



Full wwPDB EM Validation Report ⓘ

Dec 15, 2025 – 04:49 PM EST

PDB ID : 9P7I / pdb_00009p7i
EMDB ID : EMD-71343
Title : In situ HHT and CHX treated human eEF1A-A/T-P-Z state 80S ribosome
Authors : Wei, Z.; Yong, X.
Deposited on : 2025-06-20
Resolution : 3.69 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

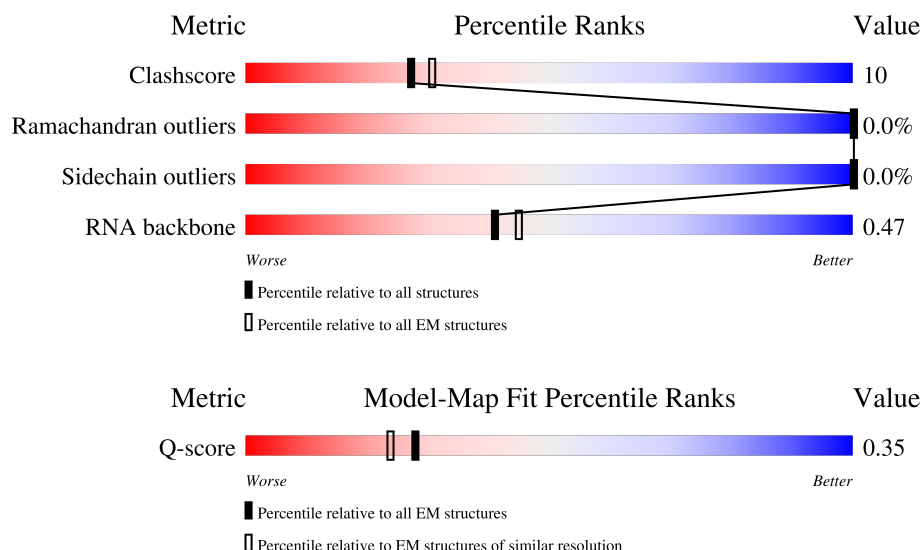
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.69 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.



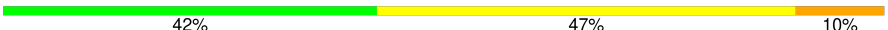
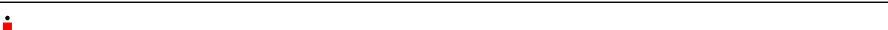
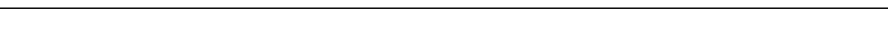
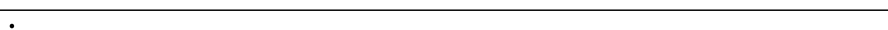
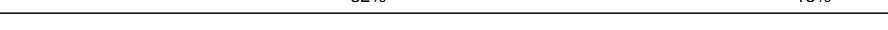
Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	210492	15764	-
Ramachandran outliers	207382	16835	-
Sidechain outliers	206894	16415	-
RNA backbone	6643	2191	-
Q-score	-	25397	11284 (3.19 - 4.18)

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	Pt	74	
2	CF	441	
3	AT	76	

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Mol	Chain	Length	Quality of chain
4	L5	3655	
5	L7	120	
6	L8	156	
7	LA	248	
8	LB	402	
9	LC	368	
10	LD	293	
11	LE	250	
12	LF	225	
13	LG	241	
14	LH	190	
15	LI	213	
16	LJ	176	
17	LL	210	
18	LM	139	
19	LN	203	
20	LO	201	
21	LP	153	
22	LQ	187	
23	LR	187	
24	LS	175	
25	LT	159	
26	LU	101	
27	LV	131	
28	LW	124	

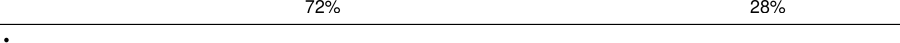
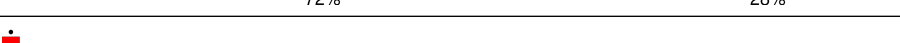
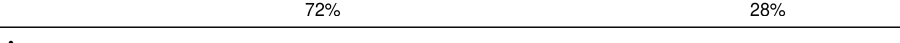
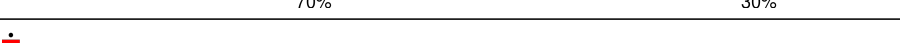
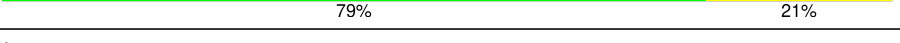
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Mol	Chain	Length	Quality of chain
29	LX	120	
30	LY	134	
31	LZ	135	
32	La	147	
33	Lb	121	
34	Lc	98	
35	Ld	107	
36	Le	128	
37	Lf	109	
38	Lg	114	
39	Lh	122	
40	Li	102	
41	Lj	86	
42	Lk	69	
43	Ll	50	
44	Lm	52	
45	Ln	24	
46	Lo	105	
47	Lp	91	
48	Lr	125	
49	Ls	196	
50	Lt	157	
51	SD	227	
52	SF	189	
53	SK	98	

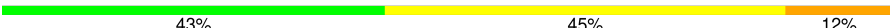
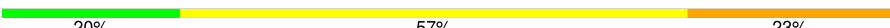
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Mol	Chain	Length	Quality of chain
54	SM	122	
55	SP	121	
56	SQ	144	
57	SR	135	
58	SS	145	
59	ST	143	
60	SU	104	
61	SZ	75	
62	Sc	64	
63	Sd	55	
64	Sf	67	
65	Sg	313	
66	SA	221	
67	SB	214	
68	SC	222	
69	SE	262	
70	SG	237	
71	SH	189	
72	SI	206	
73	SJ	185	
74	SL	153	
75	SN	150	
76	SO	140	
77	SV	83	
78	SW	129	

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Mol	Chain	Length	Quality of chain
79	SX	141	
80	SY	131	
81	Sa	102	
82	Sb	83	
83	Se	58	
84	S2	1740	
85	Zt	75	
86	CI	31	

2 Entry composition [i](#)

There are 92 unique types of molecules in this entry. The entry contains 225029 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a RNA chain called P site tRNA [Homo sapiens].

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

- Molecule 2 is a protein called Elongation factor 1-alpha 1.

Mol	Chain	Residues	Atoms						AltConf	Trace
2	CF	441	Total	C	N	O	P	S	0	0
			3383	2148	581	636	1	17		

- Molecule 3 is a RNA chain called A/T site tRNA [Homo sapiens].

Mol	Chain	Residues	Atoms					AltConf	Trace
3	AT	76	Total	C	N	O	P	0	0
			1616	723	291	527	75		

- Molecule 4 is a RNA chain called 28S rRNA [Homo sapiens].

Mol	Chain	Residues	Atoms					AltConf	Trace
4	L5	3655	Total	C	N	O	P	1	0
			78444	34968	14346	25475	3655		

- Molecule 5 is a RNA chain called 5S rRNA [Homo sapiens].

Mol	Chain	Residues	Atoms					AltConf	Trace
5	L7	120	Total	C	N	O	P	0	0
			2561	1141	456	844	120		

- Molecule 6 is a RNA chain called 5.8S rRNA [Homo sapiens].

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

- Molecule 7 is a protein called 60S ribosomal protein L8.

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

- Molecule 8 is a protein called Large ribosomal subunit protein uL3.

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

- Molecule 9 is a protein called 60S ribosomal protein L4.

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

- Molecule 10 is a protein called Large ribosomal subunit protein uL18.

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

- Molecule 11 is a protein called Large ribosomal subunit protein eL6.

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

- Molecule 12 is a protein called 60S ribosomal protein L7.

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

- Molecule 13 is a protein called 60S ribosomal protein L7a.

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

- Molecule 14 is a protein called 60S ribosomal protein L9.

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

- Molecule 15 is a protein called Ribosomal protein uL16-like.

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

- Molecule 16 is a protein called 60S ribosomal protein L11.

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

- Molecule 17 is a protein called Large ribosomal subunit protein eL13.

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

- Molecule 18 is a protein called 60S ribosomal protein L14.

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

- Molecule 19 is a protein called 60S ribosomal protein L15.

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

- Molecule 20 is a protein called 60S ribosomal protein L13a.

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

- Molecule 21 is a protein called 60S ribosomal protein L17.

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

- Molecule 22 is a protein called 60S ribosomal protein L18.

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

- Molecule 23 is a protein called 60S ribosomal protein L19.

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

- Molecule 24 is a protein called 60S ribosomal protein L18a.

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

- Molecule 25 is a protein called 60S ribosomal protein L21.

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

- Molecule 26 is a protein called Heparin-binding protein HBp15.

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

- Molecule 27 is a protein called 60S ribosomal protein L23.

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

- Molecule 28 is a protein called Ribosomal protein L24.

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

- Molecule 29 is a protein called 60S ribosomal protein L23a.

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

- Molecule 30 is a protein called 60S ribosomal protein L26.

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

- Molecule 31 is a protein called 60S ribosomal protein L27.

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

- Molecule 32 is a protein called 60S ribosomal protein L27a.

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

- Molecule 33 is a protein called Large ribosomal subunit protein eL29.

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

- Molecule 34 is a protein called 60S ribosomal protein L30.

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

- Molecule 35 is a protein called 60S ribosomal protein L31.

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

- Molecule 36 is a protein called 60S ribosomal protein L32.

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

- Molecule 37 is a protein called 60S ribosomal protein L35a.

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

- Molecule 38 is a protein called 60S ribosomal protein L34.

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

- Molecule 39 is a protein called 60S ribosomal protein L35.

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

- Molecule 40 is a protein called 60S ribosomal protein L36.

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

- Molecule 41 is a protein called 60S ribosomal protein L37.

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

- Molecule 42 is a protein called 60S ribosomal protein L38.

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

- Molecule 43 is a protein called 60S ribosomal protein L39.

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

- Molecule 44 is a protein called Large ribosomal subunit protein eL40.

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

- Molecule 45 is a protein called 60S ribosomal protein L41.

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

- Molecule 46 is a protein called 60S ribosomal protein L36a.

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

- Molecule 47 is a protein called 60S ribosomal protein L37a.

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

- Molecule 48 is a protein called 60S ribosomal protein L28.

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

- Molecule 49 is a protein called 60S acidic ribosomal protein P0.

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

- Molecule 50 is a protein called Large ribosomal subunit protein uL11.

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

- Molecule 51 is a protein called Small ribosomal subunit protein uS3.

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

- Molecule 52 is a protein called 40S ribosomal protein S5.

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

- Molecule 53 is a protein called 40S ribosomal protein S10.

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

- Molecule 54 is a protein called Small ribosomal subunit protein eS12.

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

- Molecule 55 is a protein called Small ribosomal subunit protein uS19.

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

- Molecule 56 is a protein called Small ribosomal subunit protein uS9.

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

- Molecule 57 is a protein called Small ribosomal subunit protein eS17.

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

- Molecule 58 is a protein called 40S ribosomal protein S18.

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

- Molecule 59 is a protein called 40S ribosomal protein S19.

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

- Molecule 60 is a protein called 40S ribosomal protein S20.

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

- Molecule 61 is a protein called Small ribosomal subunit protein eS25.

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

- Molecule 62 is a protein called 40S ribosomal protein S28.

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

- Molecule 63 is a protein called 40S ribosomal protein S29.

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

- Molecule 64 is a protein called Ubiquitin-40S ribosomal protein S27a.

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

- Molecule 65 is a protein called Receptor of activated protein C kinase 1.

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

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

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

- Molecule 67 is a protein called 40S ribosomal protein S3a.

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

- Molecule 68 is a protein called 40S ribosomal protein S2.

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

- Molecule 69 is a protein called Small ribosomal subunit protein eS4, X isoform.

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

- Molecule 70 is a protein called 40S ribosomal protein S6.

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

- Molecule 71 is a protein called Small ribosomal subunit protein eS7.

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

- Molecule 72 is a protein called 40S ribosomal protein S8.

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

- Molecule 73 is a protein called 40S ribosomal protein S9.

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

- Molecule 74 is a protein called 40S ribosomal protein S11.

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

- Molecule 75 is a protein called 40S ribosomal protein S13.

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

- Molecule 76 is a protein called Small ribosomal subunit protein uS11.

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

- Molecule 77 is a protein called Small ribosomal subunit protein eS21.

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

- Molecule 78 is a protein called 40S ribosomal protein S15a.

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

- Molecule 79 is a protein called 40S ribosomal protein S23.

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

- Molecule 80 is a protein called 40S ribosomal protein S24.

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

- Molecule 81 is a protein called 40S ribosomal protein S26.

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

- Molecule 82 is a protein called Small ribosomal subunit protein eS27.

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

- Molecule 83 is a protein called Small ribosomal subunit protein eS30.

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

- Molecule 84 is a RNA chain called 18S rRNA [Homo sapiens].

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

- Molecule 85 is a RNA chain called Z site tRNA [Homo sapiens].

Mol	Chain	Residues	Atoms					AltConf	Trace
85	Zt	75	Total	C	N	O	P	0	0
			1593	712	281	526	74		

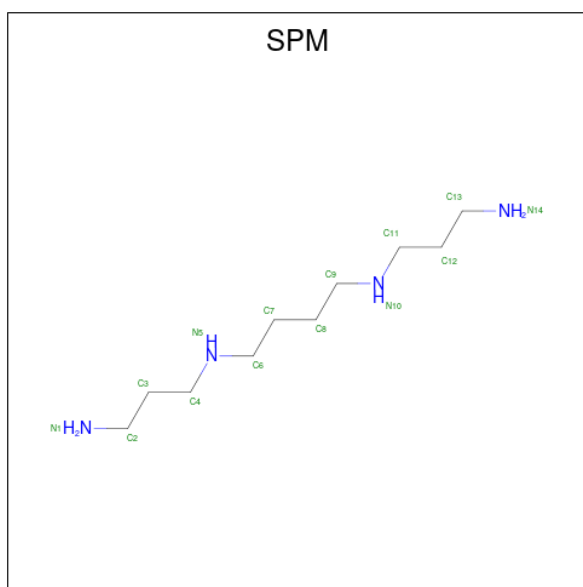
- Molecule 86 is a protein called Transcription factor BTF3.

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

- Molecule 87 is MAGNESIUM ION (CCD ID: MG) (formula: Mg) (labeled as "Ligand of Interest" by depositor).

Mol	Chain	Residues	Atoms		AltConf
87	L5	179	Total	Mg	0
			179	179	
87	L7	3	Total	Mg	0
			3	3	
87	L8	4	Total	Mg	0
			4	4	
87	LA	1	Total	Mg	0
			1	1	
87	LP	1	Total	Mg	0
			1	1	
87	LV	1	Total	Mg	0
			1	1	
87	Le	1	Total	Mg	0
			1	1	
87	Lj	1	Total	Mg	0
			1	1	
87	SS	1	Total	Mg	0
			1	1	
87	S2	27	Total	Mg	0
			27	27	

- Molecule 88 is SPERMINE (CCD ID: SPM) (formula: C₁₀H₂₆N₄) (labeled as "Ligand of Interest" by depositor).



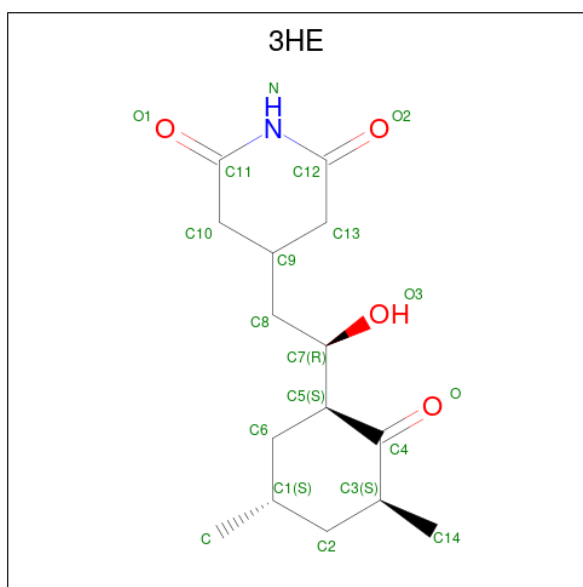
Mol	Chain	Residues	Atoms			AltConf
88	L5	1	Total	C	N	0
			14	10	4	
88	L5	1	Total	C	N	0
			14	10	4	
88	L5	1	Total	C	N	0
			14	10	4	
88	L5	1	Total	C	N	0
			14	10	4	
88	L5	1	Total	C	N	0
			14	10	4	
88	L5	1	Total	C	N	0
			14	10	4	

- Molecule 89 is SPERMIDINE (CCD ID: SPD) (formula: $C_7H_{19}N_3$) (labeled as "Ligand of Interest" by depositor).



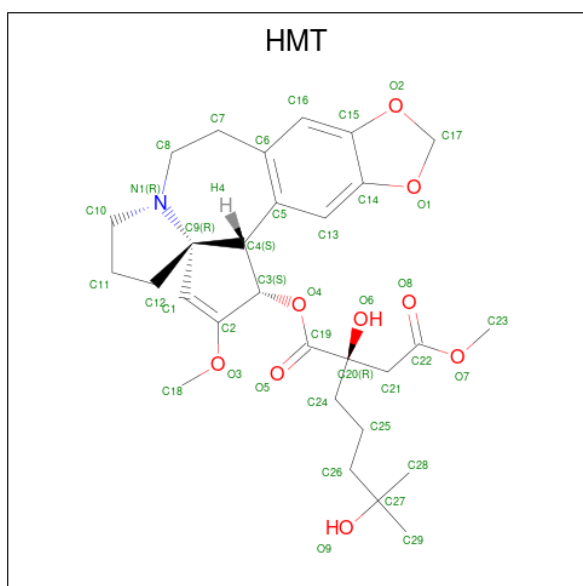
Mol	Chain	Residues	Atoms			AltConf
89	L5	1	Total	C	N	0
			10	7	3	
89	L5	1	Total	C	N	0
			10	7	3	
89	L5	1	Total	C	N	0
			10	7	3	
89	L5	1	Total	C	N	0
			10	7	3	
89	L5	1	Total	C	N	0
			10	7	3	
89	L5	1	Total	C	N	0
			10	7	3	
89	L5	1	Total	C	N	0
			10	7	3	
89	LN	1	Total	C	N	0
			10	7	3	

- Molecule 90 is 4-{(2R)-2-[(1S,3S,5S)-3,5-dimethyl-2-oxocyclohexyl]-2-hydroxyethyl}piperidine-2,6-dione (CCD ID: 3HE) (formula: C₁₅H₂₃NO₄) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				AltConf
90	L5	1	Total	C	N	O	0
			20	15	1	4	

- Molecule 91 is (3beta)-O 3 -[(2R)-2,6-dihydroxy-2-(2-methoxy-2-oxoethyl)-6-methylheptan oyl]cephalotaxine (CCD ID: HMT) (formula: $C_{29}H_{39}NO_9$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				AltConf
91	L5	1	Total	C	N	O	0
			39	29	1	9	

- Molecule 92 is ZINC ION (CCD ID: ZN) (formula: Zn) (labeled as "Ligand of Interest" by

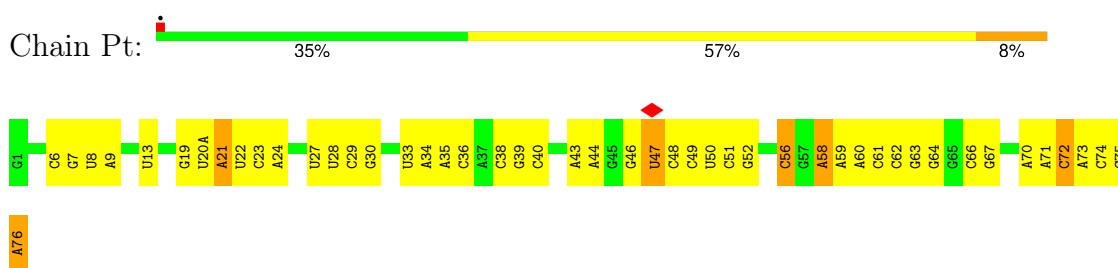
depositor).

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

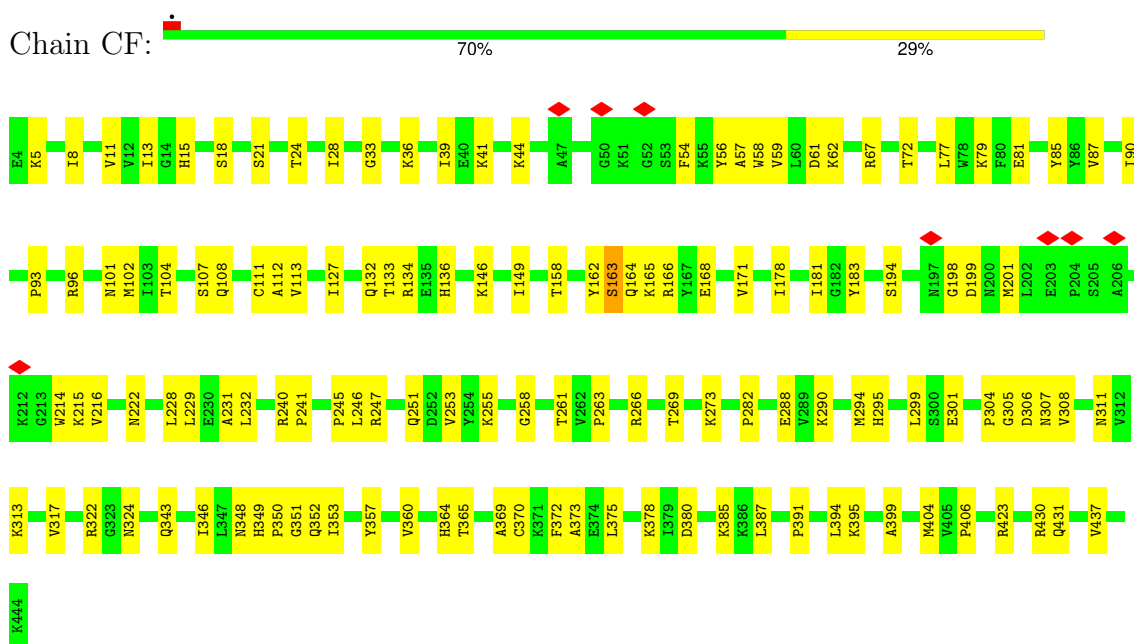
3 Residue-property plots

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.

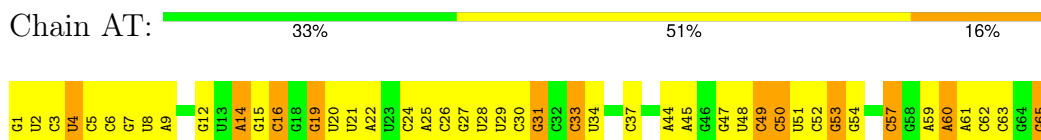
- Molecule 1: P site tRNA [Homo sapiens]



- Molecule 2: Elongation factor 1-alpha 1



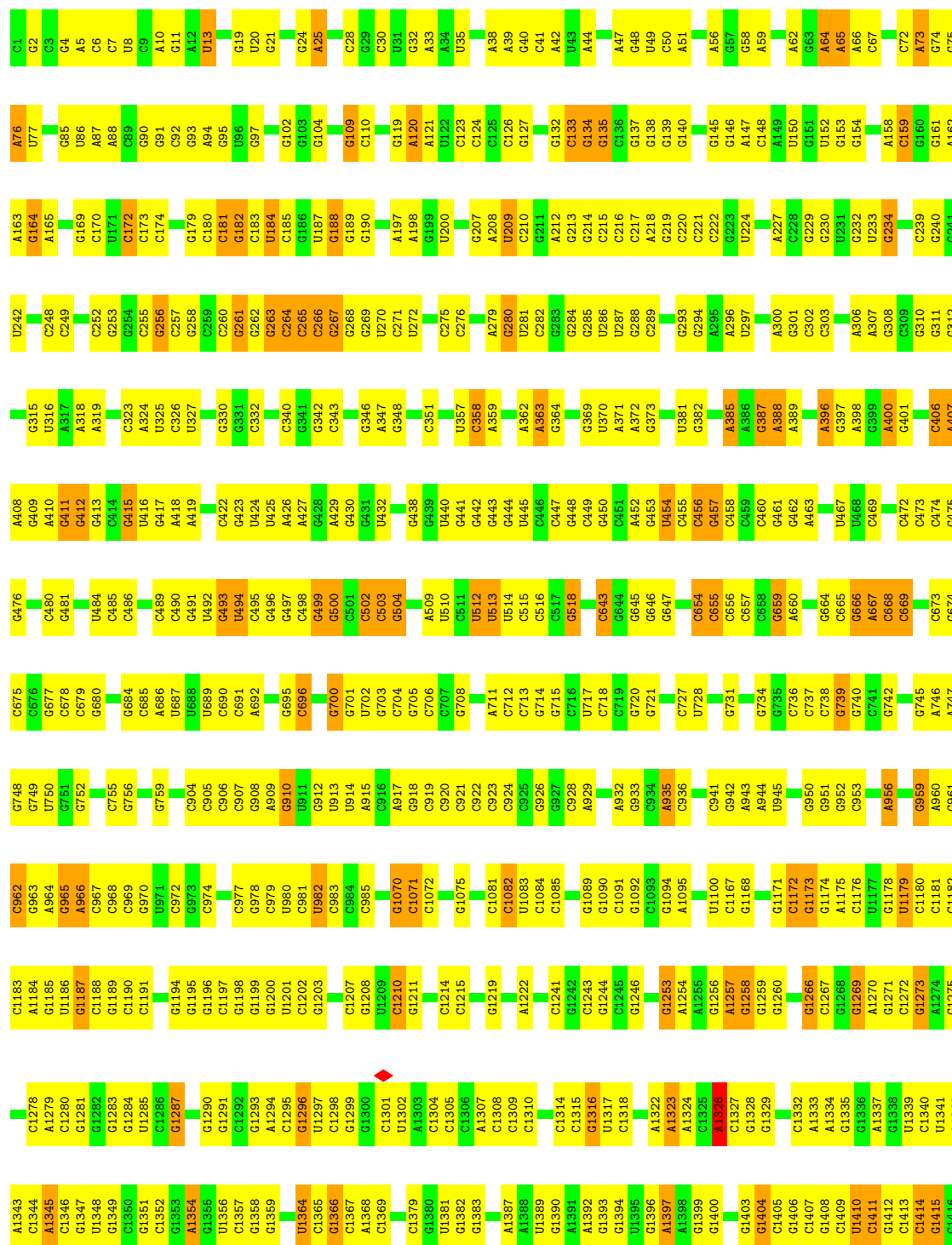
- Molecule 3: A/T site tRNA [Homo sapiens]





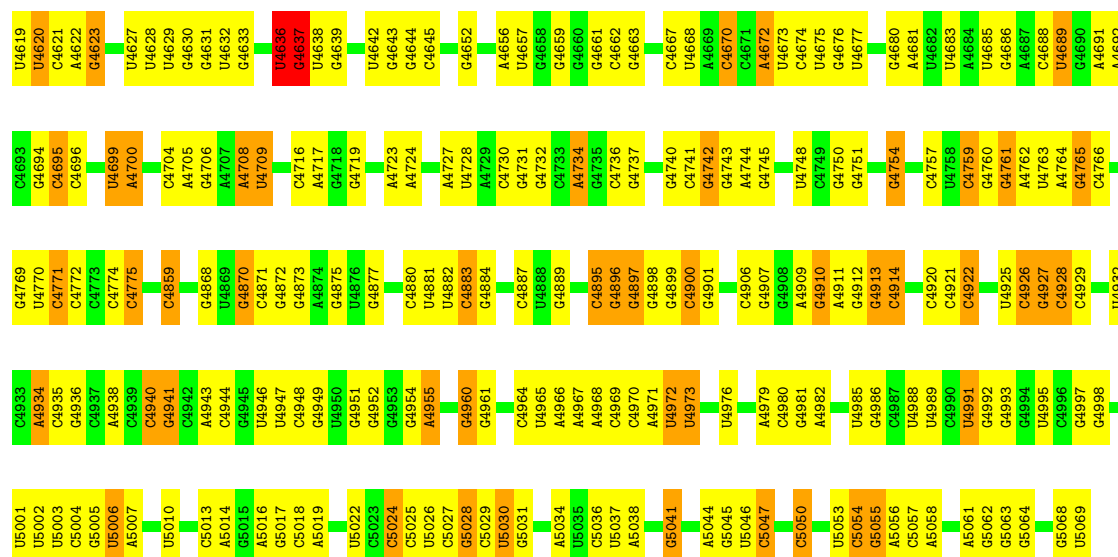
• Molecule 4: 28S rRNA [Homo sapiens]

Chain L5: 42% 47% 10%



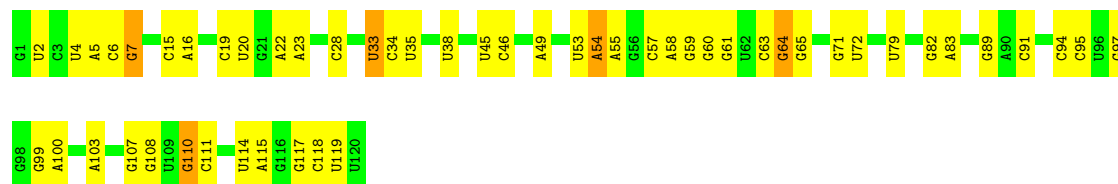
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A2621	U2538	G2458	C2365	G2283	C2077	A1991	C1915	A1837	G1760	U1677	C1590	U1514	C1418
G2622	C2539	G2459	A2368	G2284	G2078	A1992	G1916	G1837	C1762	C1678	U1591	U1515	A1420
A2623	G2540	A2460	A2369	C2289	U2080	C1993	A1917	G1842	C1763	A1679	C1594	G1516	G1426
G2624	G2541	G2461	A2374	C2290	C2081	C1994	U1918	A1843	G1764	G1680	G1595	A1518	G1425
C2627	G2542	C2462	A2375	G2295	G2082	G1995	U1919	G1844	A1765	U1683	G1596	C1519	G1426
U2631	A2543	G2463	A2376	G2296	C2083	C1996	C1920	U1845	A1766	A1684	U1597	G1521	C1431
G2632	G2544	C2464	A2377	G2297	C2084	A1997	C1921	C1846	A1767	U1687	G1598	G1522	G1432
C2633	U2545	G2465	G2378	G2298	C2087	A1998	G1922	C1847	U1768	G1688	A1601	A1523	U1437
U2634	G2546	C2466	A2381	A2300	C2087	A1999	G1925	U1848	G1769	U1689	G1612	A1524	U1438
G2635	G2547	G2471	U2386	G2301	U2090	G2001	C1926	A1850	A1770	G1691	A1613	U1525	C1439
U2636	U2554	U2387	U2386	C2302	C2091	A2002	U1927	G1851	U1771	G1697	C1614	G1532	C1442
U2637	G2555	G2387	U2387	G2303	G2092	G2003	C1931	U1852	U1772	C1697	C1615	U1533	A1443
G2638	G2556	A2388	A2388	U2304	A2093	U2004	C1932	G1855	U1779	C1698	G1617	A1534	A1444
U2639	G2557	G2474	G2389	G2305	G2094	G2005	A1932	C1856	U1780	A1699	G1618	C1535	U1445
G2640	C2558	G2475	G2390	G2306	A2095	U2006	G1933	C1857	U1781	G1700	G1618	U1536	U1446
A2641	G2559	G2478	G2391	A2308	G2096	U2007	A1934	A1858	U1782	A1701	U1621	U1537	C1447
G2642	C2560	G2479	G2394	G2311	U2097	A2008	G1940	C1859	U1783	C1702	A1622	G1457	C1457
A2647	A2565	G2483	A2395	G2312	G2098	A2009	U1941	A1860	C1785	C1703	U1622	U1538	G1458
G2648	G2566	A2484	A2396	U2313	A2100	C2011	A1942	U1861	A1786	G1705	G1624	G1540	C1459
G2649	G2567	U2485	G2397	A2313	G2101	A2012	A1943	U1862	A1787	A1706	G1625	C1541	C1460
G2650	C2568	G2486	G2399	G2316	G2102	A2017	G1948	A1867	A1788	G1716	G1626	C1467	C1467
U2651	G2569	G2487	G2400	C2317	G2103	C2018	U1949	A1868	C1789	C1717	G1627	C1461	C1461
C2653	U2570	C2488	A2401	G2318	A2105	C2019	U1950	A1869	U1792	C1718	G1628	C1546	A1462
G2654	C2571	G2489	G2402	G2321	G2106	U2020	G1951	C1870	U1792	A1719	C1629	A1547	C1463
C2655	A2572	A2490	A2403	G2322	C2107	G2021	G1952	A1871	A1795	G1721	A1631	G1548	C1464
U2658	G2574	G2492	G2405	G2323	G2108	G2024	U1953	G1872	G1800	C1722	G1633	U1552	C1467
G2659	U2575	G2493	G2406	C2324	G2109	A2025	A1956	C1875	U1801	U1725	A1634	A1553	C1468
G2660	G2576	U2494	G2407	G2325	C2110	A2026	U1957	U1876	A1802	U1726	G1637	A1554	C1469
U2662	G2577	U2495	C2410	C2326	G2111	U2027	G1960	G1877	G1803	U1727	U1639	G1555	U1473
G2666	U2579	G2496	A2412	G2327	G2112	A2028	A1961	C1878	A1804	U1730	G1640	A1558	C1474
C2669	A2581	G2503	U2413	G2328	C2249	A2029	G1962	C1879	G1805	U1731	C1645	G1562	C1478
G2670	A2582	C2504	G2414	G2329	C2250	A2040	A1965	G1880	G1806	C1732	A1646	A1563	C1480
C2671	C2583	G2505	U2415	G2330	G2251	A2041	G1965	C1881	C1807	G1733	U1647	A1564	C1481
G2672	U2584	A2507	G2416	G2331	G2252	G2043	G1965	U1882	G1810	G1734	U1657	A1565	G1482
C2673	A2587	G2508	A2417	G2332	C2253	A2044	C1971	G1883	G1811	G1739	G1654	C1566	C1483
G2674	U2588	C2509	C2422	G2333	C2254	G2045	G1972	G1884	C1812	C1740	C1655	U1567	G1490
C2675	G2589	A2513	U2423	G2334	C2255	A2046	G1973	U1885	U1813	A1742	G1657	C1568	G1491
A2676	G2590	G2517	U2424	G2335	C2256	G2047	C1974	G1886	C1814	U1743	C1662	U1569	U1494
G2682	A2598	U2519	U2425	G2336	C2257	A2048	G1975	G1887	C1815	G1740	C1663	G1574	G1495
C2683	G2599	G2520	U2426	A2347	C2258	G2055	C1976	G1888	U1817	U1748	C1666	G1577	A1497
G2684	A2600	G2521	U2427	G2348	C2259	G2056	C1977	U1889	G1818	A1749	C1667	U1578	C1498
U2687	U2601	G2522	A2431	A2349	C2260	G2059	C1978	A1890	C1820	G1750	C1668	C1579	C1499
G2688	G2608	G2523	U2436	G2350	C2261	G2060	G1979	A1891	U1821	A1751	A1668	C1580	G1502
C2689	G2609	G2524	G2437	G2351	C2262	G2063	A1980	U1892	C1822	G1752	C1669	G1581	A1503
U2691	G2610	G2525	U2438	G2352	C2263	G2064	G1981	G1903	G1823	G1753	U1670	U1582	G1504
G2692	A2611	A2527	U2444	G2353	C2264	G2065	G1982	U1906	C1824	U1756	U1671	A1583	G1504
C2693	C2613	A2528	G2448	G2354	C2265	A2069	A1984	A1907	G1825	U1757	U1672	G1584	U1511
G2694	G2614	U2530	G2449	G2355	C2266		G1985	A1908	G1826	G1758	C1673	C1585	
A2696	C2616	C2533	A2453	G2356	U2281		U1986	G1909	G1830				

A4544	U4457	U4384	U4301	G4222	C4144	U4069	A3901	G3823	U3745	A3683	G3589	A2844	U2769	A2697
G4545	C4458	C4387	U4302	G4225	C4145	U4070	A3906	A3824	A3746	G3664	G3590	A2845	C2770	G2698
A4546	U4459	A4388	C4303	G4226	G4146	U4071	G3907	C3825	A3747	G3665	C3591	G2846	G2771	C2699
C4547	C4460	A4389	A4304	G4227	C4149	C4072	A3908	C3826	A3748	G3666	C3592	G2847	G2772	C2700
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U4550	U4465	G4392	A4312	U4230	C4152	A4078	C3912	U3832	G3755	G3669	U3596	G2855	G2775	G2703
G4551	C4466	G4393	A4313	U4232	C4153	U4080	U3913	U3833	U3758	C3670	A3596	G2856	G2776	G2706
U4552	A4467	A4394	A4233	G4239	G4154	G4081	U3914	C3834	A3759	G3671	G3597	C2857	G2777	U2707
C4553	C4472	U4395	A4314	A4234	C4155	G4082	U3915	U3835	A3760	G3672	C3598	G2858	G2778	U2708
A4554	A4473	A4396	U4315	U4235	C4156	U4083	G3916	U3836	U3761	G3673	A3599	G2859	G2779	U2709
U4555	A4474	A4397	A4316	C4237	C4157	G4084	G3917	U3837	U3762	G3674	G3600	C2860	G2780	C2710
G4556	C4475	A4400	C4319	G4238	C4158	U4085	G3918	U3838	G3763	G3675	C3601	C2861	G2781	C2711
A4557	A4476	U4402	C4320	U4240	C4159	A4086	C3919	U3839	A3764	G3676	A3604	G2862	G2782	G2712
U4558	C4477	C4403	A4321	G4241	G4160	G4087	U3920	C3841	C3765	G3677	C3605	G2863	G2783	G2713
G4559	A4478	U4404	U4322	U4242	C4161	U4088	U3921	C3842	A3766	G3678	U3606	A2864	A2787	G2715
C4560	C4479	C4405	A4323	C4243	C4162	G4089	G3922	C3843	A3767	G3679	U3607	G2865	U2788	U2718
U4561	A4480	G4406	U4324	U4244	C4163	U4090	G3923	U3844	U3770	U3680	A3608	G2866	A2789	A2719
G4562	U4481	A4407	A4325	A4245	C4164	G4091	A3924	A3845	C3771	G3681	C3609	C2867	U2790	C2720
A4563	C4482	C4408	C4326	G4246	A4170	G4092	C3925	U3848	A3774	U3682	A3610	G2868	G2794	G2721
C4564	A4483	U4409	U4327	U4247	C4171	G4093	C3926	A3849	A3775	U3683	A3611	U2869	C2794	G2722
U4565	C4484	C4410	C4328	G4248	C4172	G4094	U3927	C3850	G3776	U3684	G3615	G2875	G2799	U2723
G4566	A4485	C4411	A4329	U4249	C4173	G4095	A3928	U3851	U3777	G3685	G3616	G2876	G2800	G2724
U4567	U4486	U4412	U4330	A4251	C4174	C4096	A3929	A3852	U3778	G3686	G3617	G2877	U2801	A2725
A4568	C4487	C4413	G4331	G4252	C4175	G4097	U3832	U3853	C3782	G3700	C3618	G2878	C2802	G2726
G4569	A4488	U4414	U4332	U4253	C4176	U4098	G3933	C3854	A3783	C3702	G3619	G2879	U2803	C2727
U4570	C4489	C4415	C4333	G4254	C4177	G4099	G3934	C3855	A3784	A3702	C3620	G2880	C2804	U2728
A4571	U4490	U4416	U4334	U4255	C4178	C4100	G3935	A3856	A3785	G3703	A3624	G2881	C2805	C2729
G4572	C4491	C4417	C4335	A4256	C4179	C4101	A3936	A3857	U3786	U3707	G3625	A2882	A2806	U2730
U4573	A4492	U4418	U4336	G4257	C4180	C4102	G3937	A3858	U3787	C3708	G3626	G2883	A2807	C2731
C4574	C4493	C4419	C4337	U4258	C4181	C4103	G3938	A3859	C3788	U3709	C3627	G2884	G2808	G2732
G4575	U4494	U4420	U4338	U4259	C4182	G4104	G3939	C3860	C3789	A3711	A3630	A2885	U2810	C2733
U4576	C4495	C4421	C4339	G4260	C4183	C4105	A3942	A3861	G3792	A3712	C2890	G2886	G2811	G2742
A4577	A4496	U4422	U4340	C4261	C4184	G4106	A3943	A3862	U3793	G3713	C3633	U2887	A2812	A2743
G4578	C4497	C4423	U4341	C4262	C4185	G4107	G3944	C3863	C3794	G3714	G3634	C2892	A2813	A2744
U4579	U4498	U4424	C4342	U4263	C4186	U4108	A3945	C3864	A3795	U3715	A3635	U2893	C2814	A2745
C4580	C4499	C4425	U4343	U4264	C4187	U4109	G3946	A3865	U3796	C3716	C3636	A2894	A2815	U2746
U4581	A4500	U4426	U4344	U4265	C4188	C4110	A3947	C3866	C3797	A3717	U3637	A2895	U2819	U2747
G4582	C4501	C4427	C4345	A4266	C4189	C4111	C3948	A3867	U3805	A3718	G3638	G2896	C2748	C2749
U4583	U4502	U4428	U4346	U4267	C4190	C4112	A3949	A3868	G3806	G3720	U3639	G2897	G2823	G2750
C4584	C4503	C4429	C4347	U4268	C4191	U4113	U3950	A3869	A3807	U3721	U3640	C2898	C2824	G2751
U4585	U4504	U4430	U4348	G4269	C4192	C4114	A3951	C3870	C3808	G3722	U3641	C2899	A2825	G2752
G4586	C4505	C4431	U4349	U4270	C4193	C4115	G3952	A3871	G3809	A3723	A3642	U2900	U2826	G2753
A4587	U4506	U4432	C4350	A4271	C4194	C4116	A3953	A3872	C3810	A3724	U3643	G2902	G2827	C2754
U4588	C4507	C4433	C4351	G4272	C4195	C4117	A4056	C3873	G3811	G3725	U3644	G2903	U2828	A2755
G4589	U4508	U4434	U4352	U4273	C4196	C4118	A4057	A3874	C3812	A3726	U3645	G2904	U2829	G2756
C4590	C4509	C4435	C4353	G4274	C4197	C4119	U4058	C3875	A3813	A3727	A3646	C2905	G2830	A2757
U4591	U4510	U4436	U4354	U4275	C4198	C4120	U4059	A3876	G3814	A3728	C3650	G2906	G2831	G2758
G4592	C4511	C4437	C4355	G4276	C4199	C4121	U4060	A3877	C3806	G3729	A3651	C2907	A2832	G2759
U4593	U4512	U4438	U4356	U4277	C4200	U4122	U4061	A3878	A3807	G3730	A3652	G2908	A2835	U2761
C4594	C4513	C4439	C4357	C4278	C4201	C4123	A4062	A3879	C3808	A3732	A3653	U2909	A2836	G2762
U4595	U4514	U4440	U4358	A4279	C4202	C4124	U4063	C3880	G3809	A3733	G3654	G2910	U2837	U2763
G4596	C4515	C4441	U4359	U4280	C4203	C4125	U4064	C3881	U3810	G3735	C3655	G2911	G2838	A2764
U4597	U4516	U4442	C4360	A4281	C4204	C4126	A4065	G3882	G3811	G3736	G3656	C2912	U2839	A2765
C4598	C4517	C4443	U4361	U4282	C4205	C4127	U4066	U3883	C3812	A3737	A3657	U2904	U2840	G2766
U4599	U4518	U4444	A4362	A4283	C4206	U4128	U4067	U3884	A3813	G3738	C3658	G2905	A2843	C2767
G4600	C4519	C4445	C4363	G4284	C4207	C4129	U4068	U3885	G3814	A3739	C3659	C2906	G2768	G2768
U4601	U4520	U4446	U4364	U4285	C4208	U4130	U4069	C3886	C3806	G3740	G3660	G2907	A2844	C2769
C4602	C4521	C4447	C4365	A4286	C4209	C4131	U4070	A3887	A3807	G3741	A3661	C2908	A2845	G2770
U4603	U4522	U4448	U4366	U4287	C4210	C4132	A4069	A3888	C3808	A3742	A3662	U2909	A2846	C2771
G4604	C4523	U4449	U4367	U4288	C4211	C4133	U4071	A3889	G3809	A3743	A3663	G2910	A2847	G2772
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G4608	C4527	C4453	U4371	G4292	C4215	C4137	U4072	C3893	A3813	G3747	C3650	G2905	G2831	G2758
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G4615	C4534	C4460	U4378	U4299	C4222	C4144	U4068	C3900	G3820	A3754	A3657	G2912	U2840	G2766
A4616	U4535	U4461	U4379	U4300	C4223	C4145	U4069	C3901	U3821	G3744	A3662	C2913	A2843	C2767



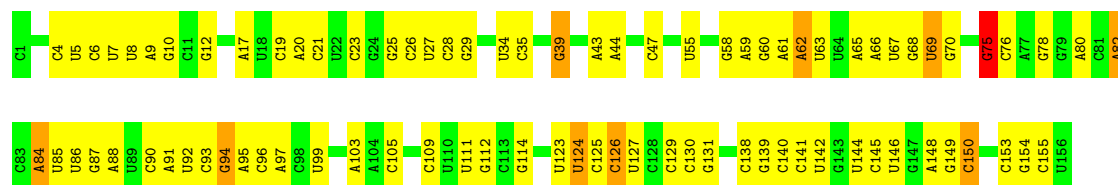
• Molecule 5: 5S rRNA [Homo sapiens]

Chain L7: 57% 39%



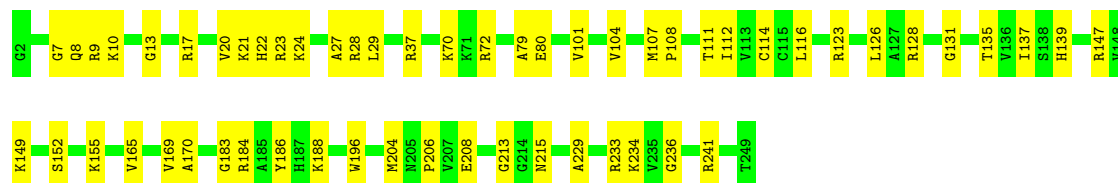
• Molecule 6: 5.8S rRNA [Homo sapiens]

Chain L8: 46% 47% 6%

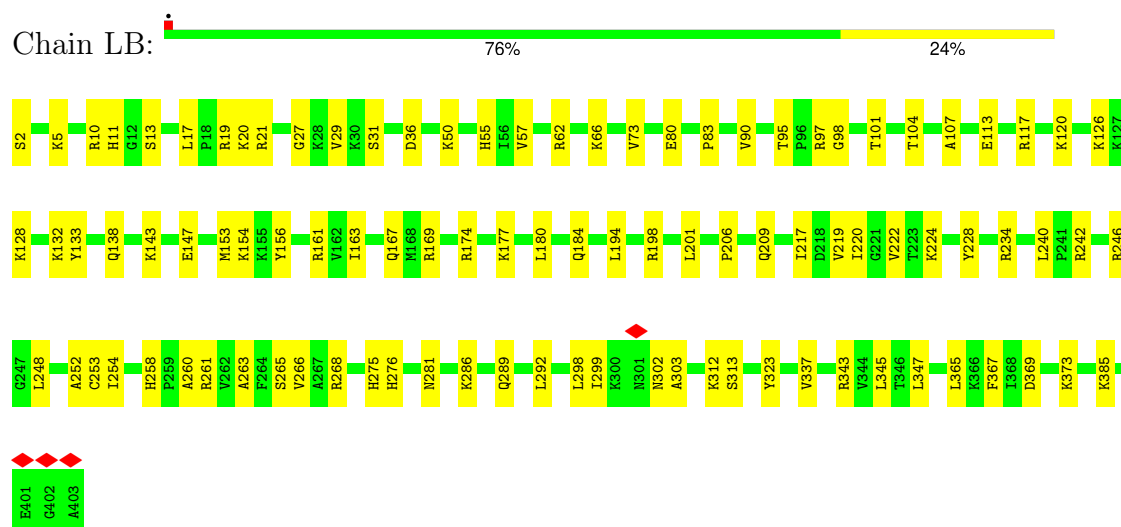


• Molecule 7: 60S ribosomal protein L8

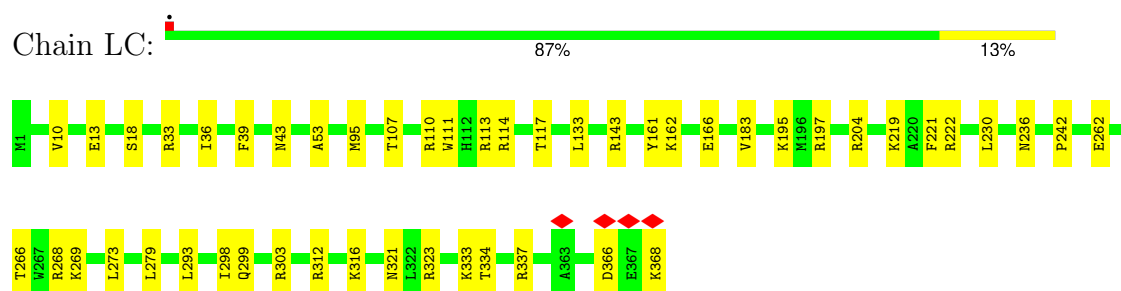
Chain LA: 77% 23%



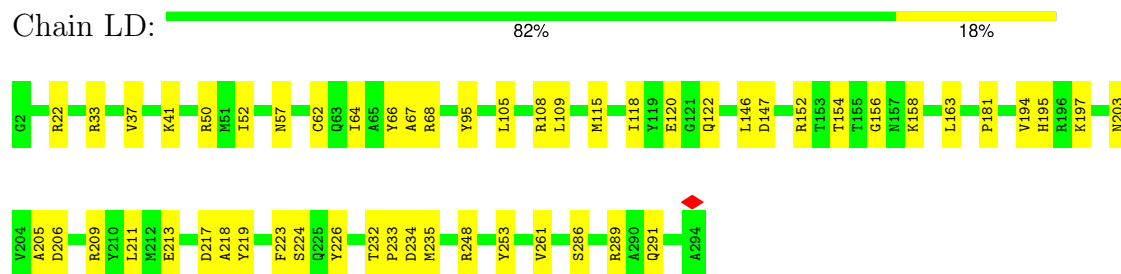
• Molecule 8: Large ribosomal subunit protein uL3



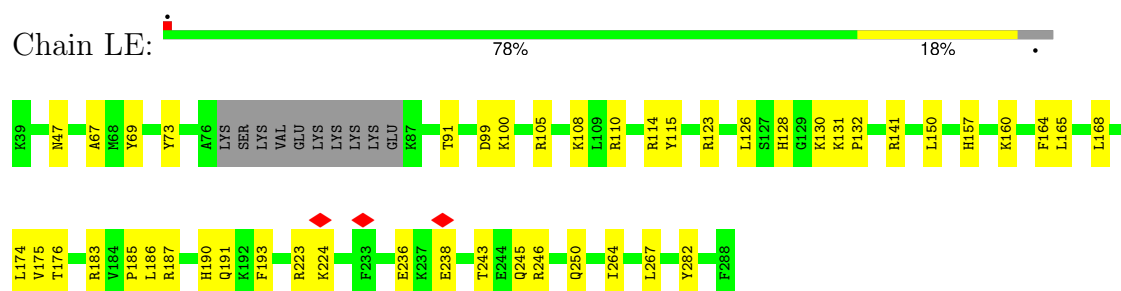
- Molecule 9: 60S ribosomal protein L4



- Molecule 10: Large ribosomal subunit protein uL18

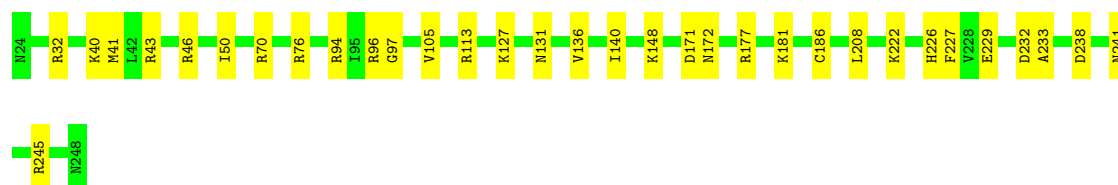


- Molecule 11: Large ribosomal subunit protein eL6



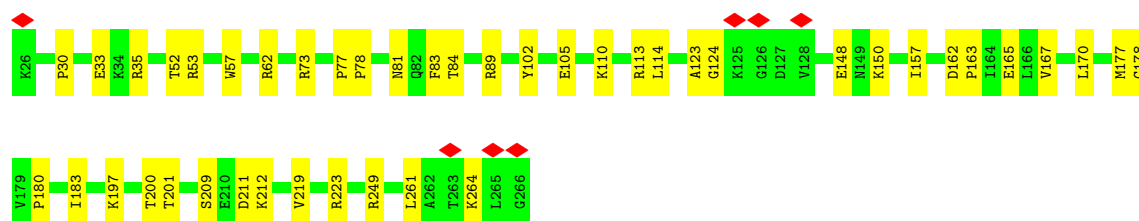
- Molecule 12: 60S ribosomal protein L7

Chain LF:  85% 15%



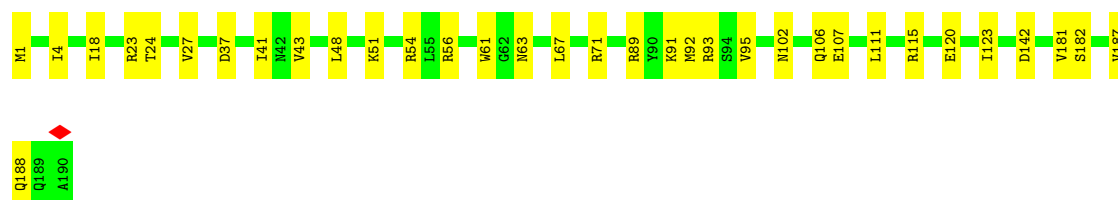
- Molecule 13: 60S ribosomal protein L7a

Chain LG:  82% 18%



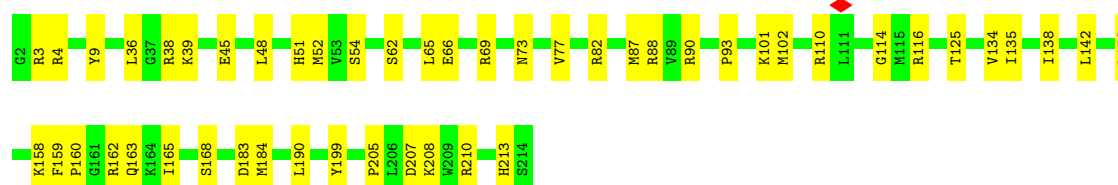
- Molecule 14: 60S ribosomal protein L9

Chain LH:  82% 18%



- Molecule 15: Ribosomal protein uL16-like

Chain LI:  77% 23%



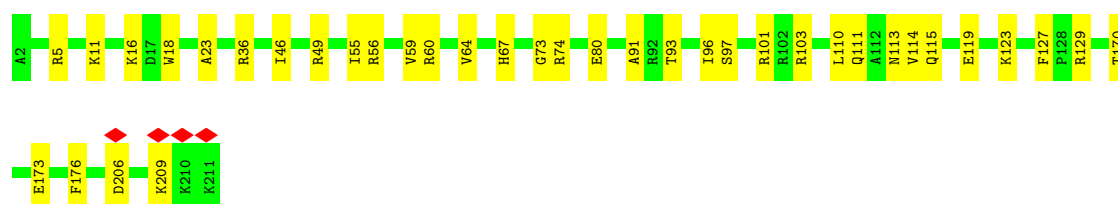
- Molecule 16: 60S ribosomal protein L11

Chain LJ:  82% 14%



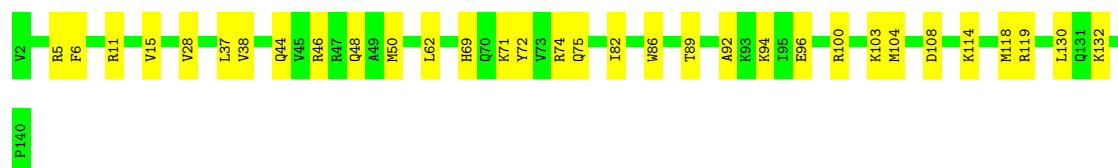
- Molecule 17: Large ribosomal subunit protein eL13

Chain LL:  82% 18%



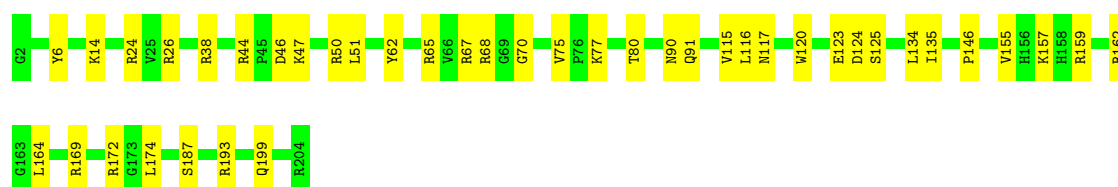
- Molecule 18: 60S ribosomal protein L14

Chain LM:  77% 23%



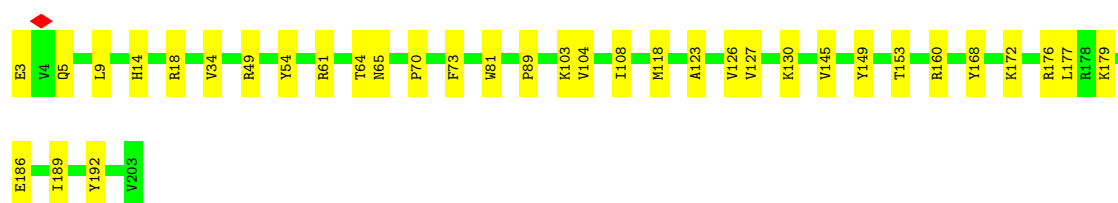
- Molecule 19: 60S ribosomal protein L15

Chain LN:  80% 20%



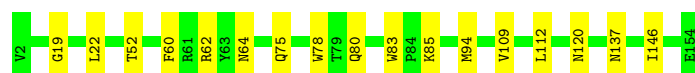
- Molecule 20: 60S ribosomal protein L13a

Chain LO:  83% 17%



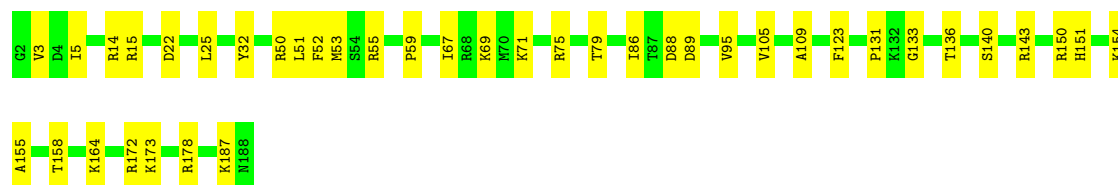
- Molecule 21: 60S ribosomal protein L17

Chain LP:  89% 11%

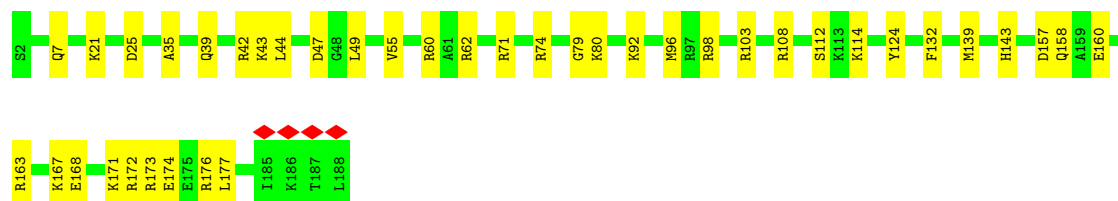
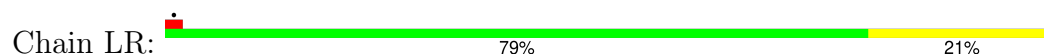


- Molecule 22: 60S ribosomal protein L18

Chain LQ:  79% 21%



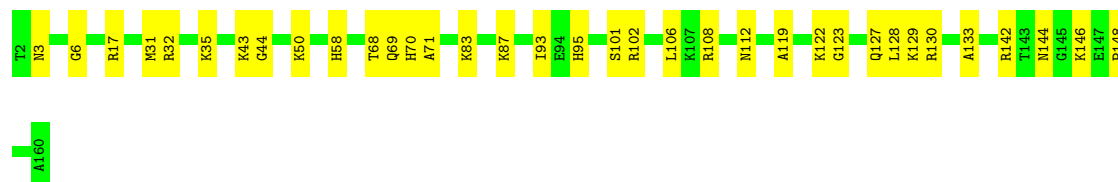
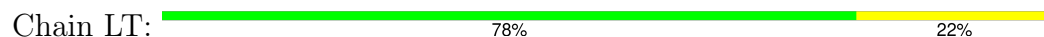
- Molecule 23: 60S ribosomal protein L19



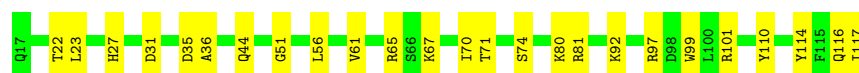
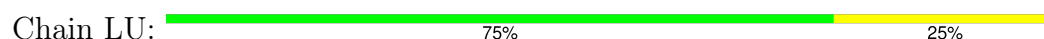
- Molecule 24: 60S ribosomal protein L18a



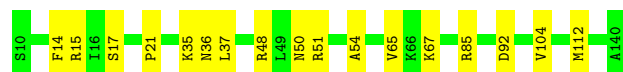
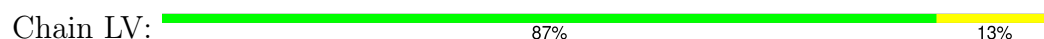
- Molecule 25: 60S ribosomal protein L21



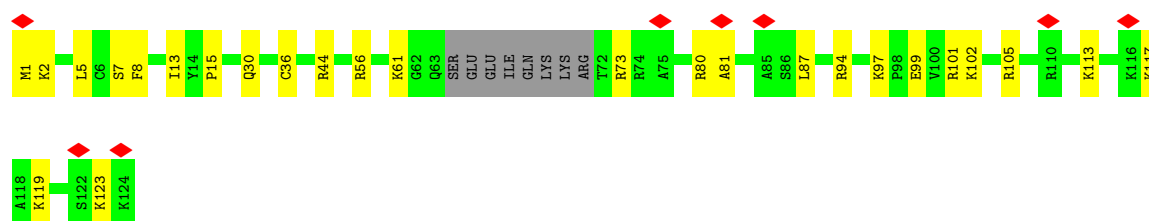
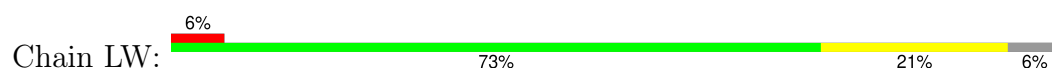
- Molecule 26: Heparin-binding protein HBp15



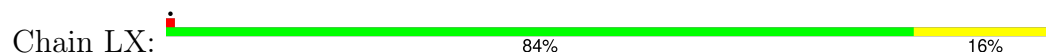
- Molecule 27: 60S ribosomal protein L23



- Molecule 28: Ribosomal protein L24



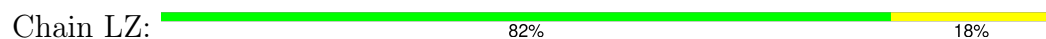
- Molecule 29: 60S ribosomal protein L23a



- Molecule 30: 60S ribosomal protein L26



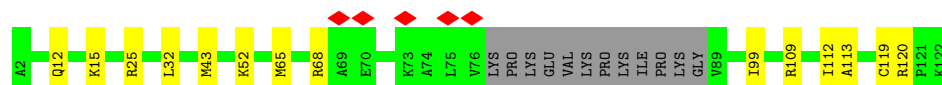
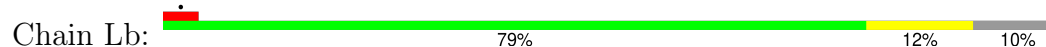
- Molecule 31: 60S ribosomal protein L27



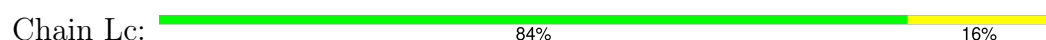
- Molecule 32: 60S ribosomal protein L27a



- Molecule 33: Large ribosomal subunit protein eL29

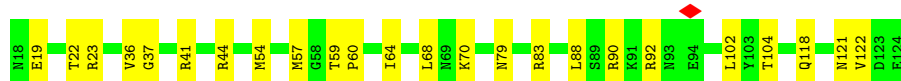
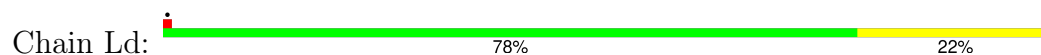


- Molecule 34: 60S ribosomal protein L30

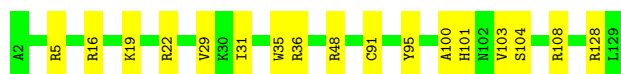
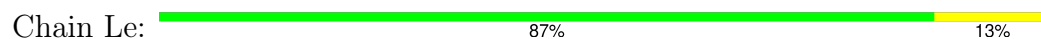




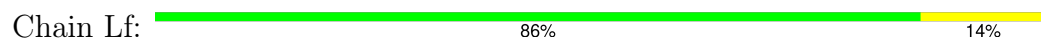
- Molecule 35: 60S ribosomal protein L31



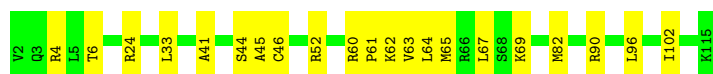
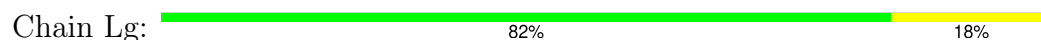
- Molecule 36: 60S ribosomal protein L32



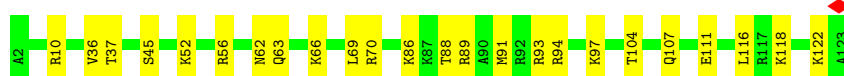
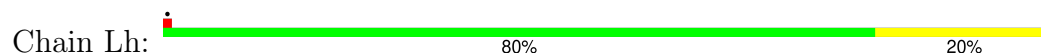
- Molecule 37: 60S ribosomal protein L35a



- Molecule 38: 60S ribosomal protein L34



- Molecule 39: 60S ribosomal protein L35



- Molecule 40: 60S ribosomal protein L36

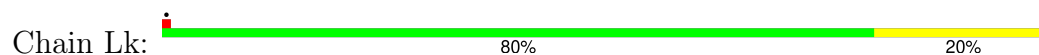


- Molecule 41: 60S ribosomal protein L37





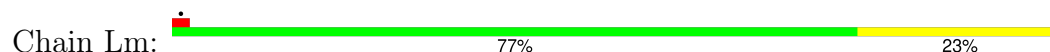
- Molecule 42: 60S ribosomal protein L38



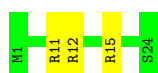
- Molecule 43: 60S ribosomal protein L39



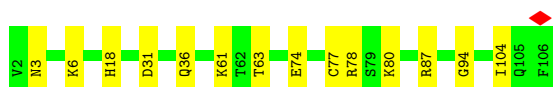
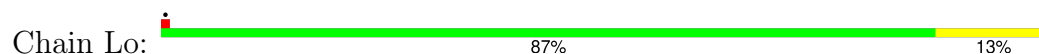
- Molecule 44: Large ribosomal subunit protein eL40



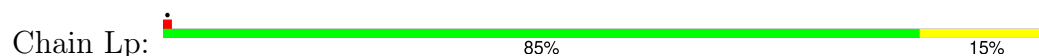
- Molecule 45: 60S ribosomal protein L41



- Molecule 46: 60S ribosomal protein L36a



- Molecule 47: 60S ribosomal protein L37a



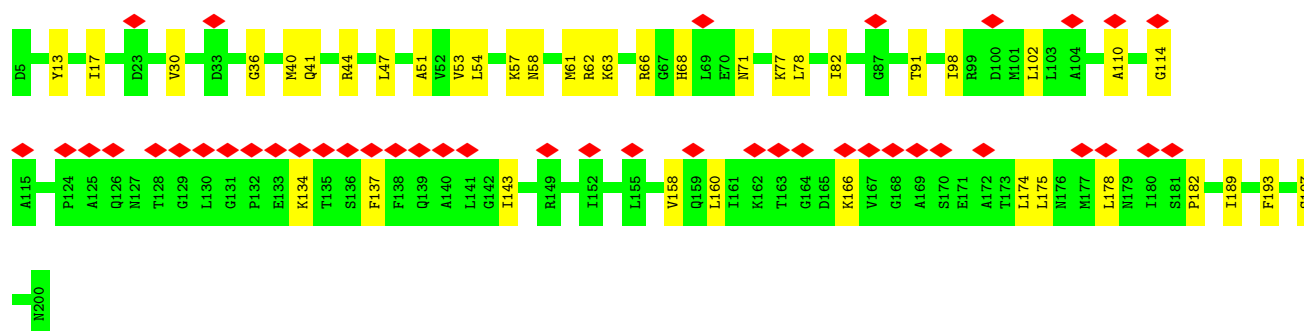
- Molecule 48: 60S ribosomal protein L28

Chain Lr: 



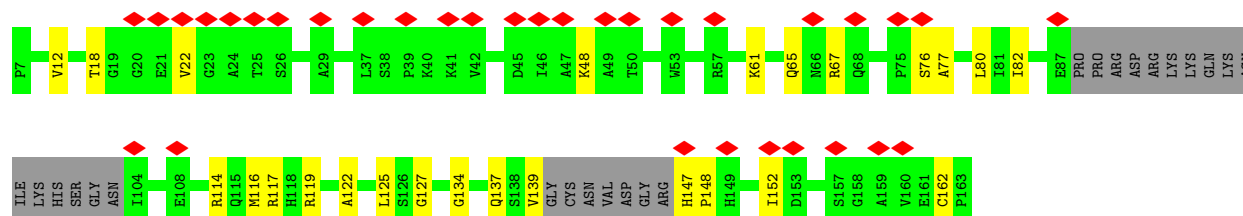
- Molecule 49: 60S acidic ribosomal protein P0

Chain Ls: 



- Molecule 50: Large ribosomal subunit protein uL11

Chain Lt: 



- Molecule 51: Small ribosomal subunit protein uS3

Chain SD: 



- Molecule 52: 40S ribosomal protein S5

Chain SF: 





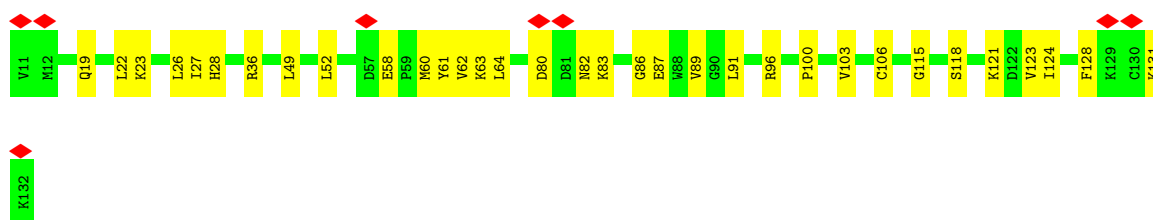
- Molecule 53: 40S ribosomal protein S10

Chain SK: 68% 32%



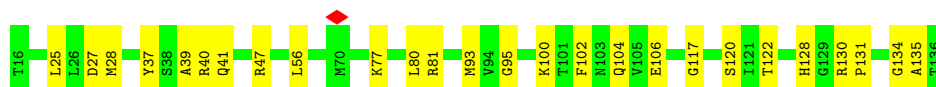
- Molecule 54: Small ribosomal subunit protein eS12

Chain SM: 7% 73% 27%



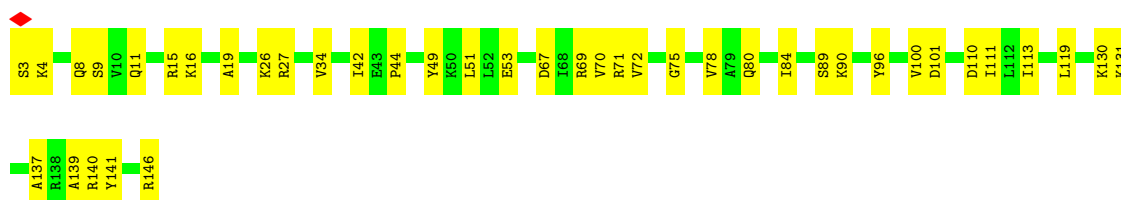
- Molecule 55: Small ribosomal subunit protein uS19

Chain SP: 79% 21%



- Molecule 56: Small ribosomal subunit protein uS9

Chain SQ: 72% 28%



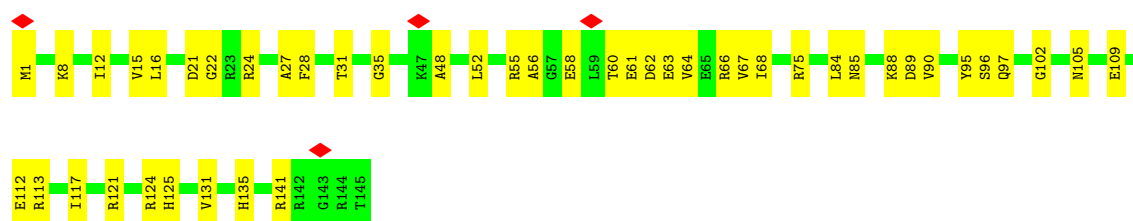
- Molecule 57: Small ribosomal subunit protein eS17

Chain SR: 82% 17%



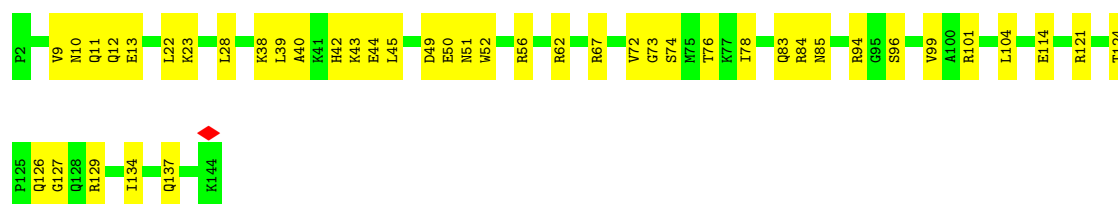
- Molecule 58: 40S ribosomal protein S18

Chain SS:  68% 32%



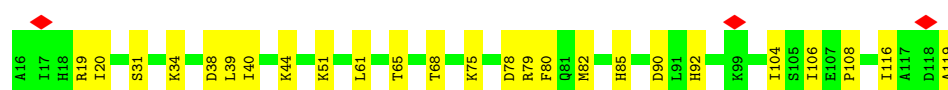
- Molecule 59: 40S ribosomal protein S19

Chain ST:  70% 30%



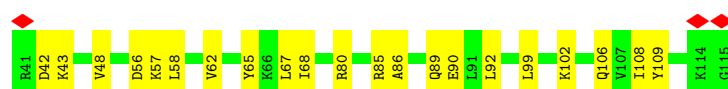
- Molecule 60: 40S ribosomal protein S20

Chain SU:  76% 24%



- Molecule 61: Small ribosomal subunit protein eS25

Chain SZ:  72% 28%



- Molecule 62: 40S ribosomal protein S28

Chain Sc:  80% 20%



- Molecule 63: 40S ribosomal protein S29

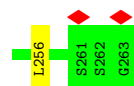
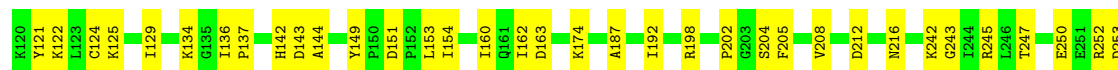
Chain Sd:  69% 31%



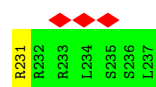
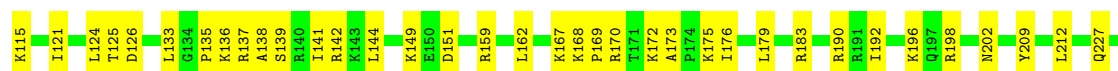
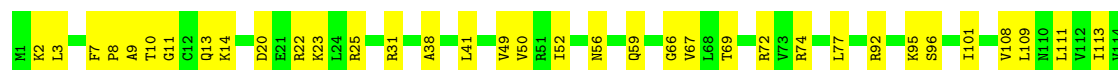
- | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| E59 | W60 | T64 | K65 | L66 | G67 | R68 | K71 | D72 | S77 | L78 | E79 | E80 | I81 | S85 | I88 | I94 | L98 | L102 | K103 | D104 | E105 | K108 | I109 | K114 | R121 | T122 | R123 | F124 | K125 | I130 | G143 | I151 | K159 | R166 | G168 | Y169 | G175 | K176 | P177 | V180 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|



- Molecule 69: Small ribosomal subunit protein eS4, X isoform



- Molecule 70: 40S ribosomal protein S6



- Molecule 71: Small ribosomal subunit protein eS7

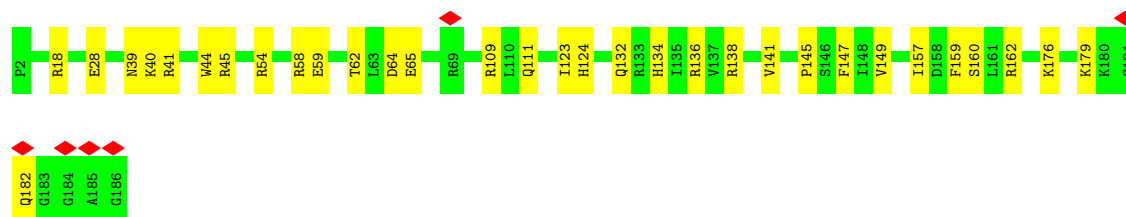
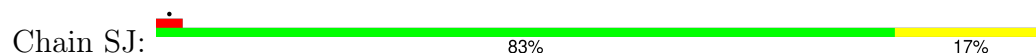


- Molecule 72: 40S ribosomal protein S8

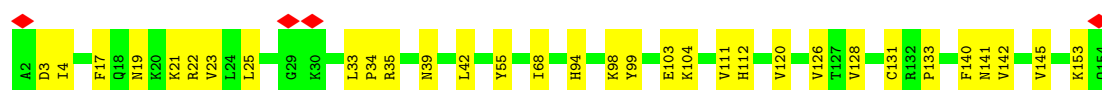
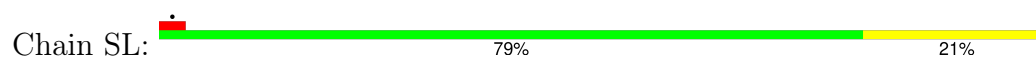




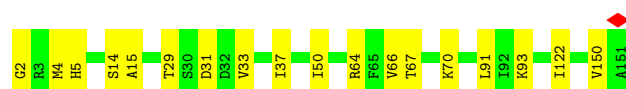
- Molecule 73: 40S ribosomal protein S9



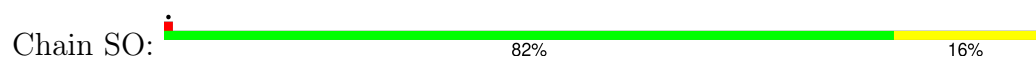
- Molecule 74: 40S ribosomal protein S11



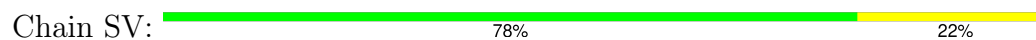
- Molecule 75: 40S ribosomal protein S13



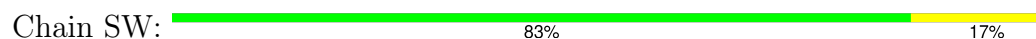
- Molecule 76: Small ribosomal subunit protein uS11



- Molecule 77: Small ribosomal subunit protein eS21



- Molecule 78: 40S ribosomal protein S15a





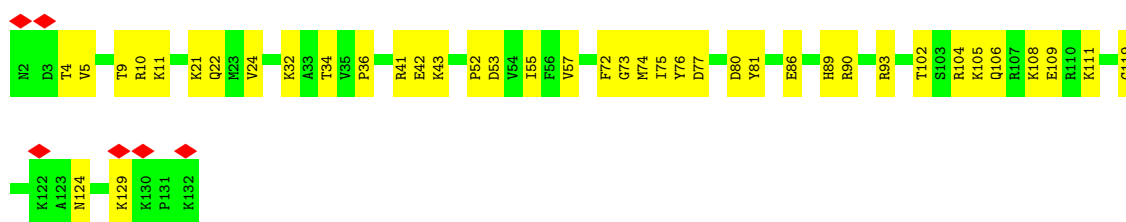
- Molecule 79: 40S ribosomal protein S23

Chain SX: 79% 21%



- Molecule 80: 40S ribosomal protein S24

Chain SY: 5% 69% 31%



- Molecule 81: 40S ribosomal protein S26

Chain Sa: 85% 15%



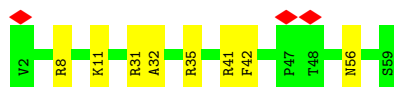
- Molecule 82: Small ribosomal subunit protein eS27

Chain Sb: 76% 24%



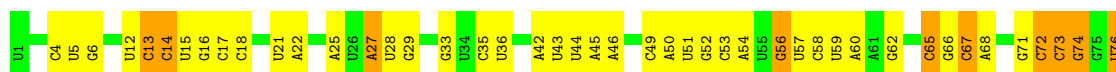
- Molecule 83: Small ribosomal subunit protein eS30

Chain Se: 5% 86% 14%

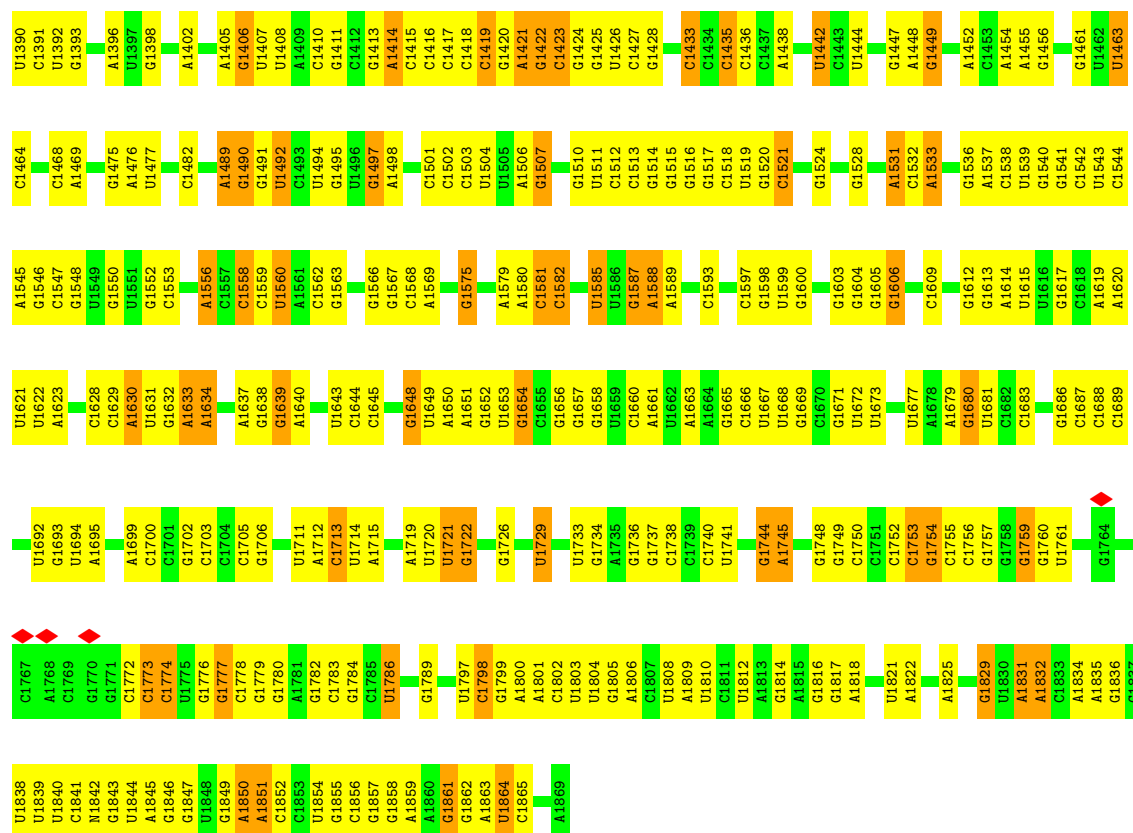


- Molecule 84: 18S rRNA [Homo sapiens]

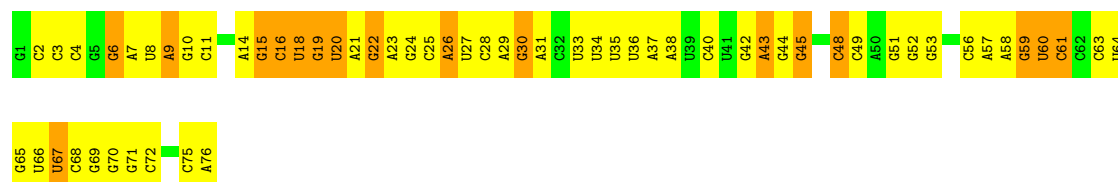
Chain S2: 43% 45% 12%



U1308	G1236	U1156	A1084	G921	G836	U689	C621	U538	A468	G377	C304	U161	A77
G1309	U1239	U1160	C1085	U002	A837	G692	C622	C539	A469	U378	U305	C162	C78
U1310	A1240	U1160	U1004	G925	G838	G692	G623	U540	G470	G379	G306	G165	A84
C1311	A1241	G1165	G1091	G928	C840	G696	G624	U541	G471	G380	G307	G166	A85
U1314	U1242	G1170	C1092	G929	G841	G696	G625	U542	A473	C381	G308	A167	C89
G1320	U1243	G1171	A1009	C930	G842	G697	G626	C543	A474	C382	G309	G168	G90
G1321	U1244	G1172	G1010	G933	C843	G698	G627	G544	C475	C383	C310	C169	A91
G1322	U1245	A1173	A1011	G934	U844	G732	A628	U545	C476	U384	C311	U170	A92
U1323	B8N1248	U1174	G1098	G934	G845	U732	U630	G547	G477	C386	A313	A171	U93
G1324	G1175	G1175	U1013	G940	G846	C733	U631	U551	G482	C387	G316	U172	G94
G1325	G1176	G1176	G1099	U940	A847	G736	A634	U556	C483	U388	C317	C173	G95
U1326	U1177	U1177	C941	C941	C851	C737	A639	U557	A484	A389	C318	A174	C96
G1327	U1178	U1178	G942	G942	G852	C738	C639	G558	A485	U406	A389	A175	C98
G1328	A1179	G1179	A944	A944	G855	C738	A640	G559	A486	G407	C319	A181	U97
U1329	U1255	U1018	U945	U945	G855	U747	A641	G559	U487	A408	C323	C182	C98
G1330	G1256	C1019	U946	U946	G855	U748	U642	U573	U488	C409	C324	A191	A99
C1331	G1257	A1020	G947	G947	G860	U749	A643	G563	A489	G420	C325	G190	A102
A1332	A1258	U1108	C948	C948	U863	C750	G644	A564	C490	G426	C326	A191	A103
U1333	A1259	C1109	G949	G949	A864	G751	C645	C570	C492	A426	U328	C196	A104
G1337	C1264	U1112	G952	G952	A865	G752	U647	C579	C493	U427	U329	U197	U105
G1338	U1195	A1113	C953	C953	U866	C753	U648	U573	C494	U428	G330	U198	C106
U1342	G1267	U1114	U954	U954	G867	G758	U649	A576	U495	C429	C331	C199	A107
G1345	G1268	U1115	G959	G959	A870	C791	A650	A576	C496	C430	G332	G200	U109
U1346	G1270	C1116	U960	U960	G874	C792	U652	C579	C497	G431	G333	G201	U110
U1347	C1271	A1030	G961	G961	A875	C793	A653	C579	C498	G432	G334	G203	G113
G1348	U1201	A1031	A962	A962	A876	C794	A654	U582	G499	A433	G335	G204	G114
G1349	C1273	A1032	A963	A963	C876	C795	A655	A583	C502	A434	G336	G205	U115
U1350	G1274	A1033	A964	A964	C877	C796	G656	A587	G506	A435	A339	G206	U116
G1351	G1275	A1036	U965	U965	G880	C797	G659	G507	G507	G436	C341	G207	U121
U1355	C1276	U1037	U966	U966	G881	C798	G660	G508	G508	G437	C342	G208	U122
U1357	A1278	U1045	G970	G970	U888	U800	U661	A590	G509	G438	A343	U210	U121
U1358	C1279	U1046	A972	A972	U889	U801	G662	U591	G510	C441	U344	G211	G125
U1359	G1280	C1047	A972	A972	U890	U802	G663	C592	U511	C442	C346	G212	G126
U1360	A1282	G1048	G976	G976	G891	G807	A664	C593	A512	G444	G347	U214	G130
U1367	C1283	U1049	G977	G977	G894	A808	U665	G600	A516	A445	C350	U218	G136
U1368	G1286	A1050	C978	C978	G895	A811	U666	G601	C517	G446	C351	U219	U137
A1369	C1218	U1051	G979	G979	U896	A812	U667	G602	A448	A447	U352	U220	G140
U1370	A1287	U1056	A980	A980	U897	A813	A669	C603	A520	A449	C353	U221	U143
U1371	U1288	G1057	A981	A981	U898	U814	A670	A604	A521	C450	U354	U222	G144
U1372	G1289	A1058	G982	G982	U899	A671	A672	A605	A522	G451	A360	A224	U145
C1373	G1290	U1061	G985	G985	C900	G821	G673	G606	A525	G452	U361	G291	G146
G1374	A1291	U1062	G986	G986	G901	U822	G674	C608	A526	C453	C362	A292	U147
G1375	C1292	A1063	C988	C988	G902	U823	G675	C609	C527	U454	A363	C293	U148
A1376	U1293	C1063	C989	C989	A903	C824	G676	G610	A528	U455	A364	U294	A149
U1377	G1294	U1068	C990	C990	G907	A825	G677	G611	A529	C459	U368	C295	A150
A1378	A1295	U1069	A991	A991	A908	A826	U678	G612	U530	C459	C369	G298	G153
U1379	G1301	A1070	A992	A992	G909	A827	U681	G613	A531	C459	G370	A299	U300
C1380	C1230	C1079	A996	A996	G910	A830	U682	C615	C532	C463	G373	U300	A158
G1381	U1303	A1080	A997	A997	A913	G831	G683	A616	G534	A464	G374	G374	A301
A1382	U1304	U1081	A998	A998	U919	G832	U686	G617	A536	A465	U375	A302	A159
A1383	C1305	U1082	A999	A999	A919	G833	C687	G620	A537	A466	A376	A303	G1385
G1385	U1306	A1083	C1000	C1000	A920	C835	U688	G620	C537	G467	A376	C303	U160



• Molecule 85: Z site tRNA [Homo sapiens]



• Molecule 86: Transcription factor BTF3



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	9091	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	0.588	Depositor
Minimum map value	-0.226	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.036	Depositor
Recommended contour level	0.0792	Depositor
Map size ($\text{\AA}$)	546.816, 546.816, 546.816	wwPDB
Map dimensions	512, 512, 512	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing ($\text{\AA}$)	1.068, 1.068, 1.068	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: A2M, OMC, SPD, HMT, 3HE, 5MC, MA6, SEP, B8N, G7M, OMG, 6MZ, ZN, 1MA, 4AC, OMU, UY1, UR3, MG, PSU, SPM

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	Pt	0.12	0/1761	0.27	0/2741
2	CF	0.14	0/3442	0.37	0/4656
3	AT	0.11	0/1805	0.25	0/2809
4	L5	0.17	0/85098	0.28	0/132762
5	L7	0.14	0/2861	0.23	0/4459
6	L8	0.16	0/3631	0.29	0/5657
7	LA	0.16	0/1936	0.36	0/2596
8	LB	0.15	0/3306	0.35	0/4424
9	LC	0.15	0/2981	0.34	0/4002
10	LD	0.14	0/2428	0.32	0/3252
11	LE	0.15	0/1973	0.39	0/2645
12	LF	0.15	0/1905	0.30	0/2539
13	LG	0.16	0/1960	0.34	0/2637
14	LH	0.14	0/1537	0.30	0/2066
15	LI	0.14	0/1751	0.34	0/2340
16	LJ	0.14	0/1385	0.35	0/1852
17	LL	0.14	0/1732	0.30	0/2315
18	LM	0.16	0/1161	0.34	0/1554
19	LN	0.15	0/1746	0.30	0/2338
20	LO	0.15	0/1682	0.32	0/2250
21	LP	0.15	0/1268	0.35	0/1701
22	LQ	0.15	0/1537	0.32	0/2052
23	LR	0.15	0/1582	0.36	0/2091
24	LS	0.15	0/1493	0.33	0/2003
25	LT	0.14	0/1326	0.29	0/1770
26	LU	0.17	0/839	0.42	0/1126
27	LV	0.15	0/993	0.34	0/1332
28	LW	0.21	0/959	0.41	0/1270
29	LX	0.14	0/1002	0.32	0/1345
30	LY	0.14	0/1132	0.35	0/1504
31	LZ	0.15	0/1130	0.34	0/1507

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
32	La	0.14	0/1191	0.31	0/1591
33	Lb	0.14	0/889	0.35	0/1175
34	Lc	0.14	0/774	0.32	0/1038
35	Ld	0.15	0/903	0.33	0/1216
36	Le	0.15	0/1071	0.30	0/1429
37	Lf	0.15	0/895	0.30	0/1198
38	Lg	0.14	0/916	0.32	0/1220
39	Lh	0.13	0/1023	0.30	0/1351
40	Li	0.14	0/843	0.29	0/1115
41	Lj	0.14	0/720	0.32	0/952
42	Lk	0.14	0/575	0.32	0/761
43	Ll	0.13	0/454	0.26	0/599
44	Lm	0.14	0/435	0.37	0/575
45	Ln	0.14	0/231	0.32	0/294
46	Lo	0.15	0/876	0.33	0/1156
47	Lp	0.15	0/718	0.31	0/953
48	Lr	0.15	0/1017	0.34	0/1364
49	Ls	0.13	0/1519	0.34	0/2052
50	Lt	0.16	0/1009	0.50	0/1363
51	SD	0.12	0/1793	0.30	0/2414
52	SF	0.14	0/1516	0.37	1/2037 (0.0%)
53	SK	0.16	0/851	0.44	0/1147
54	SM	0.13	0/950	0.38	0/1275
55	SP	0.13	0/1003	0.37	0/1342
56	SQ	0.19	0/1160	0.42	0/1553
57	SR	0.16	0/1105	0.43	0/1484
58	SS	0.14	0/1216	0.36	0/1628
59	ST	0.15	0/1131	0.41	0/1515
60	SU	0.16	0/831	0.43	0/1115
61	SZ	0.16	0/604	0.48	0/810
62	Sc	0.14	0/508	0.33	0/680
63	Sd	0.13	0/470	0.32	0/623
64	Sf	0.15	0/560	0.45	0/745
65	Sg	0.16	0/2493	0.36	0/3394
66	SA	0.15	0/1778	0.36	0/2416
67	SB	0.15	0/1765	0.36	0/2362
68	SC	0.15	0/1744	0.35	0/2357
69	SE	0.14	0/2118	0.36	0/2849
70	SG	0.14	0/1946	0.36	0/2590
71	SH	0.17	0/1519	0.42	0/2033
72	SI	0.14	0/1715	0.35	0/2287
73	SJ	0.13	0/1550	0.32	0/2069
74	SL	0.14	0/1268	0.34	0/1696

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
75	SN	0.13	0/1232	0.31	0/1656
76	SO	0.17	0/1037	0.38	0/1391
77	SV	0.14	0/643	0.35	0/860
78	SW	0.16	0/1051	0.34	0/1406
79	SX	0.13	0/1116	0.34	0/1490
80	SY	0.14	0/1083	0.35	0/1438
81	Sa	0.15	0/836	0.36	0/1121
82	Sb	0.15	0/665	0.33	0/891
83	Se	0.14	0/465	0.39	0/612
84	S2	0.18	2/39756 (0.0%)	0.28	0/61939
85	Zt	0.14	0/1779	0.35	0/2771
86	CI	0.16	0/247	0.30	0/323
All	All	0.16	2/236905 (0.0%)	0.31	1/347316 (0.0%)

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
84	S2	668	A2M	O3'-P	5.01	1.61	1.56
84	S2	99	A2M	O3'-P	5.00	1.61	1.56

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
52	SF	134	VAL	N-CA-C	-5.36	107.39	111.62

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	Pt	1576	0	803	30	0
2	CF	3383	0	3432	90	0
3	AT	1616	0	824	35	0
4	L5	78444	0	39714	1492	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
5	L7	2561	0	1295	38	0
6	L8	3315	0	1685	68	0
7	LA	1898	0	1993	45	0
8	LB	3238	0	3376	76	0
9	LC	2927	0	3104	36	0
10	LD	2382	0	2410	38	0
11	LE	1935	0	2096	37	0
12	LF	1870	0	1996	24	0
13	LG	1927	0	2074	29	0
14	LH	1518	0	1601	21	0
15	LI	1711	0	1749	31	0
16	LJ	1362	0	1399	15	0
17	LL	1701	0	1818	31	0
18	LM	1138	0	1204	25	0
19	LN	1701	0	1749	34	0
20	LO	1650	0	1794	28	0
21	LP	1242	0	1269	12	0
22	LQ	1513	0	1628	31	0
23	LR	1566	0	1729	29	0
24	LS	1453	0	1490	15	0
25	LT	1298	0	1366	30	0
26	LU	825	0	850	23	0
27	LV	979	0	1039	13	0
28	LW	945	0	1003	19	0
29	LX	985	0	1066	13	0
30	LY	1115	0	1205	11	0
31	LZ	1107	0	1182	18	0
32	La	1162	0	1213	14	0
33	Lb	876	0	948	12	0
34	Lc	764	0	804	11	0
35	Ld	888	0	930	17	0
36	Le	1053	0	1147	15	0
37	Lf	876	0	912	12	0
38	Lg	906	0	998	17	0
39	Lh	1015	0	1148	22	0
40	Li	832	0	917	9	0
41	Lj	705	0	737	21	0
42	Lk	569	0	637	11	0
43	Ll	444	0	483	10	0
44	Lm	429	0	465	10	0
45	Ln	230	0	276	2	0
46	Lo	862	0	929	11	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
47	Lp	708	0	756	12	0
48	Lr	1002	0	1068	12	0
49	Ls	1496	0	1540	28	0
50	Lt	998	0	1032	17	0
51	SD	1765	0	1865	28	0
52	SF	1495	0	1549	31	0
53	SK	827	0	854	25	0
54	SM	940	0	965	20	0
55	SP	985	0	1031	20	0
56	SQ	1142	0	1213	37	0
57	SR	1090	0	1149	20	0
58	SS	1198	0	1261	32	0
59	ST	1112	0	1146	31	0
60	SU	821	0	883	20	0
61	SZ	598	0	656	16	0
62	Sc	506	0	536	10	0
63	Sd	459	0	452	15	0
64	Sf	548	0	551	16	0
65	Sg	2436	0	2393	55	0
66	SA	1741	0	1746	41	0
67	SB	1738	0	1809	34	0
68	SC	1707	0	1791	41	0
69	SE	2076	0	2177	50	0
70	SG	1923	0	2089	61	0
71	SH	1497	0	1590	37	0
72	SI	1686	0	1772	40	0
73	SJ	1525	0	1640	25	0
74	SL	1247	0	1323	23	0
75	SN	1208	0	1294	12	0
76	SO	1024	0	1050	17	0
77	SV	636	0	637	14	0
78	SW	1034	0	1080	19	0
79	SX	1098	0	1167	24	0
80	SY	1065	0	1142	32	0
81	Sa	821	0	870	14	0
82	Sb	651	0	672	15	0
83	Se	459	0	503	9	0
84	S2	36953	0	18679	700	0
85	Zt	1593	0	809	37	0
86	CI	247	0	282	23	0
87	L5	179	0	0	0	0
87	L7	3	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
87	L8	4	0	0	0	0
87	LA	1	0	0	0	0
87	LP	1	0	0	0	0
87	LV	1	0	0	0	0
87	Le	1	0	0	0	0
87	Lj	1	0	0	0	0
87	S2	27	0	0	0	0
87	SS	1	0	0	0	0
88	L5	98	0	182	8	0
89	L5	90	0	171	10	0
89	LN	10	0	19	2	0
90	L5	20	0	23	2	0
91	L5	39	0	36	8	0
92	Lg	1	0	0	0	0
92	Lj	1	0	0	0	0
92	Lm	1	0	0	0	0
92	Lo	1	0	0	0	0
92	Lp	1	0	0	0	0
92	Sa	1	0	0	0	0
All	All	225029	0	167940	3663	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 10.

All (3663) 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)
91:L5:5297:HMT:C6	91:L5:5297:HMT:C7	1.77	1.60
91:L5:5297:HMT:C7	91:L5:5297:HMT:C8	1.79	1.58
4:L5:2706:G:N7	86:CI:78:HIS:NE2	1.64	1.38
26:LU:117:ILE:C	86:CI:75:LYS:H	1.36	1.32
4:L5:2706:G:N7	86:CI:78:HIS:CD2	2.10	1.19
4:L5:2706:G:C8	86:CI:78:HIS:NE2	2.19	1.10
26:LU:116:GLN:O	86:CI:74:LYS:HA	1.56	1.04
26:LU:117:ILE:C	86:CI:75:LYS:N	2.18	1.01
4:L5:2557:G:H1	4:L5:2570:U:H3	1.05	0.98
4:L5:1996:C:N4	4:L5:2000:G:H22	1.61	0.97
4:L5:4887:C:N4	4:L5:4932:U:H3	1.63	0.97
84:S2:1351:G:H1	84:S2:1360:U:H3	1.12	0.96
85:Zt:26:A:N6	85:Zt:44:G:H1	1.62	0.96
4:L5:3944:G:H1	4:L5:4069:U:H3	1.13	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:1996:C:H42	4:L5:2000:G:N2	1.63	0.94
4:L5:1996:C:H42	4:L5:2000:G:H22	0.95	0.94
84:S2:1033:G:H1	84:S2:1080:A:HO2'	1.10	0.94
85:Zt:26:A:H61	85:Zt:44:G:H1	0.96	0.93
84:S2:1656:G:H1	84:S2:1668:U:H3	1.07	0.93
84:S2:1324:G:H1	84:S2:1504:U:H3	1.03	0.92
4:L5:4946:U:HO2'	37:Lf:2:SER:N	1.71	0.88
85:Zt:6:G:H1	85:Zt:67:U:H3	0.92	0.88
4:L5:4887:C:H42	4:L5:4932:U:H3	0.92	0.87
4:L5:4775:C:H41	4:L5:4859:C:H42	1.21	0.87
84:S2:1737:G:H1	84:S2:1797:U:H3	1.22	0.87
78:SW:2:VAL:N	84:S2:1091:C:HO2'	1.73	0.87
84:S2:110:U:H3	84:S2:351:G:H1	1.20	0.86
4:L5:2706:G:C5	86:CI:78:HIS:NE2	2.45	0.85
84:S2:1417:C:N4	84:S2:1422:G:H22	1.75	0.84
84:S2:1748:G:H1	84:S2:1786:U:H3	0.85	0.84
4:L5:2706:G:C5	86:CI:78:HIS:CD2	2.66	0.83
4:L5:1100:U:H3	4:L5:1194:G:H1	1.22	0.83
84:S2:1417:C:H42	84:S2:1422:G:N2	1.76	0.82
84:S2:1776:G:N2	84:S2:1777:G:N7	2.27	0.82
4:L5:2007:G:H21	4:L5:2012:A:H62	1.27	0.82
4:L5:4763:U:HO2'	24:LS:174:THR:HG1	1.27	0.81
84:S2:1417:C:H42	84:S2:1422:G:H22	1.27	0.81
35:Ld:70:LYS:NZ	86:CI:66:GLY:HA3	1.95	0.81
26:LU:116:GLN:O	86:CI:74:LYS:CA	2.29	0.80
84:S2:1606:G:H1	84:S2:1632:G:HO2'	1.27	0.80
4:L5:4098:A:H2'	4:L5:4099:G:H4'	1.64	0.80
4:L5:2520:C:O2	4:L5:2640:G:N2	2.15	0.79
64:Sf:126:CYS:SG	64:Sf:144:CYS:N	2.53	0.79
1:Pt:50:U:H3	1:Pt:64:G:H1	0.81	0.79
84:S2:925:G:H1	84:S2:1017:U:H3	1.31	0.78
4:L5:1095:A:H2	4:L5:1200:G:H1	1.32	0.78
3:AT:61:A:OP1	3:AT:63:C:N4	2.17	0.78
4:L5:5024:C:H41	4:L5:5028:G:H21	1.31	0.76
4:L5:3954:A:H1'	4:L5:4058:U:H5'	1.67	0.76
4:L5:4774:C:O2'	4:L5:4775:C:O2	2.03	0.76
28:LW:119:LYS:O	28:LW:123:LYS:HB2	1.86	0.75
4:L5:1870:C:H2'	4:L5:1871:A2M:H8	1.69	0.74
4:L5:2845:A:H61	4:L5:3843:C:H42	1.32	0.74
56:SQ:72:VAL:HG11	56:SQ:80:GLN:HG3	1.68	0.74
56:SQ:4:LYS:HE3	84:S2:1423:C:H41	1.52	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AT:15:G:N2	3:AT:49:C:C2	2.56	0.74
84:S2:1417:C:N3	84:S2:1422:G:N1	2.35	0.73
28:LW:80:ARG:NH2	70:SG:8:PRO:O	2.21	0.73
59:ST:12:GLN:NE2	84:S2:1593:C:O2	2.21	0.73
84:S2:1729:U:H3	84:S2:1805:G:H1	1.36	0.73
84:S2:106:C:H2'	84:S2:107:A:H8	1.54	0.73
4:L5:1743:A:N1	4:L5:1789:C:O2'	2.23	0.72
4:L5:3641:U:OP2	4:L5:3646:A:N6	2.23	0.72
70:SG:11:GLY:HA2	84:S2:166:A2M:HM'1	1.72	0.72
4:L5:518:G:H1	4:L5:643:C:H2'	1.54	0.72
4:L5:664:G:N2	4:L5:666:G:O6	2.23	0.72
4:L5:4546:A:N7	7:LA:215:ASN:ND2	2.37	0.72
65:Sg:206:LEU:HD12	65:Sg:218:LEU:HD12	1.70	0.72
4:L5:2495:U:H2'	4:L5:2496:G:H8	1.55	0.72
52:SF:127:ARG:HG2	52:SF:136:ARG:HE	1.55	0.72
4:L5:4638:U:H3	4:L5:4661:G:H1	1.35	0.72
4:L5:381:U:H4'	4:L5:415:G:H5'	1.71	0.71
4:L5:2362:U:H2'	4:L5:2363:A2M:H8	1.72	0.71
4:L5:1563:A:N6	84:S2:1028:A:N1	2.39	0.71
4:L5:1971:C:O2	49:Ls:41:GLN:NE2	2.23	0.71
65:Sg:152:SER:HG	65:Sg:168:CYS:HG	1.37	0.71
4:L5:512:U:H3	4:L5:647:G:H1	1.38	0.70
84:S2:94:G:HO2'	84:S2:508:A:HO2'	1.34	0.70
4:L5:4896:G:H21	4:L5:4926:C:H42	1.40	0.70
4:L5:184:U:O2	4:L5:253:G:N2	2.23	0.70
4:L5:1414:C:H2'	4:L5:1415:G:H8	1.57	0.70
4:L5:4910:G:H4'	8:LB:95:THR:HG22	1.72	0.70
4:L5:3823:G:N2	4:L5:3823:G:OP2	2.23	0.70
4:L5:4102:C:H1'	4:L5:4108:G:H1	1.56	0.70
56:SQ:140:ARG:HB2	84:S2:1644:C:H4'	1.73	0.70
78:SW:107:SER:HB2	84:S2:860:G:H21	1.55	0.70
2:CF:378:LYS:HE2	2:CF:391:PRO:HB3	1.74	0.70
34:Lc:78:ASN:HD21	47:Lp:43:GLY:HA3	1.57	0.70
70:SG:168:LYS:NZ	84:S2:74:G:O6	2.23	0.70
84:S2:110:U:O2	84:S2:351:G:N2	2.23	0.70
67:SB:40:ASN:HD21	67:SB:76:ASN:HB2	1.57	0.69
4:L5:3594:C:O2	4:L5:3597:G:N2	2.25	0.69
67:SB:122:GLU:HG2	67:SB:140:VAL:HG12	1.74	0.69
2:CF:15:HIS:HE2	2:CF:133:THR:HG1	1.40	0.69
4:L5:2611:A:H5'	4:L5:2688:G:H4'	1.75	0.69
8:LB:10:ARG:NH1	8:LB:11:HIS:O	2.24	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:S2:1581:C:H5'	84:S2:1582:C:H5	1.58	0.69
4:L5:1408:G:O2'	4:L5:1411:C:N4	2.25	0.69
7:LA:107:MET:HB3	7:LA:111:THR:HG21	1.75	0.69
4:L5:935:A:N7	18:LM:46:ARG:NH2	2.41	0.68
4:L5:4541:G:N2	4:L5:4544:A:OP2	2.26	0.68
4:L5:267:G:H2'	4:L5:268:G:H8	1.58	0.68
4:L5:2601:A:N6	4:L5:2744:A:OP2	2.25	0.68
84:S2:1422:G:H4'	84:S2:1423:C:H3'	1.76	0.68
84:S2:388:U:H2'	84:S2:389:A:H8	1.57	0.68
4:L5:2702:C:OP1	26:LU:101:ARG:NH2	2.25	0.68
4:L5:4126:C:H5''	4:L5:4127:A:H5''	1.76	0.68
59:ST:126:GLN:HB2	59:ST:129:ARG:HH21	1.59	0.68
68:SC:210:PRO:HB3	68:SC:240:THR:HG21	1.75	0.68
2:CF:93:PRO:HD2	2:CF:102:MET:HB3	1.74	0.68
83:Se:41:ARG:NH2	84:S2:639:C:OP1	2.27	0.68
4:L5:24:G:N7	41:Lj:46:LYS:NZ	2.42	0.68
4:L5:2622:G:O6	26:LU:81:ARG:NH2	2.27	0.68
35:Ld:90:ARG:HD3	35:Ld:102:LEU:HD13	1.75	0.67
65:Sg:63:SER:HB2	84:S2:1398:G:H1'	1.76	0.67
4:L5:327:U:O2'	40:Li:30:ARG:NH1	2.27	0.67
84:S2:1658:G:OP2	84:S2:1660:C:N4	2.28	0.67
33:Lb:109:ARG:HA	33:Lb:112:ILE:HG12	1.76	0.67
85:Zt:15:G:N2	85:Zt:20:U:OP1	2.28	0.67
9:LC:39:PHE:O	9:LC:43:ASN:ND2	2.26	0.67
74:SL:35:ARG:NH2	74:SL:55:TYR:O	2.27	0.67
79:SX:107:ARG:HG3	79:SX:110:HIS:HB3	1.77	0.67
2:CF:72:THR:HB	2:CF:93:PRO:HA	1.77	0.67
2:CF:15:HIS:NE2	2:CF:133:THR:OG1	2.26	0.67
68:SC:200:ARG:O	73:SJ:54:ARG:NH2	2.26	0.67
84:S2:454:U:H2'	84:S2:455:A:H8	1.60	0.67
84:S2:508:A:H3'	84:S2:509:OMG:H8	1.58	0.67
2:CF:127:ILE:HG13	2:CF:134:ARG:HD3	1.76	0.67
47:Lp:38:THR:HA	47:Lp:45:THR:HA	1.76	0.67
70:SG:198:ARG:NH1	84:S2:126:G:OP2	2.28	0.67
23:LR:176:ARG:NH2	84:S2:910:G:OP1	2.28	0.67
61:SZ:58:LEU:HD12	61:SZ:62:VAL:HG21	1.77	0.67
75:SN:14:SER:HB3	84:S2:1016:U:H5''	1.75	0.67
85:Zt:15:G:H22	85:Zt:48:C:H42	1.43	0.67
4:L5:2092:G:O2'	4:L5:2262:G:N2	2.28	0.67
4:L5:2780:C:H2'	4:L5:2781:G:H8	1.58	0.67
4:L5:3697:U:H5''	4:L5:3698:G:H5'	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:SA:89:LYS:HD2	66:SA:201:LEU:HG	1.77	0.67
4:L5:323:C:H2'	4:L5:324:A:H8	1.60	0.66
4:L5:2400:G:H21	38:Lg:6:THR:HG22	1.60	0.66
42:Lk:68:GLU:HG3	42:Lk:70:LYS:H	1.58	0.66
4:L5:308:G:OP2	4:L5:308:G:N2	2.23	0.66
4:L5:1499:C:OP1	22:LQ:150:ARG:NH2	2.28	0.66
9:LC:230:LEU:HD21	9:LC:236:ASN:H	1.59	0.66
4:L5:1818:G:OP2	4:L5:1818:G:N2	2.23	0.66
19:LN:146:PRO:HB2	39:Lh:104:THR:HG23	1.77	0.66
70:SG:66:GLY:HA2	84:S2:1745:A:H1'	1.76	0.66
4:L5:369:G:N2	4:L5:372:A:OP2	2.26	0.66
14:LH:102:ASN:HB2	14:LH:115:ARG:HB2	1.78	0.66
4:L5:3937:C:H1'	19:LN:125:SER:HB3	1.76	0.66
56:SQ:131:LYS:HB2	56:SQ:140:ARG:HH22	1.61	0.66
4:L5:2845:A:H61	4:L5:3843:C:N4	1.94	0.66
65:Sg:252:THR:HG21	65:Sg:257:LYS:HD2	1.78	0.66
70:SG:135:PRO:HG2	70:SG:141:ILE:HG22	1.76	0.66
84:S2:140:C:H42	84:S2:313:A:H61	1.43	0.66
84:S2:557:U:H2'	84:S2:558:G:C8	2.30	0.66
4:L5:2484:A:H62	4:L5:2494:U:H3	1.44	0.66
6:L8:94:G:H21	41:Lj:82:THR:HB	1.60	0.66
26:LU:65:ARG:HG2	26:LU:67:LYS:H	1.61	0.66
55:SP:37:TYR:O	58:SS:88:LYS:NZ	2.28	0.66
76:SO:104:ARG:NH2	84:S2:959:G:OP1	2.29	0.66
84:S2:482:G:N1	84:S2:485:A:OP2	2.28	0.66
84:S2:587:A:H5'	84:S2:592:C:H41	1.60	0.66
4:L5:513:U:N3	4:L5:516:C:OP2	2.29	0.66
4:L5:1982:G:N2	4:L5:2009:A:O2'	2.29	0.65
4:L5:2103:G:N7	4:L5:2104:G:N2	2.43	0.65
84:S2:928:G:H2'	84:S2:929:G:C8	2.31	0.65
84:S2:1130:G:N2	84:S2:1130:G:OP2	2.29	0.65
26:LU:116:GLN:O	86:CI:74:LYS:CB	2.44	0.65
32:La:103:VAL:HB	32:La:108:TYR:HB2	1.78	0.65
73:SJ:124:HIS:HD2	83:Se:31:ARG:HE	1.43	0.65
75:SN:70:LYS:NZ	84:S2:1020:A:N7	2.43	0.65
2:CF:353:ILE:HB	2:CF:394:LEU:HB2	1.78	0.65
4:L5:1704:C:O3'	12:LF:46:ARG:NH1	2.29	0.65
14:LH:106:GLN:HB2	14:LH:111:LEU:HB3	1.78	0.65
54:SM:96:ARG:NH2	54:SM:100:PRO:O	2.29	0.65
84:S2:1562:C:H2'	84:S2:1563:G:H8	1.59	0.65
2:CF:360:VAL:HA	2:CF:369:ALA:HA	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:2059:C:H2'	4:L5:2060:G:H8	1.61	0.65
2:CF:194:SER:HB3	2:CF:199:ASP:HB2	1.79	0.65
4:L5:1670:G:OP1	33:Lb:12:GLN:NE2	2.28	0.65
91:L5:5297:HMT:C7	91:L5:5297:HMT:C16	2.69	0.65
67:SB:26:SER:O	67:SB:51:ARG:NH2	2.30	0.65
67:SB:103:MET:HG3	67:SB:215:VAL:HG12	1.79	0.65
85:Zt:19:G:O2'	85:Zt:48:C:N4	2.26	0.65
2:CF:346:ILE:HD13	2:CF:353:ILE:HD13	1.79	0.65
4:L5:4601:U:H2'	4:L5:4602:A:H8	1.61	0.65
8:LB:90:VAL:HG23	8:LB:163:ILE:HD11	1.78	0.65
84:S2:613:G:N1	84:S2:629:A:OP2	2.27	0.65
2:CF:380:ASP:HB2	2:CF:387:LEU:HD21	1.78	0.65
72:SI:70:GLU:OE2	74:SL:21:LYS:NZ	2.29	0.65
4:L5:4094:G:N2	4:L5:4115:G:OP2	2.30	0.64
4:L5:4098:A:N1	4:L5:4112:C:N4	2.45	0.64
53:SK:25:LYS:NZ	84:S2:1497:G:N7	2.40	0.64
62:Sc:29:GLN:HA	62:Sc:45:ASN:HA	1.79	0.64
4:L5:2020:U:H2'	4:L5:2021:G:H8	1.61	0.64
73:SJ:136:ARG:NH1	73:SJ:159:PHE:O	2.30	0.64
84:S2:830:A:OP2	84:S2:846:G:N2	2.30	0.64
54:SM:49:LEU:HD21	54:SM:123:VAL:HG11	1.79	0.64
84:S2:300:U:H2'	84:S2:301:A:H8	1.62	0.64
4:L5:2007:G:N2	4:L5:2012:A:H62	1.95	0.64
4:L5:4457:PSU:OP1	27:LV:50:ASN:ND2	2.27	0.64
4:L5:2351:OMC:HM22	9:LC:95:MET:HG3	1.80	0.64
7:LA:137:ILE:HD11	7:LA:149:LYS:HB2	1.80	0.64
70:SG:176:ILE:HG12	70:SG:179:LEU:HD11	1.78	0.64
3:AT:15:G:N2	3:AT:49:C:O2	2.31	0.64
65:Sg:40:ILE:HB	65:Sg:59:LEU:HB2	1.78	0.64
4:L5:1095:A:N1	4:L5:1200:G:O6	2.31	0.64
4:L5:1996:C:O3'	49:Ls:44:ARG:NH1	2.30	0.64
2:CF:163:SEP:O2P	2:CF:165:LYS:NZ	2.31	0.64
65:Sg:258:ILE:HG23	65:Sg:267:VAL:HG23	1.80	0.64
4:L5:262:G:H2'	4:L5:263:G:H8	1.62	0.64
13:LG:150:LYS:NZ	13:LG:177:MET:O	2.31	0.64
49:Ls:62:ARG:HB3	49:Ls:66:ARG:HH12	1.63	0.64
57:SR:22:THR:O	65:Sg:212:LYS:NZ	2.30	0.64
63:Sd:17:GLY:O	63:Sd:27:ARG:NH1	2.31	0.64
4:L5:4443:C:O2	4:L5:4444:C:N4	2.31	0.64
7:LA:104:VAL:HA	7:LA:107:MET:HE3	1.80	0.64
49:Ls:68:HIS:O	49:Ls:71:ASN:ND2	2.30	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:SQ:139:ALA:HB2	84:S2:1650:A:H5''	1.80	0.64
69:SE:153:LEU:O	69:SE:174:LYS:NZ	2.30	0.64
84:S2:149:A:H3'	84:S2:150:A:H8	1.62	0.64
20:LO:34:VAL:HG22	20:LO:103:LYS:HB2	1.80	0.63
84:S2:1396:A:N7	84:S2:1449:G:O6	2.30	0.63
4:L5:460:C:H2'	4:L5:461:G:H8	1.64	0.63
4:L5:4403:PSU:HN3	4:L5:4440:G:H1	1.44	0.63
70:SG:169:PRO:O	84:S2:72:C:N4	2.32	0.63
4:L5:2034:G:O2'	24:LS:118:ARG:NH1	2.30	0.63
23:LR:172:ARG:NH1	84:S2:909:G:OP1	2.30	0.63
55:SP:135:ALA:HB2	84:S2:1235:G:H21	1.64	0.63
84:S2:1808:U:H2'	84:S2:1809:A:H8	1.63	0.63
59:ST:101:ARG:NH2	84:S2:1566:G:N7	2.47	0.63
78:SW:111:MET:HE1	78:SW:119:LYS:HD2	1.81	0.63
84:S2:747:U:N3	84:S2:796:G:N1	2.46	0.63
1:Pt:73:A:N3	15:LI:110:ARG:NH1	2.47	0.63
2:CF:178:ILE:HB	2:CF:183:TYR:HB2	1.80	0.63
4:L5:4431:PSU:OP2	15:LI:3:ARG:NH2	2.31	0.63
84:S2:1228:A:H2'	84:S2:1229:G:H8	1.64	0.63
4:L5:25:A:H61	4:L5:58:G:H1	1.47	0.63
4:L5:2295:C:H2'	4:L5:2296:G:H8	1.63	0.63
4:L5:4522:G:O2'	4:L5:4525:C:OP2	2.17	0.63
71:SH:105:THR:HG23	71:SH:107:LYS:H	1.62	0.63
4:L5:2093:A:N3	4:L5:2094:G:N1	2.46	0.63
6:L8:67:U:H2'	6:L8:68:G:H8	1.63	0.63
54:SM:58:GLU:HB3	54:SM:61:TYR:HB2	1.81	0.63
69:SE:31:PRO:HA	69:SE:81:THR:HB	1.80	0.63
2:CF:201:MET:HG3	2:CF:228:LEU:HD12	1.79	0.63
4:L5:2758:G:O2'	4:L5:2765:A:N3	2.30	0.63
10:LD:232:THR:OG1	10:LD:234:ASP:OD1	2.16	0.63
12:LF:105:VAL:HG13	12:LF:136:VAL:HG12	1.81	0.63
67:SB:144:LYS:HD3	67:SB:208:HIS:HB3	1.79	0.63
84:S2:1513:C:H2'	84:S2:1514:G:H8	1.63	0.63
2:CF:246:LEU:O	2:CF:247:ARG:NH1	2.30	0.62
4:L5:4594:U:H2'	4:L5:4595:G:H8	1.64	0.62
14:LH:51:LYS:HE2	14:LH:54:ARG:HH12	1.64	0.62
44:Lm:99:CYS:HB2	44:Lm:114:LYS:HE3	1.79	0.62
63:Sd:2:GLY:N	84:S2:1271:C:O2	2.31	0.62
84:S2:1030:A:H2'	84:S2:1031:A2M:H8	1.80	0.62
85:Zt:6:G:O6	85:Zt:67:U:O4	2.16	0.62
4:L5:3619:G:H22	4:L5:3624:A:H1'	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:S2:1228:A:H2'	84:S2:1229:G:C8	2.33	0.62
84:S2:1243:U:OP2	84:S2:1518:C:O2'	2.15	0.62
84:S2:1277:C:H2'	84:S2:1278:A:H8	1.64	0.62
4:L5:1332:C:H2'	4:L5:1333:A:H8	1.63	0.62
4:L5:3726:A:H2'	4:L5:3727:A:C8	2.35	0.62
4:L5:4566:U:O2'	8:LB:234:ARG:NH1	2.32	0.62
84:S2:165:G:OP2	84:S2:165:G:N2	2.32	0.62
9:LC:107:THR:O	9:LC:111:TRP:NE1	2.30	0.62
4:L5:1100:U:O3'	4:L5:1167:C:N4	2.32	0.62
4:L5:4305:G:N7	25:LT:87:LYS:NZ	2.42	0.62
11:LE:164:PHE:HA	11:LE:175:VAL:HG12	1.81	0.62
50:Lt:65:GLN:HG3	50:Lt:67:ARG:H	1.63	0.62
4:L5:3870:C:H2'	4:L5:3871:A:H8	1.64	0.62
6:L8:155:C:OP1	13:LG:89:ARG:NH1	2.32	0.62
7:LA:29:LEU:O	7:LA:123:ARG:NH1	2.33	0.62
18:LM:15:VAL:HG22	18:LM:50:MET:HE1	1.82	0.62
4:L5:5002:U:OP2	8:LB:385:LYS:NZ	2.31	0.62
8:LB:83:PRO:O	8:LB:167:GLN:NE2	2.33	0.62
27:LV:35:LYS:HB2	27:LV:67:LYS:HG3	1.82	0.62
67:SB:205:TYR:CD1	84:S2:1122:A:H4'	2.34	0.62
84:S2:1748:G:O6	84:S2:1786:U:O4	2.17	0.62
85:Zt:22:G:H2'	85:Zt:23:A:H8	1.64	0.62
4:L5:184:U:O2'	4:L5:189:G:O4'	2.17	0.62
4:L5:2599:G:N2	4:L5:2747:U:O4	2.32	0.62
4:L5:2764:A:H2'	4:L5:2765:A:H8	1.65	0.62
4:L5:3717:A:H2'	4:L5:3718:A2M:H8	1.82	0.62
16:LJ:141:ILE:HA	16:LJ:144:LYS:HD2	1.81	0.62
59:ST:124:THR:HG23	59:ST:127:GLY:H	1.64	0.62
84:S2:350:C:HO2'	84:S2:383:G:H1	1.43	0.62
4:L5:73:A:N7	17:LL:103:ARG:NH2	2.47	0.62
52:SF:134:VAL:HG12	52:SF:135:ARG:HG2	1.81	0.62
81:Sa:12:LYS:NZ	84:S2:1086:G:OP2	2.29	0.62
84:S2:1605:G:N2	84:S2:1633:A:OP2	2.32	0.62
24:LS:76:LYS:NZ	24:LS:100:LEU:O	2.33	0.62
80:SY:124:ASN:HD22	84:S2:84:A:H5''	1.64	0.62
4:L5:1354:A:N6	4:L5:1503:A:O4'	2.33	0.61
4:L5:4129:G:O6	4:L5:4156:G:N2	2.33	0.61
26:LU:44:GLN:HB2	26:LU:56:LEU:HD21	1.82	0.61
28:LW:7:SER:HB2	28:LW:13:ILE:HD11	1.80	0.61
35:Ld:36:VAL:HG21	35:Ld:44:ARG:HG2	1.81	0.61
84:S2:1004:PSU:H2'	84:S2:1005:G:H8	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
85:Zt:68:C:H2'	85:Zt:69:G:C8	2.35	0.61
4:L5:4301:U:OP2	4:L5:4303:C:N4	2.33	0.61
4:L5:4413:C:O2	15:LI:158:LYS:NZ	2.32	0.61
71:SH:191:GLU:O	71:SH:193:GLN:NE2	2.27	0.61
79:SX:48:LYS:HB3	79:SX:75:ILE:HD12	1.83	0.61
2:CF:241:PRO:HG2	2:CF:269:THR:HA	1.82	0.61
4:L5:330:G:N7	89:L5:5284:SPD:N1	2.48	0.61
4:L5:3661:G:H4'	4:L5:3662:A:H5'	1.82	0.61
4:L5:4474:A:OP2	4:L5:4476:C:N4	2.33	0.61
4:L5:300:A:H2'	4:L5:301:G:H8	1.65	0.61
75:SN:64:ARG:HD3	75:SN:70:LYS:HG2	1.81	0.61
80:SY:111:LYS:NZ	84:S2:54:A:OP1	2.28	0.61
84:S2:889:U:OP2	84:S2:896:U:N3	2.33	0.61
4:L5:4277:G:H5''	25:LT:17:ARG:HG2	1.83	0.61
84:S2:588:G:H4'	84:S2:589:G:H5'	1.82	0.61
4:L5:364:G:O6	41:Lj:55:ARG:NH2	2.33	0.61
4:L5:3589:G:N2	4:L5:3590:G:O6	2.33	0.61
6:L8:150:C:N4	13:LG:52:THR:O	2.34	0.61
42:Lk:8:ILE:HD11	42:Lk:56:LEU:HD13	1.82	0.61
68:SC:191:VAL:HG11	68:SC:236:PHE:HA	1.82	0.61
69:SE:79:ASP:HB3	69:SE:82:TYR:HB2	1.83	0.61
4:L5:1326:A2M:H2'	4:L5:1327:C:C6	2.36	0.61
4:L5:1396:G:HO2'	4:L5:1468:C:HO2'	1.46	0.61
4:L5:2520:C:H2'	4:L5:2521:G:H8	1.66	0.61
4:L5:3672:G:OP2	4:L5:3672:G:N2	2.32	0.61
4:L5:3824:A:H3'	4:L5:3825:A2M:H8	1.81	0.61
41:Lj:19:CYS:SG	41:Lj:34:CYS:HB2	2.41	0.61
60:SU:116:ILE:HG13	60:SU:119:ALA:H	1.66	0.61
68:SC:167:ARG:HB3	68:SC:177:PRO:HB2	1.83	0.61
4:L5:4458:C:OP1	8:LB:11:HIS:NE2	2.31	0.61
23:LR:98:ARG:NH1	23:LR:132:PHE:O	2.34	0.61
84:S2:874:G:H2'	84:S2:875:A:H8	1.65	0.61
4:L5:4873:G:N7	20:LO:179:LYS:NZ	2.48	0.61
91:L5:5297:HMT:C7	91:L5:5297:HMT:N1	2.61	0.61
13:LG:81:ASN:O	13:LG:84:THR:OG1	2.19	0.61
84:S2:1179:G:N2	84:S2:1182:A:OP2	2.30	0.61
4:L5:382:G:N1	4:L5:385:A:OP2	2.34	0.60
4:L5:2444:U:HO2'	6:L8:112:G:HO2'	1.46	0.60
20:LO:126:VAL:HG13	20:LO:127:VAL:HG13	1.83	0.60
84:S2:136:C:H5''	84:S2:137:U:H5''	1.82	0.60
4:L5:1979:A:N6	4:L5:1984:A:OP1	2.27	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:LL:80:GLU:OE2	17:LL:113:ASN:ND2	2.34	0.60
42:Lk:24:LYS:HD3	42:Lk:69:LEU:HD21	1.83	0.60
68:SC:267:GLN:OE1	77:SV:35:ASN:ND2	2.34	0.60
70:SG:202:ASN:ND2	84:S2:125:C:OP1	2.33	0.60
4:L5:1626:G:OP2	19:LN:77:LYS:NZ	2.33	0.60
4:L5:2893:U:O2'	72:SI:88:ASN:ND2	2.33	0.60
4:L5:3668:C:OP1	7:LA:8:GLN:NE2	2.30	0.60
55:SP:130:ARG:HD3	55:SP:131:PRO:HD2	1.82	0.60
56:SQ:89:SER:OG	56:SQ:119:LEU:O	2.19	0.60
66:SA:22:GLY:O	66:SA:24:HIS:ND1	2.34	0.60
69:SE:27:PHE:O	84:S2:495:U:O2'	2.19	0.60
71:SH:142:LYS:HB3	78:SW:54:ASP:HB3	1.82	0.60
84:S2:1337:4AC:H2'	84:S2:1338:G:H8	1.65	0.60
4:L5:1982:G:H1'	4:L5:2010:A:H4'	1.83	0.60
4:L5:2554:U:O2	4:L5:2764:A:N7	2.34	0.60
4:L5:3880:G:H2'	4:L5:3881:G:C8	2.36	0.60
4:L5:4525:C:OP1	8:LB:246:ARG:NH2	2.29	0.60
52:SF:19:LEU:HD11	52:SF:50:PRO:HD3	1.82	0.60
68:SC:257:LYS:O	77:SV:16:LYS:NZ	2.34	0.60
84:S2:90:G:OP1	84:S2:445:A:N6	2.30	0.60
2:CF:375:LEU:HB3	2:CF:391:PRO:HD2	1.82	0.60
4:L5:3938:G:O6	4:L5:4172:A:N6	2.33	0.60
51:SD:99:ILE:HG23	51:SD:173:ARG:HH21	1.66	0.60
68:SC:68:ARG:HG2	68:SC:277:HIS:HB2	1.83	0.60
84:S2:1829:G:H1'	84:S2:1850:MA6:H2	1.83	0.60
4:L5:332:C:OP2	89:L5:5284:SPD:N10	2.34	0.60
4:L5:1933:G:H2'	4:L5:1934:A:C8	2.37	0.60
4:L5:2835:A:O2'	8:LB:228:TYR:O	2.18	0.60
24:LS:15:ARG:HD2	24:LS:25:PRO:HG2	1.83	0.60
4:L5:2856:C:O2	8:LB:242:ARG:NH2	2.33	0.60
4:L5:4670:C:O2'	4:L5:4672:A:OP2	2.18	0.60
52:SF:124:ASP:OD1	52:SF:125:SER:N	2.30	0.60
53:SK:14:LEU:HD22	53:SK:35:LEU:HD23	1.83	0.60
53:SK:85:LEU:HD21	53:SK:89:ILE:HB	1.84	0.60
56:SQ:49:TYR:O	56:SQ:53:GLU:HB2	2.01	0.60
69:SE:144:ALA:HB3	84:S2:121:OMU:HM23	1.84	0.60
84:S2:1759:G:N2	84:S2:1760:G:O6	2.34	0.60
4:L5:1739:G:N3	4:L5:1742:A:N6	2.49	0.60
4:L5:3917:A:H2'	4:L5:3918:G:H8	1.67	0.60
80:SY:74:MET:SD	80:SY:90:ARG:NH1	2.75	0.60
2:CF:343:GLN:HE22	2:CF:399:ALA:HB1	1.66	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:2577:C:OP1	31:LZ:111:ARG:NH2	2.35	0.60
7:LA:114:CYS:HB3	7:LA:165:VAL:HB	1.84	0.60
68:SC:193:VAL:HG11	68:SC:240:THR:HG22	1.83	0.60
70:SG:92:ARG:O	84:S2:453:C:O2'	2.18	0.60
72:SI:133:GLU:HA	72:SI:136:ILE:HG12	1.83	0.60
80:SY:111:LYS:NZ	84:S2:56:G:OP1	2.30	0.60
4:L5:1700:G:H5''	4:L5:1704:C:H42	1.66	0.60
4:L5:1906:U:H2'	4:L5:1907:A:H8	1.67	0.60
4:L5:2298:U:OP1	9:LC:204:ARG:NE	2.34	0.60
76:SO:134:PRO:HB3	84:S2:944:A:H5''	1.84	0.60
84:S2:941:C:H2'	84:S2:942:G:H8	1.67	0.60
4:L5:4563:U:H2'	4:L5:4564:A:H8	1.65	0.59
8:LB:292:LEU:HB2	8:LB:298:LEU:HD12	1.84	0.59
53:SK:8:ARG:NH2	84:S2:1314:U:O2'	2.34	0.59
70:SG:2:LYS:HB2	70:SG:108:VAL:HG12	1.83	0.59
84:S2:1652:G:H1	84:S2:1672:U:H3	1.49	0.59
4:L5:1532:G:OP2	41:Lj:31:LYS:NZ	2.33	0.59
4:L5:1994:C:H2'	4:L5:1995:G:C8	2.36	0.59
55:SP:40:ARG:NH2	84:S2:1615:U:O4	2.35	0.59
62:Sc:17:VAL:HA	62:Sc:30:VAL:HG12	1.84	0.59
73:SJ:162:ARG:NH1	84:S2:582:U:OP1	2.34	0.59
85:Zt:68:C:H2'	85:Zt:69:G:H8	1.65	0.59
2:CF:111:CYS:SG	2:CF:112:ALA:N	2.75	0.59
4:L5:1969:G:H4'	49:Ls:36:GLY:HA2	1.84	0.59
4:L5:2448:G:O2'	7:LA:21:LYS:NZ	2.30	0.59
10:LD:52:ILE:HA	10:LD:147:ASP:HB3	1.84	0.59
58:SS:141:ARG:NH1	84:S2:1524:G:OP2	2.33	0.59
60:SU:20:ILE:HG22	60:SU:116:ILE:HG22	1.84	0.59
66:SA:155:ARG:NH2	84:S2:1137:U:O2'	2.35	0.59
6:L8:21:C:OP1	9:LC:195:LYS:NZ	2.35	0.59
21:LP:109:VAL:HA	21:LP:112:LEU:HD13	1.84	0.59
24:LS:147:ASP:HB3	24:LS:150:ILE:HB	1.82	0.59
52:SF:168:THR:OG1	52:SF:171:GLU:OE1	2.19	0.59
70:SG:77:LEU:HD12	70:SG:95:LYS:HD3	1.83	0.59
76:SO:55:ARG:NH2	84:S2:954:U:O2	2.35	0.59
4:L5:4239:A:H2'	4:L5:4240:G:C8	2.37	0.59
6:L8:19:C:H2'	6:L8:20:A:H8	1.66	0.59
84:S2:1528:G:O2'	84:S2:1666:C:OP1	2.19	0.59
4:L5:1100:U:O4	4:L5:1194:G:O6	2.21	0.59
4:L5:1457:G:O2'	22:LQ:75:ARG:NH2	2.36	0.59
4:L5:4163:U:OP2	13:LG:53:ARG:NH2	2.35	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:4699:U:H1'	4:L5:4700:A:H5''	1.84	0.59
23:LR:39:GLN:OE1	23:LR:42:ARG:NH1	2.36	0.59
42:Lk:26:LYS:HB2	42:Lk:69:LEU:HD12	1.84	0.59
42:Lk:54:GLU:OE2	42:Lk:58:GLN:NE2	2.26	0.59
69:SE:11:ARG:NH1	69:SE:24:THR:OG1	2.36	0.59
70:SG:135:PRO:HA	84:S2:169:U:H5''	1.84	0.59
85:Zt:30:G:H2'	85:Zt:31:A:H8	1.67	0.59
11:LE:91:THR:HA	11:LE:108:LYS:HA	1.83	0.59
46:Lo:78:ARG:O	46:Lo:80:LYS:NZ	2.36	0.59
78:SW:3:ARG:HH22	78:SW:28:ARG:HH21	1.49	0.59
84:S2:300:U:H2'	84:S2:301:A:C8	2.37	0.59
4:L5:441:G:H2'	4:L5:442:G:H8	1.68	0.59
4:L5:512:U:O4	4:L5:647:G:O6	2.21	0.59
4:L5:1927:U:OP1	4:L5:1949:U:O2'	2.15	0.59
4:L5:2845:A:N6	4:L5:3843:C:H42	2.01	0.59
20:LO:9:LEU:HD23	20:LO:118:MET:HB2	1.85	0.59
34:Lc:48:LEU:HD13	34:Lc:57:LYS:HG3	1.83	0.59
58:SS:8:LYS:HZ1	58:SS:60:THR:HA	1.68	0.59
66:SA:73:ASP:HB3	66:SA:120:ARG:HB2	1.85	0.59
80:SY:36:PRO:HG3	84:S2:570:C:H4'	1.83	0.59
4:L5:40:G:N7	89:L5:5262:SPD:N1	2.51	0.59
4:L5:1844:G:H5''	33:Lb:25:ARG:HH22	1.68	0.59
4:L5:2770:C:H2'	4:L5:2771:G:H8	1.67	0.59
4:L5:4728:U:OP1	8:LB:132:LYS:NZ	2.32	0.59
9:LC:293:LEU:O	9:LC:299:GLN:NE2	2.33	0.59
4:L5:1253:G:H2'	4:L5:1256:G:H5'	1.84	0.59
4:L5:1932:A:OP1	20:LO:49:ARG:NH2	2.28	0.59
4:L5:2899:C:OP1	23:LR:108:ARG:NH2	2.34	0.59
4:L5:3787:G:H1'	4:L5:3789:C:H41	1.68	0.59
4:L5:4075:U:OP1	13:LG:249:ARG:NH2	2.36	0.59
4:L5:4097:G:O6	4:L5:4098:A:N6	2.36	0.59
4:L5:4363:A:H5''	46:Lo:36:GLN:HG2	1.84	0.59
5:L7:7:G:OP1	10:LD:33:ARG:NH1	2.35	0.59
79:SX:90:CYS:HB3	79:SX:130:LEU:HD22	1.85	0.59
84:S2:60:A:N3	84:S2:316:G:O2'	2.35	0.59
84:S2:463:C:O2'	84:S2:466:G:O6	2.17	0.59
2:CF:132:GLN:O	2:CF:136:HIS:ND1	2.30	0.58
52:SF:60:ARG:HD2	84:S2:1679:A:H2'	1.85	0.58
56:SQ:19:ALA:HB2	56:SQ:75:GLY:HA3	1.85	0.58
84:S2:795:A:H2'	84:S2:796:G:C8	2.38	0.58
2:CF:370:CYS:HA	2:CF:406:PRO:HA	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:62:A:N3	4:L5:77:U:O2'	2.33	0.58
4:L5:2386:U:H2'	4:L5:2387:G:H8	1.67	0.58
8:LB:10:ARG:NH2	8:LB:265:SER:O	2.36	0.58
42:Lk:24:LYS:HB2	42:Lk:35:LYS:HB2	1.83	0.58
59:ST:73:GLY:O	59:ST:94:ARG:NH2	2.36	0.58
84:S2:145:G:H2'	84:S2:146:G:C8	2.38	0.58
4:L5:2613:C:OP1	38:Lg:24:ARG:NH2	2.36	0.58
4:L5:2870:A:OP2	4:L5:2879:A:N6	2.33	0.58
4:L5:3633:C:OP1	88:L5:5292:SPM:N10	2.37	0.58
4:L5:4304:A:OP2	4:L5:4305:G:N2	2.35	0.58
50:Lt:77:ALA:HB3	50:Lt:80:LEU:HB2	1.84	0.58
72:SI:22:HIS:HB3	84:S2:433:A:H5''	1.83	0.58
84:S2:71:G:N2	84:S2:73:C:OP1	2.36	0.58
84:S2:1841:C:H2'	84:S2:1842:4AC:H6	1.86	0.58
4:L5:1849:U:H3'	17:LL:5:ARG:HH12	1.67	0.58
4:L5:4239:A:H2'	4:L5:4240:G:H8	1.68	0.58
4:L5:4868:G:O2'	4:L5:4872:G:OP1	2.21	0.58
6:L8:39:G:OP1	39:Lh:86:LYS:NZ	2.35	0.58
19:LN:159:ARG:HB3	19:LN:164:LEU:HB2	1.85	0.58
64:Sf:97:LYS:NZ	84:S2:1289:U:OP2	2.30	0.58
4:L5:423:G:OP1	21:LP:62:ARG:NH1	2.36	0.58
4:L5:3796:U:HO2'	84:S2:1720:U:HO2'	1.49	0.58
4:L5:4992:G:H2'	4:L5:4993:G:C8	2.38	0.58
5:L7:28:C:OP2	10:LD:57:ASN:ND2	2.36	0.58
58:SS:85:ASN:OD1	58:SS:97:GLN:NE2	2.36	0.58
70:SG:31:ARG:NH1	84:S2:1745:A:O3'	2.35	0.58
2:CF:11:VAL:HG12	2:CF:90:ILE:HB	1.85	0.58
2:CF:215:LYS:HZ1	2:CF:222:ASN:HB3	1.68	0.58
4:L5:417:G:OP1	4:L5:2329:U:O2'	2.22	0.58
8:LB:95:THR:OG1	8:LB:98:GLY:O	2.18	0.58
8:LB:138:GLN:O	8:LB:143:LYS:NZ	2.37	0.58
13:LG:180:PRO:HG3	13:LG:219:VAL:HG13	1.85	0.58
14:LH:187:VAL:HG12	14:LH:188:GLN:HG3	1.86	0.58
41:Lj:2:THR:HG22	41:Lj:4:GLY:H	1.69	0.58
51:SD:32:ASP:OD2	51:SD:65:ARG:NH1	2.36	0.58
53:SK:31:LYS:HZ3	53:SK:40:VAL:H	1.49	0.58
4:L5:3689:G:O2'	4:L5:3818:UY1:OP2	2.20	0.58
4:L5:3868:G:H22	4:L5:3900:G:H1'	1.69	0.58
4:L5:4676:G:OP1	8:LB:281:ASN:ND2	2.37	0.58
19:LN:157:LYS:O	19:LN:162:ARG:NH1	2.37	0.58
65:Sg:57:ARG:NH2	65:Sg:94:THR:O	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:SG:183:ARG:NH2	84:S2:316:G:OP2	2.36	0.58
4:L5:1563:A:H2'	4:L5:1564:A:C8	2.38	0.58
65:Sg:129:ILE:HB	65:Sg:142:VAL:HB	1.85	0.58
84:S2:629:A:O2'	84:S2:631:U:OP1	2.21	0.58
3:AT:57:C:H5	4:L5:2009:A:H1'	1.69	0.58
4:L5:67:C:N4	4:L5:325:U:O2'	2.36	0.58
4:L5:3928:A:OP1	19:LN:90:ASN:ND2	2.36	0.58
4:L5:4683:U:OP2	4:L5:4706:G:N1	2.35	0.58
22:LQ:50:ARG:HH21	22:LQ:140:SER:HB2	1.69	0.58
64:Sf:119:ARG:HB3	64:Sf:132:MET:HB2	1.85	0.58
84:S2:1536:G:H2'	84:S2:1537:A:H8	1.69	0.58
84:S2:1550:G:O2'	84:S2:1558:C:O2	2.22	0.58
4:L5:4993:G:H22	4:L5:5058:A:H2	1.52	0.58
17:LL:64:VAL:HA	17:LL:67:HIS:HD2	1.69	0.58
53:SK:27:VAL:HB	53:SK:43:LEU:HD12	1.85	0.58
54:SM:63:LYS:HD3	54:SM:64:LEU:HD22	1.85	0.58
56:SQ:8:GLN:HG3	56:SQ:27:ARG:HE	1.69	0.58
84:S2:851:C:H5''	84:S2:852:G:H5'	1.86	0.58
84:S2:1831:A:O2'	84:S2:1832:6MZ:H8	2.04	0.58
2:CF:13:ILE:HD12	2:CF:136:HIS:HB3	1.86	0.57
4:L5:325:U:H2'	4:L5:326:C:C6	2.39	0.57
8:LB:117:ARG:HA	8:LB:177:LYS:HD2	1.86	0.57
22:LQ:79:THR:HB	22:LQ:136:THR:HG22	1.86	0.57
58:SS:55:ARG:N	58:SS:58:GLU:OE2	2.34	0.57
59:ST:40:ALA:HB3	59:ST:43:LYS:HG2	1.84	0.57
1:Pt:76:A:H2'	4:L5:4397:A:H1'	1.85	0.57
4:L5:2397:G:O6	38:Lg:4:ARG:NH2	2.31	0.57
51:SD:40:ARG:NH2	60:SU:106:ILE:O	2.38	0.57
61:SZ:85:ARG:NH2	84:S2:1597:C:OP2	2.35	0.57
76:SO:142:ARG:NH1	81:Sa:23:CYS:O	2.37	0.57
78:SW:71:LYS:NZ	84:S2:1156:U:OP1	2.37	0.57
4:L5:500:G:OP1	4:L5:504:G:N2	2.38	0.57
4:L5:4212:A:N1	25:LT:3:ASN:ND2	2.45	0.57
4:L5:4620:OMU:OP2	4:L5:4670:C:N4	2.37	0.57
65:Sg:176:VAL:HG23	65:Sg:185:LYS:HB2	1.86	0.57
79:SX:51:VAL:HA	79:SX:72:VAL:HG22	1.86	0.57
80:SY:34:THR:O	84:S2:570:C:O2'	2.21	0.57
84:S2:1144:A:H2'	84:S2:1145:A:C8	2.38	0.57
4:L5:1094:G:O6	4:L5:1201:U:O2	2.22	0.57
4:L5:1270:A:H8	4:L5:2106:G:H21	1.52	0.57
4:L5:2335:C:H2'	4:L5:2336:G:H8	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:1326:A2M:OP2	4:L5:4445:U:O2'	2.22	0.57
4:L5:1461:C:H2'	4:L5:1462:A:H8	1.69	0.57
4:L5:2017:A:O2'	4:L5:2018:C:O5'	2.21	0.57
4:L5:4472:G:O2'	44:Lm:100:TYR:O	2.22	0.57
16:LJ:146:ARG:HG2	16:LJ:147:ARG:HG3	1.87	0.57
51:SD:40:ARG:HA	60:SU:108:PRO:HB3	1.85	0.57
61:SZ:80:ARG:O	84:S2:1598:G:O2'	2.19	0.57
84:S2:388:U:H2'	84:S2:389:A:C8	2.38	0.57
84:S2:468:A2M:H2'	84:S2:469:A:C8	2.38	0.57
84:S2:600:G:H2'	84:S2:601:OMG:H8	1.68	0.57
84:S2:639:C:H2'	84:S2:640:A:H8	1.69	0.57
84:S2:808:A:H2	84:S2:855:G:H22	1.51	0.57
1:Pt:33:U:H3'	56:SQ:146:ARG:HH22	1.70	0.57
4:L5:4896:G:H2'	4:L5:4897:G:C8	2.40	0.57
15:LI:38:ARG:NH1	15:LI:45:GLU:OE1	2.31	0.57
22:LQ:86:ILE:HD12	22:LQ:105:VAL:HG22	1.87	0.57
53:SK:2:LEU:HD21	84:S2:1289:U:H4'	1.86	0.57
84:S2:981:A:H2'	84:S2:982:G:C8	2.39	0.57
4:L5:1502:G:H1	22:LQ:89:ASP:HA	1.70	0.57
4:L5:4274:A:H2'	4:L5:4275:G:H8	1.69	0.57
70:SG:136:LYS:HB2	84:S2:65:C:H41	1.70	0.57
2:CF:282:PRO:HG2	2:CF:324:ASN:HA	1.84	0.57
4:L5:1279:A:OP1	11:LE:131:LYS:NZ	2.37	0.57
4:L5:2083:C:OP2	22:LQ:14:ARG:NH2	2.37	0.57
4:L5:2517:A:H5'	38:Lg:62:LYS:HD3	1.87	0.57
4:L5:4951:G:H2'	4:L5:4952:G:H8	1.70	0.57
12:LF:40:LYS:HA	12:LF:43:ARG:HE	1.70	0.57
4:L5:950:G:H2'	4:L5:951:G:H8	1.70	0.57
4:L5:3666:C:OP1	7:LA:234:LYS:NZ	2.27	0.57
88:L5:5289:SPM:H21	89:L5:5290:SPD:H102	1.70	0.57
4:L5:121:A:OP1	13:LG:110:LYS:NZ	2.35	0.57
4:L5:1346:C:H2'	4:L5:1347:G:H8	1.68	0.57
4:L5:3695:PSU:HN3	4:L5:3820:G:H1	1.52	0.57
4:L5:4184:G:H5'	7:LA:233:ARG:HB2	1.85	0.57
4:L5:4627:U:O2'	8:LB:55:HIS:ND1	2.34	0.57
57:SR:7:LYS:NZ	84:S2:1373:C:OP1	2.36	0.57
60:SU:85:HIS:ND1	84:S2:1447:G:OP1	2.38	0.57
84:S2:223:C:H2'	84:S2:224:A:C8	2.40	0.57
84:S2:1692:U:H2'	84:S2:1693:G:C8	2.40	0.57
4:L5:137:G:H2'	4:L5:138:G:H8	1.69	0.56
4:L5:3855:C:H2'	4:L5:3856:A:H8	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:4177:C:H2'	4:L5:4178:A:H8	1.70	0.56
4:L5:4314:C:OP1	25:LT:70:HIS:ND1	2.37	0.56
22:LQ:15:ARG:NH1	22:LQ:52:PHE:O	2.34	0.56
26:LU:99:TRP:HE1	86:CI:59:GLN:HB2	1.69	0.56
38:Lg:45:ALA:HB3	38:Lg:82:MET:HE2	1.86	0.56
60:SU:51:LYS:HB3	60:SU:90:ASP:HB2	1.87	0.56
65:Sg:107:ASP:HB2	65:Sg:125:ARG:HG3	1.87	0.56
68:SC:196:ILE:HB	68:SC:223:TYR:HB2	1.86	0.56
69:SE:100:ARG:HB2	69:SE:114:ILE:HD13	1.86	0.56
84:S2:1560:U:O2	84:S2:1575:G:O6	2.23	0.56
1:Pt:23:C:H2'	1:Pt:24:A:C8	2.40	0.56
41:Lj:14:LYS:NZ	43:Ll:51:LEU:OXT	2.38	0.56
69:SE:45:ILE:HG13	69:SE:61:VAL:HG11	1.85	0.56
71:SH:154:ILE:HB	71:SH:185:VAL:HG22	1.87	0.56
80:SY:102:THR:OG1	80:SY:106:GLN:OE1	2.23	0.56
82:Sb:14:GLU:HA	82:Sb:17:ARG:HG2	1.85	0.56
85:Zt:48:C:H2'	85:Zt:59:G:H1'	1.86	0.56
2:CF:348:ASN:HD21	2:CF:431:GLN:HG3	1.71	0.56
4:L5:13:U:OP2	89:L5:5287:SPD:N10	2.38	0.56
4:L5:705:G:OP1	36:Le:5:ARG:NH2	2.39	0.56
4:L5:1332:C:H2'	4:L5:1333:A:C8	2.40	0.56
4:L5:1646:A:O2'	41:Lj:49:TRP:O	2.22	0.56
4:L5:1867:A:H2'	4:L5:1868:A:C8	2.40	0.56
4:L5:3615:G:H1'	28:LW:44:ARG:HD3	1.87	0.56
4:L5:4238:G:H2'	4:L5:4239:A:H8	1.69	0.56
4:L5:4954:G:H2'	4:L5:4955:A:H8	1.70	0.56
4:L5:5064:G:H21	21:LP:75:GLN:HE22	1.54	0.56
15:LI:54:SER:HB3	15:LI:135:ILE:HD11	1.86	0.56
17:LL:46:ILE:HB	17:LL:49:ARG:HB2	1.87	0.56
55:SP:81:ARG:NH2	55:SP:117:GLY:O	2.38	0.56
61:SZ:65:TYR:HB3	85:Zt:34:U:H5'	1.87	0.56
76:SO:45:THR:HA	76:SO:52:THR:HA	1.86	0.56
80:SY:119:GLY:HA2	84:S2:85:A:H5'	1.87	0.56
84:S2:737:G:H8	84:S2:738:C:H4'	1.71	0.56
4:L5:495:C:H2'	4:L5:496:G:C8	2.41	0.56
4:L5:665:C:H4'	4:L5:666:G:H5'	1.87	0.56
4:L5:1667:G:N1	4:L5:2281:U:OP2	2.29	0.56
4:L5:1759:G:N2	4:L5:1773:U:O2	2.37	0.56
4:L5:4389:C:H2'	4:L5:4390:A:H8	1.69	0.56
4:L5:4667:C:OP1	8:LB:224:LYS:NZ	2.32	0.56
9:LC:110:ARG:O	9:LC:113:ARG:NH1	2.37	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:SG:162:LEU:HG	70:SG:167:LYS:HE3	1.86	0.56
72:SI:141:ARG:HD3	72:SI:145:ILE:HG21	1.87	0.56
84:S2:28:U:H2'	84:S2:29:G:H8	1.70	0.56
84:S2:907:G:H2'	84:S2:908:A:C8	2.40	0.56
1:Pt:40:C:HO2'	84:S2:1640:A:HO2'	1.47	0.56
3:AT:3:C:H42	3:AT:71:A:H61	1.53	0.56
3:AT:53:G:H2'	3:AT:54:G:H8	1.71	0.56
4:L5:267:G:H2'	4:L5:268:G:C8	2.40	0.56
4:L5:268:G:H2'	4:L5:269:G:H8	1.69	0.56
4:L5:1655:C:OP2	32:La:26:ARG:NH1	2.38	0.56
4:L5:2846:G:OP1	27:LV:85:ARG:NH2	2.36	0.56
4:L5:2846:G:H2'	4:L5:2847:G:H8	1.70	0.56
4:L5:4315:A:OP1	25:LT:69:GLN:NE2	2.39	0.56
4:L5:4523:A2M:H5''	4:L5:4524:G:H5'	1.86	0.56
84:S2:323:C:H2'	84:S2:327:G:H1	1.70	0.56
84:S2:1174:PSU:H2'	84:S2:1175:G:H8	1.71	0.56
84:S2:1360:U:O2'	84:S2:1379:A:OP2	2.22	0.56
4:L5:153:G:H2'	4:L5:154:G:H8	1.71	0.56
4:L5:419:A:N3	4:L5:1332:C:O2'	2.36	0.56
4:L5:2706:G:C6	86:CI:78:HIS:CD2	2.92	0.56
4:L5:2706:G:O6	86:CI:78:HIS:HD2	1.89	0.56
4:L5:4565:C:OP1	20:LO:65:ASN:ND2	2.34	0.56
60:SU:19:ARG:HH11	60:SU:92:HIS:HB3	1.69	0.56
67:SB:136:ARG:HB2	67:SB:218:LEU:HD11	1.86	0.56
4:L5:2539:C:H2'	4:L5:2540:C:C6	2.41	0.56
4:L5:4657:U:O2'	4:L5:4659:G:OP2	2.24	0.56
6:L8:142:U:OP1	19:LN:38:ARG:NH2	2.39	0.56
8:LB:161:ARG:HG2	8:LB:184:GLN:HA	1.88	0.56
35:Ld:64:ILE:HG23	35:Ld:68:LEU:HD23	1.88	0.56
69:SE:192:ILE:HG12	69:SE:243:GLY:HA3	1.87	0.56
84:S2:223:C:H2'	84:S2:224:A:H8	1.70	0.56
4:L5:1327:C:H2'	4:L5:1328:G:C8	2.41	0.56
12:LF:227:PHE:N	12:LF:233:ALA:O	2.39	0.56
36:Le:108:ARG:HD2	36:Le:128:ARG:HB2	1.86	0.56
84:S2:49:C:OP1	84:S2:471:G:N2	2.39	0.56
1:Pt:33:U:OP2	56:SQ:146:ARG:NH1	2.38	0.56
6:L8:96:C:H2'	6:L8:97:A:C8	2.40	0.56
53:SK:55:ARG:NH1	53:SK:78:TYR:OH	2.38	0.56
67:SB:146:ARG:HH21	84:S2:1122:A:H1'	1.70	0.56
69:SE:49:ARG:NH1	84:S2:495:U:OP1	2.39	0.56
74:SL:33:LEU:HD12	74:SL:34:PRO:HD2	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:120:A:N1	4:L5:148:C:O2'	2.34	0.56
4:L5:150:U:OP2	13:LG:200:THR:OG1	2.20	0.56
4:L5:4419:U:OP1	4:L5:4475:G:N2	2.39	0.56
4:L5:5030:U:H2'	4:L5:5031:G:H8	1.71	0.56
42:Lk:26:LYS:NZ	42:Lk:28:ASN:OD1	2.38	0.56
58:SS:109:GLU:HA	58:SS:112:GLU:HG2	1.88	0.56
66:SA:37:TYR:OH	77:SV:66:ASP:OD2	2.18	0.56
84:S2:520:A:O2'	84:S2:825:A:N3	2.38	0.56
1:Pt:35:A:OP2	56:SQ:146:ARG:NH2	2.38	0.55
4:L5:462:G:H2'	4:L5:463:A:C8	2.41	0.55
4:L5:968:C:OP2	11:LE:110:ARG:NH2	2.39	0.55
4:L5:2533:C:OP1	29:LX:139:ARG:NH1	2.39	0.55
4:L5:4645:C:OP2	23:LR:62:ARG:NH1	2.40	0.55
4:L5:4870:G:OP2	18:LM:5:ARG:NH1	2.29	0.55
6:L8:62:A:OP1	39:Lh:52:LYS:NZ	2.37	0.55
13:LG:209:SER:HA	13:LG:212:LYS:HG3	1.88	0.55
14:LH:93:ARG:NE	14:LH:142:ASP:O	2.35	0.55
35:Ld:70:LYS:HZ2	86:CI:66:GLY:HA3	1.70	0.55
58:SS:27:ALA:HB2	58:SS:52:LEU:HD12	1.88	0.55
58:SS:48:ALA:O	58:SS:66:ARG:NH2	2.40	0.55
84:S2:472:C:O2	84:S2:475:C:N4	2.39	0.55
84:S2:640:A:H2'	84:S2:641:A:C8	2.41	0.55
2:CF:58:TRP:HA	2:CF:61:ASP:HB2	1.88	0.55
4:L5:1514:U:H2'	4:L5:1515:A:C8	2.41	0.55
4:L5:4076:G:OP1	13:LG:73:ARG:NE	2.38	0.55
4:L5:4088:C:H2'	4:L5:4089:G:H8	1.71	0.55
4:L5:4220:6MZ:O1P	4:L5:4220:6MZ:H8	2.06	0.55
6:L8:5:U:H2'	6:L8:6:C:H6	1.71	0.55
35:Ld:70:LYS:HZ1	86:CI:66:GLY:HA3	1.71	0.55
56:SQ:110:ASP:N	56:SQ:110:ASP:OD1	2.33	0.55
69:SE:50:ASN:O	69:SE:53:LYS:NZ	2.33	0.55
4:L5:2576:G:OP1	31:LZ:48:ARG:NH2	2.39	0.55
4:L5:4537:C:H2'	4:L5:4538:G:H8	1.71	0.55
4:L5:4742:G:OP1	4:L5:4900:C:N4	2.36	0.55
84:S2:432:G:H2'	84:S2:433:A:C8	2.41	0.55
4:L5:1982:G:H2'	4:L5:1983:A:O4'	2.07	0.55
4:L5:2624:G:OP2	26:LU:97:ARG:NH2	2.39	0.55
6:L8:153:C:H2'	6:L8:154:G:H8	1.71	0.55
53:SK:50:GLN:HE22	84:S2:1276:A:H1'	1.71	0.55
71:SH:145:ARG:HE	78:SW:51:GLU:HB2	1.72	0.55
81:Sa:12:LYS:HG3	81:Sa:15:ARG:HB2	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CF:102:MET:HE3	2:CF:136:HIS:CD2	2.42	0.55
4:L5:109:G:OP2	17:LL:74:ARG:NH2	2.40	0.55
4:L5:691:C:H2'	4:L5:692:A:C8	2.41	0.55
4:L5:1333:A:H2'	4:L5:1334:A:H8	1.72	0.55
4:L5:2848:G:O2'	4:L5:3838:U:O4	2.23	0.55
10:LD:62:CYS:HB3	10:LD:105:LEU:HD22	1.88	0.55
15:LI:62:SER:HA	15:LI:65:LEU:HD12	1.86	0.55
35:Ld:54:MET:HE3	35:Ld:60:PRO:HA	1.86	0.55
51:SD:8:LYS:HG2	60:SU:61:LEU:HD11	1.87	0.55
52:SF:84:GLY:O	84:S2:1673:U:O2'	2.18	0.55
84:S2:941:C:H2'	84:S2:942:G:C8	2.42	0.55
4:L5:714:G:H2'	4:L5:715:G:H8	1.72	0.55
4:L5:1727:U:OP1	12:LF:131:ASN:ND2	2.39	0.55
4:L5:1983:A:H4'	4:L5:1984:A:C8	2.41	0.55
4:L5:4272:G:OP2	4:L5:4272:G:N2	2.28	0.55
4:L5:4274:A:H2'	4:L5:4275:G:C8	2.42	0.55
5:L7:23:A:N3	5:L7:118:C:O2'	2.32	0.55
49:Ls:174:LEU:O	49:Ls:178:LEU:HB2	2.07	0.55
51:SD:15:GLY:HA3	63:Sd:50:ILE:HG23	1.88	0.55
56:SQ:78:VAL:HG12	84:S2:1673:U:H5''	1.89	0.55
67:SB:150:ILE:HG12	84:S2:1124:C:H5''	1.87	0.55
68:SC:94:ILE:O	68:SC:98:LEU:N	2.37	0.55
68:SC:121:ARG:HH12	68:SC:123:ARG:HE	1.53	0.55
4:L5:1346:C:H2'	4:L5:1347:G:C8	2.41	0.55
4:L5:4139:G:H21	4:L5:4140:C:H41	1.53	0.55
4:L5:4587:G:OP1	20:LO:61:ARG:NH1	2.37	0.55
64:Sf:89:LYS:NZ	64:Sf:90:LYS:O	2.35	0.55
66:SA:77:ILE:HG13	66:SA:99:ILE:HB	1.88	0.55
69:SE:73:ASP:OD2	69:SE:122:LYS:NZ	2.39	0.55
84:S2:639:C:H2'	84:S2:640:A:C8	2.42	0.55
84:S2:1215:C:H42	84:S2:1220:A:H61	1.54	0.55
84:S2:1461:G:H3'	84:S2:1463:U:H3	1.72	0.55
4:L5:678:C:OP1	48:Lr:95:HIS:ND1	2.34	0.55
4:L5:4088:C:OP1	7:LA:37:ARG:NH1	2.39	0.55
6:L8:123:U:H2'	6:L8:126:C:H42	1.72	0.55
10:LD:223:PHE:HB3	10:LD:226:TYR:HB2	1.89	0.55
35:Ld:23:ARG:HG2	35:Ld:121:ASN:HA	1.88	0.55
52:SF:36:GLN:NE2	52:SF:37:ASP:OD1	2.39	0.55
61:SZ:42:ASP:OD1	61:SZ:43:LYS:N	2.39	0.55
65:Sg:87:LEU:HB2	65:Sg:101:PHE:HB2	1.88	0.55
80:SY:90:ARG:HA	80:SY:93:ARG:HD2	1.87	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:S2:1240:A:N3	84:S2:1267:C:O2'	2.33	0.55
4:L5:279:A:OP1	19:LN:50:ARG:NH1	2.40	0.55
4:L5:3944:G:O6	4:L5:4069:U:O4	2.24	0.55
4:L5:4389:C:H2'	4:L5:4390:A:C8	2.42	0.55
4:L5:4473:A:O2'	44:Lm:122:ARG:NH2	2.40	0.55
12:LF:127:LYS:HB2	25:LT:133:ALA:HB3	1.87	0.55
15:LI:152:LEU:HB3	15:LI:165:ILE:HD12	1.88	0.55
28:LW:2:LYS:HE3	28:LW:15:PRO:HB3	1.89	0.55
68:SC:77:SER:OG	68:SC:79:GLU:OE1	2.25	0.55
70:SG:3:LEU:HD23	70:SG:109:LEU:HB3	1.89	0.55
70:SG:59:GLN:OE1	70:SG:72:ARG:NH2	2.40	0.55
72:SI:88:ASN:OD1	72:SI:205:ARG:NH2	2.40	0.55
83:Se:56:ASN:HB3	84:S2:606:G:H5''	1.88	0.55
4:L5:4347:G:H2'	4:L5:4348:A:C8	2.42	0.55
4:L5:4586:G:O6	4:L5:4717:A:N6	2.40	0.55
5:L7:63:C:H5'	5:L7:64:G:H5''	1.89	0.55
6:L8:96:C:H5''	39:Lh:66:LYS:HG2	1.89	0.55
16:LJ:95:ARG:HD3	16:LJ:175:LEU:HB2	1.89	0.55
58:SS:15:VAL:HG12	58:SS:16:LEU:HG	1.89	0.55
65:Sg:260:ASP:O	65:Sg:264:LYS:N	2.39	0.55
84:S2:1275:G:N2	84:S2:1506:A:OP2	2.37	0.55
2:CF:5:LYS:NZ	2:CF:81:GLU:OE2	2.36	0.54
3:AT:24:C:H2'	3:AT:25:A:C8	2.42	0.54
4:L5:137:G:H2'	4:L5:138:G:C8	2.42	0.54
4:L5:148:C:OP2	13:LG:197:LYS:NZ	2.31	0.54
4:L5:2017:A:O2'	4:L5:2018:C:H6	1.90	0.54
4:L5:3893:C:H2'	4:L5:3894:A:H8	1.73	0.54
10:LD:37:VAL:HG12	10:LD:50:ARG:HD3	1.89	0.54
25:LT:119:ALA:HA	25:LT:122:LYS:HE3	1.88	0.54
72:SI:84:ASN:HD22	72:SI:100:CYS:HB3	1.72	0.54
84:S2:1337:4AC:H2'	84:S2:1338:G:C8	2.42	0.54
84:S2:1348:G:H2'	84:S2:1349:G:H8	1.72	0.54
4:L5:2407:G:N2	4:L5:2407:G:OP2	2.40	0.54
4:L5:3599:A:H2'	4:L5:3600:G:C8	2.41	0.54
7:LA:80:GLU:HB2	7:LA:170:ALA:HA	1.88	0.54
11:LE:165:LEU:HD11	11:LE:176:THR:HG22	1.89	0.54
24:LS:83:ARG:HG3	24:LS:125:GLN:HB2	1.89	0.54
56:SQ:141:TYR:OH	84:S2:1668:U:OP2	2.25	0.54
84:S2:602:G:H3'	84:S2:603:C:H2'	1.89	0.54
4:L5:135:G:H22	39:Lh:94:ARG:HG2	1.73	0.54
4:L5:172:C:H4'	4:L5:173:C:H5'	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:429:A:H2'	4:L5:430:G:H8	1.71	0.54
4:L5:469:C:O2	11:LE:105:ARG:NE	2.36	0.54
4:L5:1683:PSU:OP1	32:La:44:ASN:ND2	2.39	0.54
44:Lm:79:GLU:OE2	44:Lm:81:SER:OG	2.20	0.54
72:SI:81:VAL:HG22	72:SI:102:VAL:HG12	1.90	0.54
72:SI:98:LYS:HG3	72:SI:178:ARG:HG2	1.89	0.54
72:SI:106:SER:HB3	72:SI:171:LEU:HG	1.89	0.54
1:Pt:38:C:O2'	84:S2:1058:A:OP1	2.22	0.54
2:CF:79:LYS:HD2	2:CF:295:HIS:HB3	1.90	0.54
4:L5:444:G:H2'	4:L5:445:U:H6	1.71	0.54
4:L5:1091:C:H2'	4:L5:1092:G:H8	1.72	0.54
4:L5:1327:C:H2'	4:L5:1328:G:H8	1.72	0.54
4:L5:1334:A:H2'	4:L5:1335:G:H8	1.72	0.54
4:L5:2486:G:O6	4:L5:2493:G:O6	2.25	0.54
4:L5:4736:C:H2'	4:L5:4737:G:H8	1.72	0.54
8:LB:29:VAL:HG12	8:LB:31:SER:H	1.73	0.54
10:LD:64:ILE:HD13	10:LD:109:LEU:HD22	1.88	0.54
56:SQ:42:ILE:HG23	56:SQ:44:PRO:HD2	1.89	0.54
84:S2:695:C:N4	84:S2:736:C:O2'	2.40	0.54
84:S2:980:A:H2'	84:S2:981:A:C8	2.42	0.54
84:S2:1217:A:H2'	84:S2:1218:C:C6	2.43	0.54
4:L5:438:G:OP1	36:Le:16:ARG:NH1	2.36	0.54
4:L5:1795:A:N3	5:L7:79:U:O2'	2.41	0.54
4:L5:2647:A:H3'	4:L5:2648:G:H8	1.72	0.54
4:L5:4723:A:O2'	8:LB:101:THR:O	2.25	0.54
13:LG:83:PHE:HA	13:LG:183:ILE:HD13	1.88	0.54
16:LJ:22:LEU:HD22	16:LJ:128:LEU:HD12	1.89	0.54
69:SE:44:LEU:HD23	69:SE:82:TYR:HB3	1.90	0.54
84:S2:323:C:H2'	84:S2:327:G:H22	1.72	0.54
84:S2:1417:C:O2	84:S2:1422:G:O6	2.26	0.54
84:S2:1719:A:N6	84:S2:1814:G:O2'	2.40	0.54
4:L5:429:A:H2'	4:L5:430:G:C8	2.43	0.54
4:L5:667:A:H5''	4:L5:668:C:H5''	1.89	0.54
4:L5:1872:G:O2'	4:L5:4219:A:N3	2.36	0.54
4:L5:3664:G:H2'	4:L5:3665:G:H8	1.73	0.54
4:L5:4594:U:H2'	4:L5:4595:G:C8	2.43	0.54
6:L8:43:A:H2'	6:L8:44:A:H8	1.72	0.54
18:LM:100:ARG:HA	18:LM:103:LYS:HG2	1.89	0.54
60:SU:80:PHE:HB3	63:Sd:52:PHE:HB3	1.88	0.54
65:Sg:22:ALA:HB1	65:Sg:71:ILE:HG23	1.89	0.54
68:SC:72:ASP:OD2	68:SC:272:HIS:NE2	2.32	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:SE:80:ILE:HG23	69:SE:81:THR:HG23	1.89	0.54
82:Sb:42:LYS:HE3	82:Sb:58:GLY:H	1.71	0.54
84:S2:420:G:O2'	84:S2:660:C:N3	2.39	0.54
4:L5:262:G:H2'	4:L5:263:G:C8	2.41	0.54
4:L5:1802:A:N3	25:LT:130:ARG:NH2	2.55	0.54
4:L5:2756:G:O6	31:LZ:51:ARG:NH2	2.38	0.54
6:L8:67:U:H2'	6:L8:68:G:C8	2.42	0.54
30:LY:83:GLU:OE1	30:LY:84:ARG:NH1	2.41	0.54
48:Lr:28:GLU:OE2	48:Lr:31:ASN:ND2	2.38	0.54
67:SB:186:ASN:HA	67:SB:189:ILE:HD12	1.90	0.54
79:SX:28:LYS:HE2	79:SX:32:LEU:HD22	1.90	0.54
84:S2:1845:A:H2'	84:S2:1846:G:C8	2.43	0.54
4:L5:426:A:H2'	4:L5:427:A:H8	1.73	0.54
4:L5:502:C:H3'	4:L5:503:C:H3'	1.90	0.54
4:L5:748:G:O6	24:LS:98:ARG:NH2	2.41	0.54
4:L5:2406:G:O6	4:L5:2785:C:N4	2.41	0.54
4:L5:2777:G:H5''	4:L5:2778:G:H5'	1.89	0.54
5:L7:6:C:O2'	10:LD:50:ARG:NH2	2.40	0.54
5:L7:119:U:C2	10:LD:261:VAL:HG11	2.42	0.54
10:LD:122:GLN:O	10:LD:248:ARG:NH2	2.41	0.54
28:LW:105:ARG:NH2	70:SG:149:LYS:O	2.40	0.54
52:SF:100:ILE:HD11	52:SF:108:PRO:HB3	1.90	0.54
57:SR:60:ARG:HA	57:SR:63:ARG:HG2	1.90	0.54
65:Sg:32:LEU:HA	65:Sg:42:MET:HA	1.90	0.54
65:Sg:254:PRO:O	65:Sg:272:GLN:NE2	2.41	0.54
81:Sa:23:CYS:HB3	81:Sa:28:ARG:H	1.72	0.54
85:Zt:64:U:H2'	85:Zt:65:G:H8	1.72	0.54
4:L5:515:C:H41	4:L5:647:G:H21	1.53	0.54
4:L5:2318:G:N2	4:L5:2321:G:OP2	2.29	0.54
4:L5:2495:U:H2'	4:L5:2496:G:C8	2.40	0.54
4:L5:4174:U:H2'	4:L5:4175:G:H8	1.73	0.54
6:L8:47:C:H1'	6:L8:61:A:H2'	1.90	0.54
7:LA:20:VAL:HA	7:LA:23:ARG:HG3	1.89	0.54
8:LB:258:HIS:HA	8:LB:260:ALA:H	1.73	0.54
13:LG:167:VAL:HG12	13:LG:170:LEU:HD12	1.90	0.54
59:ST:56:ARG:NE	84:S2:1541:G:OP1	2.34	0.54
84:S2:1259:A:H62	84:S2:1518:C:H3'	1.73	0.54
4:L5:1890:G:OP2	4:L5:1890:G:N2	2.32	0.54
4:L5:2572:C:O2'	31:LZ:112:ARG:NH2	2.40	0.54
4:L5:4954:G:H2'	4:L5:4955:A:C8	2.43	0.54
8:LB:222:VAL:O	8:LB:343:ARG:NH1	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:SH:100:ILE:HG21	71:SH:122:LEU:HD12	1.90	0.54
84:S2:1244:PSU:H2'	84:S2:1245:G:H8	1.73	0.54
84:S2:1568:C:H2'	84:S2:1569:A:C8	2.43	0.54
85:Zt:15:G:N2	85:Zt:48:C:H42	2.06	0.54
2:CF:261:THR:O	2:CF:311:ASN:ND2	2.41	0.53
4:L5:2275:G:H2'	4:L5:2276:A:C8	2.43	0.53
4:L5:2640:G:H2'	4:L5:2641:A:C8	2.43	0.53
4:L5:4238:G:H2'	4:L5:4239:A:C8	2.43	0.53
4:L5:4420:U:H5''	4:L5:4421:C:H5	1.72	0.53
4:L5:4604:G:N2	4:L5:4607:A:OP2	2.36	0.53
5:L7:99:G:OP2	24:LS:55:LYS:NZ	2.31	0.53
30:LY:67:ILE:O	30:LY:84:ARG:NH2	2.38	0.53
58:SS:60:THR:OG1	58:SS:62:ASP:OD1	2.22	0.53
75:SN:15:ALA:HB2	82:Sb:20:LYS:HD3	1.89	0.53
80:SY:11:LYS:NZ	84:S2:832:G:O6	2.41	0.53
81:Sa:5:ARG:HH21	84:S2:1864:U:H3'	1.72	0.53
85:Zt:16:C:H1'	85:Zt:18:U:H5''	1.90	0.53
4:L5:85:G:O2'	4:L5:97:G:O6	2.22	0.53
4:L5:1281:G:H5'	9:LC:323:ARG:HB2	1.90	0.53
4:L5:2460:A:OP2	89:LN:301:SPD:N10	2.42	0.53
10:LD:211:LEU:HB3	10:LD:219:TYR:HB2	1.90	0.53
52:SF:124:ASP:O	52:SF:139:VAL:N	2.38	0.53
68:SC:65:LYS:HD2	68:SC:273:LEU:HD13	1.89	0.53
73:SJ:149:VAL:HG11	73:SJ:157:ILE:HD11	1.90	0.53
76:SO:113:GLN:OE1	81:Sa:46:GLU:N	2.41	0.53
80:SY:41:ARG:NH2	80:SY:52:PRO:O	2.41	0.53
84:S2:1726:G:H1	84:S2:1808:U:H3	1.55	0.53
84:S2:1845:A:H2'	84:S2:1846:G:H8	1.72	0.53
4:L5:1511:U:H2'	4:L5:1512:G:H8	1.73	0.53
4:L5:3610:A:H2'	4:L5:3611:A:H8	1.72	0.53
4:L5:3796:U:O2'	84:S2:1720:U:O2'	2.21	0.53
32:La:36:GLY:HA3	32:La:40:HIS:CE1	2.43	0.53
65:Sg:18:VAL:O	65:Sg:287:THR:OG1	2.25	0.53
65:Sg:89:LEU:HB3	65:Sg:99:ARG:HB3	1.90	0.53
84:S2:888:U:H4'	84:S2:889:U:H5'	1.89	0.53
4:L5:287:U:H2'	4:L5:288:G:C8	2.44	0.53
4:L5:2475:G:N1	29:LX:51:THR:O	2.28	0.53
4:L5:3774:A:H2'	4:L5:3775:A:C8	2.43	0.53
4:L5:4107:G:N2	4:L5:4108:G:O6	2.41	0.53
4:L5:4716:C:H2'	4:L5:4717:A:H8	1.72	0.53
4:L5:4997:G:H1	4:L5:5053:U:H3	1.57	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:LM:119:ARG:HG3	20:LO:189:ILE:HG23	1.91	0.53
21:LP:64:ASN:ND2	21:LP:80:GLN:OE1	2.39	0.53
22:LQ:151:HIS:ND1	22:LQ:164:LYS:O	2.38	0.53
31:LZ:9:LYS:NZ	31:LZ:83:THR:O	2.34	0.53
66:SA:102:ARG:HH12	84:S2:1377:U:H3'	1.73	0.53
84:S2:454:U:H2'	84:S2:455:A:C8	2.42	0.53
84:S2:1656:G:O6	84:S2:1668:U:O4	2.27	0.53
84:S2:1744:G:O2'	84:S2:1789:G:N2	2.29	0.53
2:CF:8:ILE:HB	2:CF:87:VAL:HG12	1.89	0.53
4:L5:2519:U:O2'	4:L5:2530:U:O2	2.21	0.53
4:L5:3870:C:H2'	4:L5:3871:A:C8	2.43	0.53
4:L5:3873:G:H2'	4:L5:3874:G:C8	2.43	0.53
4:L5:4897:G:H2'	4:L5:4898:G:H8	1.74	0.53
5:L7:64:G:H2'	5:L7:65:G:C8	2.44	0.53
7:LA:79:ALA:HA	7:LA:169:VAL:HA	1.89	0.53
20:LO:186:GLU:OE1	20:LO:186:GLU:N	2.41	0.53
52:SF:59:LYS:HB3	52:SF:62:ARG:HG3	1.90	0.53
56:SQ:130:LYS:NZ	56:SQ:131:LYS:O	2.41	0.53
65:Sg:106:LYS:HB3	65:Sg:125:ARG:HB2	1.91	0.53
73:SJ:109:ARG:NH2	73:SJ:111:GLN:OE1	2.41	0.53
73:SJ:145:PRO:HD2	84:S2:522:A:H5''	1.90	0.53
84:S2:1172:U:H2'	84:S2:1173:A:H8	1.74	0.53
84:S2:1536:G:H2'	84:S2:1537:A:C8	2.42	0.53
2:CF:132:GLN:HB3	2:CF:136:HIS:HE1	1.74	0.53
2:CF:273:LYS:HE2	2:CF:301:GLU:HG2	1.89	0.53
4:L5:1983:A:H4'	4:L5:1984:A:H8	1.74	0.53
4:L5:2295:C:H2'	4:L5:2296:G:C8	2.42	0.53
4:L5:2884:G:H2'	4:L5:2885:A:H8	1.73	0.53
4:L5:4520:G:N2	8:LB:253:CYS:SG	2.82	0.53
5:L7:28:C:H1'	5:L7:54:A:H61	1.74	0.53
5:L7:64:G:H2'	5:L7:65:G:H8	1.73	0.53
8:LB:217:ILE:HD12	8:LB:347:LEU:HB3	1.91	0.53
25:LT:43:LYS:O	25:LT:58:HIS:ND1	2.42	0.53
27:LV:21:PRO:HA	27:LV:54:ALA:HA	1.90	0.53
52:SF:127:ARG:H	52:SF:135:ARG:HD2	1.73	0.53
66:SA:118:GLU:HG3	68:SC:65:LYS:HE2	1.90	0.53
71:SH:165:ASN:O	71:SH:169:LYS:NZ	2.37	0.53
1:Pt:50:U:O2	1:Pt:64:G:N2	2.23	0.53
2:CF:240:ARG:HD2	2:CF:304:PRO:HB2	1.91	0.53
4:L5:959:G:O2'	4:L5:2263:A:N6	2.41	0.53
19:LN:70:GLY:O	89:LN:301:SPD:N6	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:SK:31:LYS:NZ	53:SK:40:VAL:H	2.05	0.53
56:SQ:67:ASP:OD2	56:SQ:69:ARG:NH1	2.42	0.53
71:SH:31:GLU:HA	71:SH:37:LYS:HG3	1.91	0.53
78:SW:6:VAL:HG13	78:SW:29:PRO:HB2	1.90	0.53
84:S2:291:G:H2'	84:S2:292:A:C8	2.43	0.53
84:S2:1115:U:O2'	84:S2:1117:C:OP2	2.27	0.53
4:L5:293:G:OP1	88:L5:5265:SPM:N1	2.38	0.53
4:L5:1241:C:H1'	33:Lb:119:CYS:HA	1.90	0.53
4:L5:1820:C:H2'	4:L5:1822:U:H5'	1.90	0.53
4:L5:2296:G:O2'	9:LC:242:PRO:O	2.23	0.53
7:LA:229:ALA:HB3	7:LA:234:LYS:HB3	1.91	0.53
11:LE:190:HIS:HB3	11:LE:193:PHE:HD2	1.73	0.53
29:LX:121:VAL:HA	29:LX:140:LEU:HA	1.91	0.53
52:SF:78:MET:HE3	84:S2:1222:G:H5''	1.89	0.53
54:SM:91:LEU:HD12	54:SM:106:CYS:HB2	1.91	0.53
58:SS:88:LYS:H	58:SS:95:TYR:HD1	1.57	0.53
65:Sg:164:ILE:HG22	65:Sg:178:ASN:HA	1.91	0.53
76:SO:38:ASN:ND2	84:S2:960:U:OP2	2.39	0.53
79:SX:68:LYS:HB3	79:SX:91:LEU:HD13	1.90	0.53
84:S2:329:G:H2'	84:S2:330:G:C8	2.44	0.53
4:L5:370:U:HO2'	41:Lj:16:HIS:HD1	1.57	0.53
4:L5:4373:G:N7	46:Lo:61:LYS:NZ	2.48	0.53
4:L5:4730:C:H2'	4:L5:4731:G:C8	2.44	0.53
8:LB:219:VAL:HG11	8:LB:337:VAL:HG13	1.89	0.53
48:Lr:26:SER:OG	48:Lr:28:GLU:OE1	2.21	0.53
70:SG:133:LEU:HB2	84:S2:65:C:C2	2.43	0.53
84:S2:525:A:H2'	84:S2:526:A:H8	1.72	0.53
84:S2:979:C:H2'	84:S2:980:A:H8	1.74	0.53
4:L5:121:A:H62	4:L5:152:U:H3	1.57	0.53
4:L5:1243:C:H2'	4:L5:1244:G:H8	1.74	0.53
4:L5:1366:G:H5''	17:LL:36:ARG:HH12	1.73	0.53
4:L5:3807:A:HO2'	84:S2:1816:G:HO2'	1.57	0.53
4:L5:4906:C:H2'	4:L5:4907:G:H8	1.74	0.53
4:L5:5057:C:H2'	4:L5:5058:A:C8	2.44	0.53
14:LH:89:ARG:HD3	14:LH:91:LYS:HE3	1.91	0.53
36:Le:101:HIS:O	36:Le:128:ARG:NH2	2.42	0.53
49:Ls:143:ILE:HD12	49:Ls:158:VAL:HG11	1.90	0.53
55:SP:81:ARG:NH1	55:SP:120:SER:OG	2.41	0.53
66:SA:198:MET:HG2	66:SA:200:ASP:H	1.74	0.53
70:SG:20:ASP:HB3	70:SG:23:LYS:HB2	1.89	0.53
70:SG:23:LYS:HE3	70:SG:41:LEU:HA	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:Sb:68:GLY:O	84:S2:928:G:N2	2.37	0.53
84:S2:527:C:H2'	84:S2:528:A:C8	2.43	0.53
4:L5:1207:C:H2'	4:L5:1208:G:H8	1.73	0.52
6:L8:130:C:H2'	6:L8:131:G:H8	1.73	0.52
22:LQ:155:ALA:O	22:LQ:158:THR:OG1	2.25	0.52
54:SM:83:LYS:NZ	54:SM:103:VAL:O	2.42	0.52
69:SE:108:ARG:NH1	84:S2:847:A:OP1	2.42	0.52
70:SG:22:ARG:HG3	70:SG:25:ARG:HH12	1.74	0.52
80:SY:119:GLY:O	84:S2:84:A:O2'	2.25	0.52
84:S2:996:A:H2'	84:S2:997:A:C8	2.44	0.52
4:L5:441:G:H2'	4:L5:442:G:C8	2.44	0.52
4:L5:1351:G:O6	22:LQ:55:ARG:NH1	2.42	0.52
4:L5:1655:C:OP1	4:L5:1679:A:O2'	2.22	0.52
4:L5:1697:G:H22	4:L5:2084:C:P	2.32	0.52
4:L5:1998:A:N6	49:Ls:40:MET:SD	2.82	0.52
4:L5:2101:C:H2'	4:L5:2102:G:C8	2.44	0.52
4:L5:2389:A:H4'	35:Ld:70:LYS:HG3	1.91	0.52
4:L5:3723:A:H2'	4:L5:3724:A:H8	1.74	0.52
15:LI:4:ARG:NH1	15:LI:9:TYR:OH	2.40	0.52
18:LM:104:MET:HG3	18:LM:108:ASP:HB2	1.91	0.52
58:SS:12:ILE:HG22	58:SS:21:ASP:HA	1.91	0.52
68:SC:78:LEU:HD12	68:SC:81:ILE:HD12	1.91	0.52
79:SX:20:GLN:OE1	84:S2:1165:G:N1	2.40	0.52
80:SY:41:ARG:HA	80:SY:55:ILE:HG21	1.91	0.52
4:L5:280:G:OP2	19:LN:44:ARG:NH1	2.41	0.52
4:L5:1197:C:H2'	4:L5:1198:G:H8	1.74	0.52
5:L7:49:A:H5''	10:LD:224:SER:HB2	1.90	0.52
17:LL:111:GLN:O	17:LL:115:GLN:HG2	2.09	0.52
58:SS:121:ARG:HG3	58:SS:131:VAL:HB	1.90	0.52
70:SG:170:ARG:NH1	84:S2:72:C:O2	2.42	0.52
71:SH:164:ASN:OD1	71:SH:165:ASN:ND2	2.43	0.52
84:S2:98:C:OP2	84:S2:426:A:O2'	2.24	0.52
4:L5:1826:G:H4'	33:Lb:43:MET:HE3	1.92	0.52
4:L5:4088:C:H2'	4:L5:4089:G:C8	2.44	0.52
4:L5:4281:A:H2'	4:L5:4282:A:H2'	1.91	0.52
4:L5:4584:A:H2'	4:L5:4585:U:O4'	2.09	0.52
17:LL:59:VAL:HG21	17:LL:73:GLY:HA3	1.91	0.52
45:Ln:11:ARG:NH2	84:S2:1844:U:OP1	2.42	0.52
48:Lr:32:LEU:HD21	48:Lr:50:GLY:HA2	1.90	0.52
62:Sc:24:GLN:NE2	84:S2:1218:C:O2'	2.42	0.52
77:SV:17:CYS:HB3	77:SV:22:ARG:H	1.73	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:SX:28:LYS:NZ	84:S2:1189:A:OP1	2.36	0.52
84:S2:1754:G:N7	84:S2:1779:G:N2	2.57	0.52
4:L5:32:G:H21	4:L5:50:C:H5	1.56	0.52
4:L5:38:A:H61	4:L5:41:C:H3'	1.75	0.52
4:L5:1984:A:N6	4:L5:2010:A:O2'	2.43	0.52
4:L5:2079:G:H2'	4:L5:2080:U:C6	2.45	0.52
4:L5:2620:G:H1	4:L5:2636:U:H3	1.57	0.52
4:L5:4353:PSU:H5'	4:L5:4354:U:H5'	1.89	0.52
4:L5:4622:A:H2'	4:L5:4623:OMG:C8	2.45	0.52
4:L5:4966:A:H5''	8:LB:128:LYS:HG3	1.91	0.52
69:SE:134:LYS:N	84:S2:298:G:OP1	2.38	0.52
70:SG:7:PHE:HD1	70:SG:113:ILE:HB	1.72	0.52
84:S2:1588:A:H2'	84:S2:1589:A:C8	2.44	0.52
3:AT:51:U:H2'	3:AT:52:C:C6	2.45	0.52
4:L5:64:A:H1'	4:L5:76:A:H1'	1.90	0.52
4:L5:447:C:H2'	4:L5:448:G:H8	1.73	0.52
4:L5:2080:U:H2'	4:L5:2081:C:C6	2.44	0.52
4:L5:3816:A:OP1	4:L5:3818:UY1:N1	2.43	0.52
4:L5:3893:C:H2'	4:L5:3894:A:C8	2.45	0.52
38:Lg:41:ALA:O	38:Lg:52:ARG:NH1	2.37	0.52
69:SE:125:LYS:O	69:SE:142:HIS:N	2.43	0.52
77:SV:15:ARG:NH1	77:SV:33:GLN:OE1	2.43	0.52
80:SY:41:ARG:HH21	80:SY:53:ASP:HA	1.74	0.52
84:S2:329:G:H2'	84:S2:330:G:H8	1.75	0.52
84:S2:1208:A:H2'	84:S2:1209:A:H8	1.75	0.52
4:L5:86:U:H2'	4:L5:87:A:H8	1.74	0.52
4:L5:1258:G:H2'	4:L5:1259:G:C8	2.44	0.52
4:L5:3933:G:H2'	4:L5:3934:G:H8	1.74	0.52
4:L5:4327:C:OP1	25:LT:70:HIS:NE2	2.43	0.52
4:L5:4872:G:OP2	18:LM:94:LYS:NZ	2.40	0.52
8:LB:206:PRO:HG2	8:LB:209:GLN:HG3	1.91	0.52
34:Lc:38:ILE:HD11	34:Lc:46:VAL:HG21	1.90	0.52
51:SD:45:ARG:NH1	51:SD:85:GLU:OE1	2.42	0.52
53:SK:51:SER:OG	84:S2:1277:C:OP1	2.28	0.52
67:SB:99:ASN:OD1	67:SB:100:PHE:N	2.39	0.52
71:SH:58:LYS:HB2	71:SH:90:LYS:HG2	1.90	0.52
73:SJ:45:ARG:NH2	84:S2:522:A:OP2	2.39	0.52
84:S2:601:OMG:H2'	84:S2:602:G:C8	2.45	0.52
1:Pt:43:A:H2'	1:Pt:44:A:C8	2.45	0.52
4:L5:418:A:H4'	4:L5:2311:C:H5'	1.92	0.52
4:L5:1876:U:H2'	4:L5:1877:G:C8	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:1895:G:OP1	12:LF:96:ARG:NH2	2.41	0.52
4:L5:2375:A:H2'	4:L5:2376:A:H8	1.73	0.52
4:L5:4981:G:H3'	4:L5:4982:A:H8	1.75	0.52
11:LE:223:ARG:NH2	11:LE:236:GLU:O	2.43	0.52
41:Lj:2:THR:O	41:Lj:7:SER:OG	2.25	0.52
51:SD:23:GLU:OE2	51:SD:27:ARG:NE	2.39	0.52
63:Sd:7:TYR:OH	84:S2:1274:G:N7	2.32	0.52
79:SX:54:LYS:NZ	79:SX:94:ILE:O	2.41	0.52
84:S2:516:A:N1	84:S2:643:A:O2'	2.38	0.52
84:S2:929:G:H2'	84:S2:930:C:O4'	2.09	0.52
4:L5:1194:G:H2'	4:L5:1195:G:H8	1.73	0.52
4:L5:1411:C:H2'	4:L5:1412:G:C8	2.44	0.52
4:L5:1618:G:OP1	41:Lj:13:ASN:ND2	2.35	0.52
4:L5:3722:G:H2'	4:L5:3723:A:H8	1.74	0.52
6:L8:60:G:O6	6:L8:96:C:O2'	2.27	0.52
8:LB:29:VAL:HA	8:LB:220:ILE:HD13	1.92	0.52
23:LR:21:LYS:HE3	23:LR:55:VAL:HA	1.92	0.52
31:LZ:100:VAL:HG23	31:LZ:106:LEU:HB3	1.92	0.52
49:Ls:114:GLY:HA2	49:Ls:166:LYS:HD2	1.92	0.52
72:SI:25:ARG:HA	84:S2:448:A:H5''	1.91	0.52
84:S2:1220:A:N3	84:S2:1677:U:O2'	2.41	0.52
4:L5:418:A:C2	6:L8:17:A:H1'	2.45	0.52
4:L5:2274:C:H2'	4:L5:2275:G:C8	2.45	0.52
4:L5:3633:C:H2'	4:L5:3634:G:C8	2.44	0.52
4:L5:4188:U:H2'	4:L5:4189:U:C6	2.45	0.52
4:L5:4232:U:H5'	46:Lo:3:ASN:HB3	1.92	0.52
4:L5:4688:C:H2'	4:L5:4689:PSU:C6	2.44	0.52
4:L5:4887:C:N3	4:L5:4932:U:O2	2.43	0.52
5:L7:57:C:H2'	5:L7:58:A:H8	1.75	0.52
9:LC:13:GLU:OE1	9:LC:161:TYR:OH	2.25	0.52
65:Sg:68:ASP:HB3	65:Sg:111:VAL:HG22	1.92	0.52
70:SG:136:LYS:NZ	70:SG:175:LYS:O	2.35	0.52
84:S2:655:A:H4'	84:S2:656:G:H3'	1.92	0.52
84:S2:656:G:N2	84:S2:663:C:H5''	2.24	0.52
84:S2:672:A:N6	84:S2:1027:A:OP1	2.35	0.52
4:L5:1461:C:H2'	4:L5:1462:A:C8	2.46	0.51
4:L5:1787:A:O5'	88:L5:5259:SPM:N14	2.42	0.51
4:L5:1971:C:H2'	4:L5:1972:G:C8	2.45	0.51
4:L5:3723:A:H2'	4:L5:3724:A:C8	2.45	0.51
4:L5:3787:G:N3	4:L5:3789:C:N4	2.58	0.51
4:L5:4064:C:N4	4:L5:4065:G:O6	2.43	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:4340:U:N3	90:L5:5296:3HE:O1	2.43	0.51
4:L5:4622:A:H2'	4:L5:4623:OMG:H8	1.75	0.51
6:L8:90:C:HO2'	30:LY:24:HIS:HD1	1.58	0.51
84:S2:467:G:H2'	84:S2:468:A2M:H8	1.92	0.51
84:S2:1201:U:H2'	84:S2:1202:U:C6	2.45	0.51
4:L5:2457:G:OP1	19:LN:65:ARG:NH2	2.34	0.51
4:L5:2809:G:O2'	4:L5:4644:G:OP1	2.28	0.51
4:L5:3805:U:H2'	4:L5:3806:G:H8	1.75	0.51
4:L5:4321:U:H2'	4:L5:4322:G:C8	2.45	0.51
4:L5:4759:C:H2'	4:L5:4760:G:C8	2.45	0.51
5:L7:34:C:N3	5:L7:46:C:O2'	2.40	0.51
8:LB:107:ALA:HB2	8:LB:201:LEU:HD22	1.92	0.51
10:LD:146:LEU:HB2	10:LD:163:LEU:HD12	1.93	0.51
13:LG:157:ILE:HA	13:LG:201:THR:HG22	1.92	0.51
84:S2:1206:G:O2'	84:S2:1208:A:OP1	2.23	0.51
2:CF:15:HIS:HB2	2:CF:18:SER:HB3	1.92	0.51
4:L5:161:G:H2'	4:L5:162:A:H8	1.76	0.51
4:L5:1095:A:C2	4:L5:1200:G:N1	2.68	0.51
4:L5:1390:G:N2	4:L5:1393:G:OP2	2.33	0.51
4:L5:1824:G:H2'	4:L5:1825:A:C8	2.45	0.51
4:L5:3819:G:H2'	4:L5:3820:G:H8	1.75	0.51
28:LW:7:SER:OG	28:LW:8:PHE:N	2.43	0.51
84:S2:603:C:N4	84:S2:620:G:O6	2.43	0.51
4:L5:93:G:H2'	4:L5:94:A:C8	2.46	0.51
4:L5:752:G:O6	4:L5:912:G:N2	2.43	0.51
4:L5:1172:C:HO2'	4:L5:1173:G:H8	1.58	0.51
4:L5:3661:G:N7	7:LA:152:SER:OG	2.36	0.51
51:SD:66:ILE:HD11	51:SD:86:LEU:HB3	1.92	0.51
71:SH:20:GLU:HG2	71:SH:48:ALA:HB3	1.92	0.51
72:SI:3:ILE:O	72:SI:30:GLY:N	2.41	0.51
1:Pt:33:U:N3	1:Pt:36:C:OP2	2.43	0.51
4:L5:1253:G:O2'	4:L5:1257:A:N7	2.43	0.51
4:L5:1345:A:H2'	4:L5:1346:C:C6	2.46	0.51
4:L5:1787:A:N3	4:L5:4210:U:O2'	2.43	0.51
4:L5:1825:A:H2'	4:L5:1826:G:C8	2.46	0.51
4:L5:2706:G:C6	86:CI:78:HIS:HD2	2.28	0.51
17:LL:206:ASP:HA	17:LL:209:LYS:HD3	1.93	0.51
66:SA:111:GLN:HA	66:SA:116:PHE:CG	2.45	0.51
67:SB:98:THR:O	67:SB:232:HIS:NE2	2.44	0.51
80:SY:80:ASP:OD1	80:SY:81:TYR:N	2.43	0.51
84:S2:1777:G:H2'	84:S2:1778:C:H6	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AT:14:A:H3'	3:AT:15:G:H8	1.76	0.51
3:AT:30:C:H2'	3:AT:31:G:C8	2.46	0.51
4:L5:444:G:OP2	37:Lf:55:ASN:ND2	2.40	0.51
4:L5:942:G:H3'	12:LF:148:LYS:HD2	1.93	0.51
4:L5:3718:A2M:H2'	4:L5:3719:A:O4'	2.10	0.51
4:L5:3848:U:H2'	4:L5:3849:A:C8	2.45	0.51
10:LD:181:PRO:HD2	10:LD:195:HIS:CD2	2.46	0.51
23:LR:160:GLU:OE1	23:LR:163:ARG:NH2	2.41	0.51
25:LT:119:ALA:O	25:LT:123:GLY:N	2.44	0.51
49:Ls:110:ALA:HA	49:Ls:182:PRO:HG2	1.92	0.51
50:Lt:76:SER:OG	50:Lt:116:MET:SD	2.64	0.51
56:SQ:3:SER:OG	56:SQ:4:LYS:N	2.44	0.51
65:Sg:175:LYS:HB3	65:Sg:184:LEU:HD11	1.92	0.51
65:Sg:191:HIS:CG	65:Sg:195:LEU:HD21	2.46	0.51
70:SG:92:ARG:NH1	84:S2:1738:C:OP1	2.37	0.51
70:SG:135:PRO:HG3	70:SG:144:LEU:HD13	1.93	0.51
84:S2:1277:C:H2'	84:S2:1278:A:C8	2.44	0.51
84:S2:1657:G:H1	84:S2:1667:U:H3	1.57	0.51
4:L5:359:A:N3	4:L5:363:A:O2'	2.42	0.51
4:L5:4459:U:H2'	4:L5:4460:U:C6	2.45	0.51
4:L5:4504:C:H2'	4:L5:4505:C:H6	1.75	0.51
4:L5:5055:G:N2	35:Ld:118:GLN:OE1	2.38	0.51
13:LG:30:PRO:HG2	31:LZ:124:THR:HA	1.93	0.51
48:Lr:54:ALA:HA	48:Lr:61:VAL:HG23	1.92	0.51
51:SD:42:THR:OG1	51:SD:45:ARG:O	2.26	0.51
4:L5:1283:G:N1	4:L5:2076:G:OP1	2.24	0.51
4:L5:1328:G:O2'	4:L5:2349:A:OP1	2.29	0.51
4:L5:2751:G:H2'	4:L5:2752:G:H8	1.75	0.51
4:L5:2910:G:N2	4:L5:3585:G:O2'	2.44	0.51
7:LA:184:ARG:NH2	47:Lp:14:TYR:OH	2.40	0.51
16:LJ:83:LEU:HD22	16:LJ:132:VAL:HG11	1.93	0.51
64:Sf:103:LEU:HB2	64:Sf:105:TYR:CE2	2.45	0.51
68:SC:108:LYS:HD2	68:SC:233:LEU:HD13	1.93	0.51
71:SH:111:LYS:HE3	84:S2:796:G:H21	1.74	0.51
84:S2:1304:U:H2'	84:S2:1305:C:C6	2.46	0.51
84:S2:1808:U:H2'	84:S2:1809:A:C8	2.46	0.51
4:L5:1503:A:H4'	4:L5:1504:G:H5'	1.93	0.51
4:L5:1631:A:H2	7:LA:208:GLU:HG3	1.75	0.51
4:L5:1992:U:H4'	4:L5:1993:C:H5''	1.93	0.51
4:L5:2007:G:H21	4:L5:2012:A:N6	2.04	0.51
4:L5:2671:C:H2'	4:L5:2672:C:C6	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:4111:U:H2'	4:L5:4112:C:H5	1.75	0.51
6:L8:148:A:H2'	6:L8:149:G:C8	2.46	0.51
31:LZ:11:VAL:HG12	31:LZ:82:PRO:HA	1.93	0.51
39:Lh:88:THR:HB	39:Lh:91:MET:HB2	1.93	0.51
54:SM:86:GLY:HA2	54:SM:89:VAL:HG12	1.93	0.51
70:SG:50:VAL:HA	70:SG:113:ILE:HA	1.92	0.51
72:SI:114:GLU:HB3	72:SI:136:ILE:HD12	1.93	0.51
75:SN:66:VAL:HG13	75:SN:67:THR:HG23	1.92	0.51
84:S2:528:A:H2'	84:S2:529:A:C8	2.46	0.51
4:L5:1511:U:H2'	4:L5:1512:G:C8	2.46	0.51
4:L5:1733:G:N3	4:L5:4214:A:H2'	2.26	0.51
4:L5:2588:C:OP1	4:L5:2768:C:O2'	2.27	0.51
4:L5:3610:A:H2'	4:L5:3611:A:C8	2.46	0.51
4:L5:4089:G:H2'	4:L5:4090:G:H8	1.75	0.51
4:L5:4695:C:O2	44:Lm:106:ARG:NH2	2.43	0.51
4:L5:4997:G:H2'	4:L5:4998:G:H8	1.76	0.51
10:LD:67:ALA:HB1	25:LT:31:MET:HE2	1.92	0.51
14:LH:1:MET:HE1	24:LS:140:PRO:HB2	1.92	0.51
49:Ls:13:TYR:O	49:Ls:17:ILE:HG12	2.11	0.51
84:S2:109:PSU:H2'	84:S2:110:U:C6	2.46	0.51
84:S2:543:C:H3'	84:S2:544:G:H8	1.76	0.51
4:L5:256:G:H2'	4:L5:257:C:C6	2.46	0.50
4:L5:426:A:H2'	4:L5:427:A:C8	2.46	0.50
4:L5:659:G:H2'	4:L5:660:A:H8	1.75	0.50
4:L5:2272:C:H2'	4:L5:2273:G:H8	1.76	0.50
4:L5:2503:G:O6	7:LA:72:ARG:NH1	2.38	0.50
4:L5:3848:U:H2'	4:L5:3849:A:H8	1.76	0.50
4:L5:4095:G:H22	4:L5:4099:G:H22	1.58	0.50
4:L5:4156:G:H5''	4:L5:4157:A:H2'	1.93	0.50
6:L8:8:U:H2'	6:L8:9:A:C8	2.45	0.50
8:LB:299:ILE:HB	8:LB:313:SER:HB3	1.92	0.50
21:LP:94:MET:HE1	21:LP:146:ILE:HB	1.93	0.50
22:LQ:67:ILE:HD11	22:LQ:95:VAL:HG13	1.93	0.50
28:LW:56:ARG:HE	28:LW:61:LYS:HB2	1.77	0.50
65:Sg:205:SER:HA	65:Sg:221:LEU:HB2	1.93	0.50
79:SX:52:LEU:HD11	79:SX:73:GLN:HB2	1.92	0.50
80:SY:10:ARG:HA	84:S2:839:C:H41	1.76	0.50
84:S2:432:G:H2'	84:S2:433:A:H8	1.76	0.50
84:S2:1831:A:O2'	84:S2:1832:6MZ:O5'	2.23	0.50
1:Pt:47:U:O2'	1:Pt:50:U:OP1	2.27	0.50
3:AT:51:U:H3	3:AT:65:G:H1	1.58	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:7:C:H2'	4:L5:8:U:C6	2.47	0.50
4:L5:268:G:H2'	4:L5:269:G:C8	2.46	0.50
4:L5:2764:A:H2'	4:L5:2765:A:C8	2.45	0.50
4:L5:3809:G:OP2	4:L5:3809:G:N2	2.33	0.50
4:L5:4612:C:C2	14:LH:120:GLU:HB2	2.46	0.50
7:LA:206:PRO:HG3	7:LA:213:GLY:HA3	1.93	0.50
9:LC:262:GLU:HB3	9:LC:273:LEU:HD13	1.93	0.50
10:LD:120:GLU:O	10:LD:248:ARG:NH1	2.44	0.50
51:SD:32:ASP:OD1	51:SD:57:ASN:ND2	2.44	0.50
51:SD:175:VAL:HB	51:SD:182:LEU:HB3	1.92	0.50
67:SB:171:ILE:HG22	67:SB:174:ARG:HE	1.77	0.50
70:SG:67:VAL:HG12	70:SG:69:THR:HG22	1.93	0.50
76:SO:147:ARG:HH22	84:S2:1854:U:P	2.34	0.50
79:SX:63:ASN:OD1	84:S2:624:C:N4	2.42	0.50
84:S2:17:C:H2'	84:S2:18:C:C6	2.46	0.50
84:S2:1797:U:H2'	84:S2:1798:C:C6	2.47	0.50
4:L5:65:A:H61	4:L5:75:G:H1'	1.76	0.50
4:L5:425:U:H2'	4:L5:426:A:H8	1.76	0.50
4:L5:1197:C:H2'	4:L5:1198:G:C8	2.46	0.50
4:L5:1305:C:OP1	6:L8:7:U:O2'	2.29	0.50
4:L5:2404:A:O2'	41:Lj:12:ARG:O	2.29	0.50
4:L5:3785:A2M:H2	4:L5:4551:U:O2	2.11	0.50
15:LI:87:MET:HG2	15:LI:138:ILE:HG12	1.92	0.50
20:LO:168:TYR:CE2	20:LO:172:LYS:HD2	2.46	0.50
59:ST:84:ARG:NH1	84:S2:1605:G:OP1	2.36	0.50
65:Sg:124:SER:OG	65:Sg:125:ARG:N	2.45	0.50
68:SC:94:ILE:HD11	68:SC:159:LYS:HG2	1.93	0.50
70:SG:136:LYS:O	70:SG:176:ILE:HG13	2.11	0.50
72:SI:130:THR:O	72:SI:134:GLU:HB2	2.12	0.50
84:S2:751:G:H1'	84:S2:793:G:H21	1.75	0.50
84:S2:1203:G:H2'	84:S2:1204:A:C8	2.47	0.50
84:S2:1447:G:H2'	84:S2:1448:A:C8	2.47	0.50
2:CF:102:MET:HE3	2:CF:136:HIS:HD2	1.76	0.50
4:L5:1176:C:H42	4:L5:1184:A:H61	1.57	0.50
4:L5:1309:C:H2'	4:L5:1310:C:C6	2.47	0.50
4:L5:1613:A:H5''	7:LA:183:GLY:HA2	1.93	0.50
4:L5:2008:U:N3	4:L5:2011:C:OP2	2.29	0.50
4:L5:3727:A:H2'	4:L5:3728:A:C8	2.46	0.50
4:L5:4092:G:N7	4:L5:4114:C:N4	2.59	0.50
7:LA:13:GLY:O	7:LA:17:ARG:HG3	2.11	0.50
14:LH:115:ARG:HD3	14:LH:123:ILE:HD12	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:Li:55:ARG:O	40:Li:59:GLU:HG2	2.11	0.50
59:ST:62:ARG:NH2	84:S2:1543:U:OP2	2.38	0.50
63:Sd:19:ARG:NH2	84:S2:1661:A:OP1	2.40	0.50
71:SH:10:LYS:HE3	71:SH:17:ASP:HB3	1.94	0.50
74:SL:133:PRO:O	84:S2:383:G:O2'	2.29	0.50
84:S2:1410:C:H2'	84:S2:1411:G:H8	1.76	0.50
4:L5:86:U:H2'	4:L5:87:A:C8	2.46	0.50
4:L5:1601:A:OP1	41:Lj:5:THR:OG1	2.25	0.50
4:L5:3684:G:H2'	4:L5:3685:C:C6	2.46	0.50
4:L5:4501:U:OP1	8:LB:5:LYS:NZ	2.44	0.50
4:L5:4909:A:OP2	8:LB:156:TYR:OH	2.28	0.50
16:LJ:84:GLU:OE2	16:LJ:92:TYR:OH	2.22	0.50
21:LP:60:PHE:O	21:LP:78:TRP:NE1	2.44	0.50
23:LR:92:LYS:HG2	23:LR:96:MET:HE3	1.94	0.50
32:La:84:GLU:OE1	32:La:87:ARG:NH2	2.44	0.50
66:SA:85:ARG:NH1	66:SA:203:PHE:O	2.44	0.50
66:SA:147:LEU:HD13	66:SA:161:ILE:HB	1.94	0.50
84:S2:1010:G:H2'	84:S2:1011:A:H8	1.77	0.50
4:L5:422:C:H2'	4:L5:423:G:H8	1.77	0.50
4:L5:1802:A:H5''	4:L5:1803:G:H5'	1.93	0.50
4:L5:2891:U:OP2	23:LR:74:ARG:NE	2.42	0.50
4:L5:4246:G:H2'	4:L5:4247:G:H8	1.76	0.50
4:L5:4575:G:H2'	4:L5:4576:PSU:H6	1.77	0.50
6:L8:65:A:OP1	39:Lh:56:ARG:NE	2.41	0.50
7:LA:116:LEU:HB3	7:LA:126:LEU:HB2	1.92	0.50
28:LW:8:PHE:HB3	28:LW:36:CYS:HB3	1.94	0.50
70:SG:121:ILE:HB	70:SG:125:THR:HG23	1.94	0.50
80:SY:5:VAL:HG12	80:SY:43:LYS:HE3	1.93	0.50
82:Sb:26:GLN:NE2	84:S2:921:G:OP2	2.44	0.50
84:S2:317:C:H2'	84:S2:318:A:C4	2.46	0.50
84:S2:1753:C:H5'	84:S2:1780:G:H22	1.77	0.50
84:S2:1801:A:H2'	84:S2:1802:C:C6	2.47	0.50
85:Zt:64:U:H2'	85:Zt:65:G:C8	2.47	0.50
4:L5:1687:U:H2'	4:L5:1688:G:C8	2.45	0.50
4:L5:1942:A:N3	4:L5:4432:C:O2'	2.32	0.50
4:L5:1995:G:O2'	50:Lt:122:ALA:O	2.24	0.50
4:L5:2386:U:H2'	4:L5:2387:G:C8	2.47	0.50
4:L5:4680:G:H2'	4:L5:4681:A:C8	2.46	0.50
6:L8:12:G:N2	21:LP:120:ASN:OD1	2.35	0.50
10:LD:108:ARG:CZ	10:LD:253:TYR:HB2	2.41	0.50
10:LD:194:VAL:HA	10:LD:197:LYS:HD2	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:LI:88:ARG:HG2	15:LI:90:ARG:HD2	1.93	0.50
17:LL:91:ALA:HB1	17:LL:96:ILE:HB	1.92	0.50
51:SD:28:GLU:OE2	51:SD:65:ARG:NH2	2.44	0.50
69:SE:10:LYS:NZ	84:S2:95:G:OP1	2.34	0.50
84:S2:649:PSU:H2'	84:S2:650:A:H8	1.77	0.50
84:S2:979:C:H2'	84:S2:980:A:C8	2.47	0.50
84:S2:1598:G:N2	84:S2:1599:U:O4	2.36	0.50
1:Pt:34:A:OP2	56:SQ:146:ARG:NH2	2.44	0.50
3:AT:6:C:H2'	3:AT:7:G:C8	2.46	0.50
4:L5:654:C:H2'	4:L5:655:C:C6	2.47	0.50
4:L5:1741:G:O6	5:L7:103:A:O2'	2.21	0.50
4:L5:2745:A:H2'	4:L5:2746:A:H8	1.76	0.50
4:L5:4291:G:H4'	4:L5:4292:A:H5''	1.93	0.50
8:LB:113:GLU:OE2	8:LB:169:ARG:NH1	2.45	0.50
12:LF:41:MET:HE2	33:Lb:113:ALA:HB2	1.94	0.50
18:LM:46:ARG:O	18:LM:48:GLN:NE2	2.31	0.50
31:LZ:84:ARG:NH2	31:LZ:85:TYR:OH	2.45	0.50
64:Sf:117:LEU:HD12	64:Sf:118:ARG:HD3	1.94	0.50
69:SE:121:TYR:HA	69:SE:163:ASP:HA	1.94	0.50
84:S2:368:U:H3'	84:S2:369:C:H2'	1.93	0.50
84:S2:1239:U:N3	84:S2:1242:U:OP2	2.35	0.50
84:S2:1858:G:H2'	84:S2:1859:A:H8	1.77	0.50
85:Zt:22:G:H2'	85:Zt:23:A:C8	2.45	0.50
2:CF:349:HIS:ND1	2:CF:351:GLY:O	2.45	0.50
4:L5:94:A:H5''	32:La:34:ASN:HB2	1.92	0.50
4:L5:424:U:H2'	4:L5:425:U:C6	2.47	0.50
4:L5:2407:G:O6	43:Ll:2:SER:N	2.45	0.50
29:LX:78:LYS:HD3	29:LX:99:ILE:HG22	1.94	0.50
52:SF:22:LYS:HG3	52:SF:23:TRP:CD2	2.47	0.50
53:SK:85:LEU:HD12	53:SK:86:PRO:HD2	1.94	0.50
61:SZ:99:LEU:HD21	61:SZ:102:LYS:HB2	1.93	0.50
82:Sb:22:LYS:HE3	84:S2:1129:G:H5''	1.94	0.50
82:Sb:67:THR:OG1	82:Sb:70:LYS:O	2.23	0.50
84:S2:895:G:H2'	84:S2:896:U:H4'	1.94	0.50
84:S2:1398:G:H22	84:S2:1448:A:H2	1.58	0.50
84:S2:1550:G:H3'	84:S2:1579:A:H61	1.77	0.50
84:S2:1657:G:H2'	84:S2:1658:G:H8	1.77	0.50
2:CF:322:ARG:NH2	3:AT:1:G:O5'	2.45	0.49
4:L5:97:G:OP1	17:LL:16:LYS:NZ	2.36	0.49
4:L5:500:G:N2	4:L5:504:G:O2'	2.25	0.49
4:L5:1961:G:O2'	4:L5:2025:A:N6	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:1994:C:H2'	4:L5:1995:G:H8	1.76	0.49
4:L5:2000:G:O2'	4:L5:2001:G:N7	2.44	0.49
4:L5:2458:C:H5''	19:LN:67:ARG:HD2	1.93	0.49
4:L5:2570:U:H2'	4:L5:2571:C:C6	2.47	0.49
4:L5:4322:G:N2	4:L5:4325:A:OP2	2.36	0.49
4:L5:4638:U:H3'	4:L5:4639:G:H21	1.77	0.49
4:L5:5005:G:N2	4:L5:5041:G:O2'	2.45	0.49
8:LB:258:HIS:HA	8:LB:260:ALA:N	2.26	0.49
52:SF:26:ASP:N	52:SF:26:ASP:OD1	2.45	0.49
64:Sf:108:VAL:HB	64:Sf:113:LYS:H	1.76	0.49
65:Sg:82:SER:OG	65:Sg:83:TRP:N	2.45	0.49
73:SJ:136:ARG:HA	73:SJ:141:VAL:HA	1.94	0.49
84:S2:940:U:H3	84:S2:1002:U:H3	1.60	0.49
4:L5:180:C:H2'	4:L5:181:C:H6	1.76	0.49
4:L5:690:C:OP1	48:Lr:87:ARG:NH1	2.45	0.49
4:L5:1308:C:H2'	4:L5:1309:C:C6	2.47	0.49
4:L5:1555:G:O6	47:Lp:4:ARG:NH1	2.41	0.49
4:L5:1669:A:H5''	33:Lb:15:LYS:HD2	1.94	0.49
4:L5:2033:A:OP1	15:LI:162:ARG:NH2	2.35	0.49
4:L5:3777:G:H22	4:L5:3816:A:P	2.36	0.49
4:L5:4527:G:OP2	4:L5:4527:G:N2	2.35	0.49
4:L5:4775:C:N4	4:L5:4859:C:H42	2.00	0.49
20:LO:186:GLU:HA	20:LO:189:ILE:HB	1.93	0.49
54:SM:23:LYS:O	54:SM:27:ILE:HG12	2.12	0.49
74:SL:39:ASN:O	84:S2:292:A:O2'	2.23	0.49
77:SV:30:ALA:O	77:SV:60:ARG:HD3	2.12	0.49
84:S2:807:G:H2'	84:S2:808:A:H8	1.75	0.49
3:AT:3:C:H2'	3:AT:4:U:H6	1.77	0.49
4:L5:1392:A:H2'	4:L5:1393:G:C8	2.47	0.49
4:L5:1977:C:O2'	4:L5:1978:C:OP1	2.31	0.49
4:L5:2610:G:H2'	4:L5:2611:A:C8	2.47	0.49
4:L5:3659:G:OP1	7:LA:241:ARG:NH1	2.45	0.49
4:L5:4537:C:H2'	4:L5:4538:G:C8	2.47	0.49
4:L5:4629:U:H2'	4:L5:4630:G:H8	1.76	0.49
4:L5:4940:C:O2'	11:LE:246:ARG:NH2	2.45	0.49
4:L5:4967:A:H2'	4:L5:4968:A:C8	2.46	0.49
4:L5:4991:U:H2'	4:L5:4992:G:H8	1.76	0.49
20:LO:61:ARG:HA	20:LO:70:PRO:HD2	1.95	0.49
43:LI:23:ILE:HG23	43:LI:38:ASN:HB2	1.93	0.49
65:Sg:159:ASN:ND2	65:Sg:162:ASN:OD1	2.43	0.49
68:SC:259:THR:HG21	77:SV:16:LYS:H	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:SY:21:LYS:HE2	80:SY:75:ILE:HD11	1.94	0.49
84:S2:1854:U:H2'	84:S2:1855:G:H8	1.76	0.49
4:L5:1578:U:H2'	4:L5:1579:C:C6	2.47	0.49
6:L8:75:OMG:OP2	30:LY:74:TYR:OH	2.25	0.49
7:LA:108:PRO:HB2	47:Lp:86:LEU:HD23	1.94	0.49
29:LX:64:SER:HB2	39:Lh:69:LEU:HD13	1.94	0.49
64:Sf:89:LYS:O	84:S2:1507:G:N2	2.40	0.49
65:Sg:21:ILE:HG21	65:Sg:299:PHE:HB2	1.93	0.49
84:S2:5:U:H2'	84:S2:6:G:C8	2.47	0.49
84:S2:1289:U:H2'	84:S2:1290:G:C8	2.47	0.49
84:S2:1545:A:N3	84:S2:1671:G:O2'	2.31	0.49
85:Zt:67:U:H2'	85:Zt:68:C:C6	2.48	0.49
4:L5:400:A2M:H2'	4:L5:401:G:O4'	2.13	0.49
4:L5:475:G:H2'	4:L5:476:G:H8	1.77	0.49
4:L5:1857:C:H2'	4:L5:1858:A:C8	2.47	0.49
4:L5:4458:C:H2'	4:L5:4459:U:C6	2.48	0.49
4:L5:4895:C:O2'	18:LM:132:LYS:NZ	2.38	0.49
4:L5:4991:U:H2'	4:L5:4992:G:C8	2.47	0.49
7:LA:114:CYS:N	7:LA:165:VAL:O	2.46	0.49
8:LB:57:VAL:HG22	8:LB:73:VAL:HG22	1.94	0.49
31:LZ:46:ILE:HA	31:LZ:70:SER:HA	1.93	0.49
50:Lt:114:ARG:NH2	50:Lt:162:CYS:SG	2.86	0.49
64:Sf:99:LYS:NZ	84:S2:1287:A:OP1	2.39	0.49
84:S2:1048:G:H21	84:S2:1070:A:H62	1.60	0.49
84:S2:1146:C:O2'	84:S2:1150:A:N1	2.42	0.49
84:S2:1242:U:O2	84:S2:1517:G:O2'	2.27	0.49
84:S2:1515:G:H2'	84:S2:1516:G:C8	2.48	0.49
84:S2:1705:C:H2'	84:S2:1706:G:C8	2.48	0.49
2:CF:372:PHE:HD1	2:CF:404:MET:HB3	1.77	0.49
4:L5:264:C:H2'	4:L5:265:C:C4	2.47	0.49
4:L5:310:G:H2'	4:L5:311:G:H8	1.76	0.49
4:L5:444:G:H2'	4:L5:445:U:C6	2.47	0.49
4:L5:474:C:H2'	4:L5:475:G:C8	2.47	0.49
16:LJ:56:THR:OG1	16:LJ:64:ARG:N	2.43	0.49
28:LW:97:LYS:O	28:LW:99:GLU:N	2.43	0.49
53:SK:64:TRP:HB3	63:Sd:23:VAL:HA	1.95	0.49
65:Sg:129:ILE:O	65:Sg:142:VAL:N	2.44	0.49
66:SA:37:TYR:OH	66:SA:57:LYS:NZ	2.45	0.49
75:SN:2:GLY:N	84:S2:1092:G:OP1	2.45	0.49
84:S2:527:C:H2'	84:S2:528:A:H8	1.77	0.49
84:S2:1320:G:H2'	84:S2:1321:G:O4'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:S2:1617:G:N1	84:S2:1620:A:OP2	2.46	0.49
2:CF:255:LYS:HB2	2:CF:317:VAL:HG11	1.95	0.49
4:L5:62:A:OP1	19:LN:172:ARG:NH1	2.38	0.49
4:L5:1414:C:H2'	4:L5:1415:G:C8	2.43	0.49
4:L5:1942:A:H2'	4:L5:1943:A:C8	2.48	0.49
4:L5:2638:G:N1	4:L5:2718:U:H2'	2.28	0.49
4:L5:2739:C:O2	7:LA:188:LYS:NZ	2.37	0.49
4:L5:2784:C:H2'	4:L5:2785:C:H6	1.78	0.49
4:L5:4911:A:OP1	8:LB:97:ARG:NH2	2.38	0.49
9:LC:298:ILE:HD13	22:LQ:131:PRO:HB3	1.93	0.49
11:LE:141:ARG:NH1	11:LE:191:GLN:O	2.44	0.49
49:Ls:17:ILE:HD12	49:Ls:54:LEU:HD21	1.93	0.49
57:SR:60:ARG:NH1	84:S2:1464:C:O3'	2.46	0.49
60:SU:68:THR:O	63:Sd:40:ARG:NH1	2.45	0.49
70:SG:49:VAL:HB	70:SG:115:LYS:HG2	1.94	0.49
70:SG:227:GLN:HB3	70:SG:231:ARG:HH21	1.77	0.49
4:L5:207:G:H2'	4:L5:208:A:C8	2.47	0.49
4:L5:325:U:H3'	40:Li:28:ARG:HH21	1.78	0.49
4:L5:1825:A:H2'	4:L5:1826:G:H8	1.78	0.49
4:L5:2749:C:H2'	4:L5:2750:G:C8	2.48	0.49
4:L5:2763:U:H4'	4:L5:2764:A:H5''	1.93	0.49
4:L5:4084:G:O6	7:LA:70:LYS:NZ	2.42	0.49
4:L5:4208:U:H2'	4:L5:4209:G:H8	1.77	0.49
4:L5:4345:C:H2'	4:L5:4346:U:C6	2.48	0.49
4:L5:4941:G:O3'	11:LE:187:ARG:NH2	2.45	0.49
13:LG:165:GLU:OE2	19:LN:26:ARG:NH1	2.45	0.49
21:LP:52:THR:HG23	21:LP:85:LYS:HG3	1.94	0.49
26:LU:114:TYR:CE2	86:CI:50:MET:HG3	2.47	0.49
57:SR:16:ILE:HD11	57:SR:54:VAL:HG21	1.94	0.49
62:Sc:37:ASP:OD1	62:Sc:39:SER:OG	2.25	0.49
81:Sa:44:ILE:HG23	81:Sa:45:VAL:HG13	1.95	0.49
2:CF:132:GLN:HB3	2:CF:136:HIS:CE1	2.47	0.49
2:CF:430:ARG:HH22	3:AT:65:G:H4'	1.78	0.49
4:L5:965:G:H21	4:L5:2092:G:H1'	1.78	0.49
4:L5:1558:A:H2'	4:L5:1559:G:H8	1.78	0.49
4:L5:2843:U:O2'	4:L5:4632:U:OP1	2.28	0.49
4:L5:3607:U:H2'	4:L5:3608:A:C8	2.48	0.49
4:L5:4630:G:H2'	4:L5:4631:G:H8	1.77	0.49
4:L5:4691:A:O3'	14:LH:71:ARG:HD3	2.13	0.49
6:L8:43:A:H2'	6:L8:44:A:C8	2.47	0.49
22:LQ:15:ARG:HB3	22:LQ:52:PHE:HB3	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:LW:105:ARG:NE	70:SG:151:ASP:OD1	2.45	0.49
54:SM:82:ASN:OD1	54:SM:83:LYS:N	2.46	0.49
68:SC:60:TRP:O	68:SC:71:LYS:NZ	2.37	0.49
84:S2:1653:U:H2'	84:S2:1654:G:C8	2.47	0.49
2:CF:294:MET:HB2	2:CF:299:LEU:HD11	1.94	0.49
4:L5:181:C:H2'	4:L5:182:G:C8	2.48	0.49
4:L5:224:U:O2	9:LC:219:LYS:NZ	2.41	0.49
4:L5:1584:G:O6	89:L5:5285:SPD:N1	2.46	0.49
4:L5:2701:U:H3	4:L5:2715:G:H1	1.60	0.49
4:L5:4237:C:H2'	4:L5:4238:G:C8	2.47	0.49
4:L5:4260:U:H2'	4:L5:4261:C:H6	1.77	0.49
20:LO:81:TRP:HB2	20:LO:104:VAL:HG21	1.95	0.49
35:Ld:22:THR:HG23	35:Ld:122:VAL:HG13	1.95	0.49
43:Ll:28:ARG:HA	43:Ll:33:ASN:ND2	2.27	0.49
57:SR:109:LEU:HD13	66:SA:52:LYS:HB2	1.94	0.49
59:ST:11:GLN:HB2	84:S2:1542:C:H4'	1.95	0.49
67:SB:97:LEU:HD23	67:SB:232:HIS:CG	2.48	0.49
68:SC:85:SER:OG	77:SV:25:GLY:O	2.26	0.49
84:S2:1468:C:H2'	84:S2:1469:A:H8	1.78	0.49
2:CF:294:MET:HB2	2:CF:308:VAL:HG12	1.95	0.48
4:L5:1199:G:H2'	4:L5:1200:G:H8	1.78	0.48
4:L5:1333:A:H2'	4:L5:1334:A:C8	2.47	0.48
4:L5:1397:A:HO2'	4:L5:1467:C:HO2'	1.59	0.48
4:L5:1480:C:O2'	4:L5:1482:G:OP2	2.30	0.48
4:L5:3939:G:O2'	4:L5:4076:G:N2	2.42	0.48
7:LA:147:ARG:HH21	7:LA:155:LYS:HG3	1.78	0.48
17:LL:23:ALA:HB3	19:LN:199:GLN:HA	1.94	0.48
54:SM:87:GLU:HG3	54:SM:103:VAL:HG11	1.94	0.48
59:ST:121:ARG:HH21	84:S2:1563:G:H5''	1.78	0.48
72:Sl:43:ILE:HD13	84:S2:305:U:H1'	1.95	0.48
74:SL:3:ASP:OD1	74:SL:4:ILE:N	2.46	0.48
84:S2:35:C:H5''	84:S2:579:C:H5''	1.95	0.48
84:S2:96:C:H2'	84:S2:97:U:C6	2.48	0.48
84:S2:538:U:H2'	84:S2:539:C:C6	2.48	0.48
84:S2:952:G:H2'	84:S2:953:C:C6	2.47	0.48
84:S2:1199:A:H2'	84:S2:1200:A:C8	2.48	0.48
84:S2:1773:C:H2'	84:S2:1774:C:H5''	1.94	0.48
1:Pt:22:U:H2'	1:Pt:23:C:C6	2.48	0.48
4:L5:248:C:O2	30:LY:121:ARG:NH2	2.41	0.48
4:L5:287:U:H2'	4:L5:288:G:H8	1.79	0.48
4:L5:447:C:H2'	4:L5:448:G:C8	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:951:G:H2'	4:L5:952:G:H8	1.79	0.48
4:L5:1194:G:H2'	4:L5:1195:G:C8	2.47	0.48
4:L5:1241:C:O2'	33:Lb:120:ARG:O	2.30	0.48
4:L5:1243:C:H2'	4:L5:1244:G:C8	2.48	0.48
4:L5:1315:C:H2'	4:L5:1316:OMG:H8	1.78	0.48
4:L5:1405:C:H2'	4:L5:1406:G:H8	1.77	0.48
4:L5:4237:C:OP1	4:L5:4327:C:O2'	2.30	0.48
4:L5:4343:U:O2'	46:Lo:31:ASP:OD1	2.30	0.48
4:L5:4643:G:H2'	4:L5:4644:G:H8	1.78	0.48
5:L7:114:U:H2'	5:L7:115:A:H8	1.79	0.48
6:L8:65:A:O2'	39:Lh:10:ARG:NH2	2.47	0.48
14:LH:41:ILE:HG22	14:LH:43:VAL:HG13	1.95	0.48
15:LI:66:GLU:OE2	15:LI:69:ARG:NH2	2.31	0.48
26:LU:36:ALA:HB1	26:LU:70:ILE:HD11	1.95	0.48
52:SF:141:VAL:HG12	62:Sc:47:LYS:HG2	1.94	0.48
57:SR:10:LYS:HG2	57:SR:53:TYR:CE2	2.48	0.48
74:SL:23:VAL:HG23	74:SL:25:LEU:HG	1.95	0.48
82:Sb:62:VAL:HG23	82:Sb:74:THR:HG21	1.94	0.48
84:S2:1419:C:H41	84:S2:1421:A:H2	1.60	0.48
2:CF:245:PRO:O	2:CF:269:THR:OG1	2.29	0.48
3:AT:3:C:N4	3:AT:71:A:H61	2.11	0.48
4:L5:358:C:H2'	4:L5:359:A:C8	2.48	0.48
4:L5:475:G:H2'	4:L5:476:G:C8	2.49	0.48
4:L5:1195:G:H2'	4:L5:1196:G:C8	2.49	0.48
4:L5:1399:G:H2'	4:L5:1400:G:H8	1.78	0.48
4:L5:1669:A:N3	4:L5:1852:U:O2'	2.40	0.48
4:L5:1683:PSU:H2'	4:L5:1684:A:H8	1.78	0.48
4:L5:2011:C:H3'	4:L5:2012:A:H8	1.78	0.48
4:L5:2869:U:O2'	4:L5:2881:A:N7	2.31	0.48
4:L5:4732:G:N2	4:L5:4734:A:N7	2.62	0.48
23:LR:168:GLU:HA	23:LR:171:LYS:HE3	1.95	0.48
66:SA:145:ILE:HG23	66:SA:159:ILE:HB	1.96	0.48
68:SC:125:LYS:HA	68:SC:143:CYS:HA	1.95	0.48
78:SW:6:VAL:HG12	78:SW:34:ILE:HD11	1.93	0.48
80:SY:76:TYR:OH	80:SY:86:GLU:OE1	2.25	0.48
84:S2:1013:U:H2'	84:S2:1014:G:H8	1.79	0.48
4:L5:921:C:H2'	4:L5:922:C:C6	2.49	0.48
4:L5:1824:G:H5''	25:LT:35:LYS:HE2	1.95	0.48
4:L5:2078:C:H2'	4:L5:2079:G:C8	2.48	0.48
4:L5:2084:C:C4	22:LQ:14:ARG:HD2	2.49	0.48
4:L5:2708:U:H1'	86:CI:79:ARG:HH22	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:L8:6:C:H2'	6:L8:7:U:C6	2.48	0.48
6:L8:141:C:H2'	6:L8:142:U:C6	2.49	0.48
39:Lh:89:ARG:O	39:Lh:93:ARG:HG2	2.14	0.48
60:SU:40:ILE:O	60:SU:44:LYS:HG2	2.13	0.48
69:SE:36:HIS:NE2	69:SE:143:ASP:OD1	2.46	0.48
84:S2:1215:C:N4	84:S2:1220:A:H61	2.12	0.48
84:S2:1455:A:H2'	84:S2:1456:G:H8	1.78	0.48
84:S2:1713:C:H2'	84:S2:1714:U:C6	2.49	0.48
85:Zt:27:U:H2'	85:Zt:28:C:C6	2.49	0.48
1:Pt:20(A):U:O4'	16:LJ:58:ARG:NH2	2.46	0.48
4:L5:257:C:H2'	4:L5:258:G:C8	2.48	0.48
4:L5:956:A:H1'	4:L5:2076:G:H5''	1.94	0.48
4:L5:2444:U:O2'	6:L8:112:G:O2'	2.22	0.48
4:L5:4642:U:H2'	4:L5:4643:G:H8	1.78	0.48
19:LN:120:TRP:HE1	19:LN:123:GLU:HB3	1.78	0.48
20:LO:14:HIS:HD2	20:LO:123:ALA:HB3	1.78	0.48
42:Lk:5:ILE:HG21	42:Lk:11:PHE:HB2	1.95	0.48
56:SQ:110:ASP:OD1	56:SQ:111:ILE:HD12	2.13	0.48
64:Sf:102:VAL:HG22	64:Sf:104:LYS:HG2	1.96	0.48
66:SA:184:ARG:HE	66:SA:191:ARG:HA	1.78	0.48
2:CF:39:ILE:HD11	2:CF:56:TYR:CD1	2.48	0.48
3:AT:4:U:H2'	3:AT:5:C:H6	1.77	0.48
4:L5:173:C:H5''	17:LL:129:ARG:HH12	1.77	0.48
4:L5:173:C:H2'	4:L5:174:C:C6	2.49	0.48
4:L5:261:G:H2'	4:L5:262:G:C8	2.48	0.48
4:L5:966:A:OP2	4:L5:2092:G:N2	2.44	0.48
4:L5:1876:U:H2'	4:L5:1877:G:H8	1.79	0.48
4:L5:2274:C:H2'	4:L5:2275:G:H8	1.78	0.48
4:L5:2897:G:H2'	4:L5:2898:G:H8	1.78	0.48
8:LB:367:PHE:HB2	28:LW:1:MET:HB2	1.96	0.48
59:ST:44:GLU:HG3	59:ST:45:LEU:HD12	1.96	0.48
59:ST:49:ASP:OD1	59:ST:50:GLU:N	2.47	0.48
60:SU:19:ARG:HB3	60:SU:92:HIS:CE1	2.49	0.48
61:SZ:86:ALA:HA	61:SZ:89:GLN:HE21	1.78	0.48
75:SN:29:THR:OG1	75:SN:31:ASP:OD1	2.28	0.48
80:SY:11:LYS:HB2	80:SY:24:VAL:HG12	1.95	0.48
84:S2:325:C:N3	84:S2:326:C:O2'	2.44	0.48
84:S2:1842:4AC:H2'	84:S2:1843:G:C8	2.49	0.48
4:L5:163:A:H2'	4:L5:164:G:H8	1.79	0.48
4:L5:184:U:H3	4:L5:253:G:H1	1.57	0.48
4:L5:260:C:H2'	4:L5:261:G:C8	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:323:C:H2'	4:L5:324:A:C8	2.47	0.48
4:L5:1464:C:H5''	33:Lb:32:LEU:HD12	1.95	0.48
4:L5:1494:U:H2'	4:L5:1495:G:H8	1.78	0.48
4:L5:1847:C:H2'	4:L5:1848:C:C6	2.49	0.48
4:L5:2411:C:H2'	4:L5:2412:A:H8	1.78	0.48
4:L5:2492:C:H2'	4:L5:2493:G:H8	1.77	0.48
4:L5:4251:A:H5''	16:LJ:108:GLY:HA3	1.96	0.48
5:L7:82:G:H2'	5:L7:83:A:C8	2.48	0.48
27:LV:92:ASP:O	28:LW:2:LYS:NZ	2.46	0.48
49:Ls:30:VAL:HA	49:Ls:189:ILE:HA	1.96	0.48
70:SG:172:LYS:NZ	84:S2:67:C:OP2	2.38	0.48
84:S2:610:G:H2'	84:S2:611:G:H8	1.78	0.48
84:S2:1804:U:H2'	84:S2:1805:G:H8	1.79	0.48
85:Zt:60:U:H2'	85:Zt:61:C:H5	1.77	0.48
1:Pt:51:C:H2'	1:Pt:52:G:C8	2.49	0.48
4:L5:1070:G:O2'	4:L5:1071:C:O5'	2.29	0.48
4:L5:1091:C:H2'	4:L5:1092:G:C8	2.49	0.48
4:L5:2769:U:N3	38:Lg:69:LYS:HD3	2.28	0.48
4:L5:2897:G:H2'	4:L5:2898:G:C8	2.48	0.48
4:L5:3867:A2M:H2'	4:L5:3868:G:O4'	2.13	0.48
4:L5:3933:G:H2'	4:L5:3934:G:C8	2.49	0.48
4:L5:4069:U:H2'	4:L5:4070:U:H6	1.79	0.48
4:L5:4452:U:OP2	4:L5:4522:G:N1	2.30	0.48
4:L5:4504:C:H2'	4:L5:4505:C:C6	2.49	0.48
4:L5:4524:G:H2'	4:L5:4525:C:H6	1.78	0.48
6:L8:19:C:H2'	6:L8:20:A:C8	2.48	0.48
18:LM:71:LYS:O	18:LM:75:GLN:HG3	2.13	0.48
31:LZ:51:ARG:HB2	31:LZ:65:ARG:HB3	1.94	0.48
32:La:127:LYS:HD3	40:Li:8:ALA:HB2	1.95	0.48
36:Le:35:TRP:O	36:Le:36:ARG:NH1	2.44	0.48
67:SB:123:ALA:HB2	67:SB:165:ARG:HG2	1.95	0.48
68:SC:166:ARG:HB3	68:SC:247:THR:HB	1.94	0.48
71:SH:49:LYS:NZ	71:SH:50:GLU:O	2.45	0.48
84:S2:1275:G:H22	84:S2:1506:A:P	2.35	0.48
4:L5:294:G:OP2	4:L5:296:A:O2'	2.27	0.48
4:L5:1591:U:OP2	4:L5:2856:C:O2'	2.30	0.48
4:L5:1837:A:OP2	25:LT:130:ARG:NH1	2.47	0.48
4:L5:4122:G:O3'	38:Lg:90:ARG:NH2	2.47	0.48
4:L5:4178:A:OP2	19:LN:91:GLN:NE2	2.35	0.48
4:L5:4643:G:H2'	4:L5:4644:G:C8	2.49	0.48
4:L5:4964:C:H2'	4:L5:4965:U:C6	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:L8:138:C:H2'	6:L8:139:G:C8	2.49	0.48
51:SD:51:LEU:HD12	51:SD:91:VAL:HG12	1.95	0.48
59:ST:114:GLU:OE1	59:ST:114:GLU:N	2.46	0.48
63:Sd:13:LYS:HG3	84:S2:1556:A:N7	2.29	0.48
63:Sd:21:CYS:HB3	63:Sd:26:ASN:H	1.79	0.48
70:SG:159:ARG:NH1	84:S2:76:U:O2'	2.47	0.48
84:S2:1842:4AC:H2'	84:S2:1843:G:H8	1.79	0.48
4:L5:1348:U:H2'	4:L5:1349:G:C8	2.49	0.48
4:L5:1478:C:H2'	4:L5:1479:G:H8	1.78	0.48
4:L5:1779:U:H2'	4:L5:1780:A:C8	2.49	0.48
4:L5:2021:G:OP1	49:Ls:58:ASN:N	2.44	0.48
4:L5:2348:G:OP1	4:L5:2351:OMC:N4	2.46	0.48
4:L5:4237:C:H2'	4:L5:4238:G:H8	1.79	0.48
4:L5:4633:G:H22	4:L5:4663:G:H2'	1.79	0.48
4:L5:4685:U:H2'	4:L5:4686:G:C8	2.49	0.48
13:LG:178:GLY:O	13:LG:223:ARG:NH2	2.46	0.48
14:LH:18:ILE:HG12	14:LH:27:VAL:HG22	1.95	0.48
23:LR:157:ASP:OD1	23:LR:158:GLN:N	2.47	0.48
35:Ld:37:GLY:O	35:Ld:41:ARG:HG3	2.14	0.48
56:SQ:100:VAL:HG22	56:SQ:101:ASP:H	1.78	0.48
73:SJ:124:HIS:CD2	83:Se:35:ARG:HD2	2.49	0.48
80:SY:57:VAL:HG12	80:SY:73:GLY:HA2	1.96	0.48
83:Se:56:ASN:ND2	84:S2:606:G:O4'	2.46	0.48
85:Zt:30:G:H2'	85:Zt:31:A:C8	2.48	0.48
85:Zt:75:C:H3'	85:Zt:76:A:H8	1.79	0.48
2:CF:290:LYS:HE3	84:S2:488:U:H5''	1.96	0.47
4:L5:1188:C:H2'	4:L5:1189:G:H8	1.79	0.47
4:L5:1705:G:H5''	12:LF:177:ARG:HG2	1.95	0.47
4:L5:2521:G:H2'	4:L5:2522:G:H8	1.79	0.47
4:L5:2759:G:O2'	4:L5:2760:G:O4'	2.28	0.47
4:L5:4324:A:H2'	4:L5:4325:A:C8	2.49	0.47
4:L5:5037:U:H2'	4:L5:5038:A:C8	2.49	0.47
6:L8:60:G:O6	39:Lh:62:ASN:ND2	2.31	0.47
6:L8:92:U:H2'	6:L8:93:C:O4'	2.14	0.47
8:LB:50:LYS:HB2	8:LB:345:LEU:HD11	1.95	0.47
10:LD:217:ASP:OD1	10:LD:218:ALA:N	2.47	0.47
12:LF:94:ARG:NH2	12:LF:97:GLY:O	2.35	0.47
50:Lt:18:THR:O	50:Lt:61:LYS:NZ	2.46	0.47
50:Lt:117:ARG:HE	50:Lt:119:ARG:H	1.60	0.47
52:SF:60:ARG:HE	84:S2:1679:A:P	2.37	0.47
59:ST:42:HIS:HE2	59:ST:43:LYS:HE3	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:SA:110:ASN:HB3	66:SA:113:GLN:HE22	1.79	0.47
70:SG:7:PHE:CE2	70:SG:9:ALA:HB3	2.49	0.47
70:SG:138:ALA:HA	70:SG:176:ILE:HD11	1.95	0.47
84:S2:89:C:H2'	84:S2:90:G:C8	2.49	0.47
84:S2:1103:C:H2'	84:S2:1104:G:C8	2.49	0.47
84:S2:1276:A:C6	84:S2:1322:G:H1'	2.49	0.47
84:S2:1407:U:H2'	84:S2:1408:U:C6	2.48	0.47
2:CF:168:GLU:HA	2:CF:171:VAL:HG22	1.95	0.47
4:L5:490:C:H2'	4:L5:491:G:C8	2.48	0.47
4:L5:2654:C:H2'	4:L5:2655:C:H6	1.79	0.47
4:L5:2658:G:O2'	4:L5:2675:G:N2	2.46	0.47
4:L5:3670:C:H2'	4:L5:3671:G:C8	2.49	0.47
4:L5:4080:C:H2'	4:L5:4081:G:H8	1.79	0.47
4:L5:4356:G:H2'	4:L5:4357:G:H8	1.79	0.47
4:L5:4578:G:H2'	4:L5:4579:PSU:H6	1.79	0.47
5:L7:15:C:H2'	5:L7:16:A:H8	1.79	0.47
53:SK:11:ILE:HD11	53:SK:40:VAL:HG11	1.96	0.47
56:SQ:80:GLN:O	56:SQ:84:ILE:HG13	2.14	0.47
69:SE:247:THR:N	69:SE:250:GLU:OE2	2.43	0.47
71:SH:118:ARG:HD3	71:SH:121:THR:HG21	1.96	0.47
80:SY:11:LYS:NZ	84:S2:831:G:O6	2.46	0.47
80:SY:77:ASP:OD1	80:SY:77:ASP:N	2.47	0.47
84:S2:671:A:H4'	84:S2:672:A:H5''	1.95	0.47
84:S2:835:C:H4'	84:S2:836:G:C8	2.49	0.47
84:S2:1142:G:N2	84:S2:1145:A:OP2	2.35	0.47
84:S2:1687:C:H2'	84:S2:1688:C:C6	2.49	0.47
84:S2:1722:G:O6	84:S2:1812:U:O2	2.31	0.47
4:L5:978:G:OP1	11:LE:47:ASN:ND2	2.42	0.47
4:L5:1419:G:H5''	22:LQ:71:LYS:NZ	2.29	0.47
4:L5:2335:C:H2'	4:L5:2336:G:C8	2.49	0.47
4:L5:2361:G:N2	4:L5:3860:A:OP2	2.42	0.47
52:SF:103:LEU:HD11	61:SZ:67:LEU:HD22	1.95	0.47
52:SF:123:GLU:OE1	62:Sc:63:ARG:NH2	2.46	0.47
54:SM:128:PHE:HA	54:SM:131:LYS:HG2	1.97	0.47
71:SH:91:HIS:ND1	71:SH:169:LYS:HG2	2.29	0.47
76:SO:113:GLN:HE22	81:Sa:45:VAL:HA	1.79	0.47
79:SX:68:LYS:NZ	84:S2:616:A:OP1	2.48	0.47
84:S2:328:U:O2'	84:S2:329:G:O5'	2.31	0.47
84:S2:468:A2M:HM'3	84:S2:468:A2M:H1'	1.53	0.47
84:S2:1172:U:H2'	84:S2:1173:A:C8	2.50	0.47
84:S2:1217:A:H2'	84:S2:1218:C:H6	1.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:S2:1643:U:H2'	84:S2:1644:C:C6	2.50	0.47
4:L5:179:G:H2'	4:L5:180:C:C6	2.48	0.47
4:L5:1179:U:OP2	10:LD:289:ARG:NH2	2.38	0.47
4:L5:1718:C:O2'	12:LF:181:LYS:NZ	2.47	0.47
4:L5:2297:G:H4'	9:LC:242:PRO:HB2	1.97	0.47
4:L5:4095:G:H2'	4:L5:4096:C:C6	2.50	0.47
4:L5:4192:A:H2'	4:L5:4193:C:H6	1.79	0.47
9:LC:162:LYS:N	9:LC:166:GLU:OE2	2.35	0.47
20:LO:3:GLU:OE1	20:LO:5:GLN:NE2	2.41	0.47
41:Lj:2:THR:HB	41:Lj:6:SER:HB2	1.95	0.47
56:SQ:110:ASP:O	56:SQ:113:ILE:N	2.43	0.47
66:SA:177:MET:SD	66:SA:180:ARG:NH2	2.87	0.47
72:SI:31:ARG:NH2	84:S2:381:C:OP1	2.47	0.47
73:SJ:40:LYS:NZ	84:S2:641:A:OP1	2.31	0.47
74:SL:68:ILE:HD11	74:SL:141:ASN:HB2	1.96	0.47
84:S2:5:U:H2'	84:S2:6:G:H8	1.79	0.47
84:S2:1280:G:H2'	84:S2:1281:G:H8	1.79	0.47
84:S2:1800:A:H3'	84:S2:1801:A:H8	1.79	0.47
84:S2:1801:A:H2'	84:S2:1802:C:H6	1.80	0.47
4:L5:1095:A:N1	4:L5:1200:G:C6	2.83	0.47
4:L5:1259:G:H2'	4:L5:1260:G:H8	1.79	0.47
4:L5:2430:C:H2'	4:L5:2431:A:H8	1.79	0.47
4:L5:4968:A:OP1	8:LB:120:LYS:N	2.45	0.47
6:L8:130:C:H2'	6:L8:131:G:C8	2.49	0.47
19:LN:155:VAL:O	19:LN:162:ARG:NH2	2.47	0.47
26:LU:23:LEU:HD23	26:LU:110:TYR:HB2	1.95	0.47
34:Lc:47:ILE:HD12	34:Lc:94:LEU:HD11	1.96	0.47
49:Ls:102:LEU:HD23	49:Ls:189:ILE:HG13	1.96	0.47
83:Se:8:ARG:HG2	83:Se:11:LYS:HD3	1.96	0.47
84:S2:1221:G:H2'	84:S2:1222:G:H8	1.80	0.47
84:S2:1539:U:H2'	84:S2:1540:G:C8	2.50	0.47
4:L5:123:C:H2'	4:L5:124:C:H6	1.79	0.47
4:L5:146:G:H2'	4:L5:147:A:H8	1.79	0.47
4:L5:162:A:H2'	4:L5:163:A:H8	1.80	0.47
4:L5:3898:G:H5'	8:LB:254:ILE:HG13	1.97	0.47
4:L5:4070:U:H2'	4:L5:4071:U:H6	1.79	0.47
4:L5:4194:U:O2'	15:LI:116:ARG:NH2	2.46	0.47
4:L5:4967:A:H2'	4:L5:4968:A:H8	1.80	0.47
5:L7:35:U:O2	5:L7:45:U:O2'	2.32	0.47
7:LA:112:ILE:HG22	7:LA:135:THR:HG23	1.97	0.47
52:SF:34:SER:HA	62:Sc:55:VAL:HG23	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:SA:18:PHE:HD1	66:SA:23:THR:HG21	1.79	0.47
69:SE:242:LYS:HA	69:SE:242:LYS:HD3	1.76	0.47
72:SI:57:ALA:HB2	72:SI:183:GLY:HA2	1.96	0.47
77:SV:17:CYS:HB2	77:SV:56:CYS:HB3	1.96	0.47
78:SW:62:VAL:HG11	82:Sb:8:LEU:HG	1.96	0.47
84:S2:52:G:H2'	84:S2:53:C:C6	2.50	0.47
84:S2:1644:C:H2'	84:S2:1645:C:C6	2.50	0.47
85:Zt:15:G:N1	85:Zt:48:C:N3	2.63	0.47
4:L5:239:C:H2'	4:L5:240:G:C8	2.49	0.47
4:L5:270:U:H2'	4:L5:271:C:C6	2.49	0.47
4:L5:347:A:H2'	4:L5:348:G:C8	2.49	0.47
4:L5:351:C:OP2	9:LC:197:ARG:NH1	2.32	0.47
4:L5:454:U:H2'	4:L5:455:C:O4'	2.15	0.47
4:L5:1305:C:OP1	89:L5:5288:SPD:N1	2.48	0.47
4:L5:1328:G:H2'	4:L5:1329:G:C8	2.49	0.47
4:L5:1554:A:OP1	47:Lp:5:THR:OG1	2.28	0.47
4:L5:1703:C:OP1	4:L5:1704:C:N4	2.48	0.47
4:L5:1903:G:OP1	37:Lf:87:LYS:NZ	2.43	0.47
4:L5:2257:C:O2'	4:L5:2259:G:OP2	2.27	0.47
4:L5:2520:C:H2'	4:L5:2521:G:C8	2.47	0.47
4:L5:2554:U:C2	4:L5:2764:A:N7	2.83	0.47
4:L5:2581:A:H2'	4:L5:2582:A:C8	2.49	0.47
4:L5:2638:G:H22	4:L5:2719:C:P	2.37	0.47
4:L5:2808:G:O3'	23:LR:60:ARG:NH1	2.47	0.47
4:L5:3744:OMG:HM23	4:L5:3744:OMG:H1'	1.72	0.47
4:L5:4246:G:H2'	4:L5:4247:G:C8	2.49	0.47
4:L5:4621:C:H2'	4:L5:4622:A:H8	1.78	0.47
4:L5:4727:A:OP1	8:LB:133:TYR:N	2.47	0.47
4:L5:4750:G:H2'	4:L5:4751:G:H8	1.79	0.47
4:L5:5025:C:H2'	4:L5:5028:G:H1'	1.96	0.47
5:L7:110:G:H2'	5:L7:111:C:C6	2.49	0.47
7:LA:107:MET:O	7:LA:139:HIS:NE2	2.47	0.47
12:LF:171:ASP:OD1	12:LF:172:ASN:N	2.47	0.47
19:LN:169:ARG:HG3	19:LN:174:LEU:HD12	1.96	0.47
34:Lc:58:SER:HB3	38:Lg:96:LEU:HD13	1.95	0.47
54:SM:60:MET:HA	54:SM:63:LYS:HB3	1.97	0.47
55:SP:93:MET:HE1	55:SP:106:GLU:OE1	2.15	0.47
59:ST:74:SER:O	59:ST:78:ILE:HD12	2.15	0.47
64:Sf:103:LEU:HD12	64:Sf:105:TYR:CZ	2.50	0.47
65:Sg:216:ALA:N	65:Sg:230:LEU:O	2.43	0.47
66:SA:184:ARG:HG2	66:SA:189:ILE:HB	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79: SX:9: THR:HG22	84: S2:681: PSU:H4'	1.95	0.47
84: S2:54: A:H3'	84: S2:451: G:H22	1.80	0.47
84: S2:66: G:H2'	84: S2:67: C:H4'	1.97	0.47
84: S2:116: OMU:HM23	84: S2:116: OMU:H1'	1.71	0.47
84: S2:146: G:H2'	84: S2:147: A:C8	2.49	0.47
84: S2:375: U:H2'	84: S2:376: A:C8	2.50	0.47
84: S2:379: C:H2'	84: S2:380: G:C8	2.49	0.47
84: S2:495: U:H2'	84: S2:496: C:O4'	2.13	0.47
84: S2:1424: G:H2'	84: S2:1425: G:H8	1.78	0.47
84: S2:1547: C:H3'	84: S2:1548: G:H8	1.80	0.47
2: CF:373: ALA:H	2: CF:404: MET:HA	1.80	0.47
4: L5:669: C:OP1	48: Lr:71: ARG:NH1	2.34	0.47
4: L5:1339: U:H2'	4: L5:1340: OMC:C6	2.50	0.47
4: L5:1756: U:O2'	4: L5:1758: G:OP2	2.27	0.47
4: L5:2568: C:H2'	4: L5:2569: G:C8	2.50	0.47
4: L5:2615: C:H2'	4: L5:2616: C:H6	1.80	0.47
4: L5:4089: G:H2'	4: L5:4090: G:C8	2.50	0.47
4: L5:4139: G:N2	4: L5:4140: C:H41	2.12	0.47
4: L5:4906: C:H2'	4: L5:4907: G:C8	2.50	0.47
4: L5:5027: C:HO2'	4: L5:5028: G:H5''	1.80	0.47
5: L7:94: C:H2'	5: L7:95: C:H6	1.80	0.47
5: L7:114: U:H2'	5: L7:115: A:C8	2.50	0.47
6: L8:144: U:H2'	6: L8:145: C:C6	2.50	0.47
17: LL:60: ARG:NH1	17: LL:67: HIS:O	2.45	0.47
17: LL:176: PHE:O	32: La:138: LYS:NZ	2.44	0.47
19: LN:51: LEU:O	19: LN:117: ASN:ND2	2.45	0.47
33: Lb:65: MET:HG3	33: Lb:68: ARG:HH12	1.80	0.47
53: SK:37: ASP:OD1	53: SK:37: ASP:N	2.48	0.47
64: Sf:108: VAL:HG12	64: Sf:114: ILE:HA	1.97	0.47
70: SG:74: ARG:NH1	70: SG:96: SER:OG	2.48	0.47
71: SH:51: ILE:HG21	71: SH:179: LYS:HG2	1.97	0.47
72: SI:10: LYS:O	72: SI:18: ARG:NH1	2.48	0.47
77: SV:74: LYS:NZ	77: SV:83: PHE:HB3	2.30	0.47
84: S2:433: A:H2'	84: S2:434: G:C8	2.49	0.47
84: S2:1491: G:H2'	84: S2:1492: U:C6	2.50	0.47
84: S2:1692: U:H2'	84: S2:1693: G:H8	1.79	0.47
4: L5:214: G:H2'	4: L5:215: C:C6	2.50	0.47
4: L5:458: C:OP2	11: LE:114: ARG:NH2	2.47	0.47
4: L5:494: U:H2'	4: L5:495: C:C6	2.50	0.47
4: L5:1316: OMG:HM23	4: L5:1316: OMG:H1'	1.73	0.47
4: L5:1628: C:OP2	7: LA:9: ARG:HD2	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:1884:C:H2'	4:L5:1885:G:H8	1.79	0.47
4:L5:2627:C:OP1	26:LU:92:LYS:NZ	2.41	0.47
4:L5:4163:U:H5'	4:L5:4164:C:H5''	1.96	0.47
10:LD:41:LYS:NZ	25:LT:32:ARG:O	2.41	0.47
28:LW:73:ARG:NH2	84:S2:1749:G:O6	2.41	0.47
67:SB:180:ASP:N	67:SB:183:GLU:OE2	2.36	0.47
82:Sb:11:SER:OG	82:Sb:14:GLU:OE1	2.32	0.47
2:CF:215:LYS:NZ	2:CF:216:VAL:O	2.48	0.47
2:CF:258:GLY:HA3	84:S2:50:A:C4	2.51	0.47
4:L5:1364:U:OP2	17:LL:36:ARG:NH2	2.31	0.47
4:L5:1578:U:H2'	4:L5:1579:C:H6	1.79	0.47
4:L5:1884:C:H2'	4:L5:1885:G:C8	2.51	0.47
4:L5:1914:C:H4'	20:LO:89:PRO:HD3	1.95	0.47
4:L5:2411:C:H2'	4:L5:2412:A:C8	2.50	0.47
4:L5:2641:A:H2'	4:L5:2642:A:O4'	2.15	0.47
4:L5:3866:C:H2'	4:L5:3867:A2M:O4'	2.15	0.47
4:L5:4441:A:H5''	15:LI:114:GLY:HA2	1.97	0.47
11:LE:243:THR:HG22	11:LE:245:GLN:H	1.80	0.47
29:LX:124:VAL:HG22	29:LX:138:VAL:HG13	1.96	0.47
51:SD:126:ILE:O	51:SD:129:SER:OG	2.28	0.47
73:SJ:136:ARG:HD3	73:SJ:160:SER:HA	1.98	0.47
74:SL:111:VAL:HG12	74:SL:140:PHE:HB2	1.96	0.47
4:L5:461:G:H2'	4:L5:462:G:H8	1.80	0.46
4:L5:1081:C:O2'	4:L5:1082:C:H5'	2.14	0.46
4:L5:1683:PSU:H2'	4:L5:1684:A:C8	2.50	0.46
4:L5:2375:A:H2'	4:L5:2376:A:C8	2.50	0.46
4:L5:2406:G:N7	43:Ll:2:SER:N	2.63	0.46
4:L5:4069:U:H2'	4:L5:4070:U:C6	2.51	0.46
4:L5:4153:C:H2'	4:L5:4154:G:C8	2.50	0.46
4:L5:4475:G:O6	44:Lm:125:LYS:NZ	2.49	0.46
4:L5:5004:C:H2'	4:L5:5005:G:O4'	2.15	0.46
15:LI:183:ASP:OD1	15:LI:184:MET:N	2.48	0.46
23:LR:103:ARG:HG2	23:LR:124:TYR:CE2	2.50	0.46
50:Lt:82:ILE:HG12	50:Lt:137:GLN:HG2	1.97	0.46
58:SS:124:ARG:NH1	84:S2:1521:C:OP2	2.45	0.46
65:Sg:283:PRO:O	65:Sg:285:GLN:NE2	2.48	0.46
66:SA:10:MET:HE3	66:SA:55:TRP:HB2	1.96	0.46
72:SI:89:GLU:OE1	72:SI:92:ARG:NH2	2.48	0.46
78:SW:52:ILE:HG12	78:SW:61:ILE:HG12	1.96	0.46
84:S2:436:OMG:H2'	84:S2:437:G:H8	1.79	0.46
84:S2:484:A2M:HM'3	84:S2:484:A2M:H1'	1.64	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:S2:1221:G:H2'	84:S2:1222:G:C8	2.49	0.46
84:S2:1657:G:H2'	84:S2:1658:G:C8	2.49	0.46
4:L5:6:C:H2'	4:L5:7:C:C6	2.50	0.46
4:L5:265:C:H1'	4:L5:266:C:H5''	1.98	0.46
4:L5:425:U:H2'	4:L5:426:A:C8	2.50	0.46
4:L5:702:U:H2'	4:L5:703:G:O4'	2.16	0.46
4:L5:959:G:C8	11:LE:123:ARG:HG2	2.50	0.46
4:L5:1558:A:H2'	4:L5:1559:G:C8	2.50	0.46
4:L5:2709:C:H5''	23:LR:43:LYS:HD2	1.97	0.46
4:L5:3946:G:N2	4:L5:4067:U:O2	2.48	0.46
4:L5:4622:A:H4'	8:LB:13:SER:HB2	1.97	0.46
6:L8:70:G:H1'	6:L8:88:A:H61	1.81	0.46
17:LL:127:PHE:HB2	39:Lh:118:LYS:HB3	1.96	0.46
81:Sa:13:LYS:HD3	81:Sa:13:LYS:HA	1.71	0.46
84:S2:1098:C:H2'	84:S2:1099:G:C8	2.50	0.46
84:S2:1805:G:H2'	84:S2:1806:A:H8	1.80	0.46
2:CF:364:HIS:CD2	2:CF:365:THR:H	2.34	0.46
3:AT:51:U:H2'	3:AT:52:C:H6	1.81	0.46
4:L5:208:A:N3	4:L5:232:G:O2'	2.46	0.46
4:L5:714:G:H2'	4:L5:715:G:C8	2.50	0.46
4:L5:746:A:H2'	4:L5:747:A:C8	2.51	0.46
4:L5:1410:U:H3	33:Lb:52:LYS:NZ	2.13	0.46
4:L5:3707:U:H2'	4:L5:3708:C:C6	2.51	0.46
4:L5:4196:OMG:HM23	4:L5:4196:OMG:H1'	1.76	0.46
4:L5:4616:A:H2'	4:L5:4617:G:O4'	2.15	0.46
4:L5:4723:A:H2'	4:L5:4724:A:C8	2.51	0.46
4:L5:4743:G:H2'	4:L5:4744:A:C8	2.50	0.46
5:L7:55:A:H4'	16:LJ:155:HIS:HB2	1.96	0.46
8:LB:289:GLN:HE22	8:LB:292:LEU:HD11	1.80	0.46
52:Sf:185:SER:H	52:Sf:190:ILE:HD11	1.80	0.46
64:Sf:124:ASP:OD1	64:Sf:124:ASP:N	2.45	0.46
67:SB:145:LYS:HB2	67:SB:145:LYS:HE3	1.72	0.46
69:SE:122:LYS:N	69:SE:162:ILE:O	2.48	0.46
84:S2:116:OMU:HN3	84:S2:347:G:H1	1.63	0.46
84:S2:382:C:H2'	84:S2:383:G:C8	2.49	0.46
84:S2:807:G:H2'	84:S2:808:A:C8	2.50	0.46
84:S2:1749:G:H2'	84:S2:1750:C:C6	2.50	0.46
3:AT:44:A:H2'	3:AT:45:A:C8	2.50	0.46
4:L5:10:A:H2'	4:L5:11:G:H8	1.81	0.46
4:L5:473:C:H2'	4:L5:474:C:C6	2.50	0.46
4:L5:1878:G:H2'	4:L5:1879:C:C6	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:2412:A:H2'	4:L5:2413:U:C6	2.50	0.46
4:L5:2610:G:H2'	4:L5:2611:A:H8	1.80	0.46
4:L5:2787:A2M:HM'2	4:L5:2787:A2M:H1'	1.70	0.46
4:L5:4128:A:O2'	13:LG:33:GLU:O	2.27	0.46
4:L5:4208:U:H2'	4:L5:4209:G:C8	2.51	0.46
4:L5:4410:G:C6	4:L5:4433:G:C6	3.03	0.46
4:L5:4507:A:H2'	4:L5:4508:C:C6	2.51	0.46
4:L5:4704:C:H2'	4:L5:4705:A:C8	2.51	0.46
12:LF:241:ASN:O	12:LF:245:ARG:HG2	2.15	0.46
19:LN:46:ASP:OD1	19:LN:47:LYS:N	2.48	0.46
25:LT:44:GLY:HA2	25:LT:95:HIS:HB3	1.97	0.46
31:LZ:61:LYS:HE3	31:LZ:65:ARG:HD2	1.96	0.46
32:La:72:THR:HG22	32:La:110:LYS:HB3	1.97	0.46
34:Lc:48:LEU:O	34:Lc:74:TYR:N	2.46	0.46
37:Lf:25:THR:HB	37:Lf:87:LYS:HD3	1.97	0.46
58:SS:22:GLY:HA2	58:SS:56:ALA:HB3	1.97	0.46
60:SU:65:THR:O	60:SU:78:ASP:N	2.37	0.46
65:Sg:207:CYS:HB3	65:Sg:221:LEU:HD21	1.98	0.46
68:SC:207:ALA:HB2	84:S2:4:C:H4'	1.97	0.46
84:S2:835:C:H4'	84:S2:836:G:H8	1.80	0.46
84:S2:1562:C:H2'	84:S2:1563:G:C8	2.47	0.46
3:AT:4:U:H2'	3:AT:5:C:C6	2.51	0.46
4:L5:88:A:OP1	22:LQ:172:ARG:NH2	2.46	0.46
4:L5:952:G:H2'	4:L5:953:C:C6	2.50	0.46
4:L5:962:C:H2'	4:L5:1702:C:H41	1.81	0.46
4:L5:1348:U:H2'	4:L5:1349:G:H8	1.79	0.46
4:L5:4524:G:H2'	4:L5:4525:C:C6	2.50	0.46
4:L5:4674:C:H2'	4:L5:4675:U:C6	2.51	0.46
14:LH:48:LEU:HD21	14:LH:56:ARG:HB2	1.96	0.46
31:LZ:50:PRO:HD3	31:LZ:68:ILE:HG12	1.97	0.46
46:Lo:6:LYS:HG3	46:Lo:94:GLY:HA3	1.98	0.46
56:SQ:15:ARG:HH22	84:S2:1444:U:P	2.39	0.46
58:SS:63:GLU:O	58:SS:67:VAL:HG23	2.16	0.46
64:Sf:130:VAL:HB	84:S2:1310:U:H5''	1.97	0.46
66:SA:3:GLY:N	66:SA:56:GLU:OE1	2.48	0.46
66:SA:6:ASP:OD1	66:SA:6:ASP:N	2.48	0.46
84:S2:626:G:H5''	84:S2:627:OMU:H5'	1.97	0.46
84:S2:1380:C:H2'	84:S2:1381:G:C8	2.51	0.46
2:CF:253:VAL:HA	2:CF:263:PRO:HA	1.97	0.46
3:AT:24:C:N3	3:AT:25:A:N6	2.64	0.46
4:L5:713:C:H2'	4:L5:714:G:C8	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:755:C:H2'	4:L5:756:G:H8	1.81	0.46
4:L5:964:A:H2'	4:L5:965:G:H4'	1.98	0.46
4:L5:966:A:H5''	4:L5:2092:G:H22	1.81	0.46
4:L5:1090:G:OP1	25:LT:142:ARG:NE	2.39	0.46
4:L5:1399:G:H2'	4:L5:1400:G:C8	2.50	0.46
4:L5:1541:C:H5''	7:LA:21:LYS:HG2	1.98	0.46
4:L5:1677:PSU:H4'	4:L5:1680:G:C2	2.50	0.46
4:L5:2284:G:OP1	32:La:7:LYS:NZ	2.41	0.46
4:L5:2823:G:H2'	4:L5:2824:OMC:C6	2.51	0.46
4:L5:4561:C:H2'	4:L5:4562:C:C6	2.50	0.46
4:L5:4601:U:OP2	4:L5:4609:G:N1	2.40	0.46
4:L5:4688:C:H2'	4:L5:4689:PSU:H6	1.80	0.46
4:L5:4764:A:OP1	24:LS:156:HIS:ND1	2.36	0.46
10:LD:234:ASP:OD1	10:LD:235:MET:N	2.49	0.46
17:LL:119:GLU:HG2	17:LL:123:LYS:HE2	1.96	0.46
19:LN:75:VAL:HG21	19:LN:80:THR:HG22	1.97	0.46
20:LO:108:ILE:HD12	20:LO:160:ARG:CZ	2.45	0.46
53:SK:80:ARG:HH22	53:SK:90:VAL:HG12	1.81	0.46
55:SP:39:ALA:N	84:S2:1613:G:OP2	2.49	0.46
71:SH:111:LYS:HE3	84:S2:796:G:N2	2.31	0.46
84:S2:293:C:O2'	84:S2:294:U:H3'	2.16	0.46
84:S2:656:G:H21	84:S2:663:C:H5''	1.80	0.46
84:S2:811:A:H2'	84:S2:812:A:H8	1.81	0.46
84:S2:945:U:H2'	84:S2:946:U:C6	2.51	0.46
84:S2:948:C:H2'	84:S2:949:G:H8	1.81	0.46
84:S2:1050:A:H62	84:S2:1068:G:H21	1.62	0.46
84:S2:1255:G:OP1	84:S2:1256:G:O2'	2.24	0.46
84:S2:1278:A:H2'	84:S2:1279:C:C6	2.51	0.46
84:S2:1628:C:H2'	84:S2:1629:C:C6	2.49	0.46
3:AT:7:G:O2'	3:AT:50:C:H5'	2.15	0.46
4:L5:50:C:C2	4:L5:51:A:C8	3.03	0.46
4:L5:284:G:H2'	4:L5:285:G:H8	1.80	0.46
4:L5:1089:G:H2'	4:L5:1090:G:H8	1.80	0.46
4:L5:2078:C:H2'	4:L5:2079:G:H8	1.81	0.46
4:L5:2580:U:OP1	31:LZ:36:ARG:NH1	2.34	0.46
4:L5:3660:C:P	7:LA:241:ARG:HH22	2.38	0.46
4:L5:5056:A:H2'	4:L5:5057:C:C6	2.50	0.46
6:L8:9:A:H2'	6:L8:10:G:H8	1.81	0.46
11:LE:150:LEU:HD11	11:LE:164:PHE:HB2	1.98	0.46
21:LP:19:GLY:HA3	21:LP:22:LEU:HD11	1.98	0.46
55:SP:122:THR:HG1	84:S2:1622:U:H3	1.64	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:Sg:37:ASP:OD1	65:Sg:39:THR:OG1	2.28	0.46
65:Sg:289:LEU:HD11	65:Sg:298:LEU:HD21	1.97	0.46
69:SE:160:ILE:HD12	69:SE:162:ILE:HD11	1.97	0.46
74:SL:68:ILE:HD13	74:SL:131:CYS:HB3	1.97	0.46
84:S2:1112:U:O2	84:S2:1121:G:O6	2.34	0.46
1:Pt:51:C:H2'	1:Pt:52:G:H8	1.81	0.46
4:L5:33:A:H3'	4:L5:47:A:H61	1.81	0.46
4:L5:88:A:N7	22:LQ:173:LYS:NZ	2.64	0.46
4:L5:1800:U:H2'	4:L5:1801:A:H8	1.80	0.46
4:L5:2394:G:O4'	4:L5:2397:G:N2	2.49	0.46
4:L5:2666:U:OP2	23:LR:124:TYR:OH	2.21	0.46
4:L5:3869:OMC:C2	88:L5:5293:SPM:H32	2.50	0.46
4:L5:3916:G:H2'	4:L5:3917:A:C8	2.51	0.46
4:L5:3917:A:H2'	4:L5:3918:G:C8	2.50	0.46
4:L5:4212:A:N6	4:L5:4219:A:OP2	2.46	0.46
4:L5:4261:C:OP1	16:LJ:19:LYS:NZ	2.45	0.46
4:L5:4742:G:H2'	4:L5:4743:G:C8	2.50	0.46
6:L8:5:U:H2'	6:L8:6:C:C6	2.50	0.46
23:LR:173:ARG:O	23:LR:176:ARG:NH1	2.49	0.46
26:LU:114:TYR:CD2	86:CI:50:MET:HG3	2.51	0.46
55:SP:128:HIS:CE1	84:S2:1521:C:H1'	2.51	0.46
69:SE:56:LEU:N	69:SE:60:GLU:OE1	2.37	0.46
75:SN:93:LYS:HA	75:SN:150:VAL:HG21	1.97	0.46
4:L5:209:U:OP1	30:LY:63:LYS:NZ	2.39	0.46
4:L5:460:C:H2'	4:L5:461:G:C8	2.49	0.46
4:L5:679:C:H2'	4:L5:680:G:C8	2.51	0.46
4:L5:978:G:H2'	4:L5:979:C:C6	2.51	0.46
4:L5:1494:U:H2'	4:L5:1495:G:C8	2.51	0.46
4:L5:1645:C:H2'	4:L5:1646:A:C8	2.50	0.46
4:L5:1725:U:H2'	4:L5:1726:U:H6	1.81	0.46
4:L5:1764:G:H4'	4:L5:1769:G:C6	2.51	0.46
4:L5:2376:A:H2'	4:L5:2377:C:C6	2.51	0.46
4:L5:2633:U:H2'	4:L5:2634:C:H6	1.81	0.46
4:L5:4156:G:H3'	4:L5:4157:A:H8	1.80	0.46
4:L5:4578:G:H2'	4:L5:4579:PSU:C6	2.50	0.46
5:L7:15:C:H2'	5:L7:16:A:C8	2.51	0.46
5:L7:58:A:H2'	5:L7:59:G:H8	1.80	0.46
14:LH:24:THR:HA	14:LH:37:ASP:HA	1.98	0.46
39:Lh:36:VAL:HG13	39:Lh:37:THR:HG23	1.97	0.46
48:Lr:16:PHE:HB3	48:Lr:27:THR:H	1.81	0.46
50:Lt:125:LEU:HG	50:Lt:127:GLY:H	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:SB:167:LYS:O	67:SB:171:ILE:HG12	2.15	0.46
68:SC:121:ARG:NH1	68:SC:123:ARG:HE	2.13	0.46
70:SG:13:GLN:NE2	84:S2:153:G:N3	2.59	0.46
72:SI:139:LYS:HB2	72:SI:139:LYS:HE2	1.69	0.46
80:SY:9:THR:H	84:S2:837:A:N6	2.14	0.46
84:S2:429:C:H2'	84:S2:430:C:C6	2.51	0.46
84:S2:525:A:H2'	84:S2:526:A:C8	2.50	0.46
84:S2:1392:U:H2'	84:S2:1393:G:C8	2.51	0.46
2:CF:113:VAL:HG23	2:CF:149:ILE:HG13	1.97	0.46
4:L5:10:A:H2'	4:L5:11:G:C8	2.51	0.46
4:L5:736:C:OP1	18:LM:74:ARG:NH2	2.41	0.46
4:L5:739:G:HO2'	4:L5:740:G:H8	1.62	0.46
4:L5:1290:G:H2'	4:L5:1291:G:C8	2.51	0.46
4:L5:3600:G:H2'	4:L5:3601:C:C6	2.51	0.46
4:L5:4128:A:H1'	13:LG:35:ARG:HB2	1.97	0.46
4:L5:5046:U:P	35:Ld:83:ARG:HH12	2.39	0.46
8:LB:286:LYS:HB2	8:LB:365:LEU:HD11	1.98	0.46
23:LR:44:LEU:HD22	23:LR:49:LEU:HD12	1.97	0.46
50:Lt:22:VAL:HA	50:Lt:48:LYS:HG2	1.96	0.46
59:ST:22:LEU:HD11	59:ST:28:LEU:HD21	1.98	0.46
66:SA:32:PHE:CG	84:S2:1097:G:H4'	2.51	0.46
71:SH:17:ASP:HB2	71:SH:20:GLU:HB2	1.98	0.46
84:S2:543:C:H3'	84:S2:544:G:C8	2.50	0.46
84:S2:824:C:H2'	84:S2:825:A:C8	2.51	0.46
84:S2:1606:G:O2'	84:S2:1632:G:N2	2.49	0.46
2:CF:352:GLN:HA	2:CF:395:LYS:HD3	1.98	0.45
4:L5:666:G:N7	4:L5:668:C:N4	2.65	0.45
4:L5:1186:U:H3'	4:L5:1187:G:H21	1.81	0.45
4:L5:1278:C:H2'	4:L5:1279:A:O4'	2.16	0.45
4:L5:1942:A:H2'	4:L5:1943:A:H8	1.81	0.45
4:L5:3867:A2M:HM'3	4:L5:3867:A2M:H1'	1.59	0.45
4:L5:4981:G:O6	8:LB:21:ARG:NH2	2.48	0.45
10:LD:209:ARG:O	10:LD:213:GLU:HG2	2.16	0.45
13:LG:102:TYR:OH	13:LG:211:ASP:OD2	2.25	0.45
17:LL:56:ARG:NH1	17:LL:74:ARG:O	2.40	0.45
22:LQ:133:GLY:O	22:LQ:136:THR:OG1	2.26	0.45
56:SQ:90:LYS:HB3	56:SQ:90:LYS:HE2	1.79	0.45
60:SU:51:LYS:HD3	84:S2:1433:C:N4	2.31	0.45
60:SU:104:ILE:HB	60:SU:106:ILE:HG12	1.97	0.45
69:SE:89:VAL:HG11	69:SE:119:ALA:HB1	1.98	0.45
70:SG:52:ILE:HA	70:SG:111:LEU:HD23	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
74:SL:17:PHE:CG	84:S2:222:U:H5''	2.51	0.45
77:SV:40:ASP:OD1	77:SV:44:GLY:N	2.49	0.45
84:S2:43:U:OP2	84:S2:485:A:N6	2.38	0.45
84:S2:496:C:H2'	84:S2:497:C:H6	1.81	0.45
2:CF:39:ILE:HD11	2:CF:56:TYR:CE1	2.52	0.45
4:L5:67:C:H41	4:L5:325:U:HO2'	1.62	0.45
4:L5:1413:C:H2'	4:L5:1414:C:C6	2.51	0.45
4:L5:1563:A:OP1	84:S2:678:U:O2'	2.31	0.45
4:L5:1751:A:H2'	4:L5:1752:G:C8	2.50	0.45
4:L5:2041:A:H62	4:L5:4434:C:H1'	1.81	0.45
4:L5:2081:C:H2'	4:L5:2082:G:H8	1.80	0.45
4:L5:2281:U:H2'	4:L5:2282:A:H8	1.81	0.45
4:L5:2857:A:H2'	4:L5:2858:A:O4'	2.16	0.45
4:L5:3732:A:H2'	4:L5:3733:A:H8	1.81	0.45
4:L5:3911:C:H2'	4:L5:3912:U:H6	1.80	0.45
4:L5:4080:C:H2'	4:L5:4081:G:C8	2.51	0.45
4:L5:4986:G:H1'	8:LB:174:ARG:NH2	2.30	0.45
8:LB:147:GLU:OE2	8:LB:198:ARG:NH2	2.31	0.45
18:LM:118:MET:HG2	20:LO:192:TYR:CZ	2.52	0.45
26:LU:27:HIS:HB3	26:LU:114:TYR:HE1	1.82	0.45
28:LW:99:GLU:HB3	28:LW:102:LYS:HE3	1.97	0.45
29:LX:129:ARG:NH2	29:LX:131:ASP:OD2	2.49	0.45
30:LY:55:VAL:HG12	30:LY:106:ILE:HA	1.98	0.45
58:SS:89:ASP:OD1	58:SS:90:VAL:N	2.49	0.45
64:Sf:147:THR:OG1	84:S2:1292:C:O2'	2.27	0.45
72:SI:150:ASP:HA	72:SI:153:LYS:HG2	1.98	0.45
78:SW:2:VAL:N	84:S2:1091:C:O2'	2.42	0.45
84:S2:212:C:H2'	84:S2:213:G:C8	2.51	0.45
84:S2:897:U:H2'	84:S2:898:U:H4'	1.97	0.45
84:S2:1804:U:H2'	84:S2:1805:G:C8	2.51	0.45
2:CF:266:ARG:HA	2:CF:307:ASN:HA	1.99	0.45
4:L5:302:C:H2'	4:L5:303:C:H6	1.82	0.45
4:L5:418:A:H2'	4:L5:419:A:C8	2.50	0.45
4:L5:745:G:H2'	4:L5:746:A:C8	2.51	0.45
4:L5:749:G:C6	4:L5:912:G:C8	3.05	0.45
4:L5:1845:U:H2'	4:L5:1846:G:H8	1.82	0.45
4:L5:2328:G:H2'	4:L5:2329:U:C6	2.52	0.45
4:L5:2608:G:H2'	4:L5:2609:G:H8	1.81	0.45
4:L5:2621:A:H2'	4:L5:2622:G:C8	2.52	0.45
4:L5:2875:C:OP1	47:Lp:23:ARG:NH2	2.45	0.45
4:L5:4765:G:OP1	14:LH:23:ARG:NE	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:SQ:113:ILE:HD13	56:SQ:113:ILE:HA	1.78	0.45
65:Sg:178:ASN:HB2	65:Sg:185:LYS:HD3	1.97	0.45
65:Sg:207:CYS:SG	65:Sg:219:TRP:HB2	2.56	0.45
71:SH:51:ILE:HD11	71:SH:176:VAL:HG12	1.99	0.45
74:SL:104:LYS:O	79:SX:11:ARG:NH2	2.46	0.45
84:S2:15:U:H2'	84:S2:16:G:O4'	2.17	0.45
84:S2:1501:C:H2'	84:S2:1502:C:H6	1.81	0.45
84:S2:1817:G:H2'	84:S2:1818:A:C8	2.51	0.45
84:S2:1850:MA6:H8	84:S2:1850:MA6:O5'	2.17	0.45
4:L5:221:C:H2'	4:L5:222:C:C6	2.52	0.45
4:L5:280:G:H5''	19:LN:14:LYS:HE2	1.99	0.45
4:L5:918:G:H5'	18:LM:72:TYR:CZ	2.51	0.45
4:L5:1393:G:O2'	4:L5:4352:U:OP1	2.33	0.45
4:L5:2438:A:OP1	29:LX:106:LYS:NZ	2.42	0.45
4:L5:4411:G:H2'	4:L5:4412:C:H6	1.82	0.45
4:L5:4590:A2M:H1'	4:L5:4590:A2M:HM'3	1.56	0.45
5:L7:19:C:H2'	5:L7:20:U:C6	2.52	0.45
15:LI:39:LYS:HE3	15:LI:39:LYS:HB2	1.75	0.45
18:LM:86:TRP:O	18:LM:89:THR:OG1	2.27	0.45
22:LQ:88:ASP:HB2	22:LQ:109:ALA:HB2	1.97	0.45
67:SB:23:ASP:N	67:SB:23:ASP:OD1	2.48	0.45
67:SB:146:ARG:HB2	67:SB:149:GLN:HB2	1.97	0.45
67:SB:229:MET:O	67:SB:233:GLY:N	2.32	0.45
68:SC:259:THR:HG23	77:SV:16:LYS:HZ3	1.82	0.45
70:SG:190:ARG:NH2	84:S2:334:C:OP2	2.42	0.45
71:SH:126:HIS:CE1	71:SH:181:THR:HG23	2.51	0.45
72:SI:126:GLY:O	72:SI:128:LYS:NZ	2.44	0.45
80:SY:108:LYS:NZ	84:S2:506:G:OP1	2.47	0.45
84:S2:864:A:H2'	84:S2:865:A:H8	1.82	0.45
84:S2:1244:PSU:H2'	84:S2:1245:G:C8	2.50	0.45
84:S2:1779:G:H2'	84:S2:1780:G:C8	2.51	0.45
4:L5:6:C:H2'	4:L5:7:C:H6	1.82	0.45
4:L5:28:C:P	19:LN:193:ARG:HH22	2.39	0.45
4:L5:1178:G:H2'	10:LD:286:SER:HB3	1.97	0.45
4:L5:2365:OMC:HM23	4:L5:2365:OMC:H1'	1.84	0.45
4:L5:2374:A:H2'	4:L5:2375:A:H8	1.81	0.45
4:L5:3667:C:H2'	4:L5:3668:C:H6	1.82	0.45
4:L5:4346:U:O2'	46:Lo:80:LYS:O	2.34	0.45
4:L5:4769:G:H2'	4:L5:4770:U:H6	1.82	0.45
4:L5:5036:C:H2'	4:L5:5037:U:C6	2.52	0.45
7:LA:7:GLY:HA2	7:LA:10:LYS:HG3	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:LH:107:GLU:N	14:LH:107:GLU:OE1	2.49	0.45
29:LX:77:ILE:HD13	29:LX:100:VAL:HG12	1.98	0.45
52:SF:70:GLU:OE2	52:SF:86:LYS:NZ	2.32	0.45
55:SP:100:LYS:HD3	84:S2:1240:A:C8	2.50	0.45
56:SQ:16:LYS:NZ	84:S2:1648:G:O6	2.36	0.45
58:SS:62:ASP:OD1	58:SS:62:ASP:N	2.48	0.45
67:SB:147:ASN:OD1	67:SB:148:ASN:N	2.50	0.45
68:SC:169:TYR:OH	68:SC:175:GLY:O	2.24	0.45
69:SE:198:ARG:HA	69:SE:208:VAL:HA	1.98	0.45
76:SO:34:PHE:HB3	76:SO:41:PHE:HB2	1.99	0.45
84:S2:16:G:H2'	84:S2:17:C:C6	2.51	0.45
84:S2:57:U:O2'	84:S2:499:G:N3	2.48	0.45
84:S2:644:OMG:H2'	84:S2:645:C:C6	2.51	0.45
84:S2:1426:U:H2'	84:S2:1427:C:C6	2.51	0.45
84:S2:1844:U:H2'	84:S2:1845:A:C8	2.52	0.45
2:CF:229:LEU:HD13	2:CF:232:LEU:HD11	1.97	0.45
4:L5:318:A:H2'	4:L5:319:A:C8	2.50	0.45
4:L5:974:C:H5''	12:LF:43:ARG:NH1	2.31	0.45
4:L5:977:C:OP1	9:LC:333:LYS:NZ	2.41	0.45
4:L5:1290:G:H2'	4:L5:1291:G:H8	1.82	0.45
4:L5:1323:A2M:H2'	4:L5:1324:A:O4'	2.17	0.45
4:L5:2018:C:H2'	4:L5:2019:C:C6	2.52	0.45
4:L5:2279:A:O2'	36:Le:48:ARG:NH2	2.50	0.45
4:L5:2303:C:H5''	36:Le:104:SER:HB3	1.99	0.45
4:L5:2347:A:OP1	36:Le:22:ARG:NH2	2.32	0.45
4:L5:2634:C:H2'	4:L5:2635:U:H6	1.81	0.45
4:L5:2682:G:H2'	4:L5:2683:C:H6	1.81	0.45
4:L5:3872:A:H2'	4:L5:3873:G:H8	1.81	0.45
5:L7:60:G:H2'	5:L7:61:G:H8	1.81	0.45
12:LF:136:VAL:HG23	12:LF:140:ILE:HD13	1.99	0.45
15:LI:73:ASN:HB2	15:LI:87:MET:HE1	1.99	0.45
49:Ls:77:LYS:HE2	49:Ls:193:PHE:HE1	1.81	0.45
53:SK:31:LYS:HZ3	53:SK:39:ASN:N	2.14	0.45
54:SM:36:ARG:HB3	84:S2:1286:G:O6	2.16	0.45
66:SA:104:THR:O	66:SA:107:THR:OG1	2.34	0.45
84:S2:556:U:H3'	84:S2:557:U:H4'	1.99	0.45
84:S2:1101:U:H2'	84:S2:1102:G:C8	2.51	0.45
1:Pt:50:U:O4	1:Pt:64:G:O6	2.35	0.45
2:CF:62:LYS:O	2:CF:67:ARG:NH1	2.50	0.45
4:L5:1287:G:C2	11:LE:132:PRO:HG3	2.52	0.45
4:L5:1577:G:O2'	4:L5:1612:G:H4'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:1654:G:C6	4:L5:3914:U:H5''	2.52	0.45
4:L5:1759:G:H1	4:L5:1773:U:H3	1.65	0.45
4:L5:1979:A:H1'	4:L5:1988:G:N2	2.31	0.45
4:L5:2694:G:H5'	4:L5:2695:A:C2	2.51	0.45
4:L5:4113:U:H4'	4:L5:4115:G:C5	2.51	0.45
5:L7:2:U:H3	5:L7:117:G:H1	1.64	0.45
6:L8:140:C:H2'	6:L8:141:C:C6	2.51	0.45
8:LB:27:GLY:HA2	8:LB:276:HIS:CD2	2.52	0.45
8:LB:50:LYS:NZ	8:LB:337:VAL:O	2.44	0.45
8:LB:369:ASP:OD1	8:LB:373:LYS:NZ	2.46	0.45
9:LC:33:ARG:HG2	9:LC:36:ILE:HD12	1.99	0.45
11:LE:157:HIS:HA	11:LE:160:LYS:HE3	1.98	0.45
67:SB:63:LYS:HE2	67:SB:90:ASP:HA	1.98	0.45
70:SG:126:ASP:OD1	70:SG:126:ASP:N	2.47	0.45
79:SX:17:ARG:HH22	84:S2:659:G:N2	2.15	0.45
83:Se:41:ARG:HG3	83:Se:42:PHE:CD1	2.52	0.45
84:S2:1269:G:H2'	84:S2:1270:G:H8	1.81	0.45
84:S2:1279:C:H2'	84:S2:1280:G:C8	2.51	0.45
84:S2:1503:C:H2'	84:S2:1504:U:C6	2.52	0.45
2:CF:58:TRP:CD1	2:CF:67:ARG:HG2	2.52	0.45
4:L5:67:C:OP2	4:L5:312:G:N2	2.50	0.45
4:L5:310:G:H2'	4:L5:311:G:C8	2.52	0.45
4:L5:691:C:H2'	4:L5:692:A:H8	1.81	0.45
4:L5:1199:G:H2'	4:L5:1200:G:C8	2.51	0.45
4:L5:1621:A:H2'	4:L5:1622:U:C6	2.52	0.45
4:L5:2079:G:H2'	4:L5:2080:U:H6	1.82	0.45
4:L5:2394:G:O2'	4:L5:2819:U:O4	2.31	0.45
4:L5:2658:G:N2	4:L5:2676:A:OP2	2.49	0.45
4:L5:4153:C:H2'	4:L5:4154:G:H8	1.82	0.45
4:L5:4383:U:H2'	4:L5:4384:U:C6	2.52	0.45
4:L5:4691:A:H2'	4:L5:4692:A:O4'	2.15	0.45
91:L5:5297:HMT:C7	91:L5:5297:HMT:C9	2.94	0.45
9:LC:183:VAL:HA	9:LC:204:ARG:HB3	1.99	0.45
11:LE:186:LEU:N	11:LE:250:GLN:OE1	2.44	0.45
16:LJ:99:PHE:HB2	16:LJ:159:LYS:HE3	1.98	0.45
22:LQ:22:ASP:HB3	22:LQ:25:LEU:HB3	1.99	0.45
58:SS:75:ARG:NH1	58:SS:95:TYR:HB2	2.32	0.45
65:Sg:239:LEU:HD11	65:Sg:248:LEU:HD21	1.98	0.45
81:Sa:70:LYS:NZ	84:S2:988:C:OP2	2.50	0.45
84:S2:96:C:H2'	84:S2:97:U:H6	1.82	0.45
84:S2:652:U:H2'	84:S2:653:A:C8	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:S2:1680:G:H2'	84:S2:1681:U:C6	2.52	0.45
4:L5:499:G:H2'	4:L5:499:G:N3	2.32	0.45
4:L5:1296:G:H2'	4:L5:1297:U:H6	1.82	0.45
4:L5:1382:G:H2'	4:L5:1383:G:H8	1.81	0.45
4:L5:1490:G:H2'	4:L5:1491:A:H8	1.82	0.45
4:L5:1751:A:H2'	4:L5:1752:G:H8	1.80	0.45
4:L5:2568:C:H2'	4:L5:2569:G:H8	1.82	0.45
4:L5:2683:C:H2'	4:L5:2684:C:H6	1.81	0.45
4:L5:2800:G:H1'	41:Lj:9:GLY:HA3	1.98	0.45
5:L7:4:U:H2'	5:L7:5:A:C8	2.52	0.45
6:L8:138:C:H2'	6:L8:139:G:H8	1.82	0.45
8:LB:20:LYS:O	8:LB:275:HIS:ND1	2.49	0.45
15:LI:52:MET:HE3	15:LI:163:GLN:HG2	1.98	0.45
53:SK:64:TRP:CD2	63:Sd:23:VAL:HG22	2.52	0.45
58:SS:125:HIS:CD2	58:SS:131:VAL:HG11	2.52	0.45
68:SC:187:ARG:NH2	84:S2:1142:G:OP1	2.49	0.45
70:SG:192:ILE:HG22	70:SG:196:LYS:HE3	1.98	0.45
84:S2:919:A:O2'	84:S2:1020:A:N1	2.50	0.45
85:Zt:27:U:H2'	85:Zt:28:C:H6	1.82	0.45
2:CF:423:ARG:HD3	2:CF:437:VAL:HG12	1.99	0.45
4:L5:491:G:H2'	4:L5:492:U:H6	1.81	0.45
4:L5:980:U:H2'	4:L5:981:C:C6	2.52	0.45
4:L5:1567:U:H2'	4:L5:1568:C:H6	1.82	0.45
4:L5:1646:A:H2'	4:L5:1647:U:C6	2.52	0.45
4:L5:2063:G:H2'	4:L5:2064:G:H8	1.82	0.45
4:L5:2323:C:H2'	4:L5:2324:C:C6	2.52	0.45
4:L5:2555:G:H2'	4:L5:2556:G:C8	2.51	0.45
4:L5:3717:A:H2'	4:L5:3718:A2M:C8	2.46	0.45
4:L5:4589:A:N1	4:L5:4621:C:O2'	2.49	0.45
5:L7:107:G:H2'	5:L7:108:G:H8	1.82	0.45
48:Lr:38:PHE:O	48:Lr:45:HIS:NE2	2.33	0.45
49:Ls:58:ASN:C	49:Ls:62:ARG:HE	2.25	0.45
49:Ls:160:LEU:HD11	49:Ls:175:LEU:HD21	1.98	0.45
55:SP:37:TYR:HB3	55:SP:41:GLN:HB2	1.98	0.45
59:ST:39:LEU:HD23	59:ST:39:LEU:HA	1.75	0.45
60:SU:79:ARG:NH2	84:S2:1669:G:OP1	2.50	0.45
66:SA:54:THR:HG21	66:SA:163:CYS:HB3	1.99	0.45
68:SC:180:VAL:HG23	68:SC:197:PRO:HG3	1.99	0.45
82:Sb:68:GLY:C	84:S2:928:G:H21	2.25	0.45
84:S2:35:C:H2'	84:S2:36:U:C6	2.51	0.45
84:S2:212:C:H2'	84:S2:213:G:H8	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:S2:373:G:H2'	84:S2:374:G:H8	1.81	0.45
84:S2:1116:C:H2'	84:S2:1117:C:C6	2.52	0.45
84:S2:1208:A:H2'	84:S2:1209:A:C8	2.52	0.45
84:S2:1288:OMU:HN3	84:S2:1311:C:H42	1.64	0.45
84:S2:1720:U:H5''	84:S2:1721:U:H5''	1.98	0.45
84:S2:1736:G:H2'	84:S2:1737:G:H8	1.81	0.45
2:CF:36:LYS:HA	2:CF:39:ILE:HG22	1.99	0.44
2:CF:198:GLY:HA2	2:CF:201:MET:HE1	1.99	0.44
4:L5:44:A:N3	4:L5:94:A:H2	2.16	0.44
4:L5:162:A:H2'	4:L5:163:A:C8	2.52	0.44
4:L5:270:U:H2'	4:L5:271:C:H6	1.81	0.44
4:L5:1304:C:H2'	4:L5:1305:C:C6	2.52	0.44
4:L5:2649:G:H2'	4:L5:2650:G:C8	2.51	0.44
4:L5:3932:U:H2'	4:L5:3933:G:H8	1.82	0.44
4:L5:4452:U:H5'	91:L5:5297:HMT:H16	1.99	0.44
4:L5:4592:C:H2'	4:L5:4593:C:C6	2.51	0.44
4:L5:5053:U:H5'	4:L5:5054:C:C4	2.52	0.44
9:LC:268:ARG:HH12	9:LC:269:LYS:HE2	1.81	0.44
22:LQ:3:VAL:HG13	22:LQ:5:ILE:HG12	2.00	0.44
58:SS:64:VAL:O	58:SS:68:ILE:HG12	2.16	0.44
69:SE:122:LYS:HE2	69:SE:124:CYS:SG	2.57	0.44
71:SH:65:PRO:HB2	71:SH:67:PRO:HD2	1.99	0.44
84:S2:27:A2M:H1'	84:S2:27:A2M:HM'3	1.51	0.44
84:S2:51:U:H2'	84:S2:52:G:H8	1.82	0.44
84:S2:649:PSU:H2'	84:S2:650:A:C8	2.51	0.44
84:S2:668:A2M:HM'3	84:S2:668:A2M:H1'	1.55	0.44
84:S2:1407:U:H2'	84:S2:1408:U:H6	1.82	0.44
84:S2:1702:G:O6	84:S2:1836:G:N2	2.50	0.44
4:L5:90:G:OP2	4:L5:92:C:N4	2.41	0.44
4:L5:1566:C:H2'	4:L5:1567:U:H6	1.81	0.44
4:L5:2060:G:H4'	24:LS:118:ARG:HG3	1.99	0.44
4:L5:2413:U:H2'	4:L5:2414:G:H8	1.82	0.44
4:L5:3588:C:H2'	4:L5:3589:G:O4'	2.17	0.44
4:L5:3718:A2M:HM'3	4:L5:3718:A2M:H1'	1.57	0.44
4:L5:4210:U:H3	4:L5:4222:G:H1	1.65	0.44
4:L5:4299:PSU:H2'	4:L5:4300:U:C6	2.53	0.44
4:L5:4452:U:H5'	91:L5:5297:HMT:H7	1.98	0.44
13:LG:162:ASP:HB3	13:LG:163:PRO:HD3	1.99	0.44
18:LM:28:VAL:HB	18:LM:37:LEU:HB3	1.99	0.44
23:LR:47:ASP:HB3	86:CI:76:VAL:O	2.18	0.44
25:LT:144:ASN:HB2	25:LT:146:LYS:HE2	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:LU:22:THR:HA	26:LU:71:THR:HA	1.99	0.44
38:Lg:64:LEU:HD23	38:Lg:67:LEU:HD12	1.99	0.44
51:SD:142:LEU:HD13	51:SD:150:MET:HE2	1.99	0.44
71:SH:18:GLU:OE1	71:SH:18:GLU:N	2.50	0.44
84:S2:89:C:H2'	84:S2:90:G:H8	1.81	0.44
84:S2:352:U:H2'	84:S2:353:C:C6	2.52	0.44
84:S2:747:U:O2	84:S2:796:G:N2	2.51	0.44
84:S2:1242:U:H4'	84:S2:1243:U:H5''	1.99	0.44
3:AT:2:U:H2'	3:AT:3:C:C6	2.52	0.44
4:L5:400:A2M:HM'3	4:L5:400:A2M:H1'	1.52	0.44
4:L5:1534:A2M:H8	4:L5:1637:A:H61	1.81	0.44
4:L5:1768:C:H42	4:L5:1772:C:H41	1.65	0.44
4:L5:2743:A:H2'	4:L5:2744:A:C8	2.52	0.44
4:L5:3708:C:H2'	4:L5:3709:U:C6	2.52	0.44
4:L5:3867:A2M:H2'	4:L5:3868:G:C8	2.53	0.44
4:L5:4345:C:H2'	4:L5:4346:U:H6	1.82	0.44
4:L5:4523:A2M:H1'	4:L5:4558:U:C4	2.51	0.44
4:L5:4913:G:H4'	4:L5:4914:C:O5'	2.17	0.44
4:L5:4929:C:OP1	18:LM:114:LYS:NZ	2.37	0.44
10:LD:156:GLY:HA2	10:LD:181:PRO:HG3	1.99	0.44
13:LG:261:LEU:HA	13:LG:264:LYS:HB3	1.99	0.44
22:LQ:178:ARG:N	32:La:51:GLY:HA2	2.31	0.44
50:Lt:12:VAL:HG11	50:Lt:65:GLN:H	1.82	0.44
65:Sg:183:LYS:HD2	65:Sg:183:LYS:HA	1.82	0.44
68:SC:252:THR:OG1	68:SC:254:ASP:OD1	2.29	0.44
68:SC:256:TRP:CD2	78:SW:68:ARG:HD3	2.52	0.44
79:SX:68:LYS:HG2	79:SX:91:LEU:HD22	1.99	0.44
84:S2:376:A:H2'	84:S2:377:G:O4'	2.18	0.44
84:S2:835:C:N3	84:S2:839:C:N4	2.65	0.44
4:L5:158:A:N1	4:L5:276:C:O2'	2.38	0.44
4:L5:189:G:H2'	4:L5:190:G:H8	1.83	0.44
4:L5:695:G:H3'	4:L5:696:C:H4'	1.99	0.44
4:L5:727:C:H2'	4:L5:728:U:C6	2.52	0.44
4:L5:1195:G:H2'	4:L5:1196:G:H8	1.82	0.44
4:L5:1519:C:H2'	4:L5:1520:C:H6	1.82	0.44
4:L5:1594:C:O2'	4:L5:1597:G:H1'	2.17	0.44
4:L5:2055:G:O5'	20:LO:130:LYS:NZ	2.47	0.44
4:L5:2631:U:O4	26:LU:51:GLY:N	2.51	0.44
4:L5:3687:A:O2'	7:LA:236:GLY:N	2.47	0.44
4:L5:4070:U:H2'	4:L5:4071:U:C6	2.53	0.44
4:L5:4082:G:H2'	4:L5:4083:U:C6	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:LB:240:LEU:HB2	8:LB:248:LEU:HA	2.00	0.44
14:LH:95:VAL:HG12	44:Lm:82:LEU:HD13	1.98	0.44
25:LT:102:ARG:O	25:LT:106:LEU:HG	2.17	0.44
32:La:30:GLY:O	32:La:40:HIS:NE2	2.38	0.44
56:SQ:137:ALA:N	84:S2:1650:A:OP1	2.51	0.44
67:SB:29:ASP:OD1	67:SB:29:ASP:N	2.50	0.44
69:SE:9:LEU:HB2	69:SE:30:ARG:HD3	1.99	0.44
69:SE:29:PRO:HA	84:S2:496:C:H5'	1.99	0.44
70:SG:7:PHE:HD2	70:SG:10:THR:HG22	1.81	0.44
71:SH:37:LYS:HA	71:SH:40:LEU:HB3	2.00	0.44
84:S2:1605:G:H2'	84:S2:1606:G:C4	2.53	0.44
85:Zt:9:A:O2'	85:Zt:45:G:N3	2.43	0.44
2:CF:28:ILE:HG21	2:CF:59:VAL:HG11	1.99	0.44
4:L5:717:U:H2'	4:L5:718:C:C6	2.53	0.44
4:L5:951:G:H2'	4:L5:952:G:C8	2.52	0.44
4:L5:982:U:OP1	11:LE:73:TYR:OH	2.20	0.44
4:L5:1332:C:H5''	36:Le:29:VAL:HB	1.97	0.44
4:L5:1637:A:OP1	4:L5:1640:C:N4	2.48	0.44
4:L5:2358:G:H2'	4:L5:2359:U:O4'	2.17	0.44
4:L5:2696:A:H62	42:Lk:35:LYS:NZ	2.15	0.44
4:L5:2699:C:H2'	4:L5:2700:G:C8	2.52	0.44
4:L5:2756:G:H2'	4:L5:2757:A:C8	2.52	0.44
4:L5:3758:U:H2'	4:L5:3765:G:N2	2.32	0.44
4:L5:3922[A]:G:H4'	4:L5:4183:G:H22	1.82	0.44
4:L5:4094:G:H1	4:L5:4114:C:H2'	1.83	0.44
4:L5:4111:U:H2'	4:L5:4112:C:C5	2.53	0.44
4:L5:4587:G:H5''	20:LO:61:ARG:HH12	1.82	0.44
6:L8:78:G:O2'	39:Lh:45:SER:OG	2.31	0.44
10:LD:41:LYS:HG3	25:LT:93:ILE:HG21	1.99	0.44
23:LR:174:GLU:HA	23:LR:177:LEU:HB2	2.00	0.44
32:La:110:LYS:HG3	32:La:128:PHE:HB2	2.00	0.44
49:Ls:47:LEU:HD23	49:Ls:53:VAL:HB	2.00	0.44
51:SD:146:ARG:NH1	84:S2:1489:A:N3	2.64	0.44
56:SQ:111:ILE:HD12	56:SQ:111:ILE:H	1.82	0.44
57:SR:6:THR:HA	84:S2:1373:C:H5'	1.99	0.44
57:SR:111:PHE:HE1	66:SA:12:GLU:HG3	1.83	0.44
59:ST:10:ASN:HB3	59:ST:13:GLU:OE2	2.17	0.44
63:Sd:54:LYS:NZ	84:S2:1482:C:OP1	2.50	0.44
69:SE:187:ALA:O	69:SE:245:ARG:NH1	2.43	0.44
84:S2:159:A2M:HM'3	84:S2:159:A2M:H1'	1.54	0.44
84:S2:354:OMU:HM23	84:S2:354:OMU:H1'	1.71	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:S2:509:OMG:H2'	84:S2:510:G:H8	1.82	0.44
84:S2:1004:PSU:H2'	84:S2:1005:G:C8	2.48	0.44
84:S2:1093:A:H2'	84:S2:1094:C:C6	2.52	0.44
84:S2:1597:C:H4'	84:S2:1603:G:O6	2.17	0.44
84:S2:1667:U:H2'	84:S2:1668:U:C6	2.53	0.44
85:Zt:67:U:H2'	85:Zt:68:C:H6	1.82	0.44
1:Pt:56:C:N4	46:Lo:104:ILE:HG21	2.33	0.44
2:CF:288:GLU:HB3	2:CF:313:LYS:HD3	1.99	0.44
4:L5:65:A:N6	4:L5:75:G:H1'	2.31	0.44
4:L5:133:C:N4	4:L5:134:G:N3	2.66	0.44
4:L5:275:C:H2'	4:L5:276:C:C6	2.53	0.44
4:L5:684:G:H5''	11:LE:100:LYS:HE3	2.00	0.44
4:L5:1296:G:H2'	4:L5:1297:U:C6	2.53	0.44
4:L5:1705:G:OP1	4:L5:1705:G:N2	2.26	0.44
4:L5:1830:G:H2'	4:L5:1831:G:C8	2.53	0.44
4:L5:2087:C:P	9:LC:303:ARG:HH22	2.41	0.44
4:L5:2458:C:O2'	4:L5:3671:G:N3	2.44	0.44
4:L5:4220:6MZ:O2'	4:L5:4222:G:OP1	2.27	0.44
4:L5:4754:G:N1	4:L5:4880:C:N3	2.66	0.44
53:SK:90:VAL:HG21	53:SK:95:ARG:HB2	2.00	0.44
70:SG:170:ARG:NH1	84:S2:71:G:O6	2.50	0.44
72:SI:10:LYS:NZ	84:S2:370:G:O2'	2.51	0.44
78:SW:30:CYS:SG	78:SW:31:SER:N	2.90	0.44
79:SX:129:SER:HB2	84:S2:29:G:H4'	1.99	0.44
82:Sb:23:ARG:NH1	82:Sb:27:SER:O	2.51	0.44
84:S2:92:A:H61	84:S2:444:G:H1'	1.83	0.44
84:S2:1198:G:H2'	84:S2:1199:A:H8	1.82	0.44
84:S2:1345:G:OP1	84:S2:1688:C:O2'	2.35	0.44
84:S2:1405:A:H2'	84:S2:1406:G:O4'	2.17	0.44
84:S2:1744:G:HO2'	84:S2:1789:G:H22	1.60	0.44
84:S2:1856:C:H2'	84:S2:1857:G:C8	2.52	0.44
2:CF:178:ILE:HA	2:CF:181:ILE:HG22	2.00	0.44
4:L5:161:G:H2'	4:L5:162:A:C8	2.53	0.44
4:L5:689:U:H2'	4:L5:690:C:C6	2.52	0.44
4:L5:700:G:H2'	4:L5:701:G:C8	2.53	0.44
4:L5:1908:A:H2'	4:L5:1909:G:O4'	2.18	0.44
4:L5:2351:OMC:HM23	4:L5:2351:OMC:H1'	1.71	0.44
4:L5:3607:U:H2'	4:L5:3608:A:H8	1.82	0.44
4:L5:3700:C:H2'	4:L5:3746:A:H61	1.83	0.44
4:L5:3765:G:O2'	4:L5:3767:C:N4	2.51	0.44
4:L5:3787:G:H1'	4:L5:3789:C:N4	2.31	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:3825:A2M:H2'	4:L5:3826:C:C6	2.53	0.44
4:L5:3927:U:H2'	4:L5:3928:A:C8	2.52	0.44
4:L5:4454:G:H1	4:L5:4526:U:H3	1.65	0.44
4:L5:4523:A2M:H2'	4:L5:4559:A:N7	2.32	0.44
4:L5:4593:C:H2'	4:L5:4594:U:H6	1.83	0.44
4:L5:4667:C:H2'	4:L5:4668:U:O4'	2.18	0.44
6:L8:58:G:N7	41:Lj:63:ARG:NH2	2.49	0.44
24:LS:69:GLU:HG3	24:LS:71:SER:H	1.82	0.44
58:SS:61:GLU:HA	58:SS:64:VAL:HG12	1.99	0.44
61:SZ:48:VAL:HG23	61:SZ:80:ARG:HD2	1.98	0.44
66:SA:42:LYS:HD2	66:SA:48:ILE:HD11	1.99	0.44
78:SW:111:MET:HE3	78:SW:116:ALA:HA	1.99	0.44
80:SY:22:GLN:HB2	80:SY:72:PHE:CZ	2.53	0.44
84:S2:28:U:H2'	84:S2:29:G:C8	2.51	0.44
84:S2:106:C:H2'	84:S2:107:A:C8	2.43	0.44
84:S2:1736:G:H2'	84:S2:1737:G:C8	2.53	0.44
84:S2:1737:G:O6	84:S2:1797:U:O4	2.35	0.44
1:Pt:27:U:H2'	1:Pt:28:U:H6	1.83	0.44
2:CF:357:TYR:HB3	2:CF:372:PHE:HD2	1.82	0.44
4:L5:1716:G:H2'	4:L5:1717:C:C6	2.52	0.44
4:L5:1823:G:H2'	4:L5:1824:G:C8	2.52	0.44
4:L5:2041:A:N7	4:L5:4434:C:O2'	2.50	0.44
4:L5:2081:C:H2'	4:L5:2082:G:C8	2.53	0.44
4:L5:2283:G:H2'	4:L5:2284:G:H8	1.82	0.44
4:L5:2521:G:H2'	4:L5:2522:G:C8	2.53	0.44
4:L5:2699:C:H2'	4:L5:2700:G:H8	1.83	0.44
4:L5:3841:OMC:HM23	4:L5:3841:OMC:H1'	1.80	0.44
4:L5:3844:PSU:H2'	4:L5:3845:A:H8	1.82	0.44
4:L5:3937:C:O2'	19:LN:124:ASP:OD1	2.36	0.44
4:L5:4086:G:C8	29:LX:44:PRO:HG3	2.53	0.44
4:L5:4565:C:H2'	4:L5:4566:U:H6	1.81	0.44
4:L5:4637:OMG:HM23	4:L5:4637:OMG:H1'	1.72	0.44
4:L5:4685:U:H2'	4:L5:4686:G:H8	1.83	0.44
4:L5:5030:U:C2	4:L5:5031:G:C8	3.05	0.44
5:L7:58:A:H2'	5:L7:59:G:C8	2.53	0.44
6:L8:7:U:H2'	6:L8:8:U:C6	2.52	0.44
18:LM:96:GLU:O	18:LM:100:ARG:HG2	2.17	0.44
69:SE:38:LEU:HA	69:SE:41:CYS:SG	2.58	0.44
84:S2:696:G:H8	84:S2:733:C:H41	1.65	0.44
84:S2:1047:C:H2'	84:S2:1048:G:O4'	2.17	0.44
84:S2:1146:C:H2'	84:S2:1147:C:C6	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:S2:1198:G:H2'	84:S2:1199:A:C8	2.52	0.44
84:S2:1476:A:H4'	84:S2:1477:U:H5''	2.00	0.44
84:S2:1760:G:N1	84:S2:1774:C:OP1	2.51	0.44
2:CF:5:LYS:HG3	2:CF:85:TYR:HA	2.00	0.44
4:L5:75:G:O2'	17:LL:101:ARG:NH1	2.38	0.44
4:L5:95:G:OP2	17:LL:11:LYS:NZ	2.51	0.44
4:L5:406:C:O2'	4:L5:407:A:OP1	2.33	0.44
4:L5:1334:A:H2'	4:L5:1335:G:C8	2.51	0.44
4:L5:1419:G:H5''	22:LQ:71:LYS:HZ2	1.82	0.44
4:L5:1569:U:H2'	4:L5:1570:G:H8	1.83	0.44
4:L5:1802:A:O2'	25:LT:108:ARG:NH2	2.51	0.44
4:L5:2632:PSU:H2'	4:L5:2633:U:C6	2.52	0.44
4:L5:2649:G:H2'	4:L5:2650:G:H8	1.83	0.44
4:L5:2696:A:OP1	42:Lk:26:LYS:NZ	2.50	0.44
4:L5:2844:A:N6	4:L5:3839:G:O2'	2.51	0.44
4:L5:2884:G:H2'	4:L5:2885:A:C8	2.53	0.44
4:L5:2903:G:H1'	4:L5:2904:U:C5	2.53	0.44
4:L5:3611:A:H2	4:L5:5016:A:H8	1.66	0.44
4:L5:3736:A:H2'	4:L5:3737:A:C8	2.52	0.44
4:L5:4517:A:OP2	8:LB:2:SER:N	2.51	0.44
4:L5:4695:C:H2'	4:L5:4696:C:O4'	2.17	0.44
6:L8:90:C:H2'	6:L8:91:A:C8	2.53	0.44
8:LB:17:LEU:O	8:LB:19:ARG:N	2.50	0.44
11:LE:67:ALA:HA	11:LE:69:TYR:CE2	2.52	0.44
60:SU:38:ASP:OD1	60:SU:39:LEU:N	2.51	0.44
66:SA:42:LYS:HD3	66:SA:46:ILE:HB	2.00	0.44
69:SE:59:ASP:O	69:SE:63:LYS:HG3	2.18	0.44
71:SH:43:LEU:HB3	71:SH:72:PHE:CE1	2.53	0.44
71:SH:165:ASN:HA	71:SH:168:HIS:HE1	1.83	0.44
72:SI:141:ARG:HA	72:SI:141:ARG:CZ	2.48	0.44
76:SO:44:VAL:HG12	76:SO:53:ILE:HB	2.00	0.44
84:S2:526:A:H2'	84:S2:527:C:C6	2.53	0.44
84:S2:605:A:N3	84:S2:639:C:H1'	2.33	0.44
84:S2:1688:C:H2'	84:S2:1689:C:H6	1.81	0.44
84:S2:1700:C:O2	84:S2:1834:A:N6	2.50	0.44
3:AT:33:C:H2'	3:AT:34:U:C6	2.53	0.43
4:L5:184:U:O2	4:L5:253:G:C2	2.71	0.43
4:L5:443:G:OP1	37:Lf:68:ARG:NH2	2.51	0.43
4:L5:457:G:H2'	4:L5:458:C:C6	2.53	0.43
4:L5:457:G:OP1	11:LE:115:TYR:HB3	2.17	0.43
4:L5:2063:G:H2'	4:L5:2064:G:C8	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:2109:G:H2'	4:L5:2110:C:C6	2.52	0.43
4:L5:2250:C:H2'	4:L5:2251:G:C8	2.53	0.43
4:L5:2347:A:C4	36:Le:31:ILE:HD11	2.52	0.43
4:L5:2692:U:H2'	4:L5:2693:G:O4'	2.18	0.43
4:L5:4319:C:H2'	4:L5:4320:G:H8	1.82	0.43
4:L5:4402:C:N3	4:L5:4403:PSU:N1	2.65	0.43
4:L5:4617:G:OP1	8:LB:62:ARG:NH1	2.50	0.43
4:L5:4717:A:H4'	8:LB:20:LYS:HD3	2.00	0.43
8:LB:153:MET:HB3	8:LB:194:LEU:HD11	2.00	0.43
12:LF:238:ASP:O	12:LF:241:ASN:ND2	2.49	0.43
15:LI:205:PRO:HD2	15:LI:208:LYS:HE2	2.01	0.43
52:SF:140:ASP:OD1	52:SF:140:ASP:N	2.51	0.43
57:SR:24:LEU:HB2	57:SR:58:MET:HE1	1.98	0.43
59:ST:96:SER:HB3	59:ST:99:VAL:HB	1.99	0.43
61:SZ:106:GLN:HG3	61:SZ:108:ILE:HD11	2.00	0.43
64:Sf:107:LYS:NZ	64:Sf:108:VAL:O	2.45	0.43
65:Sg:251:ALA:HA	65:Sg:256:ILE:HD13	2.00	0.43
67:SB:33:VAL:HA	67:SB:96:CYS:HB2	2.00	0.43
67:SB:40:ASN:OD1	67:SB:41:ILE:HD12	2.18	0.43
68:SC:114:LYS:HD2	84:S2:1358:U:H5'	2.00	0.43
70:SG:56:ASN:HB2	70:SG:108:VAL:HG22	1.99	0.43
84:S2:644:OMG:HM23	84:S2:644:OMG:H1'	1.70	0.43
84:S2:688:U:H1'	84:S2:689:U:OP2	2.18	0.43
2:CF:21:SER:HA	2:CF:24:THR:HG22	2.00	0.43
3:AT:6:C:H2'	3:AT:7:G:H8	1.82	0.43
4:L5:715:G:OP1	9:LC:321:ASN:ND2	2.46	0.43
4:L5:919:C:OP1	18:LM:69:HIS:ND1	2.26	0.43
4:L5:1298:C:H2'	4:L5:1299:G:H8	1.82	0.43
4:L5:1354:A:H62	4:L5:1502:G:HO2'	1.62	0.43
4:L5:1503:A:H1'	4:L5:1504:G:C8	2.53	0.43
4:L5:1548:G:O2'	4:L5:2812:A:N3	2.47	0.43
4:L5:2102:G:N2	4:L5:2104:G:H1	2.15	0.43
4:L5:2389:A:H2'	4:L5:2390:G:C8	2.53	0.43
4:L5:2459:G:N2	4:L5:2462:C:OP2	2.45	0.43
4:L5:2861:OMC:HM23	4:L5:2861:OMC:H1'	1.70	0.43
4:L5:2877:G:H2'	4:L5:2878:G:O4'	2.18	0.43
4:L5:3619:G:H4'	23:LR:79:GLY:O	2.19	0.43
4:L5:3701:OMC:H4'	4:L5:3702:A:H5''	1.99	0.43
4:L5:3825:A2M:H1'	4:L5:3825:A2M:HM'3	1.51	0.43
4:L5:4174:U:H2'	4:L5:4175:G:C8	2.52	0.43
4:L5:4551:U:H2'	4:L5:4552:PSU:C6	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:LA:27:ALA:HB3	7:LA:128:ARG:HH22	1.82	0.43
8:LB:36:ASP:OD1	8:LB:36:ASP:N	2.50	0.43
13:LG:57:TRP:O	13:LG:62:ARG:NH1	2.51	0.43
16:LJ:52:LYS:HB3	16:LJ:65:ASN:HA	1.99	0.43
44:Lm:93:LYS:HD3	44:Lm:102:ARG:HG2	1.98	0.43
52:SF:142:SER:HB3	62:Sc:50:VAL:HG22	2.00	0.43
60:SU:61:LEU:HB2	60:SU:82:MET:HB3	2.00	0.43
66:SA:215:GLN:O	66:SA:219:GLU:HG2	2.17	0.43
72:SI:165:GLN:HB3	72:SI:171:LEU:HD23	2.00	0.43
74:SL:98:LYS:HD3	74:SL:99:TYR:CZ	2.53	0.43
76:SO:42:VAL:HG11	76:SO:78:ALA:HA	2.01	0.43
80:SY:105:LYS:O	80:SY:109:GLU:HG2	2.18	0.43
84:S2:323:C:H5'	84:S2:324:C:OP1	2.18	0.43
84:S2:563:G:O2'	84:S2:564:A:OP1	2.34	0.43
84:S2:944:A:H2'	84:S2:945:U:H6	1.83	0.43
84:S2:1174:PSU:H2'	84:S2:1175:G:C8	2.51	0.43
84:S2:1846:G:H2'	84:S2:1847:G:C8	2.53	0.43
4:L5:713:C:O2	11:LE:130:LYS:NZ	2.41	0.43
4:L5:907:C:H2'	4:L5:908:G:C8	2.53	0.43
4:L5:1095:A:H2	4:L5:1200:G:N1	2.09	0.43
4:L5:1281:G:C6	11:LE:128:HIS:HB2	2.53	0.43
4:L5:1358:G:OP1	9:LC:117:THR:N	2.39	0.43
4:L5:1468:C:H2'	4:L5:1469:C:H6	1.83	0.43
4:L5:1647:U:H5''	89:L5:5291:SPD:H72	1.99	0.43
4:L5:1850:A:N3	4:L5:2283:G:O2'	2.46	0.43
4:L5:2557:G:N2	4:L5:2570:U:O2	2.32	0.43
4:L5:2578:G:N7	31:LZ:17:ARG:NH2	2.62	0.43
4:L5:2831:G:H2'	4:L5:2832:A:H8	1.84	0.43
4:L5:3627:OMG:HM23	4:L5:3627:OMG:H1'	1.83	0.43
4:L5:3736:A:H2'	4:L5:3737:A:H8	1.83	0.43
4:L5:3788:C:N4	4:L5:3812:C:O4'	2.51	0.43
4:L5:3936:A:N6	4:L5:4175:G:O6	2.51	0.43
4:L5:3949:A:OP1	4:L5:4065:G:N2	2.52	0.43
4:L5:5062:G:H2'	4:L5:5063:G:H8	1.82	0.43
34:Lc:82:GLY:HA2	34:Lc:91:VAL:HG12	2.00	0.43
46:Lo:63:THR:O	46:Lo:87:ARG:NH1	2.51	0.43
59:ST:134:ILE:HA	59:ST:137:GLN:HG2	2.00	0.43
66:SA:140:VAL:HG13	66:SA:142:LEU:HB2	2.00	0.43
68:SC:202:THR:OG1	68:SC:221:ASP:HB3	2.18	0.43
68:SC:202:THR:HG1	68:SC:221:ASP:HB3	1.83	0.43
70:SG:31:ARG:HG3	70:SG:101:ILE:HG13	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
74:SL:126:VAL:HG12	74:SL:145:VAL:HG22	2.00	0.43
78:SW:125:ILE:HD12	78:SW:125:ILE:HA	1.85	0.43
80:SY:89:HIS:CE1	80:SY:90:ARG:HG3	2.53	0.43
84:S2:77:A:H2'	84:S2:78:C:C6	2.53	0.43
84:S2:102:A:H4'	84:S2:104:A:C8	2.53	0.43
84:S2:1189:A:H2'	84:S2:1190:A:H8	1.83	0.43
1:Pt:27:U:H2'	1:Pt:28:U:C6	2.53	0.43
4:L5:19:G:P	39:Lh:93:ARG:HE	2.42	0.43
4:L5:49:U:H2'	4:L5:50:C:H6	1.82	0.43
4:L5:126:C:H2'	4:L5:127:G:H8	1.84	0.43
4:L5:271:C:H2'	4:L5:272:U:H6	1.82	0.43
4:L5:2028:C:H2'	4:L5:2029:A:H8	1.83	0.43
4:L5:2436:U:H3'	29:LX:127:LEU:HD22	2.00	0.43
4:L5:2654:C:H2'	4:L5:2655:C:C6	2.53	0.43
4:L5:3722:G:H2'	4:L5:3723:A:C8	2.52	0.43
4:L5:3830:A2M:H1'	4:L5:3830:A2M:HM'3	1.63	0.43
11:LE:99:ASP:OD1	11:LE:99:ASP:N	2.51	0.43
25:LT:112:ASN:HB3	25:LT:128:LEU:HD23	2.00	0.43
48:Lr:28:GLU:HG2	48:Lr:31:ASN:HB2	2.01	0.43
49:Ls:134:LYS:HD2	49:Ls:137:PHE:HE2	1.84	0.43
54:SM:28:HIS:CE1	54:SM:115:GLY:HA3	2.54	0.43
57:SR:128:PHE:CD2	57:SR:129:LYS:HG3	2.54	0.43
66:SA:164:ASN:OD1	66:SA:165:ASN:N	2.51	0.43
69:SE:202:PRO:HB2	74:SL:42:LEU:HD23	1.99	0.43
74:SL:128:VAL:HG12	74:SL:142:VAL:HA	2.00	0.43
75:SN:37:ILE:HG23	75:SN:50:ILE:HG21	2.00	0.43
82:Sb:49:HIS:ND1	82:Sb:69:GLY:O	2.51	0.43
84:S2:344:U:H2'	84:S2:345:U:C6	2.54	0.43
84:S2:512:A:H4'	84:S2:576:A2M:H2	2.00	0.43
84:S2:653:A:H2'	84:S2:654:A:O4'	2.18	0.43
84:S2:959:G:H1'	84:S2:964:A:H61	1.83	0.43
84:S2:1091:C:N4	84:S2:1092:G:O6	2.51	0.43
84:S2:1093:A:H2'	84:S2:1094:C:H6	1.82	0.43
2:CF:96:ARG:CZ	2:CF:430:ARG:HG3	2.48	0.43
4:L5:73:A:N6	17:LL:103:ARG:HH22	2.16	0.43
4:L5:227:A:N6	4:L5:242:U:O4'	2.51	0.43
4:L5:963:G:N2	12:LF:32:ARG:HH22	2.17	0.43
4:L5:1426:G:N1	4:L5:1458:C:OP2	2.46	0.43
4:L5:1875:C:H2'	4:L5:1876:U:C6	2.54	0.43
4:L5:2890:C:H2'	4:L5:2891:U:C6	2.53	0.43
4:L5:3609:G:H2'	4:L5:3610:A:H8	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:4299:PSU:H2'	4:L5:4300:U:H6	1.84	0.43
4:L5:4305:G:O5'	25:LT:83:LYS:NZ	2.51	0.43
4:L5:4424:A:C4	4:L5:4425:G:C8	3.07	0.43
4:L5:4672:A:OP1	27:LV:17:SER:OG	2.33	0.43
9:LC:366:ASP:HB3	9:LC:368:LYS:HE2	2.01	0.43
57:SR:133:GLY:HA3	67:SB:152:LYS:HD3	1.99	0.43
66:SA:126:ASP:OD1	66:SA:165:ASN:ND2	2.51	0.43
66:SA:184:ARG:NE	66:SA:191:ARG:HD3	2.33	0.43
73:SJ:64:ASP:OD1	73:SJ:65:GLU:N	2.52	0.43
80:SY:104:ARG:HG2	80:SY:108:LYS:HE2	1.99	0.43
84:S2:207:G:H3'	84:S2:208:G:H8	1.82	0.43
84:S2:1215:C:H42	84:S2:1220:A:N6	2.16	0.43
84:S2:1269:G:H2'	84:S2:1270:G:C8	2.53	0.43
84:S2:1390:U:H2'	84:S2:1391:OMC:C6	2.53	0.43
84:S2:1531:A:H2'	84:S2:1532:C:C6	2.54	0.43
84:S2:1538:C:H2'	84:S2:1539:U:C6	2.53	0.43
84:S2:1540:G:H2'	84:S2:1541:G:H8	1.82	0.43
85:Zt:26:A:N1	85:Zt:44:G:N2	2.54	0.43
2:CF:162:TYR:HE1	2:CF:194:SER:HB2	1.84	0.43
4:L5:158:A:H5''	4:L5:159:C:H2'	2.00	0.43
4:L5:416:U:H2'	4:L5:417:G:O4'	2.19	0.43
4:L5:1617:G:H1'	4:L5:2513:A:N6	2.33	0.43
4:L5:1949:U:H2'	4:L5:1950:U:C6	2.53	0.43
4:L5:2323:C:H2'	4:L5:2324:C:H6	1.83	0.43
4:L5:2543:A:H2	4:L5:2773:G:H22	1.66	0.43
4:L5:4244:A:H2'	4:L5:4245:G:O4'	2.18	0.43
4:L5:4619:U:H2'	4:L5:4620:OMU:H6	2.00	0.43
4:L5:4972:PSU:H2'	4:L5:4973:PSU:C6	2.53	0.43
12:LF:113:ARG:NH1	12:LF:208:LEU:O	2.39	0.43
15:LI:101:LYS:NZ	15:LI:102:MET:O	2.48	0.43
17:LL:123:LYS:HA	39:Lh:122:LYS:HE3	2.00	0.43
20:LO:54:TYR:OH	20:LO:73:PHE:O	2.36	0.43
31:LZ:84:ARG:NH2	38:Lg:102:ILE:HG21	2.33	0.43
38:Lg:33:LEU:HD23	38:Lg:33:LEU:HA	1.88	0.43
68:SC:270:THR:HA	68:SC:273:LEU:HB2	1.99	0.43
72:SI:36:THR:HG22	72:SI:96:LEU:HD12	2.01	0.43
72:SI:47:ARG:HH22	84:S2:446:G:P	2.41	0.43
73:SJ:179:LYS:HA	73:SJ:182:GLN:HG3	2.01	0.43
81:Sa:3:LYS:HA	84:S2:1861:G:H5''	2.01	0.43
84:S2:52:G:H2'	84:S2:53:C:H6	1.83	0.43
84:S2:811:A:H2'	84:S2:812:A:C8	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:S2:1177:PSU:H2'	84:S2:1178:U:C6	2.53	0.43
84:S2:1373:C:H2'	84:S2:1374:C:H6	1.83	0.43
85:Zt:75:C:H3'	85:Zt:76:A:C8	2.53	0.43
3:AT:16:C:O2'	3:AT:19:G:OP1	2.36	0.43
3:AT:50:C:H2'	3:AT:51:U:C6	2.54	0.43
4:L5:138:G:H2'	4:L5:139:G:H8	1.82	0.43
4:L5:318:A:H2'	4:L5:319:A:H8	1.83	0.43
4:L5:711:A:H2'	4:L5:712:C:C6	2.54	0.43
4:L5:908:G:H2'	4:L5:909:A:H8	1.83	0.43
4:L5:909:A:H2'	4:L5:910:G:H8	1.83	0.43
4:L5:2683:C:H2'	4:L5:2684:C:C6	2.53	0.43
4:L5:4503:A:H2'	4:L5:4504:C:C6	2.53	0.43
4:L5:4636:PSU:N1	35:Ld:79:ASN:OD1	2.51	0.43
4:L5:4736:C:H4'	4:L5:5068:G:C4	2.53	0.43
4:L5:4927:G:H5''	4:L5:4928:C:H5	1.83	0.43
6:L8:140:C:H2'	6:L8:141:C:H6	1.83	0.43
11:LE:168:LEU:HD11	11:LE:174:LEU:HB2	2.00	0.43
13:LG:105:GLU:OE2	13:LG:113:ARG:NH1	2.52	0.43
18:LM:6:PHE:H	18:LM:11:ARG:NH2	2.16	0.43
53:SK:5:LYS:O	53:SK:8:ARG:N	2.52	0.43
55:SP:95:GLY:HA2	55:SP:104:GLN:HA	1.99	0.43
58:SS:28:PHE:O	58:SS:31:THR:OG1	2.30	0.43
60:SU:31:SER:O	60:SU:34:LYS:HG3	2.18	0.43
66:SA:81:ASN:ND2	66:SA:204:TYR:OH	2.51	0.43
66:SA:220:LYS:HA	66:SA:220:LYS:HD3	1.81	0.43
68:SC:66:LEU:HD21	68:SC:88:ILE:HD13	2.00	0.43
72:SI:44:HIS:ND1	84:S2:1740:C:OP1	2.41	0.43
74:SL:112:HIS:HB3	74:SL:141:ASN:OD1	2.19	0.43
84:S2:174:OMC:HM23	84:S2:174:OMC:H1'	1.82	0.43
85:Zt:2:C:H2'	85:Zt:3:C:C6	2.53	0.43
4:L5:303:C:OP2	19:LN:68:ARG:NH2	2.38	0.43
4:L5:674:G:H2'	4:L5:675:C:C6	2.53	0.43
4:L5:1341:U:H2'	4:L5:1342:A:C8	2.54	0.43
4:L5:1567:U:H2'	4:L5:1568:C:C6	2.53	0.43
4:L5:1656:U:H2'	4:L5:1657:G:H8	1.84	0.43
4:L5:1952:G:OP1	24:LS:139:ARG:NE	2.52	0.43
4:L5:2368:A:N6	4:L5:2827:G:O2'	2.51	0.43
4:L5:2407:G:H2'	43:Ll:13:LEU:HD22	2.01	0.43
4:L5:2674:A:C6	47:Lp:42:CYS:HA	2.54	0.43
4:L5:3896:C:O2'	8:LB:268:ARG:NH2	2.49	0.43
4:L5:3951:G:H1'	4:L5:4062:A:H61	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:4291:G:H5'	4:L5:4293:PSU:C6	2.54	0.43
4:L5:4600:G:N2	4:L5:4601:U:O4	2.52	0.43
6:L8:28:C:H2'	6:L8:29:G:C8	2.54	0.43
8:LB:117:ARG:HG2	8:LB:180:LEU:HD12	2.01	0.43
10:LD:95:TYR:HA	10:LD:158:LYS:HG2	2.00	0.43
26:LU:35:ASP:OD1	26:LU:35:ASP:N	2.51	0.43
51:SD:223:ILE:HD11	65:Sg:189:ILE:HD12	2.01	0.43
52:SF:185:SER:O	52:SF:185:SER:OG	2.36	0.43
69:SE:136:ILE:HD12	69:SE:149:TYR:CE1	2.54	0.43
69:SE:212:ASP:OD1	69:SE:216:ASN:N	2.51	0.43
79:SX:32:LEU:HD12	79:SX:32:LEU:HA	1.88	0.43
84:S2:1226:G:N1	84:S2:1639:G7M:OP2	2.46	0.43
84:S2:1711:U:H2'	84:S2:1712:A:C8	2.54	0.43
2:CF:290:LYS:NZ	84:S2:477:G:O2'	2.52	0.43
4:L5:755:C:H2'	4:L5:756:G:C8	2.54	0.43
4:L5:1317:U:H2'	4:L5:1318:C:C6	2.54	0.43
4:L5:2634:C:H2'	4:L5:2635:U:C6	2.54	0.43
4:L5:2642:A:C2	42:Lk:2:PRO:HD2	2.54	0.43
4:L5:2695:A:H1'	4:L5:2697:A:N7	2.34	0.43
4:L5:3659:G:H2'	4:L5:3660:C:C6	2.54	0.43
4:L5:3932:U:H2'	4:L5:3933:G:C8	2.54	0.43
4:L5:4277:G:H2'	4:L5:4278:C:C6	2.53	0.43
4:L5:4579:PSU:H2'	4:L5:4580:U:C6	2.54	0.43
4:L5:4761:G:N2	4:L5:4766:C:O3'	2.52	0.43
4:L5:4910:G:N1	20:LO:108:ILE:O	2.52	0.43
23:LR:139:MET:HG2	23:LR:143:HIS:CE1	2.54	0.43
51:SD:106:ARG:HG3	51:SD:175:VAL:HG22	2.01	0.43
51:SD:211:VAL:O	57:SR:20:TYR:OH	2.29	0.43
53:SK:61:GLN:HB3	53:SK:68:TYR:HB2	2.00	0.43
56:SQ:110:ASP:CG	56:SQ:111:ILE:HD12	2.44	0.43
59:ST:23:LYS:HD3	59:ST:51:ASN:HD22	1.84	0.43
59:ST:104:LEU:HD22	59:ST:121:ARG:HD2	2.01	0.43
69:SE:45:ILE:HD12	69:SE:80:ILE:HD11	2.00	0.43
77:SV:42:VAL:HG23	77:SV:43:THR:HG23	1.99	0.43
84:S2:107:A:H61	84:S2:354:OMU:C4	2.32	0.43
84:S2:496:C:H2'	84:S2:497:C:C6	2.53	0.43
84:S2:1204:A:H2'	84:S2:1205:C:C6	2.53	0.43
84:S2:1558:C:H2'	84:S2:1559:C:C6	2.53	0.43
2:CF:158:THR:HG21	2:CF:166:ARG:HG2	2.00	0.43
4:L5:396:A:H2'	4:L5:397:G:C8	2.54	0.43
4:L5:455:C:O2'	4:L5:456:C:H5'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:1960:A:C8	49:Ls:63:LYS:HE2	2.53	0.43
4:L5:1996:C:N4	4:L5:2000:G:N2	2.39	0.43
4:L5:2090:U:H4'	4:L5:2091:C:H3'	2.01	0.43
4:L5:2744:A:H2'	4:L5:2745:A:C8	2.54	0.43
4:L5:2837:OMU:HM23	4:L5:2837:OMU:H1'	1.86	0.43
4:L5:3721:U:H2'	4:L5:3722:G:H8	1.84	0.43
4:L5:3754:G:O6	4:L5:3771:C:N4	2.51	0.43
4:L5:3927:U:H2'	4:L5:3928:A:H8	1.83	0.43
4:L5:4883:C:H2'	4:L5:4884:G:C8	2.54	0.43
4:L5:4921:C:H2'	4:L5:4922:C:H6	1.84	0.43
6:L8:26:C:O2'	9:LC:53:ALA:O	2.35	0.43
14:LH:63:ASN:O	14:LH:67:LEU:HG	2.18	0.43
25:LT:68:THR:OG1	25:LT:71:ALA:O	2.35	0.43
56:SQ:96:TYR:HA	56:SQ:100:VAL:HG12	2.01	0.43
58:SS:35:GLY:HA2	84:S2:1630:A:O2'	2.19	0.43
58:SS:102:GLY:HA2	58:SS:105:ASN:HD21	1.84	0.43
67:SB:167:LYS:HB2	67:SB:167:LYS:HE2	1.87	0.43
71:SH:76:GLN:O	71:SH:80:VAL:HG23	2.19	0.43
84:S2:160:U:O2'	84:S2:162:C:O5'	2.36	0.43
84:S2:386:C:H2'	84:S2:387:C:C6	2.53	0.43
84:S2:609:U:H2'	84:S2:610:G:H8	1.84	0.43
84:S2:1010:G:H2'	84:S2:1011:A:C8	2.53	0.43
84:S2:1025:U:H2'	84:S2:1026:C:O4'	2.19	0.43
4:L5:233:U:O2'	4:L5:234:G:H8	2.02	0.42
4:L5:474:C:H2'	4:L5:475:G:H8	1.84	0.42
4:L5:2689:C:H2'	4:L5:2690:C:C6	2.53	0.42
4:L5:3911:C:H2'	4:L5:3912:U:C6	2.54	0.42
4:L5:4186:A:H2'	4:L5:4187:G:H8	1.84	0.42
4:L5:4934:A:H2'	4:L5:4935:C:C6	2.53	0.42
6:L8:95:A:N3	39:Lh:63:GLN:NE2	2.66	0.42
23:LR:80:LYS:HA	23:LR:80:LYS:HD2	1.82	0.42
28:LW:5:LEU:HD12	28:LW:30:GLN:NE2	2.34	0.42
37:Lf:45:LYS:HA	37:Lf:107:PRO:HD2	2.01	0.42
49:Ls:62:ARG:HB3	49:Ls:66:ARG:NH1	2.32	0.42
65:Sg:131:LEU:O	65:Sg:139:LYS:N	2.51	0.42
69:SE:75:LYS:NZ	84:S2:122:G:OP1	2.39	0.42
84:S2:12:U:H2'	84:S2:13:C:C6	2.53	0.42
84:S2:12:U:H2'	84:S2:13:C:H6	1.83	0.42
84:S2:181:A:OP2	84:S2:182:C:O2'	2.33	0.42
84:S2:1347:U:H3'	84:S2:1348:G:H21	1.84	0.42
3:AT:60:A:H2'	3:AT:61:A:O4'	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:85:G:H1'	4:L5:86:U:H5	1.84	0.42
4:L5:325:U:P	40:Li:28:ARG:HH22	2.42	0.42
4:L5:480:C:H2'	4:L5:481:G:C8	2.54	0.42
4:L5:705:G:H2'	4:L5:706:C:C6	2.54	0.42
4:L5:1662:C:H2'	4:L5:1663:C:C6	2.54	0.42
4:L5:1662:C:H2'	4:L5:1663:C:H6	1.84	0.42
4:L5:1976:G:H22	50:Lt:139:VAL:HG11	1.83	0.42
4:L5:2039:G:OP2	4:L5:2040:A:O2'	2.35	0.42
4:L5:3716:C:H3'	4:L5:3735:G:H22	1.85	0.42
4:L5:4589:A:OP2	89:L5:5290:SPD:N10	2.52	0.42
4:L5:4592:C:H2'	4:L5:4593:C:H6	1.85	0.42
4:L5:4601:U:H2'	4:L5:4602:A:C8	2.48	0.42
4:L5:4672:A:OP1	27:LV:15:ARG:NH2	2.47	0.42
4:L5:4716:C:H5''	8:LB:276:HIS:O	2.20	0.42
8:LB:302:ASN:HB2	8:LB:313:SER:HA	2.02	0.42
14:LH:92:MET:HG2	14:LH:181:VAL:HG22	2.00	0.42
15:LI:93:PRO:HB2	15:LI:125:THR:HB	2.00	0.42
19:LN:115:VAL:HA	19:LN:134:LEU:HD13	2.01	0.42
34:Lc:30:GLY:O	34:Lc:34:THR:OG1	2.29	0.42
43:Ll:24:PRO:HD2	43:Ll:27:ILE:HG13	2.01	0.42
50:Lt:134:GLY:HA3	50:Lt:152:ILE:HD11	2.01	0.42
58:SS:1:MET:SD	58:SS:1:MET:N	2.91	0.42
71:SH:37:LYS:HD2	71:SH:40:LEU:HD23	2.01	0.42
84:S2:484:A2M:H8	84:S2:484:A2M:O5'	2.19	0.42
84:S2:698:G:H2'	84:S2:733:C:C4	2.54	0.42
2:CF:261:THR:HG22	2:CF:317:VAL:HG13	2.01	0.42
4:L5:188:G:O2'	4:L5:190:G:OP2	2.32	0.42
4:L5:217:C:OP2	4:L5:219:G:O2'	2.23	0.42
4:L5:408:A:O2'	4:L5:411:G:OP2	2.27	0.42
4:L5:972:C:C6	11:LE:126:LEU:HD13	2.55	0.42
4:L5:1273:G:C5	11:LE:73:TYR:HB2	2.54	0.42
4:L5:1307:A:H2'	4:L5:1308:C:C6	2.53	0.42
4:L5:1519:C:H2'	4:L5:1520:C:C6	2.54	0.42
4:L5:2098:G:H2'	4:L5:2099:G:C8	2.54	0.42
4:L5:2811:G:N2	4:L5:2813:A:H3'	2.33	0.42
4:L5:3920:PSU:H2'	4:L5:3921:U:C6	2.54	0.42
4:L5:4896:G:H2'	4:L5:4897:G:H8	1.83	0.42
10:LD:205:ALA:HB1	10:LD:233:PRO:HB3	2.00	0.42
15:LI:51:HIS:CD2	15:LI:168:SER:HB3	2.53	0.42
27:LV:36:ASN:ND2	27:LV:67:LYS:HG2	2.34	0.42
39:Lh:107:GLN:O	39:Lh:111:GLU:HG3	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:Ls:91:THR:HG21	49:Ls:98:ILE:HG13	2.01	0.42
57:SR:32:LYS:NZ	84:S2:1452:A:OP2	2.53	0.42
59:ST:9:VAL:O	59:ST:11:GLN:NE2	2.52	0.42
76:SO:80:ASP:O	76:SO:83:GLN:HG3	2.19	0.42
84:S2:573:U:H1'	84:S2:576:A2M:N7	2.33	0.42
84:S2:943:U:H2'	84:S2:944:A:H8	1.83	0.42
84:S2:1605:G:H1'	84:S2:1634:A:H61	1.85	0.42
84:S2:1803:U:H2'	84:S2:1804:U:C6	2.54	0.42
85:Zt:51:G:H2'	85:Zt:52:G:H8	1.84	0.42
1:Pt:58:A:O2'	1:Pt:60:A:OP2	2.28	0.42
2:CF:104:THR:O	2:CF:107:SER:OG	2.34	0.42
4:L5:269:G:H2'	4:L5:270:U:C6	2.54	0.42
4:L5:1084:C:H2'	4:L5:1085:C:H6	1.84	0.42
4:L5:1516:G:O2'	17:LL:18:TRP:NE1	2.53	0.42
4:L5:1574:G:OP2	23:LR:92:LYS:NZ	2.49	0.42
4:L5:2540:C:H5''	38:Lg:65:MET:HE3	2.02	0.42
4:L5:2616:C:C2	4:L5:2722:G:N2	2.87	0.42
4:L5:2804:OMC:H2'	4:L5:2805:C:H6	1.85	0.42
4:L5:4159:C:H2'	4:L5:4160:C:C6	2.55	0.42
6:L8:129:C:H2'	6:L8:130:C:H6	1.85	0.42
19:LN:116:LEU:HD22	19:LN:135:ILE:HD11	2.01	0.42
28:LW:81:ALA:HB2	28:LW:87:LEU:HG	2.01	0.42
43:Ll:23:ILE:HD11	43:Ll:28:ARG:HE	1.84	0.42
44:Lm:99:CYS:HB3	44:Lm:115:CYS:HB3	2.00	0.42
47:Lp:49:ARG:HG3	47:Lp:55:TRP:CE2	2.55	0.42
48:Lr:8:MET:HE3	48:Lr:8:MET:HB3	1.83	0.42
63:Sd:3:HIS:CE1	63:Sd:5:GLN:HB2	2.54	0.42
68:SC:102:LEU:HD22	68:SC:130:ILE:HD12	2.01	0.42
73:SJ:18:ARG:HH22	84:S2:4:C:H1'	1.85	0.42
76:SO:39:ASP:N	76:SO:69:SER:HB3	2.33	0.42
84:S2:14:C:H2'	84:S2:15:U:C6	2.53	0.42
84:S2:115:U:H2'	84:S2:116:OMU:C6	2.49	0.42
84:S2:651:PSU:H2'	84:S2:652:U:C6	2.54	0.42
84:S2:656:G:H5'	84:S2:662:G:N2	2.35	0.42
84:S2:813:A:H2'	84:S2:814:PSU:O4'	2.19	0.42
84:S2:874:G:H2'	84:S2:875:A:C8	2.49	0.42
84:S2:1031:A2M:H2'	84:S2:1032:C:O4'	2.19	0.42
84:S2:1414:A:H2'	84:S2:1415:C:C6	2.55	0.42
84:S2:1428:G:N1	84:S2:1585:U:O4'	2.53	0.42
84:S2:1511:U:H2'	84:S2:1512:C:C6	2.54	0.42
84:S2:1533:A:H2	84:S2:1536:G:N3	2.17	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
85:Zt:43:A:H3'	85:Zt:44:G:H8	1.84	0.42
4:L5:197:A:H2'	4:L5:198:A:C8	2.55	0.42
4:L5:325:U:H2'	4:L5:326:C:H6	1.84	0.42
4:L5:1186:U:H2'	4:L5:1187:G:N3	2.34	0.42
4:L5:1207:C:H2'	4:L5:1208:G:C8	2.53	0.42
4:L5:1357:C:O2'	9:LC:114:ARG:NH2	2.45	0.42
4:L5:1703:C:O2'	4:L5:1704:C:O5'	2.33	0.42
4:L5:1981:G:N1	4:L5:1982:G:O6	2.53	0.42
4:L5:2353:U:H2'	4:L5:2354:G:C8	2.54	0.42
4:L5:2730:U:H2'	4:L5:2731:C:C6	2.55	0.42
4:L5:3825:A2M:H2'	4:L5:3826:C:H6	1.84	0.42
4:L5:4300:U:H2'	4:L5:4301:U:C6	2.55	0.42
5:L7:57:C:H2'	5:L7:58:A:C8	2.54	0.42
7:LA:131:GLY:H	7:LA:169:VAL:HG13	1.84	0.42
8:LB:17:LEU:HD23	8:LB:17:LEU:HA	1.89	0.42
15:LI:36:LEU:HD13	15:LI:87:MET:HE3	2.01	0.42
16:LJ:19:LYS:HD3	16:LJ:75:ARG:HH12	1.84	0.42
30:LY:67:ILE:HD12	30:LY:107:THR:HG21	2.01	0.42
34:Lc:78:ASN:OD1	34:Lc:78:ASN:N	2.52	0.42
38:Lg:44:SER:OG	38:Lg:46:CYS:SG	2.60	0.42
56:SQ:34:VAL:HG22	56:SQ:70:VAL:HB	2.02	0.42
57:SR:34:VAL:O	57:SR:38:ILE:HG12	2.20	0.42
73:SJ:39:ASN:HB2	84:S2:642:U:P	2.59	0.42
74:SL:22:ARG:NH1	74:SL:23:VAL:O	2.52	0.42
84:S2:16:G:H5'	84:S2:669:A:H61	1.84	0.42
84:S2:342:C:H2'	84:S2:343:A:H8	1.84	0.42
84:S2:976:G:H2'	84:S2:977:C:C6	2.54	0.42
84:S2:1018:U:H2'	84:S2:1019:C:C6	2.54	0.42
84:S2:1351:G:O2'	84:S2:1378:A:N1	2.46	0.42
84:S2:1373:C:H2'	84:S2:1374:C:C6	2.53	0.42
84:S2:1733:U:H2'	84:S2:1734:G:O4'	2.19	0.42
84:S2:1803:U:H2'	84:S2:1804:U:H6	1.84	0.42
1:Pt:33:U:H3'	56:SQ:146:ARG:NH2	2.34	0.42
3:AT:3:C:H2'	3:AT:4:U:C6	2.54	0.42
3:AT:68:G:H2'	3:AT:69:G:C8	2.55	0.42
4:L5:73:A:H62	17:LL:103:ARG:HH22	1.68	0.42
4:L5:279:A:H5''	19:LN:47:LYS:NZ	2.35	0.42
4:L5:728:U:OP1	12:LF:76:ARG:NH2	2.46	0.42
4:L5:920:C:H2'	4:L5:921:C:C6	2.54	0.42
4:L5:1273:G:C6	11:LE:73:TYR:HB2	2.54	0.42
4:L5:1368:A:H2'	4:L5:1369:C:O4'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:1717:C:H2'	4:L5:1718:C:C4	2.55	0.42
4:L5:1811:G:H2'	4:L5:1812:C:C6	2.54	0.42
4:L5:2581:A:H1'	4:L5:2654:C:O2'	2.20	0.42
4:L5:2749:C:H2'	4:L5:2750:G:H8	1.84	0.42
4:L5:4208:U:P	25:LT:6:GLY:HA3	2.59	0.42
4:L5:4237:C:O3'	4:L5:4326:G:N2	2.53	0.42
4:L5:4262:C:H2'	4:L5:4263:C:H6	1.84	0.42
4:L5:4947:U:H2'	4:L5:4948:C:C6	2.54	0.42
4:L5:4969:C:H2'	4:L5:4970:C:H6	1.83	0.42
4:L5:4970:C:C2	4:L5:4971:A:C8	3.08	0.42
6:L8:26:C:H2'	6:L8:27:U:C6	2.55	0.42
8:LB:154:LYS:HE2	8:LB:154:LYS:HB2	1.75	0.42
9:LC:221:PHE:O	9:LC:222:ARG:HG2	2.19	0.42
11:LE:223:ARG:HH22	11:LE:238:GLU:HG3	1.85	0.42
14:LH:93:ARG:HG2	14:LH:182:SER:HB3	2.02	0.42
18:LM:62:LEU:HD21	18:LM:82:ILE:HD11	2.00	0.42
18:LM:86:TRP:CE2	18:LM:92:ALA:HB2	2.54	0.42
32:La:76:ASP:OD1	32:La:77:LYS:N	2.52	0.42
37:Lf:36:ARG:O	37:Lf:39:THR:OG1	2.27	0.42
51:SD:77:PHE:HB2	51:SD:79:PHE:CE1	2.55	0.42
53:SK:80:ARG:NH2	53:SK:89:ILE:O	2.38	0.42
55:SP:56:LEU:HD22	55:SP:80:LEU:HD11	2.01	0.42
76:SO:55:ARG:NH1	84:S2:953:C:O2	2.42	0.42
84:S2:468:A2M:H2'	84:S2:469:A:H8	1.81	0.42
84:S2:900:C:H5'	84:S2:901:G:N7	2.34	0.42
84:S2:1031:A2M:H1'	84:S2:1031:A2M:HM'3	1.81	0.42
2:CF:146:LYS:NZ	2:CF:423:ARG:HH22	2.18	0.42
3:AT:28:U:H2'	3:AT:29:U:C6	2.55	0.42
4:L5:66:A:N6	4:L5:282:C:O2'	2.52	0.42
4:L5:139:G:H2'	4:L5:140:G:C8	2.55	0.42
4:L5:286:U:H2'	4:L5:287:U:C6	2.54	0.42
4:L5:1187:G:OP2	4:L5:1187:G:N2	2.44	0.42
4:L5:1298:C:H2'	4:L5:1299:G:C8	2.55	0.42
4:L5:1566:C:H2'	4:L5:1567:U:C6	2.54	0.42
4:L5:1721:G:H2'	4:L5:1722:C:C6	2.55	0.42
4:L5:1749:A:H2'	4:L5:1750:G:C8	2.55	0.42
4:L5:2374:A:H2'	4:L5:2375:A:C8	2.55	0.42
4:L5:2539:C:H2'	4:L5:2540:C:H6	1.82	0.42
4:L5:2891:U:H2'	4:L5:2892:C:O4'	2.20	0.42
4:L5:3825:A2M:H2'	4:L5:3826:C:O4'	2.20	0.42
4:L5:3938:G:P	19:LN:24:ARG:HE	2.43	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:3946:G:H2'	4:L5:3947:A:H5''	2.02	0.42
4:L5:4175:G:H2'	4:L5:4176:C:C6	2.55	0.42
4:L5:4313:A:H2'	4:L5:4314:C:O4'	2.19	0.42
4:L5:5018:C:H2'	4:L5:5019:A:H8	1.85	0.42
9:LC:279:LEU:HD23	9:LC:279:LEU:HA	1.89	0.42
11:LE:264:ILE:HD11	11:LE:267:LEU:HD22	2.02	0.42
12:LF:222:LYS:N	12:LF:232:ASP:OD1	2.41	0.42
18:LM:130:LEU:HB3	20:LO:177:LEU:HD11	2.01	0.42
23:LR:7:GLN:NE2	23:LR:35:ALA:O	2.41	0.42
31:LZ:135:ARG:HA	31:LZ:135:ARG:HD2	1.88	0.42
37:Lf:29:LYS:HG3	37:Lf:83:MET:HE1	2.00	0.42
49:Ls:57:LYS:O	49:Ls:61:MET:HG2	2.20	0.42
51:SD:204:LEU:HB2	51:SD:207:HIS:HB2	2.02	0.42
59:ST:72:VAL:O	59:ST:76:THR:HG23	2.19	0.42
61:SZ:99:LEU:HD11	61:SZ:102:LYS:HB2	2.02	0.42
69:SE:36:HIS:CG	69:SE:85:GLY:HA3	2.54	0.42
70:SG:137:ARG:NE	84:S2:171:A:OP1	2.51	0.42
78:SW:19:LYS:NZ	84:S2:1152:U:O3'	2.53	0.42
79:SX:105:PHE:CE2	79:SX:112:VAL:HB	2.54	0.42
84:S2:867:OMG:H1'	84:S2:867:OMG:HM23	1.83	0.42
84:S2:888:U:O2'	84:S2:898:U:N3	2.52	0.42
84:S2:902:G:O2'	84:S2:903:A:O4'	2.37	0.42
4:L5:4:G:H2'	4:L5:5:A:H8	1.85	0.42
4:L5:20:U:H3'	4:L5:21:G:C8	2.55	0.42
4:L5:1340:OMC:H2'	4:L5:1341:U:C6	2.55	0.42
4:L5:1342:A:H2'	4:L5:1343:A:C8	2.55	0.42
4:L5:1352:C:O2'	4:L5:1356:U:OP1	2.37	0.42
4:L5:1552:G:O2'	4:L5:1574:G:N2	2.52	0.42
4:L5:1580:C:H2'	4:L5:1581:G:O4'	2.20	0.42
4:L5:1666:C:H2'	4:L5:1667:G:O4'	2.19	0.42
4:L5:1846:G:H2'	4:L5:1847:C:C6	2.54	0.42
4:L5:2018:C:H2'	4:L5:2019:C:H6	1.84	0.42
4:L5:2397:G:C8	4:L5:2399:G:C8	3.08	0.42
4:L5:3605:C:OP2	23:LR:71:ARG:NE	2.52	0.42
4:L5:3923:A:H2'	4:L5:3924:C:C6	2.55	0.42
4:L5:4113:U:H4'	4:L5:4115:G:C4	2.54	0.42
4:L5:4551:U:H2'	4:L5:4552:PSU:H6	1.84	0.42
4:L5:4621:C:H2'	4:L5:4622:A:C8	2.55	0.42
4:L5:4736:C:H2'	4:L5:4737:G:C8	2.54	0.42
4:L5:5044:A:H2'	4:L5:5045:G:H8	1.85	0.42
5:L7:33:U:H2'	5:L7:34:C:C6	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:LD:206:ASP:HA	10:LD:209:ARG:HG2	2.01	0.42
13:LG:148:GLU:OE2	19:LN:6:TYR:OH	2.29	0.42
14:LH:4:ILE:HG12	14:LH:61:TRP:CH2	2.55	0.42
17:LL:110:LEU:O	17:LL:114:VAL:HG13	2.20	0.42
22:LQ:59:PRO:HG3	22:LQ:143:ARG:HA	2.02	0.42
41:Lj:27:TYR:HA	41:Lj:34:CYS:HA	2.02	0.42
54:SM:52:LEU:HD11	54:SM:62:VAL:HG12	2.01	0.42
58:SS:15:VAL:HG13	58:SS:68:ILE:HD11	2.01	0.42
67:SB:89:GLU:OE2	67:SB:99:ASN:HB3	2.20	0.42
70:SG:14:LYS:HG2	70:SG:124:LEU:HD12	2.02	0.42
70:SG:38:ALA:HB2	70:SG:50:VAL:HG12	2.02	0.42
73:SJ:59:GLU:O	73:SJ:62:THR:OG1	2.37	0.42
81:Sa:8:ASN:ND2	84:S2:1861:G:OP1	2.52	0.42
84:S2:21:U:H2'	84:S2:22:A:H8	1.84	0.42
84:S2:602:G:OP2	84:S2:603:C:O2'	2.30	0.42
84:S2:666:U:H2'	84:S2:667:U:C6	2.54	0.42
84:S2:1215:C:O2'	84:S2:1645:C:OP2	2.30	0.42
84:S2:1539:U:H2'	84:S2:1540:G:H8	1.83	0.42
84:S2:1749:G:H2'	84:S2:1750:C:H6	1.85	0.42
85:Zt:44:G:H3'	85:Zt:45:G:C8	2.55	0.42
4:L5:28:C:OP1	19:LN:187:SER:OG	2.27	0.42
4:L5:44:A:H5''	88:L5:5265:SPM:H81	2.02	0.42
4:L5:288:G:H2'	4:L5:289:C:C6	2.55	0.42
4:L5:423:G:H2'	4:L5:424:U:C6	2.55	0.42
4:L5:1926:C:H2'	4:L5:1927:U:C6	2.55	0.42
4:L5:3715:U:H2'	4:L5:3716:C:O4'	2.19	0.42
4:L5:4208:U:OP1	4:L5:4334:U:O2'	2.26	0.42
4:L5:4705:A:H2'	4:L5:4706:G:O4'	2.20	0.42
4:L5:4748:U:H3	4:L5:4952:G:H1	1.67	0.42
4:L5:4926:C:H5''	4:L5:4927:G:H21	1.83	0.42
4:L5:4935:C:H2'	4:L5:4936:G:C8	2.54	0.42
6:L8:27:U:H2'	6:L8:28:C:C6	2.54	0.42
22:LQ:32:TYR:HD2	22:LQ:51:LEU:HD11	1.85	0.42
25:LT:127:GLN:NE2	25:LT:129:LYS:O	2.49	0.42
36:Le:19:LYS:HE3	36:Le:19:LYS:HB3	1.87	0.42
38:Lg:60:ARG:HD2	38:Lg:60:ARG:HA	1.79	0.42
46:Lo:74:GLU:HB3	46:Lo:77:CYS:HB3	2.02	0.42
67:SB:94:LYS:HA	67:SB:94:LYS:HD2	1.82	0.42
70:SG:136:LYS:N	84:S2:170:A:OP1	2.43	0.42
74:SL:120:VAL:HG22	74:SL:145:VAL:HG11	2.02	0.42
74:SL:153:LYS:HD3	74:SL:153:LYS:HA	1.82	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:S2:647:U:H2'	84:S2:648:A:H8	1.85	0.42
84:S2:944:A:H2'	84:S2:945:U:C6	2.55	0.42
84:S2:1129:G:H2'	84:S2:1130:G:N3	2.35	0.42
84:S2:1303:C:H2'	84:S2:1304:U:C6	2.55	0.42
86:CI:63:ARG:HD2	86:CI:63:ARG:HA	1.85	0.42
4:L5:935:A:O2'	18:LM:44:GLN:O	2.29	0.42
4:L5:1495:G:H4'	22:LQ:187:LYS:HE3	2.01	0.42
4:L5:1998:A:O2'	4:L5:2019:C:O2'	2.23	0.42
4:L5:2111:G:N2	4:L5:2252:G:O4'	2.53	0.42
4:L5:2508:U:H2'	4:L5:2509:C:H6	1.85	0.42
4:L5:2558:C:H2'	4:L5:2559:G:C8	2.55	0.42
4:L5:2632:PSU:H2'	4:L5:2633:U:H6	1.85	0.42
4:L5:2682:G:H2'	4:L5:2683:C:C6	2.55	0.42
4:L5:3832:U:H2'	4:L5:3833:C:H6	1.84	0.42
4:L5:3833:C:H2'	4:L5:3834:C:H6	1.85	0.42
4:L5:3852:A:N7	4:L5:3853:PSU:N1	2.67	0.42
4:L5:4177:C:H2'	4:L5:4178:A:C8	2.51	0.42
4:L5:4524:G:N3	8:LB:252:ALA:HB1	2.35	0.42
4:L5:4708:A:N3	4:L5:4709:U:H5'	2.35	0.42
4:L5:4770:U:H2'	4:L5:4771:C:C6	2.55	0.42
4:L5:5047:C:O2'	4:L5:5050:C:OP2	2.28	0.42
6:L8:75:OMG:H2'	6:L8:76:C:C6	2.54	0.42
7:LA:101:VAL:HG22	7:LA:165:VAL:HG22	2.02	0.42
9:LC:266:THR:N	9:LC:269:LYS:O	2.51	0.42
13:LG:114:LEU:HD23	13:LG:114:LEU:HA	1.92	0.42
34:Lc:50:ASN:ND2	34:Lc:76:GLY:O	2.53	0.42
50:Lt:12:VAL:HG11	50:Lt:65:GLN:N	2.35	0.42
56:SQ:11:GLN:OE1	56:SQ:71:ARG:NH2	2.44	0.42
65:Sg:205:SER:C	65:Sg:221:LEU:HD23	2.44	0.42
70:SG:162:LEU:O	70:SG:167:LYS:NZ	2.51	0.42
72:SI:45:THR:HG23	72:SI:53:LYS:HG3	2.02	0.42
79:SX:28:LYS:O	79:SX:32:LEU:HB2	2.19	0.42
84:S2:845:G:H2'	84:S2:846:G:C8	2.55	0.42
84:S2:1139:C:H2'	84:S2:1140:G:O4'	2.20	0.42
84:S2:1384:C:C2	84:S2:1385:G:C8	3.07	0.42
84:S2:1435:C:O2'	84:S2:1436:C:O4'	2.35	0.42
84:S2:1740:C:H2'	84:S2:1741:U:C6	2.54	0.42
84:S2:1777:G:H2'	84:S2:1778:C:C6	2.52	0.42
4:L5:239:C:H5'	30:LY:33:PRO:HD3	2.02	0.41
4:L5:325:U:O5'	40:Li:28:ARG:NH2	2.53	0.41
4:L5:387:G:HO2'	4:L5:412:G:H1	1.66	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:1403:G:N2	4:L5:1415:G:C4	2.88	0.41
4:L5:1460:C:H2'	4:L5:1461:C:H6	1.84	0.41
4:L5:1672:U:H2'	4:L5:1673:U:C6	2.55	0.41
4:L5:1701:A:C2	4:L5:1702:C:H5	2.38	0.41
4:L5:4291:G:H8	4:L5:4328:G:H2'	1.85	0.41
4:L5:4340:U:H3	90:L5:5296:3HE:C11	2.32	0.41
4:L5:4392:OMG:N2	4:L5:4395:U:O2	2.49	0.41
4:L5:4761:G:H2'	4:L5:4762:A:C8	2.55	0.41
88:L5:5293:SPM:H31	88:L5:5293:SPM:H62	1.82	0.41
6:L8:28:C:H2'	6:L8:29:G:H8	1.84	0.41
15:LI:48:LEU:HB2	15:LI:142:LEU:HA	2.01	0.41
18:LM:38:VAL:HG21	18:LM:50:MET:HB3	2.02	0.41
20:LO:149:TYR:O	20:LO:153:THR:OG1	2.27	0.41
23:LR:167:LYS:HB3	23:LR:167:LYS:HE2	1.80	0.41
24:LS:113:MET:HE3	24:LS:113:MET:HB3	1.86	0.41
36:Le:91:CYS:HB3	36:Le:95:TYR:HD2	1.85	0.41
40:Li:99:LYS:HE2	40:Li:99:LYS:HB2	1.77	0.41
54:SM:19:GLN:O	54:SM:22:LEU:HG	2.19	0.41
62:Sc:44:ARG:NH2	62:Sc:63:ARG:HH11	2.18	0.41
72:SI:83:TYR:HB3	72:SI:101:ILE:HD11	2.02	0.41
80:SY:4:THR:H	80:SY:32:LYS:HZ3	1.67	0.41
80:SY:42:GLU:HA	80:SY:52:PRO:HB3	2.02	0.41
84:S2:14:C:O2	84:S2:668:A2M:H2	2.19	0.41
84:S2:509:OMG:HM23	84:S2:509:OMG:H1'	1.77	0.41
84:S2:1324:G:O6	84:S2:1504:U:O4	2.37	0.41
1:Pt:8:U:O2'	1:Pt:21:A:N1	2.45	0.41
3:AT:53:G:H2'	3:AT:54:G:C8	2.53	0.41
4:L5:362:A:N6	43:LI:37:TYR:O	2.49	0.41
4:L5:480:C:H2'	4:L5:481:G:H8	1.86	0.41
4:L5:737:C:C5	4:L5:739:G:H5''	2.55	0.41
4:L5:1389:U:OP1	4:L5:1497:A:O2'	2.24	0.41
4:L5:1857:C:H2'	4:L5:1858:A:H8	1.85	0.41
4:L5:2300:A:N7	9:LC:143:ARG:NH1	2.68	0.41
4:L5:2306:G:N2	4:L5:2331:G:O2'	2.52	0.41
4:L5:2364:OMG:HM23	4:L5:2364:OMG:H1'	1.90	0.41
4:L5:2415:U:H2'	4:L5:2416:G:C8	2.55	0.41
4:L5:2544:G:N1	6:L8:124:U:OP1	2.54	0.41
4:L5:3871:A:H2'	4:L5:3872:A:C8	2.55	0.41
4:L5:5064:G:N2	21:LP:75:GLN:HE22	2.18	0.41
5:L7:7:G:H5''	10:LD:22:ARG:HD3	2.01	0.41
6:L8:66:A:H2'	6:L8:67:U:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:LB:66:LYS:HB2	27:LV:14:PHE:CE2	2.55	0.41
8:LB:303:ALA:HB3	8:LB:312:LYS:HG3	2.03	0.41
25:LT:50:LYS:HB3	25:LT:50:LYS:HE2	1.80	0.41
29:LX:65:ALA:HB2	39:Lh:69:LEU:HD11	2.02	0.41
50:Lt:147:HIS:HA	50:Lt:148:PRO:HD3	1.89	0.41
53:SK:4:PRO:HD2	53:SK:7:ASN:HD21	1.85	0.41
60:SU:75:LYS:NZ	84:S2:1252:C:OP1	2.46	0.41
69:SE:137:PRO:HG3	70:SG:209:TYR:CZ	2.55	0.41
69:SE:252:ARG:O	69:SE:256:LEU:HG	2.19	0.41
72:SI:116:HIS:O	72:SI:152:ARG:NH2	2.40	0.41
73:SJ:41:ARG:N	84:S2:642:U:OP1	2.52	0.41
74:SL:94:HIS:O	74:SL:103:GLU:N	2.53	0.41
76:SO:71:PRO:HB3	76:SO:114:SER:OG	2.20	0.41
84:S2:445:A:H2'	84:S2:446:G:C8	2.56	0.41
84:S2:1037:G:H4'	84:S2:1845:A:H4'	2.02	0.41
84:S2:1079:C:H4'	84:S2:1182:A:H61	1.85	0.41
84:S2:1614:A:H2'	84:S2:1615:U:C6	2.54	0.41
84:S2:1839:U:H2'	84:S2:1840:U:C6	2.54	0.41
85:Zt:2:C:H2'	85:Zt:3:C:H6	1.85	0.41
3:AT:4:U:O4	3:AT:71:A:N6	2.53	0.41
3:AT:5:C:H2'	3:AT:6:C:H6	1.84	0.41
4:L5:301:G:H2'	4:L5:302:C:C6	2.55	0.41
4:L5:678:C:H2'	4:L5:679:C:C6	2.55	0.41
4:L5:1210:C:OP1	12:LF:70:ARG:HD3	2.20	0.41
4:L5:1404:G:N7	4:L5:1408:G:N1	2.68	0.41
4:L5:1570:G:O6	47:Lp:2:ALA:N	2.54	0.41
4:L5:2308:A:OP1	36:Le:101:HIS:NE2	2.54	0.41
4:L5:4195:G:O2'	4:L5:4442:PSU:OP1	2.21	0.41
6:L8:67:U:OP1	41:Lj:87:LYS:HG2	2.20	0.41
9:LC:10:VAL:O	9:LC:18:SER:OG	2.30	0.41
9:LC:133:LEU:HD23	9:LC:133:LEU:HA	1.94	0.41
31:LZ:12:LEU:HB2	31:LZ:81:MET:HB3	2.02	0.41
52:SF:112:LEU:HD13	52:SF:177:LEU:HD21	2.01	0.41
55:SP:25:LEU:HA	55:SP:28:MET:HB2	2.01	0.41
57:SR:7:LYS:HG3	84:S2:1373:C:OP1	2.20	0.41
58:SS:135:HIS:ND1	84:S2:1232:PSU:OP2	2.53	0.41
63:Sd:14:PHE:HB2	84:S2:1661:A:H8	1.85	0.41
69:SE:100:ARG:NH2	69:SE:118:GLU:OE2	2.53	0.41
72:SI:31:ARG:NE	84:S2:380:G:OP1	2.39	0.41
81:Sa:44:ILE:HG21	81:Sa:65:PRO:HD2	2.01	0.41
84:S2:207:G:H3'	84:S2:208:G:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:S2:441:C:H2'	84:S2:442:C:C6	2.55	0.41
84:S2:1062:A:H2'	84:S2:1063:C:C6	2.56	0.41
84:S2:1240:A:H2'	84:S2:1241:A:C8	2.56	0.41
84:S2:1294:G:H3'	84:S2:1295:A:H8	1.86	0.41
84:S2:1337:4AC:O5'	84:S2:1337:4AC:H6	2.20	0.41
84:S2:1518:C:H5''	84:S2:1519:U:H5''	2.03	0.41
84:S2:1805:G:H2'	84:S2:1806:A:C8	2.55	0.41
2:CF:28:ILE:HG13	2:CF:33:GLY:HA3	2.03	0.41
4:L5:342:G:H2'	4:L5:343:C:C6	2.55	0.41
4:L5:491:G:H2'	4:L5:492:U:C6	2.55	0.41
4:L5:679:C:H2'	4:L5:680:G:H8	1.85	0.41
4:L5:1175:A:H2	4:L5:1185:G:H22	1.69	0.41
4:L5:1625:OMG:P	88:L5:5268:SPM:HN5	2.43	0.41
4:L5:1730:U:H1'	25:LT:101:SER:HB3	2.01	0.41
4:L5:2324:C:H2'	4:L5:2325:C:C6	2.55	0.41
4:L5:2378:G:N2	4:L5:2381:A:OP2	2.53	0.41
4:L5:2864:A:H2'	4:L5:2865:U:C6	2.55	0.41
4:L5:3796:U:H2'	4:L5:3797:C:C6	2.54	0.41
4:L5:4071:U:H2'	4:L5:4072:C:H6	1.86	0.41
4:L5:4620:OMU:H1'	4:L5:4620:OMU:HM23	1.84	0.41
4:L5:4960:G:H2'	4:L5:4961:G:C8	2.55	0.41
4:L5:5006:U:H4'	4:L5:5007:A:H5'	2.02	0.41
6:L8:82:A:N7	6:L8:84:A:H3'	2.35	0.41
28:LW:94:ARG:HA	28:LW:101:ARG:NH2	2.35	0.41
51:SD:29:LEU:HD22	51:SD:58:VAL:HG23	2.02	0.41
51:SD:163:PRO:HA	51:SD:166:TYR:CZ	2.55	0.41
65:Sg:163:PRO:HB2	65:Sg:179:LEU:HB2	2.01	0.41
71:SH:30:LEU:O	71:SH:33:ASN:ND2	2.53	0.41
73:SJ:147:PHE:CE1	84:S2:824:C:H5'	2.55	0.41
74:SL:131:CYS:SG	74:SL:141:ASN:ND2	2.94	0.41
83:Se:32:ALA:HB2	84:S2:525:A:H5''	2.03	0.41
84:S2:458:A:H2'	84:S2:459:C:H6	1.85	0.41
84:S2:544:G:H2'	84:S2:545:A:C8	2.55	0.41
84:S2:601:OMG:HM23	84:S2:601:OMG:H1'	1.87	0.41
84:S2:610:G:C6	84:S2:634:A:C6	3.09	0.41
84:S2:676:C:H2'	84:S2:677:G:O4'	2.21	0.41
84:S2:1713:C:H2'	84:S2:1714:U:H6	1.85	0.41
84:S2:1798:C:H2'	84:S2:1799:G:O4'	2.20	0.41
1:Pt:38:C:H2'	1:Pt:39:G:O4'	2.20	0.41
1:Pt:62:C:H2'	1:Pt:63:G:H8	1.86	0.41
4:L5:422:C:H2'	4:L5:423:G:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:677:G:H2'	4:L5:678:C:C6	2.55	0.41
4:L5:737:C:C4	4:L5:739:G:H5''	2.56	0.41
4:L5:907:C:H2'	4:L5:908:G:H8	1.86	0.41
4:L5:952:G:H2'	4:L5:953:C:H6	1.85	0.41
4:L5:982:U:H2'	4:L5:983:C:C6	2.56	0.41
4:L5:1190:C:H2'	4:L5:1191:C:C6	2.56	0.41
4:L5:1538:U:H2'	4:L5:1539:G:H8	1.85	0.41
4:L5:1631:A:C2	7:LA:204:MET:HG2	2.55	0.41
4:L5:2633:U:H2'	4:L5:2634:C:C6	2.55	0.41
4:L5:3934:G:H2'	4:L5:3935:C:C6	2.56	0.41
4:L5:4273:A:H2'	4:L5:4274:A:C8	2.56	0.41
4:L5:4313:A:H4'	25:LT:71:ALA:HB3	2.03	0.41
4:L5:4535:A:H2'	4:L5:4536:OMC:H6	1.86	0.41
4:L5:4605:A:H2'	4:L5:4606:G:C8	2.55	0.41
4:L5:4921:C:H2'	4:L5:4922:C:C6	2.55	0.41
4:L5:4967:A:P	8:LB:126:LYS:H	2.44	0.41
10:LD:66:TYR:HE2	10:LD:68:ARG:HE	1.68	0.41
34:Lc:23:LYS:HB3	34:Lc:23:LYS:HE3	1.86	0.41
35:Ld:57:MET:HG2	35:Ld:88:LEU:HD23	2.03	0.41
37:Lf:5:LEU:HA	37:Lf:5:LEU:HD23	1.88	0.41
55:SP:47:ARG:NE	84:S2:1619:A:OP1	2.39	0.41
58:SS:113:ARG:O	58:SS:117:ILE:HG12	2.21	0.41
59:ST:38:LYS:NZ	84:S2:1628:C:OP1	2.44	0.41
65:Sg:125:ARG:HD3	65:Sg:150:TRP:CE2	2.56	0.41
65:Sg:212:LYS:HA	65:Sg:235:ILE:HG13	2.02	0.41
67:SB:57:ILE:HG22	67:SB:59:SER:H	1.85	0.41
71:SH:30:LEU:HG	71:SH:33:ASN:HD22	1.85	0.41
71:SH:83:LEU:HB3	71:SH:92:VAL:HG21	2.03	0.41
72:SI:181:GLN:HE21	84:S2:379:C:P	2.44	0.41
75:SN:4:MET:HG2	75:SN:5:HIS:CD2	2.55	0.41
75:SN:91:LEU:HB3	75:SN:122:ILE:HG12	2.03	0.41
84:S2:1218:C:H2'	84:S2:1219:C:C6	2.56	0.41
84:S2:1567:G:H2'	84:S2:1568:C:C6	2.56	0.41
4:L5:72:C:H5	17:LL:67:HIS:HD1	1.68	0.41
4:L5:102:G:O2'	4:L5:1381:U:O2'	2.33	0.41
4:L5:734:G:H22	4:L5:929:A:H2	1.67	0.41
4:L5:4727:A:H2'	4:L5:4728:U:O4'	2.20	0.41
4:L5:5002:U:H2'	4:L5:5003:U:C6	2.55	0.41
10:LD:152:ARG:HG3	10:LD:154:THR:HG23	2.03	0.41
10:LD:203:ASN:OD1	10:LD:203:ASN:N	2.51	0.41
10:LD:211:LEU:HD12	10:LD:223:PHE:HE2	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:LE:223:ARG:HB3	11:LE:224:LYS:HB2	2.03	0.41
29:LX:90:ILE:HG12	29:LX:96:LEU:HD23	2.02	0.41
49:Ls:193:PHE:HA	49:Ls:197:SER:O	2.20	0.41
52:SF:22:LYS:NZ	52:SF:98:GLU:OE2	2.42	0.41
52:SF:83:ASN:OD1	84:S2:1651:A:O2'	2.34	0.41
53:SK:32:HIS:CD2	53:SK:45:VAL:HG11	2.55	0.41
58:SS:84:LEU:HD23	58:SS:96:SER:C	2.46	0.41
65:Sg:170:TRP:HA	65:Sg:194:TYR:HB2	2.02	0.41
69:SE:101:LEU:HD12	69:SE:101:LEU:HA	1.89	0.41
72:SI:132:GLU:O	72:SI:136:ILE:HG23	2.20	0.41
76:SO:66:ARG:HG2	84:S2:962:A:H5''	2.03	0.41
79:SX:5:ARG:N	84:S2:1160:U:OP2	2.52	0.41
83:Se:41:ARG:HG3	83:Se:42:PHE:HD1	1.85	0.41
84:S2:145:G:H2'	84:S2:146:G:H8	1.82	0.41
84:S2:839:C:O2'	84:S2:841:G:O4'	2.37	0.41
84:S2:1232:PSU:H2'	84:S2:1233:G:C8	2.55	0.41
84:S2:1802:C:H2'	84:S2:1803:U:H6	1.86	0.41
84:S2:1821:U:O4	84:S2:1822:A:N6	2.53	0.41
2:CF:77:LEU:HD13	2:CF:90:ILE:HG12	2.03	0.41
4:L5:248:C:H2'	4:L5:249:C:H6	1.86	0.41
4:L5:302:C:H2'	4:L5:303:C:C6	2.55	0.41
4:L5:416:U:H4'	4:L5:2330:G:H4'	2.03	0.41
4:L5:2571:C:H2'	4:L5:2572:C:C6	2.55	0.41
4:L5:2745:A:H2'	4:L5:2746:A:C8	2.55	0.41
4:L5:2824:OMC:HM23	4:L5:2824:OMC:H1'	1.71	0.41
4:L5:2856:C:H2'	4:L5:2857:A:O4'	2.21	0.41
4:L5:2904:U:O2	4:L5:3591:C:H2'	2.19	0.41
4:L5:3650:C:H2'	4:L5:3651:A:C8	2.55	0.41
4:L5:3856:A:H5''	21:LP:83:TRP:O	2.20	0.41
4:L5:4194:U:N3	4:L5:4198:G:OP2	2.53	0.41
4:L5:4407:G:H2'	4:L5:4408:G:C8	2.55	0.41
4:L5:4621:C:OP1	27:LV:48:ARG:NE	2.41	0.41
5:L7:19:C:H2'	5:L7:20:U:H6	1.85	0.41
6:L8:96:C:OP1	39:Lh:70:ARG:NH2	2.48	0.41
10:LD:115:MET:HG2	10:LD:118:ILE:HD11	2.03	0.41
15:LI:36:LEU:HD21	15:LI:69:ARG:NH1	2.36	0.41
15:LI:190:LEU:HD23	15:LI:199:TYR:HA	2.02	0.41
15:LI:207:ASP:OD1	15:LI:210:ARG:NH1	2.54	0.41
17:LL:170:THR:OG1	17:LL:173:GLU:HG3	2.21	0.41
18:LM:100:ARG:HA	18:LM:103:LYS:HE3	2.03	0.41
56:SQ:9:SER:HB3	56:SQ:26:LYS:HG3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:SR:99:ASP:OD2	66:SA:42:LYS:NZ	2.36	0.41
58:SS:24:ARG:H	58:SS:24:ARG:HG2	1.67	0.41
65:Sg:4:GLN:O	65:Sg:313:THR:N	2.47	0.41
67:SB:138:PHE:O	67:SB:213:ARG:N	2.54	0.41
68:SC:256:TRP:CE2	78:SW:68:ARG:HD3	2.56	0.41
69:SE:129:ILE:HD11	69:SE:154:ILE:HG22	2.03	0.41
73:SJ:147:PHE:HE1	84:S2:824:C:H5'	1.85	0.41
84:S2:327:G:H5'	84:S2:328:U:C2	2.56	0.41
84:S2:462:OMC:HM23	84:S2:462:OMC:H1'	1.88	0.41
84:S2:943:U:H2'	84:S2:944:A:C8	2.56	0.41
1:Pt:29:C:H2'	1:Pt:30:G:H8	1.86	0.41
2:CF:380:ASP:HB3	2:CF:385:LYS:HB2	2.01	0.41
4:L5:153:G:H2'	4:L5:154:G:C8	2.53	0.41
4:L5:492:U:H2'	4:L5:493:G:O4'	2.19	0.41
4:L5:978:G:H2'	4:L5:979:C:H6	1.84	0.41
4:L5:1545:G:H2'	4:L5:1546:C:C6	2.56	0.41
4:L5:1952:G:H2'	4:L5:1953:U:H6	1.85	0.41
4:L5:2102:G:H1'	4:L5:2103:G:C8	2.55	0.41
4:L5:2558:C:H2'	4:L5:2559:G:H8	1.86	0.41
4:L5:2849:A:O2'	4:L5:2855:G:N7	2.50	0.41
4:L5:2893:U:H2'	4:L5:2894:A:C8	2.56	0.41
4:L5:4173:G:H2'	4:L5:4174:U:C6	2.56	0.41
4:L5:4176:C:H2'	4:L5:4177:C:C6	2.56	0.41
4:L5:4344:U:H2'	4:L5:4345:C:C6	2.56	0.41
4:L5:4407:G:H2'	4:L5:4408:G:H8	1.86	0.41
4:L5:4460:U:H2'	4:L5:4461:C:H6	1.85	0.41
4:L5:4524:G:C2	8:LB:252:ALA:HB1	2.56	0.41
8:LB:90:VAL:HG22	8:LB:104:THR:HG23	2.02	0.41
11:LE:150:LEU:HD12	11:LE:175:VAL:HG11	2.02	0.41
22:LQ:50:ARG:HA	22:LQ:53:MET:HE3	2.02	0.41
47:Lp:49:ARG:NH1	47:Lp:68:ALA:O	2.39	0.41
49:Ls:78:LEU:O	49:Ls:82:ILE:HG12	2.20	0.41
51:SD:213:PRO:HB3	57:SR:20:TYR:CE1	2.56	0.41
57:SR:126:MET:HG2	66:SA:43:SER:HB2	2.02	0.41
69:SE:136:ILE:HD12	69:SE:149:TYR:HE1	1.86	0.41
71:SH:25:GLN:O	71:SH:28:LEU:HG	2.21	0.41
77:SV:11:LEU:HD23	77:SV:11:LEU:H	1.86	0.41
84:S2:602:G:N2	84:S2:621:C:N3	2.69	0.41
84:S2:1165:G:OP2	84:S2:1165:G:N2	2.31	0.41
84:S2:1229:G:H2'	84:S2:1230:C:C6	2.56	0.41
84:S2:1329:U:O2'	84:S2:1332:A:OP2	2.29	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Pt:71:A:H2'	1:Pt:72:C:C6	2.55	0.41
2:CF:108:GLN:NE2	2:CF:251:GLN:HG3	2.36	0.41
2:CF:266:ARG:HD3	2:CF:305:GLY:HA2	2.02	0.41
4:L5:208:A:C2	4:L5:233:U:H5''	2.55	0.41
4:L5:271:C:H2'	4:L5:272:U:C6	2.56	0.41
4:L5:307:A:N3	4:L5:310:G:O2'	2.48	0.41
4:L5:457:G:H2'	4:L5:458:C:H6	1.85	0.41
4:L5:1281:G:OP1	9:LC:316:LYS:NZ	2.46	0.41
4:L5:1431:C:H2'	4:L5:1432:G:O4'	2.21	0.41
4:L5:1512:G:H2'	4:L5:1513:U:C6	2.55	0.41
4:L5:1585:C:N4	89:L5:5285:SPD:HN11	2.19	0.41
4:L5:1806:G:H2'	4:L5:1807:C:H6	1.84	0.41
4:L5:1845:U:H2'	4:L5:1846:G:C8	2.55	0.41
4:L5:1846:G:H2'	4:L5:1847:C:H6	1.86	0.41
4:L5:2413:U:H2'	4:L5:2414:G:C8	2.56	0.41
4:L5:2526:C:H2'	4:L5:2527:A:C8	2.56	0.41
4:L5:2542:G:H2'	4:L5:2543:A:C8	2.55	0.41
4:L5:2589:C:H2'	4:L5:2590:G:O4'	2.21	0.41
4:L5:2728:U:H2'	4:L5:2729:C:C6	2.56	0.41
4:L5:2803:U:H2'	4:L5:2804:OMC:C6	2.56	0.41
4:L5:2878:G:OP2	4:L5:2879:A:O2'	2.33	0.41
4:L5:3660:C:OP1	7:LA:241:ARG:NH2	2.50	0.41
4:L5:3709:U:H2'	4:L5:3710:G:C8	2.56	0.41
4:L5:4638:U:H2'	4:L5:4639:G:N3	2.35	0.41
4:L5:4642:U:H2'	4:L5:4643:G:C8	2.54	0.41
4:L5:4704:C:H2'	4:L5:4705:A:H8	1.86	0.41
4:L5:4769:G:H5''	20:LO:176:ARG:HD3	2.03	0.41
5:L7:110:G:H2'	5:L7:111:C:H6	1.85	0.41
6:L8:69:PSU:H2'	6:L8:70:G:O4'	2.20	0.41
15:LI:51:HIS:HB3	15:LI:134:VAL:HG13	2.02	0.41
23:LR:25:ASP:OD2	86:CI:72:ARG:NH2	2.52	0.41
26:LU:61:VAL:HG22	26:LU:74:SER:HB2	2.03	0.41
28:LW:113:LYS:O	28:LW:117:LYS:HG2	2.21	0.41
35:Ld:59:THR:OG1	35:Ld:104:THR:OG1	2.28	0.41
36:Le:100:ALA:HB3	36:Le:103:VAL:HG23	2.02	0.41
37:Lf:15:LYS:HB3	37:Lf:25:THR:HG23	2.02	0.41
40:Li:59:GLU:HA	40:Li:62:LYS:HE3	2.02	0.41
51:SD:135:GLU:HB3	51:SD:157:MET:HE3	2.02	0.41
54:SM:80:ASP:N	54:SM:80:ASP:OD1	2.53	0.41
54:SM:124:ILE:HD13	54:SM:124:ILE:HA	1.94	0.41
55:SP:27:ASP:OD1	55:SP:27:ASP:N	2.46	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:SS:125:HIS:HE1	84:S2:1609:C:H4'	1.86	0.41
59:ST:42:HIS:NE2	59:ST:43:LYS:HE3	2.35	0.41
59:ST:67:ARG:HD3	84:S2:1587:G:N7	2.36	0.41
59:ST:129:ARG:HG3	84:S2:1416:C:OP1	2.21	0.41
61:SZ:68:ILE:HB	61:SZ:109:TYR:HB2	2.02	0.41
61:SZ:86:ALA:O	61:SZ:90:GLU:HG2	2.21	0.41
61:SZ:92:LEU:HD11	61:SZ:109:TYR:CE1	2.56	0.41
63:Sd:2:GLY:HA3	63:Sd:6:LEU:HD21	2.02	0.41
65:Sg:8:ARG:HB3	65:Sg:309:VAL:HG13	2.01	0.41
65:Sg:213:ASP:OD1	65:Sg:213:ASP:N	2.53	0.41
65:Sg:289:LEU:HD12	65:Sg:289:LEU:HA	1.93	0.41
67:SB:52:THR:HG23	67:SB:57:ILE:HA	2.02	0.41
69:SE:151:ASP:HA	70:SG:212:LEU:HD21	2.03	0.41
69:SE:253:ASP:OD1	69:SE:253:ASP:N	2.54	0.41
70:SG:173:ALA:HB3	84:S2:78:C:H5'	2.02	0.41
71:SH:7:LYS:HD3	71:SH:10:LYS:HB3	2.03	0.41
72:SI:76:THR:OG1	72:SI:77:ARG:N	2.53	0.41
73:SJ:58:ARG:O	73:SJ:62:THR:HG23	2.21	0.41
79:SX:46:HIS:CD2	79:SX:103:ALA:HB2	2.56	0.41
79:SX:86:PRO:HG3	79:SX:121:LYS:HD2	2.03	0.41
79:SX:90:CYS:HA	79:SX:93:PHE:CD2	2.56	0.41
84:S2:383:G:H2'	84:S2:384:U:C6	2.56	0.41
84:S2:490:C:H2'	84:S2:491:C:C6	2.56	0.41
84:S2:1330:G:N7	84:S2:1492:U:H3'	2.36	0.41
84:S2:1452:A:O2'	84:S2:1475:G:N2	2.54	0.41
84:S2:1515:G:H2'	84:S2:1516:G:H8	1.82	0.41
84:S2:1693:G:H2'	84:S2:1694:U:C6	2.56	0.41
84:S2:1737:G:H2'	84:S2:1738:C:C6	2.56	0.41
4:L5:35:U:H4'	4:L5:1525:A:H2	1.85	0.41
4:L5:135:G:N7	39:Lh:97:LYS:HG3	2.36	0.41
4:L5:221:C:H2'	4:L5:222:C:H6	1.86	0.41
4:L5:266:C:HO2'	4:L5:267:G:H8	1.64	0.41
4:L5:720:G:H2'	4:L5:721:G:H8	1.86	0.41
4:L5:1174:G:H2'	4:L5:1175:A:C8	2.56	0.41
4:L5:2274:C:H5''	9:LC:312:ARG:HB3	2.03	0.41
4:L5:2327:G:H2'	4:L5:2328:G:H8	1.86	0.41
4:L5:2609:G:H2'	4:L5:2610:G:H8	1.86	0.41
4:L5:2881:A:H3'	4:L5:2882:A:H8	1.86	0.41
4:L5:3600:G:H2'	4:L5:3601:C:H6	1.86	0.41
4:L5:4451:G:H1'	91:L5:5297:HMT:H26	2.03	0.41
4:L5:4920:C:H2'	4:L5:4921:C:H6	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L5:4938:A:P	11:LE:183:ARG:HH21	2.44	0.41
4:L5:5029:C:O2'	4:L5:5030:U:H6	2.04	0.41
5:L7:71:G:H2'	5:L7:72:U:C6	2.56	0.41
8:LB:80:GLU:OE1	8:LB:323:TYR:OH	2.34	0.41
16:LJ:16:ARG:HH21	16:LJ:137:PRO:HA	1.85	0.41
20:LO:54:TYR:CD1	20:LO:145:VAL:HG21	2.56	0.41
26:LU:31:ASP:OD2	26:LU:114:TYR:OH	2.28	0.41
37:Lf:78:HIS:HB3	37:Lf:83:MET:HB3	2.03	0.41
47:Lp:61:MET:HE3	47:Lp:61:MET:HB3	1.88	0.41
49:Ls:44:ARG:HD3	49:Ls:44:ARG:HA	1.93	0.41
55:SP:77:LYS:HB3	55:SP:102:PHE:CD1	2.56	0.41
65:Sg:228:TYR:CE2	65:Sg:264:LYS:HG2	2.56	0.41
65:Sg:270:LEU:HD13	65:Sg:310:TRP:CE3	2.55	0.41
69:SE:204:SER:OG	69:SE:205:PHE:N	2.54	0.41
72:SI:149:TYR:O	72:SI:153:LYS:HG2	2.21	0.41
73:SJ:132:GLN:HB2	73:SJ:134:HIS:CD2	2.56	0.41
78:SW:57:ARG:NH2	82:Sb:26:GLN:HB2	2.36	0.41
84:S2:15:U:O2'	84:S2:669:A:N6	2.50	0.41
84:S2:677:G:N1	84:S2:1027:A:OP2	2.34	0.41
84:S2:1034:A:H3'	84:S2:1035:A:H8	1.86	0.41
85:Zt:23:A:H2'	85:Zt:24:G:C8	2.56	0.41
85:Zt:26:A:N6	85:Zt:44:G:N1	2.32	0.41
1:Pt:6:C:H2'	1:Pt:7:G:C8	2.55	0.40
4:L5:152:U:C2	4:L5:153:G:C8	3.09	0.40
4:L5:1266:G:H5'	33:Lb:99:ILE:HD11	2.04	0.40
4:L5:1269:G:O2'	4:L5:1270:A:O4'	2.34	0.40
4:L5:1748:U:H2'	4:L5:1749:A:C8	2.56	0.40
4:L5:1879:C:H2'	4:L5:1880:G:O4'	2.21	0.40
4:L5:2402:G:H2'	4:L5:2403:A:H8	1.86	0.40
4:L5:2412:A:H2'	4:L5:2413:U:H6	1.86	0.40
4:L5:2544:G:H22	6:L8:124:U:H4'	1.86	0.40
4:L5:2565:A:H3'	4:L5:2566:G:H8	1.85	0.40
4:L5:2862:G:N3	4:L5:3624:A:H2'	2.35	0.40
4:L5:3633:C:H2'	4:L5:3634:G:H8	1.85	0.40
4:L5:4344:U:H2'	4:L5:4345:C:H6	1.86	0.40
5:L7:2:U:O4	5:L7:117:G:O6	2.39	0.40
9:LC:334:THR:HG22	9:LC:337:ARG:HH21	1.86	0.40
10:LD:291:GLN:NE2	15:LI:213:HIS:O	2.39	0.40
12:LF:50:ILE:HD12	12:LF:186:CYS:HB3	2.03	0.40
13:LG:77:PRO:HA	13:LG:78:PRO:HD3	1.94	0.40
17:LL:55:ILE:O	17:LL:97:SER:OG	2.37	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:LS:27:LEU:HB3	25:LT:148:PRO:HB3	2.03	0.40
30:LY:4:ASN:HB3	30:LY:7:VAL:HG22	2.03	0.40
48:Lr:59:GLY:O	48:Lr:121:GLN:NE2	2.32	0.40
51:SD:75:LYS:NZ	53:SK:18:GLU:HG3	2.36	0.40
54:SM:118:SER:O	54:SM:121:LYS:NZ	2.51	0.40
56:SQ:51:LEU:HD23	56:SQ:51:LEU:HA	1.93	0.40
66:SA:32:PHE:CD1	84:S2:1097:G:H4'	2.56	0.40
67:SB:73:ASP:OD1	67:SB:73:ASP:N	2.54	0.40
68:SC:109:ILE:HD11	68:SC:151:ILE:HD11	2.03	0.40
70:SG:139:SER:HA	70:SG:142:ARG:HB2	2.02	0.40
72:SI:191:GLU:HG3	74:SL:19:ASN:ND2	2.36	0.40
73:SJ:176:LYS:HA	73:SJ:179:LYS:HG2	2.02	0.40
80:SY:129:LYS:HD3	80:SY:129:LYS:HA	1.86	0.40
82:Sb:6:ASP:OD1	82:Sb:9:HIS:N	2.49	0.40
84:S2:864:A:H2'	84:S2:865:A:C8	2.55	0.40
84:S2:1107:G:C6	84:S2:1126:G:C6	3.09	0.40
85:Zt:51:G:H2'	85:Zt:52:G:C8	2.56	0.40
2:CF:93:PRO:HG2	2:CF:101:ASN:HB2	2.03	0.40
2:CF:132:GLN:C	2:CF:136:HIS:HD1	2.25	0.40
4:L5:123:C:H2'	4:L5:124:C:C6	2.57	0.40
4:L5:1537:A:H2'	4:L5:1538:U:C6	2.56	0.40
4:L5:1814:C:H2'	4:L5:1816:C:H5	1.87	0.40
4:L5:2056:G:H4'	20:LO:18:ARG:HH22	1.86	0.40
4:L5:2277:C:H2'	4:L5:2278:G:C8	2.55	0.40
4:L5:2598:A:H2'	4:L5:2599:G:O4'	2.22	0.40
4:L5:2779:C:H2'	4:L5:2780:C:C6	2.57	0.40
4:L5:3642:A:C8	41:Lj:3:LYS:HE2	2.56	0.40
4:L5:4323:A:C2	10:LD:146:LEU:HD23	2.57	0.40
4:L5:4769:G:H2'	4:L5:4770:U:C6	2.56	0.40
4:L5:4979:A:OP1	8:LB:228:TYR:HB2	2.21	0.40
4:L5:4997:G:H2'	4:L5:4998:G:C8	2.55	0.40
6:L8:4:C:H2'	6:L8:5:U:C6	2.57	0.40
6:L8:109:C:H3'	41:Lj:20:ARG:HH22	1.85	0.40
7:LA:28:ARG:HE	7:LA:28:ARG:HB2	1.74	0.40
7:LA:186:TYR:HB2	7:LA:196:TRP:CZ3	2.57	0.40
8:LB:263:ALA:HB3	8:LB:266:VAL:HG23	2.03	0.40
12:LF:226:HIS:HB3	12:LF:229:GLU:HG2	2.03	0.40
13:LG:123:ALA:HA	13:LG:124:GLY:HA2	1.80	0.40
17:LL:93:THR:HA	39:Lh:116:LEU:HD13	2.02	0.40
19:LN:38:ARG:HA	19:LN:62:TYR:HA	2.04	0.40
22:LQ:69:LYS:HD3	22:LQ:69:LYS:HA	1.85	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:LQ:154:LYS:HB3	22:LQ:154:LYS:HE2	1.83	0.40
26:LU:80:LYS:HG2	26:LU:110:TYR:CE2	2.56	0.40
30:LY:106:ILE:HG21	30:LY:109:LEU:HD23	2.03	0.40
35:Ld:19:GLU:OE2	35:Ld:92:ARG:NH2	2.54	0.40
38:Lg:60:ARG:HB2	38:Lg:63:VAL:HG23	2.03	0.40
38:Lg:61:PRO:HA	38:Lg:64:LEU:HD12	2.02	0.40
52:SF:39:ILE:HG23	52:SF:68:ILE:HD13	2.03	0.40
54:SM:26:LEU:HD11	54:SM:89:VAL:HA	2.03	0.40
55:SP:81:ARG:NH1	55:SP:120:SER:HG	2.18	0.40
57:SR:114:LEU:HD12	57:SR:117:LEU:HD11	2.02	0.40
65:Sg:174:VAL:HG23	65:Sg:188:HIS:HB2	2.02	0.40
69:SE:28:ALA:O	84:S2:496:C:H4'	2.22	0.40
70:SG:133:LEU:HD12	84:S2:65:C:C4	2.57	0.40
71:SH:17:ASP:OD1	71:SH:17:ASP:N	2.53	0.40
72:SI:184:ARG:HD2	84:S2:219:U:H1'	2.02	0.40
73:SJ:28:GLU:OE2	73:SJ:44:TRP:NE1	2.42	0.40
75:SN:29:THR:O	75:SN:33:VAL:HG23	2.21	0.40
84:S2:89:C:O2	84:S2:499:G:H4'	2.21	0.40
84:S2:943:U:C2	84:S2:944:A:C8	3.09	0.40
84:S2:1305:C:H2'	84:S2:1306:U:C6	2.56	0.40
84:S2:1348:G:OP2	84:S2:1348:G:N2	2.51	0.40
2:CF:306:ASP:HB3	2:CF:308:VAL:HG13	2.03	0.40
2:CF:350:PRO:HB2	3:AT:54:G:H4'	2.04	0.40
4:L5:197:A:N6	4:L5:242:U:H3	2.20	0.40
4:L5:252:C:H2'	4:L5:253:G:C8	2.56	0.40
4:L5:370:U:H2'	4:L5:371:A:C8	2.57	0.40
4:L5:385:A:O2'	4:L5:387:G:H5'	2.21	0.40
4:L5:388:A:H5'	4:L5:389:A:H5'	2.03	0.40
4:L5:965:G:N2	4:L5:2092:G:H1'	2.37	0.40
4:L5:1614:C:H2'	4:L5:1615:C:C6	2.56	0.40
4:L5:1993:C:H2'	4:L5:1994:C:C6	2.57	0.40
4:L5:2325:C:OP1	36:Le:101:HIS:ND1	2.44	0.40
4:L5:2422:OMC:HM23	4:L5:2422:OMC:H1'	1.83	0.40
4:L5:4456:OMC:HM23	4:L5:4456:OMC:H1'	1.90	0.40
4:L5:4524:G:OP1	4:L5:4559:A:N6	2.52	0.40
4:L5:4544:A:H5''	7:LA:213:GLY:HA3	2.03	0.40
4:L5:4662:C:O2'	4:L5:5004:C:OP1	2.38	0.40
4:L5:5027:C:O2'	4:L5:5028:G:H5''	2.21	0.40
7:LA:22:HIS:O	7:LA:24:LYS:NZ	2.53	0.40
15:LI:159:PHE:HA	15:LI:160:PRO:HD3	1.94	0.40
19:LN:120:TRP:HZ2	19:LN:123:GLU:HG2	1.85	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:LP:137:ASN:HD22	21:LP:137:ASN:HA	1.69	0.40
27:LV:104:VAL:HB	27:LV:112:MET:HE3	2.02	0.40
43:Ll:16:LYS:HD3	43:Ll:19:GLN:HE21	1.86	0.40
51:SD:192:TRP:NE1	51:SD:201:LYS:O	2.47	0.40
52:SF:61:PHE:CD2	62:Sc:51:ARG:HD3	2.56	0.40
52:SF:171:GLU:OE2	61:SZ:106:GLN:NE2	2.54	0.40
65:Sg:133:ASN:HB3	65:Sg:139:LYS:HD2	2.02	0.40
68:SC:104:ASP:OD1	68:SC:105:GLU:N	2.53	0.40
71:SH:33:ASN:ND2	71:SH:36:LEU:HB3	2.35	0.40
72:SI:10:LYS:HD3	84:S2:387:C:P	2.61	0.40
72:SI:117:TYR:HB3	72:SI:119:LEU:HD23	2.02	0.40
73:SJ:111:GLN:HE21	73:SJ:123:ILE:HG13	1.85	0.40
81:Sa:59:PHE:HB2	81:Sa:62:TYR:HB2	2.04	0.40
84:S2:218:U:H2'	84:S2:219:U:C6	2.56	0.40
84:S2:1368:U:O2'	84:S2:1370:A:N7	2.46	0.40
84:S2:1391:OMC:HM23	84:S2:1391:OMC:H1'	1.92	0.40
84:S2:1844:U:H2'	84:S2:1845:A:H8	1.86	0.40
2:CF:164:GLN:O	2:CF:168:GLU:HG2	2.21	0.40
4:L5:212:A:H2'	4:L5:213:G:H8	1.86	0.40
4:L5:229:G:H2'	4:L5:230:G:H8	1.87	0.40
4:L5:326:C:H2'	4:L5:327:U:C6	2.56	0.40
4:L5:1577:G:H5'	4:L5:1578:U:H5''	2.04	0.40
4:L5:1589:C:H2'	4:L5:1590:C:C6	2.57	0.40
4:L5:1973:G:O2'	50:Lt:117:ARG:NH2	2.54	0.40
4:L5:2059:C:H2'	4:L5:2060:G:C8	2.48	0.40
4:L5:2555:G:H2'	4:L5:2556:G:H8	1.87	0.40
4:L5:2574:G:O6	4:L5:2760:G:N2	2.54	0.40
4:L5:2823:G:H2'	4:L5:2824:OMC:H6	1.87	0.40
4:L5:3794:C:H2'	4:L5:3795:A:C8	2.57	0.40
4:L5:3814:U:H2'	4:L5:3815:G:C8	2.56	0.40
4:L5:4186:A:H2'	4:L5:4187:G:C8	2.57	0.40
4:L5:4473:A:P	44:Lm:102:ARG:HH21	2.44	0.40
4:L5:4980:C:H3'	4:L5:4981:G:H21	1.85	0.40
6:L8:123:U:H2'	6:L8:126:C:N4	2.34	0.40
6:L8:145:C:H2'	6:L8:146:U:C6	2.57	0.40
8:LB:261:ARG:HB3	20:LO:64:THR:HG21	2.04	0.40
22:LQ:32:TYR:OH	22:LQ:123:PHE:O	2.36	0.40
23:LR:112:SER:OG	23:LR:114:LYS:HG3	2.21	0.40
41:Lj:67:LEU:HA	41:Lj:67:LEU:HD23	1.82	0.40
45:Ln:12:ARG:HG2	45:Ln:15:ARG:HH21	1.86	0.40
50:Lt:117:ARG:HG3	50:Lt:119:ARG:HG3	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:ST:39:LEU:HD21	59:ST:52:TRP:CZ3	2.56	0.40
66:SA:73:ASP:O	66:SA:120:ARG:N	2.52	0.40
66:SA:184:ARG:HG3	66:SA:189:ILE:HD12	2.03	0.40
68:SC:64:THR:HG22	68:SC:66:LEU:N	2.36	0.40
70:SG:170:ARG:HG3	84:S2:72:C:N3	2.37	0.40
84:S2:534:G:H2'	84:S2:535:G:C8	2.56	0.40
84:S2:959:G:H1'	84:S2:964:A:N6	2.36	0.40
84:S2:1171:G:O2'	84:S2:1187:G:O6	2.39	0.40
84:S2:1287:A:N6	84:S2:1288:OMU:O2	2.55	0.40
84:S2:1510:G:H2'	84:S2:1511:U:O4'	2.22	0.40
84:S2:1688:C:H2'	84:S2:1689:C:C6	2.57	0.40
2:CF:41:LYS:HA	2:CF:44:LYS:HE2	2.02	0.40
2:CF:54:PHE:HB3	2:CF:57:ALA:HB3	2.03	0.40
2:CF:214:TRP:HZ2	2:CF:231:ALA:HB2	1.86	0.40
4:L5:20:U:H3'	4:L5:21:G:H8	1.85	0.40
4:L5:169:G:O6	4:L5:170:C:N4	2.55	0.40
4:L5:239:C:H2'	4:L5:240:G:H8	1.86	0.40
4:L5:325:U:H3'	40:Li:28:ARG:NH2	2.35	0.40
4:L5:346:G:H2'	4:L5:347:A:C8	2.57	0.40
4:L5:928:C:H2'	4:L5:929:A:C8	2.57	0.40
4:L5:1473:U:H2'	4:L5:1474:C:C6	2.56	0.40
4:L5:1956:A:H2'	4:L5:1957:U:H6	1.85	0.40
4:L5:4203:A:N3	4:L5:4221:C:H5'	2.36	0.40
4:L5:4279:A:H5'	4:L5:4281:A:H1'	2.03	0.40
4:L5:4291:G:OP1	46:Lo:18:HIS:NE2	2.54	0.40
4:L5:4938:A:H1'	11:LE:185:PRO:HG3	2.03	0.40
11:LE:282:TYR:HE1	37:Lf:31:GLU:HG2	1.87	0.40
15:LI:77:VAL:HG22	15:LI:82:ARG:HA	2.03	0.40
27:LV:37:LEU:HD23	27:LV:65:VAL:HG12	2.03	0.40
27:LV:48:ARG:HG2	27:LV:51:ARG:CZ	2.52	0.40
49:Ls:47:LEU:HD11	49:Ls:51:ALA:HB3	2.02	0.40
55:SP:134:GLY:H	84:S2:1236:G:H4'	1.87	0.40
59:ST:83:GLN:NE2	59:ST:85:ASN:OD1	2.54	0.40
61:SZ:56:ASP:OD1	61:SZ:57:LYS:N	2.54	0.40
65:Sg:256:ILE:HD11	65:Sg:286:CYS:SG	2.62	0.40
69:SE:63:LYS:O	69:SE:67:GLN:HG3	2.21	0.40
71:SH:18:GLU:C	71:SH:20:GLU:H	2.29	0.40
71:SH:78:ARG:O	71:SH:81:ARG:HG2	2.20	0.40
84:S2:1328:OMG:H1'	84:S2:1328:OMG:HM23	1.85	0.40
84:S2:1348:G:H2'	84:S2:1349:G:C8	2.56	0.40
84:S2:1612:G:H2'	84:S2:1613:G:H8	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	
2	CF	438/441 (99%)	421 (96%)	17 (4%)	0	100	100
7	LA	246/248 (99%)	232 (94%)	14 (6%)	0	100	100
8	LB	400/402 (100%)	380 (95%)	20 (5%)	0	100	100
9	LC	366/368 (100%)	353 (96%)	13 (4%)	0	100	100
10	LD	291/293 (99%)	281 (97%)	10 (3%)	0	100	100
11	LE	236/250 (94%)	223 (94%)	13 (6%)	0	100	100
12	LF	223/225 (99%)	214 (96%)	9 (4%)	0	100	100
13	LG	239/241 (99%)	225 (94%)	14 (6%)	0	100	100
14	LH	188/190 (99%)	182 (97%)	6 (3%)	0	100	100
15	LI	211/213 (99%)	202 (96%)	9 (4%)	0	100	100
16	LJ	168/176 (96%)	162 (96%)	6 (4%)	0	100	100
17	LL	208/210 (99%)	199 (96%)	9 (4%)	0	100	100
18	LM	137/139 (99%)	132 (96%)	5 (4%)	0	100	100
19	LN	201/203 (99%)	197 (98%)	4 (2%)	0	100	100
20	LO	199/201 (99%)	195 (98%)	4 (2%)	0	100	100
21	LP	151/153 (99%)	145 (96%)	6 (4%)	0	100	100
22	LQ	185/187 (99%)	182 (98%)	3 (2%)	0	100	100
23	LR	185/187 (99%)	181 (98%)	4 (2%)	0	100	100
24	LS	173/175 (99%)	168 (97%)	5 (3%)	0	100	100
25	LT	157/159 (99%)	155 (99%)	2 (1%)	0	100	100
26	LU	99/101 (98%)	94 (95%)	5 (5%)	0	100	100
27	LV	129/131 (98%)	127 (98%)	2 (2%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
28	LW	112/124 (90%)	109 (97%)	3 (3%)	0	100	100
29	LX	118/120 (98%)	117 (99%)	1 (1%)	0	100	100
30	LY	132/134 (98%)	127 (96%)	5 (4%)	0	100	100
31	LZ	133/135 (98%)	126 (95%)	7 (5%)	0	100	100
32	La	145/147 (99%)	141 (97%)	4 (3%)	0	100	100
33	Lb	105/121 (87%)	97 (92%)	8 (8%)	0	100	100
34	Lc	96/98 (98%)	94 (98%)	2 (2%)	0	100	100
35	Ld	105/107 (98%)	103 (98%)	2 (2%)	0	100	100
36	Le	126/128 (98%)	125 (99%)	1 (1%)	0	100	100
37	Lf	107/109 (98%)	105 (98%)	2 (2%)	0	100	100
38	Lg	112/114 (98%)	109 (97%)	3 (3%)	0	100	100
39	Lh	120/122 (98%)	117 (98%)	3 (2%)	0	100	100
40	Li	100/102 (98%)	97 (97%)	3 (3%)	0	100	100
41	Lj	84/86 (98%)	83 (99%)	1 (1%)	0	100	100
42	Lk	67/69 (97%)	66 (98%)	1 (2%)	0	100	100
43	Ll	48/50 (96%)	46 (96%)	2 (4%)	0	100	100
44	Lm	50/52 (96%)	49 (98%)	1 (2%)	0	100	100
45	Ln	22/24 (92%)	22 (100%)	0	0	100	100
46	Lo	103/105 (98%)	98 (95%)	5 (5%)	0	100	100
47	Lp	89/91 (98%)	86 (97%)	3 (3%)	0	100	100
48	Lr	123/125 (98%)	119 (97%)	4 (3%)	0	100	100
49	Ls	194/196 (99%)	182 (94%)	12 (6%)	0	100	100
50	Lt	128/157 (82%)	113 (88%)	15 (12%)	0	100	100
51	SD	225/227 (99%)	219 (97%)	6 (3%)	0	100	100
52	SF	187/189 (99%)	176 (94%)	11 (6%)	0	100	100
53	SK	96/98 (98%)	90 (94%)	6 (6%)	0	100	100
54	SM	120/122 (98%)	110 (92%)	10 (8%)	0	100	100
55	SP	119/121 (98%)	117 (98%)	2 (2%)	0	100	100
56	SQ	142/144 (99%)	134 (94%)	8 (6%)	0	100	100
57	SR	133/135 (98%)	124 (93%)	8 (6%)	1 (1%)	16	49
58	SS	143/145 (99%)	135 (94%)	8 (6%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
59	ST	141/143 (99%)	138 (98%)	3 (2%)	0	100	100
60	SU	102/104 (98%)	99 (97%)	3 (3%)	0	100	100
61	SZ	73/75 (97%)	67 (92%)	6 (8%)	0	100	100
62	Sc	62/64 (97%)	60 (97%)	2 (3%)	0	100	100
63	Sd	53/55 (96%)	53 (100%)	0	0	100	100
64	Sf	65/67 (97%)	58 (89%)	7 (11%)	0	100	100
65	Sg	311/313 (99%)	295 (95%)	16 (5%)	0	100	100
66	SA	219/221 (99%)	208 (95%)	11 (5%)	0	100	100
67	SB	212/214 (99%)	204 (96%)	8 (4%)	0	100	100
68	SC	218/222 (98%)	204 (94%)	14 (6%)	0	100	100
69	SE	260/262 (99%)	252 (97%)	8 (3%)	0	100	100
70	SG	235/237 (99%)	223 (95%)	12 (5%)	0	100	100
71	SH	182/189 (96%)	167 (92%)	15 (8%)	0	100	100
72	SI	204/206 (99%)	193 (95%)	11 (5%)	0	100	100
73	SJ	183/185 (99%)	175 (96%)	7 (4%)	1 (0%)	25	57
74	SL	151/153 (99%)	145 (96%)	6 (4%)	0	100	100
75	SN	148/150 (99%)	145 (98%)	3 (2%)	0	100	100
76	SO	135/140 (96%)	127 (94%)	8 (6%)	0	100	100
77	SV	81/83 (98%)	76 (94%)	5 (6%)	0	100	100
78	SW	127/129 (98%)	122 (96%)	5 (4%)	0	100	100
79	SX	139/141 (99%)	136 (98%)	3 (2%)	0	100	100
80	SY	129/131 (98%)	124 (96%)	5 (4%)	0	100	100
81	Sa	100/102 (98%)	99 (99%)	1 (1%)	0	100	100
82	Sb	81/83 (98%)	76 (94%)	5 (6%)	0	100	100
83	Se	56/58 (97%)	52 (93%)	4 (7%)	0	100	100
86	CI	29/31 (94%)	29 (100%)	0	0	100	100
All	All	12110/12348 (98%)	11613 (96%)	495 (4%)	2 (0%)	100	100

All (2) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
73	SJ	138	ARG
57	SR	129	LYS

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	
2	CF	365/366 (100%)	365 (100%)	0	100	100
7	LA	190/190 (100%)	190 (100%)	0	100	100
8	LB	348/348 (100%)	348 (100%)	0	100	100
9	LC	306/306 (100%)	306 (100%)	0	100	100
10	LD	246/247 (100%)	246 (100%)	0	100	100
11	LE	212/222 (96%)	212 (100%)	0	100	100
12	LF	194/194 (100%)	194 (100%)	0	100	100
13	LG	203/205 (99%)	203 (100%)	0	100	100
14	LH	169/169 (100%)	169 (100%)	0	100	100
15	LI	180/180 (100%)	180 (100%)	0	100	100
16	LJ	143/148 (97%)	143 (100%)	0	100	100
17	LL	176/176 (100%)	176 (100%)	0	100	100
18	LM	118/118 (100%)	118 (100%)	0	100	100
19	LN	171/171 (100%)	171 (100%)	0	100	100
20	LO	173/173 (100%)	173 (100%)	0	100	100
21	LP	134/134 (100%)	134 (100%)	0	100	100
22	LQ	164/164 (100%)	164 (100%)	0	100	100
23	LR	166/166 (100%)	166 (100%)	0	100	100
24	LS	156/156 (100%)	156 (100%)	0	100	100
25	LT	139/139 (100%)	139 (100%)	0	100	100
26	LU	91/91 (100%)	91 (100%)	0	100	100
27	LV	101/101 (100%)	101 (100%)	0	100	100
28	LW	95/103 (92%)	95 (100%)	0	100	100
29	LX	108/108 (100%)	108 (100%)	0	100	100
30	LY	124/124 (100%)	124 (100%)	0	100	100
31	LZ	117/117 (100%)	117 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
32	La	120/120 (100%)	120 (100%)	0	100	100
33	Lb	88/101 (87%)	88 (100%)	0	100	100
34	Lc	83/83 (100%)	83 (100%)	0	100	100
35	Ld	98/98 (100%)	98 (100%)	0	100	100
36	Le	114/114 (100%)	114 (100%)	0	100	100
37	Lf	88/88 (100%)	88 (100%)	0	100	100
38	Lg	98/98 (100%)	98 (100%)	0	100	100
39	Lh	109/109 (100%)	109 (100%)	0	100	100
40	Li	86/86 (100%)	86 (100%)	0	100	100
41	Lj	73/73 (100%)	73 (100%)	0	100	100
42	Lk	64/64 (100%)	64 (100%)	0	100	100
43	Ll	47/47 (100%)	47 (100%)	0	100	100
44	Lm	48/48 (100%)	48 (100%)	0	100	100
45	Ln	23/23 (100%)	23 (100%)	0	100	100
46	Lo	93/93 (100%)	93 (100%)	0	100	100
47	Lp	74/74 (100%)	74 (100%)	0	100	100
48	Lr	109/109 (100%)	109 (100%)	0	100	100
49	Ls	162/164 (99%)	162 (100%)	0	100	100
50	Lt	107/130 (82%)	107 (100%)	0	100	100
51	SD	190/190 (100%)	190 (100%)	0	100	100
52	SF	159/159 (100%)	159 (100%)	0	100	100
53	SK	89/89 (100%)	89 (100%)	0	100	100
54	SM	102/104 (98%)	102 (100%)	0	100	100
55	SP	107/107 (100%)	107 (100%)	0	100	100
56	SQ	119/119 (100%)	119 (100%)	0	100	100
57	SR	122/122 (100%)	122 (100%)	0	100	100
58	SS	126/126 (100%)	126 (100%)	0	100	100
59	ST	113/113 (100%)	113 (100%)	0	100	100
60	SU	94/94 (100%)	94 (100%)	0	100	100
61	SZ	66/66 (100%)	66 (100%)	0	100	100
62	Sc	57/57 (100%)	57 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
63	Sd	48/48 (100%)	48 (100%)	0	100	100
64	Sf	60/60 (100%)	60 (100%)	0	100	100
65	Sg	272/272 (100%)	272 (100%)	0	100	100
66	SA	183/183 (100%)	183 (100%)	0	100	100
67	SB	195/195 (100%)	195 (100%)	0	100	100
68	SC	186/188 (99%)	186 (100%)	0	100	100
69	SE	224/224 (100%)	224 (100%)	0	100	100
70	SG	207/207 (100%)	207 (100%)	0	100	100
71	SH	166/169 (98%)	165 (99%)	1 (1%)	84	90
72	SI	178/178 (100%)	178 (100%)	0	100	100
73	SJ	161/161 (100%)	161 (100%)	0	100	100
74	SL	137/137 (100%)	137 (100%)	0	100	100
75	SN	130/130 (100%)	130 (100%)	0	100	100
76	SO	107/110 (97%)	107 (100%)	0	100	100
77	SV	67/67 (100%)	67 (100%)	0	100	100
78	SW	112/112 (100%)	112 (100%)	0	100	100
79	SX	113/113 (100%)	113 (100%)	0	100	100
80	SY	113/113 (100%)	113 (100%)	0	100	100
81	Sa	89/89 (100%)	89 (100%)	0	100	100
82	Sb	75/75 (100%)	75 (100%)	0	100	100
83	Se	47/47 (100%)	47 (100%)	0	100	100
86	CI	25/25 (100%)	25 (100%)	0	100	100
All	All	10512/10587 (99%)	10511 (100%)	1 (0%)	100	100

All (1) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
71	SH	162	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (85) such sidechains are listed below:

Mol	Chain	Res	Type
2	CF	108	GLN

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Mol	Chain	Res	Type
2	CF	132	GLN
2	CF	348	ASN
7	LA	50	HIS
8	LB	68	ASN
8	LB	184	GLN
8	LB	203	GLN
8	LB	289	GLN
9	LC	38	ASN
9	LC	112	HIS
9	LC	329	ASN
9	LC	347	HIS
12	LF	192	HIS
13	LG	64	GLN
13	LG	112	GLN
14	LH	39	ASN
14	LH	78	GLN
14	LH	98	HIS
14	LH	116	ASN
14	LH	138	GLN
15	LI	73	ASN
15	LI	166	HIS
16	LJ	71	HIS
17	LL	19	GLN
17	LL	149	GLN
18	LM	34	ASN
19	LN	32	GLN
19	LN	199	GLN
20	LO	26	GLN
20	LO	180	GLN
21	LP	75	GLN
24	LS	23	HIS
24	LS	108	GLN
24	LS	173	ASN
25	LT	131	GLN
25	LT	144	ASN
26	LU	94	ASN
27	LV	77	HIS
28	LW	79	GLN
30	LY	14	ASN
30	LY	61	HIS
32	La	28	HIS
32	La	34	ASN

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Mol	Chain	Res	Type
37	Lf	99	HIS
43	Ll	19	GLN
48	Lr	4	HIS
48	Lr	21	ASN
48	Lr	31	ASN
50	Lt	65	GLN
51	SD	145	GLN
51	SD	159	HIS
53	SK	32	HIS
53	SK	50	GLN
53	SK	84	HIS
54	SM	19	GLN
54	SM	119	GLN
55	SP	103	ASN
58	SS	11	HIS
58	SS	87	GLN
61	SZ	89	GLN
62	Sc	24	GLN
65	Sg	147	HIS
66	SA	9	GLN
66	SA	84	GLN
66	SA	132	GLN
67	SB	53	GLN
67	SB	75	GLN
67	SB	95	ASN
68	SC	267	GLN
69	SE	50	ASN
69	SE	188	ASN
70	SG	56	ASN
71	SH	76	GLN
71	SH	165	ASN
72	SI	35	ASN
74	SL	19	ASN
74	SL	141	ASN
75	SN	105	ASN
77	SV	35	ASN
78	SW	5	ASN
79	SX	31	HIS
80	SY	89	HIS
80	SY	124	ASN
81	Sa	8	ASN
81	Sa	72	HIS

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	Pt	72/74 (97%)	19 (26%)	0
3	AT	74/76 (97%)	28 (37%)	0
4	L5	3643/3655 (99%)	762 (20%)	15 (0%)
5	L7	119/120 (99%)	12 (10%)	0
6	L8	155/156 (99%)	26 (16%)	0
84	S2	1714/1740 (98%)	391 (22%)	3 (0%)
85	Zt	74/75 (98%)	43 (58%)	0
All	All	5851/5896 (99%)	1281 (21%)	18 (0%)

All (1281) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	Pt	9	A
1	Pt	13	U
1	Pt	19	G
1	Pt	21	A
1	Pt	46	G
1	Pt	47	U
1	Pt	48	C
1	Pt	49	C
1	Pt	56	C
1	Pt	58	A
1	Pt	59	A
1	Pt	61	C
1	Pt	66	C
1	Pt	67	G
1	Pt	70	A
1	Pt	72	C
1	Pt	74	C
1	Pt	75	C
1	Pt	76	A
3	AT	4	U
3	AT	8	U
3	AT	9	A
3	AT	12	G
3	AT	14	A
3	AT	16	C
3	AT	19	G
3	AT	20	U
3	AT	21	U
3	AT	22	A

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Mol	Chain	Res	Type
3	AT	26	C
3	AT	27	G
3	AT	31	G
3	AT	33	C
3	AT	37	C
3	AT	47	G
3	AT	48	U
3	AT	49	C
3	AT	50	C
3	AT	53	G
3	AT	57	C
3	AT	59	A
3	AT	60	A
3	AT	62	C
3	AT	65	G
3	AT	74	A
3	AT	76	C
3	AT	77	A
4	L5	2	G
4	L5	13	U
4	L5	25	A
4	L5	30	C
4	L5	39	A
4	L5	42	A
4	L5	48	G
4	L5	56	A
4	L5	59	A
4	L5	64	A
4	L5	65	A
4	L5	73	A
4	L5	74	G
4	L5	76	A
4	L5	91	G
4	L5	104	G
4	L5	109	G
4	L5	110	C
4	L5	119	G
4	L5	120	A
4	L5	132	G
4	L5	133	C
4	L5	134	G
4	L5	135	G

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Mol	Chain	Res	Type
4	L5	145	G
4	L5	159	C
4	L5	164	G
4	L5	165	A
4	L5	172	C
4	L5	181	C
4	L5	182	G
4	L5	183	C
4	L5	184	U
4	L5	185	C
4	L5	187	U
4	L5	188	G
4	L5	200	U
4	L5	209	U
4	L5	210	C
4	L5	216	C
4	L5	218	A
4	L5	220	C
4	L5	234	G
4	L5	255	C
4	L5	256	G
4	L5	261	G
4	L5	263	G
4	L5	264	C
4	L5	265	C
4	L5	266	C
4	L5	267	G
4	L5	280	G
4	L5	281	U
4	L5	297	U
4	L5	306	A
4	L5	315	G
4	L5	316	U
4	L5	340	C
4	L5	357	U
4	L5	358	C
4	L5	363	A
4	L5	373	G
4	L5	385	A
4	L5	387	G
4	L5	388	A
4	L5	396	A

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Mol	Chain	Res	Type
4	L5	406	C
4	L5	407	A
4	L5	409	G
4	L5	410	A
4	L5	411	G
4	L5	412	G
4	L5	413	G
4	L5	415	G
4	L5	432	U
4	L5	440	U
4	L5	449	C
4	L5	450	G
4	L5	452	A
4	L5	453	G
4	L5	454	U
4	L5	456	C
4	L5	457	G
4	L5	467	U
4	L5	472	C
4	L5	484	U
4	L5	485	C
4	L5	486	C
4	L5	489	C
4	L5	493	G
4	L5	494	U
4	L5	497	G
4	L5	498	C
4	L5	499	G
4	L5	500	G
4	L5	502	C
4	L5	503	C
4	L5	504	G
4	L5	509	A
4	L5	510	U
4	L5	512	U
4	L5	513	U
4	L5	514	U
4	L5	518	G
4	L5	643	C
4	L5	645	G
4	L5	646	G
4	L5	654	C

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Mol	Chain	Res	Type
4	L5	655	C
4	L5	656	C
4	L5	657	C
4	L5	659	G
4	L5	666	G
4	L5	667	A
4	L5	668	C
4	L5	669	C
4	L5	673	C
4	L5	685	C
4	L5	686	A
4	L5	687	U
4	L5	696	C
4	L5	700	G
4	L5	704	C
4	L5	708	G
4	L5	731	G
4	L5	738	C
4	L5	739	G
4	L5	742	G
4	L5	750	U
4	L5	759	G
4	L5	904	C
4	L5	905	C
4	L5	906	C
4	L5	910	G
4	L5	913	U
4	L5	914	U
4	L5	915	A
4	L5	917	A
4	L5	923	C
4	L5	924	C
4	L5	926	G
4	L5	932	A
4	L5	933	G
4	L5	935	A
4	L5	936	C
4	L5	941	C
4	L5	943	A
4	L5	944	A
4	L5	945	U
4	L5	956	A

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Mol	Chain	Res	Type
4	L5	959	G
4	L5	960	A
4	L5	961	G
4	L5	962	C
4	L5	965	G
4	L5	966	A
4	L5	967	C
4	L5	969	C
4	L5	970	G
4	L5	982	U
4	L5	985	C
4	L5	1070	G
4	L5	1071	C
4	L5	1072	C
4	L5	1075	G
4	L5	1082	C
4	L5	1083	U
4	L5	1168	G
4	L5	1171	G
4	L5	1172	C
4	L5	1173	G
4	L5	1179	U
4	L5	1180	C
4	L5	1181	C
4	L5	1182	C
4	L5	1183	C
4	L5	1187	G
4	L5	1202	C
4	L5	1203	G
4	L5	1210	C
4	L5	1211	G
4	L5	1214	C
4	L5	1215	C
4	L5	1219	G
4	L5	1222	A
4	L5	1246	G
4	L5	1253	G
4	L5	1254	A
4	L5	1257	A
4	L5	1258	G
4	L5	1266	G
4	L5	1267	C

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Mol	Chain	Res	Type
4	L5	1269	G
4	L5	1271	G
4	L5	1272	C
4	L5	1273	G
4	L5	1275	G
4	L5	1280	C
4	L5	1284	G
4	L5	1285	U
4	L5	1287	G
4	L5	1293	G
4	L5	1294	A
4	L5	1295	C
4	L5	1296	G
4	L5	1301	C
4	L5	1302	U
4	L5	1314	C
4	L5	1326	A2M
4	L5	1337	A
4	L5	1344	C
4	L5	1345	A
4	L5	1354	A
4	L5	1359	G
4	L5	1364	U
4	L5	1365	C
4	L5	1366	G
4	L5	1367	C
4	L5	1379	C
4	L5	1387	A
4	L5	1394	G
4	L5	1397	A
4	L5	1404	G
4	L5	1407	C
4	L5	1409	C
4	L5	1410	U
4	L5	1411	C
4	L5	1414	C
4	L5	1415	G
4	L5	1417	C
4	L5	1420	A
4	L5	1425	G
4	L5	1437	C
4	L5	1439	C

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Mol	Chain	Res	Type
4	L5	1442	C
4	L5	1443	A
4	L5	1444	G
4	L5	1446	C
4	L5	1447	C
4	L5	1457	G
4	L5	1482	G
4	L5	1483	C
4	L5	1497	A
4	L5	1498	G
4	L5	1502	G
4	L5	1504	G
4	L5	1517	G
4	L5	1523	A
4	L5	1524	A2M
4	L5	1534	A2M
4	L5	1537	A
4	L5	1547	A
4	L5	1562	G
4	L5	1564	A
4	L5	1566	C
4	L5	1574	G
4	L5	1578	U
4	L5	1591	U
4	L5	1596	U
4	L5	1624	G
4	L5	1625	OMG
4	L5	1631	A
4	L5	1633	G
4	L5	1634	A
4	L5	1638	A
4	L5	1640	C
4	L5	1654	G
4	L5	1661	C
4	L5	1676	C
4	L5	1677	PSU
4	L5	1678	C
4	L5	1691	G
4	L5	1699	A
4	L5	1700	G
4	L5	1701	A
4	L5	1702	C

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Mol	Chain	Res	Type
4	L5	1704	C
4	L5	1705	G
4	L5	1717	C
4	L5	1718	C
4	L5	1719	A
4	L5	1731	C
4	L5	1734	G
4	L5	1740	C
4	L5	1742	A
4	L5	1750	G
4	L5	1753	G
4	L5	1757	U
4	L5	1758	G
4	L5	1761	G
4	L5	1762	C
4	L5	1763	C
4	L5	1764	G
4	L5	1765	A
4	L5	1766	A
4	L5	1767	A
4	L5	1768	C
4	L5	1770	A
4	L5	1785	C
4	L5	1787	A
4	L5	1803	G
4	L5	1804	A
4	L5	1806	G
4	L5	1810	G
4	L5	1815	G
4	L5	1821	G
4	L5	1822	U
4	L5	1836	G
4	L5	1837	A
4	L5	1842	G
4	L5	1855	G
4	L5	1869	G
4	L5	1882	U
4	L5	1888	A
4	L5	1893	C
4	L5	1897	A
4	L5	1916	G
4	L5	1917	A

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Mol	Chain	Res	Type
4	L5	1918	U
4	L5	1919	G
4	L5	1920	C
4	L5	1921	C
4	L5	1922	G
4	L5	1925	G
4	L5	1931	C
4	L5	1932	A
4	L5	1940	G
4	L5	1948	G
4	L5	1951	G
4	L5	1961	G
4	L5	1962	A
4	L5	1965	G
4	L5	1974	U
4	L5	1975	G
4	L5	1978	C
4	L5	1980	U
4	L5	1981	G
4	L5	1982	G
4	L5	1983	A
4	L5	1984	A
4	L5	1985	G
4	L5	1986	U
4	L5	1991	A
4	L5	1993	C
4	L5	1997	U
4	L5	1999	A
4	L5	2001	G
4	L5	2002	A
4	L5	2003	G
4	L5	2004	U
4	L5	2005	G
4	L5	2011	C
4	L5	2017	A
4	L5	2018	C
4	L5	2024	G
4	L5	2026	A
4	L5	2046	G
4	L5	2048	U
4	L5	2055	G
4	L5	2056	G

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Mol	Chain	Res	Type
4	L5	2069	A
4	L5	2084	C
4	L5	2092	G
4	L5	2093	A
4	L5	2094	G
4	L5	2095	A
4	L5	2096	G
4	L5	2097	U
4	L5	2098	G
4	L5	2099	G
4	L5	2101	C
4	L5	2102	G
4	L5	2103	G
4	L5	2107	C
4	L5	2110	C
4	L5	2112	G
4	L5	2250	C
4	L5	2252	G
4	L5	2256	C
4	L5	2258	C
4	L5	2268	A
4	L5	2289	C
4	L5	2300	A
4	L5	2301	G
4	L5	2313	A
4	L5	2316	G
4	L5	2322	G
4	L5	2331	G
4	L5	2333	G
4	L5	2348	G
4	L5	2349	A
4	L5	2351	OMC
4	L5	2360	A
4	L5	2364	OMG
4	L5	2395	A
4	L5	2397	G
4	L5	2402	G
4	L5	2410	C
4	L5	2417	A
4	L5	2422	OMC
4	L5	2425	U
4	L5	2453	A

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Mol	Chain	Res	Type
4	L5	2464	C
4	L5	2465	C
4	L5	2469	C
4	L5	2471	G
4	L5	2474	G
4	L5	2475	G
4	L5	2478	C
4	L5	2479	G
4	L5	2483	G
4	L5	2484	A
4	L5	2485	U
4	L5	2486	G
4	L5	2487	G
4	L5	2488	C
4	L5	2489	C
4	L5	2490	U
4	L5	2494	U
4	L5	2504	C
4	L5	2505	C
4	L5	2506	G
4	L5	2507	A
4	L5	2513	A
4	L5	2519	U
4	L5	2529	A
4	L5	2537	A
4	L5	2544	G
4	L5	2546	G
4	L5	2547	G
4	L5	2554	U
4	L5	2555	G
4	L5	2556	G
4	L5	2560	C
4	L5	2565	A
4	L5	2567	G
4	L5	2573	A
4	L5	2581	A
4	L5	2583	C
4	L5	2587	A
4	L5	2589	C
4	L5	2600	A
4	L5	2627	C
4	L5	2653	C

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Mol	Chain	Res	Type
4	L5	2662	G
4	L5	2669	C
4	L5	2676	A
4	L5	2687	U
4	L5	2694	G
4	L5	2695	A
4	L5	2696	A
4	L5	2703	G
4	L5	2706	G
4	L5	2707	U
4	L5	2708	U
4	L5	2709	C
4	L5	2710	C
4	L5	2711	G
4	L5	2719	C
4	L5	2721	G
4	L5	2724	G
4	L5	2726	G
4	L5	2739	C
4	L5	2742	G
4	L5	2743	A
4	L5	2754	G
4	L5	2761	U
4	L5	2763	U
4	L5	2769	U
4	L5	2770	C
4	L5	2787	A2M
4	L5	2788	U
4	L5	2790	U
4	L5	2794	C
4	L5	2799	G
4	L5	2802	C
4	L5	2806	A
4	L5	2814	C
4	L5	2826	U
4	L5	2827	G
4	L5	2829	U
4	L5	2835	A
4	L5	2855	G
4	L5	2867	C
4	L5	2877	G
4	L5	2894	A

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Mol	Chain	Res	Type
4	L5	2895	A
4	L5	2899	C
4	L5	2900	U
4	L5	2902	G
4	L5	2903	G
4	L5	2904	U
4	L5	2905	C
4	L5	2907	G
4	L5	2908	U
4	L5	3590	G
4	L5	3591	C
4	L5	3592	G
4	L5	3594	C
4	L5	3595	U
4	L5	3596	A
4	L5	3597	G
4	L5	3604	A
4	L5	3605	C
4	L5	3616	U
4	L5	3617	G
4	L5	3626	G
4	L5	3630	A
4	L5	3635	A
4	L5	3643	A
4	L5	3644	U
4	L5	3646	A
4	L5	3653	A
4	L5	3662	A
4	L5	3664	G
4	L5	3670	C
4	L5	3673	C
4	L5	3674	G
4	L5	3701	OMC
4	L5	3710	G
4	L5	3711	A
4	L5	3713	U
4	L5	3714	G
4	L5	3726	A
4	L5	3727	A
4	L5	3748	A
4	L5	3753	G
4	L5	3760	A

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Mol	Chain	Res	Type
4	L5	3764	U
4	L5	3770	U
4	L5	3774	A
4	L5	3775	A
4	L5	3776	G
4	L5	3777	G
4	L5	3778	U
4	L5	3784	A
4	L5	3785	A2M
4	L5	3786	U
4	L5	3792	OMG
4	L5	3811	G
4	L5	3812	C
4	L5	3814	U
4	L5	3817	A
4	L5	3819	G
4	L5	3824	A
4	L5	3839	G
4	L5	3840	U
4	L5	3876	A
4	L5	3877	A
4	L5	3878	C
4	L5	3879	G
4	L5	3892	U
4	L5	3897	G
4	L5	3898	G
4	L5	3901	A
4	L5	3906	A
4	L5	3907	G
4	L5	3908	A
4	L5	3915	U
4	L5	3923	A
4	L5	3938	G
4	L5	3939	G
4	L5	3942	A
4	L5	3945	A
4	L5	3947	A
4	L5	3949	A
4	L5	3950	U
4	L5	3951	G
4	L5	3952	A
4	L5	3953	G

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Mol	Chain	Res	Type
4	L5	4057	C
4	L5	4058	U
4	L5	4059	C
4	L5	4061	G
4	L5	4062	A
4	L5	4064	C
4	L5	4065	G
4	L5	4067	U
4	L5	4068	U
4	L5	4069	U
4	L5	4076	G
4	L5	4084	G
4	L5	4093	G
4	L5	4095	G
4	L5	4097	G
4	L5	4098	A
4	L5	4099	G
4	L5	4101	C
4	L5	4104	G
4	L5	4108	G
4	L5	4111	U
4	L5	4114	C
4	L5	4115	G
4	L5	4116	C
4	L5	4119	C
4	L5	4122	G
4	L5	4127	A
4	L5	4133	C
4	L5	4141	G
4	L5	4142	C
4	L5	4143	G
4	L5	4144	C
4	L5	4146	G
4	L5	4149	C
4	L5	4150	G
4	L5	4162	C
4	L5	4163	U
4	L5	4170	A
4	L5	4183	G
4	L5	4184	G
4	L5	4191	G
4	L5	4213	A

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Mol	Chain	Res	Type
4	L5	4220	6MZ
4	L5	4222	G
4	L5	4225	G
4	L5	4229	U
4	L5	4233	A
4	L5	4234	A
4	L5	4241	C
4	L5	4243	C
4	L5	4251	A
4	L5	4254	G
4	L5	4257	A
4	L5	4258	C
4	L5	4265	U
4	L5	4268	A
4	L5	4273	A
4	L5	4280	A
4	L5	4281	A
4	L5	4296	PSU
4	L5	4305	G
4	L5	4306	OMU
4	L5	4314	C
4	L5	4326	G
4	L5	4329	G
4	L5	4330	G
4	L5	4332	C
4	L5	4349	C
4	L5	4350	C
4	L5	4354	U
4	L5	4373	G
4	L5	4377	G
4	L5	4378	A
4	L5	4379	A
4	L5	4387	C
4	L5	4391	G
4	L5	4393	G
4	L5	4394	A
4	L5	4410	G
4	L5	4421	C
4	L5	4422	A
4	L5	4430	G
4	L5	4436	U
4	L5	4438	U

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Mol	Chain	Res	Type
4	L5	4444	C
4	L5	4447	5MC
4	L5	4448	G
4	L5	4449	A
4	L5	4464	A
4	L5	4466	C
4	L5	4475	G
4	L5	4476	C
4	L5	4488	A
4	L5	4500	PSU
4	L5	4512	U
4	L5	4513	A
4	L5	4518	A
4	L5	4519	C
4	L5	4523	A2M
4	L5	4524	G
4	L5	4528	G
4	L5	4545	G
4	L5	4548	A
4	L5	4549	G
4	L5	4560	C
4	L5	4567	G
4	L5	4575	G
4	L5	4584	A
4	L5	4589	A
4	L5	4590	A2M
4	L5	4601	U
4	L5	4617	G
4	L5	4636	PSU
4	L5	4637	OMG
4	L5	4652	G
4	L5	4656	A
4	L5	4670	C
4	L5	4672	A
4	L5	4677	U
4	L5	4694	G
4	L5	4695	C
4	L5	4700	A
4	L5	4708	A
4	L5	4709	U
4	L5	4719	G
4	L5	4734	A

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Mol	Chain	Res	Type
4	L5	4740	G
4	L5	4741	C
4	L5	4742	G
4	L5	4745	G
4	L5	4754	G
4	L5	4757	C
4	L5	4759	C
4	L5	4761	G
4	L5	4765	G
4	L5	4771	C
4	L5	4772	C
4	L5	4775	C
4	L5	4859	C
4	L5	4870	G
4	L5	4871	C
4	L5	4875	G
4	L5	4877	G
4	L5	4881	U
4	L5	4882	U
4	L5	4883	C
4	L5	4889	G
4	L5	4895	C
4	L5	4896	G
4	L5	4897	G
4	L5	4899	G
4	L5	4900	C
4	L5	4901	G
4	L5	4910	G
4	L5	4912	G
4	L5	4914	C
4	L5	4922	C
4	L5	4925	U
4	L5	4926	C
4	L5	4927	G
4	L5	4928	C
4	L5	4934	A
4	L5	4940	C
4	L5	4941	G
4	L5	4943	A
4	L5	4944	C
4	L5	4949	G
4	L5	4955	A

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Mol	Chain	Res	Type
4	L5	4960	G
4	L5	4976	U
4	L5	4985	U
4	L5	4988	U
4	L5	4989	U
4	L5	4991	U
4	L5	4995	U
4	L5	5006	U
4	L5	5013	C
4	L5	5014	A
4	L5	5017	G
4	L5	5022	U
4	L5	5024	C
4	L5	5026	U
4	L5	5028	G
4	L5	5030	U
4	L5	5034	A
4	L5	5041	G
4	L5	5047	C
4	L5	5050	C
4	L5	5054	C
4	L5	5055	G
4	L5	5061	A
4	L5	5069	U
5	L7	7	G
5	L7	22	A
5	L7	33	U
5	L7	38	U
5	L7	53	U
5	L7	54	A
5	L7	64	G
5	L7	89	G
5	L7	91	C
5	L7	97	G
5	L7	100	A
5	L7	110	G
6	L8	23	C
6	L8	25	G
6	L8	34	U
6	L8	35	C
6	L8	39	G
6	L8	59	A

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Mol	Chain	Res	Type
6	L8	62	A
6	L8	63	U
6	L8	75	OMG
6	L8	80	A
6	L8	82	A
6	L8	84	A
6	L8	85	U
6	L8	86	U
6	L8	87	G
6	L8	94	G
6	L8	99	U
6	L8	103	A
6	L8	105	C
6	L8	111	U
6	L8	114	G
6	L8	124	U
6	L8	125	C
6	L8	126	C
6	L8	127	U
6	L8	150	C
84	S2	13	C
84	S2	14	C
84	S2	25	A
84	S2	33	G
84	S2	42	A
84	S2	44	U
84	S2	45	A
84	S2	46	A
84	S2	56	G
84	S2	58	C
84	S2	59	U
84	S2	62	G
84	S2	65	C
84	S2	67	C
84	S2	68	A
84	S2	72	C
84	S2	73	C
84	S2	74	G
84	S2	76	U
84	S2	99	A2M
84	S2	103	A
84	S2	113	G

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Mol	Chain	Res	Type
84	S2	115	U
84	S2	130	G
84	S2	143	U
84	S2	149	A
84	S2	158	A
84	S2	160	U
84	S2	162	C
84	S2	168	C
84	S2	170	A
84	S2	171	A
84	S2	175	A
84	S2	190	G
84	S2	191	A
84	S2	196	C
84	S2	197	U
84	S2	198	U
84	S2	200	G
84	S2	203	G
84	S2	204	G
84	S2	206	G
84	S2	207	G
84	S2	208	G
84	S2	209	A
84	S2	211	G
84	S2	212	C
84	S2	214	U
84	S2	220	U
84	S2	291	G
84	S2	292	A
84	S2	295	C
84	S2	302	A
84	S2	303	C
84	S2	305	U
84	S2	306	C
84	S2	307	G
84	S2	308	G
84	S2	309	G
84	S2	311	C
84	S2	312	G
84	S2	313	A
84	S2	318	A
84	S2	319	C

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Mol	Chain	Res	Type
84	S2	323	C
84	S2	324	C
84	S2	325	C
84	S2	326	C
84	S2	328	U
84	S2	329	G
84	S2	332	G
84	S2	335	G
84	S2	339	A
84	S2	340	C
84	S2	347	G
84	S2	351	G
84	S2	360	A
84	S2	362	C
84	S2	364	A
84	S2	368	U
84	S2	370	G
84	S2	381	C
84	S2	383	G
84	S2	385	G
84	S2	386	C
84	S2	407	G
84	S2	408	A
84	S2	409	C
84	S2	426	A
84	S2	438	G
84	S2	448	A
84	S2	449	A
84	S2	450	C
84	S2	452	G
84	S2	464	A
84	S2	465	A
84	S2	471	G
84	S2	472	C
84	S2	473	A
84	S2	474	G
84	S2	476	A
84	S2	482	G
84	S2	487	U
84	S2	488	U
84	S2	492	C
84	S2	493	A

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Mol	Chain	Res	Type
84	S2	502	C
84	S2	516	A
84	S2	517	OMC
84	S2	530	U
84	S2	531	A
84	S2	532	C
84	S2	536	A
84	S2	537	C
84	S2	540	U
84	S2	542	U
84	S2	544	G
84	S2	546	G
84	S2	547	G
84	S2	551	U
84	S2	557	U
84	S2	558	G
84	S2	559	G
84	S2	563	G
84	S2	564	A
84	S2	576	A2M
84	S2	583	A
84	S2	587	A
84	S2	589	G
84	S2	590	A
84	S2	591	U
84	S2	593	C
84	S2	604	A
84	S2	606	G
84	S2	607	U
84	S2	614	C
84	S2	617	G
84	S2	622	C
84	S2	623	G
84	S2	628	A
84	S2	631	U
84	S2	643	A
84	S2	644	OMG
84	S2	660	C
84	S2	663	C
84	S2	664	A
84	S2	668	A2M
84	S2	669	A

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Mol	Chain	Res	Type
84	S2	671	A
84	S2	672	A
84	S2	673	G
84	S2	683	OMG
84	S2	688	U
84	S2	689	U
84	S2	692	G
84	S2	695	C
84	S2	696	G
84	S2	697	G
84	S2	698	G
84	S2	732	U
84	S2	733	C
84	S2	736	C
84	S2	737	G
84	S2	738	C
84	S2	749	U
84	S2	751	G
84	S2	752	G
84	S2	753	C
84	S2	788	G
84	S2	791	C
84	S2	792	C
84	S2	793	G
84	S2	798	G
84	S2	799	OMU
84	S2	801	PSU
84	S2	821	G
84	S2	822	U
84	S2	823	U
84	S2	824	C
84	S2	827	A
84	S2	830	A
84	S2	834	C
84	S2	835	C
84	S2	836	G
84	S2	837	A
84	S2	838	G
84	S2	839	C
84	S2	842	C
84	S2	844	U
84	S2	847	A

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Mol	Chain	Res	Type
84	S2	867	OMG
84	S2	870	A
84	S2	874	G
84	S2	877	C
84	S2	880	G
84	S2	888	U
84	S2	889	U
84	S2	891	G
84	S2	894	G
84	S2	896	U
84	S2	897	U
84	S2	898	U
84	S2	899	U
84	S2	900	C
84	S2	901	G
84	S2	903	A
84	S2	913	A
84	S2	920	A
84	S2	933	G
84	S2	934	G
84	S2	963	A
84	S2	970	G
84	S2	971	G
84	S2	972	A
84	S2	978	G
84	S2	985	G
84	S2	990	A
84	S2	992	A
84	S2	999	G
84	S2	1001	A
84	S2	1002	U
84	S2	1008	A
84	S2	1017	U
84	S2	1023	A
84	S2	1027	A
84	S2	1045	PSU
84	S2	1061	U
84	S2	1062	A
84	S2	1080	A
84	S2	1083	A
84	S2	1085	C
84	S2	1109	C

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Mol	Chain	Res	Type
84	S2	1113	A
84	S2	1116	C
84	S2	1121	G
84	S2	1123	C
84	S2	1126	G
84	S2	1133	A
84	S2	1138	C
84	S2	1139	C
84	S2	1148	A
84	S2	1150	A
84	S2	1153	C
84	S2	1154	U
84	S2	1155	U
84	S2	1170	A
84	S2	1195	A
84	S2	1200	A
84	S2	1207	G
84	S2	1208	A
84	S2	1215	C
84	S2	1217	A
84	S2	1220	A
84	S2	1224	G
84	S2	1227	G
84	S2	1242	U
84	S2	1243	U
84	S2	1248	B8N
84	S2	1251	A
84	S2	1253	A
84	S2	1256	G
84	S2	1257	G
84	S2	1259	A
84	S2	1264	C
84	S2	1271	C
84	S2	1272	OMC
84	S2	1274	G
84	S2	1275	G
84	S2	1281	G
84	S2	1282	A
84	S2	1283	C
84	S2	1286	G
84	S2	1288	OMU
84	S2	1290	G

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Mol	Chain	Res	Type
84	S2	1294	G
84	S2	1295	A
84	S2	1301	A
84	S2	1302	G
84	S2	1303	C
84	S2	1308	U
84	S2	1333	U
84	S2	1342	U
84	S2	1357	A
84	S2	1358	U
84	S2	1371	U
84	S2	1375	G
84	S2	1376	A
84	S2	1378	A
84	S2	1382	A
84	S2	1402	A
84	S2	1406	G
84	S2	1413	G
84	S2	1414	A
84	S2	1418	C
84	S2	1419	C
84	S2	1420	G
84	S2	1421	A
84	S2	1422	G
84	S2	1423	C
84	S2	1433	C
84	S2	1435	C
84	S2	1438	A
84	S2	1442	OMU
84	S2	1449	G
84	S2	1454	A
84	S2	1463	U
84	S2	1489	A
84	S2	1490	OMG
84	S2	1492	U
84	S2	1494	U
84	S2	1495	G
84	S2	1497	G
84	S2	1498	A
84	S2	1507	G
84	S2	1520	G
84	S2	1521	C

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Mol	Chain	Res	Type
84	S2	1531	A
84	S2	1533	A
84	S2	1544	C
84	S2	1546	G
84	S2	1552	G
84	S2	1553	C
84	S2	1556	A
84	S2	1558	C
84	S2	1560	U
84	S2	1575	G
84	S2	1580	A
84	S2	1581	C
84	S2	1582	C
84	S2	1585	U
84	S2	1587	G
84	S2	1588	A
84	S2	1600	G
84	S2	1604	G
84	S2	1606	G
84	S2	1621	U
84	S2	1623	A
84	S2	1630	A
84	S2	1631	U
84	S2	1633	A
84	S2	1634	A
84	S2	1637	A
84	S2	1638	G
84	S2	1648	G
84	S2	1649	U
84	S2	1654	G
84	S2	1663	A
84	S2	1665	G
84	S2	1680	G
84	S2	1683	C
84	S2	1686	G
84	S2	1695	A
84	S2	1699	A
84	S2	1713	C
84	S2	1715	A
84	S2	1721	U
84	S2	1722	G
84	S2	1729	U

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Mol	Chain	Res	Type
84	S2	1744	G
84	S2	1745	A
84	S2	1752	C
84	S2	1753	C
84	S2	1754	G
84	S2	1755	C
84	S2	1756	C
84	S2	1757	G
84	S2	1759	G
84	S2	1761	U
84	S2	1772	C
84	S2	1773	C
84	S2	1774	C
84	S2	1777	G
84	S2	1782	G
84	S2	1783	C
84	S2	1784	G
84	S2	1786	U
84	S2	1798	C
84	S2	1810	U
84	S2	1825	A
84	S2	1829	G
84	S2	1831	A
84	S2	1835	A
84	S2	1838	U
84	S2	1849	G
84	S2	1851	MA6
84	S2	1852	C
84	S2	1861	G
84	S2	1862	G
84	S2	1863	A
84	S2	1864	U
84	S2	1865	C
85	Zt	4	C
85	Zt	6	G
85	Zt	7	A
85	Zt	8	U
85	Zt	9	A
85	Zt	10	G
85	Zt	11	C
85	Zt	14	A
85	Zt	15	G

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Mol	Chain	Res	Type
85	Zt	16	C
85	Zt	18	U
85	Zt	19	G
85	Zt	20	U
85	Zt	21	A
85	Zt	22	G
85	Zt	25	C
85	Zt	26	A
85	Zt	29	A
85	Zt	30	G
85	Zt	33	U
85	Zt	35	U
85	Zt	36	U
85	Zt	37	A
85	Zt	38	A
85	Zt	40	C
85	Zt	42	G
85	Zt	43	A
85	Zt	45	G
85	Zt	48	C
85	Zt	49	C
85	Zt	53	G
85	Zt	56	C
85	Zt	57	A
85	Zt	58	A
85	Zt	59	G
85	Zt	60	U
85	Zt	61	C
85	Zt	63	C
85	Zt	66	U
85	Zt	67	U
85	Zt	70	G
85	Zt	71	G
85	Zt	72	C

All (18) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
4	L5	406	C
4	L5	493	G
4	L5	914	U
4	L5	1082	C

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Mol	Chain	Res	Type
4	L5	1633	G
4	L5	1977	C
4	L5	2416	G
4	L5	2485	U
4	L5	2675	G
4	L5	2760	G
4	L5	3673	C
4	L5	4447	5MC
4	L5	4600	G
4	L5	4699	U
4	L5	4913	G
84	S2	291	G
84	S2	563	G
84	S2	688	U

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

179 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
84	PSU	S2	686	84	18,21,22	1.11	1 (5%)	21,30,33	1.90	5 (23%)
4	PSU	L5	1782	4	18,21,22	1.15	1 (5%)	21,30,33	1.91	4 (19%)
84	A2M	S2	1031	84	18,25,26	1.24	2 (11%)	20,36,39	2.02	6 (30%)
4	OMU	L5	2837	4	19,22,23	3.35	7 (36%)	25,31,34	1.85	5 (20%)
4	OMC	L5	1340	4	19,22,23	0.53	0	25,31,34	0.74	0
84	MA6	S2	1851	84	19,26,27	1.51	3 (15%)	18,38,41	3.40	3 (16%)
84	OMU	S2	627	84	19,22,23	3.37	7 (36%)	25,31,34	1.80	5 (20%)
4	PSU	L5	4500	4	18,21,22	1.13	1 (5%)	21,30,33	1.95	5 (23%)
4	PSU	L5	4471	4	18,21,22	1.06	1 (5%)	21,30,33	1.83	4 (19%)
84	A2M	S2	27	84	18,25,26	1.33	2 (11%)	20,36,39	2.00	6 (30%)
84	OMC	S2	517	84	19,22,23	0.54	0	25,31,34	0.64	0
84	PSU	S2	651	84	18,21,22	1.14	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
4	A2M	L5	2363	4,87	18,25,26	1.29	2 (11%)	20,36,39	1.98	6 (30%)
4	UR3	L5	4530	4	19,22,23	2.78	7 (36%)	26,32,35	1.58	3 (11%)
4	PSU	L5	4552	4	18,21,22	1.06	1 (5%)	21,30,33	1.86	4 (19%)
4	PSU	L5	4431	4	18,21,22	1.10	1 (5%)	21,30,33	1.94	5 (23%)
84	OMU	S2	799	84	19,22,23	3.43	7 (36%)	25,31,34	1.78	5 (20%)
6	OMG	L8	75	6	19,26,27	1.12	2 (10%)	21,38,41	0.84	1 (4%)
4	PSU	L5	3822	4	18,21,22	1.13	2 (11%)	21,30,33	1.99	6 (28%)
4	PSU	L5	4628	4	18,21,22	1.00	1 (5%)	21,30,33	1.85	4 (19%)
84	PSU	S2	1056	84	18,21,22	1.07	1 (5%)	21,30,33	1.88	5 (23%)
4	OMG	L5	2424	4	19,26,27	1.16	2 (10%)	21,38,41	0.81	1 (4%)
4	OMC	L5	4456	4	19,22,23	0.56	0	25,31,34	0.79	1 (4%)
4	OMC	L5	3808	4	19,22,23	0.59	0	25,31,34	0.95	2 (8%)
84	OMU	S2	1442	84	19,22,23	3.40	7 (36%)	25,31,34	1.80	5 (20%)
4	PSU	L5	4689	4	18,21,22	1.04	1 (5%)	21,30,33	1.88	4 (19%)
4	PSU	L5	4403	4	18,21,22	1.02	1 (5%)	21,30,33	1.84	5 (23%)
84	A2M	S2	668	87,84	18,25,26	1.29	3 (16%)	20,36,39	1.98	6 (30%)
84	PSU	S2	93	84	18,21,22	1.10	1 (5%)	21,30,33	1.83	4 (19%)
4	OMC	L5	3841	4	19,22,23	0.51	0	25,31,34	0.70	1 (4%)
4	A2M	L5	2401	4	18,25,26	1.22	2 (11%)	20,36,39	1.97	6 (30%)
4	OMC	L5	2365	4,87	19,22,23	0.53	0	25,31,34	0.63	0
4	5MC	L5	3782	4,87	19,22,23	0.52	0	26,32,35	0.80	1 (3%)
4	OMC	L5	2824	4	19,22,23	0.54	0	25,31,34	0.81	1 (4%)
4	OMG	L5	3627	4	19,26,27	1.15	2 (10%)	21,38,41	0.87	1 (4%)
4	A2M	L5	3830	4	18,25,26	1.30	2 (11%)	20,36,39	2.10	6 (30%)
4	PSU	L5	4521	4,87	18,21,22	1.11	1 (5%)	21,30,33	1.88	4 (19%)
84	PSU	S2	1367	84	18,21,22	1.12	1 (5%)	21,30,33	1.90	4 (19%)
84	4AC	S2	1842	84	21,24,25	0.38	0	28,34,37	0.45	0
84	OMG	S2	683	84	19,26,27	1.16	2 (10%)	21,38,41	0.80	1 (4%)
4	A2M	L5	1871	4,87	18,25,26	1.32	2 (11%)	20,36,39	2.02	6 (30%)
4	PSU	L5	1781	4	18,21,22	1.07	1 (5%)	21,30,33	1.81	4 (19%)
4	A2M	L5	3867	4	18,25,26	1.28	3 (16%)	20,36,39	1.86	7 (35%)
84	OMU	S2	354	84	19,22,23	3.35	7 (36%)	25,31,34	1.82	5 (20%)
4	OMC	L5	2422	4,87	19,22,23	0.54	0	25,31,34	0.69	0
6	PSU	L8	69	6	18,21,22	1.09	1 (5%)	21,30,33	1.82	5 (23%)
4	OMG	L5	1522	4	19,26,27	1.15	2 (10%)	21,38,41	0.90	1 (4%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
84	PSU	S2	1174	84	18,21,22	1.10	1 (5%)	21,30,33	1.86	4 (19%)
4	OMC	L5	3869	4	19,22,23	0.51	0	25,31,34	0.64	0
4	PSU	L5	1862	4	18,21,22	1.12	1 (5%)	21,30,33	1.89	4 (19%)
84	OMU	S2	116	84	19,22,23	3.33	7 (36%)	25,31,34	1.69	5 (20%)
4	PSU	L5	2632	4	18,21,22	1.09	1 (5%)	21,30,33	1.99	5 (23%)
4	PSU	L5	4532	4	18,21,22	1.11	1 (5%)	21,30,33	1.89	4 (19%)
84	PSU	S2	1081	84	18,21,22	1.13	1 (5%)	21,30,33	1.91	5 (23%)
84	A2M	S2	166	84	18,25,26	1.33	2 (11%)	20,36,39	2.17	7 (35%)
84	PSU	S2	1045	84	18,21,22	1.10	1 (5%)	21,30,33	1.89	4 (19%)
4	PSU	L5	3851	4,87	18,21,22	1.08	1 (5%)	21,30,33	1.80	4 (19%)
84	OMU	S2	121	84	19,22,23	3.39	7 (36%)	25,31,34	1.79	5 (20%)
4	OMG	L5	3744	4	19,26,27	1.14	2 (10%)	21,38,41	0.80	1 (4%)
84	PSU	S2	1046	84	18,21,22	1.11	1 (5%)	21,30,33	1.80	4 (19%)
4	PSU	L5	1860	4	18,21,22	1.13	1 (5%)	21,30,33	1.90	4 (19%)
4	A2M	L5	4590	4	18,25,26	1.26	2 (11%)	20,36,39	2.12	7 (35%)
84	OMG	S2	1490	84	19,26,27	1.20	2 (10%)	21,38,41	0.73	0
84	PSU	S2	1004	84	18,21,22	1.09	1 (5%)	21,30,33	1.84	4 (19%)
84	OMC	S2	1391	84	19,22,23	0.51	0	25,31,34	0.67	0
6	PSU	L8	55	6	18,21,22	1.13	1 (5%)	21,30,33	1.90	4 (19%)
4	OMU	L5	4620	4	19,22,23	3.34	7 (36%)	25,31,34	1.77	4 (16%)
84	PSU	S2	863	84	18,21,22	1.10	1 (5%)	21,30,33	1.87	4 (19%)
84	PSU	S2	105	84	18,21,22	1.07	1 (5%)	21,30,33	1.86	4 (19%)
4	A2M	L5	1534	4,87	18,25,26	1.27	2 (11%)	20,36,39	2.01	6 (30%)
4	PSU	L5	3695	4	18,21,22	1.09	1 (5%)	21,30,33	1.88	5 (23%)
84	PSU	S2	681	84	18,21,22	1.07	1 (5%)	21,30,33	1.88	4 (19%)
84	A2M	S2	159	84	18,25,26	1.29	1 (5%)	20,36,39	1.91	7 (35%)
4	PSU	L5	1744	4,87	18,21,22	1.08	1 (5%)	21,30,33	1.90	6 (28%)
4	OMG	L5	1316	4	19,26,27	1.19	2 (10%)	21,38,41	0.80	1 (4%)
84	PSU	S2	649	84	18,21,22	1.07	1 (5%)	21,30,33	1.90	4 (19%)
4	A2M	L5	400	4	18,25,26	1.29	2 (11%)	20,36,39	1.95	7 (35%)
4	OMG	L5	3899	4	19,26,27	1.16	2 (10%)	21,38,41	0.79	1 (4%)
4	A2M	L5	3825	4	18,25,26	1.28	2 (11%)	20,36,39	1.98	6 (30%)
4	OMC	L5	2351	4,87	19,22,23	0.54	0	25,31,34	0.83	1 (4%)
84	A2M	S2	99	87,84	18,25,26	1.25	2 (11%)	20,36,39	1.98	5 (25%)
84	OMC	S2	174	84	19,22,23	0.51	0	25,31,34	0.70	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
4	PSU	L5	4636	4	18,21,22	1.11	1 (5%)	21,30,33	2.04	6 (28%)
4	A2M	L5	3785	4,87	18,25,26	1.34	2 (11%)	20,36,39	2.71	6 (30%)
84	OMU	S2	428	84	19,22,23	3.37	7 (36%)	25,31,34	1.83	5 (20%)
4	PSU	L5	4972	4	18,21,22	1.09	1 (5%)	21,30,33	1.90	6 (28%)
84	A2M	S2	576	84	18,25,26	1.21	2 (11%)	20,36,39	1.97	5 (25%)
4	PSU	L5	3884	4	18,21,22	1.11	1 (5%)	21,30,33	1.89	4 (19%)
84	A2M	S2	1383	84	18,25,26	1.34	2 (11%)	20,36,39	2.27	5 (25%)
84	OMG	S2	509	84	19,26,27	1.14	2 (10%)	21,38,41	0.83	1 (4%)
4	A2M	L5	2787	4	18,25,26	1.24	2 (11%)	20,36,39	1.76	5 (25%)
4	PSU	L5	3844	4	18,21,22	1.10	1 (5%)	21,30,33	1.91	4 (19%)
4	PSU	L5	4312	4	18,21,22	1.08	1 (5%)	21,30,33	1.89	4 (19%)
4	PSU	L5	2839	4	18,21,22	1.08	1 (5%)	21,30,33	1.93	5 (23%)
4	PSU	L5	4442	4	18,21,22	1.13	1 (5%)	21,30,33	2.06	6 (28%)
4	OMG	L5	3792	4	19,26,27	1.15	2 (10%)	21,38,41	0.81	1 (4%)
4	OMG	L5	4623	4	19,26,27	1.15	2 (10%)	21,38,41	0.82	1 (4%)
4	PSU	L5	4296	4	18,21,22	1.10	1 (5%)	21,30,33	1.96	5 (23%)
84	MA6	S2	1850	84	19,26,27	1.51	3 (15%)	18,38,41	3.39	3 (16%)
84	6MZ	S2	1832	87,84	21,26,26	1.32	2 (9%)	22,39,39	1.78	2 (9%)
4	A2M	L5	4571	4	18,25,26	1.29	2 (11%)	20,36,39	2.00	6 (30%)
4	PSU	L5	4299	4	18,21,22	1.10	1 (5%)	21,30,33	1.93	4 (19%)
4	PSU	L5	4361	4	18,21,22	1.07	1 (5%)	21,30,33	1.83	4 (19%)
4	OMG	L5	4494	4	19,26,27	1.15	2 (10%)	21,38,41	0.81	1 (4%)
4	PSU	L5	4673	4	18,21,22	1.08	1 (5%)	21,30,33	1.87	4 (19%)
84	OMU	S2	1288	84	19,22,23	3.38	7 (36%)	25,31,34	1.80	5 (20%)
4	PSU	L5	4579	4	18,21,22	1.07	1 (5%)	21,30,33	1.81	4 (19%)
4	OMC	L5	3701	4	19,22,23	0.56	0	25,31,34	0.82	1 (4%)
4	OMG	L5	2364	4,87	19,26,27	1.15	2 (10%)	21,38,41	0.81	1 (4%)
4	A2M	L5	2815	4	18,25,26	1.18	1 (5%)	20,36,39	1.80	7 (35%)
84	OMU	S2	1326	84	19,22,23	3.37	7 (36%)	25,31,34	1.81	5 (20%)
84	OMG	S2	644	84	19,26,27	1.13	2 (10%)	21,38,41	0.84	1 (4%)
4	PSU	L5	4457	4	18,21,22	1.10	1 (5%)	21,30,33	1.91	5 (23%)
84	OMC	S2	462	84	19,22,23	0.52	0	25,31,34	0.78	1 (4%)
4	OMU	L5	4306	4	19,22,23	3.34	7 (36%)	25,31,34	1.77	4 (16%)
4	OMG	L5	4228	4	19,26,27	1.18	3 (15%)	21,38,41	0.95	1 (4%)
4	OMC	L5	3887	4	19,22,23	0.54	0	25,31,34	0.78	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	SEP	CF	163	2	8,9,10	1.61	1 (12%)	7,12,14	1.21	1 (14%)
4	A2M	L5	4523	4,87	18,25,26	1.35	2 (11%)	20,36,39	2.23	6 (30%)
4	PSU	L5	4493	4	18,21,22	1.08	1 (5%)	21,30,33	1.92	5 (23%)
4	A2M	L5	1326	4,87	18,25,26	1.20	1 (5%)	20,36,39	1.90	8 (40%)
4	PSU	L5	4353	4	18,21,22	1.10	1 (5%)	21,30,33	1.91	5 (23%)
84	OMG	S2	867	84	19,26,27	1.13	2 (10%)	21,38,41	0.87	1 (4%)
4	A2M	L5	1323	4	18,25,26	1.26	3 (16%)	20,36,39	2.02	7 (35%)
4	OMG	L5	4637	4	19,26,27	1.14	2 (10%)	21,38,41	0.86	1 (4%)
4	PSU	L5	4973	4	18,21,22	1.08	1 (5%)	21,30,33	1.87	4 (19%)
4	PSU	L5	1582	4	18,21,22	1.12	1 (5%)	21,30,33	1.75	4 (19%)
4	OMG	L5	2876	4	19,26,27	1.15	2 (10%)	21,38,41	0.81	1 (4%)
84	OMG	S2	1328	84	19,26,27	1.12	2 (10%)	21,38,41	0.81	1 (4%)
4	A2M	L5	398	4	18,25,26	1.29	2 (11%)	20,36,39	2.10	6 (30%)
4	PSU	L5	1683	4	18,21,22	1.10	1 (5%)	21,30,33	1.88	4 (19%)
4	PSU	L5	3637	4	18,21,22	1.11	1 (5%)	21,30,33	2.04	5 (23%)
84	4AC	S2	1337	84	21,24,25	0.37	0	28,34,37	0.64	1 (3%)
84	PSU	S2	406	84	18,21,22	1.12	1 (5%)	21,30,33	1.84	4 (19%)
84	B8N	S2	1248	84	25,29,30	3.29	6 (24%)	28,42,45	1.98	8 (28%)
84	PSU	S2	866	84	18,21,22	1.13	1 (5%)	21,30,33	1.92	5 (23%)
4	OMC	L5	2804	4	19,22,23	0.53	0	25,31,34	0.65	0
4	OMU	L5	4498	4	19,22,23	3.37	7 (36%)	25,31,34	1.81	5 (20%)
4	OMC	L5	4536	4	19,22,23	0.58	0	25,31,34	0.79	0
84	PSU	S2	814	84	18,21,22	1.12	1 (5%)	21,30,33	1.88	4 (19%)
4	OMC	L5	2861	4	19,22,23	0.56	0	25,31,34	1.00	2 (8%)
84	PSU	S2	966	87,84	18,21,22	1.05	1 (5%)	21,30,33	1.85	4 (19%)
84	OMG	S2	436	84	19,26,27	1.12	2 (10%)	21,38,41	0.83	1 (4%)
4	A2M	L5	1524	4	18,25,26	1.29	2 (11%)	20,36,39	2.13	6 (30%)
4	OMU	L5	4227	4	19,22,23	3.36	7 (36%)	25,31,34	1.83	5 (20%)
4	PSU	L5	3920	4,87	18,21,22	1.08	1 (5%)	21,30,33	1.89	5 (23%)
4	PSU	L5	5001	4	18,21,22	1.10	1 (5%)	21,30,33	1.82	4 (19%)
84	PSU	S2	1177	84	18,21,22	1.11	1 (5%)	21,30,33	1.87	4 (19%)
4	6MZ	L5	4220	4	17,25,26	3.50	7 (41%)	15,36,39	2.64	4 (26%)
4	A2M	L5	3718	4	18,25,26	1.25	2 (11%)	20,36,39	2.00	5 (25%)
4	OMG	L5	4618	4	19,26,27	1.15	2 (10%)	21,38,41	0.82	1 (4%)
4	PSU	L5	4576	4	18,21,22	1.08	1 (5%)	21,30,33	1.86	5 (23%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
4	PSU	L5	5010	4	18,21,22	1.13	1 (5%)	21,30,33	1.91	4 (19%)
84	PSU	S2	1232	84	18,21,22	1.13	1 (5%)	21,30,33	1.87	4 (19%)
4	5MC	L5	4447	4	19,22,23	0.63	0	26,32,35	0.54	0
84	OMG	S2	601	84	19,26,27	1.14	2 (10%)	21,38,41	0.92	1 (4%)
84	OMC	S2	1703	84	19,22,23	0.53	0	25,31,34	0.70	1 (4%)
4	OMG	L5	4499	4	19,26,27	1.13	2 (10%)	21,38,41	0.83	1 (4%)
84	A2M	S2	468	84	18,25,26	1.25	2 (11%)	20,36,39	1.96	6 (30%)
4	PSU	L5	3853	4,87	18,21,22	1.07	1 (5%)	21,30,33	1.78	4 (19%)
84	PSU	S2	109	84	18,21,22	1.11	1 (5%)	21,30,33	1.89	4 (19%)
4	OMG	L5	4196	4,1	19,26,27	1.14	2 (10%)	21,38,41	0.84	1 (4%)
4	PSU	L5	3639	4	18,21,22	1.12	1 (5%)	21,30,33	1.91	4 (19%)
4	OMU	L5	3925	4	19,22,23	3.32	7 (36%)	25,31,34	1.87	5 (20%)
84	A2M	S2	484	84	18,25,26	1.20	1 (5%)	20,36,39	1.81	6 (30%)
4	PSU	L5	1792	4	18,21,22	1.06	1 (5%)	21,30,33	1.86	4 (19%)
4	PSU	L5	4293	4	18,21,22	1.13	2 (11%)	21,30,33	1.93	4 (19%)
84	OMU	S2	172	84	19,22,23	3.38	7 (36%)	25,31,34	1.82	5 (20%)
4	PSU	L5	1536	4	18,21,22	1.11	1 (5%)	21,30,33	1.99	4 (19%)
84	PSU	S2	1244	84	18,21,22	1.14	1 (5%)	21,30,33	1.88	4 (19%)
84	G7M	S2	1639	1,84	20,26,27	2.45	6 (30%)	16,39,42	1.11	1 (6%)
4	OMG	L5	4370	4	19,26,27	1.13	2 (10%)	21,38,41	0.81	1 (4%)
4	OMG	L5	4392	4	19,26,27	1.14	2 (10%)	21,38,41	0.82	1 (4%)
84	PSU	S2	801	84	18,21,22	1.11	1 (5%)	21,30,33	1.85	4 (19%)
4	1MA	L5	1322	4,87	17,25,26	0.93	2 (11%)	17,37,40	1.10	2 (11%)
4	UY1	L5	3818	4	19,22,23	4.96	9 (47%)	21,31,34	2.02	6 (28%)
84	OMC	S2	1272	84	19,22,23	0.53	0	25,31,34	0.82	1 (4%)
4	OMG	L5	1625	4	19,26,27	1.19	2 (10%)	21,38,41	0.83	1 (4%)
4	PSU	L5	1677	4	18,21,22	1.09	2 (11%)	21,30,33	1.95	5 (23%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
84	PSU	S2	686	84	-	0/7/25/26	0/2/2/2
4	PSU	L5	1782	4	-	0/7/25/26	0/2/2/2
84	A2M	S2	1031	84	-	0/5/27/28	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
4	OMU	L5	2837	4	-	0/9/27/28	0/2/2/2
4	OMC	L5	1340	4	-	1/9/27/28	0/2/2/2
84	MA6	S2	1851	84	-	2/7/29/30	0/3/3/3
84	OMU	S2	627	84	-	5/9/27/28	0/2/2/2
4	PSU	L5	4500	4	-	3/7/25/26	0/2/2/2
4	PSU	L5	4471	4	-	0/7/25/26	0/2/2/2
84	A2M	S2	27	84	-	1/5/27/28	0/3/3/3
84	OMC	S2	517	84	-	3/9/27/28	0/2/2/2
84	PSU	S2	651	84	-	0/7/25/26	0/2/2/2
4	A2M	L5	2363	4,87	-	0/5/27/28	0/3/3/3
4	UR3	L5	4530	4	-	0/7/25/26	0/2/2/2
4	PSU	L5	4552	4	-	0/7/25/26	0/2/2/2
4	PSU	L5	4431	4	-	0/7/25/26	0/2/2/2
84	OMU	S2	799	84	-	2/9/27/28	0/2/2/2
6	OMG	L8	75	6	-	1/5/27/28	0/3/3/3
4	PSU	L5	3822	4	-	2/7/25/26	0/2/2/2
4	PSU	L5	4628	4	-	0/7/25/26	0/2/2/2
84	PSU	S2	1056	84	-	0/7/25/26	0/2/2/2
4	OMG	L5	2424	4	-	0/5/27/28	0/3/3/3
4	OMC	L5	4456	4	-	0/9/27/28	0/2/2/2
4	OMC	L5	3808	4	-	0/9/27/28	0/2/2/2
84	OMU	S2	1442	84	-	2/9/27/28	0/2/2/2
4	PSU	L5	4689	4	-	0/7/25/26	0/2/2/2
4	PSU	L5	4403	4	-	0/7/25/26	0/2/2/2
84	A2M	S2	668	87,84	-	3/5/27/28	0/3/3/3
84	PSU	S2	93	84	-	0/7/25/26	0/2/2/2
4	OMC	L5	3841	4	-	1/9/27/28	0/2/2/2
4	A2M	L5	2401	4	-	0/5/27/28	0/3/3/3
4	OMC	L5	2365	4,87	-	0/9/27/28	0/2/2/2
4	5MC	L5	3782	4,87	-	0/7/25/26	0/2/2/2
4	OMC	L5	2824	4	-	1/9/27/28	0/2/2/2
4	OMG	L5	3627	4	-	0/5/27/28	0/3/3/3
4	A2M	L5	3830	4	-	1/5/27/28	0/3/3/3
4	PSU	L5	4521	4,87	-	2/7/25/26	0/2/2/2
84	PSU	S2	1367	84	-	0/7/25/26	0/2/2/2
84	4AC	S2	1842	84	-	0/11/29/30	0/2/2/2
84	OMG	S2	683	84	-	2/5/27/28	0/3/3/3
4	A2M	L5	1871	4,87	-	0/5/27/28	0/3/3/3
4	PSU	L5	1781	4	-	1/7/25/26	0/2/2/2
4	A2M	L5	3867	4	-	1/5/27/28	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
84	OMU	S2	354	84	-	1/9/27/28	0/2/2/2
4	OMC	L5	2422	4,87	-	2/9/27/28	0/2/2/2
6	PSU	L8	69	6	-	0/7/25/26	0/2/2/2
4	OMG	L5	1522	4	-	0/5/27/28	0/3/3/3
84	PSU	S2	1174	84	-	0/7/25/26	0/2/2/2
4	OMC	L5	3869	4	-	0/9/27/28	0/2/2/2
4	PSU	L5	1862	4	-	0/7/25/26	0/2/2/2
84	OMU	S2	116	84	-	1/9/27/28	0/2/2/2
4	PSU	L5	2632	4	-	0/7/25/26	0/2/2/2
4	PSU	L5	4532	4	-	0/7/25/26	0/2/2/2
84	PSU	S2	1081	84	-	1/7/25/26	0/2/2/2
84	A2M	S2	166	84	-	0/5/27/28	0/3/3/3
84	PSU	S2	1045	84	-	2/7/25/26	0/2/2/2
4	PSU	L5	3851	4,87	-	1/7/25/26	0/2/2/2
84	OMU	S2	121	84	-	0/9/27/28	0/2/2/2
4	OMG	L5	3744	4	-	1/5/27/28	0/3/3/3
84	PSU	S2	1046	84	-	0/7/25/26	0/2/2/2
4	PSU	L5	1860	4	-	0/7/25/26	0/2/2/2
4	A2M	L5	4590	4	-	4/5/27/28	0/3/3/3
84	OMG	S2	1490	84	-	1/5/27/28	0/3/3/3
84	PSU	S2	1004	84	-	0/7/25/26	0/2/2/2
84	OMC	S2	1391	84	-	0/9/27/28	0/2/2/2
6	PSU	L8	55	6	-	0/7/25/26	0/2/2/2
4	OMU	L5	4620	4	-	0/9/27/28	0/2/2/2
84	PSU	S2	863	84	-	0/7/25/26	0/2/2/2
84	PSU	S2	105	84	-	0/7/25/26	0/2/2/2
4	A2M	L5	1534	4,87	-	2/5/27/28	0/3/3/3
4	PSU	L5	3695	4	-	0/7/25/26	0/2/2/2
84	PSU	S2	681	84	-	0/7/25/26	0/2/2/2
84	A2M	S2	159	84	-	2/5/27/28	0/3/3/3
4	PSU	L5	1744	4,87	-	0/7/25/26	0/2/2/2
4	OMG	L5	1316	4	-	1/5/27/28	0/3/3/3
84	PSU	S2	649	84	-	0/7/25/26	0/2/2/2
4	A2M	L5	400	4	-	1/5/27/28	0/3/3/3
4	OMG	L5	3899	4	-	2/5/27/28	0/3/3/3
4	A2M	L5	3825	4	-	1/5/27/28	0/3/3/3
4	OMC	L5	2351	4,87	-	2/9/27/28	0/2/2/2
84	A2M	S2	99	87,84	-	2/5/27/28	0/3/3/3
84	OMC	S2	174	84	-	0/9/27/28	0/2/2/2
4	PSU	L5	4636	4	-	1/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
4	A2M	L5	3785	4,87	-	0/5/27/28	0/3/3/3
84	OMU	S2	428	84	-	3/9/27/28	0/2/2/2
4	PSU	L5	4972	4	-	0/7/25/26	0/2/2/2
84	A2M	S2	576	84	-	4/5/27/28	0/3/3/3
4	PSU	L5	3884	4	-	0/7/25/26	0/2/2/2
84	A2M	S2	1383	84	-	3/5/27/28	0/3/3/3
84	OMG	S2	509	84	-	1/5/27/28	0/3/3/3
4	A2M	L5	2787	4	-	3/5/27/28	0/3/3/3
4	PSU	L5	3844	4	-	1/7/25/26	0/2/2/2
4	PSU	L5	4312	4	-	0/7/25/26	0/2/2/2
4	PSU	L5	2839	4	-	0/7/25/26	0/2/2/2
4	PSU	L5	4442	4	-	0/7/25/26	0/2/2/2
4	OMG	L5	3792	4	-	2/5/27/28	0/3/3/3
4	OMG	L5	4623	4	-	1/5/27/28	0/3/3/3
4	PSU	L5	4296	4	-	2/7/25/26	0/2/2/2
84	MA6	S2	1850	84	-	1/7/29/30	0/3/3/3
84	6MZ	S2	1832	87,84	-	7/8/28/28	0/3/3/3
4	A2M	L5	4571	4	-	0/5/27/28	0/3/3/3
4	PSU	L5	4299	4	-	0/7/25/26	0/2/2/2
4	PSU	L5	4361	4	-	0/7/25/26	0/2/2/2
4	OMG	L5	4494	4	-	0/5/27/28	0/3/3/3
4	PSU	L5	4673	4	-	0/7/25/26	0/2/2/2
84	OMU	S2	1288	84	-	2/9/27/28	0/2/2/2
4	PSU	L5	4579	4	-	0/7/25/26	0/2/2/2
4	OMC	L5	3701	4	-	4/9/27/28	0/2/2/2
4	OMG	L5	2364	4,87	-	2/5/27/28	0/3/3/3
4	A2M	L5	2815	4	-	2/5/27/28	0/3/3/3
84	OMU	S2	1326	84	-	0/9/27/28	0/2/2/2
84	OMG	S2	644	84	-	4/5/27/28	0/3/3/3
4	PSU	L5	4457	4	-	0/7/25/26	0/2/2/2
84	OMC	S2	462	84	-	0/9/27/28	0/2/2/2
4	OMU	L5	4306	4	-	0/9/27/28	0/2/2/2
4	OMG	L5	4228	4	-	0/5/27/28	0/3/3/3
4	OMC	L5	3887	4	-	2/9/27/28	0/2/2/2
2	SEP	CF	163	2	-	6/6/8/10	-
4	A2M	L5	4523	4,87	-	1/5/27/28	0/3/3/3
4	PSU	L5	4493	4	-	0/7/25/26	0/2/2/2
4	A2M	L5	1326	4,87	-	3/5/27/28	0/3/3/3
4	PSU	L5	4353	4	-	0/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
84	OMG	S2	867	84	-	1/5/27/28	0/3/3/3
4	A2M	L5	1323	4	-	3/5/27/28	0/3/3/3
4	OMG	L5	4637	4	-	1/5/27/28	0/3/3/3
4	PSU	L5	4973	4	-	0/7/25/26	0/2/2/2
4	PSU	L5	1582	4	-	0/7/25/26	0/2/2/2
4	OMG	L5	2876	4	-	0/5/27/28	0/3/3/3
84	OMG	S2	1328	84	-	0/5/27/28	0/3/3/3
4	A2M	L5	398	4	-	0/5/27/28	0/3/3/3
4	PSU	L5	1683	4	-	0/7/25/26	0/2/2/2
4	PSU	L5	3637	4	-	0/7/25/26	0/2/2/2
84	4AC	S2	1337	84	-	1/11/29/30	0/2/2/2
84	PSU	S2	406	84	-	0/7/25/26	0/2/2/2
84	B8N	S2	1248	84	-	4/16/34/35	0/2/2/2
84	PSU	S2	866	84	-	0/7/25/26	0/2/2/2
4	OMC	L5	2804	4	-	0/9/27/28	0/2/2/2
4	OMU	L5	4498	4	-	0/9/27/28	0/2/2/2
4	OMC	L5	4536	4	-	0/9/27/28	0/2/2/2
84	PSU	S2	814	84	-	0/7/25/26	0/2/2/2
4	OMC	L5	2861	4	-	3/9/27/28	0/2/2/2
84	PSU	S2	966	87,84	-	0/7/25/26	0/2/2/2
84	OMG	S2	436	84	-	0/5/27/28	0/3/3/3
4	A2M	L5	1524	4	-	3/5/27/28	0/3/3/3
4	OMU	L5	4227	4	-	0/9/27/28	0/2/2/2
4	PSU	L5	3920	4,87	-	0/7/25/26	0/2/2/2
4	PSU	L5	5001	4	-	0/7/25/26	0/2/2/2
84	PSU	S2	1177	84	-	0/7/25/26	0/2/2/2
4	6MZ	L5	4220	4	-	4/5/27/28	0/3/3/3
4	A2M	L5	3718	4	-	1/5/27/28	0/3/3/3
4	OMG	L5	4618	4	-	2/5/27/28	0/3/3/3
4	PSU	L5	4576	4	-	0/7/25/26	0/2/2/2
4	PSU	L5	5010	4	-	2/7/25/26	0/2/2/2
84	PSU	S2	1232	84	-	0/7/25/26	0/2/2/2
4	5MC	L5	4447	4	-	5/7/25/26	0/2/2/2
84	OMG	S2	601	84	-	0/5/27/28	0/3/3/3
84	OMC	S2	1703	84	-	0/9/27/28	0/2/2/2
4	OMG	L5	4499	4	-	0/5/27/28	0/3/3/3
84	A2M	S2	468	84	-	1/5/27/28	0/3/3/3
4	PSU	L5	3853	4,87	-	0/7/25/26	0/2/2/2
84	PSU	S2	109	84	-	0/7/25/26	0/2/2/2
4	OMG	L5	4196	4,1	-	1/5/27/28	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
4	PSU	L5	3639	4	-	0/7/25/26	0/2/2/2
4	OMU	L5	3925	4	-	0/9/27/28	0/2/2/2
84	A2M	S2	484	84	-	1/5/27/28	0/3/3/3
4	PSU	L5	1792	4	-	0/7/25/26	0/2/2/2
4	PSU	L5	4293	4	-	1/7/25/26	0/2/2/2
84	OMU	S2	172	84	-	0/9/27/28	0/2/2/2
4	PSU	L5	1536	4	-	2/7/25/26	0/2/2/2
84	PSU	S2	1244	84	-	0/7/25/26	0/2/2/2
84	G7M	S2	1639	1,84	-	0/3/25/26	0/3/3/3
4	OMG	L5	4370	4	-	0/5/27/28	0/3/3/3
4	OMG	L5	4392	4	-	0/5/27/28	0/3/3/3
84	PSU	S2	801	84	-	2/7/25/26	0/2/2/2
4	1MA	L5	1322	4,87	-	0/3/25/26	0/3/3/3
4	UY1	L5	3818	4	-	1/9/27/28	0/2/2/2
84	OMC	S2	1272	84	-	2/9/27/28	0/2/2/2
4	OMG	L5	1625	4	-	2/5/27/28	0/3/3/3
4	PSU	L5	1677	4	-	2/7/25/26	0/2/2/2

All (347) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	L5	3818	UY1	C6-C5	12.90	1.49	1.35
4	L5	3818	UY1	C2-N1	12.00	1.52	1.36
84	S2	1442	OMU	C2-N1	8.53	1.51	1.38
84	S2	799	OMU	C2-N1	8.51	1.51	1.38
4	L5	4220	6MZ	C3'-C2'	-8.35	1.30	1.53
84	S2	121	OMU	C2-N1	8.28	1.51	1.38
84	S2	627	OMU	C2-N1	8.27	1.51	1.38
84	S2	1288	OMU	C2-N1	8.27	1.51	1.38
84	S2	172	OMU	C2-N1	8.25	1.51	1.38
4	L5	4498	OMU	C2-N1	8.24	1.51	1.38
4	L5	4620	OMU	C2-N1	8.22	1.51	1.38
84	S2	354	OMU	C2-N1	8.19	1.51	1.38
84	S2	428	OMU	C2-N1	8.19	1.51	1.38
4	L5	2837	OMU	C2-N1	8.19	1.51	1.38
4	L5	4306	OMU	C2-N1	8.18	1.51	1.38
84	S2	1326	OMU	C2-N1	8.16	1.51	1.38
4	L5	4227	OMU	C2-N1	8.15	1.51	1.38
4	L5	3925	OMU	C2-N1	8.07	1.51	1.38
84	S2	116	OMU	C2-N1	8.05	1.51	1.38
84	S2	1248	B8N	C6-N1	7.92	1.55	1.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	L5	3818	UY1	C2-N3	7.86	1.50	1.37
84	S2	1248	B8N	C4-N3	-7.75	1.26	1.40
4	L5	4220	6MZ	O4'-C1'	-7.40	1.31	1.40
84	S2	1248	B8N	C4-C5	7.09	1.63	1.47
84	S2	799	OMU	C2-N3	7.07	1.50	1.38
84	S2	172	OMU	C2-N3	7.02	1.50	1.38
84	S2	1326	OMU	C2-N3	6.98	1.50	1.38
84	S2	116	OMU	C2-N3	6.97	1.50	1.38
84	S2	121	OMU	C2-N3	6.97	1.50	1.38
84	S2	428	OMU	C2-N3	6.94	1.50	1.38
4	L5	4498	OMU	C2-N3	6.94	1.50	1.38
84	S2	1288	OMU	C2-N3	6.93	1.50	1.38
84	S2	1442	OMU	C2-N3	6.93	1.50	1.38
84	S2	627	OMU	C2-N3	6.92	1.50	1.38
4	L5	4227	OMU	C2-N3	6.92	1.50	1.38
4	L5	4620	OMU	C2-N3	6.85	1.49	1.38
4	L5	3925	OMU	C2-N3	6.84	1.49	1.38
84	S2	354	OMU	C2-N3	6.83	1.49	1.38
4	L5	2837	OMU	C2-N3	6.81	1.49	1.38
4	L5	4306	OMU	C2-N3	6.80	1.49	1.38
4	L5	4530	UR3	C2-N1	6.63	1.47	1.38
4	L5	4530	UR3	C6-C5	6.31	1.49	1.35
84	S2	1248	B8N	C2-N1	6.00	1.56	1.39
84	S2	428	OMU	C6-C5	5.95	1.48	1.35
84	S2	354	OMU	C6-C5	5.93	1.48	1.35
84	S2	799	OMU	C6-C5	5.91	1.48	1.35
84	S2	1288	OMU	C6-C5	5.91	1.48	1.35
4	L5	4498	OMU	C6-C5	5.91	1.48	1.35
84	S2	121	OMU	C6-C5	5.91	1.48	1.35
4	L5	4530	UR3	C2-N3	5.89	1.50	1.39
4	L5	4227	OMU	C6-C5	5.88	1.48	1.35
84	S2	172	OMU	C6-C5	5.88	1.48	1.35
84	S2	1326	OMU	C6-C5	5.87	1.48	1.35
84	S2	116	OMU	C6-C5	5.85	1.48	1.35
84	S2	627	OMU	C6-C5	5.85	1.48	1.35
4	L5	4620	OMU	C6-C5	5.85	1.48	1.35
4	L5	4306	OMU	C6-C5	5.83	1.48	1.35
84	S2	1442	OMU	C6-C5	5.82	1.48	1.35
4	L5	3925	OMU	C6-C5	5.82	1.48	1.35
4	L5	2837	OMU	C6-C5	5.79	1.48	1.35
4	L5	3818	UY1	C6-N1	5.55	1.45	1.36
84	S2	1248	B8N	C6-C5	5.51	1.42	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	L5	4306	OMU	O4-C4	-5.50	1.13	1.24
4	L5	3925	OMU	O4-C4	-5.49	1.13	1.24
4	L5	4620	OMU	O4-C4	-5.48	1.13	1.24
4	L5	2837	OMU	O4-C4	-5.48	1.13	1.24
84	S2	1326	OMU	O4-C4	-5.46	1.13	1.24
4	L5	4227	OMU	O4-C4	-5.42	1.13	1.24
84	S2	1639	G7M	C2-N3	5.42	1.46	1.33
84	S2	121	OMU	O4-C4	-5.42	1.13	1.24
4	L5	4498	OMU	O4-C4	-5.42	1.13	1.24
84	S2	354	OMU	O4-C4	-5.41	1.14	1.24
84	S2	116	OMU	O4-C4	-5.41	1.14	1.24
84	S2	1442	OMU	O4-C4	-5.41	1.14	1.24
84	S2	172	OMU	O4-C4	-5.40	1.14	1.24
84	S2	799	OMU	O4-C4	-5.39	1.14	1.24
84	S2	428	OMU	O4-C4	-5.39	1.14	1.24
84	S2	627	OMU	O4-C4	-5.38	1.14	1.24
84	S2	1288	OMU	O4-C4	-5.35	1.14	1.24
84	S2	1639	G7M	C4-N3	4.97	1.49	1.37
84	S2	1639	G7M	C2-N2	4.93	1.45	1.34
4	L5	4220	6MZ	O4'-C4'	4.67	1.55	1.45
4	L5	3818	UY1	C4-N3	4.58	1.47	1.38
84	S2	627	OMU	C4-N3	4.50	1.46	1.38
84	S2	1326	OMU	C4-N3	4.43	1.46	1.38
84	S2	1288	OMU	C4-N3	4.42	1.46	1.38
4	L5	4220	6MZ	C5'-C4'	-4.41	1.38	1.51
84	S2	172	OMU	C4-N3	4.40	1.46	1.38
84	S2	1442	OMU	C4-N3	4.39	1.46	1.38
84	S2	428	OMU	C4-N3	4.38	1.46	1.38
4	L5	4227	OMU	C4-N3	4.38	1.46	1.38
4	L5	2837	OMU	C4-N3	4.38	1.46	1.38
84	S2	799	OMU	C4-N3	4.37	1.46	1.38
84	S2	121	OMU	C4-N3	4.33	1.46	1.38
4	L5	4220	6MZ	C6-C5	-4.29	1.38	1.44
4	L5	4498	OMU	C4-N3	4.28	1.45	1.38
4	L5	4306	OMU	C4-N3	4.26	1.45	1.38
84	S2	354	OMU	C4-N3	4.25	1.45	1.38
84	S2	116	OMU	C4-N3	4.22	1.45	1.38
4	L5	4620	OMU	C4-N3	4.20	1.45	1.38
4	L5	3925	OMU	C4-N3	4.16	1.45	1.38
84	S2	1832	6MZ	C6-C5	-4.00	1.38	1.44
4	L5	1582	PSU	C6-C5	3.85	1.39	1.35
4	L5	1782	PSU	C6-C5	3.77	1.39	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
84	S2	866	PSU	C6-C5	3.75	1.39	1.35
84	S2	1850	MA6	C6-C5	-3.75	1.39	1.44
84	S2	801	PSU	C6-C5	3.74	1.39	1.35
84	S2	1232	PSU	C6-C5	3.73	1.39	1.35
6	L8	55	PSU	C6-C5	3.73	1.39	1.35
84	S2	1244	PSU	C6-C5	3.73	1.39	1.35
84	S2	93	PSU	C6-C5	3.73	1.39	1.35
84	S2	1177	PSU	C6-C5	3.72	1.39	1.35
84	S2	1046	PSU	C6-C5	3.72	1.39	1.35
4	L5	3637	PSU	C6-C5	3.71	1.39	1.35
84	S2	1367	PSU	C6-C5	3.71	1.39	1.35
84	S2	651	PSU	C6-C5	3.70	1.39	1.35
84	S2	1851	MA6	C6-C5	-3.70	1.39	1.44
4	L5	4532	PSU	C6-C5	3.68	1.39	1.35
4	L5	4500	PSU	C6-C5	3.67	1.39	1.35
84	S2	1248	B8N	C1'-C5	3.66	1.58	1.50
84	S2	406	PSU	C6-C5	3.66	1.39	1.35
84	S2	686	PSU	C6-C5	3.66	1.39	1.35
84	S2	1639	G7M	C6-N1	3.66	1.43	1.37
4	L5	1860	PSU	C6-C5	3.64	1.39	1.35
84	S2	109	PSU	C6-C5	3.63	1.39	1.35
84	S2	814	PSU	C6-C5	3.62	1.39	1.35
4	L5	1781	PSU	C6-C5	3.61	1.39	1.35
4	L5	1683	PSU	C6-C5	3.60	1.39	1.35
4	L5	5010	PSU	C6-C5	3.59	1.39	1.35
4	L5	3639	PSU	C6-C5	3.58	1.39	1.35
84	S2	1081	PSU	C6-C5	3.58	1.39	1.35
4	L5	1862	PSU	C6-C5	3.58	1.39	1.35
4	L5	4299	PSU	C6-C5	3.58	1.39	1.35
4	L5	1792	PSU	C6-C5	3.58	1.39	1.35
4	L5	3853	PSU	C6-C5	3.58	1.39	1.35
4	L5	4293	PSU	C6-C5	3.56	1.39	1.35
84	S2	1045	PSU	C6-C5	3.56	1.39	1.35
4	L5	5001	PSU	C6-C5	3.56	1.39	1.35
4	L5	3851	PSU	C6-C5	3.55	1.39	1.35
4	L5	4431	PSU	C6-C5	3.55	1.39	1.35
84	S2	1174	PSU	C6-C5	3.55	1.39	1.35
4	L5	1536	PSU	C6-C5	3.55	1.39	1.35
4	L5	3818	UY1	O4-C4	-3.55	1.16	1.23
4	L5	4471	PSU	C6-C5	3.55	1.39	1.35
84	S2	863	PSU	C6-C5	3.55	1.39	1.35
4	L5	3884	PSU	C6-C5	3.54	1.39	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	L5	4361	PSU	C6-C5	3.53	1.39	1.35
4	L5	4442	PSU	C6-C5	3.53	1.39	1.35
84	S2	1004	PSU	C6-C5	3.52	1.39	1.35
2	CF	163	SEP	P-O1P	3.52	1.61	1.50
4	L5	4296	PSU	C6-C5	3.52	1.39	1.35
4	L5	4353	PSU	C6-C5	3.51	1.39	1.35
4	L5	3844	PSU	C6-C5	3.51	1.39	1.35
84	S2	1850	MA6	C6-N6	3.51	1.45	1.37
6	L8	69	PSU	C6-C5	3.50	1.39	1.35
84	S2	1851	MA6	C6-N6	3.49	1.45	1.37
4	L5	2632	PSU	C6-C5	3.49	1.39	1.35
4	L5	4493	PSU	C6-C5	3.49	1.39	1.35
4	L5	4521	PSU	C6-C5	3.49	1.39	1.35
4	L5	4972	PSU	C6-C5	3.49	1.39	1.35
84	S2	105	PSU	C6-C5	3.49	1.39	1.35
4	L5	3695	PSU	C6-C5	3.48	1.39	1.35
4	L5	4636	PSU	C6-C5	3.48	1.39	1.35
4	L5	4579	PSU	C6-C5	3.47	1.39	1.35
4	L5	3822	PSU	C6-C5	3.46	1.39	1.35
4	L5	4457	PSU	C6-C5	3.46	1.39	1.35
4	L5	3920	PSU	C6-C5	3.45	1.39	1.35
84	S2	649	PSU	C6-C5	3.44	1.39	1.35
84	S2	966	PSU	C6-C5	3.44	1.39	1.35
4	L5	4552	PSU	C6-C5	3.43	1.39	1.35
4	L5	4523	A2M	O5'-C5'	-3.42	1.34	1.44
4	L5	398	A2M	O5'-C5'	-3.42	1.34	1.44
4	L5	4312	PSU	C6-C5	3.42	1.39	1.35
4	L5	1744	PSU	C6-C5	3.41	1.39	1.35
4	L5	4673	PSU	C6-C5	3.41	1.39	1.35
84	S2	681	PSU	C6-C5	3.41	1.39	1.35
84	S2	1056	PSU	C6-C5	3.41	1.39	1.35
84	S2	1383	A2M	O5'-C5'	-3.41	1.34	1.44
4	L5	3785	A2M	O5'-C5'	-3.40	1.34	1.44
4	L5	4576	PSU	C6-C5	3.39	1.39	1.35
84	S2	668	A2M	O5'-C5'	-3.39	1.34	1.44
4	L5	4973	PSU	C6-C5	3.36	1.39	1.35
4	L5	3830	A2M	O5'-C5'	-3.35	1.34	1.44
84	S2	166	A2M	O5'-C5'	-3.35	1.34	1.44
4	L5	2839	PSU	C6-C5	3.34	1.39	1.35
84	S2	99	A2M	O5'-C5'	-3.34	1.34	1.44
84	S2	1639	G7M	C5-C6	3.33	1.54	1.45
4	L5	400	A2M	O5'-C5'	-3.33	1.34	1.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	L5	4571	A2M	O5'-C5'	-3.33	1.34	1.44
4	L5	2787	A2M	O5'-C5'	-3.33	1.34	1.44
4	L5	1323	A2M	O5'-C5'	-3.33	1.34	1.44
4	L5	3825	A2M	O5'-C5'	-3.32	1.34	1.44
4	L5	1534	A2M	O5'-C5'	-3.31	1.34	1.44
4	L5	3718	A2M	O5'-C5'	-3.31	1.34	1.44
4	L5	3818	UY1	C1'-C5	3.30	1.57	1.50
4	L5	4689	PSU	C6-C5	3.29	1.38	1.35
4	L5	1871	A2M	O5'-C5'	-3.29	1.34	1.44
4	L5	2815	A2M	O5'-C5'	-3.28	1.34	1.44
84	S2	27	A2M	O5'-C5'	-3.28	1.34	1.44
4	L5	1524	A2M	O5'-C5'	-3.27	1.34	1.44
84	S2	576	A2M	O5'-C5'	-3.27	1.34	1.44
84	S2	468	A2M	O5'-C5'	-3.26	1.34	1.44
84	S2	1031	A2M	O5'-C5'	-3.26	1.34	1.44
4	L5	2401	A2M	O5'-C5'	-3.25	1.34	1.44
4	L5	1677	PSU	C6-C5	3.22	1.38	1.35
4	L5	2363	A2M	O5'-C5'	-3.22	1.34	1.44
84	S2	484	A2M	O5'-C5'	-3.20	1.34	1.44
4	L5	3818	UY1	O2-C2	-3.20	1.16	1.23
4	L5	1326	A2M	O5'-C5'	-3.19	1.34	1.44
4	L5	4590	A2M	O5'-C5'	-3.19	1.34	1.44
4	L5	3867	A2M	O5'-C5'	-3.18	1.34	1.44
4	L5	4403	PSU	C6-C5	3.12	1.38	1.35
4	L5	4628	PSU	C6-C5	3.11	1.38	1.35
84	S2	159	A2M	O5'-C5'	-3.08	1.35	1.44
4	L5	1316	OMG	C8-N7	-3.08	1.30	1.34
84	S2	1490	OMG	C8-N7	-3.04	1.30	1.34
84	S2	601	OMG	C8-N7	-3.04	1.30	1.34
4	L5	2364	OMG	C8-N7	-3.02	1.30	1.34
4	L5	1625	OMG	C8-N7	-2.98	1.30	1.34
84	S2	683	OMG	C8-N7	-2.95	1.30	1.34
4	L5	4618	OMG	C8-N7	-2.95	1.30	1.34
84	S2	1288	OMU	C5-C4	2.93	1.50	1.43
84	S2	644	OMG	C8-N7	-2.92	1.30	1.34
84	S2	799	OMU	C5-C4	2.89	1.50	1.43
4	L5	2876	OMG	C8-N7	-2.89	1.30	1.34
4	L5	4196	OMG	C8-N7	-2.89	1.30	1.34
4	L5	3899	OMG	C8-N7	-2.89	1.30	1.34
84	S2	627	OMU	C5-C4	2.89	1.50	1.43
84	S2	1328	OMG	C8-N7	-2.89	1.30	1.34
4	L5	3792	OMG	C8-N7	-2.89	1.30	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
84	S2	428	OMU	C5-C4	2.89	1.50	1.43
4	L5	4392	OMG	C8-N7	-2.88	1.30	1.34
4	L5	3925	OMU	C5-C4	2.88	1.49	1.43
84	S2	354	OMU	C5-C4	2.87	1.49	1.43
4	L5	4623	OMG	C8-N7	-2.87	1.30	1.34
4	L5	2424	OMG	C8-N7	-2.87	1.30	1.34
4	L5	4637	OMG	C8-N7	-2.87	1.30	1.34
84	S2	172	OMU	C5-C4	2.86	1.49	1.43
4	L5	3744	OMG	C8-N7	-2.86	1.30	1.34
84	S2	509	OMG	C8-N7	-2.85	1.30	1.34
4	L5	4227	OMU	C5-C4	2.85	1.49	1.43
4	L5	3627	OMG	C8-N7	-2.84	1.30	1.34
84	S2	1326	OMU	C5-C4	2.84	1.49	1.43
4	L5	4494	OMG	C8-N7	-2.84	1.30	1.34
4	L5	1522	OMG	C8-N7	-2.83	1.30	1.34
4	L5	4370	OMG	C8-N7	-2.83	1.30	1.34
84	S2	121	OMU	C5-C4	2.82	1.49	1.43
4	L5	4498	OMU	C5-C4	2.82	1.49	1.43
4	L5	4499	OMG	C8-N7	-2.82	1.30	1.34
84	S2	1639	G7M	C2-N1	2.81	1.44	1.37
84	S2	1442	OMU	C5-C4	2.80	1.49	1.43
84	S2	121	OMU	C6-N1	2.80	1.44	1.38
4	L5	2837	OMU	C5-C4	2.79	1.49	1.43
4	L5	4306	OMU	C5-C4	2.79	1.49	1.43
84	S2	867	OMG	C8-N7	-2.79	1.30	1.34
84	S2	1490	OMG	C5-C6	-2.77	1.42	1.47
84	S2	116	OMU	C5-C4	2.76	1.49	1.43
84	S2	1288	OMU	C6-N1	2.75	1.44	1.38
6	L8	75	OMG	C8-N7	-2.75	1.30	1.34
84	S2	799	OMU	C6-N1	2.75	1.44	1.38
4	L5	3785	A2M	C1'-N9	-2.75	1.43	1.49
4	L5	4620	OMU	C5-C4	2.74	1.49	1.43
84	S2	436	OMG	C8-N7	-2.71	1.30	1.34
84	S2	354	OMU	C6-N1	2.71	1.44	1.38
4	L5	4498	OMU	C6-N1	2.71	1.44	1.38
84	S2	1442	OMU	C6-N1	2.70	1.44	1.38
4	L5	4228	OMG	C8-N7	-2.70	1.30	1.34
4	L5	2837	OMU	C6-N1	2.68	1.44	1.38
4	L5	4220	6MZ	O3'-C3'	2.67	1.49	1.43
84	S2	627	OMU	C6-N1	2.65	1.44	1.38
4	L5	4306	OMU	C6-N1	2.65	1.44	1.38
84	S2	1326	OMU	C6-N1	2.64	1.44	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
84	S2	116	OMU	C6-N1	2.64	1.44	1.38
4	L5	1871	A2M	C1'-N9	-2.63	1.43	1.49
4	L5	4227	OMU	C6-N1	2.63	1.44	1.38
4	L5	4530	UR3	C6-N1	2.62	1.44	1.38
84	S2	1851	MA6	C2-N3	2.61	1.36	1.32
4	L5	2876	OMG	C5-C6	-2.60	1.42	1.47
4	L5	3925	OMU	C6-N1	2.59	1.44	1.38
84	S2	428	OMU	C6-N1	2.59	1.44	1.38
84	S2	166	A2M	C1'-N9	-2.58	1.43	1.49
84	S2	683	OMG	C5-C6	-2.58	1.42	1.47
84	S2	172	OMU	C6-N1	2.58	1.44	1.38
4	L5	2424	OMG	C5-C6	-2.57	1.42	1.47
4	L5	4494	OMG	C5-C6	-2.57	1.42	1.47
84	S2	1383	A2M	C1'-N9	-2.57	1.43	1.49
4	L5	1625	OMG	C5-C6	-2.56	1.42	1.47
84	S2	1850	MA6	C2-N3	2.56	1.36	1.32
4	L5	4620	OMU	C6-N1	2.55	1.44	1.38
4	L5	1316	OMG	C5-C6	-2.55	1.42	1.47
84	S2	867	OMG	C5-C6	-2.55	1.42	1.47
4	L5	4623	OMG	C5-C6	-2.54	1.42	1.47
4	L5	4530	UR3	O2-C2	-2.54	1.17	1.22
4	L5	3792	OMG	C5-C6	-2.53	1.42	1.47
4	L5	3899	OMG	C5-C6	-2.52	1.42	1.47
4	L5	3830	A2M	C1'-N9	-2.51	1.43	1.49
4	L5	2364	OMG	C5-C6	-2.51	1.42	1.47
4	L5	4590	A2M	C1'-N9	-2.51	1.43	1.49
4	L5	3744	OMG	C5-C6	-2.50	1.42	1.47
84	S2	27	A2M	C1'-N9	-2.46	1.43	1.49
4	L5	4637	OMG	C5-C6	-2.46	1.42	1.47
84	S2	601	OMG	C5-C6	-2.45	1.42	1.47
4	L5	4370	OMG	C5-C6	-2.45	1.42	1.47
4	L5	2363	A2M	C1'-N9	-2.44	1.43	1.49
4	L5	4392	OMG	C5-C6	-2.44	1.42	1.47
4	L5	3627	OMG	C5-C6	-2.43	1.42	1.47
4	L5	1522	OMG	C5-C6	-2.43	1.42	1.47
84	S2	1328	OMG	C5-C6	-2.42	1.42	1.47
4	L5	4196	OMG	C5-C6	-2.42	1.42	1.47
84	S2	644	OMG	C5-C6	-2.42	1.42	1.47
4	L5	4571	A2M	C1'-N9	-2.42	1.43	1.49
6	L8	75	OMG	C5-C6	-2.41	1.42	1.47
4	L5	4618	OMG	C5-C6	-2.41	1.42	1.47
4	L5	4499	OMG	C5-C6	-2.39	1.42	1.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	L5	1322	1MA	C8-N7	-2.39	1.31	1.34
4	L5	4228	OMG	C5-C6	-2.39	1.42	1.47
4	L5	4523	A2M	C1'-N9	-2.39	1.44	1.49
84	S2	436	OMG	C5-C6	-2.38	1.42	1.47
84	S2	509	OMG	C5-C6	-2.37	1.42	1.47
4	L5	3825	A2M	C1'-N9	-2.30	1.44	1.49
84	S2	576	A2M	C1'-N9	-2.30	1.44	1.49
84	S2	99	A2M	C1'-N9	-2.29	1.44	1.49
4	L5	4530	UR3	C5-C4	2.29	1.49	1.43
4	L5	1322	1MA	C5-C4	-2.28	1.37	1.43
84	S2	668	A2M	C1'-N9	-2.28	1.44	1.49
4	L5	4530	UR3	C3U-N3	2.28	1.51	1.47
4	L5	3867	A2M	O4'-C4'	-2.22	1.40	1.45
84	S2	1832	6MZ	C2-N3	2.21	1.35	1.32
84	S2	468	A2M	C1'-N9	-2.20	1.44	1.49
4	L5	3718	A2M	C1'-N9	-2.19	1.44	1.49
4	L5	1524	A2M	O4'-C4'	-2.18	1.40	1.45
84	S2	1031	A2M	C1'-N9	-2.17	1.44	1.49
4	L5	1323	A2M	O4'-C4'	-2.16	1.40	1.45
4	L5	2401	A2M	C1'-N9	-2.14	1.44	1.49
4	L5	400	A2M	C1'-N9	-2.12	1.44	1.49
4	L5	398	A2M	C1'-N9	-2.11	1.44	1.49
4	L5	3818	UY1	C4-C5	2.11	1.50	1.44
4	L5	4220	6MZ	C2-N3	2.11	1.35	1.32
4	L5	3867	A2M	C1'-N9	-2.11	1.44	1.49
84	S2	668	A2M	O4'-C4'	-2.10	1.40	1.45
4	L5	1534	A2M	C1'-N9	-2.10	1.44	1.49
4	L5	2787	A2M	C1'-N9	-2.10	1.44	1.49
4	L5	1323	A2M	C1'-N9	-2.05	1.44	1.49
4	L5	1677	PSU	C4-C5	-2.03	1.38	1.44
4	L5	4293	PSU	C4-C5	-2.03	1.38	1.44
4	L5	3822	PSU	O4'-C1'	-2.02	1.41	1.43
4	L5	4228	OMG	C5-C4	-2.01	1.38	1.43

All (647) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
84	S2	1851	MA6	N1-C6-N6	-12.35	102.56	116.83
84	S2	1850	MA6	N1-C6-N6	-12.32	102.59	116.83
4	L5	3785	A2M	C4'-O4'-C1'	-8.80	101.87	109.92
84	S2	1832	6MZ	N3-C2-N1	-6.27	120.17	128.67
84	S2	1850	MA6	N3-C2-N1	-6.26	120.17	128.67

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
84	S2	1851	MA6	N3-C2-N1	-6.22	120.22	128.67
4	L5	4523	A2M	C4'-O4'-C1'	-6.16	104.29	109.92
4	L5	4220	6MZ	N3-C2-N1	-6.13	120.35	128.67
4	L5	3925	OMU	C4-N3-C2	-5.89	119.30	126.61
84	S2	428	OMU	C4-N3-C2	-5.70	119.54	126.61
4	L5	4227	OMU	C4-N3-C2	-5.69	119.55	126.61
4	L5	1524	A2M	C4'-O4'-C1'	-5.68	104.73	109.92
84	S2	172	OMU	C4-N3-C2	-5.65	119.60	126.61
84	S2	1326	OMU	C4-N3-C2	-5.63	119.62	126.61
4	L5	2837	OMU	C4-N3-C2	-5.62	119.63	126.61
84	S2	627	OMU	C4-N3-C2	-5.62	119.63	126.61
84	S2	354	OMU	C4-N3-C2	-5.60	119.67	126.61
4	L5	4498	OMU	C4-N3-C2	-5.59	119.67	126.61
84	S2	1383	A2M	C4'-O4'-C1'	-5.58	104.81	109.92
84	S2	1288	OMU	C4-N3-C2	-5.56	119.70	126.61
4	L5	4220	6MZ	C4'-O4'-C1'	-5.52	104.87	109.92
84	S2	1442	OMU	C4-N3-C2	-5.49	119.80	126.61
4	L5	4306	OMU	C4-N3-C2	-5.49	119.80	126.61
4	L5	4530	UR3	C4-N3-C2	-5.47	120.18	124.58
4	L5	3637	PSU	N1-C2-N3	5.46	120.93	115.17
4	L5	4620	OMU	C4-N3-C2	-5.43	119.88	126.61
84	S2	799	OMU	C4-N3-C2	-5.41	119.89	126.61
84	S2	121	OMU	C4-N3-C2	-5.29	120.05	126.61
84	S2	1248	B8N	C5-C4-N3	5.15	125.50	116.15
4	L5	4636	PSU	C4-N3-C2	-5.15	119.28	126.37
84	S2	116	OMU	C4-N3-C2	-5.11	120.26	126.61
4	L5	4442	PSU	N1-C2-N3	5.03	120.47	115.17
4	L5	4442	PSU	C4-N3-C2	-5.01	119.47	126.37
4	L5	4312	PSU	C4-N3-C2	-5.00	119.48	126.37
4	L5	2632	PSU	C4-N3-C2	-5.00	119.49	126.37
4	L5	5010	PSU	C4-N3-C2	-4.96	119.54	126.37
4	L5	3637	PSU	C4-N3-C2	-4.96	119.54	126.37
4	L5	4296	PSU	C4-N3-C2	-4.95	119.55	126.37
4	L5	1860	PSU	C4-N3-C2	-4.95	119.56	126.37
4	L5	1536	PSU	C4-N3-C2	-4.95	119.56	126.37
84	S2	649	PSU	C4-N3-C2	-4.94	119.56	126.37
4	L5	1536	PSU	N1-C2-N3	4.94	120.38	115.17
4	L5	4636	PSU	N1-C2-N3	4.94	120.38	115.17
4	L5	3818	UY1	C4-N3-C2	-4.92	119.59	126.37
84	S2	166	A2M	C4'-O4'-C1'	-4.92	105.42	109.92
4	L5	4521	PSU	C4-N3-C2	-4.91	119.60	126.37
84	S2	863	PSU	C4-N3-C2	-4.91	119.60	126.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	L5	4293	PSU	C4-N3-C2	-4.91	119.60	126.37
4	L5	4299	PSU	C4-N3-C2	-4.91	119.61	126.37
4	L5	2632	PSU	N1-C2-N3	4.91	120.34	115.17
4	L5	2839	PSU	C4-N3-C2	-4.90	119.62	126.37
4	L5	4431	PSU	N1-C2-N3	4.89	120.33	115.17
4	L5	4590	A2M	C4'-O4'-C1'	-4.89	105.45	109.92
4	L5	1677	PSU	C4-N3-C2	-4.88	119.65	126.37
4	L5	4500	PSU	C4-N3-C2	-4.87	119.66	126.37
4	L5	3830	A2M	C4'-O4'-C1'	-4.86	105.47	109.92
84	S2	1174	PSU	C4-N3-C2	-4.86	119.67	126.37
4	L5	3884	PSU	C4-N3-C2	-4.86	119.67	126.37
4	L5	3920	PSU	C4-N3-C2	-4.86	119.67	126.37
84	S2	1056	PSU	C4-N3-C2	-4.86	119.68	126.37
84	S2	814	PSU	C4-N3-C2	-4.85	119.69	126.37
4	L5	4500	PSU	N1-C2-N3	4.85	120.28	115.17
4	L5	3639	PSU	C4-N3-C2	-4.85	119.69	126.37
4	L5	3844	PSU	C4-N3-C2	-4.84	119.70	126.37
4	L5	4457	PSU	C4-N3-C2	-4.84	119.70	126.37
4	L5	4299	PSU	N1-C2-N3	4.84	120.28	115.17
4	L5	3822	PSU	C4-N3-C2	-4.84	119.71	126.37
4	L5	398	A2M	C4'-O4'-C1'	-4.84	105.50	109.92
4	L5	4296	PSU	N1-C2-N3	4.84	120.27	115.17
4	L5	1677	PSU	N1-C2-N3	4.83	120.27	115.17
4	L5	1871	A2M	C4'-O4'-C1'	-4.82	105.51	109.92
84	S2	1045	PSU	C4-N3-C2	-4.82	119.73	126.37
84	S2	866	PSU	C4-N3-C2	-4.82	119.73	126.37
4	L5	4353	PSU	C4-N3-C2	-4.81	119.74	126.37
84	S2	1004	PSU	C4-N3-C2	-4.81	119.74	126.37
84	S2	686	PSU	C4-N3-C2	-4.81	119.75	126.37
84	S2	1081	PSU	C4-N3-C2	-4.80	119.75	126.37
4	L5	4532	PSU	N1-C2-N3	4.80	120.23	115.17
4	L5	1744	PSU	C4-N3-C2	-4.80	119.75	126.37
84	S2	109	PSU	C4-N3-C2	-4.80	119.76	126.37
84	S2	651	PSU	C4-N3-C2	-4.80	119.76	126.37
84	S2	866	PSU	N1-C2-N3	4.79	120.22	115.17
4	L5	1862	PSU	C4-N3-C2	-4.79	119.77	126.37
6	L8	55	PSU	C4-N3-C2	-4.79	119.78	126.37
6	L8	55	PSU	N1-C2-N3	4.79	120.22	115.17
4	L5	3695	PSU	C4-N3-C2	-4.79	119.78	126.37
4	L5	4431	PSU	C4-N3-C2	-4.79	119.78	126.37
4	L5	4972	PSU	C4-N3-C2	-4.79	119.78	126.37
84	S2	1367	PSU	N1-C2-N3	4.78	120.21	115.17

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	L5	1792	PSU	N1-C2-N3	4.78	120.21	115.17
4	L5	4493	PSU	N1-C2-N3	4.78	120.21	115.17
4	L5	4493	PSU	C4-N3-C2	-4.78	119.78	126.37
4	L5	3844	PSU	N1-C2-N3	4.77	120.20	115.17
84	S2	801	PSU	N1-C2-N3	4.77	120.20	115.17
4	L5	4532	PSU	C4-N3-C2	-4.76	119.81	126.37
4	L5	1792	PSU	C4-N3-C2	-4.76	119.82	126.37
4	L5	5001	PSU	C4-N3-C2	-4.76	119.82	126.37
4	L5	1782	PSU	N1-C2-N3	4.76	120.18	115.17
4	L5	3822	PSU	N1-C2-N3	4.76	120.18	115.17
4	L5	3639	PSU	N1-C2-N3	4.75	120.18	115.17
4	L5	4457	PSU	N1-C2-N3	4.75	120.18	115.17
84	S2	651	PSU	N1-C2-N3	4.75	120.18	115.17
4	L5	4689	PSU	N1-C2-N3	4.75	120.17	115.17
4	L5	4471	PSU	N1-C2-N3	4.74	120.17	115.17
4	L5	1782	PSU	C4-N3-C2	-4.74	119.84	126.37
4	L5	4361	PSU	C4-N3-C2	-4.74	119.84	126.37
4	L5	4673	PSU	C4-N3-C2	-4.74	119.84	126.37
84	S2	1244	PSU	C4-N3-C2	-4.74	119.84	126.37
84	S2	105	PSU	N1-C2-N3	4.74	120.17	115.17
84	S2	681	PSU	N1-C2-N3	4.74	120.17	115.17
4	L5	1683	PSU	C4-N3-C2	-4.74	119.85	126.37
84	S2	681	PSU	C4-N3-C2	-4.74	119.85	126.37
4	L5	4293	PSU	N1-C2-N3	4.73	120.16	115.17
84	S2	966	PSU	C4-N3-C2	-4.72	119.86	126.37
4	L5	1683	PSU	N1-C2-N3	4.72	120.14	115.17
84	S2	1232	PSU	C4-N3-C2	-4.72	119.87	126.37
84	S2	109	PSU	N1-C2-N3	4.72	120.14	115.17
4	L5	4353	PSU	N1-C2-N3	4.72	120.14	115.17
84	S2	686	PSU	N1-C2-N3	4.71	120.14	115.17
84	S2	1232	PSU	N1-C2-N3	4.71	120.14	115.17
84	S2	1045	PSU	N1-C2-N3	4.71	120.14	115.17
4	L5	2839	PSU	N1-C2-N3	4.71	120.14	115.17
4	L5	1862	PSU	N1-C2-N3	4.70	120.12	115.17
4	L5	1860	PSU	N1-C2-N3	4.69	120.12	115.17
84	S2	1081	PSU	N1-C2-N3	4.69	120.11	115.17
4	L5	5010	PSU	N1-C2-N3	4.69	120.11	115.17
84	S2	105	PSU	C4-N3-C2	-4.68	119.92	126.37
4	L5	3920	PSU	N1-C2-N3	4.68	120.11	115.17
84	S2	1056	PSU	N1-C2-N3	4.68	120.10	115.17
84	S2	406	PSU	N1-C2-N3	4.68	120.10	115.17
84	S2	1177	PSU	C4-N3-C2	-4.68	119.93	126.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
84	S2	1367	PSU	C4-N3-C2	-4.68	119.93	126.37
84	S2	1244	PSU	N1-C2-N3	4.68	120.10	115.17
84	S2	1177	PSU	N1-C2-N3	4.68	120.10	115.17
4	L5	4552	PSU	C4-N3-C2	-4.67	119.93	126.37
4	L5	4973	PSU	C4-N3-C2	-4.67	119.94	126.37
4	L5	3695	PSU	N1-C2-N3	4.67	120.09	115.17
4	L5	4972	PSU	N1-C2-N3	4.67	120.09	115.17
84	S2	93	PSU	N1-C2-N3	4.67	120.09	115.17
84	S2	649	PSU	N1-C2-N3	4.67	120.09	115.17
4	L5	4552	PSU	N1-C2-N3	4.66	120.09	115.17
4	L5	4628	PSU	C4-N3-C2	-4.66	119.95	126.37
84	S2	801	PSU	C4-N3-C2	-4.66	119.95	126.37
4	L5	1744	PSU	N1-C2-N3	4.66	120.08	115.17
84	S2	814	PSU	N1-C2-N3	4.66	120.08	115.17
4	L5	4579	PSU	C4-N3-C2	-4.66	119.96	126.37
84	S2	93	PSU	C4-N3-C2	-4.66	119.96	126.37
84	S2	1046	PSU	C4-N3-C2	-4.65	119.96	126.37
4	L5	4403	PSU	C4-N3-C2	-4.65	119.97	126.37
4	L5	4576	PSU	N1-C2-N3	4.64	120.07	115.17
4	L5	1781	PSU	C4-N3-C2	-4.64	119.98	126.37
84	S2	966	PSU	N1-C2-N3	4.64	120.06	115.17
4	L5	4312	PSU	N1-C2-N3	4.64	120.06	115.17
84	S2	863	PSU	N1-C2-N3	4.63	120.05	115.17
4	L5	4673	PSU	N1-C2-N3	4.63	120.05	115.17
4	L5	4628	PSU	N1-C2-N3	4.62	120.05	115.17
4	L5	1781	PSU	N1-C2-N3	4.62	120.04	115.17
6	L8	69	PSU	C4-N3-C2	-4.61	120.02	126.37
4	L5	4576	PSU	C4-N3-C2	-4.61	120.02	126.37
4	L5	1582	PSU	N1-C2-N3	4.61	120.03	115.17
4	L5	4973	PSU	N1-C2-N3	4.59	120.01	115.17
84	S2	1174	PSU	N1-C2-N3	4.59	120.01	115.17
84	S2	406	PSU	C4-N3-C2	-4.58	120.06	126.37
4	L5	3884	PSU	N1-C2-N3	4.58	120.00	115.17
4	L5	3853	PSU	C4-N3-C2	-4.58	120.06	126.37
84	S2	27	A2M	C4'-O4'-C1'	-4.57	105.74	109.92
4	L5	4361	PSU	N1-C2-N3	4.56	119.98	115.17
4	L5	4471	PSU	C4-N3-C2	-4.55	120.10	126.37
84	S2	1031	A2M	C4'-O4'-C1'	-4.55	105.75	109.92
84	S2	1046	PSU	N1-C2-N3	4.55	119.97	115.17
4	L5	4521	PSU	N1-C2-N3	4.55	119.97	115.17
4	L5	3851	PSU	C4-N3-C2	-4.55	120.10	126.37
4	L5	5001	PSU	N1-C2-N3	4.55	119.96	115.17

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	L5	4579	PSU	N1-C2-N3	4.54	119.96	115.17
6	L8	69	PSU	N1-C2-N3	4.54	119.95	115.17
4	L5	3718	A2M	C4'-O4'-C1'	-4.53	105.78	109.92
84	S2	1004	PSU	N1-C2-N3	4.53	119.95	115.17
4	L5	3851	PSU	N1-C2-N3	4.53	119.94	115.17
4	L5	3853	PSU	N1-C2-N3	4.52	119.93	115.17
84	S2	1248	B8N	C4-N3-C2	-4.51	120.07	125.62
4	L5	4689	PSU	C4-N3-C2	-4.50	120.18	126.37
4	L5	2363	A2M	C4'-O4'-C1'	-4.47	105.83	109.92
4	L5	3818	UY1	N1-C2-N3	4.42	119.83	115.17
4	L5	4403	PSU	N1-C2-N3	4.40	119.81	115.17
84	S2	99	A2M	C4'-O4'-C1'	-4.31	105.98	109.92
84	S2	1383	A2M	C3'-C2'-C1'	-4.31	94.56	102.81
4	L5	3785	A2M	C1'-N9-C4	-4.29	119.11	126.64
4	L5	1582	PSU	C4-N3-C2	-4.28	120.48	126.37
84	S2	166	A2M	C1'-N9-C4	-4.25	119.17	126.64
84	S2	1383	A2M	C1'-N9-C4	-4.21	119.24	126.64
84	S2	1832	6MZ	C2-N1-C6	4.19	119.85	116.60
4	L5	4590	A2M	C1'-N9-C4	-4.16	119.32	126.64
84	S2	576	A2M	C4'-O4'-C1'	-4.14	106.14	109.92
4	L5	3925	OMU	N3-C2-N1	4.11	120.24	114.89
4	L5	3830	A2M	C1'-N9-C4	-4.10	119.44	126.64
84	S2	354	OMU	N3-C2-N1	4.10	120.22	114.89
4	L5	1534	A2M	C4'-O4'-C1'	-4.05	106.22	109.92
84	S2	121	OMU	N3-C2-N1	4.04	120.16	114.89
84	S2	468	A2M	C4'-O4'-C1'	-4.03	106.23	109.92
4	L5	4498	OMU	N3-C2-N1	4.02	120.13	114.89
4	L5	2401	A2M	C1'-N9-C4	-4.01	119.60	126.64
4	L5	4571	A2M	C1'-N9-C4	-3.99	119.64	126.64
4	L5	1323	A2M	C4'-O4'-C1'	-3.95	106.31	109.92
4	L5	4227	OMU	N3-C2-N1	3.93	120.00	114.89
84	S2	668	A2M	C1'-N9-C4	-3.91	119.76	126.64
84	S2	428	OMU	N3-C2-N1	3.91	119.98	114.89
84	S2	799	OMU	N3-C2-N1	3.90	119.96	114.89
4	L5	1323	A2M	C1'-N9-C4	-3.89	119.80	126.64
4	L5	4523	A2M	C1'-N9-C4	-3.89	119.81	126.64
4	L5	2837	OMU	N3-C2-N1	3.88	119.95	114.89
4	L5	3825	A2M	C4'-O4'-C1'	-3.88	106.37	109.92
84	S2	1288	OMU	N3-C2-N1	3.87	119.93	114.89
84	S2	1031	A2M	C1'-N9-C4	-3.86	119.86	126.64
84	S2	172	OMU	N3-C2-N1	3.85	119.91	114.89
4	L5	398	A2M	C1'-N9-C4	-3.85	119.87	126.64

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	L5	4571	A2M	C4'-O4'-C1'	-3.84	106.41	109.92
4	L5	4620	OMU	N3-C2-N1	3.83	119.87	114.89
84	S2	668	A2M	C4'-O4'-C1'	-3.82	106.42	109.92
84	S2	1248	B8N	C1'-C5-C4	3.81	123.39	117.61
84	S2	27	A2M	C1'-N9-C4	-3.81	119.95	126.64
4	L5	4306	OMU	N3-C2-N1	3.80	119.83	114.89
84	S2	1442	OMU	N3-C2-N1	3.80	119.83	114.89
4	L5	2401	A2M	C4'-O4'-C1'	-3.77	106.47	109.92
4	L5	1871	A2M	C1'-N9-C4	-3.76	120.03	126.64
4	L5	3718	A2M	C1'-N9-C4	-3.76	120.03	126.64
84	S2	1326	OMU	N3-C2-N1	3.75	119.77	114.89
84	S2	99	A2M	C1'-N9-C4	-3.74	120.06	126.64
84	S2	116	OMU	N3-C2-N1	3.74	119.76	114.89
4	L5	400	A2M	C4'-O4'-C1'	-3.72	106.52	109.92
4	L5	4523	A2M	C3'-C2'-C1'	-3.71	95.70	102.81
4	L5	3925	OMU	C5-C4-N3	3.71	120.00	114.80
4	L5	3825	A2M	C1'-N9-C4	-3.70	120.14	126.64
84	S2	468	A2M	C1'-N9-C4	-3.70	120.14	126.64
84	S2	627	OMU	N3-C2-N1	3.69	119.69	114.89
4	L5	1534	A2M	C1'-N9-C4	-3.68	120.17	126.64
84	S2	627	OMU	C5-C4-N3	3.68	119.95	114.80
4	L5	398	A2M	C3'-C2'-C1'	-3.64	95.83	102.81
84	S2	1326	OMU	C5-C4-N3	3.63	119.89	114.80
84	S2	159	A2M	C1'-N9-C4	-3.63	120.26	126.64
4	L5	2837	OMU	C5-C4-N3	3.61	119.86	114.80
4	L5	4220	6MZ	C2-N1-C6	3.61	119.40	116.60
4	L5	4227	OMU	C5-C4-N3	3.60	119.84	114.80
84	S2	1383	A2M	O3'-C3'-C2'	3.59	121.22	111.19
4	L5	4220	6MZ	C9-N6-C6	-3.58	119.53	122.85
4	L5	4306	OMU	C5-C4-N3	3.57	119.81	114.80
84	S2	1850	MA6	C2-N1-C6	3.57	120.34	116.84
84	S2	576	A2M	C1'-N9-C4	-3.54	120.43	126.64
4	L5	4530	UR3	C5-C4-N3	3.53	119.69	115.04
4	L5	4620	OMU	C5-C4-N3	3.53	119.74	114.80
84	S2	1442	OMU	C5-C4-N3	3.53	119.74	114.80
84	S2	1248	B8N	N3-C2-N1	3.52	121.02	116.72
84	S2	428	OMU	C5-C4-N3	3.51	119.71	114.80
84	S2	354	OMU	C5-C4-N3	3.50	119.71	114.80
4	L5	2363	A2M	C1'-N9-C4	-3.50	120.49	126.64
4	L5	4498	OMU	C5-C4-N3	3.50	119.70	114.80
4	L5	400	A2M	C1'-N9-C4	-3.50	120.49	126.64
84	S2	1288	OMU	C5-C4-N3	3.49	119.69	114.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
84	S2	172	OMU	C5-C4-N3	3.49	119.69	114.80
84	S2	484	A2M	C1'-N9-C4	-3.47	120.54	126.64
84	S2	799	OMU	C5-C4-N3	3.46	119.65	114.80
4	L5	3830	A2M	C3'-C2'-C1'	-3.46	96.19	102.81
4	L5	3867	A2M	C1'-N9-C4	-3.45	120.57	126.64
4	L5	398	A2M	O3'-C3'-C2'	3.44	120.81	111.19
84	S2	166	A2M	O3'-C3'-C2'	3.43	120.79	111.19
4	L5	2815	A2M	C4'-O4'-C1'	-3.42	106.80	109.92
84	S2	1851	MA6	C2-N1-C6	3.41	120.18	116.84
4	L5	1534	A2M	C3'-C2'-C1'	-3.39	96.33	102.81
4	L5	3818	UY1	C6-C5-C4	3.37	120.45	118.17
84	S2	576	A2M	O3'-C3'-C2'	3.36	120.60	111.19
4	L5	1536	PSU	O2-C2-N1	-3.36	119.32	122.79
84	S2	116	OMU	C5-C4-N3	3.33	119.47	114.80
4	L5	1326	A2M	C1'-N9-C4	-3.33	120.80	126.64
84	S2	121	OMU	C5-C4-N3	3.32	119.45	114.80
4	L5	3867	A2M	C4'-O4'-C1'	-3.31	106.89	109.92
84	S2	166	A2M	C3'-C2'-C1'	-3.30	96.48	102.81
4	L5	1326	A2M	C4'-O4'-C1'	-3.30	106.90	109.92
4	L5	3825	A2M	O3'-C3'-C2'	3.26	120.32	111.19
4	L5	4571	A2M	O3'-C3'-C2'	3.26	120.31	111.19
84	S2	484	A2M	O3'-C3'-C2'	3.25	120.27	111.19
4	L5	1524	A2M	O3'-C3'-C2'	3.24	120.26	111.19
84	S2	1031	A2M	C3'-C2'-C1'	-3.22	96.63	102.81
4	L5	2787	A2M	C1'-N9-C4	-3.22	120.98	126.64
4	L5	2787	A2M	O3'-C3'-C2'	3.22	120.20	111.19
4	L5	4590	A2M	C3'-C2'-C1'	-3.21	96.66	102.81
84	S2	159	A2M	O3'-C3'-C2'	3.19	120.11	111.19
4	L5	2401	A2M	O3'-C3'-C2'	3.18	120.08	111.19
4	L5	4590	A2M	O3'-C3'-C2'	3.17	120.06	111.19
4	L5	3718	A2M	C3'-C2'-C1'	-3.17	96.75	102.81
84	S2	1031	A2M	O3'-C3'-C2'	3.16	120.03	111.19
4	L5	3830	A2M	O3'-C3'-C2'	3.16	120.02	111.19
4	L5	4689	PSU	C6-N1-C2	-3.15	119.77	122.69
4	L5	400	A2M	O3'-C3'-C2'	3.14	119.98	111.19
4	L5	1871	A2M	C3'-C2'-C1'	-3.13	96.82	102.81
4	L5	1524	A2M	C1'-N9-C4	-3.12	121.16	126.64
84	S2	99	A2M	O3'-C3'-C2'	3.09	119.83	111.19
4	L5	3718	A2M	O3'-C3'-C2'	3.08	119.80	111.19
84	S2	468	A2M	O3'-C3'-C2'	3.06	119.75	111.19
84	S2	159	A2M	C4'-O4'-C1'	-3.06	107.13	109.92
4	L5	2861	OMC	C1'-N1-C2	3.05	125.18	118.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
84	S2	99	A2M	C3'-C2'-C1'	-3.05	96.97	102.81
84	S2	576	A2M	C3'-C2'-C1'	-3.04	96.99	102.81
4	L5	2363	A2M	C3'-C2'-C1'	-3.03	97.00	102.81
4	L5	3818	UY1	C6-N1-C2	-3.03	119.88	122.69
4	L5	1683	PSU	O2-C2-N1	-3.03	119.67	122.79
4	L5	4689	PSU	O2-C2-N1	-3.02	119.67	122.79
4	L5	3808	OMC	C1'-N1-C2	3.01	125.09	118.44
84	S2	1442	OMU	O4-C4-C5	-3.01	119.97	125.16
84	S2	627	OMU	O4-C4-C5	-3.01	119.98	125.16
4	L5	2837	OMU	O4-C4-C5	-3.00	119.99	125.16
84	S2	668	A2M	O4'-C1'-C2'	2.98	111.69	106.61
4	L5	1326	A2M	O3'-C3'-C2'	2.98	119.52	111.19
84	S2	27	A2M	O3'-C3'-C2'	2.98	119.52	111.19
84	S2	1326	OMU	O4-C4-C5	-2.96	120.05	125.16
84	S2	27	A2M	C3'-C2'-C1'	-2.96	97.14	102.81
84	S2	172	OMU	O4-C4-C5	-2.95	120.07	125.16
4	L5	4227	OMU	O4-C4-C5	-2.94	120.09	125.16
4	L5	1323	A2M	C2'-C1'-N9	2.93	119.07	112.56
84	S2	1639	G7M	C2-N1-C6	-2.93	119.74	125.11
84	S2	428	OMU	O4-C4-C5	-2.93	120.11	125.16
4	L5	4493	PSU	O2-C2-N1	-2.92	119.78	122.79
4	L5	3822	PSU	O2-C2-N1	-2.92	119.78	122.79
6	L8	55	PSU	O2-C2-N1	-2.92	119.78	122.79
4	L5	4628	PSU	O2-C2-N1	-2.91	119.79	122.79
84	S2	668	A2M	O3'-C3'-C2'	2.90	119.32	111.19
4	L5	2815	A2M	O3'-C3'-C2'	2.90	119.29	111.19
4	L5	4523	A2M	O3'-C3'-C2'	2.90	119.29	111.19
4	L5	3785	A2M	O3'-C3'-C2'	2.90	119.29	111.19
4	L5	3637	PSU	C6-N1-C2	-2.89	120.00	122.69
4	L5	2787	A2M	O4'-C1'-C2'	2.89	111.54	106.61
4	L5	4442	PSU	O2-C2-N1	-2.89	119.81	122.79
84	S2	159	A2M	C3'-C2'-C1'	-2.88	97.29	102.81
4	L5	1782	PSU	O2-C2-N1	-2.87	119.83	122.79
84	S2	109	PSU	O2-C2-N1	-2.87	119.83	122.79
4	L5	3925	OMU	O4-C4-C5	-2.86	120.23	125.16
84	S2	1177	PSU	O2-C2-N1	-2.86	119.84	122.79
4	L5	4403	PSU	O2-C2-N1	-2.85	119.84	122.79
84	S2	1367	PSU	O2-C2-N1	-2.85	119.85	122.79
4	L5	3825	A2M	C3'-C2'-C1'	-2.85	97.36	102.81
4	L5	4673	PSU	O2-C2-N1	-2.85	119.85	122.79
4	L5	1871	A2M	O3'-C3'-C2'	2.84	119.15	111.19
4	L5	4636	PSU	O2-C2-N1	-2.83	119.87	122.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
84	S2	799	OMU	O4-C4-C5	-2.83	120.28	125.16
4	L5	4431	PSU	O2-C2-N1	-2.83	119.87	122.79
84	S2	866	PSU	O2-C2-N1	-2.83	119.87	122.79
4	L5	4498	OMU	O4-C4-C5	-2.82	120.30	125.16
4	L5	1323	A2M	O4'-C1'-C2'	2.81	111.41	106.61
84	S2	1288	OMU	O4-C4-C5	-2.81	120.31	125.16
4	L5	2815	A2M	C1'-N9-C4	-2.81	121.70	126.64
4	L5	4620	OMU	O4-C4-C5	-2.81	120.31	125.16
4	L5	4532	PSU	O2-C2-N1	-2.81	119.89	122.79
4	L5	4500	PSU	O2-C2-N1	-2.81	119.89	122.79
84	S2	681	PSU	O2-C2-N1	-2.80	119.90	122.79
84	S2	121	OMU	O4-C4-C5	-2.80	120.33	125.16
4	L5	4306	OMU	O4-C4-C5	-2.80	120.34	125.16
84	S2	801	PSU	O2-C2-N1	-2.78	119.92	122.79
4	L5	4353	PSU	O2-C2-N1	-2.77	119.93	122.79
4	L5	3844	PSU	O2-C2-N1	-2.77	119.93	122.79
4	L5	3867	A2M	O3'-C3'-C2'	2.77	118.93	111.19
84	S2	105	PSU	O2-C2-N1	-2.77	119.93	122.79
4	L5	1534	A2M	O3'-C3'-C2'	2.77	118.93	111.19
4	L5	4299	PSU	O2-C2-N1	-2.77	119.94	122.79
4	L5	1677	PSU	O2-C2-N1	-2.76	119.94	122.79
4	L5	4576	PSU	O2-C2-N1	-2.76	119.95	122.79
6	L8	69	PSU	O2-C2-N1	-2.75	119.95	122.79
4	L5	4972	PSU	O2-C2-N1	-2.75	119.95	122.79
4	L5	4457	PSU	O2-C2-N1	-2.74	119.96	122.79
4	L5	3884	PSU	O2-C2-N1	-2.74	119.96	122.79
84	S2	354	OMU	O4-C4-C5	-2.74	120.44	125.16
84	S2	406	PSU	O2-C2-N1	-2.74	119.96	122.79
4	L5	4296	PSU	O2-C2-N1	-2.74	119.97	122.79
84	S2	468	A2M	C3'-C2'-C1'	-2.73	97.57	102.81
4	L5	3785	A2M	C3'-C2'-C1'	-2.73	97.57	102.81
4	L5	4471	PSU	O2-C2-N1	-2.72	119.98	122.79
84	S2	651	PSU	O2-C2-N1	-2.72	119.98	122.79
84	S2	1056	PSU	O2-C2-N1	-2.72	119.98	122.79
4	L5	4571	A2M	C3'-C2'-C1'	-2.72	97.60	102.81
84	S2	1045	PSU	O2-C2-N1	-2.71	119.99	122.79
84	S2	814	PSU	O2-C2-N1	-2.71	119.99	122.79
84	S2	116	OMU	O4-C4-C5	-2.71	120.48	125.16
4	L5	1524	A2M	O4'-C1'-C2'	2.71	111.23	106.61
4	L5	4521	PSU	O2-C2-N1	-2.71	120.00	122.79
84	S2	966	PSU	O2-C2-N1	-2.70	120.00	122.79
4	L5	2839	PSU	O2-C2-N1	-2.70	120.01	122.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
84	S2	1248	B8N	O4-C4-N3	-2.69	115.62	119.99
4	L5	2363	A2M	O3'-C3'-C2'	2.69	118.72	111.19
4	L5	4552	PSU	O2-C2-N1	-2.69	120.01	122.79
4	L5	1323	A2M	O3'-C3'-C2'	2.69	118.71	111.19
4	L5	1677	PSU	C6-C5-C4	2.69	119.99	118.17
4	L5	3920	PSU	O2-C2-N1	-2.69	120.02	122.79
4	L5	1860	PSU	O2-C2-N1	-2.68	120.02	122.79
84	S2	1244	PSU	O2-C2-N1	-2.68	120.02	122.79
84	S2	686	PSU	O2-C2-N1	-2.68	120.02	122.79
84	S2	1174	PSU	O2-C2-N1	-2.68	120.02	122.79
4	L5	1582	PSU	C6-N1-C2	-2.68	120.20	122.69
4	L5	4973	PSU	O2-C2-N1	-2.68	120.03	122.79
4	L5	5010	PSU	O2-C2-N1	-2.66	120.04	122.79
84	S2	1232	PSU	O2-C2-N1	-2.65	120.05	122.79
4	L5	1862	PSU	O2-C2-N1	-2.65	120.06	122.79
4	L5	1326	A2M	C2'-C1'-N9	2.64	118.43	112.56
4	L5	1781	PSU	O2-C2-N1	-2.64	120.07	122.79
4	L5	4576	PSU	C6-N1-C2	-2.64	120.24	122.69
4	L5	1744	PSU	O2-C2-N1	-2.64	120.07	122.79
4	L5	400	A2M	C3'-C2'-C1'	-2.64	97.76	102.81
4	L5	3785	A2M	O4'-C1'-N9	2.63	112.23	108.75
84	S2	406	PSU	C6-N1-C2	-2.63	120.25	122.69
4	L5	4579	PSU	O2-C2-N1	-2.63	120.08	122.79
84	S2	93	PSU	O2-C2-N1	-2.63	120.08	122.79
4	L5	1582	PSU	O2-C2-N1	-2.62	120.08	122.79
4	L5	4361	PSU	O2-C2-N1	-2.62	120.09	122.79
4	L5	2632	PSU	C6-C5-C4	2.61	119.94	118.17
4	L5	1792	PSU	O2-C2-N1	-2.61	120.10	122.79
4	L5	3639	PSU	O2-C2-N1	-2.60	120.11	122.79
4	L5	3637	PSU	O2-C2-N1	-2.59	120.11	122.79
4	L5	2632	PSU	O2-C2-N1	-2.59	120.12	122.79
4	L5	4471	PSU	C6-N1-C2	-2.59	120.29	122.69
4	L5	4293	PSU	O2-C2-N1	-2.58	120.13	122.79
4	L5	3853	PSU	O2-C2-N1	-2.58	120.13	122.79
4	L5	4636	PSU	C6-C5-C4	2.57	119.91	118.17
4	L5	4431	PSU	C6-N1-C2	-2.56	120.31	122.69
84	S2	1046	PSU	O2-C2-N1	-2.56	120.15	122.79
84	S2	801	PSU	C6-N1-C2	-2.56	120.32	122.69
84	S2	1367	PSU	C6-N1-C2	-2.55	120.32	122.69
4	L5	1677	PSU	C6-N1-C2	-2.55	120.32	122.69
4	L5	3851	PSU	O2-C2-N1	-2.55	120.16	122.79
84	S2	681	PSU	C6-N1-C2	-2.54	120.33	122.69

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	L5	4628	PSU	C6-N1-C2	-2.54	120.33	122.69
84	S2	1004	PSU	O2-C2-N1	-2.54	120.17	122.79
84	S2	484	A2M	O4'-C4'-C3'	2.53	110.18	105.15
4	L5	4973	PSU	C6-N1-C2	-2.53	120.34	122.69
4	L5	1782	PSU	C6-N1-C2	-2.52	120.35	122.69
4	L5	4442	PSU	O4'-C1'-C2'	2.52	108.63	105.15
6	L8	55	PSU	C6-N1-C2	-2.52	120.36	122.69
4	L5	1683	PSU	C6-N1-C2	-2.51	120.36	122.69
4	L5	4312	PSU	O2-C2-N1	-2.51	120.20	122.79
4	L5	2351	OMC	C1'-N1-C2	2.51	123.98	118.44
4	L5	1536	PSU	C6-N1-C2	-2.50	120.37	122.69
4	L5	4579	PSU	C6-N1-C2	-2.50	120.37	122.69
4	L5	4500	PSU	C6-N1-C2	-2.49	120.38	122.69
84	S2	484	A2M	O4'-C1'-C2'	2.49	110.86	106.61
4	L5	1522	OMG	O6-C6-C5	2.49	129.26	124.32
4	L5	4673	PSU	C6-N1-C2	-2.49	120.38	122.69
4	L5	3867	A2M	C2'-C1'-N9	2.49	118.08	112.56
4	L5	4196	OMG	O6-C6-C5	2.49	129.25	124.32
4	L5	3818	UY1	O2-C2-N1	-2.48	120.23	122.79
84	S2	649	PSU	O2-C2-N1	-2.48	120.23	122.79
84	S2	1177	PSU	C6-N1-C2	-2.48	120.39	122.69
84	S2	1081	PSU	O2-C2-N1	-2.48	120.23	122.79
4	L5	2401	A2M	C3'-C2'-C1'	-2.47	98.07	102.81
4	L5	4442	PSU	C6-N1-C2	-2.47	120.40	122.69
4	L5	1323	A2M	C3'-C2'-C1'	-2.47	98.08	102.81
4	L5	3695	PSU	O2-C2-N1	-2.47	120.24	122.79
4	L5	3822	PSU	O4'-C1'-C2'	2.47	108.57	105.15
4	L5	4552	PSU	C6-N1-C2	-2.47	120.40	122.69
4	L5	4637	OMG	O6-C6-C5	2.46	129.20	124.32
4	L5	3830	A2M	C4-C5-N7	2.46	111.94	109.34
84	S2	1232	PSU	C6-N1-C2	-2.46	120.41	122.69
4	L5	2824	OMC	C1'-N1-C2	2.46	123.87	118.44
84	S2	105	PSU	C6-N1-C2	-2.45	120.42	122.69
4	L5	2815	A2M	C4-C5-N7	2.45	111.92	109.34
6	L8	69	PSU	C6-N1-C2	-2.45	120.42	122.69
4	L5	5001	PSU	O2-C2-N1	-2.44	120.27	122.79
4	L5	4493	PSU	C6-N1-C2	-2.44	120.42	122.69
4	L5	1534	A2M	C4-C5-N7	2.44	111.92	109.34
4	L5	4392	OMG	O6-C6-C5	2.43	129.15	124.32
4	L5	1326	A2M	O4'-C1'-C2'	2.43	110.75	106.61
4	L5	1524	A2M	C4-C5-N7	2.42	111.90	109.34
84	S2	644	OMG	O6-C6-C5	2.42	129.13	124.32

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
84	S2	509	OMG	O6-C6-C5	2.42	129.12	124.32
84	S2	863	PSU	O2-C2-N1	-2.42	120.30	122.79
4	L5	3627	OMG	O6-C6-C5	2.42	129.11	124.32
4	L5	3822	PSU	C6-N1-C2	-2.41	120.45	122.69
84	S2	436	OMG	O6-C6-C5	2.41	129.10	124.32
4	L5	4457	PSU	C6-N1-C2	-2.41	120.45	122.69
4	L5	4532	PSU	C6-N1-C2	-2.41	120.45	122.69
4	L5	4523	A2M	C4-C5-N7	2.41	111.88	109.34
84	S2	109	PSU	C6-N1-C2	-2.41	120.46	122.69
4	L5	4456	OMC	C1'-N1-C2	2.39	123.73	118.44
4	L5	4571	A2M	O4'-C1'-C2'	2.39	110.68	106.61
4	L5	4623	OMG	O6-C6-C5	2.39	129.06	124.32
84	S2	166	A2M	C4-C5-N7	2.39	111.86	109.34
4	L5	4228	OMG	O6-C6-C5	2.38	129.05	124.32
4	L5	4353	PSU	C6-N1-C2	-2.38	120.48	122.69
4	L5	1862	PSU	C6-N1-C2	-2.38	120.48	122.69
4	L5	4571	A2M	C4-C5-N7	2.38	111.85	109.34
84	S2	1244	PSU	C6-N1-C2	-2.38	120.48	122.69
4	L5	3844	PSU	C6-N1-C2	-2.38	120.48	122.69
4	L5	4499	OMG	O6-C6-C5	2.38	129.03	124.32
6	L8	75	OMG	O6-C6-C5	2.38	129.03	124.32
84	S2	99	A2M	C4-C5-N7	2.38	111.85	109.34
84	S2	651	PSU	C6-N1-C2	-2.38	120.49	122.69
84	S2	462	OMC	C1'-N1-C2	2.38	123.69	118.44
4	L5	4494	OMG	O6-C6-C5	2.37	129.03	124.32
4	L5	2787	A2M	O4'-C4'-C3'	2.37	109.86	105.15
4	L5	4370	OMG	O6-C6-C5	2.37	129.03	124.32
4	L5	1871	A2M	C4-C5-N7	2.37	111.84	109.34
4	L5	2363	A2M	C4-C5-N7	2.37	111.84	109.34
4	L5	2787	A2M	C4-C5-N7	2.36	111.83	109.34
4	L5	4530	UR3	C6-N1-C2	-2.36	119.87	121.80
4	L5	2401	A2M	O4'-C1'-C2'	2.36	110.63	106.61
84	S2	1328	OMG	O6-C6-C5	2.36	129.00	124.32
4	L5	1871	A2M	O4'-C1'-C2'	2.36	110.63	106.61
4	L5	2401	A2M	C4-C5-N7	2.36	111.83	109.34
84	S2	468	A2M	C4-C5-N7	2.36	111.83	109.34
4	L5	4293	PSU	C6-N1-C2	-2.36	120.50	122.69
84	S2	1272	OMC	C1'-N1-C2	2.36	123.64	118.44
84	S2	867	OMG	O6-C6-C5	2.35	128.99	124.32
4	L5	3884	PSU	C6-N1-C2	-2.35	120.51	122.69
4	L5	2424	OMG	O6-C6-C5	2.34	128.96	124.32
84	S2	576	A2M	C4-C5-N7	2.34	111.81	109.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
84	S2	601	OMG	O6-C6-C5	2.34	128.95	124.32
4	L5	2364	OMG	O6-C6-C5	2.33	128.95	124.32
4	L5	1781	PSU	C6-N1-C2	-2.33	120.53	122.69
4	L5	4296	PSU	C6-N1-C2	-2.33	120.53	122.69
4	L5	3867	A2M	C4-C5-N7	2.33	111.80	109.34
4	L5	4442	PSU	C6-C5-C4	2.33	119.75	118.17
4	L5	3851	PSU	C6-N1-C2	-2.33	120.53	122.69
84	S2	428	OMU	O2-C2-N1	-2.33	119.77	122.80
84	S2	93	PSU	C6-N1-C2	-2.33	120.53	122.69
4	L5	2839	PSU	C6-N1-C2	-2.32	120.54	122.69
84	S2	814	PSU	C6-N1-C2	-2.32	120.54	122.69
4	L5	4590	A2M	C4-C5-N7	2.32	111.79	109.34
84	S2	166	A2M	O4'-C1'-C2'	2.32	110.56	106.61
84	S2	866	PSU	C6-N1-C2	-2.32	120.54	122.69
4	L5	2861	OMC	C1'-N1-C6	-2.32	115.83	120.78
4	L5	3792	OMG	O6-C6-C5	2.32	128.91	124.32
4	L5	3867	A2M	C3'-C2'-C1'	-2.31	98.37	102.81
4	L5	1323	A2M	C4-C5-N7	2.31	111.78	109.34
4	L5	3744	OMG	O6-C6-C5	2.31	128.90	124.32
4	L5	3808	OMC	C1'-N1-C6	-2.31	115.85	120.78
4	L5	4972	PSU	C6-N1-C2	-2.30	120.56	122.69
4	L5	3695	PSU	C6-N1-C2	-2.30	120.56	122.69
4	L5	1316	OMG	O6-C6-C5	2.30	128.88	124.32
4	L5	3718	A2M	C4-C5-N7	2.30	111.77	109.34
4	L5	3639	PSU	C6-N1-C2	-2.30	120.56	122.69
4	L5	1326	A2M	C4-C5-N7	2.30	111.77	109.34
84	S2	1045	PSU	C6-N1-C2	-2.30	120.56	122.69
4	L5	4227	OMU	O2-C2-N1	-2.30	119.81	122.80
4	L5	3785	A2M	C4-C5-N7	2.30	111.76	109.34
84	S2	159	A2M	C4-C5-N7	2.30	111.76	109.34
84	S2	1081	PSU	C6-N1-C2	-2.29	120.56	122.69
84	S2	354	OMU	O2-C2-N1	-2.29	119.81	122.80
84	S2	1056	PSU	C6-N1-C2	-2.29	120.57	122.69
84	S2	1248	B8N	O4'-C1'-C2'	2.29	108.32	105.15
4	L5	4403	PSU	O4'-C1'-C2'	2.29	108.32	105.15
84	S2	683	OMG	O6-C6-C5	2.29	128.85	124.32
84	S2	27	A2M	O4'-C1'-C2'	2.28	110.50	106.61
4	L5	4618	OMG	O6-C6-C5	2.28	128.85	124.32
4	L5	400	A2M	C4-C5-N7	2.28	111.75	109.34
4	L5	3899	OMG	O6-C6-C5	2.28	128.85	124.32
84	S2	1081	PSU	C6-C5-C4	2.28	119.71	118.17
4	L5	1322	1MA	C5-C6-N1	-2.28	110.68	113.95

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
84	S2	484	A2M	C4-C5-N7	2.28	111.74	109.34
84	S2	686	PSU	C6-N1-C2	-2.28	120.58	122.69
4	L5	1744	PSU	C6-N1-C2	-2.27	120.59	122.69
4	L5	4299	PSU	C6-N1-C2	-2.27	120.59	122.69
4	L5	1792	PSU	C6-N1-C2	-2.26	120.59	122.69
4	L5	2632	PSU	C6-N1-C2	-2.26	120.59	122.69
4	L5	5001	PSU	C6-N1-C2	-2.26	120.59	122.69
84	S2	1046	PSU	C6-N1-C2	-2.26	120.60	122.69
4	L5	1625	OMG	O6-C6-C5	2.26	128.79	124.32
84	S2	159	A2M	O3'-C3'-C4'	-2.25	104.61	111.08
4	L5	400	A2M	O4'-C1'-C2'	2.25	110.45	106.61
4	L5	3825	A2M	C4-C5-N7	2.25	111.72	109.34
84	S2	1031	A2M	C4-C5-N7	2.25	111.72	109.34
4	L5	4590	A2M	O4'-C1'-C2'	2.25	110.44	106.61
4	L5	398	A2M	C4-C5-N7	2.25	111.71	109.34
4	L5	3825	A2M	O4'-C1'-C2'	2.24	110.43	106.61
4	L5	4403	PSU	C6-N1-C2	-2.24	120.61	122.69
4	L5	4498	OMU	O2-C2-N1	-2.24	119.88	122.80
84	S2	1004	PSU	C6-N1-C2	-2.24	120.61	122.69
84	S2	468	A2M	O4'-C1'-C2'	2.24	110.42	106.61
4	L5	2876	OMG	O6-C6-C5	2.24	128.75	124.32
84	S2	27	A2M	C4-C5-N7	2.23	111.70	109.34
84	S2	1383	A2M	C4-C5-N7	2.23	111.69	109.34
84	S2	668	A2M	C4-C5-N7	2.23	111.69	109.34
4	L5	3925	OMU	O2-C2-N1	-2.22	119.90	122.80
4	L5	4296	PSU	C6-C5-C4	2.22	119.67	118.17
4	L5	4636	PSU	C6-N1-C2	-2.21	120.64	122.69
4	L5	1534	A2M	C2'-C1'-N9	2.21	117.46	112.56
4	L5	3920	PSU	C6-N1-C2	-2.20	120.65	122.69
4	L5	1860	PSU	C6-N1-C2	-2.20	120.65	122.69
4	L5	2815	A2M	C2'-C1'-N9	2.20	117.43	112.56
84	S2	966	PSU	C6-N1-C2	-2.19	120.66	122.69
84	S2	484	A2M	C4'-O4'-C1'	-2.19	107.92	109.92
84	S2	1174	PSU	C6-N1-C2	-2.19	120.66	122.69
4	L5	3782	5MC	C1'-N1-C6	-2.18	117.56	121.15
4	L5	2363	A2M	O4'-C1'-C2'	2.18	110.32	106.61
4	L5	4431	PSU	C6-C5-C4	2.18	119.64	118.17
4	L5	3867	A2M	O4'-C1'-C2'	2.17	110.31	106.61
4	L5	1524	A2M	C2'-C1'-N9	2.17	117.38	112.56
4	L5	3830	A2M	O4'-C1'-C2'	2.17	110.30	106.61
4	L5	1322	1MA	N1-C6-N6	2.16	125.14	119.71
84	S2	121	OMU	O2-C2-N1	-2.16	119.98	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	L5	3822	PSU	C6-C5-C4	2.16	119.63	118.17
4	L5	4361	PSU	C6-N1-C2	-2.16	120.69	122.69
4	L5	1744	PSU	O4'-C1'-C2'	2.16	108.13	105.15
4	L5	4523	A2M	O4'-C1'-C2'	2.15	110.26	106.61
84	S2	668	A2M	O4'-C4'-C3'	2.14	109.41	105.15
84	S2	1326	OMU	O2-C2-N1	-2.14	120.01	122.80
4	L5	3853	PSU	C6-N1-C2	-2.14	120.70	122.69
4	L5	2839	PSU	C6-C5-C4	2.14	119.62	118.17
84	S2	863	PSU	C6-N1-C2	-2.14	120.71	122.69
84	S2	1248	B8N	O4-C4-C5	-2.14	118.88	122.58
4	L5	4457	PSU	O4'-C1'-C2'	2.14	108.11	105.15
4	L5	4576	PSU	O4'-C1'-C2'	2.14	108.11	105.15
84	S2	172	OMU	O2-C2-N1	-2.13	120.02	122.80
4	L5	5010	PSU	C6-N1-C2	-2.13	120.72	122.69
84	S2	799	OMU	C1'-N1-C2	2.12	121.40	117.59
84	S2	1337	4AC	N4-C4-N3	2.12	117.31	113.87
4	L5	1326	A2M	O4'-C4'-C3'	2.12	109.35	105.15
4	L5	4636	PSU	O4'-C1'-C2'	2.11	108.08	105.15
4	L5	1326	A2M	C3'-C2'-C1'	-2.11	98.76	102.81
6	L8	69	PSU	O4'-C1'-C2'	2.10	108.06	105.15
4	L5	3701	OMC	C1'-N1-C2	2.10	123.08	118.44
84	S2	649	PSU	C6-N1-C2	-2.10	120.74	122.69
4	L5	400	A2M	C2'-C1'-N9	2.10	117.22	112.56
4	L5	3695	PSU	O4'-C1'-C2'	2.09	108.05	105.15
4	L5	4972	PSU	O4'-C1'-C2'	2.09	108.05	105.15
2	CF	163	SEP	OG-CB-CA	2.09	110.18	108.14
4	L5	2837	OMU	O2-C2-N1	-2.09	120.08	122.80
84	S2	866	PSU	C6-C5-C4	2.09	119.58	118.17
84	S2	1248	B8N	C31-N3-C4	2.09	120.13	117.18
84	S2	1031	A2M	O4'-C1'-C2'	2.08	110.15	106.61
4	L5	3841	OMC	C1'-N1-C2	2.07	123.01	118.44
4	L5	1744	PSU	C6-C5-C4	2.06	119.56	118.17
84	S2	116	OMU	O2-C2-N1	-2.06	120.12	122.80
4	L5	4521	PSU	C6-N1-C2	-2.06	120.78	122.69
84	S2	627	OMU	O2-C2-N1	-2.06	120.12	122.80
4	L5	3818	UY1	O4'-C1'-C2'	2.05	108.16	104.56
4	L5	2815	A2M	C3'-C2'-C1'	-2.05	98.88	102.81
84	S2	1288	OMU	O2-C2-N1	-2.05	120.13	122.80
84	S2	166	A2M	C6-C5-C4	-2.05	113.92	117.90
4	L5	4500	PSU	C6-C5-C4	2.05	119.55	118.17
84	S2	1442	OMU	C1'-N1-C2	2.04	121.26	117.59
4	L5	3920	PSU	O4'-C1'-C2'	2.04	107.97	105.15

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	L5	3637	PSU	C6-C5-C4	2.03	119.54	118.17
84	S2	1056	PSU	O4'-C1'-C2'	2.03	107.96	105.15
4	L5	4590	A2M	C6-C5-C4	-2.03	113.96	117.90
84	S2	1703	OMC	C1'-N1-C2	2.02	122.91	118.44
4	L5	2815	A2M	O4'-C4'-C3'	2.02	109.16	105.15
4	L5	4312	PSU	C6-N1-C2	-2.01	120.82	122.69
84	S2	686	PSU	C6-C5-C4	2.01	119.53	118.17
4	L5	4493	PSU	C6-C5-C4	2.01	119.53	118.17
4	L5	4353	PSU	C6-C5-C4	2.01	119.53	118.17
4	L5	4972	PSU	C6-C5-C4	2.01	119.53	118.17
4	L5	398	A2M	O4'-C1'-C2'	2.01	110.03	106.61
84	S2	159	A2M	C2'-C1'-N9	2.01	117.01	112.56

There are no chirality outliers.

All (161) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	CF	163	SEP	C-CA-CB-OG
2	CF	163	SEP	CA-CB-OG-P
2	CF	163	SEP	CB-OG-P-O2P
2	CF	163	SEP	CB-OG-P-O3P
6	L8	75	OMG	C1'-C2'-O2'-CM2
4	L5	400	A2M	C1'-C2'-O2'-CM'
4	L5	1316	OMG	C1'-C2'-O2'-CM2
4	L5	1323	A2M	C1'-C2'-O2'-CM'
4	L5	1326	A2M	O4'-C4'-C5'-O5'
4	L5	1326	A2M	C3'-C4'-C5'-O5'
4	L5	1326	A2M	C1'-C2'-O2'-CM'
4	L5	1340	OMC	C1'-C2'-O2'-CM2
4	L5	1625	OMG	O4'-C4'-C5'-O5'
4	L5	2351	OMC	C1'-C2'-O2'-CM2
4	L5	2364	OMG	O4'-C4'-C5'-O5'
4	L5	2787	A2M	C1'-C2'-O2'-CM'
4	L5	2824	OMC	C1'-C2'-O2'-CM2
4	L5	2861	OMC	C1'-C2'-O2'-CM2
4	L5	3701	OMC	O4'-C4'-C5'-O5'
4	L5	3718	A2M	C1'-C2'-O2'-CM'
4	L5	3744	OMG	C1'-C2'-O2'-CM2
4	L5	3792	OMG	O4'-C4'-C5'-O5'
4	L5	3825	A2M	C1'-C2'-O2'-CM'
4	L5	3830	A2M	C1'-C2'-O2'-CM'
4	L5	3867	A2M	C1'-C2'-O2'-CM'

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Mol	Chain	Res	Type	Atoms
4	L5	4196	OMG	C1'-C2'-O2'-CM2
4	L5	4220	6MZ	C5-C6-N6-C9
4	L5	4220	6MZ	N1-C6-N6-C9
4	L5	4220	6MZ	O4'-C4'-C5'-O5'
4	L5	4447	5MC	C2'-C1'-N1-C2
4	L5	4447	5MC	C2'-C1'-N1-C6
4	L5	4500	PSU	O4'-C4'-C5'-O5'
4	L5	4590	A2M	O4'-C4'-C5'-O5'
4	L5	4590	A2M	C1'-C2'-O2'-CM'
4	L5	4637	OMG	C1'-C2'-O2'-CM2
84	S2	27	A2M	C1'-C2'-O2'-CM'
84	S2	116	OMU	C1'-C2'-O2'-CM2
84	S2	159	A2M	C1'-C2'-O2'-CM'
84	S2	354	OMU	C1'-C2'-O2'-CM2
84	S2	468	A2M	C1'-C2'-O2'-CM'
84	S2	484	A2M	C1'-C2'-O2'-CM'
84	S2	644	OMG	O4'-C4'-C5'-O5'
84	S2	644	OMG	C1'-C2'-O2'-CM2
84	S2	668	A2M	C1'-C2'-O2'-CM'
84	S2	683	OMG	C3'-C4'-C5'-O5'
84	S2	1248	B8N	O4'-C4'-C5'-O5'
84	S2	1272	OMC	O4'-C4'-C5'-O5'
84	S2	1288	OMU	O4'-C4'-C5'-O5'
84	S2	1337	4AC	N3-C4-N4-C7
84	S2	1383	A2M	C1'-C2'-O2'-CM'
84	S2	1442	OMU	O4'-C4'-C5'-O5'
84	S2	1832	6MZ	C5-C6-N6-C9
84	S2	1832	6MZ	N1-C6-N6-C9
84	S2	1832	6MZ	C5'-O5'-P-O1P
84	S2	1832	6MZ	C5'-O5'-P-O3P
84	S2	1851	MA6	C5-C6-N6-C9
84	S2	1248	B8N	N34-C33-C34-O36
4	L5	1323	A2M	O4'-C4'-C5'-O5'
4	L5	1536	PSU	C3'-C4'-C5'-O5'
4	L5	2787	A2M	C3'-C4'-C5'-O5'
4	L5	3701	OMC	C3'-C4'-C5'-O5'
4	L5	4500	PSU	C3'-C4'-C5'-O5'
4	L5	4590	A2M	C3'-C4'-C5'-O5'
4	L5	4618	OMG	C3'-C4'-C5'-O5'
84	S2	517	OMC	C3'-C4'-C5'-O5'
84	S2	517	OMC	O4'-C4'-C5'-O5'
84	S2	801	PSU	C3'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
84	S2	1272	OMC	C3'-C4'-C5'-O5'
84	S2	1288	OMU	C3'-C4'-C5'-O5'
84	S2	1832	6MZ	O4'-C4'-C5'-O5'
4	L5	1524	A2M	C3'-C4'-C5'-O5'
4	L5	1536	PSU	O4'-C4'-C5'-O5'
4	L5	1625	OMG	C3'-C4'-C5'-O5'
4	L5	2422	OMC	C3'-C4'-C5'-O5'
4	L5	3899	OMG	O4'-C4'-C5'-O5'
4	L5	3899	OMG	C3'-C4'-C5'-O5'
4	L5	4618	OMG	O4'-C4'-C5'-O5'
84	S2	576	A2M	O4'-C4'-C5'-O5'
84	S2	683	OMG	O4'-C4'-C5'-O5'
84	S2	1045	PSU	C3'-C4'-C5'-O5'
84	S2	1045	PSU	O4'-C4'-C5'-O5'
84	S2	1442	OMU	C3'-C4'-C5'-O5'
4	L5	3792	OMG	C3'-C4'-C5'-O5'
4	L5	4220	6MZ	C3'-C4'-C5'-O5'
84	S2	1248	B8N	C3'-C4'-C5'-O5'
4	L5	1323	A2M	C3'-C4'-C5'-O5'
4	L5	1524	A2M	O4'-C4'-C5'-O5'
4	L5	2364	OMG	C3'-C4'-C5'-O5'
84	S2	576	A2M	C3'-C4'-C5'-O5'
84	S2	644	OMG	C3'-C4'-C5'-O5'
84	S2	799	OMU	C3'-C4'-C5'-O5'
4	L5	2422	OMC	O4'-C4'-C5'-O5'
4	L5	2787	A2M	O4'-C4'-C5'-O5'
4	L5	4296	PSU	O4'-C4'-C5'-O5'
84	S2	99	A2M	O4'-C4'-C5'-O5'
84	S2	799	OMU	O4'-C4'-C5'-O5'
84	S2	627	OMU	C2'-C1'-N1-C6
4	L5	1534	A2M	C3'-C2'-O2'-CM'
4	L5	4296	PSU	C3'-C4'-C5'-O5'
84	S2	668	A2M	O4'-C4'-C5'-O5'
84	S2	801	PSU	O4'-C4'-C5'-O5'
4	L5	4590	A2M	C4'-C5'-O5'-P
2	CF	163	SEP	CB-OG-P-O1P
84	S2	1832	6MZ	C5'-O5'-P-O2P
84	S2	1832	6MZ	C3'-C4'-C5'-O5'
84	S2	668	A2M	C3'-C4'-C5'-O5'
84	S2	509	OMG	C1'-C2'-O2'-CM2
84	S2	99	A2M	C3'-C4'-C5'-O5'
84	S2	1383	A2M	O4'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
4	L5	3701	OMC	O4'-C1'-N1-C6
84	S2	1383	A2M	C3'-C4'-C5'-O5'
4	L5	4447	5MC	O4'-C1'-N1-C6
84	S2	627	OMU	O4'-C1'-N1-C6
4	L5	3701	OMC	O4'-C1'-N1-C2
4	L5	1534	A2M	C4'-C5'-O5'-P
4	L5	4500	PSU	C4'-C5'-O5'-P
84	S2	576	A2M	C4'-C5'-O5'-P
84	S2	1850	MA6	C5-C6-N6-C10
2	CF	163	SEP	N-CA-CB-OG
4	L5	3822	PSU	C3'-C4'-C5'-O5'
84	S2	627	OMU	O4'-C4'-C5'-O5'
84	S2	627	OMU	C2'-C1'-N1-C2
4	L5	3844	PSU	C4'-C5'-O5'-P
4	L5	1677	PSU	O4'-C1'-C5-C4
4	L5	4521	PSU	O4'-C1'-C5-C4
4	L5	4636	PSU	O4'-C1'-C5-C4
4	L5	5010	PSU	O4'-C1'-C5-C4
4	L5	3818	UY1	C4'-C5'-O5'-P
4	L5	3887	OMC	C4'-C5'-O5'-P
84	S2	1081	PSU	C4'-C5'-O5'-P
4	L5	4293	PSU	O4'-C4'-C5'-O5'
4	L5	4447	5MC	O4'-C1'-N1-C2
84	S2	1851	MA6	C4'-C5'-O5'-P
4	L5	4523	A2M	O4'-C4'-C5'-O5'
84	S2	627	OMU	O4'-C1'-N1-C2
84	S2	644	OMG	C4'-C5'-O5'-P
4	L5	1781	PSU	C3'-C4'-C5'-O5'
4	L5	3841	OMC	C1'-C2'-O2'-CM2
84	S2	576	A2M	C1'-C2'-O2'-CM'
84	S2	1490	OMG	C4'-C5'-O5'-P
84	S2	428	OMU	O4'-C1'-N1-C6
4	L5	2815	A2M	O4'-C4'-C5'-O5'
4	L5	4623	OMG	C3'-C4'-C5'-O5'
4	L5	4521	PSU	O4'-C1'-C5-C6
4	L5	5010	PSU	O4'-C1'-C5-C6
84	S2	428	OMU	C2'-C1'-N1-C6
4	L5	1524	A2M	C3'-C2'-O2'-CM'
4	L5	2351	OMC	O4'-C4'-C5'-O5'
4	L5	3887	OMC	C3'-C4'-C5'-O5'
4	L5	3822	PSU	O4'-C4'-C5'-O5'
84	S2	159	A2M	O4'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
84	S2	517	OMC	C4'-C5'-O5'-P
4	L5	2815	A2M	C3'-C2'-O2'-CM'
4	L5	1677	PSU	O4'-C4'-C5'-O5'
4	L5	2861	OMC	O4'-C4'-C5'-O5'
4	L5	3851	PSU	C3'-C4'-C5'-O5'
4	L5	4447	5MC	O4'-C4'-C5'-O5'
84	S2	428	OMU	O4'-C4'-C5'-O5'
4	L5	2861	OMC	C2'-C1'-N1-C2
84	S2	867	OMG	C4'-C5'-O5'-P
84	S2	1248	B8N	N34-C33-C34-O35

There are no ring outliers.

100 monomers are involved in 164 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
84	S2	1031	A2M	3	0
4	L5	2837	OMU	1	0
4	L5	1340	OMC	2	0
84	S2	627	OMU	1	0
84	S2	27	A2M	1	0
84	S2	651	PSU	1	0
4	L5	2363	A2M	1	0
4	L5	4552	PSU	2	0
4	L5	4431	PSU	1	0
6	L8	75	OMG	2	0
4	L5	4456	OMC	1	0
4	L5	4689	PSU	2	0
4	L5	4403	PSU	2	0
84	S2	668	A2M	2	0
4	L5	3841	OMC	1	0
4	L5	2365	OMC	1	0
4	L5	2824	OMC	3	0
4	L5	3627	OMG	1	0
4	L5	3830	A2M	1	0
84	S2	1842	4AC	3	0
4	L5	1871	A2M	1	0
4	L5	3867	A2M	4	0
84	S2	354	OMU	2	0
4	L5	2422	OMC	1	0
6	L8	69	PSU	1	0
84	S2	1174	PSU	2	0
4	L5	3869	OMC	1	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
84	S2	116	OMU	3	0
4	L5	2632	PSU	2	0
84	S2	166	A2M	1	0
84	S2	121	OMU	1	0
4	L5	3744	OMG	1	0
4	L5	4590	A2M	1	0
84	S2	1004	PSU	2	0
84	S2	1391	OMC	2	0
4	L5	4620	OMU	3	0
4	L5	1534	A2M	1	0
4	L5	3695	PSU	1	0
84	S2	681	PSU	1	0
84	S2	159	A2M	1	0
4	L5	1316	OMG	2	0
84	S2	649	PSU	2	0
4	L5	400	A2M	2	0
4	L5	3825	A2M	5	0
4	L5	2351	OMC	3	0
84	S2	174	OMC	1	0
4	L5	4636	PSU	1	0
4	L5	3785	A2M	1	0
4	L5	4972	PSU	1	0
84	S2	576	A2M	2	0
84	S2	509	OMG	3	0
4	L5	2787	A2M	1	0
4	L5	3844	PSU	1	0
4	L5	4442	PSU	1	0
4	L5	4623	OMG	2	0
84	S2	1850	MA6	2	0
84	S2	1832	6MZ	2	0
4	L5	4299	PSU	2	0
84	S2	1288	OMU	2	0
4	L5	4579	PSU	3	0
4	L5	3701	OMC	1	0
4	L5	2364	OMG	1	0
84	S2	644	OMG	2	0
4	L5	4457	PSU	1	0
84	S2	462	OMC	1	0
2	CF	163	SEP	1	0
4	L5	4523	A2M	3	0
4	L5	1326	A2M	2	0
4	L5	4353	PSU	1	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
84	S2	867	OMG	1	0
4	L5	1323	A2M	1	0
4	L5	4637	OMG	1	0
4	L5	4973	PSU	1	0
84	S2	1328	OMG	1	0
4	L5	1683	PSU	3	0
84	S2	1337	4AC	3	0
4	L5	2804	OMC	2	0
4	L5	4536	OMC	1	0
84	S2	814	PSU	1	0
4	L5	2861	OMC	1	0
84	S2	436	OMG	1	0
4	L5	3920	PSU	1	0
84	S2	1177	PSU	1	0
4	L5	4220	6MZ	2	0
4	L5	3718	A2M	4	0
4	L5	4576	PSU	1	0
84	S2	1232	PSU	2	0
84	S2	601	OMG	3	0
84	S2	468	A2M	4	0
4	L5	3853	PSU	1	0
84	S2	109	PSU	1	0
4	L5	4196	OMG	1	0
84	S2	484	A2M	2	0
4	L5	4293	PSU	1	0
84	S2	1244	PSU	2	0
84	S2	1639	G7M	1	0
4	L5	4392	OMG	1	0
4	L5	3818	UY1	2	0
4	L5	1625	OMG	1	0
4	L5	1677	PSU	1	0

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 244 ligands modelled in this entry, 225 are monoatomic - leaving 19 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
88	SPM	L5	5259	-	13,13,13	0.35	0	12,12,12	0.98	0
91	HMT	L5	5297	-	41,43,43	4.55	15 (36%)	43,66,66	2.01	14 (32%)
89	SPD	L5	5287	-	9,9,9	0.32	0	8,8,8	0.87	0
88	SPM	L5	5292	-	13,13,13	0.35	0	12,12,12	0.95	0
88	SPM	L5	5264	-	13,13,13	0.35	0	12,12,12	0.95	0
89	SPD	L5	5285	-	9,9,9	0.33	0	8,8,8	0.83	0
89	SPD	L5	5290	-	9,9,9	0.32	0	8,8,8	0.92	0
89	SPD	L5	5288	-	9,9,9	0.32	0	8,8,8	0.86	0
88	SPM	L5	5265	-	13,13,13	0.35	0	12,12,12	0.99	0
89	SPD	L5	5283	-	9,9,9	0.33	0	8,8,8	0.84	0
89	SPD	L5	5284	-	9,9,9	0.33	0	8,8,8	0.85	0
89	SPD	LN	301	-	9,9,9	0.32	0	8,8,8	0.87	0
90	3HE	L5	5296	-	21,21,21	0.41	0	23,30,30	0.93	1 (4%)
88	SPM	L5	5289	-	13,13,13	0.36	0	12,12,12	0.91	0
89	SPD	L5	5286	-	9,9,9	0.33	0	8,8,8	0.82	0
89	SPD	L5	5291	-	9,9,9	0.32	0	8,8,8	0.80	0
88	SPM	L5	5268	-	13,13,13	0.35	0	12,12,12	1.01	0
88	SPM	L5	5293	-	13,13,13	0.35	0	12,12,12	0.90	0
89	SPD	L5	5262	-	9,9,9	0.33	0	8,8,8	0.95	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
88	SPM	L5	5259	-	-	2/11/11/11	-
91	HMT	L5	5297	-	-	8/27/74/74	0/5/5/5
89	SPD	L5	5287	-	-	3/7/7/7	-
88	SPM	L5	5292	-	-	3/11/11/11	-
88	SPM	L5	5264	-	-	3/11/11/11	-
89	SPD	L5	5285	-	-	2/7/7/7	-
89	SPD	L5	5290	-	-	2/7/7/7	-
89	SPD	L5	5288	-	-	2/7/7/7	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
88	SPM	L5	5265	-	-	5/11/11/11	-
89	SPD	L5	5283	-	-	1/7/7/7	-
89	SPD	L5	5284	-	-	3/7/7/7	-
89	SPD	LN	301	-	-	1/7/7/7	-
90	3HE	L5	5296	-	-	1/8/36/36	0/2/2/2
88	SPM	L5	5289	-	-	5/11/11/11	-
89	SPD	L5	5286	-	-	0/7/7/7	-
89	SPD	L5	5291	-	-	2/7/7/7	-
88	SPM	L5	5268	-	-	3/11/11/11	-
88	SPM	L5	5293	-	-	1/11/11/11	-
89	SPD	L5	5262	-	-	1/7/7/7	-

All (15) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
91	L5	5297	HMT	C8-C7	18.29	1.79	1.52
91	L5	5297	HMT	C7-C6	12.08	1.77	1.51
91	L5	5297	HMT	C5-C4	-10.08	1.36	1.51
91	L5	5297	HMT	C10-N1	7.58	1.57	1.47
91	L5	5297	HMT	C1-C2	7.05	1.43	1.32
91	L5	5297	HMT	O4-C19	5.82	1.45	1.34
91	L5	5297	HMT	C9-N1	-4.87	1.34	1.48
91	L5	5297	HMT	O4-C3	-4.42	1.36	1.44
91	L5	5297	HMT	C12-C9	3.62	1.60	1.54
91	L5	5297	HMT	O3-C2	3.20	1.41	1.35
91	L5	5297	HMT	O7-C22	2.65	1.41	1.33
91	L5	5297	HMT	C3-C2	-2.54	1.44	1.50
91	L5	5297	HMT	O2-C15	2.44	1.42	1.38
91	L5	5297	HMT	O1-C14	2.41	1.42	1.38
91	L5	5297	HMT	C21-C22	2.28	1.55	1.50

All (15) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
91	L5	5297	HMT	O4-C19-C20	5.73	121.75	111.24
91	L5	5297	HMT	O7-C22-C21	5.06	120.05	111.16
91	L5	5297	HMT	C3-O4-C19	-3.88	111.14	117.24
91	L5	5297	HMT	O1-C14-C13	3.29	132.23	127.86
91	L5	5297	HMT	O2-C15-C16	3.04	131.90	127.86
91	L5	5297	HMT	C25-C24-C20	-2.83	108.74	115.34
91	L5	5297	HMT	O4-C19-O5	-2.59	119.37	123.95

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
91	L5	5297	HMT	C17-O1-C14	2.42	108.55	105.32
91	L5	5297	HMT	O5-C19-C20	-2.32	118.88	124.07
91	L5	5297	HMT	C10-N1-C9	-2.19	101.58	107.65
91	L5	5297	HMT	C18-O3-C2	-2.15	112.97	116.53
91	L5	5297	HMT	C13-C5-C6	-2.12	117.08	119.39
91	L5	5297	HMT	C16-C15-C14	-2.10	119.40	122.03
90	L5	5296	3HE	C9-C13-C12	-2.10	110.94	114.46
91	L5	5297	HMT	C17-O2-C15	2.09	108.12	105.32

There are no chirality outliers.

All (48) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
91	L5	5297	HMT	C1-C2-O3-C18
91	L5	5297	HMT	C3-C2-O3-C18
91	L5	5297	HMT	C25-C26-C27-O9
88	L5	5292	SPM	C7-C8-C9-N10
91	L5	5297	HMT	C21-C22-O7-C23
88	L5	5265	SPM	N5-C6-C7-C8
89	L5	5288	SPD	N6-C7-C8-C9
88	L5	5268	SPM	N10-C11-C12-C13
88	L5	5289	SPM	N10-C11-C12-C13
91	L5	5297	HMT	O8-C22-O7-C23
88	L5	5264	SPM	C7-C8-C9-N10
88	L5	5265	SPM	C8-C9-N10-C11
88	L5	5265	SPM	C12-C11-N10-C9
88	L5	5289	SPM	C7-C6-N5-C4
89	L5	5291	SPD	C4-C5-N6-C7
89	L5	5285	SPD	C2-C3-C4-C5
89	L5	5287	SPD	C3-C4-C5-N6
91	L5	5297	HMT	C25-C26-C27-C28
91	L5	5297	HMT	C25-C26-C27-C29
88	L5	5289	SPM	C7-C8-C9-N10
88	L5	5264	SPM	C6-C7-C8-C9
88	L5	5259	SPM	C6-C7-C8-C9
89	L5	5283	SPD	C2-C3-C4-C5
88	L5	5289	SPM	C6-C7-C8-C9
89	L5	5262	SPD	C2-C3-C4-C5
88	L5	5264	SPM	C11-C12-C13-N14
88	L5	5289	SPM	N1-C2-C3-C4
89	L5	5284	SPD	C7-C8-C9-N10
91	L5	5297	HMT	C20-C24-C25-C26

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Mol	Chain	Res	Type	Atoms
89	L5	5291	SPD	N6-C7-C8-C9
88	L5	5292	SPM	N10-C11-C12-C13
89	L5	5287	SPD	C4-C5-N6-C7
89	L5	5287	SPD	C2-C3-C4-C5
88	L5	5292	SPM	C8-C9-N10-C11
89	L5	5290	SPD	C7-C8-C9-N10
88	L5	5268	SPM	C8-C9-N10-C11
89	LN	301	SPD	C8-C7-N6-C5
89	L5	5290	SPD	C2-C3-C4-C5
88	L5	5293	SPM	C7-C6-N5-C4
88	L5	5265	SPM	C7-C6-N5-C4
89	L5	5285	SPD	N6-C7-C8-C9
88	L5	5265	SPM	C6-C7-C8-C9
90	L5	5296	3HE	C7-C8-C9-C10
89	L5	5284	SPD	C8-C7-N6-C5
88	L5	5259	SPM	C11-C12-C13-N14
89	L5	5288	SPD	C7-C8-C9-N10
89	L5	5284	SPD	N1-C2-C3-C4
88	L5	5268	SPM	C7-C8-C9-N10

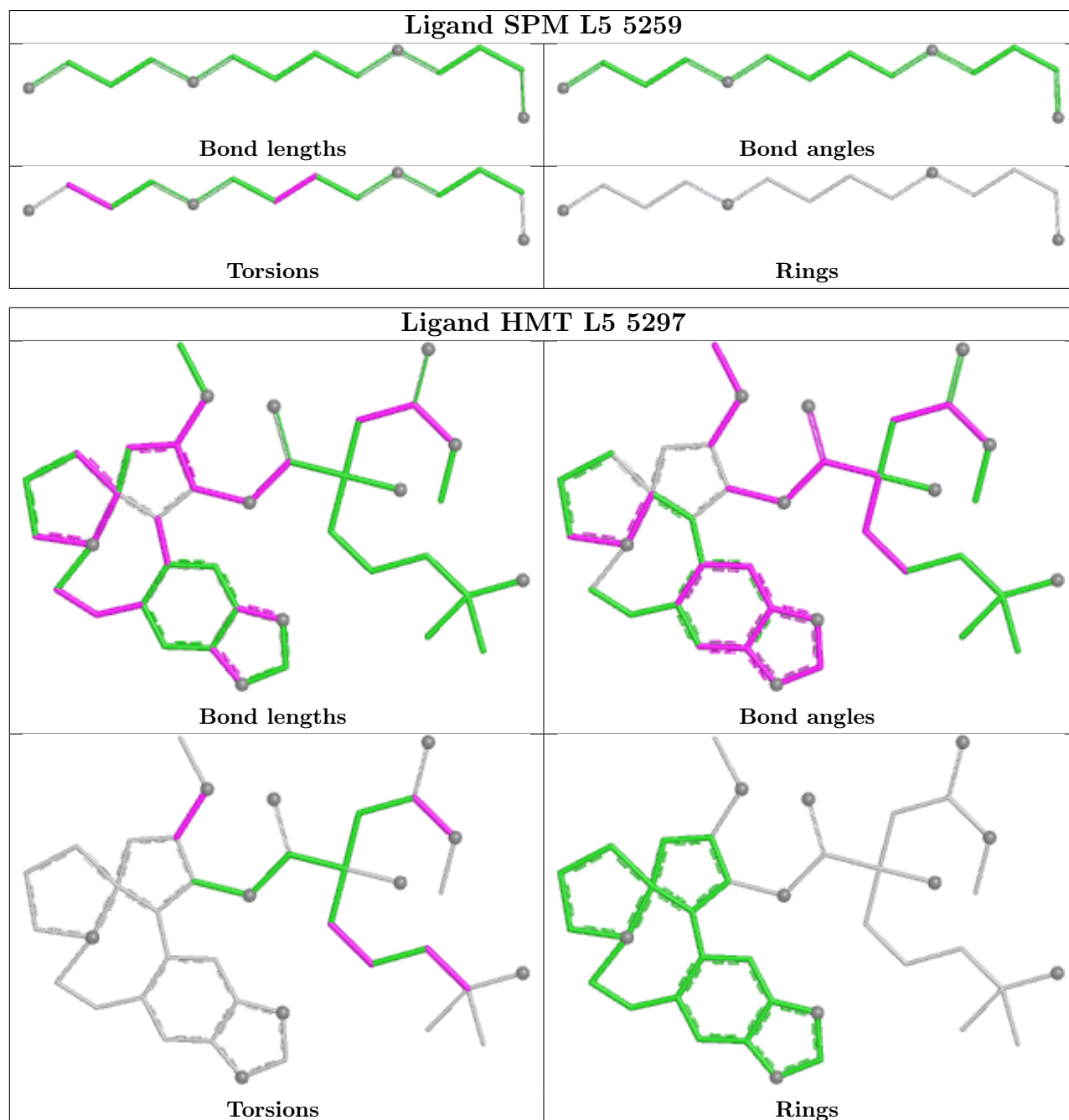
There are no ring outliers.

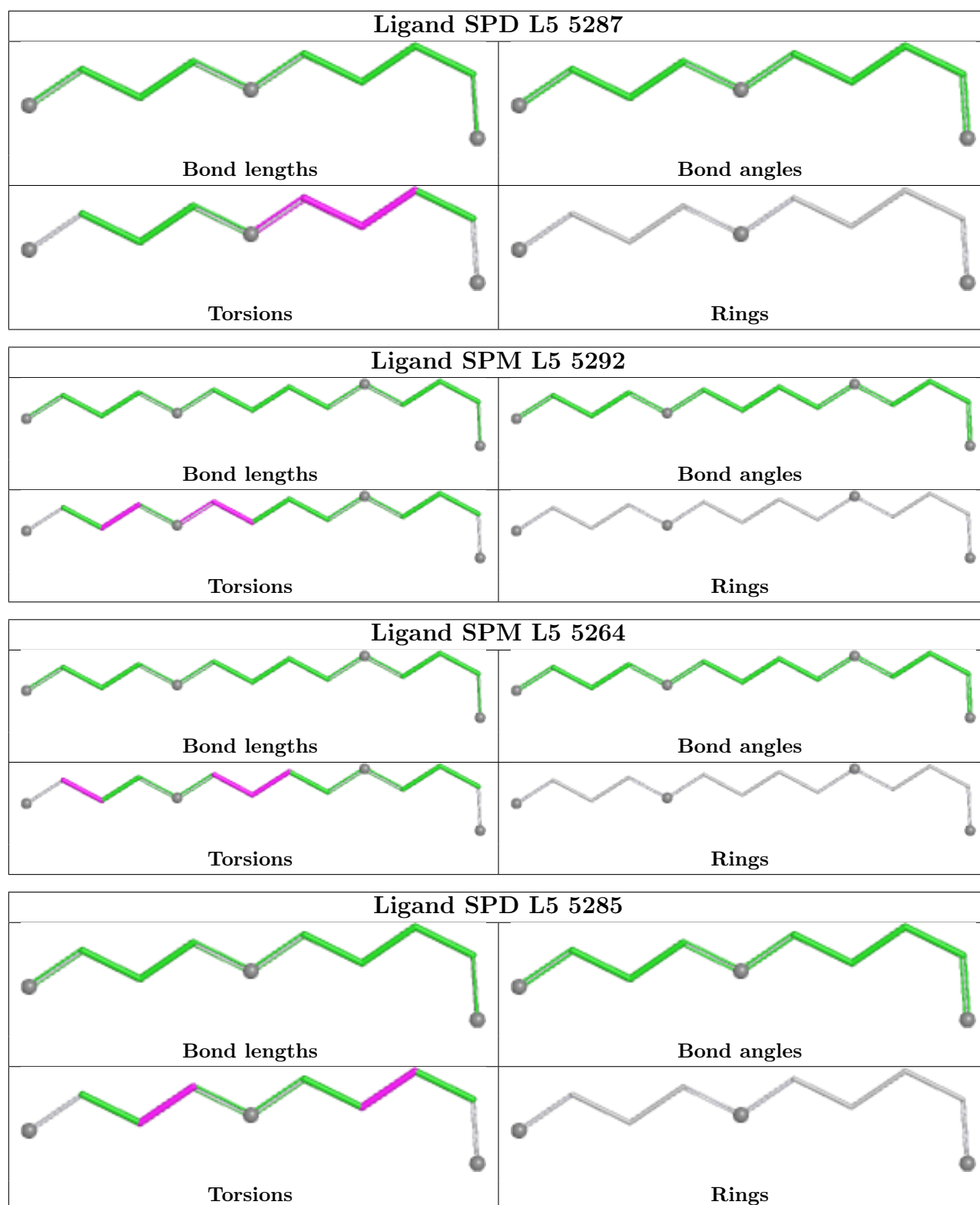
16 monomers are involved in 29 short contacts:

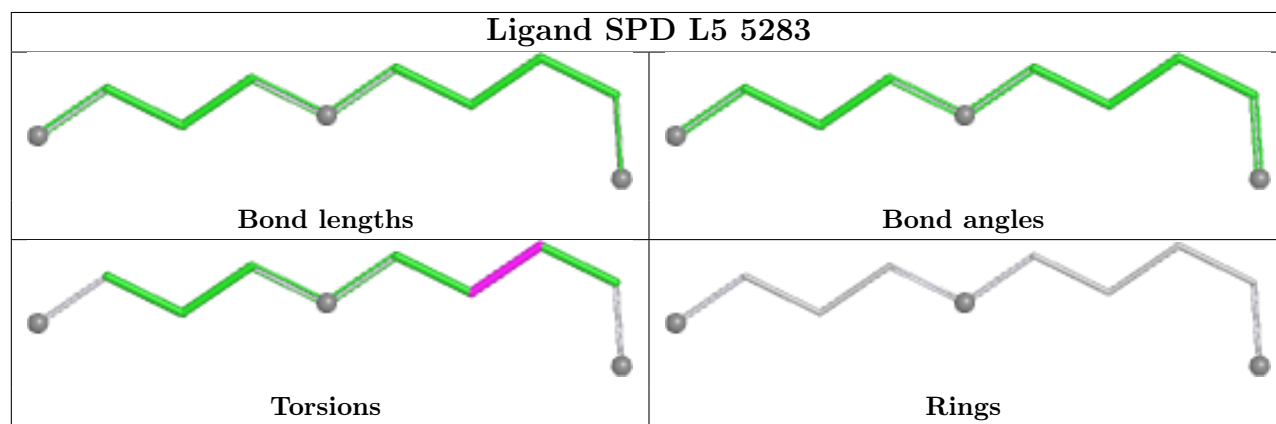
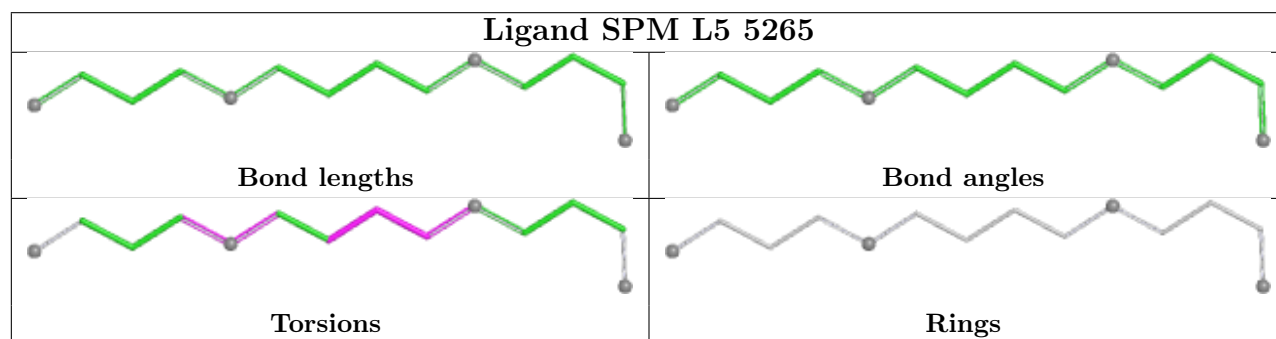
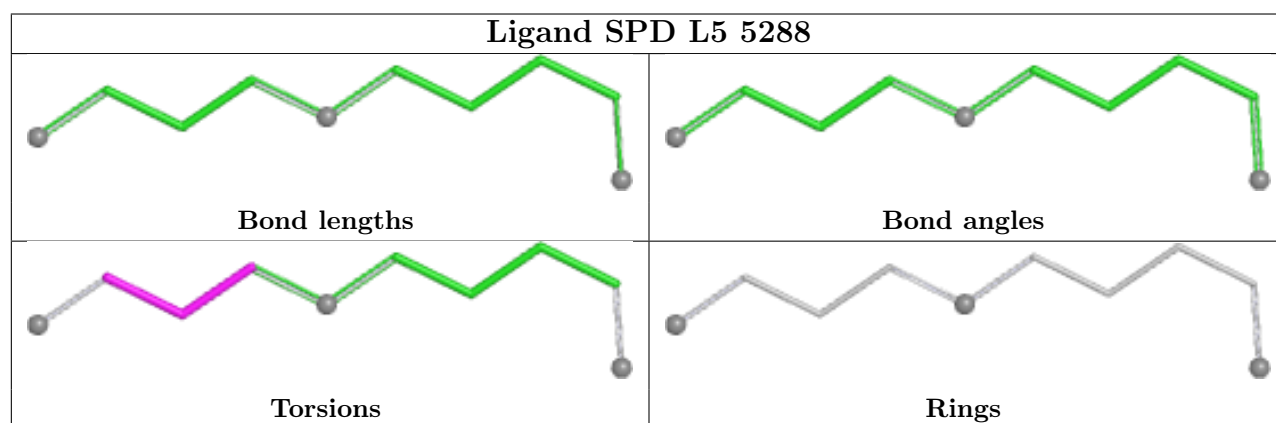
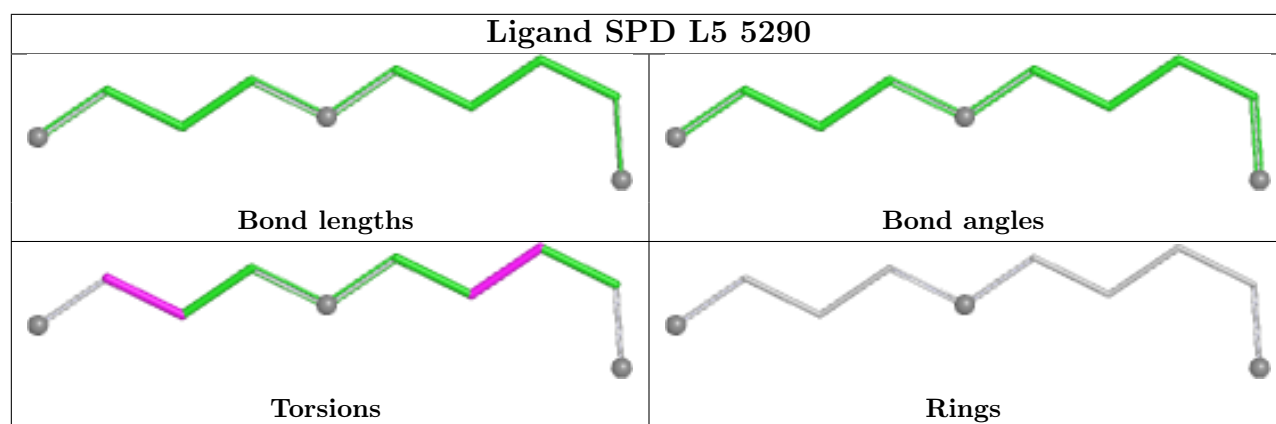
Mol	Chain	Res	Type	Clashes	Symm-Clashes
88	L5	5259	SPM	1	0
91	L5	5297	HMT	8	0
89	L5	5287	SPD	1	0
88	L5	5292	SPM	1	0
89	L5	5285	SPD	2	0
89	L5	5290	SPD	2	0
89	L5	5288	SPD	1	0
88	L5	5265	SPM	2	0
89	L5	5284	SPD	2	0
89	LN	301	SPD	2	0
90	L5	5296	3HE	2	0
88	L5	5289	SPM	1	0
89	L5	5291	SPD	1	0
88	L5	5268	SPM	1	0
88	L5	5293	SPM	2	0
89	L5	5262	SPD	1	0

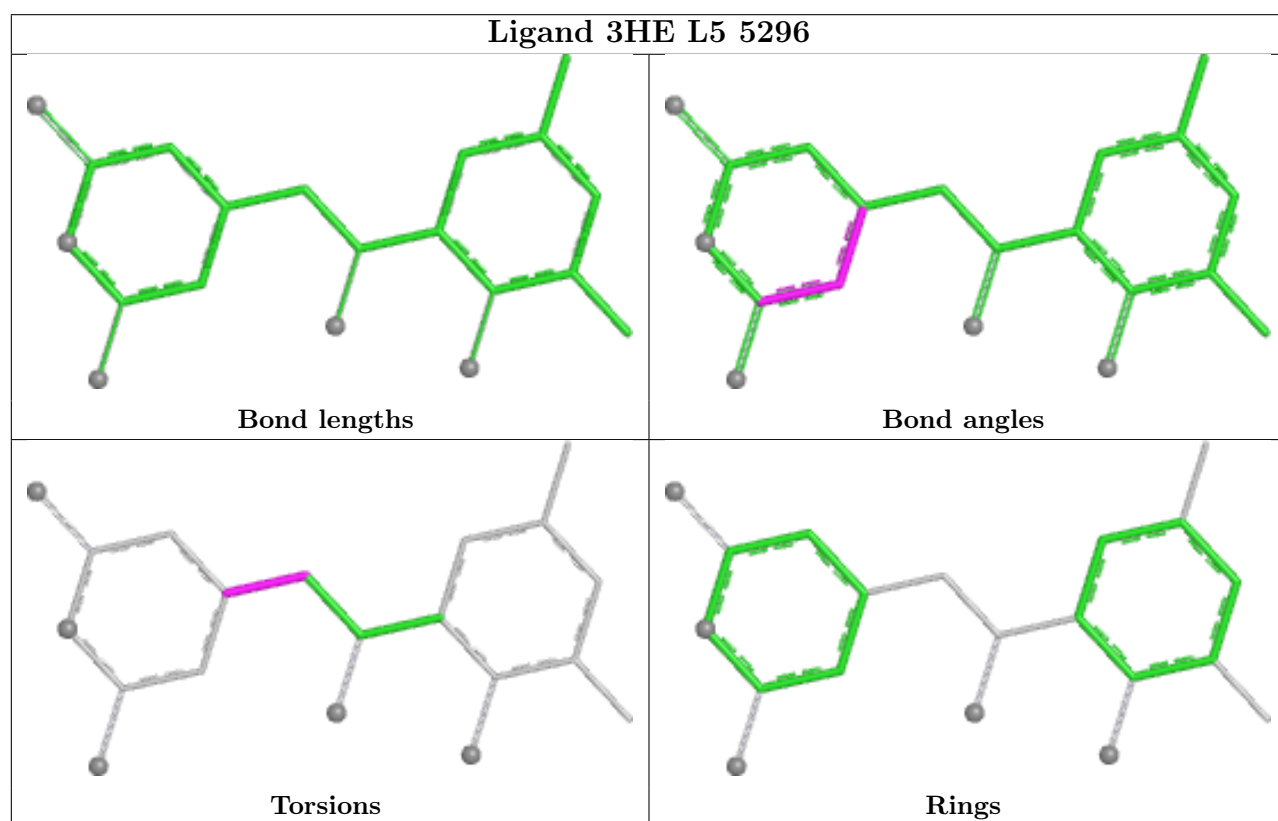
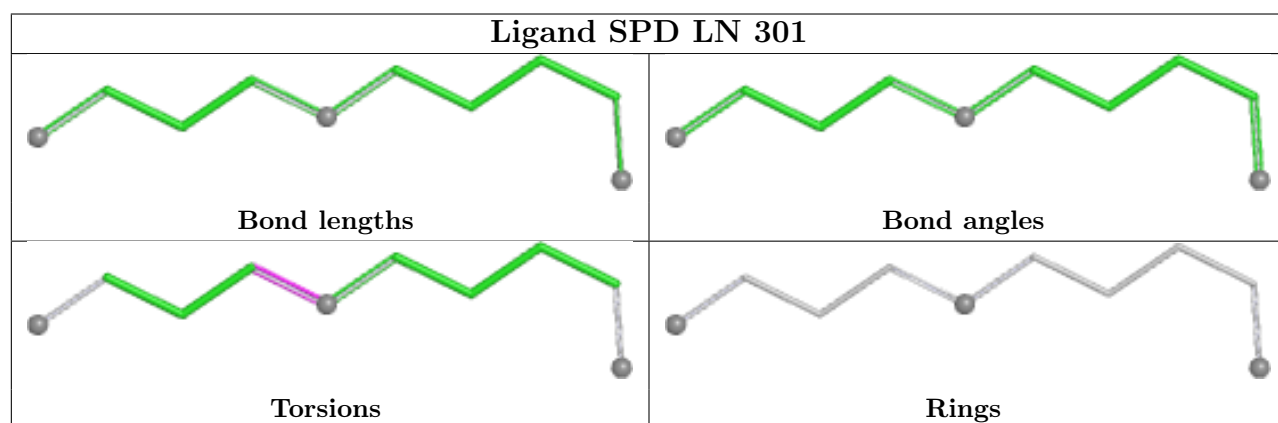
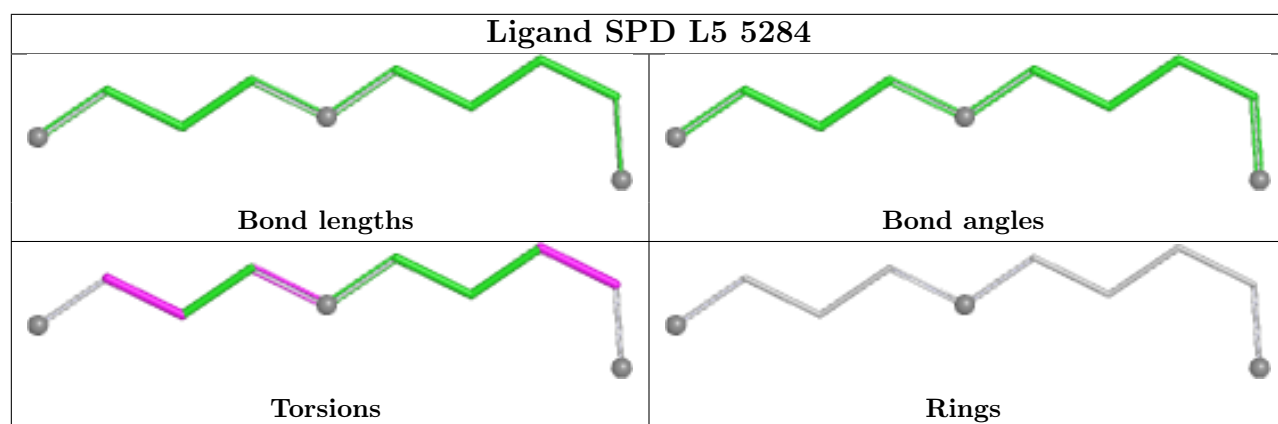
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths,

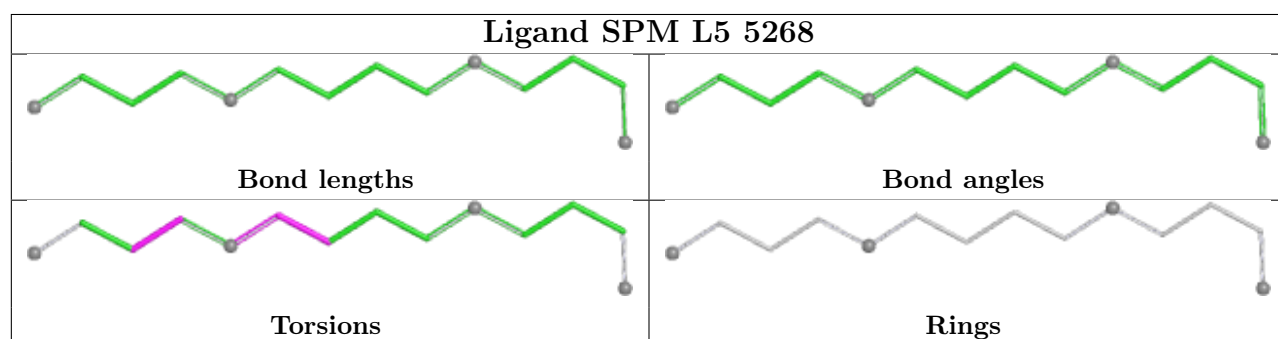
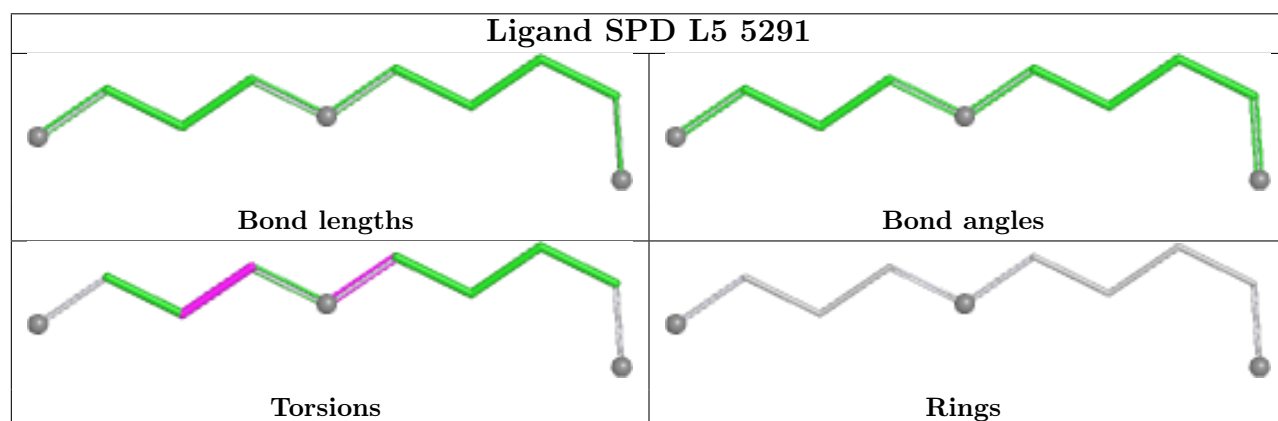
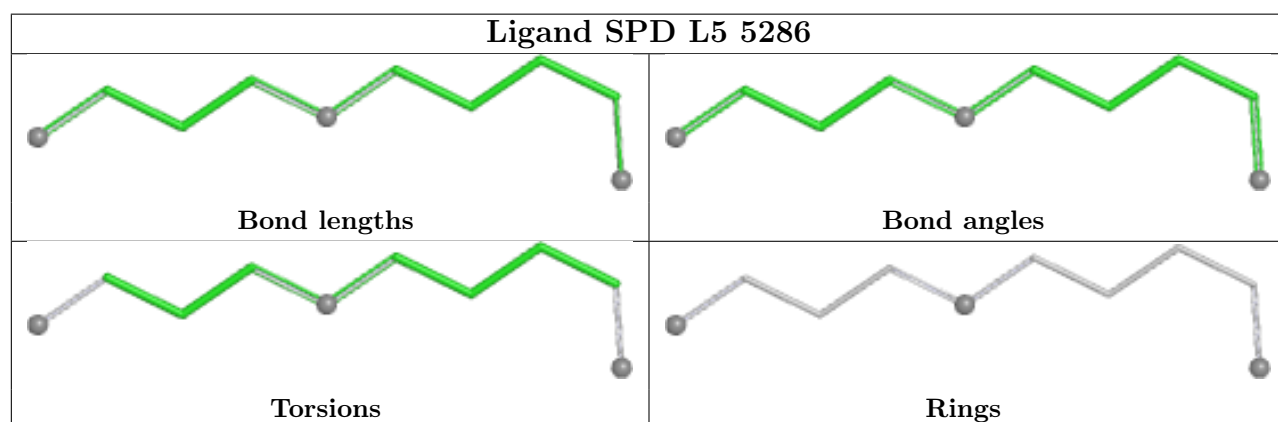
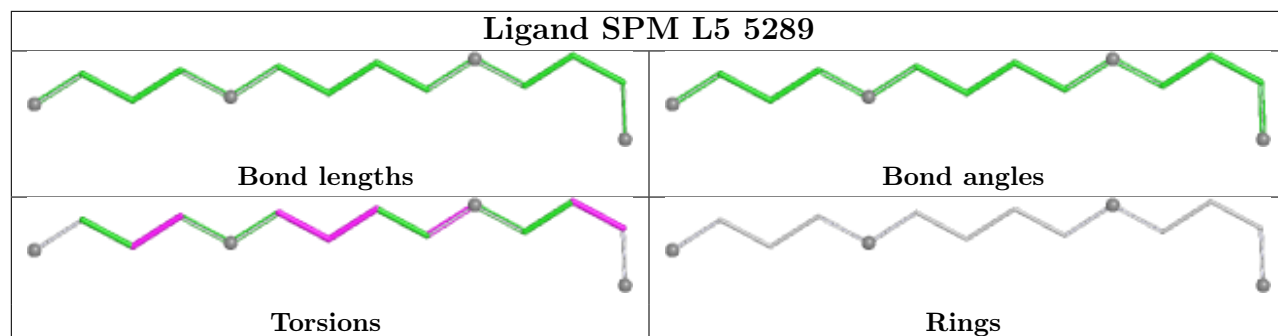
bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within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

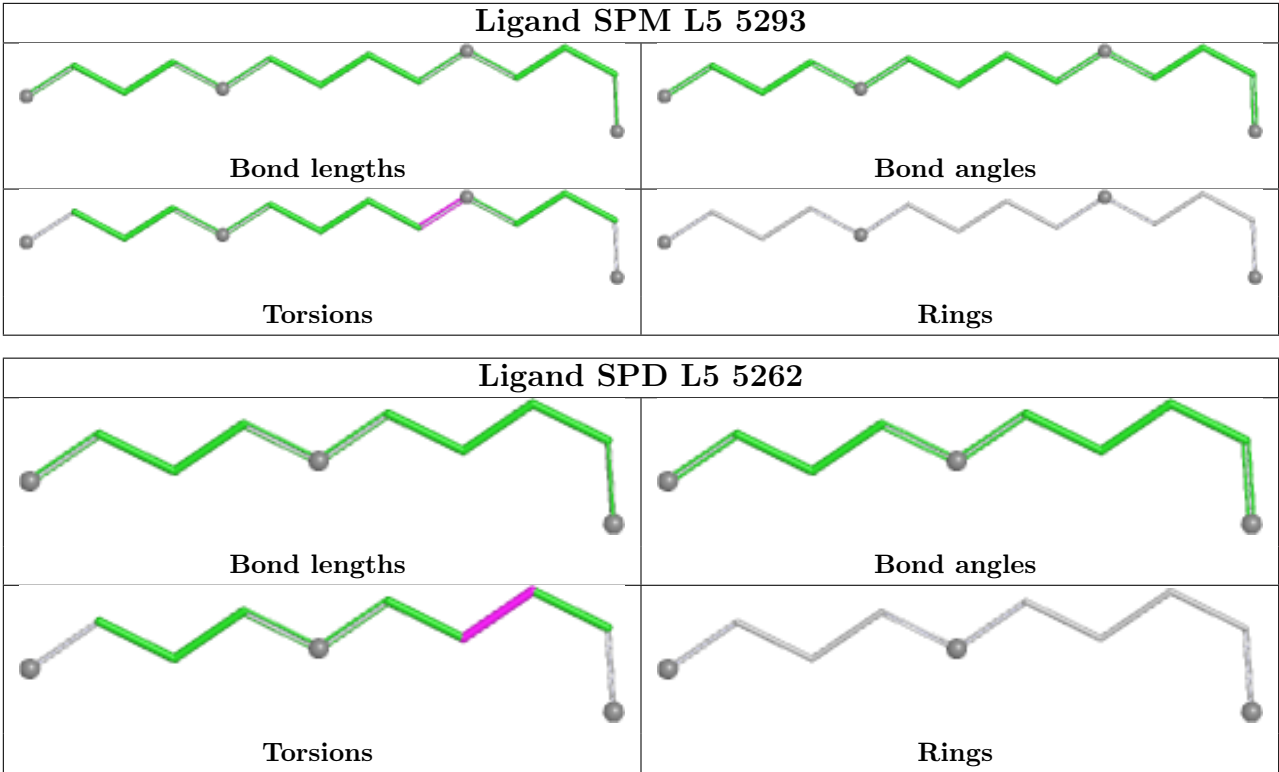












5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

The following chains have linkage breaks:

Mol	Chain	Number of breaks
4	L5	10
84	S2	5
1	Pt	1
3	AT	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	29.10
1	L5	1706:A	O3'	1716:G	P	22.00
1	L5	2910:G	O3'	3584:C	P	21.10
1	L5	760:G	O3'	903:C	P	17.10
1	L5	519:C	O3'	642:G	P	15.85
1	L5	4776:G	O3'	4858:C	P	14.95

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Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	S2	698:G	O3'	730:C	P	14.89
1	L5	2112:G	O3'	2249:C	P	14.72
1	L5	3954:A	O3'	4056:A	P	13.01
1	S2	739:C	O3'	746:C	P	12.79
1	L5	990:C	O3'	1064:G	P	12.33
1	Pt	15:G	O3'	18:G	P	10.04
1	L5	1222:A	O3'	1234:G	P	9.20
1	S2	225:G	O3'	287:U	P	7.57
1	L5	1100:U	O3'	1167:C	P	7.12
1	AT	16:C	O3'	18:G	P	4.52
1	S2	1831:A	O3'	1832:6MZ	P	4.22

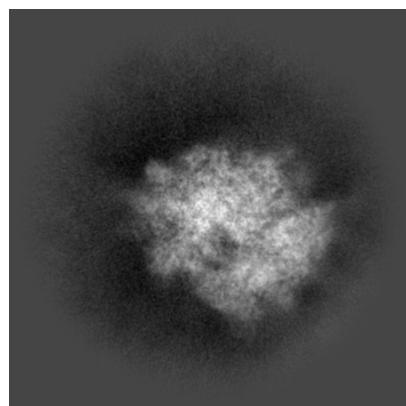
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-71343. These allow visual inspection of the internal detail of the map and identification of artifacts.

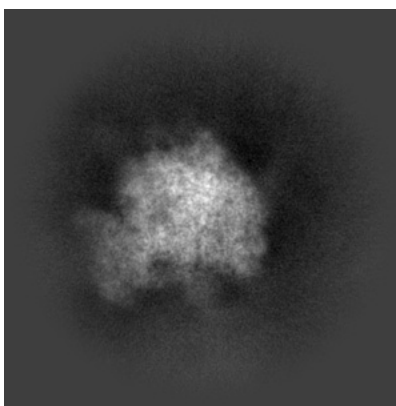
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

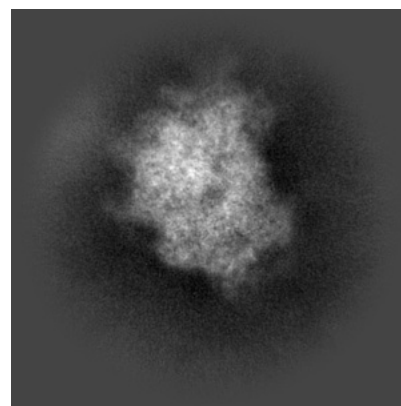
6.1.1 Primary map



X

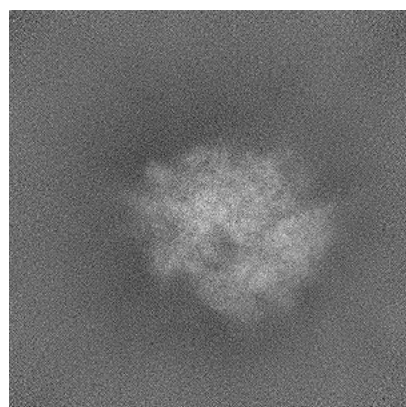


Y

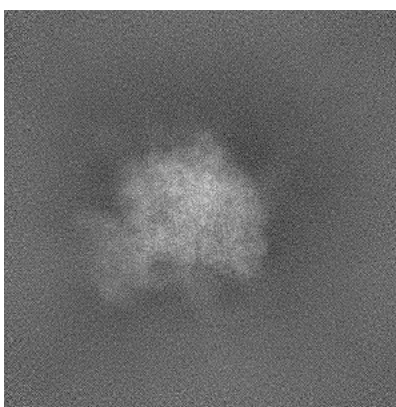


Z

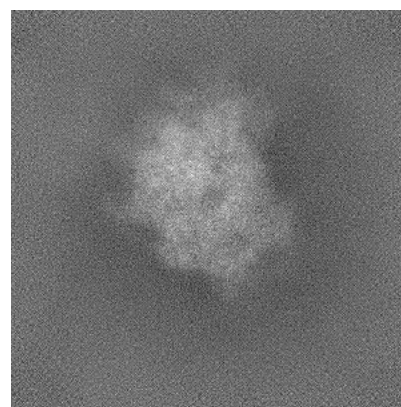
6.1.2 Raw map



X



Y

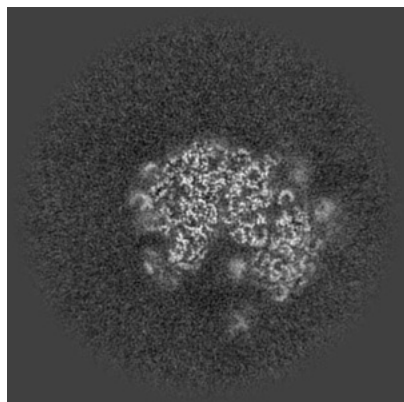


Z

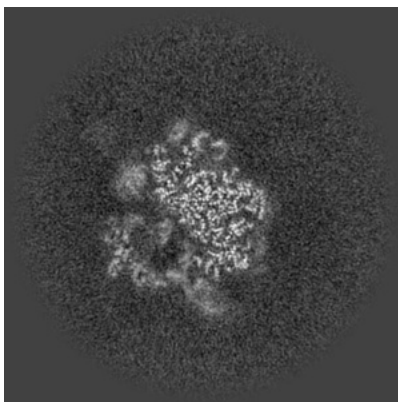
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

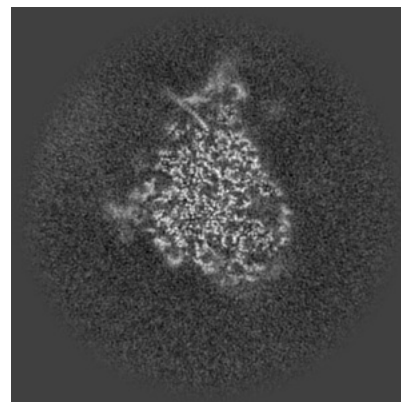
6.2.1 Primary map



X Index: 256

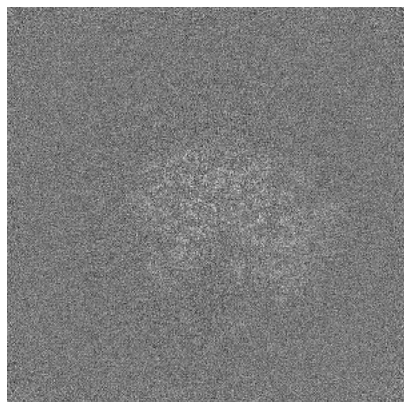


Y Index: 256

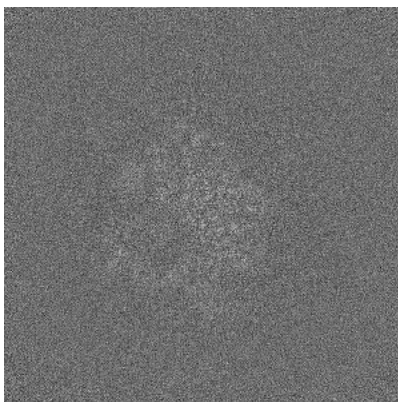


Z Index: 256

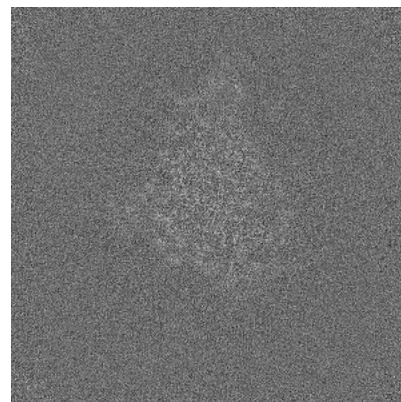
6.2.2 Raw map



X Index: 256



Y Index: 256

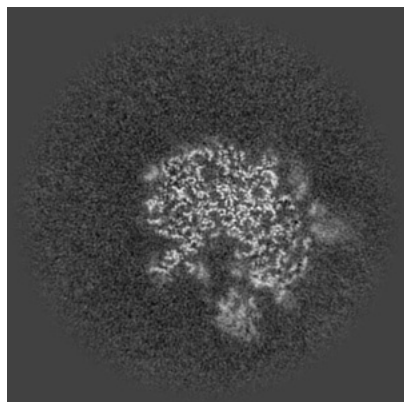


Z Index: 256

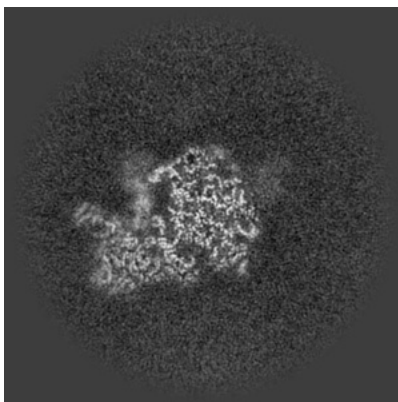
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

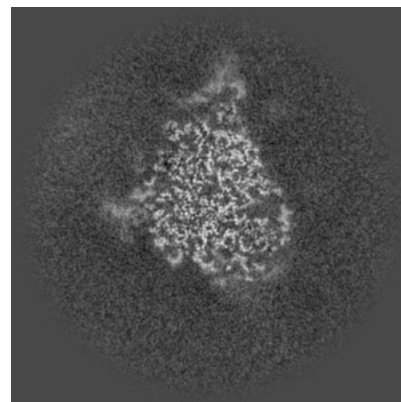
6.3.1 Primary map



X Index: 243

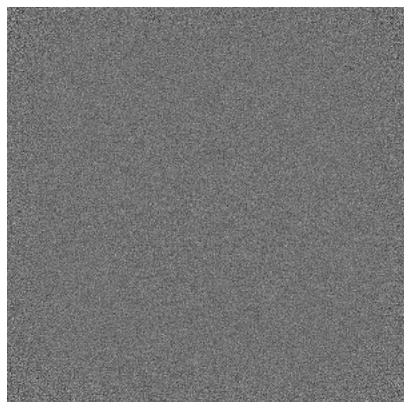


Y Index: 295

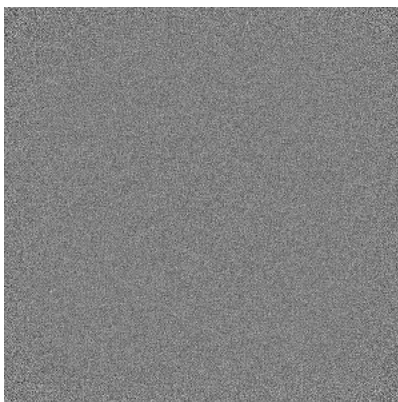


Z Index: 258

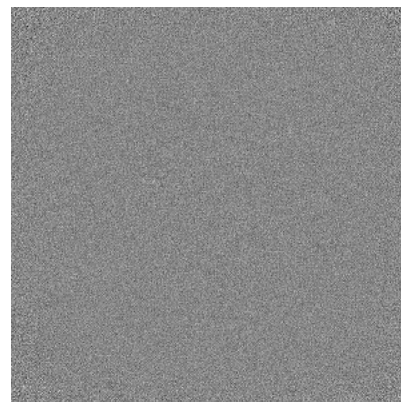
6.3.2 Raw map



X Index: 0



Y Index: 0

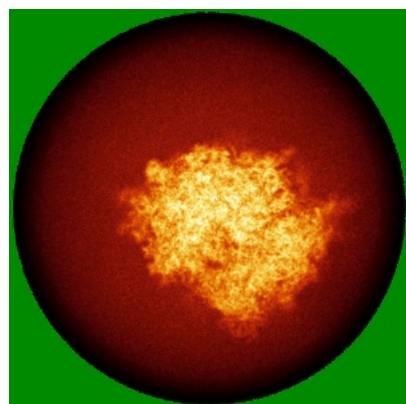


Z Index: 0

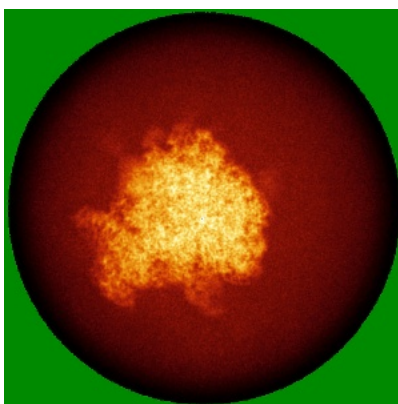
The images above show the largest variance slices of the map in three orthogonal directions.

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

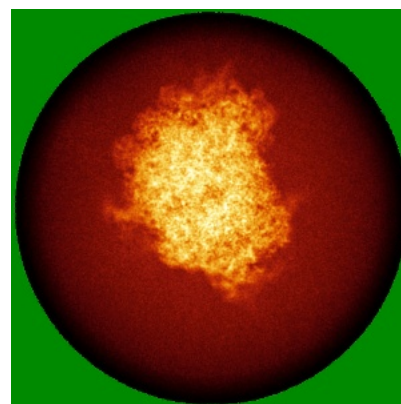
6.4.1 Primary map



X

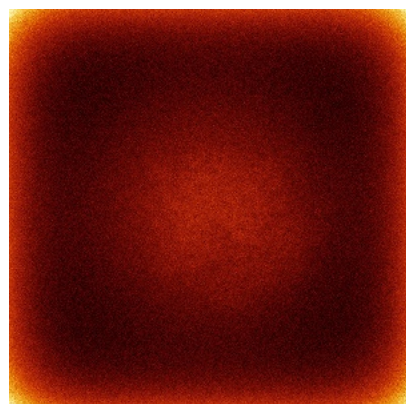


Y

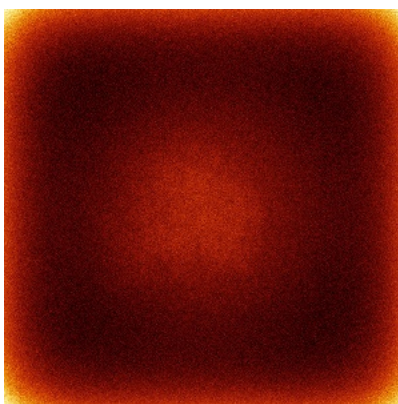


Z

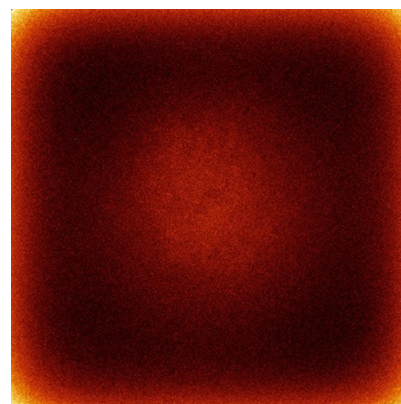
6.4.2 Raw map



X



Y

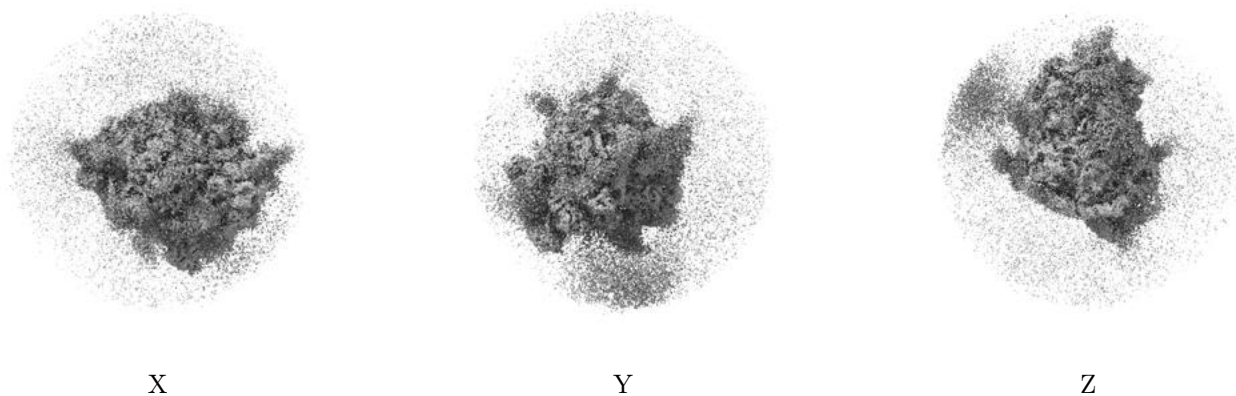


Z

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.

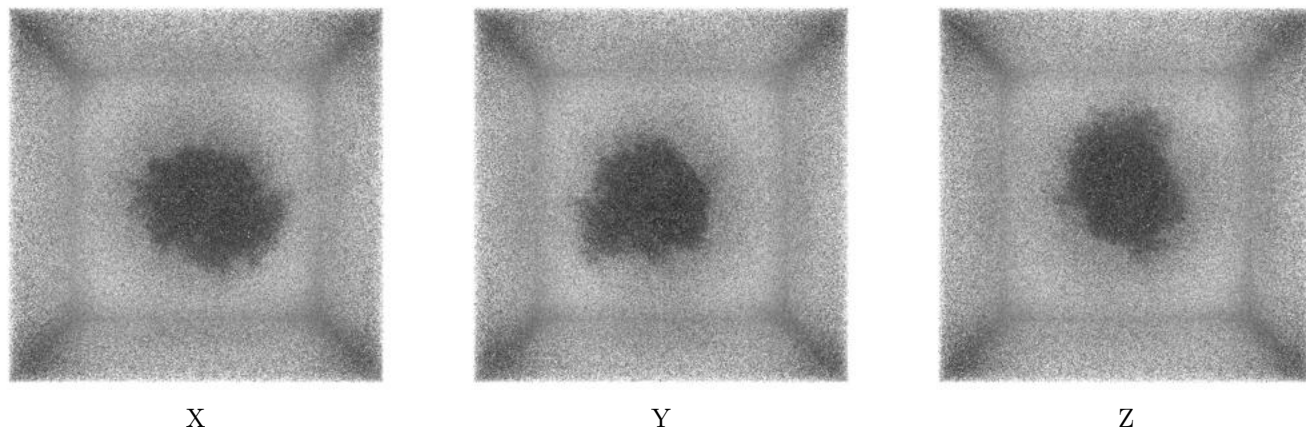
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.0792. 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.

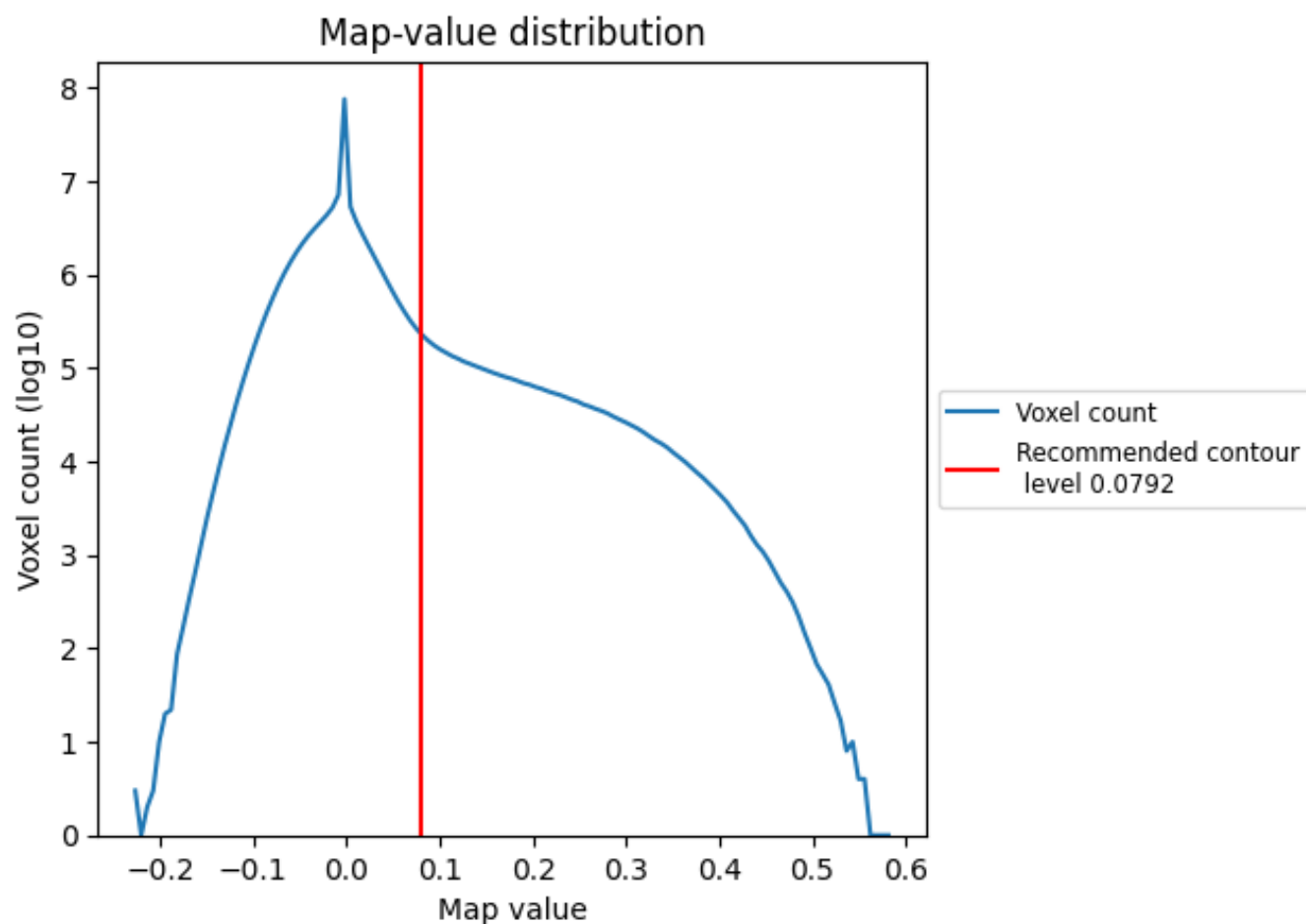
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

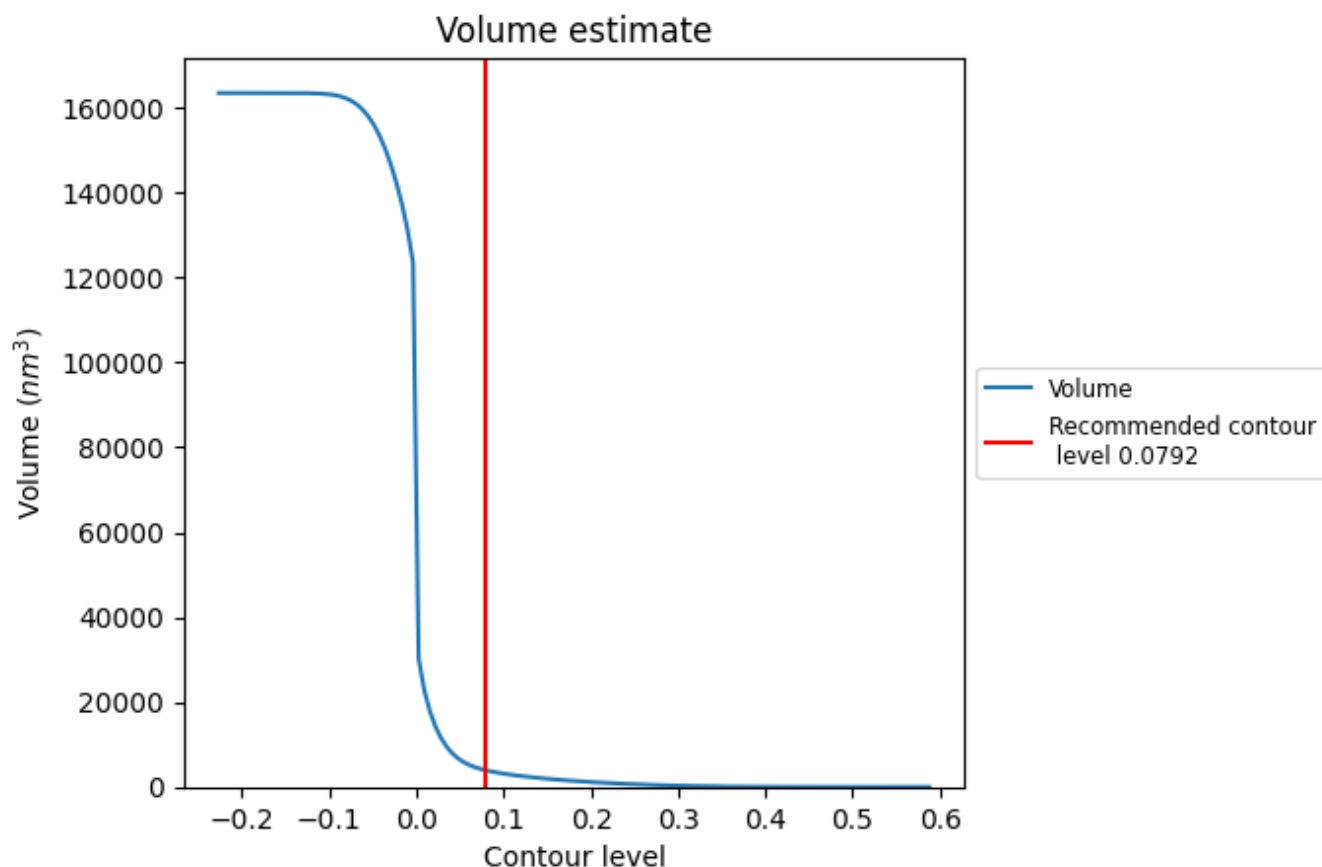
This section contains the results of statistical analysis of the map.

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.

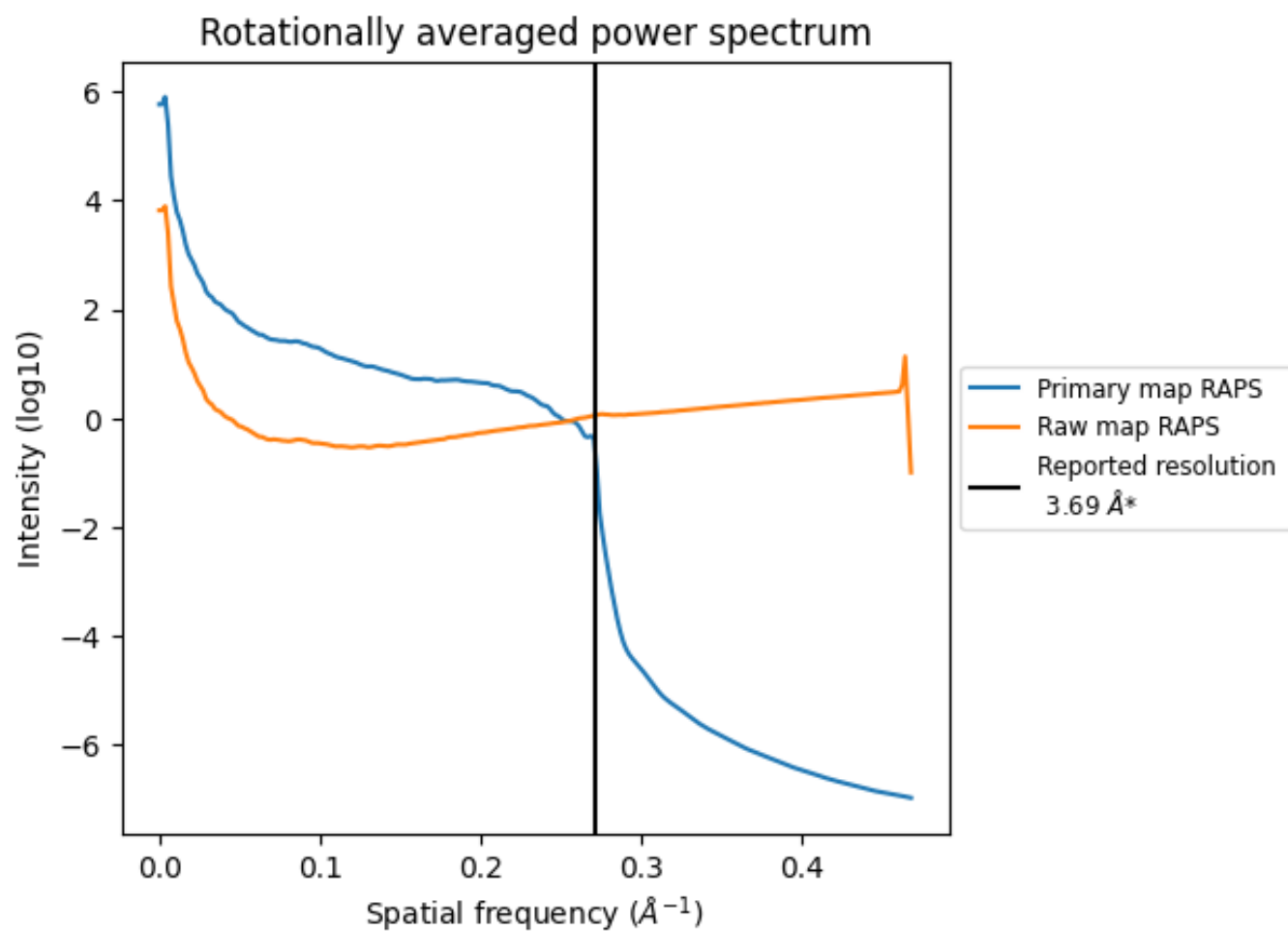
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 3944 nm³; this corresponds to an approximate mass of 3563 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](#)

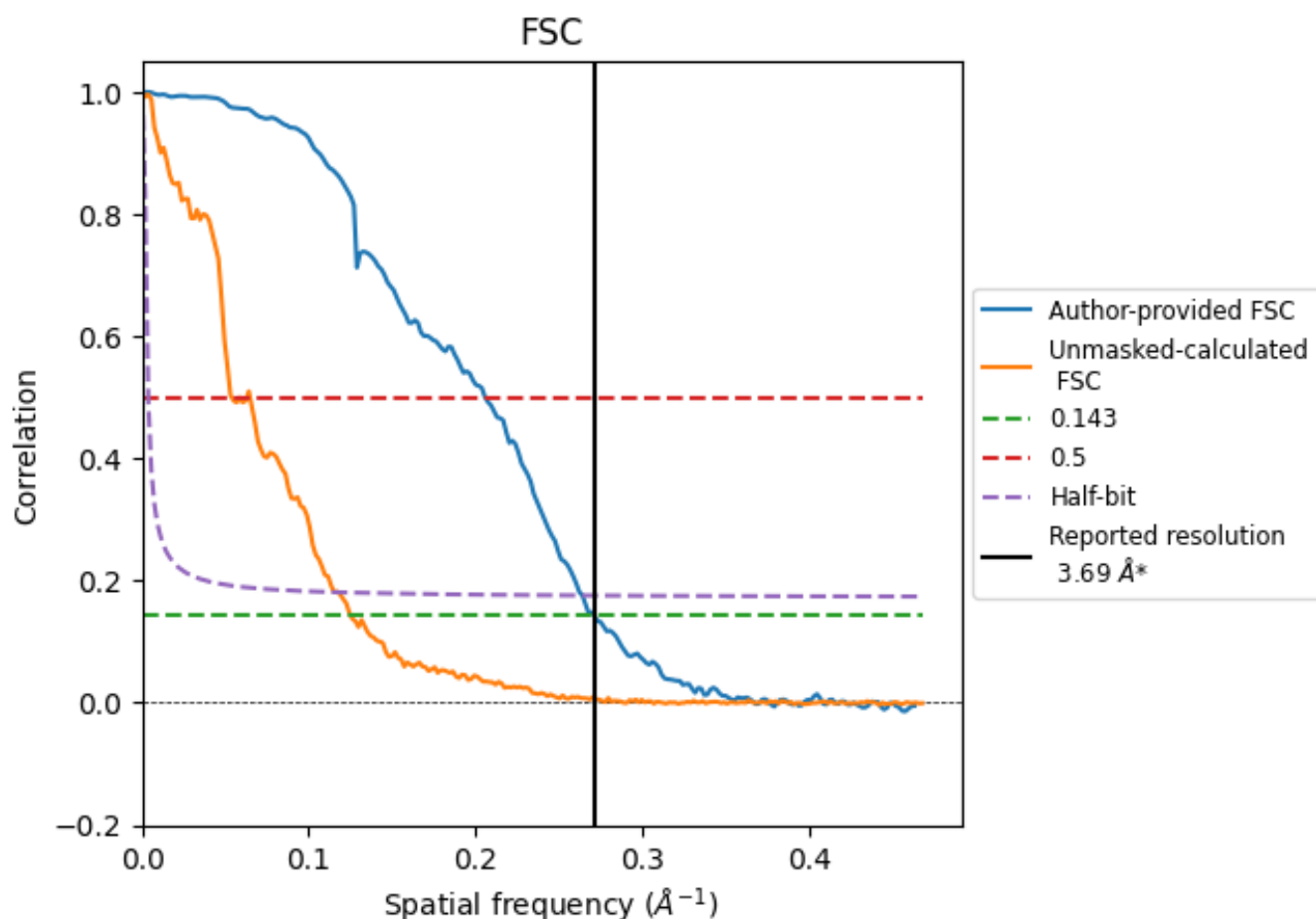


*Reported resolution corresponds to spatial frequency of 0.271 $\text{\AA}^{-1}$

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 0.271 Å⁻¹

8.2 Resolution estimates [i](#)

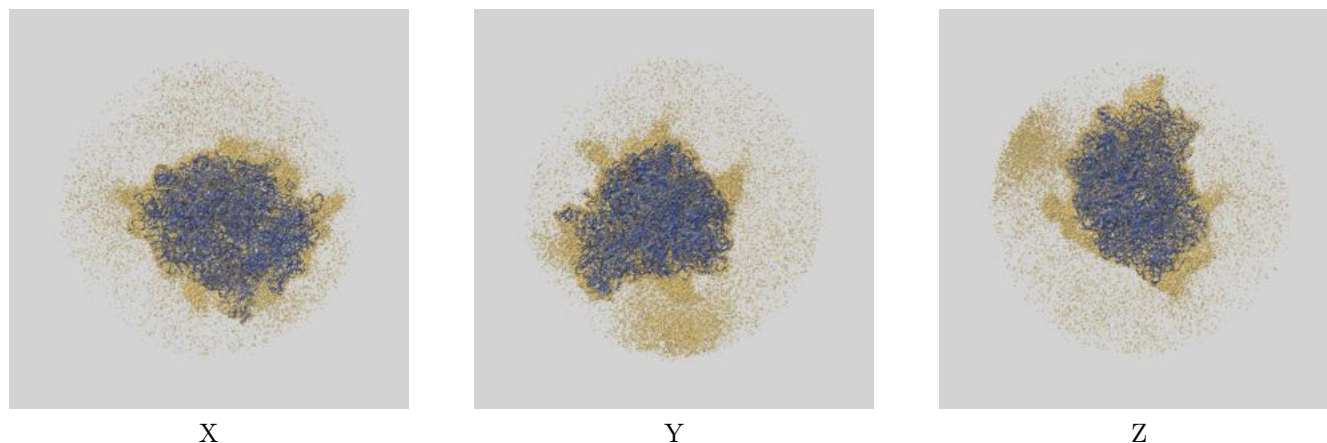
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.69	-	-
Author-provided FSC curve	3.69	4.86	3.79
Unmasked-calculated*	7.99	18.62	8.68

*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 7.99 differs from the reported value 3.69 by more than 10 %

9 Map-model fit [i](#)

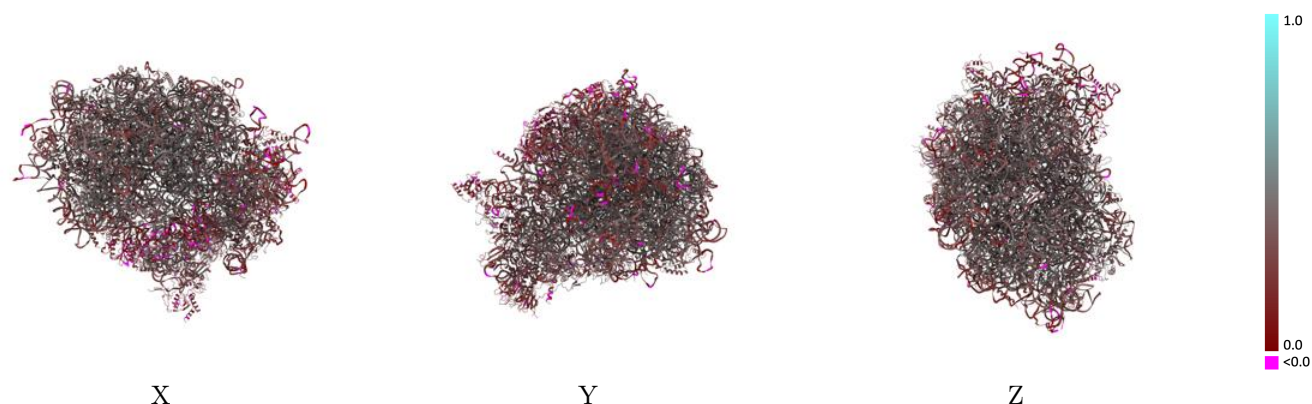
This section contains information regarding the fit between EMDB map EMD-71343 and PDB model 9P7I. Per-residue inclusion information can be found in [section 3](#) on [page 24](#).

9.1 Map-model overlay [i](#)



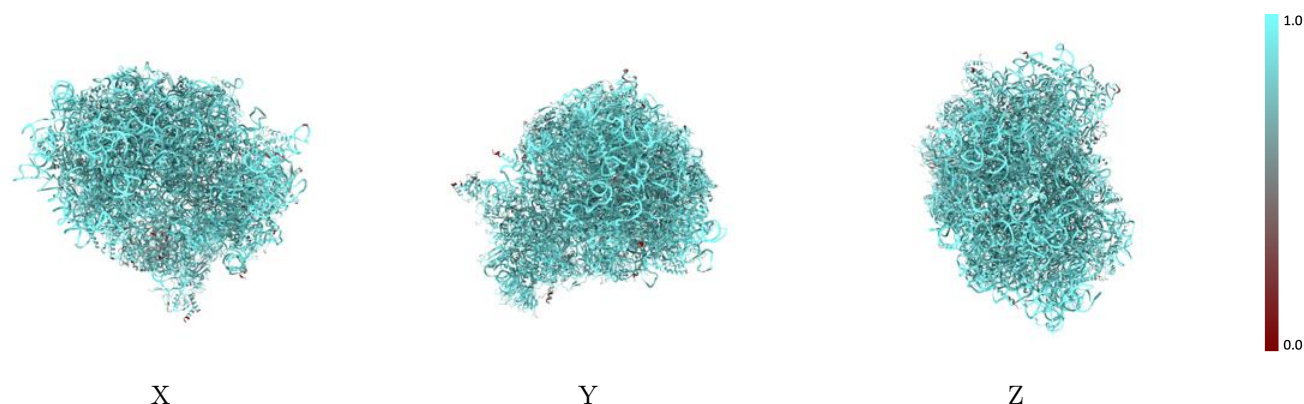
The images above show the 3D surface view of the map at the recommended contour level 0.0792 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



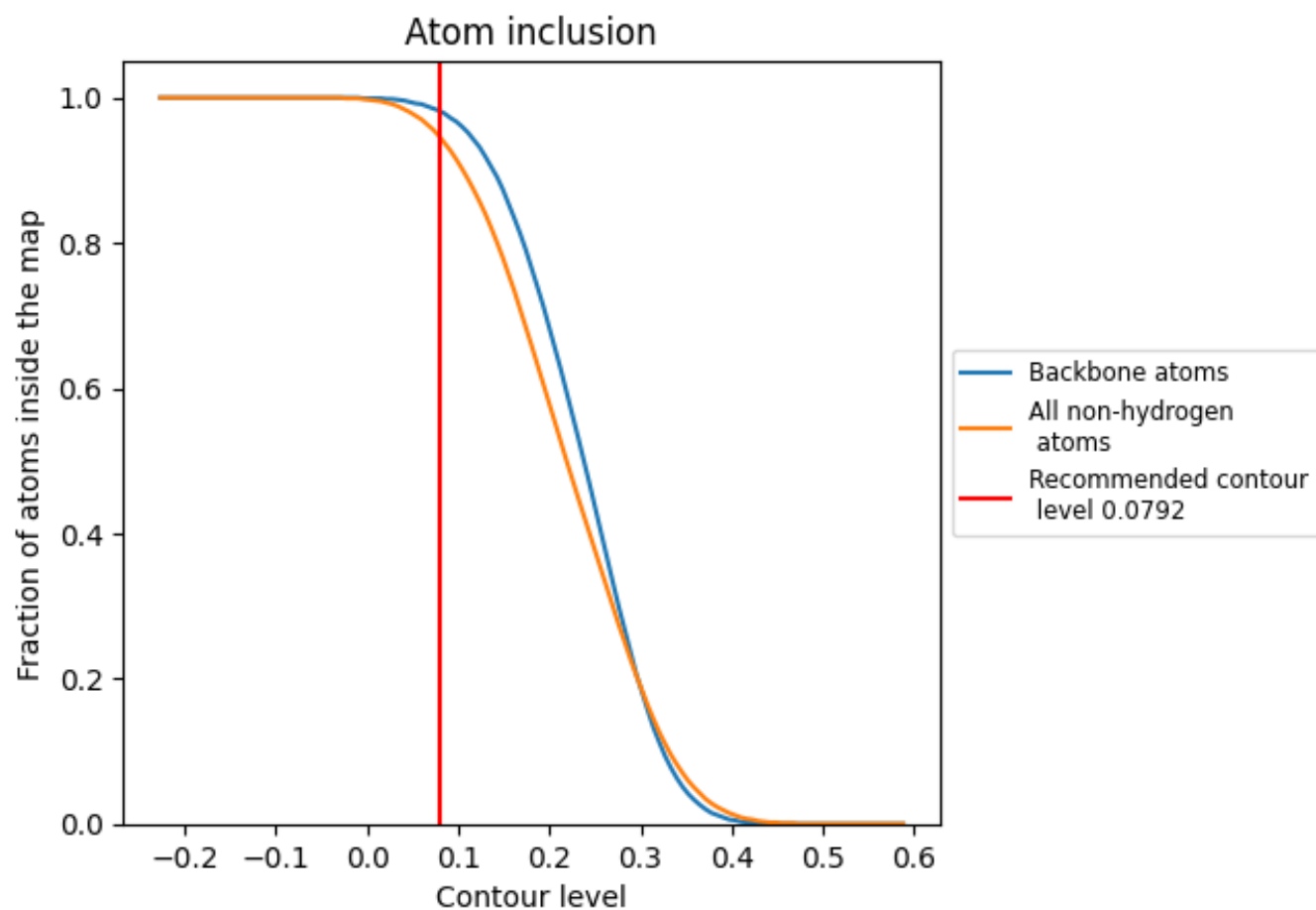
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.0792).

9.4 Atom inclusion [i](#)



At the recommended contour level, 98% of all backbone atoms, 95% 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 (0.0792) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.9470	 0.3500
AT	 0.9810	 0.1780
CF	 0.9350	 0.1700
CI	 0.6780	 0.2330
L5	 0.9890	 0.3700
L7	 0.9970	 0.3910
L8	 0.9920	 0.3830
LA	 0.9450	 0.4280
LB	 0.9070	 0.3980
LC	 0.9140	 0.3970
LD	 0.9090	 0.3510
LE	 0.8960	 0.3490
LF	 0.9080	 0.3820
LG	 0.8780	 0.3450
LH	 0.9090	 0.3830
LI	 0.9070	 0.3860
LJ	 0.8830	 0.3320
LL	 0.8980	 0.3790
LM	 0.9080	 0.3730
LN	 0.9340	 0.4170
LO	 0.9230	 0.3860
LP	 0.9250	 0.4090
LQ	 0.9210	 0.4130
LR	 0.8810	 0.3510
LS	 0.9480	 0.4120
LT	 0.9180	 0.4020
LU	 0.9110	 0.3230
LV	 0.9290	 0.4220
LW	 0.8550	 0.2890
LX	 0.9070	 0.3910
LY	 0.9340	 0.3740
LZ	 0.9190	 0.3820
La	 0.9410	 0.4170
Lb	 0.8650	 0.3290
Lc	 0.9000	 0.3730



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Chain	Atom inclusion	Q-score
Ld	 0.9230	 0.3960
Le	 0.9260	 0.4080
Lf	 0.9390	 0.4280
Lg	 0.9380	 0.3990
Lh	 0.8710	 0.3500
Li	 0.9050	 0.3680
Lj	 0.9510	 0.4160
Lk	 0.8730	 0.3550
Ll	 0.9460	 0.3890
Lm	 0.9230	 0.3880
Ln	 0.9140	 0.3750
Lo	 0.9140	 0.4000
Lp	 0.9350	 0.4010
Lr	 0.9190	 0.4130
Ls	 0.6770	 0.1400
Lt	 0.6410	 0.1270
Pt	 0.9650	 0.3210
S2	 0.9880	 0.3450
SA	 0.8910	 0.3450
SB	 0.8810	 0.3630
SC	 0.9210	 0.3720
SD	 0.8870	 0.3160
SE	 0.9150	 0.3250
SF	 0.8540	 0.3020
SG	 0.8760	 0.2450
SH	 0.8390	 0.3010
SI	 0.9030	 0.3350
SJ	 0.8780	 0.3040
SK	 0.9010	 0.2680
SL	 0.8790	 0.3600
SM	 0.7530	 0.1680
SN	 0.8910	 0.3720
SO	 0.9030	 0.3690
SP	 0.8620	 0.2990
SQ	 0.8890	 0.3000
SR	 0.8710	 0.3050
SS	 0.8450	 0.2890
ST	 0.8960	 0.2960
SU	 0.8890	 0.2820
SV	 0.9030	 0.3470
SW	 0.9230	 0.3800
SX	 0.9190	 0.3570

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Chain	Atom inclusion	Q-score
SY	 0.8410	 0.2540
SZ	 0.8150	 0.2760
Sa	 0.9300	 0.3790
Sb	 0.8870	 0.3710
Sc	 0.8660	 0.3150
Sd	 0.9320	 0.3360
Se	 0.8400	 0.2610
Sf	 0.8120	 0.1890
Sg	 0.8730	 0.2350
Zt	 0.9320	 0.1530