



Full wwPDB EM Validation Report ⓘ

Jul 15, 2026 – 10:21 AM JST

PDB ID : 9VXN / pdb_00009vxn
EMDB ID : EMD-65434
Title : Human cytosolic ribosome in a rotated state, with multiple neomycin molecules bound, featuring A/P-site and P/E-site tRNAs
Authors : Zhu, L.; Jia, C.; Wu, M.; Li, W.
Deposited on : 2025-07-19
Resolution : 2.51 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 ⓘ 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 ⓘ](#)) were used in the production of this report:

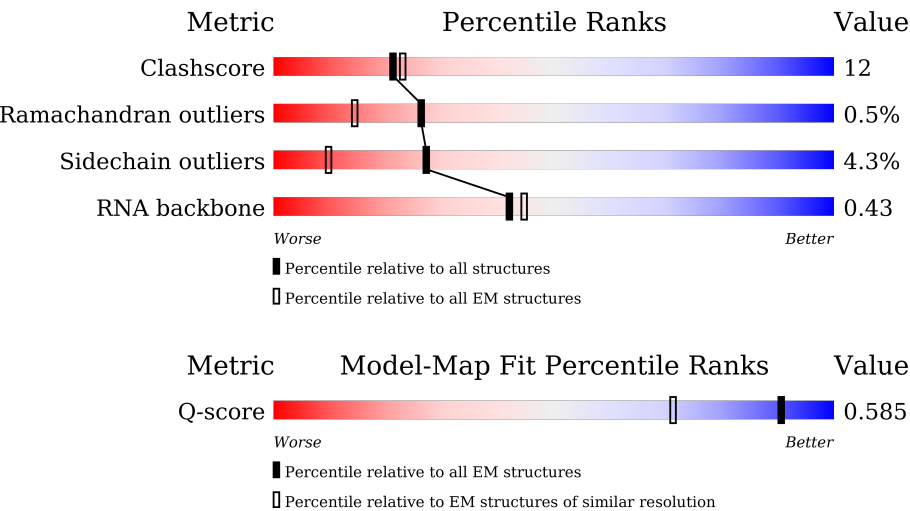
EMDB validation analysis : 0.0.1.dev133
Mogul : 1.8.5 (274361), CSD as541be (2020)
MolProbity : 4-5-2 with Phenix2.0
Buster-report : wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.50

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 2.51 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.



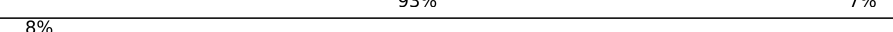
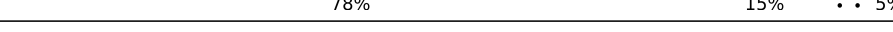
Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
RNA backbone	8273	3508	-
Q-score	-	25397	7159 (2.01 - 3.01)

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 $\leq 5\%$. 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	L5	5069	5% 37% 24% 10% 28%
2	L7	120	74% 22%
3	L8	157	57% 32% 11%

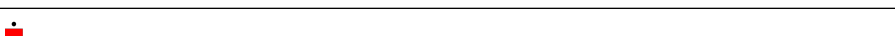
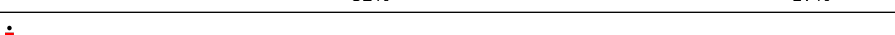
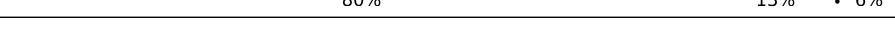
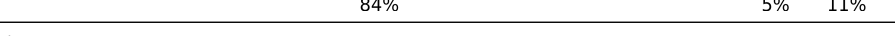
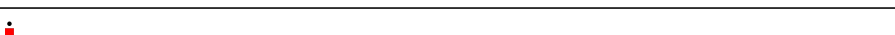
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Mol	Chain	Length	Quality of chain
4	LA	257	
5	LB	403	
6	LC	368	
7	LD	294	
8	LE	288	
9	LF	248	
10	LG	266	
11	LH	192	
12	LI	214	
13	LJ	178	
14	LL	211	
15	LM	215	
16	LN	204	
17	LO	203	
18	LP	184	
19	LQ	188	
20	LR	196	
21	LS	176	
22	LT	160	
23	LU	128	
24	LV	140	
25	LW	157	
26	LX	156	
27	LY	145	
28	LZ	136	

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Mol	Chain	Length	Quality of chain
29	La	148	
30	Lb	159	
31	Lc	115	
32	Ld	125	
33	Le	135	
34	Lf	110	
35	Lg	117	
36	Lh	123	
37	Li	105	
38	Lj	97	
39	Lk	70	
40	Ll	51	
41	Lm	128	
42	Ln	25	
43	Lo	106	
44	Lp	92	
45	Lr	137	
46	S2	1869	
47	SA	295	
48	SB	264	
49	SC	293	
50	SD	243	
51	SE	263	
52	SF	204	
53	SG	249	

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Mol	Chain	Length	Quality of chain
54	SH	194	
55	SI	208	
56	SJ	194	
57	SK	165	
58	SL	158	
59	SM	132	
60	SN	151	
61	SO	151	
62	SP	145	
63	SQ	146	
64	SR	135	
65	SS	152	
66	ST	145	
67	SU	119	
68	SV	83	
69	SW	130	
70	SX	143	
71	SY	133	
72	SZ	125	
73	Sa	115	
74	Sb	84	
75	Sc	69	
76	Sd	56	
77	Se	133	
78	Sf	156	

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Mol	Chain	Length	Quality of chain
79	Sg	317	19% 50% 45% ••
80	u	76	22% 39% 57% •
81	v	76	7% 20% 25% 54% •
82	w	10	70% 20% 10%

2 Entry composition

There are 88 unique types of molecules in this entry. The entry contains 217115 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 RNA chain called 28S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	L5	3651	Total	C	N	O	P	0	0
			78335	34920	14322	25443	3650		

- Molecule 2 is a RNA chain called 5S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	L7	120	Total	C	N	O	P	0	0
			2558	1141	456	842	119		

- Molecule 3 is a RNA chain called 5.8S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	L8	156	Total	C	N	O	P	0	0
			3316	1482	585	1094	155		

- Molecule 4 is a protein called Large ribosomal subunit protein uL2.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	LA	248	Total	C	N	O	S	0	0
			1898	1189	389	314	6		

- Molecule 5 is a protein called Large ribosomal subunit protein uL3.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	LB	402	Total	C	N	O	S	0	0
			3239	2061	608	556	14		

- Molecule 6 is a protein called Large ribosomal subunit protein uL4.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	LC	368	Total	C	N	O	S	0	0
			2927	1840	583	489	15		

- Molecule 7 is a protein called Large ribosomal subunit protein uL18.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	LD	293	Total	C	N	O	S	0	0
			2382	1507	434	427	14		

- Molecule 8 is a protein called Large ribosomal subunit protein eL6.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	LE	236	Total	C	N	O	S	0	0
			1904	1222	361	317	4		

- Molecule 9 is a protein called Large ribosomal subunit protein uL30.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	LF	225	Total	C	N	O	S	1	0
			1878	1207	361	301	9		

- Molecule 10 is a protein called Large ribosomal subunit protein eL8.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	LG	241	Total	C	N	O	S	1	0
			1935	1233	374	324	4		

- Molecule 11 is a protein called Large ribosomal subunit protein uL6.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	LH	190	Total	C	N	O	S	0	0
			1518	956	284	272	6		

- Molecule 12 is a protein called Ribosomal protein uL16-like.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	LI	213	Total	C	N	O	S	0	0
			1713	1083	329	285	16		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
LI	49	CYS	GLY	conflict	UNP Q96L21

- Molecule 13 is a protein called Large ribosomal subunit protein uL5.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	LJ	176	Total	C	N	O	S	0	0
			1410	888	263	253	6		

- Molecule 14 is a protein called Large ribosomal subunit protein eL13.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	LL	210	Total	C	N	O	S	0	0
			1701	1064	352	281	4		

- Molecule 15 is a protein called Large ribosomal subunit protein eL14.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	LM	139	Total	C	N	O	S	0	0
			1138	730	218	183	7		

- Molecule 16 is a protein called Large ribosomal subunit protein eL15.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	LN	203	Total	C	N	O	S	0	0
			1701	1072	359	266	4		

- Molecule 17 is a protein called Large ribosomal subunit protein uL13.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	LO	201	Total	C	N	O	S	0	0
			1650	1063	321	261	5		

- Molecule 18 is a protein called Large ribosomal subunit protein uL22.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	LP	153	Total	C	N	O	S	0	0
			1242	776	241	216	9		

- Molecule 19 is a protein called Large ribosomal subunit protein eL18.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	LQ	187	Total	C	N	O	S	0	0
			1513	944	314	250	5		

- Molecule 20 is a protein called Large ribosomal subunit protein eL19.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	LR	187	Total	C	N	O	S	0	0
			1566	971	336	250	9		

- Molecule 21 is a protein called Large ribosomal subunit protein eL20.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	LS	175	Total	C	N	O	S	0	0
			1453	925	283	235	10		

- Molecule 22 is a protein called Large ribosomal subunit protein eL21.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	LT	159	Total	C	N	O	S	0	0
			1298	823	252	217	6		

- Molecule 23 is a protein called Large ribosomal subunit protein eL22.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	LU	101	Total	C	N	O	S	0	0
			825	529	144	150	2		

- Molecule 24 is a protein called Large ribosomal subunit protein uL14.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	LV	131	Total	C	N	O	S	0	0
			979	618	184	172	5		

- Molecule 25 is a protein called Large ribosomal subunit protein eL24.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	LW	100	Total	C	N	O	S	0	0
			813	510	163	136	4		

- Molecule 26 is a protein called Large ribosomal subunit protein uL23.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	LX	120	Total	C	N	O	S	0	0
			985	630	185	169	1		

- Molecule 27 is a protein called Large ribosomal subunit protein uL24.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	LY	132	Total	C	N	O	S	0	0
			1102	692	223	184	3		

- Molecule 28 is a protein called Large ribosomal subunit protein eL27.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	LZ	135	Total	C	N	O	S	0	0
			1107	714	208	182	3		

- Molecule 29 is a protein called Large ribosomal subunit protein uL15.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	La	147	Total	C	N	O	S	0	0
			1163	736	237	187	3		

- Molecule 30 is a protein called Large ribosomal subunit protein eL29.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	Lb	99	Total	C	N	O	S	0	0
			808	502	177	125	4		

- Molecule 31 is a protein called Large ribosomal subunit protein eL30.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	Lc	98	Total	C	N	O	S	0	0
			764	485	135	138	6		

- Molecule 32 is a protein called Large ribosomal subunit protein eL31.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	Ld	106	Total	C	N	O	S	0	0
			879	555	170	152	2		

- Molecule 33 is a protein called Large ribosomal subunit protein eL32.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	Le	128	Total	C	N	O	S	0	0
			1053	667	216	165	5		

- Molecule 34 is a protein called Large ribosomal subunit protein eL33.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	Lf	109	Total	C	N	O	S	0	0
			876	555	174	144	3		

- Molecule 35 is a protein called Large ribosomal subunit protein eL34.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	Lg	109	Total	C	N	O	S	0	0
			868	544	179	139	6		

- Molecule 36 is a protein called Large ribosomal subunit protein uL29.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	Lh	122	Total	C	N	O	S	0	0
			1015	641	205	168	1		

- Molecule 37 is a protein called Large ribosomal subunit protein eL36.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	Li	99	Total	C	N	O	S	0	0
			813	509	173	126	5		

- Molecule 38 is a protein called Large ribosomal subunit protein eL37.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	Lj	86	Total	C	N	O	S	0	0
			705	434	155	111	5		

- Molecule 39 is a protein called Large ribosomal subunit protein eL38.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	Lk	68	Total	C	N	O	S	0	0
			559	360	101	97	1		

- Molecule 40 is a protein called Large ribosomal subunit protein eL39.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	Ll	50	Total	C	N	O	S	0	0
			444	281	98	64	1		

- Molecule 41 is a protein called Ubiquitin-ribosomal protein eL40 fusion protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	Lm	51	Total	C	N	O	S	0	0
			419	260	88	65	6		

- Molecule 42 is a protein called Small ribosomal subunit protein eS32.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	Ln	24	Total	C	N	O	S	0	0
			230	139	62	26	3		

- Molecule 43 is a protein called Large ribosomal subunit protein eL42.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	Lo	102	Total	C	N	O	S	1	0
			842	527	174	135	6		

- Molecule 44 is a protein called Large ribosomal subunit protein eL43.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	Lp	88	Total	C	N	O	S	0	0
			681	430	131	113	7		

- Molecule 45 is a protein called Large ribosomal subunit protein eL28.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	Lr	123	Total	C	N	O	S	0	0
			987	612	205	166	4		

- Molecule 46 is a RNA chain called 18S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	S2	1705	Total	C	N	O	P	0	0
			36324	16236	6498	11886	1704		

- Molecule 47 is a protein called Small ribosomal subunit protein uS2.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	SA	219	Total	C	N	O	S	0	0
			1727	1096	302	320	9		

- Molecule 48 is a protein called Small ribosomal subunit protein eS1.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	SB	215	Total	C	N	O	S	0	0
			1747	1109	312	312	14		

- Molecule 49 is a protein called Small ribosomal subunit protein uS5.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	SC	221	Total	C	N	O	S	1	0
			1724	1115	298	301	10		

- Molecule 50 is a protein called Small ribosomal subunit protein uS3.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	SD	227	Total	C	N	O	S	0	0
			1765	1125	317	315	8		

- Molecule 51 is a protein called Small ribosomal subunit protein eS4, X isoform.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	SE	262	Total	C	N	O	S	0	0
			2076	1324	386	358	8		

- Molecule 52 is a protein called Small ribosomal subunit protein uS7.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	SF	191	Total	C	N	O	S	0	0
			1509	943	286	273	7		

- Molecule 53 is a protein called Small ribosomal subunit protein eS6.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	SG	234	Total	C	N	O	S	0	0
			1903	1188	384	324	7		

- Molecule 54 is a protein called Small ribosomal subunit protein eS7.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	SH	186	Total	C	N	O	S	0	0
			1497	956	274	266	1		

- Molecule 55 is a protein called Small ribosomal subunit protein eS8.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	SI	206	Total	C	N	O	S	0	0
			1686	1058	332	291	5		

- Molecule 56 is a protein called Small ribosomal subunit protein uS4.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	SJ	182	Total	C	N	O	S	1	0
			1520	967	306	245	2		

- Molecule 57 is a protein called Small ribosomal subunit protein eS10.

Mol	Chain	Residues	Atoms					AltConf	Trace
57	SK	97	Total	C	N	O	S	0	0
			816	533	144	133	6		

- Molecule 58 is a protein called Small ribosomal subunit protein uS17.

Mol	Chain	Residues	Atoms					AltConf	Trace
58	SL	154	Total	C	N	O	S	0	0
			1258	802	235	215	6		

- Molecule 59 is a protein called Small ribosomal subunit protein eS12.

Mol	Chain	Residues	Atoms					AltConf	Trace
59	SM	118	Total	C	N	O	S	0	0
			906	568	158	172	8		

- Molecule 60 is a protein called Small ribosomal subunit protein uS15.

Mol	Chain	Residues	Atoms					AltConf	Trace
60	SN	150	Total	C	N	O	S	0	0
			1208	773	229	205	1		

- Molecule 61 is a protein called Small ribosomal subunit protein uS11.

Mol	Chain	Residues	Atoms					AltConf	Trace
61	SO	135	Total	C	N	O	S	0	0
			1008	617	198	187	6		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
SO	138	IAS	ASP	conflict	UNP P62263

- Molecule 62 is a protein called Small ribosomal subunit protein uS19.

Mol	Chain	Residues	Atoms					AltConf	Trace
62	SP	125	Total	C	N	O	S	0	0
			1027	653	193	174	7		

- Molecule 63 is a protein called Small ribosomal subunit protein uS9.

Mol	Chain	Residues	Atoms					AltConf	Trace
63	SQ	141	Total	C	N	O	S	0	0
			1124	715	212	194	3		

- Molecule 64 is a protein called Small ribosomal subunit protein eS17.

Mol	Chain	Residues	Atoms					AltConf	Trace
64	SR	131	Total	C	N	O	S	0	0
			1064	668	198	194	4		

- Molecule 65 is a protein called Small ribosomal subunit protein uS13.

Mol	Chain	Residues	Atoms					AltConf	Trace
65	SS	145	Total	C	N	O	S	0	0
			1198	751	242	203	2		

- Molecule 66 is a protein called Small ribosomal subunit protein eS19.

Mol	Chain	Residues	Atoms					AltConf	Trace
66	ST	143	Total	C	N	O	S	0	0
			1113	698	214	198	3		

- Molecule 67 is a protein called Small ribosomal subunit protein uS10.

Mol	Chain	Residues	Atoms					AltConf	Trace
67	SU	103	Total	C	N	O	S	0	0
			817	511	155	147	4		

- Molecule 68 is a protein called Small ribosomal subunit protein eS21.

Mol	Chain	Residues	Atoms					AltConf	Trace
68	SV	83	Total	C	N	O	S	0	0
			636	393	117	121	5		

- Molecule 69 is a protein called Small ribosomal subunit protein uS8.

Mol	Chain	Residues	Atoms					AltConf	Trace
69	SW	129	Total	C	N	O	S	0	0
			1034	659	193	176	6		

- Molecule 70 is a protein called Small ribosomal subunit protein uS12.

Mol	Chain	Residues	Atoms					AltConf	Trace
70	SX	141	Total	C	N	O	S	0	0
			1098	693	219	183	3		

- Molecule 71 is a protein called Small ribosomal subunit protein eS24.

Mol	Chain	Residues	Atoms					AltConf	Trace
71	SY	128	Total	C	N	O	S	1	0
			1048	661	207	175	5		

- Molecule 72 is a protein called Small ribosomal subunit protein eS25.

Mol	Chain	Residues	Atoms					AltConf	Trace
72	SZ	75	Total	C	N	O	S	0	0
			598	382	111	104	1		

- Molecule 73 is a protein called Small ribosomal subunit protein eS26.

Mol	Chain	Residues	Atoms					AltConf	Trace
73	Sa	102	Total	C	N	O	S	1	0
			829	517	174	133	5		

- Molecule 74 is a protein called Small ribosomal subunit protein eS27.

Mol	Chain	Residues	Atoms					AltConf	Trace
74	Sb	83	Total	C	N	O	S	0	0
			651	408	121	115	7		

- Molecule 75 is a protein called Small ribosomal subunit protein eS28.

Mol	Chain	Residues	Atoms					AltConf	Trace
75	Sc	64	Total	C	N	O	S	0	0
			506	308	102	94	2		

- Molecule 76 is a protein called Small ribosomal subunit protein uS14.

Mol	Chain	Residues	Atoms					AltConf	Trace
76	Sd	55	Total	C	N	O	S	0	0
			459	286	94	74	5		

- Molecule 77 is a protein called Ubiquitin-like FUBI-ribosomal protein eS30 fusion protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
77	Se	58	Total	C	N	O	S	0	0
			459	284	100	74	1		

- Molecule 78 is a protein called Ubiquitin.

Mol	Chain	Residues	Atoms					AltConf	Trace
78	Sf	67	Total	C	N	O	S	0	0
			548	346	102	93	7		

- Molecule 79 is a protein called Small ribosomal subunit protein RACK1.

Mol	Chain	Residues	Atoms					AltConf	Trace
79	Sg	313	Total	C	N	O	S	0	0
			2436	1535	424	465	12		

- Molecule 80 is a RNA chain called A/P-tRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
80	u	76	Total	C	N	O	P	0	0
			1613	720	283	535	75		

- Molecule 81 is a RNA chain called P/E-tRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
81	v	76	Total	C	N	O	P	0	0
			1618	721	287	534	76		

- Molecule 82 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
82	w	10	Total	C	N	O	P	0	0
			213	95	37	72	9		

- Molecule 83 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
83	L5	198	Total	Mg	0
			198	198	
83	L7	1	Total	Mg	0
			1	1	
83	L8	5	Total	Mg	0
			5	5	
83	LI	1	Total	Mg	0
			1	1	
83	LN	1	Total	Mg	0
			1	1	
83	LP	1	Total	Mg	0
			1	1	
83	LV	1	Total	Mg	0
			1	1	
83	S2	83	Total	Mg	0
			83	83	
83	ST	1	Total	Mg	0
			1	1	

- Molecule 84 is POTASSIUM ION (CCD ID: K) (formula: K).

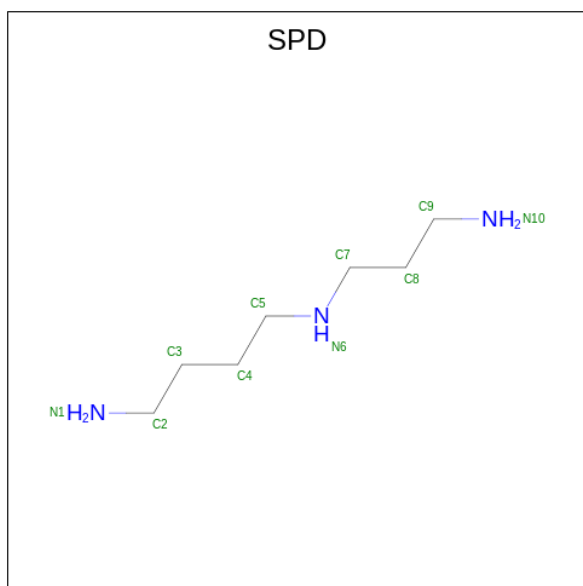
Mol	Chain	Residues	Atoms		AltConf
84	L5	78	Total	K	0
			78	78	
84	L7	1	Total	K	0
			1	1	
84	LA	1	Total	K	0
			1	1	
84	LI	1	Total	K	0
			1	1	
84	Le	1	Total	K	0
			1	1	
84	Lf	1	Total	K	0
			1	1	
84	Lg	1	Total	K	0
			1	1	
84	Lo	1	Total	K	0
			1	1	

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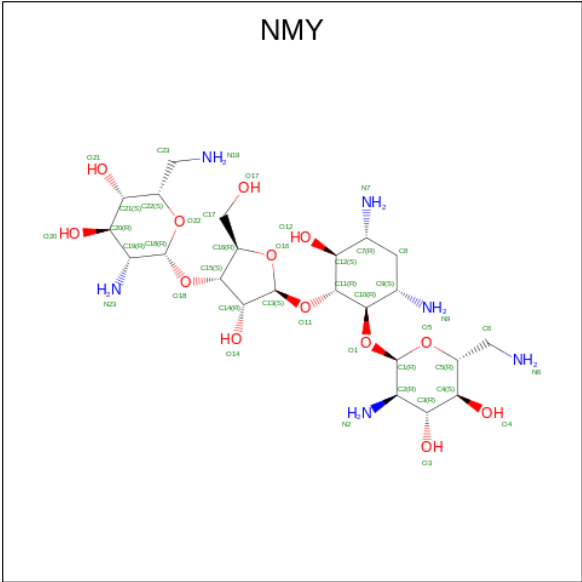
Mol	Chain	Residues	Atoms		AltConf
84	S2	19	Total	K	0
			19	19	
84	SO	1	Total	K	0
			1	1	
84	SS	1	Total	K	0
			1	1	
84	SX	1	Total	K	0
			1	1	
84	Sd	1	Total	K	0
			1	1	

- Molecule 85 is SPERMIDINE (CCD ID: SPD) (formula: $C_7H_{19}N_3$).



Mol	Chain	Residues	Atoms			AltConf
85	L5	1	Total	C	N	0
			10	7	3	
85	L5	1	Total	C	N	0
			10	7	3	
85	L5	1	Total	C	N	0
			10	7	3	

- Molecule 86 is NEOMYCIN (CCD ID: NMY) (formula: $C_{23}H_{46}N_6O_{13}$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				AltConf
86	L5	1	Total	C	N	O	0
			42	23	6	13	
86	L5	1	Total	C	N	O	0
			42	23	6	13	
86	L5	1	Total	C	N	O	0
			42	23	6	13	
86	L5	1	Total	C	N	O	0
			42	23	6	13	
86	L5	1	Total	C	N	O	0
			42	23	6	13	
86	L5	1	Total	C	N	O	0
			42	23	6	13	
86	L5	1	Total	C	N	O	0
			42	23	6	13	
86	L5	1	Total	C	N	O	0
			42	23	6	13	
86	L5	1	Total	C	N	O	0
			42	23	6	13	
86	L5	1	Total	C	N	O	0
			42	23	6	13	
86	L5	1	Total	C	N	O	0
			42	23	6	13	
86	L7	1	Total	C	N	O	0
			42	23	6	13	
86	S2	1	Total	C	N	O	0
			42	23	6	13	

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Mol	Chain	Residues	Atoms				AltConf
86	S2	1	Total	C	N	O	0
			42	23	6	13	
86	S2	1	Total	C	N	O	0
			42	23	6	13	
86	S2	1	Total	C	N	O	0
			42	23	6	13	

- Molecule 87 is ZINC ION (CCD ID: ZN) (formula: Zn).

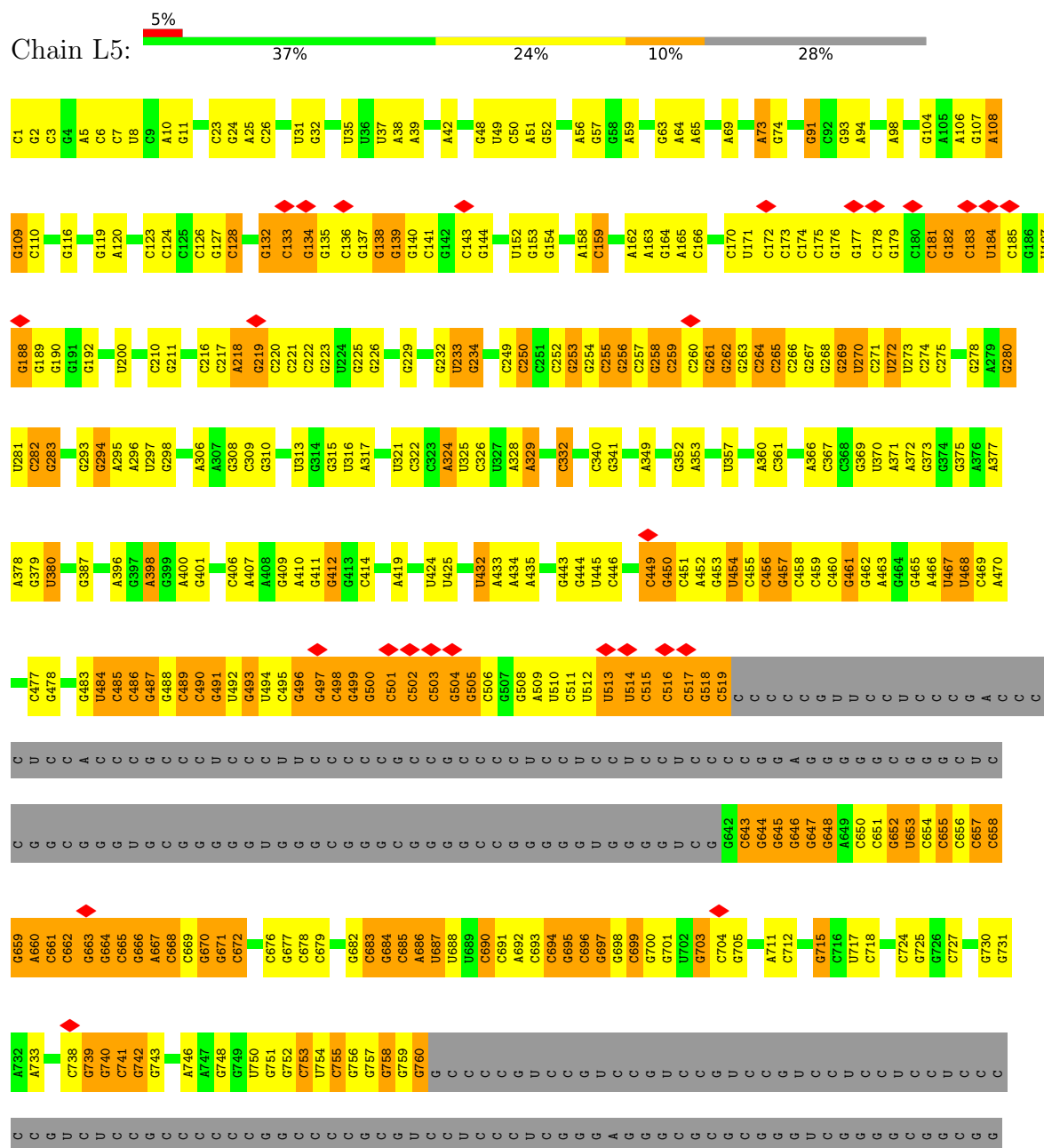
Mol	Chain	Residues	Atoms		AltConf
87	Lg	1	Total	Zn	0
			1	1	
87	Lj	1	Total	Zn	0
			1	1	
87	Lm	1	Total	Zn	0
			1	1	
87	Lo	1	Total	Zn	0
			1	1	
87	Lp	1	Total	Zn	0
			1	1	
87	Sa	1	Total	Zn	0
			1	1	
87	Sd	1	Total	Zn	0
			1	1	
87	Sf	1	Total	Zn	0
			1	1	

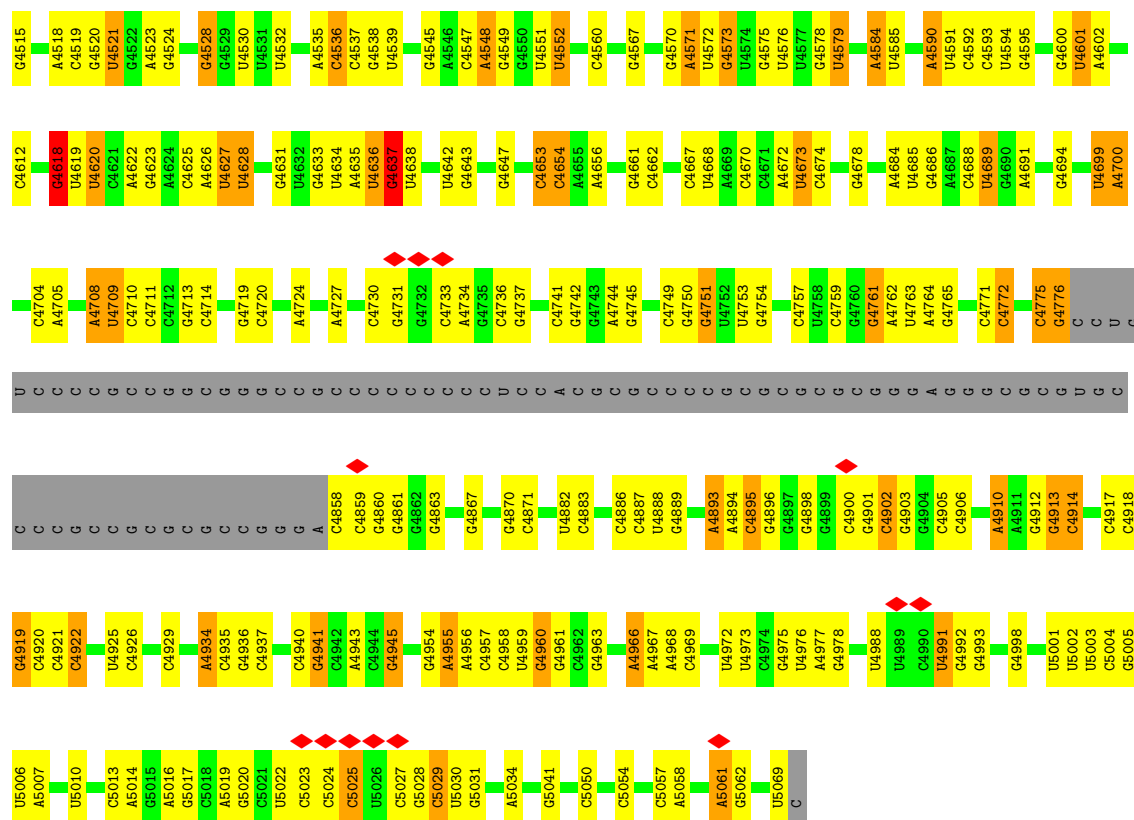
- Molecule 88 is BETA-L-ASPARTIC ACID (CCD ID: IAS) (formula: C₄H₇NO₄).

3 Residue-property plots

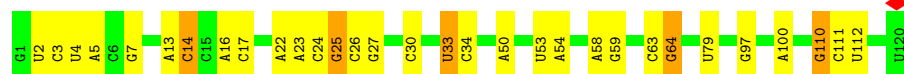
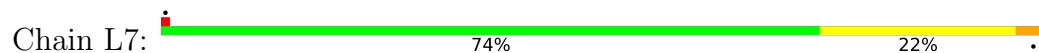
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion 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: 28S rRNA

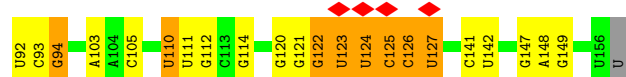




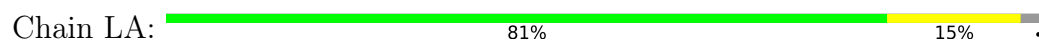
• Molecule 2: 5S rRNA

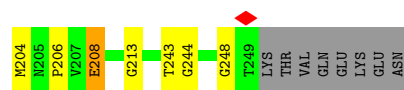


• Molecule 3: 5.8S rRNA



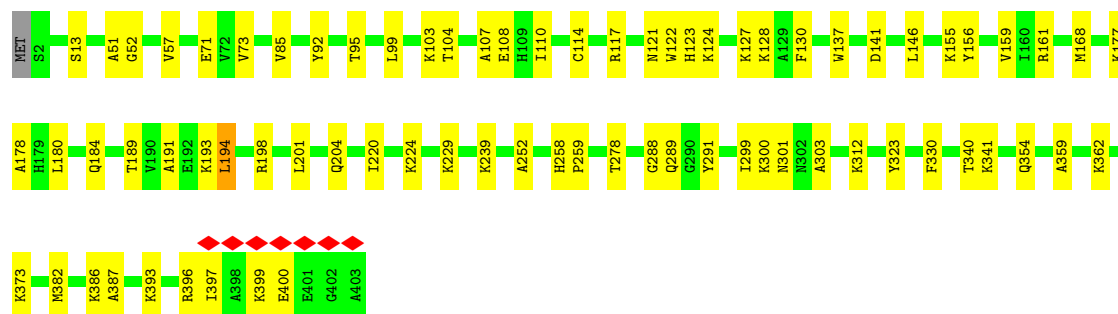
• Molecule 4: Large ribosomal subunit protein uL2





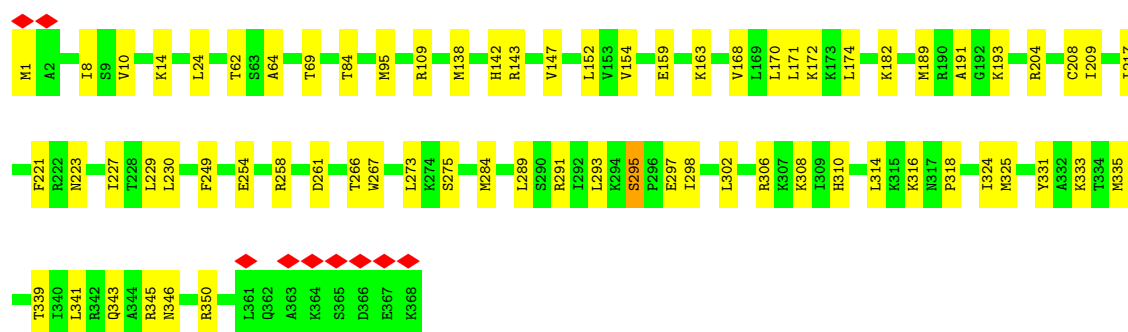
- Molecule 5: Large ribosomal subunit protein uL3

Chain LB: 81% 18%



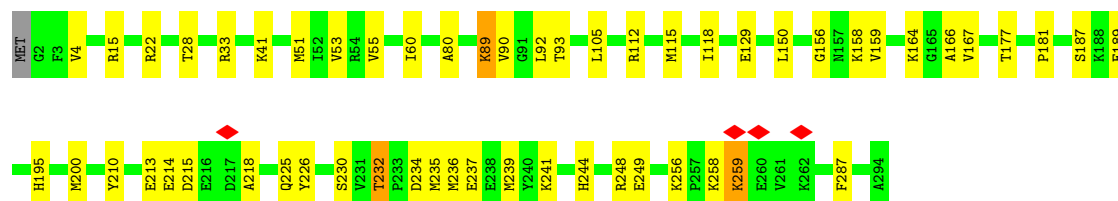
- Molecule 6: Large ribosomal subunit protein uL4

Chain LC: 81% 19%



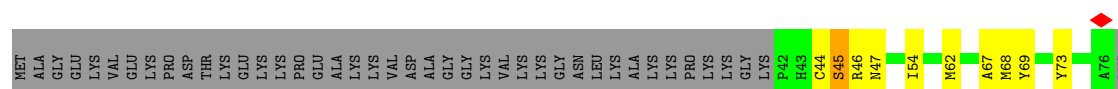
- Molecule 7: Large ribosomal subunit protein uL18

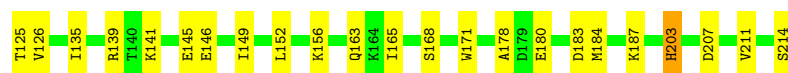
Chain LD: 81% 18%



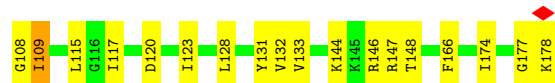
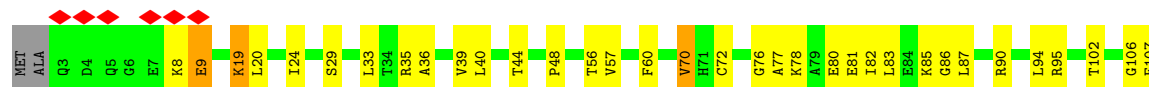
- Molecule 8: Large ribosomal subunit protein eL6

Chain LE: 6% 63% 18% 18%

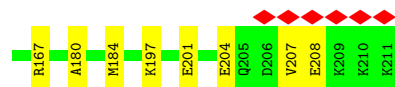
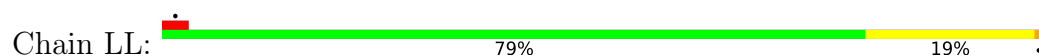




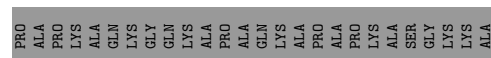
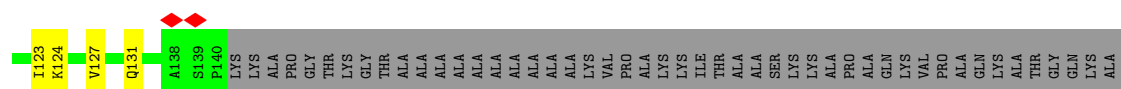
- Molecule 13: Large ribosomal subunit protein uL5



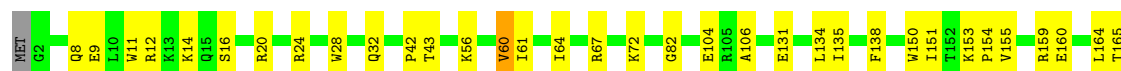
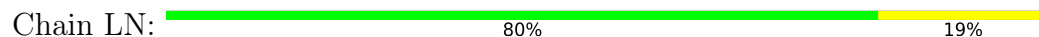
- Molecule 14: Large ribosomal subunit protein eL13



- Molecule 15: Large ribosomal subunit protein eL14



- Molecule 16: Large ribosomal subunit protein eL15



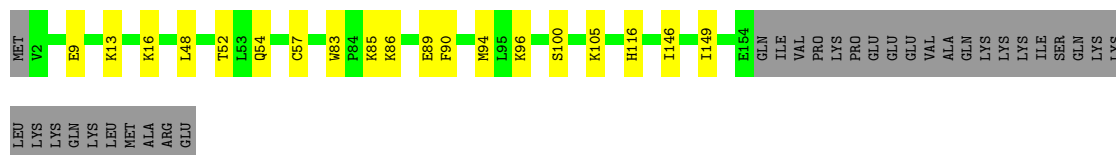
- Molecule 17: Large ribosomal subunit protein uL13

Chain LO:  85% 14%

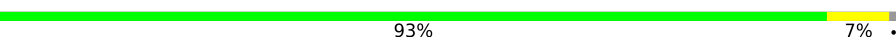


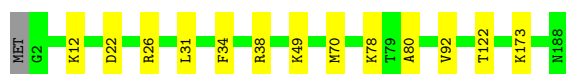
- Molecule 18: Large ribosomal subunit protein uL22

Chain LP:  73% 10% 17%



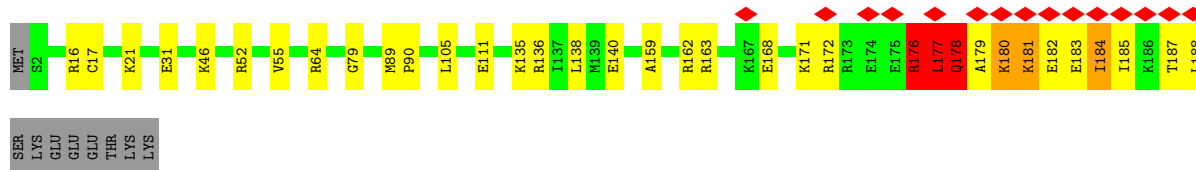
- Molecule 19: Large ribosomal subunit protein eL18

Chain LQ:  93% 7%



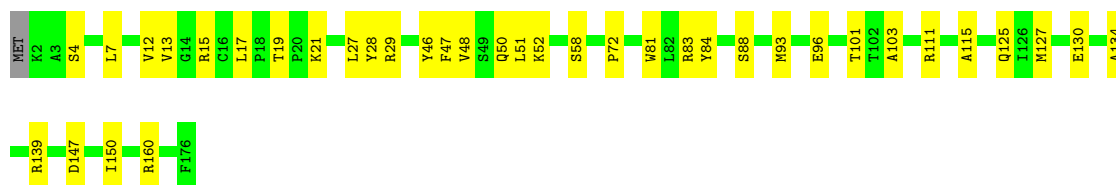
- Molecule 20: Large ribosomal subunit protein eL19

Chain LR:  8% 78% 15% 5%



- Molecule 21: Large ribosomal subunit protein eL20

Chain LS:  78% 21%

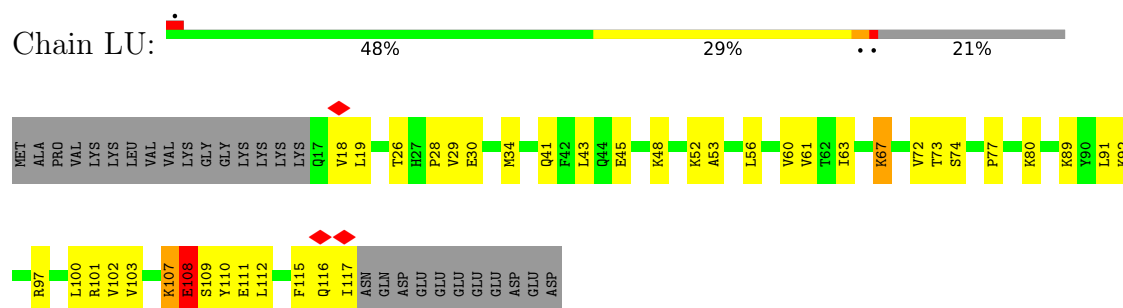


- Molecule 22: Large ribosomal subunit protein eL21

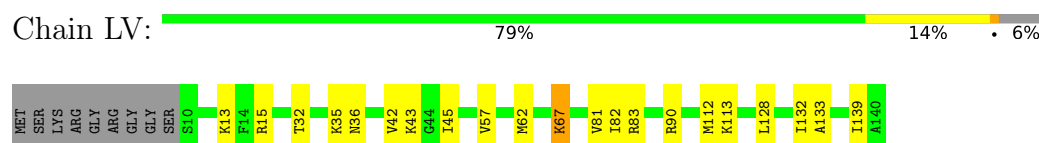
Chain LT:  82% 18%



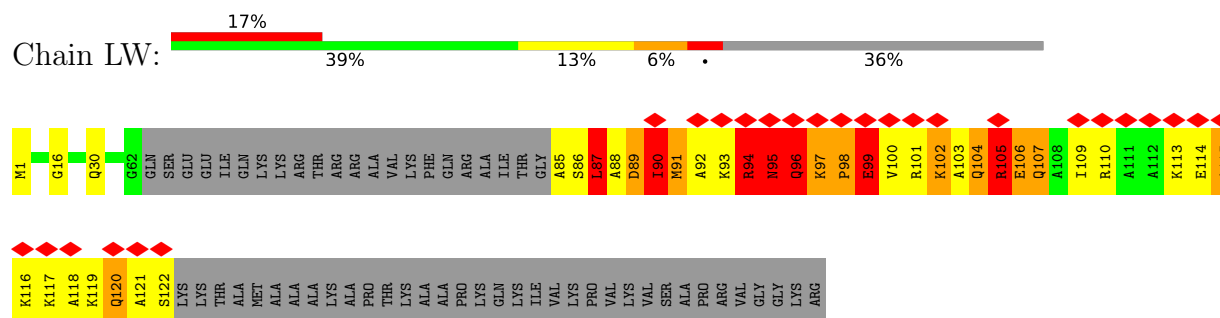
- Molecule 23: Large ribosomal subunit protein eL22



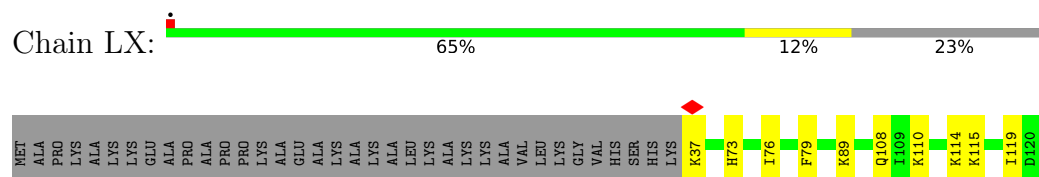
- Molecule 24: Large ribosomal subunit protein uL14



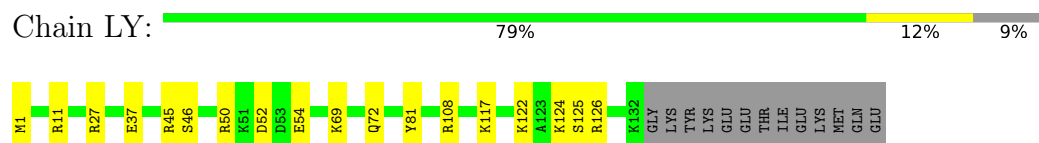
- Molecule 25: Large ribosomal subunit protein eL24



- Molecule 26: Large ribosomal subunit protein uL23



- Molecule 27: Large ribosomal subunit protein uL24



- Molecule 28: Large ribosomal subunit protein eL27



Chain Lf:  89% 10%



- Molecule 35: Large ribosomal subunit protein eL34

Chain Lg:  83% 10% 7%



- Molecule 36: Large ribosomal subunit protein uL29

Chain Lh:  82% 17%



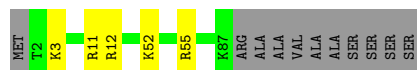
- Molecule 37: Large ribosomal subunit protein eL36

Chain Li:  80% 13% 6%



- Molecule 38: Large ribosomal subunit protein eL37

Chain Lj:  84% 5% 11%



- Molecule 39: Large ribosomal subunit protein eL38

Chain Lk:  64% 30%

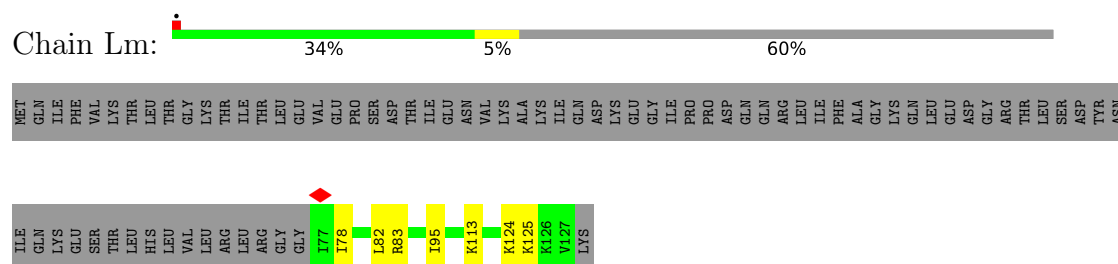


- Molecule 40: Large ribosomal subunit protein eL39

Chain Ll:  80% 18%



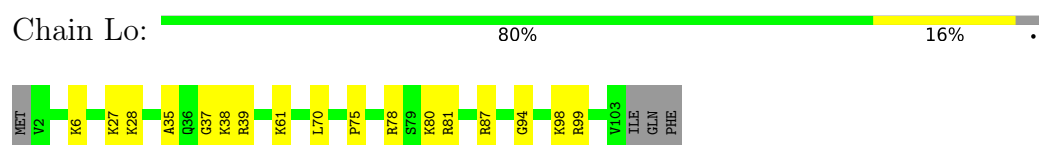
- Molecule 41: Ubiquitin-ribosomal protein eL40 fusion protein



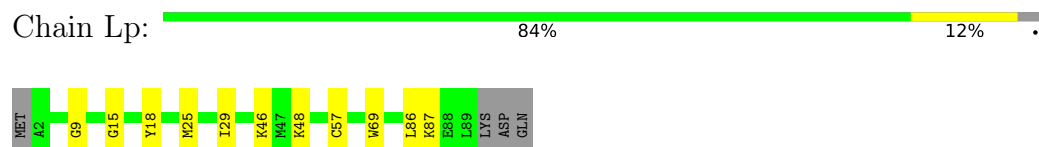
- Molecule 42: Small ribosomal subunit protein eS32



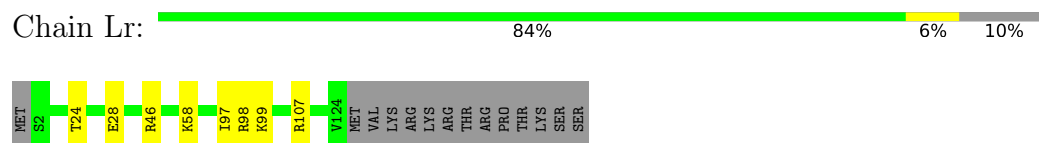
- Molecule 43: Large ribosomal subunit protein eL42



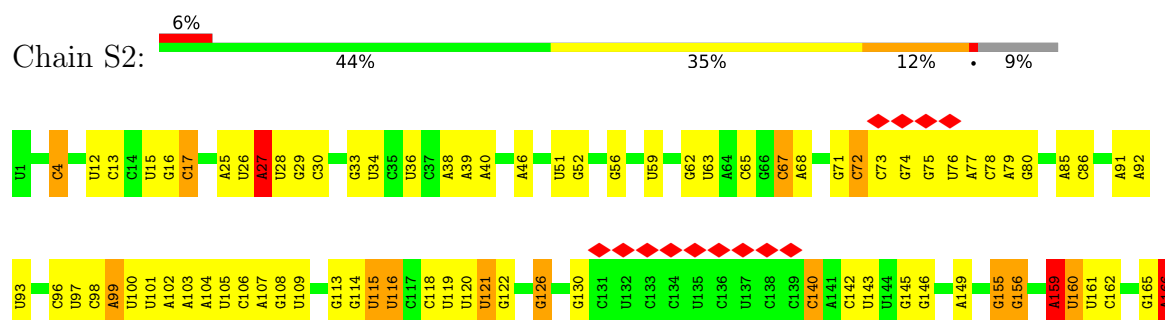
- Molecule 44: Large ribosomal subunit protein eL43

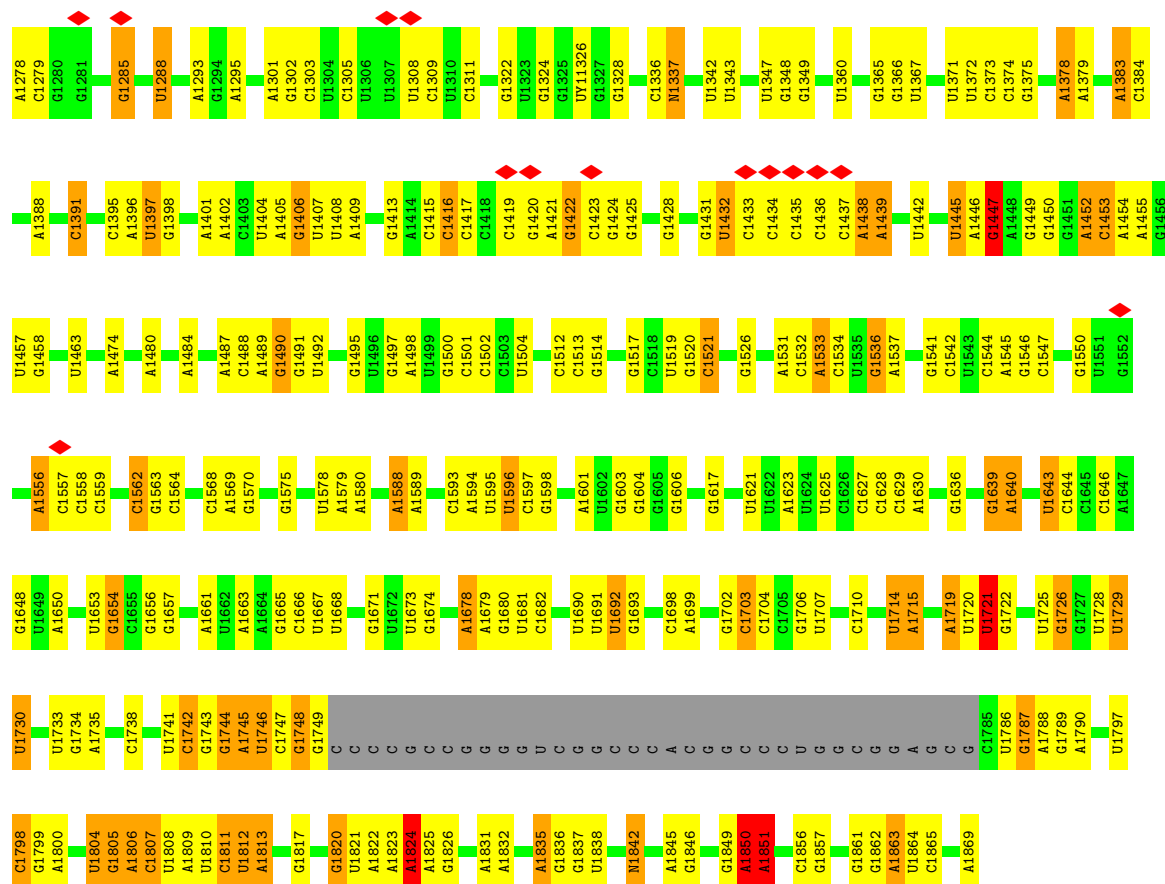


- Molecule 45: Large ribosomal subunit protein eL28

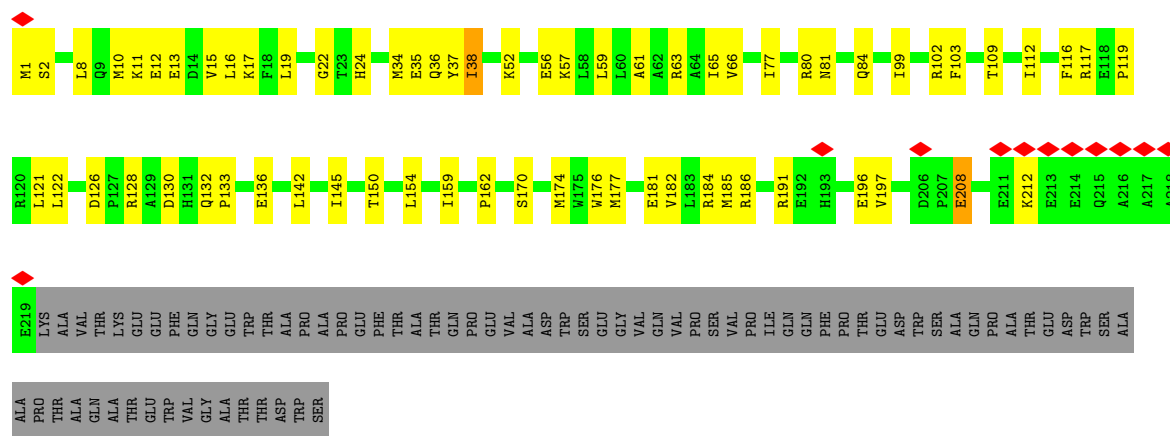


- Molecule 46: 18S rRNA





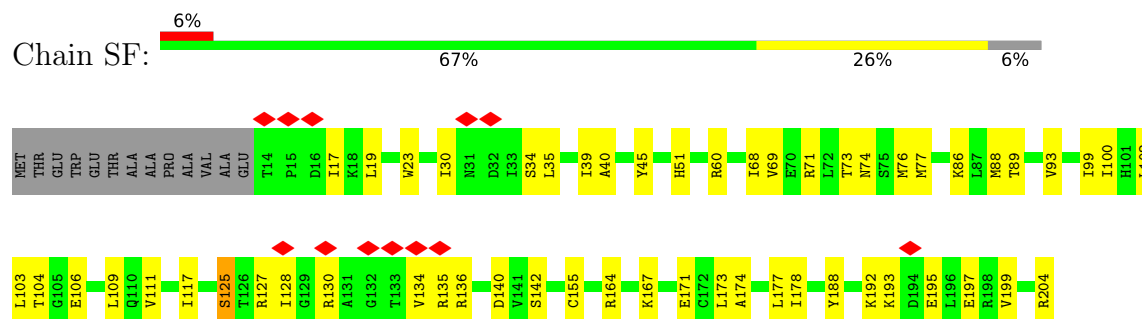
• Molecule 47: Small ribosomal subunit protein uS2



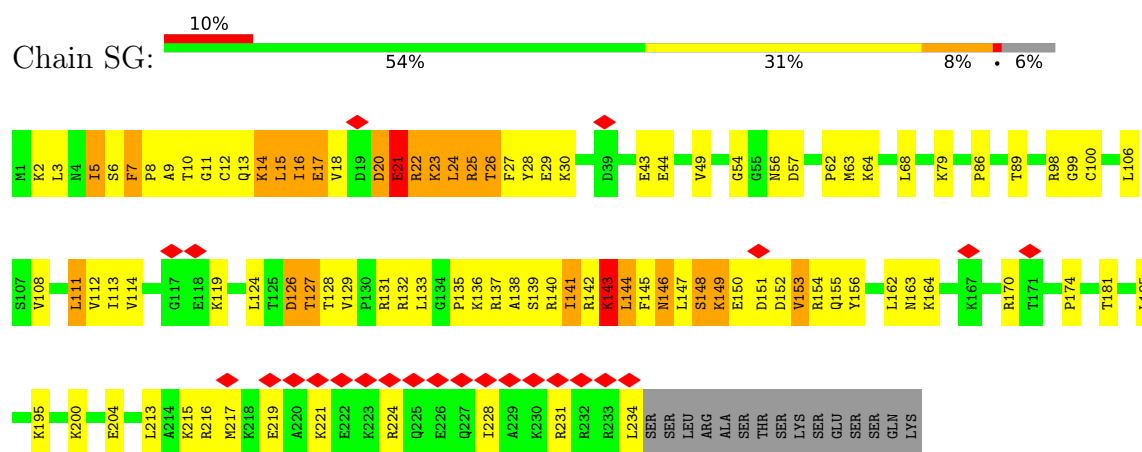
• Molecule 48: Small ribosomal subunit protein eS1



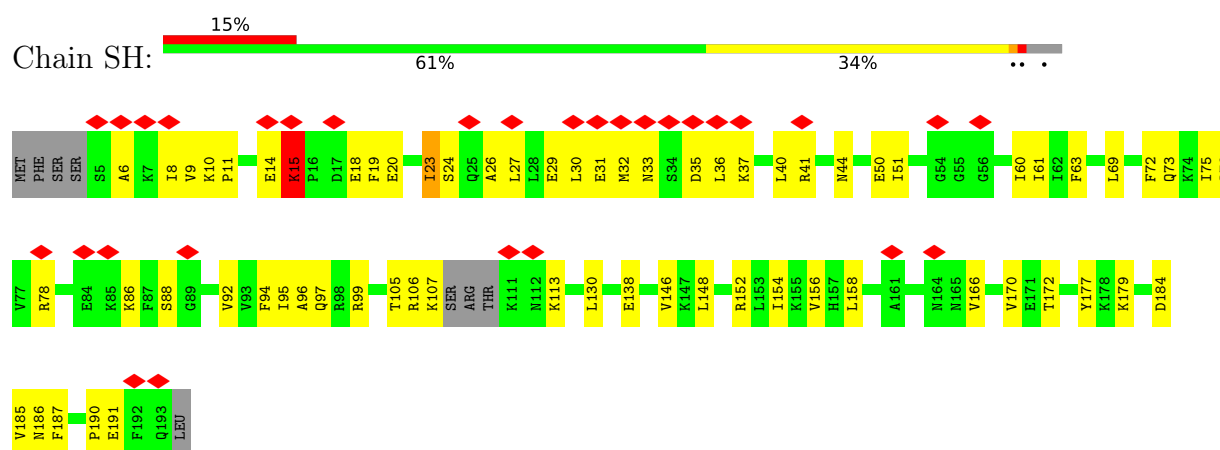
- Molecule 52: Small ribosomal subunit protein uS7



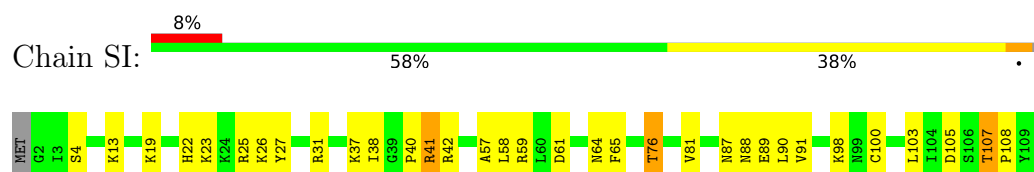
- Molecule 53: Small ribosomal subunit protein eS6

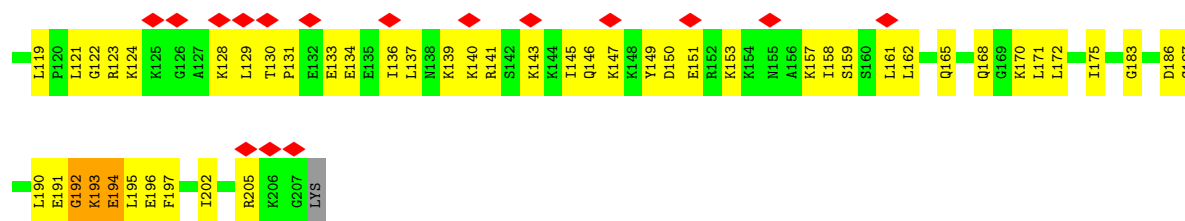


- Molecule 54: Small ribosomal subunit protein eS7



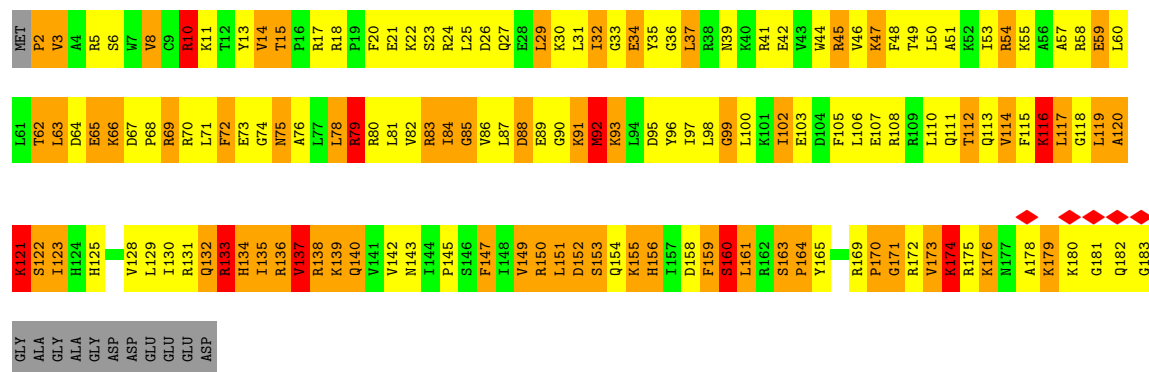
- Molecule 55: Small ribosomal subunit protein eS8





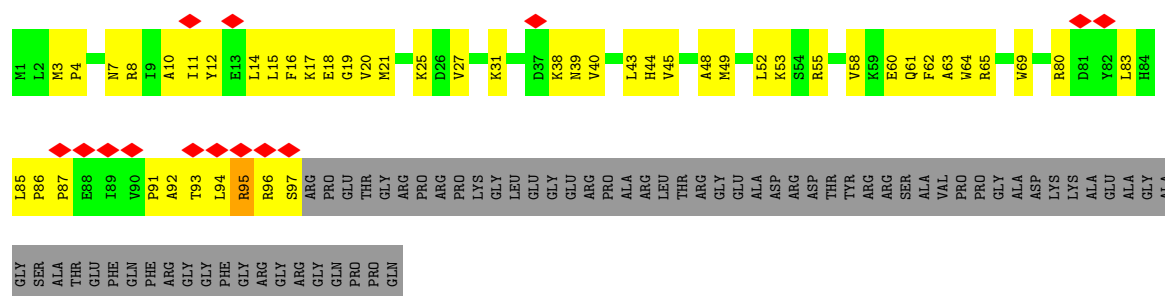
- Molecule 56: Small ribosomal subunit protein uS4

Chain SJ: 16% 42% 31% 5% 6%



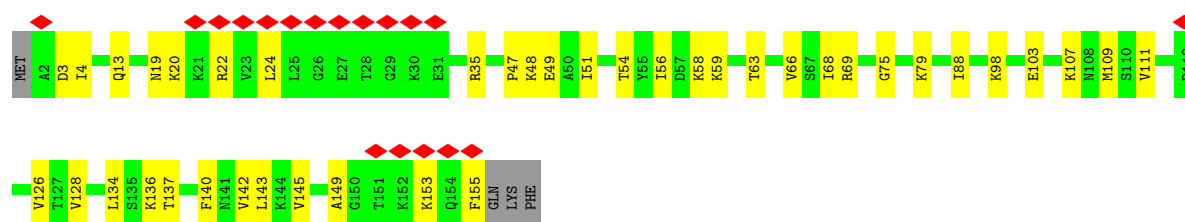
- Molecule 57: Small ribosomal subunit protein eS10

Chain SK: 8% 29% 29% 41%



- Molecule 58: Small ribosomal subunit protein uS17

Chain SL: 11% 72% 25%

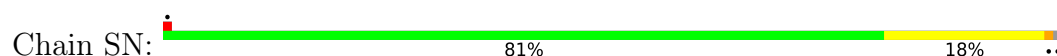


- Molecule 59: Small ribosomal subunit protein eS12

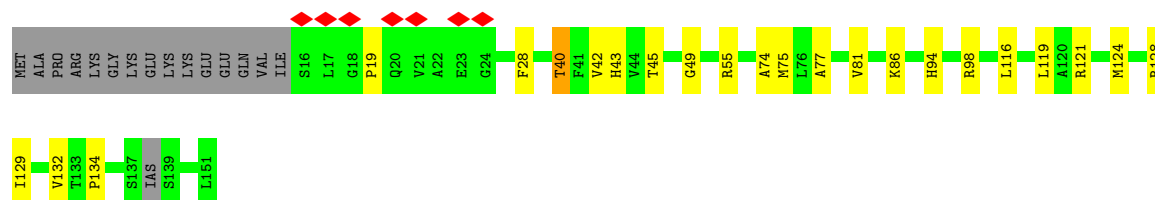
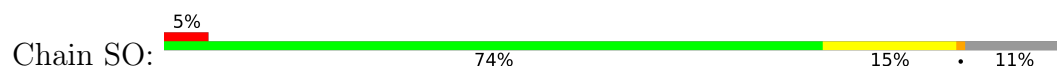
Chain SM: 44% 78% 39% 6% 11%



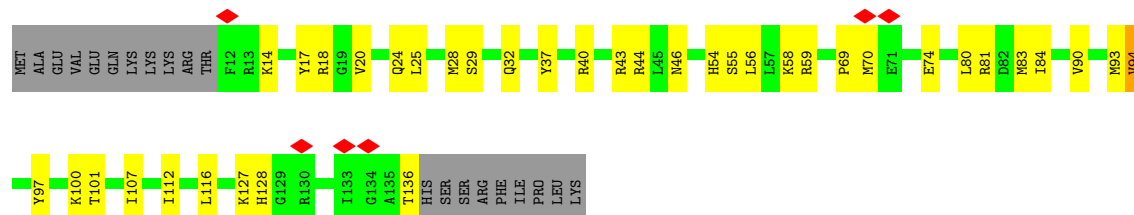
- Molecule 60: Small ribosomal subunit protein uS15



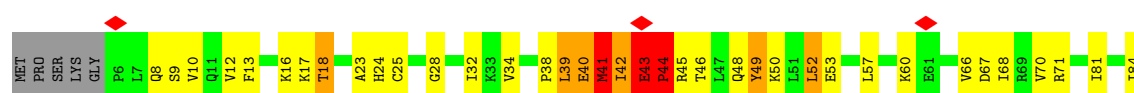
- Molecule 61: Small ribosomal subunit protein uS11

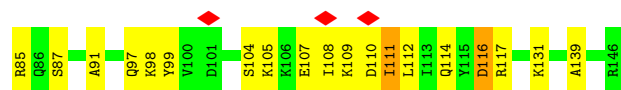


- Molecule 62: Small ribosomal subunit protein uS19

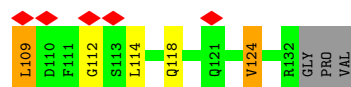


- Molecule 63: Small ribosomal subunit protein uS9

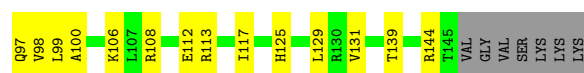




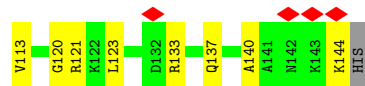
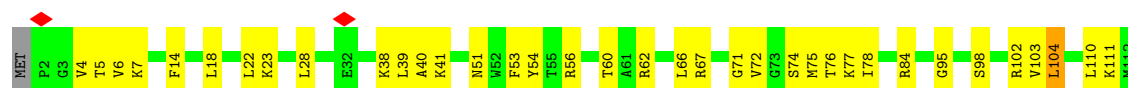
- Molecule 64: Small ribosomal subunit protein eS17



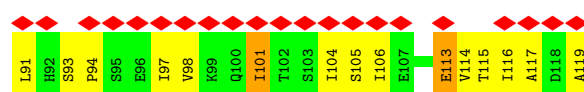
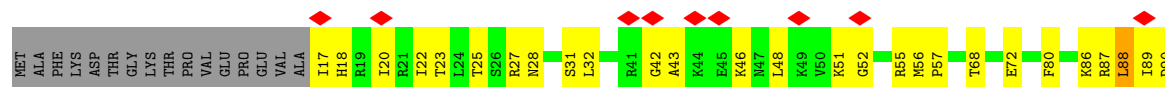
- Molecule 65: Small ribosomal subunit protein uS13



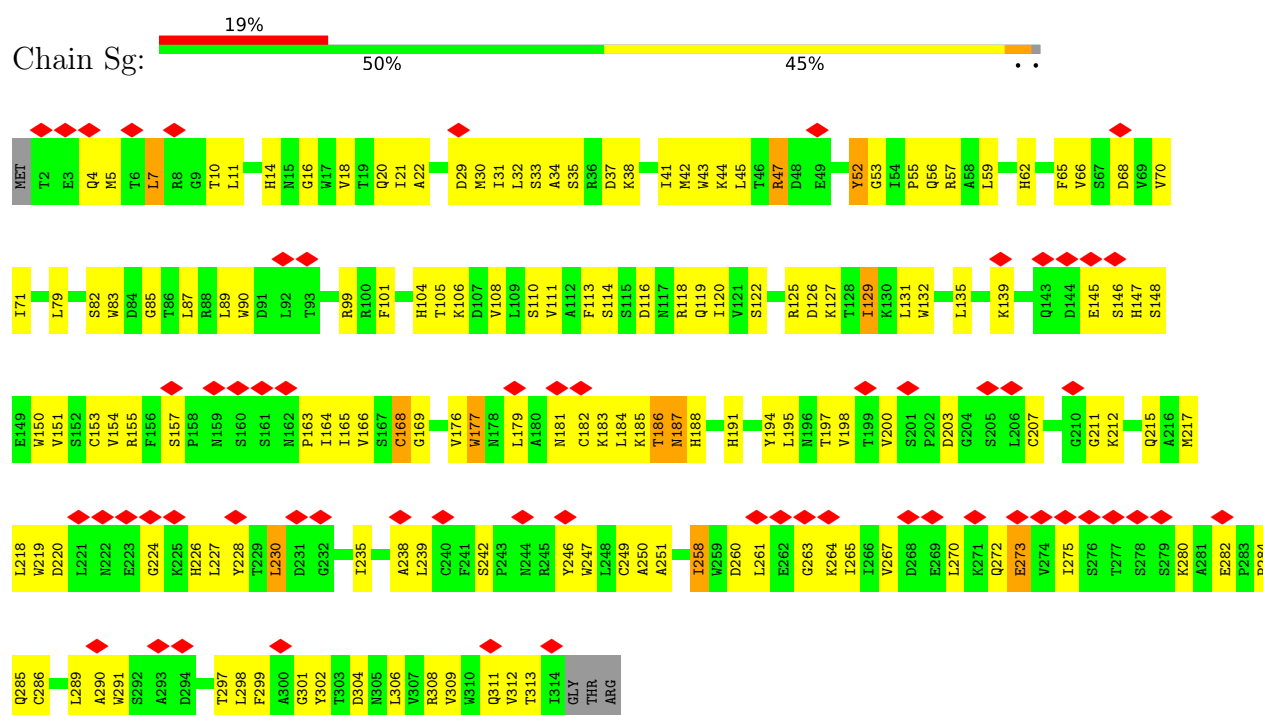
- Molecule 66: Small ribosomal subunit protein eS19



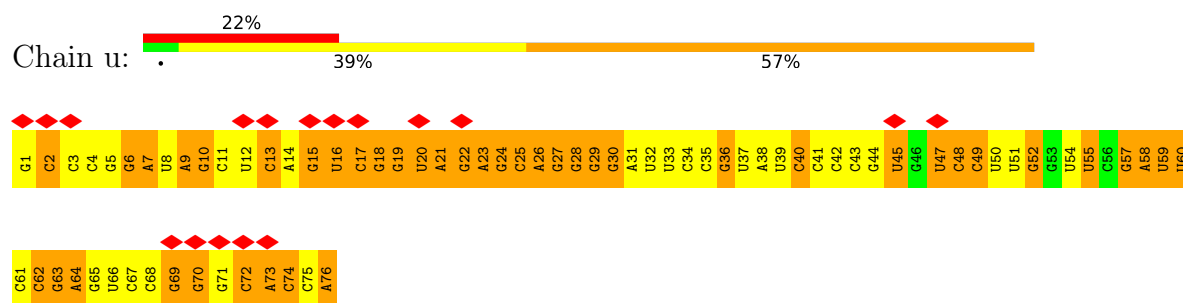
- Molecule 67: Small ribosomal subunit protein uS10



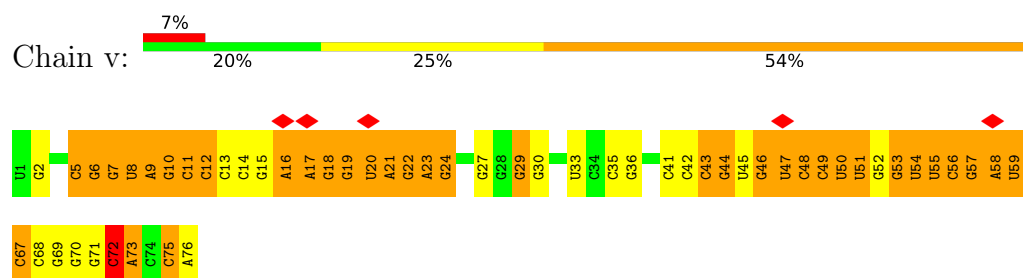
- Molecule 68: Small ribosomal subunit protein eS21



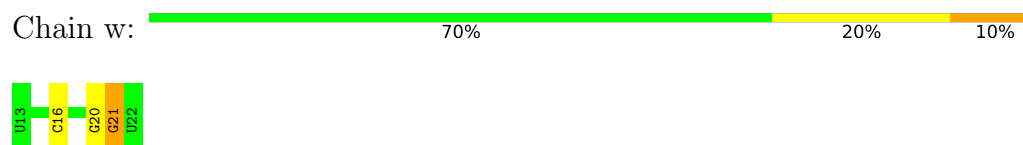
• Molecule 80: A/P-tRNA



• Molecule 81: P/E-tRNA



• Molecule 82: mRNA



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	104519	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	NONE	Depositor
Microscope	TFS KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	50	Depositor
Minimum defocus (nm)	1000	Depositor
Maximum defocus (nm)	2000	Depositor
Magnification	Not provided	
Image detector	TFS FALCON 4i (4k x 4k)	Depositor
Maximum map value	5.343	Depositor
Minimum map value	-2.542	Depositor
Average map value	-0.001	Depositor
Map value standard deviation	0.136	Depositor
Recommended contour level	0.4	Depositor
Map size ($\text{\AA}$)	552.16, 552.16, 552.16	wwPDB
Map dimensions	680, 680, 680	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing ($\text{\AA}$)	0.812, 0.812, 0.812	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: UY1, MG, HIC, 1MA, K, UR3, 6MZ, OMC, OMG, 4AC, A2M, PSU, OMU, ZN, NMY, B8N, SPD, V5N, 5MC, NMM, MA6, IAS

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	L5	0.39	1/84680 (0.0%)	0.49	15/132111 (0.0%)
2	L7	0.25	0/2858	0.27	0/4455
3	L8	0.29	0/3609	0.34	0/5623
4	LA	0.26	0/1936	0.47	0/2596
5	LB	0.24	0/3294	0.42	1/4406 (0.0%)
6	LC	0.35	1/2981 (0.0%)	0.45	0/4002
7	LD	0.23	0/2428	0.44	0/3252
8	LE	0.22	0/1942	0.45	0/2606
9	LF	0.25	0/1916	0.41	0/2553
10	LG	0.23	0/1971	0.52	0/2651
11	LH	0.22	0/1537	0.39	0/2066
12	LI	0.24	0/1753	0.48	0/2343
13	LJ	0.25	0/1433	0.53	0/1915
14	LL	0.23	0/1732	0.48	0/2315
15	LM	0.21	0/1161	0.40	0/1554
16	LN	0.30	1/1746 (0.1%)	0.42	0/2338
17	LO	0.25	0/1682	0.47	0/2250
18	LP	0.25	0/1268	0.42	0/1701
19	LQ	0.27	0/1537	0.45	0/2052
20	LR	0.30	0/1582	0.53	2/2091 (0.1%)
21	LS	0.26	0/1493	0.44	0/2003
22	LT	0.25	0/1326	0.44	0/1770
23	LU	0.31	0/839	0.68	2/1126 (0.2%)
24	LV	0.25	0/993	0.39	0/1332
25	LW	0.67	3/826 (0.4%)	0.95	6/1095 (0.5%)
26	LX	0.22	0/1002	0.38	0/1345
27	LY	0.23	0/1119	0.43	0/1488
28	LZ	0.21	0/1130	0.42	0/1507
29	La	0.27	0/1179	0.43	0/1573
30	Lb	0.36	0/821	0.61	1/1084 (0.1%)
31	Lc	0.45	1/774 (0.1%)	0.64	2/1038 (0.2%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
32	Ld	0.23	0/894	0.46	0/1204
33	Le	0.25	0/1071	0.38	0/1429
34	Lf	0.26	0/895	0.36	0/1198
35	Lg	0.23	0/878	0.39	0/1170
36	Lh	0.21	0/1023	0.41	0/1351
37	Li	0.21	0/824	0.52	0/1090
38	Lj	0.27	0/720	0.47	0/952
39	Lk	0.21	0/565	0.44	0/750
40	Ll	0.24	0/454	0.36	0/599
41	Lm	0.23	0/425	0.49	0/564
42	Ln	1.15	2/231 (0.9%)	0.81	1/294 (0.3%)
43	Lo	0.25	0/858	0.36	0/1131
44	Lp	0.26	0/691	0.45	0/919
45	Lr	0.25	0/1002	0.40	0/1344
46	S2	0.29	0/38456	0.42	5/59926 (0.0%)
47	SA	0.23	0/1764	0.51	0/2396
48	SB	0.23	0/1774	0.51	0/2373
49	SC	0.23	0/1764	0.48	0/2382
50	SD	0.23	0/1793	0.59	0/2414
51	SE	0.47	1/2118 (0.0%)	0.55	2/2849 (0.1%)
52	SF	0.22	0/1531	0.53	0/2059
53	SG	0.69	2/1926 (0.1%)	0.81	5/2563 (0.2%)
54	SH	0.27	0/1519	0.66	0/2033
55	SI	0.45	1/1715 (0.1%)	0.61	3/2287 (0.1%)
56	SJ	1.77	21/1548 (1.4%)	1.53	39/2066 (1.9%)
57	SK	0.24	0/840	0.59	0/1133
58	SL	0.23	0/1280	0.47	0/1712
59	SM	0.27	0/916	0.79	0/1233
60	SN	0.23	0/1232	0.53	2/1656 (0.1%)
61	SO	0.21	0/1020	0.40	0/1366
62	SP	0.21	0/1047	0.49	0/1399
63	SQ	0.53	1/1142 (0.1%)	0.83	4/1528 (0.3%)
64	SR	0.42	0/1078	0.60	2/1447 (0.1%)
65	SS	0.22	0/1216	0.54	1/1628 (0.1%)
66	ST	0.20	0/1119	0.52	0/1498
67	SU	0.24	0/827	0.62	0/1110
68	SV	0.21	0/643	0.46	0/860
69	SW	0.25	0/1051	0.42	0/1406
70	SX	0.22	0/1116	0.43	0/1490
71	SY	0.20	0/1068	0.54	0/1418
72	SZ	0.20	0/604	0.58	0/810
73	Sa	0.25	0/847	0.44	0/1135
74	Sb	0.23	0/665	0.53	0/891

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
75	Sc	0.24	0/508	0.58	0/680
76	Sd	0.26	0/470	0.52	0/623
77	Se	0.48	0/465	0.61	0/612
78	Sf	0.20	0/560	0.64	0/745
79	Sg	0.24	0/2493	0.71	1/3394 (0.0%)
80	u	0.45	0/1800	0.77	0/2804
81	v	0.48	0/1806	0.80	1/2813 (0.0%)
82	w	0.23	0/235	0.42	0/365
All	All	0.37	35/227035 (0.0%)	0.51	95/333340 (0.0%)

All (35) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
42	Ln	2	ARG	CA-C	-8.12	1.41	1.53
53	SG	141	ILE	CA-C	-7.71	1.43	1.52
31	Lc	13	SER	CA-C	-7.04	1.44	1.52
6	LC	295	SER	CA-C	-7.03	1.44	1.53
56	SJ	62	THR	CA-C	-6.50	1.44	1.52
56	SJ	13	TYR	CA-C	-6.45	1.44	1.52
56	SJ	163	SER	CA-C	-6.36	1.44	1.52
56	SJ	18	ARG	CA-C	-6.19	1.46	1.52
56	SJ	10	ARG	CA-C	-6.16	1.45	1.52
56	SJ	81	LEU	N-CA	-6.08	1.38	1.46
56	SJ	113	GLN	CA-C	-5.99	1.44	1.52
56	SJ	72	PHE	CA-C	-5.81	1.45	1.52
56	SJ	32	ILE	CA-C	-5.75	1.45	1.52
56	SJ	111	GLN	CA-C	-5.69	1.45	1.52
56	SJ	80	ARG	CA-C	-5.65	1.45	1.52
55	SI	194	GLU	N-CA	-5.60	1.39	1.46
56	SJ	116	LYS	N-CA	-5.58	1.40	1.46
56	SJ	156	HIS	CA-C	-5.54	1.45	1.53
25	LW	94	ARG	N-CA	5.54	1.53	1.46
56	SJ	83	ARG	N-CA	-5.54	1.39	1.46
56	SJ	13	TYR	N-CA	-5.49	1.39	1.45
1	L5	375	G	O3'-P	-5.42	1.53	1.61
56	SJ	76	ALA	CA-C	-5.40	1.45	1.52
51	SE	61	VAL	N-CA	-5.38	1.40	1.46
25	LW	90	ILE	N-CA	5.35	1.53	1.46
56	SJ	79	ARG	CA-C	-5.29	1.45	1.52
25	LW	90	ILE	CA-C	5.19	1.59	1.52
16	LN	82	GLY	C-N	-5.17	1.25	1.33
56	SJ	29	LEU	CA-C	-5.17	1.46	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
56	SJ	98	LEU	CA-C	-5.16	1.47	1.53
63	SQ	41	MET	CA-C	-5.08	1.46	1.52
42	Ln	4	LYS	N-CA	-5.04	1.39	1.46
56	SJ	153	SER	CA-C	-5.02	1.46	1.52
53	SG	7	PHE	CA-C	-5.01	1.46	1.52
56	SJ	83	ARG	CA-C	-5.01	1.46	1.52

All (95) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
56	SJ	123	ILE	N-CA-C	-13.34	97.24	110.72
63	SQ	44	PRO	N-CA-C	-10.52	90.80	112.47
53	SG	141	ILE	N-CA-C	-9.71	101.40	110.53
53	SG	24	LEU	N-CA-C	-9.35	102.69	114.56
25	LW	104	GLN	N-CA-C	-8.97	102.74	114.31
25	LW	90	ILE	N-CA-C	8.75	127.55	109.34
53	SG	141	ILE	CB-CA-C	-8.73	100.58	112.02
63	SQ	43	GLU	N-CA-C	8.56	128.73	109.81
46	S2	1824	A	C2'-C3'-O3'	-8.48	96.78	109.50
20	LR	177	LEU	N-CA-C	-8.17	102.33	111.07
56	SJ	117	LEU	N-CA-C	-7.84	100.81	110.61
53	SG	26	THR	N-CA-C	-7.80	101.61	112.45
23	LU	109	SER	N-CA-C	7.58	121.72	108.75
56	SJ	138[A]	ARG	CA-C-O	7.47	130.93	119.80
56	SJ	138[B]	ARG	CA-C-O	7.47	130.93	119.80
56	SJ	111	GLN	N-CA-C	-7.46	103.23	111.36
1	L5	3801	U	C4'-C3'-O3'	-7.28	102.07	113.00
64	SR	34	VAL	N-CA-C	-7.28	103.69	110.53
56	SJ	81	LEU	N-CA-C	-7.20	103.51	111.36
46	S2	563	G	C2'-C3'-O3'	7.11	120.16	109.50
56	SJ	116	LYS	N-CA-C	-7.04	102.08	113.19
56	SJ	160	SER	N-CA-C	6.99	121.06	108.69
1	L5	1336	G	C2'-C3'-O3'	-6.98	103.23	113.70
63	SQ	42	ILE	N-CA-C	-6.93	99.79	109.21
56	SJ	3	VAL	N-CA-C	6.92	117.48	108.35
56	SJ	132	GLN	N-CA-C	-6.86	96.19	110.80
56	SJ	164	PRO	N-CA-C	-6.78	101.63	111.33
31	Lc	10	SER	N-CA-C	-6.75	102.12	111.30
56	SJ	15	THR	CA-C-N	-6.74	112.02	120.51
56	SJ	15	THR	C-N-CA	-6.74	112.02	120.51
23	LU	107	LYS	N-CA-C	-6.44	102.49	110.41
5	LB	387	ALA	N-CA-C	-6.44	107.28	114.62

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
46	S2	560	A	C2'-C3'-O3'	-6.39	104.12	113.70
56	SJ	22	LYS	N-CA-C	6.36	119.03	111.33
25	LW	96	GLN	N-CA-C	-6.32	97.35	110.80
25	LW	99	GLU	N-CA-C	6.26	120.12	110.42
55	SI	192	GLY	N-CA-C	6.23	127.95	113.18
56	SJ	41	ARG	N-CA-C	-6.21	105.19	112.89
1	L5	1754	U	C4'-C3'-O3'	-6.16	103.76	113.00
56	SJ	55	LYS	N-CA-C	-6.10	104.71	111.36
56	SJ	14	VAL	N-CA-C	-6.02	100.73	109.29
55	SI	194	GLU	N-CA-C	-6.01	104.42	110.97
56	SJ	137	VAL	N-CA-C	-5.96	96.01	106.61
56	SJ	32	ILE	N-CA-C	-5.92	104.58	110.62
1	L5	2814	C	C2'-C3'-O3'	-5.90	104.85	113.70
20	LR	176	ARG	N-CA-C	-5.88	104.25	112.25
56	SJ	163	SER	CB-CA-C	-5.88	98.59	110.17
31	Lc	13	SER	N-CA-C	-5.87	100.57	109.85
51	SE	61	VAL	N-CA-C	-5.86	104.80	110.72
56	SJ	54	ARG	N-CA-C	-5.84	106.29	113.41
1	L5	293	G	C2'-C3'-O3'	-5.82	104.97	113.70
81	v	72	C	C4'-C3'-O3'	5.81	118.12	109.40
56	SJ	171	GLY	N-CA-C	5.79	126.89	113.18
56	SJ	92	MET	N-CA-C	-5.74	99.03	108.49
56	SJ	133	ARG	N-CA-C	5.72	122.98	110.80
63	SQ	40	GLU	N-CA-C	-5.63	104.65	112.30
56	SJ	121	LYS	CA-C-O	-5.62	115.78	122.13
1	L5	934	C	C4'-C3'-O3'	-5.61	104.58	113.00
56	SJ	76	ALA	N-CA-C	-5.53	105.25	111.28
1	L5	1258	G	C4'-C3'-O3'	-5.52	104.72	113.00
1	L5	2013	A	C2'-C3'-O3'	-5.49	105.47	113.70
56	SJ	113	GLN	N-CA-C	-5.48	106.37	112.57
1	L5	1359	G	C1'-C2'-O2'	-5.48	103.58	111.80
56	SJ	75	ASN	N-CA-C	-5.47	105.33	112.23
1	L5	329	A	C4'-C3'-O3'	-5.45	104.83	113.00
56	SJ	153	SER	N-CA-C	-5.36	106.22	114.16
65	SS	100	ALA	CB-CA-C	-5.34	110.44	116.63
60	SN	80	LEU	CA-C-N	5.31	127.78	120.67
60	SN	80	LEU	C-N-CA	5.31	127.78	120.67
25	LW	107	GLN	N-CA-C	5.30	117.03	108.34
46	S2	1721	U	C4'-C3'-O3'	-5.29	105.06	113.00
30	Lb	51	LYS	CG-CD-CE	5.28	123.44	111.30
1	L5	1523	A	C4'-C3'-O3'	-5.24	105.14	113.00
56	SJ	120	ALA	N-CA-C	5.24	117.77	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
42	Ln	4	LYS	N-CA-C	-5.23	106.75	113.23
56	SJ	65	GLU	CA-C-N	-5.22	115.99	123.20
56	SJ	65	GLU	C-N-CA	-5.22	115.99	123.20
56	SJ	140	GLN	N-CA-C	5.22	117.24	108.73
1	L5	2496	G	C4'-C3'-O3'	-5.20	105.20	113.00
25	LW	106	GLU	N-CA-C	5.20	116.80	107.80
56	SJ	114	VAL	N-CA-C	-5.20	98.52	109.34
64	SR	124	VAL	N-CA-C	-5.20	108.06	113.10
1	L5	1980	U	C2'-C3'-O3'	5.14	117.21	109.50
56	SJ	85	GLY	N-CA-C	-5.10	107.65	115.00
1	L5	1186	U	C4'-C3'-O3'	-5.10	105.35	113.00
56	SJ	138[A]	ARG	CB-CA-C	-5.08	109.23	116.34
56	SJ	138[B]	ARG	CB-CA-C	-5.08	109.23	116.34
56	SJ	62	THR	CB-CA-C	-5.06	102.82	111.02
51	SE	65	CYS	N-CA-C	-5.05	107.17	113.38
46	S2	581	U	C2'-C3'-O3'	5.04	121.27	113.70
79	Sg	52	TYR	N-CA-C	-5.04	108.15	114.56
1	L5	1977	C	C2'-C3'-O3'	-5.04	106.14	113.70
55	SI	191	GLU	N-CA-C	5.02	116.44	109.31
53	SG	22	ARG	N-CA-C	-5.02	107.22	113.19
56	SJ	173	VAL	N-CA-C	-5.01	105.71	110.42

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts

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	L5	78335	0	39651	1590	0
2	L7	2558	0	1295	19	0
3	L8	3316	0	1687	45	0
4	LA	1898	0	1993	26	0
5	LB	3239	0	3376	48	0
6	LC	2927	0	3104	48	0
7	LD	2382	0	2410	35	0
8	LE	1904	0	2055	42	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
9	LF	1878	0	2009	39	0
10	LG	1935	0	2087	32	0
11	LH	1518	0	1601	21	0
12	LI	1713	0	1751	34	0
13	LJ	1410	0	1441	33	0
14	LL	1701	0	1818	30	0
15	LM	1138	0	1204	19	0
16	LN	1701	0	1749	26	0
17	LO	1650	0	1794	19	0
18	LP	1242	0	1269	12	0
19	LQ	1513	0	1628	10	0
20	LR	1566	0	1729	27	0
21	LS	1453	0	1490	23	0
22	LT	1298	0	1366	18	0
23	LU	825	0	850	22	0
24	LV	979	0	1039	12	0
25	LW	813	0	853	82	0
26	LX	985	0	1066	12	0
27	LY	1102	0	1189	15	0
28	LZ	1107	0	1182	27	0
29	La	1163	0	1206	13	0
30	Lb	808	0	875	15	0
31	Lc	764	0	804	29	0
32	Ld	879	0	924	9	0
33	Le	1053	0	1147	5	0
34	Lf	876	0	912	6	0
35	Lg	868	0	959	8	0
36	Lh	1015	0	1148	17	0
37	Li	813	0	894	9	0
38	Lj	705	0	737	3	0
39	Lk	559	0	624	12	0
40	Ll	444	0	483	7	0
41	Lm	419	0	452	5	0
42	Ln	230	0	276	6	0
43	Lo	842	0	914	10	0
44	Lp	681	0	731	11	0
45	Lr	987	0	1050	7	0
46	S2	36324	0	18361	692	0
47	SA	1727	0	1729	59	0
48	SB	1747	0	1822	46	0
49	SC	1724	0	1817	35	0
50	SD	1765	0	1865	58	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
51	SE	2076	0	2177	52	0
52	SF	1509	0	1563	49	0
53	SG	1903	0	2068	100	0
54	SH	1497	0	1590	44	0
55	SI	1686	0	1772	61	0
56	SJ	1520	0	1642	136	0
57	SK	816	0	841	39	0
58	SL	1258	0	1332	29	0
59	SM	906	0	921	53	0
60	SN	1208	0	1293	20	0
61	SO	1008	0	1034	19	0
62	SP	1027	0	1075	25	0
63	SQ	1124	0	1193	44	0
64	SR	1064	0	1118	31	0
65	SS	1198	0	1261	33	0
66	ST	1113	0	1145	28	0
67	SU	817	0	882	38	0
68	SV	636	0	637	9	0
69	SW	1034	0	1080	19	0
70	SX	1098	0	1167	20	0
71	SY	1048	0	1122	36	0
72	SZ	598	0	656	29	0
73	Sa	829	0	883	17	0
74	Sb	651	0	672	11	0
75	Sc	506	0	536	18	0
76	Sd	459	0	448	12	0
77	Se	459	0	503	20	0
78	Sf	548	0	552	29	0
79	Sg	2436	0	2393	119	0
80	u	1613	0	821	112	0
81	v	1618	0	822	116	0
82	w	213	0	109	3	0
83	L5	198	0	0	0	0
83	L7	1	0	0	0	0
83	L8	5	0	0	0	0
83	LI	1	0	0	0	0
83	LN	1	0	0	0	0
83	LP	1	0	0	0	0
83	LV	1	0	0	0	0
83	S2	83	0	0	0	0
83	ST	1	0	0	0	0
84	L5	78	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
84	L7	1	0	0	0	0
84	LA	1	0	0	0	0
84	LI	1	0	0	0	0
84	Le	1	0	0	0	0
84	Lf	1	0	0	0	0
84	Lg	1	0	0	0	0
84	Lo	1	0	0	0	0
84	S2	19	0	0	0	0
84	SO	1	0	0	0	0
84	SS	1	0	0	0	0
84	SX	1	0	0	0	0
84	Sd	1	0	0	0	0
85	L5	30	0	57	3	0
86	L5	504	0	552	28	0
86	L7	42	0	46	4	0
86	S2	168	0	183	6	0
87	Lg	1	0	0	0	0
87	Lj	1	0	0	0	0
87	Lm	1	0	0	0	0
87	Lo	1	0	0	0	0
87	Lp	1	0	0	0	0
87	Sa	1	0	0	0	0
87	Sd	1	0	0	0	0
87	Sf	1	0	0	0	0
88	SO	8	0	4	0	0
All	All	217115	0	160566	4413	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 12.

All (4413) 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)
1:L5:497:G:C1'	1:L5:498:C:H5'	1.32	1.55
1:L5:497:G:H1'	1:L5:498:C:C5'	1.37	1.51
1:L5:255:C:H2'	1:L5:256:G:C8	1.60	1.35
1:L5:741:C:C3'	1:L5:742:G:H5''	1.60	1.28
1:L5:741:C:H3'	1:L5:742:G:C5'	1.63	1.26
1:L5:189:G:O6	1:L5:253:G:N2	1.78	1.17
1:L5:497:G:C1'	1:L5:498:C:C5'	2.02	1.17
59:SM:124:ILE:O	59:SM:128:PHE:HB2	1.49	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:v:9:A:H4'	81:v:10:G:OP1	1.37	1.08
1:L5:497:G:C2'	1:L5:498:C:H5'	1.89	1.03
1:L5:991:C:H3'	1:L5:992:C:H4'	1.41	1.03
46:S2:751:G:H2'	46:S2:792:C:H4'	1.42	1.01
1:L5:497:G:H4'	1:L5:498:C:O5'	1.58	1.01
1:L5:698:G:C5	1:L5:699:C:C5	2.49	1.00
1:L5:1993:C:H41	1:L5:2002:A:H5'	1.27	0.99
81:v:72:C:O2'	81:v:73:A:OP2	1.80	0.99
25:LW:102:LYS:HD2	25:LW:107:GLN:HB2	1.44	0.98
1:L5:741:C:H3'	1:L5:742:G:H5''	0.98	0.97
1:L5:255:C:C2'	1:L5:256:G:C8	2.47	0.96
1:L5:1270:A:H8	1:L5:2106:G:H21	1.03	0.95
46:S2:549:C:H2'	46:S2:550:C:H5'	1.47	0.95
1:L5:1995:G:H3'	1:L5:1997:U:H1'	1.47	0.94
25:LW:92:ALA:HB3	25:LW:98:PRO:HA	1.50	0.94
1:L5:2001:G:H3'	1:L5:2002:A:H5''	1.50	0.92
46:S2:549:C:C2'	46:S2:550:C:H5'	2.00	0.92
1:L5:741:C:C2'	1:L5:742:G:H5''	1.99	0.91
1:L5:1202:C:H3'	1:L5:1203:G:H5''	1.51	0.91
25:LW:96:GLN:C	25:LW:98:PRO:HD3	1.96	0.91
46:S2:536:A:H3'	46:S2:537:C:H4'	1.53	0.91
1:L5:740:G:H2'	1:L5:741:C:C6	2.06	0.90
81:v:20:U:H2'	81:v:21:A:H4'	1.52	0.90
81:v:15:G:H2'	81:v:16:A:C6	2.06	0.90
78:Sf:119:ARG:HH22	78:Sf:122:PRO:HD3	1.35	0.89
1:L5:1183:C:H6	1:L5:1183:C:H5'	1.35	0.89
50:SD:123:LEU:HD21	50:SD:154:ASP:HB2	1.54	0.89
81:v:20:U:O2'	81:v:21:A:OP1	1.90	0.89
54:SH:72:PHE:O	54:SH:76:GLN:HB2	1.73	0.88
67:SU:51:LYS:HB2	67:SU:90:ASP:HB2	1.55	0.88
1:L5:500:G:O6	1:L5:654:C:O2	1.91	0.88
1:L5:2487:G:H1'	1:L5:2493:G:C2	2.09	0.88
1:L5:698:G:C6	1:L5:699:C:C4	2.62	0.87
1:L5:1963:C:H41	1:L5:2024:G:H21	1.23	0.87
1:L5:497:G:C1'	1:L5:498:C:H5''	2.00	0.87
1:L5:2492:C:H2'	1:L5:2493:G:C8	2.10	0.86
1:L5:663:G:H2'	1:L5:664:G:C8	2.11	0.86
1:L5:1975:G:C8	1:L5:1976:G:H4'	2.10	0.86
53:SG:142:ARG:HA	53:SG:147:LEU:HD12	1.58	0.86
1:L5:2001:G:H8	1:L5:2003:G:H5''	1.41	0.85
48:SB:46:LYS:HE3	61:SO:19:PRO:HB2	1.57	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:515:C:H41	1:L5:646:G:H1	1.23	0.85
46:S2:1680:G:H4'	75:Sc:20:ARG:HD3	1.59	0.85
1:L5:497:G:H1'	1:L5:498:C:H5''	1.51	0.85
1:L5:1980:U:H4'	1:L5:1981:G:H3'	1.57	0.85
79:Sg:200:VAL:HG22	79:Sg:207:CYS:HB2	1.59	0.85
81:v:9:A:C4'	81:v:10:G:OP1	2.25	0.84
46:S2:541:U:H3'	46:S2:543:C:H41	1.43	0.84
1:L5:1985:G:N2	1:L5:2005:G:H3'	1.92	0.84
72:SZ:50:PHE:HB3	72:SZ:54:THR:HB	1.59	0.84
1:L5:2909:C:H4'	1:L5:3586:G:H22	1.42	0.84
46:S2:1714:U:H2'	46:S2:1715:A:C8	2.13	0.84
1:L5:497:G:C4'	1:L5:498:C:O5'	2.25	0.83
25:LW:114:GLU:HG2	25:LW:115:ALA:H	1.41	0.83
1:L5:2001:G:C8	1:L5:2003:G:H5''	2.12	0.83
3:L8:83:C:H41	27:LY:50:ARG:HH21	1.26	0.83
1:L5:1961:G:H1'	1:L5:2025:A:H62	1.44	0.82
1:L5:492:U:H2'	1:L5:493:G:H8	1.44	0.82
1:L5:187:U:H5''	1:L5:188:G:H5'	1.59	0.82
53:SG:135:PRO:HB2	53:SG:141:ILE:HG13	1.60	0.82
56:SJ:91:LYS:HG2	56:SJ:96:TYR:CD1	2.15	0.82
46:S2:502:C:C5	51:SE:66:MET:HB3	2.15	0.82
46:S2:838:G:H1'	46:S2:839:C:H5'	1.61	0.82
1:L5:492:U:H2'	1:L5:493:G:C8	2.14	0.82
1:L5:698:G:C4	1:L5:699:C:C5	2.67	0.82
56:SJ:155:LYS:HE2	56:SJ:155:LYS:H	1.45	0.81
1:L5:698:G:C5	1:L5:699:C:C4	2.68	0.81
3:L8:122:G:C8	3:L8:123:U:H1'	2.14	0.81
81:v:8:U:H3	81:v:14:C:H5	1.27	0.81
1:L5:1183:C:H6	1:L5:1183:C:C5'	1.92	0.81
1:L5:497:G:O4'	1:L5:498:C:C5'	2.27	0.81
7:LD:226:TYR:O	7:LD:230:SER:HA	1.80	0.81
1:L5:1985:G:H1	1:L5:2006:U:H3'	1.45	0.80
1:L5:1253:G:H4'	1:L5:1254:A:C6	2.17	0.80
57:SK:91:PRO:HD2	57:SK:94:LEU:HD12	1.63	0.80
46:S2:1824:A:H5''	70:SX:61:GLN:HG2	1.62	0.80
1:L5:741:C:C3'	1:L5:742:G:C5'	2.39	0.80
1:L5:963:G:H1	1:L5:2095:A:N6	1.80	0.80
1:L5:1975:G:H4'	1:L5:1983:A:C8	2.16	0.80
86:L5:5383:NMY:H91	86:L5:5383:NMY:H5	1.48	0.80
77:Se:2:VAL:HA	77:Se:6:LEU:HD12	1.63	0.80
1:L5:4400:G:H5''	86:L5:5382:NMY:H231	1.64	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:1972:G:H1	1:L5:1994:C:H42	1.29	0.79
1:L5:516:C:H1'	1:L5:645:G:N2	1.96	0.79
8:LE:223:ARG:HH21	8:LE:238:GLU:HB3	1.46	0.79
79:Sg:291:TRP:CD1	79:Sg:298:LEU:HB2	2.18	0.79
1:L5:491:G:H3'	1:L5:492:U:C6	2.17	0.79
46:S2:537:C:H5'	46:S2:538:U:C5	2.18	0.79
46:S2:569:A:H5'	46:S2:570:C:OP2	1.83	0.79
62:SP:28:MET:HE2	62:SP:32:GLN:HB3	1.65	0.79
46:S2:1401:A:H4'	67:SU:52:GLY:HA3	1.65	0.78
46:S2:550:C:H2'	46:S2:551:U:C6	2.17	0.78
1:L5:518:G:H1	1:L5:643:C:H2'	1.46	0.78
1:L5:1190:C:H2'	1:L5:1191:C:C6	2.18	0.78
1:L5:2611:A:H5'	1:L5:2688:G:H4'	1.63	0.78
6:LC:316:LYS:HB2	6:LC:324:ILE:HD12	1.65	0.78
46:S2:796:G:H2'	46:S2:797:C:O4'	1.84	0.78
46:S2:840:C:H5'	46:S2:841:G:H4'	1.66	0.78
79:Sg:129:ILE:HD11	79:Sg:154:VAL:HG21	1.64	0.78
15:LM:40:GLY:HA3	15:LM:45:VAL:HB	1.66	0.78
52:SF:134:VAL:HB	52:SF:199:VAL:HG11	1.66	0.78
1:L5:1048:G:N3	1:L5:1048:G:H2'	1.99	0.78
25:LW:94:ARG:NH1	53:SG:146:ASN:H	1.80	0.78
53:SG:148:SER:H	53:SG:151:ASP:CG	1.92	0.78
1:L5:496:G:H2'	1:L5:498:C:O5'	1.84	0.77
1:L5:1763:C:H2'	1:L5:1764:G:C8	2.19	0.77
1:L5:1998:A:H2'	1:L5:1999:A:C5	2.18	0.77
1:L5:2705:G:H1	1:L5:2710:C:H5	1.33	0.77
46:S2:1569:A:H5'	66:ST:41:LYS:HD3	1.65	0.77
46:S2:168:C:H4'	53:SG:131:ARG:HD2	1.64	0.77
1:L5:2492:C:H2'	1:L5:2493:G:H8	1.49	0.77
56:SJ:91:LYS:HG2	56:SJ:96:TYR:CG	2.19	0.77
42:Ln:3:ALA:HB3	46:S2:1842:4AC:OP1	1.85	0.77
79:Sg:291:TRP:HD1	79:Sg:298:LEU:HB2	1.49	0.77
80:u:14:A:H2'	80:u:15:G:O4'	1.84	0.77
81:v:61:C:H3'	81:v:62:C:C5	2.19	0.77
1:L5:1961:G:H2'	1:L5:2024:G:C6	2.20	0.76
46:S2:588:G:OP2	46:S2:588:G:N2	2.18	0.76
1:L5:1759:G:H1	1:L5:1772:C:H42	1.34	0.76
10:LG:121:LYS:HA	10:LG:126:GLY:HA2	1.66	0.76
50:SD:201:LYS:H	50:SD:201:LYS:HD2	1.51	0.76
46:S2:543:C:H3'	46:S2:544:G:C8	2.21	0.76
1:L5:698:G:H2'	1:L5:699:C:H6	1.51	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:1252:C:H5	1:L5:1259:G:H21	1.32	0.76
1:L5:1767:A:H2'	1:L5:1769:G:C8	2.21	0.76
25:LW:95:ASN:N	25:LW:98:PRO:HD2	2.01	0.76
1:L5:995:C:H2'	1:L5:996:G:C8	2.21	0.75
1:L5:497:G:H1'	1:L5:498:C:H5'	0.76	0.75
25:LW:117:LYS:HG2	25:LW:120:GLN:HE22	1.51	0.75
46:S2:499:G:H2'	46:S2:501:C:C5	2.20	0.75
81:v:72:C:O2'	81:v:73:A:P	2.43	0.75
1:L5:1975:G:H5''	1:L5:1985:G:P	2.27	0.75
46:S2:101:U:H5''	55:SI:19:LYS:HD2	1.68	0.75
25:LW:95:ASN:HB2	25:LW:98:PRO:HG2	1.68	0.75
46:S2:530:U:H1'	46:S2:555:A:H2	1.51	0.75
79:Sg:168:CYS:HB2	79:Sg:198:VAL:HB	1.68	0.75
1:L5:255:C:H2'	1:L5:256:G:H8	1.47	0.74
1:L5:483:G:H3'	1:L5:484:U:H4'	1.69	0.74
1:L5:922:C:H3'	1:L5:923:C:H4'	1.69	0.74
1:L5:1980:U:C5'	1:L5:1982:G:H2'	2.17	0.74
46:S2:1536:G:H2'	46:S2:1537:A:H8	1.52	0.74
79:Sg:260:ASP:HB2	79:Sg:267:VAL:HB	1.68	0.74
81:v:16:A:H4'	81:v:17:A:H5'	1.68	0.74
1:L5:995:C:H2'	1:L5:996:G:H8	1.52	0.74
53:SG:79:LYS:HB2	53:SG:86:PRO:HG3	1.69	0.74
1:L5:1993:C:N4	1:L5:2002:A:H5'	2.00	0.74
1:L5:262:G:H3'	1:L5:263:G:H8	1.53	0.74
1:L5:1993:C:H2'	1:L5:1994:C:O4'	1.85	0.74
46:S2:140:C:H42	46:S2:313:A:H61	1.35	0.74
1:L5:1982:G:H1'	1:L5:2008:U:N3	2.02	0.74
81:v:20:U:H2'	81:v:21:A:C4'	2.17	0.74
1:L5:258:G:H3'	1:L5:259:C:C6	2.23	0.74
1:L5:1995:G:H3'	1:L5:1997:U:C1'	2.16	0.74
1:L5:2484:A:H61	1:L5:2494:U:H3	1.34	0.74
46:S2:569:A:C5'	46:S2:570:C:OP2	2.36	0.74
24:LV:13:LYS:HE3	24:LV:128:LEU:HD11	1.67	0.74
47:SA:77:ILE:HG12	47:SA:99:ILE:HB	1.68	0.74
81:v:17:A:H1'	81:v:18:G:H4'	1.70	0.74
1:L5:497:G:C4'	1:L5:498:C:C5'	2.65	0.74
1:L5:1754:U:H3	1:L5:1776:A:H61	1.35	0.74
1:L5:2499:C:H2'	1:L5:2500:U:C6	2.23	0.74
81:v:17:A:C6	81:v:19:G:H5'	2.22	0.74
50:SD:50:ILE:HD11	50:SD:86:LEU:HD13	1.70	0.73
2:L7:79:U:OP1	86:L7:202:NMY:H12	1.87	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S2:536:A:C8	46:S2:536:A:O5'	2.41	0.73
71:SY:20:ARG:HD3	71:SY:74:MET:HB3	1.69	0.73
1:L5:1202:C:H3'	1:L5:1203:G:C5'	2.19	0.73
79:Sg:87:LEU:HD21	79:Sg:122:SER:HB3	1.71	0.73
81:v:53:G:H2'	81:v:54:U:H6	1.53	0.73
1:L5:698:G:C4	1:L5:699:C:C6	2.77	0.73
1:L5:2362:U:H2'	1:L5:2363:A2M:H8	1.70	0.73
1:L5:3823:G:N2	1:L5:3823:G:OP2	2.20	0.73
10:LG:121:LYS:HZ3	10:LG:127:ASP:H	1.35	0.73
1:L5:964:A:H2'	1:L5:965:G:H4'	1.69	0.73
1:L5:2013:A:H2'	1:L5:2014:C:C2	2.24	0.73
46:S2:753:C:C5	46:S2:791:C:H4'	2.24	0.73
1:L5:1958:A:O2'	1:L5:1962:A:H1'	1.89	0.73
13:LJ:35:ARG:HD2	13:LJ:123:ILE:HA	1.70	0.73
46:S2:549:C:O2'	46:S2:550:C:H5'	1.88	0.73
46:S2:928:G:H1	46:S2:1013:U:H3	1.35	0.73
47:SA:77:ILE:HD12	47:SA:122:LEU:HD21	1.70	0.73
79:Sg:29:ASP:HA	79:Sg:45:LEU:HB2	1.69	0.73
25:LW:94:ARG:HD3	25:LW:95:ASN:H	1.53	0.73
1:L5:2469:C:H5	1:L5:2471:G:H1	1.35	0.72
46:S2:542:U:H3'	46:S2:543:C:H6	1.53	0.72
1:L5:500:G:O6	1:L5:654:C:C2	2.41	0.72
1:L5:513:U:H2'	1:L5:515:C:C5	2.23	0.72
81:v:51:U:H3	81:v:63:G:H1	1.36	0.72
1:L5:1998:A:H2'	1:L5:1999:A:C4	2.24	0.72
11:LH:91:LYS:HG2	11:LH:145:ILE:HD13	1.70	0.72
1:L5:328:A:H2'	1:L5:329:A:C8	2.25	0.72
1:L5:1959:U:H4'	1:L5:1960:A:H3'	1.71	0.72
46:S2:377:G:H5'	55:SI:98:LYS:HB3	1.71	0.72
59:SM:59:PRO:HB2	59:SM:60:MET:HE3	1.72	0.72
46:S2:536:A:O5'	46:S2:536:A:H8	1.72	0.72
79:Sg:7:LEU:HD21	79:Sg:308:ARG:HB3	1.70	0.72
1:L5:2016:C:H2'	1:L5:2017:A:C8	2.24	0.72
80:u:29:G:H1	80:u:41:C:H42	1.37	0.72
31:Lc:47:ILE:HD12	31:Lc:94:LEU:HD11	1.71	0.72
51:SE:44:LEU:HD21	51:SE:72:ILE:HD11	1.71	0.72
66:ST:113:VAL:HA	66:ST:123:LEU:HA	1.71	0.72
1:L5:1970:A:H1'	1:L5:2019:C:H41	1.55	0.72
1:L5:2020:U:C4	1:L5:2021:G:H1'	2.25	0.72
46:S2:537:C:H3'	46:S2:538:U:C6	2.25	0.72
46:S2:788:G:H4'	46:S2:789:G:H5'	1.70	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:SJ:129:LEU:HD22	56:SJ:134:HIS:CE1	2.25	0.72
86:L5:5387:NMY:H91	86:L5:5387:NMY:HN61	1.37	0.71
55:SI:81:VAL:HG12	55:SI:91:VAL:HG23	1.71	0.71
81:v:53:G:H2'	81:v:54:U:C6	2.25	0.71
46:S2:1826:G:N7	86:S2:1966:NMY:H82	2.05	0.71
74:Sb:36:LYS:HB3	74:Sb:43:ILE:HG13	1.71	0.71
1:L5:922:C:C3'	1:L5:923:C:H4'	2.20	0.71
1:L5:1962:A:H5''	1:L5:1963:C:C6	2.26	0.71
1:L5:1183:C:H5'	1:L5:1183:C:C6	2.22	0.71
3:L8:52:A:H62	40:Ll:27:ILE:HD13	1.56	0.71
58:SL:22:ARG:HD2	58:SL:24:LEU:H	1.54	0.71
80:u:12:U:H3	80:u:23:A:H61	1.36	0.71
1:L5:1247:U:H2'	1:L5:1248:C:C6	2.26	0.71
25:LW:93:LYS:HG2	25:LW:99:GLU:HB2	1.73	0.71
1:L5:260:C:H2'	1:L5:261:G:C8	2.26	0.71
51:SE:65:CYS:O	51:SE:78:THR:HG22	1.90	0.71
56:SJ:20:PHE:HA	56:SJ:25:LEU:HD11	1.72	0.71
1:L5:2012:A:C8	1:L5:2013:A:H1'	2.25	0.71
63:SQ:34:VAL:HB	63:SQ:42:ILE:HD11	1.73	0.70
1:L5:4966:A:H5'	5:LB:128:LYS:HG3	1.73	0.70
25:LW:94:ARG:H	25:LW:99:GLU:N	1.90	0.70
1:L5:233:U:H2'	1:L5:234:G:H8	1.56	0.70
1:L5:4548:A:C4	80:u:74:C:H5'	2.26	0.70
25:LW:94:ARG:NE	53:SG:146:ASN:HB2	2.06	0.70
1:L5:644:G:H3'	1:L5:645:G:C8	2.26	0.70
80:u:51:U:H3	80:u:63:G:H1	1.37	0.70
1:L5:1404:G:H8	1:L5:1404:G:H5''	1.55	0.70
1:L5:1995:G:N3	1:L5:1995:G:H2'	2.06	0.70
1:L5:2016:C:H2'	1:L5:2017:A:H8	1.56	0.70
62:SP:94:VAL:HG21	62:SP:116:LEU:HD21	1.73	0.70
79:Sg:166:VAL:HG12	79:Sg:176:VAL:HG12	1.73	0.70
86:L5:5382:NMY:H1	86:L5:5382:NMY:H172	1.72	0.70
14:LL:64:VAL:HA	14:LL:67:HIS:CD2	2.26	0.70
79:Sg:5:MET:HB2	79:Sg:270:LEU:HD11	1.74	0.70
1:L5:687:U:N3	8:LE:95:PRO:HG2	2.07	0.70
81:v:72:C:HO2'	81:v:73:A:P	2.14	0.70
1:L5:2484:A:H3'	1:L5:2485:U:H5''	1.73	0.70
1:L5:2487:G:C2	1:L5:2489:C:H4'	2.26	0.70
1:L5:1048:G:N3	1:L5:1048:G:C2'	2.54	0.70
1:L5:491:G:OP1	1:L5:491:G:H4'	1.92	0.69
1:L5:499:G:H21	1:L5:504:G:H8	1.40	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S2:735:C:H5''	46:S2:736:C:H5	1.57	0.69
1:L5:1260:G:H2'	1:L5:1261:G:O4'	1.91	0.69
1:L5:4992:G:H2'	1:L5:4993:G:C8	2.27	0.69
21:LS:4:SER:HB3	21:LS:111:ARG:HH22	1.57	0.69
1:L5:1404:G:H3'	1:L5:1405:C:C6	2.27	0.69
46:S2:554:A:H1'	46:S2:555:A:H5'	1.74	0.69
1:L5:1980:U:H3'	1:L5:1980:U:OP2	1.91	0.69
1:L5:658:C:O2	1:L5:658:C:H2'	1.92	0.69
46:S2:548:C:H2'	46:S2:549:C:C6	2.28	0.69
54:SH:8:ILE:HD12	54:SH:9:VAL:HG13	1.74	0.69
79:Sg:212:LYS:HA	79:Sg:235:ILE:HG13	1.74	0.69
1:L5:134:G:H21	36:Lh:85:PRO:HD3	1.55	0.69
1:L5:497:G:O4'	1:L5:498:C:H5''	1.92	0.69
1:L5:2491:C:H2'	1:L5:2492:C:H4'	1.75	0.69
14:LL:47:ALA:HB3	14:LL:48:PRO:HD3	1.74	0.69
46:S2:1639:G:H5'	46:S2:1639:G:H8	1.58	0.69
48:SB:179:ASN:HD22	48:SB:179:ASN:N	1.91	0.69
46:S2:1139:C:H5	46:S2:1149:A:H62	1.41	0.69
79:Sg:163:PRO:HB2	79:Sg:179:LEU:HD21	1.75	0.69
1:L5:667:A:H3'	1:L5:668:C:H5'	1.75	0.69
1:L5:2414:G:H2'	1:L5:2415:OMU:H6	1.74	0.69
1:L5:2555:G:H4'	28:LZ:108:ARG:HH12	1.58	0.69
46:S2:838:G:H1'	46:S2:839:C:H3'	1.75	0.69
1:L5:1273:G:C2'	1:L5:1274:A:H5'	2.23	0.68
1:L5:1965:G:H1	1:L5:2023:C:H1'	1.58	0.68
46:S2:592:C:H5'	46:S2:592:C:H6	1.58	0.68
46:S2:818:A:H1'	56:SJ:72:PHE:HE2	1.56	0.68
80:u:18:G:H1'	80:u:57:G:N2	2.07	0.68
81:v:7:G:H1	81:v:66:U:H3	1.41	0.68
1:L5:492:U:H5'	6:LC:1:MET:SD	2.34	0.68
78:Sf:89:LYS:HZ2	78:Sf:90:LYS:H	1.38	0.68
1:L5:488:G:H2'	1:L5:489:C:O4'	1.94	0.68
1:L5:1970:A:H5'	1:L5:2015:U:H1'	1.74	0.68
31:Lc:20:LEU:O	31:Lc:24:SER:HB3	1.92	0.68
62:SP:100:LYS:HG3	62:SP:101:THR:HG23	1.74	0.68
1:L5:495:C:H2'	1:L5:496:G:C8	2.27	0.68
7:LD:237:GLU:O	7:LD:241:LYS:HG3	1.93	0.68
46:S2:537:C:H3'	46:S2:538:U:C5	2.28	0.68
52:SF:76:MET:HE3	52:SF:173:LEU:HD12	1.74	0.68
62:SP:136:THR:HG22	81:v:30:G:OP1	1.92	0.68
81:v:16:A:N3	81:v:16:A:H2'	2.06	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:2495:U:H2'	1:L5:2496:G:C8	2.28	0.68
79:Sg:220:ASP:HB2	79:Sg:227:LEU:HD11	1.75	0.68
20:LR:184:ILE:HG23	20:LR:185:ILE:H	1.58	0.68
25:LW:92:ALA:N	25:LW:97:LYS:O	2.25	0.68
1:L5:2012:A:H5'	1:L5:2013:A:C5	2.28	0.68
25:LW:94:ARG:CZ	53:SG:146:ASN:HB2	2.24	0.68
46:S2:190:G:H5''	55:SI:145:ILE:HD12	1.74	0.68
46:S2:587:A:H5''	46:S2:587:A:C8	2.29	0.68
46:S2:981:A:H2'	46:S2:982:G:C8	2.29	0.68
1:L5:451:C:O2'	1:L5:1293:G:H2'	1.94	0.68
1:L5:715:G:H4'	6:LC:314:LEU:HD21	1.76	0.68
1:L5:1252:C:C2	1:L5:1253:G:H1'	2.29	0.68
1:L5:1939:A:H4'	86:L5:5381:NMY:H171	1.76	0.68
59:SM:22:LEU:HD22	59:SM:89:VAL:HG12	1.74	0.68
1:L5:454:U:C4	1:L5:703:G:C8	2.82	0.67
1:L5:644:G:H3'	1:L5:645:G:H8	1.58	0.67
54:SH:146:VAL:HG22	54:SH:152:ARG:HG2	1.76	0.67
46:S2:530:U:H2'	46:S2:531:A:C8	2.30	0.67
56:SJ:75:ASN:HA	56:SJ:78:LEU:HD12	1.74	0.67
1:L5:1978:C:H1'	1:L5:1990:A:C5	2.30	0.67
46:S2:628:A:H61	46:S2:1500:G:H21	1.42	0.67
46:S2:560:A:H8	46:S2:560:A:OP2	1.77	0.67
80:u:9:A:H2'	80:u:11:C:H41	1.60	0.67
81:v:15:G:N3	81:v:16:A:N6	2.42	0.67
1:L5:1204:C:H2'	1:L5:1205:G:H8	1.60	0.67
6:LC:346:ASN:O	6:LC:350:ARG:HG3	1.95	0.67
46:S2:528:A:H3'	46:S2:529:A:H8	1.59	0.67
46:S2:560:A:H5'	56:SJ:174:LYS:HE2	1.77	0.67
46:S2:1228:A:H2'	46:S2:1229:G:H8	1.59	0.67
50:SD:96:LEU:HD12	50:SD:198:ILE:HG12	1.75	0.67
80:u:35:C:H2'	80:u:36:G:O4'	1.95	0.67
1:L5:500:G:H5''	1:L5:504:G:C2'	2.24	0.67
1:L5:1175:A:H2	1:L5:1185:G:H22	1.43	0.67
65:SS:50:ILE:HG12	65:SS:63:GLU:HG2	1.75	0.67
80:u:16:U:H2'	80:u:60:U:O4'	1.94	0.67
1:L5:218:A:H1'	1:L5:219:G:H5''	1.76	0.67
46:S2:1512:C:H5''	76:Sd:8:TRP:HZ3	1.60	0.67
25:LW:91:MET:CB	25:LW:97:LYS:HB2	2.25	0.67
59:SM:49:LEU:HG	59:SM:111:VAL:HB	1.77	0.67
79:Sg:14:HIS:ND1	79:Sg:35:SER:HB2	2.09	0.67
1:L5:906:C:H2'	1:L5:907:C:C6	2.29	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:LW:90:ILE:HG21	53:SG:145:PHE:HZ	1.60	0.67
29:La:100:ILE:HD13	29:La:123:ILE:HB	1.75	0.67
46:S2:1850:MA6:H103	46:S2:1851:MA6:N6	2.10	0.67
1:L5:1998:A:H5'	1:L5:2000:G:H1	1.60	0.67
46:S2:1536:G:H2'	46:S2:1537:A:C8	2.30	0.67
56:SJ:174:LYS:O	56:SJ:175:ARG:C	2.37	0.67
1:L5:513:U:H3'	1:L5:514:U:H4'	1.76	0.66
5:LB:108:GLU:HG3	5:LB:137:TRP:HB2	1.76	0.66
47:SA:1:MET:HA	47:SA:59:LEU:HB3	1.75	0.66
63:SQ:110:ASP:O	63:SQ:114:GLN:HG2	1.95	0.66
80:u:68:C:H2'	80:u:69:G:C8	2.30	0.66
1:L5:1203:G:C8	1:L5:1203:G:H5'	2.30	0.66
1:L5:2001:G:H3'	1:L5:2002:A:C5'	2.22	0.66
3:L8:124:U:H5'	3:L8:126:C:N4	2.10	0.66
11:LH:94:SER:HB3	11:LH:142:ASP:HB3	1.77	0.66
20:LR:105:LEU:HD22	20:LR:135:LYS:HG2	1.76	0.66
46:S2:1228:A:H2'	46:S2:1229:G:C8	2.30	0.66
81:v:27:G:H1	81:v:43:C:H42	1.42	0.66
46:S2:1391:OMC:H4'	76:Sd:55:LEU:HD13	1.76	0.66
1:L5:1974:U:H5'	1:L5:1974:U:C6	2.30	0.66
51:SE:192:ILE:HD13	51:SE:238:LEU:HD13	1.77	0.66
55:SI:103:LEU:HD13	55:SI:170:LYS:HD3	1.78	0.66
63:SQ:70:VAL:HG11	63:SQ:84:ILE:HG23	1.78	0.66
81:v:61:C:H3'	81:v:62:C:H5	1.59	0.66
1:L5:1989:G:H3'	1:L5:1990:A:C6	2.29	0.66
46:S2:530:U:H1'	46:S2:555:A:C2	2.30	0.66
1:L5:513:U:H2'	1:L5:515:C:C4	2.31	0.66
1:L5:1190:C:H2'	1:L5:1191:C:H6	1.58	0.66
1:L5:1962:A:H5''	1:L5:1963:C:C5	2.30	0.66
1:L5:2005:G:N2	1:L5:2014:C:H1'	2.10	0.66
53:SG:145:PHE:CD2	53:SG:156:TYR:HB3	2.30	0.66
71:SY:82:ALA:O	71:SY:86:GLU:HB3	1.95	0.66
80:u:12:U:H3	80:u:23:A:N6	1.93	0.66
5:LB:224:LYS:HG2	5:LB:340:THR:HG22	1.78	0.66
46:S2:545:A:H2'	46:S2:546:G:O4'	1.95	0.66
46:S2:1679:A:H2'	52:SF:60:ARG:HD2	1.78	0.66
64:SR:71:ILE:HG23	64:SR:74:GLN:HB2	1.78	0.66
80:u:15:G:H22	80:u:48:C:H5	1.43	0.66
22:LT:157:GLU:HG2	22:LT:159:MET:HE2	1.78	0.66
23:LU:100:LEU:HD23	23:LU:112:LEU:HD23	1.77	0.66
46:S2:555:A:H4'	46:S2:556:U:OP1	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S2:592:C:H5'	46:S2:592:C:C6	2.31	0.66
47:SA:1:MET:HE1	68:SV:80:SER:H	1.61	0.66
54:SH:51:ILE:HG12	54:SH:179:LYS:HD3	1.78	0.66
55:SI:110:ARG:O	55:SI:114:GLU:HG2	1.94	0.66
59:SM:51:VAL:HG22	59:SM:109:VAL:HB	1.78	0.66
67:SU:115:THR:HG22	67:SU:117:ALA:H	1.60	0.66
68:SV:58:ALA:O	68:SV:62:MET:HG3	1.95	0.66
1:L5:460:C:H2'	1:L5:461:G:H8	1.59	0.66
1:L5:666:G:H2'	1:L5:668:C:H5	1.60	0.66
1:L5:2404:A:H1'	38:Lj:12:ARG:HH11	1.61	0.66
46:S2:841:G:OP2	71:SY:14:THR:HG23	1.95	0.66
46:S2:1656:G:H2'	46:S2:1657:G:H8	1.61	0.66
1:L5:1408:G:H5'	1:L5:1408:G:C8	2.31	0.65
23:LU:61:VAL:HG22	23:LU:74:SER:HB2	1.78	0.65
46:S2:165:G:H2'	46:S2:166:A2M:H5''	1.77	0.65
46:S2:834:C:H42	46:S2:839:C:H42	1.42	0.65
66:ST:98:SER:O	66:ST:102:ARG:HG2	1.96	0.65
78:Sf:89:LYS:HZ2	78:Sf:90:LYS:N	1.94	0.65
1:L5:1192:C:H2'	1:L5:1193:C:C6	2.31	0.65
1:L5:1775:A:H2'	1:L5:1776:A:C8	2.30	0.65
1:L5:2585:C:OP1	86:L5:5385:NMY:H11	1.96	0.65
79:Sg:10:THR:HB	79:Sg:306:LEU:HD11	1.78	0.65
29:La:131:ARG:O	29:La:135:GLU:HG3	1.97	0.65
46:S2:550:C:H2'	46:S2:551:U:H6	1.61	0.65
48:SB:69:VAL:HG13	48:SB:74:LEU:HD11	1.77	0.65
57:SK:8:ARG:HG3	57:SK:8:ARG:HH11	1.61	0.65
1:L5:132:G:H2'	1:L5:133:C:H4'	1.77	0.65
1:L5:1764:G:H4'	1:L5:1769:G:O6	1.95	0.65
1:L5:1994:C:N4	1:L5:2001:G:H5''	2.11	0.65
1:L5:1294:A:H8	1:L5:1295:C:H42	1.44	0.65
31:Lc:9:LYS:O	31:Lc:10:SER:C	2.38	0.65
48:SB:137:LEU:HG	48:SB:215:VAL:HG22	1.77	0.65
79:Sg:106:LYS:HG3	79:Sg:126:ASP:HB3	1.78	0.65
1:L5:1968:G:H5''	1:L5:1969:G:O6	1.97	0.65
25:LW:92:ALA:HB3	25:LW:98:PRO:CA	2.26	0.65
46:S2:1744:G:H1'	46:S2:1790:A:N6	2.11	0.65
48:SB:178:THR:C	48:SB:179:ASN:HD22	2.04	0.65
51:SE:185:GLY:HA2	51:SE:189:LEU:HD12	1.79	0.65
79:Sg:242:SER:HB2	79:Sg:291:TRP:CZ3	2.32	0.65
1:L5:698:G:H2'	1:L5:699:C:C6	2.31	0.65
1:L5:4261:C:O2'	13:LJ:102:THR:HG21	1.95	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:SA:1:MET:H1	47:SA:63:ARG:NE	1.94	0.65
54:SH:63:PHE:HB3	54:SH:97:GLN:HG2	1.79	0.65
71:SY:79:LEU:O	71:SY:83:LYS:HG2	1.96	0.65
1:L5:4537:C:H2'	1:L5:4538:G:C8	2.32	0.65
46:S2:833:C:H2'	46:S2:834:C:C6	2.32	0.65
52:SF:167:LYS:HE2	52:SF:171:GLU:HB3	1.79	0.65
1:L5:1364:U:H6	1:L5:1364:U:H5''	1.61	0.65
1:L5:1980:U:H5''	1:L5:1982:G:H2'	1.78	0.65
12:LI:152:LEU:HB3	12:LI:165:ILE:HD12	1.78	0.65
31:Lc:37:MET:HG3	31:Lc:97:ILE:HD11	1.78	0.65
46:S2:554:A:H1'	46:S2:555:A:C5'	2.27	0.65
46:S2:752:G:H4'	46:S2:792:C:H5''	1.79	0.65
49:SC:75:ILE:HD11	49:SC:265:PRO:HB3	1.78	0.65
1:L5:1970:A:H1'	1:L5:2019:C:N4	2.11	0.65
1:L5:1942:A:H2'	1:L5:1943:A:C8	2.32	0.64
46:S2:554:A:H4'	46:S2:555:A:OP1	1.97	0.64
46:S2:1115:U:H4'	46:S2:1116:C:H5'	1.79	0.64
56:SJ:178:ALA:O	56:SJ:179:LYS:C	2.39	0.64
80:u:62:C:O2'	80:u:63:G:H5'	1.97	0.64
17:LO:61:ARG:HA	17:LO:70:PRO:HD2	1.79	0.64
1:L5:1182:C:H3'	1:L5:1182:C:OP2	1.97	0.64
1:L5:1251:C:H1'	1:L5:1260:G:N2	2.11	0.64
46:S2:562:U:H5'	56:SJ:132:GLN:HB3	1.80	0.64
1:L5:988:C:H3'	1:L5:989:U:H6	1.63	0.64
4:LA:101:VAL:HG22	4:LA:165:VAL:HG22	1.79	0.64
25:LW:114:GLU:HG2	25:LW:115:ALA:N	2.12	0.64
46:S2:1521:C:H5'	65:SS:129:LEU:HD22	1.80	0.64
52:SF:125:SER:HB2	52:SF:135:ARG:HB2	1.78	0.64
56:SJ:82:VAL:O	56:SJ:83:ARG:C	2.37	0.64
80:u:19:G:H4'	80:u:20:U:OP2	1.96	0.64
1:L5:1243:C:C6	1:L5:1243:C:H5''	2.32	0.64
45:Lr:98:ARG:HG2	45:Lr:99:LYS:HD2	1.78	0.64
71:SY:7:ILE:HG23	71:SY:25:ILE:HG23	1.79	0.64
73:Sa:88:SER:O	73:Sa:92:ARG:HG3	1.97	0.64
79:Sg:246:TYR:O	79:Sg:247:TRP:HD1	1.80	0.64
81:v:14:C:H2'	81:v:15:G:C8	2.31	0.64
1:L5:1414:C:H2'	1:L5:1415:G:C8	2.33	0.64
1:L5:3756:A:H5''	1:L5:3756:A:H8	1.61	0.64
7:LD:150:LEU:HD12	13:LJ:146:ARG:HG3	1.79	0.64
48:SB:83:LYS:HE2	48:SB:106:THR:HG22	1.80	0.64
55:SI:103:LEU:HD22	55:SI:170:LYS:HB2	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S2:1445:PSU:H4'	67:SU:57:PRO:HG3	1.80	0.64
67:SU:43:ALA:HA	67:SU:48:LEU:HD13	1.79	0.64
81:v:43:C:H6	81:v:43:C:H5''	1.62	0.64
81:v:71:G:C2'	81:v:72:C:H5'	2.27	0.64
1:L5:233:U:C2'	1:L5:234:G:H8	2.11	0.64
1:L5:1402:C:H2'	1:L5:1403:G:C8	2.32	0.64
13:LJ:20:LEU:HD13	13:LJ:132:VAL:HG12	1.79	0.64
46:S2:640:A:H2'	46:S2:641:A:C8	2.32	0.64
50:SD:22:ASN:O	50:SD:26:THR:HG23	1.98	0.64
1:L5:1302:U:C5	1:L5:1302:U:OP2	2.51	0.63
29:La:110:LYS:HG3	29:La:128:PHE:HB2	1.78	0.63
31:Lc:14:ILE:H	31:Lc:14:ILE:HD12	1.62	0.63
46:S2:568:C:H2'	46:S2:569:A:H8	1.63	0.63
58:SL:4:ILE:HD11	58:SL:54:THR:HB	1.80	0.63
1:L5:1705:G:H21	9:LF:46:ARG:HH21	1.46	0.63
1:L5:4100:C:H4'	48:SB:226:GLY:HA3	1.81	0.63
45:Lr:97:ILE:HD13	45:Lr:107:ARG:HA	1.80	0.63
57:SK:15:LEU:HD13	57:SK:49:MET:HE1	1.80	0.63
1:L5:1094:G:H3'	1:L5:1095:A:H8	1.63	0.63
9:LF:216:PRO:HD3	9:LF:247:MET:HE3	1.79	0.63
46:S2:556:U:H2'	46:S2:557:U:H4'	1.81	0.63
46:S2:568:C:H2'	46:S2:569:A:C8	2.34	0.63
81:v:5:C:H6	81:v:5:C:H5''	1.63	0.63
1:L5:1403:G:H2'	1:L5:1404:G:H5''	1.79	0.63
1:L5:2416:G:H4'	1:L5:2417:A:OP2	1.97	0.63
1:L5:2486:G:H5'	1:L5:2489:C:O2	1.97	0.63
48:SB:133:TYR:HD1	48:SB:217:MET:HE1	1.64	0.63
81:v:16:A:C1'	81:v:17:A:H2'	2.27	0.63
10:LG:94:GLN:HG2	10:LG:218:LEU:HD21	1.79	0.63
15:LM:118:MET:HA	15:LM:118:MET:HE3	1.81	0.63
25:LW:94:ARG:HB3	25:LW:98:PRO:O	1.98	0.63
46:S2:560:A:H3'	46:S2:561:A:H5''	1.81	0.63
46:S2:788:G:C4'	46:S2:789:G:H5'	2.28	0.63
46:S2:837:A:O3'	46:S2:838:G:H4'	1.99	0.63
46:S2:1748:G:H5''	46:S2:1748:G:C8	2.33	0.63
1:L5:73:A:OP1	14:LL:106:SER:HB3	1.99	0.63
1:L5:500:G:N3	1:L5:504:G:O2'	2.31	0.63
1:L5:978:G:H4'	8:LE:45:SER:HB2	1.81	0.63
28:LZ:59:LYS:H	28:LZ:59:LYS:HD2	1.64	0.63
46:S2:560:A:C3'	46:S2:561:A:H5''	2.28	0.63
65:SS:98:VAL:HG11	65:SS:106:LYS:HG3	1.79	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:Sf:134:SER:HB2	78:Sf:139:HIS:HB3	1.81	0.63
79:Sg:168:CYS:SG	79:Sg:195:LEU:HB3	2.38	0.63
1:L5:1770:A:H3'	1:L5:1771:U:H4'	1.80	0.63
1:L5:1971:C:P	1:L5:2017:A:H62	2.22	0.63
1:L5:4260:U:H2'	1:L5:4261:C:C6	2.34	0.63
46:S2:189:U:H3'	46:S2:190:G:C8	2.33	0.63
46:S2:827:A:H5'	56:SJ:8:VAL:HG22	1.81	0.63
47:SA:177:MET:O	47:SA:181:GLU:HG2	1.99	0.63
57:SK:96:ARG:HE	57:SK:97:SER:H	1.46	0.63
70:SX:68:LYS:HD2	77:Se:6:LEU:HD23	1.80	0.63
81:v:16:A:H1'	81:v:17:A:H2'	1.80	0.63
1:L5:1365:C:H3'	1:L5:1365:C:H6	1.64	0.63
4:LA:137:ILE:HD11	4:LA:149:LYS:HB2	1.81	0.62
46:S2:1636:G:H1'	52:SF:164:ARG:NH1	2.14	0.62
46:S2:1812:U:H4'	46:S2:1813:A:OP1	1.99	0.62
80:u:6:G:H1	80:u:67:C:H42	1.45	0.62
1:L5:233:U:H2'	1:L5:234:G:C8	2.35	0.62
1:L5:1415:G:H2'	1:L5:1416:G:C8	2.34	0.62
1:L5:1541:C:H5''	4:LA:21:LYS:HD3	1.81	0.62
1:L5:2486:G:H5'	1:L5:2489:C:C2	2.33	0.62
1:L5:3732:A:H2'	1:L5:3733:A:C8	2.35	0.62
21:LS:13:VAL:HG22	21:LS:29:ARG:HB2	1.80	0.62
1:L5:255:C:C2'	1:L5:256:G:H8	2.07	0.62
1:L5:740:G:C5	1:L5:741:C:C4	2.87	0.62
1:L5:2777:G:O6	86:L5:5384:NMY:H81	1.99	0.62
7:LD:156:GLY:HA2	7:LD:181:PRO:HG3	1.81	0.62
1:L5:500:G:N2	1:L5:504:G:H1'	2.13	0.62
1:L5:682:G:H5''	1:L5:682:G:C8	2.33	0.62
1:L5:741:C:C4	1:L5:742:G:C8	2.88	0.62
5:LB:220:ILE:HG12	5:LB:278:THR:HG23	1.81	0.62
6:LC:221:PHE:HD1	6:LC:227:ILE:HD13	1.65	0.62
23:LU:19:LEU:O	23:LU:73:THR:HA	1.99	0.62
49:SC:102:LEU:HD22	49:SC:130:ILE:HG12	1.81	0.62
53:SG:145:PHE:HD2	53:SG:156:TYR:HB3	1.64	0.62
1:L5:981:C:H2'	8:LE:73:TYR:CE2	2.34	0.62
1:L5:4859:C:H2'	1:L5:4860:G:C8	2.35	0.62
46:S2:528:A:H3'	46:S2:529:A:C8	2.35	0.62
46:S2:1113:A:H2'	46:S2:1114:U:C6	2.34	0.62
74:Sb:64:CYS:HB3	74:Sb:73:LEU:HD13	1.81	0.62
80:u:5:G:H3'	80:u:6:G:H8	1.63	0.62
81:v:17:A:H1'	81:v:18:G:O3'	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:462:G:N2	1:L5:694:C:H1'	2.14	0.62
1:L5:489:C:H5''	1:L5:489:C:C6	2.35	0.62
1:L5:1084:C:H2'	1:L5:1085:C:C6	2.34	0.62
4:LA:20:VAL:HA	4:LA:23:ARG:HG3	1.81	0.62
6:LC:62:THR:HG22	6:LC:64:ALA:H	1.63	0.62
46:S2:367:U:H4'	46:S2:371:A:C8	2.35	0.62
46:S2:1639:G:H2'	46:S2:1640:A:C8	2.34	0.62
53:SG:139:SER:O	53:SG:143:LYS:HB3	1.99	0.62
79:Sg:187:ASN:O	79:Sg:187:ASN:ND2	2.26	0.62
1:L5:1256:G:OP1	1:L5:1256:G:H8	1.82	0.62
1:L5:1958:A:HO2'	1:L5:1962:A:H1'	1.64	0.62
1:L5:1963:C:N4	1:L5:2024:G:H21	1.94	0.62
1:L5:2483:G:H5''	1:L5:2485:U:O4	2.00	0.62
46:S2:542:U:H3'	46:S2:543:C:C6	2.32	0.62
46:S2:549:C:O2'	46:S2:550:C:C5'	2.47	0.62
46:S2:579:C:H2'	46:S2:580:U:O4'	1.98	0.62
46:S2:1277:C:H2'	46:S2:1278:A:H8	1.63	0.62
79:Sg:87:LEU:HB2	79:Sg:101:PHE:HB2	1.81	0.62
81:v:21:A:H62	81:v:48:C:P	2.22	0.62
1:L5:4274:A:H2'	1:L5:4275:G:C8	2.35	0.62
6:LC:331:TYR:CE1	9:LF:55:LYS:HG3	2.35	0.62
46:S2:1730:U:H5''	46:S2:1730:U:H6	1.63	0.62
49:SC:65:LYS:HD2	49:SC:273:LEU:HD13	1.82	0.62
79:Sg:104:HIS:CD2	79:Sg:108:VAL:HG22	2.35	0.62
10:LG:100:HIS:HA	10:LG:103:ARG:HG3	1.82	0.62
46:S2:329:G:H2'	46:S2:330:G:C8	2.35	0.62
46:S2:822:PSU:H3'	46:S2:823:U:H5'	1.82	0.62
46:S2:1533:A:H2	46:S2:1536:G:N3	1.97	0.62
52:SF:19:LEU:HD21	52:SF:69:VAL:HG11	1.80	0.62
56:SJ:151:LEU:C	56:SJ:153:SER:H	2.08	0.62
78:Sf:102:VAL:HG12	78:Sf:103:LEU:H	1.65	0.62
1:L5:1404:G:C5	1:L5:1405:C:C4	2.88	0.62
1:L5:1412:G:H2'	1:L5:1413:C:H5'	1.82	0.62
1:L5:2490:U:H3'	1:L5:2491:C:O4'	1.98	0.62
1:L5:4200:G:C4	12:LI:111:LEU:HG	2.35	0.62
48:SB:120:MET:HG3	48:SB:142:PHE:CE2	2.35	0.62
56:SJ:178:ALA:O	56:SJ:180:LYS:N	2.33	0.62
1:L5:659:G:H3'	1:L5:660:A:H8	1.62	0.61
1:L5:1931:C:H42	86:L5:5383:NMY:H62	1.65	0.61
15:LM:52:PHE:HA	15:LM:55:MET:HE2	1.82	0.61
46:S2:1285:G:H5''	59:SM:35:ILE:HG22	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S2:1388:A:H61	50:SD:161:GLY:HA3	1.64	0.61
86:S2:1902:NMY:H5	86:S2:1902:NMY:H91	1.65	0.61
1:L5:2007:G:H4'	1:L5:2008:U:H5'	1.82	0.61
46:S2:1405:A:H2'	46:S2:1406:G:O4'	2.01	0.61
1:L5:662:C:H3'	1:L5:662:C:H6	1.65	0.61
1:L5:741:C:N3	1:L5:924:C:N4	2.48	0.61
25:LW:96:GLN:CD	25:LW:97:LYS:H	2.08	0.61
46:S2:944:A:H5''	61:SO:134:PRO:HB3	1.81	0.61
46:S2:1636:G:H1'	52:SF:164:ARG:HH12	1.65	0.61
72:SZ:111:ARG:HB2	72:SZ:114:LYS:HD2	1.82	0.61
79:Sg:146:SER:HA	79:Sg:177:TRP:HH2	1.65	0.61
1:L5:1189:G:C2'	1:L5:1190:C:H5'	2.30	0.61
12:LI:25:GLY:HA2	80:u:64:A:OP1	2.00	0.61
80:u:27:G:H1	80:u:43:C:H5	1.47	0.61
80:u:44:G:C2'	80:u:45:U:H5'	2.31	0.61
1:L5:962:C:O3'	9:LF:32:ARG:HD3	2.00	0.61
14:LL:123:LYS:HD2	14:LL:155:MET:HE2	1.82	0.61
32:Ld:64:ILE:HG23	32:Ld:68:LEU:HD23	1.81	0.61
46:S2:1728:U:H2'	46:S2:1729:U:O4'	2.01	0.61
60:SN:2:GLY:HA3	60:SN:9:LYS:HD3	1.80	0.61
80:u:70:G:H2'	80:u:71:G:C8	2.35	0.61
1:L5:468:U:H1'	1:L5:686:A:H61	1.64	0.61
1:L5:1069:G:O2'	1:L5:1070:G:H5'	2.01	0.61
9:LF:162:ILE:HD12	9:LF:167:ILE:HB	1.81	0.61
47:SA:208:GLU:O	47:SA:212:LYS:HG2	2.00	0.61
1:L5:1067:G:H2'	1:L5:1068:G:O5'	2.01	0.61
1:L5:1167:C:H2'	1:L5:1168:G:O4'	2.01	0.61
1:L5:2491:C:H2'	1:L5:2492:C:C4'	2.31	0.61
1:L5:2565:A:H3'	1:L5:2566:G:C8	2.36	0.61
46:S2:551:U:N3	46:S2:552:G:C6	2.68	0.61
46:S2:750:C:H3'	46:S2:751:G:C5'	2.31	0.61
80:u:70:G:H2'	80:u:71:G:H8	1.65	0.61
1:L5:1339:U:H2'	1:L5:1340:OMC:C6	2.36	0.61
1:L5:1980:U:O5'	1:L5:1981:G:H8	1.83	0.61
5:LB:393:LYS:HG3	5:LB:396:ARG:HH21	1.66	0.61
28:LZ:120:GLU:O	28:LZ:124:THR:HG23	2.01	0.61
46:S2:541:U:H3'	46:S2:543:C:N4	2.13	0.61
46:S2:572:PSU:H5''	71:SY:60:PHE:H	1.65	0.61
46:S2:874:G:H2'	46:S2:875:A:H8	1.65	0.61
47:SA:126:ASP:O	47:SA:130:ASP:HB2	2.01	0.61
1:L5:1985:G:H21	1:L5:2005:G:H3'	1.64	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:u:26:A:H2	80:u:44:G:H22	1.47	0.61
1:L5:753:C:H2'	1:L5:754:U:C6	2.36	0.61
1:L5:1174:G:H1	1:L5:1186:U:H3	1.48	0.61
1:L5:1413:C:H5''	1:L5:1414:C:OP2	2.00	0.61
4:LA:147:ARG:HG2	4:LA:157:VAL:HG22	1.81	0.61
57:SK:10:ALA:HB1	57:SK:38:LYS:HE2	1.83	0.61
79:Sg:284:PRO:HB3	79:Sg:304:ASP:HB3	1.83	0.61
80:u:15:G:H1	80:u:48:C:H5	1.49	0.61
1:L5:1767:A:H8	1:L5:1767:A:OP1	1.83	0.60
56:SJ:180:LYS:O	56:SJ:181:GLY:C	2.44	0.60
80:u:1:G:H22	80:u:73:A:H61	1.48	0.60
1:L5:758:G:N2	1:L5:759:G:H1'	2.15	0.60
1:L5:1067:G:H3'	8:LE:44:CYS:SG	2.40	0.60
37:Li:51:ALA:HB3	37:Li:54:GLU:HG3	1.83	0.60
46:S2:838:G:H21	46:S2:840:C:H4'	1.66	0.60
80:u:72:C:H2'	80:u:73:A:C8	2.37	0.60
1:L5:964:A:C2'	1:L5:965:G:H4'	2.30	0.60
1:L5:1186:U:H2'	1:L5:1187:G:N3	2.16	0.60
1:L5:1257:A:H3'	1:L5:1258:G:H8	1.64	0.60
1:L5:1270:A:H8	1:L5:2106:G:N2	1.87	0.60
46:S2:559:G:H1'	46:S2:560:A:OP2	2.02	0.60
55:SI:129:LEU:HD21	55:SI:137:LEU:HD12	1.84	0.60
55:SI:150:ASP:HA	55:SI:153:LYS:HG3	1.82	0.60
1:L5:260:C:H2'	1:L5:261:G:H8	1.65	0.60
1:L5:1064:G:C2	1:L5:1065:G:H1'	2.36	0.60
1:L5:1404:G:H5''	1:L5:1404:G:C8	2.35	0.60
59:SM:52:LEU:HD21	59:SM:65:VAL:HG11	1.83	0.60
81:v:27:G:H1	81:v:43:C:N4	1.99	0.60
1:L5:1272:C:H5'	9:LF:34:ARG:HG2	1.83	0.60
46:S2:189:U:H3	46:S2:210:U:H3	1.50	0.60
46:S2:1217:A:H2'	46:S2:1218:C:C6	2.36	0.60
67:SU:25:THR:HG22	67:SU:86:LYS:HG3	1.83	0.60
81:v:70:G:H3'	81:v:71:G:H21	1.66	0.60
1:L5:133:C:H41	36:Lh:74:LYS:HA	1.66	0.60
1:L5:1181:C:O2	1:L5:1181:C:H2'	2.02	0.60
1:L5:1821:G:H21	1:L5:1822:U:H5'	1.67	0.60
35:Lg:83:CYS:SG	35:Lg:86:CYS:HB2	2.42	0.60
46:S2:544:G:H8	46:S2:544:G:O5'	1.85	0.60
47:SA:61:ALA:O	47:SA:65:ILE:HG13	2.00	0.60
81:v:23:A:H2'	81:v:24:G:O4'	2.00	0.60
1:L5:176:G:H2'	1:L5:177:G:H8	1.67	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:518:G:N1	1:L5:643:C:H2'	2.17	0.60
1:L5:711:A:H2'	1:L5:712:C:C6	2.37	0.60
1:L5:2479:G:C2	1:L5:2480:G:C4	2.90	0.60
1:L5:3641:U:H5	1:L5:3646:A:N7	1.98	0.60
4:LA:108:PRO:HB2	44:Lp:86:LEU:HD22	1.83	0.60
80:u:17:C:OP2	80:u:60:U:H1'	2.02	0.60
1:L5:1365:C:H1'	1:L5:1366:G:N7	2.15	0.60
1:L5:2543:A:H2	1:L5:2773:G:H1	1.50	0.60
39:Lk:24:LYS:HB3	39:Lk:69:LEU:HD11	1.84	0.60
54:SH:148:LEU:HG	69:SW:49:GLU:HG3	1.84	0.60
79:Sg:110:SER:HB3	79:Sg:153:CYS:HA	1.84	0.60
81:v:61:C:O2	81:v:61:C:H2'	2.01	0.60
1:L5:2499:C:H2'	1:L5:2500:U:H6	1.66	0.60
9:LF:67:THR:O	9:LF:71:MET:HG2	2.02	0.60
46:S2:166:A2M:C5'	46:S2:166:A2M:H8	2.31	0.60
46:S2:749:U:H2'	46:S2:750:C:C6	2.36	0.60
50:SD:7:LYS:HD2	67:SU:25:THR:HG21	1.83	0.60
56:SJ:112:THR:O	56:SJ:116:LYS:HB2	2.02	0.60
59:SM:86:GLY:HA2	59:SM:89:VAL:HG22	1.84	0.60
1:L5:263:G:C4	1:L5:264:C:N4	2.69	0.60
1:L5:1415:G:H2'	1:L5:1416:G:H8	1.67	0.60
1:L5:1761:G:N2	1:L5:1762:C:N3	2.49	0.60
1:L5:4548:A:C5	80:u:74:C:H5'	2.37	0.60
86:L5:5385:NMY:H1	86:L5:5385:NMY:H14	1.82	0.60
5:LB:161:ARG:HG2	5:LB:184:GLN:HA	1.84	0.60
6:LC:293:LEU:HD22	19:LQ:34:PHE:CD2	2.37	0.60
25:LW:94:ARG:NH1	53:SG:146:ASN:N	2.50	0.60
46:S2:1457:U:H2'	46:S2:1458:G:H8	1.67	0.60
56:SJ:29:LEU:HD23	77:Se:42:PHE:HE2	1.67	0.60
59:SM:36:ARG:HB3	78:Sf:103:LEU:HD13	1.84	0.60
59:SM:91:LEU:HD21	59:SM:106:CYS:HB2	1.84	0.60
70:SX:140:ARG:HB2	70:SX:142:ARG:HE	1.67	0.60
77:Se:37:GLN:HG2	77:Se:41:ARG:HH21	1.67	0.60
1:L5:4088:C:H2'	1:L5:4089:G:C8	2.36	0.59
1:L5:4302:U:H4'	22:LT:5:LYS:HD2	1.84	0.59
46:S2:877:C:H2'	46:S2:878:G:C8	2.37	0.59
72:SZ:50:PHE:HE1	72:SZ:79:ILE:HD13	1.67	0.59
10:LG:162:ASP:HB3	10:LG:163:PRO:HD3	1.83	0.59
15:LM:74:ARG:O	15:LM:78:GLN:HG3	2.01	0.59
16:LN:153:LYS:HG3	16:LN:154:PRO:HD2	1.83	0.59
31:Lc:9:LYS:HD3	31:Lc:11:LEU:HD13	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:SF:99:ILE:HD11	72:SZ:106:GLN:HE21	1.67	0.59
57:SK:27:VAL:HG12	57:SK:43:LEU:HD13	1.82	0.59
63:SQ:23:ALA:HB2	63:SQ:87:SER:HB3	1.85	0.59
1:L5:366:A:H2'	1:L5:367:C:O4'	2.02	0.59
1:L5:1181:C:C6	1:L5:1182:C:H5	2.20	0.59
1:L5:1857:C:H2'	1:L5:1858:A:H8	1.67	0.59
1:L5:1976:G:N7	1:L5:1992:U:H5''	2.17	0.59
8:LE:153:LEU:HD11	8:LE:195:ILE:HG13	1.83	0.59
70:SX:60:LYS:HG3	70:SX:116:PRO:HG3	1.82	0.59
81:v:71:G:O2'	81:v:72:C:H5'	2.02	0.59
1:L5:1256:G:H5'	1:L5:1258:G:N7	2.16	0.59
14:LL:204:GLU:O	14:LL:208:GLU:HG3	2.02	0.59
48:SB:124:HIS:HA	48:SB:137:LEU:O	2.02	0.59
76:Sd:31:ILE:HD11	76:Sd:40:ARG:HA	1.85	0.59
1:L5:1069:G:C2'	1:L5:1070:G:H5'	2.32	0.59
1:L5:2692:U:O2	39:Lk:2:PRO:HB2	2.02	0.59
11:LH:91:LYS:HB2	11:LH:183:GLU:HB2	1.84	0.59
25:LW:94:ARG:HB2	25:LW:99:GLU:HG2	1.85	0.59
47:SA:81:ASN:HA	47:SA:84:GLN:HG3	1.83	0.59
55:SI:87:ASN:HB3	55:SI:90:LEU:HD12	1.85	0.59
55:SI:192:GLY:HA3	58:SL:19:ASN:OD1	2.02	0.59
59:SM:44:LYS:HD3	59:SM:46:GLN:HB2	1.84	0.59
1:L5:325:U:H2'	1:L5:326:C:C6	2.37	0.59
1:L5:1754:U:H3	1:L5:1776:A:N6	2.01	0.59
1:L5:1987:C:N3	1:L5:1990:A:N6	2.50	0.59
1:L5:2480:G:C6	1:L5:2481:G:C5	2.90	0.59
1:L5:4228:OMG:H4'	1:L5:4229:U:OP2	2.02	0.59
6:LC:306:ARG:HG2	6:LC:306:ARG:HH11	1.68	0.59
62:SP:20:VAL:HG13	62:SP:24:GLN:HG3	1.84	0.59
1:L5:1100:U:H2'	1:L5:1167:C:N4	2.18	0.59
1:L5:1967:A:C2	1:L5:2020:U:H5	2.20	0.59
5:LB:92:TYR:HB3	5:LB:99:LEU:HD22	1.83	0.59
39:Lk:54:GLU:O	39:Lk:58:GLN:HG2	2.03	0.59
46:S2:557:U:H2'	46:S2:558:G:C5'	2.33	0.59
56:SJ:118:GLY:O	56:SJ:120:ALA:N	2.35	0.59
63:SQ:104:SER:O	63:SQ:108:ILE:HG23	2.02	0.59
71:SY:29:HIS:HB2	71:SY:32:LYS:HB3	1.85	0.59
1:L5:1972:G:H1	1:L5:1994:C:N4	1.99	0.59
1:L5:2544:G:H1'	3:L8:126:C:C4'	2.33	0.59
46:S2:540:U:P	46:S2:541:U:H5''	2.42	0.59
52:SF:35:LEU:HB3	52:SF:39:ILE:HD12	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:SR:31:ASN:O	64:SR:32:LYS:C	2.46	0.59
79:Sg:226:HIS:C	79:Sg:227:LEU:HD12	2.27	0.59
86:L5:5385:NMY:H1	86:L5:5385:NMY:C14	2.33	0.59
26:LX:123:LYS:HG3	26:LX:139:ARG:HB3	1.85	0.59
36:Lh:6:ALA:O	36:Lh:10:ARG:HG2	2.02	0.59
58:SL:88:ILE:HD11	58:SL:109:MET:HE2	1.84	0.59
1:L5:1971:C:C5	1:L5:2000:G:H2'	2.37	0.59
1:L5:4775:C:H42	1:L5:4859:C:H42	1.49	0.59
1:L5:4918:C:H2'	1:L5:4919:G:C8	2.38	0.59
46:S2:540:U:H2'	46:S2:543:C:H42	1.68	0.59
46:S2:1595:U:H2'	46:S2:1596:PSU:C6	2.38	0.59
46:S2:583:A:H3'	46:S2:584:A:H8	1.68	0.58
1:L5:667:A:H5''	1:L5:668:C:H3'	1.85	0.58
1:L5:4910:A:H4'	5:LB:95:THR:HG22	1.83	0.58
53:SG:135:PRO:HB3	53:SG:140:ARG:HB3	1.85	0.58
59:SM:91:LEU:HD13	59:SM:91:LEU:H	1.67	0.58
1:L5:691:C:H2'	1:L5:692:A:C8	2.37	0.58
1:L5:1188:C:H2'	1:L5:1189:G:C8	2.38	0.58
1:L5:1509:C:H5''	29:La:2:PRO:HD2	1.85	0.58
1:L5:1973:G:H2'	1:L5:1974:U:C5	2.37	0.58
86:L5:5383:NMY:H172	86:L5:5383:NMY:N2	2.18	0.58
4:LA:126:LEU:HD13	4:LA:150:LEU:HD21	1.85	0.58
5:LB:289:GLN:HB3	5:LB:301:ASN:HD21	1.68	0.58
46:S2:795:A:H2'	46:S2:796:G:O4'	2.03	0.58
52:SF:40:ALA:HB1	52:SF:45:TYR:CG	2.38	0.58
67:SU:98:VAL:O	67:SU:101:ILE:HG22	2.04	0.58
1:L5:270:U:H2'	1:L5:271:C:C6	2.38	0.58
1:L5:1273:G:H2'	1:L5:1274:A:H5'	1.85	0.58
14:LL:146:LEU:HG	36:Lh:122:LYS:HZ1	1.67	0.58
25:LW:92:ALA:H	25:LW:97:LYS:C	2.09	0.58
25:LW:113:LYS:O	25:LW:117:LYS:HD2	2.03	0.58
46:S2:512:A2M:H4'	46:S2:576:A2M:H2	1.85	0.58
46:S2:1653:U:H2'	46:S2:1654:G:C8	2.39	0.58
50:SD:170:THR:HG22	50:SD:187:LYS:HG2	1.83	0.58
56:SJ:69:ARG:O	56:SJ:73:GLU:HB2	2.03	0.58
63:SQ:44:PRO:CG	63:SQ:81:ILE:HD11	2.34	0.58
1:L5:693:C:H2'	1:L5:694:C:C6	2.39	0.58
1:L5:991:C:H3'	1:L5:992:C:C4'	2.26	0.58
1:L5:1788:A:H2'	12:LI:22:PHE:CZ	2.39	0.58
27:LY:54:GLU:HG3	27:LY:108:ARG:HB3	1.86	0.58
46:S2:878:G:H1	46:S2:908:A:H61	1.49	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:SN:43:LYS:HG2	60:SN:43:LYS:O	2.03	0.58
61:SO:98:ARG:HB3	61:SO:132:VAL:HG23	1.86	0.58
79:Sg:120:ILE:O	79:Sg:131:LEU:HA	2.02	0.58
6:LC:10:VAL:HG21	6:LC:254:GLU:HG3	1.85	0.58
11:LH:14:GLU:H	11:LH:14:GLU:CD	2.12	0.58
27:LY:72:GLN:HB3	27:LY:81:TYR:HB2	1.84	0.58
69:SW:104:LEU:HD23	69:SW:125:ILE:HA	1.86	0.58
79:Sg:217:MET:HG3	79:Sg:226:HIS:CE1	2.39	0.58
1:L5:963:G:OP2	9:LF:32:ARG:HD3	2.04	0.58
1:L5:1864:G:H21	12:LI:115:MET:HE2	1.69	0.58
1:L5:1976:G:H5'	1:L5:1977:C:OP2	2.04	0.58
8:LE:180:VAL:HG11	8:LE:258:LEU:HD11	1.84	0.58
46:S2:817:G:N2	46:S2:818:A:H62	2.01	0.58
50:SD:21:LEU:HD21	50:SD:48:ILE:HG21	1.86	0.58
53:SG:2:LYS:HB2	53:SG:108:VAL:HG23	1.86	0.58
1:L5:256:G:C8	1:L5:256:G:OP2	2.57	0.58
1:L5:1404:G:H3'	1:L5:1405:C:C5	2.39	0.58
1:L5:4274:A:H2'	1:L5:4275:G:H8	1.68	0.58
8:LE:243:THR:HG22	8:LE:245:GLN:H	1.69	0.58
10:LG:138:ALA:HB2	10:LG:194:VAL:HG11	1.85	0.58
21:LS:81:TRP:CZ3	21:LS:130:GLU:HG3	2.39	0.58
63:SQ:44:PRO:HG3	63:SQ:81:ILE:HD11	1.84	0.58
1:L5:1:C:HO2'	26:LX:37:LYS:N	2.02	0.58
1:L5:1771:U:H1'	1:L5:1772:C:H5	1.69	0.58
5:LB:155:LYS:HE2	5:LB:156:TYR:CZ	2.39	0.58
20:LR:162:ARG:HD3	46:S2:873:G:H5'	1.86	0.58
31:Lc:10:SER:O	31:Lc:11:LEU:C	2.46	0.58
46:S2:1277:C:H2'	46:S2:1278:A:C8	2.38	0.58
46:S2:1407:U:H2'	46:S2:1408:U:C6	2.39	0.58
50:SD:5:ILE:HG23	50:SD:9:ARG:HB2	1.84	0.58
53:SG:215:LYS:HD3	53:SG:216:ARG:HH21	1.68	0.58
60:SN:25:TRP:CD2	74:Sb:82:LYS:HE2	2.39	0.58
1:L5:1252:C:N3	1:L5:1253:G:H1'	2.18	0.58
1:L5:1998:A:H5'	1:L5:2000:G:N1	2.19	0.58
5:LB:396:ARG:O	5:LB:400:GLU:HG2	2.04	0.58
28:LZ:11:VAL:HG12	28:LZ:82:PRO:HA	1.86	0.58
46:S2:1406:G:H2'	46:S2:1407:U:C6	2.39	0.58
50:SD:29:LEU:HD21	50:SD:69:LEU:HD11	1.86	0.58
57:SK:65:ARG:HH12	76:Sd:20:SER:HB2	1.69	0.58
80:u:18:G:H5'	80:u:58:A:H2	1.69	0.58
7:LD:226:TYR:HE2	7:LD:236:MET:HE1	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S2:500:A:O2'	46:S2:501:C:H5'	2.04	0.57
46:S2:822:PSU:HN3	46:S2:826:A:H62	1.52	0.57
46:S2:1416:C:H2'	46:S2:1417:C:C6	2.38	0.57
53:SG:213:LEU:O	53:SG:217:MET:HG3	2.03	0.57
55:SI:202:ILE:HG23	55:SI:205:ARG:HH11	1.67	0.57
80:u:28:G:H2'	80:u:29:G:C8	2.39	0.57
1:L5:1982:G:H5''	1:L5:2009:A:H1'	1.85	0.57
1:L5:2351:OMC:HM22	1:L5:2352:U:H5'	1.86	0.57
28:LZ:25:ILE:HA	28:LZ:43:VAL:HG12	1.86	0.57
46:S2:952:G:H2'	46:S2:953:C:C6	2.39	0.57
50:SD:29:LEU:HD13	50:SD:58:VAL:HG22	1.85	0.57
73:Sa:45:VAL:HG11	73:Sa:53:ILE:HD12	1.85	0.57
81:v:60:U:O5'	81:v:60:U:H6	1.87	0.57
1:L5:483:G:N7	1:L5:485:C:H6	2.02	0.57
1:L5:1099:C:H2'	1:L5:1100:U:O4'	2.03	0.57
25:LW:93:LYS:H	25:LW:99:GLU:H	1.51	0.57
54:SH:130:LEU:HB2	54:SH:177:TYR:CE1	2.39	0.57
1:L5:1984:A:H5'	1:L5:2011:C:OP1	2.04	0.57
1:L5:3732:A:H2'	1:L5:3733:A:H8	1.69	0.57
1:L5:4594:U:H2'	1:L5:4595:G:H8	1.70	0.57
46:S2:748:C:N4	46:S2:794:A:N7	2.52	0.57
79:Sg:217:MET:HG3	79:Sg:226:HIS:HE1	1.69	0.57
12:LI:180:GLU:O	12:LI:184:MET:HG3	2.04	0.57
26:LX:76:ILE:HD13	26:LX:108:GLN:HB3	1.86	0.57
51:SE:66:MET:C	51:SE:68:ARG:H	2.13	0.57
81:v:35:C:H2'	81:v:36:G:C8	2.39	0.57
1:L5:138:G:H2'	1:L5:139:G:C8	2.40	0.57
1:L5:964:A:C3'	1:L5:965:G:H4'	2.35	0.57
1:L5:1413:C:H2'	1:L5:1414:C:C6	2.39	0.57
1:L5:1759:G:N2	1:L5:1772:C:N3	2.52	0.57
1:L5:1773:U:H3'	1:L5:1774:C:C5	2.39	0.57
46:S2:501:C:O2	46:S2:501:C:H2'	2.04	0.57
46:S2:838:G:C1'	46:S2:839:C:H5'	2.33	0.57
81:v:16:A:H8	81:v:17:A:C5	2.22	0.57
1:L5:500:G:H4'	1:L5:501:C:OP1	2.04	0.57
1:L5:663:G:H2'	1:L5:664:G:H8	1.67	0.57
1:L5:683:C:H2'	1:L5:684:G:O4'	2.04	0.57
1:L5:1255:A:H3'	1:L5:1257:A:C8	2.38	0.57
1:L5:2487:G:H1'	1:L5:2493:G:N2	2.19	0.57
46:S2:1743:G:H2'	46:S2:1744:G:O4'	2.05	0.57
80:u:15:G:C2'	80:u:16:U:H5'	2.35	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:262:G:H3'	1:L5:263:G:C8	2.38	0.57
1:L5:1468:C:H2'	1:L5:1469:C:C6	2.40	0.57
1:L5:4239:A:H2'	1:L5:4240:G:C8	2.40	0.57
25:LW:87:LEU:HD21	53:SG:9:ALA:O	2.04	0.57
46:S2:1546:G:H5'	63:SQ:18:THR:HG21	1.87	0.57
61:SO:116:LEU:HG	73:Sa:53:ILE:HD11	1.87	0.57
1:L5:1076:C:H2'	1:L5:1077:C:C6	2.39	0.57
1:L5:1247:U:H2'	1:L5:1248:C:H6	1.70	0.57
1:L5:2484:A:N6	1:L5:2494:U:H3	2.02	0.57
1:L5:2485:U:H4'	1:L5:2486:G:H21	1.69	0.57
1:L5:2566:G:H2'	1:L5:2567:G:C8	2.40	0.57
12:LI:38:ARG:HG2	12:LI:41:ALA:HB2	1.86	0.57
46:S2:28:U:H2'	46:S2:29:G:H8	1.68	0.57
46:S2:521:A:OP1	56:SJ:45:ARG:NH1	2.38	0.57
46:S2:751:G:C2'	46:S2:792:C:H4'	2.27	0.57
46:S2:836:G:H3'	46:S2:837:A:C5'	2.34	0.57
46:S2:1512:C:H5''	76:Sd:8:TRP:CZ3	2.40	0.57
59:SM:47:ALA:HA	59:SM:112:LYS:HA	1.87	0.57
59:SM:61:TYR:O	59:SM:65:VAL:HG12	2.05	0.57
12:LI:91:LEU:HD12	12:LI:135:ILE:HG23	1.86	0.57
27:LY:37:GLU:H	27:LY:37:GLU:CD	2.12	0.57
46:S2:942:G:H2'	46:S2:943:U:C6	2.39	0.57
50:SD:47:GLU:HB3	50:SD:87:TYR:HE2	1.68	0.57
65:SS:36:VAL:HG12	65:SS:40:TYR:CD2	2.39	0.57
1:L5:1218:G:H2'	1:L5:1219:G:O4'	2.05	0.56
1:L5:1707:C:N4	30:Lb:102:PRO:HG2	2.20	0.56
18:LP:116:HIS:HB3	18:LP:149:ILE:HB	1.87	0.56
23:LU:41:GLN:O	23:LU:45:GLU:HG3	2.05	0.56
46:S2:545:A:H3'	46:S2:546:G:H8	1.69	0.56
54:SH:60:ILE:HB	54:SH:92:VAL:HG22	1.87	0.56
56:SJ:63:LEU:HD12	56:SJ:70:ARG:HB2	1.86	0.56
61:SO:42:VAL:HG23	61:SO:81:VAL:HG21	1.85	0.56
1:L5:1066:G:H2'	1:L5:1067:G:H8	1.70	0.56
3:L8:123:U:H3'	3:L8:124:U:C6	2.41	0.56
46:S2:38:A:OP1	56:SJ:5:ARG:HB3	2.05	0.56
46:S2:529:A:H3'	46:S2:530:U:H6	1.71	0.56
58:SL:111:VAL:HG12	58:SL:140:PHE:HB2	1.86	0.56
1:L5:252:C:H42	1:L5:253:G:H21	1.52	0.56
1:L5:256:G:H8	1:L5:256:G:OP2	1.88	0.56
1:L5:994:G:C2	1:L5:995:C:H4'	2.40	0.56
1:L5:1241:C:H2'	1:L5:1242:G:H5''	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:1242:G:H5''	1:L5:1242:G:H8	1.69	0.56
1:L5:1248:C:H2'	1:L5:1249:C:C6	2.40	0.56
1:L5:1982:G:H8	1:L5:1987:C:H1'	1.71	0.56
1:L5:2692:U:H5'	39:Lk:4:LYS:HD2	1.87	0.56
1:L5:3697:U:H5''	1:L5:3698:G:H5'	1.87	0.56
1:L5:4771:C:H2'	1:L5:4772:C:C6	2.41	0.56
25:LW:85:ALA:HB3	25:LW:87:LEU:HD23	1.88	0.56
28:LZ:9:LYS:HB3	28:LZ:25:ILE:HD12	1.86	0.56
46:S2:553:U:H2'	46:S2:554:A:C8	2.39	0.56
46:S2:635:G:H2'	46:S2:636:C:C6	2.40	0.56
46:S2:839:C:OP2	46:S2:839:C:H4'	2.04	0.56
64:SR:17:ILE:HG12	64:SR:58:MET:HE2	1.86	0.56
71:SY:55:ILE:HG12	71:SY:75:ILE:HG12	1.87	0.56
78:Sf:103:LEU:HD21	78:Sf:105:TYR:CZ	2.39	0.56
79:Sg:164:ILE:HD11	79:Sg:176:VAL:HB	1.87	0.56
79:Sg:176:VAL:HG23	79:Sg:185:LYS:HG2	1.88	0.56
81:v:61:C:H3'	81:v:62:C:C6	2.40	0.56
1:L5:644:G:C6	1:L5:645:G:H1'	2.39	0.56
1:L5:963:G:C6	1:L5:964:A:N6	2.73	0.56
1:L5:1365:C:H2'	1:L5:1366:G:H5''	1.86	0.56
1:L5:1985:G:C2	1:L5:1986:U:H1'	2.40	0.56
25:LW:99:GLU:OE2	25:LW:100:VAL:HG12	2.06	0.56
46:S2:575:A:H2'	46:S2:576:A2M:O4'	2.05	0.56
46:S2:928:G:H2'	46:S2:929:G:C8	2.40	0.56
47:SA:12:GLU:CD	47:SA:12:GLU:H	2.12	0.56
47:SA:52:LYS:O	47:SA:56:GLU:HG2	2.05	0.56
51:SE:68:ARG:HB3	51:SE:76:VAL:HG11	1.86	0.56
56:SJ:30:LYS:HE2	77:Se:42:PHE:CD1	2.41	0.56
56:SJ:151:LEU:O	56:SJ:153:SER:N	2.38	0.56
63:SQ:9:SER:HB3	63:SQ:24:HIS:CE1	2.40	0.56
1:L5:484:U:H1'	1:L5:486:C:H5	1.71	0.56
1:L5:1199:G:H2'	1:L5:1200:G:C8	2.40	0.56
1:L5:1271:G:N3	1:L5:1271:G:H5''	2.20	0.56
1:L5:1755:C:H3'	1:L5:1756:U:H6	1.70	0.56
1:L5:5019:A:H2'	1:L5:5020:G:C8	2.40	0.56
14:LL:197:LYS:O	14:LL:201:GLU:HG3	2.05	0.56
46:S2:1810:U:C2'	46:S2:1811:C:H5'	2.36	0.56
56:SJ:182:GLN:CD	56:SJ:183:GLY:H	2.14	0.56
72:SZ:65:TYR:HA	72:SZ:111:ARG:HH21	1.70	0.56
1:L5:1080:C:H2'	1:L5:1081:C:C6	2.40	0.56
1:L5:1994:C:H41	1:L5:2001:G:H5''	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:2002:A:N3	1:L5:2002:A:H2'	2.20	0.56
1:L5:2776:G:N7	86:L5:5384:NMY:H82	2.20	0.56
1:L5:4467:A:H5''	86:L5:5386:NMY:H81	1.88	0.56
13:LJ:29:SER:HA	13:LJ:33:LEU:HD12	1.87	0.56
14:LL:127:PHE:HA	14:LL:143:GLU:OE2	2.05	0.56
46:S2:536:A:H3'	46:S2:537:C:C4'	2.32	0.56
46:S2:537:C:H5'	46:S2:538:U:H5	1.70	0.56
57:SK:18:GLU:HB3	57:SK:93:THR:HG23	1.86	0.56
78:Sf:100:LEU:CD2	78:Sf:101:ALA:H	2.19	0.56
81:v:11:C:H2'	81:v:12:C:H6	1.71	0.56
1:L5:1308:C:H2'	1:L5:1309:C:C6	2.40	0.56
8:LE:186:LEU:HD11	8:LE:253:VAL:HG21	1.87	0.56
31:Lc:11:LEU:HD22	31:Lc:11:LEU:H	1.70	0.56
43:Lo:70:LEU:O	43:Lo:80:LYS:HA	2.06	0.56
46:S2:115:U:H2'	46:S2:116:OMU:C6	2.36	0.56
47:SA:182:VAL:O	47:SA:186:ARG:HG3	2.06	0.56
57:SK:18:GLU:HB2	57:SK:20:VAL:HG22	1.87	0.56
57:SK:58:VAL:HG11	57:SK:69:TRP:HB3	1.88	0.56
1:L5:126:C:H2'	1:L5:127:G:H8	1.69	0.56
1:L5:189:G:C6	1:L5:253:G:N2	2.70	0.56
1:L5:332:C:H5''	16:LN:150:TRP:CE3	2.41	0.56
1:L5:1978:C:C2	1:L5:1987:C:N4	2.74	0.56
1:L5:1984:A:C6	1:L5:2011:C:H4'	2.40	0.56
46:S2:996:A:H2'	46:S2:997:A:C8	2.40	0.56
46:S2:1452:A:H4'	46:S2:1453:C:O5'	2.06	0.56
81:v:16:A:O3'	81:v:17:A:H3'	2.06	0.56
1:L5:695:G:C2	1:L5:697:G:C4	2.93	0.56
1:L5:1241:C:C5	30:Lb:120:ARG:HD3	2.41	0.56
1:L5:1942:A:H2'	1:L5:1943:A:H8	1.71	0.56
1:L5:1970:A:P	1:L5:1971:C:H5'	2.46	0.56
17:LO:201:LEU:HD12	17:LO:201:LEU:H	1.70	0.56
46:S2:305:U:H4'	55:SI:41:ARG:NH1	2.20	0.56
53:SG:142:ARG:HH21	53:SG:149:LYS:HA	1.71	0.56
56:SJ:91:LYS:HZ2	56:SJ:96:TYR:HD1	1.54	0.56
64:SR:20:TYR:HD1	64:SR:23:ARG:HD2	1.71	0.56
67:SU:32:LEU:HD21	67:SU:87:ARG:HG3	1.88	0.56
1:L5:1170:G:N2	1:L5:1192:C:H1'	2.21	0.56
1:L5:1250:C:H2'	1:L5:1251:C:O4'	2.05	0.56
1:L5:1577:G:O2'	1:L5:1612:G:H4'	2.06	0.56
1:L5:2485:U:C4'	1:L5:2486:G:H21	2.18	0.56
4:LA:206:PRO:HG3	4:LA:213:GLY:HA3	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:Lk:5:ILE:HD13	39:Lk:11:PHE:HA	1.88	0.56
46:S2:556:U:H3	46:S2:557:U:HO2'	1.53	0.56
46:S2:897:U:H3'	46:S2:898:U:H4'	1.88	0.56
1:L5:665:C:H4'	1:L5:665:C:OP1	2.05	0.55
1:L5:1881:OMC:C2	1:L5:1881:OMC:HM23	2.41	0.55
1:L5:4238:G:H2'	1:L5:4239:A:H8	1.70	0.55
10:LG:212:LYS:HD2	10:LG:213:GLY:N	2.20	0.55
14:LL:144:LEU:HD12	14:LL:145:LYS:H	1.70	0.55
21:LS:84:TYR:CE1	21:LS:93:MET:HE3	2.41	0.55
25:LW:97:LYS:N	25:LW:98:PRO:HD3	2.14	0.55
46:S2:12:U:H2'	46:S2:13:C:C6	2.41	0.55
55:SI:119:LEU:HD23	55:SI:153:LYS:HE3	1.87	0.55
57:SK:12:TYR:HB3	57:SK:83:LEU:HD11	1.87	0.55
1:L5:462:G:H2'	1:L5:463:A:C8	2.41	0.55
1:L5:963:G:P	9:LF:32:ARG:HD3	2.47	0.55
21:LS:47:PHE:HE1	21:LS:125:GLN:HG2	1.71	0.55
25:LW:90:ILE:C	25:LW:91:MET:HG2	2.31	0.55
46:S2:746:C:H2'	46:S2:747:U:C6	2.41	0.55
46:S2:1114:U:H2'	46:S2:1115:U:C5	2.41	0.55
57:SK:11:ILE:HG12	57:SK:45:VAL:HG22	1.88	0.55
59:SM:52:LEU:HD13	59:SM:53:ALA:H	1.70	0.55
1:L5:1765:A:O5'	1:L5:1766:A:H5'	2.06	0.55
16:LN:24:ARG:NH1	16:LN:24:ARG:HB3	2.20	0.55
25:LW:98:PRO:HB3	53:SG:144:LEU:O	2.07	0.55
46:S2:519:A:O2'	56:SJ:10:ARG:O	2.23	0.55
80:u:29:G:H1	80:u:41:C:N4	2.04	0.55
1:L5:491:G:H3'	1:L5:492:U:C5	2.40	0.55
1:L5:497:G:H1'	1:L5:498:C:C4'	2.29	0.55
1:L5:1774:C:H2'	1:L5:1775:A:C8	2.41	0.55
1:L5:4392:OMG:H2'	1:L5:4447:5MC:HM51	1.89	0.55
3:L8:122:G:N7	3:L8:123:U:H1'	2.21	0.55
15:LM:53:LYS:HE2	21:LS:160:ARG:HG3	1.88	0.55
18:LP:48:LEU:O	18:LP:52:THR:HG23	2.06	0.55
46:S2:455:A:H2'	46:S2:456:C:C6	2.41	0.55
46:S2:533:A:H61	46:S2:550:C:H42	1.55	0.55
50:SD:16:ILE:HD13	76:Sd:50:ILE:HD12	1.87	0.55
62:SP:54:HIS:O	62:SP:58:LYS:HG2	2.06	0.55
81:v:5:C:H5''	81:v:5:C:C6	2.41	0.55
81:v:8:U:N3	81:v:14:C:H5	2.00	0.55
81:v:56:C:H2'	81:v:57:G:N9	2.21	0.55
1:L5:162:A:H2'	1:L5:163:A:C8	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:189:G:O6	1:L5:253:G:C2	2.56	0.55
1:L5:678:C:H2'	1:L5:679:C:C6	2.41	0.55
1:L5:1254:A:C8	1:L5:1254:A:O5'	2.60	0.55
1:L5:1979:A:H3'	1:L5:1980:U:H2'	1.87	0.55
1:L5:2745:A:H2'	1:L5:2746:A:C8	2.41	0.55
31:Lc:56:ARG:O	31:Lc:60:ILE:HG13	2.07	0.55
46:S2:324:C:H5'	46:S2:326:C:N3	2.22	0.55
46:S2:500:A:H3'	46:S2:501:C:C5	2.41	0.55
46:S2:1217:A:H2'	46:S2:1218:C:H6	1.70	0.55
52:SF:76:MET:HE2	52:SF:155:CYS:SG	2.46	0.55
53:SG:7:PHE:CZ	53:SG:9:ALA:HB3	2.42	0.55
65:SS:144:ARG:HH11	65:SS:144:ARG:HA	1.71	0.55
80:u:1:G:N2	80:u:71:G:O6	2.40	0.55
1:L5:3770:PSU:H2'	1:L5:3771:C:C6	2.42	0.55
4:LA:158:ILE:HB	4:LA:162:ASN:HD22	1.71	0.55
50:SD:25:LEU:HD11	50:SD:50:ILE:HD13	1.89	0.55
56:SJ:115:PHE:CG	56:SJ:115:PHE:O	2.59	0.55
79:Sg:191:HIS:CD2	79:Sg:195:LEU:HD21	2.42	0.55
79:Sg:289:LEU:HB3	79:Sg:298:LEU:HD11	1.89	0.55
1:L5:233:U:HO2'	1:L5:234:G:H8	1.54	0.55
1:L5:268:G:O2'	1:L5:269:G:H5'	2.06	0.55
1:L5:988:C:H3'	1:L5:989:U:C6	2.41	0.55
1:L5:1992:U:H4'	1:L5:2002:A:N3	2.22	0.55
1:L5:2561:C:H2'	1:L5:2562:G:O4'	2.06	0.55
4:LA:94:ALA:HB3	4:LA:102:LEU:HG	1.87	0.55
13:LJ:19:LYS:HG2	13:LJ:133:VAL:HB	1.88	0.55
46:S2:434:G:OP1	55:SI:23:LYS:HG2	2.07	0.55
46:S2:793:G:N3	46:S2:794:A:H1'	2.22	0.55
47:SA:2:SER:HA	47:SA:8:LEU:O	2.07	0.55
65:SS:40:TYR:CZ	65:SS:97:GLN:HG3	2.42	0.55
74:Sb:56:CYS:HB3	74:Sb:59:CYS:HB3	1.89	0.55
1:L5:3612:C:H1'	1:L5:5016:A:C8	2.42	0.55
5:LB:168:MET:HG3	5:LB:178:ALA:HA	1.89	0.55
6:LC:308:LYS:HD3	6:LC:310:HIS:NE2	2.22	0.55
10:LG:110:LYS:HA	10:LG:113:ARG:HG2	1.88	0.55
46:S2:1446:A:O2'	46:S2:1447:OMG:H5''	2.07	0.55
52:SF:128:ILE:HG22	52:SF:135:ARG:HE	1.72	0.55
80:u:1:G:H1	80:u:73:A:H61	1.53	0.55
1:L5:989:U:H1'	1:L5:1065:G:N2	2.21	0.55
1:L5:1931:C:C4	86:L5:5383:NMY:H82	2.41	0.55
1:L5:1973:G:H3'	1:L5:1974:U:H2'	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:2479:G:H2'	1:L5:2480:G:C8	2.42	0.55
1:L5:4691:A:H5'	11:LH:71:ARG:HE	1.72	0.55
4:LA:158:ILE:HB	4:LA:162:ASN:ND2	2.22	0.55
46:S2:1744:G:H8	46:S2:1744:G:OP2	1.90	0.55
53:SG:142:ARG:O	53:SG:142:ARG:HG2	2.07	0.55
70:SX:67:ARG:HB3	70:SX:84:PHE:HE1	1.72	0.55
79:Sg:79:LEU:HD22	79:Sg:120:ILE:HD12	1.87	0.55
1:L5:666:G:H2'	1:L5:668:C:C5	2.42	0.55
1:L5:1197:C:H2'	1:L5:1198:G:C8	2.42	0.55
1:L5:1417:C:H2'	1:L5:1418:C:O4'	2.07	0.55
1:L5:1974:U:H5'	1:L5:1974:U:H6	1.71	0.55
1:L5:2562:G:H21	1:L5:2565:A:H8	1.55	0.55
8:LE:47:ASN:CG	8:LE:62:MET:HE3	2.32	0.55
32:Ld:32:ARG:HB3	32:Ld:48:GLU:HG3	1.88	0.55
46:S2:751:G:H3'	46:S2:792:C:H5'	1.89	0.55
46:S2:1127:C:H4'	74:Sb:17:ARG:HE	1.72	0.55
52:SF:68:ILE:HA	52:SF:71:ARG:HG3	1.89	0.55
53:SG:8:PRO:O	53:SG:9:ALA:C	2.49	0.55
53:SG:43:GLU:H	53:SG:43:GLU:CD	2.15	0.55
74:Sb:54:VAL:HG23	74:Sb:63:LEU:HD12	1.88	0.55
79:Sg:177:TRP:HB3	79:Sg:184:LEU:HA	1.88	0.55
1:L5:1405:C:H42	1:L5:1411:C:N4	2.05	0.54
1:L5:1765:A:H2'	1:L5:1765:A:N3	2.21	0.54
1:L5:4459:U:H2'	1:L5:4460:U:C6	2.42	0.54
3:L8:124:U:H5'	3:L8:126:C:H41	1.71	0.54
46:S2:541:U:H2'	46:S2:542:U:C5	2.42	0.54
46:S2:591:U:C2	46:S2:593:C:N4	2.75	0.54
46:S2:1810:U:O2'	46:S2:1811:C:H5'	2.06	0.54
59:SM:84:LYS:HA	59:SM:87:GLU:HB2	1.89	0.54
1:L5:1183:C:C5'	1:L5:1183:C:C6	2.82	0.54
1:L5:1303:A:H8	1:L5:1303:A:O5'	1.89	0.54
1:L5:1604:G:H2'	1:L5:1605:G:C8	2.41	0.54
1:L5:2562:G:H1'	1:L5:2566:G:N2	2.23	0.54
1:L5:4088:C:H2'	1:L5:4089:G:H8	1.73	0.54
1:L5:4100:C:H41	1:L5:4107:G:H8	1.55	0.54
1:L5:4169:G:H4'	1:L5:4171:C:C2	2.42	0.54
1:L5:4457:PSU:H1'	5:LB:252:ALA:HB3	1.89	0.54
25:LW:94:ARG:CD	53:SG:146:ASN:HB2	2.37	0.54
46:S2:567:C:O5'	46:S2:567:C:H6	1.91	0.54
46:S2:1453:C:C5	46:S2:1455:A:H1'	2.42	0.54
53:SG:181:THR:O	53:SG:185:LEU:HD23	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:SH:130:LEU:HD11	54:SH:156:VAL:HG21	1.90	0.54
56:SJ:45:ARG:O	56:SJ:49:THR:HG23	2.06	0.54
56:SJ:160:SER:O	56:SJ:161:LEU:C	2.49	0.54
58:SL:59:LYS:HE2	58:SL:134:LEU:HB3	1.88	0.54
1:L5:272:U:H2'	1:L5:273:U:C6	2.42	0.54
1:L5:1755:C:H41	1:L5:1776:A:H2	1.54	0.54
1:L5:1773:U:H2'	1:L5:1774:C:O4'	2.07	0.54
7:LD:51:MET:HE1	7:LD:166:ALA:HB2	1.88	0.54
46:S2:544:G:H2'	46:S2:545:A:H8	1.73	0.54
54:SH:11:PRO:HD3	54:SH:44:ASN:HB2	1.90	0.54
70:SX:41:PHE:HZ	70:SX:102:VAL:HG12	1.72	0.54
71:SY:59:GLY:O	71:SY:71:GLY:HA2	2.07	0.54
75:Sc:29:GLN:HE22	75:Sc:67:ARG:HD3	1.72	0.54
79:Sg:59:LEU:HB3	79:Sg:90:TRP:CE3	2.42	0.54
80:u:9:A:H8	80:u:12:U:O4	1.90	0.54
1:L5:459:C:H2'	1:L5:460:C:H6	1.72	0.54
1:L5:697:G:C2	1:L5:698:G:N7	2.76	0.54
1:L5:1974:U:H5''	1:L5:1975:G:H8	1.72	0.54
1:L5:2478:C:H2'	1:L5:2479:G:C1'	2.37	0.54
1:L5:2640:G:H2'	1:L5:2641:A:C8	2.43	0.54
4:LA:180:LEU:HD22	44:Lp:18:TYR:HB3	1.89	0.54
25:LW:93:LYS:NZ	25:LW:99:GLU:HG3	2.22	0.54
46:S2:539:C:H2'	46:S2:540:U:C6	2.43	0.54
46:S2:1406:G:H2'	46:S2:1407:U:H6	1.72	0.54
47:SA:8:LEU:HD11	68:SV:39:VAL:HG21	1.89	0.54
52:SF:77:MET:HG3	52:SF:89:THR:HG21	1.90	0.54
53:SG:5:ILE:HG13	53:SG:124:LEU:HD11	1.88	0.54
53:SG:141:ILE:C	53:SG:143:LYS:H	2.15	0.54
79:Sg:41:ILE:HD11	79:Sg:55:PRO:HB3	1.89	0.54
1:L5:93:G:H2'	1:L5:94:A:C8	2.43	0.54
1:L5:715:G:H5''	6:LC:316:LYS:HG2	1.90	0.54
1:L5:924:C:H2'	1:L5:925:C:O4'	2.07	0.54
1:L5:2298:U:H5''	6:LC:204:ARG:HH12	1.72	0.54
3:L8:125:C:P	3:L8:125:C:H3'	2.47	0.54
61:SO:86:LYS:HG2	61:SO:124:MET:HE2	1.89	0.54
67:SU:22:ILE:CD1	67:SU:114:VAL:HG12	2.37	0.54
73:Sa:102:ARG:NE	73:Sa:102:ARG:HA	2.21	0.54
81:v:43:C:H3'	81:v:44:G:C8	2.42	0.54
1:L5:658:C:O2	1:L5:658:C:C2'	2.56	0.54
1:L5:1253:G:H4'	1:L5:1254:A:N6	2.23	0.54
2:L7:110:G:H2'	2:L7:111:C:C6	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:LD:244:HIS:O	7:LD:248:ARG:HG3	2.06	0.54
46:S2:1457:U:H2'	46:S2:1458:G:C8	2.42	0.54
52:SF:142:SER:HB3	75:Sc:50:VAL:HG23	1.89	0.54
56:SJ:65:GLU:H	56:SJ:65:GLU:CD	2.16	0.54
59:SM:52:LEU:HD13	59:SM:53:ALA:N	2.23	0.54
79:Sg:302:TYR:HE2	79:Sg:308:ARG:HG3	1.72	0.54
1:L5:964:A:N3	1:L5:966:A:H1'	2.22	0.54
1:L5:4188:U:H2'	1:L5:4189:U:C6	2.43	0.54
1:L5:4260:U:H2'	1:L5:4261:C:H6	1.73	0.54
1:L5:4991:U:H2'	1:L5:4992:G:C8	2.41	0.54
30:Lb:36:ASP:HB3	30:Lb:39:PHE:HB3	1.90	0.54
46:S2:115:U:H2'	46:S2:116:OMU:H6	1.90	0.54
46:S2:558:G:H5'	46:S2:558:G:C8	2.42	0.54
46:S2:1562:C:H2'	46:S2:1563:G:H8	1.72	0.54
47:SA:61:ALA:HB1	47:SA:145:ILE:HD13	1.90	0.54
64:SR:105:MET:O	64:SR:109:LEU:HG	2.08	0.54
80:u:27:G:H22	80:u:43:C:H5	1.56	0.54
1:L5:512:U:H3	1:L5:647:G:H1	1.56	0.54
13:LJ:35:ARG:O	13:LJ:39:VAL:HG13	2.08	0.54
17:LO:121:PRO:HA	17:LO:124:LEU:HD12	1.90	0.54
40:LI:42:ARG:HG3	40:LI:47:THR:HG23	1.89	0.54
46:S2:533:A:N3	46:S2:552:G:N2	2.55	0.54
46:S2:554:A:C6	46:S2:555:A:C2	2.96	0.54
46:S2:1098:C:H2'	46:S2:1099:G:C8	2.42	0.54
80:u:25:C:C2	80:u:26:A:N7	2.76	0.54
1:L5:684:G:H4'	8:LE:100:LYS:HB2	1.89	0.54
1:L5:963:G:H1	1:L5:2095:A:H61	1.55	0.54
1:L5:965:G:H2'	1:L5:2092:G:N2	2.22	0.54
1:L5:994:G:C5	1:L5:1050:C:C4	2.96	0.54
1:L5:1327:C:H2'	1:L5:1328:G:C8	2.43	0.54
1:L5:1763:C:H2'	1:L5:1764:G:N7	2.23	0.54
1:L5:1977:C:H6	1:L5:1978:C:N3	2.05	0.54
12:LI:121:LYS:HD2	12:LI:121:LYS:N	2.23	0.54
24:LV:133:ALA:HB1	24:LV:139:ILE:HD11	1.89	0.54
46:S2:819:G:H4'	51:SE:255:ARG:NH1	2.23	0.54
53:SG:57:ASP:HA	53:SG:106:LEU:HA	1.89	0.54
53:SG:142:ARG:HB2	53:SG:153:VAL:HG13	1.90	0.54
56:SJ:50:LEU:O	56:SJ:51:ALA:C	2.50	0.54
73:Sa:21:ILE:HD13	73:Sa:72:HIS:HB3	1.89	0.54
1:L5:2101:C:H2'	1:L5:2102:G:C8	2.43	0.54
9:LF:32:ARG:O	9:LF:36:LYS:HG3	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:LW:90:ILE:CG2	53:SG:145:PHE:HZ	2.20	0.54
46:S2:185:G:H2'	46:S2:186:C:C6	2.43	0.54
46:S2:186:C:H2'	46:S2:187:G:C8	2.43	0.54
46:S2:380:G:OP1	55:SI:31:ARG:HD2	2.08	0.54
47:SA:1:MET:HE1	68:SV:79:VAL:HA	1.90	0.54
47:SA:116:PHE:HE2	49:SC:64:THR:HG22	1.73	0.54
47:SA:184:ARG:HG2	47:SA:191:ARG:HG2	1.90	0.54
55:SI:129:LEU:HD23	55:SI:134:GLU:OE2	2.08	0.54
56:SJ:163:SER:C	56:SJ:164:PRO:O	2.47	0.54
64:SR:107:LYS:HA	64:SR:112:GLY:HA3	1.88	0.54
1:L5:379:G:C2'	1:L5:380:U:H5'	2.38	0.53
1:L5:4277:G:H5''	22:LT:17:ARG:HG2	1.90	0.53
1:L5:5061:A:H5''	1:L5:5062:G:C8	2.43	0.53
7:LD:210:TYR:O	7:LD:214:GLU:HG2	2.07	0.53
10:LG:215:LEU:O	10:LG:219:VAL:HG23	2.08	0.53
46:S2:839:C:H41	71:SY:10:ARG:HA	1.73	0.53
46:S2:1568:C:H2'	46:S2:1569:A:C8	2.43	0.53
51:SE:64:ILE:HG22	51:SE:70:ILE:HD11	1.89	0.53
52:SF:134:VAL:HG13	52:SF:135:ARG:NH1	2.22	0.53
63:SQ:107:GLU:O	63:SQ:111:ILE:HD12	2.08	0.53
66:ST:104:LEU:HB3	66:ST:121:ARG:NH1	2.23	0.53
1:L5:1204:C:H2'	1:L5:1205:G:C8	2.42	0.53
1:L5:1403:G:C2	1:L5:1404:G:C5	2.96	0.53
1:L5:1964:A:H61	1:L5:2023:C:C2'	2.21	0.53
1:L5:1982:G:H4'	1:L5:2008:U:H2'	1.89	0.53
1:L5:4991:U:H2'	1:L5:4992:G:H8	1.73	0.53
46:S2:555:A:H2'	46:S2:557:U:O4'	2.08	0.53
51:SE:19:MET:HE1	51:SE:108:ARG:HD2	1.90	0.53
51:SE:192:ILE:HB	51:SE:243:GLY:HA3	1.91	0.53
52:SF:111:VAL:HG11	52:SF:178:ILE:HD13	1.91	0.53
79:Sg:116:ASP:OD2	79:Sg:118:ARG:HB2	2.07	0.53
1:L5:138:G:H2'	1:L5:139:G:H8	1.72	0.53
1:L5:1064:G:C8	1:L5:1064:G:H5''	2.42	0.53
1:L5:1415:G:O5'	1:L5:1415:G:H8	1.90	0.53
1:L5:3726:A:H2'	1:L5:3727:A:C8	2.43	0.53
25:LW:91:MET:HB2	25:LW:97:LYS:HD3	1.89	0.53
25:LW:93:LYS:CG	25:LW:99:GLU:HB2	2.38	0.53
25:LW:103:ALA:HB3	25:LW:106:GLU:OE1	2.08	0.53
46:S2:483:C:H5''	70:SX:48:LYS:HE3	1.90	0.53
46:S2:541:U:C6	46:S2:542:U:H5	2.26	0.53
46:S2:544:G:H2'	46:S2:545:A:C8	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S2:925:G:H1	46:S2:1017:U:H3	1.56	0.53
53:SG:21:GLU:C	53:SG:23:LYS:H	2.15	0.53
60:SN:33:VAL:HG21	60:SN:66:VAL:HG11	1.90	0.53
80:u:14:A:C2	80:u:22:G:H1'	2.44	0.53
1:L5:1696:C:H2'	1:L5:1697:G:O4'	2.08	0.53
1:L5:1982:G:H1'	1:L5:2008:U:H3	1.74	0.53
10:LG:170:LEU:HD23	10:LG:201:THR:HG21	1.90	0.53
13:LJ:80:GLU:OE1	13:LJ:80:GLU:HA	2.08	0.53
25:LW:93:LYS:N	25:LW:98:PRO:N	2.57	0.53
46:S2:988:C:H5''	48:SB:116:LYS:HG2	1.90	0.53
46:S2:1826:G:N7	86:S2:1966:NMY:N9	2.57	0.53
59:SM:79:VAL:HG11	59:SM:88:TRP:HZ3	1.72	0.53
65:SS:108:ARG:O	65:SS:112:GLU:HG2	2.09	0.53
71:SY:4:THR:HB	71:SY:30:PRO:HD2	1.91	0.53
79:Sg:147:HIS:HB2	79:Sg:151:VAL:HG22	1.90	0.53
81:v:17:A:C5	81:v:19:G:H5'	2.43	0.53
1:L5:74:G:H5'	14:LL:59:VAL:HG13	1.91	0.53
1:L5:492:U:H4'	6:LC:1:MET:HE2	1.90	0.53
1:L5:516:C:C4	1:L5:518:G:N7	2.76	0.53
1:L5:1202:C:C2	1:L5:1203:G:H4'	2.43	0.53
1:L5:4238:G:H2'	1:L5:4239:A:C8	2.43	0.53
3:L8:83:C:N4	27:LY:50:ARG:HH21	2.01	0.53
25:LW:107:GLN:HG3	25:LW:109:ILE:H	1.73	0.53
46:S2:170:A:H4'	53:SG:136:LYS:HD2	1.91	0.53
46:S2:860:G:H21	69:SW:107:SER:HB3	1.72	0.53
49:SC:68:ARG:HH11	49:SC:68:ARG:HG3	1.74	0.53
53:SG:11:GLY:O	53:SG:129:VAL:HG21	2.08	0.53
55:SI:161:LEU:O	55:SI:165:GLN:HG3	2.08	0.53
77:Se:39:ASN:HA	77:Se:43:VAL:HG22	1.91	0.53
1:L5:255:C:C3'	1:L5:256:G:C8	2.92	0.53
1:L5:499:G:C3'	1:L5:500:G:H5'	2.39	0.53
1:L5:662:C:H2'	1:L5:663:G:O4'	2.08	0.53
1:L5:1258:G:H3'	1:L5:1259:G:O4'	2.08	0.53
1:L5:1364:U:H5''	1:L5:1364:U:C6	2.42	0.53
1:L5:1365:C:H3'	1:L5:1365:C:C6	2.44	0.53
1:L5:1976:G:C8	1:L5:2002:A:C4	2.97	0.53
1:L5:2520:C:H2'	1:L5:2521:G:H8	1.72	0.53
5:LB:52:GLY:HA2	5:LB:341:LYS:HE3	1.89	0.53
16:LN:60:VAL:HG22	16:LN:134:LEU:HB2	1.91	0.53
25:LW:91:MET:HB2	25:LW:97:LYS:HB2	1.89	0.53
46:S2:529:A:H61	46:S2:555:A:H61	1.56	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:SB:185:VAL:O	48:SB:189:ILE:HG13	2.09	0.53
53:SG:200:LYS:O	53:SG:204:GLU:HG2	2.08	0.53
59:SM:124:ILE:O	59:SM:128:PHE:CB	2.41	0.53
66:ST:104:LEU:HB3	66:ST:121:ARG:HH11	1.73	0.53
75:Sc:63:ARG:HB2	75:Sc:63:ARG:HH11	1.73	0.53
81:v:15:G:N2	81:v:16:A:H61	2.07	0.53
81:v:52:G:C6	81:v:53:G:C5	2.97	0.53
1:L5:1405:C:C5	1:L5:1408:G:C5	2.96	0.53
1:L5:1468:C:H2'	1:L5:1469:C:H6	1.73	0.53
1:L5:1972:G:N7	1:L5:2001:G:C6	2.76	0.53
10:LG:182:CYS:HB3	10:LG:222:ILE:HG12	1.90	0.53
25:LW:93:LYS:HE3	25:LW:99:GLU:HB3	1.90	0.53
25:LW:117:LYS:HG2	25:LW:120:GLN:NE2	2.21	0.53
31:Lc:11:LEU:H	31:Lc:11:LEU:CD2	2.21	0.53
46:S2:51:U:H2'	46:S2:52:G:C8	2.43	0.53
54:SH:37:LYS:O	54:SH:41:ARG:HB2	2.09	0.53
74:Sb:56:CYS:HB2	74:Sb:63:LEU:HD21	1.89	0.53
80:u:36:G:H5''	80:u:36:G:H8	1.73	0.53
1:L5:433:A:C2	1:L5:3867:A2M:H4'	2.43	0.53
1:L5:1617:G:H1'	1:L5:2513:A:N6	2.24	0.53
1:L5:2010:A:H1'	1:L5:2011:C:C5	2.44	0.53
1:L5:3607:U:H2'	1:L5:3608:A:C8	2.43	0.53
1:L5:3772:U:H5	1:L5:3776:G:O6	1.92	0.53
1:L5:4591:U:H2'	1:L5:4592:C:C6	2.44	0.53
1:L5:4653:C:H2'	1:L5:4654:C:C6	2.44	0.53
3:L8:19:C:H2'	3:L8:20:A:C8	2.43	0.53
5:LB:303:ALA:HB3	5:LB:312:LYS:HG3	1.90	0.53
20:LR:178:GLN:CG	20:LR:179:ALA:H	2.22	0.53
46:S2:501:C:H2'	46:S2:502:C:H5''	1.91	0.53
46:S2:1401:A:H2'	46:S2:1402:A:C8	2.43	0.53
55:SI:139:LYS:HG2	55:SI:140:LYS:H	1.74	0.53
56:SJ:169:ARG:O	56:SJ:170:PRO:C	2.49	0.53
1:L5:261:G:C4	1:L5:262:G:H1'	2.44	0.53
1:L5:1255:A:H2'	1:L5:1256:G:H3'	1.90	0.53
1:L5:1776:A:H2'	1:L5:1777:C:C6	2.44	0.53
1:L5:1975:G:H5''	1:L5:1985:G:O5'	2.08	0.53
1:L5:4724:A:O2'	5:LB:104:THR:HG22	2.08	0.53
6:LC:339:THR:O	6:LC:343:GLN:HG3	2.09	0.53
23:LU:80:LYS:HG2	23:LU:110:TYR:CE2	2.44	0.53
46:S2:841:G:H2'	46:S2:842:C:C6	2.44	0.53
46:S2:1745:A:H5''	46:S2:1745:A:C8	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:SG:8:PRO:HD3	53:SG:112:VAL:HG22	1.91	0.53
58:SL:22:ARG:HD2	58:SL:24:LEU:N	2.21	0.53
58:SL:68:ILE:CD1	58:SL:143:LEU:HD21	2.39	0.53
59:SM:36:ARG:O	59:SM:40:LYS:HG2	2.09	0.53
64:SR:78:ARG:HA	64:SR:81:ARG:HD3	1.90	0.53
67:SU:80:PHE:HB3	76:Sd:52:PHE:HB3	1.90	0.53
72:SZ:69:THR:HG23	72:SZ:107:VAL:O	2.09	0.53
81:v:5:C:H42	81:v:68:C:N4	2.07	0.53
1:L5:264:C:C3'	1:L5:264:C:C6	2.92	0.53
1:L5:1408:G:H2'	1:L5:1408:G:N3	2.24	0.53
1:L5:1969:G:C8	1:L5:2019:C:N4	2.77	0.53
1:L5:3786:U:O2	1:L5:3814:U:H4'	2.08	0.53
46:S2:533:A:H1'	46:S2:552:G:H22	1.74	0.53
46:S2:557:U:H2'	46:S2:558:G:H5''	1.91	0.53
46:S2:750:C:H3'	46:S2:751:G:H5'	1.91	0.53
47:SA:52:LYS:HG3	64:SR:109:LEU:HD22	1.90	0.53
51:SE:101:LEU:O	51:SE:102:ILE:HD13	2.08	0.53
56:SJ:97:ILE:O	56:SJ:99:GLY:N	2.40	0.53
80:u:47:U:H2'	80:u:50:U:OP1	2.09	0.53
1:L5:698:G:N7	1:L5:699:C:C5	2.76	0.52
1:L5:753:C:H2'	1:L5:754:U:H6	1.74	0.52
1:L5:2478:C:C4	1:L5:2479:G:C6	2.97	0.52
3:L8:126:C:H4'	3:L8:127:U:OP1	2.07	0.52
31:Lc:104:ILE:HD12	31:Lc:105:ILE:HG13	1.90	0.52
46:S2:448:A:H5''	55:SI:25:ARG:HA	1.91	0.52
46:S2:502:C:C6	51:SE:66:MET:HB3	2.44	0.52
46:S2:567:C:H2'	46:S2:568:C:H5	1.74	0.52
46:S2:750:C:H2'	46:S2:752:G:N1	2.24	0.52
1:L5:457:G:H2'	1:L5:458:C:C6	2.43	0.52
1:L5:907:C:H2'	1:L5:908:G:H8	1.73	0.52
1:L5:1332:C:H2'	1:L5:1333:A:C8	2.44	0.52
1:L5:2844:A:O2'	1:L5:4631:G:H4'	2.09	0.52
3:L8:121:G:C2'	3:L8:122:G:H5'	2.38	0.52
30:Lb:95:ARG:O	30:Lb:99:ILE:HG13	2.09	0.52
46:S2:529:A:N1	46:S2:555:A:N1	2.57	0.52
46:S2:1628:C:H2'	46:S2:1629:C:H6	1.73	0.52
53:SG:21:GLU:C	53:SG:23:LYS:N	2.66	0.52
78:Sf:132:MET:HG2	78:Sf:140:TYR:C	2.34	0.52
79:Sg:285:GLN:O	79:Sg:302:TYR:HB3	2.08	0.52
80:u:1:G:H1'	80:u:2:C:H5	1.73	0.52
80:u:17:C:N4	80:u:19:G:H8	2.07	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:v:43:C:H3'	81:v:44:G:H8	1.74	0.52
1:L5:182:G:H2'	1:L5:183:C:C2	2.44	0.52
1:L5:1167:C:OP1	1:L5:1167:C:H3'	2.09	0.52
1:L5:1247:U:H3	1:L5:1263:A:H61	1.57	0.52
1:L5:1299:G:H2'	1:L5:1300:G:O4'	2.09	0.52
1:L5:2487:G:C5	1:L5:2489:C:H1'	2.44	0.52
1:L5:3868:G:H22	1:L5:3900:G:H1'	1.75	0.52
1:L5:4199:C:O2	12:LI:111:LEU:HD21	2.09	0.52
9:LF:184:ILE:HG23	9:LF:189:ASP:HB3	1.91	0.52
10:LG:95:LEU:HD21	10:LG:156:VAL:HG21	1.91	0.52
28:LZ:103:ASP:OD1	28:LZ:106:LEU:HB2	2.08	0.52
48:SB:109:LYS:O	48:SB:113:MET:HG3	2.09	0.52
48:SB:173:THR:O	48:SB:177:GLN:HG2	2.08	0.52
53:SG:20:ASP:OD2	53:SG:23:LYS:HG3	2.08	0.52
60:SN:127:ARG:O	60:SN:131:THR:HG23	2.09	0.52
81:v:36:G:N2	82:w:16:C:N3	2.49	0.52
81:v:72:C:C2'	81:v:73:A:OP2	2.58	0.52
1:L5:264:C:C6	1:L5:264:C:H3'	2.44	0.52
1:L5:667:A:C3'	1:L5:668:C:H5'	2.39	0.52
1:L5:676:C:H2'	1:L5:677:G:C8	2.44	0.52
1:L5:1256:G:OP1	1:L5:1256:G:C8	2.63	0.52
1:L5:2776:G:C5	86:L5:5384:NMY:H82	2.45	0.52
1:L5:4537:C:H2'	1:L5:4538:G:H8	1.72	0.52
46:S2:107:A:H2'	46:S2:108:G:C8	2.45	0.52
46:S2:746:C:H3'	46:S2:746:C:H6	1.75	0.52
55:SI:130:THR:HB	55:SI:131:PRO:HD2	1.91	0.52
75:Sc:32:VAL:HG11	75:Sc:58:LEU:HD11	1.90	0.52
81:v:35:C:H2'	81:v:36:G:H8	1.73	0.52
1:L5:502:C:O2'	1:L5:503:C:H5''	2.09	0.52
1:L5:645:G:H8	1:L5:645:G:O5'	1.93	0.52
1:L5:758:G:OP1	11:LH:52:LYS:NZ	2.35	0.52
1:L5:1048:G:N3	1:L5:1048:G:H3'	2.23	0.52
1:L5:1255:A:C4	1:L5:1257:A:H5''	2.44	0.52
1:L5:1407:C:C2	1:L5:1409:C:C2	2.98	0.52
1:L5:3684:G:H2'	1:L5:3685:C:C6	2.44	0.52
1:L5:5061:A:H5''	1:L5:5062:G:H8	1.73	0.52
13:LJ:44:THR:HG21	13:LJ:72:CYS:SG	2.49	0.52
21:LS:81:TRP:HZ3	21:LS:130:GLU:HG3	1.75	0.52
46:S2:793:G:H2'	46:S2:794:A:H1'	1.90	0.52
46:S2:804:U:H2'	46:S2:805:U:C6	2.44	0.52
46:S2:1797:U:H2'	46:S2:1798:C:C6	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:SE:20:LEU:HD21	51:SE:46:ILE:HD12	1.92	0.52
63:SQ:108:ILE:HG13	63:SQ:109:LYS:N	2.24	0.52
65:SS:26:ILE:HG13	65:SS:45:LEU:HD11	1.90	0.52
79:Sg:249:CYS:HA	79:Sg:258:ILE:HD12	1.90	0.52
79:Sg:286:CYS:HA	79:Sg:302:TYR:HA	1.92	0.52
80:u:7:A:H61	80:u:66:U:H3	1.58	0.52
81:v:70:G:H3'	81:v:71:G:N2	2.24	0.52
1:L5:484:U:C2	1:L5:486:C:N4	2.77	0.52
1:L5:498:C:N4	1:L5:656:C:H42	2.08	0.52
1:L5:1304:C:H2'	1:L5:1305:C:H6	1.75	0.52
1:L5:1406:G:H3'	1:L5:1407:C:H3'	1.90	0.52
1:L5:4699:U:H1'	1:L5:4700:A:H5''	1.90	0.52
5:LB:121:ASN:ND2	5:LB:124:LYS:HD3	2.25	0.52
7:LD:200:MET:HE3	7:LD:241:LYS:HE3	1.92	0.52
46:S2:561:A:OP1	56:SJ:164:PRO:HB3	2.10	0.52
46:S2:1007:C:H2'	46:S2:1008:A:C8	2.44	0.52
47:SA:1:MET:CE	68:SV:79:VAL:HA	2.40	0.52
51:SE:153:LEU:HD12	53:SG:216:ARG:NH1	2.25	0.52
52:SF:73:THR:HG22	52:SF:93:VAL:HG21	1.92	0.52
52:SF:127:ARG:HD2	52:SF:136:ARG:CZ	2.39	0.52
78:Sf:108:VAL:HG12	78:Sf:114:ILE:HG22	1.92	0.52
79:Sg:14:HIS:CE1	79:Sg:35:SER:HB2	2.44	0.52
23:LU:28:PRO:HB2	23:LU:34:MET:HB3	1.92	0.52
28:LZ:53:VAL:HA	28:LZ:57:MET:HE2	1.90	0.52
31:Lc:9:LYS:C	31:Lc:11:LEU:N	2.66	0.52
46:S2:1025:U:H2'	46:S2:1026:C:O4'	2.10	0.52
46:S2:1545:A:H2'	46:S2:1546:G:C8	2.45	0.52
47:SA:80:ARG:HH21	47:SA:126:ASP:HB2	1.74	0.52
50:SD:47:GLU:HB3	50:SD:87:TYR:CE2	2.45	0.52
81:v:71:G:N2	81:v:71:G:OP2	2.39	0.52
1:L5:106:A:H2'	1:L5:107:G:O4'	2.09	0.52
1:L5:490:C:H2'	1:L5:491:G:H5''	1.90	0.52
1:L5:493:G:C2	1:L5:661:C:C2	2.97	0.52
1:L5:741:C:H2'	1:L5:742:G:C4'	2.39	0.52
1:L5:994:G:C5	1:L5:995:C:H1'	2.45	0.52
1:L5:1097:C:H2'	1:L5:1098:G:C8	2.44	0.52
1:L5:1387:A:C6	29:La:112:LEU:HD13	2.45	0.52
1:L5:1768:C:O2	1:L5:1772:C:N4	2.43	0.52
1:L5:1846:G:H2'	1:L5:1847:C:C6	2.44	0.52
1:L5:2007:G:H5''	1:L5:2007:G:H8	1.74	0.52
1:L5:4100:C:H1'	1:L5:4110:C:H41	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
86:L5:5385:NMY:H1	86:L5:5385:NMY:H15	1.92	0.52
14:LL:69:LYS:HA	14:LL:159:ASN:HD21	1.74	0.52
46:S2:1627:C:H5''	66:ST:41:LYS:HD2	1.91	0.52
46:S2:1748:G:H5''	46:S2:1748:G:H8	1.75	0.52
53:SG:63:MET:HG2	53:SG:99:GLY:O	2.10	0.52
62:SP:43:ARG:HA	62:SP:46:ASN:ND2	2.25	0.52
81:v:21:A:H2'	81:v:22:G:C8	2.45	0.52
1:L5:176:G:H2'	1:L5:177:G:C8	2.45	0.52
1:L5:469:C:H2'	1:L5:470:A:H8	1.74	0.52
1:L5:2486:G:H5''	1:L5:2487:G:C8	2.44	0.52
1:L5:3861:A:H2'	1:L5:3862:A:C8	2.45	0.52
13:LJ:109:ILE:HG12	13:LJ:128:LEU:HB2	1.92	0.52
15:LM:123:ILE:HD13	17:LO:182:GLU:HG2	1.92	0.52
40:L1:28:ARG:HH11	40:L1:28:ARG:HG3	1.75	0.52
46:S2:120:U:H1'	51:SE:33:THR:HB	1.91	0.52
46:S2:1199:A:H2'	46:S2:1200:A:C8	2.45	0.52
46:S2:1628:C:H2'	46:S2:1629:C:C6	2.44	0.52
46:S2:1733:U:H2'	46:S2:1734:G:O4'	2.09	0.52
56:SJ:87:LEU:HD13	56:SJ:100:LEU:HD21	1.91	0.52
80:u:10:G:N3	80:u:10:G:H2'	2.24	0.52
1:L5:255:C:C3'	1:L5:256:G:H8	2.23	0.52
1:L5:671:G:H2'	1:L5:672:C:H6	1.74	0.52
1:L5:741:C:C2'	1:L5:742:G:C5'	2.83	0.52
1:L5:1326:A2M:HM'2	1:L5:1327:C:O4'	2.09	0.52
1:L5:1443:A:N6	1:L5:2104:G:C6	2.78	0.52
1:L5:2481:G:C2	1:L5:2482:C:H1'	2.45	0.52
1:L5:2583:C:OP1	35:Lg:54:ARG:HB2	2.10	0.52
1:L5:3721:U:H2'	1:L5:3722:G:C8	2.45	0.52
1:L5:4199:C:H42	12:LI:111:LEU:HD11	1.74	0.52
14:LL:144:LEU:HD12	14:LL:145:LYS:N	2.25	0.52
35:Lg:82:MET:HG2	35:Lg:87:VAL:HG23	1.92	0.52
46:S2:1288:OMU:HN3	46:S2:1311:C:H42	1.57	0.52
64:SR:77:GLU:HG3	64:SR:81:ARG:HH11	1.75	0.52
76:Sd:30:LEU:HA	76:Sd:39:CYS:HA	1.92	0.52
79:Sg:57:ARG:NH1	79:Sg:57:ARG:HB2	2.24	0.52
80:u:11:C:H2'	80:u:12:U:C6	2.45	0.52
81:v:54:U:H3'	81:v:55:U:C5	2.45	0.52
81:v:55:U:O4	81:v:58:A:N6	2.43	0.52
1:L5:189:G:C6	1:L5:253:G:C2	2.98	0.51
1:L5:695:G:H2'	1:L5:695:G:OP2	2.11	0.51
1:L5:963:G:C6	1:L5:964:A:C6	2.98	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:1304:C:H2'	1:L5:1305:C:C6	2.45	0.51
1:L5:1500:A:H5''	1:L5:1501:C:H5''	1.92	0.51
1:L5:1969:G:N2	1:L5:1999:A:C2	2.78	0.51
9:LF:75:ALA:HB2	22:LT:140:PHE:CE2	2.45	0.51
12:LI:61:SER:HA	12:LI:126:VAL:HG12	1.91	0.51
46:S2:532:C:H2'	46:S2:533:A:O4'	2.10	0.51
46:S2:839:C:C2	46:S2:841:G:C4	2.98	0.51
58:SL:75:GLY:HA3	58:SL:88:ILE:HD12	1.92	0.51
59:SM:122:ASP:O	59:SM:123:VAL:HG23	2.11	0.51
71:SY:102:THR:HG23	71:SY:107:ARG:HH11	1.75	0.51
78:Sf:123:SER:OG	78:Sf:126:CYS:HB2	2.10	0.51
81:v:29:G:H8	81:v:29:G:H5''	1.73	0.51
1:L5:760:G:H1	1:L5:903:C:H2'	1.75	0.51
1:L5:2489:C:H3'	1:L5:2489:C:OP2	2.10	0.51
1:L5:3736:A:H2'	1:L5:3737:A:C8	2.46	0.51
20:LR:178:GLN:CD	20:LR:179:ALA:H	2.19	0.51
37:Li:23:LYS:HD3	37:Li:23:LYS:H	1.74	0.51
46:S2:1203:G:H2'	46:S2:1204:A:C8	2.45	0.51
46:S2:1798:C:H2'	46:S2:1799:G:O4'	2.10	0.51
51:SE:67:GLN:O	51:SE:68:ARG:C	2.53	0.51
52:SF:204:ARG:HD2	75:Sc:63:ARG:NH2	2.25	0.51
56:SJ:67:ASP:HB3	56:SJ:70:ARG:H	1.76	0.51
56:SJ:83:ARG:HG2	56:SJ:150:ARG:NH1	2.26	0.51
59:SM:89:VAL:HG11	59:SM:109:VAL:HG21	1.91	0.51
80:u:14:A:H2'	80:u:15:G:C1'	2.40	0.51
80:u:24:G:H3'	80:u:25:C:C6	2.44	0.51
1:L5:255:C:O5'	1:L5:255:C:H6	1.94	0.51
1:L5:444:G:H2'	1:L5:445:U:H6	1.75	0.51
1:L5:671:G:H2'	1:L5:672:C:C6	2.45	0.51
1:L5:733:A:C8	1:L5:733:A:H5''	2.46	0.51
1:L5:1662:C:H2'	1:L5:1663:C:C6	2.45	0.51
1:L5:2448:G:H2'	1:L5:2449:A:C8	2.46	0.51
1:L5:4473:A:H5''	41:Lm:95:ILE:HD12	1.92	0.51
1:L5:4584:A:H2'	1:L5:4585:U:O4'	2.09	0.51
1:L5:4988:U:H2'	1:L5:5061:A:N7	2.24	0.51
10:LG:61:ILE:HA	10:LG:64:GLN:HE21	1.76	0.51
10:LG:146:LEU:HD13	10:LG:205:THR:HG21	1.91	0.51
12:LI:156:LYS:HG2	12:LI:163:GLN:HB2	1.92	0.51
46:S2:795:A:H8	46:S2:795:A:O5'	1.93	0.51
46:S2:1741:U:H2'	46:S2:1742:C:O4'	2.11	0.51
51:SE:11:ARG:HA	51:SE:28:ALA:HB2	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:SE:22:LYS:HG3	51:SE:23:LEU:HD22	1.91	0.51
53:SG:135:PRO:HG2	53:SG:144:LEU:HD22	1.92	0.51
70:SX:66:ILE:HG13	77:SE:5:SER:HB2	1.92	0.51
72:SZ:88:LEU:HD13	72:SZ:109:TYR:HD2	1.75	0.51
80:u:15:G:H3'	80:u:16:U:H6	1.75	0.51
80:u:24:G:H3'	80:u:25:C:H6	1.75	0.51
80:u:51:U:H3	80:u:63:G:H22	1.58	0.51
81:v:9:A:H8	81:v:12:C:N4	2.07	0.51
1:L5:253:G:C5	1:L5:254:G:C6	2.99	0.51
1:L5:1983:A:H61	1:L5:1987:C:H41	1.58	0.51
1:L5:1987:C:O5'	1:L5:2008:U:N3	2.43	0.51
1:L5:2480:G:C2	1:L5:2481:G:C4	2.98	0.51
1:L5:2744:A:H2'	1:L5:2745:A:C8	2.46	0.51
1:L5:4220:6MZ:H2'	1:L5:4222:G:H5''	1.93	0.51
46:S2:15:U:H2'	46:S2:16:G:O4'	2.10	0.51
46:S2:170:A:P	53:SG:140:ARG:HH11	2.33	0.51
46:S2:750:C:H6	46:S2:750:C:O5'	1.92	0.51
46:S2:1037:G:H4'	46:S2:1845:A:H4'	1.91	0.51
48:SB:25:PHE:HA	48:SB:28:LYS:HG3	1.93	0.51
49:SC:78:LEU:HD12	49:SC:98:LEU:HD21	1.91	0.51
51:SE:95:THR:HG22	71:SY:16:ARG:HG3	1.92	0.51
53:SG:5:ILE:HD11	53:SG:113:ILE:HG12	1.92	0.51
56:SJ:79:ARG:HG2	56:SJ:83:ARG:NE	2.25	0.51
64:SR:20:TYR:CD1	64:SR:23:ARG:HD2	2.46	0.51
81:v:22:G:N7	81:v:46:G:O6	2.44	0.51
1:L5:694:C:O5'	1:L5:694:C:H6	1.93	0.51
1:L5:908:G:O2'	1:L5:909:A:H5'	2.10	0.51
1:L5:1701:A:H2'	1:L5:1702:C:H5	1.75	0.51
1:L5:1984:A:H3'	1:L5:2011:C:H5''	1.92	0.51
1:L5:2705:G:H22	1:L5:2710:C:H5	1.57	0.51
1:L5:3774:A:H2'	1:L5:3775:A:C8	2.45	0.51
1:L5:4199:C:N3	12:LI:111:LEU:HD21	2.26	0.51
1:L5:4392:OMG:HM21	1:L5:4394:A:H2'	1.92	0.51
1:L5:4458:C:H2'	1:L5:4459:U:C6	2.45	0.51
1:L5:4776:G:H2'	1:L5:4858:C:N4	2.25	0.51
31:Lc:18:LEU:O	31:Lc:22:MET:HG2	2.11	0.51
46:S2:92:A:H1'	51:SE:3:ARG:HB2	1.92	0.51
46:S2:436:OMG:HM22	46:S2:437:G:H5'	1.93	0.51
65:SS:63:GLU:O	65:SS:67:VAL:HG23	2.09	0.51
80:u:29:G:H2'	80:u:30:G:O4'	2.10	0.51
1:L5:1977:C:C2	1:L5:1991:A:H2'	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:4708:A:N3	1:L5:4709:U:H5'	2.26	0.51
6:LC:266:THR:O	6:LC:267:TRP:HB2	2.09	0.51
25:LW:93:LYS:H	25:LW:98:PRO:N	2.08	0.51
37:Li:43:MET:HE2	37:Li:43:MET:HA	1.93	0.51
46:S2:25:A:HO2'	46:S2:26:U:H6	1.59	0.51
46:S2:540:U:N3	46:S2:544:G:C2	2.79	0.51
46:S2:1101:U:H2'	46:S2:1102:G:H8	1.76	0.51
47:SA:128:ARG:HG3	47:SA:128:ARG:HH11	1.76	0.51
55:SI:149:TYR:O	55:SI:153:LYS:HG3	2.11	0.51
81:v:59:U:H3'	81:v:60:U:C6	2.45	0.51
1:L5:497:G:O2'	1:L5:498:C:H5'	2.10	0.51
1:L5:1067:G:C2'	1:L5:1068:G:O5'	2.57	0.51
1:L5:1633:G:H5'	1:L5:1634:A:OP1	2.11	0.51
8:LE:46:ARG:O	8:LE:62:MET:HE1	2.11	0.51
20:LR:17:CYS:HB3	20:LR:52:ARG:NH1	2.26	0.51
25:LW:94:ARG:C	25:LW:98:PRO:HD2	2.35	0.51
47:SA:38:ILE:HD11	47:SA:150:THR:HG22	1.92	0.51
53:SG:145:PHE:O	53:SG:146:ASN:C	2.54	0.51
67:SU:55:ARG:HG2	67:SU:87:ARG:HD3	1.92	0.51
76:Sd:46:TYR:O	76:Sd:50:ILE:HG12	2.10	0.51
1:L5:2487:G:H1'	1:L5:2493:G:N1	2.26	0.51
1:L5:3610:A:H2'	1:L5:3611:A:C8	2.46	0.51
13:LJ:48:PRO:HB2	13:LJ:70:VAL:HG12	1.93	0.51
26:LX:73:HIS:CD2	26:LX:115:LYS:HD2	2.46	0.51
46:S2:461:U:H2'	46:S2:462:OMC:C6	2.46	0.51
46:S2:544:G:C4	46:S2:545:A:C8	2.99	0.51
46:S2:590:A2M:HM'2	46:S2:592:C:H2'	1.91	0.51
46:S2:1101:U:H2'	46:S2:1102:G:C8	2.45	0.51
46:S2:1431:G:O2'	46:S2:1432:U:H5'	2.10	0.51
56:SJ:50:LEU:HD13	56:SJ:105:PHE:CE1	2.46	0.51
59:SM:93:LYS:HB2	59:SM:101:ARG:O	2.11	0.51
63:SQ:24:HIS:O	63:SQ:68:ILE:HA	2.11	0.51
1:L5:1701:A:H2'	1:L5:1702:C:C5	2.45	0.51
1:L5:2497:C:H2'	1:L5:2498:C:O4'	2.10	0.51
1:L5:2705:G:N1	1:L5:2710:C:H5	2.05	0.51
1:L5:3923:A:H2'	1:L5:3924:C:C6	2.46	0.51
1:L5:4688:C:H2'	1:L5:4689:PSU:C6	2.46	0.51
17:LO:165:LYS:O	17:LO:169:ARG:HG3	2.11	0.51
46:S2:328:U:HO2'	46:S2:329:G:H8	1.58	0.51
46:S2:560:A:C5'	56:SJ:174:LYS:HE2	2.41	0.51
46:S2:674:C:H2'	46:S2:675:U:C6	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S2:1395:C:H1'	46:S2:1474:A:C5	2.46	0.51
51:SE:104:ASP:OD1	51:SE:110:ALA:HB2	2.10	0.51
53:SG:17:GLU:HG3	53:SG:17:GLU:O	2.10	0.51
57:SK:7:ASN:OD1	57:SK:40:VAL:HG22	2.11	0.51
61:SO:129:ILE:O	73:Sa:65:PRO:HG3	2.11	0.51
66:ST:133:ARG:O	66:ST:137:GLN:HG3	2.11	0.51
74:Sb:36:LYS:HE3	74:Sb:43:ILE:HG12	1.93	0.51
75:Sc:46:VAL:HG11	75:Sc:50:VAL:HG21	1.93	0.51
79:Sg:30:MET:HG2	79:Sg:42:MET:HG3	1.91	0.51
79:Sg:146:SER:HA	79:Sg:177:TRP:CH2	2.46	0.51
79:Sg:188:HIS:HB3	79:Sg:219:TRP:CZ2	2.45	0.51
1:L5:268:G:H2'	1:L5:269:G:H8	1.76	0.51
1:L5:459:C:H2'	1:L5:460:C:C6	2.46	0.51
1:L5:1201:U:C2	1:L5:1203:G:C8	2.99	0.51
1:L5:1279:A:C8	1:L5:1279:A:H5''	2.46	0.51
1:L5:1773:U:H3'	1:L5:1774:C:C6	2.46	0.51
1:L5:3610:A:H2'	1:L5:3611:A:H8	1.75	0.51
13:LJ:86:GLY:O	13:LJ:90:ARG:HG2	2.11	0.51
15:LM:101:LYS:HA	15:LM:104:MET:HE2	1.92	0.51
25:LW:91:MET:HB3	25:LW:96:GLN:OE1	2.11	0.51
46:S2:1208:A:H2'	46:S2:1209:A:H8	1.76	0.51
46:S2:1787:G:H2'	46:S2:1788:A:O4'	2.10	0.51
52:SF:99:ILE:HG23	72:SZ:67:LEU:HD21	1.93	0.51
56:SJ:163:SER:O	56:SJ:164:PRO:C	2.52	0.51
57:SK:48:ALA:O	57:SK:52:LEU:HG	2.11	0.51
63:SQ:8:GLN:HG2	63:SQ:99:TYR:CE1	2.46	0.51
66:ST:7:LYS:HE3	66:ST:66:LEU:HD22	1.93	0.51
78:Sf:89:LYS:HG3	78:Sf:90:LYS:N	2.26	0.51
80:u:49:C:H2'	80:u:50:U:C6	2.46	0.51
1:L5:309:C:H5''	1:L5:310:G:O4'	2.11	0.50
1:L5:444:G:H2'	1:L5:445:U:C6	2.46	0.50
1:L5:506:C:H42	1:L5:652:G:H1	1.58	0.50
1:L5:927:G:C2'	1:L5:928:C:H5'	2.41	0.50
1:L5:1404:G:H3'	1:L5:1405:C:H6	1.73	0.50
1:L5:1962:A:N6	1:L5:2026:A:O2'	2.44	0.50
1:L5:1980:U:OP1	1:L5:1982:G:C8	2.64	0.50
1:L5:1982:G:C8	1:L5:1987:C:H1'	2.46	0.50
1:L5:3756:A:H5''	1:L5:3756:A:C8	2.46	0.50
1:L5:4967:A:H2'	1:L5:4968:A:C8	2.47	0.50
6:LC:154:VAL:HG21	6:LC:170:LEU:HD11	1.93	0.50
28:LZ:92:ASP:HB3	28:LZ:95:VAL:HG12	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S2:752:G:H5'	46:S2:793:G:OP1	2.11	0.50
46:S2:819:G:H2'	46:S2:820:U:C6	2.46	0.50
46:S2:1395:C:O2'	46:S2:1396:A:H5'	2.11	0.50
47:SA:117:ARG:HG2	47:SA:119:PRO:HD3	1.92	0.50
56:SJ:150:ARG:O	56:SJ:151:LEU:C	2.54	0.50
66:ST:74:SER:O	66:ST:78:ILE:HG13	2.10	0.50
80:u:63:G:H2'	80:u:63:G:OP2	2.10	0.50
1:L5:23:C:H2'	1:L5:24:G:O4'	2.11	0.50
1:L5:662:C:H2'	1:L5:663:G:C4'	2.42	0.50
1:L5:740:G:N1	1:L5:924:C:N3	2.56	0.50
1:L5:1076:C:H2'	1:L5:1077:C:H6	1.76	0.50
1:L5:1208:G:H5''	1:L5:1209:U:OP2	2.10	0.50
1:L5:1995:G:C3'	1:L5:1997:U:H1'	2.30	0.50
3:L8:141:C:H2'	3:L8:142:U:C6	2.46	0.50
12:LI:48:LEU:O	12:LI:139:ARG:HA	2.11	0.50
25:LW:94:ARG:HB3	25:LW:98:PRO:C	2.36	0.50
46:S2:569:A:C4'	46:S2:570:C:OP2	2.60	0.50
46:S2:793:G:H8	46:S2:793:G:O5'	1.94	0.50
51:SE:57:THR:O	51:SE:61:VAL:HG23	2.12	0.50
56:SJ:134:HIS:C	56:SJ:134:HIS:CD2	2.89	0.50
56:SJ:150:ARG:HD2	56:SJ:152:ASP:OD1	2.11	0.50
65:SS:36:VAL:HG12	65:SS:40:TYR:HD2	1.76	0.50
67:SU:94:PRO:O	67:SU:97:ILE:HG22	2.10	0.50
1:L5:650:C:H2'	1:L5:651:C:C6	2.47	0.50
1:L5:659:G:C6	1:L5:660:A:C6	3.00	0.50
1:L5:677:G:H5'	45:Lr:99:LYS:HG2	1.92	0.50
1:L5:992:C:O2	1:L5:1051:G:H8	1.94	0.50
1:L5:1857:C:H2'	1:L5:1858:A:C8	2.46	0.50
1:L5:2011:C:H3'	1:L5:2012:A:H4'	1.92	0.50
1:L5:4093:G:H2'	1:L5:4094:G:H8	1.76	0.50
8:LE:92:VAL:HG13	8:LE:109:LEU:HD21	1.93	0.50
10:LG:220:GLU:OE1	10:LG:220:GLU:HA	2.11	0.50
16:LN:42:PRO:HD3	16:LN:61:ILE:HG13	1.93	0.50
20:LR:89:MET:HE3	20:LR:90:PRO:HD2	1.94	0.50
43:Lo:75:PRO:HA	43:Lo:78:ARG:HE	1.77	0.50
46:S2:538:U:C5	46:S2:539:C:C4	3.00	0.50
46:S2:544:G:C6	46:S2:545:A:C5	3.00	0.50
46:S2:587:A:H1'	46:S2:590:A2M:H1'	1.94	0.50
46:S2:1422:G:N3	46:S2:1422:G:H2'	2.26	0.50
50:SD:41:VAL:HG13	50:SD:42:THR:H	1.75	0.50
58:SL:126:VAL:HG12	58:SL:145:VAL:HG22	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:SM:17:ALA:HB1	59:SM:123:VAL:HG22	1.93	0.50
81:v:27:G:N2	81:v:43:C:N3	2.48	0.50
1:L5:253:G:C8	1:L5:254:G:C4	3.00	0.50
1:L5:647:G:H2'	1:L5:648:G:C8	2.46	0.50
1:L5:1253:G:H3'	1:L5:1256:G:C8	2.46	0.50
1:L5:1977:C:C6	1:L5:1978:C:N3	2.80	0.50
1:L5:2520:C:H2'	1:L5:2521:G:C8	2.46	0.50
8:LE:190:HIS:HB3	8:LE:193:PHE:HD1	1.76	0.50
11:LH:89:ARG:HA	11:LH:146:LEU:O	2.12	0.50
15:LM:104:MET:HG2	15:LM:108:ASP:HB3	1.94	0.50
26:LX:110:LYS:HG3	26:LX:121:VAL:HB	1.93	0.50
46:S2:1201:U:H2'	46:S2:1202:U:C6	2.46	0.50
47:SA:1:MET:SD	68:SV:79:VAL:HG22	2.51	0.50
47:SA:184:ARG:HB3	47:SA:191:ARG:NH1	2.26	0.50
50:SD:68:GLU:O	50:SD:72:VAL:HG13	2.11	0.50
50:SD:71:ALA:HB3	57:SK:20:VAL:HG11	1.93	0.50
52:SF:51:HIS:CD2	52:SF:86:LYS:HE2	2.46	0.50
55:SI:119:LEU:HD21	55:SI:153:LYS:HB3	1.93	0.50
61:SO:40:THR:HG21	61:SO:74:ALA:HB2	1.93	0.50
79:Sg:246:TYR:CZ	79:Sg:261:LEU:HD12	2.47	0.50
80:u:17:C:O5'	80:u:18:G:H5''	2.12	0.50
81:v:17:A:C1'	81:v:18:G:H4'	2.39	0.50
1:L5:37:U:H4'	29:La:32:ARG:HD2	1.92	0.50
1:L5:261:G:N3	1:L5:262:G:H1'	2.27	0.50
1:L5:682:G:H5''	1:L5:682:G:H8	1.73	0.50
1:L5:759:G:N3	1:L5:759:G:H2'	2.26	0.50
1:L5:979:C:OP1	8:LE:46:ARG:HB2	2.11	0.50
1:L5:1048:G:N3	1:L5:1048:G:C3'	2.74	0.50
1:L5:1203:G:H5'	1:L5:1203:G:H8	1.73	0.50
1:L5:1741:G:N3	1:L5:1781:PSU:H5''	2.27	0.50
1:L5:1914:C:H4'	17:LO:89:PRO:HD3	1.94	0.50
1:L5:2669:C:H2'	1:L5:2670:C:O4'	2.12	0.50
5:LB:57:VAL:HG22	5:LB:73:VAL:HG22	1.94	0.50
46:S2:791:C:H3'	46:S2:792:C:C6	2.47	0.50
56:SJ:39:ASN:OD1	56:SJ:42:GLU:HG3	2.12	0.50
66:ST:56:ARG:O	66:ST:60:THR:HG23	2.12	0.50
79:Sg:181:ASN:CG	79:Sg:182:CYS:H	2.18	0.50
80:u:15:G:H2'	80:u:16:U:O4'	2.12	0.50
81:v:16:A:C6	81:v:59:U:N3	2.79	0.50
1:L5:3848:U:H2'	1:L5:3849:A:C8	2.47	0.50
1:L5:5006:U:H4'	1:L5:5007:A:H5'	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L8:67:U:H2'	3:L8:68:G:H8	1.77	0.50
5:LB:194:LEU:O	5:LB:198:ARG:HG3	2.12	0.50
20:LR:177:LEU:O	20:LR:178:GLN:C	2.54	0.50
46:S2:1639:G:H5'	46:S2:1639:G:C8	2.43	0.50
47:SA:37:TYR:O	47:SA:38:ILE:HD12	2.12	0.50
50:SD:167:TYR:CD2	50:SD:204:LEU:HD12	2.46	0.50
52:SF:102:LEU:HD11	72:SZ:100:VAL:HG11	1.92	0.50
55:SI:157:LYS:O	55:SI:157:LYS:HD3	2.12	0.50
57:SK:21:MET:HG2	57:SK:49:MET:HE2	1.92	0.50
62:SP:69:PRO:O	62:SP:70:MET:HG2	2.12	0.50
63:SQ:32:ILE:HD13	63:SQ:39:LEU:HB2	1.94	0.50
65:SS:47:LYS:HD2	65:SS:79:ILE:HG12	1.94	0.50
81:v:62:C:H2'	81:v:63:G:C8	2.46	0.50
1:L5:757:G:H2'	1:L5:758:G:C8	2.46	0.50
1:L5:985:C:H2'	1:L5:986:C:C6	2.46	0.50
1:L5:1705:G:H21	9:LF:46:ARG:NH2	2.09	0.50
1:L5:1763:C:H2'	1:L5:1764:G:H8	1.74	0.50
1:L5:1794:A:H5''	1:L5:4214:A:H61	1.75	0.50
1:L5:1824:G:H2'	1:L5:1825:A:C8	2.46	0.50
1:L5:1991:A:H2'	1:L5:1992:U:H5'	1.94	0.50
1:L5:2539:C:H2'	1:L5:2540:C:C6	2.47	0.50
1:L5:2557:G:H2'	1:L5:2558:C:C6	2.47	0.50
1:L5:4678:G:N2	1:L5:4713:G:H1'	2.26	0.50
1:L5:4919:G:H2'	1:L5:4920:C:H6	1.77	0.50
34:Lf:42:TYR:HA	34:Lf:45:LYS:HG3	1.94	0.50
46:S2:580:U:H2'	46:S2:581:U:H5'	1.94	0.50
46:S2:1017:U:H5'	60:SN:55:ARG:HD3	1.93	0.50
46:S2:1812:U:H6	46:S2:1812:U:H5''	1.77	0.50
46:S2:1823:A:C5	86:S2:1966:NMY:H3	2.47	0.50
56:SJ:26:ASP:HB3	77:Se:42:PHE:HZ	1.77	0.50
57:SK:80:ARG:HD2	57:SK:87:PRO:HA	1.94	0.50
1:L5:1365:C:H2'	1:L5:1366:G:C5'	2.41	0.50
1:L5:1977:C:N4	1:L5:2002:A:O2'	2.45	0.50
1:L5:4625:C:O2'	1:L5:4626:A:H5'	2.11	0.50
5:LB:117:ARG:HA	5:LB:177:LYS:HD3	1.93	0.50
5:LB:122:TRP:CH2	5:LB:127:LYS:HG2	2.47	0.50
10:LG:135:VAL:HB	10:LG:137[A]:ARG:HH21	1.77	0.50
20:LR:181:LYS:C	20:LR:183:GLU:H	2.20	0.50
21:LS:19:THR:HG22	21:LS:21:LYS:H	1.77	0.50
24:LV:36:ASN:ND2	24:LV:67:LYS:HG3	2.27	0.50
25:LW:120:GLN:HG2	25:LW:121:ALA:N	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S2:51:U:H2'	46:S2:52:G:H8	1.76	0.50
46:S2:528:A:C3'	46:S2:529:A:H8	2.25	0.50
65:SS:97:GLN:HE21	65:SS:99:LEU:HD21	1.76	0.50
81:v:10:G:OP1	81:v:46:G:H4'	2.11	0.50
1:L5:698:G:C8	1:L5:699:C:C5	3.00	0.50
1:L5:994:G:N3	1:L5:995:C:H4'	2.27	0.50
1:L5:1268:G:P	30:Lb:107:ARG:HH21	2.35	0.50
1:L5:1364:U:OP2	14:LL:36:ARG:NH1	2.43	0.50
6:LC:284:MET:HA	19:LQ:122:THR:HG21	1.94	0.50
14:LL:120:TYR:HA	14:LL:155:MET:HE1	1.94	0.50
20:LR:105:LEU:HD23	20:LR:138:LEU:HD23	1.93	0.50
21:LS:96:GLU:HG3	21:LS:139:ARG:HG2	1.92	0.50
37:Li:3:LEU:HD12	37:Li:4:ARG:HG2	1.94	0.50
46:S2:546:G:O3'	46:S2:547:G:N7	2.44	0.50
46:S2:1365:G:H2'	46:S2:1366:G:C8	2.47	0.50
52:SF:171:GLU:OE2	72:SZ:69:THR:HG21	2.12	0.50
55:SI:38:ILE:HD11	55:SI:81:VAL:HG23	1.93	0.50
55:SI:141:ARG:HD3	55:SI:146:GLN:NE2	2.27	0.50
56:SJ:87:LEU:HD11	56:SJ:96:TYR:HD2	1.77	0.50
80:u:24:G:C6	80:u:25:C:N3	2.79	0.50
80:u:54:U:H2'	80:u:55:U:O4'	2.12	0.50
1:L5:497:G:C4	1:L5:498:C:C5	3.00	0.49
1:L5:518:G:C2	1:L5:519:C:H5'	2.46	0.49
1:L5:1976:G:H5''	1:L5:1977:C:C4	2.47	0.49
1:L5:1983:A:H1'	1:L5:1985:G:H5'	1.94	0.49
4:LA:158:ILE:HD12	4:LA:162:ASN:HD22	1.77	0.49
14:LL:28:GLN:O	14:LL:32:LYS:HG3	2.12	0.49
46:S2:102:A:H4'	46:S2:104:A:C8	2.46	0.49
46:S2:106:C:H2'	46:S2:107:A:H8	1.77	0.49
46:S2:494:C:H41	46:S2:509:OMG:HN22	1.58	0.49
53:SG:20:ASP:CG	53:SG:21:GLU:H	2.20	0.49
53:SG:21:GLU:HA	53:SG:24:LEU:HD13	1.94	0.49
79:Sg:16:GLY:H	79:Sg:37:ASP:HB3	1.77	0.49
81:v:52:G:C2	81:v:63:G:C5	3.00	0.49
1:L5:1438:U:O2'	1:L5:2099:G:H5'	2.13	0.49
1:L5:1968:G:C8	1:L5:1969:G:C2	2.98	0.49
1:L5:1985:G:H8	1:L5:2011:C:OP2	1.94	0.49
1:L5:2007:G:H5''	1:L5:2007:G:C8	2.47	0.49
1:L5:2012:A:H5'	1:L5:2013:A:C4	2.47	0.49
1:L5:4499:OMG:H1'	1:L5:4528:G:N3	2.27	0.49
1:L5:4921:C:C2	1:L5:4922:C:C5	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:LH:63:ASN:O	11:LH:67:LEU:HG	2.12	0.49
25:LW:95:ASN:N	25:LW:98:PRO:CD	2.73	0.49
46:S2:867:OMG:H4'	58:SL:149:ALA:HB1	1.94	0.49
46:S2:1174:PSU:H2'	46:S2:1175:G:C8	2.48	0.49
46:S2:1208:A:H2'	46:S2:1209:A:C8	2.47	0.49
46:S2:1588:A:H2'	46:S2:1589:A:C8	2.46	0.49
50:SD:136:VAL:HG13	50:SD:152:PHE:HB2	1.94	0.49
55:SI:194:GLU:O	55:SI:195:LEU:C	2.54	0.49
56:SJ:58:ARG:O	56:SJ:59:GLU:C	2.50	0.49
65:SS:125:HIS:CD2	65:SS:131:VAL:HG11	2.46	0.49
78:Sf:103:LEU:HD21	78:Sf:105:TYR:CE1	2.47	0.49
78:Sf:134:SER:HA	78:Sf:139:HIS:HA	1.94	0.49
1:L5:126:C:H2'	1:L5:127:G:C8	2.47	0.49
1:L5:503:C:H1'	1:L5:504:G:N2	2.26	0.49
1:L5:645:G:H2'	1:L5:646:G:O4'	2.13	0.49
1:L5:1763:C:H3'	1:L5:1763:C:OP2	2.13	0.49
1:L5:1962:A:H5''	1:L5:1963:C:H6	1.76	0.49
1:L5:2902:G:N2	1:L5:3597:G:H1	2.10	0.49
1:L5:4070:U:H2'	1:L5:4071:U:C6	2.47	0.49
12:LI:207:ASP:O	12:LI:211:VAL:HG22	2.12	0.49
19:LQ:70:MET:SD	19:LQ:80:ALA:HB2	2.51	0.49
40:LI:24:PRO:HD2	40:LI:27:ILE:HD12	1.94	0.49
46:S2:167:G:H21	53:SG:132:ARG:HG3	1.78	0.49
46:S2:565:G:H5''	46:S2:565:G:C8	2.47	0.49
47:SA:17:LYS:HZ1	47:SA:176:TRP:HZ3	1.58	0.49
47:SA:121:LEU:HD11	47:SA:145:ILE:HG13	1.95	0.49
50:SD:72:VAL:HG12	57:SK:20:VAL:HB	1.93	0.49
58:SL:68:ILE:HD12	58:SL:143:LEU:HD21	1.94	0.49
59:SM:18:LEU:O	59:SM:22:LEU:HG	2.12	0.49
65:SS:66:ARG:O	65:SS:70:ILE:HD12	2.12	0.49
80:u:51:U:H2'	80:u:52:G:O4'	2.12	0.49
81:v:12:C:H42	81:v:23:A:N6	2.10	0.49
81:v:60:U:H3'	81:v:61:C:C5'	2.42	0.49
1:L5:700:G:N3	1:L5:700:G:H2'	2.27	0.49
1:L5:742:G:C6	1:L5:923:C:C2	3.00	0.49
1:L5:923:C:O2'	1:L5:924:C:H5'	2.13	0.49
1:L5:1048:G:OP2	1:L5:1048:G:N7	2.46	0.49
1:L5:1080:C:C2	1:L5:1220:G:C2	3.00	0.49
1:L5:2492:C:H4'	1:L5:2493:G:OP1	2.11	0.49
1:L5:2495:U:C2	1:L5:2496:G:C8	3.00	0.49
1:L5:4859:C:H2'	1:L5:4860:G:H8	1.74	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:LC:341:LEU:HB3	6:LC:345:ARG:HH21	1.77	0.49
8:LE:67:ALA:HA	8:LE:69:TYR:CE1	2.47	0.49
11:LH:43:VAL:HG21	11:LH:73:ILE:HD12	1.94	0.49
13:LJ:57:VAL:HG11	13:LJ:60:PHE:CD2	2.48	0.49
26:LX:79:PHE:CD1	36:Lh:36:VAL:HG11	2.47	0.49
46:S2:525:A:O2'	46:S2:526:A:H5'	2.13	0.49
46:S2:1491:G:H2'	46:S2:1492:U:C6	2.48	0.49
53:SG:221:LYS:HA	53:SG:224:ARG:NH2	2.27	0.49
56:SJ:60:LEU:HA	56:SJ:63:LEU:HG	1.94	0.49
79:Sg:99:ARG:NE	79:Sg:135:LEU:HD13	2.28	0.49
1:L5:91:G:N7	85:L5:5377:SPD:H52	2.27	0.49
1:L5:1970:A:H1'	1:L5:2018:C:N3	2.27	0.49
1:L5:2588:C:H5''	1:L5:2589:C:H5''	1.94	0.49
1:L5:4071:U:H2'	1:L5:4072:C:C6	2.48	0.49
1:L5:4305:G:C6	22:LT:80:VAL:HG21	2.47	0.49
1:L5:4571:A2M:H2'	1:L5:4572:U:H6	1.77	0.49
42:Ln:9:ARG:NH2	46:S2:1851:MA6:OP1	2.44	0.49
46:S2:381:C:N4	55:SI:27:TYR:HB2	2.27	0.49
46:S2:513:G:C5	46:S2:514:U:C5	3.01	0.49
46:S2:554:A:H1'	46:S2:555:A:O5'	2.12	0.49
46:S2:681:PSU:H4'	70:SX:9:THR:HG22	1.93	0.49
46:S2:1407:U:H4'	63:SQ:71:ARG:CZ	2.43	0.49
51:SE:36:HIS:CD2	51:SE:85:GLY:HA3	2.48	0.49
61:SO:94:HIS:ND1	61:SO:128:ARG:HG2	2.27	0.49
69:SW:37:PHE:O	69:SW:41:MET:HG3	2.12	0.49
79:Sg:85:GLY:HA2	79:Sg:108:VAL:HG23	1.95	0.49
81:v:14:C:H41	81:v:21:A:H2	1.60	0.49
1:L5:153:G:H2'	1:L5:154:G:H8	1.76	0.49
1:L5:218:A:N3	1:L5:219:G:H8	2.11	0.49
1:L5:457:G:H2'	1:L5:458:C:H6	1.77	0.49
1:L5:518:G:C6	1:L5:644:G:C8	3.01	0.49
1:L5:667:A:H61	6:LC:291:ARG:HH21	1.60	0.49
1:L5:1183:C:C6	1:L5:1183:C:C4'	2.96	0.49
1:L5:1405:C:C4	1:L5:1408:G:C5	2.99	0.49
1:L5:1763:C:H3'	1:L5:1763:C:P	2.52	0.49
1:L5:1959:U:H4'	1:L5:1960:A:O5'	2.13	0.49
1:L5:1989:G:H3'	1:L5:1990:A:C5	2.47	0.49
1:L5:4601:U:H2'	1:L5:4602:A:H8	1.78	0.49
6:LC:152:LEU:HD11	6:LC:174:LEU:HD22	1.94	0.49
17:LO:181:ALA:O	17:LO:185:VAL:HG22	2.13	0.49
18:LP:94:MET:HE1	18:LP:146:ILE:HB	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S2:443:U:H2'	46:S2:444:G:O4'	2.12	0.49
46:S2:1230:C:H2'	46:S2:1231:C:H6	1.78	0.49
52:SF:19:LEU:HB3	52:SF:23:TRP:HD1	1.78	0.49
56:SJ:79:ARG:HG2	56:SJ:83:ARG:HE	1.77	0.49
69:SW:28:ARG:HB3	69:SW:29:PRO:HD3	1.95	0.49
77:Se:18:LYS:HD2	77:Se:19:VAL:N	2.28	0.49
79:Sg:185:LYS:HG3	79:Sg:186:THR:HG23	1.94	0.49
80:u:29:G:N2	80:u:41:C:N3	2.52	0.49
81:v:15:G:H2'	81:v:16:A:N1	2.24	0.49
81:v:63:G:H2'	81:v:63:G:N3	2.27	0.49
1:L5:644:G:H2'	1:L5:645:G:H5'	1.94	0.49
1:L5:1188:C:H2'	1:L5:1189:G:H8	1.78	0.49
1:L5:1419:G:C5	29:La:116:LYS:HE3	2.47	0.49
1:L5:1969:G:N2	1:L5:1999:A:N1	2.60	0.49
1:L5:1985:G:H22	1:L5:2005:G:H3'	1.71	0.49
1:L5:1994:C:H5'	1:L5:1995:G:OP2	2.12	0.49
3:L8:52:A:N6	40:Ll:27:ILE:HD13	2.24	0.49
45:Lr:58:LYS:NZ	45:Lr:58:LYS:HB3	2.28	0.49
71:SY:51:THR:HG22	71:SY:53:ASP:H	1.78	0.49
1:L5:127:G:H2'	1:L5:128:C:C6	2.48	0.49
1:L5:189:G:C4	1:L5:254:G:N1	2.80	0.49
1:L5:659:G:H2'	1:L5:660:A:C8	2.48	0.49
1:L5:660:A:H2'	1:L5:660:A:N3	2.27	0.49
1:L5:1364:U:OP2	14:LL:36:ARG:NH2	2.45	0.49
1:L5:1759:G:C2	1:L5:1773:U:N3	2.81	0.49
1:L5:2022:C:H3'	1:L5:2023:C:H6	1.77	0.49
6:LC:318:PRO:O	6:LC:325:MET:HB2	2.12	0.49
9:LF:37:PHE:HZ	30:Lb:113:ALA:HB1	1.78	0.49
23:LU:18:VAL:HG21	23:LU:77:PRO:HA	1.95	0.49
28:LZ:66:SER:HB3	28:LZ:122:TYR:HE2	1.77	0.49
46:S2:145:G:H2'	46:S2:146:G:C8	2.48	0.49
46:S2:525:A:H5'	77:Se:32:ALA:HB2	1.93	0.49
55:SI:121:LEU:HD13	55:SI:122:GLY:N	2.27	0.49
80:u:1:G:H22	80:u:73:A:N6	2.09	0.49
1:L5:670:G:C2'	1:L5:671:G:H5'	2.43	0.49
1:L5:946:C:H2'	1:L5:947:C:C6	2.48	0.49
1:L5:1754:U:O2'	1:L5:1755:C:H5'	2.13	0.49
1:L5:1770:A:H2'	1:L5:1771:U:H4'	1.95	0.49
1:L5:1770:A:C3'	1:L5:1771:U:H4'	2.42	0.49
1:L5:1852:U:H5''	29:La:22:ILE:HD12	1.94	0.49
1:L5:1970:A:C1'	1:L5:2019:C:H41	2.25	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:1975:G:H5''	1:L5:1985:G:OP2	2.13	0.49
1:L5:2693:G:H2'	1:L5:2694:G:N2	2.26	0.49
1:L5:3727:A:H2'	1:L5:3728:A:C8	2.48	0.49
1:L5:3867:A2M:HM'3	1:L5:3880:G:N2	2.27	0.49
1:L5:4139:G:H21	1:L5:4140:C:H41	1.59	0.49
28:LZ:41:ALA:HB2	28:LZ:77:TYR:HE1	1.78	0.49
46:S2:329:G:H2'	46:S2:330:G:H8	1.75	0.49
46:S2:1845:A:H2'	46:S2:1846:G:C8	2.47	0.49
48:SB:134:LEU:HD23	48:SB:218:LEU:HB2	1.94	0.49
49:SC:142:LYS:HB2	49:SC:157:LEU:HD12	1.94	0.49
53:SG:7:PHE:CD1	53:SG:113:ILE:HB	2.47	0.49
56:SJ:151:LEU:C	56:SJ:153:SER:N	2.70	0.49
64:SR:75:GLU:O	64:SR:78:ARG:HG3	2.13	0.49
1:L5:1802:A:H5''	1:L5:1803:G:H5'	1.95	0.49
1:L5:2264:C:H2'	1:L5:2265:G:O4'	2.12	0.49
1:L5:2411:C:H2'	1:L5:2412:A:H8	1.77	0.49
1:L5:4504:C:H2'	1:L5:4505:C:C6	2.48	0.49
12:LI:36:LEU:HD12	12:LI:87:MET:HG2	1.95	0.49
13:LJ:109:ILE:HD11	13:LJ:128:LEU:HD12	1.94	0.49
46:S2:29:G:H2'	46:S2:30:C:C6	2.48	0.49
46:S2:126:G:H5'	53:SG:195:LYS:HZ2	1.77	0.49
46:S2:342:C:H2'	46:S2:343:A:C8	2.48	0.49
46:S2:576:A2M:H2'	46:S2:577:U:C6	2.48	0.49
46:S2:586:G:P	56:SJ:176:LYS:HZ3	2.35	0.49
46:S2:955:A:N6	46:S2:971:G:H1'	2.28	0.49
46:S2:1139:C:H2'	46:S2:1140:G:O4'	2.12	0.49
63:SQ:44:PRO:O	63:SQ:46:THR:N	2.45	0.49
67:SU:46:LYS:HG2	67:SU:48:LEU:HD11	1.95	0.49
1:L5:690:C:H2'	1:L5:691:C:C6	2.48	0.48
1:L5:2003:G:H21	1:L5:2004:U:H3	1.60	0.48
1:L5:2458:C:H5''	16:LN:67:ARG:HD2	1.93	0.48
1:L5:5061:A:H5'	5:LB:123:HIS:NE2	2.28	0.48
86:L5:5379:NMY:O11	86:L5:5379:NMY:H1	2.13	0.48
15:LM:120:ASN:O	15:LM:124:LYS:HG3	2.13	0.48
23:LU:91:LEU:HB3	23:LU:97:ARG:HG2	1.95	0.48
25:LW:96:GLN:O	25:LW:98:PRO:HD3	2.11	0.48
26:LX:114:LYS:HD2	26:LX:119:ILE:O	2.13	0.48
46:S2:166:A2M:H5''	46:S2:166:A2M:H8	1.95	0.48
48:SB:103:MET:HE1	48:SB:212:VAL:O	2.13	0.48
56:SJ:26:ASP:O	56:SJ:27:GLN:C	2.54	0.48
56:SJ:158:ASP:C	56:SJ:159:PHE:O	2.53	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:SP:18:ARG:HD2	65:SS:88:LYS:HG2	1.94	0.48
79:Sg:228:TYR:CE2	79:Sg:230:LEU:HB3	2.48	0.48
1:L5:37:U:H2'	1:L5:38:A:O4'	2.13	0.48
1:L5:760:G:N1	1:L5:903:C:C2	2.81	0.48
1:L5:1931:C:C6	1:L5:1931:C:H5''	2.48	0.48
1:L5:1979:A:H3'	1:L5:1980:U:H5'	1.96	0.48
1:L5:2010:A:C8	1:L5:2012:A:H1'	2.48	0.48
1:L5:4199:C:C2	12:LI:111:LEU:HD21	2.48	0.48
1:L5:4343:U:H2'	1:L5:4344:U:C6	2.48	0.48
1:L5:4966:A:H2'	1:L5:4967:A:O4'	2.12	0.48
24:LV:36:ASN:HD21	24:LV:67:LYS:HG3	1.78	0.48
46:S2:160:U:O2'	46:S2:161:U:H3'	2.13	0.48
46:S2:501:C:C2'	46:S2:502:C:H5''	2.43	0.48
46:S2:531:A:N1	46:S2:553:U:N3	2.57	0.48
46:S2:591:U:C2	46:S2:593:C:C4	3.01	0.48
46:S2:1826:G:O6	86:S2:1966:NMY:H10	2.13	0.48
47:SA:145:ILE:HG12	47:SA:159:ILE:HB	1.94	0.48
54:SH:29:GLU:O	54:SH:32:MET:HG3	2.13	0.48
56:SJ:130:ILE:HG13	56:SJ:135:ILE:HD13	1.95	0.48
56:SJ:134:HIS:HD1	56:SJ:165:TYR:HD2	1.57	0.48
67:SU:20:ILE:HG12	67:SU:116:ILE:HA	1.94	0.48
80:u:18:G:H21	80:u:58:A:H5'	1.79	0.48
80:u:25:C:H2'	80:u:26:A:H8	1.77	0.48
1:L5:647:G:C2	1:L5:648:G:C4	3.02	0.48
1:L5:1084:C:H2'	1:L5:1085:C:H6	1.77	0.48
1:L5:2787:A2M:HM'1	1:L5:2789:A:H3'	1.95	0.48
1:L5:4913:G:H4'	1:L5:4914:C:O5'	2.12	0.48
2:L7:7:G:OP1	7:LD:33:ARG:HD2	2.13	0.48
5:LB:258:HIS:HA	5:LB:259:PRO:C	2.39	0.48
6:LC:170:LEU:HD23	6:LC:221:PHE:HZ	1.78	0.48
13:LJ:178:LYS:N	13:LJ:178:LYS:HD2	2.27	0.48
18:LP:54:GLN:HA	18:LP:83:TRP:CD1	2.48	0.48
20:LR:176:ARG:HG2	20:LR:178:GLN:HG2	1.95	0.48
31:Lc:22:MET:O	31:Lc:23:LYS:HG2	2.12	0.48
46:S2:189:U:C2	46:S2:211:G:C6	3.01	0.48
46:S2:1531:A:H2'	46:S2:1532:C:C6	2.48	0.48
46:S2:1721:U:H6	46:S2:1721:U:H5'	1.77	0.48
50:SD:93:THR:HG21	50:SD:198:ILE:HG13	1.95	0.48
59:SM:30:GLY:O	59:SM:111:VAL:HA	2.14	0.48
77:Se:36:MET:O	77:Se:37:GLN:C	2.56	0.48
79:Sg:11:LEU:HB3	79:Sg:43:TRP:CH2	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:Sg:164:ILE:HD12	79:Sg:177:TRP:O	2.13	0.48
1:L5:905:C:H2'	1:L5:906:C:C6	2.48	0.48
1:L5:992:C:O2'	1:L5:1051:G:N7	2.41	0.48
1:L5:2412:A:H2'	1:L5:2413:U:C6	2.48	0.48
1:L5:2487:G:N1	1:L5:2492:C:O2	2.46	0.48
2:L7:23:A:H2'	2:L7:24:C:C6	2.48	0.48
3:L8:8:U:H2'	3:L8:9:A:C8	2.49	0.48
32:Ld:41:ARG:HG3	32:Ld:78:ARG:HA	1.95	0.48
46:S2:96:C:H2'	46:S2:97:U:C6	2.48	0.48
46:S2:385:G:H3'	58:SL:136:LYS:HB2	1.96	0.48
46:S2:502:C:C4	51:SE:66:MET:HB3	2.48	0.48
46:S2:823:U:O2	56:SJ:142:VAL:HA	2.13	0.48
46:S2:883:U:C4	46:S2:904:A:C6	3.02	0.48
46:S2:1016:U:H5'	60:SN:15:ALA:O	2.13	0.48
48:SB:101:HIS:O	48:SB:217:MET:HB2	2.13	0.48
62:SP:29:SER:OG	62:SP:32:GLN:HG3	2.13	0.48
1:L5:184:U:C5	1:L5:253:G:O6	2.67	0.48
1:L5:1437:C:H1'	1:L5:2098:G:N7	2.28	0.48
1:L5:1969:G:OP2	1:L5:1970:A:H5''	2.12	0.48
1:L5:2001:G:C5	1:L5:2003:G:C8	3.01	0.48
1:L5:2493:G:C2	1:L5:2494:U:H1'	2.48	0.48
1:L5:4233:A:O5'	43:Lo:98:LYS:HD2	2.13	0.48
1:L5:4342:C:O3'	43:Lo:37:GLY:HA3	2.14	0.48
5:LB:107:ALA:HB2	5:LB:201:LEU:HD22	1.96	0.48
13:LJ:83:LEU:O	13:LJ:87:LEU:HB2	2.12	0.48
46:S2:1232:PSU:H2'	46:S2:1233:G:C8	2.48	0.48
46:S2:1787:G:H8	46:S2:1787:G:OP2	1.97	0.48
48:SB:133:TYR:CD1	48:SB:217:MET:HE1	2.45	0.48
49:SC:146:GLU:HB2	49:SC:149:THR:HG22	1.96	0.48
54:SH:19:PHE:CZ	54:SH:50:GLU:HB2	2.48	0.48
62:SP:28:MET:HE2	62:SP:32:GLN:CB	2.38	0.48
64:SR:31:ASN:C	64:SR:33:ARG:N	2.69	0.48
79:Sg:20:GLN:OE1	79:Sg:68:ASP:HB2	2.13	0.48
81:v:41:C:H2'	81:v:42:C:C6	2.48	0.48
81:v:59:U:H2'	81:v:60:U:O4'	2.12	0.48
1:L5:477:C:H2'	1:L5:478:G:C8	2.49	0.48
1:L5:483:G:C8	1:L5:485:C:H5'	2.49	0.48
1:L5:497:G:C4	1:L5:498:C:H5	2.31	0.48
1:L5:697:G:C2	1:L5:698:G:C5	3.02	0.48
1:L5:1693:U:H2'	1:L5:1694:C:O4'	2.13	0.48
1:L5:1726:U:H5'	9:LF:135:ILE:HD11	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:1993:C:H2'	1:L5:1994:C:C4'	2.44	0.48
1:L5:2001:G:C2	1:L5:2003:G:C6	3.00	0.48
1:L5:2745:A:H2'	1:L5:2746:A:H8	1.77	0.48
1:L5:4347:G:H2'	1:L5:4348:A:C8	2.48	0.48
1:L5:4627:U:H4'	5:LB:373:LYS:HD2	1.94	0.48
1:L5:4988:U:H3'	1:L5:5061:A:H62	1.78	0.48
8:LE:192:LYS:HD2	34:Lf:107:PRO:HB3	1.95	0.48
25:LW:92:ALA:N	25:LW:97:LYS:C	2.69	0.48
28:LZ:87:VAL:HG22	28:LZ:127:ASN:ND2	2.28	0.48
46:S2:538:U:H2'	46:S2:539:C:O4'	2.14	0.48
46:S2:1629:C:H2'	46:S2:1630:A:O4'	2.14	0.48
53:SG:7:PHE:HD1	53:SG:113:ILE:HB	1.79	0.48
59:SM:13:ASP:HB2	59:SM:122:ASP:OD1	2.13	0.48
79:Sg:191:HIS:CG	79:Sg:195:LEU:HD21	2.48	0.48
1:L5:662:C:H2'	1:L5:663:G:C1'	2.43	0.48
1:L5:733:A:H5''	1:L5:733:A:H8	1.78	0.48
1:L5:1202:C:H2'	1:L5:1204:C:P	2.53	0.48
1:L5:1273:G:O2'	1:L5:1274:A:H5'	2.14	0.48
1:L5:1961:G:H2'	1:L5:2024:G:N1	2.27	0.48
1:L5:2478:C:N4	1:L5:2479:G:C6	2.81	0.48
1:L5:2626:U:C5	23:LU:92:LYS:HG2	2.48	0.48
1:L5:4633:G:O3'	1:L5:4634:U:H3'	2.14	0.48
1:L5:5003:U:H2'	1:L5:5004:C:C6	2.48	0.48
7:LD:287:PHE:HZ	12:LI:214:SER:HB2	1.79	0.48
46:S2:170:A:OP2	53:SG:140:ARG:NH1	2.47	0.48
46:S2:839:C:H1'	46:S2:841:G:C1'	2.44	0.48
46:S2:1401:A:H2'	46:S2:1402:A:H8	1.79	0.48
46:S2:1678:A2M:HM'3	46:S2:1678:A2M:H1'	1.48	0.48
46:S2:1692:PSU:H2'	46:S2:1693:G:C8	2.49	0.48
49:SC:156:ILE:O	49:SC:160:LEU:HD23	2.14	0.48
50:SD:74:GLN:HG2	50:SD:79:PHE:HB2	1.96	0.48
56:SJ:79:ARG:HG2	56:SJ:83:ARG:NH2	2.29	0.48
60:SN:63:VAL:O	60:SN:67:THR:HG22	2.13	0.48
63:SQ:97:GLN:HG2	63:SQ:105:LYS:HG3	1.95	0.48
72:SZ:73:VAL:HG12	72:SZ:79:ILE:HD11	1.94	0.48
79:Sg:145:GLU:HG2	79:Sg:145:GLU:O	2.13	0.48
1:L5:759:G:N2	1:L5:904:C:C2	2.82	0.48
1:L5:1365:C:C6	1:L5:1365:C:C3'	2.96	0.48
1:L5:1988:G:H2'	1:L5:1988:G:N3	2.27	0.48
1:L5:2465:C:H2'	1:L5:2466:G:O4'	2.13	0.48
16:LN:43:THR:HG22	16:LN:131:GLU:OE1	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:LW:1:MET:O	25:LW:1:MET:HE3	2.14	0.48
25:LW:94:ARG:HD2	25:LW:98:PRO:O	2.13	0.48
44:Lp:25:MET:HE2	46:S2:1040:G:H5''	1.95	0.48
46:S2:499:G:H2'	46:S2:501:C:H5	1.75	0.48
46:S2:1787:G:OP2	46:S2:1787:G:C8	2.67	0.48
48:SB:127:VAL:HG13	48:SB:176:VAL:HG11	1.96	0.48
49:SC:259:THR:HG21	68:SV:15:ARG:HA	1.94	0.48
55:SI:128:LYS:HD3	55:SI:129:LEU:H	1.77	0.48
56:SJ:114:VAL:O	56:SJ:114:VAL:HG12	2.14	0.48
69:SW:80:ASP:OD1	69:SW:124:LYS:HE3	2.14	0.48
70:SX:132:ALA:HB1	70:SX:138:LYS:HB2	1.95	0.48
74:Sb:33:MET:HG3	74:Sb:35:VAL:HG23	1.96	0.48
79:Sg:176:VAL:HG22	79:Sg:186:THR:OG1	2.13	0.48
81:v:20:U:HO2'	81:v:21:A:P	2.25	0.48
1:L5:252:C:H42	1:L5:253:G:N2	2.10	0.48
1:L5:491:G:C3'	1:L5:492:U:C6	2.94	0.48
1:L5:693:C:H2'	1:L5:694:C:H6	1.77	0.48
1:L5:1242:G:H5''	1:L5:1242:G:C8	2.47	0.48
1:L5:1295:C:O2	1:L5:1295:C:O4'	2.31	0.48
1:L5:1645:C:H2'	1:L5:1646:A:C8	2.49	0.48
1:L5:1991:A:C8	1:L5:1992:U:C6	3.01	0.48
1:L5:2261:G:H4'	8:LE:112:MET:HE2	1.95	0.48
1:L5:2487:G:C4	1:L5:2493:G:C6	3.01	0.48
5:LB:110:ILE:HG23	5:LB:114:CYS:HB3	1.95	0.48
46:S2:656:G:H5'	46:S2:662:G:N2	2.29	0.48
46:S2:1826:G:N7	86:S2:1966:NMY:C8	2.73	0.48
47:SA:16:LEU:HD22	64:SR:114:LEU:HD13	1.96	0.48
51:SE:36:HIS:CG	51:SE:85:GLY:HA3	2.49	0.48
57:SK:38:LYS:HZ3	57:SK:38:LYS:HB2	1.78	0.48
67:SU:116:ILE:HG13	67:SU:119:ALA:OXT	2.14	0.48
78:Sf:89:LYS:HG3	78:Sf:90:LYS:H	1.78	0.48
78:Sf:100:LEU:HD22	78:Sf:101:ALA:H	1.77	0.48
78:Sf:105:TYR:O	78:Sf:105:TYR:HD1	1.96	0.48
80:u:2:C:O2	80:u:2:C:H2'	2.14	0.48
80:u:44:G:H2'	80:u:45:U:H5'	1.94	0.48
1:L5:233:U:O2'	1:L5:234:G:H8	1.96	0.48
1:L5:454:U:C5	1:L5:703:G:C8	3.02	0.48
1:L5:647:G:H2'	1:L5:648:G:H8	1.76	0.48
1:L5:1168:G:OP1	1:L5:1168:G:H4'	2.13	0.48
1:L5:1294:A:H1'	1:L5:1295:C:N3	2.29	0.48
1:L5:1967:A:H2'	1:L5:1967:A:N3	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:1994:C:H3'	1:L5:1995:G:H4'	1.96	0.48
1:L5:2671:C:H2'	1:L5:2672:C:C6	2.48	0.48
1:L5:4344:U:H2'	1:L5:4345:C:C6	2.48	0.48
1:L5:4886:C:H2'	1:L5:4887:C:C6	2.49	0.48
5:LB:189:THR:O	5:LB:193:LYS:HG3	2.14	0.48
7:LD:164:LYS:HG2	7:LD:195:HIS:CE1	2.48	0.48
46:S2:818:A:H2'	46:S2:819:G:C8	2.48	0.48
49:SC:191:VAL:HG13	49:SC:230:THR:HG22	1.95	0.48
51:SE:55:ALA:HB1	51:SE:60:GLU:HB2	1.95	0.48
53:SG:57:ASP:HB3	53:SG:98:ARG:HD2	1.96	0.48
56:SJ:85:GLY:HA3	56:SJ:108:ARG:NE	2.29	0.48
56:SJ:125:HIS:O	56:SJ:129:LEU:HG	2.14	0.48
66:ST:40:ALA:HB2	66:ST:95:GLY:HA2	1.96	0.48
66:ST:140:ALA:O	66:ST:144:LYS:HG2	2.13	0.48
67:SU:106:ILE:HG22	67:SU:106:ILE:O	2.14	0.48
79:Sg:239:LEU:HD23	79:Sg:250:ALA:HA	1.96	0.48
1:L5:992:C:H5''	1:L5:992:C:H6	1.79	0.47
1:L5:1252:C:C4	1:L5:1253:G:H1'	2.49	0.47
1:L5:1979:A:H1'	1:L5:1983:A:C2	2.48	0.47
1:L5:1984:A:N3	1:L5:1984:A:H2'	2.29	0.47
1:L5:1994:C:H2'	1:L5:1996:C:P	2.54	0.47
1:L5:2411:C:H2'	1:L5:2412:A:C8	2.49	0.47
1:L5:3880:G:H2'	1:L5:3881:G:C8	2.49	0.47
1:L5:4475:G:N7	41:Lm:125:LYS:HE3	2.28	0.47
28:LZ:59:LYS:HD2	28:LZ:59:LYS:N	2.27	0.47
46:S2:857:U:H2'	46:S2:858:A:C8	2.49	0.47
46:S2:1336:C:H2'	46:S2:1337:4AC:O4'	2.14	0.47
52:SF:174:ALA:O	52:SF:178:ILE:HG12	2.14	0.47
56:SJ:108:ARG:O	56:SJ:149:VAL:HG13	2.13	0.47
57:SK:8:ARG:HG3	57:SK:8:ARG:NH1	2.26	0.47
63:SQ:32:ILE:HD12	63:SQ:32:ILE:O	2.14	0.47
63:SQ:53:GLU:O	63:SQ:57:LEU:HB2	2.14	0.47
65:SS:86:ARG:HD3	65:SS:106:LYS:HD2	1.96	0.47
67:SU:88:LEU:O	67:SU:89:ILE:HD13	2.14	0.47
1:L5:741:C:H2'	1:L5:742:G:H5''	1.88	0.47
1:L5:1081:C:H2'	1:L5:1082:C:C6	2.49	0.47
1:L5:1279:A:H5''	1:L5:1279:A:H8	1.79	0.47
1:L5:1294:A:H8	1:L5:1295:C:N4	2.10	0.47
1:L5:1403:G:H2'	1:L5:1404:G:H8	1.79	0.47
1:L5:2348:G:H5'	1:L5:2351:OMC:C5	2.49	0.47
1:L5:3906:A:H2'	6:LC:69:THR:HG21	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:LD:256:LYS:HE2	7:LD:256:LYS:HA	1.96	0.47
23:LU:101:ARG:HG2	23:LU:115:PHE:CZ	2.49	0.47
25:LW:116:LYS:C	25:LW:118:ALA:H	2.22	0.47
46:S2:532:C:O2	46:S2:552:G:N1	2.47	0.47
46:S2:553:U:O2'	46:S2:554:A:H5'	2.13	0.47
46:S2:1650:A:H5''	63:SQ:139:ALA:HB2	1.96	0.47
55:SI:147:LYS:O	55:SI:151:GLU:HG2	2.13	0.47
56:SJ:35:TYR:HB2	56:SJ:37:LEU:HD22	1.96	0.47
56:SJ:36:GLY:O	77:Se:31:ARG:HD3	2.14	0.47
56:SJ:131:ARG:O	56:SJ:132:GLN:C	2.56	0.47
71:SY:37:LYS:HG2	71:SY:57:VAL:HG23	1.96	0.47
81:v:53:G:N2	81:v:54:U:O4	2.47	0.47
1:L5:647:G:C8	1:L5:647:G:OP2	2.67	0.47
1:L5:1083:U:C6	1:L5:1083:U:H5''	2.49	0.47
1:L5:1758:G:N7	1:L5:1774:C:O2	2.47	0.47
1:L5:1867:A:H2'	1:L5:1868:A:C8	2.49	0.47
1:L5:2013:A:C8	1:L5:2013:A:O5'	2.67	0.47
1:L5:2303:C:H5''	33:Le:104:SER:HB3	1.97	0.47
1:L5:4239:A:H2'	1:L5:4240:G:H8	1.79	0.47
3:L8:121:G:H2'	3:L8:122:G:H5'	1.96	0.47
13:LJ:77:ALA:O	13:LJ:81:GLU:HG2	2.14	0.47
16:LN:135:ILE:HD12	16:LN:151:ILE:HD13	1.95	0.47
46:S2:496:C:H2'	46:S2:497:C:C6	2.49	0.47
46:S2:542:U:OP2	46:S2:543:C:H5	1.97	0.47
46:S2:639:C:H2'	46:S2:640:A:H8	1.79	0.47
47:SA:103:PHE:CG	47:SA:133:PRO:HG3	2.50	0.47
79:Sg:47:ARG:H	79:Sg:47:ARG:HG2	1.43	0.47
1:L5:454:U:O4	1:L5:703:G:C8	2.67	0.47
1:L5:665:C:H4'	1:L5:666:G:O5'	2.13	0.47
1:L5:1169:G:H2'	1:L5:1169:G:N3	2.30	0.47
1:L5:2741:U:H2'	4:LA:50:HIS:CD2	2.49	0.47
1:L5:4594:U:H2'	1:L5:4595:G:C8	2.47	0.47
3:L8:125:C:H5''	3:L8:126:C:H6	1.79	0.47
8:LE:225:PRO:O	8:LE:226:ARG:HB3	2.15	0.47
10:LG:212:LYS:HD2	10:LG:213:GLY:H	1.79	0.47
10:LG:245:LYS:O	10:LG:249:ARG:HG3	2.14	0.47
11:LH:105:ILE:HD13	11:LH:112:VAL:HG22	1.96	0.47
14:LL:139:SER:O	14:LL:143:GLU:HG2	2.14	0.47
22:LT:39:ILE:CD1	22:LT:102:ARG:HD3	2.44	0.47
31:Lc:99:PRO:HG3	31:Lc:104:ILE:HG13	1.95	0.47
46:S2:531:A:C2	46:S2:554:A:N6	2.82	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:SD:70:THR:OG1	50:SD:86:LEU:HB2	2.15	0.47
55:SI:40:PRO:O	55:SI:59:ARG:HB2	2.12	0.47
56:SJ:117:LEU:HD11	56:SJ:154:GLN:NE2	2.29	0.47
57:SK:53:LYS:HD3	57:SK:60:GLU:OE1	2.15	0.47
63:SQ:32:ILE:HG22	63:SQ:68:ILE:HB	1.95	0.47
80:u:5:G:C2	80:u:69:G:C2	3.03	0.47
80:u:23:A:H4'	80:u:23:A:OP1	2.14	0.47
1:L5:500:G:H5''	1:L5:504:G:H2'	1.96	0.47
1:L5:1253:G:H2'	1:L5:1256:G:OP1	2.15	0.47
1:L5:1590:C:H5''	1:L5:1591:U:O5'	2.13	0.47
1:L5:1998:A:C5'	1:L5:2000:G:H22	2.27	0.47
1:L5:2018:C:H2'	1:L5:2019:C:H5''	1.95	0.47
1:L5:2480:G:N1	1:L5:2481:G:C5	2.83	0.47
2:L7:33:U:H2'	2:L7:34:C:C6	2.50	0.47
8:LE:243:THR:HG22	8:LE:245:GLN:N	2.29	0.47
24:LV:42:VAL:HB	24:LV:45:ILE:HG13	1.95	0.47
46:S2:120:U:H2'	46:S2:121:OMU:H6	1.95	0.47
46:S2:624:C:H41	70:SX:63:ASN:ND2	2.12	0.47
46:S2:955:A:H61	46:S2:971:G:H1'	1.79	0.47
51:SE:45:ILE:HD12	51:SE:61:VAL:HG21	1.96	0.47
56:SJ:121:LYS:O	56:SJ:122:SER:CB	2.62	0.47
64:SR:87:GLU:HG2	64:SR:88:VAL:N	2.28	0.47
65:SS:15:VAL:HG22	65:SS:68:ILE:HD11	1.96	0.47
79:Sg:38:LYS:HA	79:Sg:66:VAL:HG23	1.95	0.47
79:Sg:114:SER:HB3	79:Sg:119:GLN:HB2	1.96	0.47
1:L5:1048:G:OP2	1:L5:1048:G:C5	2.67	0.47
1:L5:2739:C:H5''	44:Lp:69:TRP:CH2	2.49	0.47
1:L5:3760:A:C2	46:S2:1826:G:H4'	2.50	0.47
1:L5:3787:G:H1'	1:L5:3789:C:N4	2.29	0.47
1:L5:3861:A:H2'	1:L5:3862:A:H8	1.80	0.47
1:L5:4919:G:H2'	1:L5:4920:C:C6	2.50	0.47
9:LF:92:VAL:O	9:LF:120:GLY:HA2	2.14	0.47
22:LT:87:LYS:HE3	22:LT:87:LYS:HB3	1.74	0.47
46:S2:544:G:C2	46:S2:545:A:C4	3.03	0.47
46:S2:642:U:H5	77:Se:34:ARG:HH21	1.62	0.47
46:S2:1164:G:O2'	46:S2:1165:G:H5'	2.14	0.47
49:SC:125:LYS:HG2	49:SC:143:CYS:HB2	1.97	0.47
50:SD:208:VAL:HG13	64:SR:41:ILE:HG12	1.96	0.47
54:SH:10:LYS:HE3	54:SH:20:GLU:HG3	1.97	0.47
55:SI:88:ASN:O	55:SI:91:VAL:HG12	2.15	0.47
65:SS:12:ILE:HG22	65:SS:12:ILE:O	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:SU:48:LEU:HD23	67:SU:93:SER:HB3	1.96	0.47
75:Sc:16:LYS:HG2	75:Sc:31:ARG:HB3	1.96	0.47
80:u:33:U:O2'	80:u:35:C:H5	1.98	0.47
80:u:55:U:H5''	80:u:55:U:H6	1.80	0.47
1:L5:137:G:H2'	1:L5:138:G:H8	1.79	0.47
1:L5:184:U:C6	1:L5:254:G:N7	2.83	0.47
1:L5:249:C:O2'	1:L5:250:C:H5'	2.15	0.47
1:L5:281:U:C2'	1:L5:282:C:H5'	2.45	0.47
1:L5:663:G:C5	1:L5:664:G:C5	3.02	0.47
1:L5:687:U:OP1	8:LE:97:GLY:N	2.46	0.47
1:L5:733:A:O2'	21:LS:72:PRO:HD2	2.14	0.47
1:L5:741:C:C4	1:L5:742:G:H8	2.32	0.47
1:L5:752:G:H5'	1:L5:916:C:N4	2.29	0.47
1:L5:963:G:H3'	1:L5:963:G:N3	2.30	0.47
1:L5:1296:G:H2'	1:L5:1297:U:C6	2.49	0.47
1:L5:1406:G:C5	1:L5:1412:G:C5	3.03	0.47
1:L5:1753:G:H5''	1:L5:1753:G:H8	1.79	0.47
1:L5:1772:C:H2'	1:L5:1773:U:C1'	2.44	0.47
5:LB:92:TYR:HB2	5:LB:159:VAL:HB	1.96	0.47
5:LB:289:GLN:HB3	5:LB:301:ASN:ND2	2.29	0.47
8:LE:225:PRO:HG2	8:LE:227:HIS:CG	2.50	0.47
10:LG:143:VAL:O	10:LG:147:VAL:HG23	2.14	0.47
12:LI:76:MET:HE3	12:LI:80:CYS:SG	2.55	0.47
25:LW:95:ASN:CB	25:LW:98:PRO:HG2	2.42	0.47
37:Li:54:GLU:O	37:Li:58:MET:HG3	2.15	0.47
39:Lk:54:GLU:H	39:Lk:54:GLU:CD	2.23	0.47
46:S2:97:U:O2'	46:S2:98:C:H5'	2.14	0.47
46:S2:496:C:H2'	46:S2:497:C:H6	1.79	0.47
46:S2:529:A:H61	46:S2:555:A:N6	2.12	0.47
46:S2:583:A:H3'	46:S2:584:A:C8	2.47	0.47
46:S2:587:A:O5'	46:S2:592:C:N4	2.48	0.47
46:S2:818:A:C4	46:S2:819:G:C8	3.03	0.47
46:S2:846:G:C2	51:SE:19:MET:HG2	2.49	0.47
46:S2:878:G:H1	46:S2:908:A:N6	2.13	0.47
46:S2:1134:G:H2'	46:S2:1135:C:H6	1.80	0.47
48:SB:163:GLN:HB3	48:SB:204:ILE:HD13	1.95	0.47
49:SC:194:ARG:HD3	49:SC:196:ILE:HD11	1.97	0.47
50:SD:71:ALA:HB1	57:SK:20:VAL:HG21	1.96	0.47
51:SE:19:MET:SD	51:SE:108:ARG:HD2	2.55	0.47
51:SE:97:GLU:HG2	51:SE:113:ARG:HH12	1.80	0.47
53:SG:141:ILE:C	53:SG:143:LYS:N	2.73	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:SJ:137:VAL:O	56:SJ:137:VAL:HG13	2.14	0.47
56:SJ:140:GLN:NE2	71:SY:64:PHE:O	2.47	0.47
56:SJ:171:GLY:O	56:SJ:175:ARG:HG3	2.14	0.47
59:SM:63:LYS:HZ3	78:Sf:108:VAL:HG21	1.80	0.47
70:SX:68:LYS:HB3	70:SX:91:LEU:HD22	1.96	0.47
73:Sa:28:ARG:HG2	73:Sa:30:VAL:HG23	1.95	0.47
79:Sg:166:VAL:HB	79:Sg:198:VAL:HG22	1.96	0.47
79:Sg:228:TYR:HB2	79:Sg:264:LYS:NZ	2.30	0.47
79:Sg:238:ALA:H	79:Sg:251:ALA:HB3	1.78	0.47
80:u:47:U:H3'	80:u:48:C:C5'	2.45	0.47
80:u:67:C:H2'	80:u:68:C:C6	2.50	0.47
81:v:53:G:C6	81:v:58:A:C6	3.03	0.47
1:L5:10:A:H2'	1:L5:11:G:C8	2.50	0.47
1:L5:493:G:N1	1:L5:660:A:C2	2.79	0.47
1:L5:1345:A:H2'	1:L5:1346:C:C6	2.50	0.47
1:L5:2621:A:H2'	1:L5:2622:G:C8	2.50	0.47
3:L8:148:A:H2'	3:L8:149:G:C8	2.50	0.47
8:LE:102:GLY:H	8:LE:105:ARG:HH12	1.63	0.47
23:LU:28:PRO:HB3	23:LU:100:LEU:HD21	1.97	0.47
25:LW:99:GLU:OE1	25:LW:99:GLU:HA	2.15	0.47
46:S2:804:U:H2'	46:S2:805:U:H6	1.77	0.47
46:S2:867:OMG:H2'	46:S2:868:G:C2	2.50	0.47
46:S2:1232:PSU:H2'	46:S2:1233:G:H8	1.78	0.47
46:S2:1673:U:H2'	46:S2:1674:G:O4'	2.15	0.47
46:S2:1690:U:H2'	46:S2:1691:U:C6	2.50	0.47
49:SC:108:LYS:HB2	49:SC:233:LEU:HD22	1.96	0.47
55:SI:13:LYS:HB3	58:SL:137:THR:HG21	1.97	0.47
59:SM:73:GLN:O	59:SM:73:GLN:HG2	2.14	0.47
79:Sg:183:LYS:N	79:Sg:183:LYS:HD2	2.30	0.47
81:v:43:C:H5''	81:v:43:C:C6	2.47	0.47
1:L5:1094:G:H3'	1:L5:1095:A:C8	2.47	0.47
1:L5:1190:C:C4	1:L5:1191:C:C4	3.03	0.47
1:L5:1252:C:H5	1:L5:1259:G:N2	2.07	0.47
1:L5:1294:A:H5'	1:L5:1294:A:N3	2.30	0.47
1:L5:1980:U:H5'	1:L5:1980:U:H6	1.80	0.47
1:L5:2060:G:N2	21:LS:115:ALA:HB2	2.30	0.47
1:L5:2491:C:C4	1:L5:2492:C:H1'	2.50	0.47
4:LA:96:LEU:O	44:Lp:87:LYS:HD2	2.14	0.47
7:LD:41:LYS:HD2	22:LT:93:ILE:HD13	1.96	0.47
14:LL:180:ALA:O	14:LL:184:MET:HG3	2.15	0.47
18:LP:105:LYS:HB3	18:LP:105:LYS:HE2	1.54	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S2:532:C:C4	46:S2:533:A:N7	2.82	0.47
46:S2:580:U:C2'	46:S2:581:U:H5'	2.44	0.47
46:S2:793:G:N1	46:S2:794:A:C4	2.83	0.47
46:S2:835:C:O3'	46:S2:837:A:H5'	2.14	0.47
50:SD:223:ILE:O	50:SD:223:ILE:HG22	2.15	0.47
53:SG:27:PHE:O	53:SG:30:LYS:HB2	2.14	0.47
54:SH:19:PHE:O	54:SH:23:ILE:HD12	2.15	0.47
54:SH:105:THR:HG22	54:SH:107:LYS:H	1.79	0.47
60:SN:60:VAL:HG13	60:SN:66:VAL:HG21	1.95	0.47
64:SR:24:LEU:HB2	64:SR:58:MET:HE3	1.96	0.47
65:SS:83:PHE:O	65:SS:83:PHE:HD1	1.98	0.47
78:Sf:150:PHE:CG	78:Sf:150:PHE:O	2.67	0.47
80:u:42:C:H2'	80:u:43:C:O2	2.15	0.47
1:L5:742:G:C6	1:L5:743:G:C5	3.03	0.47
1:L5:1169:G:H5'	1:L5:1170:G:OP2	2.15	0.47
1:L5:1257:A:C4	1:L5:1258:G:C8	3.03	0.47
1:L5:1399:G:H1	1:L5:1418:C:H42	1.63	0.47
1:L5:1884:C:H4'	1:L5:2070:U:C4	2.50	0.47
1:L5:2484:A:C2	1:L5:2495:U:H1'	2.50	0.47
1:L5:4967:A:H2'	1:L5:4968:A:H8	1.79	0.47
7:LD:112:ARG:HH11	7:LD:112:ARG:HG2	1.80	0.47
9:LF:241:ASN:O	9:LF:245:ARG:HG2	2.15	0.47
18:LP:16:LYS:HG2	18:LP:149:ILE:HG12	1.97	0.47
46:S2:440:G:H5''	46:S2:1798:C:O2'	2.15	0.47
46:S2:537:C:H41	46:S2:546:G:H21	1.63	0.47
46:S2:545:A:C6	46:S2:546:G:C4	3.03	0.47
46:S2:554:A:C1'	46:S2:555:A:H5'	2.44	0.47
46:S2:818:A:H2'	46:S2:819:G:H8	1.79	0.47
46:S2:1349:G:H21	47:SA:112:ILE:HD11	1.79	0.47
53:SG:154:ARG:HG3	53:SG:155:GLN:HG2	1.97	0.47
57:SK:4:PRO:HG2	57:SK:7:ASN:HB2	1.96	0.47
59:SM:23:LYS:O	59:SM:27:ILE:HG12	2.15	0.47
63:SQ:34:VAL:HG13	63:SQ:70:VAL:HB	1.97	0.47
71:SY:12:PHE:HZ	71:SY:21:LYS:HD2	1.79	0.47
79:Sg:129:ILE:HG12	79:Sg:151:VAL:HG11	1.97	0.47
1:L5:321:U:H2'	1:L5:322:C:C6	2.50	0.46
1:L5:665:C:O2'	1:L5:668:C:N4	2.48	0.46
1:L5:919:C:H2'	1:L5:920:C:C6	2.50	0.46
1:L5:992:C:C2	1:L5:1050:C:N4	2.84	0.46
1:L5:1294:A:H8	1:L5:1295:C:N3	2.12	0.46
1:L5:1669:A:H4'	1:L5:1685:G:N2	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:1995:G:N7	1:L5:2000:G:N2	2.63	0.46
1:L5:2369:U:H1'	32:Ld:39:LYS:HE3	1.97	0.46
1:L5:2484:A:OP2	1:L5:2484:A:C8	2.68	0.46
1:L5:3856:A:H5''	18:LP:83:TRP:O	2.15	0.46
2:L7:64:G:OP1	12:LI:203:HIS:HB2	2.14	0.46
3:L8:70:G:H5''	27:LY:27:ARG:CZ	2.45	0.46
20:LR:183:GLU:HB2	20:LR:187:THR:HA	1.96	0.46
25:LW:93:LYS:H	25:LW:99:GLU:N	2.13	0.46
31:Lc:48:LEU:HD21	31:Lc:60:ILE:HG21	1.97	0.46
37:Li:63:VAL:HG13	37:Li:65:LYS:HG3	1.97	0.46
46:S2:529:A:H3'	46:S2:530:U:C6	2.50	0.46
46:S2:818:A:C8	46:S2:847:A:N6	2.84	0.46
56:SJ:164:PRO:O	56:SJ:165:TYR:CB	2.63	0.46
58:SL:47:PRO:HB2	58:SL:49:GLU:OE1	2.16	0.46
61:SO:121:ARG:HH22	75:Sc:40:ARG:HH12	1.63	0.46
62:SP:56:LEU:HD23	62:SP:83:MET:HG2	1.96	0.46
71:SY:6:THR:C	71:SY:7:ILE:HD13	2.40	0.46
73:Sa:45:VAL:CG1	73:Sa:53:ILE:HD12	2.45	0.46
76:Sd:23:VAL:HG11	76:Sd:46:TYR:CE2	2.50	0.46
80:u:24:G:C5	80:u:25:C:C4	3.03	0.46
81:v:67:C:OP2	81:v:67:C:H6	1.97	0.46
1:L5:377:A:H2'	1:L5:378:A:O4'	2.15	0.46
1:L5:661:C:H2'	1:L5:662:C:C4	2.50	0.46
1:L5:698:G:C6	1:L5:699:C:N4	2.82	0.46
1:L5:965:G:C6	1:L5:2256:C:C5	3.04	0.46
1:L5:1078:A:H5''	1:L5:1079:C:H5	1.80	0.46
1:L5:1084:C:O2'	1:L5:1085:C:H5'	2.16	0.46
1:L5:1270:A:H4'	1:L5:1270:A:OP1	2.16	0.46
1:L5:2391:G:H2'	1:L5:2392:C:H6	1.79	0.46
1:L5:3930:U:H2'	1:L5:3931:C:C6	2.51	0.46
86:L5:5389:NMY:O11	86:L5:5389:NMY:H1	2.15	0.46
5:LB:354:GLN:HB3	5:LB:359:ALA:HB1	1.97	0.46
19:LQ:49:LYS:NZ	19:LQ:49:LYS:HB3	2.30	0.46
31:Lc:29:LEU:HD22	31:Lc:91:VAL:HG11	1.96	0.46
46:S2:537:C:OP1	46:S2:538:U:H5	1.97	0.46
50:SD:61:GLU:O	50:SD:62:LYS:HG2	2.15	0.46
51:SE:72:ILE:HG21	51:SE:82:TYR:HE2	1.79	0.46
55:SI:165:GLN:HB2	55:SI:171:LEU:HD23	1.97	0.46
60:SN:34:LYS:HE2	60:SN:74:ILE:HG12	1.96	0.46
79:Sg:157:SER:HB2	79:Sg:164:ILE:H	1.80	0.46
79:Sg:263:GLY:O	79:Sg:265:ILE:HG13	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:u:6:G:H2'	80:u:6:G:N3	2.31	0.46
1:L5:176:G:C6	1:L5:261:G:C6	3.04	0.46
1:L5:516:C:H3'	1:L5:516:C:H6	1.79	0.46
1:L5:994:G:C6	1:L5:995:C:H1'	2.51	0.46
1:L5:1256:G:H5''	1:L5:1258:G:OP2	2.15	0.46
1:L5:1272:C:N3	9:LF:30:ILE:HD12	2.30	0.46
1:L5:1457:G:O2'	1:L5:1458:C:H5'	2.15	0.46
1:L5:2489:C:O3'	1:L5:2491:C:N3	2.48	0.46
1:L5:2904:U:C5	1:L5:3592:G:H1'	2.50	0.46
1:L5:3652:A:H2'	1:L5:3653:A:C5	2.49	0.46
1:L5:3718:A2M:H2'	1:L5:3719:A:O4'	2.15	0.46
1:L5:4578:G:H2'	1:L5:4579:PSU:H6	1.81	0.46
1:L5:4954:G:H2'	1:L5:4955:A:C8	2.50	0.46
15:LM:5:ARG:HD3	15:LM:59:ASP:OD1	2.15	0.46
20:LR:46:LYS:HB3	20:LR:46:LYS:HE2	1.60	0.46
20:LR:64:ARG:HG2	20:LR:64:ARG:HH11	1.80	0.46
30:Lb:63:LYS:C	30:Lb:63:LYS:HD2	2.40	0.46
46:S2:1324:G:H1	46:S2:1504:U:H3	1.63	0.46
46:S2:1593:C:H2'	46:S2:1594:A:C8	2.50	0.46
47:SA:1:MET:H2	47:SA:185:MET:HE1	1.79	0.46
49:SC:214:LEU:HD23	49:SC:219:ILE:HD13	1.98	0.46
50:SD:48:ILE:HB	50:SD:86:LEU:CD2	2.45	0.46
53:SG:5:ILE:CG1	53:SG:124:LEU:HD11	2.45	0.46
56:SJ:134:HIS:CG	56:SJ:134:HIS:O	2.68	0.46
56:SJ:136:ARG:HD2	56:SJ:160:SER:HB3	1.97	0.46
66:ST:28:LEU:HB2	66:ST:110:LEU:HD22	1.96	0.46
80:u:43:C:H3'	80:u:44:G:H8	1.80	0.46
1:L5:1415:G:C2	1:L5:1416:G:C5	3.03	0.46
1:L5:2082:G:H5''	19:LQ:12:LYS:HD2	1.98	0.46
6:LC:159:GLU:HA	6:LC:217:ILE:HB	1.97	0.46
31:Lc:57:LYS:HE3	31:Lc:57:LYS:HB2	1.82	0.46
35:Lg:56:VAL:HG13	35:Lg:72:LYS:HA	1.98	0.46
46:S2:72:C:H42	53:SG:170:ARG:HG2	1.81	0.46
46:S2:179:C:H2'	46:S2:180:G:O4'	2.16	0.46
46:S2:540:U:C2'	46:S2:543:C:H42	2.28	0.46
46:S2:793:G:C6	46:S2:794:A:C5	3.04	0.46
46:S2:867:OMG:O2'	46:S2:868:G:H5'	2.15	0.46
46:S2:1521:C:H1'	62:SP:128:HIS:NE2	2.31	0.46
47:SA:122:LEU:HB2	47:SA:142:LEU:HD21	1.96	0.46
53:SG:56:ASN:HB2	53:SG:108:VAL:HG12	1.97	0.46
54:SH:18:GLU:C	54:SH:20:GLU:H	2.23	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:SH:35:ASP:HB2	54:SH:78:ARG:NH2	2.30	0.46
59:SM:42:LEU:HD23	59:SM:68:LEU:HB3	1.96	0.46
59:SM:44:LYS:HD2	59:SM:46:GLN:H	1.81	0.46
59:SM:79:VAL:HG11	59:SM:88:TRP:CZ3	2.49	0.46
66:ST:51:ASN:C	66:ST:53:PHE:H	2.24	0.46
71:SY:9:THR:HB	71:SY:23:MET:HG3	1.98	0.46
72:SZ:88:LEU:HB3	72:SZ:109:TYR:CE2	2.51	0.46
80:u:67:C:H2'	80:u:68:C:H6	1.79	0.46
1:L5:162:A:H2'	1:L5:163:A:H8	1.78	0.46
1:L5:495:C:H6	1:L5:495:C:H5''	1.80	0.46
1:L5:652:G:H2'	1:L5:653:U:C6	2.50	0.46
1:L5:690:C:H2'	1:L5:691:C:H6	1.80	0.46
1:L5:923:C:O2	1:L5:924:C:C4	2.68	0.46
1:L5:1183:C:H2'	1:L5:1184:A:O4'	2.15	0.46
1:L5:1217:G:H2'	1:L5:1218:G:C8	2.50	0.46
1:L5:1241:C:C5	30:Lb:118:LEU:HB2	2.51	0.46
1:L5:1764:G:O2'	1:L5:1766:A:H3'	2.14	0.46
1:L5:4281:A:O2'	1:L5:4282:A:H8	1.99	0.46
12:LI:47:PRO:HB3	12:LI:171:TRP:CZ2	2.50	0.46
20:LR:21:LYS:HE3	20:LR:55:VAL:HA	1.97	0.46
24:LV:112:MET:HG3	24:LV:132:ILE:HG12	1.98	0.46
31:Lc:14:ILE:H	31:Lc:14:ILE:CD1	2.28	0.46
40:Ll:34:LYS:HE3	40:Ll:34:LYS:HB2	1.70	0.46
46:S2:1856:C:H2'	46:S2:1857:G:C8	2.50	0.46
56:SJ:138[A]:ARG:HB3	56:SJ:139:LYS:H	1.38	0.46
61:SO:45:THR:OG1	61:SO:49:GLY:HA2	2.15	0.46
81:v:11:C:H2'	81:v:12:C:C6	2.50	0.46
1:L5:108:A:H4'	1:L5:109:G:OP1	2.14	0.46
1:L5:963:G:OP2	9:LF:32:ARG:CD	2.63	0.46
1:L5:1181:C:C5	1:L5:1182:C:C5	3.04	0.46
1:L5:1245:C:H2'	1:L5:1246:G:O4'	2.16	0.46
1:L5:1326:A2M:H5''	1:L5:1326:A2M:H8	1.96	0.46
1:L5:1984:A:C5	1:L5:2011:C:H4'	2.51	0.46
1:L5:2480:G:N2	1:L5:2498:C:N3	2.63	0.46
1:L5:4281:A:O2'	1:L5:4282:A:H2'	2.15	0.46
1:L5:4460:U:H2'	1:L5:4461:C:C6	2.50	0.46
1:L5:4905:C:H2'	1:L5:4906:C:C6	2.51	0.46
86:L5:5387:NMY:H16	86:L5:5387:NMY:H18	1.70	0.46
2:L7:13:A:O2'	2:L7:14:C:H5'	2.16	0.46
6:LC:298:ILE:O	6:LC:302:LEU:HG	2.15	0.46
15:LM:24:LEU:HD11	15:LM:86:TRP:CG	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:LN:178:HIS:HA	16:LN:181:HIS:NE2	2.30	0.46
21:LS:147:ASP:HB3	21:LS:150:ILE:HB	1.96	0.46
31:Lc:38:ILE:HG21	31:Lc:63:TYR:HB3	1.97	0.46
33:Le:35:TRP:CH2	33:Le:55:MET:HG2	2.50	0.46
46:S2:25:A:O2'	46:S2:26:U:H6	1.99	0.46
46:S2:28:U:H2'	46:S2:29:G:C8	2.49	0.46
46:S2:541:U:H2'	46:S2:542:U:C6	2.50	0.46
46:S2:881:G:H2'	46:S2:881:G:N3	2.31	0.46
46:S2:883:U:H2'	46:S2:884:C:C6	2.51	0.46
46:S2:1047:C:H2'	46:S2:1048:G:O4'	2.14	0.46
46:S2:1230:C:H3'	65:SS:139:THR:HG21	1.97	0.46
46:S2:1808:U:H2'	46:S2:1809:A:C8	2.50	0.46
48:SB:110:MET:HE2	48:SB:213:ARG:HD2	1.98	0.46
54:SH:148:LEU:HA	69:SW:42:MET:SD	2.55	0.46
58:SL:48:LYS:HE3	58:SL:48:LYS:HB3	1.65	0.46
67:SU:51:LYS:HD3	67:SU:51:LYS:HA	1.65	0.46
69:SW:83:LEU:HD11	69:SW:120:HIS:HA	1.98	0.46
79:Sg:5:MET:SD	79:Sg:312:VAL:HG22	2.56	0.46
80:u:49:C:H2'	80:u:50:U:H6	1.79	0.46
1:L5:496:G:H2'	1:L5:497:G:H4'	1.97	0.46
1:L5:516:C:N4	1:L5:643:C:N3	2.63	0.46
1:L5:760:G:H22	1:L5:903:C:C2'	2.29	0.46
1:L5:993:G:C6	1:L5:1051:G:C5	3.03	0.46
1:L5:1066:G:H2'	1:L5:1067:G:C8	2.49	0.46
1:L5:1294:A:H1'	1:L5:1295:C:O2	2.16	0.46
1:L5:1840:G:H1'	9:LF:111:LEU:HD23	1.96	0.46
1:L5:2500:U:C4	1:L5:2501:C:C4	3.03	0.46
1:L5:2683:C:H2'	1:L5:2684:C:C6	2.50	0.46
1:L5:2864:A:H2'	1:L5:2865:U:C6	2.50	0.46
1:L5:4069:U:H2'	1:L5:4070:U:C6	2.51	0.46
5:LB:291:TYR:CE1	5:LB:299:ILE:HG22	2.50	0.46
7:LD:51:MET:HE3	7:LD:105:LEU:HD23	1.98	0.46
9:LF:182:TYR:CD1	9:LF:200:ARG:HD3	2.51	0.46
10:LG:156:VAL:HG22	10:LG:182:CYS:SG	2.56	0.46
25:LW:99:GLU:CD	25:LW:100:VAL:H	2.24	0.46
25:LW:119:LYS:HD2	25:LW:122:SER:C	2.41	0.46
27:LY:117:LYS:HE2	27:LY:117:LYS:HB3	1.49	0.46
46:S2:118:C:H1'	46:S2:445:A:C5	2.51	0.46
46:S2:635:G:H2'	46:S2:636:C:H6	1.80	0.46
46:S2:787:G:H4'	46:S2:787:G:OP1	2.16	0.46
46:S2:1259:A:H61	46:S2:1519:U:H5'	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:SD:211:VAL:HG22	64:SR:38:ILE:O	2.16	0.46
61:SO:43:HIS:CD2	61:SO:55:ARG:HB2	2.50	0.46
66:ST:56:ARG:HG3	66:ST:103:VAL:HG21	1.98	0.46
67:SU:28:ASN:HB2	67:SU:31:SER:HB3	1.97	0.46
79:Sg:120:ILE:HB	79:Sg:132:TRP:O	2.15	0.46
81:v:54:U:H3'	81:v:55:U:H5	1.81	0.46
81:v:62:C:H2'	81:v:62:C:O2	2.16	0.46
1:L5:1269:G:H1'	1:L5:1440:U:O2'	2.16	0.46
1:L5:1370:G:H4'	1:L5:1371:A:O5'	2.16	0.46
1:L5:1969:G:C4	1:L5:2019:C:C4	3.04	0.46
1:L5:1982:G:H5''	1:L5:2009:A:C1'	2.45	0.46
1:L5:3848:U:H2'	1:L5:3849:A:H8	1.81	0.46
1:L5:4196:OMG:HM23	1:L5:4196:OMG:H1'	1.64	0.46
1:L5:4460:U:H2'	1:L5:4461:C:H6	1.81	0.46
1:L5:4917:C:H2'	1:L5:4918:C:C6	2.51	0.46
86:L5:5378:NMY:H5	86:L5:5378:NMY:H91	1.80	0.46
7:LD:258:LYS:O	7:LD:259:LYS:HB2	2.16	0.46
46:S2:126:G:H5'	53:SG:195:LYS:NZ	2.31	0.46
46:S2:462:OMC:HM23	46:S2:462:OMC:H1'	1.59	0.46
46:S2:542:U:H2'	46:S2:543:C:O4'	2.16	0.46
46:S2:1513:C:H2'	46:S2:1514:G:H8	1.79	0.46
46:S2:1542:C:O5'	46:S2:1542:C:H6	1.99	0.46
48:SB:28:LYS:HD3	48:SB:48:LEU:HD12	1.97	0.46
52:SF:100:ILE:HG23	52:SF:178:ILE:HD11	1.97	0.46
53:SG:56:ASN:ND2	53:SG:62:PRO:HA	2.31	0.46
55:SI:42:ARG:HD2	55:SI:58:LEU:HD12	1.98	0.46
59:SM:19:GLN:HB3	59:SM:23:LYS:NZ	2.31	0.46
63:SQ:13:PHE:CD1	63:SQ:13:PHE:C	2.93	0.46
79:Sg:52:TYR:CD2	79:Sg:309:VAL:HG21	2.51	0.46
79:Sg:165:ILE:HG13	79:Sg:177:TRP:CD1	2.51	0.46
1:L5:163:A:H2'	1:L5:164:G:H8	1.80	0.46
1:L5:684:G:H5''	1:L5:685:C:OP2	2.16	0.46
1:L5:963:G:H2'	1:L5:964:A:O4'	2.15	0.46
1:L5:1217:G:H5''	1:L5:1217:G:H8	1.81	0.46
1:L5:1941:A:C2	1:L5:4434:C:H5'	2.51	0.46
1:L5:1977:C:N3	1:L5:2002:A:O2'	2.49	0.46
1:L5:2479:G:H2'	1:L5:2480:G:O4'	2.16	0.46
1:L5:2858:A:H2'	1:L5:2859:G:O4'	2.16	0.46
1:L5:4959:U:H2'	1:L5:4960:G:C8	2.51	0.46
86:L7:202:NMY:O11	86:L7:202:NMY:N2	2.49	0.46
7:LD:80:ALA:O	7:LD:92:LEU:HD22	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:LW:94:ARG:CG	25:LW:95:ASN:N	2.78	0.46
28:LZ:61:LYS:HE2	28:LZ:61:LYS:HB2	1.75	0.46
55:SI:100:CYS:SG	55:SI:175:ILE:HG13	2.56	0.46
59:SM:99:LYS:H	59:SM:99:LYS:HG3	1.50	0.46
65:SS:26:ILE:O	65:SS:30:ILE:HG12	2.16	0.46
72:SZ:49:LEU:H	72:SZ:83:LEU:HD13	1.81	0.46
1:L5:1087:A:H2'	1:L5:1088:C:C6	2.50	0.46
1:L5:1672:U:H2'	1:L5:1673:U:C6	2.51	0.46
1:L5:4070:U:H2'	1:L5:4071:U:H6	1.80	0.46
1:L5:4090:G:OP1	10:LG:252:LYS:HE2	2.16	0.46
1:L5:4547:C:H4'	1:L5:4548:A:H2	1.80	0.46
1:L5:4934:A:H2'	1:L5:4935:C:C6	2.50	0.46
11:LH:31:ARG:HH21	11:LH:187:VAL:HG11	1.81	0.46
20:LR:184:ILE:HG23	20:LR:185:ILE:N	2.30	0.46
23:LU:28:PRO:HB2	23:LU:34:MET:CB	2.45	0.46
25:LW:105:ARG:N	25:LW:106:GLU:OE1	2.45	0.46
30:Lb:91:ARG:HB2	30:Lb:94:ASP:HB2	1.98	0.46
46:S2:539:C:N3	46:S2:544:G:O6	2.49	0.46
46:S2:795:A:H2'	46:S2:796:G:C1'	2.46	0.46
46:S2:1681:U:H2'	46:S2:1682:C:C6	2.51	0.46
53:SG:23:LYS:C	53:SG:24:LEU:HD12	2.41	0.46
56:SJ:122:SER:HB2	56:SJ:125:HIS:HB2	1.98	0.46
79:Sg:34:ALA:HB1	79:Sg:66:VAL:HG12	1.98	0.46
1:L5:468:U:C4	1:L5:684:G:N7	2.84	0.45
1:L5:489:C:C6	1:L5:489:C:C5'	2.99	0.45
1:L5:962:C:N3	1:L5:1701:A:H2	2.13	0.45
1:L5:994:G:C4	1:L5:1050:C:C2	3.03	0.45
1:L5:1065:G:H2'	1:L5:1065:G:N3	2.30	0.45
1:L5:1193:C:H2'	1:L5:1194:G:O4'	2.17	0.45
1:L5:1258:G:H2'	1:L5:1258:G:N3	2.31	0.45
1:L5:1448:G:H2'	1:L5:1449:C:C6	2.51	0.45
1:L5:3720:G:H22	1:L5:3733:A:H2	1.62	0.45
1:L5:3746:A:H5''	4:LA:244:GLY:HA3	1.97	0.45
6:LC:163:LYS:HE3	6:LC:163:LYS:HB3	1.79	0.45
6:LC:208:CYS:SG	6:LC:230:LEU:HD12	2.56	0.45
17:LO:196:LEU:HB2	17:LO:202:LEU:HD12	1.97	0.45
19:LQ:22:ASP:O	19:LQ:26:ARG:HG3	2.15	0.45
23:LU:26:THR:O	23:LU:30:GLU:HG2	2.16	0.45
28:LZ:36:ARG:HG2	28:LZ:38:TYR:CZ	2.51	0.45
41:Lm:78:ILE:HD13	41:Lm:83:ARG:HH21	1.81	0.45
46:S2:25:A:O2'	46:S2:26:U:H5''	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S2:512:A2M:HM'3	46:S2:512:A2M:H1'	1.65	0.45
46:S2:576:A2M:HM'3	46:S2:576:A2M:H1'	1.56	0.45
46:S2:746:C:H2'	46:S2:747:U:C5	2.51	0.45
47:SA:1:MET:N	47:SA:63:ARG:NE	2.63	0.45
48:SB:171:ILE:HD12	48:SB:197:ILE:HA	1.98	0.45
51:SE:72:ILE:HG21	51:SE:82:TYR:CE2	2.51	0.45
51:SE:128:LYS:O	51:SE:139:LEU:HA	2.16	0.45
53:SG:126:ASP:CG	53:SG:127:THR:H	2.23	0.45
65:SS:113:ARG:O	65:SS:117:ILE:HG12	2.16	0.45
67:SU:46:LYS:HD2	67:SU:97:ILE:HG12	1.96	0.45
72:SZ:94:LYS:HB3	72:SZ:96:LEU:HD12	1.98	0.45
78:Sf:132:MET:HE2	78:Sf:140:TYR:HA	1.97	0.45
80:u:62:C:H2'	80:u:63:G:C8	2.52	0.45
81:v:16:A:O4'	81:v:17:A:H2'	2.16	0.45
81:v:58:A:H1'	81:v:61:C:N4	2.32	0.45
1:L5:497:G:C8	1:L5:499:G:N7	2.85	0.45
1:L5:1259:G:N3	1:L5:1259:G:H2'	2.30	0.45
1:L5:1967:A:H2	1:L5:1969:G:O6	1.98	0.45
1:L5:2020:U:OP1	1:L5:2020:U:H4'	2.15	0.45
1:L5:2396:A:N7	1:L5:2814:C:H2'	2.31	0.45
1:L5:4571:A2M:H2'	1:L5:4572:U:C6	2.51	0.45
5:LB:85:VAL:HG22	5:LB:204:GLN:HG2	1.98	0.45
5:LB:300:LYS:HD2	5:LB:301:ASN:N	2.30	0.45
6:LC:209:ILE:HB	6:LC:229:LEU:HD13	1.98	0.45
10:LG:90:GLN:H	10:LG:90:GLN:CD	2.24	0.45
31:Lc:47:ILE:HB	31:Lc:94:LEU:HG	1.99	0.45
42:Ln:4:LYS:HG3	42:Ln:5:TRP:CE3	2.51	0.45
46:S2:495:U:H2'	46:S2:496:C:O4'	2.15	0.45
46:S2:529:A:H2'	46:S2:529:A:N3	2.30	0.45
46:S2:534:G:C2	46:S2:550:C:C2	3.04	0.45
46:S2:614:C:H2'	46:S2:626:G:C8	2.50	0.45
46:S2:817:G:H21	46:S2:818:A:H62	1.63	0.45
46:S2:1627:C:H2'	46:S2:1628:C:H6	1.81	0.45
49:SC:275:LYS:HD3	49:SC:275:LYS:HA	1.82	0.45
50:SD:45:ARG:O	50:SD:47:GLU:HG3	2.16	0.45
52:SF:195:GLU:O	52:SF:199:VAL:HG23	2.16	0.45
66:ST:38:LYS:HB2	66:ST:38:LYS:HE3	1.69	0.45
70:SX:46:HIS:CD2	70:SX:103:ALA:HB2	2.51	0.45
80:u:69:G:N3	80:u:69:G:H2'	2.31	0.45
81:v:14:C:H2'	81:v:15:G:O4'	2.16	0.45
1:L5:646:G:C2'	1:L5:647:G:H5'	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:662:C:C6	1:L5:662:C:C3'	2.99	0.45
1:L5:1192:C:H2'	1:L5:1193:C:C5	2.52	0.45
1:L5:2836:A:H4'	5:LB:229:LYS:HA	1.98	0.45
1:L5:3712:A:C5	1:L5:3713:U:H1'	2.51	0.45
1:L5:4389:C:H2'	1:L5:4390:A:C8	2.52	0.45
1:L5:4894:A:H5''	1:L5:4895:C:H5'	1.99	0.45
10:LG:231:ASP:HB3	10:LG:235:ARG:NH1	2.31	0.45
17:LO:193:THR:O	17:LO:197:LYS:HG2	2.16	0.45
24:LV:57:VAL:HA	24:LV:81:VAL:HG12	1.98	0.45
31:Lc:9:LYS:HB3	31:Lc:11:LEU:HD13	1.98	0.45
46:S2:77:A:H2'	46:S2:78:C:C6	2.51	0.45
46:S2:963:A:H2'	46:S2:964:A:C8	2.51	0.45
46:S2:1408:U:H2'	46:S2:1409:A:C8	2.51	0.45
50:SD:97:CYS:HB3	50:SD:100:ALA:HB3	1.98	0.45
56:SJ:133:ARG:H	56:SJ:133:ARG:HG2	1.34	0.45
59:SM:75:ASN:OD1	59:SM:77:ILE:HG12	2.16	0.45
72:SZ:90:GLU:O	72:SZ:94:LYS:HD3	2.17	0.45
80:u:58:A:H1'	80:u:60:U:C5	2.51	0.45
1:L5:174:C:C2	1:L5:263:G:N2	2.85	0.45
1:L5:261:G:C6	1:L5:262:G:C8	3.04	0.45
1:L5:1189:G:H2'	1:L5:1190:C:H5'	1.99	0.45
1:L5:1301:C:OP1	1:L5:1301:C:H3'	2.17	0.45
1:L5:1368:A:C2'	1:L5:1369:C:H5'	2.47	0.45
1:L5:1821:G:H3'	1:L5:1821:G:N3	2.32	0.45
1:L5:1983:A:C8	1:L5:1986:U:P	3.09	0.45
1:L5:1997:U:O5'	1:L5:1997:U:H6	1.99	0.45
1:L5:2693:G:H2'	1:L5:2694:G:C2	2.52	0.45
6:LC:261:ASP:OD1	6:LC:266:THR:HG22	2.17	0.45
7:LD:89:LYS:HE3	7:LD:89:LYS:HB3	1.84	0.45
8:LE:223:ARG:CZ	8:LE:223:ARG:HA	2.46	0.45
9:LF:37:PHE:CE1	9:LF:41:MET:HE2	2.51	0.45
9:LF:127:LYS:HB2	22:LT:133:ALA:HB3	1.97	0.45
12:LI:183:ASP:O	12:LI:187:LYS:HG3	2.16	0.45
16:LN:104:GLU:HA	16:LN:160:GLU:HG3	1.98	0.45
18:LP:89:GLU:HG3	18:LP:90:PHE:N	2.31	0.45
23:LU:63:ILE:HG22	23:LU:72:VAL:HG22	1.98	0.45
34:Lf:8:LYS:HB3	34:Lf:100:ARG:CZ	2.46	0.45
46:S2:345:U:H2'	46:S2:346:C:C6	2.52	0.45
46:S2:686:PSU:OP1	69:SW:32:LYS:HG3	2.17	0.45
46:S2:913:A:OP2	54:SH:99:ARG:HD3	2.17	0.45
46:S2:1643:PSU:H2'	46:S2:1644:C:C6	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:SA:1:MET:H1	47:SA:63:ARG:HE	1.60	0.45
51:SE:22:LYS:CG	51:SE:23:LEU:HD22	2.46	0.45
56:SJ:30:LYS:O	56:SJ:33:GLY:N	2.50	0.45
63:SQ:44:PRO:C	63:SQ:46:THR:N	2.73	0.45
64:SR:105:MET:HG2	64:SR:109:LEU:HD21	1.98	0.45
77:Se:8:ARG:HB3	77:Se:8:ARG:NH1	2.30	0.45
81:v:15:G:H4'	81:v:16:A:OP1	2.14	0.45
1:L5:229:G:H5''	27:LY:11:ARG:HG3	1.98	0.45
1:L5:434:A:H2'	1:L5:435:A:O4'	2.16	0.45
1:L5:1907:A:H4'	9:LF:223:LYS:HE3	1.98	0.45
1:L5:2656:U:H5''	28:LZ:38:TYR:HB3	1.97	0.45
1:L5:3612:C:H1'	1:L5:5016:A:H8	1.81	0.45
1:L5:3701:OMC:N4	1:L5:3745:U:H2'	2.31	0.45
7:LD:164:LYS:HA	7:LD:167:VAL:HG22	1.98	0.45
27:LY:52:ASP:HA	27:LY:69:LYS:HG2	1.99	0.45
29:La:7:LYS:HE3	29:La:7:LYS:HB3	1.70	0.45
44:Lp:46:LYS:HB3	44:Lp:46:LYS:HE3	1.63	0.45
46:S2:669:A:H2'	46:S2:670:A:C8	2.51	0.45
46:S2:877:C:H2'	46:S2:878:G:H8	1.81	0.45
46:S2:1073:U:H2'	46:S2:1074:C:H6	1.81	0.45
46:S2:1374:C:H2'	46:S2:1375:G:O4'	2.16	0.45
46:S2:1729:U:H6	46:S2:1729:U:H5''	1.81	0.45
52:SF:99:ILE:HG23	72:SZ:67:LEU:CD2	2.47	0.45
52:SF:193:LYS:O	52:SF:197:GLU:HG3	2.17	0.45
55:SI:123:ARG:HG2	55:SI:123:ARG:HH11	1.82	0.45
58:SL:35:ARG:HH12	58:SL:63:THR:HG21	1.82	0.45
67:SU:104:ILE:HD12	67:SU:104:ILE:HA	1.83	0.45
79:Sg:169:GLY:O	79:Sg:195:LEU:HB2	2.16	0.45
81:v:52:G:H2'	81:v:52:G:N3	2.31	0.45
1:L5:505:G:H2'	1:L5:506:C:O4'	2.17	0.45
1:L5:965:G:O2'	1:L5:966:A:N3	2.46	0.45
1:L5:1431:C:H2'	1:L5:1432:G:O4'	2.15	0.45
1:L5:1907:A:H2'	1:L5:1908:A:C8	2.52	0.45
1:L5:1977:C:C6	1:L5:1991:A:H1'	2.52	0.45
1:L5:1986:U:O4	1:L5:2010:A:H5'	2.17	0.45
1:L5:4673:PSU:H2'	1:L5:4674:C:H6	1.82	0.45
1:L5:4959:U:H2'	1:L5:4960:G:H8	1.81	0.45
6:LC:289:LEU:HD11	19:LQ:31:LEU:HB2	1.98	0.45
46:S2:568:C:C4	46:S2:583:A:C5	3.05	0.45
46:S2:862:A:C8	69:SW:107:SER:HA	2.52	0.45
46:S2:1556:A:N3	46:S2:1556:A:H2'	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:SB:119:THR:OG1	48:SB:155:TYR:HA	2.16	0.45
49:SC:74:LYS:HD2	49:SC:269:PHE:CD2	2.52	0.45
51:SE:17:HIS:H	51:SE:17:HIS:CD2	2.34	0.45
54:SH:30:LEU:HD13	54:SH:40:LEU:HD22	1.99	0.45
56:SJ:57:ALA:O	56:SJ:58:ARG:C	2.59	0.45
1:L5:25:A:H2'	1:L5:26:C:C6	2.52	0.45
1:L5:455:C:O2'	1:L5:456:C:H5'	2.17	0.45
1:L5:497:G:C5	1:L5:498:C:C5	3.05	0.45
1:L5:687:U:C2	8:LE:95:PRO:HG2	2.51	0.45
1:L5:1461:C:H2'	1:L5:1462:A:C8	2.52	0.45
1:L5:2362:U:H2'	1:L5:2363:A2M:C8	2.42	0.45
1:L5:2570:U:H2'	1:L5:2571:C:C6	2.51	0.45
1:L5:3771:C:H2'	1:L5:3772:U:O2	2.17	0.45
1:L5:4413:C:H2'	1:L5:4414:A:O4'	2.17	0.45
16:LN:9:GLU:HB2	37:Li:44:ILE:HG13	1.97	0.45
27:LY:1:MET:HE2	27:LY:1:MET:HB2	1.84	0.45
28:LZ:48:ARG:H	28:LZ:69:LYS:HB3	1.81	0.45
36:Lh:94:ARG:HE	36:Lh:94:ARG:HB3	1.52	0.45
43:Lo:6:LYS:HG3	43:Lo:94:GLY:HA3	1.99	0.45
46:S2:1745:A:H5'	46:S2:1746:U:OP2	2.16	0.45
50:SD:134:CYS:O	50:SD:153:VAL:HA	2.16	0.45
56:SJ:134:HIS:CD2	56:SJ:134:HIS:O	2.69	0.45
58:SL:20:LYS:HE3	58:SL:20:LYS:HB3	1.68	0.45
58:SL:47:PRO:O	58:SL:51:ILE:HG13	2.17	0.45
65:SS:22:GLY:HA2	65:SS:56:ALA:HB3	1.97	0.45
80:u:25:C:H2'	80:u:26:A:C8	2.51	0.45
1:L5:352:G:H2'	6:LC:193:LYS:HE2	1.98	0.45
1:L5:419:A:N6	3:L8:15:G:H1'	2.32	0.45
1:L5:917:A:H2'	1:L5:918:G:O4'	2.17	0.45
1:L5:1764:G:O3'	1:L5:1766:A:H5'	2.17	0.45
1:L5:1866:U:H2'	1:L5:1867:A:O4'	2.17	0.45
1:L5:1933:G:H2'	1:L5:1934:A:C8	2.51	0.45
1:L5:2025:A:N3	1:L5:2026:A:H1'	2.32	0.45
1:L5:2376:A:H2'	1:L5:2377:C:C6	2.51	0.45
1:L5:2563:C:H3'	1:L5:2564:G:H8	1.81	0.45
1:L5:2565:A:H3'	1:L5:2566:G:H8	1.81	0.45
1:L5:4273:A:H2'	1:L5:4274:A:C8	2.51	0.45
1:L5:4287:G:H2'	1:L5:4288:C:C6	2.52	0.45
1:L5:4612:C:O2	11:LH:120:GLU:HB3	2.16	0.45
2:L7:2:U:H2'	2:L7:3:C:H6	1.81	0.45
3:L8:82:A:P	3:L8:83:C:H5''	2.57	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:LE:222:LEU:HD13	8:LE:237:LYS:HD3	1.97	0.45
21:LS:28:TYR:CZ	21:LS:52:LYS:HD2	2.52	0.45
23:LU:60:VAL:HG12	23:LU:61:VAL:HG23	1.98	0.45
25:LW:95:ASN:H	25:LW:98:PRO:HD2	1.80	0.45
31:Lc:9:LYS:HB3	31:Lc:11:LEU:HD22	1.99	0.45
46:S2:589:G:H2'	46:S2:589:G:OP1	2.17	0.45
46:S2:1415:C:H2'	46:S2:1416:C:C6	2.52	0.45
46:S2:1656:G:H2'	46:S2:1657:G:C8	2.46	0.45
46:S2:1725:U:H2'	46:S2:1726:G:H8	1.81	0.45
50:SD:204:LEU:HD23	50:SD:205:PRO:O	2.17	0.45
56:SJ:47:LYS:N	56:SJ:102:ILE:HD11	2.31	0.45
57:SK:53:LYS:HA	57:SK:58:VAL:O	2.16	0.45
65:SS:34:LYS:HE3	65:SS:34:LYS:HB3	1.73	0.45
80:u:26:A:H2'	80:u:27:G:C8	2.52	0.45
81:v:56:C:H2'	81:v:57:G:C4	2.51	0.45
1:L5:1078:A:OP1	1:L5:1078:A:H4'	2.16	0.45
1:L5:1377:G:H4'	1:L5:1378:C:H3'	1.99	0.45
1:L5:1920:C:H3'	1:L5:1921:C:H5''	1.98	0.45
1:L5:2256:C:H2'	1:L5:2257:C:O4'	2.17	0.45
1:L5:2389:A:H4'	32:Ld:70:LYS:HG3	1.98	0.45
1:L5:4236:G:H4'	1:L5:4328:G:O2'	2.16	0.45
1:L5:4578:G:H2'	1:L5:4579:PSU:C6	2.52	0.45
8:LE:98:GLY:HA3	8:LE:101:ASN:HD22	1.80	0.45
25:LW:101:ARG:HB2	53:SG:156:TYR:CE2	2.52	0.45
46:S2:533:A:C6	46:S2:534:G:N7	2.84	0.45
46:S2:628:A:N6	46:S2:1500:G:H21	2.13	0.45
46:S2:839:C:N4	71:SY:10:ARG:HA	2.32	0.45
46:S2:1239:U:H1'	46:S2:1242:U:C5	2.52	0.45
46:S2:1845:A:H2'	46:S2:1846:G:H8	1.82	0.45
49:SC:184:VAL:HG23	49:SC:195:LEU:HB2	1.99	0.45
54:SH:32:MET:HE3	54:SH:33:ASN:HD22	1.82	0.45
57:SK:86:PRO:HA	57:SK:87:PRO:HD3	1.85	0.45
58:SL:13:GLN:HG3	58:SL:56:ILE:HD12	1.99	0.45
62:SP:17:TYR:HB3	62:SP:25:LEU:HD11	1.98	0.45
66:ST:72:VAL:O	66:ST:76:THR:HG23	2.17	0.45
67:SU:48:LEU:HB3	67:SU:91:LEU:HD22	1.98	0.45
71:SY:39:GLU:O	71:SY:43:LYS:HG3	2.17	0.45
79:Sg:228:TYR:CD2	79:Sg:264:LYS:HE2	2.51	0.45
80:u:1:G:H1	80:u:73:A:N6	2.13	0.45
1:L5:268:G:H2'	1:L5:269:G:C8	2.52	0.45
1:L5:647:G:OP2	1:L5:647:G:H8	2.00	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:662:C:H3'	1:L5:662:C:C6	2.48	0.45
1:L5:663:G:H2'	1:L5:664:G:O4'	2.17	0.45
1:L5:982:U:H2'	1:L5:983:C:O4'	2.16	0.45
1:L5:988:C:O2	1:L5:988:C:H2'	2.17	0.45
1:L5:1443:A:C6	1:L5:2104:G:C6	3.05	0.45
1:L5:1759:G:C5	1:L5:1760:G:C5	3.05	0.45
1:L5:2018:C:O2'	1:L5:2019:C:C2	2.65	0.45
1:L5:2586:G:O2'	1:L5:2587:A:C8	2.70	0.45
1:L5:4137:C:H2'	1:L5:4138:C:C6	2.51	0.45
1:L5:4415:A:H2'	1:L5:4416:G:O4'	2.17	0.45
1:L5:4619:U:H2'	1:L5:4620:OMU:H6	1.98	0.45
7:LD:181:PRO:HD2	7:LD:195:HIS:CD2	2.52	0.45
46:S2:185:G:H2'	46:S2:186:C:H6	1.81	0.45
46:S2:556:U:C2	46:S2:557:U:H4'	2.52	0.45
46:S2:628:A:H61	46:S2:1500:G:N2	2.12	0.45
46:S2:867:OMG:HM23	46:S2:867:OMG:H1'	1.45	0.45
46:S2:1593:C:H2'	46:S2:1594:A:H8	1.82	0.45
46:S2:1617:G:O6	62:SP:43:ARG:HD3	2.16	0.45
50:SD:69:LEU:O	50:SD:73:VAL:HG23	2.17	0.45
52:SF:100:ILE:HG13	52:SF:174:ALA:HB1	1.99	0.45
53:SG:24:LEU:C	53:SG:26:THR:H	2.25	0.45
54:SH:30:LEU:HD23	54:SH:31:GLU:N	2.31	0.45
56:SJ:173:VAL:O	56:SJ:174:LYS:C	2.59	0.45
57:SK:3:MET:HE3	57:SK:44:HIS:HB3	1.99	0.45
60:SN:91:LEU:HB3	60:SN:122:ILE:HG12	1.98	0.45
67:SU:23:THR:OG1	67:SU:113:GLU:HG3	2.17	0.45
71:SY:8:ARG:HD2	71:SY:8:ARG:HA	1.82	0.45
72:SZ:96:LEU:C	72:SZ:112:ASN:HD21	2.25	0.45
79:Sg:177:TRP:CD1	79:Sg:177:TRP:N	2.84	0.45
80:u:15:G:N2	80:u:48:C:H5	2.12	0.45
80:u:71:G:N2	80:u:72:C:N3	2.65	0.45
81:v:23:A:N3	81:v:23:A:H5''	2.31	0.45
1:L5:226:G:H2'	6:LC:223:ASN:OD1	2.18	0.44
1:L5:497:G:C5	1:L5:498:C:H5	2.35	0.44
1:L5:985:C:H2'	1:L5:986:C:H6	1.81	0.44
1:L5:1255:A:C8	1:L5:1257:A:OP1	2.70	0.44
1:L5:1718:C:P	9:LF:200:ARG:HH22	2.41	0.44
1:L5:1962:A:C2	1:L5:2025:A:C5	3.05	0.44
1:L5:2694:G:H5'	1:L5:2695:A:C2	2.52	0.44
1:L5:4139:G:N2	1:L5:4140:C:H41	2.15	0.44
1:L5:4453:C:H2'	1:L5:4454:G:O4'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:4941:G:OP1	8:LE:219:LYS:HD2	2.16	0.44
3:L8:123:U:H3'	3:L8:124:U:H6	1.81	0.44
7:LD:90:VAL:HG11	7:LD:225:GLN:O	2.17	0.44
11:LH:12:ILE:HG12	11:LH:18:ILE:HD12	1.99	0.44
23:LU:29:VAL:HG12	23:LU:34:MET:O	2.18	0.44
46:S2:106:C:H2'	46:S2:107:A:C8	2.52	0.44
46:S2:438:G:O2'	46:S2:1800:A:H5''	2.17	0.44
46:S2:832:G:C2'	46:S2:833:C:H5'	2.47	0.44
46:S2:834:C:C4	46:S2:835:C:C5	3.05	0.44
46:S2:1208:A:H4'	46:S2:1835:A:N7	2.31	0.44
46:S2:1221:G:H2'	46:S2:1222:G:C8	2.52	0.44
46:S2:1265:A:H5'	46:S2:1266:C:OP2	2.17	0.44
46:S2:1278:A:H2'	46:S2:1279:C:C6	2.52	0.44
56:SJ:23:SER:O	56:SJ:24:ARG:C	2.58	0.44
56:SJ:30:LYS:O	56:SJ:31:LEU:C	2.58	0.44
56:SJ:71:LEU:O	56:SJ:72:PHE:C	2.58	0.44
65:SS:68:ILE:O	65:SS:72:GLN:HG3	2.17	0.44
67:SU:42:GLY:C	67:SU:101:ILE:HD11	2.42	0.44
79:Sg:155:ARG:HG3	79:Sg:155:ARG:HH11	1.82	0.44
1:L5:493:G:H22	1:L5:660:A:H2	1.65	0.44
1:L5:741:C:N3	1:L5:742:G:C8	2.85	0.44
1:L5:1216:C:O5'	1:L5:1216:C:H6	2.00	0.44
1:L5:1613:A:H5'	4:LA:183:GLY:HA2	2.00	0.44
1:L5:1998:A:H3'	1:L5:1999:A:C8	2.52	0.44
1:L5:2001:G:C2	1:L5:2003:G:C5	3.06	0.44
1:L5:2335:C:H2'	1:L5:2336:G:H8	1.82	0.44
1:L5:2422:OMC:HM23	1:L5:2422:OMC:H1'	1.70	0.44
1:L5:2563:C:H3'	1:L5:2564:G:C8	2.52	0.44
1:L5:3795:A:O2'	46:S2:1719:A:N1	2.45	0.44
1:L5:4887:C:H2'	1:L5:4888:U:O4'	2.16	0.44
6:LC:168:VAL:HG12	6:LC:172:LYS:HE2	1.99	0.44
6:LC:295:SER:OG	6:LC:297:GLU:HG2	2.16	0.44
8:LE:93:THR:HG22	8:LE:104:THR:HB	1.99	0.44
13:LJ:36:ALA:O	13:LJ:39:VAL:HG22	2.17	0.44
25:LW:93:LYS:CB	25:LW:99:GLU:HB2	2.47	0.44
31:Lc:9:LYS:CD	31:Lc:11:LEU:HD13	2.48	0.44
46:S2:174:OMC:HM23	46:S2:174:OMC:H1'	1.58	0.44
46:S2:342:C:H2'	46:S2:343:A:H8	1.81	0.44
46:S2:538:U:H2'	46:S2:539:C:C1'	2.46	0.44
46:S2:567:C:H2'	46:S2:568:C:C5	2.52	0.44
46:S2:583:A:C2'	46:S2:584:A:H5'	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S2:1383:A2M:HM'3	46:S2:1383:A2M:H1'	1.72	0.44
46:S2:1438:A:H5'	46:S2:1439:A:OP2	2.17	0.44
46:S2:1806:A:H3'	46:S2:1807:C:H6	1.82	0.44
53:SG:5:ILE:HG21	53:SG:16:ILE:HD13	2.00	0.44
53:SG:138:ALA:O	53:SG:139:SER:C	2.59	0.44
55:SI:113:TYR:CD2	55:SI:121:LEU:HG	2.53	0.44
55:SI:194:GLU:O	55:SI:197:PHE:HB3	2.17	0.44
56:SJ:48:PHE:O	56:SJ:49:THR:C	2.59	0.44
73:Sa:11:ALA:HB3	73:Sa:33:ASP:HB2	1.99	0.44
73:Sa:47:ALA:HA	73:Sa:50:VAL:HG23	1.99	0.44
79:Sg:66:VAL:HA	79:Sg:82:SER:OG	2.17	0.44
80:u:36:G:H5''	80:u:36:G:C8	2.53	0.44
1:L5:500:G:O6	1:L5:654:C:N3	2.49	0.44
1:L5:980:U:H2'	1:L5:981:C:C6	2.53	0.44
1:L5:992:C:H6	1:L5:992:C:C5'	2.30	0.44
1:L5:1254:A:H2'	1:L5:1254:A:N3	2.31	0.44
1:L5:1402:C:H2'	1:L5:1403:G:O4'	2.18	0.44
1:L5:1403:G:H1	1:L5:1414:C:H42	1.63	0.44
1:L5:1406:G:H3'	1:L5:1407:C:C2'	2.47	0.44
1:L5:3748:A:H5''	4:LA:243:THR:HB	1.99	0.44
1:L5:3873:G:H2'	1:L5:3874:G:C8	2.52	0.44
9:LF:62:ARG:O	9:LF:66:ARG:HG2	2.17	0.44
12:LI:82:ARG:O	12:LI:82:ARG:HG2	2.17	0.44
20:LR:31:GLU:OE1	20:LR:31:GLU:HA	2.17	0.44
25:LW:93:LYS:N	25:LW:99:GLU:H	2.14	0.44
39:Lk:54:GLU:HA	39:Lk:57:LYS:HB3	1.99	0.44
46:S2:796:G:C6	46:S2:797:C:C2	3.05	0.44
46:S2:818:A:C1'	56:SJ:72:PHE:HE2	2.26	0.44
46:S2:953:C:H2'	46:S2:954:U:O4'	2.17	0.44
46:S2:1239:U:O2'	46:S2:1241:A:N7	2.46	0.44
48:SB:76:ASN:HB2	48:SB:77:ASP:H	1.65	0.44
48:SB:123:ALA:HB2	48:SB:165:ARG:HG3	1.98	0.44
49:SC:195:LEU:HD23	49:SC:224:THR:HG22	1.99	0.44
56:SJ:88:ASP:C	56:SJ:90:GLY:N	2.72	0.44
61:SO:121:ARG:HE	75:Sc:62:GLU:HG3	1.83	0.44
71:SY:8:ARG:HB3	71:SY:26:ASP:HB2	1.99	0.44
1:L5:411:G:H4'	1:L5:412:G:H5''	1.99	0.44
1:L5:508:G:N2	29:La:85:GLN:OE1	2.35	0.44
1:L5:518:G:N3	1:L5:519:C:H5'	2.33	0.44
1:L5:659:G:C3'	1:L5:660:A:H8	2.29	0.44
1:L5:667:A:H1'	45:Lr:46:ARG:NH2	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:1405:C:C4	1:L5:1408:G:C4	3.05	0.44
1:L5:1443:A:N6	1:L5:2104:G:C5	2.85	0.44
1:L5:1534:A2M:HM'2	1:L5:1535:C:C6	2.53	0.44
1:L5:1538:U:H2'	1:L5:1539:G:H8	1.82	0.44
1:L5:1763:C:C6	1:L5:1764:G:N7	2.86	0.44
3:L8:33:G:H4'	3:L8:34:U:C5	2.53	0.44
3:L8:66:A:H2'	3:L8:67:U:C6	2.52	0.44
7:LD:55:VAL:HG22	7:LD:60:ILE:HG12	2.00	0.44
8:LE:226:ARG:O	8:LE:226:ARG:HD2	2.18	0.44
17:LO:84:VAL:HG11	17:LO:102:LEU:HD22	1.99	0.44
25:LW:94:ARG:CD	25:LW:95:ASN:H	2.27	0.44
46:S2:1278:A:H2'	46:S2:1279:C:H6	1.83	0.44
49:SC:187:ARG:HB3	49:SC:187:ARG:CZ	2.46	0.44
50:SD:163:PRO:HA	50:SD:166:TYR:CZ	2.52	0.44
51:SE:103:TYR:HB2	51:SE:182:MET:HE2	1.99	0.44
53:SG:14:LYS:HE3	53:SG:14:LYS:HB2	1.30	0.44
53:SG:215:LYS:O	53:SG:219:GLU:HG2	2.18	0.44
54:SH:191:GLU:H	54:SH:191:GLU:CD	2.24	0.44
56:SJ:85:GLY:HA3	56:SJ:108:ARG:HE	1.81	0.44
56:SJ:88:ASP:O	56:SJ:90:GLY:N	2.49	0.44
62:SP:81:ARG:HA	62:SP:116:LEU:O	2.17	0.44
67:SU:46:LYS:HD2	67:SU:97:ILE:HD11	2.00	0.44
67:SU:104:ILE:HG13	67:SU:105:SER:H	1.82	0.44
72:SZ:69:THR:HG22	72:SZ:70:PRO:HD2	2.00	0.44
78:Sf:123:SER:HG	78:Sf:126:CYS:HB2	1.82	0.44
80:u:16:U:O3'	80:u:60:U:O2	2.35	0.44
1:L5:269:G:C6	1:L5:270:U:C4	3.06	0.44
1:L5:966:A:OP2	1:L5:2092:G:N2	2.48	0.44
1:L5:1220:G:H2'	1:L5:1220:G:N3	2.32	0.44
1:L5:2410:C:O2	1:L5:2410:C:H2'	2.17	0.44
1:L5:2492:C:C2'	1:L5:2493:G:H8	2.23	0.44
1:L5:4968:A:H2'	1:L5:4969:C:C6	2.52	0.44
8:LE:251:LYS:HA	8:LE:254:ASP:OD1	2.17	0.44
13:LJ:147:ARG:HE	13:LJ:147:ARG:HB3	1.60	0.44
26:LX:121:VAL:HG13	26:LX:138:VAL:HG13	1.99	0.44
42:Ln:17:ARG:HA	42:Ln:20:MET:HE2	1.99	0.44
46:S2:1447:OMG:HM23	46:S2:1447:OMG:H1'	1.74	0.44
48:SB:66:VAL:HG22	48:SB:87:ILE:HB	1.99	0.44
48:SB:168:MET:O	48:SB:172:MET:HG3	2.17	0.44
52:SF:88:MET:HE3	52:SF:88:MET:HB2	1.84	0.44
59:SM:60:MET:HE3	59:SM:60:MET:N	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:SY:63:HIS:CD2	71:SY:63:HIS:N	2.85	0.44
79:Sg:127:LYS:HE3	79:Sg:148:SER:O	2.18	0.44
79:Sg:273:GLU:H	79:Sg:273:GLU:HG2	1.41	0.44
80:u:31:A:H2'	80:u:32:U:C6	2.53	0.44
80:u:43:C:O2	80:u:43:C:O4'	2.33	0.44
1:L5:489:C:OP1	1:L5:489:C:H4'	2.18	0.44
1:L5:504:G:H3'	1:L5:504:G:OP2	2.18	0.44
1:L5:644:G:C8	1:L5:645:G:C8	3.05	0.44
1:L5:686:A:H5'	8:LE:98:GLY:N	2.32	0.44
1:L5:742:G:N3	1:L5:924:C:H5	2.16	0.44
1:L5:1094:G:C3'	1:L5:1095:A:H8	2.28	0.44
1:L5:2300:A:C8	6:LC:182:LYS:HG3	2.52	0.44
1:L5:2487:G:C2	1:L5:2489:C:C4'	2.99	0.44
1:L5:2493:G:N1	1:L5:2494:U:H1'	2.33	0.44
1:L5:4135:G:H2'	1:L5:4136:G:H8	1.82	0.44
6:LC:189:MET:HE2	6:LC:189:MET:HB2	1.88	0.44
10:LG:48:LYS:HA	10:LG:48:LYS:HD2	1.71	0.44
11:LH:7:ASN:HB3	11:LH:58:ASP:OD1	2.18	0.44
14:LL:47:ALA:CB	14:LL:48:PRO:HD3	2.45	0.44
22:LT:126:VAL:HG22	22:LT:127:GLN:H	1.83	0.44
25:LW:97:LYS:NZ	25:LW:97:LYS:HB3	2.31	0.44
31:Lc:45:LEU:HB2	31:Lc:104:ILE:HG22	1.99	0.44
44:Lp:46:LYS:O	44:Lp:57:CYS:HA	2.18	0.44
46:S2:497:C:H2'	46:S2:498:C:C6	2.52	0.44
46:S2:1276:A:C5	46:S2:1322:G:H1'	2.53	0.44
46:S2:1597:C:H4'	46:S2:1603:G:O6	2.17	0.44
46:S2:1729:U:H3	46:S2:1805:G:H1	1.65	0.44
46:S2:1808:U:H2'	46:S2:1809:A:H8	1.83	0.44
46:S2:1822:A:H2'	46:S2:1823:A:C8	2.52	0.44
50:SD:226:GLN:HE21	79:Sg:224:GLY:HA3	1.82	0.44
52:SF:127:ARG:HD2	52:SF:136:ARG:HD3	1.99	0.44
55:SI:57:ALA:HB2	55:SI:183:GLY:HA2	1.99	0.44
55:SI:161:LEU:HD12	55:SI:161:LEU:H	1.82	0.44
56:SJ:10:ARG:HG3	56:SJ:11:LYS:N	2.32	0.44
56:SJ:128:VAL:O	56:SJ:129:LEU:C	2.55	0.44
61:SO:28:PHE:CZ	73:Sa:58:VAL:HG21	2.53	0.44
69:SW:41:MET:HE2	69:SW:41:MET:HB3	1.92	0.44
72:SZ:88:LEU:HD13	72:SZ:109:TYR:CD2	2.51	0.44
79:Sg:249:CYS:SG	79:Sg:258:ILE:HD11	2.58	0.44
1:L5:493:G:C6	1:L5:661:C:N3	2.86	0.44
1:L5:754:U:H2'	1:L5:755:C:O4'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:1340:OMC:HM22	1:L5:1341:U:O4'	2.17	0.44
1:L5:2010:A:N9	1:L5:2012:A:H1'	2.33	0.44
1:L5:2480:G:H2'	1:L5:2481:G:O4'	2.17	0.44
1:L5:2539:C:H2'	1:L5:2540:C:H6	1.82	0.44
1:L5:2824:OMC:H1'	1:L5:2824:OMC:HM23	1.57	0.44
1:L5:3841:OMC:HM23	1:L5:3841:OMC:H1'	1.76	0.44
1:L5:4902:C:H2'	1:L5:4903:G:C8	2.53	0.44
1:L5:5004:C:H2'	1:L5:5005:G:O4'	2.17	0.44
11:LH:6:SER:HB2	11:LH:67:LEU:HD22	2.00	0.44
17:LO:197:LYS:NZ	17:LO:197:LYS:HB3	2.32	0.44
21:LS:7:LEU:O	21:LS:103:ALA:HB1	2.18	0.44
22:LT:146:LYS:HB2	22:LT:146:LYS:HE2	1.68	0.44
39:Lk:11:PHE:CZ	39:Lk:34:PHE:HB3	2.52	0.44
46:S2:418:A:H2'	46:S2:419:G:C8	2.53	0.44
46:S2:540:U:C2	46:S2:544:G:C2	3.06	0.44
46:S2:600:G:H2'	46:S2:601:OMG:C8	2.53	0.44
46:S2:1558:C:H2'	46:S2:1559:C:C6	2.53	0.44
48:SB:63:LYS:HG2	48:SB:89:GLU:O	2.17	0.44
49:SC:124:PHE:O	49:SC:143:CYS:HA	2.18	0.44
51:SE:100:ARG:HB2	51:SE:114:ILE:HD13	2.00	0.44
53:SG:137:ARG:O	53:SG:138:ALA:C	2.58	0.44
54:SH:76:GLN:NE2	54:SH:94:PHE:HB2	2.32	0.44
62:SP:90:VAL:HA	62:SP:107:ILE:HG22	1.99	0.44
66:ST:23:LYS:HG3	66:ST:54:TYR:CE2	2.52	0.44
71:SY:35:VAL:HG12	71:SY:39:GLU:HB2	2.00	0.44
1:L5:1406:G:C6	1:L5:1412:G:C8	3.06	0.44
1:L5:1416:G:H2'	1:L5:1417:C:C6	2.53	0.44
1:L5:1761:G:C4	1:L5:1764:G:N1	2.85	0.44
1:L5:1968:G:C8	1:L5:1969:G:N1	2.86	0.44
1:L5:2001:G:N2	1:L5:2003:G:O6	2.51	0.44
1:L5:2351:OMC:HM23	6:LC:95:MET:HG3	2.00	0.44
1:L5:3928:A:H2'	1:L5:3929:G:O4'	2.17	0.44
1:L5:4135:G:H2'	1:L5:4136:G:C8	2.53	0.44
1:L5:4142:C:H3'	1:L5:4143:G:C6	2.52	0.44
1:L5:4507:A:H2'	1:L5:4508:C:C6	2.53	0.44
1:L5:4673:PSU:H2'	1:L5:4674:C:C6	2.52	0.44
3:L8:86:U:H1'	3:L8:87:G:C8	2.52	0.44
11:LH:95:VAL:HG22	41:Lm:82:LEU:HB3	2.00	0.44
11:LH:103:VAL:HG11	11:LH:144:LEU:HD21	1.99	0.44
12:LI:101:LYS:HB2	12:LI:101:LYS:HE3	1.75	0.44
46:S2:543:C:C6	46:S2:543:C:O5'	2.71	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S2:1031:A2M:HM'3	46:S2:1031:A2M:H1'	1.81	0.44
46:S2:1240:A:N3	46:S2:1267:C:O2'	2.47	0.44
50:SD:23:GLU:HG3	57:SK:64:TRP:HE1	1.83	0.44
50:SD:191:PRO:HG2	50:SD:198:ILE:HG23	2.00	0.44
52:SF:76:MET:HE3	52:SF:173:LEU:CD1	2.43	0.44
54:SH:95:ILE:HG22	54:SH:96:ALA:N	2.33	0.44
55:SI:131:PRO:C	55:SI:133:GLU:H	2.25	0.44
56:SJ:121:LYS:O	56:SJ:122:SER:HB2	2.18	0.44
59:SM:74:ILE:HD12	59:SM:74:ILE:H	1.81	0.44
62:SP:81:ARG:HD2	62:SP:97:TYR:O	2.18	0.44
63:SQ:49:TYR:HD1	63:SQ:49:TYR:HA	1.64	0.44
1:L5:264:C:H6	1:L5:264:C:C5'	2.31	0.44
1:L5:994:G:C2	1:L5:1050:C:C6	3.06	0.44
1:L5:1198:G:C2	1:L5:1199:G:C8	3.06	0.44
1:L5:1407:C:H6	1:L5:1407:C:H2'	1.68	0.44
1:L5:1770:A:OP2	1:L5:1770:A:O3'	2.36	0.44
1:L5:2306:G:H1'	1:L5:2332:A:N6	2.33	0.44
1:L5:2414:G:H2'	1:L5:2415:OMU:C6	2.45	0.44
1:L5:4130:C:H2'	1:L5:4131:G:H8	1.83	0.44
1:L5:4761:G:H2'	1:L5:4762:A:H8	1.82	0.44
1:L5:4968:A:H2'	1:L5:4969:C:H6	1.83	0.44
86:L5:5385:NMY:H1	86:L5:5385:NMY:C15	2.48	0.44
2:L7:4:U:H2'	2:L7:5:A:H8	1.82	0.44
4:LA:42:LYS:HB2	4:LA:89:TYR:CE2	2.53	0.44
7:LD:115:MET:HA	7:LD:118:ILE:HD12	1.98	0.44
13:LJ:76:GLY:C	13:LJ:78:LYS:H	2.25	0.44
16:LN:138:PHE:CZ	36:Lh:93:ARG:HG2	2.53	0.44
28:LZ:3:LYS:HB2	28:LZ:3:LYS:HE2	1.66	0.44
46:S2:65:C:C5	53:SG:174:PRO:HB3	2.51	0.44
46:S2:545:A:C2	46:S2:546:G:H1'	2.53	0.44
46:S2:1378:A:H4'	46:S2:1379:A:O5'	2.18	0.44
46:S2:1823:A:H5''	70:SX:60:LYS:HG2	2.00	0.44
47:SA:174:MET:HA	47:SA:174:MET:HE3	2.00	0.44
56:SJ:53:ILE:HG13	56:SJ:54:ARG:HG2	1.99	0.44
56:SJ:164:PRO:O	56:SJ:165:TYR:HB2	2.18	0.44
58:SL:79:LYS:HE2	58:SL:79:LYS:HB2	1.64	0.44
62:SP:37:TYR:HE1	62:SP:112:ILE:HG22	1.83	0.44
73:Sa:21:ILE:C	73:Sa:21:ILE:HD12	2.42	0.44
79:Sg:18:VAL:O	79:Sg:18:VAL:HG22	2.18	0.44
80:u:16:U:O2'	80:u:59:U:N3	2.49	0.44
1:L5:262:G:H5'	1:L5:263:G:OP2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:469:C:H2'	1:L5:470:A:C8	2.53	0.43
1:L5:645:G:N2	1:L5:646:G:C4	2.86	0.43
1:L5:699:C:H1'	1:L5:968:C:N3	2.33	0.43
1:L5:1174:G:H3'	1:L5:1175:A:H8	1.83	0.43
1:L5:1412:G:C2'	1:L5:1413:C:H5'	2.47	0.43
1:L5:1717:C:H2'	1:L5:1718:C:O4'	2.18	0.43
1:L5:1773:U:N3	1:L5:1774:C:O2	2.50	0.43
1:L5:1895:G:H2'	1:L5:1896:A:O4'	2.17	0.43
1:L5:1976:G:C8	1:L5:1977:C:O2	2.71	0.43
1:L5:3643:A:C4	38:Lj:3:LYS:HE3	2.53	0.43
1:L5:4291:G:H5''	1:L5:4293:PSU:C6	2.53	0.43
5:LB:117:ARG:HG2	5:LB:180:LEU:HD13	1.99	0.43
7:LD:22:ARG:HB3	7:LD:28:THR:HG22	2.00	0.43
9:LF:136:VAL:O	9:LF:140:ILE:HG12	2.17	0.43
32:Ld:68:LEU:O	32:Ld:72:VAL:HG23	2.18	0.43
46:S2:964:A:H2'	46:S2:965:U:H6	1.82	0.43
46:S2:1309:C:H5'	78:Sf:105:TYR:HE2	1.83	0.43
47:SA:22:GLY:C	47:SA:24:HIS:H	2.26	0.43
55:SI:119:LEU:CD2	55:SI:153:LYS:HE3	2.48	0.43
58:SL:155:PHE:CE2	60:SN:136:PRO:HG3	2.53	0.43
63:SQ:9:SER:HB3	63:SQ:24:HIS:HE1	1.81	0.43
63:SQ:60:LYS:HD2	63:SQ:60:LYS:HA	1.81	0.43
69:SW:46:TYR:HB3	69:SW:69:LEU:HD13	1.99	0.43
74:Sb:20:LYS:HG3	74:Sb:21:LYS:HG2	1.99	0.43
79:Sg:45:LEU:HB3	79:Sg:47:ARG:HH21	1.83	0.43
79:Sg:226:HIS:CD2	79:Sg:227:LEU:O	2.71	0.43
80:u:12:U:H2'	80:u:13:C:C6	2.52	0.43
80:u:15:G:H3'	80:u:16:U:C6	2.52	0.43
80:u:21:A:H1'	80:u:48:C:N4	2.33	0.43
81:v:17:A:C2	81:v:60:U:N3	2.85	0.43
81:v:33:U:O2'	81:v:35:C:H5	2.01	0.43
1:L5:52:G:H4'	1:L5:1529:G:H4'	2.00	0.43
1:L5:265:C:H6	1:L5:265:C:H5''	1.82	0.43
1:L5:1405:C:H3'	1:L5:1408:G:H8	1.82	0.43
1:L5:1846:G:H2'	1:L5:1847:C:H6	1.83	0.43
1:L5:1976:G:C8	1:L5:2002:A:N3	2.86	0.43
1:L5:2276:A:H2'	1:L5:2277:C:O4'	2.17	0.43
1:L5:2804:OMC:H2'	1:L5:2805:C:H6	1.83	0.43
1:L5:3607:U:H2'	1:L5:3608:A:H8	1.83	0.43
1:L5:4348:A:C6	1:L5:4350:C:C4	3.07	0.43
1:L5:4684:A:H2'	1:L5:4685:U:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:4918:C:H2'	1:L5:4919:G:H8	1.81	0.43
1:L5:5028:G:H2'	1:L5:5029:C:C6	2.52	0.43
10:LG:159:HIS:CD2	10:LG:185:LYS:HA	2.53	0.43
14:LL:92:ARG:NH2	14:LL:98:VAL:HB	2.34	0.43
14:LL:123:LYS:O	36:Lh:122:LYS:HG3	2.18	0.43
21:LS:83:ARG:HG3	21:LS:125:GLN:HB2	2.00	0.43
23:LU:48:LYS:HG2	23:LU:53:ALA:HB2	2.00	0.43
25:LW:90:ILE:CG2	53:SG:145:PHE:CZ	3.01	0.43
26:LX:152:LYS:HB3	26:LX:152:LYS:HE3	1.88	0.43
42:Ln:10:MET:HE2	42:Ln:10:MET:HB2	1.83	0.43
46:S2:899:U:H3'	46:S2:900:C:C5'	2.48	0.43
46:S2:1438:A:OP1	46:S2:1438:A:H4'	2.15	0.43
51:SE:124:CYS:HB3	51:SE:141:THR:HB	2.01	0.43
54:SH:95:ILE:HG22	54:SH:96:ALA:H	1.83	0.43
63:SQ:12:VAL:HG21	63:SQ:91:ALA:N	2.33	0.43
79:Sg:194:TYR:O	79:Sg:211:GLY:HA3	2.17	0.43
79:Sg:275:ILE:H	79:Sg:275:ILE:HD12	1.82	0.43
1:L5:253:G:N7	1:L5:254:G:C5	2.86	0.43
1:L5:1406:G:C8	1:L5:1412:G:C6	3.06	0.43
1:L5:1698:C:H5''	1:L5:1699:A:C8	2.53	0.43
1:L5:1880:G:C8	1:L5:1881:OMC:HM22	2.53	0.43
1:L5:1979:A:H2'	1:L5:1983:A:OP1	2.18	0.43
1:L5:2747:U:O2'	35:Lg:62:LYS:HD3	2.18	0.43
1:L5:3772:U:C5	1:L5:3776:G:O6	2.70	0.43
1:L5:4220:6MZ:O5'	1:L5:4220:6MZ:H8	2.19	0.43
1:L5:4750:G:H2'	1:L5:4751:G:C8	2.54	0.43
22:LT:44:GLY:HA2	22:LT:95:HIS:HB3	2.00	0.43
46:S2:4:C:H4'	49:SC:207:ALA:HB2	2.00	0.43
46:S2:533:A:H1'	46:S2:552:G:N2	2.33	0.43
46:S2:1052:A:H2'	46:S2:1053:C:O4'	2.17	0.43
51:SE:71:LYS:HG2	51:SE:76:VAL:HG22	2.01	0.43
51:SE:185:GLY:CA	51:SE:189:LEU:HD12	2.47	0.43
54:SH:158:LEU:O	54:SH:190:PRO:HD2	2.18	0.43
56:SJ:147:PHE:CD1	56:SJ:147:PHE:C	2.96	0.43
60:SN:107:LYS:HE2	60:SN:107:LYS:HB3	1.90	0.43
69:SW:24:GLN:HA	69:SW:63:VAL:O	2.17	0.43
72:SZ:48:VAL:HA	72:SZ:83:LEU:HD22	2.00	0.43
73:Sa:24:THR:HG21	73:Sa:71:LEU:HA	1.99	0.43
77:Se:36:MET:HG2	77:Se:37:GLN:N	2.30	0.43
78:Sf:89:LYS:NZ	78:Sf:90:LYS:H	2.11	0.43
80:u:71:G:N2	80:u:72:C:C4	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:v:15:G:H21	81:v:16:A:H61	1.66	0.43
1:L5:223:G:H4'	1:L5:225:G:N7	2.33	0.43
1:L5:273:U:H6	1:L5:273:U:O5'	2.01	0.43
1:L5:460:C:C2	1:L5:461:G:C8	3.06	0.43
1:L5:500:G:H5''	1:L5:504:G:C3'	2.48	0.43
1:L5:664:G:C2	1:L5:666:G:N7	2.86	0.43
1:L5:1294:A:H1'	1:L5:1295:C:C2	2.54	0.43
1:L5:1970:A:H1'	1:L5:2018:C:C2	2.53	0.43
1:L5:2391:G:H2'	1:L5:2392:C:C6	2.53	0.43
1:L5:4067:U:O2	1:L5:4067:U:O4'	2.36	0.43
1:L5:4281:A:O2'	1:L5:4282:A:C8	2.71	0.43
1:L5:4536:OMC:HM22	1:L5:4537:C:O4'	2.19	0.43
1:L5:4622:A:H4'	5:LB:13:SER:HB2	2.00	0.43
2:L7:26:C:H2'	2:L7:27:G:O4'	2.19	0.43
26:LX:156:ILE:HD12	26:LX:156:ILE:HA	1.85	0.43
27:LY:45:ARG:HB2	27:LY:126:ARG:NH2	2.32	0.43
30:Lb:50:ASN:O	30:Lb:52:LYS:O	2.36	0.43
43:Lo:35:ALA:O	43:Lo:39:ARG:HG3	2.17	0.43
46:S2:433:A:H5''	55:SI:22:HIS:HB3	2.00	0.43
46:S2:1174:PSU:H2'	46:S2:1175:G:H8	1.82	0.43
46:S2:1702:G:H2'	46:S2:1703:OMC:O4'	2.19	0.43
50:SD:41:VAL:O	50:SD:46:THR:HA	2.18	0.43
52:SF:109:LEU:HD23	52:SF:109:LEU:HA	1.77	0.43
53:SG:25:ARG:CB	53:SG:25:ARG:HH11	2.30	0.43
56:SJ:47:LYS:HZ3	56:SJ:47:LYS:HG2	1.70	0.43
58:SL:128:VAL:HG12	58:SL:142:VAL:HA	2.00	0.43
73:Sa:46:GLU:O	73:Sa:50:VAL:HG23	2.18	0.43
79:Sg:132:TRP:HA	79:Sg:139:LYS:H	1.83	0.43
80:u:2:C:N4	80:u:72:C:H41	2.16	0.43
81:v:16:A:C8	81:v:17:A:C5	3.06	0.43
1:L5:25:A:H2'	1:L5:26:C:H6	1.83	0.43
1:L5:137:G:C2	1:L5:138:G:C8	3.06	0.43
1:L5:661:C:O5'	1:L5:661:C:H6	2.01	0.43
1:L5:1182:C:H3'	1:L5:1182:C:P	2.58	0.43
1:L5:1300:G:H5''	1:L5:1301:C:O5'	2.19	0.43
1:L5:1400:G:C6	1:L5:1401:C:C4	3.06	0.43
1:L5:1617:G:H1'	1:L5:2513:A:H61	1.84	0.43
1:L5:1980:U:OP1	1:L5:1989:G:N1	2.52	0.43
1:L5:2003:G:N3	1:L5:2004:U:C4	2.86	0.43
1:L5:2079:G:H2'	1:L5:2080:U:C6	2.54	0.43
1:L5:2495:U:H2'	1:L5:2496:G:O4'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:2717:G:OP1	23:LU:107:LYS:NZ	2.52	0.43
1:L5:2730:U:H2'	1:L5:2731:C:C6	2.53	0.43
1:L5:3656:A:H2'	1:L5:3657:U:H6	1.84	0.43
1:L5:4484:A:OP1	86:L5:5389:NMY:H10	2.19	0.43
5:LB:103:LYS:HB2	5:LB:103:LYS:HE3	1.60	0.43
6:LC:138:MET:HE3	6:LC:138:MET:HB3	1.91	0.43
12:LI:48:LEU:HD21	12:LI:145:GLU:HB2	1.99	0.43
14:LL:111:GLN:O	14:LL:115:GLN:HG3	2.18	0.43
14:LL:144:LEU:O	14:LL:145:LYS:C	2.62	0.43
16:LN:11:TRP:CE3	16:LN:14:LYS:HE3	2.53	0.43
20:LR:180:LYS:C	20:LR:182:GLU:N	2.76	0.43
20:LR:180:LYS:N	20:LR:180:LYS:HD2	2.32	0.43
25:LW:119:LYS:HD3	25:LW:119:LYS:HA	1.85	0.43
28:LZ:58:GLY:O	28:LZ:62:ILE:HG13	2.19	0.43
46:S2:388:U:H2'	46:S2:389:A:C8	2.53	0.43
46:S2:535:G:H2'	46:S2:537:C:O4'	2.19	0.43
46:S2:542:U:P	46:S2:543:C:H5	2.42	0.43
46:S2:576:A2M:H2'	46:S2:577:U:H6	1.82	0.43
46:S2:834:C:H2'	46:S2:835:C:O4'	2.18	0.43
46:S2:1744:G:O2'	46:S2:1789:G:N2	2.51	0.43
47:SA:1:MET:HA	47:SA:59:LEU:CB	2.45	0.43
48:SB:85:LYS:HB2	48:SB:101:HIS:HB3	2.01	0.43
53:SG:25:ARG:HH11	53:SG:25:ARG:HB2	1.83	0.43
55:SI:76:THR:HG23	55:SI:108:PRO:HG3	2.01	0.43
55:SI:172:LEU:HA	55:SI:172:LEU:HD23	1.85	0.43
57:SK:92:ALA:HA	57:SK:95:ARG:HB2	2.00	0.43
58:SL:69:ARG:HD3	58:SL:69:ARG:H	1.83	0.43
60:SN:110:ASP:O	60:SN:114:ARG:HG2	2.18	0.43
64:SR:21:TYR:HE1	64:SR:61:ILE:HG21	1.83	0.43
79:Sg:125:ARG:HG2	79:Sg:150:TRP:CD1	2.54	0.43
79:Sg:297:THR:HG22	79:Sg:311:GLN:HB2	2.00	0.43
81:v:15:G:N3	81:v:16:A:N1	2.67	0.43
1:L5:5:A:H2'	1:L5:6:C:O4'	2.19	0.43
1:L5:499:G:C5	1:L5:500:G:H2'	2.53	0.43
1:L5:695:G:O2'	1:L5:696:C:H5'	2.18	0.43
1:L5:760:G:H22	1:L5:903:C:H2'	1.84	0.43
1:L5:760:G:C4	1:L5:904:C:C2	3.07	0.43
1:L5:1503:A:H4'	1:L5:1504:G:H5'	2.00	0.43
1:L5:1758:G:H1'	1:L5:1775:A:N3	2.33	0.43
1:L5:1972:G:N2	1:L5:1995:G:N3	2.66	0.43
1:L5:2436:U:C4	26:LX:130:PRO:HG3	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:2485:U:O2'	1:L5:2486:G:N2	2.51	0.43
1:L5:2544:G:N2	3:L8:126:C:OP1	2.43	0.43
8:LE:183:ARG:HA	8:LE:183:ARG:HD2	1.81	0.43
14:LL:144:LEU:HD12	14:LL:145:LYS:HG2	2.00	0.43
46:S2:1863:A:H1'	73:Sa:79:ILE:HD13	2.00	0.43
61:SO:119:LEU:HD23	61:SO:119:LEU:HA	1.86	0.43
62:SP:55:SER:O	62:SP:59:ARG:HG3	2.19	0.43
64:SR:72:LYS:O	64:SR:76:GLU:HG2	2.19	0.43
66:ST:14:PHE:CE2	66:ST:62:ARG:HG3	2.54	0.43
66:ST:111:LYS:HE2	66:ST:111:LYS:HB2	1.80	0.43
69:SW:14:ILE:HD11	69:SW:27:ILE:HD11	2.00	0.43
79:Sg:155:ARG:HG3	79:Sg:155:ARG:NH1	2.33	0.43
1:L5:123:C:H2'	1:L5:124:C:H6	1.83	0.43
1:L5:398:A2M:O5'	1:L5:398:A2M:H8	2.18	0.43
1:L5:454:U:H2'	1:L5:455:C:O4'	2.19	0.43
1:L5:465:G:H2'	1:L5:466:A:C8	2.54	0.43
1:L5:741:C:N4	1:L5:742:G:C8	2.87	0.43
1:L5:962:C:H41	1:L5:1702:C:H41	1.66	0.43
1:L5:1767:A:H8	1:L5:1767:A:P	2.41	0.43
1:L5:1870:C:H2'	1:L5:1871:A2M:H8	2.01	0.43
1:L5:1973:G:H2'	1:L5:1974:U:C6	2.53	0.43
1:L5:2495:U:H2'	1:L5:2496:G:H8	1.78	0.43
1:L5:4508:C:N3	1:L5:4512:U:H5	2.16	0.43
3:L8:90:C:H2'	3:L8:91:A:C8	2.54	0.43
4:LA:118:GLU:HG3	4:LA:156:LYS:NZ	2.34	0.43
9:LF:118:PHE:CD1	9:LF:247:MET:HE1	2.52	0.43
16:LN:24:ARG:HB3	16:LN:24:ARG:HH11	1.84	0.43
23:LU:56:LEU:HD23	23:LU:56:LEU:HA	1.81	0.43
46:S2:1563:G:H2'	46:S2:1564:C:C6	2.54	0.43
50:SD:41:VAL:HG13	50:SD:42:THR:N	2.33	0.43
57:SK:45:VAL:O	57:SK:49:MET:HG2	2.19	0.43
63:SQ:48:GLN:O	63:SQ:52:LEU:HG	2.19	0.43
64:SR:71:ILE:CG2	64:SR:74:GLN:HB2	2.48	0.43
66:ST:84:ARG:HE	66:ST:84:ARG:HB3	1.47	0.43
71:SY:10:ARG:HH21	71:SY:11:LYS:HE3	1.84	0.43
81:v:7:G:C6	81:v:49:C:C4	3.07	0.43
81:v:47:U:H2'	81:v:48:C:H5''	2.01	0.43
1:L5:233:U:H4'	1:L5:233:U:OP1	2.18	0.43
1:L5:263:G:C2	1:L5:264:C:N4	2.84	0.43
1:L5:645:G:C2	1:L5:646:G:C4	3.07	0.43
1:L5:1776:A:H2'	1:L5:1777:C:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:1974:U:H5''	1:L5:1975:G:C8	2.53	0.43
1:L5:3664:G:H2'	1:L5:3665:G:H8	1.84	0.43
1:L5:4136:G:H2'	1:L5:4137:C:H6	1.83	0.43
86:L5:5380:NMY:H1	86:L5:5380:NMY:H171	2.00	0.43
7:LD:215:ASP:HB3	7:LD:218:ALA:HB3	2.00	0.43
9:LF:88:LYS:HE3	9:LF:88:LYS:HB2	1.67	0.43
17:LO:47:PHE:HA	17:LO:136:ALA:HB2	2.00	0.43
19:LQ:70:MET:HE1	19:LQ:78:LYS:O	2.18	0.43
31:Lc:24:SER:OG	31:Lc:100:GLY:HA3	2.18	0.43
36:Lh:73:TYR:HA	36:Lh:76:LYS:HD2	2.00	0.43
38:Lj:52:LYS:HG3	38:Lj:55:ARG:NH2	2.34	0.43
46:S2:59:U:H5''	46:S2:503:C:N4	2.34	0.43
46:S2:752:G:O2'	46:S2:753:C:P	2.77	0.43
46:S2:828:G:H5''	51:SE:23:LEU:HD21	2.00	0.43
46:S2:1134:G:H2'	46:S2:1135:C:C6	2.53	0.43
46:S2:1703:OMC:HM23	46:S2:1703:OMC:H1'	1.78	0.43
49:SC:173:LYS:HE2	49:SC:173:LYS:HB3	1.76	0.43
51:SE:45:ILE:HD11	51:SE:49:ARG:NH2	2.33	0.43
65:SS:9:PHE:CZ	65:SS:57:GLY:HA3	2.54	0.43
68:SV:56:CYS:SG	68:SV:59:ILE:HG12	2.59	0.43
74:Sb:33:MET:HB2	74:Sb:79:PHE:HD2	1.84	0.43
80:u:9:A:N3	80:u:45:U:H2'	2.34	0.43
80:u:64:A:H2'	80:u:65:G:O4'	2.19	0.43
1:L5:468:U:N3	1:L5:684:G:N7	2.66	0.43
1:L5:742:G:C8	1:L5:924:C:N4	2.83	0.43
1:L5:750:U:H2'	1:L5:751:G:O4'	2.19	0.43
1:L5:1048:G:H3'	1:L5:1048:G:C4	2.54	0.43
1:L5:1234:G:H3'	1:L5:1234:G:P	2.58	0.43
1:L5:1246:G:H2'	1:L5:1247:U:C6	2.54	0.43
1:L5:1758:G:C8	1:L5:1759:G:C8	3.06	0.43
1:L5:1982:G:H5''	1:L5:2009:A:H4'	2.01	0.43
1:L5:1999:A:OP2	1:L5:2000:G:N2	2.51	0.43
1:L5:2898:G:H2'	1:L5:2899:C:H6	1.84	0.43
1:L5:3670:C:O3'	16:LN:72:LYS:HE2	2.18	0.43
1:L5:4219:A:H2'	1:L5:4220:6MZ:C8	2.48	0.43
3:L8:88:A:H2'	3:L8:89:U:O4'	2.18	0.43
4:LA:79:ALA:O	4:LA:82:ILE:HG12	2.19	0.43
9:LF:182:TYR:CZ	9:LF:203:GLU:HG2	2.54	0.43
15:LM:26:ALA:HB2	15:LM:77:TRP:HZ3	1.84	0.43
34:Lf:21:GLN:HG2	34:Lf:23:GLU:HG3	2.00	0.43
46:S2:535:G:C2	46:S2:549:C:C2	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S2:562:U:H6	46:S2:562:U:OP2	2.02	0.43
46:S2:809:A:H2'	46:S2:810:A:O4'	2.19	0.43
46:S2:835:C:O2	46:S2:839:C:C4	2.72	0.43
46:S2:1010:G:H2'	46:S2:1011:A:H8	1.84	0.43
46:S2:1220:A:H2'	46:S2:1221:G:O4'	2.18	0.43
46:S2:1404:U:C5	67:SU:88:LEU:HD11	2.54	0.43
46:S2:1603:G:N3	46:S2:1603:G:H5'	2.34	0.43
47:SA:116:PHE:CE2	49:SC:64:THR:HG22	2.52	0.43
51:SE:108:ARG:H	51:SE:108:ARG:HG3	1.58	0.43
54:SH:26:ALA:O	54:SH:29:GLU:HG2	2.19	0.43
56:SJ:67:ASP:O	56:SJ:68:PRO:C	2.58	0.43
56:SJ:93:LYS:HB3	56:SJ:93:LYS:HE2	1.58	0.43
59:SM:50:CYS:SG	59:SM:110:VAL:HG22	2.59	0.43
63:SQ:16:LYS:HG3	63:SQ:17:LYS:HG3	2.00	0.43
65:SS:77:TYR:CD1	65:SS:77:TYR:N	2.87	0.43
67:SU:72:GLU:C	67:SU:72:GLU:OE1	2.61	0.43
71:SY:44:LEU:HB3	71:SY:55:ILE:HD13	2.00	0.43
75:Sc:7:GLN:HB2	75:Sc:60:GLU:OE2	2.18	0.43
81:v:58:A:H1'	81:v:61:C:H41	1.83	0.43
1:L5:2:G:H2'	1:L5:3:C:C6	2.54	0.43
1:L5:459:C:C2	1:L5:698:G:N1	2.86	0.43
1:L5:505:G:H1	1:L5:653:U:H3	1.66	0.43
1:L5:946:C:H2'	1:L5:947:C:H6	1.84	0.43
1:L5:1719:A:H2'	1:L5:1720:C:C6	2.54	0.43
1:L5:1984:A:N3	1:L5:1984:A:C2'	2.82	0.43
1:L5:3721:U:H2'	1:L5:3722:G:H8	1.84	0.43
1:L5:4178:A:H2'	1:L5:4179:G:C8	2.54	0.43
5:LB:386:LYS:HB3	5:LB:386:LYS:HE3	1.65	0.43
10:LG:107:LYS:HE2	10:LG:107:LYS:HB3	1.74	0.43
13:LJ:166:PHE:HD2	13:LJ:174:ILE:HD11	1.84	0.43
17:LO:197:LYS:HD2	17:LO:202:LEU:O	2.18	0.43
25:LW:94:ARG:H	25:LW:99:GLU:HB2	1.84	0.43
28:LZ:89:ILE:HG23	28:LZ:91:LEU:HG	2.01	0.43
28:LZ:98:LYS:HB3	28:LZ:98:LYS:HE3	1.82	0.43
46:S2:155:G:H4'	53:SG:15:LEU:HD13	2.00	0.43
46:S2:428:OMU:H6	46:S2:428:OMU:H2'	1.87	0.43
46:S2:839:C:N4	71:SY:9:THR:O	2.47	0.43
46:S2:1449:G:H2'	46:S2:1450:G:O4'	2.19	0.43
46:S2:1563:G:H2'	46:S2:1564:C:H6	1.84	0.43
46:S2:1667:U:H2'	46:S2:1668:U:C6	2.54	0.43
47:SA:13:GLU:O	47:SA:17:LYS:HG3	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:SD:106:ARG:HD2	50:SD:173:ARG:HB3	2.01	0.43
50:SD:157:MET:HE2	50:SD:157:MET:HB2	1.93	0.43
52:SF:140:ASP:OD2	75:Sc:44:ARG:HD3	2.19	0.43
53:SG:29:GLU:O	53:SG:29:GLU:HG2	2.19	0.43
54:SH:6:ALA:HB3	54:SH:24:SER:OG	2.19	0.43
54:SH:10:LYS:HE3	54:SH:20:GLU:HB2	2.00	0.43
55:SI:124:LYS:HE2	55:SI:124:LYS:HB3	1.72	0.43
56:SJ:44:TRP:HA	56:SJ:47:LYS:HB2	2.00	0.43
56:SJ:88:ASP:O	56:SJ:89:GLU:C	2.62	0.43
56:SJ:136:ARG:HD3	56:SJ:159:PHE:O	2.17	0.43
59:SM:87:GLU:HG2	59:SM:100:PRO:HG2	2.00	0.43
59:SM:96:ARG:HG2	59:SM:96:ARG:HH11	1.83	0.43
62:SP:40:ARG:HE	62:SP:40:ARG:HB2	1.67	0.43
62:SP:44:ARG:HG2	62:SP:84:ILE:HD11	1.99	0.43
71:SY:5:VAL:HA	71:SY:28:LEU:O	2.19	0.43
79:Sg:197:THR:HG21	79:Sg:239:LEU:H	1.83	0.43
79:Sg:290:ALA:HB3	79:Sg:299:PHE:HB2	2.01	0.43
80:u:5:G:C4	80:u:6:G:C8	3.07	0.43
81:v:52:G:H1'	81:v:63:G:N2	2.34	0.43
1:L5:298:G:H5'	16:LN:179:LYS:O	2.19	0.42
1:L5:490:C:C3'	1:L5:491:G:H5''	2.48	0.42
1:L5:1206:C:H2'	1:L5:1207:C:H6	1.83	0.42
1:L5:1307:A:H2'	1:L5:1308:C:C6	2.54	0.42
1:L5:1757:U:H2'	1:L5:1758:G:H5'	2.00	0.42
1:L5:1758:G:OP1	1:L5:1758:G:N2	2.52	0.42
1:L5:1759:G:C4	1:L5:1760:G:C8	3.07	0.42
1:L5:1968:G:H8	1:L5:1969:G:C6	2.37	0.42
1:L5:1974:U:C5	1:L5:2002:A:C8	3.06	0.42
1:L5:2652:G:N3	1:L5:2652:G:C2'	2.82	0.42
1:L5:4538:G:H2'	1:L5:4539:U:C6	2.54	0.42
1:L5:4775:C:N4	1:L5:4859:C:H42	2.16	0.42
1:L5:4929:C:H5''	15:LM:114:LYS:HD2	2.00	0.42
2:L7:24:C:H2'	2:L7:25:G:O4'	2.20	0.42
12:LI:52:MET:HE2	12:LI:156:LYS:HG3	2.00	0.42
31:Lc:9:LYS:HD3	31:Lc:11:LEU:HA	2.01	0.42
36:Lh:40:ALA:O	36:Lh:44:LEU:HG	2.19	0.42
39:Lk:56:LEU:HA	39:Lk:59:SER:OG	2.19	0.42
46:S2:441:C:H2'	46:S2:442:C:C6	2.54	0.42
46:S2:543:C:H6	46:S2:543:C:O5'	2.02	0.42
46:S2:788:G:O3'	46:S2:789:G:H8	2.01	0.42
46:S2:1630:A:H5''	65:SS:37:GLY:H	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S2:1850:MA6:H93	46:S2:1850:MA6:N7	2.34	0.42
54:SH:170:VAL:HG12	54:SH:187:PHE:HB2	2.01	0.42
55:SI:139:LYS:CG	55:SI:140:LYS:H	2.31	0.42
57:SK:58:VAL:CG1	57:SK:69:TRP:HB3	2.49	0.42
60:SN:27:LYS:HA	60:SN:27:LYS:HE3	1.99	0.42
61:SO:77:ALA:O	61:SO:81:VAL:HG23	2.19	0.42
67:SU:17:ILE:HD12	67:SU:94:PRO:HA	2.00	0.42
67:SU:48:LEU:HD12	67:SU:48:LEU:H	1.83	0.42
71:SY:90:ARG:HA	71:SY:93:ARG:HD2	2.01	0.42
79:Sg:220:ASP:HB2	79:Sg:227:LEU:CD1	2.47	0.42
80:u:5:G:C6	80:u:6:G:C5	3.07	0.42
1:L5:646:G:C6	1:L5:647:G:C5	3.07	0.42
1:L5:740:G:C5	1:L5:741:C:N4	2.87	0.42
1:L5:1959:U:O2	1:L5:1961:G:C5	2.73	0.42
1:L5:1972:G:H1	1:L5:2001:G:H5''	1.84	0.42
1:L5:2008:U:H6	1:L5:2008:U:O5'	2.01	0.42
1:L5:3867:A2M:HM'2	1:L5:3868:G:O4'	2.19	0.42
1:L5:4572:U:H2'	1:L5:4573:G:H5''	2.00	0.42
1:L5:4653:C:H2'	1:L5:4654:C:H6	1.83	0.42
2:L7:111:C:H2'	2:L7:112:U:O4'	2.18	0.42
3:L8:110:U:O2'	3:L8:111:U:H4'	2.19	0.42
5:LB:399:LYS:HB3	5:LB:399:LYS:HE3	1.76	0.42
13:LJ:95:ARG:H	13:LJ:95:ARG:HD2	1.83	0.42
20:LR:180:LYS:C	20:LR:182:GLU:H	2.26	0.42
25:LW:101:ARG:N	53:SG:156:TYR:OH	2.50	0.42
33:Le:75:ARG:O	33:Le:95:TYR:HA	2.19	0.42
34:Lf:72:GLY:HA2	34:Lf:88:PHE:HA	2.00	0.42
46:S2:538:U:O2	46:S2:547:G:C8	2.72	0.42
46:S2:1373:C:H5'	64:SR:7:LYS:HG3	2.00	0.42
46:S2:1397:U:H3	63:SQ:12:VAL:HA	1.83	0.42
46:S2:1836:G:H4'	46:S2:1837:G:C4	2.54	0.42
47:SA:132:GLN:HB3	47:SA:133:PRO:HD3	2.02	0.42
48:SB:114:VAL:HG22	48:SB:120:MET:HE2	2.01	0.42
53:SG:10:THR:HB	53:SG:12:CYS:SG	2.59	0.42
55:SI:89:GLU:OE1	55:SI:89:GLU:HA	2.18	0.42
56:SJ:66:LYS:HB2	56:SJ:66:LYS:HE3	1.25	0.42
71:SY:88:LYS:H	71:SY:88:LYS:HG2	1.58	0.42
78:Sf:94:LYS:HE3	78:Sf:95:ARG:O	2.19	0.42
79:Sg:191:HIS:HE1	79:Sg:215:GLN:O	2.02	0.42
1:L5:654:C:H2'	1:L5:655:C:O4'	2.19	0.42
1:L5:739:G:O2'	1:L5:740:G:H5'	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:741:C:H2'	1:L5:742:G:C5'	2.49	0.42
1:L5:922:C:C2'	1:L5:923:C:H4'	2.50	0.42
1:L5:1760:G:H22	1:L5:1768:C:N4	2.17	0.42
1:L5:1761:G:C2	1:L5:1764:G:O6	2.72	0.42
1:L5:1958:A:HO2'	1:L5:2025:A:N6	2.17	0.42
1:L5:1985:G:N1	1:L5:1986:U:H1'	2.34	0.42
1:L5:4132:C:H2'	1:L5:4133:C:O4'	2.19	0.42
1:L5:4296:PSU:H2'	1:L5:4297:G:O4'	2.19	0.42
1:L5:4945:G:N3	8:LE:158:ARG:HD2	2.35	0.42
2:L7:4:U:H2'	2:L7:5:A:C8	2.54	0.42
3:L8:93:C:O2'	3:L8:94:G:H8	2.01	0.42
7:LD:53:VAL:HG11	7:LD:159:VAL:HA	2.01	0.42
7:LD:158:LYS:HE2	7:LD:158:LYS:HB2	1.84	0.42
8:LE:68:MET:HE3	8:LE:68:MET:HB3	1.92	0.42
16:LN:8:GLN:O	16:LN:12:ARG:HG3	2.18	0.42
20:LR:181:LYS:C	20:LR:183:GLU:N	2.77	0.42
25:LW:100:VAL:HA	53:SG:147:LEU:HD23	2.01	0.42
32:Ld:94:GLU:H	32:Ld:94:GLU:HG3	1.68	0.42
39:Lk:36:VAL:HG13	39:Lk:43:TYR:HB2	2.01	0.42
44:Lp:48:LYS:HE2	44:Lp:48:LYS:HB2	1.70	0.42
46:S2:444:G:O6	55:SI:26:LYS:HE2	2.19	0.42
46:S2:550:C:H3'	46:S2:550:C:OP2	2.19	0.42
46:S2:801:PSU:H2'	46:S2:802:A:H8	1.84	0.42
46:S2:1148:A:H4'	46:S2:1149:A:O4'	2.19	0.42
46:S2:1407:U:H4'	63:SQ:71:ARG:NH2	2.34	0.42
46:S2:1820:G:H2'	46:S2:1821:U:C6	2.54	0.42
46:S2:1824:A:H5''	70:SX:61:GLN:CG	2.41	0.42
48:SB:178:THR:C	48:SB:179:ASN:ND2	2.74	0.42
53:SG:5:ILE:HD12	53:SG:6:SER:N	2.34	0.42
53:SG:54:GLY:HA2	53:SG:63:MET:HE2	2.00	0.42
55:SI:193:LYS:HB2	55:SI:193:LYS:HE2	1.62	0.42
66:ST:5:THR:HG22	66:ST:6:VAL:H	1.84	0.42
67:SU:20:ILE:HD12	67:SU:98:VAL:HG11	2.01	0.42
77:Se:48:THR:HG22	77:Se:49:PHE:H	1.84	0.42
78:Sf:96:LYS:HA	78:Sf:96:LYS:HD2	1.78	0.42
80:u:9:A:H2'	80:u:11:C:N4	2.32	0.42
80:u:26:A:H2	80:u:44:G:N2	2.16	0.42
1:L5:137:G:N3	1:L5:138:G:C8	2.87	0.42
1:L5:211:G:H1'	1:L5:233:U:O4	2.19	0.42
1:L5:253:G:C4	1:L5:254:G:C6	3.07	0.42
1:L5:486:C:H5'	1:L5:487:G:OP2	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:513:U:C2	1:L5:515:C:C5	3.06	0.42
1:L5:657:C:C4	1:L5:658:C:C5	3.07	0.42
1:L5:1254:A:H5''	1:L5:1255:A:H4'	2.00	0.42
1:L5:1682:A:H5''	14:LL:3:PRO:O	2.19	0.42
1:L5:1958:A:HO2'	1:L5:2025:A:H61	1.67	0.42
1:L5:1964:A:C6	1:L5:4694:G:O6	2.72	0.42
1:L5:2045:G:C6	17:LO:62:MET:HA	2.54	0.42
1:L5:2654:C:H2'	1:L5:2655:C:H6	1.84	0.42
1:L5:4188:U:H2'	1:L5:4189:U:H6	1.82	0.42
1:L5:4309:G:H5'	1:L5:4338:G:H5''	2.00	0.42
1:L5:4619:U:H2'	1:L5:4620:OMU:C6	2.49	0.42
13:LJ:106:GLY:HA3	13:LJ:131:TYR:CD1	2.54	0.42
15:LM:7:VAL:HG23	15:LM:57:LEU:HD11	2.02	0.42
16:LN:16:SER:O	16:LN:20:ARG:HG3	2.20	0.42
21:LS:47:PHE:CE1	21:LS:125:GLN:HG2	2.52	0.42
21:LS:83:ARG:HG2	21:LS:127:MET:SD	2.60	0.42
37:Li:35:LYS:HB3	37:Li:35:LYS:HE3	1.74	0.42
46:S2:192:C:C2	46:S2:193:C:C5	3.07	0.42
46:S2:550:C:OP2	46:S2:550:C:H6	2.02	0.42
46:S2:1806:A:H3'	46:S2:1807:C:C6	2.55	0.42
47:SA:34:MET:HE3	47:SA:34:MET:HB3	1.77	0.42
47:SA:57:LYS:HD2	47:SA:57:LYS:HA	1.79	0.42
48:SB:179:ASN:HB3	48:SB:183:GLU:HB3	2.02	0.42
49:SC:60:TRP:CE2	49:SC:92:GLU:HB2	2.55	0.42
50:SD:142:LEU:HD21	50:SD:182:LEU:HD11	2.01	0.42
55:SI:37:LYS:O	55:SI:59:ARG:HA	2.20	0.42
56:SJ:79:ARG:HG2	56:SJ:83:ARG:HH21	1.84	0.42
56:SJ:92:MET:HE3	56:SJ:92:MET:HB3	1.65	0.42
63:SQ:40:GLU:O	63:SQ:41:MET:HE3	2.19	0.42
64:SR:32:LYS:HG3	64:SR:47:ARG:HH12	1.84	0.42
79:Sg:65:PHE:HB2	79:Sg:83:TRP:CG	2.55	0.42
79:Sg:105:THR:C	79:Sg:106:LYS:HG2	2.45	0.42
79:Sg:181:ASN:CG	79:Sg:182:CYS:N	2.76	0.42
81:v:47:U:H2'	81:v:48:C:C5'	2.50	0.42
1:L5:516:C:H2'	1:L5:517:C:H2'	2.01	0.42
1:L5:924:C:H2'	1:L5:924:C:O2	2.20	0.42
1:L5:1241:C:H2'	1:L5:1242:G:C5'	2.48	0.42
1:L5:1976:G:C8	1:L5:2002:A:C2	3.07	0.42
1:L5:2079:G:OP2	33:Le:64:LYS:HE3	2.19	0.42
1:L5:3817:A:H4'	1:L5:3818:UY1:O5'	2.19	0.42
1:L5:3934:G:H2'	1:L5:3935:C:C6	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:4198:G:H2'	1:L5:4199:C:C6	2.55	0.42
1:L5:4593:C:H2'	1:L5:4594:U:H6	1.84	0.42
1:L5:4736:C:H2'	1:L5:4737:G:H8	1.84	0.42
3:L8:67:U:H2'	3:L8:68:G:C8	2.54	0.42
6:LC:143:ARG:HE	6:LC:143:ARG:HB3	1.48	0.42
6:LC:254:GLU:O	6:LC:258:ARG:HG3	2.19	0.42
9:LF:200:ARG:HA	9:LF:200:ARG:HE	1.84	0.42
14:LL:48:PRO:HG3	36:Lh:118:LYS:HE3	2.02	0.42
15:LM:127:VAL:O	15:LM:131:GLN:HG2	2.19	0.42
21:LS:46:TYR:O	21:LS:50:GLN:HG3	2.19	0.42
25:LW:94:ARG:HG2	25:LW:95:ASN:N	2.33	0.42
31:Lc:21:VAL:HG11	31:Lc:96:ILE:HG12	2.02	0.42
46:S2:67:C:N4	53:SG:170:ARG:HD2	2.34	0.42
46:S2:429:C:P	56:SJ:2:PRO:HD2	2.60	0.42
46:S2:793:G:H2'	46:S2:794:A:C1'	2.49	0.42
46:S2:1293:A:H1'	78:Sf:138:ARG:CZ	2.49	0.42
46:S2:1562:C:H4'	66:ST:120:GLY:N	2.33	0.42
56:SJ:83:ARG:O	56:SJ:84:ILE:C	2.61	0.42
56:SJ:173:VAL:HG13	56:SJ:174:LYS:H	1.85	0.42
59:SM:63:LYS:NZ	78:Sf:108:VAL:HG21	2.34	0.42
59:SM:79:VAL:HG12	59:SM:80:ASP:H	1.84	0.42
65:SS:5:ILE:HA	72:SZ:49:LEU:HB3	2.02	0.42
66:ST:18:LEU:O	66:ST:22:LEU:HG	2.19	0.42
79:Sg:242:SER:CB	79:Sg:291:TRP:CZ3	3.02	0.42
80:u:24:G:C6	80:u:25:C:C2	3.07	0.42
1:L5:273:U:H2'	1:L5:274:C:O4'	2.18	0.42
1:L5:432:U:O2	85:L5:5376:SPD:H81	2.20	0.42
1:L5:495:C:C2	1:L5:659:G:C6	3.07	0.42
1:L5:657:C:O2	1:L5:657:C:H2'	2.19	0.42
1:L5:691:C:H2'	1:L5:692:A:H8	1.82	0.42
1:L5:1407:C:H2'	1:L5:1407:C:OP1	2.20	0.42
1:L5:1554:A:H5'	44:Lp:9:GLY:C	2.44	0.42
1:L5:1765:A:N3	1:L5:1765:A:C2'	2.83	0.42
1:L5:1977:C:OP2	1:L5:1978:C:N4	2.53	0.42
1:L5:1979:A:H1'	1:L5:1983:A:H2	1.84	0.42
1:L5:1994:C:H2'	1:L5:1995:G:O3'	2.19	0.42
1:L5:4134:C:H2'	1:L5:4135:G:O4'	2.20	0.42
1:L5:4154:G:H2'	1:L5:4155:C:C6	2.54	0.42
1:L5:4393:G:O4'	1:L5:4447:5MC:HM52	2.20	0.42
4:LA:10:LYS:HA	4:LA:16:PHE:CD2	2.54	0.42
4:LA:248:GLY:HA3	46:S2:1069:U:H4'	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:LR:159:ALA:HB1	20:LR:163:ARG:HH12	1.85	0.42
22:LT:118:GLU:HG2	22:LT:122:LYS:HE2	2.01	0.42
46:S2:216:C:C4	46:S2:217:A:N7	2.88	0.42
46:S2:526:A:OP1	77:Se:35:ARG:NH1	2.53	0.42
46:S2:559:G:O2'	46:S2:560:A:P	2.77	0.42
46:S2:565:G:C2'	46:S2:566:U:H5'	2.49	0.42
46:S2:1703:OMC:H2'	46:S2:1704:C:O4'	2.20	0.42
46:S2:1869:A:C5	48:SB:115:LYS:HG2	2.54	0.42
48:SB:36:PRO:HB2	48:SB:38:MET:HE2	2.01	0.42
51:SE:122:LYS:HE3	51:SE:122:LYS:HB3	1.82	0.42
54:SH:94:PHE:C	54:SH:95:ILE:HD13	2.45	0.42
56:SJ:10:ARG:HG3	56:SJ:11:LYS:O	2.20	0.42
59:SM:59:PRO:HB2	59:SM:60:MET:CE	2.44	0.42
61:SO:116:LEU:HG	73:Sa:53:ILE:CD1	2.48	0.42
78:Sf:90:LYS:HE3	78:Sf:90:LYS:HB3	1.73	0.42
81:v:47:U:O4	81:v:50:U:H3'	2.19	0.42
1:L5:176:G:N1	1:L5:261:G:C6	2.88	0.42
1:L5:962:C:C2	1:L5:1701:A:H2	2.38	0.42
1:L5:1047:C:H2'	1:L5:1048:G:H8	1.85	0.42
1:L5:1070:G:O2'	1:L5:1071:C:P	2.78	0.42
1:L5:1341:U:H5'	6:LC:109:ARG:HA	2.00	0.42
1:L5:1400:G:H1	1:L5:1417:C:H42	1.66	0.42
1:L5:1957:U:H3	1:L5:2026:A:H61	1.68	0.42
1:L5:1985:G:H1	1:L5:2006:U:C3'	2.24	0.42
1:L5:2602:G:H2'	1:L5:2603:C:C6	2.54	0.42
1:L5:4251:A:H5''	13:LJ:108:GLY:HA3	2.00	0.42
1:L5:4637:OMG:HM23	1:L5:4637:OMG:H1'	1.72	0.42
1:L5:4704:C:H2'	1:L5:4705:A:C8	2.55	0.42
1:L5:4860:G:OP1	17:LO:169:ARG:HD2	2.20	0.42
86:L5:5387:NMY:H22	86:L5:5387:NMY:H19	1.77	0.42
3:L8:74:U:H3	27:LY:72:GLN:NE2	2.18	0.42
6:LC:171:LEU:HD11	6:LC:227:ILE:HD11	2.02	0.42
7:LD:232:THR:HB	7:LD:234:ASP:OD1	2.19	0.42
13:LJ:8:LYS:HG2	13:LJ:9:GLU:OE1	2.19	0.42
13:LJ:24:ILE:HD12	13:LJ:40:LEU:HG	2.02	0.42
21:LS:101:THR:HG22	21:LS:103:ALA:N	2.35	0.42
35:Lg:78:TYR:HB3	35:Lg:82:MET:HB3	2.01	0.42
46:S2:201:C:H3'	46:S2:202:G:H21	1.84	0.42
46:S2:541:U:C6	46:S2:543:C:N4	2.87	0.42
46:S2:834:C:C5	46:S2:835:C:C5	3.07	0.42
47:SA:170:SER:O	47:SA:174:MET:HG2	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:SD:221:THR:O	50:SD:223:ILE:HD12	2.19	0.42
56:SJ:131:ARG:HD2	56:SJ:143:ASN:O	2.19	0.42
69:SW:111:MET:HE2	69:SW:111:MET:HB3	1.85	0.42
75:Sc:42:ILE:C	75:Sc:42:ILE:HD12	2.45	0.42
80:u:2:C:C2	80:u:3:C:C6	3.08	0.42
80:u:6:G:H1	80:u:67:C:N4	2.12	0.42
80:u:15:G:H2'	80:u:16:U:H5'	2.00	0.42
81:v:21:A:H4'	81:v:22:G:OP2	2.12	0.42
1:L5:158:A:H5''	1:L5:159:C:H2'	2.02	0.42
1:L5:221:C:H2'	1:L5:222:C:C6	2.54	0.42
1:L5:264:C:N4	1:L5:265:C:C2	2.88	0.42
1:L5:268:G:C2'	1:L5:269:G:H5'	2.49	0.42
1:L5:712:C:H1'	8:LE:136:HIS:CE1	2.55	0.42
1:L5:1414:C:H2'	1:L5:1415:G:H8	1.82	0.42
1:L5:1415:G:O2'	1:L5:1416:G:H5'	2.19	0.42
1:L5:2018:C:C2	1:L5:2019:C:N4	2.88	0.42
1:L5:2568:C:H2'	1:L5:2569:G:H8	1.85	0.42
1:L5:4261:C:H2'	1:L5:4262:C:H6	1.84	0.42
1:L5:4535:A:H2'	1:L5:4536:OMC:H6	1.85	0.42
1:L5:4893:A:H2'	1:L5:4894:A:O4'	2.20	0.42
2:L7:79:U:OP1	86:L7:202:NMY:H1	2.19	0.42
15:LM:38:VAL:HG11	15:LM:50:MET:HE3	2.01	0.42
21:LS:101:THR:HG22	21:LS:103:ALA:H	1.85	0.42
22:LT:28:ALA:O	22:LT:32:ARG:HG2	2.20	0.42
22:LT:143:THR:HG23	22:LT:145:GLY:H	1.85	0.42
25:LW:94:ARG:HB2	25:LW:99:GLU:CG	2.49	0.42
28:LZ:112:ARG:O	28:LZ:116:VAL:HG13	2.19	0.42
35:Lg:69:LYS:HA	35:Lg:72:LYS:HE2	2.01	0.42
35:Lg:108:LYS:HB2	35:Lg:108:LYS:HE2	1.94	0.42
39:Lk:3:ARG:HH11	39:Lk:3:ARG:HG3	1.84	0.42
46:S2:159:A2M:H2	46:S2:468:A2M:O4'	2.19	0.42
46:S2:835:C:C4	71:SY:8:ARG:NE	2.83	0.42
46:S2:1242:U:O2	46:S2:1517:G:O3'	2.38	0.42
47:SA:10:MET:HG3	47:SA:11:LYS:N	2.35	0.42
52:SF:30:ILE:HG23	52:SF:117:ILE:HD11	2.01	0.42
52:SF:125:SER:HB2	52:SF:135:ARG:CB	2.47	0.42
56:SJ:139:LYS:HZ3	56:SJ:139:LYS:HG2	1.71	0.42
56:SJ:139:LYS:N	56:SJ:139:LYS:HZ2	2.17	0.42
64:SR:59:LYS:HE3	64:SR:59:LYS:HB2	1.72	0.42
79:Sg:258:ILE:HD12	79:Sg:258:ILE:HA	1.83	0.42
81:v:10:G:H2'	81:v:10:G:N3	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:7:C:H2'	1:L5:8:U:C6	2.54	0.42
1:L5:258:G:H5'	1:L5:259:C:OP2	2.19	0.42
1:L5:282:C:H2'	1:L5:283:G:O4'	2.20	0.42
1:L5:379:G:H2'	1:L5:380:U:H5'	2.02	0.42
1:L5:511:C:H2'	1:L5:512:U:C6	2.55	0.42
1:L5:966:A:H5'	1:L5:967:C:C5	2.55	0.42
1:L5:1064:G:H5'	1:L5:1065:G:OP2	2.20	0.42
1:L5:1074:G:C2'	1:L5:1075:G:H5'	2.50	0.42
1:L5:1247:U:H3	1:L5:1263:A:N6	2.18	0.42
1:L5:1443:A:C6	1:L5:2104:G:N1	2.88	0.42
1:L5:1758:G:O5'	1:L5:1758:G:N3	2.53	0.42
1:L5:1771:U:H1'	1:L5:1772:C:C5	2.54	0.42
1:L5:1962:A:N3	1:L5:2025:A:C5	2.88	0.42
1:L5:1978:C:N4	1:L5:1983:A:C6	2.87	0.42
1:L5:3648:A:H1'	1:L5:3785:A2M:N6	2.35	0.42
1:L5:4068:U:O2	1:L5:4068:U:O4'	2.36	0.42
1:L5:4462:C:O2'	1:L5:4463:U:H5'	2.20	0.42
2:L7:3:C:H2'	2:L7:4:U:H6	1.85	0.42
5:LB:146:LEU:HD23	5:LB:146:LEU:HA	1.90	0.42
7:LD:259:LYS:HA	7:LD:259:LYS:HD2	1.79	0.42
14:LL:146:LEU:HG	36:Lh:122:LYS:NZ	2.33	0.42
21:LS:17:LEU:HD23	21:LS:17:LEU:HA	1.93	0.42
28:LZ:104:PRO:O	28:LZ:108:ARG:HG3	2.20	0.42
46:S2:557:U:H6	46:S2:557:U:H5''	1.85	0.42
46:S2:615:C:H2'	46:S2:616:A:O4'	2.19	0.42
46:S2:1227:G:C2	46:S2:1228:A:C8	3.08	0.42
46:S2:1578:U:H5''	46:S2:1579:A:O4'	2.20	0.42
49:SC:81:ILE:HG23	49:SC:86:LEU:HB2	2.01	0.42
51:SE:134:LYS:HB2	51:SE:134:LYS:HE2	1.77	0.42
54:SH:30:LEU:HA	54:SH:33:ASN:ND2	2.35	0.42
54:SH:154:ILE:HB	54:SH:185:VAL:HG23	2.02	0.42
56:SJ:155:LYS:HG2	56:SJ:156:HIS:CE1	2.55	0.42
63:SQ:112:LEU:HD23	63:SQ:112:LEU:HA	1.78	0.42
66:ST:77:LYS:HB2	66:ST:77:LYS:HE2	1.81	0.42
1:L5:921:C:H2'	1:L5:922:C:C6	2.54	0.42
1:L5:981:C:H2'	8:LE:73:TYR:HE2	1.80	0.42
1:L5:1257:A:C2	1:L5:1258:G:C4	3.08	0.42
1:L5:1725:U:H5''	9:LF:104:LYS:HE2	2.01	0.42
1:L5:1759:G:H3'	1:L5:1760:G:H8	1.85	0.42
1:L5:1811:G:H2'	1:L5:1812:C:C6	2.54	0.42
1:L5:1973:G:H2'	1:L5:1974:U:H5	1.82	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:2023:C:N4	1:L5:2024:G:O6	2.52	0.42
1:L5:2478:C:H2'	1:L5:2479:G:O4'	2.20	0.42
1:L5:2537:A:H2'	1:L5:2538:U:O4'	2.20	0.42
1:L5:2777:G:N7	86:L5:5384:NMY:N9	2.55	0.42
1:L5:2859:G:H2'	1:L5:2860:C:H6	1.85	0.42
1:L5:4136:G:H2'	1:L5:4137:C:C6	2.55	0.42
1:L5:4749:C:H2'	1:L5:4750:G:O4'	2.20	0.42
1:L5:4762:A:H2'	1:L5:4763:U:O4'	2.20	0.42
5:LB:128:LYS:HE2	5:LB:128:LYS:HB3	1.59	0.42
5:LB:362:LYS:HD2	5:LB:362:LYS:HA	1.86	0.42
7:LD:129:GLU:HG2	7:LD:177:THR:HG21	2.02	0.42
10:LG:117:ARG:NH1	10:LG:121:LYS:HB2	2.34	0.42
12:LI:145:GLU:O	12:LI:149:ILE:HG13	2.20	0.42
13:LJ:82:ILE:HA	13:LJ:85:LYS:HE2	2.02	0.42
13:LJ:90:ARG:HG2	13:LJ:90:ARG:H	1.65	0.42
24:LV:32:THR:HG21	24:LV:113:LYS:HG2	2.01	0.42
25:LW:91:MET:HB3	25:LW:97:LYS:HB2	1.99	0.42
25:LW:107:GLN:H	25:LW:110:ARG:HH21	1.68	0.42
37:Li:26:HIS:CE1	37:Li:29:ARG:HD2	2.55	0.42
43:Lo:99:ARG:HG2	43:Lo:99:ARG:HH11	1.85	0.42
46:S2:67:C:C5	53:SG:162:LEU:HG	2.55	0.42
46:S2:556:U:N3	46:S2:557:U:O2'	2.51	0.42
46:S2:588:G:C8	46:S2:590:A2M:H5''	2.55	0.42
46:S2:663:C:H2'	46:S2:664:A:O4'	2.20	0.42
46:S2:750:C:N4	46:S2:793:G:C2	2.88	0.42
46:S2:1010:G:H2'	46:S2:1011:A:C8	2.55	0.42
46:S2:1550:G:H3'	46:S2:1579:A:H61	1.84	0.42
48:SB:225:LEU:HD23	48:SB:229:MET:HG2	2.01	0.42
50:SD:120:TYR:O	50:SD:124:ARG:HD3	2.19	0.42
54:SH:30:LEU:HD12	54:SH:40:LEU:HB3	2.02	0.42
67:SU:20:ILE:HG12	67:SU:116:ILE:HG12	2.01	0.42
70:SX:90:CYS:SG	70:SX:134:TYR:HB2	2.60	0.42
79:Sg:21:ILE:HD11	79:Sg:301:GLY:HA3	2.01	0.42
80:u:27:G:N1	80:u:43:C:H5	2.15	0.42
1:L5:31:U:H2'	1:L5:32:G:O4'	2.20	0.41
1:L5:467:U:H2'	1:L5:468:U:H4'	2.02	0.41
1:L5:1768:C:O5'	1:L5:1768:C:H6	2.02	0.41
1:L5:1772:C:H2'	1:L5:1773:U:O4'	2.20	0.41
1:L5:2478:C:N4	1:L5:2499:C:H42	2.18	0.41
1:L5:2544:G:H1	3:L8:124:U:H5''	1.85	0.41
1:L5:4498:OMU:HM23	1:L5:4500:PSU:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:4551:U:H2'	1:L5:4552:PSU:C6	2.55	0.41
1:L5:4998:G:OP1	32:Ld:115:LYS:HG3	2.20	0.41
7:LD:187:SER:HB2	7:LD:189:GLU:OE2	2.20	0.41
9:LF:75:ALA:HB2	22:LT:140:PHE:HE2	1.83	0.41
9:LF:214:SER:O	9:LF:247:MET:HE2	2.20	0.41
12:LI:51:HIS:CD2	12:LI:168:SER:HB2	2.55	0.41
22:LT:14:MET:HE3	22:LT:14:MET:HB2	1.97	0.41
46:S2:386:C:H2'	46:S2:387:C:C6	2.54	0.41
46:S2:840:C:H5'	46:S2:841:G:C4'	2.44	0.41
46:S2:1277:C:O3'	57:SK:55:ARG:HD3	2.20	0.41
48:SB:71:LEU:HD11	48:SB:189:ILE:HG23	2.02	0.41
51:SE:19:MET:HE2	51:SE:19:MET:HB2	1.94	0.41
52:SF:192:LYS:HA	52:SF:192:LYS:HD2	1.78	0.41
54:SH:69:LEU:HD13	54:SH:96:ALA:HB2	2.01	0.41
56:SJ:114:VAL:O	56:SJ:120:ALA:HB3	2.20	0.41
63:SQ:28:GLY:HA3	63:SQ:67:ASP:CG	2.45	0.41
64:SR:95:ILE:HD11	64:SR:118:GLN:NE2	2.35	0.41
67:SU:56:MET:HE2	67:SU:56:MET:HA	2.02	0.41
80:u:69:G:C2	80:u:70:G:C8	3.08	0.41
82:w:20:G:H2'	82:w:21:G:C8	2.55	0.41
1:L5:177:G:H2'	1:L5:178:C:C6	2.55	0.41
1:L5:233:U:C2'	1:L5:234:G:C8	2.96	0.41
1:L5:280:G:H5''	16:LN:14:LYS:HE2	2.01	0.41
1:L5:294:G:H3'	1:L5:294:G:N3	2.36	0.41
1:L5:489:C:C5'	1:L5:489:C:H6	2.33	0.41
1:L5:1064:G:N2	1:L5:1065:G:H1'	2.35	0.41
1:L5:1175:A:H2'	1:L5:1175:A:N3	2.35	0.41
1:L5:1252:C:H2'	1:L5:1254:A:N1	2.35	0.41
1:L5:1991:A:C8	1:L5:1991:A:H3'	2.55	0.41
1:L5:2479:G:C2	1:L5:2480:G:C5	3.08	0.41
1:L5:2519:U:H1'	1:L5:2520:C:C6	2.55	0.41
1:L5:2654:C:H2'	1:L5:2655:C:C6	2.54	0.41
1:L5:3619:G:H4'	20:LR:79:GLY:O	2.20	0.41
1:L5:3724:A2M:HM'3	1:L5:3724:A2M:H1'	1.74	0.41
1:L5:4667:C:H2'	1:L5:4668:U:O4'	2.20	0.41
1:L5:5025:C:O2	1:L5:5028:G:H1'	2.20	0.41
2:L7:58:A:H2'	2:L7:59:G:C8	2.54	0.41
16:LN:165:THR:O	16:LN:169:ARG:HB3	2.20	0.41
17:LO:190:ASP:C	17:LO:190:ASP:OD1	2.63	0.41
46:S2:27:A2M:H2'	46:S2:28:U:C6	2.55	0.41
46:S2:464:A:H5''	46:S2:465:A:N7	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S2:484:A2M:H8	46:S2:484:A2M:O5'	2.20	0.41
46:S2:587:A:O2'	46:S2:590:A2M:H8	2.20	0.41
46:S2:835:C:H42	71:SY:8:ARG:HG3	1.85	0.41
46:S2:1500:G:H2'	46:S2:1501:C:C6	2.55	0.41
46:S2:1811:C:OP1	70:SX:37:LYS:HE2	2.19	0.41
47:SA:66:VAL:HG11	47:SA:185:MET:HB2	2.03	0.41
47:SA:128:ARG:HG3	47:SA:128:ARG:NH1	2.35	0.41
48:SB:71:LEU:HD12	48:SB:71:LEU:HA	1.86	0.41
53:SG:23:LYS:HB3	53:SG:23:LYS:HE3	1.48	0.41
54:SH:36:LEU:HD23	54:SH:36:LEU:HA	1.88	0.41
56:SJ:110:LEU:HD23	56:SJ:130:ILE:HG12	2.03	0.41
56:SJ:129:LEU:O	56:SJ:132:GLN:O	2.39	0.41
56:SJ:134:HIS:ND1	56:SJ:165:TYR:CD2	2.82	0.41
57:SK:14:LEU:O	57:SK:17:LYS:HB2	2.20	0.41
59:SM:28:HIS:CD2	59:SM:115:GLY:HA2	2.55	0.41
62:SP:93:MET:HE3	62:SP:93:MET:HB3	1.95	0.41
67:SU:88:LEU:C	67:SU:89:ILE:HD13	2.45	0.41
71:SY:82:ALA:O	71:SY:86:GLU:CB	2.67	0.41
72:SZ:69:THR:HB	72:SZ:72:VAL:HG23	2.02	0.41
1:L5:5:A:H4'	10:LG:192:ARG:HH21	1.85	0.41
1:L5:189:G:H2'	1:L5:190:G:H8	1.86	0.41
1:L5:324:A:H2'	1:L5:325:U:C6	2.55	0.41
1:L5:513:U:C2	1:L5:515:C:H5	2.39	0.41
1:L5:1182:C:OP1	1:L5:1183:C:H5'	2.20	0.41
1:L5:1253:G:O5'	1:L5:1254:A:N6	2.53	0.41
1:L5:1962:A:H3'	1:L5:1963:C:C5'	2.49	0.41
1:L5:1977:C:H2'	1:L5:1978:C:C2	2.55	0.41
1:L5:2012:A:H3'	1:L5:2013:A:N9	2.35	0.41
1:L5:2681:G:N7	86:L5:5387:NMY:N6	2.63	0.41
1:L5:2765:A:H2'	1:L5:2766:A:C8	2.55	0.41
1:L5:3709:U:H3	1:L5:3711:A:H61	1.66	0.41
1:L5:3790:U:OP1	1:L5:3790:U:H6	2.04	0.41
1:L5:4099:G:H1'	1:L5:4107:G:O6	2.21	0.41
1:L5:4232:U:H4'	1:L5:4233:A:O4'	2.20	0.41
1:L5:4518:A:O5'	1:L5:4520:G:H4'	2.21	0.41
3:L8:47:C:H1'	3:L8:61:A:H2'	2.01	0.41
4:LA:117:GLU:HG2	4:LA:122:ASP:OD1	2.19	0.41
9:LF:243:LEU:O	9:LF:247:MET:HG3	2.20	0.41
11:LH:89:ARG:HG3	11:LH:145:ILE:HG23	2.02	0.41
14:LL:163:LYS:HD2	14:LL:164:GLU:H	1.85	0.41
22:LT:41:ASP:HB2	22:LT:97:LYS:HG2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:LZ:53:VAL:HG11	28:LZ:62:ILE:HG23	2.02	0.41
36:Lh:15:GLU:HG2	36:Lh:16:GLU:N	2.35	0.41
36:Lh:98:HIS:O	36:Lh:102:LEU:HG	2.20	0.41
46:S2:591:U:O2	46:S2:593:C:N4	2.52	0.41
47:SA:52:LYS:CG	64:SR:109:LEU:HD22	2.50	0.41
53:SG:49:VAL:HG12	53:SG:114:VAL:HG12	2.03	0.41
54:SH:35:ASP:N	54:SH:35:ASP:OD1	2.53	0.41
57:SK:15:LEU:HD12	57:SK:19:GLY:HA2	2.01	0.41
59:SM:44:LYS:CD	59:SM:46:GLN:HB2	2.48	0.41
59:SM:125:GLU:H	59:SM:125:GLU:HG3	1.65	0.41
70:SX:124:LYS:HB2	70:SX:129:SER:HA	2.01	0.41
72:SZ:49:LEU:H	72:SZ:83:LEU:CD1	2.33	0.41
79:Sg:44:LYS:HD2	79:Sg:56:GLN:OE1	2.19	0.41
1:L5:50:C:C2	1:L5:51:A:C8	3.08	0.41
1:L5:424:U:H2'	1:L5:425:U:C6	2.55	0.41
1:L5:500:G:C4	1:L5:505:G:N7	2.88	0.41
1:L5:500:G:C6	1:L5:655:C:C2	3.09	0.41
1:L5:727:C:H5''	9:LF:69:ILE:HG21	2.03	0.41
1:L5:905:C:H2'	1:L5:906:C:H6	1.85	0.41
1:L5:978:G:OP1	8:LE:47:ASN:ND2	2.45	0.41
1:L5:1764:G:N7	1:L5:1770:A:H2	2.19	0.41
1:L5:1813:U:H2'	1:L5:1814:C:C6	2.55	0.41
1:L5:1967:A:C5	1:L5:2021:G:C6	3.08	0.41
1:L5:2347:A:C4	33:Le:31:ILE:HD11	2.55	0.41
1:L5:2871:A:H2'	1:L5:2872:C:O4'	2.20	0.41
1:L5:4500:PSU:H2'	1:L5:4501:U:C6	2.55	0.41
86:L5:5385:NMY:H91	86:L5:5385:NMY:H5	1.84	0.41
9:LF:71:MET:HA	9:LF:74:MET:SD	2.60	0.41
13:LJ:120:ASP:HB3	13:LJ:123:ILE:HB	2.02	0.41
18:LP:94:MET:HE3	18:LP:94:MET:HB2	1.82	0.41
25:LW:119:LYS:HG2	46:S2:327:G:C8	2.55	0.41
46:S2:653:A:H2'	46:S2:654:A:O4'	2.19	0.41
46:S2:847:A:O2'	51:SE:106:LYS:HD3	2.21	0.41
46:S2:1035:A:H2'	46:S2:1036:A:O4'	2.20	0.41
52:SF:173:LEU:O	52:SF:177:LEU:HD13	2.21	0.41
53:SG:27:PHE:O	53:SG:28:TYR:C	2.63	0.41
54:SH:72:PHE:O	54:SH:76:GLN:CB	2.57	0.41
61:SO:75:MET:HE2	61:SO:75:MET:HB3	1.95	0.41
61:SO:116:LEU:HD21	61:SO:129:ILE:HD13	2.01	0.41
63:SQ:10:VAL:HG22	63:SQ:25:CYS:HB3	2.01	0.41
65:SS:44:VAL:HG11	65:SS:71:MET:HG3	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:ST:71:GLY:O	66:ST:75:MET:HG2	2.20	0.41
69:SW:87:GLU:HA	69:SW:90:GLN:NE2	2.36	0.41
79:Sg:32:LEU:HD12	79:Sg:71:ILE:HG12	2.01	0.41
79:Sg:249:CYS:HB3	79:Sg:289:LEU:CD1	2.50	0.41
81:v:15:G:H8	81:v:15:G:H5''	1.85	0.41
81:v:53:G:C2	81:v:62:C:C2	3.09	0.41
1:L5:181:C:H42	1:L5:255:C:N4	2.18	0.41
1:L5:263:G:C5	1:L5:264:C:N4	2.88	0.41
1:L5:682:G:C2'	1:L5:683:C:H5'	2.50	0.41
1:L5:717:U:H2'	1:L5:718:C:C6	2.56	0.41
1:L5:1096:C:C4	1:L5:1097:C:C5	3.09	0.41
1:L5:1209:U:O2'	1:L5:1211:G:H5''	2.20	0.41
1:L5:2103:G:H2'	1:L5:2104:G:N7	2.36	0.41
1:L5:3925:OMU:H1'	1:L5:3925:OMU:HM23	1.80	0.41
1:L5:4642:U:H2'	1:L5:4643:G:H8	1.85	0.41
1:L5:4727:A:H5'	5:LB:130:PHE:H	1.86	0.41
1:L5:5002:U:H2'	1:L5:5003:U:C6	2.55	0.41
2:L7:79:U:OP2	86:L7:202:NMY:H2	2.20	0.41
3:L8:62:A:H4'	3:L8:63:U:O5'	2.21	0.41
3:L8:123:U:H2'	3:L8:124:U:O5'	2.21	0.41
5:LB:239:LYS:HB3	5:LB:239:LYS:HE3	1.86	0.41
6:LC:331:TYR:CE2	6:LC:335:MET:HG3	2.56	0.41
17:LO:109:PRO:HB2	17:LO:111:PRO:HD2	2.01	0.41
24:LV:43:LYS:HE2	24:LV:62:MET:SD	2.60	0.41
40:Ll:48:LYS:HD3	40:Ll:48:LYS:HA	1.82	0.41
46:S2:155:G:H2'	46:S2:156:G:C8	2.55	0.41
46:S2:513:G:C6	46:S2:514:U:C4	3.09	0.41
46:S2:528:A:C2	46:S2:558:G:N1	2.89	0.41
46:S2:540:U:C2	46:S2:543:C:C4	3.09	0.41
46:S2:693:A:N3	46:S2:739:C:H4'	2.36	0.41
48:SB:103:MET:HG2	48:SB:104:ASP:N	2.35	0.41
53:SG:138:ALA:O	53:SG:140:ARG:N	2.54	0.41
53:SG:153:VAL:O	53:SG:154:ARG:C	2.61	0.41
55:SI:130:THR:O	55:SI:133:GLU:HB2	2.19	0.41
56:SJ:125:HIS:NE2	56:SJ:129:LEU:HD21	2.36	0.41
57:SK:4:PRO:CG	57:SK:7:ASN:HD22	2.32	0.41
60:SN:149:LEU:HA	60:SN:149:LEU:HD23	1.81	0.41
66:ST:110:LEU:HD12	66:ST:110:LEU:HA	1.86	0.41
76:Sd:23:VAL:HG11	76:Sd:46:TYR:HE2	1.84	0.41
79:Sg:44:LYS:O	79:Sg:53:GLY:HA2	2.21	0.41
80:u:39:U:H2'	80:u:40:C:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:v:62:C:H5'	81:v:63:G:OP2	2.20	0.41
1:L5:253:G:C8	1:L5:253:G:H3'	2.56	0.41
1:L5:258:G:H2'	1:L5:258:G:N3	2.35	0.41
1:L5:443:G:H5''	34:Lf:54:LYS:HD3	2.03	0.41
1:L5:1244:G:N3	1:L5:1244:G:H2'	2.36	0.41
1:L5:1755:C:H2'	1:L5:1756:U:H5'	2.02	0.41
1:L5:1774:C:O5'	1:L5:1774:C:H6	2.03	0.41
1:L5:1775:A:O2'	1:L5:1776:A:H5'	2.21	0.41
1:L5:1972:G:OP2	1:L5:2001:G:N2	2.53	0.41
1:L5:1979:A:C3'	1:L5:1980:U:H5'	2.50	0.41
1:L5:2017:A:H3'	1:L5:2018:C:C5'	2.50	0.41
1:L5:2891:U:H2'	1:L5:2892:C:O4'	2.20	0.41
1:L5:3857:G:H5''	18:LP:86:LYS:HB2	2.02	0.41
1:L5:4173:G:H2'	1:L5:4174:U:C6	2.55	0.41
1:L5:4405:G:H5'	12:LI:8:CYS:SG	2.61	0.41
2:L7:2:U:H2'	2:L7:3:C:C6	2.55	0.41
8:LE:257:ILE:HG22	8:LE:261:ILE:HD12	2.02	0.41
9:LF:137:GLU:HG3	9:LF:234:GLY:HA2	2.02	0.41
12:LI:171:TRP:HB2	12:LI:178:ALA:HA	2.02	0.41
20:LR:188:LEU:HD12	20:LR:188:LEU:H	1.86	0.41
24:LV:35:LYS:HB3	24:LV:35:LYS:HE3	1.84	0.41
30:Lb:117:ARG:HA	30:Lb:117:ARG:HD3	1.60	0.41
46:S2:541:U:H6	46:S2:543:C:N4	2.19	0.41
46:S2:565:G:H5''	46:S2:565:G:H8	1.86	0.41
46:S2:639:C:H2'	46:S2:640:A:C8	2.56	0.41
46:S2:1501:C:H2'	46:S2:1502:C:H6	1.84	0.41
46:S2:1556:A:H3'	46:S2:1557:C:C6	2.55	0.41
48:SB:83:LYS:HB2	48:SB:83:LYS:HE3	1.89	0.41
50:SD:45:ARG:HA	50:SD:83:SER:O	2.20	0.41
52:SF:74:ASN:HA	52:SF:77:MET:HE2	2.02	0.41
55:SI:65:PHE:HA	55:SI:187:GLY:O	2.21	0.41
55:SI:107:THR:O	55:SI:111:GLN:HG3	2.20	0.41
55:SI:136:ILE:HD13	55:SI:136:ILE:HA	1.92	0.41
63:SQ:42:ILE:HD13	63:SQ:42:ILE:HA	1.81	0.41
63:SQ:85:ARG:HH22	63:SQ:116:ASP:CG	2.27	0.41
72:SZ:99:LEU:HD12	72:SZ:109:TYR:HE1	1.85	0.41
77:Se:18:LYS:HD2	77:Se:19:VAL:H	1.84	0.41
79:Sg:165:ILE:HG12	79:Sg:177:TRP:O	2.21	0.41
80:u:1:G:H4'	80:u:2:C:OP1	2.19	0.41
1:L5:313:U:H5''	16:LN:179:LYS:HE3	2.02	0.41
1:L5:515:C:N4	1:L5:646:G:H22	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:646:G:N2	1:L5:647:G:H1'	2.36	0.41
1:L5:667:A:H1'	45:Lr:46:ARG:CZ	2.51	0.41
1:L5:923:C:O2	1:L5:924:C:C5	2.73	0.41
1:L5:1208:G:N2	9:LF:74:MET:CE	2.84	0.41
1:L5:1816:C:C4	1:L5:1817:U:C4	3.09	0.41
1:L5:2292:C:H2'	1:L5:2293:U:C6	2.54	0.41
1:L5:2392:C:H2'	1:L5:2393:C:H6	1.84	0.41
1:L5:2494:U:C2	1:L5:2495:U:C6	3.09	0.41
1:L5:4069:U:H2'	1:L5:4070:U:H6	1.85	0.41
1:L5:4935:C:H2'	1:L5:4936:G:C8	2.55	0.41
4:LA:204:MET:HB3	4:LA:208:GLU:HG3	2.03	0.41
6:LC:333:LYS:HE3	8:LE:54:ILE:HA	2.03	0.41
7:LD:93:THR:O	7:LD:93:THR:HG22	2.20	0.41
8:LE:149:ILE:HD12	8:LE:271:LEU:HD21	2.03	0.41
14:LL:154:VAL:HG12	14:LL:155:MET:HG3	2.03	0.41
15:LM:38:VAL:O	15:LM:47:ARG:HA	2.21	0.41
16:LN:64:ILE:HD11	16:LN:106:ALA:HB2	2.01	0.41
16:LN:159:ARG:HB3	16:LN:164:LEU:HB2	2.01	0.41
19:LQ:173:LYS:HE2	19:LQ:173:LYS:HB2	1.81	0.41
20:LR:136:ARG:O	20:LR:140:GLU:HG3	2.20	0.41
25:LW:93:LYS:HE3	25:LW:99:GLU:CB	2.50	0.41
28:LZ:51:ARG:HB3	28:LZ:65:ARG:NH2	2.36	0.41
31:Lc:45:LEU:HD23	31:Lc:96:ILE:HD12	2.03	0.41
46:S2:328:U:O2'	46:S2:329:G:H8	2.04	0.41
46:S2:375:U:H2'	46:S2:376:A:C8	2.56	0.41
46:S2:540:U:C2	46:S2:543:C:N3	2.88	0.41
46:S2:555:A:N7	46:S2:557:U:C5	2.89	0.41
46:S2:1678:A2M:H2'	46:S2:1679:A:N3	2.36	0.41
47:SA:11:LYS:O	47:SA:15:VAL:HG23	2.21	0.41
48:SB:94:LYS:HA	48:SB:94:LYS:HD3	1.88	0.41
48:SB:144:LYS:HD2	48:SB:208:HIS:HB3	2.03	0.41
50:SD:201:LYS:HD2	50:SD:201:LYS:N	2.28	0.41
53:SG:224:ARG:O	53:SG:228:ILE:HD13	2.21	0.41
56:SJ:11:LYS:HE3	56:SJ:11:LYS:HB3	1.84	0.41
56:SJ:78:LEU:O	56:SJ:82:VAL:HG23	2.21	0.41
56:SJ:79:ARG:HG2	56:SJ:83:ARG:CZ	2.51	0.41
56:SJ:129:LEU:HD13	56:SJ:134:HIS:NE2	2.35	0.41
62:SP:56:LEU:HD22	62:SP:80:LEU:HD12	2.03	0.41
63:SQ:43:GLU:N	63:SQ:44:PRO:HD3	2.34	0.41
72:SZ:88:LEU:HA	72:SZ:88:LEU:HD23	1.77	0.41
79:Sg:22:ALA:O	79:Sg:31:ILE:HG13	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:269:G:C2'	1:L5:270:U:O5'	2.69	0.41
1:L5:370:U:H2'	1:L5:371:A:O4'	2.20	0.41
1:L5:449:C:H4'	1:L5:450:G:OP2	2.21	0.41
1:L5:1095:A:C6	1:L5:1096:C:C4	3.09	0.41
1:L5:1253:G:N2	1:L5:1258:G:C5	2.79	0.41
1:L5:1743:A:O4'	7:LD:15:ARG:HD3	2.20	0.41
1:L5:1980:U:OP1	1:L5:1989:G:N2	2.54	0.41
1:L5:2013:A:H2'	1:L5:2014:C:N3	2.36	0.41
1:L5:2293:U:H2'	1:L5:2294:G:C8	2.56	0.41
1:L5:2424:OMG:HM23	1:L5:2424:OMG:H1'	1.62	0.41
1:L5:2587:A:H2'	1:L5:2588:C:C2	2.56	0.41
1:L5:4917:C:H2'	1:L5:4918:C:H6	1.86	0.41
3:L8:36:G:C5	36:Lh:89:ARG:HD3	2.55	0.41
13:LJ:94:LEU:HD21	13:LJ:107:PHE:HB3	2.02	0.41
21:LS:15:ARG:HB3	21:LS:27:LEU:HD23	2.03	0.41
24:LV:82:ILE:HG13	24:LV:83:ARG:HG3	2.01	0.41
41:Lm:95:ILE:HD11	41:Lm:124:LYS:HD2	2.03	0.41
42:Ln:8:LYS:HD3	42:Ln:12:ARG:NH2	2.36	0.41
43:Lo:27:LYS:HA	43:Lo:27:LYS:HD2	1.70	0.41
43:Lo:61:LYS:HD2	43:Lo:87:ARG:NH1	2.35	0.41
46:S2:502:C:O4'	51:SE:66:MET:HG3	2.21	0.41
46:S2:585:C:H2'	46:S2:586:G:O4'	2.20	0.41
46:S2:874:G:H2'	46:S2:875:A:C8	2.50	0.41
46:S2:1116:C:H2'	46:S2:1117:C:C6	2.56	0.41
46:S2:1627:C:H2'	46:S2:1628:C:C6	2.56	0.41
49:SC:144:SER:OG	49:SC:149:THR:HG23	2.19	0.41
49:SC:145:LYS:H	49:SC:145:LYS:HG3	1.61	0.41
49:SC:194:ARG:O	49:SC:224:THR:HA	2.21	0.41
52:SF:34:SER:HA	75:Sc:55:VAL:HB	2.02	0.41
54:SH:41:ARG:HH11	54:SH:41:ARG:HG3	1.85	0.41
56:SJ:46:VAL:HG21	56:SJ:106:LEU:HD21	2.03	0.41
56:SJ:83:ARG:C	56:SJ:150:ARG:HG3	2.46	0.41
56:SJ:155:LYS:HE2	56:SJ:155:LYS:N	2.25	0.41
57:SK:25:LYS:HD3	57:SK:62:PHE:CE1	2.56	0.41
58:SL:22:ARG:CZ	58:SL:22:ARG:HB3	2.50	0.41
63:SQ:50:LYS:HE2	63:SQ:85:ARG:CZ	2.51	0.41
71:SY:19:GLN:HG2	71:SY:81:TYR:CE2	2.56	0.41
79:Sg:113:PHE:HE1	79:Sg:120:ILE:HD11	1.86	0.41
79:Sg:119:GLN:HE21	79:Sg:179:LEU:HD12	1.85	0.41
81:v:58:A:OP2	81:v:58:A:C4	2.74	0.41
81:v:75:C:H6	81:v:75:C:H2'	1.70	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:165:A:H2'	1:L5:166:C:C6	2.56	0.41
1:L5:189:G:N2	1:L5:254:G:H22	2.19	0.41
1:L5:255:C:H3'	1:L5:256:G:C8	2.56	0.41
1:L5:698:G:C2'	1:L5:699:C:H6	2.28	0.41
1:L5:751:G:H2'	1:L5:752:G:O4'	2.20	0.41
1:L5:993:G:C8	1:L5:993:G:H3'	2.56	0.41
1:L5:1255:A:C5	1:L5:1257:A:H5''	2.56	0.41
1:L5:1396:G:H5''	29:La:132:ARG:NH1	2.36	0.41
1:L5:1406:G:H3'	1:L5:1407:C:C3'	2.50	0.41
1:L5:1426:G:H1'	1:L5:1459:A:H61	1.86	0.41
1:L5:1980:U:O5'	1:L5:1982:G:H2'	2.21	0.41
1:L5:2010:A:C2'	1:L5:2012:A:H1'	2.51	0.41
1:L5:3867:A2M:H2	1:L5:3880:G:C5	2.55	0.41
1:L5:4194:U:H3'	30:Lb:3:LYS:HD3	2.02	0.41
1:L5:4233:A:C4	1:L5:4235:G:N7	2.89	0.41
1:L5:4320:G:H2'	1:L5:4321:U:C6	2.56	0.41
1:L5:4389:C:H2'	1:L5:4390:A:H8	1.85	0.41
1:L5:4444:C:H2'	1:L5:4445:U:H6	1.85	0.41
1:L5:4685:U:H2'	1:L5:4686:G:C8	2.56	0.41
1:L5:4710:C:H2'	1:L5:4711:C:C6	2.56	0.41
3:L8:40:A:H2'	3:L8:41:A:C8	2.55	0.41
10:LG:39:PHE:CD1	10:LG:47:PRO:HD3	2.56	0.41
11:LH:45:LEU:HD22	11:LH:57:VAL:HG22	2.03	0.41
11:LH:104:VAL:HG12	11:LH:106:GLN:HG3	2.03	0.41
13:LJ:144:LYS:HD3	13:LJ:146:ARG:O	2.20	0.41
15:LM:96:GLU:HA	15:LM:99:GLU:HG3	2.03	0.41
20:LR:64:ARG:HG2	20:LR:64:ARG:NH1	2.36	0.41
23:LU:52:LYS:HB2	23:LU:52:LYS:HE3	1.76	0.41
28:LZ:107:LYS:O	28:LZ:111:ARG:HG2	2.20	0.41
32:Ld:95:ASP:OD1	32:Ld:95:ASP:N	2.54	0.41
45:Lr:46:ARG:HG2	45:Lr:46:ARG:NH1	2.36	0.41
46:S2:16:G:H2'	46:S2:17:C:C6	2.55	0.41
46:S2:91:A:H61	53:SG:89:THR:HG22	1.84	0.41
46:S2:502:C:H5'	51:SE:66:MET:HE2	2.02	0.41
46:S2:528:A:N1	46:S2:558:G:C6	2.89	0.41
46:S2:539:C:H6	46:S2:539:C:H5''	1.86	0.41
46:S2:548:C:H6	46:S2:548:C:H5''	1.86	0.41
46:S2:660:C:C5	58:SL:98:LYS:HE2	2.55	0.41
46:S2:818:A:O2'	46:S2:819:G:H5'	2.21	0.41
46:S2:949:G:H2'	46:S2:950:C:C6	2.56	0.41
46:S2:1043:G:H2'	46:S2:1044:G:O4'	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S2:1133:A:H4'	73:Sa:13:LYS:HD2	2.02	0.41
46:S2:1166:G:OP2	70:SX:25:LYS:HD3	2.21	0.41
46:S2:1285:G:H5'	59:SM:61:TYR:CE2	2.56	0.41
46:S2:1365:G:H2'	46:S2:1366:G:H8	1.85	0.41
46:S2:1487:A:H2'	46:S2:1488:C:C6	2.56	0.41
46:S2:1598:G:H3'	72:SZ:80:ARG:HD3	2.02	0.41
46:S2:1730:U:H5''	46:S2:1730:U:C6	2.49	0.41
47:SA:8:LEU:CD1	68:SV:39:VAL:HG21	2.50	0.41
47:SA:17:LYS:HB3	47:SA:17:LYS:HE2	1.86	0.41
47:SA:57:LYS:HB2	47:SA:162:PRO:HD2	2.02	0.41
47:SA:119:PRO:HG2	47:SA:142:LEU:HD22	2.03	0.41
49:SC:169:TYR:CD2	49:SC:173:LYS:HA	2.56	0.41
50:SD:116:ARG:HG3	50:SD:120:TYR:CE2	2.56	0.41
53:SG:5:ILE:HA	53:SG:111:LEU:O	2.20	0.41
53:SG:64:LYS:O	53:SG:100:CYS:HB3	2.21	0.41
54:SH:94:PHE:O	54:SH:95:ILE:HD13	2.21	0.41
55:SI:76:THR:HG21	55:SI:105:ASP:O	2.20	0.41
56:SJ:58:ARG:O	56:SJ:62:THR:HG23	2.21	0.41
56:SJ:74:GLY:O	56:SJ:78:LEU:HG	2.21	0.41
58:SL:35:ARG:NH1	58:SL:63:THR:HG21	2.35	0.41
58:SL:35:ARG:HH21	58:SL:54:THR:C	2.28	0.41
60:SN:102:LEU:HD23	60:SN:102:LEU:HA	1.90	0.41
69:SW:94:LEU:HD21	69:SW:102:ILE:HG13	2.03	0.41
75:Sc:44:ARG:HD2	75:Sc:58:LEU:HD13	2.03	0.41
79:Sg:177:TRP:CE3	79:Sg:184:LEU:HB2	2.56	0.41
81:v:15:G:C8	81:v:15:G:H5''	2.56	0.41
81:v:36:G:H1	82:w:16:C:H42	1.68	0.41
1:L5:483:G:C4	1:L5:485:C:H5''	2.56	0.41
1:L5:644:G:O4'	1:L5:644:G:P	2.79	0.41
1:L5:742:G:C4	1:L5:743:G:C8	3.08	0.41
1:L5:993:G:C8	1:L5:993:G:C3'	3.04	0.41
1:L5:1065:G:H5''	1:L5:1066:G:OP2	2.20	0.41
1:L5:1181:C:C6	1:L5:1182:C:C5	3.05	0.41
1:L5:1241:C:C6	30:Lb:120:ARG:HD3	2.55	0.41
1:L5:1365:C:O2	1:L5:1366:G:N7	2.54	0.41
1:L5:1534:A2M:HM'3	1:L5:1637:A:C4	2.56	0.41
1:L5:1828:C:H1'	30:Lb:57:MET:SD	2.61	0.41
1:L5:2095:A:H5'	1:L5:2096:G:OP1	2.20	0.41
1:L5:2479:G:N1	1:L5:2480:G:C5	2.89	0.41
1:L5:2876:OMG:H8	44:Lp:15:GLY:O	2.04	0.41
1:L5:3888:G:H4'	85:L5:5376:SPD:H21	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:4244:A:H2'	1:L5:4245:G:O4'	2.21	0.41
1:L5:4977:A:H2'	1:L5:4978:G:O4'	2.21	0.41
6:LC:8:ILE:HD11	6:LC:24:LEU:HD13	2.03	0.41
6:LC:142:HIS:CD2	6:LC:249:PHE:H	2.39	0.41
13:LJ:177:GLY:C	13:LJ:178:LYS:HD2	2.46	0.41
16:LN:28:TRP:O	16:LN:32:GLN:HG2	2.21	0.41
23:LU:107:LYS:C	23:LU:108:GLU:HG3	2.45	0.41
25:LW:86:SER:O	25:LW:87:LEU:O	2.40	0.41
26:LX:89:LYS:HD2	26:LX:137:TYR:CD1	2.56	0.41
28:LZ:33:THR:HG23	28:LZ:40:HIS:CE1	2.56	0.41
44:Lp:29:ILE:HG23	44:Lp:69:TRP:CG	2.56	0.41
46:S2:194:C:H2'	46:S2:195:C:C6	2.56	0.41
46:S2:320:G:H2'	46:S2:321:C:C6	2.56	0.41
46:S2:517:OMC:H2'	46:S2:518:G:O4'	2.20	0.41
46:S2:558:G:O2'	46:S2:559:G:C8	2.74	0.41
46:S2:751:G:H4'	46:S2:752:G:OP2	2.20	0.41
46:S2:958:G:H2'	46:S2:959:G:C8	2.56	0.41
46:S2:1013:U:OP2	60:SN:12:SER:HB2	2.20	0.41
46:S2:1666:C:H2'	46:S2:1667:U:O4'	2.20	0.41
47:SA:109:THR:HG23	47:SA:136:GLU:HG2	2.03	0.41
50:SD:6:SER:HB2	50:SD:9:ARG:HG3	2.02	0.41
50:SD:137:VAL:HG22	50:SD:151:LYS:HG2	2.03	0.41
59:SM:31:LEU:HD13	59:SM:109:VAL:CG1	2.51	0.41
64:SR:41:ILE:HD13	64:SR:50:ILE:HD12	2.03	0.41
67:SU:46:LYS:HD2	67:SU:97:ILE:CD1	2.51	0.41
72:SZ:68:ILE:HB	72:SZ:109:TYR:HB2	2.02	0.41
75:Sc:17:VAL:HG22	75:Sc:30:VAL:HG12	2.03	0.41
76:Sd:55:LEU:HD23	76:Sd:55:LEU:HA	1.92	0.41
79:Sg:104:HIS:HD2	79:Sg:108:VAL:HG22	1.80	0.41
81:v:20:U:C2'	81:v:21:A:OP1	2.68	0.41
1:L5:182:G:H1'	1:L5:255:C:O2	2.21	0.40
1:L5:218:A:N3	1:L5:219:G:C8	2.88	0.40
1:L5:505:G:H2'	1:L5:506:C:C6	2.56	0.40
1:L5:646:G:C4	1:L5:647:G:C8	3.09	0.40
1:L5:698:G:C8	1:L5:699:C:H5	2.37	0.40
1:L5:1187:G:N3	1:L5:1187:G:H5''	2.36	0.40
1:L5:1269:G:N2	1:L5:1441:C:H1'	2.36	0.40
1:L5:1395:U:O2	1:L5:1469:C:H4'	2.21	0.40
1:L5:1976:G:N7	1:L5:2002:A:C2	2.89	0.40
1:L5:1987:C:O2'	1:L5:1989:G:N2	2.53	0.40
1:L5:2363:A2M:H2'	1:L5:2364:OMG:O4'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:2481:G:C5	1:L5:2482:C:C6	3.09	0.40
1:L5:3792:OMG:H2'	1:L5:3793:U:C6	2.56	0.40
1:L5:3845:A:H2'	1:L5:3846:C:C6	2.57	0.40
13:LJ:85:LYS:HE2	13:LJ:85:LYS:HB2	1.80	0.40
27:LY:124:LYS:HE3	27:LY:124:LYS:HB3	1.81	0.40
39:Lk:14:THR:HA	39:Lk:17:ARG:HD3	2.03	0.40
46:S2:165:G:C2'	46:S2:166:A2M:H5''	2.47	0.40
46:S2:501:C:O2	46:S2:501:C:C2'	2.69	0.40
46:S2:550:C:H3'	46:S2:550:C:C6	2.56	0.40
46:S2:551:U:H1'	77:Se:44:ASN:ND2	2.36	0.40
46:S2:1424:G:C5	46:S2:1425:G:N7	2.89	0.40
46:S2:1789:G:H8	46:S2:1789:G:O5'	2.04	0.40
47:SA:1:MET:HG2	47:SA:2:SER:H	1.87	0.40
48:SB:88:THR:HA	48:SB:98:THR:HA	2.04	0.40
49:SC:271:ASP:O	49:SC:274:VAL:HG12	2.21	0.40
50:SD:34:TYR:OH	50:SD:51:LEU:HB3	2.21	0.40
55:SI:158:ILE:HD12	55:SI:159:SER:O	2.21	0.40
55:SI:162:LEU:HD23	55:SI:162:LEU:HA	1.92	0.40
56:SJ:60:LEU:C	56:SJ:62:THR:H	2.27	0.40
56:SJ:65:GLU:CD	56:SJ:65:GLU:N	2.78	0.40
63:SQ:44:PRO:C	63:SQ:46:THR:H	2.29	0.40
64:SR:77:GLU:OE1	64:SR:77:GLU:HA	2.21	0.40
67:SU:20:ILE:CG1	67:SU:116:ILE:HG23	2.50	0.40
69:SW:108:ALA:HB3	69:SW:111:MET:HE1	2.03	0.40
69:SW:113:HIS:CD2	69:SW:114:GLU:HG3	2.56	0.40
80:u:43:C:H2'	80:u:44:G:O4'	2.21	0.40
80:u:75:C:H5''	80:u:76:A:OP2	2.20	0.40
1:L5:10:A:H2'	1:L5:11:G:H8	1.84	0.40
1:L5:49:U:H2'	1:L5:50:C:H6	1.86	0.40
1:L5:127:G:O2'	1:L5:128:C:H5'	2.22	0.40
1:L5:369:G:N2	1:L5:372:A:OP2	2.44	0.40
1:L5:457:G:OP1	8:LE:115:TYR:HB3	2.21	0.40
1:L5:758:G:H8	1:L5:758:G:OP2	2.05	0.40
1:L5:1284:G:O2'	1:L5:1285:U:H5''	2.22	0.40
1:L5:1991:A:C8	1:L5:1991:A:C3'	3.04	0.40
1:L5:3867:A2M:HM'3	1:L5:3880:G:C2	2.56	0.40
1:L5:4090:G:H5''	10:LG:252:LYS:NZ	2.36	0.40
1:L5:4520:G:H2'	1:L5:4521:PSU:O4'	2.21	0.40
3:L8:92:U:H2'	3:L8:93:C:O4'	2.21	0.40
4:LA:60:LYS:NZ	4:LA:60:LYS:HB3	2.36	0.40
5:LB:51:ALA:HA	5:LB:323:TYR:CD1	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:LG:230:TYR:HD1	10:LG:230:TYR:HA	1.76	0.40
19:LQ:34:PHE:CE1	19:LQ:38:ARG:HG3	2.56	0.40
20:LR:168:GLU:HA	20:LR:171:LYS:HG2	2.02	0.40
30:Lb:56:LYS:H	30:Lb:56:LYS:HG3	1.66	0.40
46:S2:85:A:H2'	46:S2:86:C:H6	1.87	0.40
46:S2:483:C:H2'	46:S2:484:A2M:O4'	2.21	0.40
46:S2:496:C:P	51:SE:49:ARG:HH22	2.44	0.40
46:S2:533:A:C1'	46:S2:552:G:H22	2.34	0.40
46:S2:535:G:C6	46:S2:537:C:C4	3.09	0.40
46:S2:546:G:H1'	46:S2:547:G:N7	2.36	0.40
46:S2:568:C:C4	46:S2:583:A:C6	3.09	0.40
46:S2:796:G:C5	46:S2:797:C:C2	3.09	0.40
46:S2:867:OMG:H2'	46:S2:868:G:N3	2.36	0.40
46:S2:1093:A:H2'	46:S2:1094:C:C6	2.56	0.40
46:S2:1121:G:C5	46:S2:1122:A:N7	2.90	0.40
46:S2:1233:G:C6	46:S2:1526:G:C6	3.09	0.40
46:S2:1388:A:N6	50:SD:161:GLY:HA3	2.32	0.40
46:S2:1407:U:H4'	63:SQ:71:ARG:NH1	2.36	0.40
46:S2:1674:G:H5''	52:SF:86:LYS:HD3	2.02	0.40
49:SC:68:ARG:HD2	49:SC:277:HIS:ND1	2.36	0.40
50:SD:109:LEU:HD13	50:SD:182:LEU:HD23	2.01	0.40
51:SE:62:LYS:HE2	51:SE:62:LYS:HB3	1.76	0.40
53:SG:68:LEU:HD23	53:SG:100:CYS:SG	2.62	0.40
56:SJ:129:LEU:HB3	56:SJ:134:HIS:NE2	2.36	0.40
57:SK:16:PHE:CD2	57:SK:85:LEU:HD12	2.57	0.40
59:SM:121:LYS:HA	59:SM:121:LYS:HD3	1.70	0.40
60:SN:106:ARG:HA	60:SN:106:ARG:HD3	1.84	0.40
64:SR:34:VAL:O	64:SR:35:CYS:C	2.61	0.40
64:SR:72:LYS:HD3	64:SR:72:LYS:HA	1.63	0.40
65:SS:35:GLY:HA2	65:SS:85:ASN:HD21	1.86	0.40
79:Sg:218:LEU:HD13	79:Sg:218:LEU:HA	1.94	0.40
80:u:17:C:H2'	80:u:17:C:O2	2.19	0.40
80:u:23:A:C5	80:u:24:G:C8	3.09	0.40
80:u:51:U:H3	80:u:63:G:N2	2.20	0.40
81:v:19:G:O4'	81:v:57:G:N2	2.50	0.40
1:L5:497:G:C3'	1:L5:498:C:H5'	2.48	0.40
1:L5:1183:C:C6	1:L5:1183:C:C3'	3.05	0.40
1:L5:1355:G:H2'	1:L5:1356:U:O4'	2.21	0.40
1:L5:1964:A:C6	1:L5:4694:G:C6	3.09	0.40
1:L5:1975:G:H8	1:L5:1975:G:H3'	1.86	0.40
1:L5:2334:C:C5	6:LC:191:ALA:HB2	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:2484:A:H3'	1:L5:2485:U:C5'	2.45	0.40
1:L5:2591:A:H2'	1:L5:2592:U:H6	1.85	0.40
1:L5:2664:G:H4'	1:L5:2677:G:H4'	2.03	0.40
1:L5:3851:PSU:H2'	1:L5:3852:A:O4'	2.21	0.40
1:L5:4130:C:H2'	1:L5:4131:G:C8	2.56	0.40
1:L5:4618:OMG:H5''	24:LV:15:ARG:HB2	2.03	0.40
86:L5:5387:NMY:H172	86:L5:5387:NMY:H1	2.04	0.40
2:L7:16:A:H2'	2:L7:17:C:C6	2.56	0.40
5:LB:288:GLY:HA3	5:LB:330:PHE:CE2	2.56	0.40
10:LG:164:ILE:HD12	10:LG:164:ILE:HA	1.89	0.40
12:LI:111:LEU:HD13	12:LI:111:LEU:HA	1.72	0.40
15:LM:89:THR:O	15:LM:93:LYS:HG3	2.22	0.40
16:LN:138:PHE:HZ	36:Lh:93:ARG:HG2	1.86	0.40
16:LN:153:LYS:HE3	16:LN:153:LYS:HB2	1.93	0.40
18:LP:86:LYS:HA	18:LP:89:GLU:HG2	2.03	0.40
29:La:27:LYS:HA	29:La:27:LYS:HD2	1.87	0.40
46:S2:79:A:H2'	46:S2:80:G:O4'	2.22	0.40
46:S2:455:A:H2'	46:S2:456:C:H6	1.84	0.40
46:S2:544:G:C6	46:S2:545:A:C6	3.09	0.40
46:S2:550:C:O2'	46:S2:551:U:O4'	2.37	0.40
46:S2:583:A:C5	46:S2:584:A:C5	3.09	0.40
46:S2:746:C:C3'	46:S2:746:C:C6	3.04	0.40
46:S2:887:U:H2'	46:S2:888:U:C5	2.56	0.40
46:S2:943:U:C2	46:S2:944:A:C8	3.10	0.40
46:S2:1706:G:H2'	46:S2:1707:U:C6	2.55	0.40
46:S2:1812:U:H5''	46:S2:1812:U:C6	2.56	0.40
49:SC:271:ASP:HA	49:SC:274:VAL:HG12	2.03	0.40
52:SF:103:LEU:HD23	52:SF:103:LEU:HA	1.92	0.40
52:SF:127:ARG:HD2	52:SF:136:ARG:NH1	2.37	0.40
53:SG:141:ILE:O	53:SG:143:LYS:N	2.50	0.40
53:SG:148:SER:N	53:SG:151:ASP:OD2	2.54	0.40
56:SJ:102:ILE:HG22	56:SJ:103:GLU:N	2.35	0.40
57:SK:31:LYS:HD2	57:SK:39:ASN:C	2.46	0.40
57:SK:63:ALA:O	57:SK:64:TRP:C	2.64	0.40
57:SK:94:LEU:O	57:SK:95:ARG:C	2.64	0.40
59:SM:40:LYS:HE2	78:Sf:129:GLY:O	2.20	0.40
71:SY:7:ILE:HG12	71:SY:43:LYS:HE3	2.03	0.40
72:SZ:111:ARG:HD3	72:SZ:114:LYS:HB2	2.03	0.40
75:Sc:61:SER:O	75:Sc:62:GLU:HB3	2.20	0.40
79:Sg:200:VAL:HA	79:Sg:207:CYS:HA	2.03	0.40
1:L5:360:A:H4'	1:L5:361:C:OP2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L5:460:C:H2'	1:L5:461:G:C8	2.48	0.40
1:L5:484:U:O4	1:L5:665:C:H2'	2.22	0.40
1:L5:1074:G:H5''	1:L5:1074:G:H8	1.86	0.40
1:L5:1217:G:H2'	1:L5:1218:G:O4'	2.22	0.40
1:L5:1261:G:C6	1:L5:1262:G:C5	3.10	0.40
1:L5:1893:C:H1'	1:L5:1937:C:O2	2.22	0.40
1:L5:1962:A:C2	1:L5:1963:C:C5	3.10	0.40
1:L5:1975:G:H8	1:L5:1976:G:H4'	1.78	0.40
1:L5:4471:PSU:H2'	1:L5:4472:G:C8	2.56	0.40
1:L5:4713:G:C5	1:L5:4714:C:C5	3.09	0.40
1:L5:4753:U:OP1	17:LO:4:VAL:HG21	2.21	0.40
3:L8:56:G:H2'	3:L8:57:C:O4'	2.20	0.40
3:L8:69:PSU:H2'	3:L8:70:G:O4'	2.21	0.40
3:L8:78:G:O2'	36:Lh:42:SER:HA	2.22	0.40
3:L8:89:U:H2'	3:L8:90:C:C6	2.56	0.40
11:LH:10:VAL:HG22	11:LH:78:GLN:OE1	2.20	0.40
12:LI:36:LEU:CD2	12:LI:69:ARG:HH11	2.34	0.40
12:LI:85:PHE:CD2	12:LI:87:MET:HE3	2.56	0.40
14:LL:91:ALA:HB1	14:LL:96:ILE:HB	2.02	0.40
25:LW:93:LYS:HB3	25:LW:99:GLU:HB2	2.03	0.40
27:LY:45:ARG:HB2	27:LY:126:ARG:HH21	1.87	0.40
27:LY:46:SER:O	27:LY:122:LYS:HE2	2.21	0.40
43:Lo:38:LYS:HA	81:v:75:C:N4	2.37	0.40
46:S2:39:A:H2'	46:S2:40:A:O4'	2.21	0.40
46:S2:591:U:O4'	46:S2:593:C:C2	2.74	0.40
46:S2:1480:A:O5'	63:SQ:131:LYS:HE2	2.22	0.40
46:S2:1809:A:H2'	46:S2:1810:U:O4'	2.20	0.40
47:SA:196:GLU:OE2	47:SA:197:VAL:HG23	2.21	0.40
48:SB:86:LEU:HD23	48:SB:86:LEU:HA	1.86	0.40
48:SB:179:ASN:N	48:SB:179:ASN:ND2	2.63	0.40
49:SC:68:ARG:HG3	49:SC:68:ARG:NH1	2.34	0.40
49:SC:83:LEU:HD12	49:SC:83:LEU:O	2.22	0.40
50:SD:123:LEU:HG	50:SD:134:CYS:SG	2.61	0.40
50:SD:127:MET:HG2	50:SD:134:CYS:SG	2.62	0.40
52:SF:60:ARG:HH21	75:Sc:49:PRO:HA	1.86	0.40
52:SF:127:ARG:NH1	52:SF:130:ARG:H	2.20	0.40
52:SF:188:TYR:O	52:SF:192:LYS:HG2	2.21	0.40
53:SG:147:LEU:HB3	53:SG:151:ASP:HB2	2.03	0.40
55:SI:64:ASN:O	55:SI:186:ASP:HA	2.22	0.40
58:SL:103:GLU:HG3	70:SX:11:ARG:NH2	2.37	0.40
59:SM:19:GLN:O	59:SM:23:LYS:HD3	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:SM:72:HIS:HB2	59:SM:74:ILE:CD1	2.52	0.40
63:SQ:98:LYS:HB3	63:SQ:98:LYS:HE3	1.94	0.40
65:SS:64:VAL:O	65:SS:68:ILE:HG13	2.22	0.40
72:SZ:52:LYS:HD3	72:SZ:52:LYS:HA	1.83	0.40
77:Se:6:LEU:HD23	77:Se:6:LEU:HA	1.90	0.40
79:Sg:147:HIS:CG	79:Sg:169:GLY:HA3	2.56	0.40
81:v:44:G:H8	81:v:44:G:OP2	2.03	0.40
1:L5:35:U:H4'	1:L5:1525:A:C2	2.57	0.40
1:L5:255:C:C2	1:L5:256:G:C5	3.09	0.40
1:L5:664:G:H8	1:L5:664:G:O5'	2.04	0.40
1:L5:748:G:OP1	21:LS:134:ALA:HB3	2.21	0.40
1:L5:978:G:H2'	1:L5:979:C:C6	2.57	0.40
1:L5:1075:G:N2	1:L5:1237:C:C2	2.89	0.40
1:L5:1171:G:H2'	1:L5:1171:G:N3	2.37	0.40
1:L5:1200:G:C8	1:L5:1200:G:OP2	2.75	0.40
1:L5:1253:G:N2	1:L5:1256:G:H5'	2.36	0.40
1:L5:1426:G:H1'	1:L5:1459:A:N6	2.37	0.40
1:L5:1794:A:H5''	1:L5:4214:A:N6	2.37	0.40
1:L5:1962:A:OP2	1:L5:2024:G:N1	2.52	0.40
1:L5:1985:G:H1'	1:L5:2013:A:C2	2.57	0.40
1:L5:2423:A:H2'	1:L5:2424:OMG:C8	2.57	0.40
1:L5:2634:C:H2'	1:L5:2635:U:C6	2.56	0.40
1:L5:3690:U:H5'	1:L5:3818:UY1:OP2	2.21	0.40
1:L5:3920:PSU:H2'	1:L5:3921:U:C6	2.57	0.40
1:L5:4095:G:H5''	1:L5:4096:C:OP1	2.22	0.40
1:L5:4503:A:H2'	1:L5:4504:C:C6	2.55	0.40
1:L5:4628:PSU:H4'	25:LW:16:GLY:O	2.22	0.40
1:L5:4661:G:H2'	1:L5:4662:C:C6	2.57	0.40
1:L5:4771:C:H2'	1:L5:4772:C:H6	1.85	0.40
1:L5:4886:C:H2'	1:L5:4887:C:H6	1.86	0.40
1:L5:5057:C:H2'	1:L5:5058:A:C8	2.57	0.40
5:LB:71:GLU:OE1	25:LW:1:MET:HB2	2.22	0.40
5:LB:300:LYS:HB3	5:LB:300:LYS:HE3	1.82	0.40
7:LD:105:LEU:HD12	7:LD:105:LEU:HA	1.89	0.40
17:LO:192:TYR:O	17:LO:196:LEU:HG	2.22	0.40
18:LP:85:LYS:HB2	18:LP:85:LYS:HE3	1.70	0.40
23:LU:67:LYS:HB2	23:LU:67:LYS:NZ	2.36	0.40
25:LW:94:ARG:NE	53:SG:146:ASN:HD22	2.18	0.40
29:La:112:LEU:HD23	29:La:130:SER:OG	2.21	0.40
46:S2:518:G:H2'	46:S2:519:A:H8	1.87	0.40
46:S2:538:U:H6	46:S2:538:U:O5'	2.05	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:S2:544:G:H2'	46:S2:545:A:O4'	2.21	0.40
46:S2:547:G:H2'	46:S2:548:C:C2	2.56	0.40
46:S2:841:G:H2'	46:S2:842:C:H6	1.85	0.40
46:S2:1564:C:P	66:ST:121:ARG:HH22	2.43	0.40
46:S2:1725:U:H2'	46:S2:1726:G:C8	2.56	0.40
50:SD:41:VAL:HG22	50:SD:42:THR:H	1.86	0.40
53:SG:5:ILE:HD12	53:SG:6:SER:H	1.86	0.40
53:SG:151:ASP:OD1	53:SG:151:ASP:N	2.52	0.40
54:SH:14:GLU:O	54:SH:15:LYS:HB3	2.21	0.40
54:SH:18:GLU:OE1	54:SH:18:GLU:N	2.55	0.40
56:SJ:30:LYS:O	56:SJ:34:GLU:HG3	2.21	0.40
56:SJ:131:ARG:O	56:SJ:133:ARG:N	2.54	0.40
56:SJ:169:ARG:HE	56:SJ:175:ARG:NH1	2.19	0.40
60:SN:42:LYS:NZ	60:SN:80:LEU:HD21	2.35	0.40
62:SP:100:LYS:HE2	62:SP:100:LYS:HB2	1.86	0.40
64:SR:47:ARG:HB3	64:SR:47:ARG:CZ	2.52	0.40
65:SS:25:LYS:HE3	65:SS:25:LYS:HB3	2.00	0.40
81:v:6:G:C6	81:v:68:C:N4	2.90	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

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	
4	LA	246/257 (96%)	236 (96%)	10 (4%)	0	100	100
5	LB	399/403 (99%)	387 (97%)	11 (3%)	1 (0%)	36	55
6	LC	366/368 (100%)	357 (98%)	9 (2%)	0	100	100
7	LD	291/294 (99%)	281 (97%)	9 (3%)	1 (0%)	36	55
8	LE	232/288 (81%)	213 (92%)	18 (8%)	1 (0%)	30	49
9	LF	224/248 (90%)	218 (97%)	6 (3%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
10	LG	240/266 (90%)	227 (95%)	12 (5%)	1 (0%)	30	49
11	LH	188/192 (98%)	184 (98%)	4 (2%)	0	100	100
12	LI	211/214 (99%)	201 (95%)	9 (4%)	1 (0%)	24	43
13	LJ	174/178 (98%)	163 (94%)	9 (5%)	2 (1%)	11	22
14	LL	208/211 (99%)	194 (93%)	12 (6%)	2 (1%)	12	24
15	LM	137/215 (64%)	132 (96%)	5 (4%)	0	100	100
16	LN	201/204 (98%)	199 (99%)	2 (1%)	0	100	100
17	LO	199/203 (98%)	191 (96%)	7 (4%)	1 (0%)	24	43
18	LP	151/184 (82%)	147 (97%)	4 (3%)	0	100	100
19	LQ	185/188 (98%)	179 (97%)	6 (3%)	0	100	100
20	LR	185/196 (94%)	176 (95%)	7 (4%)	2 (1%)	11	22
21	LS	173/176 (98%)	169 (98%)	4 (2%)	0	100	100
22	LT	157/160 (98%)	152 (97%)	5 (3%)	0	100	100
23	LU	99/128 (77%)	91 (92%)	6 (6%)	2 (2%)	6	10
24	LV	129/140 (92%)	127 (98%)	2 (2%)	0	100	100
25	LW	96/157 (61%)	78 (81%)	8 (8%)	10 (10%)	0	0
26	LX	118/156 (76%)	116 (98%)	2 (2%)	0	100	100
27	LY	130/145 (90%)	128 (98%)	2 (2%)	0	100	100
28	LZ	133/136 (98%)	130 (98%)	3 (2%)	0	100	100
29	La	144/148 (97%)	137 (95%)	6 (4%)	1 (1%)	18	34
30	Lb	95/159 (60%)	92 (97%)	3 (3%)	0	100	100
31	Lc	96/115 (84%)	88 (92%)	7 (7%)	1 (1%)	12	24
32	Ld	104/125 (83%)	103 (99%)	1 (1%)	0	100	100
33	Le	126/135 (93%)	124 (98%)	2 (2%)	0	100	100
34	Lf	107/110 (97%)	105 (98%)	2 (2%)	0	100	100
35	Lg	107/117 (92%)	105 (98%)	2 (2%)	0	100	100
36	Lh	120/123 (98%)	117 (98%)	3 (2%)	0	100	100
37	Li	97/105 (92%)	92 (95%)	5 (5%)	0	100	100
38	Lj	84/97 (87%)	84 (100%)	0	0	100	100
39	Lk	66/70 (94%)	63 (96%)	3 (4%)	0	100	100
40	Ll	48/51 (94%)	47 (98%)	1 (2%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
41	Lm	49/128 (38%)	49 (100%)	0	0	100	100
42	Ln	22/25 (88%)	20 (91%)	2 (9%)	0	100	100
43	Lo	101/106 (95%)	99 (98%)	2 (2%)	0	100	100
44	Lp	86/92 (94%)	81 (94%)	5 (6%)	0	100	100
45	Lr	121/137 (88%)	120 (99%)	1 (1%)	0	100	100
47	SA	217/295 (74%)	208 (96%)	9 (4%)	0	100	100
48	SB	213/264 (81%)	207 (97%)	5 (2%)	1 (0%)	24	43
49	SC	220/293 (75%)	209 (95%)	11 (5%)	0	100	100
50	SD	225/243 (93%)	203 (90%)	18 (8%)	4 (2%)	6	12
51	SE	260/263 (99%)	245 (94%)	14 (5%)	1 (0%)	30	49
52	SF	189/204 (93%)	176 (93%)	13 (7%)	0	100	100
53	SG	232/249 (93%)	200 (86%)	26 (11%)	6 (3%)	4	7
54	SH	182/194 (94%)	167 (92%)	13 (7%)	2 (1%)	11	22
55	SI	204/208 (98%)	187 (92%)	17 (8%)	0	100	100
56	SJ	181/194 (93%)	134 (74%)	37 (20%)	10 (6%)	1	1
57	SK	95/165 (58%)	86 (90%)	8 (8%)	1 (1%)	11	22
58	SL	152/158 (96%)	148 (97%)	4 (3%)	0	100	100
59	SM	116/132 (88%)	96 (83%)	19 (16%)	1 (1%)	14	27
60	SN	148/151 (98%)	141 (95%)	7 (5%)	0	100	100
61	SO	131/151 (87%)	126 (96%)	5 (4%)	0	100	100
62	SP	123/145 (85%)	119 (97%)	3 (2%)	1 (1%)	16	31
63	SQ	139/146 (95%)	126 (91%)	9 (6%)	4 (3%)	3	5
64	SR	129/135 (96%)	120 (93%)	9 (7%)	0	100	100
65	SS	143/152 (94%)	137 (96%)	6 (4%)	0	100	100
66	ST	140/145 (97%)	131 (94%)	9 (6%)	0	100	100
67	SU	101/119 (85%)	92 (91%)	9 (9%)	0	100	100
68	SV	81/83 (98%)	78 (96%)	3 (4%)	0	100	100
69	SW	127/130 (98%)	125 (98%)	2 (2%)	0	100	100
70	SX	139/143 (97%)	136 (98%)	3 (2%)	0	100	100
71	SY	127/133 (96%)	119 (94%)	8 (6%)	0	100	100
72	SZ	73/125 (58%)	65 (89%)	8 (11%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
73	Sa	101/115 (88%)	99 (98%)	2 (2%)	0	100	100
74	Sb	81/84 (96%)	79 (98%)	2 (2%)	0	100	100
75	Sc	62/69 (90%)	54 (87%)	7 (11%)	1 (2%)	7	14
76	Sd	53/56 (95%)	53 (100%)	0	0	100	100
77	Se	56/133 (42%)	48 (86%)	8 (14%)	0	100	100
78	Sf	65/156 (42%)	58 (89%)	6 (9%)	1 (2%)	8	16
79	Sg	311/317 (98%)	265 (85%)	46 (15%)	0	100	100
All	All	11261/12700 (89%)	10639 (94%)	563 (5%)	59 (0%)	26	43

All (59) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
5	LB	191	ALA
7	LD	259	LYS
8	LE	223	ARG
13	LJ	9	GLU
13	LJ	117	ILE
14	LL	47	ALA
25	LW	87	LEU
25	LW	90	ILE
25	LW	95	ASN
25	LW	98	PRO
25	LW	105	ARG
31	Lc	103	ASP
50	SD	153	VAL
54	SH	15	LYS
56	SJ	119	LEU
56	SJ	122	SER
56	SJ	179	LYS
57	SK	95	ARG
59	SM	123	VAL
63	SQ	44	PRO
78	Sf	102	VAL
10	LG	127	ASP
14	LL	146	LEU
20	LR	178	GLN
23	LU	108	GLU
25	LW	88	ALA
25	LW	94	ARG
25	LW	96	GLN

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Mol	Chain	Res	Type
53	SG	20	ASP
53	SG	126	ASP
53	SG	146	ASN
56	SJ	152	ASP
56	SJ	161	LEU
75	Sc	38	THR
23	LU	67	LYS
50	SD	30	ALA
50	SD	42	THR
51	SE	68	ARG
56	SJ	151	LEU
56	SJ	159	PHE
63	SQ	45	ARG
63	SQ	116	ASP
12	LI	108	ALA
17	LO	31	ARG
25	LW	89	ASP
25	LW	115	ALA
50	SD	41	VAL
53	SG	21	GLU
53	SG	164	LYS
62	SP	14	LYS
63	SQ	38	PRO
20	LR	184	ILE
48	SB	76	ASN
53	SG	143	LYS
54	SH	88	SER
56	SJ	174	LYS
29	La	15	VAL
56	SJ	170	PRO
56	SJ	99	GLY

5.3.2 Protein sidechains ⓘ

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.

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
4	LA	190/199 (96%)	188 (99%)	2 (1%)	65	84
5	LB	347/348 (100%)	343 (99%)	4 (1%)	63	83
6	LC	306/306 (100%)	301 (98%)	5 (2%)	55	79
7	LD	246/248 (99%)	239 (97%)	7 (3%)	38	66
8	LE	209/252 (83%)	202 (97%)	7 (3%)	33	61
9	LF	195/215 (91%)	190 (97%)	5 (3%)	40	68
10	LG	204/223 (92%)	198 (97%)	6 (3%)	37	65
11	LH	169/171 (99%)	164 (97%)	5 (3%)	36	64
12	LI	181/182 (100%)	173 (96%)	8 (4%)	25	50
13	LJ	148/149 (99%)	142 (96%)	6 (4%)	27	53
14	LL	176/177 (99%)	167 (95%)	9 (5%)	21	43
15	LM	118/161 (73%)	114 (97%)	4 (3%)	32	60
16	LN	171/172 (99%)	167 (98%)	4 (2%)	44	72
17	LO	173/174 (99%)	171 (99%)	2 (1%)	63	83
18	LP	134/163 (82%)	129 (96%)	5 (4%)	30	57
19	LQ	164/165 (99%)	163 (99%)	1 (1%)	78	91
20	LR	166/175 (95%)	158 (95%)	8 (5%)	23	46
21	LS	156/157 (99%)	151 (97%)	5 (3%)	34	62
22	LT	139/140 (99%)	136 (98%)	3 (2%)	45	73
23	LU	91/115 (79%)	83 (91%)	8 (9%)	9	20
24	LV	101/107 (94%)	99 (98%)	2 (2%)	48	75
25	LW	82/126 (65%)	69 (84%)	13 (16%)	2	5
26	LX	108/133 (81%)	107 (99%)	1 (1%)	70	87
27	LY	123/135 (91%)	122 (99%)	1 (1%)	73	88
28	LZ	117/118 (99%)	114 (97%)	3 (3%)	40	68
29	La	119/120 (99%)	119 (100%)	0	100	100
30	Lb	83/126 (66%)	79 (95%)	4 (5%)	23	46
31	Lc	83/97 (86%)	78 (94%)	5 (6%)	17	36
32	Ld	97/110 (88%)	96 (99%)	1 (1%)	68	86
33	Le	114/121 (94%)	111 (97%)	3 (3%)	40	68

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
34	Lf	88/89 (99%)	87 (99%)	1 (1%)	65	84
35	Lg	94/100 (94%)	93 (99%)	1 (1%)	65	84
36	Lh	109/110 (99%)	107 (98%)	2 (2%)	51	77
37	Li	85/89 (96%)	82 (96%)	3 (4%)	32	58
38	Lj	73/80 (91%)	72 (99%)	1 (1%)	59	81
39	Lk	63/65 (97%)	55 (87%)	8 (13%)	4	9
40	Ll	47/48 (98%)	45 (96%)	2 (4%)	26	51
41	Lm	47/116 (40%)	46 (98%)	1 (2%)	47	74
42	Ln	23/24 (96%)	22 (96%)	1 (4%)	26	51
43	Lo	91/94 (97%)	89 (98%)	2 (2%)	45	73
44	Lp	71/75 (95%)	71 (100%)	0	100	100
45	Lr	107/121 (88%)	105 (98%)	2 (2%)	50	76
47	SA	182/243 (75%)	175 (96%)	7 (4%)	29	56
48	SB	196/231 (85%)	187 (95%)	9 (5%)	24	48
49	SC	188/225 (84%)	180 (96%)	8 (4%)	26	51
50	SD	190/202 (94%)	180 (95%)	10 (5%)	20	42
51	SE	224/225 (100%)	208 (93%)	16 (7%)	13	29
52	SF	161/170 (95%)	157 (98%)	4 (2%)	42	69
53	SG	204/218 (94%)	176 (86%)	28 (14%)	3	7
54	SH	166/174 (95%)	152 (92%)	14 (8%)	10	22
55	SI	178/180 (99%)	168 (94%)	10 (6%)	19	39
56	SJ	162/168 (96%)	112 (69%)	50 (31%)	0	0
57	SK	88/136 (65%)	87 (99%)	1 (1%)	65	84
58	SL	138/142 (97%)	133 (96%)	5 (4%)	31	58
59	SM	98/108 (91%)	89 (91%)	9 (9%)	8	19
60	SN	130/131 (99%)	130 (100%)	0	100	100
61	SO	105/118 (89%)	104 (99%)	1 (1%)	68	86
62	SP	111/130 (85%)	108 (97%)	3 (3%)	39	67
63	SQ	117/121 (97%)	108 (92%)	9 (8%)	12	25
64	SR	119/122 (98%)	115 (97%)	4 (3%)	32	60
65	SS	126/132 (96%)	122 (97%)	4 (3%)	34	62

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
66	ST	112/114 (98%)	109 (97%)	3 (3%)	39	67
67	SU	94/107 (88%)	88 (94%)	6 (6%)	16	33
68	SV	67/67 (100%)	65 (97%)	2 (3%)	36	64
69	SW	112/113 (99%)	109 (97%)	3 (3%)	39	67
70	SX	113/115 (98%)	108 (96%)	5 (4%)	25	50
71	SY	111/115 (96%)	105 (95%)	6 (5%)	20	41
72	SZ	66/103 (64%)	63 (96%)	3 (4%)	24	49
73	Sa	90/98 (92%)	86 (96%)	4 (4%)	25	50
74	Sb	75/76 (99%)	71 (95%)	4 (5%)	20	42
75	Sc	57/62 (92%)	49 (86%)	8 (14%)	3	7
76	Sd	48/49 (98%)	46 (96%)	2 (4%)	26	52
77	Se	47/104 (45%)	43 (92%)	4 (8%)	10	22
78	Sf	60/140 (43%)	56 (93%)	4 (7%)	15	31
79	Sg	272/275 (99%)	251 (92%)	21 (8%)	12	25
All	All	9815/10810 (91%)	9387 (96%)	428 (4%)	27	50

All (428) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
4	LA	159	SER
4	LA	208	GLU
5	LB	141	ASP
5	LB	194	LEU
5	LB	382	MET
5	LB	397	ILE
6	LC	14	LYS
6	LC	84	THR
6	LC	147	VAL
6	LC	273	LEU
6	LC	275	SER
7	LD	4	VAL
7	LD	89	LYS
7	LD	213	GLU
7	LD	232	THR
7	LD	235	MET
7	LD	239	MET
7	LD	249	GLU

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Mol	Chain	Res	Type
8	LE	45	SER
8	LE	119	GLU
8	LE	175	VAL
8	LE	223	ARG
8	LE	236	GLU
8	LE	254	ASP
8	LE	267	LEU
9	LF	52	GLU
9	LF	63	GLN
9	LF	200	ARG
9	LF	228	VAL
9	LF	238	ASP
10	LG	55	VAL
10	LG	119	GLU
10	LG	125	LYS
10	LG	137[A]	ARG
10	LG	137[B]	ARG
10	LG	198	THR
11	LH	28	LYS
11	LH	33	THR
11	LH	52	LYS
11	LH	143	GLU
11	LH	150	ASP
12	LI	44	ASP
12	LI	78	LYS
12	LI	103	LEU
12	LI	123	GLN
12	LI	125	THR
12	LI	141	LYS
12	LI	146	GLU
12	LI	203	HIS
13	LJ	19	LYS
13	LJ	56	THR
13	LJ	70	VAL
13	LJ	109	ILE
13	LJ	115	LEU
13	LJ	148	THR
14	LL	59	VAL
14	LL	79	GLU
14	LL	109	SER
14	LL	121	ARG
14	LL	122	SER

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Mol	Chain	Res	Type
14	LL	146	LEU
14	LL	162	LYS
14	LL	167	ARG
14	LL	207	VAL
15	LM	38	VAL
15	LM	66	HIS
15	LM	79	LYS
15	LM	113	MET
16	LN	56	LYS
16	LN	60	VAL
16	LN	155	VAL
16	LN	197	THR
17	LO	37	ARG
17	LO	132	THR
18	LP	9	GLU
18	LP	13	LYS
18	LP	57	CYS
18	LP	96	LYS
18	LP	100	SER
19	LQ	92	VAL
20	LR	16	ARG
20	LR	111	GLU
20	LR	172	ARG
20	LR	176	ARG
20	LR	177	LEU
20	LR	178	GLN
20	LR	180	LYS
20	LR	181	LYS
21	LS	12	VAL
21	LS	48	VAL
21	LS	51	LEU
21	LS	58	SER
21	LS	88	SER
22	LT	79	GLN
22	LT	83	LYS
22	LT	147	GLU
23	LU	43	LEU
23	LU	89	LYS
23	LU	102	VAL
23	LU	103	VAL
23	LU	108	GLU
23	LU	111	GLU

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Mol	Chain	Res	Type
23	LU	116	GLN
23	LU	117	ILE
24	LV	67	LYS
24	LV	90	ARG
25	LW	30	GLN
25	LW	87	LEU
25	LW	89	ASP
25	LW	91	MET
25	LW	94	ARG
25	LW	95	ASN
25	LW	96	GLN
25	LW	97	LYS
25	LW	99	GLU
25	LW	102	LYS
25	LW	104	GLN
25	LW	105	ARG
25	LW	120	GLN
26	LX	155	ILE
27	LY	125	SER
28	LZ	6	LYS
28	LZ	27	LYS
28	LZ	123	LYS
30	Lb	9	THR
30	Lb	25	ARG
30	Lb	50	ASN
30	Lb	65	MET
31	Lc	9	LYS
31	Lc	10	SER
31	Lc	11	LEU
31	Lc	35	LEU
31	Lc	65	MET
32	Ld	111	VAL
33	Le	11	LYS
33	Le	87	VAL
33	Le	126	ASN
34	Lf	58	VAL
35	Lg	43	LYS
36	Lh	29	SER
36	Lh	107	GLN
37	Li	19	LYS
37	Li	23	LYS
37	Li	56	ARG

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Mol	Chain	Res	Type
38	Lj	11	ARG
39	Lk	24	LYS
39	Lk	29	LYS
39	Lk	30	ASP
39	Lk	46	VAL
39	Lk	50	LYS
39	Lk	64	LEU
39	Lk	66	VAL
39	Lk	69	LEU
40	Ll	29	MET
40	Ll	46	ARG
41	Lm	113	LYS
42	Ln	4	LYS
43	Lo	28	LYS
43	Lo	81	ARG
45	Lr	24	THR
45	Lr	28	GLU
47	SA	19	LEU
47	SA	35	GLU
47	SA	36	GLN
47	SA	38	ILE
47	SA	102	ARG
47	SA	154	LEU
47	SA	208	GLU
48	SB	91	VAL
48	SB	92	GLN
48	SB	135	LEU
48	SB	137	LEU
48	SB	147	ASN
48	SB	179	ASN
48	SB	192	SER
48	SB	230	GLU
48	SB	231	LEU
49	SC	98	LEU
49	SC	149	THR
49	SC	200[A]	ARG
49	SC	200[B]	ARG
49	SC	248	TYR
49	SC	258	GLU
49	SC	259	THR
49	SC	271	ASP
50	SD	5	ILE

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Mol	Chain	Res	Type
50	SD	32	ASP
50	SD	37	VAL
50	SD	62	LYS
50	SD	81	GLU
50	SD	94	ARG
50	SD	113	LEU
50	SD	136	VAL
50	SD	204	LEU
50	SD	215	ASP
51	SE	12	VAL
51	SE	39	ARG
51	SE	45	ILE
51	SE	48	LEU
51	SE	56	LEU
51	SE	59	ASP
51	SE	70	ILE
51	SE	77	ARG
51	SE	108	ARG
51	SE	118	GLU
51	SE	133	THR
51	SE	168	LYS
51	SE	181	CYS
51	SE	216	ASN
51	SE	220	THR
51	SE	255	ARG
52	SF	17	ILE
52	SF	104	THR
52	SF	106	GLU
52	SF	125	SER
53	SG	3	LEU
53	SG	5	ILE
53	SG	13	GLN
53	SG	14	LYS
53	SG	15	LEU
53	SG	16	ILE
53	SG	17	GLU
53	SG	18	VAL
53	SG	21	GLU
53	SG	22	ARG
53	SG	23	LYS
53	SG	25	ARG
53	SG	44	GLU

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Mol	Chain	Res	Type
53	SG	111	LEU
53	SG	119	LYS
53	SG	127	THR
53	SG	128	THR
53	SG	133	LEU
53	SG	143	LYS
53	SG	144	LEU
53	SG	148	SER
53	SG	149	LYS
53	SG	150	GLU
53	SG	152	ASP
53	SG	153	VAL
53	SG	163	ASN
53	SG	231	ARG
53	SG	234	LEU
54	SH	15	LYS
54	SH	23	ILE
54	SH	27	LEU
54	SH	61	ILE
54	SH	73	GLN
54	SH	75	ILE
54	SH	86	LYS
54	SH	106	ARG
54	SH	113	LYS
54	SH	138	GLU
54	SH	166	VAL
54	SH	172	THR
54	SH	184	ASP
54	SH	186	ASN
55	SI	4	SER
55	SI	41	ARG
55	SI	61	ASP
55	SI	76	THR
55	SI	107	THR
55	SI	143	LYS
55	SI	168	GLN
55	SI	190	LEU
55	SI	193	LYS
55	SI	196	GLU
56	SJ	2	PRO
56	SJ	3	VAL
56	SJ	6	SER

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Mol	Chain	Res	Type
56	SJ	8	VAL
56	SJ	10	ARG
56	SJ	14	VAL
56	SJ	15	THR
56	SJ	17	ARG
56	SJ	21	GLU
56	SJ	32	ILE
56	SJ	34	GLU
56	SJ	37	LEU
56	SJ	45	ARG
56	SJ	47	LYS
56	SJ	59	GLU
56	SJ	63	LEU
56	SJ	64	ASP
56	SJ	66	LYS
56	SJ	69	ARG
56	SJ	78	LEU
56	SJ	79	ARG
56	SJ	84	ILE
56	SJ	86	VAL
56	SJ	88	ASP
56	SJ	91	LYS
56	SJ	92	MET
56	SJ	93	LYS
56	SJ	95	ASP
56	SJ	102	ILE
56	SJ	107	GLU
56	SJ	112	THR
56	SJ	116	LYS
56	SJ	119	LEU
56	SJ	121	LYS
56	SJ	123	ILE
56	SJ	133	ARG
56	SJ	134	HIS
56	SJ	135	ILE
56	SJ	136	ARG
56	SJ	137	VAL
56	SJ	139	LYS
56	SJ	145	PRO
56	SJ	147	PHE
56	SJ	149	VAL
56	SJ	150	ARG

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Mol	Chain	Res	Type
56	SJ	155	LYS
56	SJ	160	SER
56	SJ	172	ARG
56	SJ	174	LYS
56	SJ	176	LYS
57	SK	61	GLN
58	SL	3	ASP
58	SL	58	LYS
58	SL	66	VAL
58	SL	107	LYS
58	SL	153	LYS
59	SM	18	LEU
59	SM	33	ARG
59	SM	36	ARG
59	SM	72	HIS
59	SM	73	GLN
59	SM	91	LEU
59	SM	99	LYS
59	SM	125	GLU
59	SM	126	GLU
61	SO	40	THR
62	SP	74	GLU
62	SP	94	VAL
62	SP	127	LYS
63	SQ	18	THR
63	SQ	39	LEU
63	SQ	41	MET
63	SQ	43	GLU
63	SQ	49	TYR
63	SQ	52	LEU
63	SQ	66	VAL
63	SQ	111	ILE
63	SQ	117	ARG
64	SR	36	GLU
64	SR	82	ASP
64	SR	109	LEU
64	SR	124	VAL
65	SS	4	VAL
65	SS	31	THR
65	SS	44	VAL
65	SS	59	LEU
66	ST	4	VAL

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Mol	Chain	Res	Type
66	ST	39	LEU
66	ST	104	LEU
67	SU	18	HIS
67	SU	27	ARG
67	SU	68	THR
67	SU	88	LEU
67	SU	101	ILE
67	SU	113	GLU
68	SV	41	LYS
68	SV	47	ASN
69	SW	4	MET
69	SW	25	VAL
69	SW	76	SER
70	SX	26	GLN
70	SX	53	GLU
70	SX	64	SER
70	SX	94	ILE
70	SX	105	PHE
71	SY	14	THR
71	SY	54	VAL
71	SY	62	THR
71	SY	84	LYS
71	SY	89	HIS
71	SY	103	SER
72	SZ	41	ARG
72	SZ	65	TYR
72	SZ	107	VAL
73	Sa	37	LYS
73	Sa	63	VAL
73	Sa	85[A]	ARG
73	Sa	85[B]	ARG
74	Sb	8	LEU
74	Sb	52	THR
74	Sb	74	THR
74	Sb	78	SER
75	Sc	5	ARG
75	Sc	10	LYS
75	Sc	32	VAL
75	Sc	36	ASP
75	Sc	45	ASN
75	Sc	50	VAL
75	Sc	63	ARG

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Mol	Chain	Res	Type
75	Sc	64	GLU
76	Sd	4	GLN
76	Sd	18	SER
77	Se	3	HIS
77	Se	21	LYS
77	Se	36	MET
77	Se	48	THR
78	Sf	102	VAL
78	Sf	105	TYR
78	Sf	107	LYS
78	Sf	139	HIS
79	Sg	4	GLN
79	Sg	7	LEU
79	Sg	33	SER
79	Sg	47	ARG
79	Sg	62	HIS
79	Sg	70	VAL
79	Sg	89	LEU
79	Sg	111	VAL
79	Sg	129	ILE
79	Sg	168	CYS
79	Sg	177	TRP
79	Sg	186	THR
79	Sg	187	ASN
79	Sg	203	ASP
79	Sg	230	LEU
79	Sg	258	ILE
79	Sg	272	GLN
79	Sg	273	GLU
79	Sg	280	LYS
79	Sg	282	GLU
79	Sg	313	THR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (84) such sidechains are listed below:

Mol	Chain	Res	Type
4	LA	140	ASN
5	LB	138	GLN
5	LB	328	ASN
6	LC	43	ASN
6	LC	187	GLN
6	LC	203	GLN

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Mol	Chain	Res	Type
7	LD	45	ASN
7	LD	202	GLN
8	LE	101	ASN
8	LE	245	GLN
9	LF	58	HIS
9	LF	119	ASN
10	LG	43	GLN
10	LG	153	GLN
12	LI	59	GLN
12	LI	73	ASN
12	LI	130	HIS
12	LI	163	GLN
12	LI	177	ASN
15	LM	33	GLN
15	LM	34	ASN
15	LM	48	GLN
17	LO	180	GLN
18	LP	21	ASN
18	LP	25	HIS
20	LR	30	ASN
23	LU	94	ASN
24	LV	135	ASN
25	LW	50	ASN
25	LW	59	HIS
25	LW	95	ASN
26	LX	73	HIS
30	Lb	60	ASN
31	Lc	72	HIS
33	Le	52	GLN
34	Lf	20	ASN
35	Lg	28	ASN
40	Ll	4	HIS
40	Ll	33	ASN
47	SA	36	GLN
47	SA	113	GLN
47	SA	215	GLN
48	SB	40	ASN
49	SC	113	GLN
49	SC	120	GLN
49	SC	172	ASN
50	SD	159	HIS
51	SE	216	ASN

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Mol	Chain	Res	Type
51	SE	260	GLN
52	SF	95	HIS
52	SF	118	ASN
53	SG	146	ASN
54	SH	33	ASN
54	SH	44	ASN
54	SH	68	GLN
54	SH	76	GLN
55	SI	146	GLN
57	SK	28	HIS
57	SK	61	GLN
59	SM	15	ASN
59	SM	28	HIS
59	SM	73	GLN
60	SN	13	GLN
60	SN	36	GLN
60	SN	123	HIS
61	SO	103	ASN
63	SQ	86	GLN
63	SQ	97	GLN
64	SR	93	GLN
64	SR	127	ASN
65	SS	10	GLN
65	SS	105	ASN
66	ST	12	GLN
67	SU	47	ASN
68	SV	29	HIS
69	SW	5	ASN
69	SW	91	ASN
70	SX	127	ASN
72	SZ	64	ASN
73	Sa	25	ASN
74	Sb	65	GLN
77	Se	22	GLN
79	Sg	51	ASN
79	Sg	62	HIS

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	L5	3640/5069 (71%)	961 (26%)	73 (2%)

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Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
2	L7	119/120 (99%)	13 (10%)	0
3	L8	155/157 (98%)	32 (20%)	2 (1%)
46	S2	1689/1869 (90%)	433 (25%)	31 (1%)
80	u	75/76 (98%)	49 (65%)	0
81	v	75/76 (98%)	48 (64%)	0
82	w	9/10 (90%)	1 (11%)	0
All	All	5762/7377 (78%)	1537 (26%)	106 (1%)

All (1537) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	L5	39	A
1	L5	42	A
1	L5	48	G
1	L5	56	A
1	L5	57	G
1	L5	59	A
1	L5	63	G
1	L5	64	A
1	L5	65	A
1	L5	69	A
1	L5	73	A
1	L5	91	G
1	L5	98	A
1	L5	104	G
1	L5	108	A
1	L5	109	G
1	L5	110	C
1	L5	116	G
1	L5	119	G
1	L5	120	A
1	L5	128	C
1	L5	132	G
1	L5	133	C
1	L5	134	G
1	L5	135	G
1	L5	136	C
1	L5	138	G
1	L5	139	G
1	L5	140	G
1	L5	141	C
1	L5	143	C

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Mol	Chain	Res	Type
1	L5	144	G
1	L5	152	U
1	L5	159	C
1	L5	170	C
1	L5	171	U
1	L5	172	C
1	L5	173	C
1	L5	175	C
1	L5	179	G
1	L5	181	C
1	L5	182	G
1	L5	183	C
1	L5	184	U
1	L5	185	C
1	L5	188	G
1	L5	192	G
1	L5	200	U
1	L5	210	C
1	L5	216	C
1	L5	217	C
1	L5	218	A
1	L5	219	G
1	L5	220	C
1	L5	232	G
1	L5	233	U
1	L5	234	G
1	L5	250	C
1	L5	253	G
1	L5	255	C
1	L5	256	G
1	L5	257	C
1	L5	258	G
1	L5	259	C
1	L5	261	G
1	L5	262	G
1	L5	264	C
1	L5	265	C
1	L5	266	C
1	L5	267	G
1	L5	269	G
1	L5	270	U
1	L5	272	U

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Mol	Chain	Res	Type
1	L5	275	C
1	L5	278	G
1	L5	280	G
1	L5	282	C
1	L5	283	G
1	L5	294	G
1	L5	295	A
1	L5	296	A
1	L5	297	U
1	L5	306	A
1	L5	308	G
1	L5	315	G
1	L5	316	U
1	L5	317	A
1	L5	324	A
1	L5	332	C
1	L5	340	C
1	L5	341	G
1	L5	349	A
1	L5	353	A
1	L5	357	U
1	L5	373	G
1	L5	380	U
1	L5	387	G
1	L5	396	A
1	L5	401	G
1	L5	407	A
1	L5	409	G
1	L5	410	A
1	L5	412	G
1	L5	414	C
1	L5	432	U
1	L5	446	C
1	L5	449	C
1	L5	450	G
1	L5	452	A
1	L5	453	G
1	L5	454	U
1	L5	456	C
1	L5	457	G
1	L5	461	G
1	L5	467	U

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Mol	Chain	Res	Type
1	L5	468	U
1	L5	484	U
1	L5	485	C
1	L5	486	C
1	L5	487	G
1	L5	489	C
1	L5	490	C
1	L5	491	G
1	L5	493	G
1	L5	494	U
1	L5	496	G
1	L5	497	G
1	L5	498	C
1	L5	499	G
1	L5	500	G
1	L5	501	C
1	L5	502	C
1	L5	503	C
1	L5	504	G
1	L5	505	G
1	L5	509	A
1	L5	510	U
1	L5	513	U
1	L5	514	U
1	L5	515	C
1	L5	516	C
1	L5	517	C
1	L5	518	G
1	L5	519	C
1	L5	643	C
1	L5	644	G
1	L5	645	G
1	L5	646	G
1	L5	647	G
1	L5	648	G
1	L5	652	G
1	L5	653	U
1	L5	655	C
1	L5	657	C
1	L5	658	C
1	L5	659	G
1	L5	660	A

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Mol	Chain	Res	Type
1	L5	661	C
1	L5	662	C
1	L5	663	G
1	L5	664	G
1	L5	665	C
1	L5	666	G
1	L5	667	A
1	L5	668	C
1	L5	669	C
1	L5	670	G
1	L5	671	G
1	L5	672	C
1	L5	683	C
1	L5	684	G
1	L5	685	C
1	L5	686	A
1	L5	687	U
1	L5	688	U
1	L5	690	C
1	L5	694	C
1	L5	695	G
1	L5	696	C
1	L5	697	G
1	L5	699	C
1	L5	701	G
1	L5	703	G
1	L5	704	C
1	L5	705	G
1	L5	715	G
1	L5	724	C
1	L5	725	G
1	L5	730	G
1	L5	731	G
1	L5	738	C
1	L5	739	G
1	L5	740	G
1	L5	741	C
1	L5	742	G
1	L5	746	A
1	L5	753	C
1	L5	755	C
1	L5	756	G

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Mol	Chain	Res	Type
1	L5	758	G
1	L5	760	G
1	L5	904	C
1	L5	905	C
1	L5	906	C
1	L5	909	A
1	L5	911	U
1	L5	912	G
1	L5	913	U
1	L5	914	U
1	L5	915	A
1	L5	917	A
1	L5	918	G
1	L5	923	C
1	L5	924	C
1	L5	925	C
1	L5	926	G
1	L5	928	C
1	L5	932	A
1	L5	933	G
1	L5	935	A
1	L5	936	C
1	L5	937	U
1	L5	940	C
1	L5	943	A
1	L5	944	A
1	L5	945	U
1	L5	958	G
1	L5	959	G
1	L5	960	A
1	L5	961	G
1	L5	962	C
1	L5	963	G
1	L5	965	G
1	L5	966	A
1	L5	967	C
1	L5	968	C
1	L5	970	G
1	L5	971	U
1	L5	972	C
1	L5	973	G
1	L5	976	G

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Mol	Chain	Res	Type
1	L5	981	C
1	L5	982	U
1	L5	984	C
1	L5	986	C
1	L5	987	C
1	L5	988	C
1	L5	989	U
1	L5	990	C
1	L5	991	C
1	L5	992	C
1	L5	993	G
1	L5	994	G
1	L5	995	C
1	L5	1048	G
1	L5	1049	C
1	L5	1050	C
1	L5	1051	G
1	L5	1065	G
1	L5	1066	G
1	L5	1068	G
1	L5	1070	G
1	L5	1071	C
1	L5	1072	C
1	L5	1074	G
1	L5	1075	G
1	L5	1076	C
1	L5	1077	C
1	L5	1078	A
1	L5	1079	C
1	L5	1080	C
1	L5	1082	C
1	L5	1083	U
1	L5	1084	C
1	L5	1085	C
1	L5	1093	C
1	L5	1094	G
1	L5	1095	A
1	L5	1096	C
1	L5	1098	G
1	L5	1099	C
1	L5	1100	U
1	L5	1168	G

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Mol	Chain	Res	Type
1	L5	1169	G
1	L5	1170	G
1	L5	1171	G
1	L5	1172	C
1	L5	1173	G
1	L5	1175	A
1	L5	1179	U
1	L5	1180	C
1	L5	1181	C
1	L5	1182	C
1	L5	1183	C
1	L5	1184	A
1	L5	1190	C
1	L5	1191	C
1	L5	1195	G
1	L5	1196	G
1	L5	1198	G
1	L5	1199	G
1	L5	1200	G
1	L5	1202	C
1	L5	1203	G
1	L5	1204	C
1	L5	1208	G
1	L5	1209	U
1	L5	1210	C
1	L5	1211	G
1	L5	1215	C
1	L5	1216	C
1	L5	1217	G
1	L5	1218	G
1	L5	1219	G
1	L5	1220	G
1	L5	1221	G
1	L5	1222	A
1	L5	1235	G
1	L5	1240	G
1	L5	1241	C
1	L5	1242	G
1	L5	1243	C
1	L5	1244	G
1	L5	1246	G
1	L5	1251	C

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Mol	Chain	Res	Type
1	L5	1252	C
1	L5	1253	G
1	L5	1254	A
1	L5	1255	A
1	L5	1256	G
1	L5	1257	A
1	L5	1258	G
1	L5	1259	G
1	L5	1260	G
1	L5	1261	G
1	L5	1264	C
1	L5	1265	G
1	L5	1266	G
1	L5	1267	C
1	L5	1269	G
1	L5	1271	G
1	L5	1272	C
1	L5	1273	G
1	L5	1274	A
1	L5	1275	G
1	L5	1277	G
1	L5	1279	A
1	L5	1280	C
1	L5	1284	G
1	L5	1285	U
1	L5	1287	G
1	L5	1289	C
1	L5	1293	G
1	L5	1294	A
1	L5	1295	C
1	L5	1296	G
1	L5	1301	C
1	L5	1302	U
1	L5	1303	A
1	L5	1306	C
1	L5	1309	C
1	L5	1313	C
1	L5	1314	C
1	L5	1324	A
1	L5	1326	A2M
1	L5	1337	A
1	L5	1339	U

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Mol	Chain	Res	Type
1	L5	1354	A
1	L5	1358	G
1	L5	1359	G
1	L5	1365	C
1	L5	1366	G
1	L5	1367	C
1	L5	1371	A
1	L5	1379	C
1	L5	1387	A
1	L5	1394	G
1	L5	1397	A
1	L5	1402	C
1	L5	1403	G
1	L5	1404	G
1	L5	1407	C
1	L5	1408	G
1	L5	1409	C
1	L5	1410	U
1	L5	1411	C
1	L5	1413	C
1	L5	1414	C
1	L5	1417	C
1	L5	1418	C
1	L5	1420	A
1	L5	1425	G
1	L5	1434	G
1	L5	1435	G
1	L5	1436	C
1	L5	1439	C
1	L5	1442	C
1	L5	1443	A
1	L5	1445	U
1	L5	1446	C
1	L5	1449	C
1	L5	1450	C
1	L5	1458	C
1	L5	1476	C
1	L5	1482	G
1	L5	1483	C
1	L5	1485	C
1	L5	1497	A
1	L5	1498	G

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Mol	Chain	Res	Type
1	L5	1501	C
1	L5	1502	G
1	L5	1514	U
1	L5	1534	A2M
1	L5	1535	C
1	L5	1547	A
1	L5	1564	A
1	L5	1566	C
1	L5	1574	G
1	L5	1578	U
1	L5	1591	U
1	L5	1596	U
1	L5	1612	G
1	L5	1624	G
1	L5	1625	OMG
1	L5	1626	G
1	L5	1631	A
1	L5	1633	G
1	L5	1634	A
1	L5	1638	A
1	L5	1640	C
1	L5	1641	G
1	L5	1642	A
1	L5	1654	G
1	L5	1661	C
1	L5	1676	C
1	L5	1677	PSU
1	L5	1680	G
1	L5	1694	C
1	L5	1698	C
1	L5	1699	A
1	L5	1700	G
1	L5	1702	C
1	L5	1703	C
1	L5	1704	C
1	L5	1705	G
1	L5	1718	C
1	L5	1734	G
1	L5	1735	U
1	L5	1740	C
1	L5	1742	A
1	L5	1750	G

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Mol	Chain	Res	Type
1	L5	1753	G
1	L5	1754	U
1	L5	1755	C
1	L5	1756	U
1	L5	1757	U
1	L5	1758	G
1	L5	1759	G
1	L5	1761	G
1	L5	1763	C
1	L5	1764	G
1	L5	1765	A
1	L5	1766	A
1	L5	1767	A
1	L5	1768	C
1	L5	1769	G
1	L5	1770	A
1	L5	1771	U
1	L5	1772	C
1	L5	1775	A
1	L5	1776	A
1	L5	1781	PSU
1	L5	1787	A
1	L5	1792	PSU
1	L5	1804	A
1	L5	1810	G
1	L5	1815	G
1	L5	1821	G
1	L5	1822	U
1	L5	1823	G
1	L5	1834	U
1	L5	1836	G
1	L5	1837	A
1	L5	1842	G
1	L5	1855	G
1	L5	1869	G
1	L5	1882	U
1	L5	1897	A
1	L5	1917	A
1	L5	1918	U
1	L5	1919	G
1	L5	1921	C
1	L5	1922	G

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Mol	Chain	Res	Type
1	L5	1925	G
1	L5	1930	U
1	L5	1931	C
1	L5	1948	G
1	L5	1956	A
1	L5	1958	A
1	L5	1959	U
1	L5	1960	A
1	L5	1961	G
1	L5	1963	C
1	L5	1964	A
1	L5	1965	G
1	L5	1966	C
1	L5	1967	A
1	L5	1968	G
1	L5	1969	G
1	L5	1970	A
1	L5	1971	C
1	L5	1972	G
1	L5	1973	G
1	L5	1974	U
1	L5	1975	G
1	L5	1976	G
1	L5	1977	C
1	L5	1978	C
1	L5	1979	A
1	L5	1980	U
1	L5	1981	G
1	L5	1982	G
1	L5	1983	A
1	L5	1984	A
1	L5	1985	G
1	L5	1987	C
1	L5	1988	G
1	L5	1989	G
1	L5	1990	A
1	L5	1991	A
1	L5	1992	U
1	L5	1993	C
1	L5	1994	C
1	L5	1995	G
1	L5	1996	C

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Mol	Chain	Res	Type
1	L5	1997	U
1	L5	1998	A
1	L5	1999	A
1	L5	2000	G
1	L5	2001	G
1	L5	2002	A
1	L5	2003	G
1	L5	2004	U
1	L5	2006	U
1	L5	2007	G
1	L5	2009	A
1	L5	2010	A
1	L5	2012	A
1	L5	2013	A
1	L5	2015	U
1	L5	2016	C
1	L5	2017	A
1	L5	2018	C
1	L5	2019	C
1	L5	2020	U
1	L5	2021	G
1	L5	2024	G
1	L5	2025	A
1	L5	2026	A
1	L5	2027	U
1	L5	2042	A
1	L5	2046	G
1	L5	2048	U
1	L5	2052	G
1	L5	2055	G
1	L5	2056	G
1	L5	2069	A
1	L5	2084	C
1	L5	2089	G
1	L5	2091	C
1	L5	2092	G
1	L5	2093	A
1	L5	2095	A
1	L5	2096	G
1	L5	2097	U
1	L5	2098	G
1	L5	2102	G

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Mol	Chain	Res	Type
1	L5	2104	G
1	L5	2105	A
1	L5	2106	G
1	L5	2107	C
1	L5	2108	G
1	L5	2111	G
1	L5	2112	G
1	L5	2113	G
1	L5	2252	G
1	L5	2253	A
1	L5	2256	C
1	L5	2258	C
1	L5	2259	G
1	L5	2260	C
1	L5	2269	C
1	L5	2289	C
1	L5	2300	A
1	L5	2301	G
1	L5	2306	G
1	L5	2313	A
1	L5	2333	G
1	L5	2345	G
1	L5	2348	G
1	L5	2351	OMC
1	L5	2360	A
1	L5	2364	OMG
1	L5	2383	C
1	L5	2392	C
1	L5	2395	A
1	L5	2396	A
1	L5	2397	G
1	L5	2408	U
1	L5	2416	G
1	L5	2417	A
1	L5	2421	G
1	L5	2422	OMC
1	L5	2425	U
1	L5	2441	C
1	L5	2450	G
1	L5	2469	C
1	L5	2471	G
1	L5	2475	G

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Mol	Chain	Res	Type
1	L5	2479	G
1	L5	2480	G
1	L5	2481	G
1	L5	2482	C
1	L5	2483	G
1	L5	2484	A
1	L5	2485	U
1	L5	2486	G
1	L5	2487	G
1	L5	2488	C
1	L5	2489	C
1	L5	2490	U
1	L5	2491	C
1	L5	2492	C
1	L5	2493	G
1	L5	2494	U
1	L5	2497	C
1	L5	2498	C
1	L5	2499	C
1	L5	2501	C
1	L5	2504	C
1	L5	2505	C
1	L5	2506	G
1	L5	2513	A
1	L5	2518	G
1	L5	2519	U
1	L5	2520	C
1	L5	2529	A
1	L5	2544	G
1	L5	2546	G
1	L5	2547	G
1	L5	2555	G
1	L5	2556	G
1	L5	2560	C
1	L5	2566	G
1	L5	2567	G
1	L5	2569	G
1	L5	2583	C
1	L5	2587	A
1	L5	2589	C
1	L5	2627	C
1	L5	2632	PSU

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Mol	Chain	Res	Type
1	L5	2638	G
1	L5	2647	A
1	L5	2651	C
1	L5	2652	G
1	L5	2653	C
1	L5	2662	G
1	L5	2669	C
1	L5	2675	G
1	L5	2676	A
1	L5	2684	C
1	L5	2687	U
1	L5	2690	C
1	L5	2694	G
1	L5	2695	A
1	L5	2696	A
1	L5	2708	U
1	L5	2709	C
1	L5	2710	C
1	L5	2711	G
1	L5	2726	G
1	L5	2739	C
1	L5	2742	G
1	L5	2743	A
1	L5	2754	G
1	L5	2760	G
1	L5	2761	U
1	L5	2763	U
1	L5	2764	A
1	L5	2769	U
1	L5	2770	C
1	L5	2788	U
1	L5	2790	U
1	L5	2814	C
1	L5	2815	A2M
1	L5	2826	U
1	L5	2827	G
1	L5	2842	G
1	L5	2846	G
1	L5	2855	G
1	L5	2892	C
1	L5	2899	C
1	L5	2900	U

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Mol	Chain	Res	Type
1	L5	2902	G
1	L5	2903	G
1	L5	2904	U
1	L5	2906	G
1	L5	2908	U
1	L5	2910	G
1	L5	3588	C
1	L5	3594	C
1	L5	3595	U
1	L5	3596	A
1	L5	3597	G
1	L5	3604	A
1	L5	3615	G
1	L5	3616	U
1	L5	3618	C
1	L5	3626	G
1	L5	3635	A
1	L5	3644	U
1	L5	3648	A
1	L5	3662	A
1	L5	3673	C
1	L5	3674	G
1	L5	3694	U
1	L5	3711	A
1	L5	3713	U
1	L5	3717	A
1	L5	3719	A
1	L5	3727	A
1	L5	3735	G
1	L5	3756	A
1	L5	3759	A
1	L5	3765	G
1	L5	3766	A
1	L5	3772	U
1	L5	3773	U
1	L5	3774	A
1	L5	3776	G
1	L5	3777	G
1	L5	3784	A
1	L5	3785	A2M
1	L5	3786	U
1	L5	3788	C

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Mol	Chain	Res	Type
1	L5	3792	OMG
1	L5	3798	U
1	L5	3799	A
1	L5	3803	A
1	L5	3810	C
1	L5	3811	G
1	L5	3814	U
1	L5	3817	A
1	L5	3818	UY1
1	L5	3819	G
1	L5	3822	PSU
1	L5	3838	U
1	L5	3839	G
1	L5	3840	U
1	L5	3844	PSU
1	L5	3877	A
1	L5	3878	C
1	L5	3879	G
1	L5	3897	G
1	L5	3901	A
1	L5	3906	A
1	L5	3907	G
1	L5	3908	A
1	L5	3915	U
1	L5	4068	U
1	L5	4076	G
1	L5	4084	G
1	L5	4099	G
1	L5	4100	C
1	L5	4101	C
1	L5	4104	G
1	L5	4106	G
1	L5	4108	G
1	L5	4109	G
1	L5	4112	C
1	L5	4113	U
1	L5	4114	C
1	L5	4115	G
1	L5	4119	C
1	L5	4122	G
1	L5	4127	A
1	L5	4133	C

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Mol	Chain	Res	Type
1	L5	4135	G
1	L5	4136	G
1	L5	4138	C
1	L5	4139	G
1	L5	4140	C
1	L5	4141	G
1	L5	4142	C
1	L5	4143	G
1	L5	4144	C
1	L5	4145	C
1	L5	4146	G
1	L5	4147	G
1	L5	4148	C
1	L5	4149	C
1	L5	4150	G
1	L5	4162	C
1	L5	4163	U
1	L5	4170	A
1	L5	4183	G
1	L5	4184	G
1	L5	4191	G
1	L5	4203	A
1	L5	4222	G
1	L5	4229	U
1	L5	4233	A
1	L5	4242	U
1	L5	4249	G
1	L5	4251	A
1	L5	4254	G
1	L5	4258	C
1	L5	4268	A
1	L5	4273	A
1	L5	4281	A
1	L5	4291	G
1	L5	4297	G
1	L5	4304	A
1	L5	4305	G
1	L5	4314	C
1	L5	4329	G
1	L5	4330	G
1	L5	4332	C
1	L5	4338	G

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Mol	Chain	Res	Type
1	L5	4339	A
1	L5	4349	C
1	L5	4350	C
1	L5	4354	U
1	L5	4373	G
1	L5	4376	A
1	L5	4377	G
1	L5	4378	A
1	L5	4379	A
1	L5	4387	C
1	L5	4391	G
1	L5	4394	A
1	L5	4405	G
1	L5	4421	C
1	L5	4422	A
1	L5	4444	C
1	L5	4448	G
1	L5	4449	A
1	L5	4452	U
1	L5	4464	A
1	L5	4466	C
1	L5	4475	G
1	L5	4500	PSU
1	L5	4512	U
1	L5	4513	A
1	L5	4515	G
1	L5	4519	C
1	L5	4524	G
1	L5	4528	G
1	L5	4545	G
1	L5	4548	A
1	L5	4549	G
1	L5	4560	C
1	L5	4567	G
1	L5	4570	G
1	L5	4573	G
1	L5	4575	G
1	L5	4584	A
1	L5	4590	A2M
1	L5	4600	G
1	L5	4601	U
1	L5	4618	OMG

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Mol	Chain	Res	Type
1	L5	4627	U
1	L5	4635	A
1	L5	4636	PSU
1	L5	4637	OMG
1	L5	4638	U
1	L5	4647	G
1	L5	4654	C
1	L5	4656	A
1	L5	4670	C
1	L5	4672	A
1	L5	4700	A
1	L5	4708	A
1	L5	4709	U
1	L5	4719	G
1	L5	4720	C
1	L5	4730	C
1	L5	4731	G
1	L5	4733	C
1	L5	4734	A
1	L5	4741	C
1	L5	4742	G
1	L5	4744	A
1	L5	4745	G
1	L5	4751	G
1	L5	4754	G
1	L5	4757	C
1	L5	4759	C
1	L5	4761	G
1	L5	4764	A
1	L5	4765	G
1	L5	4772	C
1	L5	4775	C
1	L5	4776	G
1	L5	4861	G
1	L5	4863	G
1	L5	4867	G
1	L5	4870	G
1	L5	4871	C
1	L5	4882	U
1	L5	4883	C
1	L5	4889	G
1	L5	4893	A

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Mol	Chain	Res	Type
1	L5	4895	C
1	L5	4896	G
1	L5	4898	G
1	L5	4900	C
1	L5	4901	G
1	L5	4902	C
1	L5	4910	A
1	L5	4912	G
1	L5	4913	G
1	L5	4914	C
1	L5	4919	G
1	L5	4922	C
1	L5	4925	U
1	L5	4926	C
1	L5	4934	A
1	L5	4937	C
1	L5	4940	C
1	L5	4941	G
1	L5	4943	A
1	L5	4945	G
1	L5	4955	A
1	L5	4956	A
1	L5	4957	C
1	L5	4958	C
1	L5	4960	G
1	L5	4961	G
1	L5	4963	G
1	L5	4966	A
1	L5	4975	G
1	L5	4976	U
1	L5	4991	U
1	L5	5013	C
1	L5	5014	A
1	L5	5017	G
1	L5	5022	U
1	L5	5023	C
1	L5	5024	C
1	L5	5025	C
1	L5	5027	C
1	L5	5029	C
1	L5	5030	U
1	L5	5031	G

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Mol	Chain	Res	Type
1	L5	5034	A
1	L5	5041	G
1	L5	5050	C
1	L5	5054	C
1	L5	5061	A
1	L5	5069	U
2	L7	14	C
2	L7	22	A
2	L7	25	G
2	L7	30	C
2	L7	33	U
2	L7	50	A
2	L7	53	U
2	L7	54	A
2	L7	63	C
2	L7	64	G
2	L7	97	G
2	L7	100	A
2	L7	110	G
3	L8	23	C
3	L8	34	U
3	L8	35	C
3	L8	48	A
3	L8	51	U
3	L8	52	A
3	L8	59	A
3	L8	62	A
3	L8	63	U
3	L8	79	G
3	L8	80	A
3	L8	81	C
3	L8	82	A
3	L8	83	C
3	L8	84	A
3	L8	85	U
3	L8	86	U
3	L8	87	G
3	L8	94	G
3	L8	103	A
3	L8	105	C
3	L8	110	U
3	L8	112	G

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Mol	Chain	Res	Type
3	L8	114	G
3	L8	120	G
3	L8	122	G
3	L8	123	U
3	L8	124	U
3	L8	125	C
3	L8	126	C
3	L8	127	U
3	L8	147	G
46	S2	4	C
46	S2	17	C
46	S2	27	A2M
46	S2	33	G
46	S2	46	A
46	S2	56	G
46	S2	62	G
46	S2	67	C
46	S2	68	A
46	S2	71	G
46	S2	72	C
46	S2	73	C
46	S2	74	G
46	S2	75	G
46	S2	76	U
46	S2	99	A2M
46	S2	103	A
46	S2	113	G
46	S2	114	G
46	S2	115	U
46	S2	122	G
46	S2	126	G
46	S2	130	G
46	S2	140	C
46	S2	142	C
46	S2	143	U
46	S2	149	A
46	S2	155	G
46	S2	156	G
46	S2	159	A2M
46	S2	160	U
46	S2	162	C
46	S2	166	A2M

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Mol	Chain	Res	Type
46	S2	167	G
46	S2	168	C
46	S2	173	A
46	S2	183	G
46	S2	185	G
46	S2	189	U
46	S2	190	G
46	S2	193	C
46	S2	197	U
46	S2	198	U
46	S2	199	C
46	S2	200	G
46	S2	202	G
46	S2	203	G
46	S2	204	G
46	S2	205	G
46	S2	206	G
46	S2	207	G
46	S2	210	U
46	S2	211	G
46	S2	213	G
46	S2	219	U
46	S2	220	U
46	S2	293	C
46	S2	297	A
46	S2	302	A
46	S2	306	C
46	S2	307	G
46	S2	308	G
46	S2	309	G
46	S2	312	G
46	S2	318	A
46	S2	319	C
46	S2	321	C
46	S2	323	C
46	S2	325	C
46	S2	326	C
46	S2	327	G
46	S2	328	U
46	S2	329	G
46	S2	335	G
46	S2	347	G

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Mol	Chain	Res	Type
46	S2	351	G
46	S2	360	A
46	S2	362	C
46	S2	364	A
46	S2	368	U
46	S2	369	C
46	S2	370	G
46	S2	381	C
46	S2	384	U
46	S2	385	G
46	S2	386	C
46	S2	407	G
46	S2	408	A
46	S2	409	C
46	S2	448	A
46	S2	449	A
46	S2	450	C
46	S2	452	G
46	S2	462	OMC
46	S2	464	A
46	S2	466	G
46	S2	471	G
46	S2	472	C
46	S2	473	A
46	S2	474	G
46	S2	482	G
46	S2	487	U
46	S2	488	U
46	S2	492	C
46	S2	493	A
46	S2	501	C
46	S2	502	C
46	S2	508	A
46	S2	511	U
46	S2	516	A
46	S2	525	A
46	S2	526	A
46	S2	528	A
46	S2	529	A
46	S2	530	U
46	S2	533	A
46	S2	534	G

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Mol	Chain	Res	Type
46	S2	535	G
46	S2	536	A
46	S2	537	C
46	S2	538	U
46	S2	539	C
46	S2	540	U
46	S2	541	U
46	S2	542	U
46	S2	543	C
46	S2	544	G
46	S2	546	G
46	S2	547	G
46	S2	548	C
46	S2	550	C
46	S2	553	U
46	S2	554	A
46	S2	555	A
46	S2	556	U
46	S2	557	U
46	S2	558	G
46	S2	559	G
46	S2	560	A
46	S2	561	A
46	S2	562	U
46	S2	563	G
46	S2	564	A
46	S2	565	G
46	S2	566	U
46	S2	567	C
46	S2	568	C
46	S2	569	A
46	S2	570	C
46	S2	573	U
46	S2	576	A2M
46	S2	577	U
46	S2	578	C
46	S2	580	U
46	S2	581	U
46	S2	582	U
46	S2	583	A
46	S2	584	A
46	S2	585	C

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Mol	Chain	Res	Type
46	S2	586	G
46	S2	587	A
46	S2	588	G
46	S2	589	G
46	S2	590	A2M
46	S2	591	U
46	S2	592	C
46	S2	594	A
46	S2	598	G
46	S2	607	U
46	S2	608	C
46	S2	613	G
46	S2	614	C
46	S2	617	G
46	S2	627	U
46	S2	628	A
46	S2	631	U
46	S2	643	A
46	S2	655	A
46	S2	659	G
46	S2	660	C
46	S2	664	A
46	S2	668	A2M
46	S2	669	A
46	S2	671	A
46	S2	672	A
46	S2	673	G
46	S2	688	U
46	S2	689	U
46	S2	692	G
46	S2	696	G
46	S2	698	G
46	S2	731	G
46	S2	732	U
46	S2	733	C
46	S2	734	C
46	S2	736	C
46	S2	738	C
46	S2	747	U
46	S2	748	C
46	S2	749	U
46	S2	751	G

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Mol	Chain	Res	Type
46	S2	752	G
46	S2	753	C
46	S2	787	G
46	S2	788	G
46	S2	789	G
46	S2	790	C
46	S2	791	C
46	S2	792	C
46	S2	793	G
46	S2	794	A
46	S2	798	G
46	S2	799	U
46	S2	811	A
46	S2	819	G
46	S2	820	U
46	S2	821	G
46	S2	822	PSU
46	S2	823	U
46	S2	830	A
46	S2	833	C
46	S2	834	C
46	S2	835	C
46	S2	836	G
46	S2	837	A
46	S2	838	G
46	S2	839	C
46	S2	840	C
46	S2	841	G
46	S2	842	C
46	S2	844	U
46	S2	847	A
46	S2	852	G
46	S2	867	OMG
46	S2	869	A
46	S2	870	A
46	S2	871	U
46	S2	872	A
46	S2	873	G
46	S2	877	C
46	S2	878	G
46	S2	879	C
46	S2	880	G

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Mol	Chain	Res	Type
46	S2	881	G
46	S2	882	U
46	S2	883	U
46	S2	887	U
46	S2	888	U
46	S2	890	U
46	S2	891	G
46	S2	892	U
46	S2	893	U
46	S2	894	G
46	S2	895	G
46	S2	896	U
46	S2	897	U
46	S2	898	U
46	S2	899	U
46	S2	900	C
46	S2	901	G
46	S2	902	G
46	S2	904	A
46	S2	905	C
46	S2	906	U
46	S2	908	A
46	S2	909	G
46	S2	913	A
46	S2	920	A
46	S2	922	A
46	S2	933	G
46	S2	943	U
46	S2	955	A
46	S2	971	G
46	S2	990	A
46	S2	992	A
46	S2	1017	U
46	S2	1023	A
46	S2	1027	A
46	S2	1060	A
46	S2	1061	U
46	S2	1062	A
46	S2	1082	A
46	S2	1083	A
46	S2	1085	C
46	S2	1089	G

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Mol	Chain	Res	Type
46	S2	1107	G
46	S2	1108	G
46	S2	1109	C
46	S2	1115	U
46	S2	1116	C
46	S2	1117	C
46	S2	1119	A
46	S2	1121	G
46	S2	1132	C
46	S2	1138	C
46	S2	1139	C
46	S2	1150	A
46	S2	1153	C
46	S2	1154	U
46	S2	1195	A
46	S2	1197	G
46	S2	1207	G
46	S2	1208	A
46	S2	1215	C
46	S2	1216	C
46	S2	1217	A
46	S2	1224	G
46	S2	1240	A
46	S2	1242	U
46	S2	1243	U
46	S2	1251	A
46	S2	1253	A
46	S2	1256	G
46	S2	1257	G
46	S2	1259	A
46	S2	1269	G
46	S2	1274	G
46	S2	1275	G
46	S2	1285	G
46	S2	1295	A
46	S2	1301	A
46	S2	1302	G
46	S2	1303	C
46	S2	1305	C
46	S2	1308	U
46	S2	1343	U
46	S2	1348	G

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Mol	Chain	Res	Type
46	S2	1371	U
46	S2	1372	U
46	S2	1378	A
46	S2	1384	C
46	S2	1397	U
46	S2	1398	G
46	S2	1406	G
46	S2	1413	G
46	S2	1416	C
46	S2	1419	C
46	S2	1420	G
46	S2	1421	A
46	S2	1422	G
46	S2	1423	C
46	S2	1428	G
46	S2	1432	U
46	S2	1433	C
46	S2	1434	C
46	S2	1435	C
46	S2	1436	C
46	S2	1437	C
46	S2	1438	A
46	S2	1439	A
46	S2	1447	OMG
46	S2	1452	A
46	S2	1453	C
46	S2	1454	A
46	S2	1463	U
46	S2	1484	A
46	S2	1489	A
46	S2	1490	OMG
46	S2	1495	G
46	S2	1497	G
46	S2	1498	A
46	S2	1521	C
46	S2	1533	A
46	S2	1534	C
46	S2	1536	G
46	S2	1541	G
46	S2	1544	C
46	S2	1547	C
46	S2	1556	A

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Mol	Chain	Res	Type
46	S2	1562	C
46	S2	1570	G
46	S2	1575	G
46	S2	1580	A
46	S2	1588	A
46	S2	1601	A
46	S2	1604	G
46	S2	1606	G
46	S2	1621	U
46	S2	1623	A
46	S2	1639	G
46	S2	1640	A
46	S2	1646	C
46	S2	1648	G
46	S2	1654	G
46	S2	1661	A
46	S2	1663	A
46	S2	1665	G
46	S2	1671	G
46	S2	1698	C
46	S2	1699	A
46	S2	1710	C
46	S2	1714	U
46	S2	1715	A
46	S2	1719	A
46	S2	1720	U
46	S2	1721	U
46	S2	1722	G
46	S2	1726	G
46	S2	1729	U
46	S2	1730	U
46	S2	1735	A
46	S2	1738	C
46	S2	1742	C
46	S2	1744	G
46	S2	1745	A
46	S2	1746	U
46	S2	1747	C
46	S2	1748	G
46	S2	1749	G
46	S2	1786	U
46	S2	1787	G

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Mol	Chain	Res	Type
46	S2	1798	C
46	S2	1804	OMU
46	S2	1805	G
46	S2	1806	A
46	S2	1807	C
46	S2	1811	C
46	S2	1813	A
46	S2	1817	G
46	S2	1820	G
46	S2	1824	A
46	S2	1825	A
46	S2	1831	A
46	S2	1835	A
46	S2	1838	U
46	S2	1849	G
46	S2	1850	MA6
46	S2	1851	MA6
46	S2	1861	G
46	S2	1862	G
46	S2	1863	A
46	S2	1864	U
46	S2	1865	C
80	u	2	C
80	u	4	C
80	u	6	G
80	u	7	A
80	u	8	U
80	u	9	A
80	u	10	G
80	u	13	C
80	u	15	G
80	u	16	U
80	u	17	C
80	u	18	G
80	u	19	G
80	u	20	U
80	u	21	A
80	u	22	G
80	u	23	A
80	u	24	G
80	u	25	C
80	u	26	A

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Mol	Chain	Res	Type
80	u	27	G
80	u	28	G
80	u	29	G
80	u	30	G
80	u	34	C
80	u	36	G
80	u	37	U
80	u	38	A
80	u	40	C
80	u	45	U
80	u	47	U
80	u	48	C
80	u	49	C
80	u	52	G
80	u	55	U
80	u	57	G
80	u	58	A
80	u	59	U
80	u	60	U
80	u	61	C
80	u	62	C
80	u	63	G
80	u	64	A
80	u	69	G
80	u	70	G
80	u	72	C
80	u	73	A
80	u	74	C
80	u	76	A
81	v	2	G
81	v	5	C
81	v	6	G
81	v	7	G
81	v	8	U
81	v	9	A
81	v	10	G
81	v	11	C
81	v	12	C
81	v	13	C
81	v	16	A
81	v	17	A
81	v	18	G

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Mol	Chain	Res	Type
81	v	19	G
81	v	20	U
81	v	21	A
81	v	22	G
81	v	23	A
81	v	24	G
81	v	29	G
81	v	43	C
81	v	44	G
81	v	45	U
81	v	46	G
81	v	47	U
81	v	48	C
81	v	49	C
81	v	50	U
81	v	51	U
81	v	53	G
81	v	54	U
81	v	55	U
81	v	56	C
81	v	57	G
81	v	58	A
81	v	59	U
81	v	60	U
81	v	61	C
81	v	62	C
81	v	63	G
81	v	64	A
81	v	66	U
81	v	67	C
81	v	69	G
81	v	72	C
81	v	73	A
81	v	75	C
81	v	76	A
82	w	21	G

All (106) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	L5	219	G
1	L5	233	U

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Mol	Chain	Res	Type
1	L5	255	C
1	L5	265	C
1	L5	278	G
1	L5	294	G
1	L5	296	A
1	L5	406	C
1	L5	485	C
1	L5	497	G
1	L5	500	G
1	L5	661	C
1	L5	685	C
1	L5	695	G
1	L5	904	C
1	L5	923	C
1	L5	924	C
1	L5	935	A
1	L5	959	G
1	L5	966	A
1	L5	968	C
1	L5	992	C
1	L5	1064	G
1	L5	1067	G
1	L5	1199	G
1	L5	1203	G
1	L5	1243	C
1	L5	1254	A
1	L5	1274	A
1	L5	1279	A
1	L5	1302	U
1	L5	1324	A
1	L5	1408	G
1	L5	1410	U
1	L5	1590	C
1	L5	1633	G
1	L5	1753	G
1	L5	1760	G
1	L5	1763	C
1	L5	1931	C
1	L5	1958	A
1	L5	1960	A
1	L5	1970	A
1	L5	1979	A

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Mol	Chain	Res	Type
1	L5	1981	G
1	L5	1983	A
1	L5	1989	G
1	L5	1990	A
1	L5	1997	U
1	L5	1998	A
1	L5	2006	U
1	L5	2009	A
1	L5	2016	C
1	L5	2017	A
1	L5	2024	G
1	L5	2391	G
1	L5	2416	G
1	L5	2488	C
1	L5	2490	U
1	L5	2492	C
1	L5	2496	G
1	L5	2498	C
1	L5	2675	G
1	L5	2760	G
1	L5	3614	G
1	L5	3673	C
1	L5	3764	PSU
1	L5	3787	G
1	L5	4142	C
1	L5	4600	G
1	L5	4653	C
1	L5	4699	U
1	L5	4913	G
3	L8	84	A
3	L8	125	C
46	S2	369	C
46	S2	501	C
46	S2	534	G
46	S2	537	C
46	S2	541	U
46	S2	547	G
46	S2	553	U
46	S2	554	A
46	S2	555	A
46	S2	558	G
46	S2	559	G

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Mol	Chain	Res	Type
46	S2	561	A
46	S2	563	G
46	S2	581	U
46	S2	587	A
46	S2	591	U
46	S2	688	U
46	S2	751	G
46	S2	752	G
46	S2	793	G
46	S2	838	G
46	S2	839	C
46	S2	866	PSU
46	S2	1342	U
46	S2	1520	G
46	S2	1721	U
46	S2	1744	G
46	S2	1745	A
46	S2	1748	G
46	S2	1812	U
46	S2	1824	A

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

222 non-standard protein/DNA/RNA residues are modelled in this entry.

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	$\# Z > 2$
1	PSU	L5	5001	1	18,21,22	1.05	1 (5%)	22,30,33	1.72	4 (18%)
46	OMC	S2	517	46	19,22,23	2.95	8 (42%)	26,31,34	0.73	0
1	A2M	L5	398	1	22,25,26	1.50	4 (18%)	31,36,39	2.04	9 (29%)
1	OMG	L5	4499	1	23,26,27	3.01	10 (43%)	33,38,41	2.52	13 (39%)
1	A2M	L5	2787	1,83	22,25,26	1.62	4 (18%)	31,36,39	2.18	9 (29%)
1	OMU	L5	2415	1	19,22,23	2.94	8 (42%)	26,31,34	1.66	5 (19%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
3	PSU	L8	55	3	18,21,22	1.07	1 (5%)	22,30,33	1.81	4 (18%)
1	OMG	L5	4228	1	23,26,27	2.92	10 (43%)	33,38,41	2.39	13 (39%)
46	PSU	S2	609	46	18,21,22	1.13	1 (5%)	22,30,33	1.70	4 (18%)
1	PSU	L5	3844	1	18,21,22	1.01	1 (5%)	22,30,33	1.76	4 (18%)
46	A2M	S2	166	46	22,25,26	1.46	4 (18%)	31,36,39	2.10	7 (22%)
1	A2M	L5	1534	1,83	22,25,26	1.62	5 (22%)	31,36,39	2.24	9 (29%)
1	A2M	L5	4590	1	22,25,26	1.55	4 (18%)	31,36,39	2.14	11 (35%)
1	A2M	L5	1871	1,83	22,25,26	1.56	4 (18%)	31,36,39	2.28	11 (35%)
46	PSU	S2	1186	46	18,21,22	1.01	1 (5%)	22,30,33	1.80	4 (18%)
46	PSU	S2	366	46	18,21,22	1.04	1 (5%)	22,30,33	1.89	5 (22%)
1	PSU	L5	4636	1	18,21,22	1.05	1 (5%)	22,30,33	2.03	5 (22%)
1	OMG	L5	4392	1	23,26,27	2.92	9 (39%)	33,38,41	2.46	13 (39%)
46	6MZ	S2	1832	84,83,46	22,25,26	3.16	4 (18%)	30,36,39	2.17	9 (30%)
46	OMU	S2	428	46	19,22,23	2.98	8 (42%)	26,31,34	1.77	5 (19%)
1	OMG	L5	4494	1	23,26,27	2.97	9 (39%)	33,38,41	2.50	12 (36%)
46	OMG	S2	1447	46	23,26,27	3.06	10 (43%)	33,38,41	2.63	12 (36%)
46	A2M	S2	1031	46	22,25,26	1.55	4 (18%)	31,36,39	2.18	11 (35%)
1	5MC	L5	4447	1,84	18,22,23	3.67	7 (38%)	26,32,35	1.23	1 (3%)
1	OMC	L5	1881	1,83	19,22,23	2.88	8 (42%)	26,31,34	0.82	0
1	OMC	L5	3808	1	19,22,23	1.27	3 (15%)	26,31,34	1.08	1 (3%)
1	PSU	L5	3822	1	18,21,22	0.99	1 (5%)	22,30,33	1.79	3 (13%)
46	PSU	S2	815	46	18,21,22	1.07	1 (5%)	22,30,33	1.81	5 (22%)
46	PSU	S2	1174	46	18,21,22	1.05	1 (5%)	22,30,33	1.74	4 (18%)
1	PSU	L5	4628	1	18,21,22	1.05	1 (5%)	22,30,33	1.93	5 (22%)
46	PSU	S2	918	46	18,21,22	1.12	2 (11%)	22,30,33	1.90	6 (27%)
3	PSU	L8	69	3	18,21,22	1.07	1 (5%)	22,30,33	1.83	5 (22%)
1	PSU	L5	3637	1,84	18,21,22	1.01	1 (5%)	22,30,33	1.82	4 (18%)
1	OMC	L5	2824	1	19,22,23	2.95	8 (42%)	26,31,34	0.73	0
1	OMG	L5	4196	1,80,83	23,26,27	2.97	9 (39%)	33,38,41	2.49	12 (36%)
1	A2M	L5	1326	1	22,25,26	1.57	5 (22%)	31,36,39	2.35	11 (35%)
46	PSU	S2	1596	46	18,21,22	1.05	1 (5%)	22,30,33	1.69	4 (18%)
1	UY1	L5	3818	1,84	19,22,23	4.09	9 (47%)	22,31,34	1.97	6 (27%)
46	PSU	S2	966	46	18,21,22	1.06	1 (5%)	22,30,33	1.75	4 (18%)
46	UY1	S2	1326	83,46	19,22,23	4.20	8 (42%)	22,31,34	1.92	4 (18%)
1	PSU	L5	4579	1	18,21,22	1.04	1 (5%)	22,30,33	1.88	5 (22%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
46	MA6	S2	1850	46	23,26,27	1.61	4 (17%)	34,38,41	2.42	14 (41%)
1	OMC	L5	3887	1	19,22,23	2.93	8 (42%)	26,31,34	0.74	0
46	PSU	S2	1360	84,83,46	18,21,22	1.04	2 (11%)	22,30,33	1.76	5 (22%)
1	PSU	L5	4312	1	18,21,22	1.00	1 (5%)	22,30,33	1.76	4 (18%)
46	PSU	S2	1367	46	18,21,22	1.10	1 (5%)	22,30,33	1.87	5 (22%)
46	PSU	S2	105	46	18,21,22	1.03	1 (5%)	22,30,33	1.73	4 (18%)
46	OMU	S2	354	46	19,22,23	2.92	8 (42%)	26,31,34	1.72	5 (19%)
46	PSU	S2	686	46	18,21,22	1.07	1 (5%)	22,30,33	1.83	4 (18%)
1	PSU	L5	4361	1	18,21,22	1.02	1 (5%)	22,30,33	1.79	4 (18%)
46	A2M	S2	576	46	22,25,26	1.46	5 (22%)	31,36,39	2.37	10 (32%)
46	PSU	S2	801	46	18,21,22	1.10	1 (5%)	22,30,33	1.75	4 (18%)
1	PSU	L5	4431	1	18,21,22	1.06	1 (5%)	22,30,33	1.78	4 (18%)
1	5MC	L5	3782	1,83	18,22,23	3.68	7 (38%)	26,32,35	1.04	2 (7%)
46	OMU	S2	116	46	19,22,23	2.96	8 (42%)	26,31,34	1.66	5 (19%)
46	A2M	S2	484	46	22,25,26	1.51	5 (22%)	31,36,39	2.12	9 (29%)
46	OMG	S2	683	46	23,26,27	3.03	10 (43%)	33,38,41	2.60	12 (36%)
46	PSU	S2	218	46	18,21,22	1.04	1 (5%)	22,30,33	1.75	4 (18%)
1	PSU	L5	3920	1,83	18,21,22	1.02	1 (5%)	22,30,33	1.74	4 (18%)
1	OMC	L5	1340	1	19,22,23	1.41	4 (21%)	26,31,34	1.01	2 (7%)
46	OMC	S2	1703	46	19,22,23	2.92	8 (42%)	26,31,34	0.74	0
1	PSU	L5	1860	1	18,21,22	1.06	1 (5%)	22,30,33	1.75	4 (18%)
1	6MZ	L5	4220	1	22,25,26	3.06	4 (18%)	30,36,39	2.24	9 (30%)
1	PSU	L5	4973	1	18,21,22	1.05	1 (5%)	22,30,33	1.77	4 (18%)
1	OMG	L5	1316	1,84	23,26,27	1.89	6 (26%)	33,38,41	2.20	10 (30%)
46	A2M	S2	27	83,46	22,25,26	1.50	4 (18%)	31,36,39	2.21	11 (35%)
46	OMG	S2	436	46	23,26,27	3.03	10 (43%)	33,38,41	2.54	16 (48%)
46	OMC	S2	1272	46	19,22,23	3.02	8 (42%)	26,31,34	0.70	0
1	OMU	L5	3925	1	19,22,23	2.89	8 (42%)	26,31,34	1.65	4 (15%)
46	PSU	S2	100	83,46	18,21,22	1.01	1 (5%)	22,30,33	1.82	4 (18%)
46	OMG	S2	867	46	23,26,27	3.09	10 (43%)	33,38,41	2.63	11 (33%)
46	OMG	S2	1328	84,46	23,26,27	3.02	10 (43%)	33,38,41	2.59	12 (36%)
46	4AC	S2	1842	46	21,24,25	3.10	10 (47%)	29,34,37	1.03	4 (13%)
1	A2M	L5	2815	1	22,25,26	1.52	4 (18%)	31,36,39	2.23	9 (29%)
46	OMC	S2	1391	46	19,22,23	2.98	8 (42%)	26,31,34	0.73	0
46	4AC	S2	1337	46	21,24,25	3.21	9 (42%)	29,34,37	1.15	3 (10%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
46	PSU	S2	822	46	18,21,22	1.10	1 (5%)	22,30,33	1.85	5 (22%)
1	PSU	L5	1782	1	18,21,22	1.07	1 (5%)	22,30,33	1.76	4 (18%)
1	OMC	L5	4536	1	19,22,23	2.88	8 (42%)	26,31,34	0.74	0
46	PSU	S2	34	46	18,21,22	1.03	1 (5%)	22,30,33	1.82	5 (22%)
1	PSU	L5	1582	1	18,21,22	1.03	1 (5%)	22,30,33	1.62	4 (18%)
1	OMU	L5	4498	1,83	19,22,23	2.91	8 (42%)	26,31,34	1.75	5 (19%)
1	OMU	L5	4620	1	19,22,23	2.90	8 (42%)	26,31,34	1.66	5 (19%)
46	PSU	S2	651	46	18,21,22	1.06	1 (5%)	22,30,33	1.78	4 (18%)
46	OMG	S2	601	46	23,26,27	2.92	10 (43%)	33,38,41	2.56	12 (36%)
1	PSU	L5	3851	1	18,21,22	1.05	1 (5%)	22,30,33	1.83	4 (18%)
1	PSU	L5	4299	1	18,21,22	1.05	1 (5%)	22,30,33	1.69	4 (18%)
46	PSU	S2	1643	83,46	18,21,22	1.08	1 (5%)	22,30,33	1.75	5 (22%)
1	PSU	L5	4293	1	18,21,22	1.02	1 (5%)	22,30,33	1.69	3 (13%)
46	PSU	S2	1445	46	18,21,22	1.04	1 (5%)	22,30,33	1.82	5 (22%)
1	PSU	L5	3730	1	18,21,22	1.06	1 (5%)	22,30,33	1.77	4 (18%)
1	PSU	L5	4353	1	18,21,22	1.06	1 (5%)	22,30,33	1.82	5 (22%)
46	A2M	S2	159	46	22,25,26	1.44	6 (27%)	31,36,39	2.46	11 (35%)
46	PSU	S2	866	46	18,21,22	1.10	1 (5%)	22,30,33	1.84	5 (22%)
46	OMC	S2	462	46	19,22,23	2.95	8 (42%)	26,31,34	0.66	0
1	PSU	L5	2839	1	18,21,22	1.04	1 (5%)	22,30,33	1.71	4 (18%)
1	A2M	L5	3724	1	22,25,26	1.44	5 (22%)	31,36,39	2.20	10 (32%)
46	A2M	S2	1383	46	22,25,26	1.39	4 (18%)	31,36,39	2.24	9 (29%)
1	PSU	L5	1862	1	18,21,22	1.04	1 (5%)	22,30,33	1.80	4 (18%)
1	A2M	L5	2363	1,83	22,25,26	1.61	4 (18%)	31,36,39	2.20	10 (32%)
1	A2M	L5	4571	1	22,25,26	1.65	4 (18%)	31,36,39	2.04	9 (29%)
1	PSU	L5	1779	1	18,21,22	1.01	1 (5%)	22,30,33	1.80	5 (22%)
1	PSU	L5	1792	1	18,21,22	1.05	1 (5%)	22,30,33	1.73	4 (18%)
1	PSU	L5	4471	1	18,21,22	1.06	1 (5%)	22,30,33	1.68	4 (18%)
1	PSU	L5	3768	1	18,21,22	1.06	1 (5%)	22,30,33	1.78	4 (18%)
1	PSU	L5	4521	1,84,83	18,21,22	1.09	1 (5%)	22,30,33	1.88	5 (22%)
1	OMG	L5	1625	1,84	23,26,27	2.98	9 (39%)	33,38,41	2.54	13 (39%)
46	OMU	S2	121	46	19,22,23	2.96	8 (42%)	26,31,34	1.58	4 (15%)
5	HIC	LB	245	5	10,11,12	0.58	0	8,14,16	0.77	0
1	OMG	L5	3627	1	23,26,27	2.94	10 (43%)	33,38,41	2.45	14 (42%)
1	OMC	L5	4456	1	19,22,23	2.87	8 (42%)	26,31,34	0.68	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
46	OMG	S2	1490	83,46	23,26,27	2.99	10 (43%)	33,38,41	2.52	13 (39%)
1	PSU	L5	3884	1	18,21,22	1.07	1 (5%)	22,30,33	1.77	4 (18%)
1	PSU	L5	4689	1	18,21,22	1.04	1 (5%)	22,30,33	1.66	4 (18%)
46	PSU	S2	406	46	18,21,22	1.07	1 (5%)	22,30,33	1.75	4 (18%)
46	OMU	S2	1442	83,46	19,22,23	2.99	8 (42%)	26,31,34	1.73	5 (19%)
1	PSU	L5	3695	1	18,21,22	1.06	1 (5%)	22,30,33	1.72	4 (18%)
46	PSU	S2	1003	46	18,21,22	1.10	1 (5%)	22,30,33	1.74	4 (18%)
1	OMC	L5	3869	1	19,22,23	1.12	2 (10%)	26,31,34	0.96	1 (3%)
1	OMU	L5	4227	1	19,22,23	2.96	8 (42%)	26,31,34	1.73	5 (19%)
1	PSU	L5	4500	1	18,21,22	1.07	1 (5%)	22,30,33	1.87	5 (22%)
46	PSU	S2	649	46	18,21,22	1.07	1 (5%)	22,30,33	1.76	4 (18%)
46	OMG	S2	644	46	23,26,27	2.99	10 (43%)	33,38,41	2.53	13 (39%)
46	PSU	S2	667	46	18,21,22	1.07	2 (11%)	22,30,33	1.79	5 (22%)
46	PSU	S2	1238	46	18,21,22	1.10	2 (11%)	22,30,33	1.78	5 (22%)
1	PSU	L5	4673	1,84	18,21,22	1.03	1 (5%)	22,30,33	1.74	4 (18%)
1	OMG	L5	2364	1	23,26,27	1.53	4 (17%)	33,38,41	2.09	9 (27%)
1	PSU	L5	3770	1	18,21,22	1.03	1 (5%)	22,30,33	1.78	4 (18%)
1	OMC	L5	2861	1	19,22,23	2.93	8 (42%)	26,31,34	0.76	0
1	PSU	L5	4576	1	18,21,22	1.07	1 (5%)	22,30,33	1.77	4 (18%)
1	PSU	L5	4493	1,84	18,21,22	1.02	1 (5%)	22,30,33	1.72	4 (18%)
1	PSU	L5	4972	1	18,21,22	1.02	1 (5%)	22,30,33	1.75	4 (18%)
46	PSU	S2	814	46	18,21,22	1.04	1 (5%)	22,30,33	1.67	4 (18%)
1	1MA	L5	1322	1,83	21,25,26	1.55	6 (28%)	31,37,40	1.91	7 (22%)
46	PSU	S2	863	46	18,21,22	1.04	1 (5%)	22,30,33	1.77	4 (18%)
46	PSU	S2	1625	46	18,21,22	1.07	1 (5%)	22,30,33	1.75	4 (18%)
1	PSU	L5	4532	1	18,21,22	1.07	1 (5%)	22,30,33	1.78	4 (18%)
46	A2M	S2	668	83,46	22,25,26	1.52	4 (18%)	31,36,39	2.09	7 (22%)
46	PSU	S2	1692	46	18,21,22	1.06	1 (5%)	22,30,33	1.76	4 (18%)
3	OMU	L8	14	1,3	19,22,23	2.94	8 (42%)	26,31,34	1.80	5 (19%)
46	PSU	S2	1232	46	18,21,22	1.01	1 (5%)	22,30,33	1.74	4 (18%)
1	A2M	L5	3867	1	22,25,26	1.69	4 (18%)	31,36,39	2.10	11 (35%)
46	PSU	S2	119	46	18,21,22	1.01	1 (5%)	22,30,33	1.67	4 (18%)
46	PSU	S2	1177	46	18,21,22	1.05	1 (5%)	22,30,33	1.81	4 (18%)
1	PSU	L5	4403	1	18,21,22	1.09	1 (5%)	22,30,33	1.77	6 (27%)
1	PSU	L5	4457	1	18,21,22	1.06	1 (5%)	22,30,33	1.81	4 (18%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
46	A2M	S2	512	46	22,25,26	1.47	5 (22%)	31,36,39	2.33	11 (35%)
46	PSU	S2	681	46	18,21,22	1.09	1 (5%)	22,30,33	1.78	4 (18%)
1	OMG	L5	4370	1	23,26,27	2.94	10 (43%)	33,38,41	2.48	14 (42%)
1	UR3	L5	4530	1	19,22,23	2.67	5 (26%)	26,32,35	1.31	3 (11%)
66	NMM	ST	67	66	9,11,12	0.60	0	6,12,14	2.78	2 (33%)
1	PSU	L5	3762	1	18,21,22	1.02	1 (5%)	22,30,33	1.88	4 (18%)
46	PSU	S2	1136	46	18,21,22	1.07	1 (5%)	22,30,33	1.85	5 (22%)
3	OMG	L8	75	3	23,26,27	2.97	10 (43%)	33,38,41	2.44	12 (36%)
1	PSU	L5	2508	1	18,21,22	1.06	1 (5%)	22,30,33	1.74	4 (18%)
1	OMC	L5	2804	1	19,22,23	2.90	8 (42%)	26,31,34	0.67	0
1	PSU	L5	4296	1	18,21,22	1.08	1 (5%)	22,30,33	1.83	5 (22%)
1	OMU	L5	4306	1	19,22,23	2.88	8 (42%)	26,31,34	1.67	5 (19%)
46	PSU	S2	1046	46	18,21,22	1.04	1 (5%)	22,30,33	1.72	4 (18%)
46	OMU	S2	1288	46	19,22,23	3.03	8 (42%)	26,31,34	1.65	4 (15%)
1	OMG	L5	1522	1	23,26,27	1.60	5 (21%)	33,38,41	2.37	8 (24%)
1	OMG	L5	4637	1,84	23,26,27	2.97	10 (43%)	33,38,41	2.48	13 (39%)
1	A2M	L5	3718	1	22,25,26	1.53	4 (18%)	31,36,39	2.07	9 (29%)
46	A2M	S2	468	46	22,25,26	1.46	5 (22%)	31,36,39	2.36	10 (32%)
46	PSU	S2	109	46	18,21,22	1.04	1 (5%)	22,30,33	1.82	4 (18%)
46	PSU	S2	1347	46	18,21,22	1.04	1 (5%)	22,30,33	1.84	5 (22%)
46	PSU	S2	1244	46	18,21,22	1.03	1 (5%)	22,30,33	1.78	4 (18%)
1	PSU	L5	1536	1	18,21,22	1.07	1 (5%)	22,30,33	1.73	4 (18%)
1	OMC	L5	3701	1,84	19,22,23	2.86	8 (42%)	26,31,34	0.79	0
46	OMU	S2	1804	46	19,22,23	1.57	4 (21%)	26,31,34	1.97	6 (23%)
46	A2M	S2	1678	46	22,25,26	1.52	5 (22%)	31,36,39	2.08	9 (29%)
1	OMC	L5	3841	1	19,22,23	2.91	8 (42%)	26,31,34	0.66	0
46	PSU	S2	93	46	18,21,22	1.09	1 (5%)	22,30,33	1.69	4 (18%)
46	OMU	S2	172	46	19,22,23	3.04	8 (42%)	26,31,34	1.73	5 (19%)
29	V5N	La	39	29	9,11,12	0.96	0	9,14,16	1.42	2 (22%)
1	PSU	L5	3764	1	18,21,22	1.05	1 (5%)	22,30,33	1.87	5 (22%)
46	A2M	S2	590	46	22,25,26	1.48	5 (22%)	31,36,39	2.15	7 (22%)
1	OMC	L5	2365	1,83	19,22,23	1.12	2 (10%)	26,31,34	0.98	1 (3%)
46	B8N	S2	1248	46	24,29,30	3.13	6 (25%)	29,42,45	1.81	6 (20%)
1	OMG	L5	4618	1	23,26,27	2.96	10 (43%)	33,38,41	2.46	14 (42%)
46	PSU	S2	1045	46	18,21,22	1.01	1 (5%)	22,30,33	1.79	3 (13%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
1	OMG	L5	4623	1	23,26,27	2.94	10 (43%)	33,38,41	2.46	14 (42%)
1	PSU	L5	2632	1	18,21,22	1.06	1 (5%)	22,30,33	1.71	4 (18%)
1	OMG	L5	2876	1	23,26,27	3.01	10 (43%)	33,38,41	2.71	12 (36%)
46	OMC	S2	174	46	19,22,23	3.03	8 (42%)	26,31,34	0.74	0
1	PSU	L5	1677	1	18,21,22	1.11	1 (5%)	22,30,33	1.81	6 (27%)
1	OMU	L5	2837	1	19,22,23	2.91	8 (42%)	26,31,34	1.79	5 (19%)
46	MA6	S2	1851	46	23,26,27	1.60	5 (21%)	34,38,41	2.48	11 (32%)
1	PSU	L5	4552	1	18,21,22	1.05	1 (5%)	22,30,33	1.78	4 (18%)
1	PSU	L5	4423	1	18,21,22	1.03	1 (5%)	22,30,33	1.78	4 (18%)
1	OMC	L5	2422	1,83	19,22,23	2.92	8 (42%)	26,31,34	0.69	0
46	PSU	S2	1056	46	18,21,22	1.05	1 (5%)	22,30,33	1.74	4 (18%)
46	PSU	S2	572	46	18,21,22	1.06	1 (5%)	22,30,33	1.72	5 (22%)
1	PSU	L5	1781	1	18,21,22	1.05	1 (5%)	22,30,33	1.78	4 (18%)
1	PSU	L5	1683	1,84	18,21,22	1.07	1 (5%)	22,30,33	1.79	4 (18%)
1	OMG	L5	3899	1,83	23,26,27	2.92	9 (39%)	33,38,41	2.39	14 (42%)
1	PSU	L5	2843	1	18,21,22	1.08	1 (5%)	22,30,33	1.82	5 (22%)
1	A2M	L5	2401	1	22,25,26	1.54	4 (18%)	31,36,39	2.23	10 (32%)
1	A2M	L5	3830	1	22,25,26	1.49	4 (18%)	31,36,39	2.25	10 (32%)
46	PSU	S2	296	46	18,21,22	1.07	1 (5%)	22,30,33	1.72	4 (18%)
1	PSU	L5	1744	1	18,21,22	1.04	1 (5%)	22,30,33	1.79	4 (18%)
46	PSU	S2	36	46	18,21,22	1.04	1 (5%)	22,30,33	1.77	4 (18%)
46	OMG	S2	509	83,46	23,26,27	3.03	9 (39%)	33,38,41	2.56	13 (39%)
46	PSU	S2	1004	46	18,21,22	1.03	1 (5%)	22,30,33	1.69	4 (18%)
1	PSU	L5	5010	1	18,21,22	1.08	1 (5%)	22,30,33	1.81	4 (18%)
46	PSU	S2	63	46	18,21,22	1.06	1 (5%)	22,30,33	1.81	4 (18%)
1	A2M	L5	3785	1	22,25,26	1.55	5 (22%)	31,36,39	2.52	14 (45%)
1	OMG	L5	3744	1	23,26,27	2.97	10 (43%)	33,38,41	2.47	13 (39%)
1	OMC	L5	2351	1,83	19,22,23	2.80	8 (42%)	26,31,34	0.95	2 (7%)
1	A2M	L5	1524	1	22,25,26	1.56	5 (22%)	31,36,39	2.33	11 (35%)
46	PSU	S2	300	46	18,21,22	1.06	1 (5%)	22,30,33	1.70	4 (18%)
46	A2M	S2	99	83,46	22,25,26	1.53	4 (18%)	31,36,39	2.24	9 (29%)
1	PSU	L5	3853	1,83	18,21,22	1.05	1 (5%)	22,30,33	1.81	5 (22%)
1	A2M	L5	400	1	22,25,26	1.50	4 (18%)	31,36,39	2.16	10 (32%)
1	PSU	L5	3639	1	18,21,22	1.07	1 (5%)	22,30,33	1.76	4 (18%)
1	PSU	L5	4442	1	18,21,22	1.08	1 (5%)	22,30,33	1.79	6 (27%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
1	A2M	L5	1323	1	22,25,26	1.57	4 (18%)	31,36,39	2.25	9 (29%)
1	OMG	L5	3792	1	23,26,27	1.65	6 (26%)	33,38,41	2.07	7 (21%)
1	A2M	L5	4523	1,83	22,25,26	1.50	4 (18%)	31,36,39	2.30	10 (32%)
1	A2M	L5	3825	1	22,25,26	1.51	4 (18%)	31,36,39	2.24	10 (32%)
1	PSU	L5	3715	1	18,21,22	1.08	1 (5%)	22,30,33	1.77	4 (18%)
1	OMG	L5	2424	1	23,26,27	3.03	10 (43%)	33,38,41	2.69	11 (33%)

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
1	PSU	L5	5001	1	-	0/7/25/26	0/2/2/2
46	OMC	S2	517	46	-	0/9/27/28	0/2/2/2
1	A2M	L5	398	1	-	1/9/27/28	0/3/3/3
1	OMG	L5	4499	1	-	0/9/27/28	0/3/3/3
1	A2M	L5	2787	1,83	-	3/9/27/28	0/3/3/3
1	OMU	L5	2415	1	-	0/9/27/28	0/2/2/2
3	PSU	L8	55	3	-	0/7/25/26	0/2/2/2
1	OMG	L5	4228	1	-	0/9/27/28	0/3/3/3
46	PSU	S2	609	46	-	0/7/25/26	0/2/2/2
1	PSU	L5	3844	1	-	3/7/25/26	0/2/2/2
46	A2M	S2	166	46	-	3/9/27/28	0/3/3/3
1	A2M	L5	1534	1,83	-	2/9/27/28	0/3/3/3
1	A2M	L5	4590	1	-	1/9/27/28	0/3/3/3
1	A2M	L5	1871	1,83	-	0/9/27/28	0/3/3/3
46	PSU	S2	1186	46	-	0/7/25/26	0/2/2/2
46	PSU	S2	366	46	-	0/7/25/26	0/2/2/2
1	PSU	L5	4636	1	-	4/7/25/26	0/2/2/2
1	OMG	L5	4392	1	-	0/9/27/28	0/3/3/3
46	6MZ	S2	1832	84,83,46	-	2/9/27/28	0/3/3/3
46	OMU	S2	428	46	-	4/9/27/28	0/2/2/2
1	OMG	L5	4494	1	-	0/9/27/28	0/3/3/3
46	OMG	S2	1447	46	-	3/9/27/28	0/3/3/3
46	A2M	S2	1031	46	-	0/9/27/28	0/3/3/3
1	5MC	L5	4447	1,84	-	4/7/25/26	0/2/2/2
1	OMC	L5	1881	1,83	-	0/9/27/28	0/2/2/2
1	OMC	L5	3808	1	-	0/9/27/28	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
1	PSU	L5	3822	1	-	2/7/25/26	0/2/2/2
46	PSU	S2	815	46	-	0/7/25/26	0/2/2/2
46	PSU	S2	1174	46	-	0/7/25/26	0/2/2/2
1	PSU	L5	4628	1	-	0/7/25/26	0/2/2/2
46	PSU	S2	918	46	-	2/7/25/26	0/2/2/2
3	PSU	L8	69	3	-	0/7/25/26	0/2/2/2
1	PSU	L5	3637	1,84	-	0/7/25/26	0/2/2/2
1	OMC	L5	2824	1	-	1/9/27/28	0/2/2/2
1	OMG	L5	4196	1,80,83	-	1/9/27/28	0/3/3/3
1	A2M	L5	1326	1	-	1/9/27/28	0/3/3/3
46	PSU	S2	1596	46	-	0/7/25/26	0/2/2/2
1	UY1	L5	3818	1,84	-	4/9/27/28	0/2/2/2
46	PSU	S2	966	46	-	1/7/25/26	0/2/2/2
46	UY1	S2	1326	83,46	-	3/9/27/28	0/2/2/2
1	PSU	L5	4579	1	-	0/7/25/26	0/2/2/2
46	MA6	S2	1850	46	-	5/11/29/30	0/3/3/3
1	OMC	L5	3887	1	-	0/9/27/28	0/2/2/2
46	PSU	S2	1360	84,83,46	-	0/7/25/26	0/2/2/2
1	PSU	L5	4312	1	-	0/7/25/26	0/2/2/2
46	PSU	S2	1367	46	-	0/7/25/26	0/2/2/2
46	PSU	S2	105	46	-	0/7/25/26	0/2/2/2
46	OMU	S2	354	46	-	0/9/27/28	0/2/2/2
46	PSU	S2	686	46	-	0/7/25/26	0/2/2/2
1	PSU	L5	4361	1	-	0/7/25/26	0/2/2/2
46	A2M	S2	576	46	-	3/9/27/28	0/3/3/3
46	PSU	S2	801	46	-	1/7/25/26	0/2/2/2
1	PSU	L5	4431	1	-	0/7/25/26	0/2/2/2
1	5MC	L5	3782	1,83	-	0/7/25/26	0/2/2/2
46	OMU	S2	116	46	-	0/9/27/28	0/2/2/2
46	A2M	S2	484	46	-	0/9/27/28	0/3/3/3
46	OMG	S2	683	46	-	3/9/27/28	0/3/3/3
46	PSU	S2	218	46	-	0/7/25/26	0/2/2/2
1	PSU	L5	3920	1,83	-	0/7/25/26	0/2/2/2
1	OMC	L5	1340	1	-	0/9/27/28	0/2/2/2
46	OMC	S2	1703	46	-	3/9/27/28	0/2/2/2
1	PSU	L5	1860	1	-	0/7/25/26	0/2/2/2
1	6MZ	L5	4220	1	-	0/9/27/28	0/3/3/3
1	PSU	L5	4973	1	-	0/7/25/26	0/2/2/2
1	OMG	L5	1316	1,84	-	0/9/27/28	0/3/3/3
46	A2M	S2	27	83,46	-	3/9/27/28	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
46	OMG	S2	436	46	-	0/9/27/28	0/3/3/3
46	OMC	S2	1272	46	-	0/9/27/28	0/2/2/2
1	OMU	L5	3925	1	-	0/9/27/28	0/2/2/2
46	PSU	S2	100	83,46	-	2/7/25/26	0/2/2/2
46	OMG	S2	867	46	-	3/9/27/28	0/3/3/3
46	OMG	S2	1328	84,46	-	1/9/27/28	0/3/3/3
46	4AC	S2	1842	46	-	0/11/29/30	0/2/2/2
1	A2M	L5	2815	1	-	3/9/27/28	0/3/3/3
46	OMC	S2	1391	46	-	0/9/27/28	0/2/2/2
46	4AC	S2	1337	46	-	0/11/29/30	0/2/2/2
46	PSU	S2	822	46	-	3/7/25/26	0/2/2/2
1	PSU	L5	1782	1	-	0/7/25/26	0/2/2/2
1	OMC	L5	4536	1	-	0/9/27/28	0/2/2/2
46	PSU	S2	34	46	-	0/7/25/26	0/2/2/2
1	PSU	L5	1582	1	-	3/7/25/26	0/2/2/2
1	OMU	L5	4498	1,83	-	0/9/27/28	0/2/2/2
1	OMU	L5	4620	1	-	0/9/27/28	0/2/2/2
46	PSU	S2	651	46	-	0/7/25/26	0/2/2/2
46	OMG	S2	601	46	-	1/9/27/28	0/3/3/3
1	PSU	L5	3851	1	-	0/7/25/26	0/2/2/2
1	PSU	L5	4299	1	-	0/7/25/26	0/2/2/2
46	PSU	S2	1643	83,46	-	0/7/25/26	0/2/2/2
1	PSU	L5	4293	1	-	0/7/25/26	0/2/2/2
46	PSU	S2	1445	46	-	0/7/25/26	0/2/2/2
1	PSU	L5	3730	1	-	0/7/25/26	0/2/2/2
1	PSU	L5	4353	1	-	0/7/25/26	0/2/2/2
46	A2M	S2	159	46	-	0/9/27/28	0/3/3/3
46	PSU	S2	866	46	-	0/7/25/26	0/2/2/2
46	OMC	S2	462	46	-	1/9/27/28	0/2/2/2
1	PSU	L5	2839	1	-	0/7/25/26	0/2/2/2
1	A2M	L5	3724	1	-	3/9/27/28	0/3/3/3
46	A2M	S2	1383	46	-	1/9/27/28	0/3/3/3
1	PSU	L5	1862	1	-	0/7/25/26	0/2/2/2
1	A2M	L5	2363	1,83	-	0/9/27/28	0/3/3/3
1	A2M	L5	4571	1	-	0/9/27/28	0/3/3/3
1	PSU	L5	1779	1	-	0/7/25/26	0/2/2/2
1	PSU	L5	1792	1	-	2/7/25/26	0/2/2/2
1	PSU	L5	4471	1	-	0/7/25/26	0/2/2/2
1	PSU	L5	3768	1	-	0/7/25/26	0/2/2/2
1	PSU	L5	4521	1,84,83	-	0/7/25/26	0/2/2/2
1	OMG	L5	1625	1,84	-	0/9/27/28	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
46	OMU	S2	121	46	-	0/9/27/28	0/2/2/2
5	HIC	LB	245	5	-	0/5/6/8	0/1/1/1
1	OMG	L5	3627	1	-	1/9/27/28	0/3/3/3
1	OMC	L5	4456	1	-	0/9/27/28	0/2/2/2
46	OMG	S2	1490	83,46	-	2/9/27/28	0/3/3/3
1	PSU	L5	3884	1	-	0/7/25/26	0/2/2/2
1	PSU	L5	4689	1	-	0/7/25/26	0/2/2/2
46	PSU	S2	406	46	-	0/7/25/26	0/2/2/2
46	OMU	S2	1442	83,46	-	0/9/27/28	0/2/2/2
1	PSU	L5	3695	1	-	0/7/25/26	0/2/2/2
46	PSU	S2	1003	46	-	0/7/25/26	0/2/2/2
1	OMC	L5	3869	1	-	0/9/27/28	0/2/2/2
1	OMU	L5	4227	1	-	0/9/27/28	0/2/2/2
1	PSU	L5	4500	1	-	3/7/25/26	0/2/2/2
46	PSU	S2	649	46	-	0/7/25/26	0/2/2/2
46	OMG	S2	644	46	-	1/9/27/28	0/3/3/3
46	PSU	S2	667	46	-	0/7/25/26	0/2/2/2
46	PSU	S2	1238	46	-	0/7/25/26	0/2/2/2
1	PSU	L5	4673	1,84	-	0/7/25/26	0/2/2/2
1	OMG	L5	2364	1	-	2/9/27/28	0/3/3/3
1	PSU	L5	3770	1	-	0/7/25/26	0/2/2/2
1	OMC	L5	2861	1	-	1/9/27/28	0/2/2/2
1	PSU	L5	4576	1	-	0/7/25/26	0/2/2/2
1	PSU	L5	4493	1,84	-	0/7/25/26	0/2/2/2
1	PSU	L5	4972	1	-	0/7/25/26	0/2/2/2
46	PSU	S2	814	46	-	0/7/25/26	0/2/2/2
1	1MA	L5	1322	1,83	-	2/7/25/26	0/3/3/3
46	PSU	S2	863	46	-	0/7/25/26	0/2/2/2
46	PSU	S2	1625	46	-	0/7/25/26	0/2/2/2
1	PSU	L5	4532	1	-	0/7/25/26	0/2/2/2
46	A2M	S2	668	83,46	-	2/9/27/28	0/3/3/3
46	PSU	S2	1692	46	-	0/7/25/26	0/2/2/2
3	OMU	L8	14	1,3	-	1/9/27/28	0/2/2/2
46	PSU	S2	1232	46	-	0/7/25/26	0/2/2/2
1	A2M	L5	3867	1	-	0/9/27/28	0/3/3/3
46	PSU	S2	119	46	-	0/7/25/26	0/2/2/2
46	PSU	S2	1177	46	-	0/7/25/26	0/2/2/2
1	PSU	L5	4403	1	-	0/7/25/26	0/2/2/2
1	PSU	L5	4457	1	-	0/7/25/26	0/2/2/2
46	A2M	S2	512	46	-	1/9/27/28	0/3/3/3
46	PSU	S2	681	46	-	0/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
1	OMG	L5	4370	1	-	0/9/27/28	0/3/3/3
1	UR3	L5	4530	1	-	0/7/25/26	0/2/2/2
66	NMM	ST	67	66	-	5/9/11/13	-
1	PSU	L5	3762	1	-	0/7/25/26	0/2/2/2
46	PSU	S2	1136	46	-	0/7/25/26	0/2/2/2
3	OMG	L8	75	3	-	0/9/27/28	0/3/3/3
1	PSU	L5	2508	1	-	0/7/25/26	0/2/2/2
1	OMC	L5	2804	1	-	1/9/27/28	0/2/2/2
1	PSU	L5	4296	1	-	0/7/25/26	0/2/2/2
1	OMU	L5	4306	1	-	0/9/27/28	0/2/2/2
46	PSU	S2	1046	46	-	0/7/25/26	0/2/2/2
46	OMU	S2	1288	46	-	0/9/27/28	0/2/2/2
1	OMG	L5	1522	1	-	0/9/27/28	0/3/3/3
1	OMG	L5	4637	1,84	-	3/9/27/28	0/3/3/3
1	A2M	L5	3718	1	-	0/9/27/28	0/3/3/3
46	A2M	S2	468	46	-	0/9/27/28	0/3/3/3
46	PSU	S2	109	46	-	0/7/25/26	0/2/2/2
46	PSU	S2	1347	46	-	0/7/25/26	0/2/2/2
46	PSU	S2	1244	46	-	0/7/25/26	0/2/2/2
1	PSU	L5	1536	1	-	0/7/25/26	0/2/2/2
1	OMC	L5	3701	1,84	-	4/9/27/28	0/2/2/2
46	OMU	S2	1804	46	-	0/9/27/28	0/2/2/2
46	A2M	S2	1678	46	-	1/9/27/28	0/3/3/3
1	OMC	L5	3841	1	-	1/9/27/28	0/2/2/2
46	PSU	S2	93	46	-	0/7/25/26	0/2/2/2
46	OMU	S2	172	46	-	0/9/27/28	0/2/2/2
29	V5N	La	39	29	-	0/9/10/12	0/1/1/1
1	PSU	L5	3764	1	-	0/7/25/26	0/2/2/2
46	A2M	S2	590	46	-	4/9/27/28	0/3/3/3
1	OMC	L5	2365	1,83	-	0/9/27/28	0/2/2/2
46	B8N	S2	1248	46	-	8/16/34/35	0/2/2/2
1	OMG	L5	4618	1	-	2/9/27/28	0/3/3/3
46	PSU	S2	1045	46	-	1/7/25/26	0/2/2/2
1	OMG	L5	4623	1	-	1/9/27/28	0/3/3/3
1	PSU	L5	2632	1	-	0/7/25/26	0/2/2/2
1	OMG	L5	2876	1	-	0/9/27/28	0/3/3/3
46	OMC	S2	174	46	-	1/9/27/28	0/2/2/2
1	PSU	L5	1677	1	-	1/7/25/26	0/2/2/2
1	OMU	L5	2837	1	-	0/9/27/28	0/2/2/2
46	MA6	S2	1851	46	-	6/11/29/30	0/3/3/3
1	PSU	L5	4552	1	-	0/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
1	PSU	L5	4423	1	-	0/7/25/26	0/2/2/2
1	OMC	L5	2422	1,83	-	2/9/27/28	0/2/2/2
46	PSU	S2	1056	46	-	0/7/25/26	0/2/2/2
46	PSU	S2	572	46	-	2/7/25/26	0/2/2/2
1	PSU	L5	1781	1	-	0/7/25/26	0/2/2/2
1	PSU	L5	1683	1,84	-	0/7/25/26	0/2/2/2
1	OMG	L5	3899	1,83	-	1/9/27/28	0/3/3/3
1	PSU	L5	2843	1	-	0/7/25/26	0/2/2/2
1	A2M	L5	2401	1	-	0/9/27/28	0/3/3/3
1	A2M	L5	3830	1	-	0/9/27/28	0/3/3/3
46	PSU	S2	296	46	-	0/7/25/26	0/2/2/2
1	PSU	L5	1744	1	-	0/7/25/26	0/2/2/2
46	PSU	S2	36	46	-	0/7/25/26	0/2/2/2
46	OMG	S2	509	83,46	-	2/9/27/28	0/3/3/3
46	PSU	S2	1004	46	-	0/7/25/26	0/2/2/2
1	PSU	L5	5010	1	-	0/7/25/26	0/2/2/2
46	PSU	S2	63	46	-	0/7/25/26	0/2/2/2
1	A2M	L5	3785	1	-	2/9/27/28	0/3/3/3
1	OMG	L5	3744	1	-	0/9/27/28	0/3/3/3
1	OMC	L5	2351	1,83	-	3/9/27/28	0/2/2/2
1	A2M	L5	1524	1	-	1/9/27/28	0/3/3/3
46	PSU	S2	300	46	-	0/7/25/26	0/2/2/2
46	A2M	S2	99	83,46	-	2/9/27/28	0/3/3/3
1	PSU	L5	3853	1,83	-	0/7/25/26	0/2/2/2
1	A2M	L5	400	1	-	0/9/27/28	0/3/3/3
1	PSU	L5	3639	1	-	0/7/25/26	0/2/2/2
1	PSU	L5	4442	1	-	0/7/25/26	0/2/2/2
1	A2M	L5	1323	1	-	0/9/27/28	0/3/3/3
1	OMG	L5	3792	1	-	0/9/27/28	0/3/3/3
1	A2M	L5	4523	1,83	-	1/9/27/28	0/3/3/3
1	A2M	L5	3825	1	-	0/9/27/28	0/3/3/3
1	PSU	L5	3715	1	-	0/7/25/26	0/2/2/2
1	OMG	L5	2424	1	-	1/9/27/28	0/3/3/3

All (876) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
46	S2	1832	6MZ	C6-N6	13.64	1.49	1.34
1	L5	4220	6MZ	C6-N6	13.03	1.48	1.34
46	S2	1326	UY1	C6-C5	10.63	1.47	1.35
1	L5	3818	UY1	C6-C5	10.23	1.47	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
46	S2	1326	UY1	C2-N1	10.01	1.50	1.36
1	L5	3818	UY1	C2-N1	9.64	1.49	1.36
1	L5	4447	5MC	C6-C5	9.60	1.50	1.34
1	L5	3782	5MC	C6-C5	9.47	1.50	1.34
46	S2	1248	B8N	C4-N3	-8.62	1.24	1.40
46	S2	867	OMG	C2-N2	7.54	1.52	1.34
46	S2	1447	OMG	C2-N2	7.52	1.52	1.34
46	S2	1328	OMG	C2-N2	7.46	1.51	1.34
1	L5	2424	OMG	C2-N2	7.42	1.51	1.34
46	S2	509	OMG	C2-N2	7.42	1.51	1.34
46	S2	436	OMG	C2-N2	7.42	1.51	1.34
46	S2	683	OMG	C2-N2	7.42	1.51	1.34
1	L5	4499	OMG	C2-N2	7.39	1.51	1.34
46	S2	1248	B8N	C6-N1	7.39	1.54	1.36
46	S2	1490	OMG	C2-N2	7.38	1.51	1.34
1	L5	3818	UY1	C2-N3	7.36	1.50	1.37
1	L5	2876	OMG	C2-N2	7.35	1.51	1.34
46	S2	1326	UY1	C2-N3	7.35	1.50	1.37
1	L5	4494	OMG	C2-N2	7.32	1.51	1.34
46	S2	1248	B8N	C6-C5	7.27	1.45	1.34
1	L5	4370	OMG	C2-N2	7.27	1.51	1.34
1	L5	1625	OMG	C2-N2	7.27	1.51	1.34
46	S2	644	OMG	C2-N2	7.26	1.51	1.34
46	S2	867	OMG	C4-N3	7.24	1.51	1.34
1	L5	3744	OMG	C2-N2	7.24	1.51	1.34
1	L5	4196	OMG	C2-N2	7.24	1.51	1.34
1	L5	4637	OMG	C2-N2	7.20	1.51	1.34
1	L5	4618	OMG	C2-N2	7.14	1.51	1.34
3	L8	75	OMG	C2-N2	7.13	1.51	1.34
1	L5	2424	OMG	C4-N3	7.11	1.51	1.34
1	L5	4228	OMG	C2-N2	7.10	1.51	1.34
1	L5	3627	OMG	C2-N2	7.09	1.51	1.34
1	L5	3899	OMG	C2-N2	7.09	1.51	1.34
1	L5	4623	OMG	C2-N2	7.09	1.51	1.34
1	L5	2876	OMG	C4-N3	7.09	1.51	1.34
46	S2	1288	OMU	C2-N1	7.08	1.49	1.38
46	S2	172	OMU	C2-N1	7.08	1.49	1.38
1	L5	4392	OMG	C2-N2	7.07	1.51	1.34
46	S2	1447	OMG	C4-N3	7.03	1.51	1.34
46	S2	601	OMG	C2-N2	7.03	1.50	1.34
46	S2	683	OMG	C4-N3	7.01	1.50	1.34
1	L5	4499	OMG	C4-N3	6.98	1.50	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
46	S2	509	OMG	C4-N3	6.96	1.50	1.34
46	S2	1328	OMG	C4-N3	6.96	1.50	1.34
46	S2	172	OMU	C2-N3	6.93	1.50	1.38
1	L5	4530	UR3	C2-N1	6.88	1.48	1.38
46	S2	436	OMG	C4-N3	6.85	1.50	1.34
46	S2	1288	OMU	C2-N3	6.85	1.50	1.38
1	L5	1625	OMG	C4-N3	6.85	1.50	1.34
1	L5	3782	5MC	C4-N3	6.84	1.45	1.34
46	S2	121	OMU	C2-N1	6.82	1.49	1.38
46	S2	1442	OMU	C2-N3	6.81	1.50	1.38
1	L5	4227	OMU	C2-N1	6.81	1.49	1.38
3	L8	75	OMG	C4-N3	6.79	1.50	1.34
46	S2	428	OMU	C2-N3	6.79	1.50	1.38
46	S2	1442	OMU	C2-N1	6.78	1.49	1.38
1	L5	4196	OMG	C4-N3	6.76	1.50	1.34
46	S2	1490	OMG	C4-N3	6.75	1.50	1.34
3	L8	14	OMU	C2-N1	6.75	1.49	1.38
1	L5	3925	OMU	C2-N1	6.74	1.49	1.38
46	S2	428	OMU	C2-N1	6.74	1.49	1.38
46	S2	116	OMU	C2-N3	6.72	1.49	1.38
46	S2	1337	4AC	C4-N3	6.70	1.44	1.32
1	L5	2415	OMU	C2-N3	6.70	1.49	1.38
46	S2	644	OMG	C4-N3	6.70	1.50	1.34
1	L5	2415	OMU	C2-N1	6.69	1.49	1.38
1	L5	4637	OMG	C4-N3	6.67	1.50	1.34
46	S2	1842	4AC	C4-N3	6.67	1.44	1.32
1	L5	4370	OMG	C4-N3	6.66	1.50	1.34
1	L5	4494	OMG	C4-N3	6.62	1.50	1.34
1	L5	4447	5MC	C4-N3	6.62	1.45	1.34
1	L5	2837	OMU	C2-N3	6.61	1.49	1.38
46	S2	601	OMG	C4-N3	6.61	1.50	1.34
46	S2	116	OMU	C2-N1	6.61	1.49	1.38
1	L5	3744	OMG	C4-N3	6.60	1.50	1.34
46	S2	354	OMU	C2-N1	6.60	1.49	1.38
1	L5	2837	OMU	C2-N1	6.60	1.49	1.38
1	L5	4498	OMU	C2-N1	6.60	1.49	1.38
46	S2	121	OMU	C2-N3	6.59	1.49	1.38
1	L5	4623	OMG	C4-N3	6.58	1.49	1.34
1	L5	4392	OMG	C4-N3	6.58	1.49	1.34
1	L5	4620	OMU	C2-N1	6.58	1.49	1.38
1	L5	4620	OMU	C2-N3	6.57	1.49	1.38
1	L5	4618	OMG	C4-N3	6.56	1.49	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
46	S2	354	OMU	C2-N3	6.56	1.49	1.38
1	L5	4227	OMU	C2-N3	6.55	1.49	1.38
3	L8	14	OMU	C2-N3	6.55	1.49	1.38
1	L5	4306	OMU	C2-N3	6.54	1.49	1.38
1	L5	3627	OMG	C4-N3	6.52	1.49	1.34
1	L5	4306	OMU	C2-N1	6.50	1.48	1.38
1	L5	4498	OMU	C2-N3	6.50	1.49	1.38
1	L5	3899	OMG	C4-N3	6.49	1.49	1.34
46	S2	1272	OMC	C2-N3	6.39	1.49	1.36
46	S2	174	OMC	C2-N3	6.37	1.49	1.36
1	L5	4228	OMG	C4-N3	6.32	1.49	1.34
46	S2	1337	4AC	C6-C5	6.31	1.49	1.35
46	S2	462	OMC	C2-N3	6.28	1.49	1.36
1	L5	2824	OMC	C2-N3	6.24	1.49	1.36
46	S2	517	OMC	C2-N3	6.23	1.49	1.36
46	S2	1391	OMC	C2-N3	6.22	1.49	1.36
1	L5	2422	OMC	C2-N3	6.20	1.48	1.36
1	L5	3925	OMU	C2-N3	6.19	1.49	1.38
46	S2	867	OMG	C2-N3	6.19	1.48	1.33
1	L5	3887	OMC	C2-N3	6.17	1.48	1.36
1	L5	2804	OMC	C2-N3	6.16	1.48	1.36
1	L5	2861	OMC	C2-N3	6.15	1.48	1.36
1	L5	3841	OMC	C2-N3	6.11	1.48	1.36
1	L5	2424	OMG	C2-N3	6.10	1.47	1.33
46	S2	1447	OMG	C2-N3	6.09	1.47	1.33
1	L5	4536	OMC	C2-N3	6.08	1.48	1.36
46	S2	1703	OMC	C6-C5	6.06	1.49	1.35
46	S2	1842	4AC	C6-C5	6.05	1.49	1.35
1	L5	4530	UR3	C6-C5	6.03	1.49	1.35
46	S2	1391	OMC	C6-C5	6.02	1.49	1.35
46	S2	1703	OMC	C2-N3	6.01	1.48	1.36
1	L5	1881	OMC	C2-N3	6.00	1.48	1.36
46	S2	174	OMC	C6-C5	5.99	1.49	1.35
1	L5	4456	OMC	C2-N3	5.99	1.48	1.36
46	S2	1272	OMC	C6-C5	5.97	1.48	1.35
1	L5	3701	OMC	C6-C5	5.96	1.48	1.35
1	L5	3701	OMC	C2-N3	5.96	1.48	1.36
46	S2	683	OMG	C2-N3	5.94	1.47	1.33
46	S2	1328	OMG	C2-N3	5.93	1.47	1.33
1	L5	2876	OMG	C2-N3	5.93	1.47	1.33
46	S2	517	OMC	C6-C5	5.93	1.48	1.35
1	L5	4456	OMC	C6-C5	5.92	1.48	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
46	S2	509	OMG	C2-N3	5.92	1.47	1.33
46	S2	1337	4AC	C2-N3	5.91	1.48	1.36
1	L5	3887	OMC	C6-C5	5.87	1.48	1.35
1	L5	2861	OMC	C6-C5	5.87	1.48	1.35
46	S2	462	OMC	C6-C5	5.87	1.48	1.35
1	L5	1881	OMC	C6-C5	5.87	1.48	1.35
1	L5	2422	OMC	C6-C5	5.86	1.48	1.35
1	L5	3841	OMC	C6-C5	5.85	1.48	1.35
1	L5	4536	OMC	C6-C5	5.85	1.48	1.35
1	L5	2351	OMC	C2-N3	5.83	1.48	1.36
1	L5	3782	5MC	C2-N3	5.82	1.48	1.36
1	L5	2824	OMC	C6-C5	5.78	1.48	1.35
1	L5	2804	OMC	C6-C5	5.78	1.48	1.35
46	S2	436	OMG	C2-N3	5.77	1.47	1.33
1	L5	4499	OMG	C2-N3	5.76	1.47	1.33
46	S2	1842	4AC	C2-N3	5.74	1.48	1.36
46	S2	644	OMG	C2-N3	5.74	1.47	1.33
1	L5	1625	OMG	C2-N3	5.73	1.47	1.33
46	S2	121	OMU	C6-C5	5.70	1.48	1.35
46	S2	1490	OMG	C2-N3	5.68	1.46	1.33
1	L5	2351	OMC	C6-C5	5.68	1.48	1.35
46	S2	172	OMU	C6-C5	5.68	1.48	1.35
46	S2	1248	B8N	C2-N1	5.66	1.56	1.39
46	S2	1288	OMU	C6-C5	5.65	1.48	1.35
46	S2	116	OMU	C6-C5	5.65	1.48	1.35
46	S2	428	OMU	C6-C5	5.64	1.48	1.35
3	L8	75	OMG	C2-N3	5.64	1.46	1.33
46	S2	1442	OMU	C6-C5	5.64	1.48	1.35
1	L5	4227	OMU	C6-C5	5.62	1.48	1.35
1	L5	4494	OMG	C2-N3	5.61	1.46	1.33
46	S2	354	OMU	C6-C5	5.60	1.48	1.35
46	S2	601	OMG	C2-N3	5.58	1.46	1.33
1	L5	4196	OMG	C2-N3	5.57	1.46	1.33
1	L5	3744	OMG	C2-N3	5.56	1.46	1.33
1	L5	4447	5MC	C2-N3	5.56	1.47	1.36
1	L5	3925	OMU	C6-C5	5.56	1.48	1.35
1	L5	4637	OMG	C2-N3	5.55	1.46	1.33
1	L5	2415	OMU	C6-C5	5.52	1.47	1.35
1	L5	4620	OMU	C6-C5	5.48	1.47	1.35
1	L5	4370	OMG	C2-N3	5.48	1.46	1.33
1	L5	4498	OMU	C6-C5	5.46	1.47	1.35
1	L5	2837	OMU	C6-C5	5.46	1.47	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	L5	4623	OMG	C2-N3	5.44	1.46	1.33
1	L5	4306	OMU	C6-C5	5.44	1.47	1.35
1	L5	4392	OMG	C2-N3	5.44	1.46	1.33
1	L5	4618	OMG	C2-N3	5.44	1.46	1.33
3	L8	14	OMU	C6-C5	5.43	1.47	1.35
1	L5	3627	OMG	C2-N3	5.40	1.46	1.33
46	S2	1326	UY1	C6-N1	5.37	1.45	1.36
1	L5	4228	OMG	C2-N3	5.32	1.46	1.33
46	S2	1272	OMC	C4-N3	5.31	1.45	1.34
1	L5	3899	OMG	C2-N3	5.28	1.45	1.33
46	S2	174	OMC	C4-N3	5.22	1.45	1.34
1	L5	2824	OMC	C4-N3	5.10	1.44	1.34
46	S2	462	OMC	C4-N3	5.10	1.44	1.34
46	S2	1391	OMC	C4-N3	5.08	1.44	1.34
1	L5	3818	UY1	C6-N1	5.04	1.44	1.36
1	L5	3887	OMC	C4-N3	5.01	1.44	1.34
1	L5	2804	OMC	C4-N3	5.00	1.44	1.34
46	S2	517	OMC	C4-N3	4.98	1.44	1.34
46	S2	1391	OMC	C4-N4	4.95	1.45	1.33
46	S2	174	OMC	C4-N4	4.92	1.45	1.33
46	S2	1272	OMC	C4-N4	4.91	1.45	1.33
1	L5	2861	OMC	C4-N3	4.91	1.44	1.34
1	L5	3841	OMC	C4-N3	4.90	1.44	1.34
1	L5	2422	OMC	C4-N3	4.89	1.44	1.34
1	L5	4530	UR3	C2-N3	4.88	1.48	1.39
1	L5	2861	OMC	C4-N4	4.82	1.45	1.33
46	S2	1703	OMC	C4-N4	4.81	1.45	1.33
1	L5	3887	OMC	C4-N4	4.80	1.45	1.33
1	L5	2824	OMC	C4-N4	4.80	1.45	1.33
1	L5	2422	OMC	C4-N4	4.78	1.45	1.33
1	L5	3782	5MC	C6-N1	4.76	1.46	1.38
1	L5	4447	5MC	C6-N1	4.76	1.46	1.38
46	S2	462	OMC	C4-N4	4.75	1.45	1.33
1	L5	4536	OMC	C4-N3	4.74	1.44	1.34
1	L5	2804	OMC	C4-N4	4.73	1.45	1.33
1	L5	3841	OMC	C4-N4	4.71	1.45	1.33
1	L5	4456	OMC	C4-N3	4.70	1.44	1.34
1	L5	1316	OMG	C6-N1	-4.70	1.30	1.38
46	S2	517	OMC	C4-N4	4.69	1.45	1.33
1	L5	1881	OMC	C4-N3	4.68	1.43	1.34
46	S2	1703	OMC	C4-N3	4.67	1.43	1.34
1	L5	4536	OMC	C4-N4	4.65	1.44	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	L5	4456	OMC	C4-N4	4.64	1.44	1.33
1	L5	1881	OMC	C4-N4	4.64	1.44	1.33
1	L5	3701	OMC	C4-N3	4.61	1.43	1.34
46	S2	1337	4AC	C7-N4	4.59	1.45	1.37
1	L5	3701	OMC	C4-N4	4.57	1.44	1.33
1	L5	3782	5MC	C2-N1	4.54	1.49	1.40
1	L5	2351	OMC	C4-N3	4.52	1.43	1.34
46	S2	517	OMC	C2-N1	4.48	1.49	1.40
1	L5	2351	OMC	C4-N4	4.46	1.44	1.33
46	S2	174	OMC	C2-N1	4.45	1.49	1.40
1	L5	4447	5MC	C2-N1	4.45	1.49	1.40
46	S2	1842	4AC	C7-N4	4.39	1.45	1.37
46	S2	1391	OMC	C2-N1	4.37	1.49	1.40
46	S2	1272	OMC	C2-N1	4.35	1.49	1.40
1	L5	2824	OMC	C2-N1	4.34	1.49	1.40
1	L5	1881	OMC	C2-N1	4.33	1.49	1.40
1	L5	2861	OMC	C2-N1	4.30	1.49	1.40
1	L5	1522	OMG	C6-N1	-4.29	1.30	1.38
46	S2	1337	4AC	C4-N4	4.26	1.45	1.39
46	S2	1703	OMC	C2-N1	4.22	1.49	1.40
1	L5	2351	OMC	C2-N1	4.21	1.49	1.40
1	L5	3744	OMG	C6-N1	4.19	1.46	1.38
1	L5	3841	OMC	C2-N1	4.18	1.49	1.40
46	S2	644	OMG	C6-N1	4.16	1.46	1.38
46	S2	462	OMC	C2-N1	4.16	1.49	1.40
46	S2	436	OMG	C6-N1	4.14	1.46	1.38
1	L5	4618	OMG	C6-N1	4.14	1.46	1.38
46	S2	509	OMG	C6-N1	4.13	1.46	1.38
1	L5	3627	OMG	C6-N1	4.11	1.46	1.38
1	L5	3887	OMC	C2-N1	4.11	1.48	1.40
1	L5	2804	OMC	C2-N1	4.11	1.48	1.40
1	L5	3782	5MC	C4-N4	4.10	1.44	1.34
46	S2	1490	OMG	C6-N1	4.10	1.46	1.38
1	L5	4228	OMG	C6-N1	4.10	1.46	1.38
1	L5	2422	OMC	C2-N1	4.10	1.48	1.40
1	L5	4447	5MC	C4-N4	4.09	1.44	1.34
46	S2	1288	OMU	C4-N3	4.09	1.45	1.38
46	S2	172	OMU	C4-N3	4.09	1.45	1.38
46	S2	867	OMG	C6-N1	4.07	1.46	1.38
46	S2	1447	OMG	C6-N1	4.07	1.46	1.38
46	S2	1337	4AC	C5-C4	4.06	1.49	1.40
46	S2	116	OMU	C4-N3	4.05	1.45	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	L5	3792	OMG	C6-N1	-4.04	1.31	1.38
1	L5	4536	OMC	C2-N1	4.04	1.48	1.40
46	S2	1442	OMU	C4-N3	4.04	1.45	1.38
1	L5	4456	OMC	C2-N1	4.02	1.48	1.40
3	L8	75	OMG	C6-N1	4.00	1.46	1.38
1	L5	4637	OMG	C6-N1	3.99	1.46	1.38
1	L5	4494	OMG	C6-N1	3.97	1.46	1.38
46	S2	428	OMU	C4-N3	3.96	1.45	1.38
1	L5	3701	OMC	C2-N1	3.96	1.48	1.40
46	S2	1328	OMG	C6-N1	3.96	1.46	1.38
1	L5	4623	OMG	C6-N1	3.93	1.46	1.38
46	S2	1842	4AC	C4-N4	3.92	1.45	1.39
46	S2	601	OMG	C6-N1	3.92	1.46	1.38
1	L5	2415	OMU	C4-N3	3.91	1.45	1.38
1	L5	398	A2M	C5-C4	3.90	1.46	1.39
1	L5	4196	OMG	C6-N1	3.89	1.46	1.38
1	L5	2424	OMG	C6-N1	3.89	1.46	1.38
1	L5	3899	OMG	C6-N1	3.86	1.46	1.38
3	L8	14	OMU	C4-N3	3.85	1.45	1.38
1	L5	4499	OMG	C6-N1	3.85	1.46	1.38
46	S2	576	A2M	C5-C4	3.82	1.46	1.39
1	L5	2364	OMG	C6-N1	-3.81	1.31	1.38
46	S2	354	OMU	C4-N3	3.81	1.45	1.38
46	S2	683	OMG	C6-N1	3.80	1.45	1.38
46	S2	121	OMU	C4-N3	3.80	1.45	1.38
46	S2	1842	4AC	C2-N1	3.79	1.48	1.40
46	S2	1804	OMU	C4-N3	-3.79	1.31	1.38
1	L5	4227	OMU	C4-N3	3.79	1.45	1.38
46	S2	166	A2M	C5-C4	3.78	1.46	1.39
46	S2	1337	4AC	C2-N1	3.78	1.48	1.40
1	L5	2787	A2M	C5-N7	-3.78	1.31	1.39
46	S2	590	A2M	C5-C4	3.77	1.46	1.39
1	L5	4498	OMU	C4-N3	3.77	1.45	1.38
46	S2	1842	4AC	C5-C4	3.73	1.48	1.40
1	L5	1625	OMG	C6-N1	3.73	1.45	1.38
1	L5	4370	OMG	C6-N1	3.71	1.45	1.38
46	S2	609	PSU	C6-C5	3.71	1.39	1.35
1	L5	3867	A2M	C5-N7	-3.70	1.32	1.39
1	L5	4620	OMU	C4-N3	3.68	1.45	1.38
1	L5	4306	OMU	C4-N3	3.64	1.45	1.38
1	L5	2837	OMU	C4-N3	3.63	1.45	1.38
46	S2	866	PSU	C6-C5	3.63	1.39	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	L5	4392	OMG	O6-C6	-3.62	1.16	1.23
1	L5	2876	OMG	C6-N1	3.60	1.45	1.38
1	L5	4392	OMG	C6-N1	3.59	1.45	1.38
46	S2	512	A2M	C5-C4	3.57	1.45	1.39
1	L5	1316	OMG	C5-N7	-3.56	1.32	1.39
1	L5	3925	OMU	C4-N3	3.56	1.44	1.38
1	L5	1323	A2M	C5-N7	-3.55	1.32	1.39
46	S2	822	PSU	C6-C5	3.55	1.39	1.35
46	S2	159	A2M	C5-C4	3.53	1.45	1.39
46	S2	801	PSU	C6-C5	3.53	1.39	1.35
1	L5	4447	5MC	O2-C2	-3.50	1.17	1.23
1	L5	3724	A2M	C5-C4	3.49	1.45	1.39
1	L5	3718	A2M	C5-C4	3.49	1.45	1.39
46	S2	1003	PSU	C6-C5	3.48	1.39	1.35
1	L5	1524	A2M	C5-N7	-3.48	1.32	1.39
1	L5	4370	OMG	O6-C6	-3.47	1.17	1.23
1	L5	1625	OMG	C5-N7	-3.47	1.32	1.39
1	L5	3899	OMG	O6-C6	-3.47	1.17	1.23
1	L5	4228	OMG	C4-N9	-3.47	1.29	1.38
1	L5	1534	A2M	C5-N7	-3.46	1.32	1.39
46	S2	683	OMG	C5-N7	-3.46	1.32	1.39
1	L5	1625	OMG	O6-C6	-3.45	1.17	1.23
46	S2	668	A2M	C5-N7	-3.44	1.32	1.39
1	L5	3899	OMG	C4-N9	-3.44	1.29	1.38
46	S2	1850	MA6	C5-N7	-3.43	1.32	1.39
46	S2	1367	PSU	C6-C5	3.42	1.39	1.35
46	S2	93	PSU	C6-C5	3.42	1.39	1.35
1	L5	2401	A2M	C5-N7	-3.41	1.32	1.39
1	L5	2815	A2M	C5-N7	-3.41	1.32	1.39
46	S2	1383	A2M	C5-C4	3.40	1.45	1.39
1	L5	5010	PSU	C6-C5	3.40	1.39	1.35
46	S2	484	A2M	C5-C4	3.39	1.45	1.39
46	S2	1625	PSU	C6-C5	3.39	1.39	1.35
1	L5	2876	OMG	C5-N7	-3.39	1.32	1.39
1	L5	2363	A2M	C5-N7	-3.39	1.32	1.39
1	L5	2876	OMG	O6-C6	-3.38	1.17	1.23
1	L5	4499	OMG	O6-C6	-3.38	1.17	1.23
1	L5	2424	OMG	C5-N7	-3.38	1.32	1.39
46	S2	436	OMG	O6-C6	-3.37	1.17	1.23
1	L5	4523	A2M	C5-N7	-3.37	1.32	1.39
1	L5	4571	A2M	C5-N7	-3.37	1.32	1.39
1	L5	1792	PSU	C6-C5	3.36	1.39	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	L5	4228	OMG	O6-C6	-3.36	1.17	1.23
46	S2	218	PSU	C6-C5	3.36	1.39	1.35
1	L5	4618	OMG	O6-C6	-3.36	1.17	1.23
1	L5	1677	PSU	C6-C5	3.36	1.39	1.35
1	L5	1326	A2M	C5-N7	-3.36	1.32	1.39
1	L5	4623	OMG	O6-C6	-3.36	1.17	1.23
46	S2	99	A2M	C5-C4	3.35	1.45	1.39
46	S2	815	PSU	C6-C5	3.35	1.39	1.35
1	L5	4196	OMG	C5-N7	-3.35	1.32	1.39
1	L5	4637	OMG	O6-C6	-3.34	1.17	1.23
1	L5	4494	OMG	O6-C6	-3.34	1.17	1.23
46	S2	509	OMG	O6-C6	-3.34	1.17	1.23
46	S2	601	OMG	O6-C6	-3.34	1.17	1.23
46	S2	683	OMG	O6-C6	-3.34	1.17	1.23
1	L5	3764	PSU	C6-C5	3.33	1.39	1.35
1	L5	3867	A2M	C4-N9	-3.33	1.30	1.37
1	L5	1322	1MA	C5-N7	-3.33	1.32	1.39
46	S2	1326	UY1	C4-N3	3.33	1.45	1.38
1	L5	4196	OMG	O6-C6	-3.32	1.17	1.23
46	S2	1447	OMG	C2-N1	3.32	1.45	1.37
1	L5	1782	PSU	C6-C5	3.32	1.39	1.35
46	S2	300	PSU	C6-C5	3.32	1.39	1.35
46	S2	296	PSU	C6-C5	3.31	1.39	1.35
46	S2	651	PSU	C6-C5	3.31	1.39	1.35
46	S2	63	PSU	C6-C5	3.31	1.39	1.35
46	S2	468	A2M	C5-C4	3.30	1.45	1.39
1	L5	4590	A2M	C5-C4	3.30	1.45	1.39
46	S2	867	OMG	C2-N1	3.30	1.45	1.37
1	L5	4392	OMG	C5-N7	-3.30	1.32	1.39
3	L8	55	PSU	C6-C5	3.29	1.39	1.35
1	L5	3818	UY1	C4-N3	3.29	1.45	1.38
46	S2	649	PSU	C6-C5	3.29	1.39	1.35
3	L8	75	OMG	O6-C6	-3.29	1.17	1.23
46	S2	668	A2M	C5-C4	3.29	1.45	1.39
46	S2	686	PSU	C6-C5	3.29	1.39	1.35
1	L5	1781	PSU	C6-C5	3.29	1.39	1.35
46	S2	572	PSU	C6-C5	3.29	1.39	1.35
1	L5	3782	5MC	O2-C2	-3.29	1.17	1.23
46	S2	966	PSU	C6-C5	3.28	1.39	1.35
1	L5	1534	A2M	C5-C4	3.28	1.45	1.39
46	S2	681	PSU	C6-C5	3.28	1.39	1.35
1	L5	3627	OMG	O6-C6	-3.28	1.17	1.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	L5	4618	OMG	C4-N9	-3.27	1.29	1.38
1	L5	3730	PSU	C6-C5	3.27	1.39	1.35
1	L5	3744	OMG	O6-C6	-3.27	1.17	1.23
1	L5	1871	A2M	C5-N7	-3.27	1.32	1.39
46	S2	406	PSU	C6-C5	3.27	1.39	1.35
1	L5	4296	PSU	C6-C5	3.26	1.39	1.35
46	S2	119	PSU	C6-C5	3.26	1.39	1.35
1	L5	4471	PSU	C6-C5	3.26	1.39	1.35
1	L5	3627	OMG	C4-N9	-3.26	1.29	1.38
46	S2	1238	PSU	C6-C5	3.26	1.39	1.35
1	L5	2815	A2M	C5-C4	3.25	1.45	1.39
1	L5	4431	PSU	C6-C5	3.25	1.39	1.35
1	L5	4571	A2M	C5-C4	3.25	1.45	1.39
46	S2	1174	PSU	C6-C5	3.25	1.39	1.35
1	L5	2424	OMG	O6-C6	-3.24	1.17	1.23
46	S2	34	PSU	C6-C5	3.24	1.39	1.35
46	S2	99	A2M	C5-N7	-3.24	1.32	1.39
1	L5	4576	PSU	C6-C5	3.24	1.39	1.35
46	S2	1031	A2M	C5-N7	-3.24	1.32	1.39
46	S2	1328	OMG	O6-C6	-3.24	1.17	1.23
46	S2	174	OMC	C6-N1	3.24	1.45	1.38
46	S2	1850	MA6	C8-N9	-3.23	1.31	1.37
46	S2	1337	4AC	O2-C2	-3.23	1.17	1.23
46	S2	644	OMG	O6-C6	-3.23	1.17	1.23
46	S2	1490	OMG	C2-N1	3.23	1.45	1.37
1	L5	4494	OMG	C5-N7	-3.22	1.32	1.39
46	S2	644	OMG	C2-N1	3.22	1.45	1.37
1	L5	4532	PSU	C6-C5	3.22	1.39	1.35
1	L5	4228	OMG	C2-N1	3.22	1.45	1.37
1	L5	3715	PSU	C6-C5	3.22	1.39	1.35
46	S2	509	OMG	C5-N7	-3.22	1.32	1.39
1	L5	4499	OMG	C5-N7	-3.22	1.32	1.39
1	L5	400	A2M	C5-C4	3.22	1.45	1.39
1	L5	3695	PSU	C6-C5	3.22	1.39	1.35
46	S2	1272	OMC	C6-N1	3.22	1.45	1.38
46	S2	1447	OMG	O6-C6	-3.22	1.17	1.23
1	L5	4623	OMG	C4-N9	-3.21	1.29	1.38
46	S2	1596	PSU	C6-C5	3.21	1.39	1.35
46	S2	1804	OMU	C2-N3	-3.21	1.32	1.38
46	S2	1490	OMG	O6-C6	-3.21	1.17	1.23
1	L5	1522	OMG	C5-N7	-3.21	1.32	1.39
1	L5	4521	PSU	C6-C5	3.21	1.39	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	L5	3627	OMG	C2-N1	3.20	1.45	1.37
46	S2	601	OMG	C5-N7	-3.20	1.32	1.39
46	S2	436	OMG	C2-N1	3.20	1.45	1.37
46	S2	1692	PSU	C6-C5	3.20	1.39	1.35
46	S2	517	OMC	C6-N1	3.20	1.45	1.38
1	L5	4498	OMU	O4-C4	-3.20	1.18	1.24
46	S2	1244	PSU	C6-C5	3.20	1.39	1.35
46	S2	1328	OMG	C2-N1	3.20	1.45	1.37
1	L5	4494	OMG	C2-N1	3.20	1.45	1.37
46	S2	1490	OMG	C5-N7	-3.19	1.32	1.39
46	S2	918	PSU	C6-C5	3.19	1.39	1.35
1	L5	4306	OMU	O4-C4	-3.19	1.18	1.24
46	S2	1045	PSU	C6-C5	3.19	1.39	1.35
46	S2	27	A2M	C5-C4	3.19	1.45	1.39
1	L5	4403	PSU	C6-C5	3.19	1.39	1.35
1	L5	4499	OMG	C2-N1	3.19	1.45	1.37
1	L5	3825	A2M	C5-N7	-3.19	1.33	1.39
46	S2	1447	OMG	C5-N7	-3.19	1.32	1.39
1	L5	1860	PSU	C6-C5	3.19	1.39	1.35
1	L5	4353	PSU	C6-C5	3.19	1.39	1.35
1	L5	4637	OMG	C5-N7	-3.18	1.32	1.39
46	S2	1445	PSU	C6-C5	3.18	1.39	1.35
46	S2	109	PSU	C6-C5	3.18	1.39	1.35
46	S2	867	OMG	C5-N7	-3.18	1.32	1.39
1	L5	4196	OMG	C2-N1	3.18	1.45	1.37
3	L8	75	OMG	C5-N7	-3.18	1.32	1.39
1	L5	3899	OMG	C5-N7	-3.18	1.32	1.39
1	L5	1862	PSU	C6-C5	3.17	1.39	1.35
46	S2	590	A2M	C5-N7	-3.17	1.33	1.39
1	L5	4618	OMG	C2-N1	3.17	1.45	1.37
46	S2	814	PSU	C6-C5	3.16	1.39	1.35
1	L5	3744	OMG	C5-N7	-3.16	1.32	1.39
46	S2	1328	OMG	C5-N7	-3.16	1.32	1.39
46	S2	644	OMG	C5-N7	-3.16	1.32	1.39
1	L5	2508	PSU	C6-C5	3.16	1.39	1.35
1	L5	5001	PSU	C6-C5	3.16	1.39	1.35
1	L5	3627	OMG	C5-N7	-3.16	1.33	1.39
1	L5	3884	PSU	C6-C5	3.15	1.39	1.35
1	L5	4689	PSU	C6-C5	3.15	1.39	1.35
1	L5	2632	PSU	C6-C5	3.15	1.39	1.35
46	S2	36	PSU	C6-C5	3.15	1.39	1.35
1	L5	3744	OMG	C2-N1	3.15	1.45	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	L5	3785	A2M	C4-N9	-3.15	1.30	1.37
46	S2	1347	PSU	C6-C5	3.15	1.39	1.35
1	L5	3925	OMU	O4-C4	-3.15	1.18	1.24
3	L8	69	PSU	C6-C5	3.15	1.39	1.35
46	S2	1703	OMC	C6-N1	3.15	1.45	1.38
1	L5	3768	PSU	C6-C5	3.15	1.39	1.35
1	L5	4637	OMG	C2-N1	3.15	1.45	1.37
1	L5	3701	OMC	C6-N1	3.14	1.45	1.38
1	L5	1744	PSU	C6-C5	3.14	1.39	1.35
3	L8	75	OMG	C2-N1	3.14	1.45	1.37
46	S2	436	OMG	C5-N7	-3.14	1.33	1.39
1	L5	4500	PSU	C6-C5	3.14	1.39	1.35
46	S2	1851	MA6	C4-N9	-3.14	1.30	1.37
1	L5	4972	PSU	C6-C5	3.14	1.39	1.35
46	S2	105	PSU	C6-C5	3.13	1.39	1.35
46	S2	27	A2M	C5-N7	-3.13	1.33	1.39
46	S2	484	A2M	C5-N7	-3.13	1.33	1.39
1	L5	4618	OMG	C5-N7	-3.13	1.33	1.39
1	L5	3887	OMC	C6-N1	3.13	1.45	1.38
1	L5	1683	PSU	C6-C5	3.13	1.39	1.35
1	L5	4973	PSU	C6-C5	3.13	1.39	1.35
1	L5	4299	PSU	C6-C5	3.12	1.39	1.35
46	S2	1136	PSU	C6-C5	3.12	1.39	1.35
1	L5	4456	OMC	O2-C2	-3.12	1.17	1.23
46	S2	683	OMG	C2-N1	3.12	1.45	1.37
46	S2	1678	A2M	C5-C4	3.12	1.44	1.39
1	L5	4590	A2M	C5-N7	-3.12	1.33	1.39
46	S2	509	OMG	C2-N1	3.12	1.45	1.37
1	L5	4673	PSU	C6-C5	3.12	1.39	1.35
1	L5	2424	OMG	C2-N1	3.12	1.45	1.37
46	S2	1678	A2M	C5-N7	-3.12	1.33	1.39
46	S2	1643	PSU	C6-C5	3.12	1.39	1.35
46	S2	1391	OMC	C6-N1	3.12	1.45	1.38
1	L5	4623	OMG	C2-N1	3.11	1.45	1.37
1	L5	3744	OMG	C4-N9	-3.11	1.30	1.38
1	L5	3762	PSU	C6-C5	3.11	1.39	1.35
1	L5	4493	PSU	C6-C5	3.11	1.39	1.35
46	S2	667	PSU	C6-C5	3.11	1.38	1.35
46	S2	1056	PSU	C6-C5	3.11	1.38	1.35
1	L5	4392	OMG	C4-N9	-3.11	1.30	1.38
46	S2	1177	PSU	C6-C5	3.11	1.38	1.35
1	L5	1582	PSU	C6-C5	3.11	1.38	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	L5	4370	OMG	C4-N9	-3.11	1.30	1.38
46	S2	867	OMG	O6-C6	-3.11	1.17	1.23
1	L5	4637	OMG	C4-N9	-3.10	1.30	1.38
1	L5	4552	PSU	C6-C5	3.10	1.38	1.35
1	L5	4370	OMG	C5-N7	-3.10	1.33	1.39
1	L5	2824	OMC	C6-N1	3.09	1.45	1.38
1	L5	4442	PSU	C6-C5	3.09	1.38	1.35
46	S2	462	OMC	C6-N1	3.09	1.45	1.38
1	L5	2839	PSU	C6-C5	3.09	1.38	1.35
1	L5	3770	PSU	C6-C5	3.08	1.38	1.35
1	L5	3830	A2M	C5-N7	-3.08	1.33	1.39
1	L5	2843	PSU	C6-C5	3.08	1.38	1.35
1	L5	3851	PSU	C6-C5	3.08	1.38	1.35
1	L5	2837	OMU	O4-C4	-3.08	1.18	1.24
46	S2	100	PSU	C6-C5	3.08	1.38	1.35
1	L5	4623	OMG	C5-N7	-3.07	1.33	1.39
46	S2	863	PSU	C6-C5	3.07	1.38	1.35
3	L8	14	OMU	O4-C4	-3.07	1.18	1.24
1	L5	2351	OMC	C6-N1	3.07	1.45	1.38
46	S2	601	OMG	C2-N1	3.07	1.45	1.37
1	L5	3830	A2M	C4-N9	-3.07	1.30	1.37
1	L5	1536	PSU	C6-C5	3.07	1.38	1.35
1	L5	1881	OMC	C6-N1	3.07	1.45	1.38
1	L5	4196	OMG	C4-N9	-3.07	1.30	1.38
1	L5	4392	OMG	C2-N1	3.07	1.45	1.37
1	L5	3785	A2M	C5-N7	-3.06	1.33	1.39
1	L5	4227	OMU	O4-C4	-3.06	1.18	1.24
1	L5	3844	PSU	C6-C5	3.06	1.38	1.35
1	L5	2804	OMC	C6-N1	3.06	1.45	1.38
1	L5	2415	OMU	O4-C4	-3.06	1.18	1.24
46	S2	1004	PSU	C6-C5	3.06	1.38	1.35
1	L5	4620	OMU	O4-C4	-3.05	1.18	1.24
1	L5	2861	OMC	C6-N1	3.05	1.45	1.38
1	L5	4494	OMG	C4-N9	-3.05	1.30	1.38
46	S2	1232	PSU	C6-C5	3.05	1.38	1.35
1	L5	3639	PSU	C6-C5	3.05	1.38	1.35
1	L5	1316	OMG	C4-N9	-3.05	1.30	1.38
1	L5	4579	PSU	C6-C5	3.04	1.38	1.35
1	L5	4571	A2M	C4-N9	-3.04	1.30	1.37
1	L5	2422	OMC	C6-N1	3.04	1.45	1.38
1	L5	4423	PSU	C6-C5	3.04	1.38	1.35
46	S2	1046	PSU	C6-C5	3.04	1.38	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
46	S2	1850	MA6	C4-N9	-3.04	1.30	1.37
46	S2	354	OMU	O4-C4	-3.04	1.18	1.24
1	L5	4536	OMC	O2-C2	-3.04	1.18	1.23
1	L5	1524	A2M	C4-N9	-3.03	1.30	1.37
1	L5	4628	PSU	C6-C5	3.03	1.38	1.35
1	L5	3718	A2M	C4-N9	-3.03	1.30	1.37
3	L8	75	OMG	C4-N9	-3.02	1.30	1.38
1	L5	3637	PSU	C6-C5	3.02	1.38	1.35
46	S2	121	OMU	O4-C4	-3.02	1.18	1.24
46	S2	1850	MA6	C5-C4	3.02	1.44	1.39
46	S2	428	OMU	O4-C4	-3.01	1.18	1.24
46	S2	1842	4AC	C6-N1	3.00	1.45	1.38
1	L5	3853	PSU	C6-C5	3.00	1.38	1.35
1	L5	1779	PSU	C6-C5	3.00	1.38	1.35
1	L5	4636	PSU	C6-C5	3.00	1.38	1.35
1	L5	3841	OMC	C6-N1	3.00	1.45	1.38
1	L5	1534	A2M	C4-N9	-2.99	1.31	1.37
1	L5	1625	OMG	C4-N9	-2.99	1.30	1.38
1	L5	4293	PSU	C6-C5	2.99	1.38	1.35
1	L5	2787	A2M	C5-C4	2.99	1.44	1.39
46	S2	366	PSU	C6-C5	2.98	1.38	1.35
1	L5	4536	OMC	C6-N1	2.98	1.45	1.38
46	S2	1703	OMC	O2-C2	-2.98	1.18	1.23
1	L5	1625	OMG	C2-N1	2.98	1.45	1.37
1	L5	3822	PSU	C6-C5	2.98	1.38	1.35
46	S2	601	OMG	C4-N9	-2.97	1.30	1.38
1	L5	1340	OMC	C5-C4	-2.97	1.36	1.42
46	S2	1326	UY1	C1'-C5	2.97	1.57	1.50
1	L5	3899	OMG	C2-N1	2.97	1.45	1.37
1	L5	4361	PSU	C6-C5	2.97	1.38	1.35
46	S2	116	OMU	O4-C4	-2.97	1.18	1.24
1	L5	4370	OMG	C2-N1	2.96	1.45	1.37
46	S2	1851	MA6	C5-C4	2.96	1.44	1.39
1	L5	3841	OMC	O2-C2	-2.96	1.18	1.23
1	L5	2351	OMC	O2-C2	-2.96	1.18	1.23
46	S2	1186	PSU	C6-C5	2.96	1.38	1.35
1	L5	3718	A2M	C5-N7	-2.96	1.33	1.39
1	L5	2876	OMG	C2-N1	2.95	1.45	1.37
1	L5	4456	OMC	C6-N1	2.95	1.45	1.38
1	L5	1326	A2M	C8-N9	-2.95	1.32	1.37
1	L5	2787	A2M	C4-N9	-2.95	1.31	1.37
46	S2	1337	4AC	C6-N1	2.94	1.45	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	L5	4457	PSU	C6-C5	2.94	1.38	1.35
1	L5	2861	OMC	O2-C2	-2.93	1.18	1.23
46	S2	1360	PSU	C6-C5	2.93	1.38	1.35
1	L5	3701	OMC	O2-C2	-2.93	1.18	1.23
46	S2	436	OMG	C4-N9	-2.93	1.30	1.38
46	S2	1383	A2M	C5-N7	-2.93	1.33	1.39
1	L5	4530	UR3	C6-N1	2.93	1.45	1.38
1	L5	4220	6MZ	C5-C4	-2.92	1.33	1.39
1	L5	2422	OMC	O2-C2	-2.92	1.18	1.23
46	S2	172	OMU	O4-C4	-2.91	1.18	1.24
1	L5	2364	OMG	C4-N9	-2.91	1.30	1.38
1	L5	1871	A2M	C4-N9	-2.91	1.31	1.37
46	S2	1490	OMG	C4-N9	-2.91	1.30	1.38
46	S2	1842	4AC	O2-C2	-2.91	1.18	1.23
1	L5	2363	A2M	C8-N9	-2.91	1.32	1.37
1	L5	4228	OMG	C5-N7	-2.91	1.33	1.39
1	L5	1534	A2M	C8-N9	-2.91	1.32	1.37
1	L5	2364	OMG	C5-N7	-2.90	1.33	1.39
1	L5	1323	A2M	C8-N9	-2.90	1.32	1.37
46	S2	644	OMG	C4-N9	-2.90	1.30	1.38
46	S2	644	OMG	C5-C6	2.90	1.55	1.44
1	L5	3887	OMC	O2-C2	-2.90	1.18	1.23
1	L5	400	A2M	C5-N7	-2.89	1.33	1.39
1	L5	3724	A2M	C5-N7	-2.89	1.33	1.39
46	S2	1288	OMU	O4-C4	-2.88	1.18	1.24
1	L5	2401	A2M	C8-N9	-2.88	1.32	1.37
1	L5	2363	A2M	C4-N9	-2.88	1.31	1.37
1	L5	4312	PSU	C6-C5	2.87	1.38	1.35
46	S2	1442	OMU	O4-C4	-2.87	1.18	1.24
1	L5	2401	A2M	C4-N9	-2.86	1.31	1.37
1	L5	3792	OMG	C5-N7	-2.86	1.33	1.39
1	L5	1881	OMC	O2-C2	-2.86	1.18	1.23
46	S2	867	OMG	C5-C6	2.85	1.55	1.44
1	L5	3825	A2M	C4-N9	-2.85	1.31	1.37
1	L5	4228	OMG	C5-C6	2.84	1.54	1.44
1	L5	4637	OMG	C5-C6	2.84	1.54	1.44
1	L5	2824	OMC	O2-C2	-2.84	1.18	1.23
1	L5	3920	PSU	C6-C5	2.84	1.38	1.35
46	S2	1288	OMU	C6-N1	2.83	1.44	1.38
1	L5	4623	OMG	C5-C6	2.83	1.54	1.44
46	S2	462	OMC	O2-C2	-2.82	1.18	1.23
1	L5	3818	UY1	C1'-C5	2.82	1.56	1.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	L5	4499	OMG	C4-N9	-2.82	1.30	1.38
1	L5	4618	OMG	C5-C6	2.82	1.54	1.44
1	L5	2804	OMC	O2-C2	-2.82	1.18	1.23
46	S2	1447	OMG	C5-C6	2.81	1.54	1.44
46	S2	1678	A2M	C4-N9	-2.81	1.31	1.37
46	S2	1031	A2M	C4-N9	-2.81	1.31	1.37
1	L5	3744	OMG	C5-C6	2.80	1.54	1.44
1	L5	2401	A2M	C5-C4	2.80	1.44	1.39
46	S2	27	A2M	C4-N9	-2.80	1.31	1.37
1	L5	4523	A2M	C5-C4	2.80	1.44	1.39
1	L5	1871	A2M	C5-C4	2.80	1.44	1.39
46	S2	1031	A2M	C5-C4	2.80	1.44	1.39
1	L5	1326	A2M	C4-N9	-2.79	1.31	1.37
46	S2	1442	OMU	C6-N1	2.79	1.44	1.38
1	L5	3825	A2M	C5-C4	2.79	1.44	1.39
1	L5	3825	A2M	C8-N9	-2.78	1.32	1.37
46	S2	172	OMU	C6-N1	2.78	1.44	1.38
1	L5	3785	A2M	C5-C4	2.78	1.44	1.39
3	L8	75	OMG	C5-C6	2.77	1.54	1.44
46	S2	174	OMC	O2-C2	-2.77	1.18	1.23
1	L5	4227	OMU	C6-N1	2.77	1.44	1.38
1	L5	3627	OMG	C5-C6	2.77	1.54	1.44
1	L5	1323	A2M	C4-N9	-2.76	1.31	1.37
3	L8	14	OMU	O2-C2	-2.76	1.18	1.23
46	S2	509	OMG	C5-C6	2.76	1.54	1.44
46	S2	601	OMG	C5-C6	2.75	1.54	1.44
46	S2	1391	OMC	O2-C2	-2.75	1.18	1.23
46	S2	1490	OMG	C5-C6	2.75	1.54	1.44
46	S2	116	OMU	C6-N1	2.75	1.44	1.38
46	S2	1328	OMG	C5-C6	2.74	1.54	1.44
46	S2	121	OMU	C6-N1	2.74	1.44	1.38
1	L5	398	A2M	C5-N7	-2.74	1.33	1.39
46	S2	436	OMG	C5-C6	2.74	1.54	1.44
1	L5	4523	A2M	C4-N9	-2.73	1.31	1.37
46	S2	509	OMG	C4-N9	-2.73	1.31	1.38
1	L5	1524	A2M	C8-N9	-2.73	1.32	1.37
1	L5	3867	A2M	C5-C4	2.73	1.44	1.39
1	L5	4494	OMG	C5-C6	2.73	1.54	1.44
1	L5	4499	OMG	C5-C6	2.73	1.54	1.44
3	L8	14	OMU	C6-N1	2.72	1.44	1.38
46	S2	428	OMU	C6-N1	2.72	1.44	1.38
1	L5	4392	OMG	C5-C6	2.72	1.54	1.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
46	S2	683	OMG	C4-N9	-2.72	1.31	1.38
1	L5	3830	A2M	C5-C4	2.72	1.44	1.39
1	L5	4220	6MZ	C5-N7	-2.71	1.33	1.39
46	S2	159	A2M	C5-N7	-2.71	1.33	1.39
1	L5	2787	A2M	C8-N9	-2.71	1.32	1.37
1	L5	4523	A2M	C8-N9	-2.71	1.32	1.37
1	L5	4370	OMG	C5-C6	2.71	1.54	1.44
46	S2	354	OMU	C6-N1	2.70	1.44	1.38
1	L5	4196	OMG	C5-C6	2.68	1.54	1.44
46	S2	517	OMC	O2-C2	-2.68	1.18	1.23
1	L5	2363	A2M	C5-C4	2.68	1.44	1.39
1	L5	4498	OMU	O2-C2	-2.68	1.18	1.23
46	S2	1832	6MZ	C5-C4	-2.67	1.34	1.39
46	S2	1031	A2M	C8-N9	-2.67	1.32	1.37
1	L5	2876	OMG	C4-N9	-2.67	1.31	1.38
46	S2	1851	MA6	C5-N7	-2.67	1.34	1.39
1	L5	2415	OMU	C6-N1	2.67	1.44	1.38
46	S2	468	A2M	C5-N7	-2.67	1.34	1.39
1	L5	3899	OMG	C5-C6	2.67	1.54	1.44
46	S2	668	A2M	C4-N9	-2.66	1.31	1.37
1	L5	1871	A2M	C8-N9	-2.66	1.32	1.37
1	L5	4498	OMU	C6-N1	2.66	1.44	1.38
46	S2	166	A2M	C5-N7	-2.66	1.34	1.39
46	S2	1272	OMC	O2-C2	-2.66	1.18	1.23
46	S2	512	A2M	C5-N7	-2.65	1.34	1.39
1	L5	4620	OMU	C6-N1	2.65	1.44	1.38
46	S2	1328	OMG	C4-N9	-2.65	1.31	1.38
1	L5	2424	OMG	C5-C6	2.64	1.54	1.44
1	L5	2876	OMG	C5-C6	2.63	1.54	1.44
1	L5	2815	A2M	C4-N9	-2.63	1.31	1.37
46	S2	683	OMG	C5-C6	2.62	1.54	1.44
1	L5	2837	OMU	C6-N1	2.62	1.44	1.38
46	S2	668	A2M	C8-N9	-2.62	1.32	1.37
1	L5	3925	OMU	C6-N1	2.62	1.44	1.38
1	L5	2815	A2M	C8-N9	-2.62	1.32	1.37
1	L5	3792	OMG	C2-N1	-2.61	1.31	1.37
1	L5	4571	A2M	C8-N9	-2.60	1.32	1.37
1	L5	4306	OMU	C6-N1	2.60	1.44	1.38
46	S2	1447	OMG	C4-N9	-2.58	1.31	1.38
1	L5	3792	OMG	C4-N9	-2.58	1.31	1.38
46	S2	99	A2M	C4-N9	-2.58	1.32	1.37
1	L5	400	A2M	C4-N9	-2.58	1.32	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	L5	1625	OMG	C5-C6	2.56	1.53	1.44
46	S2	1832	6MZ	C5-N7	-2.56	1.34	1.39
1	L5	3785	A2M	C8-N9	-2.56	1.32	1.37
1	L5	3925	OMU	O2-C2	-2.56	1.18	1.23
1	L5	4306	OMU	O2-C2	-2.56	1.18	1.23
1	L5	1316	OMG	C2-N1	-2.55	1.31	1.37
1	L5	4590	A2M	C4-N9	-2.53	1.32	1.37
1	L5	1326	A2M	C5-C4	2.52	1.43	1.39
1	L5	2837	OMU	O2-C2	-2.52	1.18	1.23
1	L5	3701	OMC	C5-C4	2.51	1.48	1.42
46	S2	484	A2M	C4-N9	-2.51	1.32	1.37
1	L5	3818	UY1	O4'-C1'	-2.51	1.40	1.43
46	S2	1248	B8N	O2-C2	-2.49	1.18	1.22
1	L5	4620	OMU	O2-C2	-2.49	1.18	1.23
46	S2	1326	UY1	O4-C4	-2.48	1.18	1.23
46	S2	174	OMC	C5-C4	2.48	1.48	1.42
1	L5	398	A2M	C4-N9	-2.48	1.32	1.37
1	L5	2424	OMG	C4-N9	-2.47	1.31	1.38
1	L5	1524	A2M	C5-C4	2.47	1.43	1.39
1	L5	3869	OMC	C5-C4	-2.47	1.37	1.42
46	S2	428	OMU	O2-C2	-2.46	1.18	1.23
1	L5	3830	A2M	C8-N9	-2.46	1.33	1.37
1	L5	4227	OMU	O2-C2	-2.46	1.18	1.23
46	S2	1851	MA6	C8-N9	-2.45	1.33	1.37
46	S2	576	A2M	C5-N7	-2.44	1.34	1.39
46	S2	99	A2M	C8-N9	-2.44	1.33	1.37
46	S2	172	OMU	C5-C4	2.44	1.49	1.43
1	L5	1522	OMG	C4-N9	-2.44	1.31	1.38
1	L5	1522	OMG	C2-N1	-2.43	1.31	1.37
46	S2	1272	OMC	C5-C4	2.43	1.48	1.42
1	L5	2415	OMU	O2-C2	-2.43	1.18	1.23
46	S2	159	A2M	C8-N9	-2.43	1.33	1.37
1	L5	400	A2M	C8-N9	-2.43	1.33	1.37
46	S2	1804	OMU	C5-C4	-2.43	1.38	1.43
46	S2	121	OMU	O2-C2	-2.42	1.18	1.23
1	L5	3785	A2M	O5'-C5'	-2.42	1.38	1.44
1	L5	1340	OMC	C6-N1	-2.41	1.32	1.38
46	S2	462	OMC	C5-C4	2.41	1.48	1.42
46	S2	590	A2M	C4-N9	-2.41	1.32	1.37
46	S2	116	OMU	O2-C2	-2.40	1.18	1.23
1	L5	1322	1MA	C4-N9	-2.39	1.31	1.38
46	S2	1703	OMC	C5-C4	2.39	1.48	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
46	S2	484	A2M	C8-N9	-2.38	1.33	1.37
46	S2	517	OMC	C5-C4	2.38	1.48	1.42
1	L5	4227	OMU	C5-C4	2.37	1.48	1.43
46	S2	1391	OMC	C5-C4	2.37	1.48	1.42
1	L5	3818	UY1	O4-C4	-2.37	1.19	1.23
46	S2	354	OMU	O2-C2	-2.37	1.18	1.23
1	L5	3867	A2M	C8-N9	-2.37	1.33	1.37
1	L5	1323	A2M	C5-C4	2.37	1.43	1.39
46	S2	159	A2M	C4-N9	-2.36	1.32	1.37
46	S2	1832	6MZ	C8-N9	-2.36	1.33	1.37
1	L5	4220	6MZ	C8-N9	-2.36	1.33	1.37
1	L5	2824	OMC	C5-C4	2.36	1.48	1.42
1	L5	2422	OMC	C5-C4	2.36	1.48	1.42
46	S2	1442	OMU	C5-C4	2.35	1.48	1.43
46	S2	1288	OMU	C5-C4	2.35	1.48	1.43
1	L5	4590	A2M	C8-N9	-2.35	1.33	1.37
46	S2	576	A2M	C5-C6	2.34	1.47	1.41
1	L5	3808	OMC	C5-C4	-2.33	1.37	1.42
46	S2	512	A2M	C4-N9	-2.33	1.32	1.37
1	L5	2364	OMG	C2-N1	-2.33	1.31	1.37
46	S2	867	OMG	C4-N9	-2.33	1.32	1.38
46	S2	1442	OMU	O2-C2	-2.32	1.18	1.23
1	L5	1881	OMC	C5-C4	2.32	1.48	1.42
46	S2	918	PSU	O4'-C1'	-2.32	1.40	1.43
1	L5	1534	A2M	C5-C6	2.32	1.47	1.41
1	L5	3792	OMG	O4'-C4'	-2.31	1.39	1.45
46	S2	468	A2M	C4-N9	-2.31	1.32	1.37
1	L5	2861	OMC	C5-C4	2.31	1.48	1.42
1	L5	3841	OMC	C5-C4	2.30	1.48	1.42
1	L5	4456	OMC	C5-C4	2.30	1.48	1.42
46	S2	1804	OMU	C6-N1	-2.30	1.32	1.38
1	L5	3887	OMC	C5-C4	2.29	1.48	1.42
46	S2	172	OMU	O2-C2	-2.29	1.18	1.23
46	S2	590	A2M	C8-N9	-2.29	1.33	1.37
1	L5	4536	OMC	C5-C4	2.28	1.48	1.42
46	S2	1326	UY1	O2-C2	-2.28	1.18	1.23
1	L5	1524	A2M	O4'-C4'	-2.28	1.39	1.45
46	S2	428	OMU	C5-C4	2.28	1.48	1.43
1	L5	1322	1MA	C8-N9	-2.28	1.32	1.37
3	L8	14	OMU	C5-C4	2.28	1.48	1.43
46	S2	121	OMU	C5-C4	2.27	1.48	1.43
46	S2	1851	MA6	C5-C6	2.26	1.47	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
46	S2	1383	A2M	C8-N9	-2.26	1.33	1.37
46	S2	512	A2M	C8-N9	-2.25	1.33	1.37
46	S2	166	A2M	C5-C6	2.25	1.47	1.41
46	S2	116	OMU	C5-C4	2.25	1.48	1.43
46	S2	1383	A2M	C4-N9	-2.25	1.32	1.37
1	L5	3724	A2M	C4-N9	-2.24	1.32	1.37
1	L5	3808	OMC	C2-N3	-2.24	1.31	1.36
46	S2	576	A2M	C4-N9	-2.22	1.32	1.37
1	L5	3808	OMC	C6-N1	-2.22	1.32	1.38
46	S2	354	OMU	C5-C4	2.21	1.48	1.43
46	S2	27	A2M	C8-N9	-2.21	1.33	1.37
1	L5	3718	A2M	C8-N9	-2.21	1.33	1.37
1	L5	2837	OMU	C5-C4	2.21	1.48	1.43
46	S2	1288	OMU	O2-C2	-2.21	1.19	1.23
1	L5	3925	OMU	C5-C4	2.21	1.48	1.43
1	L5	1316	OMG	C8-N9	-2.20	1.32	1.37
1	L5	1322	1MA	C5-C4	2.20	1.44	1.38
1	L5	2365	OMC	C6-N1	-2.19	1.32	1.38
46	S2	166	A2M	C4-N9	-2.19	1.32	1.37
46	S2	484	A2M	C5-C6	2.17	1.47	1.41
1	L5	2804	OMC	C5-C4	2.17	1.47	1.42
1	L5	1322	1MA	C6-N6	2.17	1.33	1.28
1	L5	2415	OMU	C5-C4	2.17	1.48	1.43
46	S2	1842	4AC	O7-C7	-2.17	1.18	1.23
1	L5	4530	UR3	C5-C4	2.15	1.49	1.43
1	L5	4498	OMU	C5-C4	2.15	1.48	1.43
46	S2	159	A2M	C5-C6	2.15	1.47	1.41
1	L5	3724	A2M	C8-N9	-2.14	1.33	1.37
46	S2	512	A2M	C5-C6	2.14	1.47	1.41
1	L5	4620	OMU	C5-C4	2.14	1.48	1.43
46	S2	159	A2M	C8-N7	2.14	1.35	1.31
1	L5	1322	1MA	O4'-C4'	-2.14	1.40	1.45
46	S2	867	OMG	O2'-CM2	2.12	1.49	1.42
46	S2	1678	A2M	C8-N9	-2.11	1.33	1.37
1	L5	1522	OMG	C8-N9	-2.11	1.32	1.37
46	S2	576	A2M	C8-N7	2.10	1.35	1.31
1	L5	3744	OMG	O2'-CM2	2.10	1.49	1.42
1	L5	2876	OMG	O2'-CM2	2.09	1.49	1.42
1	L5	1326	A2M	O4'-C4'	-2.09	1.40	1.45
1	L5	3869	OMC	C6-N1	-2.08	1.33	1.38
1	L5	4370	OMG	O2'-CM2	2.08	1.49	1.42
1	L5	3818	UY1	O2-C2	-2.08	1.19	1.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
46	S2	683	OMG	O2'-CM2	2.08	1.49	1.42
46	S2	644	OMG	O2'-CM2	2.07	1.49	1.42
46	S2	1238	PSU	C4-C5	-2.07	1.38	1.44
1	L5	1316	OMG	C2'-C1'	-2.07	1.47	1.53
1	L5	4306	OMU	C5-C4	2.06	1.48	1.43
46	S2	590	A2M	C5-C6	2.06	1.46	1.41
3	L8	75	OMG	O2'-CM2	2.06	1.49	1.42
1	L5	4637	OMG	O2'-CM2	2.06	1.49	1.42
46	S2	436	OMG	O2'-CM2	2.06	1.49	1.42
46	S2	667	PSU	O4'-C1'	-2.05	1.41	1.43
46	S2	1248	B8N	O4'-C1'	-2.05	1.41	1.43
46	S2	601	OMG	O2'-CM2	2.05	1.49	1.42
1	L5	2351	OMC	C5-C4	2.05	1.47	1.42
1	L5	4499	OMG	O2'-CM2	2.05	1.49	1.42
46	S2	1328	OMG	O2'-CM2	2.04	1.49	1.42
1	L5	1340	OMC	C2-N3	-2.04	1.32	1.36
46	S2	468	A2M	C5-C6	2.04	1.46	1.41
1	L5	4623	OMG	O2'-CM2	2.04	1.49	1.42
1	L5	2365	OMC	C5-C4	-2.03	1.38	1.42
1	L5	3792	OMG	C5-C4	2.03	1.44	1.38
1	L5	1340	OMC	C3'-C2'	-2.03	1.48	1.52
1	L5	3724	A2M	C5-C6	2.03	1.46	1.41
46	S2	1490	OMG	O2'-CM2	2.02	1.49	1.42
1	L5	4618	OMG	O2'-CM2	2.02	1.49	1.42
46	S2	1678	A2M	O4'-C4'	-2.02	1.40	1.45
1	L5	398	A2M	C5-C6	2.02	1.46	1.41
1	L5	3627	OMG	O2'-CM2	2.02	1.49	1.42
46	S2	1447	OMG	O2'-CM2	2.02	1.49	1.42
1	L5	4228	OMG	O2'-CM2	2.01	1.49	1.42
46	S2	468	A2M	C8-N9	-2.01	1.33	1.37
1	L5	2424	OMG	O2'-CM2	2.00	1.49	1.42
46	S2	1360	PSU	C4-C5	-2.00	1.38	1.44

All (1305) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	L5	2876	OMG	C1'-N9-C8	-9.21	100.48	126.70
1	L5	2424	OMG	C1'-N9-C8	-8.90	101.36	126.70
46	S2	683	OMG	C1'-N9-C8	-8.41	102.76	126.70
46	S2	867	OMG	C1'-N9-C8	-8.33	102.99	126.70
1	L5	1625	OMG	C1'-N9-C8	-8.27	103.14	126.70
46	S2	1447	OMG	C1'-N9-C8	-8.25	103.22	126.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
46	S2	601	OMG	C1'-N9-C8	-8.12	103.58	126.70
46	S2	1328	OMG	C1'-N9-C8	-8.03	103.83	126.70
46	S2	1490	OMG	C1'-N9-C8	-8.00	103.91	126.70
1	L5	4499	OMG	C1'-N9-C8	-7.96	104.04	126.70
1	L5	4196	OMG	C1'-N9-C8	-7.83	104.40	126.70
46	S2	509	OMG	C1'-N9-C8	-7.82	104.43	126.70
1	L5	4494	OMG	C1'-N9-C8	-7.69	104.79	126.70
1	L5	4392	OMG	C1'-N9-C8	-7.57	105.14	126.70
1	L5	4370	OMG	C1'-N9-C8	-7.48	105.40	126.70
1	L5	2876	OMG	C1'-N9-C4	7.46	148.66	126.50
46	S2	644	OMG	C1'-N9-C8	-7.45	105.49	126.70
46	S2	436	OMG	C1'-N9-C8	-7.39	105.67	126.70
1	L5	2424	OMG	C1'-N9-C4	7.35	148.33	126.50
3	L8	75	OMG	C1'-N9-C8	-7.32	105.85	126.70
1	L5	3744	OMG	C1'-N9-C8	-7.31	105.89	126.70
1	L5	4623	OMG	C1'-N9-C8	-7.27	106.00	126.70
1	L5	4637	OMG	C1'-N9-C8	-7.25	106.05	126.70
1	L5	3627	OMG	C1'-N9-C8	-6.99	106.79	126.70
1	L5	4618	OMG	C1'-N9-C8	-6.92	106.99	126.70
1	L5	3899	OMG	C1'-N9-C8	-6.88	107.11	126.70
46	S2	683	OMG	C1'-N9-C4	6.74	146.51	126.50
46	S2	590	A2M	C5-C4-N3	-6.68	118.03	126.75
46	S2	99	A2M	C5-C4-N3	-6.62	118.11	126.75
46	S2	1447	OMG	C1'-N9-C4	6.61	146.14	126.50
1	L5	4228	OMG	C1'-N9-C8	-6.61	107.89	126.70
46	S2	166	A2M	C5-C4-N3	-6.56	118.19	126.75
46	S2	867	OMG	C1'-N9-C4	6.55	145.97	126.50
1	L5	1625	OMG	C1'-N9-C4	6.54	145.92	126.50
46	S2	1383	A2M	C5-C4-N3	-6.53	118.23	126.75
1	L5	1323	A2M	C5-C4-N3	-6.51	118.26	126.75
1	L5	2815	A2M	C5-C4-N3	-6.44	118.34	126.75
46	S2	668	A2M	C5-C4-N3	-6.44	118.35	126.75
1	L5	1522	OMG	C5-C4-N3	-6.43	118.03	128.46
46	S2	601	OMG	C1'-N9-C4	6.41	145.54	126.50
46	S2	159	A2M	C5-C4-N3	-6.38	118.43	126.75
46	S2	512	A2M	C5-C4-N3	-6.36	118.45	126.75
46	S2	1490	OMG	C1'-N9-C4	6.36	145.39	126.50
1	L5	1871	A2M	C5-C4-N3	-6.32	118.51	126.75
46	S2	1328	OMG	C1'-N9-C4	6.30	145.22	126.50
1	L5	1534	A2M	C5-C4-N3	-6.29	118.54	126.75
1	L5	4499	OMG	C1'-N9-C4	6.28	145.16	126.50
46	S2	484	A2M	C5-C4-N3	-6.23	118.62	126.75

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	L5	1522	OMG	C2'-C1'-N9	-6.19	102.20	114.22
46	S2	509	OMG	C1'-N9-C4	6.16	144.79	126.50
1	L5	3724	A2M	C5-C4-N3	-6.14	118.74	126.75
1	L5	2363	A2M	C5-C4-N3	-6.12	118.77	126.75
1	L5	4196	OMG	C1'-N9-C4	6.08	144.57	126.50
46	S2	576	A2M	C2'-C1'-N9	-6.05	103.35	113.53
1	L5	4392	OMG	C1'-N9-C4	6.04	144.44	126.50
1	L5	398	A2M	C5-C4-N3	-6.03	118.88	126.75
46	S2	576	A2M	C5-C4-N3	-6.00	118.92	126.75
1	L5	400	A2M	C5-C4-N3	-6.00	118.92	126.75
1	L5	4494	OMG	C1'-N9-C4	6.00	144.31	126.50
46	S2	468	A2M	C5-C4-N3	-5.99	118.93	126.75
1	L5	2787	A2M	C5-C4-N3	-5.98	118.95	126.75
1	L5	3830	A2M	C5-C4-N3	-5.95	118.99	126.75
46	S2	644	OMG	C1'-N9-C4	5.94	144.14	126.50
1	L5	4523	A2M	C5-C4-N3	-5.92	119.02	126.75
1	L5	2401	A2M	C5-C4-N3	-5.83	119.14	126.75
1	L5	1326	A2M	C5-C4-N3	-5.82	119.15	126.75
1	L5	3825	A2M	C5-C4-N3	-5.79	119.19	126.75
1	L5	4370	OMG	C1'-N9-C4	5.78	143.66	126.50
66	ST	67	NMM	NE-CZ-NH2	-5.78	114.18	119.48
46	S2	1678	A2M	C5-C4-N3	-5.76	119.24	126.75
1	L5	2364	OMG	C5-C4-N3	-5.75	119.13	128.46
1	L5	1524	A2M	C5-C4-N3	-5.72	119.29	126.75
1	L5	3792	OMG	C5-C4-N3	-5.72	119.19	128.46
1	L5	3744	OMG	C1'-N9-C4	5.71	143.47	126.50
3	L8	14	OMU	C4-N3-C2	-5.67	119.10	126.58
1	L5	4571	A2M	C5-C4-N3	-5.66	119.37	126.75
46	S2	27	A2M	C5-C4-N3	-5.64	119.39	126.75
1	L5	2815	A2M	N3-C4-N9	5.64	136.38	127.08
46	S2	99	A2M	N3-C4-N9	5.64	136.38	127.08
46	S2	428	OMU	C4-N3-C2	-5.63	119.15	126.58
3	L8	75	OMG	C1'-N9-C4	5.63	143.22	126.50
1	L5	4637	OMG	C1'-N9-C4	5.61	143.17	126.50
1	L5	4590	A2M	C5-C4-N3	-5.61	119.43	126.75
1	L5	3785	A2M	C5-C4-N3	-5.60	119.44	126.75
46	S2	1832	6MZ	N1-C2-N3	-5.59	119.86	128.60
1	L5	3867	A2M	C5-C4-N3	-5.57	119.48	126.75
1	L5	4623	OMG	C1'-N9-C4	5.54	142.97	126.50
1	L5	3718	A2M	C5-C4-N3	-5.54	119.52	126.75
46	S2	1031	A2M	C5-C4-N3	-5.54	119.52	126.75
46	S2	590	A2M	N3-C4-N9	5.52	136.18	127.08

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
46	S2	436	OMG	C1'-N9-C4	5.51	142.87	126.50
46	S2	1248	B8N	C5-C4-N3	5.50	126.36	116.17
46	S2	159	A2M	C2'-C1'-N9	-5.49	104.28	113.53
1	L5	2837	OMU	C4-N3-C2	-5.49	119.34	126.58
1	L5	4220	6MZ	N1-C2-N3	-5.49	120.02	128.60
1	L5	4227	OMU	C4-N3-C2	-5.47	119.37	126.58
46	S2	1851	MA6	C5-C4-N3	-5.45	119.64	126.75
46	S2	1442	OMU	C4-N3-C2	-5.44	119.40	126.58
1	L5	1316	OMG	C5-C4-N3	-5.44	119.63	128.46
1	L5	1322	1MA	C5-C4-N3	-5.42	119.17	127.26
1	L5	4498	OMU	C4-N3-C2	-5.41	119.45	126.58
46	S2	172	OMU	C4-N3-C2	-5.37	119.49	126.58
1	L5	3627	OMG	C1'-N9-C4	5.32	142.31	126.50
1	L5	400	A2M	N3-C4-N9	5.24	135.72	127.08
1	L5	1323	A2M	N3-C4-N9	5.23	135.70	127.08
1	L5	4618	OMG	C1'-N9-C4	5.22	142.01	126.50
46	S2	354	OMU	C4-N3-C2	-5.20	119.72	126.58
1	L5	4523	A2M	C2'-C1'-N9	-5.18	104.80	113.53
46	S2	1850	MA6	C2-N1-C6	5.15	123.92	111.75
46	S2	668	A2M	N3-C4-N9	5.15	135.57	127.08
1	L5	1322	1MA	C2-N3-C4	5.15	122.53	112.41
1	L5	2364	OMG	C2-N3-C4	5.13	121.44	112.30
46	S2	512	A2M	N3-C4-N9	5.13	135.53	127.08
1	L5	4636	PSU	C4-N3-C2	-5.11	118.98	126.34
1	L5	4628	PSU	N1-C2-N3	5.11	120.92	115.13
46	S2	1832	6MZ	C5-C4-N3	-5.10	120.10	126.75
1	L5	1524	A2M	N3-C4-N9	5.10	135.48	127.08
1	L5	3792	OMG	C2-N3-C4	5.10	121.38	112.30
46	S2	116	OMU	C4-N3-C2	-5.09	119.86	126.58
1	L5	1326	A2M	N3-C4-N9	5.09	135.47	127.08
1	L5	4306	OMU	C4-N3-C2	-5.06	119.90	126.58
1	L5	3899	OMG	C1'-N9-C4	5.06	141.53	126.50
1	L5	3925	OMU	C4-N3-C2	-5.06	119.91	126.58
1	L5	1522	OMG	C2-N3-C4	5.05	121.31	112.30
46	S2	1383	A2M	N3-C4-N9	5.05	135.40	127.08
1	L5	4636	PSU	N1-C2-N3	5.04	120.84	115.13
1	L5	2415	OMU	C4-N3-C2	-5.04	119.94	126.58
46	S2	1851	MA6	C2-N1-C6	5.02	123.60	111.75
1	L5	2787	A2M	N3-C4-N9	5.01	135.33	127.08
46	S2	1031	A2M	N3-C4-N9	5.00	135.32	127.08
1	L5	1522	OMG	N9-C4-N3	5.00	135.98	125.94
46	S2	1288	OMU	C4-N3-C2	-4.99	120.00	126.58

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	L5	2401	A2M	C2'-C1'-N9	-4.99	105.12	113.53
1	L5	1316	OMG	C2-N3-C4	4.99	121.19	112.30
1	L5	4220	6MZ	C5-C4-N3	-4.93	120.31	126.75
46	S2	1326	UY1	C4-N3-C2	-4.92	119.25	126.34
1	L5	2401	A2M	N3-C4-N9	4.91	135.18	127.08
1	L5	3785	A2M	N3-C4-N9	4.91	135.16	127.08
1	L5	3724	A2M	N3-C4-N9	4.89	135.14	127.08
1	L5	1871	A2M	N3-C4-N9	4.89	135.14	127.08
1	L5	3762	PSU	N1-C2-N3	4.89	120.67	115.13
1	L5	4620	OMU	C4-N3-C2	-4.87	120.16	126.58
1	L5	398	A2M	N3-C4-N9	4.84	135.06	127.08
46	S2	1367	PSU	N1-C2-N3	4.84	120.61	115.13
46	S2	1851	MA6	C10-N6-C6	-4.82	107.90	120.40
1	L5	4228	OMG	C1'-N9-C4	4.81	140.80	126.50
46	S2	1177	PSU	C4-N3-C2	-4.81	119.40	126.34
1	L5	3825	A2M	N3-C4-N9	4.81	135.01	127.08
1	L5	4628	PSU	C4-N3-C2	-4.81	119.41	126.34
46	S2	1804	OMU	C4-N3-C2	-4.81	120.23	126.58
1	L5	4521	PSU	C4-N3-C2	-4.81	119.42	126.34
1	L5	3637	PSU	N1-C2-N3	4.80	120.57	115.13
1	L5	4521	PSU	N1-C2-N3	4.80	120.57	115.13
46	S2	468	A2M	N3-C4-N9	4.80	134.99	127.08
46	S2	822	PSU	N1-C2-N3	4.80	120.57	115.13
46	S2	686	PSU	C4-N3-C2	-4.80	119.43	126.34
1	L5	3851	PSU	N1-C2-N3	4.79	120.55	115.13
46	S2	159	A2M	N3-C4-N9	4.78	134.97	127.08
1	L5	4579	PSU	N1-C2-N3	4.78	120.55	115.13
46	S2	121	OMU	C4-N3-C2	-4.78	120.27	126.58
1	L5	3818	UY1	C4-N3-C2	-4.77	119.47	126.34
1	L5	3637	PSU	C4-N3-C2	-4.77	119.47	126.34
46	S2	1136	PSU	C4-N3-C2	-4.76	119.47	126.34
1	L5	4579	PSU	C4-N3-C2	-4.76	119.48	126.34
1	L5	4296	PSU	N1-C2-N3	4.76	120.52	115.13
46	S2	576	A2M	N3-C4-N9	4.76	134.92	127.08
46	S2	1850	MA6	C5-C4-N3	-4.75	120.55	126.75
46	S2	63	PSU	C4-N3-C2	-4.75	119.49	126.34
1	L5	3822	PSU	C4-N3-C2	-4.75	119.50	126.34
46	S2	366	PSU	N1-C2-N3	4.75	120.51	115.13
46	S2	166	A2M	N3-C4-N9	4.74	134.90	127.08
1	L5	3851	PSU	C4-N3-C2	-4.74	119.51	126.34
46	S2	1238	PSU	C4-N3-C2	-4.74	119.51	126.34
46	S2	1045	PSU	C4-N3-C2	-4.73	119.52	126.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	L5	3792	OMG	N9-C4-N3	4.73	135.44	125.94
1	L5	4500	PSU	N1-C2-N3	4.73	120.49	115.13
1	L5	4500	PSU	C4-N3-C2	-4.73	119.52	126.34
46	S2	1678	A2M	N3-C4-N9	4.73	134.87	127.08
1	L5	5010	PSU	C4-N3-C2	-4.73	119.53	126.34
46	S2	100	PSU	C4-N3-C2	-4.71	119.55	126.34
46	S2	366	PSU	C4-N3-C2	-4.71	119.55	126.34
46	S2	1186	PSU	C4-N3-C2	-4.71	119.55	126.34
1	L5	3762	PSU	C4-N3-C2	-4.71	119.56	126.34
1	L5	4530	UR3	C4-N3-C2	-4.70	120.14	124.56
46	S2	27	A2M	N3-C4-N9	4.70	134.83	127.08
1	L5	4361	PSU	C4-N3-C2	-4.70	119.56	126.34
1	L5	4353	PSU	C4-N3-C2	-4.70	119.57	126.34
3	L8	55	PSU	C4-N3-C2	-4.70	119.57	126.34
1	L5	3853	PSU	N1-C2-N3	4.69	120.44	115.13
46	S2	1692	PSU	C4-N3-C2	-4.69	119.59	126.34
46	S2	109	PSU	N1-C2-N3	4.68	120.43	115.13
1	L5	1316	OMG	N9-C4-N3	4.68	135.33	125.94
46	S2	34	PSU	N1-C2-N3	4.67	120.43	115.13
46	S2	1347	PSU	N1-C2-N3	4.67	120.43	115.13
1	L5	4296	PSU	C4-N3-C2	-4.67	119.61	126.34
46	S2	1367	PSU	C4-N3-C2	-4.67	119.61	126.34
46	S2	100	PSU	N1-C2-N3	4.67	120.42	115.13
1	L5	1677	PSU	C4-N3-C2	-4.66	119.62	126.34
1	L5	4457	PSU	C4-N3-C2	-4.66	119.62	126.34
3	L8	69	PSU	N1-C2-N3	4.66	120.41	115.13
1	L5	1781	PSU	N1-C2-N3	4.66	120.41	115.13
1	L5	1683	PSU	N1-C2-N3	4.66	120.41	115.13
1	L5	1326	A2M	N3-C2-N1	-4.65	121.33	128.60
1	L5	5010	PSU	N1-C2-N3	4.65	120.40	115.13
46	S2	1445	PSU	C4-N3-C2	-4.65	119.64	126.34
1	L5	4431	PSU	N1-C2-N3	4.64	120.39	115.13
46	S2	918	PSU	C4-N3-C2	-4.64	119.65	126.34
1	L5	1683	PSU	C4-N3-C2	-4.64	119.66	126.34
1	L5	2843	PSU	N1-C2-N3	4.64	120.38	115.13
46	S2	1186	PSU	N1-C2-N3	4.63	120.38	115.13
46	S2	34	PSU	C4-N3-C2	-4.63	119.66	126.34
46	S2	815	PSU	C4-N3-C2	-4.63	119.66	126.34
1	L5	1862	PSU	C4-N3-C2	-4.63	119.67	126.34
1	L5	4532	PSU	C4-N3-C2	-4.63	119.67	126.34
1	L5	1779	PSU	C4-N3-C2	-4.63	119.67	126.34
1	L5	1862	PSU	N1-C2-N3	4.63	120.37	115.13

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	L5	2843	PSU	C4-N3-C2	-4.63	119.67	126.34
46	S2	667	PSU	C4-N3-C2	-4.62	119.68	126.34
1	L5	4423	PSU	C4-N3-C2	-4.62	119.68	126.34
46	S2	918	PSU	N1-C2-N3	4.62	120.36	115.13
1	L5	4228	OMG	N9-C8-N7	-4.62	104.69	113.39
1	L5	4442	PSU	C4-N3-C2	-4.62	119.69	126.34
1	L5	4972	PSU	C4-N3-C2	-4.62	119.69	126.34
1	L5	4571	A2M	N3-C4-N9	4.61	134.68	127.08
46	S2	686	PSU	N1-C2-N3	4.61	120.35	115.13
1	L5	1326	A2M	C2-N3-C4	4.61	122.64	111.75
46	S2	815	PSU	N1-C2-N3	4.61	120.35	115.13
1	L5	3853	PSU	C4-N3-C2	-4.61	119.70	126.34
1	L5	1744	PSU	N1-C2-N3	4.61	120.35	115.13
1	L5	4523	A2M	N3-C4-N9	4.61	134.67	127.08
46	S2	1136	PSU	N1-C2-N3	4.60	120.35	115.13
46	S2	109	PSU	C4-N3-C2	-4.60	119.71	126.34
1	L5	4361	PSU	N1-C2-N3	4.60	120.34	115.13
1	L5	3830	A2M	N3-C4-N9	4.60	134.65	127.08
1	L5	4431	PSU	C4-N3-C2	-4.60	119.72	126.34
1	L5	3715	PSU	C4-N3-C2	-4.59	119.72	126.34
1	L5	3867	A2M	N3-C4-N9	4.59	134.65	127.08
46	S2	651	PSU	C4-N3-C2	-4.59	119.72	126.34
1	L5	3770	PSU	C4-N3-C2	-4.59	119.73	126.34
1	L5	3770	PSU	N1-C2-N3	4.59	120.33	115.13
46	S2	1347	PSU	C4-N3-C2	-4.59	119.73	126.34
1	L5	3639	PSU	C4-N3-C2	-4.58	119.73	126.34
46	S2	1174	PSU	C4-N3-C2	-4.58	119.74	126.34
1	L5	4312	PSU	C4-N3-C2	-4.58	119.74	126.34
1	L5	3764	PSU	N1-C2-N3	4.58	120.32	115.13
46	S2	218	PSU	C4-N3-C2	-4.58	119.74	126.34
1	L5	4552	PSU	C4-N3-C2	-4.58	119.74	126.34
46	S2	822	PSU	C4-N3-C2	-4.58	119.74	126.34
46	S2	966	PSU	C4-N3-C2	-4.57	119.75	126.34
1	L5	3730	PSU	C4-N3-C2	-4.57	119.75	126.34
1	L5	1744	PSU	C4-N3-C2	-4.57	119.75	126.34
1	L5	1781	PSU	C4-N3-C2	-4.57	119.76	126.34
1	L5	2424	OMG	C5-C4-N3	-4.57	121.05	128.46
46	S2	1232	PSU	C4-N3-C2	-4.57	119.76	126.34
46	S2	1244	PSU	N1-C2-N3	4.57	120.30	115.13
1	L5	3884	PSU	N1-C2-N3	4.56	120.30	115.13
1	L5	3768	PSU	C4-N3-C2	-4.56	119.77	126.34
1	L5	4353	PSU	N1-C2-N3	4.56	120.30	115.13

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
46	S2	863	PSU	C4-N3-C2	-4.56	119.77	126.34
46	S2	681	PSU	N1-C2-N3	4.56	120.29	115.13
1	L5	4973	PSU	C4-N3-C2	-4.55	119.78	126.34
1	L5	4552	PSU	N1-C2-N3	4.55	120.29	115.13
46	S2	651	PSU	N1-C2-N3	4.55	120.29	115.13
1	L5	4293	PSU	C4-N3-C2	-4.55	119.78	126.34
1	L5	4457	PSU	N1-C2-N3	4.55	120.28	115.13
46	S2	1445	PSU	N1-C2-N3	4.55	120.28	115.13
1	L5	3920	PSU	C4-N3-C2	-4.55	119.79	126.34
1	L5	4673	PSU	N1-C2-N3	4.55	120.28	115.13
3	L8	55	PSU	N1-C2-N3	4.55	120.28	115.13
1	L5	4493	PSU	C4-N3-C2	-4.54	119.80	126.34
46	S2	1625	PSU	C4-N3-C2	-4.54	119.80	126.34
1	L5	3844	PSU	N1-C2-N3	4.54	120.27	115.13
46	S2	866	PSU	C4-N3-C2	-4.54	119.80	126.34
1	L5	4403	PSU	N1-C2-N3	4.54	120.27	115.13
1	L5	4532	PSU	N1-C2-N3	4.53	120.27	115.13
1	L5	1792	PSU	N1-C2-N3	4.53	120.27	115.13
46	S2	1177	PSU	N1-C2-N3	4.53	120.27	115.13
46	S2	436	OMG	N9-C8-N7	-4.53	104.86	113.39
3	L8	69	PSU	C4-N3-C2	-4.53	119.81	126.34
1	L5	1782	PSU	N1-C2-N3	4.53	120.26	115.13
1	L5	4673	PSU	C4-N3-C2	-4.53	119.82	126.34
46	S2	36	PSU	C4-N3-C2	-4.52	119.82	126.34
1	L5	4576	PSU	N1-C2-N3	4.52	120.25	115.13
46	S2	296	PSU	C4-N3-C2	-4.52	119.83	126.34
1	L5	3884	PSU	C4-N3-C2	-4.52	119.83	126.34
1	L5	3764	PSU	C4-N3-C2	-4.52	119.83	126.34
46	S2	649	PSU	N1-C2-N3	4.51	120.24	115.13
46	S2	1056	PSU	C4-N3-C2	-4.51	119.84	126.34
1	L5	1782	PSU	C4-N3-C2	-4.51	119.84	126.34
1	L5	5001	PSU	C4-N3-C2	-4.51	119.84	126.34
46	S2	93	PSU	C4-N3-C2	-4.51	119.84	126.34
1	L5	4590	A2M	N3-C4-N9	4.51	134.52	127.08
1	L5	3822	PSU	N1-C2-N3	4.51	120.24	115.13
1	L5	4423	PSU	N1-C2-N3	4.51	120.24	115.13
46	S2	1045	PSU	N1-C2-N3	4.51	120.24	115.13
1	L5	3715	PSU	N1-C2-N3	4.51	120.23	115.13
1	L5	3695	PSU	C4-N3-C2	-4.51	119.85	126.34
46	S2	105	PSU	C4-N3-C2	-4.50	119.85	126.34
1	L5	4442	PSU	N1-C2-N3	4.50	120.23	115.13
1	L5	3844	PSU	C4-N3-C2	-4.50	119.85	126.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
46	S2	1244	PSU	C4-N3-C2	-4.50	119.86	126.34
46	S2	1003	PSU	N1-C2-N3	4.50	120.23	115.13
1	L5	1792	PSU	C4-N3-C2	-4.50	119.86	126.34
46	S2	801	PSU	N1-C2-N3	4.50	120.23	115.13
46	S2	36	PSU	N1-C2-N3	4.50	120.22	115.13
1	L5	1860	PSU	N1-C2-N3	4.50	120.22	115.13
46	S2	667	PSU	N1-C2-N3	4.49	120.22	115.13
46	S2	406	PSU	N1-C2-N3	4.49	120.22	115.13
1	L5	4973	PSU	N1-C2-N3	4.49	120.21	115.13
46	S2	1625	PSU	N1-C2-N3	4.49	120.21	115.13
1	L5	3768	PSU	N1-C2-N3	4.48	120.21	115.13
1	L5	1779	PSU	N1-C2-N3	4.48	120.21	115.13
46	S2	1360	PSU	C4-N3-C2	-4.48	119.88	126.34
1	L5	4972	PSU	N1-C2-N3	4.48	120.21	115.13
46	S2	681	PSU	C4-N3-C2	-4.48	119.88	126.34
1	L5	1316	OMG	C2'-C1'-N9	-4.48	105.53	114.22
1	L5	1536	PSU	C4-N3-C2	-4.48	119.89	126.34
1	L5	3899	OMG	N9-C8-N7	-4.48	104.96	113.39
46	S2	63	PSU	N1-C2-N3	4.47	120.20	115.13
46	S2	1046	PSU	C4-N3-C2	-4.46	119.92	126.34
46	S2	484	A2M	N3-C4-N9	4.46	134.43	127.08
1	L5	3639	PSU	N1-C2-N3	4.45	120.17	115.13
46	S2	1326	UY1	N1-C2-N3	4.45	120.17	115.13
1	L5	4576	PSU	C4-N3-C2	-4.45	119.92	126.34
1	L5	1860	PSU	C4-N3-C2	-4.45	119.93	126.34
46	S2	1692	PSU	N1-C2-N3	4.45	120.17	115.13
46	S2	649	PSU	C4-N3-C2	-4.45	119.93	126.34
1	L5	3730	PSU	N1-C2-N3	4.45	120.17	115.13
1	L5	4493	PSU	N1-C2-N3	4.45	120.17	115.13
1	L5	4618	OMG	N9-C8-N7	-4.45	105.01	113.39
46	S2	218	PSU	N1-C2-N3	4.45	120.17	115.13
1	L5	2508	PSU	N1-C2-N3	4.44	120.17	115.13
46	S2	863	PSU	N1-C2-N3	4.44	120.17	115.13
46	S2	572	PSU	N1-C2-N3	4.44	120.16	115.13
46	S2	1174	PSU	N1-C2-N3	4.44	120.16	115.13
46	S2	1851	MA6	N1-C2-N3	-4.43	121.67	128.60
46	S2	105	PSU	N1-C2-N3	4.43	120.15	115.13
1	L5	3920	PSU	N1-C2-N3	4.43	120.15	115.13
46	S2	1003	PSU	C4-N3-C2	-4.42	119.96	126.34
1	L5	4312	PSU	N1-C2-N3	4.42	120.14	115.13
46	S2	1056	PSU	N1-C2-N3	4.41	120.13	115.13
46	S2	801	PSU	C4-N3-C2	-4.41	119.98	126.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
46	S2	572	PSU	C4-N3-C2	-4.41	119.98	126.34
1	L5	4471	PSU	N1-C2-N3	4.41	120.13	115.13
46	S2	406	PSU	C4-N3-C2	-4.40	119.99	126.34
1	L5	3695	PSU	N1-C2-N3	4.40	120.12	115.13
1	L5	2839	PSU	C4-N3-C2	-4.40	120.00	126.34
46	S2	966	PSU	N1-C2-N3	4.40	120.11	115.13
46	S2	1232	PSU	N1-C2-N3	4.40	120.11	115.13
1	L5	1536	PSU	N1-C2-N3	4.40	120.11	115.13
46	S2	300	PSU	C4-N3-C2	-4.39	120.01	126.34
1	L5	4447	5MC	C5-C6-N1	-4.39	118.82	123.34
46	S2	814	PSU	C4-N3-C2	-4.39	120.01	126.34
1	L5	2632	PSU	N1-C2-N3	4.39	120.10	115.13
1	L5	2508	PSU	C4-N3-C2	-4.39	120.02	126.34
46	S2	1643	PSU	N1-C2-N3	4.38	120.10	115.13
1	L5	1677	PSU	N1-C2-N3	4.38	120.09	115.13
1	L5	2363	A2M	N3-C4-N9	4.38	134.30	127.08
46	S2	1046	PSU	N1-C2-N3	4.38	120.09	115.13
46	S2	1804	OMU	N3-C2-N1	4.38	120.70	114.89
1	L5	5001	PSU	N1-C2-N3	4.37	120.08	115.13
46	S2	119	PSU	N1-C2-N3	4.36	120.07	115.13
1	L5	4299	PSU	C4-N3-C2	-4.36	120.06	126.34
46	S2	1851	MA6	C2-N3-C4	4.36	122.04	111.75
46	S2	93	PSU	N1-C2-N3	4.36	120.07	115.13
46	S2	866	PSU	N1-C2-N3	4.36	120.07	115.13
1	L5	1534	A2M	N3-C4-N9	4.35	134.26	127.08
46	S2	867	OMG	C5-C4-N3	-4.35	121.41	128.46
1	L5	4299	PSU	N1-C2-N3	4.34	120.05	115.13
1	L5	3830	A2M	C2'-C1'-N9	-4.34	106.22	113.53
1	L5	2363	A2M	C2-N3-C4	4.34	122.00	111.75
1	L5	4471	PSU	C4-N3-C2	-4.33	120.10	126.34
1	L5	3627	OMG	N9-C8-N7	-4.32	105.25	113.39
46	S2	1447	OMG	C5-C4-N3	-4.32	121.45	128.46
46	S2	468	A2M	C2'-C1'-N9	-4.32	106.26	113.53
46	S2	119	PSU	C4-N3-C2	-4.32	120.12	126.34
46	S2	609	PSU	N1-C2-N3	4.32	120.02	115.13
46	S2	1238	PSU	N1-C2-N3	4.32	120.02	115.13
1	L5	4623	OMG	N9-C8-N7	-4.31	105.27	113.39
1	L5	2839	PSU	N1-C2-N3	4.31	120.02	115.13
46	S2	1004	PSU	N1-C2-N3	4.30	120.00	115.13
46	S2	1643	PSU	C4-N3-C2	-4.30	120.15	126.34
46	S2	300	PSU	N1-C2-N3	4.30	120.00	115.13
46	S2	1596	PSU	C4-N3-C2	-4.29	120.16	126.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
46	S2	296	PSU	N1-C2-N3	4.29	119.99	115.13
3	L8	75	OMG	N9-C8-N7	-4.28	105.32	113.39
1	L5	2632	PSU	C4-N3-C2	-4.28	120.17	126.34
1	L5	4637	OMG	N9-C8-N7	-4.28	105.33	113.39
46	S2	1004	PSU	C4-N3-C2	-4.28	120.18	126.34
1	L5	4370	OMG	N9-C8-N7	-4.27	105.34	113.39
1	L5	4403	PSU	C4-N3-C2	-4.27	120.19	126.34
46	S2	1328	OMG	N9-C8-N7	-4.26	105.36	113.39
46	S2	512	A2M	C2'-C1'-N9	-4.25	106.37	113.53
46	S2	1360	PSU	N1-C2-N3	4.25	119.94	115.13
1	L5	4689	PSU	N1-C2-N3	4.25	119.94	115.13
1	L5	1582	PSU	C4-N3-C2	-4.24	120.22	126.34
1	L5	1323	A2M	C2-N3-C4	4.24	121.76	111.75
1	L5	4293	PSU	N1-C2-N3	4.23	119.92	115.13
46	S2	867	OMG	N9-C8-N7	-4.23	105.42	113.39
1	L5	3830	A2M	C2-N3-C4	4.23	121.74	111.75
1	L5	2364	OMG	N9-C4-N3	4.23	134.43	125.94
46	S2	814	PSU	N1-C2-N3	4.23	119.92	115.13
1	L5	1582	PSU	N1-C2-N3	4.22	119.91	115.13
1	L5	4196	OMG	N9-C8-N7	-4.22	105.44	113.39
46	S2	159	A2M	C2-N3-C4	4.22	121.72	111.75
1	L5	4494	OMG	N9-C8-N7	-4.22	105.45	113.39
46	S2	601	OMG	N9-C8-N7	-4.21	105.46	113.39
46	S2	1596	PSU	N1-C2-N3	4.21	119.90	115.13
46	S2	1248	B8N	C4-N3-C2	-4.20	120.15	125.46
46	S2	644	OMG	N9-C8-N7	-4.19	105.50	113.39
46	S2	468	A2M	C2-N3-C4	4.19	121.64	111.75
1	L5	3818	UY1	N1-C2-N3	4.18	119.86	115.13
1	L5	4220	6MZ	C9-N6-C6	-4.17	119.28	122.87
1	L5	2876	OMG	C5-C4-N3	-4.15	121.73	128.46
1	L5	3744	OMG	N9-C8-N7	-4.15	105.58	113.39
46	S2	509	OMG	C2-N3-C4	4.14	119.68	112.30
46	S2	644	OMG	C2-N3-C4	4.14	119.68	112.30
1	L5	3818	UY1	C6-C5-C4	4.14	121.09	118.20
46	S2	609	PSU	C4-N3-C2	-4.14	120.38	126.34
46	S2	1850	MA6	C10-N6-C6	-4.13	109.69	120.40
46	S2	1490	OMG	N9-C8-N7	-4.12	105.63	113.39
46	S2	1328	OMG	C2-N3-C4	4.12	119.64	112.30
46	S2	1447	OMG	C2-N3-C4	4.12	119.64	112.30
1	L5	2424	OMG	C2-N3-C4	4.12	119.64	112.30
1	L5	1625	OMG	N9-C8-N7	-4.11	105.64	113.39
46	S2	436	OMG	C2-N3-C4	4.11	119.62	112.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	L5	3718	A2M	N3-C4-N9	4.10	133.85	127.08
1	L5	3785	A2M	C4-N9-C8	4.10	110.17	105.73
46	S2	509	OMG	N9-C8-N7	-4.09	105.68	113.39
1	L5	1534	A2M	C2-N3-C4	4.09	121.42	111.75
1	L5	4499	OMG	N9-C8-N7	-4.09	105.69	113.39
46	S2	867	OMG	C2-N3-C4	4.09	119.58	112.30
1	L5	4689	PSU	C4-N3-C2	-4.09	120.45	126.34
46	S2	1447	OMG	N9-C8-N7	-4.09	105.70	113.39
46	S2	1832	6MZ	N9-C8-N7	-4.07	108.34	113.91
3	L8	14	OMU	N3-C2-N1	4.07	120.30	114.89
46	S2	683	OMG	C5-C4-N3	-4.07	121.86	128.46
1	L5	3744	OMG	C2-N3-C4	4.06	119.54	112.30
46	S2	1328	OMG	C5-C4-N3	-4.06	121.88	128.46
1	L5	1524	A2M	C2-N3-C4	4.06	121.34	111.75
1	L5	2363	A2M	N3-C2-N1	-4.05	122.26	128.60
1	L5	4392	OMG	N9-C8-N7	-4.05	105.76	113.39
1	L5	4499	OMG	C2-N3-C4	4.04	119.50	112.30
1	L5	4220	6MZ	N9-C8-N7	-4.04	108.39	113.91
1	L5	3867	A2M	C2-N3-C4	4.04	121.29	111.75
46	S2	99	A2M	C2-N3-C4	4.04	121.29	111.75
1	L5	4637	OMG	C2-N3-C4	4.04	119.49	112.30
46	S2	1851	MA6	C4-C5-N7	-4.03	105.71	110.62
1	L5	4370	OMG	C2-N3-C4	4.03	119.48	112.30
46	S2	512	A2M	C2-N3-C4	4.02	121.26	111.75
1	L5	4618	OMG	C2-N3-C4	4.02	119.47	112.30
46	S2	590	A2M	C2-N3-C4	4.02	121.25	111.75
46	S2	509	OMG	C5-C4-N3	-4.02	121.94	128.46
1	L5	3724	A2M	C2-N3-C4	4.02	121.24	111.75
46	S2	1850	MA6	N3-C4-N9	4.02	133.70	127.08
1	L5	3785	A2M	C2'-C1'-N9	-4.02	106.77	113.53
1	L5	2876	OMG	C2-N3-C4	4.01	119.44	112.30
1	L5	4227	OMU	N3-C2-N1	4.01	120.21	114.89
46	S2	166	A2M	C2-N3-C4	4.01	121.22	111.75
46	S2	1490	OMG	C2-N3-C4	4.01	119.44	112.30
1	L5	4494	OMG	C2-N3-C4	4.00	119.42	112.30
46	S2	683	OMG	C2-N3-C4	3.99	119.42	112.30
46	S2	1832	6MZ	C4-C5-C6	3.99	119.90	116.81
46	S2	484	A2M	C2-N3-C4	3.98	121.16	111.75
1	L5	4220	6MZ	C4-C5-C6	3.97	119.88	116.81
46	S2	668	A2M	C2-N3-C4	3.96	121.10	111.75
46	S2	1383	A2M	C2-N3-C4	3.96	121.09	111.75
1	L5	1871	A2M	C2-N3-C4	3.95	121.08	111.75

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	L5	2815	A2M	C2-N3-C4	3.95	121.08	111.75
46	S2	683	OMG	N9-C8-N7	-3.95	105.96	113.39
1	L5	1625	OMG	C2-N3-C4	3.94	119.33	112.30
46	S2	172	OMU	N3-C2-N1	3.94	120.12	114.89
46	S2	1678	A2M	C2-N3-C4	3.94	121.05	111.75
46	S2	1804	OMU	C5-C4-N3	3.93	120.72	114.84
1	L5	3825	A2M	C2-N3-C4	3.93	121.04	111.75
46	S2	428	OMU	N3-C2-N1	3.93	120.11	114.89
1	L5	1524	A2M	C2'-C1'-N9	-3.92	106.92	113.53
1	L5	1534	A2M	C4-C5-N7	-3.91	105.85	110.62
1	L5	3867	A2M	N3-C2-N1	-3.91	122.49	128.60
46	S2	644	OMG	C5-C4-N3	-3.90	122.13	128.46
46	S2	27	A2M	C2-N3-C4	3.90	120.97	111.75
1	L5	3627	OMG	C2-N3-C4	3.90	119.25	112.30
46	S2	601	OMG	C2-N3-C4	3.89	119.23	112.30
1	L5	4623	OMG	C2-N3-C4	3.89	119.22	112.30
46	S2	601	OMG	C5-C4-N3	-3.89	122.16	128.46
1	L5	3830	A2M	N3-C2-N1	-3.89	122.53	128.60
1	L5	2876	OMG	N9-C8-N7	-3.88	106.09	113.39
1	L5	2837	OMU	N3-C2-N1	3.88	120.04	114.89
3	L8	75	OMG	C2-N3-C4	3.87	119.20	112.30
1	L5	4392	OMG	C2-N3-C4	3.87	119.20	112.30
1	L5	3825	A2M	C2'-C1'-N9	-3.86	107.04	113.53
1	L5	4499	OMG	C5-C4-N3	-3.85	122.21	128.46
1	L5	400	A2M	C2-N3-C4	3.84	120.83	111.75
1	L5	4228	OMG	C2-N3-C4	3.84	119.14	112.30
1	L5	4196	OMG	C2-N3-C4	3.84	119.14	112.30
1	L5	2787	A2M	C2-N3-C4	3.84	120.81	111.75
46	S2	468	A2M	N3-C2-N1	-3.84	122.60	128.60
1	L5	4498	OMU	N3-C2-N1	3.84	119.98	114.89
1	L5	1524	A2M	N3-C2-N1	-3.83	122.61	128.60
46	S2	1442	OMU	N3-C2-N1	3.83	119.97	114.89
1	L5	1625	OMG	C5-C4-N3	-3.83	122.25	128.46
1	L5	2401	A2M	C2-N3-C4	3.82	120.77	111.75
1	L5	398	A2M	C2-N3-C4	3.82	120.77	111.75
46	S2	116	OMU	N3-C2-N1	3.82	119.96	114.89
46	S2	1850	MA6	N1-C2-N3	-3.78	122.69	128.60
1	L5	3785	A2M	C2-N3-C4	3.78	120.68	111.75
1	L5	1871	A2M	C2'-C1'-N9	-3.77	107.18	113.53
1	L5	1524	A2M	C4-N9-C8	3.77	109.82	105.73
1	L5	3925	OMU	N3-C2-N1	3.77	119.89	114.89
46	S2	1031	A2M	C4-N9-C8	3.76	109.81	105.73

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	L5	4571	A2M	C2-N3-C4	3.76	120.62	111.75
1	L5	4523	A2M	C2-N3-C4	3.75	120.60	111.75
1	L5	3718	A2M	C2-N3-C4	3.74	120.59	111.75
1	L5	2364	OMG	C6-C5-N7	3.74	137.20	130.25
46	S2	576	A2M	C2-N3-C4	3.74	120.58	111.75
1	L5	2415	OMU	N3-C2-N1	3.74	119.85	114.89
1	L5	2363	A2M	C4-C5-N7	-3.72	106.09	110.62
46	S2	1031	A2M	C2-N3-C4	3.72	120.53	111.75
46	S2	354	OMU	N3-C2-N1	3.72	119.82	114.89
1	L5	3782	5MC	C5-C6-N1	-3.71	119.52	123.34
46	S2	1490	OMG	C5-C4-N3	-3.70	122.46	128.46
1	L5	4620	OMU	N3-C2-N1	3.69	119.79	114.89
46	S2	1850	MA6	C4-N9-C8	3.69	109.73	105.73
46	S2	159	A2M	C4-C5-N7	-3.67	106.14	110.62
46	S2	436	OMG	C5-C4-N3	-3.66	122.52	128.46
1	L5	4637	OMG	C5-C4-N3	-3.66	122.52	128.46
1	L5	4590	A2M	C2-N3-C4	3.66	120.39	111.75
1	L5	1322	1MA	N9-C4-N3	3.65	135.46	126.94
1	L5	3899	OMG	C2-N3-C4	3.65	118.80	112.30
46	S2	1383	A2M	C2'-C1'-N9	-3.63	107.42	113.53
46	S2	1850	MA6	C4-C5-N7	-3.63	106.20	110.62
1	L5	1323	A2M	N3-C2-N1	-3.63	122.93	128.60
1	L5	4392	OMG	C5-C4-N3	-3.62	122.59	128.46
46	S2	27	A2M	N3-C2-N1	-3.61	122.95	128.60
46	S2	121	OMU	N3-C2-N1	3.61	119.68	114.89
1	L5	3792	OMG	C6-C5-N7	3.61	136.96	130.25
1	L5	4494	OMG	C5-C4-N3	-3.61	122.61	128.46
1	L5	3724	A2M	N3-C2-N1	-3.60	122.97	128.60
1	L5	2424	OMG	N9-C8-N7	-3.60	106.61	113.39
46	S2	1804	OMU	C2'-C1'-N1	-3.59	107.25	114.22
1	L5	3744	OMG	C5-C4-N3	-3.57	122.67	128.46
3	L8	14	OMU	C5-C4-N3	3.57	120.18	114.84
1	L5	4498	OMU	C5-C4-N3	3.57	120.18	114.84
46	S2	484	A2M	C4-C5-N7	-3.57	106.27	110.62
1	L5	3718	A2M	C2'-C1'-N9	-3.56	107.53	113.53
1	L5	4306	OMU	N3-C2-N1	3.56	119.61	114.89
46	S2	1326	UY1	C6-C5-C4	3.55	120.68	118.20
1	L5	3785	A2M	N3-C2-N1	-3.54	123.06	128.60
1	L5	4196	OMG	C5-C4-N3	-3.54	122.72	128.46
46	S2	27	A2M	C2'-C1'-N9	-3.53	107.58	113.53
1	L5	4370	OMG	C5-C4-N3	-3.53	122.73	128.46
1	L5	3825	A2M	N3-C2-N1	-3.52	123.09	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	L5	2837	OMU	C5-C4-N3	3.52	120.11	114.84
46	S2	1678	A2M	N3-C2-N1	-3.51	123.11	128.60
46	S2	1832	6MZ	C2-N3-C4	3.51	120.03	111.75
46	S2	428	OMU	C5-C4-N3	3.50	120.08	114.84
46	S2	159	A2M	N3-C2-N1	-3.50	123.12	128.60
1	L5	1316	OMG	C6-C5-N7	3.49	136.73	130.25
46	S2	1031	A2M	N3-C2-N1	-3.48	123.16	128.60
3	L8	75	OMG	C5-C4-N3	-3.48	122.82	128.46
1	L5	3718	A2M	N3-C2-N1	-3.48	123.16	128.60
1	L5	400	A2M	C4-N9-C8	3.47	109.48	105.73
46	S2	1288	OMU	N3-C2-N1	3.45	119.48	114.89
1	L5	4623	OMG	C5-C4-N3	-3.45	122.86	128.46
1	L5	2787	A2M	N3-C2-N1	-3.45	123.20	128.60
46	S2	1442	OMU	C5-C4-N3	3.45	120.01	114.84
1	L5	4228	OMG	N2-C2-N1	3.45	124.06	116.71
1	L5	3627	OMG	C5-C4-N3	-3.45	122.87	128.46
1	L5	4590	A2M	N3-C2-N1	-3.45	123.21	128.60
1	L5	1871	A2M	C4-C5-N7	-3.44	106.43	110.62
1	L5	4227	OMU	C5-C4-N3	3.44	119.98	114.84
1	L5	4618	OMG	C5-C4-N3	-3.44	122.89	128.46
46	S2	1851	MA6	C6-C5-N7	3.41	139.00	133.28
46	S2	1850	MA6	C2-N3-C4	3.40	119.78	111.75
46	S2	354	OMU	C5-C4-N3	3.37	119.88	114.84
1	L5	1534	A2M	N3-C2-N1	-3.37	123.33	128.60
1	L5	4220	6MZ	C2-N3-C4	3.37	119.71	111.75
1	L5	4571	A2M	N3-C2-N1	-3.36	123.35	128.60
1	L5	4523	A2M	C4-C5-N7	-3.35	106.53	110.62
1	L5	1326	A2M	C4-N9-C8	3.35	109.36	105.73
1	L5	4306	OMU	C5-C4-N3	3.33	119.83	114.84
46	S2	1288	OMU	C5-C4-N3	3.32	119.81	114.84
1	L5	398	A2M	N3-C2-N1	-3.32	123.41	128.60
1	L5	3762	PSU	O2-C2-N1	-3.29	119.16	122.79
1	L5	3825	A2M	C4-N9-C8	3.29	109.30	105.73
46	S2	166	A2M	C4-C5-N7	-3.29	106.61	110.62
1	L5	2424	OMG	N9-C4-N3	3.29	132.54	125.94
46	S2	468	A2M	C4-N9-C8	3.28	109.28	105.73
46	S2	512	A2M	N3-C2-N1	-3.28	123.48	128.60
46	S2	1850	MA6	C5-N7-C8	3.28	108.17	103.51
1	L5	4636	PSU	C6-C5-C4	3.28	120.49	118.20
46	S2	1832	6MZ	C5-N7-C8	3.27	108.16	103.51
46	S2	468	A2M	C4-C5-N7	-3.27	106.63	110.62
46	S2	1383	A2M	N3-C2-N1	-3.27	123.48	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	L5	1323	A2M	C4-C5-N7	-3.27	106.64	110.62
46	S2	484	A2M	N3-C2-N1	-3.26	123.50	128.60
46	S2	116	OMU	C5-C4-N3	3.26	119.72	114.84
46	S2	576	A2M	C4-C5-N7	-3.26	106.65	110.62
1	L5	3925	OMU	C5-C4-N3	3.25	119.70	114.84
1	L5	2415	OMU	C5-C4-N3	3.24	119.69	114.84
46	S2	172	OMU	C5-C4-N3	3.24	119.68	114.84
46	S2	590	A2M	N3-C2-N1	-3.23	123.55	128.60
46	S2	1337	4AC	C6-C5-C4	3.23	120.92	116.96
1	L5	3724	A2M	C4-C5-N7	-3.22	106.69	110.62
46	S2	1851	MA6	N3-C4-N9	3.21	132.37	127.08
1	L5	2815	A2M	N3-C2-N1	-3.21	123.58	128.60
46	S2	1678	A2M	C4-N9-C8	3.21	109.20	105.73
1	L5	4590	A2M	C4-C5-N7	-3.20	106.72	110.62
1	L5	2401	A2M	N3-C2-N1	-3.19	123.62	128.60
46	S2	121	OMU	C5-C4-N3	3.18	119.60	114.84
1	L5	1323	A2M	C5-N7-C8	3.18	108.03	103.51
46	S2	668	A2M	N3-C2-N1	-3.18	123.63	128.60
1	L5	4620	OMU	C5-C4-N3	3.17	119.59	114.84
46	S2	1850	MA6	N1-C6-N6	3.17	120.56	117.08
1	L5	3785	A2M	O4'-C1'-N9	3.17	114.30	108.06
46	S2	99	A2M	N3-C2-N1	-3.16	123.66	128.60
46	S2	576	A2M	C4-N9-C8	3.13	109.12	105.73
1	L5	1522	OMG	C6-C5-N7	3.13	136.07	130.25
1	L5	4618	OMG	N2-C2-N1	3.11	123.34	116.71
46	S2	468	A2M	C5-N7-C8	3.10	107.92	103.51
1	L5	3825	A2M	C4-C5-N7	-3.10	106.84	110.62
1	L5	3899	OMG	C5-C4-N3	-3.10	123.43	128.46
46	S2	601	OMG	C2-N1-C6	-3.09	119.47	125.10
1	L5	1326	A2M	C6-C5-N7	3.09	137.77	132.02
1	L5	400	A2M	N3-C2-N1	-3.07	123.80	128.60
46	S2	27	A2M	C4-N9-C8	3.07	109.05	105.73
46	S2	576	A2M	N3-C2-N1	-3.06	123.81	128.60
46	S2	644	OMG	C2-N1-C6	-3.06	119.52	125.10
1	L5	2401	A2M	C4-N9-C8	3.06	109.04	105.73
1	L5	2815	A2M	C4-N9-C8	3.06	109.04	105.73
1	L5	4523	A2M	N3-C2-N1	-3.06	123.82	128.60
1	L5	1323	A2M	C4-N9-C8	3.05	109.03	105.73
46	S2	159	A2M	C5-N7-C8	3.05	107.84	103.51
1	L5	2363	A2M	C5-N7-C8	3.05	107.84	103.51
1	L5	1871	A2M	C5-N7-C8	3.05	107.84	103.51
46	S2	1383	A2M	C4-C5-N7	-3.04	106.91	110.62

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
46	S2	159	A2M	C4-N9-C8	3.04	109.02	105.73
46	S2	512	A2M	C4-C5-N7	-3.03	106.92	110.62
46	S2	867	OMG	N9-C4-N3	3.03	132.02	125.94
1	L5	4523	A2M	C5-N7-C8	3.02	107.80	103.51
1	L5	1871	A2M	C4-N9-C8	3.02	109.00	105.73
46	S2	36	PSU	O2-C2-N1	-3.01	119.47	122.79
1	L5	3627	OMG	C2-N1-C6	-3.01	119.61	125.10
1	L5	4500	PSU	O2-C2-N1	-3.01	119.48	122.79
46	S2	1851	MA6	C9-N6-C6	-3.01	112.60	120.40
66	ST	67	NMM	NE-CZ-NH1	3.01	125.89	120.26
1	L5	4532	PSU	O2-C2-N1	-3.01	119.48	122.79
1	L5	4498	OMU	O4-C4-C5	-3.00	119.88	125.16
3	L8	14	OMU	O4-C4-C5	-3.00	119.89	125.16
46	S2	1248	B8N	C31-N3-C2	3.00	122.16	117.67
1	L5	2876	OMG	N9-C4-N3	3.00	131.96	125.94
1	L5	3830	A2M	C4-C5-N7	-2.99	106.97	110.62
46	S2	1447	OMG	C2-N1-C6	-2.99	119.65	125.10
1	L5	4637	OMG	C2-N1-C6	-2.99	119.65	125.10
1	L5	3785	A2M	N9-C8-N7	-2.99	109.83	113.91
1	L5	3808	OMC	O2-C2-N3	-2.98	117.48	122.33
1	L5	3785	A2M	O4'-C4'-C5'	-2.98	99.58	109.37
1	L5	1534	A2M	O3'-C3'-C4'	-2.97	102.46	111.05
1	L5	2363	A2M	C6-C5-N7	2.97	137.55	132.02
1	L5	3867	A2M	C4-N9-C8	2.97	108.94	105.73
46	S2	1248	B8N	N3-C2-N1	2.96	120.95	116.76
1	L5	3718	A2M	C4-C5-N7	-2.96	107.01	110.62
46	S2	428	OMU	O4-C4-C5	-2.96	119.96	125.16
1	L5	4590	A2M	C2'-C1'-N9	-2.95	108.56	113.53
1	L5	398	A2M	C4-C5-N7	-2.95	107.03	110.62
1	L5	3724	A2M	C5-N7-C8	2.94	107.69	103.51
46	S2	512	A2M	C4-N9-C8	2.94	108.91	105.73
1	L5	3627	OMG	N2-C2-N1	2.93	122.96	116.71
1	L5	4220	6MZ	N3-C4-N9	2.92	131.89	127.08
46	S2	436	OMG	C2'-C1'-N9	-2.91	108.58	114.22
1	L5	4590	A2M	C5-N7-C8	2.91	107.64	103.51
1	L5	4590	A2M	C4-N9-C8	2.91	108.88	105.73
1	L5	4579	PSU	O2-C2-N1	-2.90	119.59	122.79
1	L5	4618	OMG	C2-N1-C6	-2.90	119.81	125.10
1	L5	4628	PSU	O2-C2-N1	-2.89	119.60	122.79
1	L5	3744	OMG	C2-N1-C6	-2.89	119.83	125.10
1	L5	2837	OMU	O4-C4-C5	-2.89	120.08	125.16
1	L5	3830	A2M	C4-N9-C8	2.88	108.85	105.73

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	L5	4220	6MZ	C5-N7-C8	2.88	107.60	103.51
46	S2	509	OMG	C2-N1-C6	-2.88	119.85	125.10
46	S2	1442	OMU	O4-C4-C5	-2.88	120.10	125.16
1	L5	4623	OMG	C2-N1-C6	-2.87	119.86	125.10
1	L5	4392	OMG	C2-N1-C6	-2.87	119.86	125.10
46	S2	484	A2M	C5-N7-C8	2.87	107.59	103.51
46	S2	867	OMG	C2-N1-C6	-2.87	119.87	125.10
1	L5	2415	OMU	O4-C4-C5	-2.87	120.12	125.16
1	L5	4571	A2M	C4-N9-C8	2.87	108.83	105.73
46	S2	1445	PSU	O2-C2-N1	-2.86	119.64	122.79
1	L5	4228	OMG	C5-C4-N3	-2.86	123.82	128.46
46	S2	1248	B8N	O4-C4-N3	-2.86	115.12	119.98
1	L5	1871	A2M	N3-C2-N1	-2.86	124.13	128.60
46	S2	166	A2M	N3-C2-N1	-2.86	124.13	128.60
46	S2	1625	PSU	O2-C2-N1	-2.86	119.65	122.79
46	S2	1288	OMU	O4-C4-C5	-2.85	120.14	125.16
1	L5	4523	A2M	C4-N9-C8	2.85	108.81	105.73
1	L5	1326	A2M	C4-C5-N7	-2.85	107.15	110.62
46	S2	644	OMG	N2-C2-N1	2.85	122.78	116.71
1	L5	3744	OMG	N2-C2-N1	2.85	122.78	116.71
1	L5	1522	OMG	O4'-C1'-N9	2.85	114.87	108.36
1	L5	2424	OMG	C2-N1-C6	-2.85	119.91	125.10
3	L8	69	PSU	O2-C2-N1	-2.85	119.66	122.79
1	L5	4623	OMG	N2-C2-N1	2.84	122.76	116.71
46	S2	1328	OMG	C2-N1-C6	-2.83	119.93	125.10
1	L5	3724	A2M	C4-N9-C8	2.83	108.80	105.73
46	S2	354	OMU	O4-C4-C5	-2.83	120.19	125.16
1	L5	4423	PSU	O2-C2-N1	-2.83	119.68	122.79
1	L5	3899	OMG	N2-C2-N1	2.83	122.73	116.71
1	L5	400	A2M	C4-C5-N7	-2.83	107.18	110.62
46	S2	576	A2M	C5-N7-C8	2.82	107.52	103.51
1	L5	3825	A2M	C5-N7-C8	2.82	107.52	103.51
46	S2	683	OMG	N9-C4-N3	2.82	131.61	125.94
1	L5	1534	A2M	C5-N7-C8	2.82	107.52	103.51
46	S2	1326	UY1	C6-N1-C2	-2.82	119.80	122.68
1	L5	2401	A2M	C4-C5-N7	-2.81	107.19	110.62
46	S2	1850	MA6	C9-N6-C6	-2.81	113.11	120.40
1	L5	1677	PSU	O2-C2-N1	-2.80	119.71	122.79
46	S2	1832	6MZ	N3-C4-N9	2.80	131.70	127.08
1	L5	1524	A2M	N9-C8-N7	-2.80	110.08	113.91
46	S2	1347	PSU	O2-C2-N1	-2.80	119.71	122.79
46	S2	1596	PSU	O2-C2-N1	-2.79	119.72	122.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
46	S2	468	A2M	N9-C8-N7	-2.79	110.10	113.91
46	S2	1678	A2M	C4-C5-N7	-2.79	107.22	110.62
1	L5	4457	PSU	O2-C2-N1	-2.79	119.72	122.79
1	L5	1326	A2M	C5-N7-C8	2.79	107.47	103.51
46	S2	436	OMG	C8-N9-C4	2.79	111.35	106.05
1	L5	4571	A2M	C4-C5-N7	-2.79	107.23	110.62
46	S2	172	OMU	O4-C4-C5	-2.79	120.26	125.16
46	S2	436	OMG	C2-N1-C6	-2.78	120.04	125.10
1	L5	3899	OMG	C2'-C1'-N9	-2.77	108.84	114.22
1	L5	4228	OMG	C6-C5-N7	2.77	135.41	130.25
1	L5	4521	PSU	O2-C2-N1	-2.77	119.74	122.79
46	S2	109	PSU	O2-C2-N1	-2.77	119.74	122.79
1	L5	4576	PSU	O2-C2-N1	-2.77	119.74	122.79
46	S2	116	OMU	O4-C4-C5	-2.76	120.30	125.16
1	L5	2632	PSU	O2-C2-N1	-2.76	119.75	122.79
1	L5	3785	A2M	C4-C5-N7	-2.76	107.26	110.62
1	L5	4228	OMG	C8-N9-C4	2.76	111.29	106.05
1	L5	4228	OMG	C2-N1-C6	-2.75	120.08	125.10
46	S2	1850	MA6	N9-C8-N7	-2.75	110.15	113.91
46	S2	801	PSU	O2-C2-N1	-2.75	119.76	122.79
3	L8	75	OMG	C2-N1-C6	-2.75	120.08	125.10
46	S2	863	PSU	O2-C2-N1	-2.75	119.76	122.79
46	S2	1447	OMG	N9-C4-N3	2.75	131.46	125.94
1	L5	4494	OMG	C2-N1-C6	-2.74	120.10	125.10
1	L5	4306	OMU	O4-C4-C5	-2.74	120.35	125.16
1	L5	1779	PSU	O2-C2-N1	-2.73	119.78	122.79
46	S2	34	PSU	O2-C2-N1	-2.73	119.78	122.79
46	S2	867	OMG	C8-N7-C5	2.73	109.17	104.24
46	S2	296	PSU	O2-C2-N1	-2.72	119.79	122.79
1	L5	4196	OMG	C2-N1-C6	-2.72	120.13	125.10
46	S2	436	OMG	C8-N7-C5	2.72	109.17	104.24
1	L5	1316	OMG	C5-C6-N1	2.72	120.10	113.19
1	L5	3899	OMG	C8-N9-C4	2.72	111.23	106.05
1	L5	3724	A2M	C2'-C1'-N9	-2.72	108.95	113.53
46	S2	681	PSU	O2-C2-N1	-2.72	119.80	122.79
1	L5	1862	PSU	O2-C2-N1	-2.71	119.80	122.79
1	L5	1316	OMG	O6-C6-C5	-2.71	119.40	126.60
46	S2	366	PSU	C6-C5-C4	2.71	120.09	118.20
1	L5	4499	OMG	C2-N1-C6	-2.71	120.16	125.10
1	L5	1524	A2M	C5-N7-C8	2.71	107.36	103.51
1	L5	4637	OMG	C5-C6-N1	2.71	120.07	113.19
46	S2	509	OMG	C5-C6-N1	2.71	120.07	113.19

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	L5	4227	OMU	O4-C4-C5	-2.71	120.40	125.16
1	L5	4370	OMG	C5-C6-N1	2.71	120.06	113.19
46	S2	668	A2M	C4-C5-N7	-2.71	107.32	110.62
46	S2	436	OMG	C5-C6-N1	2.71	120.06	113.19
46	S2	918	PSU	O4'-C1'-C2'	2.71	108.96	105.14
46	S2	686	PSU	O2-C2-N1	-2.70	119.82	122.79
1	L5	4637	OMG	N2-C2-N1	2.70	122.47	116.71
46	S2	1328	OMG	C5-C6-N1	2.70	120.04	113.19
46	S2	667	PSU	O2-C2-N1	-2.70	119.82	122.79
1	L5	4689	PSU	C6-N1-C2	-2.69	119.93	122.68
1	L5	4499	OMG	C5-C6-N1	2.69	120.03	113.19
1	L5	4370	OMG	N2-C2-N1	2.69	122.43	116.71
1	L5	1322	1MA	N1-C2-N3	-2.69	122.81	126.00
1	L5	3785	A2M	C5-N7-C8	2.69	107.32	103.51
1	L5	4370	OMG	C2-N1-C6	-2.68	120.20	125.10
1	L5	400	A2M	C5-N7-C8	2.68	107.32	103.51
1	L5	4973	PSU	O2-C2-N1	-2.68	119.84	122.79
46	S2	27	A2M	C4-C5-N7	-2.68	107.35	110.62
1	L5	4628	PSU	C6-N1-C2	-2.68	119.94	122.68
1	L5	1323	A2M	N9-C8-N7	-2.68	110.25	113.91
46	S2	1490	OMG	N2-C2-N1	2.68	122.42	116.71
46	S2	99	A2M	C4-N9-C8	2.68	108.63	105.73
46	S2	644	OMG	C5-C6-N1	2.68	119.98	113.19
46	S2	590	A2M	C4-C5-N7	-2.67	107.36	110.62
46	S2	1447	OMG	C5-C6-N1	2.67	119.97	113.19
1	L5	2815	A2M	C4-C5-N7	-2.67	107.37	110.62
46	S2	644	OMG	C8-N7-C5	2.66	109.06	104.24
1	L5	4392	OMG	C5-C6-N1	2.66	119.95	113.19
46	S2	1842	4AC	C6-C5-C4	2.66	120.22	116.96
1	L5	4353	PSU	O2-C2-N1	-2.66	119.86	122.79
1	L5	3884	PSU	O2-C2-N1	-2.66	119.86	122.79
1	L5	3627	OMG	C2'-C1'-N9	-2.66	109.06	114.22
1	L5	2787	A2M	C4-N9-C8	2.66	108.61	105.73
46	S2	1244	PSU	O2-C2-N1	-2.66	119.87	122.79
46	S2	27	A2M	O2'-C2'-C1'	2.65	114.25	109.08
46	S2	1031	A2M	N9-C8-N7	-2.65	110.28	113.91
46	S2	1031	A2M	C5-N7-C8	2.65	107.28	103.51
46	S2	1328	OMG	C8-N7-C5	2.65	109.03	104.24
46	S2	867	OMG	C5-C6-N1	2.64	119.91	113.19
46	S2	366	PSU	O2-C2-N1	-2.64	119.89	122.79
3	L8	75	OMG	C5-C6-N1	2.64	119.89	113.19
1	L5	1534	A2M	C6-C5-N7	2.64	136.94	132.02

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
46	S2	1678	A2M	C5-N7-C8	2.64	107.26	103.51
1	L5	4392	OMG	N2-C2-N1	2.64	122.33	116.71
1	L5	3744	OMG	C5-C6-N1	2.64	119.89	113.19
1	L5	3899	OMG	C2-N1-C6	-2.63	120.30	125.10
1	L5	2424	OMG	C5-C6-N1	2.63	119.88	113.19
1	L5	4618	OMG	C5-C6-N1	2.63	119.88	113.19
1	L5	4618	OMG	C8-N7-C5	2.63	109.00	104.24
1	L5	4620	OMU	O4-C4-C5	-2.63	120.54	125.16
1	L5	3853	PSU	O2-C2-N1	-2.62	119.90	122.79
46	S2	918	PSU	O2-C2-N1	-2.62	119.91	122.79
1	L5	4196	OMG	C8-N9-C4	2.62	111.03	106.05
46	S2	601	OMG	C5-C6-N1	2.62	119.84	113.19
1	L5	4623	OMG	C5-C6-N1	2.61	119.82	113.19
46	S2	166	A2M	C5-N7-C8	2.61	107.21	103.51
1	L5	3627	OMG	C5-C6-N1	2.60	119.80	113.19
1	L5	4228	OMG	C8-N7-C5	2.60	108.95	104.24
1	L5	4637	OMG	C8-N7-C5	2.60	108.95	104.24
46	S2	1447	OMG	C8-N7-C5	2.60	108.95	104.24
29	La	39	V5N	O2-CB-CA	2.60	112.77	107.28
46	S2	683	OMG	C2-N1-C6	-2.60	120.36	125.10
1	L5	4228	OMG	C5-C6-N1	2.60	119.78	113.19
46	S2	1490	OMG	C2-N1-C6	-2.60	120.37	125.10
1	L5	4571	A2M	O4'-C4'-C3'	-2.59	99.98	105.11
3	L8	55	PSU	O2-C2-N1	-2.59	119.94	122.79
1	L5	3715	PSU	O2-C2-N1	-2.59	119.94	122.79
1	L5	398	A2M	C4-N9-C8	2.59	108.54	105.73
1	L5	2787	A2M	C4-C5-N7	-2.59	107.46	110.62
1	L5	4618	OMG	C8-N9-C4	2.59	110.98	106.05
46	S2	822	PSU	O2-C2-N1	-2.59	119.94	122.79
46	S2	1328	OMG	N9-C4-N3	2.59	131.13	125.94
46	S2	867	OMG	C8-N9-C4	2.59	110.97	106.05
46	S2	1031	A2M	C4-C5-N7	-2.58	107.47	110.62
46	S2	683	OMG	C5-C6-N1	2.58	119.74	113.19
1	L5	1871	A2M	N9-C8-N7	-2.58	110.39	113.91
1	L5	4196	OMG	C5-C6-N1	2.58	119.74	113.19
46	S2	121	OMU	O4-C4-C5	-2.58	120.63	125.16
46	S2	1643	PSU	O2-C2-N1	-2.58	119.95	122.79
1	L5	2876	OMG	C5-C6-N1	2.58	119.73	113.19
3	L8	69	PSU	C6-N1-C2	-2.58	120.05	122.68
46	S2	1174	PSU	O2-C2-N1	-2.58	119.95	122.79
46	S2	1851	MA6	C5-N7-C8	2.58	107.17	103.51
46	S2	159	A2M	N9-C8-N7	-2.58	110.39	113.91

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	L5	3925	OMU	O4-C4-C5	-2.57	120.63	125.16
46	S2	509	OMG	O6-C6-C5	-2.57	119.77	126.60
46	S2	651	PSU	O2-C2-N1	-2.57	119.96	122.79
1	L5	2815	A2M	C5-N7-C8	2.57	107.16	103.51
46	S2	1328	OMG	C8-N9-C4	2.57	110.94	106.05
3	L8	75	OMG	N2-C2-N1	2.57	122.19	116.71
1	L5	1860	PSU	O2-C2-N1	-2.57	119.96	122.79
1	L5	4689	PSU	O2-C2-N1	-2.57	119.96	122.79
46	S2	1177	PSU	O2-C2-N1	-2.57	119.96	122.79
1	L5	2632	PSU	C6-N1-C2	-2.57	120.06	122.68
1	L5	4494	OMG	C5-C6-N1	2.57	119.71	113.19
1	L5	1625	OMG	C8-N9-C4	2.57	110.94	106.05
46	S2	1238	PSU	O2-C2-N1	-2.57	119.97	122.79
1	L5	3695	PSU	O2-C2-N1	-2.56	119.97	122.79
46	S2	159	A2M	C6-C5-N7	2.56	136.80	132.02
1	L5	4623	OMG	C8-N9-C4	2.56	110.92	106.05
1	L5	3830	A2M	C6-C5-N7	2.56	136.79	132.02
46	S2	1692	PSU	O2-C2-N1	-2.56	119.97	122.79
1	L5	4494	OMG	N2-C2-N1	2.56	122.16	116.71
1	L5	2364	OMG	C4-C5-N7	-2.56	106.67	110.72
3	L8	75	OMG	C8-N9-C4	2.56	110.92	106.05
46	S2	649	PSU	O2-C2-N1	-2.56	119.97	122.79
46	S2	1804	OMU	O4-C4-C5	-2.56	120.67	125.16
46	S2	1678	A2M	N9-C8-N7	-2.55	110.42	113.91
1	L5	2364	OMG	O6-C6-C5	-2.55	119.83	126.60
1	L5	1524	A2M	C4-C5-N7	-2.55	107.51	110.62
46	S2	406	PSU	O2-C2-N1	-2.55	119.98	122.79
46	S2	1136	PSU	O2-C2-N1	-2.55	119.99	122.79
1	L5	4431	PSU	O2-C2-N1	-2.55	119.99	122.79
46	S2	1046	PSU	O2-C2-N1	-2.54	119.99	122.79
1	L5	4312	PSU	O2-C2-N1	-2.54	120.00	122.79
1	L5	4442	PSU	O2-C2-N1	-2.54	120.00	122.79
46	S2	105	PSU	O2-C2-N1	-2.54	120.00	122.79
46	S2	572	PSU	O2-C2-N1	-2.54	120.00	122.79
46	S2	1383	A2M	C5-N7-C8	2.54	107.11	103.51
1	L5	3818	UY1	C6-N1-C2	-2.54	120.09	122.68
1	L5	1744	PSU	O2-C2-N1	-2.54	120.00	122.79
46	S2	100	PSU	O2-C2-N1	-2.54	120.00	122.79
1	L5	2401	A2M	C5-N7-C8	2.54	107.11	103.51
1	L5	4403	PSU	C6-N1-C2	-2.54	120.09	122.68
46	S2	1056	PSU	O2-C2-N1	-2.53	120.00	122.79
1	L5	4370	OMG	C8-N9-C4	2.53	110.87	106.05

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
46	S2	512	A2M	C5-N7-C8	2.53	107.11	103.51
1	L5	3899	OMG	C8-N7-C5	2.53	108.83	104.24
1	L5	4972	PSU	O2-C2-N1	-2.53	120.00	122.79
46	S2	436	OMG	N2-C2-N1	2.53	122.11	116.71
1	L5	2424	OMG	O6-C6-C5	-2.53	119.88	126.60
46	S2	601	OMG	C8-N9-C4	2.53	110.87	106.05
46	S2	428	OMU	O2-C2-N1	-2.53	119.42	122.79
46	S2	1447	OMG	O6-C6-C5	-2.53	119.89	126.60
1	L5	3639	PSU	O2-C2-N1	-2.53	120.01	122.79
1	L5	1871	A2M	C6-C5-N7	2.53	136.73	132.02
1	L5	1625	OMG	N9-C4-N3	2.53	131.01	125.94
1	L5	4494	OMG	C8-N9-C4	2.52	110.85	106.05
46	S2	1003	PSU	O2-C2-N1	-2.52	120.01	122.79
1	L5	3718	A2M	C6-C5-N7	2.52	136.72	132.02
1	L5	3627	OMG	C8-N7-C5	2.52	108.80	104.24
46	S2	99	A2M	C4-C5-N7	-2.52	107.55	110.62
46	S2	509	OMG	N9-C4-N3	2.52	130.99	125.94
46	S2	966	PSU	O2-C2-N1	-2.52	120.02	122.79
1	L5	2363	A2M	C4-N9-C8	2.52	108.45	105.73
46	S2	436	OMG	O6-C6-C5	-2.51	119.93	126.60
1	L5	3762	PSU	C6-N1-C2	-2.51	120.11	122.68
46	S2	601	OMG	C8-N7-C5	2.51	108.79	104.24
46	S2	1367	PSU	O2-C2-N1	-2.51	120.02	122.79
1	L5	3627	OMG	C8-N9-C4	2.51	110.83	106.05
1	L5	4673	PSU	O2-C2-N1	-2.51	120.03	122.79
1	L5	2876	OMG	C8-N9-C4	2.51	110.82	106.05
1	L5	1625	OMG	C5-C6-N1	2.50	119.55	113.19
1	L5	4500	PSU	C6-N1-C2	-2.50	120.12	122.68
1	L5	4623	OMG	C8-N7-C5	2.50	108.77	104.24
3	L8	75	OMG	C8-N7-C5	2.50	108.77	104.24
1	L5	4370	OMG	C8-N7-C5	2.50	108.76	104.24
1	L5	4494	OMG	C8-N7-C5	2.50	108.76	104.24
46	S2	683	OMG	O6-C6-C5	-2.49	119.99	126.60
1	L5	4196	OMG	C8-N7-C5	2.49	108.75	104.24
1	L5	4637	OMG	C8-N9-C4	2.49	110.78	106.05
1	L5	5001	PSU	O2-C2-N1	-2.49	120.05	122.79
46	S2	1328	OMG	O6-C6-C5	-2.49	120.00	126.60
46	S2	1367	PSU	C6-N1-C2	-2.49	120.14	122.68
1	L5	4499	OMG	C8-N9-C4	2.48	110.78	106.05
1	L5	3899	OMG	C5-C6-N1	2.48	119.48	113.19
1	L5	3764	PSU	O2-C2-N1	-2.47	120.07	122.79
1	L5	3785	A2M	O2'-C2'-C1'	2.47	113.90	109.08

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
46	S2	468	A2M	C6-C5-N7	2.47	136.63	132.02
46	S2	1832	6MZ	C4-C5-N7	-2.47	107.61	110.62
1	L5	5010	PSU	O2-C2-N1	-2.47	120.07	122.79
46	S2	63	PSU	O2-C2-N1	-2.47	120.07	122.79
46	S2	1490	OMG	C5-C6-N1	2.47	119.46	113.19
1	L5	4296	PSU	O2-C2-N1	-2.47	120.07	122.79
1	L5	4493	PSU	O2-C2-N1	-2.47	120.07	122.79
1	L5	3744	OMG	C8-N7-C5	2.47	108.71	104.24
1	L5	3830	A2M	C5-N7-C8	2.47	107.01	103.51
46	S2	866	PSU	O2-C2-N1	-2.46	120.08	122.79
1	L5	3825	A2M	N9-C8-N7	-2.46	110.54	113.91
46	S2	484	A2M	C6-C5-N7	2.46	136.61	132.02
1	L5	2876	OMG	C2-N1-C6	-2.46	120.61	125.10
46	S2	590	A2M	C4-N9-C8	2.46	108.40	105.73
46	S2	576	A2M	N9-C8-N7	-2.46	110.55	113.91
29	La	39	V5N	O2-CB-CG	-2.46	106.29	110.73
46	S2	609	PSU	C6-N1-C2	-2.46	120.17	122.68
46	S2	1004	PSU	O2-C2-N1	-2.46	120.08	122.79
1	L5	3768	PSU	O2-C2-N1	-2.46	120.08	122.79
1	L5	4523	A2M	N9-C8-N7	-2.46	110.55	113.91
1	L5	3637	PSU	O2-C2-N1	-2.46	120.08	122.79
46	S2	1490	OMG	C8-N7-C5	2.46	108.69	104.24
46	S2	822	PSU	C6-N1-C2	-2.46	120.17	122.68
46	S2	1596	PSU	C6-N1-C2	-2.46	120.17	122.68
1	L5	2839	PSU	O2-C2-N1	-2.46	120.09	122.79
46	S2	683	OMG	C8-N9-C4	2.46	110.72	106.05
46	S2	509	OMG	C8-N7-C5	2.45	108.68	104.24
46	S2	509	OMG	C8-N9-C4	2.45	110.71	106.05
46	S2	27	A2M	C5-N7-C8	2.45	106.99	103.51
46	S2	119	PSU	O2-C2-N1	-2.45	120.09	122.79
46	S2	1232	PSU	O2-C2-N1	-2.45	120.10	122.79
1	L5	3785	A2M	O4'-C4'-C3'	2.44	109.95	105.11
1	L5	4499	OMG	C8-N7-C5	2.44	108.66	104.24
46	S2	1004	PSU	C6-N1-C2	-2.44	120.19	122.68
1	L5	1625	OMG	C2-N1-C6	-2.44	120.65	125.10
46	S2	1490	OMG	C8-N9-C4	2.44	110.69	106.05
1	L5	1536	PSU	O2-C2-N1	-2.43	120.11	122.79
1	L5	4392	OMG	C8-N7-C5	2.43	108.64	104.24
1	L5	4423	PSU	C6-N1-C2	-2.42	120.20	122.68
1	L5	3730	PSU	O2-C2-N1	-2.42	120.12	122.79
46	S2	814	PSU	O2-C2-N1	-2.42	120.13	122.79
1	L5	4499	OMG	N9-C4-N3	2.42	130.80	125.94

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
46	S2	300	PSU	O2-C2-N1	-2.42	120.13	122.79
46	S2	601	OMG	N2-C2-N1	2.42	121.86	116.71
1	L5	4636	PSU	O2-C2-N1	-2.42	120.13	122.79
1	L5	4618	OMG	C6-C5-N7	2.41	134.74	130.25
1	L5	1340	OMC	O4'-C4'-C3'	-2.41	100.34	105.11
46	S2	1447	OMG	C8-N9-C4	2.41	110.64	106.05
46	S2	1186	PSU	O2-C2-N1	-2.41	120.14	122.79
1	L5	3744	OMG	C8-N9-C4	2.40	110.63	106.05
1	L5	4196	OMG	O6-C6-C5	-2.40	120.22	126.60
46	S2	1347	PSU	C6-N1-C2	-2.40	120.23	122.68
1	L5	3770	PSU	O2-C2-N1	-2.40	120.15	122.79
1	L5	4618	OMG	C2'-C1'-N9	-2.40	109.57	114.22
1	L5	1522	OMG	C4-C5-N7	-2.39	106.93	110.72
1	L5	4499	OMG	O6-C6-C5	-2.39	120.25	126.60
1	L5	1326	A2M	N9-C8-N7	-2.39	110.64	113.91
1	L5	3884	PSU	C6-N1-C2	-2.39	120.24	122.68
46	S2	1337	4AC	C5-C4-N3	-2.39	118.75	122.59
1	L5	4552	PSU	O2-C2-N1	-2.39	120.16	122.79
46	S2	1045	PSU	O2-C2-N1	-2.39	120.16	122.79
46	S2	681	PSU	C6-N1-C2	-2.39	120.24	122.68
46	S2	1046	PSU	C6-N1-C2	-2.39	120.24	122.68
46	S2	1244	PSU	C6-N1-C2	-2.39	120.24	122.68
46	S2	1383	A2M	C4-N9-C8	2.39	108.31	105.73
1	L5	4361	PSU	O2-C2-N1	-2.39	120.16	122.79
1	L5	1322	1MA	C4-C5-N7	-2.39	106.94	110.72
46	S2	644	OMG	O6-C6-C5	-2.39	120.27	126.60
1	L5	3744	OMG	O6-C6-C5	-2.39	120.27	126.60
1	L5	3627	OMG	O6-C6-C5	-2.39	120.27	126.60
1	L5	4618	OMG	O6-C6-C5	-2.38	120.28	126.60
1	L5	400	A2M	N9-C8-N7	-2.38	110.66	113.91
46	S2	918	PSU	C6-N1-C2	-2.38	120.25	122.68
46	S2	601	OMG	O6-C6-C5	-2.38	120.29	126.60
1	L5	4494	OMG	O6-C6-C5	-2.38	120.29	126.60
1	L5	1683	PSU	O2-C2-N1	-2.38	120.17	122.79
1	L5	1782	PSU	O2-C2-N1	-2.38	120.17	122.79
46	S2	406	PSU	C6-N1-C2	-2.38	120.25	122.68
1	L5	1625	OMG	O6-C6-C5	-2.37	120.30	126.60
1	L5	1625	OMG	C8-N7-C5	2.37	108.53	104.24
46	S2	867	OMG	O6-C6-C5	-2.37	120.31	126.60
46	S2	36	PSU	C6-N1-C2	-2.37	120.26	122.68
3	L8	75	OMG	O6-C6-C5	-2.37	120.32	126.60
46	S2	1643	PSU	C6-N1-C2	-2.36	120.27	122.68

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	L5	4590	A2M	C6-C5-N7	2.36	136.42	132.02
46	S2	683	OMG	C8-N7-C5	2.36	108.51	104.24
1	L5	1860	PSU	C6-N1-C2	-2.36	120.27	122.68
1	L5	3825	A2M	C6-C5-N7	2.36	136.41	132.02
1	L5	2787	A2M	C5-N7-C8	2.35	106.85	103.51
1	L5	2363	A2M	N9-C8-N7	-2.35	110.69	113.91
1	L5	3920	PSU	O2-C2-N1	-2.35	120.20	122.79
1	L5	398	A2M	C5-N7-C8	2.35	106.85	103.51
1	L5	4296	PSU	C6-N1-C2	-2.35	120.28	122.68
1	L5	3867	A2M	C4-C5-N7	-2.35	107.75	110.62
1	L5	4973	PSU	C6-N1-C2	-2.35	120.28	122.68
46	S2	218	PSU	O2-C2-N1	-2.35	120.20	122.79
46	S2	1003	PSU	C6-N1-C2	-2.35	120.28	122.68
1	L5	2508	PSU	O2-C2-N1	-2.35	120.21	122.79
1	L5	3718	A2M	C4-N9-C8	2.35	108.27	105.73
1	L5	4590	A2M	N9-C8-N7	-2.34	110.71	113.91
1	L5	1316	OMG	C6-C5-C4	-2.34	115.17	118.77
1	L5	2351	OMC	O2-C2-N3	-2.34	118.52	122.33
1	L5	3724	A2M	N9-C8-N7	-2.34	110.71	113.91
1	L5	4196	OMG	N2-C2-N1	2.34	121.70	116.71
1	L5	1322	1MA	C6-C5-N7	2.34	136.45	132.20
1	L5	2843	PSU	O2-C2-N1	-2.34	120.22	122.79
1	L5	1781	PSU	C6-N1-C2	-2.34	120.29	122.68
1	L5	3844	PSU	O2-C2-N1	-2.34	120.22	122.79
46	S2	1337	4AC	N4-C4-N3	2.34	117.77	113.85
1	L5	1792	PSU	O2-C2-N1	-2.33	120.22	122.79
46	S2	109	PSU	C6-N1-C2	-2.33	120.30	122.68
46	S2	1442	OMU	O2-C2-N1	-2.33	119.69	122.79
46	S2	509	OMG	N2-C2-N1	2.33	121.68	116.71
1	L5	4637	OMG	O6-C6-C5	-2.33	120.42	126.60
46	S2	649	PSU	C6-N1-C2	-2.33	120.30	122.68
1	L5	3822	PSU	O2-C2-N1	-2.33	120.23	122.79
1	L5	3899	OMG	C6-C5-N7	2.32	134.57	130.25
46	S2	1360	PSU	O2-C2-N1	-2.32	120.23	122.79
1	L5	4576	PSU	C6-N1-C2	-2.32	120.31	122.68
1	L5	4579	PSU	C6-N1-C2	-2.32	120.31	122.68
1	L5	1683	PSU	C6-N1-C2	-2.32	120.31	122.68
46	S2	1625	PSU	C6-N1-C2	-2.32	120.31	122.68
46	S2	1490	OMG	O6-C6-C5	-2.32	120.45	126.60
1	L5	3764	PSU	C6-N1-C2	-2.32	120.31	122.68
1	L5	4228	OMG	C4-C5-N7	-2.32	107.05	110.72
46	S2	801	PSU	C6-N1-C2	-2.32	120.31	122.68

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	L5	2876	OMG	O6-C6-C5	-2.31	120.46	126.60
1	L5	4673	PSU	C6-N1-C2	-2.31	120.32	122.68
1	L5	4293	PSU	O2-C2-N1	-2.31	120.25	122.79
46	S2	572	PSU	C6-N1-C2	-2.31	120.32	122.68
1	L5	3818	UY1	O4'-C1'-C2'	2.31	108.77	104.48
1	L5	2364	OMG	C5-C6-N1	2.31	119.06	113.19
46	S2	484	A2M	C4-N9-C8	2.31	108.23	105.73
1	L5	4530	UR3	C6-N1-C2	-2.30	119.73	121.79
1	L5	4299	PSU	O2-C2-N1	-2.30	120.26	122.79
3	L8	14	OMU	O2-C2-N1	-2.30	119.73	122.79
1	L5	1781	PSU	O2-C2-N1	-2.30	120.26	122.79
46	S2	1842	4AC	N4-C4-N3	2.30	117.71	113.85
46	S2	815	PSU	O2-C2-N1	-2.30	120.26	122.79
1	L5	4392	OMG	C8-N9-C4	2.30	110.42	106.05
1	L5	4618	OMG	C4-C5-N7	-2.29	107.09	110.72
1	L5	4552	PSU	C6-N1-C2	-2.29	120.34	122.68
46	S2	609	PSU	O2-C2-N1	-2.29	120.27	122.79
1	L5	4471	PSU	O2-C2-N1	-2.29	120.27	122.79
46	S2	822	PSU	O4'-C1'-C2'	2.29	108.37	105.14
46	S2	644	OMG	C4-C5-N7	-2.29	107.10	110.72
1	L5	3851	PSU	C6-N1-C2	-2.29	120.35	122.68
46	S2	601	OMG	N9-C4-N3	2.28	130.52	125.94
1	L5	2815	A2M	O5'-C5'-C4'	2.28	116.76	108.99
1	L5	4623	OMG	O6-C6-C5	-2.28	120.55	126.60
1	L5	4370	OMG	O6-C6-C5	-2.28	120.55	126.60
1	L5	2876	OMG	C8-N7-C5	2.28	108.37	104.24
1	L5	4403	PSU	O2-C2-N1	-2.28	120.28	122.79
46	S2	1850	MA6	C3'-C2'-C1'	2.28	105.75	101.43
46	S2	116	OMU	O2-C2-N1	-2.28	119.76	122.79
46	S2	1360	PSU	O4'-C1'-C2'	2.28	108.35	105.14
1	L5	3715	PSU	C6-N1-C2	-2.28	120.36	122.68
1	L5	3770	PSU	C6-N1-C2	-2.28	120.36	122.68
1	L5	3851	PSU	O2-C2-N1	-2.27	120.29	122.79
1	L5	4370	OMG	C6-C5-N7	2.27	134.47	130.25
1	L5	3830	A2M	N9-C8-N7	-2.27	110.81	113.91
1	L5	4571	A2M	C5-N7-C8	2.27	106.73	103.51
46	S2	1367	PSU	C6-C5-C4	2.27	119.78	118.20
46	S2	1360	PSU	C6-C5-C4	2.27	119.78	118.20
1	L5	3853	PSU	C6-N1-C2	-2.27	120.37	122.68
1	L5	4228	OMG	O6-C6-C5	-2.27	120.59	126.60
1	L5	2843	PSU	C6-N1-C2	-2.26	120.37	122.68
1	L5	2351	OMC	C1'-N1-C2	2.26	123.47	118.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	L5	3867	A2M	N9-C8-N7	-2.26	110.82	113.91
1	L5	4431	PSU	C6-N1-C2	-2.26	120.37	122.68
46	S2	119	PSU	C6-N1-C2	-2.26	120.37	122.68
46	S2	27	A2M	N9-C8-N7	-2.26	110.82	113.91
1	L5	1524	A2M	C6-C5-N7	2.26	136.23	132.02
1	L5	3785	A2M	C6-C5-N7	2.26	136.22	132.02
46	S2	644	OMG	C8-N9-C4	2.26	110.34	106.05
1	L5	4471	PSU	C6-N1-C2	-2.26	120.38	122.68
1	L5	4392	OMG	O6-C6-C5	-2.25	120.62	126.60
1	L5	4623	OMG	C6-C5-N7	2.25	134.44	130.25
46	S2	1347	PSU	C6-C5-C4	2.25	119.77	118.20
1	L5	1782	PSU	C6-N1-C2	-2.25	120.39	122.68
1	L5	1862	PSU	C6-N1-C2	-2.24	120.39	122.68
1	L5	4457	PSU	C6-N1-C2	-2.24	120.39	122.68
46	S2	1136	PSU	C6-N1-C2	-2.24	120.39	122.68
1	L5	2424	OMG	C8-N9-C4	2.24	110.31	106.05
1	L5	1326	A2M	C4'-O4'-C1'	2.24	114.42	109.47
46	S2	296	PSU	C6-N1-C2	-2.24	120.39	122.68
1	L5	1536	PSU	C6-N1-C2	-2.24	120.40	122.68
1	L5	3695	PSU	C6-N1-C2	-2.24	120.40	122.68
46	S2	590	A2M	C5-N7-C8	2.24	106.69	103.51
46	S2	1056	PSU	C6-N1-C2	-2.23	120.40	122.68
46	S2	576	A2M	C6-C5-N7	2.23	136.18	132.02
46	S2	105	PSU	C6-N1-C2	-2.23	120.40	122.68
46	S2	93	PSU	C6-N1-C2	-2.23	120.40	122.68
46	S2	99	A2M	C5-N7-C8	2.23	106.67	103.51
1	L5	4637	OMG	C6-C5-N7	2.23	134.39	130.25
1	L5	1744	PSU	C6-N1-C2	-2.22	120.41	122.68
1	L5	3768	PSU	C6-N1-C2	-2.22	120.41	122.68
1	L5	5010	PSU	C6-N1-C2	-2.22	120.41	122.68
1	L5	3867	A2M	C2'-C1'-N9	-2.22	109.79	113.53
46	S2	863	PSU	C6-N1-C2	-2.22	120.41	122.68
46	S2	1445	PSU	C6-N1-C2	-2.22	120.41	122.68
46	S2	1328	OMG	N2-C2-N1	2.22	121.44	116.71
46	S2	34	PSU	C6-N1-C2	-2.22	120.41	122.68
46	S2	668	A2M	C4-N9-C8	2.22	108.13	105.73
1	L5	3899	OMG	O6-C6-C5	-2.22	120.71	126.60
1	L5	3627	OMG	C6-C5-N7	2.22	134.38	130.25
1	L5	1522	OMG	C5-C6-N1	2.22	118.82	113.19
1	L5	3724	A2M	C6-C5-N7	2.22	136.15	132.02
1	L5	3764	PSU	O3'-C3'-C2'	2.21	118.99	111.82
1	L5	4299	PSU	C6-N1-C2	-2.21	120.42	122.68

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	L5	4521	PSU	C6-C5-C4	2.21	119.75	118.20
46	S2	512	A2M	O4'-C1'-N9	2.21	112.42	108.06
46	S2	1174	PSU	C6-N1-C2	-2.21	120.42	122.68
1	L5	3627	OMG	C4-C5-N7	-2.21	107.23	110.72
1	L5	1582	PSU	C6-N1-C2	-2.20	120.43	122.68
1	L5	3792	OMG	C5-C6-N1	2.20	118.79	113.19
46	S2	1186	PSU	C6-N1-C2	-2.20	120.43	122.68
46	S2	1136	PSU	C6-C5-C4	2.20	119.73	118.20
1	L5	3818	UY1	O2-C2-N1	-2.20	120.37	122.79
46	S2	667	PSU	C6-N1-C2	-2.20	120.44	122.68
46	S2	1248	B8N	O4'-C1'-C2'	2.20	108.24	105.14
1	L5	1340	OMC	O2-C2-N3	-2.19	118.76	122.33
46	S2	814	PSU	C6-N1-C2	-2.19	120.44	122.68
46	S2	1238	PSU	C6-N1-C2	-2.19	120.44	122.68
46	S2	436	OMG	N9-C4-N3	2.19	130.33	125.94
46	S2	300	PSU	C6-N1-C2	-2.19	120.45	122.68
1	L5	3867	A2M	C5-N7-C8	2.19	106.61	103.51
3	L8	69	PSU	O4'-C1'-C2'	2.18	108.22	105.14
1	L5	4523	A2M	C6-C5-N7	2.18	136.08	132.02
1	L5	2508	PSU	C6-N1-C2	-2.18	120.45	122.68
46	S2	815	PSU	C6-N1-C2	-2.18	120.45	122.68
1	L5	4306	OMU	O2-C2-N1	-2.18	119.89	122.79
1	L5	4637	OMG	C4-C5-N7	-2.18	107.27	110.72
1	L5	1792	PSU	C6-N1-C2	-2.18	120.46	122.68
46	S2	100	PSU	C6-N1-C2	-2.18	120.46	122.68
46	S2	651	PSU	C6-N1-C2	-2.18	120.46	122.68
1	L5	4579	PSU	C6-C5-C4	2.18	119.72	118.20
1	L5	2415	OMU	O2-C2-N1	-2.18	119.89	122.79
1	L5	4500	PSU	C6-C5-C4	2.17	119.72	118.20
46	S2	93	PSU	O2-C2-N1	-2.17	120.40	122.79
1	L5	2424	OMG	C8-N7-C5	2.17	108.17	104.24
1	L5	4530	UR3	C1'-N1-C2	2.17	120.65	116.99
1	L5	398	A2M	C6-C5-N7	2.17	136.06	132.02
1	L5	3744	OMG	C6-C5-N7	2.17	134.28	130.25
46	S2	484	A2M	N9-C8-N7	-2.17	110.95	113.91
46	S2	815	PSU	C6-C5-C4	2.17	119.71	118.20
46	S2	172	OMU	O2-C2-N1	-2.16	119.91	122.79
1	L5	4521	PSU	C6-N1-C2	-2.16	120.47	122.68
46	S2	354	OMU	O2-C2-N1	-2.16	119.91	122.79
1	L5	4403	PSU	O4'-C1'-C2'	2.16	108.19	105.14
1	L5	4590	A2M	C2-N1-C6	2.16	122.47	118.77
1	L5	2843	PSU	C6-C5-C4	2.16	119.71	118.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
46	S2	668	A2M	C5-N7-C8	2.16	106.57	103.51
1	L5	1871	A2M	O4'-C4'-C3'	-2.15	100.85	105.11
1	L5	3899	OMG	C4-C5-N7	-2.15	107.31	110.72
46	S2	1692	PSU	C6-N1-C2	-2.15	120.48	122.68
1	L5	400	A2M	C2'-C1'-N9	-2.15	109.91	113.53
1	L5	1779	PSU	C6-C5-C4	2.15	119.70	118.20
46	S2	1232	PSU	C6-N1-C2	-2.15	120.48	122.68
1	L5	2401	A2M	N9-C8-N7	-2.15	110.97	113.91
1	L5	4196	OMG	N9-C4-N3	2.15	130.26	125.94
1	L5	4623	OMG	C4-C5-N7	-2.15	107.32	110.72
1	L5	2364	OMG	C2'-C1'-N9	-2.14	110.06	114.22
1	L5	4628	PSU	C6-C5-C4	2.14	119.70	118.20
46	S2	1678	A2M	C6-C5-N7	2.14	136.01	132.02
46	S2	1447	OMG	N2-C2-N1	2.14	121.28	116.71
46	S2	1490	OMG	N9-C4-N3	2.14	130.24	125.94
1	L5	4620	OMU	O2-C2-N1	-2.14	119.94	122.79
1	L5	3730	PSU	C6-N1-C2	-2.14	120.50	122.68
46	S2	1643	PSU	C6-C5-C4	2.14	119.69	118.20
1	L5	3844	PSU	C6-N1-C2	-2.14	120.50	122.68
46	S2	686	PSU	C6-N1-C2	-2.14	120.50	122.68
1	L5	4636	PSU	O4'-C1'-C2'	2.13	108.15	105.14
1	L5	4361	PSU	C6-N1-C2	-2.13	120.51	122.68
1	L5	1625	OMG	N1-C2-N3	-2.13	119.35	123.32
1	L5	4623	OMG	C2'-C1'-N9	-2.13	110.09	114.22
1	L5	2837	OMU	O2-C2-N1	-2.12	119.96	122.79
1	L5	3637	PSU	C6-N1-C2	-2.12	120.52	122.68
46	S2	366	PSU	C6-N1-C2	-2.12	120.52	122.68
46	S2	644	OMG	C6-C5-N7	2.12	134.19	130.25
1	L5	3853	PSU	C6-C5-C4	2.12	119.68	118.20
1	L5	4403	PSU	C6-C5-C4	2.11	119.68	118.20
1	L5	2839	PSU	C6-N1-C2	-2.11	120.52	122.68
46	S2	27	A2M	C6-C5-N7	2.11	135.96	132.02
46	S2	436	OMG	N1-C2-N3	-2.11	119.38	123.32
1	L5	1677	PSU	O4'-C1'-C2'	2.11	108.12	105.14
46	S2	99	A2M	C5-C6-N6	-2.11	118.83	123.43
1	L5	3867	A2M	C6-C5-N7	2.11	135.95	132.02
1	L5	1316	OMG	O4'-C4'-C3'	-2.11	100.94	105.11
46	S2	1851	MA6	C10-N6-C9	-2.11	109.32	116.12
46	S2	159	A2M	CM'-O2'-C2'	-2.11	109.00	114.52
46	S2	1445	PSU	C6-C5-C4	2.11	119.67	118.20
46	S2	512	A2M	N9-C8-N7	-2.11	111.03	113.91
46	S2	34	PSU	C6-C5-C4	2.11	119.67	118.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
46	S2	436	OMG	C6-C5-N7	2.10	134.16	130.25
1	L5	4442	PSU	C6-N1-C2	-2.10	120.53	122.68
46	S2	166	A2M	C6-C5-N7	2.10	135.94	132.02
1	L5	2787	A2M	C4'-O4'-C1'	2.10	114.11	109.47
46	S2	866	PSU	O3'-C3'-C2'	2.10	118.61	111.82
1	L5	3639	PSU	C6-N1-C2	-2.10	120.54	122.68
1	L5	4392	OMG	C6-C5-N7	2.10	134.15	130.25
1	L5	1322	1MA	O4'-C1'-C2'	-2.10	102.07	106.64
3	L8	55	PSU	C6-N1-C2	-2.10	120.54	122.68
46	S2	1031	A2M	C2-N1-C6	2.09	122.36	118.77
1	L5	3744	OMG	C4-C5-N7	-2.09	107.41	110.72
1	L5	1326	A2M	C2-N1-C6	2.09	122.36	118.77
1	L5	4312	PSU	C6-N1-C2	-2.09	120.55	122.68
1	L5	4532	PSU	C6-N1-C2	-2.09	120.55	122.68
1	L5	2876	OMG	N1-C2-N3	-2.09	119.43	123.32
46	S2	572	PSU	O4'-C1'-C2'	2.09	108.08	105.14
1	L5	3867	A2M	C2-N1-C6	2.08	122.34	118.77
1	L5	3869	OMC	O2-C2-N3	-2.08	118.94	122.33
46	S2	966	PSU	C6-N1-C2	-2.08	120.55	122.68
3	L8	75	OMG	C6-C5-N7	2.08	134.12	130.25
1	L5	5001	PSU	C6-N1-C2	-2.08	120.56	122.68
46	S2	1832	6MZ	C5-C4-N9	2.08	108.20	105.78
1	L5	4442	PSU	O4'-C1'-C2'	2.08	108.07	105.14
1	L5	1625	OMG	N2-C2-N1	2.08	121.14	116.71
1	L5	400	A2M	C6-C5-N7	2.08	135.89	132.02
1	L5	4353	PSU	C6-N1-C2	-2.08	120.56	122.68
46	S2	1177	PSU	C6-N1-C2	-2.07	120.56	122.68
46	S2	509	OMG	C2'-C1'-N9	-2.07	110.20	114.22
46	S2	866	PSU	C6-N1-C2	-2.07	120.56	122.68
1	L5	1582	PSU	O2-C2-N1	-2.07	120.51	122.79
46	S2	1842	4AC	C5-C4-N3	-2.07	119.26	122.59
1	L5	2364	OMG	N9-C8-N7	-2.07	109.49	113.39
1	L5	3792	OMG	C4-C5-N7	-2.07	107.45	110.72
46	S2	218	PSU	C6-N1-C2	-2.07	120.57	122.68
46	S2	1031	A2M	C2'-C1'-N9	-2.07	110.05	113.53
1	L5	3792	OMG	C6-C5-C4	-2.07	115.59	118.77
1	L5	4972	PSU	C6-N1-C2	-2.06	120.57	122.68
1	L5	4353	PSU	C6-C5-C4	2.06	119.64	118.20
46	S2	63	PSU	C6-C5-C4	2.06	119.64	118.20
46	S2	436	OMG	C4-C5-N7	-2.06	107.46	110.72
46	S2	99	A2M	C2'-C1'-N9	-2.06	110.06	113.53
1	L5	4392	OMG	C4-C5-N7	-2.06	107.46	110.72

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	L5	1534	A2M	C2'-C1'-N9	2.06	117.00	113.53
1	L5	4370	OMG	N1-C2-N3	-2.06	119.48	123.32
1	L5	4499	OMG	N2-C2-N1	2.06	121.09	116.71
46	S2	512	A2M	C6-C5-N7	2.06	135.85	132.02
1	L5	4227	OMU	O2-C2-N1	-2.06	120.05	122.79
1	L5	4498	OMU	O2-C2-N1	-2.05	120.06	122.79
1	L5	4493	PSU	C6-N1-C2	-2.05	120.59	122.68
1	L5	4494	OMG	N9-C4-N3	2.05	130.06	125.94
46	S2	1383	A2M	C6-C5-N7	2.05	135.84	132.02
46	S2	1850	MA6	C6-C5-N7	2.04	136.72	133.28
1	L5	398	A2M	C2-N1-C6	2.04	122.28	118.77
1	L5	1779	PSU	C6-N1-C2	-2.04	120.59	122.68
46	S2	683	OMG	N1-C2-N3	-2.04	119.51	123.32
1	L5	4370	OMG	C4-C5-N7	-2.04	107.49	110.72
1	L5	2401	A2M	C6-C5-N7	2.04	135.82	132.02
1	L5	3718	A2M	C5-N7-C8	2.04	106.40	103.51
46	S2	1031	A2M	C6-C5-N7	2.03	135.81	132.02
1	L5	1677	PSU	C6-N1-C2	-2.03	120.61	122.68
1	L5	4571	A2M	C6-C5-N7	2.03	135.80	132.02
46	S2	667	PSU	O4'-C1'-C2'	2.03	108.00	105.14
1	L5	2787	A2M	O2'-C2'-C1'	-2.03	105.12	109.08
1	L5	4499	OMG	N1-C2-N3	-2.03	119.54	123.32
1	L5	3920	PSU	C6-N1-C2	-2.03	120.61	122.68
1	L5	1323	A2M	C6-C5-N7	2.03	135.79	132.02
1	L5	2815	A2M	N9-C8-N7	-2.03	111.14	113.91
46	S2	1490	OMG	N1-C2-N3	-2.03	119.54	123.32
1	L5	4442	PSU	C6-C5-C4	2.02	119.61	118.20
46	S2	1804	OMU	O4'-C4'-C3'	-2.02	101.12	105.11
1	L5	4220	6MZ	C4-N9-C8	2.02	107.92	105.73
46	S2	1238	PSU	O4-C4-C5	-2.02	118.77	124.05
1	L5	1677	PSU	C6-C5-C4	2.02	119.61	118.20
1	L5	2363	A2M	C2-N1-C6	2.01	122.22	118.77
1	L5	4296	PSU	C6-C5-C4	2.01	119.61	118.20
46	S2	918	PSU	C6-C5-C4	2.01	119.61	118.20
1	L5	2365	OMC	O2-C2-N3	-2.01	119.06	122.33
1	L5	1524	A2M	O4'-C4'-C3'	-2.01	101.14	105.11
1	L5	1316	OMG	C8-N9-C4	2.01	109.87	106.05
1	L5	3782	5MC	CM5-C5-C6	-2.00	120.17	122.85
46	S2	1842	4AC	CM7-C7-N4	2.00	118.75	115.29

There are no chirality outliers.

All (158) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	L8	14	OMU	C1'-C2'-O2'-CM2
66	ST	67	NMM	O-C-CA-CB
1	L5	1582	PSU	O4'-C1'-C5-C4
1	L5	1582	PSU	O4'-C1'-C5-C6
1	L5	1792	PSU	O4'-C4'-C5'-O5'
1	L5	2364	OMG	O4'-C4'-C5'-O5'
1	L5	2422	OMC	C1'-C2'-O2'-CM2
1	L5	2424	OMG	C1'-C2'-O2'-CM2
1	L5	2815	A2M	O4'-C4'-C5'-O5'
1	L5	2824	OMC	C1'-C2'-O2'-CM2
1	L5	2861	OMC	C1'-C2'-O2'-CM2
1	L5	3701	OMC	C2'-C1'-N1-C2
1	L5	3701	OMC	C2'-C1'-N1-C6
1	L5	3724	A2M	C1'-C2'-O2'-CM'
1	L5	3785	A2M	O4'-C4'-C5'-O5'
1	L5	3841	OMC	C1'-C2'-O2'-CM2
1	L5	4196	OMG	C1'-C2'-O2'-CM2
1	L5	4523	A2M	C1'-C2'-O2'-CM'
1	L5	4590	A2M	C4'-C5'-O5'-P
1	L5	4623	OMG	C1'-C2'-O2'-CM2
1	L5	4636	PSU	C2'-C1'-C5-C6
1	L5	4636	PSU	C3'-C4'-C5'-O5'
1	L5	4636	PSU	O4'-C4'-C5'-O5'
1	L5	4637	OMG	O4'-C4'-C5'-O5'
1	L5	4637	OMG	C3'-C4'-C5'-O5'
1	L5	4637	OMG	C1'-C2'-O2'-CM2
46	S2	27	A2M	O4'-C4'-C5'-O5'
46	S2	27	A2M	C3'-C4'-C5'-O5'
46	S2	27	A2M	C1'-C2'-O2'-CM'
46	S2	166	A2M	C1'-C2'-O2'-CM'
46	S2	174	OMC	C1'-C2'-O2'-CM2
46	S2	428	OMU	C2'-C1'-N1-C6
46	S2	462	OMC	C1'-C2'-O2'-CM2
46	S2	512	A2M	C1'-C2'-O2'-CM'
46	S2	576	A2M	C1'-C2'-O2'-CM'
46	S2	601	OMG	C1'-C2'-O2'-CM2
46	S2	668	A2M	C3'-C4'-C5'-O5'
46	S2	867	OMG	C1'-C2'-O2'-CM2
46	S2	1248	B8N	N34-C33-C34-O35
46	S2	1248	B8N	C31-C32-C33-C34
46	S2	1248	B8N	C31-C32-C33-N34
46	S2	1326	UY1	C2'-C1'-C5-C4
46	S2	1328	OMG	C1'-C2'-O2'-CM2

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Mol	Chain	Res	Type	Atoms
46	S2	1383	A2M	C1'-C2'-O2'-CM'
46	S2	1447	OMG	C3'-C4'-C5'-O5'
46	S2	1447	OMG	C1'-C2'-O2'-CM2
46	S2	1678	A2M	C1'-C2'-O2'-CM'
46	S2	1703	OMC	C1'-C2'-O2'-CM2
46	S2	1832	6MZ	C5-C6-N6-C9
46	S2	1832	6MZ	N1-C6-N6-C9
46	S2	1850	MA6	C5-C6-N6-C9
46	S2	1851	MA6	O4'-C4'-C5'-O5'
46	S2	1851	MA6	C3'-C4'-C5'-O5'
46	S2	1851	MA6	C5-C6-N6-C9
46	S2	1851	MA6	C5-C6-N6-C10
1	L5	1792	PSU	C3'-C4'-C5'-O5'
1	L5	2364	OMG	C3'-C4'-C5'-O5'
1	L5	2815	A2M	C3'-C4'-C5'-O5'
1	L5	3818	UY1	O4'-C4'-C5'-O5'
1	L5	3822	PSU	O4'-C4'-C5'-O5'
1	L5	3844	PSU	O4'-C4'-C5'-O5'
1	L5	4500	PSU	C3'-C4'-C5'-O5'
1	L5	4500	PSU	O4'-C4'-C5'-O5'
1	L5	4618	OMG	O4'-C4'-C5'-O5'
46	S2	99	A2M	O4'-C4'-C5'-O5'
46	S2	100	PSU	O4'-C4'-C5'-O5'
46	S2	166	A2M	O4'-C4'-C5'-O5'
46	S2	166	A2M	C3'-C4'-C5'-O5'
46	S2	590	A2M	O4'-C4'-C5'-O5'
46	S2	668	A2M	O4'-C4'-C5'-O5'
46	S2	822	PSU	C3'-C4'-C5'-O5'
46	S2	822	PSU	O4'-C4'-C5'-O5'
46	S2	867	OMG	O4'-C4'-C5'-O5'
46	S2	1490	OMG	O4'-C4'-C5'-O5'
46	S2	428	OMU	C2'-C1'-N1-C2
1	L5	3785	A2M	C3'-C4'-C5'-O5'
1	L5	3818	UY1	C3'-C4'-C5'-O5'
1	L5	3822	PSU	C3'-C4'-C5'-O5'
1	L5	4618	OMG	C3'-C4'-C5'-O5'
46	S2	590	A2M	C3'-C4'-C5'-O5'
46	S2	867	OMG	C3'-C4'-C5'-O5'
46	S2	918	PSU	O4'-C4'-C5'-O5'
46	S2	1447	OMG	O4'-C4'-C5'-O5'
46	S2	1248	B8N	C32-C31-N3-C4
46	S2	1851	MA6	N1-C6-N6-C10

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Mol	Chain	Res	Type	Atoms
46	S2	1248	B8N	N34-C33-C34-O36
1	L5	3844	PSU	C3'-C4'-C5'-O5'
46	S2	100	PSU	C3'-C4'-C5'-O5'
46	S2	683	OMG	C3'-C4'-C5'-O5'
46	S2	576	A2M	C3'-C4'-C5'-O5'
1	L5	3818	UY1	C4'-C5'-O5'-P
46	S2	99	A2M	C3'-C4'-C5'-O5'
46	S2	683	OMG	O4'-C4'-C5'-O5'
46	S2	1850	MA6	O4'-C4'-C5'-O5'
46	S2	1850	MA6	C3'-C4'-C5'-O5'
46	S2	590	A2M	C2'-C1'-N9-C4
46	S2	1850	MA6	C5-C6-N6-C10
1	L5	2787	A2M	C2'-C1'-N9-C8
66	ST	67	NMM	NE-CD-CG-CB
46	S2	1248	B8N	C32-C31-N3-C2
1	L5	1534	A2M	C4'-C5'-O5'-P
46	S2	590	A2M	C2'-C1'-N9-C8
46	S2	509	OMG	O4'-C4'-C5'-O5'
46	S2	576	A2M	O4'-C4'-C5'-O5'
1	L5	4447	5MC	C2'-C1'-N1-C6
46	S2	1490	OMG	C4'-C5'-O5'-P
46	S2	572	PSU	O4'-C4'-C5'-O5'
46	S2	1703	OMC	O4'-C4'-C5'-O5'
66	ST	67	NMM	N-CA-CB-CG
1	L5	3724	A2M	C3'-C4'-C5'-O5'
46	S2	918	PSU	C3'-C4'-C5'-O5'
1	L5	4447	5MC	O4'-C1'-N1-C6
66	ST	67	NMM	C-CA-CB-CG
46	S2	428	OMU	O4'-C1'-N1-C2
46	S2	428	OMU	O4'-C1'-N1-C6
1	L5	3844	PSU	C4'-C5'-O5'-P
1	L5	3701	OMC	O4'-C1'-N1-C6
1	L5	3627	OMG	O4'-C4'-C5'-O5'
46	S2	1248	B8N	C32-C33-C34-O36
46	S2	1248	B8N	C32-C33-C34-O35
1	L5	4500	PSU	C4'-C5'-O5'-P
1	L5	2351	OMC	C2'-C1'-N1-C2
1	L5	2787	A2M	C2'-C1'-N9-C4
1	L5	1326	A2M	C4'-C5'-O5'-P
1	L5	4447	5MC	O4'-C1'-N1-C2
1	L5	2351	OMC	C2'-C1'-N1-C6
1	L5	3818	UY1	O4'-C1'-C5-C4

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Mol	Chain	Res	Type	Atoms
46	S2	1326	UY1	O4'-C1'-C5-C4
1	L5	3701	OMC	O4'-C1'-N1-C2
1	L5	1322	1MA	C2'-C1'-N9-C8
46	S2	1850	MA6	N1-C6-N6-C10
46	S2	683	OMG	C4'-C5'-O5'-P
1	L5	1582	PSU	C3'-C4'-C5'-O5'
46	S2	966	PSU	O4'-C4'-C5'-O5'
1	L5	2804	OMC	C1'-C2'-O2'-CM2
1	L5	1524	A2M	O4'-C1'-N9-C8
1	L5	1322	1MA	C2'-C1'-N9-C4
1	L5	2815	A2M	C4'-C5'-O5'-P
1	L5	2351	OMC	O4'-C4'-C5'-O5'
1	L5	3724	A2M	O4'-C4'-C5'-O5'
66	ST	67	NMM	CA-CB-CG-CD
1	L5	1677	PSU	O4'-C1'-C5-C6
1	L5	4636	PSU	O4'-C1'-C5-C6
46	S2	1326	UY1	O4'-C1'-C5-C6
46	S2	1851	MA6	C4'-C5'-O5'-P
1	L5	2787	A2M	O4'-C1'-N9-C8
1	L5	2422	OMC	O4'-C4'-C5'-O5'
46	S2	1703	OMC	C3'-C4'-C5'-O5'
1	L5	4447	5MC	C2'-C1'-N1-C2
1	L5	398	A2M	O4'-C4'-C5'-O5'
1	L5	1534	A2M	O4'-C4'-C5'-O5'
1	L5	3899	OMG	O4'-C4'-C5'-O5'
46	S2	509	OMG	C3'-C4'-C5'-O5'
46	S2	572	PSU	C3'-C4'-C5'-O5'
46	S2	644	OMG	C4'-C5'-O5'-P
46	S2	822	PSU	C4'-C5'-O5'-P
46	S2	801	PSU	C3'-C4'-C5'-O5'
46	S2	1045	PSU	C3'-C4'-C5'-O5'

There are no ring outliers.

93 monomers are involved in 139 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
46	S2	517	OMC	1	0
1	L5	398	A2M	1	0
1	L5	4499	OMG	1	0
1	L5	2787	A2M	1	0
1	L5	2415	OMU	2	0
1	L5	4228	OMG	1	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
46	S2	166	A2M	4	0
1	L5	1534	A2M	2	0
1	L5	1871	A2M	1	0
1	L5	4392	OMG	2	0
46	S2	428	OMU	1	0
46	S2	1447	OMG	2	0
46	S2	1031	A2M	1	0
1	L5	4447	5MC	2	0
1	L5	1881	OMC	2	0
46	S2	1174	PSU	2	0
1	L5	4628	PSU	1	0
3	L8	69	PSU	1	0
1	L5	2824	OMC	1	0
1	L5	4196	OMG	1	0
1	L5	1326	A2M	2	0
46	S2	1596	PSU	1	0
1	L5	3818	UY1	2	0
1	L5	4579	PSU	2	0
46	S2	1850	MA6	2	0
46	S2	686	PSU	1	0
46	S2	576	A2M	5	0
46	S2	801	PSU	1	0
46	S2	116	OMU	2	0
46	S2	484	A2M	2	0
1	L5	3920	PSU	1	0
1	L5	1340	OMC	2	0
46	S2	1703	OMC	3	0
1	L5	4220	6MZ	3	0
46	S2	27	A2M	1	0
46	S2	436	OMG	1	0
1	L5	3925	OMU	1	0
46	S2	867	OMG	5	0
46	S2	1842	4AC	1	0
46	S2	1391	OMC	1	0
46	S2	1337	4AC	1	0
46	S2	822	PSU	2	0
1	L5	4536	OMC	2	0
1	L5	4498	OMU	1	0
1	L5	4620	OMU	2	0
46	S2	601	OMG	1	0
1	L5	3851	PSU	1	0
46	S2	1643	PSU	1	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
1	L5	4293	PSU	1	0
46	S2	1445	PSU	1	0
46	S2	159	A2M	1	0
46	S2	462	OMC	2	0
1	L5	3724	A2M	1	0
46	S2	1383	A2M	1	0
1	L5	2363	A2M	3	0
1	L5	4571	A2M	2	0
1	L5	4471	PSU	1	0
1	L5	4521	PSU	1	0
46	S2	121	OMU	1	0
1	L5	4689	PSU	1	0
1	L5	4500	PSU	2	0
1	L5	4673	PSU	2	0
1	L5	2364	OMG	1	0
1	L5	3770	PSU	1	0
46	S2	1692	PSU	1	0
46	S2	1232	PSU	2	0
1	L5	3867	A2M	5	0
1	L5	4457	PSU	1	0
46	S2	512	A2M	2	0
46	S2	681	PSU	1	0
1	L5	2804	OMC	1	0
1	L5	4296	PSU	1	0
46	S2	1288	OMU	1	0
1	L5	4637	OMG	1	0
1	L5	3718	A2M	1	0
46	S2	468	A2M	1	0
1	L5	3701	OMC	1	0
46	S2	1678	A2M	2	0
1	L5	3841	OMC	1	0
46	S2	590	A2M	4	0
1	L5	4618	OMG	1	0
1	L5	2876	OMG	1	0
46	S2	174	OMC	1	0
46	S2	1851	MA6	2	0
1	L5	4552	PSU	1	0
1	L5	2422	OMC	1	0
46	S2	572	PSU	1	0
1	L5	1781	PSU	1	0
46	S2	509	OMG	1	0
1	L5	3785	A2M	1	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
1	L5	2351	OMC	3	0
1	L5	3792	OMG	1	0
1	L5	2424	OMG	2	0

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 429 ligands modelled in this entry, 408 are monoatomic - leaving 21 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	$\# Z > 2$
86	NMY	L5	5379	-	45,45,45	1.02	2 (4%)	63,67,67	1.13	5 (7%)
86	NMY	L5	5383	-	45,45,45	0.79	1 (2%)	63,67,67	1.48	8 (12%)
86	NMY	L5	5389	-	45,45,45	0.68	1 (2%)	63,67,67	1.36	7 (11%)
86	NMY	L5	5380	-	45,45,45	0.73	1 (2%)	63,67,67	1.04	3 (4%)
86	NMY	L5	5382	-	45,45,45	0.65	0	63,67,67	1.03	2 (3%)
86	NMY	L5	5385	-	45,45,45	0.73	1 (2%)	63,67,67	1.26	5 (7%)
85	SPD	L5	5376	-	9,9,9	0.28	0	8,8,8	0.29	0
86	NMY	L5	5381	-	45,45,45	0.73	0	63,67,67	1.12	4 (6%)
88	IAS	SO	202	-	6,7,8	1.07	0	6,8,10	1.52	1 (16%)
85	SPD	L5	5377	-	9,9,9	0.35	0	8,8,8	0.72	0
86	NMY	S2	1966	-	45,45,45	0.60	0	63,67,67	1.49	11 (17%)
86	NMY	L5	5384	-	45,45,45	0.68	0	63,67,67	1.57	10 (15%)
85	SPD	L5	5375	-	9,9,9	0.25	0	8,8,8	0.24	0
86	NMY	L7	202	-	45,45,45	0.90	1 (2%)	63,67,67	2.18	21 (33%)
86	NMY	L5	5387	-	45,45,45	0.75	2 (4%)	63,67,67	1.57	13 (20%)
86	NMY	L5	5378	-	45,45,45	0.79	1 (2%)	63,67,67	1.24	4 (6%)
86	NMY	L5	5386	-	45,45,45	0.71	0	63,67,67	1.12	6 (9%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
86	NMY	S2	1975	83	45,45,45	0.87	2 (4%)	63,67,67	1.12	5 (7%)
86	NMY	L5	5388	-	45,45,45	0.67	0	63,67,67	1.25	7 (11%)
86	NMY	S2	1902	-	45,45,45	0.68	0	63,67,67	1.17	5 (7%)
86	NMY	S2	1945	-	45,45,45	0.76	1 (2%)	63,67,67	1.04	3 (4%)

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
86	NMY	L5	5379	-	-	5/18/94/94	0/4/4/4
86	NMY	L5	5383	-	-	5/18/94/94	0/4/4/4
86	NMY	L5	5389	-	-	6/18/94/94	0/4/4/4
86	NMY	L5	5380	-	-	10/18/94/94	0/4/4/4
86	NMY	L5	5382	-	-	10/18/94/94	0/4/4/4
86	NMY	L5	5385	-	-	12/18/94/94	0/4/4/4
85	SPD	L5	5376	-	-	4/7/7/7	-
86	NMY	L5	5381	-	-	6/18/94/94	0/4/4/4
88	IAS	SO	202	-	-	0/7/7/8	-
85	SPD	L5	5377	-	-	4/7/7/7	-
86	NMY	S2	1966	-	-	12/18/94/94	0/4/4/4
86	NMY	L5	5384	-	-	8/18/94/94	0/4/4/4
85	SPD	L5	5375	-	-	3/7/7/7	-
86	NMY	L7	202	-	-	7/18/94/94	0/4/4/4
86	NMY	L5	5387	-	-	12/18/94/94	0/4/4/4
86	NMY	L5	5378	-	-	2/18/94/94	0/4/4/4
86	NMY	L5	5386	-	-	9/18/94/94	0/4/4/4
86	NMY	S2	1975	83	-	3/18/94/94	0/4/4/4
86	NMY	L5	5388	-	-	6/18/94/94	0/4/4/4
86	NMY	S2	1902	-	-	9/18/94/94	0/4/4/4
86	NMY	S2	1945	-	-	6/18/94/94	0/4/4/4

All (13) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
86	L7	202	NMY	C3-C2	-2.90	1.49	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
86	L5	5379	NMY	C2-N2	-2.57	1.43	1.47
86	L5	5378	NMY	C2-N2	-2.29	1.43	1.47
86	L5	5385	NMY	C13-C14	-2.26	1.50	1.52
86	L5	5389	NMY	C13-C14	-2.25	1.50	1.52
86	L5	5383	NMY	C8-C9	-2.21	1.48	1.53
86	L5	5379	NMY	C19-N23	-2.16	1.44	1.47
86	S2	1975	NMY	C2-N2	-2.13	1.44	1.47
86	L5	5387	NMY	C13-C14	-2.07	1.50	1.52
86	L5	5380	NMY	C13-C14	-2.05	1.50	1.52
86	S2	1945	NMY	C13-C14	-2.02	1.50	1.52
86	S2	1975	NMY	C3-C2	-2.01	1.51	1.53
86	L5	5387	NMY	C20-C19	-2.00	1.51	1.53

All (120) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
86	L7	202	NMY	C1-O1-C10	-6.09	102.89	117.96
86	L5	5389	NMY	O11-C13-O16	-5.64	105.33	111.43
86	L7	202	NMY	C8-C7-C12	5.35	118.12	110.04
86	L7	202	NMY	C12-C11-C10	-5.28	99.60	111.66
86	L5	5383	NMY	C8-C7-C12	4.94	117.50	110.04
86	L7	202	NMY	C18-O22-C22	-4.78	104.31	113.69
86	L7	202	NMY	C11-C10-C9	-4.74	102.32	111.16
86	L5	5387	NMY	C21-C20-C19	-4.64	103.10	111.07
86	L5	5385	NMY	C1-O1-C10	-4.34	107.22	117.96
86	L5	5387	NMY	C3-C4-C5	-4.16	102.82	110.24
86	L5	5384	NMY	C9-C8-C7	4.15	119.70	111.18
86	L5	5384	NMY	C18-O22-C22	3.73	121.00	113.69
86	S2	1966	NMY	O12-C12-C7	-3.71	103.01	109.81
86	L5	5380	NMY	O11-C13-O16	-3.71	107.42	111.43
86	L5	5384	NMY	C13-O11-C11	-3.63	108.98	117.96
86	L5	5383	NMY	C11-C12-C7	3.62	118.45	109.63
86	S2	1966	NMY	C21-C20-C19	3.61	117.28	111.07
86	L5	5383	NMY	C13-C14-C15	3.61	106.44	102.10
86	L7	202	NMY	O1-C10-C9	3.53	117.61	109.18
86	S2	1966	NMY	C1-O1-C10	-3.50	109.29	117.96
86	L5	5380	NMY	C18-O18-C15	-3.47	109.39	117.96
86	L5	5388	NMY	C1-O5-C5	3.46	120.48	113.69
86	L5	5384	NMY	C13-C14-C15	3.29	106.05	102.10
86	L5	5384	NMY	C11-C12-C7	3.25	117.56	109.63
86	L5	5389	NMY	C18-O18-C15	-3.14	110.18	117.96
86	L7	202	NMY	C3-C2-N2	-3.13	104.65	111.05

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
86	L7	202	NMY	C20-C21-C22	3.12	115.80	110.24
86	L5	5378	NMY	C20-C21-C22	3.09	115.75	110.24
86	S2	1966	NMY	C13-C14-C15	3.02	105.73	102.10
86	L5	5387	NMY	O5-C5-C4	-3.01	104.23	109.69
86	L5	5387	NMY	C1-O1-C10	-2.94	110.69	117.96
86	L7	202	NMY	C18-O18-C15	-2.93	110.72	117.96
86	L5	5388	NMY	O22-C22-C23	2.92	111.44	106.01
86	L5	5383	NMY	O18-C18-C19	2.92	113.24	108.22
86	L5	5378	NMY	C13-C14-C15	2.90	105.59	102.10
86	S2	1966	NMY	O11-C11-C12	2.89	114.97	107.28
86	L5	5381	NMY	C13-C14-C15	2.89	105.58	102.10
86	L7	202	NMY	O21-C21-C22	-2.89	102.13	109.30
86	L5	5378	NMY	C6-C5-C4	-2.87	107.45	113.10
86	L5	5384	NMY	O1-C10-C9	-2.84	102.41	109.18
86	L5	5383	NMY	C1-O1-C10	-2.84	110.94	117.96
86	L5	5379	NMY	O1-C10-C9	-2.83	102.42	109.18
86	S2	1975	NMY	O12-C12-C7	-2.81	104.66	109.81
86	S2	1966	NMY	O11-C13-C14	2.79	113.74	107.96
86	L7	202	NMY	C1-O5-C5	2.77	119.12	113.69
86	L5	5384	NMY	C8-C7-C12	2.75	114.19	110.04
86	L5	5386	NMY	C18-O18-C15	-2.72	111.23	117.96
86	L5	5381	NMY	O1-C10-C9	-2.71	102.70	109.18
86	L5	5386	NMY	C11-C12-C7	2.69	116.19	109.63
86	L5	5387	NMY	O22-C22-C21	2.66	114.53	109.69
86	L7	202	NMY	O22-C22-C23	2.64	110.93	106.01
86	L7	202	NMY	C9-C8-C7	2.57	116.46	111.18
86	S2	1966	NMY	C20-C21-C22	2.55	114.79	110.24
86	L5	5381	NMY	O1-C10-C11	2.54	113.93	107.48
86	L5	5385	NMY	O11-C11-C12	2.53	114.01	107.28
86	L5	5384	NMY	C3-C2-N2	-2.52	105.88	111.05
86	S2	1966	NMY	C8-C7-C12	2.52	113.84	110.04
86	L7	202	NMY	C12-C7-N7	-2.51	105.99	110.97
86	L5	5386	NMY	C13-O11-C11	-2.51	111.74	117.96
86	S2	1902	NMY	O5-C5-C6	2.50	110.67	106.01
86	S2	1902	NMY	O1-C10-C11	2.49	113.82	107.48
86	L5	5386	NMY	O5-C5-C6	2.48	110.63	106.01
86	L5	5387	NMY	O5-C5-C6	2.48	110.62	106.01
86	S2	1945	NMY	C1-O1-C10	-2.47	111.84	117.96
86	L5	5389	NMY	O22-C22-C23	2.47	110.61	106.01
86	S2	1975	NMY	C1-O5-C5	2.47	118.53	113.69
86	L5	5387	NMY	O18-C18-O22	-2.46	103.80	110.67
86	L5	5388	NMY	C21-C20-C19	2.46	115.30	111.07

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
86	L7	202	NMY	O5-C1-C2	2.44	115.55	110.06
86	L5	5379	NMY	O1-C10-C11	2.44	113.67	107.48
86	L5	5387	NMY	C18-C19-C20	-2.43	103.85	110.21
86	L5	5384	NMY	O18-C18-C19	2.42	112.39	108.22
86	L5	5387	NMY	C18-C19-N23	2.42	114.56	110.20
86	L5	5382	NMY	C18-O18-C15	-2.41	111.99	117.96
86	L5	5378	NMY	C13-O11-C11	-2.41	112.01	117.96
86	L7	202	NMY	O16-C16-C17	2.39	114.37	109.21
86	L5	5379	NMY	C9-C8-C7	-2.39	106.28	111.18
86	L7	202	NMY	C13-C14-C15	2.39	104.97	102.10
86	L5	5385	NMY	C18-O22-C22	-2.38	109.03	113.69
86	L7	202	NMY	O3-C3-C2	-2.37	105.95	110.22
86	S2	1975	NMY	C13-C14-C15	2.34	104.91	102.10
86	L5	5388	NMY	O22-C22-C21	-2.34	105.45	109.69
86	L7	202	NMY	C6-C5-C4	-2.33	108.52	113.10
86	L5	5387	NMY	O11-C11-C12	2.32	113.46	107.28
86	L5	5387	NMY	O4-C4-C3	2.31	115.70	110.35
86	S2	1975	NMY	C11-C12-C7	2.30	115.24	109.63
86	L7	202	NMY	O4-C4-C3	-2.30	105.04	110.35
86	L5	5383	NMY	C8-C7-N7	-2.28	102.75	110.84
86	L5	5387	NMY	C23-C22-C21	-2.27	108.63	113.10
86	L5	5389	NMY	C11-C12-C7	2.27	115.17	109.63
88	SO	202	IAS	OD1-CG-CB	-2.27	118.82	125.43
86	L5	5384	NMY	O22-C22-C21	2.25	113.78	109.69
86	L5	5388	NMY	O5-C5-C6	2.23	110.16	106.01
86	S2	1966	NMY	C11-C10-C9	-2.21	107.03	111.16
86	L5	5383	NMY	O5-C5-C6	2.18	110.07	106.01
86	L5	5387	NMY	O5-C1-C2	2.18	114.96	110.06
86	S2	1902	NMY	O11-C11-C10	2.18	113.01	107.48
86	L5	5388	NMY	C18-C19-C20	2.17	115.89	110.21
86	L5	5389	NMY	C1-O1-C10	-2.15	112.63	117.96
86	L5	5379	NMY	O20-C20-C21	-2.15	105.37	110.35
86	S2	1902	NMY	C11-C12-C7	2.14	114.86	109.63
86	S2	1902	NMY	C9-C8-C7	-2.14	106.79	111.18
86	L5	5389	NMY	C4-C3-C2	2.13	114.74	111.07
86	S2	1945	NMY	C12-C7-N7	-2.11	106.80	110.97
86	L5	5389	NMY	O1-C1-C2	2.10	111.84	108.22
86	L7	202	NMY	O22-C22-C21	-2.10	105.88	109.69
86	S2	1966	NMY	C18-C19-C20	2.08	115.66	110.21
86	L5	5385	NMY	C18-O18-C15	2.08	123.11	117.96
86	L5	5380	NMY	O5-C5-C6	2.07	109.87	106.01
86	L5	5382	NMY	C8-C7-C12	-2.05	106.94	110.04

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
86	L5	5379	NMY	C12-C11-C10	-2.05	106.99	111.66
86	L5	5381	NMY	O12-C12-C7	-2.04	106.06	109.81
86	S2	1966	NMY	O5-C5-C6	2.04	109.80	106.01
86	S2	1975	NMY	C12-C7-N7	-2.02	106.97	110.97
86	L5	5383	NMY	C3-C4-C5	-2.02	106.63	110.24
86	L5	5386	NMY	C12-C7-N7	-2.02	106.98	110.97
86	L5	5385	NMY	O11-C11-C10	2.01	112.60	107.48
86	L5	5388	NMY	C13-C14-C15	2.00	104.51	102.10
86	S2	1945	NMY	C4-C3-C2	-2.00	107.63	111.07
86	L5	5386	NMY	C1-O1-C10	-2.00	113.01	117.96

There are no chirality outliers.

All (139) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
86	L5	5378	NMY	C21-C22-C23-N19
86	L5	5378	NMY	O22-C22-C23-N19
86	L5	5380	NMY	C14-C13-O11-C11
86	L5	5380	NMY	C21-C22-C23-N19
86	L5	5380	NMY	O22-C22-C23-N19
86	L5	5382	NMY	C4-C5-C6-N6
86	L5	5382	NMY	O5-C5-C6-N6
86	L5	5382	NMY	C14-C13-O11-C11
86	L5	5383	NMY	C16-C15-O18-C18
86	L5	5383	NMY	C15-C16-C17-O17
86	L5	5383	NMY	O16-C16-C17-O17
86	L5	5383	NMY	C19-C18-O18-C15
86	L5	5384	NMY	C4-C5-C6-N6
86	L5	5384	NMY	C14-C13-O11-C11
86	L5	5384	NMY	C19-C18-O18-C15
86	L5	5384	NMY	C21-C22-C23-N19
86	L5	5384	NMY	O22-C22-C23-N19
86	L5	5385	NMY	C14-C13-O11-C11
86	L5	5385	NMY	O16-C13-O11-C11
86	L5	5385	NMY	C14-C15-O18-C18
86	L5	5385	NMY	C19-C18-O18-C15
86	L5	5385	NMY	C21-C22-C23-N19
86	L5	5385	NMY	O22-C22-C23-N19
86	L5	5386	NMY	O5-C5-C6-N6
86	L5	5386	NMY	C14-C13-O11-C11
86	L5	5386	NMY	O16-C13-O11-C11
86	L5	5386	NMY	C21-C22-C23-N19

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Mol	Chain	Res	Type	Atoms
86	L5	5386	NMY	O22-C22-C23-N19
86	L5	5387	NMY	C14-C13-O11-C11
86	L5	5387	NMY	O16-C13-O11-C11
86	L5	5387	NMY	C16-C15-O18-C18
86	L5	5387	NMY	C15-C16-C17-O17
86	L5	5387	NMY	C19-C18-O18-C15
86	L5	5387	NMY	O22-C22-C23-N19
86	L5	5388	NMY	C4-C5-C6-N6
86	L5	5388	NMY	C14-C13-O11-C11
86	L5	5389	NMY	C14-C13-O11-C11
86	L5	5389	NMY	O16-C13-O11-C11
86	L7	202	NMY	C4-C5-C6-N6
86	L7	202	NMY	O5-C5-C6-N6
86	L7	202	NMY	C14-C13-O11-C11
86	S2	1902	NMY	C14-C13-O11-C11
86	S2	1902	NMY	C21-C22-C23-N19
86	S2	1945	NMY	C14-C13-O11-C11
86	S2	1945	NMY	O22-C22-C23-N19
86	S2	1966	NMY	C9-C10-O1-C1
86	S2	1966	NMY	C4-C5-C6-N6
86	S2	1966	NMY	O5-C5-C6-N6
86	S2	1966	NMY	C14-C13-O11-C11
86	S2	1966	NMY	O16-C13-O11-C11
86	S2	1966	NMY	C21-C22-C23-N19
86	S2	1966	NMY	O22-C22-C23-N19
86	S2	1975	NMY	C14-C13-O11-C11
86	S2	1975	NMY	O16-C13-O11-C11
86	L5	5385	NMY	C12-C11-O11-C13
86	S2	1902	NMY	O22-C18-O18-C15
86	L5	5385	NMY	O22-C18-O18-C15
86	L5	5388	NMY	O22-C18-O18-C15
86	L5	5387	NMY	O16-C16-C17-O17
86	S2	1966	NMY	O16-C16-C17-O17
86	S2	1966	NMY	C15-C16-C17-O17
86	L5	5386	NMY	O22-C18-O18-C15
86	S2	1975	NMY	O22-C18-O18-C15
86	L5	5387	NMY	O5-C1-O1-C10
86	L7	202	NMY	O16-C16-C17-O17
86	L7	202	NMY	C15-C16-C17-O17
86	L5	5380	NMY	O16-C16-C17-O17
86	L5	5380	NMY	C15-C16-C17-O17
86	S2	1945	NMY	O22-C18-O18-C15

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Mol	Chain	Res	Type	Atoms
85	L5	5377	SPD	C3-C4-C5-N6
85	L5	5376	SPD	C3-C4-C5-N6
86	S2	1945	NMY	C15-C16-C17-O17
86	L5	5389	NMY	O22-C18-O18-C15
85	L5	5375	SPD	C3-C4-C5-N6
85	L5	5376	SPD	N6-C7-C8-C9
86	L5	5385	NMY	O16-C16-C17-O17
86	L5	5382	NMY	O5-C1-O1-C10
86	L5	5381	NMY	C15-C16-C17-O17
86	S2	1945	NMY	O16-C16-C17-O17
86	L5	5379	NMY	O16-C16-C17-O17
86	L5	5384	NMY	O22-C18-O18-C15
86	L5	5379	NMY	C15-C16-C17-O17
86	L5	5387	NMY	O22-C18-O18-C15
85	L5	5376	SPD	C8-C7-N6-C5
85	L5	5377	SPD	C4-C5-N6-C7
86	L5	5379	NMY	C11-C10-O1-C1
86	L5	5381	NMY	O16-C16-C17-O17
86	L5	5380	NMY	O16-C13-O11-C11
86	L5	5382	NMY	O16-C13-O11-C11
86	L5	5384	NMY	O16-C13-O11-C11
86	L5	5388	NMY	O16-C13-O11-C11
86	L7	202	NMY	O16-C13-O11-C11
86	S2	1902	NMY	O16-C13-O11-C11
86	S2	1945	NMY	O16-C13-O11-C11
86	S2	1966	NMY	C10-C11-O11-C13
86	S2	1966	NMY	C12-C11-O11-C13
86	L5	5383	NMY	O5-C1-O1-C10
86	L5	5387	NMY	C10-C11-O11-C13
86	S2	1966	NMY	C11-C10-O1-C1
86	L5	5382	NMY	C10-C11-O11-C13
86	L5	5387	NMY	C12-C11-O11-C13
86	L5	5380	NMY	C4-C5-C6-N6
86	L5	5381	NMY	C11-C10-O1-C1
86	L5	5382	NMY	C12-C11-O11-C13
86	L5	5381	NMY	O22-C18-O18-C15
86	L5	5388	NMY	O16-C16-C17-O17
86	S2	1902	NMY	O16-C16-C17-O17
85	L5	5377	SPD	C7-C8-C9-N10
86	L5	5379	NMY	C9-C10-O1-C1
86	L5	5384	NMY	C11-C10-O1-C1
86	L5	5388	NMY	C15-C16-C17-O17

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Mol	Chain	Res	Type	Atoms
86	L5	5380	NMY	O5-C5-C6-N6
86	L5	5382	NMY	O22-C22-C23-N19
86	L5	5385	NMY	O5-C5-C6-N6
86	L5	5389	NMY	O5-C5-C6-N6
86	L7	202	NMY	O22-C22-C23-N19
86	S2	1902	NMY	O5-C5-C6-N6
86	S2	1902	NMY	O22-C22-C23-N19
86	S2	1902	NMY	C15-C16-C17-O17
86	L5	5385	NMY	C4-C5-C6-N6
86	L5	5389	NMY	C4-C5-C6-N6
86	L5	5382	NMY	C11-C10-O1-C1
86	L5	5386	NMY	C12-C11-O11-C13
86	L5	5385	NMY	C15-C16-C17-O17
86	L5	5389	NMY	C11-C10-O1-C1
86	L5	5381	NMY	O16-C13-O11-C11
85	L5	5375	SPD	C2-C3-C4-C5
86	L5	5380	NMY	C11-C10-O1-C1
85	L5	5375	SPD	C4-C5-N6-C7
85	L5	5376	SPD	C4-C5-N6-C7
86	L5	5381	NMY	C14-C13-O11-C11
86	L5	5379	NMY	C14-C15-O18-C18
86	L5	5380	NMY	C14-C15-O18-C18
86	L5	5382	NMY	C21-C22-C23-N19
86	L5	5386	NMY	C16-C15-O18-C18
86	L5	5387	NMY	C21-C22-C23-N19
86	S2	1902	NMY	C14-C15-O18-C18
85	L5	5377	SPD	C8-C7-N6-C5
86	L5	5386	NMY	C10-C11-O11-C13

There are no ring outliers.

16 monomers are involved in 41 short contacts:

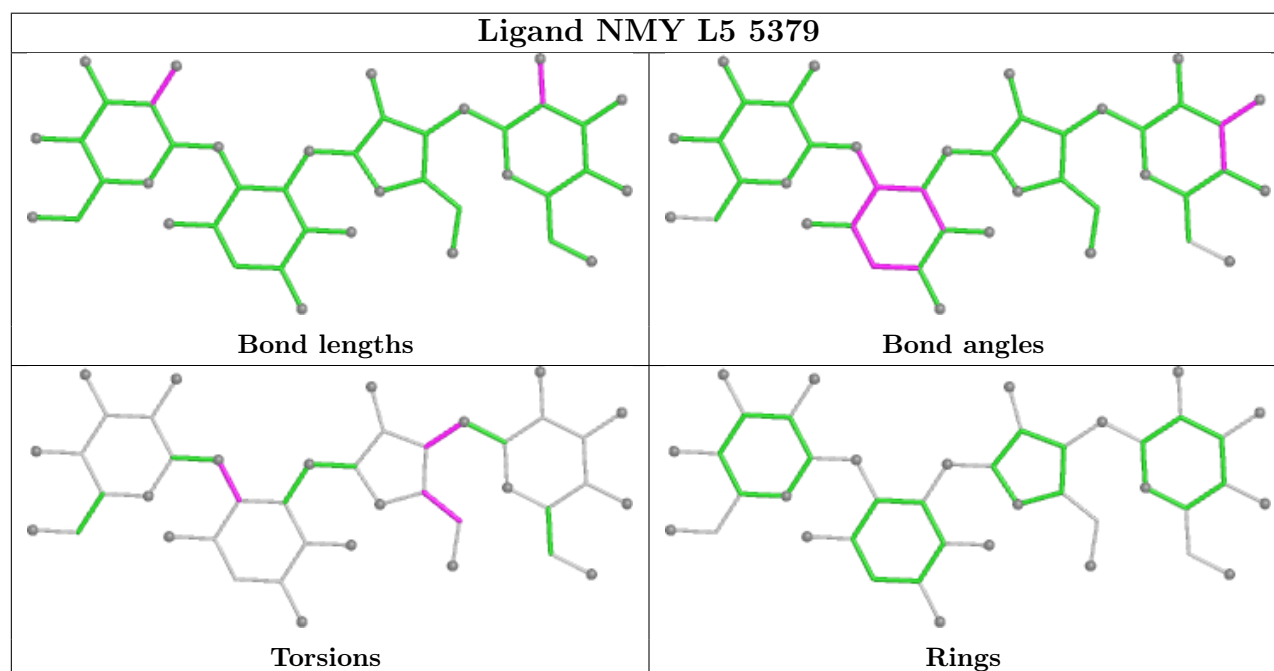
Mol	Chain	Res	Type	Clashes	Symm-Clashes
86	L5	5379	NMY	1	0
86	L5	5383	NMY	4	0
86	L5	5389	NMY	2	0
86	L5	5380	NMY	1	0
86	L5	5382	NMY	2	0
86	L5	5385	NMY	6	0
85	L5	5376	SPD	2	0
86	L5	5381	NMY	1	0
85	L5	5377	SPD	1	0

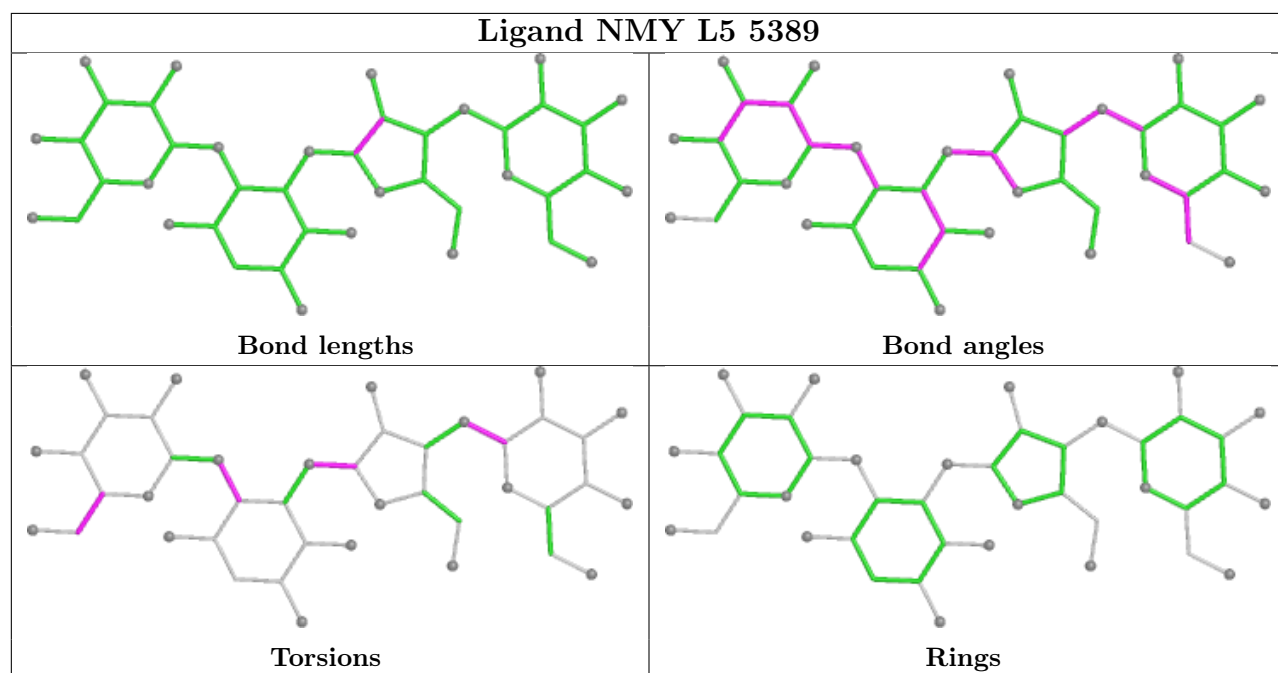
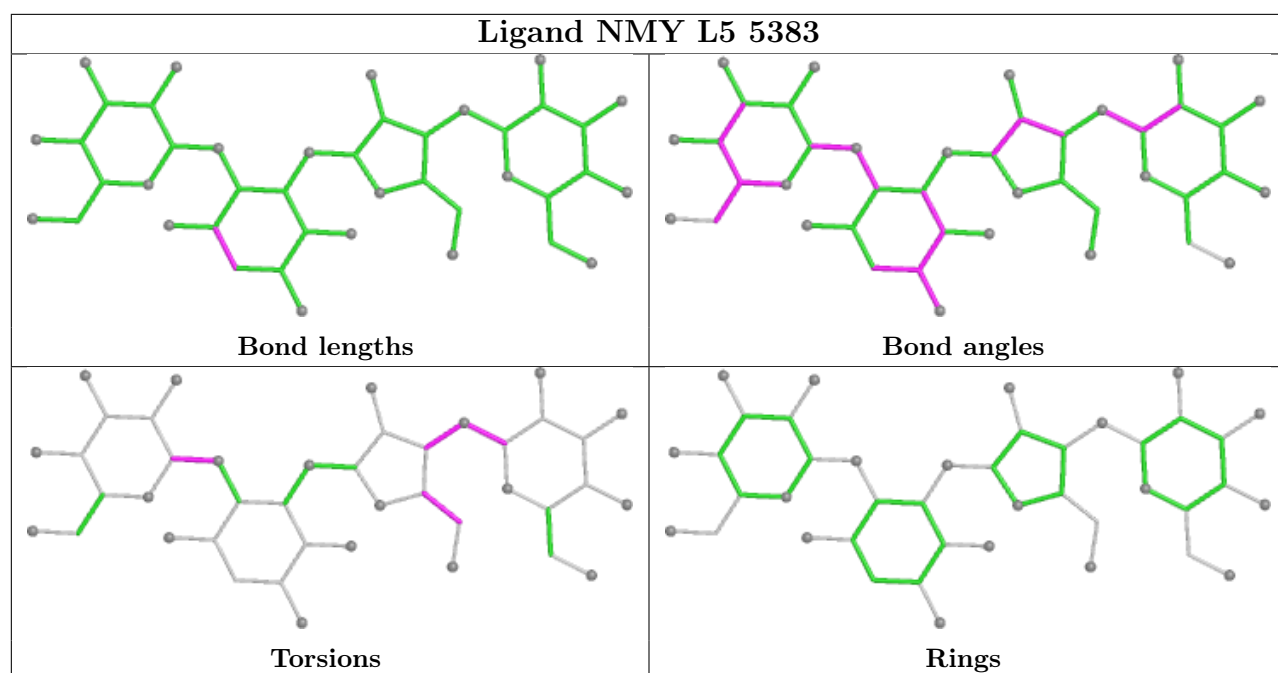
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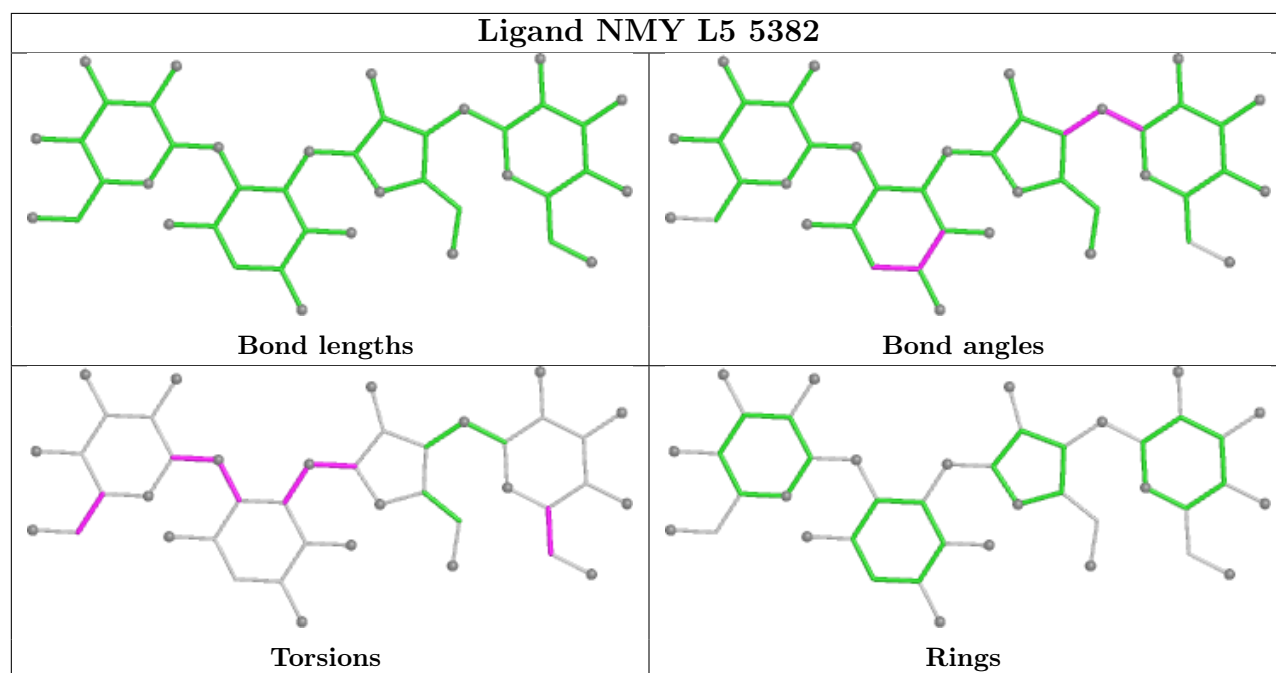
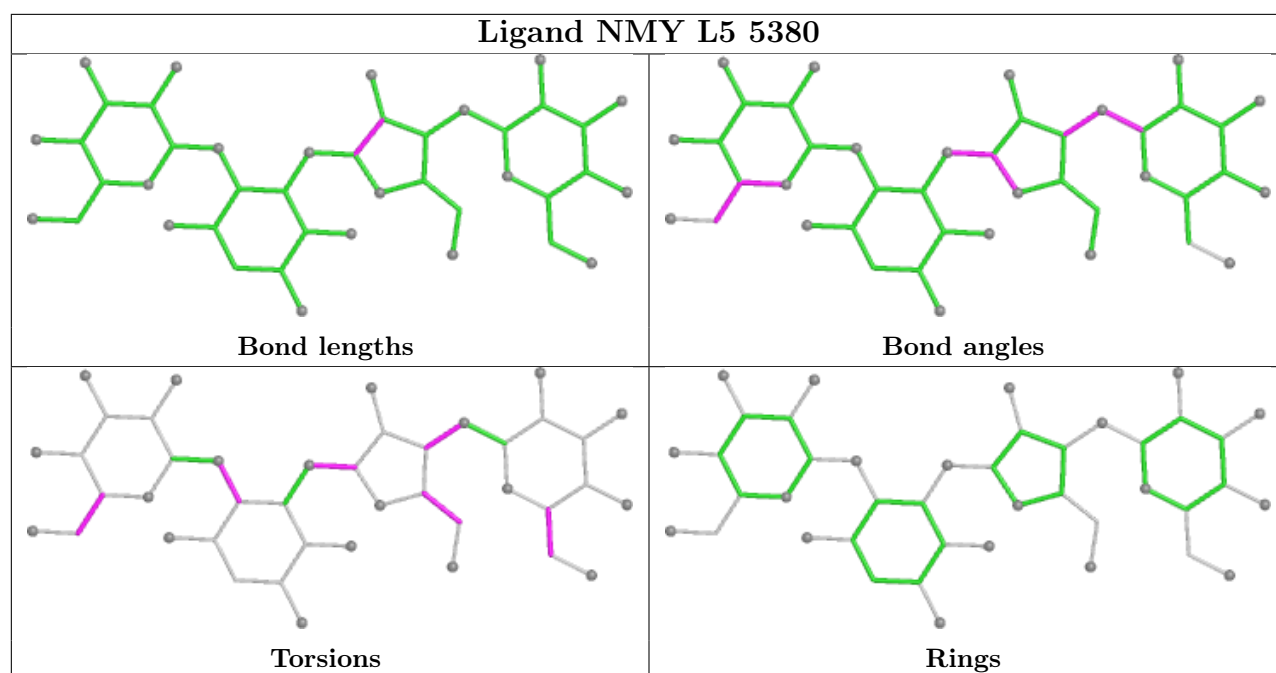
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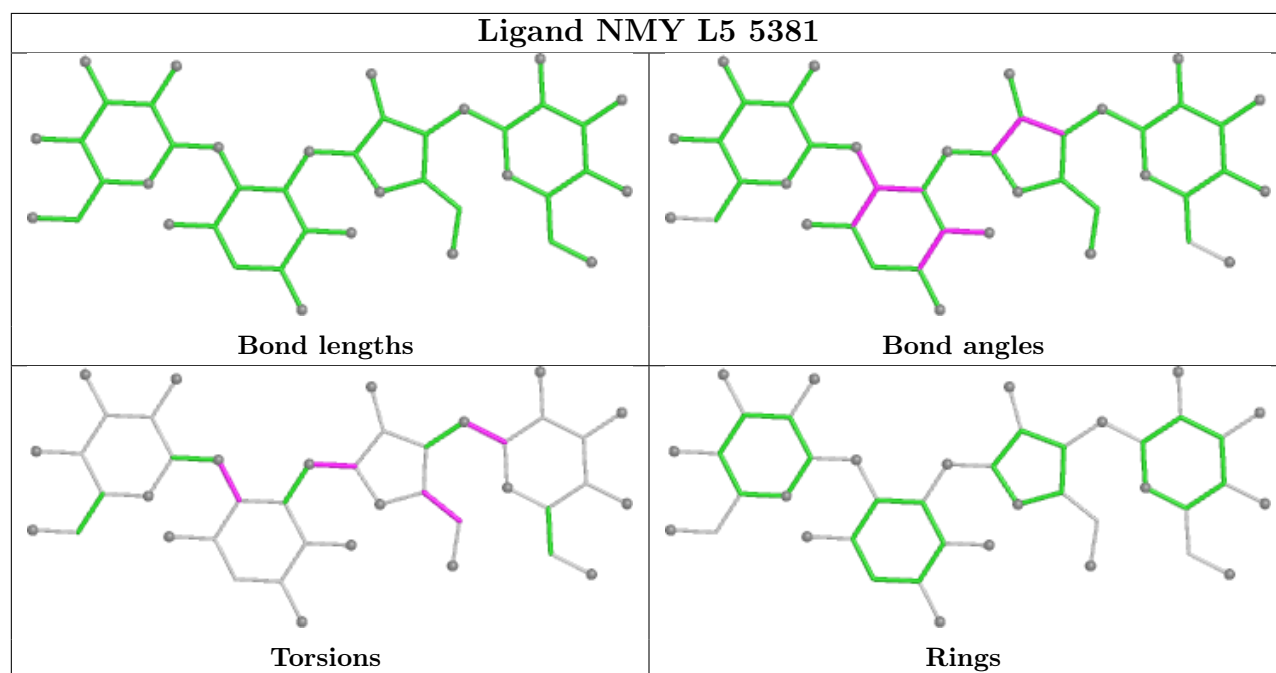
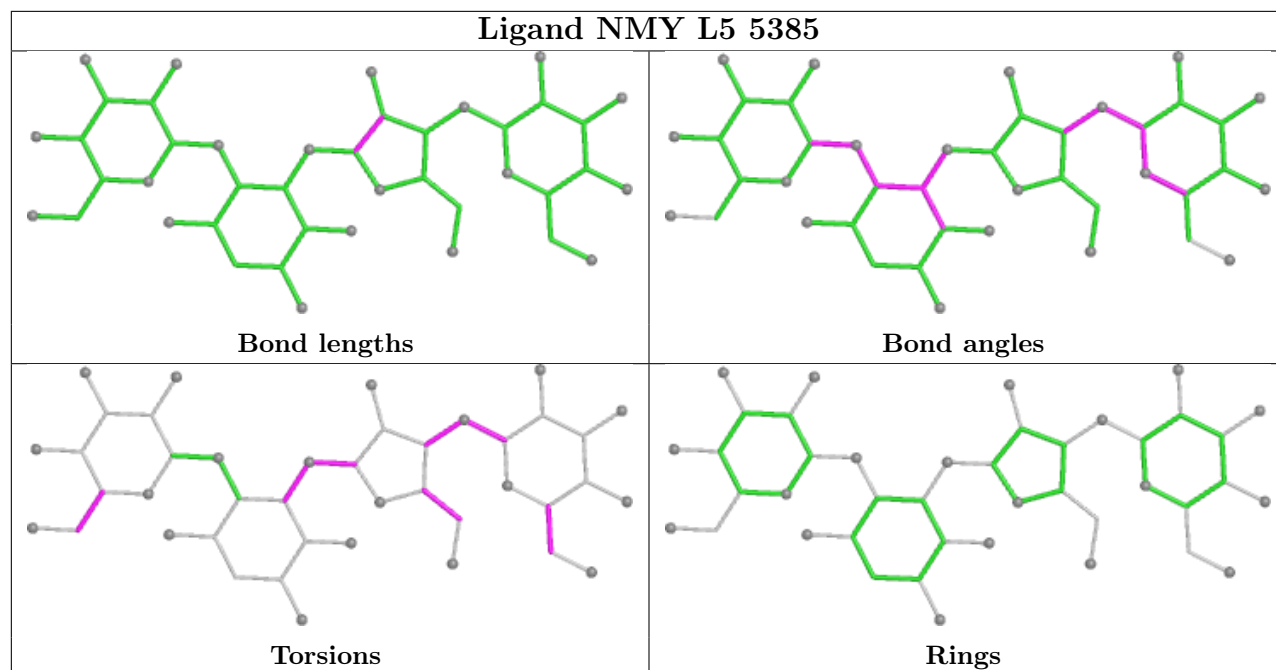
Mol	Chain	Res	Type	Clashes	Symm-Clashes
86	S2	1966	NMY	5	0
86	L5	5384	NMY	4	0
86	L7	202	NMY	4	0
86	L5	5387	NMY	5	0
86	L5	5378	NMY	1	0
86	L5	5386	NMY	1	0
86	S2	1902	NMY	1	0

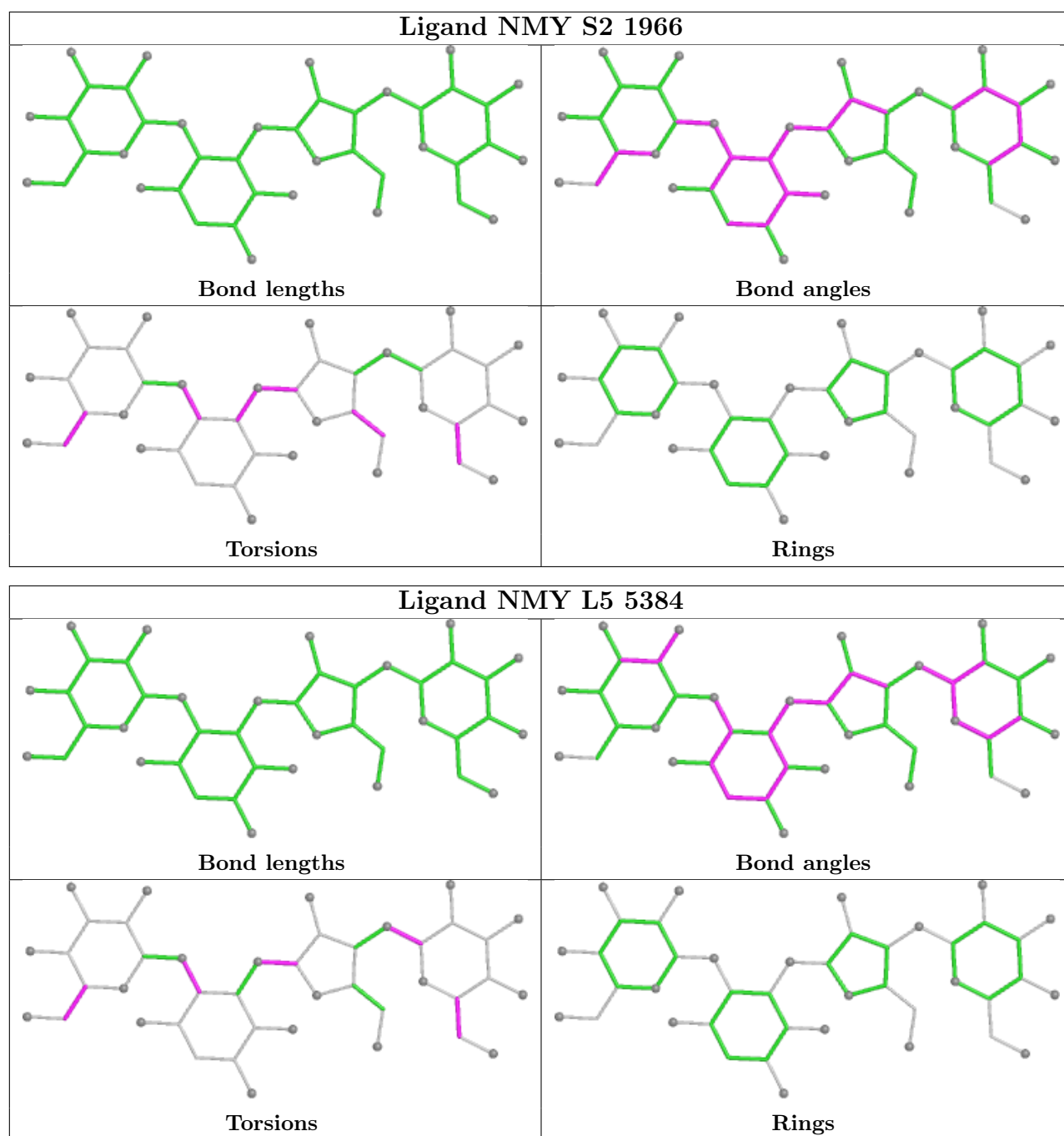
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 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.

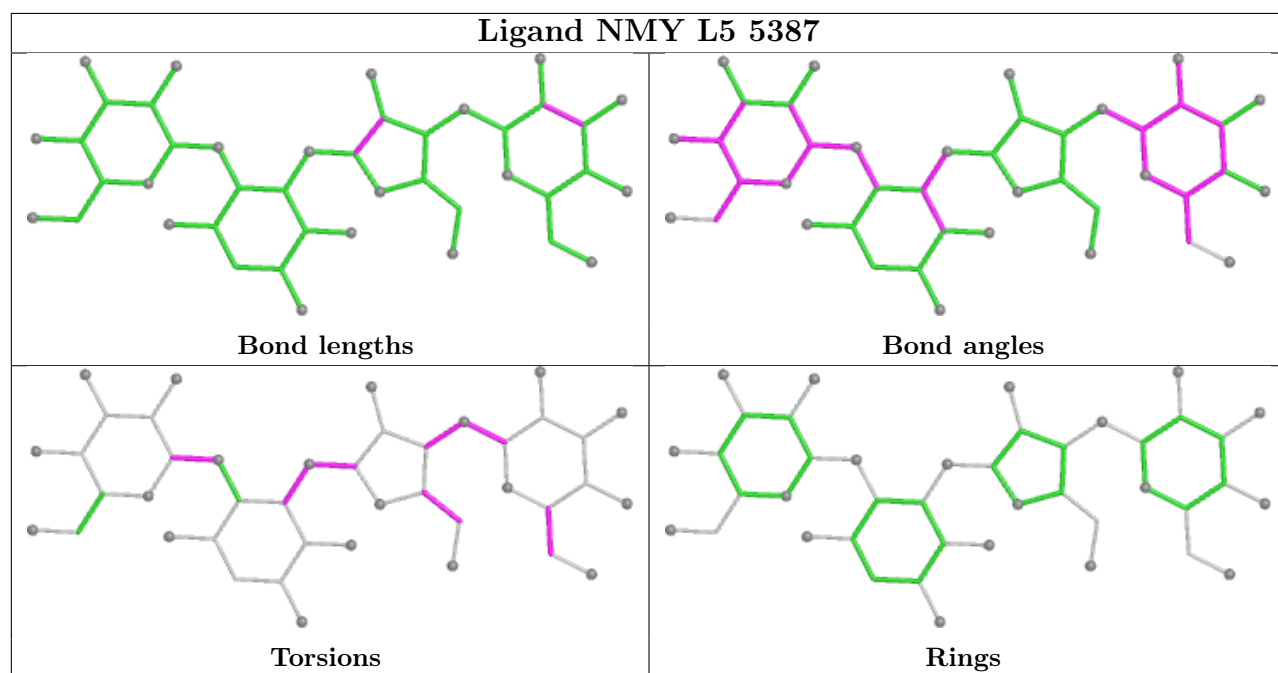
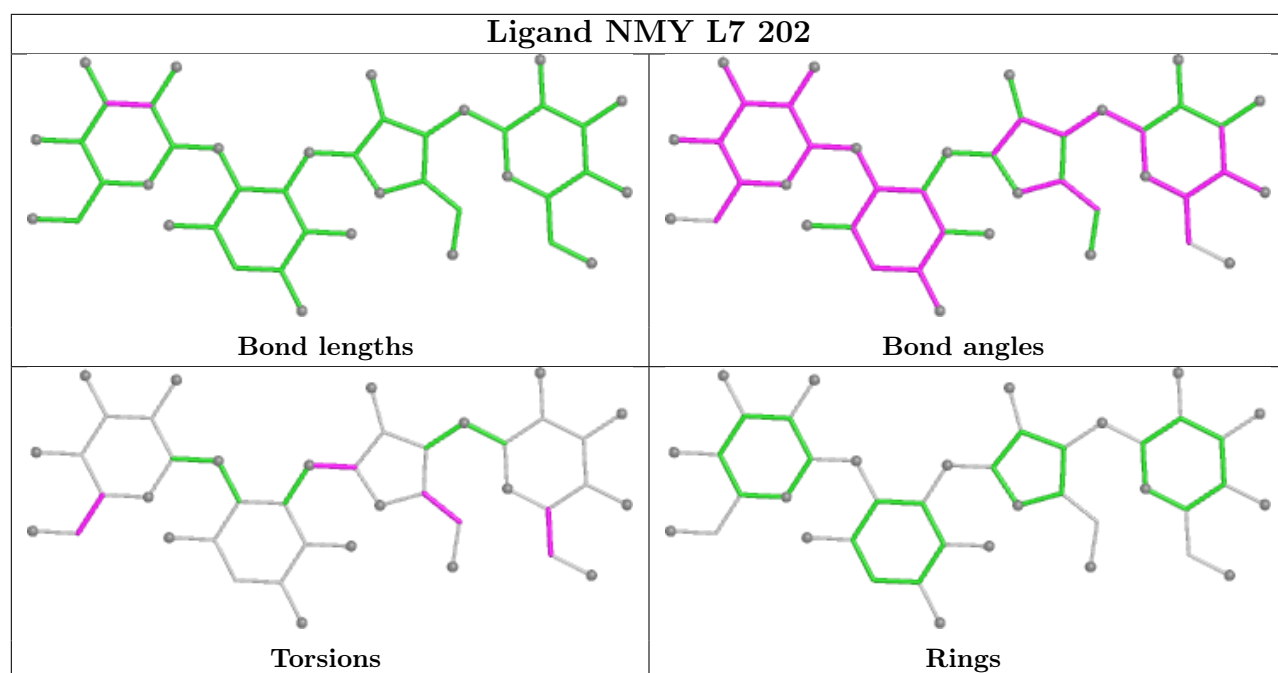


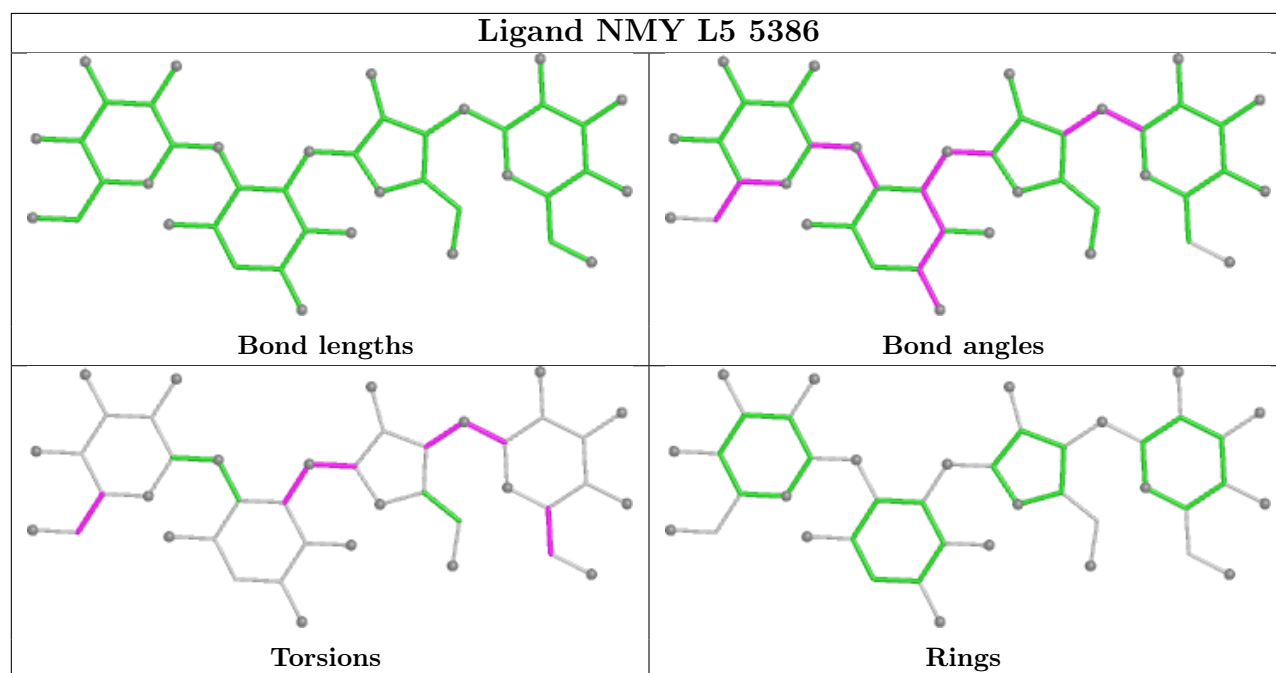
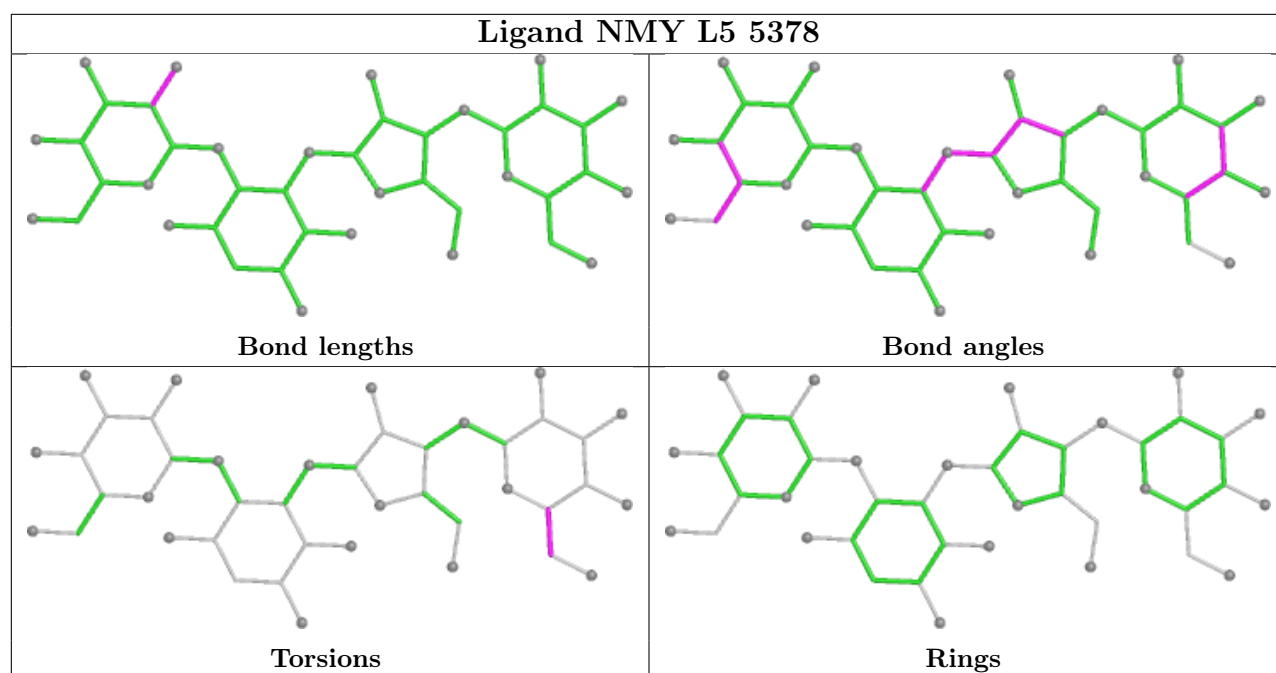


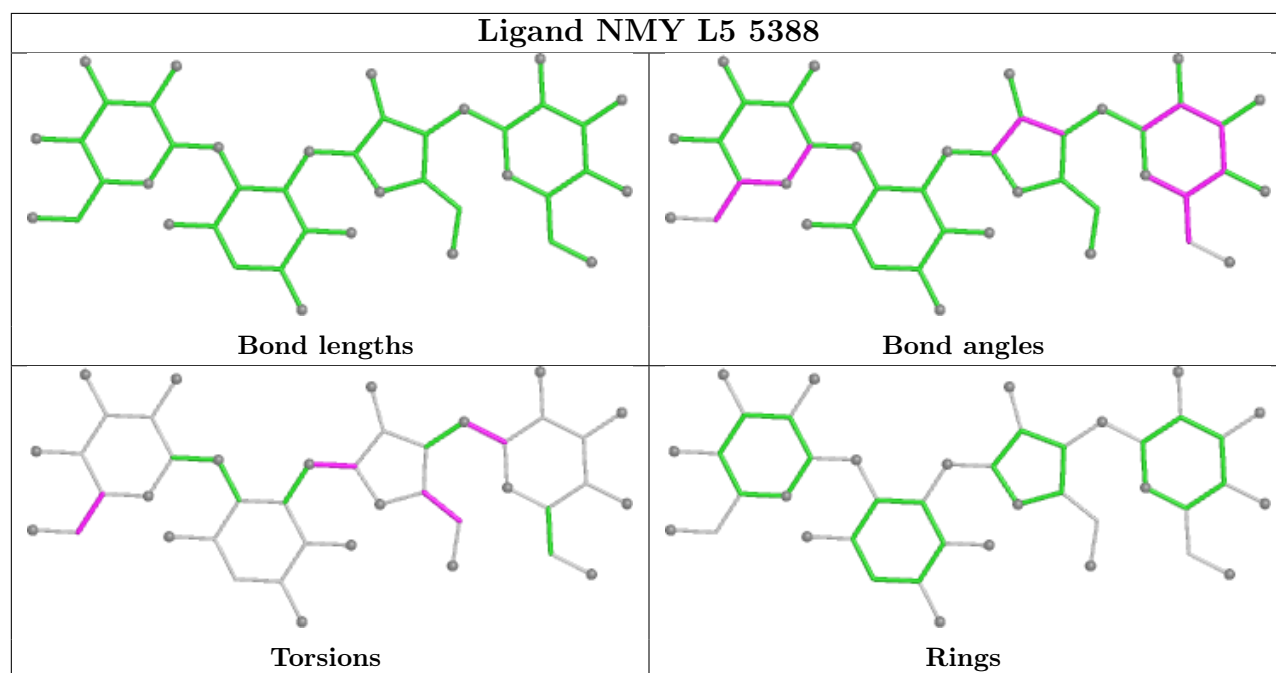
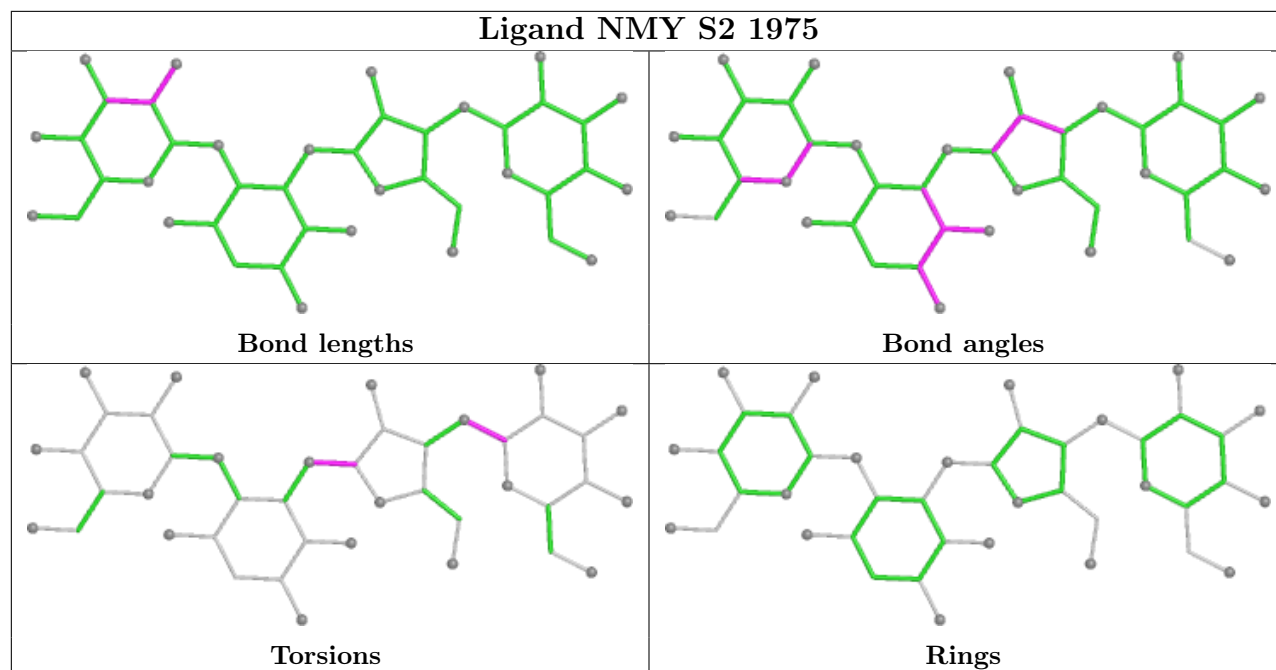


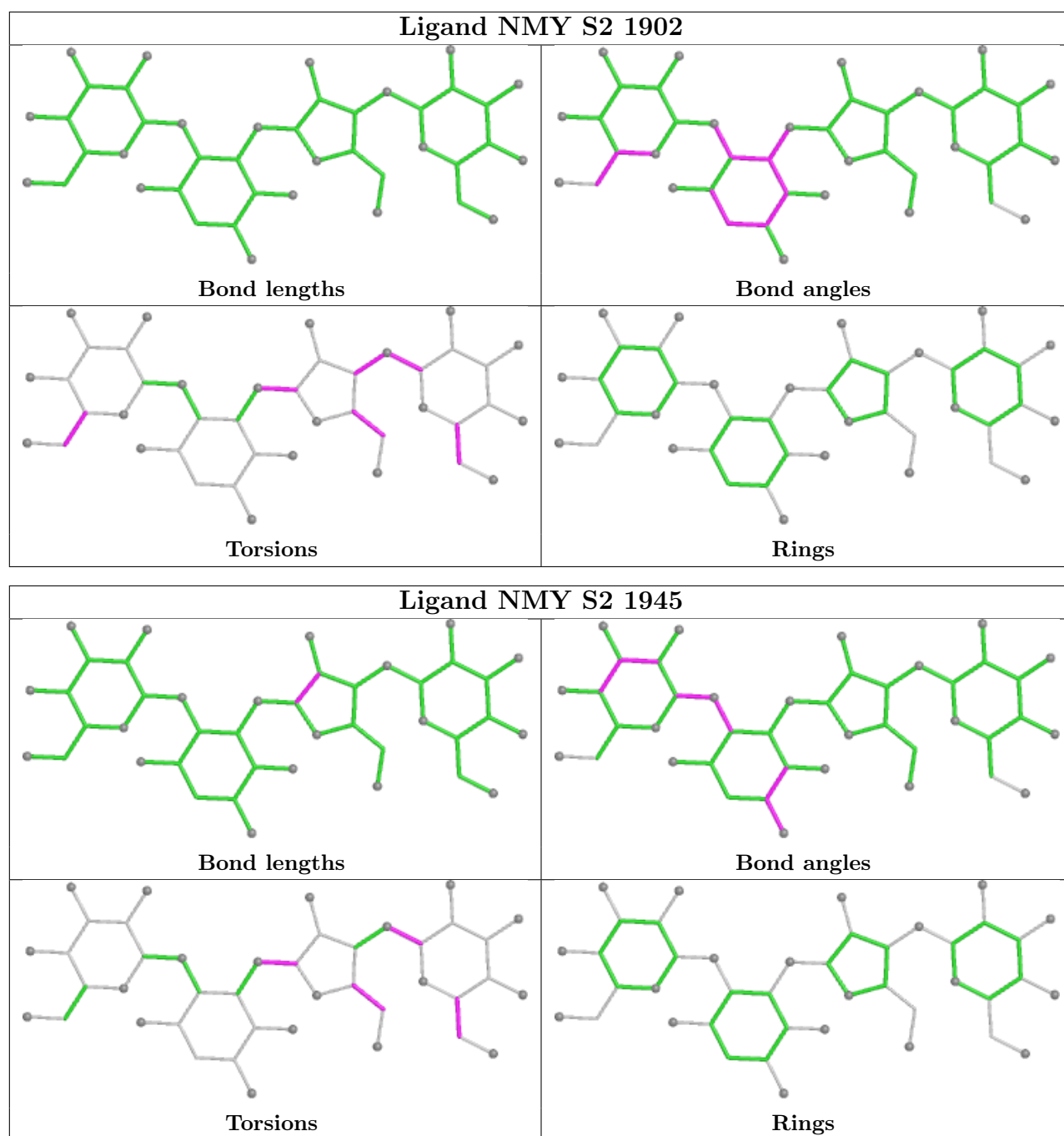












5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

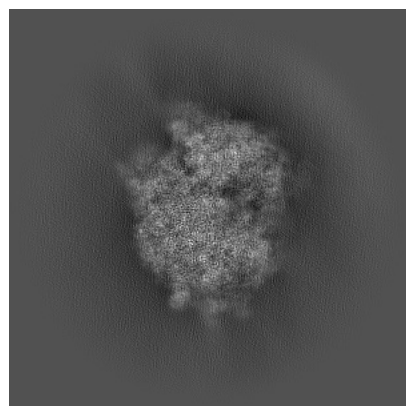
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-65434. These allow visual inspection of the internal detail of the map and identification of artifacts.

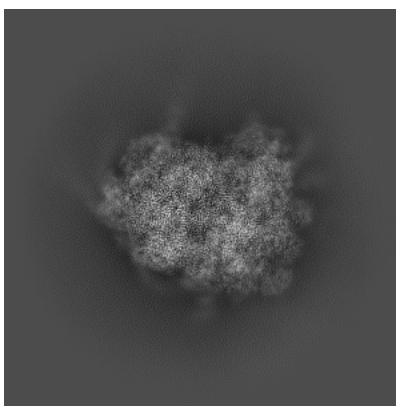
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

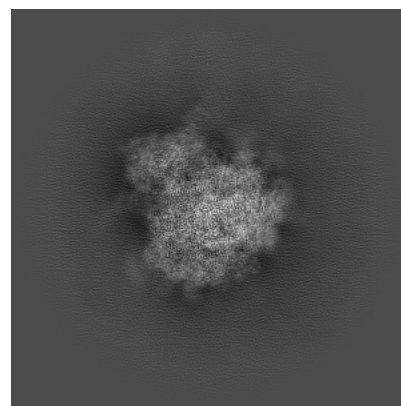
6.1.1 Primary map



X

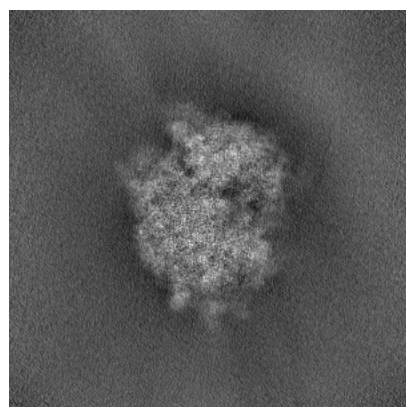


Y

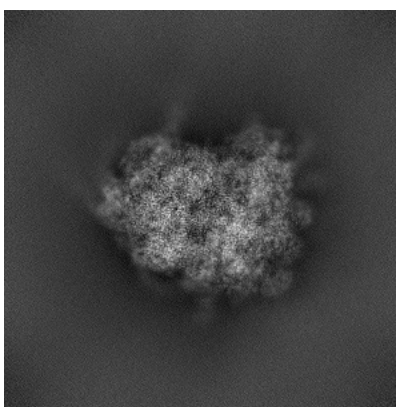


Z

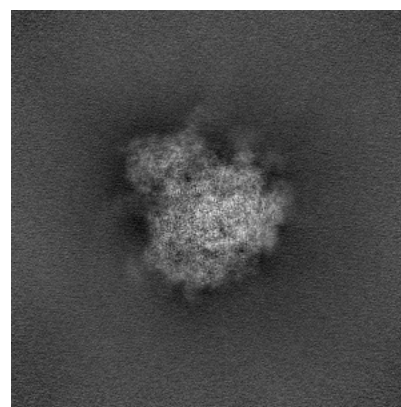
6.1.2 Raw map



X



Y

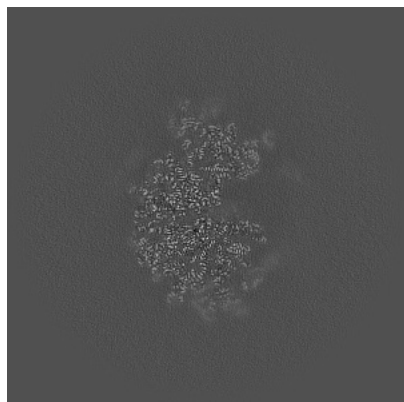


Z

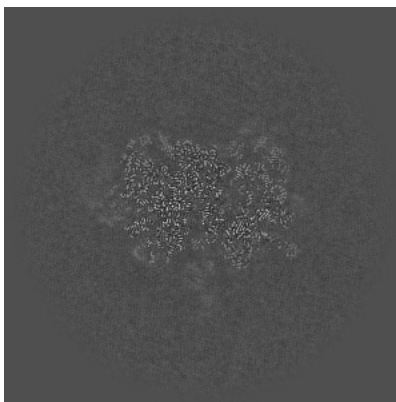
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

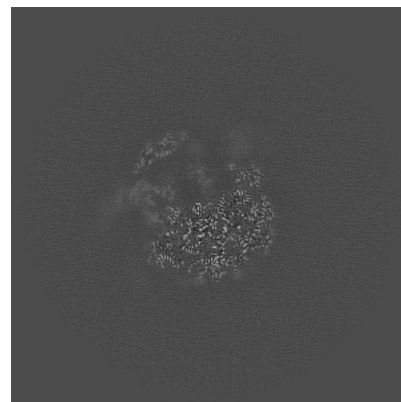
6.2.1 Primary map



X Index: 340

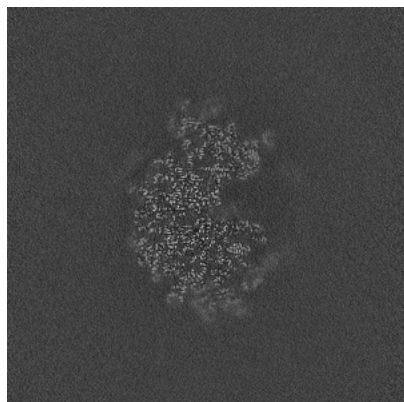


Y Index: 340

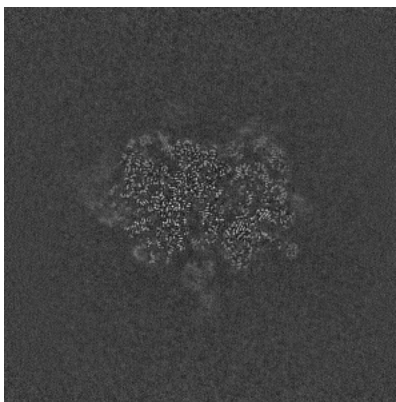


Z Index: 340

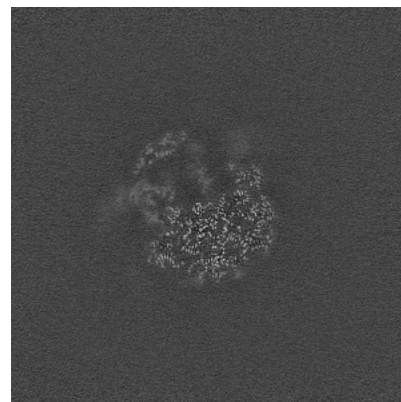
6.2.2 Raw map



X Index: 340



Y Index: 340

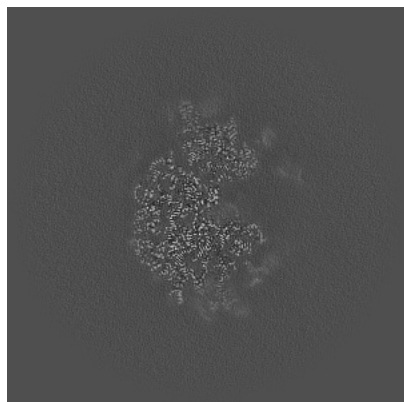


Z Index: 340

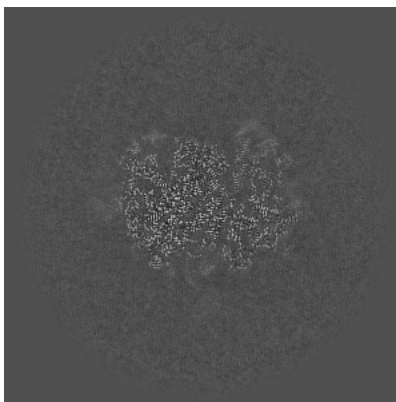
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

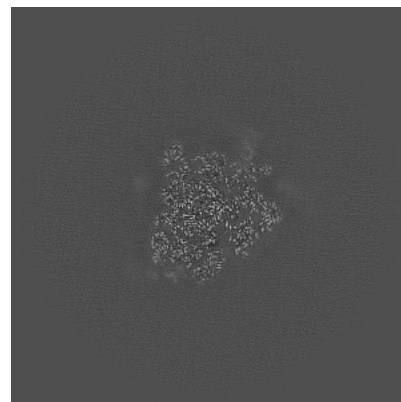
6.3.1 Primary map



X Index: 335

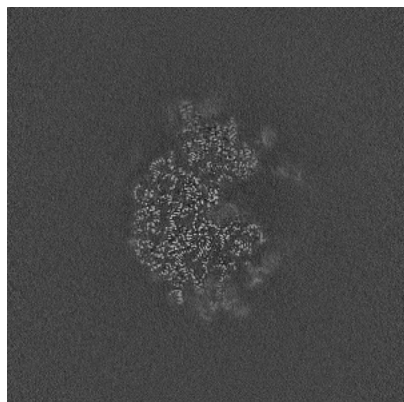


Y Index: 331

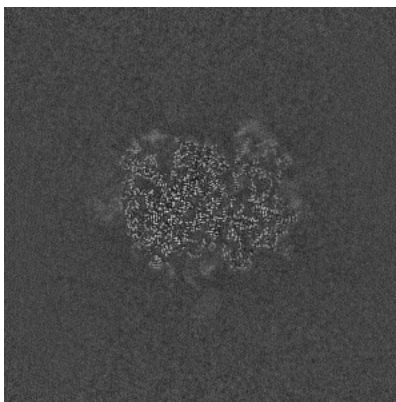


Z Index: 298

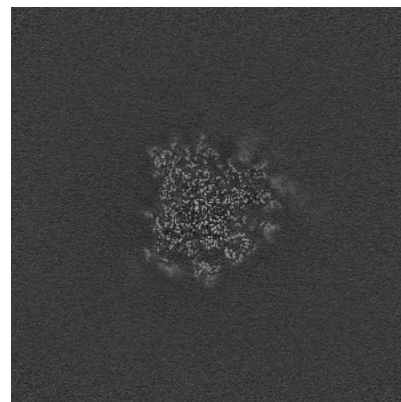
6.3.2 Raw map



X Index: 335



Y Index: 331

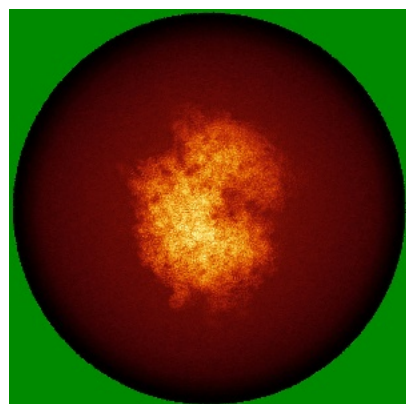


Z Index: 281

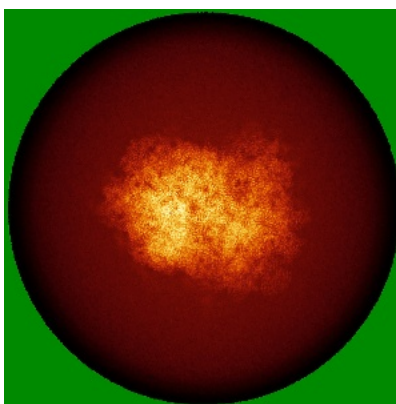
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) [i](#)

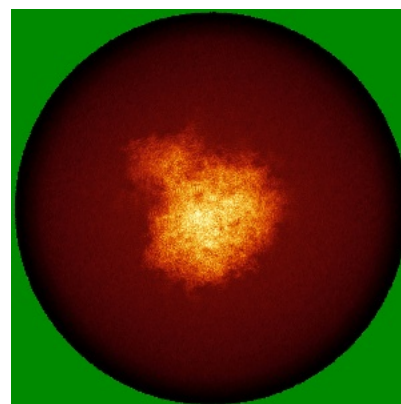
6.4.1 Primary map



X

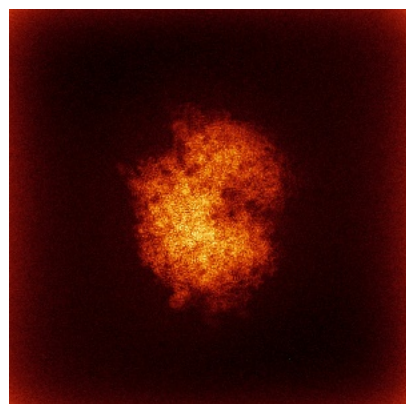


Y

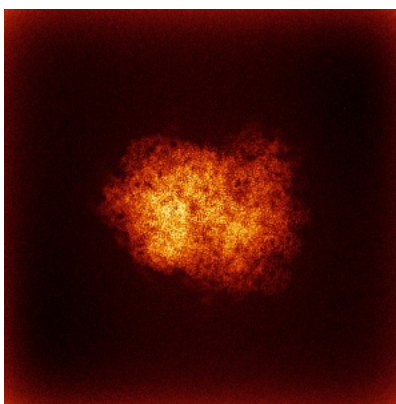


Z

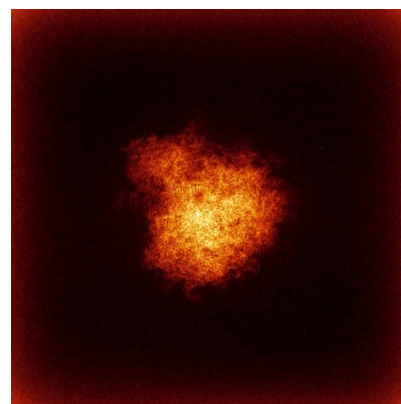
6.4.2 Raw map



X



Y

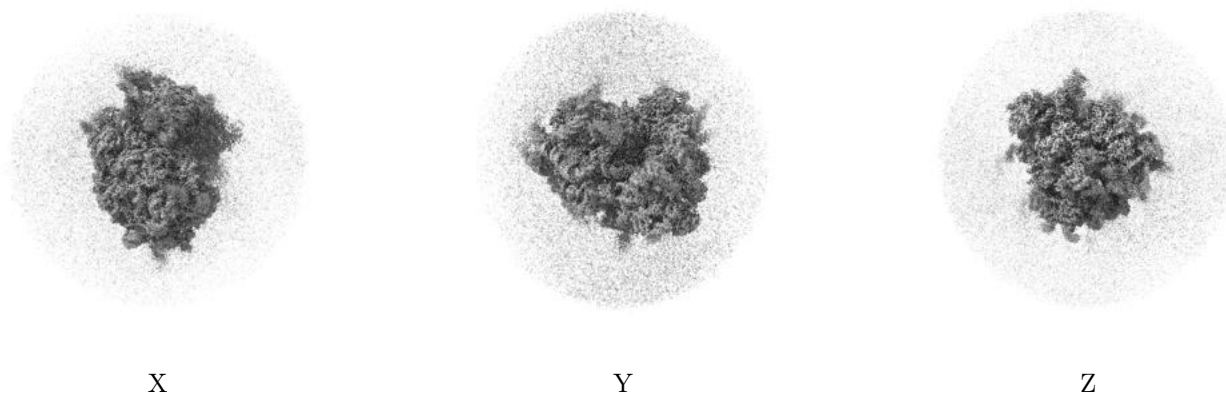


Z

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.

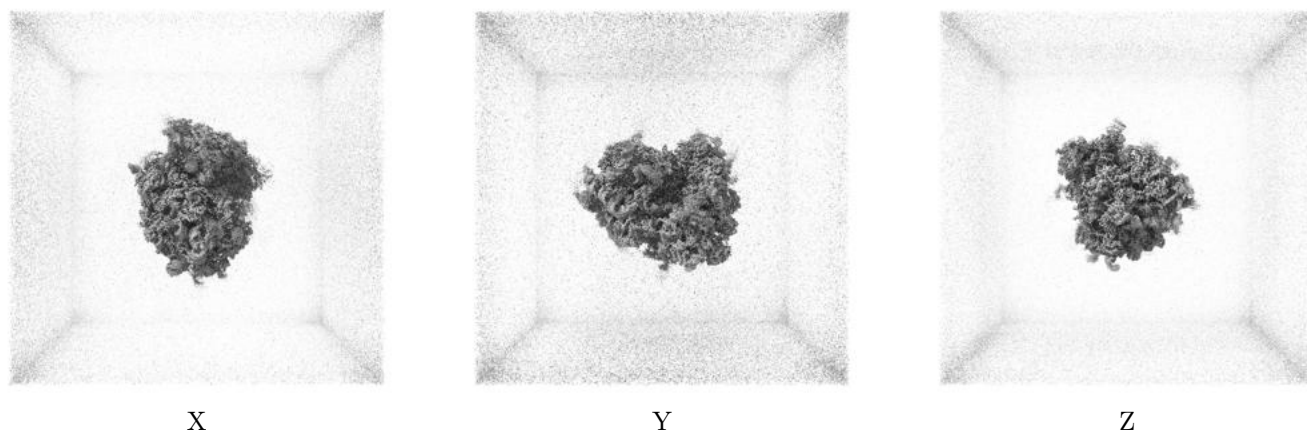
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.4. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map



These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

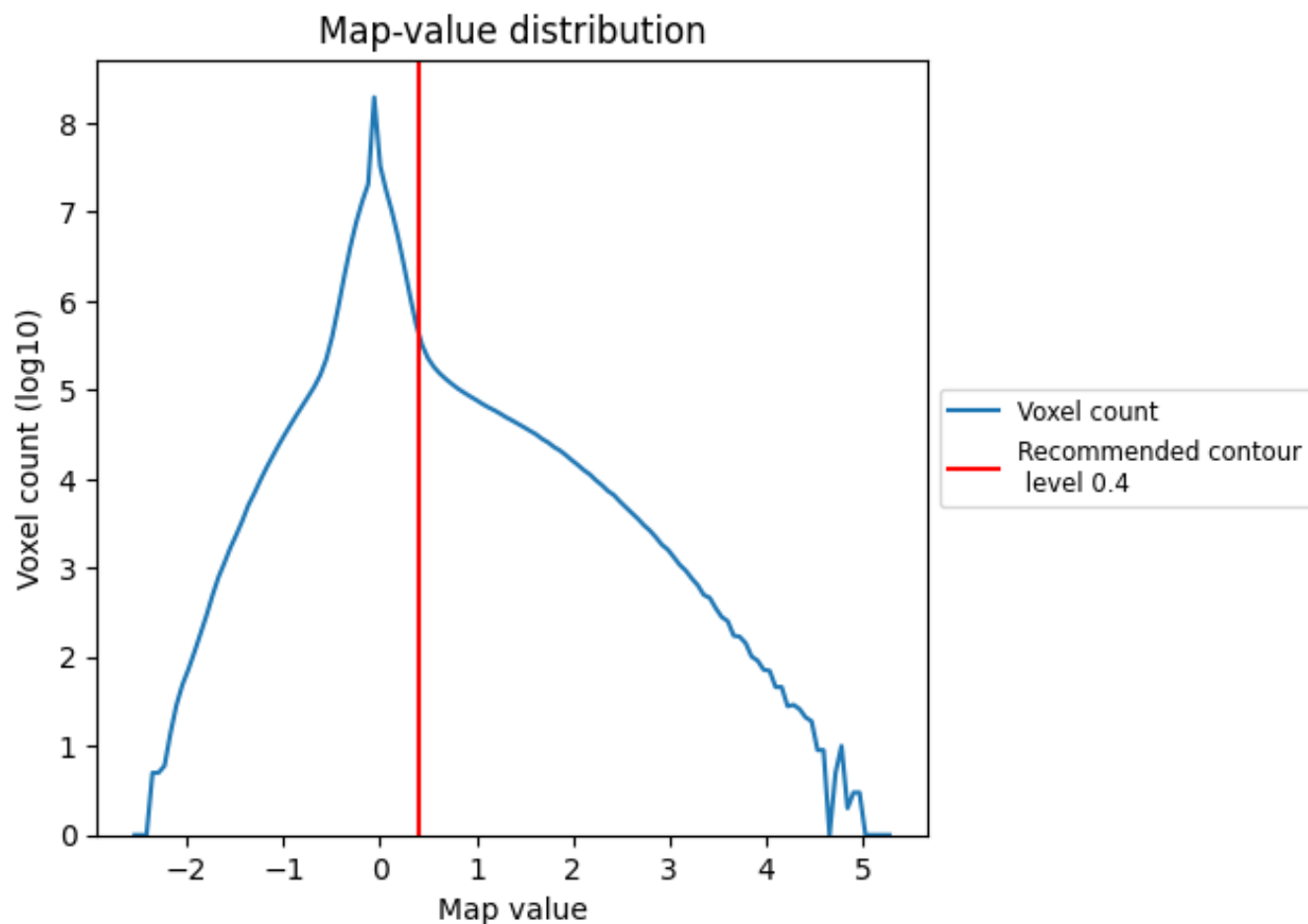
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

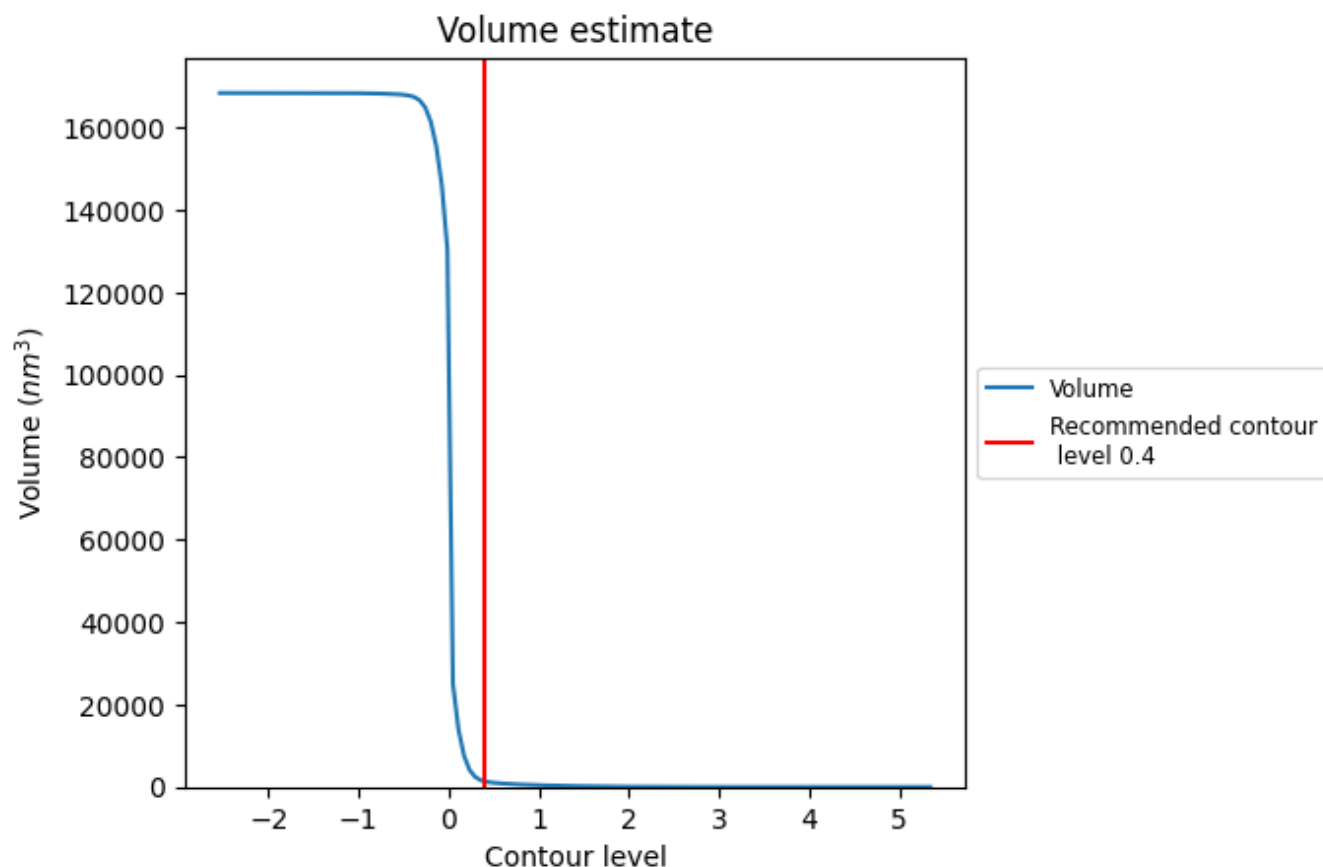
This section contains the results of statistical analysis of the map.

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.

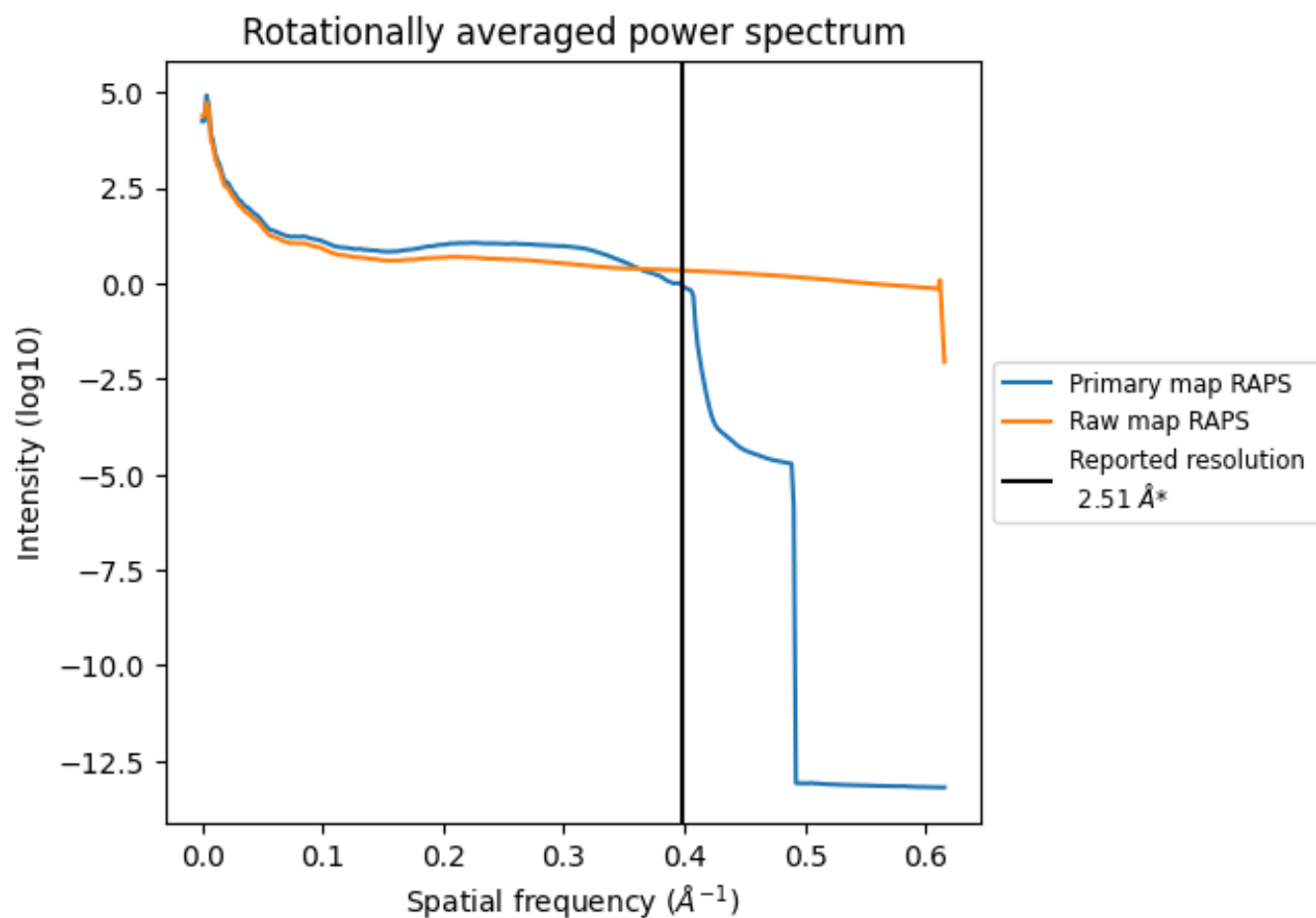
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 1362 nm^3 ; this corresponds to an approximate mass of 1231 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 ⓘ

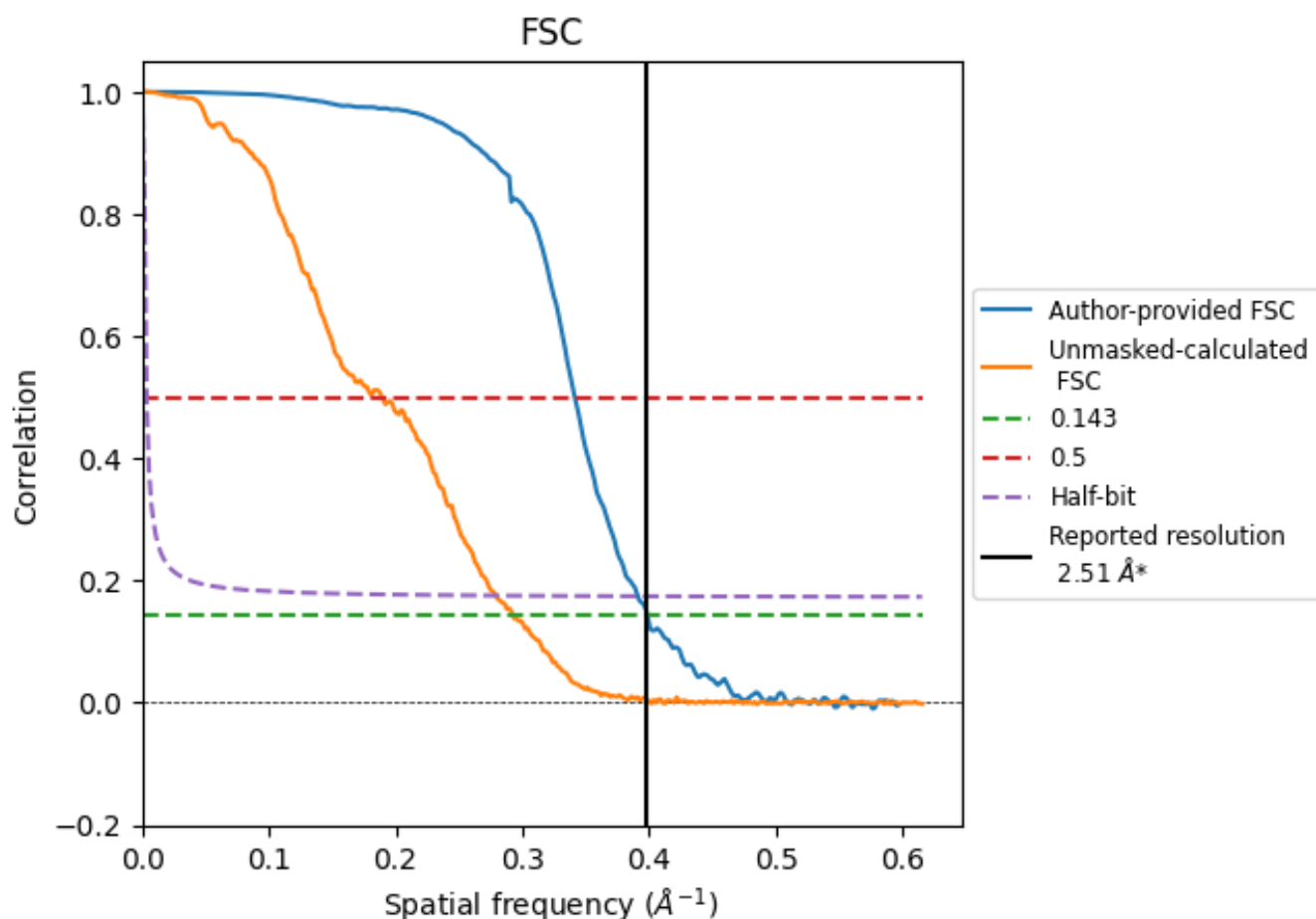


*Reported resolution corresponds to spatial frequency of 0.398 Å⁻¹

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 0.398 $\text{\AA}^{-1}$

8.2 Resolution estimates [i](#)

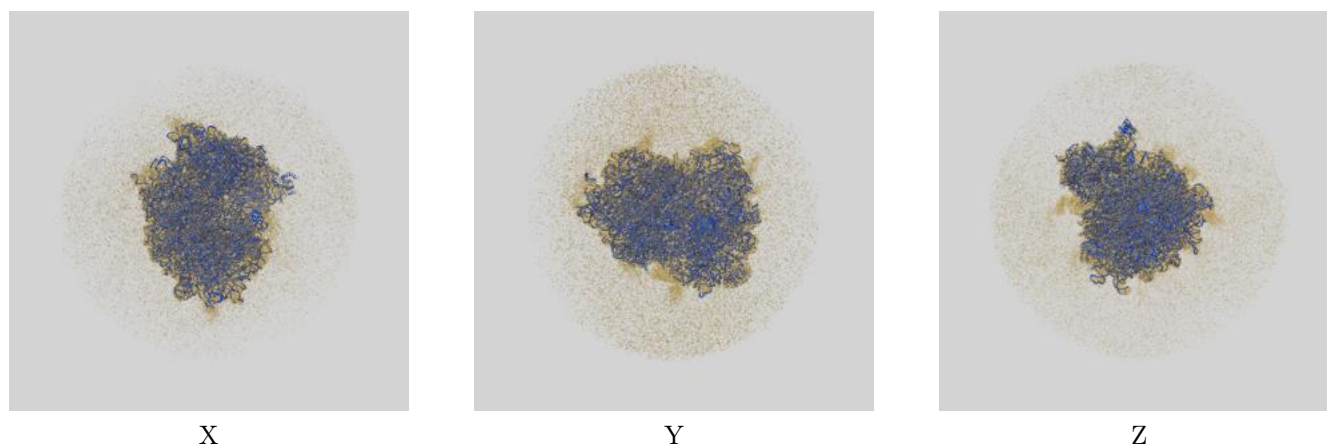
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	2.51	-	-
Author-provided FSC curve	2.51	2.93	2.56
Unmasked-calculated*	3.42	5.28	3.58

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 3.42 differs from the reported value 2.51 by more than 10 %

9 Map-model fit [i](#)

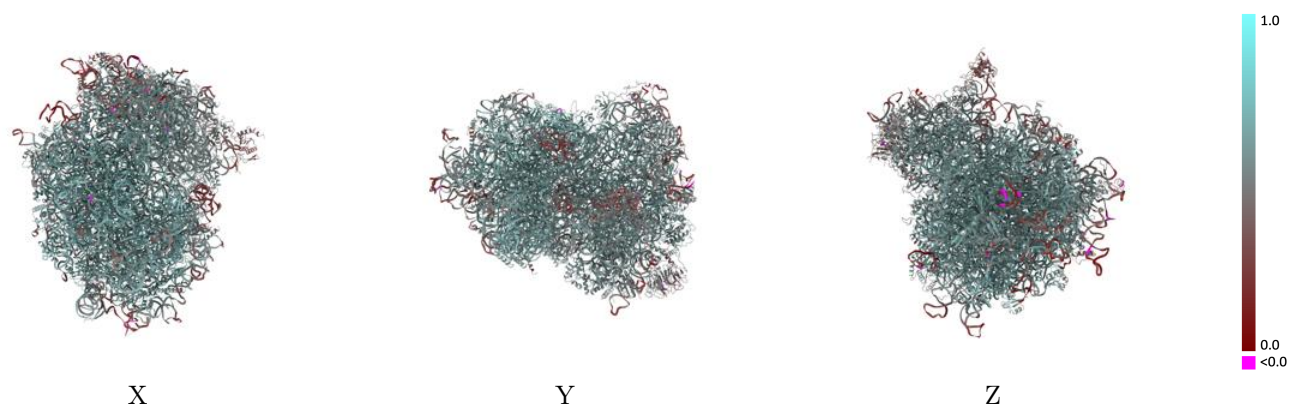
This section contains information regarding the fit between EMDB map EMD-65434 and PDB model 9VXN. Per-residue inclusion information can be found in section [3](#) on page [24](#).

9.1 Map-model overlay [i](#)



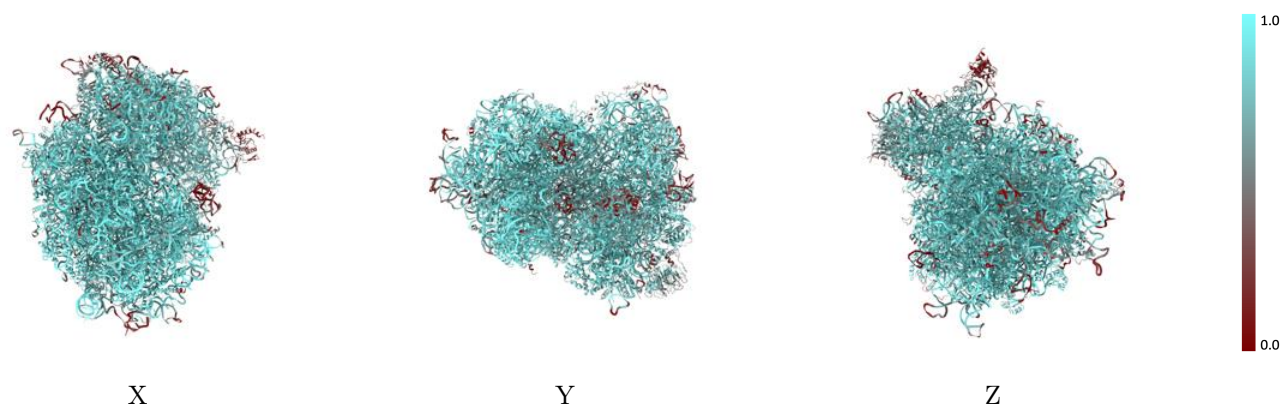
The images above show the 3D surface view of the map at the recommended contour level 0.4 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model [i](#)



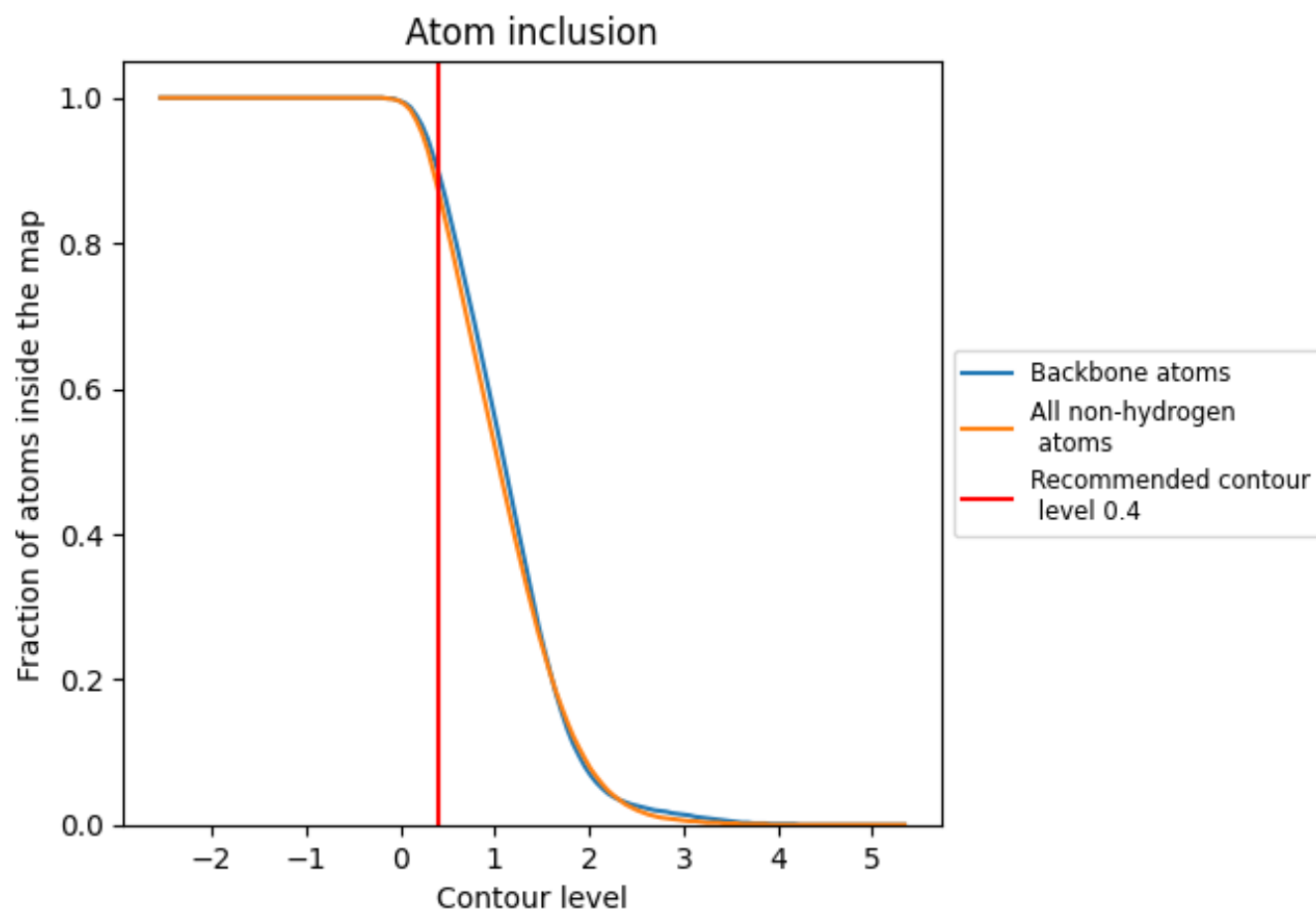
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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](#)



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 (0.4).

9.4 Atom inclusion [i](#)



At the recommended contour level, 90% of all backbone atoms, 87% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary ⓘ

The table lists the average atom inclusion at the recommended contour level (0.4) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.8740	 0.5850
L5	 0.8990	 0.5870
L7	 0.9790	 0.6320
L8	 0.9360	 0.6160
LA	 0.9710	 0.6640
LB	 0.9380	 0.6450
LC	 0.9390	 0.6430
LD	 0.9170	 0.6140
LE	 0.8430	 0.5860
LF	 0.9490	 0.6540
LG	 0.8280	 0.5790
LH	 0.9230	 0.6310
LI	 0.8970	 0.6200
LJ	 0.8640	 0.5920
LL	 0.8850	 0.6140
LM	 0.9290	 0.6210
LN	 0.9810	 0.6670
LO	 0.9420	 0.6450
LP	 0.9650	 0.6600
LQ	 0.9590	 0.6610
LR	 0.8560	 0.6070
LS	 0.9620	 0.6540
LT	 0.9230	 0.6350
LU	 0.8050	 0.5500
LV	 0.9400	 0.6540
LW	 0.7070	 0.5320
LX	 0.9100	 0.6320
LY	 0.9400	 0.6430
LZ	 0.9010	 0.6100
La	 0.9720	 0.6620
Lb	 0.8860	 0.6090
Lc	 0.8850	 0.6170
Ld	 0.9220	 0.6280
Le	 0.9660	 0.6650
Lf	 0.9760	 0.6670



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Chain	Atom inclusion	Q-score
Lg	 0.9400	 0.6450
Lh	 0.9040	 0.6230
Li	 0.9170	 0.6220
Lj	 0.9750	 0.6640
Lk	 0.8340	 0.5830
Ll	 0.9600	 0.6450
Lm	 0.9460	 0.6420
Ln	 0.9140	 0.6380
Lo	 0.9420	 0.6520
Lp	 0.9580	 0.6610
Lr	 0.9620	 0.6480
S2	 0.8760	 0.5520
SA	 0.8220	 0.5750
SB	 0.8790	 0.6090
SC	 0.8720	 0.6000
SD	 0.7020	 0.5240
SE	 0.8340	 0.5850
SF	 0.7850	 0.5480
SG	 0.7090	 0.5230
SH	 0.6850	 0.5110
SI	 0.7970	 0.5530
SJ	 0.8470	 0.5970
SK	 0.6620	 0.5050
SL	 0.8090	 0.5950
SM	 0.1610	 0.3230
SN	 0.8750	 0.6090
SO	 0.8610	 0.5850
SP	 0.8210	 0.5630
SQ	 0.7840	 0.5450
SR	 0.7190	 0.5370
SS	 0.8330	 0.5760
ST	 0.7860	 0.5460
SU	 0.5980	 0.4630
SV	 0.8570	 0.5890
SW	 0.9210	 0.6190
SX	 0.8950	 0.6270
SY	 0.7440	 0.5240
SZ	 0.7340	 0.5370
Sa	 0.8610	 0.5990
Sb	 0.8170	 0.5780
Sc	 0.7200	 0.5290
Sd	 0.8560	 0.5820

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Chain	Atom inclusion	Q-score
Se	 0.6890	 0.5260
Sf	 0.2290	 0.3610
Sg	 0.6030	 0.4460
u	 0.6300	 0.4910
v	 0.7750	 0.4950
w	 0.9200	 0.5980