



Full wwPDB EM Validation Report ⓘ

Jun 25, 2026 – 01:03 AM EDT

PDB ID : 8G61 / pdb_00008g61
EMDB ID : EMD-29760
Title : mRNA decoding in human is kinetically and structurally distinct from bacteria (AC state)
Authors : Holm, M.; Natchiar, K.S.; Rundlet, E.J.; Myasnikov, A.G.; Altman, R.B.; Blanchard, S.C.
Deposited on : 2023-02-14
Resolution : 2.94 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.dev132
Mogul : 2022.3.0, CSD as543be (2022)
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) : 2.49

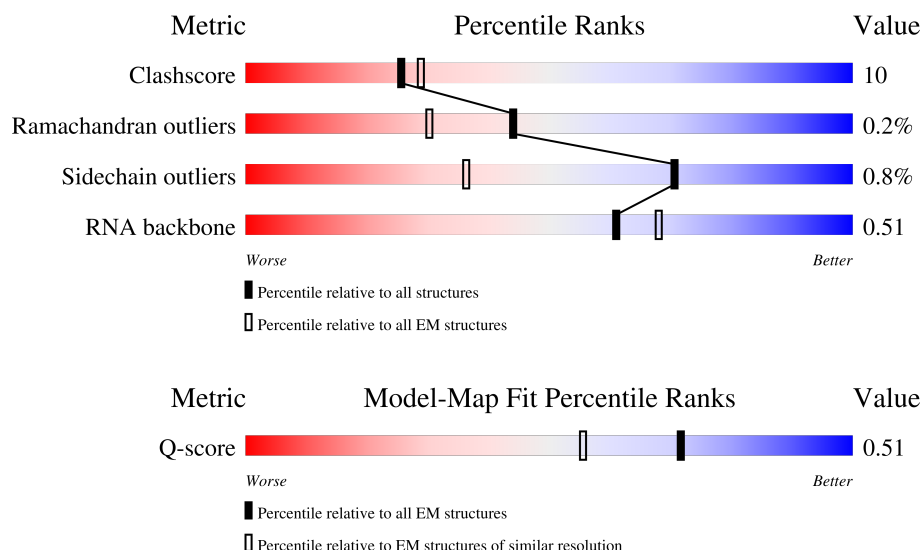
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 2.94 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	13068 (2.44 - 3.44)

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	S2	1869	
2	L8	156	
3	L5	5069	

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Mol	Chain	Length	Quality of chain
4	L7	120	
5	SB	264	
6	SA	295	
7	SD	243	
8	SJ	194	
9	SE	263	
10	SC	293	
11	SG	249	
12	SF	204	
13	SH	194	
14	SW	130	
15	SI	208	
16	SQ	146	
17	SU	119	
18	SK	165	
19	SO	151	
20	SX	143	
21	SM	132	
22	SS	152	
23	Sd	56	
24	SN	151	
25	SL	158	
26	SR	135	
27	SP	145	
28	ST	145	

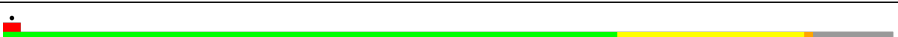
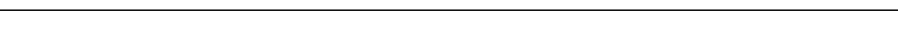
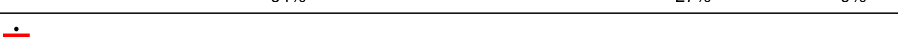
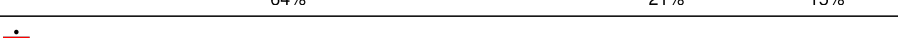
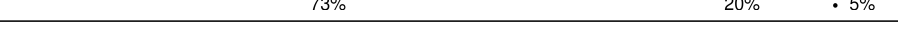
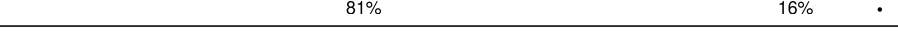
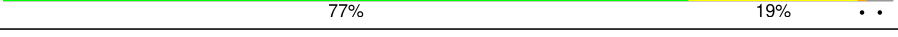
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Mol	Chain	Length	Quality of chain
29	SV	83	
30	SY	133	
31	SZ	125	
32	Sa	115	
33	Sb	84	
34	Sc	69	
35	Se	133	
36	Sf	156	
37	Sg	317	
38	Lz	217	
39	LA	257	
40	LB	403	
41	LC	427	
42	LJ	178	
43	LH	192	
44	LE	288	
45	LG	266	
46	LO	203	
47	LL	211	
48	LV	140	
49	LM	215	
50	La	148	
51	LN	204	
52	LI	214	
53	LD	297	

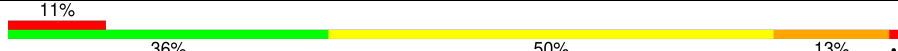
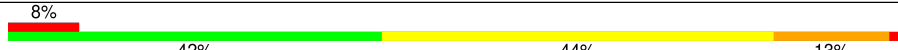
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Mol	Chain	Length	Quality of chain
54	LQ	188	
55	LR	196	
56	LS	176	
57	LT	160	
58	LP	184	
59	LU	128	
60	LX	156	
61	LY	145	
62	LW	157	
63	LZ	136	
64	Lr	137	
65	Lh	123	
66	Lb	159	
67	LF	248	
68	Lc	115	
69	Ld	125	
70	Le	135	
71	Lf	110	
72	Lg	117	
73	Li	105	
74	Lj	97	
75	Lk	70	
76	Ll	51	
77	Lm	128	
78	Ln	25	

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Mol	Chain	Length	Quality of chain
79	Lo	106	
80	Lp	92	
81	5A	154	
82	mR	60	
83	At	76	
84	Pt	77	

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
6	SAC	SA	2	-	X	-	-

2 Entry composition

There are 92 unique types of molecules in this entry. The entry contains 219329 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 18S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	S2	1682	Total	C	N	O	P	1	0
			35978	16086	6447	11762	1683		

- Molecule 2 is a RNA chain called 5.8S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	L8	156	Total	C	N	O	P	0	0
			3320	1482	585	1097	156		

- Molecule 3 is a RNA chain called 28S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	L5	3657	Total	C	N	O	P	0	0
			78479	34987	14355	25480	3657		

- Molecule 4 is a RNA chain called 5S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	L7	120	Total	C	N	O	P	0	0
			2562	1141	456	845	120		

- Molecule 5 is a protein called 40S ribosomal protein S3a.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	SB	214	Total	C	N	O	S	0	0
			1738	1103	310	311	14		

- Molecule 6 is a protein called 40S ribosomal protein SA.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	SA	222	Total	C	N	O	S	0	0
			1750	1111	306	325	8		

- Molecule 7 is a protein called 40S ribosomal protein S3.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	SD	226	Total	C	N	O	S	0	0
			1756	1119	315	314	8		

- Molecule 8 is a protein called 40S ribosomal protein S9.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	SJ	185	Total	C	N	O	S	0	0
			1525	969	306	248	2		

- Molecule 9 is a protein called 40S ribosomal protein S4, X isoform.

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

- Molecule 10 is a protein called 40S ribosomal protein S2.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	SC	222	Total	C	N	O	S	0	0
			1725	1115	298	302	10		

- Molecule 11 is a protein called 40S ribosomal protein S6.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	SG	237	Total	C	N	O	S	0	0
			1923	1200	387	329	7		

- Molecule 12 is a protein called 40S ribosomal protein S5.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	SF	189	Total	C	N	O	S	0	0
			1494	934	284	269	7		

- Molecule 13 is a protein called 40S ribosomal protein S7.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	SH	189	Total	C	N	O	S	0	0
			1517	966	279	271	1		

- Molecule 14 is a protein called 40S ribosomal protein S15a.

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

- Molecule 15 is a protein called 40S ribosomal protein S8.

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

- Molecule 16 is a protein called 40S ribosomal protein S16.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	SQ	141	Total	C	N	O	S	0	0
			1123	715	212	193	3		

- Molecule 17 is a protein called 40S ribosomal protein S20.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	SU	101	Total	C	N	O	S	0	0
			803	504	153	142	4		

- Molecule 18 is a protein called 40S ribosomal protein S10.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	SK	96	Total	C	N	O	S	0	0
			810	530	143	131	6		

- Molecule 19 is a protein called 40S ribosomal protein S14.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	SO	135	Total	C	N	O	S	0	0
			1009	618	198	187	6		

- Molecule 20 is a protein called uS12.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	SX	140	Total	C	N	O	S	0	0
			1088	687	215	183	3		

- Molecule 21 is a protein called 40S ribosomal protein S12.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	SM	122	Total	C	N	O	S	0	0
			940	590	164	177	9		

- Molecule 22 is a protein called 40S ribosomal protein S18.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	SS	148	Total	C	N	O	S	0	0
			1214	761	245	207	1		

- Molecule 23 is a protein called 40S ribosomal protein S29.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	Sd	54	Total	C	N	O	S	0	0
			454	284	93	72	5		

- Molecule 24 is a protein called 40S ribosomal protein S13.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	SN	150	Total	C	N	O	S	1	0
			1214	778	231	204	1		

- Molecule 25 is a protein called 40S ribosomal protein S11.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	SL	145	Total	C	N	O	S	0	0
			1189	757	225	201	6		

- Molecule 26 is a protein called 40S ribosomal protein S17.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	SR	134	Total	C	N	O	S	0	0
			1083	680	201	198	4		

- Molecule 27 is a protein called 40S ribosomal protein S15.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	SP	135	Total	C	N	O	S	0	0
			1110	707	209	187	7		

- Molecule 28 is a protein called 40S ribosomal protein S19.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	ST	143	Total	C	N	O	S	0	0
			1112	697	214	198	3		

- Molecule 29 is a protein called 40S ribosomal protein S21.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	SV	83	Total	C	N	O	S	0	0
			639	395	117	122	5		

- Molecule 30 is a protein called 40S ribosomal protein S24.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	SY	131	Total	C	N	O	S	0	0
			1065	673	209	178	5		

- Molecule 31 is a protein called 40S ribosomal protein S25.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	SZ	86	Total	C	N	O	S	0	0
			688	442	129	116	1		

- Molecule 32 is a protein called 40S ribosomal protein S26.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	Sa	99	Total	C	N	O	S	0	0
			792	492	165	130	5		

- Molecule 33 is a protein called 40S ribosomal protein S27.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	Sb	83	Total	C	N	O	S	0	0
			650	408	121	114	7		

- Molecule 34 is a protein called 40S ribosomal protein S28.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	Sc	65	Total	C	N	O	S	0	0
			517	314	106	95	2		

- Molecule 35 is a protein called FAU ubiquitin-like and ribosomal protein S30.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	Se	57	Total	C	N	O	S	0	0
			452	281	99	71	1		

- Molecule 36 is a protein called Ubiquitin-40S ribosomal protein S27a.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	Sf	63	Total	C	N	O	S	0	0
			515	324	98	86	7		

- Molecule 37 is a protein called Receptor of activated protein C kinase 1.

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

- Molecule 38 is a protein called 60S ribosomal protein L10a.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	Lz	213	Total	C	N	O	S	0	0
			1714	1097	309	300	8		

- Molecule 39 is a protein called uL2.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	LA	251	Total	C	N	O	S	1	0
			1930	1209	396	319	6		

- Molecule 40 is a protein called 60S ribosomal protein L3.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	LB	402	Total	C	N	O	S	0	0
			3240	2061	608	557	14		

- Molecule 41 is a protein called 60S ribosomal protein L4.

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

- Molecule 42 is a protein called 60S ribosomal protein L11.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	LJ	169	Total	C	N	O	S	0	0
			1358	859	253	240	6		

- Molecule 43 is a protein called 60S ribosomal protein L9.

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

- Molecule 44 is a protein called 60S ribosomal protein L6.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	LE	223	Total	C	N	O	S	0	0
			1787	1150	339	294	4		

- Molecule 45 is a protein called 60S ribosomal protein L7a.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	LG	239	Total	C	N	O	S	0	0
			1913	1218	368	323	4		

- Molecule 46 is a protein called 60S ribosomal protein L13a.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	LO	200	Total	C	N	O	S	0	0
			1641	1058	320	258	5		

- Molecule 47 is a protein called 60S ribosomal protein L13.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	LL	206	Total	C	N	O	S	0	0
			1664	1041	345	274	4		

- Molecule 48 is a protein called 60S ribosomal protein L23.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	LV	133	Total	C	N	O	S	0	0
			988	623	186	174	5		

- Molecule 49 is a protein called 60S ribosomal protein L14.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	LM	136	Total	C	N	O	S	0	0
			1120	719	215	179	7		

- Molecule 50 is a protein called 60S ribosomal protein L27a.

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

- Molecule 51 is a protein called 60S ribosomal protein L15.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	LN	203	Total	C	N	O	S	0	0
			1700	1072	359	265	4		

- Molecule 52 is a protein called 60S ribosomal protein L10.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	LI	203	Total	C	N	O	S	0	0
			1646	1045	317	271	13		

- Molecule 53 is a protein called 60S ribosomal protein L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	LD	294	Total	C	N	O	S	0	0
			2391	1513	436	428	14		

- Molecule 54 is a protein called 60S ribosomal protein L18.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	LQ	187	Total	C	N	O	S	0	0
			1512	944	314	249	5		

- Molecule 55 is a protein called 60S ribosomal protein L19.

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

- Molecule 56 is a protein called 60S ribosomal protein L18a.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	LS	176	Total	C	N	O	S	0	0
			1460	930	284	235	11		

- Molecule 57 is a protein called 60S ribosomal protein L21.

Mol	Chain	Residues	Atoms					AltConf	Trace
57	LT	159	Total	C	N	O	S	0	0
			1297	823	252	216	6		

- Molecule 58 is a protein called 60S ribosomal protein L17.

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

- Molecule 59 is a protein called 60S ribosomal protein L22.

Mol	Chain	Residues	Atoms					AltConf	Trace
59	LU	99	Total	C	N	O	S	0	0
			808	518	141	147	2		

- Molecule 60 is a protein called 60S ribosomal protein L23a.

Mol	Chain	Residues	Atoms					AltConf	Trace
60	LX	118	Total	C	N	O	S	0	0
			967	618	181	167	1		

- Molecule 61 is a protein called 60S ribosomal protein L26.

Mol	Chain	Residues	Atoms					AltConf	Trace
61	LY	134	Total	C	N	O	S	0	0
			1115	700	226	186	3		

- Molecule 62 is a protein called 60S ribosomal protein L24.

Mol	Chain	Residues	Atoms					AltConf	Trace
62	LW	118	Total	C	N	O	S	0	0
			950	595	192	159	4		

- Molecule 63 is a protein called 60S ribosomal protein L27.

Mol	Chain	Residues	Atoms					AltConf	Trace
63	LZ	135	Total	C	N	O	S	0	0
			1106	714	208	181	3		

- Molecule 64 is a protein called 60S ribosomal protein L28.

Mol	Chain	Residues	Atoms					AltConf	Trace
64	Lr	125	Total	C	N	O	S	0	0
			1005	624	207	169	5		

- Molecule 65 is a protein called 60S ribosomal protein L35.

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

- Molecule 66 is a protein called 60S ribosomal protein L29.

Mol	Chain	Residues	Atoms					AltConf	Trace
66	Lb	109	Total	C	N	O	S	0	0
			885	552	192	137	4		

- Molecule 67 is a protein called 60S ribosomal protein L7.

Mol	Chain	Residues	Atoms					AltConf	Trace
67	LF	225	Total	C	N	O	S	0	0
			1870	1202	358	301	9		

- Molecule 68 is a protein called 60S ribosomal protein L30.

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

- Molecule 69 is a protein called 60S ribosomal protein L31.

Mol	Chain	Residues	Atoms					AltConf	Trace
69	Ld	107	Total	C	N	O	S	0	0
			888	560	171	155	2		

- Molecule 70 is a protein called 60S ribosomal protein L32.

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

- Molecule 71 is a protein called 60S ribosomal protein L35a.

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

- Molecule 72 is a protein called 60S ribosomal protein L34.

Mol	Chain	Residues	Atoms					AltConf	Trace
72	Lg	114	Total	C	N	O	S	0	0
			906	566	187	147	6		

- Molecule 73 is a protein called 60S ribosomal protein L36.

Mol	Chain	Residues	Atoms					AltConf	Trace
73	Li	102	Total	C	N	O	S	0	0
			832	521	177	129	5		

- Molecule 74 is a protein called 60S ribosomal protein L37.

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

- Molecule 75 is a protein called 60S ribosomal protein L38.

Mol	Chain	Residues	Atoms					AltConf	Trace
75	Lk	69	Total	C	N	O	S	0	0
			569	366	103	99	1		

- Molecule 76 is a protein called 60S ribosomal protein L39.

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

- Molecule 77 is a protein called eL40.

Mol	Chain	Residues	Atoms					AltConf	Trace
77	Lm	52	Total	C	N	O	S	0	0
			431	269	90	66	6		

- Molecule 78 is a protein called 60S ribosomal protein L41.

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

- Molecule 79 is a protein called 60S ribosomal protein L36a.

Mol	Chain	Residues	Atoms					AltConf	Trace
79	Lo	104	Total	C	N	O	S	0	0
			852	534	174	138	6		

- Molecule 80 is a protein called 60S ribosomal protein L37a.

Mol	Chain	Residues	Atoms					AltConf	Trace
80	Lp	91	Total	C	N	O	S	0	0
			708	445	136	120	7		

- Molecule 81 is a protein called eIF5A1.

Mol	Chain	Residues	Atoms					AltConf	Trace
81	5A	150	Total	C	N	O	S	0	0
			1144	716	194	225	9		

- Molecule 82 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
82	mR	10	Total	C	N	O	P	0	0
			210	94	34	72	10		

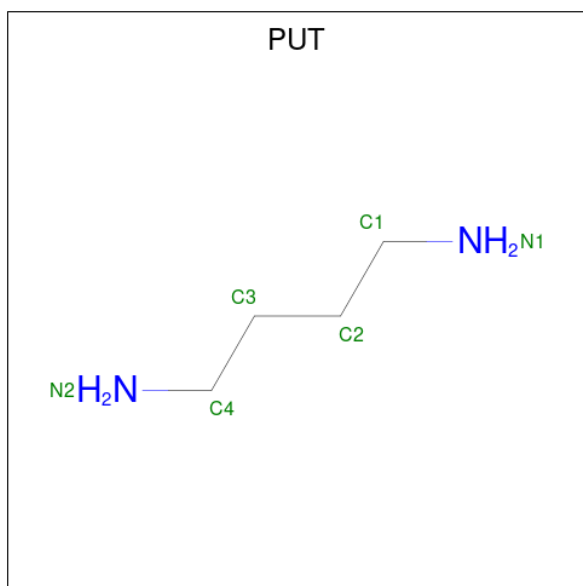
- Molecule 83 is a RNA chain called A-site tRNA.

Mol	Chain	Residues	Atoms						AltConf	Trace
83	At	76	Total	C	N	O	P	S	0	0
			1624	724	290	533	76	1		

- Molecule 84 is a RNA chain called RNA (77-MER).

Mol	Chain	Residues	Atoms						AltConf	Trace
84	Pt	77	Total	C	N	O	P	S	0	0
			1645	734	298	535	77	1		

- Molecule 85 is 1,4-DIAMINOBUTANE (CCD ID: PUT) (formula: $C_4H_{12}N_2$).



Mol	Chain	Residues	Atoms			AltConf
85	S2	1	Total	C	N	0
			6	4	2	
85	L5	1	Total	C	N	0
			6	4	2	
85	L5	1	Total	C	N	0
			6	4	2	
85	L5	1	Total	C	N	0
			6	4	2	

- Molecule 86 is POTASSIUM ION (CCD ID: K) (formula: K).

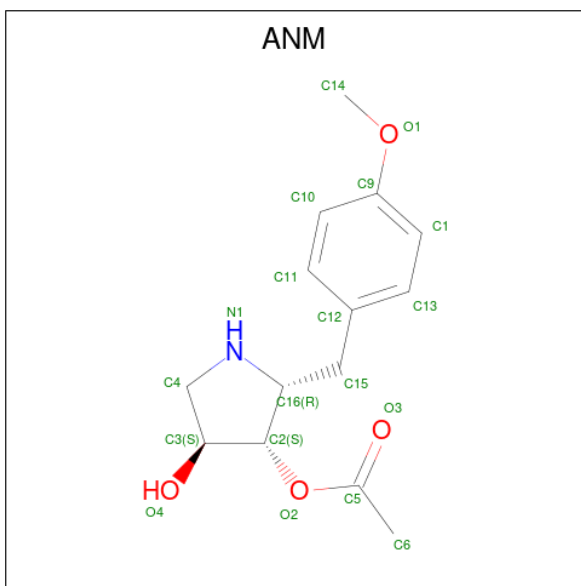
Mol	Chain	Residues	Atoms		AltConf
86	S2	1	Total	K	0
			1	1	
86	L5	13	Total	K	0
			13	13	
86	LA	1	Total	K	0
			1	1	
86	Lf	1	Total	K	0
			1	1	

- Molecule 87 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
87	S2	67	Total 67	Mg 67	0
87	L8	6	Total 6	Mg 6	0
87	L5	231	Total 231	Mg 231	0
87	L7	4	Total 4	Mg 4	0
87	SC	1	Total 1	Mg 1	0
87	SS	1	Total 1	Mg 1	0
87	SN	1	Total 1	Mg 1	0
87	Sa	1	Total 1	Mg 1	0
87	LA	1	Total 1	Mg 1	0
87	LB	1	Total 1	Mg 1	0
87	LV	1	Total 1	Mg 1	0
87	LN	2	Total 2	Mg 2	0
87	LP	1	Total 1	Mg 1	0
87	Le	1	Total 1	Mg 1	0
87	Lg	1	Total 1	Mg 1	0
87	Ln	1	Total 1	Mg 1	0
87	Lo	1	Total 1	Mg 1	0
87	5A	1	Total 1	Mg 1	0
87	At	1	Total 1	Mg 1	0
87	Pt	2	Total 2	Mg 2	0

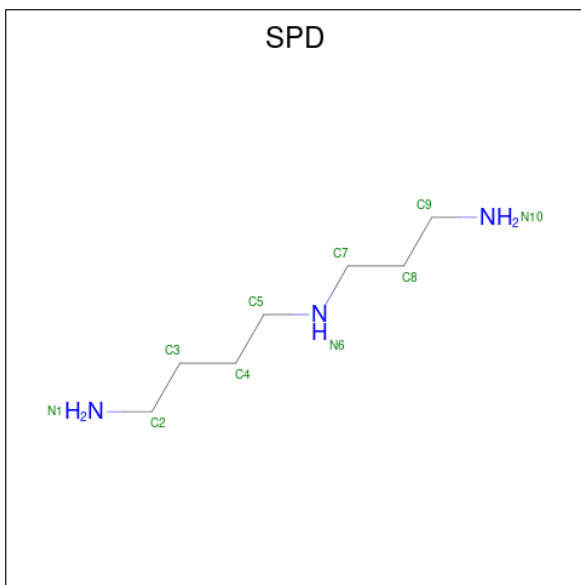
- Molecule 88 is ANISOMYCIN (CCD ID: ANM) (formula: C₁₄H₁₉NO₄) (labeled as "Ligand

of Interest" by depositor).



Mol	Chain	Residues	Atoms				AltConf
88	L5	1	Total	C	N	O	0
			19	14	1	4	

- Molecule 89 is SPERMIDINE (CCD ID: SPD) (formula: $C_7H_{19}N_3$).



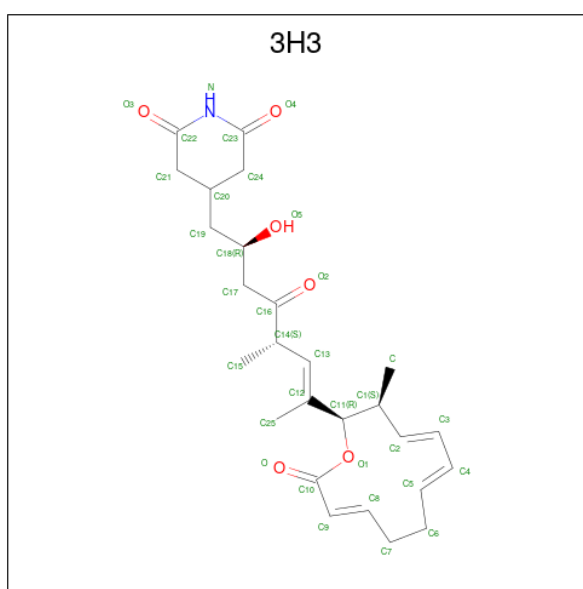
Mol	Chain	Residues	Atoms				AltConf
89	L5	1	Total	C	N		0
			10	7	3		
89	L5	1	Total	C	N		0
			10	7	3		

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

- Molecule 90 is 4-[(2R,5S,6E)-2-hydroxy-5-methyl-7-[(2R,3S,4E,6Z,10E)-3-methyl-12-oxo oxacyclododeca-4,6,10-trien-2-yl]-4-oxooct-6-en-1-yl]piperidine-2,6-dione (CCD ID: 3H3) (formula: C₂₆H₃₅NO₆) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				AltConf
90	L5	1	Total	C	N	O	0
			33	26	1	6	

- Molecule 91 is ZINC ION (CCD ID: ZN) (formula: Zn).

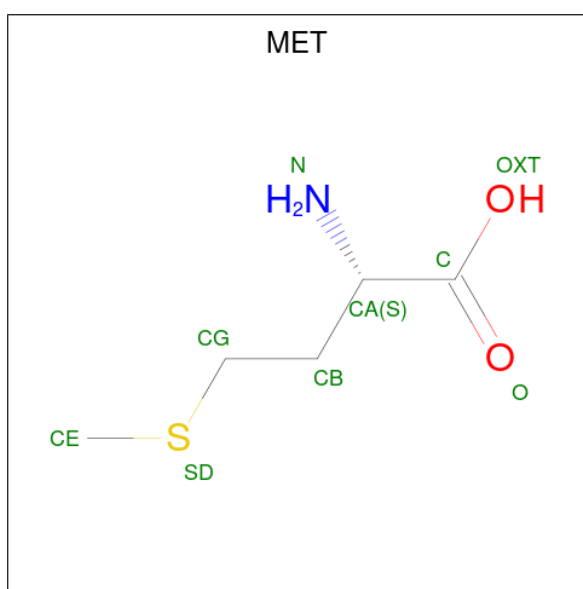
Mol	Chain	Residues	Atoms		AltConf
91	Sd	1	Total	Zn	0
			1	1	
91	Sa	1	Total	Zn	0
			1	1	
91	Sf	1	Total	Zn	0
			1	1	
91	Lg	1	Total	Zn	0
			1	1	

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Mol	Chain	Residues	Atoms		AltConf
91	Lj	1	Total	Zn	0
			1	1	
91	Lm	1	Total	Zn	0
			1	1	
91	Lo	1	Total	Zn	0
			1	1	
91	Lp	1	Total	Zn	0
			1	1	

- Molecule 92 is METHIONINE (CCD ID: MET) (formula: $C_5H_{11}NO_2S$).

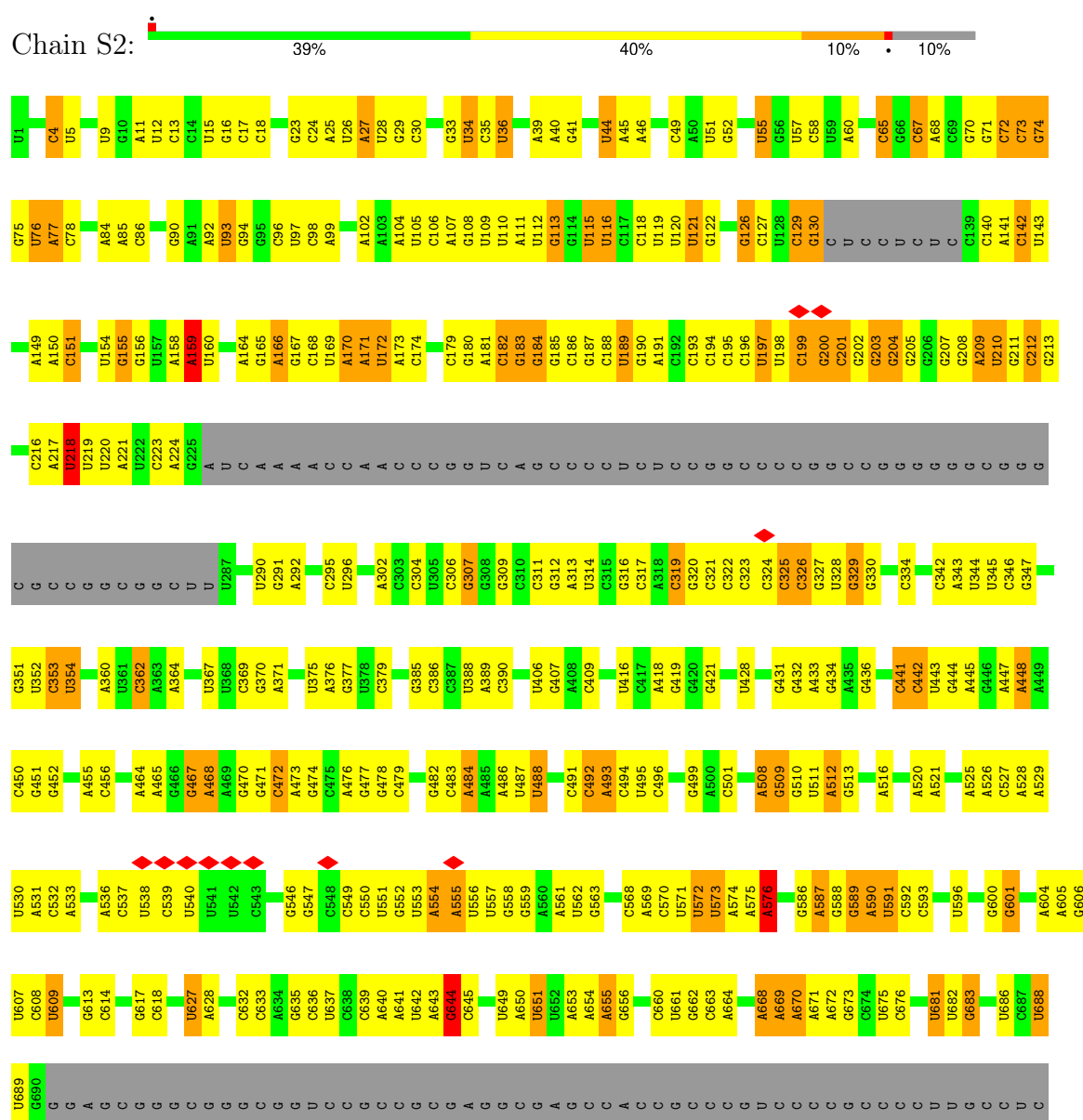


Mol	Chain	Residues	Atoms					AltConf
92	Pt	1	Total	C	N	O	S	0
			8	5	1	1	1	

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: 18S rRNA

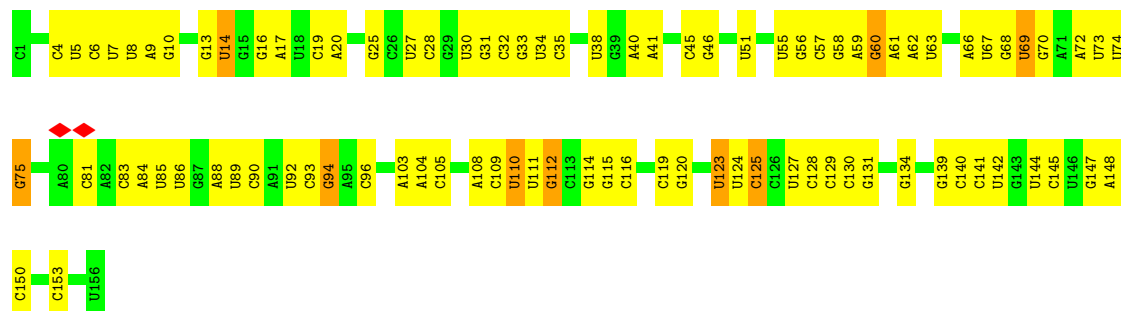




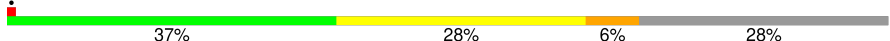
G1862
A1863
U1864
C1865
A1866
A1869

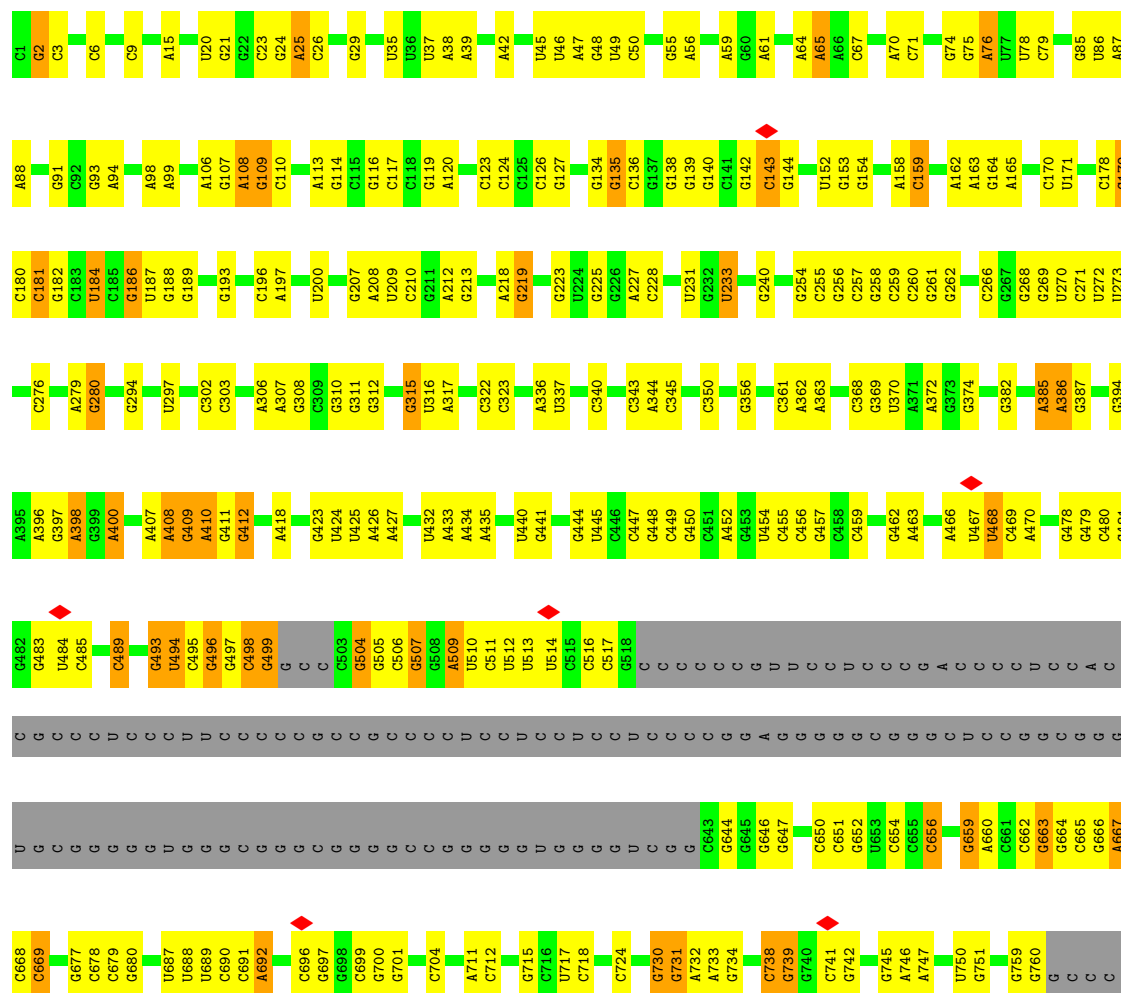
• Molecule 2: 5.8S rRNA

Chain L8:  42% 53% 6%



• Molecule 3: 28S rRNA

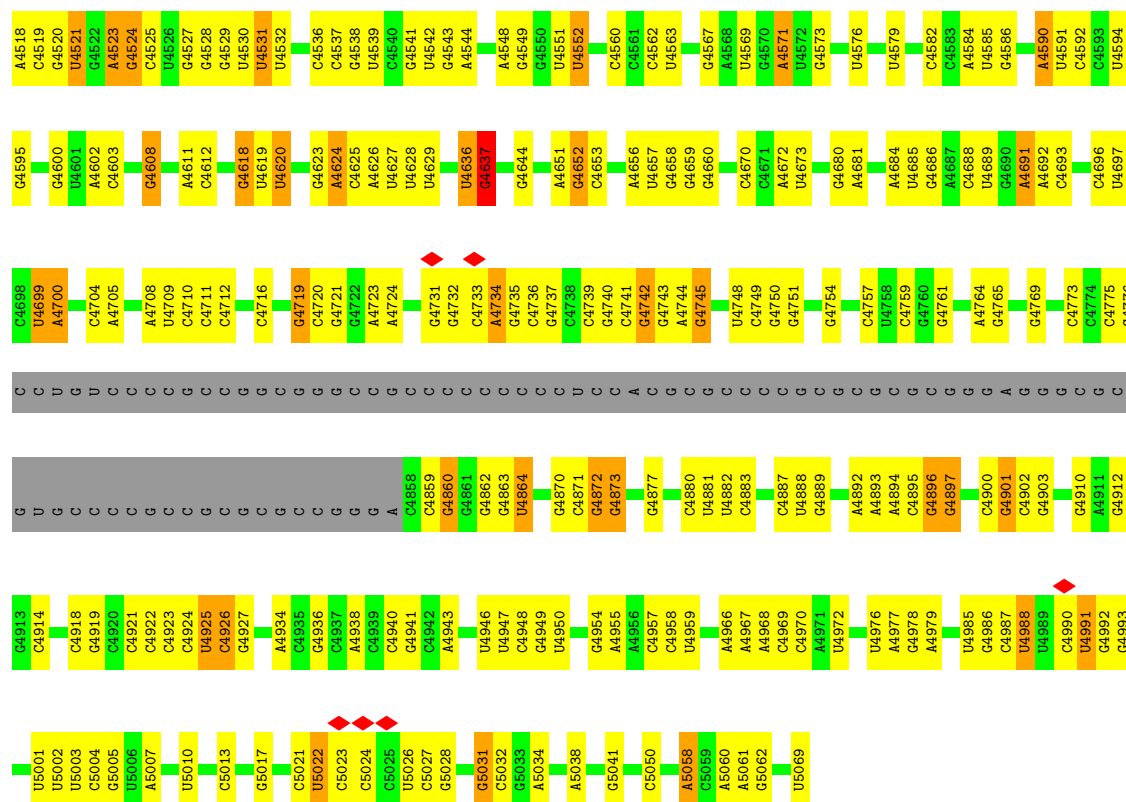
Chain L5:  37% 28% 6% 28%



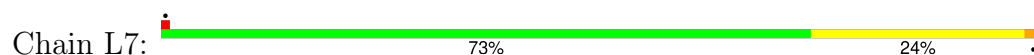




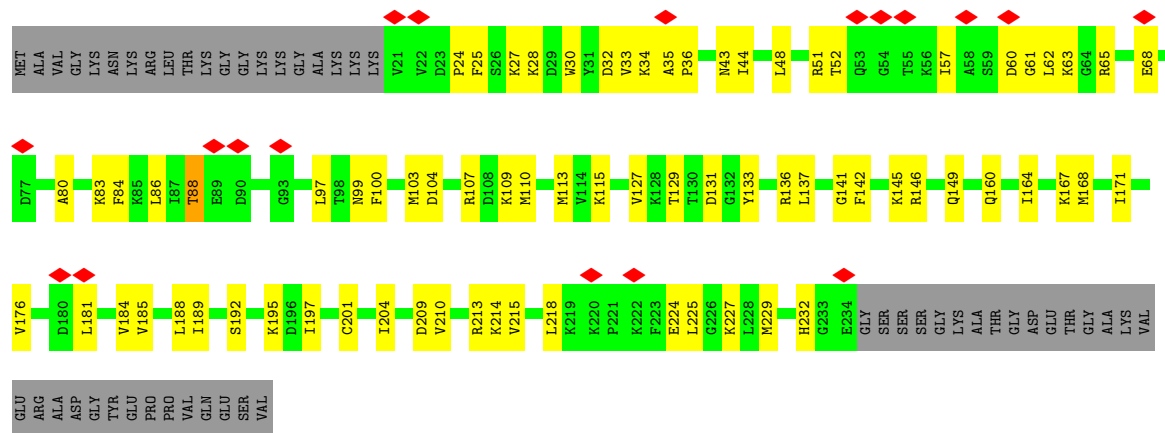




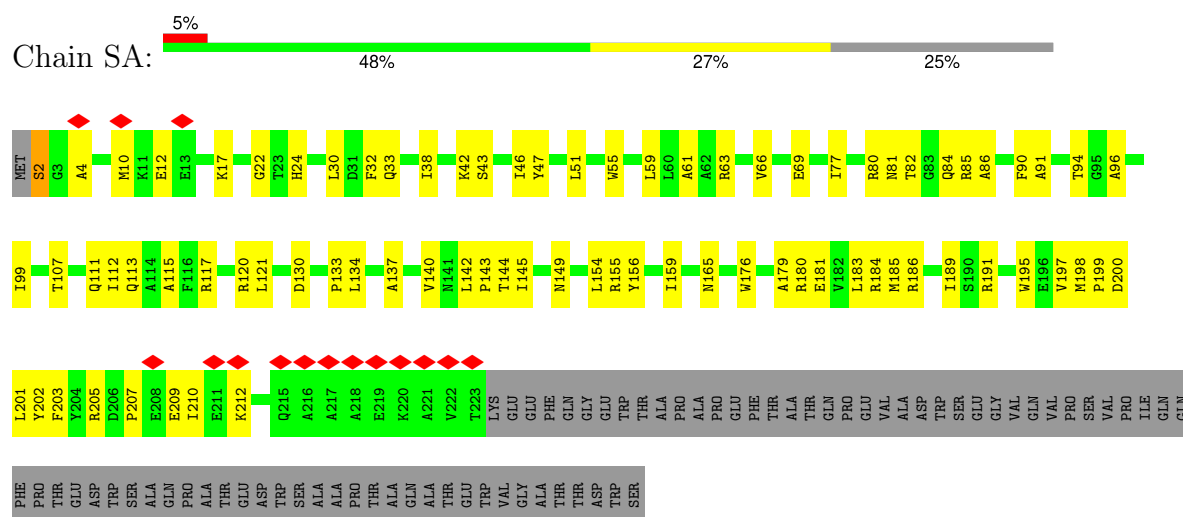
- Molecule 4: 5S rRNA



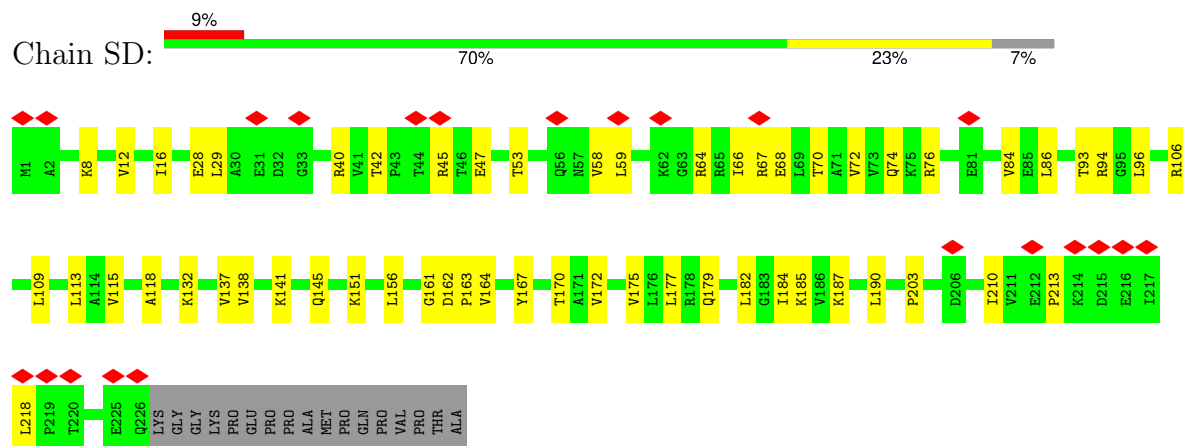
- Molecule 5: 40S ribosomal protein S3a



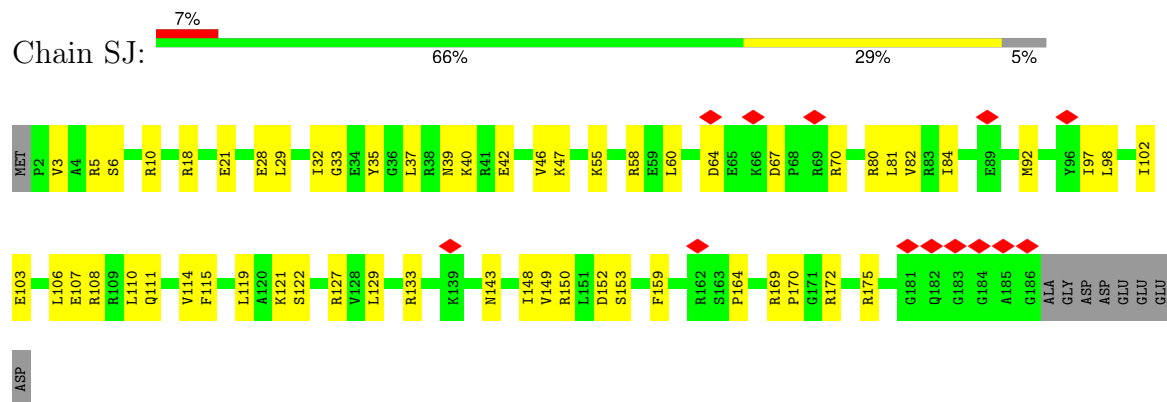
- Molecule 6: 40S ribosomal protein SA



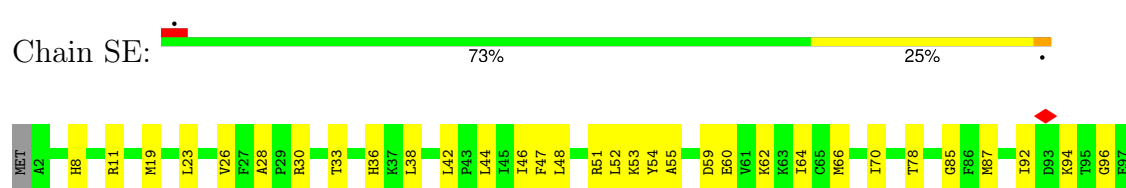
- Molecule 7: 40S ribosomal protein S3

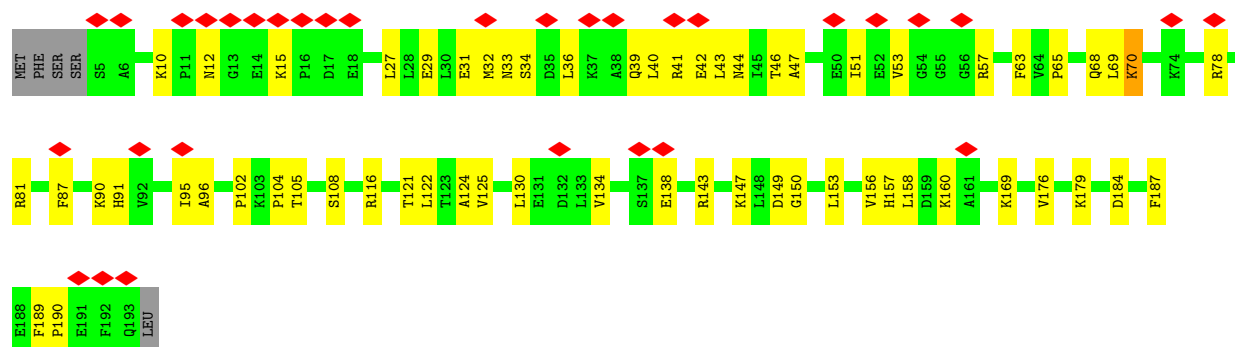


- Molecule 8: 40S ribosomal protein S9



- Molecule 9: 40S ribosomal protein S4, X isoform





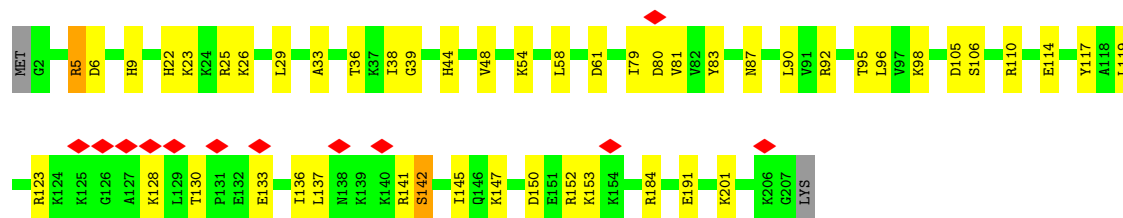
- Molecule 14: 40S ribosomal protein S15a

Chain SW: 75% 24% ..



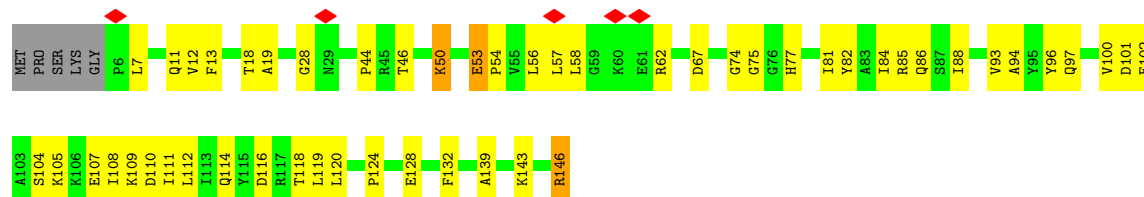
- Molecule 15: 40S ribosomal protein S8

Chain SI: 6% 75% 23% ..



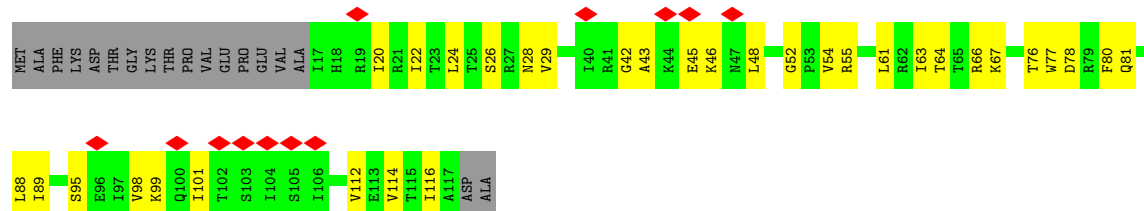
- Molecule 16: 40S ribosomal protein S16

Chain SQ: 61% 34% ..

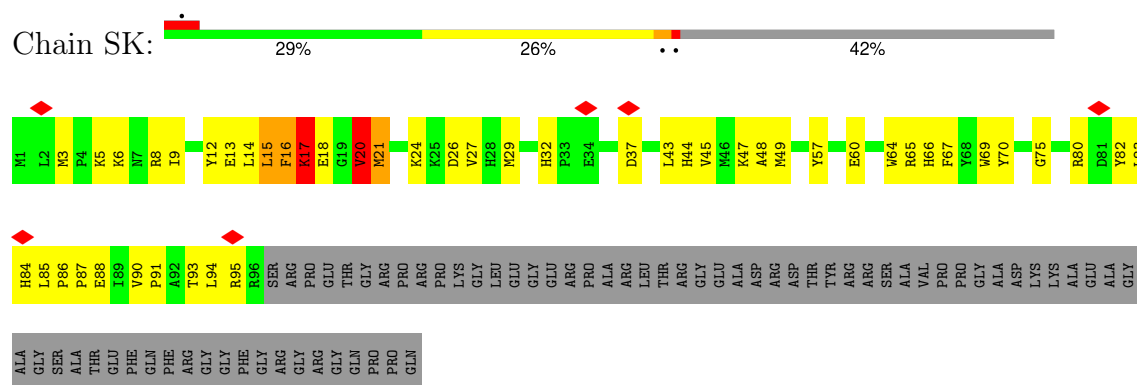


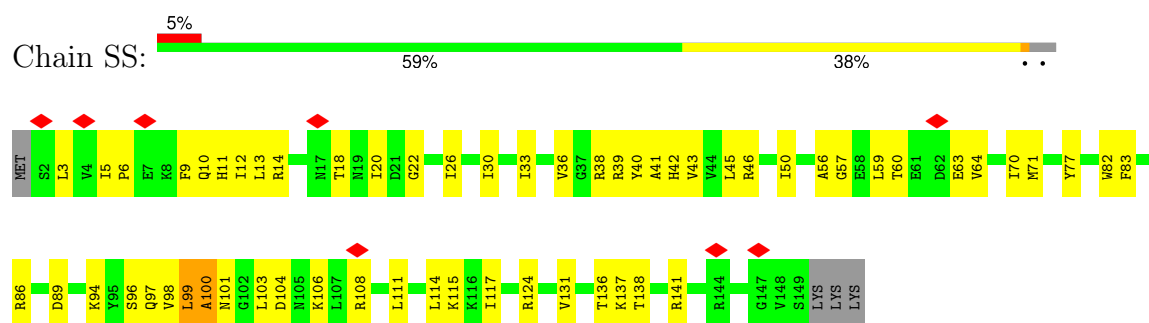
- Molecule 17: 40S ribosomal protein S20

Chain SU: 10% 57% 28% 15%

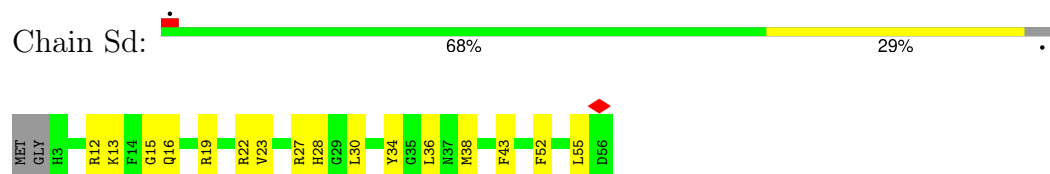


- Molecule 18: 40S ribosomal protein S10

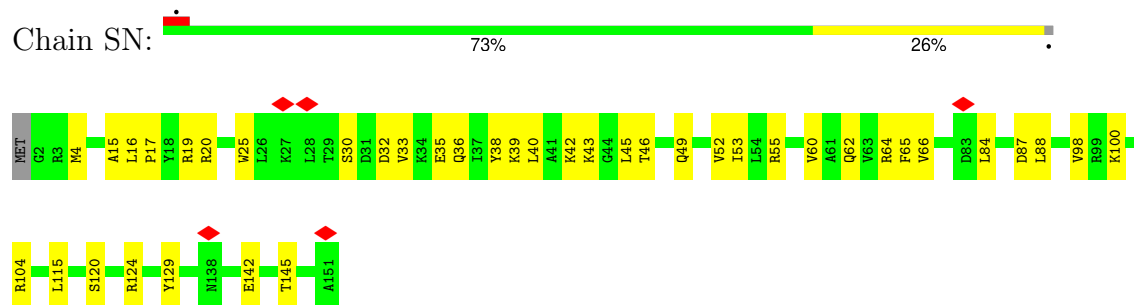




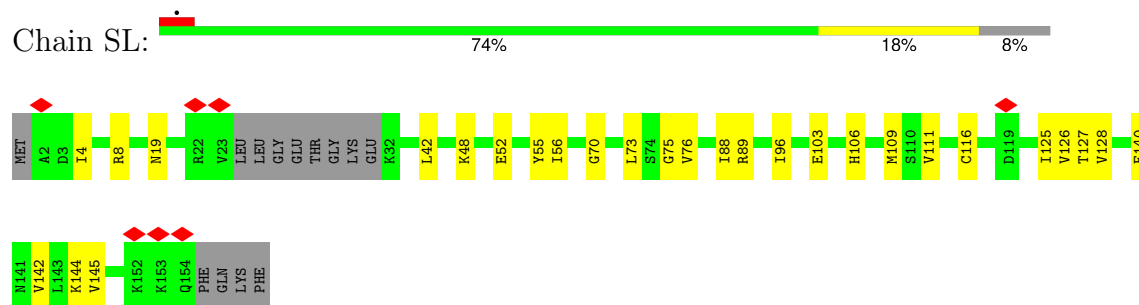
- Molecule 23: 40S ribosomal protein S29



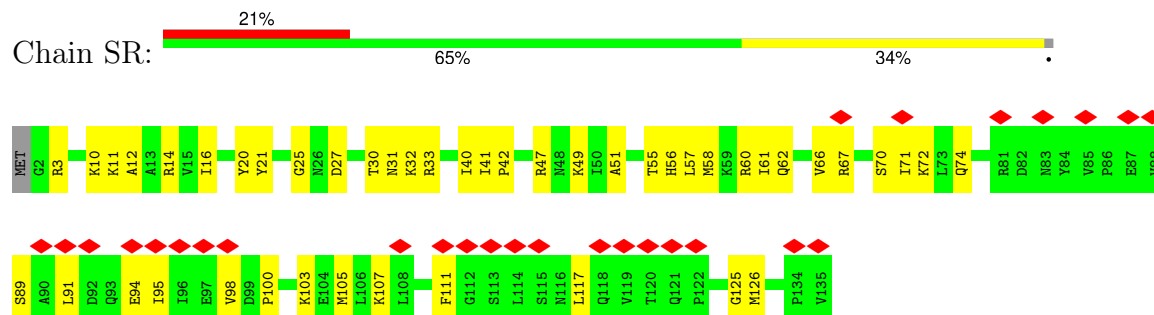
- Molecule 24: 40S ribosomal protein S13



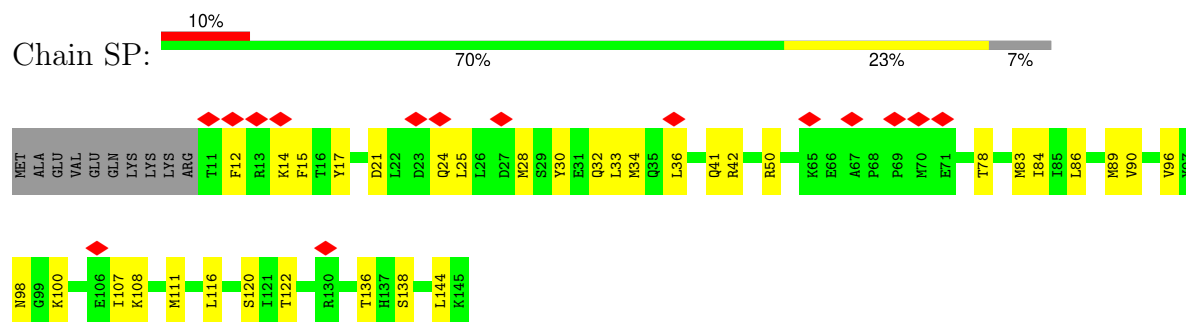
- Molecule 25: 40S ribosomal protein S11



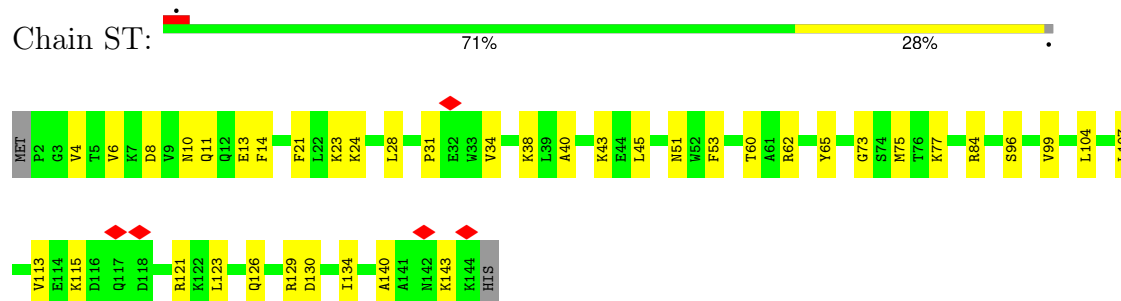
- Molecule 26: 40S ribosomal protein S17



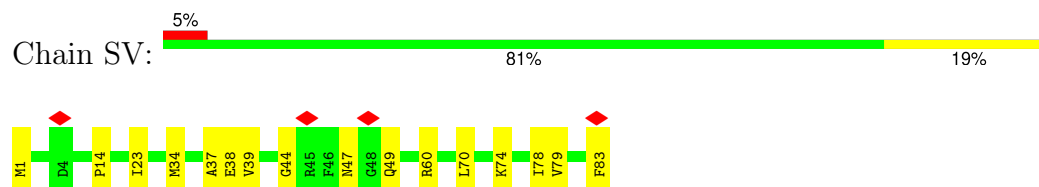
- Molecule 27: 40S ribosomal protein S15



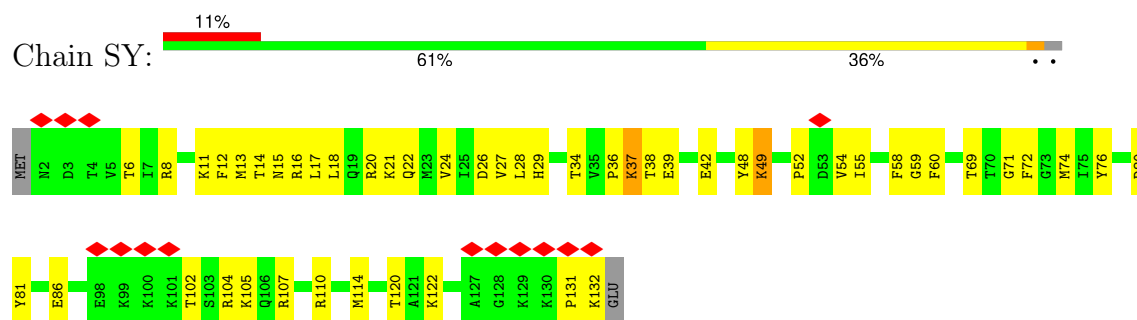
- Molecule 28: 40S ribosomal protein S19



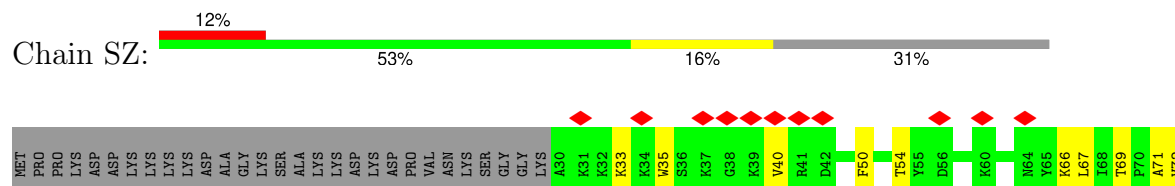
- Molecule 29: 40S ribosomal protein S21

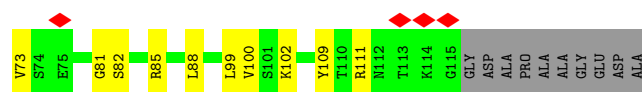


- Molecule 30: 40S ribosomal protein S24

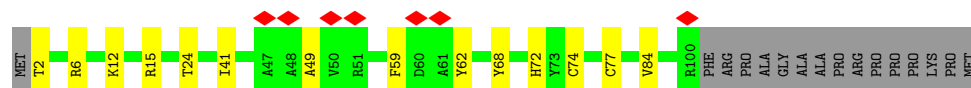
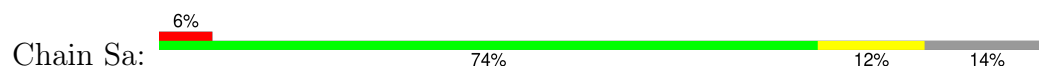


- Molecule 31: 40S ribosomal protein S25

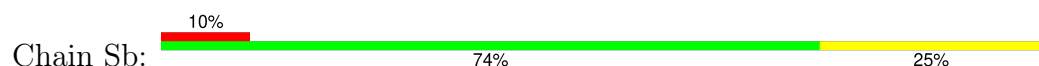




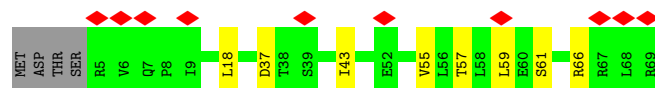
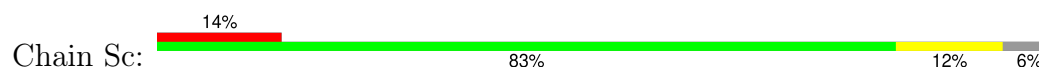
- Molecule 32: 40S ribosomal protein S26



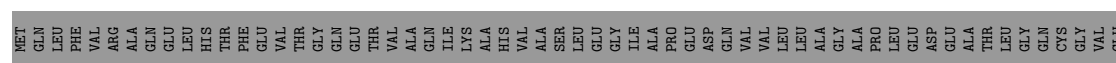
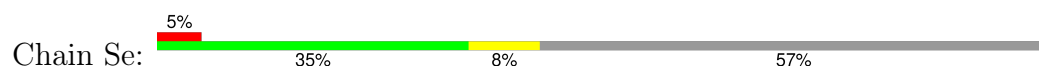
- Molecule 33: 40S ribosomal protein S27



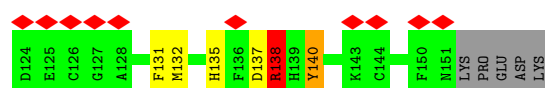
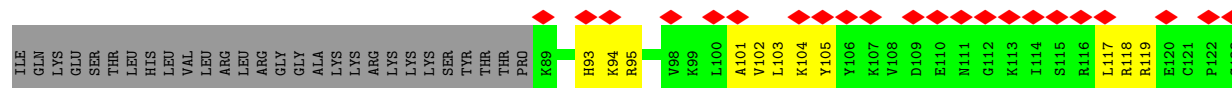
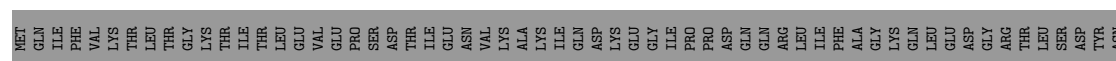
- Molecule 34: 40S ribosomal protein S28



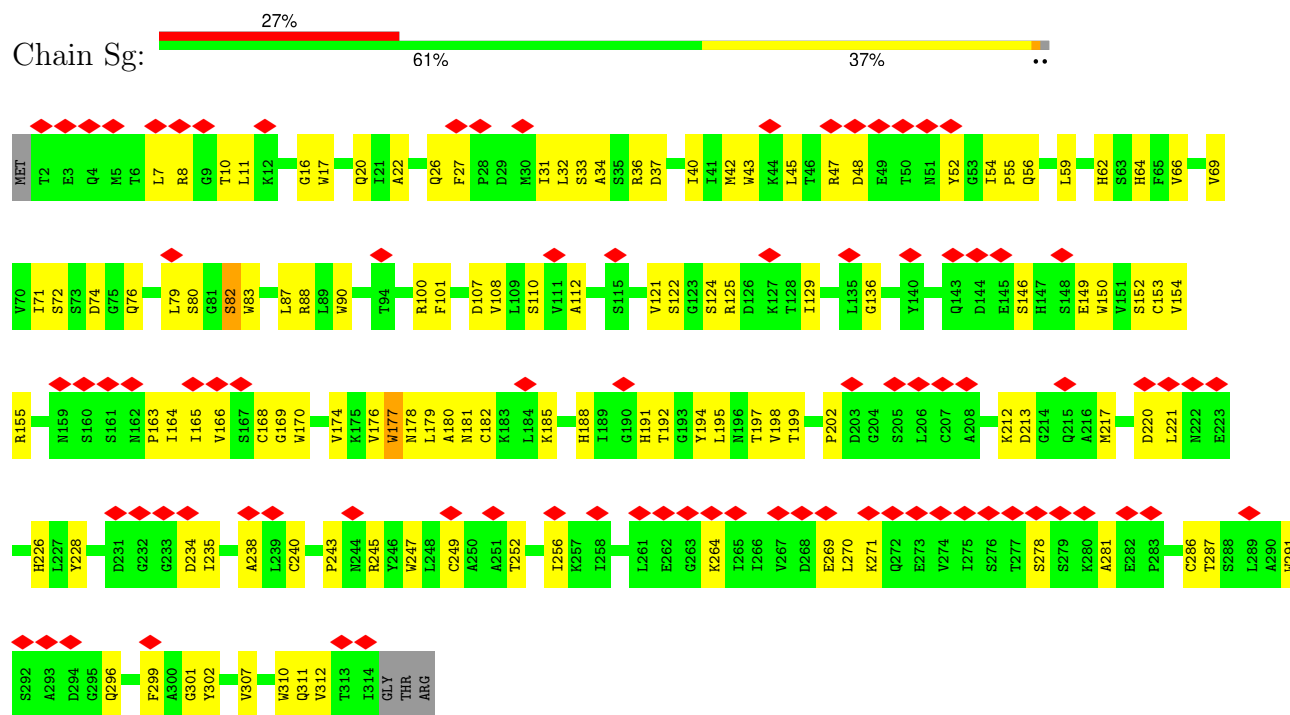
- Molecule 35: FAU ubiquitin-like and ribosomal protein S30



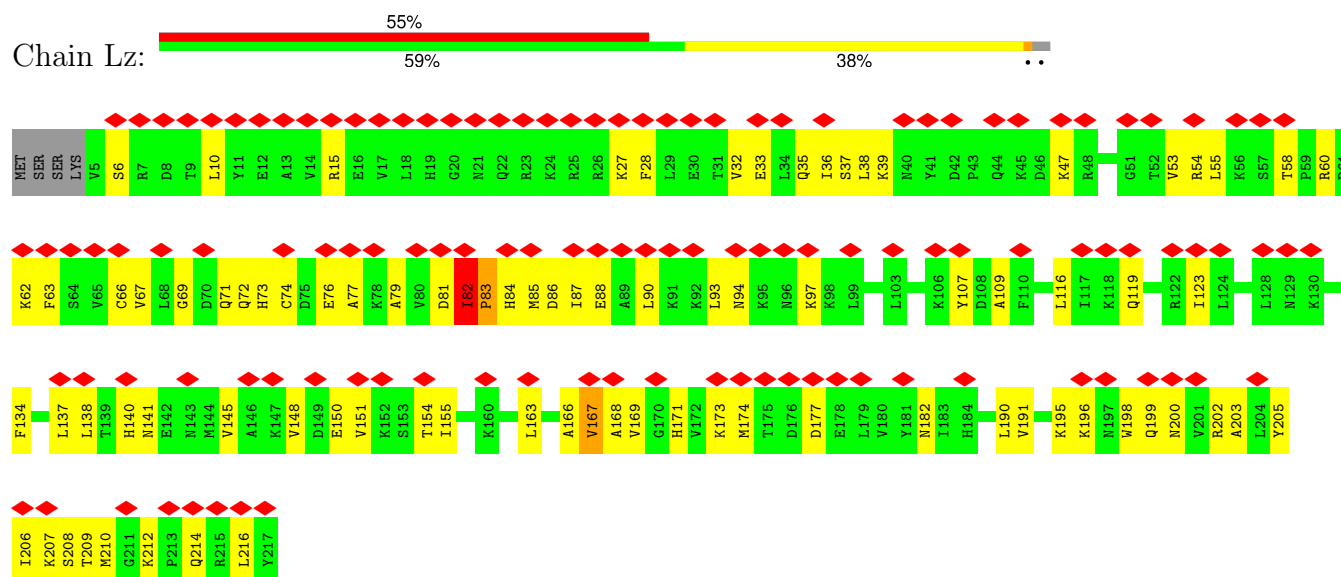
- Molecule 36: Ubiquitin-40S ribosomal protein S27a



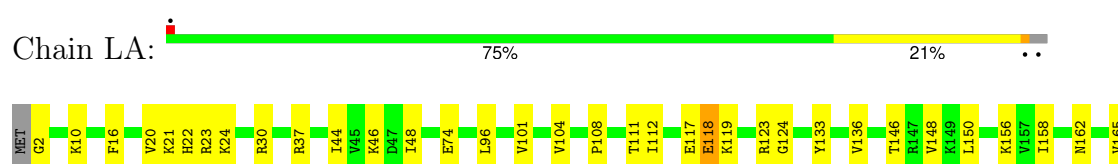
- Molecule 37: Receptor of activated protein C kinase 1



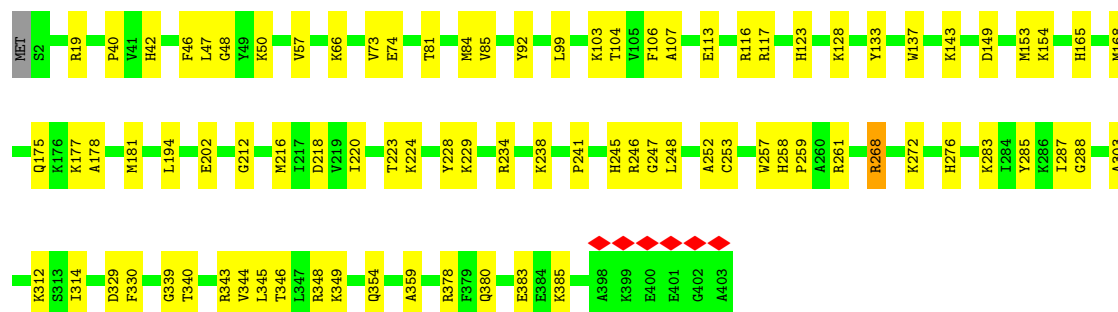
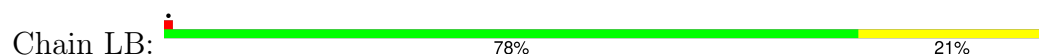
- Molecule 38: 60S ribosomal protein L10a



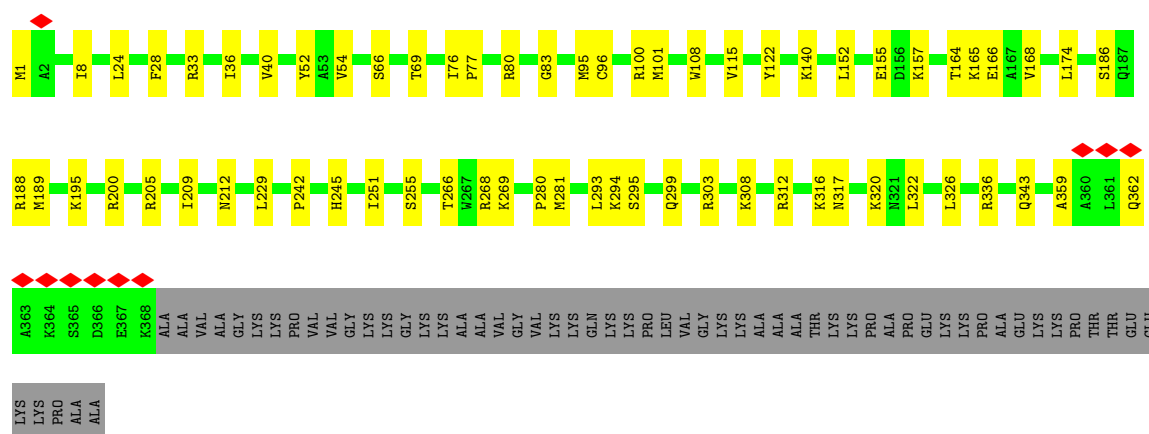
- Molecule 39: uL2



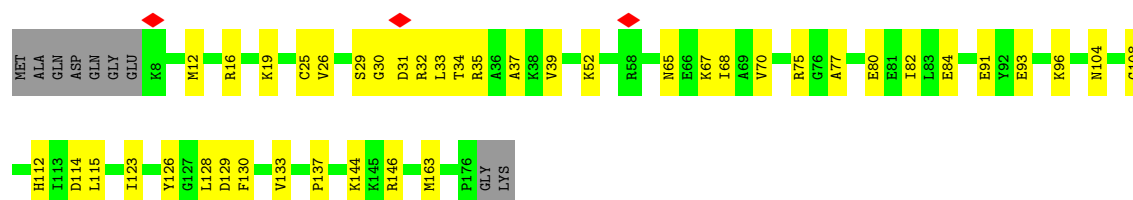
- Molecule 40: 60S ribosomal protein L3



- Molecule 41: 60S ribosomal protein L4

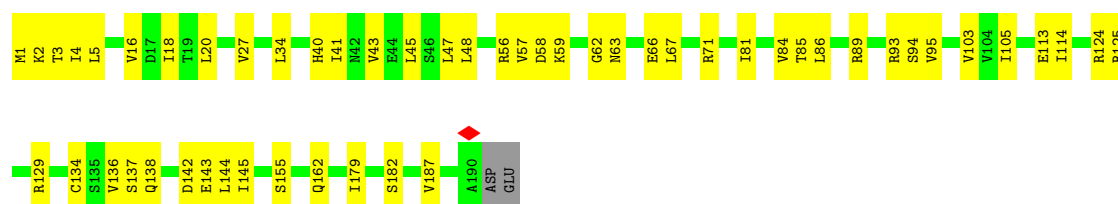


- Molecule 42: 60S ribosomal protein L11

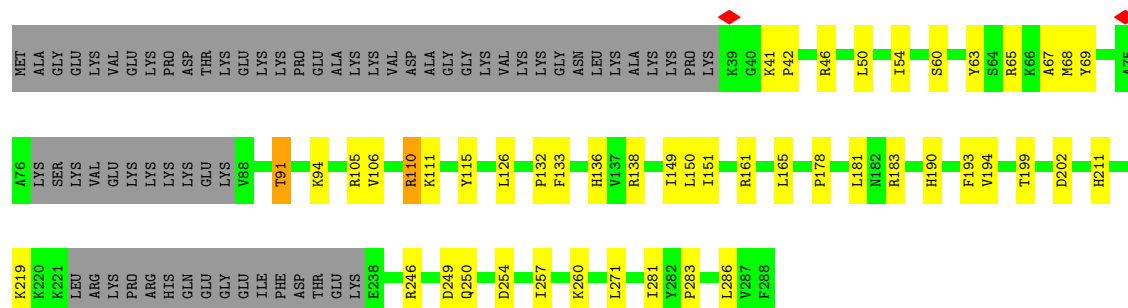


- Molecule 43: 60S ribosomal protein L9

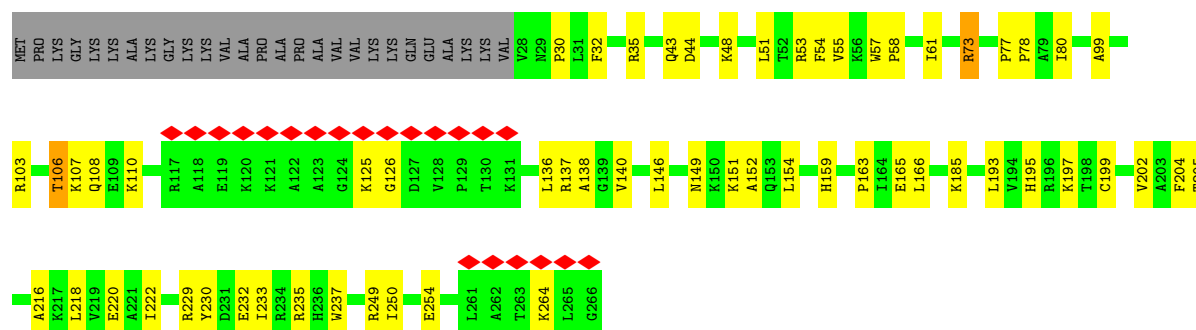




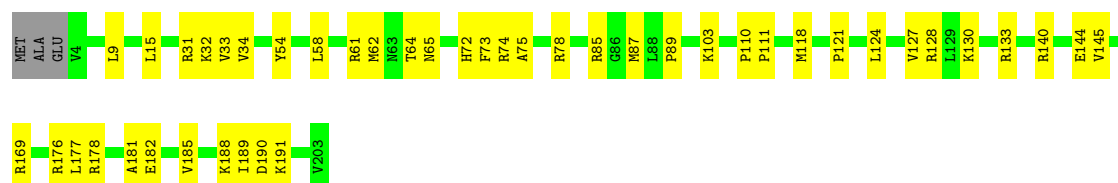
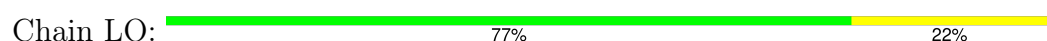
- Molecule 44: 60S ribosomal protein L6



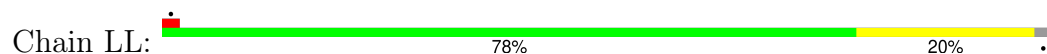
- Molecule 45: 60S ribosomal protein L7a

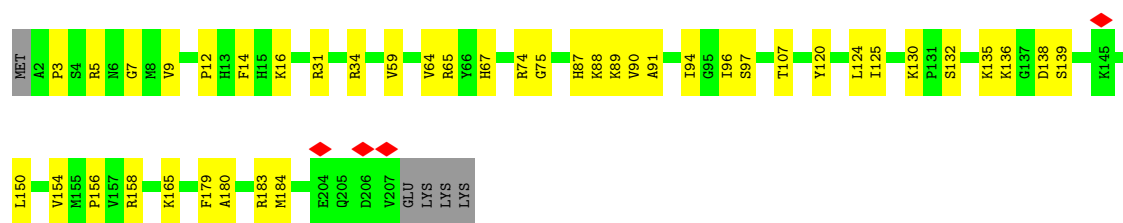


- Molecule 46: 60S ribosomal protein L13a

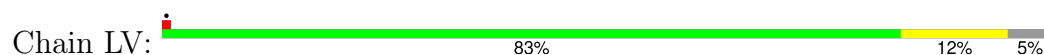


- Molecule 47: 60S ribosomal protein L13

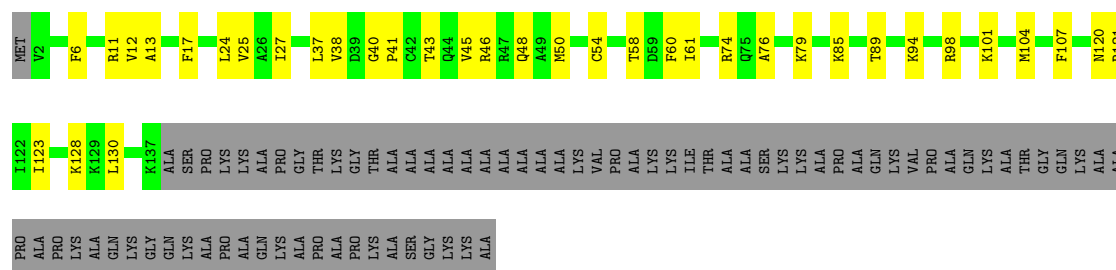




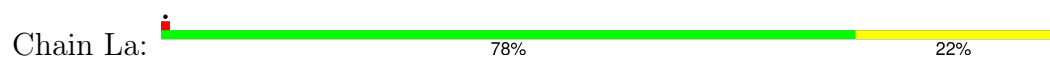
- Molecule 48: 60S ribosomal protein L23



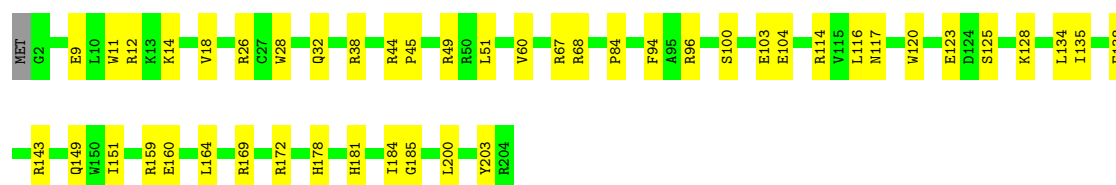
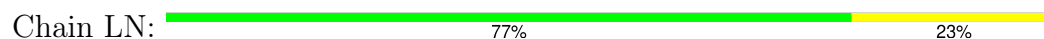
- Molecule 49: 60S ribosomal protein L14



- Molecule 50: 60S ribosomal protein L27a

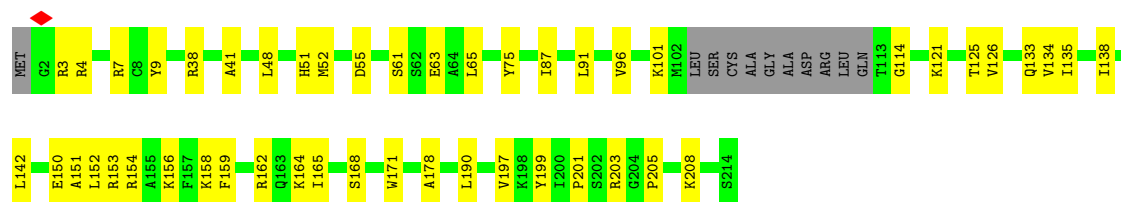


- Molecule 51: 60S ribosomal protein L15

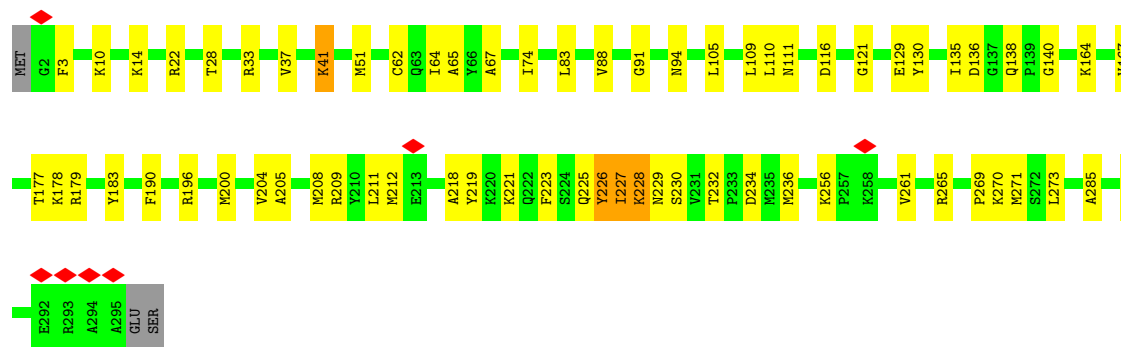
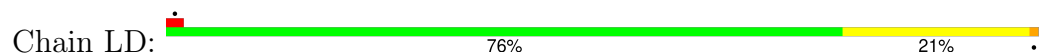


- Molecule 52: 60S ribosomal protein L10

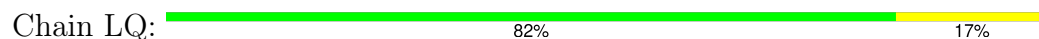




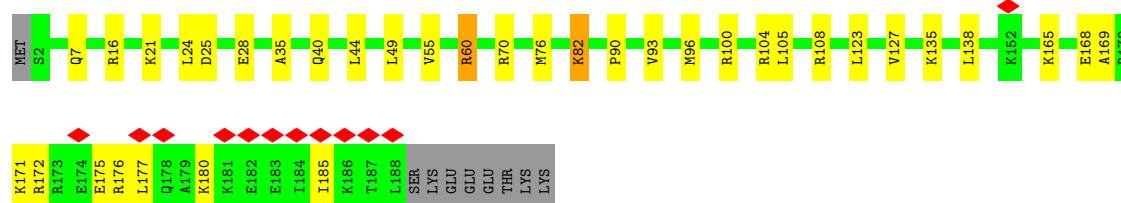
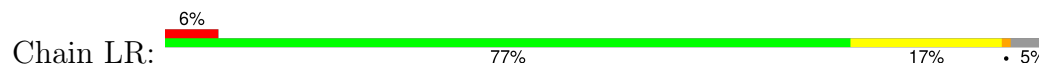
- Molecule 53: 60S ribosomal protein L5



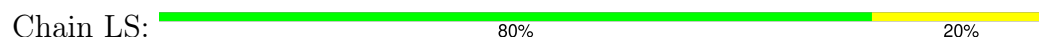
- Molecule 54: 60S ribosomal protein L18



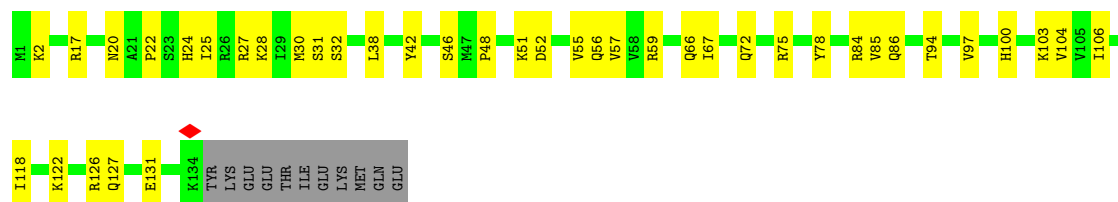
- Molecule 55: 60S ribosomal protein L19



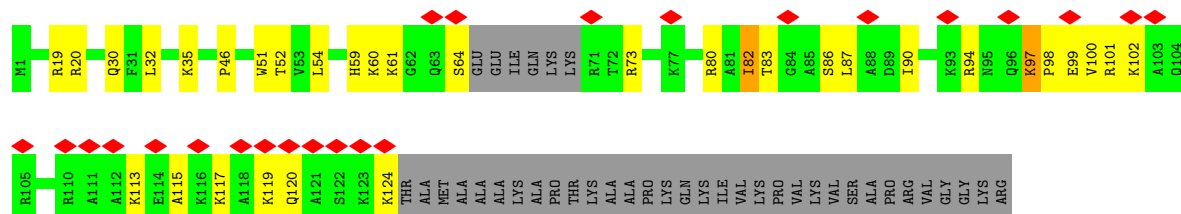
- Molecule 56: 60S ribosomal protein L18a



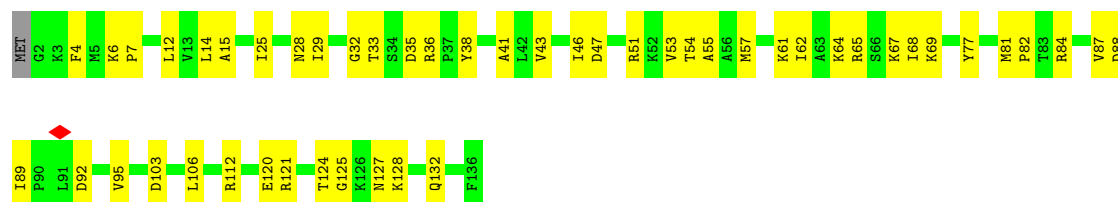




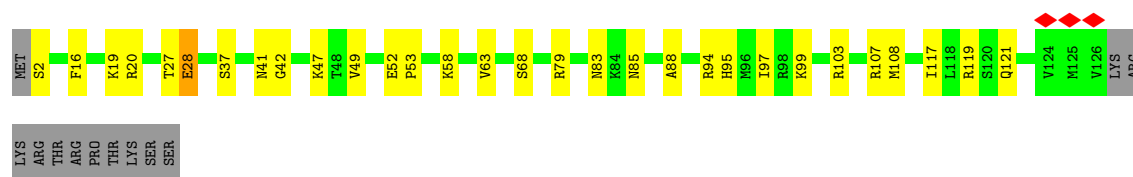
- Molecule 62: 60S ribosomal protein L24



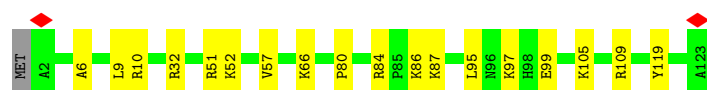
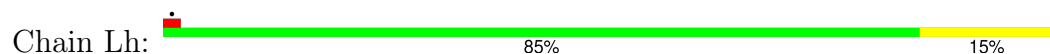
- Molecule 63: 60S ribosomal protein L27



- Molecule 64: 60S ribosomal protein L28

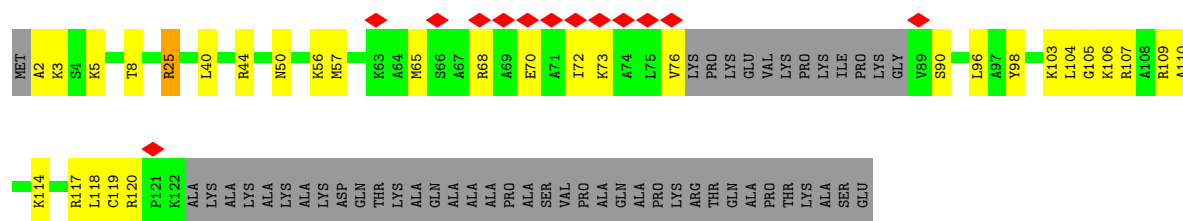


- Molecule 65: 60S ribosomal protein L35



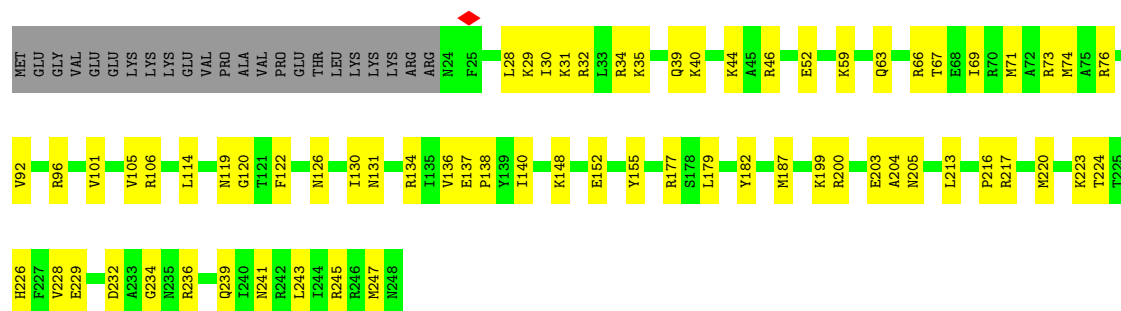
- Molecule 66: 60S ribosomal protein L29





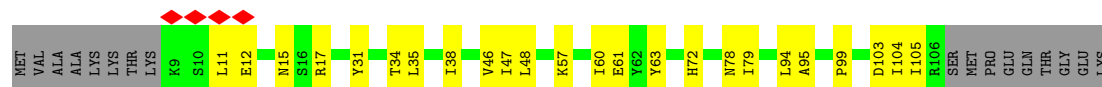
• Molecule 67: 60S ribosomal protein L7

Chain LF: 64% 27% 9%



• Molecule 68: 60S ribosomal protein L30

Chain Lc: 64% 21% 15%



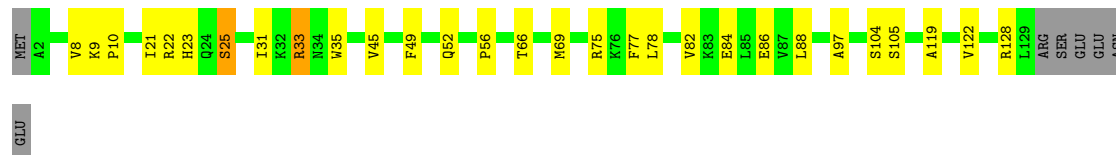
• Molecule 69: 60S ribosomal protein L31

Chain Ld: 74% 11% 14%



• Molecule 70: 60S ribosomal protein L32

Chain Le: 73% 20% 5%

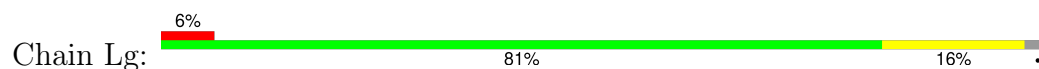


• Molecule 71: 60S ribosomal protein L35a

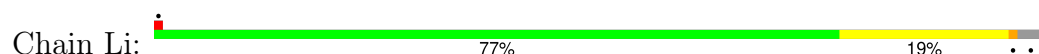
Chain Lf: 84% 15% 1%



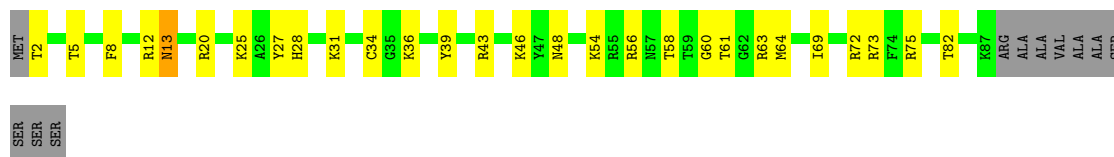
- Molecule 72: 60S ribosomal protein L34



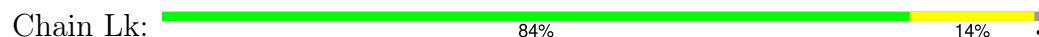
- Molecule 73: 60S ribosomal protein L36



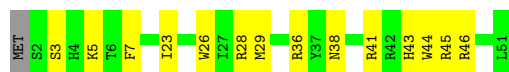
- Molecule 74: 60S ribosomal protein L37



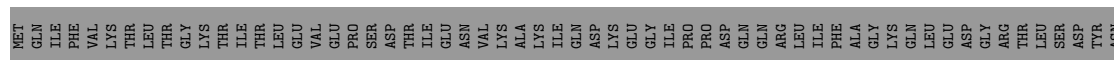
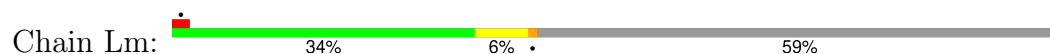
- Molecule 75: 60S ribosomal protein L38



- Molecule 76: 60S ribosomal protein L39

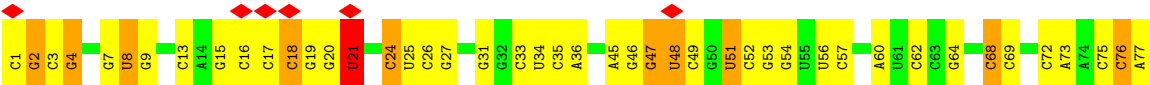


- Molecule 77: eL40



A76

● Molecule 84: RNA (77-MER)



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	9750	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING ONLY	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	79	Depositor
Minimum defocus (nm)	-500	Depositor
Maximum defocus (nm)	-1500	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	0.030	Depositor
Minimum map value	-0.008	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.001	Depositor
Recommended contour level	0.004	Depositor
Map size ($\text{\AA}$)	528.64, 528.64, 528.64	wwPDB
Map dimensions	640, 640, 640	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing ($\text{\AA}$)	0.82600003, 0.82600003, 0.82600003	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: UR3, 1MA, 5MC, K, PSU, MLZ, MG, G7M, A2M, 6MZ, B8N, 5CT, 4AC, HY3, SPD, OMC, AME, 4SU, 7MG, OMU, UY1, 3H3, SAC, OMG, ZN, PUT, ANM, HIC, MA6, M3L, H2U, V5N

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	S2	0.23	1/38205 (0.0%)	0.32	0/59545
2	L8	0.25	0/3613	0.31	0/5627
3	L5	0.27	0/84727	0.34	0/132180
4	L7	0.22	0/2862	0.29	0/4459
5	SB	0.22	0/1765	0.45	0/2362
6	SA	0.21	0/1778	0.44	0/2416
7	SD	0.21	0/1784	0.40	0/2403
8	SJ	0.23	0/1550	0.44	0/2069
9	SE	0.27	0/2118	0.45	0/2849
10	SC	0.23	0/1762	0.44	0/2381
11	SG	0.29	0/1946	0.57	0/2590
12	SF	0.19	0/1515	0.41	0/2037
13	SH	0.19	0/1540	0.45	0/2064
14	SW	0.26	0/1051	0.45	0/1406
15	SI	0.27	0/1715	0.49	0/2287
16	SQ	0.28	0/1141	0.55	0/1528
17	SU	0.14	0/813	0.34	0/1092
18	SK	0.51	0/834	0.77	0/1125
19	SO	0.38	0/1022	0.59	0/1372
20	SX	0.19	0/1096	0.37	0/1461
21	SM	0.20	0/950	0.48	0/1275
22	SS	0.27	0/1232	0.57	0/1651
23	Sd	0.27	0/465	0.50	0/618
24	SN	0.17	0/1242	0.35	0/1671
25	SL	0.19	0/1209	0.32	0/1616
26	SR	0.22	0/1098	0.52	0/1474
27	SP	0.21	0/1133	0.44	0/1515
28	ST	0.24	0/1131	0.40	0/1515
29	SV	0.16	0/635	0.38	0/850
30	SY	0.27	0/1083	0.55	0/1438
31	SZ	0.19	0/696	0.50	0/929

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
32	Sa	0.18	0/805	0.34	0/1079
33	Sb	0.14	0/664	0.34	0/891
34	Sc	0.18	0/519	0.38	0/694
35	Se	0.26	0/458	0.47	0/604
36	Sf	0.40	0/525	0.58	0/695
37	Sg	0.26	0/2493	0.44	0/3394
38	Lz	0.28	0/1742	0.55	0/2338
39	LA	0.35	0/1958	0.53	2/2623 (0.1%)
40	LB	0.28	0/3295	0.43	0/4406
41	LC	0.27	0/2981	0.45	0/4002
42	LJ	0.21	0/1381	0.40	0/1847
43	LH	0.23	0/1537	0.44	0/2066
44	LE	0.25	0/1821	0.40	0/2442
45	LG	0.19	0/1946	0.38	0/2620
46	LO	0.32	0/1673	0.51	0/2238
47	LL	0.27	0/1695	0.47	0/2270
48	LV	0.23	0/1002	0.39	0/1345
49	LM	0.23	0/1142	0.40	0/1527
50	La	0.28	0/1179	0.44	0/1573
51	LN	0.30	0/1745	0.50	0/2338
52	LI	0.24	0/1684	0.42	0/2247
53	LD	0.22	0/2437	0.42	2/3263 (0.1%)
54	LQ	0.30	0/1536	0.47	0/2052
55	LR	0.26	0/1582	0.45	0/2091
56	LS	0.27	0/1500	0.43	0/2013
57	LT	0.25	0/1325	0.40	0/1770
58	LP	0.24	0/1268	0.40	0/1701
59	LU	0.23	0/822	0.46	0/1103
60	LX	0.25	0/984	0.38	0/1323
61	LY	0.28	0/1132	0.50	0/1504
62	LW	0.32	0/964	0.48	0/1278
63	LZ	0.25	0/1129	0.48	0/1507
64	Lr	0.33	0/1011	0.51	0/1356
65	Lh	0.24	0/1023	0.40	0/1351
66	Lb	0.24	0/887	0.44	0/1171
67	LF	0.24	0/1905	0.43	0/2539
68	Lc	0.21	0/774	0.39	0/1038
69	Ld	0.21	0/903	0.36	0/1216
70	Le	0.32	0/1071	0.49	0/1429
71	Lf	0.25	0/895	0.40	0/1198
72	Lg	0.25	0/916	0.43	0/1220
73	Li	0.21	0/843	0.42	0/1115
74	Lj	0.37	0/720	0.61	0/952

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
75	Lk	0.18	0/575	0.35	0/761
76	Ll	0.32	0/454	0.56	0/599
77	Lm	0.33	0/425	0.51	0/564
78	Ln	0.37	0/231	0.59	0/294
79	Lo	0.31	0/854	0.49	0/1125
80	Lp	0.26	0/718	0.44	0/953
81	5A	0.29	0/1144	0.55	0/1539
82	mR	0.28	0/233	0.42	0/360
83	At	0.17	0/1677	0.29	0/2612
84	Pt	0.29	0/1721	0.33	0/2679
All	All	0.26	1/229615 (0.0%)	0.39	4/336720 (0.0%)

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	S2	172	OMU	O3'-P	5.07	1.61	1.56

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
39	LA	245[A]	ARG	CA-C-O	5.93	127.67	121.15
39	LA	245[B]	ARG	CA-C-O	5.93	127.67	121.15
53	LD	227	ILE	N-CA-C	-5.56	107.22	111.62
53	LD	226	TYR	N-CA-C	-5.45	106.61	113.20

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	S2	35978	0	18210	723	0
2	L8	3320	0	1686	60	0
3	L5	78479	0	39731	1198	0
4	L7	2562	0	1295	28	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
5	SB	1738	0	1809	52	0
6	SA	1750	0	1755	78	0
7	SD	1756	0	1852	43	0
8	SJ	1525	0	1640	40	0
9	SE	2076	0	2177	53	0
10	SC	1725	0	1813	34	0
11	SG	1923	0	2089	64	0
12	SF	1494	0	1549	33	0
13	SH	1517	0	1605	40	0
14	SW	1034	0	1080	25	0
15	SI	1686	0	1772	38	0
16	SQ	1123	0	1192	47	0
17	SU	803	0	873	27	0
18	SK	810	0	836	49	0
19	SO	1009	0	1034	40	0
20	SX	1088	0	1149	30	0
21	SM	940	0	965	28	0
22	SS	1214	0	1275	47	0
23	Sd	454	0	447	21	0
24	SN	1214	0	1301	36	0
25	SL	1189	0	1262	20	0
26	SR	1083	0	1137	36	0
27	SP	1110	0	1163	30	0
28	ST	1112	0	1146	36	0
29	SV	639	0	638	12	0
30	SY	1065	0	1142	49	0
31	SZ	688	0	766	17	0
32	Sa	792	0	842	11	0
33	Sb	650	0	672	17	0
34	Sc	517	0	549	7	0
35	Se	452	0	498	10	0
36	Sf	515	0	521	14	0
37	Sg	2436	0	2393	91	0
38	Lz	1714	0	1824	75	0
39	LA	1930	0	2028	44	0
40	LB	3240	0	3377	64	0
41	LC	2927	0	3104	49	0
42	LJ	1358	0	1396	30	0
43	LH	1518	0	1601	34	0
44	LE	1787	0	1945	38	0
45	LG	1913	0	2054	42	0
46	LO	1641	0	1788	33	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
47	LL	1664	0	1773	33	0
48	LV	988	0	1047	13	0
49	LM	1120	0	1187	25	0
50	La	1163	0	1206	27	0
51	LN	1700	0	1749	37	0
52	LI	1646	0	1694	33	0
53	LD	2391	0	2426	53	0
54	LQ	1512	0	1628	26	0
55	LR	1566	0	1729	26	0
56	LS	1460	0	1502	28	0
57	LT	1297	0	1366	26	0
58	LP	1242	0	1269	26	0
59	LU	808	0	831	15	0
60	LX	967	0	1040	19	0
61	LY	1115	0	1205	32	0
62	LW	950	0	999	26	0
63	LZ	1106	0	1182	31	0
64	Lr	1005	0	1072	22	0
65	Lh	1015	0	1148	12	0
66	Lb	885	0	967	24	0
67	LF	1870	0	1996	61	0
68	Lc	764	0	804	15	0
69	Ld	888	0	930	8	0
70	Le	1053	0	1147	21	0
71	Lf	876	0	911	14	0
72	Lg	906	0	998	14	0
73	Li	832	0	917	14	0
74	Lj	705	0	737	22	0
75	Lk	569	0	637	7	0
76	Ll	444	0	483	14	0
77	Lm	431	0	471	8	0
78	Ln	230	0	276	6	0
79	Lo	852	0	921	14	0
80	Lp	708	0	757	15	0
81	5A	1144	0	1141	45	0
82	mR	210	0	107	2	0
83	At	1624	0	829	37	0
84	Pt	1645	0	843	29	0
85	L5	18	0	36	0	0
85	S2	6	0	12	0	0
86	L5	13	0	0	0	0
86	LA	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
86	Lf	1	0	0	0	0
86	S2	1	0	0	0	0
87	5A	1	0	0	0	0
87	At	1	0	0	0	0
87	L5	231	0	0	0	0
87	L7	4	0	0	0	0
87	L8	6	0	0	0	0
87	LA	1	0	0	0	0
87	LB	1	0	0	0	0
87	LN	2	0	0	0	0
87	LP	1	0	0	0	0
87	LV	1	0	0	0	0
87	Le	1	0	0	0	0
87	Lg	1	0	0	0	0
87	Ln	1	0	0	0	0
87	Lo	1	0	0	0	0
87	Pt	2	0	0	0	0
87	S2	67	0	0	0	0
87	SC	1	0	0	0	0
87	SN	1	0	0	0	0
87	SS	1	0	0	0	0
87	Sa	1	0	0	0	0
88	L5	19	0	19	1	0
89	L5	50	0	95	2	0
90	L5	33	0	35	3	0
91	Lg	1	0	0	0	0
91	Lj	1	0	0	0	0
91	Lm	1	0	0	0	0
91	Lo	1	0	0	0	0
91	Lp	1	0	0	0	0
91	Sa	1	0	0	0	0
91	Sd	1	0	0	0	0
91	Sf	1	0	0	0	0
92	Pt	8	0	8	0	0
All	All	219329	0	163111	3901	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 10.

All (3901) 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)
11:SG:161:PRO:HA	11:SG:171:THR:HA	1.43	1.01
6:SA:159:ILE:HD11	29:SV:34:MET:HE1	1.50	0.93
16:SQ:86:GLN:HE21	16:SQ:118:THR:HG22	1.31	0.92
17:SU:46:LYS:HE3	17:SU:101:ILE:HD13	1.52	0.91
3:L5:3710:G:H1'	3:L5:3711:A:H2	1.33	0.91
38:Lz:82:ILE:HB	38:Lz:83:PRO:HD2	1.52	0.90
3:L5:4044:U:H2'	3:L5:4045:G:C8	2.08	0.88
3:L5:2008:U:H1'	3:L5:2011:C:H5	1.33	0.88
3:L5:2557:G:H1	3:L5:2570:U:H3	1.18	0.88
38:Lz:81:ASP:O	38:Lz:83:PRO:HD2	1.72	0.88
3:L5:4044:U:H2'	3:L5:4045:G:H8	1.39	0.88
3:L5:1699:A:H2'	3:L5:1700:G:C4	2.10	0.87
1:S2:180:G:H2'	1:S2:181:A:C8	2.10	0.87
3:L5:1976:G:H1	3:L5:1990:A:H61	1.24	0.86
61:LY:30:MET:HE1	61:LY:75:ARG:HA	1.57	0.86
19:SO:33:ILE:HD11	19:SO:97:LEU:HG	1.57	0.84
3:L5:4302:U:H4'	57:LT:5:LYS:HD2	1.60	0.83
3:L5:4252:C:H3'	3:L5:4253:A:H2'	1.61	0.83
10:SC:179:THR:HG22	10:SC:221:ASP:O	1.80	0.82
11:SG:161:PRO:CA	11:SG:171:THR:HA	2.09	0.82
38:Lz:35:GLN:HE21	38:Lz:205:TYR:HB2	1.45	0.82
1:S2:1678:A2M:H5''	1:S2:1678:A2M:H8	1.62	0.82
3:L5:1315:C:H5'	70:Le:23:HIS:HE1	1.45	0.81
27:SP:41:GLN:HG3	27:SP:84:ILE:HD13	1.60	0.81
7:SD:106:ARG:HG3	7:SD:175:VAL:HG22	1.62	0.81
11:SG:131:ARG:HB2	62:LW:82:ILE:HG23	1.63	0.80
1:S2:141:A:H4'	1:S2:142:C:H5'	1.62	0.80
61:LY:30:MET:HE2	61:LY:78:TYR:HA	1.63	0.80
16:SQ:97:GLN:HB3	16:SQ:105:LYS:HG3	1.61	0.80
26:SR:100:PRO:HA	26:SR:103:LYS:HD2	1.62	0.79
6:SA:85:ARG:HH12	6:SA:205:ARG:HE	1.30	0.79
3:L5:2838:G:H5'	40:LB:247:GLY:HA2	1.64	0.79
1:S2:1091:C:HO2'	14:SW:2:VAL:N	1.81	0.79
3:L5:690:C:H4'	64:Lr:85:ASN:HD22	1.47	0.79
40:LB:229:LYS:HG3	40:LB:272:LYS:HE2	1.64	0.79
3:L5:1826:G:H21	66:Lb:50:ASN:HD21	1.28	0.79
3:L5:4529:G:H21	83:At:76:A:H8	1.31	0.79
3:L5:3722:G:H2'	3:L5:3723:A2M:H8	1.64	0.78
8:SJ:32:ILE:HG13	8:SJ:37:LEU:HB2	1.65	0.78
58:LP:116:HIS:HB3	58:LP:149:ILE:HB	1.64	0.78
3:L5:2008:U:H1'	3:L5:2011:C:C5	2.16	0.78
3:L5:170:C:H4'	47:LL:135:LYS:HE3	1.64	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:1259:G:H2'	3:L5:1260:G:C8	2.19	0.77
66:Lb:40:LEU:O	66:Lb:44:ARG:HG3	1.84	0.77
17:SU:98:VAL:HA	17:SU:101:ILE:HD12	1.67	0.77
43:LH:1:MET:HE1	56:LS:140:PRO:HB2	1.64	0.77
26:SR:98:VAL:HG11	26:SR:117:LEU:HD12	1.66	0.77
1:S2:606:G:H5''	35:Se:56:ASN:HB3	1.67	0.77
8:SJ:6:SER:HB3	9:SE:23:LEU:HD21	1.67	0.77
6:SA:180:ARG:HE	6:SA:184:ARG:HH22	1.34	0.76
37:Sg:87:LEU:HB2	37:Sg:101:PHE:HB2	1.67	0.76
62:LW:46:PRO:HB2	62:LW:54:LEU:HD21	1.67	0.76
1:S2:1421:A:H4'	1:S2:1422:G:H5'	1.65	0.76
24:SN:40:LEU:HD12	24:SN:45:LEU:HD12	1.68	0.76
1:S2:1046:U:H1'	19:SO:140:THR:HB	1.68	0.76
3:L5:1700:G:H1'	3:L5:1704:C:H42	1.50	0.76
55:LR:70:ARG:HB3	55:LR:76:MET:HE3	1.68	0.76
68:Lc:12:GLU:HA	68:Lc:15:ASN:HD22	1.51	0.76
3:L5:3709:U:H2'	3:L5:3710:G:C4	2.21	0.75
3:L5:240:G:H5''	61:LY:28:LYS:HE2	1.67	0.75
3:L5:3713:U:H2'	3:L5:3714:G:H8	1.51	0.75
30:SY:37:LYS:HG2	30:SY:60:PHE:HE2	1.51	0.75
67:LF:182:TYR:HB3	67:LF:200:ARG:HG3	1.66	0.75
1:S2:867:OMG:H3'	1:S2:868:G:H21	1.50	0.75
1:S2:980:A:H2'	1:S2:981:A:C8	2.21	0.75
3:L5:4993:G:H1	3:L5:5058:A:H61	1.34	0.75
3:L5:2611:A:H5'	3:L5:2688:G:H4'	1.69	0.75
16:SQ:86:GLN:NE2	16:SQ:118:THR:HG22	2.01	0.75
51:LN:138:PHE:HA	51:LN:143:ARG:HD2	1.67	0.75
84:Pt:3:C:H2'	84:Pt:4:G:C8	2.22	0.74
37:Sg:178:ASN:HD22	37:Sg:181:ASN:H	1.33	0.74
1:S2:377:G:H5'	15:SI:98:LYS:HB3	1.70	0.74
12:SF:103:LEU:HD11	31:SZ:67:LEU:HG	1.69	0.74
3:L5:1268:G:O2'	3:L5:1269:G:H5'	1.86	0.74
37:Sg:212:LYS:HA	37:Sg:235:ILE:HG13	1.70	0.74
3:L5:3764:PSU:H2'	3:L5:3765:G:C8	2.22	0.73
3:L5:2469:C:H5	3:L5:2471:G:H1	1.36	0.73
3:L5:1258:G:H2'	3:L5:1259:G:C8	2.24	0.73
3:L5:1942:A:H2'	3:L5:1943:A:C8	2.22	0.73
3:L5:2876:OMG:HM22	3:L5:2877:G:H4'	1.70	0.73
1:S2:1478:U:H2'	1:S2:1479:G:C8	2.24	0.73
18:SK:3:MET:HE1	18:SK:48:ALA:HB2	1.71	0.73
1:S2:1127:C:H5''	33:Sb:17:ARG:HH21	1.52	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
68:Lc:104:ILE:HG23	68:Lc:105:ILE:HD12	1.70	0.72
58:LP:36:ILE:HA	58:LP:39:MET:HE3	1.70	0.72
3:L5:3960:A:H4'	3:L5:4044:U:H1'	1.70	0.72
57:LT:68:THR:HG22	57:LT:69:GLN:H	1.54	0.72
11:SG:10:THR:HG23	11:SG:12:CYS:H	1.54	0.72
5:SB:97:LEU:HB3	5:SB:232:HIS:HE1	1.55	0.72
41:LC:212:ASN:HD22	41:LC:255:SER:HB3	1.55	0.72
3:L5:3716:C:H3'	3:L5:3735:G:N2	2.05	0.72
6:SA:113:GLN:HE21	6:SA:115:ALA:H	1.38	0.72
22:SS:20:ILE:HD11	22:SS:33:ILE:HG13	1.72	0.72
84:Pt:48:U:H5''	84:Pt:49:C:H5'	1.71	0.71
3:L5:1971:C:C5	3:L5:2000:G:H2'	2.26	0.71
3:L5:4114:C:H2'	3:L5:4115:G:N3	2.05	0.71
44:LE:178:PRO:HD2	44:LE:181:LEU:HD12	1.72	0.71
1:S2:527:C:H2'	1:S2:528:A:H8	1.55	0.71
8:SJ:133:ARG:HG2	8:SJ:143:ASN:HB3	1.72	0.71
5:SB:103:MET:HG3	5:SB:215:VAL:HB	1.70	0.71
9:SE:94:LYS:HG3	30:SY:16:ARG:HH22	1.54	0.71
7:SD:141:LYS:HE2	7:SD:179:GLN:HG3	1.71	0.71
52:LI:55:ASP:HB2	52:LI:162:ARG:CG	2.19	0.71
3:L5:1298:C:H2'	3:L5:1299:G:C8	2.25	0.71
3:L5:2101:C:H3'	3:L5:2102:G:N2	2.05	0.71
7:SD:72:VAL:HG11	18:SK:70:TYR:HE1	1.54	0.71
3:L5:3723:A2M:H2'	3:L5:3724:A2M:H8	1.72	0.71
1:S2:551:U:H2'	1:S2:552:G:C8	2.26	0.71
3:L5:1771:U:H2'	3:L5:1772:C:C6	2.26	0.70
3:L5:2607:C:H5''	55:LR:96:MET:HE1	1.73	0.70
52:LI:55:ASP:HB2	52:LI:162:ARG:HG3	1.72	0.70
10:SC:167:ARG:HG3	10:SC:219:ILE:HD13	1.74	0.70
3:L5:4924:C:H2'	3:L5:4925:U:C6	2.26	0.70
47:LL:64:VAL:HA	47:LL:67:HIS:CD2	2.26	0.70
38:Lz:171:HIS:CE1	38:Lz:173:LYS:HE2	2.27	0.70
1:S2:1228:A:H2'	1:S2:1229:G:C8	2.27	0.70
43:LH:93:ARG:HG2	43:LH:182:SER:HB3	1.74	0.70
57:LT:49:GLN:HA	57:LT:52:MET:HE2	1.74	0.70
77:Lm:77:ILE:HG23	77:Lm:78:ILE:HD12	1.72	0.70
21:SM:79:VAL:HG11	21:SM:85:LEU:HB2	1.73	0.69
58:LP:16:LYS:HB3	58:LP:149:ILE:HD13	1.74	0.69
1:S2:130:G:H2'	1:S2:130:G:N3	2.08	0.69
1:S2:968:U:H1'	1:S2:972:A:H1'	1.72	0.69
3:L5:2390:G:H22	3:L5:2825:A:H2	1.40	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:4543:G:H2'	3:L5:4544:A:C8	2.27	0.69
3:L5:4769:G:H5''	46:LO:176:ARG:HD3	1.72	0.69
67:LF:67:THR:O	67:LF:71:MET:HG2	1.92	0.69
37:Sg:177:TRP:O	37:Sg:185:LYS:HG2	1.92	0.69
1:S2:1010:G:H2'	1:S2:1011:A:H8	1.55	0.69
20:SX:11:ARG:HB2	25:SL:103:GLU:HG3	1.74	0.69
1:S2:1010:G:H2'	1:S2:1011:A:C8	2.28	0.69
1:S2:1657:G:H1	1:S2:1667:U:H3	1.40	0.69
37:Sg:166:VAL:HG22	37:Sg:176:VAL:HG22	1.74	0.69
40:LB:378:ARG:HG2	62:LW:32:LEU:HD21	1.74	0.69
1:S2:190:G:H3'	15:SI:145:ILE:HD13	1.74	0.69
1:S2:836:G:H3'	1:S2:837:A:H4'	1.74	0.69
3:L5:344:A:H5'	74:Lj:75:ARG:HH21	1.58	0.69
61:LY:24:HIS:CE1	61:LY:25:ILE:HG12	2.28	0.69
3:L5:1339:U:H2'	3:L5:1340:OMC:C6	2.29	0.68
3:L5:4745:G:H1	3:L5:4955:A:H61	1.42	0.68
12:SF:125:SER:HB3	12:SF:136:ARG:HB3	1.75	0.68
21:SM:44:LYS:HZ2	21:SM:46:GLN:HG2	1.58	0.68
37:Sg:296:GLN:HG3	37:Sg:312:VAL:HG22	1.75	0.68
1:S2:1017:U:H5'	24:SN:55:ARG:HE	1.57	0.68
6:SA:30:LEU:HD21	6:SA:47:TYR:CZ	2.28	0.68
1:S2:525:A:H2'	1:S2:526:A:H8	1.57	0.68
53:LD:41:LYS:HD2	57:LT:93:ILE:HD13	1.74	0.68
3:L5:964:A:H2'	3:L5:965:G:H4'	1.76	0.68
3:L5:1250:C:H2'	3:L5:1251:C:C6	2.30	0.67
18:SK:5:LYS:H	18:SK:5:LYS:HD2	1.59	0.67
34:Sc:18:LEU:HD11	34:Sc:43:ILE:HD12	1.76	0.67
1:S2:1513:C:H2'	1:S2:1514:G:H8	1.59	0.67
9:SE:100:ARG:HH22	9:SE:122:LYS:HA	1.59	0.67
60:LX:91:GLU:HA	60:LX:147:LEU:HD21	1.76	0.67
1:S2:928:G:H2'	1:S2:929:G:C8	2.29	0.67
46:LO:118:MET:HE1	56:LS:169:THR:HG22	1.76	0.67
67:LF:213:LEU:HB3	67:LF:247:MET:HG2	1.75	0.67
3:L5:4039:G:H1'	3:L5:4040:C:H5	1.59	0.67
3:L5:4048:A:H5''	3:L5:4048:A:N3	2.09	0.67
3:L5:2414:G:H2'	3:L5:2415:OMU:H6	1.75	0.67
3:L5:3736:A:H2'	3:L5:3737:A:C8	2.29	0.67
13:SH:69:LEU:HD22	13:SH:96:ALA:HB2	1.76	0.67
55:LR:172:ARG:O	55:LR:175:GLU:HG3	1.95	0.67
1:S2:75:G:H2'	1:S2:76:U:O4'	1.94	0.67
1:S2:1217:A:H2'	1:S2:1218:C:C6	2.29	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:1269:G:H1'	3:L5:1440:U:O2'	1.95	0.67
3:L5:4046:A:H2'	3:L5:4047:A:O4'	1.95	0.67
17:SU:46:LYS:HE2	17:SU:48:LEU:HD22	1.77	0.67
1:S2:833:C:H2'	1:S2:834:C:O4'	1.95	0.67
22:SS:40:TYR:HE2	22:SS:71:MET:HG3	1.60	0.67
3:L5:2094:G:H2'	3:L5:2095:A:C8	2.30	0.66
37:Sg:31:ILE:HG21	37:Sg:299:PHE:HE2	1.61	0.66
74:Lj:48:ASN:HA	74:Lj:54:LYS:HE2	1.76	0.66
58:LP:94:MET:HE1	58:LP:146:ILE:HB	1.77	0.66
3:L5:4704:C:H4'	43:LH:129:ARG:HH22	1.60	0.66
38:Lz:94:ASN:HA	38:Lz:97:LYS:HB2	1.77	0.66
63:LZ:57:MET:HB3	63:LZ:61:LYS:HD2	1.76	0.66
1:S2:311:C:H5''	1:S2:312:G:H5''	1.77	0.66
2:L8:96:C:H5''	65:Lh:66:LYS:HD3	1.78	0.66
63:LZ:87:VAL:HG23	63:LZ:127:ASN:HD22	1.61	0.66
3:L5:1976:G:H1	3:L5:1990:A:N6	1.91	0.66
3:L5:3711:A:H2'	3:L5:3712:A:O4'	1.94	0.66
1:S2:943:U:H2'	1:S2:944:A:C8	2.30	0.66
1:S2:981:A:H2'	1:S2:982:G:C8	2.30	0.66
50:La:72:THR:HG22	50:La:110:LYS:HB3	1.78	0.66
3:L5:963:G:H5''	67:LF:32:ARG:HH21	1.61	0.66
3:L5:1942:A:H2'	3:L5:1943:A:H8	1.60	0.66
3:L5:4370:OMG:H5''	79:Lo:64:LYS:HG2	1.77	0.66
1:S2:434:G:H5''	15:SI:23:LYS:HE3	1.78	0.66
1:S2:1413:G:H2'	1:S2:1414:A:H8	1.61	0.66
41:LC:140:LYS:HE3	41:LC:245:HIS:HB2	1.77	0.66
1:S2:1829:G:H1'	1:S2:1850:MA6:H2	1.78	0.66
5:SB:83:LYS:HG2	5:SB:104:ASP:O	1.95	0.66
13:SH:29:GLU:HG3	13:SH:32:MET:HE2	1.78	0.66
28:ST:31:PRO:HD2	28:ST:34:VAL:HG22	1.78	0.66
67:LF:105:VAL:HG13	67:LF:136:VAL:HG12	1.76	0.66
1:S2:201:C:H3'	1:S2:202:G:H21	1.59	0.65
37:Sg:168:CYS:HB3	37:Sg:198:VAL:HG13	1.77	0.65
5:SB:142:PHE:HD2	5:SB:209:ASP:HB3	1.61	0.65
1:S2:562:U:H2'	1:S2:563:G:C8	2.31	0.65
3:L5:4258:C:H5'	42:LJ:68:ILE:HD11	1.78	0.65
3:L5:4926:C:H3'	3:L5:4927:G:N2	2.11	0.65
6:SA:181:GLU:HA	6:SA:184:ARG:HE	1.61	0.65
39:LA:117:GLU:HG2	39:LA:124:GLY:H	1.61	0.65
26:SR:27:ASP:HB3	26:SR:30:THR:HG22	1.77	0.65
3:L5:2744:A:H2'	3:L5:2745:A:C8	2.31	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:Lz:85:MET:SD	38:Lz:88:GLU:HB2	2.36	0.65
45:LG:154:LEU:HB3	45:LG:204:PHE:HB2	1.78	0.65
3:L5:1759:G:H1	3:L5:1773:U:H3	1.45	0.65
37:Sg:249:CYS:SG	37:Sg:291:TRP:NE1	2.69	0.65
3:L5:4734:A:H2'	3:L5:4735:G:C8	2.30	0.65
7:SD:172:VAL:HG22	7:SD:185:LYS:HG2	1.79	0.65
40:LB:261:ARG:HB2	46:LO:64:THR:HG21	1.79	0.65
55:LR:25:ASP:HB3	55:LR:28:GLU:HB2	1.79	0.65
3:L5:1998:A:C2	3:L5:2019:C:H1'	2.31	0.65
10:SC:166:ARG:HG2	10:SC:181:PRO:HG3	1.77	0.65
10:SC:224:THR:CG2	10:SC:225:SER:N	2.59	0.65
43:LH:1:MET:CE	56:LS:140:PRO:HB2	2.26	0.65
1:S2:1391:OMC:H4'	23:Sd:55:LEU:HD21	1.79	0.65
6:SA:195:TRP:CZ3	6:SA:197:VAL:HB	2.31	0.65
49:LM:37:LEU:HD21	56:LS:100:LEU:HD21	1.79	0.65
3:L5:171:U:H5'	47:LL:135:LYS:NZ	2.11	0.65
3:L5:2001:G:C4	3:L5:2003:G:H1'	2.32	0.65
3:L5:2362:U:H2'	3:L5:2363:A2M:H8	1.79	0.65
49:LM:40:GLY:HA3	49:LM:45:VAL:HB	1.79	0.65
1:S2:940:U:H3	1:S2:1002:U:H3	1.45	0.64
1:S2:1537:A:H5''	28:ST:84:ARG:HH22	1.62	0.64
3:L5:2084:C:H5''	3:L5:2085:G:H5''	1.78	0.64
3:L5:2351:OMC:HM22	3:L5:2352:U:H5'	1.77	0.64
3:L5:1207:C:H2'	3:L5:1208:G:H8	1.62	0.64
3:L5:1268:G:H2'	66:Lb:107:ARG:HH22	1.61	0.64
4:L7:49:A:H3'	53:LD:225:GLN:NE2	2.12	0.64
17:SU:24:LEU:HD22	17:SU:112:VAL:HG22	1.79	0.64
3:L5:1983:A:C2	3:L5:2010:A:H5''	2.32	0.64
3:L5:3708:C:O2'	3:L5:3709:U:H5'	1.97	0.64
3:L5:4138:C:H2'	3:L5:4139:G:C8	2.32	0.64
13:SH:130:LEU:HD21	13:SH:156:VAL:HG11	1.77	0.64
28:ST:31:PRO:O	28:ST:34:VAL:HG23	1.98	0.64
3:L5:2101:C:H3'	3:L5:2102:G:H21	1.62	0.64
37:Sg:146:SER:HA	37:Sg:177:TRP:HH2	1.61	0.64
37:Sg:199:THR:HG21	37:Sg:240:CYS:HA	1.78	0.64
38:Lz:82:ILE:HB	38:Lz:83:PRO:CD	2.23	0.64
68:Lc:57:LYS:O	68:Lc:61:GLU:HG3	1.96	0.64
1:S2:202:G:H2'	1:S2:203:G:O4'	1.97	0.64
3:L5:1325:C:C4	3:L5:3879:G:H5''	2.33	0.64
3:L5:2765:A:H2'	3:L5:2766:A:C8	2.33	0.64
8:SJ:82:VAL:HG11	8:SJ:92:MET:HE1	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:SG:181:THR:HG22	11:SG:183:ARG:H	1.63	0.64
22:SS:11:HIS:O	22:SS:12:ILE:HD13	1.96	0.64
30:SY:60:PHE:HD1	30:SY:71:GLY:HA3	1.62	0.64
1:S2:1536:G:H2'	1:S2:1537:A:H8	1.63	0.64
3:L5:1773:U:H2'	3:L5:1774:C:C6	2.33	0.64
1:S2:189:U:H2'	1:S2:190:G:C8	2.33	0.64
1:S2:1396:A:H2	1:S2:1449:G:H1	1.46	0.64
3:L5:3732:A:H2'	3:L5:3733:A:C8	2.33	0.64
5:SB:60:ASP:HA	5:SB:63:LYS:HG2	1.80	0.64
1:S2:948:C:H2'	1:S2:949:G:H8	1.63	0.64
3:L5:511:C:H5''	47:LL:165:LYS:HE2	1.78	0.64
3:L5:3717:A:H2'	3:L5:3718:A2M:H8	1.80	0.64
3:L5:4736:C:H2'	3:L5:4737:G:H8	1.63	0.64
1:S2:28:U:H2'	1:S2:29:G:H8	1.63	0.64
1:S2:1286:G:H1'	1:S2:1313:A:H61	1.63	0.64
1:S2:1740:C:H5''	15:SI:58:LEU:HD21	1.79	0.64
3:L5:2023:C:H2'	3:L5:2024:G:C4	2.33	0.64
3:L5:4925:U:H5'	3:L5:4926:C:H5'	1.80	0.64
54:LQ:27:LEU:HD23	54:LQ:30:LYS:HD2	1.80	0.64
81:5A:91:LEU:HD21	81:5A:94:ILE:HD11	1.79	0.64
17:SU:95:SER:HA	17:SU:98:VAL:HG22	1.81	0.63
20:SX:123:VAL:HG12	20:SX:124:LYS:HG3	1.80	0.63
40:LB:117:ARG:HA	40:LB:177:LYS:HD3	1.79	0.63
71:Lf:50:VAL:HG22	71:Lf:69:VAL:HG22	1.78	0.63
81:5A:59:VAL:HG22	81:5A:70:GLU:HG2	1.79	0.63
1:S2:210:U:H2'	1:S2:211:G:C8	2.33	0.63
3:L5:4274:A:H2'	3:L5:4275:G:C8	2.33	0.63
26:SR:11:LYS:HA	26:SR:14:ARG:HD2	1.80	0.63
28:ST:40:ALA:HB3	28:ST:43:LYS:HG2	1.79	0.63
37:Sg:45:LEU:HB3	37:Sg:47:ARG:HH11	1.62	0.63
1:S2:1189:A:H4'	20:SX:34:THR:HG21	1.80	0.63
1:S2:1743:G:H21	1:S2:1791:A:H62	1.46	0.63
3:L5:1298:C:H2'	3:L5:1299:G:H8	1.63	0.63
37:Sg:16:GLY:HA3	37:Sg:37:ASP:HB3	1.79	0.63
3:L5:184:U:H2'	3:L5:186:G:C8	2.33	0.63
3:L5:280:G:H5''	51:LN:14:LYS:HE2	1.78	0.63
3:L5:3710:G:H21	3:L5:3711:A:H61	1.44	0.63
3:L5:3960:A:H2'	3:L5:3961:G:C8	2.34	0.63
44:LE:41:LYS:HD3	44:LE:42:PRO:HD2	1.80	0.63
1:S2:570:C:H4'	30:SY:36:PRO:HG3	1.80	0.63
1:S2:1005:G:H2'	1:S2:1006:C:H6	1.61	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:478:G:H2'	3:L5:479:G:H8	1.64	0.63
3:L5:5021:C:H2'	3:L5:5022:U:H4'	1.79	0.63
22:SS:124:ARG:HB2	22:SS:131:VAL:HG12	1.81	0.63
3:L5:4594:U:H2'	3:L5:4595:G:H8	1.64	0.63
37:Sg:202:PRO:HG3	37:Sg:243:PRO:HA	1.79	0.63
3:L5:4452:U:O4'	88:L5:5301:ANM:H10	1.98	0.63
2:L8:144:U:H2'	2:L8:145:C:C6	2.33	0.63
38:Lz:116:LEU:HD22	38:Lz:137:LEU:HB2	1.81	0.63
3:L5:2745:A:H2'	3:L5:2746:A:C8	2.33	0.62
18:SK:20:VAL:HA	18:SK:69:TRP:O	1.98	0.62
26:SR:94:GLU:HG2	26:SR:95:ILE:HG12	1.81	0.62
60:LX:107:HIS:O	60:LX:111:GLN:HG3	1.98	0.62
63:LZ:47:ASP:OD1	63:LZ:69:LYS:HG2	1.99	0.62
3:L5:4260:U:H2'	3:L5:4261:C:C6	2.34	0.62
16:SQ:86:GLN:HE21	16:SQ:118:THR:CG2	2.08	0.62
52:LI:152:LEU:HB3	52:LI:165:ILE:HD12	1.81	0.62
65:Lh:6:ALA:O	65:Lh:10:ARG:HG2	1.99	0.62
1:S2:1382:A:H2'	1:S2:1383:A2M:H8	1.80	0.62
3:L5:1811:G:H21	66:Lb:57:MET:HE3	1.64	0.62
1:S2:1670:C:H2'	1:S2:1671:G:C8	2.34	0.62
3:L5:3604:A:H2'	3:L5:3605:C:C6	2.35	0.62
9:SE:181:CYS:HB3	9:SE:195:ILE:HD11	1.82	0.62
52:LI:87:ILE:HG12	52:LI:138:ILE:HG12	1.79	0.62
3:L5:3746:A:H5''	39:LA:244:GLY:HA3	1.82	0.62
6:SA:145:ILE:HG13	6:SA:159:ILE:HD13	1.80	0.62
16:SQ:86:GLN:NE2	16:SQ:118:THR:CG2	2.62	0.62
72:Lg:97:ILE:HG22	72:Lg:101:LYS:HE2	1.81	0.62
1:S2:962:A:H5''	19:SO:66:ARG:HG2	1.80	0.62
3:L5:1999:A:O2'	3:L5:2000:G:H5'	1.99	0.62
56:LS:19:THR:HG23	56:LS:22:CYS:H	1.65	0.62
83:At:9:A:H1'	83:At:45:U:H2'	1.81	0.62
3:L5:1272:C:C4	67:LF:30:ILE:HD11	2.34	0.62
3:L5:4611:A:H2'	3:L5:4612:C:H6	1.64	0.62
22:SS:3:LEU:HD21	31:SZ:50:PHE:HD2	1.63	0.62
1:S2:190:G:H3'	15:SI:145:ILE:CD1	2.30	0.62
3:L5:1241:C:H1'	66:Lb:119:CYS:HA	1.82	0.62
3:L5:3910:C:H2'	3:L5:3911:C:C6	2.34	0.62
7:SD:138:VAL:HG22	7:SD:184:ILE:HG22	1.80	0.62
68:Lc:48:LEU:HD21	68:Lc:60:ILE:HG21	1.81	0.62
73:Li:56:ARG:HH12	73:Li:60:LEU:HD21	1.65	0.62
81:5A:150:LYS:HD2	84:Pt:18:C:H42	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S2:321:C:H2'	1:S2:322:C:C6	2.33	0.62
3:L5:730:G:OP2	67:LF:76:ARG:HD2	2.00	0.62
3:L5:1193:C:H2'	3:L5:1194:G:H8	1.65	0.62
3:L5:1377:G:H21	3:L5:1380:G:H5'	1.65	0.62
3:L5:1914:C:H4'	46:LO:89:PRO:HD3	1.82	0.62
4:L7:23:A:H2'	4:L7:24:C:C6	2.35	0.62
19:SO:90:ILE:HD12	19:SO:93:LEU:HD21	1.81	0.62
25:SL:75:GLY:HA3	25:SL:88:ILE:HD12	1.81	0.62
55:LR:165:LYS:O	55:LR:168:GLU:HG3	1.99	0.62
3:L5:4591:U:H2'	3:L5:4592:C:C6	2.35	0.61
1:S2:838:G:H3'	1:S2:839:C:H5''	1.81	0.61
3:L5:4537:C:H2'	3:L5:4538:G:C8	2.35	0.61
3:L5:4993:G:H1	3:L5:5058:A:N6	1.98	0.61
4:L7:117:G:H5'	53:LD:256:LYS:HD2	1.82	0.61
21:SM:76:LEU:HD21	21:SM:78:LYS:HE3	1.82	0.61
1:S2:477:G:H1'	1:S2:488:U:O2	2.00	0.61
1:S2:1228:A:H2'	1:S2:1229:G:H8	1.66	0.61
3:L5:711:A:H2'	3:L5:712:C:C6	2.34	0.61
3:L5:3964:U:H3	3:L5:4048:A:H8	1.48	0.61
61:LY:66:GLN:HB3	61:LY:84:ARG:HH22	1.66	0.61
1:S2:1234:C:H41	22:SS:137:LYS:HE3	1.65	0.61
1:S2:1536:G:H2'	1:S2:1537:A:C8	2.36	0.61
3:L5:74:G:H5'	47:LL:59:VAL:HB	1.82	0.61
3:L5:1698:C:H2'	3:L5:1699:A:C4	2.35	0.61
3:L5:3917:A:H2'	3:L5:3918:G:H8	1.66	0.61
5:SB:35:ALA:HB2	5:SB:44:ILE:HD11	1.82	0.61
26:SR:31:ASN:HD22	26:SR:55:THR:HG22	1.65	0.61
32:Sa:59:PHE:HB2	32:Sa:62:TYR:HB2	1.83	0.61
3:L5:2090:U:H4'	3:L5:2091:C:H3'	1.82	0.61
3:L5:3710:G:H1'	3:L5:3711:A:C2	2.25	0.61
37:Sg:174:VAL:HB	37:Sg:188:HIS:HB2	1.81	0.61
38:Lz:155:ILE:HG23	38:Lz:167:VAL:HG11	1.83	0.61
9:SE:183:VAL:HG11	9:SE:188:ASN:HB2	1.83	0.61
27:SP:33:LEU:HD12	27:SP:36:LEU:HD21	1.83	0.61
43:LH:5:LEU:HD11	43:LH:58:ASP:HB2	1.83	0.61
43:LH:95:VAL:HG12	77:Lm:82:LEU:HD12	1.83	0.61
3:L5:3758:PSU:H2'	3:L5:3765:G:N2	2.15	0.61
3:L5:4924:C:H2'	3:L5:4925:U:H6	1.65	0.61
30:SY:15:ASN:HB3	30:SY:18:LEU:HB2	1.82	0.61
38:Lz:66:CYS:HA	38:Lz:109:ALA:O	2.01	0.61
81:5A:118:ASP:O	81:5A:121:LYS:HG3	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S2:367:U:H4'	1:S2:371:A:C8	2.36	0.61
3:L5:2796:G:H5'	76:Ll:45:ARG:NH2	2.16	0.61
3:L5:3964:U:H2'	3:L5:3966:A:OP1	2.00	0.61
11:SG:7:PHE:CZ	11:SG:9:ALA:HB3	2.35	0.61
18:SK:84:HIS:HB3	21:SM:27:ILE:HG23	1.83	0.61
1:S2:191:A:H61	1:S2:208:G:H1'	1.66	0.61
1:S2:1478:U:H2'	1:S2:1479:G:H8	1.64	0.61
3:L5:93:G:H2'	3:L5:94:A:C8	2.35	0.61
3:L5:3710:G:H5''	3:L5:3710:G:H8	1.66	0.61
16:SQ:28:GLY:HA3	16:SQ:67:ASP:HB2	1.83	0.61
43:LH:18:ILE:HG12	43:LH:27:VAL:HG22	1.83	0.61
64:Lr:119:ARG:HH12	70:Le:119:ALA:HB2	1.65	0.61
1:S2:874:G:H2'	1:S2:875:A:H8	1.65	0.61
3:L5:411:G:H4'	3:L5:412:G:H5''	1.83	0.61
3:L5:963:G:H21	67:LF:32:ARG:CZ	2.14	0.61
3:L5:1396:G:HO2'	3:L5:1468:C:HO2'	1.48	0.61
3:L5:1730:U:H4'	57:LT:100:LYS:HB3	1.83	0.61
3:L5:4113:U:H3'	3:L5:4114:C:C6	2.36	0.61
3:L5:4430:G:H1'	52:LI:158:LYS:HD2	1.81	0.61
11:SG:200:LYS:HA	11:SG:203:LYS:HE3	1.83	0.61
66:Lb:117:ARG:HG3	66:Lb:118:LEU:HD23	1.82	0.61
1:S2:867:OMG:H3'	1:S2:868:G:N2	2.16	0.60
3:L5:408:A:H4'	3:L5:409:G:O5'	2.01	0.60
3:L5:4207:C:H3'	57:LT:4:THR:HG21	1.83	0.60
27:SP:136:THR:HG22	27:SP:138:SER:H	1.65	0.60
53:LD:265:ARG:HH12	53:LD:269:PRO:HD3	1.65	0.60
1:S2:1199:A:H5''	32:Sa:2:THR:HB	1.82	0.60
1:S2:1293:A:H1'	36:Sf:138:ARG:NE	2.15	0.60
2:L8:9:A:H2'	2:L8:10:G:H8	1.65	0.60
3:L5:1971:C:C6	3:L5:2000:G:H2'	2.36	0.60
4:L7:22:A:H2'	4:L7:23:A:C8	2.36	0.60
16:SQ:53:GLU:HG2	16:SQ:54:PRO:HD3	1.84	0.60
22:SS:22:GLY:HA2	22:SS:56:ALA:HB3	1.83	0.60
37:Sg:178:ASN:HB3	37:Sg:182:CYS:H	1.65	0.60
74:Lj:46:LYS:HD3	74:Lj:54:LYS:HD3	1.83	0.60
3:L5:1753:G:H21	53:LD:3:PHE:HD2	1.50	0.60
6:SA:51:LEU:HD23	26:SR:105:MET:HE1	1.84	0.60
37:Sg:26:GLN:HG2	37:Sg:27:PHE:CD2	2.36	0.60
38:Lz:138:LEU:HB3	38:Lz:148:VAL:HG21	1.83	0.60
44:LE:91:THR:HG21	44:LE:106:VAL:HG13	1.83	0.60
3:L5:179:G:N2	3:L5:258:G:H1'	2.16	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:SD:8:LYS:HG2	17:SU:61:LEU:HD11	1.83	0.60
8:SJ:114:VAL:HG13	8:SJ:119:LEU:HB2	1.82	0.60
11:SG:198:ARG:O	11:SG:201:LYS:HG3	2.01	0.60
33:Sb:33:MET:HE3	33:Sb:48:SER:HA	1.84	0.60
1:S2:1401:A:H4'	17:SU:52:GLY:HA3	1.83	0.60
3:L5:1577:G:O2'	3:L5:1612:G:H4'	1.99	0.60
3:L5:1766:A:H1'	3:L5:1768:C:H1'	1.84	0.60
3:L5:3641:U:H5	3:L5:3646:A:N7	1.99	0.60
3:L5:4437:U:H5'	3:L5:4516:G:H5''	1.82	0.60
11:SG:50:VAL:HG12	11:SG:113:ILE:HD13	1.83	0.60
12:SF:40:ALA:HB3	12:SF:67:PRO:HA	1.84	0.60
19:SO:135:ILE:HD12	19:SO:136:PRO:HD2	1.82	0.60
28:ST:140:ALA:HA	28:ST:143:LYS:HE3	1.83	0.60
37:Sg:168:CYS:HB3	37:Sg:198:VAL:CG1	2.32	0.60
37:Sg:296:GLN:HG3	37:Sg:312:VAL:CG2	2.30	0.60
1:S2:492:C:H6	30:SY:104:ARG:HH12	1.49	0.60
1:S2:943:U:H2'	1:S2:944:A:H8	1.67	0.60
36:Sf:135:HIS:CE1	36:Sf:138:ARG:HH12	2.20	0.60
1:S2:74:G:H3'	1:S2:75:G:C8	2.36	0.60
3:L5:498:C:H42	3:L5:656:C:H42	1.49	0.60
15:SI:133:GLU:HA	15:SI:136:ILE:HG12	1.82	0.60
1:S2:73:C:H4'	1:S2:74:G:C4	2.37	0.60
1:S2:1293:A:H1'	36:Sf:138:ARG:HE	1.67	0.60
3:L5:1269:G:H2'	3:L5:1270:A:O4'	2.02	0.60
3:L5:4274:A:H2'	3:L5:4275:G:H8	1.67	0.60
3:L5:4618:OMG:H5''	48:LV:15:ARG:HB2	1.84	0.60
9:SE:36:HIS:CD2	9:SE:85:GLY:HA3	2.37	0.60
63:LZ:6:LYS:HA	63:LZ:28:ASN:HD22	1.67	0.60
70:Le:22:ARG:O	70:Le:25:SER:HB3	2.01	0.60
1:S2:640:A:H2'	1:S2:641:A:C8	2.37	0.60
5:SB:137:LEU:HG	5:SB:215:VAL:HG22	1.83	0.60
19:SO:117:ARG:HH21	32:Sa:49:ALA:HB2	1.66	0.60
22:SS:5:ILE:HD12	22:SS:6:PRO:HD2	1.84	0.60
32:Sa:74:CYS:SG	32:Sa:77:CYS:HB2	2.41	0.60
41:LC:317:ASN:HB3	41:LC:320:LYS:HG2	1.82	0.60
67:LF:220:MET:HB3	67:LF:232:ASP:OD2	2.02	0.60
83:At:18:G:H21	83:At:58:A:H5'	1.65	0.60
5:SB:84:PHE:HB3	5:SB:86:LEU:HD23	1.84	0.60
63:LZ:12:LEU:HB2	63:LZ:81:MET:HB3	1.82	0.60
68:Lc:47:ILE:HD12	68:Lc:94:LEU:HD11	1.83	0.60
84:Pt:51:U:H2'	84:Pt:52:C:C6	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S2:67:C:H41	11:SG:164:LYS:H	1.49	0.59
3:L5:152:U:P	51:LN:49:ARG:HH12	2.25	0.59
69:Ld:24:GLU:HG2	69:Ld:87:ARG:HG2	1.84	0.59
3:L5:6:C:H5'	45:LG:197:LYS:HG2	1.84	0.59
3:L5:504:G:H2'	3:L5:505:G:H8	1.67	0.59
13:SH:158:LEU:HD11	13:SH:187:PHE:HD2	1.67	0.59
17:SU:20:ILE:HG22	17:SU:116:ILE:HA	1.84	0.59
31:SZ:81:GLY:O	31:SZ:85:ARG:HG2	2.02	0.59
39:LA:156:LYS:HE2	39:LA:158:ILE:HG22	1.84	0.59
69:Ld:36:VAL:HG21	69:Ld:44:ARG:HG2	1.83	0.59
75:Lk:32:VAL:HG11	75:Lk:53:ALA:HB2	1.84	0.59
3:L5:1188:C:H2'	3:L5:1189:G:H8	1.67	0.59
3:L5:1662:C:H2'	3:L5:1663:C:C6	2.38	0.59
3:L5:4394:A:HO2'	66:Lb:2:ALA:N	2.00	0.59
3:L5:4507:A:HO2'	48:LV:41:SER:HG	1.51	0.59
8:SJ:164:PRO:HB3	8:SJ:170:PRO:HA	1.85	0.59
13:SH:147:LYS:NZ	13:SH:153:LEU:HG	2.17	0.59
63:LZ:103:ASP:HB3	63:LZ:106:LEU:HD13	1.84	0.59
22:SS:98:VAL:HG11	22:SS:106:LYS:HG3	1.84	0.59
48:LV:33:GLY:HA3	48:LV:69:LYS:HE2	1.82	0.59
56:LS:29:ARG:HB2	57:LT:148:PRO:HB2	1.85	0.59
1:S2:111:A:H2'	1:S2:112:U:C6	2.37	0.59
1:S2:527:C:H4'	8:SJ:121:LYS:HE2	1.83	0.59
1:S2:1217:A:H2'	1:S2:1218:C:H6	1.66	0.59
24:SN:84:LEU:HD11	24:SN:88:LEU:HD22	1.84	0.59
64:Lr:117:ILE:O	64:Lr:121:GLN:HG3	2.02	0.59
67:LF:243:LEU:HD11	67:LF:247:MET:HE3	1.84	0.59
3:L5:3716:C:H3'	3:L5:3735:G:H22	1.67	0.59
3:L5:3944:OMG:HN1	3:L5:4069:U:H3	1.51	0.59
18:SK:14:LEU:HA	18:SK:17:LYS:NZ	2.17	0.59
18:SK:86:PRO:C	18:SK:88:GLU:H	2.11	0.59
1:S2:107:A:H2'	1:S2:108:G:C8	2.38	0.59
1:S2:1313:A:H5'	18:SK:5:LYS:HZ2	1.66	0.59
3:L5:669:C:H5'	64:Lr:68:SER:HB2	1.85	0.59
3:L5:2520:C:H2'	3:L5:2521:G:H8	1.68	0.59
19:SO:98:ARG:HB3	19:SO:132:VAL:HG23	1.83	0.59
45:LG:103:ARG:HH21	45:LG:195:HIS:CD2	2.20	0.59
76:Ll:44:TRP:CZ3	76:Ll:45:ARG:HD3	2.37	0.59
1:S2:1005:G:H2'	1:S2:1006:C:C6	2.38	0.59
1:S2:1714:U:H2'	1:S2:1715:A:C8	2.38	0.59
3:L5:1773:U:H2'	3:L5:1774:C:H6	1.68	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:2765:A:H2'	3:L5:2766:A:H8	1.67	0.59
3:L5:3718:A2M:H2	3:L5:3934:G:O4'	2.03	0.59
10:SC:167:ARG:HG3	10:SC:219:ILE:CD1	2.32	0.59
12:SF:48:TYR:HE2	16:SQ:56:LEU:HD11	1.66	0.59
13:SH:51:ILE:HD11	13:SH:176:VAL:HG12	1.85	0.59
47:LL:125:ILE:HA	47:LL:138:ASP:OD2	2.03	0.59
76:L1:23:ILE:HG23	76:L1:38:ASN:HB2	1.85	0.59
1:S2:1562:C:H2'	1:S2:1563:G:H8	1.68	0.59
3:L5:396:A:H2'	3:L5:397:G:C8	2.37	0.59
3:L5:1590:C:H5''	3:L5:1591:U:O5'	2.03	0.59
59:LU:63:ILE:HG13	59:LU:72:VAL:HG22	1.83	0.59
1:S2:1558:C:H2'	1:S2:1559:C:C6	2.37	0.58
3:L5:1307:A:H2'	3:L5:1308:C:C6	2.37	0.58
3:L5:3642:A:HO2'	74:Lj:2:THR:N	2.01	0.58
6:SA:184:ARG:HD2	6:SA:191:ARG:HG2	1.84	0.58
22:SS:38:ARG:HB3	28:ST:45:LEU:HD21	1.85	0.58
57:LT:4:THR:HG22	57:LT:6:GLY:H	1.68	0.58
83:At:51:U:H3	83:At:63:G:H1	1.50	0.58
1:S2:329:G:H5'	1:S2:329:G:H8	1.67	0.58
24:SN:15:ALA:HA	33:Sb:26:GLN:HE21	1.67	0.58
38:Lz:39:LYS:HG2	38:Lz:202:ARG:HB3	1.85	0.58
67:LF:223:LYS:HA	67:LF:232:ASP:HB2	1.85	0.58
84:Pt:2:G:H2'	84:Pt:3:C:C6	2.38	0.58
6:SA:189:ILE:HG21	6:SA:195:TRP:HD1	1.67	0.58
17:SU:95:SER:O	17:SU:99:LYS:HG2	2.03	0.58
30:SY:102:THR:HG23	30:SY:107:ARG:HD3	1.84	0.58
1:S2:102:A:H4'	1:S2:104:A:C8	2.39	0.58
1:S2:958:G:H2'	1:S2:959:G:C8	2.38	0.58
3:L5:218:A:H3'	3:L5:219:G:H21	1.69	0.58
3:L5:1765:A:H2'	3:L5:1766:A:C8	2.39	0.58
3:L5:1846:G:H2'	3:L5:1847:C:C6	2.38	0.58
3:L5:3921:U:H4'	3:L5:4542:U:O2	2.03	0.58
30:SY:15:ASN:H	30:SY:21:LYS:HA	1.67	0.58
31:SZ:50:PHE:HB3	31:SZ:54:THR:OG1	2.04	0.58
39:LA:117:GLU:HG2	39:LA:124:GLY:N	2.18	0.58
40:LB:168:MET:HE2	40:LB:175:GLN:HG2	1.86	0.58
41:LC:295:SER:O	41:LC:299:GLN:HG2	2.04	0.58
43:LH:103:VAL:HG11	43:LH:144:LEU:HD11	1.85	0.58
1:S2:388:U:H2'	1:S2:389:A:C8	2.39	0.58
3:L5:1258:G:H2'	3:L5:1259:G:H8	1.69	0.58
3:L5:1479:G:H21	47:LL:184:MET:HE1	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:LZ:46:ILE:HG12	63:LZ:68:ILE:HD11	1.86	0.58
1:S2:979:C:O2'	1:S2:980:A:H5'	2.02	0.58
1:S2:1720:U:HO2'	3:L5:3796:U:HO2'	1.51	0.58
3:L5:4991:U:H2'	3:L5:4992:G:H8	1.68	0.58
5:SB:185:VAL:O	5:SB:189:ILE:HG12	2.03	0.58
14:SW:87:GLU:HA	14:SW:90:GLN:HG3	1.86	0.58
40:LB:92:TYR:HB3	40:LB:99:LEU:HD22	1.84	0.58
45:LG:125:LYS:HG3	45:LG:126:GLY:H	1.68	0.58
1:S2:527:C:H2'	1:S2:528:A:C8	2.39	0.58
3:L5:396:A:N6	58:LP:93:HIS:NE2	2.50	0.58
3:L5:4085:A:H3'	60:LX:44:PRO:HB2	1.86	0.58
28:ST:31:PRO:HG2	28:ST:34:VAL:HG22	1.86	0.58
1:S2:388:U:H2'	1:S2:389:A:H8	1.68	0.58
1:S2:1127:C:H5''	33:Sb:17:ARG:NH2	2.17	0.58
1:S2:1195:A:H2'	1:S2:1196:A:C8	2.39	0.58
3:L5:495:C:N4	3:L5:660:A:H61	2.02	0.58
3:L5:4252:C:N4	42:LJ:25:CYS:HB3	2.18	0.58
5:SB:192:SER:HA	5:SB:195:LYS:HE2	1.84	0.58
7:SD:67:ARG:HB3	18:SK:93:THR:HG22	1.84	0.58
38:Lz:37:SER:HB3	38:Lz:203:ALA:HB3	1.83	0.58
38:Lz:90:LEU:HG	38:Lz:123:ILE:HG21	1.85	0.58
1:S2:562:U:H2'	1:S2:563:G:H8	1.67	0.58
1:S2:1415:C:H4'	28:ST:129:ARG:HB2	1.86	0.58
18:SK:3:MET:HE2	18:SK:44:HIS:HB3	1.85	0.58
42:LJ:12:MET:HE3	42:LJ:137:PRO:HB2	1.86	0.58
83:At:21:A:N6	83:At:46:7MG:H2'	2.18	0.58
1:S2:209:A:H2'	1:S2:210:U:H5'	1.85	0.57
1:S2:980:A:H2'	1:S2:981:A:H8	1.69	0.57
7:SD:177:LEU:HD12	7:SD:182:LEU:HD13	1.85	0.57
18:SK:13:GLU:HG2	18:SK:83:LEU:HD23	1.86	0.57
21:SM:26:LEU:HA	21:SM:30:GLY:HA2	1.86	0.57
23:Sd:15:GLY:H	23:Sd:19:ARG:HH12	1.50	0.57
37:Sg:152:SER:HB3	37:Sg:168:CYS:SG	2.44	0.57
42:LJ:65:ASN:HD21	79:Lo:101:GLY:HA2	1.68	0.57
1:S2:486:A:H1'	1:S2:513:G:H22	1.69	0.57
1:S2:512:A2M:H4'	1:S2:576:A2M:H2	1.86	0.57
3:L5:4970:C:H5''	58:LP:71:ALA:HB1	1.85	0.57
22:SS:14:ARG:HH21	42:LJ:114:ASP:HB3	1.67	0.57
23:Sd:19:ARG:HB3	23:Sd:30:LEU:HD23	1.86	0.57
43:LH:113:GLU:HG2	43:LH:125:ARG:HG2	1.85	0.57
45:LG:58:PRO:HD2	45:LG:61:ILE:HD12	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:LV:87:SER:HB2	62:LW:19:ARG:HH21	1.68	0.57
64:Lr:49:VAL:HG11	64:Lr:97:ILE:HD11	1.86	0.57
1:S2:187:G:H1	1:S2:212:C:H42	1.52	0.57
1:S2:1442:OMU:HM22	1:S2:1443:C:O4'	2.03	0.57
3:L5:180:C:H2'	3:L5:181:C:C1'	2.34	0.57
3:L5:1824:G:H5''	57:LT:35:LYS:HE2	1.86	0.57
6:SA:205:ARG:HB3	6:SA:209:GLU:OE2	2.03	0.57
11:SG:1:MET:HG2	11:SG:24:LEU:HD21	1.86	0.57
17:SU:42:GLY:O	17:SU:46:LYS:HG2	2.03	0.57
61:LY:57:VAL:HA	61:LY:104:VAL:HG12	1.86	0.57
1:S2:1098:C:H2'	1:S2:1099:G:C8	2.40	0.57
3:L5:344:A:H5'	74:Lj:75:ARG:NH2	2.19	0.57
3:L5:3971:G:H21	3:L5:4050:A:H2	1.53	0.57
3:L5:4478:G:N2	3:L5:4608:G:O2'	2.38	0.57
5:SB:52:THR:HG23	5:SB:57:ILE:HA	1.86	0.57
22:SS:111:LEU:HB3	22:SS:115:LYS:NZ	2.18	0.57
30:SY:58:PHE:HZ	30:SY:74:MET:HE3	1.68	0.57
1:S2:546:G:H2'	1:S2:547:G:C8	2.39	0.57
3:L5:260:C:H2'	3:L5:261:G:H8	1.70	0.57
3:L5:2009:A:H3'	3:L5:2010:A:H8	1.68	0.57
3:L5:4138:C:H2'	3:L5:4139:G:H8	1.69	0.57
79:Lo:12:CYS:SG	79:Lo:15:CYS:HB2	2.44	0.57
1:S2:1440:C:H2'	1:S2:1441:U:C6	2.40	0.57
3:L5:2263:A:H5''	64:Lr:108:MET:HG3	1.86	0.57
3:L5:3917:A:H2'	3:L5:3918:G:C8	2.39	0.57
16:SQ:116:ASP:HB3	16:SQ:119:LEU:HD23	1.85	0.57
19:SO:34:PHE:HB3	19:SO:41:PHE:HB2	1.87	0.57
1:S2:199:C:H5''	1:S2:200:G:C8	2.40	0.57
1:S2:924:G:H5'	24:SN:4:MET:HE3	1.87	0.57
3:L5:504:G:H2'	3:L5:505:G:C8	2.39	0.57
3:L5:1857:C:H2'	3:L5:1858:A:H8	1.69	0.57
3:L5:2543:A:H2	3:L5:2773:G:H1	1.52	0.57
11:SG:10:THR:HG23	11:SG:12:CYS:N	2.18	0.57
40:LB:216:MET:HE2	40:LB:283:LYS:HB2	1.86	0.57
67:LF:29:LYS:HG3	67:LF:32:ARG:CZ	2.34	0.57
81:5A:110:GLU:HG3	81:5A:110:GLU:O	2.04	0.57
1:S2:67:C:H41	11:SG:164:LYS:N	2.02	0.57
11:SG:2:LYS:HB2	11:SG:108:VAL:HG22	1.87	0.57
43:LH:45:LEU:HD22	43:LH:57:VAL:HG22	1.87	0.57
50:La:85:GLN:HA	50:La:88:VAL:HG22	1.86	0.57
56:LS:15:ARG:HB3	56:LS:27:LEU:HD23	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:Lf:49:TYR:HD2	71:Lf:70:ILE:HD12	1.68	0.57
1:S2:96:C:H2'	1:S2:97:U:C6	2.40	0.57
9:SE:11:ARG:HA	9:SE:28:ALA:HB2	1.86	0.57
19:SO:27:VAL:O	19:SO:91:THR:OG1	2.21	0.57
37:Sg:20:GLN:HB3	37:Sg:34:ALA:HB3	1.87	0.57
45:LG:32:PHE:HE1	63:LZ:53:VAL:HG12	1.69	0.57
63:LZ:120:GLU:O	63:LZ:124:THR:HG23	2.05	0.57
3:L5:3956:G:H1	3:L5:3961:G:N2	2.02	0.57
18:SK:67:PHE:HB3	18:SK:69:TRP:NE1	2.19	0.57
21:SM:23:LYS:O	21:SM:27:ILE:HG12	2.04	0.57
28:ST:126:GLN:HB2	28:ST:129:ARG:HH21	1.69	0.57
81:5A:64:PHE:HE2	81:5A:143:GLU:HG2	1.70	0.57
81:5A:119:LEU:HD13	81:5A:122:GLU:HB2	1.85	0.57
3:L5:1359:G:H4'	51:LN:203:TYR:HB2	1.87	0.56
3:L5:1759:G:H2'	3:L5:1760:G:H8	1.70	0.56
3:L5:4918:C:H2'	3:L5:4919:G:C8	2.39	0.56
10:SC:166:ARG:O	10:SC:181:PRO:HD3	2.05	0.56
14:SW:31:SER:HB3	14:SW:34:ILE:HG12	1.86	0.56
19:SO:82:ALA:O	19:SO:86:LYS:HG2	2.05	0.56
27:SP:30:TYR:HA	27:SP:33:LEU:HB3	1.87	0.56
37:Sg:59:LEU:HD21	37:Sg:90:TRP:CG	2.40	0.56
38:Lz:62:LYS:HD2	38:Lz:63:PHE:N	2.19	0.56
75:Lk:33:LYS:HG2	75:Lk:46:VAL:HG22	1.87	0.56
81:5A:82:PRO:HB3	81:5A:141:MET:HE2	1.86	0.56
1:S2:189:U:H3	1:S2:210:U:H3	1.51	0.56
3:L5:1198:G:H2'	3:L5:1200:G:H8	1.71	0.56
22:SS:42:HIS:O	22:SS:46:ARG:HG2	2.05	0.56
28:ST:96:SER:HB3	28:ST:99:VAL:HG12	1.87	0.56
1:S2:441:C:H2'	1:S2:442:C:C6	2.40	0.56
1:S2:996:A:H2'	1:S2:997:A:C8	2.39	0.56
1:S2:1442:OMU:HM21	16:SQ:13:PHE:HB3	1.87	0.56
1:S2:1672:U:H2'	1:S2:1673:U:C6	2.40	0.56
2:L8:40:A:H2'	2:L8:41:A:C8	2.41	0.56
3:L5:3664:G:H2'	3:L5:3665:G:H8	1.69	0.56
3:L5:4260:U:H2'	3:L5:4261:C:H6	1.70	0.56
3:L5:4385:A:C4	81:5A:50:5CT:H13	2.39	0.56
3:L5:4992:G:H2'	3:L5:4993:G:C8	2.40	0.56
37:Sg:74:ASP:CG	37:Sg:76:GLN:H	2.14	0.56
37:Sg:149:GLU:OE1	37:Sg:170:TRP:HB2	2.06	0.56
1:S2:1337:4AC:H2'	1:S2:1338:G:C8	2.41	0.56
1:S2:1854:U:H2'	1:S2:1855:G:H8	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:1270:A:C5	3:L5:2107:C:H1'	2.40	0.56
3:L5:3861:A:H2'	3:L5:3862:A:C8	2.40	0.56
3:L5:3880:G:H2'	3:L5:3881:G:C8	2.40	0.56
13:SH:46:THR:HG23	13:SH:65:PRO:HD3	1.86	0.56
22:SS:117:ILE:HD11	27:SP:111:MET:SD	2.45	0.56
39:LA:104:VAL:HG12	39:LA:146:THR:HG21	1.87	0.56
51:LN:120:TRP:HE1	51:LN:123:GLU:HG3	1.71	0.56
53:LD:64:ILE:HG13	53:LD:109:LEU:HD22	1.87	0.56
73:Li:29:ARG:HH22	73:Li:34:THR:HG22	1.71	0.56
3:L5:1346:C:H2'	3:L5:1347:G:H8	1.69	0.56
6:SA:81:ASN:HA	6:SA:84:GLN:HE21	1.69	0.56
7:SD:137:VAL:HG22	7:SD:151:LYS:HG3	1.86	0.56
17:SU:20:ILE:HD11	17:SU:98:VAL:HG11	1.86	0.56
20:SX:51:VAL:HG22	20:SX:98:ASP:H	1.70	0.56
1:S2:55:U:H5''	1:S2:451:G:H22	1.71	0.56
1:S2:605:A:H4'	35:Se:55:PRO:HG2	1.86	0.56
1:S2:1215:C:H5	1:S2:1645:C:H2'	1.70	0.56
3:L5:2520:C:H2'	3:L5:2521:G:C8	2.40	0.56
3:L5:4077:A:N1	3:L5:4171:C:N4	2.53	0.56
10:SC:224:THR:HG22	10:SC:225:SER:N	2.19	0.56
12:SF:167:LYS:HA	31:SZ:71:ALA:HB1	1.87	0.56
19:SO:137:SER:O	19:SO:138:ASP:HB2	2.05	0.56
20:SX:68:LYS:HD2	35:Se:6:LEU:HD13	1.87	0.56
47:LL:9:VAL:HG23	50:La:49:HIS:CE1	2.40	0.56
63:LZ:7:PRO:HD3	63:LZ:28:ASN:ND2	2.21	0.56
68:Lc:31:TYR:CZ	68:Lc:35:LEU:HD11	2.40	0.56
81:5A:86:ARG:HG2	84:Pt:18:C:H5'	1.88	0.56
84:Pt:2:G:H2'	84:Pt:3:C:H6	1.70	0.56
1:S2:828:G:H21	1:S2:830:A:H1'	1.70	0.56
1:S2:1349:G:H21	6:SA:112:ILE:HD11	1.70	0.56
2:L8:28:C:O2'	3:L5:1371:A:N1	2.38	0.56
3:L5:65:A:N6	3:L5:75:G:H1'	2.21	0.56
3:L5:1440:U:H2'	3:L5:1441:C:C6	2.41	0.56
6:SA:140:VAL:HG23	6:SA:142:LEU:HD23	1.88	0.56
10:SC:201:GLY:N	10:SC:221:ASP:OD2	2.39	0.56
54:LQ:39:THR:HG21	54:LQ:132:LYS:HG2	1.86	0.56
62:LW:54:LEU:HD23	62:LW:54:LEU:H	1.70	0.56
1:S2:683:OMG:H4'	14:SW:4:MET:HG3	1.88	0.56
3:L5:1942:A:H61	3:L5:2039:G:H2'	1.71	0.56
3:L5:4227:OMU:O2'	3:L5:4228:OMG:H5'	2.05	0.56
21:SM:26:LEU:HD11	21:SM:33:ARG:CZ	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
72:Lg:56:VAL:HG13	72:Lg:72:LYS:HA	1.86	0.56
1:S2:352:U:H2'	1:S2:353:C:C6	2.41	0.56
6:SA:189:ILE:HG21	6:SA:195:TRP:CD1	2.41	0.56
18:SK:14:LEU:O	18:SK:17:LYS:HB2	2.05	0.56
24:SN:49:GLN:HA	24:SN:52:VAL:HG12	1.88	0.56
29:SV:39:VAL:HB	29:SV:44:GLY:HA2	1.87	0.56
40:LB:50:LYS:HB2	40:LB:345:LEU:HD11	1.88	0.56
40:LB:57:VAL:HG22	40:LB:73:VAL:HG22	1.87	0.56
40:LB:212:GLY:O	40:LB:287:ILE:HD11	2.05	0.56
1:S2:16:G:H2'	1:S2:17:C:C6	2.41	0.56
1:S2:1313:A:H5'	18:SK:5:LYS:NZ	2.21	0.56
3:L5:396:A:N6	58:LP:93:HIS:CE1	2.74	0.56
3:L5:1245:C:H2'	3:L5:1246:G:H8	1.70	0.56
3:L5:4504:C:H2'	3:L5:4505:C:C6	2.41	0.56
5:SB:136:ARG:HB2	5:SB:218:LEU:HD11	1.87	0.56
9:SE:246:LEU:HD11	9:SE:251:GLU:OE1	2.06	0.56
31:SZ:33:LYS:HD3	31:SZ:35:TRP:CZ2	2.41	0.56
45:LG:159:HIS:ND1	45:LG:185:LYS:HA	2.20	0.56
53:LD:226:TYR:CE2	53:LD:236:MET:HE1	2.40	0.56
1:S2:682:U:O2	14:SW:4:MET:HE2	2.05	0.55
3:L5:717:U:H2'	3:L5:718:C:C6	2.41	0.55
3:L5:4594:U:H2'	3:L5:4595:G:C8	2.40	0.55
13:SH:138:GLU:OE2	24:SN:19:ARG:NH2	2.40	0.55
22:SS:45:LEU:HD22	22:SS:50:ILE:HD11	1.88	0.55
24:SN:120:SER:O	24:SN:124:ARG:HG3	2.05	0.55
44:LE:91:THR:CG2	44:LE:106:VAL:HG13	2.36	0.55
47:LL:7:GLY:O	50:La:49:HIS:CE1	2.58	0.55
53:LD:62:CYS:HB3	53:LD:105:LEU:HD22	1.88	0.55
1:S2:550:C:H2'	1:S2:551:U:C6	2.41	0.55
1:S2:1798:C:H2'	1:S2:1799:G:O4'	2.06	0.55
3:L5:181:C:H2'	3:L5:182:G:H8	1.71	0.55
3:L5:1998:A:N3	3:L5:1998:A:H2'	2.21	0.55
3:L5:4940:C:H1'	44:LE:246:ARG:HH12	1.70	0.55
5:SB:141:GLY:HA2	5:SB:210:VAL:HG12	1.88	0.55
18:SK:13:GLU:HG2	18:SK:83:LEU:CD2	2.36	0.55
19:SO:102:GLY:N	19:SO:134:PRO:HB2	2.21	0.55
1:S2:325:C:H2'	1:S2:326:C:O4'	2.06	0.55
1:S2:528:A:H2'	1:S2:529:A:H8	1.70	0.55
3:L5:1727:U:OP1	67:LF:131:ASN:ND2	2.39	0.55
37:Sg:170:TRP:HA	37:Sg:194:TYR:HB2	1.88	0.55
38:Lz:205:TYR:HB3	38:Lz:207:LYS:HZ1	1.70	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:LA:245[B]:ARG:HE	39:LA:246:LEU:H	1.54	0.55
72:Lg:83:CYS:SG	72:Lg:86:CYS:HB2	2.45	0.55
1:S2:877:C:H2'	1:S2:878:G:C8	2.42	0.55
1:S2:946:U:H2'	1:S2:947:G:C8	2.41	0.55
9:SE:36:HIS:CG	9:SE:85:GLY:HA3	2.41	0.55
16:SQ:58:LEU:HD13	16:SQ:111:ILE:HD11	1.88	0.55
20:SX:67:ARG:HG3	20:SX:115:ILE:HG12	1.88	0.55
39:LA:245[A]:ARG:HE	39:LA:246:LEU:H	1.54	0.55
40:LB:234:ARG:HA	40:LB:272:LYS:HD3	1.89	0.55
62:LW:113:LYS:O	62:LW:117:LYS:HG2	2.06	0.55
69:Ld:64:ILE:HG23	69:Ld:68:LEU:HD23	1.88	0.55
1:S2:1195:A:H2'	1:S2:1196:A:H8	1.71	0.55
1:S2:1736:G:H2'	1:S2:1737:G:H8	1.70	0.55
3:L5:259:C:H2'	3:L5:260:C:H6	1.71	0.55
3:L5:745:G:H2'	3:L5:746:A:C8	2.42	0.55
3:L5:1083:U:O2	3:L5:1216:C:N4	2.39	0.55
22:SS:104:ASP:O	22:SS:108:ARG:HG3	2.06	0.55
64:Lr:58:LYS:HG3	64:Lr:83:ASN:HD21	1.72	0.55
1:S2:65:C:O2	11:SG:160:LYS:HE2	2.06	0.55
1:S2:1220:A:H2'	1:S2:1221:G:O4'	2.06	0.55
1:S2:1277:C:H2'	1:S2:1278:A:H8	1.72	0.55
2:L8:83:C:H4'	2:L8:84:A:C5	2.42	0.55
3:L5:3963:A:H2'	3:L5:3963:A:N3	2.21	0.55
3:L5:4045:G:H2'	3:L5:4046:A:N7	2.22	0.55
3:L5:4611:A:H2'	3:L5:4612:C:C6	2.41	0.55
7:SD:132:LYS:HD3	7:SD:156:LEU:HD23	1.88	0.55
11:SG:58:LYS:HE3	11:SG:105:ASN:HA	1.87	0.55
29:SV:38:GLU:HG2	29:SV:47:ASN:HD21	1.71	0.55
30:SY:20:ARG:HD3	30:SY:76:TYR:CZ	2.42	0.55
49:LM:11:ARG:NH2	49:LM:61:ILE:HD11	2.21	0.55
1:S2:201:C:H3'	1:S2:202:G:N2	2.22	0.55
1:S2:970:G:N3	3:L5:3711:A:H5''	2.22	0.55
2:L8:141:C:H2'	2:L8:142:U:C6	2.42	0.55
3:L5:1439:C:H2'	3:L5:1440:U:H6	1.72	0.55
3:L5:1706:A:OP2	67:LF:46:ARG:NH2	2.40	0.55
8:SJ:67:ASP:HB3	8:SJ:70:ARG:HB3	1.89	0.55
22:SS:6:PRO:HG2	22:SS:9:PHE:HB2	1.89	0.55
83:At:18:G:H2'	83:At:57:G:N2	2.21	0.55
1:S2:44:U:O2'	1:S2:45:A:H2'	2.05	0.55
1:S2:159:A2M:H2	1:S2:468:A2M:O4'	2.07	0.55
3:L5:2640:G:H2'	3:L5:2641:A:C8	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:3736:A:H2'	3:L5:3737:A:H8	1.70	0.55
7:SD:16:ILE:HD11	23:SD:36:LEU:HD13	1.88	0.55
44:LE:151:ILE:HG12	44:LE:161:ARG:HG2	1.87	0.55
74:Lj:28:HIS:CD2	74:Lj:31:LYS:HD3	2.41	0.55
1:S2:600:G:H2'	1:S2:601:OMG:H8	1.71	0.55
1:S2:1771:G:H1'	1:S2:1772:C:C5	2.41	0.55
3:L5:4239:A:H2'	3:L5:4240:G:C8	2.42	0.55
9:SE:60:GLU:O	9:SE:64:ILE:HG13	2.07	0.55
12:SF:68:ILE:HD11	12:SF:151:ILE:HD11	1.88	0.55
12:SF:124:ASP:OD1	12:SF:125:SER:N	2.40	0.55
13:SH:160:LYS:HD2	13:SH:189:PHE:HB3	1.88	0.55
55:LR:104:ARG:O	55:LR:108:ARG:HG3	2.06	0.55
3:L5:4371:G:H5'	90:L5:5310:3H3:H31	1.89	0.55
3:L5:4985:U:H2'	3:L5:4986:G:H8	1.72	0.55
5:SB:213:ARG:HG2	5:SB:214:LYS:HG3	1.88	0.55
9:SE:92:ILE:HD13	30:SY:17:LEU:HD21	1.87	0.55
12:SF:34:SER:HA	34:Sc:55:VAL:HB	1.88	0.55
12:SF:144:LEU:HD23	12:SF:148:ASN:HD21	1.71	0.55
28:ST:130:ASP:O	28:ST:134:ILE:HG12	2.07	0.55
1:S2:35:C:H2'	1:S2:36:PSU:H6	1.73	0.54
1:S2:191:A:H5''	15:SI:141:ARG:HD3	1.89	0.54
1:S2:1634:A:H2'	1:S2:1635:C:O4'	2.07	0.54
2:L8:67:U:H2'	2:L8:68:G:H8	1.72	0.54
3:L5:2864:A:H2'	3:L5:2865:U:C6	2.42	0.54
3:L5:4946:U:HO2'	71:Lf:2:SER:N	2.05	0.54
9:SE:96:GLY:O	9:SE:98:ASN:ND2	2.39	0.54
73:Li:59:GLU:HA	73:Li:62:LYS:HE2	1.89	0.54
1:S2:17:C:H2'	1:S2:18:C:C6	2.42	0.54
1:S2:181:A:H3'	1:S2:182:C:H2'	1.88	0.54
1:S2:1618:C:H4'	27:SP:50:ARG:HH22	1.72	0.54
1:S2:1653:U:H2'	1:S2:1654:G:C8	2.42	0.54
3:L5:1833:G:O2'	3:L5:1835:G:N2	2.39	0.54
3:L5:2753:G:O2'	3:L5:2754:G:H5'	2.07	0.54
3:L5:4126:C:H5''	3:L5:4127:A:H5''	1.88	0.54
3:L5:4239:A:H2'	3:L5:4240:G:H8	1.72	0.54
26:SR:58:MET:O	26:SR:62:GLN:HG2	2.07	0.54
27:SP:28:MET:SD	27:SP:32:GLN:HG2	2.47	0.54
32:Sa:41:ILE:HG12	32:Sa:68:TYR:CD2	2.43	0.54
1:S2:72:C:H42	11:SG:170:ARG:NH1	2.05	0.54
1:S2:1112:U:H2'	1:S2:1113:A:C8	2.42	0.54
3:L5:2102:G:H2'	3:L5:2103:G:N7	2.23	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:2394:G:H5''	3:L5:2397:G:O4'	2.08	0.54
3:L5:4112:C:H2'	3:L5:4113:U:O4'	2.06	0.54
8:SJ:3:VAL:HB	8:SJ:5:ARG:HG3	1.89	0.54
28:ST:115:LYS:HE3	28:ST:121:ARG:HH21	1.72	0.54
44:LE:149:ILE:HD12	44:LE:271:LEU:HD21	1.89	0.54
1:S2:172:OMU:H5	1:S2:314:U:O2	2.08	0.54
1:S2:1759:G:H2'	1:S2:1760:G:C6	2.42	0.54
3:L5:498:C:H42	3:L5:656:C:N4	2.06	0.54
3:L5:1308:C:H2'	3:L5:1309:C:C6	2.42	0.54
3:L5:3707:U:H2'	3:L5:3708:C:C6	2.42	0.54
8:SJ:84:ILE:HA	8:SJ:150:ARG:HG3	1.89	0.54
1:S2:1281:G:H2'	1:S2:1282:A:H8	1.73	0.54
1:S2:1751:C:H42	1:S2:1782:G:H21	1.55	0.54
3:L5:259:C:H2'	3:L5:260:C:C6	2.43	0.54
3:L5:1238:A:O2'	67:LF:52:GLU:OE1	2.25	0.54
3:L5:1762:C:H2'	3:L5:1763:C:C6	2.42	0.54
3:L5:1995:G:H3'	3:L5:1996:C:C6	2.43	0.54
3:L5:3937:C:H1'	51:LN:125:SER:HB3	1.88	0.54
3:L5:4189:U:H2'	3:L5:4190:U:O4'	2.08	0.54
14:SW:14:ILE:HD13	14:SW:25:VAL:HG11	1.90	0.54
38:Lz:71:GLN:NE2	42:LJ:30:GLY:O	2.41	0.54
43:LH:59:LYS:HE3	43:LH:66:GLU:HB3	1.88	0.54
43:LH:94:SER:OG	43:LH:142:ASP:HB2	2.07	0.54
45:LG:137:ARG:HE	45:LG:146:LEU:HD11	1.72	0.54
48:LV:48:ARG:NH1	48:LV:49:LEU:HB3	2.22	0.54
58:LP:128:ARG:HG3	58:LP:136:ILE:HG23	1.89	0.54
83:At:47:U:H4'	83:At:48:C:O5'	2.08	0.54
1:S2:72:C:H2'	1:S2:73:C:C2	2.42	0.54
1:S2:1550:G:H3'	1:S2:1579:A:H61	1.71	0.54
3:L5:2539:C:H2'	3:L5:2540:C:C6	2.42	0.54
3:L5:4095:G:H21	3:L5:4096:C:H42	1.53	0.54
17:SU:80:PHE:HB3	23:Sd:52:PHE:HB3	1.89	0.54
38:Lz:74:CYS:SG	38:Lz:84:HIS:CD2	3.01	0.54
1:S2:985:G:H4'	19:SO:138:ASP:OD2	2.08	0.54
1:S2:1079:C:H4'	1:S2:1182:A:H61	1.71	0.54
3:L5:1307:A:H2'	3:L5:1308:C:H6	1.72	0.54
3:L5:3717:A:H2'	3:L5:3718:A2M:C8	2.38	0.54
3:L5:3948:C:N4	3:L5:3949:A:H62	2.06	0.54
10:SC:88:ILE:HG21	10:SC:94:ILE:HD11	1.88	0.54
20:SX:50:ILE:HB	20:SX:73:GLN:HE21	1.72	0.54
68:Lc:17:ARG:HH12	68:Lc:103:ASP:HB2	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S2:1454:A:H5''	26:SR:3:ARG:HD3	1.90	0.54
1:S2:1671:G:H2'	1:S2:1672:U:C6	2.43	0.54
2:L8:66:A:H2'	2:L8:67:U:C6	2.43	0.54
2:L8:148:A:H2'	2:L8:149:G:C8	2.42	0.54
3:L5:423:G:OP1	58:LP:62:ARG:NH1	2.41	0.54
3:L5:3946:G:H1	3:L5:4067:U:H3	1.55	0.54
3:L5:4045:G:H1'	3:L5:4048:A:N6	2.22	0.54
11:SG:161:PRO:HA	11:SG:171:THR:CA	2.28	0.54
31:SZ:99:LEU:HD11	31:SZ:102:LYS:HB2	1.90	0.54
39:LA:234:LYS:HG2	39:LA:238:ILE:HG12	1.89	0.54
45:LG:77:PRO:HG2	45:LG:80:ILE:HD12	1.89	0.54
51:LN:45:PRO:O	51:LN:49:ARG:HG3	2.07	0.54
52:LI:150:GLU:HG3	52:LI:154:ARG:HE	1.73	0.54
3:L5:25:A:H2'	3:L5:26:C:H6	1.72	0.54
3:L5:1468:C:H2'	3:L5:1469:C:C6	2.43	0.54
3:L5:1705:G:H5''	67:LF:46:ARG:HH12	1.73	0.54
3:L5:2448:G:H2'	3:L5:2449:A:C8	2.42	0.54
27:SP:108:LYS:N	27:SP:111:MET:HE1	2.23	0.54
37:Sg:20:GLN:HG2	37:Sg:69:VAL:H	1.73	0.54
83:At:47:U:H4'	83:At:47:U:OP2	2.07	0.54
84:Pt:3:C:H2'	84:Pt:4:G:H8	1.68	0.54
1:S2:126:G:C4	1:S2:181:A:H1'	2.43	0.54
2:L8:27:U:H2'	2:L8:28:C:C6	2.43	0.54
3:L5:1772:C:H2'	3:L5:1773:U:C6	2.43	0.54
3:L5:2523:G:OP1	55:LR:16:ARG:NH2	2.41	0.54
3:L5:2902:G:N2	3:L5:3597:G:OP2	2.41	0.54
3:L5:3868:G:H22	3:L5:3900:G:H1'	1.73	0.54
3:L5:4053:A:H1'	38:Lz:212:LYS:HD2	1.90	0.54
3:L5:4537:C:H2'	3:L5:4538:G:H8	1.73	0.54
6:SA:156:TYR:O	29:SV:60:ARG:NH2	2.41	0.54
26:SR:10:LYS:O	26:SR:14:ARG:HG3	2.08	0.54
33:Sb:34:ASP:HB3	33:Sb:43:ILE:HD11	1.90	0.54
46:LO:190:ASP:OD1	46:LO:191:LYS:N	2.41	0.54
57:LT:52:MET:HG2	57:LT:95:HIS:CE1	2.43	0.54
63:LZ:88:ASP:O	63:LZ:121:ARG:NH2	2.39	0.54
70:Le:21:ILE:HG23	70:Le:33:ARG:HG2	1.90	0.54
1:S2:199:C:H5''	1:S2:200:G:H8	1.73	0.53
1:S2:1286:G:OP1	36:Sf:101:ALA:HB2	2.08	0.53
3:L5:659:G:O6	3:L5:660:A:N6	2.41	0.53
3:L5:4508:C:N3	3:L5:4512:U:H5	2.06	0.53
10:SC:108:LYS:HB2	10:SC:233:LEU:HD13	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:SY:104:ARG:HA	30:SY:107:ARG:HE	1.72	0.53
63:LZ:89:ILE:HD11	63:LZ:121:ARG:HG2	1.89	0.53
74:Lj:25:LYS:O	74:Lj:25:LYS:HD3	2.08	0.53
81:5A:95:GLN:HG3	81:5A:96:ASP:H	1.72	0.53
1:S2:196:C:H2'	1:S2:197:U:C6	2.43	0.53
1:S2:839:C:H4'	1:S2:840:C:H5''	1.90	0.53
1:S2:907:G:H2'	1:S2:908:A:C8	2.43	0.53
1:S2:925:G:H1	1:S2:1017:U:H3	1.55	0.53
3:L5:1346:C:H2'	3:L5:1347:G:C8	2.42	0.53
3:L5:1468:C:H2'	3:L5:1469:C:H6	1.73	0.53
3:L5:1479:G:N2	47:LL:184:MET:HE1	2.24	0.53
3:L5:3713:U:H2'	3:L5:3714:G:C8	2.40	0.53
8:SJ:169:ARG:NE	8:SJ:175:ARG:HH22	2.06	0.53
18:SK:3:MET:SD	18:SK:8:ARG:HB2	2.48	0.53
21:SM:91:LEU:HG	21:SM:104:VAL:HG12	1.90	0.53
29:SV:70:LEU:HG	29:SV:74:LYS:HE3	1.89	0.53
30:SY:20:ARG:HB3	30:SY:76:TYR:CD1	2.44	0.53
38:Lz:171:HIS:ND1	38:Lz:174:MET:SD	2.81	0.53
81:5A:46:SER:HB3	81:5A:55:LYS:HG3	1.91	0.53
83:At:26:A:H61	83:At:44:G:H1	1.56	0.53
1:S2:470:G:H2'	1:S2:471:G:C8	2.43	0.53
1:S2:525:A:H5''	35:Se:32:ALA:HB2	1.89	0.53
3:L5:180:C:H2'	3:L5:181:C:N1	2.23	0.53
6:SA:2:SAC:H2A1	29:SV:79:VAL:HG12	1.90	0.53
6:SA:86:ALA:HA	6:SA:202:TYR:HD1	1.73	0.53
7:SD:109:LEU:HD11	7:SD:115:VAL:HG22	1.91	0.53
11:SG:231:ARG:NH1	11:SG:235:SER:OG	2.42	0.53
12:SF:107:ASN:ND2	12:SF:109:LEU:HB2	2.22	0.53
18:SK:24:LYS:HB3	18:SK:29:MET:HE1	1.91	0.53
30:SY:39:GLU:HA	30:SY:42:GLU:CD	2.34	0.53
52:LI:51:HIS:CD2	52:LI:168:SER:HB2	2.43	0.53
81:5A:114:LEU:HG	81:5A:119:LEU:HB3	1.90	0.53
83:At:47:U:H4'	83:At:48:C:C5'	2.38	0.53
1:S2:970:G:C2	3:L5:3711:A:H5''	2.44	0.53
3:L5:260:C:H2'	3:L5:261:G:C8	2.44	0.53
3:L5:3598:C:H2'	3:L5:3599:A:C8	2.44	0.53
3:L5:4296:PSU:H2'	3:L5:4297:G:C8	2.44	0.53
3:L5:4967:A:H2'	3:L5:4968:A:H8	1.72	0.53
3:L5:4985:U:H2'	3:L5:4986:G:C8	2.43	0.53
13:SH:78:ARG:NH2	13:SH:81:ARG:HD2	2.23	0.53
18:SK:14:LEU:HD13	18:SK:21:MET:HE1	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:SS:70:ILE:HG22	22:SS:77:TYR:CD2	2.43	0.53
67:LF:71:MET:HA	67:LF:74:MET:HG2	1.90	0.53
83:At:51:U:H2'	83:At:52:G:H8	1.74	0.53
1:S2:196:C:O2'	1:S2:197:U:H5'	2.09	0.53
1:S2:1337:4AC:H2'	1:S2:1338:G:H8	1.72	0.53
1:S2:1513:C:OP1	23:Sd:12:ARG:NH2	2.42	0.53
6:SA:43:SER:O	26:SR:126:MET:HG3	2.08	0.53
10:SC:70:VAL:HG21	10:SC:93:ILE:HG12	1.90	0.53
19:SO:121:ARG:NH2	34:Sc:61:SER:O	2.42	0.53
37:Sg:8:ARG:HH12	37:Sg:47:ARG:HG2	1.73	0.53
43:LH:2:LYS:O	43:LH:3:THR:C	2.51	0.53
52:LI:52:MET:HB2	52:LI:152:LEU:HD22	1.90	0.53
80:Lp:22:LEU:HD23	80:Lp:25:MET:HE3	1.89	0.53
1:S2:159:A2M:N1	1:S2:467:G:O2'	2.39	0.53
1:S2:656:G:H5'	1:S2:662:G:N2	2.24	0.53
1:S2:1137:U:O2'	6:SA:155:ARG:NH2	2.40	0.53
1:S2:1240:A:C4	27:SP:100:LYS:HE3	2.44	0.53
1:S2:1432:U:H4'	1:S2:1437:C:N3	2.23	0.53
3:L5:2079:G:H2'	3:L5:2080:U:C6	2.44	0.53
3:L5:3961:G:H2'	3:L5:3962:A:O4'	2.09	0.53
5:SB:65:ARG:H	5:SB:88:THR:HG23	1.73	0.53
21:SM:31:LEU:HB2	21:SM:111:VAL:HA	1.91	0.53
26:SR:71:ILE:HA	26:SR:74:GLN:HE22	1.73	0.53
33:Sb:40:CYS:SG	33:Sb:41:TYR:N	2.81	0.53
84:Pt:52:C:H2'	84:Pt:53:G:H8	1.72	0.53
3:L5:1739:G:H5''	4:L7:102:U:H1'	1.90	0.53
3:L5:3722:G:H5''	73:Li:68:ARG:HH21	1.73	0.53
3:L5:3910:C:H2'	3:L5:3911:C:H6	1.72	0.53
15:SI:119:LEU:HD21	15:SI:153:LYS:HG3	1.90	0.53
19:SO:101:GLY:HA3	19:SO:134:PRO:HD2	1.89	0.53
22:SS:94:LYS:HE3	22:SS:96:SER:HB3	1.91	0.53
40:LB:312:LYS:HZ3	40:LB:380:GLN:HB3	1.73	0.53
41:LC:209:ILE:HB	41:LC:229:LEU:HD13	1.90	0.53
44:LE:199:THR:HG21	49:LM:107:PHE:HB2	1.90	0.53
46:LO:128:ARG:NH1	56:LS:162:GLN:OE1	2.42	0.53
56:LS:84:TYR:HE1	56:LS:93:MET:HE3	1.73	0.53
58:LP:122:ALA:HB3	58:LP:143:PRO:HG2	1.90	0.53
61:LY:59:ARG:HG3	61:LY:103:LYS:HD2	1.91	0.53
64:Lr:16:PHE:HB3	64:Lr:27:THR:H	1.72	0.53
70:Le:82:VAL:O	70:Le:86:GLU:HG2	2.08	0.53
1:S2:51:U:H2'	1:S2:52:G:H8	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S2:1277:C:H2'	1:S2:1278:A:C8	2.44	0.53
1:S2:1406:G:H21	1:S2:1443:C:H42	1.57	0.53
3:L5:1333:A:H2'	3:L5:1334:A:C8	2.43	0.53
3:L5:3765:G:H21	3:L5:3766:A:N6	2.07	0.53
3:L5:4860:G:H5'	46:LO:169:ARG:CZ	2.39	0.53
8:SJ:111:GLN:OE1	8:SJ:127:ARG:HB2	2.09	0.53
18:SK:16:PHE:CG	18:SK:17:LYS:N	2.76	0.53
19:SO:44:VAL:HG13	19:SO:53:ILE:HB	1.91	0.53
26:SR:66:VAL:HG23	26:SR:67:ARG:H	1.74	0.53
1:S2:183:G:H2'	1:S2:184:G:O4'	2.09	0.53
1:S2:962:A:N1	1:S2:1055:A:O2'	2.40	0.53
1:S2:1657:G:H2'	1:S2:1658:G:C8	2.44	0.53
3:L5:1202:C:H2'	3:L5:1203:G:H8	1.73	0.53
3:L5:2001:G:N3	3:L5:2003:G:H1'	2.23	0.53
3:L5:2876:OMG:HM22	3:L5:2877:G:C4'	2.39	0.53
3:L5:3599:A:H2'	3:L5:3600:G:C8	2.44	0.53
3:L5:4538:G:H2'	3:L5:4539:U:C6	2.44	0.53
3:L5:4542:U:H2'	3:L5:4543:G:O4'	2.09	0.53
9:SE:94:LYS:HG3	30:SY:16:ARG:NH2	2.24	0.53
19:SO:95:ILE:HD13	19:SO:116:LEU:HD11	1.91	0.53
24:SN:88:LEU:HD12	24:SN:129:TYR:HD2	1.73	0.53
30:SY:8:ARG:HB2	30:SY:26:ASP:HB2	1.91	0.53
55:LR:169:ALA:HA	55:LR:172:ARG:HE	1.73	0.53
1:S2:107:A:H2'	1:S2:108:G:H8	1.73	0.53
1:S2:558:G:H2'	1:S2:559:G:C8	2.43	0.53
9:SE:137:PRO:HG2	9:SE:150:PRO:HD2	1.90	0.53
13:SH:36:LEU:HB2	13:SH:39:GLN:HE21	1.73	0.53
24:SN:39:LYS:HG2	24:SN:43:LYS:NZ	2.24	0.53
26:SR:40:ILE:O	26:SR:40:ILE:HG13	2.09	0.53
37:Sg:269:GLU:HB3	37:Sg:271:LYS:HD3	1.92	0.53
39:LA:108:PRO:HD3	80:Lp:90:LYS:HD2	1.91	0.53
57:LT:68:THR:HG22	57:LT:69:GLN:N	2.21	0.53
64:Lr:63:VAL:HG22	64:Lr:79:ARG:HG2	1.91	0.53
1:S2:51:U:H2'	1:S2:52:G:C8	2.44	0.52
1:S2:322:C:H2'	1:S2:323:C:C6	2.45	0.52
1:S2:1782:G:O6	62:LW:73:ARG:NH2	2.41	0.52
2:L8:30:U:H2'	2:L8:31:G:C8	2.44	0.52
3:L5:1970:A:O2'	3:L5:2000:G:H1'	2.09	0.52
3:L5:4736:C:H2'	3:L5:4737:G:C8	2.43	0.52
40:LB:103:LYS:HD3	40:LB:104:THR:H	1.74	0.52
41:LC:317:ASN:HD22	41:LC:320:LYS:HE3	1.73	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:LQ:79:THR:HB	54:LQ:136:THR:HG22	1.91	0.52
55:LR:105:LEU:HD22	55:LR:135:LYS:HG2	1.90	0.52
62:LW:60:LYS:HA	62:LW:64:SER:HB2	1.91	0.52
62:LW:97:LYS:HD3	62:LW:101:ARG:HD2	1.91	0.52
1:S2:120:U:C2	9:SE:33:THR:HG22	2.44	0.52
1:S2:1430:C:H2'	1:S2:1431:G:C8	2.44	0.52
3:L5:1380:G:N2	3:L5:1381:U:O4	2.40	0.52
3:L5:2010:A:C2	3:L5:2011:C:H1'	2.43	0.52
3:L5:4051:C:O2'	38:Lz:210:MET:HE1	2.09	0.52
4:L7:49:A:OP1	53:LD:225:GLN:HB2	2.09	0.52
11:SG:7:PHE:HD2	11:SG:10:THR:HG22	1.74	0.52
30:SY:11:LYS:HB2	30:SY:24:VAL:HG22	1.91	0.52
38:Lz:73:HIS:HE1	38:Lz:141:ASN:H	1.57	0.52
47:LL:180:ALA:O	47:LL:184:MET:HG2	2.09	0.52
53:LD:204:VAL:O	53:LD:208:MET:HG3	2.09	0.52
80:Lp:51:ALA:HB3	80:Lp:54:ILE:HD12	1.91	0.52
81:5A:115:PRO:HD2	81:5A:119:LEU:HG	1.90	0.52
1:S2:118:C:H1'	1:S2:445:A:C5	2.44	0.52
1:S2:1113:A:H2'	1:S2:1114:U:C6	2.44	0.52
3:L5:1077:C:OP1	3:L5:1215:C:O2'	2.28	0.52
3:L5:2370:A:N1	3:L5:2390:G:O2'	2.41	0.52
3:L5:2753:G:H2'	3:L5:2754:G:C8	2.44	0.52
3:L5:4991:U:H2'	3:L5:4992:G:C8	2.43	0.52
5:SB:25:PHE:HA	5:SB:28:LYS:HG3	1.91	0.52
24:SN:17:PRO:HG3	33:Sb:28:PRO:HG3	1.91	0.52
47:LL:150:LEU:HD23	47:LL:154:VAL:HG22	1.90	0.52
1:S2:1752:C:H1'	1:S2:1782:G:H4'	1.92	0.52
3:L5:3933:G:H2'	3:L5:3934:G:H8	1.75	0.52
7:SD:70:THR:HG23	7:SD:86:LEU:HD23	1.90	0.52
8:SJ:35:TYR:CD2	8:SJ:106:LEU:HD11	2.45	0.52
9:SE:47:PHE:CE1	9:SE:52:LEU:HD11	2.45	0.52
13:SH:42:GLU:HG2	13:SH:43:LEU:HD22	1.92	0.52
19:SO:102:GLY:H	19:SO:134:PRO:HB2	1.74	0.52
22:SS:97:GLN:HG3	22:SS:99:LEU:HD21	1.92	0.52
38:Lz:171:HIS:CE1	38:Lz:173:LYS:HB2	2.44	0.52
83:At:51:U:H2'	83:At:52:G:C8	2.44	0.52
1:S2:164:A:H2'	1:S2:165:G:N3	2.25	0.52
1:S2:1223:A:H5''	12:SF:80:GLY:H	1.74	0.52
3:L5:1998:A:N3	3:L5:2019:C:H1'	2.25	0.52
3:L5:2538:U:H2'	3:L5:2539:C:C6	2.45	0.52
3:L5:3906:A:H5''	41:LC:69:THR:OG1	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:4052:C:H2'	3:L5:4053:A:C8	2.45	0.52
3:L5:4880:C:OP2	49:LM:120:ASN:ND2	2.41	0.52
4:L7:4:U:H2'	4:L7:5:A:H8	1.75	0.52
6:SA:121:LEU:HD12	6:SA:143:PRO:HB2	1.91	0.52
8:SJ:97:ILE:HG23	8:SJ:98:LEU:HD12	1.91	0.52
14:SW:18:GLU:HG2	14:SW:65:LEU:HD23	1.90	0.52
31:SZ:67:LEU:HD13	31:SZ:72:VAL:HG21	1.92	0.52
37:Sg:129:ILE:HD13	37:Sg:154:VAL:HG21	1.91	0.52
39:LA:96:LEU:HD23	80:Lp:83:ILE:HG23	1.91	0.52
40:LB:107:ALA:HB1	40:LB:202:GLU:HG3	1.91	0.52
40:LB:113:GLU:HB3	40:LB:178:ALA:HB2	1.92	0.52
41:LC:76:ILE:HG12	41:LC:96:CYS:SG	2.49	0.52
45:LG:136:LEU:HD13	45:LG:202:VAL:HG21	1.92	0.52
46:LO:34:VAL:HG22	46:LO:103:LYS:HB2	1.91	0.52
54:LQ:42:THR:O	54:LQ:46:VAL:HG23	2.10	0.52
70:Le:21:ILE:HG12	70:Le:33:ARG:HD2	1.91	0.52
2:L8:5:U:OP1	58:LP:62:ARG:HG3	2.09	0.52
3:L5:1693:U:H2'	3:L5:1694:C:O4'	2.10	0.52
3:L5:4542:U:H2'	3:L5:4543:G:C8	2.44	0.52
3:L5:4750:G:H2'	3:L5:4751:G:C8	2.44	0.52
12:SF:130:ARG:HG3	12:SF:131:ALA:H	1.75	0.52
13:SH:105:THR:HG23	13:SH:108:SER:H	1.73	0.52
1:S2:1007:C:H2'	1:S2:1008:A:C8	2.45	0.52
1:S2:1736:G:H2'	1:S2:1737:G:C8	2.44	0.52
2:L8:93:C:H3'	74:Lj:72:ARG:HE	1.75	0.52
3:L5:86:U:H2'	3:L5:87:A:C8	2.44	0.52
3:L5:1443:A:H61	3:L5:2102:G:H8	1.51	0.52
3:L5:1699:A:H2'	3:L5:1700:G:N3	2.24	0.52
3:L5:1866:U:H2'	3:L5:1867:A:O4'	2.09	0.52
3:L5:2590:G:H2'	3:L5:2754:G:N2	2.24	0.52
3:L5:4076:G:H5'	45:LG:73:ARG:HG2	1.91	0.52
3:L5:4113:U:H3'	3:L5:4114:C:C5	2.45	0.52
6:SA:17:LYS:HA	26:SR:91:LEU:HD21	1.91	0.52
7:SD:170:THR:HG23	7:SD:187:LYS:HG2	1.92	0.52
24:SN:62:GLN:HB2	24:SN:65:PHE:HB2	1.92	0.52
27:SP:34:MET:SD	27:SP:42:ARG:HG3	2.50	0.52
28:ST:31:PRO:HD2	28:ST:34:VAL:CG2	2.39	0.52
33:Sb:78:SER:O	33:Sb:80:ARG:NH1	2.42	0.52
50:La:46:ASP:OD1	54:LQ:178:ARG:NH1	2.42	0.52
3:L5:1857:C:H2'	3:L5:1858:A:C8	2.44	0.52
3:L5:4288:C:O2'	3:L5:4321:U:OP1	2.27	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:4378:A:O2'	3:L5:4379:A:H2'	2.10	0.52
46:LO:9:LEU:HD23	46:LO:118:MET:HB2	1.91	0.52
51:LN:178:HIS:HA	51:LN:181:HIS:NE2	2.25	0.52
56:LS:9:GLU:OE2	56:LS:31:ARG:HD2	2.09	0.52
67:LF:216:PRO:HD3	67:LF:247:MET:HE2	1.92	0.52
1:S2:946:U:H2'	1:S2:947:G:H8	1.75	0.52
2:L8:30:U:OP1	47:LL:34:ARG:NH2	2.43	0.52
3:L5:268:G:H2'	3:L5:269:G:H8	1.75	0.52
3:L5:968:C:H1'	44:LE:110:ARG:CZ	2.40	0.52
3:L5:2411:C:H2'	3:L5:2412:A:C8	2.44	0.52
5:SB:80:ALA:O	19:SO:128:ARG:NH2	2.43	0.52
6:SA:107:THR:HG21	6:SA:117:ARG:HH21	1.74	0.52
15:SI:110:ARG:O	15:SI:114:GLU:HG2	2.10	0.52
27:SP:108:LYS:H	27:SP:111:MET:HE1	1.75	0.52
30:SY:110:ARG:O	30:SY:114:MET:HG2	2.10	0.52
37:Sg:110:SER:HB3	37:Sg:153:CYS:HA	1.91	0.52
43:LH:63:ASN:O	43:LH:67:LEU:HG	2.09	0.52
49:LM:38:VAL:HG21	49:LM:50:MET:HE3	1.92	0.52
62:LW:59:HIS:HB3	62:LW:61:LYS:HD3	1.92	0.52
63:LZ:53:VAL:HG13	63:LZ:62:ILE:HG12	1.92	0.52
1:S2:27:A2M:H2'	1:S2:28:U:C6	2.44	0.52
1:S2:191:A:N6	1:S2:208:G:H1'	2.25	0.52
1:S2:1393:G:H2'	1:S2:1394:G:C8	2.45	0.52
3:L5:907:C:H2'	3:L5:908:G:H8	1.75	0.52
3:L5:1732:C:H5''	57:LT:43:LYS:HD2	1.91	0.52
3:L5:3611:A:H4'	15:SI:92:ARG:HH12	1.75	0.52
3:L5:3656:A:H2'	3:L5:3657:U:H6	1.75	0.52
3:L5:4967:A:H2'	3:L5:4968:A:C8	2.45	0.52
9:SE:64:ILE:HG22	9:SE:70:ILE:HD11	1.92	0.52
11:SG:7:PHE:CE2	11:SG:9:ALA:HB3	2.45	0.52
17:SU:26:SER:OG	17:SU:28:ASN:O	2.27	0.52
18:SK:8:ARG:HD2	18:SK:12:TYR:CZ	2.44	0.52
18:SK:49:MET:HE1	18:SK:60:GLU:HB3	1.92	0.52
28:ST:113:VAL:HG12	28:ST:123:LEU:HD23	1.91	0.52
49:LM:12:VAL:HB	49:LM:60:PHE:HB2	1.92	0.52
55:LR:172:ARG:HG3	55:LR:176:ARG:HH21	1.74	0.52
62:LW:90:ILE:O	62:LW:94:ARG:HG2	2.10	0.52
81:5A:86:ARG:HB2	81:5A:137:VAL:O	2.09	0.52
1:S2:164:A:O2'	1:S2:165:G:H5'	2.10	0.51
1:S2:521:A:H5'	1:S2:825:A:H1'	1.92	0.51
1:S2:1287:A:N1	1:S2:1314:U:H5	2.08	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S2:1298:G:H4'	27:SP:78:THR:HA	1.92	0.51
3:L5:2815:A2M:H2'	3:L5:2816:G:C8	2.44	0.51
3:L5:4441:A:H5''	52:LI:114:GLY:HA2	1.91	0.51
20:SX:105:PHE:CD1	20:SX:121:LYS:HD3	2.45	0.51
30:SY:13:MET:O	30:SY:22:GLN:N	2.41	0.51
38:Lz:207:LYS:NZ	38:Lz:214:GLN:HB3	2.25	0.51
41:LC:54:VAL:HG11	41:LC:101:MET:SD	2.50	0.51
1:S2:182:C:H4'	1:S2:183:G:O5'	2.08	0.51
1:S2:553:U:H2'	1:S2:554:A:H8	1.76	0.51
1:S2:681:PSU:H4'	20:SX:9:THR:HG22	1.92	0.51
1:S2:1568:C:OP1	28:ST:96:SER:OG	2.27	0.51
1:S2:1622:U:H3'	1:S2:1623:A:H4'	1.92	0.51
3:L5:1210:C:H41	67:LF:66:ARG:CZ	2.23	0.51
3:L5:2640:G:H2'	3:L5:2641:A:H8	1.75	0.51
3:L5:4050:A:H3'	3:L5:4051:C:H6	1.75	0.51
6:SA:113:GLN:NE2	6:SA:115:ALA:H	2.06	0.51
21:SM:15:ASN:OD1	21:SM:16:THR:N	2.44	0.51
24:SN:142:GLU:HB3	24:SN:145:THR:HG22	1.92	0.51
29:SV:14:PRO:HG2	29:SV:23:ILE:HD11	1.93	0.51
38:Lz:27:LYS:HD2	38:Lz:28:PHE:HB2	1.91	0.51
39:LA:206:PRO:HG3	39:LA:213:GLY:HA3	1.93	0.51
63:LZ:14:LEU:HD13	72:Lg:92:LYS:HE3	1.92	0.51
80:Lp:23:ARG:O	80:Lp:26:VAL:HG12	2.10	0.51
1:S2:202:G:N2	1:S2:202:G:OP2	2.43	0.51
1:S2:1174:PSU:H2'	1:S2:1175:G:H8	1.76	0.51
1:S2:1389:C:O2'	7:SD:162:ASP:HB3	2.10	0.51
1:S2:1606:G:N2	1:S2:1632:G:HO2'	2.09	0.51
1:S2:1718:G:O2'	1:S2:1815:A:N6	2.43	0.51
3:L5:20:U:H3'	3:L5:21:G:H8	1.75	0.51
3:L5:1177:U:H2'	3:L5:1178:G:C8	2.45	0.51
3:L5:1400:G:H2'	3:L5:1401:C:H6	1.75	0.51
3:L5:1684:A:OP1	50:La:47:LYS:NZ	2.43	0.51
3:L5:2351:OMC:HM23	41:LC:95:MET:HG3	1.93	0.51
3:L5:3770:PSU:H2'	3:L5:3771:C:C6	2.45	0.51
3:L5:4966:A:H5''	40:LB:128:LYS:HG3	1.92	0.51
9:SE:127:ARG:HG3	9:SE:142:HIS:HA	1.92	0.51
38:Lz:67:VAL:HB	38:Lz:107:TYR:CD2	2.45	0.51
47:LL:124:LEU:HD11	65:Lh:119:TYR:HB2	1.92	0.51
54:LQ:177:ALA:O	54:LQ:184:ARG:HB2	2.11	0.51
63:LZ:84:ARG:NH2	72:Lg:99:GLU:OE1	2.42	0.51
66:Lb:114:LYS:HA	66:Lb:117:ARG:HG2	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S2:819:G:OP2	8:SJ:80:ARG:NH1	2.43	0.51
1:S2:1708:C:H2'	1:S2:1709:G:H8	1.74	0.51
3:L5:153:G:H2'	3:L5:154:G:H8	1.74	0.51
3:L5:4448:G:H5''	3:L5:4449:A:H5'	1.93	0.51
5:SB:160:GLN:O	5:SB:164:ILE:HG12	2.09	0.51
37:Sg:40:ILE:HD12	37:Sg:59:LEU:HD23	1.92	0.51
40:LB:149:ASP:O	40:LB:153:MET:HG3	2.10	0.51
54:LQ:95:VAL:HG21	54:LQ:112:ARG:HD3	1.92	0.51
1:S2:344:U:H2'	1:S2:345:U:C6	2.44	0.51
1:S2:807:G:H2'	1:S2:808:A:H8	1.75	0.51
1:S2:941:C:H2'	1:S2:942:G:C8	2.45	0.51
1:S2:1436:C:O2'	1:S2:1437:C:O4'	2.29	0.51
1:S2:1436:C:O2'	1:S2:1437:C:O5'	2.23	0.51
1:S2:1639:G7M:H2'	1:S2:1640:A:C8	2.46	0.51
1:S2:1702:G:H2'	1:S2:1703:OMC:O4'	2.11	0.51
1:S2:1751:C:H42	1:S2:1782:G:N2	2.09	0.51
3:L5:2380:G:N2	3:L5:2424:OMG:H5'	2.26	0.51
4:L7:3:C:H2'	4:L7:4:U:C6	2.46	0.51
8:SJ:103:GLU:O	8:SJ:107:GLU:HG2	2.11	0.51
10:SC:78:LEU:HA	10:SC:81:ILE:HD13	1.92	0.51
10:SC:167:ARG:CG	10:SC:219:ILE:HD13	2.41	0.51
18:SK:90:VAL:HB	18:SK:91:PRO:HD2	1.92	0.51
22:SS:39:ARG:HD2	28:ST:45:LEU:HD23	1.92	0.51
53:LD:116:ASP:OD1	53:LD:116:ASP:N	2.43	0.51
58:LP:24:VAL:HG12	58:LP:86:LYS:HG2	1.92	0.51
83:At:4:C:H2'	83:At:5:G:H8	1.75	0.51
1:S2:433:A:H2'	1:S2:434:G:C8	2.46	0.51
1:S2:1174:PSU:H2'	1:S2:1175:G:C8	2.45	0.51
1:S2:1201:U:H2'	1:S2:1202:U:C6	2.45	0.51
3:L5:1613:A:H5'	39:LA:183:GLY:HA2	1.92	0.51
3:L5:1727:U:H5''	67:LF:131:ASN:HD22	1.76	0.51
3:L5:3602:C:H2'	3:L5:3603:G:C8	2.46	0.51
3:L5:4342:C:O3'	79:Lo:37:GLY:HA3	2.10	0.51
22:SS:86:ARG:HE	22:SS:89:ASP:HB3	1.76	0.51
37:Sg:164:ILE:HB	37:Sg:176:VAL:HG12	1.92	0.51
38:Lz:81:ASP:O	38:Lz:82:ILE:HB	2.11	0.51
41:LC:24:LEU:HD21	41:LC:28:PHE:HB2	1.92	0.51
43:LH:134:CYS:SG	43:LH:144:LEU:HD12	2.51	0.51
67:LF:134:ARG:HA	67:LF:137:GLU:HG2	1.92	0.51
70:Le:45:VAL:HG22	70:Le:52:GLN:HB3	1.93	0.51
1:S2:958:G:H8	1:S2:958:G:O5'	1.94	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S2:1672:U:OP1	16:SQ:18:THR:HG22	2.11	0.51
1:S2:1856:C:H2'	1:S2:1857:G:C8	2.46	0.51
3:L5:181:C:H2'	3:L5:182:G:C8	2.46	0.51
3:L5:4473:A:H5''	77:Lm:95:ILE:HD12	1.92	0.51
36:Sf:102:VAL:HG12	36:Sf:104:LYS:H	1.75	0.51
53:LD:223:PHE:HB3	53:LD:226:TYR:HB2	1.92	0.51
60:LX:110:LYS:HG3	60:LX:121:VAL:HB	1.93	0.51
1:S2:639:C:H2'	1:S2:640:A:H8	1.74	0.51
1:S2:895:G:H3'	1:S2:896:U:H4'	1.92	0.51
3:L5:433:A:C2	3:L5:3867:A2M:H4'	2.45	0.51
3:L5:659:G:C6	3:L5:660:A:N6	2.79	0.51
3:L5:963:G:C5'	67:LF:32:ARG:HH21	2.23	0.51
3:L5:1995:G:H3'	3:L5:1996:C:C5	2.46	0.51
3:L5:3710:G:H5''	3:L5:3710:G:C8	2.45	0.51
3:L5:4075:U:OP1	45:LG:249:ARG:NH1	2.40	0.51
6:SA:55:TRP:HD1	6:SA:59:LEU:HD23	1.76	0.51
7:SD:64:ARG:NH2	18:SK:94:LEU:HD22	2.26	0.51
19:SO:79:GLN:OE1	19:SO:122:SER:HB3	2.11	0.51
38:Lz:38:LEU:HB2	38:Lz:163:LEU:HB3	1.91	0.51
41:LC:36:ILE:HG21	41:LC:122:TYR:HD2	1.74	0.51
42:LJ:35:ARG:O	42:LJ:39:VAL:HG23	2.11	0.51
44:LE:63:TYR:CD1	44:LE:68:MET:HB3	2.46	0.51
45:LG:165:GLU:OE2	51:LN:26:ARG:NH1	2.42	0.51
58:LP:54:GLN:HA	58:LP:83:TRP:CD1	2.45	0.51
63:LZ:128:LYS:O	63:LZ:132:GLN:HG2	2.10	0.51
1:S2:15:U:H2'	1:S2:16:G:O4'	2.10	0.51
3:L5:1268:G:H2'	66:Lb:107:ARG:NH2	2.24	0.51
3:L5:4173:G:H2'	3:L5:4174:U:C6	2.46	0.51
6:SA:176:TRP:CE3	6:SA:199:PRO:HB3	2.45	0.51
16:SQ:102:GLU:HB2	16:SQ:105:LYS:HE3	1.91	0.51
22:SS:41:ALA:O	22:SS:45:LEU:HG	2.11	0.51
49:LM:17:PHE:CE1	49:LM:54:CYS:HA	2.46	0.51
55:LR:105:LEU:HD23	55:LR:138:LEU:HD23	1.93	0.51
62:LW:120:GLN:HG2	62:LW:124:LYS:HZ3	1.76	0.51
66:Lb:5:MLZ:HZ	66:Lb:8:THR:HB	1.76	0.51
70:Le:25:SER:HA	70:Le:31:ILE:CG2	2.40	0.51
1:S2:71:G:H3'	1:S2:72:C:C6	2.46	0.51
1:S2:1203:G:H2'	1:S2:1204:A:C8	2.46	0.51
1:S2:1708:C:H2'	1:S2:1709:G:C8	2.46	0.51
2:L8:92:U:H2'	2:L8:93:C:O4'	2.10	0.51
3:L5:61:A:H5''	51:LN:164:LEU:HD21	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:1245:C:H2'	3:L5:1246:G:C8	2.46	0.51
3:L5:2685:C:H2'	3:L5:2686:G:O4'	2.11	0.51
3:L5:3684:G:H2'	3:L5:3685:C:C6	2.46	0.51
3:L5:4457:PSU:H1'	40:LB:252:ALA:HB3	1.92	0.51
3:L5:4862:G:H2'	3:L5:4863:G:H8	1.75	0.51
4:L7:102:U:H3'	4:L7:103:A:H8	1.76	0.51
7:SD:93:THR:HB	7:SD:96:LEU:HD23	1.93	0.51
36:Sf:137:ASP:O	36:Sf:138:ARG:HG2	2.11	0.51
53:LD:218:ALA:HA	53:LD:221:LYS:HG2	1.92	0.51
1:S2:203:G:N2	1:S2:204:G:H1'	2.25	0.50
1:S2:1406:G:H21	1:S2:1443:C:N4	2.08	0.50
1:S2:1413:G:H2'	1:S2:1414:A:C8	2.43	0.50
1:S2:1528:G:H2'	1:S2:1529:C:C6	2.46	0.50
1:S2:1771:G:H5''	1:S2:1771:G:N3	2.26	0.50
3:L5:496:G:H2'	3:L5:497:G:H8	1.75	0.50
3:L5:952:G:H5''	71:Lf:73:LYS:HE2	1.92	0.50
3:L5:2757:A:H2'	3:L5:2758:G:C8	2.46	0.50
3:L5:3732:A:H2'	3:L5:3733:A:H8	1.76	0.50
3:L5:4238:G:H2'	3:L5:4239:A:C8	2.46	0.50
3:L5:4625:C:O2'	3:L5:4626:A:H5'	2.11	0.50
9:SE:46:ILE:O	9:SE:51:ARG:HG2	2.11	0.50
12:SF:18:LYS:HG3	12:SF:21:GLY:HA2	1.92	0.50
41:LC:189:MET:HE1	41:LC:200:ARG:HB3	1.92	0.50
42:LJ:19:LYS:HG2	42:LJ:133:VAL:HB	1.93	0.50
57:LT:104:SER:O	57:LT:107:LYS:HG3	2.10	0.50
67:LF:29:LYS:HG3	67:LF:32:ARG:NH2	2.26	0.50
1:S2:334:C:OP2	11:SG:190:ARG:NH2	2.40	0.50
1:S2:1302:G:H21	36:Sf:95:ARG:HD2	1.76	0.50
3:L5:700:G:H2'	3:L5:701:G:H8	1.76	0.50
3:L5:1315:C:H5'	70:Le:23:HIS:CE1	2.35	0.50
3:L5:1648:C:H3'	3:L5:1649:U:H2'	1.93	0.50
3:L5:2019:C:H2'	3:L5:2020:U:C6	2.45	0.50
3:L5:2745:A:H2'	3:L5:2746:A:H8	1.73	0.50
3:L5:3664:G:H2'	3:L5:3665:G:C8	2.46	0.50
9:SE:162:ILE:HG22	9:SE:169:ILE:HA	1.93	0.50
41:LC:322:LEU:O	41:LC:326:LEU:HG	2.11	0.50
51:LN:9:GLU:HB2	73:Li:44:ILE:HG13	1.94	0.50
73:Li:73:ILE:O	73:Li:77:VAL:HG22	2.11	0.50
83:At:72:C:H2'	83:At:73:A:C8	2.46	0.50
1:S2:1102:G:H2'	1:S2:1103:C:C6	2.46	0.50
1:S2:1565:C:H2'	1:S2:1566:G:C8	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L8:140:C:H2'	2:L8:141:C:C6	2.46	0.50
3:L5:408:A:H5''	3:L5:409:G:OP1	2.11	0.50
3:L5:5058:A:H4'	69:Ld:23:ARG:HH12	1.76	0.50
9:SE:101:LEU:HD22	9:SE:109:PHE:HB3	1.94	0.50
10:SC:130:ILE:HG23	10:SC:162:ILE:HD11	1.93	0.50
42:LJ:19:LYS:HE2	42:LJ:75:ARG:HH12	1.76	0.50
47:LL:107:THR:OG1	73:Li:18:THR:OG1	2.29	0.50
68:Lc:38:ILE:HD11	68:Lc:46:VAL:HG21	1.93	0.50
1:S2:639:C:H2'	1:S2:640:A:C8	2.46	0.50
1:S2:1542:C:H5''	28:ST:62:ARG:CZ	2.41	0.50
1:S2:1643:PSU:H2'	1:S2:1644:C:C6	2.46	0.50
3:L5:164:G:H2'	3:L5:165:A:H8	1.75	0.50
3:L5:956:A:H1'	3:L5:2076:G:H5''	1.92	0.50
3:L5:1214:C:N3	66:Lb:90:SER:OG	2.45	0.50
3:L5:1400:G:H2'	3:L5:1401:C:C6	2.45	0.50
3:L5:2015:U:H2'	3:L5:2016:C:H6	1.76	0.50
3:L5:2094:G:H2'	3:L5:2095:A:N7	2.25	0.50
3:L5:3721:U:H2'	3:L5:3722:G:H8	1.76	0.50
3:L5:4936:G:C5	44:LE:183:ARG:HD3	2.46	0.50
5:SB:109:LYS:O	5:SB:113:MET:HG2	2.12	0.50
8:SJ:169:ARG:HG2	8:SJ:170:PRO:HD2	1.93	0.50
22:SS:86:ARG:NE	22:SS:89:ASP:HB3	2.26	0.50
24:SN:32:ASP:O	24:SN:35:GLU:HG3	2.11	0.50
45:LG:136:LEU:HD22	45:LG:202:VAL:HG22	1.92	0.50
51:LN:149:GLN:NE2	65:Lh:99:GLU:O	2.40	0.50
53:LD:223:PHE:O	53:LD:227:ILE:HG12	2.11	0.50
77:Lm:99:CYS:C	77:Lm:101:ALA:H	2.19	0.50
1:S2:1279:C:H2'	1:S2:1280:G:C8	2.47	0.50
2:L8:6:C:H2'	2:L8:7:U:H6	1.76	0.50
3:L5:3748:A:O2'	39:LA:223:SER:OG	2.29	0.50
3:L5:4251:A:H5''	42:LJ:108:GLY:HA3	1.92	0.50
5:SB:32:ASP:OD2	5:SB:43:ASN:ND2	2.45	0.50
6:SA:90:PHE:HD1	6:SA:179:ALA:HB2	1.76	0.50
11:SG:7:PHE:CD2	11:SG:10:THR:HG22	2.47	0.50
12:SF:40:ALA:HB1	12:SF:45:TYR:HB3	1.94	0.50
25:SL:127:THR:HB	25:SL:144:LYS:HB3	1.93	0.50
74:Lj:20:ARG:NH1	74:Lj:39:TYR:OH	2.44	0.50
1:S2:834:C:H2'	1:S2:835:C:H6	1.76	0.50
3:L5:396:A:H62	58:LP:93:HIS:CE1	2.29	0.50
3:L5:699:C:H2'	3:L5:700:G:H8	1.76	0.50
3:L5:3923:A:H2'	3:L5:3924:C:C6	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:4901:G:H2'	3:L5:4902:C:C6	2.47	0.50
12:SF:102:LEU:HD11	31:SZ:100:VAL:HG21	1.94	0.50
31:SZ:82:SER:HA	31:SZ:85:ARG:NE	2.27	0.50
55:LR:168:GLU:HA	55:LR:171:LYS:HG2	1.93	0.50
70:Le:35:TRP:CZ2	70:Le:56:PRO:HD2	2.46	0.50
1:S2:448:A:H5''	15:SI:25:ARG:HA	1.93	0.50
1:S2:494:C:N4	1:S2:509:OMG:HN22	2.10	0.50
1:S2:958:G:C6	1:S2:959:G:C6	2.99	0.50
3:L5:1428:U:H5''	54:LQ:42:THR:OG1	2.12	0.50
3:L5:1942:A:N6	3:L5:2039:G:H2'	2.26	0.50
3:L5:4094:G:N2	3:L5:4114:C:O2	2.44	0.50
3:L5:4699:U:H1'	3:L5:4700:A:H5''	1.93	0.50
3:L5:4704:C:H2'	3:L5:4705:A:H8	1.77	0.50
5:SB:103:MET:HE3	5:SB:188:LEU:HD21	1.94	0.50
16:SQ:132:PHE:CE1	17:SU:76:THR:HA	2.47	0.50
38:Lz:67:VAL:HB	38:Lz:107:TYR:HD2	1.77	0.50
38:Lz:82:ILE:CB	38:Lz:83:PRO:HD2	2.35	0.50
44:LE:211:HIS:NE2	44:LE:249:ASP:OD2	2.45	0.50
45:LG:218:LEU:O	45:LG:222:ILE:HG12	2.12	0.50
59:LU:28:PRO:HB3	59:LU:100:LEU:HD11	1.94	0.50
1:S2:170:A:H4'	11:SG:136:LYS:HD2	1.94	0.50
1:S2:573:PSU:O4	1:S2:576:A2M:H8	2.11	0.50
1:S2:675:U:H2'	1:S2:676:C:H6	1.77	0.50
1:S2:1067:C:H2'	1:S2:1068:G:O4'	2.11	0.50
1:S2:1775:U:H2'	1:S2:1776:G:C8	2.47	0.50
3:L5:1878:G:H2'	3:L5:1879:C:C6	2.47	0.50
3:L5:2630:U:H2'	3:L5:2632:PSU:H1'	1.94	0.50
3:L5:3652:A:H2'	3:L5:3653:A:C8	2.46	0.50
3:L5:4306:OMU:OP2	54:LQ:159:PRO:HD2	2.12	0.50
3:L5:4390:A:H2'	3:L5:4391:G:O4'	2.12	0.50
6:SA:180:ARG:HE	6:SA:184:ARG:NH2	2.07	0.50
18:SK:57:TYR:HB3	18:SK:75:GLY:HA2	1.94	0.50
37:Sg:245:ARG:HB2	37:Sg:247:TRP:CZ3	2.46	0.50
49:LM:13:ALA:HA	49:LM:58:THR:HG23	1.93	0.50
53:LD:33:ARG:NH1	53:LD:37:VAL:HG11	2.27	0.50
58:LP:24:VAL:HG12	58:LP:86:LYS:HD3	1.93	0.50
81:5A:74:PRO:O	81:5A:75:SER:HB2	2.11	0.50
1:S2:641:A:O2'	1:S2:645:C:OP1	2.30	0.50
1:S2:903:A:H2'	1:S2:904:A:H8	1.77	0.50
1:S2:1093:A:H2'	1:S2:1094:C:C6	2.47	0.50
1:S2:1227:G:C2	1:S2:1228:A:C8	2.99	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L8:6:C:H2'	2:L8:7:U:C6	2.47	0.50
3:L5:254:G:H3'	3:L5:255:C:C6	2.47	0.50
3:L5:987:C:H2'	3:L5:988:C:H6	1.77	0.50
4:L7:58:A:H2'	4:L7:59:G:H8	1.77	0.50
6:SA:198:MET:SD	6:SA:199:PRO:HD2	2.52	0.50
31:SZ:82:SER:HA	31:SZ:85:ARG:CZ	2.41	0.50
37:Sg:32:LEU:HG	37:Sg:71:ILE:HD11	1.94	0.50
41:LC:165:LYS:O	41:LC:166:GLU:C	2.54	0.50
67:LF:126:ASN:O	67:LF:130:ILE:HG12	2.12	0.50
70:Le:66:THR:HA	70:Le:69:MET:HE3	1.93	0.50
74:Lj:69:ILE:O	74:Lj:73:ARG:HG3	2.11	0.50
77:Lm:99:CYS:C	77:Lm:101:ALA:N	2.69	0.50
83:At:27:G:H2'	83:At:28:G:H8	1.76	0.50
1:S2:72:C:H42	11:SG:170:ARG:HH12	1.60	0.49
1:S2:182:C:H3'	1:S2:182:C:OP2	2.11	0.49
3:L5:2693:G:H2'	3:L5:2694:G:N2	2.27	0.49
3:L5:4188:U:H2'	3:L5:4189:U:C6	2.47	0.49
8:SJ:152:ASP:OD1	8:SJ:153:SER:N	2.44	0.49
9:SE:8:HIS:O	9:SE:30:ARG:NH1	2.45	0.49
22:SS:40:TYR:CZ	22:SS:97:GLN:HG2	2.47	0.49
22:SS:138:THR:HA	22:SS:141:ARG:HH21	1.77	0.49
28:ST:115:LYS:HG2	28:ST:121:ARG:HE	1.77	0.49
44:LE:105:ARG:HH11	44:LE:105:ARG:HG2	1.77	0.49
49:LM:94:LYS:O	49:LM:98:ARG:HG3	2.12	0.49
56:LS:161:ARG:HD2	56:LS:164:LYS:HB2	1.94	0.49
3:L5:1283:G:O6	41:LC:312:ARG:NH1	2.45	0.49
3:L5:1569:U:H2'	3:L5:1570:G:C8	2.48	0.49
3:L5:1978:C:H3'	3:L5:1979:A:H8	1.77	0.49
3:L5:2345:G:N7	50:La:9:ARG:NH2	2.60	0.49
3:L5:2399:G:O2'	3:L5:2822:G:O2'	2.28	0.49
7:SD:68:GLU:HA	18:SK:93:THR:HG21	1.94	0.49
9:SE:173:ILE:HD13	9:SE:230:LYS:HD3	1.93	0.49
13:SH:47:ALA:HB3	13:SH:63:PHE:HD2	1.76	0.49
13:SH:53:VAL:O	13:SH:57:ARG:HB3	2.11	0.49
15:SI:48:VAL:HG11	15:SI:54:LYS:HE3	1.94	0.49
40:LB:168:MET:HG3	40:LB:177:LYS:O	2.13	0.49
42:LJ:91:GLU:O	42:LJ:93:GLU:HG2	2.12	0.49
55:LR:60:ARG:HB3	55:LR:60:ARG:HH11	1.77	0.49
63:LZ:25:ILE:HA	63:LZ:43:VAL:HG12	1.95	0.49
83:At:2:C:H2'	83:At:3:C:C6	2.47	0.49
1:S2:129:C:C4	1:S2:182:C:C4	3.01	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S2:184:G:H2'	1:S2:185:G:C8	2.47	0.49
1:S2:1270:G:O2'	1:S2:1301:A:N7	2.41	0.49
1:S2:1332:A:O2'	7:SD:145:GLN:O	2.27	0.49
1:S2:1595:U:H2'	1:S2:1596:U:C6	2.47	0.49
3:L5:724:C:H1'	41:LC:343:GLN:HG2	1.92	0.49
3:L5:1084:C:H2'	3:L5:1085:C:C6	2.47	0.49
3:L5:1811:G:H2'	3:L5:1812:C:H6	1.77	0.49
3:L5:4088:C:OP1	39:LA:37:ARG:NH2	2.44	0.49
3:L5:4287:G:H2'	3:L5:4288:C:C6	2.47	0.49
3:L5:4901:G:H2'	3:L5:4902:C:H6	1.77	0.49
18:SK:15:LEU:O	18:SK:16:PHE:C	2.53	0.49
30:SY:14:THR:HA	30:SY:21:LYS:HB3	1.95	0.49
52:LI:38:ARG:HG2	52:LI:41:ALA:HB2	1.93	0.49
56:LS:147:ASP:HB3	56:LS:150:ILE:HB	1.94	0.49
59:LU:56:LEU:HG	59:LU:61:VAL:HG23	1.94	0.49
63:LZ:92:ASP:HB2	63:LZ:95:VAL:HG22	1.95	0.49
1:S2:150:A:H3'	1:S2:151:C:H6	1.77	0.49
3:L5:1084:C:H2'	3:L5:1085:C:H6	1.77	0.49
3:L5:3722:G:H2'	3:L5:3723:A2M:C8	2.38	0.49
3:L5:3911:C:H2'	3:L5:3912:U:C6	2.47	0.49
3:L5:4161:G:N2	45:LG:53:ARG:HH21	2.10	0.49
3:L5:4235:G:O2'	3:L5:4330:G:O2'	2.29	0.49
3:L5:4892:A:H5''	46:LO:188:LYS:HZ2	1.77	0.49
19:SO:44:VAL:HG23	19:SO:93:LEU:HD11	1.94	0.49
20:SX:67:ARG:NH2	20:SX:114:ASP:OD2	2.46	0.49
38:Lz:207:LYS:HD2	38:Lz:212:LYS:CA	2.43	0.49
45:LG:163:PRO:HB2	45:LG:165:GLU:OE1	2.13	0.49
70:Le:105:SER:HB3	70:Le:128:ARG:HB3	1.95	0.49
1:S2:352:U:HO2'	25:SL:140:PHE:HZ	1.57	0.49
1:S2:1438:A:H2'	1:S2:1439:A:C8	2.47	0.49
2:L8:70:G:H5''	61:LY:27:ARG:CZ	2.43	0.49
3:L5:162:A:H2'	3:L5:163:A:C8	2.48	0.49
3:L5:218:A:O5'	3:L5:219:G:N2	2.45	0.49
3:L5:1251:C:H2'	3:L5:1252:C:C6	2.47	0.49
3:L5:1332:C:H2'	3:L5:1333:A:H8	1.77	0.49
3:L5:3867:A2M:HM'3	3:L5:3880:G:N2	2.26	0.49
28:ST:31:PRO:CD	28:ST:34:VAL:HG22	2.41	0.49
37:Sg:42:MET:SD	37:Sg:56:GLN:HB3	2.53	0.49
37:Sg:245:ARG:HB2	37:Sg:247:TRP:HZ3	1.78	0.49
38:Lz:81:ASP:OD2	38:Lz:145:VAL:HG11	2.13	0.49
38:Lz:85:MET:HE2	38:Lz:85:MET:HA	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:LJ:80:GLU:O	42:LJ:84:GLU:HG2	2.13	0.49
75:Lk:12:LEU:HB3	75:Lk:16:ARG:NH1	2.28	0.49
81:5A:113:ARG:O	81:5A:115:PRO:HD3	2.11	0.49
81:5A:150:LYS:HD2	84:Pt:18:C:N4	2.27	0.49
1:S2:71:G:C2	1:S2:72:C:H1'	2.48	0.49
1:S2:115:U:H2'	1:S2:116:OMU:C6	2.41	0.49
1:S2:1221:G:H2'	1:S2:1222:G:C8	2.47	0.49
3:L5:164:G:H2'	3:L5:165:A:C8	2.48	0.49
3:L5:1998:A:C5	3:L5:1999:A:C5	3.01	0.49
3:L5:4291:G:H8	3:L5:4328:G:H2'	1.76	0.49
6:SA:200:ASP:HA	6:SA:203:PHE:CE2	2.48	0.49
13:SH:51:ILE:HG21	13:SH:179:LYS:HG2	1.93	0.49
18:SK:16:PHE:O	18:SK:17:LYS:C	2.55	0.49
37:Sg:40:ILE:HB	37:Sg:59:LEU:HB3	1.94	0.49
40:LB:47:LEU:HG	40:LB:181:MET:SD	2.52	0.49
41:LC:359:ALA:O	41:LC:362:GLN:HG3	2.12	0.49
42:LJ:26:VAL:HG13	42:LJ:32:ARG:HG3	1.94	0.49
54:LQ:59:PRO:HG3	54:LQ:143:ARG:HA	1.94	0.49
1:S2:180:G:H2'	1:S2:181:A:H8	1.72	0.49
1:S2:211:G:H2'	1:S2:212:C:C6	2.47	0.49
1:S2:901:G:H2'	1:S2:902:G:H8	1.77	0.49
1:S2:984:C:O2'	19:SO:138:ASP:HB3	2.13	0.49
1:S2:1285:G:H5''	1:S2:1286:G:C8	2.48	0.49
1:S2:1648:G:H22	1:S2:1675:A:P	2.36	0.49
1:S2:1650:A:H5''	16:SQ:139:ALA:HB2	1.94	0.49
2:L8:110:U:N3	2:L8:112:G:H1'	2.27	0.49
3:L5:368:C:O4'	41:LC:83:GLY:HA3	2.13	0.49
3:L5:1645:C:OP1	41:LC:80:ARG:NH2	2.45	0.49
3:L5:3712:A:H2'	3:L5:3713:U:C6	2.47	0.49
30:SY:37:LYS:HG2	30:SY:60:PHE:CE2	2.41	0.49
37:Sg:121:VAL:HG22	37:Sg:129:ILE:HD11	1.94	0.49
1:S2:1164:G:O2'	1:S2:1165:G:H5'	2.13	0.49
1:S2:1394:G:O2'	16:SQ:124:PRO:HB3	2.13	0.49
3:L5:1218:G:H2'	3:L5:1219:G:H8	1.76	0.49
3:L5:1535:C:H2'	3:L5:1536:PSU:O4'	2.12	0.49
3:L5:1811:G:H2'	3:L5:1812:C:C6	2.48	0.49
3:L5:2758:G:H2'	3:L5:2759:G:C8	2.47	0.49
3:L5:3965:A:H61	3:L5:4056:A:N6	2.11	0.49
3:L5:4309:G:H5'	3:L5:4338:G:H5''	1.94	0.49
9:SE:106:LYS:HB2	9:SE:108:ARG:NE	2.28	0.49
10:SC:168:GLY:N	10:SC:179:THR:O	2.30	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:LA:174:ARG:C	39:LA:176:ASP:H	2.21	0.49
43:LH:34:LEU:HD12	43:LH:84:VAL:HG23	1.95	0.49
43:LH:137:SER:HB2	43:LH:145:ILE:HD11	1.95	0.49
49:LM:85:LYS:O	49:LM:89:THR:HG23	2.12	0.49
59:LU:23:LEU:HD11	59:LU:39:PHE:HE2	1.78	0.49
61:LY:30:MET:CE	61:LY:78:TYR:HA	2.39	0.49
1:S2:183:G:H3'	1:S2:183:G:N3	2.28	0.49
1:S2:419:G:N2	1:S2:661:U:O2	2.45	0.49
1:S2:1545:A:H2'	1:S2:1546:G:C8	2.48	0.49
1:S2:1705:C:H2'	1:S2:1706:G:C8	2.47	0.49
1:S2:1745:A:H1'	11:SG:66:GLY:HA2	1.94	0.49
3:L5:1262:G:H2'	3:L5:1263:A:H8	1.78	0.49
3:L5:1961:G:HO2'	3:L5:1962:A:P	2.36	0.49
3:L5:1970:A:H4'	3:L5:2000:G:H8	1.78	0.49
3:L5:2539:C:H2'	3:L5:2540:C:H6	1.76	0.49
3:L5:3976:C:N4	3:L5:4035:G:OP1	2.46	0.49
5:SB:167:LYS:O	5:SB:171:ILE:HD12	2.13	0.49
11:SG:161:PRO:CB	11:SG:171:THR:HA	2.42	0.49
14:SW:30:CYS:HB2	14:SW:61:ILE:HG13	1.95	0.49
25:SL:111:VAL:HG12	25:SL:140:PHE:HB2	1.95	0.49
37:Sg:8:ARG:HB3	37:Sg:311:GLN:HE22	1.77	0.49
37:Sg:31:ILE:HG21	37:Sg:299:PHE:CE2	2.45	0.49
37:Sg:256:ILE:HB	37:Sg:270:LEU:HB2	1.95	0.49
38:Lz:66:CYS:O	38:Lz:83:PRO:HB2	2.12	0.49
64:Lr:20:ARG:HD3	70:Le:78:LEU:HB3	1.95	0.49
79:Lo:35:ALA:O	79:Lo:39:ARG:HG3	2.13	0.49
1:S2:34:PSU:H2'	1:S2:35:C:H6	1.77	0.49
1:S2:49:C:H2'	1:S2:472:C:H41	1.78	0.49
1:S2:187:G:C6	1:S2:188:C:C4	3.01	0.49
3:L5:447:C:H2'	3:L5:448:G:C8	2.48	0.49
3:L5:1577:G:H5'	3:L5:1578:U:H5''	1.93	0.49
3:L5:2863:G:H1'	55:LR:82:LYS:CE	2.43	0.49
3:L5:4141:G:H2'	3:L5:4142:C:C6	2.48	0.49
3:L5:4306:OMU:OP1	54:LQ:154:LYS:NZ	2.43	0.49
12:SF:50:PRO:HG2	12:SF:90:VAL:HG22	1.95	0.49
13:SH:27:LEU:HD21	13:SH:40:LEU:HD21	1.95	0.49
19:SO:105:THR:HG22	19:SO:107:THR:H	1.77	0.49
30:SY:29:HIS:ND1	30:SY:29:HIS:O	2.45	0.49
37:Sg:191:HIS:CD2	37:Sg:195:LEU:HD21	2.48	0.49
38:Lz:145:VAL:HA	38:Lz:148:VAL:HG12	1.94	0.49
40:LB:48:GLY:HA3	40:LB:81:THR:HG22	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:LT:132:PRO:HB2	67:LF:126:ASN:HB2	1.95	0.49
72:Lg:93:ARG:O	72:Lg:97:ILE:HG12	2.13	0.49
1:S2:5:U:OP2	10:SC:230:THR:OG1	2.29	0.48
1:S2:28:U:H2'	1:S2:29:G:C8	2.46	0.48
1:S2:1545:A:H4'	16:SQ:74:GLY:HA2	1.95	0.48
3:L5:1269:G:H8	3:L5:1269:G:H3'	1.78	0.48
3:L5:2467:U:H4'	3:L5:2468:U:H5'	1.94	0.48
3:L5:3899:OMG:H5''	40:LB:257:TRP:CD1	2.48	0.48
3:L5:4129:G:OP1	63:LZ:55:ALA:N	2.44	0.48
8:SJ:29:LEU:HA	8:SJ:32:ILE:HG22	1.94	0.48
8:SJ:115:PHE:HE1	8:SJ:122:SER:HA	1.78	0.48
11:SG:7:PHE:HD2	11:SG:10:THR:CG2	2.26	0.48
12:SF:187:SER:OG	12:SF:190:ILE:HG12	2.13	0.48
13:SH:134:VAL:HG11	13:SH:187:PHE:HE2	1.77	0.48
21:SM:20:GLU:HG3	21:SM:119:GLN:HG3	1.95	0.48
22:SS:111:LEU:HB3	22:SS:115:LYS:HZ3	1.78	0.48
30:SY:15:ASN:HD22	30:SY:20:ARG:HG3	1.77	0.48
31:SZ:66:LYS:HD3	31:SZ:111:ARG:HH21	1.78	0.48
37:Sg:165:ILE:HG23	37:Sg:179:LEU:HD11	1.95	0.48
51:LN:51:LEU:O	51:LN:117:ASN:ND2	2.46	0.48
1:S2:184:G:H2'	1:S2:185:G:H8	1.79	0.48
1:S2:618:C:H41	20:SX:67:ARG:NH2	2.11	0.48
1:S2:946:U:H4'	1:S2:1046:U:OP1	2.13	0.48
3:L5:1907:A:H2'	3:L5:1908:A:C8	2.48	0.48
3:L5:2436:U:OP2	60:LX:135:LYS:NZ	2.46	0.48
7:SD:203:PRO:HG2	26:SR:42:PRO:HG3	1.94	0.48
10:SC:178:HIS:CD2	10:SC:179:THR:HG23	2.49	0.48
11:SG:224:ARG:O	11:SG:228:ILE:HD12	2.14	0.48
12:SF:126:THR:O	12:SF:136:ARG:HA	2.12	0.48
21:SM:15:ASN:O	21:SM:19:GLN:HG2	2.13	0.48
25:SL:126:VAL:HG13	25:SL:142:VAL:HG13	1.95	0.48
53:LD:178:LYS:HG2	53:LD:179:ARG:HH12	1.77	0.48
58:LP:125:MET:HB2	58:LP:141:SER:OG	2.13	0.48
59:LU:25:CYS:HB3	59:LU:28:PRO:HG2	1.94	0.48
70:Le:25:SER:HA	70:Le:31:ILE:HG22	1.94	0.48
76:Ll:43:HIS:HB3	76:Ll:46:ARG:HG3	1.95	0.48
81:5A:119:LEU:HA	81:5A:122:GLU:OE1	2.13	0.48
1:S2:835:C:H5''	1:S2:836:G:C8	2.47	0.48
1:S2:1033:G:H8	1:S2:1033:G:O5'	1.96	0.48
3:L5:459:C:H5'	44:LE:110:ARG:HA	1.95	0.48
3:L5:1893:C:H1'	3:L5:1937:C:O2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:4070:U:H2'	3:L5:4071:U:H6	1.79	0.48
3:L5:4141:G:O2'	3:L5:4142:C:O5'	2.31	0.48
6:SA:207:PRO:HA	6:SA:210:ILE:HG22	1.94	0.48
18:SK:13:GLU:O	18:SK:14:LEU:C	2.56	0.48
40:LB:224:LYS:HE3	40:LB:340:THR:HG22	1.96	0.48
44:LE:67:ALA:HA	44:LE:69:TYR:CE2	2.48	0.48
45:LG:30:PRO:HB2	63:LZ:125:GLY:HA3	1.96	0.48
45:LG:48:LYS:HE2	60:LX:42:THR:HB	1.95	0.48
53:LD:51:MET:HE3	53:LD:105:LEU:HD23	1.95	0.48
53:LD:211:LEU:HB3	53:LD:219:TYR:HB2	1.94	0.48
1:S2:27:A2M:HM'3	1:S2:27:A2M:H1'	1.65	0.48
1:S2:1143:A:H2'	1:S2:1144:A:C8	2.48	0.48
1:S2:1417:C:H2'	1:S2:1418:C:C2	2.49	0.48
1:S2:1712:A:H2'	1:S2:1713:C:C6	2.48	0.48
2:L8:144:U:H2'	2:L8:145:C:H6	1.77	0.48
3:L5:4704:C:H2'	3:L5:4705:A:C8	2.48	0.48
3:L5:4734:A:H2'	3:L5:4735:G:H8	1.77	0.48
6:SA:38:ILE:HG21	6:SA:47:TYR:HD2	1.77	0.48
8:SJ:170:PRO:O	8:SJ:175:ARG:NH2	2.45	0.48
9:SE:42:LEU:HD23	9:SE:47:PHE:HD2	1.78	0.48
11:SG:121:ILE:HD12	11:SG:122:PRO:HD2	1.94	0.48
16:SQ:62:ARG:NH1	16:SQ:108:ILE:HG22	2.28	0.48
20:SX:10:ALA:HB1	25:SL:96:ILE:HD12	1.94	0.48
40:LB:303:ALA:HB2	40:LB:314:ILE:HA	1.96	0.48
45:LG:152:ALA:HA	45:LG:205:THR:HA	1.95	0.48
46:LO:178:ARG:O	46:LO:182:GLU:HG3	2.14	0.48
53:LD:121:GLY:HA2	53:LD:130:TYR:OH	2.13	0.48
53:LD:218:ALA:HA	53:LD:221:LYS:HE3	1.95	0.48
54:LQ:39:THR:CG2	54:LQ:132:LYS:HG2	2.44	0.48
67:LF:96:ARG:HH12	67:LF:224:THR:HG22	1.76	0.48
81:5A:42:GLU:HB3	81:5A:59:VAL:HB	1.94	0.48
1:S2:1398:G:H22	1:S2:1448:A:H2	1.60	0.48
3:L5:35:U:H4'	3:L5:1525:A:C2	2.48	0.48
3:L5:162:A:H2'	3:L5:163:A:H8	1.77	0.48
3:L5:317:A:C2	3:L5:4361:PSU:H1'	2.48	0.48
3:L5:456:C:H2'	3:L5:457:G:H8	1.78	0.48
3:L5:909:A:H2'	3:L5:910:G:H8	1.79	0.48
3:L5:1683:PSU:H2'	3:L5:1684:A:C8	2.48	0.48
3:L5:1849:U:OP2	47:LL:5:ARG:NH2	2.45	0.48
3:L5:2103:G:H2'	3:L5:2104:G:O4'	2.14	0.48
3:L5:2667:C:OP1	55:LR:100:ARG:NE	2.40	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:2838:G:OP1	40:LB:248:LEU:N	2.43	0.48
3:L5:3595:U:H2'	3:L5:3596:A:H4'	1.95	0.48
3:L5:5004:C:H2'	3:L5:5005:G:O4'	2.14	0.48
10:SC:253:PRO:HA	10:SC:256:TRP:CG	2.49	0.48
39:LA:22:HIS:O	39:LA:24:LYS:NZ	2.45	0.48
41:LC:303:ARG:HG2	54:LQ:38:ARG:O	2.14	0.48
42:LJ:16:ARG:NH2	42:LJ:137:PRO:HG3	2.29	0.48
49:LM:24:LEU:H	49:LM:43:THR:HG21	1.77	0.48
57:LT:4:THR:HB	57:LT:9:ARG:HD3	1.95	0.48
77:Lm:79:GLU:HB2	77:Lm:82:LEU:HD23	1.96	0.48
1:S2:12:U:H2'	1:S2:13:C:C6	2.49	0.48
1:S2:434:G:OP1	15:SI:23:LYS:HG2	2.14	0.48
1:S2:550:C:H2'	1:S2:551:U:H6	1.78	0.48
2:L8:9:A:H2'	2:L8:10:G:C8	2.48	0.48
3:L5:1617:G:H1'	3:L5:2513:A:N6	2.28	0.48
3:L5:2743:A:H2'	3:L5:2744:A:C8	2.49	0.48
3:L5:3656:A:H2'	3:L5:3657:U:C6	2.47	0.48
3:L5:3661:G:C4	39:LA:150:LEU:HD13	2.49	0.48
3:L5:4083:U:OP1	39:LA:123:ARG:NH1	2.47	0.48
19:SO:33:ILE:HG13	19:SO:97:LEU:HA	1.95	0.48
81:5A:114:LEU:HG	81:5A:119:LEU:CB	2.43	0.48
82:mR:34:C:H2'	82:mR:35:G:O4'	2.12	0.48
83:At:74:C:H3'	83:At:75:C:C6	2.49	0.48
1:S2:1706:G:H4'	78:Ln:1:MET:HE3	1.95	0.48
1:S2:1760:G:N7	1:S2:1771:G:C8	2.82	0.48
2:L8:30:U:H2'	2:L8:31:G:H8	1.78	0.48
3:L5:1633:G:H5'	3:L5:1634:A:OP1	2.14	0.48
3:L5:3654:G:O2'	3:L5:3693:U:OP1	2.26	0.48
3:L5:4045:G:N2	3:L5:4047:A:N3	2.62	0.48
3:L5:4507:A:H2'	3:L5:4508:C:C6	2.49	0.48
5:SB:65:ARG:O	5:SB:88:THR:HG22	2.13	0.48
9:SE:160:ILE:HD12	9:SE:169:ILE:HG12	1.96	0.48
12:SF:107:ASN:HD21	12:SF:109:LEU:HB2	1.77	0.48
15:SI:36:THR:HB	15:SI:96:LEU:HB2	1.95	0.48
15:SI:87:ASN:HB3	15:SI:90:LEU:HG	1.96	0.48
18:SK:80:ARG:HD3	18:SK:87:PRO:HA	1.96	0.48
37:Sg:54:ILE:HD12	37:Sg:55:PRO:HD2	1.96	0.48
61:LY:17:ARG:NH2	61:LY:20:ASN:O	2.46	0.48
62:LW:20:ARG:HG2	62:LW:30:GLN:HG3	1.95	0.48
1:S2:1610:G:H2'	1:S2:1611:G:H8	1.78	0.48
3:L5:37:U:H2'	3:L5:38:A:O4'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:677:G:H2'	3:L5:678:C:H6	1.78	0.48
3:L5:1503:A:H4'	3:L5:1504:G:H5'	1.96	0.48
3:L5:1867:A:H2'	3:L5:1868:A:C8	2.49	0.48
3:L5:2091:C:H1'	3:L5:2094:G:H1'	1.95	0.48
3:L5:2334:C:OP2	41:LC:195:LYS:NZ	2.44	0.48
3:L5:2555:G:H2'	3:L5:2556:G:H8	1.77	0.48
3:L5:3599:A:H2'	3:L5:3600:G:H8	1.79	0.48
3:L5:3757:G:H2'	3:L5:3758:PSU:O4'	2.13	0.48
3:L5:3948:C:H2'	3:L5:3949:A:C8	2.49	0.48
3:L5:4258:C:H2'	3:L5:4259:C:H6	1.78	0.48
3:L5:4897:G:OP1	49:LM:128:LYS:NZ	2.47	0.48
11:SG:58:LYS:HA	11:SG:107:SER:HB2	1.94	0.48
14:SW:5:ASN:HD22	14:SW:8:ALA:HB2	1.78	0.48
21:SM:53:ALA:HB3	21:SM:107:SER:HA	1.95	0.48
22:SS:9:PHE:HE1	22:SS:57:GLY:HA3	1.79	0.48
22:SS:13:LEU:HB3	22:SS:20:ILE:HB	1.94	0.48
30:SY:60:PHE:CD1	30:SY:71:GLY:HA3	2.45	0.48
32:Sa:12:LYS:NZ	32:Sa:15:ARG:O	2.41	0.48
37:Sg:154:VAL:O	37:Sg:155:ARG:HD3	2.13	0.48
43:LH:81:ILE:O	43:LH:85:THR:HG22	2.14	0.48
53:LD:22:ARG:HB3	53:LD:28:THR:HG22	1.96	0.48
53:LD:228:LYS:HB2	53:LD:228:LYS:HE3	1.55	0.48
61:LY:38:LEU:HD22	61:LY:42:TYR:HE2	1.79	0.48
66:Lb:110:ALA:HB1	66:Lb:114:LYS:NZ	2.29	0.48
79:Lo:104:ILE:HG21	84:Pt:57:C:O2	2.14	0.48
81:5A:20:MET:HE2	81:5A:25:LEU:HD23	1.95	0.48
1:S2:115:U:H2'	1:S2:116:OMU:H6	1.95	0.48
1:S2:172:OMU:H6	1:S2:314:U:H1'	1.95	0.48
1:S2:344:U:H2'	1:S2:345:U:H6	1.79	0.48
1:S2:483:C:OP1	20:SX:47:ALA:HA	2.14	0.48
1:S2:495:U:H2'	1:S2:496:C:O4'	2.14	0.48
1:S2:864:A:H2'	1:S2:865:A:C8	2.49	0.48
1:S2:1285:G:H5'	21:SM:35:ILE:HD13	1.96	0.48
3:L5:171:U:H5'	47:LL:135:LYS:HZ2	1.76	0.48
3:L5:964:A:OP2	67:LF:29:LYS:HE2	2.14	0.48
3:L5:1173:G:H2'	3:L5:1174:G:C8	2.49	0.48
3:L5:1392:A:H2'	3:L5:1393:G:C8	2.49	0.48
3:L5:1551:C:C2'	3:L5:1552:G:H5'	2.44	0.48
3:L5:1998:A:H3'	3:L5:1999:A:C8	2.48	0.48
3:L5:1999:A:C2'	3:L5:2000:G:H5'	2.43	0.48
3:L5:2611:A:H2'	3:L5:2612:G:C8	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:4071:U:H2'	3:L5:4072:C:H6	1.78	0.48
3:L5:4862:G:H2'	3:L5:4863:G:C8	2.48	0.48
3:L5:4892:A:H5''	46:LO:188:LYS:NZ	2.28	0.48
9:SE:66:MET:SD	9:SE:78:THR:OG1	2.72	0.48
23:Sd:15:GLY:H	23:Sd:19:ARG:NH1	2.10	0.48
37:Sg:82:SER:OG	37:Sg:83:TRP:N	2.47	0.48
83:At:3:C:H2'	83:At:4:C:C6	2.48	0.48
1:S2:841:G:OP2	30:SY:14:THR:HG23	2.13	0.48
1:S2:1845:A:H2'	1:S2:1846:G:C8	2.49	0.48
3:L5:385:A:H1'	3:L5:386:A:H5''	1.95	0.48
3:L5:651:C:H2'	3:L5:652:G:C8	2.49	0.48
3:L5:677:G:H2'	3:L5:678:C:C6	2.49	0.48
3:L5:1202:C:H2'	3:L5:1203:G:C8	2.49	0.48
3:L5:1269:G:H3'	3:L5:1269:G:C8	2.49	0.48
3:L5:1578:U:H2'	3:L5:1579:C:C6	2.49	0.48
3:L5:4060:U:H2'	3:L5:4061:G:C8	2.48	0.48
3:L5:4173:G:H2'	3:L5:4174:U:H6	1.78	0.48
7:SD:218:LEU:HD21	37:Sg:192:THR:HG22	1.96	0.48
13:SH:143:ARG:HD2	14:SW:53:ILE:HG12	1.95	0.48
16:SQ:93:VAL:HG21	16:SQ:120:LEU:HD11	1.94	0.48
22:SS:30:ILE:HG22	22:SS:36:VAL:HG11	1.95	0.48
37:Sg:108:VAL:HA	37:Sg:124:SER:HA	1.96	0.48
41:LC:33:ARG:HG3	41:LC:122:TYR:CE2	2.49	0.48
42:LJ:112:HIS:HA	42:LJ:115:LEU:HD12	1.94	0.48
56:LS:45:TRP:CD1	56:LS:56:LYS:HE2	2.49	0.48
57:LT:118:GLU:O	57:LT:121:GLU:HG3	2.14	0.48
61:LY:22:PRO:HG2	61:LY:24:HIS:CE1	2.49	0.48
1:S2:511:U:H2'	1:S2:512:A2M:H8	1.96	0.47
1:S2:822:PSU:H3'	1:S2:824:C:OP2	2.13	0.47
1:S2:832:G:H2'	1:S2:833:C:C6	2.48	0.47
1:S2:834:C:O2'	1:S2:838:G:N2	2.47	0.47
1:S2:1562:C:H2'	1:S2:1563:G:C8	2.47	0.47
3:L5:218:A:H2'	3:L5:218:A:N3	2.28	0.47
3:L5:498:C:H2'	3:L5:499:G:C8	2.48	0.47
3:L5:688:U:H1'	44:LE:105:ARG:HD2	1.96	0.47
3:L5:1270:A:H1'	3:L5:1440:U:H1'	1.96	0.47
3:L5:3827:G:O2'	3:L5:3829:G:OP2	2.31	0.47
3:L5:4254:G:H2'	3:L5:4254:G:N3	2.29	0.47
5:SB:80:ALA:HB1	19:SO:128:ARG:HH22	1.79	0.47
5:SB:99:ASN:OD1	5:SB:100:PHE:N	2.47	0.47
11:SG:2:LYS:HB3	11:SG:15:LEU:HD11	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:SG:22:ARG:HA	11:SG:25:ARG:HH21	1.79	0.47
12:SF:130:ARG:HD3	12:SF:135:ARG:NH2	2.29	0.47
18:SK:21:MET:HB3	18:SK:69:TRP:CE3	2.48	0.47
37:Sg:228:TYR:CD1	37:Sg:264:LYS:HD3	2.49	0.47
38:Lz:207:LYS:HZ2	38:Lz:214:GLN:HB3	1.79	0.47
61:LY:17:ARG:HH21	61:LY:20:ASN:C	2.22	0.47
61:LY:32:SER:HB2	61:LY:106:ILE:HD11	1.96	0.47
71:Lf:36:ARG:HB2	71:Lf:80:ASN:HA	1.96	0.47
1:S2:77:A:OP1	11:SG:154:ARG:HB3	2.14	0.47
1:S2:919:A:OP2	24:SN:64:ARG:NH2	2.48	0.47
1:S2:1037:G:H4'	1:S2:1845:A:H4'	1.96	0.47
1:S2:1240:A:N6	27:SP:122:THR:O	2.47	0.47
1:S2:1800:A:H3'	1:S2:1801:A:H8	1.77	0.47
3:L5:478:G:H2'	3:L5:479:G:C8	2.46	0.47
3:L5:1217:G:H2'	3:L5:1218:G:C8	2.50	0.47
3:L5:1304:C:H1'	3:L5:2313:A:H1'	1.96	0.47
3:L5:3673:C:N4	3:L5:4174:U:OP1	2.47	0.47
3:L5:4115:G:OP1	3:L5:4115:G:H4'	2.13	0.47
3:L5:4954:G:H2'	3:L5:4955:A:C8	2.49	0.47
5:SB:36:PRO:HA	5:SB:232:HIS:CD2	2.49	0.47
6:SA:180:ARG:HG3	6:SA:184:ARG:NH2	2.29	0.47
16:SQ:53:GLU:CD	16:SQ:85:ARG:HE	2.22	0.47
38:Lz:77:ALA:O	38:Lz:81:ASP:N	2.40	0.47
40:LB:354:GLN:HB3	40:LB:359:ALA:HB1	1.95	0.47
53:LD:183:TYR:HA	53:LD:190:PHE:HA	1.97	0.47
54:LQ:39:THR:HG22	54:LQ:41:SER:H	1.79	0.47
63:LZ:4:PHE:HE2	63:LZ:82:PRO:HG3	1.79	0.47
1:S2:84:A:N3	1:S2:150:A:O2'	2.43	0.47
1:S2:111:A:H2'	1:S2:112:U:H6	1.78	0.47
1:S2:1161:U:H2'	1:S2:1162:C:H6	1.78	0.47
1:S2:1294:G:H2'	1:S2:1295:A:H8	1.79	0.47
3:L5:424:U:H2'	3:L5:425:U:C6	2.49	0.47
3:L5:1287:G:C2	44:LE:132:PRO:HG3	2.50	0.47
3:L5:1662:C:H2'	3:L5:1663:C:H6	1.76	0.47
3:L5:2285:A:OP2	50:La:7:LYS:NZ	2.45	0.47
3:L5:2486:G:H4'	3:L5:2487:G:H5'	1.95	0.47
3:L5:3598:C:H2'	3:L5:3599:A:H8	1.79	0.47
3:L5:3785:A2M:H2	3:L5:4551:U:O2	2.14	0.47
3:L5:3932:U:H2'	3:L5:3933:G:C8	2.49	0.47
3:L5:4987:C:P	40:LB:116:ARG:HH22	2.37	0.47
4:L7:16:A:H2'	4:L7:17:C:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:SA:176:TRP:O	6:SA:180:ARG:HG2	2.14	0.47
7:SD:161:GLY:O	7:SD:164:VAL:HG12	2.15	0.47
40:LB:66:LYS:HB3	48:LV:14:PHE:CE2	2.49	0.47
66:Lb:72:ILE:O	66:Lb:76:VAL:HB	2.15	0.47
81:5A:17:THR:HB	81:5A:80:ASP:HB3	1.96	0.47
84:Pt:51:U:H2'	84:Pt:52:C:H6	1.77	0.47
1:S2:194:C:H2'	1:S2:195:C:H6	1.80	0.47
1:S2:1394:G:H21	1:S2:1475:G:H1'	1.79	0.47
1:S2:1678:A2M:HM'3	1:S2:1678:A2M:H1'	1.68	0.47
2:L8:128:C:H2'	2:L8:129:C:H6	1.79	0.47
3:L5:15:A:O2'	60:LX:59:LYS:HD2	2.15	0.47
3:L5:88:A:N7	54:LQ:173:LYS:NZ	2.62	0.47
3:L5:171:U:H5'	47:LL:135:LYS:HZ1	1.76	0.47
3:L5:1532:G:OP2	74:Lj:31:LYS:NZ	2.43	0.47
3:L5:2267:U:OP1	64:Lr:37:SER:HB2	2.14	0.47
3:L5:2379:A:H3'	3:L5:2380:G:C8	2.50	0.47
3:L5:2409:U:H1'	76:Li:44:TRP:CH2	2.50	0.47
3:L5:2555:G:H2'	3:L5:2556:G:C8	2.49	0.47
3:L5:2557:G:O6	3:L5:2570:U:O4	2.32	0.47
3:L5:3705:G:H2'	3:L5:3706:C:H6	1.80	0.47
3:L5:3856:A:H5''	58:LP:83:TRP:O	2.15	0.47
3:L5:4139:G:C6	3:L5:4146:G:N1	2.82	0.47
3:L5:4145:C:H2'	3:L5:4146:G:C8	2.50	0.47
3:L5:4385:A:C5	81:5A:50:5CT:H13	2.49	0.47
6:SA:55:TRP:CD1	6:SA:59:LEU:HD23	2.50	0.47
11:SG:14:LYS:HE3	11:SG:16:ILE:HG22	1.96	0.47
18:SK:14:LEU:HA	18:SK:17:LYS:HZ2	1.76	0.47
37:Sg:11:LEU:HB2	37:Sg:307:VAL:HG13	1.95	0.47
67:LF:137:GLU:OE1	67:LF:234:GLY:HA2	2.14	0.47
68:Lc:99:PRO:HG3	68:Lc:105:ILE:HD13	1.96	0.47
1:S2:1233:G:N3	1:S2:1252:C:O2'	2.48	0.47
1:S2:1317:C:N4	1:S2:1318:G:O6	2.47	0.47
1:S2:1649:U:H5'	16:SQ:128:GLU:OE2	2.14	0.47
3:L5:678:C:H2'	3:L5:679:C:H6	1.79	0.47
3:L5:738:C:OP1	3:L5:739:G:H4'	2.15	0.47
3:L5:2374:A:H2'	3:L5:2375:A:C8	2.50	0.47
3:L5:2602:G:H2'	3:L5:2603:C:C6	2.50	0.47
3:L5:3705:G:H2'	3:L5:3706:C:C6	2.50	0.47
3:L5:4286:C:H2'	3:L5:4287:G:H8	1.78	0.47
3:L5:4896:G:N2	3:L5:4926:C:H41	2.11	0.47
3:L5:5002:U:H2'	3:L5:5003:U:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:SA:61:ALA:HB2	6:SA:159:ILE:HG21	1.95	0.47
6:SA:137:ALA:HB1	6:SA:142:LEU:HB2	1.95	0.47
9:SE:124:CYS:HB3	9:SE:141:THR:HB	1.94	0.47
12:SF:48:TYR:CE2	16:SQ:56:LEU:HD11	2.49	0.47
14:SW:90:GLN:HE22	14:SW:113:HIS:CD2	2.31	0.47
52:LI:205:PRO:HD2	52:LI:208:LYS:HE2	1.97	0.47
68:Lc:34:THR:HG23	68:Lc:95:ALA:HB2	1.96	0.47
1:S2:199:C:C5	1:S2:200:G:C5	3.02	0.47
1:S2:209:A:C2'	1:S2:210:U:H5'	2.45	0.47
1:S2:360:A:C2	1:S2:362:C:H2'	2.50	0.47
1:S2:476:A:N3	1:S2:488:U:H1'	2.30	0.47
1:S2:509:OMG:H2'	1:S2:510:G:H8	1.79	0.47
1:S2:866:PSU:H2'	1:S2:867:OMG:C8	2.49	0.47
1:S2:1726:G:H1	1:S2:1808:U:H3	1.62	0.47
1:S2:1803:U:H2'	1:S2:1804:OMU:H6	1.96	0.47
3:L5:2757:A:O2'	3:L5:2758:G:H5'	2.14	0.47
3:L5:4174:U:H2'	3:L5:4175:G:H8	1.80	0.47
8:SJ:55:LYS:HA	8:SJ:58:ARG:HE	1.80	0.47
18:SK:5:LYS:O	18:SK:9:ILE:HG12	2.15	0.47
20:SX:109:GLY:O	20:SX:110:HIS:ND1	2.47	0.47
22:SS:3:LEU:HD21	31:SZ:50:PHE:CD2	2.46	0.47
24:SN:35:GLU:OE2	24:SN:36:GLN:NE2	2.47	0.47
37:Sg:11:LEU:HD21	37:Sg:52:TYR:HD2	1.80	0.47
41:LC:36:ILE:HD12	41:LC:122:TYR:CE2	2.49	0.47
42:LJ:32:ARG:HH11	42:LJ:126:TYR:HE1	1.62	0.47
49:LM:25:VAL:HB	49:LM:38:VAL:HB	1.97	0.47
60:LX:149:VAL:O	60:LX:153:ILE:HG12	2.14	0.47
83:At:75:C:H2'	83:At:76:A:C4	2.49	0.47
1:S2:34:PSU:H2'	1:S2:35:C:C6	2.50	0.47
1:S2:71:G:H3'	1:S2:72:C:C5	2.49	0.47
1:S2:455:A:H2'	1:S2:456:C:C6	2.50	0.47
1:S2:928:G:H1	1:S2:1013:U:H3	1.62	0.47
1:S2:1266:C:H2'	1:S2:1267:C:H6	1.80	0.47
1:S2:1410:C:H2'	1:S2:1411:G:H8	1.79	0.47
1:S2:1743:G:N2	1:S2:1791:A:H62	2.13	0.47
2:L8:119:C:H2'	2:L8:120:G:C8	2.49	0.47
3:L5:23:C:H2'	3:L5:24:G:O4'	2.14	0.47
3:L5:750:U:H1'	3:L5:917:A:C8	2.50	0.47
3:L5:1296:G:H2'	3:L5:1297:U:H6	1.80	0.47
3:L5:1682:A:H5''	47:LL:3:PRO:O	2.15	0.47
3:L5:1958:A:H4'	3:L5:1962:A:H5'	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:2297:G:OP1	41:LC:205:ARG:NE	2.47	0.47
3:L5:2361:G:O2'	3:L5:3859:G:O6	2.31	0.47
3:L5:2409:U:H1'	76:L1:44:TRP:CZ2	2.49	0.47
3:L5:2411:C:H2'	3:L5:2412:A:H8	1.79	0.47
3:L5:3965:A:H61	3:L5:4056:A:H61	1.62	0.47
3:L5:4098:A:H2'	3:L5:4099:G:H8	1.79	0.47
3:L5:4266:G:N3	3:L5:4266:G:H2'	2.29	0.47
3:L5:4419:U:OP1	3:L5:4421:C:N4	2.41	0.47
3:L5:4459:U:H2'	3:L5:4460:U:C6	2.49	0.47
3:L5:4624:A:H5'	40:LB:223:THR:HG21	1.97	0.47
3:L5:4872:G:H4'	3:L5:4873:G:O5'	2.14	0.47
3:L5:4887:C:H2'	3:L5:4888:U:O4'	2.14	0.47
12:SF:112:LEU:O	12:SF:116:ILE:HG12	2.15	0.47
18:SK:24:LYS:NZ	18:SK:65:ARG:HE	2.13	0.47
22:SS:26:ILE:HD13	22:SS:56:ALA:HA	1.95	0.47
22:SS:98:VAL:HG23	22:SS:103:LEU:HD12	1.97	0.47
37:Sg:163:PRO:C	37:Sg:179:LEU:HD13	2.40	0.47
47:LL:91:ALA:HB1	47:LL:96:ILE:HB	1.96	0.47
51:LN:123:GLU:HG2	51:LN:128:LYS:HG2	1.97	0.47
66:Lb:25:ARG:HE	66:Lb:25:ARG:HB2	1.39	0.47
67:LF:179:LEU:HD21	67:LF:204:ALA:HA	1.97	0.47
75:Lk:12:LEU:HB3	75:Lk:16:ARG:HH12	1.79	0.47
81:5A:50:5CT:H3	84:Pt:76:C:H5'	1.97	0.47
81:5A:89:PHE:CD1	81:5A:103:GLN:HA	2.50	0.47
1:S2:1256:G:H8	17:SU:66:ARG:HB2	1.79	0.47
1:S2:1759:G:H4'	1:S2:1774:C:H5'	1.95	0.47
2:L8:67:U:H2'	2:L8:68:G:C8	2.48	0.47
3:L5:180:C:H2'	3:L5:181:C:C6	2.50	0.47
3:L5:982:U:H2'	3:L5:983:C:C6	2.50	0.47
3:L5:3610:A:H2'	3:L5:3611:A:C8	2.50	0.47
3:L5:3712:A:H2	3:L5:3740:G:H1	1.61	0.47
3:L5:4112:C:H2'	3:L5:4113:U:C6	2.50	0.47
3:L5:4219:A:H2'	3:L5:4220:6MZ:C8	2.45	0.47
3:L5:4345:C:H2'	3:L5:4346:U:C6	2.49	0.47
5:SB:127:VAL:HG21	5:SB:176:VAL:HG11	1.96	0.47
19:SO:75:MET:HG2	19:SO:118:ALA:HB2	1.97	0.47
24:SN:40:LEU:HA	24:SN:43:LYS:HE2	1.97	0.47
30:SY:59:GLY:O	30:SY:71:GLY:HA2	2.14	0.47
38:Lz:87:ILE:HA	38:Lz:90:LEU:HD13	1.96	0.47
40:LB:85:VAL:HB	40:LB:165:HIS:CD2	2.49	0.47
43:LH:40:HIS:CD2	43:LH:40:HIS:H	2.32	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:La:75:LEU:HD13	50:La:117:LEU:HD11	1.96	0.47
53:LD:164:LYS:HA	53:LD:167:VAL:HG22	1.97	0.47
57:LT:111:GLU:OE2	57:LT:115:LYS:HD2	2.15	0.47
61:LY:127:GLN:O	61:LY:131:GLU:HG2	2.14	0.47
67:LF:226:HIS:ND1	67:LF:228:VAL:HG22	2.30	0.47
81:5A:101:LEU:O	81:5A:109:ARG:HG3	2.14	0.47
1:S2:688:U:N3	13:SH:102:PRO:HA	2.30	0.47
1:S2:943:U:O2'	19:SO:135:ILE:O	2.33	0.47
1:S2:1610:G:H2'	1:S2:1611:G:C8	2.50	0.47
1:S2:1657:G:H2'	1:S2:1658:G:H8	1.80	0.47
2:L8:119:C:H2'	2:L8:120:G:H8	1.79	0.47
3:L5:106:A:H1'	3:L5:336:A:N3	2.30	0.47
3:L5:1239:C:H5	44:LE:60:SER:HB2	1.80	0.47
3:L5:1399:G:H2'	3:L5:1400:G:H8	1.79	0.47
3:L5:2378:G:N2	3:L5:2380:G:H3'	2.30	0.47
6:SA:176:TRP:CZ3	6:SA:199:PRO:HB3	2.49	0.47
9:SE:87:MET:SD	9:SE:123:LEU:HB2	2.55	0.47
13:SH:78:ARG:HH21	13:SH:81:ARG:HD2	1.79	0.47
15:SI:123:ARG:HD2	15:SI:128:LYS:HG3	1.97	0.47
16:SQ:118:THR:HG22	16:SQ:118:THR:O	2.13	0.47
24:SN:25:TRP:CG	33:Sb:82:LYS:HZ3	2.32	0.47
38:Lz:33:GLU:HA	38:Lz:169:VAL:HG12	1.96	0.47
41:LC:8:ILE:HD11	41:LC:24:LEU:HD12	1.97	0.47
48:LV:57:VAL:HG13	48:LV:84:GLN:HG2	1.96	0.47
53:LD:227:ILE:O	53:LD:230:SER:N	2.46	0.47
53:LD:265:ARG:HH12	53:LD:269:PRO:CD	2.28	0.47
65:Lh:80:PRO:O	65:Lh:84:ARG:HG3	2.15	0.47
67:LF:35:LYS:O	67:LF:39:GLN:HG3	2.14	0.47
1:S2:35:C:H2'	1:S2:36:PSU:C6	2.50	0.47
1:S2:111:A:H5'	25:SL:70:GLY:HA2	1.97	0.47
1:S2:203:G:C8	1:S2:203:G:H5''	2.50	0.47
1:S2:549:C:H2'	1:S2:550:C:C6	2.49	0.47
1:S2:549:C:H2'	1:S2:550:C:H6	1.79	0.47
1:S2:1135:C:H2'	1:S2:1136:PSU:H6	1.80	0.47
1:S2:1521:C:H2'	22:SS:136:THR:OG1	2.15	0.47
1:S2:1842:4AC:OP1	78:Ln:3:ALA:HB3	2.14	0.47
2:L8:89:U:H2'	2:L8:90:C:C6	2.49	0.47
3:L5:398:A2M:O5'	3:L5:398:A2M:H8	2.15	0.47
3:L5:509:A:C4	50:La:82:VAL:HG12	2.50	0.47
3:L5:1478:C:H2'	3:L5:1479:G:H8	1.79	0.47
3:L5:3712:A:H8	3:L5:3712:A:O5'	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:3784:A:O2'	3:L5:3785:A2M:H3'	2.15	0.47
3:L5:4456:OMC:HM21	40:LB:241:PRO:HD3	1.96	0.47
3:L5:4619:U:H2'	3:L5:4620:OMU:H6	1.96	0.47
90:L5:5310:3H3:H10	79:Lo:55:ILE:HG23	1.95	0.47
9:SE:44:LEU:HD11	9:SE:70:ILE:HG21	1.96	0.47
16:SQ:146:ARG:HH21	84:Pt:34:U:P	2.38	0.47
30:SY:27:VAL:HB	30:SY:69:THR:HB	1.97	0.47
39:LA:10:LYS:HA	39:LA:16:PHE:CD2	2.50	0.47
58:LP:126:ARG:HE	58:LP:140:MET:HE1	1.80	0.47
61:LY:32:SER:HB2	61:LY:106:ILE:CD1	2.45	0.47
65:Lh:32:ARG:NH2	65:Lh:51:ARG:HD2	2.30	0.47
65:Lh:105:LYS:O	65:Lh:109:ARG:HG2	2.15	0.47
79:Lo:69:ARG:NH2	79:Lo:80:LYS:HD3	2.29	0.47
81:5A:74:PRO:HG2	81:5A:77:HIS:ND1	2.30	0.47
1:S2:85:A:H2'	1:S2:86:C:H6	1.80	0.46
1:S2:187:G:N1	1:S2:213:G:C6	2.83	0.46
1:S2:553:U:H2'	1:S2:554:A:C8	2.50	0.46
1:S2:941:C:H2'	1:S2:942:G:H8	1.80	0.46
3:L5:1870:C:H2'	3:L5:1871:A2M:H8	1.97	0.46
3:L5:2422:OMC:H1'	3:L5:2422:OMC:HM23	1.76	0.46
3:L5:4139:G:C5	3:L5:4140:C:N4	2.83	0.46
3:L5:4651:A:H2'	3:L5:4652:G:O4'	2.15	0.46
3:L5:4923:C:H2'	3:L5:4924:C:H6	1.78	0.46
3:L5:4968:A:H2'	3:L5:4969:C:H6	1.80	0.46
5:SB:164:ILE:HD11	5:SB:204:ILE:HB	1.96	0.46
8:SJ:172:ARG:O	8:SJ:175:ARG:HG2	2.15	0.46
11:SG:10:THR:OG1	11:SG:127:THR:O	2.33	0.46
12:SF:153:LEU:HB3	12:SF:189:ALA:HA	1.96	0.46
20:SX:51:VAL:HG12	20:SX:72:VAL:HG22	1.97	0.46
22:SS:98:VAL:C	22:SS:99:LEU:HG	2.41	0.46
24:SN:38:TYR:O	24:SN:42:LYS:HG2	2.15	0.46
24:SN:46:THR:HG23	24:SN:49:GLN:H	1.79	0.46
36:Sf:118:ARG:HH21	36:Sf:119:ARG:HG2	1.80	0.46
38:Lz:82:ILE:CB	38:Lz:83:PRO:CD	2.91	0.46
41:LC:100:ARG:HG2	41:LC:101:MET:O	2.15	0.46
46:LO:75:ALA:HB3	46:LO:78:ARG:HG2	1.97	0.46
67:LF:101:VAL:O	67:LF:106:ARG:NH1	2.48	0.46
1:S2:484:A2M:H8	1:S2:484:A2M:O5'	2.14	0.46
1:S2:845:G:H3'	1:S2:846:G:H8	1.80	0.46
1:S2:1284:A:C2	21:SM:91:LEU:HD21	2.50	0.46
1:S2:1587:G:H21	28:ST:77:LYS:NZ	2.13	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:2:G:H2'	3:L5:3:C:C6	2.51	0.46
3:L5:231:U:H4'	61:LY:100:HIS:CD2	2.49	0.46
3:L5:257:C:H3'	3:L5:258:G:H8	1.80	0.46
3:L5:2045:G:O2'	3:L5:2046:G:H5''	2.14	0.46
3:L5:2343:G:OP1	41:LC:52:TYR:OH	2.29	0.46
3:L5:2732:G:H2'	3:L5:2733:C:C6	2.49	0.46
3:L5:3848:U:H2'	3:L5:3849:A:C8	2.50	0.46
3:L5:3938:G:H8	3:L5:3938:G:OP1	1.99	0.46
3:L5:4159:C:H2'	3:L5:4160:C:C6	2.50	0.46
3:L5:4273:A:H2'	3:L5:4274:A:C8	2.50	0.46
6:SA:69:GLU:HG3	10:SC:270:THR:HG21	1.98	0.46
6:SA:207:PRO:O	6:SA:210:ILE:HG22	2.15	0.46
18:SK:13:GLU:O	18:SK:17:LYS:HG3	2.16	0.46
24:SN:49:GLN:O	24:SN:53:ILE:HG12	2.14	0.46
24:SN:52:VAL:HG23	24:SN:55:ARG:NH2	2.31	0.46
27:SP:21:ASP:O	27:SP:25:LEU:HD23	2.15	0.46
38:Lz:54:ARG:NH1	38:Lz:150:GLU:O	2.48	0.46
38:Lz:76:GLU:HA	38:Lz:79:ALA:HB3	1.96	0.46
41:LC:266:THR:HG23	41:LC:268:ARG:H	1.80	0.46
51:LN:104:GLU:HA	51:LN:160:GLU:HG3	1.97	0.46
64:Lr:52:GLU:OE1	64:Lr:53:PRO:HD2	2.15	0.46
67:LF:28:LEU:O	67:LF:31:LYS:HG2	2.15	0.46
67:LF:241:ASN:O	67:LF:245:ARG:HG2	2.15	0.46
84:Pt:1:C:H42	84:Pt:73:A:N6	2.13	0.46
84:Pt:68:C:H2'	84:Pt:69:C:H6	1.80	0.46
1:S2:1447:OMG:H2'	1:S2:1448:A:C8	2.51	0.46
1:S2:1558:C:H2'	1:S2:1559:C:H6	1.78	0.46
1:S2:1831:A:N6	1:S2:1832:6MZ:H9	2.30	0.46
2:L8:60:G:O6	2:L8:96:C:O2'	2.29	0.46
3:L5:158:A:H5''	3:L5:159:C:H2'	1.97	0.46
3:L5:496:G:H2'	3:L5:497:G:C8	2.50	0.46
3:L5:934:C:H4'	3:L5:935:A:O5'	2.15	0.46
3:L5:1431:C:H2'	3:L5:1432:G:O4'	2.15	0.46
3:L5:1538:U:H2'	3:L5:1539:G:H8	1.79	0.46
3:L5:1569:U:C5	80:Lp:2:ALA:HA	2.51	0.46
3:L5:3813:A:N3	3:L5:4538:G:O2'	2.42	0.46
3:L5:4405:G:OP2	52:LI:7:ARG:NH2	2.47	0.46
3:L5:4524:G:OP2	40:LB:246:ARG:HD2	2.14	0.46
13:SH:10:LYS:HD3	13:SH:15:LYS:HA	1.98	0.46
16:SQ:44:PRO:HB2	16:SQ:46:THR:HG22	1.96	0.46
20:SX:46:HIS:HD2	20:SX:101:LEU:HD21	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:SS:18:THR:HG21	22:SS:33:ILE:HA	1.97	0.46
28:ST:4:VAL:HG13	28:ST:8:ASP:HB3	1.96	0.46
37:Sg:178:ASN:HB3	37:Sg:182:CYS:N	2.31	0.46
43:LH:105:ILE:HD12	43:LH:136:VAL:HG23	1.96	0.46
50:La:3:SER:HA	50:La:6:ARG:HG2	1.98	0.46
52:LI:91:LEU:HD12	52:LI:135:ILE:HA	1.96	0.46
66:Lb:70:GLU:HG2	66:Lb:73:LYS:HE3	1.97	0.46
83:At:18:G:H2'	83:At:57:G:C2	2.50	0.46
1:S2:1059:G:O6	1:S2:1060:A:N6	2.47	0.46
1:S2:1290:G:N2	1:S2:1310:U:H1'	2.29	0.46
3:L5:29:G:H5''	51:LN:172:ARG:HG2	1.98	0.46
3:L5:1441:C:H2'	3:L5:1442:C:C6	2.51	0.46
3:L5:1905:U:H2'	3:L5:1906:U:O4'	2.15	0.46
3:L5:2845:A:H61	3:L5:3843:C:H42	1.62	0.46
3:L5:3855:C:H2'	3:L5:3856:A:H8	1.80	0.46
3:L5:4562:C:H2'	3:L5:4563:U:C6	2.51	0.46
4:L7:4:U:H2'	4:L7:5:A:C8	2.49	0.46
6:SA:42:LYS:HG2	6:SA:46:ILE:O	2.16	0.46
6:SA:94:THR:O	6:SA:186:ARG:NH1	2.45	0.46
8:SJ:28:GLU:HG3	8:SJ:40:LYS:NZ	2.30	0.46
12:SF:17:ILE:HG13	12:SF:48:TYR:CE1	2.50	0.46
16:SQ:53:GLU:HG2	16:SQ:54:PRO:CD	2.45	0.46
26:SR:12:ALA:O	26:SR:16:ILE:HG12	2.15	0.46
81:5A:8:GLU:HG2	81:5A:10:GLY:H	1.81	0.46
1:S2:60:A:N3	1:S2:316:G:O2'	2.43	0.46
1:S2:591:U:H5''	1:S2:592:C:H3'	1.98	0.46
3:L5:382:G:H4'	3:L5:407:A:N1	2.30	0.46
3:L5:952:G:H2'	3:L5:953:C:C6	2.50	0.46
3:L5:1177:U:H2'	3:L5:1178:G:H8	1.80	0.46
3:L5:1591:U:H5''	3:L5:4527:G:OP1	2.16	0.46
3:L5:2538:U:H2'	3:L5:2539:C:H6	1.81	0.46
13:SH:65:PRO:HG2	13:SH:68:GLN:HG2	1.97	0.46
13:SH:153:LEU:HD23	13:SH:184:ASP:HB3	1.97	0.46
13:SH:157:HIS:HB3	13:SH:190:PRO:HD3	1.97	0.46
15:SI:105:ASP:OD1	15:SI:106:SER:N	2.48	0.46
21:SM:44:LYS:NZ	21:SM:46:GLN:HG2	2.29	0.46
28:ST:31:PRO:CG	28:ST:34:VAL:HG22	2.46	0.46
30:SY:15:ASN:HB2	30:SY:20:ARG:HG3	1.97	0.46
45:LG:232:GLU:HA	45:LG:235:ARG:HG2	1.98	0.46
45:LG:250:ILE:O	45:LG:254:GLU:HG2	2.15	0.46
56:LS:119:ALA:HB1	56:LS:124:ILE:HD11	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:5A:37:PRO:HB3	81:5A:141:MET:HE3	1.97	0.46
1:S2:1124:C:O2'	26:SR:125:GLY:O	2.31	0.46
1:S2:1468:C:H2'	1:S2:1469:A:C8	2.50	0.46
3:L5:1984:A:H2'	3:L5:2011:C:OP1	2.14	0.46
3:L5:2306:G:H1'	3:L5:2332:A:N6	2.30	0.46
3:L5:2378:G:O2'	3:L5:2380:G:N7	2.47	0.46
3:L5:2568:C:H2'	3:L5:2569:G:H8	1.81	0.46
3:L5:4618:OMG:HM23	3:L5:4618:OMG:H1'	1.53	0.46
3:L5:4691:A:H2'	3:L5:4692:A:O4'	2.16	0.46
6:SA:24:HIS:HB3	6:SA:51:LEU:HD21	1.96	0.46
13:SH:104:PRO:HD2	13:SH:116:ARG:HH21	1.81	0.46
14:SW:30:CYS:SG	14:SW:31:SER:N	2.89	0.46
38:Lz:58:THR:HG21	38:Lz:182:ASN:HD21	1.80	0.46
60:LX:128:ILE:HD13	76:Ll:7:PHE:HE1	1.80	0.46
61:LY:56:GLN:HG2	61:LY:67:ILE:HD13	1.97	0.46
64:Lr:95:HIS:O	64:Lr:99:LYS:HB2	2.15	0.46
68:Lc:47:ILE:HB	68:Lc:94:LEU:HG	1.98	0.46
1:S2:389:A:H2'	1:S2:390:C:C6	2.51	0.46
1:S2:587:A:OP2	8:SJ:172:ARG:HD2	2.16	0.46
1:S2:1272:C:H2'	1:S2:1273:C:C6	2.50	0.46
1:S2:1490:OMG:HM23	1:S2:1490:OMG:H1'	1.80	0.46
2:L8:19:C:H2'	2:L8:20:A:C8	2.51	0.46
2:L8:115:G:H2'	2:L8:116:C:C6	2.51	0.46
3:L5:394:G:N2	3:L5:397:G:C8	2.84	0.46
3:L5:1217:G:H2'	3:L5:1218:G:H8	1.79	0.46
3:L5:1789:C:H2'	3:L5:1790:U:C6	2.51	0.46
3:L5:3726:A:H2'	3:L5:3727:A:C8	2.50	0.46
3:L5:3799:A:OP1	48:LV:64:THR:HG21	2.16	0.46
3:L5:3911:C:H2'	3:L5:3912:U:H6	1.81	0.46
3:L5:3956:G:C6	3:L5:3963:A:N3	2.84	0.46
3:L5:4070:U:H2'	3:L5:4071:U:C6	2.51	0.46
3:L5:4393:G:O4'	3:L5:4447:5MC:HM52	2.15	0.46
9:SE:52:LEU:HD13	9:SE:54:TYR:HE2	1.81	0.46
13:SH:149:ASP:OD1	13:SH:150:GLY:N	2.48	0.46
22:SS:114:LEU:O	22:SS:117:ILE:HG22	2.16	0.46
28:ST:10:ASN:HB3	28:ST:13:GLU:CD	2.40	0.46
30:SY:131:PRO:HG2	30:SY:132:LYS:HD2	1.97	0.46
37:Sg:164:ILE:CG2	37:Sg:185:LYS:HG3	2.44	0.46
37:Sg:178:ASN:ND2	37:Sg:181:ASN:H	2.06	0.46
38:Lz:74:CYS:HA	38:Lz:77:ALA:HB3	1.97	0.46
38:Lz:207:LYS:HD2	38:Lz:212:LYS:HA	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:LN:114:ARG:NH1	51:LN:151:ILE:O	2.48	0.46
60:LX:89:LYS:HE2	60:LX:137:TYR:CD1	2.50	0.46
61:LY:118:ILE:O	61:LY:122:LYS:HG3	2.16	0.46
67:LF:92:VAL:O	67:LF:120:GLY:HA2	2.16	0.46
1:S2:1096:G:H1	1:S2:1136:PSU:HN3	1.62	0.46
1:S2:1606:G:H22	1:S2:1632:G:HO2'	1.63	0.46
1:S2:1613:G:P	27:SP:42:ARG:HH22	2.39	0.46
1:S2:1740:C:H2'	1:S2:1741:U:C6	2.51	0.46
3:L5:495:C:H42	3:L5:660:A:H61	1.63	0.46
3:L5:1218:G:H2'	3:L5:1219:G:C8	2.50	0.46
3:L5:1459:A:H2'	3:L5:1460:C:O4'	2.15	0.46
3:L5:1679:A:N1	3:L5:4391:G:O2'	2.45	0.46
3:L5:1812:C:H5''	66:Lb:56:LYS:HE2	1.97	0.46
3:L5:1846:G:H2'	3:L5:1847:C:H6	1.81	0.46
3:L5:3960:A:H1'	3:L5:4048:A:N6	2.30	0.46
3:L5:4742:G:H2'	3:L5:4743:G:C8	2.50	0.46
5:SB:107:ARG:HH12	19:SO:133:THR:N	2.14	0.46
6:SA:180:ARG:HH21	6:SA:184:ARG:HH12	1.64	0.46
9:SE:126:VAL:HG12	9:SE:139:LEU:HD21	1.98	0.46
20:SX:101:LEU:HD13	20:SX:124:LYS:HD3	1.98	0.46
42:LJ:35:ARG:HB3	42:LJ:123:ILE:HG23	1.97	0.46
42:LJ:37:ALA:HA	42:LJ:70:VAL:HG11	1.98	0.46
52:LI:91:LEU:HD21	52:LI:133:GLN:NE2	2.30	0.46
65:Lh:95:LEU:HB3	65:Lh:99:GLU:HG3	1.98	0.46
76:Ll:26:TRP:HA	76:Ll:29:MET:HE2	1.98	0.46
84:Pt:15:G:H2'	84:Pt:60:A:N1	2.31	0.46
84:Pt:45:A:H2'	84:Pt:46:G:O4'	2.16	0.46
1:S2:834:C:H4'	1:S2:836:G:C6	2.50	0.46
1:S2:835:C:O5'	1:S2:836:G:H5'	2.16	0.46
1:S2:1391:OMC:H2'	1:S2:1392:U:C6	2.51	0.46
1:S2:1410:C:H2'	1:S2:1411:G:C8	2.51	0.46
2:L8:150:C:H41	45:LG:57:TRP:HE1	1.62	0.46
3:L5:2276:A:H2'	3:L5:2277:C:O4'	2.16	0.46
3:L5:2335:C:H2'	3:L5:2336:G:H8	1.81	0.46
3:L5:4350:C:C2	3:L5:4351:U:C5	3.04	0.46
5:SB:68:GLU:HG3	5:SB:68:GLU:O	2.16	0.46
6:SA:2:SAC:H	29:SV:79:VAL:HA	1.81	0.46
12:SF:17:ILE:HG13	12:SF:48:TYR:HE1	1.79	0.46
14:SW:7:LEU:HA	14:SW:34:ILE:HD11	1.98	0.46
14:SW:27:ILE:HB	14:SW:61:ILE:HB	1.97	0.46
16:SQ:104:SER:O	16:SQ:107:GLU:HG3	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:Sg:64:HIS:ND1	37:Sg:83:TRP:HB2	2.31	0.46
38:Lz:81:ASP:O	38:Lz:83:PRO:CD	2.56	0.46
55:LR:177:LEU:HA	55:LR:180:LYS:HE2	1.97	0.46
84:Pt:52:C:H2'	84:Pt:53:G:C8	2.51	0.46
1:S2:77:A:H2'	1:S2:78:C:C6	2.51	0.46
1:S2:1565:C:N4	1:S2:1571:G:O6	2.49	0.46
1:S2:1828:C:H2'	1:S2:1829:G:C8	2.50	0.46
2:L8:115:G:H2'	2:L8:116:C:H6	1.81	0.46
3:L5:433:A:H2'	3:L5:434:A:O4'	2.16	0.46
3:L5:1609:U:H2'	3:L5:1610:C:O4'	2.15	0.46
3:L5:1983:A:C4	3:L5:2010:A:H5''	2.51	0.46
3:L5:2264:C:H2'	3:L5:2265:G:O4'	2.15	0.46
3:L5:2764:A:H2'	3:L5:2765:A:H8	1.81	0.46
3:L5:4286:C:H2'	3:L5:4287:G:C8	2.51	0.46
3:L5:4629:U:O3'	62:LW:19:ARG:HD2	2.16	0.46
4:L7:3:C:H2'	4:L7:4:U:H6	1.80	0.46
7:SD:113:LEU:HD22	7:SD:118:ALA:HB2	1.98	0.46
18:SK:86:PRO:C	18:SK:88:GLU:N	2.73	0.46
22:SS:100:ALA:O	22:SS:101:ASN:C	2.58	0.46
26:SR:32:LYS:HE2	26:SR:32:LYS:HB3	1.73	0.46
40:LB:288:GLY:HA3	40:LB:330:PHE:CZ	2.51	0.46
42:LJ:31:ASP:OD1	42:LJ:31:ASP:N	2.49	0.46
43:LH:137:SER:HB3	43:LH:143:GLU:HB2	1.98	0.46
43:LH:138:GLN:OE1	43:LH:138:GLN:N	2.49	0.46
44:LE:190:HIS:HB3	44:LE:193:PHE:HD2	1.81	0.46
49:LM:101:LYS:HG3	49:LM:104:MET:HE2	1.97	0.46
51:LN:11:TRP:HZ3	51:LN:120:TRP:HZ3	1.63	0.46
52:LI:4:ARG:NH1	52:LI:9:TYR:OH	2.48	0.46
61:LY:85:VAL:HG12	61:LY:97:VAL:HB	1.98	0.46
79:Lo:23:VAL:HG22	79:Lo:70:LEU:HD22	1.97	0.46
80:Lp:74:THR:HA	80:Lp:77:VAL:HG22	1.98	0.46
1:S2:65:C:C4	11:SG:133:LEU:HD21	2.51	0.45
1:S2:183:G:C5	1:S2:184:G:H1'	2.51	0.45
1:S2:903:A:H2'	1:S2:904:A:C8	2.51	0.45
1:S2:940:U:H2'	1:S2:941:C:C6	2.51	0.45
1:S2:1264:C:P	23:Sd:28:HIS:HE2	2.39	0.45
1:S2:1512:C:H2'	1:S2:1513:C:C6	2.51	0.45
1:S2:1588:A:H2'	1:S2:1589:A:C8	2.52	0.45
3:L5:55:G:P	74:Lj:43:ARG:HH22	2.39	0.45
3:L5:440:U:H2'	3:L5:441:G:C8	2.51	0.45
3:L5:4285:U:H2'	3:L5:4286:C:C6	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:4464:A:H2'	3:L5:4464:A:N3	2.30	0.45
5:SB:225:LEU:HD11	5:SB:229:MET:HE3	1.98	0.45
7:SD:40:ARG:HB3	7:SD:47:GLU:HB2	1.99	0.45
12:SF:123:GLU:HG3	34:Sc:59:LEU:HG	1.96	0.45
19:SO:34:PHE:CZ	19:SO:36:SER:HB3	2.52	0.45
22:SS:10:GLN:C	22:SS:12:ILE:H	2.24	0.45
26:SR:60:ARG:HH21	26:SR:66:VAL:HG11	1.80	0.45
37:Sg:101:PHE:CE2	37:Sg:136:GLY:HA2	2.51	0.45
47:LL:88:LYS:HE3	47:LL:89:LYS:NZ	2.31	0.45
58:LP:30:ARG:NH1	58:LP:31:GLU:OE1	2.48	0.45
61:LY:31:SER:HA	61:LY:48:PRO:HA	1.98	0.45
62:LW:115:ALA:O	62:LW:119:LYS:HG3	2.17	0.45
66:Lb:96:LEU:HD12	67:LF:52:GLU:HG3	1.98	0.45
67:LF:122:PHE:O	67:LF:205:ASN:ND2	2.49	0.45
1:S2:57:U:O2'	1:S2:499:G:N3	2.45	0.45
1:S2:179:C:C2'	1:S2:180:G:H5'	2.46	0.45
1:S2:561:A:H2'	1:S2:562:U:C6	2.51	0.45
1:S2:968:U:C1'	1:S2:972:A:H1'	2.41	0.45
1:S2:1016:U:OP2	33:Sb:20:LYS:NZ	2.48	0.45
1:S2:1422:G:C4	1:S2:1424:G:N7	2.83	0.45
1:S2:1520:G:H5''	1:S2:1521:C:OP2	2.17	0.45
3:L5:276:C:O2	73:Li:26:HIS:NE2	2.42	0.45
3:L5:337:U:OP1	47:LL:31:ARG:NH1	2.49	0.45
3:L5:372:A:OP1	74:Lj:36:LYS:HE3	2.16	0.45
3:L5:663:G:H2'	3:L5:664:G:C8	2.51	0.45
3:L5:1317:U:H2'	3:L5:1318:C:C6	2.51	0.45
3:L5:3975:C:H2'	3:L5:4036:G:H1	1.80	0.45
8:SJ:81:LEU:HA	8:SJ:84:ILE:HG22	1.98	0.45
24:SN:19:ARG:NH1	33:Sb:84:HIS:O	2.48	0.45
25:SL:73:LEU:HD12	25:SL:109:MET:HE1	1.97	0.45
37:Sg:169:GLY:O	37:Sg:195:LEU:HB2	2.15	0.45
38:Lz:196:LYS:O	38:Lz:199:GLN:HG2	2.16	0.45
39:LA:158:ILE:HB	39:LA:162:ASN:ND2	2.31	0.45
40:LB:47:LEU:HD22	40:LB:344:VAL:HG22	1.98	0.45
50:La:7:LYS:HE3	50:La:11:LEU:HD11	1.99	0.45
52:LI:190:LEU:HB3	52:LI:197:VAL:HG21	1.98	0.45
53:LD:226:TYR:CD2	53:LD:236:MET:HE1	2.51	0.45
80:Lp:47:MET:HE2	80:Lp:57:CYS:HB2	1.98	0.45
1:S2:16:G:H1'	1:S2:1195:A:H61	1.80	0.45
1:S2:1221:G:H2'	1:S2:1222:G:H8	1.81	0.45
1:S2:1617:G:N1	1:S2:1620:A:OP2	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:L8:134:G:H5''	60:LX:63:LYS:NZ	2.30	0.45
3:L5:715:G:H5''	41:LC:316:LYS:HG2	1.97	0.45
3:L5:919:C:H2'	3:L5:920:C:C6	2.52	0.45
3:L5:1340:OMC:HM23	3:L5:1340:OMC:H1'	1.74	0.45
3:L5:2803:U:O2'	72:Lg:12:SER:O	2.26	0.45
3:L5:4696:C:H2'	3:L5:4697:U:O4'	2.17	0.45
4:L7:33:U:H2'	4:L7:34:C:H6	1.80	0.45
4:L7:108:G:P	53:LD:273:LEU:HD21	2.57	0.45
7:SD:163:PRO:O	7:SD:167:TYR:HB2	2.16	0.45
9:SE:44:LEU:HG	9:SE:48:LEU:HD13	1.97	0.45
17:SU:54:VAL:HB	17:SU:88:LEU:HB2	1.98	0.45
26:SR:51:ALA:O	26:SR:55:THR:HG23	2.16	0.45
28:ST:73:GLY:O	28:ST:77:LYS:HG3	2.16	0.45
30:SY:12:PHE:CZ	30:SY:21:LYS:HD3	2.51	0.45
38:Lz:35:GLN:HA	38:Lz:166:ALA:HA	1.98	0.45
38:Lz:58:THR:HB	38:Lz:60:ARG:CZ	2.46	0.45
38:Lz:148:VAL:HA	38:Lz:151:VAL:HB	1.99	0.45
39:LA:133:TYR:HB3	39:LA:168:VAL:HG23	1.98	0.45
41:LC:266:THR:HG22	41:LC:269:LYS:HG2	1.97	0.45
53:LD:136:ASP:OD1	53:LD:136:ASP:N	2.49	0.45
56:LS:26:PRO:HG2	56:LS:28:TYR:CE2	2.51	0.45
59:LU:100:LEU:HB3	59:LU:112:LEU:HD12	1.97	0.45
64:Lr:28:GLU:OE2	64:Lr:41:ASN:HA	2.15	0.45
68:Lc:11:LEU:HD23	68:Lc:15:ASN:HD21	1.82	0.45
81:5A:50:5CT:H15	81:5A:50:5CT:H10	1.59	0.45
1:S2:863:PSU:O2	1:S2:864:A:N6	2.45	0.45
1:S2:1144:A:H2'	1:S2:1145:A:C8	2.50	0.45
1:S2:1618:C:H2'	1:S2:1619:A:C8	2.52	0.45
1:S2:1801:A:H2'	1:S2:1802:C:H6	1.81	0.45
3:L5:223:G:H4'	3:L5:225:G:N7	2.32	0.45
3:L5:469:C:H2'	3:L5:470:A:H8	1.81	0.45
3:L5:1332:C:H2'	3:L5:1333:A:C8	2.51	0.45
3:L5:2411:C:O2'	3:L5:2526:C:O2	2.31	0.45
3:L5:2412:A:H2'	3:L5:2413:U:C6	2.51	0.45
3:L5:2654:C:H2'	3:L5:2655:C:C6	2.52	0.45
3:L5:3867:A2M:H8	3:L5:3867:A2M:H5''	1.97	0.45
3:L5:3893:C:H2'	3:L5:3894:A:C8	2.52	0.45
3:L5:4285:U:H2'	3:L5:4286:C:H6	1.81	0.45
3:L5:4452:U:H1'	83:At:76:A:O3'	2.16	0.45
13:SH:63:PHE:HA	13:SH:95:ILE:O	2.17	0.45
21:SM:96:ARG:HG3	21:SM:97:GLU:OE1	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:SN:15:ALA:HA	33:Sb:26:GLN:NE2	2.30	0.45
30:SY:48:TYR:O	30:SY:49:LYS:C	2.60	0.45
31:SZ:88:LEU:HD23	31:SZ:109:TYR:HD2	1.82	0.45
38:Lz:205:TYR:HB3	38:Lz:207:LYS:NZ	2.31	0.45
46:LO:181:ALA:O	46:LO:185:VAL:HG22	2.15	0.45
46:LO:189:ILE:HD13	49:LM:123:ILE:HD11	1.98	0.45
50:La:76:ASP:HB3	54:LQ:91:ARG:HG2	1.98	0.45
53:LD:208:MET:O	53:LD:212:MET:HG2	2.17	0.45
55:LR:7:GLN:NE2	55:LR:35:ALA:O	2.49	0.45
61:LY:2:LYS:HE3	61:LY:2:LYS:HB3	1.63	0.45
62:LW:97:LYS:HB2	62:LW:98:PRO:HD3	1.98	0.45
63:LZ:87:VAL:HG22	63:LZ:89:ILE:HG13	1.99	0.45
68:Lc:38:ILE:HG21	68:Lc:63:TYR:HB3	1.98	0.45
69:Ld:61:ASP:OD1	69:Ld:63:ARG:NE	2.49	0.45
1:S2:573:PSU:H1'	1:S2:576:A2M:N7	2.32	0.45
1:S2:656:G:N2	1:S2:663:C:H5''	2.31	0.45
1:S2:1017:U:H5'	24:SN:55:ARG:NE	2.30	0.45
1:S2:1801:A:H2'	1:S2:1802:C:C6	2.51	0.45
3:L5:495:C:H2'	3:L5:496:G:O4'	2.16	0.45
3:L5:499:G:O6	3:L5:656:C:N4	2.50	0.45
3:L5:1762:C:H2'	3:L5:1763:C:H6	1.80	0.45
3:L5:2021:G:H2'	3:L5:2022:C:H6	1.81	0.45
3:L5:2504:C:H6	3:L5:2506:G:H21	1.64	0.45
3:L5:2556:G:H2'	3:L5:2557:G:H8	1.81	0.45
3:L5:2701:U:H3	3:L5:2715:G:H1	1.64	0.45
3:L5:2758:G:O2'	3:L5:2765:A:N3	2.45	0.45
3:L5:4094:G:N1	3:L5:4114:C:O2	2.49	0.45
3:L5:4227:OMU:H1'	3:L5:4227:OMU:HM23	1.59	0.45
3:L5:4481:U:H2'	3:L5:4482:U:C6	2.52	0.45
6:SA:80:ARG:HH21	6:SA:82:THR:HG21	1.81	0.45
9:SE:19:MET:SD	9:SE:108:ARG:HG2	2.56	0.45
18:SK:12:TYR:O	18:SK:15:LEU:HB3	2.16	0.45
22:SS:59:LEU:HB3	22:SS:63:GLU:OE2	2.17	0.45
24:SN:87:ASP:OD1	24:SN:87:ASP:N	2.49	0.45
38:Lz:32:VAL:HA	38:Lz:208:SER:HB2	1.96	0.45
39:LA:30:ARG:HG2	39:LA:74:GLU:HG3	1.99	0.45
40:LB:137:TRP:O	40:LB:143:LYS:HE2	2.17	0.45
46:LO:54:TYR:OH	46:LO:73:PHE:O	2.34	0.45
51:LN:178:HIS:HA	51:LN:181:HIS:CE1	2.51	0.45
72:Lg:72:LYS:HE3	72:Lg:72:LYS:HB2	1.78	0.45
74:Lj:60:GLY:HA2	74:Lj:64:MET:SD	2.57	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:Lo:26:TYR:HB3	79:Lo:67:VAL:HB	1.99	0.45
81:5A:62:ASP:HB3	81:5A:65:THR:O	2.17	0.45
1:S2:75:G:C6	1:S2:76:U:N3	2.85	0.45
1:S2:106:C:OP1	1:S2:431:G:O2'	2.28	0.45
1:S2:122:G:H21	9:SE:146:THR:HG21	1.81	0.45
1:S2:572:PSU:OP1	30:SY:59:GLY:N	2.50	0.45
1:S2:1147:C:OP1	32:Sa:6:ARG:HD2	2.17	0.45
2:L8:130:C:H2'	2:L8:131:G:C8	2.52	0.45
3:L5:78:U:H5''	51:LN:185:GLY:HA2	1.97	0.45
3:L5:750:U:C2	3:L5:751:G:C8	3.04	0.45
3:L5:1594:C:H2'	3:L5:1595:G:O4'	2.16	0.45
3:L5:1677:PSU:H4'	3:L5:1680:G:N1	2.32	0.45
3:L5:2439:G:H5'	3:L5:2778:G:OP2	2.17	0.45
3:L5:3896:C:O2'	40:LB:268:ARG:NH2	2.50	0.45
3:L5:4458:C:H2'	3:L5:4459:U:C6	2.51	0.45
3:L5:5002:U:OP2	40:LB:385:LYS:NZ	2.50	0.45
9:SE:54:TYR:O	30:SY:22:GLN:NE2	2.50	0.45
17:SU:63:ILE:HD11	23:Sd:34:TYR:CE2	2.51	0.45
18:SK:9:ILE:HD12	18:SK:82:TYR:HE2	1.81	0.45
23:Sd:19:ARG:O	23:Sd:27:ARG:NH1	2.50	0.45
37:Sg:164:ILE:HG22	37:Sg:185:LYS:HG3	1.99	0.45
37:Sg:178:ASN:HD21	37:Sg:180:ALA:HB3	1.82	0.45
40:LB:220:ILE:HB	40:LB:346:THR:HB	1.99	0.45
40:LB:383:GLU:CD	40:LB:383:GLU:H	2.24	0.45
53:LD:83:LEU:HB3	53:LD:88:VAL:HB	1.99	0.45
54:LQ:157:GLY:O	54:LQ:188:ASN:ND2	2.49	0.45
58:LP:27:LYS:O	58:LP:31:GLU:HG2	2.17	0.45
76:Ll:44:TRP:CH2	76:Ll:45:ARG:HD3	2.51	0.45
1:S2:186:C:H2'	1:S2:187:G:C8	2.52	0.45
1:S2:1712:A:H2'	1:S2:1713:C:H6	1.81	0.45
1:S2:1849:G:H3'	1:S2:1850:MA6:H8	1.98	0.45
3:L5:307:A:C5	3:L5:308:G:C6	3.05	0.45
3:L5:733:A:H2'	3:L5:734:G:O4'	2.17	0.45
3:L5:1699:A:C2	67:LF:177:ARG:HD3	2.52	0.45
3:L5:2376:A:H2'	3:L5:2377:C:C6	2.52	0.45
3:L5:4571:A2M:H8	3:L5:4571:A2M:O5'	2.16	0.45
3:L5:4748:U:OP1	71:Lf:54:LYS:HE2	2.17	0.45
3:L5:4923:C:H2'	3:L5:4924:C:C6	2.51	0.45
5:SB:48:LEU:HD23	5:SB:48:LEU:H	1.81	0.45
5:SB:62:LEU:HD12	5:SB:65:ARG:HD2	1.99	0.45
21:SM:22:LEU:HD13	21:SM:89:VAL:HB	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:Sg:112:ALA:HB3	37:Sg:121:VAL:HG12	1.97	0.45
37:Sg:234:ASP:HB2	37:Sg:252:THR:HB	1.99	0.45
55:LR:82:LYS:HA	55:LR:82:LYS:HD2	1.72	0.45
58:LP:16:LYS:HB3	58:LP:149:ILE:CD1	2.44	0.45
61:LY:51:LYS:HE2	61:LY:72:GLN:HA	1.98	0.45
64:Lr:119:ARG:HH22	70:Le:119:ALA:HB3	1.82	0.45
1:S2:317:C:OP2	11:SG:183:ARG:NH2	2.50	0.45
1:S2:632:C:C2	1:S2:633:C:C5	3.05	0.45
1:S2:1565:C:H2'	1:S2:1566:G:H8	1.80	0.45
1:S2:1758:G:O2'	1:S2:1771:G:N2	2.50	0.45
1:S2:1869:A:C6	5:SB:115:LYS:HG2	2.52	0.45
2:L8:8:U:H2'	2:L8:9:A:C8	2.52	0.45
3:L5:343:C:O2'	74:Lj:75:ARG:NH2	2.49	0.45
3:L5:440:U:H5'	71:Lf:91:ASN:HB2	1.99	0.45
3:L5:1405:C:H2'	3:L5:1406:G:C8	2.52	0.45
3:L5:1411:C:H2'	3:L5:1412:G:C8	2.52	0.45
3:L5:1514:U:H2'	3:L5:1515:A:C8	2.51	0.45
3:L5:2297:G:H4'	41:LC:242:PRO:HB2	1.99	0.45
3:L5:2796:G:H5'	76:Ll:45:ARG:HH21	1.82	0.45
3:L5:2861:OMC:H2'	3:L5:2862:G:O4'	2.17	0.45
3:L5:3798:U:O2'	3:L5:3800:A:N7	2.46	0.45
3:L5:4344:U:H2'	3:L5:4345:C:C6	2.52	0.45
3:L5:4957:C:H2'	3:L5:4958:C:C6	2.52	0.45
6:SA:10:MET:HA	6:SA:55:TRP:CZ3	2.52	0.45
20:SX:41:PHE:HZ	20:SX:102:VAL:HG12	1.82	0.45
27:SP:96:VAL:HB	27:SP:120:SER:HB3	1.99	0.45
30:SY:102:THR:CG2	30:SY:107:ARG:HD3	2.46	0.45
44:LE:115:TYR:CE1	64:Lr:119:ARG:HD3	2.52	0.45
52:LI:201:PRO:HB2	52:LI:203:ARG:HG2	1.99	0.45
64:Lr:85:ASN:OD1	64:Lr:88:ALA:HB3	2.17	0.45
69:Ld:117:LEU:HD23	69:Ld:117:LEU:HA	1.84	0.45
83:At:46:7MG:H2'	83:At:46:7MG:H81	1.71	0.45
1:S2:1097:G:H4'	6:SA:32:PHE:CD1	2.51	0.45
1:S2:1134:G:H2'	1:S2:1135:C:C6	2.52	0.45
1:S2:1446:A:H1'	17:SU:55:ARG:HD3	1.98	0.45
1:S2:1511:U:H2'	1:S2:1512:C:C6	2.52	0.45
3:L5:434:A:H2'	3:L5:435:A:O4'	2.17	0.45
3:L5:1544:G:H5''	72:Lg:14:ASN:O	2.17	0.45
3:L5:2758:G:H2'	3:L5:2759:G:N7	2.32	0.45
3:L5:4723:A:H2'	3:L5:4724:A:C8	2.52	0.45
4:L7:57:C:H2'	4:L7:58:A:H8	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:SB:30:TRP:HA	5:SB:48:LEU:HA	1.98	0.45
6:SA:90:PHE:O	6:SA:94:THR:HG22	2.17	0.45
10:SC:251:LEU:HD21	10:SC:256:TRP:CD1	2.52	0.45
23:Sd:16:GLN:O	23:Sd:27:ARG:HD3	2.16	0.45
24:SN:88:LEU:HD12	24:SN:129:TYR:CD2	2.52	0.45
26:SR:31:ASN:ND2	26:SR:55:THR:HG22	2.31	0.45
30:SY:6:THR:OG1	30:SY:28:LEU:HB2	2.17	0.45
37:Sg:197:THR:HG21	37:Sg:238:ALA:HA	1.99	0.45
46:LO:31:ARG:O	46:LO:33:VAL:HG23	2.16	0.45
53:LD:91:GLY:HA3	53:LD:94:ASN:HD21	1.82	0.45
53:LD:135:ILE:HG13	53:LD:138:GLN:HB2	1.99	0.45
58:LP:118:GLN:HG2	58:LP:147:GLU:HG2	1.99	0.45
61:LY:66:GLN:HB3	61:LY:84:ARG:NH2	2.31	0.45
70:Le:97:ALA:O	70:Le:122:VAL:HA	2.16	0.45
72:Lg:19:LYS:HD2	72:Lg:19:LYS:HA	1.76	0.45
84:Pt:21:H2U:H62	84:Pt:21:H2U:H2'	1.61	0.45
1:S2:190:G:H1'	1:S2:209:A:H61	1.82	0.45
1:S2:886:A:H2'	1:S2:887:U:C6	2.52	0.45
1:S2:1311:C:H2'	1:S2:1312:G:O5'	2.17	0.45
1:S2:1313:A:P	1:S2:1313:A:H8	2.40	0.45
1:S2:1546:G:N2	1:S2:1670:C:O2	2.50	0.45
2:L8:16:G:O2'	2:L8:17:A:OP2	2.34	0.45
3:L5:679:C:H2'	3:L5:680:G:H8	1.81	0.45
3:L5:1440:U:O2'	3:L5:1441:C:H5'	2.17	0.45
3:L5:1443:A:N6	3:L5:2102:G:C8	2.80	0.45
3:L5:1749:A:H2'	3:L5:1750:G:C8	2.51	0.45
3:L5:1763:C:H2'	3:L5:1764:G:C8	2.52	0.45
3:L5:1967:A:C6	3:L5:2021:G:C6	3.05	0.45
3:L5:2474:G:N2	3:L5:2503:G:H5''	2.32	0.45
3:L5:4523:A2M:H1'	3:L5:4523:A2M:HM'3	1.55	0.45
3:L5:4745:G:H1	3:L5:4955:A:N6	2.10	0.45
3:L5:4947:U:H2'	3:L5:4948:C:C6	2.52	0.45
3:L5:4988:U:OP2	40:LB:123:HIS:HD2	2.00	0.45
18:SK:91:PRO:O	18:SK:95:ARG:HB2	2.17	0.45
27:SP:98:ASN:HB2	27:SP:122:THR:HA	1.99	0.45
30:SY:29:HIS:NE2	30:SY:34:THR:HA	2.32	0.45
38:Lz:69:GLY:O	38:Lz:73:HIS:HB2	2.17	0.45
50:La:104:VAL:HG21	50:La:147:VAL:HG21	1.99	0.45
51:LN:68:ARG:HD2	51:LN:128:LYS:HG3	1.98	0.45
51:LN:116:LEU:HD22	51:LN:135:ILE:HD11	1.97	0.45
60:LX:90:ILE:HG12	60:LX:96:LEU:HD23	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:LF:155:TYR:HA	67:LF:187:MET:HE1	1.98	0.45
81:5A:17:THR:HG22	81:5A:82:PRO:HA	1.99	0.45
81:5A:107:GLU:HG2	81:5A:108:VAL:H	1.81	0.45
83:At:70:G:H2'	83:At:71:G:C8	2.52	0.45
1:S2:9:U:O2'	1:S2:11:A:N7	2.44	0.44
1:S2:71:G:C6	1:S2:72:C:C2	3.06	0.44
1:S2:116:OMU:HM23	1:S2:116:OMU:H1'	1.76	0.44
1:S2:166:A2M:HM'3	1:S2:166:A2M:H1'	1.56	0.44
1:S2:636:C:H2'	1:S2:637:U:C6	2.53	0.44
1:S2:951:C:H1'	19:SO:50:LYS:NZ	2.32	0.44
1:S2:1286:G:N2	1:S2:1312:G:H1'	2.32	0.44
1:S2:1424:G:H2'	1:S2:1425:G:H8	1.82	0.44
1:S2:1543:U:P	28:ST:62:ARG:HH12	2.40	0.44
3:L5:1511:U:OP1	50:La:7:LYS:N	2.50	0.44
3:L5:1690:C:C5	54:LQ:13:VAL:HG11	2.52	0.44
3:L5:1983:A:C6	3:L5:2010:A:H5''	2.52	0.44
3:L5:2386:U:H5''	55:LR:24:LEU:HD12	1.98	0.44
3:L5:2416:G:H8	3:L5:2416:G:OP2	2.00	0.44
3:L5:2787:A2M:HM'1	3:L5:2789:A:H3'	1.98	0.44
3:L5:2893:U:H2'	3:L5:2894:A:C8	2.52	0.44
3:L5:3848:U:H2'	3:L5:3849:A:H8	1.82	0.44
3:L5:3855:C:H2'	3:L5:3856:A:C8	2.51	0.44
3:L5:3961:G:H5'	3:L5:4049:U:O4	2.18	0.44
3:L5:4921:C:H2'	3:L5:4922:C:C6	2.52	0.44
3:L5:4968:A:H2'	3:L5:4969:C:C6	2.52	0.44
6:SA:120:ARG:NH2	10:SC:267:GLN:HB3	2.33	0.44
7:SD:162:ASP:N	7:SD:163:PRO:CD	2.80	0.44
11:SG:147:LEU:HD23	62:LW:101:ARG:HH12	1.82	0.44
16:SQ:110:ASP:O	16:SQ:114:GLN:HG2	2.17	0.44
24:SN:100:LYS:HG2	24:SN:104:ARG:HH12	1.82	0.44
25:SL:76:VAL:HG22	25:SL:125:ILE:HD13	1.98	0.44
25:SL:126:VAL:HG22	25:SL:145:VAL:HG22	1.97	0.44
37:Sg:286:CYS:HA	37:Sg:302:TYR:HD1	1.83	0.44
44:LE:281:ILE:HG23	44:LE:286:LEU:HD21	1.98	0.44
67:LF:136:VAL:O	67:LF:140:ILE:HG12	2.18	0.44
1:S2:129:C:H4'	1:S2:130:G:H5'	1.99	0.44
1:S2:1183:A:H2'	1:S2:1184:G:H8	1.83	0.44
1:S2:1286:G:H1'	1:S2:1313:A:N6	2.29	0.44
1:S2:1406:G:H2'	1:S2:1407:U:C6	2.52	0.44
1:S2:1839:U:H2'	1:S2:1840:U:C6	2.52	0.44
2:L8:123:U:O4	2:L8:125:C:N4	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:99:A:H5''	51:LN:184:ILE:HD12	2.00	0.44
3:L5:2021:G:H2'	3:L5:2022:C:C6	2.52	0.44
3:L5:2654:C:H2'	3:L5:2655:C:H6	1.81	0.44
3:L5:2728:U:H2'	3:L5:2729:C:C6	2.52	0.44
3:L5:3713:U:H3	3:L5:3740:G:N2	2.15	0.44
3:L5:4059:C:H2'	3:L5:4060:U:C6	2.52	0.44
6:SA:111:GLN:CD	6:SA:111:GLN:H	2.24	0.44
9:SE:104:ASP:HB2	9:SE:110:ALA:HB2	1.99	0.44
11:SG:7:PHE:HD1	11:SG:113:ILE:HB	1.82	0.44
11:SG:197:GLN:HA	11:SG:200:LYS:HB3	2.00	0.44
17:SU:81:GLN:NE2	23:Sd:55:LEU:HD13	2.32	0.44
27:SP:15:PHE:CE2	27:SP:17:TYR:HB2	2.51	0.44
30:SY:80:ASP:OD1	30:SY:81:TYR:N	2.50	0.44
41:LC:152:LEU:HD11	41:LC:174:LEU:HD12	1.99	0.44
47:LL:65:ARG:HA	50:La:69:PHE:CD2	2.52	0.44
51:LN:120:TRP:NE1	51:LN:123:GLU:HG3	2.31	0.44
84:Pt:68:C:H2'	84:Pt:69:C:C6	2.52	0.44
1:S2:642:U:P	8:SJ:39:ASN:HB2	2.57	0.44
1:S2:1135:C:H2'	1:S2:1136:PSU:C6	2.53	0.44
1:S2:1289:U:O4	1:S2:1311:C:N4	2.51	0.44
2:L8:147:G:H2'	2:L8:148:A:H8	1.82	0.44
3:L5:268:G:H2'	3:L5:269:G:C8	2.52	0.44
3:L5:1551:C:H2'	3:L5:1552:G:H5'	1.99	0.44
3:L5:4324:A:H2'	3:L5:4325:A:C8	2.52	0.44
5:SB:141:GLY:CA	5:SB:210:VAL:HG12	2.47	0.44
8:SJ:108:ARG:HH21	8:SJ:149:VAL:HG23	1.82	0.44
13:SH:31:GLU:HB2	13:SH:40:LEU:HD22	2.00	0.44
17:SU:43:ALA:HA	17:SU:46:LYS:HZ3	1.81	0.44
29:SV:70:LEU:HD21	29:SV:83:PHE:CE2	2.51	0.44
33:Sb:30:SER:HG	33:Sb:48:SER:HG	1.60	0.44
37:Sg:213:ASP:OD1	37:Sg:213:ASP:N	2.50	0.44
45:LG:51:LEU:O	45:LG:55:VAL:HG23	2.17	0.44
63:LZ:15:ALA:HB2	72:Lg:88:ARG:HH21	1.82	0.44
1:S2:120:U:H1'	9:SE:33:THR:O	2.17	0.44
1:S2:209:A:C3'	1:S2:210:U:H5'	2.48	0.44
1:S2:636:C:H5''	35:Se:22:GLN:CD	2.42	0.44
1:S2:655:A:H4'	1:S2:656:G:H3'	1.99	0.44
1:S2:1289:U:H2'	1:S2:1290:G:C8	2.53	0.44
1:S2:1383:A2M:HM'3	1:S2:1383:A2M:H1'	1.80	0.44
1:S2:1396:A:O2'	1:S2:1398:G:N7	2.50	0.44
1:S2:1399:C:OP1	37:Sg:100:ARG:NH1	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S2:1749:G:H2'	1:S2:1750:C:C6	2.53	0.44
3:L5:1681:G:O2'	50:La:41:HIS:NE2	2.47	0.44
3:L5:2004:U:H3'	3:L5:2004:U:P	2.57	0.44
3:L5:2568:C:H2'	3:L5:2569:G:C8	2.52	0.44
3:L5:3724:A2M:HM'3	3:L5:3724:A2M:H1'	1.71	0.44
3:L5:3932:U:H2'	3:L5:3933:G:H8	1.82	0.44
3:L5:4196:OMG:HM23	3:L5:4196:OMG:H1'	1.48	0.44
3:L5:4716:C:H5''	40:LB:276:HIS:O	2.18	0.44
3:L5:5002:U:H2'	3:L5:5003:U:H6	1.83	0.44
6:SA:22:GLY:HA2	6:SA:24:HIS:CE1	2.52	0.44
7:SD:132:LYS:HG2	7:SD:156:LEU:HB3	1.99	0.44
8:SJ:110:LEU:O	8:SJ:114:VAL:HG23	2.18	0.44
9:SE:103:TYR:HB2	9:SE:182:MET:CE	2.47	0.44
13:SH:147:LYS:HZ2	13:SH:153:LEU:HG	1.80	0.44
17:SU:22:ILE:HG22	17:SU:114:VAL:HG22	1.99	0.44
18:SK:26:ASP:HB3	18:SK:29:MET:HE3	2.00	0.44
18:SK:64:TRP:HZ3	23:Sd:22:ARG:HD3	1.82	0.44
21:SM:11:VAL:HA	21:SM:14:VAL:HG12	2.00	0.44
21:SM:65:VAL:HA	21:SM:68:LEU:HD12	1.99	0.44
24:SN:98:VAL:HG13	24:SN:115:LEU:HD13	2.00	0.44
28:ST:107:LEU:HB3	28:ST:113:VAL:HG22	1.98	0.44
33:Sb:12:PRO:HA	33:Sb:15:GLU:HG2	1.99	0.44
38:Lz:53:VAL:O	38:Lz:154:THR:HB	2.17	0.44
38:Lz:71:GLN:NE2	42:LJ:34:THR:HG22	2.32	0.44
38:Lz:191:VAL:HG11	38:Lz:198:TRP:CE2	2.53	0.44
39:LA:48:ILE:HG22	80:Lp:54:ILE:HG12	2.00	0.44
47:LL:12:PRO:HB2	47:LL:14:PHE:HD2	1.82	0.44
47:LL:75:GLY:HA2	47:LL:97:SER:OG	2.17	0.44
53:LD:196:ARG:NH2	53:LD:200:MET:HE3	2.32	0.44
56:LS:84:TYR:HB2	56:LS:124:ILE:HD13	2.00	0.44
68:Lc:78:ASN:OD1	68:Lc:79:ILE:N	2.51	0.44
73:Li:16:LYS:HD3	73:Li:16:LYS:HA	1.73	0.44
83:At:47:U:H3'	83:At:50:U:OP1	2.17	0.44
1:S2:23:G:O2'	1:S2:416:U:OP1	2.35	0.44
1:S2:94:G:O2'	1:S2:508:A:O2'	2.31	0.44
1:S2:216:C:N3	1:S2:217:A:C8	2.86	0.44
1:S2:468:A2M:HM'3	1:S2:468:A2M:H1'	1.70	0.44
1:S2:608:C:O4'	35:Se:58:ASN:ND2	2.40	0.44
1:S2:830:A:C2	1:S2:845:G:C6	3.06	0.44
1:S2:1157:G:H5''	1:S2:1158:G:OP1	2.17	0.44
3:L5:113:A:H2'	3:L5:114:G:O4'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:280:G:P	51:LN:44:ARG:HH22	2.41	0.44
3:L5:651:C:H2'	3:L5:652:G:H8	1.82	0.44
3:L5:963:G:H22	3:L5:2095:A:H2	1.65	0.44
3:L5:1204:C:H2'	3:L5:1205:G:H8	1.82	0.44
3:L5:1264:C:H2'	3:L5:1265:G:C8	2.53	0.44
3:L5:2009:A:H3'	3:L5:2010:A:C8	2.49	0.44
3:L5:2761:U:H4'	3:L5:2762:G:O4'	2.18	0.44
3:L5:3792:OMG:HM23	3:L5:3792:OMG:H1'	1.81	0.44
3:L5:3837:C:H2'	3:L5:3838:U:O4'	2.17	0.44
3:L5:3951:G:H1	3:L5:4061:G:H22	1.66	0.44
3:L5:4237:C:OP1	3:L5:4327:C:O2'	2.34	0.44
7:SD:74:GLN:HB3	7:SD:84:VAL:HG21	1.98	0.44
8:SJ:18:ARG:HB2	8:SJ:21:GLU:OE2	2.17	0.44
8:SJ:33:GLY:HA3	35:Se:38:TYR:CG	2.53	0.44
14:SW:105:THR:HG22	14:SW:124:LYS:O	2.18	0.44
15:SI:38:ILE:HD11	15:SI:81:VAL:HG23	1.98	0.44
16:SQ:53:GLU:CG	16:SQ:54:PRO:HD3	2.45	0.44
51:LN:94:PHE:CE2	51:LN:96:ARG:HB2	2.52	0.44
56:LS:76:LYS:HE2	56:LS:76:LYS:HB2	1.80	0.44
66:Lb:65:MET:HA	66:Lb:68:ARG:HG2	1.98	0.44
84:Pt:24:C:H2'	84:Pt:25:U:C6	2.52	0.44
1:S2:27:A2M:H2'	1:S2:28:U:H6	1.82	0.44
1:S2:71:G:N2	1:S2:72:C:H1'	2.33	0.44
1:S2:171:A:C4	1:S2:173:A:C8	3.06	0.44
1:S2:220:U:H2'	1:S2:221:A:C8	2.52	0.44
1:S2:491:C:OP2	30:SY:104:ARG:HG2	2.17	0.44
1:S2:499:G:H2'	1:S2:501:C:O2	2.18	0.44
1:S2:608:C:H2'	1:S2:609:PSU:C6	2.52	0.44
1:S2:618:C:OP1	20:SX:87:ASN:N	2.49	0.44
1:S2:853:C:C2	1:S2:854:A:C8	3.06	0.44
1:S2:1337:4AC:C2	1:S2:1490:OMG:HN21	2.29	0.44
1:S2:1538:C:H2'	1:S2:1539:U:C6	2.52	0.44
3:L5:1309:C:H2'	3:L5:1310:C:C6	2.52	0.44
3:L5:1399:G:H2'	3:L5:1400:G:C8	2.53	0.44
3:L5:1411:C:H2'	3:L5:1412:G:H8	1.82	0.44
3:L5:1461:C:H2'	3:L5:1462:A:C8	2.53	0.44
3:L5:1786:A:H2'	3:L5:1789:C:C5	2.53	0.44
3:L5:1939:A:H5'	3:L5:1940:G:OP1	2.18	0.44
3:L5:2030:A:H2'	3:L5:2031:C:O4'	2.17	0.44
3:L5:2836:A:H1'	40:LB:228:TYR:CD2	2.53	0.44
3:L5:3865:A:H2'	3:L5:3866:C:C6	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:4095:G:N3	3:L5:4096:C:N4	2.65	0.44
3:L5:4220:6MZ:O5'	3:L5:4220:6MZ:H8	2.16	0.44
5:SB:110:MET:SD	5:SB:113:MET:HE2	2.58	0.44
6:SA:33:GLN:HB2	6:SA:154:LEU:HD22	1.99	0.44
7:SD:28:GLU:HG3	7:SD:29:LEU:HD22	2.00	0.44
11:SG:18:VAL:HG11	11:SG:24:LEU:HD11	1.99	0.44
12:SF:122:ARG:HG2	34:Sc:57:THR:OG1	2.18	0.44
27:SP:41:GLN:HG3	27:SP:84:ILE:CD1	2.41	0.44
27:SP:83:MET:HB3	27:SP:116:LEU:HB2	2.00	0.44
37:Sg:8:ARG:HB3	37:Sg:311:GLN:NE2	2.32	0.44
37:Sg:245:ARG:HH12	37:Sg:312:VAL:HG21	1.82	0.44
41:LC:40:VAL:HG22	41:LC:115:VAL:HG11	2.00	0.44
48:LV:22:VAL:O	48:LV:24:ALA:N	2.50	0.44
49:LM:46:ARG:O	49:LM:48:GLN:HG3	2.17	0.44
50:La:38:LEU:HD23	50:La:38:LEU:HA	1.86	0.44
50:La:134:GLU:O	50:La:138:LYS:HG2	2.17	0.44
51:LN:120:TRP:HE1	51:LN:123:GLU:CG	2.30	0.44
62:LW:99:GLU:HA	62:LW:102:LYS:HG2	1.98	0.44
63:LZ:41:ALA:HB2	63:LZ:77:TYR:HE1	1.83	0.44
72:Lg:23:SER:O	72:Lg:30:ILE:HA	2.18	0.44
84:Pt:72:C:H2'	84:Pt:73:A:H8	1.82	0.44
1:S2:190:G:HO2'	1:S2:191:A:H8	1.58	0.44
1:S2:644:OMG:H1'	1:S2:644:OMG:HM23	1.71	0.44
1:S2:917:U:C4	1:S2:918:PSU:C2	3.05	0.44
1:S2:1161:U:H2'	1:S2:1162:C:C6	2.53	0.44
1:S2:1231:C:O2'	1:S2:1253:A:N6	2.51	0.44
1:S2:1286:G:H22	1:S2:1312:G:H1'	1.82	0.44
1:S2:1468:C:H2'	1:S2:1469:A:H8	1.82	0.44
1:S2:1841:C:H2'	1:S2:1842:4AC:H6	2.00	0.44
3:L5:1168:G:H2'	3:L5:1169:G:H8	1.82	0.44
3:L5:1180:C:H5''	3:L5:1181:C:H5	1.82	0.44
3:L5:1188:C:H2'	3:L5:1189:G:C8	2.51	0.44
3:L5:1510:G:H2'	3:L5:1511:U:C6	2.53	0.44
3:L5:1613:A:H5'	39:LA:183:GLY:CA	2.48	0.44
3:L5:1705:G:H2'	3:L5:1706:A:C8	2.52	0.44
3:L5:1912:G:N2	46:LO:87:MET:HE2	2.33	0.44
3:L5:1932:A:H2'	3:L5:1933:G:C8	2.53	0.44
3:L5:1998:A:C6	3:L5:1999:A:C4	3.05	0.44
3:L5:2610:G:H2'	3:L5:2611:A:C8	2.52	0.44
3:L5:4071:U:H2'	3:L5:4072:C:C6	2.53	0.44
3:L5:4508:C:N3	3:L5:4512:U:C5	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:4749:C:H2'	3:L5:4750:G:O4'	2.16	0.44
16:SQ:58:LEU:HD11	16:SQ:108:ILE:HB	2.00	0.44
20:SX:68:LYS:HB3	20:SX:91:LEU:HD13	1.99	0.44
28:ST:6:VAL:HB	28:ST:65:TYR:CE2	2.53	0.44
28:ST:21:PHE:HD1	28:ST:24:LYS:HZ3	1.65	0.44
38:Lz:77:ALA:O	38:Lz:81:ASP:HB2	2.16	0.44
42:LJ:77:ALA:HA	42:LJ:80:GLU:OE2	2.18	0.44
45:LG:149:ASN:HB3	45:LG:151:LYS:NZ	2.32	0.44
52:LI:61:SER:HA	52:LI:126:VAL:HG12	1.99	0.44
59:LU:24:ASP:HB3	59:LU:69:LYS:HG2	2.00	0.44
68:Lc:47:ILE:HG12	68:Lc:72:HIS:HB3	1.98	0.44
1:S2:193:C:H2'	1:S2:194:C:H6	1.83	0.44
1:S2:307:G:C2	15:SI:44:HIS:HB3	2.53	0.44
1:S2:329:G:H2'	1:S2:330:G:O4'	2.17	0.44
1:S2:948:C:H2'	1:S2:949:G:C8	2.47	0.44
1:S2:1388:A:H61	7:SD:161:GLY:CA	2.31	0.44
1:S2:1398:G:O2'	37:Sg:88:ARG:NH2	2.50	0.44
1:S2:1675:A:C6	1:S2:1676:U:C4	3.06	0.44
2:L8:27:U:H2'	2:L8:28:C:H6	1.81	0.44
3:L5:223:G:H4'	3:L5:225:G:C8	2.53	0.44
3:L5:272:U:H2'	3:L5:273:U:C6	2.52	0.44
3:L5:1081:C:H2'	3:L5:1082:C:C6	2.52	0.44
3:L5:1847:C:H2'	3:L5:1848:C:C6	2.53	0.44
3:L5:2702:C:O3'	59:LU:113:ARG:NH1	2.51	0.44
3:L5:3822:U:H3'	3:L5:3823:G:N2	2.33	0.44
3:L5:3933:G:H2'	3:L5:3934:G:C8	2.51	0.44
7:SD:53:THR:HG21	7:SD:94:ARG:HE	1.83	0.44
15:SI:39:GLY:O	15:SI:61:ASP:HB2	2.18	0.44
16:SQ:77:HIS:O	16:SQ:81:ILE:HG12	2.17	0.44
16:SQ:96:TYR:HA	16:SQ:100:VAL:HB	2.00	0.44
19:SO:98:ARG:HH21	19:SO:134:PRO:HG2	1.82	0.44
30:SY:14:THR:HA	30:SY:21:LYS:CB	2.48	0.44
36:Sf:93:HIS:ND1	36:Sf:94:LYS:O	2.49	0.44
37:Sg:7:LEU:HB2	37:Sg:310:TRP:CZ3	2.52	0.44
38:Lz:15:ARG:NH1	38:Lz:177:ASP:OD1	2.51	0.44
39:LA:112:ILE:HG13	80:Lp:79:VAL:HG22	1.99	0.44
40:LB:258:HIS:HA	40:LB:259:PRO:C	2.41	0.44
40:LB:312:LYS:NZ	40:LB:380:GLN:HB3	2.32	0.44
43:LH:48:LEU:HD11	43:LH:56:ARG:NH1	2.32	0.44
44:LE:63:TYR:CE1	44:LE:68:MET:HB3	2.53	0.44
83:At:14:A:H2'	83:At:15:G:O4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S2:113:G:O6	1:S2:290:U:H1'	2.17	0.44
1:S2:1284:A:H1'	1:S2:1286:G:C5	2.52	0.44
1:S2:1397:U:H3	16:SQ:12:VAL:HA	1.82	0.44
1:S2:1503:C:H2'	1:S2:1504:U:C6	2.52	0.44
2:L8:58:G:O6	74:Lj:63:ARG:NH1	2.50	0.44
3:L5:279:A:N7	51:LN:12:ARG:NH1	2.65	0.44
3:L5:1269:G:C8	3:L5:1269:G:C3'	3.00	0.44
3:L5:1754:U:O2'	3:L5:1755:C:H6	2.01	0.44
3:L5:2100:A:H2'	3:L5:2101:C:C6	2.53	0.44
3:L5:2415:OMU:H1'	3:L5:2415:OMU:HM23	1.62	0.44
3:L5:2633:U:H2'	3:L5:2634:C:H6	1.83	0.44
3:L5:3610:A:H2'	3:L5:3611:A:H8	1.83	0.44
3:L5:3956:G:H1	3:L5:3961:G:H21	1.65	0.44
3:L5:3973:G:H22	3:L5:4036:G:H2'	1.83	0.44
3:L5:4088:C:C5	45:LG:54:PHE:HZ	2.36	0.44
3:L5:4685:U:H2'	3:L5:4686:G:C8	2.53	0.44
3:L5:4688:C:O2'	43:LH:155:SER:OG	2.33	0.44
4:L7:112:U:H2'	4:L7:113:G:H8	1.81	0.44
6:SA:80:ARG:HH21	6:SA:82:THR:CG2	2.31	0.44
13:SH:41:ARG:NH2	55:LR:185:ILE:HA	2.33	0.44
40:LB:46:PHE:CE1	40:LB:84:MET:HG3	2.53	0.44
42:LJ:144:LYS:HE2	42:LJ:146:ARG:O	2.17	0.44
43:LH:89:ARG:HB2	43:LH:187:VAL:HG22	1.99	0.44
47:LL:120:TYR:HE1	47:LL:154:VAL:HG11	1.81	0.44
54:LQ:18:PRO:HD3	54:LQ:52:PHE:CD1	2.53	0.44
62:LW:35:LYS:HE2	62:LW:51:TRP:CZ2	2.52	0.44
1:S2:443:U:H2'	1:S2:444:G:O4'	2.18	0.43
1:S2:575:A:H2'	1:S2:576:A2M:O4'	2.17	0.43
1:S2:946:U:C2	1:S2:947:G:C8	3.05	0.43
1:S2:1650:A:H2'	1:S2:1651:A:O4'	2.18	0.43
1:S2:1746:U:P	11:SG:31:ARG:HH22	2.41	0.43
1:S2:1845:A:H2'	1:S2:1846:G:H8	1.81	0.43
3:L5:42:A:H4'	51:LN:84:PRO:HD2	1.99	0.43
3:L5:1269:G:H2'	3:L5:1270:A:C4'	2.47	0.43
3:L5:1443:A:N6	3:L5:2103:G:O6	2.51	0.43
3:L5:1589:C:H2'	3:L5:1590:C:C6	2.53	0.43
3:L5:1802:A:H4'	57:LT:105:PHE:CE1	2.53	0.43
3:L5:2037:C:O2'	77:Lm:113:LYS:HD2	2.18	0.43
3:L5:2338:C:OP1	64:Lr:19:LYS:NZ	2.41	0.43
3:L5:2482:C:H2'	3:L5:2483:G:H8	1.82	0.43
3:L5:2815:A2M:HM'3	3:L5:2815:A2M:H1'	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:2858:A:H2'	3:L5:2859:G:O4'	2.18	0.43
3:L5:3871:A:H2'	3:L5:3872:A:C8	2.53	0.43
3:L5:4114:C:H2'	3:L5:4115:G:C4	2.53	0.43
9:SE:98:ASN:HB2	9:SE:114:ILE:O	2.18	0.43
9:SE:202:PRO:HB2	25:SL:42:LEU:HD23	2.01	0.43
14:SW:101:PHE:HA	14:SW:113:HIS:CE1	2.53	0.43
40:LB:181:MET:HE3	40:LB:181:MET:HB2	1.86	0.43
45:LG:106:THR:OG1	45:LG:195:HIS:ND1	2.51	0.43
45:LG:107:LYS:HA	45:LG:110:LYS:HB3	2.00	0.43
45:LG:138:ALA:HB1	45:LG:199:CYS:SG	2.58	0.43
46:LO:140:ARG:O	46:LO:144:GLU:HG3	2.18	0.43
51:LN:60:VAL:HG23	51:LN:134:LEU:HB2	2.00	0.43
75:Lk:14:THR:HG23	75:Lk:36:VAL:HG11	2.00	0.43
84:Pt:26:C:C4	84:Pt:27:G:C8	3.06	0.43
1:S2:816:A:P	8:SJ:10:ARG:HH22	2.41	0.43
1:S2:834:C:H2'	1:S2:835:C:C6	2.52	0.43
1:S2:922:A:H2'	1:S2:923:G:O4'	2.18	0.43
1:S2:962:A:H4'	19:SO:66:ARG:CZ	2.48	0.43
3:L5:270:U:H2'	3:L5:271:C:C6	2.53	0.43
3:L5:466:A:C6	3:L5:468:U:C4	3.06	0.43
3:L5:906:C:H2'	3:L5:907:C:H6	1.83	0.43
3:L5:1270:A:N6	3:L5:2106:G:O2'	2.51	0.43
3:L5:1570:G:N7	80:Lp:2:ALA:N	2.65	0.43
3:L5:2029:A:H2'	3:L5:2030:A:C8	2.53	0.43
3:L5:2835:A:O2'	40:LB:228:TYR:O	2.31	0.43
3:L5:3596:A:H2'	3:L5:3597:G:C8	2.52	0.43
3:L5:3764:PSU:H2'	3:L5:3765:G:H8	1.78	0.43
3:L5:4141:G:O2'	3:L5:4142:C:O4'	2.33	0.43
3:L5:4411:G:C2	3:L5:4432:C:C2	3.06	0.43
3:L5:4711:C:H2'	3:L5:4712:C:H6	1.84	0.43
11:SG:159:ARG:HA	11:SG:159:ARG:HD3	1.82	0.43
12:SF:178:ILE:O	12:SF:182:LYS:HG2	2.18	0.43
13:SH:122:LEU:HA	13:SH:125:VAL:HG12	1.99	0.43
20:SX:60:LYS:HD3	20:SX:116:PRO:HB3	2.00	0.43
20:SX:134:TYR:O	35:Se:13:ARG:NH2	2.51	0.43
26:SR:57:LEU:O	26:SR:61:ILE:HG12	2.18	0.43
38:Lz:72:GLN:HE21	38:Lz:141:ASN:HD21	1.66	0.43
42:LJ:104:ASN:OD1	42:LJ:133:VAL:HA	2.19	0.43
43:LH:162:GLN:HG2	43:LH:179:ILE:O	2.18	0.43
46:LO:127:VAL:HG12	46:LO:128:ARG:HD2	1.99	0.43
57:LT:8:ARG:NH1	57:LT:52:MET:HE1	2.32	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:5A:107:GLU:HG2	81:5A:108:VAL:N	2.34	0.43
1:S2:183:G:C2	1:S2:184:G:C8	3.06	0.43
1:S2:346:C:H5''	9:SE:38:LEU:HB2	1.98	0.43
1:S2:596:U:O2'	1:S2:645:C:O2	2.35	0.43
1:S2:1035:A:O2'	1:S2:1856:C:O2	2.36	0.43
1:S2:1112:U:H1'	5:SB:146:ARG:NH2	2.33	0.43
1:S2:1273:C:O2'	1:S2:1275:G:H5''	2.18	0.43
1:S2:1511:U:H2'	1:S2:1512:C:H6	1.82	0.43
1:S2:1804:OMU:HM23	1:S2:1804:OMU:H1'	1.69	0.43
2:L8:75:OMG:HM23	2:L8:75:OMG:H1'	1.75	0.43
2:L8:94:G:H1'	74:Lj:82:THR:O	2.17	0.43
3:L5:469:C:H2'	3:L5:470:A:C8	2.53	0.43
3:L5:920:C:H2'	3:L5:921:C:C6	2.54	0.43
3:L5:1325:C:N4	3:L5:3879:G:H5''	2.33	0.43
3:L5:3736:A:H1'	3:L5:3932:U:O2'	2.19	0.43
3:L5:4238:G:H2'	3:L5:4239:A:H8	1.80	0.43
6:SA:91:ALA:HA	6:SA:96:ALA:HB3	2.01	0.43
9:SE:55:ALA:HB2	9:SE:64:ILE:HD11	2.00	0.43
37:Sg:33:SER:OG	37:Sg:43:TRP:NE1	2.47	0.43
37:Sg:66:VAL:HA	37:Sg:82:SER:HB2	2.00	0.43
40:LB:74:GLU:OE1	40:LB:285:TYR:OH	2.30	0.43
45:LG:230:TYR:HA	45:LG:233:ILE:HB	1.99	0.43
46:LO:185:VAL:O	46:LO:189:ILE:HG12	2.18	0.43
51:LN:169:ARG:HA	51:LN:172:ARG:HD3	1.99	0.43
53:LD:65:ALA:HB2	53:LD:74:ILE:HD13	2.00	0.43
62:LW:46:PRO:HG2	62:LW:54:LEU:HD11	2.01	0.43
83:At:4:C:H2'	83:At:5:G:C8	2.53	0.43
1:S2:455:A:H2'	1:S2:456:C:H6	1.83	0.43
1:S2:1148:A:OP1	32:Sa:6:ARG:NH2	2.51	0.43
2:L8:88:A:H2'	2:L8:89:U:O4'	2.18	0.43
3:L5:78:U:H2'	3:L5:79:C:H6	1.83	0.43
3:L5:212:A:H2'	3:L5:213:G:C8	2.53	0.43
3:L5:310:G:H2'	3:L5:311:G:H8	1.83	0.43
3:L5:400:A2M:HM'3	3:L5:400:A2M:H1'	1.73	0.43
3:L5:444:G:OP1	71:Lf:54:LYS:NZ	2.51	0.43
3:L5:731:G:C6	3:L5:932:A:C4	3.06	0.43
3:L5:1727:U:H2'	3:L5:1728:U:C6	2.53	0.43
3:L5:1760:G:H2'	3:L5:1761:G:C8	2.53	0.43
3:L5:1920:C:H3'	3:L5:1921:C:H5''	1.99	0.43
3:L5:4112:C:H2'	3:L5:4113:U:H6	1.83	0.43
3:L5:4551:U:H2'	3:L5:4552:PSU:C6	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:4691:A:O3'	43:LH:71:ARG:HD3	2.17	0.43
3:L5:5031:G:H2'	3:L5:5032:C:C6	2.54	0.43
4:L7:61:G:H5''	53:LD:271:MET:SD	2.58	0.43
8:SJ:60:LEU:HD22	8:SJ:70:ARG:HA	2.00	0.43
15:SI:79:ILE:HG22	15:SI:80:ASP:OD1	2.18	0.43
19:SO:86:LYS:HA	19:SO:86:LYS:HE2	2.00	0.43
20:SX:46:HIS:CD2	20:SX:103:ALA:HB2	2.53	0.43
25:SL:4:ILE:HD12	25:SL:56:ILE:HG12	2.00	0.43
26:SR:33:ARG:HD3	26:SR:33:ARG:HA	1.73	0.43
27:SP:12:PHE:CE1	27:SP:14:LYS:HB2	2.53	0.43
27:SP:24:GLN:O	27:SP:28:MET:HB2	2.18	0.43
27:SP:36:LEU:HD23	27:SP:36:LEU:H	1.84	0.43
36:Sf:101:ALA:O	36:Sf:103:LEU:N	2.43	0.43
38:Lz:119:GLN:HA	38:Lz:123:ILE:HD13	2.00	0.43
44:LE:150:LEU:HB3	44:LE:194:VAL:CG2	2.49	0.43
46:LO:110:PRO:N	46:LO:111:PRO:HD2	2.33	0.43
47:LL:87:HIS:HB3	47:LL:90:VAL:HG23	2.01	0.43
52:LI:48:LEU:HB2	52:LI:142:LEU:HD23	2.00	0.43
52:LI:171:TRP:HB2	52:LI:178:ALA:HA	1.99	0.43
53:LD:37:VAL:HB	53:LD:67:ALA:HB2	1.99	0.43
53:LD:232:THR:HG22	53:LD:234:ASP:H	1.83	0.43
56:LS:28:TYR:CD1	57:LT:151:LEU:HD11	2.54	0.43
61:LY:86:GLN:HE21	61:LY:94:THR:HB	1.82	0.43
81:5A:94:ILE:HG21	81:5A:123:ILE:HD11	2.00	0.43
83:At:27:G:H2'	83:At:28:G:C8	2.52	0.43
1:S2:223:C:H2'	1:S2:224:A:C8	2.53	0.43
1:S2:569:A:H2'	1:S2:570:C:C6	2.53	0.43
1:S2:650:A:H2'	1:S2:651:PSU:O4'	2.18	0.43
1:S2:683:OMG:HM23	1:S2:683:OMG:H1'	1.76	0.43
1:S2:861:A:H8	1:S2:861:A:OP2	2.00	0.43
1:S2:1337:4AC:O2'	1:S2:1338:G:H5'	2.18	0.43
1:S2:1491:G:H2'	1:S2:1492:U:C6	2.53	0.43
1:S2:1523:C:H2'	1:S2:1524:G:H8	1.84	0.43
3:L5:1242:G:H1'	66:Lb:120:ARG:HD2	2.00	0.43
3:L5:1296:G:H2'	3:L5:1297:U:C6	2.54	0.43
3:L5:1300:G:H2'	3:L5:1301:C:C6	2.53	0.43
3:L5:1441:C:H2'	3:L5:1442:C:H6	1.83	0.43
3:L5:3873:G:H2'	3:L5:3874:G:C8	2.53	0.43
3:L5:4050:A:H3'	3:L5:4051:C:C6	2.52	0.43
5:SB:133:TYR:CE2	5:SB:181:LEU:HD22	2.53	0.43
15:SI:201:LYS:HZ1	25:SL:8:ARG:HA	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:SO:28:PHE:CE1	19:SO:92:ALA:HB3	2.53	0.43
20:SX:94:ILE:HG12	20:SX:125:VAL:HG21	2.00	0.43
30:SY:15:ASN:HD21	30:SY:22:GLN:HG3	1.82	0.43
37:Sg:164:ILE:HD11	37:Sg:221:LEU:HB3	2.01	0.43
39:LA:101:VAL:HG22	39:LA:165:VAL:HG22	2.01	0.43
40:LB:19:ARG:O	40:LB:234:ARG:NH2	2.51	0.43
40:LB:339:GLY:HA3	40:LB:343:ARG:HD2	1.99	0.43
61:LY:118:ILE:HG22	61:LY:122:LYS:HD2	2.00	0.43
64:Lr:20:ARG:NH2	70:Le:84:GLU:OE2	2.51	0.43
74:Lj:27:TYR:HA	74:Lj:34:CYS:HA	2.01	0.43
81:5A:43:MET:HE3	81:5A:56:VAL:HG11	2.01	0.43
81:5A:89:PHE:HD2	81:5A:101:LEU:HD23	1.84	0.43
1:S2:845:G:H3'	1:S2:846:G:C8	2.53	0.43
1:S2:918:PSU:H4'	24:SN:20:ARG:NH2	2.34	0.43
1:S2:1332:A:N3	7:SD:141:LYS:NZ	2.64	0.43
1:S2:1726:G:H2'	1:S2:1727:G:H8	1.84	0.43
1:S2:1851:MA6:O5'	78:Ln:1:MET:HE2	2.19	0.43
3:L5:45:U:H2'	3:L5:46:U:O4'	2.19	0.43
3:L5:302:C:H2'	3:L5:303:C:C6	2.53	0.43
3:L5:1672:U:H2'	3:L5:1673:U:C6	2.53	0.43
3:L5:3651:A:O3'	39:LA:197:PRO:HB2	2.18	0.43
3:L5:3768:PSU:O2'	3:L5:3769:C:H5'	2.19	0.43
3:L5:3953:G:H2'	3:L5:3954:A:C8	2.54	0.43
4:L7:102:U:H3'	4:L7:103:A:C8	2.53	0.43
5:SB:168:MET:HG3	5:SB:197:ILE:HG21	2.01	0.43
6:SA:2:SAC:C	6:SA:4:ALA:N	2.81	0.43
14:SW:5:ASN:O	14:SW:8:ALA:N	2.51	0.43
18:SK:82:TYR:HD2	18:SK:83:LEU:HD12	1.83	0.43
23:Sd:36:LEU:HD12	23:Sd:38:MET:HE2	2.01	0.43
47:LL:130:LYS:NZ	47:LL:132:SER:OG	2.41	0.43
49:LM:76:ALA:O	49:LM:79:LYS:HG3	2.18	0.43
50:La:137:ILE:O	50:La:140:VAL:HG12	2.19	0.43
56:LS:75:VAL:HG11	56:LS:98:ARG:NH2	2.33	0.43
63:LZ:54:THR:OG1	63:LZ:57:MET:HE3	2.18	0.43
65:Lh:9:LEU:HD21	65:Lh:57:VAL:HG22	1.99	0.43
1:S2:1134:G:H2'	1:S2:1135:C:H6	1.83	0.43
1:S2:1532:C:H3'	1:S2:1637:A:H62	1.83	0.43
3:L5:440:U:H2'	3:L5:441:G:H8	1.83	0.43
3:L5:1471:U:H2'	3:L5:1472:C:H6	1.83	0.43
3:L5:2482:C:H2'	3:L5:2483:G:C8	2.54	0.43
3:L5:2590:G:H2'	3:L5:2754:G:H22	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:4139:G:C5	3:L5:4140:C:C4	3.07	0.43
3:L5:4344:U:H2'	3:L5:4345:C:H6	1.84	0.43
3:L5:4370:OMG:HM23	90:L5:5310:3H3:H33	2.00	0.43
3:L5:4392:OMG:H2'	3:L5:4447:5MC:HM51	2.00	0.43
3:L5:4488:A:H4'	3:L5:4489:G:C8	2.54	0.43
3:L5:4979:A:OP1	40:LB:228:TYR:HB2	2.19	0.43
15:SI:147:LYS:HA	15:SI:150:ASP:OD2	2.19	0.43
27:SP:28:MET:HE1	27:SP:33:LEU:HD13	2.00	0.43
28:ST:38:LYS:HG2	28:ST:43:LYS:HB2	2.01	0.43
36:Sf:118:ARG:CZ	36:Sf:132:MET:HB3	2.48	0.43
39:LA:180:LEU:HD11	80:Lp:22:LEU:HB3	2.01	0.43
42:LJ:91:GLU:O	42:LJ:91:GLU:HG3	2.18	0.43
60:LX:71:LEU:HD12	60:LX:71:LEU:HA	1.82	0.43
66:Lb:96:LEU:CD1	67:LF:52:GLU:HG3	2.49	0.43
1:S2:17:C:H2'	1:S2:18:C:H6	1.81	0.43
1:S2:191:A:OP1	15:SI:142:SER:HB2	2.19	0.43
1:S2:509:OMG:HM23	1:S2:509:OMG:H1'	1.80	0.43
1:S2:669:A:H2'	1:S2:670:A:C4	2.54	0.43
1:S2:835:C:O2'	1:S2:837:A:H1'	2.18	0.43
1:S2:1104:G:H2'	1:S2:1105:G:H8	1.84	0.43
1:S2:1249:C:H4'	16:SQ:143:LYS:HE2	2.01	0.43
1:S2:1547:C:H1'	1:S2:1670:C:H4'	2.01	0.43
1:S2:1606:G:H1	1:S2:1632:G:HO2'	1.64	0.43
3:L5:106:A:H2'	3:L5:107:G:O4'	2.19	0.43
3:L5:153:G:H2'	3:L5:154:G:C8	2.53	0.43
3:L5:1075:G:H2'	3:L5:1076:C:C6	2.54	0.43
3:L5:1374:G:H2'	3:L5:1375:C:C6	2.53	0.43
3:L5:2002:A:N3	3:L5:2002:A:H5''	2.33	0.43
3:L5:2710:C:H2'	3:L5:2712:G:O5'	2.17	0.43
3:L5:3768:PSU:H2'	3:L5:3769:C:H6	1.82	0.43
3:L5:3807:A:H2'	3:L5:3808:OMC:H6	1.83	0.43
3:L5:3861:A:H2'	3:L5:3862:A:H8	1.81	0.43
3:L5:4131:G:H2'	3:L5:4132:C:C6	2.54	0.43
3:L5:4233:A:C5	3:L5:4235:G:C8	3.07	0.43
3:L5:4491:G:O2'	3:L5:4511:A:N1	2.50	0.43
3:L5:4524:G:H2'	3:L5:4525:C:C6	2.53	0.43
3:L5:4538:G:H2'	3:L5:4539:U:H6	1.82	0.43
7:SD:58:VAL:HG23	7:SD:59:LEU:HD22	1.99	0.43
15:SI:6:ASP:OD1	15:SI:9:HIS:ND1	2.49	0.43
23:Sd:22:ARG:HG3	23:Sd:23:VAL:HG23	2.00	0.43
26:SR:14:ARG:HG2	26:SR:14:ARG:HH11	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:ST:28:LEU:HD21	28:ST:53:PHE:HD2	1.83	0.43
30:SY:58:PHE:CZ	30:SY:74:MET:HE3	2.49	0.43
36:Sf:118:ARG:HB3	36:Sf:131:PHE:CD1	2.54	0.43
40:LB:348:ARG:HG2	40:LB:349:LYS:O	2.19	0.43
49:LM:11:ARG:O	49:LM:27:ILE:HG12	2.19	0.43
53:LD:129:GLU:HB2	53:LD:177:THR:HG21	2.01	0.43
64:Lr:28:GLU:CD	64:Lr:42:GLY:H	2.25	0.43
67:LF:59:LYS:O	67:LF:63:GLN:HG3	2.19	0.43
67:LF:69:ILE:O	67:LF:73:ARG:HG3	2.19	0.43
67:LF:226:HIS:HB3	67:LF:229:GLU:HG3	2.00	0.43
1:S2:322:C:O5'	1:S2:322:C:H6	2.01	0.43
1:S2:1313:A:H4'	1:S2:1314:U:H6	1.84	0.43
1:S2:1425:G:H2'	1:S2:1426:U:C6	2.54	0.43
1:S2:1465:A:OP1	26:SR:56:HIS:NE2	2.52	0.43
1:S2:1671:G:H2'	1:S2:1672:U:H6	1.84	0.43
1:S2:1676:U:H2'	1:S2:1677:U:O4'	2.18	0.43
3:L5:1352:C:H2'	3:L5:1353:G:O4'	2.19	0.43
3:L5:1760:G:H2'	3:L5:1761:G:H8	1.83	0.43
3:L5:3690:U:H5'	3:L5:3818:UY1:OP2	2.19	0.43
3:L5:4046:A:C5	3:L5:4047:A:C6	3.06	0.43
3:L5:4954:G:H2'	3:L5:4955:A:H8	1.84	0.43
31:SZ:40:VAL:HB	38:Lz:93:LEU:CD2	2.49	0.43
44:LE:133:PHE:O	44:LE:138:ARG:NH2	2.48	0.43
48:LV:128:LEU:HD23	48:LV:128:LEU:HA	1.92	0.43
52:LI:75:TYR:HD2	52:LI:151:ALA:HB2	1.84	0.43
55:LR:168:GLU:O	55:LR:172:ARG:HG2	2.19	0.43
83:At:3:C:H2'	83:At:4:C:H6	1.84	0.43
1:S2:190:G:H8	1:S2:190:G:O5'	2.02	0.43
1:S2:811:A:H2'	1:S2:812:A:C8	2.54	0.43
2:L8:73:U:H2'	2:L8:74:U:O4'	2.18	0.43
3:L5:663:G:H2'	3:L5:664:G:H8	1.84	0.43
3:L5:2303:C:H5''	70:Le:104:SER:HB3	2.00	0.43
3:L5:3883:U:H2'	3:L5:3884:PSU:C6	2.53	0.43
3:L5:3945:A:H2'	3:L5:3946:G:H8	1.84	0.43
3:L5:3969:G:H5'	3:L5:3970:G:OP2	2.19	0.43
3:L5:4187:G:H2'	3:L5:4188:U:O4'	2.19	0.43
3:L5:4194:U:H3'	66:Lb:3:LYS:HD2	2.01	0.43
3:L5:4208:U:H4'	3:L5:4274:A:C2	2.54	0.43
3:L5:4287:G:H2'	3:L5:4288:C:H6	1.84	0.43
3:L5:4460:U:H2'	3:L5:4461:C:C6	2.54	0.43
3:L5:4719:G:O2'	3:L5:4720:C:H5''	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L7:88:A:H2'	4:L7:89:G:O4'	2.18	0.43
27:SP:86:LEU:O	27:SP:89:MET:HG2	2.19	0.43
35:Se:2:VAL:N	83:At:37:A:OP1	2.52	0.43
37:Sg:62:HIS:CG	37:Sg:82:SER:HB3	2.54	0.43
38:Lz:205:TYR:HA	38:Lz:216:LEU:HD21	2.00	0.43
40:LB:154:LYS:HB2	40:LB:194:LEU:HD12	2.01	0.43
41:LC:294:LYS:HA	41:LC:299:GLN:NE2	2.33	0.43
43:LH:85:THR:HG23	43:LH:86:LEU:HD13	2.00	0.43
44:LE:202:ASP:O	44:LE:260:LYS:HD3	2.18	0.43
44:LE:250:GLN:HE21	44:LE:254:ASP:CG	2.27	0.43
49:LM:41:PRO:HB2	49:LM:74:ARG:HB2	2.01	0.43
55:LR:21:LYS:HE3	55:LR:55:VAL:HA	2.00	0.43
65:Lh:52:LYS:HA	65:Lh:52:LYS:HD3	1.90	0.43
1:S2:1313:A:H4'	1:S2:1314:U:C6	2.54	0.42
1:S2:1556:A:C6	23:Sd:13:LYS:HA	2.54	0.42
3:L5:374:G:OP2	74:Lj:56:ARG:NH1	2.42	0.42
3:L5:456:C:H2'	3:L5:457:G:C8	2.53	0.42
3:L5:732:A:H2'	3:L5:733:A:O4'	2.18	0.42
3:L5:1074:G:H2'	3:L5:1075:G:H8	1.84	0.42
3:L5:1173:G:H2'	3:L5:1174:G:H8	1.83	0.42
3:L5:1327:C:H2'	3:L5:1328:G:C8	2.53	0.42
3:L5:1426:G:H1'	3:L5:1459:A:H61	1.83	0.42
3:L5:1460:C:H2'	3:L5:1461:C:H6	1.83	0.42
3:L5:1480:C:O2'	3:L5:1482:G:OP2	2.25	0.42
3:L5:1534:A2M:C4	74:Lj:13:ASN:O	2.67	0.42
3:L5:2570:U:H2'	3:L5:2571:C:C6	2.54	0.42
3:L5:2601:A:N6	3:L5:2743:A:H3'	2.33	0.42
3:L5:2634:C:H2'	3:L5:2635:U:H6	1.84	0.42
3:L5:3712:A:H2'	3:L5:3713:U:C5	2.53	0.42
3:L5:4230:C:OP2	79:Lo:88:CYS:HA	2.19	0.42
3:L5:4521:PSU:H1'	40:LB:253:CYS:SG	2.59	0.42
3:L5:4620:OMU:H1'	3:L5:4620:OMU:HM23	1.75	0.42
10:SC:133:TYR:CE1	10:SC:216:MET:HA	2.53	0.42
10:SC:189:GLY:HA3	10:SC:235:ASN:ND2	2.34	0.42
18:SK:86:PRO:O	18:SK:88:GLU:N	2.52	0.42
22:SS:43:VAL:HG11	22:SS:83:PHE:CE2	2.54	0.42
30:SY:54:VAL:HG22	30:SY:76:TYR:HB2	2.01	0.42
41:LC:66:SER:HA	41:LC:77:PRO:HA	2.01	0.42
41:LC:308:LYS:HD2	41:LC:308:LYS:HA	1.79	0.42
44:LE:50:LEU:HD21	44:LE:54:ILE:HG22	2.01	0.42
44:LE:110:ARG:NH2	44:LE:110:ARG:HB3	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:LE:283:PRO:HB2	71:Lf:41:PHE:CZ	2.53	0.42
51:LN:28:TRP:O	51:LN:32:GLN:HG2	2.19	0.42
53:LD:227:ILE:C	53:LD:229:ASN:N	2.74	0.42
60:LX:47:ARG:HA	60:LX:47:ARG:HD2	1.73	0.42
67:LF:137:GLU:HB2	67:LF:138:PRO:HD3	2.01	0.42
70:Le:77:PHE:CD2	70:Le:88:LEU:HD21	2.54	0.42
84:Pt:18:C:O2'	84:Pt:19:G:H5''	2.19	0.42
1:S2:528:A:H2'	1:S2:529:A:C8	2.52	0.42
1:S2:809:A:H2'	1:S2:810:A:C8	2.54	0.42
1:S2:1409:A:H2'	1:S2:1410:C:H6	1.84	0.42
1:S2:1453:C:O3'	26:SR:49:LYS:HD3	2.19	0.42
1:S2:1614:A:P	27:SP:42:ARG:HH21	2.42	0.42
2:L8:4:C:H2'	2:L8:5:U:C6	2.54	0.42
2:L8:14:OMU:HM23	2:L8:14:OMU:H1'	1.50	0.42
2:L8:32:C:H2'	2:L8:33:G:O4'	2.19	0.42
3:L5:47:A:H5''	47:LL:16:LYS:HD3	2.00	0.42
3:L5:116:G:H2'	3:L5:117:C:C6	2.54	0.42
3:L5:687:U:H1'	44:LE:94:LYS:NZ	2.34	0.42
3:L5:1204:C:H2'	3:L5:1205:G:C8	2.54	0.42
3:L5:1207:C:H2'	3:L5:1208:G:C8	2.49	0.42
3:L5:1351:G:O6	54:LQ:55:ARG:NH1	2.52	0.42
3:L5:1785:C:O2'	3:L5:1786:A:H5'	2.19	0.42
3:L5:1883:G:H5'	70:Le:49:PHE:CE1	2.54	0.42
3:L5:1966:C:H5'	3:L5:1967:A:OP2	2.19	0.42
3:L5:2374:A:H2'	3:L5:2375:A:H8	1.83	0.42
3:L5:3607:U:H2'	3:L5:3608:A:C8	2.54	0.42
3:L5:4263:C:H2'	3:L5:4264:G:O4'	2.19	0.42
3:L5:4297:G:H22	3:L5:4313:A:H2	1.67	0.42
3:L5:4430:G:H5'	52:LI:3:ARG:HH12	1.84	0.42
3:L5:4453:C:H2'	3:L5:4454:G:O4'	2.19	0.42
3:L5:4949:G:H4'	3:L5:4950:U:H3'	2.01	0.42
5:SB:33:VAL:HG13	5:SB:44:ILE:HB	2.01	0.42
6:SA:17:LYS:HZ3	6:SA:176:TRP:HZ3	1.63	0.42
6:SA:63:ARG:HD3	29:SV:37:ALA:O	2.19	0.42
7:SD:12:VAL:HG11	23:Sd:36:LEU:HD22	2.00	0.42
11:SG:7:PHE:O	11:SG:10:THR:HG22	2.19	0.42
18:SK:37:ASP:N	18:SK:37:ASP:OD1	2.50	0.42
19:SO:151:LEU:HD23	19:SO:151:LEU:HA	1.83	0.42
20:SX:107:ARG:CD	20:SX:112:VAL:HG12	2.48	0.42
37:Sg:83:TRP:HA	37:Sg:107:ASP:OD1	2.19	0.42
39:LA:46:LYS:HD3	39:LA:46:LYS:HA	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:LJ:29:SER:HB2	42:LJ:67:LYS:O	2.19	0.42
42:LJ:115:LEU:HD11	42:LJ:128:LEU:HD21	2.00	0.42
52:LI:61:SER:OG	52:LI:63:GLU:OE1	2.30	0.42
53:LD:226:TYR:HE2	53:LD:236:MET:HE1	1.84	0.42
67:LF:30:ILE:C	67:LF:34:ARG:HE	2.27	0.42
1:S2:196:C:C2'	1:S2:197:U:H5'	2.49	0.42
1:S2:291:G:H2'	1:S2:292:A:O4'	2.19	0.42
1:S2:304:C:H1'	15:SI:184:ARG:HH12	1.83	0.42
1:S2:901:G:H2'	1:S2:902:G:C8	2.54	0.42
1:S2:1064:C:H2'	1:S2:1065:G:H8	1.85	0.42
1:S2:1281:G:H2'	1:S2:1282:A:C8	2.51	0.42
1:S2:1288:OMU:H1'	1:S2:1288:OMU:HM23	1.76	0.42
1:S2:1728:U:H2'	1:S2:1729:U:O4'	2.19	0.42
2:L8:45:C:H2'	2:L8:46:G:O4'	2.18	0.42
3:L5:426:A:H2'	3:L5:427:A:C8	2.54	0.42
3:L5:2101:C:H3'	3:L5:2102:G:C2	2.55	0.42
3:L5:4475:G:H5''	3:L5:4476:C:H5''	2.01	0.42
3:L5:4524:G:OP2	3:L5:4524:G:H4'	2.19	0.42
3:L5:4710:C:H2'	3:L5:4711:C:C6	2.54	0.42
3:L5:4742:G:H2'	3:L5:4743:G:H8	1.85	0.42
3:L5:4977:A:H2'	3:L5:4978:G:C8	2.54	0.42
4:L7:58:A:H2'	4:L7:59:G:C8	2.54	0.42
4:L7:108:G:OP2	53:LD:273:LEU:HD21	2.19	0.42
6:SA:130:ASP:O	6:SA:134:LEU:HG	2.20	0.42
6:SA:180:ARG:NE	6:SA:184:ARG:HH22	2.09	0.42
9:SE:195:ILE:HA	9:SE:210:VAL:HG22	2.02	0.42
11:SG:167:LYS:HG2	11:SG:168:LYS:H	1.84	0.42
21:SM:42:LEU:O	21:SM:72:HIS:NE2	2.51	0.42
38:Lz:58:THR:HB	38:Lz:60:ARG:NE	2.34	0.42
40:LB:19:ARG:HB2	40:LB:234:ARG:NH2	2.35	0.42
46:LO:121:PRO:HA	46:LO:124:LEU:HD12	2.02	0.42
52:LI:65:LEU:HD23	52:LI:159:PHE:CZ	2.53	0.42
53:LD:110:LEU:HG	53:LD:116:ASP:HA	2.00	0.42
1:S2:67:C:O2	11:SG:167:LYS:HD2	2.19	0.42
1:S2:375:U:H2'	1:S2:376:A:C8	2.54	0.42
1:S2:600:G:H2'	1:S2:601:OMG:C8	2.54	0.42
1:S2:1629:C:H4'	22:SS:83:PHE:O	2.19	0.42
3:L5:462:G:H2'	3:L5:463:A:C8	2.55	0.42
3:L5:493:G:H2'	3:L5:494:U:C6	2.55	0.42
3:L5:964:A:N3	3:L5:966:A:H5''	2.35	0.42
3:L5:1369:C:OP2	3:L5:1370:G:O2'	2.26	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:1808:C:H2'	3:L5:1809:C:C6	2.54	0.42
3:L5:2079:G:H2'	3:L5:2080:U:H6	1.83	0.42
3:L5:2423:A:H2'	3:L5:2424:OMG:C8	2.54	0.42
3:L5:2893:U:H2'	3:L5:2894:A:H8	1.84	0.42
3:L5:3710:G:C2	3:L5:3712:A:N6	2.87	0.42
3:L5:4518:A:O5'	3:L5:4520:G:H4'	2.19	0.42
5:SB:129:THR:HG23	5:SB:131:ASP:H	1.83	0.42
6:SA:63:ARG:HA	6:SA:66:VAL:HG22	2.00	0.42
8:SJ:42:GLU:O	8:SJ:46:VAL:HG23	2.19	0.42
10:SC:74:LYS:HA	10:SC:74:LYS:HD3	1.76	0.42
11:SG:123:GLY:H	11:SG:126:ASP:CG	2.27	0.42
12:SF:128:ILE:HD11	34:Sc:66:ARG:HH21	1.84	0.42
15:SI:130:THR:HB	15:SI:133:GLU:CG	2.50	0.42
16:SQ:102:GLU:HA	16:SQ:105:LYS:HB3	2.00	0.42
19:SO:85:CYS:HB2	19:SO:90:ILE:HD11	2.02	0.42
28:ST:60:THR:HG23	28:ST:75:MET:HE2	2.01	0.42
30:SY:76:TYR:OH	30:SY:86:GLU:HB3	2.20	0.42
43:LH:16:VAL:HG11	43:LH:81:ILE:HG12	2.00	0.42
45:LG:229:ARG:O	45:LG:233:ILE:HG13	2.19	0.42
45:LG:264:LYS:HE3	45:LG:264:LYS:HB3	1.85	0.42
51:LN:135:ILE:HD12	51:LN:151:ILE:HD13	2.01	0.42
52:LI:190:LEU:HD23	52:LI:199:TYR:HA	2.00	0.42
67:LF:148:LYS:O	67:LF:152:GLU:HG2	2.19	0.42
73:Li:90:LEU:HA	73:Li:93:VAL:HG12	2.00	0.42
83:At:34:G:H2'	83:At:35:A:C8	2.54	0.42
1:S2:4:C:H4'	10:SC:207:ALA:HB2	2.01	0.42
1:S2:155:G:H2'	1:S2:156:G:H8	1.83	0.42
1:S2:190:G:O2'	1:S2:209:A:N6	2.52	0.42
1:S2:1035:A:H2'	1:S2:1036:A:O4'	2.19	0.42
1:S2:1284:A:H61	1:S2:1313:A:H2'	1.85	0.42
1:S2:1568:C:H2'	1:S2:1569:A:C8	2.55	0.42
1:S2:1579:A:O2'	1:S2:1581:C:OP2	2.29	0.42
3:L5:256:G:H2'	3:L5:257:C:H6	1.83	0.42
3:L5:408:A:H1'	3:L5:410:A:H3'	2.02	0.42
3:L5:1306:C:H2'	3:L5:1307:A:H8	1.85	0.42
3:L5:3723:A2M:H8	3:L5:3723:A2M:O5'	2.19	0.42
3:L5:4145:C:H2'	3:L5:4146:G:H8	1.84	0.42
3:L5:4305:G:O5'	57:LT:83:LYS:NZ	2.52	0.42
4:L7:120:U:C6	53:LD:261:VAL:HG23	2.55	0.42
16:SQ:19:ALA:HB2	16:SQ:75:GLY:HA3	2.02	0.42
32:Sa:24:THR:HG23	32:Sa:72:HIS:H	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:Sg:48:ASP:OD1	37:Sg:48:ASP:N	2.52	0.42
42:LJ:82:ILE:HG22	42:LJ:130:PHE:HE2	1.84	0.42
44:LE:105:ARG:HG2	44:LE:105:ARG:NH1	2.34	0.42
59:LU:23:LEU:HD23	59:LU:83:LEU:HD12	2.02	0.42
64:Lr:94:ARG:HG3	64:Lr:107:ARG:HD3	2.01	0.42
74:Lj:58:THR:O	74:Lj:61:THR:OG1	2.31	0.42
1:S2:65:C:N4	11:SG:133:LEU:HD21	2.34	0.42
1:S2:120:U:H2'	1:S2:121:OMU:H6	2.02	0.42
1:S2:159:A2M:O5'	1:S2:159:A2M:H8	2.19	0.42
1:S2:181:A:OP2	1:S2:182:C:O2'	2.37	0.42
1:S2:291:G:N3	25:SL:42:LEU:HG	2.35	0.42
1:S2:464:A:H5''	1:S2:465:A:C8	2.55	0.42
1:S2:1218:C:H2'	1:S2:1219:C:C6	2.54	0.42
1:S2:1372:U:H2'	1:S2:1373:C:O4'	2.19	0.42
1:S2:1838:U:H4'	19:SO:151:LEU:C	2.45	0.42
2:L8:147:G:H2'	2:L8:148:A:C8	2.54	0.42
3:L5:212:A:H2'	3:L5:213:G:H8	1.85	0.42
3:L5:489:C:O2'	3:L5:667:A:N1	2.52	0.42
3:L5:512:U:H3	3:L5:647:G:H1	1.66	0.42
3:L5:3702:A:C2	3:L5:3703:G:C8	3.08	0.42
3:L5:3919:C:OP1	39:LA:2:GLY:HA3	2.20	0.42
3:L5:4208:U:H4'	3:L5:4274:A:H2	1.84	0.42
3:L5:4571:A2M:HM'3	3:L5:4571:A2M:H1'	1.58	0.42
3:L5:4941:G:OP1	44:LE:219:LYS:HG3	2.19	0.42
4:L7:110:G:H2'	4:L7:111:C:C6	2.54	0.42
5:SB:27:LYS:HA	5:SB:51:ARG:NH2	2.35	0.42
9:SE:188:ASN:ND2	9:SE:219:ALA:O	2.53	0.42
11:SG:145:PHE:HE1	62:LW:90:ILE:HG23	1.84	0.42
11:SG:159:ARG:HD2	11:SG:171:THR:HG23	2.02	0.42
12:SF:136:ARG:O	12:SF:203:ASN:HB3	2.20	0.42
16:SQ:94:ALA:O	16:SQ:97:GLN:HG3	2.20	0.42
29:SV:38:GLU:OE2	29:SV:49:GLN:HG2	2.19	0.42
40:LB:238:LYS:HA	40:LB:238:LYS:HD3	1.92	0.42
45:LG:216:ALA:O	45:LG:220:GLU:HG3	2.19	0.42
52:LI:205:PRO:HG2	52:LI:208:LYS:HG3	2.02	0.42
55:LR:123:LEU:O	55:LR:127:VAL:HG23	2.19	0.42
59:LU:24:ASP:OD1	59:LU:111:GLU:HA	2.19	0.42
62:LW:52:THR:HB	62:LW:54:LEU:HD23	2.00	0.42
1:S2:478:G:H2'	1:S2:479:C:H6	1.84	0.42
1:S2:839:C:H4'	1:S2:840:C:C5'	2.48	0.42
1:S2:929:G:H2'	1:S2:930:C:O4'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:S2:1473:G:N2	1:S2:1475:G:H3'	2.34	0.42
1:S2:1545:A:C2	1:S2:1671:G:H1'	2.55	0.42
3:L5:135:G:N7	65:Lh:97:LYS:HG2	2.34	0.42
3:L5:1086:C:H2'	3:L5:1087:A:H8	1.84	0.42
3:L5:1895:G:H2'	3:L5:1896:A:O4'	2.19	0.42
3:L5:2437:C:H5'	60:LX:127:LEU:HB3	2.00	0.42
3:L5:3949:A:N6	3:L5:4065:G:O6	2.53	0.42
3:L5:3953:G:H2'	3:L5:3954:A:H8	1.85	0.42
3:L5:4253:A:H4'	3:L5:4254:G:O5'	2.19	0.42
3:L5:4987:C:H2'	40:LB:123:HIS:CD2	2.53	0.42
5:SB:24:PRO:HA	5:SB:27:LYS:HE2	2.02	0.42
8:SJ:55:LYS:HB3	8:SJ:55:LYS:HE3	1.86	0.42
10:SC:81:ILE:HG23	10:SC:86:LEU:HB2	2.01	0.42
14:SW:115:GLU:HB3	14:SW:118:ARG:NH2	2.35	0.42
15:SI:26:LYS:HD2	15:SI:29:LEU:HD23	2.00	0.42
16:SQ:82:TYR:O	16:SQ:85:ARG:HG2	2.19	0.42
17:SU:42:GLY:HA2	17:SU:45:GLU:HG2	2.01	0.42
20:SX:66:ILE:O	20:SX:68:LYS:NZ	2.44	0.42
21:SM:42:LEU:HD13	21:SM:72:HIS:CE1	2.55	0.42
25:SL:48:LYS:O	25:SL:52:GLU:HG3	2.19	0.42
46:LO:58:LEU:HD23	46:LO:72:HIS:CG	2.55	0.42
53:LD:205:ALA:O	53:LD:209:ARG:NE	2.46	0.42
56:LS:98:ARG:HG3	56:LS:142:VAL:HG13	2.01	0.42
63:LZ:51:ARG:HB2	63:LZ:65:ARG:HB3	2.02	0.42
73:Li:54:GLU:O	73:Li:58:MET:HG3	2.20	0.42
82:mR:34:C:H2'	82:mR:35:G:C8	2.55	0.42
1:S2:96:C:O2	1:S2:473:A:O2'	2.33	0.42
1:S2:509:OMG:H4'	9:SE:26:VAL:HG21	2.01	0.42
1:S2:983:A:H2'	1:S2:983:A:N3	2.34	0.42
1:S2:1039:C:H2'	1:S2:1040:G:H8	1.84	0.42
1:S2:1139:C:H2'	1:S2:1140:G:O4'	2.20	0.42
1:S2:1244:PSU:H2'	1:S2:1245:G:H8	1.84	0.42
1:S2:1310:U:C2	1:S2:1311:C:H5	2.37	0.42
1:S2:1336:C:N4	1:S2:1337:4AC:O7	2.52	0.42
1:S2:1355:C:O3'	10:SC:238:LYS:NZ	2.51	0.42
1:S2:1406:G:N2	1:S2:1443:C:H42	2.18	0.42
1:S2:1447:OMG:HM23	1:S2:1447:OMG:H1'	1.63	0.42
1:S2:1688:C:H2'	1:S2:1689:C:H6	1.85	0.42
3:L5:196:C:H4'	61:LY:126:ARG:CG	2.50	0.42
3:L5:910:G:H2'	3:L5:911:U:C6	2.55	0.42
3:L5:1074:G:H2'	3:L5:1075:G:C8	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:1097:C:H2'	3:L5:1098:G:C8	2.55	0.42
3:L5:1304:C:H2'	3:L5:1305:C:C6	2.54	0.42
3:L5:3733:A:H2'	3:L5:3734:PSU:O4'	2.20	0.42
3:L5:4345:C:H2'	3:L5:4346:U:H6	1.84	0.42
3:L5:4480:A:H2'	3:L5:4481:U:O4'	2.20	0.42
3:L5:4659:G:H2'	3:L5:4660:G:C8	2.55	0.42
6:SA:85:ARG:NH1	6:SA:205:ARG:HE	2.07	0.42
9:SE:126:VAL:HG22	9:SE:158:ASP:O	2.19	0.42
14:SW:111:MET:HE1	14:SW:115:GLU:C	2.45	0.42
21:SM:60:MET:SD	21:SM:61:TYR:N	2.92	0.42
37:Sg:287:THR:OG1	37:Sg:301:GLY:O	2.30	0.42
38:Lz:35:GLN:NE2	38:Lz:205:TYR:HB2	2.24	0.42
41:LC:36:ILE:HG21	41:LC:122:TYR:CD2	2.53	0.42
50:La:82:VAL:HG13	50:La:101:ILE:HG23	2.01	0.42
61:LY:55:VAL:HG22	61:LY:104:VAL:HB	2.01	0.42
65:Lh:86:LYS:O	65:Lh:87:LYS:C	2.63	0.42
66:Lb:105:GLY:O	66:Lb:109:ARG:HG3	2.20	0.42
81:5A:115:PRO:HD2	81:5A:119:LEU:CG	2.50	0.42
1:S2:187:G:C2	1:S2:188:C:C2	3.08	0.42
1:S2:203:G:H5''	1:S2:203:G:H8	1.85	0.42
1:S2:530:U:H2'	1:S2:531:A:C8	2.54	0.42
1:S2:804:U:C2	1:S2:805:U:C5	3.08	0.42
1:S2:943:U:C2	1:S2:944:A:C8	3.07	0.42
1:S2:1647:A:N1	1:S2:1675:A:H5''	2.35	0.42
3:L5:271:C:H2'	3:L5:272:U:H6	1.85	0.42
3:L5:691:C:H2'	3:L5:692:A:C8	2.54	0.42
3:L5:1920:C:O2'	3:L5:1922:G:H5''	2.20	0.42
3:L5:1998:A:C2	3:L5:2019:C:O2	2.73	0.42
3:L5:3948:C:N4	3:L5:3949:A:N6	2.68	0.42
3:L5:4095:G:N1	3:L5:4114:C:O2	2.53	0.42
3:L5:4389:C:H2'	3:L5:4390:A:C8	2.55	0.42
3:L5:4392:OMG:HM23	3:L5:4392:OMG:H1'	1.88	0.42
3:L5:4684:A:H2'	3:L5:4685:U:O4'	2.19	0.42
3:L5:4880:C:H2'	3:L5:4881:U:O4'	2.20	0.42
3:L5:4926:C:H3'	3:L5:4927:G:C2	2.54	0.42
4:L7:22:A:H2'	4:L7:23:A:H8	1.80	0.42
16:SQ:53:GLU:N	16:SQ:54:PRO:CD	2.83	0.42
24:SN:52:VAL:HG23	24:SN:55:ARG:HH22	1.84	0.42
26:SR:103:LYS:O	26:SR:107:LYS:HG2	2.20	0.42
39:LA:203:ALA:HA	39:LA:217:GLN:HE21	1.85	0.42
41:LC:152:LEU:HD23	41:LC:251:ILE:HG12	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:LH:20:LEU:HD22	43:LH:47:LEU:CD2	2.50	0.42
44:LE:91:THR:HG21	44:LE:106:VAL:CG1	2.48	0.42
55:LR:90:PRO:HB2	55:LR:93:VAL:HG23	2.02	0.42
58:LP:67:VAL:HG13	58:LP:82:ARG:HG3	2.02	0.42
67:LF:236:ARG:HB2	67:LF:239:GLN:HB2	2.00	0.42
71:Lf:9:ALA:HB3	71:Lf:101:ILE:HB	2.02	0.42
76:Ll:23:ILE:HD11	76:Ll:28:ARG:HE	1.84	0.42
1:S2:74:G:H2'	1:S2:75:G:C1'	2.50	0.42
1:S2:129:C:O3'	1:S2:130:G:H3'	2.20	0.42
1:S2:806:U:H2'	1:S2:807:G:C8	2.54	0.42
1:S2:893:U:C2	1:S2:894:G:C8	3.08	0.42
1:S2:927:C:O2	33:Sb:51:GLN:NE2	2.53	0.42
1:S2:979:C:C2'	1:S2:980:A:H5'	2.50	0.42
1:S2:1446:A:O2'	1:S2:1447:OMG:H8	2.02	0.42
1:S2:1573:G:H2'	1:S2:1574:C:C6	2.55	0.42
2:L8:150:C:N4	45:LG:57:TRP:HE1	2.17	0.42
3:L5:126:C:H2'	3:L5:127:G:H8	1.84	0.42
3:L5:196:C:H4'	61:LY:126:ARG:HG2	2.02	0.42
3:L5:207:G:H2'	3:L5:208:A:C8	2.55	0.42
3:L5:227:A:H2'	3:L5:228:C:O4'	2.20	0.42
3:L5:1405:C:H2'	3:L5:1406:G:H8	1.85	0.42
3:L5:1967:A:N6	3:L5:2021:G:O6	2.53	0.42
3:L5:2034:G:H2'	3:L5:2035:C:C6	2.55	0.42
3:L5:2809:G:O2'	3:L5:4644:G:OP1	2.35	0.42
3:L5:2824:OMC:H1'	3:L5:2824:OMC:HM23	1.81	0.42
3:L5:4393:G:N2	3:L5:4396:A:OP2	2.52	0.42
3:L5:4881:U:P	49:LM:121:ARG:HH22	2.43	0.42
5:SB:48:LEU:O	19:SO:51:GLU:HG3	2.20	0.42
6:SA:149:ASN:HB2	6:SA:165:ASN:OD1	2.20	0.42
7:SD:76:ARG:HH21	18:SK:66:HIS:CD2	2.37	0.42
12:SF:154:LEU:HD22	12:SF:177:LEU:HD23	2.02	0.42
13:SH:121:THR:HG23	13:SH:124:ALA:H	1.85	0.42
30:SY:114:MET:HE3	30:SY:122:LYS:HG2	2.01	0.42
37:Sg:278:SER:HB3	37:Sg:281:ALA:HB3	2.01	0.42
38:Lz:93:LEU:HD12	38:Lz:93:LEU:HA	1.89	0.42
39:LA:179:ILE:O	39:LA:181:LYS:N	2.53	0.42
41:LC:164:THR:O	41:LC:168:VAL:HG23	2.19	0.42
45:LG:77:PRO:HG3	51:LN:18:VAL:HA	2.01	0.42
48:LV:48:ARG:HH11	48:LV:49:LEU:HB3	1.85	0.42
51:LN:159:ARG:HB3	51:LN:164:LEU:HB2	2.02	0.42
56:LS:84:TYR:CE1	56:LS:93:MET:HE3	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:LU:91:LEU:HD11	59:LU:112:LEU:HD11	2.01	0.42
62:LW:99:GLU:HG2	62:LW:100:VAL:N	2.35	0.42
69:Ld:85:ARG:NH1	69:Ld:118:GLN:O	2.44	0.42
70:Le:8:VAL:HG23	70:Le:10:PRO:HD3	2.02	0.42
71:Lf:15:LYS:HB3	71:Lf:25:THR:HB	2.00	0.42
84:Pt:24:C:H2'	84:Pt:25:U:H6	1.84	0.42
1:S2:432:G:H2'	1:S2:433:A:C8	2.55	0.41
1:S2:991:G:N1	1:S2:1134:G:H4'	2.35	0.41
1:S2:1104:G:H2'	1:S2:1105:G:C8	2.54	0.41
1:S2:1391:OMC:H1'	1:S2:1391:OMC:HM23	1.74	0.41
1:S2:1567:G:C6	22:SS:82:TRP:CG	3.08	0.41
1:S2:1609:C:OP1	22:SS:131:VAL:HG22	2.20	0.41
3:L5:440:U:H4'	71:Lf:91:ASN:O	2.19	0.41
3:L5:678:C:H2'	3:L5:679:C:C6	2.54	0.41
3:L5:1270:A:N1	3:L5:2106:G:H1'	2.35	0.41
3:L5:1444:G:C6	3:L5:2102:G:C8	3.08	0.41
3:L5:1450:C:H2'	3:L5:1451:G:O4'	2.19	0.41
3:L5:4524:G:N3	40:LB:252:ALA:HB1	2.34	0.41
3:L5:4637:OMG:H1'	3:L5:4637:OMG:HM23	1.54	0.41
11:SG:10:THR:HA	11:SG:128:THR:HG23	2.02	0.41
17:SU:43:ALA:HA	17:SU:46:LYS:NZ	2.35	0.41
17:SU:67:LYS:HG3	17:SU:78:ASP:HB2	2.02	0.41
18:SK:80:ARG:NH1	18:SK:87:PRO:HA	2.35	0.41
21:SM:39:ALA:HA	21:SM:42:LEU:HG	2.01	0.41
21:SM:118:SER:HA	21:SM:121:LYS:NZ	2.35	0.41
27:SP:136:THR:HG23	84:Pt:31:G:P	2.60	0.41
31:SZ:69:THR:O	31:SZ:73:VAL:HG22	2.20	0.41
38:Lz:73:HIS:CE1	38:Lz:141:ASN:H	2.38	0.41
39:LA:20:VAL:HA	39:LA:23:ARG:HG3	2.01	0.41
41:LC:186:SER:O	41:LC:188:ARG:HD3	2.20	0.41
67:LF:114:LEU:HD22	67:LF:119:ASN:O	2.20	0.41
67:LF:217:ARG:HE	67:LF:217:ARG:HB3	1.72	0.41
74:Lj:5:THR:O	74:Lj:8:PHE:HB2	2.20	0.41
76:Ll:44:TRP:CD1	76:Ll:44:TRP:H	2.38	0.41
84:Pt:53:G:H2'	84:Pt:54:G:H8	1.85	0.41
1:S2:570:C:H2'	1:S2:571:U:C6	2.55	0.41
2:L8:139:G:H2'	2:L8:140:C:O4'	2.20	0.41
3:L5:49:U:H2'	3:L5:50:C:H6	1.85	0.41
3:L5:979:C:OP1	44:LE:46:ARG:NH1	2.52	0.41
3:L5:1244:G:H2'	3:L5:1245:C:C6	2.55	0.41
3:L5:1269:G:H21	3:L5:1441:C:C1'	2.33	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:1439:C:H2'	3:L5:1440:U:C6	2.53	0.41
3:L5:1541:C:H5''	39:LA:21:LYS:HG2	2.02	0.41
3:L5:1819:G:O2'	53:LD:140:GLY:O	2.31	0.41
3:L5:2015:U:H2'	3:L5:2016:C:C6	2.54	0.41
3:L5:3865:A:H2'	3:L5:3866:C:H6	1.85	0.41
3:L5:4680:G:H2'	3:L5:4681:A:C8	2.55	0.41
5:SB:224:GLU:H	5:SB:227:LYS:HE3	1.85	0.41
7:SD:42:THR:HB	7:SD:45:ARG:O	2.21	0.41
16:SQ:112:LEU:HD23	16:SQ:112:LEU:HA	1.85	0.41
20:SX:98:ASP:OD2	20:SX:140:ARG:NH2	2.48	0.41
22:SS:114:LEU:HA	22:SS:117:ILE:HG22	2.01	0.41
28:ST:11:GLN:HA	28:ST:14:PHE:HB3	2.01	0.41
34:Sc:37:ASP:OD1	34:Sc:37:ASP:N	2.53	0.41
37:Sg:17:TRP:HB2	37:Sg:36:ARG:HB2	2.02	0.41
38:Lz:206:ILE:HG23	38:Lz:206:ILE:O	2.19	0.41
43:LH:41:ILE:HG22	43:LH:43:VAL:HG13	2.01	0.41
44:LE:136:HIS:HB2	44:LE:138:ARG:NH1	2.35	0.41
1:S2:121:OMU:H1'	1:S2:121:OMU:HM23	1.70	0.41
1:S2:319:C:H2'	1:S2:320:G:H8	1.85	0.41
1:S2:345:U:H1'	9:SE:33:THR:HG23	2.03	0.41
1:S2:538:U:H2'	1:S2:539:C:C6	2.55	0.41
1:S2:653:A:H2'	1:S2:654:A:O4'	2.20	0.41
1:S2:1025:U:H2'	1:S2:1026:C:O4'	2.20	0.41
1:S2:1144:A:H5'	1:S2:1355:C:H41	1.85	0.41
1:S2:1183:A:OP1	78:Ln:15:ARG:HD2	2.19	0.41
1:S2:1351:G:O2'	1:S2:1378:A:N1	2.47	0.41
3:L5:139:G:H2'	3:L5:140:G:C8	2.56	0.41
3:L5:2632:PSU:C4	3:L5:2633:U:C5	3.07	0.41
3:L5:2804:OMC:H2'	3:L5:2805:C:C6	2.55	0.41
3:L5:3722:G:O3'	73:Li:68:ARG:NH2	2.54	0.41
3:L5:3920:PSU:H2'	3:L5:3921:U:C6	2.55	0.41
3:L5:3944:OMG:H1'	3:L5:3944:OMG:HM23	1.83	0.41
3:L5:4128:A:H1'	45:LG:35:ARG:HB2	2.01	0.41
3:L5:4307:A:H2'	3:L5:4308:C:C6	2.55	0.41
3:L5:4385:A:O2'	81:5A:50:5CT:H14	2.19	0.41
3:L5:4584:A:H2'	3:L5:4585:U:O4'	2.20	0.41
3:L5:4893:A:H2'	3:L5:4894:A:O4'	2.20	0.41
6:SA:12:GLU:HG3	26:SR:111:PHE:CE1	2.54	0.41
8:SJ:129:LEU:HD21	8:SJ:159:PHE:CE1	2.55	0.41
13:SH:29:GLU:HA	13:SH:32:MET:HG2	2.01	0.41
15:SI:114:GLU:OE1	15:SI:137:LEU:HD21	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:SI:130:THR:HB	15:SI:133:GLU:HG3	2.02	0.41
17:SU:22:ILE:CG1	17:SU:89:ILE:HB	2.51	0.41
18:SK:27:VAL:HB	18:SK:43:LEU:HD13	2.01	0.41
37:Sg:31:ILE:HG13	37:Sg:43:TRP:HD1	1.84	0.41
37:Sg:79:LEU:HD21	37:Sg:87:LEU:HD12	2.02	0.41
40:LB:40:PRO:O	40:LB:42:HIS:ND1	2.52	0.41
40:LB:194:LEU:HD23	40:LB:194:LEU:HA	1.88	0.41
42:LJ:96:LYS:HG3	42:LJ:163:MET:SD	2.60	0.41
54:LQ:122:THR:OG1	54:LQ:125:GLN:HG3	2.19	0.41
62:LW:97:LYS:HA	62:LW:101:ARG:HG3	2.01	0.41
66:Lb:103:LYS:HA	66:Lb:106:LYS:HE2	2.02	0.41
79:Lo:22:LYS:NZ	81:5A:5:LEU:HD12	2.35	0.41
83:At:74:C:H2'	83:At:75:C:O4'	2.20	0.41
1:S2:433:A:H5''	15:SI:22:HIS:HB3	2.01	0.41
1:S2:682:U:OP2	20:SX:8:ARG:NH2	2.54	0.41
1:S2:1432:U:H2'	1:S2:1438:A:C8	2.54	0.41
3:L5:25:A:H2'	3:L5:26:C:C6	2.54	0.41
3:L5:269:G:H2'	3:L5:270:U:C6	2.56	0.41
3:L5:1884:C:H2'	3:L5:1885:G:H8	1.85	0.41
3:L5:2362:U:H2'	3:L5:2363:A2M:C8	2.47	0.41
3:L5:2461:G:H2'	3:L5:2462:C:C6	2.56	0.41
3:L5:2479:G:H2'	3:L5:2480:G:H8	1.85	0.41
3:L5:2562:G:C2	3:L5:2566:G:C6	3.08	0.41
3:L5:2781:G:O2'	76:Ll:3:SER:O	2.38	0.41
3:L5:4154:G:H2'	3:L5:4155:C:C6	2.55	0.41
3:L5:4863:G:H2'	3:L5:4864:U:O4'	2.20	0.41
7:SD:96:LEU:HD12	7:SD:190:LEU:HD23	2.02	0.41
11:SG:131:ARG:O	11:SG:132:ARG:HB2	2.20	0.41
12:SF:130:ARG:HD2	12:SF:130:ARG:HA	1.75	0.41
15:SI:90:LEU:HD22	15:SI:95:THR:HG21	2.02	0.41
16:SQ:50:LYS:HD2	16:SQ:50:LYS:HA	1.90	0.41
16:SQ:109:LYS:HG3	16:SQ:120:LEU:HG	2.01	0.41
21:SM:123:VAL:O	21:SM:126:GLU:HG2	2.20	0.41
24:SN:45:LEU:HD23	24:SN:45:LEU:HA	1.83	0.41
38:Lz:33:GLU:HG2	38:Lz:168:ALA:HA	2.02	0.41
40:LB:218:ASP:OD2	40:LB:348:ARG:NH2	2.53	0.41
41:LC:33:ARG:HG3	41:LC:122:TYR:OH	2.20	0.41
42:LJ:52:LYS:HD3	42:LJ:65:ASN:OD1	2.20	0.41
47:LL:156:PRO:HB2	47:LL:158:ARG:HH12	1.86	0.41
50:La:51:GLY:C	54:LQ:175:GLU:HA	2.46	0.41
60:LX:85:SER:O	60:LX:89:LYS:HG2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:LX:121:VAL:HG13	60:LX:138:VAL:HG13	2.02	0.41
67:LF:31:LYS:HA	67:LF:34:ARG:HE	1.86	0.41
73:Li:23:LYS:HE2	73:Li:23:LYS:HB2	1.84	0.41
80:Lp:29:ILE:HG23	80:Lp:69:TRP:CG	2.56	0.41
80:Lp:49:ARG:HG3	80:Lp:55:TRP:CE2	2.55	0.41
1:S2:168:C:O2'	11:SG:133:LEU:O	2.37	0.41
1:S2:169:U:H4'	11:SG:134:GLY:O	2.21	0.41
1:S2:193:C:H2'	1:S2:194:C:C6	2.55	0.41
1:S2:442:C:H2'	1:S2:443:U:C6	2.55	0.41
1:S2:979:C:H2'	1:S2:980:A:C8	2.56	0.41
1:S2:1026:C:H5''	1:S2:1026:C:H6	1.86	0.41
1:S2:1121:G:C2	1:S2:1122:A:C8	3.08	0.41
1:S2:1463:U:H5''	1:S2:1464:C:C5	2.55	0.41
1:S2:1746:U:H2'	1:S2:1747:C:C6	2.55	0.41
1:S2:1866:A:N6	32:Sa:84:VAL:HB	2.36	0.41
3:L5:233:U:O2'	3:L5:2304:U:O4	2.38	0.41
3:L5:650:C:H2'	3:L5:651:C:C6	2.55	0.41
3:L5:746:A:O2'	3:L5:747:A:H5'	2.20	0.41
3:L5:907:C:H2'	3:L5:908:G:C8	2.55	0.41
3:L5:964:A:H2	3:L5:966:A:C8	2.38	0.41
3:L5:964:A:H8	3:L5:964:A:O5'	2.03	0.41
3:L5:1655:C:C5	50:La:26:ARG:HD2	2.56	0.41
3:L5:2363:A2M:H2'	3:L5:2364:OMG:O4'	2.20	0.41
3:L5:2424:OMG:H1'	3:L5:2424:OMG:HM23	1.69	0.41
3:L5:2611:A:H2'	3:L5:2612:G:H8	1.86	0.41
3:L5:2696:A:H5'	75:Lk:26:LYS:HE2	2.02	0.41
3:L5:2871:A:H2'	3:L5:2872:C:O4'	2.20	0.41
3:L5:3621:A:HO2'	3:L5:4658:G:HO2'	1.67	0.41
3:L5:3718:A2M:HM'3	3:L5:3718:A2M:H1'	1.88	0.41
3:L5:3946:G:H2'	3:L5:3947:A:C8	2.55	0.41
3:L5:3961:G:H5'	3:L5:4049:U:C4	2.55	0.41
5:SB:145:LYS:HG3	5:SB:149:GLN:HG2	2.02	0.41
6:SA:198:MET:O	6:SA:201:LEU:HG	2.20	0.41
9:SE:53:LYS:O	30:SY:22:GLN:NE2	2.53	0.41
15:SI:83:TYR:OH	15:SI:201:LYS:NZ	2.40	0.41
15:SI:117:TYR:CD1	15:SI:152:ARG:HB3	2.55	0.41
17:SU:64:THR:HG22	17:SU:77:TRP:HE3	1.86	0.41
21:SM:121:LYS:HA	21:SM:124:ILE:HG12	2.02	0.41
25:SL:55:TYR:OH	25:SL:116:CYS:HB3	2.21	0.41
28:ST:104:LEU:HD13	28:ST:121:ARG:HH11	1.86	0.41
37:Sg:31:ILE:HG13	37:Sg:43:TRP:CD1	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:LA:108:PRO:O	39:LA:111:THR:OG1	2.29	0.41
46:LO:62:MET:HB3	46:LO:65:ASN:O	2.21	0.41
52:LI:51:HIS:HD1	52:LI:134:VAL:HG11	1.85	0.41
57:LT:11:THR:HA	57:LT:14:MET:HG2	2.01	0.41
63:LZ:33:THR:C	63:LZ:35:ASP:H	2.27	0.41
67:LF:220:MET:HE2	67:LF:223:LYS:HB3	2.02	0.41
72:Lg:25:THR:OG1	72:Lg:29:ARG:HG2	2.20	0.41
79:Lo:70:LEU:O	79:Lo:80:LYS:HA	2.20	0.41
81:5A:64:PHE:CE2	81:5A:143:GLU:HG2	2.53	0.41
1:S2:130:G:N3	1:S2:130:G:C2'	2.81	0.41
1:S2:512:A2M:H1'	1:S2:512:A2M:HM'3	1.85	0.41
1:S2:593:C:H4'	35:Se:26:LYS:HD2	2.01	0.41
1:S2:601:OMG:H1'	1:S2:601:OMG:HM23	1.75	0.41
1:S2:848:U:H2'	1:S2:849:A:H8	1.85	0.41
1:S2:991:G:C6	1:S2:1134:G:H4'	2.56	0.41
1:S2:1340:U:H3'	1:S2:1341:C:H2'	2.01	0.41
1:S2:1725:U:H2'	1:S2:1726:G:H8	1.85	0.41
3:L5:506:C:H2'	3:L5:507:G:O4'	2.21	0.41
3:L5:910:G:H2'	3:L5:911:U:H6	1.84	0.41
3:L5:1192:C:H2'	3:L5:1193:C:C6	2.55	0.41
3:L5:1727:U:C5'	67:LF:131:ASN:HD22	2.34	0.41
3:L5:3736:A:H3'	3:L5:3736:A:OP2	2.21	0.41
3:L5:3867:A2M:HM'3	3:L5:3867:A2M:H1'	1.77	0.41
5:SB:181:LEU:HA	5:SB:184:VAL:HG22	2.02	0.41
6:SA:63:ARG:HH11	29:SV:78:ILE:HG23	1.86	0.41
8:SJ:84:ILE:HD11	8:SJ:148:ILE:HG23	2.03	0.41
20:SX:46:HIS:CD2	20:SX:101:LEU:HD21	2.54	0.41
24:SN:30:SER:HA	24:SN:33:VAL:HG12	2.02	0.41
26:SR:21:TYR:CE1	26:SR:58:MET:HE1	2.56	0.41
28:ST:31:PRO:HG2	28:ST:34:VAL:CG2	2.49	0.41
37:Sg:22:ALA:HB3	37:Sg:32:LEU:HB2	2.02	0.41
37:Sg:177:TRP:O	37:Sg:178:ASN:HB2	2.21	0.41
45:LG:43:GLN:HG3	45:LG:44:ASP:H	1.86	0.41
46:LO:32:LYS:HB2	46:LO:32:LYS:HE3	1.90	0.41
46:LO:130:LYS:HB2	46:LO:133:ARG:HG2	2.03	0.41
49:LM:17:PHE:O	49:LM:54:CYS:HB2	2.20	0.41
51:LN:100:SER:HA	51:LN:103:GLU:HG2	2.01	0.41
52:LI:55:ASP:OD2	52:LI:164:LYS:HG3	2.21	0.41
52:LI:153:ARG:HA	52:LI:156:LYS:HE2	2.03	0.41
55:LR:35:ALA:HA	55:LR:40:GLN:OE1	2.20	0.41
56:LS:24:THR:HG23	56:LS:24:THR:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:LF:155:TYR:HA	67:LF:187:MET:CE	2.50	0.41
83:At:9:A:H4'	83:At:46:7MG:O4'	2.21	0.41
1:S2:29:G:H2'	1:S2:30:C:C6	2.55	0.41
1:S2:35:C:H42	1:S2:520:A:H61	1.69	0.41
1:S2:512:A2M:C2	1:S2:513:G:C8	3.04	0.41
1:S2:532:C:H2'	1:S2:533:A:C8	2.56	0.41
1:S2:681:PSU:H5'	20:SX:8:ARG:O	2.20	0.41
1:S2:1288:OMU:HN3	1:S2:1311:C:H42	1.68	0.41
1:S2:1499:U:H2'	1:S2:1500:G:H8	1.85	0.41
2:L8:68:G:H2'	2:L8:69:PSU:O4'	2.20	0.41
3:L5:369:G:N2	3:L5:372:A:OP2	2.50	0.41
3:L5:398:A2M:HM'3	3:L5:398:A2M:H1'	1.54	0.41
3:L5:690:C:H2'	3:L5:691:C:H6	1.85	0.41
3:L5:973:G:H2'	3:L5:974:C:C6	2.56	0.41
3:L5:1538:U:H2'	3:L5:1539:G:C8	2.55	0.41
3:L5:1580:C:H2'	3:L5:1581:G:O4'	2.21	0.41
3:L5:1881:OMC:C2	3:L5:1881:OMC:HM23	2.55	0.41
3:L5:2292:C:H2'	3:L5:2293:U:C6	2.55	0.41
3:L5:3708:C:C2'	3:L5:3709:U:H5'	2.50	0.41
3:L5:3715:PSU:H2'	3:L5:3716:C:O4'	2.21	0.41
3:L5:4291:G:C8	3:L5:4328:G:H2'	2.54	0.41
3:L5:5038:A:OP1	62:LW:61:LYS:NZ	2.49	0.41
4:L7:60:G:H5''	53:LD:270:LYS:HG3	2.01	0.41
7:SD:210:ILE:HD12	26:SR:16:ILE:HD11	2.01	0.41
13:SH:87:PHE:HB3	13:SH:90:LYS:HE3	2.03	0.41
13:SH:91:HIS:CD2	13:SH:169:LYS:HE2	2.55	0.41
16:SQ:7:LEU:H	16:SQ:7:LEU:HD23	1.85	0.41
19:SO:28:PHE:CD1	19:SO:92:ALA:HB3	2.56	0.41
30:SY:52:PRO:HA	30:SY:55:ILE:HG12	2.02	0.41
38:Lz:36:ILE:HD13	38:Lz:190:LEU:HD21	2.02	0.41
39:LA:245[A]:ARG:HD2	39:LA:245[A]:ARG:HA	1.62	0.41
41:LC:108:TRP:HB2	51:LN:200:LEU:HD12	2.02	0.41
42:LJ:26:VAL:HG21	42:LJ:33:LEU:HA	2.02	0.41
43:LH:4:ILE:HG13	56:LS:144:GLN:OE1	2.21	0.41
43:LH:114:ILE:HB	43:LH:124:ARG:HB2	2.02	0.41
45:LG:140:VAL:HG21	45:LG:166:LEU:O	2.21	0.41
47:LL:179:PHE:O	47:LL:183:ARG:HG2	2.20	0.41
48:LV:72:LEU:HD21	48:LV:113:LYS:HE2	2.01	0.41
52:LI:96:VAL:HG22	52:LI:125:THR:HG22	2.03	0.41
53:LD:10:LYS:O	53:LD:14:LYS:HG3	2.21	0.41
56:LS:43:ARG:HA	56:LS:43:ARG:HD2	1.92	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:LS:102:THR:O	56:LS:106:VAL:HG23	2.20	0.41
63:LZ:29:ILE:HG22	63:LZ:32:GLY:H	1.85	0.41
1:S2:39:A:H2'	1:S2:40:A:O4'	2.20	0.41
1:S2:156:G:H5''	11:SG:2:LYS:HE3	2.03	0.41
1:S2:174:OMC:HM23	1:S2:174:OMC:H1'	1.82	0.41
1:S2:493:A:H1'	1:S2:574:A:OP1	2.20	0.41
1:S2:511:U:C2	1:S2:512:A2M:C8	3.04	0.41
1:S2:1199:A:OP1	32:Sa:2:THR:N	2.54	0.41
1:S2:1672:U:H2'	1:S2:1673:U:H6	1.82	0.41
3:L5:123:C:H2'	3:L5:124:C:H6	1.86	0.41
3:L5:700:G:H2'	3:L5:701:G:C8	2.53	0.41
3:L5:1685:G:H2'	3:L5:1686:C:C6	2.55	0.41
3:L5:1813:U:H2'	3:L5:1814:C:C6	2.55	0.41
3:L5:1877:G:H2'	3:L5:1878:G:O4'	2.21	0.41
3:L5:2694:G:H5'	3:L5:2695:A:C2	2.56	0.41
3:L5:3710:G:N3	3:L5:3711:A:N1	2.69	0.41
3:L5:3770:PSU:H2'	3:L5:3771:C:H6	1.84	0.41
3:L5:3965:A:N6	3:L5:4056:A:H61	2.19	0.41
3:L5:4088:C:H2'	3:L5:4089:G:H8	1.85	0.41
3:L5:4313:A:H2'	3:L5:4314:C:O4'	2.21	0.41
3:L5:4381:A:P	81:5A:77:HIS:HE2	2.42	0.41
3:L5:4475:G:OP2	3:L5:4476:C:H5''	2.20	0.41
3:L5:4477:A:H2	3:L5:4603:C:O2	2.04	0.41
3:L5:4493:PSU:C6	3:L5:4512:U:C2	3.08	0.41
4:L7:2:U:H2'	4:L7:3:C:H6	1.86	0.41
7:SD:12:VAL:HG21	23:Sd:34:TYR:HB3	2.02	0.41
9:SE:249:ALA:O	9:SE:252:ARG:HG2	2.21	0.41
11:SG:31:ARG:O	11:SG:34:THR:OG1	2.37	0.41
13:SH:70:LYS:HE3	13:SH:70:LYS:HB2	1.91	0.41
14:SW:81:VAL:HG22	14:SW:89:TRP:NE1	2.35	0.41
14:SW:90:GLN:NE2	14:SW:113:HIS:CD2	2.89	0.41
23:Sd:19:ARG:HB3	23:Sd:30:LEU:CD2	2.49	0.41
25:SL:89:ARG:HE	25:SL:106:HIS:HB2	1.85	0.41
45:LG:103:ARG:NH1	45:LG:193:LEU:HA	2.35	0.41
46:LO:177:LEU:HD11	49:LM:130:LEU:HB3	2.02	0.41
52:LI:55:ASP:OD2	52:LI:162:ARG:HG3	2.20	0.41
52:LI:101:LYS:NZ	52:LI:121:LYS:HB2	2.36	0.41
53:LD:285:ALA:HA	53:LD:288:LEU:HG	2.02	0.41
56:LS:101:THR:HG22	56:LS:103:ALA:H	1.85	0.41
60:LX:100:VAL:HG23	60:LX:134:LYS:HB3	2.02	0.41
61:LY:51:LYS:HG3	61:LY:52:ASP:OD1	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:LZ:6:LYS:HA	63:LZ:28:ASN:ND2	2.33	0.41
67:LF:40:LYS:O	67:LF:44:LYS:HG2	2.20	0.41
71:Lf:69:VAL:HG11	71:Lf:71:TRP:CE2	2.56	0.41
78:Ln:16:LYS:HZ3	78:Ln:20:MET:HE3	1.86	0.41
78:Ln:16:LYS:NZ	78:Ln:20:MET:HE3	2.35	0.41
83:At:43:C:H2'	83:At:44:G:C8	2.55	0.41
1:S2:24:C:H2'	1:S2:25:A:C8	2.56	0.41
1:S2:491:C:O2'	1:S2:493:A:N7	2.49	0.41
1:S2:527:C:O2	1:S2:559:G:N2	2.53	0.41
1:S2:1286:G:N2	1:S2:1312:G:N3	2.68	0.41
1:S2:1291:A:N3	36:Sf:140:TYR:OH	2.54	0.41
1:S2:1335:G:OP1	7:SD:185:LYS:HE3	2.21	0.41
1:S2:1495:G:H2'	1:S2:1496:U:C6	2.56	0.41
1:S2:1520:G:N3	1:S2:1520:G:H2'	2.35	0.41
1:S2:1653:U:H3	1:S2:1671:G:H1	1.69	0.41
2:L8:17:A:H1'	3:L5:418:A:C2	2.56	0.41
3:L5:67:C:OP2	3:L5:312:G:N2	2.49	0.41
3:L5:78:U:H2'	3:L5:79:C:C6	2.56	0.41
3:L5:134:G:O3'	3:L5:135:G:H4'	2.20	0.41
3:L5:143:C:H5''	45:LG:108:GLN:OE1	2.21	0.41
3:L5:664:G:N2	3:L5:667:A:H62	2.19	0.41
3:L5:965:G:O3'	3:L5:2092:G:N2	2.54	0.41
3:L5:1853:G:H5''	3:L5:1854:G:O5'	2.21	0.41
3:L5:2100:A:H2'	3:L5:2101:C:H6	1.85	0.41
3:L5:2848:G:H22	3:L5:3839:G:H5'	1.85	0.41
3:L5:2874:U:O2'	3:L5:2876:OMG:N7	2.50	0.41
3:L5:3916:G:H2'	3:L5:3917:A:C8	2.55	0.41
3:L5:3973:G:H2'	3:L5:3975:C:N4	2.36	0.41
3:L5:4042:G:C2	3:L5:4043:G:C4	3.09	0.41
3:L5:4478:G:O2'	3:L5:4602:A:N1	2.43	0.41
5:SB:34:LYS:HB2	5:SB:97:LEU:HD23	2.03	0.41
6:SA:66:VAL:HG11	6:SA:185:MET:CG	2.51	0.41
6:SA:183:LEU:HD23	6:SA:183:LEU:HA	1.86	0.41
6:SA:184:ARG:CD	6:SA:191:ARG:HG2	2.48	0.41
6:SA:200:ASP:OD2	26:SR:89:SER:HA	2.21	0.41
6:SA:209:GLU:O	6:SA:212:LYS:HG3	2.20	0.41
9:SE:47:PHE:CE2	9:SE:101:LEU:HD21	2.55	0.41
10:SC:66:LEU:HD21	10:SC:86:LEU:HD13	2.02	0.41
10:SC:82:TYR:CZ	10:SC:164:PRO:HD3	2.55	0.41
11:SG:68:LEU:HD23	11:SG:100:CYS:SG	2.61	0.41
11:SG:98:ARG:NH1	11:SG:99:GLY:O	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:SG:137:ARG:O	11:SG:141:ILE:HD12	2.21	0.41
13:SH:33:ASN:OD1	13:SH:34:SER:N	2.54	0.41
13:SH:147:LYS:HZ1	13:SH:153:LEU:HG	1.83	0.41
14:SW:10:ALA:O	14:SW:14:ILE:HG12	2.20	0.41
14:SW:23:ARG:NH1	14:SW:23:ARG:HA	2.35	0.41
16:SQ:108:ILE:HG13	16:SQ:109:LYS:N	2.36	0.41
18:SK:20:VAL:HG13	18:SK:21:MET:N	2.35	0.41
24:SN:39:LYS:HG2	24:SN:43:LYS:HZ3	1.85	0.41
31:SZ:88:LEU:HD23	31:SZ:109:TYR:CD2	2.55	0.41
36:Sf:105:TYR:HA	36:Sf:117:LEU:HB2	2.02	0.41
37:Sg:125:ARG:HD3	37:Sg:150:TRP:CE2	2.56	0.41
37:Sg:220:ASP:OD1	37:Sg:220:ASP:N	2.46	0.41
38:Lz:6:SER:OG	38:Lz:10:LEU:HB2	2.21	0.41
38:Lz:47:LYS:HE3	38:Lz:47:LYS:HB2	1.93	0.41
38:Lz:116:LEU:HD11	38:Lz:134:PHE:HE2	1.86	0.41
39:LA:245[B]:ARG:HD2	39:LA:245[B]:ARG:HA	1.62	0.41
41:LC:155:GLU:OE2	41:LC:157:LYS:HE2	2.21	0.41
43:LH:62:GLY:HA2	43:LH:66:GLU:OE1	2.20	0.41
46:LO:15:LEU:HD11	46:LO:128:ARG:HB2	2.03	0.41
46:LO:85:ARG:HE	46:LO:85:ARG:HB3	1.67	0.41
48:LV:87:SER:HA	48:LV:97:TYR:HB3	2.03	0.41
53:LD:196:ARG:HH21	53:LD:200:MET:HE3	1.85	0.41
55:LR:44:LEU:HD22	55:LR:49:LEU:HD22	2.02	0.41
56:LS:154:LEU:HD13	56:LS:157:ARG:CZ	2.50	0.41
59:LU:48:LYS:HD2	59:LU:51:GLY:C	2.46	0.41
67:LF:182:TYR:CZ	67:LF:203:GLU:HG2	2.56	0.41
77:Lm:95:ILE:CG2	77:Lm:100:TYR:HA	2.51	0.41
81:5A:126:LYS:HG3	81:5A:126:LYS:O	2.21	0.41
83:At:28:G:H2'	83:At:29:G:H8	1.85	0.41
1:S2:76:U:H2'	11:SG:159:ARG:HH22	1.86	0.41
1:S2:97:U:H2'	1:S2:98:C:C6	2.56	0.41
1:S2:342:C:H2'	1:S2:343:A:H8	1.86	0.41
1:S2:536:A:H2'	1:S2:537:C:H6	1.86	0.41
2:L8:25:G:N3	3:L5:356:G:O2'	2.53	0.41
2:L8:72:A:OP2	61:LY:51:LYS:HE3	2.22	0.41
2:L8:127:U:H2'	2:L8:128:C:O4'	2.21	0.41
3:L5:272:U:H2'	3:L5:273:U:H6	1.86	0.41
3:L5:964:A:OP2	67:LF:29:LYS:CE	2.68	0.41
3:L5:972:C:C6	44:LE:126:LEU:HD13	2.55	0.41
3:L5:1278:C:H2'	3:L5:1279:A:O4'	2.20	0.41
3:L5:1458:C:H5''	54:LQ:69:LYS:HD3	2.04	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:1645:C:H2'	3:L5:1646:A:C8	2.56	0.41
3:L5:1768:C:H2'	3:L5:1769:G:C8	2.56	0.41
3:L5:2391:G:OP1	3:L5:4653:C:O2'	2.39	0.41
3:L5:2556:G:H2'	3:L5:2557:G:C8	2.56	0.41
3:L5:4045:G:N3	3:L5:4048:A:C6	2.89	0.41
3:L5:4340:U:O2	89:L5:5302:SPD:N10	2.54	0.41
5:SB:164:ILE:HD12	5:SB:201:CYS:HB3	2.03	0.41
6:SA:130:ASP:C	6:SA:133:PRO:HD2	2.45	0.41
7:SD:66:ILE:HG13	7:SD:67:ARG:N	2.36	0.41
8:SJ:64:ASP:OD1	8:SJ:64:ASP:N	2.50	0.41
9:SE:47:PHE:HE2	9:SE:101:LEU:HD21	1.85	0.41
9:SE:59:ASP:O	9:SE:62:LYS:HG2	2.21	0.41
12:SF:188:TYR:HA	12:SF:191:LYS:HE3	2.03	0.41
15:SI:191:GLU:HB2	25:SL:19:ASN:ND2	2.36	0.41
16:SQ:100:VAL:HG12	16:SQ:101:ASP:N	2.36	0.41
18:SK:43:LEU:O	18:SK:47:LYS:HG2	2.21	0.41
22:SS:10:GLN:O	22:SS:11:HIS:HB2	2.21	0.41
22:SS:60:THR:O	22:SS:64:VAL:HG23	2.21	0.41
24:SN:16:LEU:HA	24:SN:17:PRO:HD3	1.97	0.41
28:ST:23:LYS:HD2	28:ST:51:ASN:HD22	1.85	0.41
30:SY:38:THR:O	30:SY:42:GLU:OE1	2.39	0.41
37:Sg:10:THR:OG1	37:Sg:307:VAL:O	2.36	0.41
37:Sg:69:VAL:HG12	37:Sg:80:SER:CB	2.51	0.41
39:LA:44:ILE:CG2	39:LA:46:LYS:HE3	2.51	0.41
39:LA:201:GLY:HA3	39:LA:209:HIS:CE1	2.56	0.41
41:LC:1:MET:N	41:LC:281:MET:HE1	2.35	0.41
46:LO:185:VAL:HB	46:LO:188:LYS:HB3	2.03	0.41
49:LM:6:PHE:H	49:LM:11:ARG:NH2	2.18	0.41
50:La:46:ASP:CG	54:LQ:178:ARG:HH12	2.29	0.41
50:La:51:GLY:HA2	54:LQ:178:ARG:N	2.36	0.41
58:LP:123:PRO:O	58:LP:125:MET:HE2	2.19	0.41
64:Lr:47:LYS:O	64:Lr:103:ARG:HD3	2.21	0.41
69:Ld:29:ILE:O	69:Ld:33:ILE:HG12	2.22	0.41
1:S2:90:G:OP1	1:S2:445:A:N6	2.52	0.40
1:S2:151:C:OP1	30:SY:120:THR:HG22	2.21	0.40
1:S2:1266:C:H2'	1:S2:1267:C:C6	2.55	0.40
1:S2:1401:A:H2'	1:S2:1402:A:C8	2.56	0.40
3:L5:108:A:H4'	3:L5:109:G:OP1	2.21	0.40
3:L5:516:C:H2'	3:L5:517:C:C6	2.56	0.40
3:L5:1205:G:H2'	3:L5:1206:C:C6	2.55	0.40
3:L5:1808:C:H2'	3:L5:1809:C:H6	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:3607:U:H2'	3:L5:3608:A:H8	1.86	0.40
3:L5:3723:A2M:HM'3	3:L5:3723:A2M:H1'	1.60	0.40
3:L5:3779:A:H2'	3:L5:3780:G:O4'	2.21	0.40
3:L5:4174:U:H2'	3:L5:4175:G:C8	2.56	0.40
3:L5:4585:U:H2'	3:L5:4586:G:C8	2.56	0.40
10:SC:105:GLU:HB3	10:SC:216:MET:HE1	2.03	0.40
10:SC:107:LEU:HD22	10:SC:209:VAL:HG13	2.03	0.40
15:SI:128:LYS:O	15:SI:128:LYS:HD2	2.20	0.40
17:SU:28:ASN:OD1	17:SU:29:VAL:N	2.52	0.40
18:SK:32:HIS:CD2	18:SK:45:VAL:HG21	2.56	0.40
26:SR:25:GLY:O	26:SR:31:ASN:ND2	2.45	0.40
26:SR:41:ILE:HD13	26:SR:47:ARG:HA	2.03	0.40
30:SY:58:PHE:CZ	30:SY:72:PHE:HD2	2.39	0.40
33:Sb:11:SER:O	33:Sb:14:GLU:HG3	2.21	0.40
41:LC:322:LEU:HD13	41:LC:336:ARG:NH1	2.35	0.40
44:LE:165:LEU:HD21	44:LE:257:ILE:HD11	2.03	0.40
47:LL:90:VAL:O	47:LL:94:ILE:HG12	2.21	0.40
52:LI:150:GLU:OE1	52:LI:150:GLU:HA	2.21	0.40
54:LQ:18:PRO:HG3	54:LQ:29:VAL:HG21	2.02	0.40
57:LT:80:VAL:O	57:LT:83:LYS:HG2	2.21	0.40
62:LW:120:GLN:HG2	62:LW:124:LYS:NZ	2.37	0.40
1:S2:166:A2M:H2'	1:S2:167:G:H8	1.86	0.40
1:S2:220:U:H2'	1:S2:221:A:H8	1.85	0.40
1:S2:379:C:H5'	15:SI:33:ALA:HA	2.02	0.40
1:S2:379:C:O2	15:SI:5:ARG:NE	2.53	0.40
1:S2:635:G:H2'	1:S2:636:C:C6	2.57	0.40
1:S2:816:A:H2'	1:S2:817:G:O4'	2.21	0.40
2:L8:40:A:H2'	2:L8:41:A:H8	1.84	0.40
2:L8:56:G:H2'	2:L8:57:C:O4'	2.21	0.40
3:L5:179:G:C2	3:L5:180:C:C4	3.09	0.40
3:L5:294:G:O6	3:L5:315:G:H1'	2.21	0.40
3:L5:480:C:H2'	3:L5:481:G:H8	1.86	0.40
3:L5:667:A:H2'	3:L5:668:C:C6	2.57	0.40
3:L5:689:U:H2'	3:L5:690:C:H6	1.85	0.40
3:L5:980:U:H2'	3:L5:981:C:C6	2.56	0.40
3:L5:1264:C:H2'	3:L5:1265:G:H8	1.85	0.40
3:L5:1338:G:N7	50:La:25:HIS:ND1	2.66	0.40
3:L5:1537:A:H2'	3:L5:1538:U:C6	2.56	0.40
3:L5:1545:G:OP1	72:Lg:14:ASN:ND2	2.47	0.40
3:L5:1698:C:O2	67:LF:177:ARG:HB3	2.20	0.40
3:L5:1701:A:C5	3:L5:1702:C:C5	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:2875:C:OP1	80:Lp:23:ARG:NH2	2.54	0.40
3:L5:4039:G:H1'	3:L5:4040:C:C5	2.49	0.40
3:L5:4046:A:C8	3:L5:4047:A:C4	3.10	0.40
3:L5:4244:A:H2'	3:L5:4245:G:O4'	2.21	0.40
3:L5:4371:G:H4'	79:Lo:56:PHE:CE2	2.56	0.40
4:L7:57:C:H2'	4:L7:58:A:C8	2.56	0.40
6:SA:111:GLN:HG2	6:SA:112:ILE:HG23	2.02	0.40
6:SA:134:LEU:HD22	6:SA:144:THR:HG21	2.02	0.40
16:SQ:53:GLU:O	16:SQ:57:LEU:HG	2.21	0.40
26:SR:70:SER:O	26:SR:72:LYS:N	2.54	0.40
27:SP:90:VAL:HA	27:SP:107:ILE:HG22	2.03	0.40
33:Sb:24:LEU:HD12	33:Sb:24:LEU:HA	1.93	0.40
37:Sg:217:MET:SD	37:Sg:226:HIS:NE2	2.94	0.40
38:Lz:137:LEU:HD11	38:Lz:140:HIS:HB3	2.02	0.40
40:LB:106:PHE:HB2	40:LB:133:TYR:CE2	2.55	0.40
41:LC:293:LEU:O	41:LC:299:GLN:NE2	2.54	0.40
45:LG:99:ALA:HB1	45:LG:136:LEU:HD11	2.03	0.40
57:LT:93:ILE:HA	57:LT:96:ILE:HG12	2.03	0.40
63:LZ:36:ARG:O	63:LZ:38:TYR:N	2.45	0.40
67:LF:29:LYS:O	67:LF:32:ARG:HG2	2.22	0.40
67:LF:30:ILE:O	67:LF:34:ARG:NE	2.52	0.40
83:At:66:U:H2'	83:At:67:C:C6	2.57	0.40
1:S2:92:A:H4'	1:S2:93:PSU:OP2	2.21	0.40
1:S2:96:C:H2'	1:S2:97:U:H6	1.86	0.40
1:S2:528:A:C4	1:S2:558:G:N2	2.89	0.40
1:S2:939:U:H2'	1:S2:940:U:C6	2.56	0.40
1:S2:955:A:H4'	19:SO:60:MET:HE3	2.03	0.40
1:S2:1131:G:H2'	1:S2:1132:C:C6	2.56	0.40
1:S2:1354:G:N2	1:S2:1357:A:OP2	2.49	0.40
3:L5:76:A:N7	47:LL:74:ARG:NH2	2.69	0.40
3:L5:965:G:N2	3:L5:2092:G:O2'	2.55	0.40
3:L5:1671:U:O4	3:L5:1853:G:H1'	2.21	0.40
3:L5:1779:PSU:H2'	3:L5:1780:A:C8	2.56	0.40
3:L5:1998:A:C4	3:L5:1999:A:C8	3.10	0.40
3:L5:2310:C:H2'	3:L5:2311:C:C6	2.57	0.40
3:L5:2392:C:H2'	3:L5:2393:C:H6	1.86	0.40
3:L5:2607:C:H2'	3:L5:2608:G:H8	1.87	0.40
3:L5:4146:G:N1	3:L5:4147:G:C5	2.90	0.40
3:L5:4922:C:N4	3:L5:4923:C:H41	2.19	0.40
6:SA:99:ILE:HG13	6:SA:117:ARG:HH22	1.86	0.40
6:SA:209:GLU:HA	6:SA:212:LYS:HG3	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:SC:182:CYS:HB2	14:SW:95:PRO:HB2	2.03	0.40
13:SH:39:GLN:NE2	13:SH:40:LEU:HB2	2.35	0.40
16:SQ:84:ILE:O	16:SQ:88:ILE:HG12	2.21	0.40
21:SM:38:ALA:HA	21:SM:110:VAL:HG11	2.03	0.40
23:Sd:38:MET:HE3	23:Sd:43:PHE:HA	2.04	0.40
37:Sg:166:VAL:HG22	37:Sg:176:VAL:CG2	2.48	0.40
38:Lz:54:ARG:HG3	38:Lz:55:LEU:O	2.21	0.40
39:LA:118:GLU:O	39:LA:119:LYS:HD3	2.21	0.40
39:LA:136:VAL:HA	39:LA:148:VAL:HG12	2.02	0.40
45:LG:78:PRO:HD3	45:LG:237:TRP:CE2	2.57	0.40
53:LD:226:TYR:O	53:LD:227:ILE:HD13	2.21	0.40
58:LP:86:LYS:O	58:LP:89:GLU:HG2	2.21	0.40
61:LY:46:SER:O	61:LY:122:LYS:HE2	2.21	0.40
66:Lb:98:TYR:CE1	66:Lb:104:LEU:HB3	2.56	0.40
67:LF:199:LYS:HG3	67:LF:200:ARG:NH1	2.36	0.40
81:5A:120:GLY:O	81:5A:123:ILE:HB	2.21	0.40
83:At:30:G:C2	83:At:31:A:C8	3.09	0.40
84:Pt:35:C:H2'	84:Pt:36:A:C8	2.56	0.40
1:S2:191:A:N6	1:S2:208:G:HO2'	2.20	0.40
1:S2:555:A:H61	1:S2:589:G:H21	1.69	0.40
3:L5:370:U:H4'	3:L5:1534:A2M:N6	2.37	0.40
3:L5:1068:G:H2'	3:L5:1069:G:H8	1.87	0.40
3:L5:1291:G:OP1	44:LE:219:LYS:NZ	2.49	0.40
3:L5:1741:G:N3	3:L5:1781:PSU:H5''	2.37	0.40
3:L5:2066:C:O2'	71:Lf:79:GLY:HA2	2.21	0.40
3:L5:2622:G:O6	59:LU:81:ARG:NH2	2.54	0.40
3:L5:3802:U:O2'	3:L5:3803:A:H5'	2.21	0.40
3:L5:3946:G:H2'	3:L5:3947:A:H8	1.86	0.40
3:L5:3963:A:N3	3:L5:3964:U:H5'	2.37	0.40
3:L5:4135:G:H2'	3:L5:4136:G:C8	2.56	0.40
3:L5:4541:G:N2	3:L5:4544:A:OP2	2.49	0.40
5:SB:30:TRP:CD2	5:SB:48:LEU:HB3	2.57	0.40
5:SB:60:ASP:OD1	5:SB:61:GLY:N	2.54	0.40
6:SA:77:ILE:HG13	6:SA:99:ILE:HB	2.02	0.40
8:SJ:47:LYS:HG3	8:SJ:102:ILE:HD12	2.02	0.40
10:SC:206:SER:HB3	10:SC:210:PRO:HG2	2.04	0.40
11:SG:186:GLN:N	11:SG:189:ARG:HH21	2.19	0.40
11:SG:194:LEU:HD13	11:SG:197:GLN:NE2	2.36	0.40
14:SW:88:LYS:HA	14:SW:91:ASN:OD1	2.21	0.40
24:SN:60:VAL:HG13	24:SN:66:VAL:HG21	2.04	0.40
27:SP:107:ILE:HA	27:SP:111:MET:CE	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:ST:10:ASN:HB3	28:ST:13:GLU:OE2	2.21	0.40
38:Lz:195:LYS:HG2	38:Lz:200:ASN:ND2	2.36	0.40
39:LA:233:ARG:O	39:LA:233:ARG:NH1	2.49	0.40
40:LB:103:LYS:HD3	40:LB:104:THR:N	2.35	0.40
41:LC:122:TYR:CD1	41:LC:280:PRO:HG3	2.56	0.40
46:LO:74:ARG:HG3	46:LO:145:VAL:HG23	2.03	0.40
46:LO:118:MET:CE	56:LS:169:THR:HG22	2.47	0.40
49:LM:43:THR:O	49:LM:43:THR:HG22	2.21	0.40
53:LD:111:ASN:HD22	53:LD:111:ASN:C	2.28	0.40
53:LD:223:PHE:HD1	53:LD:226:TYR:CD1	2.40	0.40
57:LT:45:MET:SD	57:LT:47:THR:HB	2.61	0.40
57:LT:115:LYS:HZ3	57:LT:126:VAL:CG1	2.34	0.40
63:LZ:64:LYS:O	63:LZ:67:LYS:HG2	2.21	0.40
73:Li:33:LEU:HD22	73:Li:38:LYS:HB2	2.02	0.40
76:Ll:41:ARG:HD2	76:Ll:41:ARG:HA	1.92	0.40
1:S2:191:A:N6	1:S2:208:G:O2'	2.53	0.40
1:S2:218:PSU:H2'	1:S2:219:U:C6	2.57	0.40
1:S2:561:A:H5''	8:SJ:164:PRO:HG2	2.03	0.40
1:S2:1593:C:H2'	1:S2:1594:A:H8	1.85	0.40
3:L5:184:U:H2'	3:L5:186:G:H8	1.82	0.40
3:L5:322:C:H2'	3:L5:323:C:O4'	2.22	0.40
3:L5:444:G:H2'	3:L5:445:U:C6	2.56	0.40
3:L5:455:C:H2'	3:L5:456:C:H6	1.85	0.40
3:L5:691:C:C2	3:L5:692:A:C8	3.09	0.40
3:L5:1294:A:H1'	3:L5:1295:C:H5	1.86	0.40
3:L5:1414:C:C2	3:L5:1415:G:C8	3.09	0.40
3:L5:1510:G:P	50:La:2:PRO:HD2	2.61	0.40
3:L5:2040:A:H4'	3:L5:2041:A:O5'	2.21	0.40
3:L5:2695:A:OP1	75:Lk:35:LYS:NZ	2.54	0.40
3:L5:3666:C:OP1	39:LA:227:ARG:NH1	2.54	0.40
3:L5:3961:G:N2	3:L5:3964:U:OP1	2.49	0.40
3:L5:4192:A:H2'	3:L5:4193:C:H6	1.86	0.40
89:L5:5304:SPD:H22	89:L5:5304:SPD:H51	1.92	0.40
7:SD:12:VAL:HG11	23:Sd:34:TYR:O	2.22	0.40
7:SD:213:PRO:HB3	26:SR:20:TYR:CE2	2.57	0.40
10:SC:82:TYR:OH	10:SC:162:ILE:HG22	2.21	0.40
11:SG:201:LYS:HA	11:SG:204:GLU:HG2	2.03	0.40
25:SL:111:VAL:HG11	25:SL:128:VAL:HG11	2.04	0.40
27:SP:144:LEU:HA	83:At:38:A:H1'	2.04	0.40
37:Sg:122:SER:O	37:Sg:129:ILE:HD12	2.22	0.40
39:LA:202:VAL:O	39:LA:217:GLN:HG2	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:LC:33:ARG:HG3	41:LC:122:TYR:HE2	1.86	0.40
58:LP:32:THR:HG22	58:LP:91:LEU:HD12	2.03	0.40
59:LU:19:LEU:HD13	59:LU:21:PHE:CE2	2.57	0.40
59:LU:40:GLU:CD	59:LU:63:ILE:HG22	2.46	0.40
60:LX:129:ARG:HB2	60:LX:131:ASP:OD1	2.22	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
5	SB	212/264 (80%)	204 (96%)	8 (4%)	0	100	100
6	SA	220/295 (75%)	213 (97%)	7 (3%)	0	100	100
7	SD	224/243 (92%)	221 (99%)	3 (1%)	0	100	100
8	SJ	183/194 (94%)	174 (95%)	9 (5%)	0	100	100
9	SE	260/263 (99%)	251 (96%)	8 (3%)	1 (0%)	30	54
10	SC	220/293 (75%)	215 (98%)	4 (2%)	1 (0%)	24	49
11	SG	235/249 (94%)	221 (94%)	13 (6%)	1 (0%)	30	54
12	SF	187/204 (92%)	169 (90%)	18 (10%)	0	100	100
13	SH	187/194 (96%)	178 (95%)	8 (4%)	1 (0%)	24	49
14	SW	127/130 (98%)	122 (96%)	5 (4%)	0	100	100
15	SI	204/208 (98%)	194 (95%)	9 (4%)	1 (0%)	24	49
16	SQ	139/146 (95%)	135 (97%)	4 (3%)	0	100	100
17	SU	99/119 (83%)	97 (98%)	2 (2%)	0	100	100
18	SK	94/165 (57%)	82 (87%)	8 (8%)	4 (4%)	2	4
19	SO	133/151 (88%)	122 (92%)	9 (7%)	2 (2%)	8	23
20	SX	137/143 (96%)	131 (96%)	6 (4%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
21	SM	120/132 (91%)	113 (94%)	5 (4%)	2 (2%)	7	20
22	SS	146/152 (96%)	136 (93%)	9 (6%)	1 (1%)	18	40
23	Sd	52/56 (93%)	49 (94%)	3 (6%)	0	100	100
24	SN	149/151 (99%)	145 (97%)	4 (3%)	0	100	100
25	SL	141/158 (89%)	134 (95%)	7 (5%)	0	100	100
26	SR	132/135 (98%)	124 (94%)	8 (6%)	0	100	100
27	SP	133/145 (92%)	125 (94%)	8 (6%)	0	100	100
28	ST	141/145 (97%)	136 (96%)	5 (4%)	0	100	100
29	SV	81/83 (98%)	81 (100%)	0	0	100	100
30	SY	129/133 (97%)	123 (95%)	6 (5%)	0	100	100
31	SZ	84/125 (67%)	79 (94%)	5 (6%)	0	100	100
32	Sa	97/115 (84%)	93 (96%)	4 (4%)	0	100	100
33	Sb	81/84 (96%)	79 (98%)	2 (2%)	0	100	100
34	Sc	63/69 (91%)	60 (95%)	3 (5%)	0	100	100
35	Se	55/133 (41%)	51 (93%)	4 (7%)	0	100	100
36	Sf	61/156 (39%)	53 (87%)	7 (12%)	1 (2%)	7	21
37	Sg	311/317 (98%)	285 (92%)	25 (8%)	1 (0%)	36	59
38	Lz	211/217 (97%)	170 (81%)	36 (17%)	5 (2%)	4	13
39	LA	249/257 (97%)	240 (96%)	8 (3%)	1 (0%)	30	54
40	LB	399/403 (99%)	386 (97%)	13 (3%)	0	100	100
41	LC	366/427 (86%)	358 (98%)	8 (2%)	0	100	100
42	LJ	167/178 (94%)	163 (98%)	4 (2%)	0	100	100
43	LH	188/192 (98%)	181 (96%)	7 (4%)	0	100	100
44	LE	217/288 (75%)	207 (95%)	10 (5%)	0	100	100
45	LG	237/266 (89%)	223 (94%)	13 (6%)	1 (0%)	30	54
46	LO	198/203 (98%)	192 (97%)	6 (3%)	0	100	100
47	LL	204/211 (97%)	192 (94%)	12 (6%)	0	100	100
48	LV	131/140 (94%)	125 (95%)	6 (5%)	0	100	100
49	LM	134/215 (62%)	131 (98%)	3 (2%)	0	100	100
50	La	144/148 (97%)	138 (96%)	5 (4%)	1 (1%)	18	40
51	LN	201/204 (98%)	193 (96%)	8 (4%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
52	LI	199/214 (93%)	192 (96%)	7 (4%)	0	100	100
53	LD	292/297 (98%)	285 (98%)	7 (2%)	0	100	100
54	LQ	185/188 (98%)	182 (98%)	3 (2%)	0	100	100
55	LR	185/196 (94%)	184 (100%)	1 (0%)	0	100	100
56	LS	174/176 (99%)	170 (98%)	4 (2%)	0	100	100
57	LT	157/160 (98%)	155 (99%)	2 (1%)	0	100	100
58	LP	151/184 (82%)	149 (99%)	2 (1%)	0	100	100
59	LU	97/128 (76%)	91 (94%)	6 (6%)	0	100	100
60	LX	116/156 (74%)	113 (97%)	3 (3%)	0	100	100
61	LY	132/145 (91%)	127 (96%)	5 (4%)	0	100	100
62	LW	114/157 (73%)	107 (94%)	6 (5%)	1 (1%)	14	34
63	LZ	133/136 (98%)	128 (96%)	5 (4%)	0	100	100
64	Lr	123/137 (90%)	120 (98%)	3 (2%)	0	100	100
65	Lh	120/123 (98%)	119 (99%)	1 (1%)	0	100	100
66	Lb	104/159 (65%)	100 (96%)	4 (4%)	0	100	100
67	LF	223/248 (90%)	212 (95%)	11 (5%)	0	100	100
68	Lc	96/115 (84%)	92 (96%)	4 (4%)	0	100	100
69	Ld	105/125 (84%)	101 (96%)	4 (4%)	0	100	100
70	Le	126/135 (93%)	121 (96%)	5 (4%)	0	100	100
71	Lf	107/110 (97%)	104 (97%)	3 (3%)	0	100	100
72	Lg	112/117 (96%)	110 (98%)	2 (2%)	0	100	100
73	Li	100/105 (95%)	99 (99%)	1 (1%)	0	100	100
74	Lj	84/97 (87%)	82 (98%)	2 (2%)	0	100	100
75	Lk	67/70 (96%)	67 (100%)	0	0	100	100
76	Ll	48/51 (94%)	45 (94%)	3 (6%)	0	100	100
77	Lm	49/128 (38%)	47 (96%)	2 (4%)	0	100	100
78	Ln	22/25 (88%)	21 (96%)	1 (4%)	0	100	100
79	Lo	101/106 (95%)	96 (95%)	5 (5%)	0	100	100
80	Lp	89/92 (97%)	84 (94%)	5 (6%)	0	100	100
81	5A	147/154 (96%)	130 (88%)	14 (10%)	3 (2%)	6	17
All	All	11641/13133 (89%)	11127 (96%)	486 (4%)	28 (0%)	44	65

All (28) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
21	SM	82	ASN
38	Lz	82	ILE
38	Lz	86	ASP
81	5A	75	SER
81	5A	131	GLU
11	SG	132	ARG
18	SK	20	VAL
38	Lz	167	VAL
62	LW	97	LYS
15	SI	142	SER
18	SK	17	LYS
10	SC	77	SER
36	Sf	138	ARG
37	Sg	177	TRP
38	Lz	83	PRO
38	Lz	209	THR
81	5A	48	THR
13	SH	12	ASN
18	SK	15	LEU
19	SO	138	ASP
21	SM	102	LYS
22	SS	100	ALA
39	LA	180	LEU
45	LG	106	THR
9	SE	109	PHE
18	SK	6	LYS
50	La	15	VAL
19	SO	134	PRO

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.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
5	SB	195/231 (84%)	194 (100%)	1 (0%)	81	90
6	SA	183/242 (76%)	183 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
7	SD	189/202 (94%)	189 (100%)	0	100	100
8	SJ	161/168 (96%)	161 (100%)	0	100	100
9	SE	224/225 (100%)	221 (99%)	3 (1%)	61	77
10	SC	188/225 (84%)	185 (98%)	3 (2%)	55	74
11	SG	207/218 (95%)	204 (99%)	3 (1%)	59	76
12	SF	159/170 (94%)	159 (100%)	0	100	100
13	SH	168/174 (97%)	166 (99%)	2 (1%)	63	78
14	SW	112/113 (99%)	110 (98%)	2 (2%)	51	72
15	SI	178/180 (99%)	177 (99%)	1 (1%)	78	89
16	SQ	117/121 (97%)	113 (97%)	4 (3%)	32	58
17	SU	93/107 (87%)	93 (100%)	0	100	100
18	SK	87/136 (64%)	81 (93%)	6 (7%)	14	33
19	SO	105/119 (88%)	104 (99%)	1 (1%)	68	81
20	SX	111/114 (97%)	110 (99%)	1 (1%)	70	82
21	SM	102/108 (94%)	101 (99%)	1 (1%)	68	81
22	SS	128/132 (97%)	127 (99%)	1 (1%)	73	84
23	Sd	48/49 (98%)	48 (100%)	0	100	100
24	SN	131/131 (100%)	131 (100%)	0	100	100
25	SL	131/142 (92%)	131 (100%)	0	100	100
26	SR	121/122 (99%)	121 (100%)	0	100	100
27	SP	121/130 (93%)	121 (100%)	0	100	100
28	ST	113/115 (98%)	113 (100%)	0	100	100
29	SV	66/66 (100%)	66 (100%)	0	100	100
30	SY	113/115 (98%)	110 (97%)	3 (3%)	39	64
31	SZ	75/103 (73%)	75 (100%)	0	100	100
32	Sa	86/98 (88%)	86 (100%)	0	100	100
33	Sb	75/76 (99%)	75 (100%)	0	100	100
34	Sc	58/62 (94%)	58 (100%)	0	100	100
35	Se	46/104 (44%)	46 (100%)	0	100	100
36	Sf	56/140 (40%)	54 (96%)	2 (4%)	31	56
37	Sg	272/275 (99%)	270 (99%)	2 (1%)	76	86

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
38	Lz	192/196 (98%)	191 (100%)	1 (0%)	81	90
39	LA	193/198 (98%)	190 (98%)	3 (2%)	55	74
40	LB	347/348 (100%)	345 (99%)	2 (1%)	78	89
41	LC	306/348 (88%)	306 (100%)	0	100	100
42	LJ	143/149 (96%)	142 (99%)	1 (1%)	76	86
43	LH	169/171 (99%)	169 (100%)	0	100	100
44	LE	196/252 (78%)	192 (98%)	4 (2%)	48	70
45	LG	202/223 (91%)	201 (100%)	1 (0%)	81	90
46	LO	172/174 (99%)	171 (99%)	1 (1%)	78	89
47	LL	172/177 (97%)	170 (99%)	2 (1%)	63	78
48	LV	102/107 (95%)	102 (100%)	0	100	100
49	LM	116/161 (72%)	116 (100%)	0	100	100
50	La	119/120 (99%)	119 (100%)	0	100	100
51	LN	171/172 (99%)	169 (99%)	2 (1%)	63	78
52	LI	173/181 (96%)	173 (100%)	0	100	100
53	LD	247/250 (99%)	245 (99%)	2 (1%)	73	84
54	LQ	164/165 (99%)	164 (100%)	0	100	100
55	LR	166/175 (95%)	164 (99%)	2 (1%)	63	78
56	LS	157/157 (100%)	157 (100%)	0	100	100
57	LT	139/140 (99%)	138 (99%)	1 (1%)	76	86
58	LP	134/163 (82%)	134 (100%)	0	100	100
59	LU	89/115 (77%)	89 (100%)	0	100	100
60	LX	106/133 (80%)	106 (100%)	0	100	100
61	LY	124/135 (92%)	124 (100%)	0	100	100
62	LW	95/126 (75%)	90 (95%)	5 (5%)	20	43
63	LZ	117/118 (99%)	116 (99%)	1 (1%)	70	82
64	Lr	108/120 (90%)	107 (99%)	1 (1%)	70	82
65	Lh	109/110 (99%)	109 (100%)	0	100	100
66	Lb	89/125 (71%)	88 (99%)	1 (1%)	65	80
67	LF	194/215 (90%)	194 (100%)	0	100	100
68	Lc	83/97 (86%)	83 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
69	Ld	98/110 (89%)	98 (100%)	0	100	100
70	Le	114/121 (94%)	110 (96%)	4 (4%)	32	56
71	Lf	88/89 (99%)	88 (100%)	0	100	100
72	Lg	98/100 (98%)	96 (98%)	2 (2%)	48	70
73	Li	86/89 (97%)	84 (98%)	2 (2%)	44	68
74	Lj	73/80 (91%)	71 (97%)	2 (3%)	39	64
75	Lk	64/65 (98%)	64 (100%)	0	100	100
76	Ll	47/48 (98%)	45 (96%)	2 (4%)	26	51
77	Lm	47/115 (41%)	46 (98%)	1 (2%)	47	70
78	Ln	23/24 (96%)	23 (100%)	0	100	100
79	Lo	91/93 (98%)	90 (99%)	1 (1%)	65	80
80	Lp	74/75 (99%)	73 (99%)	1 (1%)	59	76
81	5A	122/127 (96%)	119 (98%)	3 (2%)	42	66
All	All	10138/11170 (91%)	10054 (99%)	84 (1%)	70	84

All (84) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
5	SB	88	THR
9	SE	104	ASP
9	SE	108	ARG
9	SE	122	LYS
10	SC	166	ARG
10	SC	167	ARG
10	SC	180	VAL
11	SG	13	GLN
11	SG	172	LYS
11	SG	201	LYS
13	SH	44	ASN
13	SH	70	LYS
14	SW	3	ARG
14	SW	4	MET
15	SI	5	ARG
16	SQ	11	GLN
16	SQ	50	LYS
16	SQ	53	GLU
16	SQ	146	ARG

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Mol	Chain	Res	Type
18	SK	16	PHE
18	SK	17	LYS
18	SK	18	GLU
18	SK	20	VAL
18	SK	21	MET
18	SK	85	LEU
19	SO	45	THR
20	SX	105	PHE
21	SM	33	ARG
22	SS	99	LEU
30	SY	37	LYS
30	SY	49	LYS
30	SY	105	LYS
36	Sf	138	ARG
36	Sf	140	TYR
37	Sg	72	SER
37	Sg	82	SER
38	Lz	82	ILE
39	LA	118	GLU
39	LA	245[A]	ARG
39	LA	245[B]	ARG
40	LB	268	ARG
40	LB	329	ASP
42	LJ	129	ASP
44	LE	65	ARG
44	LE	91	THR
44	LE	110	ARG
44	LE	111	LYS
45	LG	73	ARG
46	LO	61	ARG
47	LL	136	LYS
47	LL	139	SER
51	LN	38	ARG
51	LN	67	ARG
53	LD	41	LYS
53	LD	228	LYS
55	LR	60	ARG
55	LR	82	LYS
57	LT	55	LYS
62	LW	80	ARG
62	LW	82	ILE
62	LW	83	THR

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Mol	Chain	Res	Type
62	LW	86	SER
62	LW	87	LEU
63	LZ	112	ARG
64	Lr	28	GLU
66	Lb	25	ARG
70	Le	9	LYS
70	Le	25	SER
70	Le	33	ARG
70	Le	75	ARG
72	Lg	37	LYS
72	Lg	52	ARG
73	Li	68	ARG
73	Li	76	ARG
74	Lj	12	ARG
74	Lj	13	ASN
76	Ll	5	LYS
76	Ll	36	ARG
77	Lm	99	CYS
79	Lo	36	GLN
80	Lp	23	ARG
81	5A	53	HIS
81	5A	141	MET
81	5A	142	THR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (130) such sidechains are listed below:

Mol	Chain	Res	Type
5	SB	76	ASN
5	SB	101	HIS
5	SB	177	GLN
5	SB	232	HIS
6	SA	36	GLN
6	SA	113	GLN
6	SA	132	GLN
6	SA	164	ASN
7	SD	4	GLN
8	SJ	111	GLN
8	SJ	113	GLN
8	SJ	124	HIS
9	SE	214	ASN
10	SC	178	HIS
11	SG	70	HIS

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Mol	Chain	Res	Type
11	SG	163	ASN
11	SG	227	GLN
12	SF	74	ASN
12	SF	95	HIS
12	SF	203	ASN
13	SH	39	GLN
13	SH	68	GLN
13	SH	91	HIS
13	SH	162	GLN
13	SH	164	ASN
13	SH	165	ASN
14	SW	90	GLN
15	SI	64	ASN
16	SQ	86	GLN
18	SK	28	HIS
18	SK	61	GLN
18	SK	66	HIS
19	SO	103	ASN
20	SX	16	HIS
20	SX	73	GLN
20	SX	92	ASN
20	SX	97	ASN
22	SS	17	ASN
24	SN	13	GLN
25	SL	11	GLN
25	SL	19	ASN
25	SL	106	HIS
25	SL	154	GLN
26	SR	26	ASN
30	SY	15	ASN
30	SY	19	GLN
30	SY	22	GLN
33	Sb	26	GLN
33	Sb	84	HIS
35	Se	3	HIS
35	Se	44	ASN
37	Sg	178	ASN
37	Sg	191	HIS
38	Lz	35	GLN
38	Lz	71	GLN
38	Lz	84	HIS
38	Lz	141	ASN

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Mol	Chain	Res	Type
38	Lz	182	ASN
39	LA	22	HIS
39	LA	86	GLN
39	LA	95	GLN
40	LB	145	GLN
41	LC	212	ASN
41	LC	276	ASN
41	LC	299	GLN
41	LC	317	ASN
41	LC	329	ASN
42	LJ	110	GLN
43	LH	42	ASN
43	LH	63	ASN
43	LH	98	HIS
43	LH	189	GLN
45	LG	66	GLN
45	LG	141	ASN
45	LG	149	ASN
46	LO	26	GLN
46	LO	50	ASN
46	LO	180	GLN
47	LL	19	GLN
49	LM	34	ASN
49	LM	125	ASN
50	La	14	HIS
50	La	60	HIS
52	LI	59	GLN
53	LD	81	HIS
53	LD	111	ASN
53	LD	282	GLN
54	LQ	21	GLN
54	LQ	57	ASN
56	LS	23	HIS
57	LT	66	ASN
58	LP	21	ASN
58	LP	34	GLN
58	LP	93	HIS
58	LP	137	ASN
61	LY	72	GLN
62	LW	63	GLN
62	LW	95	ASN
62	LW	96	GLN

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Mol	Chain	Res	Type
63	LZ	28	ASN
64	Lr	36	ASN
64	Lr	41	ASN
65	Lh	20	GLN
65	Lh	65	GLN
65	Lh	107	GLN
66	Lb	42	ASN
66	Lb	50	ASN
66	Lb	58	GLN
67	LF	39	GLN
67	LF	80	ASN
67	LF	131	ASN
68	Lc	15	ASN
68	Lc	33	GLN
69	Ld	116	ASN
70	Le	23	HIS
70	Le	52	GLN
70	Le	107	ASN
72	Lg	112	GLN
73	Li	15	HIS
73	Li	36	HIS
74	Lj	57	ASN
74	Lj	66	HIS
76	Ll	17	GLN
77	Lm	90	ASN
78	Ln	22	GLN
79	Lo	51	GLN
79	Lo	76	ASN
79	Lo	90	HIS
81	5A	21	GLN
81	5A	51	HIS

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	S2	1676/1869 (89%)	327 (19%)	11 (0%)
2	L8	155/156 (99%)	27 (17%)	0
3	L5	3644/5069 (71%)	678 (18%)	21 (0%)
4	L7	119/120 (99%)	7 (5%)	0
82	mR	9/60 (15%)	0	0
83	At	75/76 (98%)	15 (20%)	0

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Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
84	Pt	76/77 (98%)	21 (27%)	0
All	All	5754/7427 (77%)	1075 (18%)	32 (0%)

All (1075) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	S2	4	C
1	S2	26	U
1	S2	33	G
1	S2	41	G
1	S2	44	U
1	S2	46	A
1	S2	55	U
1	S2	58	C
1	S2	65	C
1	S2	67	C
1	S2	68	A
1	S2	70	G
1	S2	72	C
1	S2	73	C
1	S2	74	G
1	S2	76	U
1	S2	77	A
1	S2	110	U
1	S2	113	G
1	S2	115	U
1	S2	126	G
1	S2	127	C
1	S2	129	C
1	S2	130	G
1	S2	140	C
1	S2	142	C
1	S2	143	U
1	S2	149	A
1	S2	151	C
1	S2	154	U
1	S2	155	G
1	S2	158	A
1	S2	159	A2M
1	S2	160	U
1	S2	170	A
1	S2	171	A

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Mol	Chain	Res	Type
1	S2	182	C
1	S2	183	G
1	S2	184	G
1	S2	189	U
1	S2	197	U
1	S2	198	U
1	S2	199	C
1	S2	200	G
1	S2	201	C
1	S2	203	G
1	S2	204	G
1	S2	205	G
1	S2	207	G
1	S2	209	A
1	S2	210	U
1	S2	212	C
1	S2	218	PSU
1	S2	295	C
1	S2	302	A
1	S2	306	C
1	S2	307	G
1	S2	309	G
1	S2	313	A
1	S2	319	C
1	S2	324	C
1	S2	325	C
1	S2	326	C
1	S2	327	G
1	S2	328	U
1	S2	329	G
1	S2	347	G
1	S2	351	G
1	S2	353	C
1	S2	354	OMU
1	S2	362	C
1	S2	364	A
1	S2	369	C
1	S2	370	G
1	S2	385	G
1	S2	386	C
1	S2	407	G
1	S2	409	C

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Mol	Chain	Res	Type
1	S2	418	A
1	S2	421	G
1	S2	441	C
1	S2	442	C
1	S2	447	A
1	S2	448	A
1	S2	450	C
1	S2	452	G
1	S2	467	G
1	S2	472	C
1	S2	474	G
1	S2	482	G
1	S2	487	U
1	S2	488	U
1	S2	492	C
1	S2	493	A
1	S2	508	A
1	S2	516	A
1	S2	540	U
1	S2	555	A
1	S2	556	U
1	S2	557	U
1	S2	568	C
1	S2	576	A2M
1	S2	586	G
1	S2	587	A
1	S2	588	G
1	S2	589	G
1	S2	590	A2M
1	S2	591	U
1	S2	604	A
1	S2	607	U
1	S2	613	G
1	S2	614	C
1	S2	617	G
1	S2	627	OMU
1	S2	628	A
1	S2	643	A
1	S2	644	OMG
1	S2	655	A
1	S2	660	C
1	S2	664	A

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Mol	Chain	Res	Type
1	S2	668	A2M
1	S2	669	A
1	S2	670	A
1	S2	671	A
1	S2	672	A
1	S2	673	G
1	S2	688	U
1	S2	689	U
1	S2	811	A
1	S2	821	G
1	S2	822	PSU
1	S2	823	U
1	S2	827	A
1	S2	835	C
1	S2	836	G
1	S2	837	A
1	S2	838	G
1	S2	839	C
1	S2	840	C
1	S2	841	G
1	S2	845	G
1	S2	847	A
1	S2	852	G
1	S2	861	A
1	S2	867	OMG
1	S2	868	G
1	S2	869	A
1	S2	870	A
1	S2	883	U
1	S2	888	U
1	S2	889	U
1	S2	890	U
1	S2	891	G
1	S2	892	U
1	S2	895	G
1	S2	896	U
1	S2	897	U
1	S2	898	U
1	S2	901	G
1	S2	909	G
1	S2	913	A
1	S2	917	U

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Mol	Chain	Res	Type
1	S2	918	PSU
1	S2	919	A
1	S2	920	A
1	S2	922	A
1	S2	933	G
1	S2	943	U
1	S2	969	U
1	S2	970	G
1	S2	971	G
1	S2	980	A
1	S2	982	G
1	S2	983	A
1	S2	985	G
1	S2	990	A
1	S2	992	A
1	S2	997	A
1	S2	999	G
1	S2	1002	U
1	S2	1011	A
1	S2	1017	U
1	S2	1023	A
1	S2	1030	A
1	S2	1045	U
1	S2	1049	A
1	S2	1053	C
1	S2	1055	A
1	S2	1058	A
1	S2	1061	U
1	S2	1062	A
1	S2	1080	A
1	S2	1081	PSU
1	S2	1082	A
1	S2	1083	A
1	S2	1085	C
1	S2	1115	U
1	S2	1121	G
1	S2	1130	G
1	S2	1133	A
1	S2	1138	C
1	S2	1153	C
1	S2	1154	U
1	S2	1156	U

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Mol	Chain	Res	Type
1	S2	1157	G
1	S2	1195	A
1	S2	1212	G
1	S2	1215	C
1	S2	1216	C
1	S2	1217	A
1	S2	1220	A
1	S2	1224	G
1	S2	1240	A
1	S2	1242	U
1	S2	1243	PSU
1	S2	1249	C
1	S2	1251	A
1	S2	1253	A
1	S2	1256	G
1	S2	1257	G
1	S2	1259	A
1	S2	1264	C
1	S2	1269	G
1	S2	1274	G
1	S2	1275	G
1	S2	1285	G
1	S2	1286	G
1	S2	1287	A
1	S2	1302	G
1	S2	1303	C
1	S2	1305	C
1	S2	1312	G
1	S2	1313	A
1	S2	1342	U
1	S2	1348	G
1	S2	1371	U
1	S2	1372	U
1	S2	1374	C
1	S2	1378	A
1	S2	1394	G
1	S2	1398	G
1	S2	1404	U
1	S2	1405	A
1	S2	1415	C
1	S2	1420	G
1	S2	1421	A

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Mol	Chain	Res	Type
1	S2	1422	G
1	S2	1433	C
1	S2	1435	C
1	S2	1437	C
1	S2	1438	A
1	S2	1442	OMU
1	S2	1449	G
1	S2	1454	A
1	S2	1462	U
1	S2	1463	U
1	S2	1464	C
1	S2	1466	G
1	S2	1477	U
1	S2	1489	A
1	S2	1490	OMG
1	S2	1495	G
1	S2	1497	G
1	S2	1498	A
1	S2	1507	G
1	S2	1508	A
1	S2	1509	U
1	S2	1520	G
1	S2	1521	C
1	S2	1522	A
1	S2	1533	A
1	S2	1536	G
1	S2	1544	C
1	S2	1552	G
1	S2	1556	A
1	S2	1570	G
1	S2	1574	C
1	S2	1575	G
1	S2	1579	A
1	S2	1580	A
1	S2	1584	G
1	S2	1587	G
1	S2	1588	A
1	S2	1601	A
1	S2	1606	G
1	S2	1621	U
1	S2	1623	A
1	S2	1637	A

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Mol	Chain	Res	Type
1	S2	1638	G
1	S2	1639	G7M
1	S2	1648	G
1	S2	1654	G
1	S2	1657	G
1	S2	1664	A
1	S2	1665	G
1	S2	1678	A2M
1	S2	1679	A
1	S2	1680	G
1	S2	1686	G
1	S2	1695	A
1	S2	1721	U
1	S2	1722	G
1	S2	1729	U
1	S2	1745	A
1	S2	1758	G
1	S2	1759	G
1	S2	1760	G
1	S2	1773	C
1	S2	1774	C
1	S2	1775	U
1	S2	1776	G
1	S2	1777	G
1	S2	1779	G
1	S2	1783	C
1	S2	1824	A
1	S2	1826	G
1	S2	1829	G
1	S2	1830	U
1	S2	1831	A
1	S2	1838	U
1	S2	1849	G
1	S2	1851	MA6
1	S2	1861	G
1	S2	1862	G
1	S2	1863	A
1	S2	1864	U
1	S2	1865	C
2	L8	13	G
2	L8	34	U
2	L8	35	C

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Mol	Chain	Res	Type
2	L8	38	U
2	L8	51	U
2	L8	59	A
2	L8	60	G
2	L8	61	A
2	L8	62	A
2	L8	63	U
2	L8	81	C
2	L8	85	U
2	L8	86	U
2	L8	94	G
2	L8	103	A
2	L8	104	A
2	L8	105	C
2	L8	108	A
2	L8	109	C
2	L8	110	U
2	L8	111	U
2	L8	112	G
2	L8	114	G
2	L8	123	U
2	L8	124	U
2	L8	125	C
2	L8	153	C
3	L5	2	G
3	L5	9	C
3	L5	25	A
3	L5	39	A
3	L5	48	G
3	L5	56	A
3	L5	59	A
3	L5	64	A
3	L5	65	A
3	L5	70	A
3	L5	71	C
3	L5	76	A
3	L5	85	G
3	L5	91	G
3	L5	98	A
3	L5	108	A
3	L5	109	G
3	L5	110	C

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Mol	Chain	Res	Type
3	L5	119	G
3	L5	120	A
3	L5	135	G
3	L5	136	C
3	L5	138	G
3	L5	142	G
3	L5	143	C
3	L5	144	G
3	L5	159	C
3	L5	178	C
3	L5	179	G
3	L5	181	C
3	L5	184	U
3	L5	186	G
3	L5	187	U
3	L5	188	G
3	L5	189	G
3	L5	193	G
3	L5	197	A
3	L5	200	U
3	L5	209	U
3	L5	210	C
3	L5	219	G
3	L5	233	U
3	L5	262	G
3	L5	266	C
3	L5	280	G
3	L5	297	U
3	L5	306	A
3	L5	315	G
3	L5	316	U
3	L5	340	C
3	L5	345	C
3	L5	350	C
3	L5	361	C
3	L5	362	A
3	L5	363	A
3	L5	386	A
3	L5	387	G
3	L5	409	G
3	L5	410	A
3	L5	412	G

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Mol	Chain	Res	Type
3	L5	432	U
3	L5	449	C
3	L5	450	G
3	L5	452	A
3	L5	454	U
3	L5	467	U
3	L5	468	U
3	L5	483	G
3	L5	484	U
3	L5	485	C
3	L5	489	C
3	L5	493	G
3	L5	494	U
3	L5	496	G
3	L5	498	C
3	L5	499	G
3	L5	504	G
3	L5	507	G
3	L5	509	A
3	L5	510	U
3	L5	513	U
3	L5	514	U
3	L5	644	G
3	L5	646	G
3	L5	654	C
3	L5	656	C
3	L5	659	G
3	L5	662	C
3	L5	663	G
3	L5	665	C
3	L5	666	G
3	L5	667	A
3	L5	669	C
3	L5	692	A
3	L5	696	C
3	L5	697	G
3	L5	704	C
3	L5	730	G
3	L5	731	G
3	L5	738	C
3	L5	739	G
3	L5	741	C

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Mol	Chain	Res	Type
3	L5	742	G
3	L5	759	G
3	L5	760	G
3	L5	913	U
3	L5	914	U
3	L5	915	A
3	L5	917	A
3	L5	918	G
3	L5	925	C
3	L5	926	G
3	L5	932	A
3	L5	933	G
3	L5	935	A
3	L5	942	G
3	L5	945	U
3	L5	956	A
3	L5	958	G
3	L5	959	G
3	L5	960	A
3	L5	961	G
3	L5	962	C
3	L5	963	G
3	L5	965	G
3	L5	966	A
3	L5	967	C
3	L5	968	C
3	L5	969	C
3	L5	970	G
3	L5	971	U
3	L5	982	U
3	L5	1070	G
3	L5	1072	C
3	L5	1084	C
3	L5	1170	G
3	L5	1180	C
3	L5	1183	C
3	L5	1199	G
3	L5	1200	G
3	L5	1211	G
3	L5	1214	C
3	L5	1215	C
3	L5	1241	C

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Mol	Chain	Res	Type
3	L5	1254	A
3	L5	1255	A
3	L5	1256	G
3	L5	1257	A
3	L5	1258	G
3	L5	1266	G
3	L5	1267	C
3	L5	1269	G
3	L5	1270	A
3	L5	1272	C
3	L5	1273	G
3	L5	1277	G
3	L5	1279	A
3	L5	1280	C
3	L5	1284	G
3	L5	1285	U
3	L5	1287	G
3	L5	1302	U
3	L5	1303	A
3	L5	1313	C
3	L5	1314	C
3	L5	1315	C
3	L5	1326	A2M
3	L5	1337	A
3	L5	1354	A
3	L5	1358	G
3	L5	1359	G
3	L5	1365	C
3	L5	1366	G
3	L5	1379	C
3	L5	1387	A
3	L5	1394	G
3	L5	1397	A
3	L5	1398	A
3	L5	1403	G
3	L5	1404	G
3	L5	1408	G
3	L5	1410	U
3	L5	1411	C
3	L5	1415	G
3	L5	1417	C
3	L5	1420	A

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Mol	Chain	Res	Type
3	L5	1439	C
3	L5	1440	U
3	L5	1441	C
3	L5	1443	A
3	L5	1447	C
3	L5	1449	C
3	L5	1457	G
3	L5	1481	C
3	L5	1483	C
3	L5	1497	A
3	L5	1498	G
3	L5	1502	G
3	L5	1515	A
3	L5	1534	A2M
3	L5	1547	A
3	L5	1549	G
3	L5	1566	C
3	L5	1574	G
3	L5	1578	U
3	L5	1582	PSU
3	L5	1586	G
3	L5	1591	U
3	L5	1596	U
3	L5	1614	C
3	L5	1624	G
3	L5	1625	OMG
3	L5	1631	A
3	L5	1633	G
3	L5	1634	A
3	L5	1638	A
3	L5	1640	C
3	L5	1641	G
3	L5	1654	G
3	L5	1661	C
3	L5	1670	G
3	L5	1676	C
3	L5	1677	PSU
3	L5	1681	G
3	L5	1694	C
3	L5	1697	G
3	L5	1698	C
3	L5	1699	A

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Mol	Chain	Res	Type
3	L5	1705	G
3	L5	1721	G
3	L5	1734	G
3	L5	1754	U
3	L5	1761	G
3	L5	1763	C
3	L5	1767	A
3	L5	1768	C
3	L5	1769	G
3	L5	1770	A
3	L5	1771	U
3	L5	1772	C
3	L5	1775	A
3	L5	1781	PSU
3	L5	1785	C
3	L5	1787	A
3	L5	1794	A
3	L5	1804	A
3	L5	1815	G
3	L5	1836	G
3	L5	1837	A
3	L5	1842	G
3	L5	1854	G
3	L5	1855	G
3	L5	1869	G
3	L5	1882	U
3	L5	1891	A
3	L5	1897	A
3	L5	1906	U
3	L5	1917	A
3	L5	1919	G
3	L5	1921	C
3	L5	1922	G
3	L5	1925	G
3	L5	1931	C
3	L5	1932	A
3	L5	1935	C
3	L5	1940	G
3	L5	1941	A
3	L5	1948	G
3	L5	1951	G
3	L5	1956	A

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Mol	Chain	Res	Type
3	L5	1960	A
3	L5	1961	G
3	L5	1963	C
3	L5	1967	A
3	L5	1968	G
3	L5	1969	G
3	L5	1974	U
3	L5	1978	C
3	L5	1982	G
3	L5	1984	A
3	L5	1985	G
3	L5	1987	C
3	L5	1992	U
3	L5	1993	C
3	L5	1996	C
3	L5	1997	U
3	L5	1998	A
3	L5	1999	A
3	L5	2002	A
3	L5	2003	G
3	L5	2004	U
3	L5	2023	C
3	L5	2026	A
3	L5	2034	G
3	L5	2040	A
3	L5	2044	U
3	L5	2046	G
3	L5	2048	U
3	L5	2052	G
3	L5	2055	G
3	L5	2056	G
3	L5	2069	A
3	L5	2071	A
3	L5	2084	C
3	L5	2085	G
3	L5	2090	U
3	L5	2091	C
3	L5	2092	G
3	L5	2095	A
3	L5	2096	G
3	L5	2098	G
3	L5	2099	G

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Mol	Chain	Res	Type
3	L5	2104	G
3	L5	2106	G
3	L5	2108	G
3	L5	2256	C
3	L5	2258	C
3	L5	2259	G
3	L5	2268	A
3	L5	2269	C
3	L5	2278	G
3	L5	2289	C
3	L5	2300	A
3	L5	2301	G
3	L5	2313	A
3	L5	2348	G
3	L5	2351	OMC
3	L5	2357	G
3	L5	2360	A
3	L5	2366	A
3	L5	2369	U
3	L5	2379	A
3	L5	2383	C
3	L5	2394	G
3	L5	2395	A
3	L5	2397	G
3	L5	2398	U
3	L5	2416	G
3	L5	2421	G
3	L5	2424	OMG
3	L5	2425	U
3	L5	2450	G
3	L5	2471	G
3	L5	2474	G
3	L5	2478	C
3	L5	2481	G
3	L5	2485	U
3	L5	2487	G
3	L5	2488	C
3	L5	2489	C
3	L5	2490	U
3	L5	2491	C
3	L5	2499	C
3	L5	2500	U

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Mol	Chain	Res	Type
3	L5	2503	G
3	L5	2504	C
3	L5	2505	C
3	L5	2506	G
3	L5	2513	A
3	L5	2518	G
3	L5	2519	U
3	L5	2520	C
3	L5	2529	A
3	L5	2554	U
3	L5	2573	A
3	L5	2583	C
3	L5	2587	A
3	L5	2589	C
3	L5	2601	A
3	L5	2627	C
3	L5	2632	PSU
3	L5	2647	A
3	L5	2653	C
3	L5	2661	U
3	L5	2662	G
3	L5	2669	C
3	L5	2687	U
3	L5	2694	G
3	L5	2695	A
3	L5	2696	A
3	L5	2701	U
3	L5	2707	U
3	L5	2708	U
3	L5	2710	C
3	L5	2711	G
3	L5	2721	G
3	L5	2726	G
3	L5	2743	A
3	L5	2759	G
3	L5	2760	G
3	L5	2761	U
3	L5	2763	U
3	L5	2764	A
3	L5	2769	U
3	L5	2770	C
3	L5	2787	A2M

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Mol	Chain	Res	Type
3	L5	2788	U
3	L5	2790	U
3	L5	2794	C
3	L5	2806	A
3	L5	2814	C
3	L5	2826	U
3	L5	2827	G
3	L5	2838	G
3	L5	2839	PSU
3	L5	2841	G
3	L5	2855	G
3	L5	2876	OMG
3	L5	2877	G
3	L5	2902	G
3	L5	3596	A
3	L5	3597	G
3	L5	3598	C
3	L5	3599	A
3	L5	3606	U
3	L5	3616	U
3	L5	3618	C
3	L5	3626	G
3	L5	3635	A
3	L5	3644	U
3	L5	3646	A
3	L5	3648	A
3	L5	3662	A
3	L5	3664	G
3	L5	3674	G
3	L5	3709	U
3	L5	3710	G
3	L5	3711	A
3	L5	3736	A
3	L5	3737	A
3	L5	3748	A
3	L5	3753	G
3	L5	3760	A2M
3	L5	3765	G
3	L5	3776	G
3	L5	3777	G
3	L5	3778	U
3	L5	3784	A

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Mol	Chain	Res	Type
3	L5	3785	A2M
3	L5	3787	G
3	L5	3811	G
3	L5	3814	U
3	L5	3816	A
3	L5	3817	A
3	L5	3819	G
3	L5	3822	U
3	L5	3828	A
3	L5	3838	U
3	L5	3839	G
3	L5	3840	U
3	L5	3867	A2M
3	L5	3876	A
3	L5	3877	A
3	L5	3878	C
3	L5	3879	G
3	L5	3887	OMC
3	L5	3897	G
3	L5	3898	G
3	L5	3901	A
3	L5	3905	A
3	L5	3906	A
3	L5	3907	G
3	L5	3908	A
3	L5	3915	U
3	L5	3943	A
3	L5	3947	A
3	L5	3948	C
3	L5	3951	G
3	L5	3956	G
3	L5	3957	U
3	L5	3958	G
3	L5	3959	U
3	L5	3960	A
3	L5	3962	A
3	L5	3963	A
3	L5	3964	U
3	L5	3965	A
3	L5	3967	G
3	L5	3969	G
3	L5	3973	G

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Mol	Chain	Res	Type
3	L5	3974	G
3	L5	3977	C
3	L5	4035	G
3	L5	4039	G
3	L5	4040	C
3	L5	4041	C
3	L5	4042	G
3	L5	4043	G
3	L5	4044	U
3	L5	4047	A
3	L5	4048	A
3	L5	4049	U
3	L5	4050	A
3	L5	4051	C
3	L5	4053	A
3	L5	4055	U
3	L5	4056	A
3	L5	4058	U
3	L5	4060	U
3	L5	4061	G
3	L5	4063	U
3	L5	4065	G
3	L5	4076	G
3	L5	4077	A
3	L5	4084	G
3	L5	4093	G
3	L5	4096	C
3	L5	4097	G
3	L5	4103	C
3	L5	4107	G
3	L5	4108	G
3	L5	4114	C
3	L5	4115	G
3	L5	4118	U
3	L5	4119	C
3	L5	4122	G
3	L5	4127	A
3	L5	4137	C
3	L5	4138	C
3	L5	4139	G
3	L5	4140	C
3	L5	4142	C

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Mol	Chain	Res	Type
3	L5	4145	C
3	L5	4148	C
3	L5	4150	G
3	L5	4152	G
3	L5	4162	C
3	L5	4163	U
3	L5	4170	A
3	L5	4183	G
3	L5	4184	G
3	L5	4191	G
3	L5	4225	G
3	L5	4228	OMG
3	L5	4229	U
3	L5	4233	A
3	L5	4241	C
3	L5	4251	A
3	L5	4253	A
3	L5	4254	G
3	L5	4266	G
3	L5	4268	A
3	L5	4273	A
3	L5	4280	A
3	L5	4281	A
3	L5	4291	G
3	L5	4305	G
3	L5	4314	C
3	L5	4326	G
3	L5	4329	G
3	L5	4330	G
3	L5	4332	C
3	L5	4338	G
3	L5	4339	A
3	L5	4354	U
3	L5	4371	G
3	L5	4373	G
3	L5	4374	U
3	L5	4377	G
3	L5	4378	A
3	L5	4379	A
3	L5	4380	A
3	L5	4387	C
3	L5	4391	G

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Mol	Chain	Res	Type
3	L5	4394	A
3	L5	4419	U
3	L5	4421	C
3	L5	4422	A
3	L5	4426	C
3	L5	4433	G
3	L5	4437	U
3	L5	4444	C
3	L5	4448	G
3	L5	4449	A
3	L5	4453	C
3	L5	4464	A
3	L5	4465	U
3	L5	4471	PSU
3	L5	4475	G
3	L5	4476	C
3	L5	4500	PSU
3	L5	4512	U
3	L5	4513	A
3	L5	4519	C
3	L5	4524	G
3	L5	4528	G
3	L5	4531	PSU
3	L5	4548	A
3	L5	4549	G
3	L5	4560	C
3	L5	4567	G
3	L5	4573	G
3	L5	4582	C
3	L5	4590	A2M
3	L5	4600	G
3	L5	4608	G
3	L5	4624	A
3	L5	4627	U
3	L5	4636	PSU
3	L5	4637	OMG
3	L5	4652	G
3	L5	4656	A
3	L5	4657	U
3	L5	4670	C
3	L5	4672	A
3	L5	4691	A

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Mol	Chain	Res	Type
3	L5	4693	C
3	L5	4700	A
3	L5	4708	A
3	L5	4709	U
3	L5	4719	G
3	L5	4721	G
3	L5	4731	G
3	L5	4732	G
3	L5	4733	C
3	L5	4734	A
3	L5	4739	C
3	L5	4740	G
3	L5	4741	C
3	L5	4742	G
3	L5	4744	A
3	L5	4745	G
3	L5	4754	G
3	L5	4757	C
3	L5	4759	C
3	L5	4761	G
3	L5	4764	A
3	L5	4765	G
3	L5	4773	C
3	L5	4775	C
3	L5	4776	G
3	L5	4859	C
3	L5	4860	G
3	L5	4864	U
3	L5	4870	G
3	L5	4871	C
3	L5	4873	G
3	L5	4877	G
3	L5	4882	U
3	L5	4883	C
3	L5	4889	G
3	L5	4895	C
3	L5	4896	G
3	L5	4897	G
3	L5	4900	C
3	L5	4901	G
3	L5	4903	G
3	L5	4910	G

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Mol	Chain	Res	Type
3	L5	4912	G
3	L5	4914	C
3	L5	4925	U
3	L5	4926	C
3	L5	4934	A
3	L5	4938	A
3	L5	4943	A
3	L5	4959	U
3	L5	4976	U
3	L5	4988	U
3	L5	4990	C
3	L5	4991	U
3	L5	5007	A
3	L5	5013	C
3	L5	5017	G
3	L5	5022	U
3	L5	5023	C
3	L5	5024	C
3	L5	5026	U
3	L5	5027	C
3	L5	5028	G
3	L5	5031	G
3	L5	5034	A
3	L5	5041	G
3	L5	5050	C
3	L5	5058	A
3	L5	5060	A
3	L5	5061	A
3	L5	5062	G
3	L5	5069	U
4	L7	7	G
4	L7	53	U
4	L7	64	G
4	L7	100	A
4	L7	102	U
4	L7	110	G
4	L7	120	U
83	At	8	4SU
83	At	14	A
83	At	16	H2U
83	At	17	C
83	At	18	G

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Mol	Chain	Res	Type
83	At	19	G
83	At	21	A
83	At	46	7MG
83	At	47	U
83	At	48	C
83	At	49	C
83	At	52	G
83	At	58	A
83	At	59	U
83	At	74	C
84	Pt	2	G
84	Pt	4	G
84	Pt	7	G
84	Pt	8	4SU
84	Pt	9	G
84	Pt	13	C
84	Pt	16	C
84	Pt	17	C
84	Pt	18	C
84	Pt	20	G
84	Pt	21	H2U
84	Pt	24	C
84	Pt	47	G7M
84	Pt	48	U
84	Pt	51	U
84	Pt	62	C
84	Pt	64	G
84	Pt	68	C
84	Pt	75	C
84	Pt	76	C
84	Pt	77	A

All (32) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	S2	203	G
1	S2	329	G
1	S2	554	A
1	S2	867	OMG
1	S2	869	A
1	S2	918	PSU
1	S2	1081	PSU

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Mol	Chain	Res	Type
1	S2	1419	C
1	S2	1436	C
1	S2	1776	G
1	S2	1825	A
3	L5	385	A
3	L5	408	A
3	L5	409	G
3	L5	934	C
3	L5	1407	C
3	L5	1590	C
3	L5	1633	G
3	L5	2652	G
3	L5	2876	OMG
3	L5	3876	A
3	L5	4048	A
3	L5	4076	G
3	L5	4141	G
3	L5	4378	A
3	L5	4475	G
3	L5	4699	U
3	L5	4733	C
3	L5	4872	G
3	L5	4925	U
3	L5	5027	C
3	L5	5060	A

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

240 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	$\# Z > 2$
2	OMG	L8	75	2	23,26,27	1.17	3 (13%)	32,38,41	2.02	7 (21%)
3	OMG	L5	3627	3	23,26,27	1.18	3 (13%)	32,38,41	2.08	6 (18%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
3	PSU	L5	3768	3	18,21,22	1.50	3 (16%)	21,30,33	2.24	6 (28%)
1	PSU	S2	866	1	18,21,22	1.37	2 (11%)	21,30,33	2.08	4 (19%)
3	PSU	L5	4521	3,87	18,21,22	1.46	3 (16%)	21,30,33	2.09	5 (23%)
1	A2M	S2	668	1,87	22,25,26	1.47	4 (18%)	30,36,39	2.03	9 (30%)
3	OMC	L5	3869	3	19,22,23	0.81	0	25,31,34	0.84	0
3	PSU	L5	4420	3	18,21,22	1.41	4 (22%)	21,30,33	1.96	5 (23%)
1	A2M	S2	484	1	22,25,26	1.47	4 (18%)	30,36,39	2.11	9 (30%)
3	OMC	L5	3701	86,3	19,22,23	0.77	0	25,31,34	0.75	0
1	PSU	S2	966	1	18,21,22	1.37	2 (11%)	21,30,33	2.11	4 (19%)
3	PSU	L5	2508	3	18,21,22	1.44	3 (16%)	21,30,33	2.12	4 (19%)
3	PSU	L5	4689	3	18,21,22	1.43	4 (22%)	21,30,33	2.09	3 (14%)
1	OMG	S2	1490	1,87	23,26,27	1.20	3 (13%)	32,38,41	1.99	6 (18%)
3	OMG	L5	4618	3	23,26,27	1.26	4 (17%)	32,38,41	2.14	8 (25%)
3	A2M	L5	3724	3	22,25,26	1.48	4 (18%)	30,36,39	2.05	8 (26%)
2	PSU	L8	55	2	18,21,22	1.42	3 (16%)	21,30,33	2.06	4 (19%)
3	A2M	L5	1524	3	22,25,26	1.54	4 (18%)	30,36,39	1.92	9 (30%)
1	PSU	S2	814	1	18,21,22	1.39	3 (16%)	21,30,33	2.04	4 (19%)
1	PSU	S2	1081	1	18,21,22	1.49	5 (27%)	21,30,33	2.23	5 (23%)
1	PSU	S2	109	1	18,21,22	1.55	5 (27%)	21,30,33	2.29	4 (19%)
1	PSU	S2	1004	1	18,21,22	1.47	3 (16%)	21,30,33	2.22	5 (23%)
1	A2M	S2	1031	1	22,25,26	1.47	5 (22%)	30,36,39	2.09	9 (30%)
3	PSU	L5	4576	3	18,21,22	1.42	3 (16%)	21,30,33	2.02	3 (14%)
3	PSU	L5	4500	83,3	18,21,22	1.39	2 (11%)	21,30,33	2.10	4 (19%)
1	PSU	S2	1445	1	18,21,22	1.33	2 (11%)	21,30,33	2.04	4 (19%)
1	OMU	S2	121	1	19,22,23	1.25	3 (15%)	25,31,34	1.76	4 (16%)
3	OMG	L5	3744	3	23,26,27	1.19	3 (13%)	32,38,41	2.01	6 (18%)
3	A2M	L5	4571	3	22,25,26	1.50	4 (18%)	30,36,39	2.04	7 (23%)
3	PSU	L5	4312	3	18,21,22	1.40	4 (22%)	21,30,33	2.12	4 (19%)
3	PSU	L5	4579	3	18,21,22	1.39	3 (16%)	21,30,33	2.13	4 (19%)
3	OMU	L5	4498	3	19,22,23	1.23	3 (15%)	25,31,34	1.88	5 (20%)
3	OMG	L5	4637	3	23,26,27	1.24	3 (13%)	32,38,41	2.17	8 (25%)
3	OMG	L5	2364	3	23,26,27	1.18	4 (17%)	32,38,41	1.97	6 (18%)
3	PSU	L5	1792	3	18,21,22	1.43	3 (16%)	21,30,33	2.04	4 (19%)
84	OMC	Pt	33	84	19,22,23	0.82	0	25,31,34	1.05	2 (8%)
1	PSU	S2	1692	1	18,21,22	1.54	5 (27%)	21,30,33	2.23	4 (19%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
83	4SU	At	8	83	18,21,22	1.88	4 (22%)	25,30,33	2.31	5 (20%)
3	A2M	L5	1871	3	22,25,26	1.47	5 (22%)	30,36,39	2.19	9 (30%)
1	OMC	S2	462	1	19,22,23	0.78	0	25,31,34	0.83	0
3	PSU	L5	3851	3	18,21,22	1.42	4 (22%)	21,30,33	2.05	5 (23%)
3	UR3	L5	4530	3	19,22,23	0.94	1 (5%)	26,32,35	1.74	3 (11%)
1	PSU	S2	918	1	18,21,22	1.39	2 (11%)	21,30,33	2.34	5 (23%)
3	OMG	L5	4494	3	23,26,27	1.22	3 (13%)	32,38,41	2.01	6 (18%)
1	OMC	S2	174	1	19,22,23	0.78	0	25,31,34	0.79	0
3	A2M	L5	398	3	22,25,26	1.48	5 (22%)	30,36,39	2.10	8 (26%)
1	PSU	S2	119	1	18,21,22	1.34	2 (11%)	21,30,33	1.90	4 (19%)
84	PSU	Pt	56	84	18,21,22	1.36	2 (11%)	21,30,33	2.02	3 (14%)
1	A2M	S2	590	1	22,25,26	1.50	4 (18%)	30,36,39	2.07	8 (26%)
83	H2U	At	16	83	18,21,22	1.02	2 (11%)	19,30,33	0.98	2 (10%)
1	OMG	S2	683	1	23,26,27	1.19	3 (13%)	32,38,41	1.98	5 (15%)
64	SAC	Lr	2	64	7,8,9	3.81	2 (28%)	7,9,11	4.15	3 (42%)
1	PSU	S2	1244	1	18,21,22	1.37	3 (16%)	21,30,33	2.08	4 (19%)
3	PSU	L5	2839	3	18,21,22	1.32	2 (11%)	21,30,33	2.13	3 (14%)
3	PSU	L5	3764	3	18,21,22	1.49	4 (22%)	21,30,33	2.34	5 (23%)
3	OMG	L5	4370	3	23,26,27	1.22	3 (13%)	32,38,41	1.96	5 (15%)
3	OMU	L5	4306	3	19,22,23	1.29	3 (15%)	25,31,34	1.80	5 (20%)
1	OMU	S2	172	1	19,22,23	1.37	4 (21%)	25,31,34	1.98	6 (24%)
2	PSU	L8	69	2	18,21,22	1.42	3 (16%)	21,30,33	2.11	4 (19%)
3	A2M	L5	4590	3	22,25,26	1.47	4 (18%)	30,36,39	2.12	9 (30%)
3	6MZ	L5	4220	3	22,25,26	1.45	4 (18%)	29,36,39	2.15	10 (34%)
83	H2U	At	20	83	18,21,22	0.96	2 (11%)	19,30,33	1.02	1 (5%)
1	OMU	S2	1804	1	19,22,23	1.29	3 (15%)	25,31,34	1.78	4 (16%)
3	OMG	L5	4196	3,84	23,26,27	1.26	4 (17%)	32,38,41	2.01	8 (25%)
3	A2M	L5	400	3	22,25,26	1.49	4 (18%)	30,36,39	2.03	9 (30%)
1	A2M	S2	159	1	22,25,26	1.51	4 (18%)	30,36,39	2.09	7 (23%)
3	PSU	L5	4403	3	18,21,22	1.47	4 (22%)	21,30,33	2.15	4 (19%)
3	PSU	L5	5010	3	18,21,22	1.39	2 (11%)	21,30,33	2.07	3 (14%)
1	A2M	S2	166	1	22,25,26	1.47	5 (22%)	30,36,39	2.22	10 (33%)
3	PSU	L5	1744	86,3	18,21,22	1.41	3 (16%)	21,30,33	2.08	4 (19%)
3	OMC	L5	2824	3	19,22,23	0.76	0	25,31,34	0.79	0
1	A2M	S2	512	1	22,25,26	1.49	4 (18%)	30,36,39	2.22	10 (33%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
3	PSU	L5	3770	3	18,21,22	1.35	2 (11%)	21,30,33	2.01	4 (19%)
3	OMG	L5	4228	3	23,26,27	1.18	4 (17%)	32,38,41	1.91	6 (18%)
3	OMC	L5	3808	3	19,22,23	0.80	0	25,31,34	0.91	1 (4%)
1	PSU	S2	34	1	18,21,22	1.36	2 (11%)	21,30,33	2.10	4 (19%)
1	A2M	S2	468	1	22,25,26	1.48	4 (18%)	30,36,39	2.05	9 (30%)
3	A2M	L5	3723	3	22,25,26	1.51	4 (18%)	30,36,39	2.03	7 (23%)
3	OMC	L5	2422	3,87	19,22,23	0.80	0	25,31,34	0.86	1 (4%)
1	OMU	S2	428	1	19,22,23	1.22	3 (15%)	25,31,34	1.86	5 (20%)
3	OMU	L5	3925	3	19,22,23	1.24	3 (15%)	25,31,34	1.93	5 (20%)
40	HIC	LB	245	40	10,11,12	1.43	1 (10%)	9,14,16	1.39	2 (22%)
3	PSU	L5	4442	3	18,21,22	1.51	4 (22%)	21,30,33	2.34	5 (23%)
1	PSU	S2	649	1	18,21,22	1.40	3 (16%)	21,30,33	2.08	3 (14%)
39	V5N	LA	216	39	8,11,12	1.54	1 (12%)	8,14,16	1.93	2 (25%)
3	A2M	L5	3825	3	22,25,26	1.45	4 (18%)	30,36,39	2.08	8 (26%)
3	OMC	L5	4456	3	19,22,23	0.80	0	25,31,34	0.84	1 (4%)
1	OMU	S2	1288	1	19,22,23	1.21	3 (15%)	25,31,34	1.76	4 (16%)
1	PSU	S2	1232	1	18,21,22	1.37	2 (11%)	21,30,33	2.12	4 (19%)
3	A2M	L5	2787	3	22,25,26	1.45	4 (18%)	30,36,39	2.10	9 (30%)
3	PSU	L5	1860	3	18,21,22	1.45	4 (22%)	21,30,33	2.10	3 (14%)
84	H2U	Pt	21	84	18,21,22	0.97	2 (11%)	19,30,33	1.05	1 (5%)
3	PSU	L5	2632	3	18,21,22	1.42	4 (22%)	21,30,33	1.94	3 (14%)
3	PSU	L5	1782	3	18,21,22	1.41	3 (16%)	21,30,33	2.08	3 (14%)
3	OMC	L5	3841	3	19,22,23	0.80	0	25,31,34	0.84	1 (4%)
3	OMC	L5	1340	3	19,22,23	0.86	1 (5%)	25,31,34	0.81	0
3	PSU	L5	4628	3	18,21,22	1.43	3 (16%)	21,30,33	2.08	3 (14%)
1	A2M	S2	27	1	22,25,26	1.48	4 (18%)	30,36,39	2.10	10 (33%)
1	PSU	S2	93	1	18,21,22	1.38	2 (11%)	21,30,33	2.04	3 (14%)
3	PSU	L5	1677	3	18,21,22	1.53	4 (22%)	21,30,33	2.12	4 (19%)
3	PSU	L5	4493	3	18,21,22	1.42	3 (16%)	21,30,33	1.98	4 (19%)
3	A2M	L5	4523	3,87	22,25,26	1.45	5 (22%)	30,36,39	2.38	10 (33%)
1	OMU	S2	354	1	19,22,23	1.29	3 (15%)	25,31,34	1.89	5 (20%)
79	MLZ	Lo	53	79	8,9,10	0.80	0	4,9,11	0.62	0
1	G7M	S2	1639	1,84	23,26,27	2.40	5 (21%)	34,39,42	3.10	11 (32%)
3	PSU	L5	4423	3,87	18,21,22	1.40	3 (16%)	21,30,33	2.09	4 (19%)
3	PSU	L5	4299	3	18,21,22	1.46	3 (16%)	21,30,33	2.08	5 (23%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
1	PSU	S2	1238	1	18,21,22	1.36	2 (11%)	21,30,33	2.02	4 (19%)
1	PSU	S2	1177	1	18,21,22	1.42	3 (16%)	21,30,33	2.07	3 (14%)
1	MA6	S2	1850	1	23,26,27	1.50	5 (21%)	33,38,41	2.02	9 (27%)
3	PSU	L5	1781	3	18,21,22	1.46	3 (16%)	21,30,33	2.03	3 (14%)
3	OMG	L5	3899	3	23,26,27	1.22	4 (17%)	32,38,41	2.06	7 (21%)
3	A2M	L5	1534	3,87	22,25,26	1.51	5 (22%)	30,36,39	2.15	10 (33%)
1	PSU	S2	1243	1	18,21,22	1.39	2 (11%)	21,30,33	2.03	3 (14%)
1	6MZ	S2	1832	1,87	22,25,26	1.48	5 (22%)	29,36,39	2.06	9 (31%)
3	PSU	L5	3639	3	18,21,22	1.48	4 (22%)	21,30,33	2.10	5 (23%)
1	OMG	S2	867	1	23,26,27	1.22	3 (13%)	32,38,41	2.12	7 (21%)
3	OMG	L5	3792	3	23,26,27	1.20	3 (13%)	32,38,41	1.96	6 (18%)
1	OMG	S2	1328	1	23,26,27	1.20	3 (13%)	32,38,41	2.00	6 (18%)
1	PSU	S2	1174	1,87	18,21,22	1.39	4 (22%)	21,30,33	2.02	3 (14%)
3	A2M	L5	3785	3,87	22,25,26	1.46	5 (22%)	30,36,39	2.46	12 (40%)
3	A2M	L5	3867	3	22,25,26	1.51	4 (18%)	30,36,39	2.01	7 (23%)
1	A2M	S2	99	1,87	22,25,26	1.49	4 (18%)	30,36,39	2.17	10 (33%)
3	A2M	L5	2363	3,87	22,25,26	1.46	3 (13%)	30,36,39	2.03	7 (23%)
1	OMG	S2	509	1,87	23,26,27	1.19	3 (13%)	32,38,41	1.97	6 (18%)
1	OMG	S2	1447	1	23,26,27	1.19	3 (13%)	32,38,41	1.98	6 (18%)
3	OMG	L5	1316	3	23,26,27	1.25	4 (17%)	32,38,41	1.93	6 (18%)
3	OMG	L5	1522	3	23,26,27	1.23	4 (17%)	32,38,41	2.04	7 (21%)
3	PSU	L5	4353	3	18,21,22	1.42	3 (16%)	21,30,33	2.09	5 (23%)
3	UY1	L5	3818	3,87	19,22,23	1.43	4 (21%)	21,31,34	2.12	4 (19%)
3	OMU	L5	4620	3	19,22,23	1.33	3 (15%)	25,31,34	1.90	5 (20%)
83	7MG	At	46	83	23,26,27	1.34	3 (13%)	27,39,42	2.79	9 (33%)
1	PSU	S2	1367	1	18,21,22	1.37	2 (11%)	21,30,33	2.07	3 (14%)
3	PSU	L5	4293	3	18,21,22	1.45	4 (22%)	21,30,33	2.00	3 (14%)
1	OMG	S2	436	1	23,26,27	1.19	3 (13%)	32,38,41	1.98	6 (18%)
1	PSU	S2	822	1	18,21,22	1.35	2 (11%)	21,30,33	2.23	5 (23%)
3	OMC	L5	1881	3,87	19,22,23	0.78	0	25,31,34	0.78	0
1	PSU	S2	686	1	18,21,22	1.41	2 (11%)	21,30,33	2.03	3 (14%)
3	A2M	L5	2815	3,87	22,25,26	1.47	4 (18%)	30,36,39	2.06	8 (26%)
1	PSU	S2	218	1	18,21,22	1.35	3 (16%)	21,30,33	2.00	4 (19%)
3	PSU	L5	4552	3	18,21,22	1.44	4 (22%)	21,30,33	2.16	4 (19%)
3	PSU	L5	4296	3	18,21,22	1.40	3 (16%)	21,30,33	2.11	4 (19%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
3	PSU	L5	3853	3,87	18,21,22	1.43	4 (22%)	21,30,33	2.12	4 (19%)
3	PSU	L5	1862	3	18,21,22	1.44	4 (22%)	21,30,33	2.23	4 (19%)
81	5CT	5A	50	81	13,14,15	0.69	1 (7%)	8,15,17	2.25	3 (37%)
1	PSU	S2	296	1	18,21,22	1.36	2 (11%)	21,30,33	2.03	4 (19%)
3	OMG	L5	3944	3	23,26,27	1.17	2 (8%)	32,38,41	2.00	6 (18%)
1	PSU	S2	105	1	18,21,22	1.36	3 (16%)	21,30,33	2.06	4 (19%)
3	PSU	L5	3884	3	18,21,22	1.46	4 (22%)	21,30,33	2.11	3 (14%)
3	OMC	L5	2365	3	19,22,23	0.79	0	25,31,34	0.77	0
3	PSU	L5	4457	3	18,21,22	1.43	3 (16%)	21,30,33	2.09	6 (28%)
1	PSU	S2	863	1	18,21,22	1.41	2 (11%)	21,30,33	2.04	3 (14%)
3	PSU	L5	3758	3	18,21,22	1.57	5 (27%)	21,30,33	2.16	4 (19%)
1	OMU	S2	627	1	19,22,23	1.22	3 (15%)	25,31,34	1.79	5 (20%)
1	UY1	S2	1326	1,87	19,22,23	1.33	3 (15%)	21,31,34	2.08	4 (19%)
6	SAC	SA	2	6	7,8,9	3.81	2 (28%)	7,9,11	4.26	4 (57%)
3	PSU	L5	1779	3	18,21,22	1.39	2 (11%)	21,30,33	2.07	4 (19%)
1	OMC	S2	1391	1	19,22,23	0.80	0	25,31,34	0.84	1 (4%)
1	PSU	S2	1136	1	18,21,22	1.36	2 (11%)	21,30,33	2.05	3 (14%)
3	PSU	L5	3734	3	18,21,22	1.35	2 (11%)	21,30,33	2.07	4 (19%)
1	PSU	S2	1625	1	18,21,22	1.36	2 (11%)	21,30,33	2.01	3 (14%)
3	PSU	L5	4361	3	18,21,22	1.43	3 (16%)	21,30,33	2.08	4 (19%)
1	OMG	S2	601	1	23,26,27	1.19	3 (13%)	32,38,41	2.00	6 (18%)
1	PSU	S2	651	1	18,21,22	1.40	2 (11%)	21,30,33	2.12	4 (19%)
3	OMC	L5	2861	3	19,22,23	0.77	0	25,31,34	0.71	0
3	PSU	L5	4471	3	18,21,22	1.38	3 (16%)	21,30,33	2.01	4 (19%)
1	PSU	S2	1347	1	18,21,22	1.36	3 (16%)	21,30,33	2.01	4 (19%)
3	PSU	L5	3637	3	18,21,22	1.47	3 (16%)	21,30,33	2.08	5 (23%)
3	5MC	L5	3782	3,87	19,22,23	1.45	3 (15%)	26,32,35	1.16	3 (11%)
1	OMC	S2	517	1	19,22,23	0.79	0	25,31,34	0.84	0
3	PSU	L5	3695	3	18,21,22	1.42	3 (16%)	21,30,33	2.08	4 (19%)
3	5MC	L5	4447	86,3	19,22,23	1.62	3 (15%)	26,32,35	1.35	4 (15%)
3	PSU	L5	4532	3	18,21,22	1.51	3 (16%)	21,30,33	2.07	4 (19%)
3	PSU	L5	1582	3	18,21,22	1.48	3 (16%)	21,30,33	2.22	6 (28%)
3	PSU	L5	4673	3	18,21,22	1.57	4 (22%)	21,30,33	2.18	5 (23%)
3	PSU	L5	1536	3	18,21,22	1.50	3 (16%)	21,30,33	2.00	4 (19%)
1	PSU	S2	572	1	18,21,22	1.43	3 (16%)	21,30,33	2.18	5 (23%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
3	OMG	L5	2424	3	23,26,27	1.23	3 (13%)	32,38,41	1.91	6 (18%)
3	OMG	L5	2876	3	23,26,27	1.21	3 (13%)	32,38,41	2.12	7 (21%)
1	PSU	S2	609	1	18,21,22	1.38	2 (11%)	21,30,33	2.05	3 (14%)
3	OMG	L5	4392	3	23,26,27	1.21	4 (17%)	32,38,41	1.91	5 (15%)
3	OMG	L5	4499	83,3	23,26,27	1.18	3 (13%)	32,38,41	2.00	6 (18%)
3	OMG	L5	4623	3	23,26,27	1.22	4 (17%)	32,38,41	1.98	6 (18%)
77	M3L	Lm	98	77	10,11,12	0.48	0	9,14,16	0.11	0
1	A2M	S2	1678	1	22,25,26	1.45	4 (18%)	30,36,39	2.15	7 (23%)
3	OMU	L5	4227	3	19,22,23	1.28	3 (15%)	25,31,34	1.82	5 (20%)
83	PSU	At	32	83	18,21,22	1.36	2 (11%)	21,30,33	1.98	3 (14%)
3	OMC	L5	2804	3	19,22,23	0.78	0	25,31,34	0.87	0
1	A2M	S2	576	1	22,25,26	1.49	5 (22%)	30,36,39	2.12	9 (30%)
3	PSU	L5	1683	3	18,21,22	1.52	4 (22%)	21,30,33	1.99	4 (19%)
1	PSU	S2	1239	1	18,21,22	1.39	2 (11%)	21,30,33	2.04	3 (14%)
1	OMU	S2	1442	1,87	19,22,23	1.23	3 (15%)	25,31,34	1.81	4 (16%)
3	A2M	L5	3830	3	22,25,26	1.43	3 (13%)	30,36,39	2.20	9 (30%)
3	PSU	L5	5001	3	18,21,22	1.41	3 (16%)	21,30,33	2.11	4 (19%)
3	1MA	L5	1322	3,87	21,25,26	1.36	3 (14%)	30,37,40	1.73	5 (16%)
1	OMU	S2	116	1	19,22,23	1.25	3 (15%)	25,31,34	1.78	6 (24%)
1	PSU	S2	801	1	18,21,22	1.37	3 (16%)	21,30,33	2.08	4 (19%)
3	PSU	L5	4569	3	18,21,22	1.44	3 (16%)	21,30,33	2.11	3 (14%)
66	MLZ	Lb	5	66	8,9,10	0.81	0	4,9,11	0.71	0
1	4AC	S2	1842	1	21,24,25	1.00	1 (4%)	28,34,37	1.13	4 (14%)
3	A2M	L5	3718	3	22,25,26	1.50	4 (18%)	30,36,39	2.00	8 (26%)
1	PSU	S2	681	1	18,21,22	1.44	3 (16%)	21,30,33	2.12	4 (19%)
1	PSU	S2	1056	1	18,21,22	1.35	2 (11%)	21,30,33	2.06	4 (19%)
3	PSU	L5	3715	3	18,21,22	1.39	3 (16%)	21,30,33	2.03	4 (19%)
1	4AC	S2	1337	1	21,24,25	1.18	2 (9%)	28,34,37	1.15	3 (10%)
1	OMG	S2	644	1	23,26,27	1.20	3 (13%)	32,38,41	2.03	6 (18%)
3	A2M	L5	2401	3	22,25,26	1.47	5 (22%)	30,36,39	2.21	10 (33%)
83	PSU	At	39	83	18,21,22	1.36	3 (16%)	21,30,33	2.08	4 (19%)
2	OMU	L8	14	2,3	19,22,23	1.29	3 (15%)	25,31,34	1.81	4 (16%)
3	OMC	L5	2351	3	19,22,23	0.82	0	25,31,34	0.76	0
50	V5N	La	39	50	8,11,12	1.34	1 (12%)	8,14,16	1.88	2 (25%)
3	PSU	L5	4431	3	18,21,22	1.35	2 (11%)	21,30,33	2.10	4 (19%)
1	OMC	S2	1703	1	19,22,23	0.79	0	25,31,34	0.70	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
3	PSU	L5	4636	3	18,21,22	1.51	4 (22%)	21,30,33	2.38	6 (28%)
3	PSU	L5	3729	3	18,21,22	1.37	2 (11%)	21,30,33	2.04	4 (19%)
3	OMG	L5	1625	3,87	23,26,27	1.23	3 (13%)	32,38,41	2.06	6 (18%)
29	AME	SV	1	29	9,10,11	3.41	2 (22%)	9,11,13	3.78	3 (33%)
3	A2M	L5	3760	3,87	22,25,26	1.51	5 (22%)	30,36,39	2.09	10 (33%)
3	PSU	L5	4972	3	18,21,22	1.36	3 (16%)	21,30,33	1.98	5 (23%)
3	OMC	L5	4536	3	19,22,23	0.83	0	25,31,34	0.81	1 (4%)
1	PSU	S2	406	1	18,21,22	1.37	3 (16%)	21,30,33	2.04	3 (14%)
1	PSU	S2	1643	1,87	18,21,22	1.36	2 (11%)	21,30,33	2.02	4 (19%)
3	A2M	L5	1326	3	22,25,26	1.51	5 (22%)	30,36,39	2.08	8 (26%)
3	PSU	L5	3762	3	18,21,22	1.38	2 (11%)	21,30,33	2.07	3 (14%)
1	PSU	S2	573	1	18,21,22	1.38	2 (11%)	21,30,33	2.03	4 (19%)
3	PSU	L5	2843	3	18,21,22	1.44	3 (16%)	21,30,33	2.14	4 (19%)
20	HY3	SX	62	20	7,8,9	1.45	1 (14%)	7,10,12	1.34	0
3	PSU	L5	3844	3	18,21,22	1.47	3 (16%)	21,30,33	2.02	4 (19%)
1	PSU	S2	815	1	18,21,22	1.38	3 (16%)	21,30,33	2.07	4 (19%)
3	OMU	L5	2415	3	19,22,23	1.33	4 (21%)	25,31,34	1.91	5 (20%)
3	PSU	L5	3920	3,87	18,21,22	1.43	3 (16%)	21,30,33	2.16	4 (19%)
1	PSU	S2	36	1	18,21,22	1.38	3 (16%)	21,30,33	2.01	3 (14%)
84	4SU	Pt	8	84	18,21,22	1.82	4 (22%)	25,30,33	2.26	5 (20%)
1	A2M	S2	1383	1	22,25,26	1.49	4 (18%)	30,36,39	2.22	9 (30%)
3	OMU	L5	2837	3	19,22,23	1.29	2 (10%)	25,31,34	1.89	4 (16%)
84	G7M	Pt	47	84	23,26,27	1.88	3 (13%)	34,39,42	1.11	1 (2%)
1	MA6	S2	1851	1	23,26,27	1.47	5 (21%)	33,38,41	2.02	9 (27%)
1	B8N	S2	1248	1	25,29,30	0.99	2 (8%)	28,42,45	1.72	5 (17%)
3	OMC	L5	3887	3	19,22,23	0.75	0	25,31,34	0.83	0
3	PSU	L5	4531	3	18,21,22	1.47	2 (11%)	21,30,33	2.27	5 (23%)

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
2	OMG	L8	75	2	-	0/9/27/28	0/3/3/3
3	OMG	L5	3627	3	-	0/9/27/28	0/3/3/3
3	PSU	L5	3768	3	-	0/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
1	PSU	S2	866	1	-	0/7/25/26	0/2/2/2
3	PSU	L5	4521	3,87	-	0/7/25/26	0/2/2/2
1	A2M	S2	668	1,87	-	4/9/27/28	0/3/3/3
3	OMC	L5	3869	3	-	0/9/27/28	0/2/2/2
3	PSU	L5	4420	3	-	4/7/25/26	0/2/2/2
1	A2M	S2	484	1	-	0/9/27/28	0/3/3/3
3	OMC	L5	3701	86,3	-	4/9/27/28	0/2/2/2
1	PSU	S2	966	1	-	0/7/25/26	0/2/2/2
3	PSU	L5	2508	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	4689	3	-	0/7/25/26	0/2/2/2
1	OMG	S2	1490	1,87	-	1/9/27/28	0/3/3/3
3	OMG	L5	4618	3	-	1/9/27/28	0/3/3/3
3	A2M	L5	3724	3	-	1/9/27/28	0/3/3/3
2	PSU	L8	55	2	-	0/7/25/26	0/2/2/2
3	A2M	L5	1524	3	-	1/9/27/28	0/3/3/3
1	PSU	S2	814	1	-	0/7/25/26	0/2/2/2
1	PSU	S2	1081	1	-	1/7/25/26	0/2/2/2
1	PSU	S2	109	1	-	0/7/25/26	0/2/2/2
1	PSU	S2	1004	1	-	0/7/25/26	0/2/2/2
1	A2M	S2	1031	1	-	0/9/27/28	0/3/3/3
3	PSU	L5	4576	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	4500	83,3	-	1/7/25/26	0/2/2/2
1	PSU	S2	1445	1	-	0/7/25/26	0/2/2/2
1	OMU	S2	121	1	-	1/9/27/28	0/2/2/2
3	OMG	L5	3744	3	-	1/9/27/28	0/3/3/3
3	A2M	L5	4571	3	-	1/9/27/28	0/3/3/3
3	PSU	L5	4312	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	4579	3	-	0/7/25/26	0/2/2/2
3	OMU	L5	4498	3	-	0/9/27/28	0/2/2/2
3	OMG	L5	4637	3	-	2/9/27/28	0/3/3/3
3	OMG	L5	2364	3	-	3/9/27/28	0/3/3/3
3	PSU	L5	1792	3	-	0/7/25/26	0/2/2/2
84	OMC	Pt	33	84	-	2/9/27/28	0/2/2/2
1	PSU	S2	1692	1	-	0/7/25/26	0/2/2/2
83	4SU	At	8	83	-	0/7/25/26	0/2/2/2
3	A2M	L5	1871	3	-	0/9/27/28	0/3/3/3
1	OMC	S2	462	1	-	1/9/27/28	0/2/2/2
3	PSU	L5	3851	3	-	0/7/25/26	0/2/2/2
3	UR3	L5	4530	3	-	0/7/25/26	0/2/2/2
1	PSU	S2	918	1	-	2/7/25/26	0/2/2/2
3	OMG	L5	4494	3	-	0/9/27/28	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
1	OMC	S2	174	1	-	0/9/27/28	0/2/2/2
3	A2M	L5	398	3	-	1/9/27/28	0/3/3/3
1	PSU	S2	119	1	-	0/7/25/26	0/2/2/2
84	PSU	Pt	56	84	-	0/7/25/26	0/2/2/2
1	A2M	S2	590	1	-	1/9/27/28	0/3/3/3
83	H2U	At	16	83	-	1/7/38/39	0/2/2/2
1	OMG	S2	683	1	-	2/9/27/28	0/3/3/3
64	SAC	Lr	2	64	-	1/7/8/10	-
1	PSU	S2	1244	1	-	0/7/25/26	0/2/2/2
3	PSU	L5	2839	3	-	2/7/25/26	0/2/2/2
3	PSU	L5	3764	3	-	0/7/25/26	0/2/2/2
3	OMG	L5	4370	3	-	0/9/27/28	0/3/3/3
3	OMU	L5	4306	3	-	0/9/27/28	0/2/2/2
1	OMU	S2	172	1	-	0/9/27/28	0/2/2/2
2	PSU	L8	69	2	-	0/7/25/26	0/2/2/2
3	A2M	L5	4590	3	-	1/9/27/28	0/3/3/3
3	6MZ	L5	4220	3	-	0/9/27/28	0/3/3/3
83	H2U	At	20	83	-	0/7/38/39	0/2/2/2
1	OMU	S2	1804	1	-	1/9/27/28	0/2/2/2
3	OMG	L5	4196	3,84	-	1/9/27/28	0/3/3/3
3	A2M	L5	400	3	-	1/9/27/28	0/3/3/3
1	A2M	S2	159	1	-	3/9/27/28	0/3/3/3
3	PSU	L5	4403	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	5010	3	-	0/7/25/26	0/2/2/2
1	A2M	S2	166	1	-	1/9/27/28	0/3/3/3
3	PSU	L5	1744	86,3	-	0/7/25/26	0/2/2/2
3	OMC	L5	2824	3	-	0/9/27/28	0/2/2/2
1	A2M	S2	512	1	-	1/9/27/28	0/3/3/3
3	PSU	L5	3770	3	-	0/7/25/26	0/2/2/2
3	OMG	L5	4228	3	-	2/9/27/28	0/3/3/3
3	OMC	L5	3808	3	-	0/9/27/28	0/2/2/2
1	PSU	S2	34	1	-	0/7/25/26	0/2/2/2
1	A2M	S2	468	1	-	1/9/27/28	0/3/3/3
3	A2M	L5	3723	3	-	1/9/27/28	0/3/3/3
3	OMC	L5	2422	3,87	-	3/9/27/28	0/2/2/2
1	OMU	S2	428	1	-	6/9/27/28	0/2/2/2
3	OMU	L5	3925	3	-	0/9/27/28	0/2/2/2
40	HIC	LB	245	40	-	3/5/6/8	0/1/1/1
3	PSU	L5	4442	3	-	0/7/25/26	0/2/2/2
1	PSU	S2	649	1	-	0/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
39	V5N	LA	216	39	-	2/9/10/12	0/1/1/1
3	A2M	L5	3825	3	-	0/9/27/28	0/3/3/3
3	OMC	L5	4456	3	-	0/9/27/28	0/2/2/2
1	OMU	S2	1288	1	-	1/9/27/28	0/2/2/2
1	PSU	S2	1232	1	-	0/7/25/26	0/2/2/2
3	A2M	L5	2787	3	-	3/9/27/28	0/3/3/3
3	PSU	L5	1860	3	-	0/7/25/26	0/2/2/2
84	H2U	Pt	21	84	-	6/7/38/39	0/2/2/2
3	PSU	L5	2632	3	-	4/7/25/26	0/2/2/2
3	PSU	L5	1782	3	-	0/7/25/26	0/2/2/2
3	OMC	L5	3841	3	-	0/9/27/28	0/2/2/2
3	OMC	L5	1340	3	-	1/9/27/28	0/2/2/2
3	PSU	L5	4628	3	-	0/7/25/26	0/2/2/2
1	A2M	S2	27	1	-	1/9/27/28	0/3/3/3
1	PSU	S2	93	1	-	0/7/25/26	0/2/2/2
3	PSU	L5	1677	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	4493	3	-	0/7/25/26	0/2/2/2
3	A2M	L5	4523	3,87	-	1/9/27/28	0/3/3/3
1	OMU	S2	354	1	-	2/9/27/28	0/2/2/2
79	MLZ	Lo	53	79	-	1/7/8/10	-
1	G7M	S2	1639	1,84	-	2/7/25/26	0/3/3/3
3	PSU	L5	4423	3,87	-	0/7/25/26	0/2/2/2
3	PSU	L5	4299	3	-	0/7/25/26	0/2/2/2
1	PSU	S2	1238	1	-	0/7/25/26	0/2/2/2
1	PSU	S2	1177	1	-	0/7/25/26	0/2/2/2
1	MA6	S2	1850	1	-	0/11/29/30	0/3/3/3
3	PSU	L5	1781	3	-	2/7/25/26	0/2/2/2
3	OMG	L5	3899	3	-	0/9/27/28	0/3/3/3
3	A2M	L5	1534	3,87	-	2/9/27/28	0/3/3/3
1	PSU	S2	1243	1	-	2/7/25/26	0/2/2/2
1	6MZ	S2	1832	1,87	-	2/9/27/28	0/3/3/3
3	PSU	L5	3639	3	-	0/7/25/26	0/2/2/2
1	OMG	S2	867	1	-	3/9/27/28	0/3/3/3
3	OMG	L5	3792	3	-	0/9/27/28	0/3/3/3
1	OMG	S2	1328	1	-	0/9/27/28	0/3/3/3
1	PSU	S2	1174	1,87	-	0/7/25/26	0/2/2/2
3	A2M	L5	3785	3,87	-	3/9/27/28	0/3/3/3
3	A2M	L5	3867	3	-	3/9/27/28	0/3/3/3
1	A2M	S2	99	1,87	-	0/9/27/28	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	A2M	L5	2363	3,87	-	0/9/27/28	0/3/3/3
1	OMG	S2	509	1,87	-	0/9/27/28	0/3/3/3
1	OMG	S2	1447	1	-	2/9/27/28	0/3/3/3
3	OMG	L5	1316	3	-	0/9/27/28	0/3/3/3
3	OMG	L5	1522	3	-	0/9/27/28	0/3/3/3
3	PSU	L5	4353	3	-	0/7/25/26	0/2/2/2
3	UY1	L5	3818	3,87	-	2/9/27/28	0/2/2/2
3	OMU	L5	4620	3	-	1/9/27/28	0/2/2/2
83	7MG	At	46	83	-	3/7/37/38	0/3/3/3
1	PSU	S2	1367	1	-	0/7/25/26	0/2/2/2
3	PSU	L5	4293	3	-	0/7/25/26	0/2/2/2
1	OMG	S2	436	1	-	0/9/27/28	0/3/3/3
1	PSU	S2	822	1	-	0/7/25/26	0/2/2/2
3	OMC	L5	1881	3,87	-	0/9/27/28	0/2/2/2
1	PSU	S2	686	1	-	0/7/25/26	0/2/2/2
3	A2M	L5	2815	3,87	-	1/9/27/28	0/3/3/3
1	PSU	S2	218	1	-	3/7/25/26	0/2/2/2
3	PSU	L5	4552	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	4296	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	3853	3,87	-	0/7/25/26	0/2/2/2
3	PSU	L5	1862	3	-	0/7/25/26	0/2/2/2
81	5CT	5A	50	81	-	8/13/14/16	-
1	PSU	S2	296	1	-	0/7/25/26	0/2/2/2
3	OMG	L5	3944	3	-	0/9/27/28	0/3/3/3
1	PSU	S2	105	1	-	0/7/25/26	0/2/2/2
3	PSU	L5	3884	3	-	0/7/25/26	0/2/2/2
3	OMC	L5	2365	3	-	0/9/27/28	0/2/2/2
3	PSU	L5	4457	3	-	0/7/25/26	0/2/2/2
1	PSU	S2	863	1	-	2/7/25/26	0/2/2/2
3	PSU	L5	3758	3	-	0/7/25/26	0/2/2/2
1	OMU	S2	627	1	-	1/9/27/28	0/2/2/2
1	UY1	S2	1326	1,87	-	1/9/27/28	0/2/2/2
6	SAC	SA	2	6	-	5/7/8/10	-
3	PSU	L5	1779	3	-	0/7/25/26	0/2/2/2
1	OMC	S2	1391	1	-	1/9/27/28	0/2/2/2
1	PSU	S2	1136	1	-	0/7/25/26	0/2/2/2
3	PSU	L5	3734	3	-	0/7/25/26	0/2/2/2
1	PSU	S2	1625	1	-	0/7/25/26	0/2/2/2
3	PSU	L5	4361	3	-	0/7/25/26	0/2/2/2
1	OMG	S2	601	1	-	0/9/27/28	0/3/3/3
1	PSU	S2	651	1	-	0/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	OMC	L5	2861	3	-	0/9/27/28	0/2/2/2
3	PSU	L5	4471	3	-	2/7/25/26	0/2/2/2
1	PSU	S2	1347	1	-	0/7/25/26	0/2/2/2
3	PSU	L5	3637	3	-	0/7/25/26	0/2/2/2
3	5MC	L5	3782	3,87	-	2/7/25/26	0/2/2/2
1	OMC	S2	517	1	-	0/9/27/28	0/2/2/2
3	PSU	L5	3695	3	-	0/7/25/26	0/2/2/2
3	5MC	L5	4447	86,3	-	4/7/25/26	0/2/2/2
3	PSU	L5	4532	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	1582	3	-	2/7/25/26	0/2/2/2
3	PSU	L5	4673	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	1536	3	-	0/7/25/26	0/2/2/2
1	PSU	S2	572	1	-	0/7/25/26	0/2/2/2
3	OMG	L5	2424	3	-	3/9/27/28	0/3/3/3
3	OMG	L5	2876	3	-	0/9/27/28	0/3/3/3
1	PSU	S2	609	1	-	0/7/25/26	0/2/2/2
3	OMG	L5	4392	3	-	0/9/27/28	0/3/3/3
3	OMG	L5	4499	83,3	-	0/9/27/28	0/3/3/3
3	OMG	L5	4623	3	-	0/9/27/28	0/3/3/3
77	M3L	Lm	98	77	-	4/9/10/12	-
1	A2M	S2	1678	1	-	3/9/27/28	0/3/3/3
3	OMU	L5	4227	3	-	1/9/27/28	0/2/2/2
83	PSU	At	32	83	-	0/7/25/26	0/2/2/2
3	OMC	L5	2804	3	-	0/9/27/28	0/2/2/2
1	A2M	S2	576	1	-	2/9/27/28	0/3/3/3
3	PSU	L5	1683	3	-	0/7/25/26	0/2/2/2
1	PSU	S2	1239	1	-	0/7/25/26	0/2/2/2
1	OMU	S2	1442	1,87	-	1/9/27/28	0/2/2/2
3	A2M	L5	3830	3	-	1/9/27/28	0/3/3/3
3	PSU	L5	5001	3	-	0/7/25/26	0/2/2/2
3	1MA	L5	1322	3,87	-	2/7/25/26	0/3/3/3
1	OMU	S2	116	1	-	1/9/27/28	0/2/2/2
1	PSU	S2	801	1	-	0/7/25/26	0/2/2/2
3	PSU	L5	4569	3	-	0/7/25/26	0/2/2/2
66	MLZ	Lb	5	66	-	3/7/8/10	-
1	4AC	S2	1842	1	-	2/11/29/30	0/2/2/2
3	A2M	L5	3718	3	-	0/9/27/28	0/3/3/3
1	PSU	S2	681	1	-	0/7/25/26	0/2/2/2
1	PSU	S2	1056	1	-	0/7/25/26	0/2/2/2
3	PSU	L5	3715	3	-	0/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
1	4AC	S2	1337	1	-	2/11/29/30	0/2/2/2
1	OMG	S2	644	1	-	4/9/27/28	0/3/3/3
3	A2M	L5	2401	3	-	0/9/27/28	0/3/3/3
83	PSU	At	39	83	-	0/7/25/26	0/2/2/2
2	OMU	L8	14	2,3	-	1/9/27/28	0/2/2/2
3	OMC	L5	2351	3	-	0/9/27/28	0/2/2/2
50	V5N	La	39	50	-	0/9/10/12	0/1/1/1
3	PSU	L5	4431	3	-	0/7/25/26	0/2/2/2
1	OMC	S2	1703	1	-	0/9/27/28	0/2/2/2
3	PSU	L5	4636	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	3729	3	-	2/7/25/26	0/2/2/2
3	OMG	L5	1625	3,87	-	1/9/27/28	0/3/3/3
29	AME	SV	1	29	-	2/9/10/12	-
3	A2M	L5	3760	3,87	-	0/9/27/28	0/3/3/3
3	PSU	L5	4972	3	-	0/7/25/26	0/2/2/2
3	OMC	L5	4536	3	-	0/9/27/28	0/2/2/2
1	PSU	S2	406	1	-	0/7/25/26	0/2/2/2
1	PSU	S2	1643	1,87	-	0/7/25/26	0/2/2/2
3	A2M	L5	1326	3	-	3/9/27/28	0/3/3/3
3	PSU	L5	3762	3	-	0/7/25/26	0/2/2/2
1	PSU	S2	573	1	-	0/7/25/26	0/2/2/2
3	PSU	L5	2843	3	-	0/7/25/26	0/2/2/2
20	HY3	SX	62	20	-	1/1/12/14	0/1/1/1
3	PSU	L5	3844	3	-	1/7/25/26	0/2/2/2
1	PSU	S2	815	1	-	0/7/25/26	0/2/2/2
3	OMU	L5	2415	3	-	1/9/27/28	0/2/2/2
3	PSU	L5	3920	3,87	-	0/7/25/26	0/2/2/2
1	PSU	S2	36	1	-	0/7/25/26	0/2/2/2
84	4SU	Pt	8	84	-	0/7/25/26	0/2/2/2
1	A2M	S2	1383	1	-	1/9/27/28	0/3/3/3
3	OMU	L5	2837	3	-	0/9/27/28	0/2/2/2
84	G7M	Pt	47	84	-	2/7/25/26	0/3/3/3
1	MA6	S2	1851	1	-	2/11/29/30	0/3/3/3
1	B8N	S2	1248	1	-	4/16/34/35	0/2/2/2
3	OMC	L5	3887	3	-	2/9/27/28	0/2/2/2
3	PSU	L5	4531	3	-	2/7/25/26	0/2/2/2

All (684) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
29	SV	1	AME	OT-CT1	9.11	1.43	1.23
6	SA	2	SAC	OAC-C1A	9.02	1.43	1.23
64	Lr	2	SAC	OAC-C1A	8.99	1.43	1.23
84	Pt	47	G7M	C8-N7	7.41	1.45	1.33
1	S2	1639	G7M	C8-N7	7.36	1.45	1.33
3	L5	4447	5MC	C5-C4	5.65	1.48	1.44
1	S2	1639	G7M	C5-N7	-5.51	1.32	1.39
83	At	8	4SU	C4-S4	-5.21	1.59	1.68
3	L5	3782	5MC	C5-C4	5.00	1.47	1.44
84	Pt	8	4SU	C4-S4	-4.92	1.60	1.68
1	S2	1851	MA6	C5-C4	4.71	1.47	1.39
1	S2	159	A2M	C5-C4	4.68	1.47	1.39
1	S2	590	A2M	C5-C4	4.68	1.47	1.39
3	L5	3723	A2M	C5-C4	4.68	1.47	1.39
1	S2	1850	MA6	C5-C4	4.64	1.47	1.39
1	S2	512	A2M	C5-C4	4.61	1.47	1.39
1	S2	576	A2M	C5-C4	4.59	1.47	1.39
1	S2	1832	6MZ	C5-C4	4.57	1.47	1.39
1	S2	1383	A2M	C5-C4	4.56	1.47	1.39
1	S2	468	A2M	C5-C4	4.55	1.47	1.39
3	L5	3724	A2M	C5-C4	4.55	1.47	1.39
3	L5	3867	A2M	C5-C4	4.52	1.47	1.39
3	L5	4220	6MZ	C5-C4	4.51	1.47	1.39
3	L5	4571	A2M	C5-C4	4.51	1.47	1.39
1	S2	484	A2M	C5-C4	4.50	1.47	1.39
3	L5	4590	A2M	C5-C4	4.50	1.47	1.39
1	S2	27	A2M	C5-C4	4.46	1.47	1.39
3	L5	400	A2M	C5-C4	4.45	1.47	1.39
3	L5	1524	A2M	C5-C4	4.45	1.47	1.39
1	S2	99	A2M	C5-C4	4.45	1.47	1.39
3	L5	3718	A2M	C5-C4	4.43	1.47	1.39
3	L5	2401	A2M	C5-C4	4.42	1.47	1.39
1	S2	1678	A2M	C5-C4	4.42	1.47	1.39
3	L5	2815	A2M	C5-C4	4.40	1.46	1.39
3	L5	1326	A2M	C5-C4	4.38	1.46	1.39
3	L5	3760	A2M	C5-C4	4.36	1.46	1.39
1	S2	668	A2M	C5-C4	4.35	1.46	1.39
1	S2	1031	A2M	C5-C4	4.35	1.46	1.39
3	L5	3830	A2M	C5-C4	4.35	1.46	1.39
1	S2	166	A2M	C5-C4	4.33	1.46	1.39
3	L5	2363	A2M	C5-C4	4.33	1.46	1.39
3	L5	1871	A2M	C5-C4	4.30	1.46	1.39
3	L5	398	A2M	C5-C4	4.26	1.46	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	L5	1534	A2M	C5-C4	4.26	1.46	1.39
3	L5	3825	A2M	C5-C4	4.24	1.46	1.39
3	L5	2787	A2M	C5-C4	4.22	1.46	1.39
6	SA	2	SAC	C1A-N	4.12	1.47	1.34
3	L5	4523	A2M	C5-C4	4.10	1.46	1.39
29	SV	1	AME	CT1-N	4.09	1.47	1.34
64	Lr	2	SAC	C1A-N	4.08	1.47	1.34
1	S2	1639	G7M	C8-N9	4.00	1.46	1.35
84	Pt	47	G7M	C8-N9	4.00	1.46	1.35
3	L5	3785	A2M	C5-C4	3.99	1.46	1.39
3	L5	4532	PSU	C6-C5	3.94	1.39	1.35
3	L5	4531	PSU	C6-C5	3.71	1.39	1.35
1	S2	863	PSU	C6-C5	3.64	1.39	1.35
1	S2	1639	G7M	C5-C4	3.57	1.47	1.38
20	SX	62	HY3	C3-CA	-3.51	1.51	1.55
1	S2	866	PSU	C6-C5	3.46	1.39	1.35
39	LA	216	V5N	CG-ND1	-3.43	1.34	1.37
1	S2	686	PSU	C6-C5	3.43	1.39	1.35
3	L5	5010	PSU	C6-C5	3.43	1.39	1.35
83	At	8	4SU	C4-N3	-3.42	1.34	1.37
1	S2	609	PSU	C6-C5	3.42	1.39	1.35
3	L5	3844	PSU	C6-C5	3.40	1.39	1.35
84	Pt	56	PSU	C6-C5	3.39	1.39	1.35
1	S2	1337	4AC	C4-N4	-3.39	1.34	1.39
3	L5	1779	PSU	C6-C5	3.37	1.39	1.35
84	Pt	8	4SU	C4-N3	-3.34	1.34	1.37
1	S2	801	PSU	C6-C5	3.32	1.39	1.35
3	L5	3637	PSU	C4-N3	-3.32	1.32	1.38
3	L5	4576	PSU	C6-C5	3.32	1.39	1.35
1	S2	573	PSU	C6-C5	3.31	1.39	1.35
1	S2	1243	PSU	C6-C5	3.31	1.39	1.35
1	S2	1239	PSU	C6-C5	3.31	1.39	1.35
3	L5	3920	PSU	C6-C5	3.31	1.39	1.35
3	L5	4293	PSU	C6-C5	3.29	1.38	1.35
3	L5	3715	PSU	C6-C5	3.29	1.38	1.35
3	L5	4361	PSU	C6-C5	3.29	1.38	1.35
3	L5	3758	PSU	C4-N3	-3.29	1.32	1.38
3	L5	4636	PSU	C4-N3	-3.28	1.32	1.38
3	L5	4628	PSU	C6-C5	3.28	1.38	1.35
1	S2	822	PSU	C6-C5	3.27	1.38	1.35
1	S2	1081	PSU	C4-N3	-3.26	1.32	1.38
3	L5	1582	PSU	C4-N3	-3.25	1.32	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	S2	966	PSU	C6-C5	3.25	1.38	1.35
1	S2	1232	PSU	C6-C5	3.25	1.38	1.35
3	L5	3764	PSU	C4-N3	-3.25	1.32	1.38
3	L5	4673	PSU	C4-N3	-3.24	1.32	1.38
83	At	32	PSU	C6-C5	3.24	1.38	1.35
3	L5	4569	PSU	C6-C5	3.23	1.38	1.35
3	L5	4442	PSU	C4-N3	-3.23	1.32	1.38
1	S2	815	PSU	C6-C5	3.22	1.38	1.35
3	L5	3884	PSU	C6-C5	3.22	1.38	1.35
3	L5	1536	PSU	C4-N3	-3.22	1.32	1.38
1	S2	34	PSU	C6-C5	3.22	1.38	1.35
1	S2	649	PSU	C6-C5	3.22	1.38	1.35
3	L5	4423	PSU	C6-C5	3.22	1.38	1.35
1	S2	814	PSU	C6-C5	3.22	1.38	1.35
1	S2	1238	PSU	C6-C5	3.21	1.38	1.35
3	L5	4521	PSU	C4-N3	-3.20	1.32	1.38
1	S2	1177	PSU	C6-C5	3.20	1.38	1.35
3	L5	1792	PSU	C6-C5	3.20	1.38	1.35
3	L5	1744	PSU	C6-C5	3.20	1.38	1.35
3	L5	3762	PSU	C6-C5	3.20	1.38	1.35
2	L8	55	PSU	C6-C5	3.19	1.38	1.35
3	L5	1781	PSU	C6-C5	3.19	1.38	1.35
1	S2	1692	PSU	C4-N3	-3.18	1.32	1.38
3	L5	1782	PSU	C6-C5	3.18	1.38	1.35
3	L5	3639	PSU	C4-N3	-3.18	1.32	1.38
3	L5	4579	PSU	C6-C5	3.18	1.38	1.35
3	L5	1677	PSU	O4'-C1'	-3.17	1.39	1.43
1	S2	218	PSU	C6-C5	3.17	1.38	1.35
3	L5	3770	PSU	C6-C5	3.17	1.38	1.35
1	S2	918	PSU	C6-C5	3.16	1.38	1.35
1	S2	1367	PSU	C6-C5	3.16	1.38	1.35
1	S2	109	PSU	C4-N3	-3.16	1.32	1.38
3	L5	2843	PSU	C4-N3	-3.16	1.32	1.38
1	S2	651	PSU	C6-C5	3.16	1.38	1.35
1	S2	296	PSU	C6-C5	3.15	1.38	1.35
1	S2	1625	PSU	C6-C5	3.15	1.38	1.35
83	At	46	7MG	C5-C4	3.15	1.47	1.37
3	L5	3818	UY1	C4-N3	-3.15	1.33	1.38
3	L5	3729	PSU	C6-C5	3.14	1.38	1.35
1	S2	119	PSU	C6-C5	3.13	1.38	1.35
3	L5	4494	OMG	C5-C4	3.13	1.47	1.38
3	L5	4457	PSU	C4-N3	-3.13	1.33	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	L5	3768	PSU	C4-N3	-3.13	1.33	1.38
3	L5	3639	PSU	C6-C5	3.12	1.38	1.35
3	L5	4689	PSU	C6-C5	3.12	1.38	1.35
3	L5	2837	OMU	C4-N3	-3.12	1.33	1.38
3	L5	1683	PSU	C6-C5	3.11	1.38	1.35
3	L5	2876	OMG	C5-C4	3.11	1.47	1.38
1	S2	1244	PSU	C6-C5	3.10	1.38	1.35
1	S2	36	PSU	C6-C5	3.10	1.38	1.35
1	S2	1056	PSU	C6-C5	3.10	1.38	1.35
3	L5	1862	PSU	C6-C5	3.10	1.38	1.35
3	L5	4353	PSU	C6-C5	3.10	1.38	1.35
3	L5	3734	PSU	C6-C5	3.10	1.38	1.35
3	L5	3944	OMG	C5-C4	3.09	1.47	1.38
1	S2	1004	PSU	C4-N3	-3.09	1.33	1.38
3	L5	4620	OMU	C4-N3	-3.09	1.33	1.38
1	S2	1328	OMG	C5-C4	3.09	1.47	1.38
3	L5	4493	PSU	C6-C5	3.09	1.38	1.35
3	L5	1683	PSU	C4-N3	-3.09	1.33	1.38
3	L5	3768	PSU	C6-C5	3.08	1.38	1.35
1	S2	1326	UY1	C6-C5	3.08	1.38	1.35
1	S2	406	PSU	C6-C5	3.08	1.38	1.35
3	L5	4521	PSU	C6-C5	3.08	1.38	1.35
3	L5	1792	PSU	C4-N3	-3.07	1.33	1.38
1	S2	1447	OMG	C5-C4	3.07	1.47	1.38
3	L5	4972	PSU	C6-C5	3.07	1.38	1.35
1	S2	1347	PSU	C6-C5	3.07	1.38	1.35
3	L5	3920	PSU	C4-N3	-3.07	1.33	1.38
1	S2	601	OMG	C5-C4	3.07	1.47	1.38
3	L5	4299	PSU	C6-C5	3.06	1.38	1.35
83	At	39	PSU	C6-C5	3.06	1.38	1.35
1	S2	93	PSU	C6-C5	3.06	1.38	1.35
3	L5	3695	PSU	C6-C5	3.06	1.38	1.35
1	S2	572	PSU	C6-C5	3.05	1.38	1.35
1	S2	644	OMG	C5-C4	3.05	1.47	1.38
3	L5	1860	PSU	C4-N3	-3.05	1.33	1.38
3	L5	3853	PSU	C4-N3	-3.04	1.33	1.38
1	S2	867	OMG	C5-C4	3.04	1.47	1.38
3	L5	5001	PSU	C6-C5	3.04	1.38	1.35
3	L5	1536	PSU	C6-C5	3.04	1.38	1.35
83	At	46	7MG	C4-N9	-3.03	1.34	1.37
50	La	39	V5N	CG-ND1	-3.03	1.34	1.37
1	S2	1174	PSU	C6-C5	3.02	1.38	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	S2	509	OMG	C5-C4	3.02	1.47	1.38
1	S2	1804	OMU	C4-N3	-3.02	1.33	1.38
3	L5	4312	PSU	C6-C5	3.02	1.38	1.35
1	S2	681	PSU	C4-N3	-3.01	1.33	1.38
1	S2	1490	OMG	C5-C4	3.01	1.47	1.38
3	L5	3792	OMG	C5-C4	3.01	1.47	1.38
3	L5	4296	PSU	C6-C5	3.01	1.38	1.35
3	L5	4228	OMG	C5-C4	3.01	1.47	1.38
1	S2	1136	PSU	C6-C5	3.01	1.38	1.35
3	L5	4296	PSU	C4-N3	-3.00	1.33	1.38
2	L8	69	PSU	C6-C5	3.00	1.38	1.35
3	L5	4420	PSU	C6-C5	3.00	1.38	1.35
3	L5	3637	PSU	C6-C5	3.00	1.38	1.35
3	L5	2508	PSU	C6-C5	2.99	1.38	1.35
1	S2	1643	PSU	C6-C5	2.99	1.38	1.35
3	L5	4403	PSU	C4-N3	-2.98	1.33	1.38
3	L5	3695	PSU	C4-N3	-2.98	1.33	1.38
3	L5	2508	PSU	C4-N3	-2.98	1.33	1.38
3	L5	3844	PSU	C4-N3	-2.98	1.33	1.38
3	L5	1860	PSU	C6-C5	2.97	1.38	1.35
3	L5	3884	PSU	C4-N3	-2.97	1.33	1.38
3	L5	4500	PSU	C6-C5	2.97	1.38	1.35
3	L5	2424	OMG	C5-C4	2.97	1.46	1.38
3	L5	4299	PSU	C4-N3	-2.97	1.33	1.38
3	L5	1625	OMG	C5-C4	2.97	1.46	1.38
1	S2	683	OMG	C5-C4	2.96	1.46	1.38
3	L5	1316	OMG	C6-N1	-2.96	1.33	1.38
3	L5	4531	PSU	C4-N3	-2.96	1.33	1.38
3	L5	1322	1MA	C5-C4	2.96	1.46	1.38
3	L5	3744	OMG	C5-C4	2.96	1.46	1.38
3	L5	4552	PSU	C6-C5	2.96	1.38	1.35
2	L8	55	PSU	C4-N3	-2.95	1.33	1.38
1	S2	1445	PSU	C6-C5	2.95	1.38	1.35
3	L5	3851	PSU	C4-N3	-2.95	1.33	1.38
1	S2	172	OMU	C4-N3	-2.95	1.33	1.38
3	L5	4532	PSU	C4-N3	-2.95	1.33	1.38
3	L5	1862	PSU	C4-N3	-2.95	1.33	1.38
3	L5	3899	OMG	C6-N1	-2.95	1.33	1.38
3	L5	4493	PSU	C4-N3	-2.94	1.33	1.38
1	S2	436	OMG	C5-C4	2.94	1.46	1.38
3	L5	4579	PSU	C4-N3	-2.94	1.33	1.38
3	L5	4361	PSU	C4-N3	-2.94	1.33	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	L5	2632	PSU	C6-C5	2.94	1.38	1.35
3	L5	4293	PSU	C4-N3	-2.93	1.33	1.38
3	L5	4447	5MC	C6-C5	2.93	1.39	1.34
1	S2	572	PSU	C4-N3	-2.92	1.33	1.38
3	L5	4569	PSU	C4-N3	-2.92	1.33	1.38
3	L5	2415	OMU	C4-N3	-2.92	1.33	1.38
3	L5	1744	PSU	C4-N3	-2.92	1.33	1.38
2	L8	14	OMU	C4-N3	-2.92	1.33	1.38
3	L5	1677	PSU	C4-N3	-2.91	1.33	1.38
3	L5	4637	OMG	C6-N1	-2.91	1.33	1.38
3	L5	1524	A2M	C5-N7	-2.91	1.33	1.39
1	S2	1850	MA6	C5-C6	2.91	1.48	1.41
3	L5	4370	OMG	C5-C4	2.91	1.46	1.38
3	L5	2839	PSU	C4-N3	-2.91	1.33	1.38
3	L5	4552	PSU	C4-N3	-2.90	1.33	1.38
3	L5	3925	OMU	C4-N3	-2.90	1.33	1.38
2	L8	69	PSU	C4-N3	-2.90	1.33	1.38
3	L5	1625	OMG	C6-N1	-2.90	1.33	1.38
3	L5	4499	OMG	C5-C4	2.89	1.46	1.38
1	S2	681	PSU	C6-C5	2.89	1.38	1.35
3	L5	4471	PSU	C4-N3	-2.89	1.33	1.38
3	L5	4306	OMU	C4-N3	-2.88	1.33	1.38
1	S2	814	PSU	C4-N3	-2.88	1.33	1.38
3	L5	2632	PSU	C4-N3	-2.88	1.33	1.38
3	L5	4628	PSU	C4-N3	-2.88	1.33	1.38
3	L5	1782	PSU	C4-N3	-2.88	1.33	1.38
3	L5	1316	OMG	C5-C4	2.88	1.46	1.38
3	L5	3851	PSU	C6-C5	2.87	1.38	1.35
3	L5	2424	OMG	C6-N1	-2.87	1.33	1.38
3	L5	4498	OMU	C4-N3	-2.87	1.33	1.38
3	L5	1322	1MA	C6-N6	2.87	1.34	1.28
3	L5	1781	PSU	C4-N3	-2.87	1.33	1.38
3	L5	4353	PSU	C4-N3	-2.86	1.33	1.38
3	L5	1326	A2M	C5-N7	-2.86	1.33	1.39
1	S2	1851	MA6	C5-C6	2.86	1.48	1.41
3	L5	4471	PSU	C6-C5	2.86	1.38	1.35
3	L5	4457	PSU	C6-C5	2.86	1.38	1.35
3	L5	4623	OMG	C6-N1	-2.86	1.33	1.38
1	S2	1177	PSU	C4-N3	-2.85	1.33	1.38
3	L5	4370	OMG	C6-N1	-2.85	1.33	1.38
3	L5	4689	PSU	C4-N3	-2.85	1.33	1.38
1	S2	105	PSU	C6-C5	2.85	1.38	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	L5	4392	OMG	C5-C4	2.85	1.46	1.38
3	L5	2843	PSU	C6-C5	2.85	1.38	1.35
3	L5	4227	OMU	C4-N3	-2.85	1.33	1.38
3	L5	3627	OMG	C5-C4	2.84	1.46	1.38
3	L5	1582	PSU	C6-C5	2.84	1.38	1.35
1	S2	116	OMU	C4-N3	-2.84	1.33	1.38
3	L5	1677	PSU	C6-C5	2.84	1.38	1.35
3	L5	5001	PSU	C4-N3	-2.83	1.33	1.38
1	S2	121	OMU	C4-N3	-2.83	1.33	1.38
1	S2	918	PSU	C4-N3	-2.83	1.33	1.38
3	L5	4403	PSU	C6-C5	2.83	1.38	1.35
2	L8	75	OMG	C5-C4	2.83	1.46	1.38
3	L5	4196	OMG	C6-N1	-2.83	1.33	1.38
3	L5	4494	OMG	C6-N1	-2.83	1.33	1.38
1	S2	1347	PSU	C4-N3	-2.83	1.33	1.38
3	L5	1522	OMG	C6-N1	-2.83	1.33	1.38
1	S2	1326	UY1	C4-N3	-2.83	1.33	1.38
1	S2	354	OMU	C4-N3	-2.82	1.33	1.38
3	L5	2364	OMG	C5-C4	2.82	1.46	1.38
40	LB	245	HIC	CD2-CG	2.82	1.41	1.36
3	L5	4576	PSU	C4-N3	-2.82	1.33	1.38
1	S2	651	PSU	C4-N3	-2.81	1.33	1.38
3	L5	4423	PSU	C4-N3	-2.81	1.33	1.38
3	L5	1322	1MA	C5-N7	-2.81	1.33	1.39
3	L5	4972	PSU	C4-N3	-2.81	1.33	1.38
3	L5	4431	PSU	C4-N3	-2.81	1.33	1.38
1	S2	649	PSU	C4-N3	-2.80	1.33	1.38
3	L5	4623	OMG	C5-C4	2.80	1.46	1.38
3	L5	3758	PSU	C6-C5	2.80	1.38	1.35
3	L5	4637	OMG	C5-C4	2.79	1.46	1.38
84	Pt	8	4SU	C5-C4	-2.79	1.39	1.42
1	S2	109	PSU	C6-C5	2.79	1.38	1.35
3	L5	4618	OMG	C6-N1	-2.78	1.33	1.38
1	S2	815	PSU	C4-N3	-2.77	1.33	1.38
3	L5	4312	PSU	C4-N3	-2.77	1.33	1.38
83	At	8	4SU	C5-C4	-2.77	1.39	1.42
3	L5	1326	A2M	C5-C6	2.76	1.48	1.41
3	L5	3715	PSU	C4-N3	-2.76	1.33	1.38
3	L5	1779	PSU	C4-N3	-2.76	1.33	1.38
1	S2	105	PSU	C4-N3	-2.76	1.33	1.38
1	S2	573	PSU	C4-N3	-2.76	1.33	1.38
3	L5	3867	A2M	C5-N7	-2.76	1.34	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
83	At	39	PSU	C4-N3	-2.75	1.33	1.38
3	L5	1522	OMG	C5-C4	2.75	1.46	1.38
3	L5	4431	PSU	C6-C5	2.74	1.38	1.35
1	S2	428	OMU	C4-N3	-2.74	1.33	1.38
3	L5	3744	OMG	C6-N1	-2.74	1.33	1.38
1	S2	1232	PSU	C4-N3	-2.74	1.33	1.38
1	S2	1239	PSU	C4-N3	-2.74	1.33	1.38
1	S2	966	PSU	C4-N3	-2.73	1.33	1.38
1	S2	1248	B8N	C6-C5	2.73	1.39	1.35
3	L5	4523	A2M	C5-N7	-2.73	1.34	1.39
1	S2	406	PSU	C4-N3	-2.73	1.33	1.38
3	L5	3734	PSU	C4-N3	-2.73	1.33	1.38
1	S2	296	PSU	C4-N3	-2.73	1.33	1.38
3	L5	1534	A2M	C5-C6	2.73	1.48	1.41
2	L8	14	OMU	C2-N3	-2.73	1.33	1.38
1	S2	34	PSU	C4-N3	-2.72	1.33	1.38
3	L5	2787	A2M	C5-N7	-2.72	1.34	1.39
1	S2	27	A2M	C5-C6	2.72	1.48	1.41
3	L5	4636	PSU	C6-C5	2.72	1.38	1.35
1	S2	686	PSU	C4-N3	-2.72	1.33	1.38
1	S2	1238	PSU	C4-N3	-2.72	1.33	1.38
1	S2	1056	PSU	C4-N3	-2.71	1.33	1.38
1	S2	1244	PSU	C4-N3	-2.71	1.33	1.38
3	L5	5010	PSU	C4-N3	-2.70	1.33	1.38
3	L5	3825	A2M	C5-N7	-2.70	1.34	1.39
3	L5	2364	OMG	C6-N1	-2.70	1.33	1.38
3	L5	4392	OMG	C6-N1	-2.70	1.33	1.38
3	L5	3782	5MC	C6-C5	2.70	1.39	1.34
1	S2	1004	PSU	C6-C5	2.69	1.38	1.35
1	S2	1174	PSU	C4-N3	-2.69	1.33	1.38
3	L5	2815	A2M	C5-C6	2.69	1.48	1.41
1	S2	1243	PSU	C4-N3	-2.68	1.33	1.38
1	S2	627	OMU	C4-N3	-2.68	1.34	1.38
1	S2	1442	OMU	C4-N3	-2.68	1.34	1.38
3	L5	3627	OMG	C6-N1	-2.68	1.33	1.38
1	S2	1136	PSU	C4-N3	-2.68	1.33	1.38
3	L5	4590	A2M	C5-C6	2.68	1.48	1.41
1	S2	822	PSU	C4-N3	-2.68	1.33	1.38
1	S2	668	A2M	C5-C6	2.68	1.48	1.41
3	L5	3792	OMG	C6-N1	-2.67	1.33	1.38
1	S2	1842	4AC	C4-N4	-2.67	1.35	1.39
1	S2	468	A2M	C5-C6	2.67	1.48	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	L5	3770	PSU	C4-N3	-2.67	1.33	1.38
3	L5	4500	PSU	C4-N3	-2.67	1.33	1.38
1	S2	36	PSU	C4-N3	-2.67	1.33	1.38
1	S2	590	A2M	C5-C6	2.66	1.48	1.41
1	S2	801	PSU	C4-N3	-2.66	1.33	1.38
3	L5	4196	OMG	C5-C4	2.66	1.46	1.38
3	L5	3729	PSU	C4-N3	-2.66	1.33	1.38
3	L5	1683	PSU	C2-N3	-2.66	1.33	1.37
1	S2	863	PSU	C4-N3	-2.66	1.33	1.38
84	Pt	56	PSU	C4-N3	-2.66	1.33	1.38
1	S2	159	A2M	C5-C6	2.65	1.48	1.41
3	L5	4220	6MZ	C5-C6	2.65	1.48	1.41
3	L5	3718	A2M	C5-N7	-2.65	1.34	1.39
1	S2	1367	PSU	C4-N3	-2.65	1.33	1.38
1	S2	93	PSU	C4-N3	-2.64	1.33	1.38
3	L5	3818	UY1	C6-C5	2.64	1.38	1.35
1	S2	1643	PSU	C4-N3	-2.64	1.33	1.38
1	S2	1625	PSU	C4-N3	-2.64	1.33	1.38
3	L5	3785	A2M	C5-N7	-2.63	1.34	1.39
83	At	32	PSU	C4-N3	-2.63	1.33	1.38
3	L5	4306	OMU	C2-N3	-2.63	1.33	1.38
3	L5	4620	OMU	C2-N3	-2.63	1.33	1.38
3	L5	4299	PSU	C2-N3	-2.63	1.33	1.37
1	S2	866	PSU	C4-N3	-2.63	1.33	1.38
1	S2	1692	PSU	C6-C5	2.63	1.38	1.35
3	L5	2363	A2M	C5-N7	-2.63	1.34	1.39
3	L5	3762	PSU	C4-N3	-2.62	1.33	1.38
1	S2	1383	A2M	C5-C6	2.62	1.48	1.41
3	L5	3723	A2M	C5-C6	2.62	1.48	1.41
1	S2	159	A2M	C5-N7	-2.62	1.34	1.39
1	S2	99	A2M	C5-C6	2.62	1.48	1.41
3	L5	398	A2M	C5-N7	-2.62	1.34	1.39
1	S2	512	A2M	C5-C6	2.62	1.48	1.41
1	S2	1031	A2M	C5-C6	2.61	1.48	1.41
1	S2	436	OMG	C6-N1	-2.60	1.34	1.38
3	L5	4571	A2M	C5-C6	2.60	1.48	1.41
3	L5	4618	OMG	C5-C4	2.60	1.45	1.38
1	S2	218	PSU	C4-N3	-2.60	1.34	1.38
1	S2	1328	OMG	C6-N1	-2.60	1.34	1.38
1	S2	576	A2M	C5-C6	2.60	1.48	1.41
3	L5	3760	A2M	C5-C6	2.59	1.48	1.41
1	S2	609	PSU	C4-N3	-2.59	1.34	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	L5	4499	OMG	C6-N1	-2.59	1.34	1.38
1	S2	119	PSU	C4-N3	-2.59	1.34	1.38
3	L5	2401	A2M	C5-N7	-2.59	1.34	1.39
3	L5	1871	A2M	C5-C6	2.58	1.48	1.41
3	L5	3899	OMG	C5-C4	2.58	1.45	1.38
3	L5	1524	A2M	C5-C6	2.58	1.48	1.41
84	Pt	21	H2U	C2-N3	-2.58	1.33	1.38
1	S2	1445	PSU	C4-N3	-2.58	1.34	1.38
3	L5	3724	A2M	C5-C6	2.58	1.48	1.41
3	L5	4673	PSU	C2-N3	-2.58	1.33	1.37
1	S2	1678	A2M	C5-N7	-2.58	1.34	1.39
1	S2	1288	OMU	C4-N3	-2.57	1.34	1.38
3	L5	3764	PSU	C2-N3	-2.57	1.33	1.37
3	L5	2401	A2M	C5-C6	2.57	1.48	1.41
1	S2	644	OMG	C6-N1	-2.57	1.34	1.38
1	S2	1490	OMG	C6-N1	-2.57	1.34	1.38
1	S2	1804	OMU	C2-N3	-2.56	1.33	1.38
1	S2	683	OMG	C6-N1	-2.56	1.34	1.38
3	L5	400	A2M	C5-C6	2.56	1.48	1.41
1	S2	867	OMG	C6-N1	-2.56	1.34	1.38
1	S2	1832	6MZ	C5-C6	2.55	1.48	1.41
1	S2	509	OMG	C6-N1	-2.55	1.34	1.38
83	At	16	H2U	C2-N3	-2.55	1.33	1.38
1	S2	166	A2M	C5-C6	2.54	1.48	1.41
3	L5	4571	A2M	C5-N7	-2.54	1.34	1.39
1	S2	484	A2M	C5-C6	2.54	1.48	1.41
3	L5	2837	OMU	C2-N3	-2.54	1.33	1.38
3	L5	3785	A2M	C4-N9	-2.54	1.32	1.37
3	L5	3867	A2M	C5-C6	2.53	1.48	1.41
3	L5	1536	PSU	C2-N3	-2.53	1.33	1.37
3	L5	2839	PSU	C6-C5	2.53	1.38	1.35
83	At	46	7MG	C6-N1	-2.53	1.34	1.38
1	S2	1447	OMG	C6-N1	-2.53	1.34	1.38
1	S2	172	OMU	C2-N3	-2.52	1.33	1.38
2	L8	75	OMG	C6-N1	-2.52	1.34	1.38
3	L5	2843	PSU	C2-N3	-2.52	1.33	1.37
1	S2	1639	G7M	C6-N1	-2.51	1.34	1.38
3	L5	2876	OMG	C6-N1	-2.51	1.34	1.38
3	L5	4420	PSU	C4-N3	-2.51	1.34	1.38
3	L5	4228	OMG	C6-N1	-2.50	1.34	1.38
3	L5	3718	A2M	C5-C6	2.50	1.48	1.41
3	L5	1625	OMG	C5-N7	-2.50	1.34	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	L5	1524	A2M	C4-N9	-2.50	1.32	1.37
3	L5	3925	OMU	C2-N3	-2.50	1.33	1.38
3	L5	2363	A2M	C5-C6	2.49	1.47	1.41
3	L5	4220	6MZ	C5-N7	-2.49	1.34	1.39
3	L5	4457	PSU	C2-N3	-2.49	1.33	1.37
1	S2	1248	B8N	O4'-C1'	-2.48	1.40	1.43
3	L5	3637	PSU	C2-N3	-2.48	1.33	1.37
3	L5	3830	A2M	C5-N7	-2.48	1.34	1.39
3	L5	400	A2M	C5-N7	-2.48	1.34	1.39
1	S2	1081	PSU	C2-N3	-2.48	1.33	1.37
3	L5	4673	PSU	C6-C5	2.48	1.38	1.35
3	L5	4636	PSU	C2-N3	-2.47	1.33	1.37
3	L5	4498	OMU	C2-N3	-2.47	1.33	1.38
1	S2	99	A2M	C5-N7	-2.47	1.34	1.39
83	At	20	H2U	C2-N3	-2.47	1.33	1.38
3	L5	1522	OMG	C5-N7	-2.47	1.34	1.39
3	L5	3830	A2M	C5-C6	2.47	1.47	1.41
3	L5	4442	PSU	C2-N3	-2.47	1.33	1.37
3	L5	1871	A2M	C5-N7	-2.47	1.34	1.39
1	S2	1031	A2M	C5-N7	-2.47	1.34	1.39
3	L5	1534	A2M	C5-N7	-2.47	1.34	1.39
3	L5	2415	OMU	C5-C4	-2.46	1.38	1.43
1	S2	172	OMU	C5-C4	-2.46	1.38	1.43
3	L5	3853	PSU	C6-C5	2.46	1.38	1.35
3	L5	2424	OMG	C5-N7	-2.46	1.34	1.39
3	L5	4532	PSU	C2-N3	-2.45	1.33	1.37
3	L5	3825	A2M	C5-C6	2.45	1.47	1.41
1	S2	1832	6MZ	C5-N7	-2.45	1.34	1.39
3	L5	398	A2M	C5-C6	2.45	1.47	1.41
1	S2	484	A2M	C5-N7	-2.45	1.34	1.39
3	L5	1582	PSU	C2-N3	-2.44	1.33	1.37
1	S2	601	OMG	C6-N1	-2.44	1.34	1.38
1	S2	1678	A2M	C5-C6	2.44	1.47	1.41
1	S2	668	A2M	C5-N7	-2.44	1.34	1.39
3	L5	2415	OMU	C2-N3	-2.44	1.33	1.38
3	L5	4442	PSU	C6-C5	2.43	1.38	1.35
3	L5	3760	A2M	C4-N9	-2.43	1.32	1.37
1	S2	354	OMU	C2-N3	-2.43	1.33	1.38
3	L5	4227	OMU	C2-N3	-2.43	1.33	1.38
1	S2	576	A2M	C5-N7	-2.42	1.34	1.39
3	L5	3818	UY1	C2-N3	-2.42	1.33	1.37
3	L5	4392	OMG	C5-N7	-2.42	1.34	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	L5	2815	A2M	C5-N7	-2.42	1.34	1.39
1	S2	1692	PSU	C2'-C1'	-2.42	1.50	1.53
1	S2	1081	PSU	C6-C5	2.42	1.38	1.35
3	L5	3944	OMG	C6-N1	-2.41	1.34	1.38
1	S2	590	A2M	C5-N7	-2.41	1.34	1.39
3	L5	4521	PSU	C2-N3	-2.41	1.33	1.37
1	S2	166	A2M	C5-N7	-2.41	1.34	1.39
1	S2	1692	PSU	C2-N3	-2.40	1.33	1.37
3	L5	4403	PSU	C2-N3	-2.40	1.33	1.37
3	L5	4494	OMG	C5-N7	-2.40	1.34	1.39
3	L5	4590	A2M	C5-N7	-2.40	1.34	1.39
3	L5	3758	PSU	C2-N3	-2.39	1.33	1.37
3	L5	3639	PSU	C2-N3	-2.39	1.33	1.37
83	At	16	H2U	C4-N3	-2.39	1.33	1.37
1	S2	109	PSU	C2'-C1'	-2.39	1.50	1.53
3	L5	3768	PSU	C2-N3	-2.38	1.33	1.37
3	L5	3758	PSU	C2'-C1'	-2.38	1.50	1.53
3	L5	3792	OMG	C5-N7	-2.38	1.34	1.39
3	L5	2787	A2M	C5-C6	2.38	1.47	1.41
1	S2	681	PSU	C2-N3	-2.37	1.33	1.37
3	L5	3844	PSU	C2-N3	-2.37	1.33	1.37
1	S2	1383	A2M	C5-N7	-2.37	1.34	1.39
3	L5	4296	PSU	C2-N3	-2.37	1.33	1.37
3	L5	3723	A2M	C5-N7	-2.37	1.34	1.39
2	L8	14	OMU	C5-C4	-2.36	1.38	1.43
3	L5	3782	5MC	C6-N1	-2.36	1.34	1.38
1	S2	428	OMU	C2-N3	-2.35	1.33	1.38
3	L5	4227	OMU	C5-C4	-2.34	1.38	1.43
1	S2	512	A2M	C5-N7	-2.34	1.34	1.39
1	S2	1004	PSU	C2-N3	-2.34	1.33	1.37
3	L5	2364	OMG	C5-N7	-2.33	1.34	1.39
1	S2	121	OMU	C2-N3	-2.33	1.33	1.38
3	L5	3899	OMG	C4-N9	-2.33	1.32	1.38
3	L5	3695	PSU	C2-N3	-2.33	1.33	1.37
3	L5	1316	OMG	C5-N7	-2.33	1.34	1.39
1	S2	166	A2M	C8-N7	2.33	1.36	1.31
3	L5	4673	PSU	C2'-C1'	-2.33	1.50	1.53
3	L5	4447	5MC	C6-N1	-2.33	1.34	1.38
3	L5	4623	OMG	C5-N7	-2.33	1.34	1.39
3	L5	4523	A2M	C4-N9	-2.32	1.32	1.37
3	L5	4620	OMU	C5-C4	-2.32	1.38	1.43
3	L5	3724	A2M	C5-N7	-2.32	1.34	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	S2	468	A2M	C8-N7	2.32	1.36	1.31
1	S2	601	OMG	C5-N7	-2.32	1.34	1.39
1	S2	354	OMU	C5-C4	-2.32	1.38	1.43
3	L5	4196	OMG	C5-N7	-2.32	1.34	1.39
3	L5	1534	A2M	C4-N9	-2.32	1.32	1.37
1	S2	1850	MA6	C5-N7	-2.31	1.34	1.39
3	L5	1340	OMC	C6-N1	-2.31	1.32	1.38
3	L5	4353	PSU	C2-N3	-2.30	1.33	1.37
3	L5	1860	PSU	C2-N3	-2.29	1.33	1.37
1	S2	1383	A2M	C8-N7	2.29	1.36	1.31
3	L5	4196	OMG	C4-N9	-2.29	1.32	1.38
3	L5	4306	OMU	C5-C4	-2.29	1.38	1.43
3	L5	3853	PSU	C2-N1	-2.29	1.33	1.36
3	L5	3884	PSU	C2-N3	-2.29	1.33	1.37
1	S2	1442	OMU	C2-N3	-2.28	1.34	1.38
3	L5	3760	A2M	C5-N7	-2.28	1.34	1.39
1	S2	1851	MA6	C5-N7	-2.28	1.34	1.39
1	S2	27	A2M	C5-N7	-2.28	1.34	1.39
3	L5	3851	PSU	C2-N3	-2.28	1.33	1.37
3	L5	400	A2M	C8-N7	2.28	1.36	1.31
3	L5	3764	PSU	C6-C5	2.27	1.37	1.35
1	S2	116	OMU	C2-N3	-2.27	1.34	1.38
3	L5	4552	PSU	C2-N1	-2.27	1.33	1.36
3	L5	4499	OMG	C5-N7	-2.27	1.34	1.39
3	L5	4493	PSU	C2-N3	-2.26	1.33	1.37
3	L5	4403	PSU	C2-N1	-2.26	1.33	1.36
3	L5	4618	OMG	C5-N7	-2.26	1.34	1.39
1	S2	27	A2M	C8-N7	2.26	1.36	1.31
3	L5	4370	OMG	C5-N7	-2.26	1.34	1.39
3	L5	4293	PSU	C2-N3	-2.25	1.33	1.37
83	At	8	4SU	C2-N3	-2.25	1.34	1.38
3	L5	1792	PSU	C2-N3	-2.25	1.33	1.37
3	L5	3760	A2M	C8-N7	2.25	1.36	1.31
1	S2	512	A2M	C8-N7	2.24	1.36	1.31
1	S2	627	OMU	C2-N3	-2.24	1.34	1.38
3	L5	3853	PSU	C2-N3	-2.24	1.33	1.37
1	S2	509	OMG	C5-N7	-2.24	1.34	1.39
1	S2	590	A2M	C8-N7	2.23	1.36	1.31
3	L5	3723	A2M	C8-N7	2.23	1.36	1.31
1	S2	1490	OMG	C5-N7	-2.23	1.34	1.39
3	L5	2508	PSU	C2-N3	-2.22	1.33	1.37
3	L5	4471	PSU	C2-N3	-2.22	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	L5	4623	OMG	C4-N9	-2.22	1.32	1.38
3	L5	1683	PSU	C2-N1	-2.22	1.33	1.36
1	S2	468	A2M	C5-N7	-2.21	1.35	1.39
3	L5	4637	OMG	C5-N7	-2.21	1.34	1.39
3	L5	398	A2M	C4-N9	-2.21	1.33	1.37
3	L5	3899	OMG	C5-N7	-2.21	1.34	1.39
3	L5	3724	A2M	C8-N7	2.21	1.35	1.31
1	S2	644	OMG	C5-N7	-2.20	1.34	1.39
1	S2	576	A2M	C8-N7	2.20	1.35	1.31
3	L5	4618	OMG	C4-N9	-2.20	1.32	1.38
84	Pt	21	H2U	C4-N3	-2.20	1.33	1.37
2	L8	55	PSU	C2-N3	-2.20	1.33	1.37
1	S2	1850	MA6	C4-N9	-2.20	1.33	1.37
3	L5	4228	OMG	C5-N7	-2.20	1.34	1.39
1	S2	109	PSU	C2-N3	-2.19	1.33	1.37
3	L5	3785	A2M	C5-C6	2.19	1.47	1.41
3	L5	1781	PSU	C2-N3	-2.18	1.33	1.37
1	S2	1328	OMG	C5-N7	-2.18	1.34	1.39
3	L5	2632	PSU	C2-N3	-2.18	1.33	1.37
3	L5	4523	A2M	C5-C6	2.18	1.47	1.41
1	S2	116	OMU	C5-C4	-2.18	1.39	1.43
1	S2	121	OMU	C5-C4	-2.18	1.39	1.43
3	L5	1744	PSU	C2-N3	-2.18	1.33	1.37
1	S2	172	OMU	C6-N1	-2.18	1.32	1.38
1	S2	428	OMU	C5-C4	-2.18	1.39	1.43
1	S2	484	A2M	C8-N7	2.17	1.35	1.31
3	L5	3884	PSU	C2-N1	-2.17	1.33	1.36
3	L5	4361	PSU	C2-N3	-2.17	1.33	1.37
3	L5	1871	A2M	C4-N9	-2.17	1.33	1.37
1	S2	1288	OMU	C2-N3	-2.17	1.34	1.38
84	Pt	8	4SU	C2-N3	-2.17	1.34	1.38
2	L8	75	OMG	C5-N7	-2.17	1.34	1.39
1	S2	1447	OMG	C5-N7	-2.17	1.34	1.39
3	L5	4569	PSU	C2-N3	-2.17	1.33	1.37
3	L5	4220	6MZ	C4-N9	-2.16	1.33	1.37
3	L5	3718	A2M	C4-N9	-2.16	1.33	1.37
3	L5	3764	PSU	C2'-C1'	-2.15	1.50	1.53
3	L5	4498	OMU	C5-C4	-2.15	1.39	1.43
3	L5	4442	PSU	C2-N1	-2.15	1.33	1.36
1	S2	1337	4AC	C7-N4	-2.15	1.32	1.37
1	S2	99	A2M	C8-N7	2.15	1.35	1.31
1	S2	436	OMG	C5-N7	-2.15	1.34	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	S2	1174	PSU	C2-N1	-2.14	1.33	1.36
3	L5	2787	A2M	C4-N9	-2.14	1.33	1.37
3	L5	1534	A2M	C8-N9	-2.14	1.33	1.37
3	L5	4689	PSU	C2-N1	-2.14	1.33	1.36
83	At	20	H2U	C4-N3	-2.14	1.34	1.37
3	L5	4689	PSU	C2-N3	-2.13	1.34	1.37
2	L8	69	PSU	O4'-C1'	-2.13	1.40	1.43
3	L5	1326	A2M	C8-N9	-2.13	1.33	1.37
1	S2	1174	PSU	C2-N3	-2.12	1.34	1.37
3	L5	1862	PSU	C2-N1	-2.12	1.33	1.36
3	L5	4312	PSU	C2-N3	-2.12	1.34	1.37
3	L5	4590	A2M	C8-N7	2.12	1.35	1.31
1	S2	1177	PSU	C2-N3	-2.11	1.34	1.37
3	L5	5001	PSU	C2-N3	-2.11	1.34	1.37
3	L5	4392	OMG	C4-N9	-2.11	1.32	1.38
3	L5	4552	PSU	C2-N3	-2.11	1.34	1.37
3	L5	4579	PSU	C2-N3	-2.11	1.34	1.37
3	L5	4420	PSU	O4'-C1'	-2.11	1.40	1.43
1	S2	867	OMG	C5-N7	-2.11	1.34	1.39
1	S2	1851	MA6	C8-N7	2.10	1.35	1.31
1	S2	683	OMG	C5-N7	-2.10	1.34	1.39
3	L5	1522	OMG	C4-N9	-2.10	1.32	1.38
1	S2	1347	PSU	C2-N3	-2.10	1.34	1.37
3	L5	1677	PSU	C2-N3	-2.10	1.34	1.37
3	L5	1860	PSU	C2-N1	-2.10	1.33	1.36
1	S2	159	A2M	C8-N7	2.10	1.35	1.31
3	L5	4972	PSU	C2-N3	-2.09	1.34	1.37
3	L5	1782	PSU	C2-N3	-2.09	1.34	1.37
3	L5	4312	PSU	C2-N1	-2.09	1.33	1.36
3	L5	4423	PSU	C2-N3	-2.08	1.34	1.37
3	L5	2364	OMG	C4-N9	-2.08	1.32	1.38
3	L5	1316	OMG	C4-N9	-2.08	1.32	1.38
3	L5	3715	PSU	C2-N3	-2.08	1.34	1.37
3	L5	3920	PSU	C2-N3	-2.08	1.34	1.37
3	L5	4530	UR3	C5-C4	-2.07	1.38	1.43
3	L5	2401	A2M	C4-N9	-2.07	1.33	1.37
3	L5	3744	OMG	C5-N7	-2.07	1.34	1.39
3	L5	1871	A2M	C8-N7	2.07	1.35	1.31
1	S2	668	A2M	C8-N7	2.07	1.35	1.31
3	L5	3925	OMU	C5-C4	-2.07	1.39	1.43
3	L5	4228	OMG	C4-N9	-2.07	1.32	1.38
1	S2	109	PSU	C2-N1	-2.07	1.34	1.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	S2	1442	OMU	C5-C4	-2.06	1.39	1.43
3	L5	4571	A2M	C4-N9	-2.06	1.33	1.37
1	S2	166	A2M	C4-N9	-2.06	1.33	1.37
1	S2	814	PSU	C2-N3	-2.06	1.34	1.37
3	L5	4576	PSU	C2-N3	-2.06	1.34	1.37
3	L5	398	A2M	C8-N7	2.06	1.35	1.31
3	L5	2401	A2M	C8-N7	2.06	1.35	1.31
3	L5	1326	A2M	C4-N9	-2.06	1.33	1.37
3	L5	3639	PSU	C2-N1	-2.06	1.34	1.36
1	S2	627	OMU	C5-C4	-2.06	1.39	1.43
1	S2	1832	6MZ	C8-N7	2.06	1.35	1.31
3	L5	3818	UY1	C2-N1	-2.05	1.34	1.36
83	At	39	PSU	C2-N3	-2.05	1.34	1.37
3	L5	2876	OMG	C5-N7	-2.05	1.35	1.39
84	Pt	47	G7M	C5-N7	2.05	1.41	1.39
1	S2	1850	MA6	C8-N7	2.05	1.35	1.31
1	S2	1244	PSU	C2-N3	-2.05	1.34	1.37
1	S2	1804	OMU	C5-C4	-2.05	1.39	1.43
1	S2	572	PSU	C2-N3	-2.04	1.34	1.37
1	S2	1326	UY1	C2-N3	-2.04	1.34	1.37
3	L5	3851	PSU	C2-N1	-2.04	1.34	1.36
1	S2	1851	MA6	C4-N9	-2.04	1.33	1.37
1	S2	406	PSU	C2-N3	-2.04	1.34	1.37
3	L5	3627	OMG	C4-N9	-2.04	1.32	1.38
81	5A	50	5CT	CB-CA	-2.03	1.50	1.53
3	L5	2632	PSU	C2-N1	-2.03	1.34	1.36
1	S2	218	PSU	C2-N3	-2.03	1.34	1.37
3	L5	2815	A2M	C8-N7	2.03	1.35	1.31
1	S2	36	PSU	C2-N3	-2.03	1.34	1.37
3	L5	3825	A2M	C4-N9	-2.03	1.33	1.37
1	S2	815	PSU	C2-N3	-2.03	1.34	1.37
1	S2	1288	OMU	C5-C4	-2.03	1.39	1.43
3	L5	3758	PSU	C2-N1	-2.03	1.34	1.36
1	S2	576	A2M	C4-N9	-2.03	1.33	1.37
3	L5	3867	A2M	C4-N9	-2.03	1.33	1.37
1	S2	801	PSU	C2-N3	-2.02	1.34	1.37
1	S2	1031	A2M	C8-N7	2.02	1.35	1.31
3	L5	4523	A2M	C8-N7	2.02	1.35	1.31
1	S2	1692	PSU	C2-N1	-2.02	1.34	1.36
1	S2	1832	6MZ	C4-N9	-2.02	1.33	1.37
3	L5	4628	PSU	C2-N1	-2.02	1.34	1.36
1	S2	649	PSU	C2-N1	-2.02	1.34	1.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	L5	2415	OMU	C2-N1	2.01	1.41	1.38
3	L5	4636	PSU	C2'-C1'	-2.01	1.51	1.53
3	L5	3785	A2M	C8-N7	2.01	1.35	1.31
1	S2	105	PSU	C2-N3	-2.01	1.34	1.37
3	L5	1862	PSU	C2-N3	-2.01	1.34	1.37
1	S2	1031	A2M	C4-N9	-2.01	1.33	1.37
3	L5	4293	PSU	C2-N1	-2.01	1.34	1.36
1	S2	1081	PSU	C2'-C1'	-2.01	1.51	1.53
1	S2	1081	PSU	C2-N1	-2.01	1.34	1.36
1	S2	1678	A2M	C8-N7	2.00	1.35	1.31
3	L5	4420	PSU	C2-N1	-2.00	1.34	1.36

All (1121) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
83	At	46	7MG	N9-C4-N3	9.21	138.95	125.46
1	S2	1639	G7M	CN7-N7-C8	-7.75	113.06	124.79
6	SA	2	SAC	OAC-C1A-C2A	-7.41	108.86	122.05
29	SV	1	AME	OT-CT1-N	-7.35	108.98	121.98
3	L5	4636	PSU	N1-C2-N3	7.29	122.86	115.17
1	S2	109	PSU	N1-C2-N3	7.27	122.83	115.17
3	L5	4531	PSU	N1-C2-N3	7.25	122.82	115.17
29	SV	1	AME	OT-CT1-CT2	-7.09	109.44	122.05
3	L5	4442	PSU	N1-C2-N3	7.06	122.62	115.17
64	Lr	2	SAC	OAC-C1A-C2A	-7.04	109.53	122.05
1	S2	1692	PSU	N1-C2-N3	7.03	122.59	115.17
3	L5	1862	PSU	N1-C2-N3	7.03	122.58	115.17
83	At	8	4SU	C4-N3-C2	-7.01	120.59	127.31
64	Lr	2	SAC	OAC-C1A-N	-7.01	109.59	121.98
3	L5	3768	PSU	N1-C2-N3	7.00	122.55	115.17
1	S2	1639	G7M	N9-C8-N7	-6.96	95.59	112.48
3	L5	4673	PSU	N1-C2-N3	6.89	122.43	115.17
3	L5	1582	PSU	N1-C2-N3	6.87	122.42	115.17
3	L5	3758	PSU	N1-C2-N3	6.86	122.41	115.17
3	L5	3764	PSU	N1-C2-N3	6.85	122.40	115.17
1	S2	1004	PSU	N1-C2-N3	6.83	122.37	115.17
84	Pt	8	4SU	C4-N3-C2	-6.83	120.77	127.31
1	S2	572	PSU	N1-C2-N3	6.80	122.34	115.17
1	S2	918	PSU	N1-C2-N3	6.79	122.33	115.17
6	SA	2	SAC	OAC-C1A-N	-6.78	110.00	121.98
3	L5	3920	PSU	N1-C2-N3	6.77	122.31	115.17
3	L5	3884	PSU	N1-C2-N3	6.77	122.31	115.17

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	S2	1232	PSU	N1-C2-N3	6.77	122.31	115.17
3	L5	3639	PSU	N1-C2-N3	6.75	122.28	115.17
3	L5	2508	PSU	N1-C2-N3	6.74	122.27	115.17
3	L5	4579	PSU	N1-C2-N3	6.71	122.24	115.17
1	S2	681	PSU	N1-C2-N3	6.68	122.22	115.17
3	L5	4403	PSU	N1-C2-N3	6.67	122.20	115.17
3	L5	4530	UR3	C4-N3-C2	-6.67	119.21	124.58
3	L5	4361	PSU	N1-C2-N3	6.67	122.20	115.17
3	L5	1677	PSU	N1-C2-N3	6.66	122.20	115.17
1	S2	1639	G7M	C8-N7-C5	6.66	116.11	107.78
3	L5	4423	PSU	N1-C2-N3	6.66	122.19	115.17
3	L5	4299	PSU	N1-C2-N3	6.65	122.19	115.17
1	S2	1639	G7M	N9-C4-N3	6.64	139.24	125.95
3	L5	5001	PSU	N1-C2-N3	6.64	122.17	115.17
3	L5	4552	PSU	N1-C2-N3	6.62	122.15	115.17
3	L5	1625	OMG	C5-C4-N3	-6.62	117.86	128.39
3	L5	4628	PSU	N1-C2-N3	6.61	122.14	115.17
3	L5	4532	PSU	N1-C2-N3	6.61	122.14	115.17
3	L5	4494	OMG	C5-C4-N3	-6.61	117.87	128.39
1	S2	651	PSU	N1-C2-N3	6.61	122.14	115.17
3	L5	3818	UY1	N1-C2-N3	6.60	122.13	115.17
1	S2	966	PSU	N1-C2-N3	6.59	122.12	115.17
3	L5	4500	PSU	N1-C2-N3	6.59	122.12	115.17
3	L5	3853	PSU	N1-C2-N3	6.58	122.11	115.17
3	L5	3762	PSU	N1-C2-N3	6.58	122.11	115.17
3	L5	4569	PSU	N1-C2-N3	6.58	122.11	115.17
3	L5	4523	A2M	C2'-C1'-N9	-6.57	102.94	113.75
1	S2	34	PSU	N1-C2-N3	6.57	122.10	115.17
3	L5	3637	PSU	N1-C2-N3	6.56	122.09	115.17
3	L5	4296	PSU	N1-C2-N3	6.56	122.09	115.17
1	S2	1081	PSU	N1-C2-N3	6.55	122.08	115.17
3	L5	1683	PSU	N1-C2-N3	6.55	122.08	115.17
3	L5	4312	PSU	N1-C2-N3	6.55	122.08	115.17
3	L5	4457	PSU	N1-C2-N3	6.53	122.06	115.17
3	L5	1782	PSU	N1-C2-N3	6.53	122.06	115.17
3	L5	1744	PSU	N1-C2-N3	6.53	122.05	115.17
1	S2	644	OMG	C5-C4-N3	-6.52	118.01	128.39
3	L5	1860	PSU	N1-C2-N3	6.51	122.04	115.17
3	L5	4353	PSU	N1-C2-N3	6.51	122.04	115.17
2	L8	55	PSU	N1-C2-N3	6.51	122.03	115.17
2	L8	69	PSU	N1-C2-N3	6.50	122.03	115.17
1	S2	1177	PSU	N1-C2-N3	6.50	122.03	115.17

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	S2	801	PSU	N1-C2-N3	6.50	122.03	115.17
83	At	39	PSU	N1-C2-N3	6.49	122.02	115.17
3	L5	4521	PSU	N1-C2-N3	6.49	122.02	115.17
1	S2	815	PSU	N1-C2-N3	6.49	122.02	115.17
3	L5	1779	PSU	N1-C2-N3	6.49	122.02	115.17
3	L5	3695	PSU	N1-C2-N3	6.49	122.02	115.17
1	S2	1326	UY1	N1-C2-N3	6.49	122.01	115.17
3	L5	4431	PSU	N1-C2-N3	6.49	122.01	115.17
3	L5	5010	PSU	N1-C2-N3	6.47	122.00	115.17
1	S2	649	PSU	N1-C2-N3	6.47	121.99	115.17
3	L5	1781	PSU	N1-C2-N3	6.46	121.99	115.17
1	S2	1244	PSU	N1-C2-N3	6.46	121.98	115.17
3	L5	4689	PSU	N1-C2-N3	6.46	121.98	115.17
1	S2	822	PSU	N1-C2-N3	6.45	121.97	115.17
3	L5	3734	PSU	N1-C2-N3	6.44	121.96	115.17
1	S2	866	PSU	N1-C2-N3	6.42	121.94	115.17
1	S2	1056	PSU	N1-C2-N3	6.42	121.94	115.17
1	S2	609	PSU	N1-C2-N3	6.41	121.93	115.17
1	S2	1136	PSU	N1-C2-N3	6.41	121.93	115.17
3	L5	4637	OMG	C5-C4-N3	-6.41	118.19	128.39
3	L5	3851	PSU	N1-C2-N3	6.41	121.93	115.17
1	S2	1367	PSU	N1-C2-N3	6.40	121.92	115.17
1	S2	1328	OMG	C5-C4-N3	-6.39	118.21	128.39
3	L5	2843	PSU	N1-C2-N3	6.39	121.91	115.17
1	S2	1243	PSU	N1-C2-N3	6.37	121.88	115.17
3	L5	1792	PSU	N1-C2-N3	6.36	121.88	115.17
1	S2	1447	OMG	C5-C4-N3	-6.35	118.28	128.39
3	L5	4493	PSU	N1-C2-N3	6.35	121.87	115.17
1	S2	686	PSU	N1-C2-N3	6.34	121.86	115.17
3	L5	4293	PSU	N1-C2-N3	6.34	121.86	115.17
1	S2	1239	PSU	N1-C2-N3	6.34	121.85	115.17
3	L5	4576	PSU	N1-C2-N3	6.33	121.84	115.17
1	S2	296	PSU	N1-C2-N3	6.33	121.84	115.17
1	S2	1238	PSU	N1-C2-N3	6.32	121.83	115.17
1	S2	601	OMG	C5-C4-N3	-6.32	118.34	128.39
84	Pt	56	PSU	N1-C2-N3	6.29	121.80	115.17
1	S2	93	PSU	N1-C2-N3	6.29	121.80	115.17
1	S2	105	PSU	N1-C2-N3	6.29	121.80	115.17
3	L5	3844	PSU	N1-C2-N3	6.28	121.79	115.17
3	L5	3715	PSU	N1-C2-N3	6.28	121.79	115.17
3	L5	2839	PSU	N1-C2-N3	6.27	121.78	115.17
1	S2	814	PSU	N1-C2-N3	6.27	121.78	115.17

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	S2	1174	PSU	N1-C2-N3	6.27	121.78	115.17
3	L5	3744	OMG	C5-C4-N3	-6.26	118.42	128.39
1	S2	573	PSU	N1-C2-N3	6.26	121.78	115.17
1	S2	863	PSU	N1-C2-N3	6.26	121.77	115.17
1	S2	1445	PSU	N1-C2-N3	6.26	121.77	115.17
1	S2	406	PSU	N1-C2-N3	6.26	121.77	115.17
1	S2	1625	PSU	N1-C2-N3	6.25	121.76	115.17
3	L5	4471	PSU	N1-C2-N3	6.24	121.75	115.17
83	At	32	PSU	N1-C2-N3	6.24	121.75	115.17
3	L5	4972	PSU	N1-C2-N3	6.23	121.74	115.17
3	L5	3770	PSU	N1-C2-N3	6.23	121.73	115.17
3	L5	2876	OMG	C5-C4-N3	-6.21	118.51	128.39
3	L5	2424	OMG	C5-C4-N3	-6.21	118.51	128.39
1	S2	36	PSU	N1-C2-N3	6.20	121.71	115.17
3	L5	4499	OMG	C5-C4-N3	-6.20	118.52	128.39
3	L5	3729	PSU	N1-C2-N3	6.19	121.70	115.17
1	S2	1643	PSU	N1-C2-N3	6.19	121.70	115.17
83	At	8	4SU	C5-C4-N3	6.18	120.50	114.75
1	S2	1490	OMG	C5-C4-N3	-6.18	118.55	128.39
3	L5	3792	OMG	C5-C4-N3	-6.17	118.57	128.39
1	S2	159	A2M	C5-C4-N3	-6.17	118.22	126.72
3	L5	1536	PSU	N1-C2-N3	6.14	121.64	115.17
1	S2	1347	PSU	N1-C2-N3	6.14	121.64	115.17
1	S2	218	PSU	N1-C2-N3	6.12	121.63	115.17
1	S2	509	OMG	C5-C4-N3	-6.12	118.65	128.39
3	L5	2632	PSU	N1-C2-N3	6.09	121.60	115.17
1	S2	867	OMG	C5-C4-N3	-6.08	118.71	128.39
3	L5	3944	OMG	C5-C4-N3	-6.08	118.72	128.39
3	L5	1326	A2M	C5-C4-N3	-6.07	118.36	126.72
3	L5	2815	A2M	C5-C4-N3	-6.05	118.39	126.72
1	S2	1678	A2M	C5-C4-N3	-6.05	118.39	126.72
3	L5	3723	A2M	C5-C4-N3	-6.02	118.43	126.72
1	S2	436	OMG	C5-C4-N3	-6.00	118.85	128.39
1	S2	1383	A2M	C5-C4-N3	-5.97	118.49	126.72
3	L5	3867	A2M	C5-C4-N3	-5.97	118.50	126.72
1	S2	683	OMG	C5-C4-N3	-5.96	118.90	128.39
3	L5	2363	A2M	C5-C4-N3	-5.95	118.52	126.72
2	L8	75	OMG	C5-C4-N3	-5.95	118.93	128.39
1	S2	166	A2M	C5-C4-N3	-5.94	118.54	126.72
3	L5	3718	A2M	C5-C4-N3	-5.93	118.55	126.72
3	L5	4590	A2M	C5-C4-N3	-5.92	118.56	126.72
3	L5	2364	OMG	C5-C4-N3	-5.92	118.97	128.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	S2	27	A2M	C5-C4-N3	-5.91	118.58	126.72
3	L5	4370	OMG	C5-C4-N3	-5.90	119.00	128.39
1	S2	484	A2M	C5-C4-N3	-5.87	118.64	126.72
1	S2	668	A2M	C5-C4-N3	-5.86	118.64	126.72
3	L5	2787	A2M	C5-C4-N3	-5.86	118.65	126.72
3	L5	3724	A2M	C5-C4-N3	-5.86	118.65	126.72
3	L5	4571	A2M	C5-C4-N3	-5.86	118.65	126.72
3	L5	3830	A2M	C5-C4-N3	-5.84	118.67	126.72
1	S2	512	A2M	C5-C4-N3	-5.84	118.68	126.72
1	S2	1031	A2M	C5-C4-N3	-5.84	118.68	126.72
3	L5	4420	PSU	N1-C2-N3	5.83	121.32	115.17
3	L5	4196	OMG	C5-C4-N3	-5.82	119.13	128.39
1	S2	99	A2M	C5-C4-N3	-5.81	118.72	126.72
1	S2	468	A2M	C5-C4-N3	-5.78	118.76	126.72
3	L5	4623	OMG	C5-C4-N3	-5.78	119.19	128.39
1	S2	590	A2M	C5-C4-N3	-5.78	118.77	126.72
84	Pt	8	4SU	C5-C4-N3	5.76	120.11	114.75
3	L5	1316	OMG	C5-C4-N3	-5.76	119.22	128.39
3	L5	398	A2M	C5-C4-N3	-5.74	118.81	126.72
3	L5	4220	6MZ	C5-C4-N3	-5.72	118.83	126.72
3	L5	400	A2M	C5-C4-N3	-5.72	118.83	126.72
3	L5	3825	A2M	C5-C4-N3	-5.72	118.84	126.72
3	L5	3627	OMG	C5-C4-N3	-5.71	119.30	128.39
3	L5	3899	OMG	C5-C4-N3	-5.71	119.30	128.39
3	L5	4618	OMG	C5-C4-N3	-5.70	119.31	128.39
3	L5	3785	A2M	C2'-C1'-N9	-5.70	104.37	113.75
3	L5	2401	A2M	C5-C4-N3	-5.68	118.90	126.72
1	S2	119	PSU	N1-C2-N3	5.68	121.16	115.17
3	L5	1522	OMG	C5-C4-N3	-5.67	119.37	128.39
3	L5	4392	OMG	C5-C4-N3	-5.67	119.37	128.39
3	L5	1871	A2M	C5-C4-N3	-5.66	118.92	126.72
1	S2	1248	B8N	C4-N3-C2	-5.65	118.66	125.62
1	S2	1851	MA6	C5-C4-N3	-5.62	118.98	126.72
1	S2	576	A2M	C5-C4-N3	-5.60	119.01	126.72
3	L5	4228	OMG	C5-C4-N3	-5.59	119.50	128.39
3	L5	1534	A2M	C5-C4-N3	-5.58	119.03	126.72
3	L5	4523	A2M	C5-C4-N3	-5.57	119.04	126.72
83	At	46	7MG	C5-C4-N3	-5.56	117.69	128.13
1	S2	1832	6MZ	C5-C4-N3	-5.52	119.12	126.72
83	At	46	7MG	N9-C8-N7	-5.52	95.56	103.37
3	L5	1322	1MA	C5-C4-N3	-5.51	119.17	127.27
3	L5	3785	A2M	C5-C4-N3	-5.48	119.18	126.72

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	S2	1639	G7M	C5-C4-N3	-5.45	117.84	128.15
3	L5	1524	A2M	C5-C4-N3	-5.41	119.27	126.72
3	L5	1625	OMG	N9-C4-N3	5.37	136.68	125.95
1	S2	1850	MA6	C5-C4-N3	-5.35	119.35	126.72
3	L5	3760	A2M	C5-C4-N3	-5.25	119.49	126.72
1	S2	644	OMG	C2-N3-C4	5.24	121.32	112.30
3	L5	4499	OMG	C2-N3-C4	5.20	121.26	112.30
1	S2	601	OMG	C2-N3-C4	5.15	121.18	112.30
2	L8	75	OMG	C2-N3-C4	5.15	121.17	112.30
3	L5	3744	OMG	C2-N3-C4	5.15	121.17	112.30
3	L5	4637	OMG	C2-N3-C4	5.13	121.14	112.30
3	L5	4494	OMG	C2-N3-C4	5.12	121.12	112.30
1	S2	1328	OMG	C2-N3-C4	5.11	121.11	112.30
3	L5	3627	OMG	C2-N3-C4	5.10	121.08	112.30
1	S2	867	OMG	C2-N3-C4	5.10	121.08	112.30
3	L5	4196	OMG	C2-N3-C4	5.08	121.05	112.30
3	L5	3925	OMU	C4-N3-C2	-5.07	120.32	126.61
3	L5	2876	OMG	C2-N3-C4	5.07	121.03	112.30
3	L5	1522	OMG	C2-N3-C4	5.06	121.02	112.30
1	S2	1490	OMG	C2-N3-C4	5.05	121.00	112.30
1	S2	436	OMG	C2-N3-C4	5.05	121.00	112.30
3	L5	3944	OMG	C2-N3-C4	5.05	121.00	112.30
3	L5	4498	OMU	C4-N3-C2	-5.03	120.36	126.61
1	S2	1447	OMG	C2-N3-C4	5.03	120.96	112.30
1	S2	683	OMG	C2-N3-C4	5.02	120.94	112.30
3	L5	3899	OMG	C2-N3-C4	5.01	120.92	112.30
3	L5	2837	OMU	C4-N3-C2	-5.00	120.41	126.61
3	L5	4618	OMG	C2-N3-C4	4.99	120.90	112.30
3	L5	4494	OMG	N9-C4-N3	4.99	135.93	125.95
3	L5	3792	OMG	C2-N3-C4	4.99	120.89	112.30
3	L5	4623	OMG	C2-N3-C4	4.99	120.89	112.30
3	L5	4370	OMG	C2-N3-C4	4.98	120.87	112.30
1	S2	509	OMG	C2-N3-C4	4.97	120.85	112.30
3	L5	2364	OMG	C2-N3-C4	4.96	120.84	112.30
1	S2	172	OMU	C4-N3-C2	-4.95	120.47	126.61
3	L5	2363	A2M	N3-C4-N9	4.93	135.55	127.17
3	L5	1316	OMG	C2-N3-C4	4.93	120.79	112.30
3	L5	1326	A2M	N3-C4-N9	4.91	135.51	127.17
1	S2	428	OMU	C4-N3-C2	-4.91	120.52	126.61
3	L5	3867	A2M	N3-C4-N9	4.90	135.51	127.17
3	L5	4636	PSU	C4-N3-C2	-4.90	119.62	126.37
1	S2	354	OMU	C4-N3-C2	-4.89	120.54	126.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	1625	OMG	C2-N3-C4	4.89	120.72	112.30
2	L8	14	OMU	C4-N3-C2	-4.88	120.55	126.61
1	S2	1678	A2M	N3-C4-N9	4.86	135.43	127.17
3	L5	4392	OMG	C2-N3-C4	4.85	120.65	112.30
1	S2	627	OMU	C4-N3-C2	-4.84	120.60	126.61
3	L5	4228	OMG	C2-N3-C4	4.83	120.62	112.30
3	L5	4571	A2M	N3-C4-N9	4.83	135.38	127.17
3	L5	4620	OMU	C4-N3-C2	-4.82	120.63	126.61
1	S2	1447	OMG	N9-C4-N3	4.80	135.55	125.95
81	5A	50	5CT	C4-C3-C2	-4.80	103.37	113.47
3	L5	2424	OMG	C2-N3-C4	4.80	120.56	112.30
3	L5	4227	OMU	C4-N3-C2	-4.79	120.67	126.61
3	L5	4637	OMG	N9-C4-N3	4.77	135.49	125.95
3	L5	3723	A2M	N3-C4-N9	4.77	135.27	127.17
1	S2	512	A2M	N3-C4-N9	4.76	135.26	127.17
3	L5	3792	OMG	N9-C4-N3	4.75	135.46	125.95
1	S2	159	A2M	N3-C4-N9	4.75	135.25	127.17
1	S2	644	OMG	N9-C4-N3	4.75	135.44	125.95
1	S2	1383	A2M	N3-C4-N9	4.74	135.23	127.17
1	S2	601	OMG	N9-C4-N3	4.73	135.42	125.95
3	L5	3724	A2M	N3-C4-N9	4.73	135.22	127.17
3	L5	3768	PSU	C4-N3-C2	-4.73	119.86	126.37
3	L5	4620	OMU	N3-C2-N1	4.72	121.04	114.89
1	S2	1442	OMU	C4-N3-C2	-4.72	120.76	126.61
1	S2	1328	OMG	N9-C4-N3	4.71	135.37	125.95
1	S2	1081	PSU	C4-N3-C2	-4.71	119.88	126.37
3	L5	3825	A2M	N3-C4-N9	4.70	135.16	127.17
3	L5	4531	PSU	C4-N3-C2	-4.70	119.90	126.37
3	L5	4442	PSU	C4-N3-C2	-4.69	119.91	126.37
1	S2	121	OMU	C4-N3-C2	-4.68	120.80	126.61
3	L5	3718	A2M	N3-C4-N9	4.68	135.13	127.17
3	L5	4499	OMG	N9-C4-N3	4.68	135.31	125.95
3	L5	2876	OMG	N9-C4-N3	4.67	135.30	125.95
3	L5	2424	OMG	N9-C4-N3	4.67	135.29	125.95
1	S2	109	PSU	C4-N3-C2	-4.67	119.94	126.37
3	L5	3830	A2M	N3-C4-N9	4.67	135.10	127.17
3	L5	3764	PSU	C4-N3-C2	-4.66	119.95	126.37
1	S2	99	A2M	N3-C4-N9	4.66	135.09	127.17
1	S2	166	A2M	N3-C4-N9	4.66	135.09	127.17
3	L5	2843	PSU	C4-N3-C2	-4.65	119.96	126.37
1	S2	1804	OMU	C4-N3-C2	-4.65	120.83	126.61
3	L5	3925	OMU	N3-C2-N1	4.64	120.94	114.89

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	S2	1288	OMU	C4-N3-C2	-4.63	120.86	126.61
3	L5	2787	A2M	N3-C4-N9	4.62	135.03	127.17
3	L5	3830	A2M	C2'-C1'-N9	-4.62	106.14	113.75
1	S2	1031	A2M	N3-C4-N9	4.62	135.02	127.17
1	S2	1692	PSU	C4-N3-C2	-4.62	120.01	126.37
1	S2	1490	OMG	N9-C4-N3	4.61	135.18	125.95
3	L5	2837	OMU	N3-C2-N1	4.61	120.89	114.89
1	S2	484	A2M	N3-C4-N9	4.61	135.00	127.17
1	S2	27	A2M	N3-C4-N9	4.60	134.99	127.17
3	L5	4220	6MZ	N3-C4-N9	4.59	134.97	127.17
1	S2	867	OMG	N9-C4-N3	4.59	135.12	125.95
3	L5	4590	A2M	N3-C4-N9	4.58	134.95	127.17
3	L5	2415	OMU	C4-N3-C2	-4.57	120.94	126.61
3	L5	1322	1MA	C2-N3-C4	4.56	121.47	112.53
3	L5	3744	OMG	N9-C4-N3	4.55	135.06	125.95
1	S2	468	A2M	N3-C4-N9	4.55	134.91	127.17
1	S2	590	A2M	N3-C4-N9	4.55	134.91	127.17
3	L5	4523	A2M	N3-C4-N9	4.55	134.91	127.17
1	S2	116	OMU	C4-N3-C2	-4.55	120.97	126.61
3	L5	3920	PSU	C4-N3-C2	-4.54	120.11	126.37
3	L5	3818	UY1	C4-N3-C2	-4.53	120.14	126.37
3	L5	4673	PSU	C4-N3-C2	-4.52	120.14	126.37
3	L5	2815	A2M	N3-C4-N9	4.52	134.86	127.17
3	L5	400	A2M	N3-C4-N9	4.52	134.85	127.17
3	L5	3785	A2M	N3-C4-N9	4.52	134.85	127.17
3	L5	398	A2M	N3-C4-N9	4.51	134.83	127.17
3	L5	1534	A2M	N3-C4-N9	4.50	134.81	127.17
1	S2	668	A2M	N3-C4-N9	4.49	134.81	127.17
3	L5	1582	PSU	C4-N3-C2	-4.49	120.19	126.37
1	S2	1639	G7M	C8-N9-C4	4.49	118.20	107.09
3	L5	4552	PSU	O2-C2-N1	-4.48	118.17	122.79
83	At	46	7MG	C2-N3-C4	4.48	120.02	112.30
3	L5	2839	PSU	O2-C2-N1	-4.47	118.18	122.79
1	S2	1832	6MZ	N3-C4-N9	4.47	134.77	127.17
1	S2	436	OMG	N9-C4-N3	4.47	134.90	125.95
3	L5	3944	OMG	N9-C4-N3	4.47	134.89	125.95
1	S2	572	PSU	C4-N3-C2	-4.46	120.22	126.37
1	S2	1383	A2M	C2'-C1'-N9	-4.46	106.42	113.75
3	L5	4370	OMG	N9-C4-N3	4.44	134.83	125.95
3	L5	1862	PSU	C4-N3-C2	-4.43	120.26	126.37
1	S2	512	A2M	C2'-C1'-N9	-4.43	106.46	113.75
3	L5	4296	PSU	C4-N3-C2	-4.43	120.28	126.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	S2	576	A2M	N3-C4-N9	4.42	134.69	127.17
2	L8	75	OMG	N9-C4-N3	4.41	134.77	125.95
3	L5	4306	OMU	N3-C2-N1	4.40	120.62	114.89
3	L5	4498	OMU	N3-C2-N1	4.40	120.62	114.89
1	S2	1004	PSU	C4-N3-C2	-4.39	120.33	126.37
3	L5	4306	OMU	C4-N3-C2	-4.38	121.17	126.61
3	L5	4579	PSU	C4-N3-C2	-4.38	120.34	126.37
3	L5	4457	PSU	C4-N3-C2	-4.37	120.36	126.37
3	L5	1871	A2M	N3-C4-N9	4.37	134.59	127.17
1	S2	1326	UY1	C4-N3-C2	-4.36	120.36	126.37
3	L5	2401	A2M	N3-C4-N9	4.35	134.57	127.17
1	S2	509	OMG	N9-C4-N3	4.35	134.65	125.95
3	L5	1871	A2M	C2'-C1'-N9	-4.35	106.59	113.75
1	S2	1804	OMU	N3-C2-N1	4.35	120.55	114.89
3	L5	4521	PSU	C4-N3-C2	-4.35	120.38	126.37
84	Pt	47	G7M	N9-C8-N7	-4.34	101.94	112.48
1	S2	681	PSU	C4-N3-C2	-4.34	120.39	126.37
3	L5	3637	PSU	C4-N3-C2	-4.33	120.40	126.37
1	S2	576	A2M	C2'-C1'-N9	-4.33	106.63	113.75
3	L5	1677	PSU	C4-N3-C2	-4.33	120.41	126.37
3	L5	4312	PSU	C4-N3-C2	-4.33	120.41	126.37
3	L5	4618	OMG	C2'-C1'-N9	-4.32	106.03	114.24
3	L5	1316	OMG	N9-C4-N3	4.32	134.60	125.95
1	S2	105	PSU	C4-N3-C2	-4.32	120.42	126.37
1	S2	822	PSU	C4-N3-C2	-4.32	120.42	126.37
1	S2	1639	G7M	C1'-N9-C8	-4.32	112.16	126.74
1	S2	683	OMG	N9-C4-N3	4.31	134.57	125.95
1	S2	1232	PSU	C4-N3-C2	-4.30	120.44	126.37
3	L5	3853	PSU	O2-C2-N1	-4.30	118.36	122.79
1	S2	918	PSU	C4-N3-C2	-4.29	120.46	126.37
3	L5	5001	PSU	C4-N3-C2	-4.29	120.46	126.37
1	S2	1850	MA6	C2-N1-C6	4.29	122.31	111.83
1	S2	966	PSU	C4-N3-C2	-4.29	120.47	126.37
3	L5	4403	PSU	C4-N3-C2	-4.29	120.47	126.37
1	S2	34	PSU	C4-N3-C2	-4.27	120.48	126.37
3	L5	3758	PSU	C4-N3-C2	-4.27	120.48	126.37
1	S2	1442	OMU	N3-C2-N1	4.27	120.45	114.89
3	L5	1744	PSU	C4-N3-C2	-4.27	120.48	126.37
3	L5	2508	PSU	C4-N3-C2	-4.27	120.49	126.37
3	L5	1862	PSU	O2-C2-N1	-4.27	118.39	122.79
2	L8	14	OMU	C5-C4-N3	4.26	120.77	114.80
3	L5	4500	PSU	C4-N3-C2	-4.26	120.50	126.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	3734	PSU	C4-N3-C2	-4.26	120.50	126.37
3	L5	2839	PSU	C4-N3-C2	-4.26	120.50	126.37
1	S2	172	OMU	N3-C2-N1	4.26	120.44	114.89
1	S2	428	OMU	N3-C2-N1	4.25	120.42	114.89
3	L5	2415	OMU	N3-C2-N1	4.24	120.41	114.89
3	L5	4569	PSU	C4-N3-C2	-4.24	120.53	126.37
3	L5	4196	OMG	N9-C4-N3	4.24	134.43	125.95
1	S2	1244	PSU	C4-N3-C2	-4.24	120.53	126.37
3	L5	4299	PSU	C4-N3-C2	-4.23	120.54	126.37
3	L5	4353	PSU	C4-N3-C2	-4.23	120.55	126.37
1	S2	573	PSU	C4-N3-C2	-4.22	120.56	126.37
3	L5	3760	A2M	N3-C4-N9	4.22	134.34	127.17
1	S2	116	OMU	N3-C2-N1	4.22	120.38	114.89
3	L5	3695	PSU	C4-N3-C2	-4.22	120.56	126.37
83	At	39	PSU	C4-N3-C2	-4.21	120.56	126.37
1	S2	801	PSU	C4-N3-C2	-4.21	120.57	126.37
1	S2	1347	PSU	C4-N3-C2	-4.21	120.57	126.37
3	L5	4361	PSU	C4-N3-C2	-4.21	120.57	126.37
3	L5	2364	OMG	N9-C4-N3	4.21	134.36	125.95
3	L5	1522	OMG	N9-C4-N3	4.21	134.36	125.95
1	S2	814	PSU	C4-N3-C2	-4.20	120.58	126.37
1	S2	651	PSU	C4-N3-C2	-4.20	120.58	126.37
1	S2	866	PSU	C4-N3-C2	-4.20	120.58	126.37
3	L5	4423	PSU	C4-N3-C2	-4.20	120.58	126.37
3	L5	3851	PSU	C4-N3-C2	-4.20	120.59	126.37
1	S2	1639	G7M	C2-N3-C4	4.19	119.52	112.30
3	L5	4552	PSU	C4-N3-C2	-4.19	120.60	126.37
3	L5	4392	OMG	N9-C4-N3	4.19	134.32	125.95
1	S2	354	OMU	N3-C2-N1	4.18	120.34	114.89
64	Lr	2	SAC	C2A-C1A-N	-4.18	109.18	116.12
1	S2	1056	PSU	C4-N3-C2	-4.18	120.61	126.37
3	L5	3627	OMG	C6-C5-N7	4.18	137.89	130.29
3	L5	1779	PSU	C4-N3-C2	-4.17	120.63	126.37
1	S2	1851	MA6	N3-C4-N9	4.17	134.26	127.17
3	L5	4972	PSU	C4-N3-C2	-4.17	120.63	126.37
3	L5	4623	OMG	N9-C4-N3	4.16	134.28	125.95
1	S2	815	PSU	C4-N3-C2	-4.16	120.64	126.37
3	L5	3715	PSU	C4-N3-C2	-4.16	120.64	126.37
1	S2	1239	PSU	C4-N3-C2	-4.16	120.65	126.37
3	L5	1782	PSU	C4-N3-C2	-4.15	120.65	126.37
3	L5	3844	PSU	C4-N3-C2	-4.15	120.65	126.37
3	L5	4431	PSU	C4-N3-C2	-4.15	120.66	126.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
84	Pt	8	4SU	C5-C4-S4	-4.15	119.57	124.31
3	L5	1536	PSU	C4-N3-C2	-4.14	120.66	126.37
3	L5	3899	OMG	N9-C4-N3	4.14	134.23	125.95
84	Pt	8	4SU	N3-C2-N1	4.13	120.27	114.89
3	L5	3853	PSU	C4-N3-C2	-4.13	120.68	126.37
3	L5	5010	PSU	C4-N3-C2	-4.13	120.68	126.37
3	L5	4228	OMG	N9-C4-N3	4.13	134.21	125.95
29	SV	1	AME	CT2-CT1-N	-4.13	109.28	116.12
1	S2	1851	MA6	C2-N1-C6	4.12	121.90	111.83
3	L5	4618	OMG	N9-C4-N3	4.12	134.19	125.95
2	L8	55	PSU	C4-N3-C2	-4.12	120.70	126.37
3	L5	4431	PSU	O2-C2-N1	-4.12	118.54	122.79
3	L5	1860	PSU	C4-N3-C2	-4.11	120.71	126.37
6	SA	2	SAC	C2A-C1A-N	-4.11	109.30	116.12
1	S2	296	PSU	C4-N3-C2	-4.11	120.71	126.37
3	L5	3770	PSU	C4-N3-C2	-4.11	120.71	126.37
3	L5	3729	PSU	C4-N3-C2	-4.10	120.72	126.37
1	S2	109	PSU	O2-C2-N1	-4.10	118.56	122.79
1	S2	406	PSU	C4-N3-C2	-4.10	120.72	126.37
1	S2	1174	PSU	C4-N3-C2	-4.10	120.73	126.37
1	S2	1177	PSU	C4-N3-C2	-4.10	120.73	126.37
3	L5	1792	PSU	C4-N3-C2	-4.10	120.73	126.37
3	L5	3762	PSU	C4-N3-C2	-4.10	120.73	126.37
1	S2	1238	PSU	C4-N3-C2	-4.09	120.73	126.37
1	S2	1367	PSU	C4-N3-C2	-4.09	120.73	126.37
3	L5	4471	PSU	C4-N3-C2	-4.09	120.73	126.37
2	L8	69	PSU	C4-N3-C2	-4.08	120.74	126.37
1	S2	1643	PSU	C4-N3-C2	-4.08	120.74	126.37
3	L5	3639	PSU	C4-N3-C2	-4.08	120.75	126.37
3	L5	4403	PSU	O2-C2-N1	-4.08	118.58	122.79
3	L5	4498	OMU	C5-C4-N3	4.08	120.51	114.80
1	S2	649	PSU	C4-N3-C2	-4.07	120.76	126.37
1	S2	863	PSU	C4-N3-C2	-4.07	120.77	126.37
3	L5	4689	PSU	C4-N3-C2	-4.07	120.77	126.37
1	S2	1243	PSU	C4-N3-C2	-4.06	120.78	126.37
1	S2	1850	MA6	N3-C4-N9	4.05	134.06	127.17
1	S2	93	PSU	C4-N3-C2	-4.05	120.79	126.37
1	S2	609	PSU	C4-N3-C2	-4.05	120.79	126.37
84	Pt	56	PSU	C4-N3-C2	-4.04	120.80	126.37
1	S2	1445	PSU	C4-N3-C2	-4.04	120.81	126.37
1	S2	121	OMU	N3-C2-N1	4.04	120.14	114.89
3	L5	4532	PSU	C4-N3-C2	-4.04	120.81	126.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	S2	218	PSU	C4-N3-C2	-4.03	120.81	126.37
39	LA	216	V5N	CD2-CG-ND1	4.03	111.19	105.76
3	L5	1524	A2M	N3-C4-N9	4.03	134.02	127.17
3	L5	2401	A2M	C2'-C1'-N9	-4.03	107.12	113.75
83	At	8	4SU	N3-C2-N1	4.03	120.13	114.89
1	S2	1136	PSU	C4-N3-C2	-4.03	120.82	126.37
1	S2	627	OMU	N3-C2-N1	4.03	120.13	114.89
1	S2	36	PSU	C4-N3-C2	-4.02	120.83	126.37
1	S2	1625	PSU	C4-N3-C2	-4.02	120.84	126.37
1	S2	1288	OMU	N3-C2-N1	4.01	120.12	114.89
1	S2	686	PSU	C4-N3-C2	-4.01	120.85	126.37
83	At	8	4SU	C5-C4-S4	-4.00	119.74	124.31
3	L5	3884	PSU	C4-N3-C2	-4.00	120.87	126.37
3	L5	4227	OMU	N3-C2-N1	4.00	120.09	114.89
3	L5	4227	OMU	C5-C4-N3	3.99	120.39	114.80
1	S2	428	OMU	C5-C4-N3	3.99	120.39	114.80
3	L5	3925	OMU	C5-C4-N3	3.99	120.39	114.80
1	S2	354	OMU	C5-C4-N3	3.99	120.39	114.80
1	S2	1850	MA6	C4-C5-N7	-3.97	106.04	110.58
3	L5	1781	PSU	C4-N3-C2	-3.97	120.90	126.37
3	L5	4628	PSU	C4-N3-C2	-3.97	120.91	126.37
1	S2	627	OMU	C5-C4-N3	3.96	120.35	114.80
3	L5	3785	A2M	O4'-C1'-N9	3.96	115.70	108.09
3	L5	4442	PSU	O2-C2-N1	-3.96	118.70	122.79
2	L8	14	OMU	N3-C2-N1	3.96	120.05	114.89
3	L5	4576	PSU	C4-N3-C2	-3.96	120.92	126.37
1	S2	651	PSU	O2-C2-N1	-3.96	118.71	122.79
1	S2	1367	PSU	O2-C2-N1	-3.95	118.71	122.79
3	L5	4493	PSU	C4-N3-C2	-3.94	120.94	126.37
2	L8	69	PSU	O2-C2-N1	-3.94	118.73	122.79
3	L5	4293	PSU	C4-N3-C2	-3.93	120.95	126.37
1	S2	121	OMU	C5-C4-N3	3.93	120.31	114.80
3	L5	4628	PSU	O2-C2-N1	-3.93	118.74	122.79
3	L5	3762	PSU	O2-C2-N1	-3.92	118.75	122.79
3	L5	1860	PSU	O2-C2-N1	-3.91	118.75	122.79
1	S2	166	A2M	C2-N3-C4	3.90	121.36	111.83
83	At	32	PSU	C4-N3-C2	-3.89	121.01	126.37
3	L5	3899	OMG	C6-C5-N7	3.87	137.33	130.29
1	S2	1442	OMU	C5-C4-N3	3.86	120.20	114.80
1	S2	866	PSU	O2-C2-N1	-3.85	118.81	122.79
3	L5	4689	PSU	O2-C2-N1	-3.85	118.81	122.79
1	S2	1804	OMU	C5-C4-N3	3.84	120.18	114.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	S2	172	OMU	C5-C4-N3	3.84	120.18	114.80
3	L5	2401	A2M	C2-N3-C4	3.84	121.20	111.83
1	S2	1288	OMU	C5-C4-N3	3.83	120.16	114.80
3	L5	4447	5MC	C5-C6-N1	-3.82	119.17	123.31
3	L5	4500	PSU	O2-C2-N1	-3.82	118.85	122.79
1	S2	1383	A2M	C2-N3-C4	3.82	121.15	111.83
3	L5	4312	PSU	O2-C2-N1	-3.81	118.86	122.79
1	S2	1678	A2M	C2-N3-C4	3.80	121.12	111.83
3	L5	5001	PSU	O2-C2-N1	-3.80	118.87	122.79
3	L5	4637	OMG	C2'-C1'-N9	-3.80	107.04	114.24
1	S2	27	A2M	C2-N3-C4	3.80	121.10	111.83
3	L5	3729	PSU	O2-C2-N1	-3.80	118.88	122.79
1	S2	119	PSU	C4-N3-C2	-3.79	121.15	126.37
3	L5	2632	PSU	C4-N3-C2	-3.79	121.15	126.37
1	S2	93	PSU	O2-C2-N1	-3.78	118.89	122.79
1	S2	512	A2M	C2-N3-C4	3.78	121.06	111.83
1	S2	649	PSU	O2-C2-N1	-3.77	118.90	122.79
3	L5	2837	OMU	C5-C4-N3	3.77	120.09	114.80
3	L5	2787	A2M	C2-N3-C4	3.77	121.05	111.83
3	L5	1326	A2M	C2-N3-C4	3.76	121.02	111.83
3	L5	2363	A2M	C2-N3-C4	3.76	121.01	111.83
3	L5	2415	OMU	C5-C4-N3	3.76	120.07	114.80
3	L5	2815	A2M	C2-N3-C4	3.76	121.01	111.83
1	S2	1136	PSU	O2-C2-N1	-3.76	118.92	122.79
1	S2	1445	PSU	O2-C2-N1	-3.75	118.92	122.79
1	S2	1692	PSU	O2-C2-N1	-3.75	118.92	122.79
3	L5	4569	PSU	O2-C2-N1	-3.75	118.92	122.79
3	L5	3830	A2M	C2-N3-C4	3.75	120.99	111.83
1	S2	1643	PSU	O2-C2-N1	-3.75	118.92	122.79
1	S2	668	A2M	C4-C5-N7	-3.75	106.30	110.58
3	L5	2815	A2M	C4-C5-N7	-3.74	106.30	110.58
3	L5	3723	A2M	C2-N3-C4	3.74	120.97	111.83
1	S2	406	PSU	O2-C2-N1	-3.74	118.93	122.79
1	S2	918	PSU	O2-C2-N1	-3.74	118.93	122.79
3	L5	1534	A2M	C4-C5-N7	-3.74	106.31	110.58
1	S2	99	A2M	C2'-C1'-N9	-3.74	107.61	113.75
3	L5	3627	OMG	N9-C4-N3	3.73	133.42	125.95
3	L5	2508	PSU	O2-C2-N1	-3.73	118.94	122.79
1	S2	1851	MA6	C4-C5-N7	-3.72	106.32	110.58
3	L5	4590	A2M	C2-N3-C4	3.72	120.92	111.83
3	L5	4620	OMU	C5-C4-N3	3.72	120.01	114.80
1	S2	99	A2M	C2-N3-C4	3.72	120.91	111.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	S2	166	A2M	C2'-C1'-N9	-3.71	107.64	113.75
1	S2	468	A2M	C2-N3-C4	3.70	120.88	111.83
1	S2	116	OMU	C5-C4-N3	3.70	119.99	114.80
3	L5	1534	A2M	C2-N3-C4	3.70	120.87	111.83
3	L5	1871	A2M	C2-N3-C4	3.70	120.87	111.83
1	S2	36	PSU	O2-C2-N1	-3.69	118.98	122.79
3	L5	4618	OMG	C6-C5-N7	3.69	137.01	130.29
3	L5	1683	PSU	C4-N3-C2	-3.69	121.28	126.37
1	S2	1243	PSU	O2-C2-N1	-3.69	118.99	122.79
84	Pt	56	PSU	O2-C2-N1	-3.68	118.99	122.79
1	S2	686	PSU	O2-C2-N1	-3.68	118.99	122.79
1	S2	863	PSU	O2-C2-N1	-3.68	118.99	122.79
1	S2	159	A2M	C2-N3-C4	3.68	120.82	111.83
1	S2	1031	A2M	C2-N3-C4	3.68	120.82	111.83
3	L5	400	A2M	C2-N3-C4	3.68	120.81	111.83
83	At	39	PSU	O2-C2-N1	-3.68	119.00	122.79
1	S2	1244	PSU	O2-C2-N1	-3.68	119.00	122.79
1	S2	609	PSU	O2-C2-N1	-3.67	119.00	122.79
1	S2	1625	PSU	O2-C2-N1	-3.67	119.00	122.79
3	L5	5010	PSU	O2-C2-N1	-3.67	119.00	122.79
1	S2	1056	PSU	O2-C2-N1	-3.67	119.01	122.79
1	S2	668	A2M	C2-N3-C4	3.66	120.76	111.83
3	L5	4220	6MZ	C2-N3-C4	3.65	120.75	111.83
1	S2	34	PSU	O2-C2-N1	-3.65	119.02	122.79
3	L5	3734	PSU	O2-C2-N1	-3.65	119.02	122.79
3	L5	3724	A2M	C2-N3-C4	3.65	120.74	111.83
3	L5	4590	A2M	C4-C5-N7	-3.65	106.41	110.58
1	S2	1851	MA6	C2-N3-C4	3.65	120.74	111.83
3	L5	4523	A2M	C2-N3-C4	3.64	120.72	111.83
1	S2	296	PSU	O2-C2-N1	-3.62	119.05	122.79
3	L5	2401	A2M	N3-C2-N1	-3.62	123.10	128.58
3	L5	398	A2M	C2-N3-C4	3.62	120.66	111.83
1	S2	27	A2M	C4-C5-N7	-3.62	106.45	110.58
1	S2	484	A2M	C2-N3-C4	3.62	120.66	111.83
3	L5	2415	OMU	C1'-N1-C2	3.61	124.08	117.59
1	S2	105	PSU	O2-C2-N1	-3.61	119.07	122.79
1	S2	1177	PSU	O2-C2-N1	-3.61	119.07	122.79
1	S2	966	PSU	O2-C2-N1	-3.60	119.07	122.79
1	S2	801	PSU	O2-C2-N1	-3.60	119.08	122.79
3	L5	4306	OMU	C5-C4-N3	3.60	119.84	114.80
3	L5	2401	A2M	C4-C5-N7	-3.60	106.47	110.58
3	L5	1677	PSU	O2-C2-N1	-3.60	119.08	122.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	3825	A2M	C2-N3-C4	3.59	120.61	111.83
1	S2	918	PSU	C3'-C2'-C1'	3.59	105.92	101.69
1	S2	590	A2M	C2-N3-C4	3.59	120.59	111.83
3	L5	1522	OMG	C6-C5-N7	3.58	136.81	130.29
3	L5	1782	PSU	O2-C2-N1	-3.58	119.09	122.79
3	L5	4392	OMG	C6-C5-N7	3.58	136.81	130.29
1	S2	1832	6MZ	C2-N3-C4	3.58	120.57	111.83
1	S2	1248	B8N	C31-N3-C2	3.58	122.92	117.64
3	L5	3785	A2M	C2-N3-C4	3.57	120.55	111.83
3	L5	4576	PSU	O2-C2-N1	-3.56	119.11	122.79
83	At	32	PSU	O2-C2-N1	-3.56	119.11	122.79
1	S2	822	PSU	O2-C2-N1	-3.56	119.11	122.79
3	L5	1322	1MA	N9-C4-N3	3.56	135.01	126.90
3	L5	4228	OMG	C6-C5-N7	3.56	136.77	130.29
1	S2	681	PSU	O2-C2-N1	-3.56	119.12	122.79
1	S2	1174	PSU	O2-C2-N1	-3.55	119.12	122.79
3	L5	4531	PSU	O2-C2-N1	-3.55	119.13	122.79
3	L5	4623	OMG	C6-C5-N7	3.55	136.75	130.29
3	L5	3867	A2M	C2-N3-C4	3.55	120.50	111.83
3	L5	3718	A2M	C2-N3-C4	3.55	120.49	111.83
1	S2	1239	PSU	O2-C2-N1	-3.55	119.13	122.79
2	L8	75	OMG	C6-C5-N7	3.54	136.74	130.29
3	L5	4571	A2M	C2-N3-C4	3.54	120.47	111.83
3	L5	3920	PSU	O2-C2-N1	-3.54	119.14	122.79
50	La	39	V5N	CD2-CG-ND1	3.52	110.51	105.76
1	S2	159	A2M	C4-C5-N7	-3.52	106.56	110.58
1	S2	99	A2M	C4-C5-N7	-3.52	106.56	110.58
1	S2	1238	PSU	O2-C2-N1	-3.51	119.16	122.79
3	L5	4420	PSU	C4-N3-C2	-3.51	121.53	126.37
3	L5	1326	A2M	C4-C5-N7	-3.51	106.56	110.58
1	S2	1031	A2M	C4-C5-N7	-3.51	106.57	110.58
1	S2	1850	MA6	C2-N3-C4	3.51	120.40	111.83
3	L5	3851	PSU	O2-C2-N1	-3.51	119.17	122.79
3	L5	4353	PSU	O2-C2-N1	-3.50	119.18	122.79
3	L5	2787	A2M	N3-C2-N1	-3.50	123.29	128.58
3	L5	4220	6MZ	C9-N6-C6	-3.50	119.61	122.85
3	L5	3758	PSU	O2-C2-N1	-3.50	119.18	122.79
3	L5	3760	A2M	C2-N3-C4	3.49	120.36	111.83
3	L5	4196	OMG	C6-C5-N7	3.49	136.64	130.29
1	S2	814	PSU	O2-C2-N1	-3.49	119.19	122.79
1	S2	576	A2M	C4-C5-N7	-3.48	106.60	110.58
1	S2	576	A2M	C2-N3-C4	3.48	120.33	111.83

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	S2	573	PSU	O2-C2-N1	-3.48	119.20	122.79
1	S2	1004	PSU	O2-C2-N1	-3.48	119.20	122.79
3	L5	3770	PSU	O2-C2-N1	-3.47	119.21	122.79
3	L5	1779	PSU	O2-C2-N1	-3.46	119.22	122.79
3	L5	3764	PSU	O2-C2-N1	-3.46	119.22	122.79
3	L5	1781	PSU	O2-C2-N1	-3.46	119.22	122.79
1	S2	484	A2M	C4-C5-N7	-3.46	106.63	110.58
3	L5	3695	PSU	O2-C2-N1	-3.46	119.22	122.79
2	L8	55	PSU	O2-C2-N1	-3.45	119.23	122.79
1	S2	166	A2M	C4-C5-N7	-3.45	106.63	110.58
1	S2	1232	PSU	O2-C2-N1	-3.45	119.23	122.79
1	S2	512	A2M	N3-C2-N1	-3.45	123.36	128.58
3	L5	1871	A2M	C4-C5-N7	-3.45	106.64	110.58
1	S2	683	OMG	C6-C5-N7	3.44	136.56	130.29
3	L5	4420	PSU	O2-C2-N1	-3.44	119.24	122.79
3	L5	3760	A2M	C4-C5-N7	-3.44	106.65	110.58
3	L5	2364	OMG	C6-C5-N7	3.44	136.55	130.29
1	S2	166	A2M	N3-C2-N1	-3.44	123.38	128.58
3	L5	400	A2M	C4-C5-N7	-3.44	106.65	110.58
1	S2	218	PSU	O2-C2-N1	-3.44	119.25	122.79
3	L5	4636	PSU	O2-C2-N1	-3.43	119.25	122.79
1	S2	1832	6MZ	N1-C2-N3	-3.42	123.41	128.58
3	L5	3884	PSU	O2-C2-N1	-3.41	119.27	122.79
3	L5	3830	A2M	C4-C5-N7	-3.41	106.68	110.58
3	L5	4423	PSU	O2-C2-N1	-3.41	119.27	122.79
1	S2	1347	PSU	O2-C2-N1	-3.40	119.28	122.79
1	S2	1383	A2M	C4-C5-N7	-3.40	106.69	110.58
1	S2	815	PSU	O2-C2-N1	-3.40	119.28	122.79
3	L5	1524	A2M	C2-N3-C4	3.40	120.13	111.83
3	L5	4220	6MZ	N1-C2-N3	-3.40	123.44	128.58
3	L5	1316	OMG	C6-C5-N7	3.39	136.46	130.29
1	S2	468	A2M	C4-C5-N7	-3.39	106.71	110.58
3	L5	4523	A2M	N3-C2-N1	-3.39	123.45	128.58
3	L5	4471	PSU	O2-C2-N1	-3.39	119.29	122.79
3	L5	1744	PSU	O2-C2-N1	-3.39	119.30	122.79
3	L5	3715	PSU	O2-C2-N1	-3.39	119.30	122.79
1	S2	572	PSU	O2-C2-N1	-3.38	119.30	122.79
1	S2	1326	UY1	O2-C2-N1	-3.38	119.30	122.79
1	S2	512	A2M	C4-C5-N7	-3.37	106.72	110.58
3	L5	3723	A2M	C4-C5-N7	-3.37	106.72	110.58
1	S2	119	PSU	O2-C2-N1	-3.37	119.31	122.79
3	L5	4530	UR3	C5-C4-N3	3.37	119.48	115.04

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	S2	1832	6MZ	C4-C5-N7	-3.37	106.73	110.58
1	S2	590	A2M	C4-C5-N7	-3.36	106.74	110.58
3	L5	1524	A2M	C4-C5-N7	-3.36	106.74	110.58
3	L5	2843	PSU	O2-C2-N1	-3.36	119.32	122.79
3	L5	3744	OMG	C6-C5-N7	3.36	136.41	130.29
3	L5	3768	PSU	O2-C2-N1	-3.35	119.33	122.79
3	L5	4220	6MZ	C6-C5-N7	3.35	136.08	132.43
3	L5	398	A2M	C4-C5-N7	-3.35	106.75	110.58
1	S2	1383	A2M	N3-C2-N1	-3.35	123.51	128.58
3	L5	4442	PSU	C3'-C2'-C1'	3.35	105.64	101.69
1	S2	1832	6MZ	C6-C5-N7	3.35	136.08	132.43
3	L5	4220	6MZ	C4-C5-N7	-3.34	106.76	110.58
3	L5	3944	OMG	C6-C5-N7	3.34	136.37	130.29
3	L5	4370	OMG	C6-C5-N7	3.34	136.36	130.29
3	L5	3724	A2M	C4-C5-N7	-3.33	106.78	110.58
3	L5	3830	A2M	N3-C2-N1	-3.32	123.55	128.58
3	L5	4227	OMU	O4-C4-C5	-3.32	119.44	125.16
3	L5	3760	A2M	C4-N9-C8	3.32	109.22	105.74
3	L5	1534	A2M	N3-C2-N1	-3.31	123.57	128.58
3	L5	3785	A2M	N3-C2-N1	-3.30	123.58	128.58
3	L5	4498	OMU	O4-C4-C5	-3.30	119.46	125.16
1	S2	172	OMU	O4-C4-C5	-3.30	119.47	125.16
3	L5	3785	A2M	C4-N9-C8	3.30	109.20	105.74
1	S2	436	OMG	C6-C5-N7	3.30	136.29	130.29
3	L5	3718	A2M	C4-C5-N7	-3.29	106.81	110.58
1	S2	590	A2M	C2'-C1'-N9	-3.29	108.33	113.75
3	L5	3760	A2M	N3-C2-N1	-3.29	123.60	128.58
3	L5	3867	A2M	C4-C5-N7	-3.29	106.82	110.58
1	S2	867	OMG	C2'-C1'-N9	-3.29	108.00	114.24
1	S2	1678	A2M	N3-C2-N1	-3.28	123.61	128.58
3	L5	1871	A2M	N3-C2-N1	-3.28	123.61	128.58
3	L5	4361	PSU	O2-C2-N1	-3.28	119.41	122.79
1	S2	867	OMG	C6-C5-N7	3.28	136.26	130.29
3	L5	4521	PSU	O2-C2-N1	-3.28	119.41	122.79
1	S2	509	OMG	C6-C5-N7	3.27	136.25	130.29
3	L5	3764	PSU	C3'-C2'-C1'	3.27	105.55	101.69
1	S2	99	A2M	N3-C2-N1	-3.27	123.63	128.58
1	S2	468	A2M	N3-C2-N1	-3.26	123.64	128.58
3	L5	400	A2M	N3-C2-N1	-3.26	123.65	128.58
1	S2	27	A2M	N3-C2-N1	-3.25	123.66	128.58
3	L5	2787	A2M	C4-C5-N7	-3.25	106.86	110.58
3	L5	3825	A2M	N3-C2-N1	-3.25	123.67	128.58

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	4579	PSU	O2-C2-N1	-3.24	119.44	122.79
2	L8	14	OMU	O4-C4-C5	-3.24	119.57	125.16
1	S2	1639	G7M	CN7-N7-C5	3.24	130.84	126.80
3	L5	2363	A2M	C4-C5-N7	-3.23	106.89	110.58
3	L5	3639	PSU	O2-C2-N1	-3.23	119.46	122.79
1	S2	1031	A2M	N3-C2-N1	-3.23	123.70	128.58
3	L5	1792	PSU	O2-C2-N1	-3.23	119.46	122.79
1	S2	354	OMU	O4-C4-C5	-3.23	119.60	125.16
3	L5	2876	OMG	C6-C5-N7	3.22	136.16	130.29
3	L5	4571	A2M	C4-C5-N7	-3.22	106.90	110.58
3	L5	3723	A2M	N3-C2-N1	-3.22	123.71	128.58
1	S2	822	PSU	C3'-C2'-C1'	3.22	105.48	101.69
3	L5	3818	UY1	O2-C2-N1	-3.21	119.47	122.79
3	L5	398	A2M	C2'-C1'-N9	-3.21	108.47	113.75
3	L5	2363	A2M	N3-C2-N1	-3.21	123.72	128.58
3	L5	3785	A2M	C4-C5-N7	-3.19	106.94	110.58
3	L5	1582	PSU	O2-C2-N1	-3.19	119.50	122.79
1	S2	1678	A2M	C4-C5-N7	-3.18	106.94	110.58
1	S2	1081	PSU	O2-C2-N1	-3.18	119.51	122.79
3	L5	4673	PSU	O2-C2-N1	-3.17	119.52	122.79
3	L5	4637	OMG	C6-C5-N7	3.17	136.06	130.29
3	L5	2415	OMU	O4-C4-C5	-3.16	119.72	125.16
3	L5	398	A2M	N3-C2-N1	-3.16	123.81	128.58
3	L5	3825	A2M	C4-C5-N7	-3.15	106.98	110.58
3	L5	1534	A2M	C4-N9-C8	3.15	109.05	105.74
1	S2	428	OMU	O4-C4-C5	-3.15	119.73	125.16
3	L5	4296	PSU	O2-C2-N1	-3.14	119.55	122.79
3	L5	3724	A2M	N3-C2-N1	-3.14	123.83	128.58
1	S2	627	OMU	O4-C4-C5	-3.14	119.75	125.16
81	5A	50	5CT	C1-NZ-CE	-3.14	106.53	113.38
3	L5	2632	PSU	O2-C2-N1	-3.14	119.55	122.79
3	L5	3782	5MC	C5-C6-N1	-3.14	119.91	123.31
1	S2	644	OMG	C6-C5-N7	3.13	136.00	130.29
3	L5	4499	OMG	C6-C5-N7	3.13	135.99	130.29
1	S2	1442	OMU	O4-C4-C5	-3.13	119.77	125.16
3	L5	3782	5MC	C5-C4-N3	-3.13	118.55	121.75
1	S2	1248	B8N	N3-C2-N1	3.12	120.53	116.72
1	S2	590	A2M	N3-C2-N1	-3.12	123.86	128.58
3	L5	4447	5MC	C5-C4-N3	-3.10	118.57	121.75
3	L5	4590	A2M	C2'-C1'-N9	-3.10	108.65	113.75
1	S2	1490	OMG	C6-C5-N7	3.10	135.93	130.29
1	S2	1328	OMG	C6-C5-N7	3.10	135.92	130.29

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	4493	PSU	O2-C2-N1	-3.08	119.61	122.79
3	L5	4590	A2M	N3-C2-N1	-3.08	123.91	128.58
3	L5	1683	PSU	O2-C2-N1	-3.08	119.61	122.79
3	L5	4620	OMU	O4-C4-C5	-3.07	119.86	125.16
3	L5	3627	OMG	C4-C5-N7	-3.07	105.80	110.67
1	S2	1288	OMU	O4-C4-C5	-3.07	119.87	125.16
1	S2	484	A2M	C2'-C1'-N9	-3.07	108.71	113.75
1	S2	1850	MA6	N1-C2-N3	-3.06	123.94	128.58
3	L5	2815	A2M	N3-C2-N1	-3.06	123.95	128.58
3	L5	1536	PSU	O2-C2-N1	-3.06	119.63	122.79
1	S2	668	A2M	N3-C2-N1	-3.06	123.95	128.58
1	S2	116	OMU	O4-C4-C5	-3.06	119.89	125.16
1	S2	1851	MA6	N1-C2-N3	-3.05	123.96	128.58
1	S2	1842	4AC	N4-C4-N3	3.05	118.81	113.87
1	S2	484	A2M	N3-C2-N1	-3.04	123.98	128.58
3	L5	3825	A2M	C2'-C1'-N9	-3.04	108.75	113.75
3	L5	4523	A2M	C4-C5-N7	-3.04	107.11	110.58
1	S2	601	OMG	C6-C5-N7	3.03	135.81	130.29
3	L5	1326	A2M	N3-C2-N1	-3.03	123.99	128.58
3	L5	4306	OMU	O4-C4-C5	-3.01	119.97	125.16
3	L5	4293	PSU	O2-C2-N1	-3.01	119.69	122.79
3	L5	2876	OMG	C2'-C1'-N9	-3.00	108.54	114.24
1	S2	576	A2M	N3-C2-N1	-2.99	124.06	128.58
1	S2	1447	OMG	C6-C5-N7	2.98	135.70	130.29
1	S2	1004	PSU	C3'-C2'-C1'	2.97	105.20	101.69
3	L5	4299	PSU	O2-C2-N1	-2.96	119.74	122.79
3	L5	3925	OMU	O4-C4-C5	-2.96	120.06	125.16
3	L5	3899	OMG	C4-C5-N7	-2.95	106.00	110.67
1	S2	121	OMU	O4-C4-C5	-2.95	120.08	125.16
3	L5	4571	A2M	N3-C2-N1	-2.93	124.15	128.58
1	S2	1337	4AC	N4-C4-N3	2.92	118.61	113.87
1	S2	1081	PSU	C5-C6-N1	-2.90	118.11	122.14
1	S2	159	A2M	N3-C2-N1	-2.90	124.20	128.58
3	L5	3844	PSU	O2-C2-N1	-2.89	119.80	122.79
1	S2	1639	G7M	C3'-C2'-C1'	2.88	106.91	101.46
1	S2	1031	A2M	C2'-C1'-N9	-2.88	109.02	113.75
3	L5	3718	A2M	N3-C2-N1	-2.87	124.24	128.58
3	L5	3867	A2M	N3-C2-N1	-2.87	124.24	128.58
3	L5	3792	OMG	C6-C5-N7	2.86	135.49	130.29
84	Pt	21	H2U	C5-C6-N1	-2.85	102.88	111.52
3	L5	1524	A2M	N3-C2-N1	-2.85	124.27	128.58
1	S2	512	A2M	C4-N9-C8	2.85	108.73	105.74

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	4457	PSU	O2-C2-N1	-2.84	119.86	122.79
3	L5	4523	A2M	C4-N9-C8	2.84	108.72	105.74
1	S2	166	A2M	C4-N9-C8	2.83	108.71	105.74
3	L5	3637	PSU	C5-C6-N1	-2.82	118.22	122.14
3	L5	2424	OMG	C6-C5-N7	2.80	135.38	130.29
1	S2	1639	G7M	O6-C6-C5	-2.77	121.82	128.01
1	S2	1804	OMU	O4-C4-C5	-2.77	120.38	125.16
1	S2	99	A2M	C4-N9-C8	2.77	108.64	105.74
3	L5	4636	PSU	C5-C6-N1	-2.76	118.31	122.14
83	At	46	7MG	C5-C6-N1	2.76	115.80	110.94
3	L5	3764	PSU	C5-C6-N1	-2.75	118.32	122.14
3	L5	4420	PSU	C6-C5-C4	-2.75	116.32	118.17
3	L5	1534	A2M	O3'-C3'-C4'	-2.73	103.24	111.08
84	Pt	33	OMC	O2-C2-N3	-2.72	118.04	122.33
3	L5	4531	PSU	C5-C6-N1	-2.72	118.37	122.14
3	L5	2843	PSU	C5-C6-N1	-2.72	118.37	122.14
1	S2	668	A2M	C5-N7-C8	2.71	107.71	103.45
3	L5	1534	A2M	C5-N7-C8	2.71	107.71	103.45
1	S2	683	OMG	C4-C5-N7	-2.71	106.38	110.67
1	S2	172	OMU	O2'-C2'-C1'	2.71	114.13	108.99
3	L5	3724	A2M	C4-N9-C8	2.71	108.58	105.74
3	L5	4494	OMG	C6-C5-N7	2.71	135.21	130.29
3	L5	4636	PSU	C3'-C2'-C1'	2.70	104.87	101.69
3	L5	2364	OMG	C4-C5-N7	-2.69	106.41	110.67
3	L5	400	A2M	C4-N9-C8	2.69	108.56	105.74
3	L5	3825	A2M	C4-N9-C8	2.69	108.56	105.74
3	L5	3818	UY1	C5-C6-N1	-2.69	118.41	122.14
1	S2	1850	MA6	C5-N7-C8	2.68	107.66	103.45
1	S2	27	A2M	C4-N9-C8	2.68	108.55	105.74
1	S2	1832	6MZ	C4-N9-C8	2.68	108.55	105.74
1	S2	468	A2M	C2'-C1'-N9	-2.67	109.35	113.75
1	S2	1842	4AC	C6-C5-C4	2.67	120.22	117.00
3	L5	4571	A2M	C4-N9-C8	2.67	108.54	105.74
83	At	20	H2U	C5-C6-N1	-2.67	103.44	111.52
1	S2	1850	MA6	C4-N9-C8	2.67	108.54	105.74
50	La	39	V5N	O-C-CA	-2.66	117.93	124.77
83	At	46	7MG	O4'-C1'-N9	2.66	112.92	109.30
3	L5	3744	OMG	C4-C5-N7	-2.66	106.46	110.67
1	S2	576	A2M	C4-N9-C8	2.65	108.52	105.74
1	S2	644	OMG	C4-C5-N7	-2.65	106.47	110.67
1	S2	468	A2M	C4-N9-C8	2.64	108.51	105.74
3	L5	4972	PSU	O2-C2-N1	-2.63	120.07	122.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	4590	A2M	C5-N7-C8	2.63	107.59	103.45
1	S2	99	A2M	C5-N7-C8	2.63	107.58	103.45
1	S2	1031	A2M	C4-N9-C8	2.63	108.50	105.74
1	S2	1692	PSU	C5-C6-N1	-2.63	118.49	122.14
3	L5	4447	5MC	O2-C2-N3	-2.62	118.19	122.33
3	L5	2401	A2M	C5-N7-C8	2.62	107.57	103.45
1	S2	27	A2M	C5-N7-C8	2.62	107.57	103.45
1	S2	509	OMG	C4-C5-N7	-2.62	106.52	110.67
1	S2	428	OMU	O2-C2-N1	-2.61	119.39	122.80
3	L5	2876	OMG	C4-C5-N7	-2.61	106.53	110.67
3	L5	2815	A2M	C5-N7-C8	2.61	107.56	103.45
2	L8	75	OMG	C4-C5-N7	-2.60	106.55	110.67
3	L5	1326	A2M	C5-N7-C8	2.60	107.53	103.45
3	L5	3944	OMG	C4-C5-N7	-2.60	106.56	110.67
3	L5	4618	OMG	C4-C5-N7	-2.59	106.56	110.67
3	L5	4673	PSU	C5-C6-N1	-2.59	118.55	122.14
3	L5	2837	OMU	O4-C4-C5	-2.59	120.70	125.16
3	L5	4523	A2M	O4'-C1'-N9	2.59	113.06	108.09
1	S2	1383	A2M	C4-N9-C8	2.59	108.45	105.74
3	L5	3830	A2M	C4-N9-C8	2.57	108.44	105.74
3	L5	398	A2M	C4-N9-C8	2.57	108.44	105.74
3	L5	4392	OMG	C4-C5-N7	-2.57	106.60	110.67
3	L5	1522	OMG	C4-C5-N7	-2.56	106.61	110.67
1	S2	166	A2M	C5-N7-C8	2.56	107.48	103.45
3	L5	4623	OMG	C4-C5-N7	-2.56	106.61	110.67
3	L5	4530	UR3	C6-N1-C2	-2.56	119.71	121.80
3	L5	3830	A2M	C5-N7-C8	2.55	107.46	103.45
1	S2	1328	OMG	C4-C5-N7	-2.55	106.62	110.67
3	L5	4637	OMG	C4-C5-N7	-2.55	106.63	110.67
1	S2	512	A2M	C5-N7-C8	2.55	107.46	103.45
1	S2	1031	A2M	C5-N7-C8	2.55	107.46	103.45
3	L5	1582	PSU	C3'-C2'-C1'	2.54	104.69	101.69
3	L5	3867	A2M	C4-N9-C8	2.53	108.40	105.74
1	S2	1004	PSU	C5-C6-N1	-2.53	118.62	122.14
3	L5	1871	A2M	C4-N9-C8	2.52	108.39	105.74
40	LB	245	HIC	CB-CG-CD2	-2.52	123.88	129.96
3	L5	400	A2M	C5-N7-C8	2.52	107.41	103.45
3	L5	4521	PSU	C5-C6-N1	-2.52	118.65	122.14
1	S2	1447	OMG	C4-C5-N7	-2.52	106.68	110.67
1	S2	109	PSU	C5-C6-N1	-2.51	118.66	122.14
1	S2	484	A2M	C5-N7-C8	2.51	107.39	103.45
3	L5	3758	PSU	C5-C6-N1	-2.50	118.67	122.14

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	3760	A2M	C5-N7-C8	2.50	107.38	103.45
1	S2	668	A2M	C4-N9-C8	2.50	108.36	105.74
1	S2	1851	MA6	C5-N7-C8	2.50	107.37	103.45
3	L5	3825	A2M	C5-N7-C8	2.50	107.37	103.45
1	S2	576	A2M	C5-N7-C8	2.49	107.37	103.45
1	S2	159	A2M	C5-N7-C8	2.49	107.37	103.45
3	L5	4370	OMG	C4-C5-N7	-2.49	106.72	110.67
3	L5	1625	OMG	C6-C5-N7	2.49	134.82	130.29
3	L5	3718	A2M	C2'-C1'-N9	-2.49	109.66	113.75
1	S2	1383	A2M	C5-N7-C8	2.48	107.36	103.45
3	L5	4228	OMG	C4-C5-N7	-2.48	106.73	110.67
1	S2	119	PSU	C6-C5-C4	-2.48	116.50	118.17
1	S2	484	A2M	C4-N9-C8	2.48	108.34	105.74
3	L5	1871	A2M	C5-N7-C8	2.48	107.34	103.45
3	L5	3637	PSU	O2-C2-N1	-2.48	120.23	122.79
3	L5	3808	OMC	O2-C2-N3	-2.47	118.43	122.33
3	L5	1326	A2M	C4-N9-C8	2.47	108.33	105.74
3	L5	2363	A2M	C5-N7-C8	2.47	107.33	103.45
3	L5	4296	PSU	C5-C6-N1	-2.47	118.71	122.14
1	S2	436	OMG	C4-C5-N7	-2.46	106.77	110.67
3	L5	3925	OMU	O2-C2-N1	-2.46	119.59	122.80
1	S2	867	OMG	C4-C5-N7	-2.46	106.77	110.67
1	S2	601	OMG	C4-C5-N7	-2.46	106.77	110.67
3	L5	4196	OMG	C4-C5-N7	-2.46	106.77	110.67
3	L5	3867	A2M	C5-N7-C8	2.46	107.31	103.45
3	L5	3768	PSU	C5-C6-N1	-2.46	118.73	122.14
1	S2	1490	OMG	C4-C5-N7	-2.45	106.78	110.67
3	L5	2363	A2M	C4-N9-C8	2.45	108.31	105.74
3	L5	4590	A2M	C4-N9-C8	2.45	108.31	105.74
3	L5	4532	PSU	O2-C2-N3	-2.45	117.52	121.86
3	L5	1322	1MA	C4-C5-N7	-2.45	106.79	110.67
39	LA	216	V5N	O-C-CA	-2.44	118.49	124.77
3	L5	3724	A2M	C5-N7-C8	2.44	107.28	103.45
1	S2	590	A2M	C5-N7-C8	2.44	107.28	103.45
3	L5	3920	PSU	C5-C6-N1	-2.43	118.76	122.14
3	L5	1582	PSU	C5-C6-N1	-2.43	118.76	122.14
3	L5	2401	A2M	C6-C5-N7	2.43	136.77	132.09
3	L5	2787	A2M	C5-N7-C8	2.42	107.25	103.45
3	L5	4499	OMG	C4-C5-N7	-2.41	106.84	110.67
3	L5	1536	PSU	C5-C6-N1	-2.41	118.79	122.14
3	L5	3639	PSU	C5-C6-N1	-2.41	118.79	122.14
3	L5	4196	OMG	O6-C6-C5	-2.41	120.17	126.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	3785	A2M	C5-N7-C8	2.41	107.24	103.45
3	L5	4457	PSU	C5-C6-N1	-2.41	118.79	122.14
1	S2	590	A2M	C4-N9-C8	2.41	108.27	105.74
3	L5	2401	A2M	C4-N9-C8	2.41	108.27	105.74
1	S2	468	A2M	C5-N7-C8	2.41	107.23	103.45
1	S2	1326	UY1	C5-C6-N1	-2.41	118.80	122.14
1	S2	1832	6MZ	C5-N7-C8	2.41	107.23	103.45
1	S2	1678	A2M	C4-N9-C8	2.41	108.27	105.74
3	L5	398	A2M	C5-N7-C8	2.40	107.23	103.45
1	S2	1678	A2M	C5-N7-C8	2.39	107.21	103.45
3	L5	2787	A2M	C4-N9-C8	2.39	108.24	105.74
3	L5	1534	A2M	C6-C5-N7	2.38	136.68	132.09
3	L5	4571	A2M	C5-N7-C8	2.38	107.19	103.45
3	L5	4220	6MZ	C4-N9-C8	2.38	108.23	105.74
3	L5	3723	A2M	C5-N7-C8	2.37	107.18	103.45
3	L5	4532	PSU	O2-C2-N1	-2.37	120.34	122.79
3	L5	4227	OMU	C1'-N1-C2	2.37	121.84	117.59
3	L5	3760	A2M	N9-C8-N7	-2.36	110.58	113.94
2	L8	69	PSU	O4'-C1'-C2'	2.36	108.41	105.15
3	L5	4442	PSU	C5-C6-N1	-2.36	118.87	122.14
3	L5	3637	PSU	O2-C2-N3	-2.36	117.67	121.86
3	L5	4579	PSU	C5-C6-N1	-2.36	118.87	122.14
3	L5	4299	PSU	C5-C6-N1	-2.35	118.87	122.14
6	SA	2	SAC	O-C-CA	-2.35	118.73	124.77
1	S2	815	PSU	C5-C6-N1	-2.34	118.89	122.14
1	S2	572	PSU	C5-C6-N1	-2.34	118.89	122.14
3	L5	1316	OMG	C4-C5-N7	-2.34	106.96	110.67
1	S2	966	PSU	C5-C6-N1	-2.34	118.89	122.14
1	S2	822	PSU	C5-C6-N1	-2.34	118.90	122.14
1	S2	1337	4AC	C2'-C1'-N1	-2.33	106.76	113.25
3	L5	4306	OMU	C1'-N1-C2	2.33	121.78	117.59
3	L5	3785	A2M	N9-C8-N7	-2.33	110.63	113.94
3	L5	4220	6MZ	C5-N7-C8	2.33	107.11	103.45
83	At	46	7MG	C5-C4-N9	-2.32	103.36	106.33
3	L5	4423	PSU	C5-C6-N1	-2.32	118.92	122.14
3	L5	2424	OMG	C4-C5-N7	-2.32	106.99	110.67
3	L5	3792	OMG	O6-C6-C5	-2.32	120.41	126.53
83	At	46	7MG	C3'-C2'-C1'	2.32	105.85	101.46
3	L5	3723	A2M	C4-N9-C8	2.32	108.17	105.74
3	L5	4523	A2M	C5-N7-C8	2.31	107.08	103.45
3	L5	1862	PSU	C5-C6-N1	-2.31	118.93	122.14
83	At	16	H2U	C5-C6-N1	-2.31	104.53	111.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	1522	OMG	O6-C6-C5	-2.31	120.45	126.53
3	L5	3782	5MC	O2-C2-N3	-2.29	118.72	122.33
83	At	46	7MG	O6-C6-C5	-2.29	122.00	127.62
1	S2	27	A2M	C2'-C1'-N9	-2.29	109.99	113.75
1	S2	1244	PSU	C5-C6-N1	-2.29	118.97	122.14
3	L5	4494	OMG	O6-C6-C5	-2.29	120.50	126.53
1	S2	601	OMG	O6-C6-C5	-2.29	120.50	126.53
3	L5	1524	A2M	C5-N7-C8	2.28	107.03	103.45
3	L5	2364	OMG	O6-C6-C5	-2.28	120.52	126.53
3	L5	1871	A2M	C6-C5-N7	2.27	136.47	132.09
1	S2	1248	B8N	O4'-C1'-C2'	2.27	108.30	105.15
1	S2	1337	4AC	C6-C5-C4	2.27	119.74	117.00
3	L5	1522	OMG	C2'-C1'-N9	-2.27	109.93	114.24
3	L5	3718	A2M	C4-N9-C8	2.27	108.12	105.74
3	L5	4618	OMG	O6-C6-C5	-2.27	120.55	126.53
3	L5	4494	OMG	C4-C5-N7	-2.26	107.10	110.67
3	L5	3851	PSU	C5-C6-N1	-2.26	119.01	122.14
2	L8	75	OMG	O6-C6-C5	-2.25	120.59	126.53
3	L5	4498	OMU	O2-C2-N1	-2.25	119.87	122.80
3	L5	3718	A2M	C5-N7-C8	2.25	106.99	103.45
3	L5	2508	PSU	C5-C6-N1	-2.25	119.02	122.14
3	L5	3760	A2M	C6-C5-N7	2.25	136.43	132.09
1	S2	1850	MA6	C6-C5-N7	2.24	137.02	133.43
1	S2	668	A2M	C6-C5-N7	2.24	136.41	132.09
1	S2	1445	PSU	O4'-C1'-C2'	2.24	108.25	105.15
3	L5	3792	OMG	C4-C5-N7	-2.24	107.12	110.67
3	L5	4636	PSU	O2-C2-N3	-2.24	117.89	121.86
3	L5	1625	OMG	O6-C6-C5	-2.24	120.62	126.53
3	L5	1744	PSU	C5-C6-N1	-2.24	119.03	122.14
3	L5	4447	5MC	N1-C2-N3	2.24	122.69	118.80
3	L5	1625	OMG	C4-C5-N7	-2.24	107.12	110.67
1	S2	1490	OMG	O6-C6-C5	-2.24	120.63	126.53
3	L5	2815	A2M	C6-C5-N7	2.23	136.40	132.09
1	S2	105	PSU	C5-C6-N1	-2.23	119.04	122.14
1	S2	1832	6MZ	C2-N1-C6	2.23	122.63	115.24
1	S2	681	PSU	C5-C6-N1	-2.23	119.05	122.14
3	L5	1534	A2M	N9-C8-N7	-2.23	110.78	113.94
3	L5	4471	PSU	C5-C6-N1	-2.22	119.06	122.14
3	L5	4637	OMG	O6-C6-C5	-2.22	120.67	126.53
3	L5	4590	A2M	C6-C5-N7	2.22	136.37	132.09
3	L5	3695	PSU	C5-C6-N1	-2.22	119.06	122.14
1	S2	814	PSU	C5-C6-N1	-2.22	119.06	122.14

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	5001	PSU	C5-C6-N1	-2.21	119.07	122.14
1	S2	166	A2M	C6-C5-N7	2.21	136.36	132.09
1	S2	27	A2M	C6-C5-N7	2.21	136.34	132.09
1	S2	166	A2M	N9-C8-N7	-2.20	110.81	113.94
3	L5	3768	PSU	C3'-C2'-C1'	2.20	104.29	101.69
1	S2	1347	PSU	C5-C6-N1	-2.20	119.08	122.14
3	L5	2401	A2M	C2-N1-C6	2.20	122.34	118.73
1	S2	651	PSU	C5-C6-N1	-2.20	119.09	122.14
1	S2	172	OMU	O2-C2-N1	-2.20	119.94	122.80
84	Pt	33	OMC	C1'-N1-C2	2.19	123.27	118.44
3	L5	4403	PSU	C5-C6-N1	-2.19	119.11	122.14
1	S2	354	OMU	O2-C2-N1	-2.19	119.95	122.80
2	L8	55	PSU	C5-C6-N1	-2.18	119.11	122.14
3	L5	4353	PSU	C5-C6-N1	-2.18	119.11	122.14
3	L5	3830	A2M	C6-C5-N7	2.18	136.28	132.09
1	S2	1842	4AC	C5-C4-N3	-2.17	119.21	122.60
3	L5	4431	PSU	C5-C6-N1	-2.17	119.13	122.14
3	L5	4536	OMC	O2-C2-N3	-2.16	118.92	122.33
3	L5	1524	A2M	C2-N1-C6	2.16	122.28	118.73
3	L5	2787	A2M	O4'-C4'-C5'	2.16	116.25	109.33
3	L5	2815	A2M	C4-N9-C8	2.16	108.00	105.74
1	S2	627	OMU	O2-C2-N1	-2.16	119.99	122.80
1	S2	1643	PSU	O4'-C1'-C2'	2.16	108.13	105.15
3	L5	1779	PSU	C5-C6-N1	-2.15	119.15	122.14
1	S2	1081	PSU	C3'-C2'-C1'	2.15	104.23	101.69
1	S2	34	PSU	C5-C6-N1	-2.15	119.16	122.14
3	L5	1524	A2M	C6-C5-N7	2.15	136.23	132.09
3	L5	3734	PSU	C5-C6-N1	-2.15	119.16	122.14
1	S2	99	A2M	C6-C5-N7	2.15	136.23	132.09
3	L5	4673	PSU	O2-C2-N3	-2.14	118.05	121.86
3	L5	4531	PSU	O2-C2-N3	-2.14	118.06	121.86
1	S2	1851	MA6	C6-C5-N7	2.14	136.85	133.43
3	L5	4499	OMG	O6-C6-C5	-2.14	120.88	126.53
1	S2	573	PSU	C5-C6-N1	-2.14	119.17	122.14
1	S2	1851	MA6	C4-N9-C8	2.14	107.98	105.74
1	S2	572	PSU	C3'-C2'-C1'	2.14	104.21	101.69
3	L5	2424	OMG	O6-C6-C5	-2.14	120.89	126.53
3	L5	3899	OMG	C8-N7-C5	2.13	108.06	104.26
1	S2	436	OMG	O6-C6-C5	-2.13	120.90	126.53
83	At	16	H2U	O2-C2-N1	-2.13	120.54	123.10
3	L5	4299	PSU	O2-C2-N3	-2.13	118.08	121.86
3	L5	4361	PSU	C5-C6-N1	-2.13	119.18	122.14

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	3944	OMG	O6-C6-C5	-2.13	120.92	126.53
3	L5	1582	PSU	O2-C2-N3	-2.13	118.08	121.86
3	L5	4457	PSU	O2-C2-N3	-2.13	118.08	121.86
3	L5	4456	OMC	O2-C2-N3	-2.13	118.98	122.33
1	S2	1248	B8N	O36-C34-O35	-2.13	119.26	124.08
3	L5	400	A2M	C6-C5-N7	2.11	136.16	132.09
3	L5	3844	PSU	C5-C6-N1	-2.11	119.21	122.14
3	L5	4220	6MZ	C2-N1-C6	2.11	122.22	115.24
3	L5	3768	PSU	O2-C2-N3	-2.11	118.12	121.86
1	S2	918	PSU	C5-C6-N1	-2.11	119.22	122.14
3	L5	3715	PSU	C5-C6-N1	-2.11	119.22	122.14
3	L5	4420	PSU	O4'-C1'-C2'	2.10	108.06	105.15
1	S2	1328	OMG	O6-C6-C5	-2.10	120.99	126.53
3	L5	3785	A2M	CM'-O2'-C2'	-2.10	109.09	114.47
81	5A	50	5CT	CD-CG-CB	-2.09	105.74	113.62
3	L5	4196	OMG	C2'-C1'-N9	-2.09	110.28	114.24
1	S2	1056	PSU	C5-C6-N1	-2.08	119.25	122.14
83	At	39	PSU	C5-C6-N1	-2.08	119.25	122.14
3	L5	4493	PSU	C5-C6-N1	-2.08	119.25	122.14
3	L5	3853	PSU	O4'-C1'-C2'	2.08	108.03	105.15
1	S2	468	A2M	C6-C5-N7	2.08	136.10	132.09
83	At	8	4SU	O2-C2-N1	-2.08	120.09	122.80
3	L5	3724	A2M	C2'-C1'-N9	-2.08	110.33	113.75
1	S2	116	OMU	O2-C2-N1	-2.08	120.09	122.80
1	S2	1447	OMG	O6-C6-C5	-2.07	121.06	126.53
1	S2	1842	4AC	O2-C2-N3	-2.07	119.06	122.33
1	S2	218	PSU	O4'-C1'-C2'	2.07	108.02	105.15
1	S2	27	A2M	N9-C8-N7	-2.07	111.00	113.94
3	L5	4623	OMG	O6-C6-C5	-2.07	121.07	126.53
3	L5	4972	PSU	O2-C2-N3	-2.07	118.19	121.86
3	L5	1316	OMG	C2'-C1'-N9	-2.06	110.32	114.24
1	S2	1031	A2M	C6-C5-N7	2.06	136.07	132.09
1	S2	159	A2M	C4-N9-C8	2.06	107.90	105.74
3	L5	4972	PSU	C5-C6-N1	-2.06	119.28	122.14
3	L5	1326	A2M	C6-C5-N7	2.06	136.06	132.09
1	S2	801	PSU	C5-C6-N1	-2.06	119.28	122.14
3	L5	4552	PSU	C5-C6-N1	-2.06	119.28	122.14
3	L5	3744	OMG	O6-C6-C5	-2.05	121.11	126.53
1	S2	99	A2M	N9-C8-N7	-2.05	111.02	113.94
1	S2	512	A2M	N9-C8-N7	-2.05	111.03	113.94
3	L5	3627	OMG	C8-N7-C5	2.05	107.91	104.26
1	S2	1391	OMC	O2-C2-N3	-2.05	119.10	122.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	S2	1383	A2M	C6-C5-N7	2.05	136.04	132.09
1	S2	512	A2M	C6-C5-N7	2.05	136.04	132.09
3	L5	4228	OMG	O6-C6-C5	-2.05	121.13	126.53
3	L5	4523	A2M	N9-C8-N7	-2.04	111.04	113.94
3	L5	3899	OMG	O6-C6-C5	-2.04	121.14	126.53
3	L5	1792	PSU	C5-C6-N1	-2.04	119.31	122.14
2	L8	75	OMG	C5-C6-N1	2.04	118.45	113.25
3	L5	4312	PSU	C5-C6-N1	-2.04	119.31	122.14
1	S2	1238	PSU	C5-C6-N1	-2.04	119.31	122.14
3	L5	4521	PSU	O4'-C1'-C2'	2.04	107.97	105.15
1	S2	867	OMG	O6-C6-C5	-2.04	121.16	126.53
1	S2	509	OMG	O6-C6-C5	-2.03	121.16	126.53
40	LB	245	HIC	NE2-CE1-ND1	-2.03	111.89	112.66
3	L5	4618	OMG	C5-C6-N1	2.03	118.42	113.25
3	L5	3851	PSU	O4'-C1'-C2'	2.03	107.96	105.15
3	L5	3639	PSU	O2-C2-N3	-2.03	118.26	121.86
3	L5	2876	OMG	O6-C6-C5	-2.03	121.18	126.53
3	L5	4196	OMG	C5-C6-N1	2.03	118.42	113.25
3	L5	3760	A2M	C2-N1-C6	2.03	122.06	118.73
3	L5	2787	A2M	C2'-C1'-N9	-2.03	110.42	113.75
3	L5	4620	OMU	O2-C2-N1	-2.03	120.16	122.80
3	L5	2422	OMC	O2-C2-N3	-2.03	119.14	122.33
1	S2	644	OMG	O6-C6-C5	-2.03	121.18	126.53
1	S2	576	A2M	C6-C5-N7	2.02	135.99	132.09
3	L5	400	A2M	N9-C8-N7	-2.02	111.06	113.94
3	L5	4353	PSU	O4'-C1'-C2'	2.02	107.95	105.15
3	L5	4637	OMG	C5-C6-N1	2.02	118.40	113.25
1	S2	296	PSU	C5-C6-N1	-2.02	119.34	122.14
3	L5	4457	PSU	O4'-C1'-C2'	2.02	107.95	105.15
3	L5	3841	OMC	O2-C2-N3	-2.02	119.15	122.33
3	L5	1683	PSU	C5-C6-N1	-2.01	119.34	122.14
3	L5	1524	A2M	C4-N9-C8	2.01	107.85	105.74
1	S2	668	A2M	N9-C8-N7	-2.01	111.08	113.94
3	L5	3729	PSU	C5-C6-N1	-2.01	119.35	122.14
1	S2	1232	PSU	C5-C6-N1	-2.01	119.35	122.14
1	S2	116	OMU	C1'-N1-C2	2.01	121.20	117.59
1	S2	866	PSU	C5-C6-N1	-2.00	119.36	122.14
3	L5	4500	PSU	C5-C6-N1	-2.00	119.36	122.14
3	L5	1322	1MA	C6-C5-N7	2.00	135.70	132.16
3	L5	3785	A2M	C6-C5-N7	2.00	135.95	132.09
84	Pt	8	4SU	O2-C2-N1	-2.00	120.19	122.80
3	L5	1677	PSU	C5-C6-N1	-2.00	119.36	122.14

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	3770	PSU	C5-C6-N1	-2.00	119.36	122.14
1	S2	484	A2M	C6-C5-N7	2.00	135.95	132.09

There are no chirality outliers.

All (199) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	L8	14	OMU	C1'-C2'-O2'-CM2
6	SA	2	SAC	C-CA-N-C1A
6	SA	2	SAC	C-CA-CB-OG
29	SV	1	AME	OT-CT1-N-CA
66	Lb	5	MLZ	N-CA-CB-CG
66	Lb	5	MLZ	C-CA-CB-CG
83	At	46	7MG	O4'-C4'-C5'-O5'
83	At	46	7MG	C3'-C4'-C5'-O5'
84	Pt	21	H2U	O4'-C4'-C5'-O5'
84	Pt	21	H2U	O4'-C1'-N1-C6
84	Pt	21	H2U	C2'-C1'-N1-C2
84	Pt	21	H2U	C2'-C1'-N1-C6
1	S2	27	A2M	C1'-C2'-O2'-CM'
1	S2	121	OMU	C1'-C2'-O2'-CM2
1	S2	166	A2M	C1'-C2'-O2'-CM'
1	S2	354	OMU	C3'-C4'-C5'-O5'
1	S2	354	OMU	O4'-C4'-C5'-O5'
1	S2	428	OMU	C2'-C1'-N1-C6
1	S2	468	A2M	C1'-C2'-O2'-CM'
1	S2	576	A2M	C3'-C4'-C5'-O5'
1	S2	644	OMG	O4'-C4'-C5'-O5'
1	S2	644	OMG	C3'-C4'-C5'-O5'
1	S2	644	OMG	C1'-C2'-O2'-CM2
1	S2	668	A2M	C1'-C2'-O2'-CM'
1	S2	1337	4AC	O7-C7-N4-C4
1	S2	1337	4AC	CM7-C7-N4-C4
1	S2	1383	A2M	C1'-C2'-O2'-CM'
1	S2	1391	OMC	C1'-C2'-O2'-CM2
1	S2	1447	OMG	C1'-C2'-O2'-CM2
1	S2	1678	A2M	C1'-C2'-O2'-CM'
1	S2	1804	OMU	C1'-C2'-O2'-CM2
1	S2	1832	6MZ	C5-C6-N6-C9
1	S2	1832	6MZ	N1-C6-N6-C9
1	S2	1842	4AC	N3-C4-N4-C7
1	S2	1842	4AC	C5-C4-N4-C7

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Mol	Chain	Res	Type	Atoms
3	L5	398	A2M	C1'-C2'-O2'-CM'
3	L5	400	A2M	C1'-C2'-O2'-CM'
3	L5	1326	A2M	O4'-C4'-C5'-O5'
3	L5	2415	OMU	C1'-C2'-O2'-CM2
3	L5	2422	OMC	C1'-C2'-O2'-CM2
3	L5	2424	OMG	O4'-C4'-C5'-O5'
3	L5	2424	OMG	C1'-C2'-O2'-CM2
3	L5	2632	PSU	C2'-C1'-C5-C4
3	L5	2632	PSU	C3'-C4'-C5'-O5'
3	L5	2632	PSU	O4'-C4'-C5'-O5'
3	L5	2815	A2M	C1'-C2'-O2'-CM'
3	L5	3723	A2M	C1'-C2'-O2'-CM'
3	L5	3724	A2M	C1'-C2'-O2'-CM'
3	L5	3887	OMC	C3'-C4'-C5'-O5'
3	L5	3887	OMC	O4'-C4'-C5'-O5'
3	L5	4196	OMG	C1'-C2'-O2'-CM2
3	L5	4227	OMU	C1'-C2'-O2'-CM2
3	L5	4420	PSU	C2'-C1'-C5-C4
3	L5	4420	PSU	C2'-C1'-C5-C6
3	L5	4471	PSU	O4'-C4'-C5'-O5'
3	L5	4523	A2M	C1'-C2'-O2'-CM'
3	L5	4531	PSU	O4'-C4'-C5'-O5'
3	L5	4571	A2M	C1'-C2'-O2'-CM'
3	L5	4590	A2M	C4'-C5'-O5'-P
3	L5	4618	OMG	C1'-C2'-O2'-CM2
3	L5	4637	OMG	C1'-C2'-O2'-CM2
81	5A	50	5CT	NZ-C1-C2-C3
81	5A	50	5CT	NZ-C1-C2-O1
81	5A	50	5CT	C2-C3-C4-N1
64	Lr	2	SAC	OAC-C1A-N-CA
81	5A	50	5CT	CE-CD-CG-CB
1	S2	428	OMU	C2'-C1'-N1-C2
81	5A	50	5CT	CG-CD-CE-NZ
1	S2	867	OMG	C3'-C4'-C5'-O5'
3	L5	1326	A2M	C3'-C4'-C5'-O5'
3	L5	1582	PSU	C3'-C4'-C5'-O5'
3	L5	2424	OMG	C3'-C4'-C5'-O5'
3	L5	3785	A2M	C3'-C4'-C5'-O5'
3	L5	3867	A2M	C3'-C4'-C5'-O5'
3	L5	4471	PSU	C3'-C4'-C5'-O5'
6	SA	2	SAC	OAC-C1A-N-CA
1	S2	159	A2M	O4'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
1	S2	159	A2M	C3'-C4'-C5'-O5'
1	S2	576	A2M	O4'-C4'-C5'-O5'
1	S2	867	OMG	O4'-C4'-C5'-O5'
1	S2	1639	G7M	O4'-C4'-C5'-O5'
1	S2	1639	G7M	C3'-C4'-C5'-O5'
1	S2	1678	A2M	C3'-C4'-C5'-O5'
3	L5	1781	PSU	C3'-C4'-C5'-O5'
3	L5	1781	PSU	O4'-C4'-C5'-O5'
3	L5	3785	A2M	O4'-C4'-C5'-O5'
3	L5	4228	OMG	C3'-C4'-C5'-O5'
3	L5	4531	PSU	C3'-C4'-C5'-O5'
3	L5	3701	OMC	C2'-C1'-N1-C6
3	L5	1625	OMG	C3'-C2'-O2'-CM2
84	Pt	21	H2U	C3'-C4'-C5'-O5'
1	S2	867	OMG	C4'-C5'-O5'-P
66	Lb	5	MLZ	CA-CB-CG-CD
1	S2	668	A2M	O4'-C4'-C5'-O5'
1	S2	1442	OMU	O4'-C4'-C5'-O5'
3	L5	4228	OMG	O4'-C4'-C5'-O5'
3	L5	4420	PSU	C3'-C4'-C5'-O5'
79	Lo	53	MLZ	CA-CB-CG-CD
6	SA	2	SAC	C2A-C1A-N-CA
3	L5	4447	5MC	C2'-C1'-N1-C6
1	S2	1248	B8N	C32-C31-N3-C4
1	S2	218	PSU	C3'-C4'-C5'-O5'
1	S2	218	PSU	O4'-C4'-C5'-O5'
1	S2	668	A2M	C3'-C4'-C5'-O5'
1	S2	1243	PSU	O4'-C4'-C5'-O5'
3	L5	1582	PSU	O4'-C4'-C5'-O5'
3	L5	2839	PSU	C3'-C4'-C5'-O5'
3	L5	2839	PSU	O4'-C4'-C5'-O5'
40	LB	245	HIC	CA-CB-CG-ND1
83	At	16	H2U	C4'-C5'-O5'-P
3	L5	3818	UY1	C4'-C5'-O5'-P
1	S2	1851	MA6	C5-C6-N6-C10
84	Pt	47	G7M	O4'-C4'-C5'-O5'
1	S2	1678	A2M	O4'-C4'-C5'-O5'
3	L5	2364	OMG	O4'-C4'-C5'-O5'
3	L5	3729	PSU	O4'-C4'-C5'-O5'
3	L5	3867	A2M	O4'-C4'-C5'-O5'
6	SA	2	SAC	N-CA-CB-OG
3	L5	2787	A2M	C2'-C1'-N9-C8

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Mol	Chain	Res	Type	Atoms
1	S2	627	OMU	O4'-C4'-C5'-O5'
3	L5	3782	5MC	O4'-C4'-C5'-O5'
40	LB	245	HIC	CA-CB-CG-CD2
3	L5	2787	A2M	C2'-C1'-N9-C4
29	SV	1	AME	C-CA-N-CT1
1	S2	428	OMU	O4'-C4'-C5'-O5'
3	L5	3701	OMC	C2'-C1'-N1-C2
84	Pt	33	OMC	C1'-C2'-O2'-CM2
1	S2	159	A2M	C1'-C2'-O2'-CM'
1	S2	512	A2M	C1'-C2'-O2'-CM'
3	L5	1340	OMC	C1'-C2'-O2'-CM2
3	L5	2364	OMG	C1'-C2'-O2'-CM2
3	L5	3744	OMG	C1'-C2'-O2'-CM2
3	L5	3867	A2M	C1'-C2'-O2'-CM'
3	L5	4620	OMU	C1'-C2'-O2'-CM2
3	L5	4420	PSU	O4'-C4'-C5'-O5'
1	S2	1248	B8N	C32-C31-N3-C2
1	S2	644	OMG	C4'-C5'-O5'-P
81	5A	50	5CT	CD-CE-NZ-C1
84	Pt	47	G7M	C3'-C4'-C5'-O5'
81	5A	50	5CT	C1-C2-C3-C4
3	L5	4447	5MC	O4'-C1'-N1-C6
1	S2	1447	OMG	C3'-C4'-C5'-O5'
83	At	46	7MG	C4'-C5'-O5'-P
3	L5	3701	OMC	O4'-C1'-N1-C6
1	S2	683	OMG	O4'-C4'-C5'-O5'
3	L5	4637	OMG	O4'-C4'-C5'-O5'
40	LB	245	HIC	C-CA-CB-CG
39	LA	216	V5N	O2-CB-CG-CD2
3	L5	4447	5MC	O4'-C1'-N1-C2
1	S2	428	OMU	C3'-C4'-C5'-O5'
1	S2	428	OMU	O4'-C1'-N1-C2
77	Lm	98	M3L	CD-CE-NZ-CM3
3	L5	4447	5MC	C2'-C1'-N1-C2
3	L5	1326	A2M	C4'-C5'-O5'-P
3	L5	4500	PSU	C4'-C5'-O5'-P
1	S2	863	PSU	O4'-C1'-C5-C4
1	S2	918	PSU	O4'-C1'-C5-C4
3	L5	3818	UY1	O4'-C1'-C5-C4
3	L5	3701	OMC	O4'-C1'-N1-C2
3	L5	2422	OMC	C3'-C4'-C5'-O5'
3	L5	1534	A2M	C4'-C5'-O5'-P

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Mol	Chain	Res	Type	Atoms
3	L5	3785	A2M	C4'-C5'-O5'-P
1	S2	428	OMU	O4'-C1'-N1-C6
1	S2	1490	OMG	C4'-C5'-O5'-P
1	S2	1851	MA6	C4'-C5'-O5'-P
3	L5	2422	OMC	O4'-C4'-C5'-O5'
84	Pt	21	H2U	O4'-C1'-N1-C2
3	L5	3844	PSU	C4'-C5'-O5'-P
77	Lm	98	M3L	CD-CE-NZ-CM2
3	L5	1322	1MA	C2'-C1'-N9-C8
1	S2	116	OMU	C1'-C2'-O2'-CM2
1	S2	462	OMC	C1'-C2'-O2'-CM2
1	S2	683	OMG	C1'-C2'-O2'-CM2
3	L5	3830	A2M	C1'-C2'-O2'-CM'
20	SX	62	HY3	O-C-CA-C3
3	L5	1322	1MA	C2'-C1'-N9-C4
1	S2	1243	PSU	C3'-C4'-C5'-O5'
3	L5	2364	OMG	C3'-C4'-C5'-O5'
1	S2	863	PSU	O4'-C1'-C5-C6
1	S2	918	PSU	O4'-C1'-C5-C6
1	S2	1326	UY1	O4'-C1'-C5-C6
81	5A	50	5CT	C2-C1-NZ-CE
3	L5	2787	A2M	O4'-C1'-N9-C8
1	S2	590	A2M	C3'-C4'-C5'-O5'
1	S2	1288	OMU	C3'-C4'-C5'-O5'
1	S2	1248	B8N	N34-C33-C34-O36
1	S2	668	A2M	C2'-C1'-N9-C8
3	L5	2632	PSU	C2'-C1'-C5-C6
3	L5	1524	A2M	O4'-C1'-N9-C8
3	L5	1534	A2M	O4'-C4'-C5'-O5'
39	LA	216	V5N	O-C-CA-CB
3	L5	3729	PSU	C3'-C4'-C5'-O5'
1	S2	1248	B8N	N3-C31-C32-C33
3	L5	3782	5MC	C3'-C4'-C5'-O5'
1	S2	218	PSU	C4'-C5'-O5'-P
1	S2	1081	PSU	C4'-C5'-O5'-P
84	Pt	33	OMC	C2'-C1'-N1-C2
77	Lm	98	M3L	N-CA-CB-CG
77	Lm	98	M3L	CE-CD-CG-CB

There are no ring outliers.

118 monomers are involved in 204 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	L8	75	OMG	1	0
3	L5	3768	PSU	2	0
1	S2	866	PSU	1	0
3	L5	4521	PSU	1	0
1	S2	484	A2M	1	0
1	S2	1490	OMG	2	0
3	L5	4618	OMG	2	0
3	L5	3724	A2M	2	0
1	S2	121	OMU	2	0
3	L5	4571	A2M	2	0
3	L5	4637	OMG	1	0
3	L5	2364	OMG	1	0
3	L5	1871	A2M	1	0
1	S2	918	PSU	2	0
1	S2	174	OMC	1	0
3	L5	398	A2M	2	0
1	S2	683	OMG	2	0
1	S2	1244	PSU	1	0
3	L5	3764	PSU	2	0
3	L5	4370	OMG	2	0
3	L5	4306	OMU	2	0
1	S2	172	OMU	2	0
2	L8	69	PSU	1	0
3	L5	4220	6MZ	2	0
1	S2	1804	OMU	2	0
3	L5	4196	OMG	1	0
3	L5	400	A2M	1	0
1	S2	159	A2M	3	0
1	S2	166	A2M	2	0
3	L5	2824	OMC	1	0
1	S2	512	A2M	5	0
3	L5	3770	PSU	2	0
3	L5	4228	OMG	1	0
3	L5	3808	OMC	1	0
1	S2	34	PSU	2	0
1	S2	468	A2M	2	0
3	L5	3723	A2M	5	0
3	L5	2422	OMC	1	0
3	L5	4456	OMC	1	0
1	S2	1288	OMU	2	0
3	L5	2787	A2M	1	0
84	Pt	21	H2U	1	0
3	L5	2632	PSU	2	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	L5	1340	OMC	2	0
1	S2	27	A2M	3	0
1	S2	93	PSU	1	0
3	L5	1677	PSU	1	0
3	L5	4493	PSU	1	0
3	L5	4523	A2M	1	0
1	S2	1639	G7M	1	0
1	S2	1850	MA6	2	0
3	L5	1781	PSU	1	0
3	L5	3899	OMG	1	0
3	L5	1534	A2M	2	0
1	S2	1832	6MZ	1	0
1	S2	867	OMG	3	0
3	L5	3792	OMG	1	0
1	S2	1174	PSU	2	0
3	L5	3785	A2M	2	0
3	L5	3867	A2M	4	0
3	L5	2363	A2M	3	0
1	S2	509	OMG	4	0
1	S2	1447	OMG	3	0
3	L5	3818	UY1	1	0
3	L5	4620	OMU	2	0
83	At	46	7MG	3	0
1	S2	822	PSU	1	0
3	L5	1881	OMC	1	0
3	L5	2815	A2M	2	0
1	S2	218	PSU	1	0
3	L5	4552	PSU	1	0
3	L5	4296	PSU	1	0
81	5A	50	5CT	5	0
3	L5	3944	OMG	2	0
3	L5	3884	PSU	1	0
3	L5	4457	PSU	1	0
1	S2	863	PSU	1	0
3	L5	3758	PSU	2	0
6	SA	2	SAC	3	0
3	L5	1779	PSU	1	0
1	S2	1391	OMC	3	0
1	S2	1136	PSU	3	0
3	L5	3734	PSU	1	0
3	L5	4361	PSU	1	0
1	S2	601	OMG	3	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
1	S2	651	PSU	1	0
3	L5	2861	OMC	1	0
3	L5	4447	5MC	2	0
3	L5	1536	PSU	1	0
1	S2	572	PSU	1	0
3	L5	2424	OMG	3	0
3	L5	2876	OMG	3	0
1	S2	609	PSU	1	0
3	L5	4392	OMG	2	0
1	S2	1678	A2M	2	0
3	L5	4227	OMU	2	0
3	L5	2804	OMC	1	0
1	S2	576	A2M	4	0
3	L5	1683	PSU	1	0
1	S2	1442	OMU	2	0
1	S2	116	OMU	3	0
66	Lb	5	MLZ	1	0
1	S2	1842	4AC	2	0
3	L5	3718	A2M	4	0
1	S2	681	PSU	2	0
3	L5	3715	PSU	1	0
1	S2	1337	4AC	5	0
1	S2	644	OMG	1	0
2	L8	14	OMU	1	0
3	L5	2351	OMC	2	0
1	S2	1703	OMC	1	0
1	S2	1643	PSU	1	0
1	S2	573	PSU	2	0
3	L5	2415	OMU	2	0
3	L5	3920	PSU	1	0
1	S2	36	PSU	2	0
1	S2	1383	A2M	2	0
1	S2	1851	MA6	1	0

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 362 ligands modelled in this entry, 350 are monoatomic - leaving 12 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$
89	SPD	L5	5304	-	9,9,9	0.20	0	8,8,8	0.21	0
89	SPD	L5	5307	-	9,9,9	0.32	0	8,8,8	0.65	0
88	ANM	L5	5301	86	20,20,20	1.17	1 (5%)	24,27,27	1.47	4 (16%)
85	PUT	S2	1901	-	5,5,5	0.10	0	4,4,4	0.11	0
89	SPD	L5	5303	-	9,9,9	0.39	0	8,8,8	0.87	0
89	SPD	L5	5302	-	9,9,9	0.37	0	8,8,8	0.89	0
89	SPD	L5	5306	-	9,9,9	0.16	0	8,8,8	0.23	0
85	PUT	L5	5305	-	5,5,5	0.11	0	4,4,4	0.12	0
85	PUT	L5	5309	-	5,5,5	0.15	0	4,4,4	0.23	0
92	MET	Pt	78	84	6,7,8	0.55	0	2,7,9	1.50	1 (50%)
90	3H3	L5	5310	-	34,34,34	3.40	12 (35%)	36,45,45	3.94	16 (44%)
85	PUT	L5	5308	-	5,5,5	0.14	0	4,4,4	0.24	0

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
89	SPD	L5	5304	-	-	5/7/7/7	-
89	SPD	L5	5307	-	-	0/7/7/7	-
88	ANM	L5	5301	86	-	4/10/23/23	0/2/2/2
85	PUT	S2	1901	-	-	1/3/3/3	-
89	SPD	L5	5303	-	-	3/7/7/7	-
89	SPD	L5	5302	-	-	0/7/7/7	-
89	SPD	L5	5306	-	-	1/7/7/7	-
85	PUT	L5	5305	-	-	1/3/3/3	-
85	PUT	L5	5309	-	-	3/3/3/3	-
92	MET	Pt	78	84	-	1/5/6/8	-
90	3H3	L5	5310	-	-	17/39/51/51	0/1/2/2
85	PUT	L5	5308	-	-	1/3/3/3	-

All (13) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
90	L5	5310	3H3	C13-C12	9.03	1.53	1.33
90	L5	5310	3H3	O3-C22	8.19	1.39	1.23
90	L5	5310	3H3	O4-C23	7.70	1.38	1.23
90	L5	5310	3H3	C23-N	6.77	1.48	1.37
90	L5	5310	3H3	C22-N	6.54	1.48	1.37
90	L5	5310	3H3	C3-C2	5.57	1.54	1.33
88	L5	5301	ANM	O2-C5	4.67	1.45	1.35
90	L5	5310	3H3	O1-C10	2.84	1.40	1.34
90	L5	5310	3H3	C4-C3	2.84	1.53	1.44
90	L5	5310	3H3	C19-C20	2.83	1.57	1.53
90	L5	5310	3H3	O1-C11	-2.67	1.39	1.44
90	L5	5310	3H3	C24-C20	-2.31	1.49	1.53
90	L5	5310	3H3	O2-C16	-2.21	1.18	1.21

All (21) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
90	L5	5310	3H3	C22-N-C23	-11.65	111.83	125.87
90	L5	5310	3H3	O4-C23-N	-8.79	106.75	120.30
90	L5	5310	3H3	O3-C22-N	-7.83	108.22	120.30
90	L5	5310	3H3	O3-C22-C21	-7.16	108.95	122.62
90	L5	5310	3H3	O4-C23-C24	-7.00	109.26	122.62
90	L5	5310	3H3	C1-C2-C3	-6.19	113.30	126.11
90	L5	5310	3H3	C25-C12-C13	-4.93	110.90	123.56
90	L5	5310	3H3	C24-C23-N	-4.36	110.63	115.92
88	L5	5301	ANM	O2-C5-C6	4.28	118.72	111.09
90	L5	5310	3H3	C8-C9-C10	-4.01	113.20	122.78
90	L5	5310	3H3	C1-C11-C12	-4.00	105.89	113.19
90	L5	5310	3H3	C21-C22-N	-3.82	111.28	115.92
90	L5	5310	3H3	C19-C18-C17	-3.37	106.09	112.96
90	L5	5310	3H3	C25-C12-C11	-2.59	110.84	115.96
88	L5	5301	ANM	O2-C5-O3	-2.43	118.31	122.99
90	L5	5310	3H3	C6-C7-C8	-2.28	107.00	112.73
88	L5	5301	ANM	C3-C2-C16	-2.24	101.06	104.29
90	L5	5310	3H3	C11-C12-C13	-2.15	112.19	119.78
92	Pt	78	MET	CE-SD-CG	2.12	111.30	100.32
90	L5	5310	3H3	C-C1-C11	-2.05	107.97	110.78
88	L5	5301	ANM	C14-O1-C9	2.04	121.87	117.50

There are no chirality outliers.

All (37) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
90	L5	5310	3H3	C2-C1-C11-O1
90	L5	5310	3H3	C2-C1-C11-C12
90	L5	5310	3H3	C-C1-C11-O1
90	L5	5310	3H3	C-C1-C11-C12
90	L5	5310	3H3	C9-C10-O1-C11
90	L5	5310	3H3	C25-C12-C13-C14
90	L5	5310	3H3	C1-C11-C12-C25
90	L5	5310	3H3	C2-C3-C4-C5
90	L5	5310	3H3	O-C10-O1-C11
92	Pt	78	MET	CA-CB-CG-SD
89	L5	5303	SPD	N6-C7-C8-C9
89	L5	5303	SPD	C4-C5-N6-C7
89	L5	5304	SPD	C4-C5-N6-C7
85	S2	1901	PUT	C1-C2-C3-C4
85	L5	5309	PUT	C1-C2-C3-C4
85	L5	5308	PUT	C1-C2-C3-C4
89	L5	5304	SPD	N6-C7-C8-C9
89	L5	5303	SPD	C8-C7-N6-C5
90	L5	5310	3H3	C16-C17-C18-O5
85	L5	5309	PUT	C2-C3-C4-N2
88	L5	5301	ANM	C13-C12-C15-C16
88	L5	5301	ANM	C11-C12-C15-C16
89	L5	5304	SPD	C2-C3-C4-C5
89	L5	5304	SPD	C7-C8-C9-N10
89	L5	5306	SPD	N1-C2-C3-C4
90	L5	5310	3H3	C-C1-C2-C3
85	L5	5309	PUT	N1-C1-C2-C3
89	L5	5304	SPD	N1-C2-C3-C4
88	L5	5301	ANM	C1-C9-O1-C14
90	L5	5310	3H3	C12-C11-O1-C10
88	L5	5301	ANM	C10-C9-O1-C14
90	L5	5310	3H3	C15-C14-C16-O2
90	L5	5310	3H3	C15-C14-C16-C17
90	L5	5310	3H3	O1-C11-C12-C25
90	L5	5310	3H3	C12-C13-C14-C15
90	L5	5310	3H3	C1-C11-O1-C10
85	L5	5305	PUT	C1-C2-C3-C4

There are no ring outliers.

4 monomers are involved in 6 short contacts:

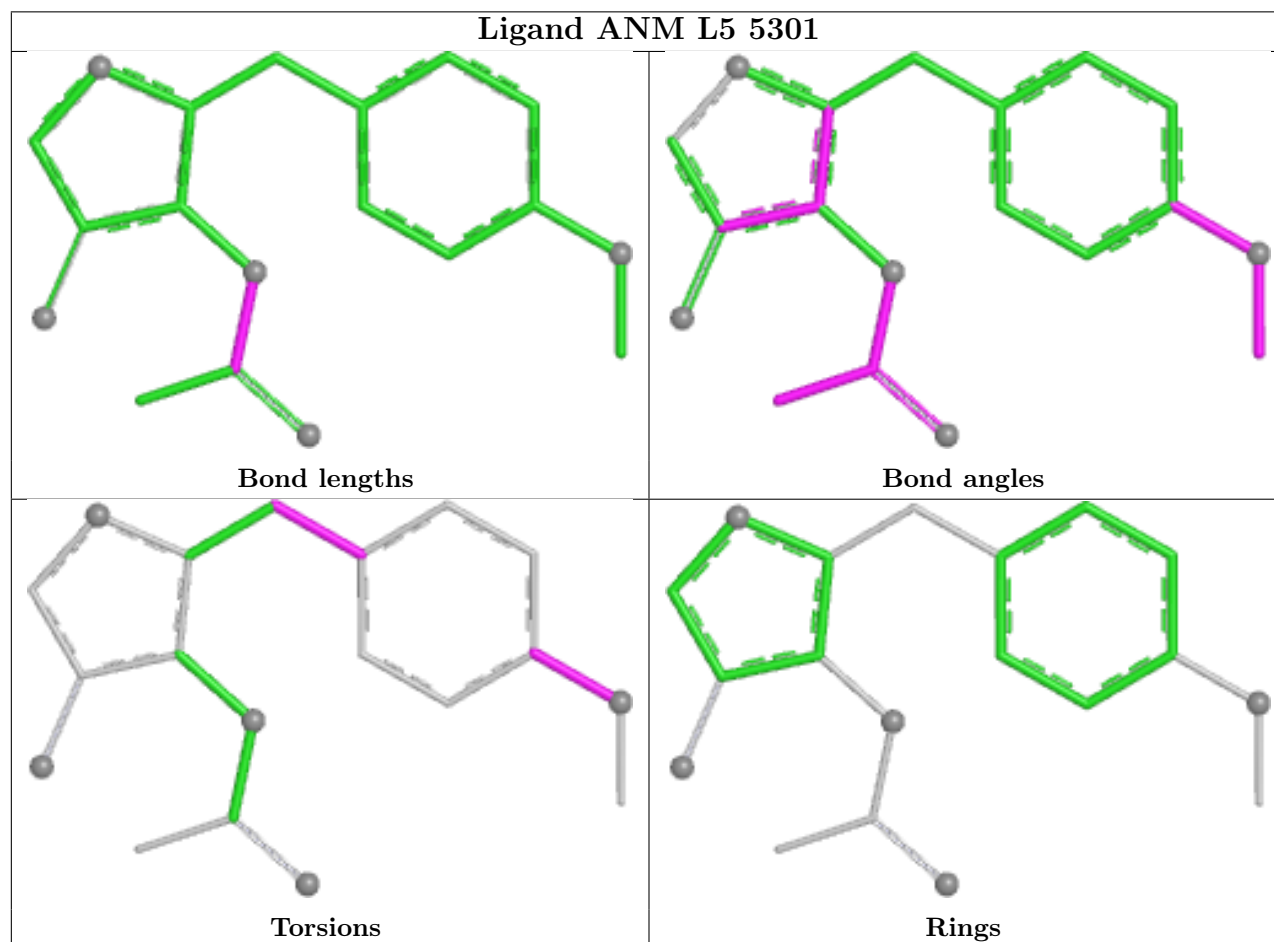
Mol	Chain	Res	Type	Clashes	Symm-Clashes
89	L5	5304	SPD	1	0

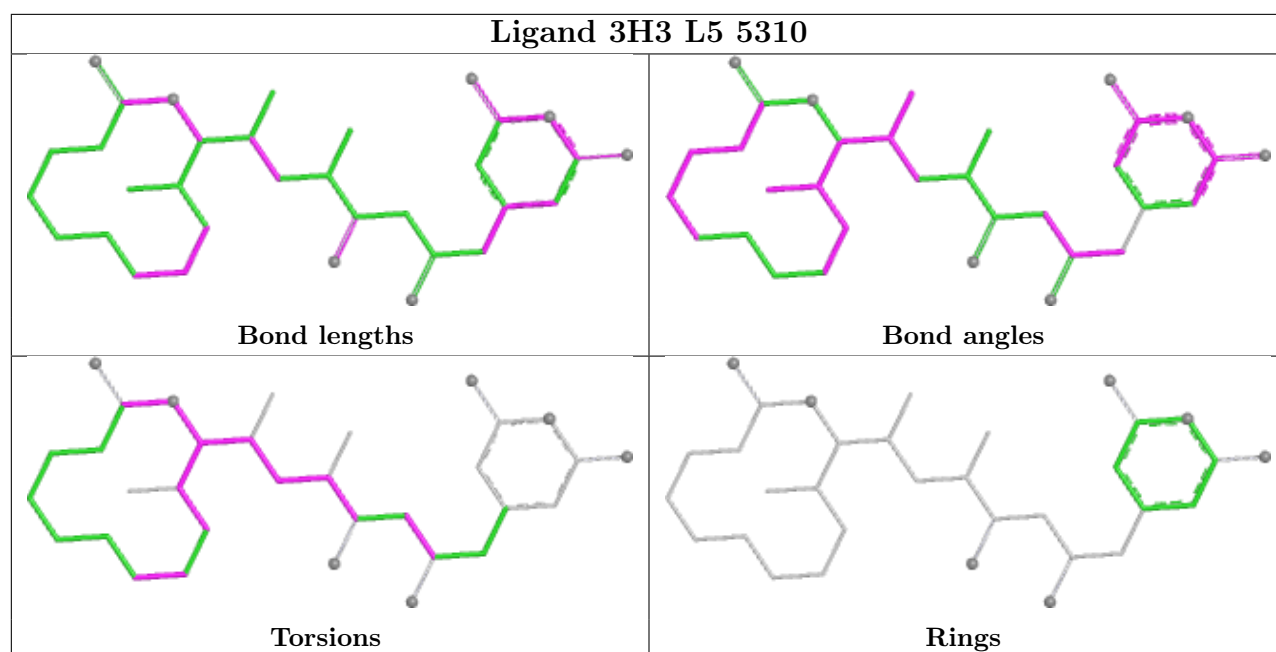
Continued on next page...

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
88	L5	5301	ANM	1	0
89	L5	5302	SPD	1	0
90	L5	5310	3H3	3	0

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

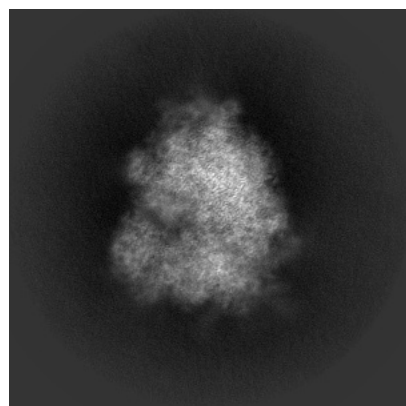
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-29760. These allow visual inspection of the internal detail of the map and identification of artifacts.

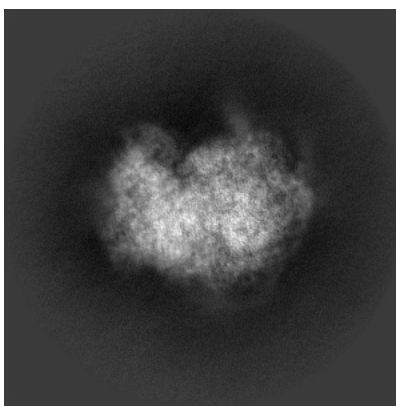
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

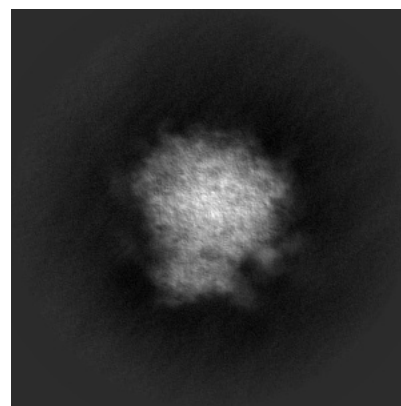
6.1.1 Primary map



X

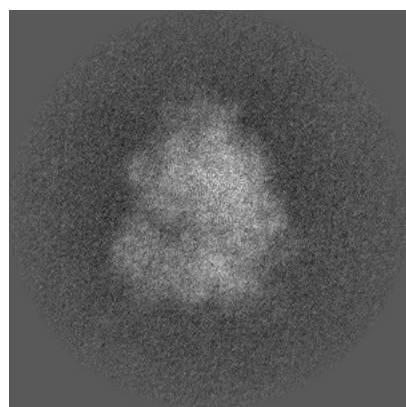


Y

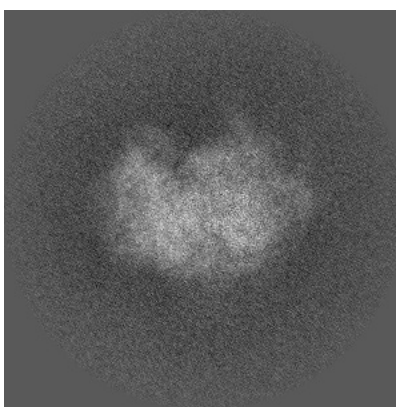


Z

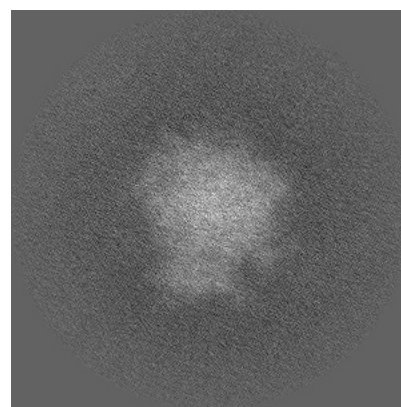
6.1.2 Raw map



X



Y

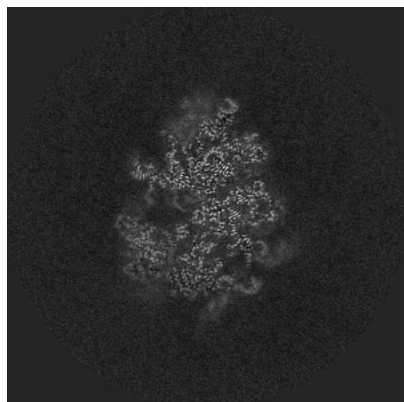


Z

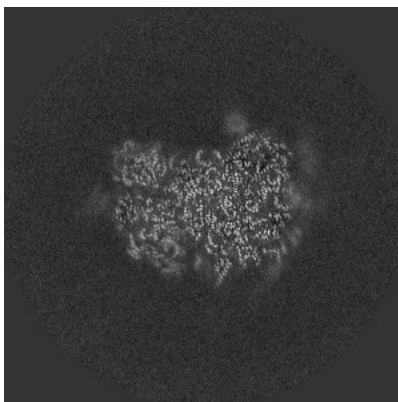
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

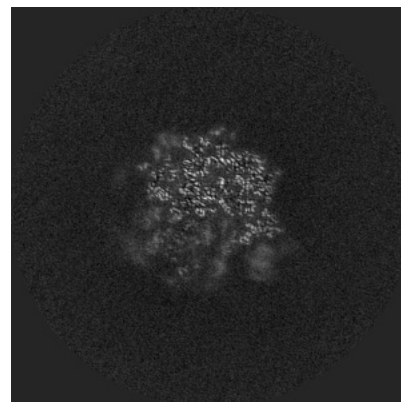
6.2.1 Primary map



X Index: 320

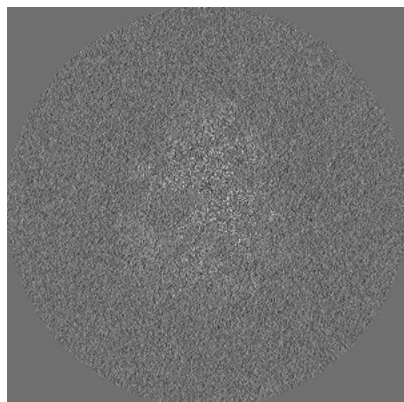


Y Index: 320

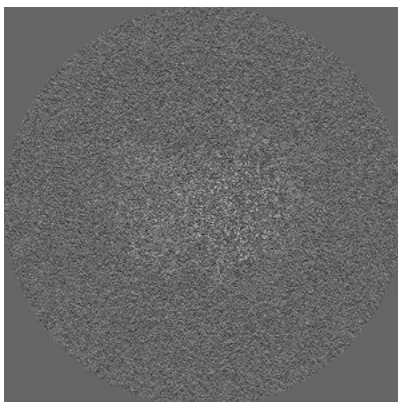


Z Index: 320

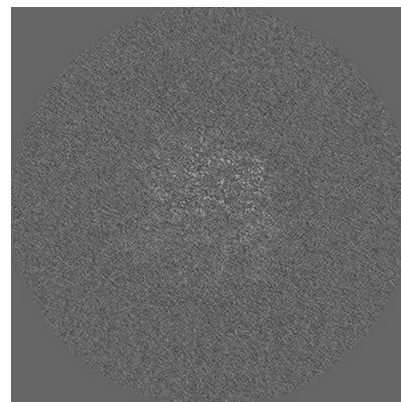
6.2.2 Raw map



X Index: 320



Y Index: 320

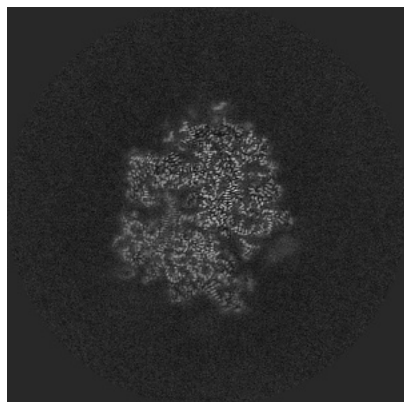


Z Index: 320

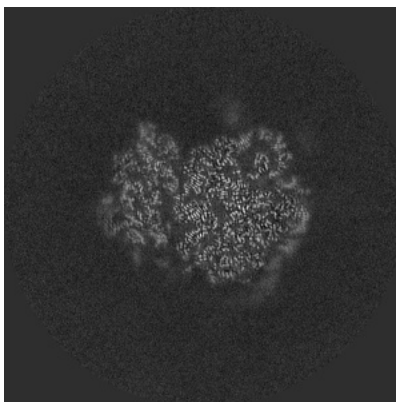
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

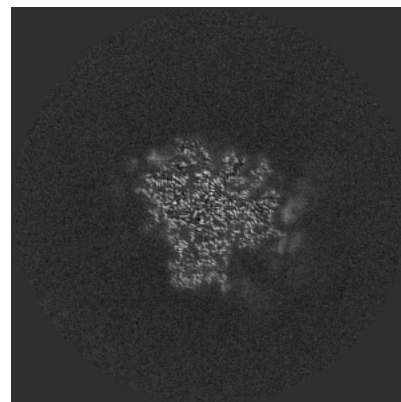
6.3.1 Primary map



X Index: 298

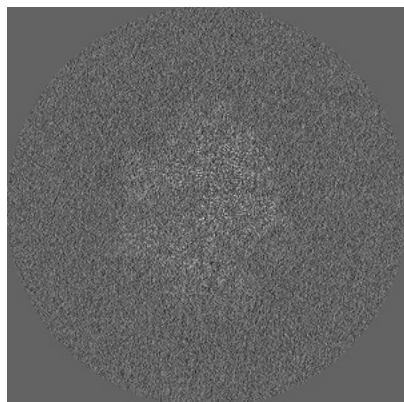


Y Index: 341

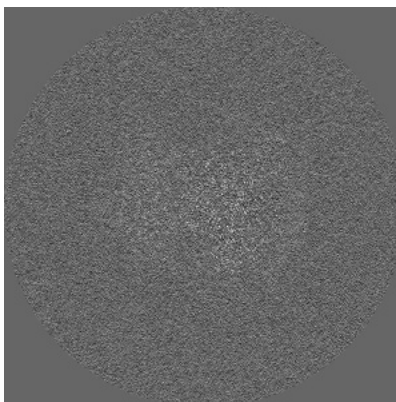


Z Index: 376

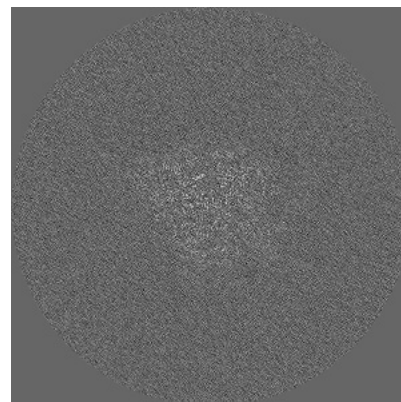
6.3.2 Raw map



X Index: 304



Y Index: 332

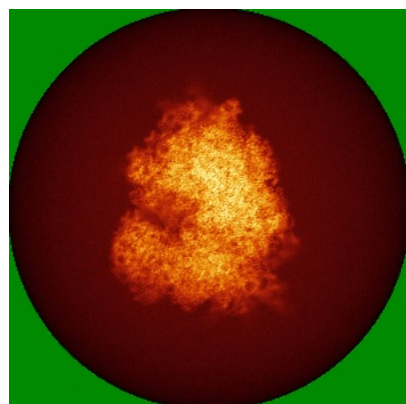


Z Index: 355

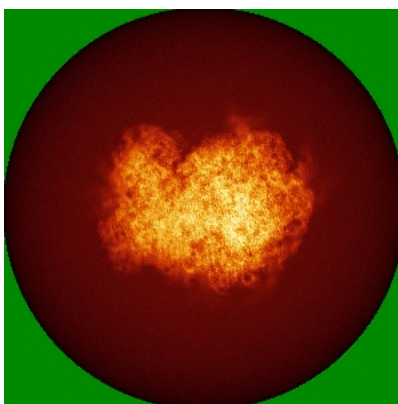
The images above show the largest variance slices of the map in three orthogonal directions.

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

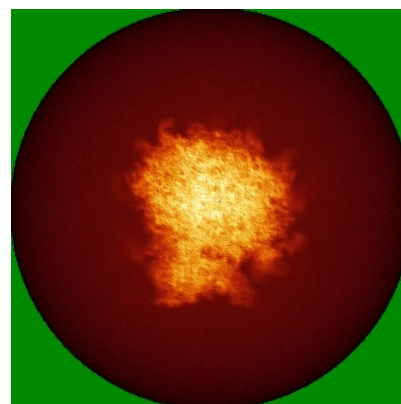
6.4.1 Primary map



X

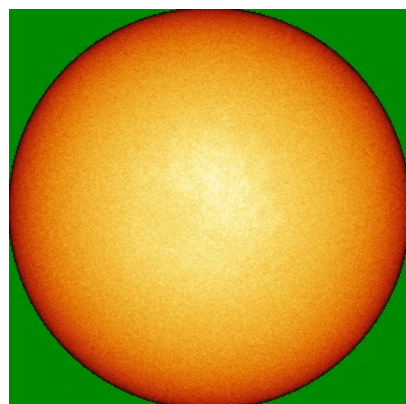


Y

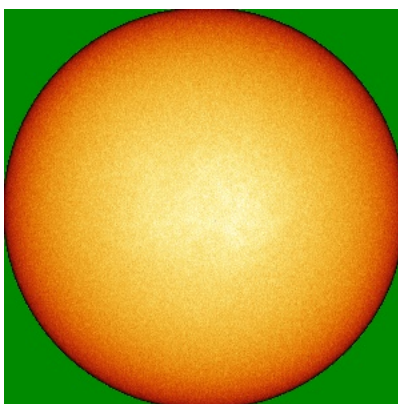


Z

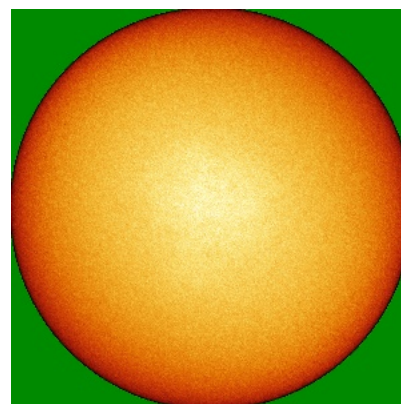
6.4.2 Raw map



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



X



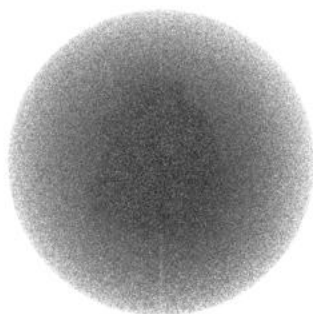
Y



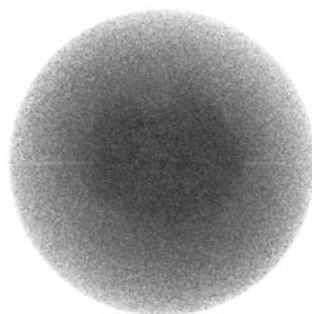
Z

The images above show the 3D surface view of the map at the recommended contour level 0.004. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

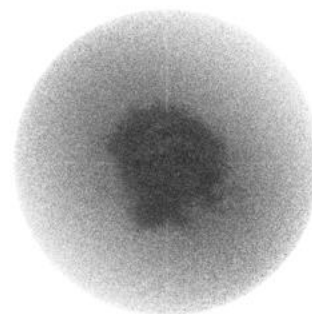
6.5.2 Raw map



X



Y



Z

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.

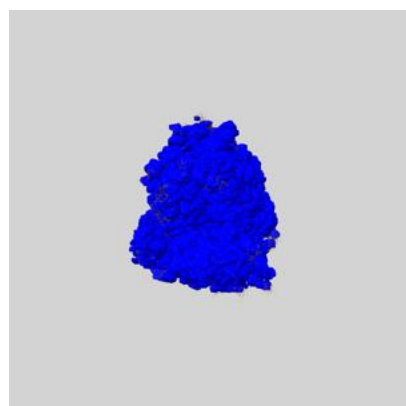
6.6 Mask visualisation [i](#)

This section shows the 3D surface view of the primary map at 50% transparency overlaid with the specified mask at 0% transparency

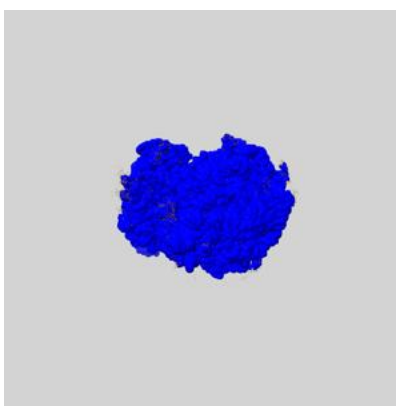
A mask typically either:

- Encompasses the whole structure
- Separates out a domain, a functional unit, a monomer or an area of interest from a larger structure

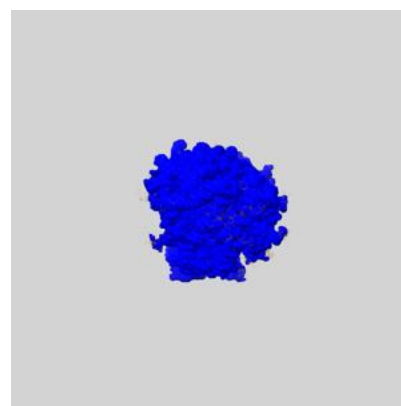
6.6.1 emd_29760_msk_1.map [i](#)



X



Y

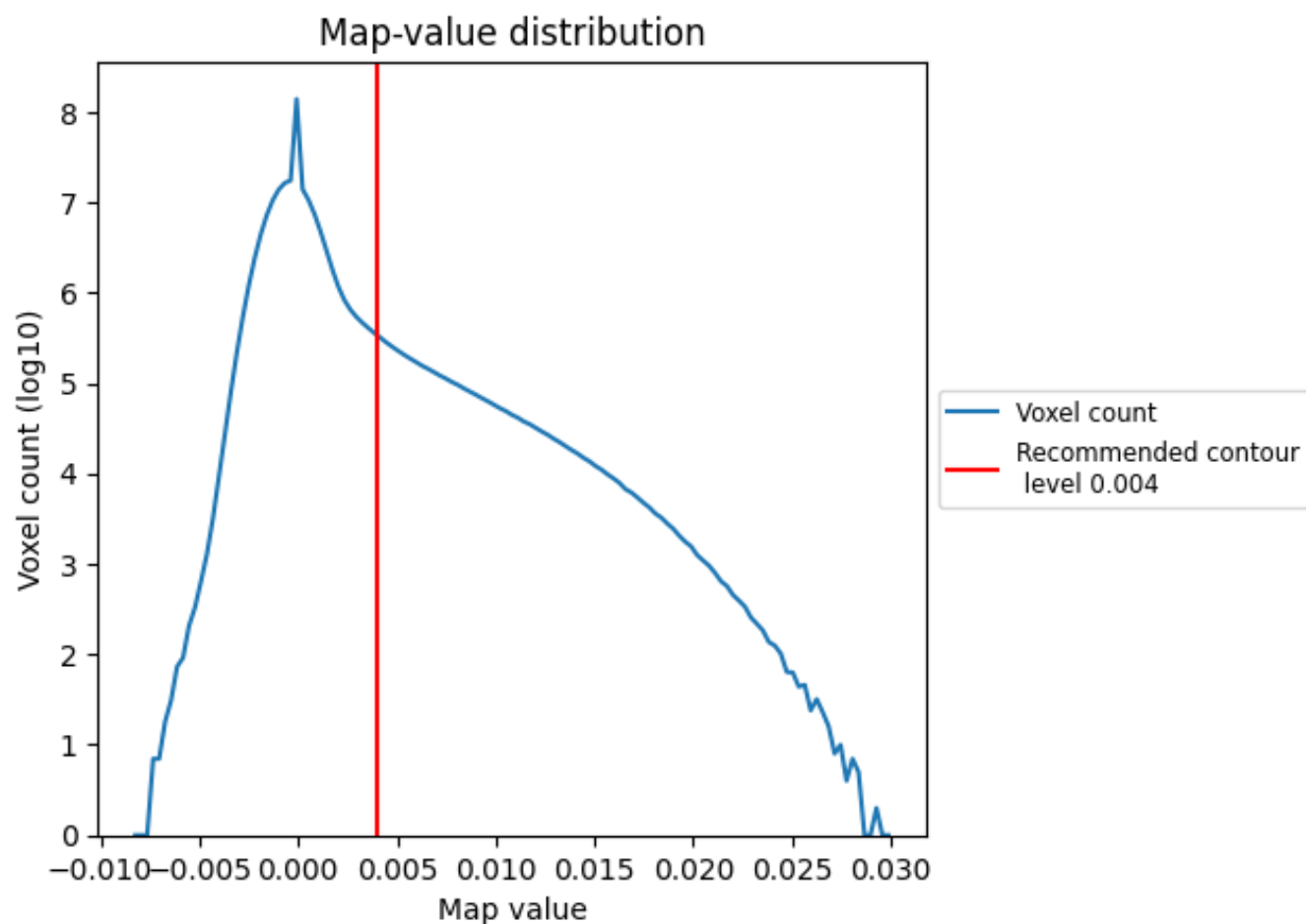


Z

7 Map analysis [i](#)

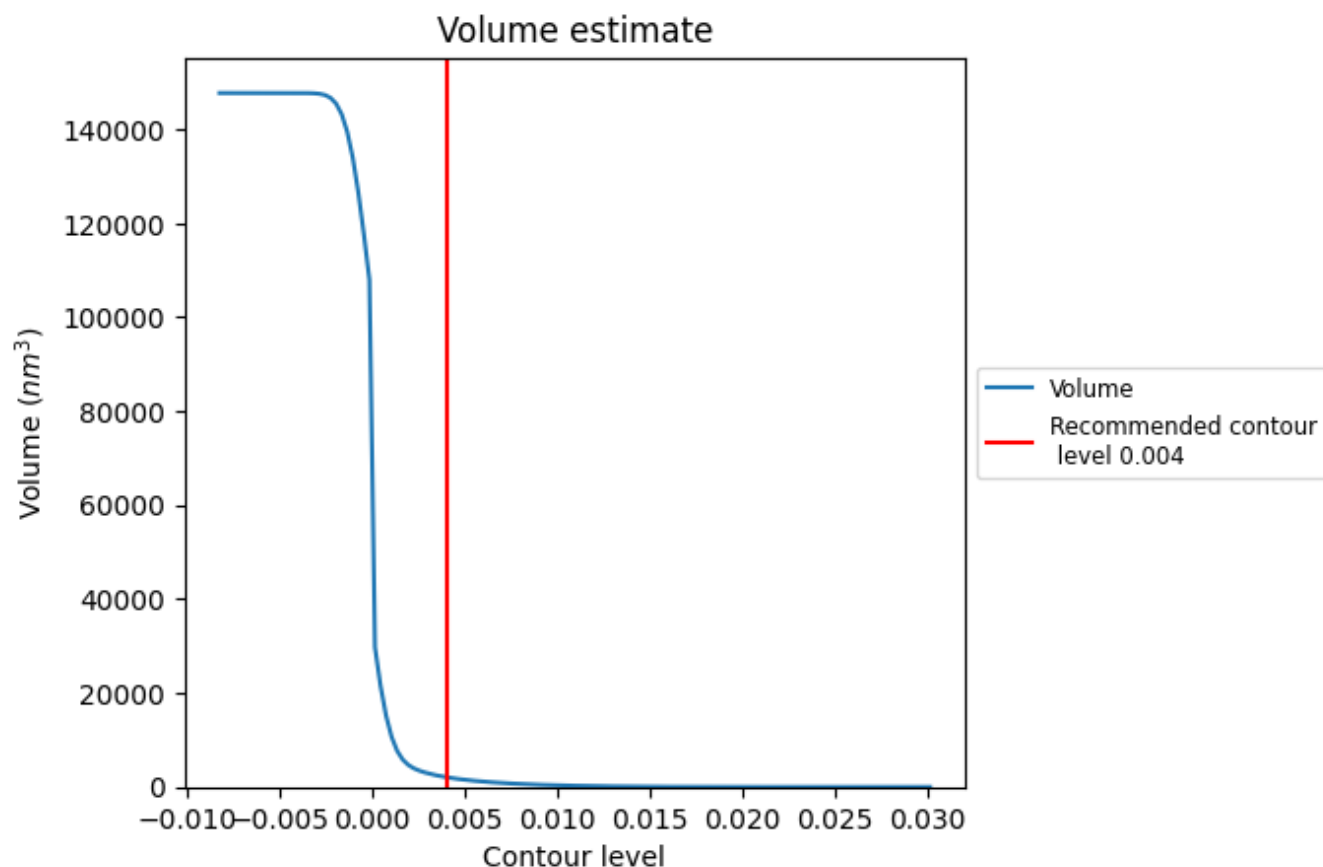
This section contains the results of statistical analysis of the map.

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.

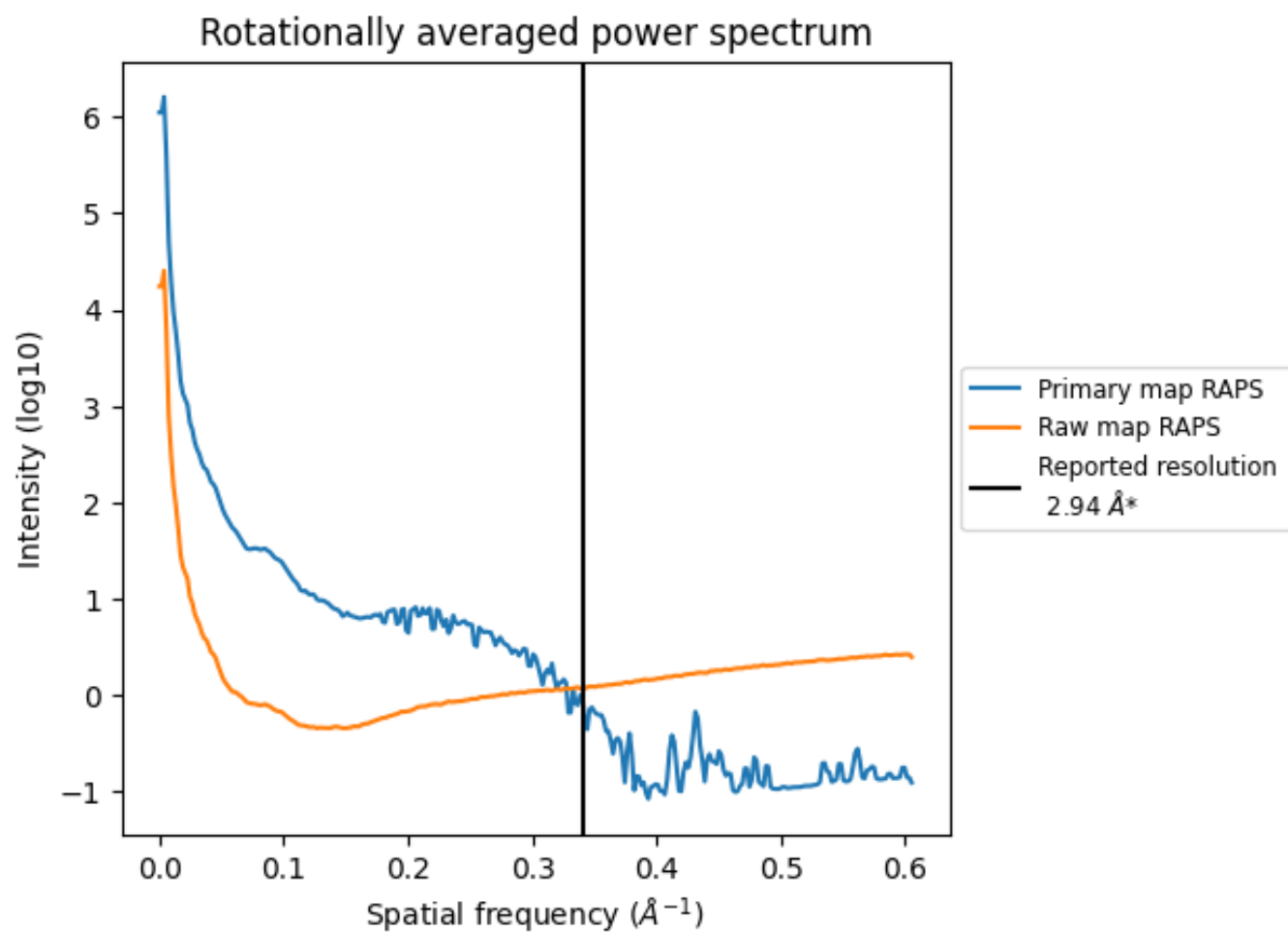
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 2088 nm^3 ; this corresponds to an approximate mass of 1886 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 ⓘ

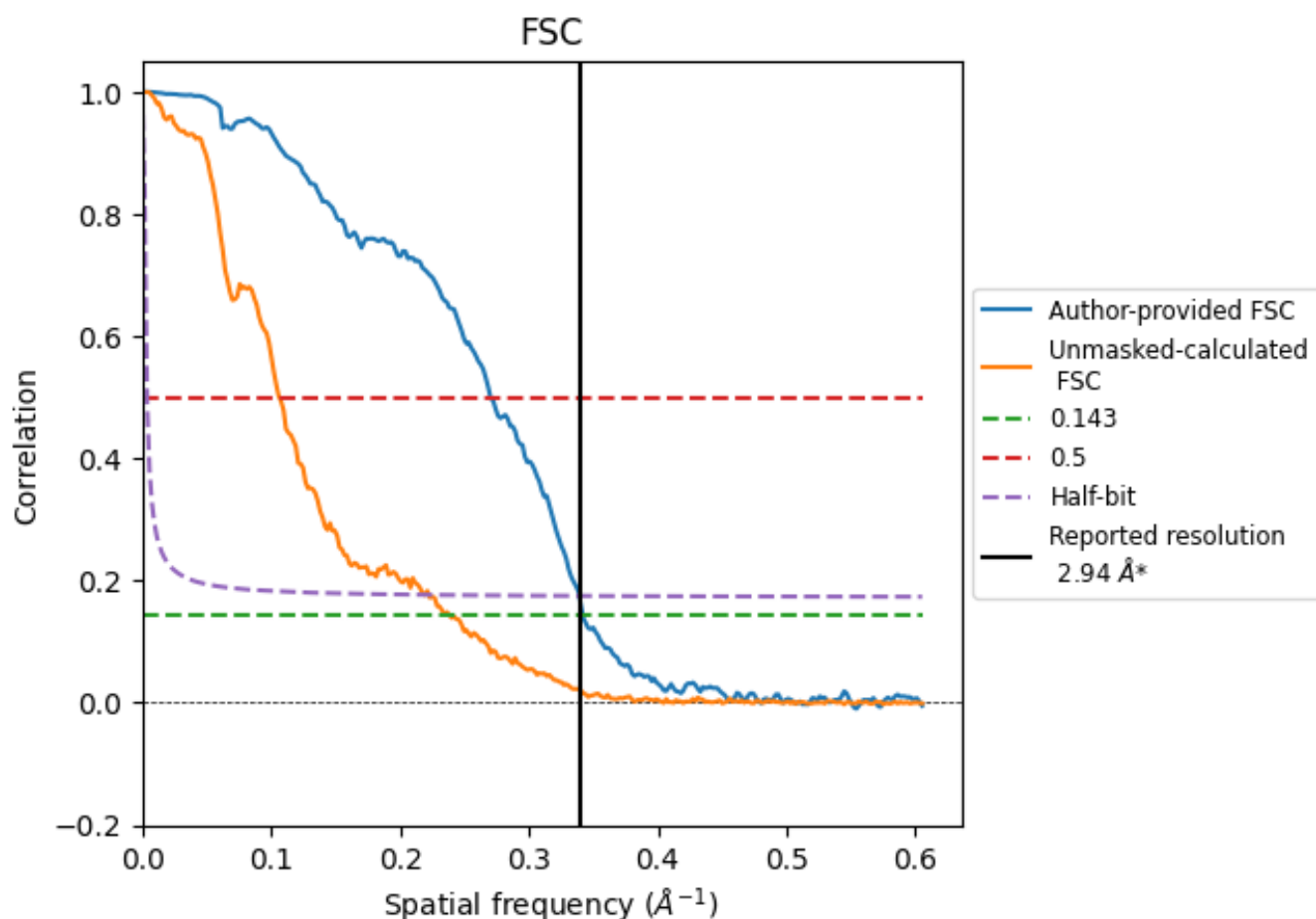


*Reported resolution corresponds to spatial frequency of 0.340 $\text{\AA}^{-1}$

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 0.340 $\text{\AA}^{-1}$

8.2 Resolution estimates [i](#)

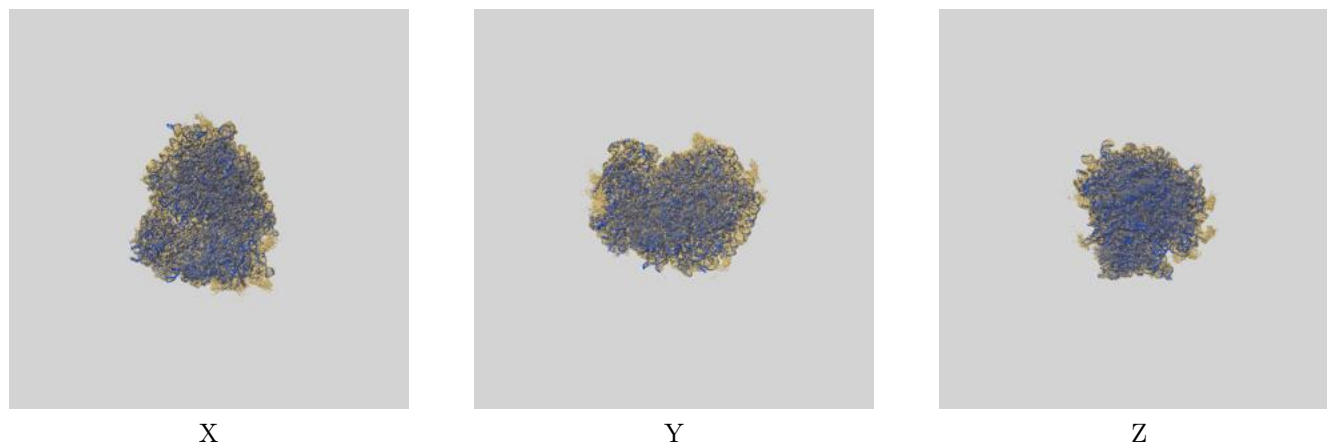
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	2.94	-	-
Author-provided FSC curve	2.92	3.70	2.95
Unmasked-calculated*	4.19	9.40	4.56

*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 4.19 differs from the reported value 2.94 by more than 10 %

9 Map-model fit [i](#)

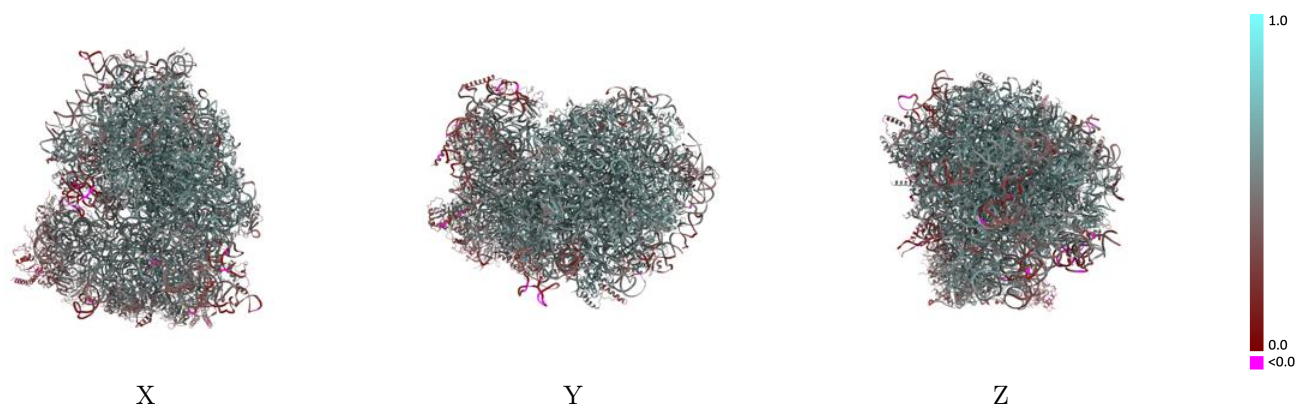
This section contains information regarding the fit between EMDB map EMD-29760 and PDB model 8G61. Per-residue inclusion information can be found in section [3](#) on page [24](#).

9.1 Map-model overlay [i](#)



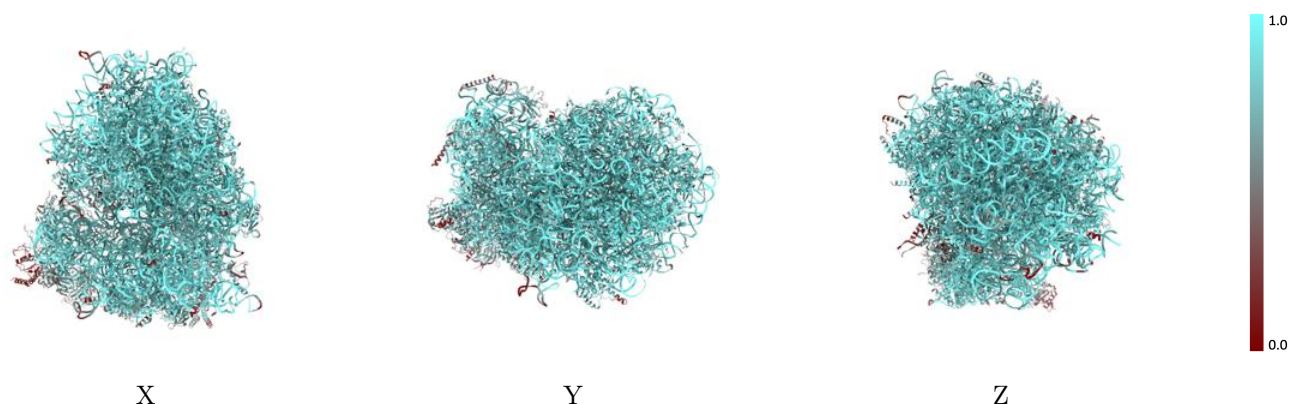
The images above show the 3D surface view of the map at the recommended contour level 0.004 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



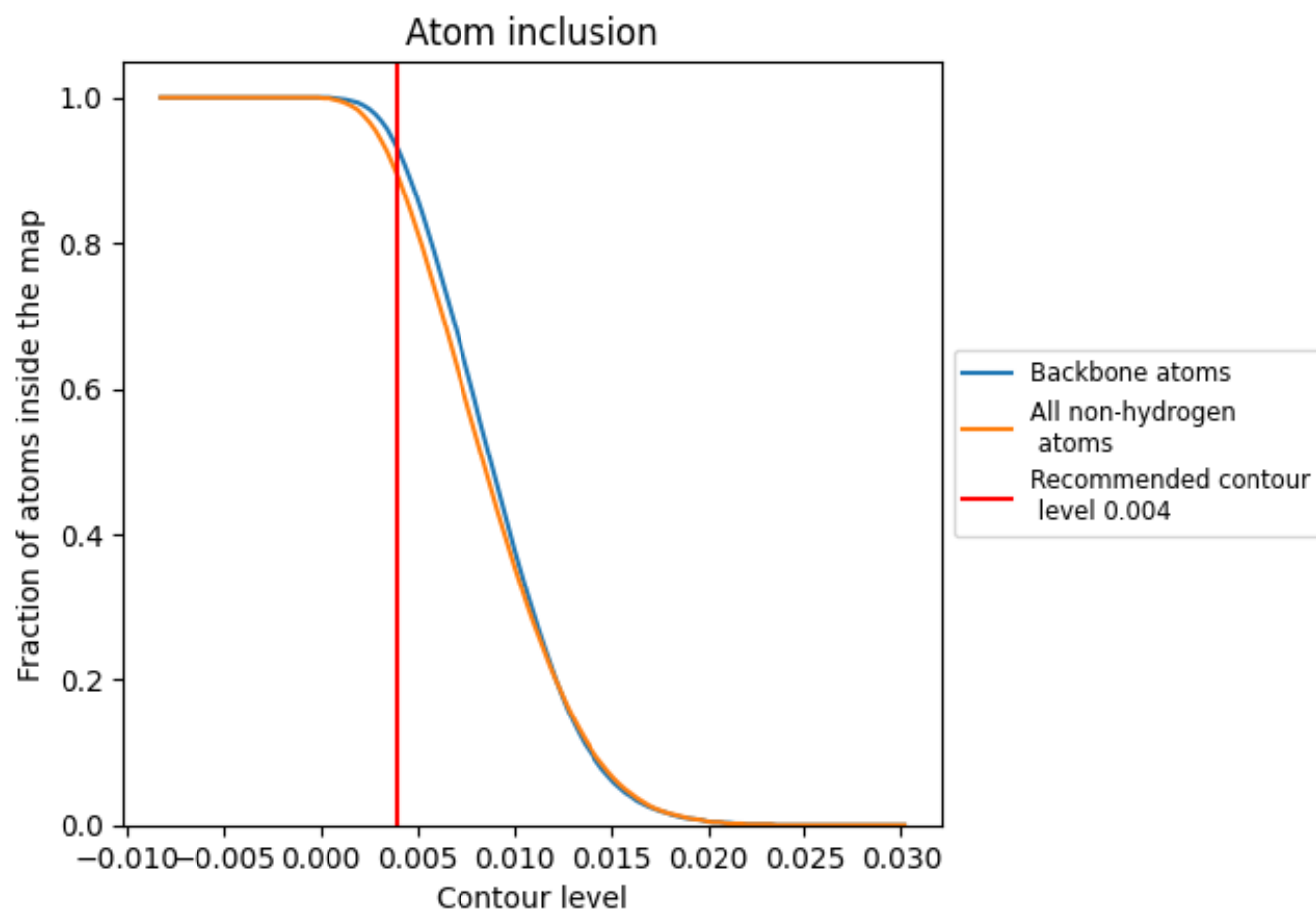
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.004).

9.4 Atom inclusion [i](#)



At the recommended contour level, 93% of all backbone atoms, 89% 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 (0.004) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.8930	 0.5100
5A	 0.5460	 0.4450
At	 0.7180	 0.4270
L5	 0.9520	 0.5290
L7	 0.9880	 0.5760
L8	 0.9810	 0.5630
LA	 0.9410	 0.6010
LB	 0.9020	 0.5770
LC	 0.9140	 0.5770
LD	 0.8790	 0.5230
LE	 0.8720	 0.5410
LF	 0.9250	 0.5730
LG	 0.8020	 0.5020
LH	 0.8690	 0.5390
LI	 0.9030	 0.5570
LJ	 0.8250	 0.4720
LL	 0.8800	 0.5470
LM	 0.9020	 0.5500
LN	 0.9780	 0.6100
LO	 0.9230	 0.5770
LP	 0.9300	 0.5920
LQ	 0.9490	 0.6050
LR	 0.8470	 0.5160
LS	 0.9470	 0.5870
LT	 0.9130	 0.5760
LU	 0.8020	 0.4820
LV	 0.9250	 0.5810
LW	 0.6940	 0.4220
LX	 0.9190	 0.5650
LY	 0.9030	 0.5590
LZ	 0.8770	 0.5350
La	 0.9510	 0.6000
Lb	 0.8060	 0.4950
Lc	 0.8410	 0.5400
Ld	 0.8890	 0.5550



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Chain	Atom inclusion	Q-score
Le	 0.9630	 0.6070
Lf	 0.9530	 0.6030
Lg	 0.8900	 0.5680
Lh	 0.8860	 0.5450
Li	 0.8860	 0.5270
Lj	 0.9670	 0.6080
Lk	 0.8060	 0.5110
Ll	 0.9310	 0.5630
Lm	 0.8990	 0.5580
Ln	 0.9380	 0.5690
Lo	 0.9010	 0.5670
Lp	 0.9000	 0.5740
Lr	 0.9190	 0.5810
Lz	 0.3610	 0.3050
Pt	 0.8110	 0.4480
S2	 0.9560	 0.4870
SA	 0.7540	 0.4380
SB	 0.7030	 0.3990
SC	 0.8190	 0.4990
SD	 0.7200	 0.4450
SE	 0.8250	 0.4810
SF	 0.7770	 0.4490
SG	 0.7270	 0.4140
SH	 0.6270	 0.3820
SI	 0.8160	 0.4800
SJ	 0.7940	 0.4410
SK	 0.7110	 0.4050
SL	 0.8550	 0.5270
SM	 0.1570	 0.1880
SN	 0.8120	 0.4880
SO	 0.7690	 0.4310
SP	 0.7300	 0.3990
SQ	 0.8200	 0.4540
SR	 0.6540	 0.3790
SS	 0.7660	 0.4380
ST	 0.8360	 0.4680
SU	 0.7440	 0.4190
SV	 0.7760	 0.4720
SW	 0.8770	 0.5250
SX	 0.9010	 0.5380
SY	 0.7510	 0.4040
SZ	 0.6240	 0.4100

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Chain	Atom inclusion	Q-score
Sa	 0.8520	 0.4810
Sb	 0.7210	 0.4450
Sc	 0.7030	 0.4220
Sd	 0.9220	 0.5000
Se	 0.7780	 0.4480
Sf	 0.4000	 0.2380
Sg	 0.5670	 0.3550
mR	 0.9710	 0.5440