:HH21	51:DG:171:LYS:HD2	1.84	0.42
52:DH:174:ASN:HD21	52:DH:180:GLN:HA	1.83	0.42
65:D2:439:A:N6	65:D2:441:C:N3	2.66	0.42
66:D3:1743:U:H2'	66:D3:1744:A:C8	2.55	0.42
1:UA:308:VAL:HG22	1:UA:319:PHE:CD1	2.55	0.42
1:UA:522:SER:HB2	1:UA:583:ILE:HG23	2.02	0.42
1:UA:844:TYR:CE2	12:UL:899:GLY:HA3	2.55	0.42
2:UB:530:GLU:HG2	2:UB:566:TYR:CE2	2.55	0.42
3:UC:553:LYS:HG2	66:D3:586:G:C2	2.54	0.42
4:UD:541:ALA:HB3	4:UD:553:LEU:HB2	2.02	0.42
6:UF:272:THR:O	6:UF:276:VAL:HG22	2.19	0.42
7:UG:333:SER:O	7:UG:333:SER:OG	2.37	0.42
8:UH:309:PRO:HA	8:UH:330:ARG:HA	2.02	0.42
11:UK:79:ILE:HG21	11:UK:79:ILE:HD13	1.81	0.42
11:UK:250:ARG:O	28:CF:94:SER:OG	2.34	0.42
15:UO:90:ARG:HG3	15:UO:132:PHE:CG	2.55	0.42
17:UQ:43:ASN:HA	17:UQ:57:VAL:HG23	2.02	0.42
17:UQ:604:PHE:HB3	17:UQ:606:HIS:CD2	2.54	0.42
17:UQ:750:LEU:HD12	17:UQ:750:LEU:HA	1.75	0.42
19:US:347:PRO:HB3	19:US:386:LEU:HD22	2.00	0.42
19:US:399:ILE:HG21	19:US:480:LEU:HB3	2.02	0.42
23:UX:30:GLU:H	23:UX:30:GLU:HG3	1.69	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:CB:200:SER:OG	25:CB:201:HIS:N	2.52	0.42
26:CD:237:LEU:HA	26:CD:240:LEU:HB2	2.02	0.42
26:CD:322:LEU:HD12	26:CD:322:LEU:HA	1.88	0.42
28:CF:125:LEU:HA	28:CF:125:LEU:HD23	1.84	0.42
30:CI:25:GLN:HE21	30:CI:25:GLN:HB2	1.50	0.42
32:CK:495:ILE:HG21	32:CK:495:ILE:HD13	1.82	0.42
34:CM:19:LEU:HD12	34:CM:19:LEU:HA	1.84	0.42
34:CM:271:LEU:HD12	34:CM:271:LEU:HA	1.85	0.42
36:JA:789:LEU:HD21	36:JA:891:GLN:HG3	2.02	0.42
36:JB:743:VAL:O	36:JB:763:LEU:N	2.48	0.42
42:JK:494:PHE:HA	42:JK:497:LEU:HG	2.01	0.42
45:JO:102:LYS:HE2	45:JO:102:LYS:HB2	1.67	0.42
51:DG:21:GLU:HG2	51:DG:25:ARG:HH12	1.85	0.42
51:DG:28:PHE:CZ	51:DG:104:PRO:HA	2.55	0.42
54:DJ:97:LEU:HA	54:DJ:97:LEU:HD23	1.81	0.42
65:D2:185:A:C6	65:D2:213:G:C6	3.07	0.42
66:D3:1128:C:H2'	66:D3:1129:U:H6	1.84	0.42
66:D3:1638:G:O2'	66:D3:1639:C:O5'	2.35	0.42
66:D3:1743:U:H2'	66:D3:1744:A:H8	1.84	0.42
1:UA:202:ASP:N	1:UA:202:ASP:OD1	2.43	0.42
1:UA:482:SER:O	1:UA:486:SER:HA	2.20	0.42
2:UB:572:LEU:HB2	2:UB:667:LEU:HD21	2.02	0.42
3:UC:551:THR:HA	3:UC:552:PRO:HD3	1.91	0.42
4:UD:233:LYS:HA	4:UD:239:THR:HG21	2.02	0.42
5:UE:335:ASN:ND2	15:UO:369:ASP:O	2.52	0.42
7:UG:196:LEU:HA	7:UG:196:LEU:HD23	1.78	0.42
7:UG:263:MET:HA	7:UG:264:PRO:HD2	1.91	0.42
12:UL:46:LEU:O	12:UL:47:GLU:HG2	2.20	0.42
12:UL:412:GLY:O	12:UL:414:LEU:N	2.52	0.42
12:UL:482:THR:OG1	12:UL:484:ASP:OD1	2.29	0.42
15:UO:450:ILE:HD12	15:UO:450:ILE:HG23	1.85	0.42
17:UQ:198:LEU:HD23	17:UQ:198:LEU:HA	1.84	0.42
19:US:3:LEU:O	19:US:7:GLU:N	2.52	0.42
20:UT:470:ILE:O	20:UT:472:ASP:N	2.45	0.42
22:UV:304:GLU:HB2	22:UV:307:LYS:HB2	1.99	0.42
26:CD:381:ASN:O	26:CD:384:SER:OG	2.35	0.42
29:CH:422:ILE:HD11	29:CH:475:ILE:HG21	2.01	0.42
36:JA:90:GLU:OE2	36:JA:91:MET:N	2.53	0.42
36:JB:737:TRP:O	36:JB:740:ASN:C	2.58	0.42
38:JE:355:ARG:HD2	38:JE:355:ARG:HA	1.83	0.42
39:JF:150:ILE:O	39:JF:159:LEU:N	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:DG:49:VAL:HB	51:DG:115:LYS:H	1.84	0.42
62:DY:88:THR:HA	62:DY:91:LEU:HD12	2.01	0.42
66:D3:267:U:H3	66:D3:288:A:H61	1.67	0.42
66:D3:476:U:OP1	66:D3:477:A:O2'	2.27	0.42
1:UA:666:ARG:HE	1:UA:666:ARG:HB2	1.69	0.42
1:UA:844:TYR:CD2	12:UL:899:GLY:HA3	2.54	0.42
2:UB:647:ILE:HA	2:UB:651:TRP:HB2	2.02	0.42
4:UD:157:SER:HB3	4:UD:195:TRP:HZ2	1.85	0.42
4:UD:183:LEU:HD22	4:UD:223:GLY:HA2	2.02	0.42
4:UD:353:GLU:O	4:UD:355:THR:N	2.51	0.42
4:UD:490:SER:OG	4:UD:494:ASP:HB2	2.19	0.42
5:UE:272:SER:O	5:UE:272:SER:OG	2.31	0.42
8:UH:563:LEU:HA	8:UH:563:LEU:HD23	1.76	0.42
9:UI:417:LYS:HG3	9:UI:455:TRP:CH2	2.55	0.42
11:UK:246:LYS:HE3	28:CF:29:ASN:HD21	1.85	0.42
12:UL:499:PHE:CD1	12:UL:526:THR:HG23	2.54	0.42
13:UM:513:LYS:HE2	13:UM:513:LYS:HB3	1.78	0.42
13:UM:584:ILE:HG13	13:UM:586:LYS:N	2.32	0.42
13:UM:702:LEU:HA	13:UM:702:LEU:HD23	1.68	0.42
17:UQ:623:PHE:CE2	17:UQ:664:LEU:HD13	2.51	0.42
18:UR:178:VAL:HG13	18:UR:179:ASP:HB2	2.01	0.42
21:UU:721:LEU:HD13	21:UU:721:LEU:HA	1.87	0.42
22:UV:490:GLU:OE1	22:UV:580:TYR:OH	2.35	0.42
25:CA:177:SER:HB3	25:CA:178:GLY:H	1.72	0.42
25:CA:264:GLN:CA	25:CA:320:TYR:O	2.66	0.42
25:CA:315:ILE:HG21	25:CA:315:ILE:HD13	1.66	0.42
25:CB:116:SER:OG	67:D4:318:U:O2'	2.36	0.42
29:CH:368:LEU:O	29:CH:371:ARG:HG3	2.20	0.42
31:CJ:236:HIS:CD2	32:CK:369:ILE:HD13	2.55	0.42
32:CK:357:ILE:HD13	32:CK:357:ILE:HA	1.72	0.42
33:CL:296:PHE:HZ	33:CL:797:PRO:HD3	1.84	0.42
33:CL:1033:ARG:H	33:CL:1033:ARG:HG3	1.61	0.42
36:JA:169:HIS:CE1	36:JA:705:LEU:HD11	2.54	0.42
36:JB:25:ILE:O	36:JB:198:CYS:HA	2.20	0.42
48:DA:64:ARG:HA	48:DA:64:ARG:HD3	1.91	0.42
50:DF:205:SER:O	50:DF:205:SER:OG	2.29	0.42
51:DG:22:HIS:CD2	51:DG:23:ARG:HG3	2.55	0.42
62:DY:25:VAL:HG11	62:DY:60:PHE:CZ	2.54	0.42
62:DY:61:ARG:HB2	62:DY:70:VAL:CG1	2.50	0.42
66:D3:1600:A:H4'	66:D3:1601:G:H5"	2.02	0.42
2:UB:542:PHE:O	2:UB:546:LEU:HD23	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:UB:604:VAL:HG13	2:UB:606:PHE:HD1	1.84	0.42
3:UC:566:ARG:NH1	66:D3:479:C:OP2	2.44	0.42
5:UE:3:SER:HA	5:UE:4:PRO:HD3	1.84	0.42
5:UE:123:SER:HB3	5:UE:141:ARG:NH2	2.35	0.42
5:UE:281:ILE:HG13	5:UE:328:VAL:HG13	2.01	0.42
5:UE:481:LEU:HD23	5:UE:481:LEU:HA	1.82	0.42
7:UG:38:LYS:HB3	7:UG:38:LYS:HE3	1.87	0.42
10:UJ:59:LEU:HD11	10:UJ:114:THR:HG22	2.02	0.42
10:UJ:275:ILE:HD12	10:UJ:306:LEU:HD23	2.01	0.42
12:UL:336:TYR:CE1	12:UL:359:SER:HB3	2.55	0.42
13:UM:217:ASP:OD1	13:UM:218:ASP:N	2.50	0.42
14:UN:277:ARG:HG3	14:UN:277:ARG:HH21	1.84	0.42
19:US:385:ARG:HA	19:US:465:GLU:OE2	2.19	0.42
21:UU:32:ASN:HB3	21:UU:54:VAL:HG11	2.02	0.42
21:UU:442:THR:OG1	21:UU:453:TRP:O	2.31	0.42
23:UX:69:THR:HG23	23:UX:106:LEU:HD22	2.02	0.42
23:UX:170:ILE:HA	23:UX:170:ILE:HD13	1.82	0.42
24:UZ:45:LYS:HD2	24:UZ:194:ASP:HA	2.00	0.42
29:CH:411:PHE:HA	29:CH:427:LEU:HD13	2.00	0.42
33:CL:187:LYS:HE2	33:CL:206:TYR:CD2	2.55	0.42
37:JC:116:HIS:CE1	37:JC:124:GLN:HB2	2.55	0.42
39:JF:31:LEU:HD23	39:JF:31:LEU:HA	1.82	0.42
41:JJ:117:TYR:CD1	41:JJ:118:PRO:HD3	2.55	0.42
41:JJ:227:ALA:HB3	41:JJ:230:LYS:H	1.85	0.42
44:JN:215:LEU:HA	44:JN:215:LEU:HD23	1.72	0.42
44:JN:264:LEU:HD23	44:JN:264:LEU:HA	1.82	0.42
46:JP:120:GLN:OE1	46:JP:120:GLN:N	2.53	0.42
46:JP:319:GLU:OE1	46:JP:340:ARG:NH2	2.42	0.42
46:JP:399:LYS:HA	46:JP:399:LYS:HD2	1.81	0.42
48:DA:111:ARG:HA	48:DA:111:ARG:HD3	1.84	0.42
49:DE:140:VAL:HA	49:DE:145:ARG:O	2.19	0.42
50:DF:84:LYS:HB3	50:DF:84:LYS:HE2	1.71	0.42
61:DX:97:ASP:HB2	61:DX:100:ASP:OD2	2.19	0.42
65:D2:136:U:H2'	65:D2:137:C:H6	1.85	0.42
65:D2:262:U:H2'	65:D2:263:C:H6	1.84	0.42
66:D3:53:G:H2'	66:D3:54:C:O4'	2.20	0.42
66:D3:376:C:H2'	66:D3:377:G:C8	2.54	0.42
66:D3:1035:G:H1	66:D3:1082:C:H42	1.67	0.42
1:UA:58:ILE:HA	1:UA:74:ASP:HA	2.02	0.42
1:UA:125:PRO:HD3	1:UA:136:PHE:CE1	2.55	0.42
1:UA:758:ILE:HG21	1:UA:758:ILE:HD13	1.78	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:UA:775:LEU:HD12	1:UA:775:LEU:HA	1.75	0.42
5:UE:476:LEU:HD13	5:UE:476:LEU:HA	1.87	0.42
7:UG:534:LYS:HA	7:UG:534:LYS:HD3	1.85	0.42
12:UL:50:ASN:HB3	12:UL:52:TRP:CZ3	2.55	0.42
13:UM:314:ILE:HD12	13:UM:330:THR:HG23	2.02	0.42
15:UO:149:THR:HG23	15:UO:164:LEU:HB2	2.02	0.42
18:UR:277:ILE:HD12	18:UR:277:ILE:HG23	1.84	0.42
21:UU:320:LYS:HA	21:UU:345:SER:OG	2.19	0.42
21:UU:925:LEU:HA	21:UU:925:LEU:HD23	1.70	0.42
24:UZ:80:SER:HB2	24:UZ:102:SER:HB2	2.01	0.42
29:CH:331:LEU:HA	29:CH:331:LEU:HD23	1.85	0.42
29:CH:350:LYS:HE3	29:CH:353:ASP:HB2	2.02	0.42
32:CK:305:ILE:HD13	32:CK:305:ILE:HA	1.88	0.42
33:CL:634:ARG:HH21	34:CM:185:ARG:NH1	2.17	0.42
33:CL:907:THR:OG1	33:CL:908:GLY:N	2.52	0.42
36:JA:73:ARG:NH1	36:JA:99:SER:OG	2.53	0.42
36:JA:217:LYS:HA	36:JA:217:LYS:HD3	1.55	0.42
36:JA:486:LEU:HD12	36:JA:486:LEU:HA	1.77	0.42
36:JA:656:LEU:HD23	36:JA:656:LEU:HA	1.85	0.42
36:JB:44:MET:O	36:JB:47:ALA:C	2.58	0.42
39:JG:246:GLU:HB2	39:JG:251:ILE:HB	2.00	0.42
41:JJ:263:LEU:HD12	41:JJ:263:LEU:HA	1.74	0.42
46:JP:96:ASN:ND2	46:JP:99:THR:HG22	2.34	0.42
46:JP:454:ILE:O	46:JP:459:LYS:NZ	2.48	0.42
49:DE:205:PHE:CD1	49:DE:207:LEU:HG	2.55	0.42
50:DF:217:LEU:HD23	50:DF:217:LEU:HA	1.68	0.42
52:DH:112:ARG:NH2	52:DH:117:THR:HG22	2.34	0.42
54:DJ:128:LEU:HD23	54:DJ:128:LEU:HA	1.68	0.42
54:DJ:134:ILE:HD13	54:DJ:134:ILE:HA	1.85	0.42
58:DQ:58:ASP:O	58:DQ:61:SER:N	2.49	0.42
65:D2:125:G:H2'	65:D2:126:A:C8	2.55	0.42
66:D3:1738:U:H2'	66:D3:1739:C:C6	2.55	0.42
67:D4:306:G:H2'	67:D4:307:G:C8	2.55	0.42
1:UA:73:ILE:HG12	1:UA:79:ALA:HB2	2.01	0.41
4:UD:74:GLY:HA2	4:UD:99:ILE:HG12	2.01	0.41
4:UD:556:LYS:HB3	4:UD:556:LYS:HE3	1.74	0.41
9:UI:411:TRP:HB3	9:UI:455:TRP:HE1	1.85	0.41
11:UK:231:LYS:HE2	11:UK:233:ILE:HG22	2.01	0.41
13:UM:69:LEU:HD12	13:UM:69:LEU:HA	1.88	0.41
13:UM:138:HIS:NE2	13:UM:177:LEU:HD22	2.35	0.41
13:UM:269:LEU:HB3	13:UM:279:LYS:HB2	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:UM:314:ILE:HD12	13:UM:314:ILE:HA	1.83	0.41
13:UM:806:LEU:HD23	13:UM:806:LEU:HA	1.85	0.41
15:UO:108:TYR:HB3	15:UO:117:LEU:H	1.85	0.41
15:UO:131:LYS:HB3	15:UO:131:LYS:HE3	1.89	0.41
17:UQ:657:SER:OG	17:UQ:675:ARG:N	2.51	0.41
19:US:262:LEU:HD13	19:US:262:LEU:HA	1.80	0.41
22:UV:337:LEU:O	22:UV:341:THR:HG22	2.19	0.41
22:UV:1216:LYS:HA	22:UV:1219:ILE:HD12	2.02	0.41
27:CE:175:LYS:HB2	27:CE:175:LYS:HE2	1.78	0.41
29:CH:156:ASN:HA	29:CH:544:ALA:HB1	2.00	0.41
29:CH:245:SER:HB2	29:CH:247:ASP:OD1	2.20	0.41
31:CJ:100:LEU:HD22	31:CJ:144:GLU:HB3	2.02	0.41
33:CL:833:ARG:NH2	61:DX:138:GLU:O	2.52	0.41
33:CL:928:ILE:HD13	33:CL:928:ILE:HG21	1.83	0.41
37:JC:93:PHE:CE2	37:JC:95:ARG:HB2	2.54	0.41
37:JC:166:ASN:H	37:JC:173:LEU:HD23	1.85	0.41
51:DG:211:LEU:O	51:DG:215:ARG:HG3	2.19	0.41
54:DJ:86:LEU:HD12	54:DJ:86:LEU:HA	1.70	0.41
66:D3:263:C:N4	66:D3:264:G:O6	2.53	0.41
66:D3:1025:A:H2'	66:D3:1026:A:C8	2.55	0.41
66:D3:1666:U:H5'	66:D3:1666:U:H6	1.84	0.41
1:UA:62:ASP:OD1	1:UA:63:LEU:N	2.53	0.41
1:UA:779:LEU:HD23	1:UA:779:LEU:HA	1.78	0.41
5:UE:332:LEU:HD12	5:UE:332:LEU:HA	1.90	0.41
7:UG:81:GLU:OE1	46:JP:1:MET:HB2	2.20	0.41
9:UI:466:GLU:O	9:UI:470:ILE:HG12	2.20	0.41
10:UJ:261:LEU:HA	10:UJ:261:LEU:HD23	1.82	0.41
15:UO:28:ARG:NH1	65:D2:142:U:O2	2.53	0.41
17:UQ:433:ARG:NE	65:D2:4:C:OP1	2.53	0.41
19:US:148:PHE:O	19:US:152:ILE:HG12	2.19	0.41
19:US:226:ASP:HB2	19:US:284:ARG:HD3	2.01	0.41
21:UU:327:SER:HG	21:UU:329:SER:H	1.65	0.41
21:UU:493:ILE:HG21	21:UU:493:ILE:HD13	1.78	0.41
22:UV:883:LEU:HD23	22:UV:883:LEU:HA	1.90	0.41
22:UV:1111:SER:HA	22:UV:1129:PRO:HG3	2.01	0.41
22:UV:1165:SER:OG	22:UV:1166:ARG:N	2.52	0.41
23:UX:135:THR:O	23:UX:135:THR:OG1	2.34	0.41
28:CG:59:GLU:OE2	28:CG:59:GLU:N	2.54	0.41
29:CH:74:LEU:HD12	29:CH:74:LEU:HA	1.80	0.41
33:CL:215:TYR:HB3	33:CL:216:PRO:CD	2.50	0.41
33:CL:235:LEU:HA	33:CL:235:LEU:HD23	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:CL:254:HIS:HB3	33:CL:256:GLU:OE1	2.19	0.41
34:CM:324:ILE:HD12	34:CM:324:ILE:HA	1.93	0.41
36:JB:802:LEU:O	36:JB:805:ILE:N	2.51	0.41
37:JC:14:TYR:HB2	37:JC:342:TYR:O	2.20	0.41
37:JC:141:GLY:HA2	37:JC:157:ALA:HA	2.01	0.41
37:JC:160:ASN:HB3	37:JC:180:THR:O	2.21	0.41
39:JF:116:THR:OG1	39:JF:119:GLY:N	2.54	0.41
45:JO:90:ASP:OD2	45:JO:93:ILE:HG12	2.20	0.41
45:JO:159:LEU:HA	45:JO:159:LEU:HD23	1.83	0.41
46:JP:450:ASP:OD1	46:JP:450:ASP:N	2.36	0.41
58:DQ:118:ILE:HD12	58:DQ:118:ILE:HA	1.88	0.41
65:D2:190:U:H2'	65:D2:191:U:C6	2.55	0.41
66:D3:1782:A:H8	66:D3:1782:A:O5'	2.02	0.41
1:UA:30:LEU:HG	1:UA:39:VAL:HG22	2.02	0.41
2:UB:561:ILE:HG12	19:US:473:TYR:CD2	2.55	0.41
3:UC:502:LYS:NZ	24:UZ:251:SER:OG	2.46	0.41
4:UD:758:ASN:HB3	4:UD:761:THR:OG1	2.20	0.41
7:UG:162:ASN:HB3	7:UG:164:GLN:H	1.85	0.41
7:UG:317:THR:HG23	7:UG:334:ARG:HB3	2.03	0.41
7:UG:440:ASP:OD1	14:UN:838:LYS:HB3	2.20	0.41
7:UG:527:ARG:NH1	65:D2:366:A:OP1	2.47	0.41
10:UJ:336:LEU:HD23	10:UJ:336:LEU:HA	1.87	0.41
12:UL:220:THR:HG23	12:UL:259:ILE:HD11	2.02	0.41
13:UM:35:PRO:HD3	13:UM:67:LEU:HD21	2.01	0.41
13:UM:302:MET:HB2	13:UM:314:ILE:HG22	2.02	0.41
15:UO:439:LEU:HD23	15:UO:439:LEU:HA	1.87	0.41
15:UO:509:GLN:HE21	15:UO:509:GLN:HB3	1.73	0.41
19:US:180:PHE:CD1	19:US:184:TYR:HD2	2.37	0.41
22:UV:1136:LEU:O	22:UV:1139:LEU:HB2	2.20	0.41
26:CD:237:LEU:O	26:CD:240:LEU:C	2.59	0.41
29:CH:336:CYS:SG	29:CH:349:TRP:HB2	2.59	0.41
29:CH:342:ARG:HE	29:CH:342:ARG:HB3	1.73	0.41
33:CL:369:ASP:OD1	33:CL:370:ALA:N	2.52	0.41
34:CM:337:VAL:HG13	34:CM:354:ILE:HG13	2.03	0.41
36:JA:59:TYR:OH	66:D3:416:A:N1	2.53	0.41
37:JC:152:ASP:OD1	37:JC:166:ASN:ND2	2.54	0.41
38:JE:300:THR:O	38:JE:304:GLU:HG2	2.21	0.41
45:JO:98:ARG:O	45:JO:101:ILE:HG12	2.20	0.41
49:DE:112:HIS:O	49:DE:114:ILE:HG12	2.19	0.41
52:DH:6:ALA:O	52:DH:9:LEU:C	2.59	0.41
65:D2:117:G:H2'	65:D2:118:A:H8	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:D2:273:G:N2	65:D2:274:C:O2	2.53	0.41
66:D3:417:A:H5'	66:D3:418:G:C4	2.55	0.41
1:UA:502:ILE:HD13	1:UA:502:ILE:HG21	1.83	0.41
2:UB:494:SER:HB2	2:UB:497:ASP:OD2	2.21	0.41
2:UB:548:ARG:NH1	2:UB:638:ASN:OD1	2.39	0.41
3:UC:596:THR:HG22	43:JM:137:LYS:HG3	2.02	0.41
4:UD:741:LEU:HA	4:UD:756:GLU:HA	2.02	0.41
7:UG:78:ASN:HB3	7:UG:80:LEU:H	1.85	0.41
7:UG:118:TYR:CE1	7:UG:125:LEU:HD12	2.55	0.41
7:UG:279:SER:O	7:UG:292:THR:HG22	2.21	0.41
12:UL:484:ASP:OD1	12:UL:485:GLY:N	2.54	0.41
12:UL:857:LEU:HD12	12:UL:857:LEU:HA	1.71	0.41
12:UL:926:GLN:HG3	41:JJ:264:ARG:NH1	2.36	0.41
13:UM:97:ARG:NH2	13:UM:133:ASN:HA	2.36	0.41
13:UM:265:ALA:HB3	13:UM:284:PRO:HG3	2.03	0.41
13:UM:537:TRP:CD1	13:UM:553:GLY:HA2	2.55	0.41
14:UN:837:LYS:O	14:UN:840:LEU:HB3	2.20	0.41
15:UO:101:ALA:HA	15:UO:126:PRO:HB3	2.03	0.41
15:UO:206:ILE:HD13	15:UO:206:ILE:HA	1.86	0.41
18:UR:16:ASP:O	18:UR:20:GLN:HB2	2.21	0.41
18:UR:344:ARG:NH2	65:D2:88:U:H3	2.14	0.41
19:US:124:LEU:HD11	19:US:184:TYR:OH	2.20	0.41
19:US:280:ILE:HG23	19:US:284:ARG:HD2	2.02	0.41
21:UU:190:LEU:HB3	21:UU:200:PHE:HB3	2.01	0.41
21:UU:229:GLU:HA	21:UU:244:ILE:O	2.20	0.41
22:UV:188:SER:HA	22:UV:191:LEU:HB2	2.03	0.41
22:UV:235:LEU:HD23	22:UV:235:LEU:HA	1.87	0.41
22:UV:1037:LEU:HD11	22:UV:1050:ILE:HG22	2.02	0.41
24:UZ:130:ARG:NH2	24:UZ:169:GLU:OE1	2.53	0.41
29:CH:449:ASN:OD1	29:CH:450:ASP:N	2.53	0.41
30:CI:143:ILE:HD12	30:CI:143:ILE:HG23	1.82	0.41
36:JA:870:LYS:H	36:JA:870:LYS:HG2	1.57	0.41
45:JO:94:ILE:HD12	45:JO:94:ILE:HA	1.91	0.41
46:JP:345:THR:OG1	46:JP:346:LYS:N	2.53	0.41
49:DE:149:TYR:HB3	51:DG:208:TYR:CG	2.55	0.41
57:DO:112:ILE:HD13	57:DO:112:ILE:HA	1.93	0.41
58:DQ:13:LYS:HG3	58:DQ:14:LYS:N	2.32	0.41
65:D2:188:A:H2	65:D2:209:G:H22	1.67	0.41
65:D2:312:U:O2'	65:D2:313:A:H5'	2.20	0.41
66:D3:208:U:H3	66:D3:257:A:H61	1.69	0.41
66:D3:529:A:H2'	66:D3:530:C:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:D3:1037:C:H6	66:D3:1037:C:O5'	2.03	0.41
66:D3:1699:G:H2'	66:D3:1701:A:N7	2.35	0.41
1:UA:474:GLY:O	1:UA:492:SER:OG	2.37	0.41
6:UF:14:GLU:OE2	6:UF:36:ARG:NH2	2.27	0.41
10:UJ:111:LEU:HD23	10:UJ:111:LEU:HA	1.85	0.41
12:UL:20:ASN:HA	12:UL:339:LYS:HE3	2.03	0.41
12:UL:48:ASP:OD2	12:UL:62:LYS:HD3	2.20	0.41
12:UL:268:LYS:N	12:UL:371:LYS:HZ3	2.18	0.41
12:UL:428:PHE:CD1	12:UL:463:SER:HB3	2.55	0.41
13:UM:237:LEU:HD13	13:UM:275:GLY:HA2	2.03	0.41
14:UN:306:ARG:HA	14:UN:306:ARG:HD3	1.94	0.41
15:UO:22:PRO:O	15:UO:25:ARG:HB2	2.21	0.41
15:UO:287:LEU:HD23	15:UO:287:LEU:HA	1.86	0.41
17:UQ:35:ALA:HB1	17:UQ:46:ILE:HD13	2.01	0.41
17:UQ:264:ILE:HG21	17:UQ:264:ILE:HD13	1.80	0.41
17:UQ:464:LYS:HB3	17:UQ:464:LYS:HE2	1.85	0.41
18:UR:395:LEU:HD23	18:UR:395:LEU:HA	1.81	0.41
19:US:407:ARG:HH11	19:US:491:LEU:HD22	1.84	0.41
24:UZ:209:ILE:HA	24:UZ:212:ILE:HG22	2.02	0.41
25:CA:252:ILE:HD13	25:CA:252:ILE:HG21	1.75	0.41
25:CB:272:LYS:HB3	25:CB:313:HIS:NE2	2.35	0.41
27:CE:320:LEU:HD12	27:CE:320:LEU:HA	1.83	0.41
29:CH:367:LYS:HD3	29:CH:367:LYS:HA	1.77	0.41
33:CL:635:PHE:HA	34:CM:188:ILE:HG23	2.02	0.41
38:JE:265:ASP:HB3	38:JE:274:ILE:HG23	2.02	0.41
39:JG:99:LEU:HD23	39:JG:99:LEU:HA	1.82	0.41
41:JJ:219:ALA:HB1	41:JJ:267:ALA:HB2	2.03	0.41
46:JP:298:LEU:HD23	46:JP:298:LEU:HA	1.88	0.41
51:DG:32:ILE:HD11	51:DG:63:MET:HG3	2.00	0.41
52:DH:49:ILE:HG12	52:DH:175:LYS:HG3	2.03	0.41
57:DO:76:ILE:HD13	57:DO:76:ILE:HA	1.89	0.41
65:D2:369:G:C2	65:D2:371:G:C8	3.08	0.41
65:D2:443:G:N2	65:D2:444:U:O2	2.54	0.41
66:D3:154:G:H1	66:D3:160:C:H42	1.67	0.41
66:D3:391:A:H2'	66:D3:392:G:H8	1.85	0.41
66:D3:1695:G:H2'	66:D3:1696:G:C8	2.55	0.41
2:UB:571:ILE:HD13	2:UB:571:ILE:HA	1.89	0.41
10:UJ:364:ASN:OD1	10:UJ:364:ASN:N	2.53	0.41
10:UJ:406:TYR:O	10:UJ:409:SER:OG	2.21	0.41
11:UK:115:LEU:O	11:UK:119:GLU:HG2	2.21	0.41
11:UK:195:LEU:HA	11:UK:195:LEU:HD23	1.82	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:UQ:386:ASN:OD1	17:UQ:387:GLY:N	2.54	0.41
17:UQ:823:ALA:HB1	17:UQ:827:HIS:NE2	2.35	0.41
19:US:397:THR:HG23	19:US:499:LEU:HA	2.02	0.41
21:UU:591:PHE:HA	21:UU:601:VAL:O	2.20	0.41
21:UU:837:LEU:HB3	21:UU:884:PHE:CE2	2.56	0.41
22:UV:207:LEU:HB2	22:UV:296:ILE:HD13	2.02	0.41
22:UV:261:ASN:HD21	22:UV:588:GLN:HE22	1.68	0.41
22:UV:329:THR:O	22:UV:333:ASN:HB2	2.21	0.41
25:CA:162:LEU:HA	25:CA:162:LEU:HD12	1.88	0.41
26:CD:143:GLN:OE1	26:CD:147:LEU:HB2	2.20	0.41
26:CD:194:ARG:HD3	26:CD:194:ARG:HA	1.98	0.41
29:CH:63:ARG:HB2	54:DJ:70:LEU:HD21	2.02	0.41
31:CJ:13:LEU:HD23	31:CJ:13:LEU:HA	1.71	0.41
31:CJ:117:LEU:HA	31:CJ:117:LEU:HD12	1.64	0.41
31:CJ:285:ASN:OD1	31:CJ:285:ASN:N	2.49	0.41
33:CL:607:ASP:OD1	33:CL:607:ASP:N	2.51	0.41
33:CL:1128:LYS:HD3	33:CL:1128:LYS:HA	1.84	0.41
34:CM:18:ARG:HD3	34:CM:98:TYR:CE1	2.56	0.41
34:CM:185:ARG:HA	34:CM:186:PRO:HD3	1.90	0.41
35:CN:23:HIS:HB3	35:CN:26:LEU:HD13	2.02	0.41
36:JA:361:ARG:O	36:JA:363:HIS:N	2.50	0.41
36:JA:865:LEU:HD12	36:JA:865:LEU:HA	1.87	0.41
37:JC:70:TYR:CZ	37:JC:111:TRP:CD1	3.09	0.41
38:JE:285:ARG:O	38:JE:288:SER:OG	2.26	0.41
45:JO:287:LYS:HA	45:JO:290:GLU:HG3	2.01	0.41
46:JP:201:ILE:CG2	46:JP:215:LEU:HB2	2.50	0.41
46:JP:248:ASP:OD2	46:JP:251:THR:OG1	2.27	0.41
48:DA:19:ARG:HH12	48:DA:22:ASP:N	2.10	0.41
49:DE:126:VAL:HB	49:DE:158:ASP:HB2	2.01	0.41
57:DO:15:GLY:O	57:DO:79:VAL:HA	2.20	0.41
65:D2:328:A:O2'	65:D2:329:A:H5"	2.20	0.41
66:D3:498:G:N2	66:D3:499:U:O2	2.54	0.41
67:D4:105:C:H42	67:D4:309:G:H1	1.69	0.41
1:UA:430:ARG:HB3	32:CK:458:PRO:HB2	2.02	0.41
1:UA:667:GLY:O	1:UA:673:ARG:NH2	2.53	0.41
2:UB:435:PHE:O	2:UB:439:GLN:HG2	2.21	0.41
4:UD:309:GLN:NE2	4:UD:318:ASN:HA	2.34	0.41
4:UD:332:ASP:O	4:UD:351:GLY:HA3	2.21	0.41
4:UD:638:SER:HA	4:UD:646:LEU:HD13	2.02	0.41
4:UD:657:ILE:HD13	4:UD:732:PHE:HB2	2.02	0.41
4:UD:735:THR:OG1	4:UD:737:LYS:HG2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:UE:234:GLU:HB2	5:UE:247:THR:HB	2.02	0.41
7:UG:75:GLU:HA	7:UG:76:PRO:HD3	1.78	0.41
7:UG:303:ILE:HG21	7:UG:303:ILE:HD13	1.81	0.41
7:UG:508:VAL:HG22	45:JO:73:LEU:HD23	2.02	0.41
8:UH:262:LEU:N	8:UH:270:PHE:O	2.50	0.41
9:UI:503:LEU:O	9:UI:507:ARG:HD2	2.19	0.41
10:UJ:196:LEU:HD23	10:UJ:196:LEU:HA	1.86	0.41
10:UJ:373:ILE:HD12	10:UJ:373:ILE:HA	1.96	0.41
12:UL:292:ILE:HG23	12:UL:324:PHE:CZ	2.56	0.41
13:UM:133:ASN:HD22	13:UM:135:TYR:HD1	1.69	0.41
13:UM:303:PHE:HA	13:UM:312:GLN:O	2.20	0.41
19:US:452:ASP:HA	19:US:453:PRO:HD3	1.93	0.41
21:UU:110:LEU:HA	21:UU:110:LEU:HD12	1.89	0.41
21:UU:218:LEU:HA	21:UU:218:LEU:HD23	1.64	0.41
21:UU:497:LYS:HB3	50:DF:17:VAL:HG23	2.02	0.41
21:UU:900:ASN:O	21:UU:901:LYS:HG2	2.20	0.41
25:CA:142:ARG:HH11	25:CA:142:ARG:HD3	1.74	0.41
25:CB:117:VAL:HG13	25:CB:118:TYR:HD1	1.84	0.41
26:CD:263:ILE:HD11	26:CD:268:MET:HE2	2.03	0.41
29:CH:235:HIS:NE2	29:CH:253:THR:OG1	2.53	0.41
29:CH:409:ASP:CG	29:CH:411:PHE:H	2.23	0.41
32:CK:314:LEU:HD23	32:CK:314:LEU:HA	1.79	0.41
36:JA:8:SER:O	36:JA:12:SER:CB	2.69	0.41
36:JA:727:TYR:CE2	36:JA:729:LEU:HA	2.55	0.41
37:JC:192:ASN:O	37:JC:194:LEU:N	2.49	0.41
37:JC:239:ASP:OD1	37:JC:240:GLY:N	2.53	0.41
38:JE:228:PHE:CZ	49:DE:189:LEU:HD22	2.55	0.41
39:JG:117:SER:OG	39:JG:118:ARG:HD2	2.20	0.41
44:JN:323:LYS:HA	44:JN:323:LYS:HD2	1.85	0.41
46:JP:85:THR:HG21	46:JP:372:VAL:HG21	2.01	0.41
48:DA:172:LEU:HD23	48:DA:172:LEU:HA	1.85	0.41
49:DE:37:LYS:HE2	49:DE:37:LYS:HB3	1.97	0.41
49:DE:41:SER:OG	49:DE:84:ALA:O	2.34	0.41
54:DJ:63:ASP:OD1	54:DJ:63:ASP:N	2.53	0.41
56:DN:43:LYS:HE2	56:DN:43:LYS:HB3	1.95	0.41
66:D3:1480:G:N2	66:D3:1528:U:O2	2.54	0.41
66:D3:1675:C:H2'	66:D3:1676:U:O4'	2.20	0.41
1:UA:825:GLN:O	1:UA:829:VAL:HG22	2.21	0.41
5:UE:216:ASP:OD1	5:UE:217:ILE:N	2.54	0.41
6:UF:14:GLU:OE1	6:UF:87:SER:OG	2.20	0.41
7:UG:389:LEU:HD13	7:UG:400:ASN:HD22	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:UJ:66:PHE:CZ	10:UJ:105:ALA:HB2	2.55	0.41
12:UL:572:HIS:CD2	12:UL:598:LYS:HE2	2.56	0.41
12:UL:620:ASN:HD21	12:UL:663:LEU:N	2.19	0.41
12:UL:633:CYS:SG	12:UL:663:LEU:HD22	2.61	0.41
12:UL:855:LYS:HE2	12:UL:855:LYS:HB3	1.80	0.41
13:UM:154:GLY:HA3	13:UM:161:TRP:HD1	1.84	0.41
13:UM:355:LEU:HA	13:UM:355:LEU:HD23	1.85	0.41
13:UM:805:ILE:HG21	13:UM:805:ILE:HD13	1.86	0.41
17:UQ:96:ILE:HD12	17:UQ:151:TYR:CE2	2.55	0.41
17:UQ:524:ASP:OD1	17:UQ:524:ASP:N	2.45	0.41
22:UV:186:ILE:O	22:UV:204:ASP:HB2	2.21	0.41
24:UZ:109:ARG:HE	24:UZ:109:ARG:HB2	1.67	0.41
25:CB:204:GLY:HA3	25:CB:221:ILE:HD11	2.03	0.41
28:CG:53:ILE:HA	28:CG:53:ILE:HD13	1.77	0.41
29:CH:67:ALA:HB1	38:JE:249:ILE:HD13	2.02	0.41
29:CH:492:TRP:HB3	29:CH:520:VAL:HG22	2.03	0.41
30:CI:85:MET:HE1	32:CK:448:LEU:HB3	2.03	0.41
33:CL:133:LYS:NZ	33:CL:850:GLY:O	2.37	0.41
36:JA:8:SER:O	36:JA:12:SER:HB2	2.21	0.41
36:JA:80:GLU:OE1	36:JA:85:THR:OG1	2.25	0.41
36:JA:523:LEU:HD11	36:JA:534:LEU:HD13	2.02	0.41
37:JC:61:LYS:HA	37:JC:61:LYS:HD3	1.96	0.41
39:JF:80:MET:HB3	39:JF:82:ARG:NH2	2.36	0.41
62:DY:40:LEU:HA	62:DY:40:LEU:HD13	1.70	0.41
65:D2:519:A:H2'	65:D2:520:A:O4'	2.20	0.41
66:D3:88:U:H2'	66:D3:89:G:C8	2.48	0.41
66:D3:108:A:C6	66:D3:307:G:C6	3.09	0.41
66:D3:212:U:N3	66:D3:213:A:N7	2.69	0.41
66:D3:282:C:H2'	66:D3:283:U:O4'	2.21	0.41
66:D3:375:U:H5'	66:D3:376:C:OP1	2.20	0.41
66:D3:538:A:H5'	66:D3:543:C:C5	2.55	0.41
66:D3:688:G:H2'	66:D3:689:G:C8	2.55	0.41
1:UA:155:SER:OG	1:UA:160:PHE:HB2	2.21	0.41
1:UA:573:ASN:N	1:UA:573:ASN:OD1	2.52	0.41
1:UA:644:ILE:HD12	1:UA:644:ILE:HG23	1.84	0.41
2:UB:577:VAL:HG11	2:UB:596:TYR:HA	2.02	0.41
4:UD:524:LYS:HD2	4:UD:524:LYS:HA	1.81	0.41
4:UD:535:GLU:HG3	4:UD:573:VAL:HG23	2.03	0.41
5:UE:83:GLY:O	5:UE:101:THR:HG22	2.20	0.41
6:UF:87:SER:OG	6:UF:88:ILE:N	2.53	0.41
7:UG:150:LEU:HD11	7:UG:154:CYS:SG	2.61	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:UH:79:ASN:N	8:UH:89:GLY:O	2.53	0.41
8:UH:231:PHE:HA	8:UH:238:ASP:HA	2.02	0.41
8:UH:596:LYS:HD2	8:UH:643:ASP:HB3	2.03	0.41
10:UJ:166:ASN:CG	27:CE:407:ARG:HH11	2.24	0.41
10:UJ:231:LEU:HD23	10:UJ:231:LEU:HA	1.71	0.41
10:UJ:316:PRO:HD2	10:UJ:319:ILE:HD12	2.02	0.41
11:UK:48:LEU:HA	11:UK:48:LEU:HD12	1.70	0.41
12:UL:107:ASP:OD2	12:UL:110:SER:N	2.42	0.41
12:UL:299:ARG:NH1	12:UL:324:PHE:HB2	2.35	0.41
12:UL:352:GLU:OE1	12:UL:364:TYR:OH	2.28	0.41
12:UL:439:LEU:HB2	12:UL:444:LEU:O	2.20	0.41
12:UL:643:ASP:OD2	12:UL:646:LYS:N	2.34	0.41
12:UL:838:THR:O	12:UL:841:GLN:HB2	2.21	0.41
15:UO:83:VAL:HG13	15:UO:85:TYR:CE1	2.44	0.41
15:UO:273:ILE:HG21	15:UO:273:ILE:HD13	1.76	0.41
17:UQ:110:PHE:CD2	17:UQ:144:VAL:HG21	2.56	0.41
17:UQ:126:VAL:O	17:UQ:128:SER:N	2.46	0.41
17:UQ:177:THR:OG1	17:UQ:178:PHE:N	2.54	0.41
17:UQ:294:LYS:HD2	65:D2:83:U:H5'	2.03	0.41
17:UQ:301:LEU:HD23	17:UQ:301:LEU:HA	1.73	0.41
17:UQ:383:LEU:HD12	17:UQ:383:LEU:HA	1.83	0.41
17:UQ:426:ARG:NH1	65:D2:68:U:OP2	2.30	0.41
17:UQ:727:GLN:NE2	17:UQ:740:LYS:HB3	2.34	0.41
18:UR:155:ILE:HG23	18:UR:155:ILE:HD12	1.80	0.41
18:UR:456:THR:OG1	18:UR:457:LYS:N	2.54	0.41
19:US:324:PHE:HA	19:US:327:MET:HE2	2.03	0.41
19:US:366:LEU:HD11	19:US:379:PHE:CD2	2.56	0.41
21:UU:728:ARG:HA	21:UU:728:ARG:HD3	1.75	0.41
22:UV:111:LEU:O	22:UV:115:LYS:HB2	2.21	0.41
22:UV:221:ASN:HA	22:UV:315:ILE:HD13	2.02	0.41
22:UV:763:THR:HG22	22:UV:917:LYS:HE3	2.03	0.41
22:UV:828:ASP:HB2	22:UV:839:THR:HG23	2.02	0.41
22:UV:831:ILE:HD13	22:UV:831:ILE:HA	1.86	0.41
25:CA:305:THR:HA	25:CA:314:CYS:SG	2.61	0.41
25:CB:109:LYS:HG2	25:CB:141:TYR:CE1	2.53	0.41
26:CD:30:ARG:HA	26:CD:30:ARG:HD3	1.88	0.41
26:CD:206:LEU:HD21	26:CD:251:VAL:HG21	2.02	0.41
27:CE:157:ASP:OD1	27:CE:157:ASP:N	2.42	0.41
27:CE:252:LEU:O	27:CE:256:ASN:HB2	2.21	0.41
29:CH:146:LYS:O	29:CH:566:ALA:HA	2.19	0.41
30:CI:166:ILE:O	30:CI:170:LEU:HG	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:CJ:215:LYS:HA	31:CJ:215:LYS:HD2	1.82	0.41
31:CJ:279:ARG:HH21	31:CJ:279:ARG:HD3	1.65	0.41
31:CJ:281:ILE:HD13	31:CJ:281:ILE:HG21	1.80	0.41
32:CK:511:ASN:OD1	32:CK:511:ASN:N	2.46	0.41
33:CL:858:PRO:HA	33:CL:885:PHE:HB3	2.02	0.41
35:CN:180:LEU:O	35:CN:184:ILE:HG12	2.21	0.41
36:JA:918:ARG:O	36:JA:921:SER:OG	2.39	0.41
37:JC:144:LEU:HD21	37:JC:153:LEU:HD12	2.03	0.41
37:JC:194:LEU:HD11	37:JC:243:PHE:CE2	2.55	0.41
39:JF:175:CYS:HB2	39:JF:177:LYS:HZ2	1.86	0.41
45:JO:85:THR:HG23	45:JO:87:LYS:H	1.86	0.41
45:JO:104:LEU:HA	45:JO:104:LEU:HD23	1.88	0.41
46:JP:278:VAL:HG21	46:JP:320:ILE:HD13	2.03	0.41
49:DE:114:ILE:HD13	49:DE:114:ILE:HA	1.92	0.41
49:DE:131:LEU:HD12	49:DE:131:LEU:HA	1.87	0.41
52:DH:23:ALA:HA	52:DH:26:GLU:HG2	2.03	0.41
53:DI:169:ILE:HD13	53:DI:169:ILE:HA	1.97	0.41
54:DJ:106:GLU:OE1	54:DJ:115:LYS:HE3	2.19	0.41
55:DL:72:THR:O	55:DL:88:ARG:NE	2.34	0.41
56:DN:114:ARG:HD3	56:DN:114:ARG:HA	1.89	0.41
62:DY:27:VAL:CB	62:DY:69:SER:HB3	2.50	0.41
65:D2:338:A:O2'	65:D2:340:U:O4	2.26	0.41
66:D3:317:C:H2'	66:D3:318:U:C6	2.55	0.41
67:D4:35:U:H6	67:D4:35:U:H5"	1.86	0.41
1:UA:223:ARG:HA	1:UA:223:ARG:HD3	1.84	0.41
1:UA:722:THR:O	1:UA:726:THR:HG23	2.21	0.41
1:UA:790:GLN:O	1:UA:792:ILE:N	2.54	0.41
2:UB:710:ILE:HG22	2:UB:711:PRO:O	2.21	0.41
10:UJ:385:THR:HG1	10:UJ:418:CYS:HG	1.68	0.41
13:UM:219:ILE:HD13	13:UM:219:ILE:HA	1.83	0.41
13:UM:513:LYS:HG2	13:UM:535:GLY:N	2.35	0.41
14:UN:872:ARG:NE	14:UN:876:GLN:HE21	2.19	0.41
17:UQ:92:LEU:HD23	17:UQ:92:LEU:HA	1.78	0.41
17:UQ:200:ASN:HD22	17:UQ:263:ALA:HA	1.86	0.41
18:UR:445:ARG:NH2	18:UR:500:MET:O	2.41	0.41
22:UV:329:THR:HG22	22:UV:332:TYR:HB3	2.02	0.41
22:UV:596:LYS:HA	22:UV:596:LYS:HD3	1.88	0.41
22:UV:950:ILE:HA	22:UV:951:PRO:HD3	1.95	0.41
29:CH:154:GLU:OE1	29:CH:195:GLN:HB3	2.21	0.41
30:CI:33:MET:HA	30:CI:38:ILE:HG12	2.02	0.41
31:CJ:7:ARG:O	31:CJ:11:GLU:HG3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:CJ:226:ASN:OD1	31:CJ:289:TYR:OH	2.27	0.41
31:CJ:236:HIS:HD2	32:CK:369:ILE:HD13	1.86	0.41
33:CL:71:ILE:HD13	33:CL:71:ILE:HG21	1.88	0.41
33:CL:98:LEU:HA	33:CL:98:LEU:HD12	1.78	0.41
33:CL:312:PHE:HD1	33:CL:312:PHE:HA	1.73	0.41
33:CL:312:PHE:HA	33:CL:315:GLN:HG3	2.03	0.41
34:CM:119:LYS:HG2	34:CM:165:GLU:HG2	2.03	0.41
35:CN:228:LYS:HG3	66:D3:1059:U:O4	2.21	0.41
35:CN:261:GLN:O	35:CN:264:GLU:HG3	2.21	0.41
37:JC:326:THR:HG21	37:JC:348:PRO:HD2	2.02	0.41
46:JP:139:CYS:HB3	46:JP:185:ILE:HD13	2.03	0.41
46:JP:191:ASN:HB3	46:JP:193:THR:OG1	2.20	0.41
46:JP:272:MET:HG3	46:JP:316:THR:O	2.21	0.41
46:JP:400:LEU:HD12	46:JP:400:LEU:HA	1.69	0.41
48:DA:83:LYS:HE2	48:DA:83:LYS:HB2	1.84	0.41
49:DE:88:ASP:O	49:DE:100:ARG:HA	2.21	0.41
52:DH:141:ARG:NH2	60:DW:51:GLU:OE2	2.54	0.41
52:DH:177:THR:HG23	52:DH:179:LYS:HG2	2.03	0.41
60:DW:2:THR:N	66:D3:966:A:HO2'	2.18	0.41
62:DY:53:ASP:OD1	62:DY:53:ASP:N	2.40	0.41
65:D2:550:C:H2'	65:D2:551:A:C8	2.55	0.41
66:D3:9:U:H2'	66:D3:10:G:O4'	2.20	0.41
66:D3:181:A:H2'	66:D3:182:A:C8	2.55	0.41
66:D3:186:C:H2'	66:D3:187:G:O4'	2.20	0.41
66:D3:410:A:H2'	66:D3:411:C:O4'	2.21	0.41
66:D3:630:A:C5	66:D3:631:G:C8	3.09	0.41
1:UA:23:SER:OG	1:UA:24:ASP:N	2.54	0.40
1:UA:315:GLU:O	1:UA:316:TRP:HD1	2.04	0.40
4:UD:212:ILE:HG21	4:UD:212:ILE:HD13	1.85	0.40
5:UE:123:SER:HB3	5:UE:141:ARG:HH22	1.86	0.40
5:UE:173:ILE:HG21	5:UE:173:ILE:HD13	1.88	0.40
6:UF:271:LEU:HD13	6:UF:337:HIS:HB3	2.03	0.40
6:UF:309:LEU:HD13	6:UF:312:LEU:HD11	2.03	0.40
7:UG:484:PRO:HG2	7:UG:497:LEU:HD23	2.03	0.40
10:UJ:59:LEU:HB3	10:UJ:66:PHE:CD2	2.56	0.40
10:UJ:349:THR:HG21	10:UJ:379:GLU:HG2	2.03	0.40
11:UK:190:LEU:O	11:UK:194:LYS:HG2	2.22	0.40
12:UL:23:CYS:HB2	12:UL:41:LEU:HD11	2.02	0.40
12:UL:143:SER:HB3	12:UL:162:HIS:HB2	2.04	0.40
12:UL:289:GLU:OE1	12:UL:289:GLU:N	2.52	0.40
13:UM:433:HIS:NE2	13:UM:435:ALA:O	2.54	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:UM:618:ASN:OD1	13:UM:618:ASN:N	2.51	0.40
15:UO:97:CYS:HB3	15:UO:132:PHE:HE2	1.85	0.40
15:UO:404:ALA:CB	15:UO:417:VAL:HG11	2.51	0.40
21:UU:419:ILE:HD13	21:UU:419:ILE:HG21	1.90	0.40
22:UV:115:LYS:HA	22:UV:115:LYS:HD2	1.93	0.40
22:UV:738:TYR:O	22:UV:742:PHE:HB2	2.20	0.40
23:UX:103:MET:CG	23:UX:127:ARG:HH21	2.32	0.40
23:UX:109:LEU:HB3	23:UX:113:TYR:CE2	2.56	0.40
27:CE:4:VAL:O	27:CE:14:LEU:HA	2.20	0.40
32:CK:489:SER:O	32:CK:489:SER:OG	2.37	0.40
33:CL:156:LEU:HD23	33:CL:156:LEU:HA	1.86	0.40
33:CL:1108:LYS:HB3	33:CL:1108:LYS:HE3	1.83	0.40
35:CN:70:PHE:HZ	35:CN:158:TRP:HA	1.86	0.40
35:CN:255:LYS:O	35:CN:261:GLN:HB3	2.21	0.40
36:JA:25:ILE:HG23	36:JA:198:CYS:SG	2.61	0.40
36:JA:32:ARG:N	36:JA:203:ASP:OD2	2.36	0.40
36:JA:71:LYS:HA	36:JA:71:LYS:HD3	1.86	0.40
36:JA:97:PHE:CE1	36:JA:101:GLN:HG3	2.56	0.40
36:JA:108:TYR:OH	36:JA:126:ASP:O	2.37	0.40
36:JA:117:ASN:O	36:JA:141:THR:OG1	2.39	0.40
36:JA:846:SER:HB3	36:JA:918:ARG:NH1	2.35	0.40
37:JC:55:PHE:CD1	37:JC:75:GLY:HA3	2.56	0.40
41:JJ:185:PHE:HB2	41:JJ:231:ILE:CG1	2.51	0.40
46:JP:21:GLU:H	46:JP:21:GLU:HG3	1.64	0.40
46:JP:202:HIS:HB3	46:JP:211:PRO:HB3	2.03	0.40
50:DF:143:ARG:O	50:DF:162:VAL:HG12	2.21	0.40
57:DO:62:LEU:HD23	57:DO:62:LEU:HA	1.71	0.40
58:DQ:98:ASP:N	58:DQ:98:ASP:OD1	2.47	0.40
61:DX:70:LYS:O	61:DX:87:VAL:HG12	2.21	0.40
62:DY:10:ARG:C	62:DY:24:VAL:HG12	2.41	0.40
62:DY:25:VAL:HB	62:DY:71:GLY:C	2.42	0.40
65:D2:246:G:H2'	65:D2:247:U:O4'	2.22	0.40
66:D3:8:U:O4	67:D4:27:U:H5	2.04	0.40
66:D3:314:C:H42	66:D3:354:C:H42	1.69	0.40
66:D3:353:A:OP2	66:D3:354:C:N4	2.51	0.40
66:D3:1676:U:H1'	66:D3:1726:G:N2	2.36	0.40
1:UA:63:LEU:HD12	1:UA:69:LEU:O	2.21	0.40
1:UA:336:SER:OG	21:UU:744:SER:OG	2.26	0.40
2:UB:548:ARG:HH11	2:UB:642:SER:HB2	1.86	0.40
2:UB:606:PHE:CZ	2:UB:677:ASP:HB3	2.56	0.40
4:UD:83:ASN:O	4:UD:85:TRP:N	2.47	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:UD:102:LEU:HD23	4:UD:102:LEU:HA	1.90	0.40
4:UD:383:LEU:HD23	4:UD:383:LEU:HA	1.94	0.40
6:UF:144:VAL:O	6:UF:148:ILE:HD12	2.21	0.40
8:UH:32:ALA:O	8:UH:353:ARG:N	2.50	0.40
10:UJ:266:THR:O	10:UJ:266:THR:OG1	2.34	0.40
12:UL:106:TRP:CZ3	12:UL:113:VAL:HB	2.56	0.40
12:UL:123:ALA:O	12:UL:141:LYS:N	2.48	0.40
12:UL:406:LEU:HA	12:UL:406:LEU:HD23	1.92	0.40
12:UL:760:ILE:HA	12:UL:760:ILE:HD13	1.86	0.40
13:UM:86:LYS:HZ2	13:UM:86:LYS:HG2	1.65	0.40
17:UQ:349:PRO:HB2	17:UQ:350:GLN:HG3	2.02	0.40
18:UR:158:VAL:O	18:UR:161:ILE:HG22	2.21	0.40
18:UR:181:GLU:HB3	21:UU:281:ARG:NH2	2.36	0.40
18:UR:545:HIS:HB2	18:UR:552:PHE:CZ	2.57	0.40
19:US:156:TRP:HZ3	19:US:215:ASN:HB2	1.86	0.40
19:US:314:VAL:HG11	19:US:352:VAL:HG11	2.02	0.40
19:US:341:LEU:O	19:US:344:ILE:HG22	2.20	0.40
21:UU:375:LEU:HD12	21:UU:414:ILE:HD12	2.03	0.40
21:UU:525:ILE:HG21	21:UU:525:ILE:HD13	1.83	0.40
22:UV:330:PRO:HG2	22:UV:331:LEU:HD12	2.03	0.40
22:UV:464:THR:HG23	22:UV:466:THR:HG23	2.02	0.40
22:UV:795:GLU:O	22:UV:799:LEU:HB2	2.21	0.40
22:UV:1098:PHE:CZ	22:UV:1184:GLY:HA3	2.56	0.40
25:CB:198:GLU:OE2	25:CB:200:SER:N	2.54	0.40
26:CD:411:ARG:HA	26:CD:411:ARG:HD3	1.91	0.40
28:CF:63:ILE:HG21	28:CF:63:ILE:HD13	1.80	0.40
31:CJ:127:LEU:HD12	31:CJ:127:LEU:HA	1.84	0.40
32:CK:447:LYS:HE2	32:CK:447:LYS:HB2	1.85	0.40
33:CL:176:LEU:HD22	33:CL:176:LEU:HA	1.93	0.40
33:CL:257:LEU:HD23	33:CL:257:LEU:HA	1.84	0.40
33:CL:863:THR:HA	33:CL:868:ARG:O	2.21	0.40
34:CM:7:LYS:N	34:CM:30:PRO:HB2	2.36	0.40
34:CM:48:TYR:CE2	34:CM:94:LYS:HE3	2.56	0.40
35:CN:100:LEU:HA	35:CN:100:LEU:HD12	1.88	0.40
36:JA:215:ASN:N	36:JA:215:ASN:OD1	2.53	0.40
37:JC:34:LYS:HE3	37:JC:34:LYS:HB3	1.93	0.40
39:JG:166:PRO:O	39:JG:169:ASP:HB3	2.21	0.40
43:JM:68:GLY:O	43:JM:72:LEU:HB2	2.22	0.40
46:JP:112:LEU:HB3	46:JP:113:VAL:O	2.22	0.40
48:DA:97:LEU:HD23	48:DA:97:LEU:HA	1.83	0.40
50:DF:40:ILE:HG12	50:DF:69:PHE:CE2	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DH:61:PHE:HA	52:DH:93:LEU:O	2.21	0.40
60:DW:78:ARG:O	60:DW:124:LYS:HD3	2.21	0.40
61:DX:107:PHE:HD1	61:DX:123:LYS:HB3	1.86	0.40
65:D2:509:A:H2'	65:D2:510:A:C8	2.57	0.40
66:D3:1122:G:H1	67:D4:3:C:H42	1.70	0.40
2:UB:740:MET:HE3	59:DS:103:ASN:CB	2.51	0.40
5:UE:56:SER:O	5:UE:56:SER:OG	2.31	0.40
5:UE:322:ILE:HD12	5:UE:322:ILE:HA	1.90	0.40
6:UF:281:LEU:HD23	6:UF:281:LEU:HA	1.80	0.40
7:UG:60:ALA:HA	7:UG:63:THR:HG22	2.03	0.40
7:UG:185:HIS:ND1	30:CI:24:ASP:OD2	2.55	0.40
7:UG:309:LEU:HD23	7:UG:309:LEU:HA	1.88	0.40
7:UG:448:SER:O	14:UN:843:GLN:HG2	2.21	0.40
8:UH:660:LEU:HD23	8:UH:660:LEU:HA	1.81	0.40
11:UK:135:ILE:HA	25:CB:302:GLU:OE2	2.21	0.40
12:UL:672:VAL:HG13	12:UL:684:TRP:HD1	1.86	0.40
13:UM:736:LEU:HD23	13:UM:736:LEU:HA	1.88	0.40
14:UN:317:LYS:HD2	14:UN:317:LYS:HA	1.92	0.40
15:UO:239:LEU:HA	15:UO:239:LEU:HD12	1.84	0.40
17:UQ:559:LYS:HB3	17:UQ:576:ALA:HB3	2.02	0.40
19:US:295:LEU:HD13	19:US:295:LEU:HA	1.95	0.40
19:US:399:ILE:HA	19:US:399:ILE:HD13	1.83	0.40
21:UU:511:ASP:OD1	21:UU:512:GLY:N	2.54	0.40
21:UU:630:THR:HG22	21:UU:644:THR:O	2.21	0.40
21:UU:847:LEU:HD12	21:UU:847:LEU:HA	1.81	0.40
22:UV:807:LEU:HD23	22:UV:807:LEU:HA	1.83	0.40
22:UV:814:LEU:O	22:UV:818:SER:HB2	2.21	0.40
22:UV:1102:LEU:HG	22:UV:1231:VAL:HA	2.03	0.40
23:UX:76:ILE:HD12	23:UX:76:ILE:HG23	1.83	0.40
24:UZ:155:ARG:NH2	47:JQ:179:VAL:HG21	2.37	0.40
24:UZ:179:GLN:HG2	47:JQ:192:ALA:HB3	2.03	0.40
25:CA:308:PRO:HG2	25:CA:309:TYR:CE2	2.56	0.40
25:CB:239:CYS:SG	25:CB:240:VAL:N	2.93	0.40
26:CD:245:SER:O	26:CD:250:ARG:NH2	2.54	0.40
26:CD:266:THR:O	26:CD:270:ASN:ND2	2.54	0.40
30:CI:94:ILE:HG21	30:CI:94:ILE:HD13	1.79	0.40
32:CK:365:LEU:HD12	32:CK:365:LEU:HA	1.91	0.40
33:CL:952:PHE:CD2	33:CL:958:VAL:HG22	2.56	0.40
34:CM:309:GLY:O	34:CM:353:THR:HA	2.22	0.40
46:JP:60:GLY:O	46:JP:374:LEU:HD23	2.21	0.40
46:JP:329:ILE:O	46:JP:342:ILE:HA	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:DI:84:HIS:CD2	53:DI:86:SER:H	2.39	0.40
55:DL:130:PRO:HA	55:DL:136:ARG:HG3	2.02	0.40
57:DO:48:VAL:HG22	57:DO:50:ALA:H	1.85	0.40
61:DX:133:LEU:HA	61:DX:133:LEU:HD23	1.77	0.40
65:D2:121:G:H1'	65:D2:124:A:H61	1.86	0.40
66:D3:143:G:H2'	66:D3:144:U:H4'	2.04	0.40
66:D3:640:U:O2'	66:D3:641:G:H8	2.04	0.40
1:UA:669:ASP:O	1:UA:672:THR:OG1	2.38	0.40
2:UB:210:VAL:HA	66:D3:1208:A:H61	1.86	0.40
2:UB:543:GLY:HA3	2:UB:567:PHE:HZ	1.87	0.40
4:UD:155:LYS:HA	4:UD:169:ASP:HA	2.04	0.40
5:UE:91:LEU:HD23	5:UE:91:LEU:HA	1.83	0.40
7:UG:174:THR:HB	7:UG:187:LEU:HB2	2.04	0.40
11:UK:120:LYS:NZ	67:D4:323:G:OP1	2.49	0.40
11:UK:149:GLU:OE2	11:UK:156:SER:OG	2.32	0.40
12:UL:746:LEU:HD23	12:UL:746:LEU:HA	1.81	0.40
13:UM:151:LYS:HD2	13:UM:151:LYS:HA	1.91	0.40
17:UQ:565:ARG:O	17:UQ:569:ASN:HA	2.22	0.40
18:UR:137:ILE:HG21	18:UR:137:ILE:HD13	1.81	0.40
20:UT:1334:ASP:HA	20:UT:1335:GLY:HA3	1.63	0.40
21:UU:752:LYS:HE2	21:UU:752:LYS:HB2	1.86	0.40
22:UV:282:ASP:OD1	22:UV:283:TYR:N	2.54	0.40
22:UV:441:GLN:NE2	22:UV:456:LYS:HB3	2.36	0.40
22:UV:1149:LEU:HD23	22:UV:1149:LEU:HA	1.88	0.40
25:CA:135:PRO:HA	25:CA:136:PRO:HD3	1.91	0.40
25:CB:244:VAL:HG23	25:CB:249:GLN:HG2	2.03	0.40
26:CD:202:HIS:CE1	26:CD:203:PHE:HB2	2.56	0.40
27:CE:328:ARG:O	27:CE:332:THR:HG22	2.22	0.40
27:CE:429:ALA:HA	27:CE:432:ASP:HB2	2.02	0.40
28:CG:87:LEU:HD12	28:CG:87:LEU:HA	1.91	0.40
29:CH:431:LYS:HE3	29:CH:431:LYS:HB3	1.91	0.40
31:CJ:42:LEU:HD23	31:CJ:42:LEU:HA	1.90	0.40
33:CL:831:ARG:HD3	33:CL:838:ILE:HA	2.02	0.40
33:CL:1034:LEU:O	33:CL:1038:ILE:HG23	2.20	0.40
34:CM:158:SER:H	34:CM:162:GLY:HA2	1.86	0.40
35:CN:199:GLN:HA	35:CN:202:VAL:HG12	2.02	0.40
36:JA:763:LEU:HD23	36:JA:774:LEU:HD13	2.02	0.40
36:JA:911:ALA:O	36:JA:915:LYS:HG3	2.22	0.40
37:JC:301:ASP:HB2	37:JC:306:LYS:HB3	2.02	0.40
45:JO:180:LEU:HA	45:JO:180:LEU:HD23	1.78	0.40
46:JP:91:VAL:HG23	46:JP:106:PHE:O	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DA:179:SER:OG	48:DA:180:THR:N	2.54	0.40
51:DG:77:LEU:HB3	51:DG:84:TYR:CD2	2.57	0.40
52:DH:84:LYS:CD	52:DH:85:PHE:CE1	3.04	0.40
52:DH:174:ASN:O	52:DH:178:GLY:HA2	2.22	0.40
55:DL:27:THR:OG1	55:DL:28:SER:N	2.55	0.40
55:DL:131:ILE:HB	55:DL:135:VAL:HG23	2.02	0.40
56:DN:84:ILE:HA	56:DN:85:PRO:HD3	1.81	0.40
56:DN:112:LYS:NZ	66:D3:974:A:O3'	2.45	0.40
62:DY:8:ARG:HE	62:DY:9:THR:H	1.69	0.40
66:D3:538:A:H5'	66:D3:543:C:H5	1.86	0.40
66:D3:1661:U:H2'	66:D3:1662:G:C8	2.56	0.40
4:UD:180:ASP:OD1	4:UD:181:THR:OG1	2.38	0.40
4:UD:219:ASP:OD1	4:UD:220:GLU:N	2.55	0.40
7:UG:136:SER:HG	7:UG:159:TYR:HH	1.69	0.40
7:UG:168:VAL:HG22	7:UG:177:TYR:HE2	1.87	0.40
8:UH:668:ILE:HD12	9:UI:448:GLU:HA	2.04	0.40
12:UL:536:CYS:SG	12:UL:537:VAL:N	2.94	0.40
12:UL:540:SER:HG	12:UL:544:ARG:H	1.67	0.40
13:UM:345:TYR:CZ	13:UM:626:MET:HB2	2.56	0.40
15:UO:21:THR:CG2	15:UO:24:GLN:HB2	2.51	0.40
17:UQ:22:LEU:HD21	17:UQ:32:LYS:HD3	2.03	0.40
18:UR:129:ASP:HA	18:UR:132:LYS:HE3	2.04	0.40
20:UT:1775:ALA:HB1	38:JE:353:ALA:HB1	2.04	0.40
21:UU:868:LEU:HA	21:UU:868:LEU:HD23	1.72	0.40
22:UV:468:PHE:CD2	22:UV:470:LYS:HG2	2.57	0.40
22:UV:626:LYS:HA	22:UV:626:LYS:HD2	1.88	0.40
22:UV:635:SER:OG	22:UV:636:GLU:N	2.55	0.40
26:CD:170:ASN:HD21	27:CE:190:TRP:HE1	1.68	0.40
26:CD:198:TRP:CE3	26:CD:271:VAL:HG22	2.49	0.40
27:CE:160:ASP:O	27:CE:164:ILE:HG12	2.21	0.40
27:CE:258:LEU:HA	27:CE:258:LEU:HD12	1.90	0.40
29:CH:289:ARG:HB3	29:CH:292:SER:HB3	2.03	0.40
36:JA:814:LEU:HD23	36:JA:814:LEU:HA	1.90	0.40
37:JC:178:LEU:HA	37:JC:214:ARG:HH22	1.86	0.40
37:JC:304:ASP:OD1	37:JC:304:ASP:N	2.50	0.40
41:JJ:182:ILE:HA	41:JJ:233:ILE:O	2.22	0.40
45:JO:167:GLN:O	45:JO:170:THR:N	2.48	0.40
46:JP:238:THR:OG1	46:JP:264:THR:OG1	2.29	0.40
46:JP:320:ILE:HD13	46:JP:320:ILE:HG21	1.83	0.40
49:DE:101:LEU:HD13	49:DE:101:LEU:HA	1.92	0.40
50:DF:80:LYS:HE3	50:DF:83:ARG:HH21	1.87	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DH:143:LEU:HA	52:DH:143:LEU:HD23	1.88	0.40
53:DI:9:HIS:NE2	66:D3:339:C:OP1	2.52	0.40
53:DI:49:ARG:HH22	66:D3:399:A:P	2.45	0.40
54:DJ:104:PHE:HD1	54:DJ:104:PHE:HA	1.73	0.40
66:D3:57:G:H2'	66:D3:58:U:C6	2.56	0.40
66:D3:230:C:N3	66:D3:236:A:N6	2.69	0.40
66:D3:309:C:H2'	66:D3:310:C:C6	2.57	0.40
66:D3:892:A:C6	66:D3:893:U:C4	3.10	0.40

There are no symmetry-related clashes.

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 PDB entries followed by that with respect to all EM entries.

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	
1	UA	830/923 (90%)	730 (88%)	99 (12%)	1 (0%)	51	84
2	UB	496/810 (61%)	458 (92%)	35 (7%)	3 (1%)	25	63
3	UC	124/610 (20%)	113 (91%)	10 (8%)	1 (1%)	19	57
4	UD	663/776 (85%)	585 (88%)	78 (12%)	0	100	100
5	UE	465/643 (72%)	401 (86%)	63 (14%)	1 (0%)	47	79
6	UF	283/440 (64%)	273 (96%)	10 (4%)	0	100	100
7	UG	529/554 (96%)	471 (89%)	58 (11%)	0	100	100
8	UH	423/713 (59%)	305 (72%)	94 (22%)	24 (6%)	1	21
9	UI	98/575 (17%)	92 (94%)	6 (6%)	0	100	100
10	UJ	1093/1769 (62%)	1038 (95%)	55 (5%)	0	100	100
11	UK	237/250 (95%)	217 (92%)	19 (8%)	1 (0%)	34	71
12	UL	828/943 (88%)	733 (88%)	94 (11%)	1 (0%)	51	84
13	UM	750/817 (92%)	666 (89%)	84 (11%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
14	UN	141/145 (97%)	124 (88%)	16 (11%)	1 (1%)	22	60
15	UO	489/513 (95%)	433 (88%)	55 (11%)	1 (0%)	47	79
16	UP	58/214 (27%)	57 (98%)	1 (2%)	0	100	100
17	UQ	820/896 (92%)	720 (88%)	98 (12%)	2 (0%)	47	79
18	UR	473/594 (80%)	432 (91%)	40 (8%)	1 (0%)	47	79
19	US	471/552 (85%)	421 (89%)	49 (10%)	1 (0%)	47	79
20	UT	2189/2493 (88%)	2067 (94%)	122 (6%)	0	100	100
21	UU	842/939 (90%)	737 (88%)	105 (12%)	0	100	100
22	UV	1068/1237 (86%)	1006 (94%)	62 (6%)	0	100	100
23	UX	170/189 (90%)	151 (89%)	18 (11%)	1 (1%)	25	63
24	UZ	245/274 (89%)	217 (89%)	28 (11%)	0	100	100
25	CA	238/327 (73%)	220 (92%)	18 (8%)	0	100	100
25	CB	224/327 (68%)	197 (88%)	27 (12%)	0	100	100
26	CD	376/504 (75%)	351 (93%)	25 (7%)	0	100	100
27	CE	431/511 (84%)	394 (91%)	37 (9%)	0	100	100
28	CF	121/126 (96%)	112 (93%)	9 (7%)	0	100	100
28	CG	121/126 (96%)	111 (92%)	10 (8%)	0	100	100
29	CH	446/573 (78%)	399 (90%)	45 (10%)	2 (0%)	34	71
30	CI	180/183 (98%)	162 (90%)	18 (10%)	0	100	100
31	CJ	278/290 (96%)	247 (89%)	30 (11%)	1 (0%)	34	71
32	CK	203/593 (34%)	177 (87%)	25 (12%)	1 (0%)	29	67
33	CL	771/1183 (65%)	704 (91%)	63 (8%)	4 (0%)	29	67
34	CM	358/367 (98%)	334 (93%)	24 (7%)	0	100	100
35	CN	224/297 (75%)	210 (94%)	14 (6%)	0	100	100
36	JA	802/1056 (76%)	717 (89%)	85 (11%)	0	100	100
36	JB	827/1056 (78%)	736 (89%)	91 (11%)	0	100	100
37	JC	350/707 (50%)	308 (88%)	42 (12%)	0	100	100
38	JE	134/357 (38%)	119 (89%)	14 (10%)	1 (1%)	22	60
39	JF	212/252 (84%)	201 (95%)	11 (5%)	0	100	100
39	JG	226/252 (90%)	215 (95%)	11 (5%)	0	100	100
40	JH	257/483 (53%)	244 (95%)	13 (5%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
41	JJ	180/274 (66%)	166 (92%)	13 (7%)	1 (1%)	25	63
42	JK	40/534 (8%)	30 (75%)	10 (25%)	0	100	100
43	JM	129/217 (59%)	113 (88%)	15 (12%)	1 (1%)	19	57
44	JN	178/346 (51%)	154 (86%)	19 (11%)	5 (3%)	5	34
45	JO	232/316 (73%)	215 (93%)	17 (7%)	0	100	100
46	JP	453/489 (93%)	412 (91%)	41 (9%)	0	100	100
47	JQ	59/206 (29%)	49 (83%)	9 (15%)	1 (2%)	9	43
48	DA	236/255 (92%)	207 (88%)	29 (12%)	0	100	100
49	DE	243/261 (93%)	224 (92%)	19 (8%)	0	100	100
50	DF	211/225 (94%)	188 (89%)	23 (11%)	0	100	100
51	DG	216/236 (92%)	203 (94%)	13 (6%)	0	100	100
52	DH	182/190 (96%)	160 (88%)	22 (12%)	0	100	100
53	DI	173/200 (86%)	160 (92%)	13 (8%)	0	100	100
54	DJ	175/197 (89%)	160 (91%)	15 (9%)	0	100	100
55	DL	138/156 (88%)	125 (91%)	13 (9%)	0	100	100
56	DN	148/151 (98%)	127 (86%)	21 (14%)	0	100	100
57	DO	118/137 (86%)	107 (91%)	10 (8%)	1 (1%)	19	57
58	DQ	123/143 (86%)	114 (93%)	9 (7%)	0	100	100
59	DS	98/147 (67%)	89 (91%)	9 (9%)	0	100	100
60	DW	127/130 (98%)	106 (84%)	21 (16%)	0	100	100
61	DX	101/145 (70%)	89 (88%)	12 (12%)	0	100	100
62	DY	95/135 (70%)	79 (83%)	16 (17%)	0	100	100
63	Db	79/82 (96%)	66 (84%)	13 (16%)	0	100	100
64	Dc	61/67 (91%)	52 (85%)	9 (15%)	0	100	100
All	All	24359/32678 (74%)	22000 (90%)	2302 (10%)	57 (0%)	50	79

All (57) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	UB	399	HIS
8	UH	59	PRO
8	UH	61	PRO
8	UH	68	PRO
8	UH	127	TYR

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Mol	Chain	Res	Type
8	UH	258	PRO
8	UH	309	PRO
15	UO	20	THR
17	UQ	335	PRO
29	CH	438	ILE
32	CK	454	VAL
33	CL	78	PRO
33	CL	626	LYS
41	JJ	273	ARG
44	JN	94	PRO
44	JN	97	ILE
8	UH	52	ILE
8	UH	162	GLU
8	UH	235	PRO
8	UH	316	PRO
8	UH	533	PRO
19	US	85	GLU
8	UH	29	VAL
8	UH	208	SER
8	UH	287	LEU
8	UH	297	LEU
43	JM	202	ARG
44	JN	107	VAL
44	JN	111	LYS
8	UH	245	LEU
23	UX	52	PHE
44	JN	93	GLN
3	UC	594	GLU
8	UH	53	SER
8	UH	308	PHE
17	UQ	318	GLU
31	CJ	93	SER
57	DO	129	LYS
2	UB	284	ALA
2	UB	395	ASP
8	UH	198	ILE
8	UH	298	PRO
11	UK	226	LYS
12	UL	336	TYR
18	UR	226	LYS
29	CH	439	ALA
33	CL	81	GLY

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Mol	Chain	Res	Type
8	UH	292	ILE
1	UA	33	VAL
47	JQ	146	ILE
8	UH	70	PRO
14	UN	881	PRO
8	UH	56	ILE
8	UH	266	ILE
38	JE	274	ILE
5	UE	517	PRO
33	CL	774	PRO

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 PDB entries followed by that with respect to all EM entries.

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
1	UA	730/812 (90%)	729 (100%)	1 (0%)	93 97
2	UB	345/732 (47%)	345 (100%)	0	100 100
3	UC	107/538 (20%)	103 (96%)	4 (4%)	34 60
4	UD	615/713 (86%)	612 (100%)	3 (0%)	88 93
5	UE	428/574 (75%)	426 (100%)	2 (0%)	88 93
6	UF	277/414 (67%)	275 (99%)	2 (1%)	84 90
7	UG	462/480 (96%)	462 (100%)	0	100 100
8	UH	150/657 (23%)	149 (99%)	1 (1%)	84 90
9	UI	97/533 (18%)	97 (100%)	0	100 100
10	UJ	390/1633 (24%)	388 (100%)	2 (0%)	88 93
11	UK	226/234 (97%)	223 (99%)	3 (1%)	69 82
12	UL	746/832 (90%)	745 (100%)	1 (0%)	93 97
13	UM	665/719 (92%)	663 (100%)	2 (0%)	92 95
14	UN	135/135 (100%)	135 (100%)	0	100 100
15	UO	437/454 (96%)	435 (100%)	2 (0%)	88 93
16	UP	57/196 (29%)	56 (98%)	1 (2%)	59 77

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
17	UQ	769/826 (93%)	763 (99%)	6 (1%)	81	89
18	UR	424/529 (80%)	421 (99%)	3 (1%)	84	90
19	US	360/506 (71%)	360 (100%)	0	100	100
21	UU	743/819 (91%)	740 (100%)	3 (0%)	91	94
22	UV	985/1125 (88%)	980 (100%)	5 (0%)	88	93
23	UX	156/169 (92%)	155 (99%)	1 (1%)	86	91
24	UZ	230/256 (90%)	228 (99%)	2 (1%)	78	87
25	CA	202/240 (84%)	200 (99%)	2 (1%)	76	86
25	CB	192/240 (80%)	191 (100%)	1 (0%)	88	93
26	CD	326/435 (75%)	325 (100%)	1 (0%)	92	95
27	CE	244/433 (56%)	244 (100%)	0	100	100
28	CF	102/104 (98%)	102 (100%)	0	100	100
28	CG	101/104 (97%)	100 (99%)	1 (1%)	76	86
29	CH	395/503 (78%)	393 (100%)	2 (0%)	88	93
30	CI	171/172 (99%)	170 (99%)	1 (1%)	86	91
31	CJ	251/258 (97%)	249 (99%)	2 (1%)	81	89
32	CK	187/535 (35%)	187 (100%)	0	100	100
33	CL	690/1039 (66%)	684 (99%)	6 (1%)	78	87
34	CM	307/312 (98%)	306 (100%)	1 (0%)	92	95
35	CN	212/274 (77%)	212 (100%)	0	100	100
36	JA	549/934 (59%)	545 (99%)	4 (1%)	84	90
37	JC	318/636 (50%)	318 (100%)	0	100	100
38	JE	119/315 (38%)	118 (99%)	1 (1%)	81	89
39	JF	195/222 (88%)	195 (100%)	0	100	100
39	JG	206/222 (93%)	206 (100%)	0	100	100
41	JJ	159/238 (67%)	156 (98%)	3 (2%)	57	75
42	JK	35/482 (7%)	35 (100%)	0	100	100
43	JM	124/200 (62%)	123 (99%)	1 (1%)	81	89
44	JN	141/304 (46%)	141 (100%)	0	100	100
45	JO	215/289 (74%)	213 (99%)	2 (1%)	78	87
46	JP	412/443 (93%)	412 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
47	JQ	22/192 (12%)	21 (96%)	1 (4%)	27	56
48	DA	212/224 (95%)	209 (99%)	3 (1%)	67	81
49	DE	209/222 (94%)	206 (99%)	3 (1%)	67	81
50	DF	180/191 (94%)	180 (100%)	0	100	100
51	DG	187/201 (93%)	186 (100%)	1 (0%)	88	93
52	DH	164/170 (96%)	162 (99%)	2 (1%)	71	83
53	DI	142/161 (88%)	141 (99%)	1 (1%)	84	90
54	DJ	151/166 (91%)	150 (99%)	1 (1%)	84	90
55	DL	125/137 (91%)	125 (100%)	0	100	100
56	DN	127/128 (99%)	127 (100%)	0	100	100
57	DO	91/105 (87%)	91 (100%)	0	100	100
58	DQ	105/119 (88%)	105 (100%)	0	100	100
60	DW	110/111 (99%)	110 (100%)	0	100	100
61	DX	85/120 (71%)	83 (98%)	2 (2%)	49	69
62	DY	81/113 (72%)	81 (100%)	0	100	100
63	Db	70/71 (99%)	70 (100%)	0	100	100
64	Dc	56/60 (93%)	56 (100%)	0	100	100
All	All	17504/25311 (69%)	17418 (100%)	86 (0%)	89	93

All (86) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	UA	674	LYS
3	UC	544	ILE
3	UC	545	LEU
3	UC	548	LYS
3	UC	553	LYS
4	UD	472	ARG
4	UD	565	ARG
4	UD	689	ASN
5	UE	180	VAL
5	UE	184	PHE
6	UF	67	ARG
6	UF	266	ARG
8	UH	664	LYS
10	UJ	143	TYR

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Mol	Chain	Res	Type
10	UJ	145	THR
11	UK	82	ARG
11	UK	150	LYS
11	UK	217	ARG
12	UL	255	ARG
13	UM	464	LYS
13	UM	747	ASN
15	UO	20	THR
15	UO	509	GLN
16	UP	160	ARG
17	UQ	333	PHE
17	UQ	334	LEU
17	UQ	432	ARG
17	UQ	433	ARG
17	UQ	446	ASN
17	UQ	828	LYS
18	UR	41	ASN
18	UR	217	ASN
18	UR	365	ASN
21	UU	19	LYS
21	UU	476	PHE
21	UU	587	ARG
22	UV	154	LYS
22	UV	269	ARG
22	UV	520	ASN
22	UV	712	ASN
22	UV	834	ASN
23	UX	60	LYS
24	UZ	117	GLN
24	UZ	120	LYS
25	CA	122	ARG
25	CA	138	LYS
25	CB	231	ARG
26	CD	391	ASN
28	CG	31	ARG
29	CH	370	ARG
29	CH	506	ARG
30	CI	25	GLN
31	CJ	116	ARG
31	CJ	226	ASN
33	CL	45	ARG
33	CL	84	THR

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Mol	Chain	Res	Type
33	CL	92	ARG
33	CL	119	GLU
33	CL	176	LEU
33	CL	960	ARG
34	CM	147	ARG
36	JA	9	ARG
36	JA	32	ARG
36	JA	829	HIS
36	JA	861	MET
38	JE	356	ARG
41	JJ	129	ARG
41	JJ	271	LYS
41	JJ	273	ARG
43	JM	77	LYS
45	JO	274	ARG
45	JO	280	LYS
47	JQ	183	ARG
48	DA	8	ARG
48	DA	11	LYS
48	DA	19	ARG
49	DE	3	ARG
49	DE	200	ARG
49	DE	233	LYS
51	DG	4	ASN
52	DH	19	GLN
52	DH	42	GLN
53	DI	24	LYS
54	DJ	57	ARG
61	DX	109	ARG
61	DX	110	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (53) such sidechains are listed below:

Mol	Chain	Res	Type
1	UA	421	ASN
3	UC	496	GLN
4	UD	292	ASN
4	UD	310	ASN
4	UD	483	ASN
5	UE	346	HIS
5	UE	443	GLN
6	UF	169	GLN

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Mol	Chain	Res	Type
6	UF	191	ASN
6	UF	207	ASN
9	UI	443	GLN
10	UJ	166	ASN
10	UJ	227	ASN
11	UK	206	GLN
12	UL	390	GLN
12	UL	901	ASN
13	UM	667	GLN
13	UM	671	ASN
13	UM	757	GLN
15	UO	24	GLN
15	UO	313	GLN
17	UQ	115	HIS
17	UQ	289	GLN
17	UQ	332	GLN
18	UR	41	ASN
18	UR	242	ASN
18	UR	365	ASN
19	US	196	GLN
19	US	200	ASN
19	US	256	ASN
22	UV	1154	ASN
23	UX	70	ASN
24	UZ	117	GLN
24	UZ	192	ASN
24	UZ	193	ASN
26	CD	23	GLN
26	CD	189	ASN
27	CE	145	HIS
28	CG	113	GLN
29	CH	463	GLN
33	CL	241	HIS
33	CL	315	GLN
36	JA	19	GLN
36	JA	548	ASN
36	JA	822	ASN
39	JF	73	HIS
39	JG	73	HIS
48	DA	16	GLN
52	DH	19	GLN
52	DH	170	GLN

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Mol	Chain	Res	Type
52	DH	174	ASN
55	DL	127	GLN
62	DY	77	ASN

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
65	D2	518/700 (74%)	166 (32%)	9 (1%)
66	D3	1172/1808 (64%)	423 (36%)	28 (2%)
67	D4	169/175 (96%)	62 (36%)	2 (1%)
All	All	1859/2683 (69%)	651 (35%)	39 (2%)

All (651) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
65	D2	6	A
65	D2	7	A
65	D2	8	A
65	D2	9	G
65	D2	15	G
65	D2	63	G
65	D2	69	U
65	D2	70	A
65	D2	81	A
65	D2	82	A
65	D2	83	U
65	D2	86	C
65	D2	90	G
65	D2	97	G
65	D2	98	G
65	D2	103	G
65	D2	107	G
65	D2	109	C
65	D2	113	A
65	D2	122	U
65	D2	124	A
65	D2	125	G
65	D2	129	U
65	D2	130	G
65	D2	137	C
65	D2	141	A

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Mol	Chain	Res	Type
65	D2	144	C
65	D2	150	G
65	D2	151	U
65	D2	152	U
65	D2	153	U
65	D2	162	U
65	D2	163	G
65	D2	166	U
65	D2	169	A
65	D2	170	U
65	D2	171	G
65	D2	176	U
65	D2	177	U
65	D2	184	U
65	D2	185	A
65	D2	193	G
65	D2	197	G
65	D2	200	A
65	D2	207	G
65	D2	220	U
65	D2	227	U
65	D2	234	A
65	D2	235	A
65	D2	236	C
65	D2	237	A
65	D2	238	G
65	D2	239	U
65	D2	240	C
65	D2	248	G
65	D2	252	A
65	D2	253	U
65	D2	256	U
65	D2	259	G
65	D2	264	C
65	D2	266	U
65	D2	267	U
65	D2	268	G
65	D2	269	G
65	D2	271	G
65	D2	278	G
65	D2	279	A
65	D2	280	A

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Mol	Chain	Res	Type
65	D2	281	G
65	D2	284	U
65	D2	287	G
65	D2	292	A
65	D2	294	U
65	D2	302	A
65	D2	303	A
65	D2	304	U
65	D2	305	A
65	D2	306	G
65	D2	310	U
65	D2	311	C
65	D2	312	U
65	D2	313	A
65	D2	314	U
65	D2	315	U
65	D2	316	U
65	D2	320	A
65	D2	322	A
65	D2	323	A
65	D2	324	U
65	D2	325	U
65	D2	326	C
65	D2	327	A
65	D2	328	A
65	D2	331	U
65	D2	337	G
65	D2	341	G
65	D2	346	G
65	D2	354	G
65	D2	356	C
65	D2	358	G
65	D2	368	U
65	D2	370	U
65	D2	371	G
65	D2	372	A
65	D2	373	U
65	D2	374	U
65	D2	379	A
65	D2	384	U
65	D2	385	A
65	D2	386	A

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Mol	Chain	Res	Type
65	D2	389	U
65	D2	395	C
65	D2	399	U
65	D2	407	A
65	D2	410	A
65	D2	418	C
65	D2	422	C
65	D2	425	U
65	D2	426	G
65	D2	427	A
65	D2	428	A
65	D2	430	C
65	D2	431	A
65	D2	432	C
65	D2	435	G
65	D2	441	C
65	D2	442	U
65	D2	443	G
65	D2	449	U
65	D2	451	G
65	D2	461	A
65	D2	462	G
65	D2	463	A
65	D2	465	G
65	D2	468	A
65	D2	469	C
65	D2	474	A
65	D2	475	G
65	D2	477	G
65	D2	478	U
65	D2	481	U
65	D2	482	A
65	D2	483	U
65	D2	486	U
65	D2	487	A
65	D2	488	U
65	D2	489	G
65	D2	490	G
65	D2	491	U
65	D2	492	G
65	D2	493	A
65	D2	494	C

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Mol	Chain	Res	Type
65	D2	518	A
65	D2	525	U
65	D2	526	U
65	D2	534	A
65	D2	535	G
65	D2	536	A
65	D2	538	C
65	D2	540	U
65	D2	541	U
65	D2	542	U
65	D2	546	G
65	D2	548	A
65	D2	584	U
65	D2	586	A
66	D3	-6	A
66	D3	-5	G
66	D3	-2	A
66	D3	-1	G
66	D3	0	U
66	D3	1	U
66	D3	2	A
66	D3	4	C
66	D3	6	G
66	D3	7	G
66	D3	9	U
66	D3	12	U
66	D3	14	C
66	D3	17	C
66	D3	23	G
66	D3	24	U
66	D3	25	C
66	D3	26	A
66	D3	36	C
66	D3	37	U
66	D3	38	C
66	D3	39	A
66	D3	51	A
66	D3	54	C
66	D3	55	A
66	D3	60	U
66	D3	65	A
66	D3	66	U

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Mol	Chain	Res	Type
66	D3	69	G
66	D3	73	U
66	D3	74	U
66	D3	75	U
66	D3	76	A
66	D3	78	A
66	D3	81	G
66	D3	93	A
66	D3	94	U
66	D3	97	C
66	D3	99	C
66	D3	100	A
66	D3	104	A
66	D3	114	C
66	D3	116	U
66	D3	127	G
66	D3	128	U
66	D3	140	A
66	D3	141	U
66	D3	142	G
66	D3	143	G
66	D3	144	U
66	D3	145	A
66	D3	146	U
66	D3	153	G
66	D3	156	A
66	D3	158	U
66	D3	159	U
66	D3	162	A
66	D3	166	C
66	D3	167	U
66	D3	182	A
66	D3	184	C
66	D3	188	A
66	D3	190	C
66	D3	192	U
66	D3	193	U
66	D3	194	U
66	D3	195	G
66	D3	196	G
66	D3	197	A
66	D3	198	A

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Mol	Chain	Res	Type
66	D3	200	A
66	D3	203	U
66	D3	204	G
66	D3	213	A
66	D3	227	U
66	D3	232	U
66	D3	234	G
66	D3	238	U
66	D3	241	U
66	D3	257	A
66	D3	260	U
66	D3	261	U
66	D3	262	U
66	D3	263	C
66	D3	265	A
66	D3	266	A
66	D3	271	A
66	D3	272	U
66	D3	273	G
66	D3	275	C
66	D3	276	C
66	D3	277	U
66	D3	278	U
66	D3	280	U
66	D3	298	C
66	D3	299	A
66	D3	302	U
66	D3	313	U
66	D3	314	C
66	D3	317	C
66	D3	319	U
66	D3	320	U
66	D3	321	C
66	D3	322	G
66	D3	337	G
66	D3	338	C
66	D3	350	U
66	D3	351	C
66	D3	352	A
66	D3	359	A
66	D3	360	A
66	D3	361	C

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Mol	Chain	Res	Type
66	D3	366	A
66	D3	368	U
66	D3	369	A
66	D3	370	A
66	D3	371	G
66	D3	372	G
66	D3	373	G
66	D3	374	U
66	D3	376	C
66	D3	382	C
66	D3	383	G
66	D3	388	G
66	D3	400	A
66	D3	402	C
66	D3	403	G
66	D3	404	G
66	D3	411	C
66	D3	413	U
66	D3	416	A
66	D3	417	A
66	D3	418	G
66	D3	440	U
66	D3	441	A
66	D3	444	C
66	D3	446	A
66	D3	453	U
66	D3	454	U
66	D3	455	C
66	D3	459	G
66	D3	461	G
66	D3	466	U
66	D3	467	G
66	D3	468	A
66	D3	469	C
66	D3	470	A
66	D3	474	A
66	D3	477	A
66	D3	487	G
66	D3	488	G
66	D3	491	C
66	D3	494	U
66	D3	496	G

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Mol	Chain	Res	Type
66	D3	501	U
66	D3	502	U
66	D3	503	G
66	D3	505	A
66	D3	506	A
66	D3	513	U
66	D3	514	G
66	D3	523	G
66	D3	524	U
66	D3	525	A
66	D3	531	C
66	D3	534	A
66	D3	539	G
66	D3	540	G
66	D3	543	C
66	D3	545	A
66	D3	546	U
66	D3	548	G
66	D3	557	G
66	D3	558	U
66	D3	562	G
66	D3	563	U
66	D3	564	G
66	D3	565	C
66	D3	566	C
66	D3	570	A
66	D3	572	C
66	D3	576	G
66	D3	579	A
66	D3	580	A
66	D3	582	U
66	D3	584	C
66	D3	585	A
66	D3	586	G
66	D3	587	C
66	D3	594	A
66	D3	595	G
66	D3	601	A
66	D3	602	U
66	D3	603	U
66	D3	625	C
66	D3	629	U

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Mol	Chain	Res	Type
66	D3	634	G
66	D3	635	A
66	D3	639	U
66	D3	640	U
66	D3	642	G
66	D3	649	U
66	D3	650	U
66	D3	652	G
66	D3	654	C
66	D3	655	G
66	D3	656	G
66	D3	657	U
66	D3	658	C
66	D3	677	G
66	D3	679	U
66	D3	680	U
66	D3	682	C
66	D3	685	A
66	D3	691	C
66	D3	692	C
66	D3	693	U
66	D3	694	U
66	D3	695	U
66	D3	860	U
66	D3	861	U
66	D3	862	A
66	D3	863	A
66	D3	867	G
66	D3	873	U
66	D3	886	U
66	D3	895	G
66	D3	898	A
66	D3	900	A
66	D3	904	G
66	D3	906	A
66	D3	912	U
66	D3	913	G
66	D3	914	G
66	D3	915	A
66	D3	916	U
66	D3	921	U
66	D3	925	G

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Mol	Chain	Res	Type
66	D3	926	A
66	D3	931	C
66	D3	932	U
66	D3	933	A
66	D3	935	U
66	D3	939	A
66	D3	940	A
66	D3	942	G
66	D3	951	A
66	D3	960	U
66	D3	964	U
66	D3	966	A
66	D3	970	A
66	D3	977	A
66	D3	978	A
66	D3	1029	U
66	D3	1031	U
66	D3	1032	G
66	D3	1033	C
66	D3	1036	A
66	D3	1037	C
66	D3	1038	U
66	D3	1039	A
66	D3	1040	G
66	D3	1042	G
66	D3	1043	A
66	D3	1044	U
66	D3	1050	G
66	D3	1053	G
66	D3	1058	U
66	D3	1061	A
66	D3	1062	A
66	D3	1063	U
66	D3	1064	G
66	D3	1065	A
66	D3	1070	C
66	D3	1072	C
66	D3	1076	A
66	D3	1079	U
66	D3	1081	A
66	D3	1082	C
66	D3	1084	A

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Mol	Chain	Res	Type
66	D3	1118	G
66	D3	1119	G
66	D3	1123	C
66	D3	1126	G
66	D3	1128	C
66	D3	1132	A
66	D3	1133	A
66	D3	1134	C
66	D3	1135	U
66	D3	1136	U
66	D3	1140	G
66	D3	1143	A
66	D3	1144	U
66	D3	1145	U
66	D3	1146	G
66	D3	1149	G
66	D3	1152	A
66	D3	1154	G
66	D3	1156	C
66	D3	1158	C
66	D3	1159	C
66	D3	1160	A
66	D3	1161	C
66	D3	1167	G
66	D3	1176	G
66	D3	1177	C
66	D3	1178	G
66	D3	1179	G
66	D3	1204	A
66	D3	1206	U
66	D3	1207	C
66	D3	1208	A
66	D3	1214	U
66	D3	1217	A
66	D3	1218	G
66	D3	1219	A
66	D3	1223	A
66	D3	1226	A
66	D3	1264	G
66	D3	1267	G
66	D3	1268	G
66	D3	1269	U

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Mol	Chain	Res	Type
66	D3	1270	G
66	D3	1271	G
66	D3	1273	G
66	D3	1434	U
66	D3	1436	A
66	D3	1437	U
66	D3	1442	U
66	D3	1471	A
66	D3	1472	C
66	D3	1473	U
66	D3	1474	G
66	D3	1475	A
66	D3	1478	G
66	D3	1480	G
66	D3	1485	C
66	D3	1486	G
66	D3	1488	G
66	D3	1489	U
66	D3	1490	C
66	D3	1491	U
66	D3	1492	A
66	D3	1493	A
66	D3	1498	G
66	D3	1504	G
66	D3	1506	G
66	D3	1509	C
66	D3	1512	G
66	D3	1514	U
66	D3	1525	A
66	D3	1526	A
66	D3	1542	G
66	D3	1570	A
66	D3	1571	C
66	D3	1572	G
66	D3	1573	A
66	D3	1574	G
66	D3	1575	G
66	D3	1582	U
66	D3	1583	A
66	D3	1584	G
66	D3	1590	G
66	D3	1591	C

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Mol	Chain	Res	Type
66	D3	1593	A
66	D3	1594	G
66	D3	1595	U
66	D3	1596	C
66	D3	1600	A
66	D3	1601	G
66	D3	1602	C
66	D3	1607	G
66	D3	1609	U
66	D3	1618	C
66	D3	1619	C
66	D3	1620	C
66	D3	1621	U
66	D3	1624	C
66	D3	1627	U
66	D3	1628	U
66	D3	1629	G
66	D3	1630	U
66	D3	1631	A
66	D3	1633	A
66	D3	1638	G
66	D3	1639	C
66	D3	1640	C
66	D3	1651	A
66	D3	1654	G
66	D3	1658	G
66	D3	1665	U
66	D3	1666	U
66	D3	1670	G
66	D3	1680	G
66	D3	1681	A
66	D3	1682	U
66	D3	1683	C
66	D3	1684	U
66	D3	1695	G
66	D3	1697	G
66	D3	1698	G
66	D3	1699	G
66	D3	1703	C
66	D3	1709	C
66	D3	1710	U
66	D3	1711	C

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Mol	Chain	Res	Type
66	D3	1712	A
66	D3	1716	C
66	D3	1717	G
66	D3	1726	G
66	D3	1727	G
66	D3	1730	A
66	D3	1734	U
66	D3	1736	G
66	D3	1742	U
66	D3	1746	A
66	D3	1747	G
66	D3	1769	U
66	D3	1780	G
66	D3	1781	A
66	D3	1782	A
66	D3	1783	C
66	D3	1786	G
67	D4	3	C
67	D4	4	G
67	D4	10	C
67	D4	13	C
67	D4	14	A
67	D4	15	U
67	D4	16	A
67	D4	20	U
67	D4	22	A
67	D4	24	U
67	D4	25	U
67	D4	28	A
67	D4	29	U
67	D4	30	A
67	D4	32	G
67	D4	33	A
67	D4	34	A
67	D4	35	U
67	D4	37	G
67	D4	38	U
67	D4	39	C
67	D4	40	A
67	D4	41	C
67	D4	42	U
67	D4	49	C

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Mol	Chain	Res	Type
67	D4	51	C
67	D4	55	A
67	D4	56	A
67	D4	58	A
67	D4	60	A
67	D4	61	G
67	D4	63	C
67	D4	67	G
67	D4	73	A
67	D4	80	U
67	D4	82	G
67	D4	87	G
67	D4	90	C
67	D4	91	C
67	D4	92	A
67	D4	97	C
67	D4	115	G
67	D4	117	A
67	D4	118	A
67	D4	199	G
67	D4	205	G
67	D4	247	U
67	D4	248	G
67	D4	252	C
67	D4	256	G
67	D4	258	U
67	D4	259	C
67	D4	260	U
67	D4	267	A
67	D4	310	G
67	D4	312	U
67	D4	320	G
67	D4	322	A
67	D4	324	U
67	D4	325	C
67	D4	328	A
67	D4	329	C

All (39) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
65	D2	81	A

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Mol	Chain	Res	Type
65	D2	239	U
65	D2	311	C
65	D2	312	U
65	D2	314	U
65	D2	331	U
65	D2	370	U
65	D2	486	U
65	D2	492	G
66	D3	-6	A
66	D3	-2	A
66	D3	0	U
66	D3	127	G
66	D3	158	U
66	D3	187	G
66	D3	272	U
66	D3	375	U
66	D3	417	A
66	D3	542	A
66	D3	579	A
66	D3	583	C
66	D3	639	U
66	D3	691	C
66	D3	912	U
66	D3	959	U
66	D3	1037	C
66	D3	1057	U
66	D3	1486	G
66	D3	1572	G
66	D3	1573	A
66	D3	1594	G
66	D3	1600	A
66	D3	1620	C
66	D3	1638	G
66	D3	1657	U
66	D3	1746	A
66	D3	1768	G
67	D4	24	U
67	D4	33	A

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 3 ligands modelled in this entry, 2 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	$\#\|Z\| > 2$
69	GTP	CL	2001	-	26,34,34	0.93	1 (3%)	32,54,54	1.49	5 (15%)

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
69	GTP	CL	2001	-	-	4/18/38/38	0/3/3/3

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
69	CL	2001	GTP	C6-N1	-2.56	1.34	1.37

All (5) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
69	CL	2001	GTP	PA-O3A-PB	-3.97	119.20	132.83
69	CL	2001	GTP	PB-O3B-PG	-3.56	120.62	132.83
69	CL	2001	GTP	C3'-C2'-C1'	3.11	105.67	100.98
69	CL	2001	GTP	C5-C6-N1	2.35	118.11	113.95
69	CL	2001	GTP	C8-N7-C5	2.26	107.29	102.99

There are no chirality outliers.

All (4) torsion outliers are listed below:

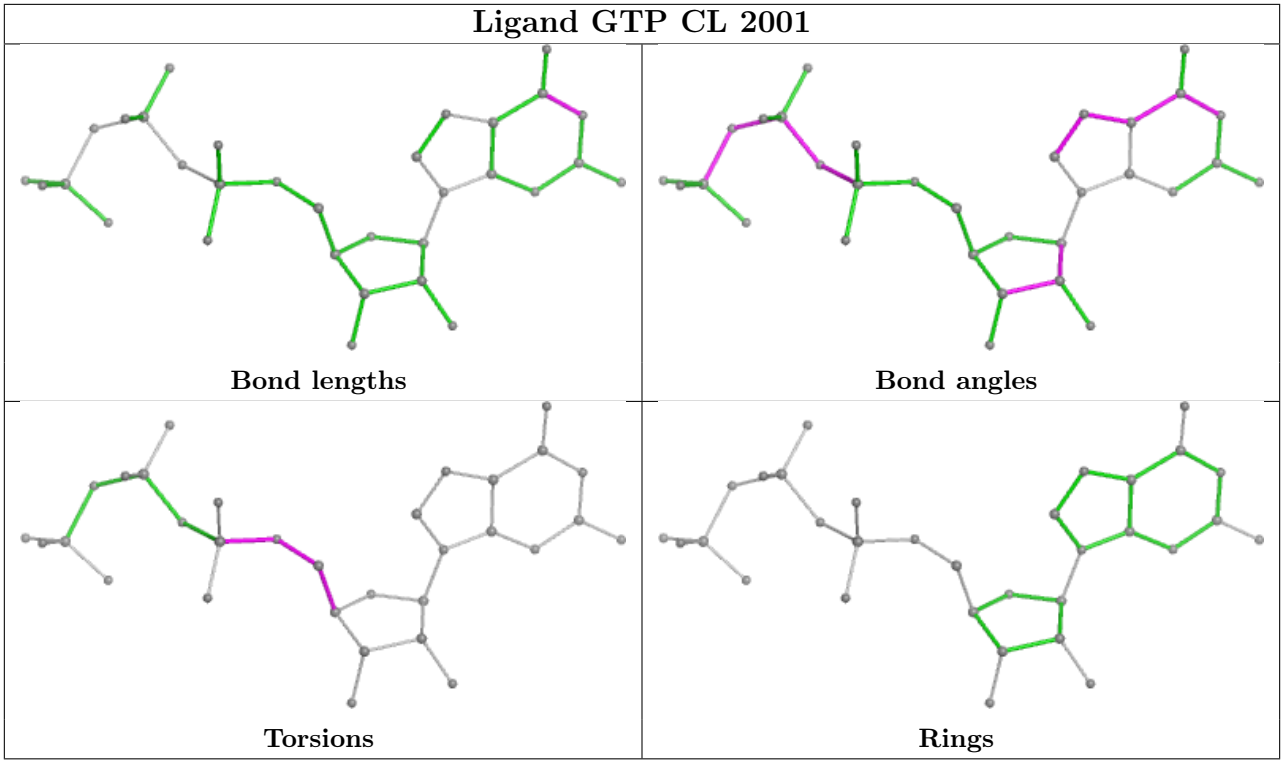
Mol	Chain	Res	Type	Atoms
69	CL	2001	GTP	C5'-O5'-PA-O1A
69	CL	2001	GTP	C3'-C4'-C5'-O5'
69	CL	2001	GTP	C4'-C5'-O5'-PA
69	CL	2001	GTP	C5'-O5'-PA-O3A

There are no ring outliers.

1 monomer is involved in 3 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
69	CL	2001	GTP	3	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.



5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
67	D4	5
14	UN	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	UN	349:SER	C	827:GLN	N	110.52
1	D4	118:A	O3'	197:G	P	24.98
1	D4	267:A	O3'	304:U	P	18.78
1	D4	106:C	O3'	111:G	P	16.51
1	D4	206:C	O3'	245:U	P	14.23
1	D4	260:U	O3'	263:A	P	9.82

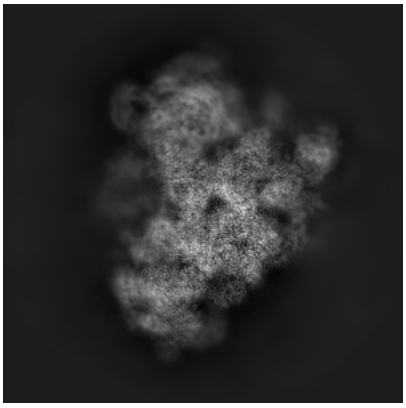
6 Map visualisation (i)

This section contains visualisations of the EMDB entry EMD-11358. These allow visual inspection of the internal detail of the map and identification of artifacts.

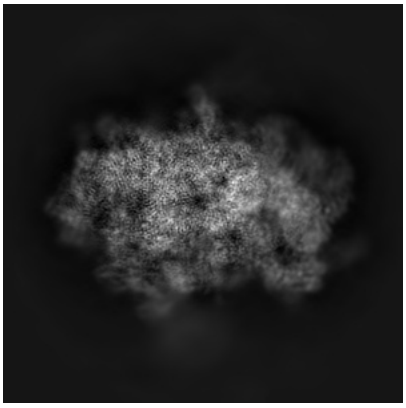
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections (i)

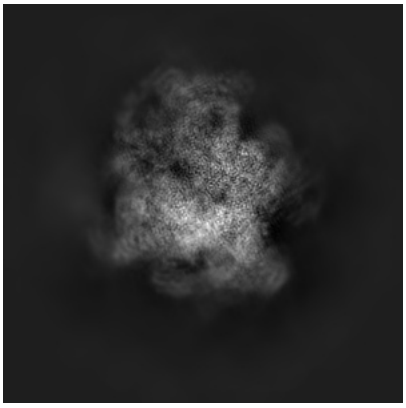
6.1.1 Primary map



X



Y

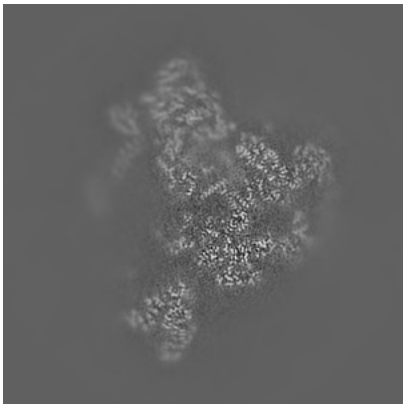


Z

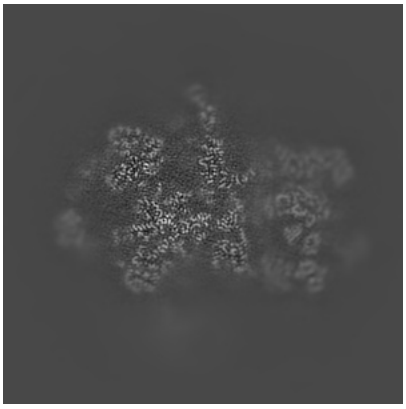
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

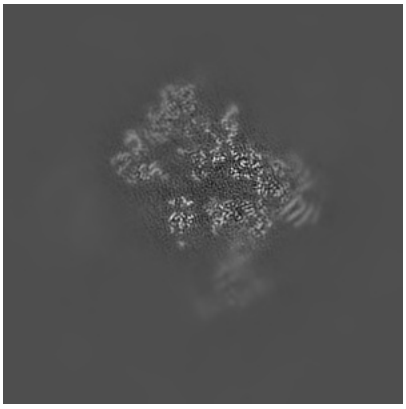
6.2.1 Primary map



X Index: 240



Y Index: 240

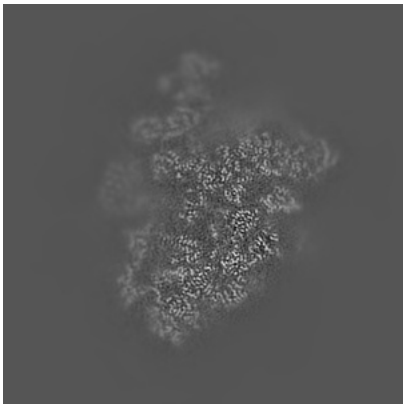


Z Index: 240

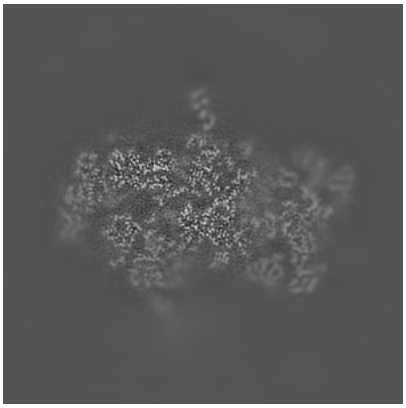
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

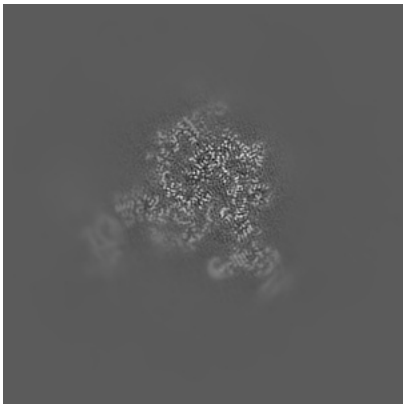
6.3.1 Primary map



X Index: 270



Y Index: 225

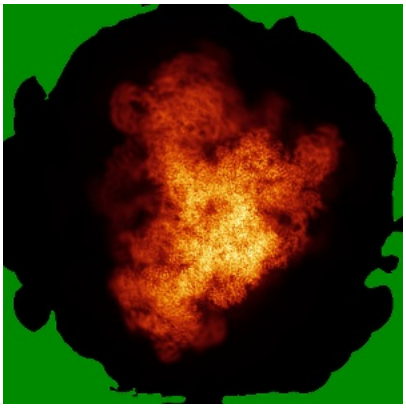


Z Index: 182

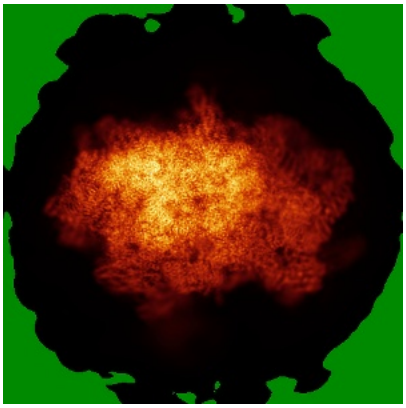
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) (i)

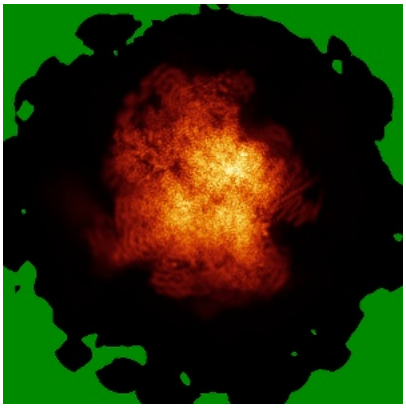
6.4.1 Primary map



X



Y

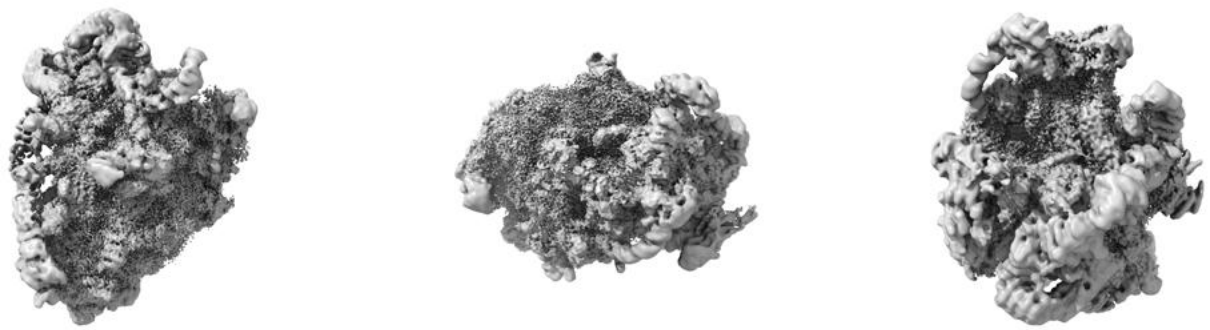


Z

The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views (i)

6.5.1 Primary map



X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.01. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

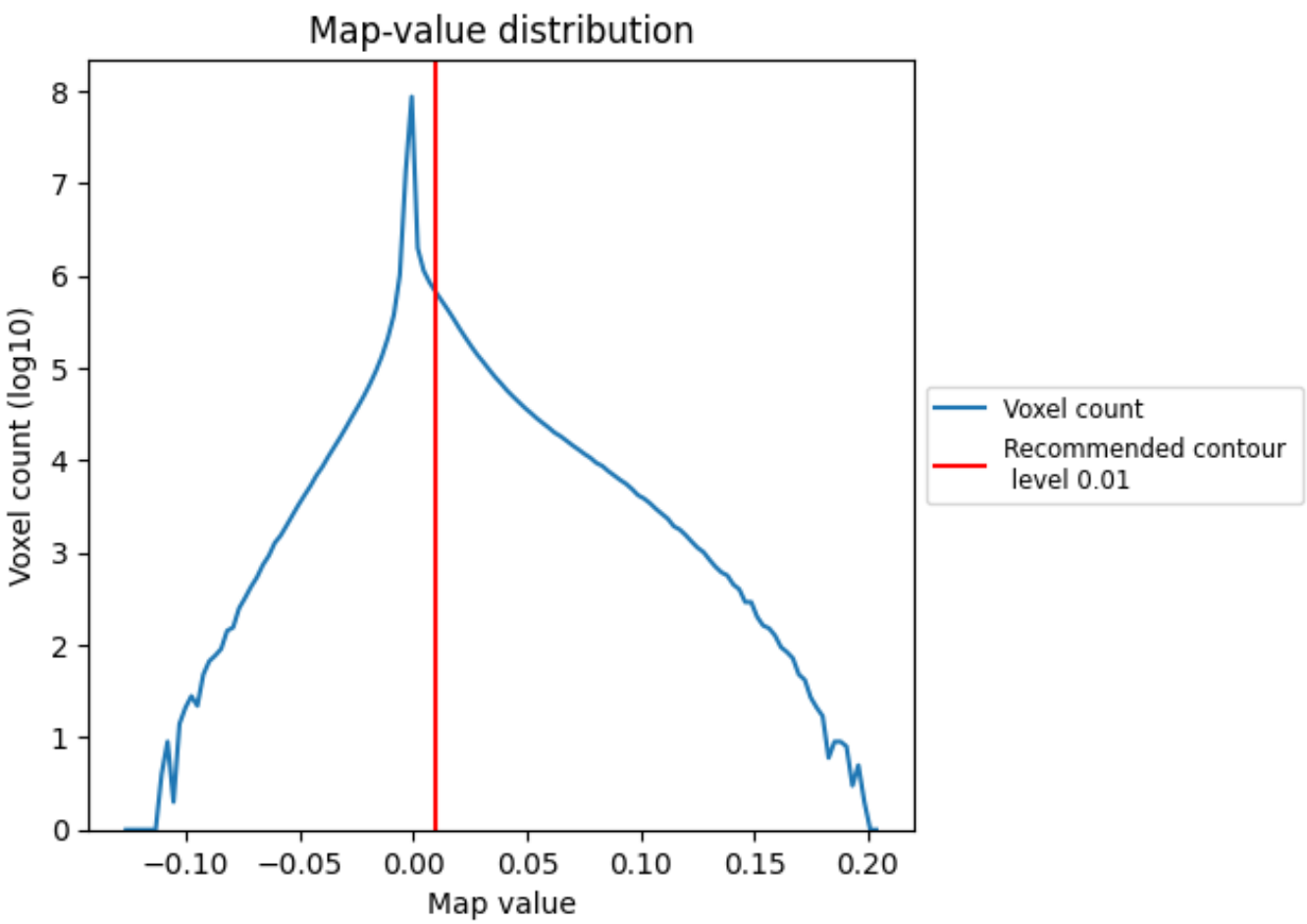
6.6 Mask visualisation (i)

This section was not generated. No masks/segmentation were deposited.

7 Map analysis (i)

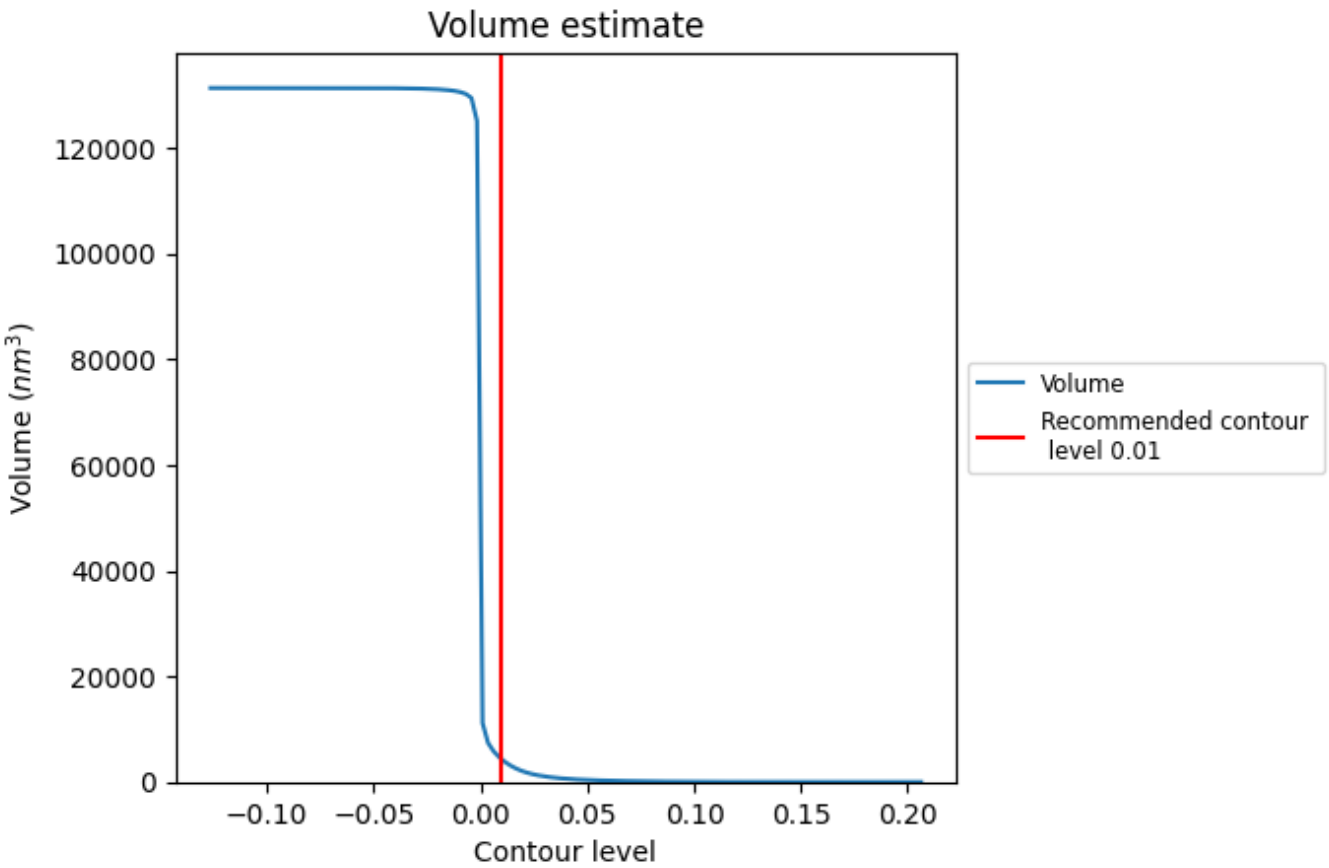
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution (i)



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

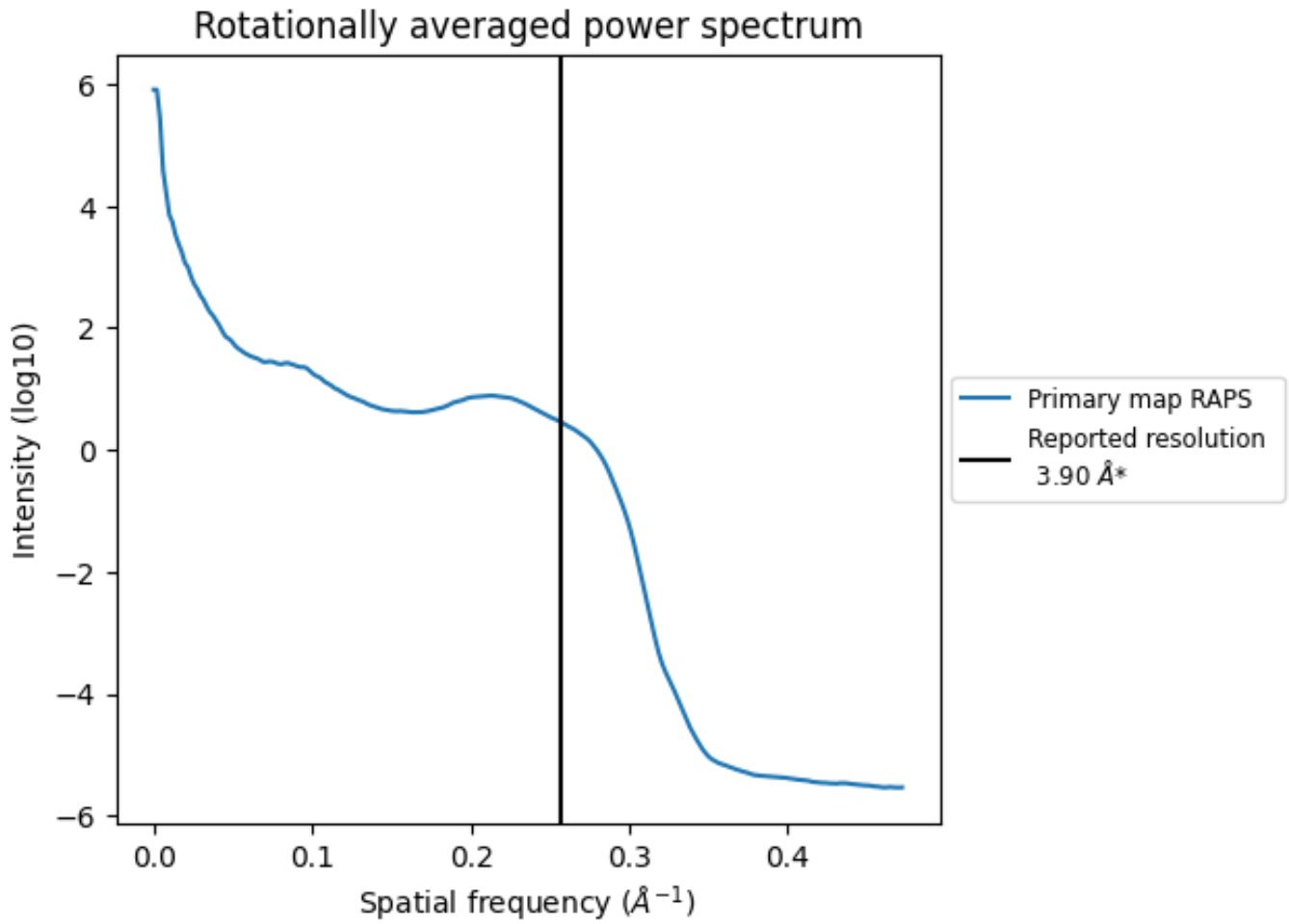
7.2 Volume estimate (i)



The volume at the recommended contour level is 4278 nm^3; this corresponds to an approximate mass of 3864 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

7.3 Rotationally averaged power spectrum (i)

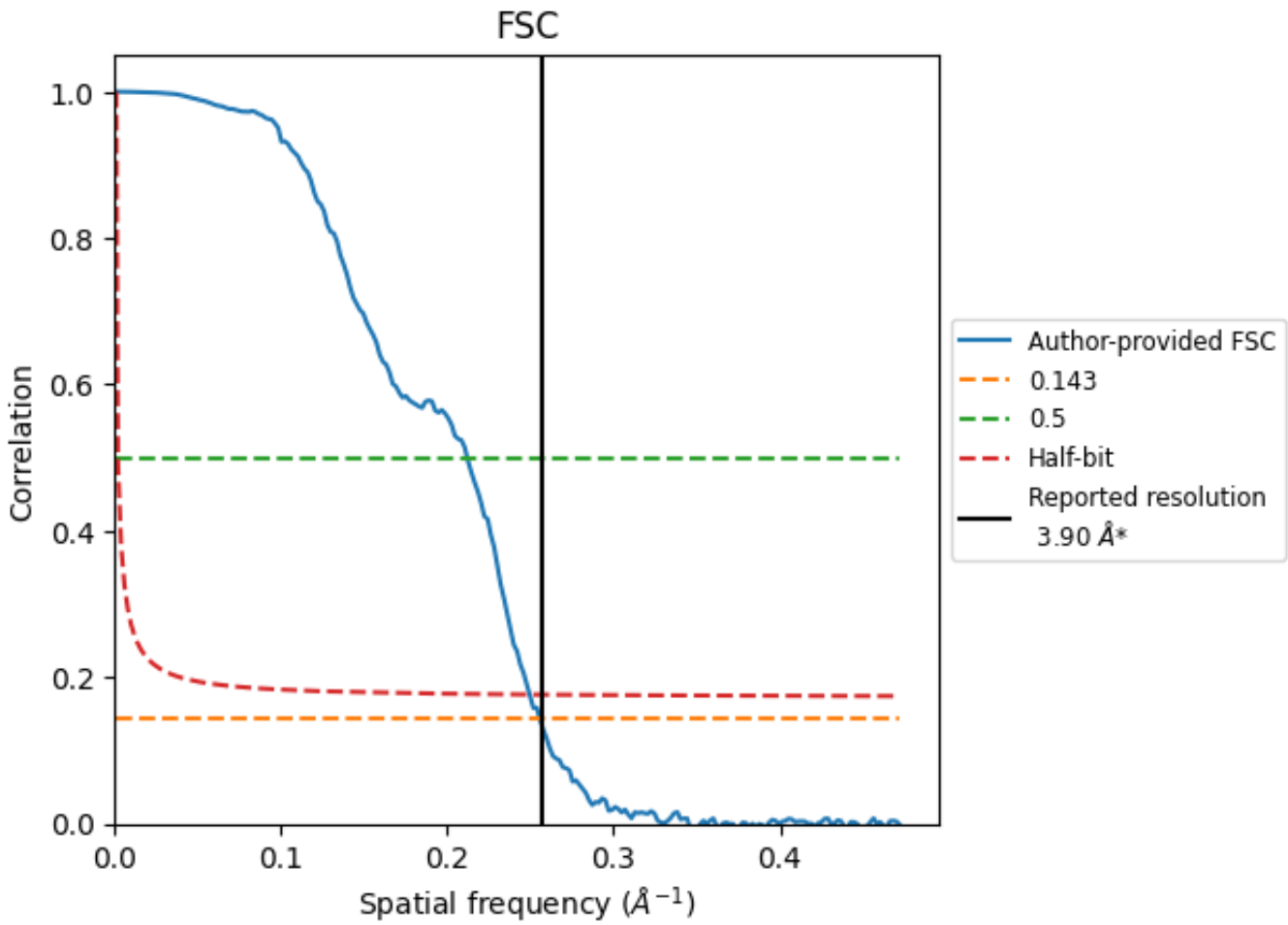


*Reported resolution corresponds to spatial frequency of 0.256 Å^{-1}

8 Fourier-Shell correlation (i)

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

8.1 FSC (i)



*Reported resolution corresponds to spatial frequency of 0.256 Å^{-1}

8.2 Resolution estimates (i)

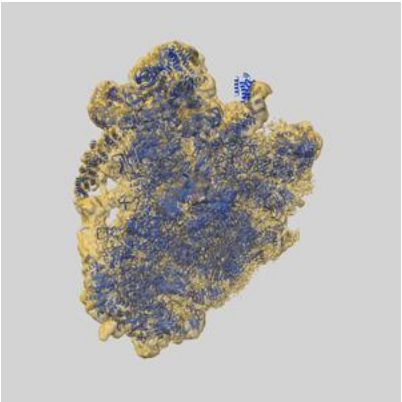
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.90	-	-
Author-provided FSC curve	3.91	4.72	4.01
Unmasked-calculated*	-	-	-

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps.

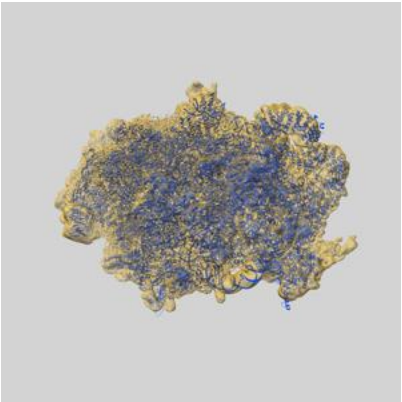
9 Map-model fit (i)

This section contains information regarding the fit between EMDB map EMD-11358 and PDB model 6ZQB. Per-residue inclusion information can be found in section 3 on page 17.

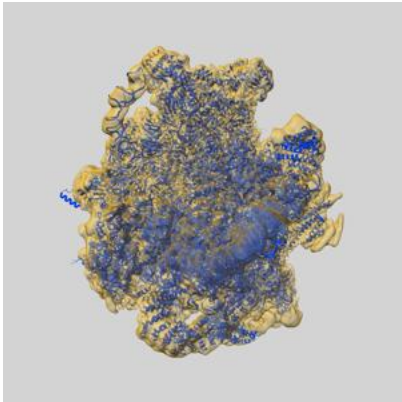
9.1 Map-model overlay (i)



X



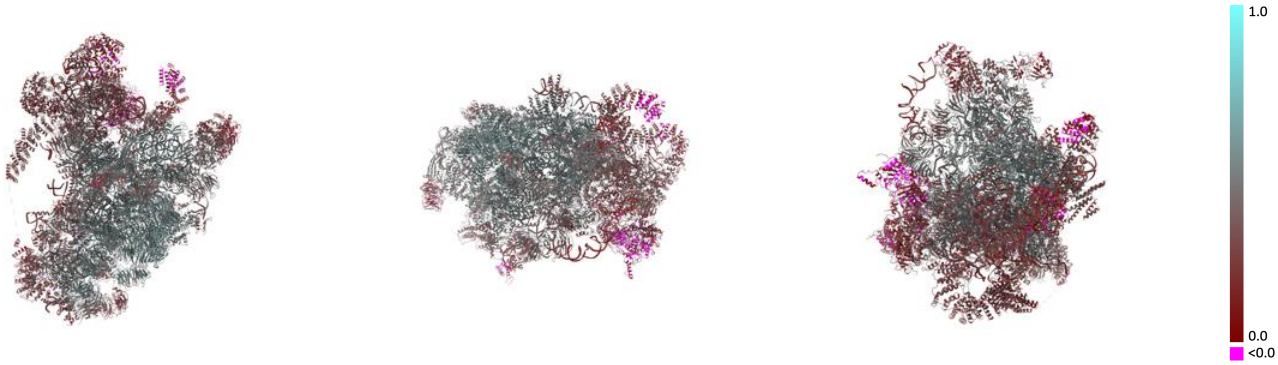
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.01 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

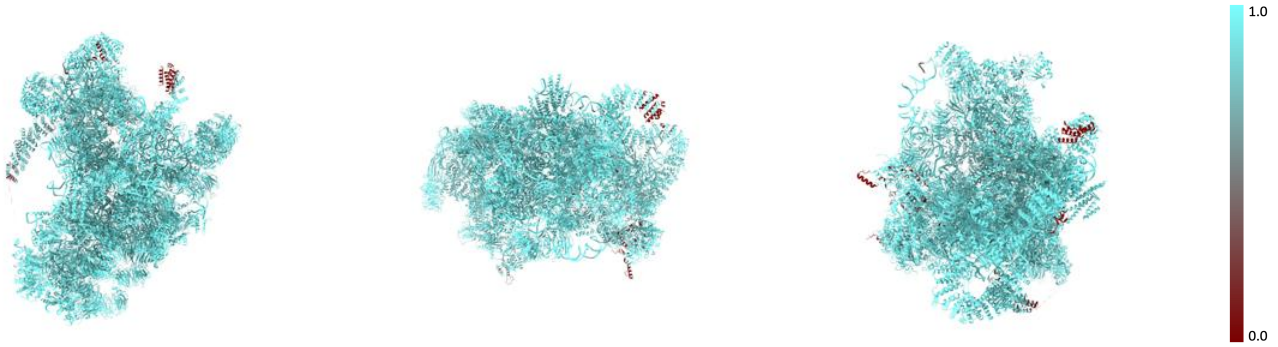
9.2 Q-score mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

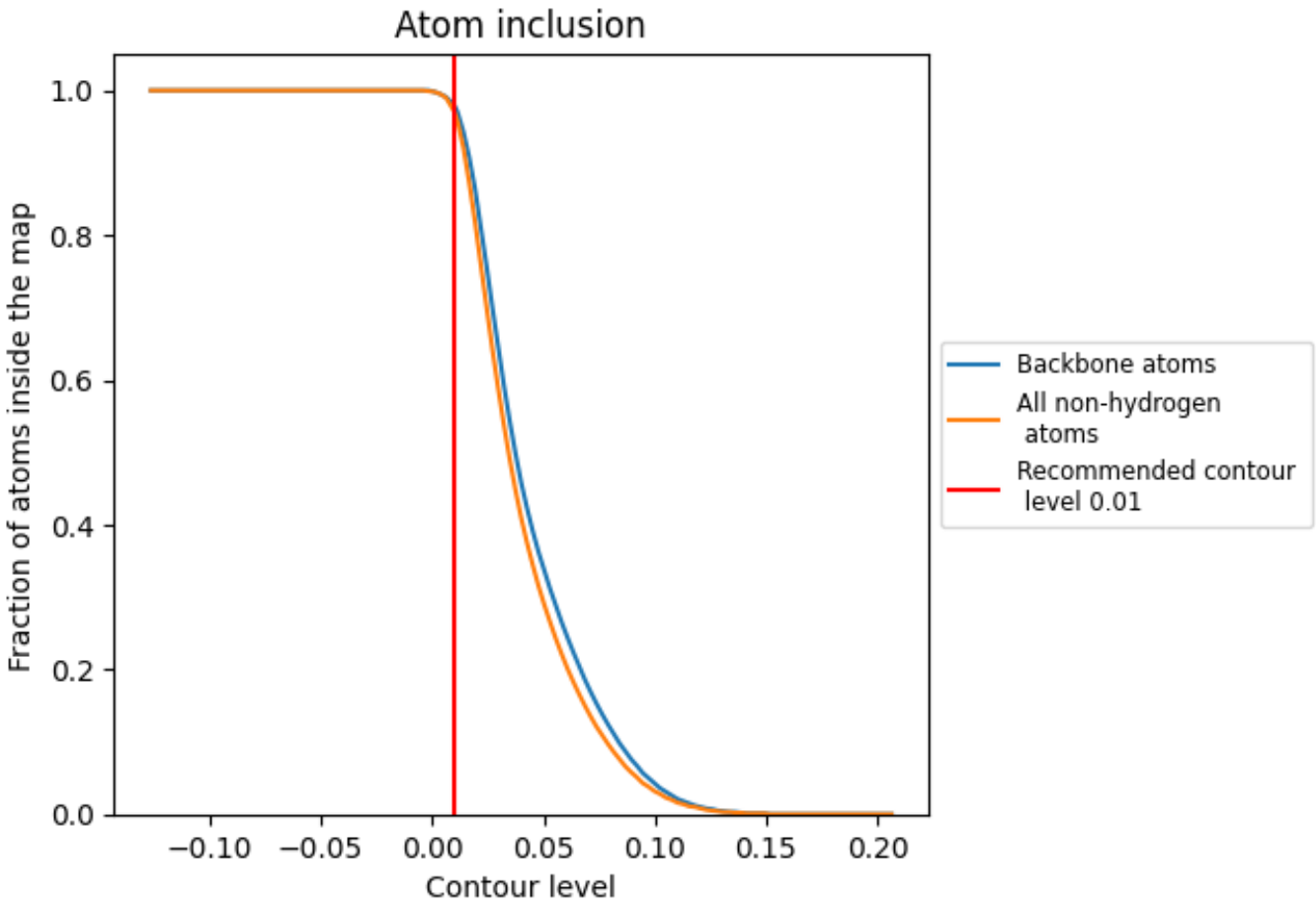
9.3 Atom inclusion mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.01).

9.4 Atom inclusion (i)



At the recommended contour level, 98% of all backbone atoms, 97% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary (i)

The table lists the average atom inclusion at the recommended contour level (0.01) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.9700	0.4180
CA	0.9850	0.5400
CB	0.9790	0.4490
CD	0.9810	0.4390
CE	0.9870	0.4440
CF	0.9880	0.5340
CG	0.9830	0.4950
CH	0.9690	0.4040
CI	0.9870	0.5690
CJ	0.9840	0.5330
CK	0.9830	0.4980
CL	0.9800	0.4960
CM	0.9880	0.4760
CN	0.9400	0.2930
D2	0.9930	0.4430
D3	0.9800	0.3870
D4	0.9970	0.4560
DA	0.9620	0.4930
DE	0.9710	0.3350
DF	0.9870	0.5290
DG	0.9460	0.2890
DH	0.9570	0.3480
DI	0.9700	0.3140
DJ	0.9820	0.5030
DL	0.9690	0.3070
DN	0.9610	0.4690
DO	0.9940	0.5030
DQ	0.9920	0.5580
DS	0.8970	0.2850
DW	0.9810	0.5160
DX	0.9850	0.5290
DY	0.9410	0.2750
Db	0.9820	0.5160
Dc	0.9900	0.5280
JA	0.9490	0.2970

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Chain	Atom inclusion	Q-score
JB	0.7950	0.1190
JC	0.9370	0.3250
JE	0.9340	0.3590
JF	0.9640	0.3740
JG	0.9800	0.4690
JH	0.8460	0.1060
JJ	0.9770	0.4150
JK	0.9670	0.2650
JM	0.9750	0.4760
JN	0.9810	0.5150
JO	0.9840	0.4700
JP	0.9900	0.5540
JQ	0.9290	0.3940
UA	0.9910	0.5600
UB	0.9620	0.3210
UC	0.9800	0.4710
UD	0.9850	0.4520
UE	0.9900	0.4920
UF	0.9750	0.4290
UG	0.9890	0.5480
UH	0.9820	0.2700
UI	0.9810	0.3370
UJ	0.9280	0.3780
UK	0.9840	0.4860
UL	0.9820	0.4370
UM	0.9760	0.4100
UN	0.9850	0.5020
UO	0.9900	0.5010
UP	0.9650	0.4030
UQ	0.9900	0.4770
UR	0.9930	0.5470
US	0.9700	0.3530
UT	0.9300	0.2440
UU	0.9950	0.5490
UV	0.9510	0.3270
UX	0.9880	0.5520
UZ	0.9840	0.4270