



Full wwPDB EM Validation Report ⓘ

Dec 16, 2025 – 06:53 AM EST

PDB ID : 9PKG / pdb_00009pkg
EMDB ID : EMD-71696
Title : In situ human P state 80S ribosome
Authors : Wei, Z.; Yong, X.
Deposited on : 2025-07-14
Resolution : 3.26 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:

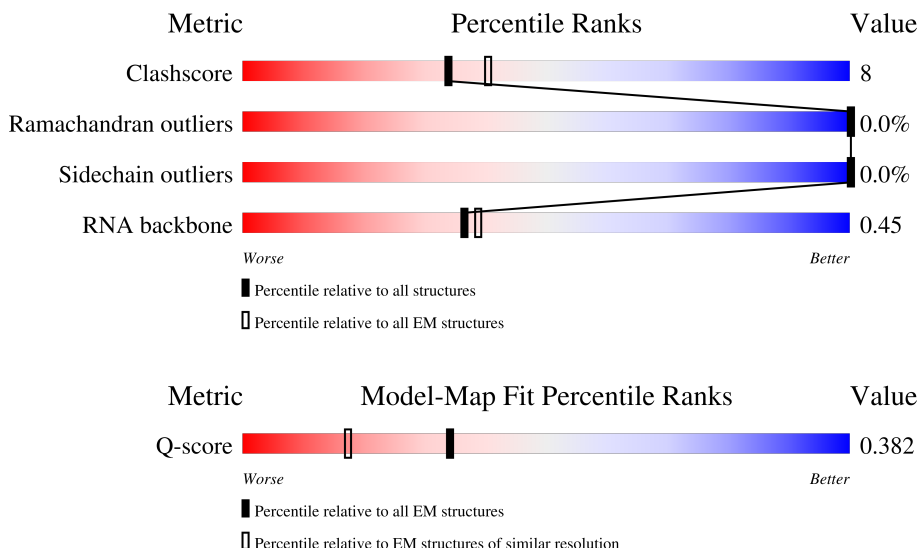
EMDB validation analysis : 0.0.1.dev129
Mogul : 2022.3.0, CSD as543be (2022)
MolProbity : 4-5-2 with Phenix2.0
buster-report : 1.1.7 (2018)
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive 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) : 2.47

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 3.26 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.



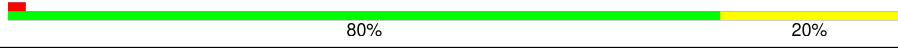
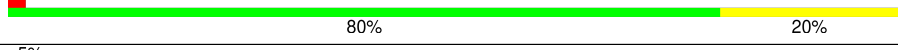
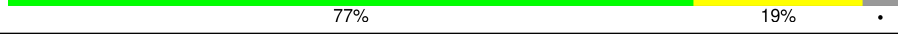
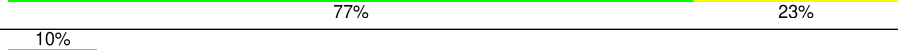
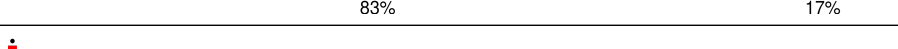
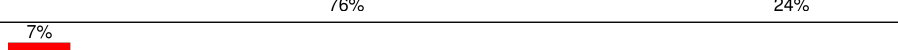
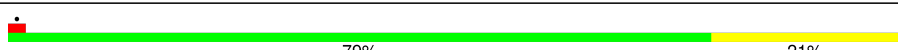
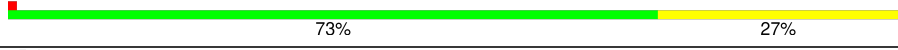
Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	210492	15764	-
Ramachandran outliers	207382	16835	-
Sidechain outliers	206894	16415	-
RNA backbone	6643	2191	-
Q-score	-	25397	14557 (2.76 - 3.76)

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	CI	31	58% 90% 10%
2	Pt	74	11% 42% 49% 9%
3	L5	3655	51% 42% 7%

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Mol	Chain	Length	Quality of chain
4	L7	120	
5	L8	156	
6	LA	248	
7	LB	402	
8	LC	368	
9	LD	293	
10	LE	250	
11	LF	225	
12	LG	241	
13	LH	190	
14	LI	213	
15	LJ	176	
16	LL	210	
17	LM	139	
18	LN	203	
19	LO	201	
20	LP	153	
21	LQ	187	
22	LR	187	
23	LS	175	
24	LT	159	
25	LU	101	
26	LV	131	
27	LW	124	
28	LX	120	

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Mol	Chain	Length	Quality of chain
29	LY	134	
30	LZ	135	
31	La	147	
32	Lb	121	
33	Lc	98	
34	Ld	107	
35	Le	128	
36	Lf	109	
37	Lg	114	
38	Lh	122	
39	Li	102	
40	Lj	86	
41	Lk	69	
42	Ll	50	
43	Lm	52	
44	Ln	24	
45	Lo	105	
46	Lp	91	
47	Lr	125	
48	Ls	196	
49	Lt	157	
50	SD	227	
51	SF	189	
52	SK	98	
53	SM	122	

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Mol	Chain	Length	Quality of chain
54	SP	121	
55	SQ	144	
56	SR	135	
57	SS	145	
58	ST	143	
59	SU	104	
60	SZ	75	
61	Sc	64	
62	Sd	55	
63	Sf	67	
64	Sg	313	
65	SA	221	
66	SB	214	
67	SC	222	
68	SE	262	
69	SG	237	
70	SH	189	
71	SI	206	
72	SJ	185	
73	SL	153	
74	SN	150	
75	SO	140	
76	SV	83	
77	SW	129	
78	SX	141	

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Mol	Chain	Length	Quality of chain
79	SY	131	
80	Sa	102	
81	Sb	83	
82	Se	58	
83	S2	1740	

2 Entry composition [i](#)

There are 87 unique types of molecules in this entry. The entry contains 218355 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called Transcription factor BTF3.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	CI	31	Total	C	N	O	S	0	0
			247	153	55	38	1		

- Molecule 2 is a RNA chain called P site tRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	Pt	74	Total	C	N	O	P	0	0
			1576	705	286	512	73		

There are 6 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
Pt	3	C	U	conflict	GB X64278
Pt	?	-	U	deletion	GB X64278
Pt	?	-	G	deletion	GB X64278
Pt	19	G	U	conflict	GB X64278
Pt	50	U	-	insertion	GB X64278
Pt	74	C	-	insertion	GB X64278

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

Mol	Chain	Residues	Atoms					AltConf	Trace
3	L5	3655	Total	C	N	O	P	0	0
			78421	34958	14341	25468	3654		

- 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
			2561	1141	456	844	120		

- Molecule 5 is a RNA chain called 5.8S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	L8	156	Total	C	N	O	P	0	0
			3315	1481	585	1094	155		

- Molecule 6 is a protein called 60S ribosomal protein L8.

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

- Molecule 7 is a protein called Large ribosomal subunit protein uL3.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	LB	402	Total	C	N	O	S	0	0
			3238	2060	608	556	14		

- Molecule 8 is a protein called 60S ribosomal protein L4.

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

- Molecule 9 is a protein called Large ribosomal subunit protein uL18.

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

- Molecule 10 is a protein called Large ribosomal subunit protein eL6.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	LE	240	Total	C	N	O	S	0	0
			1935	1242	368	321	4		

- Molecule 11 is a protein called 60S ribosomal protein L7.

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

- Molecule 12 is a protein called 60S ribosomal protein L7a.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	LG	241	Total	C	N	O	S	0	0
			1927	1228	371	324	4		

- Molecule 13 is a protein called 60S ribosomal protein L9.

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

- Molecule 14 is a protein called Ribosomal protein uL16-like.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	LI	213	Total	C	N	O	S	0	0
			1711	1082	329	285	15		

- Molecule 15 is a protein called 60S ribosomal protein L11.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	LJ	170	Total	C	N	O	S	0	0
			1362	861	254	241	6		

- Molecule 16 is a protein called Large ribosomal subunit protein eL13.

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

- Molecule 17 is a protein called 60S ribosomal protein L14.

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

- Molecule 18 is a protein called 60S ribosomal protein L15.

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

- Molecule 19 is a protein called 60S ribosomal protein L13a.

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

- Molecule 20 is a protein called 60S ribosomal protein L17.

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

- Molecule 21 is a protein called 60S ribosomal protein L18.

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

- Molecule 22 is a protein called 60S ribosomal protein L19.

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

- Molecule 23 is a protein called 60S ribosomal protein L18a.

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

- Molecule 24 is a protein called 60S ribosomal protein L21.

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

- Molecule 25 is a protein called Heparin-binding protein HBp15.

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

- Molecule 26 is a protein called 60S ribosomal protein L23.

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

- Molecule 27 is a protein called Ribosomal protein L24.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	LW	116	Total	C	N	O	S	0	0
			945	592	193	156	4		

- Molecule 28 is a protein called 60S ribosomal protein L23a.

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

- Molecule 29 is a protein called 60S ribosomal protein L26.

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

- Molecule 30 is a protein called 60S ribosomal protein L27.

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

- Molecule 31 is a protein called 60S ribosomal protein L27a.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	La	147	Total	C	N	O	S	0	0
			1162	736	237	186	3		

- Molecule 32 is a protein called Large ribosomal subunit protein eL29.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	Lb	109	Total	C	N	O	S	0	0
			876	546	189	137	4		

- Molecule 33 is a protein called 60S ribosomal protein L30.

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

- Molecule 34 is a protein called 60S ribosomal protein L31.

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

- Molecule 35 is a protein called 60S ribosomal protein L32.

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

- Molecule 36 is a protein called 60S ribosomal protein L35a.

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

- Molecule 37 is a protein called 60S ribosomal protein L34.

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

- Molecule 38 is a protein called 60S ribosomal protein L35.

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

- Molecule 39 is a protein called 60S ribosomal protein L36.

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

- Molecule 40 is a protein called 60S ribosomal protein L37.

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

- Molecule 41 is a protein called 60S ribosomal protein L38.

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

- Molecule 42 is a protein called 60S ribosomal protein L39.

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

- Molecule 43 is a protein called Large ribosomal subunit protein eL40.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	Lm	52	Total	C	N	O	S	0	0
			429	266	90	67	6		

- Molecule 44 is a protein called 60S ribosomal protein L41.

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

- Molecule 45 is a protein called 60S ribosomal protein L36a.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	Lo	105	Total	C	N	O	S	0	0
			862	542	175	139	6		

- Molecule 46 is a protein called 60S ribosomal protein L37a.

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

- Molecule 47 is a protein called 60S ribosomal protein L28.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	Lr	125	Total	C	N	O	S	0	0
			1002	622	207	168	5		

- Molecule 48 is a protein called 60S acidic ribosomal protein P0.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	Ls	196	Total	C	N	O	S	0	0
			1496	952	259	276	9		

- Molecule 49 is a protein called Large ribosomal subunit protein uL11.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	Lt	134	Total	C	N	O	S	0	0
			998	626	180	189	3		

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

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

- Molecule 51 is a protein called 40S ribosomal protein S5.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	SF	189	Total	C	N	O	S	0	0
			1495	934	284	270	7		

- Molecule 52 is a protein called 40S ribosomal protein S10.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	SK	98	Total	C	N	O	S	0	0
			827	539	148	134	6		

- Molecule 53 is a protein called Small ribosomal subunit protein eS12.

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

- Molecule 54 is a protein called Small ribosomal subunit protein uS19.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	SP	121	Total	C	N	O	S	0	0
			985	623	185	170	7		

- Molecule 55 is a protein called Small ribosomal subunit protein uS9.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	SQ	144	Total	C	N	O	S	0	0
			1142	726	216	197	3		

- Molecule 56 is a protein called Small ribosomal subunit protein eS17.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	SR	135	Total	C	N	O	S	0	0
			1090	685	202	198	5		

- Molecule 57 is a protein called 40S ribosomal protein S18.

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

- Molecule 58 is a protein called 40S ribosomal protein S19.

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

- Molecule 59 is a protein called 40S ribosomal protein S20.

Mol	Chain	Residues	Atoms					AltConf	Trace
59	SU	104	Total	C	N	O	S	0	0
			821	514	155	148	4		

- Molecule 60 is a protein called Small ribosomal subunit protein eS25.

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

- Molecule 61 is a protein called 40S ribosomal protein S28.

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

- Molecule 62 is a protein called 40S ribosomal protein S29.

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

- Molecule 63 is a protein called Ubiquitin-40S ribosomal protein S27a.

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

- Molecule 64 is a protein called Receptor of activated protein C kinase 1.

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

- Molecule 65 is a protein called 40S ribosomal protein SA.

Mol	Chain	Residues	Atoms					AltConf	Trace
65	SA	221	Total	C	N	O	S	0	0
			1741	1106	305	322	8		

- Molecule 66 is a protein called 40S ribosomal protein S3a.

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

- Molecule 67 is a protein called 40S ribosomal protein S2.

Mol	Chain	Residues	Atoms					AltConf	Trace
67	SC	220	Total	C	N	O	S	0	0
			1707	1104	293	300	10		

- Molecule 68 is a protein called Small ribosomal subunit protein eS4, X isoform.

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

- Molecule 69 is a protein called 40S ribosomal protein S6.

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

- Molecule 70 is a protein called Small ribosomal subunit protein eS7.

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

- Molecule 71 is a protein called 40S ribosomal protein S8.

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

- Molecule 72 is a protein called 40S ribosomal protein S9.

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

- Molecule 73 is a protein called 40S ribosomal protein S11.

Mol	Chain	Residues	Atoms					AltConf	Trace
73	SL	153	Total	C	N	O	S	0	0
			1247	793	234	214	6		

- Molecule 74 is a protein called 40S ribosomal protein S13.

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

- Molecule 75 is a protein called Small ribosomal subunit protein uS11.

Mol	Chain	Residues	Atoms					AltConf	Trace
75	SO	137	Total	C	N	O	S	0	0
			1024	627	200	191	6		

- Molecule 76 is a protein called Small ribosomal subunit protein eS21.

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

- Molecule 77 is a protein called 40S ribosomal protein S15a.

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

- Molecule 78 is a protein called 40S ribosomal protein S23.

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

- Molecule 79 is a protein called 40S ribosomal protein S24.

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

- Molecule 80 is a protein called 40S ribosomal protein S26.

Mol	Chain	Residues	Atoms					AltConf	Trace
80	Sa	102	Total	C	N	O	S	0	0
			821	512	171	133	5		

- Molecule 81 is a protein called Small ribosomal subunit protein eS27.

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

- Molecule 82 is a protein called Small ribosomal subunit protein eS30.

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

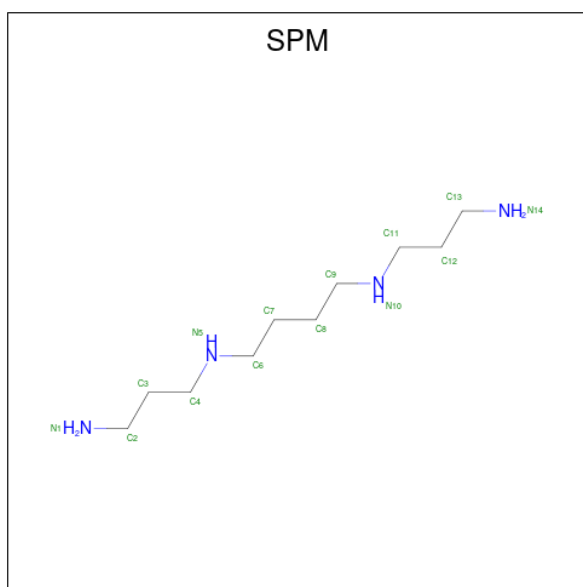
- Molecule 83 is a RNA chain called 18S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
83	S2	1740	Total	C	N	O	P	0	0
			36953	16508	6600	12106	1739		

- Molecule 84 is MAGNESIUM ION (CCD ID: MG) (formula: Mg) (labeled as "Ligand of Interest" by depositor).

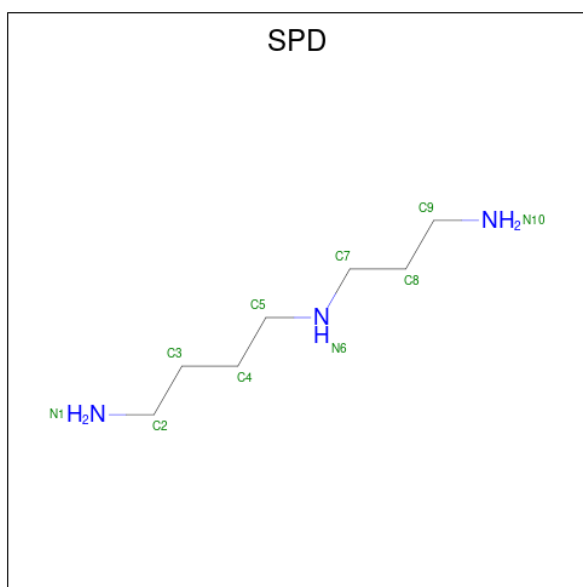
Mol	Chain	Residues	Atoms		AltConf
84	L5	181	Total	Mg	0
			181	181	
84	L7	2	Total	Mg	0
			2	2	
84	L8	4	Total	Mg	0
			4	4	
84	LA	1	Total	Mg	0
			1	1	
84	LV	1	Total	Mg	0
			1	1	
84	Le	1	Total	Mg	0
			1	1	
84	Lj	1	Total	Mg	0
			1	1	
84	Sa	1	Total	Mg	0
			1	1	
84	S2	27	Total	Mg	0
			27	27	

- Molecule 85 is SPERMINE (CCD ID: SPM) (formula: C₁₀H₂₆N₄) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms			AltConf
85	L5	1	Total	C	N	0
			14	10	4	
85	L5	1	Total	C	N	0
			14	10	4	
85	L5	1	Total	C	N	0
			14	10	4	
85	L5	1	Total	C	N	0
			14	10	4	
85	L5	1	Total	C	N	0
			14	10	4	
85	L5	1	Total	C	N	0
			14	10	4	

- Molecule 86 is SPERMIDINE (CCD ID: SPD) (formula: $C_7H_{19}N_3$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms			AltConf
86	L5	1	Total	C	N	0
			10	7	3	
86	L5	1	Total	C	N	0
			10	7	3	
86	L5	1	Total	C	N	0
			10	7	3	
86	L5	1	Total	C	N	0
			10	7	3	
86	L5	1	Total	C	N	0
			10	7	3	
86	L5	1	Total	C	N	0
			10	7	3	
86	L5	1	Total	C	N	0
			10	7	3	
86	L8	1	Total	C	N	0
			10	7	3	
86	LN	1	Total	C	N	0
			10	7	3	

- Molecule 87 is ZINC ION (CCD ID: ZN) (formula: Zn) (labeled as "Ligand of Interest" by depositor).

Mol	Chain	Residues	Atoms		AltConf
87	Lg	1	Total	Zn	0
			1	1	

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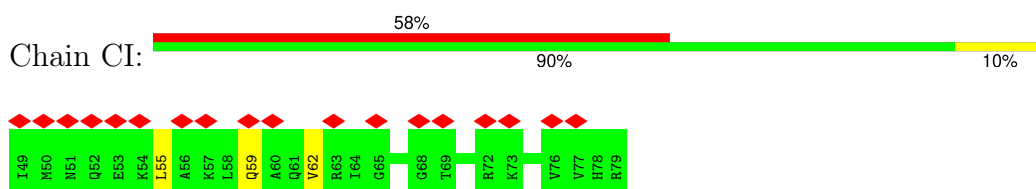
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Mol	Chain	Residues	Atoms		AltConf
87	Lj	1	Total 1	Zn 1	0
87	Lm	1	Total 1	Zn 1	0
87	Lo	1	Total 1	Zn 1	0
87	Lp	1	Total 1	Zn 1	0
87	Sa	1	Total 1	Zn 1	0

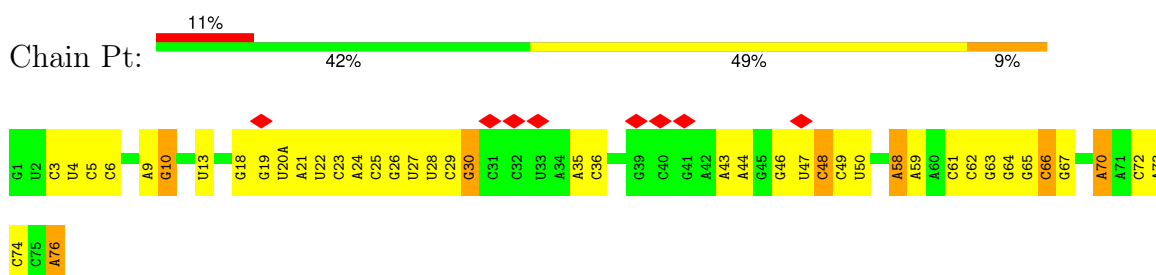
3 Residue-property plots

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.

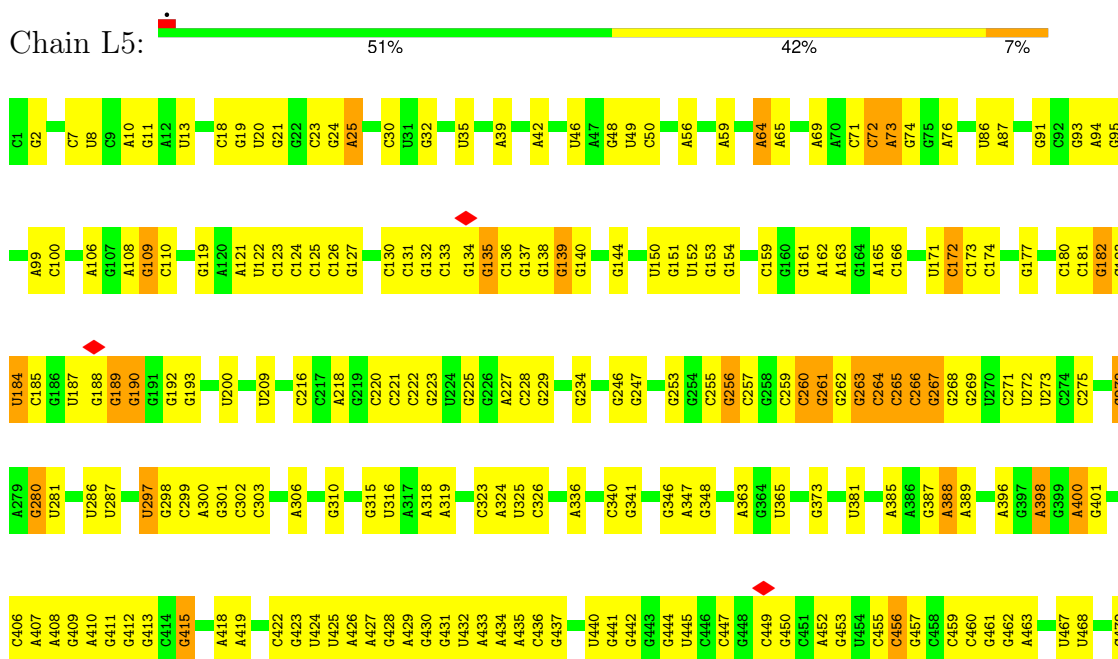
• Molecule 1: Transcription factor BTF3



• Molecule 2: P site tRNA

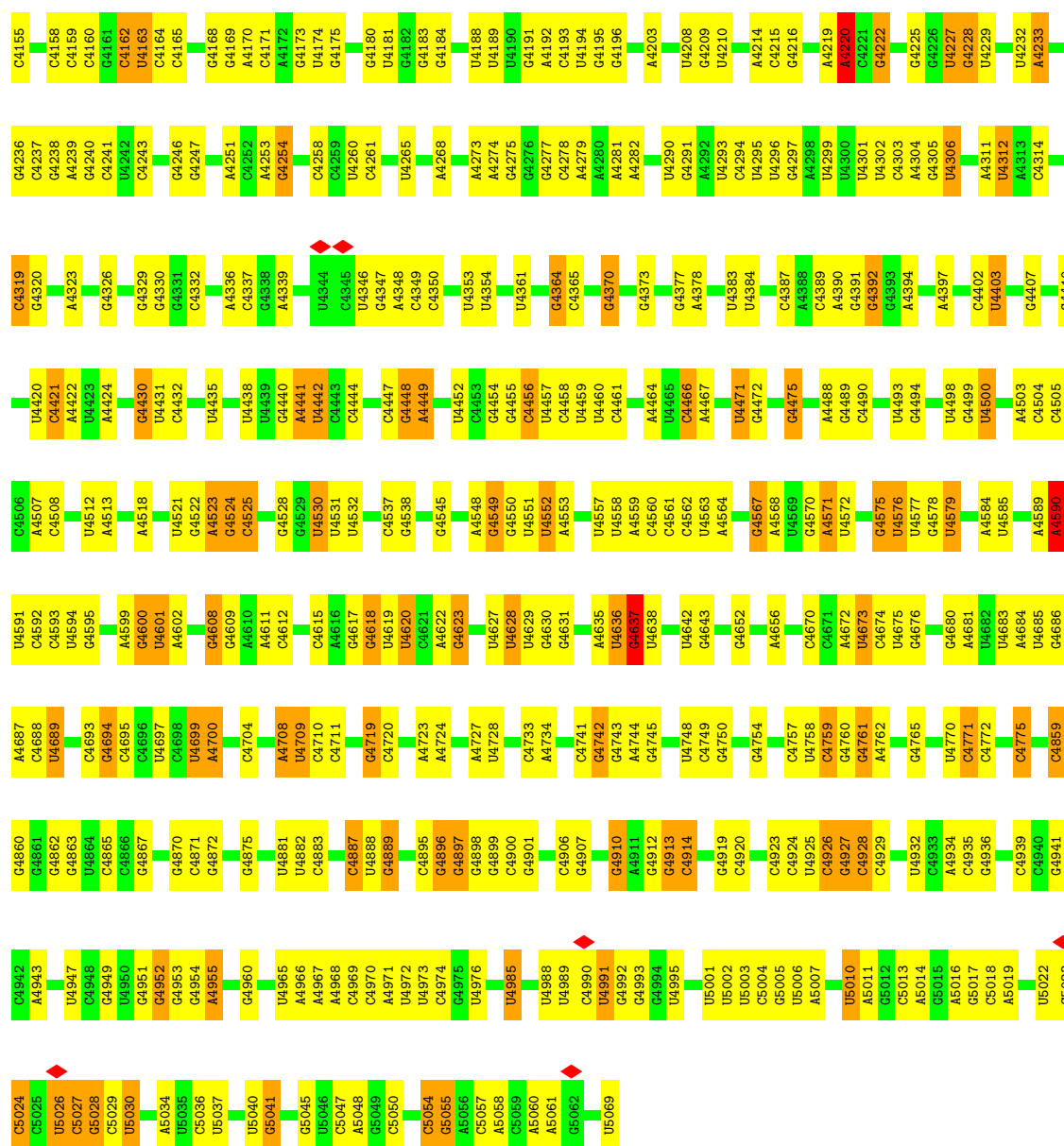


• Molecule 3: 28S rRNA

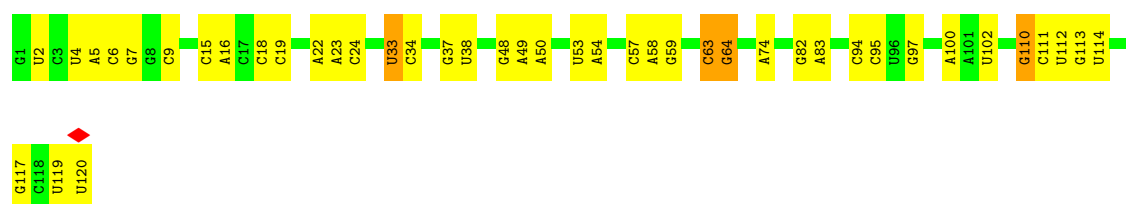


U1980	A1897	G1803	C1704	G1617	U1511	G1435	U1339	G1261	G1178	C969	G742	C473
G1981	A1898	A1805	A1706	A1621	U1512	C1436	C1340	G1262	U1179	G743	G474	
G1982	G1899	G1806	G1716	G1624	U1514	C1437	A1345	G1266	C1181	A746	G479	
A1983	C1807	C1807	C1717	G1625	A1515	U1438	C1346	C1267	C972	C672	C480	
G1984	C1808	C1808	C1718	G1626	U1516	C1439	C1347	G1268	C973	G674	C480	
G1985	C1809	C1809	A1719	G1626	G1517	U1440	U1348	G1269	C975	C675	C481	
U1906	U1907	G1811	U1725	G1628	G1522	C1441	C1349	A1270	G976	G676	C482	
A1907	A1908	G1812	U1726	C1628	A1523	C1442	C1350	G1271	C977	G677	G483	
G1909	G1909	U1813	U1727	U1728	A1524	U1444	G1351	G1272	C978	G678	U484	
C1914	C1915	G1814	U1728	A1631	A1525	U1445	G1351	G1273	C979	G679	C485	
A1916	G1916	G1815	A1729	A1632	A1534	C1446	A1354	A1274	C981	G680	C486	
A1917	U1917	G1818	C1730	G1633	U1534	C1447	G1355	G1275	U982	C683	C489	
A1918	U1918	G1819	C1731	A1634	A1535	G1448	U1356	C1276	G908	G684	C490	
A1919	G1919	G1820	C1732	U1636	U1536	C1449	C1357	G1277	A909	G685	C491	
G2000	C1920	G1821	G1733	A1637	A1537	C1450	G1358	A1278	G910	A686	U492	
G2001	G1921	G1822	U1733	A1638	C1541	G1451	G1359	C1280	U989	U687	C493	
A2002	G1922	G1823	A1742	U1639	U1542	G1457	C1365	G1281	G913	U688	C494	
G2003	G1922	G1824	C1743	C1640	A1547	C1458	G1366	U1284	G1064	U689	C495	
U2004	G1925	A1825	U1744	A1641	A1548	A1459	C1367	U1285	C985	C690	C496	
G2005	C1931	G1833	G1753	A1645	G1549	C1460	C1368	G1286	G1070	C691	C497	
G2006	A1932	G1836	U1754	A1646	A1558	A1461	C1369	G1287	C1071	C498	C498	
G2007	A1933	A1837	C1755	U1647	G1559	A1462	C1369	U1287	C1072	C499	C499	
U2008	A1934	G1837	U1756	G1654	A1563	G1465	A1373	G1290	G1075	G500		
A2009	G1935	G1842	U1757	C1661	A1563	C1468	G1377	U1291	C1076	C501		
A2010	C1936	U1845	G1758	C1662	A1564	C1469	C1378	G1292	C1077	C502		
C1942	A1942	U1846	G1759	C1663	U1565	G1470	C1379	G1293	C925	C503		
A1943	A1943	G1847	G1760	U1663	A1566	C1471	C1379	A1294	A1078	G504		
U1946	G1946	C1848	G1761	A1669	C1566	C1472	A1387	C1295	G926	G701		
U1947	U1947	U1849	C1762	A1669	U1572	C1472	G1394	U1297	C1080	G702		
G1948	G1948	G1855	C1763	C1675	G1573	G1479	C1479	U1298	C1081	U702		
G1951	G1951	U1860	G1764	C1676	G1574	C1480	A1388	C1299	U1083	C704		
G1952	G1952	U1861	A1765	U1677	U1577	C1481	G1398	G1300	A932	G710		
G1953	G1953	U1862	A1766	A1679	G1578	C1482	G1399	C1301	G933	A711		
A2025	A2025	U1863	U1767	A1679	U1578	C1483	G1400	G1301	G934	C712		
A2026	A2026	G1864	G1768	G1680	C1579	C1483	G1403	C1304	A935	C713		
A2029	A2029	U1864	U1769	G1680	U1579	C1483	G1404	C1305	C936	G714		
A2030	A2030	U1863	A1770	U1683	U1582	A1491	C1405	C1308	C941	G715		
G2034	G2034	G1864	U1771	U1683	U1582	A1491	C1405	G1308	G942	C517		
C2035	A1958	A1867	C1772	G1685	U1588	U1494	G1406	C1309	A943	G518		
A1960	A1960	U1868	U1773	C1686	C1589	G1495	C1407	C1310	A944	C519		
G1961	G1961	G1869	C1774	U1687	C1590	G1496	G1408	C1310	U945	C543		
A1962	A1962	C1870	A1775	G1688	U1591	A1497	C1409	C1314	C946	C724		
A2047	A2047	A1871	U1776	G1688	U1591	A1497	U1410	C1315	C947			
U2048	U2048	C1871	C1777	G1691	U1596	C1499	G1412	G1316	G1087			
G2049	A1970	C1875	U1778	C1692	U1597	C1499	C1413	U1317	G1088			
G2050	U1970	U1876	C1779	U1695	C1597	A1500	C1414	C1316	U728			
C2051	G1971	G1877	U1780	C1696	U1598	C1501	G1415	U1247	G729			
G2052	C1972	U1878	U1781	G1697	A1599	C1502	G1416	C1248	G646			
G2055	U1974	C1879	U1782	C1697	C1603	A1503	G1417	A1322	U728			
G2056	G1975	G1878	U1783	C1698	G1604	G1504	C1418	A1323	G647			
C1976	C1976	A1884	A1787	A1699	G1605	C1505	G1419	A1324	G734			
C1977	C1977	G1885	A1788	A1699	G1605	G1506	C1418	A1254	G735			
C1978	C1978	G1885	U1788	A1699	G1605	C1507	A1420	A1255	C736			
C2059	C1978	A1888	G1700	G1700	G1612	A1508	A1420	A1256	G737			
G2060	A1979	A1888	C1702	C1702	A1613	C1509	C1431	A1257	C738			
			C1703	C1703		G1510	G1432	A1332	G739			
								A1333	G740			
									C741			
									A667			



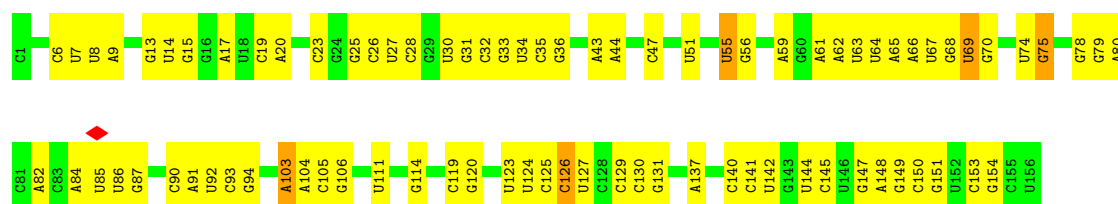


• Molecule 4: 5S rRNA

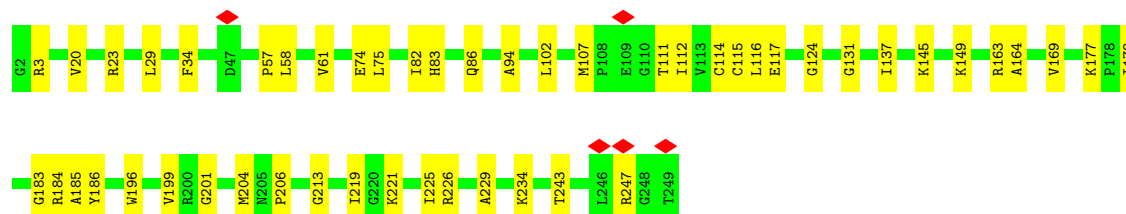
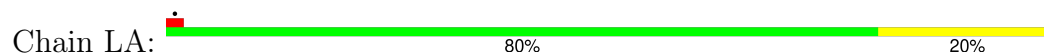


• Molecule 5: 5.8S rRNA

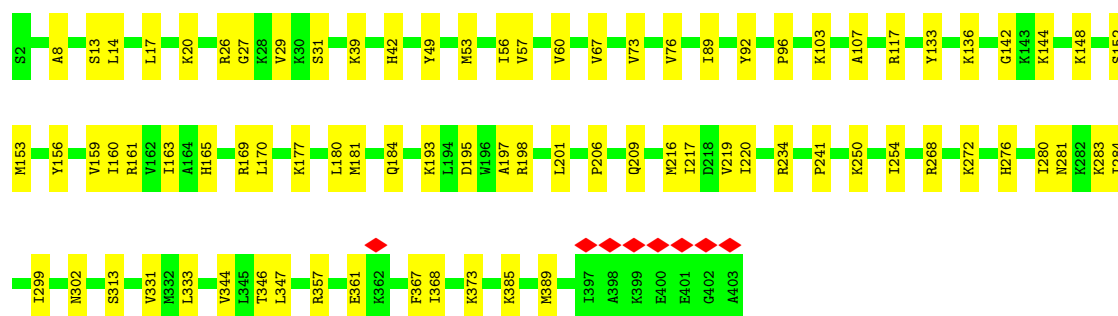
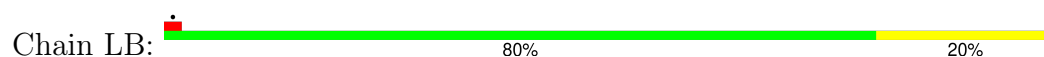




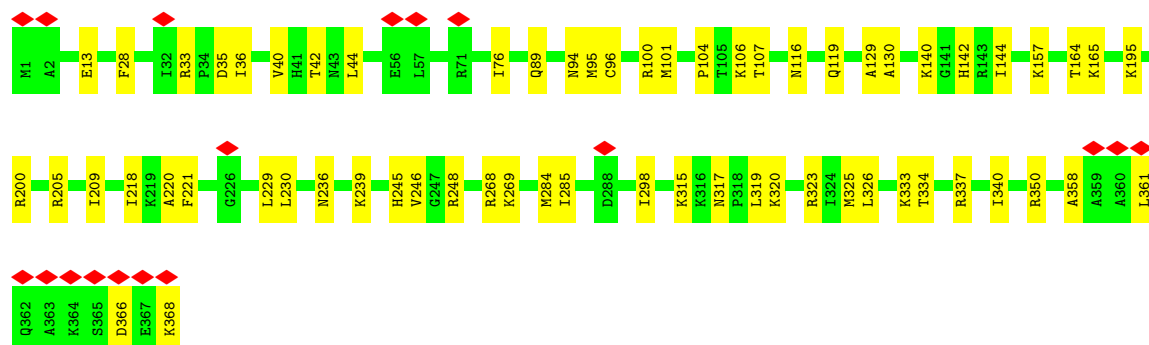
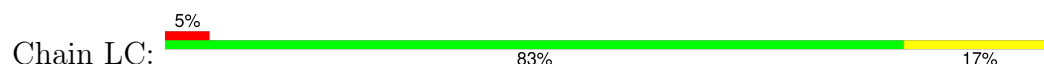
• Molecule 6: 60S ribosomal protein L8



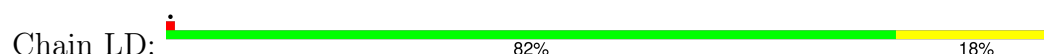
• Molecule 7: Large ribosomal subunit protein uL3

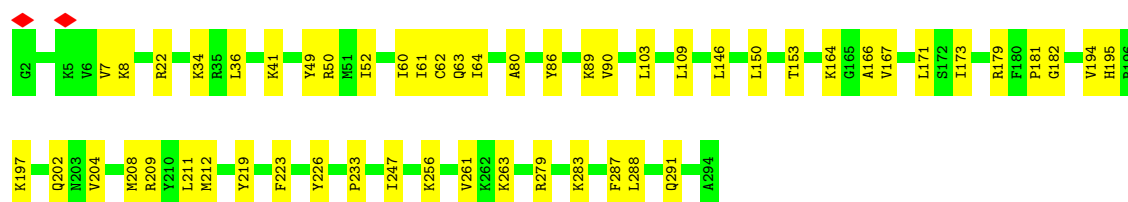


• Molecule 8: 60S ribosomal protein L4

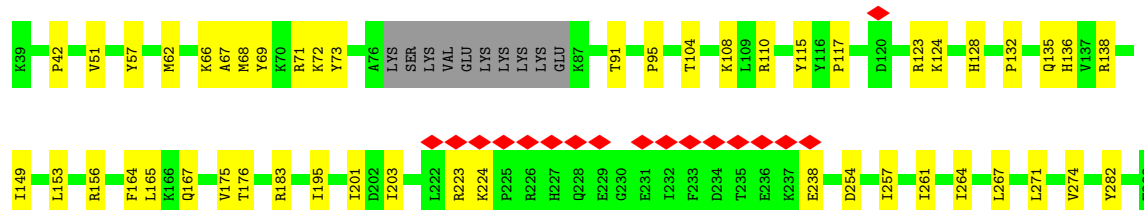
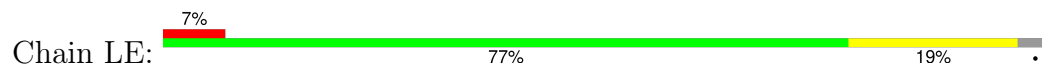


• Molecule 9: Large ribosomal subunit protein uL18

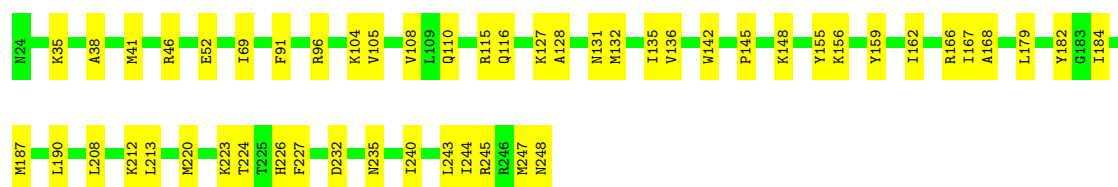
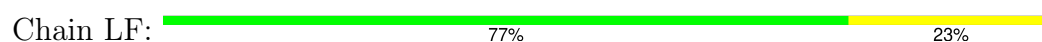




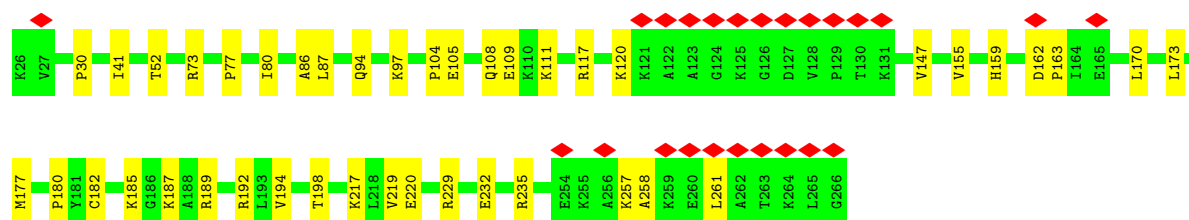
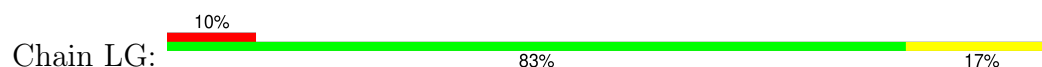
- Molecule 10: Large ribosomal subunit protein eL6



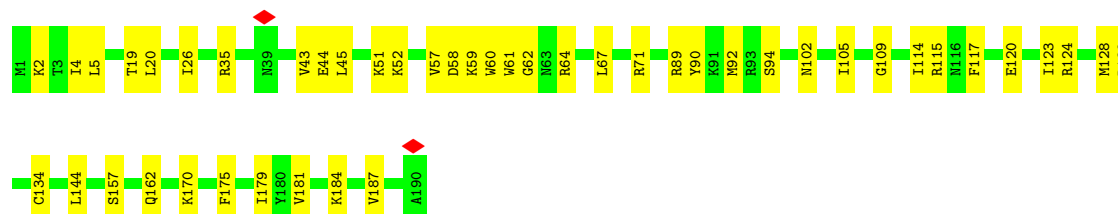
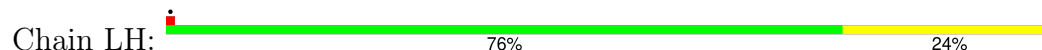
- Molecule 11: 60S ribosomal protein L7



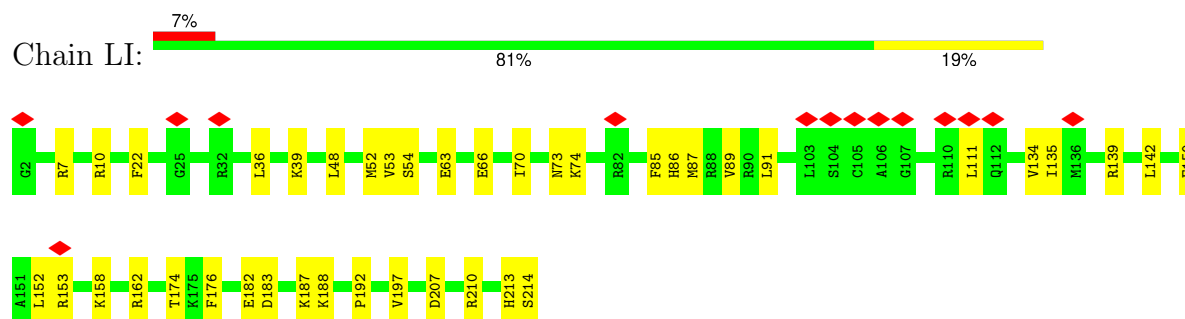
- Molecule 12: 60S ribosomal protein L7a



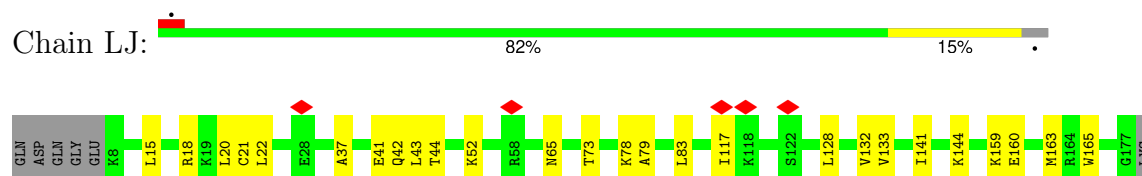
- Molecule 13: 60S ribosomal protein L9



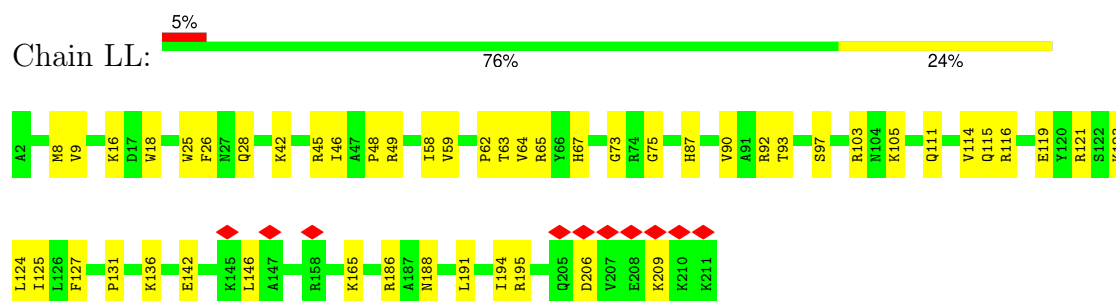
- Molecule 14: Ribosomal protein uL16-like



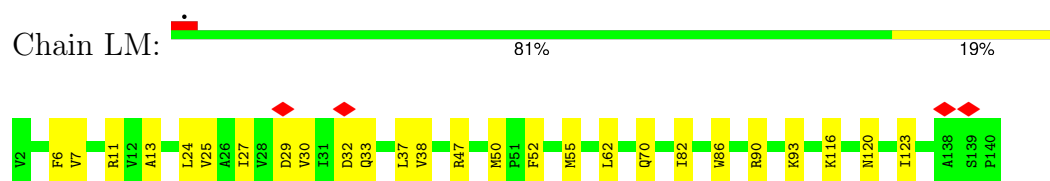
- Molecule 15: 60S ribosomal protein L11



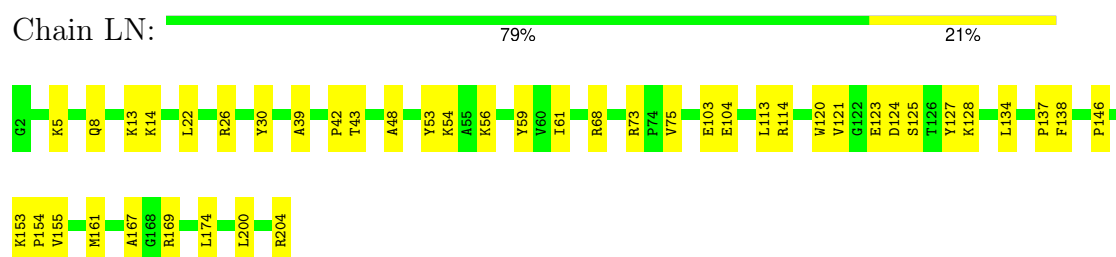
- Molecule 16: Large ribosomal subunit protein eL13



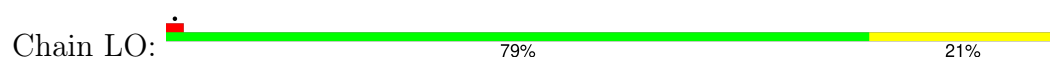
- Molecule 17: 60S ribosomal protein L14

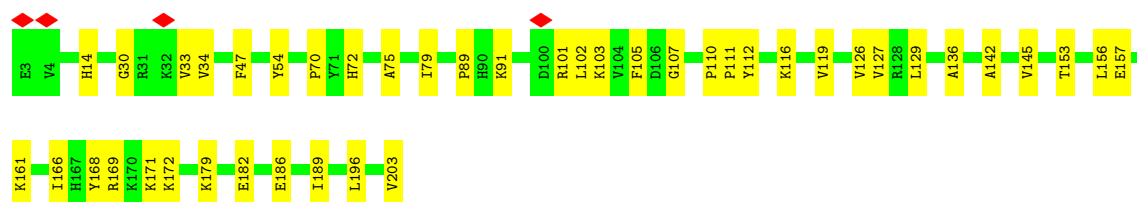


- Molecule 18: 60S ribosomal protein L15

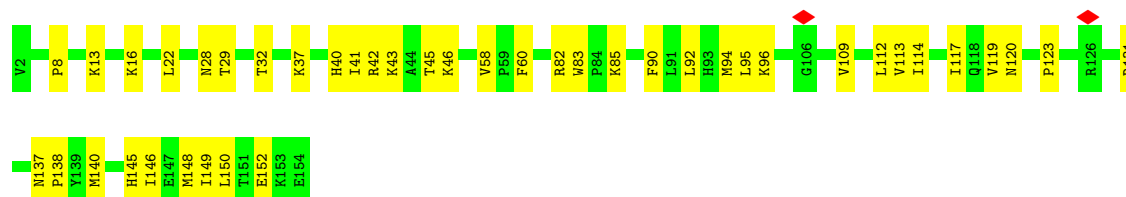
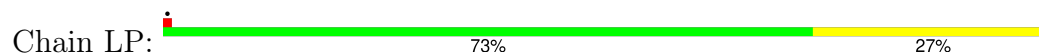


- Molecule 19: 60S ribosomal protein L13a

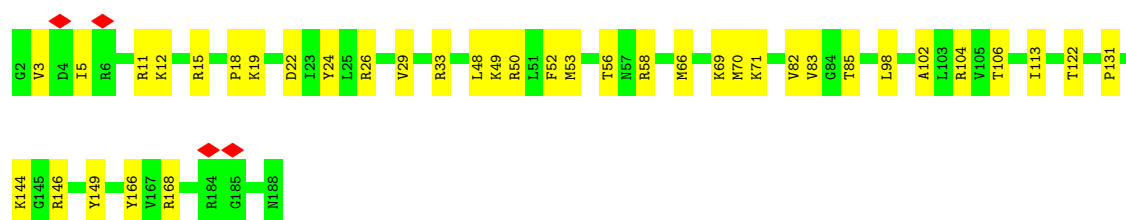
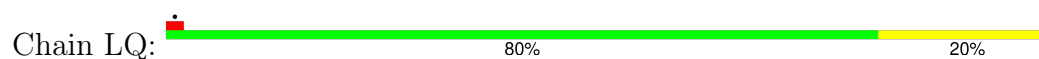




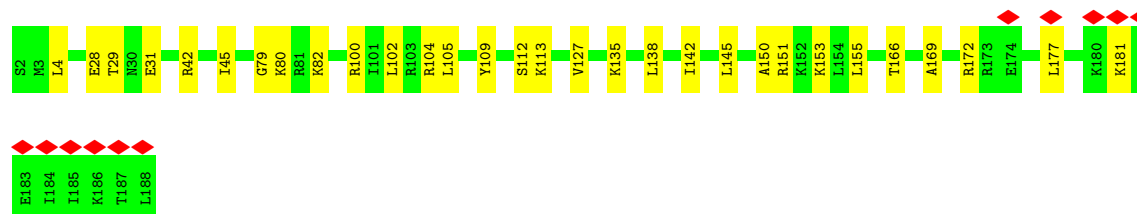
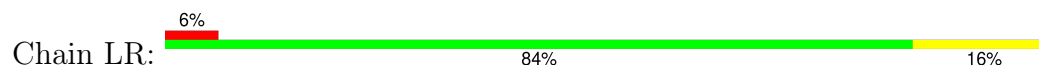
- Molecule 20: 60S ribosomal protein L17



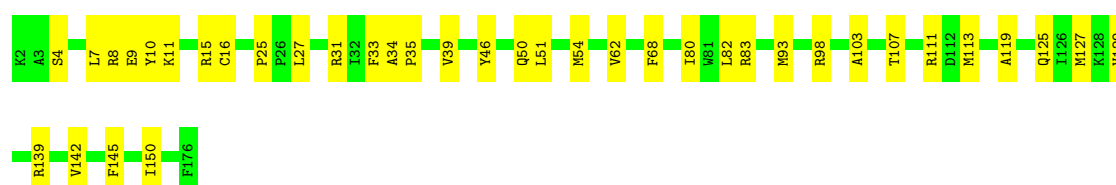
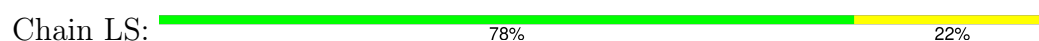
- Molecule 21: 60S ribosomal protein L18



- Molecule 22: 60S ribosomal protein L19



- Molecule 23: 60S ribosomal protein L18a



- Molecule 24: 60S ribosomal protein L21

Chain LT:  86% 14%



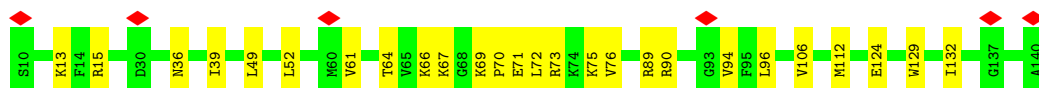
- Molecule 25: Heparin-binding protein HBp15

Chain LU:  73% 27%



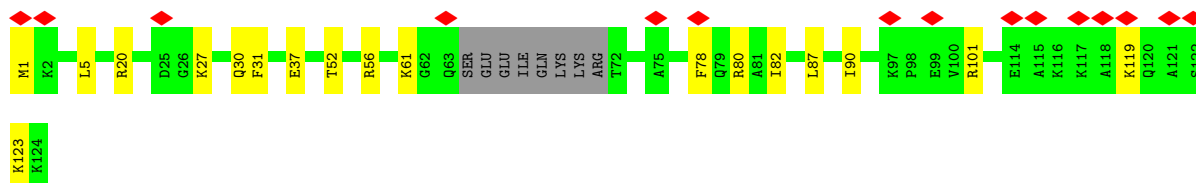
- Molecule 26: 60S ribosomal protein L23

Chain LV:  5% 80% 20%



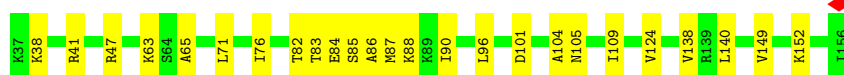
- Molecule 27: Ribosomal protein L24

Chain LW:  12% 79% 15% 6%



- Molecule 28: 60S ribosomal protein L23a

Chain LX:  79% 21%



- Molecule 29: 60S ribosomal protein L26

Chain LY:  80% 20%



- Molecule 30: 60S ribosomal protein L27

Chain LZ: 



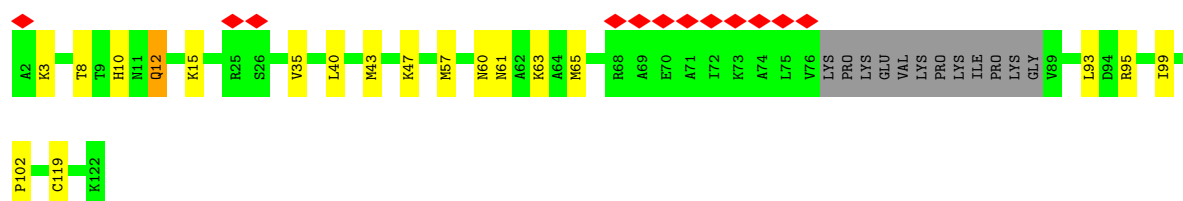
- Molecule 31: 60S ribosomal protein L27a

Chain La: 



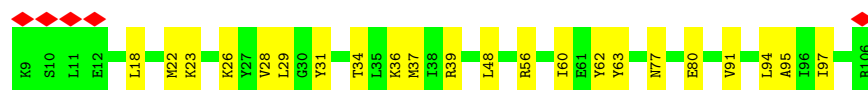
- Molecule 32: Large ribosomal subunit protein eL29

Chain Lb: 



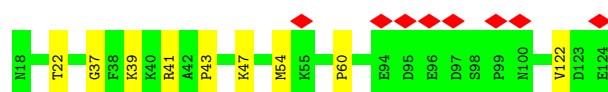
- Molecule 33: 60S ribosomal protein L30

Chain Lc: 



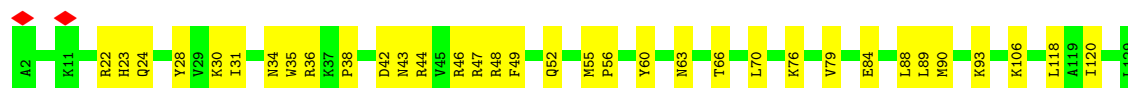
- Molecule 34: 60S ribosomal protein L31

Chain Ld: 



- Molecule 35: 60S ribosomal protein L32

Chain Le: 

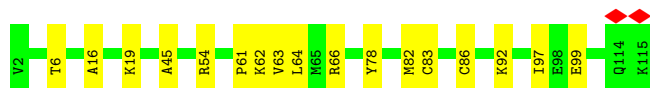
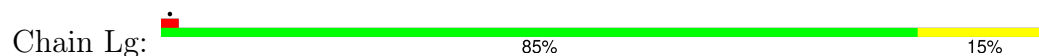


- Molecule 36: 60S ribosomal protein L35a

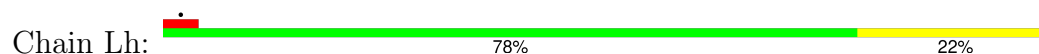
Chain Lf: 



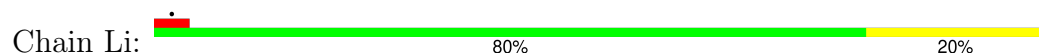
- Molecule 37: 60S ribosomal protein L34



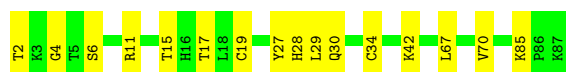
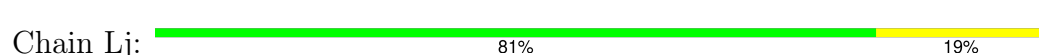
- Molecule 38: 60S ribosomal protein L35



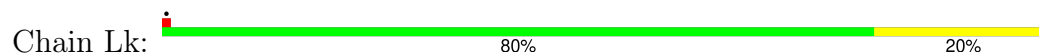
- Molecule 39: 60S ribosomal protein L36



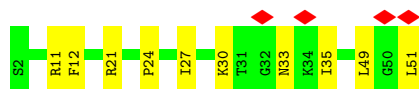
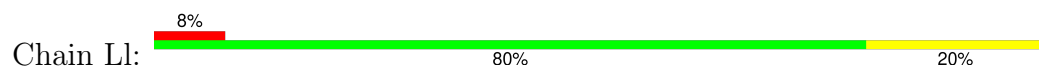
- Molecule 40: 60S ribosomal protein L37



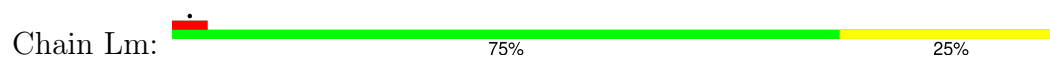
- Molecule 41: 60S ribosomal protein L38



- Molecule 42: 60S ribosomal protein L39



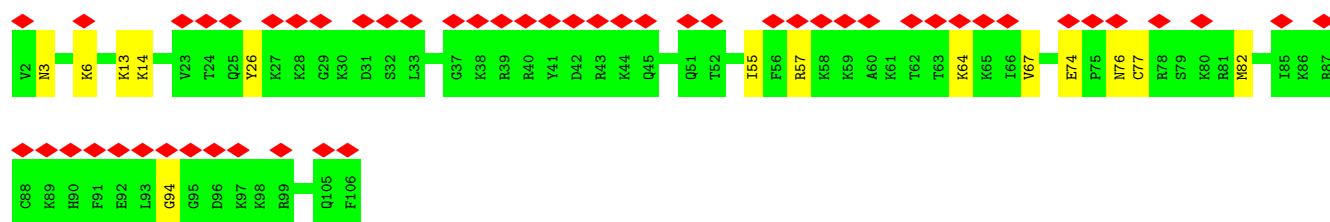
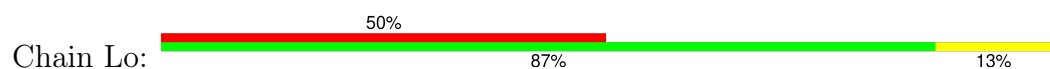
- Molecule 43: Large ribosomal subunit protein eL40



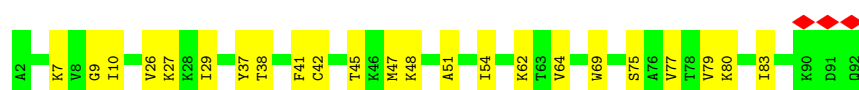
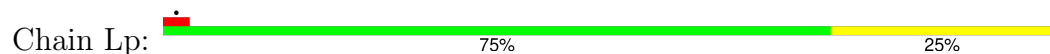
- Molecule 44: 60S ribosomal protein L41



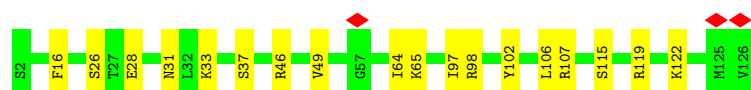
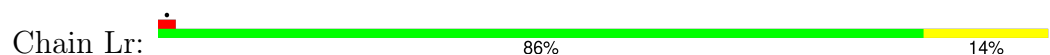
- Molecule 45: 60S ribosomal protein L36a



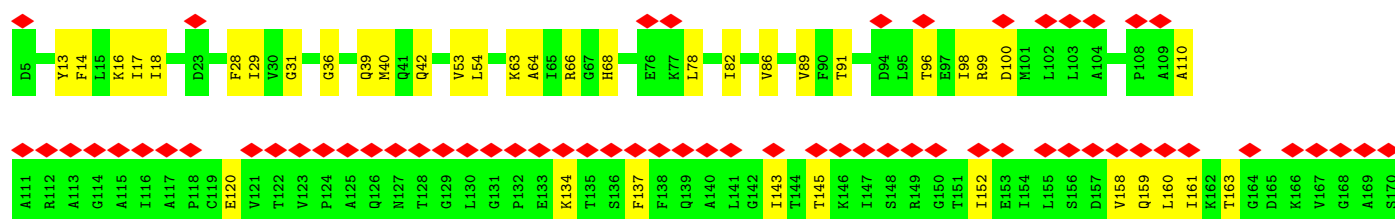
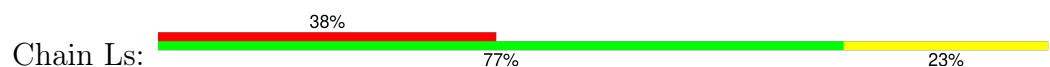
- Molecule 46: 60S ribosomal protein L37a



- Molecule 47: 60S ribosomal protein L28

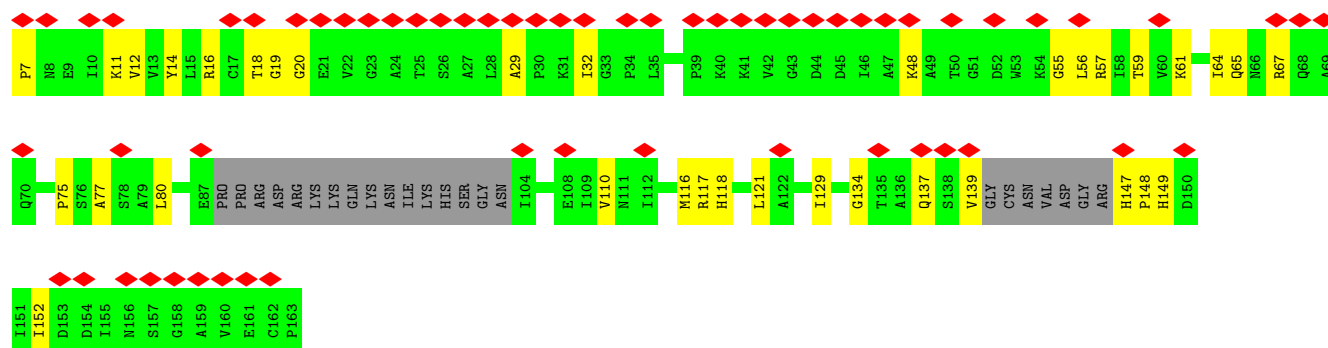
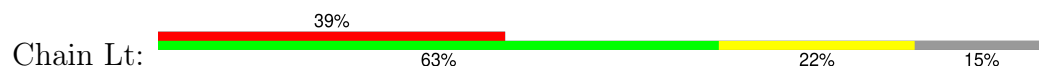


- Molecule 48: 60S acidic ribosomal protein P0

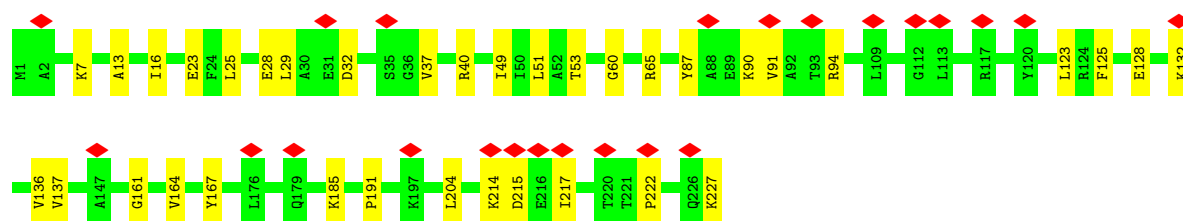
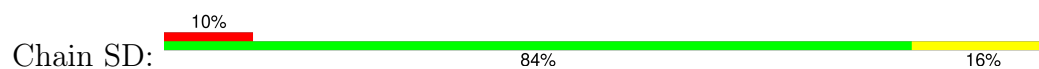




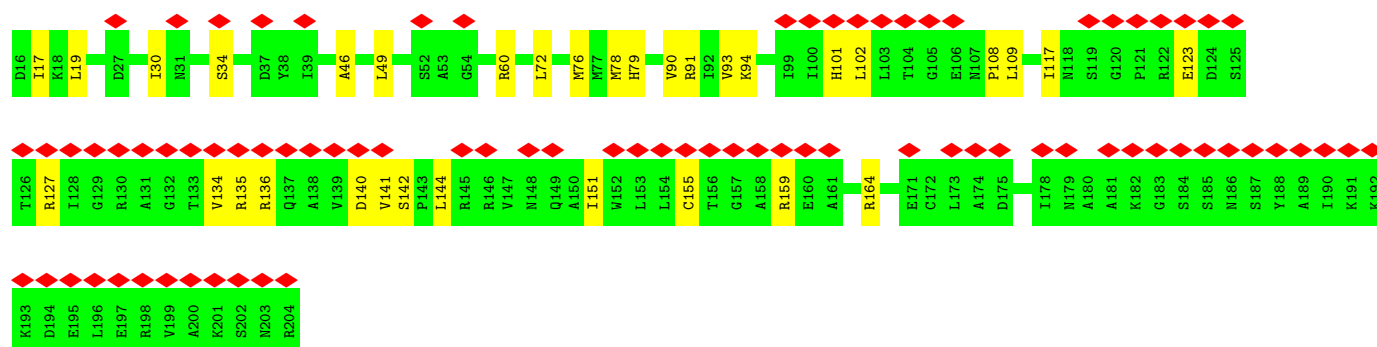
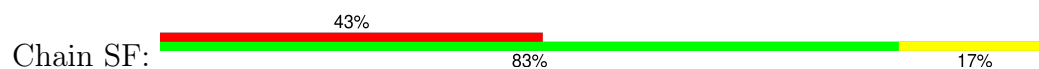
- Molecule 49: Large ribosomal subunit protein uL11



- Molecule 50: Small ribosomal subunit protein uS3

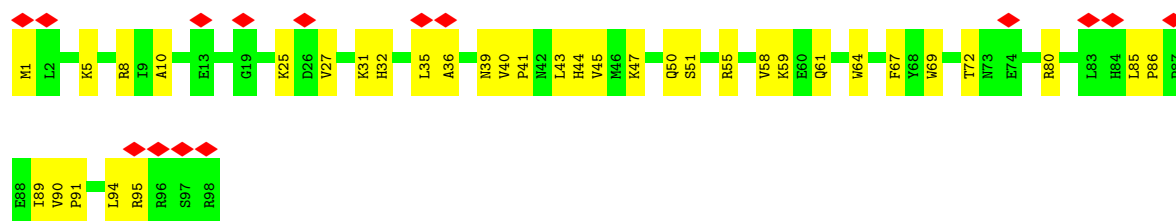


- Molecule 51: 40S ribosomal protein S5

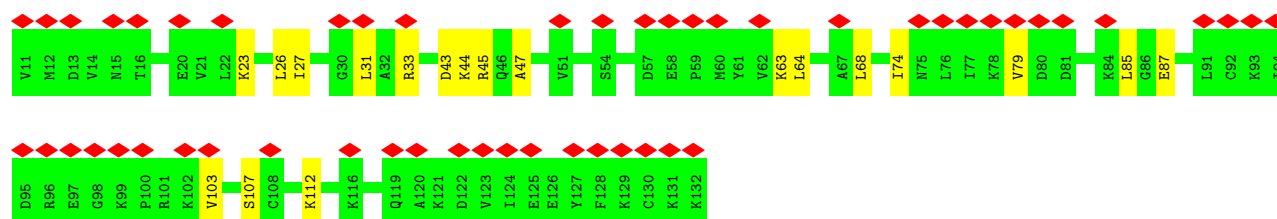
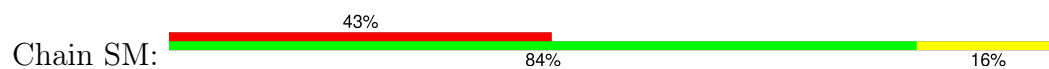


- Molecule 52: 40S ribosomal protein S10

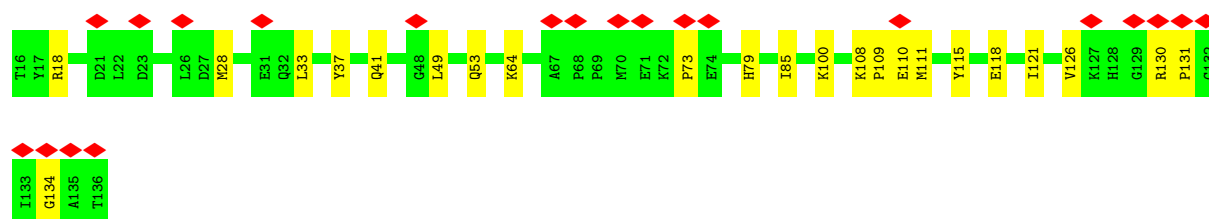
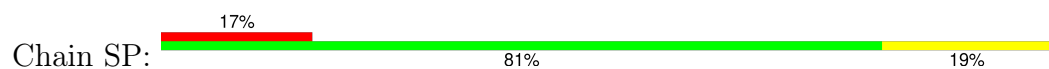




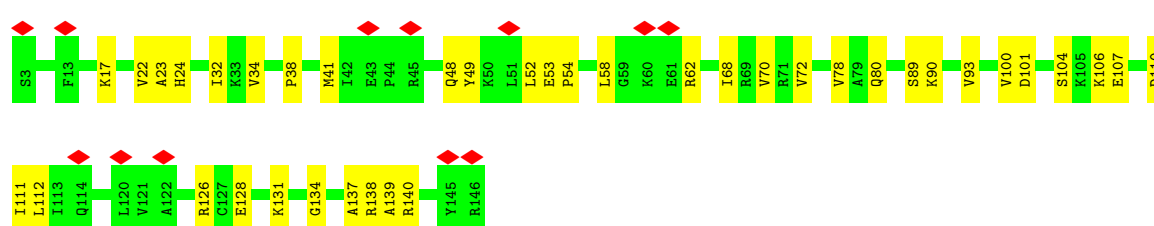
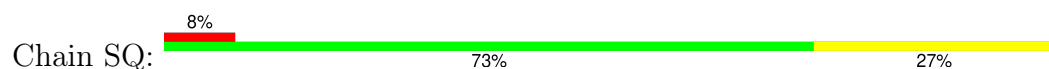
- Molecule 53: Small ribosomal subunit protein eS12



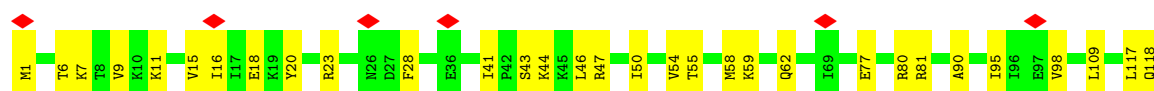
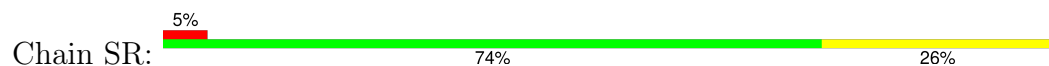
- Molecule 54: Small ribosomal subunit protein uS19

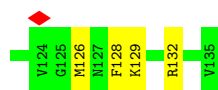


- Molecule 55: Small ribosomal subunit protein uS9

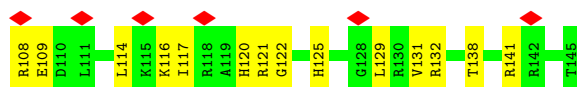
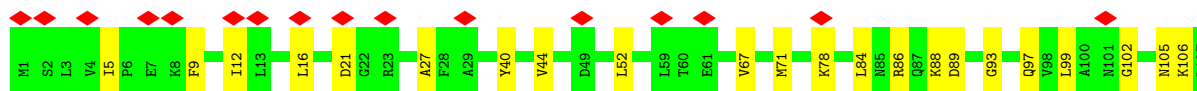
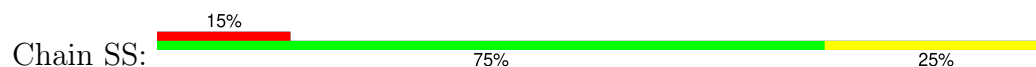


- Molecule 56: Small ribosomal subunit protein eS17

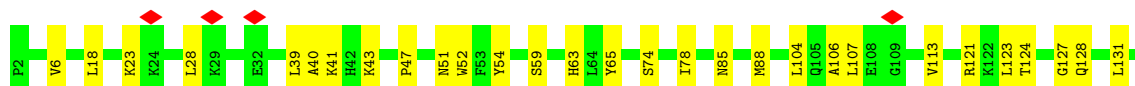
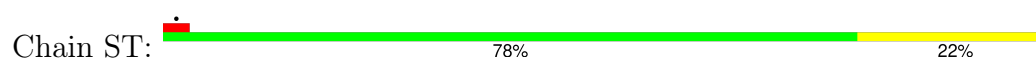




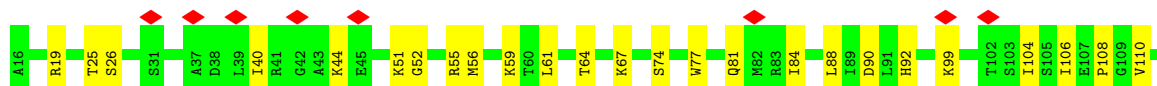
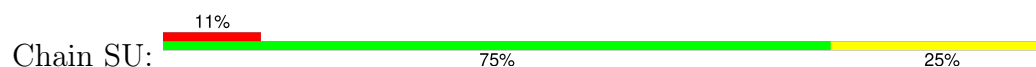
- Molecule 57: 40S ribosomal protein S18



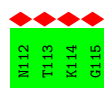
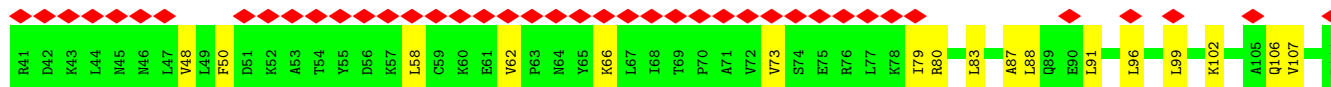
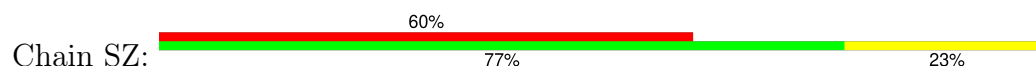
- Molecule 58: 40S ribosomal protein S19



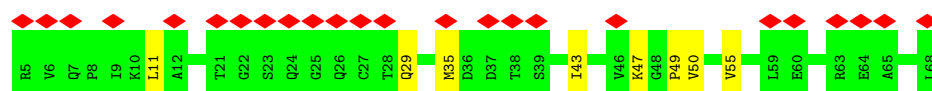
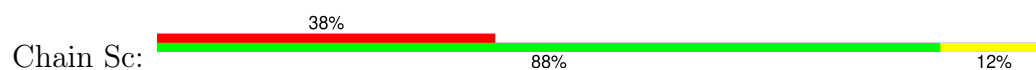
- Molecule 59: 40S ribosomal protein S20



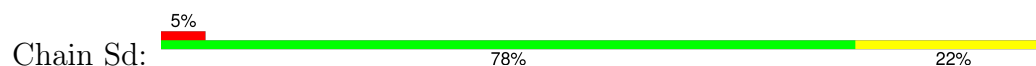
- Molecule 60: Small ribosomal subunit protein eS25



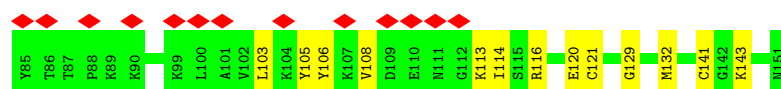
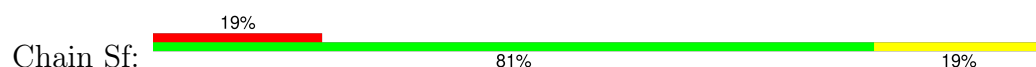
- Molecule 61: 40S ribosomal protein S28



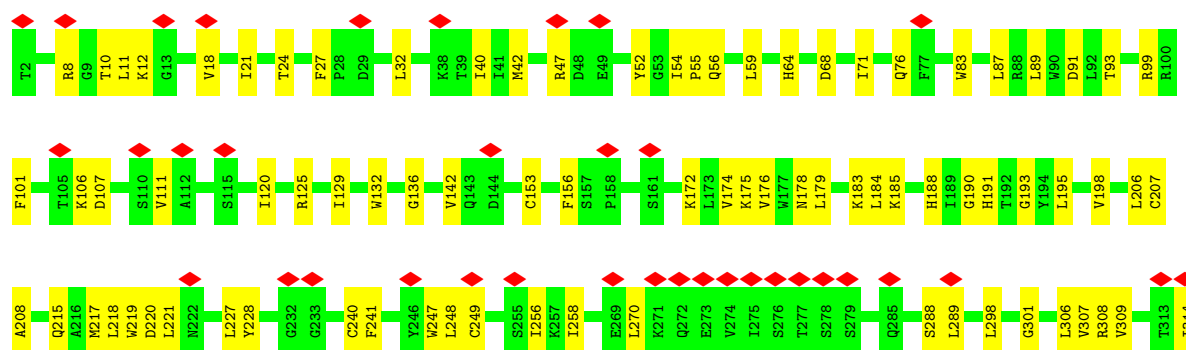
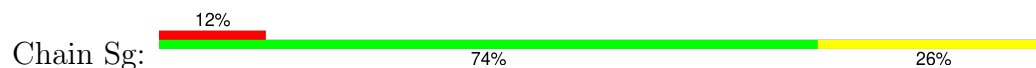
- Molecule 62: 40S ribosomal protein S29



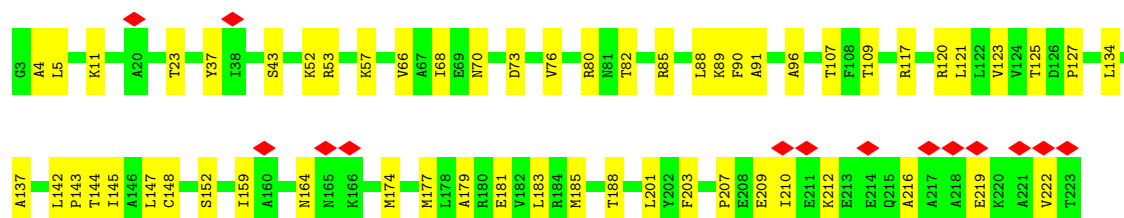
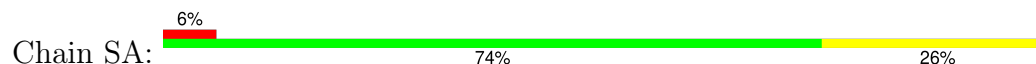
- Molecule 63: Ubiquitin-40S ribosomal protein S27a



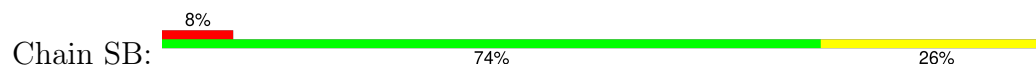
- Molecule 64: Receptor of activated protein C kinase 1

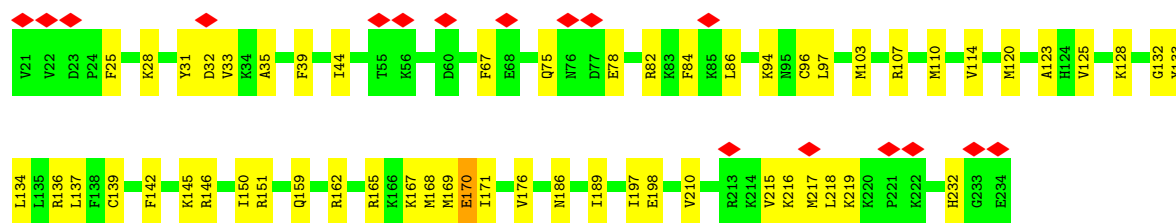


- Molecule 65: 40S ribosomal protein SA



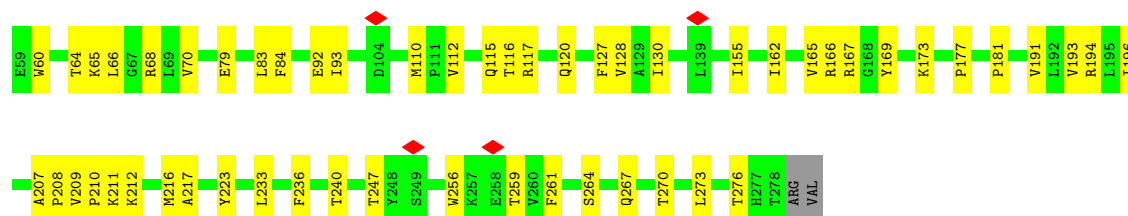
- Molecule 66: 40S ribosomal protein S3a





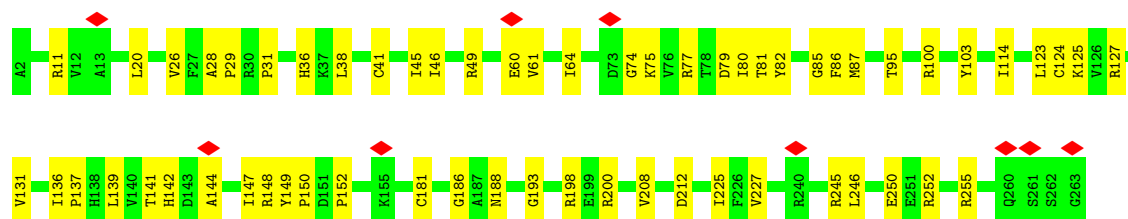
- Molecule 67: 40S ribosomal protein S2

Chain SC: 75% 24%



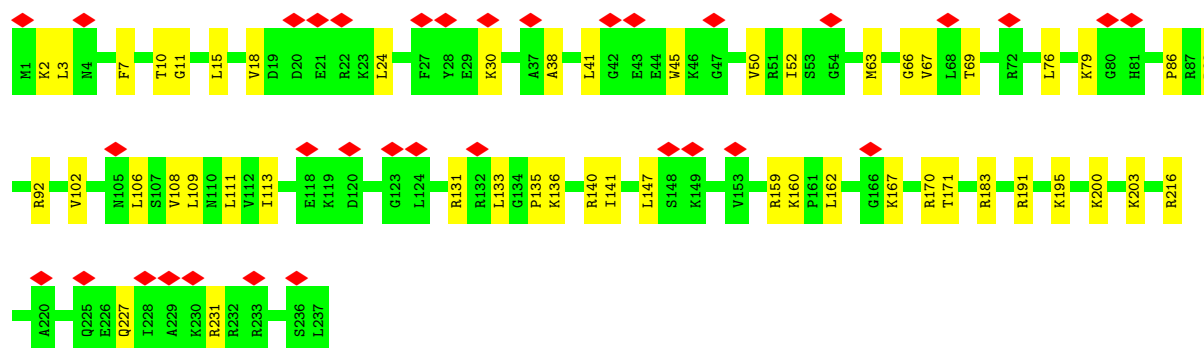
- Molecule 68: Small ribosomal subunit protein eS4, X isoform

Chain SE: 77% 23%



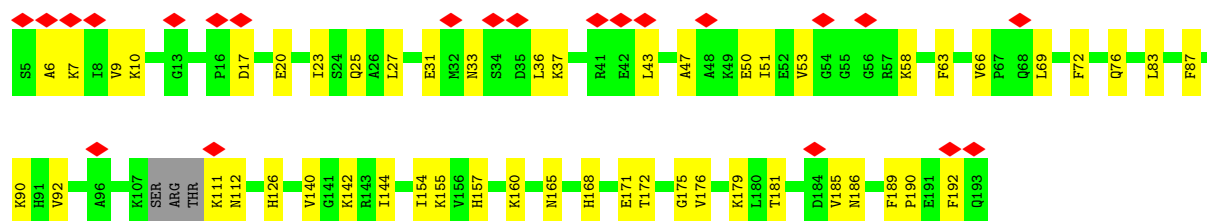
- Molecule 69: 40S ribosomal protein S6

Chain SG: 14% 79% 21%

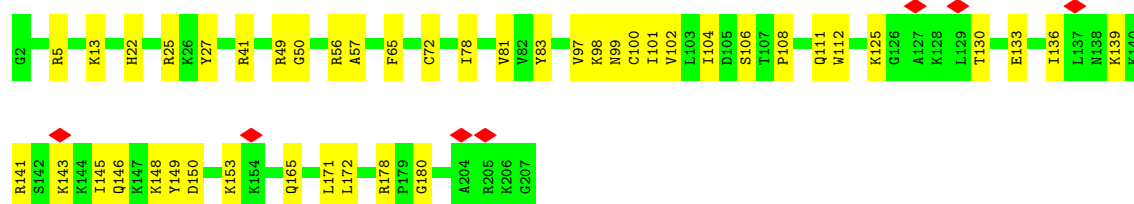
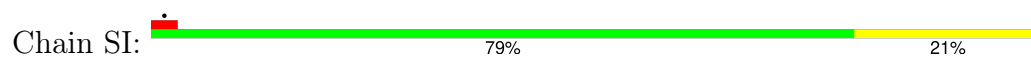


- Molecule 70: Small ribosomal subunit protein eS7

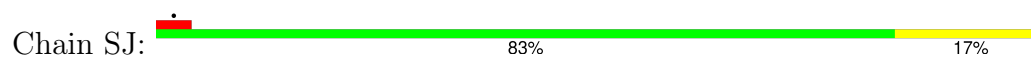
Chain SH: 12% 71% 27%



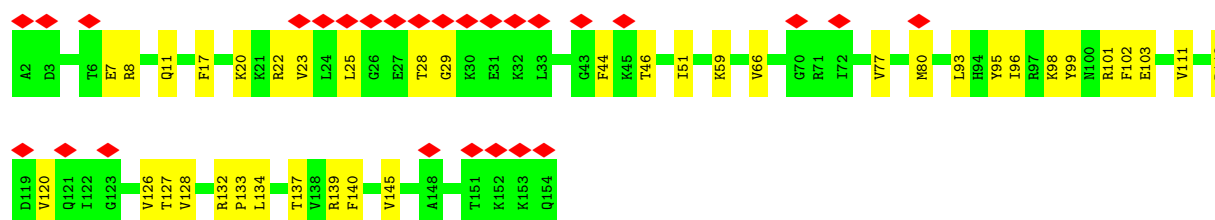
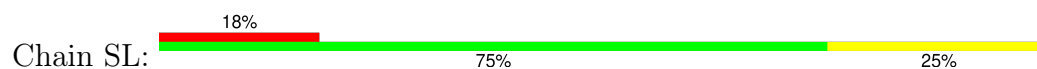
- Molecule 71: 40S ribosomal protein S8



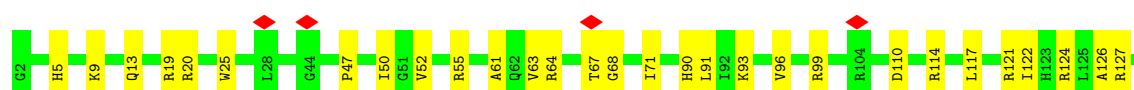
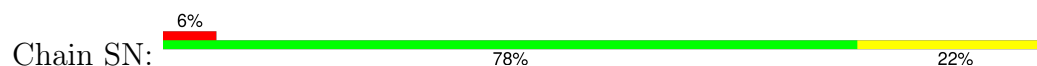
- Molecule 72: 40S ribosomal protein S9

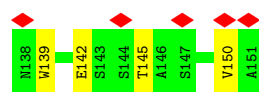


- Molecule 73: 40S ribosomal protein S11



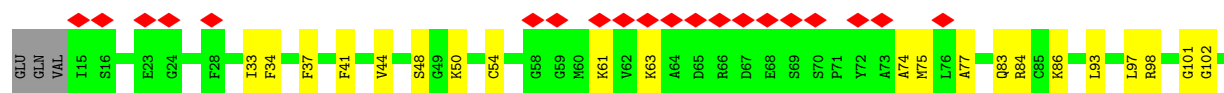
- Molecule 74: 40S ribosomal protein S13





- Molecule 75: Small ribosomal subunit protein uS11

Chain SO: 18% 78% 20%



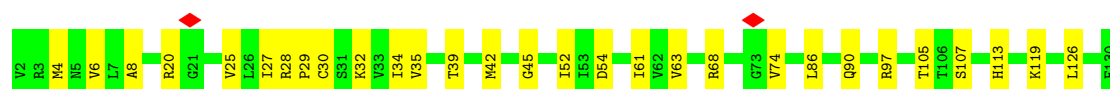
- Molecule 76: Small ribosomal subunit protein eS21

Chain SV: 66% 34%



- Molecule 77: 40S ribosomal protein S15a

Chain SW: 78% 22%



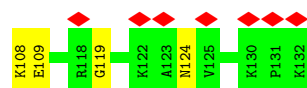
- Molecule 78: 40S ribosomal protein S23

Chain SX: 9% 79% 21%

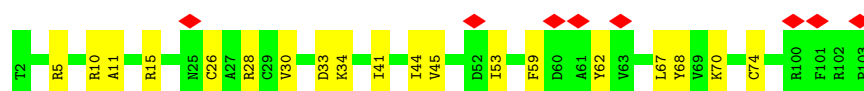
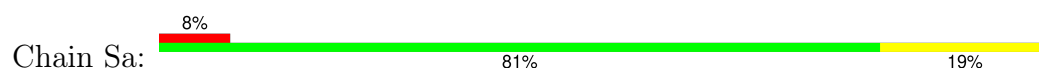


- Molecule 79: 40S ribosomal protein S24

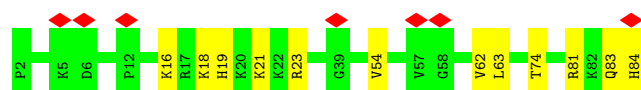
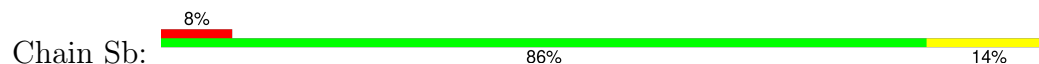
Chain SY: 11% 74% 26%



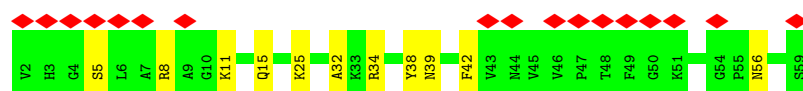
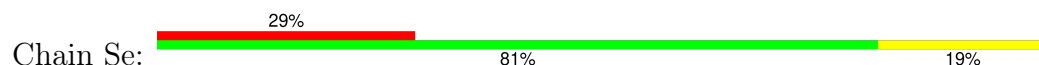
- Molecule 80: 40S ribosomal protein S26



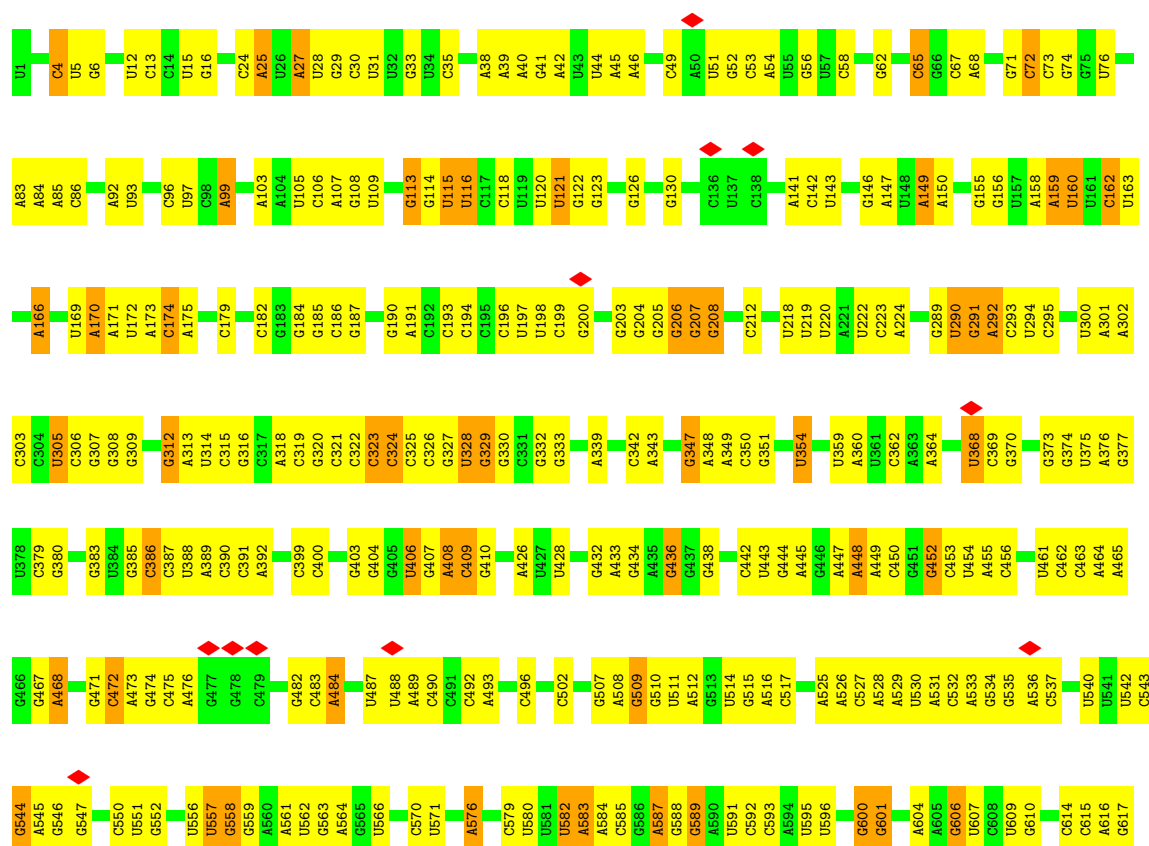
- Molecule 81: Small ribosomal subunit protein eS27

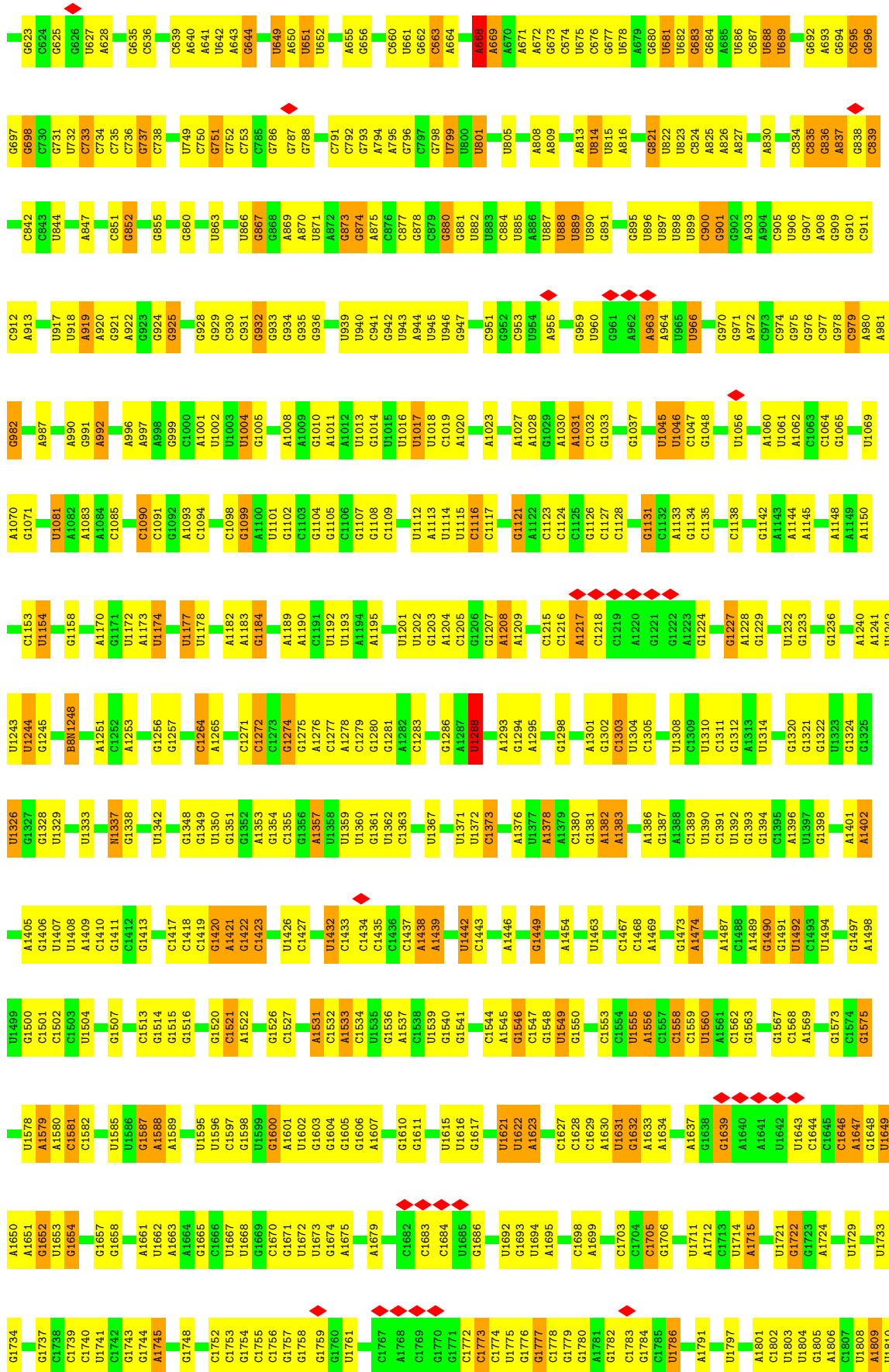


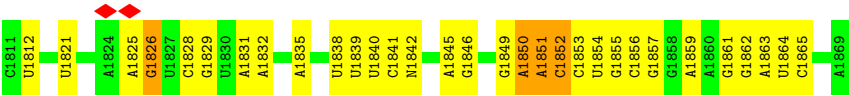
- Molecule 82: Small ribosomal subunit protein eS30



- Molecule 83: 18S rRNA







4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	24591	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	NONE	Depositor
Microscope	FEI TECNAI F30	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	50	Depositor
Minimum defocus (nm)	1200	Depositor
Maximum defocus (nm)	2500	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	0.066	Depositor
Minimum map value	-0.056	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.004	Depositor
Recommended contour level	0.0108	Depositor
Map size ($\text{\AA}$)	512.64, 512.64, 512.64	wwPDB
Map dimensions	576, 576, 576	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing ($\text{\AA}$)	0.89000005, 0.89000005, 0.89000005	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: OMU, OMC, 5MC, UR3, MG, A2M, UY1, 6MZ, PSU, SPM, B8N, ZN, MA6, 1MA, OMG, G7M, 4AC, SPD

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	CI	0.13	0/247	0.34	0/323
2	Pt	0.14	0/1761	0.27	0/2741
3	L5	0.23	0/85072	0.31	0/132721
4	L7	0.21	0/2861	0.26	0/4459
5	L8	0.22	0/3631	0.30	0/5657
6	LA	0.24	0/1936	0.43	0/2596
7	LB	0.22	0/3306	0.42	0/4424
8	LC	0.23	0/2981	0.40	0/4002
9	LD	0.20	0/2428	0.40	0/3252
10	LE	0.20	0/1973	0.41	0/2645
11	LF	0.27	0/1905	0.44	0/2539
12	LG	0.21	0/1960	0.46	0/2637
13	LH	0.22	0/1537	0.45	0/2066
14	LI	0.22	0/1751	0.45	0/2340
15	LJ	0.18	0/1385	0.42	0/1852
16	LL	0.20	0/1732	0.37	0/2315
17	LM	0.22	0/1161	0.43	0/1554
18	LN	0.25	0/1746	0.41	0/2338
19	LO	0.24	0/1682	0.40	0/2250
20	LP	0.23	0/1268	0.46	0/1701
21	LQ	0.24	0/1537	0.42	0/2052
22	LR	0.21	0/1582	0.46	0/2091
23	LS	0.25	0/1493	0.43	0/2003
24	LT	0.20	0/1326	0.36	0/1770
25	LU	0.22	0/839	0.51	0/1126
26	LV	0.21	0/993	0.42	0/1332
27	LW	0.19	0/959	0.41	0/1270
28	LX	0.23	0/1002	0.39	0/1345
29	LY	0.24	0/1132	0.46	0/1504
30	LZ	0.21	0/1130	0.43	0/1507
31	La	0.21	0/1191	0.39	0/1591

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
32	Lb	0.20	0/889	0.43	0/1175
33	Lc	0.21	0/774	0.45	0/1038
34	Ld	0.23	0/903	0.40	0/1216
35	Le	0.24	0/1071	0.47	0/1429
36	Lf	0.23	0/895	0.40	0/1198
37	Lg	0.20	0/916	0.39	0/1220
38	Lh	0.20	0/1023	0.48	0/1351
39	Li	0.20	0/843	0.44	0/1115
40	Lj	0.24	0/720	0.45	0/952
41	Lk	0.19	0/575	0.42	0/761
42	Ll	0.20	0/454	0.38	0/599
43	Lm	0.22	0/435	0.44	0/575
44	Ln	0.20	0/231	0.39	0/294
45	Lo	0.17	0/876	0.37	0/1156
46	Lp	0.24	0/718	0.48	0/953
47	Lr	0.24	0/1017	0.41	0/1364
48	Ls	0.16	0/1519	0.41	0/2052
49	Lt	0.18	0/1009	0.53	0/1363
50	SD	0.14	0/1793	0.36	0/2414
51	SF	0.16	0/1516	0.41	0/2037
52	SK	0.16	0/851	0.40	0/1147
53	SM	0.16	0/950	0.43	0/1275
54	SP	0.16	0/1003	0.45	0/1342
55	SQ	0.16	0/1160	0.43	0/1553
56	SR	0.16	0/1105	0.43	0/1484
57	SS	0.17	0/1216	0.48	0/1628
58	ST	0.16	0/1131	0.39	0/1515
59	SU	0.16	0/831	0.42	0/1115
60	SZ	0.18	0/604	0.47	0/810
61	Sc	0.15	0/508	0.41	0/680
62	Sd	0.16	0/470	0.41	0/623
63	Sf	0.18	0/560	0.51	0/745
64	Sg	0.15	0/2493	0.39	0/3394
65	SA	0.18	0/1778	0.41	0/2416
66	SB	0.17	0/1765	0.42	0/2362
67	SC	0.17	0/1744	0.42	0/2357
68	SE	0.16	0/2118	0.38	0/2849
69	SG	0.15	0/1946	0.40	0/2590
70	SH	0.18	0/1519	0.45	0/2033
71	SI	0.17	0/1715	0.44	0/2287
72	SJ	0.15	0/1550	0.38	0/2069
73	SL	0.17	0/1268	0.40	0/1696
74	SN	0.18	0/1232	0.36	0/1656

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
75	SO	0.18	0/1037	0.41	0/1391
76	SV	0.18	0/643	0.41	0/860
77	SW	0.17	0/1051	0.39	0/1406
78	SX	0.19	0/1116	0.46	0/1490
79	SY	0.16	0/1083	0.41	0/1438
80	Sa	0.16	0/836	0.36	0/1121
81	Sb	0.16	0/665	0.40	0/891
82	Se	0.15	0/465	0.44	0/612
83	S2	0.20	3/39756 (0.0%)	0.30	0/61939
All	All	0.21	3/229853 (0.0%)	0.36	0/337039

All (3) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
83	S2	1288	OMU	O3'-P	5.16	1.61	1.56
83	S2	1639	G7M	O3'-P	5.09	1.61	1.56
83	S2	1326	OMU	O3'-P	5.01	1.61	1.56

There are no bond angle outliers.

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	CI	247	0	283	3	0
2	Pt	1576	0	803	29	0
3	L5	78421	0	39705	971	0
4	L7	2561	0	1295	25	0
5	L8	3315	0	1685	49	0
6	LA	1898	0	1993	41	0
7	LB	3238	0	3376	56	0
8	LC	2927	0	3104	50	0
9	LD	2382	0	2410	36	0
10	LE	1935	0	2096	37	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
11	LF	1870	0	1996	32	0
12	LG	1927	0	2074	28	0
13	LH	1518	0	1601	28	0
14	LI	1711	0	1749	28	0
15	LJ	1362	0	1399	14	0
16	LL	1701	0	1818	36	0
17	LM	1138	0	1204	20	0
18	LN	1701	0	1749	31	0
19	LO	1650	0	1794	29	0
20	LP	1242	0	1269	28	0
21	LQ	1513	0	1628	32	0
22	LR	1566	0	1729	21	0
23	LS	1453	0	1490	28	0
24	LT	1298	0	1366	17	0
25	LU	825	0	850	17	0
26	LV	979	0	1039	19	0
27	LW	945	0	1003	15	0
28	LX	985	0	1066	21	0
29	LY	1115	0	1205	20	0
30	LZ	1107	0	1182	19	0
31	La	1162	0	1213	19	0
32	Lb	876	0	948	15	0
33	Lc	764	0	804	13	0
34	Ld	888	0	930	5	0
35	Le	1053	0	1147	24	0
36	Lf	876	0	912	15	0
37	Lg	906	0	998	13	0
38	Lh	1015	0	1148	21	0
39	Li	832	0	917	16	0
40	Lj	705	0	737	13	0
41	Lk	569	0	637	9	0
42	Ll	444	0	483	7	0
43	Lm	429	0	465	12	0
44	Ln	230	0	276	7	0
45	Lo	862	0	929	9	0
46	Lp	708	0	756	20	0
47	Lr	1002	0	1068	16	0
48	Ls	1496	0	1540	27	0
49	Lt	998	0	1032	26	0
50	SD	1765	0	1865	25	0
51	SF	1495	0	1549	25	0
52	SK	827	0	854	26	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
53	SM	940	0	965	13	0
54	SP	985	0	1031	18	0
55	SQ	1142	0	1213	27	0
56	SR	1090	0	1149	23	0
57	SS	1198	0	1261	25	0
58	ST	1112	0	1146	21	0
59	SU	821	0	883	19	0
60	SZ	598	0	656	15	0
61	Sc	506	0	536	6	0
62	Sd	459	0	452	11	0
63	Sf	548	0	551	9	0
64	Sg	2436	0	2393	53	0
65	SA	1741	0	1746	38	0
66	SB	1738	0	1809	44	0
67	SC	1707	0	1791	40	0
68	SE	2076	0	2177	40	0
69	SG	1923	0	2089	36	0
70	SH	1497	0	1590	33	0
71	SI	1686	0	1772	35	0
72	SJ	1525	0	1640	22	0
73	SL	1247	0	1323	28	0
74	SN	1208	0	1294	21	0
75	SO	1024	0	1050	21	0
76	SV	636	0	637	21	0
77	SW	1034	0	1080	22	0
78	SX	1098	0	1167	20	0
79	SY	1065	0	1142	26	0
80	Sa	821	0	870	12	0
81	Sb	651	0	672	10	0
82	Se	459	0	503	10	0
83	S2	36953	0	18679	568	0
84	L5	181	0	0	0	0
84	L7	2	0	0	0	0
84	L8	4	0	0	0	0
84	LA	1	0	0	0	0
84	LV	1	0	0	0	0
84	Le	1	0	0	0	0
84	Lj	1	0	0	0	0
84	S2	27	0	0	0	0
84	Sa	1	0	0	0	0
85	L5	98	0	182	7	0
86	L5	80	0	152	2	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
86	L8	10	0	19	0	0
86	LN	10	0	19	0	0
87	Lg	1	0	0	0	0
87	Lj	1	0	0	0	0
87	Lm	1	0	0	0	0
87	Lo	1	0	0	0	0
87	Lp	1	0	0	0	0
87	Sa	1	0	0	0	0
All	All	218355	0	162808	3048	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 8.

All (3048) 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)
3:L5:2845:A:H61	3:L5:3843:C:N4	1.53	1.04
3:L5:2845:A:N6	3:L5:3843:C:H42	1.56	1.03
3:L5:1095:A:H2	3:L5:1200:G:H1	1.14	0.96
83:S2:1324:G:H1	83:S2:1504:U:H3	1.14	0.95
3:L5:1100:U:H3	3:L5:1194:G:H1	0.95	0.95
3:L5:184:U:H3	3:L5:253:G:H1	1.05	0.95
3:L5:3946:G:H1	3:L5:4067:U:H3	1.18	0.92
3:L5:2557:G:H1	3:L5:2570:U:H3	0.99	0.91
3:L5:4887:C:H42	3:L5:4932:U:H3	1.16	0.90
83:S2:1351:G:H1	83:S2:1360:U:H3	1.13	0.90
83:S2:1652:G:H1	83:S2:1672:U:H3	0.90	0.90
3:L5:3944:G:H1	3:L5:4069:U:H3	1.21	0.86
9:LD:34:LYS:HG2	24:LT:27:LEU:HD21	1.58	0.85
18:LN:13:LYS:HZ1	39:Li:45:ARG:HE	1.25	0.85
3:L5:1095:A:C2	3:L5:1200:G:N1	2.43	0.85
3:L5:3929:G:H1	3:L5:4181:U:H3	1.23	0.85
3:L5:512:U:H3	3:L5:647:G:H1	0.85	0.83
68:SE:252:ARG:HA	68:SE:255:ARG:HE	1.41	0.83
8:LC:326:LEU:HD21	8:LC:333:LYS:HB2	1.62	0.82
17:LM:7:VAL:HG23	17:LM:27:ILE:HD13	1.61	0.81
67:SC:117:ARG:HH11	83:S2:1204:A:H5''	1.43	0.81
83:S2:1533:A:H62	83:S2:1602:U:H3	1.26	0.81
2:Pt:50:U:H3	2:Pt:64:G:H1	0.82	0.81
3:L5:184:U:O2	3:L5:253:G:N2	2.14	0.80
69:SG:183:ARG:HH12	83:S2:316:G:H5''	1.44	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:S2:677:G:H21	83:S2:1028:A:H62	1.29	0.80
3:L5:4093:G:N2	3:L5:4114:C:O2	2.13	0.80
68:SE:198:ARG:HH11	68:SE:200:ARG:HD2	1.46	0.80
3:L5:3754:G:H1	3:L5:3770:U:H3	1.31	0.78
50:SD:51:LEU:HD12	50:SD:91:VAL:HG12	1.65	0.78
8:LC:116:ASN:HD22	8:LC:119:GLN:HE22	1.28	0.78
83:S2:600:G:H2'	83:S2:601:OMG:H8	1.49	0.77
43:Lm:103:LEU:HD21	43:Lm:110:CYS:HA	1.67	0.77
70:SH:6:ALA:H	70:SH:25:GLN:HE21	1.33	0.77
43:Lm:111:ARG:HG3	43:Lm:112:LYS:HG3	1.67	0.77
4:L7:2:U:H3	4:L7:117:G:H1	1.30	0.76
21:LQ:50:ARG:HB3	21:LQ:83:VAL:HG11	1.66	0.76
83:S2:1729:U:H3	83:S2:1805:G:H1	1.32	0.76
83:S2:928:G:H2'	83:S2:929:G:C8	2.21	0.75
3:L5:1952:G:H4'	23:LS:93:MET:HG3	1.68	0.75
3:L5:5002:U:H3	3:L5:5045:G:H1	1.34	0.75
83:S2:924:G:H1	83:S2:1018:U:H3	1.32	0.75
56:SR:41:ILE:HG21	56:SR:47:ARG:HB2	1.68	0.74
3:L5:2609:G:H1	3:L5:2730:U:H3	1.35	0.74
83:S2:1657:G:H1	83:S2:1667:U:H3	1.34	0.74
83:S2:1607:A:H62	83:S2:1632:G:N2	1.85	0.74
22:LR:155:LEU:HD11	73:SL:118:ARG:HH21	1.52	0.73
3:L5:310:G:H5''	39:Li:85:ARG:HH12	1.53	0.73
3:L5:513:U:H1'	3:L5:516:C:H41	1.52	0.73
10:LE:117:PRO:HB2	35:Le:93:LYS:HZ3	1.53	0.73
3:L5:4139:G:H21	3:L5:4140:C:H41	1.37	0.72
3:L5:4162:C:H5	12:LG:73:ARG:HH12	1.37	0.72
13:LH:114:ILE:HB	13:LH:124:ARG:HB2	1.71	0.72
55:SQ:23:ALA:HB1	55:SQ:68:ILE:HD11	1.71	0.72
66:SB:123:ALA:HB1	66:SB:169:MET:HE3	1.72	0.72
23:LS:34:ALA:HB1	23:LS:39:VAL:HG23	1.71	0.72
3:L5:1095:A:H2	3:L5:1200:G:N1	1.83	0.72
3:L5:665:C:H4'	3:L5:666:G:H5'	1.70	0.72
3:L5:4407:G:H1	3:L5:4435:U:H3	1.37	0.72
3:L5:4887:C:N4	3:L5:4932:U:H3	1.86	0.72
7:LB:57:VAL:HB	7:LB:367:PHE:HB3	1.72	0.72
3:L5:5024:C:H41	3:L5:5028:G:H21	1.38	0.71
64:Sg:247:TRP:HB3	64:Sg:258:ILE:HD11	1.72	0.71
69:SG:11:GLY:HA2	83:S2:166:A2M:HM'1	1.73	0.71
73:SL:20:LYS:HE3	73:SL:22:ARG:HH12	1.56	0.71
3:L5:3946:G:N2	3:L5:4067:U:O2	2.24	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:3717:A:H2'	3:L5:3718:A2M:H8	1.73	0.70
3:L5:121:A:H62	3:L5:152:U:H3	1.37	0.70
83:S2:928:G:H1	83:S2:1013:U:H3	1.35	0.70
3:L5:1996:C:H42	3:L5:2000:G:N2	1.89	0.70
17:LM:116:LYS:HD3	19:LO:196:LEU:HD21	1.72	0.70
3:L5:4537:C:H2'	3:L5:4538:G:H8	1.57	0.70
55:SQ:131:LYS:HB2	55:SQ:140:ARG:HH22	1.57	0.70
3:L5:2845:A:H61	3:L5:3843:C:H42	0.77	0.70
83:S2:1653:U:H3	83:S2:1671:G:H1	1.39	0.70
59:SU:52:GLY:HA3	83:S2:1401:A:H4'	1.74	0.70
21:LQ:98:LEU:HB2	21:LQ:113:ILE:HD11	1.72	0.70
83:S2:49:C:H2'	83:S2:472:C:H41	1.55	0.70
3:L5:1996:C:H42	3:L5:2000:G:H22	1.38	0.69
37:Lg:78:TYR:HB3	37:Lg:82:MET:HB3	1.72	0.69
3:L5:1095:A:N1	3:L5:1200:G:O6	2.25	0.69
83:S2:1841:C:H2'	83:S2:1842:4AC:H6	1.73	0.69
3:L5:2353:U:H5''	8:LC:89:GLN:HG2	1.73	0.69
76:SV:2:GLN:H	76:SV:8:PHE:HA	1.55	0.69
83:S2:1417:C:H42	83:S2:1422:G:H22	1.40	0.69
3:L5:1332:C:H2'	3:L5:1333:A:H8	1.57	0.69
62:Sd:22:ARG:HG2	62:Sd:38:MET:HB3	1.74	0.69
71:SI:81:VAL:HG12	71:SI:102:VAL:HG12	1.74	0.69
3:L5:4926:C:H5''	3:L5:4927:G:H21	1.57	0.69
10:LE:136:HIS:HB2	10:LE:138:ARG:HH12	1.58	0.69
35:Le:90:MET:HG3	47:Lr:33:LYS:HA	1.74	0.69
83:S2:1112:U:O2	83:S2:1121:G:O6	2.11	0.69
3:L5:1348:U:H2'	3:L5:1349:G:H8	1.58	0.68
3:L5:1094:G:O6	3:L5:1201:U:O2	2.11	0.68
79:SY:43:LYS:HG2	79:SY:47:MET:HE1	1.74	0.68
85:L5:5291:SPM:H112	19:LO:91:LYS:HD3	1.75	0.68
31:La:102:ASP:HA	31:La:125:LYS:HB2	1.75	0.68
41:Lk:24:LYS:HZ3	41:Lk:67:LYS:HD2	1.57	0.68
3:L5:1435:G:N2	3:L5:1449:C:O2	2.19	0.68
3:L5:1351:G:H1'	8:LC:119:GLN:HE21	1.59	0.68
3:L5:2554:U:O2	3:L5:2764:A:N7	2.27	0.68
67:SC:191:VAL:HG11	67:SC:236:PHE:HA	1.75	0.68
70:SH:83:LEU:HB3	70:SH:92:VAL:HG21	1.76	0.68
83:S2:1829:G:H1'	83:S2:1850:MA6:H2	1.76	0.68
3:L5:1969:G:H4'	48:Ls:36:GLY:HA2	1.75	0.67
29:LY:10:ASP:HB3	29:LY:13:LYS:HB2	1.75	0.67
41:Lk:52:LYS:HA	41:Lk:55:LYS:HG2	1.74	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:2608:G:H5'	22:LR:100:ARG:HH22	1.58	0.67
55:SQ:139:ALA:HB2	83:S2:1650:A:H5''	1.76	0.67
78:SX:9:THR:HG22	83:S2:681:PSU:H4'	1.76	0.67
71:SI:22:HIS:HB3	83:S2:433:A:H5''	1.77	0.67
3:L5:3930:U:H3	3:L5:4180:G:H1	1.40	0.67
3:L5:4126:C:H5''	3:L5:4127:A:H5''	1.75	0.67
7:LB:57:VAL:HG22	7:LB:73:VAL:HG22	1.77	0.66
50:SD:90:LYS:HG3	50:SD:94:ARG:HH21	1.59	0.66
64:Sg:206:LEU:HD12	64:Sg:218:LEU:HD12	1.77	0.66
15:LJ:141:ILE:HA	15:LJ:144:LYS:HE3	1.77	0.66
68:SE:31:PRO:HA	68:SE:81:THR:HB	1.75	0.66
83:S2:1748:G:H1	83:S2:1786:U:H3	0.75	0.66
70:SH:154:ILE:HB	70:SH:185:VAL:HG22	1.75	0.66
83:S2:885:U:O2	83:S2:901:G:O6	2.14	0.66
3:L5:4618:OMG:H5'	26:LV:15:ARG:HB2	1.78	0.66
78:SX:107:ARG:HG3	78:SX:110:HIS:HB3	1.74	0.66
20:LP:8:PRO:HD3	20:LP:149:ILE:HD13	1.76	0.66
50:SD:137:VAL:HB	50:SD:185:LYS:HB2	1.78	0.66
77:SW:107:SER:HB2	83:S2:860:G:H21	1.59	0.66
83:S2:1533:A:N6	83:S2:1602:U:H3	1.93	0.66
3:L5:4093:G:H1	3:L5:4114:C:H2'	1.61	0.66
83:S2:149:A:H3'	83:S2:150:A:H8	1.60	0.66
83:S2:1417:C:N3	83:S2:1422:G:N1	2.44	0.66
3:L5:1442:C:H42	3:L5:2105:A:H1'	1.59	0.66
3:L5:4174:U:H2'	3:L5:4175:G:H8	1.61	0.66
13:LH:102:ASN:HB3	13:LH:115:ARG:HB2	1.76	0.66
39:Li:55:ARG:HA	39:Li:58:MET:HE2	1.78	0.66
74:SN:13:GLN:HE22	83:S2:921:G:H5'	1.61	0.66
4:L7:63:C:H5'	4:L7:64:G:H5''	1.78	0.65
12:LG:173:LEU:HG	12:LG:177:MET:HE2	1.77	0.65
13:LH:128:MET:HE3	13:LH:134:CYS:HB2	1.78	0.65
29:LY:55:VAL:HG12	29:LY:106:ILE:HG22	1.78	0.65
3:L5:2017:A:HO2'	3:L5:2018:C:H6	1.44	0.65
51:SF:142:SER:HB3	61:Sc:50:VAL:HG22	1.78	0.65
3:L5:1696:C:H2'	3:L5:1697:G:C4	2.31	0.65
9:LD:197:LYS:HG3	9:LD:202:GLN:HB2	1.77	0.65
83:S2:655:A:H4'	83:S2:656:G:H3'	1.79	0.65
3:L5:511:C:H5''	16:LL:165:LYS:HZ2	1.61	0.65
71:SI:98:LYS:HD3	83:S2:377:G:H5'	1.79	0.65
67:SC:212:LYS:O	67:SC:216:MET:HB2	1.96	0.65
51:SF:127:ARG:HG2	51:SF:136:ARG:HE	1.62	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:LP:138:PRO:HB3	20:LP:140:MET:HE3	1.77	0.65
49:Lt:65:GLN:HG3	49:Lt:67:ARG:H	1.61	0.65
57:SS:86:ARG:HE	57:SS:106:LYS:HD3	1.61	0.65
3:L5:2520:C:H2'	3:L5:2521:G:H8	1.62	0.65
83:S2:1228:A:H2'	83:S2:1229:G:H8	1.62	0.65
7:LB:136:LYS:HB2	7:LB:142:GLY:HA3	1.79	0.65
64:Sg:176:VAL:HG23	64:Sg:185:LYS:HB2	1.79	0.65
3:L5:518:G:H1	3:L5:643:C:H2'	1.62	0.64
29:LY:74:TYR:HE2	29:LY:77:LYS:HG3	1.60	0.64
30:LZ:9:LYS:HB3	30:LZ:25:ILE:HD12	1.79	0.64
56:SR:20:TYR:HB3	56:SR:23:ARG:HB3	1.79	0.64
57:SS:105:ASN:HA	57:SS:108:ARG:HD3	1.78	0.64
55:SQ:38:PRO:HD2	55:SQ:41:MET:HE2	1.79	0.64
3:L5:1942:A:H2'	3:L5:1943:A:C8	2.32	0.64
7:LB:8:ALA:HB2	26:LV:49:LEU:HD12	1.77	0.64
61:Sc:29:GLN:HG2	61:Sc:43:ILE:HD11	1.79	0.64
63:Sf:108:VAL:HB	63:Sf:113:LYS:H	1.61	0.64
64:Sg:76:GLN:HE22	64:Sg:91:ASP:HB2	1.61	0.64
55:SQ:78:VAL:HG12	83:S2:1673:U:H5''	1.80	0.64
73:SL:103:GLU:HG3	78:SX:11:ARG:HB2	1.80	0.64
81:Sb:16:LYS:HA	81:Sb:23:ARG:HH21	1.63	0.64
83:S2:28:U:H2'	83:S2:29:G:H8	1.61	0.64
27:LW:87:LEU:HD23	27:LW:90:ILE:HD11	1.79	0.64
63:Sf:108:VAL:HG12	63:Sf:114:ILE:HA	1.78	0.64
57:SS:138:THR:HA	57:SS:141:ARG:HH21	1.63	0.64
83:S2:106:C:H2'	83:S2:107:A:H8	1.62	0.64
5:L8:67:U:H2'	5:L8:68:G:H8	1.62	0.64
67:SC:79:GLU:HG2	76:SV:12:TYR:HB3	1.80	0.64
83:S2:1030:A:H2'	83:S2:1031:A2M:H8	1.81	0.64
3:L5:2745:A:H2'	3:L5:2746:A:H8	1.63	0.63
3:L5:3861:A:H2'	3:L5:3862:A:H8	1.63	0.63
3:L5:1973:G:H4'	49:Lt:117:ARG:HH22	1.62	0.63
6:LA:20:VAL:HA	6:LA:23:ARG:HD3	1.80	0.63
13:LH:20:LEU:HD13	13:LH:45:LEU:HB3	1.80	0.63
35:Le:63:ASN:HB3	35:Le:66:THR:HG22	1.80	0.63
36:Lf:70:ILE:HD11	36:Lf:92:LEU:HD23	1.79	0.63
81:Sb:54:VAL:HG13	81:Sb:63:LEU:HB2	1.79	0.63
55:SQ:140:ARG:HB2	83:S2:1644:C:H4'	1.81	0.63
62:Sd:14:PHE:HB2	83:S2:1661:A:H8	1.64	0.63
66:SB:146:ARG:HD3	83:S2:1123:C:H1'	1.80	0.63
3:L5:989:U:H3	3:L5:1064:G:H1	1.46	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:2400:G:H21	37:Lg:6:THR:HG22	1.63	0.63
3:L5:4220:6MZ:O1P	3:L5:4220:6MZ:H8	1.98	0.63
67:SC:210:PRO:HB3	67:SC:240:THR:HG21	1.81	0.63
68:SE:45:ILE:HG13	68:SE:61:VAL:HG11	1.80	0.63
69:SG:2:LYS:HB2	69:SG:108:VAL:HG12	1.81	0.63
72:SJ:164:PRO:HB3	72:SJ:170:PRO:HA	1.81	0.63
83:S2:1010:G:H2'	83:S2:1011:A:C8	2.34	0.63
83:S2:1550:G:H3'	83:S2:1579:A:H61	1.62	0.63
39:Li:74:LYS:HE2	39:Li:80:HIS:HA	1.81	0.63
83:S2:527:C:H2'	83:S2:528:A:C8	2.34	0.63
3:L5:512:U:O4	3:L5:647:G:O6	2.17	0.63
3:L5:4897:G:H2'	3:L5:4898:G:H8	1.64	0.63
58:ST:128:GLN:HA	58:ST:131:LEU:HB2	1.80	0.63
65:SA:23:THR:HA	65:SA:164:ASN:HD22	1.64	0.63
2:Pt:3:C:H42	2:Pt:70:A:H61	1.46	0.62
3:L5:229:G:H5''	29:LY:11:ARG:HG3	1.81	0.62
3:L5:989:U:O2	3:L5:1064:G:N2	2.28	0.62
3:L5:2486:G:O6	3:L5:2493:G:O6	2.16	0.62
12:LG:87:LEU:HD21	12:LG:182:CYS:HB2	1.80	0.62
70:SH:142:LYS:HB3	77:SW:54:ASP:HB3	1.80	0.62
83:S2:677:G:N2	83:S2:1028:A:H62	1.96	0.62
83:S2:1547:C:H3'	83:S2:1548:G:H8	1.64	0.62
19:LO:34:VAL:HG22	19:LO:103:LYS:HB3	1.80	0.62
52:SK:10:ALA:HB1	52:SK:35:LEU:HD21	1.79	0.62
83:S2:5:U:H2'	83:S2:6:G:H8	1.65	0.62
3:L5:1802:A:H5''	3:L5:1803:G:H5'	1.81	0.62
3:L5:2701:U:H3	3:L5:2715:G:H1	1.47	0.62
11:LF:162:ILE:HB	11:LF:167:ILE:HD13	1.79	0.62
12:LG:105:GLU:HG3	12:LG:109:GLU:HG3	1.80	0.62
44:Ln:1:MET:HE2	44:Ln:6:ARG:HG2	1.80	0.62
66:SB:31:TYR:HA	66:SB:94:LYS:HD2	1.80	0.62
3:L5:1414:C:H2'	3:L5:1415:G:H8	1.63	0.62
14:LI:63:GLU:HA	14:LI:66:GLU:OE1	1.99	0.62
83:S2:556:U:H3'	83:S2:557:U:H4'	1.82	0.62
3:L5:300:A:H2'	3:L5:301:G:H8	1.64	0.62
35:Le:38:PRO:HB2	35:Le:46:ARG:HB2	1.80	0.62
48:Ls:96:THR:HA	48:Ls:99:ARG:HG2	1.82	0.62
83:S2:1607:A:H62	83:S2:1632:G:H21	1.46	0.62
67:SC:193:VAL:HG11	67:SC:240:THR:HG22	1.82	0.62
73:SL:66:VAL:HA	73:SL:132:ARG:HH22	1.65	0.62
12:LG:104:PRO:HG2	12:LG:194:VAL:HG23	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:SK:5:LYS:HD3	52:SK:8:ARG:HH21	1.64	0.62
79:SY:90:ARG:HA	79:SY:93:ARG:HD2	1.81	0.62
83:S2:1513:C:H2'	83:S2:1514:G:H8	1.64	0.62
3:L5:1207:C:H2'	3:L5:1208:G:H8	1.65	0.62
7:LB:284:ILE:HD13	7:LB:331:VAL:HG13	1.81	0.62
56:SR:98:VAL:HB	56:SR:117:LEU:HD12	1.81	0.62
57:SS:121:ARG:HG3	57:SS:131:VAL:HB	1.82	0.62
3:L5:4246:G:H2'	3:L5:4247:G:H8	1.64	0.61
14:LI:174:THR:HG23	14:LI:176:PHE:H	1.65	0.61
64:Sg:106:LYS:HG2	64:Sg:107:ASP:H	1.65	0.61
68:SE:79:ASP:HB3	68:SE:82:TYR:HB2	1.81	0.61
6:LA:107:MET:HB2	6:LA:111:THR:HG21	1.82	0.61
6:LA:112:ILE:HD11	46:Lp:79:VAL:HG22	1.81	0.61
11:LF:110:GLN:HA	11:LF:115:ARG:HH12	1.64	0.61
17:LM:29:ASP:H	17:LM:37:LEU:HB3	1.65	0.61
83:S2:1653:U:O2	83:S2:1671:G:N2	2.28	0.61
3:L5:73:A:H5''	16:LL:105:LYS:HD3	1.82	0.61
6:LA:179:ILE:HG21	6:LA:185:ALA:HB2	1.81	0.61
49:Lt:7:PRO:HB2	49:Lt:11:LYS:HD3	1.83	0.61
68:SE:125:LYS:HB3	68:SE:142:HIS:HB3	1.83	0.61
78:SX:50:ILE:HG22	78:SX:73:GLN:HB3	1.83	0.61
3:L5:2020:U:H2'	3:L5:2021:G:H8	1.65	0.61
12:LG:117:ARG:HA	12:LG:120:LYS:HG2	1.82	0.61
50:SD:215:ASP:HB2	50:SD:217:ILE:HG12	1.83	0.61
3:L5:422:C:H2'	3:L5:423:G:H8	1.66	0.61
3:L5:2362:U:H2'	3:L5:2363:A2M:H8	1.82	0.61
23:LS:4:SER:HB3	23:LS:111:ARG:HH22	1.66	0.61
49:Lt:134:GLY:HA3	49:Lt:152:ILE:HD11	1.83	0.61
83:S2:1417:C:O2	83:S2:1422:G:O6	2.19	0.61
38:Lh:106:LYS:HB3	38:Lh:110:LYS:HZ3	1.66	0.61
3:L5:2484:A:H62	3:L5:2494:U:H3	1.49	0.61
9:LD:288:LEU:HD23	9:LD:291:GLN:HE22	1.65	0.61
22:LR:169:ALA:HA	22:LR:172:ARG:HE	1.66	0.61
38:Lh:88:THR:HB	38:Lh:91:MET:HB2	1.83	0.61
83:S2:1534:C:H41	83:S2:1600:G:H1	1.49	0.61
3:L5:2647:A:H3'	3:L5:2648:G:H8	1.66	0.60
70:SH:140:VAL:HG12	74:SN:19:ARG:HD3	1.83	0.60
78:SX:100:VAL:HG12	78:SX:125:VAL:HG22	1.83	0.60
83:S2:587:A:H5'	83:S2:592:C:H41	1.66	0.60
83:S2:1337:4AC:H2'	83:S2:1338:G:H8	1.67	0.60
49:Lt:117:ARG:HG2	49:Lt:118:HIS:H	1.66	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:1259:G:H2'	3:L5:1260:G:H8	1.66	0.60
22:LR:105:LEU:HD23	22:LR:138:LEU:HD23	1.82	0.60
79:SY:61:ARG:HH12	83:S2:580:U:H1'	1.66	0.60
83:S2:981:A:H2'	83:S2:982:G:C8	2.37	0.60
3:L5:2611:A:H5'	3:L5:2688:G:H4'	1.83	0.60
20:LP:37:LYS:HD3	20:LP:117:ILE:HG22	1.82	0.60
35:Le:44:ARG:HG3	35:Le:52:GLN:HE22	1.66	0.60
49:Lt:55:GLY:H	49:Lt:59:THR:HG21	1.67	0.60
64:Sg:76:GLN:HE21	64:Sg:93:THR:HG23	1.65	0.60
83:S2:368:U:H3'	83:S2:369:C:H2'	1.84	0.60
83:S2:525:A:H2'	83:S2:526:A:H8	1.64	0.60
3:L5:3932:U:H2'	3:L5:3933:G:H8	1.67	0.60
68:SE:100:ARG:HB2	68:SE:114:ILE:HD13	1.84	0.60
16:LL:48:PRO:HB2	38:Lh:120:ALA:HB2	1.84	0.60
16:LL:59:VAL:HG21	16:LL:73:GLY:HA3	1.83	0.60
29:LY:111:LEU:HB3	29:LY:116:LYS:HE3	1.83	0.60
3:L5:1095:A:N1	3:L5:1200:G:C6	2.70	0.60
3:L5:4601:U:H2'	3:L5:4602:A:H8	1.65	0.60
85:L5:5291:SPM:H132	19:LO:91:LYS:HG2	1.83	0.60
41:Lk:26:LYS:HB2	41:Lk:69:LEU:HD12	1.83	0.60
83:S2:27:A2M:H2'	83:S2:28:U:C6	2.37	0.60
83:S2:609:U:H2'	83:S2:610:G:H8	1.65	0.60
83:S2:1729:U:O2	83:S2:1805:G:N2	2.29	0.60
3:L5:138:G:H2'	3:L5:139:G:H8	1.67	0.60
3:L5:3664:G:H2'	3:L5:3665:G:H8	1.65	0.60
74:SN:96:VAL:HG22	74:SN:99:ARG:HH22	1.66	0.60
3:L5:1346:C:H2'	3:L5:1347:G:H8	1.67	0.59
25:LU:23:LEU:HB2	25:LU:70:ILE:HG22	1.84	0.59
29:LY:34:LEU:HD11	29:LY:47:MET:HG2	1.84	0.59
83:S2:359:U:H3	83:S2:403:G:H1	1.48	0.59
83:S2:668:A2M:H2'	83:S2:669:A:N7	2.16	0.59
3:L5:262:G:H2'	3:L5:263:G:H8	1.65	0.59
3:L5:2884:G:H2'	3:L5:2885:A:H8	1.67	0.59
19:LO:157:GLU:O	19:LO:161:LYS:HG2	2.02	0.59
25:LU:43:LEU:HD12	25:LU:47:ILE:HD11	1.84	0.59
3:L5:1195:G:H2'	3:L5:1196:G:C8	2.37	0.59
49:Lt:16:ARG:HH21	49:Lt:61:LYS:HE2	1.67	0.59
83:S2:1351:G:N2	83:S2:1360:U:O2	2.34	0.59
83:S2:1417:C:H42	83:S2:1422:G:N2	2.01	0.59
3:L5:735:G:H5''	17:LM:70:GLN:HG3	1.84	0.59
3:L5:2279:A:H4'	35:Le:48:ARG:HH22	1.66	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:SG:135:PRO:HG2	69:SG:141:ILE:HG13	1.84	0.59
3:L5:3944:G:O6	3:L5:4069:U:O4	2.21	0.59
3:L5:4294:C:H4'	45:Lo:13:LYS:HD3	1.84	0.59
33:Lc:36:LYS:HZ3	33:Lc:37:MET:HE3	1.67	0.59
77:SW:30:CYS:HA	77:SW:34:ILE:HD11	1.84	0.59
28:LX:76:ILE:HD11	28:LX:104:ALA:HB2	1.83	0.59
31:La:2:PRO:HB2	31:La:5:LEU:HD13	1.83	0.59
31:La:4:ARG:HG3	31:La:5:LEU:HD12	1.84	0.59
83:S2:808:A:H2	83:S2:855:G:H22	1.51	0.59
6:LA:58:LEU:HD12	6:LA:75:LEU:HG	1.84	0.59
20:LP:41:ILE:HD13	20:LP:112:LEU:HB2	1.84	0.59
45:Lo:55:ILE:HG21	45:Lo:57:ARG:HH21	1.67	0.59
51:SF:134:VAL:HG12	51:SF:135:ARG:HG2	1.85	0.59
83:S2:155:G:H2'	83:S2:156:G:H8	1.67	0.59
83:S2:1101:U:H2'	83:S2:1102:G:C8	2.38	0.59
3:L5:1563:A:H2'	3:L5:1564:A:C8	2.37	0.59
3:L5:3697:U:H5''	3:L5:3698:G:H5'	1.85	0.59
3:L5:4992:G:H2'	3:L5:4993:G:C8	2.37	0.59
6:LA:137:ILE:HD11	6:LA:149:LYS:HB2	1.84	0.59
21:LQ:26:ARG:HA	21:LQ:29:VAL:HG22	1.84	0.59
59:SU:51:LYS:HB2	59:SU:90:ASP:HB2	1.85	0.59
78:SX:66:ILE:HG21	82:Se:5:SER:HB2	1.84	0.59
67:SC:209:VAL:HG21	67:SC:233:LEU:HD13	1.85	0.59
75:SO:34:PHE:HB3	75:SO:41:PHE:HB2	1.85	0.59
83:S2:1348:G:H2'	83:S2:1349:G:H8	1.68	0.59
65:SA:85:ARG:HH21	65:SA:201:LEU:HD12	1.68	0.59
83:S2:888:U:H4'	83:S2:889:U:H5'	1.85	0.59
83:S2:1228:A:H2'	83:S2:1229:G:C8	2.38	0.59
3:L5:2495:U:H2'	3:L5:2496:G:H8	1.68	0.58
3:L5:2903:G:H1'	3:L5:2904:U:H5	1.67	0.58
9:LD:61:ILE:HG12	9:LD:63:GLN:HE22	1.68	0.58
66:SB:35:ALA:HB2	66:SB:44:ILE:HD11	1.85	0.58
75:SO:98:ARG:HG3	75:SO:133:THR:HA	1.85	0.58
3:L5:490:C:H2'	3:L5:491:G:C8	2.38	0.58
72:SJ:109:ARG:HE	72:SJ:146:SER:HA	1.68	0.58
7:LB:107:ALA:HB2	7:LB:201:LEU:HD22	1.85	0.58
34:Ld:22:THR:HG23	34:Ld:122:VAL:HG23	1.85	0.58
2:Pt:29:C:H2'	2:Pt:30:G:H8	1.67	0.58
3:L5:459:C:H5'	10:LE:110:ARG:HA	1.85	0.58
67:SC:65:LYS:HD2	67:SC:273:LEU:HD22	1.85	0.58
77:SW:8:ALA:HA	77:SW:74:VAL:HG11	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:S2:1277:C:H2'	83:S2:1278:A:H8	1.69	0.58
11:LF:190:LEU:HD21	11:LF:208:LEU:HD21	1.86	0.58
15:LJ:18:ARG:HB2	15:LJ:133:VAL:HG13	1.86	0.58
51:SF:144:LEU:HD22	61:Sc:49:PRO:HG2	1.85	0.58
64:Sg:288:SER:HB3	64:Sg:301:GLY:H	1.67	0.58
68:SE:144:ALA:HB3	83:S2:121:OMU:HM23	1.84	0.58
69:SG:170:ARG:HA	83:S2:72:C:H42	1.68	0.58
71:SI:97:VAL:HG22	71:SI:98:LYS:H	1.68	0.58
83:S2:5:U:H2'	83:S2:6:G:C8	2.39	0.58
24:LT:40:VAL:HG11	24:LT:96:ILE:HD12	1.86	0.58
69:SG:38:ALA:HB1	69:SG:41:LEU:HD12	1.85	0.58
79:SY:105:LYS:HZ1	79:SY:108:LYS:HE3	1.68	0.58
80:Sa:59:PHE:HB2	80:Sa:62:TYR:HB2	1.85	0.58
3:L5:150:U:H3	12:LG:163:PRO:HD2	1.68	0.58
43:Lm:94:MET:HB3	43:Lm:121:LEU:HD12	1.85	0.58
70:SH:72:PHE:O	70:SH:76:GLN:HB2	2.02	0.58
74:SN:142:GLU:HB2	74:SN:145:THR:HG22	1.85	0.58
7:LB:60:VAL:HG11	7:LB:67:VAL:HG13	1.86	0.58
47:Lr:98:ARG:HD2	47:Lr:107:ARG:HD3	1.86	0.58
74:SN:91:LEU:HB3	74:SN:122:ILE:HG12	1.85	0.58
7:LB:217:ILE:HD12	7:LB:347:LEU:HD12	1.84	0.58
7:LB:333:LEU:HD11	7:LB:347:LEU:HD11	1.85	0.58
12:LG:159:HIS:HD2	12:LG:185:LYS:HA	1.69	0.58
65:SA:183:LEU:HD12	65:SA:188:THR:HG21	1.85	0.58
3:L5:4302:U:H4'	24:LT:5:LYS:HD2	1.86	0.58
3:L5:4537:C:H2'	3:L5:4538:G:C8	2.38	0.58
14:LI:53:VAL:HG22	14:LI:134:VAL:HG12	1.84	0.58
54:SP:115:TYR:HB2	54:SP:118:GLU:HG3	1.86	0.58
83:S2:1536:G:H2'	83:S2:1537:A:H8	1.68	0.58
18:LN:39:ALA:HB3	18:LN:61:ILE:HG22	1.85	0.57
23:LS:7:LEU:HD23	23:LS:107:THR:HG22	1.85	0.57
23:LS:15:ARG:HD2	23:LS:25:PRO:HG2	1.85	0.57
64:Sg:40:ILE:HB	64:Sg:59:LEU:HB2	1.85	0.57
65:SA:127:PRO:HG2	65:SA:152:SER:HB3	1.86	0.57
69:SG:162:LEU:HG	69:SG:167:LYS:HE3	1.86	0.57
71:SI:133:GLU:HA	71:SI:136:ILE:HG12	1.86	0.57
71:SI:165:GLN:HG2	71:SI:171:LEU:HD23	1.86	0.57
83:S2:1337:4AC:H2'	83:S2:1338:G:C8	2.39	0.57
3:L5:1759:G:H1	3:L5:1773:U:H3	1.52	0.57
3:L5:1982:G:H21	3:L5:2010:A:H5'	1.69	0.57
3:L5:3661:G:H4'	3:L5:3662:A:H5'	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:SS:27:ALA:HB2	57:SS:52:LEU:HD12	1.87	0.57
65:SA:177:MET:HE3	65:SA:181:GLU:HG2	1.87	0.57
48:Ls:63:LYS:HG3	48:Ls:66:ARG:HH22	1.69	0.57
59:SU:104:ILE:HB	59:SU:106:ILE:HG12	1.86	0.57
80:Sa:41:ILE:HD12	80:Sa:68:TYR:HD2	1.69	0.57
83:S2:929:G:H2'	83:S2:930:C:O4'	2.04	0.57
3:L5:4910:G:H21	7:LB:96:PRO:HG3	1.68	0.57
23:LS:83:ARG:HG3	23:LS:125:GLN:HB3	1.87	0.57
67:SC:169:TYR:CE1	67:SC:173:LYS:HE3	2.39	0.57
80:Sa:11:ALA:HB3	80:Sa:33:ASP:HB2	1.86	0.57
3:L5:2745:A:H2'	3:L5:2746:A:C8	2.40	0.57
48:Ls:91:THR:HG21	48:Ls:98:ILE:HG13	1.87	0.57
71:SI:57:ALA:H	71:SI:180:GLY:HA2	1.68	0.57
83:S2:388:U:H2'	83:S2:389:A:H8	1.69	0.57
3:L5:4742:G:H2'	3:L5:4743:G:H8	1.70	0.57
55:SQ:34:VAL:HG22	55:SQ:70:VAL:HB	1.86	0.57
83:S2:640:A:H2'	83:S2:641:A:C8	2.39	0.57
83:S2:1417:C:N4	83:S2:1422:G:H22	2.02	0.57
3:L5:2375:A:H2'	3:L5:2376:A:H8	1.69	0.57
3:L5:4246:G:H2'	3:L5:4247:G:C8	2.39	0.57
10:LE:264:ILE:HD11	10:LE:267:LEU:HD12	1.84	0.57
42:LI:27:ILE:HD12	42:LI:30:LYS:HZ3	1.69	0.57
66:SB:128:LYS:HE2	66:SB:132:GLY:HA2	1.86	0.57
3:L5:1695:U:H3	3:L5:1696:C:H41	1.53	0.57
3:L5:3736:A:H2'	3:L5:3737:A:C8	2.40	0.57
18:LN:120:TRP:HE1	18:LN:123:GLU:HB2	1.68	0.57
35:Le:47:ARG:HE	35:Le:49:PHE:HE2	1.51	0.57
60:SZ:99:LEU:HD21	60:SZ:102:LYS:HB2	1.87	0.57
70:SH:31:GLU:HA	70:SH:37:LYS:HG3	1.87	0.57
83:S2:159:A2M:H2'	83:S2:160:U:H6	1.70	0.57
3:L5:318:A:H2'	3:L5:319:A:C8	2.40	0.57
3:L5:1972:G:C6	3:L5:1973:G:O6	2.58	0.57
3:L5:3848:U:H2'	3:L5:3849:A:H8	1.70	0.57
3:L5:3880:G:H2'	3:L5:3881:G:C8	2.40	0.57
29:LY:4:ASN:HB3	29:LY:7:VAL:HG22	1.87	0.57
50:SD:60:GLY:HA3	50:SD:65:ARG:H	1.69	0.57
56:SR:16:ILE:HD11	56:SR:54:VAL:HG21	1.87	0.57
3:L5:976:G:H4'	8:LC:326:LEU:HD13	1.86	0.57
3:L5:1914:C:H4'	19:LO:89:PRO:HD3	1.87	0.57
3:L5:1992:U:H4'	3:L5:1993:C:H5''	1.87	0.57
60:SZ:73:VAL:HG21	60:SZ:88:LEU:HD21	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
74:SN:52:VAL:HG22	74:SN:55:ARG:HH12	1.69	0.57
75:SO:74:ALA:HB1	75:SO:115:ALA:HB2	1.87	0.57
3:L5:2543:A:H2	3:L5:2773:G:H22	1.52	0.56
52:SK:1:MET:HE3	52:SK:47:LYS:HB3	1.87	0.56
53:SM:44:LYS:O	53:SM:45:ARG:HD3	2.05	0.56
66:SB:168:MET:HA	66:SB:171:ILE:HG12	1.87	0.56
68:SE:61:VAL:HG22	68:SE:80:ILE:HD11	1.87	0.56
83:S2:388:U:H2'	83:S2:389:A:C8	2.40	0.56
3:L5:1779:U:H2'	3:L5:1780:A:C8	2.40	0.56
18:LN:5:LYS:HG3	39:Li:40:VAL:HG11	1.86	0.56
35:Le:70:LEU:HD21	35:Le:76:LYS:HE2	1.87	0.56
83:S2:1101:U:H2'	83:S2:1102:G:H8	1.70	0.56
83:S2:1562:C:H2'	83:S2:1563:G:C8	2.40	0.56
3:L5:908:G:H2'	3:L5:909:A:H8	1.71	0.56
3:L5:3754:G:O6	3:L5:3770:U:O4	2.22	0.56
3:L5:3861:A:H2'	3:L5:3862:A:C8	2.40	0.56
8:LC:334:THR:HG22	8:LC:337:ARG:HH21	1.71	0.56
12:LG:147:VAL:HG22	12:LG:177:MET:HE3	1.86	0.56
14:LI:207:ASP:HA	14:LI:210:ARG:HG2	1.86	0.56
16:LL:63:THR:HG23	16:LL:65:ARG:H	1.70	0.56
41:Lk:47:ILE:HD11	41:Lk:52:LYS:HE3	1.87	0.56
56:SR:28:PHE:HA	56:SR:55:THR:HG21	1.87	0.56
64:Sg:24:THR:HG23	64:Sg:27:PHE:H	1.70	0.56
70:SH:9:VAL:HG11	70:SH:27:LEU:HD22	1.86	0.56
71:SI:25:ARG:HA	83:S2:448:A:H5''	1.87	0.56
83:S2:533:A:H61	83:S2:550:C:H42	1.53	0.56
83:S2:750:C:H42	83:S2:793:G:H1'	1.69	0.56
3:L5:3718:A2M:H2'	3:L5:3719:A:O4'	2.05	0.56
3:L5:4108:G:H2'	3:L5:4109:G:H8	1.70	0.56
3:L5:4347:G:H2'	3:L5:4348:A:C8	2.41	0.56
3:L5:4594:U:H2'	3:L5:4595:G:H8	1.70	0.56
5:L8:90:C:H1'	29:LY:24:HIS:HB3	1.88	0.56
10:LE:138:ARG:HB3	10:LE:167:GLN:HE22	1.70	0.56
21:LQ:18:PRO:HG3	21:LQ:29:VAL:HG11	1.88	0.56
21:LQ:70:MET:HG2	21:LQ:98:LEU:HD11	1.86	0.56
49:Lt:57:ARG:NH1	49:Lt:59:THR:H	2.04	0.56
65:SA:143:PRO:HB3	76:SV:32:ILE:HG21	1.88	0.56
3:L5:926:G:H2'	3:L5:927:G:H8	1.70	0.56
3:L5:1350:C:H2'	3:L5:1351:G:H8	1.71	0.56
3:L5:2411:C:H2'	3:L5:2412:A:H8	1.70	0.56
64:Sg:175:LYS:HB3	64:Sg:184:LEU:HD11	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:261:G:H2'	3:L5:262:G:C8	2.40	0.56
3:L5:501:C:H41	3:L5:650:C:H41	1.54	0.56
13:LH:19:THR:HB	13:LH:26:ILE:HB	1.87	0.56
15:LJ:159:LYS:HG2	15:LJ:163:MET:HE1	1.87	0.56
23:LS:8:ARG:HB2	23:LS:10:TYR:HE1	1.70	0.56
57:SS:71:MET:HB3	57:SS:99:LEU:HG	1.88	0.56
83:S2:1748:G:N2	83:S2:1786:U:O2	2.28	0.56
3:L5:2075:G:H2'	3:L5:2076:G:H8	1.71	0.56
10:LE:164:PHE:HA	10:LE:175:VAL:HG12	1.88	0.56
70:SH:51:ILE:HD11	70:SH:176:VAL:HG12	1.87	0.56
80:Sa:44:ILE:HG22	80:Sa:67:LEU:HB2	1.87	0.56
83:S2:159:A2M:H2	83:S2:467:G:H21	1.71	0.56
83:S2:1422:G:H4'	83:S2:1423:C:H3'	1.88	0.56
3:L5:462:G:H2'	3:L5:463:A:H8	1.71	0.56
3:L5:4163:U:H5'	3:L5:4164:C:H5''	1.88	0.56
3:L5:4896:G:H2'	3:L5:4897:G:C8	2.41	0.56
9:LD:86:TYR:HE2	9:LD:247:ILE:HG13	1.70	0.56
21:LQ:85:THR:HG22	21:LQ:104:ARG:HB2	1.87	0.56
69:SG:66:GLY:HA2	83:S2:1745:A:H1'	1.88	0.56
70:SH:126:HIS:CE1	70:SH:181:THR:HG23	2.41	0.56
83:S2:207:G:H3'	83:S2:208:G:H8	1.70	0.56
83:S2:557:U:H2'	83:S2:558:G:C8	2.41	0.56
83:S2:1560:U:O2	83:S2:1575:G:O6	2.23	0.56
3:L5:4430:G:H1'	14:LI:158:LYS:HE3	1.88	0.56
51:SF:34:SER:HA	61:Sc:55:VAL:HG23	1.88	0.56
52:SK:32:HIS:HD2	52:SK:45:VAL:HG21	1.70	0.56
58:ST:124:THR:HG23	58:ST:127:GLY:H	1.70	0.56
71:SI:143:LYS:HD3	71:SI:146:GLN:HE21	1.71	0.56
78:SX:52:LEU:HD11	78:SX:73:GLN:HB2	1.88	0.56
83:S2:1845:A:H2'	83:S2:1846:G:C8	2.41	0.56
2:Pt:62:C:H2'	2:Pt:63:G:H8	1.70	0.56
3:L5:1079:C:H2'	3:L5:1080:C:H6	1.71	0.56
8:LC:142:HIS:HE1	8:LC:248:ARG:HD2	1.71	0.56
17:LM:30:VAL:HG11	23:LS:150:ILE:HD13	1.88	0.56
30:LZ:54:THR:H	30:LZ:57:MET:HE3	1.71	0.56
55:SQ:32:ILE:HA	55:SQ:68:ILE:HG22	1.88	0.56
76:SV:42:VAL:HG23	76:SV:43:THR:HG23	1.87	0.56
13:LH:162:GLN:HE21	13:LH:181:VAL:HG23	1.71	0.55
66:SB:146:ARG:HH11	83:S2:1123:C:H1'	1.70	0.55
72:SJ:46:VAL:HG11	72:SJ:106:LEU:HD21	1.87	0.55
83:S2:525:A:H2'	83:S2:526:A:C8	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:S2:1562:C:H2'	83:S2:1563:G:H8	1.70	0.55
3:L5:267:G:H2'	3:L5:268:G:H8	1.70	0.55
3:L5:2261:G:H8	47:Lr:98:ARG:HH12	1.55	0.55
16:LL:8:MET:HG2	21:LQ:166:TYR:HB3	1.88	0.55
20:LP:148:MET:HE3	20:LP:150:LEU:HD21	1.88	0.55
31:La:75:LEU:HD11	31:La:133:ALA:HA	1.88	0.55
31:La:95:THR:HG23	31:La:97:ALA:H	1.71	0.55
53:SM:85:LEU:HD23	53:SM:107:SER:HA	1.88	0.55
61:Sc:11:LEU:HB3	61:Sc:35:MET:HG3	1.88	0.55
83:S2:406:PSU:H2'	83:S2:408:A:H8	1.71	0.55
83:S2:1748:G:O6	83:S2:1786:U:O4	2.23	0.55
3:L5:1350:C:H2'	3:L5:1351:G:C8	2.41	0.55
3:L5:2448:G:H2'	3:L5:2449:A:C8	2.42	0.55
25:LU:45:GLU:HA	25:LU:54:GLY:HA2	1.88	0.55
50:SD:53:THR:HA	50:SD:94:ARG:CZ	2.36	0.55
3:L5:137:G:H2'	3:L5:138:G:H8	1.71	0.55
27:LW:82:ILE:HD12	69:SG:131:ARG:HG3	1.88	0.55
54:SP:134:GLY:H	83:S2:1236:G:H4'	1.71	0.55
64:Sg:64:HIS:HB3	64:Sg:83:TRP:HB2	1.89	0.55
68:SE:188:ASN:HA	68:SE:245:ARG:HH12	1.70	0.55
71:SI:97:VAL:HG12	71:SI:100:CYS:HB3	1.88	0.55
83:S2:39:A:H3'	83:S2:40:A:H8	1.70	0.55
83:S2:223:C:H2'	83:S2:224:A:C8	2.42	0.55
83:S2:795:A:H2'	83:S2:796:G:C8	2.40	0.55
3:L5:1617:G:H1'	3:L5:2513:A:N6	2.21	0.55
3:L5:1700:G:H5'	3:L5:1702:C:OP2	2.07	0.55
3:L5:1933:G:H2'	3:L5:1934:A:C8	2.42	0.55
3:L5:1976:G:H22	49:Lt:139:VAL:HG11	1.70	0.55
3:L5:4421:C:H42	3:L5:4475:G:H22	1.54	0.55
3:L5:4642:U:H2'	3:L5:4643:G:H8	1.72	0.55
8:LC:315:LYS:HD2	11:LF:168:ALA:HB1	1.88	0.55
19:LO:166:ILE:HD11	19:LO:169:ARG:HH21	1.71	0.55
25:LU:65:ARG:HG2	25:LU:67:LYS:H	1.72	0.55
63:Sf:132:MET:HE2	63:Sf:141:CYS:HB2	1.89	0.55
79:SY:36:PRO:HG3	83:S2:570:C:H4'	1.88	0.55
82:Se:8:ARG:HG2	82:Se:11:LYS:HD3	1.87	0.55
5:L8:86:U:H3'	38:Lh:7:ARG:HH12	1.71	0.55
18:LN:146:PRO:HB2	38:Lh:104:THR:HG23	1.89	0.55
49:Lt:19:GLY:HA2	49:Lt:48:LYS:HZ3	1.70	0.55
53:SM:87:GLU:HG3	53:SM:103:VAL:HG11	1.87	0.55
67:SC:207:ALA:HB2	83:S2:4:C:H4'	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:SH:53:VAL:HG12	70:SH:175:GLY:HA3	1.89	0.55
83:S2:27:A2M:H2'	83:S2:28:U:H6	1.71	0.55
83:S2:1410:C:H2'	83:S2:1411:G:H8	1.71	0.55
3:L5:161:G:H2'	3:L5:162:A:H8	1.72	0.55
3:L5:1100:U:O4	3:L5:1194:G:O6	2.23	0.55
3:L5:1189:G:H2'	3:L5:1190:C:C6	2.42	0.55
3:L5:1500:A:H5''	3:L5:1501:C:H5''	1.89	0.55
3:L5:2744:A:H2'	3:L5:2745:A:C8	2.41	0.55
20:LP:28:ASN:HD22	20:LP:60:PHE:HZ	1.53	0.55
30:LZ:28:ASN:C	30:LZ:28:ASN:HD22	2.14	0.55
30:LZ:81:MET:HE3	37:Lg:92:LYS:HD3	1.89	0.55
66:SB:39:PHE:HA	66:SB:75:GLN:HE22	1.71	0.55
72:SJ:63:LEU:HD21	72:SJ:69:ARG:HH21	1.70	0.55
83:S2:583:A:H3'	83:S2:584:A:H8	1.72	0.55
83:S2:907:G:H2'	83:S2:908:A:C8	2.42	0.55
3:L5:2111:G:H21	3:L5:2252:G:H5'	1.72	0.55
3:L5:4319:C:H2'	3:L5:4320:G:H8	1.71	0.55
6:LA:83:HIS:HB3	46:Lp:64:VAL:HG22	1.89	0.55
49:Lt:20:GLY:HA2	49:Lt:56:LEU:HD12	1.88	0.55
83:S2:528:A:H2'	83:S2:529:A:C8	2.42	0.55
83:S2:639:C:H2'	83:S2:640:A:C8	2.42	0.55
3:L5:137:G:H2'	3:L5:138:G:C8	2.42	0.55
3:L5:1870:C:H2'	3:L5:1871:A2M:H8	1.89	0.55
3:L5:4743:G:H2'	3:L5:4744:A:H8	1.72	0.55
16:LL:206:ASP:HA	16:LL:209:LYS:HD3	1.89	0.55
30:LZ:4:PHE:HE1	33:Lc:39:ARG:HA	1.72	0.55
53:SM:26:LEU:HD12	53:SM:31:LEU:HD11	1.89	0.55
83:S2:159:A2M:O5'	83:S2:159:A2M:H8	2.07	0.55
3:L5:1558:A:H2'	3:L5:1559:G:H8	1.73	0.55
3:L5:4402:C:H42	3:L5:4441:A:H61	1.55	0.55
26:LV:64:THR:HG22	26:LV:76:VAL:HA	1.88	0.55
50:SD:227:LYS:HG2	64:Sg:184:LEU:HD23	1.89	0.55
52:SK:90:VAL:HG11	52:SK:95:ARG:HE	1.71	0.55
77:SW:90:GLN:HG2	77:SW:97:ARG:HH21	1.72	0.55
83:S2:329:G:H2'	83:S2:330:G:H8	1.72	0.55
3:L5:181:C:H2'	3:L5:182:G:C8	2.42	0.54
8:LC:195:LYS:HA	8:LC:200:ARG:HA	1.89	0.54
14:LI:54:SER:HB3	14:LI:135:ILE:HD11	1.89	0.54
47:Lr:119:ARG:HD3	47:Lr:122:LYS:HZ1	1.72	0.54
67:SC:64:THR:HG22	67:SC:66:LEU:H	1.72	0.54
83:S2:751:G:H1'	83:S2:793:G:H21	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:LV:69:LYS:HB3	26:LV:72:LEU:HD13	1.88	0.54
32:Lb:60:ASN:HA	32:Lb:63:LYS:HZ2	1.72	0.54
33:Lc:26:LYS:HB2	33:Lc:97:ILE:HB	1.88	0.54
44:Ln:21:ARG:HH12	83:S2:1174:PSU:H5'	1.72	0.54
49:Lt:110:VAL:HG11	49:Lt:137:GLN:HE22	1.72	0.54
49:Lt:117:ARG:HG2	49:Lt:118:HIS:N	2.23	0.54
55:SQ:72:VAL:HG11	55:SQ:80:GLN:HG3	1.89	0.54
68:SE:45:ILE:HB	68:SE:80:ILE:HG13	1.90	0.54
3:L5:2554:U:C2	3:L5:2764:A:N7	2.76	0.54
3:L5:4489:G:H4'	86:L5:5288:SPD:H91	1.90	0.54
9:LD:182:GLY:HA2	9:LD:194:VAL:HG23	1.89	0.54
22:LR:142:ILE:HA	22:LR:145:LEU:HG	1.87	0.54
48:Ls:175:LEU:HD21	48:Ls:182:PRO:HB3	1.89	0.54
83:S2:146:G:H1	83:S2:173:A:H61	1.56	0.54
3:L5:3717:A:H2'	3:L5:3718:A2M:C8	2.36	0.54
3:L5:4967:A:H2'	3:L5:4968:A:C8	2.42	0.54
3:L5:4991:U:H2'	3:L5:4992:G:C8	2.43	0.54
17:LM:62:LEU:HD21	17:LM:82:ILE:HD11	1.88	0.54
22:LR:105:LEU:HD22	22:LR:135:LYS:HG3	1.88	0.54
26:LV:71:GLU:HG2	26:LV:72:LEU:HD12	1.90	0.54
31:La:75:LEU:HG	31:La:113:GLY:HA2	1.90	0.54
42:Ll:21:ARG:HH22	42:Ll:24:PRO:HG3	1.72	0.54
51:SF:30:ILE:HG23	51:SF:117:ILE:HD11	1.89	0.54
77:SW:6:VAL:HG13	77:SW:29:PRO:HB2	1.89	0.54
83:S2:1845:A:H2'	83:S2:1846:G:H8	1.73	0.54
3:L5:268:G:H2'	3:L5:269:G:H8	1.72	0.54
3:L5:481:G:H2'	3:L5:482:G:C8	2.42	0.54
3:L5:1647:U:H5''	86:L5:5289:SPD:H71	1.90	0.54
6:LA:206:PRO:HG3	6:LA:213:GLY:HA3	1.90	0.54
8:LC:358:ALA:HA	8:LC:361:LEU:HD12	1.89	0.54
10:LE:149:ILE:HD12	10:LE:271:LEU:HD21	1.88	0.54
23:LS:46:TYR:O	23:LS:50:GLN:HG2	2.08	0.54
23:LS:127:MET:HE1	24:LT:155:PRO:HA	1.88	0.54
35:Le:89:LEU:HD13	35:Le:118:LEU:HD22	1.89	0.54
3:L5:3726:A:H2'	3:L5:3727:A:C8	2.42	0.54
3:L5:3932:U:H2'	3:L5:3933:G:C8	2.42	0.54
7:LB:283:LYS:HE2	7:LB:361:GLU:HB2	1.90	0.54
46:Lp:9:GLY:HA3	46:Lp:27:LYS:HZ3	1.72	0.54
68:SE:87:MET:HG2	68:SE:100:ARG:HD2	1.90	0.54
6:LA:177:LYS:HD3	6:LA:184:ARG:HH22	1.73	0.54
29:LY:2:LYS:HD2	29:LY:7:VAL:HG23	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:S2:149:A:N7	83:S2:169:U:O2	2.41	0.54
83:S2:588:G:H4'	83:S2:589:G:H5'	1.90	0.54
83:S2:649:PSU:H2'	83:S2:650:A:C8	2.43	0.54
3:L5:667:A:H5''	3:L5:668:C:H5''	1.88	0.54
3:L5:1350:C:H4'	8:LC:36:ILE:HD11	1.90	0.54
8:LC:230:LEU:HD21	8:LC:236:ASN:H	1.72	0.54
76:SV:14:PRO:HG2	76:SV:23:ILE:HD11	1.88	0.54
83:S2:851:C:H5''	83:S2:852:G:H5'	1.89	0.54
3:L5:162:A:H2'	3:L5:163:A:H8	1.73	0.54
5:L8:106:G:H4'	5:L8:137:A:H5'	1.90	0.54
32:Lb:95:ARG:O	32:Lb:99:ILE:HG12	2.07	0.54
74:SN:63:VAL:HG21	74:SN:71:ILE:HG13	1.89	0.54
83:S2:1037:G:H4'	83:S2:1845:A:H4'	1.88	0.54
3:L5:659:G:H2'	3:L5:660:A:H8	1.73	0.54
3:L5:1332:C:H2'	3:L5:1333:A:C8	2.39	0.54
7:LB:217:ILE:HD11	7:LB:333:LEU:HD21	1.89	0.54
45:Lo:26:TYR:HB3	45:Lo:67:VAL:HB	1.90	0.54
74:SN:5:HIS:HB3	74:SN:117:LEU:HD13	1.89	0.54
3:L5:162:A:H2'	3:L5:163:A:C8	2.43	0.53
3:L5:3611:A:H2	3:L5:5016:A:H8	1.56	0.53
28:LX:82:THR:HG21	38:Lh:37:THR:HG22	1.90	0.53
48:Ls:143:ILE:HD12	48:Ls:158:VAL:HG11	1.89	0.53
66:SB:198:GLU:HB3	66:SB:210:VAL:HG21	1.90	0.53
71:SI:165:GLN:HE22	71:SI:172:LEU:HG	1.73	0.53
3:L5:462:G:H2'	3:L5:463:A:C8	2.42	0.53
13:LH:105:ILE:HD11	13:LH:109:GLY:HA2	1.89	0.53
46:Lp:29:ILE:HD11	46:Lp:69:TRP:CD1	2.43	0.53
68:SE:131:VAL:HA	68:SE:137:PRO:HA	1.91	0.53
83:S2:935:G:H2'	83:S2:936:G:H8	1.74	0.53
3:L5:481:G:H2'	3:L5:482:G:H8	1.73	0.53
3:L5:2079:G:H2'	3:L5:2080:U:C6	2.44	0.53
3:L5:2683:C:H2'	3:L5:2684:C:H6	1.73	0.53
42:Ll:33:ASN:HB3	42:Ll:35:ILE:HG22	1.89	0.53
48:Ls:174:LEU:O	48:Ls:178:LEU:HB2	2.08	0.53
64:Sg:178:ASN:HB2	64:Sg:185:LYS:HD3	1.90	0.53
66:SB:170:GLU:HG2	66:SB:171:ILE:HG23	1.90	0.53
81:Sb:62:VAL:HG23	81:Sb:74:THR:HG21	1.90	0.53
83:S2:433:A:H2'	83:S2:434:G:C8	2.43	0.53
3:L5:958:G:C4	10:LE:124:LYS:HD2	2.43	0.53
3:L5:1982:G:H2'	3:L5:1983:A:O4'	2.09	0.53
3:L5:3736:A:H2'	3:L5:3737:A:H8	1.72	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:4192:A:H2'	3:L5:4193:C:H6	1.74	0.53
4:L7:58:A:H2'	4:L7:59:G:C8	2.43	0.53
38:Lh:80:PRO:HD2	38:Lh:83:LEU:HD12	1.90	0.53
55:SQ:104:SER:HA	55:SQ:107:GLU:HG3	1.91	0.53
64:Sg:47:ARG:HG3	64:Sg:52:TYR:HE1	1.72	0.53
70:SH:160:LYS:HD3	70:SH:189:PHE:HB3	1.90	0.53
3:L5:1461:C:H2'	3:L5:1462:A:H8	1.72	0.53
4:L7:117:G:H5'	9:LD:256:LYS:HD2	1.90	0.53
6:LA:247:ARG:HB3	83:S2:1069:U:H4'	1.90	0.53
23:LS:51:LEU:HD21	24:LT:153:PRO:HA	1.91	0.53
27:LW:56:ARG:HE	27:LW:61:LYS:HB2	1.74	0.53
34:Ld:54:MET:HE1	34:Ld:60:PRO:HA	1.90	0.53
48:Ls:29:ILE:HD11	48:Ls:191:GLN:HG2	1.90	0.53
56:SR:7:LYS:HG3	83:S2:1373:C:H5''	1.90	0.53
64:Sg:68:ASP:HB3	64:Sg:111:VAL:HG22	1.91	0.53
65:SA:145:ILE:HA	65:SA:159:ILE:HB	1.89	0.53
71:SI:78:ILE:HG13	71:SI:104:ILE:HG22	1.89	0.53
77:SW:4:MET:HB2	83:S2:683:OMG:H4'	1.88	0.53
3:L5:323:C:H2'	3:L5:324:A:H8	1.72	0.53
3:L5:1906:U:H2'	3:L5:1907:A:H8	1.73	0.53
3:L5:4743:G:H2'	3:L5:4744:A:C8	2.42	0.53
5:L8:19:C:H2'	5:L8:20:A:H8	1.73	0.53
26:LV:106:VAL:HG12	26:LV:112:MET:HG2	1.91	0.53
52:SK:85:LEU:HD21	52:SK:89:ILE:HB	1.91	0.53
58:ST:28:LEU:HD12	58:ST:106:ALA:HB1	1.90	0.53
58:ST:40:ALA:HB3	58:ST:43:LYS:HG2	1.89	0.53
60:SZ:48:VAL:HG23	60:SZ:80:ARG:HD2	1.90	0.53
66:SB:136:ARG:HB3	66:SB:216:LYS:HG3	1.90	0.53
70:SH:10:LYS:HE3	70:SH:17:ASP:HB3	1.91	0.53
3:L5:1468:C:H2'	3:L5:1469:C:H6	1.74	0.53
3:L5:5018:C:H2'	3:L5:5019:A:H8	1.74	0.53
64:Sg:89:LEU:HB3	64:Sg:99:ARG:HB3	1.91	0.53
3:L5:18:C:H4'	18:LN:138:PHE:CD2	2.44	0.53
3:L5:1172:C:HO2'	3:L5:1173:G:H8	1.57	0.53
3:L5:1907:A:H4'	11:LF:223:LYS:HD2	1.90	0.53
3:L5:2067:C:H5''	36:Lf:78:HIS:CE1	2.43	0.53
3:L5:4188:U:H2'	3:L5:4189:U:C6	2.44	0.53
8:LC:268:ARG:HH12	8:LC:269:LYS:HE2	1.73	0.53
80:Sa:5:ARG:HH21	83:S2:1864:U:H3'	1.73	0.53
3:L5:974:C:H41	3:L5:1281:G:H21	1.57	0.53
3:L5:1996:C:N4	3:L5:2000:G:H22	2.06	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:2375:A:H2'	3:L5:2376:A:C8	2.44	0.53
3:L5:4699:U:H1'	3:L5:4700:A:H5''	1.90	0.53
3:L5:4174:U:H2'	3:L5:4175:G:C8	2.44	0.53
26:LV:13:LYS:HZ3	26:LV:124:GLU:HB3	1.74	0.53
43:Lm:99:CYS:HB2	43:Lm:114:LYS:HE3	1.90	0.53
43:Lm:106:ARG:HD3	43:Lm:106:ARG:H	1.74	0.53
67:SC:130:ILE:HG23	67:SC:162:ILE:HD11	1.91	0.53
67:SC:267:GLN:HA	67:SC:270:THR:HB	1.91	0.53
69:SG:41:LEU:HB3	69:SG:45:TRP:HE3	1.74	0.53
69:SG:191:ARG:HH22	83:S2:312:G:H2'	1.73	0.53
77:SW:4:MET:HE1	83:S2:1158:G:H21	1.72	0.53
83:S2:1801:A:H2'	83:S2:1802:C:C6	2.44	0.53
3:L5:1346:C:H2'	3:L5:1347:G:C8	2.43	0.52
3:L5:3721:U:H2'	3:L5:3722:G:H8	1.72	0.52
3:L5:3856:A:H4'	20:LP:85:LYS:HG2	1.91	0.52
26:LV:129:TRP:HB2	26:LV:132:ILE:HG12	1.91	0.52
68:SE:208:VAL:HG11	68:SE:225:ILE:HG13	1.90	0.52
72:SJ:108:ARG:HH22	72:SJ:154:GLN:HB3	1.73	0.52
83:S2:106:C:H2'	83:S2:107:A:C8	2.43	0.52
83:S2:1536:G:H2'	83:S2:1537:A:C8	2.43	0.52
83:S2:1568:C:H2'	83:S2:1569:A:C8	2.45	0.52
3:L5:1811:G:H21	32:Lb:57:MET:HE1	1.74	0.52
3:L5:4965:U:H4'	3:L5:4966:A:H5'	1.90	0.52
13:LH:115:ARG:HD3	13:LH:123:ILE:HD12	1.91	0.52
28:LX:71:LEU:HG	28:LX:76:ILE:HD13	1.91	0.52
30:LZ:57:MET:HB2	30:LZ:61:LYS:HD3	1.91	0.52
56:SR:6:THR:HA	83:S2:1373:C:H5'	1.90	0.52
64:Sg:12:LYS:HD3	64:Sg:306:LEU:HD12	1.90	0.52
83:S2:1579:A:H4'	83:S2:1581:C:H5	1.73	0.52
3:L5:1683:PSU:H2'	3:L5:1684:A:C8	2.44	0.52
3:L5:4274:A:H2'	3:L5:4275:G:C8	2.44	0.52
3:L5:4680:G:H2'	3:L5:4681:A:C8	2.45	0.52
5:L8:67:U:H2'	5:L8:68:G:C8	2.43	0.52
18:LN:73:ARG:HG2	18:LN:75:VAL:HG23	1.91	0.52
30:LZ:91:LEU:HD12	30:LZ:96:VAL:HG21	1.91	0.52
3:L5:3848:U:H2'	3:L5:3849:A:C8	2.44	0.52
5:L8:19:C:H2'	5:L8:20:A:C8	2.45	0.52
23:LS:80:ILE:HG22	23:LS:129:VAL:HA	1.92	0.52
47:Lr:97:ILE:HD13	47:Lr:107:ARG:HA	1.91	0.52
67:SC:165:VAL:HG21	67:SC:217:ALA:HB1	1.91	0.52
71:SI:106:SER:HB3	71:SI:171:LEU:HG	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:S2:300:U:H2'	83:S2:301:A:C8	2.44	0.52
83:S2:1203:G:H2'	83:S2:1204:A:C8	2.44	0.52
3:L5:7:C:H2'	3:L5:8:U:C6	2.45	0.52
3:L5:1955:G:H2'	3:L5:1956:A:H8	1.75	0.52
3:L5:2495:U:H2'	3:L5:2496:G:C8	2.45	0.52
3:L5:4421:C:H42	3:L5:4475:G:N2	2.08	0.52
26:LV:70:PRO:HG3	83:S2:1724:A:H5'	1.92	0.52
27:LW:56:ARG:HH21	27:LW:61:LYS:HB3	1.75	0.52
32:Lb:12:GLN:HA	32:Lb:12:GLN:HE21	1.75	0.52
52:SK:31:LYS:NZ	52:SK:40:VAL:H	2.08	0.52
3:L5:4507:A:H2'	3:L5:4508:C:C6	2.45	0.52
5:L8:66:A:H2'	5:L8:67:U:C6	2.44	0.52
13:LH:4:ILE:HG13	13:LH:61:TRP:CH2	2.45	0.52
49:Lt:12:VAL:HG11	49:Lt:65:GLN:H	1.75	0.52
60:SZ:79:ILE:HB	60:SZ:83:LEU:HD23	1.91	0.52
66:SB:133:TYR:HB3	66:SB:217:MET:HE1	1.91	0.52
68:SE:127:ARG:HD2	68:SE:142:HIS:HA	1.90	0.52
71:SI:83:TYR:HB3	71:SI:101:ILE:HD11	1.91	0.52
71:SI:141:ARG:HD3	71:SI:145:ILE:HG21	1.92	0.52
83:S2:116:OMU:O5'	83:S2:116:OMU:H6	2.09	0.52
83:S2:342:C:H2'	83:S2:343:A:H8	1.74	0.52
83:S2:825:A:H2'	83:S2:826:A:C8	2.45	0.52
83:S2:980:A:H2'	83:S2:981:A:C8	2.45	0.52
83:S2:1804:U:H2'	83:S2:1805:G:C8	2.44	0.52
3:L5:3607:U:H2'	3:L5:3608:A:H8	1.73	0.52
3:L5:4098:A:H2'	3:L5:4099:G:H4'	1.92	0.52
3:L5:4260:U:H2'	3:L5:4261:C:C6	2.45	0.52
3:L5:4991:U:H2'	3:L5:4992:G:H8	1.74	0.52
8:LC:319:LEU:H	8:LC:325:MET:HE3	1.75	0.52
23:LS:11:LYS:HA	23:LS:31:ARG:HH21	1.75	0.52
64:Sg:11:LEU:HB2	64:Sg:307:VAL:HG13	1.92	0.52
83:S2:1513:C:H2'	83:S2:1514:G:C8	2.44	0.52
2:Pt:29:C:H2'	2:Pt:30:G:C8	2.45	0.52
3:L5:189:G:H2'	3:L5:190:G:H8	1.75	0.52
3:L5:300:A:H2'	3:L5:301:G:C8	2.44	0.52
3:L5:2539:C:H2'	3:L5:2540:C:C6	2.45	0.52
3:L5:4274:A:H2'	3:L5:4275:G:H8	1.75	0.52
4:L7:6:C:H4'	9:LD:52:ILE:HD13	1.92	0.52
6:LA:115:CYS:SG	6:LA:124:GLY:HA3	2.50	0.52
75:SO:54:CYS:HB2	75:SO:84:ARG:HG2	1.92	0.52
83:S2:793:G:H2'	83:S2:794:A:H8	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:S2:1351:G:O6	83:S2:1360:U:O4	2.28	0.52
3:L5:1461:C:H2'	3:L5:1462:A:C8	2.45	0.52
3:L5:1558:A:H2'	3:L5:1559:G:C8	2.45	0.52
3:L5:1675:C:H3'	3:L5:1677:PSU:HN1	1.73	0.52
3:L5:2007:G:H2'	3:L5:2008:U:C6	2.45	0.52
3:L5:3599:A:H2'	3:L5:3600:G:C8	2.45	0.52
3:L5:3946:G:O6	3:L5:4067:U:O4	2.27	0.52
3:L5:4208:U:H2'	3:L5:4209:G:H8	1.74	0.52
3:L5:4530:UR3:H2'	3:L5:4531:U:H2'	1.90	0.52
5:L8:153:C:H2'	5:L8:154:G:H8	1.74	0.52
9:LD:181:PRO:HD2	9:LD:195:HIS:CD2	2.44	0.52
66:SB:33:VAL:HG12	66:SB:96:CYS:HB2	1.91	0.52
72:SJ:114:VAL:HG11	72:SJ:135:ILE:HG21	1.91	0.52
83:S2:1581:C:H5'	83:S2:1582:C:H5	1.74	0.52
3:L5:1683:PSU:H2'	3:L5:1684:A:H8	1.75	0.52
3:L5:1943:A:H5''	14:LI:162:ARG:HH12	1.75	0.52
3:L5:2018:C:H2'	3:L5:2019:C:C6	2.45	0.52
3:L5:2029:A:H2'	3:L5:2030:A:C8	2.45	0.52
3:L5:2049:G:H2'	3:L5:2050:G:C8	2.45	0.52
3:L5:2859:G:H21	3:L5:3837:C:H1'	1.75	0.52
16:LL:191:LEU:HD22	16:LL:194:ILE:HD11	1.92	0.52
38:Lh:106:LYS:HB3	38:Lh:110:LYS:NZ	2.24	0.52
40:Lj:27:TYR:HA	40:Lj:34:CYS:HA	1.92	0.52
67:SC:83:LEU:HG	76:SV:15:ARG:NH1	2.25	0.52
69:SG:133:LEU:HD12	83:S2:65:C:C4	2.45	0.52
83:S2:874:G:H2'	83:S2:875:A:H8	1.75	0.52
83:S2:996:A:H2'	83:S2:997:A:C8	2.45	0.52
83:S2:1277:C:H2'	83:S2:1278:A:C8	2.45	0.52
83:S2:1432:U:H2'	83:S2:1438:A:C8	2.45	0.52
83:S2:1558:C:H2'	83:S2:1559:C:C6	2.44	0.52
2:Pt:50:U:O4	2:Pt:64:G:O6	2.28	0.51
3:L5:46:U:H5''	16:LL:16:LYS:HG3	1.92	0.51
3:L5:426:A:H2'	3:L5:427:A:H8	1.74	0.51
3:L5:980:U:H5'	10:LE:42:PRO:HA	1.92	0.51
4:L7:2:U:O4	4:L7:117:G:O6	2.28	0.51
39:Li:65:LYS:HG2	39:Li:68:ARG:HB3	1.92	0.51
54:SP:108:LYS:HD2	54:SP:109:PRO:HD2	1.91	0.51
60:SZ:106:GLN:HA	60:SZ:106:GLN:HE21	1.76	0.51
83:S2:1013:U:H2'	83:S2:1014:G:H8	1.75	0.51
3:L5:418:A:H4'	3:L5:2311:C:H5'	1.93	0.51
3:L5:460:C:H2'	3:L5:461:G:H8	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:3870:C:H2'	3:L5:3871:A:H8	1.75	0.51
18:LN:169:ARG:HG3	18:LN:174:LEU:HD12	1.90	0.51
39:Li:6:PRO:HB3	39:Li:16:LYS:HD3	1.91	0.51
41:Lk:8:ILE:HD11	41:Lk:56:LEU:HD13	1.90	0.51
41:Lk:24:LYS:HB2	41:Lk:35:LYS:HB2	1.91	0.51
43:Lm:103:LEU:HD22	43:Lm:121:LEU:HD11	1.90	0.51
52:SK:58:VAL:HG21	52:SK:69:TRP:HB3	1.92	0.51
64:Sg:156:PHE:HE1	64:Sg:179:LEU:HD11	1.74	0.51
76:SV:11:LEU:HG	76:SV:12:TYR:HD1	1.75	0.51
82:Se:32:ALA:HB2	83:S2:525:A:H5'	1.92	0.51
83:S2:1804:U:H2'	83:S2:1805:G:H8	1.75	0.51
3:L5:264:C:H2'	3:L5:265:C:C4	2.46	0.51
3:L5:3898:G:H5'	7:LB:254:ILE:HG13	1.91	0.51
13:LH:5:LEU:HA	13:LH:60:TRP:CD1	2.45	0.51
23:LS:82:LEU:HD11	23:LS:113:MET:HE3	1.92	0.51
54:SP:121:ILE:HD13	57:SS:120:HIS:HD2	1.75	0.51
69:SG:67:VAL:HG12	69:SG:69:THR:HG22	1.91	0.51
79:SY:57:VAL:HB	79:SY:60:PHE:HE2	1.74	0.51
83:S2:121:OMU:HM22	83:S2:122:G:H5'	1.92	0.51
3:L5:921:C:H2'	3:L5:922:C:C6	2.46	0.51
3:L5:2520:C:H2'	3:L5:2521:G:C8	2.44	0.51
3:L5:2557:G:O6	3:L5:2570:U:O4	2.29	0.51
7:LB:14:LEU:HD12	7:LB:17:LEU:HD11	1.92	0.51
14:LI:39:LYS:HA	14:LI:86:HIS:HD2	1.75	0.51
21:LQ:53:MET:HB2	21:LQ:58:ARG:HG3	1.91	0.51
35:Le:38:PRO:HD2	35:Le:55:MET:HE3	1.93	0.51
51:SF:49:LEU:HD12	55:SQ:49:TYR:HB2	1.92	0.51
64:Sg:107:ASP:HB2	64:Sg:125:ARG:HG3	1.91	0.51
72:SJ:33:GLY:HA3	82:Se:38:TYR:CG	2.45	0.51
3:L5:161:G:H2'	3:L5:162:A:C8	2.46	0.51
3:L5:2765:A:H2'	3:L5:2766:A:C8	2.45	0.51
20:LP:120:ASN:HB2	20:LP:145:HIS:HB2	1.92	0.51
35:Le:22:ARG:HD2	35:Le:36:ARG:HB2	1.91	0.51
83:S2:929:G:N2	83:S2:1104:G:H4'	2.25	0.51
3:L5:93:G:H2'	3:L5:94:A:C8	2.45	0.51
3:L5:109:G:H5'	16:LL:92:ARG:HE	1.75	0.51
3:L5:4192:A:H2'	3:L5:4193:C:C6	2.46	0.51
3:L5:4685:U:H2'	3:L5:4686:G:C8	2.45	0.51
11:LF:127:LYS:HB2	24:LT:133:ALA:HB3	1.93	0.51
14:LI:39:LYS:HA	14:LI:86:HIS:CD2	2.46	0.51
35:Le:70:LEU:HD21	35:Le:76:LYS:HB2	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:SM:47:ALA:HB3	53:SM:74:ILE:HD13	1.93	0.51
57:SS:125:HIS:CD2	57:SS:131:VAL:HG11	2.46	0.51
70:SH:66:VAL:HA	70:SH:69:LEU:HD23	1.91	0.51
83:S2:1671:G:H2'	83:S2:1672:U:H6	1.74	0.51
3:L5:429:A:H2'	3:L5:430:G:C8	2.45	0.51
3:L5:959:G:C8	10:LE:123:ARG:HG2	2.46	0.51
3:L5:4389:C:H2'	3:L5:4390:A:C8	2.46	0.51
3:L5:4459:U:H2'	3:L5:4460:U:C6	2.45	0.51
3:L5:5006:U:H4'	3:L5:5007:A:H5'	1.92	0.51
7:LB:152:SER:O	7:LB:156:TYR:HB2	2.11	0.51
12:LG:52:THR:HG22	28:LX:41:ARG:HG3	1.92	0.51
14:LI:85:PHE:HE2	14:LI:87:MET:HE2	1.75	0.51
19:LO:126:VAL:HG13	19:LO:127:VAL:HG13	1.93	0.51
28:LX:87:MET:HA	28:LX:90:ILE:HG22	1.93	0.51
31:La:85:GLN:HA	31:La:88:VAL:HG12	1.91	0.51
44:Ln:15:ARG:HG2	44:Ln:18:ARG:HH22	1.74	0.51
69:SG:52:ILE:HA	69:SG:111:LEU:HD23	1.93	0.51
69:SG:76:LEU:HD21	69:SG:92:ARG:HE	1.74	0.51
83:S2:116:OMU:HN3	83:S2:347:G:H1	1.57	0.51
83:S2:1808:U:H2'	83:S2:1809:A:H8	1.76	0.51
3:L5:1194:G:H2'	3:L5:1195:G:C8	2.46	0.51
3:L5:2250:C:H2'	3:L5:2251:G:C8	2.45	0.51
3:L5:3937:C:H1'	18:LN:125:SER:HB3	1.91	0.51
3:L5:4615:C:H5''	7:LB:357:ARG:HD2	1.92	0.51
10:LE:282:TYR:HE2	36:Lf:31:GLU:HG2	1.75	0.51
13:LH:92:MET:HB3	13:LH:144:LEU:HB2	1.91	0.51
15:LJ:21:CYS:HA	15:LJ:73:THR:HG22	1.92	0.51
16:LL:46:ILE:HB	16:LL:49:ARG:HB2	1.92	0.51
51:SF:72:LEU:HB3	51:SF:151:ILE:HD11	1.92	0.51
83:S2:432:G:H2'	83:S2:433:A:C8	2.46	0.51
83:S2:1652:G:O6	83:S2:1672:U:O4	2.28	0.51
83:S2:1722:G:O6	83:S2:1812:U:O2	2.27	0.51
83:S2:1737:G:H1	83:S2:1797:U:H3	1.59	0.51
3:L5:1323:A2M:H2'	3:L5:1324:A:O4'	2.11	0.51
3:L5:4370:OMG:H4'	45:Lo:64:LYS:HD3	1.93	0.51
3:L5:4458:C:H2'	3:L5:4459:U:C6	2.45	0.51
3:L5:4723:A:H2'	3:L5:4724:A:C8	2.46	0.51
3:L5:4770:U:H2'	3:L5:4771:C:C6	2.46	0.51
21:LQ:22:ASP:O	21:LQ:26:ARG:HG3	2.11	0.51
29:LY:82:ILE:HB	29:LY:85:VAL:HG12	1.92	0.51
51:SF:91:ARG:HA	51:SF:94:LYS:HE3	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:SM:26:LEU:HA	53:SM:31:LEU:HD21	1.92	0.51
58:ST:78:ILE:HD11	83:S2:1587:G:C5	2.45	0.51
70:SH:165:ASN:HA	70:SH:168:HIS:HE1	1.76	0.51
83:S2:925:G:H1	83:S2:1017:U:H3	1.58	0.51
83:S2:1010:G:H2'	83:S2:1011:A:H8	1.75	0.51
83:S2:1652:G:N2	83:S2:1672:U:O2	2.31	0.51
83:S2:1773:C:H2'	83:S2:1774:C:H5''	1.93	0.51
3:L5:10:A:H2'	3:L5:11:G:C8	2.46	0.51
3:L5:262:G:H2'	3:L5:263:G:C8	2.45	0.51
3:L5:700:G:N1	3:L5:701:G:C6	2.79	0.51
3:L5:1253:G:H2'	3:L5:1256:G:H5'	1.93	0.51
3:L5:4584:A:H2'	3:L5:4585:U:O4'	2.11	0.51
5:L8:92:U:H2'	5:L8:93:C:O4'	2.10	0.51
33:Lc:77:ASN:OD1	33:Lc:80:GLU:HG2	2.11	0.51
50:SD:23:GLU:HG2	52:SK:64:TRP:HE1	1.75	0.51
52:SK:50:GLN:HE22	83:S2:1276:A:H1'	1.76	0.51
64:Sg:120:ILE:HB	64:Sg:132:TRP:HB2	1.92	0.51
83:S2:15:U:H2'	83:S2:16:G:O4'	2.11	0.51
83:S2:186:C:H2'	83:S2:187:G:H8	1.76	0.51
83:S2:1144:A:H2'	83:S2:1145:A:C8	2.46	0.51
83:S2:1386:A:H3'	83:S2:1387:G:H8	1.75	0.51
2:Pt:18:G:H21	2:Pt:58:A:H5'	1.76	0.50
3:L5:268:G:H2'	3:L5:269:G:C8	2.46	0.50
3:L5:1503:A:H4'	3:L5:1504:G:H5'	1.93	0.50
3:L5:1972:G:C6	3:L5:1973:G:C6	2.99	0.50
6:LA:186:TYR:HB2	6:LA:196:TRP:CZ3	2.46	0.50
7:LB:29:VAL:HG12	7:LB:31:SER:H	1.76	0.50
7:LB:89:ILE:HG12	7:LB:197:ALA:HB1	1.94	0.50
8:LC:366:ASP:HB3	8:LC:368:LYS:HE2	1.92	0.50
18:LN:124:ASP:HB3	18:LN:127:TYR:H	1.76	0.50
25:LU:84:LYS:HE2	25:LU:102:VAL:HG23	1.92	0.50
75:SO:33:ILE:HG23	75:SO:97:LEU:HD23	1.93	0.50
83:S2:28:U:H2'	83:S2:29:G:C8	2.45	0.50
83:S2:159:A2M:H2'	83:S2:160:U:C6	2.45	0.50
83:S2:374:G:H2'	83:S2:375:U:C6	2.46	0.50
83:S2:1348:G:H2'	83:S2:1349:G:C8	2.46	0.50
3:L5:256:G:H2'	3:L5:257:C:C6	2.46	0.50
3:L5:299:C:H2'	3:L5:300:A:C8	2.46	0.50
3:L5:299:C:H2'	3:L5:300:A:H8	1.77	0.50
3:L5:2017:A:O2'	3:L5:2018:C:H6	1.92	0.50
3:L5:4563:U:H2'	3:L5:4564:A:H8	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:L8:123:U:H2'	5:L8:126:C:H42	1.76	0.50
27:LW:119:LYS:O	27:LW:123:LYS:HB2	2.10	0.50
75:SO:149:ARG:HH22	83:S2:960:U:H5''	1.75	0.50
83:S2:1244:PSU:H2'	83:S2:1245:G:H8	1.77	0.50
3:L5:318:A:H2'	3:L5:319:A:H8	1.74	0.50
3:L5:697:G:H2'	3:L5:698:G:H8	1.77	0.50
3:L5:1959:U:H4'	3:L5:1960:A:H5''	1.93	0.50
3:L5:4710:C:H2'	3:L5:4711:C:C6	2.47	0.50
16:LL:8:MET:HE1	21:LQ:168:ARG:HB3	1.93	0.50
27:LW:123:LYS:HD2	83:S2:320:G:H5''	1.93	0.50
39:Li:44:ILE:HA	39:Li:47:VAL:HG12	1.92	0.50
42:Ll:12:PHE:HE2	42:Ll:51:LEU:HD22	1.76	0.50
47:Lr:26:SER:HB3	47:Lr:31:ASN:ND2	2.26	0.50
58:ST:104:LEU:HD23	58:ST:107:LEU:HD12	1.94	0.50
65:SA:4:ALA:HA	76:SV:80:SER:HB3	1.92	0.50
20:LP:114:ILE:HD11	20:LP:117:ILE:HB	1.92	0.50
23:LS:113:MET:HG3	23:LS:119:ALA:HB3	1.93	0.50
58:ST:85:ASN:HB3	58:ST:88:MET:HB2	1.94	0.50
64:Sg:174:VAL:HG23	64:Sg:188:HIS:HB2	1.93	0.50
64:Sg:218:LEU:HB2	64:Sg:228:TYR:HB2	1.93	0.50
68:SE:26:VAL:HG22	72:SJ:4:ALA:HB2	1.93	0.50
73:SL:46:THR:HG21	73:SL:51:ILE:HD11	1.94	0.50
77:SW:27:ILE:HG13	77:SW:61:ILE:HB	1.93	0.50
3:L5:1876:U:H2'	3:L5:1877:G:C8	2.47	0.50
3:L5:4503:A:H2'	3:L5:4504:C:C6	2.46	0.50
32:Lb:12:GLN:HE22	32:Lb:15:LYS:HE2	1.77	0.50
56:SR:44:LYS:HG3	56:SR:47:ARG:HH21	1.77	0.50
59:SU:19:ARG:HH11	59:SU:92:HIS:HB3	1.76	0.50
2:Pt:76:A:H2'	3:L5:4397:A:H1'	1.94	0.50
3:L5:1097:C:H2'	3:L5:1098:G:C8	2.46	0.50
3:L5:1994:C:H2'	3:L5:1995:G:C8	2.46	0.50
3:L5:2413:U:H2'	3:L5:2414:G:C8	2.47	0.50
3:L5:2764:A:H2'	3:L5:2765:A:H8	1.75	0.50
3:L5:2770:C:H2'	3:L5:2771:G:H8	1.77	0.50
3:L5:3945:A:H2'	3:L5:3946:G:C8	2.46	0.50
3:L5:4403:PSU:HN3	3:L5:4440:G:H1	1.58	0.50
4:L7:58:A:H2'	4:L7:59:G:H8	1.76	0.50
6:LA:225:ILE:HG21	6:LA:234:LYS:HA	1.93	0.50
8:LC:221:PHE:HB3	8:LC:229:LEU:HD11	1.92	0.50
12:LG:30:PRO:HG2	30:LZ:124:THR:HA	1.94	0.50
13:LH:89:ARG:HB2	13:LH:187:VAL:HG22	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:LO:54:TYR:HD2	19:LO:145:VAL:HG21	1.77	0.50
25:LU:83:LEU:HD23	25:LU:86:LEU:HD21	1.92	0.50
33:Lc:34:THR:HG23	33:Lc:95:ALA:HB2	1.93	0.50
47:Lr:49:VAL:HG23	47:Lr:64:ILE:HG22	1.92	0.50
64:Sg:32:LEU:HA	64:Sg:42:MET:HA	1.93	0.50
83:S2:327:G:H5'	83:S2:328:U:C2	2.47	0.50
83:S2:609:U:H2'	83:S2:610:G:C8	2.44	0.50
83:S2:1545:A:H2'	83:S2:1546:G:C8	2.46	0.50
3:L5:223:G:H4'	3:L5:225:G:N7	2.27	0.50
3:L5:2870:A:H2'	3:L5:2871:A:C8	2.47	0.50
3:L5:4088:C:H2'	3:L5:4089:G:C8	2.47	0.50
4:L7:15:C:H2'	4:L7:16:A:H8	1.77	0.50
19:LO:105:PHE:HE2	19:LO:112:TYR:HE2	1.60	0.50
20:LP:92:LEU:O	20:LP:96:LYS:HG2	2.12	0.50
31:La:36:GLY:HA3	31:La:40:HIS:CE1	2.47	0.50
65:SA:142:LEU:HD12	65:SA:143:PRO:HD2	1.93	0.50
68:SE:139:LEU:HB3	68:SE:147:ILE:HG22	1.94	0.50
3:L5:87:A:H4'	31:La:63:LEU:HD12	1.94	0.50
3:L5:418:A:C2	5:L8:17:A:H1'	2.47	0.50
3:L5:425:U:H2'	3:L5:426:A:H8	1.75	0.50
3:L5:1578:U:H2'	3:L5:1579:C:H6	1.77	0.50
3:L5:2517:A:H5'	37:Lg:62:LYS:HD2	1.94	0.50
4:L7:110:G:H2'	4:L7:111:C:C6	2.47	0.50
13:LH:43:VAL:HG12	13:LH:59:LYS:HB2	1.94	0.50
35:Le:28:TYR:HB3	35:Le:30:LYS:HG2	1.93	0.50
64:Sg:208:ALA:HB2	64:Sg:218:LEU:HD13	1.94	0.50
69:SG:159:ARG:HH21	69:SG:171:THR:HG23	1.76	0.50
80:Sa:10:ARG:HD2	80:Sa:34:LYS:HD2	1.94	0.50
3:L5:1441:C:H2'	3:L5:1442:C:C5	2.47	0.50
3:L5:1999:A:H62	48:Ls:40:MET:HE2	1.76	0.50
3:L5:3607:U:H2'	3:L5:3608:A:C8	2.46	0.50
3:L5:3721:U:H2'	3:L5:3722:G:C8	2.46	0.50
3:L5:4071:U:H2'	3:L5:4072:C:H6	1.77	0.50
6:LA:229:ALA:HB3	6:LA:234:LYS:HB3	1.94	0.50
44:Ln:14:LYS:HD3	44:Ln:18:ARG:HH11	1.76	0.50
50:SD:29:LEU:HG	50:SD:32:ASP:HB2	1.94	0.50
50:SD:222:PRO:HB3	64:Sg:190:GLY:HA3	1.94	0.50
59:SU:81:GLN:HB2	62:Sd:55:LEU:HD23	1.94	0.50
60:SZ:91:LEU:HD22	60:SZ:96:LEU:HD21	1.92	0.50
69:SG:191:ARG:HH12	83:S2:312:G:H2'	1.77	0.50
83:S2:1515:G:H2'	83:S2:1516:G:H8	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Pt:50:U:O2	2:Pt:64:G:N2	2.27	0.49
3:L5:267:G:H2'	3:L5:268:G:C8	2.47	0.49
3:L5:278:G:H5''	18:LN:8:GLN:HE22	1.77	0.49
3:L5:474:C:H2'	3:L5:475:G:C8	2.47	0.49
3:L5:1399:G:H2'	3:L5:1400:G:H8	1.76	0.49
3:L5:1732:C:H2'	3:L5:1733:G:C8	2.47	0.49
3:L5:2101:C:H2'	3:L5:2102:G:C8	2.47	0.49
3:L5:4088:C:H2'	3:L5:4089:G:H8	1.77	0.49
7:LB:161:ARG:HG2	7:LB:184:GLN:HA	1.94	0.49
32:Lb:8:THR:HB	32:Lb:10:HIS:H	1.77	0.49
59:SU:26:SER:HB3	59:SU:110:VAL:HG23	1.94	0.49
80:Sa:70:LYS:HD3	83:S2:987:A:H4'	1.93	0.49
83:S2:118:C:H1'	83:S2:445:A:C5	2.46	0.49
83:S2:403:G:H2'	83:S2:404:G:H8	1.77	0.49
3:L5:246:G:H2'	3:L5:247:G:H8	1.75	0.49
3:L5:1373:A:H5''	8:LC:44:LEU:HD12	1.94	0.49
3:L5:1494:U:H2'	3:L5:1495:G:H8	1.77	0.49
3:L5:1636:U:H5''	3:L5:1637:A:H5'	1.94	0.49
49:Lt:121:LEU:HD22	49:Lt:129:ILE:HA	1.94	0.49
49:Lt:147:HIS:CE1	49:Lt:149:HIS:HB3	2.47	0.49
64:Sg:87:LEU:HB2	64:Sg:101:PHE:HB2	1.92	0.49
65:SA:57:LYS:HZ1	65:SA:159:ILE:C	2.20	0.49
65:SA:207:PRO:HA	65:SA:210:ILE:HB	1.93	0.49
73:SL:96:ILE:HD11	78:SX:10:ALA:HB1	1.93	0.49
73:SL:133:PRO:HG2	83:S2:383:G:H21	1.76	0.49
83:S2:1288:OMU:HN3	83:S2:1311:C:H42	1.57	0.49
83:S2:1802:C:H2'	83:S2:1803:U:C6	2.47	0.49
3:L5:4578:G:H2'	3:L5:4579:PSU:H6	1.76	0.49
3:L5:4685:U:H2'	3:L5:4686:G:H8	1.78	0.49
3:L5:4897:G:H2'	3:L5:4898:G:C8	2.47	0.49
52:SK:27:VAL:HB	52:SK:43:LEU:HD12	1.94	0.49
54:SP:64:LYS:HD2	54:SP:73:PRO:HG2	1.94	0.49
64:Sg:129:ILE:HB	64:Sg:142:VAL:HB	1.93	0.49
66:SB:134:LEU:HD22	66:SB:219:LYS:HZ2	1.77	0.49
70:SH:87:PHE:HB3	70:SH:90:LYS:HD2	1.94	0.49
73:SL:7:GLU:HB3	73:SL:11:GLN:HE22	1.77	0.49
82:Se:39:ASN:HD21	83:S2:551:U:H4'	1.77	0.49
83:S2:909:G:H2'	83:S2:910:G:C8	2.48	0.49
3:L5:1613:A:H5''	6:LA:183:GLY:HA3	1.94	0.49
3:L5:2413:U:H2'	3:L5:2414:G:H8	1.77	0.49
3:L5:2631:U:H5''	3:L5:2632:PSU:H5''	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:4939:C:P	10:LE:156:ARG:HH22	2.35	0.49
3:L5:5054:C:H4'	3:L5:5055:G:H8	1.77	0.49
7:LB:96:PRO:HB3	19:LO:153:THR:HG22	1.93	0.49
16:LL:127:PHE:HZ	16:LL:131:PRO:HB3	1.78	0.49
19:LO:75:ALA:O	19:LO:79:ILE:HG12	2.11	0.49
83:S2:52:G:H2'	83:S2:53:C:C6	2.47	0.49
83:S2:115:U:H2'	83:S2:116:OMU:C6	2.42	0.49
3:L5:444:G:H2'	3:L5:445:U:H6	1.77	0.49
3:L5:1960:A:H5'	48:Ls:63:LYS:HG2	1.95	0.49
3:L5:2305:U:C2	35:Le:106:LYS:HD3	2.47	0.49
3:L5:4070:U:H2'	3:L5:4071:U:H6	1.77	0.49
3:L5:4208:U:H2'	3:L5:4209:G:C8	2.48	0.49
3:L5:4742:G:H2'	3:L5:4743:G:C8	2.48	0.49
15:LJ:160:GLU:HA	15:LJ:163:MET:HE2	1.94	0.49
46:Lp:51:ALA:H	46:Lp:54:ILE:HB	1.78	0.49
83:S2:291:G:H2'	83:S2:292:A:C8	2.48	0.49
83:S2:1777:G:H2'	83:S2:1778:C:H6	1.76	0.49
3:L5:429:A:H2'	3:L5:430:G:H8	1.76	0.49
3:L5:1081:C:O2'	3:L5:1082:C:H5'	2.12	0.49
3:L5:1725:U:H2'	3:L5:1726:U:H6	1.77	0.49
3:L5:2474:G:C5	28:LX:47:ARG:HG2	2.47	0.49
3:L5:4523:A2M:H5''	3:L5:4524:G:H5'	1.93	0.49
6:LA:177:LYS:HB2	46:Lp:29:ILE:HD13	1.95	0.49
65:SA:181:GLU:O	65:SA:185:MET:HG2	2.11	0.49
3:L5:426:A:H2'	3:L5:427:A:C8	2.48	0.49
3:L5:2751:G:H2'	3:L5:2752:G:H8	1.76	0.49
3:L5:4567:G:H5'	7:LB:20:LYS:HB3	1.95	0.49
7:LB:206:PRO:HG2	7:LB:209:GLN:HG3	1.94	0.49
9:LD:223:PHE:HB3	9:LD:226:TYR:HB2	1.95	0.49
14:LI:192:PRO:HA	14:LI:197:VAL:HG12	1.94	0.49
18:LN:68:ARG:HG2	18:LN:128:LYS:HG3	1.95	0.49
30:LZ:81:MET:HE1	33:Lc:63:TYR:HE1	1.78	0.49
35:Le:23:HIS:HD2	35:Le:24:GLN:HG2	1.78	0.49
59:SU:74:SER:H	83:S2:1338:G:H4'	1.77	0.49
64:Sg:18:VAL:HB	64:Sg:301:GLY:HA3	1.95	0.49
67:SC:112:VAL:HG11	83:S2:1357:A:H5'	1.94	0.49
75:SO:50:LYS:HZ1	83:S2:951:C:H1'	1.78	0.49
77:SW:39:THR:HG23	77:SW:42:MET:HE2	1.94	0.49
83:S2:375:U:H2'	83:S2:376:A:C8	2.46	0.49
3:L5:710:G:H2'	3:L5:711:A:C8	2.48	0.49
3:L5:932:A:H61	23:LS:68:PHE:HZ	1.61	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:1186:U:H3'	3:L5:1187:G:H21	1.77	0.49
3:L5:1345:A:H2'	3:L5:1346:C:C6	2.48	0.49
3:L5:1847:C:H2'	3:L5:1848:C:C6	2.47	0.49
3:L5:2351:OMC:HM22	8:LC:95:MET:HG3	1.94	0.49
3:L5:5005:G:H22	3:L5:5041:G:H1'	1.78	0.49
10:LE:66:LYS:HB3	10:LE:68:MET:HE3	1.95	0.49
12:LG:159:HIS:CD2	12:LG:185:LYS:HA	2.47	0.49
34:Ld:43:PRO:O	34:Ld:47:LYS:HG2	2.12	0.49
54:SP:108:LYS:HB3	54:SP:111:MET:HE3	1.94	0.49
63:Sf:116:ARG:HD2	63:Sf:120:GLU:HG2	1.94	0.49
83:S2:155:G:H2'	83:S2:156:G:C8	2.48	0.49
83:S2:1278:A:H2'	83:S2:1279:C:C6	2.48	0.49
3:L5:422:C:H2'	3:L5:423:G:C8	2.48	0.49
3:L5:444:G:H2'	3:L5:445:U:C6	2.48	0.49
3:L5:1504:G:H2'	3:L5:1505:C:C6	2.47	0.49
3:L5:2411:C:H2'	3:L5:2412:A:C8	2.47	0.49
3:L5:4113:U:H4'	3:L5:4115:G:C5	2.47	0.49
3:L5:4147:G:H2'	3:L5:4148:C:H6	1.76	0.49
5:L8:141:C:H2'	5:L8:142:U:C6	2.47	0.49
8:LC:209:ILE:HG12	8:LC:221:PHE:HE2	1.78	0.49
12:LG:187:LYS:HB2	12:LG:198:THR:HG23	1.95	0.49
23:LS:9:GLU:HB3	23:LS:33:PHE:CE2	2.48	0.49
23:LS:83:ARG:HG2	23:LS:127:MET:HE3	1.95	0.49
30:LZ:51:ARG:HB2	30:LZ:65:ARG:HB3	1.94	0.49
75:SO:75:MET:SD	75:SO:118:ALA:HB2	2.52	0.49
83:S2:509:OMG:H2'	83:S2:510:G:H8	1.77	0.49
3:L5:1273:G:C6	10:LE:73:TYR:HB2	2.48	0.49
19:LO:168:TYR:CE2	19:LO:172:LYS:HD2	2.48	0.49
51:SF:78:MET:HE3	51:SF:159:ARG:NH1	2.28	0.49
67:SC:166:ARG:HG2	67:SC:181:PRO:HG3	1.95	0.49
72:SJ:65:GLU:O	72:SJ:66:LYS:HG2	2.13	0.49
79:SY:34:THR:HG23	79:SY:69:THR:HG21	1.94	0.49
83:S2:323:C:H5'	83:S2:324:C:OP1	2.12	0.49
3:L5:433:A:C2	3:L5:3867:A2M:H4'	2.48	0.48
3:L5:1377:G:H4'	3:L5:1378:C:H3'	1.94	0.48
3:L5:1514:U:H2'	3:L5:1515:A:C8	2.48	0.48
3:L5:4775:C:H5	3:L5:4859:C:H42	1.61	0.48
10:LE:57:TYR:HB2	10:LE:62:MET:HE2	1.94	0.48
10:LE:165:LEU:HD11	10:LE:176:THR:HG22	1.95	0.48
12:LG:155:VAL:HG11	12:LG:170:LEU:HD21	1.95	0.48
12:LG:180:PRO:HG3	12:LG:219:VAL:HG13	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:LH:162:GLN:NE2	13:LH:181:VAL:H	2.10	0.48
26:LV:94:VAL:HG11	27:LW:20:ARG:HH21	1.78	0.48
60:SZ:99:LEU:HD11	60:SZ:102:LYS:HB2	1.95	0.48
70:SH:7:LYS:HD3	70:SH:10:LYS:HB3	1.94	0.48
83:S2:461:U:H2'	83:S2:462:OMC:C6	2.48	0.48
83:S2:1805:G:H2'	83:S2:1806:A:C8	2.48	0.48
3:L5:10:A:H2'	3:L5:11:G:H8	1.78	0.48
3:L5:419:A:H61	5:L8:15:G:H1'	1.78	0.48
3:L5:1730:U:H2'	3:L5:1731:C:C6	2.49	0.48
3:L5:3911:C:H2'	3:L5:3912:U:H6	1.78	0.48
25:LU:100:LEU:HD12	25:LU:112:LEU:HB3	1.95	0.48
30:LZ:100:VAL:HG23	30:LZ:106:LEU:HB3	1.95	0.48
51:SF:19:LEU:HD22	51:SF:109:LEU:HD21	1.96	0.48
57:SS:84:LEU:HG	57:SS:97:GLN:HB2	1.95	0.48
73:SL:17:PHE:CG	83:S2:222:U:H5''	2.47	0.48
83:S2:1304:U:H2'	83:S2:1305:C:C6	2.48	0.48
3:L5:1405:C:H2'	3:L5:1406:G:C8	2.49	0.48
3:L5:4277:G:H5''	24:LT:17:ARG:HG2	1.96	0.48
3:L5:4389:C:H2'	3:L5:4390:A:H8	1.79	0.48
6:LA:20:VAL:HG12	6:LA:23:ARG:HH11	1.78	0.48
7:LB:195:ASP:HA	7:LB:198:ARG:HG2	1.95	0.48
16:LL:125:ILE:HD11	38:Lh:122:LYS:HG3	1.95	0.48
20:LP:16:LYS:HG2	20:LP:149:ILE:HG12	1.95	0.48
24:LT:48:VAL:HG11	24:LT:94:GLU:HG3	1.95	0.48
49:Lt:77:ALA:HB3	49:Lt:80:LEU:HB2	1.93	0.48
50:SD:123:LEU:HD13	50:SD:136:VAL:HG22	1.95	0.48
62:Sd:14:PHE:HB2	83:S2:1661:A:C8	2.46	0.48
65:SA:80:ARG:HD3	65:SA:82:THR:HG23	1.94	0.48
83:S2:1393:G:H2'	83:S2:1394:G:C8	2.47	0.48
3:L5:1577:G:O2'	3:L5:1612:G:H4'	2.12	0.48
3:L5:1811:G:H2'	3:L5:1812:C:C6	2.48	0.48
3:L5:2633:U:H2'	3:L5:2634:C:H6	1.79	0.48
3:L5:2640:G:H2'	3:L5:2641:A:C8	2.48	0.48
3:L5:4601:U:H2'	3:L5:4602:A:C8	2.46	0.48
48:Ls:53:VAL:HG23	48:Ls:89:VAL:HB	1.94	0.48
55:SQ:138:ARG:HD3	83:S2:1646:C:H5''	1.94	0.48
57:SS:12:ILE:HG22	57:SS:21:ASP:HA	1.95	0.48
64:Sg:10:THR:HG22	64:Sg:308:ARG:HG2	1.95	0.48
73:SL:132:ARG:HE	83:S2:114:G:H5'	1.78	0.48
83:S2:349:A:H2'	83:S2:350:C:C6	2.48	0.48
83:S2:399:C:H5	83:S2:680:G:H5''	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:S2:1628:C:H2'	83:S2:1629:C:C6	2.49	0.48
3:L5:325:U:H2'	3:L5:326:C:C6	2.49	0.48
3:L5:1348:U:H2'	3:L5:1349:G:C8	2.43	0.48
3:L5:4951:G:H2'	3:L5:4952:G:H8	1.79	0.48
11:LF:166:ARG:HH12	11:LF:212:LYS:NZ	2.11	0.48
17:LM:7:VAL:HG21	17:LM:52:PHE:HE1	1.78	0.48
36:Lf:45:LYS:HD2	36:Lf:105:LEU:HA	1.95	0.48
59:SU:61:LEU:HD13	59:SU:84:ILE:HD13	1.95	0.48
65:SA:90:PHE:HD1	65:SA:179:ALA:HB2	1.79	0.48
83:S2:677:G:H21	83:S2:1028:A:N6	2.04	0.48
83:S2:1407:U:H2'	83:S2:1408:U:C6	2.49	0.48
3:L5:702:U:H2'	3:L5:703:G:O4'	2.13	0.48
3:L5:1876:U:H2'	3:L5:1877:G:H8	1.79	0.48
3:L5:3867:A2M:H2'	3:L5:3868:G:C8	2.48	0.48
3:L5:4253:A:H5'	3:L5:4254:G:C8	2.49	0.48
3:L5:4466:C:H2'	3:L5:4467:A:H8	1.77	0.48
5:L8:75:OMG:H8	5:L8:75:OMG:OP1	1.96	0.48
14:LI:36:LEU:HD22	14:LI:73:ASN:HD21	1.79	0.48
15:LJ:37:ALA:O	15:LJ:41:GLU:HG2	2.14	0.48
26:LV:36:ASN:HD21	26:LV:66:LYS:HB2	1.79	0.48
27:LW:78:PHE:HE2	27:LW:80:ARG:HB2	1.78	0.48
30:LZ:11:VAL:HG12	30:LZ:82:PRO:HA	1.95	0.48
46:Lp:10:ILE:H	46:Lp:27:LYS:HZ3	1.60	0.48
58:ST:18:LEU:HD13	58:ST:134:ILE:HD13	1.95	0.48
64:Sg:8:ARG:HB3	64:Sg:309:VAL:HG13	1.95	0.48
74:SN:90:HIS:HA	74:SN:93:LYS:HG2	1.96	0.48
83:S2:71:G:H2'	83:S2:72:C:H4'	1.94	0.48
83:S2:484:A2M:H8	83:S2:484:A2M:O5'	2.13	0.48
83:S2:786:G:H2'	83:S2:787:G:C8	2.49	0.48
3:L5:72:C:H5	16:LL:67:HIS:HD1	1.62	0.48
3:L5:713:C:H2'	3:L5:714:G:H8	1.79	0.48
3:L5:972:C:H2'	3:L5:973:G:H8	1.78	0.48
7:LB:92:TYR:HB2	7:LB:159:VAL:HG13	1.96	0.48
26:LV:39:ILE:HG12	26:LV:61:VAL:HG11	1.95	0.48
40:Lj:67:LEU:HA	40:Lj:70:VAL:HG12	1.94	0.48
46:Lp:26:VAL:HA	46:Lp:29:ILE:HG22	1.95	0.48
55:SQ:128:GLU:HG2	55:SQ:137:ALA:HB1	1.96	0.48
58:ST:23:LYS:HE3	58:ST:51:ASN:HB3	1.95	0.48
58:ST:63:HIS:CE1	58:ST:78:ILE:HG21	2.49	0.48
79:SY:89:HIS:CE1	79:SY:90:ARG:HG3	2.49	0.48
83:S2:1280:G:H2'	83:S2:1281:G:H8	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:153:G:H2'	3:L5:154:G:H8	1.79	0.48
3:L5:1086:C:H2'	3:L5:1087:A:H8	1.79	0.48
3:L5:1339:U:H2'	3:L5:1340:OMC:C6	2.49	0.48
3:L5:4642:U:H2'	3:L5:4643:G:C8	2.48	0.48
7:LB:26:ARG:HE	7:LB:181:MET:HE3	1.79	0.48
8:LC:268:ARG:NH1	8:LC:269:LYS:HE2	2.28	0.48
14:LI:70:ILE:O	14:LI:74:LYS:HG2	2.12	0.48
19:LO:33:VAL:HG13	19:LO:102:LEU:HD13	1.95	0.48
48:Ls:160:LEU:HD23	48:Ls:161:ILE:HB	1.96	0.48
50:SD:28:GLU:HA	52:SK:61:GLN:HG3	1.95	0.48
75:SO:102:GLY:H	75:SO:134:PRO:HB2	1.79	0.48
75:SO:149:ARG:HH12	83:S2:960:U:H5''	1.79	0.48
77:SW:86:LEU:HD11	77:SW:113:HIS:HB2	1.95	0.48
83:S2:374:G:H2'	83:S2:375:U:H6	1.79	0.48
3:L5:1315:C:H2'	3:L5:1316:OMG:H8	1.79	0.48
3:L5:1888:A:N7	3:L5:2049:G:H5'	2.29	0.48
3:L5:2018:C:H2'	3:L5:2019:C:H6	1.78	0.48
3:L5:2638:G:H22	3:L5:2719:C:P	2.36	0.48
3:L5:3842:C:H1'	26:LV:52:LEU:HD12	1.95	0.48
3:L5:3916:G:H2'	3:L5:3917:A:C8	2.49	0.48
4:L7:15:C:H2'	4:L7:16:A:C8	2.49	0.48
12:LG:94:GLN:HG3	12:LG:97:LYS:NZ	2.28	0.48
18:LN:114:ARG:HH11	18:LN:137:PRO:HG3	1.79	0.48
20:LP:95:LEU:HD23	20:LP:148:MET:HE1	1.96	0.48
22:LR:151:ARG:HH21	22:LR:155:LEU:HD12	1.79	0.48
32:Lb:61:ASN:O	32:Lb:65:MET:HG2	2.14	0.48
54:SP:130:ARG:HD3	54:SP:131:PRO:HD2	1.96	0.48
57:SS:129:LEU:HD13	83:S2:1521:C:H5'	1.95	0.48
68:SE:148:ARG:NH1	83:S2:123:G:H4'	2.28	0.48
69:SG:7:PHE:HD2	69:SG:10:THR:HG22	1.78	0.48
82:Se:38:TYR:O	82:Se:42:PHE:HB2	2.14	0.48
83:S2:35:C:H5''	83:S2:579:C:H5''	1.96	0.48
83:S2:835:C:H4'	83:S2:836:G:C8	2.48	0.48
83:S2:1643:U:H2'	83:S2:1644:C:C6	2.49	0.48
2:Pt:10:G:N2	2:Pt:26:G:H1'	2.29	0.48
3:L5:2045:G:O2'	3:L5:2046:G:H5''	2.14	0.48
3:L5:2696:A:H62	41:Lk:35:LYS:NZ	2.12	0.48
3:L5:3924:C:H2'	3:L5:3925:OMU:H6	1.96	0.48
3:L5:4319:C:H2'	3:L5:4320:G:C8	2.49	0.48
3:L5:4594:U:H2'	3:L5:4595:G:C8	2.49	0.48
12:LG:232:GLU:HB2	12:LG:235:ARG:HE	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:LI:48:LEU:HB2	14:LI:142:LEU:HA	1.96	0.48
43:Lm:110:CYS:HB3	43:Lm:115:CYS:SG	2.53	0.48
51:SF:17:ILE:HG13	51:SF:46:ALA:HB3	1.95	0.48
56:SR:109:LEU:HD13	65:SA:52:LYS:HE2	1.96	0.48
3:L5:1725:U:H2'	3:L5:1726:U:C6	2.49	0.47
3:L5:4504:C:H2'	3:L5:4505:C:C6	2.49	0.47
3:L5:4591:U:H2'	3:L5:4592:C:C6	2.49	0.47
3:L5:4688:C:H2'	3:L5:4689:PSU:C6	2.49	0.47
4:L7:23:A:H2'	4:L7:24:C:C6	2.49	0.47
10:LE:261:ILE:HG23	10:LE:267:LEU:HD22	1.95	0.47
13:LH:51:LYS:HG3	13:LH:52:LYS:H	1.79	0.47
18:LN:42:PRO:HG3	18:LN:53:TYR:CE2	2.48	0.47
52:SK:64:TRP:CZ3	62:Sd:23:VAL:HG22	2.49	0.47
56:SR:95:ILE:HB	56:SR:118:GLN:HE22	1.79	0.47
57:SS:44:VAL:HG21	57:SS:71:MET:HE1	1.95	0.47
62:Sd:3:HIS:CE1	62:Sd:5:GLN:HB2	2.49	0.47
66:SB:103:MET:HB3	66:SB:215:VAL:HG12	1.96	0.47
66:SB:137:LEU:HD11	66:SB:176:VAL:HG21	1.96	0.47
71:SI:27:TYR:HB3	71:SI:49:ARG:HH22	1.78	0.47
73:SL:101:ARG:HB2	78:SX:10:ALA:HB2	1.95	0.47
83:S2:696:G:H8	83:S2:733:C:H41	1.62	0.47
83:S2:1359:U:H2'	83:S2:1360:U:H6	1.78	0.47
83:S2:1417:C:O2	83:S2:1422:G:C6	2.67	0.47
3:L5:138:G:H2'	3:L5:139:G:C8	2.47	0.47
3:L5:690:C:H2'	3:L5:691:C:C6	2.49	0.47
3:L5:1091:C:H2'	3:L5:1092:G:C8	2.49	0.47
8:LC:28:PHE:HA	8:LC:129:ALA:HA	1.96	0.47
15:LJ:22:LEU:HD11	15:LJ:128:LEU:HB2	1.96	0.47
19:LO:186:GLU:HA	19:LO:189:ILE:HB	1.96	0.47
57:SS:89:ASP:HB3	57:SS:93:GLY:H	1.79	0.47
69:SG:227:GLN:HB3	69:SG:231:ARG:HH21	1.78	0.47
75:SO:44:VAL:HG23	75:SO:93:LEU:HD11	1.96	0.47
83:S2:375:U:H2'	83:S2:376:A:H8	1.79	0.47
83:S2:1396:A:N7	83:S2:1449:G:O6	2.46	0.47
83:S2:1547:C:H1'	83:S2:1670:C:H4'	1.97	0.47
83:S2:1610:G:H2'	83:S2:1611:G:H8	1.79	0.47
83:S2:1651:A:H2'	83:S2:1652:G:H8	1.78	0.47
3:L5:425:U:H2'	3:L5:426:A:C8	2.49	0.47
3:L5:1084:C:H2'	3:L5:1085:C:H6	1.79	0.47
3:L5:1309:C:H2'	3:L5:1310:C:C6	2.49	0.47
3:L5:1788:A:H2'	14:LI:22:PHE:CZ	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:1846:G:H2'	3:L5:1847:C:C6	2.50	0.47
3:L5:2401:A2M:HM'3	3:L5:2401:A2M:H1'	1.74	0.47
71:SI:72:CYS:HG	71:SI:112:TRP:CG	2.32	0.47
73:SL:93:LEU:HD11	78:SX:8:ARG:HE	1.79	0.47
78:SX:137:LYS:HE2	83:S2:30:C:O3'	2.15	0.47
83:S2:51:U:H2'	83:S2:52:G:H8	1.79	0.47
83:S2:1098:C:H2'	83:S2:1099:G:C8	2.48	0.47
83:S2:1204:A:H2'	83:S2:1205:C:C6	2.49	0.47
83:S2:1276:A:C5	83:S2:1322:G:H1'	2.49	0.47
83:S2:1329:U:O2	83:S2:1500:G:O6	2.31	0.47
83:S2:1588:A:H2'	83:S2:1589:A:C8	2.49	0.47
3:L5:265:C:H1'	3:L5:266:C:H5''	1.94	0.47
3:L5:1878:G:H2'	3:L5:1879:C:C6	2.49	0.47
5:L8:148:A:H2'	5:L8:149:G:C8	2.50	0.47
27:LW:78:PHE:CE2	27:LW:80:ARG:HB2	2.49	0.47
71:SI:49:ARG:HD3	71:SI:50:GLY:N	2.29	0.47
73:SL:111:VAL:HG12	73:SL:140:PHE:HB2	1.95	0.47
77:SW:28:ARG:NH2	83:S2:921:G:H3'	2.30	0.47
3:L5:2374:A:H2'	3:L5:2375:A:H8	1.80	0.47
3:L5:4066:U:H2'	3:L5:4067:U:H6	1.79	0.47
5:L8:55:PSU:H2'	5:L8:56:G:H8	1.79	0.47
5:L8:78:G:H2'	5:L8:79:G:C8	2.49	0.47
8:LC:298:ILE:HD13	21:LQ:131:PRO:HG3	1.97	0.47
16:LL:9:VAL:HG13	21:LQ:168:ARG:HH12	1.80	0.47
22:LR:112:SER:O	22:LR:113:LYS:HG3	2.15	0.47
28:LX:96:LEU:HB2	28:LX:138:VAL:HG13	1.96	0.47
31:La:103:VAL:HG22	31:La:125:LYS:O	2.15	0.47
38:Lh:4:ILE:HD12	38:Lh:9:LEU:HD11	1.95	0.47
54:SP:49:LEU:HD13	54:SP:53:GLN:HG3	1.95	0.47
59:SU:40:ILE:HG22	59:SU:44:LYS:NZ	2.30	0.47
59:SU:56:MET:HE3	59:SU:88:LEU:HB2	1.96	0.47
60:SZ:106:GLN:HA	60:SZ:106:GLN:NE2	2.29	0.47
67:SC:64:THR:HG22	67:SC:66:LEU:N	2.28	0.47
70:SH:47:ALA:HB3	70:SH:63:PHE:HD2	1.79	0.47
72:SJ:86:VAL:HG11	72:SJ:105:PHE:HD1	1.78	0.47
78:SX:49:GLY:HA2	78:SX:75:ILE:HG23	1.96	0.47
79:SY:21:LYS:HE2	79:SY:75:ILE:HD11	1.97	0.47
83:S2:941:C:H2'	83:S2:942:G:H8	1.79	0.47
2:Pt:27:U:H2'	2:Pt:28:U:C6	2.50	0.47
3:L5:2079:G:H2'	3:L5:2080:U:H6	1.80	0.47
8:LC:33:ARG:HG3	8:LC:35:ASP:OD1	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:LE:223:ARG:HH22	10:LE:238:GLU:HG3	1.80	0.47
26:LV:90:ARG:HH22	26:LV:96:LEU:HD13	1.79	0.47
27:LW:52:THR:O	27:LW:56:ARG:HG2	2.14	0.47
32:Lb:43:MET:HE3	32:Lb:47:LYS:HG3	1.96	0.47
53:SM:68:LEU:HD11	63:Sf:106:TYR:HE2	1.79	0.47
55:SQ:58:LEU:HB3	55:SQ:62:ARG:HD2	1.97	0.47
59:SU:55:ARG:HD2	83:S2:1446:A:N3	2.29	0.47
75:SO:101:GLY:HA3	75:SO:134:PRO:HD2	1.96	0.47
83:S2:146:G:H2'	83:S2:147:A:H8	1.80	0.47
83:S2:467:G:H2'	83:S2:468:A2M:H8	1.97	0.47
83:S2:1383:A2M:HM'3	83:S2:1383:A2M:H1'	1.69	0.47
83:S2:1829:G:H1'	83:S2:1850:MA6:C2	2.43	0.47
1:CI:62:VAL:HG21	25:LU:115:PHE:CD2	2.49	0.47
3:L5:1079:C:H2'	3:L5:1080:C:C6	2.50	0.47
3:L5:1471:U:H2'	3:L5:1472:C:C6	2.49	0.47
3:L5:1511:U:H2'	3:L5:1512:G:C8	2.49	0.47
3:L5:1631:A:C8	6:LA:199:VAL:HG11	2.50	0.47
3:L5:1875:C:H2'	3:L5:1876:U:C6	2.50	0.47
3:L5:4611:A:H2'	3:L5:4612:C:H6	1.78	0.47
3:L5:4758:U:H5''	19:LO:116:LYS:HG2	1.95	0.47
3:L5:4775:C:H41	3:L5:4859:C:N4	2.13	0.47
3:L5:4967:A:H2'	3:L5:4968:A:H8	1.80	0.47
7:LB:103:LYS:HB3	7:LB:153:MET:HE2	1.96	0.47
14:LI:7:ARG:HA	14:LI:10:ARG:HG3	1.97	0.47
35:Le:22:ARG:NH2	35:Le:31:ILE:HG23	2.30	0.47
46:Lp:77:VAL:HG13	46:Lp:80:LYS:HZ3	1.79	0.47
51:SF:141:VAL:HG12	61:Sc:47:LYS:HG2	1.96	0.47
58:ST:23:LYS:HG2	58:ST:54:TYR:HD2	1.79	0.47
65:SA:76:VAL:HG12	65:SA:123:VAL:HB	1.96	0.47
65:SA:209:GLU:HA	65:SA:212:LYS:HG2	1.97	0.47
66:SB:67:PHE:CE1	75:SO:48:SER:HB3	2.50	0.47
66:SB:150:ILE:HG12	83:S2:1124:C:H5''	1.97	0.47
67:SC:259:THR:HG23	76:SV:16:LYS:HZ3	1.80	0.47
67:SC:261:PHE:HD2	76:SV:52:THR:HG23	1.80	0.47
72:SJ:28:GLU:O	72:SJ:32:ILE:HG12	2.15	0.47
73:SL:28:THR:HA	73:SL:29:GLY:HA2	1.61	0.47
77:SW:28:ARG:HB3	77:SW:29:PRO:HD3	1.96	0.47
83:S2:24:C:O2'	83:S2:25:A:H8	1.98	0.47
83:S2:329:G:H2'	83:S2:330:G:C8	2.50	0.47
83:S2:511:U:H2'	83:S2:512:A:C8	2.49	0.47
83:S2:929:G:H21	83:S2:1104:G:H4'	1.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:S2:1405:A:H2'	83:S2:1406:G:O4'	2.15	0.47
83:S2:1775:U:H2'	83:S2:1776:G:C2	2.50	0.47
3:L5:687:U:N3	10:LE:95:PRO:HG2	2.30	0.47
3:L5:714:G:H2'	3:L5:715:G:H8	1.79	0.47
3:L5:1179:U:H3'	3:L5:1180:C:H5''	1.97	0.47
3:L5:1339:U:H2'	3:L5:1340:OMC:H6	1.80	0.47
3:L5:1471:U:H2'	3:L5:1472:C:H6	1.79	0.47
3:L5:2671:C:H2'	3:L5:2672:C:C6	2.49	0.47
3:L5:2824:OMC:H1'	3:L5:2824:OMC:HM23	1.61	0.47
3:L5:4066:U:H2'	3:L5:4067:U:C6	2.50	0.47
3:L5:4627:U:H4'	7:LB:373:LYS:HE2	1.95	0.47
9:LD:287:PHE:HZ	14:LI:214:SER:HB3	1.79	0.47
10:LE:274:VAL:HG21	36:Lf:2:SER:HB2	1.97	0.47
12:LG:189:ARG:HG2	12:LG:192:ARG:HH22	1.80	0.47
16:LL:87:HIS:HB3	16:LL:90:VAL:HG22	1.97	0.47
35:Le:38:PRO:HB3	35:Le:43:ASN:ND2	2.29	0.47
48:Ls:16:LYS:HZ3	48:Ls:54:LEU:HD11	1.79	0.47
65:SA:66:VAL:HG11	65:SA:185:MET:HG3	1.96	0.47
66:SB:33:VAL:HG23	66:SB:44:ILE:HB	1.97	0.47
67:SC:166:ARG:H	67:SC:247:THR:HG21	1.79	0.47
67:SC:167:ARG:HB3	67:SC:177:PRO:HB2	1.97	0.47
71:SI:139:LYS:HE3	71:SI:149:TYR:CZ	2.50	0.47
83:S2:96:C:H2'	83:S2:97:U:C6	2.49	0.47
83:S2:141:A:H4'	83:S2:142:C:H3'	1.97	0.47
3:L5:35:U:H4'	3:L5:1525:A:C2	2.50	0.47
3:L5:1900:C:H4'	35:Le:60:TYR:CE1	2.50	0.47
3:L5:4070:U:H2'	3:L5:4071:U:C6	2.50	0.47
3:L5:4281:A:H2'	3:L5:4282:A:H2'	1.96	0.47
3:L5:5010:PSU:H2'	3:L5:5011:A:C8	2.50	0.47
13:LH:64:ARG:HA	13:LH:67:LEU:HB2	1.97	0.47
23:LS:8:ARG:HB2	23:LS:10:TYR:CE1	2.49	0.47
55:SQ:48:GLN:HG2	55:SQ:52:LEU:HD13	1.97	0.47
79:SY:9:THR:H	83:S2:837:A:N6	2.13	0.47
83:S2:941:C:H2'	83:S2:942:G:C8	2.50	0.47
83:S2:1420:G:H21	83:S2:1421:A:H1'	1.80	0.47
83:S2:1468:C:H2'	83:S2:1469:A:H8	1.80	0.47
83:S2:1491:G:H2'	83:S2:1492:U:C6	2.49	0.47
3:L5:434:A:H3'	3:L5:435:A:H8	1.80	0.47
3:L5:1705:G:H2'	3:L5:1706:A:O4'	2.15	0.47
3:L5:1824:G:H2'	3:L5:1825:A:C8	2.50	0.47
3:L5:3873:G:H2'	3:L5:3874:G:C8	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:4079:C:H2'	3:L5:4080:C:H6	1.80	0.47
3:L5:4237:C:H2'	3:L5:4238:G:H8	1.80	0.47
3:L5:4421:C:N4	3:L5:4475:G:H22	2.12	0.47
3:L5:4913:G:H4'	3:L5:4914:C:O5'	2.15	0.47
39:Li:76:ARG:HD3	39:Li:76:ARG:HA	1.72	0.47
46:Lp:41:PHE:CD2	46:Lp:62:LYS:HG2	2.49	0.47
58:ST:39:LEU:HD21	58:ST:52:TRP:CZ3	2.49	0.47
58:ST:47:PRO:HA	83:S2:1539:U:H4'	1.96	0.47
63:Sf:103:LEU:HB2	63:Sf:105:TYR:CE2	2.49	0.47
68:SE:36:HIS:CG	68:SE:85:GLY:HA3	2.49	0.47
68:SE:77:ARG:NH1	83:S2:121:OMU:H5'	2.30	0.47
69:SG:3:LEU:HD13	69:SG:109:LEU:HB3	1.97	0.47
83:S2:1116:C:H2'	83:S2:1117:C:C6	2.50	0.47
3:L5:436:C:H2'	3:L5:437:G:H8	1.80	0.46
3:L5:1511:U:H2'	3:L5:1512:G:H8	1.79	0.46
3:L5:4523:A2M:H2'	3:L5:4559:A:N7	2.30	0.46
5:L8:6:C:H2'	5:L8:7:U:C6	2.50	0.46
10:LE:72:LYS:HD3	32:Lb:119:CYS:HB3	1.97	0.46
29:LY:37:GLU:HA	29:LY:40:GLN:CD	2.40	0.46
33:Lc:48:LEU:HD11	33:Lc:60:ILE:HG21	1.96	0.46
48:Ls:120:GLU:HB2	48:Ls:163:THR:HG22	1.96	0.46
49:Lt:57:ARG:HD3	49:Lt:80:LEU:HG	1.96	0.46
56:SR:132:ARG:HE	66:SB:151:ARG:HA	1.79	0.46
66:SB:114:VAL:HG11	83:S2:987:A:H2'	1.96	0.46
68:SE:136:ILE:HD12	68:SE:149:TYR:HE1	1.79	0.46
82:Se:56:ASN:HB3	83:S2:606:G:H5''	1.96	0.46
83:S2:795:A:H2'	83:S2:796:G:H8	1.78	0.46
83:S2:1093:A:H2'	83:S2:1094:C:H6	1.79	0.46
83:S2:1610:G:H2'	83:S2:1611:G:C8	2.50	0.46
3:L5:509:A:C4	31:La:82:VAL:HG12	2.50	0.46
3:L5:3785:A2M:HM'1	3:L5:4537:C:H1'	1.98	0.46
3:L5:3883:U:H2'	3:L5:3884:PSU:C6	2.49	0.46
3:L5:4723:A:H2'	3:L5:4724:A:H8	1.80	0.46
3:L5:4935:C:H2'	3:L5:4936:G:C8	2.49	0.46
4:L7:4:U:H2'	4:L7:5:A:C8	2.49	0.46
5:L8:119:C:H2'	5:L8:120:G:C8	2.50	0.46
8:LC:140:LYS:HD3	8:LC:245:HIS:HB2	1.97	0.46
9:LD:209:ARG:HA	9:LD:212:MET:HE3	1.97	0.46
20:LP:40:HIS:CG	20:LP:42:ARG:HH11	2.33	0.46
51:SF:102:LEU:O	60:SZ:66:LYS:HD3	2.16	0.46
55:SQ:17:LYS:H	55:SQ:126:ARG:NH2	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:SR:126:MET:HB3	65:SA:43:SER:HB2	1.97	0.46
68:SE:193:GLY:HA2	68:SE:212:ASP:HA	1.97	0.46
71:SI:65:PHE:HE1	71:SI:78:ILE:HD11	1.80	0.46
83:S2:1382:A:H2'	83:S2:1383:A2M:H8	1.97	0.46
3:L5:1468:C:H2'	3:L5:1469:C:C6	2.50	0.46
3:L5:3684:G:H2'	3:L5:3685:C:C6	2.51	0.46
3:L5:4239:A:H2'	3:L5:4240:G:C8	2.50	0.46
3:L5:4906:C:H2'	3:L5:4907:G:H8	1.80	0.46
3:L5:4954:G:H2'	3:L5:4955:A:C8	2.50	0.46
9:LD:204:VAL:O	9:LD:208:MET:HG2	2.15	0.46
11:LF:52:GLU:HG3	32:Lb:93:LEU:HD13	1.96	0.46
17:LM:6:PHE:H	17:LM:11:ARG:NH2	2.14	0.46
18:LN:13:LYS:NZ	39:Li:45:ARG:HA	2.29	0.46
46:Lp:9:GLY:HA3	46:Lp:27:LYS:NZ	2.30	0.46
65:SA:125:THR:HA	65:SA:147:LEU:HD12	1.98	0.46
66:SB:35:ALA:HB1	66:SB:39:PHE:HD2	1.80	0.46
83:S2:455:A:H2'	83:S2:456:C:H6	1.80	0.46
83:S2:931:C:H2'	83:S2:932:G:C8	2.51	0.46
83:S2:991:G:N1	83:S2:1134:G:H4'	2.30	0.46
3:L5:1195:G:H2'	3:L5:1196:G:H8	1.81	0.46
3:L5:3923:A:H2'	3:L5:3924:C:C6	2.51	0.46
3:L5:3925:OMU:HM23	3:L5:3925:OMU:H1'	1.65	0.46
3:L5:4079:C:H2'	3:L5:4080:C:C6	2.51	0.46
3:L5:4236:G:H2'	3:L5:4237:C:C6	2.50	0.46
3:L5:4590:A2M:HM'3	3:L5:4590:A2M:H1'	1.51	0.46
36:Lf:46:ARG:HD3	36:Lf:72:GLY:O	2.15	0.46
48:Ls:134:LYS:HD2	48:Ls:137:PHE:HE2	1.80	0.46
51:SF:127:ARG:HG2	51:SF:136:ARG:HB2	1.97	0.46
67:SC:264:SER:H	67:SC:267:GLN:HE21	1.64	0.46
73:SL:66:VAL:HA	73:SL:132:ARG:HH12	1.80	0.46
83:S2:409:C:H2'	83:S2:410:G:H8	1.81	0.46
83:S2:880:G:H3'	83:S2:881:G:H8	1.78	0.46
83:S2:900:C:H5'	83:S2:901:G:N7	2.30	0.46
3:L5:1411:C:H2'	3:L5:1412:G:C8	2.51	0.46
3:L5:1884:C:H4'	3:L5:2070:U:C4	2.49	0.46
3:L5:2610:G:H2'	3:L5:2611:A:H8	1.79	0.46
3:L5:4232:U:H1'	3:L5:4233:A:C2	2.51	0.46
3:L5:4448:G:H5''	3:L5:4449:A:H5'	1.97	0.46
9:LD:7:VAL:HG13	9:LD:8:LYS:HG3	1.97	0.46
9:LD:166:ALA:HB1	9:LD:171:LEU:HD12	1.98	0.46
10:LE:223:ARG:HA	10:LE:224:LYS:HA	1.69	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:LG:108:GLN:O	12:LG:111:LYS:HG2	2.16	0.46
16:LL:188:ASN:HA	16:LL:195:ARG:HH21	1.80	0.46
31:La:148:ALA:HB3	39:Li:6:PRO:HB2	1.97	0.46
33:Lc:18:LEU:HG	33:Lc:22:MET:HE1	1.97	0.46
35:Le:22:ARG:HD3	35:Le:34:ASN:O	2.15	0.46
45:Lo:74:GLU:HG3	45:Lo:76:ASN:H	1.80	0.46
58:ST:74:SER:O	58:ST:78:ILE:HD12	2.15	0.46
65:SA:148:CYS:HB3	65:SA:152:SER:HB2	1.96	0.46
72:SJ:121:LYS:HD3	83:S2:527:C:H4'	1.97	0.46
83:S2:348:A:H2'	83:S2:349:A:C8	2.50	0.46
3:L5:20:U:H3'	3:L5:21:G:C8	2.50	0.46
3:L5:23:C:H2'	3:L5:24:G:O4'	2.16	0.46
3:L5:189:G:H2'	3:L5:190:G:C8	2.51	0.46
3:L5:676:C:H2'	3:L5:677:G:C8	2.50	0.46
3:L5:689:U:H2'	3:L5:690:C:C6	2.51	0.46
3:L5:4523:A2M:H1'	3:L5:4558:U:C4	2.51	0.46
9:LD:49:TYR:HB3	9:LD:64:ILE:HD11	1.97	0.46
14:LI:162:ARG:NE	14:LI:162:ARG:HA	2.30	0.46
65:SA:5:LEU:HD11	76:SV:41:LYS:HD3	1.98	0.46
65:SA:107:THR:HG22	65:SA:117:ARG:HG2	1.98	0.46
66:SB:134:LEU:HG	66:SB:218:LEU:HD12	1.97	0.46
83:S2:1396:A:C5	83:S2:1449:G:O6	2.68	0.46
3:L5:1084:C:H2'	3:L5:1085:C:C6	2.50	0.46
3:L5:1654:G:C6	3:L5:3914:U:H5''	2.51	0.46
3:L5:4952:G:H2'	3:L5:4953:G:C8	2.51	0.46
8:LC:142:HIS:CE1	8:LC:248:ARG:HD2	2.51	0.46
23:LS:98:ARG:HG3	23:LS:142:VAL:HG23	1.97	0.46
33:Lc:62:TYR:HE2	37:Lg:99:GLU:HG3	1.80	0.46
64:Sg:215:GLN:HE22	64:Sg:217:MET:HG2	1.81	0.46
69:SG:50:VAL:HG23	69:SG:113:ILE:HG13	1.98	0.46
83:S2:314:U:H2'	83:S2:315:C:C6	2.50	0.46
83:S2:1337:4AC:O5'	83:S2:1337:4AC:H6	2.15	0.46
3:L5:221:C:H2'	3:L5:222:C:C6	2.50	0.46
3:L5:676:C:H2'	3:L5:677:G:H8	1.80	0.46
3:L5:1449:C:H2'	3:L5:1450:C:C6	2.51	0.46
3:L5:1700:G:H2'	3:L5:1704:C:H42	1.81	0.46
9:LD:279:ARG:HG2	9:LD:283:LYS:HE2	1.98	0.46
38:Lh:23:ASP:O	38:Lh:26:VAL:HG22	2.16	0.46
54:SP:28:MET:HG3	54:SP:33:LEU:HB2	1.96	0.46
64:Sg:21:ILE:HD11	64:Sg:307:VAL:HG21	1.98	0.46
68:SE:87:MET:HE1	68:SE:123:LEU:O	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:S2:293:C:O2'	83:S2:294:U:H3'	2.16	0.46
83:S2:354:OMU:HM23	83:S2:354:OMU:H1'	1.79	0.46
83:S2:543:C:H3'	83:S2:544:G:H8	1.79	0.46
3:L5:32:G:H21	3:L5:50:C:H5	1.64	0.46
3:L5:126:C:H2'	3:L5:127:G:H8	1.81	0.46
3:L5:474:C:H2'	3:L5:475:G:H8	1.81	0.46
3:L5:1199:G:H2'	3:L5:1200:G:C8	2.51	0.46
3:L5:1779:U:H2'	3:L5:1780:A:H8	1.80	0.46
3:L5:1845:U:H2'	3:L5:1846:G:H8	1.81	0.46
3:L5:2369:U:H1'	34:Ld:39:LYS:NZ	2.30	0.46
3:L5:4173:G:H2'	3:L5:4174:U:C6	2.51	0.46
3:L5:5018:C:H2'	3:L5:5019:A:C8	2.50	0.46
7:LB:250:LYS:HE2	7:LB:250:LYS:HB2	1.81	0.46
11:LF:105:VAL:HG13	11:LF:136:VAL:HG12	1.96	0.46
29:LY:103:LYS:HA	29:LY:103:LYS:HD3	1.81	0.46
31:La:89:ASN:HA	31:La:92:LYS:HG2	1.98	0.46
64:Sg:24:THR:HA	64:Sg:71:ILE:HD13	1.98	0.46
66:SB:169:MET:HE2	66:SB:169:MET:HA	1.98	0.46
77:SW:25:VAL:HG12	77:SW:63:VAL:HB	1.97	0.46
83:S2:693:A:H2'	83:S2:694:G:N7	2.31	0.46
83:S2:890:U:H3	83:S2:895:G:H22	1.62	0.46
2:Pt:22:U:H2'	2:Pt:23:C:C6	2.51	0.46
2:Pt:65:G:H2'	2:Pt:66:C:C6	2.51	0.46
3:L5:86:U:H2'	3:L5:87:A:C8	2.51	0.46
3:L5:710:G:H2'	3:L5:711:A:H8	1.81	0.46
3:L5:1598:C:H2'	3:L5:1599:A:H8	1.80	0.46
3:L5:2081:C:H2'	3:L5:2082:G:H8	1.81	0.46
3:L5:4549:G:H2'	3:L5:4550:G:H8	1.81	0.46
10:LE:132:PRO:HG2	10:LE:135:GLN:OE1	2.16	0.46
11:LF:159:TYR:HD1	11:LF:168:ALA:HA	1.80	0.46
19:LO:171:LYS:HA	19:LO:171:LYS:HD3	1.63	0.46
29:LY:85:VAL:HG22	29:LY:97:VAL:HB	1.98	0.46
37:Lg:61:PRO:HA	37:Lg:64:LEU:HD23	1.98	0.46
40:Lj:42:LYS:HA	40:Lj:42:LYS:HD3	1.78	0.46
49:Lt:16:ARG:HD3	49:Lt:18:THR:HG22	1.97	0.46
53:SM:23:LYS:O	53:SM:27:ILE:HG12	2.16	0.46
54:SP:108:LYS:HG3	54:SP:110:GLU:H	1.80	0.46
55:SQ:17:LYS:H	55:SQ:126:ARG:CZ	2.29	0.46
69:SG:88:ARG:HH12	83:S2:452:G:H4'	1.80	0.46
70:SH:33:ASN:ND2	70:SH:36:LEU:HB3	2.30	0.46
78:SX:68:LYS:HG2	78:SX:91:LEU:HD13	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:SY:9:THR:HA	79:SY:25:ILE:HG22	1.98	0.46
83:S2:205:G:H2'	83:S2:206:G:H8	1.81	0.46
83:S2:1324:G:O6	83:S2:1504:U:O4	2.34	0.46
3:L5:227:A:H4'	29:LY:1:MET:HE2	1.98	0.45
3:L5:490:C:H2'	3:L5:491:G:H8	1.79	0.45
3:L5:1317:U:H2'	3:L5:1318:C:C6	2.52	0.45
3:L5:1326:A2M:H2'	3:L5:1327:C:C6	2.51	0.45
3:L5:2340:C:H4'	8:LC:42:THR:HG23	1.98	0.45
3:L5:2876:OMG:HM22	3:L5:2877:G:H5'	1.97	0.45
3:L5:3718:A2M:H2	3:L5:3934:G:O4'	2.16	0.45
3:L5:3844:PSU:H2'	3:L5:3845:A:H8	1.81	0.45
4:L7:112:U:H2'	4:L7:113:G:H8	1.81	0.45
5:L8:153:C:H2'	5:L8:154:G:C8	2.52	0.45
11:LF:220:MET:HB3	11:LF:232:ASP:OD2	2.16	0.45
51:SF:60:ARG:HE	83:S2:1679:A:P	2.40	0.45
83:S2:534:G:H2'	83:S2:535:G:H8	1.81	0.45
83:S2:1183:A:H2'	83:S2:1184:G:H8	1.81	0.45
3:L5:667:A:H5'	47:Lr:46:ARG:NH2	2.31	0.45
3:L5:713:C:H2'	3:L5:714:G:C8	2.51	0.45
3:L5:956:A:H1'	3:L5:2076:G:H5''	1.98	0.45
3:L5:1394:G:H4'	16:LL:186:ARG:HH22	1.80	0.45
3:L5:1505:C:H2'	3:L5:1506:G:C8	2.52	0.45
3:L5:2476:G:H2'	3:L5:2477:A:C8	2.51	0.45
3:L5:2730:U:H2'	3:L5:2731:C:C6	2.51	0.45
10:LE:201:ILE:HG13	10:LE:203:ILE:HG23	1.97	0.45
17:LM:120:ASN:HA	17:LM:123:ILE:HG22	1.99	0.45
32:Lb:43:MET:HG3	32:Lb:47:LYS:NZ	2.31	0.45
37:Lg:54:ARG:HD3	37:Lg:54:ARG:H	1.80	0.45
40:Lj:19:CYS:SG	40:Lj:34:CYS:HB2	2.55	0.45
55:SQ:100:VAL:HG22	55:SQ:101:ASP:H	1.80	0.45
79:SY:39:GLU:HA	79:SY:42:GLU:CD	2.41	0.45
83:S2:113:G:H22	83:S2:292:A:H2'	1.81	0.45
83:S2:348:A:H2'	83:S2:349:A:H8	1.80	0.45
83:S2:1777:G:H2'	83:S2:1778:C:C6	2.51	0.45
2:Pt:5:C:H2'	2:Pt:6:C:C6	2.51	0.45
3:L5:3727:A:H2'	3:L5:3728:A:C8	2.51	0.45
3:L5:4346:U:H2'	3:L5:4347:G:C8	2.51	0.45
3:L5:4761:G:H2'	3:L5:4762:A:H8	1.81	0.45
7:LB:144:LYS:HZ3	7:LB:148:LYS:HE2	1.81	0.45
16:LL:111:GLN:HA	16:LL:114:VAL:HG22	1.98	0.45
17:LM:13:ALA:HB1	17:LM:55:MET:HB2	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:LN:43:THR:HG21	18:LN:121:VAL:HG21	1.97	0.45
28:LX:83:THR:HG23	28:LX:86:ALA:H	1.82	0.45
59:SU:64:THR:HG22	59:SU:77:TRP:HE3	1.81	0.45
70:SH:111:LYS:HE3	83:S2:796:G:H21	1.81	0.45
83:S2:656:G:N2	83:S2:663:C:H5''	2.31	0.45
83:S2:1090:C:H2'	83:S2:1091:C:C6	2.52	0.45
3:L5:1692:C:H5''	21:LQ:53:MET:HE1	1.98	0.45
3:L5:1971:C:H2'	3:L5:1972:G:C8	2.52	0.45
3:L5:2844:A:O2'	3:L5:4631:G:H4'	2.16	0.45
3:L5:2846:G:H2'	3:L5:2847:G:H8	1.82	0.45
3:L5:3841:OMC:HM23	3:L5:3841:OMC:H1'	1.79	0.45
3:L5:4159:C:H2'	3:L5:4160:C:C6	2.52	0.45
3:L5:4237:C:H2'	3:L5:4238:G:C8	2.51	0.45
11:LF:179:LEU:HB3	11:LF:184:ILE:HB	1.98	0.45
15:LJ:42:GLN:HG3	15:LJ:117:ILE:HD12	1.98	0.45
35:Le:35:TRP:CZ2	35:Le:56:PRO:HD2	2.52	0.45
44:Ln:14:LYS:HA	44:Ln:17:ARG:HG2	1.98	0.45
56:SR:90:ALA:HB3	65:SA:203:PHE:HE2	1.82	0.45
58:ST:121:ARG:HH21	83:S2:1563:G:H5''	1.81	0.45
60:SZ:58:LEU:HD12	60:SZ:62:VAL:HG21	1.97	0.45
64:Sg:191:HIS:CG	64:Sg:195:LEU:HD21	2.52	0.45
82:Se:11:LYS:O	82:Se:15:GLN:HG3	2.16	0.45
83:S2:544:G:H2'	83:S2:545:A:C8	2.51	0.45
2:Pt:23:C:H2'	2:Pt:24:A:C8	2.51	0.45
3:L5:495:C:H2'	3:L5:496:G:C8	2.52	0.45
3:L5:962:C:H2'	3:L5:1702:C:H41	1.82	0.45
3:L5:1258:G:H2'	3:L5:1259:G:C8	2.52	0.45
3:L5:1725:U:O2	11:LF:132:MET:HE1	2.16	0.45
3:L5:1943:A:H5''	14:LI:162:ARG:NH1	2.32	0.45
3:L5:2888:G:H5''	22:LR:80:LYS:NZ	2.31	0.45
3:L5:4467:A:H61	3:L5:4490:C:H42	1.62	0.45
3:L5:4623:OMG:HM23	3:L5:4623:OMG:H1'	1.66	0.45
3:L5:4704:C:H4'	13:LH:129:ARG:HH22	1.80	0.45
85:L5:5263:SPM:H111	85:L5:5263:SPM:H82	1.68	0.45
10:LE:68:MET:HE2	10:LE:71:ARG:HD3	1.98	0.45
23:LS:139:ARG:HB2	23:LS:142:VAL:HG12	1.97	0.45
33:Lc:23:LYS:HE3	33:Lc:23:LYS:HB3	1.83	0.45
35:Le:42:ASP:HA	35:Le:47:ARG:HH12	1.81	0.45
64:Sg:256:ILE:HB	64:Sg:270:LEU:HB2	1.98	0.45
68:SE:60:GLU:O	68:SE:64:ILE:HG13	2.15	0.45
68:SE:95:THR:HG22	79:SY:16:ARG:HB2	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:SY:108:LYS:HZ2	83:S2:54:A:H5'	1.81	0.45
83:S2:1351:G:N1	83:S2:1360:U:N3	2.43	0.45
2:Pt:3:C:H42	2:Pt:70:A:N6	2.12	0.45
2:Pt:35:A:H2'	2:Pt:36:C:H6	1.82	0.45
3:L5:49:U:H2'	3:L5:50:C:H6	1.82	0.45
3:L5:319:A:H1'	3:L5:3726:A:N3	2.32	0.45
3:L5:1479:G:H2'	3:L5:1480:C:C6	2.52	0.45
3:L5:3916:G:H2'	3:L5:3917:A:H8	1.82	0.45
3:L5:4122:G:C5	37:Lg:97:ILE:HG21	2.52	0.45
3:L5:4127:A:O2'	3:L5:4128:A:H8	1.99	0.45
3:L5:4608:G:H3'	3:L5:4609:G:H8	1.81	0.45
18:LN:54:LYS:HB3	18:LN:59:TYR:CE2	2.51	0.45
21:LQ:49:LYS:HD2	21:LQ:49:LYS:HA	1.74	0.45
23:LS:35:PRO:HD2	23:LS:39:VAL:HG21	1.98	0.45
27:LW:101:ARG:HH12	69:SG:147:LEU:HD22	1.82	0.45
28:LX:85:SER:HA	28:LX:88:LYS:HE3	1.99	0.45
30:LZ:10:VAL:HG23	30:LZ:86:SER:HA	1.98	0.45
44:Ln:12:ARG:HG2	44:Ln:15:ARG:HH22	1.81	0.45
50:SD:132:LYS:HG2	50:SD:191:PRO:HB3	1.98	0.45
64:Sg:153:CYS:HB3	64:Sg:198:VAL:HG12	1.98	0.45
64:Sg:207:CYS:HB3	64:Sg:221:LEU:HD21	1.98	0.45
71:SI:99:ASN:HB2	83:S2:377:G:O5'	2.17	0.45
73:SL:44:PHE:HZ	73:SL:127:THR:HG21	1.82	0.45
83:S2:386:C:H2'	83:S2:387:C:C6	2.52	0.45
83:S2:884:C:H2'	83:S2:885:U:O4'	2.17	0.45
83:S2:1217:A:H2'	83:S2:1218:C:C6	2.52	0.45
83:S2:1801:A:H2'	83:S2:1802:C:H6	1.82	0.45
3:L5:734:G:H22	3:L5:929:A:H2	1.64	0.45
3:L5:1450:C:H2'	3:L5:1451:G:O4'	2.17	0.45
3:L5:1818:G:O2'	3:L5:1819:G:H5''	2.17	0.45
3:L5:1978:C:H2'	3:L5:1979:A:O4'	2.17	0.45
3:L5:2072:C:H5''	11:LF:116:GLN:HE21	1.81	0.45
3:L5:2898:G:H5''	22:LR:104:ARG:HH22	1.82	0.45
3:L5:4954:G:H2'	3:L5:4955:A:H8	1.81	0.45
6:LA:57:PRO:HB3	46:Lp:54:ILE:HD11	1.98	0.45
7:LB:133:TYR:O	7:LB:136:LYS:HG3	2.17	0.45
8:LC:285:ILE:HG12	21:LQ:122:THR:HG21	1.98	0.45
11:LF:156:LYS:HD3	11:LF:248:ASN:HB2	1.98	0.45
13:LH:5:LEU:HG	13:LH:60:TRP:HE1	1.81	0.45
14:LI:89:VAL:HG22	14:LI:91:LEU:H	1.82	0.45
16:LL:58:ILE:HG13	16:LL:116:ARG:HD2	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:LT:44:GLY:HA2	24:LT:95:HIS:HB3	1.98	0.45
52:SK:31:LYS:HZ3	52:SK:39:ASN:N	2.14	0.45
59:SU:67:LYS:HB3	83:S2:1337:4AC:H5''	1.99	0.45
68:SE:64:ILE:HG12	79:SY:18:LEU:HD11	1.99	0.45
71:SI:130:THR:HA	71:SI:133:GLU:HG3	1.99	0.45
83:S2:113:G:N2	83:S2:292:A:H2'	2.32	0.45
83:S2:551:U:H2'	83:S2:552:G:C8	2.51	0.45
83:S2:1033:G:N2	83:S2:1081:PSU:HN1	2.15	0.45
83:S2:1671:G:H2'	83:S2:1672:U:C6	2.51	0.45
3:L5:965:G:H21	3:L5:2092:G:H1'	1.81	0.45
3:L5:1960:A:H5'	48:Ls:63:LYS:HE2	1.98	0.45
3:L5:2081:C:H5''	21:LQ:11:ARG:HD3	1.98	0.45
3:L5:3588:C:H2'	3:L5:3589:G:O4'	2.17	0.45
3:L5:3927:U:H2'	3:L5:3928:A:H8	1.82	0.45
85:L5:5263:SPM:HN11	85:L5:5263:SPM:H42	1.61	0.45
5:L8:74:U:P	29:LY:76:LYS:HD2	2.57	0.45
9:LD:52:ILE:O	9:LD:62:CYS:HA	2.17	0.45
12:LG:229:ARG:HB2	12:LG:232:GLU:OE2	2.16	0.45
14:LI:52:MET:HB2	14:LI:152:LEU:HD22	1.98	0.45
21:LQ:3:VAL:HG13	21:LQ:5:ILE:HG12	1.99	0.45
21:LQ:15:ARG:HB3	21:LQ:52:PHE:HB3	1.98	0.45
51:SF:78:MET:HE3	51:SF:159:ARG:HH12	1.82	0.45
53:SM:43:ASP:OD1	63:Sf:129:GLY:HA2	2.17	0.45
55:SQ:24:HIS:O	55:SQ:68:ILE:HA	2.17	0.45
71:SI:145:ILE:HG22	71:SI:149:TYR:CE2	2.52	0.45
71:SI:145:ILE:O	71:SI:148:LYS:HG2	2.17	0.45
74:SN:61:ALA:HB1	83:S2:1016:U:H6	1.82	0.45
83:S2:1240:A:H2'	83:S2:1241:A:C8	2.52	0.45
83:S2:1839:U:H2'	83:S2:1840:U:C6	2.52	0.45
2:Pt:62:C:H2'	2:Pt:63:G:C8	2.50	0.45
3:L5:1368:A:H2'	3:L5:1369:C:O4'	2.17	0.45
3:L5:4311:A:H2'	3:L5:4312:PSU:C6	2.52	0.45
11:LF:155:TYR:HE1	11:LF:187:MET:HB3	1.82	0.45
39:Li:23:LYS:HG2	39:Li:24:PRO:HD2	1.98	0.45
57:SS:114:LEU:HD23	57:SS:117:ILE:HD11	1.97	0.45
58:ST:59:SER:HB3	83:S2:1541:G:H5''	1.99	0.45
60:SZ:102:LYS:HA	60:SZ:107:VAL:HG23	1.98	0.45
65:SA:89:LYS:HD2	65:SA:201:LEU:HG	1.97	0.45
68:SE:38:LEU:HA	68:SE:41:CYS:SG	2.56	0.45
71:SI:141:ARG:HB3	71:SI:145:ILE:HB	1.99	0.45
79:SY:37:LYS:HG3	83:S2:571:U:H5''	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:S2:174:OMC:HM23	83:S2:174:OMC:H1'	1.81	0.45
83:S2:963:A:H61	83:S2:1065:G:H1'	1.82	0.45
83:S2:1093:A:H2'	83:S2:1094:C:C6	2.52	0.45
83:S2:1531:A:H2'	83:S2:1532:C:C6	2.52	0.45
83:S2:1539:U:H2'	83:S2:1540:G:C8	2.52	0.45
3:L5:123:C:H2'	3:L5:124:C:H6	1.82	0.45
3:L5:683:C:H2'	3:L5:684:G:O4'	2.17	0.45
3:L5:739:G:HO2'	3:L5:740:G:H8	1.65	0.45
3:L5:1097:C:H2'	3:L5:1098:G:H8	1.80	0.45
3:L5:1188:C:H2'	3:L5:1189:G:C8	2.51	0.45
3:L5:2544:G:H22	5:L8:124:U:H5'	1.82	0.45
3:L5:3595:U:H5''	3:L5:3597:G:OP2	2.17	0.45
3:L5:3718:A2M:HM'3	3:L5:3718:A2M:H1'	1.81	0.45
3:L5:4571:A2M:H2'	3:L5:4572:U:C6	2.52	0.45
4:L7:82:G:H2'	4:L7:83:A:C8	2.52	0.45
9:LD:41:LYS:HG3	24:LT:93:ILE:HG21	1.99	0.45
18:LN:103:GLU:OE2	18:LN:167:ALA:HB3	2.16	0.45
21:LQ:69:LYS:HD3	21:LQ:69:LYS:HA	1.77	0.45
22:LR:28:GLU:OE1	22:LR:31:GLU:HB2	2.17	0.45
35:Le:88:LEU:HB2	35:Le:120:ILE:HD13	1.99	0.45
52:SK:80:ARG:NH2	52:SK:90:VAL:HG12	2.32	0.45
52:SK:90:VAL:HG21	52:SK:95:ARG:HB2	1.98	0.45
67:SC:194:ARG:HH11	83:S2:1154:U:H1'	1.80	0.45
69:SG:18:VAL:HG21	69:SG:24:LEU:HD21	1.99	0.45
79:SY:33:ALA:HB2	83:S2:582:U:H1'	1.99	0.45
83:S2:218:U:H2'	83:S2:219:U:C6	2.52	0.45
83:S2:935:G:H2'	83:S2:936:G:C8	2.51	0.45
83:S2:1192:U:H2'	83:S2:1193:U:C6	2.52	0.45
2:Pt:24:A:H2'	2:Pt:25:C:C6	2.52	0.44
3:L5:679:C:H2'	3:L5:680:G:C8	2.52	0.44
3:L5:1669:A:H4'	3:L5:1685:G:N2	2.31	0.44
3:L5:2568:C:H2'	3:L5:2569:G:C8	2.52	0.44
3:L5:3700:C:H2'	3:L5:3746:A:H61	1.82	0.44
3:L5:4227:OMU:HM21	3:L5:4336:A:H1'	1.98	0.44
3:L5:4622:A:H4'	7:LB:13:SER:HB2	1.99	0.44
7:LB:163:ILE:HG22	7:LB:180:LEU:HD22	1.99	0.44
9:LD:288:LEU:HD23	9:LD:291:GLN:NE2	2.30	0.44
18:LN:26:ARG:HD2	18:LN:30:TYR:OH	2.16	0.44
38:Lh:89:ARG:O	38:Lh:93:ARG:HG2	2.17	0.44
48:Ls:31:GLY:HA2	48:Ls:86:VAL:HG12	1.98	0.44
56:SR:1:MET:HA	83:S2:1467:C:H5''	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:ST:39:LEU:HA	58:ST:39:LEU:HD23	1.66	0.44
63:Sf:121:CYS:HA	63:Sf:132:MET:HE3	1.99	0.44
67:SC:208:PRO:HA	67:SC:211:LYS:HE3	1.98	0.44
69:SG:160:LYS:HE2	83:S2:65:C:O2	2.17	0.44
72:SJ:3:VAL:HB	72:SJ:5:ARG:HG2	1.99	0.44
72:SJ:39:ASN:HB2	83:S2:642:U:P	2.57	0.44
3:L5:1266:G:H5'	32:Lb:99:ILE:HD11	2.00	0.44
3:L5:2465:C:H2'	3:L5:2466:G:O4'	2.17	0.44
3:L5:2486:G:N7	3:L5:2493:G:N1	2.57	0.44
3:L5:3860:A:H2	20:LP:131:ARG:HH22	1.64	0.44
3:L5:4236:G:H2'	3:L5:4237:C:H6	1.82	0.44
3:L5:4906:C:H2'	3:L5:4907:G:C8	2.52	0.44
5:L8:90:C:H2'	5:L8:91:A:C8	2.51	0.44
9:LD:60:ILE:HB	9:LD:80:ALA:HB2	1.99	0.44
10:LE:91:THR:HA	10:LE:108:LYS:HA	1.99	0.44
11:LF:38:ALA:HA	11:LF:41:MET:HE2	1.98	0.44
11:LF:104:LYS:O	11:LF:108:VAL:HG22	2.16	0.44
17:LM:24:LEU:HD11	17:LM:86:TRP:CG	2.52	0.44
36:Lf:36:ARG:HB2	36:Lf:80:ASN:HA	2.00	0.44
38:Lh:52:LYS:HA	38:Lh:52:LYS:HD3	1.70	0.44
40:Lj:2:THR:HG22	40:Lj:4:GLY:H	1.82	0.44
67:SC:128:VAL:HG11	67:SC:155:ILE:HG13	2.00	0.44
73:SL:128:VAL:HG22	73:SL:140:PHE:HB3	2.00	0.44
82:Se:25:LYS:HD2	82:Se:25:LYS:HA	1.83	0.44
83:S2:12:U:H2'	83:S2:13:C:C6	2.52	0.44
83:S2:1127:C:H2'	83:S2:1128:C:C6	2.52	0.44
83:S2:1653:U:H2'	83:S2:1654:G:C8	2.52	0.44
83:S2:1739:C:H2'	83:S2:1740:C:C6	2.52	0.44
83:S2:1808:U:H2'	83:S2:1809:A:C8	2.52	0.44
83:S2:1856:C:H2'	83:S2:1857:G:C8	2.52	0.44
3:L5:947:C:H5''	10:LE:51:VAL:HG11	1.99	0.44
3:L5:1773:U:H2'	3:L5:1774:C:C6	2.52	0.44
3:L5:2017:A:H2'	3:L5:2017:A:OP2	2.17	0.44
3:L5:2683:C:H2'	3:L5:2684:C:C6	2.50	0.44
3:L5:2780:C:H2'	3:L5:2781:G:H8	1.81	0.44
3:L5:4143:G:N3	3:L5:4145:C:H1'	2.32	0.44
7:LB:220:ILE:HB	7:LB:346:THR:OG1	2.17	0.44
12:LG:258:ALA:HA	12:LG:261:LEU:HB2	1.98	0.44
46:Lp:38:THR:HA	46:Lp:45:THR:HA	1.99	0.44
51:SF:101:HIS:HB2	51:SF:108:PRO:HG3	1.99	0.44
55:SQ:22:VAL:HG21	83:S2:1443:C:H1'	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:Sg:289:LEU:HD11	64:Sg:298:LEU:HD21	2.00	0.44
67:SC:177:PRO:HD3	76:SV:9:VAL:HG11	1.99	0.44
77:SW:105:THR:HB	77:SW:126:LEU:HD11	1.99	0.44
83:S2:1019:C:H2'	83:S2:1020:A:O4'	2.17	0.44
83:S2:1533:A:N6	83:S2:1602:U:N3	2.55	0.44
83:S2:1692:U:H2'	83:S2:1693:G:C8	2.52	0.44
3:L5:228:C:H2'	3:L5:229:G:H8	1.82	0.44
3:L5:400:A2M:HM'3	3:L5:400:A2M:H1'	1.48	0.44
3:L5:419:A:N6	5:L8:15:G:H1'	2.32	0.44
3:L5:674:G:H2'	3:L5:675:C:C6	2.52	0.44
3:L5:1356:U:H2'	3:L5:1357:C:C6	2.53	0.44
3:L5:1700:G:H5''	3:L5:1704:C:N4	2.32	0.44
3:L5:3748:A:H2'	3:L5:3749:C:C6	2.53	0.44
3:L5:3846:C:H2'	3:L5:3847:C:H6	1.83	0.44
3:L5:3917:A:H2'	3:L5:3918:G:H8	1.83	0.44
3:L5:5057:C:H2'	3:L5:5058:A:C8	2.52	0.44
5:L8:14:U:H5''	20:LP:123:PRO:HD3	2.00	0.44
7:LB:299:ILE:HB	7:LB:313:SER:HB3	1.98	0.44
11:LF:96:ARG:HH12	11:LF:224:THR:HG23	1.83	0.44
13:LH:2:LYS:HZ1	13:LH:62:GLY:HA2	1.83	0.44
13:LH:94:SER:HB3	13:LH:179:ILE:HD13	2.00	0.44
17:LM:37:LEU:HD21	17:LM:47:ARG:HD3	1.99	0.44
21:LQ:19:LYS:HE2	21:LQ:19:LYS:HB2	1.82	0.44
21:LQ:50:ARG:O	21:LQ:53:MET:HG2	2.18	0.44
27:LW:27:LYS:HA	27:LW:27:LYS:HD3	1.82	0.44
28:LX:124:VAL:HG12	28:LX:138:VAL:HA	1.98	0.44
36:Lf:45:LYS:NZ	36:Lf:108:SER:HA	2.33	0.44
37:Lg:45:ALA:HB3	37:Lg:82:MET:HE2	1.99	0.44
49:Lt:12:VAL:HG11	49:Lt:64:ILE:HA	1.99	0.44
55:SQ:134:GLY:HA3	55:SQ:140:ARG:HA	1.98	0.44
62:Sd:13:LYS:HG3	83:S2:1556:A:C8	2.52	0.44
67:SC:60:TRP:CD1	67:SC:92:GLU:HG3	2.51	0.44
70:SH:157:HIS:CD2	70:SH:190:PRO:HG3	2.53	0.44
73:SL:59:LYS:HD3	73:SL:134:LEU:HB3	1.99	0.44
76:SV:60:ARG:HB3	76:SV:65:SER:HB3	1.98	0.44
80:Sa:30:VAL:HG21	80:Sa:74:CYS:HB3	2.00	0.44
83:S2:675:U:H2'	83:S2:676:C:H6	1.81	0.44
83:S2:974:C:H2'	83:S2:975:G:H8	1.82	0.44
83:S2:976:G:H2'	83:S2:977:C:H6	1.83	0.44
83:S2:1070:A:H2'	83:S2:1071:G:O4'	2.16	0.44
83:S2:1426:U:H2'	83:S2:1427:C:C6	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:S2:1616:U:H2'	83:S2:1617:G:C8	2.52	0.44
3:L5:679:C:H2'	3:L5:680:G:H8	1.82	0.44
3:L5:1176:C:H2'	3:L5:1177:U:C6	2.53	0.44
3:L5:1259:G:H2'	3:L5:1260:G:C8	2.48	0.44
3:L5:2059:C:H2'	3:L5:2060:G:H8	1.82	0.44
3:L5:3869:OMC:N4	85:L5:5291:SPM:H72	2.33	0.44
3:L5:4154:G:H2'	3:L5:4155:C:C6	2.53	0.44
3:L5:4194:U:H5''	32:Lb:3:LYS:HG2	2.00	0.44
5:L8:32:C:H3'	5:L8:33:G:H8	1.81	0.44
16:LL:111:GLN:O	16:LL:115:GLN:HG2	2.18	0.44
20:LP:29:THR:HG23	20:LP:119:VAL:HG11	1.98	0.44
48:Ls:145:THR:HG21	48:Ls:152:ILE:HG23	1.99	0.44
59:SU:19:ARG:HB2	59:SU:117:ALA:HB2	1.99	0.44
70:SH:50:GLU:OE2	70:SH:58:LYS:HB3	2.18	0.44
83:S2:1064:C:H2'	83:S2:1065:G:H8	1.83	0.44
83:S2:1567:G:H2'	83:S2:1568:C:C6	2.52	0.44
83:S2:1627:C:H2'	83:S2:1628:C:C6	2.51	0.44
83:S2:1805:G:H2'	83:S2:1806:A:H8	1.81	0.44
3:L5:25:A:C8	3:L5:341:G:C8	3.05	0.44
3:L5:223:G:N7	8:LC:165:LYS:HE3	2.33	0.44
3:L5:946:C:HO2'	8:LC:340:ILE:HG22	1.83	0.44
3:L5:1326:A2M:HM'3	3:L5:1326:A2M:H1'	1.51	0.44
3:L5:1405:C:H2'	3:L5:1406:G:H8	1.83	0.44
3:L5:1449:C:H2'	3:L5:1450:C:H6	1.83	0.44
3:L5:1534:A2M:N3	40:Lj:11:ARG:HB2	2.33	0.44
3:L5:1662:C:H2'	3:L5:1663:C:C6	2.52	0.44
3:L5:2081:C:H2'	3:L5:2082:G:C8	2.52	0.44
3:L5:2374:A:H2'	3:L5:2375:A:C8	2.52	0.44
5:L8:66:A:H2'	5:L8:67:U:H6	1.83	0.44
7:LB:17:LEU:HA	7:LB:17:LEU:HD23	1.80	0.44
7:LB:234:ARG:HG3	7:LB:272:LYS:HB3	2.00	0.44
9:LD:211:LEU:HB3	9:LD:219:TYR:HB2	2.00	0.44
10:LE:67:ALA:HA	10:LE:69:TYR:CE2	2.53	0.44
13:LH:45:LEU:HD13	13:LH:57:VAL:HG12	2.00	0.44
16:LL:119:GLU:O	16:LL:123:LYS:HG3	2.18	0.44
29:LY:118:ILE:HD12	29:LY:118:ILE:HA	1.89	0.44
33:Lc:28:VAL:O	33:Lc:94:LEU:HD12	2.18	0.44
53:SM:31:LEU:HB3	53:SM:33:ARG:HG3	1.98	0.44
62:Sd:20:SER:HB3	62:Sd:27:ARG:CZ	2.47	0.44
64:Sg:172:LYS:HG2	64:Sg:193:GLY:O	2.17	0.44
72:SJ:40:LYS:HG2	82:Se:34:ARG:HH12	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
72:SJ:169:ARG:HD2	72:SJ:169:ARG:HA	1.91	0.44
83:S2:534:G:H2'	83:S2:535:G:C8	2.52	0.44
83:S2:1650:A:H2'	83:S2:1651:A:O4'	2.18	0.44
83:S2:1714:U:H2'	83:S2:1715:A:C8	2.52	0.44
3:L5:1687:U:H2'	3:L5:1688:G:C8	2.53	0.44
3:L5:2891:U:H2'	3:L5:2892:C:O4'	2.18	0.44
3:L5:3722:G:H2'	3:L5:3723:A:H8	1.83	0.44
3:L5:4169:G:H4'	3:L5:4171:C:C2	2.53	0.44
6:LA:234:LYS:H	6:LA:234:LYS:HG2	1.66	0.44
9:LD:263:LYS:HD3	9:LD:263:LYS:HA	1.74	0.44
11:LF:131:ASN:O	11:LF:135:ILE:HG12	2.17	0.44
16:LL:64:VAL:HA	16:LL:67:HIS:HD2	1.81	0.44
52:SK:5:LYS:HZ1	83:S2:1312:G:H4'	1.83	0.44
66:SB:25:PHE:HA	66:SB:28:LYS:HG3	1.99	0.44
70:SH:58:LYS:HD2	70:SH:58:LYS:HA	1.75	0.44
74:SN:9:LYS:HE3	83:S2:1131:G:P	2.58	0.44
75:SO:33:ILE:HD12	75:SO:41:PHE:O	2.17	0.44
83:S2:509:OMG:H2'	83:S2:510:G:C8	2.53	0.44
83:S2:656:G:H5'	83:S2:662:G:N2	2.32	0.44
83:S2:693:A:H2'	83:S2:694:G:C8	2.53	0.44
83:S2:881:G:N2	83:S2:906:U:H1'	2.33	0.44
3:L5:64:A:H1'	3:L5:76:A:H1'	1.98	0.44
3:L5:106:A:H1'	3:L5:336:A:N3	2.32	0.44
3:L5:259:C:H2'	3:L5:260:C:C6	2.53	0.44
3:L5:1315:C:H2'	3:L5:1316:OMG:C8	2.53	0.44
3:L5:1431:C:H2'	3:L5:1432:G:O4'	2.18	0.44
3:L5:1942:A:H2'	3:L5:1943:A:H8	1.77	0.44
3:L5:3744:OMG:HM23	3:L5:3744:OMG:H1'	1.79	0.44
3:L5:4279:A:H5'	3:L5:4281:A:H1'	2.00	0.44
3:L5:4759:C:H2'	3:L5:4760:G:C8	2.53	0.44
4:L7:48:G:H2'	4:L7:49:A:C8	2.53	0.44
5:L8:47:C:H1'	5:L8:61:A:H2'	2.00	0.44
11:LF:213:LEU:HD23	11:LF:247:MET:HG3	1.99	0.44
15:LJ:43:LEU:HA	15:LJ:117:ILE:HD11	2.00	0.44
17:LM:82:ILE:H	17:LM:82:ILE:HD12	1.82	0.44
25:LU:44:GLN:HB2	25:LU:56:LEU:HD21	2.00	0.44
31:La:8:THR:HG23	31:La:17:HIS:CE1	2.52	0.44
51:SF:79:HIS:HB2	51:SF:159:ARG:HD3	2.00	0.44
57:SS:67:VAL:O	57:SS:71:MET:HG2	2.18	0.44
66:SB:120:MET:HE2	66:SB:142:PHE:HE2	1.82	0.44
71:SI:49:ARG:HD3	71:SI:50:GLY:H	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:S2:12:U:H2'	83:S2:13:C:H6	1.82	0.44
83:S2:468:A2M:HM'3	83:S2:468:A2M:H1'	1.68	0.44
83:S2:1177:PSU:H2'	83:S2:1178:U:C6	2.52	0.44
83:S2:1595:U:H2'	83:S2:1596:U:C6	2.53	0.44
1:CI:55:LEU:HD13	25:LU:99:TRP:CE3	2.53	0.44
3:L5:272:U:H2'	3:L5:273:U:C6	2.53	0.44
3:L5:737:C:C4	3:L5:739:G:H5''	2.53	0.44
3:L5:1604:G:H2'	3:L5:1605:G:C8	2.52	0.44
3:L5:2804:OMC:H2'	3:L5:2805:C:H6	1.83	0.44
3:L5:3707:U:H2'	3:L5:3708:C:C6	2.53	0.44
3:L5:4383:U:H2'	3:L5:4384:U:C6	2.53	0.44
3:L5:4748:U:H2'	3:L5:4749:C:C6	2.53	0.44
3:L5:4927:G:H5''	3:L5:4928:C:C5	2.53	0.44
3:L5:5027:C:O2'	3:L5:5028:G:H5''	2.18	0.44
85:L5:5291:SPM:H82	85:L5:5291:SPM:H111	1.81	0.44
4:L7:9:C:OP1	24:LT:26:PRO:HB2	2.18	0.44
6:LA:131:GLY:H	6:LA:169:VAL:HG13	1.82	0.44
7:LB:367:PHE:HB2	27:LW:1:MET:HG2	2.00	0.44
9:LD:64:ILE:HG21	9:LD:109:LEU:HD12	1.99	0.44
11:LF:142:TRP:CZ2	11:LF:235:ASN:HB2	2.53	0.44
43:Lm:94:MET:HG2	43:Lm:105:PRO:HA	2.00	0.44
50:SD:40:ARG:HA	59:SU:108:PRO:HB3	2.00	0.44
83:S2:116:OMU:HM23	83:S2:116:OMU:H1'	1.74	0.44
83:S2:813:A:H2'	83:S2:814:PSU:O4'	2.18	0.44
83:S2:1438:A:H2'	83:S2:1439:A:C8	2.52	0.44
3:L5:441:G:H2'	3:L5:442:G:H8	1.82	0.43
3:L5:1399:G:H2'	3:L5:1400:G:C8	2.53	0.43
3:L5:1505:C:H2'	3:L5:1506:G:H8	1.82	0.43
3:L5:1777:C:H2'	3:L5:1778:C:C6	2.53	0.43
3:L5:2249:C:H2'	3:L5:2250:C:C5	2.53	0.43
3:L5:2804:OMC:H2'	3:L5:2805:C:C6	2.53	0.43
3:L5:3690:U:H2'	3:L5:3691:G:O4'	2.18	0.43
3:L5:3707:U:H2'	3:L5:3708:C:H6	1.83	0.43
3:L5:4364:G:H2'	3:L5:4365:C:C6	2.52	0.43
3:L5:4578:G:H2'	3:L5:4579:PSU:C6	2.53	0.43
3:L5:4676:G:H4'	7:LB:280:ILE:HD11	2.00	0.43
6:LA:83:HIS:CE1	6:LA:86:GLN:HB2	2.52	0.43
8:LC:101:MET:SD	8:LC:104:PRO:HA	2.57	0.43
16:LL:25:TRP:HE3	16:LL:28:GLN:HG3	1.83	0.43
19:LO:30:GLY:HA2	19:LO:101:ARG:NE	2.32	0.43
21:LQ:82:VAL:O	21:LQ:102:ALA:HA	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:LU:39:PHE:HD1	25:LU:90:TYR:CD2	2.36	0.43
50:SD:214:LYS:HG3	50:SD:215:ASP:H	1.82	0.43
52:SK:91:PRO:HB2	52:SK:94:LEU:HD23	1.99	0.43
73:SL:126:VAL:HG12	73:SL:145:VAL:HG12	2.00	0.43
76:SV:36:VAL:O	76:SV:50:PHE:HB2	2.18	0.43
83:S2:1104:G:H2'	83:S2:1105:G:C8	2.52	0.43
83:S2:1548:G:H2'	83:S2:1549:U:C6	2.52	0.43
83:S2:1683:C:H2'	83:S2:1684:C:H6	1.83	0.43
83:S2:1743:G:H21	83:S2:1791:A:H62	1.65	0.43
2:Pt:35:A:H2'	2:Pt:36:C:C6	2.53	0.43
3:L5:381:U:H4'	3:L5:415:G:H5'	1.99	0.43
3:L5:1508:A:H2'	3:L5:1509:C:C6	2.54	0.43
3:L5:1524:A2M:HM'1	3:L5:3916:G:H21	1.82	0.43
3:L5:1613:A:H5''	6:LA:183:GLY:CA	2.48	0.43
3:L5:1812:C:H2'	3:L5:1813:U:C6	2.53	0.43
3:L5:4392:OMG:N3	3:L5:4447:5MC:HM52	2.32	0.43
10:LE:95:PRO:HA	10:LE:104:THR:HG22	2.00	0.43
14:LI:36:LEU:HD22	14:LI:73:ASN:ND2	2.33	0.43
45:Lo:82:MET:HE3	45:Lo:82:MET:HB3	1.91	0.43
48:Ls:99:ARG:HG3	48:Ls:100:ASP:N	2.32	0.43
51:SF:76:MET:HG2	51:SF:155:CYS:SG	2.58	0.43
56:SR:43:SER:HB3	56:SR:46:LEU:HD12	2.01	0.43
58:ST:6:VAL:HG12	58:ST:135:ALA:HB2	1.99	0.43
71:SI:108:PRO:O	71:SI:111:GLN:HG3	2.18	0.43
74:SN:124:ARG:HG2	74:SN:127:ARG:HH22	1.83	0.43
78:SX:51:VAL:HB	78:SX:98:ASP:H	1.82	0.43
83:S2:321:C:H2'	83:S2:322:C:C6	2.53	0.43
83:S2:1515:G:H2'	83:S2:1516:G:C8	2.53	0.43
83:S2:1693:G:H2'	83:S2:1694:U:C6	2.53	0.43
2:Pt:27:U:H2'	2:Pt:28:U:H6	1.83	0.43
3:L5:125:C:H2'	3:L5:126:C:H6	1.82	0.43
3:L5:400:A2M:H2'	3:L5:401:G:O4'	2.18	0.43
3:L5:1274:A:O2'	3:L5:1275:G:H8	2.01	0.43
3:L5:2080:U:H2'	3:L5:2081:C:C6	2.52	0.43
3:L5:2273:G:H2'	3:L5:2274:C:C6	2.53	0.43
3:L5:2674:A:N6	46:Lp:42:CYS:HA	2.34	0.43
3:L5:3856:A:H5''	20:LP:83:TRP:O	2.19	0.43
3:L5:4627:U:H2'	3:L5:4628:PSU:H6	1.82	0.43
3:L5:5002:U:H2'	3:L5:5003:U:H6	1.82	0.43
3:L5:5010:PSU:H2'	3:L5:5011:A:H8	1.83	0.43
5:L8:140:C:H2'	5:L8:141:C:C6	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:LA:94:ALA:HB3	6:LA:102:LEU:HB3	2.00	0.43
19:LO:142:ALA:HA	19:LO:145:VAL:HG12	2.01	0.43
24:LT:107:LYS:HE3	24:LT:107:LYS:HB3	1.85	0.43
27:LW:5:LEU:HB3	27:LW:30:GLN:HG3	2.00	0.43
34:Ld:37:GLY:O	34:Ld:41:ARG:HG3	2.17	0.43
54:SP:37:TYR:HB3	54:SP:41:GLN:HB2	2.00	0.43
54:SP:126:VAL:HG11	83:S2:1520:G:N2	2.34	0.43
59:SU:59:LYS:HD2	59:SU:59:LYS:HA	1.68	0.43
66:SB:145:LYS:HB2	66:SB:145:LYS:HE3	1.75	0.43
74:SN:25:TRP:HE1	81:Sb:83:GLN:HG2	1.83	0.43
74:SN:47:PRO:HA	74:SN:50:ILE:HD12	2.00	0.43
83:S2:159:A2M:O2'	83:S2:160:U:H5'	2.18	0.43
83:S2:391:C:H2'	83:S2:392:A:H8	1.83	0.43
83:S2:649:PSU:H2'	83:S2:650:A:H8	1.82	0.43
83:S2:1779:G:H2'	83:S2:1780:G:C8	2.53	0.43
3:L5:221:C:H2'	3:L5:222:C:H6	1.83	0.43
3:L5:742:G:H2'	3:L5:743:G:C8	2.54	0.43
3:L5:1199:G:H2'	3:L5:1200:G:H8	1.83	0.43
3:L5:2538:U:H2'	3:L5:2539:C:C6	2.53	0.43
3:L5:2611:A:H2'	3:L5:2612:G:C8	2.54	0.43
3:L5:3619:G:H4'	22:LR:79:GLY:O	2.19	0.43
3:L5:4407:G:O6	3:L5:4435:U:O4	2.37	0.43
3:L5:4552:PSU:H2'	3:L5:4553:A:C8	2.53	0.43
6:LA:219:ILE:HG22	6:LA:221:LYS:H	1.84	0.43
9:LD:164:LYS:HA	9:LD:167:VAL:HG22	1.99	0.43
11:LF:46:ARG:NH2	32:Lb:102:PRO:HG3	2.33	0.43
15:LJ:20:LEU:HD23	15:LJ:79:ALA:HB1	2.01	0.43
21:LQ:144:LYS:HA	21:LQ:149:TYR:CD2	2.54	0.43
38:Lh:31:LEU:HD23	38:Lh:31:LEU:HA	1.79	0.43
54:SP:79:HIS:CD2	83:S2:1298:G:C8	3.07	0.43
60:SZ:99:LEU:HD21	60:SZ:102:LYS:HD2	2.01	0.43
63:Sf:143:LYS:HD3	83:S2:1310:U:O3'	2.18	0.43
76:SV:17:CYS:HB2	76:SV:56:CYS:HB3	2.00	0.43
79:SY:23:MET:HE2	79:SY:48:TYR:HE2	1.83	0.43
83:S2:162:C:H2'	83:S2:163:U:O4'	2.19	0.43
83:S2:461:U:H2'	83:S2:462:OMC:H6	1.84	0.43
2:Pt:43:A:H2'	2:Pt:44:A:H8	1.84	0.43
3:L5:1662:C:H2'	3:L5:1663:C:H6	1.83	0.43
3:L5:2259:G:H22	10:LE:110:ARG:HH21	1.66	0.43
3:L5:2308:A:H4'	3:L5:2334:C:H4'	1.99	0.43
3:L5:3910:C:H2'	3:L5:3911:C:H6	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:4637:OMG:H1'	3:L5:4637:OMG:HM23	1.66	0.43
3:L5:4970:C:C2	3:L5:4971:A:C8	3.07	0.43
7:LB:117:ARG:HA	7:LB:177:LYS:HD2	2.01	0.43
20:LP:32:THR:HA	20:LP:58:VAL:HG21	2.00	0.43
21:LQ:66:MET:HE1	21:LQ:98:LEU:HG	2.00	0.43
25:LU:24:ASP:HB2	25:LU:111:GLU:HB3	2.01	0.43
46:Lp:37:TYR:HB2	46:Lp:47:MET:HB2	1.99	0.43
47:Lr:49:VAL:HG12	47:Lr:106:LEU:HD13	2.00	0.43
65:SA:121:LEU:HD11	65:SA:145:ILE:HG13	2.01	0.43
66:SB:159:GLN:O	66:SB:162:ARG:HG2	2.18	0.43
66:SB:186:ASN:HA	66:SB:189:ILE:HD12	2.00	0.43
74:SN:110:ASP:O	74:SN:114:ARG:HG2	2.18	0.43
75:SO:50:LYS:HA	83:S2:976:G:H1'	2.01	0.43
83:S2:601:OMG:H1'	83:S2:601:OMG:HM23	1.68	0.43
83:S2:1201:U:H2'	83:S2:1202:U:C6	2.53	0.43
83:S2:1739:C:H2'	83:S2:1740:C:H6	1.83	0.43
3:L5:297:U:H2'	3:L5:298:G:C8	2.54	0.43
3:L5:2019:C:H2'	3:L5:2020:U:H6	1.83	0.43
3:L5:2034:G:H2'	3:L5:2035:C:C6	2.54	0.43
3:L5:2461:G:H2'	3:L5:2462:C:C6	2.53	0.43
3:L5:2744:A:H2'	3:L5:2745:A:H8	1.81	0.43
3:L5:3830:A2M:H1'	3:L5:3830:A2M:HM'3	1.57	0.43
3:L5:3933:G:H2'	3:L5:3934:G:H8	1.83	0.43
3:L5:4887:C:N3	3:L5:4932:U:O2	2.52	0.43
11:LF:148:LYS:HD2	11:LF:245:ARG:HH21	1.83	0.43
22:LR:42:ARG:HA	22:LR:45:ILE:HG22	2.01	0.43
50:SD:53:THR:HA	50:SD:94:ARG:NH1	2.33	0.43
65:SA:147:LEU:HD13	65:SA:174:MET:SD	2.58	0.43
70:SH:51:ILE:HG21	70:SH:179:LYS:HG2	1.99	0.43
74:SN:64:ARG:NH1	74:SN:68:GLY:HA2	2.33	0.43
74:SN:93:LYS:HA	74:SN:150:VAL:HG21	2.01	0.43
76:SV:11:LEU:HD23	76:SV:11:LEU:H	1.83	0.43
83:S2:406:PSU:H2'	83:S2:408:A:C8	2.52	0.43
83:S2:1134:G:H2'	83:S2:1135:C:C6	2.54	0.43
83:S2:1828:C:H2'	83:S2:1829:G:C8	2.53	0.43
3:L5:967:C:H2'	10:LE:110:ARG:HH22	1.83	0.43
3:L5:2492:C:H2'	3:L5:2493:G:H8	1.84	0.43
3:L5:3600:G:H2'	3:L5:3601:C:C6	2.54	0.43
3:L5:3867:A2M:H1'	3:L5:3867:A2M:HM'3	1.48	0.43
3:L5:3911:C:H2'	3:L5:3912:U:C6	2.54	0.43
3:L5:4910:G:H22	19:LO:107:GLY:HA3	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:4923:C:O2	3:L5:4924:C:O2	2.36	0.43
5:L8:26:C:H2'	5:L8:27:U:C6	2.54	0.43
6:LA:34:PHE:CE2	12:LG:41:ILE:HD11	2.54	0.43
6:LA:131:GLY:N	6:LA:169:VAL:HG13	2.33	0.43
8:LC:94:ASN:HA	8:LC:100:ARG:O	2.19	0.43
20:LP:22:LEU:HD12	20:LP:90:PHE:CD2	2.54	0.43
24:LT:112:ASN:HB3	24:LT:128:LEU:HD23	2.00	0.43
48:Ls:14:PHE:CD1	48:Ls:64:ALA:HB2	2.54	0.43
48:Ls:110:ALA:HA	48:Ls:182:PRO:HG2	2.00	0.43
66:SB:97:LEU:HD23	66:SB:232:HIS:CG	2.54	0.43
67:SC:84:PHE:CE1	67:SC:264:SER:HA	2.53	0.43
68:SE:181:CYS:HA	68:SE:227:VAL:HA	1.99	0.43
69:SG:133:LEU:HD23	69:SG:133:LEU:H	1.82	0.43
70:SH:155:LYS:HD2	70:SH:186:ASN:HB2	2.00	0.43
71:SI:13:LYS:HB2	73:SL:137:THR:HG21	2.01	0.43
77:SW:20:ARG:HA	77:SW:20:ARG:HD2	1.84	0.43
83:S2:432:G:H2'	83:S2:433:A:H8	1.84	0.43
83:S2:489:A:H2'	83:S2:490:C:C6	2.53	0.43
83:S2:909:G:H2'	83:S2:910:G:H8	1.84	0.43
83:S2:1392:U:H2'	83:S2:1393:G:C8	2.54	0.43
83:S2:1615:U:H2'	83:S2:1616:U:C6	2.54	0.43
2:Pt:48:C:H2'	2:Pt:59:A:O4'	2.18	0.43
3:L5:7:C:H2'	3:L5:8:U:H6	1.83	0.43
3:L5:280:G:H5''	18:LN:14:LYS:HE2	2.00	0.43
3:L5:398:A2M:O5'	3:L5:398:A2M:H8	2.19	0.43
3:L5:691:C:H2'	3:L5:692:A:C8	2.54	0.43
3:L5:1494:U:H2'	3:L5:1495:G:C8	2.53	0.43
3:L5:2561:C:H2'	3:L5:2562:G:O4'	2.19	0.43
3:L5:3845:A:H2'	3:L5:3846:C:C6	2.54	0.43
3:L5:4071:U:H2'	3:L5:4072:C:C6	2.53	0.43
3:L5:4113:U:H4'	3:L5:4115:G:C6	2.54	0.43
3:L5:4239:A:H2'	3:L5:4240:G:H8	1.82	0.43
3:L5:4919:G:H2'	3:L5:4920:C:H6	1.84	0.43
3:L5:5004:C:H2'	3:L5:5005:G:O4'	2.17	0.43
5:L8:130:C:H2'	5:L8:131:G:C8	2.54	0.43
7:LB:27:GLY:HA2	7:LB:276:HIS:CD2	2.54	0.43
9:LD:36:LEU:CD2	9:LD:50:ARG:HD2	2.49	0.43
16:LL:64:VAL:HA	16:LL:67:HIS:CD2	2.54	0.43
17:LM:32:ASP:O	17:LM:33:GLN:HG3	2.19	0.43
18:LN:153:LYS:HD2	18:LN:154:PRO:HD2	2.00	0.43
18:LN:153:LYS:HG3	18:LN:155:VAL:HG12	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:LT:18:PRO:HD2	24:LT:21:LYS:HB2	2.01	0.43
28:LX:65:ALA:HB2	38:Lh:69:LEU:HD11	2.00	0.43
28:LX:88:LYS:HE3	28:LX:88:LYS:HB2	1.84	0.43
37:Lg:16:ALA:HA	37:Lg:19:LYS:HE2	2.01	0.43
50:SD:161:GLY:O	50:SD:164:VAL:HG12	2.18	0.43
51:SF:90:VAL:HA	51:SF:93:VAL:HG12	2.01	0.43
56:SR:81:ARG:HH21	65:SA:88:LEU:HD22	1.83	0.43
65:SA:91:ALA:HA	65:SA:96:ALA:HB3	2.01	0.43
66:SB:123:ALA:HB3	66:SB:139:CYS:SG	2.58	0.43
71:SI:145:ILE:HG23	71:SI:148:LYS:HE2	1.99	0.43
79:SY:29:HIS:HB2	79:SY:32:LYS:HB2	2.00	0.43
79:SY:119:GLY:HA2	83:S2:85:A:H5'	2.00	0.43
83:S2:99:A2M:H62	83:S2:433:A:H1'	1.84	0.43
83:S2:186:C:H2'	83:S2:187:G:C8	2.54	0.43
83:S2:462:OMC:HM23	83:S2:462:OMC:H1'	1.76	0.43
83:S2:595:U:H2'	83:S2:596:U:C6	2.54	0.43
83:S2:661:U:H3'	83:S2:662:G:H2'	2.00	0.43
83:S2:1182:A:C5	83:S2:1183:A:H1'	2.53	0.43
3:L5:727:C:H4'	11:LF:69:ILE:HG12	2.00	0.43
3:L5:1077:C:H4'	3:L5:1215:C:C4	2.54	0.43
3:L5:1541:C:H2'	3:L5:1542:U:C6	2.54	0.43
3:L5:1915:C:H5'	36:Lf:16:ARG:NH1	2.33	0.43
3:L5:2685:C:H2'	3:L5:2686:G:O4'	2.19	0.43
3:L5:4323:A:C6	9:LD:153:THR:HG21	2.53	0.43
3:L5:5036:C:H2'	3:L5:5037:U:H6	1.84	0.43
10:LE:183:ARG:HA	10:LE:183:ARG:HD2	1.79	0.43
15:LJ:15:LEU:HD12	15:LJ:165:TRP:HB2	2.01	0.43
16:LL:93:THR:HA	38:Lh:116:LEU:HD13	2.01	0.43
20:LP:60:PHE:CE2	20:LP:82:ARG:HB2	2.54	0.43
22:LR:4:LEU:HD11	22:LR:29:THR:HG23	1.99	0.43
38:Lh:25:LYS:O	38:Lh:28:LEU:HG	2.19	0.43
57:SS:106:LYS:HA	57:SS:109:GLU:HG2	2.01	0.43
66:SB:97:LEU:HB3	66:SB:232:HIS:NE2	2.33	0.43
66:SB:171:ILE:HG13	66:SB:197:ILE:HG12	1.99	0.43
67:SC:70:VAL:HG21	67:SC:93:ILE:HG23	2.01	0.43
68:SE:186:GLY:HA3	83:S2:809:A:OP1	2.19	0.43
72:SJ:5:ARG:HB3	83:S2:38:A:H5''	2.00	0.43
75:SO:83:GLN:HA	75:SO:86:LYS:HG2	2.00	0.43
77:SW:90:GLN:HG2	77:SW:97:ARG:NH2	2.33	0.43
83:S2:83:A:H2'	83:S2:84:A:O4'	2.19	0.43
83:S2:1144:A:H5'	83:S2:1355:C:H41	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:S2:1189:A:H2'	83:S2:1190:A:C8	2.54	0.43
83:S2:1705:C:H2'	83:S2:1706:G:C8	2.54	0.43
2:Pt:4:U:H2'	2:Pt:5:C:H6	1.84	0.43
3:L5:717:U:H2'	3:L5:718:C:C6	2.53	0.43
3:L5:1281:G:H5'	8:LC:323:ARG:HB2	2.00	0.43
3:L5:1884:C:H2'	3:L5:1885:G:H8	1.84	0.43
3:L5:2351:OMC:HM23	3:L5:2351:OMC:H1'	1.70	0.43
3:L5:2870:A:H2'	3:L5:2871:A:H8	1.83	0.43
3:L5:3748:A:H5''	6:LA:243:THR:OG1	2.19	0.43
3:L5:4215:C:C2	3:L5:4216:G:C8	3.07	0.43
3:L5:4424:A:H5'	43:Lm:125:LYS:HE3	2.00	0.43
3:L5:4466:C:H2'	3:L5:4467:A:C8	2.53	0.43
3:L5:4593:C:H2'	3:L5:4594:U:H6	1.83	0.43
3:L5:4637:OMG:H2'	3:L5:4638:U:C6	2.54	0.43
5:L8:119:C:H2'	5:L8:120:G:H8	1.83	0.43
5:L8:141:C:H2'	5:L8:142:U:H6	1.81	0.43
9:LD:208:MET:CB	9:LD:233:PRO:HG3	2.49	0.43
22:LR:82:LYS:HA	22:LR:82:LYS:HD2	1.92	0.43
29:LY:34:LEU:HG	29:LY:106:ILE:HD11	2.00	0.43
35:Le:79:VAL:HG23	35:Le:84:GLU:HB2	2.01	0.43
64:Sg:217:MET:HE2	64:Sg:219:TRP:CH2	2.54	0.43
65:SA:134:LEU:HD21	65:SA:144:THR:HG21	1.99	0.43
65:SA:137:ALA:HB1	65:SA:142:LEU:HB3	2.01	0.43
67:SC:196:ILE:HB	67:SC:223:TYR:HB2	2.01	0.43
73:SL:23:VAL:HG23	73:SL:25:LEU:HG	2.01	0.43
75:SO:63:LYS:HD3	75:SO:63:LYS:HA	1.81	0.43
83:S2:96:C:H2'	83:S2:97:U:H6	1.83	0.43
83:S2:120:U:H2'	83:S2:121:OMU:H6	2.01	0.43
83:S2:193:C:H2'	83:S2:194:C:C6	2.54	0.43
83:S2:289:G:H2'	83:S2:290:U:C6	2.54	0.43
83:S2:475:C:H1'	83:S2:507:G:H1'	1.99	0.43
3:L5:461:G:H2'	3:L5:462:G:H8	1.84	0.42
3:L5:1304:C:H2'	3:L5:1305:C:C6	2.54	0.42
3:L5:1308:C:H2'	3:L5:1309:C:C6	2.54	0.42
3:L5:2676:A:H8	3:L5:2676:A:OP2	2.02	0.42
3:L5:4195:G:C8	3:L5:4442:PSU:H5'	2.53	0.42
3:L5:4219:A:H2'	3:L5:4220:6MZ:C8	2.49	0.42
3:L5:4600:G:H4'	3:L5:4601:U:O5'	2.19	0.42
3:L5:4919:G:H2'	3:L5:4920:C:C6	2.54	0.42
4:L7:33:U:H2'	4:L7:34:C:C6	2.53	0.42
5:L8:69:PSU:H2'	5:L8:70:G:O4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:LA:116:LEU:HD13	6:LA:164:ALA:HB2	2.01	0.42
7:LB:181:MET:HE1	7:LB:346:THR:HG21	2.01	0.42
8:LC:13:GLU:CD	8:LC:157:LYS:HE3	2.44	0.42
28:LX:76:ILE:HD12	28:LX:101:ASP:HB3	1.99	0.42
39:Li:51:ALA:HB3	39:Li:54:GLU:OE1	2.19	0.42
48:Ls:39:GLN:O	48:Ls:42:GLN:HG3	2.19	0.42
58:ST:65:TYR:HE1	58:ST:128:GLN:HB2	1.84	0.42
72:SJ:111:GLN:HE21	72:SJ:123:ILE:HG13	1.84	0.42
74:SN:5:HIS:CE1	74:SN:121:ARG:HG3	2.54	0.42
83:S2:99:A2M:H1'	83:S2:99:A2M:HM'3	1.55	0.42
83:S2:483:C:H2'	83:S2:484:A2M:C8	2.49	0.42
83:S2:1114:U:O2'	83:S2:1115:U:H2'	2.19	0.42
83:S2:1391:OMC:H1'	83:S2:1391:OMC:HM23	1.78	0.42
83:S2:1533:A:N6	83:S2:1602:U:C2	2.86	0.42
3:L5:424:U:H2'	3:L5:425:U:C6	2.54	0.42
3:L5:711:A:H2'	3:L5:712:C:C6	2.53	0.42
3:L5:2066:C:O2'	36:Lf:79:GLY:HA2	2.19	0.42
3:L5:2898:G:H2'	3:L5:2899:C:H6	1.84	0.42
3:L5:3825:A2M:HM'3	3:L5:3825:A2M:H1'	1.66	0.42
3:L5:4673:PSU:H5'	26:LV:89:ARG:NH2	2.34	0.42
3:L5:5003:U:H2'	3:L5:5004:C:C6	2.55	0.42
5:L8:64:U:C2	5:L8:65:A:C8	3.08	0.42
6:LA:114:CYS:SG	6:LA:169:VAL:HB	2.58	0.42
6:LA:145:LYS:HA	6:LA:145:LYS:HD3	1.74	0.42
15:LJ:52:LYS:HB3	15:LJ:65:ASN:HA	2.01	0.42
18:LN:56:LYS:HD3	18:LN:56:LYS:HA	1.87	0.42
47:Lr:16:PHE:CD2	47:Lr:28:GLU:HB3	2.53	0.42
52:SK:51:SER:HA	83:S2:1276:A:O2'	2.19	0.42
56:SR:9:VAL:HG23	56:SR:50:ILE:HG12	2.01	0.42
66:SB:123:ALA:HB2	66:SB:165:ARG:HG2	2.00	0.42
69:SG:200:LYS:HA	69:SG:203:LYS:HG2	2.01	0.42
76:SV:74:LYS:NZ	76:SV:83:PHE:HB3	2.34	0.42
81:Sb:18:LYS:NZ	81:Sb:23:ARG:HA	2.34	0.42
83:S2:185:G:H2'	83:S2:186:C:H6	1.85	0.42
83:S2:453:C:H2'	83:S2:454:U:C6	2.54	0.42
83:S2:530:U:H2'	83:S2:531:A:H8	1.83	0.42
83:S2:651:PSU:H2'	83:S2:652:U:C6	2.54	0.42
83:S2:919:A:H8	83:S2:919:A:OP2	2.02	0.42
83:S2:1775:U:H2'	83:S2:1776:G:N3	2.34	0.42
3:L5:1290:G:H2'	3:L5:1291:G:C8	2.54	0.42
3:L5:3833:C:H2'	3:L5:3834:C:H6	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:3910:C:H2'	3:L5:3911:C:C6	2.53	0.42
3:L5:4092:G:N2	3:L5:4158:C:C2	2.87	0.42
4:L7:4:U:H2'	4:L7:5:A:H8	1.83	0.42
5:L8:7:U:H2'	5:L8:8:U:C6	2.54	0.42
5:L8:8:U:H2'	5:L8:9:A:C8	2.54	0.42
6:LA:58:LEU:HD13	6:LA:58:LEU:HA	1.89	0.42
11:LF:179:LEU:HD13	11:LF:182:TYR:HD2	1.84	0.42
16:LL:121:ARG:NH2	16:LL:124:LEU:HD11	2.34	0.42
17:LM:24:LEU:HD21	17:LM:86:TRP:CE2	2.53	0.42
19:LO:47:PHE:HA	19:LO:136:ALA:HB2	2.01	0.42
21:LQ:33:ARG:HA	21:LQ:48:LEU:HD22	2.01	0.42
52:SK:85:LEU:HD12	52:SK:86:PRO:HD2	2.01	0.42
66:SB:167:LYS:HB2	66:SB:167:LYS:HE2	1.86	0.42
70:SH:112:ASN:ND2	83:S2:875:A:H5''	2.34	0.42
71:SI:41:ARG:CZ	83:S2:305:U:H4'	2.49	0.42
73:SL:59:LYS:HD3	73:SL:134:LEU:HD13	2.02	0.42
74:SN:20:ARG:NH2	83:S2:918:U:H4'	2.35	0.42
76:SV:30:ALA:HA	76:SV:60:ARG:HH21	1.84	0.42
77:SW:32:LYS:HA	77:SW:35:VAL:HG22	2.00	0.42
78:SX:24:ASP:OD1	78:SX:27:TYR:HB3	2.20	0.42
81:Sb:81:ARG:HA	81:Sb:81:ARG:HD2	1.79	0.42
83:S2:30:C:H2'	83:S2:31:U:C6	2.54	0.42
83:S2:184:G:H2'	83:S2:185:G:H8	1.84	0.42
83:S2:314:U:H2'	83:S2:315:C:H6	1.85	0.42
83:S2:945:U:H2'	83:S2:946:U:C6	2.55	0.42
83:S2:991:G:C6	83:S2:1134:G:H4'	2.53	0.42
83:S2:1004:PSU:H2'	83:S2:1005:G:C8	2.54	0.42
83:S2:1107:G:H2'	83:S2:1108:G:H8	1.83	0.42
3:L5:347:A:H2'	3:L5:348:G:C8	2.54	0.42
3:L5:700:G:C6	3:L5:701:G:C6	3.07	0.42
3:L5:1278:C:H2'	3:L5:1279:A:O4'	2.20	0.42
3:L5:2020:U:H2'	3:L5:2021:G:C8	2.50	0.42
3:L5:2539:C:H2'	3:L5:2540:C:H6	1.81	0.42
3:L5:2875:C:H5'	3:L5:2876:OMG:C5	2.54	0.42
3:L5:3928:A:H3'	3:L5:3929:G:H8	1.84	0.42
3:L5:4454:G:H2'	3:L5:4455:G:H8	1.84	0.42
3:L5:4524:G:H2'	3:L5:4525:C:H6	1.84	0.42
3:L5:4928:C:H2'	3:L5:4929:C:C6	2.54	0.42
3:L5:4968:A:H2'	3:L5:4969:C:C6	2.55	0.42
4:L7:18:C:H2'	4:L7:19:C:C6	2.54	0.42
7:LB:49:TYR:CE2	7:LB:344:VAL:HG22	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:LI:150:GLU:O	14:LI:153:ARG:HG3	2.20	0.42
15:LJ:83:LEU:HD11	15:LJ:132:VAL:HG21	2.01	0.42
19:LO:70:PRO:HB2	19:LO:72:HIS:CE1	2.53	0.42
20:LP:43:LYS:HA	20:LP:46:LYS:HG2	2.01	0.42
26:LV:90:ARG:HH22	26:LV:96:LEU:HD22	1.83	0.42
31:La:100:ILE:HG13	31:La:123:ILE:HB	2.01	0.42
37:Lg:63:VAL:HG13	37:Lg:66:ARG:CZ	2.49	0.42
49:Lt:29:ALA:HA	49:Lt:32:ILE:HD13	2.02	0.42
53:SM:112:LYS:HE2	53:SM:112:LYS:HB2	1.90	0.42
64:Sg:10:THR:HB	64:Sg:306:LEU:HD21	2.00	0.42
64:Sg:289:LEU:HD12	64:Sg:289:LEU:HA	1.91	0.42
66:SB:75:GLN:HB2	66:SB:78:GLU:CD	2.44	0.42
70:SH:192:PHE:HE1	81:Sb:84:HIS:HB3	1.84	0.42
71:SI:56:ARG:HH12	83:S2:379:C:H5''	1.85	0.42
83:S2:92:A:N6	83:S2:444:G:H1'	2.34	0.42
83:S2:616:A:H62	83:S2:625:G:N2	2.18	0.42
83:S2:1173:A:H2'	83:S2:1174:PSU:H6	1.84	0.42
83:S2:1303:C:H2'	83:S2:1304:U:C6	2.55	0.42
83:S2:1320:G:H2'	83:S2:1321:G:O4'	2.19	0.42
83:S2:1555:U:H5'	83:S2:1556:A:C5	2.54	0.42
83:S2:1621:U:O2'	83:S2:1622:U:H2'	2.20	0.42
83:S2:1649:U:H2'	83:S2:1650:A:H8	1.84	0.42
83:S2:1651:A:H2'	83:S2:1652:G:C8	2.54	0.42
3:L5:742:G:H2'	3:L5:743:G:H8	1.84	0.42
3:L5:1354:A:OP2	21:LQ:106:THR:HG21	2.18	0.42
3:L5:1534:A2M:H8	40:Lj:15:THR:HG23	2.01	0.42
3:L5:1588:U:H2'	3:L5:1589:C:C6	2.55	0.42
3:L5:3871:A:H2'	3:L5:3872:A:C8	2.54	0.42
3:L5:3927:U:H2'	3:L5:3928:A:C8	2.55	0.42
3:L5:3936:A:H2'	3:L5:3937:C:C6	2.54	0.42
3:L5:4153:C:H5''	28:LX:38:LYS:HD2	2.01	0.42
3:L5:4518:A:OP2	3:L5:4518:A:H8	2.01	0.42
3:L5:4592:C:H2'	3:L5:4593:C:C6	2.53	0.42
5:L8:27:U:H2'	5:L8:28:C:C6	2.54	0.42
5:L8:55:PSU:H2'	5:L8:56:G:C8	2.54	0.42
8:LC:130:ALA:HB3	8:LC:246:VAL:HG21	2.00	0.42
14:LI:188:LYS:NZ	14:LI:213:HIS:H	2.17	0.42
19:LO:14:HIS:CE1	19:LO:119:VAL:HG13	2.55	0.42
40:Lj:28:HIS:HE1	40:Lj:30:GLN:HB3	1.84	0.42
55:SQ:90:LYS:HA	55:SQ:93:VAL:HG22	2.02	0.42
56:SR:54:VAL:O	56:SR:58:MET:HG2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:SZ:50:PHE:HE2	60:SZ:87:ALA:HB2	1.83	0.42
64:Sg:54:ILE:HD12	64:Sg:55:PRO:HD2	2.02	0.42
68:SE:137:PRO:HG2	68:SE:150:PRO:HD2	2.02	0.42
69:SG:63:MET:HE1	69:SG:106:LEU:HD21	2.02	0.42
73:SL:8:ARG:HH21	83:S2:390:C:H4'	1.85	0.42
83:S2:1070:A:H3'	83:S2:1071:G:H8	1.85	0.42
83:S2:1501:C:H2'	83:S2:1502:C:H6	1.83	0.42
83:S2:1643:U:H2'	83:S2:1644:C:H6	1.83	0.42
2:Pt:72:C:H3'	2:Pt:73:A:H8	1.84	0.42
3:L5:35:U:H4'	3:L5:1525:A:H2	1.85	0.42
3:L5:74:G:H1'	16:LL:62:PRO:HG3	2.01	0.42
3:L5:2875:C:H3'	46:Lp:7:LYS:HG2	2.01	0.42
3:L5:3760:A:C5	83:S2:1826:G:H4'	2.55	0.42
3:L5:4146:G:H2'	3:L5:4147:G:C8	2.55	0.42
3:L5:4147:G:H2'	3:L5:4148:C:C6	2.53	0.42
3:L5:4407:G:H1'	3:L5:4438:U:C2	2.54	0.42
3:L5:4568:A:P	7:LB:20:LYS:HB2	2.59	0.42
4:L7:111:C:H2'	4:L7:112:U:O4'	2.19	0.42
5:L8:144:U:H2'	5:L8:145:C:C6	2.55	0.42
6:LA:29:LEU:HG	6:LA:124:GLY:H	1.84	0.42
6:LA:179:ILE:HA	6:LA:184:ARG:HH21	1.83	0.42
7:LB:169:ARG:HG3	7:LB:170:LEU:HD22	2.01	0.42
7:LB:216:MET:HG3	7:LB:281:ASN:HA	2.01	0.42
16:LL:18:TRP:CD1	16:LL:18:TRP:H	2.36	0.42
18:LN:48:ALA:C	18:LN:53:TYR:HB3	2.44	0.42
20:LP:114:ILE:HA	20:LP:150:LEU:HD13	2.01	0.42
22:LR:150:ALA:O	22:LR:153:LYS:HG2	2.19	0.42
28:LX:90:ILE:HD13	28:LX:96:LEU:HA	2.02	0.42
42:Ll:11:ARG:HD2	42:Ll:12:PHE:N	2.34	0.42
47:Lr:119:ARG:HD3	47:Lr:119:ARG:HA	1.78	0.42
50:SD:125:PHE:HA	50:SD:128:GLU:HG2	2.00	0.42
51:SF:164:ARG:HH21	83:S2:1533:A:H3'	1.84	0.42
52:SK:31:LYS:HE3	52:SK:36:ALA:HA	2.01	0.42
57:SS:78:LYS:HD3	57:SS:78:LYS:HA	1.75	0.42
65:SA:11:LYS:HD2	65:SA:11:LYS:HA	1.83	0.42
67:SC:233:LEU:HD23	67:SC:233:LEU:HA	1.78	0.42
68:SE:46:ILE:HG22	68:SE:49:ARG:HH21	1.84	0.42
76:SV:74:LYS:HZ3	76:SV:83:PHE:HB3	1.85	0.42
83:S2:1090:C:H2'	83:S2:1091:C:H6	1.84	0.42
3:L5:180:C:H2'	3:L5:181:C:H6	1.85	0.42
3:L5:677:G:H2'	3:L5:678:C:C6	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:1188:C:H2'	3:L5:1189:G:H8	1.85	0.42
3:L5:1191:C:H2'	3:L5:1192:C:H6	1.83	0.42
3:L5:1867:A:H2'	3:L5:1868:A:C8	2.55	0.42
3:L5:2264:C:H2'	3:L5:2265:G:O4'	2.20	0.42
3:L5:2634:C:H2'	3:L5:2635:U:H6	1.85	0.42
3:L5:3732:A:H2'	3:L5:3733:A:H8	1.85	0.42
3:L5:3855:C:H2'	3:L5:3856:A:H8	1.84	0.42
3:L5:4093:G:H3'	3:L5:4094:G:H8	1.84	0.42
3:L5:4456:OMC:HM21	7:LB:241:PRO:HD3	2.01	0.42
3:L5:5029:C:O2'	3:L5:5030:U:H6	2.02	0.42
20:LP:40:HIS:HA	20:LP:113:VAL:HG12	2.02	0.42
20:LP:42:ARG:HA	20:LP:45:THR:HG22	2.01	0.42
36:Lf:18:LEU:HD23	36:Lf:19:ARG:NH1	2.35	0.42
36:Lf:56:ASN:HD21	36:Lf:64:PRO:HB2	1.85	0.42
45:Lo:6:LYS:HG3	45:Lo:94:GLY:HA3	2.01	0.42
46:Lp:75:SER:O	46:Lp:79:VAL:HG23	2.19	0.42
54:SP:100:LYS:HB2	83:S2:1240:A:C5	2.54	0.42
64:Sg:183:LYS:HD2	64:Sg:183:LYS:HA	1.89	0.42
76:SV:64:GLU:OE2	76:SV:67:ASP:HB3	2.19	0.42
83:S2:386:C:H2'	83:S2:387:C:H6	1.84	0.42
3:L5:286:U:H2'	3:L5:287:U:C6	2.55	0.42
3:L5:909:A:H2'	3:L5:910:G:H8	1.85	0.42
3:L5:1298:C:H2'	3:L5:1299:G:C8	2.55	0.42
3:L5:1717:C:H2'	3:L5:1718:C:C4	2.55	0.42
3:L5:2006:U:H2'	3:L5:2007:G:O4'	2.19	0.42
3:L5:4232:U:H5''	45:Lo:3:ASN:O	2.20	0.42
3:L5:4697:U:H4'	43:Lm:104:HIS:ND1	2.33	0.42
8:LC:104:PRO:HB2	8:LC:106:LYS:NZ	2.35	0.42
16:LL:42:LYS:HG3	16:LL:45:ARG:HH22	1.84	0.42
20:LP:131:ARG:HG3	20:LP:137:ASN:OD1	2.19	0.42
46:Lp:83:ILE:HD13	46:Lp:83:ILE:HA	1.93	0.42
48:Ls:13:TYR:O	48:Ls:17:ILE:HG12	2.20	0.42
49:Lt:11:LYS:HA	49:Lt:11:LYS:HD2	1.84	0.42
59:SU:61:LEU:HG	62:Sd:34:TYR:CZ	2.54	0.42
65:SA:37:TYR:HA	65:SA:53:ARG:HD3	2.02	0.42
67:SC:208:PRO:O	67:SC:211:LYS:HG2	2.20	0.42
70:SH:157:HIS:HB3	70:SH:190:PRO:HG3	2.02	0.42
73:SL:95:TYR:HB2	73:SL:102:PHE:CE1	2.54	0.42
79:SY:105:LYS:O	79:SY:109:GLU:HG2	2.20	0.42
80:Sa:10:ARG:HH12	83:S2:1859:A:P	2.42	0.42
83:S2:688:U:H1'	83:S2:689:U:OP2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:S2:885:U:O2	83:S2:901:G:C6	2.73	0.42
83:S2:1409:A:H2'	83:S2:1410:C:C6	2.54	0.42
3:L5:152:U:H5''	18:LN:54:LYS:HG2	2.01	0.42
3:L5:171:U:H5''	3:L5:172:C:C5	2.55	0.42
3:L5:440:U:H2'	3:L5:441:G:C8	2.55	0.42
3:L5:1677:PSU:H4'	3:L5:1680:G:C2	2.53	0.42
3:L5:1811:G:H2'	3:L5:1812:C:H6	1.84	0.42
3:L5:1848:C:H2'	3:L5:1849:U:O4'	2.20	0.42
3:L5:2082:G:H5''	21:LQ:12:LYS:HD3	2.02	0.42
3:L5:2499:C:H2'	3:L5:2500:U:H6	1.85	0.42
3:L5:4139:G:N2	3:L5:4140:C:H41	2.12	0.42
3:L5:4727:A:H2'	3:L5:4728:U:O4'	2.19	0.42
11:LF:91:PHE:HB2	11:LF:145:PRO:HG3	2.01	0.42
12:LG:77:PRO:HD2	12:LG:80:ILE:HD13	2.02	0.42
17:LM:38:VAL:HG21	17:LM:50:MET:HE2	2.01	0.42
22:LR:42:ARG:O	22:LR:45:ILE:HG22	2.19	0.42
28:LX:105:ASN:O	28:LX:109:ILE:HD12	2.20	0.42
54:SP:85:ILE:HD13	54:SP:111:MET:HG3	2.01	0.42
56:SR:15:VAL:O	56:SR:18:GLU:HG2	2.20	0.42
68:SE:86:PHE:HE1	68:SE:103:TYR:H	1.68	0.42
68:SE:136:ILE:HD12	68:SE:149:TYR:CE1	2.55	0.42
70:SH:171:GLU:HG2	70:SH:172:THR:N	2.34	0.42
71:SI:98:LYS:HD2	71:SI:178:ARG:HG2	2.01	0.42
77:SW:119:LYS:HA	77:SW:119:LYS:HD3	1.82	0.42
83:S2:1362:U:H5''	83:S2:1363:C:H5	1.83	0.42
83:S2:1657:G:H2'	83:S2:1658:G:H8	1.85	0.42
3:L5:678:C:H2'	3:L5:679:C:C6	2.55	0.42
3:L5:1340:OMC:HN41	3:L5:1516:G:H1	1.66	0.42
3:L5:4561:C:H2'	3:L5:4562:C:C6	2.55	0.42
3:L5:4697:U:H4'	43:Lm:104:HIS:CE1	2.55	0.42
3:L5:4896:G:H2'	3:L5:4897:G:H8	1.83	0.42
8:LC:40:VAL:O	8:LC:44:LEU:HB2	2.20	0.42
8:LC:284:MET:HB3	21:LQ:24:TYR:HD2	1.85	0.42
11:LF:226:HIS:HD2	11:LF:227:PHE:N	2.17	0.42
18:LN:104:GLU:OE1	18:LN:161:MET:HG2	2.19	0.42
21:LQ:18:PRO:HD3	21:LQ:52:PHE:CE1	2.54	0.42
47:Lr:26:SER:HB3	47:Lr:31:ASN:HD22	1.84	0.42
50:SD:13:ALA:HA	50:SD:16:ILE:HG22	2.02	0.42
52:SK:32:HIS:CD2	52:SK:45:VAL:HG21	2.52	0.42
60:SZ:106:GLN:HE21	60:SZ:106:GLN:CA	2.32	0.42
66:SB:82:ARG:HD3	66:SB:103:MET:HE2	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:SC:116:THR:HA	83:S2:1203:G:H4'	2.01	0.42
72:SJ:150:ARG:HG3	83:S2:821:G:C6	2.54	0.42
75:SO:136:PRO:HB3	83:S2:944:A:H1'	2.00	0.42
83:S2:1208:A:H2'	83:S2:1209:A:H8	1.84	0.42
83:S2:1264:C:H4'	83:S2:1265:A:O4'	2.20	0.42
3:L5:192:G:H2'	3:L5:193:G:H8	1.85	0.41
3:L5:1997:U:O2'	3:L5:1998:A:H8	2.02	0.41
3:L5:2638:G:N1	3:L5:2718:U:H2'	2.35	0.41
3:L5:4102:C:H1'	3:L5:4108:G:H1	1.85	0.41
3:L5:4694:G:H4'	13:LH:71:ARG:HH12	1.85	0.41
4:L7:57:C:H2'	4:L7:58:A:C8	2.55	0.41
8:LC:205:ARG:HD3	8:LC:205:ARG:HA	1.88	0.41
12:LG:162:ASP:HB3	12:LG:163:PRO:HD3	2.01	0.41
23:LS:107:THR:O	23:LS:111:ARG:HG2	2.19	0.41
29:LY:74:TYR:CE2	29:LY:77:LYS:HG3	2.48	0.41
31:La:125:LYS:HD3	31:La:125:LYS:HA	1.89	0.41
32:Lb:35:VAL:HB	32:Lb:40:LEU:HD21	2.01	0.41
47:Lr:65:LYS:HE3	47:Lr:65:LYS:HB2	1.82	0.41
49:Lt:61:LYS:HA	49:Lt:75:PRO:HD2	2.03	0.41
53:SM:79:VAL:HG11	53:SM:85:LEU:HD22	2.01	0.41
56:SR:128:PHE:CD2	56:SR:129:LYS:HG3	2.55	0.41
57:SS:102:GLY:O	57:SS:106:LYS:HG2	2.20	0.41
65:SA:219:GLU:HA	65:SA:222:VAL:HG12	2.02	0.41
66:SB:32:ASP:HB2	66:SB:94:LYS:NZ	2.35	0.41
67:SC:110:MET:HE1	67:SC:127:PHE:CZ	2.55	0.41
73:SL:77:VAL:HG11	73:SL:80:MET:HE2	2.01	0.41
74:SN:63:VAL:O	74:SN:67:THR:HG22	2.20	0.41
83:S2:674:C:H2'	83:S2:675:U:C6	2.55	0.41
83:S2:959:G:H1'	83:S2:964:A:N6	2.35	0.41
83:S2:1047:C:H2'	83:S2:1048:G:O4'	2.20	0.41
2:Pt:27:U:C2	2:Pt:28:U:C5	3.09	0.41
3:L5:1181:C:O2'	3:L5:1183:C:H5''	2.20	0.41
3:L5:1534:A2M:C8	40:Lj:15:THR:HG23	2.50	0.41
3:L5:1820:C:H2'	3:L5:1822:U:H5'	2.02	0.41
3:L5:4260:U:H2'	3:L5:4261:C:H6	1.84	0.41
3:L5:4910:G:C4	19:LO:156:LEU:HD13	2.55	0.41
4:L7:113:G:H2'	4:L7:114:U:C6	2.55	0.41
5:L8:43:A:H2'	5:L8:44:A:H8	1.84	0.41
6:LA:20:VAL:HG12	6:LA:23:ARG:NH1	2.35	0.41
8:LC:218:ILE:HG12	8:LC:229:LEU:HD22	2.02	0.41
13:LH:44:GLU:HG3	13:LH:58:ASP:HB2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:LH:117:PHE:O	13:LH:120:GLU:HG3	2.20	0.41
14:LI:183:ASP:O	14:LI:187:LYS:HG2	2.20	0.41
17:LM:33:GLN:HB3	23:LS:145:PHE:HZ	1.85	0.41
36:Lf:8:LYS:HB3	36:Lf:100:ARG:CZ	2.50	0.41
40:Lj:17:THR:HB	40:Lj:29:LEU:HD21	2.01	0.41
41:Lk:27:LYS:HD2	41:Lk:32:VAL:HG22	2.01	0.41
42:Ll:49:LEU:HD23	42:Ll:49:LEU:HA	1.91	0.41
49:Lt:147:HIS:HA	49:Lt:148:PRO:HD3	1.88	0.41
52:SK:41:PRO:HG2	52:SK:44:HIS:HB2	2.03	0.41
56:SR:77:GLU:HG2	56:SR:80:ARG:HH21	1.84	0.41
57:SS:102:GLY:HA2	57:SS:105:ASN:ND2	2.35	0.41
60:SZ:80:ARG:HH11	83:S2:1598:G:H5''	1.85	0.41
64:Sg:191:HIS:CE1	64:Sg:217:MET:HB2	2.55	0.41
70:SH:23:ILE:HD12	70:SH:23:ILE:HA	1.97	0.41
73:SL:133:PRO:HB3	73:SL:139:ARG:NH1	2.35	0.41
75:SO:37:PHE:CE1	75:SO:110:PRO:HD3	2.55	0.41
83:S2:403:G:H2'	83:S2:404:G:C8	2.54	0.41
83:S2:943:U:H2'	83:S2:944:A:H8	1.85	0.41
83:S2:1740:C:H2'	83:S2:1741:U:C6	2.54	0.41
3:L5:135:G:C6	38:Lh:96:ASN:HA	2.55	0.41
3:L5:325:U:H3'	39:Li:28:ARG:HH21	1.85	0.41
3:L5:1281:G:C6	10:LE:128:HIS:HB2	2.55	0.41
3:L5:1514:U:H2'	3:L5:1515:A:H8	1.85	0.41
3:L5:3706:C:H5''	6:LA:226:ARG:N	2.35	0.41
3:L5:3823:G:H2'	3:L5:3824:A:H8	1.85	0.41
3:L5:3920:PSU:H2'	3:L5:3921:U:C6	2.56	0.41
3:L5:4069:U:H2'	3:L5:4070:U:C6	2.56	0.41
3:L5:4164:C:H2'	3:L5:4165:C:C6	2.55	0.41
3:L5:4210:U:H3	3:L5:4222:G:H1	1.68	0.41
3:L5:4460:U:H2'	3:L5:4461:C:H6	1.84	0.41
3:L5:4563:U:H2'	3:L5:4564:A:C8	2.54	0.41
3:L5:4592:C:H2'	3:L5:4593:C:H6	1.86	0.41
3:L5:4872:G:C2	19:LO:203:VAL:HG23	2.55	0.41
3:L5:4923:C:C2	3:L5:4924:C:N3	2.89	0.41
4:L7:7:G:H5''	9:LD:22:ARG:HD3	2.01	0.41
4:L7:119:U:C2	9:LD:261:VAL:HG11	2.55	0.41
14:LI:182:GLU:HG2	14:LI:183:ASP:N	2.35	0.41
20:LP:109:VAL:HA	20:LP:112:LEU:HD13	2.00	0.41
24:LT:122:LYS:NZ	24:LT:124:THR:HB	2.36	0.41
30:LZ:26:VAL:HG22	30:LZ:91:LEU:HD11	2.01	0.41
43:Lm:99:CYS:HB3	43:Lm:115:CYS:HB3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:ST:113:VAL:HG22	58:ST:123:LEU:HD23	2.02	0.41
65:SA:109:THR:HG21	83:S2:1378:A:H61	1.84	0.41
68:SE:11:ARG:NH1	68:SE:20:LEU:HB3	2.35	0.41
68:SE:28:ALA:O	83:S2:496:C:H4'	2.19	0.41
69:SG:30:LYS:O	69:SG:102:VAL:HG12	2.20	0.41
70:SH:43:LEU:HB3	70:SH:72:PHE:CE1	2.54	0.41
78:SX:140:ARG:HE	78:SX:141:PRO:HD2	1.84	0.41
83:S2:943:U:H2'	83:S2:944:A:C8	2.55	0.41
83:S2:1647:A:N1	83:S2:1675:A:H5''	2.36	0.41
3:L5:1198:G:H2'	3:L5:1199:G:H8	1.84	0.41
3:L5:2327:G:H2'	3:L5:2328:G:H8	1.85	0.41
3:L5:2474:G:C6	28:LX:47:ARG:HG2	2.55	0.41
3:L5:2749:C:H4'	37:Lg:64:LEU:HB3	2.02	0.41
3:L5:3601:C:H2'	3:L5:3602:C:C6	2.55	0.41
3:L5:4130:C:H2'	3:L5:4131:G:C8	2.55	0.41
3:L5:4130:C:H2'	3:L5:4131:G:H8	1.85	0.41
3:L5:4683:U:H2'	3:L5:4684:A:C8	2.56	0.41
6:LA:117:GLU:HG2	6:LA:163:ARG:O	2.19	0.41
9:LD:89:LYS:HD2	9:LD:90:VAL:HB	2.01	0.41
9:LD:179:ARG:HD3	9:LD:179:ARG:HA	1.81	0.41
10:LE:223:ARG:HB3	10:LE:224:LYS:HB2	2.03	0.41
22:LR:105:LEU:HD11	22:LR:109:TYR:CZ	2.55	0.41
23:LS:103:ALA:O	23:LS:107:THR:HG23	2.21	0.41
25:LU:42:PHE:CZ	25:LU:46:ARG:HG3	2.55	0.41
36:Lf:45:LYS:HA	36:Lf:107:PRO:HD2	2.02	0.41
50:SD:49:ILE:HG22	50:SD:87:TYR:HB3	2.02	0.41
62:Sd:55:LEU:HD12	83:S2:1391:OMC:H4'	2.02	0.41
66:SB:32:ASP:HB2	66:SB:94:LYS:HZ2	1.85	0.41
66:SB:107:ARG:HA	66:SB:110:MET:HG2	2.03	0.41
69:SG:136:LYS:HB3	83:S2:170:A:O5'	2.20	0.41
71:SI:5:ARG:NH1	83:S2:380:G:H1'	2.36	0.41
80:Sa:15:ARG:HH22	83:S2:992:A:H3'	1.85	0.41
81:Sb:19:HIS:NE2	81:Sb:21:LYS:HE2	2.35	0.41
83:S2:51:U:H2'	83:S2:52:G:C8	2.55	0.41
83:S2:159:A2M:HM'3	83:S2:159:A2M:H1'	1.48	0.41
83:S2:681:PSU:H2'	83:S2:682:U:C6	2.55	0.41
83:S2:1189:A:H2'	83:S2:1190:A:H8	1.85	0.41
83:S2:1244:PSU:H2'	83:S2:1245:G:C8	2.54	0.41
83:S2:1329:U:C2	83:S2:1500:G:O6	2.74	0.41
83:S2:1380:C:H2'	83:S2:1381:G:C8	2.56	0.41
83:S2:1852:C:H2'	83:S2:1853:C:C6	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Pt:43:A:H2'	2:Pt:44:A:C8	2.55	0.41
3:L5:228:C:H2'	3:L5:229:G:C8	2.55	0.41
3:L5:678:C:H2'	3:L5:679:C:H6	1.86	0.41
3:L5:727:C:H2'	3:L5:728:U:C6	2.55	0.41
3:L5:1270:A:H8	3:L5:2106:G:H21	1.67	0.41
3:L5:1578:U:H2'	3:L5:1579:C:C6	2.55	0.41
3:L5:1645:C:H2'	3:L5:1646:A:C8	2.55	0.41
3:L5:1997:U:H2'	3:L5:1998:A:H3'	2.01	0.41
3:L5:2519:U:H1'	3:L5:2520:C:C6	2.55	0.41
3:L5:2624:G:H2'	3:L5:2625:U:H6	1.83	0.41
3:L5:2774:C:H2'	3:L5:2775:C:C6	2.56	0.41
3:L5:4629:U:C2	3:L5:4630:G:C8	3.08	0.41
3:L5:5002:U:H2'	3:L5:5003:U:C6	2.55	0.41
4:L7:94:C:H2'	4:L7:95:C:H6	1.85	0.41
5:L8:30:U:H2'	5:L8:31:G:C8	2.56	0.41
6:LA:201:GLY:HA2	6:LA:204:MET:HG3	2.02	0.41
7:LB:385:LYS:O	7:LB:389:MET:HG2	2.21	0.41
11:LF:243:LEU:HG	11:LF:247:MET:HE3	2.02	0.41
25:LU:103:VAL:O	25:LU:111:GLU:HG3	2.21	0.41
30:LZ:32:GLY:HA2	30:LZ:36:ARG:O	2.20	0.41
46:Lp:48:LYS:HE3	46:Lp:48:LYS:HB3	1.87	0.41
47:Lr:64:ILE:HB	47:Lr:102:TYR:CZ	2.55	0.41
49:Lt:12:VAL:HA	49:Lt:14:TYR:CE2	2.55	0.41
51:SF:151:ILE:HD12	51:SF:151:ILE:HA	1.95	0.41
65:SA:70:ASN:HB3	65:SA:73:ASP:HB2	2.03	0.41
68:SE:124:CYS:HB3	68:SE:141:THR:HB	2.02	0.41
71:SI:125:LYS:HA	71:SI:125:LYS:HD3	1.93	0.41
75:SO:61:LYS:HG3	75:SO:77:ALA:HB2	2.02	0.41
83:S2:85:A:H2'	83:S2:86:C:H6	1.86	0.41
83:S2:146:G:H2'	83:S2:147:A:C8	2.55	0.41
83:S2:514:U:H2'	83:S2:515:G:O4'	2.21	0.41
83:S2:695:C:H2'	83:S2:735:C:N4	2.35	0.41
83:S2:1595:U:H2'	83:S2:1596:U:H6	1.86	0.41
3:L5:126:C:H2'	3:L5:127:G:C8	2.56	0.41
3:L5:1194:G:H2'	3:L5:1195:G:H8	1.84	0.41
3:L5:1733:G:N3	3:L5:4214:A:H2'	2.36	0.41
3:L5:2497:C:H2'	3:L5:2498:C:H6	1.86	0.41
3:L5:2532:C:H2'	3:L5:2533:C:C6	2.56	0.41
3:L5:2610:G:H2'	3:L5:2611:A:C8	2.55	0.41
3:L5:2682:G:H2'	3:L5:2683:C:C6	2.55	0.41
3:L5:4571:A2M:H8	3:L5:4571:A2M:O5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:4575:G:H2'	3:L5:4576:PSU:H6	1.85	0.41
3:L5:4708:A:N3	3:L5:4709:U:H5'	2.35	0.41
5:L8:103:A:H5'	5:L8:104:A:H8	1.86	0.41
5:L8:123:U:H2'	5:L8:126:C:N4	2.36	0.41
8:LC:106:LYS:HD3	8:LC:106:LYS:HA	1.80	0.41
10:LE:254:ASP:HA	10:LE:257:ILE:HB	2.03	0.41
12:LG:257:LYS:HZ3	12:LG:261:LEU:HD11	1.86	0.41
17:LM:90:ARG:HA	17:LM:93:LYS:HG2	2.01	0.41
29:LY:34:LEU:HD23	29:LY:38:LEU:HB3	2.03	0.41
33:Lc:31:TYR:CD1	33:Lc:56:ARG:HD2	2.56	0.41
56:SR:7:LYS:HB3	56:SR:11:LYS:HE2	2.02	0.41
58:ST:41:LYS:HD2	83:S2:1627:C:H5''	2.02	0.41
62:Sd:10:HIS:HB3	83:S2:1513:C:OP1	2.20	0.41
64:Sg:314:ILE:HD12	64:Sg:314:ILE:HA	1.93	0.41
65:SA:216:ALA:O	65:SA:219:GLU:HG2	2.21	0.41
66:SB:84:PHE:HB3	66:SB:86:LEU:HD23	2.03	0.41
72:SJ:86:VAL:HG21	72:SJ:105:PHE:HE1	1.84	0.41
78:SX:33:GLY:HA2	78:SX:36:LEU:HD13	2.03	0.41
80:Sa:45:VAL:HG11	80:Sa:53:ILE:HD11	2.02	0.41
83:S2:107:A:H2'	83:S2:108:G:C8	2.54	0.41
83:S2:508:A:H5'	83:S2:509:OMG:OP2	2.21	0.41
83:S2:1173:A:H2'	83:S2:1174:PSU:C6	2.56	0.41
83:S2:1597:C:H4'	83:S2:1603:G:O6	2.21	0.41
83:S2:1630:A:H2'	83:S2:1630:A:N3	2.34	0.41
83:S2:1854:U:H2'	83:S2:1855:G:H8	1.86	0.41
3:L5:302:C:H2'	3:L5:303:C:C6	2.56	0.41
3:L5:388:A:H5'	3:L5:389:A:H5'	2.02	0.41
3:L5:724:C:OP1	8:LC:350:ARG:HD3	2.20	0.41
3:L5:1458:C:C2	3:L5:1459:A:C8	3.09	0.41
3:L5:1754:U:H2'	3:L5:1755:C:C5	2.55	0.41
3:L5:2283:G:H2'	3:L5:2284:G:C8	2.55	0.41
3:L5:2376:A:H2'	3:L5:2377:C:C6	2.56	0.41
3:L5:2422:OMC:HM23	3:L5:2422:OMC:H1'	1.62	0.41
3:L5:2431:A:H2'	3:L5:2432:U:C6	2.56	0.41
3:L5:3641:U:H5	3:L5:3646:A:N7	2.19	0.41
3:L5:3664:G:H2'	3:L5:3665:G:C8	2.50	0.41
3:L5:3785:A2M:H2	3:L5:4551:U:O2	2.20	0.41
3:L5:4719:G:O2'	3:L5:4720:C:H5''	2.20	0.41
3:L5:4761:G:H2'	3:L5:4762:A:C8	2.55	0.41
7:LB:302:ASN:HB2	7:LB:313:SER:HA	2.03	0.41
9:LD:150:LEU:HD23	9:LD:150:LEU:HA	1.90	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:LH:90:TYR:CZ	13:LH:184:LYS:HG2	2.56	0.41
13:LH:170:LYS:HD2	13:LH:175:PHE:CE1	2.56	0.41
18:LN:22:LEU:HD12	18:LN:26:ARG:NH1	2.36	0.41
31:La:72:THR:OG1	31:La:112:LEU:HG	2.20	0.41
38:Lh:54:ILE:HA	38:Lh:57:VAL:HG12	2.01	0.41
40:Lj:2:THR:HB	40:Lj:6:SER:HB2	2.02	0.41
68:SE:246:LEU:HD13	68:SE:250:GLU:HG2	2.03	0.41
83:S2:698:G:H5'	83:S2:733:C:N3	2.35	0.41
83:S2:734:C:H42	83:S2:737:G:H22	1.68	0.41
83:S2:835:C:H2'	83:S2:837:A:C6	2.54	0.41
83:S2:1104:G:H2'	83:S2:1105:G:H8	1.84	0.41
83:S2:1402:A:H3'	83:S2:1405:A:N6	2.36	0.41
3:L5:69:A:H2	3:L5:71:C:H42	1.68	0.41
3:L5:398:A2M:HM'3	3:L5:398:A2M:H1'	1.56	0.41
3:L5:440:U:H2'	3:L5:441:G:H8	1.86	0.41
3:L5:1247:U:H2'	3:L5:1248:C:C6	2.56	0.41
3:L5:1444:G:H22	3:L5:2104:G:N2	2.19	0.41
3:L5:2335:C:H2'	3:L5:2336:G:H8	1.85	0.41
3:L5:2611:A:H2'	3:L5:2612:G:H8	1.86	0.41
3:L5:2722:G:H2'	3:L5:2723:U:O4'	2.20	0.41
3:L5:3718:A2M:H2	3:L5:3934:G:C1'	2.51	0.41
5:L8:75:OMG:C8	42:Ll:30:LYS:HG2	2.55	0.41
8:LC:76:ILE:HG12	8:LC:96:CYS:SG	2.61	0.41
8:LC:116:ASN:HB2	8:LC:119:GLN:OE1	2.20	0.41
8:LC:236:ASN:HB3	8:LC:239:LYS:HG2	2.03	0.41
10:LE:153:LEU:HD11	10:LE:195:ILE:HG13	2.03	0.41
12:LG:86:ALA:HB3	12:LG:185:LYS:HE2	2.03	0.41
17:LM:25:VAL:HB	17:LM:38:VAL:HG13	2.03	0.41
19:LO:179:LYS:O	19:LO:182:GLU:HG3	2.21	0.41
21:LQ:18:PRO:HD3	21:LQ:52:PHE:CD1	2.56	0.41
22:LR:166:THR:HG21	83:S2:873:G:H5'	2.02	0.41
46:Lp:62:LYS:HE3	46:Lp:62:LYS:HB2	1.87	0.41
56:SR:59:LYS:O	56:SR:62:GLN:HG3	2.21	0.41
64:Sg:241:PHE:CE2	64:Sg:248:LEU:HD12	2.56	0.41
68:SE:74:GLY:O	68:SE:75:LYS:HD2	2.20	0.41
69:SG:191:ARG:O	69:SG:195:LYS:HG3	2.20	0.41
83:S2:218:U:H2'	83:S2:219:U:H6	1.86	0.41
83:S2:462:OMC:H2'	83:S2:463:C:C6	2.56	0.41
83:S2:635:G:H2'	83:S2:636:C:C6	2.55	0.41
83:S2:639:C:H2'	83:S2:640:A:H8	1.82	0.41
83:S2:815:U:C2	83:S2:816:A:C8	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CI:59:GLN:HB2	25:LU:99:TRP:HE1	1.86	0.41
3:L5:94:A:C5	3:L5:95:G:H1'	2.55	0.41
3:L5:135:G:H5''	3:L5:136:C:O4'	2.21	0.41
3:L5:428:G:H2'	3:L5:429:A:C8	2.56	0.41
3:L5:441:G:H2'	3:L5:442:G:C8	2.56	0.41
3:L5:697:G:H2'	3:L5:698:G:C8	2.56	0.41
3:L5:946:C:H2'	3:L5:947:C:C6	2.56	0.41
3:L5:1628:C:H42	6:LA:3:ARG:HD3	1.84	0.41
3:L5:1728:U:H2'	3:L5:1729:A:H8	1.85	0.41
3:L5:1768:C:H2'	3:L5:1770:A:N7	2.36	0.41
3:L5:1863:U:H2'	3:L5:1864:G:H8	1.84	0.41
3:L5:1908:A:H2'	3:L5:1909:G:O4'	2.20	0.41
3:L5:2019:C:H2'	3:L5:2020:U:C6	2.55	0.41
3:L5:2249:C:H2'	3:L5:2250:C:H5	1.85	0.41
3:L5:2275:G:H2'	3:L5:2276:A:C8	2.56	0.41
3:L5:2386:U:H2'	3:L5:2387:G:H8	1.86	0.41
3:L5:2730:U:H2'	3:L5:2731:C:H6	1.86	0.41
3:L5:3723:A:H2'	3:L5:3724:A:H8	1.86	0.41
3:L5:4277:G:H2'	3:L5:4278:C:C6	2.55	0.41
3:L5:4301:U:H4'	24:LT:54:HIS:CD2	2.55	0.41
3:L5:4303:C:H1'	3:L5:4306:OMU:H5	2.03	0.41
3:L5:4323:A:C2	9:LD:146:LEU:HD23	2.56	0.41
3:L5:4336:A:H5''	3:L5:4337:C:H5'	2.02	0.41
3:L5:4524:G:H2'	3:L5:4525:C:C6	2.56	0.41
3:L5:4628:PSU:C4	3:L5:4629:U:C5	3.09	0.41
3:L5:4775:C:H41	3:L5:4859:C:H42	1.67	0.41
3:L5:4923:C:N3	3:L5:4924:C:N3	2.69	0.41
3:L5:4974:C:H1'	3:L5:4985:U:O2	2.21	0.41
85:L5:5291:SPM:H31	85:L5:5291:SPM:H62	1.91	0.41
5:L8:36:G:C5	38:Lh:89:ARG:HD3	2.55	0.41
5:L8:129:C:H2'	5:L8:130:C:C6	2.56	0.41
7:LB:56:ILE:HD12	7:LB:368:ILE:HG12	2.01	0.41
7:LB:160:ILE:HD11	7:LB:193:LYS:HB3	2.03	0.41
7:LB:165:HIS:HB3	7:LB:180:LEU:HD23	2.03	0.41
8:LC:317:ASN:HB3	8:LC:320:LYS:HB2	2.02	0.41
12:LG:159:HIS:CD2	12:LG:185:LYS:HD3	2.56	0.41
15:LJ:44:THR:HA	15:LJ:78:LYS:HE2	2.02	0.41
18:LN:13:LYS:HZ1	39:Li:45:ARG:HA	1.84	0.41
20:LP:13:LYS:HB3	20:LP:152:GLU:HB3	2.03	0.41
22:LR:102:LEU:HB3	22:LR:127:VAL:HG21	2.03	0.41
23:LS:7:LEU:H	23:LS:107:THR:CG2	2.34	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:LS:27:LEU:HD22	23:LS:62:VAL:HG11	2.03	0.41
25:LU:65:ARG:HG2	25:LU:67:LYS:N	2.36	0.41
28:LX:63:LYS:NZ	38:Lh:81:LEU:HD11	2.36	0.41
28:LX:149:VAL:HA	28:LX:152:LYS:HG3	2.03	0.41
30:LZ:103:ASP:HB3	30:LZ:106:LEU:HB2	2.03	0.41
40:Lj:85:LYS:HE3	40:Lj:85:LYS:HB3	1.76	0.41
44:Ln:14:LYS:HD3	44:Ln:18:ARG:NH1	2.34	0.41
50:SD:7:LYS:HD3	59:SU:25:THR:HG21	2.02	0.41
50:SD:25:LEU:HD22	50:SD:37:VAL:HB	2.02	0.41
51:SF:76:MET:HE3	51:SF:76:MET:HB3	1.93	0.41
52:SK:25:LYS:HB2	52:SK:67:PHE:HE1	1.86	0.41
57:SS:40:TYR:OH	57:SS:97:GLN:HG2	2.20	0.41
57:SS:132:ARG:HD3	83:S2:1623:A:C5	2.56	0.41
59:SU:99:LYS:HZ3	59:SU:99:LYS:HG2	1.72	0.41
64:Sg:52:TYR:CE2	64:Sg:309:VAL:HG21	2.55	0.41
64:Sg:240:CYS:SG	64:Sg:249:CYS:HB3	2.61	0.41
66:SB:114:VAL:HG22	66:SB:120:MET:HE1	2.01	0.41
67:SC:60:TRP:CG	67:SC:92:GLU:HG3	2.55	0.41
67:SC:68:ARG:CZ	67:SC:276:THR:HB	2.51	0.41
67:SC:115:GLN:HA	67:SC:120:GLN:HG3	2.03	0.41
69:SG:140:ARG:HD2	83:S2:170:A:OP1	2.21	0.41
70:SH:144:ILE:HB	77:SW:52:ILE:HB	2.02	0.41
72:SJ:60:LEU:HD11	72:SJ:73:GLU:HB3	2.01	0.41
74:SN:126:ALA:HB1	74:SN:139:TRP:HZ3	1.86	0.41
78:SX:132:ALA:HB1	78:SX:138:LYS:HG2	2.03	0.41
79:SY:68:LYS:HB3	79:SY:68:LYS:HE2	1.81	0.41
80:Sa:26:CYS:SG	80:Sa:28:ARG:HG3	2.61	0.41
83:S2:379:C:H2'	83:S2:380:G:C8	2.55	0.41
83:S2:561:A:H2'	83:S2:562:U:C6	2.55	0.41
83:S2:570:C:H2'	83:S2:571:U:O4'	2.20	0.41
83:S2:615:C:H2'	83:S2:616:A:O4'	2.21	0.41
83:S2:910:G:H2'	83:S2:911:C:O4'	2.21	0.41
83:S2:930:C:H42	83:S2:1011:A:H62	1.69	0.41
83:S2:1353:A:H2'	83:S2:1354:G:C8	2.56	0.41
83:S2:1501:C:H2'	83:S2:1502:C:C6	2.56	0.41
83:S2:1733:U:H2'	83:S2:1734:G:O4'	2.21	0.41
83:S2:1802:C:H2'	83:S2:1803:U:H6	1.85	0.41
3:L5:20:U:H3'	3:L5:21:G:H8	1.85	0.41
3:L5:271:C:H2'	3:L5:272:U:H6	1.86	0.41
3:L5:714:G:H2'	3:L5:715:G:C8	2.56	0.41
3:L5:1323:A2M:HM'3	3:L5:1323:A2M:H1'	1.90	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:1524:A2M:H8	3:L5:3915:U:O2	2.20	0.41
3:L5:2858:A:H2'	3:L5:2859:G:H8	1.83	0.41
3:L5:4458:C:H2'	3:L5:4459:U:H6	1.86	0.41
3:L5:4523:A2M:H1'	3:L5:4523:A2M:HM'3	1.74	0.41
3:L5:4674:C:H2'	3:L5:4675:U:C6	2.56	0.41
6:LA:61:VAL:HB	6:LA:74:GLU:OE2	2.21	0.41
7:LB:49:TYR:HE2	7:LB:344:VAL:HG22	1.86	0.41
7:LB:219:VAL:HG22	7:LB:347:LEU:HD13	2.02	0.41
11:LF:240:ILE:O	11:LF:244:ILE:HD12	2.21	0.41
18:LN:200:LEU:HD22	18:LN:204:ARG:NH1	2.36	0.41
19:LO:189:ILE:HD13	19:LO:189:ILE:HA	1.96	0.41
22:LR:177:LEU:O	22:LR:181:LYS:HG2	2.21	0.41
26:LV:72:LEU:HA	26:LV:75:LYS:HZ2	1.86	0.41
30:LZ:67:LYS:HA	30:LZ:119:GLU:OE2	2.21	0.41
33:Lc:29:LEU:HD12	33:Lc:91:VAL:HG21	2.02	0.41
48:Ls:28:PHE:HB3	48:Ls:189:ILE:HD11	2.03	0.41
50:SD:167:TYR:CE2	50:SD:204:LEU:HD23	2.56	0.41
54:SP:108:LYS:O	54:SP:111:MET:HG2	2.21	0.41
55:SQ:78:VAL:HG11	83:S2:1674:G:P	2.61	0.41
57:SS:114:LEU:HB3	57:SS:122:GLY:HA3	2.03	0.41
67:SC:256:TRP:CE2	77:SW:68:ARG:HD3	2.55	0.41
68:SE:29:PRO:HA	83:S2:496:C:H5'	2.02	0.41
69:SG:41:LEU:HB3	69:SG:45:TRP:CE3	2.56	0.41
70:SH:20:GLU:O	70:SH:23:ILE:HG22	2.21	0.41
81:Sb:19:HIS:CD2	81:Sb:21:LYS:H	2.39	0.41
83:S2:39:A:H3'	83:S2:40:A:C8	2.54	0.41
83:S2:455:A:H2'	83:S2:456:C:C6	2.55	0.41
83:S2:1227:G:H5''	83:S2:1639:G7M:O6	2.21	0.41
83:S2:1349:G:H2'	83:S2:1350:U:C6	2.55	0.41
83:S2:1406:G:H2'	83:S2:1407:U:C6	2.55	0.41
3:L5:86:U:H2'	3:L5:87:A:H8	1.84	0.40
3:L5:173:C:H2'	3:L5:174:C:C6	2.56	0.40
3:L5:473:C:H2'	3:L5:474:C:C6	2.56	0.40
3:L5:659:G:H2'	3:L5:660:A:C8	2.55	0.40
3:L5:1490:G:H2'	3:L5:1491:A:C8	2.57	0.40
3:L5:1603:C:H2'	3:L5:1604:G:H8	1.86	0.40
3:L5:1972:G:C6	3:L5:1995:G:N1	2.89	0.40
3:L5:2390:G:H22	3:L5:2825:A:H2	1.68	0.40
3:L5:2528:G:H4'	3:L5:2783:A:H4'	2.03	0.40
3:L5:2888:G:H2'	3:L5:2889:G:H8	1.86	0.40
3:L5:4471:PSU:H2'	3:L5:4472:G:C8	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:4577:U:H2'	3:L5:4578:G:C8	2.56	0.40
3:L5:4619:U:H2'	3:L5:4620:OMU:H6	2.02	0.40
7:LB:39:LYS:HG2	7:LB:42:HIS:CE1	2.56	0.40
13:LH:26:ILE:HG13	13:LH:35:ARG:NE	2.36	0.40
14:LI:48:LEU:O	14:LI:139:ARG:HA	2.20	0.40
16:LL:142:GLU:O	16:LL:146:LEU:HB3	2.21	0.40
20:LP:94:MET:HE3	20:LP:146:ILE:HG22	2.03	0.40
21:LQ:56:THR:HB	21:LQ:146:ARG:NH1	2.37	0.40
30:LZ:23:ALA:HB1	30:LZ:43:VAL:HG22	2.03	0.40
36:Lf:78:HIS:HB3	36:Lf:83:MET:HB2	2.03	0.40
37:Lg:83:CYS:SG	37:Lg:86:CYS:HB2	2.61	0.40
48:Ls:78:LEU:O	48:Ls:82:ILE:HG12	2.21	0.40
52:SK:55:ARG:HG3	83:S2:1277:C:H4'	2.03	0.40
55:SQ:89:SER:HB2	55:SQ:112:LEU:HD11	2.03	0.40
55:SQ:106:LYS:NZ	55:SQ:110:ASP:HB3	2.36	0.40
64:Sg:101:PHE:CE2	64:Sg:136:GLY:HA2	2.55	0.40
77:SW:45:GLY:O	77:SW:68:ARG:HD2	2.21	0.40
78:SX:33:GLY:HA2	78:SX:36:LEU:HB2	2.03	0.40
78:SX:61:GLN:HG3	78:SX:62:PRO:HD3	2.02	0.40
83:S2:92:A:C8	83:S2:447:A:C4	3.09	0.40
83:S2:342:C:H2'	83:S2:343:A:C8	2.54	0.40
83:S2:389:A:H2'	83:S2:390:C:C6	2.56	0.40
83:S2:979:C:H2'	83:S2:980:A:C8	2.57	0.40
83:S2:1389:C:H2'	83:S2:1390:U:C6	2.56	0.40
3:L5:19:G:H2'	3:L5:20:U:C6	2.57	0.40
3:L5:423:G:H2'	3:L5:424:U:C6	2.57	0.40
3:L5:455:C:O2'	3:L5:456:C:H5'	2.21	0.40
3:L5:674:G:H2'	3:L5:675:C:H6	1.87	0.40
3:L5:746:A:H2'	3:L5:747:A:C8	2.56	0.40
3:L5:1481:C:H41	39:Li:4:ARG:HG3	1.86	0.40
3:L5:1490:G:H2'	3:L5:1491:A:H8	1.87	0.40
3:L5:1807:C:H2'	3:L5:1808:C:C6	2.57	0.40
3:L5:2476:G:H2'	3:L5:2477:A:H8	1.86	0.40
3:L5:3652:A:H2'	3:L5:3653:A:C5	2.57	0.40
3:L5:4139:G:H21	3:L5:4140:C:N4	2.12	0.40
8:LC:164:THR:HG22	8:LC:220:ALA:O	2.21	0.40
10:LE:115:TYR:HD1	47:Lr:115:SER:HB3	1.84	0.40
13:LH:128:MET:SD	13:LH:157:SER:HB3	2.62	0.40
16:LL:75:GLY:HA2	16:LL:97:SER:OG	2.22	0.40
18:LN:22:LEU:HD12	18:LN:26:ARG:HH12	1.86	0.40
19:LO:110:PRO:N	19:LO:111:PRO:HD2	2.35	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:LX:84:GLU:O	28:LX:87:MET:HG3	2.21	0.40
40:Lj:28:HIS:CE1	40:Lj:30:GLN:HB3	2.55	0.40
41:Lk:33:LYS:HG2	41:Lk:46:VAL:HG22	2.03	0.40
45:Lo:14:LYS:HB3	45:Lo:77:CYS:SG	2.61	0.40
49:Lt:116:MET:H	49:Lt:116:MET:HG3	1.77	0.40
57:SS:5:ILE:HD11	57:SS:9:PHE:CG	2.57	0.40
65:SA:68:ILE:HG23	65:SA:120:ARG:NH1	2.36	0.40
69:SG:79:LYS:HG2	69:SG:86:PRO:HB3	2.02	0.40
79:SY:42:GLU:HA	79:SY:52:PRO:HB3	2.03	0.40
81:Sb:16:LYS:HA	81:Sb:16:LYS:HD3	1.78	0.40
83:S2:939:U:H2'	83:S2:940:U:C6	2.56	0.40
83:S2:1233:G:C6	83:S2:1526:G:C6	3.09	0.40
83:S2:1407:U:H2'	83:S2:1408:U:H6	1.85	0.40
83:S2:1473:G:H5'	83:S2:1474:A:OP2	2.22	0.40
3:L5:73:A:N6	16:LL:103:ARG:HH22	2.20	0.40
3:L5:286:U:H3	3:L5:301:G:H1	1.68	0.40
3:L5:978:G:H2'	3:L5:979:C:C6	2.55	0.40
3:L5:1298:C:H2'	3:L5:1299:G:H8	1.86	0.40
3:L5:1509:C:H5''	31:La:2:PRO:HG3	2.03	0.40
3:L5:1572:U:H2'	3:L5:1573:G:C8	2.57	0.40
3:L5:2521:G:H2'	3:L5:2522:G:H8	1.86	0.40
3:L5:3831:U:H2'	3:L5:3832:U:H6	1.87	0.40
3:L5:4460:U:H2'	3:L5:4461:C:C6	2.56	0.40
3:L5:4888:U:H2'	3:L5:4889:G:C8	2.56	0.40
3:L5:5026:U:H4'	3:L5:5027:C:O4'	2.22	0.40
5:L8:13:G:C5	5:L8:14:U:C4	3.09	0.40
8:LC:144:ILE:HG13	8:LC:144:ILE:O	2.22	0.40
18:LN:113:LEU:HB3	18:LN:134:LEU:HD23	2.03	0.40
25:LU:91:LEU:HD13	25:LU:96:LEU:HB2	2.04	0.40
28:LX:96:LEU:HD12	28:LX:140:LEU:HD11	2.03	0.40
48:Ls:18:ILE:HD13	48:Ls:68:HIS:HB3	2.04	0.40
50:SD:167:TYR:HE2	50:SD:204:LEU:HD23	1.86	0.40
54:SP:18:ARG:NE	57:SS:88:LYS:HG2	2.36	0.40
55:SQ:53:GLU:HB3	55:SQ:54:PRO:HD3	2.02	0.40
66:SB:125:VAL:HB	66:SB:169:MET:SD	2.61	0.40
67:SC:208:PRO:O	67:SC:212:LYS:HG2	2.21	0.40
68:SE:152:PRO:HG2	69:SG:216:ARG:HG3	2.03	0.40
76:SV:27:LYS:HD3	76:SV:29:HIS:CE1	2.55	0.40
83:S2:442:C:H2'	83:S2:443:U:C6	2.56	0.40
83:S2:808:A:H2'	83:S2:809:A:C8	2.57	0.40
83:S2:974:C:H2'	83:S2:975:G:C8	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:S2:1031:A2M:H2'	83:S2:1032:C:O4'	2.21	0.40
83:S2:1631:U:H2'	83:S2:1632:G:C4	2.57	0.40
2:Pt:3:C:N4	2:Pt:70:A:H61	2.16	0.40
2:Pt:10:G:C2	2:Pt:26:G:H1'	2.56	0.40
3:L5:124:C:H2'	3:L5:125:C:H6	1.86	0.40
3:L5:716:C:OP1	8:LC:317:ASN:HB2	2.20	0.40
3:L5:1086:C:H2'	3:L5:1087:A:C8	2.56	0.40
3:L5:3764:U:H3'	3:L5:3765:G:H8	1.86	0.40
3:L5:4420:U:H5''	3:L5:4421:C:H5	1.86	0.40
3:L5:5036:C:H2'	3:L5:5037:U:C6	2.57	0.40
6:LA:82:ILE:HD13	6:LA:82:ILE:HA	1.93	0.40
7:LB:53:MET:HB2	7:LB:76:VAL:O	2.21	0.40
12:LG:217:LYS:O	12:LG:220:GLU:HG2	2.22	0.40
16:LL:136:LYS:HE2	16:LL:136:LYS:HB2	1.85	0.40
23:LS:16:CYS:HA	23:LS:54:MET:HE1	2.02	0.40
24:LT:119:ALA:HA	24:LT:122:LYS:HG3	2.03	0.40
26:LV:67:LYS:HD2	26:LV:73:ARG:NH2	2.36	0.40
26:LV:106:VAL:HA	26:LV:112:MET:HA	2.03	0.40
30:LZ:10:VAL:HG11	30:LZ:129:TRP:HZ3	1.87	0.40
31:La:146:LEU:HD23	31:La:146:LEU:HA	1.87	0.40
50:SD:91:VAL:HG22	50:SD:94:ARG:NH1	2.37	0.40
55:SQ:110:ASP:OD1	55:SQ:111:ILE:HD12	2.21	0.40
64:Sg:42:MET:SD	64:Sg:56:GLN:HB3	2.61	0.40
64:Sg:220:ASP:HB2	64:Sg:227:LEU:HD12	2.02	0.40
69:SG:2:LYS:HD3	69:SG:15:LEU:HD21	2.04	0.40
73:SL:80:MET:HE1	73:SL:120:VAL:HG13	2.03	0.40
79:SY:124:ASN:ND2	83:S2:84:A:H5''	2.36	0.40
83:S2:946:U:H2'	83:S2:947:G:C8	2.55	0.40
83:S2:1272:OMC:HM21	83:S2:1274:G:C6	2.57	0.40
83:S2:1360:U:H3'	83:S2:1361:G:C8	2.56	0.40
83:S2:1432:U:H2'	83:S2:1438:A:H8	1.84	0.40
83:S2:1711:U:H2'	83:S2:1712:A:C8	2.56	0.40
3:L5:99:A:H2'	3:L5:100:C:O2	2.21	0.40
3:L5:130:C:H2'	3:L5:131:C:C6	2.57	0.40
3:L5:222:C:H2'	3:L5:223:G:O4'	2.22	0.40
3:L5:271:C:H2'	3:L5:272:U:C6	2.56	0.40
3:L5:502:C:H3'	3:L5:503:C:H3'	2.03	0.40
3:L5:946:C:O2'	8:LC:340:ILE:HG22	2.20	0.40
3:L5:1419:G:H5''	21:LQ:71:LYS:NZ	2.37	0.40
3:L5:1995:G:H2'	3:L5:1996:C:C6	2.57	0.40
3:L5:2267:U:P	47:Lr:37:SER:HB2	2.62	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:2535:G:H2'	3:L5:2536:A:C8	2.57	0.40
3:L5:2846:G:H2'	3:L5:2847:G:C8	2.57	0.40
3:L5:2877:G:H2'	3:L5:2878:G:O4'	2.22	0.40
3:L5:3896:C:H1'	7:LB:268:ARG:NH2	2.36	0.40
3:L5:4093:G:H3'	3:L5:4094:G:C8	2.57	0.40
8:LC:107:THR:HG22	16:LL:26:PHE:HE2	1.87	0.40
9:LD:103:LEU:HG	9:LD:247:ILE:HG21	2.03	0.40
9:LD:171:LEU:HB3	9:LD:173:ILE:HD11	2.03	0.40
11:LF:35:LYS:HE3	11:LF:35:LYS:HB3	1.97	0.40
11:LF:128:ALA:O	11:LF:132:MET:HG2	2.21	0.40
14:LI:111:LEU:HD12	14:LI:111:LEU:HA	1.95	0.40
17:LM:25:VAL:HG21	17:LM:50:MET:HE1	2.04	0.40
19:LO:129:LEU:HD23	19:LO:129:LEU:HA	1.87	0.40
27:LW:31:PHE:CD2	27:LW:37:GLU:HG3	2.57	0.40
29:LY:58:VAL:HG23	29:LY:59:ARG:HG2	2.03	0.40
35:Le:76:LYS:HA	35:Le:76:LYS:HD3	1.95	0.40
48:Ls:16:LYS:NZ	48:Ls:54:LEU:HD11	2.36	0.40
51:SF:123:GLU:HA	51:SF:140:ASP:HA	2.04	0.40
52:SK:59:LYS:HD3	52:SK:72:THR:HG22	2.03	0.40
53:SM:63:LYS:HD3	53:SM:64:LEU:HD22	2.03	0.40
54:SP:108:LYS:HG2	57:SS:116:LYS:NZ	2.37	0.40
66:SB:167:LYS:O	66:SB:171:ILE:HG12	2.22	0.40
71:SI:150:ASP:HA	71:SI:153:LYS:CG	2.51	0.40
72:SJ:37:LEU:HD23	72:SJ:109:ARG:NH1	2.36	0.40
73:SL:98:LYS:HD3	73:SL:99:TYR:CE2	2.57	0.40
75:SO:50:LYS:NZ	83:S2:951:C:H1'	2.37	0.40
79:SY:8:ARG:HA	83:S2:837:A:H62	1.86	0.40
79:SY:10:ARG:HA	83:S2:839:C:H41	1.86	0.40
83:S2:1410:C:H2'	83:S2:1411:G:C8	2.54	0.40
83:S2:1558:C:H2'	83:S2:1559:C:H6	1.85	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	CI	29/31 (94%)	29 (100%)	0	0	100	100
6	LA	246/248 (99%)	229 (93%)	17 (7%)	0	100	100
7	LB	400/402 (100%)	380 (95%)	20 (5%)	0	100	100
8	LC	366/368 (100%)	347 (95%)	19 (5%)	0	100	100
9	LD	291/293 (99%)	282 (97%)	9 (3%)	0	100	100
10	LE	236/250 (94%)	220 (93%)	16 (7%)	0	100	100
11	LF	223/225 (99%)	213 (96%)	10 (4%)	0	100	100
12	LG	239/241 (99%)	223 (93%)	16 (7%)	0	100	100
13	LH	188/190 (99%)	184 (98%)	4 (2%)	0	100	100
14	LI	211/213 (99%)	204 (97%)	7 (3%)	0	100	100
15	LJ	168/176 (96%)	160 (95%)	8 (5%)	0	100	100
16	LL	208/210 (99%)	198 (95%)	10 (5%)	0	100	100
17	LM	137/139 (99%)	128 (93%)	9 (7%)	0	100	100
18	LN	201/203 (99%)	196 (98%)	5 (2%)	0	100	100
19	LO	199/201 (99%)	196 (98%)	3 (2%)	0	100	100
20	LP	151/153 (99%)	145 (96%)	6 (4%)	0	100	100
21	LQ	185/187 (99%)	180 (97%)	5 (3%)	0	100	100
22	LR	185/187 (99%)	181 (98%)	4 (2%)	0	100	100
23	LS	173/175 (99%)	165 (95%)	8 (5%)	0	100	100
24	LT	157/159 (99%)	152 (97%)	5 (3%)	0	100	100
25	LU	99/101 (98%)	92 (93%)	7 (7%)	0	100	100
26	LV	129/131 (98%)	119 (92%)	10 (8%)	0	100	100
27	LW	112/124 (90%)	109 (97%)	3 (3%)	0	100	100
28	LX	118/120 (98%)	117 (99%)	1 (1%)	0	100	100
29	LY	132/134 (98%)	128 (97%)	4 (3%)	0	100	100
30	LZ	133/135 (98%)	126 (95%)	7 (5%)	0	100	100
31	La	145/147 (99%)	140 (97%)	5 (3%)	0	100	100
32	Lb	105/121 (87%)	100 (95%)	5 (5%)	0	100	100
33	Lc	96/98 (98%)	91 (95%)	5 (5%)	0	100	100
34	Ld	105/107 (98%)	100 (95%)	5 (5%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
35	Le	126/128 (98%)	121 (96%)	5 (4%)	0	100	100
36	Lf	107/109 (98%)	105 (98%)	2 (2%)	0	100	100
37	Lg	112/114 (98%)	108 (96%)	4 (4%)	0	100	100
38	Lh	120/122 (98%)	118 (98%)	2 (2%)	0	100	100
39	Li	100/102 (98%)	97 (97%)	3 (3%)	0	100	100
40	Lj	84/86 (98%)	80 (95%)	4 (5%)	0	100	100
41	Lk	67/69 (97%)	65 (97%)	2 (3%)	0	100	100
42	Ll	48/50 (96%)	45 (94%)	3 (6%)	0	100	100
43	Lm	50/52 (96%)	50 (100%)	0	0	100	100
44	Ln	22/24 (92%)	22 (100%)	0	0	100	100
45	Lo	103/105 (98%)	99 (96%)	4 (4%)	0	100	100
46	Lp	89/91 (98%)	83 (93%)	6 (7%)	0	100	100
47	Lr	123/125 (98%)	121 (98%)	2 (2%)	0	100	100
48	Ls	194/196 (99%)	183 (94%)	11 (6%)	0	100	100
49	Lt	128/157 (82%)	109 (85%)	19 (15%)	0	100	100
50	SD	225/227 (99%)	214 (95%)	11 (5%)	0	100	100
51	SF	187/189 (99%)	177 (95%)	10 (5%)	0	100	100
52	SK	96/98 (98%)	88 (92%)	8 (8%)	0	100	100
53	SM	120/122 (98%)	107 (89%)	13 (11%)	0	100	100
54	SP	119/121 (98%)	115 (97%)	4 (3%)	0	100	100
55	SQ	142/144 (99%)	133 (94%)	9 (6%)	0	100	100
56	SR	133/135 (98%)	127 (96%)	6 (4%)	0	100	100
57	SS	143/145 (99%)	137 (96%)	5 (4%)	1 (1%)	19	49
58	ST	141/143 (99%)	139 (99%)	2 (1%)	0	100	100
59	SU	102/104 (98%)	98 (96%)	4 (4%)	0	100	100
60	SZ	73/75 (97%)	66 (90%)	7 (10%)	0	100	100
61	Sc	62/64 (97%)	57 (92%)	5 (8%)	0	100	100
62	Sd	53/55 (96%)	52 (98%)	1 (2%)	0	100	100
63	Sf	65/67 (97%)	56 (86%)	9 (14%)	0	100	100
64	Sg	311/313 (99%)	291 (94%)	20 (6%)	0	100	100
65	SA	219/221 (99%)	204 (93%)	15 (7%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
66	SB	212/214 (99%)	203 (96%)	9 (4%)	0	100	100
67	SC	218/222 (98%)	203 (93%)	15 (7%)	0	100	100
68	SE	260/262 (99%)	247 (95%)	13 (5%)	0	100	100
69	SG	235/237 (99%)	223 (95%)	12 (5%)	0	100	100
70	SH	182/189 (96%)	169 (93%)	13 (7%)	0	100	100
71	SI	204/206 (99%)	194 (95%)	10 (5%)	0	100	100
72	SJ	183/185 (99%)	172 (94%)	11 (6%)	0	100	100
73	SL	151/153 (99%)	142 (94%)	9 (6%)	0	100	100
74	SN	148/150 (99%)	147 (99%)	1 (1%)	0	100	100
75	SO	135/140 (96%)	124 (92%)	11 (8%)	0	100	100
76	SV	81/83 (98%)	80 (99%)	1 (1%)	0	100	100
77	SW	127/129 (98%)	122 (96%)	5 (4%)	0	100	100
78	SX	139/141 (99%)	131 (94%)	8 (6%)	0	100	100
79	SY	129/131 (98%)	127 (98%)	2 (2%)	0	100	100
80	Sa	100/102 (98%)	95 (95%)	5 (5%)	0	100	100
81	Sb	81/83 (98%)	76 (94%)	5 (6%)	0	100	100
82	Se	56/58 (97%)	52 (93%)	4 (7%)	0	100	100
All	All	11672/11907 (98%)	11108 (95%)	563 (5%)	1 (0%)	100	100

All (1) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
57	SS	16	LEU

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	
1	CI	25/25 (100%)	25 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
6	LA	190/190 (100%)	190 (100%)	0	100	100
7	LB	348/348 (100%)	348 (100%)	0	100	100
8	LC	306/306 (100%)	306 (100%)	0	100	100
9	LD	246/247 (100%)	246 (100%)	0	100	100
10	LE	212/222 (96%)	212 (100%)	0	100	100
11	LF	194/194 (100%)	194 (100%)	0	100	100
12	LG	203/205 (99%)	203 (100%)	0	100	100
13	LH	169/169 (100%)	169 (100%)	0	100	100
14	LI	180/180 (100%)	180 (100%)	0	100	100
15	LJ	143/148 (97%)	143 (100%)	0	100	100
16	LL	176/176 (100%)	176 (100%)	0	100	100
17	LM	118/118 (100%)	118 (100%)	0	100	100
18	LN	171/171 (100%)	171 (100%)	0	100	100
19	LO	173/173 (100%)	173 (100%)	0	100	100
20	LP	134/134 (100%)	134 (100%)	0	100	100
21	LQ	164/164 (100%)	164 (100%)	0	100	100
22	LR	166/166 (100%)	166 (100%)	0	100	100
23	LS	156/156 (100%)	156 (100%)	0	100	100
24	LT	139/139 (100%)	139 (100%)	0	100	100
25	LU	91/91 (100%)	91 (100%)	0	100	100
26	LV	101/101 (100%)	101 (100%)	0	100	100
27	LW	95/103 (92%)	95 (100%)	0	100	100
28	LX	108/108 (100%)	108 (100%)	0	100	100
29	LY	124/124 (100%)	124 (100%)	0	100	100
30	LZ	117/117 (100%)	116 (99%)	1 (1%)	75	84
31	La	120/120 (100%)	120 (100%)	0	100	100
32	Lb	88/101 (87%)	87 (99%)	1 (1%)	70	81
33	Lc	83/83 (100%)	83 (100%)	0	100	100
34	Ld	98/98 (100%)	98 (100%)	0	100	100
35	Le	114/114 (100%)	114 (100%)	0	100	100
36	Lf	88/88 (100%)	88 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
37	Lg	98/98 (100%)	98 (100%)	0	100	100
38	Lh	109/109 (100%)	109 (100%)	0	100	100
39	Li	86/86 (100%)	86 (100%)	0	100	100
40	Lj	73/73 (100%)	73 (100%)	0	100	100
41	Lk	64/64 (100%)	64 (100%)	0	100	100
42	Ll	47/47 (100%)	47 (100%)	0	100	100
43	Lm	48/48 (100%)	48 (100%)	0	100	100
44	Ln	23/23 (100%)	23 (100%)	0	100	100
45	Lo	93/93 (100%)	93 (100%)	0	100	100
46	Lp	74/74 (100%)	74 (100%)	0	100	100
47	Lr	109/109 (100%)	109 (100%)	0	100	100
48	Ls	162/164 (99%)	161 (99%)	1 (1%)	84	89
49	Lt	107/130 (82%)	107 (100%)	0	100	100
50	SD	190/190 (100%)	190 (100%)	0	100	100
51	SF	159/159 (100%)	159 (100%)	0	100	100
52	SK	89/89 (100%)	89 (100%)	0	100	100
53	SM	102/104 (98%)	102 (100%)	0	100	100
54	SP	107/107 (100%)	107 (100%)	0	100	100
55	SQ	119/119 (100%)	119 (100%)	0	100	100
56	SR	122/122 (100%)	122 (100%)	0	100	100
57	SS	126/126 (100%)	126 (100%)	0	100	100
58	ST	113/113 (100%)	113 (100%)	0	100	100
59	SU	94/94 (100%)	94 (100%)	0	100	100
60	SZ	66/66 (100%)	66 (100%)	0	100	100
61	Sc	57/57 (100%)	57 (100%)	0	100	100
62	Sd	48/48 (100%)	48 (100%)	0	100	100
63	Sf	60/60 (100%)	60 (100%)	0	100	100
64	Sg	272/272 (100%)	272 (100%)	0	100	100
65	SA	183/183 (100%)	183 (100%)	0	100	100
66	SB	195/195 (100%)	194 (100%)	1 (0%)	86	90
67	SC	186/188 (99%)	186 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
68	SE	224/224 (100%)	224 (100%)	0	100	100
69	SG	207/207 (100%)	207 (100%)	0	100	100
70	SH	166/169 (98%)	166 (100%)	0	100	100
71	SI	178/178 (100%)	178 (100%)	0	100	100
72	SJ	161/161 (100%)	161 (100%)	0	100	100
73	SL	137/137 (100%)	137 (100%)	0	100	100
74	SN	130/130 (100%)	130 (100%)	0	100	100
75	SO	107/110 (97%)	107 (100%)	0	100	100
76	SV	67/67 (100%)	67 (100%)	0	100	100
77	SW	112/112 (100%)	112 (100%)	0	100	100
78	SX	113/113 (100%)	113 (100%)	0	100	100
79	SY	113/113 (100%)	113 (100%)	0	100	100
80	Sa	89/89 (100%)	89 (100%)	0	100	100
81	Sb	75/75 (100%)	75 (100%)	0	100	100
82	Se	47/47 (100%)	47 (100%)	0	100	100
All	All	10147/10221 (99%)	10143 (100%)	4 (0%)	100	100

All (4) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
30	LZ	28	ASN
32	Lb	12	GLN
48	Ls	159	GLN
66	SB	170	GLU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (110) such sidechains are listed below:

Mol	Chain	Res	Type
6	LA	22	HIS
6	LA	83	HIS
6	LA	86	GLN
6	LA	194	ASN
6	LA	215	ASN
7	LB	184	GLN
7	LB	213	GLN
8	LC	38	ASN

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Mol	Chain	Res	Type
8	LC	43	ASN
8	LC	119	GLN
8	LC	276	ASN
8	LC	362	GLN
9	LD	17	GLN
9	LD	225	GLN
9	LD	282	GLN
9	LD	291	GLN
10	LE	167	GLN
11	LF	116	GLN
11	LF	226	HIS
12	LG	81	ASN
12	LG	112	GLN
12	LG	159	HIS
12	LG	208	ASN
13	LH	162	GLN
14	LI	73	ASN
16	LL	205	GLN
18	LN	91	GLN
18	LN	149	GLN
19	LO	167	HIS
20	LP	54	GLN
20	LP	75	GLN
20	LP	93	HIS
20	LP	97	ASN
20	LP	116	HIS
21	LQ	44	ASN
21	LQ	162	HIS
25	LU	94	ASN
26	LV	27	ASN
27	LW	59	HIS
29	LY	14	ASN
29	LY	56	GLN
29	LY	61	HIS
30	LZ	28	ASN
31	La	17	HIS
31	La	34	ASN
31	La	62	HIS
32	Lb	6	ASN
32	Lb	10	HIS
32	Lb	12	GLN
32	Lb	60	ASN

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Mol	Chain	Res	Type
34	Ld	28	ASN
35	Le	24	GLN
35	Le	34	ASN
36	Lf	21	GLN
36	Lf	55	ASN
37	Lg	28	ASN
37	Lg	114	GLN
40	Lj	13	ASN
42	Ll	33	ASN
45	Lo	45	GLN
47	Lr	21	ASN
47	Lr	95	HIS
47	Lr	121	GLN
48	Ls	159	GLN
48	Ls	191	GLN
49	Lt	65	GLN
49	Lt	70	GLN
49	Lt	137	GLN
49	Lt	149	HIS
50	SD	159	HIS
52	SK	32	HIS
52	SK	44	HIS
52	SK	50	GLN
56	SR	56	HIS
57	SS	87	GLN
57	SS	120	HIS
57	SS	125	HIS
59	SU	18	HIS
60	SZ	112	ASN
62	Sd	37	ASN
64	Sg	76	GLN
64	Sg	119	GLN
64	Sg	196	ASN
64	Sg	215	GLN
65	SA	9	GLN
65	SA	29	ASN
65	SA	84	GLN
66	SB	76	ASN
66	SB	95	ASN
66	SB	149	GLN
67	SC	120	GLN
67	SC	267	GLN

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Mol	Chain	Res	Type
68	SE	50	ASN
68	SE	67	GLN
69	SG	56	ASN
69	SG	186	GLN
71	SI	64	ASN
71	SI	146	GLN
71	SI	165	GLN
73	SL	13	GLN
73	SL	108	ASN
74	SN	13	GLN
74	SN	36	GLN
74	SN	105	ASN
75	SO	79	GLN
77	SW	44	HIS
77	SW	56	HIS
77	SW	90	GLN
79	SY	85	ASN
80	Sa	25	ASN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
2	Pt	72/74 (97%)	18 (25%)	0
3	L5	3644/3655 (99%)	808 (22%)	13 (0%)
4	L7	119/120 (99%)	15 (12%)	0
5	L8	155/156 (99%)	24 (15%)	0
83	S2	1714/1740 (98%)	422 (24%)	3 (0%)
All	All	5704/5745 (99%)	1287 (22%)	16 (0%)

All (1287) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
2	Pt	9	A
2	Pt	10	G
2	Pt	13	U
2	Pt	19	G
2	Pt	20(A)	U
2	Pt	21	A
2	Pt	30	G
2	Pt	46	G
2	Pt	47	U

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Mol	Chain	Res	Type
2	Pt	48	C
2	Pt	49	C
2	Pt	58	A
2	Pt	61	C
2	Pt	66	C
2	Pt	67	G
2	Pt	70	A
2	Pt	74	C
2	Pt	76	A
3	L5	2	G
3	L5	13	U
3	L5	25	A
3	L5	30	C
3	L5	39	A
3	L5	42	A
3	L5	48	G
3	L5	56	A
3	L5	59	A
3	L5	64	A
3	L5	65	A
3	L5	72	C
3	L5	73	A
3	L5	91	G
3	L5	108	A
3	L5	109	G
3	L5	110	C
3	L5	119	G
3	L5	122	U
3	L5	132	G
3	L5	133	C
3	L5	134	G
3	L5	135	G
3	L5	139	G
3	L5	140	G
3	L5	144	G
3	L5	151	G
3	L5	159	C
3	L5	165	A
3	L5	166	C
3	L5	172	C
3	L5	177	G
3	L5	182	G

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Mol	Chain	Res	Type
3	L5	183	C
3	L5	184	U
3	L5	185	C
3	L5	187	U
3	L5	188	G
3	L5	189	G
3	L5	190	G
3	L5	200	U
3	L5	209	U
3	L5	216	C
3	L5	218	A
3	L5	220	C
3	L5	234	G
3	L5	255	C
3	L5	256	G
3	L5	260	C
3	L5	261	G
3	L5	263	G
3	L5	264	C
3	L5	265	C
3	L5	266	C
3	L5	267	G
3	L5	275	C
3	L5	278	G
3	L5	280	G
3	L5	281	U
3	L5	297	U
3	L5	306	A
3	L5	315	G
3	L5	316	U
3	L5	340	C
3	L5	346	G
3	L5	363	A
3	L5	365	U
3	L5	373	G
3	L5	385	A
3	L5	387	G
3	L5	388	A
3	L5	396	A
3	L5	407	A
3	L5	408	A
3	L5	409	G

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Mol	Chain	Res	Type
3	L5	410	A
3	L5	411	G
3	L5	412	G
3	L5	413	G
3	L5	415	G
3	L5	431	G
3	L5	432	U
3	L5	447	C
3	L5	449	C
3	L5	450	G
3	L5	452	A
3	L5	453	G
3	L5	456	C
3	L5	457	G
3	L5	467	U
3	L5	468	U
3	L5	472	C
3	L5	479	G
3	L5	484	U
3	L5	485	C
3	L5	486	C
3	L5	489	C
3	L5	493	G
3	L5	494	U
3	L5	497	G
3	L5	498	C
3	L5	499	G
3	L5	502	C
3	L5	503	C
3	L5	504	G
3	L5	505	G
3	L5	509	A
3	L5	510	U
3	L5	512	U
3	L5	513	U
3	L5	514	U
3	L5	518	G
3	L5	519	C
3	L5	643	C
3	L5	646	G
3	L5	654	C
3	L5	655	C

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Mol	Chain	Res	Type
3	L5	656	C
3	L5	659	G
3	L5	666	G
3	L5	667	A
3	L5	668	C
3	L5	669	C
3	L5	672	C
3	L5	673	C
3	L5	674	G
3	L5	685	C
3	L5	686	A
3	L5	687	U
3	L5	696	C
3	L5	704	C
3	L5	729	G
3	L5	730	G
3	L5	731	G
3	L5	738	C
3	L5	739	G
3	L5	742	G
3	L5	746	A
3	L5	750	U
3	L5	758	G
3	L5	759	G
3	L5	904	C
3	L5	905	C
3	L5	910	G
3	L5	913	U
3	L5	914	U
3	L5	915	A
3	L5	917	A
3	L5	923	C
3	L5	924	C
3	L5	926	G
3	L5	932	A
3	L5	933	G
3	L5	935	A
3	L5	936	C
3	L5	941	C
3	L5	943	A
3	L5	944	A
3	L5	945	U

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Mol	Chain	Res	Type
3	L5	956	A
3	L5	957	G
3	L5	959	G
3	L5	960	A
3	L5	961	G
3	L5	962	C
3	L5	965	G
3	L5	966	A
3	L5	967	C
3	L5	969	C
3	L5	970	G
3	L5	982	U
3	L5	985	C
3	L5	989	U
3	L5	1070	G
3	L5	1072	C
3	L5	1075	G
3	L5	1076	C
3	L5	1082	C
3	L5	1083	U
3	L5	1088	C
3	L5	1168	G
3	L5	1170	G
3	L5	1171	G
3	L5	1172	C
3	L5	1173	G
3	L5	1179	U
3	L5	1180	C
3	L5	1181	C
3	L5	1182	C
3	L5	1183	C
3	L5	1187	G
3	L5	1202	C
3	L5	1203	G
3	L5	1206	C
3	L5	1210	C
3	L5	1211	G
3	L5	1214	C
3	L5	1215	C
3	L5	1216	C
3	L5	1218	G
3	L5	1219	G

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Mol	Chain	Res	Type
3	L5	1221	G
3	L5	1222	A
3	L5	1241	C
3	L5	1243	C
3	L5	1245	C
3	L5	1246	G
3	L5	1247	U
3	L5	1254	A
3	L5	1257	A
3	L5	1258	G
3	L5	1262	G
3	L5	1266	G
3	L5	1267	C
3	L5	1269	G
3	L5	1271	G
3	L5	1272	C
3	L5	1273	G
3	L5	1275	G
3	L5	1277	G
3	L5	1280	C
3	L5	1284	G
3	L5	1285	U
3	L5	1287	G
3	L5	1293	G
3	L5	1294	A
3	L5	1295	C
3	L5	1296	G
3	L5	1301	C
3	L5	1314	C
3	L5	1326	A2M
3	L5	1354	A
3	L5	1359	G
3	L5	1365	C
3	L5	1366	G
3	L5	1367	C
3	L5	1379	C
3	L5	1387	A
3	L5	1394	G
3	L5	1398	A
3	L5	1403	G
3	L5	1404	G
3	L5	1407	C

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Mol	Chain	Res	Type
3	L5	1409	C
3	L5	1410	U
3	L5	1411	C
3	L5	1417	C
3	L5	1420	A
3	L5	1437	C
3	L5	1438	U
3	L5	1439	C
3	L5	1442	C
3	L5	1443	A
3	L5	1444	G
3	L5	1446	C
3	L5	1447	C
3	L5	1457	G
3	L5	1465	G
3	L5	1482	G
3	L5	1483	C
3	L5	1497	A
3	L5	1498	G
3	L5	1502	G
3	L5	1504	G
3	L5	1516	G
3	L5	1517	G
3	L5	1523	A
3	L5	1534	A2M
3	L5	1537	A
3	L5	1547	A
3	L5	1549	G
3	L5	1563	A
3	L5	1564	A
3	L5	1566	C
3	L5	1574	G
3	L5	1578	U
3	L5	1591	U
3	L5	1596	U
3	L5	1612	G
3	L5	1613	A
3	L5	1621	A
3	L5	1624	G
3	L5	1625	OMG
3	L5	1626	G
3	L5	1631	A

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Mol	Chain	Res	Type
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	1676	C
3	L5	1677	PSU
3	L5	1678	C
3	L5	1691	G
3	L5	1696	C
3	L5	1698	C
3	L5	1699	A
3	L5	1700	G
3	L5	1701	A
3	L5	1702	C
3	L5	1703	C
3	L5	1704	C
3	L5	1705	G
3	L5	1717	C
3	L5	1718	C
3	L5	1719	A
3	L5	1731	C
3	L5	1742	A
3	L5	1745	G
3	L5	1753	G
3	L5	1757	U
3	L5	1758	G
3	L5	1760	G
3	L5	1761	G
3	L5	1762	C
3	L5	1763	C
3	L5	1764	G
3	L5	1765	A
3	L5	1766	A
3	L5	1767	A
3	L5	1768	C
3	L5	1770	A
3	L5	1772	C
3	L5	1775	A
3	L5	1787	A

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Mol	Chain	Res	Type
3	L5	1803	G
3	L5	1804	A
3	L5	1806	G
3	L5	1810	G
3	L5	1811	G
3	L5	1815	G
3	L5	1821	G
3	L5	1822	U
3	L5	1833	G
3	L5	1836	G
3	L5	1837	A
3	L5	1842	G
3	L5	1855	G
3	L5	1869	G
3	L5	1897	A
3	L5	1899	G
3	L5	1915	C
3	L5	1917	A
3	L5	1918	U
3	L5	1919	G
3	L5	1920	C
3	L5	1921	C
3	L5	1922	G
3	L5	1925	G
3	L5	1931	C
3	L5	1932	A
3	L5	1936	C
3	L5	1946	G
3	L5	1948	G
3	L5	1951	G
3	L5	1957	U
3	L5	1961	G
3	L5	1962	A
3	L5	1974	U
3	L5	1975	G
3	L5	1978	C
3	L5	1980	U
3	L5	1981	G
3	L5	1982	G
3	L5	1984	A
3	L5	1985	G
3	L5	1991	A

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Mol	Chain	Res	Type
3	L5	1993	C
3	L5	1997	U
3	L5	1998	A
3	L5	1999	A
3	L5	2001	G
3	L5	2002	A
3	L5	2003	G
3	L5	2004	U
3	L5	2005	G
3	L5	2011	C
3	L5	2017	A
3	L5	2018	C
3	L5	2021	G
3	L5	2024	G
3	L5	2026	A
3	L5	2034	G
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	2072	C
3	L5	2084	C
3	L5	2085	G
3	L5	2092	G
3	L5	2093	A
3	L5	2094	G
3	L5	2095	A
3	L5	2097	U
3	L5	2098	G
3	L5	2099	G
3	L5	2101	C
3	L5	2102	G
3	L5	2107	C
3	L5	2112	G
3	L5	2250	C
3	L5	2252	G
3	L5	2256	C
3	L5	2258	C
3	L5	2269	C
3	L5	2270	G

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Mol	Chain	Res	Type
3	L5	2289	C
3	L5	2300	A
3	L5	2301	G
3	L5	2306	G
3	L5	2313	A
3	L5	2316	G
3	L5	2331	G
3	L5	2333	G
3	L5	2348	G
3	L5	2351	OMC
3	L5	2360	A
3	L5	2364	OMG
3	L5	2382	A
3	L5	2383	C
3	L5	2395	A
3	L5	2397	G
3	L5	2398	U
3	L5	2410	C
3	L5	2416	G
3	L5	2417	A
3	L5	2425	U
3	L5	2450	G
3	L5	2453	A
3	L5	2463	G
3	L5	2464	C
3	L5	2465	C
3	L5	2469	C
3	L5	2471	G
3	L5	2474	G
3	L5	2475	G
3	L5	2478	C
3	L5	2479	G
3	L5	2483	G
3	L5	2484	A
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	2494	U
3	L5	2504	C

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Mol	Chain	Res	Type
3	L5	2506	G
3	L5	2513	A
3	L5	2519	U
3	L5	2537	A
3	L5	2544	G
3	L5	2546	G
3	L5	2547	G
3	L5	2553	A
3	L5	2554	U
3	L5	2555	G
3	L5	2556	G
3	L5	2558	C
3	L5	2560	C
3	L5	2565	A
3	L5	2567	G
3	L5	2573	A
3	L5	2583	C
3	L5	2586	G
3	L5	2587	A
3	L5	2589	C
3	L5	2602	G
3	L5	2606	G
3	L5	2618	G
3	L5	2627	C
3	L5	2638	G
3	L5	2653	C
3	L5	2658	G
3	L5	2662	G
3	L5	2669	C
3	L5	2673	G
3	L5	2675	G
3	L5	2676	A
3	L5	2687	U
3	L5	2694	G
3	L5	2695	A
3	L5	2696	A
3	L5	2702	C
3	L5	2703	G
3	L5	2706	G
3	L5	2707	U
3	L5	2708	U
3	L5	2709	C

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Mol	Chain	Res	Type
3	L5	2710	C
3	L5	2711	G
3	L5	2719	C
3	L5	2721	G
3	L5	2724	G
3	L5	2726	G
3	L5	2727	C
3	L5	2736	G
3	L5	2739	C
3	L5	2742	G
3	L5	2743	A
3	L5	2746	A
3	L5	2761	U
3	L5	2763	U
3	L5	2769	U
3	L5	2770	C
3	L5	2788	U
3	L5	2790	U
3	L5	2799	G
3	L5	2806	A
3	L5	2814	C
3	L5	2826	U
3	L5	2827	G
3	L5	2828	U
3	L5	2829	U
3	L5	2833	A
3	L5	2835	A
3	L5	2855	G
3	L5	2867	C
3	L5	2876	OMG
3	L5	2877	G
3	L5	2900	U
3	L5	2901	G
3	L5	2902	G
3	L5	2903	G
3	L5	2904	U
3	L5	2905	C
3	L5	2907	G
3	L5	2908	U
3	L5	3590	G
3	L5	3591	C
3	L5	3594	C

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Mol	Chain	Res	Type
3	L5	3595	U
3	L5	3596	A
3	L5	3597	G
3	L5	3604	A
3	L5	3605	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	3670	C
3	L5	3673	C
3	L5	3674	G
3	L5	3683	C
3	L5	3684	G
3	L5	3692	A
3	L5	3701	OMC
3	L5	3710	G
3	L5	3711	A
3	L5	3713	U
3	L5	3727	A
3	L5	3748	A
3	L5	3753	G
3	L5	3760	A
3	L5	3770	U
3	L5	3774	A
3	L5	3775	A
3	L5	3776	G
3	L5	3777	G
3	L5	3778	U
3	L5	3785	A2M
3	L5	3786	U
3	L5	3791	C
3	L5	3792	OMG
3	L5	3810	C
3	L5	3811	G
3	L5	3812	C
3	L5	3813	A
3	L5	3817	A
3	L5	3819	G

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Mol	Chain	Res	Type
3	L5	3824	A
3	L5	3838	U
3	L5	3839	G
3	L5	3840	U
3	L5	3877	A
3	L5	3878	C
3	L5	3879	G
3	L5	3892	U
3	L5	3897	G
3	L5	3898	G
3	L5	3901	A
3	L5	3906	A
3	L5	3907	G
3	L5	3908	A
3	L5	3915	U
3	L5	3938	G
3	L5	3939	G
3	L5	3942	A
3	L5	3947	A
3	L5	3949	A
3	L5	3950	U
3	L5	3951	G
3	L5	3953	G
3	L5	4057	C
3	L5	4058	U
3	L5	4059	C
3	L5	4060	U
3	L5	4061	G
3	L5	4062	A
3	L5	4064	C
3	L5	4065	G
3	L5	4068	U
3	L5	4076	G
3	L5	4093	G
3	L5	4095	G
3	L5	4097	G
3	L5	4099	G
3	L5	4101	C
3	L5	4104	G
3	L5	4108	G
3	L5	4111	U
3	L5	4114	C

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Mol	Chain	Res	Type
3	L5	4115	G
3	L5	4116	C
3	L5	4121	G
3	L5	4122	G
3	L5	4127	A
3	L5	4138	C
3	L5	4139	G
3	L5	4140	C
3	L5	4141	G
3	L5	4142	C
3	L5	4143	G
3	L5	4144	C
3	L5	4146	G
3	L5	4149	C
3	L5	4150	G
3	L5	4162	C
3	L5	4163	U
3	L5	4168	G
3	L5	4170	A
3	L5	4183	G
3	L5	4184	G
3	L5	4191	G
3	L5	4203	A
3	L5	4220	6MZ
3	L5	4222	G
3	L5	4225	G
3	L5	4228	OMG
3	L5	4229	U
3	L5	4233	A
3	L5	4241	C
3	L5	4243	C
3	L5	4251	A
3	L5	4254	G
3	L5	4258	C
3	L5	4265	U
3	L5	4268	A
3	L5	4273	A
3	L5	4290	U
3	L5	4291	G
3	L5	4295	U
3	L5	4297	G
3	L5	4304	A

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Mol	Chain	Res	Type
3	L5	4305	G
3	L5	4314	C
3	L5	4319	C
3	L5	4326	G
3	L5	4329	G
3	L5	4330	G
3	L5	4332	C
3	L5	4339	A
3	L5	4349	C
3	L5	4350	C
3	L5	4354	U
3	L5	4364	G
3	L5	4373	G
3	L5	4377	G
3	L5	4378	A
3	L5	4387	C
3	L5	4391	G
3	L5	4394	A
3	L5	4410	G
3	L5	4421	C
3	L5	4422	A
3	L5	4430	G
3	L5	4432	C
3	L5	4441	A
3	L5	4444	C
3	L5	4448	G
3	L5	4449	A
3	L5	4452	U
3	L5	4464	A
3	L5	4466	C
3	L5	4475	G
3	L5	4488	A
3	L5	4500	PSU
3	L5	4512	U
3	L5	4513	A
3	L5	4522	G
3	L5	4524	G
3	L5	4525	C
3	L5	4528	G
3	L5	4545	G
3	L5	4548	A
3	L5	4549	G

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Mol	Chain	Res	Type
3	L5	4557	U
3	L5	4560	C
3	L5	4567	G
3	L5	4570	G
3	L5	4575	G
3	L5	4589	A
3	L5	4590	A2M
3	L5	4599	A
3	L5	4601	U
3	L5	4608	G
3	L5	4617	G
3	L5	4635	A
3	L5	4636	PSU
3	L5	4637	OMG
3	L5	4652	G
3	L5	4656	A
3	L5	4670	C
3	L5	4672	A
3	L5	4687	A
3	L5	4693	C
3	L5	4694	G
3	L5	4695	C
3	L5	4700	A
3	L5	4708	A
3	L5	4709	U
3	L5	4719	G
3	L5	4733	C
3	L5	4734	A
3	L5	4741	C
3	L5	4742	G
3	L5	4745	G
3	L5	4750	G
3	L5	4754	G
3	L5	4757	C
3	L5	4759	C
3	L5	4761	G
3	L5	4765	G
3	L5	4771	C
3	L5	4772	C
3	L5	4775	C
3	L5	4859	C
3	L5	4860	G

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Mol	Chain	Res	Type
3	L5	4862	G
3	L5	4863	G
3	L5	4865	C
3	L5	4867	G
3	L5	4870	G
3	L5	4871	C
3	L5	4875	G
3	L5	4881	U
3	L5	4882	U
3	L5	4883	C
3	L5	4887	C
3	L5	4889	G
3	L5	4895	C
3	L5	4896	G
3	L5	4897	G
3	L5	4899	G
3	L5	4900	C
3	L5	4901	G
3	L5	4910	G
3	L5	4912	G
3	L5	4914	C
3	L5	4925	U
3	L5	4926	C
3	L5	4927	G
3	L5	4928	C
3	L5	4934	A
3	L5	4941	G
3	L5	4943	A
3	L5	4947	U
3	L5	4949	G
3	L5	4952	G
3	L5	4955	A
3	L5	4960	G
3	L5	4976	U
3	L5	4985	U
3	L5	4988	U
3	L5	4989	U
3	L5	4990	C
3	L5	4991	U
3	L5	4995	U
3	L5	5013	C
3	L5	5014	A

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Mol	Chain	Res	Type
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	5030	U
3	L5	5034	A
3	L5	5040	U
3	L5	5041	G
3	L5	5047	C
3	L5	5048	A
3	L5	5050	C
3	L5	5054	C
3	L5	5055	G
3	L5	5060	A
3	L5	5061	A
3	L5	5069	U
4	L7	22	A
4	L7	33	U
4	L7	37	G
4	L7	38	U
4	L7	50	A
4	L7	53	U
4	L7	54	A
4	L7	63	C
4	L7	64	G
4	L7	74	A
4	L7	97	G
4	L7	100	A
4	L7	102	U
4	L7	110	G
4	L7	120	U
5	L8	23	C
5	L8	25	G
5	L8	34	U
5	L8	35	C
5	L8	51	U
5	L8	59	A
5	L8	62	A
5	L8	63	U

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Mol	Chain	Res	Type
5	L8	80	A
5	L8	82	A
5	L8	84	A
5	L8	85	U
5	L8	87	G
5	L8	94	G
5	L8	103	A
5	L8	105	C
5	L8	111	U
5	L8	114	G
5	L8	125	C
5	L8	126	C
5	L8	127	U
5	L8	147	G
5	L8	150	C
5	L8	151	G
83	S2	4	C
83	S2	25	A
83	S2	33	G
83	S2	41	G
83	S2	42	A
83	S2	44	U
83	S2	45	A
83	S2	46	A
83	S2	56	G
83	S2	58	C
83	S2	62	G
83	S2	65	C
83	S2	67	C
83	S2	68	A
83	S2	72	C
83	S2	73	C
83	S2	74	G
83	S2	76	U
83	S2	103	A
83	S2	113	G
83	S2	115	U
83	S2	126	G
83	S2	130	G
83	S2	143	U
83	S2	149	A
83	S2	158	A

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Mol	Chain	Res	Type
83	S2	160	U
83	S2	162	C
83	S2	170	A
83	S2	171	A
83	S2	175	A
83	S2	179	C
83	S2	182	C
83	S2	190	G
83	S2	191	A
83	S2	196	C
83	S2	197	U
83	S2	198	U
83	S2	199	C
83	S2	200	G
83	S2	203	G
83	S2	204	G
83	S2	206	G
83	S2	207	G
83	S2	208	G
83	S2	212	C
83	S2	220	U
83	S2	290	U
83	S2	291	G
83	S2	292	A
83	S2	295	C
83	S2	302	A
83	S2	303	C
83	S2	305	U
83	S2	306	C
83	S2	307	G
83	S2	308	G
83	S2	309	G
83	S2	312	G
83	S2	313	A
83	S2	318	A
83	S2	319	C
83	S2	323	C
83	S2	324	C
83	S2	325	C
83	S2	326	C
83	S2	328	U
83	S2	329	G

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Mol	Chain	Res	Type
83	S2	332	G
83	S2	333	G
83	S2	339	A
83	S2	347	G
83	S2	351	G
83	S2	360	A
83	S2	362	C
83	S2	364	A
83	S2	368	U
83	S2	370	G
83	S2	373	G
83	S2	385	G
83	S2	386	C
83	S2	400	C
83	S2	407	G
83	S2	408	A
83	S2	409	C
83	S2	426	A
83	S2	436	OMG
83	S2	438	G
83	S2	448	A
83	S2	449	A
83	S2	450	C
83	S2	452	G
83	S2	464	A
83	S2	465	A
83	S2	471	G
83	S2	472	C
83	S2	473	A
83	S2	474	G
83	S2	476	A
83	S2	482	G
83	S2	487	U
83	S2	488	U
83	S2	492	C
83	S2	493	A
83	S2	502	C
83	S2	516	A
83	S2	517	OMC
83	S2	532	C
83	S2	536	A
83	S2	537	C

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Mol	Chain	Res	Type
83	S2	540	U
83	S2	542	U
83	S2	544	G
83	S2	546	G
83	S2	547	G
83	S2	557	U
83	S2	558	G
83	S2	559	G
83	S2	563	G
83	S2	564	A
83	S2	566	U
83	S2	576	A2M
83	S2	582	U
83	S2	583	A
83	S2	585	C
83	S2	587	A
83	S2	589	G
83	S2	591	U
83	S2	593	C
83	S2	600	G
83	S2	604	A
83	S2	606	G
83	S2	607	U
83	S2	614	C
83	S2	617	G
83	S2	623	G
83	S2	628	A
83	S2	643	A
83	S2	644	OMG
83	S2	660	C
83	S2	663	C
83	S2	664	A
83	S2	668	A2M
83	S2	669	A
83	S2	671	A
83	S2	672	A
83	S2	673	G
83	S2	678	U
83	S2	684	G
83	S2	687	C
83	S2	688	U
83	S2	689	U

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Mol	Chain	Res	Type
83	S2	692	G
83	S2	695	C
83	S2	696	G
83	S2	697	G
83	S2	698	G
83	S2	731	G
83	S2	732	U
83	S2	733	C
83	S2	736	C
83	S2	737	G
83	S2	738	C
83	S2	749	U
83	S2	751	G
83	S2	752	G
83	S2	753	C
83	S2	788	G
83	S2	791	C
83	S2	792	C
83	S2	798	G
83	S2	799	OMU
83	S2	801	PSU
83	S2	805	U
83	S2	821	G
83	S2	822	U
83	S2	823	U
83	S2	824	C
83	S2	827	A
83	S2	830	A
83	S2	834	C
83	S2	835	C
83	S2	836	G
83	S2	837	A
83	S2	838	G
83	S2	839	C
83	S2	842	C
83	S2	844	U
83	S2	847	A
83	S2	852	G
83	S2	867	OMG
83	S2	869	A
83	S2	870	A
83	S2	871	U

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Mol	Chain	Res	Type
83	S2	873	G
83	S2	874	G
83	S2	877	C
83	S2	878	G
83	S2	880	G
83	S2	882	U
83	S2	887	U
83	S2	888	U
83	S2	889	U
83	S2	891	G
83	S2	896	U
83	S2	897	U
83	S2	898	U
83	S2	899	U
83	S2	900	C
83	S2	901	G
83	S2	903	A
83	S2	905	C
83	S2	912	C
83	S2	913	A
83	S2	917	U
83	S2	919	A
83	S2	920	A
83	S2	922	A
83	S2	925	G
83	S2	932	G
83	S2	933	G
83	S2	934	G
83	S2	953	C
83	S2	955	A
83	S2	963	A
83	S2	966	PSU
83	S2	970	G
83	S2	971	G
83	S2	972	A
83	S2	978	G
83	S2	979	C
83	S2	982	G
83	S2	990	A
83	S2	992	A
83	S2	999	G
83	S2	1001	A

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Mol	Chain	Res	Type
83	S2	1002	U
83	S2	1008	A
83	S2	1017	U
83	S2	1023	A
83	S2	1027	A
83	S2	1045	PSU
83	S2	1046	PSU
83	S2	1060	A
83	S2	1061	U
83	S2	1062	A
83	S2	1083	A
83	S2	1085	C
83	S2	1090	C
83	S2	1099	G
83	S2	1109	C
83	S2	1113	A
83	S2	1116	C
83	S2	1121	G
83	S2	1126	G
83	S2	1131	G
83	S2	1133	A
83	S2	1138	C
83	S2	1142	G
83	S2	1148	A
83	S2	1150	A
83	S2	1153	C
83	S2	1154	U
83	S2	1170	A
83	S2	1172	U
83	S2	1184	G
83	S2	1195	A
83	S2	1207	G
83	S2	1208	A
83	S2	1215	C
83	S2	1216	C
83	S2	1217	A
83	S2	1224	G
83	S2	1227	G
83	S2	1242	U
83	S2	1243	U
83	S2	1248	B8N
83	S2	1251	A

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Mol	Chain	Res	Type
83	S2	1253	A
83	S2	1256	G
83	S2	1257	G
83	S2	1264	C
83	S2	1271	C
83	S2	1272	OMC
83	S2	1274	G
83	S2	1275	G
83	S2	1283	C
83	S2	1286	G
83	S2	1288	OMU
83	S2	1293	A
83	S2	1294	G
83	S2	1295	A
83	S2	1301	A
83	S2	1302	G
83	S2	1303	C
83	S2	1308	U
83	S2	1314	U
83	S2	1326	OMU
83	S2	1333	U
83	S2	1342	U
83	S2	1357	A
83	S2	1371	U
83	S2	1372	U
83	S2	1373	C
83	S2	1376	A
83	S2	1378	A
83	S2	1382	A
83	S2	1398	G
83	S2	1402	A
83	S2	1413	G
83	S2	1418	C
83	S2	1419	C
83	S2	1420	G
83	S2	1421	A
83	S2	1422	G
83	S2	1423	C
83	S2	1432	U
83	S2	1433	C
83	S2	1434	C
83	S2	1435	C

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Mol	Chain	Res	Type
83	S2	1437	C
83	S2	1438	A
83	S2	1439	A
83	S2	1442	OMU
83	S2	1449	G
83	S2	1454	A
83	S2	1463	U
83	S2	1474	A
83	S2	1487	A
83	S2	1489	A
83	S2	1490	OMG
83	S2	1492	U
83	S2	1494	U
83	S2	1497	G
83	S2	1498	A
83	S2	1507	G
83	S2	1521	C
83	S2	1522	A
83	S2	1527	C
83	S2	1531	A
83	S2	1533	A
83	S2	1544	C
83	S2	1546	G
83	S2	1549	U
83	S2	1553	C
83	S2	1555	U
83	S2	1556	A
83	S2	1558	C
83	S2	1560	U
83	S2	1573	G
83	S2	1575	G
83	S2	1578	U
83	S2	1579	A
83	S2	1580	A
83	S2	1581	C
83	S2	1585	U
83	S2	1587	G
83	S2	1588	A
83	S2	1600	G
83	S2	1601	A
83	S2	1604	G
83	S2	1605	G

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Mol	Chain	Res	Type
83	S2	1606	G
83	S2	1621	U
83	S2	1622	U
83	S2	1623	A
83	S2	1631	U
83	S2	1632	G
83	S2	1633	A
83	S2	1634	A
83	S2	1637	A
83	S2	1646	C
83	S2	1647	A
83	S2	1648	G
83	S2	1649	U
83	S2	1652	G
83	S2	1654	G
83	S2	1662	U
83	S2	1663	A
83	S2	1665	G
83	S2	1668	U
83	S2	1686	G
83	S2	1695	A
83	S2	1698	C
83	S2	1699	A
83	S2	1705	C
83	S2	1715	A
83	S2	1721	U
83	S2	1722	G
83	S2	1744	G
83	S2	1745	A
83	S2	1752	C
83	S2	1753	C
83	S2	1754	G
83	S2	1755	C
83	S2	1756	C
83	S2	1757	G
83	S2	1758	G
83	S2	1759	G
83	S2	1761	U
83	S2	1772	C
83	S2	1773	C
83	S2	1777	G
83	S2	1782	G

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Mol	Chain	Res	Type
83	S2	1783	C
83	S2	1784	G
83	S2	1786	U
83	S2	1809	A
83	S2	1810	U
83	S2	1821	U
83	S2	1825	A
83	S2	1826	G
83	S2	1831	A
83	S2	1835	A
83	S2	1838	U
83	S2	1849	G
83	S2	1851	MA6
83	S2	1852	C
83	S2	1861	G
83	S2	1862	G
83	S2	1863	A
83	S2	1865	C

All (16) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
3	L5	406	C
3	L5	493	G
3	L5	914	U
3	L5	1082	C
3	L5	1633	G
3	L5	1977	C
3	L5	2416	G
3	L5	2675	G
3	L5	2760	G
3	L5	3673	C
3	L5	4600	G
3	L5	4699	U
3	L5	4913	G
83	S2	291	G
83	S2	563	G
83	S2	688	U

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

178 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
83	OMG	S2	601	83	19,26,27	1.19	2 (10%)	21,38,41	0.80	0
3	PSU	L5	4972	3	18,21,22	1.04	1 (5%)	21,30,33	1.85	4 (19%)
3	PSU	L5	4636	3	18,21,22	1.10	2 (11%)	21,30,33	2.10	6 (28%)
3	OMC	L5	4536	3	19,22,23	0.56	0	25,31,34	0.62	0
3	PSU	L5	4689	3	18,21,22	1.04	2 (11%)	21,30,33	1.80	4 (19%)
3	PSU	L5	1683	3	18,21,22	1.15	1 (5%)	21,30,33	1.87	4 (19%)
3	OMG	L5	2424	3	19,26,27	1.19	2 (10%)	21,38,41	0.79	1 (4%)
3	PSU	L5	2839	3	18,21,22	1.11	2 (11%)	21,30,33	1.90	4 (19%)
83	OMU	S2	354	83	19,22,23	3.33	7 (36%)	25,31,34	1.72	4 (16%)
3	OMC	L5	3808	84,3	19,22,23	0.61	0	25,31,34	0.94	2 (8%)
83	PSU	S2	1045	83	18,21,22	1.13	1 (5%)	21,30,33	1.90	5 (23%)
3	PSU	L5	1860	3	18,21,22	1.06	1 (5%)	21,30,33	1.75	4 (19%)
3	PSU	L5	4471	3	18,21,22	1.07	1 (5%)	21,30,33	1.78	4 (19%)
3	PSU	L5	4296	3	18,21,22	1.08	1 (5%)	21,30,33	1.96	5 (23%)
3	PSU	L5	4532	3	18,21,22	1.09	1 (5%)	21,30,33	1.93	4 (19%)
3	PSU	L5	4521	84,3	18,21,22	1.09	1 (5%)	21,30,33	1.95	5 (23%)
83	A2M	S2	1383	83	18,25,26	1.35	2 (11%)	20,36,39	2.26	5 (25%)
83	OMU	S2	627	83	19,22,23	3.39	7 (36%)	25,31,34	1.81	4 (16%)
3	A2M	L5	1534	84,3	18,25,26	1.23	1 (5%)	20,36,39	1.98	6 (30%)
3	UR3	L5	4530	3	19,22,23	2.69	7 (36%)	26,32,35	1.59	3 (11%)
83	A2M	S2	159	83	18,25,26	1.23	1 (5%)	20,36,39	1.84	7 (35%)
3	OMG	L5	3627	3	19,26,27	1.17	2 (10%)	21,38,41	0.89	1 (4%)
83	OMC	S2	174	83	19,22,23	0.53	0	25,31,34	0.73	1 (4%)
3	PSU	L5	4353	3	18,21,22	1.10	1 (5%)	21,30,33	1.96	4 (19%)
3	A2M	L5	1326	3	18,25,26	1.26	2 (11%)	20,36,39	1.85	7 (35%)
3	OMG	L5	4196	2,3	19,26,27	1.19	2 (10%)	21,38,41	0.85	1 (4%)
83	OMG	S2	683	83	19,26,27	1.14	2 (10%)	21,38,41	0.86	1 (4%)
83	PSU	S2	1004	83	18,21,22	1.10	1 (5%)	21,30,33	1.80	4 (19%)
3	PSU	L5	2632	3	18,21,22	1.06	1 (5%)	21,30,33	1.95	5 (23%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
83	A2M	S2	1031	83	18,25,26	1.34	2 (11%)	20,36,39	2.01	6 (30%)
3	A2M	L5	3825	3	18,25,26	1.29	2 (11%)	20,36,39	1.93	7 (35%)
3	PSU	L5	1781	3	18,21,22	1.07	1 (5%)	21,30,33	1.84	4 (19%)
3	OMG	L5	4392	3	19,26,27	1.21	3 (15%)	21,38,41	0.78	1 (4%)
83	A2M	S2	27	83	18,25,26	1.26	2 (11%)	20,36,39	1.82	5 (25%)
83	OMG	S2	436	83	19,26,27	1.16	2 (10%)	21,38,41	0.81	1 (4%)
83	PSU	S2	814	83	18,21,22	1.12	1 (5%)	21,30,33	1.90	4 (19%)
3	A2M	L5	3867	3	18,25,26	1.34	3 (16%)	20,36,39	1.99	7 (35%)
3	A2M	L5	2815	3	18,25,26	1.29	2 (11%)	20,36,39	1.87	7 (35%)
83	OMC	S2	517	83	19,22,23	0.54	0	25,31,34	0.72	0
83	OMC	S2	1703	83	19,22,23	0.52	0	25,31,34	0.72	1 (4%)
83	A2M	S2	99	84,83	18,25,26	1.31	2 (11%)	20,36,39	2.04	6 (30%)
3	OMG	L5	4637	3	19,26,27	1.20	3 (15%)	21,38,41	0.84	1 (4%)
3	PSU	L5	4973	3	18,21,22	1.09	1 (5%)	21,30,33	1.95	4 (19%)
3	A2M	L5	2401	3	18,25,26	1.33	2 (11%)	20,36,39	2.00	6 (30%)
83	A2M	S2	468	83	18,25,26	1.27	2 (11%)	20,36,39	2.07	5 (25%)
83	6MZ	S2	1832	84,83	21,26,26	1.27	2 (9%)	22,39,39	1.79	2 (9%)
3	PSU	L5	1782	3	18,21,22	1.10	1 (5%)	21,30,33	1.86	4 (19%)
3	PSU	L5	3884	3	18,21,22	1.08	2 (11%)	21,30,33	1.93	4 (19%)
83	PSU	S2	649	83	18,21,22	1.19	1 (5%)	21,30,33	1.83	4 (19%)
3	PSU	L5	5001	3	18,21,22	1.06	1 (5%)	21,30,33	1.82	4 (19%)
5	PSU	L8	69	5	18,21,22	1.10	1 (5%)	21,30,33	1.88	5 (23%)
83	OMC	S2	462	83	19,22,23	0.52	0	25,31,34	0.64	0
3	OMG	L5	3899	3	19,26,27	1.24	2 (10%)	21,38,41	0.77	1 (4%)
3	OMC	L5	2861	3	19,22,23	0.58	0	25,31,34	0.94	2 (8%)
3	PSU	L5	4312	3	18,21,22	1.09	1 (5%)	21,30,33	1.91	4 (19%)
3	OMC	L5	4456	3	19,22,23	0.61	0	25,31,34	0.80	1 (4%)
83	PSU	S2	866	83	18,21,22	1.15	1 (5%)	21,30,33	1.87	4 (19%)
83	PSU	S2	863	83	18,21,22	1.12	1 (5%)	21,30,33	1.92	4 (19%)
3	UY1	L5	3818	3	19,22,23	4.91	10 (52%)	21,31,34	2.07	5 (23%)
83	A2M	S2	484	83	18,25,26	1.20	1 (5%)	20,36,39	1.78	6 (30%)
83	MA6	S2	1850	83	19,26,27	1.50	3 (15%)	18,38,41	3.30	3 (16%)
83	PSU	S2	966	84,83	18,21,22	1.08	1 (5%)	21,30,33	1.98	5 (23%)
3	PSU	L5	4579	3	18,21,22	1.05	1 (5%)	21,30,33	1.83	4 (19%)
3	PSU	L5	5010	3	18,21,22	1.06	1 (5%)	21,30,33	1.89	4 (19%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
3	OMG	L5	1625	3	19,26,27	1.22	2 (10%)	21,38,41	0.88	1 (4%)
3	OMG	L5	1522	3	19,26,27	1.22	3 (15%)	21,38,41	0.91	1 (4%)
83	PSU	S2	1232	83	18,21,22	1.10	1 (5%)	21,30,33	1.93	4 (19%)
3	OMG	L5	4499	3	19,26,27	1.17	2 (10%)	21,38,41	0.84	1 (4%)
3	A2M	L5	4571	3	18,25,26	1.36	3 (16%)	20,36,39	2.06	5 (25%)
3	A2M	L5	398	3	18,25,26	1.33	2 (11%)	20,36,39	2.12	5 (25%)
3	5MC	L5	3782	84,3	19,22,23	0.61	0	26,32,35	0.81	1 (3%)
3	PSU	L5	4493	3	18,21,22	1.07	1 (5%)	21,30,33	1.95	5 (23%)
3	OMU	L5	4498	3	19,22,23	3.31	7 (36%)	25,31,34	1.86	5 (20%)
83	PSU	S2	1177	83	18,21,22	1.09	1 (5%)	21,30,33	1.88	4 (19%)
3	A2M	L5	1524	3	18,25,26	1.37	3 (16%)	20,36,39	2.04	6 (30%)
83	OMG	S2	644	83	19,26,27	1.13	2 (10%)	21,38,41	0.85	1 (4%)
83	OMG	S2	1328	83	19,26,27	1.13	2 (10%)	21,38,41	0.83	1 (4%)
83	PSU	S2	681	83	18,21,22	1.08	1 (5%)	21,30,33	1.84	4 (19%)
83	4AC	S2	1337	83	21,24,25	0.39	0	28,34,37	0.78	2 (7%)
83	A2M	S2	668	84,83	18,25,26	1.36	3 (16%)	20,36,39	2.31	6 (30%)
3	OMU	L5	4306	3	19,22,23	3.19	7 (36%)	25,31,34	1.72	4 (16%)
3	OMG	L5	4228	3	19,26,27	1.23	3 (15%)	21,38,41	0.94	1 (4%)
83	OMG	S2	867	83	19,26,27	1.13	2 (10%)	21,38,41	0.91	1 (4%)
83	PSU	S2	1244	83	18,21,22	1.14	1 (5%)	21,30,33	1.96	5 (23%)
3	PSU	L5	4628	3	18,21,22	1.01	1 (5%)	21,30,33	1.78	4 (19%)
83	OMU	S2	1442	83	19,22,23	3.41	7 (36%)	25,31,34	1.78	5 (20%)
3	PSU	L5	1792	3	18,21,22	1.03	1 (5%)	21,30,33	1.87	4 (19%)
3	PSU	L5	4431	3	18,21,22	1.11	1 (5%)	21,30,33	1.95	4 (19%)
3	A2M	L5	400	3	18,25,26	1.32	2 (11%)	20,36,39	1.98	7 (35%)
3	A2M	L5	3718	3	18,25,26	1.24	2 (11%)	20,36,39	1.91	5 (25%)
3	PSU	L5	3637	3	18,21,22	1.06	1 (5%)	21,30,33	2.02	5 (23%)
3	OMC	L5	3701	3	19,22,23	0.60	0	25,31,34	1.03	2 (8%)
83	A2M	S2	576	83	18,25,26	1.22	2 (11%)	20,36,39	2.01	5 (25%)
3	OMC	L5	3869	3	19,22,23	0.57	0	25,31,34	0.62	0
3	A2M	L5	3785	84,3	18,25,26	1.28	2 (11%)	20,36,39	2.08	6 (30%)
83	OMC	S2	1391	83	19,22,23	0.51	0	25,31,34	0.68	0
83	OMU	S2	1288	83	19,22,23	3.41	7 (36%)	25,31,34	1.76	4 (16%)
3	A2M	L5	4590	3	18,25,26	1.24	2 (11%)	20,36,39	2.01	7 (35%)
3	OMC	L5	1340	3	19,22,23	0.61	0	25,31,34	0.72	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
83	PSU	S2	109	83	18,21,22	1.10	1 (5%)	21,30,33	1.90	4 (19%)
83	PSU	S2	93	83	18,21,22	1.15	1 (5%)	21,30,33	1.77	4 (19%)
83	OMG	S2	509	83	19,26,27	1.15	2 (10%)	21,38,41	0.82	1 (4%)
83	B8N	S2	1248	83	25,29,30	3.28	6 (24%)	28,42,45	2.06	9 (32%)
83	OMU	S2	116	83	19,22,23	3.35	7 (36%)	25,31,34	1.71	5 (20%)
3	OMG	L5	2364	84,3	19,26,27	1.19	2 (10%)	21,38,41	0.82	1 (4%)
83	MA6	S2	1851	83	19,26,27	1.49	3 (15%)	18,38,41	3.45	3 (16%)
3	PSU	L5	4299	3	18,21,22	1.13	1 (5%)	21,30,33	1.96	4 (19%)
3	PSU	L5	4293	3	18,21,22	1.05	2 (11%)	21,30,33	1.96	5 (23%)
3	PSU	L5	1744	84,3	18,21,22	1.09	1 (5%)	21,30,33	1.87	4 (19%)
3	A2M	L5	4523	84,3	18,25,26	1.43	4 (22%)	20,36,39	1.99	6 (30%)
83	PSU	S2	651	83	18,21,22	1.17	1 (5%)	21,30,33	1.88	4 (19%)
3	PSU	L5	1536	3	18,21,22	1.09	2 (11%)	21,30,33	1.92	4 (19%)
3	PSU	L5	4403	3	18,21,22	1.06	1 (5%)	21,30,33	1.94	6 (28%)
3	OMU	L5	3925	3	19,22,23	3.28	7 (36%)	25,31,34	1.75	4 (16%)
3	PSU	L5	3639	3	18,21,22	1.11	2 (11%)	21,30,33	1.94	4 (19%)
3	OMG	L5	3792	3	19,26,27	1.17	2 (10%)	21,38,41	0.81	1 (4%)
3	OMG	L5	1316	3	19,26,27	1.21	3 (15%)	21,38,41	0.89	1 (4%)
3	PSU	L5	1862	3	18,21,22	1.10	1 (5%)	21,30,33	1.97	5 (23%)
3	OMU	L5	2837	3	19,22,23	3.31	7 (36%)	25,31,34	1.85	5 (20%)
3	PSU	L5	3920	84,3	18,21,22	1.08	1 (5%)	21,30,33	1.81	4 (19%)
83	OMU	S2	799	83	19,22,23	3.36	7 (36%)	25,31,34	1.79	4 (16%)
83	PSU	S2	801	83	18,21,22	1.16	1 (5%)	21,30,33	1.71	4 (19%)
83	PSU	S2	1367	83	18,21,22	1.12	1 (5%)	21,30,33	1.98	6 (28%)
3	OMU	L5	4227	3	19,22,23	3.30	7 (36%)	25,31,34	1.79	5 (20%)
3	OMG	L5	4623	3	19,26,27	1.18	2 (10%)	21,38,41	0.85	1 (4%)
83	OMU	S2	172	83	19,22,23	3.40	7 (36%)	25,31,34	1.82	5 (20%)
83	PSU	S2	105	83	18,21,22	1.08	1 (5%)	21,30,33	1.91	4 (19%)
3	A2M	L5	1871	84,3	18,25,26	1.33	2 (11%)	20,36,39	2.31	5 (25%)
3	A2M	L5	2363	84,3	18,25,26	1.33	2 (11%)	20,36,39	1.90	7 (35%)
3	PSU	L5	1677	3	18,21,22	1.05	2 (11%)	21,30,33	1.89	4 (19%)
83	G7M	S2	1639	2,83	20,26,27	2.51	6 (30%)	16,39,42	1.18	1 (6%)
3	OMG	L5	2876	3	19,26,27	1.17	2 (10%)	21,38,41	0.81	1 (4%)
3	OMC	L5	2804	3	19,22,23	0.57	0	25,31,34	0.64	0
3	OMC	L5	2824	3	19,22,23	0.57	0	25,31,34	0.66	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
83	PSU	S2	686	83	18,21,22	1.09	1 (5%)	21,30,33	1.97	5 (23%)
3	6MZ	L5	4220	3	17,25,26	3.55	7 (41%)	15,36,39	2.65	4 (26%)
3	PSU	L5	3851	3	18,21,22	1.05	1 (5%)	21,30,33	1.96	6 (28%)
3	OMC	L5	3887	3	19,22,23	0.56	0	25,31,34	0.65	0
3	PSU	L5	4442	3	18,21,22	1.12	3 (16%)	21,30,33	2.10	6 (28%)
3	PSU	L5	1582	3	18,21,22	1.08	1 (5%)	21,30,33	1.85	4 (19%)
3	PSU	L5	3844	3	18,21,22	1.14	1 (5%)	21,30,33	1.81	4 (19%)
3	OMC	L5	2351	84,3	19,22,23	0.58	0	25,31,34	0.80	1 (4%)
5	OMG	L8	75	5	19,26,27	1.22	2 (10%)	21,38,41	0.78	1 (4%)
83	PSU	S2	1174	83	18,21,22	1.02	1 (5%)	21,30,33	1.86	4 (19%)
3	A2M	L5	3830	3	18,25,26	1.38	2 (11%)	20,36,39	2.08	5 (25%)
83	4AC	S2	1842	83	21,24,25	0.41	0	28,34,37	0.51	0
3	A2M	L5	2787	3	18,25,26	1.29	2 (11%)	20,36,39	1.88	7 (35%)
5	PSU	L8	55	5	18,21,22	1.11	1 (5%)	21,30,33	1.85	4 (19%)
3	OMC	L5	3841	3	19,22,23	0.57	0	25,31,34	0.48	0
83	PSU	S2	1046	83	18,21,22	1.08	1 (5%)	21,30,33	1.87	4 (19%)
3	PSU	L5	4361	3	18,21,22	1.09	1 (5%)	21,30,33	1.84	4 (19%)
83	PSU	S2	1056	83	18,21,22	1.08	1 (5%)	21,30,33	1.80	4 (19%)
83	A2M	S2	166	83	18,25,26	1.36	2 (11%)	20,36,39	2.02	6 (30%)
3	OMG	L5	4618	3	19,26,27	1.21	3 (15%)	21,38,41	0.82	1 (4%)
3	OMG	L5	4494	3	19,26,27	1.19	3 (15%)	21,38,41	0.82	1 (4%)
83	OMU	S2	428	83	19,22,23	3.36	7 (36%)	25,31,34	1.80	5 (20%)
3	1MA	L5	1322	84,3	17,25,26	1.01	2 (11%)	17,37,40	1.11	2 (11%)
3	OMU	L5	4620	3	19,22,23	3.26	7 (36%)	25,31,34	1.74	4 (16%)
83	OMU	S2	1326	83	19,22,23	3.40	7 (36%)	25,31,34	1.87	5 (20%)
83	PSU	S2	406	83	18,21,22	1.12	1 (5%)	21,30,33	1.88	5 (23%)
3	OMC	L5	2422	84,3	19,22,23	0.58	0	25,31,34	0.77	1 (4%)
3	PSU	L5	4552	3	18,21,22	1.10	1 (5%)	21,30,33	1.87	4 (19%)
83	OMC	S2	1272	83	19,22,23	0.49	0	25,31,34	0.73	0
83	OMG	S2	1490	83	19,26,27	1.23	2 (10%)	21,38,41	0.72	0
3	OMG	L5	4370	3	19,26,27	1.16	2 (10%)	21,38,41	0.90	1 (4%)
3	PSU	L5	3853	84,3	18,21,22	1.07	1 (5%)	21,30,33	1.94	5 (23%)
83	PSU	S2	1081	83	18,21,22	1.05	1 (5%)	21,30,33	1.93	4 (19%)
3	5MC	L5	4447	3	19,22,23	0.73	0	26,32,35	0.68	0
3	PSU	L5	3822	3	18,21,22	1.08	1 (5%)	21,30,33	1.94	6 (28%)
3	PSU	L5	3695	3	18,21,22	1.07	1 (5%)	21,30,33	1.86	4 (19%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
3	PSU	L5	4500	3	18,21,22	1.12	1 (5%)	21,30,33	2.08	6 (28%)
3	OMC	L5	2365	84,3	19,22,23	0.55	0	25,31,34	0.64	0
3	A2M	L5	1323	3	18,25,26	1.36	4 (22%)	20,36,39	1.98	7 (35%)
3	PSU	L5	4457	3	18,21,22	1.07	1 (5%)	21,30,33	2.02	6 (28%)
3	PSU	L5	4576	3	18,21,22	1.06	1 (5%)	21,30,33	1.87	5 (23%)
83	OMU	S2	121	83	19,22,23	3.33	7 (36%)	25,31,34	1.73	4 (16%)
3	PSU	L5	4673	3	18,21,22	1.13	2 (11%)	21,30,33	1.90	4 (19%)
3	OMG	L5	3744	3	19,26,27	1.18	3 (15%)	21,38,41	0.85	1 (4%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
83	OMG	S2	601	83	-	1/5/27/28	0/3/3/3
3	PSU	L5	4972	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	4636	3	-	1/7/25/26	0/2/2/2
3	OMC	L5	4536	3	-	0/9/27/28	0/2/2/2
3	PSU	L5	4689	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	1683	3	-	0/7/25/26	0/2/2/2
3	OMG	L5	2424	3	-	0/5/27/28	0/3/3/3
3	PSU	L5	2839	3	-	0/7/25/26	0/2/2/2
83	OMU	S2	354	83	-	0/9/27/28	0/2/2/2
3	OMC	L5	3808	84,3	-	1/9/27/28	0/2/2/2
83	PSU	S2	1045	83	-	2/7/25/26	0/2/2/2
3	PSU	L5	1860	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	4471	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	4532	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	4521	84,3	-	0/7/25/26	0/2/2/2
83	A2M	S2	1383	83	-	3/5/27/28	0/3/3/3
83	OMU	S2	627	83	-	5/9/27/28	0/2/2/2
3	A2M	L5	1534	84,3	-	1/5/27/28	0/3/3/3
3	UR3	L5	4530	3	-	1/7/25/26	0/2/2/2
83	A2M	S2	159	83	-	1/5/27/28	0/3/3/3
3	OMG	L5	3627	3	-	0/5/27/28	0/3/3/3
83	OMC	S2	174	83	-	0/9/27/28	0/2/2/2
3	PSU	L5	4353	3	-	0/7/25/26	0/2/2/2
3	A2M	L5	1326	3	-	4/5/27/28	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	OMG	L5	4196	2,3	-	1/5/27/28	0/3/3/3
83	OMG	S2	683	83	-	0/5/27/28	0/3/3/3
83	PSU	S2	1004	83	-	0/7/25/26	0/2/2/2
3	PSU	L5	2632	3	-	2/7/25/26	0/2/2/2
83	A2M	S2	1031	83	-	1/5/27/28	0/3/3/3
3	A2M	L5	3825	3	-	1/5/27/28	0/3/3/3
3	PSU	L5	1781	3	-	1/7/25/26	0/2/2/2
3	OMG	L5	4392	3	-	0/5/27/28	0/3/3/3
83	A2M	S2	27	83	-	1/5/27/28	0/3/3/3
83	OMG	S2	436	83	-	0/5/27/28	0/3/3/3
83	PSU	S2	814	83	-	0/7/25/26	0/2/2/2
3	A2M	L5	3867	3	-	1/5/27/28	0/3/3/3
3	A2M	L5	2815	3	-	0/5/27/28	0/3/3/3
83	OMC	S2	517	83	-	2/9/27/28	0/2/2/2
83	OMC	S2	1703	83	-	0/9/27/28	0/2/2/2
83	A2M	S2	99	84,83	-	1/5/27/28	0/3/3/3
3	OMG	L5	4637	3	-	3/5/27/28	0/3/3/3
3	PSU	L5	4973	3	-	0/7/25/26	0/2/2/2
3	A2M	L5	2401	3	-	0/5/27/28	0/3/3/3
83	A2M	S2	468	83	-	1/5/27/28	0/3/3/3
83	6MZ	S2	1832	84,83	-	6/8/28/28	0/3/3/3
3	PSU	L5	1782	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	3884	3	-	0/7/25/26	0/2/2/2
83	PSU	S2	649	83	-	0/7/25/26	0/2/2/2
3	PSU	L5	5001	3	-	0/7/25/26	0/2/2/2
5	PSU	L8	69	5	-	0/7/25/26	0/2/2/2
83	OMC	S2	462	83	-	1/9/27/28	0/2/2/2
3	OMG	L5	3899	3	-	0/5/27/28	0/3/3/3
3	OMC	L5	2861	3	-	0/9/27/28	0/2/2/2
3	PSU	L5	4312	3	-	0/7/25/26	0/2/2/2
3	OMC	L5	4456	3	-	0/9/27/28	0/2/2/2
83	PSU	S2	866	83	-	0/7/25/26	0/2/2/2
83	PSU	S2	863	83	-	0/7/25/26	0/2/2/2
3	UY1	L5	3818	3	-	2/9/27/28	0/2/2/2
83	A2M	S2	484	83	-	0/5/27/28	0/3/3/3
83	MA6	S2	1850	83	-	0/7/29/30	0/3/3/3
83	PSU	S2	966	84,83	-	0/7/25/26	0/2/2/2
3	PSU	L5	4579	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	5010	3	-	0/7/25/26	0/2/2/2
3	OMG	L5	1625	3	-	3/5/27/28	0/3/3/3
3	OMG	L5	1522	3	-	0/5/27/28	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
83	PSU	S2	1232	83	-	0/7/25/26	0/2/2/2
3	OMG	L5	4499	3	-	1/5/27/28	0/3/3/3
3	A2M	L5	4571	3	-	2/5/27/28	0/3/3/3
3	A2M	L5	398	3	-	1/5/27/28	0/3/3/3
3	5MC	L5	3782	84,3	-	0/7/25/26	0/2/2/2
3	PSU	L5	4493	3	-	0/7/25/26	0/2/2/2
3	OMU	L5	4498	3	-	0/9/27/28	0/2/2/2
83	PSU	S2	1177	83	-	0/7/25/26	0/2/2/2
3	A2M	L5	1524	3	-	2/5/27/28	0/3/3/3
83	OMG	S2	644	83	-	3/5/27/28	0/3/3/3
83	OMG	S2	1328	83	-	1/5/27/28	0/3/3/3
83	PSU	S2	681	83	-	0/7/25/26	0/2/2/2
83	4AC	S2	1337	83	-	1/11/29/30	0/2/2/2
83	A2M	S2	668	84,83	-	2/5/27/28	0/3/3/3
3	OMU	L5	4306	3	-	2/9/27/28	0/2/2/2
3	OMG	L5	4228	3	-	2/5/27/28	0/3/3/3
83	OMG	S2	867	83	-	2/5/27/28	0/3/3/3
83	PSU	S2	1244	83	-	1/7/25/26	0/2/2/2
3	PSU	L5	4628	3	-	0/7/25/26	0/2/2/2
83	OMU	S2	1442	83	-	2/9/27/28	0/2/2/2
3	PSU	L5	1792	3	-	2/7/25/26	0/2/2/2
3	PSU	L5	4431	3	-	0/7/25/26	0/2/2/2
3	A2M	L5	400	3	-	1/5/27/28	0/3/3/3
3	A2M	L5	3718	3	-	0/5/27/28	0/3/3/3
3	PSU	L5	3637	3	-	0/7/25/26	0/2/2/2
3	OMC	L5	3701	3	-	5/9/27/28	0/2/2/2
83	A2M	S2	576	83	-	3/5/27/28	0/3/3/3
3	OMC	L5	3869	3	-	2/9/27/28	0/2/2/2
3	A2M	L5	3785	84,3	-	2/5/27/28	0/3/3/3
83	OMC	S2	1391	83	-	1/9/27/28	0/2/2/2
83	OMU	S2	1288	83	-	2/9/27/28	0/2/2/2
3	A2M	L5	4590	3	-	4/5/27/28	0/3/3/3
3	OMC	L5	1340	3	-	0/9/27/28	0/2/2/2
83	PSU	S2	109	83	-	0/7/25/26	0/2/2/2
83	PSU	S2	93	83	-	0/7/25/26	0/2/2/2
83	OMG	S2	509	83	-	0/5/27/28	0/3/3/3
83	B8N	S2	1248	83	-	8/16/34/35	0/2/2/2
83	OMU	S2	116	83	-	1/9/27/28	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	OMG	L5	2364	84,3	-	2/5/27/28	0/3/3/3
83	MA6	S2	1851	83	-	1/7/29/30	0/3/3/3
3	PSU	L5	4299	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	4293	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	1744	84,3	-	0/7/25/26	0/2/2/2
3	A2M	L5	4523	84,3	-	0/5/27/28	0/3/3/3
83	PSU	S2	651	83	-	1/7/25/26	0/2/2/2
3	PSU	L5	1536	3	-	2/7/25/26	0/2/2/2
3	PSU	L5	4403	3	-	0/7/25/26	0/2/2/2
3	OMU	L5	3925	3	-	1/9/27/28	0/2/2/2
3	PSU	L5	3639	3	-	0/7/25/26	0/2/2/2
3	OMG	L5	3792	3	-	2/5/27/28	0/3/3/3
3	OMG	L5	1316	3	-	1/5/27/28	0/3/3/3
3	PSU	L5	1862	3	-	0/7/25/26	0/2/2/2
3	OMU	L5	2837	3	-	0/9/27/28	0/2/2/2
3	PSU	L5	3920	84,3	-	0/7/25/26	0/2/2/2
83	OMU	S2	799	83	-	2/9/27/28	0/2/2/2
83	PSU	S2	801	83	-	2/7/25/26	0/2/2/2
83	PSU	S2	1367	83	-	0/7/25/26	0/2/2/2
3	OMU	L5	4227	3	-	0/9/27/28	0/2/2/2
3	OMG	L5	4623	3	-	1/5/27/28	0/3/3/3
83	OMU	S2	172	83	-	0/9/27/28	0/2/2/2
83	PSU	S2	105	83	-	0/7/25/26	0/2/2/2
3	A2M	L5	1871	84,3	-	0/5/27/28	0/3/3/3
3	A2M	L5	2363	84,3	-	0/5/27/28	0/3/3/3
3	PSU	L5	1677	3	-	2/7/25/26	0/2/2/2
83	G7M	S2	1639	2,83	-	0/3/25/26	0/3/3/3
3	OMG	L5	2876	3	-	2/5/27/28	0/3/3/3
3	OMC	L5	2804	3	-	0/9/27/28	0/2/2/2
3	OMC	L5	2824	3	-	1/9/27/28	0/2/2/2
83	PSU	S2	686	83	-	0/7/25/26	0/2/2/2
3	6MZ	L5	4220	3	-	2/5/27/28	0/3/3/3
3	PSU	L5	3851	3	-	0/7/25/26	0/2/2/2
3	OMC	L5	3887	3	-	1/9/27/28	0/2/2/2
3	PSU	L5	4442	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	3844	3	-	1/7/25/26	0/2/2/2
3	OMC	L5	2351	84,3	-	1/9/27/28	0/2/2/2
5	OMG	L8	75	5	-	0/5/27/28	0/3/3/3
83	PSU	S2	1174	83	-	0/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	A2M	L5	3830	3	-	3/5/27/28	0/3/3/3
83	4AC	S2	1842	83	-	0/11/29/30	0/2/2/2
3	A2M	L5	2787	3	-	2/5/27/28	0/3/3/3
5	PSU	L8	55	5	-	0/7/25/26	0/2/2/2
3	OMC	L5	3841	3	-	1/9/27/28	0/2/2/2
83	PSU	S2	1046	83	-	2/7/25/26	0/2/2/2
3	PSU	L5	4361	3	-	0/7/25/26	0/2/2/2
83	PSU	S2	1056	83	-	0/7/25/26	0/2/2/2
83	A2M	S2	166	83	-	0/5/27/28	0/3/3/3
3	OMG	L5	4618	3	-	0/5/27/28	0/3/3/3
3	OMG	L5	4494	3	-	0/5/27/28	0/3/3/3
83	OMU	S2	428	83	-	6/9/27/28	0/2/2/2
3	1MA	L5	1322	84,3	-	0/3/25/26	0/3/3/3
3	OMU	L5	4620	3	-	0/9/27/28	0/2/2/2
83	OMU	S2	1326	83	-	2/9/27/28	0/2/2/2
83	PSU	S2	406	83	-	0/7/25/26	0/2/2/2
3	OMC	L5	2422	84,3	-	3/9/27/28	0/2/2/2
3	PSU	L5	4552	3	-	0/7/25/26	0/2/2/2
83	OMC	S2	1272	83	-	2/9/27/28	0/2/2/2
83	OMG	S2	1490	83	-	1/5/27/28	0/3/3/3
3	OMG	L5	4370	3	-	0/5/27/28	0/3/3/3
3	PSU	L5	3853	84,3	-	0/7/25/26	0/2/2/2
83	PSU	S2	1081	83	-	1/7/25/26	0/2/2/2
3	5MC	L5	4447	3	-	4/7/25/26	0/2/2/2
3	PSU	L5	3822	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	3695	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	4500	3	-	3/7/25/26	0/2/2/2
3	OMC	L5	2365	84,3	-	0/9/27/28	0/2/2/2
3	A2M	L5	1323	3	-	2/5/27/28	0/3/3/3
3	PSU	L5	4457	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	4576	3	-	0/7/25/26	0/2/2/2
83	OMU	S2	121	83	-	0/9/27/28	0/2/2/2
3	PSU	L5	4673	3	-	0/7/25/26	0/2/2/2
3	OMG	L5	3744	3	-	1/5/27/28	0/3/3/3

All (368) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	L5	3818	UY1	C6-C5	12.81	1.49	1.35
3	L5	3818	UY1	C2-N1	11.77	1.52	1.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
83	S2	1288	OMU	C2-N1	8.58	1.51	1.38
83	S2	1442	OMU	C2-N1	8.45	1.51	1.38
83	S2	172	OMU	C2-N1	8.42	1.51	1.38
83	S2	799	OMU	C2-N1	8.42	1.51	1.38
3	L5	4220	6MZ	C3'-C2'	-8.42	1.30	1.53
83	S2	627	OMU	C2-N1	8.37	1.51	1.38
83	S2	1326	OMU	C2-N1	8.34	1.51	1.38
83	S2	428	OMU	C2-N1	8.16	1.51	1.38
83	S2	121	OMU	C2-N1	8.15	1.51	1.38
83	S2	354	OMU	C2-N1	8.11	1.51	1.38
83	S2	116	OMU	C2-N1	8.10	1.51	1.38
3	L5	4498	OMU	C2-N1	8.06	1.51	1.38
3	L5	2837	OMU	C2-N1	8.01	1.51	1.38
3	L5	3925	OMU	C2-N1	8.00	1.51	1.38
3	L5	4620	OMU	C2-N1	7.97	1.50	1.38
3	L5	4227	OMU	C2-N1	7.90	1.50	1.38
3	L5	3818	UY1	C2-N3	7.87	1.50	1.37
83	S2	1248	B8N	C6-N1	7.85	1.55	1.36
3	L5	4306	OMU	C2-N1	7.83	1.50	1.38
83	S2	1248	B8N	C4-N3	-7.76	1.26	1.40
3	L5	4220	6MZ	O4'-C1'	-7.43	1.31	1.40
83	S2	1248	B8N	C4-C5	7.17	1.63	1.47
83	S2	116	OMU	C2-N3	7.06	1.50	1.38
83	S2	1326	OMU	C2-N3	7.03	1.50	1.38
83	S2	1442	OMU	C2-N3	6.97	1.50	1.38
83	S2	172	OMU	C2-N3	6.96	1.50	1.38
83	S2	428	OMU	C2-N3	6.94	1.50	1.38
83	S2	627	OMU	C2-N3	6.93	1.50	1.38
83	S2	1288	OMU	C2-N3	6.89	1.50	1.38
83	S2	354	OMU	C2-N3	6.80	1.49	1.38
83	S2	799	OMU	C2-N3	6.78	1.49	1.38
3	L5	4227	OMU	C2-N3	6.77	1.49	1.38
3	L5	2837	OMU	C2-N3	6.76	1.49	1.38
3	L5	4498	OMU	C2-N3	6.74	1.49	1.38
3	L5	3925	OMU	C2-N3	6.73	1.49	1.38
3	L5	4620	OMU	C2-N3	6.70	1.49	1.38
83	S2	121	OMU	C2-N3	6.70	1.49	1.38
3	L5	4306	OMU	C2-N3	6.47	1.49	1.38
3	L5	4530	UR3	C6-C5	6.22	1.49	1.35
3	L5	4530	UR3	C2-N1	6.16	1.47	1.38
83	S2	172	OMU	C6-C5	5.95	1.48	1.35
83	S2	1288	OMU	C6-C5	5.94	1.48	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
83	S2	1248	B8N	C2-N1	5.91	1.56	1.39
83	S2	428	OMU	C6-C5	5.90	1.48	1.35
83	S2	121	OMU	C6-C5	5.89	1.48	1.35
3	L5	4227	OMU	C6-C5	5.87	1.48	1.35
83	S2	354	OMU	C6-C5	5.86	1.48	1.35
83	S2	627	OMU	C6-C5	5.85	1.48	1.35
83	S2	1326	OMU	C6-C5	5.84	1.48	1.35
83	S2	1442	OMU	C6-C5	5.80	1.48	1.35
83	S2	116	OMU	C6-C5	5.79	1.48	1.35
3	L5	4498	OMU	C6-C5	5.76	1.48	1.35
83	S2	799	OMU	C6-C5	5.76	1.48	1.35
3	L5	2837	OMU	C6-C5	5.75	1.48	1.35
3	L5	4530	UR3	C2-N3	5.75	1.50	1.39
3	L5	3925	OMU	C6-C5	5.71	1.48	1.35
3	L5	4620	OMU	C6-C5	5.69	1.48	1.35
83	S2	1639	G7M	C2-N3	5.59	1.46	1.33
3	L5	4306	OMU	C6-C5	5.55	1.47	1.35
83	S2	799	OMU	O4-C4	-5.54	1.13	1.24
3	L5	4498	OMU	O4-C4	-5.54	1.13	1.24
3	L5	2837	OMU	O4-C4	-5.53	1.13	1.24
3	L5	4306	OMU	O4-C4	-5.52	1.13	1.24
3	L5	4620	OMU	O4-C4	-5.51	1.13	1.24
83	S2	1442	OMU	O4-C4	-5.49	1.13	1.24
3	L5	4227	OMU	O4-C4	-5.47	1.13	1.24
83	S2	1326	OMU	O4-C4	-5.46	1.13	1.24
3	L5	3925	OMU	O4-C4	-5.46	1.13	1.24
83	S2	354	OMU	O4-C4	-5.45	1.13	1.24
83	S2	172	OMU	O4-C4	-5.40	1.14	1.24
83	S2	627	OMU	O4-C4	-5.40	1.14	1.24
83	S2	1248	B8N	C6-C5	5.39	1.42	1.35
83	S2	1288	OMU	O4-C4	-5.39	1.14	1.24
83	S2	116	OMU	O4-C4	-5.38	1.14	1.24
83	S2	428	OMU	O4-C4	-5.36	1.14	1.24
83	S2	121	OMU	O4-C4	-5.36	1.14	1.24
3	L5	3818	UY1	C6-N1	5.30	1.45	1.36
83	S2	1639	G7M	C4-N3	5.18	1.49	1.37
83	S2	1639	G7M	C2-N2	4.96	1.45	1.34
3	L5	4220	6MZ	O4'-C4'	4.71	1.55	1.45
3	L5	3818	UY1	C4-N3	4.54	1.47	1.38
83	S2	428	OMU	C4-N3	4.51	1.46	1.38
83	S2	1442	OMU	C4-N3	4.50	1.46	1.38
83	S2	1326	OMU	C4-N3	4.46	1.46	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
83	S2	116	OMU	C4-N3	4.46	1.46	1.38
3	L5	4220	6MZ	C5'-C4'	-4.45	1.38	1.51
83	S2	627	OMU	C4-N3	4.44	1.46	1.38
3	L5	4220	6MZ	C6-C5	-4.36	1.38	1.44
83	S2	1288	OMU	C4-N3	4.36	1.46	1.38
83	S2	172	OMU	C4-N3	4.35	1.46	1.38
3	L5	2837	OMU	C4-N3	4.31	1.46	1.38
3	L5	3925	OMU	C4-N3	4.28	1.46	1.38
83	S2	354	OMU	C4-N3	4.24	1.45	1.38
3	L5	4498	OMU	C4-N3	4.24	1.45	1.38
83	S2	799	OMU	C4-N3	4.21	1.45	1.38
83	S2	121	OMU	C4-N3	4.20	1.45	1.38
3	L5	4227	OMU	C4-N3	4.13	1.45	1.38
83	S2	1850	MA6	C6-C5	-4.07	1.38	1.44
83	S2	649	PSU	C6-C5	4.04	1.39	1.35
3	L5	4620	OMU	C4-N3	3.98	1.45	1.38
83	S2	801	PSU	C6-C5	3.98	1.39	1.35
83	S2	93	PSU	C6-C5	3.94	1.39	1.35
83	S2	1248	B8N	C1'-C5	3.84	1.58	1.50
83	S2	651	PSU	C6-C5	3.84	1.39	1.35
3	L5	4306	OMU	C4-N3	3.83	1.45	1.38
83	S2	1832	6MZ	C6-C5	-3.79	1.39	1.44
83	S2	866	PSU	C6-C5	3.75	1.39	1.35
83	S2	1639	G7M	C6-N1	3.75	1.43	1.37
3	L5	1683	PSU	C6-C5	3.73	1.39	1.35
83	S2	1851	MA6	C6-C5	-3.72	1.39	1.44
83	S2	1244	PSU	C6-C5	3.71	1.39	1.35
3	L5	3844	PSU	C6-C5	3.70	1.39	1.35
83	S2	863	PSU	C6-C5	3.69	1.39	1.35
3	L5	3818	UY1	O4-C4	-3.64	1.16	1.23
5	L8	55	PSU	C6-C5	3.64	1.39	1.35
83	S2	406	PSU	C6-C5	3.61	1.39	1.35
83	S2	1004	PSU	C6-C5	3.61	1.39	1.35
3	L5	1782	PSU	C6-C5	3.60	1.39	1.35
83	S2	1056	PSU	C6-C5	3.60	1.39	1.35
83	S2	1045	PSU	C6-C5	3.59	1.39	1.35
83	S2	1367	PSU	C6-C5	3.58	1.39	1.35
3	L5	4299	PSU	C6-C5	3.58	1.39	1.35
83	S2	1232	PSU	C6-C5	3.57	1.39	1.35
3	L5	4673	PSU	C6-C5	3.56	1.39	1.35
83	S2	814	PSU	C6-C5	3.55	1.39	1.35
3	L5	3830	A2M	O5'-C5'	-3.52	1.33	1.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
83	S2	668	A2M	O5'-C5'	-3.52	1.33	1.44
3	L5	4353	PSU	C6-C5	3.52	1.39	1.35
3	L5	4361	PSU	C6-C5	3.51	1.39	1.35
3	L5	2839	PSU	C6-C5	3.51	1.39	1.35
3	L5	1744	PSU	C6-C5	3.50	1.39	1.35
83	S2	99	A2M	O5'-C5'	-3.49	1.34	1.44
83	S2	966	PSU	C6-C5	3.49	1.39	1.35
83	S2	1177	PSU	C6-C5	3.49	1.39	1.35
3	L5	4471	PSU	C6-C5	3.49	1.39	1.35
83	S2	681	PSU	C6-C5	3.48	1.39	1.35
5	L8	69	PSU	C6-C5	3.47	1.39	1.35
83	S2	109	PSU	C6-C5	3.47	1.39	1.35
3	L5	3825	A2M	O5'-C5'	-3.47	1.34	1.44
3	L5	4312	PSU	C6-C5	3.47	1.39	1.35
3	L5	4431	PSU	C6-C5	3.46	1.39	1.35
83	S2	105	PSU	C6-C5	3.45	1.39	1.35
3	L5	1871	A2M	O5'-C5'	-3.45	1.34	1.44
83	S2	1046	PSU	C6-C5	3.44	1.39	1.35
3	L5	2815	A2M	O5'-C5'	-3.44	1.34	1.44
83	S2	1639	G7M	C5-C6	3.44	1.54	1.45
3	L5	4532	PSU	C6-C5	3.43	1.39	1.35
3	L5	4552	PSU	C6-C5	3.42	1.39	1.35
83	S2	686	PSU	C6-C5	3.42	1.39	1.35
3	L5	2401	A2M	O5'-C5'	-3.42	1.34	1.44
3	L5	4296	PSU	C6-C5	3.42	1.39	1.35
3	L5	1323	A2M	O5'-C5'	-3.42	1.34	1.44
3	L5	1862	PSU	C6-C5	3.42	1.39	1.35
3	L5	1781	PSU	C6-C5	3.41	1.39	1.35
83	S2	166	A2M	O5'-C5'	-3.40	1.34	1.44
3	L5	5010	PSU	C6-C5	3.39	1.39	1.35
83	S2	1031	A2M	O5'-C5'	-3.39	1.34	1.44
3	L5	400	A2M	O5'-C5'	-3.39	1.34	1.44
83	S2	1851	MA6	C6-N6	3.38	1.45	1.37
3	L5	2787	A2M	O5'-C5'	-3.37	1.34	1.44
3	L5	1582	PSU	C6-C5	3.37	1.39	1.35
3	L5	3639	PSU	C6-C5	3.36	1.39	1.35
3	L5	5001	PSU	C6-C5	3.36	1.39	1.35
3	L5	3695	PSU	C6-C5	3.36	1.39	1.35
83	S2	484	A2M	O5'-C5'	-3.35	1.34	1.44
3	L5	4500	PSU	C6-C5	3.35	1.39	1.35
83	S2	1081	PSU	C6-C5	3.35	1.39	1.35
3	L5	4571	A2M	O5'-C5'	-3.34	1.34	1.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	L5	4973	PSU	C6-C5	3.34	1.39	1.35
3	L5	2363	A2M	O5'-C5'	-3.34	1.34	1.44
3	L5	3920	PSU	C6-C5	3.34	1.39	1.35
3	L5	4521	PSU	C6-C5	3.34	1.39	1.35
3	L5	1536	PSU	C6-C5	3.33	1.39	1.35
83	S2	1383	A2M	O5'-C5'	-3.33	1.34	1.44
3	L5	1524	A2M	O5'-C5'	-3.32	1.34	1.44
83	S2	1850	MA6	C6-N6	3.32	1.45	1.37
3	L5	1860	PSU	C6-C5	3.32	1.39	1.35
3	L5	2632	PSU	C6-C5	3.31	1.39	1.35
3	L5	4493	PSU	C6-C5	3.31	1.39	1.35
3	L5	4523	A2M	O5'-C5'	-3.31	1.34	1.44
3	L5	4442	PSU	C6-C5	3.29	1.38	1.35
3	L5	4590	A2M	O5'-C5'	-3.29	1.34	1.44
3	L5	3785	A2M	O5'-C5'	-3.29	1.34	1.44
3	L5	4972	PSU	C6-C5	3.28	1.38	1.35
3	L5	3867	A2M	O5'-C5'	-3.26	1.34	1.44
3	L5	1792	PSU	C6-C5	3.26	1.38	1.35
3	L5	4636	PSU	C6-C5	3.25	1.38	1.35
3	L5	398	A2M	O5'-C5'	-3.25	1.34	1.44
3	L5	4579	PSU	C6-C5	3.23	1.38	1.35
3	L5	3853	PSU	C6-C5	3.22	1.38	1.35
3	L5	4457	PSU	C6-C5	3.22	1.38	1.35
83	S2	601	OMG	C8-N7	-3.22	1.29	1.34
3	L5	1326	A2M	O5'-C5'	-3.21	1.34	1.44
3	L5	3637	PSU	C6-C5	3.21	1.38	1.35
3	L5	3818	UY1	O2-C2	-3.21	1.16	1.23
3	L5	3822	PSU	C6-C5	3.21	1.38	1.35
3	L5	3718	A2M	O5'-C5'	-3.20	1.34	1.44
3	L5	3818	UY1	C1'-C5	3.20	1.57	1.50
3	L5	4293	PSU	C6-C5	3.19	1.38	1.35
83	S2	1490	OMG	C8-N7	-3.18	1.29	1.34
83	S2	1174	PSU	C6-C5	3.17	1.38	1.35
83	S2	468	A2M	O5'-C5'	-3.17	1.34	1.44
3	L5	3851	PSU	C6-C5	3.15	1.38	1.35
3	L5	3884	PSU	C6-C5	3.14	1.38	1.35
3	L5	2876	OMG	C8-N7	-3.13	1.29	1.34
3	L5	3899	OMG	C8-N7	-3.11	1.30	1.34
3	L5	4403	PSU	C6-C5	3.11	1.38	1.35
83	S2	576	A2M	O5'-C5'	-3.10	1.35	1.44
5	L8	75	OMG	C8-N7	-3.10	1.30	1.34
83	S2	27	A2M	O5'-C5'	-3.09	1.35	1.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	L5	3792	OMG	C8-N7	-3.09	1.30	1.34
3	L5	1534	A2M	O5'-C5'	-3.08	1.35	1.44
3	L5	1677	PSU	C6-C5	3.07	1.38	1.35
3	L5	4576	PSU	C6-C5	3.07	1.38	1.35
3	L5	2424	OMG	C8-N7	-3.05	1.30	1.34
83	S2	159	A2M	O5'-C5'	-3.05	1.35	1.44
3	L5	1316	OMG	C8-N7	-3.01	1.30	1.34
3	L5	4689	PSU	C6-C5	3.01	1.38	1.35
3	L5	4196	OMG	C8-N7	-3.00	1.30	1.34
3	L5	4494	OMG	C8-N7	-2.99	1.30	1.34
3	L5	3744	OMG	C8-N7	-2.99	1.30	1.34
3	L5	2364	OMG	C8-N7	-2.97	1.30	1.34
3	L5	1625	OMG	C8-N7	-2.96	1.30	1.34
3	L5	4370	OMG	C8-N7	-2.96	1.30	1.34
3	L5	4499	OMG	C8-N7	-2.95	1.30	1.34
3	L5	4392	OMG	C8-N7	-2.94	1.30	1.34
83	S2	1288	OMU	C5-C4	2.94	1.50	1.43
83	S2	172	OMU	C5-C4	2.92	1.50	1.43
3	L5	4637	OMG	C8-N7	-2.92	1.30	1.34
3	L5	4618	OMG	C8-N7	-2.91	1.30	1.34
83	S2	1490	OMG	C5-C6	-2.91	1.41	1.47
83	S2	867	OMG	C8-N7	-2.89	1.30	1.34
83	S2	683	OMG	C8-N7	-2.89	1.30	1.34
83	S2	509	OMG	C8-N7	-2.87	1.30	1.34
3	L5	4623	OMG	C8-N7	-2.87	1.30	1.34
83	S2	627	OMU	C5-C4	2.86	1.49	1.43
3	L5	1522	OMG	C8-N7	-2.86	1.30	1.34
3	L5	4628	PSU	C6-C5	2.86	1.38	1.35
83	S2	121	OMU	C5-C4	2.86	1.49	1.43
3	L5	3627	OMG	C8-N7	-2.85	1.30	1.34
3	L5	3830	A2M	C1'-N9	-2.85	1.42	1.49
83	S2	1328	OMG	C8-N7	-2.84	1.30	1.34
83	S2	644	OMG	C8-N7	-2.84	1.30	1.34
83	S2	1639	G7M	C2-N1	2.84	1.44	1.37
83	S2	428	OMU	C5-C4	2.84	1.49	1.43
83	S2	1326	OMU	C5-C4	2.84	1.49	1.43
83	S2	354	OMU	C5-C4	2.82	1.49	1.43
3	L5	4227	OMU	C5-C4	2.81	1.49	1.43
3	L5	3899	OMG	C5-C6	-2.80	1.41	1.47
83	S2	799	OMU	C5-C4	2.80	1.49	1.43
3	L5	4220	6MZ	O3'-C3'	2.79	1.49	1.43
5	L8	75	OMG	C5-C6	-2.77	1.42	1.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
83	S2	121	OMU	C6-N1	2.76	1.44	1.38
3	L5	4228	OMG	C8-N7	-2.76	1.30	1.34
83	S2	601	OMG	C5-C6	-2.74	1.42	1.47
3	L5	4392	OMG	C5-C6	-2.74	1.42	1.47
83	S2	1383	A2M	C1'-N9	-2.74	1.43	1.49
83	S2	1442	OMU	C5-C4	2.73	1.49	1.43
3	L5	4498	OMU	C5-C4	2.72	1.49	1.43
83	S2	1442	OMU	C6-N1	2.71	1.44	1.38
83	S2	436	OMG	C8-N7	-2.71	1.30	1.34
83	S2	116	OMU	C5-C4	2.70	1.49	1.43
83	S2	1326	OMU	C6-N1	2.70	1.44	1.38
83	S2	1288	OMU	C6-N1	2.70	1.44	1.38
3	L5	2837	OMU	C5-C4	2.69	1.49	1.43
83	S2	799	OMU	C6-N1	2.68	1.44	1.38
3	L5	4196	OMG	C5-C6	-2.68	1.42	1.47
83	S2	627	OMU	C6-N1	2.67	1.44	1.38
83	S2	172	OMU	C6-N1	2.67	1.44	1.38
83	S2	354	OMU	C6-N1	2.67	1.44	1.38
3	L5	2837	OMU	C6-N1	2.65	1.44	1.38
3	L5	2364	OMG	C5-C6	-2.64	1.42	1.47
83	S2	428	OMU	C6-N1	2.64	1.44	1.38
3	L5	2424	OMG	C5-C6	-2.63	1.42	1.47
3	L5	4637	OMG	C5-C6	-2.62	1.42	1.47
3	L5	4498	OMU	C6-N1	2.62	1.44	1.38
3	L5	1522	OMG	C5-C6	-2.62	1.42	1.47
3	L5	4499	OMG	C5-C6	-2.61	1.42	1.47
3	L5	2876	OMG	C5-C6	-2.61	1.42	1.47
83	S2	1851	MA6	C2-N3	2.61	1.36	1.32
3	L5	4227	OMU	C6-N1	2.60	1.44	1.38
3	L5	4530	UR3	O2-C2	-2.60	1.17	1.22
3	L5	1625	OMG	C5-C6	-2.60	1.42	1.47
3	L5	4494	OMG	C5-C6	-2.60	1.42	1.47
83	S2	668	A2M	O4'-C4'	-2.59	1.39	1.45
3	L5	4618	OMG	C5-C6	-2.59	1.42	1.47
3	L5	4228	OMG	C5-C6	-2.58	1.42	1.47
83	S2	116	OMU	C6-N1	2.57	1.44	1.38
83	S2	436	OMG	C5-C6	-2.57	1.42	1.47
83	S2	683	OMG	C5-C6	-2.56	1.42	1.47
3	L5	4620	OMU	C5-C4	2.56	1.49	1.43
3	L5	2787	A2M	C1'-N9	-2.56	1.43	1.49
3	L5	3925	OMU	C5-C4	2.55	1.49	1.43
3	L5	3785	A2M	C1'-N9	-2.55	1.43	1.49

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	L5	1322	1MA	C8-N7	-2.54	1.30	1.34
3	L5	1316	OMG	C5-C6	-2.54	1.42	1.47
3	L5	3744	OMG	C5-C6	-2.53	1.42	1.47
3	L5	4620	OMU	C6-N1	2.53	1.44	1.38
3	L5	4530	UR3	C6-N1	2.53	1.44	1.38
3	L5	4523	A2M	C1'-N9	-2.53	1.43	1.49
3	L5	1322	1MA	C5-C4	-2.52	1.36	1.43
3	L5	2401	A2M	C1'-N9	-2.52	1.43	1.49
3	L5	4623	OMG	C5-C6	-2.51	1.42	1.47
3	L5	3792	OMG	C5-C6	-2.51	1.42	1.47
3	L5	4306	OMU	C6-N1	2.50	1.44	1.38
3	L5	2363	A2M	C1'-N9	-2.48	1.43	1.49
3	L5	4370	OMG	C5-C6	-2.48	1.42	1.47
3	L5	3925	OMU	C6-N1	2.47	1.44	1.38
3	L5	4306	OMU	C5-C4	2.47	1.49	1.43
83	S2	509	OMG	C5-C6	-2.46	1.42	1.47
83	S2	867	OMG	C5-C6	-2.44	1.42	1.47
3	L5	1871	A2M	C1'-N9	-2.44	1.43	1.49
83	S2	1031	A2M	C1'-N9	-2.43	1.43	1.49
83	S2	1328	OMG	C5-C6	-2.42	1.42	1.47
3	L5	3627	OMG	C5-C6	-2.42	1.42	1.47
3	L5	4571	A2M	C1'-N9	-2.40	1.44	1.49
3	L5	1524	A2M	C1'-N9	-2.38	1.44	1.49
3	L5	1323	A2M	C1'-N9	-2.37	1.44	1.49
83	S2	668	A2M	C1'-N9	-2.37	1.44	1.49
83	S2	644	OMG	C5-C6	-2.36	1.42	1.47
83	S2	576	A2M	C1'-N9	-2.36	1.44	1.49
3	L5	1524	A2M	O4'-C4'	-2.36	1.39	1.45
83	S2	166	A2M	C1'-N9	-2.34	1.44	1.49
3	L5	3867	A2M	C1'-N9	-2.34	1.44	1.49
3	L5	398	A2M	C1'-N9	-2.32	1.44	1.49
83	S2	27	A2M	C1'-N9	-2.31	1.44	1.49
3	L5	3867	A2M	O4'-C4'	-2.31	1.39	1.45
3	L5	4530	UR3	C3U-N3	2.27	1.51	1.47
3	L5	4590	A2M	C1'-N9	-2.27	1.44	1.49
3	L5	4530	UR3	C5-C4	2.25	1.49	1.43
3	L5	4523	A2M	O4'-C4'	-2.25	1.40	1.45
3	L5	2815	A2M	C1'-N9	-2.24	1.44	1.49
83	S2	1850	MA6	C2-N3	2.21	1.35	1.32
83	S2	99	A2M	C1'-N9	-2.21	1.44	1.49
3	L5	4228	OMG	C5-C4	-2.20	1.37	1.43
3	L5	4571	A2M	O4'-C4'	-2.19	1.40	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	L5	1326	A2M	C1'-N9	-2.19	1.44	1.49
3	L5	3818	UY1	O4'-C1'	-2.17	1.40	1.43
3	L5	3718	A2M	C1'-N9	-2.16	1.44	1.49
3	L5	3825	A2M	C1'-N9	-2.16	1.44	1.49
3	L5	400	A2M	C1'-N9	-2.12	1.44	1.49
3	L5	4442	PSU	O4'-C1'	-2.12	1.40	1.43
3	L5	4523	A2M	O3'-C3'	-2.11	1.37	1.43
3	L5	4637	OMG	C5-C4	-2.11	1.37	1.43
3	L5	1522	OMG	C5-C4	-2.11	1.37	1.43
83	S2	1832	6MZ	C2-N3	2.10	1.35	1.32
3	L5	4220	6MZ	C2-N3	2.09	1.35	1.32
3	L5	4689	PSU	C4-C5	-2.09	1.38	1.44
3	L5	4392	OMG	C5-C4	-2.08	1.38	1.43
3	L5	1323	A2M	O4'-C4'	-2.08	1.40	1.45
3	L5	1677	PSU	C4-C5	-2.08	1.38	1.44
3	L5	1536	PSU	C4-C5	-2.06	1.38	1.44
3	L5	4636	PSU	C4-C5	-2.05	1.38	1.44
3	L5	2839	PSU	C4-C5	-2.05	1.38	1.44
3	L5	3744	OMG	C5-C4	-2.04	1.38	1.43
3	L5	3884	PSU	C4-C5	-2.04	1.38	1.44
3	L5	4618	OMG	C5-C4	-2.04	1.38	1.43
3	L5	4442	PSU	C4-C5	-2.04	1.38	1.44
3	L5	1316	OMG	C5-C4	-2.04	1.38	1.43
83	S2	468	A2M	C1'-N9	-2.03	1.44	1.49
3	L5	3639	PSU	C4-C5	-2.03	1.38	1.44
3	L5	1323	A2M	O3'-C3'	-2.02	1.37	1.43
3	L5	4673	PSU	C4-C5	-2.02	1.38	1.44
3	L5	3818	UY1	C4-C5	2.02	1.49	1.44
3	L5	4494	OMG	C5-C4	-2.01	1.38	1.43
3	L5	4293	PSU	C4-C5	-2.00	1.38	1.44

All (638) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
83	S2	1851	MA6	N1-C6-N6	-12.61	102.26	116.83
83	S2	1850	MA6	N1-C6-N6	-11.95	103.02	116.83
83	S2	1832	6MZ	N3-C2-N1	-6.41	119.97	128.67
83	S2	668	A2M	C4'-O4'-C1'	-6.35	104.11	109.92
83	S2	1851	MA6	N3-C2-N1	-6.31	120.10	128.67
83	S2	1850	MA6	N3-C2-N1	-6.11	120.37	128.67
3	L5	4220	6MZ	N3-C2-N1	-6.07	120.43	128.67
3	L5	1871	A2M	C4'-O4'-C1'	-5.84	104.58	109.92

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	4498	OMU	C4-N3-C2	-5.77	119.45	126.61
83	S2	1326	OMU	C4-N3-C2	-5.71	119.52	126.61
83	S2	172	OMU	C4-N3-C2	-5.66	119.58	126.61
83	S2	627	OMU	C4-N3-C2	-5.62	119.63	126.61
3	L5	2837	OMU	C4-N3-C2	-5.61	119.64	126.61
3	L5	4530	UR3	C4-N3-C2	-5.60	120.07	124.58
3	L5	4227	OMU	C4-N3-C2	-5.57	119.70	126.61
83	S2	799	OMU	C4-N3-C2	-5.55	119.72	126.61
83	S2	428	OMU	C4-N3-C2	-5.50	119.78	126.61
83	S2	1248	B8N	C5-C4-N3	5.44	126.02	116.15
83	S2	1288	OMU	C4-N3-C2	-5.43	119.86	126.61
83	S2	1442	OMU	C4-N3-C2	-5.37	119.95	126.61
3	L5	4220	6MZ	C4'-O4'-C1'	-5.35	105.03	109.92
3	L5	3785	A2M	C4'-O4'-C1'	-5.33	105.04	109.92
83	S2	354	OMU	C4-N3-C2	-5.31	120.01	126.61
3	L5	4636	PSU	C4-N3-C2	-5.26	119.12	126.37
83	S2	1383	A2M	C4'-O4'-C1'	-5.24	105.13	109.92
3	L5	3830	A2M	C4'-O4'-C1'	-5.19	105.17	109.92
3	L5	4306	OMU	C4-N3-C2	-5.19	120.17	126.61
3	L5	3637	PSU	N1-C2-N3	5.17	120.62	115.17
3	L5	3925	OMU	C4-N3-C2	-5.17	120.19	126.61
3	L5	4442	PSU	N1-C2-N3	5.13	120.58	115.17
3	L5	4457	PSU	C4-N3-C2	-5.12	119.32	126.37
3	L5	4500	PSU	N1-C2-N3	5.11	120.56	115.17
83	S2	121	OMU	C4-N3-C2	-5.09	120.30	126.61
3	L5	398	A2M	C4'-O4'-C1'	-5.08	105.27	109.92
3	L5	4500	PSU	C4-N3-C2	-5.06	119.40	126.37
3	L5	4620	OMU	C4-N3-C2	-5.06	120.33	126.61
3	L5	4636	PSU	N1-C2-N3	5.06	120.50	115.17
83	S2	116	OMU	C4-N3-C2	-5.05	120.34	126.61
3	L5	3851	PSU	C4-N3-C2	-5.05	119.42	126.37
3	L5	4293	PSU	C4-N3-C2	-5.04	119.42	126.37
83	S2	686	PSU	C4-N3-C2	-5.04	119.43	126.37
3	L5	4431	PSU	C4-N3-C2	-5.01	119.47	126.37
3	L5	4457	PSU	N1-C2-N3	5.01	120.45	115.17
3	L5	1677	PSU	C4-N3-C2	-4.99	119.50	126.37
3	L5	4442	PSU	C4-N3-C2	-4.99	119.50	126.37
83	S2	1081	PSU	C4-N3-C2	-4.99	119.50	126.37
3	L5	4523	A2M	C4'-O4'-C1'	-4.98	105.37	109.92
3	L5	4296	PSU	C4-N3-C2	-4.97	119.52	126.37
3	L5	4532	PSU	N1-C2-N3	4.97	120.41	115.17
3	L5	3637	PSU	C4-N3-C2	-4.96	119.54	126.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
83	S2	1248	B8N	C4-N3-C2	-4.96	119.52	125.62
3	L5	1524	A2M	C4'-O4'-C1'	-4.95	105.39	109.92
3	L5	1862	PSU	C4-N3-C2	-4.95	119.55	126.37
3	L5	4296	PSU	N1-C2-N3	4.95	120.39	115.17
83	S2	1367	PSU	C4-N3-C2	-4.94	119.57	126.37
3	L5	4353	PSU	N1-C2-N3	4.94	120.38	115.17
83	S2	105	PSU	N1-C2-N3	4.93	120.37	115.17
83	S2	966	PSU	N1-C2-N3	4.93	120.37	115.17
3	L5	4299	PSU	N1-C2-N3	4.91	120.35	115.17
3	L5	1862	PSU	N1-C2-N3	4.90	120.34	115.17
3	L5	2632	PSU	N1-C2-N3	4.90	120.34	115.17
3	L5	4493	PSU	N1-C2-N3	4.88	120.32	115.17
3	L5	3853	PSU	C4-N3-C2	-4.88	119.65	126.37
3	L5	4521	PSU	N1-C2-N3	4.88	120.31	115.17
83	S2	1367	PSU	N1-C2-N3	4.87	120.31	115.17
3	L5	4353	PSU	C4-N3-C2	-4.87	119.66	126.37
3	L5	4521	PSU	C4-N3-C2	-4.87	119.66	126.37
3	L5	2632	PSU	C4-N3-C2	-4.87	119.66	126.37
83	S2	1244	PSU	N1-C2-N3	4.87	120.31	115.17
83	S2	468	A2M	C4'-O4'-C1'	-4.87	105.47	109.92
3	L5	4973	PSU	N1-C2-N3	4.87	120.30	115.17
83	S2	966	PSU	C4-N3-C2	-4.87	119.67	126.37
83	S2	686	PSU	N1-C2-N3	4.86	120.30	115.17
3	L5	1582	PSU	C4-N3-C2	-4.86	119.67	126.37
3	L5	3818	UY1	C4-N3-C2	-4.86	119.68	126.37
3	L5	3884	PSU	N1-C2-N3	4.85	120.28	115.17
83	S2	863	PSU	N1-C2-N3	4.85	120.28	115.17
3	L5	4299	PSU	C4-N3-C2	-4.85	119.70	126.37
83	S2	814	PSU	C4-N3-C2	-4.85	119.70	126.37
83	S2	1232	PSU	C4-N3-C2	-4.84	119.70	126.37
3	L5	1792	PSU	N1-C2-N3	4.84	120.27	115.17
3	L5	1536	PSU	N1-C2-N3	4.83	120.26	115.17
3	L5	3639	PSU	N1-C2-N3	4.83	120.26	115.17
83	S2	1244	PSU	C4-N3-C2	-4.83	119.72	126.37
83	S2	1232	PSU	N1-C2-N3	4.83	120.26	115.17
3	L5	4431	PSU	N1-C2-N3	4.82	120.26	115.17
3	L5	4972	PSU	C4-N3-C2	-4.82	119.73	126.37
3	L5	1871	A2M	C3'-C2'-C1'	-4.82	93.58	102.81
3	L5	5010	PSU	N1-C2-N3	4.82	120.25	115.17
3	L5	4312	PSU	N1-C2-N3	4.81	120.25	115.17
83	S2	863	PSU	C4-N3-C2	-4.81	119.75	126.37
83	S2	1045	PSU	C4-N3-C2	-4.81	119.75	126.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	3851	PSU	N1-C2-N3	4.80	120.23	115.17
3	L5	4493	PSU	C4-N3-C2	-4.80	119.76	126.37
3	L5	3853	PSU	N1-C2-N3	4.79	120.22	115.17
3	L5	4293	PSU	N1-C2-N3	4.79	120.22	115.17
83	S2	1031	A2M	C4'-O4'-C1'	-4.79	105.54	109.92
3	L5	1536	PSU	C4-N3-C2	-4.79	119.78	126.37
3	L5	4673	PSU	C4-N3-C2	-4.78	119.79	126.37
83	S2	105	PSU	C4-N3-C2	-4.78	119.79	126.37
83	S2	651	PSU	C4-N3-C2	-4.78	119.79	126.37
3	L5	4576	PSU	C4-N3-C2	-4.77	119.80	126.37
3	L5	4673	PSU	N1-C2-N3	4.77	120.19	115.17
3	L5	1782	PSU	N1-C2-N3	4.76	120.19	115.17
3	L5	4973	PSU	C4-N3-C2	-4.75	119.83	126.37
83	S2	1046	PSU	N1-C2-N3	4.75	120.18	115.17
3	L5	1781	PSU	N1-C2-N3	4.75	120.18	115.17
83	S2	109	PSU	C4-N3-C2	-4.75	119.83	126.37
3	L5	4361	PSU	C4-N3-C2	-4.75	119.83	126.37
3	L5	3822	PSU	N1-C2-N3	4.74	120.17	115.17
3	L5	2839	PSU	N1-C2-N3	4.73	120.16	115.17
5	L8	69	PSU	N1-C2-N3	4.73	120.16	115.17
83	S2	651	PSU	N1-C2-N3	4.73	120.16	115.17
3	L5	3822	PSU	C4-N3-C2	-4.72	119.86	126.37
83	S2	1081	PSU	N1-C2-N3	4.72	120.15	115.17
3	L5	4403	PSU	C4-N3-C2	-4.71	119.89	126.37
83	S2	109	PSU	N1-C2-N3	4.71	120.13	115.17
3	L5	1744	PSU	N1-C2-N3	4.71	120.13	115.17
5	L8	69	PSU	C4-N3-C2	-4.70	119.89	126.37
83	S2	1177	PSU	C4-N3-C2	-4.70	119.90	126.37
83	S2	1174	PSU	N1-C2-N3	4.70	120.12	115.17
83	S2	1046	PSU	C4-N3-C2	-4.70	119.90	126.37
3	L5	3695	PSU	C4-N3-C2	-4.70	119.90	126.37
83	S2	406	PSU	N1-C2-N3	4.70	120.12	115.17
3	L5	4532	PSU	C4-N3-C2	-4.69	119.91	126.37
3	L5	4403	PSU	N1-C2-N3	4.69	120.12	115.17
3	L5	3639	PSU	C4-N3-C2	-4.68	119.92	126.37
83	S2	681	PSU	N1-C2-N3	4.68	120.11	115.17
3	L5	4552	PSU	N1-C2-N3	4.68	120.10	115.17
83	S2	814	PSU	N1-C2-N3	4.67	120.10	115.17
83	S2	866	PSU	C4-N3-C2	-4.67	119.93	126.37
3	L5	4579	PSU	N1-C2-N3	4.67	120.09	115.17
83	S2	1177	PSU	N1-C2-N3	4.66	120.09	115.17
3	L5	4552	PSU	C4-N3-C2	-4.66	119.95	126.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	5001	PSU	C4-N3-C2	-4.65	119.96	126.37
5	L8	55	PSU	N1-C2-N3	4.65	120.08	115.17
83	S2	1174	PSU	C4-N3-C2	-4.64	119.97	126.37
3	L5	4361	PSU	N1-C2-N3	4.63	120.05	115.17
83	S2	1045	PSU	N1-C2-N3	4.63	120.05	115.17
83	S2	866	PSU	N1-C2-N3	4.62	120.04	115.17
3	L5	3884	PSU	C4-N3-C2	-4.62	120.01	126.37
3	L5	1582	PSU	N1-C2-N3	4.61	120.03	115.17
83	S2	649	PSU	N1-C2-N3	4.60	120.02	115.17
3	L5	1683	PSU	C4-N3-C2	-4.60	120.03	126.37
3	L5	1677	PSU	N1-C2-N3	4.60	120.02	115.17
3	L5	1683	PSU	N1-C2-N3	4.60	120.02	115.17
83	S2	668	A2M	C1'-N9-C4	-4.59	118.57	126.64
3	L5	1744	PSU	C4-N3-C2	-4.59	120.05	126.37
3	L5	4972	PSU	N1-C2-N3	4.59	120.01	115.17
5	L8	55	PSU	C4-N3-C2	-4.59	120.05	126.37
83	S2	1004	PSU	N1-C2-N3	4.59	120.01	115.17
3	L5	1781	PSU	C4-N3-C2	-4.59	120.05	126.37
3	L5	3695	PSU	N1-C2-N3	4.59	120.00	115.17
3	L5	1782	PSU	C4-N3-C2	-4.58	120.06	126.37
3	L5	3844	PSU	N1-C2-N3	4.58	120.00	115.17
83	S2	681	PSU	C4-N3-C2	-4.58	120.06	126.37
3	L5	5010	PSU	C4-N3-C2	-4.57	120.07	126.37
3	L5	4471	PSU	N1-C2-N3	4.57	119.99	115.17
3	L5	1534	A2M	C4'-O4'-C1'	-4.57	105.74	109.92
83	S2	576	A2M	C4'-O4'-C1'	-4.57	105.74	109.92
3	L5	5001	PSU	N1-C2-N3	4.57	119.98	115.17
83	S2	406	PSU	C4-N3-C2	-4.55	120.10	126.37
3	L5	4312	PSU	C4-N3-C2	-4.55	120.10	126.37
3	L5	4576	PSU	N1-C2-N3	4.55	119.97	115.17
3	L5	4590	A2M	C4'-O4'-C1'	-4.55	105.76	109.92
3	L5	1792	PSU	C4-N3-C2	-4.54	120.11	126.37
3	L5	3920	PSU	N1-C2-N3	4.53	119.95	115.17
83	S2	1056	PSU	N1-C2-N3	4.53	119.94	115.17
83	S2	1056	PSU	C4-N3-C2	-4.51	120.16	126.37
3	L5	4579	PSU	C4-N3-C2	-4.50	120.18	126.37
83	S2	93	PSU	N1-C2-N3	4.49	119.91	115.17
3	L5	4628	PSU	C4-N3-C2	-4.49	120.19	126.37
3	L5	4689	PSU	N1-C2-N3	4.48	119.89	115.17
83	S2	1383	A2M	C3'-C2'-C1'	-4.48	94.23	102.81
83	S2	801	PSU	N1-C2-N3	4.46	119.87	115.17
3	L5	3867	A2M	C4'-O4'-C1'	-4.45	105.85	109.92

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	3818	UY1	N1-C2-N3	4.45	119.86	115.17
3	L5	2839	PSU	C4-N3-C2	-4.44	120.26	126.37
3	L5	4471	PSU	C4-N3-C2	-4.40	120.31	126.37
83	S2	93	PSU	C4-N3-C2	-4.39	120.32	126.37
3	L5	3844	PSU	C4-N3-C2	-4.38	120.33	126.37
3	L5	4628	PSU	N1-C2-N3	4.38	119.79	115.17
3	L5	1860	PSU	N1-C2-N3	4.37	119.78	115.17
83	S2	649	PSU	C4-N3-C2	-4.36	120.36	126.37
3	L5	3920	PSU	C4-N3-C2	-4.35	120.38	126.37
83	S2	99	A2M	C4'-O4'-C1'	-4.35	105.94	109.92
3	L5	1860	PSU	C4-N3-C2	-4.34	120.40	126.37
83	S2	1004	PSU	C4-N3-C2	-4.32	120.42	126.37
83	S2	1832	6MZ	C2-N1-C6	4.19	119.85	116.60
3	L5	4571	A2M	C4'-O4'-C1'	-4.16	106.12	109.92
83	S2	166	A2M	C4'-O4'-C1'	-4.14	106.13	109.92
83	S2	1383	A2M	C1'-N9-C4	-4.12	119.41	126.64
3	L5	4689	PSU	C4-N3-C2	-4.11	120.71	126.37
3	L5	1323	A2M	C4'-O4'-C1'	-4.04	106.22	109.92
3	L5	4498	OMU	N3-C2-N1	4.03	120.13	114.89
83	S2	801	PSU	C4-N3-C2	-4.00	120.86	126.37
3	L5	3825	A2M	C4'-O4'-C1'	-3.99	106.27	109.92
83	S2	172	OMU	N3-C2-N1	3.98	120.07	114.89
83	S2	121	OMU	N3-C2-N1	3.97	120.06	114.89
3	L5	4590	A2M	C1'-N9-C4	-3.96	119.68	126.64
3	L5	398	A2M	C3'-C2'-C1'	-3.93	95.28	102.81
83	S2	27	A2M	C1'-N9-C4	-3.93	119.73	126.64
3	L5	3718	A2M	C4'-O4'-C1'	-3.93	106.33	109.92
3	L5	4227	OMU	N3-C2-N1	3.92	120.00	114.89
3	L5	2401	A2M	C4'-O4'-C1'	-3.92	106.34	109.92
3	L5	1871	A2M	C1'-N9-C4	-3.89	119.81	126.64
3	L5	4220	6MZ	C9-N6-C6	-3.85	119.28	122.85
83	S2	99	A2M	C1'-N9-C4	-3.84	119.89	126.64
83	S2	1326	OMU	N3-C2-N1	3.83	119.88	114.89
3	L5	2837	OMU	N3-C2-N1	3.83	119.87	114.89
3	L5	400	A2M	C4'-O4'-C1'	-3.83	106.42	109.92
83	S2	428	OMU	N3-C2-N1	3.81	119.85	114.89
3	L5	4523	A2M	C1'-N9-C4	-3.79	119.99	126.64
83	S2	799	OMU	C5-C4-N3	3.78	120.09	114.80
83	S2	468	A2M	C3'-C2'-C1'	-3.77	95.58	102.81
3	L5	2401	A2M	C1'-N9-C4	-3.77	120.02	126.64
3	L5	1323	A2M	C1'-N9-C4	-3.77	120.02	126.64
3	L5	4498	OMU	C5-C4-N3	3.76	120.07	114.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	2837	OMU	C5-C4-N3	3.74	120.04	114.80
3	L5	4306	OMU	N3-C2-N1	3.73	119.75	114.89
3	L5	2787	A2M	O3'-C3'-C2'	3.72	121.60	111.19
83	S2	166	A2M	C1'-N9-C4	-3.71	120.12	126.64
3	L5	4620	OMU	N3-C2-N1	3.71	119.72	114.89
3	L5	2363	A2M	C4'-O4'-C1'	-3.71	106.53	109.92
83	S2	1442	OMU	C5-C4-N3	3.71	119.99	114.80
3	L5	3925	OMU	N3-C2-N1	3.70	119.71	114.89
83	S2	1288	OMU	N3-C2-N1	3.70	119.71	114.89
83	S2	159	A2M	C1'-N9-C4	-3.70	120.14	126.64
83	S2	627	OMU	N3-C2-N1	3.69	119.69	114.89
83	S2	354	OMU	N3-C2-N1	3.69	119.69	114.89
3	L5	3830	A2M	C1'-N9-C4	-3.68	120.17	126.64
83	S2	1326	OMU	C5-C4-N3	3.68	119.95	114.80
3	L5	398	A2M	C1'-N9-C4	-3.68	120.18	126.64
83	S2	627	OMU	C5-C4-N3	3.68	119.95	114.80
83	S2	468	A2M	C1'-N9-C4	-3.67	120.19	126.64
3	L5	3830	A2M	C3'-C2'-C1'	-3.66	95.80	102.81
3	L5	3785	A2M	C1'-N9-C4	-3.65	120.22	126.64
83	S2	1383	A2M	O3'-C3'-C2'	3.65	121.41	111.19
83	S2	799	OMU	N3-C2-N1	3.64	119.64	114.89
83	S2	484	A2M	C1'-N9-C4	-3.64	120.24	126.64
3	L5	4571	A2M	C3'-C2'-C1'	-3.64	95.83	102.81
3	L5	400	A2M	C1'-N9-C4	-3.64	120.24	126.64
83	S2	116	OMU	N3-C2-N1	3.64	119.63	114.89
83	S2	1248	B8N	C1'-C5-C4	3.64	123.13	117.61
83	S2	1031	A2M	C1'-N9-C4	-3.59	120.33	126.64
3	L5	3818	UY1	C6-C5-C4	3.56	120.58	118.17
3	L5	1871	A2M	O3'-C3'-C2'	3.55	121.13	111.19
83	S2	1288	OMU	C5-C4-N3	3.54	119.77	114.80
3	L5	4227	OMU	C5-C4-N3	3.54	119.76	114.80
3	L5	4220	6MZ	C2-N1-C6	3.54	119.35	116.60
3	L5	4530	UR3	C5-C4-N3	3.54	119.70	115.04
83	S2	354	OMU	C5-C4-N3	3.53	119.74	114.80
3	L5	2815	A2M	C4'-O4'-C1'	-3.52	106.70	109.92
3	L5	3718	A2M	C1'-N9-C4	-3.50	120.49	126.64
83	S2	172	OMU	C5-C4-N3	3.50	119.70	114.80
83	S2	428	OMU	C5-C4-N3	3.48	119.68	114.80
3	L5	4571	A2M	C1'-N9-C4	-3.48	120.53	126.64
83	S2	1442	OMU	N3-C2-N1	3.48	119.42	114.89
83	S2	1248	B8N	N3-C2-N1	3.48	120.97	116.72
3	L5	3867	A2M	C1'-N9-C4	-3.46	120.57	126.64

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
83	S2	576	A2M	C1'-N9-C4	-3.44	120.60	126.64
83	S2	1850	MA6	C2-N1-C6	3.43	120.21	116.84
3	L5	2363	A2M	C1'-N9-C4	-3.43	120.61	126.64
3	L5	4571	A2M	O3'-C3'-C2'	3.43	120.79	111.19
3	L5	3825	A2M	C1'-N9-C4	-3.42	120.63	126.64
3	L5	1326	A2M	C4'-O4'-C1'	-3.41	106.80	109.92
83	S2	576	A2M	C3'-C2'-C1'	-3.41	96.28	102.81
83	S2	576	A2M	O3'-C3'-C2'	3.40	120.71	111.19
3	L5	3925	OMU	C5-C4-N3	3.38	119.54	114.80
3	L5	2401	A2M	O3'-C3'-C2'	3.37	120.61	111.19
3	L5	4306	OMU	C5-C4-N3	3.37	119.51	114.80
3	L5	1524	A2M	O3'-C3'-C2'	3.36	120.59	111.19
3	L5	2787	A2M	C1'-N9-C4	-3.35	120.76	126.64
3	L5	4620	OMU	C5-C4-N3	3.34	119.47	114.80
3	L5	1326	A2M	C1'-N9-C4	-3.33	120.80	126.64
3	L5	1534	A2M	C1'-N9-C4	-3.31	120.83	126.64
3	L5	1534	A2M	C3'-C2'-C1'	-3.30	96.50	102.81
83	S2	116	OMU	C5-C4-N3	3.28	119.39	114.80
83	S2	99	A2M	C3'-C2'-C1'	-3.28	96.53	102.81
83	S2	121	OMU	C5-C4-N3	3.27	119.38	114.80
83	S2	99	A2M	O3'-C3'-C2'	3.26	120.31	111.19
3	L5	4689	PSU	C6-N1-C2	-3.25	119.67	122.69
3	L5	398	A2M	O3'-C3'-C2'	3.23	120.23	111.19
3	L5	4973	PSU	O2-C2-N1	-3.23	119.46	122.79
83	S2	468	A2M	O3'-C3'-C2'	3.23	120.22	111.19
83	S2	166	A2M	O3'-C3'-C2'	3.22	120.19	111.19
3	L5	3639	PSU	O2-C2-N1	-3.21	119.48	122.79
83	S2	1851	MA6	C2-N1-C6	3.21	119.99	116.84
3	L5	2839	PSU	O2-C2-N1	-3.19	119.50	122.79
83	S2	1031	A2M	C3'-C2'-C1'	-3.17	96.74	102.81
3	L5	3718	A2M	O3'-C3'-C2'	3.17	120.05	111.19
83	S2	1326	OMU	O4-C4-C5	-3.16	119.71	125.16
3	L5	1744	PSU	O2-C2-N1	-3.14	119.55	122.79
83	S2	1442	OMU	O4-C4-C5	-3.14	119.75	125.16
3	L5	3818	UY1	C6-N1-C2	-3.12	119.80	122.69
3	L5	4500	PSU	C6-C5-C4	3.11	120.28	118.17
3	L5	4532	PSU	O2-C2-N1	-3.11	119.58	122.79
83	S2	863	PSU	O2-C2-N1	-3.10	119.59	122.79
3	L5	2839	PSU	C6-N1-C2	-3.09	119.82	122.69
3	L5	5010	PSU	O2-C2-N1	-3.09	119.61	122.79
3	L5	2837	OMU	O4-C4-C5	-3.06	119.89	125.16
83	S2	159	A2M	O3'-C3'-C2'	3.05	119.71	111.19

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	1683	PSU	O2-C2-N1	-3.05	119.65	122.79
3	L5	3925	OMU	O4-C4-C5	-3.03	119.93	125.16
83	S2	116	OMU	O4-C4-C5	-3.03	119.94	125.16
3	L5	3785	A2M	O3'-C3'-C2'	3.03	119.67	111.19
3	L5	4523	A2M	C3'-C2'-C1'	-3.03	97.01	102.81
83	S2	428	OMU	O4-C4-C5	-3.03	119.94	125.16
3	L5	1677	PSU	O2-C2-N1	-3.02	119.68	122.79
3	L5	4293	PSU	O2-C2-N1	-3.01	119.68	122.79
83	S2	1031	A2M	O3'-C3'-C2'	3.01	119.62	111.19
3	L5	3830	A2M	O3'-C3'-C2'	3.00	119.58	111.19
3	L5	2815	A2M	C1'-N9-C4	-3.00	121.38	126.64
83	S2	627	OMU	O4-C4-C5	-2.99	120.00	125.16
3	L5	400	A2M	O3'-C3'-C2'	2.99	119.56	111.19
83	S2	649	PSU	C6-N1-C2	-2.99	119.92	122.69
3	L5	1792	PSU	O2-C2-N1	-2.97	119.72	122.79
3	L5	4442	PSU	O2-C2-N1	-2.97	119.72	122.79
3	L5	4636	PSU	C6-C5-C4	2.97	120.18	118.17
3	L5	4498	OMU	O4-C4-C5	-2.97	120.05	125.16
83	S2	1248	B8N	O4-C4-N3	-2.96	115.19	119.99
3	L5	3808	OMC	C1'-N1-C2	2.95	124.97	118.44
83	S2	1639	G7M	C2-N1-C6	-2.95	119.71	125.11
3	L5	2401	A2M	C3'-C2'-C1'	-2.95	97.16	102.81
83	S2	799	OMU	O4-C4-C5	-2.95	120.08	125.16
3	L5	1524	A2M	C1'-N9-C4	-2.94	121.47	126.64
3	L5	3884	PSU	O2-C2-N1	-2.94	119.75	122.79
3	L5	4403	PSU	O2-C2-N1	-2.94	119.76	122.79
3	L5	1536	PSU	O2-C2-N1	-2.94	119.76	122.79
3	L5	3825	A2M	O3'-C3'-C2'	2.93	119.39	111.19
83	S2	1177	PSU	O2-C2-N1	-2.93	119.77	122.79
3	L5	5010	PSU	C6-N1-C2	-2.92	119.98	122.69
3	L5	4312	PSU	C6-N1-C2	-2.92	119.98	122.69
3	L5	3718	A2M	C3'-C2'-C1'	-2.92	97.21	102.81
83	S2	966	PSU	O2-C2-N1	-2.92	119.78	122.79
3	L5	4299	PSU	O2-C2-N1	-2.92	119.78	122.79
3	L5	4312	PSU	O2-C2-N1	-2.92	119.78	122.79
83	S2	801	PSU	C6-N1-C2	-2.91	119.99	122.69
83	S2	484	A2M	O3'-C3'-C2'	2.91	119.32	111.19
83	S2	109	PSU	O2-C2-N1	-2.90	119.79	122.79
3	L5	3701	OMC	C1'-N1-C2	2.90	124.84	118.44
3	L5	4590	A2M	C3'-C2'-C1'	-2.90	97.26	102.81
3	L5	4552	PSU	O2-C2-N1	-2.89	119.81	122.79
3	L5	3884	PSU	C6-N1-C2	-2.89	120.01	122.69

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	2632	PSU	O2-C2-N1	-2.88	119.82	122.79
83	S2	27	A2M	C4'-O4'-C1'	-2.88	107.29	109.92
3	L5	4457	PSU	O2-C2-N1	-2.88	119.82	122.79
3	L5	3639	PSU	C6-N1-C2	-2.88	120.02	122.69
3	L5	1524	A2M	O4'-C1'-C2'	2.88	111.51	106.61
83	S2	1045	PSU	O2-C2-N1	-2.87	119.82	122.79
83	S2	668	A2M	O3'-C3'-C2'	2.87	119.23	111.19
83	S2	1004	PSU	C6-N1-C2	-2.87	120.03	122.69
3	L5	3822	PSU	O2-C2-N1	-2.86	119.84	122.79
83	S2	1081	PSU	O2-C2-N1	-2.86	119.84	122.79
3	L5	4628	PSU	O2-C2-N1	-2.85	119.84	122.79
5	L8	55	PSU	O2-C2-N1	-2.85	119.85	122.79
83	S2	93	PSU	O2-C2-N1	-2.85	119.85	122.79
3	L5	4620	OMU	O4-C4-C5	-2.85	120.25	125.16
83	S2	1288	OMU	O4-C4-C5	-2.85	120.25	125.16
83	S2	172	OMU	O4-C4-C5	-2.84	120.27	125.16
3	L5	2861	OMC	C1'-N1-C2	2.84	124.70	118.44
83	S2	1232	PSU	O2-C2-N1	-2.83	119.87	122.79
3	L5	3853	PSU	O2-C2-N1	-2.83	119.87	122.79
3	L5	4590	A2M	O3'-C3'-C2'	2.83	119.10	111.19
3	L5	2815	A2M	O3'-C3'-C2'	2.82	119.09	111.19
3	L5	1326	A2M	O3'-C3'-C2'	2.82	119.07	111.19
3	L5	4628	PSU	C6-N1-C2	-2.81	120.08	122.69
83	S2	649	PSU	O2-C2-N1	-2.81	119.89	122.79
83	S2	1337	4AC	N4-C4-N3	2.81	118.42	113.87
3	L5	4972	PSU	O2-C2-N1	-2.80	119.90	122.79
3	L5	4532	PSU	C6-N1-C2	-2.80	120.09	122.69
3	L5	3637	PSU	C6-N1-C2	-2.80	120.10	122.69
83	S2	1174	PSU	O2-C2-N1	-2.79	119.91	122.79
3	L5	4353	PSU	O2-C2-N1	-2.79	119.91	122.79
3	L5	3637	PSU	O2-C2-N1	-2.79	119.92	122.79
3	L5	4576	PSU	O2-C2-N1	-2.78	119.92	122.79
3	L5	3844	PSU	C6-N1-C2	-2.78	120.11	122.69
3	L5	4521	PSU	O2-C2-N1	-2.78	119.92	122.79
3	L5	4636	PSU	O2-C2-N1	-2.78	119.92	122.79
83	S2	354	OMU	O4-C4-C5	-2.77	120.38	125.16
3	L5	3851	PSU	O2-C2-N1	-2.77	119.93	122.79
3	L5	2815	A2M	C2'-C1'-N9	2.77	118.71	112.56
83	S2	1046	PSU	O2-C2-N1	-2.77	119.93	122.79
3	L5	3818	UY1	O2-C2-N1	-2.77	119.93	122.79
3	L5	4973	PSU	C6-N1-C2	-2.77	120.12	122.69
3	L5	4673	PSU	O2-C2-N1	-2.77	119.94	122.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
83	S2	406	PSU	O2-C2-N1	-2.76	119.94	122.79
3	L5	1744	PSU	C6-N1-C2	-2.76	120.13	122.69
3	L5	4579	PSU	C6-N1-C2	-2.76	120.13	122.69
83	S2	1174	PSU	C6-N1-C2	-2.76	120.13	122.69
3	L5	4552	PSU	C6-N1-C2	-2.76	120.13	122.69
3	L5	3695	PSU	O2-C2-N1	-2.76	119.95	122.79
3	L5	4306	OMU	O4-C4-C5	-2.75	120.42	125.16
83	S2	166	A2M	C3'-C2'-C1'	-2.75	97.55	102.81
3	L5	400	A2M	C3'-C2'-C1'	-2.74	97.55	102.81
3	L5	1683	PSU	C6-N1-C2	-2.74	120.15	122.69
3	L5	3867	A2M	C2'-C1'-N9	2.73	118.63	112.56
3	L5	3825	A2M	C3'-C2'-C1'	-2.73	97.57	102.81
3	L5	4442	PSU	C6-N1-C2	-2.73	120.16	122.69
83	S2	1244	PSU	O2-C2-N1	-2.73	119.97	122.79
3	L5	1323	A2M	C3'-C2'-C1'	-2.73	97.58	102.81
83	S2	27	A2M	O4'-C1'-C2'	2.73	111.26	106.61
3	L5	4689	PSU	O2-C2-N1	-2.73	119.97	122.79
83	S2	27	A2M	O3'-C3'-C2'	2.73	118.82	111.19
3	L5	2787	A2M	C4'-O4'-C1'	-2.73	107.43	109.92
83	S2	814	PSU	O2-C2-N1	-2.73	119.98	122.79
3	L5	4442	PSU	C6-C5-C4	2.72	120.01	118.17
3	L5	1792	PSU	C6-N1-C2	-2.72	120.17	122.69
83	S2	1004	PSU	O2-C2-N1	-2.72	119.98	122.79
83	S2	866	PSU	O2-C2-N1	-2.72	119.99	122.79
3	L5	1536	PSU	C6-N1-C2	-2.71	120.17	122.69
3	L5	4500	PSU	O2-C2-N1	-2.71	119.99	122.79
3	L5	4493	PSU	O2-C2-N1	-2.70	120.00	122.79
83	S2	651	PSU	O2-C2-N1	-2.69	120.01	122.79
3	L5	1862	PSU	O2-C2-N1	-2.69	120.02	122.79
3	L5	1782	PSU	C6-N1-C2	-2.68	120.21	122.69
83	S2	159	A2M	C4'-O4'-C1'	-2.67	107.48	109.92
3	L5	1781	PSU	O2-C2-N1	-2.67	120.03	122.79
83	S2	406	PSU	C6-N1-C2	-2.67	120.21	122.69
3	L5	4227	OMU	O4-C4-C5	-2.67	120.56	125.16
3	L5	1782	PSU	O2-C2-N1	-2.66	120.04	122.79
83	S2	668	A2M	O4'-C1'-C2'	2.66	111.14	106.61
3	L5	2363	A2M	O3'-C3'-C2'	2.66	118.62	111.19
3	L5	4471	PSU	O2-C2-N1	-2.65	120.05	122.79
3	L5	4471	PSU	C6-N1-C2	-2.65	120.23	122.69
83	S2	1367	PSU	O2-C2-N1	-2.64	120.06	122.79
3	L5	1323	A2M	O3'-C3'-C2'	2.64	118.58	111.19
3	L5	3867	A2M	O3'-C3'-C2'	2.63	118.56	111.19

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	4579	PSU	O2-C2-N1	-2.63	120.07	122.79
3	L5	4353	PSU	C6-N1-C2	-2.63	120.25	122.69
3	L5	4673	PSU	C6-N1-C2	-2.63	120.25	122.69
3	L5	4431	PSU	O2-C2-N1	-2.62	120.09	122.79
3	L5	3920	PSU	C6-N1-C2	-2.62	120.26	122.69
3	L5	1860	PSU	C6-N1-C2	-2.61	120.27	122.69
83	S2	681	PSU	O2-C2-N1	-2.61	120.10	122.79
83	S2	93	PSU	C6-N1-C2	-2.60	120.28	122.69
83	S2	1056	PSU	O2-C2-N1	-2.60	120.11	122.79
83	S2	651	PSU	C6-N1-C2	-2.59	120.28	122.69
3	L5	2787	A2M	C4-C5-N7	2.59	112.08	109.34
3	L5	1582	PSU	O2-C2-N1	-2.59	120.12	122.79
83	S2	121	OMU	O4-C4-C5	-2.58	120.71	125.16
3	L5	1534	A2M	O3'-C3'-C2'	2.58	118.41	111.19
3	L5	4296	PSU	O2-C2-N1	-2.58	120.13	122.79
3	L5	4299	PSU	C6-N1-C2	-2.58	120.30	122.69
3	L5	3867	A2M	O4'-C1'-C2'	2.58	111.00	106.61
3	L5	3844	PSU	O2-C2-N1	-2.58	120.13	122.79
3	L5	3830	A2M	C4-C5-N7	2.58	112.06	109.34
3	L5	2787	A2M	O4'-C1'-C2'	2.57	111.00	106.61
3	L5	4530	UR3	C6-N1-C2	-2.57	119.70	121.80
3	L5	1781	PSU	C6-N1-C2	-2.57	120.31	122.69
83	S2	681	PSU	C6-N1-C2	-2.57	120.31	122.69
3	L5	3695	PSU	C6-N1-C2	-2.57	120.31	122.69
3	L5	3822	PSU	C6-N1-C2	-2.57	120.31	122.69
5	L8	55	PSU	C6-N1-C2	-2.56	120.32	122.69
83	S2	109	PSU	C6-N1-C2	-2.56	120.32	122.69
5	L8	69	PSU	C6-N1-C2	-2.55	120.33	122.69
83	S2	1046	PSU	C6-N1-C2	-2.54	120.33	122.69
5	L8	69	PSU	O2-C2-N1	-2.54	120.17	122.79
83	S2	686	PSU	O2-C2-N1	-2.53	120.17	122.79
83	S2	1244	PSU	C6-N1-C2	-2.53	120.35	122.69
3	L5	4361	PSU	O2-C2-N1	-2.53	120.18	122.79
83	S2	1177	PSU	C6-N1-C2	-2.52	120.35	122.69
3	L5	4370	OMG	O6-C6-C5	2.52	129.31	124.32
83	S2	863	PSU	C6-N1-C2	-2.52	120.36	122.69
83	S2	866	PSU	C6-N1-C2	-2.50	120.37	122.69
83	S2	1244	PSU	C6-C5-C4	2.50	119.86	118.17
83	S2	1367	PSU	C6-C5-C4	2.49	119.86	118.17
3	L5	4500	PSU	C6-N1-C2	-2.49	120.38	122.69
83	S2	105	PSU	O2-C2-N1	-2.49	120.22	122.79
83	S2	801	PSU	O2-C2-N1	-2.49	120.22	122.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
83	S2	683	OMG	O6-C6-C5	2.48	129.24	124.32
3	L5	5001	PSU	O2-C2-N1	-2.48	120.23	122.79
83	S2	576	A2M	C4-C5-N7	2.47	111.94	109.34
3	L5	4493	PSU	C6-C5-C4	2.46	119.84	118.17
3	L5	4523	A2M	O3'-C3'-C2'	2.46	118.08	111.19
3	L5	4403	PSU	C6-N1-C2	-2.46	120.41	122.69
3	L5	3920	PSU	O2-C2-N1	-2.45	120.26	122.79
83	S2	105	PSU	C6-N1-C2	-2.45	120.42	122.69
3	L5	4196	OMG	O6-C6-C5	2.45	129.17	124.32
3	L5	1860	PSU	O2-C2-N1	-2.45	120.27	122.79
3	L5	2363	A2M	C3'-C2'-C1'	-2.44	98.13	102.81
83	S2	966	PSU	C6-C5-C4	2.44	119.82	118.17
3	L5	2632	PSU	C6-N1-C2	-2.44	120.42	122.69
3	L5	4493	PSU	C6-N1-C2	-2.44	120.43	122.69
3	L5	4576	PSU	C6-N1-C2	-2.44	120.43	122.69
3	L5	1316	OMG	O6-C6-C5	2.44	129.16	124.32
3	L5	4442	PSU	O4'-C1'-C2'	2.44	108.52	105.15
83	S2	1383	A2M	C4-C5-N7	2.44	111.91	109.34
3	L5	4521	PSU	C6-N1-C2	-2.43	120.43	122.69
83	S2	484	A2M	O4'-C4'-C3'	2.43	109.98	105.15
3	L5	4523	A2M	C4-C5-N7	2.43	111.91	109.34
3	L5	2363	A2M	C4-C5-N7	2.43	111.90	109.34
83	S2	1232	PSU	C6-N1-C2	-2.42	120.44	122.69
83	S2	1328	OMG	O6-C6-C5	2.42	129.13	124.32
3	L5	3718	A2M	C4-C5-N7	2.42	111.89	109.34
3	L5	4590	A2M	C4-C5-N7	2.42	111.89	109.34
3	L5	4228	OMG	O6-C6-C5	2.42	129.12	124.32
3	L5	1323	A2M	C4-C5-N7	2.41	111.88	109.34
3	L5	4623	OMG	O6-C6-C5	2.41	129.10	124.32
3	L5	3744	OMG	O6-C6-C5	2.41	129.09	124.32
83	S2	159	A2M	C3'-C2'-C1'	-2.41	98.20	102.81
3	L5	1534	A2M	C4-C5-N7	2.40	111.88	109.34
3	L5	3627	OMG	O6-C6-C5	2.40	129.09	124.32
3	L5	1524	A2M	C4-C5-N7	2.40	111.88	109.34
3	L5	4571	A2M	C4-C5-N7	2.40	111.87	109.34
83	S2	484	A2M	C4-C5-N7	2.40	111.87	109.34
3	L5	4296	PSU	C6-N1-C2	-2.39	120.47	122.69
3	L5	2815	A2M	C3'-C2'-C1'	-2.39	98.23	102.81
83	S2	1367	PSU	C6-N1-C2	-2.39	120.47	122.69
3	L5	4590	A2M	O4'-C1'-C2'	2.39	110.68	106.61
83	S2	966	PSU	C6-N1-C2	-2.39	120.47	122.69
83	S2	1056	PSU	C6-N1-C2	-2.39	120.48	122.69

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	1323	A2M	O4'-C1'-C2'	2.39	110.67	106.61
3	L5	1522	OMG	O6-C6-C5	2.38	129.04	124.32
83	S2	644	OMG	O6-C6-C5	2.38	129.04	124.32
3	L5	1862	PSU	C6-N1-C2	-2.38	120.48	122.69
3	L5	4457	PSU	C6-N1-C2	-2.38	120.48	122.69
3	L5	1326	A2M	C4-C5-N7	2.38	111.85	109.34
3	L5	4403	PSU	O4'-C1'-C2'	2.38	108.44	105.15
83	S2	814	PSU	C6-N1-C2	-2.38	120.48	122.69
83	S2	484	A2M	O4'-C1'-C2'	2.38	110.66	106.61
3	L5	3867	A2M	C3'-C2'-C1'	-2.38	98.26	102.81
3	L5	3701	OMC	C1'-N1-C6	-2.38	115.70	120.78
83	S2	1031	A2M	C4-C5-N7	2.37	111.85	109.34
83	S2	867	OMG	O6-C6-C5	2.37	129.02	124.32
3	L5	400	A2M	C4-C5-N7	2.37	111.84	109.34
3	L5	4403	PSU	C6-C5-C4	2.36	119.77	118.17
3	L5	4456	OMC	C1'-N1-C2	2.36	123.66	118.44
83	S2	166	A2M	C4-C5-N7	2.36	111.83	109.34
3	L5	3785	A2M	C4-C5-N7	2.35	111.82	109.34
83	S2	1248	B8N	C31-N3-C2	2.35	121.10	117.64
3	L5	4361	PSU	C6-N1-C2	-2.34	120.52	122.69
83	S2	1045	PSU	C6-N1-C2	-2.34	120.52	122.69
3	L5	398	A2M	C4-C5-N7	2.34	111.81	109.34
3	L5	1625	OMG	O6-C6-C5	2.33	128.95	124.32
83	S2	159	A2M	C2'-C1'-N9	2.33	117.73	112.56
3	L5	4523	A2M	O4'-C1'-C2'	2.33	110.58	106.61
3	L5	2364	OMG	O6-C6-C5	2.33	128.94	124.32
3	L5	1862	PSU	C6-C5-C4	2.33	119.75	118.17
3	L5	3853	PSU	C6-N1-C2	-2.33	120.53	122.69
3	L5	2861	OMC	C1'-N1-C6	-2.32	115.81	120.78
3	L5	1871	A2M	C4-C5-N7	2.32	111.79	109.34
3	L5	4494	OMG	O6-C6-C5	2.32	128.92	124.32
83	S2	1442	OMU	C1'-N1-C2	2.31	121.75	117.59
3	L5	3867	A2M	C4-C5-N7	2.31	111.78	109.34
3	L5	4431	PSU	C6-N1-C2	-2.31	120.55	122.69
3	L5	2363	A2M	C2'-C1'-N9	2.31	117.69	112.56
83	S2	99	A2M	C4-C5-N7	2.31	111.78	109.34
3	L5	4637	OMG	O6-C6-C5	2.31	128.89	124.32
3	L5	3792	OMG	O6-C6-C5	2.30	128.89	124.32
3	L5	4227	OMU	O2-C2-N1	-2.30	119.80	122.80
83	S2	686	PSU	C6-N1-C2	-2.30	120.55	122.69
3	L5	5001	PSU	C6-N1-C2	-2.30	120.56	122.69
3	L5	1322	1MA	C5-C6-N1	-2.30	110.66	113.95

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	1323	A2M	C2'-C1'-N9	2.30	117.66	112.56
3	L5	2424	OMG	O6-C6-C5	2.29	128.86	124.32
3	L5	2876	OMG	O6-C6-C5	2.28	128.85	124.32
3	L5	3822	PSU	O4'-C1'-C2'	2.28	108.31	105.15
3	L5	2401	A2M	O4'-C1'-C2'	2.28	110.49	106.61
83	S2	27	A2M	C4-C5-N7	2.27	111.74	109.34
3	L5	1326	A2M	O4'-C1'-C2'	2.27	110.48	106.61
3	L5	3785	A2M	O4'-C4'-C3'	2.26	109.65	105.15
3	L5	4499	OMG	O6-C6-C5	2.26	128.80	124.32
3	L5	1326	A2M	C3'-C2'-C1'	-2.26	98.48	102.81
3	L5	4636	PSU	C6-N1-C2	-2.26	120.60	122.69
83	S2	166	A2M	O4'-C1'-C2'	2.25	110.45	106.61
83	S2	468	A2M	C4-C5-N7	2.25	111.72	109.34
3	L5	2815	A2M	C4-C5-N7	2.25	111.71	109.34
3	L5	1524	A2M	C3'-C2'-C1'	-2.25	98.51	102.81
3	L5	2422	OMC	C1'-N1-C2	2.24	123.39	118.44
3	L5	3637	PSU	C6-C5-C4	2.24	119.69	118.17
3	L5	2401	A2M	C4-C5-N7	2.24	111.71	109.34
3	L5	2363	A2M	O4'-C1'-C2'	2.24	110.42	106.61
3	L5	4618	OMG	O6-C6-C5	2.23	128.74	124.32
3	L5	4972	PSU	C6-N1-C2	-2.22	120.63	122.69
3	L5	3808	OMC	C1'-N1-C6	-2.22	116.04	120.78
83	S2	436	OMG	O6-C6-C5	2.21	128.71	124.32
83	S2	159	A2M	C4-C5-N7	2.20	111.66	109.34
83	S2	509	OMG	O6-C6-C5	2.20	128.68	124.32
3	L5	3825	A2M	O4'-C1'-C2'	2.20	110.36	106.61
83	S2	1248	B8N	O4-C4-C5	-2.19	118.79	122.58
3	L5	4392	OMG	O6-C6-C5	2.19	128.66	124.32
3	L5	400	A2M	O4'-C1'-C2'	2.19	110.34	106.61
3	L5	3782	5MC	C1'-N1-C6	-2.19	117.55	121.15
5	L8	75	OMG	O6-C6-C5	2.18	128.65	124.32
83	S2	428	OMU	O2-C2-N1	-2.18	119.96	122.80
3	L5	1582	PSU	C6-N1-C2	-2.18	120.67	122.69
3	L5	3825	A2M	C4-C5-N7	2.17	111.63	109.34
83	S2	1326	OMU	O2-C2-N1	-2.17	119.97	122.80
3	L5	1677	PSU	C6-N1-C2	-2.17	120.68	122.69
3	L5	2351	OMC	C1'-N1-C2	2.17	123.23	118.44
83	S2	116	OMU	O2-C2-N1	-2.17	119.97	122.80
3	L5	4457	PSU	C6-C5-C4	2.17	119.64	118.17
3	L5	1326	A2M	C2'-C1'-N9	2.16	117.36	112.56
3	L5	400	A2M	C2'-C1'-N9	2.16	117.36	112.56
3	L5	1322	1MA	N1-C6-N6	2.15	125.11	119.71

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
83	S2	686	PSU	C6-C5-C4	2.15	119.62	118.17
83	S2	1248	B8N	O4'-C1'-C2'	2.14	108.11	105.15
83	S2	1031	A2M	O4'-C1'-C2'	2.14	110.25	106.61
3	L5	4498	OMU	O2-C2-N1	-2.14	120.01	122.80
3	L5	2787	A2M	C3'-C2'-C1'	-2.14	98.72	102.81
3	L5	4521	PSU	C6-C5-C4	2.13	119.61	118.17
3	L5	1534	A2M	C2'-C1'-N9	2.13	117.29	112.56
5	L8	69	PSU	O4'-C1'-C2'	2.11	108.07	105.15
3	L5	3785	A2M	C3'-C2'-C1'	-2.10	98.78	102.81
3	L5	4636	PSU	O4'-C1'-C2'	2.10	108.06	105.15
3	L5	4576	PSU	O4'-C1'-C2'	2.09	108.05	105.15
83	S2	1337	4AC	C5-C4-N4	-2.09	119.42	122.94
3	L5	4293	PSU	C6-N1-C2	-2.09	120.76	122.69
3	L5	4296	PSU	C6-C5-C4	2.09	119.58	118.17
3	L5	3851	PSU	C6-N1-C2	-2.08	120.76	122.69
3	L5	2787	A2M	O4'-C4'-C3'	2.08	109.27	105.15
83	S2	668	A2M	C6-C5-C4	-2.08	113.86	117.90
3	L5	3851	PSU	O4'-C1'-C2'	2.07	108.02	105.15
3	L5	2837	OMU	O2-C2-N1	-2.07	120.10	122.80
83	S2	99	A2M	O4'-C1'-C2'	2.07	110.13	106.61
83	S2	668	A2M	C2'-C1'-N9	2.06	117.14	112.56
3	L5	4293	PSU	C6-C5-C4	2.06	119.56	118.17
3	L5	3899	OMG	O6-C6-C5	2.06	128.40	124.32
3	L5	3825	A2M	C2'-C1'-N9	2.05	117.12	112.56
3	L5	2632	PSU	C6-C5-C4	2.05	119.56	118.17
83	S2	406	PSU	C6-C5-C4	2.04	119.55	118.17
3	L5	3853	PSU	C6-C5-C4	2.04	119.55	118.17
3	L5	3822	PSU	C6-C5-C4	2.04	119.55	118.17
83	S2	1248	B8N	O36-C34-O35	-2.03	119.46	124.08
83	S2	484	A2M	C4'-O4'-C1'	-2.03	108.06	109.92
83	S2	1081	PSU	C6-C5-C4	2.03	119.55	118.17
3	L5	4457	PSU	O4'-C1'-C2'	2.02	107.95	105.15
3	L5	2815	A2M	O4'-C1'-C2'	2.02	110.05	106.61
83	S2	1367	PSU	O4'-C1'-C2'	2.02	107.95	105.15
3	L5	3851	PSU	C6-C5-C4	2.02	119.54	118.17
83	S2	159	A2M	O4'-C1'-C2'	2.02	110.05	106.61
3	L5	4590	A2M	C6-C5-C4	-2.02	113.98	117.90
83	S2	174	OMC	C1'-N1-C2	2.02	122.89	118.44
83	S2	172	OMU	O2-C2-N1	-2.01	120.17	122.80
3	L5	4500	PSU	O4'-C1'-C2'	2.00	107.92	105.15
83	S2	1703	OMC	C1'-N1-C2	2.00	122.87	118.44
83	S2	1045	PSU	C6-C5-C4	2.00	119.53	118.17

There are no chirality outliers.

All (160) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	L5	398	A2M	C1'-C2'-O2'-CM'
3	L5	400	A2M	C1'-C2'-O2'-CM'
3	L5	1316	OMG	C1'-C2'-O2'-CM2
3	L5	1326	A2M	O4'-C4'-C5'-O5'
3	L5	1326	A2M	C3'-C4'-C5'-O5'
3	L5	1326	A2M	C1'-C2'-O2'-CM'
3	L5	1625	OMG	O4'-C4'-C5'-O5'
3	L5	1625	OMG	C3'-C4'-C5'-O5'
3	L5	2351	OMC	C1'-C2'-O2'-CM2
3	L5	2364	OMG	O4'-C4'-C5'-O5'
3	L5	2422	OMC	C1'-C2'-O2'-CM2
3	L5	2787	A2M	C1'-C2'-O2'-CM'
3	L5	2824	OMC	C1'-C2'-O2'-CM2
3	L5	2876	OMG	O4'-C4'-C5'-O5'
3	L5	3792	OMG	O4'-C4'-C5'-O5'
3	L5	3808	OMC	C1'-C2'-O2'-CM2
3	L5	3830	A2M	C1'-C2'-O2'-CM'
3	L5	3867	A2M	C1'-C2'-O2'-CM'
3	L5	3925	OMU	C1'-C2'-O2'-CM2
3	L5	4196	OMG	C1'-C2'-O2'-CM2
3	L5	4220	6MZ	O4'-C4'-C5'-O5'
3	L5	4590	A2M	C1'-C2'-O2'-CM'
3	L5	4623	OMG	C1'-C2'-O2'-CM2
3	L5	4637	OMG	O4'-C4'-C5'-O5'
3	L5	4637	OMG	C1'-C2'-O2'-CM2
83	S2	27	A2M	C1'-C2'-O2'-CM'
83	S2	99	A2M	C1'-C2'-O2'-CM'
83	S2	116	OMU	C1'-C2'-O2'-CM2
83	S2	159	A2M	C1'-C2'-O2'-CM'
83	S2	462	OMC	C1'-C2'-O2'-CM2
83	S2	601	OMG	C1'-C2'-O2'-CM2
83	S2	644	OMG	O4'-C4'-C5'-O5'
83	S2	801	PSU	C3'-C4'-C5'-O5'
83	S2	1031	A2M	C1'-C2'-O2'-CM'
83	S2	1248	B8N	O4'-C4'-C5'-O5'
83	S2	1248	B8N	C31-C32-C33-C34
83	S2	1272	OMC	C3'-C4'-C5'-O5'
83	S2	1272	OMC	O4'-C4'-C5'-O5'
83	S2	1288	OMU	C3'-C4'-C5'-O5'
83	S2	1288	OMU	O4'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
83	S2	1337	4AC	N3-C4-N4-C7
83	S2	1383	A2M	C1'-C2'-O2'-CM'
83	S2	1832	6MZ	C5-C6-N6-C9
83	S2	1832	6MZ	N1-C6-N6-C9
83	S2	1832	6MZ	C5'-O5'-P-O1P
83	S2	1832	6MZ	C5'-O5'-P-O3P
3	L5	1536	PSU	C3'-C4'-C5'-O5'
3	L5	2876	OMG	C3'-C4'-C5'-O5'
3	L5	4306	OMU	C3'-C4'-C5'-O5'
3	L5	4500	PSU	C3'-C4'-C5'-O5'
3	L5	4500	PSU	O4'-C4'-C5'-O5'
3	L5	4590	A2M	O4'-C4'-C5'-O5'
83	S2	517	OMC	C3'-C4'-C5'-O5'
83	S2	576	A2M	O4'-C4'-C5'-O5'
83	S2	799	OMU	C3'-C4'-C5'-O5'
83	S2	799	OMU	O4'-C4'-C5'-O5'
83	S2	867	OMG	C3'-C4'-C5'-O5'
83	S2	1046	PSU	O4'-C4'-C5'-O5'
83	S2	1326	OMU	C3'-C4'-C5'-O5'
83	S2	1442	OMU	O4'-C4'-C5'-O5'
3	L5	3818	UY1	C4'-C5'-O5'-P
3	L5	1323	A2M	O4'-C4'-C5'-O5'
3	L5	1536	PSU	O4'-C4'-C5'-O5'
3	L5	3701	OMC	C3'-C4'-C5'-O5'
3	L5	3701	OMC	O4'-C4'-C5'-O5'
3	L5	4590	A2M	C3'-C4'-C5'-O5'
83	S2	517	OMC	O4'-C4'-C5'-O5'
83	S2	576	A2M	C3'-C4'-C5'-O5'
83	S2	801	PSU	O4'-C4'-C5'-O5'
83	S2	1045	PSU	O4'-C4'-C5'-O5'
83	S2	1326	OMU	O4'-C4'-C5'-O5'
83	S2	1442	OMU	C3'-C4'-C5'-O5'
3	L5	3792	OMG	C3'-C4'-C5'-O5'
3	L5	4220	6MZ	C3'-C4'-C5'-O5'
3	L5	4637	OMG	C3'-C4'-C5'-O5'
83	S2	644	OMG	C3'-C4'-C5'-O5'
83	S2	668	A2M	C3'-C4'-C5'-O5'
83	S2	1248	B8N	C3'-C4'-C5'-O5'
83	S2	428	OMU	C2'-C1'-N1-C6
3	L5	2364	OMG	C3'-C4'-C5'-O5'
3	L5	2632	PSU	C3'-C4'-C5'-O5'
83	S2	668	A2M	O4'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
83	S2	867	OMG	O4'-C4'-C5'-O5'
3	L5	4447	5MC	C2'-C1'-N1-C6
3	L5	1677	PSU	O4'-C4'-C5'-O5'
3	L5	2632	PSU	O4'-C4'-C5'-O5'
3	L5	2787	A2M	C3'-C4'-C5'-O5'
3	L5	3830	A2M	O4'-C4'-C5'-O5'
3	L5	4228	OMG	O4'-C4'-C5'-O5'
3	L5	4306	OMU	O4'-C4'-C5'-O5'
3	L5	1677	PSU	C3'-C4'-C5'-O5'
3	L5	4571	A2M	O4'-C4'-C5'-O5'
83	S2	1045	PSU	C3'-C4'-C5'-O5'
83	S2	1046	PSU	C3'-C4'-C5'-O5'
83	S2	1383	A2M	O4'-C4'-C5'-O5'
3	L5	1323	A2M	C3'-C4'-C5'-O5'
3	L5	3830	A2M	C3'-C4'-C5'-O5'
3	L5	4228	OMG	C3'-C4'-C5'-O5'
83	S2	627	OMU	C2'-C1'-N1-C6
3	L5	1524	A2M	O4'-C4'-C5'-O5'
3	L5	1792	PSU	O4'-C4'-C5'-O5'
83	S2	1383	A2M	C3'-C4'-C5'-O5'
83	S2	1248	B8N	N34-C33-C34-O35
3	L5	4571	A2M	C3'-C4'-C5'-O5'
3	L5	3825	A2M	C1'-C2'-O2'-CM'
3	L5	3841	OMC	C1'-C2'-O2'-CM2
83	S2	468	A2M	C1'-C2'-O2'-CM'
83	S2	1391	OMC	C1'-C2'-O2'-CM2
3	L5	1524	A2M	C3'-C4'-C5'-O5'
3	L5	2422	OMC	C3'-C4'-C5'-O5'
3	L5	2422	OMC	O4'-C4'-C5'-O5'
3	L5	1781	PSU	C3'-C4'-C5'-O5'
83	S2	1248	B8N	C31-C32-C33-N34
83	S2	428	OMU	O4'-C1'-N1-C6
83	S2	428	OMU	C2'-C1'-N1-C2
3	L5	4447	5MC	O4'-C1'-N1-C6
3	L5	1582	PSU	C3'-C4'-C5'-O5'
83	S2	1244	PSU	O4'-C4'-C5'-O5'
3	L5	4447	5MC	O4'-C1'-N1-C2
83	S2	1832	6MZ	C5'-O5'-P-O2P
3	L5	1534	A2M	C4'-C5'-O5'-P
83	S2	428	OMU	O4'-C4'-C5'-O5'
83	S2	428	OMU	O4'-C1'-N1-C2
83	S2	627	OMU	O4'-C1'-N1-C6

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Mol	Chain	Res	Type	Atoms
83	S2	1851	MA6	C4'-C5'-O5'-P
3	L5	4636	PSU	O4'-C1'-C5-C4
83	S2	651	PSU	O4'-C1'-C5-C4
83	S2	1248	B8N	O4'-C1'-C5-C4
3	L5	3701	OMC	O4'-C1'-N1-C6
3	L5	1326	A2M	C4'-C5'-O5'-P
3	L5	3785	A2M	O4'-C4'-C5'-O5'
3	L5	4447	5MC	C2'-C1'-N1-C2
3	L5	1625	OMG	C4'-C5'-O5'-P
3	L5	3844	PSU	C4'-C5'-O5'-P
3	L5	4500	PSU	C4'-C5'-O5'-P
3	L5	4590	A2M	C4'-C5'-O5'-P
3	L5	3785	A2M	C3'-C2'-O2'-CM'
3	L5	4499	OMG	C3'-C2'-O2'-CM2
3	L5	3887	OMC	C4'-C5'-O5'-P
83	S2	1490	OMG	C4'-C5'-O5'-P
3	L5	3869	OMC	O4'-C4'-C5'-O5'
3	L5	3701	OMC	O4'-C1'-N1-C2
83	S2	576	A2M	C4'-C5'-O5'-P
83	S2	644	OMG	C4'-C5'-O5'-P
3	L5	3818	UY1	C3'-C4'-C5'-O5'
3	L5	3744	OMG	C1'-C2'-O2'-CM2
83	S2	1328	OMG	C1'-C2'-O2'-CM2
83	S2	1081	PSU	C4'-C5'-O5'-P
83	S2	428	OMU	C3'-C4'-C5'-O5'
83	S2	1248	B8N	N34-C33-C34-O36
83	S2	1248	B8N	O4'-C1'-C5-C6
83	S2	627	OMU	C2'-C1'-N1-C2
3	L5	3869	OMC	C3'-C2'-O2'-CM2
83	S2	627	OMU	O4'-C1'-N1-C2
3	L5	4530	UR3	C3'-C4'-C5'-O5'
3	L5	1582	PSU	O4'-C4'-C5'-O5'
3	L5	3701	OMC	C2'-C1'-N1-C2
3	L5	1792	PSU	C3'-C4'-C5'-O5'
83	S2	627	OMU	C4'-C5'-O5'-P
83	S2	1832	6MZ	O4'-C4'-C5'-O5'

There are no ring outliers.

94 monomers are involved in 162 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
83	S2	601	OMG	2	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	L5	4689	PSU	1	0
3	L5	1683	PSU	2	0
83	S2	354	OMU	1	0
3	L5	4471	PSU	1	0
83	S2	1383	A2M	2	0
3	L5	1534	A2M	3	0
3	L5	4530	UR3	1	0
83	S2	159	A2M	6	0
83	S2	174	OMC	1	0
3	L5	1326	A2M	2	0
83	S2	683	OMG	1	0
83	S2	1004	PSU	1	0
3	L5	2632	PSU	1	0
83	S2	1031	A2M	2	0
3	L5	3825	A2M	1	0
3	L5	4392	OMG	1	0
83	S2	27	A2M	2	0
83	S2	814	PSU	1	0
3	L5	3867	A2M	3	0
83	S2	99	A2M	2	0
3	L5	4637	OMG	2	0
3	L5	2401	A2M	1	0
83	S2	468	A2M	2	0
3	L5	3884	PSU	1	0
83	S2	649	PSU	2	0
5	L8	69	PSU	1	0
83	S2	462	OMC	4	0
3	L5	4312	PSU	1	0
3	L5	4456	OMC	1	0
83	S2	484	A2M	2	0
83	S2	1850	MA6	2	0
3	L5	4579	PSU	2	0
3	L5	5010	PSU	2	0
3	L5	4571	A2M	2	0
3	L5	398	A2M	2	0
83	S2	1177	PSU	1	0
3	L5	1524	A2M	2	0
83	S2	681	PSU	2	0
83	S2	1337	4AC	4	0
83	S2	668	A2M	1	0
3	L5	4306	OMU	1	0
83	S2	1244	PSU	2	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	L5	4628	PSU	2	0
3	L5	400	A2M	2	0
3	L5	3718	A2M	6	0
3	L5	3869	OMC	1	0
3	L5	3785	A2M	2	0
83	S2	1391	OMC	2	0
83	S2	1288	OMU	1	0
3	L5	4590	A2M	1	0
3	L5	1340	OMC	3	0
83	S2	509	OMG	3	0
83	S2	116	OMU	4	0
3	L5	4523	A2M	4	0
83	S2	651	PSU	1	0
3	L5	4403	PSU	1	0
3	L5	3925	OMU	2	0
3	L5	1316	OMG	2	0
3	L5	3920	PSU	1	0
3	L5	4227	OMU	1	0
3	L5	4623	OMG	1	0
3	L5	1871	A2M	1	0
3	L5	2363	A2M	1	0
3	L5	1677	PSU	2	0
83	S2	1639	G7M	1	0
3	L5	2876	OMG	2	0
3	L5	2804	OMC	2	0
3	L5	2824	OMC	1	0
3	L5	4220	6MZ	2	0
3	L5	4442	PSU	1	0
3	L5	3844	PSU	1	0
3	L5	2351	OMC	2	0
5	L8	75	OMG	2	0
83	S2	1174	PSU	3	0
3	L5	3830	A2M	1	0
83	S2	1842	4AC	1	0
5	L8	55	PSU	2	0
3	L5	3841	OMC	1	0
83	S2	166	A2M	1	0
3	L5	4618	OMG	1	0
3	L5	4620	OMU	1	0
83	S2	406	PSU	2	0
3	L5	2422	OMC	1	0
3	L5	4552	PSU	1	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
83	S2	1272	OMC	1	0
3	L5	4370	OMG	1	0
83	S2	1081	PSU	1	0
3	L5	4447	5MC	1	0
3	L5	1323	A2M	2	0
3	L5	4576	PSU	1	0
83	S2	121	OMU	4	0
3	L5	4673	PSU	1	0
3	L5	3744	OMG	1	0

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 242 ligands modelled in this entry, 225 are monoatomic - leaving 17 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	$\# Z > 2$
85	SPM	L5	5267	-	13,13,13	0.36	0	12,12,12	1.05	0
86	SPD	L8	202	-	9,9,9	0.33	0	8,8,8	0.82	0
86	SPD	L5	5286	-	9,9,9	0.33	0	8,8,8	0.85	0
86	SPD	L5	5289	-	9,9,9	0.33	0	8,8,8	0.75	0
85	SPM	L5	5263	-	13,13,13	0.33	0	12,12,12	0.92	0
86	SPD	L5	5283	-	9,9,9	0.31	0	8,8,8	0.85	0
86	SPD	L5	5261	-	9,9,9	0.31	0	8,8,8	0.94	0
86	SPD	L5	5285	-	9,9,9	0.33	0	8,8,8	0.83	0
86	SPD	L5	5282	-	9,9,9	0.32	0	8,8,8	0.86	0
85	SPM	L5	5259	-	13,13,13	0.36	0	12,12,12	0.94	0
85	SPM	L5	5287	-	13,13,13	0.35	0	12,12,12	0.96	0
86	SPD	L5	5288	-	9,9,9	0.35	0	8,8,8	0.93	0
85	SPM	L5	5291	-	13,13,13	0.36	0	12,12,12	0.88	0
85	SPM	L5	5290	-	13,13,13	0.36	0	12,12,12	0.78	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
86	SPD	LN	301	-	9,9,9	0.34	0	8,8,8	0.84	0
86	SPD	L5	5284	-	9,9,9	0.33	0	8,8,8	0.85	0
85	SPM	L5	5264	-	13,13,13	0.35	0	12,12,12	0.96	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
85	SPM	L5	5267	-	-	4/11/11/11	-
86	SPD	L8	202	-	-	2/7/7/7	-
86	SPD	L5	5286	-	-	2/7/7/7	-
86	SPD	L5	5289	-	-	4/7/7/7	-
85	SPM	L5	5263	-	-	6/11/11/11	-
86	SPD	L5	5283	-	-	1/7/7/7	-
86	SPD	L5	5261	-	-	4/7/7/7	-
86	SPD	L5	5285	-	-	1/7/7/7	-
86	SPD	L5	5282	-	-	1/7/7/7	-
85	SPM	L5	5259	-	-	3/11/11/11	-
85	SPM	L5	5287	-	-	5/11/11/11	-
86	SPD	L5	5288	-	-	5/7/7/7	-
85	SPM	L5	5291	-	-	3/11/11/11	-
85	SPM	L5	5290	-	-	6/11/11/11	-
86	SPD	LN	301	-	-	2/7/7/7	-
86	SPD	L5	5284	-	-	1/7/7/7	-
85	SPM	L5	5264	-	-	1/11/11/11	-

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (51) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
85	L5	5290	SPM	N10-C11-C12-C13
85	L5	5267	SPM	C2-C3-C4-N5
86	L8	202	SPD	C3-C4-C5-N6
86	L5	5261	SPD	C3-C4-C5-N6

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Mol	Chain	Res	Type	Atoms
86	L5	5288	SPD	C3-C4-C5-N6
85	L5	5287	SPM	N10-C11-C12-C13
85	L5	5290	SPM	C2-C3-C4-N5
86	L5	5261	SPD	N6-C7-C8-C9
85	L5	5267	SPM	C7-C6-N5-C4
86	L5	5288	SPD	C8-C7-N6-C5
86	L5	5289	SPD	C4-C5-N6-C7
86	L5	5289	SPD	C8-C7-N6-C5
86	L5	5286	SPD	N6-C7-C8-C9
86	L5	5288	SPD	C4-C5-N6-C7
86	L5	5286	SPD	C8-C7-N6-C5
86	L5	5288	SPD	N6-C7-C8-C9
86	LN	301	SPD	C2-C3-C4-C5
85	L5	5290	SPM	C6-C7-C8-C9
85	L5	5263	SPM	C2-C3-C4-N5
85	L5	5259	SPM	C6-C7-C8-C9
86	L5	5282	SPD	C2-C3-C4-C5
85	L5	5263	SPM	C6-C7-C8-C9
86	L8	202	SPD	C2-C3-C4-C5
85	L5	5259	SPM	N5-C6-C7-C8
85	L5	5287	SPM	C6-C7-C8-C9
85	L5	5263	SPM	C11-C12-C13-N14
86	L5	5261	SPD	C7-C8-C9-N10
85	L5	5287	SPM	C3-C4-N5-C6
85	L5	5291	SPM	C7-C6-N5-C4
86	L5	5261	SPD	C4-C5-N6-C7
85	L5	5290	SPM	N5-C6-C7-C8
86	L5	5283	SPD	C3-C4-C5-N6
85	L5	5259	SPM	C2-C3-C4-N5
85	L5	5263	SPM	N1-C2-C3-C4
85	L5	5287	SPM	N1-C2-C3-C4
85	L5	5290	SPM	C8-C9-N10-C11
86	L5	5285	SPD	C7-C8-C9-N10
86	L5	5289	SPD	C7-C8-C9-N10
86	L5	5284	SPD	C2-C3-C4-C5
85	L5	5287	SPM	C2-C3-C4-N5
85	L5	5291	SPM	N10-C11-C12-C13
86	L5	5289	SPD	N6-C7-C8-C9
85	L5	5263	SPM	C3-C4-N5-C6
86	LN	301	SPD	C8-C7-N6-C5
85	L5	5291	SPM	C2-C3-C4-N5
85	L5	5290	SPM	C3-C4-N5-C6

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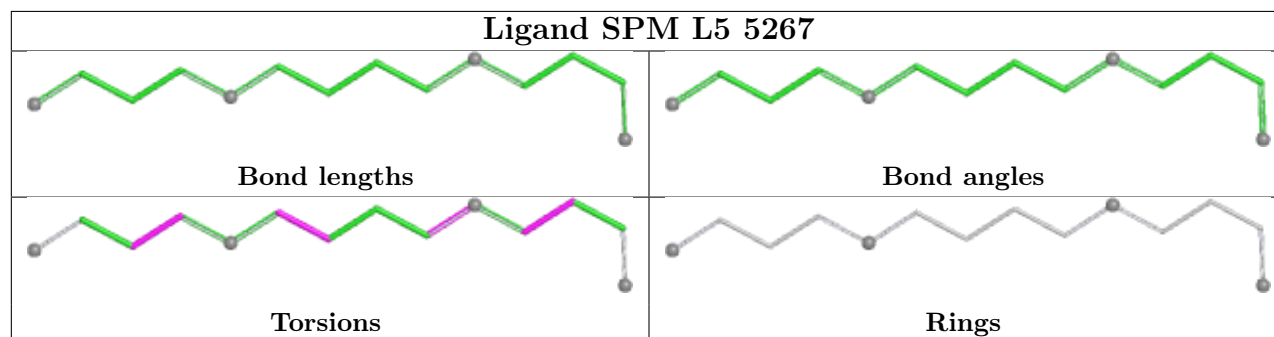
Mol	Chain	Res	Type	Atoms
85	L5	5263	SPM	C8-C9-N10-C11
85	L5	5267	SPM	N10-C11-C12-C13
85	L5	5264	SPM	C11-C12-C13-N14
86	L5	5288	SPD	N1-C2-C3-C4
85	L5	5267	SPM	C7-C8-C9-N10

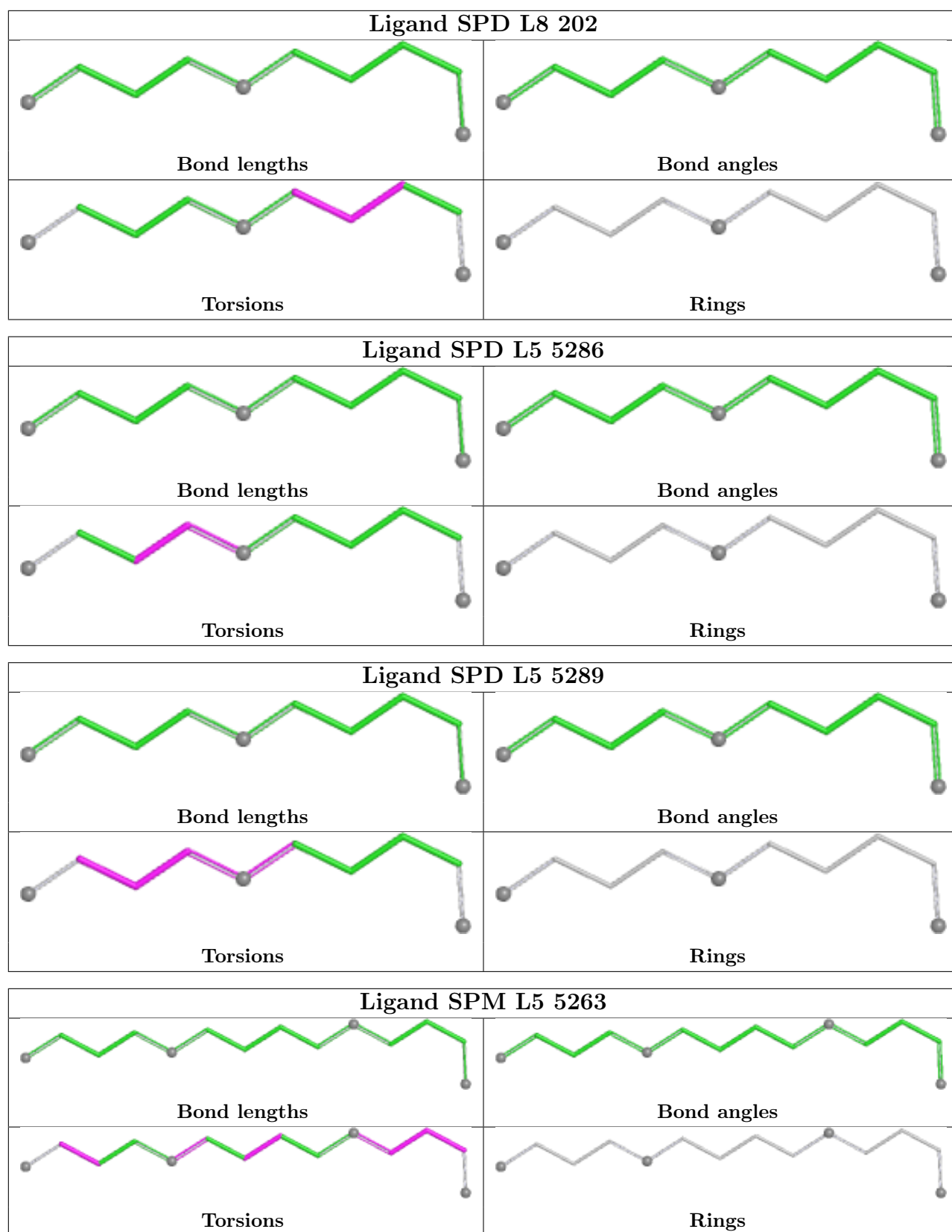
There are no ring outliers.

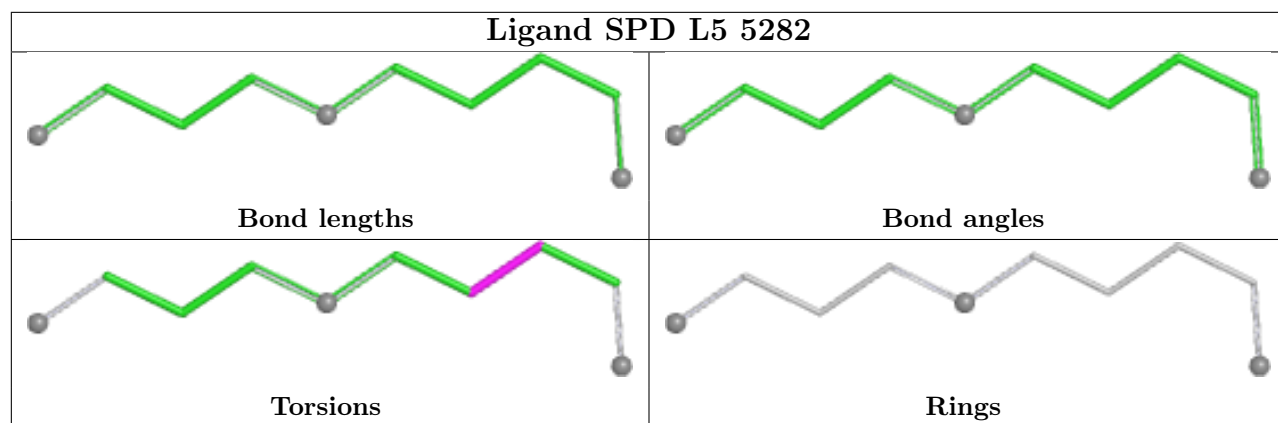
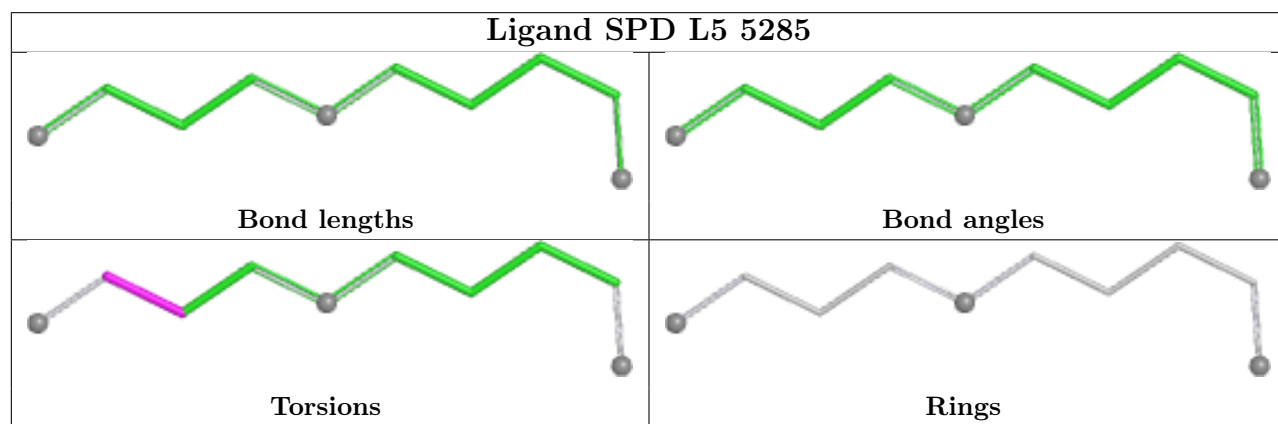
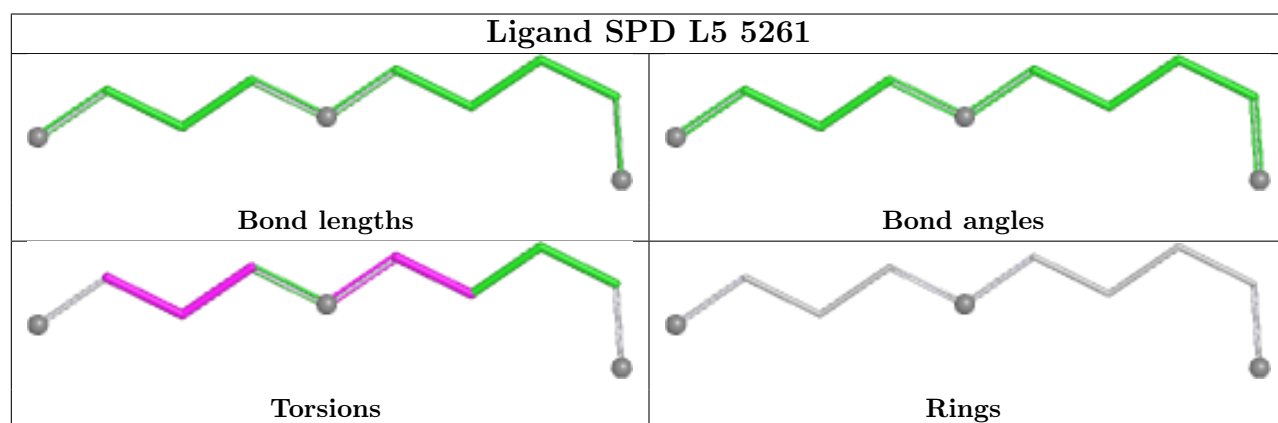
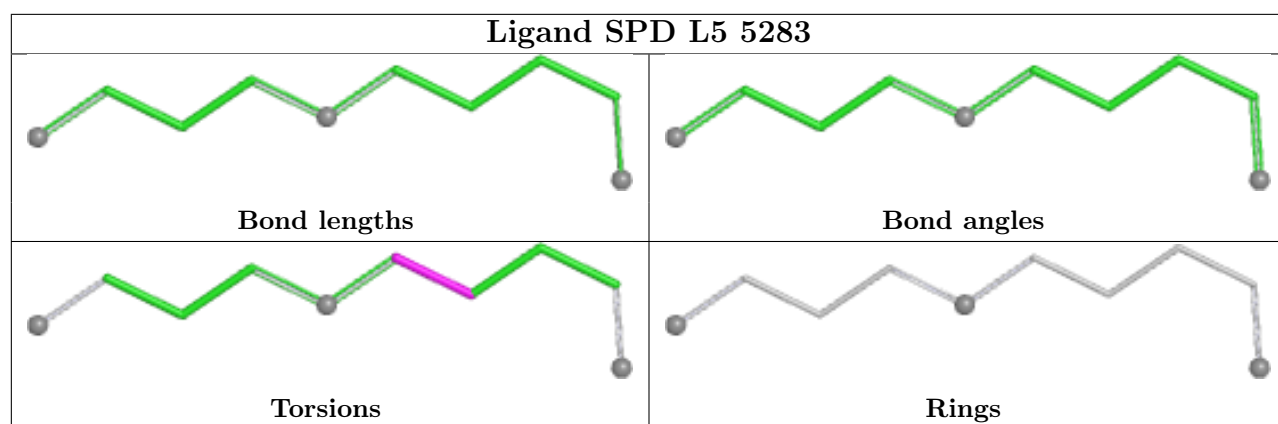
4 monomers are involved in 9 short contacts:

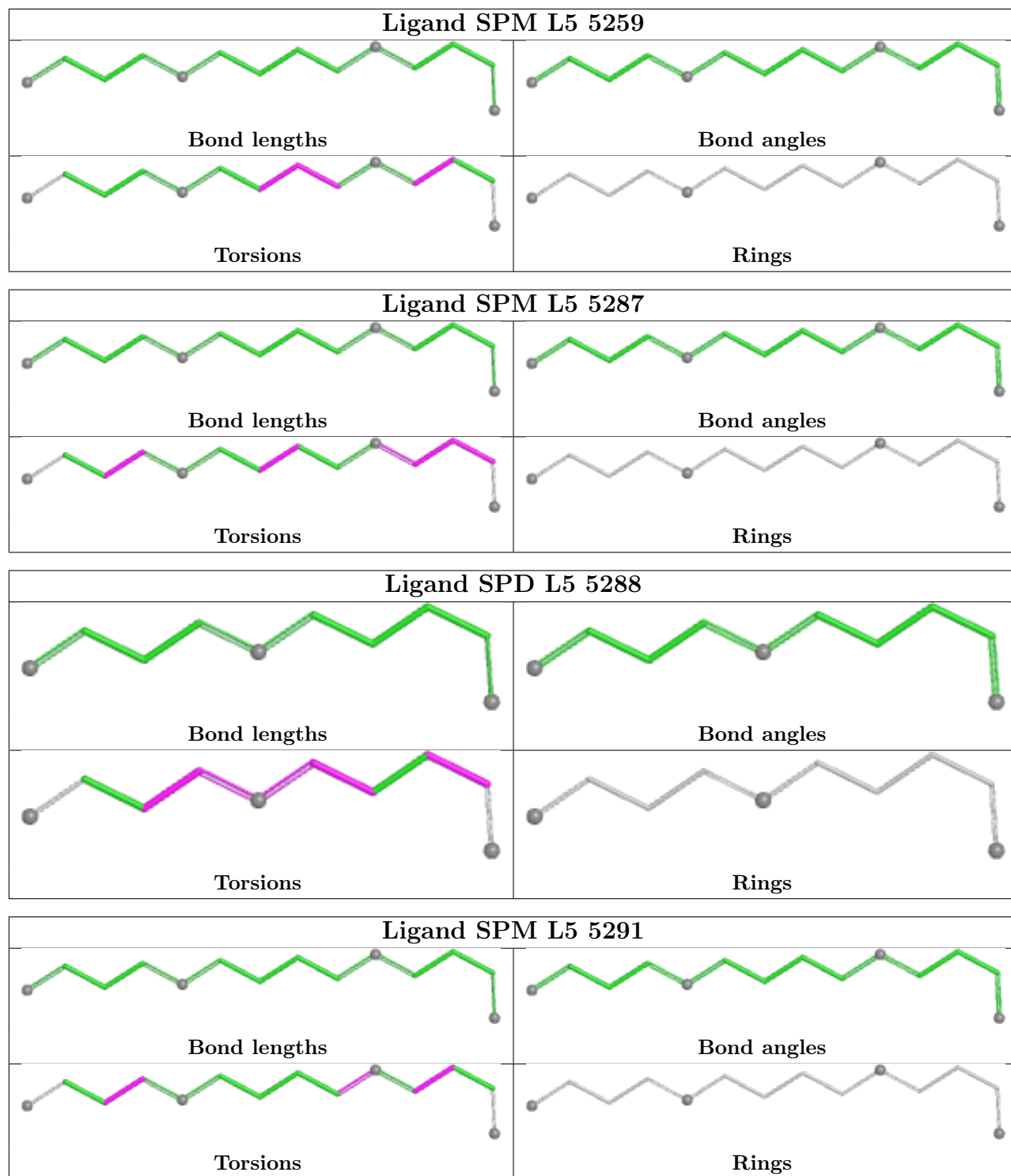
Mol	Chain	Res	Type	Clashes	Symm-Clashes
86	L5	5289	SPD	1	0
85	L5	5263	SPM	2	0
86	L5	5288	SPD	1	0
85	L5	5291	SPM	5	0

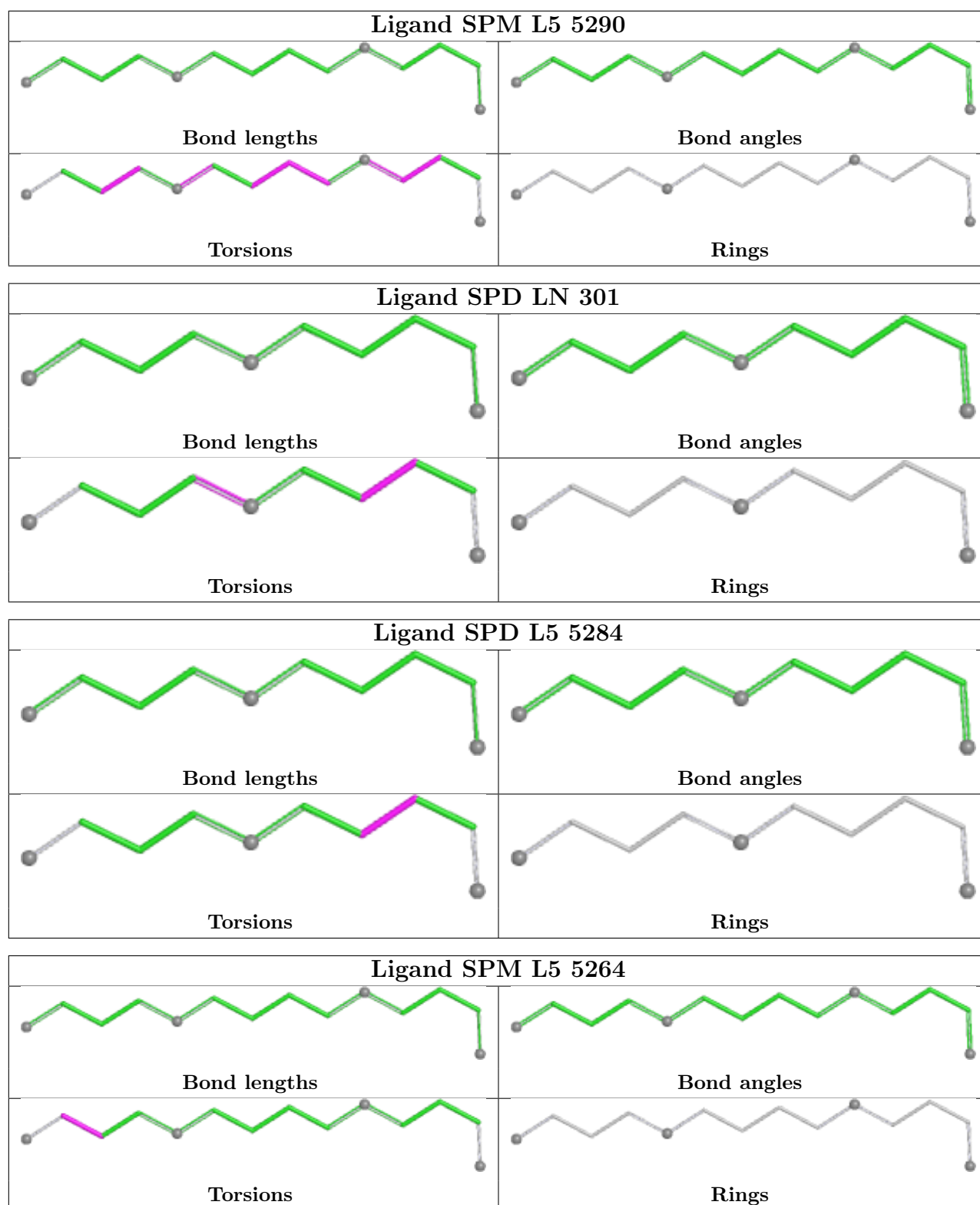
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included.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

There are no such residues in this entry.

5.8 Polymer linkage issues

The following chains have linkage breaks:

Mol	Chain	Number of breaks
3	L5	10
83	S2	5
2	Pt	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	S2	753:C	O3'	785:C	P	28.90
1	L5	1706:A	O3'	1716:G	P	21.53
1	L5	2910:G	O3'	3584:C	P	21.03
1	L5	760:G	O3'	903:C	P	17.11
1	L5	2112:G	O3'	2249:C	P	15.56
1	L5	519:C	O3'	642:G	P	15.45
1	L5	4776:G	O3'	4858:C	P	14.45
1	L5	3954:A	O3'	4056:A	P	14.38
1	S2	698:G	O3'	730:C	P	14.05
1	S2	739:C	O3'	746:C	P	13.08
1	L5	990:C	O3'	1064:G	P	12.83
1	L5	1222:A	O3'	1234:G	P	10.44
1	Pt	15:G	O3'	18:G	P	9.76
1	S2	225:G	O3'	287:U	P	7.89
1	L5	1100:U	O3'	1167:C	P	7.20
1	S2	1831:A	O3'	1832:6MZ	P	4.49

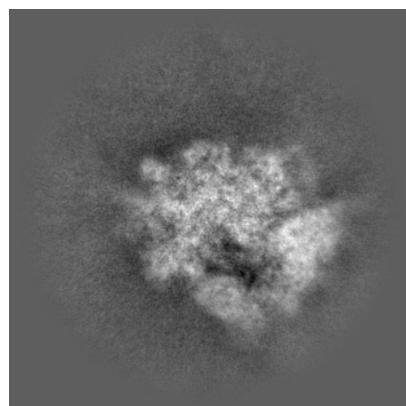
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-71696. These allow visual inspection of the internal detail of the map and identification of artifacts.

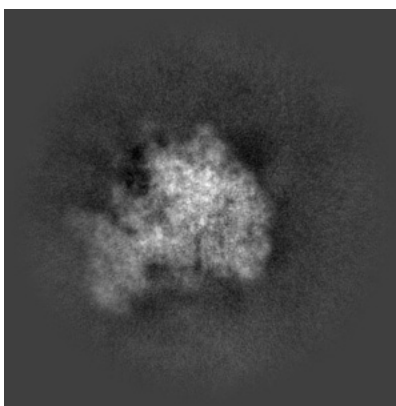
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

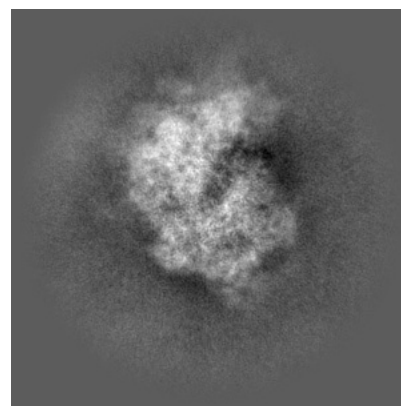
6.1.1 Primary map



X

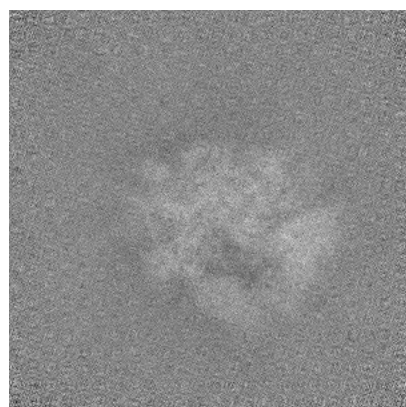


Y

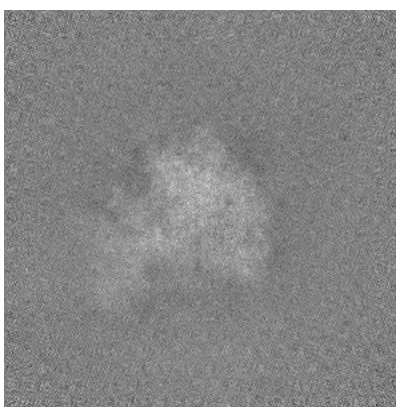


Z

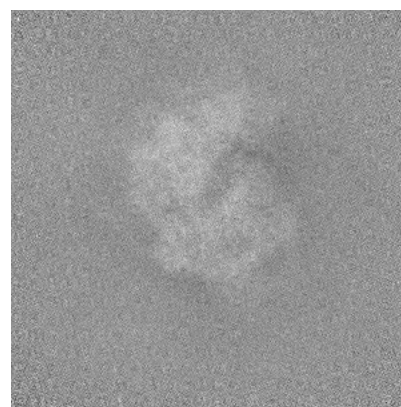
6.1.2 Raw map



X



Y

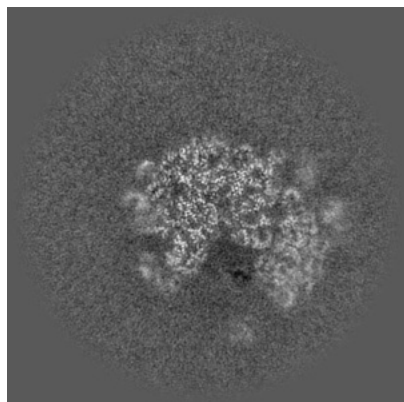


Z

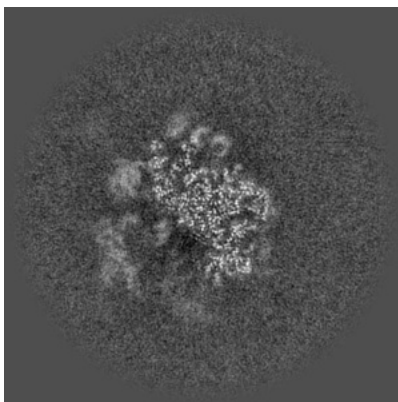
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

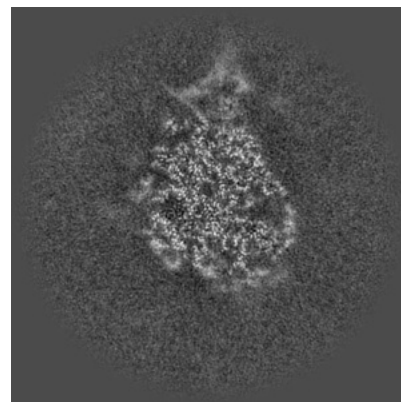
6.2.1 Primary map



X Index: 288

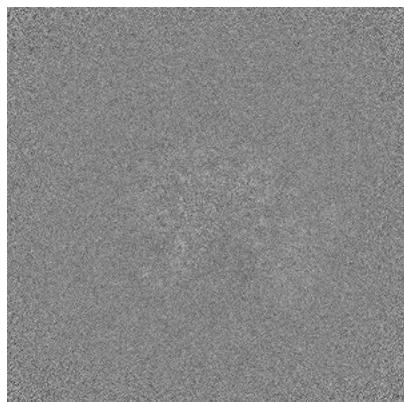


Y Index: 288

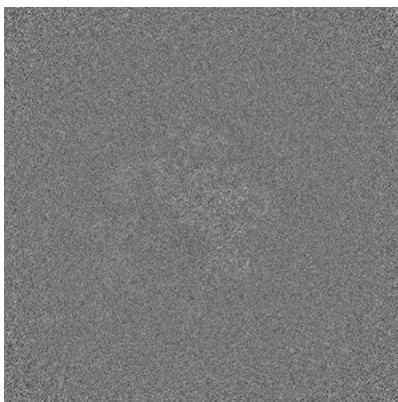


Z Index: 288

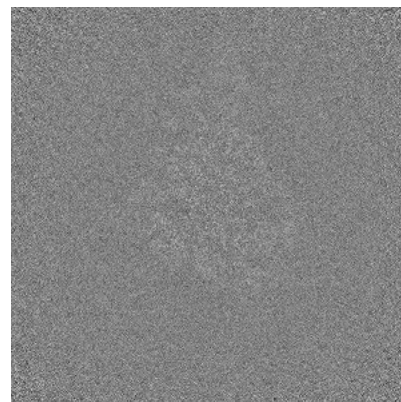
6.2.2 Raw map



X Index: 288



Y Index: 288

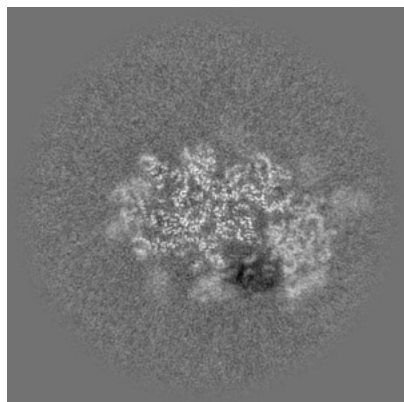


Z Index: 288

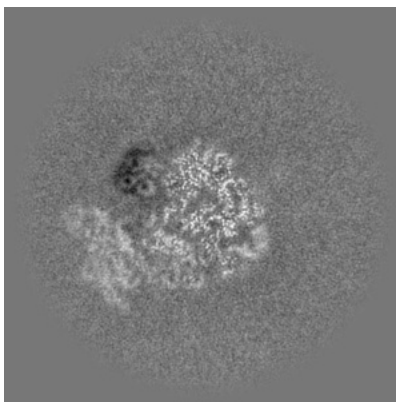
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

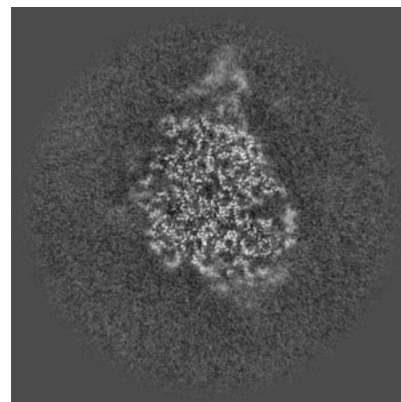
6.3.1 Primary map



X Index: 314

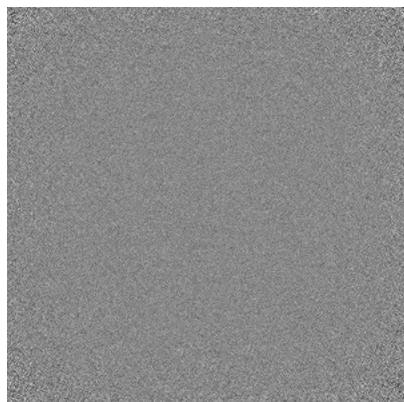


Y Index: 352

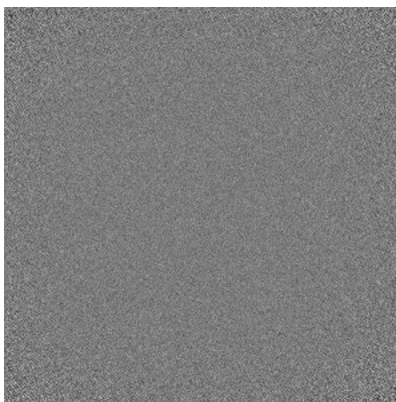


Z Index: 291

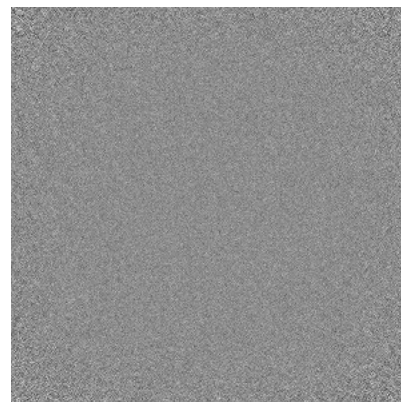
6.3.2 Raw map



X Index: 0



Y Index: 0

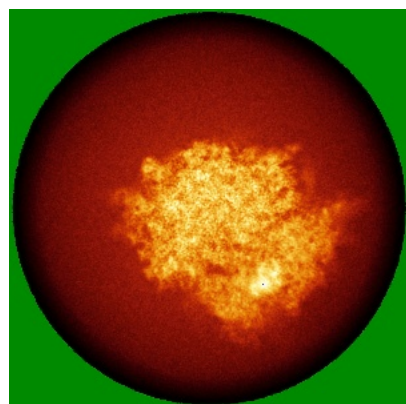


Z Index: 0

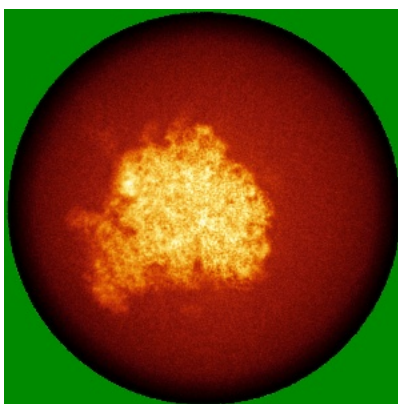
The images above show the largest variance slices of the map in three orthogonal directions.

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

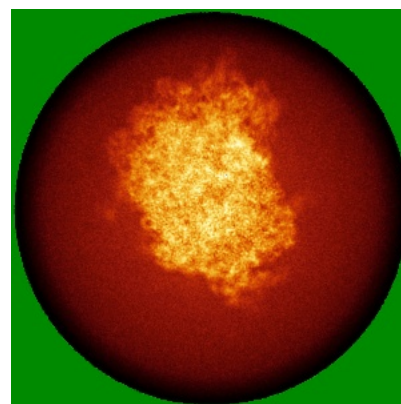
6.4.1 Primary map



X

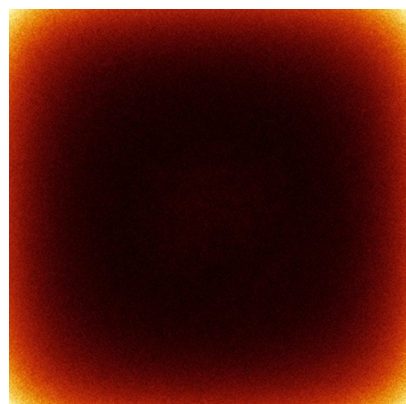


Y

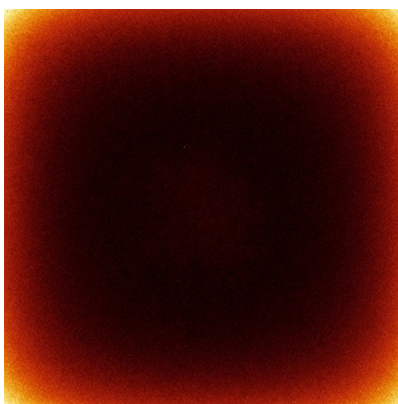


Z

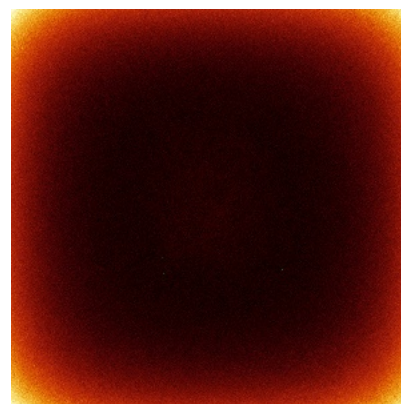
6.4.2 Raw map



X



Y

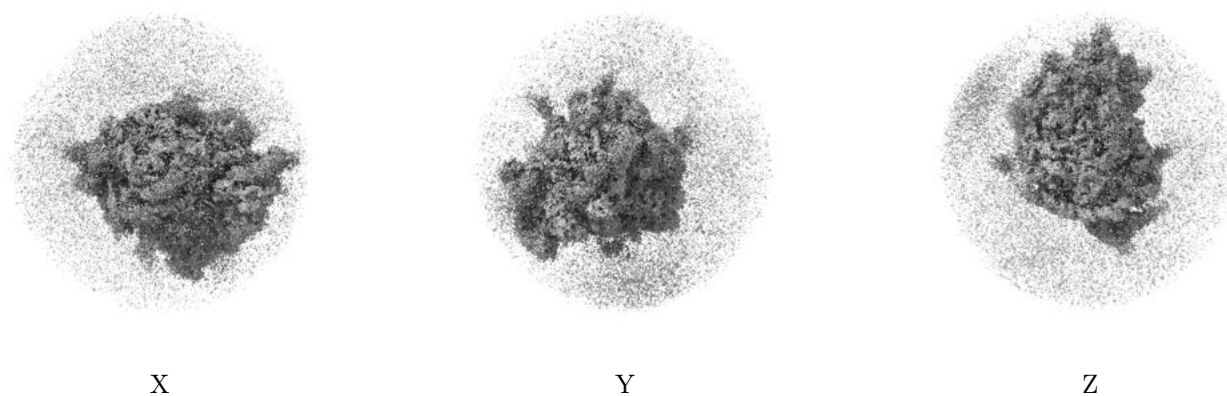


Z

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

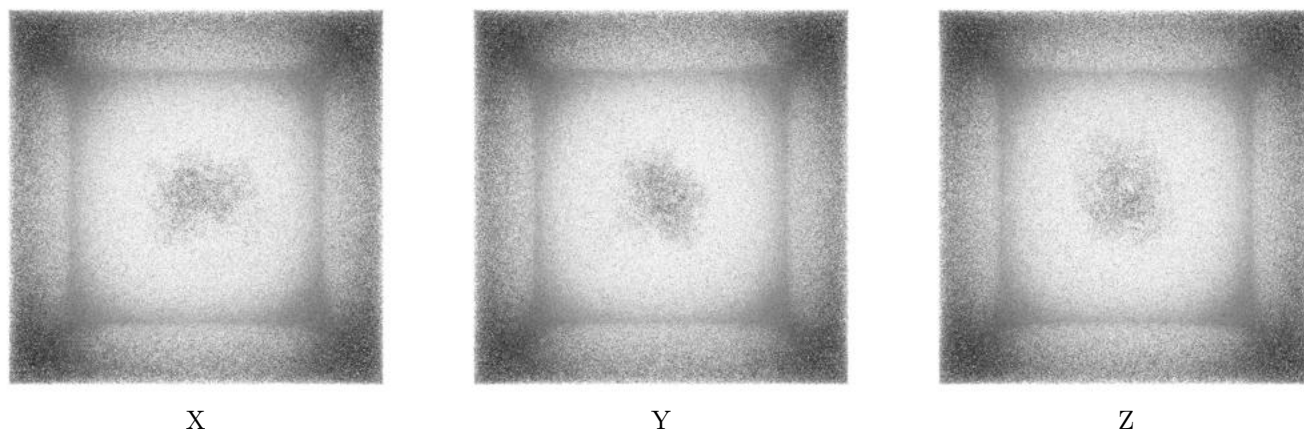
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.0108. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map



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

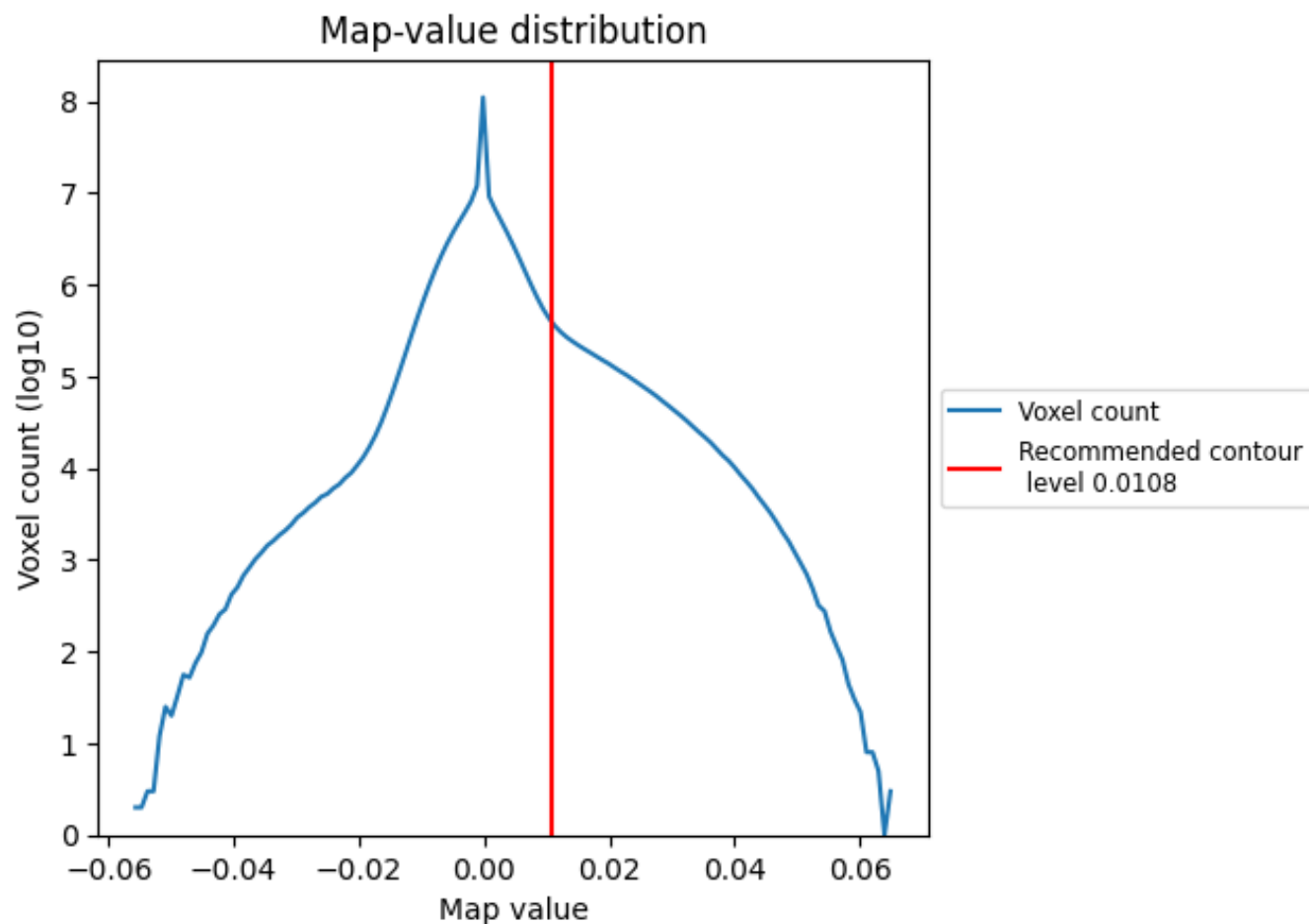
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

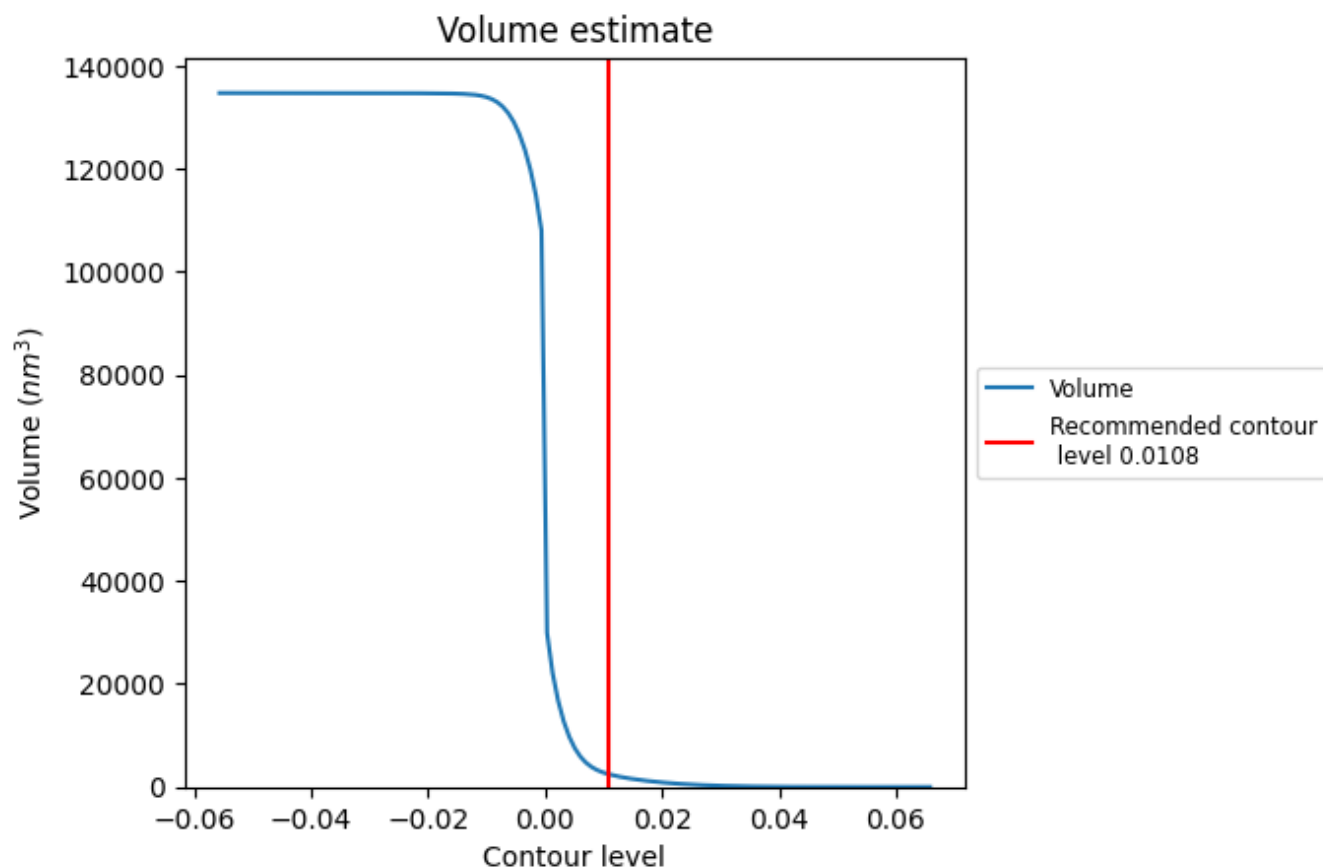
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

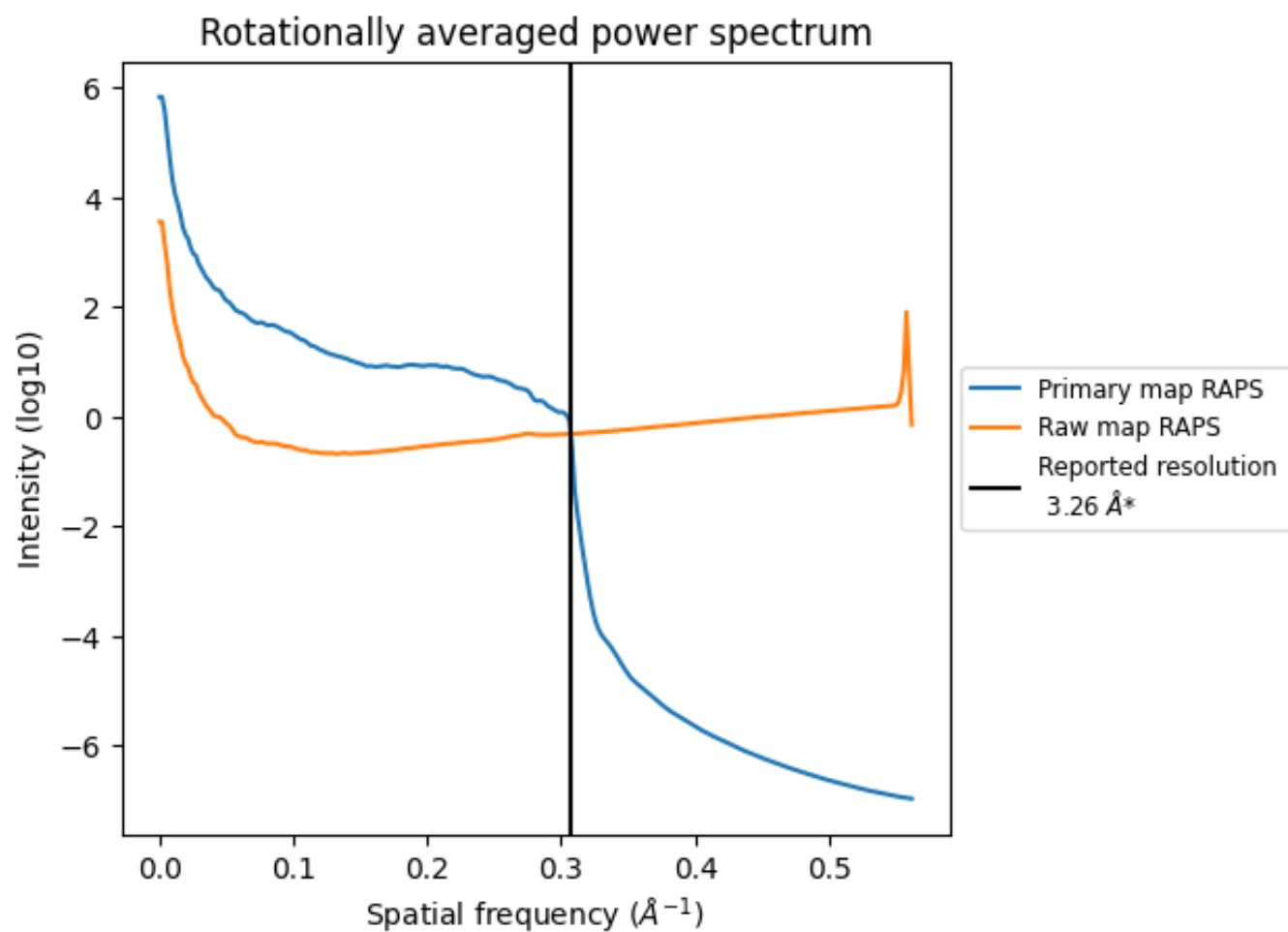
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 2501 nm³; this corresponds to an approximate mass of 2259 kDa.

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

7.3 Rotationally averaged power spectrum [i](#)

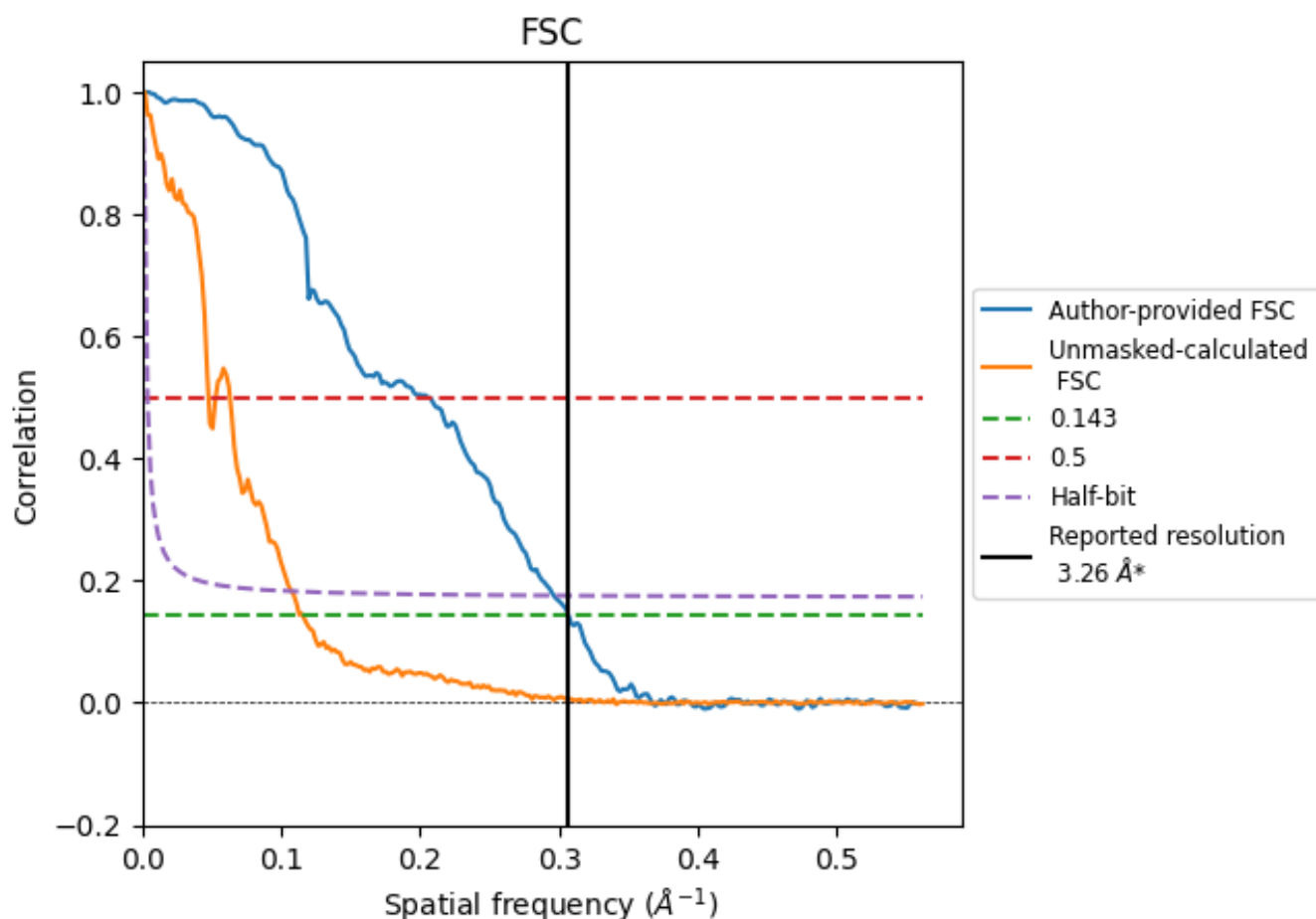


*Reported resolution corresponds to spatial frequency of 0.307 $\text{\AA}^{-1}$

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 0.307 $\text{\AA}^{-1}$

8.2 Resolution estimates [i](#)

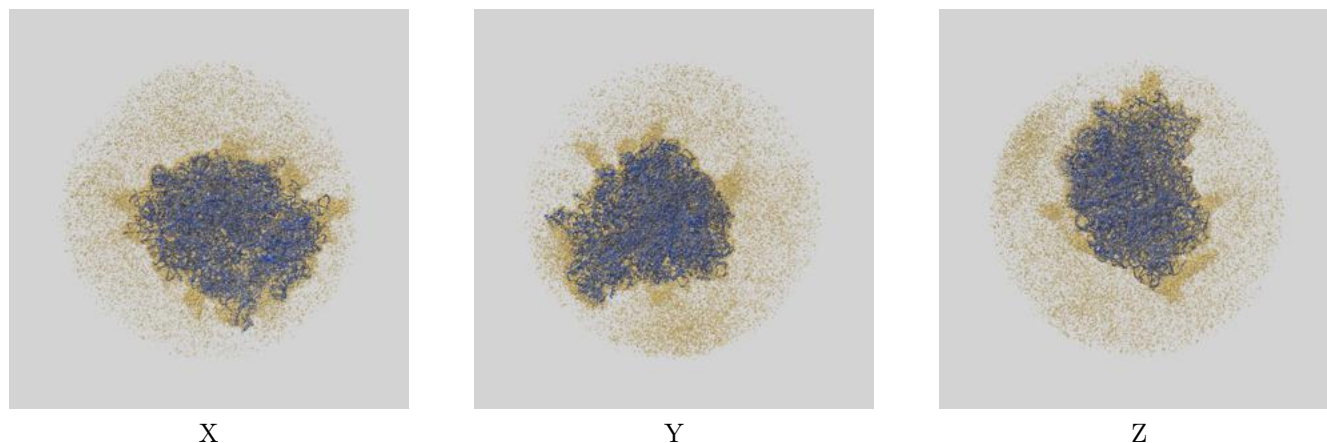
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.26	-	-
Author-provided FSC curve	3.26	4.86	3.37
Unmasked-calculated*	8.65	20.92	9.29

*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 8.65 differs from the reported value 3.26 by more than 10 %

9 Map-model fit [i](#)

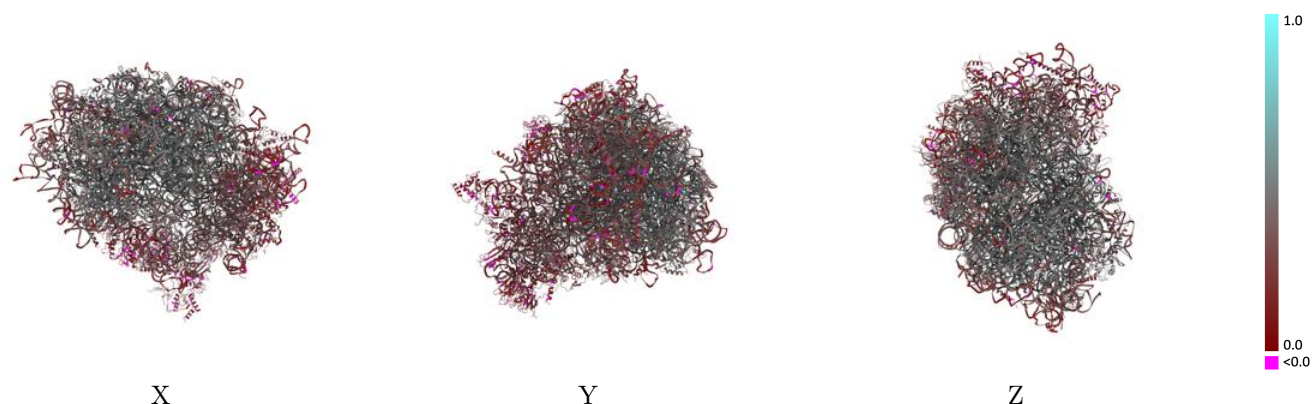
This section contains information regarding the fit between EMDB map EMD-71696 and PDB model 9PKG. Per-residue inclusion information can be found in section [3](#) on page [23](#).

9.1 Map-model overlay [i](#)



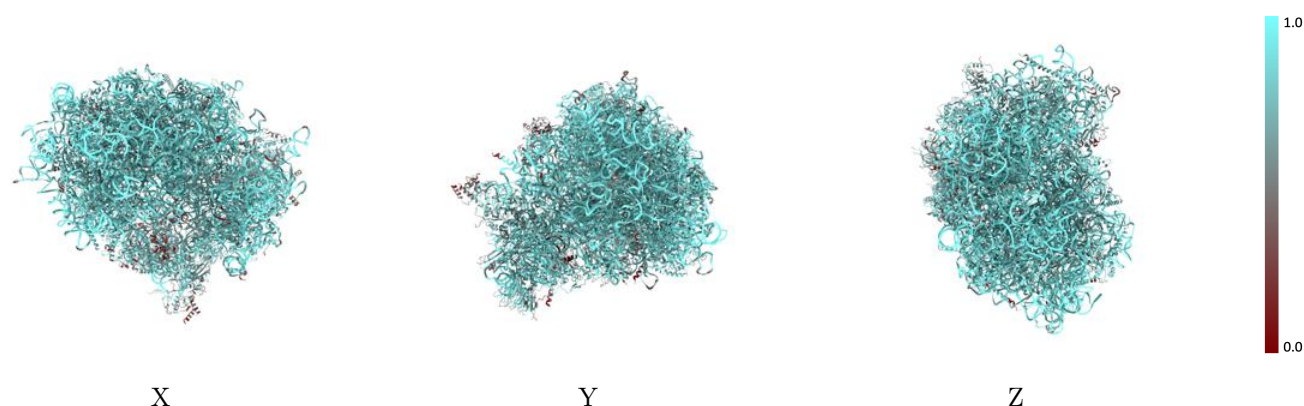
The images above show the 3D surface view of the map at the recommended contour level 0.0108 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



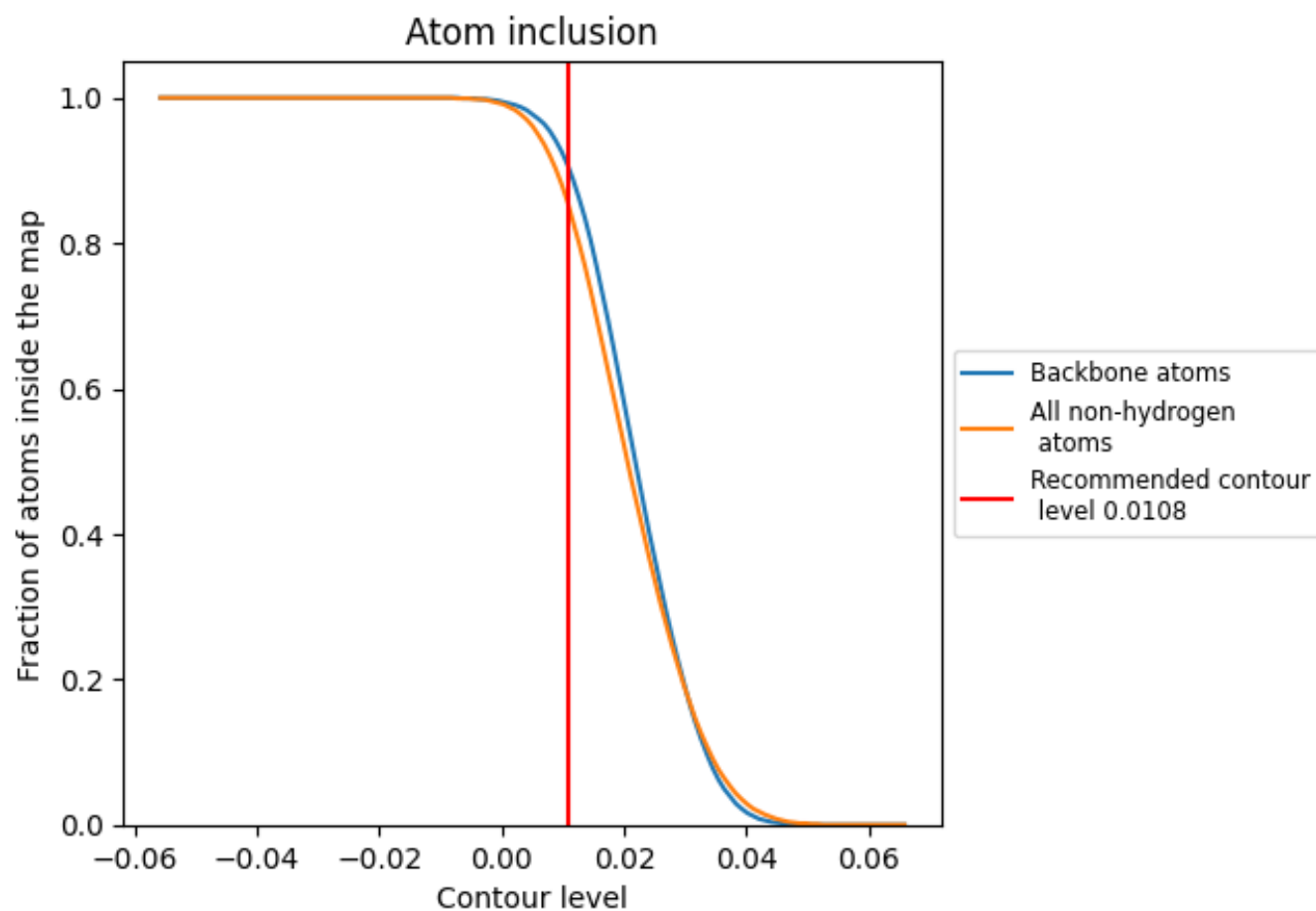
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.0108).

9.4 Atom inclusion [i](#)



At the recommended contour level, 91% of all backbone atoms, 86% 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 (0.0108) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.8570	 0.3820
CI	 0.3980	 0.2800
L5	 0.9340	 0.4250
L7	 0.9830	 0.4510
L8	 0.9520	 0.4420
LA	 0.8220	 0.4920
LB	 0.8210	 0.4660
LC	 0.8000	 0.4690
LD	 0.8700	 0.4130
LE	 0.8130	 0.3970
LF	 0.8210	 0.4570
LG	 0.7810	 0.3970
LH	 0.8050	 0.4230
LI	 0.7630	 0.4390
LJ	 0.7990	 0.3680
LL	 0.7990	 0.4280
LM	 0.8440	 0.4350
LN	 0.8580	 0.4860
LO	 0.8070	 0.4590
LP	 0.8230	 0.4770
LQ	 0.8040	 0.4790
LR	 0.7800	 0.4130
LS	 0.8490	 0.4830
LT	 0.8200	 0.4610
LU	 0.8400	 0.3760
LV	 0.7400	 0.4680
LW	 0.7110	 0.3290
LX	 0.8120	 0.4430
LY	 0.8590	 0.4580
LZ	 0.8890	 0.4230
La	 0.8500	 0.4850
Lb	 0.7560	 0.3770
Lc	 0.8070	 0.4100
Ld	 0.7980	 0.4420
Le	 0.7900	 0.4840



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Chain	Atom inclusion	Q-score
Lf	 0.8420	 0.4950
Lg	 0.8140	 0.4550
Lh	 0.7800	 0.4150
Li	 0.8120	 0.4280
Lj	 0.8530	 0.4980
Lk	 0.8370	 0.3910
Ll	 0.7900	 0.4610
Lm	 0.8030	 0.4520
Ln	 0.7610	 0.3940
Lo	 0.4350	 0.4700
Lp	 0.7590	 0.4520
Lr	 0.8270	 0.4750
Ls	 0.5290	 0.1800
Lt	 0.4650	 0.1460
Pt	 0.6740	 0.3020
S2	 0.9190	 0.3240
SA	 0.7860	 0.2890
SB	 0.7560	 0.3520
SC	 0.8120	 0.3350
SD	 0.6970	 0.2430
SE	 0.8160	 0.2970
SF	 0.4640	 0.2450
SG	 0.7180	 0.2330
SH	 0.6880	 0.2450
SI	 0.7590	 0.3290
SJ	 0.8050	 0.2920
SK	 0.7030	 0.1980
SL	 0.7040	 0.3570
SM	 0.4590	 0.1390
SN	 0.7520	 0.3590
SO	 0.6420	 0.3410
SP	 0.6900	 0.2250
SQ	 0.7530	 0.2390
SR	 0.7770	 0.2850
SS	 0.6890	 0.2470
ST	 0.8020	 0.2380
SU	 0.7240	 0.2150
SV	 0.7860	 0.2940
SW	 0.7940	 0.3550
SX	 0.7120	 0.3600
SY	 0.7650	 0.2320
SZ	 0.3460	 0.2230

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Chain	Atom inclusion	Q-score
Sa	 0.8130	 0.3820
Sb	 0.7840	 0.3230
Sc	 0.5060	 0.2340
Sd	 0.8160	 0.2390
Se	 0.6370	 0.2590
Sf	 0.6720	 0.1790
Sg	 0.7240	 0.1840