



Full wwPDB EM Validation Report ⓘ

Jun 23, 2026 – 12:23 PM JST

PDB ID : 7F5S / pdb_00007f5s
EMDB ID : EMD-31465
Title : human delta-METTL18 60S ribosome
Authors : Takahashi, M.; Kashiwagi, K.; Ito, T.
Deposited on : 2021-06-22
Resolution : 2.72 Å(reported)

This is a Full wwPDB EM Validation Report for a publicly released PDB entry.

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

<https://www.wwpdb.org/validation/2017/EMValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

The following versions of software and data (see [references ⓘ](#)) were used in the production of this report:

EMDB validation analysis : 0.0.1.dev132
Mogul : 1.8.5 (274361), CSD as541be (2020)
MolProbity : 4-5-2 with Phenix2.0
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.49

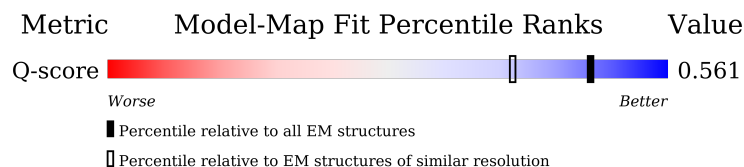
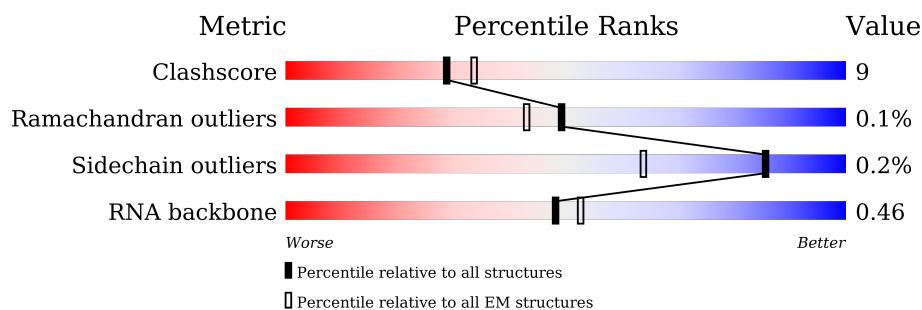
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 2.72 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



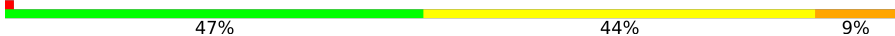
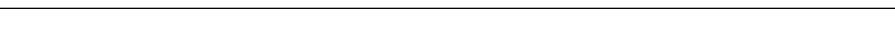
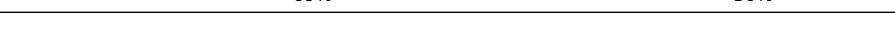
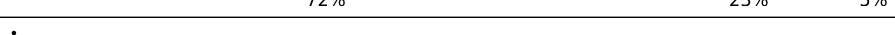
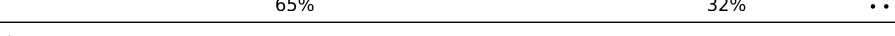
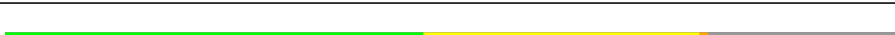
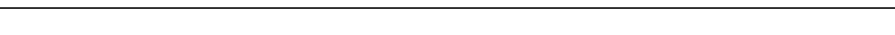
Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
RNA backbone	8273	3508	-
Q-score	-	25397	10355 (2.22 - 3.22)

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	LA	257	78% 18% .
2	LB	403	72% 27% .
3	L5	5070	35% 28% 10% 27% .

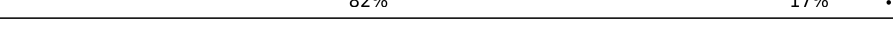
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Mol	Chain	Length	Quality of chain
4	L7	120	
5	L8	156	
6	LC	427	
7	LD	297	
8	LE	288	
9	LF	248	
10	LG	266	
11	LH	192	
12	LI	214	
13	LJ	178	
14	LL	211	
15	LM	215	
16	LN	204	
17	LO	203	
18	LP	184	
19	LQ	188	
20	LR	196	
21	LS	176	
22	LT	160	
23	LU	128	
24	LV	140	
25	LW	157	
26	LX	156	
27	LY	145	
28	LZ	136	

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Mol	Chain	Length	Quality of chain
29	La	148	 79%20%
30	Lb	159	 51%17%32%
31	Lc	115	 70%16%15%
32	Ld	125	 63%22%14%
33	Le	135	 70%25%5%
34	Lf	110	 80%16%...
35	Lg	117	 82%15%.
36	Lh	123	 80%20%.
37	Li	105	 84%13%.
38	Lj	97	 74%12%11%
39	Lk	70	 71%27%.
40	Ll	51	 73%25%.
41	Lm	128	 35%5%59%
42	Ln	25	 88%8%.
43	Lo	106	 72%25%.
44	Lp	92	 82%17%.
45	Lr	137	 72%19%9%

2 Entry composition

There are 48 unique types of molecules in this entry. The entry contains 138619 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called 60S ribosomal protein L8.

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

- Molecule 2 is a protein called 60S ribosomal protein L3.

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
3	L5	3715	Total	C	N	O	P	0	0
			79671	35522	14563	25871	3715		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
L5	3818	UY1	U	conflict	GB NR_003287

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

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

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

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

- Molecule 6 is a protein called 60S ribosomal protein L4.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	LC	368	Total	C	N	O	S	0	0
			2928	1841	583	489	15		

- Molecule 7 is a protein called 60S ribosomal protein L5.

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

- Molecule 8 is a protein called 60S ribosomal protein L6.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	LE	223	Total	C	N	O	S	0	0
			1791	1153	338	296	4		

- Molecule 9 is a protein called 60S ribosomal protein L7.

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

- Molecule 10 is a protein called 60S ribosomal protein L7a.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	LG	240	Total	C	N	O	S	0	0
			1922	1226	370	322	4		

- Molecule 11 is a protein called 60S ribosomal protein L9.

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

- Molecule 12 is a protein called 60S ribosomal protein L10.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	LI	204	Total	C	N	O	S	0	0
			1656	1052	319	272	13		

- Molecule 13 is a protein called 60S ribosomal protein L11.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	LJ	175	Total	C	N	O	S	0	0
			1401	882	261	252	6		

- Molecule 14 is a protein called 60S ribosomal protein L13.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	LL	208	Total	C	N	O	S	0	0
			1682	1052	348	278	4		

- Molecule 15 is a protein called 60S ribosomal protein L14.

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

- Molecule 16 is a protein called 60S ribosomal protein L15.

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

- Molecule 17 is a protein called 60S ribosomal protein L13a.

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

- Molecule 18 is a protein called 60S ribosomal protein L17.

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

- Molecule 19 is a protein called 60S ribosomal protein L18.

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

- Molecule 20 is a protein called 60S ribosomal protein L19.

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

- Molecule 21 is a protein called 60S ribosomal protein L18a.

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

- Molecule 22 is a protein called 60S ribosomal protein L21.

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

- Molecule 23 is a protein called 60S ribosomal protein L22.

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

- Molecule 24 is a protein called 60S ribosomal protein L23.

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

- Molecule 25 is a protein called 60S ribosomal protein L24.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	LW	76	Total	C	N	O	S	0	0
			639	403	128	105	3		

- Molecule 26 is a protein called 60S ribosomal protein L23a.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	LX	119	Total	C	N	O	S	0	0
			976	624	183	168	1		

- Molecule 27 is a protein called 60S ribosomal protein L26.

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

- Molecule 28 is a protein called 60S ribosomal protein L27.

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

- Molecule 29 is a protein called 60S ribosomal protein L27a.

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

- Molecule 30 is a protein called 60S ribosomal protein L29.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	Lb	108	Total	C	N	O	S	0	0
			877	546	191	136	4		

- Molecule 31 is a protein called 60S ribosomal protein L30.

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

- Molecule 32 is a protein called 60S ribosomal protein L31.

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

- Molecule 33 is a protein called 60S ribosomal protein L32.

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

- Molecule 34 is a protein called 60S ribosomal protein L35a.

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

- Molecule 35 is a protein called 60S ribosomal protein L34.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	Lg	113	Total	C	N	O	S	0	0
			897	560	185	146	6		

- Molecule 36 is a protein called 60S ribosomal protein L35.

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

- Molecule 37 is a protein called 60S ribosomal protein L36.

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

- Molecule 38 is a protein called 60S ribosomal protein L37.

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

- Molecule 39 is a protein called 60S ribosomal protein L38.

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

- Molecule 40 is a protein called 60S ribosomal protein L39.

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

- Molecule 41 is a protein called Ubiquitin-60S ribosomal protein L40.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	Lm	52	Total	C	N	O	S	0	0
			430	267	90	67	6		

- Molecule 42 is a protein called 60S ribosomal protein L41.

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

- Molecule 43 is a protein called 60S ribosomal protein L36a.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	Lo	103	Total	C	N	O	S	0	0
			842	528	172	136	6		

- Molecule 44 is a protein called 60S ribosomal protein L37a.

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

- Molecule 45 is a protein called 60S ribosomal protein L28.

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

- Molecule 46 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
46	LA	1	Total	Mg	0
			1	1	
46	L5	260	Total	Mg	0
			260	260	
46	L7	3	Total	Mg	0
			3	3	
46	L8	5	Total	Mg	0
			5	5	
46	LI	2	Total	Mg	0
			2	2	
46	LN	1	Total	Mg	0
			1	1	

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Mol	Chain	Residues	Atoms		AltConf
46	LP	1	Total 1	Mg 1	0
46	LR	1	Total 1	Mg 1	0
46	LS	1	Total 1	Mg 1	0
46	LV	1	Total 1	Mg 1	0
46	Le	1	Total 1	Mg 1	0
46	Lf	1	Total 1	Mg 1	0
46	Lg	1	Total 1	Mg 1	0

- Molecule 47 is ZINC ION (CCD ID: ZN) (formula: Zn).

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

- Molecule 48 is water.

Mol	Chain	Residues	Atoms		AltConf
48	L5	11	Total 11	O 11	0
48	LH	1	Total 1	O 1	0
48	La	2	Total 2	O 2	0
48	Lb	1	Total 1	O 1	0
48	Le	1	Total 1	O 1	0

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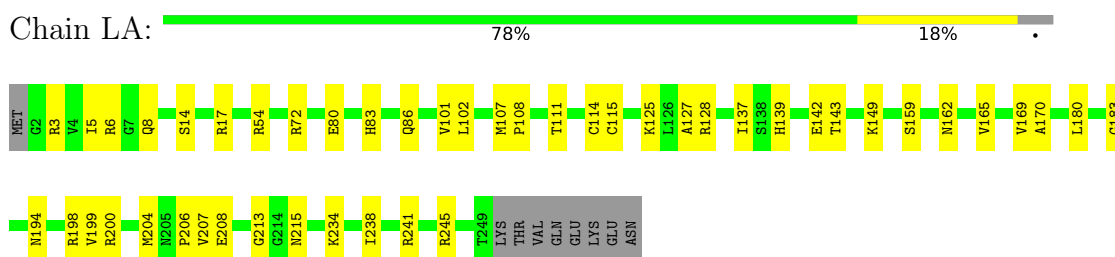
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Mol	Chain	Residues	Atoms		AltConf
48	Lf	1	Total	O	0
			1	1	
48	Lm	1	Total	O	0
			1	1	

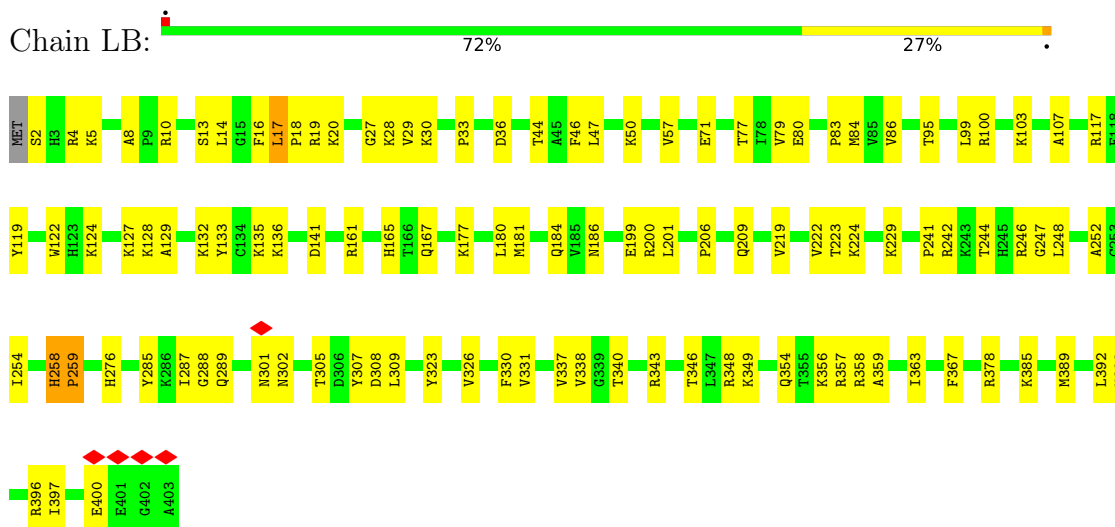
3 Residue-property plots [i](#)

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

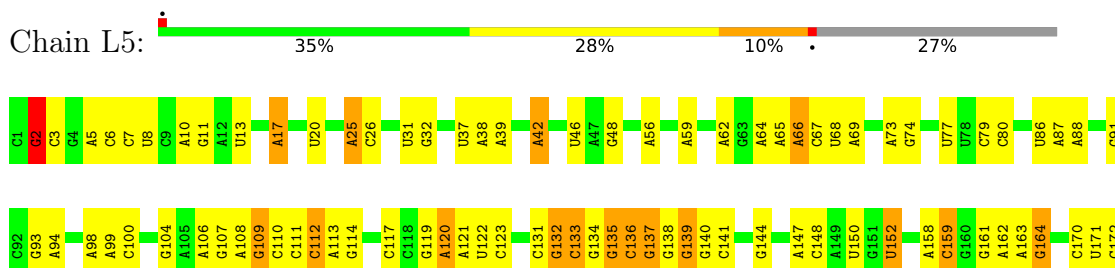
• Molecule 1: 60S ribosomal protein L8



• Molecule 2: 60S ribosomal protein L3



• Molecule 3: 28S rRNA

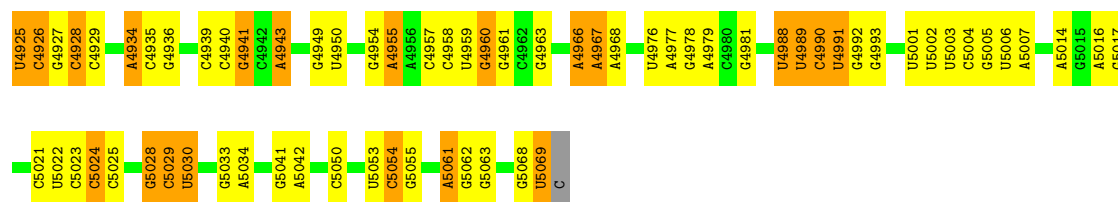












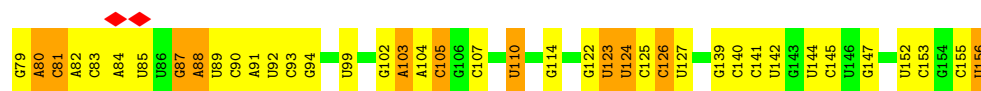
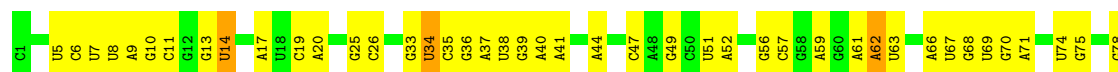
• Molecule 4: 5S rRNA

Chain L7: 75% 22%



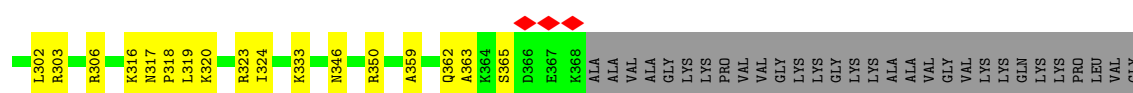
• Molecule 5: 5.8S rRNA

Chain L8: 47% 44% 9%



• Molecule 6: 60S ribosomal protein L4

Chain LC: 67% 19% 14%



• Molecule 7: 60S ribosomal protein L5

Chain LD: 79% 20%



- | MEET |
|------|
| G2 |
| Y6 |
| K14 |
| Q15 |
| R24 |
| V25 |
| R26 |
| G27 |
| W28 |
| Q29 |
| R44 |
| K47 |
| R50 |
| V60 |
| R67 |
| R68 |
| V75 |
| T80 |
| P84 |
| H87 |
| N90 |
| R96 |
| S100 |
| E104 |
| R114 |
| V115 |
| L116 |
| Y119 |
| E123 |
| D124 |
| S125 |
| T126 |
| Y127 |
| K128 |
| L134 |
| T135 |
| D136 |
| P137 |



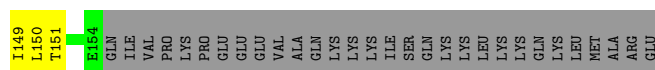
- Molecule 17: 60S ribosomal protein L13a

Chain LO: 76% 22%



- Molecule 18: 60S ribosomal protein L17

Chain LP: 63% 20% 17%



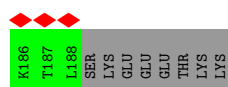
- Molecule 19: 60S ribosomal protein L18

Chain LQ: 80% 20%



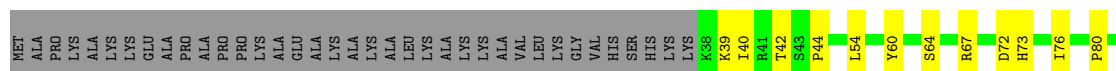
- Molecule 20: 60S ribosomal protein L19

Chain LR: 5% 81% 14% 5%



- Molecule 21: 60S ribosomal protein L18a

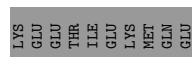
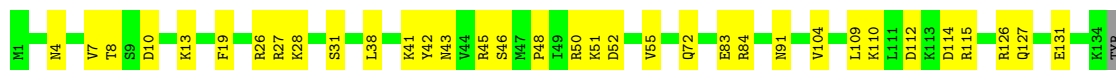
Chain LS: 82% 18%





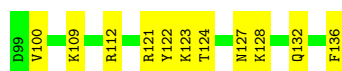
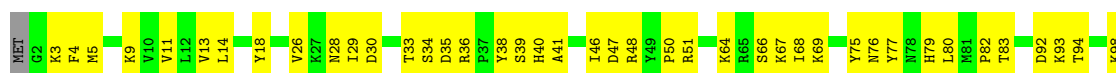
- Molecule 27: 60S ribosomal protein L26

Chain LY: 69% 23% 8%



- Molecule 28: 60S ribosomal protein L27

Chain LZ: 61% 38% .



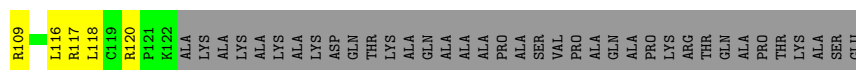
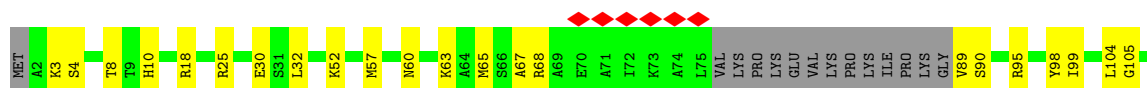
- Molecule 29: 60S ribosomal protein L27a

Chain La: 79% 20% .



- Molecule 30: 60S ribosomal protein L29

Chain Lb: 51% 17% 32%



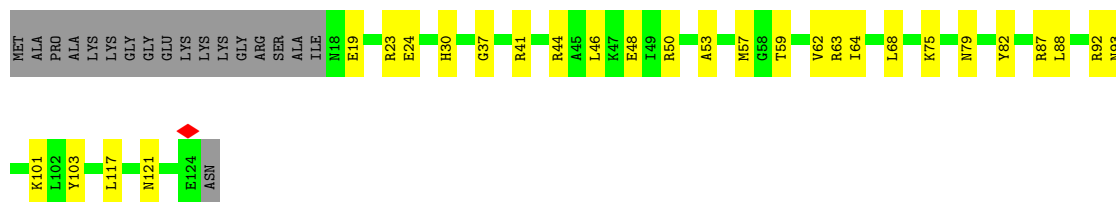
- Molecule 31: 60S ribosomal protein L30

Chain Lc: 70% 16% 15%



- Molecule 32: 60S ribosomal protein L31

Chain Ld: 



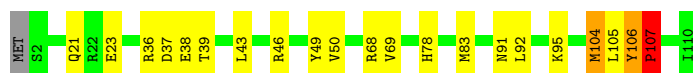
- Molecule 33: 60S ribosomal protein L32

Chain Le: 



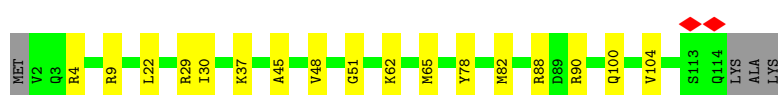
- Molecule 34: 60S ribosomal protein L35a

Chain Lf: 



- Molecule 35: 60S ribosomal protein L34

Chain Lg: 



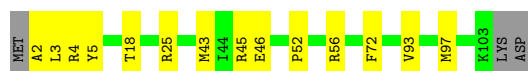
- Molecule 36: 60S ribosomal protein L35

Chain Lh: 



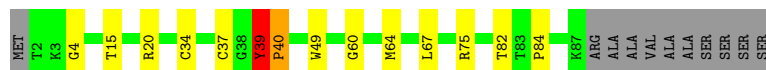
- Molecule 37: 60S ribosomal protein L36

Chain Li: 



- Molecule 38: 60S ribosomal protein L37

Chain Lj:  74% 12% .. 11%



- Molecule 39: 60S ribosomal protein L38

Chain Lk:  71% 27% .



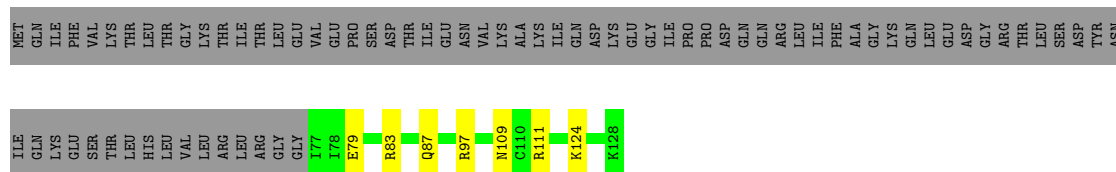
- Molecule 40: 60S ribosomal protein L39

Chain Ll:  73% 25% .



- Molecule 41: Ubiquitin-60S ribosomal protein L40

Chain Lm:  35% 5% 59%



- Molecule 42: 60S ribosomal protein L41

Chain Ln:  88% 8% .



- Molecule 43: 60S ribosomal protein L36a

Chain Lo:  72% 25% .

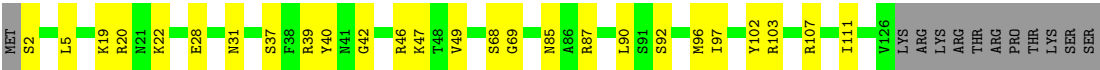


- Molecule 44: 60S ribosomal protein L37a

Chain Lp:  82% 17% .



● Molecule 45: 60S ribosomal protein L28



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	118470	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TECNAI ARCTICA	Depositor
Voltage (kV)	200	Depositor
Electron dose ($e^-/\text{\AA}^2$)	50	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	32.789	Depositor
Minimum map value	-7.797	Depositor
Average map value	0.000	Depositor
Map value standard deviation	1.000	Depositor
Recommended contour level	2.5	Depositor
Map size (Å)	485.0, 485.0, 485.0	wwPDB
Map dimensions	500, 500, 500	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.97, 0.97, 0.97	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: JMH, ZN, MLZ, OMG, UY1, A2M, 2MG, MG, PSU, 5MU, 5MC, 6MZ, OMU, B8T, UR3, OMC, 1MA

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	LA	0.50	0/1936	0.53	0/2596
2	LB	0.51	0/3306	0.61	7/4424 (0.2%)
3	L5	0.48	1/85750 (0.0%)	0.42	82/133763 (0.1%)
4	L7	0.48	0/2858	0.30	0/4455
5	L8	0.49	0/3679	0.33	0/5732
6	LC	0.48	0/2971	0.52	0/3988
7	LD	0.41	0/2428	0.49	0/3252
8	LE	0.40	0/1825	0.67	3/2448 (0.1%)
9	LF	0.49	0/1905	0.51	0/2539
10	LG	0.45	0/1955	0.61	2/2632 (0.1%)
11	LH	0.42	0/1537	0.50	0/2066
12	LI	0.48	0/1694	0.54	0/2261
13	LJ	0.38	0/1424	0.59	2/1904 (0.1%)
14	LL	0.44	0/1713	0.52	0/2293
15	LM	0.43	0/1161	0.48	0/1554
16	LN	0.53	0/1746	0.55	0/2338
17	LO	0.48	0/1673	0.47	0/2238
18	LP	0.49	0/1268	0.49	0/1701
19	LQ	0.50	0/1537	0.53	1/2052 (0.0%)
20	LR	0.40	0/1582	0.48	1/2091 (0.0%)
21	LS	0.48	0/1493	0.45	0/2003
22	LT	0.45	0/1326	0.47	0/1770
23	LU	0.35	0/839	0.57	1/1126 (0.1%)
24	LV	0.49	0/993	0.56	0/1332
25	LW	0.37	0/652	0.47	0/866
26	LX	0.40	0/993	0.41	0/1334
27	LY	0.46	0/1132	0.50	0/1504
28	LZ	0.40	0/1130	0.45	0/1507
29	La	0.51	0/1191	0.49	0/1591
30	Lb	0.35	0/890	0.50	0/1175
31	Lc	0.41	0/774	0.46	0/1038

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
32	Ld	0.45	0/903	0.46	0/1216
33	Le	0.50	0/1071	0.50	0/1429
34	Lf	0.52	0/895	0.71	3/1198 (0.3%)
35	Lg	0.56	0/907	0.71	1/1209 (0.1%)
36	Lh	0.40	0/1023	0.43	0/1351
37	Li	0.35	0/843	0.45	0/1115
38	Lj	0.54	0/720	0.69	2/952 (0.2%)
39	Lk	0.35	0/575	0.41	0/761
40	Ll	0.47	0/454	0.51	0/599
41	Lm	0.42	0/425	0.53	0/561
42	Ln	0.35	0/231	0.53	0/294
43	Lo	0.44	0/855	0.50	0/1128
44	Lp	0.46	0/718	0.47	0/953
45	Lr	0.47	0/1017	0.49	0/1364
All	All	0.48	1/145998 (0.0%)	0.45	105/215703 (0.0%)

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	L5	1326	A2M	O3'-P	6.47	1.62	1.56

All (105) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	3921	U	C1'-C2'-O2'	-15.04	85.84	108.40
8	LE	101	ASN	N-CA-C	-15.02	95.60	112.72
34	Lf	104	MET	N-CA-C	13.28	129.70	113.23
3	L5	1783	C	C1'-C2'-O2'	-12.53	89.61	108.40
3	L5	3731	C	C1'-C2'-O2'	-12.24	90.04	108.40
3	L5	2835	A	C1'-C2'-O2'	-12.22	90.08	108.40
3	L5	2633	U	C1'-C2'-O2'	-11.10	91.76	108.40
3	L5	4577	U	C1'-C2'-O2'	-10.40	92.80	108.40
3	L5	2814	C	C1'-C2'-O2'	-10.19	93.11	108.40
8	LE	102	GLY	N-CA-C	10.15	123.60	111.93
38	Lj	40	PRO	N-CA-C	-9.52	92.86	112.47
2	LB	259	PRO	N-CA-C	-9.48	100.34	113.53
3	L5	2633	U	C4'-C3'-O3'	9.04	126.56	113.00
20	LR	78	ILE	N-CA-C	-9.03	105.14	113.71
3	L5	4577	U	C4'-C3'-O3'	9.00	126.50	113.00
3	L5	2816	G	C4'-C3'-O3'	8.79	126.19	113.00
3	L5	1863	U	C1'-C2'-O2'	-8.78	95.23	108.40
3	L5	1745	G	C4'-C3'-O3'	8.77	126.15	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	233	U	C2'-C3'-O3'	-8.69	96.46	109.50
3	L5	1537	A	C4'-C3'-O3'	8.63	125.94	113.00
2	LB	258	HIS	N-CA-C	8.62	128.86	109.81
3	L5	1863	U	C4'-C3'-O3'	8.31	125.47	113.00
3	L5	1783	C	C4'-C3'-O3'	8.25	125.38	113.00
3	L5	4690	G	C4'-C3'-O3'	8.21	125.31	113.00
2	LB	17	LEU	CA-C-N	-8.06	109.76	119.84
2	LB	17	LEU	C-N-CA	-8.06	109.76	119.84
3	L5	1793	A	C4'-C3'-O3'	8.06	125.09	113.00
3	L5	4300	U	C1'-C2'-O2'	-7.86	96.61	108.40
3	L5	3731	C	C4'-C3'-O3'	7.80	124.70	113.00
3	L5	401	G	C4'-C3'-O3'	7.71	124.57	113.00
3	L5	3729	U	C1'-C2'-O2'	-7.62	96.97	108.40
3	L5	4300	U	C4'-C3'-O3'	7.58	124.37	113.00
3	L5	3638	G	C1'-C2'-O2'	-7.48	97.18	108.40
38	Lj	39	TYR	N-CA-C	7.34	126.04	109.81
3	L5	1793	A	N9-C1'-C2'	-7.22	101.16	112.00
3	L5	1863	U	N1-C1'-C2'	-7.17	101.25	112.00
19	LQ	161	SER	N-CA-C	7.15	120.33	108.96
3	L5	4674	C	C4'-C3'-O3'	7.04	123.56	113.00
2	LB	17	LEU	N-CA-C	6.92	125.10	109.81
3	L5	4577	U	N1-C1'-C2'	-6.72	101.91	112.00
3	L5	4297	G	N9-C1'-C2'	-6.64	102.04	112.00
3	L5	4297	G	C4'-C3'-O3'	6.59	122.89	113.00
3	L5	1366	G	C4'-C3'-O3'	6.58	122.88	113.00
3	L5	4424	A	C4'-C3'-O3'	6.51	122.77	113.00
3	L5	2836	A	C1'-C2'-O2'	-6.49	98.67	108.40
3	L5	3638	G	C4'-C3'-O3'	6.45	122.67	113.00
3	L5	3728	A	OP1-P-O3'	6.45	127.34	108.00
3	L5	4690	G	N9-C1'-C2'	-6.34	102.49	112.00
3	L5	3926	C	C4'-C3'-O3'	6.30	122.45	113.00
34	Lf	107	PRO	CA-N-CD	-6.26	103.23	112.00
3	L5	4674	C	C1'-C2'-O2'	-6.19	99.12	108.40
3	L5	1780	A	N9-C1'-C2'	-6.17	102.74	112.00
3	L5	2	G	C4'-C3'-O3'	6.11	122.16	113.00
3	L5	2816	G	C3'-C2'-C1'	6.04	107.34	101.30
3	L5	1537	A	N9-C1'-C2'	-6.03	102.95	112.00
3	L5	2844	A	N9-C1'-C2'	-6.02	102.97	112.00
3	L5	4580	U	N1-C1'-C2'	-5.97	103.04	112.00
3	L5	3728	A	C4'-C3'-O3'	5.94	121.90	113.00
3	L5	4533	A	C4'-C3'-O3'	5.93	121.90	113.00
3	L5	4577	U	C2'-C3'-O3'	-5.93	104.81	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	4432	C	C1'-C2'-O2'	-5.89	99.56	108.40
3	L5	1780	A	C4'-C3'-O3'	5.88	121.83	113.00
3	L5	666	G	C3'-C2'-O2'	5.86	119.48	110.70
3	L5	4432	C	C4'-C3'-O3'	5.82	121.73	113.00
35	Lg	51	GLY	N-CA-C	5.82	119.64	112.14
3	L5	4533	A	N9-C1'-C2'	-5.81	103.29	112.00
3	L5	1537	A	C1'-C2'-O2'	-5.77	99.74	108.40
13	LJ	175	LEU	CA-C-N	-5.77	113.81	119.76
13	LJ	175	LEU	C-N-CA	-5.77	113.81	119.76
3	L5	2842	G	C4'-C3'-O3'	5.76	121.65	113.00
3	L5	4690	G	C1'-C2'-O2'	-5.76	99.75	108.40
3	L5	4551	U	C4'-C3'-O3'	5.75	121.63	113.00
3	L5	1367	C	C2'-C3'-O3'	5.74	122.32	113.70
3	L5	3696	C	C1'-C2'-O2'	-5.74	99.79	108.40
3	L5	3638	G	N9-C1'-C2'	-5.69	103.47	112.00
3	L5	233	U	C4'-C3'-O3'	5.61	117.81	109.40
3	L5	3696	C	C4'-C3'-O3'	5.60	121.40	113.00
23	LU	60	VAL	N-CA-C	-5.54	108.44	113.71
3	L5	4421	C	C4'-C3'-O3'	5.54	121.31	113.00
3	L5	2835	A	C4'-C3'-O3'	5.52	121.28	113.00
8	LE	98	GLY	N-CA-C	5.50	118.93	111.72
34	Lf	106	TYR	N-CA-C	-5.50	102.04	110.07
10	LG	163	PRO	CA-C-N	-5.50	116.48	121.65
10	LG	163	PRO	C-N-CA	-5.50	116.48	121.65
3	L5	1793	A	C1'-C2'-O2'	-5.42	100.27	108.40
3	L5	3926	C	N1-C1'-C2'	-5.38	103.93	112.00
3	L5	2816	G	C1'-C2'-O2'	-5.37	100.35	108.40
3	L5	1783	C	N1-C1'-C2'	-5.33	104.00	112.00
3	L5	3696	C	N1-C1'-C2'	-5.30	104.06	112.00
3	L5	2633	U	C2'-C3'-O3'	-5.28	105.78	113.70
3	L5	4674	C	N1-C1'-C2'	-5.25	104.13	112.00
2	LB	258	HIS	CA-C-N	-5.24	113.23	119.05
2	LB	258	HIS	C-N-CA	-5.24	113.23	119.05
3	L5	4455	G	C4'-C3'-O3'	5.21	120.82	113.00
3	L5	1745	G	C5'-C4'-O4'	-5.18	102.04	109.80
3	L5	3728	A	N9-C1'-C2'	-5.16	104.27	112.00
3	L5	4297	G	C4'-C3'-C2'	5.13	107.73	102.60
3	L5	4551	U	N1-C1'-C2'	-5.11	104.33	112.00
3	L5	1253	G	C1'-C2'-O2'	5.11	116.06	108.40
3	L5	4300	U	N1-C1'-C2'	-5.08	104.38	112.00
3	L5	4580	U	C4'-C3'-O3'	5.08	120.62	113.00
3	L5	2633	U	N1-C1'-C2'	-5.04	104.45	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	4354	U	C4'-C3'-O3'	-5.03	101.86	109.40
3	L5	1745	G	N9-C1'-C2'	-5.03	104.46	112.00
3	L5	4432	C	N1-C1'-C2'	-5.03	104.46	112.00

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	LA	1898	0	1993	42	0
2	LB	3238	0	3376	87	0
3	L5	79671	0	40317	1311	0
4	L7	2558	0	1296	17	0
5	L8	3315	0	1685	60	0
6	LC	2928	0	3105	64	0
7	LD	2382	0	2410	50	0
8	LE	1791	0	1947	46	0
9	LF	1870	0	1996	48	0
10	LG	1922	0	2071	44	0
11	LH	1518	0	1601	43	0
12	LI	1656	0	1706	36	0
13	LJ	1401	0	1428	45	0
14	LL	1682	0	1792	40	0
15	LM	1138	0	1204	20	0
16	LN	1701	0	1749	41	0
17	LO	1641	0	1788	36	0
18	LP	1242	0	1269	23	0
19	LQ	1513	0	1628	28	0
20	LR	1566	0	1729	22	0
21	LS	1453	0	1490	22	0
22	LT	1298	0	1366	30	0
23	LU	825	0	850	34	0
24	LV	979	0	1039	28	0
25	LW	639	0	663	9	0
26	LX	976	0	1053	22	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
27	LY	1115	0	1205	24	0
28	LZ	1107	0	1182	40	0
29	La	1162	0	1213	25	0
30	Lb	877	0	957	32	0
31	Lc	764	0	804	12	0
32	Ld	888	0	930	19	0
33	Le	1053	0	1147	29	0
34	Lf	876	0	912	15	0
35	Lg	897	0	985	14	0
36	Lh	1015	0	1148	23	0
37	Li	832	0	917	13	0
38	Lj	705	0	737	12	0
39	Lk	569	0	637	16	0
40	Ll	444	0	483	14	0
41	Lm	430	0	465	7	0
42	Ln	230	0	276	1	0
43	Lo	842	0	912	20	0
44	Lp	708	0	756	13	0
45	Lr	1002	0	1068	21	0
46	L5	260	0	0	0	0
46	L7	3	0	0	0	0
46	L8	5	0	0	0	0
46	LA	1	0	0	0	0
46	LI	2	0	0	0	0
46	LN	1	0	0	0	0
46	LP	1	0	0	0	0
46	LR	1	0	0	0	0
46	LS	1	0	0	0	0
46	LV	1	0	0	0	0
46	Le	1	0	0	0	0
46	Lf	1	0	0	0	0
46	Lg	1	0	0	0	0
47	Lg	1	0	0	0	0
47	Lj	1	0	0	0	0
47	Lm	1	0	0	0	0
47	Lo	1	0	0	0	0
47	Lp	1	0	0	0	0
48	L5	11	0	0	0	0
48	LH	1	0	0	0	0
48	La	2	0	0	0	0
48	Lb	1	0	0	0	0
48	Le	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
48	Lf	1	0	0	0	0
48	Lm	1	0	0	0	0
All	All	138619	0	99285	2197	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 9.

All (2197) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:4576:PSU:H6	3:L5:4576:PSU:H5''	1.13	1.10
30:Lb:89:VAL:HG12	30:Lb:90:SER:N	1.64	1.09
30:Lb:89:VAL:CG1	30:Lb:90:SER:H	1.66	1.09
30:Lb:89:VAL:HG12	30:Lb:90:SER:H	0.84	1.00
3:L5:4576:PSU:H5''	3:L5:4576:PSU:C6	1.98	0.98
3:L5:1759:G:H1	3:L5:1773:U:H3	1.10	0.96
13:LJ:160:GLU:HA	13:LJ:163:MET:HE3	1.46	0.94
3:L5:3965:A:N6	3:L5:4043:G:H1	1.64	0.94
3:L5:2557:G:H1	3:L5:2570:U:H3	0.93	0.93
3:L5:4296:PSU:H5'	3:L5:4296:PSU:H6	1.36	0.91
3:L5:3751:G:H21	3:L5:3775:A:H8	1.16	0.91
3:L5:4745:G:H1	3:L5:4955:A:H61	1.11	0.90
3:L5:74:G:H5''	14:LL:59:VAL:HG22	1.56	0.87
34:Lf:106:TYR:HB3	34:Lf:107:PRO:HD2	1.57	0.87
3:L5:3965:A:H61	3:L5:4043:G:H1	1.15	0.86
9:LF:116:GLN:HB3	9:LF:119:ASN:HD21	1.41	0.86
14:LL:206:ASP:OD1	14:LL:209:LYS:HE3	1.75	0.86
3:L5:2464:C:HO2'	3:L5:2465:C:H6	1.26	0.83
3:L5:1094:G:H2'	3:L5:1095:A:C8	2.14	0.83
3:L5:2611:A:H5'	3:L5:2688:G:H4'	1.62	0.82
3:L5:4745:G:H1	3:L5:4955:A:N6	1.78	0.82
5:L8:110:U:H5'	40:Ll:8:ARG:HH12	1.44	0.81
3:L5:280:G:H5''	16:LN:14:LYS:HE2	1.62	0.81
3:L5:2481:G:H1	3:L5:2497:C:H42	1.27	0.81
3:L5:667:A:N3	45:Lr:46:ARG:NH1	2.29	0.80
6:LC:221:PHE:O	6:LC:223:ASN:N	2.13	0.80
3:L5:1986:U:H4'	3:L5:2003:G:H2'	1.62	0.80
3:L5:138:G:H2'	3:L5:139:G:H8	1.48	0.79
13:LJ:15:LEU:HD12	13:LJ:134:LEU:HD23	1.64	0.79
9:LF:105:VAL:HG13	9:LF:136:VAL:HG12	1.64	0.78
3:L5:1802:A:N3	22:LT:130:ARG:NH2	2.32	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:1860:PSU:H6	3:L5:1860:PSU:H5'	1.49	0.78
3:L5:1972:G:N2	3:L5:1973:G:O6	2.16	0.78
3:L5:2469:C:H5	3:L5:2471:G:H1	1.32	0.78
2:LB:199:GLU:OE2	2:LB:200:ARG:NH1	2.18	0.77
3:L5:1174:G:H1	3:L5:1186:U:H3	1.29	0.76
3:L5:3711:A:H2'	3:L5:3712:A:H8	1.51	0.76
3:L5:1764:G:O2'	3:L5:1769:G:N7	2.20	0.75
3:L5:1094:G:H1	3:L5:1201:U:H3	1.34	0.75
3:L5:3947:A:N6	3:L5:4068:U:O2	2.20	0.74
10:LG:162:ASP:HB3	10:LG:163:PRO:HD3	1.68	0.74
3:L5:182:G:N2	3:L5:255:C:O2'	2.20	0.74
11:LH:36:ARG:HB3	11:LH:80:MET:HE1	1.69	0.74
3:L5:2414:G:H2'	3:L5:2415:OMU:H6	1.69	0.73
3:L5:4296:PSU:H5'	3:L5:4296:PSU:C6	2.22	0.73
3:L5:1100:U:O2	3:L5:1195:G:N2	2.21	0.73
3:L5:4894:A:H3'	3:L5:4895:C:H5'	1.68	0.73
18:LP:94:MET:HE3	18:LP:148:MET:HE3	1.71	0.73
2:LB:80:GLU:HG3	2:LB:326:VAL:HG13	1.71	0.73
8:LE:128:HIS:ND1	8:LE:128:HIS:O	2.21	0.73
3:L5:1692:C:H4'	19:LQ:143:ARG:HH22	1.54	0.73
14:LL:63:THR:HG21	29:La:66:ASN:HB3	1.69	0.73
27:LY:19:PHE:O	27:LY:26:ARG:NH2	2.22	0.73
3:L5:3950:U:H2'	3:L5:3951:G:C8	2.23	0.72
14:LL:100:PRO:O	37:Li:25:ARG:NH2	2.21	0.72
3:L5:3944:OMG:H5''	3:L5:3944:OMG:H8	1.53	0.72
3:L5:3921:U:H2'	3:L5:4183:G:N2	2.05	0.72
33:Le:84:GLU:OE2	45:Lr:20:ARG:NH2	2.21	0.71
3:L5:1778:C:H1'	7:LD:2:GLY:HA2	1.72	0.71
15:LM:11:ARG:NH1	15:LM:58:THR:O	2.24	0.71
22:LT:63:ARG:NH2	30:Lb:30:GLU:OE1	2.23	0.71
1:LA:215:ASN:ND2	3:L5:4546:A:N7	2.39	0.71
2:LB:14:LEU:HA	2:LB:17:LEU:HD13	1.72	0.71
3:L5:2102:G:N2	3:L5:2103:G:O6	2.23	0.71
3:L5:1433:A:N6	3:L5:1451:G:O2'	2.24	0.71
2:LB:71:GLU:OE1	25:LW:1:MET:N	2.23	0.70
3:L5:4233:A:H4'	43:Lo:98:LYS:HE2	1.72	0.70
3:L5:2520:C:O2	3:L5:2640:G:N2	2.25	0.70
7:LD:211:LEU:HB3	7:LD:219:TYR:HB2	1.71	0.70
13:LJ:136:ARG:NH2	13:LJ:161:GLU:OE1	2.24	0.70
3:L5:4418:G:O6	3:L5:4421:C:H2'	1.91	0.70
23:LU:36:ALA:HB3	23:LU:65:ARG:HH21	1.56	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:LY:52:ASP:HB2	27:LY:110:LYS:HD2	1.73	0.70
37:Li:2:ALA:N	37:Li:5:TYR:HH	1.90	0.70
7:LD:75:VAL:O	7:LD:112:ARG:NH1	2.26	0.69
9:LF:220:MET:HB3	9:LF:232:ASP:OD2	1.91	0.69
10:LG:165:GLU:OE2	16:LN:26:ARG:NH2	2.21	0.69
3:L5:1765:A:H3'	3:L5:1766:A:H4'	1.74	0.69
3:L5:4096:C:N4	3:L5:4113:U:O2'	2.23	0.69
11:LH:26:ILE:HG13	11:LH:35:ARG:HG3	1.75	0.69
3:L5:2591:A:N6	3:L5:2754:G:O2'	2.25	0.69
3:L5:2253:A:H61	9:LF:27:GLU:HB2	1.56	0.69
4:L7:7:G:OP1	7:LD:33:ARG:NH1	2.26	0.69
13:LJ:56:THR:HG22	13:LJ:63:ARG:HA	1.74	0.69
3:L5:1699:A:O2'	6:LC:306:ARG:NH2	2.25	0.69
3:L5:4532:PSU:H6	3:L5:4532:PSU:H5''	1.58	0.69
3:L5:177:G:H2'	3:L5:178:C:C6	2.28	0.68
3:L5:2702:C:OP1	23:LU:101:ARG:NH2	2.25	0.68
6:LC:140:LYS:HE3	6:LC:245:HIS:HB2	1.75	0.68
3:L5:2544:G:N1	5:L8:124:U:OP1	2.20	0.68
6:LC:65:GLU:OE1	6:LC:80:ARG:NH1	2.26	0.68
29:La:87:ARG:HG2	29:La:120:GLN:HE22	1.59	0.68
12:LI:66:GLU:HG3	12:LI:69:ARG:HH21	1.57	0.68
24:LV:83:ARG:NH2	24:LV:118:THR:O	2.27	0.68
3:L5:4076:G:H5''	10:LG:73:ARG:HG3	1.74	0.68
3:L5:4734:A:H1'	3:L5:4735:G:C8	2.28	0.68
32:Ld:24:GLU:OE2	32:Ld:87:ARG:NH2	2.26	0.68
3:L5:4992:G:H2'	3:L5:4993:G:C8	2.29	0.68
14:LL:47:ALA:HB3	14:LL:48:PRO:HD3	1.76	0.68
14:LL:125:ILE:HD11	36:Lh:122:LYS:HB3	1.76	0.68
3:L5:42:A:H5''	3:L5:4187:OMG:HM21	1.75	0.67
3:L5:496:G:N2	3:L5:658:C:O2	2.27	0.67
1:LA:198:ARG:NH2	3:L5:3688:U:OP2	2.25	0.67
3:L5:4572:U:H2'	3:L5:4573:G:H8	1.59	0.67
32:Ld:19:GLU:OE1	32:Ld:92:ARG:NH1	2.27	0.67
3:L5:1697:G:N2	3:L5:2084:C:OP1	2.26	0.67
10:LG:58:PRO:HD2	10:LG:61:ILE:HD12	1.76	0.67
3:L5:518:G:H1	3:L5:643:C:H3'	1.60	0.67
19:LQ:15:ARG:NH1	19:LQ:52:PHE:O	2.28	0.67
20:LR:99:MET:HE2	20:LR:99:MET:HA	1.76	0.67
3:L5:4742:G:H2'	3:L5:4743:G:H8	1.60	0.67
3:L5:2284:G:OP1	29:La:7:LYS:NZ	2.28	0.67
22:LT:43:LYS:O	22:LT:58:HIS:ND1	2.27	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:258:G:H2'	3:L5:259:C:C6	2.30	0.66
3:L5:2483:G:N2	3:L5:2495:U:O2	2.25	0.66
16:LN:124:ASP:HB3	16:LN:127:TYR:H	1.60	0.66
3:L5:513:U:H3'	3:L5:514:U:H4'	1.77	0.66
12:LI:54:SER:HB3	12:LI:135:ILE:HD11	1.78	0.66
6:LC:218:ILE:O	6:LC:222:ARG:HB2	1.95	0.66
3:L5:1962:A:OP2	3:L5:2024:G:N2	2.27	0.66
16:LN:15:GLN:HG2	37:Li:52:PRO:HD2	1.77	0.66
3:L5:4910:G:N2	17:LO:106:ASP:O	2.29	0.66
3:L5:1448:G:H2'	3:L5:1449:C:C6	2.31	0.66
3:L5:4940:C:H5'	3:L5:4941:G:H5''	1.78	0.66
2:LB:222:VAL:O	2:LB:343:ARG:NH1	2.30	0.65
3:L5:1761:G:C6	3:L5:1772:C:N3	2.64	0.65
3:L5:2458:C:H5''	16:LN:67:ARG:HD2	1.78	0.65
3:L5:3589:G:N2	3:L5:3590:G:N7	2.38	0.65
3:L5:3711:A:H2'	3:L5:3712:A:C8	2.31	0.65
14:LL:80:GLU:OE2	14:LL:102:ARG:NH2	2.29	0.65
3:L5:1399:G:H2'	3:L5:1400:G:C8	2.31	0.65
3:L5:1871:A2M:HM'2	3:L5:1872:G:H5'	1.78	0.65
3:L5:4299:PSU:H6	3:L5:4299:PSU:H5'	1.61	0.65
3:L5:4636:PSU:N1	32:Ld:79:ASN:OD1	2.29	0.65
3:L5:2382:A:N1	3:L5:2829:U:O2'	2.27	0.65
5:L8:62:A:OP1	36:Lh:51:ARG:NH2	2.29	0.65
10:LG:88:ASP:OD1	10:LG:89:ARG:N	2.30	0.65
3:L5:992:C:H41	3:L5:995:C:H1'	1.62	0.65
3:L5:1760:G:N3	3:L5:1761:G:N1	2.45	0.65
3:L5:2756:G:O6	28:LZ:51:ARG:NH2	2.24	0.65
3:L5:4041:C:H5'	3:L5:4042:G:H5''	1.79	0.65
3:L5:2474:G:N2	3:L5:2502:G:O2'	2.30	0.65
3:L5:3641:U:OP2	3:L5:3646:A:N6	2.30	0.65
3:L5:3944:OMG:H8	3:L5:3944:OMG:C5'	2.10	0.65
11:LH:106:GLN:HE21	11:LH:113:GLU:CD	2.05	0.65
12:LI:150:GLU:OE2	12:LI:153:ARG:NH1	2.30	0.65
13:LJ:15:LEU:HD11	13:LJ:157:ILE:HG12	1.79	0.65
10:LG:105:GLU:OE2	10:LG:113:ARG:NH1	2.30	0.64
3:L5:442:G:OP1	34:Lf:68:ARG:NH1	2.29	0.64
12:LI:76:MET:HE1	12:LI:140:THR:HG21	1.79	0.64
13:LJ:109:ILE:HG12	13:LJ:115:LEU:HD21	1.79	0.64
17:LO:125:LYS:HG2	17:LO:129:LEU:HD12	1.78	0.64
3:L5:1398:A:OP1	29:La:136:LYS:NZ	2.30	0.64
3:L5:1339:U:H2'	3:L5:1340:OMC:C6	2.31	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:2835:A:H2'	3:L5:2836:A:H8	1.62	0.64
3:L5:3717:A:H2'	3:L5:3718:A2M:H8	1.80	0.64
3:L5:3765:G:O2'	3:L5:3767:C:N4	2.30	0.64
3:L5:2351:OMC:HM22	3:L5:2352:U:H5'	1.80	0.64
45:Lr:28:GLU:HG3	45:Lr:31:ASN:HB2	1.80	0.64
45:Lr:28:GLU:OE1	45:Lr:42:GLY:N	2.24	0.64
3:L5:1399:G:H2'	3:L5:1400:G:H8	1.63	0.64
7:LD:234:ASP:O	7:LD:235:MET:HG3	1.98	0.64
15:LM:24:LEU:HD11	15:LM:86:TRP:CG	2.33	0.64
33:Le:26:ASP:OD1	33:Le:27:ARG:N	2.31	0.64
3:L5:88:A:N7	19:LQ:173:LYS:NZ	2.46	0.64
3:L5:2483:G:N2	3:L5:2484:A:N7	2.46	0.63
3:L5:267:G:H2'	3:L5:268:G:H8	1.63	0.63
8:LE:180:VAL:HG21	8:LE:258:LEU:HD11	1.80	0.63
13:LJ:90:ARG:NH1	13:LJ:108:GLY:O	2.31	0.63
3:L5:1802:A:O2'	22:LT:108:ARG:NH2	2.29	0.63
1:LA:234:LYS:HG2	1:LA:238:ILE:HG12	1.80	0.63
3:L5:4523:A2M:H5''	3:L5:4524:G:H5'	1.80	0.63
39:Lk:27:LYS:H	39:Lk:70:LYS:HZ1	1.46	0.63
3:L5:1961:G:H21	3:L5:2025:A:H62	1.46	0.63
3:L5:3614:G:O2'	3:L5:3615:G:OP1	2.14	0.63
3:L5:3937:C:H1'	16:LN:125:SER:HB2	1.80	0.63
28:LZ:36:ARG:NH1	28:LZ:38:TYR:OH	2.31	0.63
1:LA:241:ARG:NH2	3:L5:3660:C:OP2	2.32	0.63
3:L5:1179:U:H3'	3:L5:1180:C:H5''	1.80	0.63
9:LF:92:VAL:O	9:LF:120:GLY:HA2	1.97	0.63
21:LS:173:ASN:ND2	21:LS:175:PHE:O	2.31	0.63
3:L5:2003:G:N2	3:L5:2004:U:O4	2.32	0.63
3:L5:2416:G:H8	3:L5:2416:G:OP2	1.81	0.63
3:L5:2491:C:H2'	3:L5:2492:C:O4'	1.99	0.63
9:LF:156:LYS:NZ	9:LF:248:ASN:OXT	2.29	0.63
3:L5:2487:G:N2	3:L5:2489:C:O5'	2.31	0.62
3:L5:2815:A2M:OP2	3:L5:2815:A2M:H8	1.98	0.62
3:L5:4325:A:O2'	7:LD:48:LYS:NZ	2.27	0.62
3:L5:4736:C:H2'	3:L5:4737:G:H8	1.62	0.62
7:LD:215:ASP:OD2	7:LD:218:ALA:N	2.28	0.62
3:L5:1175:A:H2	3:L5:1185:G:H1	1.47	0.62
1:LA:142:GLU:O	1:LA:143:THR:OG1	2.16	0.62
20:LR:39:GLN:OE1	20:LR:42:ARG:NH1	2.32	0.62
3:L5:180:C:H2'	3:L5:181:C:H4'	1.79	0.62
3:L5:3909:OMC:HM22	3:L5:3910:C:H5'	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:LO:168:TYR:CE2	17:LO:172:LYS:HD2	2.34	0.62
2:LB:107:ALA:HB2	2:LB:201:LEU:HD22	1.82	0.62
3:L5:4576:PSU:H6	3:L5:4576:PSU:C5'	2.01	0.62
13:LJ:13:ARG:NH2	13:LJ:154:LYS:O	2.33	0.62
33:Le:66:THR:HA	33:Le:69:MET:HE3	1.81	0.62
3:L5:188:G:N2	3:L5:191:G:N7	2.48	0.62
3:L5:1270:A:H8	3:L5:2106:G:H21	1.46	0.62
3:L5:1726:U:H5'	9:LF:135:ILE:HD11	1.81	0.62
3:L5:3641:U:H5	3:L5:3646:A:N7	1.98	0.62
3:L5:4049:U:O4'	3:L5:4051:C:N4	2.32	0.62
8:LE:186:LEU:HD21	8:LE:212:LEU:HD21	1.80	0.62
3:L5:2033:A:OP1	12:LI:162:ARG:NH2	2.33	0.62
8:LE:161:ARG:NH1	8:LE:273:SER:OG	2.32	0.62
20:LR:173:ARG:HA	20:LR:176:ARG:HG3	1.82	0.62
31:Lc:52:CYS:O	31:Lc:57:LYS:NZ	2.33	0.62
3:L5:757:G:O3'	11:LH:52:LYS:NZ	2.33	0.62
3:L5:4114:C:H5'	3:L5:4115:G:C2	2.35	0.61
20:LR:109:TYR:OH	20:LR:139:MET:SD	2.57	0.61
3:L5:4274:A:H2'	3:L5:4275:G:C8	2.35	0.61
13:LJ:164:ARG:O	13:LJ:168:GLN:NE2	2.34	0.61
21:LS:84:TYR:CE1	21:LS:93:MET:HE3	2.36	0.61
27:LY:83:GLU:OE1	27:LY:84:ARG:NH1	2.33	0.61
1:LA:208:GLU:HG3	3:L5:1631:A:H2	1.66	0.61
32:Ld:64:ILE:HG23	32:Ld:68:LEU:HD23	1.83	0.61
3:L5:2303:C:OP1	33:Le:107:ASN:ND2	2.32	0.61
3:L5:2522:G:OP1	35:Lg:29:ARG:NH1	2.34	0.61
3:L5:3965:A:N6	3:L5:4043:G:N1	2.31	0.61
7:LD:65:ALA:HB2	7:LD:74:ILE:HD13	1.81	0.61
14:LL:126:LEU:N	14:LL:138:ASP:OD2	2.33	0.61
1:LA:54:ARG:NH2	3:L5:3680:U:OP1	2.21	0.61
3:L5:4064:C:H2'	3:L5:4065:G:C8	2.36	0.61
3:L5:4694:G:H4'	11:LH:71:ARG:HH12	1.66	0.61
5:L8:110:U:H5'	40:Ll:8:ARG:NH1	2.16	0.61
36:Lh:87:LYS:HB3	36:Lh:91:MET:HE2	1.81	0.61
3:L5:147:A:OP1	10:LG:197:LYS:NZ	2.30	0.61
3:L5:1253:G:H4'	3:L5:1254:A:N7	2.16	0.61
3:L5:3717:A:H2'	3:L5:3718:A2M:C8	2.30	0.61
3:L5:4114:C:H2'	3:L5:4115:G:H21	1.66	0.61
10:LG:209:SER:HA	10:LG:212:LYS:HG3	1.82	0.61
40:Ll:42:ARG:HG3	40:Ll:47:THR:HG23	1.82	0.61
40:Ll:44:TRP:CZ3	40:Ll:45:ARG:HD3	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:1513:U:H4'	14:LL:4:SER:HB2	1.83	0.61
3:L5:4672:A:OP1	24:LV:15:ARG:NH2	2.34	0.61
24:LV:112:MET:HG2	24:LV:135:ASN:HD22	1.65	0.61
3:L5:2631:U:O4	23:LU:51:GLY:N	2.31	0.61
16:LN:75:VAL:HG11	16:LN:80:THR:HG22	1.83	0.61
3:L5:179:G:H1	3:L5:257:C:H42	1.49	0.60
3:L5:4299:PSU:C6	3:L5:4299:PSU:C5'	2.84	0.60
3:L5:4872:2MG:HM21	17:LO:202:LEU:N	2.16	0.60
5:L8:8:U:H2'	5:L8:9:A:C8	2.35	0.60
16:LN:28:TRP:CE3	16:LN:29:GLN:HB3	2.36	0.60
40:Ll:9:ILE:HG23	40:Ll:51:LEU:HD21	1.82	0.60
3:L5:2566:G:H2'	3:L5:2567:G:C8	2.36	0.60
3:L5:2796:G:H5'	40:Ll:45:ARG:HH21	1.66	0.60
3:L5:4327:C:OP1	22:LT:70:HIS:NE2	2.34	0.60
3:L5:2362:U:OP1	18:LP:82:ARG:NH2	2.30	0.60
3:L5:3707:U:H2'	3:L5:3708:C:C6	2.36	0.60
3:L5:3953:G:N2	3:L5:4060:U:O2'	2.34	0.60
3:L5:2479:G:H2'	3:L5:2480:G:H8	1.66	0.60
3:L5:4260:U:H2'	3:L5:4261:C:C6	2.37	0.60
3:L5:1985:G:O2'	3:L5:1986:U:O4'	2.18	0.60
3:L5:2562:G:N2	3:L5:2565:A:OP2	2.35	0.60
3:L5:4478:G:O2'	3:L5:4602:A:N1	2.34	0.60
19:LQ:66:MET:HE3	19:LQ:98:LEU:HD13	1.83	0.60
28:LZ:50:PRO:HD3	28:LZ:68:ILE:HG12	1.83	0.60
30:Lb:8:THR:HG22	30:Lb:10:HIS:H	1.67	0.60
43:Lo:36:GLN:HA	43:Lo:39:ARG:HE	1.67	0.60
2:LB:44:THR:HG21	2:LB:186:ASN:ND2	2.17	0.60
2:LB:385:LYS:NZ	3:L5:5002:U:OP2	2.34	0.60
3:L5:1844:G:H5''	30:Lb:25:ARG:HH22	1.65	0.60
1:LA:180:LEU:HD11	44:Lp:26:VAL:HG21	1.83	0.60
3:L5:1364:U:OP2	14:LL:36:ARG:NH2	2.31	0.60
16:LN:116:LEU:HD22	16:LN:135:ILE:HD11	1.84	0.60
17:LO:81:TRP:HB2	17:LO:104:VAL:HG21	1.83	0.60
34:Lf:21:GLN:NE2	34:Lf:23:GLU:OE2	2.31	0.60
2:LB:288:GLY:HA3	2:LB:330:PHE:CE1	2.36	0.60
3:L5:2705:G:H1	3:L5:2710:C:H5	1.48	0.60
3:L5:3928:A:OP1	16:LN:90:ASN:ND2	2.35	0.60
3:L5:4760:G:OP1	17:LO:117:ARG:NH2	2.34	0.60
14:LL:79:GLU:HG2	14:LL:110:LEU:HD11	1.82	0.60
16:LN:123:GLU:HG3	16:LN:124:ASP:H	1.66	0.60
3:L5:3654:G:O2'	3:L5:3693:U:OP1	2.20	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:3944:OMG:C5'	3:L5:3944:OMG:C8	2.85	0.60
3:L5:1194:G:H2'	3:L5:1195:G:C8	2.36	0.59
12:LI:179:ASP:OD1	12:LI:180:GLU:N	2.34	0.59
3:L5:3910:C:H2'	3:L5:3911:C:C6	2.37	0.59
12:LI:76:MET:HE2	12:LI:138:ILE:HG21	1.84	0.59
33:Le:91:CYS:HB3	33:Le:95:TYR:HD2	1.66	0.59
1:LA:207:VAL:HG23	1:LA:208:GLU:OE1	2.02	0.59
3:L5:1281:G:C6	8:LE:128:HIS:HB2	2.38	0.59
3:L5:1756:U:O2'	3:L5:1758:G:OP2	2.20	0.59
3:L5:2411:C:H2'	3:L5:2412:A:H8	1.67	0.59
3:L5:4299:PSU:H6	3:L5:4299:PSU:C5'	2.13	0.59
14:LL:18:TRP:CD1	14:LL:18:TRP:H	2.20	0.59
3:L5:132:G:N3	3:L5:137:G:N1	2.50	0.59
3:L5:2758:G:O2'	3:L5:2765:A:N3	2.33	0.59
11:LH:92:MET:HE2	11:LH:179:ILE:HG22	1.84	0.59
3:L5:498:C:H42	3:L5:656:C:H42	1.48	0.59
3:L5:1617:G:H1'	3:L5:2513:A:N6	2.18	0.59
11:LH:18:ILE:HG12	11:LH:27:VAL:HG22	1.85	0.59
30:Lb:117:ARG:O	30:Lb:118:LEU:HG	2.02	0.59
1:LA:3:ARG:HD3	3:L5:1628:C:N4	2.16	0.59
2:LB:30:LYS:NZ	3:L5:4717:A:OP2	2.23	0.59
3:L5:691:C:H2'	3:L5:692:A:C8	2.38	0.59
3:L5:1442:C:HO2'	3:L5:1443:A:H8	1.50	0.59
3:L5:1967:A:H2'	3:L5:1968:G:C8	2.37	0.59
3:L5:4919:G:H2'	3:L5:4920:C:C6	2.38	0.59
3:L5:462:G:H2'	3:L5:463:A:C8	2.38	0.59
3:L5:3718:A2M:H2	3:L5:3934:G:O4'	2.02	0.59
3:L5:924:C:H2'	3:L5:925:C:O4'	2.03	0.59
3:L5:1426:G:N1	3:L5:1458:C:OP2	2.32	0.59
3:L5:1771:U:O2'	3:L5:1772:C:H5''	2.02	0.59
3:L5:2836:A:H2'	3:L5:2837:OMU:H6	1.85	0.59
3:L5:4775:C:N3	3:L5:4859:C:N4	2.50	0.59
24:LV:31:ASN:HD21	24:LV:115:SER:HB2	1.67	0.59
15:LM:25:VAL:HG22	15:LM:38:VAL:HG22	1.84	0.58
3:L5:2464:C:O2'	3:L5:2465:C:H6	1.83	0.58
3:L5:2652:G:N2	44:Lp:58:GLY:O	2.29	0.58
3:L5:4988:U:O2'	3:L5:4989:U:OP2	2.18	0.58
1:LA:137:ILE:HD11	1:LA:149:LYS:HB2	1.85	0.58
3:L5:189:G:H2'	3:L5:190:G:H8	1.68	0.58
3:L5:4572:U:H2'	3:L5:4573:G:C8	2.37	0.58
9:LF:114:LEU:HD21	9:LF:121:THR:HG22	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:LG:48:LYS:HG3	26:LX:42:THR:HB	1.85	0.58
3:L5:1281:G:N1	8:LE:128:HIS:HB2	2.18	0.58
8:LE:128:HIS:O	8:LE:128:HIS:CG	2.56	0.58
30:Lb:89:VAL:CG1	30:Lb:90:SER:N	2.38	0.58
3:L5:964:A:H2'	3:L5:965:G:H4'	1.85	0.58
3:L5:4594:U:H2'	3:L5:4595:G:H8	1.68	0.58
3:L5:2539:C:H2'	3:L5:2540:C:C6	2.39	0.58
3:L5:3669:G:H21	3:L5:3672:G:H21	1.51	0.58
12:LI:145:LYS:HE3	12:LI:167:ILE:HG13	1.86	0.58
13:LJ:29:SER:OG	13:LJ:30:GLY:N	2.37	0.58
3:L5:495:C:O2	3:L5:496:G:N1	2.37	0.58
3:L5:4220:6MZ:OP2	22:LT:2:THR:N	2.36	0.58
3:L5:4353:PSU:C6	3:L5:4353:PSU:H5'	2.39	0.58
3:L5:4532:PSU:H5''	3:L5:4532:PSU:C6	2.38	0.58
3:L5:4939:C:OP1	8:LE:187:ARG:NH1	2.36	0.58
26:LX:124:VAL:HG22	26:LX:138:VAL:HG12	1.86	0.58
28:LZ:11:VAL:HG21	28:LZ:80:LEU:HB3	1.84	0.58
37:Li:93:VAL:HG12	37:Li:97:MET:HE2	1.85	0.58
3:L5:2640:G:H2'	3:L5:2641:A:C8	2.39	0.58
3:L5:4228:OMG:H5''	3:L5:4229:U:O4'	2.02	0.58
7:LD:27:LYS:HE2	13:LJ:147:ARG:HE	1.69	0.58
9:LF:116:GLN:HB3	9:LF:119:ASN:ND2	2.17	0.58
10:LG:187:LYS:HG2	10:LG:198:THR:HB	1.86	0.58
27:LY:10:ASP:HB3	27:LY:13:LYS:HB2	1.84	0.58
34:Lf:36:ARG:O	34:Lf:39:THR:HG22	2.03	0.58
2:LB:124:LYS:NZ	3:L5:5063:G:O6	2.35	0.58
2:LB:224:LYS:HG3	2:LB:340:THR:HG22	1.84	0.58
3:L5:4746:C:H42	3:L5:4954:G:H1	1.50	0.58
10:LG:176:LYS:HD3	37:Li:43:MET:HE1	1.85	0.58
3:L5:977:C:H4'	6:LC:333:MLZ:HCM1	1.84	0.58
3:L5:4378:A:O2'	3:L5:4379:A:H2'	2.04	0.58
5:L8:8:U:H2'	5:L8:9:A:H8	1.69	0.58
9:LF:162:ILE:HD12	9:LF:167:ILE:HB	1.86	0.58
11:LH:31:ARG:NH1	11:LH:149:ASN:OD1	2.37	0.58
21:LS:13:VAL:HG22	21:LS:29:ARG:HB3	1.86	0.58
39:Lk:9:LYS:NZ	39:Lk:10:ASP:OD1	2.37	0.58
8:LE:190:HIS:HB3	8:LE:193:PHE:HD2	1.68	0.57
3:L5:1480:C:O2'	3:L5:1482:G:OP2	2.21	0.57
3:L5:2811:G:N1	3:L5:2814:C:OP2	2.35	0.57
3:L5:3873:G:H2'	3:L5:3874:G:C8	2.39	0.57
6:LC:224:ILE:HB	6:LC:227:ILE:HD12	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:La:72:THR:HG22	29:La:110:LYS:HB3	1.86	0.57
39:Lk:26:LYS:HB2	39:Lk:69:LEU:HD12	1.86	0.57
1:LA:102:LEU:HB2	1:LA:107:MET:HE3	1.87	0.57
3:L5:1100:U:H3	3:L5:1195:G:H1	1.51	0.57
3:L5:1942:A:H2'	3:L5:1943:A:C8	2.40	0.57
3:L5:4095:G:N2	3:L5:4115:G:OP2	2.23	0.57
3:L5:121:A:H62	3:L5:152:U:H3	1.52	0.57
3:L5:137:G:H2'	3:L5:138:G:C8	2.39	0.57
3:L5:1320:U:O2'	3:L5:1891:A:N1	2.33	0.57
3:L5:1686:C:O2'	30:Lb:18:ARG:NH1	2.38	0.57
3:L5:4537:C:H2'	3:L5:4538:G:C8	2.39	0.57
43:Lo:24:THR:HA	43:Lo:93:LEU:HD21	1.85	0.57
45:Lr:47:LYS:HB2	45:Lr:102:TYR:CZ	2.39	0.57
2:LB:103:LYS:NZ	3:L5:4725:C:OP1	2.35	0.57
3:L5:418:A:C2	5:L8:17:A:H1'	2.40	0.57
3:L5:4296:PSU:C6	3:L5:4296:PSU:C5'	2.87	0.57
3:L5:4424:A:N7	3:L5:4475:G:C6	2.73	0.57
15:LM:5:ARG:NE	15:LM:59:ASP:OD1	2.35	0.57
1:LA:72:ARG:NH2	3:L5:4084:G:O6	2.38	0.57
3:L5:181:C:H3'	3:L5:182:G:H8	1.68	0.57
3:L5:1070:G:OP2	8:LE:65:ARG:NH1	2.37	0.57
3:L5:1881:C:H5'	3:L5:2281:U:H1'	1.86	0.57
3:L5:2019:C:O2'	3:L5:2020:U:O4'	2.16	0.57
3:L5:2570:U:H2'	3:L5:2571:C:C6	2.39	0.57
3:L5:4743:G:H2'	3:L5:4744:A:C8	2.39	0.57
4:L7:120:U:H4'	7:LD:261:VAL:HA	1.86	0.57
10:LG:225:ASN:O	10:LG:229:ARG:NH1	2.37	0.57
12:LI:87:ILE:HG12	12:LI:138:ILE:HG13	1.86	0.57
14:LL:50:PRO:HB3	14:LL:150:LEU:HB3	1.86	0.57
21:LS:76:LYS:NZ	21:LS:100:LEU:O	2.37	0.57
3:L5:98:A:OP1	16:LN:195:ARG:HD3	2.05	0.57
3:L5:407:A:O2'	3:L5:410:A:OP1	2.22	0.57
3:L5:4122:G:O2'	28:LZ:136:PHE:OXT	2.20	0.57
3:L5:4349:C:H5'	3:L5:4350:C:H5'	1.86	0.57
1:LA:101:VAL:HG22	1:LA:165:VAL:HG22	1.85	0.57
3:L5:1985:G:N2	3:L5:2013:A:N3	2.52	0.57
3:L5:2588:C:H5''	3:L5:2589:C:H5''	1.87	0.57
3:L5:3970:G:O2'	3:L5:4052:C:N4	2.38	0.57
3:L5:4459:U:H2'	3:L5:4460:U:C6	2.39	0.57
3:L5:444:G:H2'	3:L5:445:U:C6	2.40	0.57
3:L5:2005:G:H1	3:L5:2014:C:H42	1.51	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:3751:G:N2	3:L5:3775:A:H8	1.97	0.57
3:L5:1744:PSU:H2'	3:L5:1745:G:H5''	1.87	0.57
3:L5:1811:G:H21	30:Lb:57:MET:HE2	1.70	0.57
7:LD:208:MET:HB2	7:LD:233:PRO:HG3	1.87	0.57
3:L5:238:C:OP2	27:LY:45:ARG:NH2	2.38	0.56
3:L5:1899:G:O2'	33:Le:57:ASN:OD1	2.23	0.56
3:L5:3861:A:H2'	3:L5:3862:A:C8	2.39	0.56
3:L5:4522:G:O2'	3:L5:4525:C:OP2	2.23	0.56
7:LD:223:PHE:HB3	7:LD:226:TYR:HB2	1.87	0.56
2:LB:16:PHE:HB2	2:LB:19:ARG:HH21	1.70	0.56
3:L5:162:A:H2'	3:L5:163:A:C8	2.40	0.56
3:L5:2062:C:O2'	21:LS:5:GLY:HA2	2.05	0.56
4:L7:23:A:N3	4:L7:118:C:O2'	2.34	0.56
4:L7:49:A:H5''	7:LD:224:SER:HB3	1.86	0.56
16:LN:191:ALA:O	16:LN:195:ARG:HG2	2.05	0.56
38:Lj:60:GLY:HA2	38:Lj:64:MET:SD	2.45	0.56
1:LA:107:MET:HB3	1:LA:111:THR:HG21	1.87	0.56
3:L5:1518:A:OP1	29:La:27:LYS:NZ	2.25	0.56
3:L5:2744:A:H2'	3:L5:2745:A:C8	2.40	0.56
8:LE:149:ILE:HD12	8:LE:271:LEU:HD21	1.86	0.56
14:LL:145:LYS:HB2	14:LL:146:LEU:HD12	1.86	0.56
16:LN:68:ARG:NH1	16:LN:124:ASP:O	2.39	0.56
3:L5:4690:G:O6	3:L5:4698:C:H5''	2.05	0.56
3:L5:5006:U:H4'	3:L5:5007:A:H5'	1.86	0.56
14:LL:107:THR:OG1	37:Li:18:THR:OG1	2.22	0.56
16:LN:123:GLU:O	16:LN:124:ASP:HB2	2.06	0.56
3:L5:137:G:O2'	3:L5:138:G:O4'	2.13	0.56
3:L5:457:G:H2'	3:L5:458:C:C6	2.41	0.56
3:L5:4108:G:H2'	3:L5:4109:G:H8	1.70	0.56
3:L5:4892:A:H2'	3:L5:4893:A:O4'	2.04	0.56
28:LZ:41:ALA:HB2	28:LZ:77:TYR:HE1	1.70	0.56
2:LB:83:PRO:O	2:LB:167:GLN:NE2	2.32	0.56
3:L5:4771:C:H2'	3:L5:4772:C:C6	2.41	0.56
9:LF:238:ASP:OD1	9:LF:238:ASP:N	2.39	0.56
11:LH:77:VAL:HA	11:LH:80:MET:HG3	1.88	0.56
28:LZ:66:SER:HB2	28:LZ:122:TYR:HE2	1.69	0.56
3:L5:1221:G:O2'	3:L5:1222:A:O4'	2.23	0.56
3:L5:1759:G:O6	3:L5:1760:G:N2	2.38	0.56
3:L5:1920:C:H3'	3:L5:1921:C:H5''	1.86	0.56
33:Le:89:LEU:HD13	33:Le:118:LEU:HD22	1.88	0.56
3:L5:374:G:O2'	6:LC:80:ARG:O	2.23	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:1347:G:OP1	19:LQ:146:ARG:NH2	2.38	0.56
3:L5:4584:A:H2'	3:L5:4585:U:O4'	2.06	0.56
14:LL:50:PRO:O	14:LL:52:SER:N	2.39	0.56
24:LV:107:ASN:HD21	24:LV:111:GLU:HB2	1.70	0.56
2:LB:241:PRO:HD3	3:L5:4456:OMC:HM21	1.86	0.56
3:L5:2557:G:O6	3:L5:2570:U:O4	2.23	0.56
3:L5:4989:U:H1'	3:L5:4990:C:C5	2.41	0.56
14:LL:101:ARG:HA	37:Li:25:ARG:NH2	2.21	0.56
2:LB:244:THR:HB	2:LB:248:LEU:HD23	1.88	0.56
3:L5:1855:G:OP1	30:Lb:4:SER:HB2	2.05	0.56
14:LL:205:GLN:OE1	14:LL:205:GLN:HA	2.04	0.56
34:Lf:106:TYR:CB	34:Lf:107:PRO:HD2	2.32	0.56
3:L5:2362:U:H2'	3:L5:2363:A2M:H8	1.86	0.55
3:L5:4670:C:O2'	3:L5:4672:A:OP2	2.22	0.55
32:Ld:57:MET:O	32:Ld:59:THR:N	2.37	0.55
2:LB:224:LYS:HE2	2:LB:340:THR:HG22	1.87	0.55
2:LB:246:ARG:HG2	2:LB:246:ARG:HH11	1.71	0.55
3:L5:369:G:N2	3:L5:372:A:OP2	2.37	0.55
3:L5:382:G:N1	3:L5:385:A:OP2	2.34	0.55
3:L5:1449:C:H2'	3:L5:1450:C:C6	2.40	0.55
6:LC:209:ILE:HB	6:LC:229:LEU:HD13	1.87	0.55
3:L5:325:U:H2'	3:L5:326:C:C6	2.41	0.55
3:L5:711:A:H2'	3:L5:712:C:C6	2.41	0.55
3:L5:1933:G:H2'	3:L5:1934:A:C8	2.41	0.55
3:L5:4377:G:O6	29:La:42:ARG:NH2	2.39	0.55
3:L5:93:G:H2'	3:L5:94:A:C8	2.41	0.55
3:L5:425:U:H4'	18:LP:6:LEU:HD21	1.88	0.55
3:L5:1273:G:C2'	3:L5:1274:A:H5'	2.37	0.55
3:L5:2264:C:H2'	3:L5:2265:G:O4'	2.07	0.55
3:L5:2407:G:O6	40:Ll:2:SER:N	2.40	0.55
6:LC:7:LEU:HG	6:LC:21:ASN:HB3	1.89	0.55
23:LU:105:ASN:OD1	23:LU:111:GLU:HB3	2.07	0.55
3:L5:178:C:H2'	3:L5:179:G:C8	2.42	0.55
3:L5:1537:A:H2'	3:L5:1538:U:C6	2.41	0.55
6:LC:221:PHE:C	6:LC:223:ASN:H	2.10	0.55
12:LI:48:LEU:O	12:LI:139:ARG:HA	2.07	0.55
24:LV:13:LYS:HD2	24:LV:128:LEU:HD11	1.88	0.55
3:L5:504:G:H2'	3:L5:504:G:N3	2.21	0.55
3:L5:963:G:H21	9:LF:29:LYS:HE3	1.71	0.55
3:L5:2658:G:N2	3:L5:2676:A:OP2	2.40	0.55
3:L5:3948:C:H2'	3:L5:3949:A:C5	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:4883:C:N4	8:LE:181:LEU:O	2.35	0.55
22:LT:48:VAL:HG21	22:LT:94:GLU:HG2	1.88	0.55
26:LX:73:HIS:HB3	26:LX:116:LEU:HD23	1.87	0.55
28:LZ:14:LEU:HB3	35:Lg:88:ARG:HG2	1.89	0.55
43:Lo:36:GLN:HB3	43:Lo:39:ARG:HH21	1.70	0.55
3:L5:1359:G:H4'	16:LN:203:TYR:HB2	1.88	0.55
3:L5:1442:C:O2'	3:L5:1443:A:O4'	2.25	0.55
3:L5:2441:C:H4'	35:Lg:9:ARG:HD2	1.86	0.55
3:L5:1596:U:O2'	18:LP:135:ARG:NH2	2.32	0.55
3:L5:2005:G:H22	3:L5:2014:C:H42	1.55	0.55
3:L5:4941:G:OP2	8:LE:188:ARG:NH2	2.31	0.55
3:L5:5029:C:HO2'	3:L5:5030:U:H6	1.55	0.55
13:LJ:120:ASP:HB2	13:LJ:123:ILE:HB	1.88	0.55
33:Le:35:TRP:CZ2	33:Le:56:PRO:HD2	2.42	0.55
3:L5:2556:G:O3'	28:LZ:109:LYS:NZ	2.40	0.55
3:L5:2572:C:O2'	28:LZ:112:ARG:NH2	2.38	0.55
3:L5:3811:G:O2'	3:L5:3814:U:OP2	2.25	0.55
3:L5:3971:G:N2	3:L5:3973:G:N3	2.51	0.55
3:L5:4926:C:H2'	3:L5:4927:G:O4'	2.07	0.55
5:L8:122:G:C6	5:L8:123:U:H1'	2.41	0.55
3:L5:111:C:OP1	36:Lh:110:LYS:NZ	2.33	0.55
3:L5:268:G:H2'	3:L5:269:G:H8	1.72	0.55
3:L5:733:A:N6	3:L5:933:G:O6	2.39	0.55
3:L5:2280:G:OP1	33:Le:48:ARG:NH2	2.40	0.55
3:L5:3637:PSU:O4	3:L5:3637:PSU:H2'	2.07	0.55
3:L5:4424:A:H2'	3:L5:4425:G:C8	2.42	0.55
17:LO:27:VAL:O	17:LO:101:ARG:NH1	2.39	0.55
3:L5:1761:G:O6	3:L5:1772:C:N3	2.40	0.54
3:L5:2816:G:H2'	3:L5:2817:C:C6	2.42	0.54
3:L5:3694:U:H2'	3:L5:3695:PSU:C6	2.42	0.54
3:L5:4299:PSU:O2'	22:LT:88:ARG:O	2.24	0.54
3:L5:4343:U:O2'	43:Lo:31:ASP:OD1	2.25	0.54
4:L7:24:C:H2'	4:L7:25:G:O4'	2.07	0.54
3:L5:3707:U:H2'	3:L5:3708:C:H6	1.73	0.54
3:L5:3926:C:H2'	3:L5:3927:U:C6	2.41	0.54
3:L5:730:G:C5	9:LF:73:ARG:HD3	2.42	0.54
3:L5:2056:G:H5''	17:LO:128:ARG:HH21	1.70	0.54
2:LB:354:GLN:HB3	2:LB:359:ALA:HB1	1.88	0.54
3:L5:977:C:OP2	8:LE:59:ARG:NH2	2.36	0.54
3:L5:983:C:H2'	3:L5:984:C:O4'	2.07	0.54
3:L5:1069:G:H2'	3:L5:1070:G:O4'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:4578:G:H2'	3:L5:4579:PSU:C6	2.43	0.54
8:LE:178:PRO:O	8:LE:181:LEU:N	2.24	0.54
28:LZ:4:PHE:HE2	28:LZ:82:PRO:HG3	1.72	0.54
3:L5:679:C:H2'	3:L5:680:G:H8	1.73	0.54
3:L5:1248:C:H2'	3:L5:1249:C:C6	2.42	0.54
3:L5:2909:C:H4'	3:L5:3586:G:O6	2.08	0.54
3:L5:4578:G:H2'	3:L5:4579:PSU:H6	1.73	0.54
17:LO:113:ASP:OD1	17:LO:113:ASP:N	2.41	0.54
45:Lr:92:SER:O	45:Lr:96:MET:HG3	2.07	0.54
3:L5:1499:C:OP1	19:LQ:150:ARG:NH2	2.40	0.54
3:L5:1788:A:H2'	12:LI:22:PHE:CZ	2.43	0.54
3:L5:2580:U:O2'	28:LZ:79:HIS:ND1	2.36	0.54
3:L5:2781:G:O2'	40:Ll:3:SER:O	2.26	0.54
3:L5:4536:OMC:HM22	3:L5:4537:C:O4'	2.08	0.54
3:L5:5053:U:H3'	3:L5:5054:C:C6	2.42	0.54
9:LF:155:TYR:CE1	9:LF:187:MET:HG2	2.43	0.54
16:LN:123:GLU:HB3	16:LN:128:LYS:HG3	1.89	0.54
28:LZ:13:VAL:HG21	28:LZ:75:TYR:CZ	2.42	0.54
3:L5:1100:U:O2'	3:L5:1167:C:N4	2.41	0.54
3:L5:1464:C:H5''	30:Lb:32:LEU:HD12	1.88	0.54
3:L5:1552:G:O2'	3:L5:1574:G:N2	2.28	0.54
3:L5:1760:G:H22	3:L5:1768:C:H42	1.56	0.54
3:L5:4392:OMG:HM21	3:L5:4394:A:H2'	1.90	0.54
3:L5:4774:C:O2'	3:L5:4775:C:O4'	2.26	0.54
11:LH:5:LEU:HB2	11:LH:60:TRP:CZ3	2.43	0.54
11:LH:63:ASN:OD1	11:LH:66:GLU:HG3	2.08	0.54
24:LV:107:ASN:ND2	24:LV:111:GLU:HB2	2.22	0.54
3:L5:1332:C:H2'	3:L5:1333:A:C8	2.43	0.54
3:L5:3976:C:N4	3:L5:4035:G:OP2	2.40	0.54
3:L5:4611:A:H2'	3:L5:4612:C:H6	1.73	0.54
3:L5:4967:A:H2'	3:L5:4968:A:C8	2.42	0.54
11:LH:91:LYS:HG2	11:LH:145:ILE:HG12	1.90	0.54
15:LM:88:ALA:O	15:LM:93:LYS:NZ	2.40	0.54
3:L5:940:C:OP1	9:LF:242:ARG:NH2	2.41	0.54
3:L5:1548:G:O2'	3:L5:2812:A:N3	2.39	0.54
3:L5:1802:A:H5''	3:L5:1803:G:H5'	1.90	0.54
3:L5:2109:G:H22	3:L5:2252:G:H1	1.56	0.54
3:L5:3656:A:H2'	3:L5:3657:U:H6	1.73	0.54
5:L8:99:U:OP1	26:LX:67:ARG:NH2	2.41	0.54
5:L8:102:G:OP2	5:L8:104:A:O2'	2.21	0.54
7:LD:168:ASP:O	7:LD:248:ARG:NH2	2.40	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:74:G:C5'	14:LL:59:VAL:HG22	2.35	0.54
4:L7:39:C:O2'	13:LJ:46:GLN:HB3	2.08	0.54
5:L8:67:U:H2'	5:L8:68:G:H8	1.72	0.54
5:L8:141:C:H2'	5:L8:142:U:C6	2.43	0.54
10:LG:175:ARG:HD3	10:LG:230:TYR:CD2	2.42	0.54
21:LS:93:MET:HE1	21:LS:117:HIS:CE1	2.44	0.54
26:LX:73:HIS:CD2	26:LX:115:LYS:HG2	2.43	0.54
3:L5:914:U:O2'	3:L5:915:A:OP2	2.21	0.53
3:L5:2416:G:O6	3:L5:2426:U:OP2	2.26	0.53
3:L5:4300:U:H2'	3:L5:4301:U:C6	2.43	0.53
10:LG:38:ASN:HD21	10:LG:43:GLN:HG2	1.72	0.53
11:LH:107:GLU:N	11:LH:107:GLU:OE1	2.40	0.53
23:LU:28:PRO:HB2	23:LU:34:MET:HG3	1.89	0.53
3:L5:1577:G:O2'	3:L5:1612:G:H4'	2.09	0.53
3:L5:1857:C:H2'	3:L5:1858:A:H8	1.74	0.53
3:L5:2109:G:N2	3:L5:2252:G:H22	2.06	0.53
3:L5:2484:A:C6	3:L5:2486:G:N1	2.76	0.53
7:LD:23:ARG:O	7:LD:23:ARG:NH1	2.37	0.53
32:Ld:75:LYS:HG3	32:Ld:79:ASN:O	2.08	0.53
3:L5:1961:G:N2	3:L5:2025:A:H62	2.07	0.53
3:L5:2267:U:OP1	45:Lr:37:SER:HB2	2.09	0.53
3:L5:2351:OMC:HM23	6:LC:95:MET:HG3	1.90	0.53
3:L5:2504:C:O2'	3:L5:2506:G:OP1	2.27	0.53
3:L5:3729:U:H2'	3:L5:3730:PSU:C6	2.43	0.53
3:L5:3948:C:H2'	3:L5:3949:A:C6	2.43	0.53
18:LP:118:GLN:NE2	18:LP:147:GLU:OE2	2.42	0.53
27:LY:31:SER:HA	27:LY:48:PRO:HA	1.89	0.53
29:La:79:TRP:CE3	29:La:87:ARG:HG3	2.44	0.53
33:Le:43:ASN:O	33:Le:47:ARG:HG3	2.08	0.53
3:L5:368:C:O4'	6:LC:83:GLY:HA3	2.08	0.53
3:L5:1179:U:O5'	7:LD:289:ARG:NH1	2.35	0.53
3:L5:1181:C:H3'	3:L5:1182:C:H5'	1.90	0.53
3:L5:2005:G:H1	3:L5:2014:C:N4	2.05	0.53
3:L5:4493:PSU:O4	3:L5:4493:PSU:H2'	2.07	0.53
4:L7:55:A:O2'	13:LJ:151:ILE:O	2.21	0.53
12:LI:30:LYS:HG2	12:LI:66:GLU:OE1	2.09	0.53
3:L5:2:G:H2'	3:L5:3:C:C6	2.43	0.53
3:L5:2:G:OP2	26:LX:39:LYS:HG2	2.09	0.53
3:L5:1333:A:H2'	3:L5:1334:A:C8	2.43	0.53
3:L5:1867:A:H2'	3:L5:1868:A:C8	2.43	0.53
3:L5:3893:C:O2'	3:L5:4979:A:N1	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:LO:26:GLN:OE1	17:LO:31:ARG:NH1	2.42	0.53
18:LP:54:GLN:HA	18:LP:83:TRP:CD1	2.44	0.53
3:L5:917:A:H2'	3:L5:918:G:O4'	2.09	0.53
3:L5:1662:C:H2'	3:L5:1663:C:C6	2.43	0.53
3:L5:1683:PSU:OP1	29:La:44:ASN:ND2	2.41	0.53
3:L5:1727:U:OP1	9:LF:131:ASN:ND2	2.42	0.53
3:L5:1818:G:O2'	3:L5:1820:C:OP2	2.24	0.53
3:L5:158:A:N1	3:L5:276:C:O2'	2.36	0.53
3:L5:184:U:O2'	3:L5:189:G:O4'	2.27	0.53
3:L5:1403:G:H2'	3:L5:1404:G:H8	1.74	0.53
3:L5:2296:G:O2'	6:LC:242:PRO:O	2.21	0.53
3:L5:4368:G:H21	43:Lo:82:MET:HE1	1.74	0.53
18:LP:30:ARG:HD2	18:LP:63:TYR:HE2	1.74	0.53
3:L5:911:U:H2'	3:L5:912:G:O4'	2.09	0.53
3:L5:1247:U:H2'	3:L5:1248:C:C6	2.44	0.53
3:L5:1332:C:H2'	3:L5:1333:A:H8	1.74	0.53
3:L5:3669:G:H21	3:L5:3672:G:N2	2.06	0.53
3:L5:4424:A:OP1	41:Lm:97:ARG:NH1	2.42	0.53
3:L5:4742:G:H2'	3:L5:4743:G:C8	2.41	0.53
3:L5:5021:C:H2'	3:L5:5022:U:H5''	1.89	0.53
18:LP:85:LYS:O	18:LP:89:GLU:HG3	2.08	0.53
18:LP:115:GLU:HG2	18:LP:151:THR:OG1	2.09	0.53
26:LX:123:LYS:NZ	26:LX:125:ASN:OD1	2.42	0.53
2:LB:289:GLN:OE1	2:LB:301:ASN:ND2	2.42	0.53
3:L5:347:A:OP2	27:LY:8:THR:OG1	2.21	0.53
3:L5:1705:G:H2'	3:L5:1706:A:O4'	2.08	0.53
3:L5:3599:A:H2'	3:L5:3600:G:C8	2.44	0.53
3:L5:4739:C:H2'	3:L5:4740:G:H5'	1.91	0.53
8:LE:100:LYS:C	8:LE:102:GLY:H	2.17	0.53
15:LM:11:ARG:HD3	15:LM:57:LEU:HB3	1.91	0.53
21:LS:99:ASP:OD1	21:LS:100:LEU:N	2.39	0.53
3:L5:132:G:H22	3:L5:136:C:H1'	1.73	0.53
3:L5:982:U:OP1	8:LE:73:TYR:OH	2.21	0.53
3:L5:2495:U:H2'	3:L5:2496:G:C8	2.44	0.53
3:L5:3797:C:OP2	24:LV:74:LYS:NZ	2.41	0.53
3:L5:4260:U:H2'	3:L5:4261:C:H6	1.71	0.53
3:L5:4504:C:H2'	3:L5:4505:C:C6	2.44	0.53
10:LG:157:ILE:HA	10:LG:201:THR:HG22	1.90	0.53
12:LI:85:PHE:CD2	12:LI:87:ILE:HG13	2.44	0.53
18:LP:16:LYS:O	18:LP:101:ASN:ND2	2.37	0.53
3:L5:1328:G:O2'	3:L5:2349:A:OP1	2.27	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:2003:G:H1	3:L5:2016:C:H42	1.56	0.52
10:LG:180:PRO:HA	10:LG:227:ASN:OD1	2.09	0.52
3:L5:2515:G:OP1	35:Lg:37:LYS:NZ	2.27	0.52
3:L5:4212:A:OP2	12:LI:15:LYS:NZ	2.42	0.52
6:LC:290:SER:O	6:LC:294:LYS:HG2	2.08	0.52
8:LE:67:ALA:HB1	8:LE:70:LYS:HE2	1.92	0.52
28:LZ:92:ASP:OD1	28:LZ:94:THR:OG1	2.27	0.52
3:L5:511:C:OP2	14:LL:163:LYS:NZ	2.42	0.52
3:L5:1482:G:H3'	3:L5:1483:C:H5'	1.90	0.52
3:L5:2003:G:N2	3:L5:2016:C:N3	2.57	0.52
3:L5:2525:U:OP2	20:LR:42:ARG:NH2	2.38	0.52
6:LC:317:ASN:HD22	6:LC:320:LYS:HD2	1.75	0.52
2:LB:80:GLU:OE1	2:LB:323:TYR:OH	2.22	0.52
2:LB:287:ILE:HG12	2:LB:331:VAL:HG12	1.92	0.52
3:L5:717:U:H2'	3:L5:718:C:C6	2.44	0.52
3:L5:1087:A:H2'	3:L5:1088:C:C6	2.44	0.52
3:L5:1764:G:H1'	3:L5:1770:A:H61	1.75	0.52
3:L5:2656:U:H5''	28:LZ:38:TYR:HB3	1.91	0.52
3:L5:3732:A:H2'	3:L5:3733:A:C8	2.45	0.52
3:L5:3848:U:H2'	3:L5:3849:A:C8	2.44	0.52
3:L5:4195:G:O2'	3:L5:4442:PSU:OP1	2.21	0.52
3:L5:4280:A:N6	7:LD:28:THR:O	2.41	0.52
3:L5:5068:G:N2	3:L5:5069:U:O4	2.32	0.52
9:LF:171:ASP:OD1	9:LF:172:ASN:N	2.42	0.52
28:LZ:46:ILE:HG23	28:LZ:68:ILE:HG23	1.90	0.52
2:LB:13:SER:HB2	3:L5:4622:A:H4'	1.92	0.52
3:L5:1202:C:H3'	3:L5:1203:G:C5'	2.40	0.52
3:L5:1508:A:OP1	6:LC:113:ARG:HD2	2.09	0.52
3:L5:2696:A:H62	39:Lk:35:LYS:HE2	1.75	0.52
3:L5:3938:G:OP2	16:LN:24:ARG:NH1	2.37	0.52
3:L5:4537:C:H2'	3:L5:4538:G:H8	1.73	0.52
9:LF:182:TYR:CZ	9:LF:203:GLU:HG2	2.45	0.52
19:LQ:43:PHE:CD2	19:LQ:133:GLY:HA3	2.44	0.52
36:Lh:107:GLN:NE2	36:Lh:111:GLU:OE2	2.37	0.52
41:Lm:83:ARG:O	41:Lm:87:GLN:HG3	2.09	0.52
2:LB:252:ALA:HB3	3:L5:4457:PSU:H1'	1.91	0.52
3:L5:1271:G:OP2	3:L5:1271:G:N2	2.27	0.52
3:L5:1307:A:H2'	3:L5:1308:C:C6	2.44	0.52
3:L5:1308:C:H2'	3:L5:1309:C:C6	2.45	0.52
3:L5:1517:2MG:O6	6:LC:106:LYS:NZ	2.35	0.52
3:L5:1254:A:H61	3:L5:1258:G:H22	1.57	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:1604:G:H2'	3:L5:1605:G:C8	2.45	0.52
3:L5:2101:C:O2	3:L5:2102:G:N1	2.42	0.52
3:L5:2745:A:H2'	3:L5:2746:A:C8	2.45	0.52
5:L8:67:U:H2'	5:L8:68:G:C8	2.45	0.52
7:LD:62:CYS:HB3	7:LD:105:LEU:HD22	1.92	0.52
3:L5:112:C:OP2	36:Lh:106:LYS:NZ	2.33	0.52
3:L5:4299:PSU:C6	3:L5:4299:PSU:H5''	2.44	0.52
3:L5:4989:U:H1'	3:L5:4990:C:H5	1.74	0.52
14:LL:48:PRO:HB2	36:Lh:120:ALA:HB2	1.92	0.52
20:LR:3:MET:SD	20:LR:5:ARG:NH1	2.83	0.52
3:L5:181:C:H2'	3:L5:182:G:O4'	2.10	0.52
3:L5:2397:G:O6	35:Lg:4:ARG:NH2	2.42	0.52
3:L5:2554:U:O2	3:L5:2764:A:N7	2.43	0.52
3:L5:4239:A:H2'	3:L5:4240:G:C8	2.45	0.52
5:L8:70:G:H22	5:L8:87:G:HO2'	1.53	0.52
16:LN:80:THR:OG1	16:LN:87:HIS:HA	2.10	0.52
3:L5:457:G:H2'	3:L5:458:C:H6	1.74	0.52
3:L5:1317:U:H2'	3:L5:1318:C:C6	2.45	0.52
3:L5:1327:C:H2'	3:L5:1328:G:C8	2.44	0.52
3:L5:1877:G:O6	30:Lb:10:HIS:NE2	2.39	0.52
3:L5:3887:OMC:HM22	3:L5:3888:G:H5'	1.91	0.52
5:L8:19:C:H2'	5:L8:20:A:C8	2.45	0.52
6:LC:67:TRP:CZ3	6:LC:73:VAL:HG21	2.44	0.52
13:LJ:84:GLU:HG3	13:LJ:88:LYS:HE2	1.91	0.52
14:LL:62:PRO:O	14:LL:63:THR:OG1	2.25	0.52
20:LR:21:LYS:HE3	20:LR:55:VAL:HA	1.93	0.52
2:LB:132:LYS:HA	2:LB:135:LYS:HE2	1.91	0.51
3:L5:175:C:H2'	3:L5:176:G:C8	2.45	0.51
3:L5:2631:U:H5	23:LU:48:LYS:HD2	1.75	0.51
22:LT:44:GLY:HA2	22:LT:95:HIS:HB3	1.93	0.51
3:L5:25:A:H2'	3:L5:26:C:H6	1.75	0.51
3:L5:3917:A:H2'	3:L5:3918:G:H8	1.75	0.51
3:L5:5053:U:H5'	3:L5:5054:C:C5	2.46	0.51
7:LD:181:PRO:HD2	7:LD:195:HIS:CD2	2.45	0.51
8:LE:281:ILE:HB	8:LE:286:LEU:HD21	1.91	0.51
10:LG:154:LEU:HD12	10:LG:219:VAL:HG22	1.90	0.51
28:LZ:29:ILE:HG13	28:LZ:40:HIS:NE2	2.25	0.51
3:L5:739:G:O2'	3:L5:740:G:O5'	2.20	0.51
3:L5:1345:A:H2'	3:L5:1346:C:C6	2.45	0.51
3:L5:2003:G:H1	3:L5:2016:C:N4	2.08	0.51
3:L5:2411:C:H2'	3:L5:2412:A:C8	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:3720:G:H22	3:L5:3733:A:H2	1.59	0.51
3:L5:3770:PSU:H2'	3:L5:3771:C:C6	2.45	0.51
3:L5:4043:G:H5''	3:L5:4045:G:N3	2.24	0.51
3:L5:4699:U:H1'	3:L5:4700:A:H5''	1.91	0.51
12:LI:85:PHE:HD2	12:LI:87:ILE:HG13	1.75	0.51
34:Lf:78:HIS:HB3	34:Lf:83:MET:O	2.10	0.51
39:Lk:30:ASP:OD1	39:Lk:30:ASP:N	2.42	0.51
3:L5:1760:G:N2	3:L5:1768:C:H42	2.09	0.51
3:L5:1787:A:N3	3:L5:4210:U:O2'	2.43	0.51
3:L5:3727:A:H2'	3:L5:3728:A:C8	2.44	0.51
3:L5:4691:A:OP1	11:LH:75:SER:OG	2.23	0.51
23:LU:100:LEU:HB3	23:LU:112:LEU:HD12	1.92	0.51
28:LZ:128:LYS:O	28:LZ:132:GLN:HG2	2.10	0.51
3:L5:4228:OMG:H4'	3:L5:4229:U:OP2	2.11	0.51
3:L5:4872:2MG:C2	17:LO:203:VAL:HG23	2.45	0.51
8:LE:186:LEU:N	8:LE:250:GLN:OE1	2.42	0.51
35:Lg:45:ALA:HB3	35:Lg:82:MET:HG3	1.91	0.51
39:Lk:27:LYS:H	39:Lk:70:LYS:NZ	2.08	0.51
2:LB:378:ARG:HG2	25:LW:32:LEU:HD21	1.92	0.51
3:L5:206:U:O2'	3:L5:208:A:N7	2.38	0.51
3:L5:1725:U:H2'	3:L5:1726:U:H6	1.74	0.51
3:L5:1773:U:H2'	3:L5:1774:C:O4'	2.11	0.51
3:L5:2542:G:H2'	3:L5:2543:A:C8	2.45	0.51
3:L5:2631:U:C5	23:LU:48:LYS:CB	2.93	0.51
3:L5:5004:C:H2'	3:L5:5005:G:O4'	2.11	0.51
9:LF:182:TYR:HB3	9:LF:200:ARG:HG3	1.91	0.51
44:Lp:26:VAL:HG12	44:Lp:30:GLU:HB2	1.92	0.51
2:LB:357:ARG:HH11	3:L5:4615:C:H5''	1.76	0.51
3:L5:37:U:H2'	3:L5:38:A:O4'	2.10	0.51
3:L5:1074:G:H3'	3:L5:1075:G:H8	1.76	0.51
3:L5:2436:U:OP2	26:LX:135:LYS:NZ	2.38	0.51
3:L5:4648:A:OP1	20:LR:62:ARG:NH2	2.44	0.51
19:LQ:16:LYS:O	19:LQ:33:ARG:NH2	2.38	0.51
2:LB:252:ALA:HB1	3:L5:4524:G:C2	2.46	0.51
3:L5:139:G:H2'	3:L5:140:G:H8	1.74	0.51
3:L5:2333:G:H5''	6:LC:195:LYS:NZ	2.26	0.51
3:L5:2496:G:H2'	3:L5:2497:C:H6	1.76	0.51
3:L5:2907:G:H2'	3:L5:2907:G:N3	2.26	0.51
3:L5:3648:A:H1'	3:L5:3785:A2M:N6	2.25	0.51
3:L5:3911:C:H2'	3:L5:3912:U:H6	1.75	0.51
3:L5:4625:C:O2'	3:L5:4626:A:H5'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:LE:141:ARG:NH1	8:LE:191:GLN:O	2.43	0.51
13:LJ:84:GLU:O	13:LJ:88:LYS:HG3	2.10	0.51
37:Li:56:ARG:HD2	37:Li:72:PHE:CZ	2.46	0.51
44:Lp:33:GLN:HE21	44:Lp:49:ARG:NH1	2.09	0.51
3:L5:398:A2M:O5'	3:L5:398:A2M:H8	2.10	0.51
3:L5:1247:U:H2'	3:L5:1248:C:H6	1.76	0.51
3:L5:1846:G:H2'	3:L5:1847:C:C6	2.45	0.51
3:L5:2448:G:H2'	3:L5:2449:A:C8	2.46	0.51
6:LC:162:LYS:NZ	6:LC:215:ASN:O	2.39	0.51
9:LF:30:ILE:HG22	9:LF:34:ARG:HE	1.75	0.51
18:LP:94:MET:HE1	18:LP:146:ILE:CG2	2.41	0.51
31:Lc:36:LYS:O	31:Lc:40:GLN:HG2	2.11	0.51
3:L5:67:C:OP2	3:L5:312:G:N2	2.42	0.51
3:L5:2716:C:O3'	23:LU:107:LYS:NZ	2.44	0.51
3:L5:3770:PSU:H2'	3:L5:3771:C:H6	1.76	0.51
3:L5:4919:G:H2'	3:L5:4920:C:H6	1.74	0.51
22:LT:72:VAL:HG11	22:LT:96:ILE:HD13	1.93	0.51
22:LT:102:ARG:HH21	22:LT:105:PHE:HE2	1.59	0.51
23:LU:78:PHE:HE2	23:LU:83:LEU:HD11	1.76	0.51
1:LA:125:LYS:HD3	3:L5:3681:G:O6	2.12	0.50
3:L5:498:C:C4	3:L5:499:G:C8	2.99	0.50
3:L5:1440:U:H2'	3:L5:1441:C:C6	2.46	0.50
3:L5:1450:C:H2'	3:L5:1451:G:O4'	2.11	0.50
3:L5:4744:A:H2'	3:L5:4745:G:O4'	2.10	0.50
13:LJ:32:ARG:HD2	13:LJ:35:ARG:NH2	2.26	0.50
19:LQ:53:MET:O	19:LQ:58:ARG:NH1	2.44	0.50
28:LZ:18:TYR:HE1	28:LZ:47:ASP:OD2	1.94	0.50
28:LZ:76:ASN:OD1	28:LZ:77:TYR:N	2.43	0.50
38:Lj:20:ARG:HD3	38:Lj:39:TYR:HE2	1.75	0.50
43:Lo:33:LEU:HA	43:Lo:38:LYS:HG2	1.92	0.50
3:L5:923:C:HO2'	3:L5:924:C:H6	1.59	0.50
3:L5:1498:G:OP1	19:LQ:150:ARG:HD3	2.11	0.50
3:L5:1844:G:H5''	30:Lb:25:ARG:NH2	2.25	0.50
3:L5:2380:G:N2	3:L5:2424:OMG:H5'	2.26	0.50
3:L5:2505:C:H41	3:L5:4084:G:H4'	1.75	0.50
3:L5:2816:G:H2'	3:L5:2817:C:H6	1.76	0.50
3:L5:3656:A:H2'	3:L5:3657:U:C6	2.46	0.50
3:L5:3729:U:H2'	3:L5:3730:PSU:H6	1.74	0.50
3:L5:4967:A:H2'	3:L5:4968:A:H8	1.75	0.50
5:L8:140:C:H2'	5:L8:141:C:C6	2.46	0.50
3:L5:756:G:H2'	3:L5:757:G:H8	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:1079:C:H2'	3:L5:1080:C:C6	2.46	0.50
3:L5:1179:U:OP2	7:LD:289:ARG:NH2	2.42	0.50
3:L5:2079:G:H2'	3:L5:2080:U:C6	2.47	0.50
1:LA:183:GLY:HA2	3:L5:1613:A:H5'	1.93	0.50
2:LB:27:GLY:HA2	2:LB:276:HIS:CD2	2.47	0.50
3:L5:1503:A:H4'	3:L5:1504:G:H5'	1.93	0.50
3:L5:4298:A:H2'	3:L5:4299:PSU:H5'	1.93	0.50
3:L5:4344:U:H2'	3:L5:4345:C:H6	1.77	0.50
6:LC:346:ASN:O	6:LC:350:ARG:HG3	2.11	0.50
17:LO:61:ARG:HD3	17:LO:66:PRO:HB3	1.93	0.50
21:LS:96:GLU:HG3	21:LS:139:ARG:HG2	1.94	0.50
22:LT:116:LYS:HB2	22:LT:128:LEU:HD11	1.93	0.50
3:L5:106:A:H2'	3:L5:107:G:O4'	2.11	0.50
3:L5:2338:C:OP1	45:Lr:19:LYS:NZ	2.39	0.50
3:L5:4872:2MG:HM21	17:LO:202:LEU:H	1.76	0.50
14:LL:87:HIS:HB3	14:LL:90:VAL:HG22	1.94	0.50
17:LO:197:LYS:HD3	17:LO:202:LEU:O	2.11	0.50
22:LT:80:VAL:HG12	22:LT:81:LYS:H	1.76	0.50
43:Lo:65:LYS:HG3	43:Lo:87:ARG:HG2	1.93	0.50
3:L5:267:G:H2'	3:L5:268:G:C8	2.46	0.50
3:L5:271:C:H2'	3:L5:272:U:C6	2.46	0.50
3:L5:2050:OMG:HM22	3:L5:2051:C:O4'	2.12	0.50
3:L5:3926:C:H2'	3:L5:3927:U:H6	1.76	0.50
3:L5:4457:PSU:OP1	24:LV:50:ASN:ND2	2.38	0.50
8:LE:66:LYS:HB3	8:LE:68:MET:HE3	1.92	0.50
9:LF:199:LYS:HZ3	9:LF:200:ARG:HH11	1.58	0.50
27:LY:127:GLN:O	27:LY:131:GLU:HG2	2.12	0.50
29:La:100:ILE:HD13	29:La:123:ILE:HB	1.92	0.50
36:Lh:89:ARG:O	36:Lh:93:ARG:HG2	2.12	0.50
3:L5:497:G:H4'	3:L5:498:C:H5''	1.93	0.50
3:L5:966:A:H2	3:L5:2093:A:H2	1.60	0.50
3:L5:2630:U:O4	23:LU:89:LYS:NZ	2.43	0.50
3:L5:4723:A:H2'	3:L5:4724:A:C8	2.47	0.50
8:LE:67:ALA:HA	8:LE:69:TYR:CE1	2.46	0.50
10:LG:260:GLU:HG3	10:LG:264:LYS:HB2	1.92	0.50
2:LB:242:ARG:NH2	3:L5:2856:C:O2	2.42	0.50
3:L5:683:C:H2'	3:L5:684:G:O4'	2.12	0.50
3:L5:2318:G:N2	3:L5:2321:G:OP2	2.39	0.50
12:LI:47:PRO:HB3	12:LI:171:TRP:CZ2	2.47	0.50
12:LI:56:GLU:HG3	12:LI:161:GLY:HA3	1.94	0.50
13:LJ:128:LEU:HD23	13:LJ:130:PHE:HE1	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:LV:90:ARG:HG3	24:LV:124:GLU:OE2	2.12	0.50
3:L5:268:G:H2'	3:L5:269:G:C8	2.46	0.50
3:L5:1274:A:O2'	3:L5:1275:G:OP2	2.26	0.50
3:L5:1504:G:H2'	3:L5:1505:C:C6	2.47	0.50
3:L5:1704:C:HO2'	9:LF:46:ARG:HH12	1.57	0.50
3:L5:1889:U:OP2	3:L5:1890:G:N2	2.40	0.50
3:L5:2527:A:N6	26:LX:85:SER:OG	2.45	0.50
3:L5:3910:C:H2'	3:L5:3911:C:H6	1.77	0.50
3:L5:3965:A:O2'	3:L5:4038:C:N3	2.45	0.50
3:L5:4112:C:O2	3:L5:4112:C:H2'	2.10	0.50
3:L5:4358:U:H4'	14:LL:197:LYS:HD3	1.93	0.50
3:L5:4731:G:H4'	3:L5:4732:G:OP1	2.11	0.50
5:L8:78:G:O2'	36:Lh:45:SER:OG	2.23	0.50
22:LT:94:GLU:OE1	22:LT:94:GLU:N	2.38	0.50
3:L5:158:A:H5''	3:L5:159:C:H2'	1.94	0.49
3:L5:666:G:HO2'	3:L5:667:A:H8	1.57	0.49
3:L5:679:C:H2'	3:L5:680:G:C8	2.47	0.49
3:L5:2019:C:O2'	3:L5:2020:U:OP1	2.30	0.49
3:L5:2478:C:H2'	3:L5:2479:G:H5'	1.93	0.49
3:L5:2631:U:C5	23:LU:48:LYS:HD2	2.47	0.49
3:L5:4363:A:H5''	43:Lo:36:GLN:HG2	1.92	0.49
3:L5:4734:A:O2'	3:L5:4735:G:OP2	2.29	0.49
5:L8:144:U:H2'	5:L8:145:C:C6	2.46	0.49
8:LE:161:ARG:O	8:LE:182:ASN:ND2	2.45	0.49
8:LE:173:LEU:HD21	8:LE:191:GLN:HB3	1.92	0.49
13:LJ:163:MET:HB2	13:LJ:174:ILE:HD12	1.94	0.49
22:LT:71:ALA:HA	22:LT:92:ARG:HA	1.93	0.49
1:LA:17:ARG:NH1	3:L5:2450:G:OP1	2.43	0.49
1:LA:108:PRO:HD3	44:Lp:90:LYS:HD3	1.94	0.49
2:LB:100:ARG:HD3	3:L5:4911:A:OP2	2.12	0.49
2:LB:396:ARG:O	2:LB:400:GLU:N	2.45	0.49
3:L5:411:G:H4'	3:L5:412:G:H5''	1.94	0.49
3:L5:424:U:H2'	3:L5:425:U:H6	1.77	0.49
3:L5:493:G:N2	3:L5:661:C:O2	2.45	0.49
3:L5:2482:C:H2'	3:L5:2483:G:H4'	1.94	0.49
3:L5:3726:A:H2'	3:L5:3727:A:C8	2.48	0.49
8:LE:119:GLU:HB3	33:Le:7:LEU:HD11	1.94	0.49
9:LF:150:VAL:O	9:LF:154:ILE:HG12	2.12	0.49
44:Lp:57:CYS:SG	44:Lp:59:SER:OG	2.68	0.49
3:L5:424:U:H2'	3:L5:425:U:C6	2.47	0.49
3:L5:707:C:O2'	3:L5:4943:A:N1	2.36	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:2464:C:O2'	3:L5:2465:C:O5'	2.30	0.49
3:L5:2489:C:H4'	3:L5:2491:C:O2	2.12	0.49
3:L5:2690:C:H2'	3:L5:2691:U:O4'	2.13	0.49
3:L5:4594:U:H2'	3:L5:4595:G:C8	2.47	0.49
15:LM:94:LYS:HG2	17:LO:203:VAL:HG21	1.93	0.49
21:LS:20:PRO:C	21:LS:21:LYS:HD3	2.37	0.49
36:Lh:13:LYS:N	36:Lh:16:GLU:OE2	2.24	0.49
1:LA:207:VAL:HG12	3:L5:3919:C:H5''	1.93	0.49
2:LB:206:PRO:HG2	2:LB:209:GLN:HG3	1.94	0.49
3:L5:3965:A:N6	3:L5:4043:G:C6	2.79	0.49
3:L5:4258:C:H2'	3:L5:4259:C:H6	1.76	0.49
3:L5:4274:A:H2'	3:L5:4275:G:H8	1.75	0.49
3:L5:4618:OMG:H5''	24:LV:15:ARG:HB2	1.95	0.49
3:L5:4991:U:H2'	3:L5:4992:G:C8	2.46	0.49
13:LJ:20:LEU:HD22	13:LJ:22:LEU:HD22	1.93	0.49
26:LX:54:LEU:HD23	26:LX:54:LEU:H	1.77	0.49
3:L5:3861:A:H2'	3:L5:3862:A:H8	1.77	0.49
3:L5:4590:A2M:H61	3:L5:4620:OMU:HN3	1.60	0.49
3:L5:4635:A:O2'	3:L5:4637:OMG:OP1	2.30	0.49
3:L5:4918:C:H2'	3:L5:4919:G:C8	2.48	0.49
7:LD:85:LYS:HE3	7:LD:86:TYR:CE1	2.48	0.49
15:LM:119:ARG:HG3	17:LO:189:ILE:HG23	1.94	0.49
3:L5:109:G:OP2	14:LL:74:ARG:NH2	2.36	0.49
3:L5:264:C:H2'	3:L5:265:C:C6	2.47	0.49
3:L5:344:A:H5'	38:Lj:75:ARG:HH12	1.78	0.49
3:L5:1176:C:H42	3:L5:1184:A:H61	1.60	0.49
3:L5:2796:G:C5'	40:Ll:45:ARG:HH21	2.25	0.49
3:L5:2836:A:H2'	3:L5:2837:OMU:C6	2.43	0.49
3:L5:3949:A:H8	3:L5:4064:C:H42	1.59	0.49
3:L5:4291:G:OP2	43:Lo:10:THR:HG22	2.12	0.49
9:LF:69:ILE:O	9:LF:73:ARG:HG3	2.13	0.49
3:L5:162:A:H2'	3:L5:163:A:H8	1.76	0.49
3:L5:956:A:H1'	3:L5:2076:G:H5''	1.95	0.49
3:L5:3607:U:H2'	3:L5:3608:A:C8	2.48	0.49
7:LD:85:LYS:HD2	7:LD:86:TYR:HD1	1.78	0.49
12:LI:193:ASP:OD2	12:LI:198:LYS:HG3	2.12	0.49
40:Ll:28:ARG:HA	40:Ll:33:ASN:ND2	2.27	0.49
3:L5:300:A:H2'	3:L5:301:G:H8	1.78	0.49
3:L5:2109:G:N2	3:L5:2252:G:H1	2.11	0.49
4:L7:3:C:H2'	4:L7:4:U:C6	2.48	0.49
7:LD:146:LEU:HD12	7:LD:163:LEU:HB2	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:LG:63:LEU:HD11	16:LN:29:GLN:HB2	1.93	0.49
3:L5:216:C:OP2	3:L5:219:G:O2'	2.31	0.49
3:L5:741:C:H2'	3:L5:742:G:O4'	2.13	0.49
3:L5:1394:G:OP1	14:LL:186:ARG:NH1	2.45	0.49
3:L5:1410:U:H3	30:Lb:52:LYS:NZ	2.11	0.49
3:L5:1534:A2M:HM'2	3:L5:1535:C:H6	1.77	0.49
3:L5:2010:A:N7	3:L5:2012:A:H1'	2.28	0.49
3:L5:2538:U:H2'	3:L5:2539:C:C6	2.47	0.49
3:L5:3615:G:H1'	25:LW:44:ARG:HH11	1.78	0.49
3:L5:4764:A:N1	11:LH:60:TRP:HB2	2.27	0.49
3:L5:4913:G:H4'	3:L5:4914:C:O5'	2.13	0.49
5:L8:155:C:H2'	5:L8:156:U:O4'	2.12	0.49
35:Lg:100:GLN:HE21	35:Lg:104:VAL:HG13	1.78	0.49
3:L5:318:A:H2'	3:L5:319:A:C8	2.47	0.49
3:L5:1509:C:H5''	29:La:2:PRO:HD2	1.95	0.49
3:L5:1633:G:H5'	3:L5:1634:A:OP1	2.12	0.49
3:L5:1893:C:H1'	3:L5:1937:C:O2	2.13	0.49
3:L5:4424:A:H2'	3:L5:4425:G:H8	1.77	0.49
5:L8:123:U:H3'	5:L8:124:U:C6	2.48	0.49
7:LD:60:ILE:HB	7:LD:80:ALA:HB2	1.95	0.49
13:LJ:96:LYS:HZ2	13:LJ:163:MET:HE2	1.78	0.49
24:LV:43:LYS:HE2	24:LV:62:MET:HE3	1.94	0.49
24:LV:85:ARG:NH1	24:LV:99:GLU:O	2.46	0.49
2:LB:378:ARG:HD3	25:LW:11:TYR:CD2	2.48	0.48
23:LU:72:VAL:O	23:LU:72:VAL:HG12	2.13	0.48
29:La:12:ARG:HG3	29:La:12:ARG:O	2.13	0.48
3:L5:62:A:N3	3:L5:77:U:O2'	2.36	0.48
3:L5:148:C:OP2	10:LG:197:LYS:NZ	2.43	0.48
3:L5:650:C:H2'	3:L5:651:C:H6	1.79	0.48
3:L5:1282:G:OP2	8:LE:128:HIS:NE2	2.46	0.48
3:L5:1728:U:OP1	9:LF:127:LYS:NZ	2.37	0.48
3:L5:2520:C:H2'	3:L5:2521:G:H8	1.77	0.48
7:LD:208:MET:HE2	7:LD:236:MET:HE2	1.95	0.48
3:L5:645:G:C2	3:L5:646:G:H1'	2.48	0.48
3:L5:699:C:H2'	3:L5:700:G:H8	1.78	0.48
3:L5:1837:A:OP2	22:LT:130:ARG:HG2	2.13	0.48
3:L5:1947:U:H2'	41:Lm:109:ASN:ND2	2.29	0.48
3:L5:3768:PSU:H2'	3:L5:3769:C:C6	2.48	0.48
3:L5:4353:PSU:H5'	3:L5:4353:PSU:H6	1.78	0.48
3:L5:5062:G:H2'	3:L5:5063:G:H8	1.78	0.48
5:L8:5:U:H2'	5:L8:6:C:H6	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:Lh:88:THR:HB	36:Lh:91:MET:HB2	1.95	0.48
2:LB:57:VAL:HB	2:LB:367:PHE:HB3	1.95	0.48
3:L5:981:C:N3	8:LE:73:TYR:HD2	2.10	0.48
3:L5:1287:G:C6	8:LE:132:PRO:HG3	2.48	0.48
3:L5:1733:G:N3	3:L5:4214:A:H2'	2.28	0.48
3:L5:4393:G:O4'	3:L5:4447:5MC:HM53	2.13	0.48
7:LD:33:ARG:O	7:LD:37:VAL:HG22	2.13	0.48
9:LF:59:LYS:O	9:LF:63:GLN:HG3	2.13	0.48
27:LY:41:LYS:HD3	27:LY:42:TYR:CE1	2.48	0.48
3:L5:1719:A:H2'	3:L5:1720:C:C6	2.49	0.48
3:L5:1859:C:H3'	3:L5:1860:PSU:H5'	1.96	0.48
3:L5:1860:PSU:H5'	3:L5:1860:PSU:C6	2.41	0.48
3:L5:2481:G:H2'	3:L5:2482:C:C6	2.49	0.48
3:L5:4344:U:H2'	3:L5:4345:C:C6	2.49	0.48
10:LG:77:PRO:HG2	10:LG:80:ILE:HD12	1.94	0.48
27:LY:28:LYS:O	27:LY:31:SER:OG	2.26	0.48
28:LZ:9:LYS:HD2	28:LZ:83:THR:O	2.14	0.48
45:Lr:39:ARG:O	45:Lr:103:ARG:NH2	2.46	0.48
1:LA:80:GLU:HB2	1:LA:170:ALA:HA	1.94	0.48
3:L5:434:A:H2'	3:L5:435:A:O4'	2.14	0.48
3:L5:2590:G:N2	3:L5:2754:G:H2'	2.28	0.48
3:L5:4110:C:H2'	3:L5:4111:U:C6	2.48	0.48
3:L5:4306:OMU:OP2	19:LQ:159:PRO:HD2	2.12	0.48
3:L5:4740:G:H1'	3:L5:4742:G:H5''	1.96	0.48
20:LR:105:LEU:HD23	20:LR:138:LEU:HD23	1.95	0.48
27:LY:38:LEU:HD22	27:LY:42:TYR:HE1	1.78	0.48
39:Lk:8:ILE:HD12	39:Lk:56:LEU:HD12	1.94	0.48
2:LB:44:THR:HG21	2:LB:186:ASN:HD22	1.79	0.48
3:L5:1741:G:N3	3:L5:1781:PSU:H5''	2.29	0.48
3:L5:1996:C:H5'	3:L5:1997:U:C6	2.49	0.48
3:L5:2842:G:H2'	3:L5:2843:PSU:C6	2.48	0.48
3:L5:3911:C:H2'	3:L5:3912:U:C6	2.48	0.48
3:L5:4094:G:C6	3:L5:4095:G:C4	3.01	0.48
3:L5:4238:G:H2'	3:L5:4239:A:H8	1.78	0.48
4:L7:55:A:H4'	13:LJ:155:HIS:HB2	1.96	0.48
4:L7:110:G:H2'	4:L7:111:C:C6	2.49	0.48
33:Le:26:ASP:OD1	33:Le:27:ARG:HG3	2.14	0.48
2:LB:285:TYR:CD1	2:LB:363:ILE:HG13	2.49	0.48
3:L5:922:C:H2'	3:L5:923:C:O4'	2.14	0.48
3:L5:1296:G:H2'	3:L5:1297:U:C6	2.49	0.48
3:L5:1782:PSU:H6	3:L5:1782:PSU:H5'	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:2322:G:OP1	33:Le:36:ARG:NH2	2.29	0.48
3:L5:4252:C:OP2	3:L5:4253:A:O2'	2.24	0.48
3:L5:4455:G:H2'	3:L5:4456:OMC:C6	2.49	0.48
3:L5:4541:G:N2	3:L5:4544:A:OP2	2.39	0.48
3:L5:4591:U:H2'	3:L5:4592:C:C6	2.49	0.48
3:L5:4611:A:H2'	3:L5:4612:C:C6	2.48	0.48
3:L5:4736:C:H2'	3:L5:4737:G:C8	2.45	0.48
12:LI:76:MET:O	12:LI:80:CYS:N	2.41	0.48
32:Ld:63:ARG:HD3	32:Ld:103:TYR:CD2	2.49	0.48
2:LB:10:ARG:NH1	3:L5:4459:U:H5''	2.28	0.48
3:L5:705:G:H2'	3:L5:706:C:C6	2.49	0.48
3:L5:1254:A:H61	3:L5:1258:G:H1	1.62	0.48
3:L5:1857:C:H2'	3:L5:1858:A:C8	2.49	0.48
3:L5:1870:C:H2'	3:L5:1871:A2M:H8	1.96	0.48
3:L5:2631:U:C5	23:LU:48:LYS:HB3	2.48	0.48
3:L5:4143:G:C2	3:L5:4145:C:H1'	2.49	0.48
3:L5:4238:G:H2'	3:L5:4239:A:C8	2.49	0.48
3:L5:4304:A:C2	29:La:43:ILE:HG23	2.49	0.48
5:L8:79:G:H2'	5:L8:80:A:O4'	2.14	0.48
10:LG:134:PRO:HB3	10:LG:206:GLN:O	2.13	0.48
24:LV:35:LYS:HB2	24:LV:67:LYS:HG3	1.96	0.48
44:Lp:51:ALA:HB3	44:Lp:54:ILE:HD12	1.95	0.48
3:L5:132:G:H2'	3:L5:133:C:H4'	1.96	0.48
3:L5:650:C:H2'	3:L5:651:C:C6	2.49	0.48
3:L5:716:C:OP1	6:LC:317:ASN:HB2	2.14	0.48
3:L5:1178:G:H2'	3:L5:1178:G:N3	2.27	0.48
3:L5:4096:C:H42	3:L5:4113:U:HO2'	1.54	0.48
3:L5:4431:PSU:H2'	3:L5:4431:PSU:O4	2.13	0.48
3:L5:4619:U:H2'	3:L5:4620:OMU:H6	1.95	0.48
7:LD:55:VAL:HG22	7:LD:60:ILE:HD12	1.96	0.48
33:Le:70:LEU:HD11	33:Le:76:LYS:HB3	1.95	0.48
37:Li:3:LEU:HD12	37:Li:4:ARG:HB2	1.95	0.48
40:LI:44:TRP:CD1	40:LI:44:TRP:H	2.31	0.48
2:LB:50:LYS:HA	2:LB:79:VAL:HG12	1.96	0.47
3:L5:1100:U:O3'	3:L5:1167:C:N4	2.45	0.47
3:L5:1437:C:O2'	3:L5:2099:G:OP2	2.31	0.47
3:L5:1475:G:H2'	3:L5:1476:C:C6	2.48	0.47
3:L5:2415:OMU:HM22	3:L5:2416:G:H5'	1.95	0.47
3:L5:2835:A:H2'	3:L5:2836:A:C8	2.47	0.47
3:L5:3595:U:H5''	3:L5:3597:G:OP2	2.14	0.47
3:L5:3597:G:H2'	3:L5:3598:C:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:3920:PSU:H2'	3:L5:3921:U:C6	2.49	0.47
3:L5:4760:G:H2'	3:L5:4761:G:O4'	2.14	0.47
6:LC:144:ILE:HG13	6:LC:144:ILE:O	2.14	0.47
7:LD:79:TYR:O	7:LD:82:GLU:HG2	2.14	0.47
12:LI:52:MET:HB2	12:LI:152:LEU:HD11	1.96	0.47
15:LM:96:GLU:CD	15:LM:100:ARG:HE	2.22	0.47
16:LN:137:PRO:O	16:LN:143:ARG:HD3	2.14	0.47
24:LV:20:LEU:HB2	24:LV:55:ALA:O	2.14	0.47
24:LV:71:GLU:H	24:LV:71:GLU:CD	2.22	0.47
3:L5:458:C:OP1	45:Lr:87:ARG:NH2	2.48	0.47
3:L5:1986:U:H1'	3:L5:2005:G:N7	2.28	0.47
3:L5:3867:A2M:HM'3	3:L5:3867:A2M:H1'	1.68	0.47
11:LH:9:THR:HG21	11:LH:54:ARG:HD3	1.96	0.47
18:LP:125:MET:HB2	18:LP:141:SER:HB3	1.96	0.47
23:LU:33:ILE:HD11	23:LU:99:TRP:CZ3	2.48	0.47
28:LZ:36:ARG:HB2	28:LZ:38:TYR:CZ	2.49	0.47
3:L5:5:A:H1'	10:LG:192:ARG:HH21	1.79	0.47
3:L5:729:2MG:N2	21:LS:66:GLN:O	2.45	0.47
3:L5:1993:C:N3	3:L5:1994:C:N4	2.63	0.47
3:L5:2018:C:N3	3:L5:2019:C:N4	2.62	0.47
3:L5:2632:PSU:H2'	3:L5:2633:U:C6	2.49	0.47
3:L5:2654:C:H2'	3:L5:2655:C:H6	1.79	0.47
3:L5:4322:G:N2	3:L5:4325:A:OP2	2.40	0.47
3:L5:4420:PSU:H5''	3:L5:4421:C:C5	2.49	0.47
3:L5:4698:C:H3'	41:Lm:111:ARG:NH1	2.30	0.47
5:L8:152:U:H2'	5:L8:153:C:O4'	2.14	0.47
6:LC:109:ARG:HG2	6:LC:111:TRP:CE2	2.49	0.47
13:LJ:22:LEU:HD12	13:LJ:128:LEU:HD21	1.95	0.47
13:LJ:88:LYS:NZ	13:LJ:92:TYR:OH	2.30	0.47
15:LM:6:PHE:O	15:LM:11:ARG:NE	2.45	0.47
23:LU:105:ASN:HD22	23:LU:109:SER:HB2	1.80	0.47
38:Lj:39:TYR:CG	38:Lj:39:TYR:O	2.67	0.47
1:LA:114:CYS:HB2	1:LA:169:VAL:HG23	1.94	0.47
3:L5:1734:G:N2	3:L5:1735:U:O4	2.37	0.47
3:L5:1872:G:O2'	3:L5:4219:A:N3	2.38	0.47
3:L5:2337:C:H4'	45:Lr:19:LYS:HB2	1.96	0.47
3:L5:2368:A:N6	3:L5:2827:G:O2'	2.46	0.47
3:L5:2525:U:P	20:LR:42:ARG:HH22	2.37	0.47
3:L5:4458:C:H2'	3:L5:4459:U:C6	2.48	0.47
3:L5:4704:C:H4'	11:LH:129:ARG:HH21	1.79	0.47
2:LB:18:PRO:C	2:LB:20:LYS:H	2.23	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:1433:A:H3'	3:L5:1434:G:H8	1.78	0.47
3:L5:1697:G:H2'	3:L5:1698:C:C6	2.49	0.47
3:L5:1866:UR3:H3U2	3:L5:1867:A:N3	2.30	0.47
3:L5:1883:OMG:O6	3:L5:1896:A:H2	1.98	0.47
3:L5:5002:U:H2'	3:L5:5003:U:C6	2.49	0.47
5:L8:93:C:O2'	5:L8:94:G:H8	1.98	0.47
9:LF:169:LEU:HB3	9:LF:187:MET:HE1	1.96	0.47
20:LR:140:GLU:OE1	20:LR:140:GLU:N	2.47	0.47
1:LA:3:ARG:HD3	3:L5:1628:C:H42	1.77	0.47
3:L5:406:C:HO2'	3:L5:407:A:P	2.37	0.47
3:L5:1321:G:H2'	3:L5:3876:A:N7	2.29	0.47
3:L5:2520:C:H2'	3:L5:2521:G:C8	2.50	0.47
3:L5:3594:C:O2	3:L5:3594:C:H2'	2.13	0.47
3:L5:4651:A:H2'	3:L5:4652:G:O4'	2.15	0.47
3:L5:4741:C:H4'	3:L5:4742:G:H5'	1.97	0.47
5:L8:37:A:OP2	36:Lh:89:ARG:HD2	2.14	0.47
5:L8:94:G:N3	38:Lj:82:THR:HG23	2.29	0.47
9:LF:93:ILE:HG21	9:LF:247:MET:HE1	1.97	0.47
11:LH:89:ARG:HG3	11:LH:145:ILE:HG23	1.97	0.47
14:LL:58:ILE:HG13	14:LL:116:ARG:HD2	1.97	0.47
14:LL:172:GLU:HG2	37:Li:2:ALA:HA	1.96	0.47
31:Lc:38:ILE:HG21	31:Lc:63:TYR:HB3	1.95	0.47
45:Lr:90:LEU:HG	45:Lr:111:ILE:HG23	1.97	0.47
3:L5:362:A:N6	40:Ll:37:TYR:O	2.45	0.47
3:L5:444:G:H2'	3:L5:445:U:H6	1.79	0.47
3:L5:481:G:H2'	3:L5:482:G:C8	2.50	0.47
3:L5:1077:C:H4'	3:L5:1215:C:C4	2.49	0.47
3:L5:1695:U:H2'	3:L5:1696:C:C6	2.49	0.47
3:L5:1697:G:H21	3:L5:2084:C:P	2.37	0.47
3:L5:1725:U:H2'	3:L5:1726:U:C6	2.50	0.47
3:L5:1932:A:P	17:LO:49:ARG:HH12	2.38	0.47
3:L5:2099:G:OP1	9:LF:35:LYS:NZ	2.48	0.47
3:L5:2372:U:H2'	3:L5:2373:C:C6	2.50	0.47
3:L5:2434:G:O2'	3:L5:2527:A:N1	2.45	0.47
3:L5:3856:A:H5''	18:LP:83:TRP:O	2.14	0.47
3:L5:3943:A:H2'	3:L5:3944:OMG:H5''	1.95	0.47
3:L5:3953:G:O2'	3:L5:3954:A:O4'	2.31	0.47
3:L5:4088:C:H2'	3:L5:4089:G:C8	2.49	0.47
3:L5:4251:A:C2	13:LJ:127:GLY:HA3	2.49	0.47
3:L5:4279:A:H5'	3:L5:4281:A:H1'	1.97	0.47
3:L5:4500:PSU:H2'	3:L5:4501:U:C6	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:4872:2MG:HM22	3:L5:4874:A:N6	2.29	0.47
3:L5:4881:U:C4	15:LM:113:MET:HG3	2.50	0.47
12:LI:52:MET:HE2	12:LI:163:GLN:HG2	1.97	0.47
12:LI:53:VAL:HG11	22:LT:158:PHE:CZ	2.50	0.47
17:LO:44:SER:HB3	17:LO:129:LEU:HD21	1.95	0.47
18:LP:4:TYR:HE1	18:LP:18:ARG:HD2	1.79	0.47
24:LV:30:ASP:N	24:LV:30:ASP:OD1	2.48	0.47
24:LV:32:THR:HG23	24:LV:34:ALA:H	1.79	0.47
32:Ld:50:ARG:NH1	32:Ld:62:VAL:O	2.48	0.47
33:Le:85:LEU:HD21	33:Le:115:ALA:HB2	1.96	0.47
2:LB:99:LEU:O	3:L5:4582:C:H4'	2.14	0.47
2:LB:356:LYS:NZ	2:LB:358:ARG:HB2	2.30	0.47
3:L5:239:C:OP1	27:LY:46:SER:OG	2.32	0.47
3:L5:1202:C:H3'	3:L5:1203:G:H4'	1.97	0.47
3:L5:1248:C:H2'	3:L5:1249:C:H6	1.79	0.47
3:L5:1449:C:H2'	3:L5:1450:C:H6	1.79	0.47
3:L5:1779:PSU:H2'	3:L5:1780:A:C8	2.50	0.47
3:L5:1782:PSU:H5'	3:L5:1782:PSU:C6	2.49	0.47
3:L5:2029:A:H2'	3:L5:2030:A:C8	2.49	0.47
3:L5:2055:G:H4'	3:L5:2056:G:OP2	2.15	0.47
3:L5:2376:A:H2'	3:L5:2377:C:C6	2.50	0.47
3:L5:3893:C:H2'	3:L5:3894:A:C8	2.50	0.47
3:L5:4371:G:OP1	43:Lo:59:LYS:NZ	2.47	0.47
3:L5:4530:UR3:H2'	3:L5:4531:PSU:H2'	1.96	0.47
13:LJ:57:VAL:HG21	13:LJ:60:PHE:CE1	2.50	0.47
3:L5:1273:G:O2'	3:L5:1274:A:H5'	2.15	0.47
3:L5:4364:G:H2'	3:L5:4365:C:H6	1.79	0.47
3:L5:4455:G:H2'	3:L5:4456:OMC:H6	1.80	0.47
20:LR:16:ARG:NH2	35:Lg:29:ARG:HH21	2.13	0.47
21:LS:15:ARG:HB3	21:LS:27:LEU:HD23	1.95	0.47
24:LV:69:LYS:HB3	24:LV:71:GLU:OE2	2.14	0.47
26:LX:133:GLU:OE1	26:LX:133:GLU:N	2.48	0.47
33:Le:35:TRP:HH2	33:Le:55:MET:HG2	1.80	0.47
3:L5:6:C:H5''	10:LG:197:LYS:HB3	1.97	0.47
3:L5:440:U:O2'	34:Lf:91:ASN:O	2.32	0.47
3:L5:2422:OMC:OP1	18:LP:127:ARG:NH2	2.43	0.47
3:L5:2730:U:H2'	3:L5:2731:C:C6	2.50	0.47
3:L5:4251:A:H5''	13:LJ:108:GLY:HA3	1.97	0.47
3:L5:4452:U:OP2	3:L5:4522:G:N2	2.42	0.47
3:L5:4492:U:O2'	3:L5:4512:U:O2	2.31	0.47
7:LD:120:GLU:O	7:LD:248:ARG:NH1	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:LH:137:SER:OG	11:LH:143:GLU:HB3	2.15	0.47
16:LN:96:ARG:NH1	16:LN:100:SER:OG	2.48	0.47
34:Lf:104:MET:O	34:Lf:105:LEU:HB2	2.14	0.47
39:Lk:5:ILE:HD12	39:Lk:43:TYR:HB3	1.97	0.47
1:LA:114:CYS:SG	1:LA:165:VAL:HB	2.55	0.46
2:LB:122:TRP:CE2	2:LB:127:LYS:HE3	2.50	0.46
3:L5:38:A:H5''	29:La:35:ALA:HB2	1.97	0.46
3:L5:140:G:H2'	3:L5:141:C:C6	2.51	0.46
3:L5:163:A:H2'	3:L5:164:G:H8	1.80	0.46
3:L5:1082:C:HO2'	3:L5:1083:U:H6	1.63	0.46
3:L5:1242:G:C6	3:L5:1243:C:N4	2.83	0.46
3:L5:1693:U:H2'	3:L5:1694:C:O4'	2.14	0.46
3:L5:1721:G:H2'	3:L5:1722:C:C6	2.50	0.46
3:L5:2034:G:O2'	21:LS:118:ARG:NH1	2.48	0.46
3:L5:2496:G:H2'	3:L5:2497:C:C6	2.50	0.46
3:L5:4140:C:H2'	3:L5:4143:G:H1	1.79	0.46
3:L5:4313:A:H4'	22:LT:71:ALA:HB3	1.98	0.46
3:L5:4886:C:H2'	3:L5:4887:C:H6	1.79	0.46
7:LD:182:GLY:HA2	7:LD:194:VAL:HG23	1.96	0.46
14:LL:36:ARG:O	14:LL:40:GLN:HG3	2.16	0.46
29:La:132:ARG:HA	29:La:135:GLU:HG2	1.97	0.46
38:Lj:67:LEU:HD23	38:Lj:67:LEU:HA	1.78	0.46
43:Lo:45:GLN:NE2	43:Lo:51:GLN:HA	2.30	0.46
2:LB:308:ASP:C	2:LB:309:LEU:HD23	2.40	0.46
3:L5:196:C:H4'	27:LY:126:ARG:HG3	1.97	0.46
3:L5:300:A:H2'	3:L5:301:G:C8	2.51	0.46
3:L5:677:G:H2'	3:L5:678:C:C6	2.50	0.46
3:L5:1097:C:H2'	3:L5:1098:G:C8	2.51	0.46
3:L5:1210:C:H41	9:LF:66:ARG:CZ	2.29	0.46
3:L5:1500:A:H5''	3:L5:1501:C:H5''	1.97	0.46
3:L5:4258:C:OP1	13:LJ:54:ARG:N	2.44	0.46
3:L5:4460:U:H2'	3:L5:4461:C:C6	2.50	0.46
6:LC:211:TYR:OH	6:LC:218:ILE:HD11	2.15	0.46
36:Lh:15:GLU:OE1	36:Lh:15:GLU:N	2.39	0.46
2:LB:246:ARG:HG2	2:LB:246:ARG:NH1	2.30	0.46
3:L5:280:G:OP1	16:LN:47:LYS:HE2	2.16	0.46
3:L5:490:C:H1'	3:L5:666:G:O6	2.16	0.46
3:L5:495:C:H1'	3:L5:659:G:C2	2.50	0.46
3:L5:709:C:OP1	34:Lf:46:ARG:NH2	2.29	0.46
3:L5:980:U:H2'	3:L5:981:C:C6	2.50	0.46
3:L5:1298:C:H2'	3:L5:1299:G:C8	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:1392:A:H2'	3:L5:1393:G:C8	2.50	0.46
3:L5:1836:G:OP1	22:LT:129:LYS:NZ	2.47	0.46
3:L5:3857:G:H5''	18:LP:86:LYS:HB2	1.97	0.46
3:L5:4685:U:H2'	3:L5:4686:G:C8	2.51	0.46
3:L5:4737:G:H2'	3:L5:4738:C:H6	1.80	0.46
6:LC:152:LEU:HD23	6:LC:251:ILE:HG12	1.97	0.46
9:LF:87:PRO:HG3	9:LF:144:TYR:CE2	2.50	0.46
16:LN:114:ARG:HH12	16:LN:157:LYS:HG2	1.79	0.46
23:LU:24:ASP:HB2	23:LU:69:LYS:HG2	1.97	0.46
36:Lh:13:LYS:HG2	36:Lh:15:GLU:OE1	2.16	0.46
2:LB:128:LYS:HG3	3:L5:4966:A:H5'	1.98	0.46
3:L5:257:C:H2'	3:L5:258:G:H5''	1.96	0.46
3:L5:1941:A:C2	3:L5:4434:C:H5'	2.51	0.46
3:L5:2276:A:H2'	3:L5:2277:C:O4'	2.15	0.46
3:L5:2666:U:OP2	20:LR:124:TYR:OH	2.28	0.46
3:L5:4100:C:H5''	3:L5:4101:C:H5	1.81	0.46
3:L5:4307:A:H4'	19:LQ:186:TYR:CG	2.51	0.46
3:L5:4342:C:O3'	43:Lo:37:GLY:HA3	2.16	0.46
3:L5:4859:C:H2'	3:L5:4860:G:C8	2.51	0.46
5:L8:5:U:H2'	5:L8:6:C:C6	2.51	0.46
3:L5:1351:G:O6	19:LQ:55:ARG:NH1	2.46	0.46
3:L5:1883:OMG:HM22	3:L5:2070:U:H3	1.81	0.46
3:L5:2083:C:OP2	19:LQ:14:ARG:NH2	2.48	0.46
3:L5:4589:A:N1	3:L5:4621:C:O2'	2.42	0.46
26:LX:64:SER:HB2	36:Lh:69:LEU:HD13	1.97	0.46
29:La:110:LYS:HG3	29:La:128:PHE:HB2	1.97	0.46
29:La:113:GLY:O	29:La:136:LYS:NZ	2.40	0.46
45:Lr:107:ARG:O	45:Lr:111:ILE:HG12	2.14	0.46
1:LA:14:SER:H	1:LA:17:ARG:HG3	1.80	0.46
3:L5:135:G:N2	36:Lh:95:LEU:O	2.48	0.46
3:L5:433:A:H2'	3:L5:434:A:O4'	2.16	0.46
3:L5:690:C:H2'	3:L5:691:C:C6	2.50	0.46
3:L5:2424:OMG:HM22	3:L5:2426:U:C6	2.50	0.46
3:L5:2484:A:C4	3:L5:2486:G:N2	2.84	0.46
3:L5:3923:A:H2'	3:L5:3924:C:C6	2.51	0.46
5:L8:40:A:H2'	5:L8:41:A:C8	2.50	0.46
5:L8:88:A:H2'	5:L8:89:U:O4'	2.15	0.46
6:LC:5:ARG:HD2	6:LC:24:LEU:O	2.16	0.46
7:LD:212:MET:HE1	7:LD:233:PRO:HG2	1.97	0.46
11:LH:105:ILE:CG2	11:LH:109:GLY:HA2	2.45	0.46
26:LX:72:ASP:O	26:LX:76:ILE:HG12	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:LB:47:LEU:HG	2:LB:181:MET:SD	2.56	0.46
2:LB:254:ILE:O	2:LB:254:ILE:HG13	2.16	0.46
3:L5:2347:A:N3	33:Le:30:LYS:HE3	2.31	0.46
3:L5:2406:G:O2'	40:Ll:48:LYS:NZ	2.49	0.46
3:L5:2864:A:H2'	3:L5:2865:U:C6	2.51	0.46
3:L5:3599:A:H2'	3:L5:3600:G:H8	1.81	0.46
3:L5:4143:G:N3	3:L5:4145:C:H1'	2.30	0.46
9:LF:226:HIS:ND1	9:LF:228:VAL:HG22	2.31	0.46
10:LG:255:LYS:O	10:LG:259:LYS:HG2	2.15	0.46
23:LU:46:ARG:HH12	23:LU:89:LYS:HE3	1.80	0.46
3:L5:7:C:H2'	3:L5:8:U:C6	2.51	0.46
3:L5:1296:G:H2'	3:L5:1297:U:H6	1.81	0.46
3:L5:1565:A:C5	3:L5:1566:C:H1'	2.51	0.46
3:L5:1646:A:O2'	38:Lj:49:TRP:O	2.27	0.46
3:L5:1972:G:N2	3:L5:1995:G:H1'	2.30	0.46
3:L5:2003:G:H22	3:L5:2016:C:H42	1.64	0.46
3:L5:2303:C:H5''	33:Le:104:SER:HB3	1.97	0.46
3:L5:3652:A:H2'	3:L5:3653:A:C8	2.51	0.46
3:L5:4460:U:H2'	3:L5:4461:C:H6	1.81	0.46
3:L5:4935:C:H2'	3:L5:4936:G:C8	2.51	0.46
4:L7:3:C:H2'	4:L7:4:U:H6	1.80	0.46
5:L8:74:U:H3	27:LY:72:GLN:HE22	1.62	0.46
10:LG:26:LYS:HG3	10:LG:27:VAL:H	1.80	0.46
30:Lb:116:LEU:HB3	30:Lb:117:ARG:NH1	2.31	0.46
44:Lp:8:VAL:HG13	44:Lp:11:VAL:HG23	1.97	0.46
3:L5:174:C:H2'	3:L5:175:C:C6	2.51	0.46
3:L5:1590:C:H4'	3:L5:2857:A:H5'	1.98	0.46
3:L5:1753:G:H21	7:LD:2:GLY:HA3	1.81	0.46
3:L5:2022:C:H2'	3:L5:2023:C:O4'	2.16	0.46
3:L5:2297:G:H4'	6:LC:242:PRO:HB2	1.98	0.46
3:L5:2391:G:H2'	3:L5:2392:C:C6	2.51	0.46
3:L5:2654:C:H2'	3:L5:2655:C:C6	2.51	0.46
3:L5:3690:U:H2'	3:L5:3691:G:O4'	2.16	0.46
3:L5:4579:PSU:C6	3:L5:4579:PSU:H5'	2.51	0.46
5:L8:39:G:H1'	5:L8:103:A:N6	2.31	0.46
6:LC:254:GLU:OE2	6:LC:258:ARG:NE	2.44	0.46
19:LQ:72:LEU:HB2	19:LQ:75:ARG:HD2	1.97	0.46
26:LX:64:SER:HB3	36:Lh:83:LEU:CD2	2.46	0.46
3:L5:937:U:C6	15:LM:46:ARG:HD2	2.51	0.46
3:L5:986:C:H2'	3:L5:987:C:H6	1.81	0.46
3:L5:1241:C:C6	30:Lb:120:ARG:HD2	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:1718:C:OP2	9:LF:200:ARG:NH2	2.37	0.46
3:L5:2752:G:H2'	3:L5:2753:G:O4'	2.16	0.46
3:L5:3868:G:H22	3:L5:3900:G:H1'	1.81	0.46
6:LC:67:TRP:CE3	6:LC:73:VAL:HG21	2.51	0.46
6:LC:76:ILE:HG12	6:LC:96:CYS:SG	2.56	0.46
3:L5:448:G:C6	3:L5:450:G:C8	3.04	0.45
3:L5:1982:G:O6	3:L5:1989:G:N2	2.48	0.45
3:L5:2280:G:P	33:Le:48:ARG:HH22	2.38	0.45
3:L5:2745:A:H2'	3:L5:2746:A:H8	1.81	0.45
3:L5:3732:A:H2'	3:L5:3733:A:H8	1.80	0.45
3:L5:4737:G:H2'	3:L5:4738:C:C6	2.51	0.45
5:L8:89:U:H2'	5:L8:90:C:C6	2.50	0.45
6:LC:362:GLN:HA	6:LC:365:SER:HB3	1.98	0.45
11:LH:41:ILE:HG21	11:LH:73:ILE:HD11	1.97	0.45
18:LP:112:LEU:HG	18:LP:150:LEU:HB3	1.97	0.45
21:LS:28:TYR:CD2	21:LS:54:MET:HE1	2.50	0.45
42:Ln:14:LYS:O	42:Ln:18:ARG:HG3	2.16	0.45
2:LB:223:THR:HG22	2:LB:338:VAL:HG23	1.97	0.45
3:L5:1098:G:H2'	3:L5:1099:C:C6	2.51	0.45
3:L5:1249:C:H2'	3:L5:1250:C:H6	1.81	0.45
3:L5:2078:C:OP1	33:Le:64:LYS:HG2	2.16	0.45
3:L5:2822:G:H5''	20:LR:18:GLY:HA3	1.98	0.45
3:L5:3637:PSU:C2'	3:L5:3638:G:H5'	2.46	0.45
3:L5:3710:G:H4'	3:L5:3711:A:H5'	1.97	0.45
3:L5:3787:G:H1'	3:L5:3789:C:N4	2.31	0.45
3:L5:4405:G:H5'	12:LI:8:CYS:SG	2.55	0.45
18:LP:36:ILE:HD12	18:LP:114:ILE:HD13	1.97	0.45
20:LR:37:SER:O	20:LR:41:ILE:HG12	2.16	0.45
27:LY:112:ASP:OD1	27:LY:114:ASP:N	2.46	0.45
43:Lo:22:LYS:HG3	43:Lo:73:VAL:HG12	1.97	0.45
3:L5:6:C:H2'	3:L5:7:C:C6	2.51	0.45
3:L5:179:G:H1	3:L5:257:C:N4	2.12	0.45
3:L5:699:C:H1'	3:L5:968:C:N3	2.31	0.45
3:L5:2094:G:H2'	3:L5:2095:A:N3	2.31	0.45
3:L5:2858:A:H2'	3:L5:2859:G:O4'	2.15	0.45
3:L5:3731:C:H2'	3:L5:3732:A:H8	1.81	0.45
3:L5:3830:A2M:HM'2	3:L5:3831:U:H5'	1.99	0.45
3:L5:3928:A:H2'	3:L5:3929:G:O4'	2.16	0.45
3:L5:3937:C:H1'	16:LN:125:SER:CB	2.46	0.45
3:L5:4108:G:H2'	3:L5:4109:G:C8	2.51	0.45
3:L5:4966:A:H2'	3:L5:4967:A:O4'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:LF:115:ARG:NH1	19:LQ:4:ASP:O	2.50	0.45
10:LG:50:ASP:HB2	26:LX:40:ILE:HD11	1.99	0.45
26:LX:117:TYR:O	26:LX:119:ILE:HG23	2.16	0.45
27:LY:50:ARG:HG3	27:LY:51:LYS:N	2.31	0.45
39:Lk:5:ILE:HD13	39:Lk:11:PHE:HA	1.98	0.45
43:Lo:2:VAL:N	43:Lo:90:HIS:O	2.49	0.45
3:L5:460:C:H2'	3:L5:461:G:H8	1.81	0.45
3:L5:690:C:H4'	45:Lr:85:ASN:CG	2.42	0.45
3:L5:1273:G:C8	30:Lb:117:ARG:HD2	2.51	0.45
3:L5:1389:U:OP1	3:L5:1497:A:O2'	2.20	0.45
3:L5:3901:A:H8	3:L5:4518:A:N1	2.15	0.45
11:LH:96:TYR:HA	11:LH:177:ASP:OD1	2.16	0.45
18:LP:116:HIS:HB3	18:LP:149:ILE:HB	1.98	0.45
3:L5:656:C:H3'	3:L5:657:C:H5''	1.97	0.45
3:L5:1301:C:H5''	3:L5:1302:U:OP2	2.16	0.45
3:L5:1416:G:H2'	3:L5:1417:C:C6	2.51	0.45
3:L5:4959:U:H2'	3:L5:4960:G:C8	2.52	0.45
5:L8:36:G:C5	36:Lh:89:ARG:HD3	2.51	0.45
6:LC:318:PRO:O	6:LC:319:LEU:HB2	2.16	0.45
12:LI:43:VAL:HG23	12:LI:44:ASP:N	2.31	0.45
24:LV:60:MET:HE3	24:LV:129:TRP:CH2	2.52	0.45
32:Ld:53:ALA:HA	32:Ld:88:LEU:HD21	1.98	0.45
36:Lh:82:ASP:OD1	36:Lh:82:ASP:N	2.43	0.45
3:L5:181:C:N4	3:L5:255:C:H2'	2.31	0.45
3:L5:186:G:H4'	3:L5:187:U:H5'	1.98	0.45
3:L5:976:G:H2'	3:L5:977:C:O4'	2.16	0.45
3:L5:1197:C:H2'	3:L5:1198:G:C8	2.51	0.45
3:L5:1248:C:C2	3:L5:1249:C:C5	3.05	0.45
3:L5:1522:OMG:H2'	3:L5:1653:A:H61	1.82	0.45
3:L5:1720:C:H2'	3:L5:1721:G:O4'	2.17	0.45
3:L5:1749:A:H2'	3:L5:1750:G:C8	2.51	0.45
3:L5:2562:G:O2'	3:L5:2565:A:N6	2.48	0.45
5:L8:14:OMU:HM23	5:L8:14:OMU:H1'	1.68	0.45
5:L8:71:A:N1	5:L8:81:C:O2'	2.50	0.45
6:LC:287:THR:O	45:Lr:2:SER:OG	2.33	0.45
8:LE:218:LYS:O	8:LE:220:LYS:NZ	2.42	0.45
32:Ld:30:HIS:HB2	32:Ld:82:TYR:HA	1.98	0.45
3:L5:66:A:N1	3:L5:311:G:O2'	2.46	0.45
3:L5:655:C:OP2	6:LC:268:ARG:NH2	2.50	0.45
3:L5:960:A:H2'	3:L5:970:G:N7	2.32	0.45
3:L5:1431:C:H2'	3:L5:1432:G:O4'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:2335:C:H2'	3:L5:2336:G:H8	1.82	0.45
3:L5:2482:C:N3	3:L5:2483:G:H1'	2.31	0.45
3:L5:3867:A2M:HM'3	3:L5:3880:G:N2	2.31	0.45
3:L5:4208:U:OP1	3:L5:4334:U:O2'	2.33	0.45
3:L5:4704:C:H2'	3:L5:4705:A:C8	2.51	0.45
3:L5:5016:A:N6	3:L5:5033:G:O2'	2.49	0.45
7:LD:119:TYR:OH	7:LD:139:PRO:O	2.27	0.45
12:LI:152:LEU:HD23	12:LI:165:ILE:HG23	1.98	0.45
13:LJ:4:ASP:OD1	13:LJ:5:GLN:N	2.44	0.45
14:LL:140:SER:HA	14:LL:143:GLU:HB2	1.98	0.45
23:LU:47:ILE:HG21	23:LU:56:LEU:HD13	1.97	0.45
28:LZ:47:ASP:N	28:LZ:69:LYS:O	2.49	0.45
2:LB:258:HIS:O	2:LB:259:PRO:C	2.58	0.45
3:L5:150:U:O4'	10:LG:166:LEU:HD21	2.17	0.45
3:L5:216:C:C2	3:L5:217:C:H1'	2.51	0.45
3:L5:644:G:H5'	14:LL:162:LYS:NZ	2.32	0.45
3:L5:1883:OMG:OP1	33:Le:47:ARG:NH1	2.48	0.45
3:L5:1895:G:H2'	3:L5:1896:A:O4'	2.17	0.45
3:L5:2373:C:H5'	32:Ld:46:LEU:HD22	1.98	0.45
3:L5:4571:A2M:H2'	3:L5:4572:U:C6	2.52	0.45
10:LG:154:LEU:HD11	10:LG:222:ILE:HD12	1.98	0.45
16:LN:44:ARG:HD3	16:LN:119:TYR:CD2	2.52	0.45
33:Le:72:SER:O	33:Le:74:PHE:N	2.50	0.45
35:Lg:82:MET:HE1	35:Lg:90:ARG:CZ	2.46	0.45
3:L5:17:A:OP2	26:LX:60:TYR:OH	2.20	0.45
3:L5:302:C:OP1	16:LN:68:ARG:HB2	2.17	0.45
3:L5:1410:U:H3	30:Lb:52:LYS:HZ1	1.63	0.45
3:L5:1792:PSU:C2'	3:L5:1793:A:H5'	2.46	0.45
3:L5:2395:A:H1'	3:L5:2806:A:N3	2.32	0.45
3:L5:2590:G:H22	3:L5:2754:G:H2'	1.82	0.45
3:L5:2631:U:H5	23:LU:48:LYS:CD	2.30	0.45
3:L5:4637:OMG:HM23	3:L5:4637:OMG:H1'	1.78	0.45
12:LI:205:PRO:HG2	12:LI:208:LYS:HE2	1.99	0.45
23:LU:40:GLU:O	23:LU:44:GLN:HG2	2.17	0.45
2:LB:165:HIS:HB3	2:LB:180:LEU:HD23	1.98	0.45
3:L5:2633:U:H2'	3:L5:2634:C:H6	1.81	0.45
3:L5:2904:U:H3'	3:L5:2904:U:OP2	2.17	0.45
3:L5:4135:G:H2'	3:L5:4136:G:H8	1.81	0.45
3:L5:4338:G:N7	43:Lo:61:LYS:NZ	2.65	0.45
13:LJ:10:ASN:O	13:LJ:14:GLU:HG2	2.17	0.45
30:Lb:98:TYR:CE1	30:Lb:104:LEU:HB3	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:Lf:50:VAL:HG22	34:Lf:69:VAL:HG22	1.99	0.45
39:Lk:12:LEU:O	39:Lk:16:ARG:HG3	2.17	0.45
45:Lr:22:LYS:HD2	45:Lr:22:LYS:N	2.32	0.45
3:L5:2890:C:H2'	3:L5:2891:U:C6	2.52	0.44
5:L8:74:U:H3	27:LY:72:GLN:NE2	2.15	0.44
9:LF:157:ARG:HE	9:LF:248:ASN:HB2	1.82	0.44
9:LF:236:ARG:HB2	9:LF:239:GLN:HB2	1.99	0.44
10:LG:136:LEU:HD12	10:LG:136:LEU:HA	1.68	0.44
12:LI:171:TRP:HB2	12:LI:178:ALA:HA	1.99	0.44
14:LL:42:LYS:O	14:LL:46:ILE:HG12	2.17	0.44
16:LN:28:TRP:CZ3	16:LN:29:GLN:HB3	2.52	0.44
19:LQ:88:ASP:OD2	19:LQ:108:ARG:HD2	2.17	0.44
19:LQ:177:ALA:O	29:La:51:GLY:HA2	2.17	0.44
3:L5:99:A:H2'	3:L5:100:C:H6	1.82	0.44
3:L5:190:G:H2'	3:L5:191:G:H8	1.81	0.44
3:L5:288:G:H2'	3:L5:289:C:C6	2.52	0.44
3:L5:466:A:N3	3:L5:467:U:H1'	2.31	0.44
3:L5:989:U:H2'	3:L5:990:C:C6	2.51	0.44
3:L5:1524:A2M:H62	3:L5:1651:G:H22	1.66	0.44
3:L5:2517:A:H5'	35:Lg:62:LYS:HD3	1.98	0.44
3:L5:2749:C:H2'	3:L5:2750:G:C8	2.52	0.44
6:LC:143:ARG:HD2	6:LC:143:ARG:HA	1.62	0.44
7:LD:219:TYR:CE2	7:LD:227:ILE:HD11	2.52	0.44
12:LI:53:VAL:HG11	22:LT:158:PHE:HZ	1.82	0.44
16:LN:143:ARG:HE	36:Lh:95:LEU:HD23	1.83	0.44
28:LZ:33:THR:O	28:LZ:34:SER:OG	2.31	0.44
39:Lk:8:ILE:HD13	39:Lk:45:LEU:HD21	1.98	0.44
43:Lo:67:VAL:HG11	43:Lo:82:MET:HE2	1.98	0.44
2:LB:4:ARG:O	2:LB:5:LYS:HG2	2.17	0.44
2:LB:247:GLY:HA2	3:L5:2838:G:O5'	2.18	0.44
3:L5:318:A:H2'	3:L5:319:A:H8	1.82	0.44
3:L5:712:C:H5''	8:LE:139:LYS:HE3	1.99	0.44
3:L5:1258:G:H8	3:L5:1258:G:OP2	2.01	0.44
3:L5:2894:A:H2'	3:L5:2895:A:C8	2.53	0.44
3:L5:4471:PSU:H2'	3:L5:4472:G:C8	2.52	0.44
3:L5:4872:2MG:HM22	3:L5:4874:A:C6	2.52	0.44
5:L8:47:C:H1'	5:L8:61:A:H2'	2.00	0.44
6:LC:109:ARG:HD3	6:LC:111:TRP:CH2	2.53	0.44
6:LC:190:ARG:HB2	6:LC:202:ILE:HG23	1.98	0.44
11:LH:107:GLU:O	11:LH:107:GLU:HG2	2.16	0.44
32:Ld:19:GLU:OE1	32:Ld:101:LYS:NZ	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:Lf:37:ASP:OD1	34:Lf:38:GLU:N	2.50	0.44
1:LA:241:ARG:HH22	3:L5:3660:C:P	2.40	0.44
3:L5:216:C:N3	3:L5:217:C:H1'	2.32	0.44
3:L5:500:G:N3	3:L5:504:G:H2'	2.32	0.44
3:L5:1942:A:H2'	3:L5:1943:A:H8	1.82	0.44
3:L5:2732:G:H2'	3:L5:2733:C:C6	2.52	0.44
3:L5:2904:U:O2	3:L5:3591:C:H2'	2.18	0.44
3:L5:4339:A:H2'	3:L5:4340:U:H6	1.83	0.44
13:LJ:56:THR:HG22	13:LJ:64:ARG:H	1.83	0.44
16:LN:96:ARG:NH2	16:LN:104:GLU:OE1	2.50	0.44
27:LY:4:ASN:HB3	27:LY:7:VAL:HG22	1.98	0.44
29:La:134:GLU:O	29:La:138:LYS:HG2	2.17	0.44
3:L5:1672:U:H2'	3:L5:1673:U:C6	2.52	0.44
3:L5:2461:G:H2'	3:L5:2462:C:C6	2.53	0.44
5:L8:36:G:O2'	5:L8:103:A:N1	2.45	0.44
5:L8:123:U:HO2'	5:L8:126:C:H41	1.59	0.44
6:LC:154:VAL:HG11	6:LC:174:LEU:HD11	2.00	0.44
7:LD:84:PRO:C	7:LD:86:TYR:H	2.26	0.44
10:LG:55:VAL:HG23	26:LX:44:PRO:C	2.42	0.44
11:LH:106:GLN:HB2	11:LH:111:LEU:HB3	2.00	0.44
27:LY:109:LEU:HD22	27:LY:115:ARG:HH21	1.82	0.44
1:LA:245:ARG:HG2	3:L5:3747:A:C8	2.52	0.44
2:LB:224:LYS:NZ	3:L5:4626:A:OP2	2.44	0.44
2:LB:302:ASN:OD1	2:LB:302:ASN:N	2.50	0.44
3:L5:74:G:H5'	14:LL:60:ARG:O	2.18	0.44
3:L5:177:G:H2'	3:L5:178:C:H6	1.78	0.44
3:L5:377:A:H2'	3:L5:378:A:O4'	2.18	0.44
3:L5:422:C:H2'	3:L5:423:G:H8	1.81	0.44
3:L5:996:G:O2'	3:L5:1048:G:OP1	2.27	0.44
3:L5:1461:C:H2'	3:L5:1462:A:C8	2.53	0.44
3:L5:1913:C:O2'	17:LO:87:MET:O	2.28	0.44
3:L5:1979:A:HO2'	3:L5:1982:G:H8	1.63	0.44
3:L5:2634:C:H2'	3:L5:2635:U:C6	2.53	0.44
3:L5:2884:G:H2'	3:L5:2885:A:C8	2.52	0.44
3:L5:3784:A:O2'	3:L5:3785:A2M:H3'	2.18	0.44
3:L5:3917:A:H2'	3:L5:3918:G:C8	2.52	0.44
3:L5:3956:G:H5'	3:L5:3966:A:C8	2.52	0.44
3:L5:4391:G:OP1	6:LC:75:ARG:NH1	2.42	0.44
3:L5:4568:A:O2'	3:L5:4981:G:N7	2.48	0.44
5:L8:92:U:H2'	5:L8:93:C:O4'	2.18	0.44
6:LC:221:PHE:C	6:LC:223:ASN:N	2.74	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:LD:82:GLU:OE2	7:LD:108:ARG:NH1	2.47	0.44
8:LE:127:SER:OG	8:LE:130:LYS:HD3	2.18	0.44
19:LQ:172:ARG:HA	19:LQ:176:ARG:HD2	2.00	0.44
1:LA:199:VAL:HG21	3:L5:1631:A:N7	2.32	0.44
2:LB:124:LYS:HA	3:L5:5061:A:H61	1.82	0.44
3:L5:189:G:H2'	3:L5:190:G:C8	2.50	0.44
3:L5:2602:G:H2'	3:L5:2603:C:C6	2.53	0.44
3:L5:4095:G:H2'	3:L5:4096:C:C5	2.52	0.44
3:L5:4673:PSU:O4	3:L5:4673:PSU:H2'	2.17	0.44
4:L7:16:A:H2'	4:L7:17:C:C6	2.53	0.44
16:LN:124:ASP:OD1	16:LN:125:SER:N	2.49	0.44
3:L5:159:C:OP2	37:Li:25:ARG:HG2	2.18	0.44
3:L5:170:C:H4'	3:L5:171:U:O4'	2.18	0.44
3:L5:2045:G:O6	3:L5:3870:C:O2'	2.30	0.44
3:L5:2079:G:H2'	3:L5:2080:U:H6	1.82	0.44
3:L5:2574:G:OP1	28:LZ:67:LYS:HD3	2.17	0.44
3:L5:4039:G:H4'	3:L5:4050:A:P	2.58	0.44
3:L5:4688:C:H2'	3:L5:4689:PSU:C6	2.53	0.44
3:L5:5001:U:H2'	3:L5:5002:U:O4'	2.18	0.44
4:L7:11:A:N1	4:L7:66:G:O2'	2.47	0.44
13:LJ:94:LEU:HD11	13:LJ:99:PHE:CE1	2.52	0.44
16:LN:84:PRO:HA	16:LN:87:HIS:ND1	2.33	0.44
18:LP:84:PRO:HB2	18:LP:87:SER:HB2	1.99	0.44
23:LU:20:LYS:HE2	23:LU:73:THR:HB	2.00	0.44
24:LV:36:ASN:ND2	24:LV:67:LYS:HG2	2.33	0.44
30:Lb:99:ILE:HG23	30:Lb:109:ARG:HB3	2.00	0.44
38:Lj:34:CYS:HB3	38:Lj:39:TYR:H	1.82	0.44
3:L5:263:G:C6	3:L5:264:C:N3	2.86	0.44
3:L5:1202:C:O5'	3:L5:1203:G:H5''	2.18	0.44
3:L5:1434:G:H2'	3:L5:1435:G:O4'	2.18	0.44
3:L5:1862:PSU:O4	3:L5:1862:PSU:H2'	2.16	0.44
3:L5:1971:C:N4	3:L5:2001:G:O4'	2.51	0.44
3:L5:2626:U:C6	23:LU:92:LYS:HG2	2.52	0.44
3:L5:3871:A:H2'	3:L5:3872:A:C8	2.53	0.44
3:L5:4043:G:H5'	3:L5:4044:U:O5'	2.18	0.44
3:L5:4244:A:H2'	3:L5:4245:G:O4'	2.18	0.44
3:L5:4571:A2M:H8	3:L5:4571:A2M:O5'	2.18	0.44
5:L8:91:A:H2'	5:L8:92:U:O4'	2.17	0.44
6:LC:33:ARG:HG3	6:LC:122:TYR:HE1	1.83	0.44
6:LC:214:ASP:OD2	6:LC:218:ILE:HD12	2.18	0.44
6:LC:236:ASN:HB3	6:LC:239:LYS:HB2	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:LC:316:LYS:HB2	6:LC:324:ILE:HG13	1.99	0.44
8:LE:145:THR:O	8:LE:148:THR:OG1	2.20	0.44
19:LQ:175:GLU:HA	29:La:51:GLY:O	2.18	0.44
26:LX:80:PRO:HA	26:LX:98:PHE:HA	2.00	0.44
28:LZ:28:ASN:OD1	28:LZ:28:ASN:N	2.51	0.44
29:La:125:LYS:HG2	29:La:145:VAL:HB	2.00	0.44
44:Lp:84:ARG:HG2	44:Lp:84:ARG:HH11	1.82	0.44
1:LA:114:CYS:SG	1:LA:115:CYS:N	2.91	0.43
2:LB:77:THR:HG21	2:LB:337:VAL:CG2	2.48	0.43
3:L5:347:A:H2'	3:L5:348:G:C8	2.52	0.43
3:L5:394:G:N2	3:L5:397:G:OP2	2.36	0.43
3:L5:1566:C:H2'	3:L5:1567:U:H6	1.82	0.43
3:L5:2414:G:H2'	3:L5:2415:OMU:C6	2.44	0.43
3:L5:2727:C:H2'	3:L5:2728:U:C6	2.53	0.43
3:L5:4100:C:H5''	3:L5:4101:C:C5	2.53	0.43
3:L5:4188:U:H2'	3:L5:4189:U:C6	2.53	0.43
3:L5:4904:G:H2'	3:L5:4905:C:H6	1.83	0.43
6:LC:71:ARG:O	6:LC:73:VAL:N	2.48	0.43
15:LM:46:ARG:O	15:LM:48:GLN:HG2	2.18	0.43
19:LQ:22:ASP:O	19:LQ:26:ARG:HG2	2.17	0.43
21:LS:118:ARG:O	21:LS:120:ARG:NH1	2.51	0.43
24:LV:112:MET:HG2	24:LV:135:ASN:ND2	2.31	0.43
2:LB:2:SER:N	3:L5:4517:A:OP2	2.50	0.43
2:LB:86:VAL:HG12	2:LB:201:LEU:HD23	1.99	0.43
3:L5:433:A:C2	3:L5:3867:A2M:H4'	2.54	0.43
3:L5:499:G:H2'	3:L5:504:G:H22	1.83	0.43
3:L5:1273:G:H8	30:Lb:117:ARG:NE	2.16	0.43
3:L5:2633:U:H2'	3:L5:2634:C:C6	2.53	0.43
3:L5:3930:U:H3	3:L5:4180:G:H1	1.65	0.43
3:L5:4518:A:OP2	3:L5:4518:A:H8	2.00	0.43
5:L8:70:G:H5''	27:LY:27:ARG:CZ	2.48	0.43
8:LE:164:PHE:HE1	8:LE:173:LEU:HB3	1.82	0.43
10:LG:38:ASN:ND2	10:LG:43:GLN:HG2	2.33	0.43
10:LG:43:GLN:HB3	10:LG:44:ASP:H	1.68	0.43
17:LO:190:ASP:OD1	17:LO:191:LYS:N	2.51	0.43
23:LU:20:LYS:H	23:LU:73:THR:HA	1.83	0.43
28:LZ:123:LYS:O	28:LZ:124:THR:OG1	2.25	0.43
39:Lk:51:GLU:N	39:Lk:51:GLU:OE1	2.52	0.43
1:LA:128:ARG:N	3:L5:3682:A:OP1	2.50	0.43
2:LB:252:ALA:HB1	3:L5:4524:G:N3	2.33	0.43
3:L5:699:C:H2'	3:L5:700:G:C8	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:1081:C:O2'	3:L5:1082:C:H5'	2.19	0.43
3:L5:1591:U:H5''	3:L5:4527:G:OP1	2.19	0.43
3:L5:1675:C:C4	3:L5:1677:PSU:H1'	2.53	0.43
3:L5:2275:G:H2'	3:L5:2276:A:C8	2.53	0.43
3:L5:3777:G:O2'	3:L5:3815:G:O6	2.27	0.43
3:L5:3965:A:H1'	3:L5:4050:A:OP2	2.18	0.43
5:L8:49:G:OP1	36:Lh:48:ARG:HB2	2.17	0.43
6:LC:294:LYS:HA	6:LC:299:GLN:HE21	1.84	0.43
6:LC:359:ALA:O	6:LC:363:ALA:N	2.50	0.43
7:LD:152:ARG:HG3	7:LD:154:THR:HG23	2.01	0.43
10:LG:148:GLU:OE2	16:LN:6:TYR:OH	2.25	0.43
11:LH:89:ARG:CZ	11:LH:187:VAL:HG12	2.48	0.43
17:LO:55:LEU:HD23	17:LO:58:LEU:HD12	1.99	0.43
17:LO:111:PRO:HB2	17:LO:112:TYR:CE2	2.53	0.43
21:LS:43:ARG:HA	21:LS:43:ARG:HD2	1.66	0.43
33:Le:35:TRP:CH2	33:Le:55:MET:HG2	2.52	0.43
34:Lf:49:TYR:OH	34:Lf:95:LYS:NZ	2.51	0.43
36:Lh:80:PRO:HB2	36:Lh:83:LEU:HD23	2.01	0.43
44:Lp:30:GLU:OE2	44:Lp:34:HIS:HE1	2.01	0.43
3:L5:1298:C:H2'	3:L5:1299:G:H8	1.82	0.43
3:L5:1847:C:H2'	3:L5:1848:C:C6	2.54	0.43
3:L5:2298:U:H5''	6:LC:204:ARG:HH12	1.84	0.43
3:L5:2484:A:N6	3:L5:2486:G:C6	2.87	0.43
3:L5:2543:A:H4'	3:L5:2544:G:N7	2.32	0.43
3:L5:2720:C:H2'	3:L5:2721:G:O4'	2.18	0.43
3:L5:2743:A:H2'	3:L5:2744:A:C8	2.54	0.43
3:L5:3606:U:H2'	3:L5:3607:U:C6	2.52	0.43
3:L5:4628:PSU:O2'	25:LW:16:GLY:O	2.33	0.43
14:LL:81:LEU:HD11	14:LL:98:VAL:HG22	2.00	0.43
24:LV:29:ALA:HB2	24:LV:102:ALA:HB1	2.00	0.43
28:LZ:3:LYS:HD3	31:Lc:40:GLN:HA	2.00	0.43
30:Lb:60:ASN:ND2	30:Lb:63:LYS:HE3	2.34	0.43
3:L5:176:G:N1	3:L5:177:G:O6	2.52	0.43
3:L5:982:U:H2'	3:L5:983:C:C6	2.53	0.43
3:L5:1314:C:C2	3:L5:1315:C:C5	3.06	0.43
3:L5:2391:G:H2'	3:L5:2392:C:H6	1.84	0.43
3:L5:2639:U:O2'	3:L5:2694:G:O6	2.35	0.43
3:L5:4085:A:C5	10:LG:56:LYS:HG3	2.53	0.43
3:L5:4313:A:H4'	22:LT:71:ALA:CB	2.48	0.43
3:L5:4411:G:H2'	3:L5:4412:C:H6	1.84	0.43
3:L5:4600:G:O2'	3:L5:4609:G:O6	2.31	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:4903:G:H2'	3:L5:4904:G:H8	1.83	0.43
3:L5:4927:G:H5''	3:L5:4928:C:H5	1.84	0.43
5:L8:10:G:H2'	5:L8:11:C:O4'	2.18	0.43
7:LD:27:LYS:HE2	13:LJ:147:ARG:NE	2.32	0.43
9:LF:28:LEU:O	9:LF:32:ARG:HG3	2.18	0.43
11:LH:94:SER:HB2	11:LH:142:ASP:HB2	2.00	0.43
17:LO:77:SER:HB3	17:LO:106:ASP:OD1	2.19	0.43
17:LO:118:MET:HE2	21:LS:167:PHE:HB3	2.00	0.43
23:LU:47:ILE:O	23:LU:53:ALA:HA	2.17	0.43
26:LX:133:GLU:H	26:LX:133:GLU:CD	2.27	0.43
39:Lk:61:PRO:HA	39:Lk:62:PRO:HD3	1.88	0.43
2:LB:95:THR:HG22	3:L5:4910:G:H4'	1.99	0.43
2:LB:119:TYR:OH	2:LB:129:ALA:N	2.47	0.43
2:LB:356:LYS:NZ	2:LB:358:ARG:HD2	2.33	0.43
3:L5:750:U:H1'	3:L5:917:A:C8	2.54	0.43
3:L5:1667:G:N1	3:L5:2281:U:OP2	2.35	0.43
3:L5:2634:C:H2'	3:L5:2635:U:H6	1.82	0.43
3:L5:3712:A:C6	3:L5:3713:U:H1'	2.52	0.43
3:L5:3718:A2M:H8	3:L5:3718:A2M:O5'	2.18	0.43
3:L5:4192:A:H2'	3:L5:4193:C:H6	1.83	0.43
3:L5:4196:OMG:HM23	3:L5:4196:OMG:H1'	1.86	0.43
3:L5:4232:U:H4'	3:L5:4233:A:O4'	2.18	0.43
3:L5:4263:C:H2'	3:L5:4264:G:O4'	2.18	0.43
3:L5:4590:A2M:HM'2	3:L5:4591:U:H5'	2.01	0.43
3:L5:4903:G:H2'	3:L5:4904:G:C8	2.54	0.43
5:L8:7:U:H2'	5:L8:8:U:C6	2.53	0.43
5:L8:66:A:H2'	5:L8:67:U:C6	2.54	0.43
6:LC:205:ARG:HA	6:LC:205:ARG:HD3	1.85	0.43
31:Lc:13:SER:O	31:Lc:17:ARG:HG2	2.19	0.43
3:L5:1177:U:H5''	7:LD:283:LYS:HG3	2.00	0.43
3:L5:1414:C:H2'	3:L5:1415:G:C8	2.53	0.43
3:L5:2539:C:H2'	3:L5:2540:C:H6	1.80	0.43
3:L5:2884:G:H2'	3:L5:2885:A:H8	1.84	0.43
3:L5:3777:G:N2	3:L5:3815:G:H2'	2.34	0.43
3:L5:3945:A:H2'	3:L5:3946:G:O4'	2.19	0.43
3:L5:4401:G:H2'	3:L5:4402:C:H6	1.84	0.43
8:LE:165:LEU:HD13	8:LE:176:THR:HG22	2.00	0.43
11:LH:12:ILE:HG12	11:LH:18:ILE:HD12	2.01	0.43
11:LH:60:TRP:O	11:LH:61:TRP:HB2	2.17	0.43
12:LI:44:ASP:HA	12:LI:171:TRP:HZ2	1.84	0.43
16:LN:60:VAL:HG23	16:LN:134:LEU:HB2	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:LU:42:PHE:CE1	23:LU:46:ARG:HD3	2.54	0.43
24:LV:26:ILE:O	24:LV:37:LEU:N	2.52	0.43
38:Lj:37:CYS:SG	38:Lj:39:TYR:HB2	2.59	0.43
2:LB:28:LYS:NZ	3:L5:4582:C:OP2	2.43	0.43
3:L5:271:C:H2'	3:L5:272:U:H6	1.84	0.43
3:L5:740:G:O6	3:L5:923:C:N4	2.51	0.43
3:L5:1558:A:H2'	3:L5:1559:G:C8	2.53	0.43
3:L5:2558:C:H2'	3:L5:2559:G:C8	2.54	0.43
3:L5:2864:A:H2'	3:L5:2865:U:H6	1.83	0.43
3:L5:2893:U:H2'	3:L5:2894:A:C8	2.53	0.43
3:L5:2899:C:H2'	3:L5:2900:U:C6	2.54	0.43
3:L5:4593:C:H2'	3:L5:4594:U:H6	1.84	0.43
3:L5:4886:C:H2'	3:L5:4887:C:C6	2.54	0.43
5:L8:56:G:H2'	5:L8:57:C:O4'	2.18	0.43
6:LC:195:LYS:HB2	6:LC:195:LYS:HE3	1.72	0.43
10:LG:26:LYS:HG3	10:LG:27:VAL:N	2.34	0.43
17:LO:43:ILE:HD11	17:LO:138:LEU:HD13	2.00	0.43
45:Lr:68:SER:OG	45:Lr:69:GLY:N	2.51	0.43
2:LB:8:ALA:HB1	24:LV:48:ARG:HH12	1.84	0.43
3:L5:705:G:H2'	3:L5:706:C:H6	1.83	0.43
3:L5:716:C:H2'	3:L5:717:U:O4'	2.19	0.43
3:L5:1764:G:N2	3:L5:1768:C:H1'	2.34	0.43
3:L5:2348:G:H5'	3:L5:2351:OMC:C5	2.53	0.43
3:L5:4508:C:N3	3:L5:4512:U:H5	2.16	0.43
3:L5:5024:C:N4	3:L5:5028:G:N3	2.64	0.43
5:L8:139:G:H2'	5:L8:140:C:O4'	2.19	0.43
6:LC:134:PRO:O	6:LC:138:MET:HG2	2.19	0.43
10:LG:31:LEU:HD21	28:LZ:122:TYR:CZ	2.53	0.43
11:LH:48:LEU:HD11	11:LH:56:ARG:HH11	1.84	0.43
15:LM:77:TRP:O	15:LM:81:ASP:HA	2.19	0.43
15:LM:104:MET:SD	17:LO:199:HIS:HB3	2.59	0.43
17:LO:25:LYS:HA	17:LO:25:LYS:HD3	1.93	0.43
21:LS:113:MET:HE3	21:LS:113:MET:HB3	1.82	0.43
24:LV:90:ARG:NH2	25:LW:20:ARG:HH12	2.17	0.43
28:LZ:11:VAL:CG2	28:LZ:80:LEU:HB3	2.47	0.43
28:LZ:121:ARG:NH1	28:LZ:127:ASN:OD1	2.52	0.43
2:LB:46:PHE:CZ	2:LB:84:MET:HG3	2.54	0.43
3:L5:259:C:H2'	3:L5:260:C:O4'	2.18	0.43
3:L5:458:C:H2'	3:L5:459:C:H6	1.83	0.43
3:L5:963:G:OP1	9:LF:36:LYS:NZ	2.35	0.43
3:L5:1250:C:H2'	3:L5:1251:C:C6	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:1273:G:C8	30:Lb:117:ARG:NE	2.87	0.43
3:L5:1376:C:OP1	6:LC:275:SER:HB3	2.18	0.43
3:L5:1558:A:H2'	3:L5:1559:G:H8	1.83	0.43
3:L5:1846:G:H2'	3:L5:1847:C:H6	1.84	0.43
3:L5:3925:OMU:HM22	43:Lo:50:GLY:HA3	1.99	0.43
3:L5:4698:C:H3'	41:Lm:111:ARG:HH11	1.84	0.43
8:LE:130:LYS:N	8:LE:130:LYS:HD2	2.33	0.43
13:LJ:5:GLN:HA	13:LJ:8:LYS:HD3	2.01	0.43
13:LJ:7:GLU:O	13:LJ:8:LYS:HD2	2.19	0.43
18:LP:122:ALA:HB3	18:LP:143:PRO:HG2	2.01	0.43
28:LZ:48:ARG:HB2	28:LZ:69:LYS:HB3	2.01	0.43
31:Lc:38:ILE:HD11	31:Lc:46:VAL:HG21	2.00	0.43
2:LB:389:MET:HE2	2:LB:392:LEU:HD21	2.00	0.42
3:L5:286:U:H2'	3:L5:287:U:C6	2.54	0.42
3:L5:1283:G:N1	3:L5:2076:G:OP1	2.40	0.42
3:L5:1479:G:H2'	3:L5:1480:C:C6	2.53	0.42
3:L5:2657:G:OP2	31:Lc:36:LYS:HE2	2.18	0.42
3:L5:2749:C:H2'	3:L5:2750:G:H8	1.85	0.42
3:L5:3802:U:O2'	3:L5:3803:A:H5'	2.19	0.42
3:L5:3971:G:HO2'	3:L5:3973:G:HO2'	1.60	0.42
3:L5:4178:A:H2'	3:L5:4179:G:C8	2.54	0.42
3:L5:4345:C:H2'	3:L5:4346:U:C6	2.54	0.42
3:L5:4899:G:H3'	3:L5:4901:G:OP2	2.19	0.42
3:L5:4901:G:OP1	3:L5:4901:G:H3'	2.18	0.42
3:L5:4977:A:H2'	3:L5:4978:G:O4'	2.19	0.42
8:LE:119:GLU:CB	33:Le:7:LEU:HD11	2.49	0.42
13:LJ:57:VAL:HG22	13:LJ:62:ILE:HG12	2.01	0.42
14:LL:33:ILE:O	14:LL:37:LYS:HG2	2.19	0.42
17:LO:108:ILE:HD12	17:LO:160:ARG:CZ	2.49	0.42
28:LZ:33:THR:C	28:LZ:35:ASP:H	2.26	0.42
33:Le:105:SER:HB3	33:Le:128:ARG:HG2	2.02	0.42
36:Lh:6:ALA:O	36:Lh:10:ARG:HG3	2.19	0.42
1:LA:107:MET:O	1:LA:139:HIS:NE2	2.51	0.42
1:LA:204:MET:HE2	3:L5:1631:A:N1	2.35	0.42
3:L5:10:A:H2'	3:L5:11:G:C8	2.54	0.42
3:L5:138:G:O2'	3:L5:139:G:H5'	2.20	0.42
3:L5:270:U:H2'	3:L5:271:C:C6	2.54	0.42
3:L5:460:C:H2'	3:L5:461:G:C8	2.54	0.42
3:L5:1179:U:P	7:LD:289:ARG:HH22	2.42	0.42
3:L5:1278:C:H2'	3:L5:1279:A:O4'	2.19	0.42
3:L5:1397:A:OP1	29:La:132:ARG:HB2	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:2656:U:H2'	3:L5:2657:G:O4'	2.19	0.42
3:L5:2711:G:H3'	3:L5:2712:G:C5'	2.49	0.42
3:L5:4467:A:O2'	3:L5:4510:A:N3	2.40	0.42
3:L5:4739:C:C2'	3:L5:4740:G:H5'	2.49	0.42
3:L5:4990:C:H5''	3:L5:4991:U:H5''	2.01	0.42
8:LE:164:PHE:CE1	8:LE:173:LEU:HB3	2.53	0.42
12:LI:190:LEU:HD23	12:LI:199:TYR:HA	2.01	0.42
19:LQ:89:ASP:O	19:LQ:112:ARG:NH1	2.49	0.42
23:LU:61:VAL:HG22	23:LU:74:SER:HB2	2.01	0.42
35:Lg:22:LEU:HD23	35:Lg:30:ILE:HG21	2.01	0.42
45:Lr:31:ASN:ND2	45:Lr:40:TYR:O	2.52	0.42
3:L5:6:C:H2'	3:L5:7:C:H6	1.84	0.42
3:L5:730:G:OP2	9:LF:76:ARG:NE	2.40	0.42
3:L5:1404:G:H2'	3:L5:1405:C:O4'	2.19	0.42
3:L5:1445:U:O2	3:L5:1445:U:H2'	2.19	0.42
3:L5:2465:C:H2'	3:L5:2466:G:O4'	2.19	0.42
3:L5:2835:A:N1	3:L5:3894:A:O2'	2.52	0.42
3:L5:3736:A:H2'	3:L5:3737:A:C8	2.54	0.42
3:L5:4194:U:H3'	30:Lb:3:LYS:HD3	2.00	0.42
3:L5:4345:C:H2'	3:L5:4346:U:H6	1.83	0.42
3:L5:4732:G:H21	3:L5:4733:C:H41	1.68	0.42
3:L5:4770:U:H2'	3:L5:4771:C:C5	2.54	0.42
3:L5:4904:G:H2'	3:L5:4905:C:C6	2.54	0.42
3:L5:4923:C:H2'	3:L5:4924:C:C6	2.54	0.42
9:LF:241:ASN:O	9:LF:245:ARG:HG2	2.18	0.42
13:LJ:4:ASP:O	13:LJ:8:LYS:NZ	2.38	0.42
14:LL:7:GLY:O	29:La:49:HIS:NE2	2.45	0.42
33:Le:7:LEU:HG	33:Le:93:LYS:HG3	2.01	0.42
39:Lk:70:LYS:HE2	39:Lk:70:LYS:HB2	1.85	0.42
2:LB:133:TYR:O	2:LB:136:LYS:HG2	2.20	0.42
3:L5:223:G:H4'	3:L5:225:G:N7	2.34	0.42
3:L5:1304:C:H2'	3:L5:1305:C:C6	2.54	0.42
3:L5:1818:G:O2'	3:L5:1819:G:H5''	2.19	0.42
3:L5:4291:G:H5''	3:L5:4291:G:N3	2.35	0.42
3:L5:4612:C:C2	11:LH:120:GLU:HB2	2.54	0.42
5:L8:6:C:H2'	5:L8:7:U:H6	1.84	0.42
7:LD:41:LYS:HB2	22:LT:68:THR:O	2.19	0.42
13:LJ:113:ILE:HD13	13:LJ:125:ILE:HD12	2.02	0.42
20:LR:68:LEU:HD23	20:LR:68:LEU:HA	1.89	0.42
27:LY:43:ASN:O	27:LY:126:ARG:HD3	2.19	0.42
27:LY:112:ASP:OD1	27:LY:112:ASP:C	2.62	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:Lb:63:LYS:O	30:Lb:67:ALA:N	2.49	0.42
34:Lf:43:LEU:HA	34:Lf:43:LEU:HD12	1.76	0.42
34:Lf:92:LEU:HA	34:Lf:92:LEU:HD23	1.78	0.42
2:LB:219:VAL:HG11	2:LB:337:VAL:CG1	2.50	0.42
3:L5:46:U:OP1	14:LL:16:LYS:HE2	2.20	0.42
3:L5:86:U:H2'	3:L5:87:A:C8	2.54	0.42
3:L5:163:A:H2'	3:L5:164:G:C8	2.54	0.42
3:L5:279:A:OP1	16:LN:50:ARG:NH1	2.53	0.42
3:L5:317:A:C2	3:L5:4361:PSU:H1'	2.54	0.42
3:L5:1213:G:OP1	9:LF:59:LYS:NZ	2.30	0.42
3:L5:1241:C:C4	3:L5:1242:G:N7	2.87	0.42
3:L5:1460:C:H5''	19:LQ:144:LYS:HG3	2.01	0.42
3:L5:1967:A:O2'	3:L5:1968:G:O4'	2.35	0.42
3:L5:3832:U:H2'	3:L5:3833:C:C6	2.55	0.42
3:L5:4775:C:H42	3:L5:4859:C:H41	1.68	0.42
15:LM:96:GLU:OE2	15:LM:100:ARG:NE	2.43	0.42
26:LX:127:LEU:HD11	26:LX:135:LYS:HE3	2.02	0.42
30:Lb:60:ASN:C	30:Lb:60:ASN:HD22	2.27	0.42
39:Lk:69:LEU:HD23	39:Lk:69:LEU:HA	1.79	0.42
2:LB:17:LEU:HA	2:LB:17:LEU:HD12	1.64	0.42
2:LB:393:LYS:O	2:LB:397:ILE:HG12	2.20	0.42
3:L5:1279:A:O2'	6:LC:323:ARG:NH1	2.52	0.42
3:L5:1322:1MA:HM13	3:L5:1326:A2M:OP1	2.19	0.42
3:L5:1763:C:H2'	3:L5:1764:G:O4'	2.20	0.42
3:L5:4674:C:H2'	3:L5:4675:U:C6	2.54	0.42
3:L5:4862:G:H2'	3:L5:4863:G:C8	2.55	0.42
3:L5:4898:G:H2'	3:L5:4899:G:H8	1.84	0.42
6:LC:5:ARG:HD3	6:LC:26:ALA:HA	2.02	0.42
7:LD:182:GLY:HA2	7:LD:194:VAL:CG2	2.48	0.42
11:LH:128:MET:HE2	11:LH:128:MET:HA	2.02	0.42
12:LI:35:ASP:HB3	12:LI:86:HIS:HE2	1.84	0.42
13:LJ:57:VAL:C	13:LJ:59:SER:H	2.27	0.42
16:LN:146:PRO:O	16:LN:147:ASP:HB2	2.19	0.42
17:LO:12:ARG:HB2	17:LO:37:ARG:HD2	2.00	0.42
17:LO:111:PRO:HB2	17:LO:112:TYR:CD2	2.55	0.42
23:LU:65:ARG:CZ	23:LU:67:LYS:HA	2.50	0.42
2:LB:141:ASP:OD1	2:LB:141:ASP:N	2.53	0.42
3:L5:79:C:H2'	3:L5:80:C:H6	1.84	0.42
3:L5:113:A:H2'	3:L5:114:G:O4'	2.19	0.42
3:L5:423:G:OP1	18:LP:62:ARG:NH1	2.52	0.42
3:L5:1510:G:H2'	3:L5:1511:U:C6	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:1567:U:H2'	3:L5:1568:C:C6	2.55	0.42
3:L5:2587:A:H2'	3:L5:2588:C:C2	2.55	0.42
3:L5:2683:C:H2'	3:L5:2684:C:C6	2.54	0.42
3:L5:3967:G:OP1	3:L5:4049:U:N3	2.50	0.42
3:L5:4139:G:H21	3:L5:4140:C:H41	1.67	0.42
3:L5:4212:A:H4'	3:L5:4213:A:O5'	2.19	0.42
3:L5:4576:PSU:C6	3:L5:4576:PSU:C5'	2.85	0.42
3:L5:4863:G:H2'	3:L5:4864:U:O4'	2.19	0.42
4:L7:111:C:H2'	4:L7:112:U:O4'	2.20	0.42
9:LF:193:GLU:OE2	9:LF:198:GLY:HA3	2.19	0.42
11:LH:59:LYS:HE3	11:LH:66:GLU:HB3	2.02	0.42
23:LU:80:LYS:HA	23:LU:83:LEU:HD13	2.01	0.42
27:LY:91:ASN:OD1	27:LY:91:ASN:C	2.63	0.42
33:Le:75:ARG:HB2	33:Le:95:TYR:CD1	2.54	0.42
39:Lk:9:LYS:HG3	39:Lk:10:ASP:N	2.35	0.42
1:LA:83:HIS:CE1	1:LA:86:GLN:HB3	2.55	0.42
2:LB:136:LYS:HB3	2:LB:136:LYS:HE2	1.79	0.42
3:L5:288:G:H2'	3:L5:289:C:H6	1.85	0.42
3:L5:750:U:H2'	3:L5:751:G:O4'	2.20	0.42
3:L5:1764:G:H22	3:L5:1768:C:H1'	1.84	0.42
3:L5:2474:G:H5'	3:L5:2475:G:OP2	2.20	0.42
3:L5:2501:C:N4	3:L5:2502:G:O6	2.53	0.42
3:L5:2675:G:H4'	3:L5:2676:A:O5'	2.19	0.42
3:L5:2739:C:OP2	44:Lp:33:GLN:NE2	2.53	0.42
3:L5:2859:G:H2'	3:L5:2860:C:H6	1.83	0.42
3:L5:4146:G:H2'	3:L5:4147:G:C8	2.55	0.42
5:L8:94:G:C5	38:Lj:84:PRO:HG3	2.55	0.42
14:LL:63:THR:HG22	14:LL:64:VAL:N	2.35	0.42
15:LM:96:GLU:CD	15:LM:100:ARG:HH21	2.28	0.42
28:LZ:36:ARG:HG3	28:LZ:40:HIS:CE1	2.55	0.42
31:Lc:57:LYS:O	31:Lc:61:GLU:HG3	2.19	0.42
32:Ld:117:LEU:HA	32:Ld:117:LEU:HD12	1.84	0.42
37:Li:43:MET:O	37:Li:46:GLU:HG2	2.20	0.42
2:LB:393:LYS:HA	2:LB:396:ARG:HH11	1.84	0.42
3:L5:20:U:OP2	5:L8:36:G:N1	2.48	0.42
3:L5:138:G:H2'	3:L5:139:G:C8	2.39	0.42
3:L5:180:C:O2	3:L5:181:C:H1'	2.20	0.42
3:L5:181:C:H3'	3:L5:182:G:C8	2.51	0.42
3:L5:223:G:H4'	3:L5:225:G:C8	2.55	0.42
3:L5:1076:C:H2'	3:L5:1077:C:C6	2.54	0.42
3:L5:1662:C:H2'	3:L5:1663:C:H6	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:1932:A:H2'	3:L5:1933:G:C8	2.55	0.42
3:L5:2003:G:H22	3:L5:2016:C:N4	2.17	0.42
3:L5:2415:OMU:H3'	3:L5:2416:G:C8	2.54	0.42
3:L5:3614:G:HO2'	3:L5:3615:G:P	2.37	0.42
3:L5:4524:G:OP2	3:L5:4524:G:H4'	2.20	0.42
5:L8:83:C:P	5:L8:83:C:H6	2.43	0.42
13:LJ:160:GLU:O	13:LJ:163:MET:HG2	2.19	0.42
18:LP:131:ARG:HG3	18:LP:137:ASN:ND2	2.35	0.42
28:LZ:5:MET:SD	28:LZ:82:PRO:HB3	2.60	0.42
31:Lc:29:LEU:HD13	31:Lc:91:VAL:HG21	2.00	0.42
35:Lg:62:LYS:O	35:Lg:65:MET:HG2	2.20	0.42
2:LB:30:LYS:HD2	3:L5:4716:C:OP2	2.20	0.42
3:L5:2258:C:O2	8:LE:90:ALA:N	2.53	0.42
3:L5:2345:G:N7	29:La:9:ARG:NH2	2.67	0.42
3:L5:2503:G:N2	3:L5:4084:G:H5'	2.35	0.42
3:L5:2627:C:OP1	23:LU:92:LYS:NZ	2.48	0.42
3:L5:3586:G:H2'	3:L5:3587:C:C6	2.55	0.42
3:L5:4162:C:N3	10:LG:73:ARG:NH1	2.68	0.42
3:L5:4762:A:H2'	3:L5:4763:U:O4'	2.20	0.42
6:LC:204:ARG:HG2	6:LC:205:ARG:N	2.34	0.42
7:LD:41:LYS:HE2	7:LD:41:LYS:HA	2.02	0.42
10:LG:190:LEU:HD12	10:LG:190:LEU:HA	1.88	0.42
3:L5:1459:A:H2'	3:L5:1460:C:O4'	2.20	0.41
3:L5:2519:U:H1'	3:L5:2520:C:C6	2.55	0.41
3:L5:4136:G:H2'	3:L5:4137:C:O4'	2.19	0.41
7:LD:191:ASN:OD1	7:LD:194:VAL:HG13	2.20	0.41
10:LG:31:LEU:HD21	28:LZ:122:TYR:CE2	2.54	0.41
20:LR:98:ARG:NH2	20:LR:130:ASN:OD1	2.51	0.41
21:LS:86:SER:OG	21:LS:91:HIS:NE2	2.47	0.41
28:LZ:26:VAL:O	28:LZ:93:LYS:NZ	2.53	0.41
35:Lg:78:TYR:HB3	35:Lg:82:MET:HB2	2.02	0.41
2:LB:36:ASP:N	2:LB:36:ASP:OD1	2.52	0.41
2:LB:244:THR:HA	3:L5:4525:C:O2'	2.21	0.41
3:L5:458:C:H2'	3:L5:459:C:C6	2.55	0.41
3:L5:500:G:O2'	3:L5:501:C:H4'	2.20	0.41
3:L5:644:G:H2'	3:L5:645:G:C8	2.55	0.41
3:L5:1567:U:H2'	3:L5:1568:C:H6	1.85	0.41
3:L5:1942:A:H5''	4:L7:88:A:C5	2.55	0.41
3:L5:2101:C:H2'	3:L5:2102:G:C5	2.55	0.41
3:L5:2505:C:N4	3:L5:4084:G:H4'	2.35	0.41
3:L5:3768:PSU:H2'	3:L5:3769:C:H6	1.83	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:3848:U:H2'	3:L5:3849:A:H8	1.84	0.41
3:L5:4438:U:H2'	3:L5:4439:U:O4'	2.20	0.41
3:L5:4684:A:H2'	3:L5:4685:U:O4'	2.20	0.41
3:L5:4894:A:H3'	3:L5:4895:C:C5'	2.45	0.41
4:L7:120:U:O3'	7:LD:262:LYS:HG3	2.20	0.41
8:LE:178:PRO:O	8:LE:180:VAL:N	2.53	0.41
11:LH:4:ILE:HG12	11:LH:61:TRP:CH2	2.55	0.41
12:LI:14:ASN:O	12:LI:15:LYS:C	2.64	0.41
12:LI:43:VAL:HG11	12:LI:197:VAL:HG13	2.02	0.41
21:LS:16:CYS:O	21:LS:25:PRO:HG2	2.19	0.41
21:LS:128:LYS:HB2	22:LT:152:GLU:OE2	2.21	0.41
29:La:93:ASN:OD1	29:La:94:LYS:N	2.53	0.41
33:Le:84:GLU:O	33:Le:87:VAL:HG22	2.20	0.41
1:LA:194:ASN:HB2	3:L5:1539:G:H4'	2.02	0.41
3:L5:174:C:H2'	3:L5:175:C:H6	1.84	0.41
3:L5:176:G:N1	3:L5:177:G:C6	2.88	0.41
3:L5:651:C:H2'	3:L5:652:G:C8	2.55	0.41
3:L5:1601:A:OP2	38:Lj:4:GLY:HA3	2.20	0.41
3:L5:1971:C:C4	3:L5:2000:G:H2'	2.55	0.41
3:L5:4254:G:H2'	3:L5:4254:G:N3	2.35	0.41
3:L5:4301:U:H4'	22:LT:54:HIS:CD2	2.56	0.41
3:L5:4597:UR3:O5'	3:L5:4597:UR3:H6	2.20	0.41
5:L8:105:C:H5''	5:L8:107:C:OP2	2.20	0.41
6:LC:40:VAL:HG22	6:LC:115:VAL:HG11	2.03	0.41
6:LC:66:SER:HA	6:LC:77:PRO:HA	2.01	0.41
15:LM:11:ARG:NH2	15:LM:61:ILE:HD11	2.35	0.41
16:LN:104:GLU:HA	16:LN:160:GLU:HG3	2.01	0.41
17:LO:175:MET:HE3	17:LO:179:LYS:HE2	2.01	0.41
22:LT:4:THR:O	22:LT:9:ARG:NE	2.54	0.41
22:LT:97:LYS:HB2	22:LT:97:LYS:HE3	1.74	0.41
28:LZ:64:LYS:O	28:LZ:67:LYS:HG2	2.20	0.41
31:Lc:34:THR:HG23	31:Lc:95:ALA:HB2	2.02	0.41
37:Li:45:ARG:HA	37:Li:45:ARG:HD3	1.75	0.41
3:L5:718:C:OP1	9:LF:217:ARG:HD3	2.20	0.41
3:L5:973:G:H2'	3:L5:974:C:C6	2.55	0.41
3:L5:1874:A:O3'	3:L5:4217:G:N2	2.53	0.41
3:L5:1971:C:H1'	3:L5:2000:G:C6	2.56	0.41
3:L5:2464:C:O2'	3:L5:2465:C:P	2.79	0.41
3:L5:4633:G:O3'	3:L5:4634:U:H3'	2.20	0.41
6:LC:303:ARG:HG3	19:LQ:38:ARG:O	2.20	0.41
13:LJ:169:LYS:HE2	13:LJ:170:TYR:CE1	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:LQ:79:THR:HB	19:LQ:136:THR:HG22	2.02	0.41
22:LT:80:VAL:O	22:LT:81:LYS:C	2.63	0.41
30:Lb:105:GLY:O	30:Lb:109:ARG:HG2	2.20	0.41
31:Lc:56:ARG:O	31:Lc:60:ILE:HG12	2.21	0.41
43:Lo:14:LYS:HG2	43:Lo:77:CYS:HB2	2.02	0.41
3:L5:132:G:C3'	3:L5:133:C:H4'	2.51	0.41
3:L5:456:C:C2	3:L5:457:G:N7	2.89	0.41
3:L5:759:G:N2	3:L5:904:C:H2'	2.35	0.41
3:L5:1266:G:C5	30:Lb:95:ARG:HB3	2.55	0.41
3:L5:1475:G:N2	3:L5:1490:G:C5	2.89	0.41
3:L5:2602:G:O4'	3:L5:2742:G:H2'	2.20	0.41
3:L5:4132:C:H2'	3:L5:4133:C:O4'	2.21	0.41
5:L8:152:U:O2'	10:LG:160:ASP:OD2	2.39	0.41
6:LC:140:LYS:HB3	6:LC:142:HIS:HD2	1.85	0.41
7:LD:41:LYS:NZ	22:LT:30:TYR:O	2.38	0.41
11:LH:41:ILE:HG22	11:LH:43:VAL:HG13	2.02	0.41
11:LH:82:LYS:HE3	11:LH:88:PHE:CE1	2.56	0.41
13:LJ:96:LYS:NZ	13:LJ:163:MET:HE2	2.35	0.41
16:LN:84:PRO:HA	16:LN:87:HIS:CE1	2.56	0.41
1:LA:5:ILE:O	1:LA:8:GLN:HB2	2.20	0.41
2:LB:244:THR:HA	3:L5:4525:C:HO2'	1.86	0.41
3:L5:982:U:H2'	3:L5:983:C:H6	1.86	0.41
3:L5:1325:C:O2	3:L5:3878:C:O2'	2.38	0.41
3:L5:1741:G:H1'	3:L5:1781:PSU:H5''	2.03	0.41
3:L5:1912:G:N2	17:LO:87:MET:HE2	2.35	0.41
3:L5:2756:G:H2'	3:L5:2757:A:C8	2.56	0.41
3:L5:2811:G:H1'	3:L5:2815:A2M:H62	1.85	0.41
3:L5:2841:G:H2'	3:L5:2842:G:H5''	2.03	0.41
3:L5:3652:A:H2'	3:L5:3653:A:C5	2.55	0.41
3:L5:3886:G:H5''	17:LO:82:ARG:NH2	2.36	0.41
3:L5:4775:C:H2'	3:L5:4776:G:H5''	2.03	0.41
5:L8:140:C:H2'	5:L8:141:C:H6	1.84	0.41
25:LW:61:LYS:HA	25:LW:61:LYS:HD3	1.85	0.41
40:Ll:28:ARG:HA	40:Ll:33:ASN:HD21	1.85	0.41
3:L5:31:U:H2'	3:L5:32:G:O4'	2.20	0.41
3:L5:68:U:H2'	3:L5:69:A:O4'	2.21	0.41
3:L5:518:G:H22	3:L5:644:G:P	2.44	0.41
3:L5:1093:C:C2	3:L5:1094:G:C8	3.09	0.41
3:L5:1097:C:H2'	3:L5:1098:G:H8	1.85	0.41
3:L5:1168:G:C6	3:L5:1194:G:C2	3.09	0.41
3:L5:1217:G:H2'	3:L5:1218:G:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:1356:U:H2'	3:L5:1357:C:C6	2.56	0.41
3:L5:1577:G:H5'	3:L5:1578:U:H5''	2.03	0.41
3:L5:1875:C:H2'	3:L5:1876:U:C6	2.56	0.41
3:L5:2898:G:H2'	3:L5:2899:C:H6	1.85	0.41
3:L5:3932:U:H2'	3:L5:3933:G:C8	2.56	0.41
8:LE:120:ASP:OD1	8:LE:121:VAL:N	2.54	0.41
11:LH:21:LYS:HE3	11:LH:21:LYS:HB2	1.90	0.41
32:Ld:37:GLY:O	32:Ld:41:ARG:HG3	2.21	0.41
3:L5:122:U:H2'	3:L5:123:C:C6	2.55	0.41
3:L5:161:G:H2'	3:L5:162:A:H8	1.85	0.41
3:L5:420:A:C8	3:L5:421:C:C5	3.09	0.41
3:L5:934:C:H5''	3:L5:935:A:OP1	2.21	0.41
3:L5:1095:A:O5'	3:L5:1095:A:H8	2.03	0.41
3:L5:1346:C:H2'	3:L5:1347:G:H8	1.84	0.41
3:L5:1774:C:H2'	3:L5:1775:A:C8	2.56	0.41
3:L5:1959:U:H4'	3:L5:1961:G:OP2	2.21	0.41
3:L5:2485:U:O4'	3:L5:2486:G:N2	2.53	0.41
3:L5:4273:A:H2'	3:L5:4274:A:C8	2.55	0.41
3:L5:4928:C:H2'	3:L5:4929:C:C6	2.56	0.41
3:L5:5002:U:H2'	3:L5:5003:U:H6	1.85	0.41
5:L8:39:G:O2'	5:L8:104:A:N1	2.48	0.41
7:LD:64:ILE:HG13	7:LD:105:LEU:HD21	2.03	0.41
8:LE:74:SER:HB2	30:Lb:117:ARG:C	2.46	0.41
10:LG:140:VAL:HG21	10:LG:166:LEU:O	2.21	0.41
11:LH:44:GLU:CG	11:LH:58:ASP:HB2	2.51	0.41
13:LJ:164:ARG:CG	13:LJ:168:GLN:HE22	2.33	0.41
15:LM:39:ASP:OD1	15:LM:39:ASP:C	2.64	0.41
24:LV:104:VAL:HB	24:LV:112:MET:HE1	2.03	0.41
31:Lc:28:VAL:CG2	31:Lc:33:GLN:HB3	2.51	0.41
1:LA:6:ARG:NH2	1:LA:199:VAL:O	2.54	0.41
1:LA:114:CYS:O	1:LA:127:ALA:HB3	2.21	0.41
2:LB:305:THR:C	2:LB:307:TYR:H	2.28	0.41
3:L5:132:G:C2	3:L5:137:G:C6	3.08	0.41
3:L5:419:A:N3	3:L5:1332:C:O2'	2.45	0.41
3:L5:741:C:N4	3:L5:923:C:H42	2.19	0.41
3:L5:751:G:H2'	3:L5:752:G:O4'	2.21	0.41
3:L5:944:A:OP1	9:LF:62:ARG:HG2	2.19	0.41
3:L5:1098:G:H2'	3:L5:1099:C:H6	1.85	0.41
3:L5:1326:A2M:H2'	3:L5:1327:C:C6	2.56	0.41
3:L5:1348:U:H2'	3:L5:1349:G:H8	1.85	0.41
3:L5:1534:A2M:H8	38:Lj:15:THR:OG1	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:1726:U:H1'	9:LF:132:MET:HE2	2.02	0.41
3:L5:1792:PSU:H2'	3:L5:1793:A:H5'	2.03	0.41
3:L5:1972:G:O2'	3:L5:1995:G:N2	2.53	0.41
3:L5:2021:G:H2'	3:L5:2021:G:N3	2.36	0.41
3:L5:2530:U:O4	35:Lg:9:ARG:HD3	2.20	0.41
3:L5:2567:G:H8	3:L5:2567:G:OP2	2.04	0.41
3:L5:2898:G:OP2	20:LR:135:LYS:NZ	2.34	0.41
3:L5:3930:U:H2'	3:L5:3931:C:C6	2.56	0.41
3:L5:4473:A:OP1	41:Lm:124:LYS:NZ	2.33	0.41
3:L5:4693:C:H4'	3:L5:4694:G:OP2	2.21	0.41
3:L5:4925:U:H4'	3:L5:4926:C:H5''	2.03	0.41
3:L5:4934:A:H2'	3:L5:4935:C:C6	2.56	0.41
3:L5:5007:A:N7	3:L5:5042:A:O2'	2.41	0.41
7:LD:84:PRO:HA	7:LD:88:VAL:O	2.20	0.41
8:LE:99:ASP:C	8:LE:101:ASN:N	2.79	0.41
10:LG:131:LYS:O	10:LG:132:ARG:C	2.62	0.41
11:LH:59:LYS:HA	11:LH:59:LYS:HD2	1.73	0.41
11:LH:91:LYS:HD2	11:LH:143:GLU:OE2	2.21	0.41
12:LI:36:LEU:HD22	12:LI:69:ARG:HH11	1.86	0.41
12:LI:87:ILE:HG12	12:LI:138:ILE:CG1	2.50	0.41
13:LJ:26:VAL:C	13:LJ:28:GLU:H	2.29	0.41
14:LL:61:CYS:SG	14:LL:71:ARG:HG2	2.60	0.41
19:LQ:24:TYR:CZ	45:Lr:5:LEU:HD11	2.56	0.41
19:LQ:24:TYR:OH	45:Lr:5:LEU:HD11	2.20	0.41
22:LT:80:VAL:HG12	22:LT:81:LYS:N	2.36	0.41
23:LU:21:PHE:CE1	23:LU:80:LYS:HB3	2.55	0.41
28:LZ:98:LYS:C	28:LZ:100:VAL:H	2.29	0.41
45:Lr:49:VAL:HG11	45:Lr:97:ILE:HD11	2.02	0.41
1:LA:200:ARG:HD2	3:L5:3690:U:OP2	2.21	0.41
2:LB:161:ARG:HG2	2:LB:184:GLN:HA	2.03	0.41
2:LB:181:MET:HE1	2:LB:346:THR:HG23	2.03	0.41
3:L5:5:A:H2'	3:L5:6:C:O4'	2.20	0.41
3:L5:42:A:H5''	3:L5:4187:OMG:CM2	2.45	0.41
3:L5:500:G:H4'	3:L5:504:G:O5'	2.21	0.41
3:L5:724:C:OP1	6:LC:350:ARG:HD3	2.20	0.41
3:L5:1271:G:H1'	9:LF:34:ARG:HD3	2.02	0.41
3:L5:1554:A:OP2	44:Lp:4:ARG:NE	2.35	0.41
3:L5:1669:A:H4'	3:L5:1685:G:N2	2.36	0.41
3:L5:1804:A:O2'	3:L5:1833:G:O6	2.24	0.41
3:L5:2256:C:H2'	3:L5:2257:C:O4'	2.21	0.41
3:L5:2621:A:H2'	3:L5:2622:G:C8	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:4371:G:O2'	3:L5:4372:U:OP2	2.34	0.41
3:L5:4474:A:OP2	41:Lm:124:LYS:HE3	2.21	0.41
3:L5:4499:OMG:H5''	3:L5:4500:PSU:OP2	2.20	0.41
8:LE:165:LEU:HD21	8:LE:253:VAL:HG11	2.02	0.41
13:LJ:31:ASP:OD1	13:LJ:32:ARG:N	2.54	0.41
14:LL:29:PRO:O	14:LL:33:ILE:HG12	2.21	0.41
17:LO:110:PRO:HA	17:LO:113:ASP:OD1	2.21	0.41
30:Lb:65:MET:HA	30:Lb:68:ARG:HG2	2.02	0.41
34:Lf:78:HIS:O	34:Lf:83:MET:HB3	2.20	0.41
1:LA:207:VAL:HG11	3:L5:1633:G:N1	2.36	0.40
1:LA:207:VAL:HG11	3:L5:1633:G:C6	2.56	0.40
3:L5:120:A:N1	3:L5:148:C:O2'	2.43	0.40
3:L5:469:C:H2'	3:L5:470:A:H8	1.86	0.40
3:L5:703:G:H2'	3:L5:704:C:H4'	2.03	0.40
3:L5:734:G:C2	3:L5:735:G:C8	3.08	0.40
3:L5:1461:C:H2'	3:L5:1462:A:H8	1.86	0.40
3:L5:1739:G:H2'	3:L5:1740:C:C6	2.56	0.40
3:L5:1806:G:H2'	3:L5:1807:C:H6	1.85	0.40
3:L5:2347:A:C4	33:Le:31:ILE:HD11	2.56	0.40
3:L5:2547:G:H2'	3:L5:2548:C:C6	2.56	0.40
3:L5:3822:PSU:H5''	3:L5:3823:G:OP2	2.21	0.40
3:L5:4535:A:H2'	3:L5:4536:OMC:H6	1.86	0.40
3:L5:4988:U:HO2'	3:L5:4989:U:P	2.42	0.40
5:L8:69:U:H2'	5:L8:70:G:O4'	2.21	0.40
8:LE:94:LYS:HA	8:LE:95:PRO:HD3	1.95	0.40
11:LH:88:PHE:O	11:LH:147:GLU:HA	2.21	0.40
12:LI:49:CYS:SG	12:LI:51:HIS:CE1	3.13	0.40
25:LW:41:LEU:HD23	25:LW:41:LEU:HA	1.92	0.40
32:Ld:30:HIS:O	32:Ld:30:HIS:CG	2.73	0.40
3:L5:99:A:H2'	3:L5:100:C:C6	2.56	0.40
3:L5:99:A:H5''	16:LN:184:ILE:HD13	2.02	0.40
3:L5:138:G:C8	3:L5:139:G:N7	2.89	0.40
3:L5:261:G:C2	3:L5:262:G:C4	3.09	0.40
3:L5:1084:C:H2'	3:L5:1085:C:H6	1.86	0.40
3:L5:1263:A:H2'	3:L5:1264:C:C6	2.56	0.40
3:L5:1341:U:H2'	3:L5:1342:A:C8	2.55	0.40
3:L5:1418:C:H2'	3:L5:1419:G:H5'	2.03	0.40
3:L5:1909:G:H2'	3:L5:1910:G:O4'	2.21	0.40
3:L5:2683:C:H2'	3:L5:2684:C:H6	1.86	0.40
3:L5:3764:PSU:H3'	3:L5:3765:G:H8	1.86	0.40
3:L5:4173:G:H2'	3:L5:4174:U:C6	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:4638:U:H2'	3:L5:4639:G:N3	2.36	0.40
3:L5:4749:C:H2'	3:L5:4750:G:O4'	2.21	0.40
3:L5:4957:C:H2'	3:L5:4958:C:H6	1.86	0.40
3:L5:5016:A:H2	3:L5:5033:G:H21	1.64	0.40
6:LC:298:ILE:O	6:LC:302:LEU:HG	2.21	0.40
7:LD:51:MET:HE1	7:LD:163:LEU:HA	2.02	0.40
16:LN:159:ARG:HB3	16:LN:164:LEU:HB2	2.03	0.40
23:LU:18:VAL:HG12	23:LU:18:VAL:O	2.22	0.40
23:LU:88:LYS:HG2	23:LU:97:ARG:NH1	2.37	0.40
24:LV:109:LYS:HG3	24:LV:109:LYS:O	2.22	0.40
26:LX:119:ILE:HD12	26:LX:140:LEU:HD22	2.03	0.40
32:Ld:44:ARG:O	32:Ld:48:GLU:HG2	2.21	0.40
43:Lo:4:VAL:O	43:Lo:94:GLY:N	2.45	0.40
1:LA:206:PRO:HG3	1:LA:213:GLY:HA3	2.04	0.40
2:LB:29:VAL:HG13	2:LB:348:ARG:HD3	2.04	0.40
2:LB:77:THR:HG21	2:LB:337:VAL:HG23	2.02	0.40
3:L5:986:C:H2'	3:L5:987:C:C6	2.57	0.40
3:L5:1400:G:H2'	3:L5:1401:C:H6	1.87	0.40
3:L5:1588:U:H2'	3:L5:1589:C:C6	2.57	0.40
3:L5:1977:C:O2	3:L5:1991:A:O2'	2.33	0.40
3:L5:2562:G:H21	3:L5:2565:A:H8	1.66	0.40
3:L5:2812:A:OP1	20:LR:88:ARG:NH1	2.54	0.40
3:L5:2898:G:H2'	3:L5:2899:C:C6	2.56	0.40
3:L5:3594:C:H1'	3:L5:3597:G:H21	1.86	0.40
3:L5:3619:G:H4'	20:LR:79:GLY:O	2.21	0.40
3:L5:3637:PSU:H2'	3:L5:3638:G:H5'	2.03	0.40
3:L5:4413:C:H2'	3:L5:4414:A:O4'	2.21	0.40
3:L5:4868:G:O2'	3:L5:4872:2MG:OP1	2.37	0.40
5:L8:70:G:C2	5:L8:87:G:N3	2.89	0.40
9:LF:28:LEU:HD12	9:LF:32:ARG:HH21	1.85	0.40
16:LN:123:GLU:H	16:LN:123:GLU:HG2	1.73	0.40
20:LR:139:MET:HB2	20:LR:140:GLU:OE1	2.20	0.40
27:LY:55:VAL:CG1	27:LY:104:VAL:HB	2.51	0.40
28:LZ:30:ASP:HA	28:LZ:39:SER:OG	2.21	0.40
32:Ld:23:ARG:HG2	32:Ld:121:ASN:HA	2.03	0.40
32:Ld:93:ASN:N	32:Ld:101:LYS:O	2.38	0.40
1:LA:159:SER:O	1:LA:162:ASN:ND2	2.52	0.40
2:LB:33:PRO:HG2	2:LB:349:LYS:HB2	2.04	0.40
3:L5:752:G:C5	3:L5:753:C:C5	3.10	0.40
3:L5:1266:G:N7	30:Lb:95:ARG:HB3	2.36	0.40
3:L5:1515:A:H2'	3:L5:1516:G:O4'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:L5:1727:U:H2'	3:L5:1728:U:C6	2.56	0.40
3:L5:1759:G:OP2	3:L5:1759:G:H8	2.03	0.40
3:L5:1989:G:H2'	3:L5:1990:A:H8	1.86	0.40
3:L5:2107:C:H2'	3:L5:2108:G:C8	2.57	0.40
3:L5:2557:G:H2'	3:L5:2558:C:O4'	2.21	0.40
3:L5:2900:U:H2'	3:L5:2901:G:C8	2.56	0.40
3:L5:4135:G:H2'	3:L5:4136:G:C8	2.56	0.40
3:L5:4343:U:H2'	3:L5:4344:U:C6	2.56	0.40
5:L8:26:C:O2'	6:LC:53:ALA:O	2.35	0.40
5:L8:33:G:H4'	5:L8:34:U:C6	2.56	0.40
11:LH:4:ILE:HD13	21:LS:150:ILE:HD11	2.04	0.40
15:LM:127:VAL:O	15:LM:131:GLN:HG2	2.21	0.40
17:LO:185:VAL:HG23	17:LO:185:VAL:O	2.21	0.40
20:LR:82:LYS:HB3	20:LR:82:LYS:HE2	1.93	0.40
44:Lp:10:ILE:HD13	44:Lp:30:GLU:HG3	2.04	0.40
2:LB:117:ARG:HA	2:LB:177:LYS:HD2	2.02	0.40
2:LB:229:LYS:HA	2:LB:229:LYS:HD2	1.97	0.40
3:L5:139:G:H2'	3:L5:140:G:C8	2.54	0.40
3:L5:980:U:OP2	8:LE:46:ARG:NH2	2.55	0.40
3:L5:1497:A:N6	19:LQ:175:GLU:O	2.55	0.40
3:L5:1962:A:C8	3:L5:1963:C:C6	3.09	0.40
3:L5:1996:C:H5'	3:L5:1997:U:C5	2.56	0.40
3:L5:3909:OMC:O2	3:L5:4396:A:N1	2.54	0.40
3:L5:4103:C:H2'	3:L5:4105:A:C5	2.56	0.40
3:L5:4147:G:H2'	3:L5:4148:C:C6	2.56	0.40
3:L5:5004:C:OP1	25:LW:35:LYS:HD2	2.21	0.40
4:L7:67:C:OP1	7:LD:14:LYS:HG3	2.22	0.40
9:LF:126:ASN:HB2	22:LT:132:PRO:O	2.21	0.40
10:LG:57:TRP:NE1	10:LG:65:ARG:HH12	2.19	0.40
11:LH:37:ASP:CG	11:LH:39:ASN:HD22	2.25	0.40
11:LH:63:ASN:O	11:LH:67:LEU:HG	2.20	0.40
17:LO:120:VAL:HG22	21:LS:167:PHE:CD1	2.56	0.40
23:LU:76:VAL:HG23	23:LU:78:PHE:H	1.85	0.40
32:Ld:92:ARG:HH11	32:Ld:101:LYS:NZ	2.20	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	LA	246/257 (96%)	220 (89%)	26 (11%)	0	100	100
2	LB	400/403 (99%)	375 (94%)	25 (6%)	0	100	100
6	LC	365/427 (86%)	336 (92%)	28 (8%)	1 (0%)	36	59
7	LD	291/297 (98%)	276 (95%)	15 (5%)	0	100	100
8	LE	217/288 (75%)	197 (91%)	19 (9%)	1 (0%)	24	46
9	LF	223/248 (90%)	211 (95%)	12 (5%)	0	100	100
10	LG	238/266 (90%)	220 (92%)	17 (7%)	1 (0%)	30	52
11	LH	188/192 (98%)	175 (93%)	13 (7%)	0	100	100
12	LI	200/214 (94%)	187 (94%)	13 (6%)	0	100	100
13	LJ	173/178 (97%)	161 (93%)	12 (7%)	0	100	100
14	LL	206/211 (98%)	188 (91%)	18 (9%)	0	100	100
15	LM	137/215 (64%)	131 (96%)	6 (4%)	0	100	100
16	LN	201/204 (98%)	188 (94%)	11 (6%)	2 (1%)	12	30
17	LO	198/203 (98%)	193 (98%)	5 (2%)	0	100	100
18	LP	151/184 (82%)	142 (94%)	9 (6%)	0	100	100
19	LQ	185/188 (98%)	178 (96%)	7 (4%)	0	100	100
20	LR	185/196 (94%)	181 (98%)	4 (2%)	0	100	100
21	LS	173/176 (98%)	162 (94%)	11 (6%)	0	100	100
22	LT	157/160 (98%)	148 (94%)	9 (6%)	0	100	100
23	LU	99/128 (77%)	84 (85%)	15 (15%)	0	100	100
24	LV	129/140 (92%)	122 (95%)	7 (5%)	0	100	100
25	LW	74/157 (47%)	67 (90%)	7 (10%)	0	100	100
26	LX	117/156 (75%)	116 (99%)	1 (1%)	0	100	100
27	LY	132/145 (91%)	124 (94%)	8 (6%)	0	100	100
28	LZ	133/136 (98%)	123 (92%)	10 (8%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
29	La	145/148 (98%)	137 (94%)	8 (6%)	0	100	100
30	Lb	104/159 (65%)	97 (93%)	7 (7%)	0	100	100
31	Lc	96/115 (84%)	91 (95%)	5 (5%)	0	100	100
32	Ld	105/125 (84%)	95 (90%)	10 (10%)	0	100	100
33	Le	126/135 (93%)	119 (94%)	7 (6%)	0	100	100
34	Lf	107/110 (97%)	101 (94%)	5 (5%)	1 (1%)	14	33
35	Lg	111/117 (95%)	111 (100%)	0	0	100	100
36	Lh	120/123 (98%)	117 (98%)	3 (2%)	0	100	100
37	Li	100/105 (95%)	94 (94%)	6 (6%)	0	100	100
38	Lj	84/97 (87%)	78 (93%)	4 (5%)	2 (2%)	4	11
39	Lk	67/70 (96%)	66 (98%)	1 (2%)	0	100	100
40	Ll	48/51 (94%)	45 (94%)	3 (6%)	0	100	100
41	Lm	49/128 (38%)	47 (96%)	2 (4%)	0	100	100
42	Ln	22/25 (88%)	21 (96%)	1 (4%)	0	100	100
43	Lo	101/106 (95%)	97 (96%)	4 (4%)	0	100	100
44	Lp	89/92 (97%)	85 (96%)	4 (4%)	0	100	100
45	Lr	123/137 (90%)	112 (91%)	11 (9%)	0	100	100
All	All	6415/7212 (89%)	6018 (94%)	389 (6%)	8 (0%)	49	72

All (8) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
6	LC	222	ARG
8	LE	100	LYS
16	LN	124	ASP
34	Lf	107	PRO
38	Lj	39	TYR
38	Lj	40	PRO
10	LG	125	LYS
16	LN	84	PRO

5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	LA	190/199 (96%)	190 (100%)	0	100	100
2	LB	348/349 (100%)	348 (100%)	0	100	100
6	LC	305/347 (88%)	305 (100%)	0	100	100
7	LD	246/250 (98%)	246 (100%)	0	100	100
8	LE	197/252 (78%)	195 (99%)	2 (1%)	68	85
9	LF	194/215 (90%)	194 (100%)	0	100	100
10	LG	203/223 (91%)	201 (99%)	2 (1%)	68	85
11	LH	169/171 (99%)	169 (100%)	0	100	100
12	LI	174/181 (96%)	173 (99%)	1 (1%)	78	90
13	LJ	147/149 (99%)	145 (99%)	2 (1%)	59	80
14	LL	174/177 (98%)	174 (100%)	0	100	100
15	LM	118/161 (73%)	118 (100%)	0	100	100
16	LN	171/172 (99%)	171 (100%)	0	100	100
17	LO	172/174 (99%)	172 (100%)	0	100	100
18	LP	134/163 (82%)	134 (100%)	0	100	100
19	LQ	164/165 (99%)	164 (100%)	0	100	100
20	LR	166/175 (95%)	166 (100%)	0	100	100
21	LS	156/157 (99%)	156 (100%)	0	100	100
22	LT	139/140 (99%)	139 (100%)	0	100	100
23	LU	91/115 (79%)	90 (99%)	1 (1%)	65	84
24	LV	101/107 (94%)	101 (100%)	0	100	100
25	LW	67/126 (53%)	67 (100%)	0	100	100
26	LX	107/133 (80%)	107 (100%)	0	100	100
27	LY	124/135 (92%)	124 (100%)	0	100	100
28	LZ	117/118 (99%)	117 (100%)	0	100	100
29	La	120/121 (99%)	120 (100%)	0	100	100
30	Lb	89/126 (71%)	89 (100%)	0	100	100
31	Lc	83/97 (86%)	83 (100%)	0	100	100
32	Ld	98/110 (89%)	98 (100%)	0	100	100
33	Le	114/121 (94%)	114 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
34	Lf	88/89 (99%)	87 (99%)	1 (1%)	65	84
35	Lg	97/100 (97%)	96 (99%)	1 (1%)	68	85
36	Lh	109/110 (99%)	109 (100%)	0	100	100
37	Li	86/89 (97%)	86 (100%)	0	100	100
38	Lj	73/80 (91%)	73 (100%)	0	100	100
39	Lk	64/65 (98%)	64 (100%)	0	100	100
40	Ll	47/48 (98%)	47 (100%)	0	100	100
41	Lm	47/115 (41%)	46 (98%)	1 (2%)	47	73
42	Ln	23/24 (96%)	23 (100%)	0	100	100
43	Lo	91/94 (97%)	91 (100%)	0	100	100
44	Lp	74/75 (99%)	74 (100%)	0	100	100
45	Lr	109/121 (90%)	109 (100%)	0	100	100
All	All	5586/6139 (91%)	5575 (100%)	11 (0%)	85	95

All (11) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
8	LE	100	LYS
8	LE	106	VAL
10	LG	130	THR
10	LG	136	LEU
12	LI	203	ARG
13	LJ	113	ILE
13	LJ	174	ILE
23	LU	111	GLU
34	Lf	107	PRO
35	Lg	48	VAL
41	Lm	79	GLU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (54) such sidechains are listed below:

Mol	Chain	Res	Type
1	LA	83	HIS
1	LA	162	ASN
1	LA	205	ASN
2	LB	121	ASN
6	LC	21	ASN

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Mol	Chain	Res	Type
6	LC	38	ASN
6	LC	215	ASN
7	LD	225	GLN
7	LD	250	ASN
7	LD	282	GLN
8	LE	266	GLN
9	LF	119	ASN
9	LF	192	HIS
9	LF	239	GLN
10	LG	94	GLN
10	LG	208	ASN
11	LH	98	HIS
11	LH	188	GLN
12	LI	73	ASN
12	LI	213	HIS
13	LJ	10	ASN
13	LJ	46	GLN
13	LJ	104	ASN
13	LJ	168	GLN
15	LM	48	GLN
15	LM	69	HIS
16	LN	32	GLN
16	LN	37	HIS
17	LO	50	ASN
17	LO	72	HIS
18	LP	56	GLN
19	LQ	160	HIS
20	LR	141	HIS
21	LS	37	HIS
22	LT	131	GLN
23	LU	50	ASN
23	LU	116	GLN
24	LV	135	ASN
25	LW	50	ASN
26	LX	69	ASN
26	LX	108	GLN
27	LY	43	ASN
29	La	14	HIS
30	Lb	6	ASN
30	Lb	19	ASN
31	Lc	33	GLN
31	Lc	73	HIS

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Mol	Chain	Res	Type
33	Le	80	HIS
33	Le	117	GLN
34	Lf	56	ASN
39	Lk	28	ASN
41	Lm	109	ASN
42	Ln	22	GLN
43	Lo	45	GLN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
3	L5	3698/5070 (72%)	895 (24%)	39 (1%)
4	L7	119/120 (99%)	13 (10%)	0
5	L8	155/156 (99%)	30 (19%)	1 (0%)
All	All	3972/5346 (74%)	938 (23%)	40 (1%)

All (938) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
3	L5	2	G
3	L5	13	U
3	L5	17	A
3	L5	25	A
3	L5	39	A
3	L5	42	A
3	L5	48	G
3	L5	56	A
3	L5	59	A
3	L5	64	A
3	L5	65	A
3	L5	66	A
3	L5	73	A
3	L5	91	G
3	L5	104	G
3	L5	108	A
3	L5	109	G
3	L5	110	C
3	L5	112	C
3	L5	117	C
3	L5	119	G
3	L5	120	A

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Mol	Chain	Res	Type
3	L5	131	C
3	L5	132	G
3	L5	133	C
3	L5	134	G
3	L5	135	G
3	L5	136	C
3	L5	137	G
3	L5	139	G
3	L5	144	G
3	L5	152	U
3	L5	159	C
3	L5	164	G
3	L5	172	C
3	L5	177	G
3	L5	181	C
3	L5	183	C
3	L5	184	U
3	L5	185	C
3	L5	186	G
3	L5	188	G
3	L5	189	G
3	L5	200	U
3	L5	209	U
3	L5	216	C
3	L5	217	C
3	L5	218	A
3	L5	219	G
3	L5	220	C
3	L5	233	U
3	L5	234	G
3	L5	254	G
3	L5	255	C
3	L5	256	G
3	L5	258	G
3	L5	259	C
3	L5	260	C
3	L5	261	G
3	L5	263	G
3	L5	264	C
3	L5	265	C
3	L5	280	G
3	L5	297	U

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Mol	Chain	Res	Type
3	L5	306	A
3	L5	315	G
3	L5	316	U
3	L5	340	C
3	L5	341	G
3	L5	350	C
3	L5	387	G
3	L5	396	A
3	L5	401	G
3	L5	407	A
3	L5	408	A
3	L5	410	A
3	L5	412	G
3	L5	413	G
3	L5	415	G
3	L5	440	U
3	L5	449	C
3	L5	450	G
3	L5	452	A
3	L5	453	G
3	L5	454	U
3	L5	457	G
3	L5	464	G
3	L5	465	G
3	L5	466	A
3	L5	467	U
3	L5	479	G
3	L5	484	U
3	L5	485	C
3	L5	486	C
3	L5	489	C
3	L5	491	G
3	L5	494	U
3	L5	497	G
3	L5	498	C
3	L5	499	G
3	L5	500	G
3	L5	502	C
3	L5	503	C
3	L5	504	G
3	L5	505	G
3	L5	507	G

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Mol	Chain	Res	Type
3	L5	509	A
3	L5	510	U
3	L5	512	U
3	L5	513	U
3	L5	514	U
3	L5	516	C
3	L5	517	C
3	L5	518	G
3	L5	644	G
3	L5	645	G
3	L5	646	G
3	L5	654	C
3	L5	657	C
3	L5	659	G
3	L5	665	C
3	L5	667	A
3	L5	668	C
3	L5	669	C
3	L5	673	C
3	L5	674	G
3	L5	685	C
3	L5	686	A
3	L5	687	U
3	L5	688	U
3	L5	696	C
3	L5	697	G
3	L5	704	C
3	L5	706	C
3	L5	708	G
3	L5	731	G
3	L5	738	C
3	L5	739	G
3	L5	740	G
3	L5	742	G
3	L5	746	A
3	L5	754	U
3	L5	758	G
3	L5	904	C
3	L5	905	C
3	L5	913	U
3	L5	914	U
3	L5	915	A

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Mol	Chain	Res	Type
3	L5	916	C
3	L5	917	A
3	L5	923	C
3	L5	924	C
3	L5	926	G
3	L5	932	A
3	L5	933	G
3	L5	934	C
3	L5	935	A
3	L5	936	C
3	L5	937	U
3	L5	941	C
3	L5	945	U
3	L5	946	C
3	L5	959	G
3	L5	960	A
3	L5	961	G
3	L5	962	C
3	L5	965	G
3	L5	966	A
3	L5	968	C
3	L5	969	C
3	L5	970	G
3	L5	977	C
3	L5	982	U
3	L5	984	C
3	L5	985	C
3	L5	988	C
3	L5	989	U
3	L5	990	C
3	L5	991	C
3	L5	992	C
3	L5	993	G
3	L5	995	C
3	L5	1050	C
3	L5	1051	G
3	L5	1066	G
3	L5	1070	G
3	L5	1074	G
3	L5	1075	G
3	L5	1078	A
3	L5	1083	U

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Mol	Chain	Res	Type
3	L5	1168	G
3	L5	1170	G
3	L5	1171	G
3	L5	1173	G
3	L5	1178	G
3	L5	1179	U
3	L5	1180	C
3	L5	1181	C
3	L5	1182	C
3	L5	1183	C
3	L5	1184	A
3	L5	1187	G
3	L5	1191	C
3	L5	1196	G
3	L5	1202	C
3	L5	1203	G
3	L5	1204	C
3	L5	1205	G
3	L5	1211	G
3	L5	1214	C
3	L5	1215	C
3	L5	1218	G
3	L5	1219	G
3	L5	1220	G
3	L5	1221	G
3	L5	1222	A
3	L5	1235	G
3	L5	1241	C
3	L5	1243	C
3	L5	1246	G
3	L5	1253	G
3	L5	1254	A
3	L5	1255	A
3	L5	1257	A
3	L5	1259	G
3	L5	1260	G
3	L5	1261	G
3	L5	1266	G
3	L5	1269	G
3	L5	1272	C
3	L5	1273	G
3	L5	1274	A

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Mol	Chain	Res	Type
3	L5	1275	G
3	L5	1277	G
3	L5	1280	C
3	L5	1284	G
3	L5	1285	U
3	L5	1287	G
3	L5	1293	G
3	L5	1294	A
3	L5	1295	C
3	L5	1301	C
3	L5	1304	C
3	L5	1314	C
3	L5	1324	A
3	L5	1326	A2M
3	L5	1354	A
3	L5	1358	G
3	L5	1359	G
3	L5	1360	G
3	L5	1365	C
3	L5	1366	G
3	L5	1367	C
3	L5	1370	G
3	L5	1377	G
3	L5	1387	A
3	L5	1393	G
3	L5	1394	G
3	L5	1397	A
3	L5	1402	C
3	L5	1403	G
3	L5	1404	G
3	L5	1407	C
3	L5	1409	C
3	L5	1410	U
3	L5	1411	C
3	L5	1415	G
3	L5	1420	A
3	L5	1435	G
3	L5	1443	A
3	L5	1444	G
3	L5	1445	U
3	L5	1446	C
3	L5	1447	C

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Mol	Chain	Res	Type
3	L5	1482	G
3	L5	1483	C
3	L5	1497	A
3	L5	1498	G
3	L5	1502	G
3	L5	1525	A
3	L5	1534	A2M
3	L5	1537	A
3	L5	1547	A
3	L5	1564	A
3	L5	1566	C
3	L5	1578	U
3	L5	1586	G
3	L5	1591	U
3	L5	1596	U
3	L5	1612	G
3	L5	1621	A
3	L5	1624	G
3	L5	1625	OMG
3	L5	1626	G
3	L5	1631	A
3	L5	1633	G
3	L5	1634	A
3	L5	1638	A
3	L5	1640	C
3	L5	1641	G
3	L5	1642	A
3	L5	1654	G
3	L5	1661	C
3	L5	1676	C
3	L5	1677	PSU
3	L5	1681	G
3	L5	1691	G
3	L5	1694	C
3	L5	1697	G
3	L5	1698	C
3	L5	1699	A
3	L5	1700	G
3	L5	1701	A
3	L5	1703	C
3	L5	1704	C
3	L5	1705	G

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Mol	Chain	Res	Type
3	L5	1707	C
3	L5	1709	C
3	L5	1730	U
3	L5	1734	G
3	L5	1741	G
3	L5	1742	A
3	L5	1745	G
3	L5	1750	G
3	L5	1755	C
3	L5	1761	G
3	L5	1762	C
3	L5	1763	C
3	L5	1765	A
3	L5	1766	A
3	L5	1768	C
3	L5	1770	A
3	L5	1771	U
3	L5	1772	C
3	L5	1775	A
3	L5	1780	A
3	L5	1783	C
3	L5	1787	A
3	L5	1793	A
3	L5	1804	A
3	L5	1810	G
3	L5	1815	G
3	L5	1821	G
3	L5	1822	U
3	L5	1834	U
3	L5	1836	G
3	L5	1837	A
3	L5	1842	G
3	L5	1855	G
3	L5	1859	C
3	L5	1860	PSU
3	L5	1863	U
3	L5	1869	G
3	L5	1882	U
3	L5	1889	U
3	L5	1892	A
3	L5	1897	A
3	L5	1917	A

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Mol	Chain	Res	Type
3	L5	1918	U
3	L5	1919	G
3	L5	1920	C
3	L5	1921	C
3	L5	1922	G
3	L5	1925	G
3	L5	1931	C
3	L5	1932	A
3	L5	1936	C
3	L5	1948	G
3	L5	1949	U
3	L5	1951	G
3	L5	1959	U
3	L5	1960	A
3	L5	1961	G
3	L5	1962	A
3	L5	1966	C
3	L5	1967	A
3	L5	1968	G
3	L5	1969	G
3	L5	1971	C
3	L5	1973	G
3	L5	1974	U
3	L5	1975	G
3	L5	1977	C
3	L5	1978	C
3	L5	1981	G
3	L5	1982	G
3	L5	1983	A
3	L5	1984	A
3	L5	1985	G
3	L5	1987	C
3	L5	1988	G
3	L5	1989	G
3	L5	1993	C
3	L5	1994	C
3	L5	1995	G
3	L5	1996	C
3	L5	1997	U
3	L5	1998	A
3	L5	1999	A
3	L5	2000	G

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Mol	Chain	Res	Type
3	L5	2002	A
3	L5	2003	G
3	L5	2005	G
3	L5	2006	U
3	L5	2007	G
3	L5	2009	A
3	L5	2010	A
3	L5	2011	C
3	L5	2012	A
3	L5	2013	A
3	L5	2015	U
3	L5	2020	U
3	L5	2021	G
3	L5	2022	C
3	L5	2025	A
3	L5	2026	A
3	L5	2046	G
3	L5	2048	U
3	L5	2055	G
3	L5	2056	G
3	L5	2069	A
3	L5	2070	U
3	L5	2084	C
3	L5	2085	G
3	L5	2089	G
3	L5	2092	G
3	L5	2093	A
3	L5	2094	G
3	L5	2095	A
3	L5	2097	U
3	L5	2098	G
3	L5	2101	C
3	L5	2102	G
3	L5	2105	A
3	L5	2108	G
3	L5	2253	A
3	L5	2256	C
3	L5	2258	C
3	L5	2259	G
3	L5	2289	C
3	L5	2300	A
3	L5	2301	G

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Mol	Chain	Res	Type
3	L5	2306	G
3	L5	2313	A
3	L5	2316	G
3	L5	2332	A
3	L5	2333	G
3	L5	2348	G
3	L5	2351	OMC
3	L5	2360	A
3	L5	2395	A
3	L5	2397	G
3	L5	2402	G
3	L5	2412	A
3	L5	2415	OMU
3	L5	2416	G
3	L5	2417	A
3	L5	2421	G
3	L5	2422	OMC
3	L5	2424	OMG
3	L5	2425	U
3	L5	2440	U
3	L5	2441	C
3	L5	2447	U
3	L5	2450	G
3	L5	2453	A
3	L5	2465	C
3	L5	2471	G
3	L5	2474	G
3	L5	2475	G
3	L5	2478	C
3	L5	2479	G
3	L5	2480	G
3	L5	2482	C
3	L5	2483	G
3	L5	2484	A
3	L5	2485	U
3	L5	2486	G
3	L5	2487	G
3	L5	2488	C
3	L5	2489	C
3	L5	2490	U
3	L5	2491	C
3	L5	2492	C

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Mol	Chain	Res	Type
3	L5	2503	G
3	L5	2504	C
3	L5	2505	C
3	L5	2506	G
3	L5	2511	A
3	L5	2513	A
3	L5	2518	G
3	L5	2519	U
3	L5	2520	C
3	L5	2544	G
3	L5	2546	G
3	L5	2547	G
3	L5	2554	U
3	L5	2559	G
3	L5	2560	C
3	L5	2563	C
3	L5	2573	A
3	L5	2583	C
3	L5	2587	A
3	L5	2601	A
3	L5	2618	G
3	L5	2627	C
3	L5	2631	U
3	L5	2632	PSU
3	L5	2633	U
3	L5	2653	C
3	L5	2662	G
3	L5	2669	C
3	L5	2673	G
3	L5	2676	A
3	L5	2679	G
3	L5	2687	U
3	L5	2694	G
3	L5	2695	A
3	L5	2696	A
3	L5	2702	C
3	L5	2711	G
3	L5	2712	G
3	L5	2721	G
3	L5	2724	G
3	L5	2725	A
3	L5	2726	G

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Mol	Chain	Res	Type
3	L5	2738	C
3	L5	2739	C
3	L5	2742	G
3	L5	2743	A
3	L5	2754	G
3	L5	2756	G
3	L5	2759	G
3	L5	2761	U
3	L5	2763	U
3	L5	2764	A
3	L5	2769	U
3	L5	2770	C
3	L5	2788	U
3	L5	2790	U
3	L5	2803	U
3	L5	2814	C
3	L5	2815	A2M
3	L5	2816	G
3	L5	2826	U
3	L5	2827	G
3	L5	2829	U
3	L5	2835	A
3	L5	2842	G
3	L5	2844	A
3	L5	2855	G
3	L5	2856	C
3	L5	2876	OMG
3	L5	2877	G
3	L5	2892	C
3	L5	2900	U
3	L5	2902	G
3	L5	2903	G
3	L5	2904	U
3	L5	2906	G
3	L5	2908	U
3	L5	2909	C
3	L5	2910	G
3	L5	3587	C
3	L5	3588	C
3	L5	3591	C
3	L5	3593	C
3	L5	3594	C

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Mol	Chain	Res	Type
3	L5	3595	U
3	L5	3596	A
3	L5	3597	G
3	L5	3604	A
3	L5	3605	C
3	L5	3615	G
3	L5	3618	C
3	L5	3626	G
3	L5	3627	OMG
3	L5	3630	A
3	L5	3635	A
3	L5	3637	PSU
3	L5	3638	G
3	L5	3644	U
3	L5	3646	A
3	L5	3648	A
3	L5	3649	A
3	L5	3650	C
3	L5	3662	A
3	L5	3664	G
3	L5	3673	C
3	L5	3674	G
3	L5	3685	C
3	L5	3696	C
3	L5	3710	G
3	L5	3711	A
3	L5	3713	U
3	L5	3726	A
3	L5	3727	A
3	L5	3734	PSU
3	L5	3735	G
3	L5	3736	A
3	L5	3748	A
3	L5	3750	G
3	L5	3753	G
3	L5	3754	G
3	L5	3760	A
3	L5	3761	C
3	L5	3764	PSU
3	L5	3776	G
3	L5	3777	G
3	L5	3784	A

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Mol	Chain	Res	Type
3	L5	3786	U
3	L5	3801	U
3	L5	3802	U
3	L5	3811	G
3	L5	3812	C
3	L5	3814	U
3	L5	3817	A
3	L5	3819	G
3	L5	3823	G
3	L5	3838	U
3	L5	3840	U
3	L5	3867	A2M
3	L5	3870	C
3	L5	3877	A
3	L5	3878	C
3	L5	3879	G
3	L5	3885	G
3	L5	3897	G
3	L5	3901	A
3	L5	3906	A
3	L5	3907	G
3	L5	3908	A
3	L5	3915	U
3	L5	3921	U
3	L5	3926	C
3	L5	3942	A
3	L5	3944	OMG
3	L5	3945	A
3	L5	3947	A
3	L5	3948	C
3	L5	3949	A
3	L5	3951	G
3	L5	3952	A
3	L5	3953	G
3	L5	3954	A
3	L5	3956	G
3	L5	3957	U
3	L5	3958	G
3	L5	3959	U
3	L5	3960	A
3	L5	3961	G
3	L5	3963	A

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Mol	Chain	Res	Type
3	L5	3964	U
3	L5	3965	A
3	L5	3966	A
3	L5	3967	G
3	L5	3969	G
3	L5	3971	G
3	L5	3972	A
3	L5	3973	G
3	L5	3975	C
3	L5	3976	C
3	L5	3977	C
3	L5	4035	G
3	L5	4036	G
3	L5	4041	C
3	L5	4042	G
3	L5	4043	G
3	L5	4044	U
3	L5	4045	G
3	L5	4046	A
3	L5	4048	A
3	L5	4049	U
3	L5	4051	C
3	L5	4052	C
3	L5	4053	A
3	L5	4054	C
3	L5	4055	U
3	L5	4056	A
3	L5	4057	C
3	L5	4058	U
3	L5	4059	C
3	L5	4060	U
3	L5	4062	A
3	L5	4064	C
3	L5	4065	G
3	L5	4066	U
3	L5	4067	U
3	L5	4076	G
3	L5	4077	A
3	L5	4086	G
3	L5	4097	G
3	L5	4099	G
3	L5	4100	C

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Mol	Chain	Res	Type
3	L5	4101	C
3	L5	4102	C
3	L5	4103	C
3	L5	4104	G
3	L5	4106	G
3	L5	4107	G
3	L5	4110	C
3	L5	4111	U
3	L5	4112	C
3	L5	4113	U
3	L5	4115	G
3	L5	4116	C
3	L5	4119	C
3	L5	4122	G
3	L5	4127	A
3	L5	4139	G
3	L5	4140	C
3	L5	4141	G
3	L5	4142	C
3	L5	4143	G
3	L5	4145	C
3	L5	4150	G
3	L5	4157	A
3	L5	4162	C
3	L5	4163	U
3	L5	4168	G
3	L5	4170	A
3	L5	4183	G
3	L5	4184	G
3	L5	4191	G
3	L5	4203	A
3	L5	4222	G
3	L5	4225	G
3	L5	4228	OMG
3	L5	4229	U
3	L5	4232	U
3	L5	4233	A
3	L5	4251	A
3	L5	4254	G
3	L5	4257	A
3	L5	4268	A
3	L5	4273	A

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Mol	Chain	Res	Type
3	L5	4280	A
3	L5	4281	A
3	L5	4291	G
3	L5	4296	PSU
3	L5	4297	G
3	L5	4299	PSU
3	L5	4300	U
3	L5	4304	A
3	L5	4305	G
3	L5	4306	OMU
3	L5	4313	A
3	L5	4314	C
3	L5	4329	G
3	L5	4330	G
3	L5	4332	C
3	L5	4338	G
3	L5	4349	C
3	L5	4353	PSU
3	L5	4354	U
3	L5	4355	G
3	L5	4373	G
3	L5	4376	A
3	L5	4377	G
3	L5	4378	A
3	L5	4379	A
3	L5	4380	A
3	L5	4387	C
3	L5	4391	G
3	L5	4394	A
3	L5	4405	G
3	L5	4420	PSU
3	L5	4421	C
3	L5	4422	A
3	L5	4423	PSU
3	L5	4426	C
3	L5	4431	PSU
3	L5	4432	C
3	L5	4448	G
3	L5	4449	A
3	L5	4452	U
3	L5	4453	C
3	L5	4464	A

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Mol	Chain	Res	Type
3	L5	4466	C
3	L5	4475	G
3	L5	4488	A
3	L5	4493	PSU
3	L5	4499	OMG
3	L5	4500	PSU
3	L5	4512	U
3	L5	4513	A
3	L5	4515	G
3	L5	4519	C
3	L5	4523	A2M
3	L5	4524	G
3	L5	4532	PSU
3	L5	4533	A
3	L5	4545	G
3	L5	4548	A
3	L5	4549	G
3	L5	4554	G
3	L5	4557	U
3	L5	4560	C
3	L5	4567	G
3	L5	4572	U
3	L5	4573	G
3	L5	4575	G
3	L5	4576	PSU
3	L5	4577	U
3	L5	4579	PSU
3	L5	4580	U
3	L5	4584	A
3	L5	4589	A
3	L5	4590	A2M
3	L5	4617	G
3	L5	4636	PSU
3	L5	4637	OMG
3	L5	4652	G
3	L5	4656	A
3	L5	4670	C
3	L5	4672	A
3	L5	4674	C
3	L5	4677	U
3	L5	4679	G
3	L5	4694	G

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Mol	Chain	Res	Type
3	L5	4695	C
3	L5	4700	A
3	L5	4708	A
3	L5	4709	U
3	L5	4719	G
3	L5	4731	G
3	L5	4732	G
3	L5	4734	A
3	L5	4740	G
3	L5	4741	C
3	L5	4742	G
3	L5	4745	G
3	L5	4746	C
3	L5	4751	G
3	L5	4754	G
3	L5	4757	C
3	L5	4759	C
3	L5	4761	G
3	L5	4765	G
3	L5	4772	C
3	L5	4773	C
3	L5	4775	C
3	L5	4859	C
3	L5	4864	U
3	L5	4870	OMG
3	L5	4871	C
3	L5	4875	G
3	L5	4882	U
3	L5	4883	C
3	L5	4888	U
3	L5	4889	G
3	L5	4895	C
3	L5	4896	G
3	L5	4900	C
3	L5	4901	G
3	L5	4910	G
3	L5	4912	G
3	L5	4914	C
3	L5	4919	G
3	L5	4921	C
3	L5	4923	C
3	L5	4924	C

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Mol	Chain	Res	Type
3	L5	4925	U
3	L5	4926	C
3	L5	4928	C
3	L5	4934	A
3	L5	4941	G
3	L5	4943	A
3	L5	4950	U
3	L5	4955	A
3	L5	4960	G
3	L5	4961	G
3	L5	4963	G
3	L5	4966	A
3	L5	4967	A
3	L5	4976	U
3	L5	4988	U
3	L5	4989	U
3	L5	4990	C
3	L5	4991	U
3	L5	5014	A
3	L5	5017	G
3	L5	5023	C
3	L5	5024	C
3	L5	5025	C
3	L5	5028	G
3	L5	5029	C
3	L5	5030	U
3	L5	5034	A
3	L5	5041	G
3	L5	5050	C
3	L5	5054	C
3	L5	5055	G
3	L5	5061	A
3	L5	5069	U
4	L7	7	G
4	L7	22	A
4	L7	38	U
4	L7	53	U
4	L7	54	A
4	L7	63	C
4	L7	64	G
4	L7	70	G
4	L7	71	G

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Mol	Chain	Res	Type
4	L7	97	G
4	L7	100	A
4	L7	110	G
4	L7	120	U
5	L8	13	G
5	L8	25	G
5	L8	34	U
5	L8	35	C
5	L8	38	U
5	L8	44	A
5	L8	51	U
5	L8	52	A
5	L8	59	A
5	L8	62	A
5	L8	63	U
5	L8	75	G
5	L8	80	A
5	L8	81	C
5	L8	82	A
5	L8	84	A
5	L8	85	U
5	L8	87	G
5	L8	88	A
5	L8	103	A
5	L8	105	C
5	L8	110	U
5	L8	114	G
5	L8	123	U
5	L8	124	U
5	L8	125	C
5	L8	126	C
5	L8	127	U
5	L8	147	G
5	L8	156	U

All (40) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
3	L5	136	C
3	L5	183	C
3	L5	185	C
3	L5	406	C

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Mol	Chain	Res	Type
3	L5	696	C
3	L5	914	U
3	L5	1082	C
3	L5	1633	G
3	L5	1677	PSU
3	L5	1960	A
3	L5	1967	A
3	L5	2019	C
3	L5	2084	C
3	L5	2416	G
3	L5	2485	U
3	L5	2675	G
3	L5	2760	G
3	L5	3614	G
3	L5	3673	C
3	L5	3735	G
3	L5	3944	OMG
3	L5	3955	G
3	L5	3976	C
3	L5	4076	G
3	L5	4228	OMG
3	L5	4296	PSU
3	L5	4299	PSU
3	L5	4353	PSU
3	L5	4354	U
3	L5	4378	A
3	L5	4420	PSU
3	L5	4532	PSU
3	L5	4576	PSU
3	L5	4678	G
3	L5	4694	G
3	L5	4699	U
3	L5	4731	G
3	L5	4913	G
3	L5	4949	G
5	L8	80	A

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

143 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
3	A2M	L5	4523	46,3	22,25,26	1.45	5 (22%)	31,36,39	2.13	8 (25%)
3	A2M	L5	1326	3	22,25,26	1.45	5 (22%)	31,36,39	2.01	8 (25%)
3	PSU	L5	4450	46,3	18,21,22	1.47	3 (16%)	22,30,33	2.01	4 (18%)
3	UR3	L5	4530	3	19,22,23	0.91	1 (5%)	26,32,35	1.41	1 (3%)
3	OMG	L5	3944	3	23,26,27	1.35	4 (17%)	33,38,41	1.92	7 (21%)
3	OMU	L5	3925	3	19,22,23	1.93	5 (26%)	26,31,34	2.37	9 (34%)
3	A2M	L5	4571	3	22,25,26	1.48	5 (22%)	31,36,39	2.05	9 (29%)
3	PSU	L5	4579	3	18,21,22	1.96	6 (33%)	22,30,33	2.43	5 (22%)
3	PSU	L5	1782	3	18,21,22	1.92	6 (33%)	22,30,33	2.44	7 (31%)
3	OMC	L5	3887	3	19,22,23	0.88	2 (10%)	26,31,34	0.88	0
3	PSU	L5	4521	46,3	18,21,22	1.54	5 (27%)	22,30,33	2.02	4 (18%)
3	PSU	L5	4420	3	18,21,22	1.45	3 (16%)	22,30,33	2.25	4 (18%)
3	OMG	L5	4196	46,3	23,26,27	1.29	4 (17%)	33,38,41	1.94	6 (18%)
3	OMC	L5	2824	3	19,22,23	0.87	0	26,31,34	0.92	1 (3%)
3	PSU	L5	3637	3	18,21,22	2.21	7 (38%)	22,30,33	2.45	7 (31%)
3	2MG	L5	4872	3	23,26,27	1.36	4 (17%)	32,38,41	2.27	8 (25%)
3	PSU	L5	1677	3	18,21,22	2.02	6 (33%)	22,30,33	2.32	7 (31%)
3	A2M	L5	2787	46,3	22,25,26	1.43	5 (22%)	31,36,39	2.06	9 (29%)
3	OMG	L5	4187	3	23,26,27	1.59	5 (21%)	33,38,41	2.50	13 (39%)
3	PSU	L5	4353	3	18,21,22	1.97	5 (27%)	22,30,33	2.21	6 (27%)
3	PSU	L5	1683	3	18,21,22	1.58	3 (16%)	22,30,33	2.01	4 (18%)
3	A2M	L5	3723	3	22,25,26	1.40	5 (22%)	31,36,39	2.14	10 (32%)
3	OMG	L5	4370	3	23,26,27	1.27	4 (17%)	33,38,41	1.94	7 (21%)
3	PSU	L5	4576	3	18,21,22	1.98	4 (22%)	22,30,33	2.45	9 (40%)
3	OMC	L5	2351	46,3	19,22,23	1.05	2 (10%)	26,31,34	1.22	3 (11%)
3	OMG	L5	373	3	23,26,27	1.30	4 (17%)	33,38,41	2.01	8 (24%)
3	B8T	L5	4483	3	19,22,23	1.05	2 (10%)	26,31,34	0.86	0
3	OMG	L5	4623	3	23,26,27	1.29	4 (17%)	33,38,41	2.00	7 (21%)
3	PSU	L5	2632	3	18,21,22	1.79	5 (27%)	22,30,33	2.24	5 (22%)
3	PSU	L5	4493	46,3	18,21,22	1.91	4 (22%)	22,30,33	2.20	5 (22%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
3	PSU	L5	4689	3	18,21,22	2.15	5 (27%)	22,30,33	2.44	8 (36%)
3	PSU	L5	4293	3	18,21,22	1.57	4 (22%)	22,30,33	1.88	3 (13%)
3	PSU	L5	4673	3	18,21,22	2.00	6 (33%)	22,30,33	2.46	7 (31%)
3	PSU	L5	1860	3	18,21,22	1.88	6 (33%)	22,30,33	2.26	5 (22%)
3	PSU	L5	1536	3	18,21,22	2.14	5 (27%)	22,30,33	2.48	6 (27%)
3	UR3	L5	4597	3	19,22,23	0.91	1 (5%)	26,32,35	1.32	2 (7%)
3	OMG	L5	2424	3	23,26,27	1.30	4 (17%)	33,38,41	1.84	6 (18%)
3	PSU	L5	3734	3	18,21,22	1.43	4 (22%)	22,30,33	2.05	4 (18%)
3	A2M	L5	398	3	22,25,26	1.43	4 (18%)	31,36,39	2.09	7 (22%)
3	OMC	L5	1340	3	19,22,23	0.94	2 (10%)	26,31,34	0.81	0
3	OMG	L5	2773	3	23,26,27	1.23	4 (17%)	33,38,41	1.92	6 (18%)
3	2MG	L5	1517	3	23,26,27	1.30	4 (17%)	32,38,41	2.32	9 (28%)
3	PSU	L5	4531	3	18,21,22	1.43	2 (11%)	22,30,33	1.95	4 (18%)
3	OMC	L5	2861	3	19,22,23	0.88	2 (10%)	26,31,34	0.85	1 (3%)
3	UY1	L5	3818	46,3	19,22,23	2.56	9 (47%)	22,31,34	1.90	4 (18%)
3	PSU	L5	2843	3	18,21,22	2.01	6 (33%)	22,30,33	2.19	5 (22%)
3	OMU	L5	2837	3	19,22,23	1.68	4 (21%)	26,31,34	2.23	8 (30%)
3	PSU	L5	4471	3	18,21,22	1.99	5 (27%)	22,30,33	2.19	6 (27%)
3	A2M	L5	400	3	22,25,26	1.54	4 (18%)	31,36,39	2.10	10 (32%)
3	PSU	L5	4431	3	18,21,22	1.95	5 (27%)	22,30,33	2.29	6 (27%)
3	OMU	L5	2415	3	19,22,23	1.51	4 (21%)	26,31,34	2.09	7 (26%)
6	MLZ	LC	333	6	8,9,10	0.89	0	4,9,11	0.72	0
3	PSU	L5	4532	3	18,21,22	1.93	4 (22%)	22,30,33	2.23	9 (40%)
3	PSU	L5	3730	3	18,21,22	1.66	4 (22%)	22,30,33	2.17	5 (22%)
3	A2M	L5	1524	3	22,25,26	1.44	5 (22%)	31,36,39	2.13	11 (35%)
3	OMG	L5	4228	3	23,26,27	1.25	4 (17%)	33,38,41	1.92	6 (18%)
3	OMG	L5	2876	3	23,26,27	1.30	3 (13%)	33,38,41	2.11	8 (24%)
3	OMG	L5	3899	3	23,26,27	1.30	4 (17%)	33,38,41	1.91	7 (21%)
3	OMG	L5	4637	3	23,26,27	1.32	4 (17%)	33,38,41	1.94	7 (21%)
3	A2M	L5	3785	3	22,25,26	1.40	5 (22%)	31,36,39	2.39	11 (35%)
3	PSU	L5	4299	3	18,21,22	2.08	7 (38%)	22,30,33	2.24	9 (40%)
3	PSU	L5	4423	3	18,21,22	1.73	4 (22%)	22,30,33	2.04	4 (18%)
3	A2M	L5	3718	3	22,25,26	1.47	5 (22%)	31,36,39	1.93	6 (19%)
3	5MC	L5	4335	3	18,22,23	1.02	2 (11%)	26,32,35	1.23	2 (7%)
3	A2M	L5	1534	46,3	22,25,26	1.46	5 (22%)	31,36,39	2.11	10 (32%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
3	OMG	L5	4618	3	23,26,27	1.27	4 (17%)	33,38,41	1.98	7 (21%)
3	A2M	L5	1323	3	22,25,26	1.48	5 (22%)	31,36,39	2.06	8 (25%)
3	A2M	L5	2401	3	22,25,26	1.43	5 (22%)	31,36,39	2.10	10 (32%)
3	PSU	L5	1582	3	18,21,22	1.49	4 (22%)	22,30,33	1.89	3 (13%)
3	OMC	L5	3841	3	19,22,23	0.94	2 (10%)	26,31,34	0.75	0
3	PSU	L5	3920	46,3	18,21,22	2.20	6 (33%)	22,30,33	2.26	7 (31%)
3	5MC	L5	4447	46,3	18,22,23	1.06	2 (11%)	26,32,35	1.38	3 (11%)
3	PSU	L5	3822	3	18,21,22	1.49	5 (27%)	22,30,33	1.93	3 (13%)
3	PSU	L5	3764	3	18,21,22	1.41	4 (22%)	22,30,33	1.88	4 (18%)
3	5MC	L5	3782	46,3	18,22,23	0.99	2 (11%)	26,32,35	1.17	3 (11%)
3	A2M	L5	3830	3	22,25,26	1.44	4 (18%)	31,36,39	2.07	10 (32%)
3	PSU	L5	4500	3	18,21,22	1.49	5 (27%)	22,30,33	2.07	4 (18%)
3	PSU	L5	3695	3	18,21,22	1.87	5 (27%)	22,30,33	2.38	5 (22%)
3	PSU	L5	3715	3	18,21,22	1.42	4 (22%)	22,30,33	1.97	5 (22%)
3	OMG	L5	4392	3	23,26,27	1.31	4 (17%)	33,38,41	1.97	8 (24%)
3	PSU	L5	4457	3	18,21,22	1.55	4 (22%)	22,30,33	2.06	6 (27%)
41	MLZ	Lm	98	41	8,9,10	0.82	0	4,9,11	0.68	0
3	2MG	L5	729	46,3	23,26,27	1.34	3 (13%)	32,38,41	2.20	7 (21%)
3	UR3	L5	1866	3	19,22,23	0.95	2 (10%)	26,32,35	1.37	2 (7%)
3	2MG	L5	978	3	23,26,27	1.32	4 (17%)	32,38,41	2.20	8 (25%)
3	OMG	L5	3627	3	23,26,27	1.33	4 (17%)	33,38,41	2.08	7 (21%)
3	PSU	L5	4312	3	18,21,22	1.91	5 (27%)	22,30,33	2.42	5 (22%)
3	PSU	L5	4442	3	18,21,22	1.52	5 (27%)	22,30,33	2.05	5 (22%)
3	PSU	L5	4361	3	18,21,22	1.98	5 (27%)	22,30,33	2.24	5 (22%)
3	PSU	L5	3639	3	18,21,22	1.55	4 (22%)	22,30,33	1.98	4 (18%)
3	A2M	L5	2815	3	22,25,26	1.53	4 (18%)	31,36,39	2.27	11 (35%)
3	JMH	L5	1456	3	18,22,23	1.24	2 (11%)	21,32,35	0.84	0
3	A2M	L5	3825	3	22,25,26	1.44	5 (22%)	31,36,39	2.13	9 (29%)
3	PSU	L5	3762	3	18,21,22	1.39	2 (11%)	22,30,33	1.89	3 (13%)
3	PSU	L5	4628	3	18,21,22	1.49	3 (16%)	22,30,33	1.96	3 (13%)
5	OMU	L8	14	5,3	19,22,23	1.39	4 (21%)	26,31,34	1.85	5 (19%)
3	1MA	L5	1322	46,3	21,25,26	1.40	4 (19%)	31,37,40	1.72	5 (16%)
3	A2M	L5	4590	3	22,25,26	1.46	3 (13%)	31,36,39	2.10	8 (25%)
3	PSU	L5	4636	3	18,21,22	1.48	3 (16%)	22,30,33	2.05	5 (22%)
3	PSU	L5	3758	3	18,21,22	1.39	3 (16%)	22,30,33	2.03	6 (27%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
3	PSU	L5	4403	3	18,21,22	2.12	7 (38%)	22,30,33	2.77	7 (31%)
3	PSU	L5	1744	46,3	18,21,22	1.79	5 (27%)	22,30,33	2.22	7 (31%)
3	B8T	L5	4671	3	19,22,23	1.04	2 (10%)	26,31,34	0.95	1 (3%)
3	OMG	L5	2050	3	23,26,27	1.32	4 (17%)	33,38,41	1.91	7 (21%)
3	A2M	L5	2363	46,3	22,25,26	1.45	4 (18%)	31,36,39	2.05	8 (25%)
3	PSU	L5	2839	3	18,21,22	1.83	5 (27%)	22,30,33	2.20	5 (22%)
3	6MZ	L5	4220	3	22,25,26	1.35	4 (18%)	30,36,39	2.30	9 (30%)
3	OMC	L5	2804	3	19,22,23	0.93	2 (10%)	26,31,34	0.89	1 (3%)
3	OMC	L5	2422	46,3	19,22,23	0.90	2 (10%)	26,31,34	0.90	0
3	1MA	L5	4415	3	21,25,26	1.39	4 (19%)	31,37,40	1.62	4 (12%)
3	OMC	L5	3808	3	19,22,23	0.93	2 (10%)	26,31,34	0.87	1 (3%)
3	OMG	L5	3744	3	23,26,27	1.34	4 (17%)	33,38,41	1.96	8 (24%)
3	5MU	L5	4083	3	19,22,23	1.40	3 (15%)	28,32,35	2.21	6 (21%)
3	PSU	L5	1781	3	18,21,22	1.88	5 (27%)	22,30,33	2.26	5 (22%)
3	OMC	L5	3909	3	19,22,23	0.92	2 (10%)	26,31,34	0.98	2 (7%)
3	A2M	L5	3867	3	22,25,26	1.46	5 (22%)	31,36,39	2.08	9 (29%)
3	OMC	L5	3869	3	19,22,23	0.91	2 (10%)	26,31,34	0.78	0
3	PSU	L5	1779	3	18,21,22	1.73	4 (22%)	22,30,33	2.20	5 (22%)
3	PSU	L5	4552	3	18,21,22	1.98	5 (27%)	22,30,33	2.17	5 (22%)
3	A2M	L5	1871	46,3	22,25,26	1.45	4 (18%)	31,36,39	2.16	9 (29%)
3	OMG	L5	1625	3	23,26,27	1.28	3 (13%)	33,38,41	1.98	6 (18%)
3	PSU	L5	3770	3	18,21,22	1.41	3 (16%)	22,30,33	1.97	4 (18%)
3	PSU	L5	1792	3	18,21,22	1.97	4 (22%)	22,30,33	2.27	5 (22%)
3	OMG	L5	4494	3	23,26,27	1.59	6 (26%)	33,38,41	2.10	9 (27%)
3	OMG	L5	1522	3	23,26,27	1.30	4 (17%)	33,38,41	2.00	8 (24%)
3	PSU	L5	1862	3	18,21,22	2.08	6 (33%)	22,30,33	2.43	7 (31%)
3	OMG	L5	3792	3	23,26,27	1.28	4 (17%)	33,38,41	1.92	6 (18%)
3	OMC	L5	3701	46,3	19,22,23	0.87	1 (5%)	26,31,34	0.78	0
3	OMU	L5	4227	3	19,22,23	1.40	4 (21%)	26,31,34	1.87	5 (19%)
3	OMC	L5	4456	3	19,22,23	1.20	2 (10%)	26,31,34	1.16	3 (11%)
3	OMG	L5	4499	3	23,26,27	1.31	3 (13%)	33,38,41	2.00	7 (21%)
3	OMG	L5	1316	3	23,26,27	1.35	5 (21%)	33,38,41	2.01	7 (21%)
3	OMU	L5	4498	46,3	19,22,23	1.37	4 (21%)	26,31,34	1.79	6 (23%)
3	OMG	L5	4870	3	23,26,27	1.27	4 (17%)	33,38,41	1.90	6 (18%)
3	OMG	L5	1883	3	23,26,27	1.32	4 (17%)	33,38,41	2.00	6 (18%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
3	OMC	L5	4536	3	19,22,23	0.94	2 (10%)	26,31,34	0.84	0
3	OMC	L5	2365	46,3	19,22,23	0.91	2 (10%)	26,31,34	0.81	0
3	PSU	L5	3768	3	18,21,22	1.44	3 (16%)	22,30,33	2.03	4 (18%)
3	OMU	L5	4620	3	19,22,23	1.40	4 (21%)	26,31,34	1.86	5 (19%)
3	OMU	L5	4306	3	19,22,23	1.37	4 (21%)	26,31,34	1.73	4 (15%)
3	PSU	L5	2508	3	18,21,22	1.49	4 (22%)	22,30,33	1.94	4 (18%)
3	PSU	L5	4296	3	18,21,22	1.83	4 (22%)	22,30,33	2.28	6 (27%)
3	OMG	L5	2364	3	23,26,27	1.30	4 (17%)	33,38,41	1.94	6 (18%)

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
3	A2M	L5	4523	46,3	-	0/9/27/28	0/3/3/3
3	A2M	L5	1326	3	-	3/9/27/28	0/3/3/3
3	PSU	L5	4450	46,3	-	3/7/25/26	0/2/2/2
3	UR3	L5	4530	3	-	0/7/25/26	0/2/2/2
3	OMG	L5	3944	3	-	2/9/27/28	0/3/3/3
3	OMU	L5	3925	3	-	2/9/27/28	0/2/2/2
3	A2M	L5	4571	3	-	0/9/27/28	0/3/3/3
3	PSU	L5	4579	3	-	2/7/25/26	0/2/2/2
3	PSU	L5	1782	3	-	1/7/25/26	0/2/2/2
3	OMC	L5	3887	3	-	1/9/27/28	0/2/2/2
3	PSU	L5	4521	46,3	-	0/7/25/26	0/2/2/2
3	PSU	L5	4420	3	-	2/7/25/26	0/2/2/2
3	OMG	L5	4196	46,3	-	0/9/27/28	0/3/3/3
3	OMC	L5	2824	3	-	0/9/27/28	0/2/2/2
3	PSU	L5	3637	3	-	3/7/25/26	0/2/2/2
3	2MG	L5	4872	3	-	0/9/27/28	0/3/3/3
3	PSU	L5	1677	3	-	0/7/25/26	0/2/2/2
3	A2M	L5	2787	46,3	-	3/9/27/28	0/3/3/3
3	OMG	L5	4187	3	-	0/9/27/28	0/3/3/3
3	PSU	L5	4353	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	1683	3	-	0/7/25/26	0/2/2/2
3	A2M	L5	3723	3	-	0/9/27/28	0/3/3/3
3	OMG	L5	4370	3	-	0/9/27/28	0/3/3/3
3	PSU	L5	4576	3	-	1/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	OMC	L5	2351	46,3	-	4/9/27/28	0/2/2/2
3	OMG	L5	373	3	-	1/9/27/28	0/3/3/3
3	B8T	L5	4483	3	-	0/7/27/28	0/2/2/2
3	OMG	L5	4623	3	-	1/9/27/28	0/3/3/3
3	PSU	L5	2632	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	4493	46,3	-	2/7/25/26	0/2/2/2
3	PSU	L5	4689	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	4293	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	4673	3	-	1/7/25/26	0/2/2/2
3	PSU	L5	1860	3	-	2/7/25/26	0/2/2/2
3	PSU	L5	1536	3	-	0/7/25/26	0/2/2/2
3	UR3	L5	4597	3	-	0/7/25/26	0/2/2/2
3	OMG	L5	2424	3	-	2/9/27/28	0/3/3/3
3	PSU	L5	3734	3	-	2/7/25/26	0/2/2/2
3	A2M	L5	398	3	-	1/9/27/28	0/3/3/3
3	OMC	L5	1340	3	-	0/9/27/28	0/2/2/2
3	OMG	L5	2773	3	-	0/9/27/28	0/3/3/3
3	2MG	L5	1517	3	-	0/9/27/28	0/3/3/3
3	PSU	L5	4531	3	-	0/7/25/26	0/2/2/2
3	OMC	L5	2861	3	-	0/9/27/28	0/2/2/2
3	UY1	L5	3818	46,3	-	4/9/27/28	0/2/2/2
3	PSU	L5	2843	3	-	0/7/25/26	0/2/2/2
3	OMU	L5	2837	3	-	0/9/27/28	0/2/2/2
3	PSU	L5	4471	3	-	2/7/25/26	0/2/2/2
3	A2M	L5	400	3	-	0/9/27/28	0/3/3/3
3	PSU	L5	4431	3	-	1/7/25/26	0/2/2/2
3	OMU	L5	2415	3	-	2/9/27/28	0/2/2/2
6	MLZ	LC	333	6	-	2/7/8/10	-
3	PSU	L5	4532	3	-	1/7/25/26	0/2/2/2
3	PSU	L5	3730	3	-	0/7/25/26	0/2/2/2
3	A2M	L5	1524	3	-	1/9/27/28	0/3/3/3
3	OMG	L5	4228	3	-	0/9/27/28	0/3/3/3
3	OMG	L5	2876	3	-	3/9/27/28	0/3/3/3
3	OMG	L5	3899	3	-	0/9/27/28	0/3/3/3
3	OMG	L5	4637	3	-	0/9/27/28	0/3/3/3
3	A2M	L5	3785	3	-	2/9/27/28	0/3/3/3
3	PSU	L5	4299	3	-	2/7/25/26	0/2/2/2
3	PSU	L5	4423	3	-	2/7/25/26	0/2/2/2
3	A2M	L5	3718	3	-	0/9/27/28	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	5MC	L5	4335	3	-	0/7/25/26	0/2/2/2
3	A2M	L5	1534	46,3	-	1/9/27/28	0/3/3/3
3	OMG	L5	4618	3	-	1/9/27/28	0/3/3/3
3	A2M	L5	1323	3	-	3/9/27/28	0/3/3/3
3	A2M	L5	2401	3	-	0/9/27/28	0/3/3/3
3	PSU	L5	1582	3	-	1/7/25/26	0/2/2/2
3	OMC	L5	3841	3	-	0/9/27/28	0/2/2/2
3	PSU	L5	3920	46,3	-	0/7/25/26	0/2/2/2
3	5MC	L5	4447	46,3	-	4/7/25/26	0/2/2/2
3	PSU	L5	3822	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	3764	3	-	3/7/25/26	0/2/2/2
3	5MC	L5	3782	46,3	-	0/7/25/26	0/2/2/2
3	A2M	L5	3830	3	-	1/9/27/28	0/3/3/3
3	PSU	L5	4500	3	-	5/7/25/26	0/2/2/2
3	PSU	L5	3695	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	3715	3	-	0/7/25/26	0/2/2/2
3	OMG	L5	4392	3	-	0/9/27/28	0/3/3/3
3	PSU	L5	4457	3	-	2/7/25/26	0/2/2/2
41	MLZ	Lm	98	41	-	1/7/8/10	-
3	2MG	L5	729	46,3	-	3/9/27/28	0/3/3/3
3	UR3	L5	1866	3	-	0/7/25/26	0/2/2/2
3	2MG	L5	978	3	-	0/9/27/28	0/3/3/3
3	OMG	L5	3627	3	-	2/9/27/28	0/3/3/3
3	PSU	L5	4312	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	4442	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	4361	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	3639	3	-	0/7/25/26	0/2/2/2
3	A2M	L5	2815	3	-	2/9/27/28	0/3/3/3
3	JMH	L5	1456	3	-	0/7/25/26	0/2/2/2
3	A2M	L5	3825	3	-	0/9/27/28	0/3/3/3
3	PSU	L5	3762	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	4628	3	-	0/7/25/26	0/2/2/2
5	OMU	L8	14	5,3	-	1/9/27/28	0/2/2/2
3	1MA	L5	1322	46,3	-	1/7/25/26	0/3/3/3
3	A2M	L5	4590	3	-	5/9/27/28	0/3/3/3
3	PSU	L5	4636	3	-	4/7/25/26	0/2/2/2
3	PSU	L5	3758	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	4403	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	1744	46,3	-	0/7/25/26	0/2/2/2
3	B8T	L5	4671	3	-	1/7/27/28	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	OMG	L5	2050	3	-	0/9/27/28	0/3/3/3
3	A2M	L5	2363	46,3	-	1/9/27/28	0/3/3/3
3	PSU	L5	2839	3	-	0/7/25/26	0/2/2/2
3	6MZ	L5	4220	3	-	0/9/27/28	0/3/3/3
3	OMC	L5	2804	3	-	0/9/27/28	0/2/2/2
3	OMC	L5	2422	46,3	-	1/9/27/28	0/2/2/2
3	1MA	L5	4415	3	-	0/7/25/26	0/3/3/3
3	OMC	L5	3808	3	-	0/9/27/28	0/2/2/2
3	OMG	L5	3744	3	-	0/9/27/28	0/3/3/3
3	5MU	L5	4083	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	1781	3	-	0/7/25/26	0/2/2/2
3	OMC	L5	3909	3	-	2/9/27/28	0/2/2/2
3	A2M	L5	3867	3	-	2/9/27/28	0/3/3/3
3	OMC	L5	3869	3	-	0/9/27/28	0/2/2/2
3	PSU	L5	1779	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	4552	3	-	1/7/25/26	0/2/2/2
3	A2M	L5	1871	46,3	-	0/9/27/28	0/3/3/3
3	OMG	L5	1625	3	-	2/9/27/28	0/3/3/3
3	PSU	L5	3770	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	1792	3	-	0/7/25/26	0/2/2/2
3	OMG	L5	4494	3	-	0/9/27/28	0/3/3/3
3	OMG	L5	1522	3	-	0/9/27/28	0/3/3/3
3	PSU	L5	1862	3	-	0/7/25/26	0/2/2/2
3	OMG	L5	3792	3	-	0/9/27/28	0/3/3/3
3	OMC	L5	3701	46,3	-	4/9/27/28	0/2/2/2
3	OMU	L5	4227	3	-	3/9/27/28	0/2/2/2
3	OMC	L5	4456	3	-	1/9/27/28	0/2/2/2
3	OMG	L5	4499	3	-	2/9/27/28	0/3/3/3
3	OMG	L5	1316	3	-	0/9/27/28	0/3/3/3
3	OMU	L5	4498	46,3	-	0/9/27/28	0/2/2/2
3	OMG	L5	4870	3	-	3/9/27/28	0/3/3/3
3	OMG	L5	1883	3	-	1/9/27/28	0/3/3/3
3	OMC	L5	4536	3	-	0/9/27/28	0/2/2/2
3	OMC	L5	2365	46,3	-	0/9/27/28	0/2/2/2
3	PSU	L5	3768	3	-	0/7/25/26	0/2/2/2
3	OMU	L5	4620	3	-	0/9/27/28	0/2/2/2
3	OMU	L5	4306	3	-	0/9/27/28	0/2/2/2
3	PSU	L5	2508	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	4296	3	-	2/7/25/26	0/2/2/2
3	OMG	L5	2364	3	-	2/9/27/28	0/3/3/3

All (558) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	L5	3818	UY1	C3'-C4'	-5.54	1.38	1.53
3	L5	4403	PSU	C4-N3	-4.67	1.30	1.38
3	L5	3637	PSU	C4-N3	-4.52	1.30	1.38
3	L5	4689	PSU	C2'-C1'	-4.49	1.47	1.53
3	L5	3920	PSU	C4-N3	-4.37	1.30	1.38
3	L5	3925	OMU	C4-N3	-4.32	1.30	1.38
3	L5	1326	A2M	C5-C4	4.22	1.46	1.39
3	L5	4590	A2M	C5-C4	4.22	1.46	1.39
3	L5	4471	PSU	C4-N3	-4.20	1.31	1.38
3	L5	2843	PSU	C4-N3	-4.17	1.31	1.38
3	L5	1536	PSU	C2'-C1'	-4.17	1.48	1.53
3	L5	1536	PSU	C4-N3	-4.15	1.31	1.38
3	L5	4673	PSU	C4-N3	-4.15	1.31	1.38
3	L5	4353	PSU	C4-N3	-4.13	1.31	1.38
3	L5	3695	PSU	C4-N3	-4.12	1.31	1.38
3	L5	4299	PSU	C2'-C1'	-4.12	1.48	1.53
3	L5	4552	PSU	C4-N3	-4.11	1.31	1.38
3	L5	1862	PSU	C4-N3	-4.08	1.31	1.38
3	L5	3818	UY1	O4'-C4'	4.06	1.54	1.45
3	L5	4689	PSU	C4-N3	-4.04	1.31	1.38
3	L5	4361	PSU	C4-N3	-4.01	1.31	1.38
3	L5	3925	OMU	C2-N3	-4.00	1.30	1.38
3	L5	4571	A2M	C5-C4	3.98	1.46	1.39
3	L5	3723	A2M	C5-C4	3.97	1.46	1.39
3	L5	4299	PSU	C4-N3	-3.96	1.31	1.38
3	L5	1781	PSU	C4-N3	-3.96	1.31	1.38
3	L5	3637	PSU	C2-N3	-3.95	1.30	1.37
3	L5	4187	OMG	C6-N1	-3.95	1.31	1.38
3	L5	4493	PSU	C4-N3	-3.93	1.31	1.38
3	L5	4576	PSU	C2'-C1'	-3.93	1.48	1.53
3	L5	398	A2M	C5-C4	3.92	1.46	1.39
3	L5	4532	PSU	C2'-C1'	-3.91	1.48	1.53
3	L5	3818	UY1	C3'-C2'	3.91	1.61	1.52
3	L5	1744	PSU	C4-N3	-3.89	1.31	1.38
3	L5	1792	PSU	C4-N3	-3.89	1.31	1.38
3	L5	3718	A2M	C5-C4	3.87	1.46	1.39
3	L5	4403	PSU	C2-N3	-3.87	1.30	1.37
3	L5	4312	PSU	C4-N3	-3.86	1.31	1.38
3	L5	4494	OMG	C6-N1	-3.85	1.31	1.38
3	L5	4576	PSU	C4-N3	-3.83	1.31	1.38
3	L5	3818	UY1	C4-N3	-3.82	1.31	1.38
3	L5	1860	PSU	C4-N3	-3.82	1.31	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	L5	3920	PSU	C2-N3	-3.81	1.31	1.37
3	L5	1792	PSU	C2'-C1'	-3.81	1.48	1.53
3	L5	4296	PSU	C4-N3	-3.80	1.31	1.38
3	L5	4689	PSU	C2-N1	-3.80	1.31	1.36
3	L5	3830	A2M	C5-C4	3.78	1.46	1.39
3	L5	3867	A2M	C5-C4	3.77	1.46	1.39
3	L5	4532	PSU	C4-N3	-3.75	1.31	1.38
3	L5	4431	PSU	C4-N3	-3.74	1.31	1.38
3	L5	1677	PSU	C2'-C1'	-3.74	1.48	1.53
3	L5	2839	PSU	C4-N3	-3.73	1.31	1.38
3	L5	3920	PSU	C2'-C1'	-3.71	1.48	1.53
3	L5	1536	PSU	C2-N1	-3.71	1.31	1.36
3	L5	1456	JMH	C2-N1	-3.69	1.33	1.38
3	L5	2632	PSU	C4-N3	-3.69	1.32	1.38
3	L5	4523	A2M	C5-C4	3.68	1.45	1.39
3	L5	1779	PSU	C4-N3	-3.68	1.32	1.38
3	L5	1862	PSU	C2'-C1'	-3.67	1.49	1.53
3	L5	2787	A2M	C5-C4	3.66	1.45	1.39
3	L5	4552	PSU	C2-N3	-3.65	1.31	1.37
3	L5	4457	PSU	C4-N3	-3.65	1.32	1.38
3	L5	4220	6MZ	C5-C4	3.64	1.45	1.39
3	L5	1524	A2M	C5-C4	3.64	1.45	1.39
3	L5	1782	PSU	C4-N3	-3.64	1.32	1.38
3	L5	1534	A2M	C5-C4	3.64	1.45	1.39
3	L5	4579	PSU	C2-N1	-3.63	1.31	1.36
3	L5	3825	A2M	C5-C4	3.62	1.45	1.39
3	L5	2415	OMU	C4-N3	-3.62	1.32	1.38
3	L5	3920	PSU	C2-N1	-3.60	1.31	1.36
3	L5	4579	PSU	C4-N3	-3.60	1.32	1.38
3	L5	1323	A2M	C5-C4	3.60	1.45	1.39
3	L5	2401	A2M	C5-C4	3.60	1.45	1.39
3	L5	4353	PSU	C2-N3	-3.58	1.31	1.37
3	L5	2843	PSU	C2-N3	-3.57	1.31	1.37
3	L5	3785	A2M	C5-C4	3.56	1.45	1.39
3	L5	1536	PSU	C2-N3	-3.56	1.31	1.37
3	L5	2363	A2M	C5-C4	3.55	1.45	1.39
3	L5	4521	PSU	C4-N3	-3.55	1.32	1.38
3	L5	3637	PSU	C2'-C1'	-3.54	1.49	1.53
3	L5	4423	PSU	C4-N3	-3.53	1.32	1.38
3	L5	4361	PSU	C2-N3	-3.52	1.31	1.37
3	L5	1871	A2M	C5-C4	3.52	1.45	1.39
3	L5	2837	OMU	C4-N3	-3.51	1.32	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	L5	1677	PSU	C4-N3	-3.51	1.32	1.38
3	L5	4552	PSU	C2-N1	-3.51	1.32	1.36
3	L5	1683	PSU	C4-N3	-3.50	1.32	1.38
3	L5	1781	PSU	C2'-C1'	-3.50	1.49	1.53
3	L5	1792	PSU	C2-N3	-3.49	1.31	1.37
3	L5	4403	PSU	C2'-C1'	-3.47	1.49	1.53
3	L5	4361	PSU	C2'-C1'	-3.46	1.49	1.53
3	L5	2815	A2M	C5-C4	3.46	1.45	1.39
3	L5	4471	PSU	C2-N3	-3.45	1.31	1.37
3	L5	4293	PSU	C4-N3	-3.42	1.32	1.38
3	L5	4636	PSU	C4-N3	-3.42	1.32	1.38
3	L5	3695	PSU	C2-N1	-3.42	1.32	1.36
3	L5	4299	PSU	C2-N3	-3.41	1.31	1.37
3	L5	1677	PSU	C2-N1	-3.40	1.32	1.36
3	L5	2843	PSU	C2-N1	-3.40	1.32	1.36
3	L5	4083	5MU	C4-N3	-3.38	1.32	1.38
3	L5	4442	PSU	C4-N3	-3.35	1.32	1.38
3	L5	4620	OMU	C4-N3	-3.35	1.32	1.38
5	L8	14	OMU	C4-N3	-3.35	1.32	1.38
3	L5	3730	PSU	C4-N3	-3.35	1.32	1.38
3	L5	4576	PSU	C2-N3	-3.34	1.31	1.37
3	L5	4471	PSU	C2'-C1'	-3.33	1.49	1.53
3	L5	3639	PSU	C4-N3	-3.31	1.32	1.38
3	L5	4392	OMG	C6-N1	-3.31	1.32	1.38
3	L5	2508	PSU	C4-N3	-3.31	1.32	1.38
3	L5	2050	OMG	C6-N1	-3.30	1.32	1.38
3	L5	4296	PSU	C2-N3	-3.29	1.31	1.37
3	L5	4450	PSU	C4-N3	-3.28	1.32	1.38
3	L5	4673	PSU	C2-N3	-3.27	1.31	1.37
3	L5	4500	PSU	C4-N3	-3.25	1.32	1.38
3	L5	4312	PSU	C2'-C1'	-3.24	1.49	1.53
3	L5	4306	OMU	C4-N3	-3.23	1.32	1.38
3	L5	3822	PSU	C4-N3	-3.22	1.32	1.38
3	L5	2837	OMU	C2-N3	-3.22	1.32	1.38
3	L5	1316	OMG	C6-N1	-3.22	1.32	1.38
3	L5	4312	PSU	C2-N1	-3.22	1.32	1.36
3	L5	4628	PSU	C4-N3	-3.21	1.32	1.38
3	L5	2815	A2M	C5-N7	-3.21	1.33	1.39
3	L5	4361	PSU	C2-N1	-3.20	1.32	1.36
3	L5	4299	PSU	C2-N1	-3.20	1.32	1.36
3	L5	2839	PSU	C2-N1	-3.19	1.32	1.36
3	L5	1860	PSU	C2-N3	-3.19	1.32	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	L5	1862	PSU	C2-N3	-3.19	1.32	1.37
3	L5	4872	2MG	C6-N1	-3.18	1.32	1.38
3	L5	4493	PSU	C2-N3	-3.18	1.32	1.37
3	L5	4493	PSU	C2'-C1'	-3.18	1.49	1.53
3	L5	4637	OMG	C6-N1	-3.17	1.33	1.38
3	L5	3744	OMG	C6-N1	-3.17	1.33	1.38
3	L5	3637	PSU	C2-N1	-3.16	1.32	1.36
3	L5	4312	PSU	C2-N3	-3.16	1.32	1.37
3	L5	4494	OMG	C5-N7	-3.15	1.33	1.39
3	L5	3695	PSU	C2-N3	-3.15	1.32	1.37
3	L5	729	2MG	C6-N1	-3.15	1.33	1.38
3	L5	4671	B8T	C2-N1	-3.15	1.33	1.40
3	L5	1744	PSU	C2-N1	-3.15	1.32	1.36
3	L5	2364	OMG	C6-N1	-3.14	1.33	1.38
3	L5	4673	PSU	C2-N1	-3.14	1.32	1.36
3	L5	4471	PSU	C2-N1	-3.14	1.32	1.36
3	L5	4689	PSU	C2-N3	-3.13	1.32	1.37
3	L5	1862	PSU	C2-N1	-3.13	1.32	1.36
3	L5	4483	B8T	C2-N1	-3.13	1.33	1.40
3	L5	2415	OMU	C2-N3	-3.12	1.32	1.38
3	L5	400	A2M	C5-N7	-3.12	1.33	1.39
3	L5	4576	PSU	C2-N1	-3.12	1.32	1.36
3	L5	1522	OMG	C6-N1	-3.12	1.33	1.38
3	L5	3899	OMG	C6-N1	-3.12	1.33	1.38
3	L5	400	A2M	C5-C4	3.11	1.44	1.39
3	L5	1781	PSU	C2-N3	-3.11	1.32	1.37
3	L5	4579	PSU	C2'-C1'	-3.11	1.49	1.53
3	L5	4431	PSU	C2-N3	-3.11	1.32	1.37
3	L5	1582	PSU	C4-N3	-3.10	1.33	1.38
3	L5	4431	PSU	C2-N1	-3.10	1.32	1.36
3	L5	4532	PSU	C2-N3	-3.10	1.32	1.37
3	L5	3715	PSU	C4-N3	-3.09	1.33	1.38
3	L5	1883	OMG	C6-N1	-3.09	1.33	1.38
3	L5	3818	UY1	C2-N3	-3.08	1.32	1.37
3	L5	4498	OMU	C4-N3	-3.08	1.33	1.38
3	L5	4187	OMG	C5-N7	-3.08	1.33	1.39
3	L5	4420	PSU	C4-N3	-3.06	1.33	1.38
3	L5	3792	OMG	C6-N1	-3.05	1.33	1.38
3	L5	3627	OMG	C6-N1	-3.05	1.33	1.38
3	L5	4618	OMG	C6-N1	-3.04	1.33	1.38
3	L5	2843	PSU	C2'-C1'	-3.04	1.49	1.53
3	L5	3768	PSU	C4-N3	-3.04	1.33	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	L5	4623	OMG	C6-N1	-3.04	1.33	1.38
3	L5	1744	PSU	C2-N3	-3.04	1.32	1.37
3	L5	4499	OMG	C6-N1	-3.04	1.33	1.38
3	L5	373	OMG	C6-N1	-3.03	1.33	1.38
3	L5	2424	OMG	C6-N1	-3.03	1.33	1.38
3	L5	4335	5MC	C6-N1	-3.03	1.32	1.38
3	L5	2839	PSU	C2-N3	-3.02	1.32	1.37
3	L5	4196	OMG	C6-N1	-3.01	1.33	1.38
3	L5	4431	PSU	C2'-C1'	-3.01	1.49	1.53
3	L5	3758	PSU	C6-C5	3.01	1.38	1.35
3	L5	4870	OMG	C6-N1	-3.00	1.33	1.38
3	L5	1781	PSU	C2-N1	-3.00	1.32	1.36
3	L5	4370	OMG	C6-N1	-3.00	1.33	1.38
3	L5	4415	1MA	C6-N6	3.00	1.35	1.28
3	L5	4083	5MU	C6-N1	-2.98	1.33	1.38
3	L5	1517	2MG	C6-N1	-2.98	1.33	1.38
3	L5	2632	PSU	C2-N3	-2.98	1.32	1.37
3	L5	4228	OMG	C6-N1	-2.97	1.33	1.38
3	L5	1625	OMG	C6-N1	-2.96	1.33	1.38
3	L5	4227	OMU	C4-N3	-2.96	1.33	1.38
3	L5	3770	PSU	C4-N3	-2.96	1.33	1.38
3	L5	1782	PSU	C2-N1	-2.96	1.32	1.36
3	L5	4531	PSU	C4-N3	-2.95	1.33	1.38
3	L5	4457	PSU	C2-N3	-2.95	1.32	1.37
3	L5	978	2MG	C6-N1	-2.95	1.33	1.38
3	L5	3734	PSU	C4-N3	-2.95	1.33	1.38
3	L5	400	A2M	C4-N9	-2.94	1.31	1.37
3	L5	4447	5MC	C6-N1	-2.93	1.33	1.38
3	L5	1883	OMG	C5-N7	-2.93	1.33	1.39
3	L5	3782	5MC	C6-N1	-2.91	1.33	1.38
3	L5	1871	A2M	C5-N7	-2.91	1.33	1.39
3	L5	1860	PSU	C2-N1	-2.91	1.32	1.36
3	L5	4493	PSU	C2-N1	-2.91	1.32	1.36
3	L5	1322	1MA	C5-N7	-2.91	1.33	1.39
3	L5	3925	OMU	C5-C4	-2.91	1.37	1.43
3	L5	4353	PSU	C2-N1	-2.90	1.32	1.36
3	L5	1779	PSU	C2-N3	-2.89	1.32	1.37
3	L5	1782	PSU	C2-N3	-2.89	1.32	1.37
3	L5	3758	PSU	C4-N3	-2.89	1.33	1.38
3	L5	3762	PSU	C4-N3	-2.89	1.33	1.38
3	L5	1779	PSU	C2'-C1'	-2.88	1.50	1.53
3	L5	1323	A2M	C5-N7	-2.87	1.33	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	L5	2632	PSU	C2-N1	-2.87	1.32	1.36
3	L5	3762	PSU	C6-C5	2.87	1.38	1.35
3	L5	4306	OMU	C2-N3	-2.87	1.32	1.38
3	L5	1792	PSU	C2-N1	-2.86	1.32	1.36
3	L5	2839	PSU	C2'-C1'	-2.86	1.50	1.53
3	L5	2876	OMG	C6-N1	-2.86	1.33	1.38
3	L5	4579	PSU	C2-N3	-2.86	1.32	1.37
3	L5	3718	A2M	C5-N7	-2.85	1.33	1.39
3	L5	4227	OMU	C2-N3	-2.85	1.32	1.38
3	L5	4293	PSU	C2-N3	-2.85	1.32	1.37
3	L5	1744	PSU	C2'-C1'	-2.84	1.50	1.53
3	L5	4220	6MZ	C5-N7	-2.84	1.33	1.39
3	L5	4590	A2M	C5-N7	-2.84	1.33	1.39
3	L5	4620	OMU	C2-N3	-2.84	1.32	1.38
3	L5	2837	OMU	C5-C4	-2.83	1.37	1.43
3	L5	2363	A2M	C5-N7	-2.83	1.33	1.39
3	L5	2876	OMG	C5-C4	2.83	1.46	1.38
3	L5	1779	PSU	C2-N1	-2.82	1.32	1.36
3	L5	2787	A2M	C5-N7	-2.81	1.33	1.39
3	L5	4353	PSU	C2'-C1'	-2.81	1.50	1.53
3	L5	3818	UY1	C6-C5	2.81	1.38	1.35
5	L8	14	OMU	C2-N3	-2.81	1.33	1.38
3	L5	4498	OMU	C2-N3	-2.80	1.33	1.38
3	L5	3730	PSU	C2-N1	-2.80	1.32	1.36
3	L5	4423	PSU	C2'-C1'	-2.80	1.50	1.53
3	L5	4523	A2M	C5-N7	-2.80	1.33	1.39
3	L5	3695	PSU	C2'-C1'	-2.79	1.50	1.53
3	L5	3764	PSU	C4-N3	-2.79	1.33	1.38
3	L5	1677	PSU	C2-N3	-2.79	1.32	1.37
3	L5	2415	OMU	C5-C4	-2.79	1.37	1.43
3	L5	3785	A2M	C5-N7	-2.78	1.33	1.39
3	L5	2050	OMG	C5-N7	-2.78	1.33	1.39
3	L5	1524	A2M	C5-N7	-2.78	1.33	1.39
3	L5	729	2MG	C5-C4	2.78	1.46	1.38
3	L5	2424	OMG	C5-N7	-2.77	1.33	1.39
3	L5	1534	A2M	C5-N7	-2.77	1.33	1.39
3	L5	3830	A2M	C5-N7	-2.77	1.33	1.39
3	L5	1316	OMG	C5-N7	-2.76	1.33	1.39
3	L5	3770	PSU	C6-C5	2.76	1.38	1.35
3	L5	3944	OMG	C5-C4	2.76	1.46	1.38
3	L5	3818	UY1	C6-N1	-2.76	1.31	1.36
3	L5	2773	OMG	C6-N1	-2.75	1.33	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	L5	4423	PSU	C2-N3	-2.75	1.32	1.37
3	L5	3818	UY1	C2-N1	-2.74	1.33	1.36
3	L5	4083	5MU	C2-N3	-2.74	1.33	1.38
3	L5	4531	PSU	C6-C5	2.74	1.38	1.35
3	L5	1322	1MA	C6-N6	2.74	1.34	1.28
3	L5	1456	JMH	C2-N3	-2.74	1.33	1.39
3	L5	2401	A2M	C5-N7	-2.73	1.33	1.39
3	L5	1625	OMG	C5-C4	2.73	1.46	1.38
3	L5	3825	A2M	C5-N7	-2.73	1.33	1.39
3	L5	4415	1MA	C5-C4	2.72	1.46	1.38
3	L5	3764	PSU	C6-C5	2.72	1.38	1.35
3	L5	4293	PSU	C2-N1	-2.72	1.33	1.36
3	L5	4392	OMG	C5-N7	-2.71	1.33	1.39
3	L5	4532	PSU	C2-N1	-2.71	1.33	1.36
3	L5	4196	OMG	C5-N7	-2.70	1.33	1.39
3	L5	4296	PSU	C2-N1	-2.70	1.33	1.36
3	L5	3867	A2M	C5-N7	-2.69	1.33	1.39
3	L5	2632	PSU	C2'-C1'	-2.69	1.50	1.53
3	L5	2364	OMG	C5-N7	-2.69	1.33	1.39
3	L5	1625	OMG	C5-N7	-2.69	1.33	1.39
3	L5	4552	PSU	C2'-C1'	-2.68	1.50	1.53
3	L5	4296	PSU	C2'-C1'	-2.68	1.50	1.53
3	L5	1860	PSU	C2'-C1'	-2.68	1.50	1.53
3	L5	400	A2M	C8-N9	-2.68	1.32	1.37
3	L5	4196	OMG	C5-C4	2.68	1.46	1.38
3	L5	3925	OMU	C6-N1	-2.67	1.31	1.38
3	L5	4637	OMG	C5-N7	-2.67	1.33	1.39
3	L5	4872	2MG	C5-C4	2.67	1.46	1.38
3	L5	3730	PSU	C2-N3	-2.67	1.32	1.37
3	L5	4499	OMG	C5-N7	-2.66	1.33	1.39
3	L5	4499	OMG	C5-C4	2.66	1.46	1.38
3	L5	4870	OMG	C5-C4	2.66	1.46	1.38
3	L5	398	A2M	C5-N7	-2.66	1.34	1.39
3	L5	2773	OMG	C5-C4	2.66	1.46	1.38
3	L5	1522	OMG	C5-N7	-2.66	1.33	1.39
3	L5	4620	OMU	C5-C4	-2.65	1.37	1.43
3	L5	3627	OMG	C5-N7	-2.64	1.34	1.39
3	L5	978	2MG	C5-C4	2.64	1.46	1.38
3	L5	3639	PSU	C2-N3	-2.64	1.33	1.37
3	L5	3744	OMG	C5-N7	-2.64	1.34	1.39
3	L5	4628	PSU	C2-N1	-2.63	1.33	1.36
3	L5	4423	PSU	C2-N1	-2.62	1.33	1.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	L5	3744	OMG	C5-C4	2.62	1.46	1.38
3	L5	1683	PSU	C2-N3	-2.62	1.33	1.37
3	L5	4689	PSU	C6-N1	-2.62	1.31	1.36
3	L5	4403	PSU	C2-N1	-2.61	1.33	1.36
3	L5	4571	A2M	C5-N7	-2.61	1.34	1.39
3	L5	3944	OMG	C5-N7	-2.61	1.34	1.39
3	L5	4415	1MA	C5-N7	-2.61	1.34	1.39
3	L5	2837	OMU	C6-N1	-2.60	1.31	1.38
3	L5	3792	OMG	C5-N7	-2.60	1.34	1.39
3	L5	1677	PSU	C6-N1	-2.60	1.31	1.36
3	L5	4628	PSU	C2-N3	-2.59	1.33	1.37
3	L5	1782	PSU	C2'-C1'	-2.59	1.50	1.53
3	L5	3920	PSU	C6-N1	-2.59	1.31	1.36
3	L5	2508	PSU	C2-N3	-2.58	1.33	1.37
3	L5	3792	OMG	C5-C4	2.57	1.45	1.38
3	L5	4872	2MG	C5-N7	-2.57	1.34	1.39
3	L5	4637	OMG	C5-C4	2.56	1.45	1.38
3	L5	1683	PSU	C2-N1	-2.56	1.33	1.36
3	L5	4521	PSU	C2-N3	-2.56	1.33	1.37
3	L5	1871	A2M	C4-N9	-2.56	1.32	1.37
3	L5	3734	PSU	C6-C5	2.55	1.38	1.35
5	L8	14	OMU	C5-C4	-2.55	1.38	1.43
3	L5	4370	OMG	C5-C4	2.54	1.45	1.38
3	L5	2401	A2M	C4-N9	-2.54	1.32	1.37
3	L5	2815	A2M	C4-N9	-2.54	1.32	1.37
3	L5	1582	PSU	C2-N3	-2.54	1.33	1.37
3	L5	1517	2MG	C5-N7	-2.54	1.34	1.39
3	L5	4673	PSU	O5'-C5'	-2.54	1.38	1.44
3	L5	1582	PSU	C2-N1	-2.54	1.33	1.36
3	L5	3637	PSU	O5'-C5'	-2.53	1.38	1.44
3	L5	2424	OMG	C5-C4	2.53	1.45	1.38
3	L5	3899	OMG	C5-N7	-2.53	1.34	1.39
3	L5	3730	PSU	C2'-C1'	-2.52	1.50	1.53
3	L5	4370	OMG	C5-N7	-2.52	1.34	1.39
3	L5	373	OMG	C5-N7	-2.52	1.34	1.39
3	L5	4636	PSU	C2-N3	-2.52	1.33	1.37
3	L5	4618	OMG	C5-N7	-2.51	1.34	1.39
3	L5	4870	OMG	C5-N7	-2.51	1.34	1.39
3	L5	1316	OMG	C4-N9	-2.51	1.31	1.38
3	L5	3768	PSU	C6-C5	2.51	1.38	1.35
3	L5	3944	OMG	C6-N1	-2.50	1.34	1.38
3	L5	4500	PSU	C6-C5	2.50	1.38	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	L5	2415	OMU	C6-N1	-2.50	1.31	1.38
3	L5	4187	OMG	C4-N9	-2.50	1.31	1.38
3	L5	2843	PSU	C6-N1	-2.50	1.32	1.36
3	L5	3925	OMU	O5'-C5'	-2.49	1.38	1.44
3	L5	3639	PSU	C2-N1	-2.49	1.33	1.36
3	L5	4590	A2M	C4-N9	-2.49	1.32	1.37
3	L5	3818	UY1	O2-C2	-2.48	1.18	1.23
3	L5	4618	OMG	C5-C4	2.48	1.45	1.38
3	L5	1517	2MG	C5-C4	2.48	1.45	1.38
3	L5	4456	OMC	C5-C4	-2.48	1.37	1.42
3	L5	1534	A2M	C4-N9	-2.47	1.32	1.37
3	L5	2050	OMG	C5-C4	2.47	1.45	1.38
3	L5	3627	OMG	C5-C4	2.47	1.45	1.38
3	L5	4403	PSU	O4'-C1'	-2.47	1.40	1.43
3	L5	4623	OMG	C5-N7	-2.47	1.34	1.39
3	L5	4306	OMU	C5-C4	-2.46	1.38	1.43
3	L5	978	2MG	C5-N7	-2.46	1.34	1.39
3	L5	1326	A2M	C5-N7	-2.46	1.34	1.39
3	L5	4442	PSU	C2-N3	-2.46	1.33	1.37
3	L5	4392	OMG	C5-C4	2.45	1.45	1.38
3	L5	1524	A2M	C4-N9	-2.45	1.32	1.37
3	L5	3899	OMG	C4-N9	-2.45	1.31	1.38
3	L5	4579	PSU	C6-N1	-2.45	1.32	1.36
3	L5	4494	OMG	C4-N9	-2.44	1.31	1.38
3	L5	2508	PSU	C2-N1	-2.44	1.33	1.36
3	L5	729	2MG	C5-N7	-2.44	1.34	1.39
3	L5	2351	OMC	C5-C4	-2.43	1.37	1.42
3	L5	4228	OMG	C5-C4	2.43	1.45	1.38
3	L5	1326	A2M	C5-C6	2.43	1.47	1.41
3	L5	1322	1MA	C5-C4	2.43	1.45	1.38
3	L5	2876	OMG	C5-N7	-2.43	1.34	1.39
3	L5	3944	OMG	C4-N9	-2.43	1.31	1.38
3	L5	1522	OMG	C5-C4	2.42	1.45	1.38
3	L5	4420	PSU	C6-C5	2.42	1.38	1.35
3	L5	3822	PSU	C2-N3	-2.42	1.33	1.37
3	L5	4456	OMC	C6-N1	-2.42	1.32	1.38
3	L5	4228	OMG	C5-N7	-2.42	1.34	1.39
3	L5	2363	A2M	C4-N9	-2.41	1.32	1.37
3	L5	2787	A2M	C4-N9	-2.41	1.32	1.37
3	L5	4450	PSU	C2-N3	-2.41	1.33	1.37
3	L5	3718	A2M	C4-N9	-2.40	1.32	1.37
3	L5	2364	OMG	C5-C4	2.40	1.45	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	L5	4623	OMG	C5-C4	2.40	1.45	1.38
3	L5	3899	OMG	C5-C4	2.39	1.45	1.38
3	L5	3715	PSU	C2-N3	-2.39	1.33	1.37
3	L5	1340	OMC	C6-N1	-2.39	1.32	1.38
3	L5	1536	PSU	C6-N1	-2.39	1.32	1.36
3	L5	2773	OMG	C5-N7	-2.39	1.34	1.39
3	L5	3785	A2M	C4-N9	-2.39	1.32	1.37
3	L5	3723	A2M	C5-C6	2.39	1.47	1.41
3	L5	4447	5MC	C6-C5	2.38	1.38	1.34
3	L5	4498	OMU	C5-C4	-2.37	1.38	1.43
3	L5	4312	PSU	C6-N1	-2.36	1.32	1.36
3	L5	1866	UR3	C5-C4	-2.36	1.37	1.43
3	L5	1883	OMG	C5-C4	2.36	1.45	1.38
3	L5	4552	PSU	C6-N1	-2.36	1.32	1.36
3	L5	3695	PSU	C6-N1	-2.36	1.32	1.36
3	L5	3723	A2M	C5-N7	-2.36	1.34	1.39
3	L5	373	OMG	C4-N9	-2.36	1.31	1.38
3	L5	1323	A2M	C4-N9	-2.36	1.32	1.37
3	L5	4523	A2M	C4-N9	-2.35	1.32	1.37
3	L5	2815	A2M	C8-N9	-2.35	1.33	1.37
3	L5	4571	A2M	C4-N9	-2.35	1.32	1.37
3	L5	1340	OMC	C5-C4	-2.35	1.37	1.42
3	L5	4228	OMG	C4-N9	-2.34	1.32	1.38
3	L5	4187	OMG	C2-N1	-2.34	1.31	1.37
3	L5	373	OMG	C5-C4	2.34	1.45	1.38
3	L5	4521	PSU	C2-N1	-2.34	1.33	1.36
3	L5	4571	A2M	C5-C6	2.34	1.47	1.41
3	L5	3715	PSU	C6-C5	2.32	1.38	1.35
3	L5	2424	OMG	C4-N9	-2.32	1.32	1.38
3	L5	3830	A2M	C4-N9	-2.31	1.32	1.37
3	L5	2804	OMC	C5-C4	-2.31	1.37	1.42
3	L5	4623	OMG	C4-N9	-2.30	1.32	1.38
3	L5	3764	PSU	C2-N1	-2.29	1.33	1.36
3	L5	4220	6MZ	C4-N9	-2.29	1.32	1.37
3	L5	3637	PSU	C6-N1	-2.28	1.32	1.36
3	L5	4227	OMU	C5-C4	-2.28	1.38	1.43
3	L5	3822	PSU	C6-C5	2.28	1.38	1.35
3	L5	4442	PSU	O4'-C1'	-2.28	1.40	1.43
3	L5	4673	PSU	C2'-C1'	-2.28	1.50	1.53
3	L5	1534	A2M	C8-N9	-2.28	1.33	1.37
3	L5	2804	OMC	C6-N1	-2.27	1.32	1.38
3	L5	1883	OMG	C4-N9	-2.27	1.32	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	L5	4521	PSU	O4'-C1'	-2.26	1.40	1.43
3	L5	3841	OMC	C5-C4	-2.26	1.37	1.42
3	L5	3825	A2M	C5-C6	2.26	1.47	1.41
3	L5	3825	A2M	C4-N9	-2.26	1.32	1.37
3	L5	2363	A2M	C8-N9	-2.25	1.33	1.37
3	L5	3822	PSU	C2-N1	-2.25	1.33	1.36
3	L5	1522	OMG	C4-N9	-2.25	1.32	1.38
3	L5	1862	PSU	C6-N1	-2.24	1.32	1.36
3	L5	3808	OMC	C6-N1	-2.24	1.32	1.38
3	L5	3637	PSU	C3'-C4'	-2.24	1.47	1.53
5	L8	14	OMU	C6-N1	-2.24	1.32	1.38
3	L5	4442	PSU	C2-N1	-2.24	1.33	1.36
3	L5	1323	A2M	C8-N9	-2.23	1.33	1.37
3	L5	3825	A2M	C8-N9	-2.23	1.33	1.37
3	L5	2351	OMC	C6-N1	-2.23	1.32	1.38
3	L5	3867	A2M	C4-N9	-2.23	1.32	1.37
3	L5	1782	PSU	O5'-C5'	-2.23	1.39	1.44
3	L5	4673	PSU	C6-N1	-2.23	1.32	1.36
3	L5	1677	PSU	O4'-C4'	-2.23	1.40	1.45
3	L5	4471	PSU	C6-N1	-2.23	1.32	1.36
3	L5	3869	OMC	C5-C4	-2.22	1.37	1.42
3	L5	4335	5MC	C6-C5	2.22	1.38	1.34
3	L5	3723	A2M	C8-N7	2.21	1.35	1.31
3	L5	4457	PSU	C2-N1	-2.21	1.33	1.36
3	L5	3909	OMC	C6-N1	-2.21	1.32	1.38
3	L5	1871	A2M	C8-N9	-2.21	1.33	1.37
3	L5	1322	1MA	C4-N9	-2.20	1.32	1.38
3	L5	4618	OMG	C4-N9	-2.20	1.32	1.38
3	L5	3768	PSU	C2-N3	-2.20	1.33	1.37
3	L5	4403	PSU	C6-N1	-2.20	1.32	1.36
3	L5	4370	OMG	C4-N9	-2.19	1.32	1.38
3	L5	4494	OMG	C8-N9	-2.19	1.32	1.37
3	L5	3920	PSU	O4'-C4'	-2.19	1.40	1.45
3	L5	2422	OMC	C5-C4	-2.19	1.37	1.42
3	L5	4872	2MG	C4-N9	-2.19	1.32	1.38
3	L5	398	A2M	C5-C6	2.19	1.47	1.41
3	L5	2364	OMG	C4-N9	-2.19	1.32	1.38
3	L5	4597	UR3	C5-C4	-2.19	1.38	1.43
3	L5	3867	A2M	C5-C6	2.19	1.47	1.41
3	L5	2401	A2M	C8-N9	-2.18	1.33	1.37
3	L5	1782	PSU	O4'-C4'	-2.18	1.40	1.45
3	L5	4536	OMC	C6-N1	-2.18	1.32	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	L5	3785	A2M	C8-N9	-2.18	1.33	1.37
3	L5	4636	PSU	C6-C5	2.18	1.37	1.35
3	L5	4620	OMU	C6-N1	-2.18	1.32	1.38
3	L5	4536	OMC	C5-C4	-2.18	1.38	1.42
3	L5	4306	OMU	C6-N1	-2.18	1.32	1.38
3	L5	3841	OMC	C6-N1	-2.18	1.32	1.38
3	L5	2365	OMC	C6-N1	-2.17	1.32	1.38
3	L5	4500	PSU	O4'-C1'	-2.17	1.40	1.43
3	L5	1316	OMG	C5-C4	2.17	1.44	1.38
3	L5	3909	OMC	C5-C4	-2.17	1.38	1.42
3	L5	1326	A2M	C8-N7	2.17	1.35	1.31
3	L5	4483	B8T	C2-N3	-2.17	1.31	1.36
3	L5	1517	2MG	C4-N9	-2.17	1.32	1.38
3	L5	4299	PSU	C6-N1	-2.16	1.32	1.36
3	L5	1524	A2M	C8-N9	-2.16	1.33	1.37
3	L5	4420	PSU	C2-N3	-2.16	1.33	1.37
3	L5	2365	OMC	C5-C4	-2.16	1.38	1.42
3	L5	4392	OMG	C4-N9	-2.16	1.32	1.38
3	L5	1860	PSU	C6-C5	2.16	1.37	1.35
3	L5	1323	A2M	C5-C6	2.16	1.47	1.41
3	L5	3782	5MC	C6-C5	2.16	1.38	1.34
3	L5	1534	A2M	C5-C6	2.15	1.47	1.41
3	L5	4637	OMG	C4-N9	-2.15	1.32	1.38
3	L5	4494	OMG	C2-N1	-2.15	1.32	1.37
3	L5	1744	PSU	C6-N1	-2.15	1.32	1.36
3	L5	3764	PSU	C2-N3	-2.15	1.33	1.37
3	L5	3701	OMC	C6-N1	-2.15	1.32	1.38
3	L5	4353	PSU	O5'-C5'	-2.15	1.39	1.44
3	L5	2773	OMG	C4-N9	-2.15	1.32	1.38
3	L5	3808	OMC	C5-C4	-2.14	1.38	1.42
3	L5	3734	PSU	C2-N3	-2.14	1.33	1.37
3	L5	4450	PSU	C2-N1	-2.14	1.33	1.36
3	L5	4500	PSU	C2-N1	-2.14	1.33	1.36
3	L5	2050	OMG	C4-N9	-2.14	1.32	1.38
3	L5	3639	PSU	O4'-C1'	-2.14	1.40	1.43
3	L5	3869	OMC	C6-N1	-2.14	1.32	1.38
3	L5	1860	PSU	C6-N1	-2.14	1.32	1.36
3	L5	3718	A2M	C5-C6	2.13	1.47	1.41
3	L5	4500	PSU	C2-N3	-2.13	1.33	1.37
3	L5	4187	OMG	C8-N9	-2.13	1.32	1.37
3	L5	2508	PSU	C6-C5	2.13	1.37	1.35
3	L5	4671	B8T	C2-N3	-2.12	1.32	1.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	L5	4293	PSU	C6-C5	2.12	1.37	1.35
3	L5	1524	A2M	C5-C6	2.12	1.47	1.41
3	L5	2787	A2M	C5-C6	2.12	1.47	1.41
3	L5	3792	OMG	C4-N9	-2.11	1.32	1.38
3	L5	4523	A2M	C5-C6	2.11	1.47	1.41
3	L5	3627	OMG	C4-N9	-2.11	1.32	1.38
3	L5	4361	PSU	C6-N1	-2.11	1.32	1.36
3	L5	2401	A2M	C5-C6	2.11	1.47	1.41
3	L5	2422	OMC	C6-N1	-2.11	1.32	1.38
3	L5	1866	UR3	C6-N1	-2.11	1.32	1.38
3	L5	978	2MG	C4-N9	-2.11	1.32	1.38
3	L5	3758	PSU	C2-N3	-2.10	1.33	1.37
3	L5	3734	PSU	C2-N1	-2.10	1.33	1.36
3	L5	3887	OMC	C6-N1	-2.09	1.32	1.38
3	L5	4498	OMU	C6-N1	-2.09	1.32	1.38
3	L5	3715	PSU	C2-N1	-2.09	1.33	1.36
3	L5	3830	A2M	C5-C6	2.09	1.46	1.41
3	L5	3770	PSU	C2-N3	-2.08	1.33	1.37
3	L5	2839	PSU	C6-N1	-2.08	1.32	1.36
3	L5	4196	OMG	C4-N9	-2.08	1.32	1.38
3	L5	4431	PSU	C6-N1	-2.08	1.32	1.36
3	L5	3718	A2M	C8-N9	-2.08	1.33	1.37
3	L5	2632	PSU	C6-N1	-2.08	1.32	1.36
3	L5	1582	PSU	C6-C5	2.08	1.37	1.35
3	L5	4227	OMU	C6-N1	-2.07	1.33	1.38
3	L5	1862	PSU	O5'-C5'	-2.06	1.39	1.44
3	L5	4415	1MA	C4-N9	-2.06	1.32	1.38
3	L5	1781	PSU	C6-N1	-2.06	1.32	1.36
3	L5	2861	OMC	C6-N1	-2.06	1.33	1.38
3	L5	2787	A2M	C8-N9	-2.05	1.33	1.37
3	L5	4521	PSU	C6-C5	2.05	1.37	1.35
3	L5	1326	A2M	C4-N9	-2.05	1.33	1.37
3	L5	3744	OMG	C4-N9	-2.05	1.32	1.38
3	L5	3723	A2M	C4-N9	-2.05	1.33	1.37
3	L5	4457	PSU	C6-C5	2.05	1.37	1.35
3	L5	3785	A2M	C5-C6	2.05	1.46	1.41
3	L5	4494	OMG	C5-C4	2.05	1.44	1.38
3	L5	4523	A2M	C8-N9	-2.05	1.33	1.37
3	L5	2861	OMC	C5-C4	-2.04	1.38	1.42
3	L5	4571	A2M	C8-N9	-2.04	1.33	1.37
3	L5	398	A2M	C4-N9	-2.04	1.33	1.37
3	L5	4870	OMG	C4-N9	-2.04	1.32	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	L5	4579	PSU	O5'-C5'	-2.03	1.39	1.44
3	L5	4442	PSU	C6-C5	2.03	1.37	1.35
3	L5	4403	PSU	C1'-C5	-2.03	1.45	1.50
3	L5	4299	PSU	O5'-C5'	-2.03	1.39	1.44
3	L5	3822	PSU	O4'-C1'	-2.02	1.41	1.43
3	L5	1316	OMG	C8-N9	-2.02	1.33	1.37
3	L5	4299	PSU	O4'-C4'	-2.02	1.40	1.45
3	L5	3887	OMC	C5-C4	-2.02	1.38	1.42
3	L5	4530	UR3	C5-C4	-2.01	1.38	1.43
3	L5	3867	A2M	C8-N9	-2.01	1.33	1.37
3	L5	2843	PSU	C1'-C5	-2.01	1.45	1.50
3	L5	4220	6MZ	C8-N9	-2.01	1.33	1.37

All (787) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	4403	PSU	N1-C2-N3	8.22	124.45	115.13
3	L5	1517	2MG	C2-N3-C4	7.48	121.31	112.04
3	L5	3695	PSU	N1-C2-N3	7.43	123.55	115.13
3	L5	1536	PSU	N1-C2-N3	7.29	123.39	115.13
3	L5	1860	PSU	N1-C2-N3	7.17	123.25	115.13
3	L5	4296	PSU	N1-C2-N3	7.16	123.24	115.13
3	L5	4673	PSU	N1-C2-N3	7.15	123.23	115.13
3	L5	1862	PSU	N1-C2-N3	7.09	123.17	115.13
3	L5	978	2MG	C2-N3-C4	7.05	120.78	112.04
3	L5	4312	PSU	N1-C2-N3	6.99	123.06	115.13
3	L5	3920	PSU	N1-C2-N3	6.99	123.05	115.13
3	L5	4579	PSU	N1-C2-N3	6.98	123.04	115.13
3	L5	729	2MG	C2-N3-C4	6.90	120.59	112.04
3	L5	1744	PSU	N1-C2-N3	6.89	122.94	115.13
3	L5	2632	PSU	N1-C2-N3	6.88	122.93	115.13
3	L5	1781	PSU	N1-C2-N3	6.73	122.76	115.13
3	L5	1779	PSU	N1-C2-N3	6.69	122.71	115.13
3	L5	3637	PSU	N1-C2-N3	6.69	122.71	115.13
3	L5	4872	2MG	C2-N3-C4	6.66	120.30	112.04
3	L5	2876	OMG	C5-C4-N3	-6.63	117.70	128.46
3	L5	2839	PSU	N1-C2-N3	6.62	122.63	115.13
3	L5	4576	PSU	N1-C2-N3	6.60	122.60	115.13
3	L5	4493	PSU	N1-C2-N3	6.58	122.59	115.13
3	L5	4423	PSU	N1-C2-N3	6.57	122.58	115.13
3	L5	4500	PSU	N1-C2-N3	6.57	122.57	115.13
3	L5	4552	PSU	N1-C2-N3	6.56	122.57	115.13

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	4689	PSU	N1-C2-N3	6.52	122.52	115.13
3	L5	4353	PSU	N1-C2-N3	6.51	122.50	115.13
3	L5	4442	PSU	N1-C2-N3	6.51	122.50	115.13
3	L5	2843	PSU	N1-C2-N3	6.49	122.48	115.13
3	L5	3825	A2M	C5-C4-N3	-6.44	118.35	126.75
3	L5	1792	PSU	N1-C2-N3	6.41	122.39	115.13
3	L5	4361	PSU	N1-C2-N3	6.40	122.38	115.13
3	L5	1782	PSU	N1-C2-N3	6.39	122.37	115.13
3	L5	398	A2M	C5-C4-N3	-6.37	118.44	126.75
3	L5	4450	PSU	N1-C2-N3	6.36	122.34	115.13
3	L5	3730	PSU	N1-C2-N3	6.36	122.33	115.13
3	L5	4636	PSU	N1-C2-N3	6.35	122.33	115.13
3	L5	3768	PSU	N1-C2-N3	6.34	122.31	115.13
3	L5	4532	PSU	N1-C2-N3	6.34	122.31	115.13
3	L5	4431	PSU	N1-C2-N3	6.33	122.30	115.13
3	L5	4521	PSU	N1-C2-N3	6.33	122.30	115.13
3	L5	1683	PSU	N1-C2-N3	6.32	122.29	115.13
3	L5	1323	A2M	C5-C4-N3	-6.32	118.51	126.75
3	L5	4471	PSU	N1-C2-N3	6.32	122.29	115.13
3	L5	4531	PSU	N1-C2-N3	6.31	122.28	115.13
3	L5	1625	OMG	C5-C4-N3	-6.28	118.27	128.46
3	L5	3770	PSU	N1-C2-N3	6.26	122.22	115.13
3	L5	4420	PSU	N1-C2-N3	6.26	122.22	115.13
3	L5	3867	A2M	C5-C4-N3	-6.25	118.60	126.75
3	L5	4457	PSU	N1-C2-N3	6.24	122.20	115.13
3	L5	4523	A2M	C5-C4-N3	-6.23	118.62	126.75
3	L5	2815	A2M	C5-C4-N3	-6.22	118.63	126.75
3	L5	729	2MG	C5-C4-N3	-6.22	118.37	128.46
3	L5	4872	2MG	C5-C4-N3	-6.22	118.38	128.46
3	L5	4299	PSU	N1-C2-N3	6.21	122.17	115.13
3	L5	4220	6MZ	C5-C4-N3	-6.21	118.65	126.75
3	L5	3734	PSU	N1-C2-N3	6.21	122.17	115.13
3	L5	3639	PSU	N1-C2-N3	6.20	122.16	115.13
3	L5	3822	PSU	N1-C2-N3	6.19	122.14	115.13
3	L5	1517	2MG	C5-C4-N3	-6.18	118.43	128.46
3	L5	4392	OMG	C5-C4-N3	-6.17	118.46	128.46
3	L5	2363	A2M	C5-C4-N3	-6.15	118.72	126.75
3	L5	4499	OMG	C5-C4-N3	-6.15	118.49	128.46
3	L5	3715	PSU	N1-C2-N3	6.14	122.09	115.13
3	L5	4196	OMG	C5-C4-N3	-6.13	118.51	128.46
3	L5	3718	A2M	C5-C4-N3	-6.11	118.77	126.75
3	L5	978	2MG	C5-C4-N3	-6.10	118.56	128.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	4628	PSU	N1-C2-N3	6.09	122.03	115.13
3	L5	3744	OMG	C5-C4-N3	-6.08	118.60	128.46
3	L5	4187	OMG	C5-C4-N3	-6.08	118.60	128.46
3	L5	2050	OMG	C5-C4-N3	-6.07	118.61	128.46
3	L5	3762	PSU	N1-C2-N3	6.06	122.00	115.13
3	L5	2508	PSU	N1-C2-N3	6.05	121.98	115.13
3	L5	1534	A2M	C5-C4-N3	-6.04	118.86	126.75
3	L5	1883	OMG	C5-C4-N3	-6.04	118.66	128.46
3	L5	3627	OMG	C5-C4-N3	-6.02	118.69	128.46
3	L5	1582	PSU	N1-C2-N3	6.02	121.95	115.13
3	L5	3723	A2M	C5-C4-N3	-6.02	118.90	126.75
3	L5	1871	A2M	C5-C4-N3	-6.01	118.91	126.75
3	L5	4293	PSU	N1-C2-N3	6.01	121.94	115.13
3	L5	4494	OMG	C5-C4-N3	-6.00	118.73	128.46
3	L5	1677	PSU	N1-C2-N3	5.99	121.92	115.13
3	L5	1522	OMG	C5-C4-N3	-5.99	118.75	128.46
3	L5	2401	A2M	C5-C4-N3	-5.98	118.94	126.75
3	L5	4870	OMG	C5-C4-N3	-5.98	118.76	128.46
3	L5	1326	A2M	C5-C4-N3	-5.96	118.97	126.75
3	L5	4637	OMG	C5-C4-N3	-5.95	118.81	128.46
3	L5	1524	A2M	C5-C4-N3	-5.95	118.99	126.75
3	L5	2364	OMG	C5-C4-N3	-5.95	118.81	128.46
3	L5	4530	UR3	C4-N3-C2	-5.94	118.97	124.56
3	L5	4618	OMG	C5-C4-N3	-5.94	118.82	128.46
3	L5	4571	A2M	C5-C4-N3	-5.93	119.02	126.75
3	L5	3785	A2M	C5-C4-N3	-5.92	119.02	126.75
3	L5	3792	OMG	C5-C4-N3	-5.91	118.87	128.46
3	L5	3764	PSU	N1-C2-N3	5.91	121.83	115.13
3	L5	3830	A2M	C5-C4-N3	-5.88	119.08	126.75
3	L5	4370	OMG	C5-C4-N3	-5.80	119.05	128.46
3	L5	373	OMG	C5-C4-N3	-5.80	119.05	128.46
3	L5	1316	OMG	C5-C4-N3	-5.80	119.06	128.46
3	L5	3758	PSU	N1-C2-N3	5.79	121.69	115.13
3	L5	2787	A2M	C5-C4-N3	-5.79	119.19	126.75
3	L5	2773	OMG	C5-C4-N3	-5.79	119.07	128.46
3	L5	2424	OMG	C5-C4-N3	-5.77	119.11	128.46
3	L5	3925	OMU	C4-N3-C2	-5.76	118.98	126.58
3	L5	4623	OMG	C5-C4-N3	-5.69	119.23	128.46
3	L5	1866	UR3	C4-N3-C2	-5.67	119.22	124.56
3	L5	4403	PSU	C4-N3-C2	-5.62	118.24	126.34
3	L5	400	A2M	C5-C4-N3	-5.62	119.42	126.75
3	L5	4187	OMG	C2'-C1'-N9	-5.61	103.33	114.22

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	3899	OMG	C5-C4-N3	-5.61	119.36	128.46
3	L5	4083	5MU	C4-N3-C2	-5.59	120.12	127.35
3	L5	3818	UY1	N1-C2-N3	5.56	121.43	115.13
3	L5	4220	6MZ	C9-N6-C6	-5.56	118.08	122.87
3	L5	4083	5MU	N3-C2-N1	5.54	122.25	114.89
3	L5	4228	OMG	C5-C4-N3	-5.44	119.64	128.46
3	L5	4590	A2M	C5-C4-N3	-5.43	119.67	126.75
3	L5	4597	UR3	C4-N3-C2	-5.42	119.46	124.56
3	L5	1322	1MA	C5-C4-N3	-5.42	119.17	127.26
3	L5	2837	OMU	C4-N3-C2	-5.38	119.48	126.58
3	L5	2876	OMG	C2-N3-C4	5.32	121.77	112.30
3	L5	4415	1MA	C5-C4-N3	-5.28	119.39	127.26
3	L5	1792	PSU	C4-N3-C2	-5.12	118.97	126.34
3	L5	3925	OMU	N3-C2-N1	5.07	121.62	114.89
3	L5	2415	OMU	C4-N3-C2	-5.07	119.89	126.58
3	L5	3925	OMU	C2'-C1'-N1	-5.07	104.38	114.22
3	L5	4220	6MZ	N3-C4-N9	5.04	135.38	127.08
3	L5	2815	A2M	N3-C4-N9	5.02	135.36	127.08
3	L5	4494	OMG	C2-N3-C4	5.01	121.22	112.30
3	L5	1883	OMG	N9-C4-N3	5.00	135.98	125.94
3	L5	3637	PSU	C4-N3-C2	-5.00	119.14	126.34
3	L5	1536	PSU	C4-N3-C2	-4.97	119.18	126.34
3	L5	4618	OMG	C2-N3-C4	4.95	121.13	112.30
3	L5	3825	A2M	N3-C4-N9	4.95	135.24	127.08
3	L5	2876	OMG	N9-C4-N3	4.95	135.87	125.94
3	L5	4447	5MC	C5-C6-N1	-4.94	118.25	123.34
3	L5	398	A2M	N3-C4-N9	4.93	135.21	127.08
3	L5	4296	PSU	C4-N3-C2	-4.93	119.23	126.34
3	L5	1871	A2M	N3-C4-N9	4.92	135.19	127.08
3	L5	3695	PSU	C4-N3-C2	-4.92	119.25	126.34
3	L5	1625	OMG	N9-C4-N3	4.92	135.82	125.94
3	L5	4392	OMG	C2-N3-C4	4.92	121.06	112.30
3	L5	3627	OMG	C2-N3-C4	4.90	121.04	112.30
3	L5	1323	A2M	N3-C4-N9	4.90	135.16	127.08
3	L5	4523	A2M	N3-C4-N9	4.88	135.12	127.08
3	L5	3785	A2M	N3-C4-N9	4.87	135.10	127.08
3	L5	4576	PSU	C4-N3-C2	-4.85	119.34	126.34
3	L5	373	OMG	C2-N3-C4	4.85	120.94	112.30
5	L8	14	OMU	C4-N3-C2	-4.84	120.20	126.58
3	L5	3867	A2M	N3-C4-N9	4.83	135.05	127.08
3	L5	1883	OMG	C2-N3-C4	4.83	120.91	112.30
3	L5	3899	OMG	C2-N3-C4	4.83	120.91	112.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	4499	OMG	C2-N3-C4	4.83	120.91	112.30
3	L5	1862	PSU	C4-N3-C2	-4.83	119.38	126.34
3	L5	3944	OMG	C5-C4-N3	-4.82	120.63	128.46
3	L5	4673	PSU	C4-N3-C2	-4.82	119.39	126.34
3	L5	4620	OMU	C4-N3-C2	-4.81	120.23	126.58
3	L5	1316	OMG	C2-N3-C4	4.81	120.87	112.30
3	L5	4196	OMG	C2-N3-C4	4.80	120.86	112.30
3	L5	2837	OMU	N3-C2-N1	4.78	121.24	114.89
3	L5	729	2MG	N9-C4-N3	4.78	135.54	125.94
3	L5	1322	1MA	C2-N3-C4	4.78	121.81	112.41
3	L5	4623	OMG	C2-N3-C4	4.77	120.80	112.30
3	L5	4187	OMG	C2-N3-C4	4.77	120.80	112.30
3	L5	2415	OMU	N3-C2-N1	4.76	121.20	114.89
3	L5	1625	OMG	C2-N3-C4	4.76	120.77	112.30
3	L5	1522	OMG	C2-N3-C4	4.75	120.77	112.30
3	L5	2050	OMG	C2-N3-C4	4.75	120.77	112.30
3	L5	2773	OMG	C2-N3-C4	4.75	120.77	112.30
3	L5	4312	PSU	C4-N3-C2	-4.75	119.49	126.34
3	L5	3830	A2M	N3-C4-N9	4.75	134.91	127.08
3	L5	3792	OMG	C2-N3-C4	4.75	120.76	112.30
3	L5	3744	OMG	C2-N3-C4	4.75	120.76	112.30
3	L5	1534	A2M	N3-C4-N9	4.75	134.90	127.08
3	L5	3723	A2M	N3-C4-N9	4.73	134.87	127.08
3	L5	2632	PSU	C4-N3-C2	-4.73	119.53	126.34
3	L5	4227	OMU	C4-N3-C2	-4.72	120.35	126.58
3	L5	1524	A2M	N3-C4-N9	4.72	134.86	127.08
3	L5	4370	OMG	C2-N3-C4	4.72	120.71	112.30
3	L5	2363	A2M	N3-C4-N9	4.72	134.86	127.08
3	L5	2364	OMG	C2-N3-C4	4.72	120.70	112.30
3	L5	4571	A2M	N3-C4-N9	4.71	134.85	127.08
3	L5	4870	OMG	C2-N3-C4	4.71	120.70	112.30
3	L5	1781	PSU	C4-N3-C2	-4.70	119.56	126.34
3	L5	4637	OMG	C2-N3-C4	4.69	120.66	112.30
3	L5	4498	OMU	C4-N3-C2	-4.68	120.40	126.58
3	L5	4689	PSU	O2-C2-N1	-4.68	117.64	122.79
3	L5	2401	A2M	N3-C4-N9	4.65	134.74	127.08
3	L5	4872	2MG	N9-C4-N3	4.65	135.27	125.94
3	L5	4228	OMG	C2-N3-C4	4.64	120.57	112.30
3	L5	4637	OMG	N9-C4-N3	4.64	135.26	125.94
3	L5	1517	2MG	N9-C4-N3	4.64	135.25	125.94
3	L5	4392	OMG	N9-C4-N3	4.64	135.25	125.94
3	L5	4457	PSU	C4-N3-C2	-4.63	119.67	126.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	1782	PSU	C5'-C4'-C3'	-4.62	97.87	115.18
3	L5	2424	OMG	C2-N3-C4	4.61	120.51	112.30
3	L5	1744	PSU	C4-N3-C2	-4.61	119.70	126.34
3	L5	2843	PSU	C4-N3-C2	-4.59	119.73	126.34
3	L5	1782	PSU	C4-N3-C2	-4.58	119.73	126.34
3	L5	4493	PSU	C4-N3-C2	-4.58	119.74	126.34
3	L5	3785	A2M	O4'-C1'-N9	4.58	117.08	108.06
3	L5	2050	OMG	N9-C4-N3	4.58	135.13	125.94
3	L5	4494	OMG	N9-C4-N3	4.57	135.12	125.94
3	L5	4499	OMG	N9-C4-N3	4.57	135.12	125.94
3	L5	3744	OMG	N9-C4-N3	4.57	135.12	125.94
3	L5	4187	OMG	O2'-C2'-C1'	-4.56	100.17	109.08
3	L5	4196	OMG	N9-C4-N3	4.56	135.09	125.94
3	L5	3792	OMG	N9-C4-N3	4.55	135.09	125.94
3	L5	3925	OMU	C5-C4-N3	4.55	121.65	114.84
3	L5	4636	PSU	C4-N3-C2	-4.55	119.78	126.34
3	L5	4620	OMU	N3-C2-N1	4.54	120.92	114.89
3	L5	4579	PSU	C4-N3-C2	-4.53	119.81	126.34
3	L5	1326	A2M	N3-C4-N9	4.52	134.53	127.08
3	L5	2364	OMG	N9-C4-N3	4.52	135.01	125.94
3	L5	4689	PSU	C4-N3-C2	-4.52	119.83	126.34
3	L5	4306	OMU	C4-N3-C2	-4.51	120.64	126.58
3	L5	4431	PSU	C4-N3-C2	-4.50	119.85	126.34
3	L5	4870	OMG	N9-C4-N3	4.49	134.95	125.94
3	L5	3718	A2M	N3-C4-N9	4.48	134.47	127.08
3	L5	978	2MG	N9-C4-N3	4.47	134.92	125.94
3	L5	4415	1MA	C2-N3-C4	4.46	121.18	112.41
3	L5	2839	PSU	C4-N3-C2	-4.46	119.91	126.34
3	L5	2787	A2M	N3-C4-N9	4.46	134.43	127.08
3	L5	3920	PSU	C4-N3-C2	-4.46	119.92	126.34
3	L5	1522	OMG	N9-C4-N3	4.45	134.88	125.94
3	L5	4299	PSU	C4-N3-C2	-4.45	119.92	126.34
3	L5	1536	PSU	O2-C2-N1	-4.45	117.89	122.79
3	L5	4187	OMG	N9-C4-N3	4.45	134.88	125.94
3	L5	4450	PSU	C4-N3-C2	-4.45	119.93	126.34
3	L5	1779	PSU	C4-N3-C2	-4.45	119.93	126.34
3	L5	4532	PSU	C4-N3-C2	-4.45	119.93	126.34
3	L5	4471	PSU	C4-N3-C2	-4.44	119.94	126.34
3	L5	1860	PSU	C4-N3-C2	-4.44	119.95	126.34
3	L5	3785	A2M	C2'-C1'-N9	-4.43	106.06	113.53
3	L5	4361	PSU	C4-N3-C2	-4.42	119.97	126.34
3	L5	3730	PSU	C4-N3-C2	-4.42	119.97	126.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	L8	14	OMU	N3-C2-N1	4.42	120.75	114.89
3	L5	4590	A2M	N3-C4-N9	4.40	134.34	127.08
3	L5	400	A2M	N3-C4-N9	4.40	134.34	127.08
3	L5	4083	5MU	C5-C4-N3	4.40	119.07	115.31
3	L5	4370	OMG	N9-C4-N3	4.40	134.78	125.94
3	L5	2773	OMG	N9-C4-N3	4.37	134.71	125.94
3	L5	4442	PSU	C4-N3-C2	-4.34	120.08	126.34
3	L5	4403	PSU	O2'-C2'-C1'	-4.33	100.90	111.23
3	L5	2424	OMG	N9-C4-N3	4.33	134.63	125.94
3	L5	4521	PSU	C4-N3-C2	-4.32	120.11	126.34
3	L5	4312	PSU	O2-C2-N1	-4.32	118.03	122.79
3	L5	4353	PSU	C4-N3-C2	-4.30	120.14	126.34
3	L5	3627	OMG	N9-C4-N3	4.30	134.57	125.94
3	L5	4618	OMG	N9-C4-N3	4.30	134.57	125.94
3	L5	3944	OMG	N9-C4-N3	4.30	134.57	125.94
3	L5	1677	PSU	O2'-C2'-C1'	-4.30	100.99	111.23
3	L5	3768	PSU	C4-N3-C2	-4.29	120.15	126.34
3	L5	4500	PSU	C4-N3-C2	-4.29	120.16	126.34
3	L5	4423	PSU	C4-N3-C2	-4.27	120.18	126.34
3	L5	4306	OMU	N3-C2-N1	4.27	120.56	114.89
3	L5	3715	PSU	C4-N3-C2	-4.27	120.19	126.34
3	L5	4531	PSU	C4-N3-C2	-4.26	120.20	126.34
3	L5	3639	PSU	C4-N3-C2	-4.23	120.24	126.34
3	L5	1316	OMG	N9-C4-N3	4.23	134.42	125.94
3	L5	4579	PSU	O2-C2-N1	-4.22	118.15	122.79
3	L5	373	OMG	N9-C4-N3	4.21	134.39	125.94
3	L5	4498	OMU	N3-C2-N1	4.20	120.46	114.89
3	L5	4227	OMU	N3-C2-N1	4.19	120.45	114.89
3	L5	3695	PSU	O2-C2-N1	-4.19	118.18	122.79
3	L5	4872	2MG	CM2-N2-C2	-4.19	114.61	123.86
3	L5	2837	OMU	C5-C4-N3	4.17	121.08	114.84
3	L5	4335	5MC	C5-C6-N1	-4.16	119.06	123.34
3	L5	4579	PSU	C5'-C4'-C3'	-4.16	99.60	115.18
3	L5	4628	PSU	C4-N3-C2	-4.15	120.35	126.34
3	L5	4083	5MU	O4-C4-C5	-4.13	120.11	124.90
3	L5	3770	PSU	C4-N3-C2	-4.13	120.39	126.34
3	L5	1677	PSU	C4-N3-C2	-4.12	120.40	126.34
3	L5	3758	PSU	C4-N3-C2	-4.12	120.40	126.34
3	L5	1683	PSU	C4-N3-C2	-4.12	120.40	126.34
3	L5	4420	PSU	C4-N3-C2	-4.12	120.40	126.34
3	L5	2508	PSU	C4-N3-C2	-4.12	120.40	126.34
3	L5	3944	OMG	C2-N3-C4	4.10	119.61	112.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	3818	UY1	C4-N3-C2	-4.10	120.43	126.34
3	L5	1677	PSU	O2-C2-N1	-4.07	118.31	122.79
3	L5	3944	OMG	C2'-C1'-N9	-4.07	106.33	114.22
3	L5	4623	OMG	N9-C4-N3	4.06	134.09	125.94
3	L5	4228	OMG	N9-C4-N3	4.03	134.04	125.94
3	L5	4552	PSU	C4-N3-C2	-4.03	120.54	126.34
3	L5	4420	PSU	C3'-C2'-C1'	4.02	106.32	101.64
3	L5	3899	OMG	N9-C4-N3	4.02	134.00	125.94
3	L5	1860	PSU	O2-C2-N1	-4.01	118.38	122.79
3	L5	4500	PSU	O2-C2-N1	-3.99	118.40	122.79
3	L5	2415	OMU	C2'-C1'-N1	-3.98	106.49	114.22
3	L5	4083	5MU	C5-C6-N1	-3.97	119.26	123.34
3	L5	3734	PSU	C4-N3-C2	-3.96	120.64	126.34
3	L5	3822	PSU	C4-N3-C2	-3.96	120.64	126.34
3	L5	2815	A2M	C2-N3-C4	3.95	121.08	111.75
3	L5	1582	PSU	C4-N3-C2	-3.94	120.66	126.34
3	L5	1781	PSU	O2-C2-N1	-3.91	118.48	122.79
3	L5	3825	A2M	C2-N3-C4	3.90	120.97	111.75
5	L8	14	OMU	C5-C4-N3	3.88	120.64	114.84
3	L5	4293	PSU	C4-N3-C2	-3.84	120.81	126.34
3	L5	2632	PSU	O2-C2-N1	-3.84	118.56	122.79
3	L5	2363	A2M	C2-N3-C4	3.84	120.81	111.75
3	L5	1323	A2M	C2-N3-C4	3.83	120.81	111.75
3	L5	4220	6MZ	C2-N3-C4	3.83	120.80	111.75
3	L5	398	A2M	C2-N3-C4	3.83	120.79	111.75
3	L5	2415	OMU	C5-C4-N3	3.82	120.56	114.84
3	L5	4523	A2M	C2-N3-C4	3.82	120.77	111.75
3	L5	3723	A2M	C2'-C1'-N9	-3.80	107.12	113.53
3	L5	4227	OMU	C5-C4-N3	3.80	120.53	114.84
3	L5	1683	PSU	O2-C2-N1	-3.79	118.61	122.79
3	L5	3762	PSU	C4-N3-C2	-3.79	120.88	126.34
3	L5	4498	OMU	C5-C4-N3	3.79	120.51	114.84
3	L5	1326	A2M	C2-N3-C4	3.78	120.68	111.75
3	L5	2401	A2M	C2-N3-C4	3.78	120.68	111.75
3	L5	1779	PSU	O2-C2-N1	-3.77	118.64	122.79
3	L5	4673	PSU	C5'-C4'-C3'	-3.76	101.07	115.18
3	L5	4620	OMU	C5-C4-N3	3.76	120.47	114.84
3	L5	400	A2M	C2-N3-C4	3.76	120.64	111.75
3	L5	1534	A2M	C2-N3-C4	3.76	120.64	111.75
3	L5	3785	A2M	C2-N3-C4	3.76	120.64	111.75
3	L5	1871	A2M	C2'-C1'-N9	-3.76	107.20	113.53
3	L5	3867	A2M	C2-N3-C4	3.75	120.61	111.75

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	1862	PSU	O2-C2-N1	-3.75	118.66	122.79
3	L5	4403	PSU	O2-C2-N1	-3.74	118.67	122.79
3	L5	1871	A2M	C2-N3-C4	3.71	120.53	111.75
3	L5	3723	A2M	C2-N3-C4	3.71	120.53	111.75
3	L5	4623	OMG	C6-C5-N7	3.71	137.15	130.25
3	L5	1524	A2M	C2-N3-C4	3.70	120.50	111.75
3	L5	4571	A2M	C2-N3-C4	3.69	120.47	111.75
3	L5	2787	A2M	C2-N3-C4	3.69	120.46	111.75
3	L5	4442	PSU	O2-C2-N1	-3.68	118.74	122.79
3	L5	2837	OMU	O4-C4-C5	-3.67	118.70	125.16
3	L5	3830	A2M	C2-N3-C4	3.66	120.39	111.75
3	L5	3730	PSU	O2-C2-N1	-3.65	118.77	122.79
3	L5	3764	PSU	O2-C2-N1	-3.65	118.77	122.79
3	L5	3762	PSU	O2-C2-N1	-3.63	118.80	122.79
3	L5	4673	PSU	O2-C2-N1	-3.59	118.84	122.79
3	L5	4306	OMU	C5-C4-N3	3.58	120.20	114.84
3	L5	3627	OMG	C2'-C1'-N9	-3.58	107.27	114.22
3	L5	3768	PSU	O2-C2-N1	-3.58	118.85	122.79
3	L5	4431	PSU	O2-C2-N1	-3.57	118.86	122.79
3	L5	3718	A2M	C2-N3-C4	3.56	120.16	111.75
3	L5	3734	PSU	O2-C2-N1	-3.55	118.88	122.79
3	L5	3764	PSU	C4-N3-C2	-3.55	121.23	126.34
3	L5	1322	1MA	N9-C4-N3	3.54	135.20	126.94
3	L5	373	OMG	C6-C5-N7	3.54	136.83	130.25
3	L5	4628	PSU	O2-C2-N1	-3.54	118.89	122.79
3	L5	3782	5MC	C5-C6-N1	-3.53	119.70	123.34
3	L5	4228	OMG	C6-C5-N7	3.53	136.82	130.25
3	L5	4531	PSU	O2-C2-N1	-3.53	118.90	122.79
3	L5	2401	A2M	C2'-C1'-N9	-3.52	107.60	113.53
3	L5	2837	OMU	O4'-C4'-C3'	-3.49	98.20	105.11
3	L5	1782	PSU	O2-C2-N1	-3.49	118.95	122.79
3	L5	1316	OMG	C6-C5-N7	3.49	136.74	130.25
3	L5	4083	5MU	O2-C2-N1	-3.48	118.16	122.79
3	L5	4187	OMG	C6-C5-N7	3.47	136.71	130.25
3	L5	3770	PSU	O2-C2-N1	-3.47	118.97	122.79
3	L5	3822	PSU	O2-C2-N1	-3.46	118.98	122.79
3	L5	3637	PSU	C5'-C4'-C3'	-3.46	102.23	115.18
3	L5	4471	PSU	O2-C2-N1	-3.45	118.99	122.79
3	L5	3899	OMG	C6-C5-N7	3.44	136.65	130.25
3	L5	3639	PSU	O2-C2-N1	-3.44	119.01	122.79
3	L5	4590	A2M	O4'-C1'-N9	3.44	114.83	108.06
3	L5	4521	PSU	O2-C2-N1	-3.43	119.01	122.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	2815	A2M	N3-C2-N1	-3.43	123.24	128.60
3	L5	1582	PSU	O2-C2-N1	-3.41	119.04	122.79
3	L5	4576	PSU	O2-C2-N1	-3.41	119.04	122.79
3	L5	4618	OMG	C6-C5-N7	3.40	136.58	130.25
3	L5	4423	PSU	O2-C2-N1	-3.40	119.04	122.79
3	L5	3920	PSU	O2-C2-N1	-3.40	119.05	122.79
3	L5	3818	UY1	O2-C2-N1	-3.40	119.05	122.79
3	L5	4450	PSU	O2-C2-N1	-3.39	119.06	122.79
3	L5	400	A2M	N3-C2-N1	-3.39	123.30	128.60
3	L5	4590	A2M	C2-N3-C4	3.38	119.75	111.75
3	L5	2508	PSU	O2-C2-N1	-3.36	119.09	122.79
3	L5	3637	PSU	O4'-C4'-C3'	-3.36	98.47	105.11
3	L5	4353	PSU	C5'-C4'-C3'	-3.34	102.67	115.18
3	L5	2843	PSU	O2-C2-N1	-3.33	119.13	122.79
3	L5	4499	OMG	C2'-C1'-N9	-3.33	107.76	114.22
3	L5	4494	OMG	C6-C5-N7	3.33	136.44	130.25
3	L5	3715	PSU	O2-C2-N1	-3.32	119.14	122.79
3	L5	4415	1MA	N9-C4-N3	3.30	134.63	126.94
3	L5	3734	PSU	C3'-C2'-C1'	3.30	105.48	101.64
3	L5	4493	PSU	O2-C2-N1	-3.28	119.18	122.79
3	L5	2839	PSU	O2-C2-N1	-3.28	119.18	122.79
3	L5	4370	OMG	C6-C5-N7	3.28	136.34	130.25
3	L5	3627	OMG	C6-C5-N7	3.27	136.33	130.25
3	L5	1744	PSU	O2-C2-N1	-3.27	119.19	122.79
3	L5	2363	A2M	C4-C5-N7	-3.26	106.64	110.62
3	L5	4403	PSU	C5-C6-N1	-3.26	117.23	122.11
3	L5	1517	2MG	C6-C5-N7	3.23	136.25	130.25
3	L5	1522	OMG	C6-C5-N7	3.23	136.25	130.25
3	L5	1792	PSU	O2-C2-N1	-3.22	119.24	122.79
3	L5	3867	A2M	C4-C5-N7	-3.22	106.69	110.62
3	L5	2773	OMG	C6-C5-N7	3.21	136.22	130.25
3	L5	978	2MG	C6-C5-N7	3.20	136.19	130.25
3	L5	2363	A2M	N3-C2-N1	-3.19	123.61	128.60
3	L5	1326	A2M	N3-C2-N1	-3.19	123.61	128.60
3	L5	3718	A2M	C4-C5-N7	-3.18	106.75	110.62
3	L5	3825	A2M	C4-C5-N7	-3.18	106.75	110.62
3	L5	4637	OMG	C6-C5-N7	3.18	136.16	130.25
3	L5	4220	6MZ	N1-C2-N3	-3.18	123.63	128.60
3	L5	1792	PSU	C5-C6-N1	-3.17	117.35	122.11
3	L5	3637	PSU	O2-C2-N1	-3.17	119.30	122.79
3	L5	4431	PSU	C5'-C4'-C3'	-3.17	103.31	115.18
3	L5	2401	A2M	C4-C5-N7	-3.17	106.76	110.62

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	2415	OMU	O4-C4-C5	-3.16	119.60	125.16
3	L5	2364	OMG	C6-C5-N7	3.16	136.13	130.25
3	L5	400	A2M	C4-N9-C8	3.16	109.15	105.73
3	L5	1534	A2M	C4-C5-N7	-3.16	106.77	110.62
3	L5	400	A2M	C4-C5-N7	-3.15	106.78	110.62
3	L5	3785	A2M	C4-N9-C8	3.15	109.14	105.73
3	L5	2401	A2M	N3-C2-N1	-3.15	123.68	128.60
3	L5	3723	A2M	C4-C5-N7	-3.14	106.79	110.62
3	L5	4392	OMG	C6-C5-N7	3.14	136.08	130.25
3	L5	4636	PSU	O2-C2-N1	-3.14	119.34	122.79
3	L5	4296	PSU	O2-C2-N1	-3.13	119.35	122.79
3	L5	4420	PSU	O2-C2-N1	-3.12	119.35	122.79
3	L5	3792	OMG	C6-C5-N7	3.12	136.06	130.25
3	L5	1326	A2M	C4-C5-N7	-3.12	106.82	110.62
3	L5	2787	A2M	N3-C2-N1	-3.11	123.74	128.60
3	L5	4870	OMG	C6-C5-N7	3.11	136.03	130.25
3	L5	4227	OMU	O4-C4-C5	-3.11	119.70	125.16
3	L5	3744	OMG	C6-C5-N7	3.10	136.02	130.25
3	L5	2787	A2M	C4-C5-N7	-3.10	106.85	110.62
3	L5	4196	OMG	C6-C5-N7	3.09	136.00	130.25
3	L5	2815	A2M	O2'-C2'-C1'	-3.09	103.05	109.08
3	L5	4571	A2M	C4-C5-N7	-3.08	106.86	110.62
3	L5	1534	A2M	N3-C2-N1	-3.08	123.78	128.60
3	L5	398	A2M	C4-C5-N7	-3.07	106.88	110.62
3	L5	3785	A2M	N3-C2-N1	-3.07	123.80	128.60
3	L5	4312	PSU	O2'-C2'-C1'	-3.07	103.92	111.23
3	L5	4523	A2M	N3-C2-N1	-3.07	123.81	128.60
3	L5	3758	PSU	O2-C2-N1	-3.07	119.42	122.79
3	L5	1524	A2M	C2'-C1'-N9	-3.06	108.38	113.53
3	L5	1871	A2M	N3-C2-N1	-3.06	123.82	128.60
3	L5	3825	A2M	C2'-C1'-N9	-3.06	108.38	113.53
3	L5	4523	A2M	C4-C5-N7	-3.05	106.90	110.62
3	L5	398	A2M	N3-C2-N1	-3.05	123.83	128.60
3	L5	4576	PSU	O4'-C4'-C5'	-3.05	99.34	109.37
3	L5	4571	A2M	N3-C2-N1	-3.04	123.85	128.60
3	L5	3925	OMU	O2-C2-N1	-3.04	118.75	122.79
3	L5	2876	OMG	C6-C5-N7	3.03	135.89	130.25
5	L8	14	OMU	O4-C4-C5	-3.03	119.83	125.16
3	L5	1323	A2M	C4-C5-N7	-3.03	106.93	110.62
3	L5	3830	A2M	N3-C2-N1	-3.02	123.87	128.60
3	L5	1323	A2M	N3-C2-N1	-3.02	123.87	128.60
3	L5	4499	OMG	C6-C5-N7	3.02	135.87	130.25

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	1524	A2M	C4-C5-N7	-3.02	106.94	110.62
3	L5	2415	OMU	O2-C2-N1	-3.01	118.78	122.79
3	L5	2424	OMG	C6-C5-N7	3.00	135.82	130.25
3	L5	4293	PSU	O2-C2-N1	-2.99	119.50	122.79
3	L5	2815	A2M	C4-C5-N7	-2.99	106.98	110.62
3	L5	3825	A2M	N3-C2-N1	-2.97	123.95	128.60
3	L5	2050	OMG	C6-C5-N7	2.96	135.76	130.25
3	L5	4552	PSU	O2-C2-N1	-2.96	119.53	122.79
3	L5	1871	A2M	C4-N9-C8	2.96	108.94	105.73
3	L5	3830	A2M	C4-C5-N7	-2.96	107.02	110.62
3	L5	4620	OMU	O4-C4-C5	-2.95	119.97	125.16
3	L5	3785	A2M	C4-C5-N7	-2.95	107.03	110.62
3	L5	1883	OMG	O6-C6-C5	-2.94	118.79	126.60
3	L5	3925	OMU	O4-C4-C5	-2.94	120.00	125.16
3	L5	4361	PSU	O2-C2-N1	-2.93	119.56	122.79
3	L5	4498	OMU	O4-C4-C5	-2.93	120.00	125.16
3	L5	4590	A2M	N3-C2-N1	-2.92	124.03	128.60
3	L5	729	2MG	C6-C5-N7	2.92	135.67	130.25
3	L5	1524	A2M	N3-C2-N1	-2.91	124.05	128.60
3	L5	4623	OMG	C4-C5-N7	-2.90	106.13	110.72
3	L5	3723	A2M	N3-C2-N1	-2.89	124.08	128.60
3	L5	4576	PSU	O5'-C5'-C4'	2.87	118.77	108.99
3	L5	4457	PSU	O2-C2-N1	-2.87	119.63	122.79
3	L5	4872	2MG	C6-C5-N7	2.87	135.58	130.25
3	L5	4872	2MG	C2-N1-C6	-2.85	121.20	124.48
3	L5	400	A2M	C2'-C1'-N9	-2.85	108.74	113.53
3	L5	4673	PSU	O3'-C3'-C4'	-2.84	102.84	111.05
3	L5	3723	A2M	C4-N9-C8	2.82	108.79	105.73
3	L5	4220	6MZ	C4-C5-N7	-2.82	107.18	110.62
3	L5	2351	OMC	O2-C2-N3	-2.82	117.74	122.33
3	L5	2401	A2M	C4-N9-C8	2.82	108.78	105.73
3	L5	1781	PSU	O4'-C4'-C3'	-2.82	99.54	105.11
3	L5	4532	PSU	C3'-C2'-C1'	2.81	104.91	101.64
3	L5	4532	PSU	O2-C2-N1	-2.81	119.70	122.79
3	L5	3818	UY1	C5-C6-N1	-2.80	117.90	122.11
3	L5	1524	A2M	C4-N9-C8	2.80	108.76	105.73
3	L5	1536	PSU	O2'-C2'-C1'	-2.80	104.56	111.23
3	L5	3867	A2M	N3-C2-N1	-2.79	124.24	128.60
3	L5	4227	OMU	C2'-C1'-N1	-2.78	108.83	114.22
3	L5	3830	A2M	C4-N9-C8	2.78	108.74	105.73
3	L5	4306	OMU	O4-C4-C5	-2.78	120.28	125.16
3	L5	1871	A2M	C4-C5-N7	-2.77	107.24	110.62

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	1534	A2M	C4-N9-C8	2.77	108.73	105.73
3	L5	4571	A2M	C4-N9-C8	2.77	108.73	105.73
3	L5	2815	A2M	C4-N9-C8	2.75	108.71	105.73
3	L5	1625	OMG	C6-C5-N7	2.75	135.36	130.25
3	L5	4494	OMG	C2'-C1'-N9	-2.75	108.89	114.22
3	L5	4403	PSU	C3'-C2'-C1'	2.74	104.83	101.64
3	L5	4361	PSU	O2'-C2'-C1'	-2.74	104.69	111.23
3	L5	2837	OMU	O2-C2-N1	-2.74	119.14	122.79
3	L5	373	OMG	C4-C5-N7	-2.73	106.39	110.72
3	L5	3637	PSU	C5-C6-N1	-2.73	118.02	122.11
3	L5	4523	A2M	C2'-C1'-N9	-2.72	108.95	113.53
3	L5	978	2MG	C4-C5-N7	-2.71	106.43	110.72
3	L5	4590	A2M	C2'-C1'-N9	-2.71	108.97	113.53
3	L5	4220	6MZ	C6-C5-N7	2.71	135.32	132.39
3	L5	1316	OMG	C4-C5-N7	-2.71	106.44	110.72
3	L5	3867	A2M	C5-N7-C8	2.69	107.33	103.51
3	L5	3723	A2M	C5-N7-C8	2.68	107.32	103.51
3	L5	1517	2MG	CM2-N2-C2	-2.67	117.96	123.86
3	L5	1862	PSU	C5'-C4'-C3'	-2.67	105.18	115.18
3	L5	4187	OMG	C4-C5-N7	-2.67	106.50	110.72
3	L5	4431	PSU	O3'-C3'-C4'	-2.66	103.35	111.05
3	L5	1781	PSU	C5-C6-N1	-2.66	118.12	122.11
5	L8	14	OMU	C1'-N1-C2	2.65	122.37	117.57
3	L5	3627	OMG	C4-C5-N7	-2.65	106.53	110.72
3	L5	3944	OMG	C6-C5-N7	2.64	135.16	130.25
3	L5	1883	OMG	C6-C5-N7	2.64	135.16	130.25
3	L5	1862	PSU	C5-C6-N1	-2.64	118.15	122.11
3	L5	2363	A2M	C5-N7-C8	2.64	107.25	103.51
3	L5	4618	OMG	C4-C5-N7	-2.63	106.55	110.72
3	L5	1517	2MG	C2-N1-C6	-2.63	121.45	124.48
3	L5	4636	PSU	C5-C6-N1	-2.63	118.17	122.11
3	L5	3867	A2M	C4-N9-C8	2.62	108.57	105.73
3	L5	4498	OMU	C2'-C1'-N1	-2.62	109.13	114.22
3	L5	3785	A2M	C5-N7-C8	2.62	107.23	103.51
3	L5	4532	PSU	C5-C6-N1	-2.62	118.18	122.11
3	L5	4403	PSU	O2-C2-N3	-2.62	116.88	121.82
3	L5	2815	A2M	C5-N7-C8	2.62	107.23	103.51
3	L5	4471	PSU	C5-C6-N1	-2.61	118.19	122.11
3	L5	729	2MG	CM2-N2-C2	-2.61	118.09	123.86
3	L5	3758	PSU	C6-C5-C4	-2.61	116.37	118.20
3	L5	4220	6MZ	C4-N9-C8	2.60	108.55	105.73
3	L5	4493	PSU	C5-C6-N1	-2.60	118.21	122.11

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	2876	OMG	C4-C5-N7	-2.60	106.60	110.72
3	L5	2815	A2M	C2'-C1'-N9	-2.60	109.15	113.53
3	L5	1677	PSU	O4'-C4'-C3'	-2.60	99.98	105.11
3	L5	4296	PSU	C5-C6-N1	-2.59	118.22	122.11
3	L5	4196	OMG	C4-C5-N7	-2.59	106.62	110.72
3	L5	400	A2M	C5-N7-C8	2.59	107.19	103.51
3	L5	4523	A2M	C4-N9-C8	2.58	108.52	105.73
3	L5	4456	OMC	O2'-C2'-C1'	-2.57	104.06	109.08
3	L5	4493	PSU	C3'-C2'-C1'	2.57	104.63	101.64
3	L5	4299	PSU	O2-C2-N1	-2.57	119.96	122.79
3	L5	3909	OMC	O2-C2-N3	-2.57	118.15	122.33
3	L5	4494	OMG	O2'-C2'-C1'	-2.57	104.07	109.08
3	L5	1522	OMG	C4-C5-N7	-2.56	106.66	110.72
3	L5	4471	PSU	O2'-C2'-C1'	-2.56	105.13	111.23
3	L5	4689	PSU	O4'-C1'-C2'	-2.56	101.54	105.14
3	L5	3830	A2M	C2'-C1'-N9	-2.55	109.23	113.53
3	L5	4299	PSU	O4'-C4'-C5'	-2.55	100.97	109.37
3	L5	4689	PSU	O4'-C4'-C3'	-2.55	100.06	105.11
3	L5	2401	A2M	C5-N7-C8	2.55	107.13	103.51
3	L5	3718	A2M	N3-C2-N1	-2.55	124.62	128.60
3	L5	3830	A2M	C5-N7-C8	2.55	107.12	103.51
3	L5	3730	PSU	O4'-C4'-C3'	-2.54	100.08	105.11
3	L5	2351	OMC	C1'-N1-C2	2.54	124.10	118.42
3	L5	4228	OMG	C4-C5-N7	-2.54	106.70	110.72
3	L5	1517	2MG	C4-C5-N7	-2.54	106.70	110.72
3	L5	1534	A2M	C5-N7-C8	2.54	107.11	103.51
3	L5	2363	A2M	C4-N9-C8	2.54	108.48	105.73
3	L5	2787	A2M	C4-N9-C8	2.53	108.47	105.73
3	L5	2364	OMG	C4-C5-N7	-2.53	106.71	110.72
3	L5	4523	A2M	C5-N7-C8	2.53	107.11	103.51
3	L5	1677	PSU	C4'-O4'-C1'	-2.53	102.18	108.55
3	L5	3825	A2M	C5-N7-C8	2.52	107.09	103.51
3	L5	2787	A2M	C5-N7-C8	2.52	107.09	103.51
3	L5	4872	2MG	C4-C5-N7	-2.52	106.73	110.72
3	L5	4576	PSU	C5-C6-N1	-2.52	118.33	122.11
3	L5	4870	OMG	C4-C5-N7	-2.51	106.75	110.72
3	L5	1860	PSU	C5'-C4'-C3'	-2.50	105.81	115.18
3	L5	4353	PSU	O2-C2-N1	-2.50	120.04	122.79
3	L5	1326	A2M	C5-N7-C8	2.50	107.06	103.51
3	L5	4296	PSU	C5'-C4'-C3'	-2.50	105.82	115.18
3	L5	398	A2M	C5-N7-C8	2.50	107.05	103.51
3	L5	1524	A2M	C5-N7-C8	2.49	107.05	103.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	2837	OMU	O2'-C2'-C1'	-2.48	104.24	109.08
3	L5	4456	OMC	C2'-C1'-N1	-2.48	109.41	114.22
3	L5	4299	PSU	O2'-C2'-C1'	-2.48	105.32	111.23
3	L5	4187	OMG	O4'-C1'-C2'	-2.48	102.22	106.57
3	L5	4299	PSU	C6-C5-C4	-2.48	116.47	118.20
3	L5	4590	A2M	C4-C5-N7	-2.47	107.60	110.62
3	L5	4499	OMG	C4-C5-N7	-2.47	106.81	110.72
3	L5	1677	PSU	O3'-C3'-C4'	-2.47	103.91	111.05
3	L5	4370	OMG	C4-C5-N7	-2.47	106.81	110.72
3	L5	4494	OMG	C4-C5-N7	-2.47	106.82	110.72
3	L5	1534	A2M	O3'-C3'-C4'	-2.47	103.92	111.05
3	L5	729	2MG	C4-C5-N7	-2.46	106.82	110.72
3	L5	4571	A2M	C5-N7-C8	2.46	107.01	103.51
3	L5	2773	OMG	C4-C5-N7	-2.46	106.83	110.72
3	L5	4447	5MC	C5-C4-N3	-2.45	119.03	121.67
3	L5	4220	6MZ	C5-N7-C8	2.45	106.99	103.51
3	L5	3825	A2M	C4-N9-C8	2.45	108.38	105.73
3	L5	1522	OMG	C2'-C1'-N9	-2.45	109.47	114.22
3	L5	4187	OMG	O4'-C1'-N9	2.45	113.96	108.36
3	L5	3758	PSU	C3'-C2'-C1'	2.45	104.48	101.64
3	L5	1323	A2M	C4-N9-C8	2.44	108.37	105.73
3	L5	4637	OMG	C4-C5-N7	-2.44	106.86	110.72
3	L5	4450	PSU	C5-C6-N1	-2.44	118.45	122.11
3	L5	3744	OMG	C4-C5-N7	-2.44	106.86	110.72
3	L5	1779	PSU	O2'-C2'-C1'	-2.44	105.43	111.23
3	L5	3782	5MC	C5-C4-N3	-2.43	119.05	121.67
3	L5	4620	OMU	O2-C2-N1	-2.43	119.56	122.79
3	L5	3899	OMG	C4-C5-N7	-2.43	106.88	110.72
3	L5	1316	OMG	O6-C6-C5	-2.42	120.17	126.60
3	L5	978	2MG	C2-N1-C6	-2.42	121.69	124.48
3	L5	1323	A2M	C5-N7-C8	2.42	106.94	103.51
3	L5	3792	OMG	C4-C5-N7	-2.40	106.92	110.72
3	L5	1322	1MA	N1-C2-N3	-2.40	123.14	126.00
3	L5	1744	PSU	C3'-C2'-C1'	2.40	104.43	101.64
3	L5	400	A2M	N9-C8-N7	-2.40	110.64	113.91
3	L5	2415	OMU	O2'-C2'-C1'	-2.40	104.40	109.08
3	L5	4335	5MC	C5-C4-N3	-2.39	119.09	121.67
3	L5	2787	A2M	C2'-C1'-N9	-2.39	109.50	113.53
3	L5	2837	OMU	C2'-C1'-N1	-2.39	109.58	114.22
3	L5	2843	PSU	C5-C6-N1	-2.39	118.52	122.11
3	L5	2632	PSU	C5-C6-N1	-2.39	118.53	122.11
3	L5	4392	OMG	C4-C5-N7	-2.38	106.95	110.72

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	4673	PSU	C5-C6-N1	-2.38	118.54	122.11
3	L5	4361	PSU	C3'-C2'-C1'	2.38	104.40	101.64
3	L5	1871	A2M	C5-N7-C8	2.37	106.88	103.51
3	L5	4353	PSU	C5-C6-N1	-2.37	118.55	122.11
3	L5	3920	PSU	C5-C6-N1	-2.37	118.56	122.11
3	L5	2050	OMG	O6-C6-C5	-2.36	120.35	126.60
3	L5	400	A2M	C6-C5-N7	2.35	136.41	132.02
3	L5	2804	OMC	O2-C2-N3	-2.35	118.51	122.33
3	L5	4576	PSU	C3'-C2'-C1'	2.35	104.37	101.64
3	L5	1862	PSU	O3'-C3'-C4'	-2.35	104.26	111.05
3	L5	3785	A2M	N9-C8-N7	-2.34	110.71	113.91
3	L5	4370	OMG	O6-C6-C5	-2.34	120.38	126.60
3	L5	4531	PSU	C5-C6-N1	-2.34	118.60	122.11
3	L5	4296	PSU	O2-C2-N3	-2.34	117.41	121.82
3	L5	4415	1MA	C4-C5-N7	-2.33	107.03	110.72
3	L5	3782	5MC	O2-C2-N3	-2.33	118.54	122.33
3	L5	2773	OMG	O6-C6-C5	-2.32	120.44	126.60
3	L5	4597	UR3	C3U-N3-C2	2.32	121.38	117.31
3	L5	4228	OMG	O6-C6-C5	-2.32	120.45	126.60
3	L5	1625	OMG	O6-C6-C5	-2.32	120.45	126.60
3	L5	4353	PSU	O2-C2-N3	-2.31	117.46	121.82
3	L5	1625	OMG	C4-C5-N7	-2.31	107.07	110.72
3	L5	4187	OMG	CM2-O2'-C2'	-2.31	108.47	114.52
3	L5	4392	OMG	O6-C6-C5	-2.31	120.48	126.60
3	L5	4590	A2M	C4-N9-C8	2.30	108.22	105.73
3	L5	2632	PSU	C3'-C2'-C1'	2.30	104.31	101.64
3	L5	3944	OMG	C2'-C3'-C4'	2.30	106.99	101.99
3	L5	978	2MG	CM2-N2-C2	-2.30	118.79	123.86
3	L5	2050	OMG	C4-C5-N7	-2.29	107.09	110.72
3	L5	3718	A2M	C5-N7-C8	2.29	106.76	103.51
3	L5	3920	PSU	C3'-C2'-C1'	2.29	104.30	101.64
3	L5	1517	2MG	O6-C6-C5	-2.29	120.53	126.60
3	L5	1522	OMG	O6-C6-C5	-2.29	120.53	126.60
3	L5	4689	PSU	O2'-C2'-C1'	-2.28	105.78	111.23
3	L5	1536	PSU	O4'-C4'-C3'	-2.28	100.59	105.11
3	L5	1862	PSU	O2'-C2'-C1'	-2.28	105.79	111.23
3	L5	3899	OMG	O6-C6-C5	-2.28	120.55	126.60
3	L5	3925	OMU	O2'-C2'-C1'	-2.28	104.63	109.08
3	L5	398	A2M	C4-N9-C8	2.28	108.20	105.73
3	L5	3920	PSU	O2'-C2'-C1'	-2.27	105.81	111.23
3	L5	2424	OMG	O6-C6-C5	-2.27	120.58	126.60
3	L5	4689	PSU	C2'-C3'-C4'	-2.27	98.24	102.64

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	1524	A2M	O4'-C1'-N9	2.26	112.52	108.06
3	L5	4187	OMG	C5-C6-N1	2.26	118.93	113.19
3	L5	2424	OMG	C4-C5-N7	-2.25	107.15	110.72
3	L5	373	OMG	CM2-O2'-C2'	-2.25	108.61	114.52
3	L5	3715	PSU	C5-C6-N1	-2.25	118.73	122.11
3	L5	3944	OMG	O6-C6-C5	-2.25	120.64	126.60
3	L5	2824	OMC	O2-C2-N3	-2.25	118.68	122.33
3	L5	4618	OMG	O6-C6-C5	-2.25	120.64	126.60
3	L5	4623	OMG	O6-C6-C5	-2.24	120.67	126.60
3	L5	2839	PSU	O2'-C2'-C1'	-2.24	105.90	111.23
3	L5	4392	OMG	C5-C6-N1	2.23	118.86	113.19
3	L5	4431	PSU	C5-C6-N1	-2.23	118.77	122.11
3	L5	3723	A2M	N9-C8-N7	-2.23	110.87	113.91
3	L5	1883	OMG	C5-C6-N1	2.23	118.85	113.19
3	L5	1779	PSU	C5-C6-N1	-2.23	118.77	122.11
3	L5	1326	A2M	C4-N9-C8	2.22	108.14	105.73
3	L5	3730	PSU	C5-C6-N1	-2.22	118.78	122.11
3	L5	4499	OMG	O6-C6-C5	-2.21	120.74	126.60
3	L5	1866	UR3	C3U-N3-C4	2.21	121.04	117.89
3	L5	3764	PSU	C6-C5-C4	-2.21	116.66	118.20
3	L5	4521	PSU	C5-C6-N1	-2.20	118.81	122.11
3	L5	4579	PSU	C2'-C3'-C4'	2.20	106.92	102.64
3	L5	4471	PSU	C3'-C2'-C1'	2.20	104.20	101.64
3	L5	4571	A2M	C2'-C1'-N9	-2.20	109.83	113.53
3	L5	4637	OMG	O6-C6-C5	-2.19	120.80	126.60
3	L5	1744	PSU	O2'-C2'-C1'	-2.18	106.03	111.23
3	L5	1326	A2M	C6-C5-N7	2.18	136.08	132.02
3	L5	1536	PSU	C5-C6-N1	-2.17	118.85	122.11
3	L5	3768	PSU	C5-C6-N1	-2.17	118.86	122.11
3	L5	2843	PSU	O2'-C2'-C1'	-2.17	106.06	111.23
3	L5	3627	OMG	O6-C6-C5	-2.16	120.86	126.60
3	L5	2861	OMC	O2-C2-N3	-2.16	118.81	122.33
3	L5	3808	OMC	O2-C2-N3	-2.16	118.82	122.33
3	L5	1322	1MA	C4-C5-N7	-2.16	107.30	110.72
3	L5	2876	OMG	O6-C6-C5	-2.16	120.88	126.60
3	L5	2815	A2M	C5'-C4'-C3'	-2.15	107.11	115.18
3	L5	3792	OMG	O6-C6-C5	-2.15	120.89	126.60
3	L5	3744	OMG	O6-C6-C5	-2.15	120.89	126.60
3	L5	729	2MG	C2-N1-C6	-2.15	122.00	124.48
3	L5	1792	PSU	O2'-C2'-C1'	-2.15	106.11	111.23
3	L5	2363	A2M	C6-C5-N7	2.15	136.02	132.02
3	L5	4442	PSU	O4'-C1'-C2'	2.14	108.17	105.14

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	1316	OMG	C5-C6-N1	2.14	118.63	113.19
3	L5	4576	PSU	O4'-C1'-C2'	-2.14	102.12	105.14
3	L5	2401	A2M	C6-C5-N7	2.14	136.01	132.02
3	L5	4870	OMG	O6-C6-C5	-2.14	120.92	126.60
3	L5	4532	PSU	O2'-C2'-C1'	-2.14	106.13	111.23
3	L5	1782	PSU	C3'-C2'-C1'	-2.14	99.15	101.64
3	L5	4532	PSU	O4'-C4'-C5'	-2.13	102.35	109.37
3	L5	4498	OMU	O2-C2-N1	-2.13	119.95	122.79
3	L5	4442	PSU	C5-C6-N1	-2.13	118.92	122.11
3	L5	3695	PSU	O2'-C2'-C1'	-2.13	106.16	111.23
3	L5	4456	OMC	O4'-C4'-C3'	-2.13	100.91	105.11
3	L5	3758	PSU	O3'-C3'-C4'	2.12	117.19	111.05
3	L5	3695	PSU	C3'-C2'-C1'	2.12	104.11	101.64
3	L5	2401	A2M	N9-C8-N7	-2.12	111.01	113.91
3	L5	2508	PSU	C5-C6-N1	-2.12	118.92	122.11
3	L5	3925	OMU	C5-C6-N1	-2.12	118.25	121.81
3	L5	1782	PSU	O3'-C3'-C2'	2.12	118.69	111.82
3	L5	4457	PSU	C5-C6-N1	-2.12	118.93	122.11
3	L5	1744	PSU	O2-C2-N3	-2.12	117.82	121.82
3	L5	373	OMG	O6-C6-C5	-2.12	120.98	126.60
3	L5	1683	PSU	C5-C6-N1	-2.12	118.93	122.11
3	L5	4532	PSU	O4'-C1'-C2'	-2.12	102.16	105.14
3	L5	2787	A2M	C6-C5-N7	2.12	135.96	132.02
3	L5	4872	2MG	O6-C6-C5	-2.12	120.99	126.60
3	L5	4423	PSU	C5-C6-N1	-2.11	118.94	122.11
3	L5	2364	OMG	O6-C6-C5	-2.11	120.99	126.60
3	L5	1782	PSU	C5-C6-N1	-2.11	118.94	122.11
3	L5	4457	PSU	C6-C5-C4	-2.11	116.72	118.20
3	L5	3723	A2M	C6-C5-N7	2.11	135.95	132.02
3	L5	2839	PSU	C5-C6-N1	-2.11	118.95	122.11
3	L5	4576	PSU	O2'-C2'-C1'	-2.10	106.22	111.23
3	L5	1871	A2M	N9-C8-N7	-2.10	111.05	113.91
3	L5	4299	PSU	O2-C2-N3	-2.10	117.87	121.82
3	L5	4196	OMG	O6-C6-C5	-2.09	121.04	126.60
3	L5	3867	A2M	N9-C8-N7	-2.09	111.05	113.91
3	L5	2815	A2M	N9-C8-N7	-2.09	111.05	113.91
3	L5	4636	PSU	O4'-C1'-C2'	2.09	108.09	105.14
3	L5	3925	OMU	C5'-C4'-C3'	-2.09	107.36	115.18
3	L5	2876	OMG	C2'-C1'-N9	-2.09	110.17	114.22
3	L5	3744	OMG	C5-C6-N1	2.08	118.48	113.19
3	L5	3715	PSU	O4'-C1'-C2'	2.08	108.08	105.14
3	L5	3785	A2M	C6-C5-N7	2.08	135.90	132.02

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	3830	A2M	O2'-C2'-C1'	-2.08	105.02	109.08
3	L5	4312	PSU	C5-C6-N1	-2.08	118.99	122.11
3	L5	1517	2MG	C5-C6-N1	2.08	118.47	113.19
3	L5	4552	PSU	O2-C2-N3	-2.08	117.90	121.82
3	L5	3920	PSU	O2-C2-N3	-2.08	117.90	121.82
3	L5	4494	OMG	O6-C6-C5	-2.07	121.10	126.60
3	L5	4494	OMG	C5-C6-N1	2.07	118.45	113.19
3	L5	1860	PSU	C5-C6-N1	-2.07	119.01	122.11
3	L5	3830	A2M	N9-C8-N7	-2.06	111.09	113.91
3	L5	2351	OMC	O2'-C2'-C1'	-2.06	105.06	109.08
3	L5	1744	PSU	C5-C6-N1	-2.06	119.02	122.11
3	L5	4673	PSU	O2-C2-N3	-2.06	117.93	121.82
3	L5	4671	B8T	C5-C6-N1	-2.06	118.36	121.81
3	L5	1323	A2M	O2'-C2'-C1'	-2.06	105.07	109.08
3	L5	1524	A2M	N9-C8-N7	-2.05	111.10	113.91
3	L5	4187	OMG	O6-C6-C5	-2.05	121.15	126.60
3	L5	978	2MG	O6-C6-C5	-2.05	121.15	126.60
3	L5	3825	A2M	C6-C5-N7	2.05	135.84	132.02
3	L5	2050	OMG	C5-C6-N1	2.05	118.39	113.19
3	L5	4552	PSU	O4'-C4'-C3'	-2.04	101.07	105.11
3	L5	4618	OMG	C5-C6-N1	2.04	118.38	113.19
3	L5	4299	PSU	C5'-C4'-C3'	-2.04	107.52	115.18
3	L5	3909	OMC	C1'-N1-C2	2.04	122.98	118.42
3	L5	1534	A2M	C6-C5-N7	2.04	135.82	132.02
3	L5	4187	OMG	C2-N1-C6	-2.04	121.38	125.10
3	L5	4571	A2M	C6-C5-N7	2.03	135.81	132.02
3	L5	1522	OMG	C5-C6-N1	2.03	118.35	113.19
3	L5	4500	PSU	C5-C6-N1	-2.03	119.06	122.11
3	L5	4447	5MC	N1-C2-N3	2.03	122.51	118.81
3	L5	3867	A2M	C6-C5-N7	2.03	135.80	132.02
3	L5	1534	A2M	N9-C8-N7	-2.03	111.14	113.91
3	L5	3637	PSU	O2-C2-N3	-2.03	117.99	121.82
3	L5	4637	OMG	C5-C6-N1	2.03	118.34	113.19
3	L5	3744	OMG	C2'-C1'-N9	-2.03	110.28	114.22
3	L5	4532	PSU	O2-C2-N3	-2.03	117.99	121.82
3	L5	4299	PSU	O5'-C5'-C4'	2.03	115.89	108.99
3	L5	4623	OMG	C8-N7-C5	2.03	107.91	104.24
3	L5	2876	OMG	C5'-C4'-C3'	-2.03	107.59	115.18
3	L5	3770	PSU	C5-C6-N1	-2.02	119.07	122.11
3	L5	4370	OMG	C5-C6-N1	2.02	118.33	113.19
3	L5	4689	PSU	C3'-C2'-C1'	2.02	103.99	101.64
3	L5	373	OMG	C5-C6-N1	2.02	118.32	113.19

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	3899	OMG	C5-C6-N1	2.02	118.32	113.19
3	L5	1524	A2M	C6-C5-N7	2.02	135.78	132.02
3	L5	3639	PSU	C5-C6-N1	-2.01	119.10	122.11
3	L5	4457	PSU	O4'-C1'-C2'	2.00	107.97	105.14
3	L5	4392	OMG	C2-N1-C6	-2.00	121.45	125.10

There are no chirality outliers.

All (129) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	L5	729	2MG	N1-C2-N2-CM2
3	L5	729	2MG	N3-C2-N2-CM2
3	L5	1860	PSU	C3'-C4'-C5'-O5'
3	L5	2351	OMC	C3'-C4'-C5'-O5'
3	L5	2351	OMC	O4'-C4'-C5'-O5'
3	L5	2424	OMG	O4'-C4'-C5'-O5'
3	L5	2424	OMG	C3'-C4'-C5'-O5'
3	L5	2815	A2M	O4'-C4'-C5'-O5'
3	L5	2815	A2M	C3'-C4'-C5'-O5'
3	L5	2876	OMG	C3'-C4'-C5'-O5'
3	L5	3637	PSU	C3'-C4'-C5'-O5'
3	L5	3701	OMC	C2'-C1'-N1-C2
3	L5	3701	OMC	C2'-C1'-N1-C6
3	L5	3734	PSU	O4'-C4'-C5'-O5'
3	L5	3764	PSU	C2'-C1'-C5-C4
3	L5	3764	PSU	C2'-C1'-C5-C6
3	L5	3944	OMG	C3'-C4'-C5'-O5'
3	L5	4296	PSU	C3'-C4'-C5'-O5'
3	L5	4420	PSU	C3'-C4'-C5'-O5'
3	L5	4420	PSU	O4'-C4'-C5'-O5'
3	L5	4450	PSU	C2'-C1'-C5-C6
3	L5	4457	PSU	O4'-C1'-C5-C4
3	L5	4457	PSU	O4'-C1'-C5-C6
3	L5	4499	OMG	O4'-C4'-C5'-O5'
3	L5	4590	A2M	O4'-C1'-N9-C8
3	L5	4590	A2M	O4'-C1'-N9-C4
3	L5	4636	PSU	C2'-C1'-C5-C6
3	L5	4636	PSU	C3'-C4'-C5'-O5'
3	L5	4636	PSU	O4'-C4'-C5'-O5'
3	L5	4870	OMG	O4'-C4'-C5'-O5'
3	L5	4870	OMG	C3'-C4'-C5'-O5'
6	LC	333	MLZ	O-C-CA-CB

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Mol	Chain	Res	Type	Atoms
3	L5	3818	UY1	C1'-C2'-O2'-CM2
3	L5	1323	A2M	O4'-C4'-C5'-O5'
3	L5	2415	OMU	O4'-C4'-C5'-O5'
3	L5	2876	OMG	O4'-C4'-C5'-O5'
3	L5	3627	OMG	O4'-C4'-C5'-O5'
3	L5	3734	PSU	C3'-C4'-C5'-O5'
3	L5	3785	A2M	O4'-C4'-C5'-O5'
3	L5	3785	A2M	C3'-C4'-C5'-O5'
3	L5	3944	OMG	O4'-C4'-C5'-O5'
3	L5	4299	PSU	C3'-C4'-C5'-O5'
3	L5	4299	PSU	O4'-C4'-C5'-O5'
3	L5	4493	PSU	C3'-C4'-C5'-O5'
3	L5	4500	PSU	C3'-C4'-C5'-O5'
3	L5	4500	PSU	O4'-C4'-C5'-O5'
3	L5	4590	A2M	O4'-C4'-C5'-O5'
3	L5	4590	A2M	C3'-C4'-C5'-O5'
3	L5	2415	OMU	C3'-C4'-C5'-O5'
3	L5	3627	OMG	C3'-C4'-C5'-O5'
3	L5	3637	PSU	O4'-C4'-C5'-O5'
3	L5	4296	PSU	O4'-C4'-C5'-O5'
3	L5	4499	OMG	C3'-C4'-C5'-O5'
3	L5	1323	A2M	C3'-C4'-C5'-O5'
3	L5	3867	A2M	C3'-C4'-C5'-O5'
3	L5	4423	PSU	C3'-C4'-C5'-O5'
3	L5	1860	PSU	O4'-C4'-C5'-O5'
3	L5	3925	OMU	C3'-C4'-C5'-O5'
3	L5	4423	PSU	O4'-C4'-C5'-O5'
3	L5	4493	PSU	O4'-C4'-C5'-O5'
3	L5	4447	5MC	C2'-C1'-N1-C6
3	L5	398	A2M	O4'-C4'-C5'-O5'
3	L5	2364	OMG	O4'-C4'-C5'-O5'
3	L5	4227	OMU	O4'-C4'-C5'-O5'
3	L5	2787	A2M	C2'-C1'-N9-C8
3	L5	3818	UY1	C4'-C5'-O5'-P
3	L5	4471	PSU	C3'-C4'-C5'-O5'
3	L5	4579	PSU	O4'-C4'-C5'-O5'
3	L5	3867	A2M	O4'-C4'-C5'-O5'
3	L5	4471	PSU	O4'-C4'-C5'-O5'
5	L8	14	OMU	C1'-C2'-O2'-CM2
3	L5	1326	A2M	C3'-C4'-C5'-O5'
3	L5	3925	OMU	C3'-C2'-O2'-CM2
3	L5	4623	OMG	C3'-C2'-O2'-CM2

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Mol	Chain	Res	Type	Atoms
3	L5	4447	5MC	O4'-C1'-N1-C6
3	L5	1326	A2M	C4'-C5'-O5'-P
3	L5	3764	PSU	C4'-C5'-O5'-P
3	L5	4500	PSU	C4'-C5'-O5'-P
3	L5	4590	A2M	C4'-C5'-O5'-P
3	L5	1883	OMG	C3'-C4'-C5'-O5'
3	L5	4870	OMG	C4'-C5'-O5'-P
3	L5	1625	OMG	C3'-C4'-C5'-O5'
3	L5	4579	PSU	C3'-C4'-C5'-O5'
3	L5	2787	A2M	C2'-C1'-N9-C4
3	L5	2351	OMC	C2'-C1'-N1-C6
3	L5	373	OMG	C4'-C5'-O5'-P
3	L5	1534	A2M	O4'-C4'-C5'-O5'
3	L5	4447	5MC	O4'-C1'-N1-C2
3	L5	3701	OMC	O4'-C1'-N1-C6
3	L5	4450	PSU	O4'-C1'-C5-C4
3	L5	4500	PSU	O4'-C1'-C5-C4
3	L5	3818	UY1	O4'-C1'-C5-C4
3	L5	1323	A2M	C3'-C2'-O2'-CM'
3	L5	2876	OMG	C3'-C2'-O2'-CM2
3	L5	3830	A2M	C3'-C2'-O2'-CM'
3	L5	1625	OMG	C4'-C5'-O5'-P
3	L5	4447	5MC	C2'-C1'-N1-C2
3	L5	3909	OMC	C2'-C1'-N1-C6
3	L5	1322	1MA	C2'-C1'-N9-C8
3	L5	4456	OMC	O4'-C4'-C5'-O5'
3	L5	4552	PSU	O4'-C4'-C5'-O5'
3	L5	4576	PSU	O4'-C4'-C5'-O5'
3	L5	2787	A2M	O4'-C1'-N9-C8
6	LC	333	MLZ	CD-CE-NZ-CM
3	L5	2351	OMC	C2'-C1'-N1-C2
3	L5	1582	PSU	C3'-C4'-C5'-O5'
3	L5	4227	OMU	C1'-C2'-O2'-CM2
3	L5	4227	OMU	C3'-C2'-O2'-CM2
3	L5	3909	OMC	C2'-C1'-N1-C2
3	L5	1524	A2M	O4'-C1'-N9-C8
3	L5	1326	A2M	O4'-C4'-C5'-O5'
3	L5	1782	PSU	O4'-C4'-C5'-O5'
3	L5	4532	PSU	O4'-C4'-C5'-O5'
3	L5	4450	PSU	O4'-C1'-C5-C6
3	L5	4500	PSU	O4'-C1'-C5-C6
3	L5	4636	PSU	O4'-C1'-C5-C6

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Mol	Chain	Res	Type	Atoms
3	L5	3818	UY1	O4'-C1'-C5-C6
3	L5	3701	OMC	O4'-C1'-N1-C2
3	L5	729	2MG	O4'-C4'-C5'-O5'
3	L5	2364	OMG	C3'-C4'-C5'-O5'
3	L5	4618	OMG	O4'-C4'-C5'-O5'
3	L5	4673	PSU	C3'-C4'-C5'-O5'
41	Lm	98	MLZ	CA-CB-CG-CD
3	L5	4671	B8T	C4'-C5'-O5'-P
3	L5	2363	A2M	C3'-C2'-O2'-CM'
3	L5	2422	OMC	O4'-C4'-C5'-O5'
3	L5	3637	PSU	C4'-C5'-O5'-P
3	L5	3887	OMC	C4'-C5'-O5'-P
3	L5	4431	PSU	C4'-C5'-O5'-P

There are no ring outliers.

87 monomers are involved in 146 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	L5	4523	A2M	1	0
3	L5	1326	A2M	2	0
3	L5	4530	UR3	1	0
3	L5	3944	OMG	4	0
3	L5	3925	OMU	1	0
3	L5	4571	A2M	2	0
3	L5	4579	PSU	3	0
3	L5	1782	PSU	2	0
3	L5	3887	OMC	1	0
3	L5	4420	PSU	1	0
3	L5	4196	OMG	1	0
3	L5	3637	PSU	3	0
3	L5	4872	2MG	6	0
3	L5	1677	PSU	1	0
3	L5	4187	OMG	2	0
3	L5	4353	PSU	2	0
3	L5	1683	PSU	1	0
3	L5	4576	PSU	4	0
3	L5	2351	OMC	3	0
3	L5	2632	PSU	1	0
3	L5	4493	PSU	1	0
3	L5	4689	PSU	1	0
3	L5	4673	PSU	1	0
3	L5	1860	PSU	3	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	L5	4597	UR3	1	0
3	L5	2424	OMG	2	0
3	L5	398	A2M	1	0
3	L5	1340	OMC	1	0
3	L5	1517	2MG	1	0
3	L5	4531	PSU	1	0
3	L5	2843	PSU	1	0
3	L5	2837	OMU	2	0
3	L5	4471	PSU	1	0
3	L5	4431	PSU	1	0
3	L5	2415	OMU	4	0
6	LC	333	MLZ	1	0
3	L5	4532	PSU	2	0
3	L5	3730	PSU	2	0
3	L5	1524	A2M	1	0
3	L5	4228	OMG	2	0
3	L5	4637	OMG	2	0
3	L5	3785	A2M	2	0
3	L5	4299	PSU	6	0
3	L5	3718	A2M	4	0
3	L5	1534	A2M	2	0
3	L5	4618	OMG	1	0
3	L5	3920	PSU	1	0
3	L5	4447	5MC	1	0
3	L5	3822	PSU	1	0
3	L5	3764	PSU	1	0
3	L5	3830	A2M	1	0
3	L5	4500	PSU	2	0
3	L5	3695	PSU	1	0
3	L5	4392	OMG	1	0
3	L5	4457	PSU	2	0
3	L5	729	2MG	1	0
3	L5	1866	UR3	1	0
3	L5	4442	PSU	1	0
3	L5	4361	PSU	1	0
3	L5	2815	A2M	2	0
3	L5	4628	PSU	1	0
5	L8	14	OMU	1	0
3	L5	1322	1MA	1	0
3	L5	4590	A2M	2	0
3	L5	4636	PSU	1	0
3	L5	1744	PSU	1	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	L5	2050	OMG	1	0
3	L5	2363	A2M	1	0
3	L5	4220	6MZ	1	0
3	L5	2422	OMC	1	0
3	L5	1781	PSU	2	0
3	L5	3909	OMC	2	0
3	L5	3867	A2M	3	0
3	L5	1779	PSU	1	0
3	L5	1871	A2M	2	0
3	L5	3770	PSU	2	0
3	L5	1792	PSU	2	0
3	L5	1522	OMG	1	0
3	L5	1862	PSU	1	0
3	L5	4456	OMC	3	0
3	L5	4499	OMG	1	0
3	L5	1883	OMG	3	0
3	L5	4536	OMC	2	0
3	L5	3768	PSU	2	0
3	L5	4620	OMU	2	0
3	L5	4306	OMU	1	0
3	L5	4296	PSU	3	0

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 284 ligands modelled in this entry, 284 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

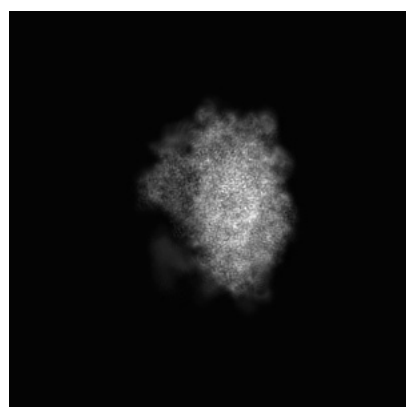
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-31465. These allow visual inspection of the internal detail of the map and identification of artifacts.

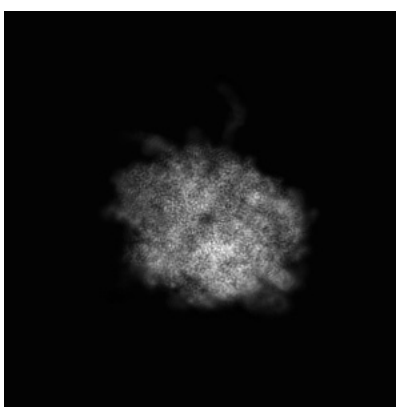
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

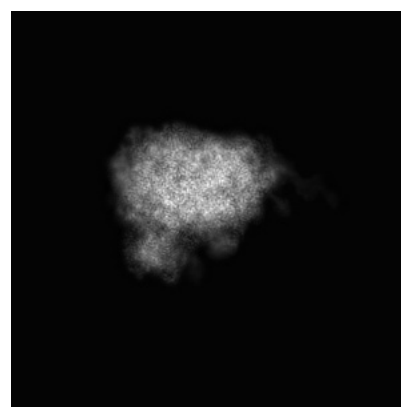
6.1.1 Primary map



X



Y

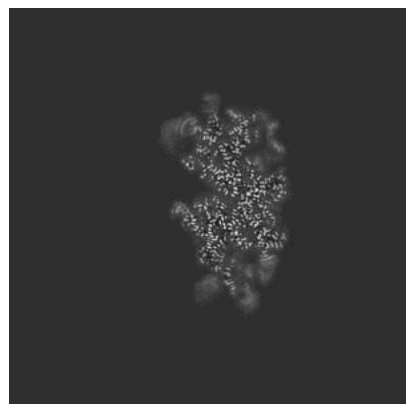


Z

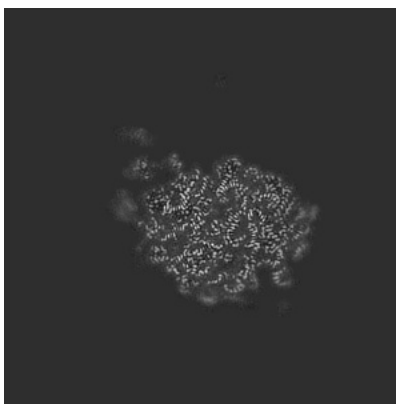
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

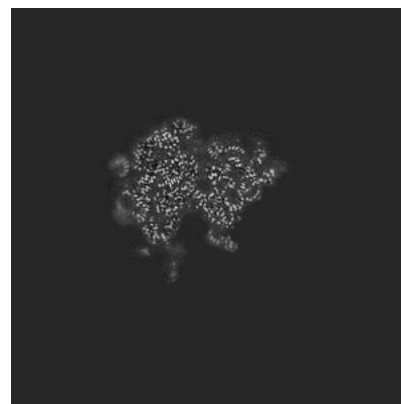
6.2.1 Primary map



X Index: 250



Y Index: 250

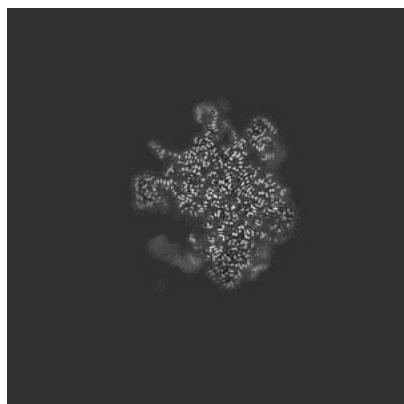


Z Index: 250

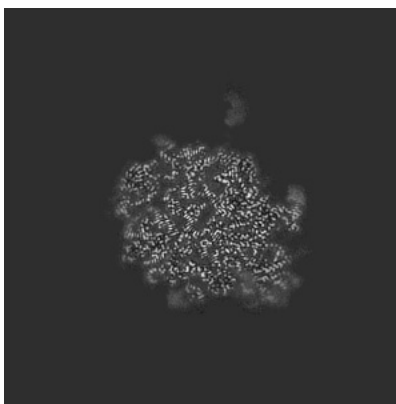
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

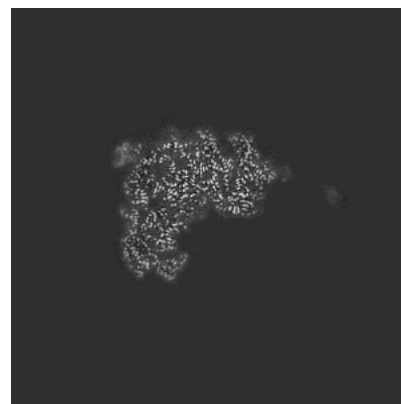
6.3.1 Primary map



X Index: 201



Y Index: 281

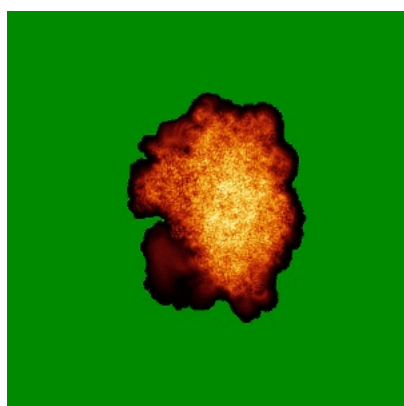


Z Index: 274

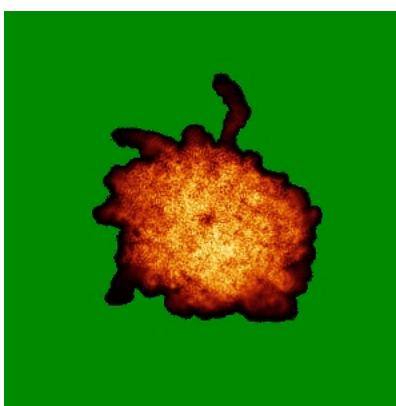
The images above show the largest variance slices of the map in three orthogonal directions.

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

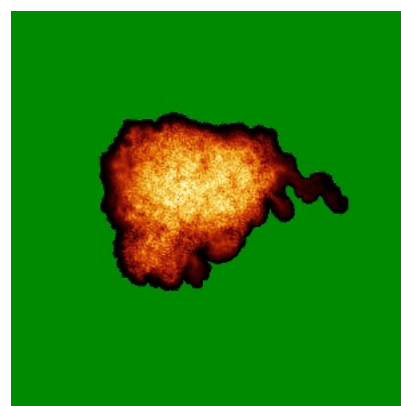
6.4.1 Primary map



X



Y

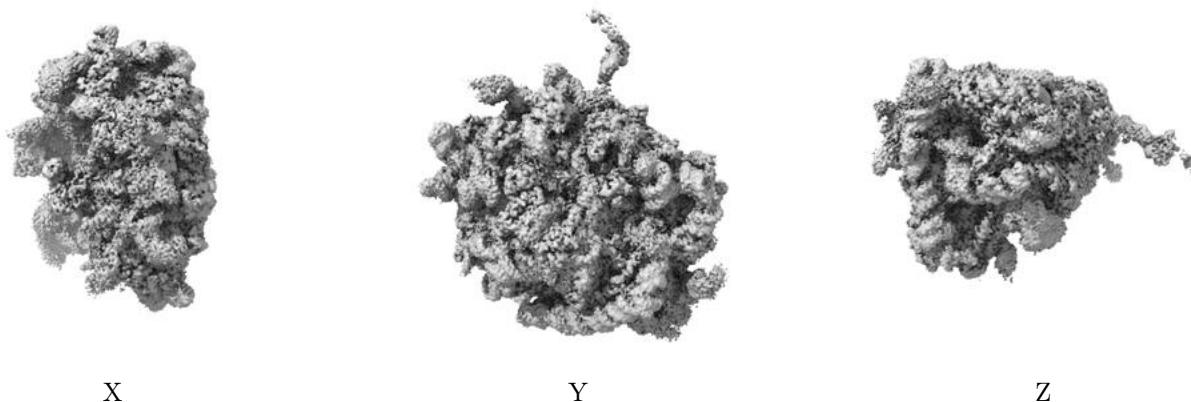


Z

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

6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 2.5. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

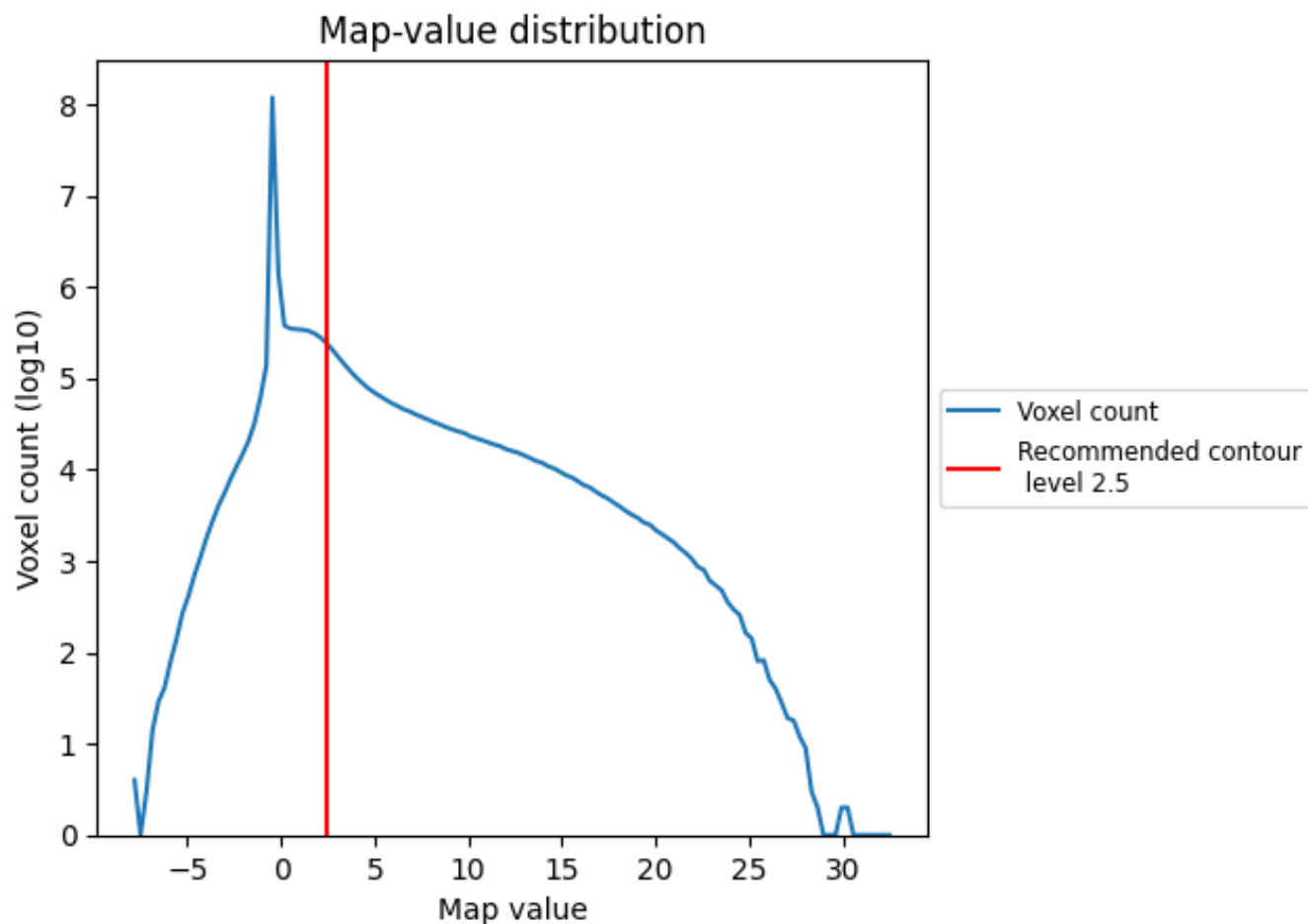
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

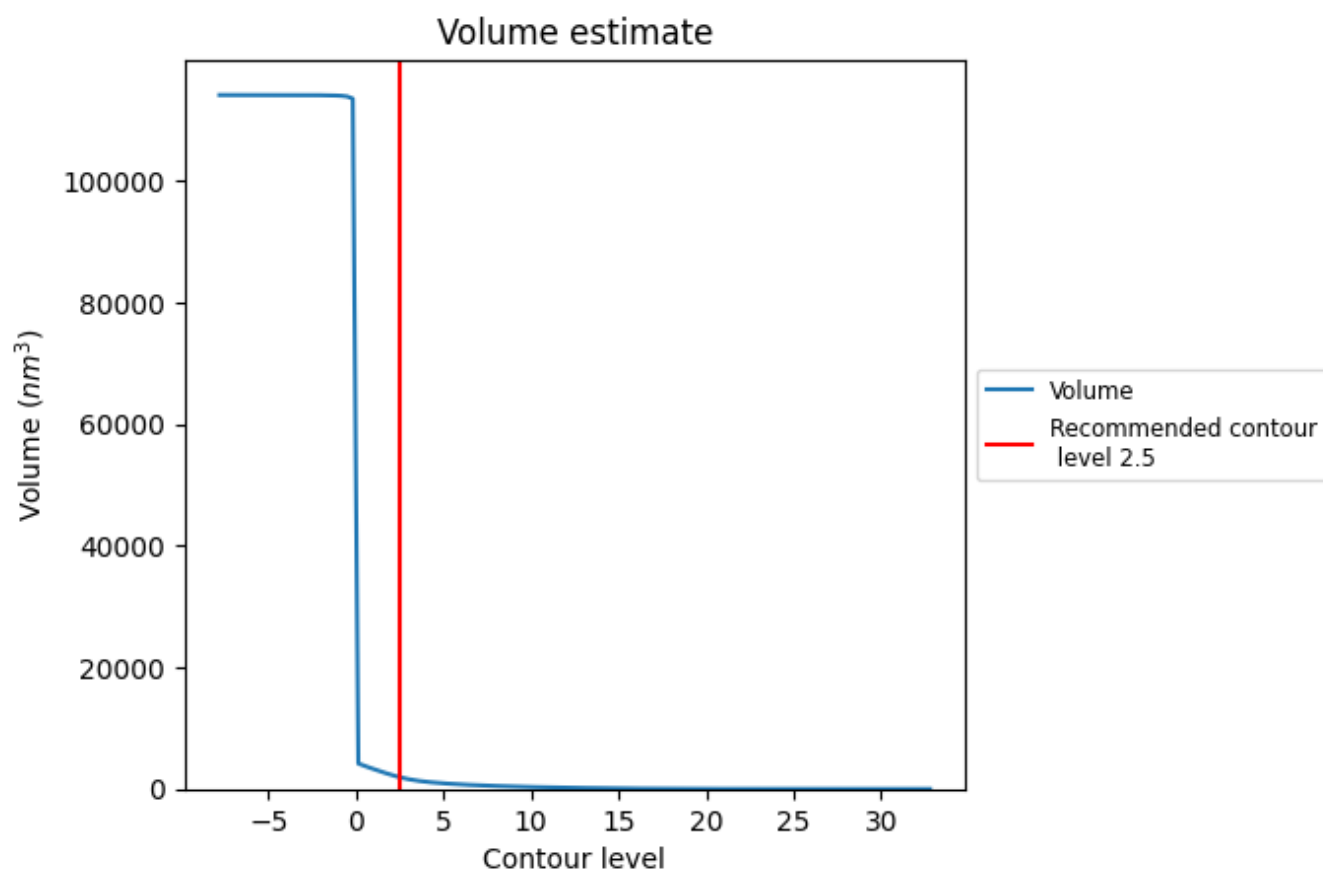
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

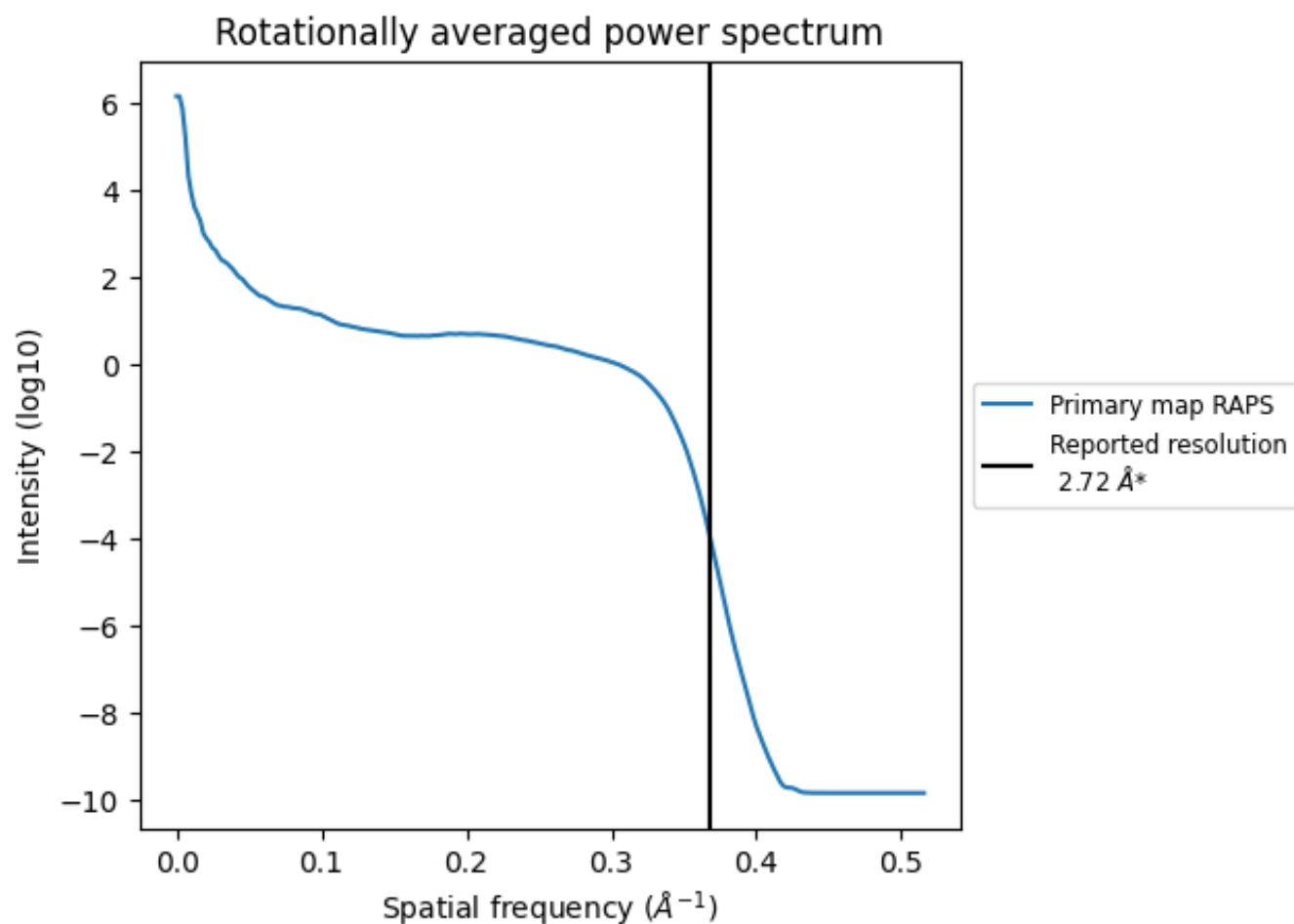
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 1927 nm^3 ; this corresponds to an approximate mass of 1741 kDa.

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

7.3 Rotationally averaged power spectrum ⓘ



*Reported resolution corresponds to spatial frequency of 0.368 Å⁻¹

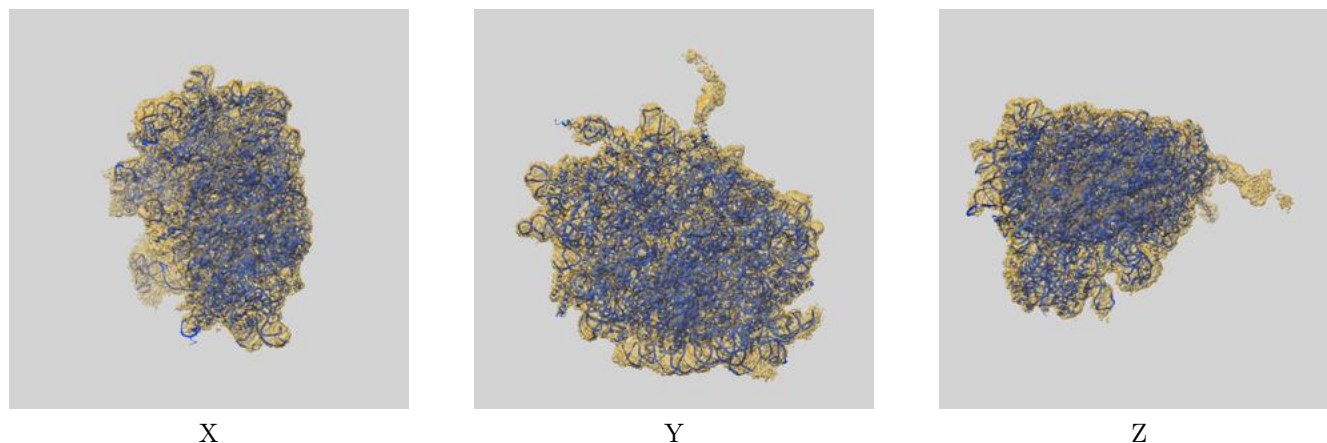
8 Fourier-Shell correlation ⓘ

This section was not generated. No FSC curve or half-maps provided.

9 Map-model fit [i](#)

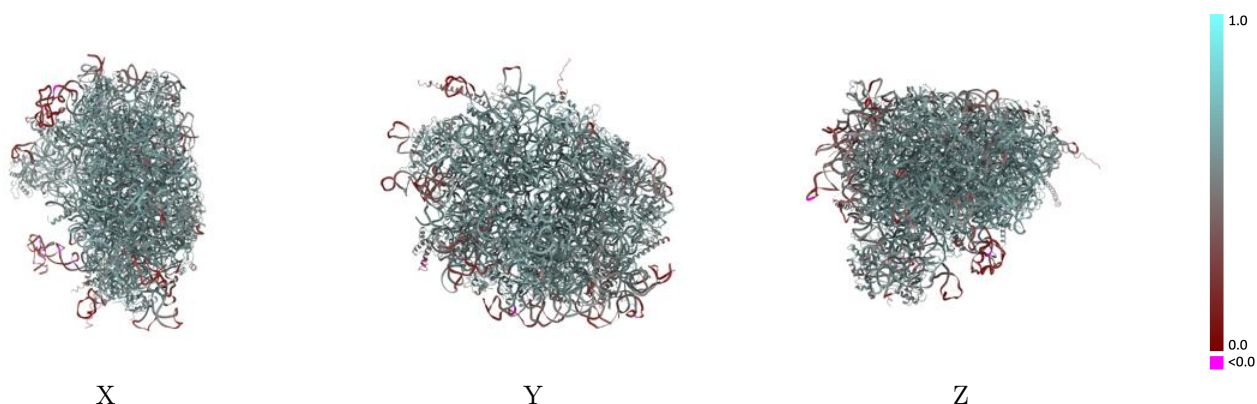
This section contains information regarding the fit between EMDB map EMD-31465 and PDB model 7F5S. Per-residue inclusion information can be found in section [3](#) on page [14](#).

9.1 Map-model overlay [i](#)



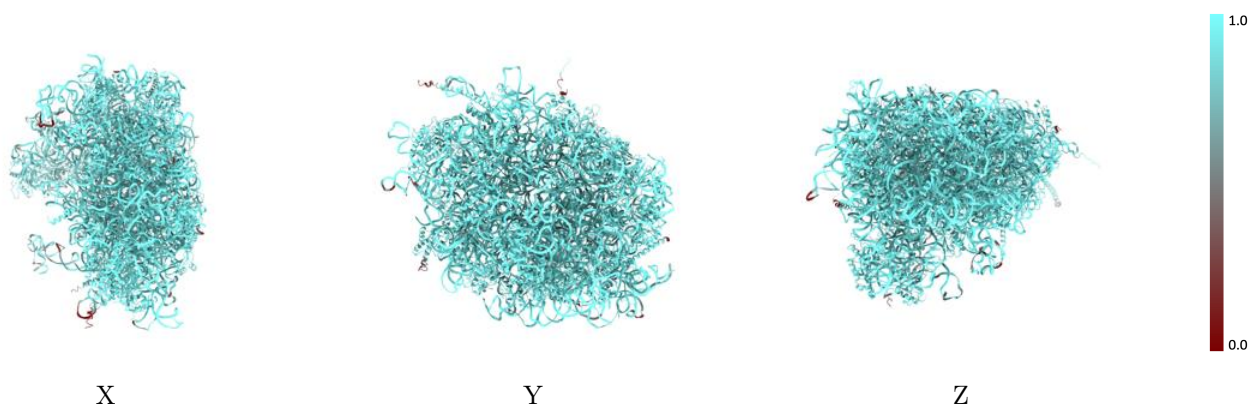
The images above show the 3D surface view of the map at the recommended contour level 2.5 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



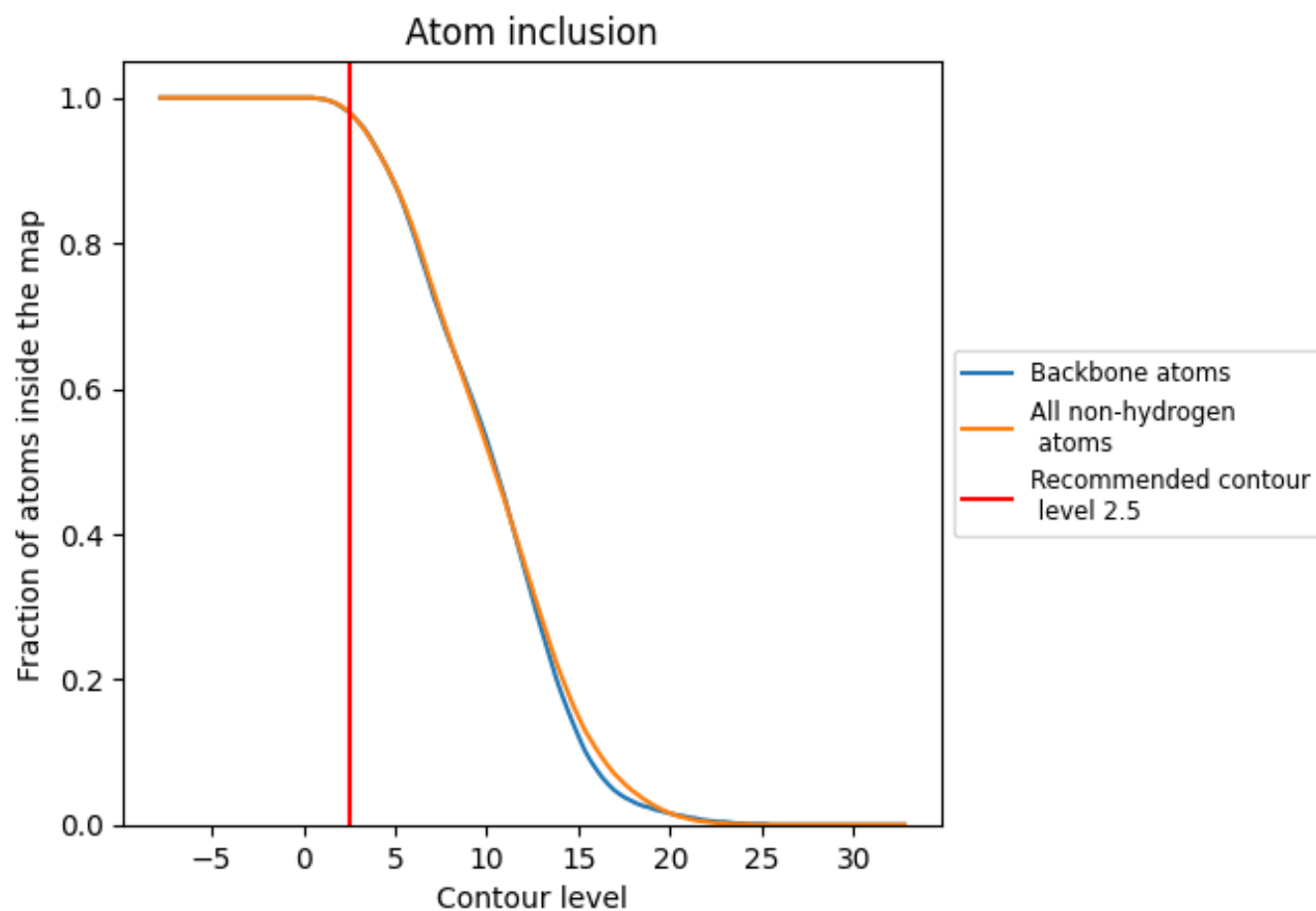
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (2.5).

9.4 Atom inclusion [i](#)



At the recommended contour level, 98% of all backbone atoms, 98% 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 (2.5) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.9800	 0.5610
L5	 0.9830	 0.5480
L7	 0.9980	 0.5990
L8	 0.9850	 0.5760
LA	 0.9950	 0.6110
LB	 0.9770	 0.5930
LC	 0.9820	 0.5890
LD	 0.9750	 0.5620
LE	 0.9820	 0.5540
LF	 0.9930	 0.5900
LG	 0.9250	 0.5330
LH	 0.9810	 0.5810
LI	 0.9730	 0.5810
LJ	 0.9290	 0.5170
LL	 0.9600	 0.5700
LM	 0.9820	 0.5730
LN	 0.9960	 0.6120
LO	 0.9890	 0.5960
LP	 0.9910	 0.6020
LQ	 0.9940	 0.6100
LR	 0.9170	 0.5480
LS	 0.9940	 0.6060
LT	 0.9770	 0.5750
LU	 0.9530	 0.5120
LV	 0.9840	 0.5950
LW	 0.9120	 0.5180
LX	 0.9830	 0.5790
LY	 0.9830	 0.5820
LZ	 0.9900	 0.5760
La	 0.9940	 0.6120
Lb	 0.9210	 0.5280
Lc	 0.9600	 0.5590
Ld	 0.9720	 0.5850
Le	 0.9950	 0.6040
Lf	 0.9910	 0.6140



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Chain	Atom inclusion	Q-score
Lg	 0.9780	 0.5850
Lh	 0.9770	 0.5750
Li	 0.9800	 0.5670
Lj	 0.9990	 0.6060
Lk	 0.9440	 0.5470
Ll	 0.9910	 0.5840
Lm	 0.9780	 0.5880
Ln	 0.9760	 0.5480
Lo	 0.9820	 0.5850
Lp	 0.9810	 0.5870
Lr	 0.9910	 0.5940