



Full wwPDB EM Validation Report ⓘ

Dec 17, 2025 – 05:03 PM EST

PDB ID : 9P6Z / pdb_00009p6z
EMDB ID : EMD-71329
Title : In situ human P-Z state 80S ribosome
Authors : Zheng, W.; Xiong, Y.
Deposited on : 2025-06-20
Resolution : 2.97 Å(reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

EMDB validation analysis : 0.0.1.dev129
Mogul : 2022.3.0, CSD as543be (2022)
MolProbity : **FAILED**
buster-report : 1.1.7 (2018)
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.47

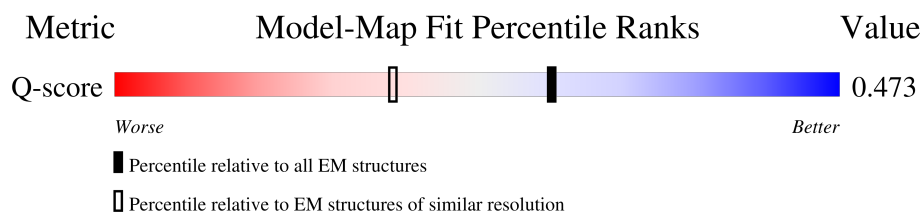
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 2.97 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	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Q-score	25397	13205 (2.47 - 3.47)

MolProbity failed to run properly - the sequence quality summary graphics cannot be shown.

2 Entry composition [i](#)

There are 88 unique types of molecules in this entry. The entry contains 219971 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a RNA chain called P site tRNA.

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

There are 6 discrepancies between the modelled and reference sequences:

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

- Molecule 2 is a RNA chain called 28S rRNA.

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

- Molecule 3 is a RNA chain called 5S rRNA.

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

- Molecule 4 is a RNA chain called 5.8S rRNA.

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

- Molecule 5 is a protein called 60S ribosomal protein L8.

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

- Molecule 6 is a protein called Large ribosomal subunit protein uL3.

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

- Molecule 7 is a protein called 60S ribosomal protein L4.

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

- Molecule 8 is a protein called Large ribosomal subunit protein uL18.

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

- Molecule 9 is a protein called Large ribosomal subunit protein eL6.

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

There are 10 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
LE	?	-	SER	deletion	UNP Q02878
LE	?	-	LYS	deletion	UNP Q02878
LE	?	-	VAL	deletion	UNP Q02878
LE	?	-	GLU	deletion	UNP Q02878
LE	?	-	LYS	deletion	UNP Q02878
LE	?	-	LYS	deletion	UNP Q02878
LE	?	-	LYS	deletion	UNP Q02878
LE	?	-	LYS	deletion	UNP Q02878
LE	?	-	GLU	deletion	UNP Q02878
LE	?	-	LYS	deletion	UNP Q02878

- Molecule 10 is a protein called 60S ribosomal protein L7.

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

- Molecule 11 is a protein called 60S ribosomal protein L7a.

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

- Molecule 12 is a protein called 60S ribosomal protein L9.

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

- Molecule 13 is a protein called Ribosomal protein uL16-like.

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

- Molecule 14 is a protein called 60S ribosomal protein L11.

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

- Molecule 15 is a protein called Large ribosomal subunit protein eL13.

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

- Molecule 16 is a protein called 60S ribosomal protein L14.

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

- Molecule 17 is a protein called 60S ribosomal protein L15.

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

- Molecule 18 is a protein called 60S ribosomal protein L13a.

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

- Molecule 19 is a protein called 60S ribosomal protein L17.

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

- Molecule 20 is a protein called 60S ribosomal protein L18.

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

- Molecule 21 is a protein called 60S ribosomal protein L19.

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

- Molecule 22 is a protein called 60S ribosomal protein L18a.

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

- Molecule 23 is a protein called 60S ribosomal protein L21.

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

- Molecule 24 is a protein called Heparin-binding protein HBp15.

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

- Molecule 25 is a protein called 60S ribosomal protein L23.

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

- Molecule 26 is a protein called Ribosomal protein L24.

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

There are 6 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
LW	?	-	SER	deletion	UNP A0A994J4A5
LW	?	-	GLU	deletion	UNP A0A994J4A5
LW	?	-	GLU	deletion	UNP A0A994J4A5
LW	?	-	ILE	deletion	UNP A0A994J4A5
LW	?	-	GLN	deletion	UNP A0A994J4A5
LW	?	-	LYS	deletion	UNP A0A994J4A5

- Molecule 27 is a protein called 60S ribosomal protein L23a.

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

- Molecule 28 is a protein called 60S ribosomal protein L26.

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

- Molecule 29 is a protein called 60S ribosomal protein L27.

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

- Molecule 30 is a protein called 60S ribosomal protein L27a.

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

- Molecule 31 is a protein called Large ribosomal subunit protein eL29.

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

There are 12 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
Lb	?	-	LYS	deletion	UNP P47914
Lb	?	-	PRO	deletion	UNP P47914
Lb	?	-	LYS	deletion	UNP P47914
Lb	?	-	GLU	deletion	UNP P47914
Lb	?	-	VAL	deletion	UNP P47914
Lb	?	-	LYS	deletion	UNP P47914
Lb	?	-	PRO	deletion	UNP P47914
Lb	?	-	LYS	deletion	UNP P47914
Lb	?	-	ILE	deletion	UNP P47914
Lb	?	-	PRO	deletion	UNP P47914
Lb	?	-	LYS	deletion	UNP P47914
Lb	?	-	GLY	deletion	UNP P47914

- Molecule 32 is a protein called 60S ribosomal protein L30.

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

- Molecule 33 is a protein called 60S ribosomal protein L31.

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

- Molecule 34 is a protein called 60S ribosomal protein L32.

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

- Molecule 35 is a protein called 60S ribosomal protein L35a.

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

- Molecule 36 is a protein called 60S ribosomal protein L34.

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

- Molecule 37 is a protein called 60S ribosomal protein L35.

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

- Molecule 38 is a protein called 60S ribosomal protein L36.

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

- Molecule 39 is a protein called 60S ribosomal protein L37.

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

- Molecule 40 is a protein called 60S ribosomal protein L38.

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

- Molecule 41 is a protein called 60S ribosomal protein L39.

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

- Molecule 42 is a protein called Large ribosomal subunit protein eL40.

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

- Molecule 43 is a protein called 60S ribosomal protein L41.

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

- Molecule 44 is a protein called 60S ribosomal protein L36a.

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

- Molecule 45 is a protein called 60S ribosomal protein L37a.

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

- Molecule 46 is a protein called 60S ribosomal protein L28.

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

- Molecule 47 is a protein called 60S acidic ribosomal protein P0.

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

- Molecule 48 is a protein called Large ribosomal subunit protein uL11.

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

There are 16 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
Lt	?	-	PRO	deletion	UNP P30050
Lt	?	-	PRO	deletion	UNP P30050
Lt	?	-	ARG	deletion	UNP P30050
Lt	?	-	ASP	deletion	UNP P30050
Lt	?	-	ARG	deletion	UNP P30050
Lt	?	-	LYS	deletion	UNP P30050
Lt	?	-	LYS	deletion	UNP P30050
Lt	?	-	GLN	deletion	UNP P30050
Lt	?	-	LYS	deletion	UNP P30050
Lt	?	-	ASN	deletion	UNP P30050
Lt	?	-	ILE	deletion	UNP P30050
Lt	?	-	LYS	deletion	UNP P30050
Lt	?	-	HIS	deletion	UNP P30050
Lt	?	-	SER	deletion	UNP P30050
Lt	?	-	GLY	deletion	UNP P30050
Lt	?	-	ASN	deletion	UNP P30050

- Molecule 49 is a protein called Small ribosomal subunit protein uS3.

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

- Molecule 50 is a protein called 40S ribosomal protein S5.

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

- Molecule 51 is a protein called 40S ribosomal protein S10.

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

- Molecule 52 is a protein called Small ribosomal subunit protein eS12.

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

- Molecule 53 is a protein called Small ribosomal subunit protein uS19.

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

- Molecule 54 is a protein called Small ribosomal subunit protein uS9.

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

- Molecule 55 is a protein called Small ribosomal subunit protein eS17.

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

- Molecule 56 is a protein called 40S ribosomal protein S18.

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

- Molecule 57 is a protein called 40S ribosomal protein S19.

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

- Molecule 58 is a protein called 40S ribosomal protein S20.

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

- Molecule 59 is a protein called Small ribosomal subunit protein eS25.

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

- Molecule 60 is a protein called 40S ribosomal protein S28.

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

- Molecule 61 is a protein called 40S ribosomal protein S29.

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

- Molecule 62 is a protein called Ubiquitin-40S ribosomal protein S27a.

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

- Molecule 63 is a protein called Receptor of activated protein C kinase 1.

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

- Molecule 64 is a protein called 40S ribosomal protein SA.

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

- Molecule 65 is a protein called 40S ribosomal protein S3a.

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

- Molecule 66 is a protein called 40S ribosomal protein S2.

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

- Molecule 67 is a protein called Small ribosomal subunit protein eS4, X isoform.

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

- Molecule 68 is a protein called 40S ribosomal protein S6.

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

- Molecule 69 is a protein called Small ribosomal subunit protein eS7.

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

There are 3 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
SH	?	-	SER	deletion	UNP P62081
SH	?	-	ARG	deletion	UNP P62081
SH	?	-	THR	deletion	UNP P62081

- Molecule 70 is a protein called 40S ribosomal protein S8.

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

- Molecule 71 is a protein called 40S ribosomal protein S9.

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

- Molecule 72 is a protein called 40S ribosomal protein S11.

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

- Molecule 73 is a protein called 40S ribosomal protein S13.

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

- Molecule 74 is a protein called Small ribosomal subunit protein uS11.

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

- Molecule 75 is a protein called Small ribosomal subunit protein eS21.

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

- Molecule 76 is a protein called 40S ribosomal protein S15a.

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

- Molecule 77 is a protein called 40S ribosomal protein S23.

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

- Molecule 78 is a protein called 40S ribosomal protein S24.

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

- Molecule 79 is a protein called 40S ribosomal protein S26.

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

- Molecule 80 is a protein called Small ribosomal subunit protein eS27.

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

- Molecule 81 is a protein called Small ribosomal subunit protein eS30.

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

- Molecule 82 is a RNA chain called 18S rRNA.

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

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

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

- Molecule 84 is a protein called Transcription factor BTF3.

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

- Molecule 85 is MAGNESIUM ION (CCD ID: MG) (formula: Mg) (labeled as "Ligand of Interest" by depositor).

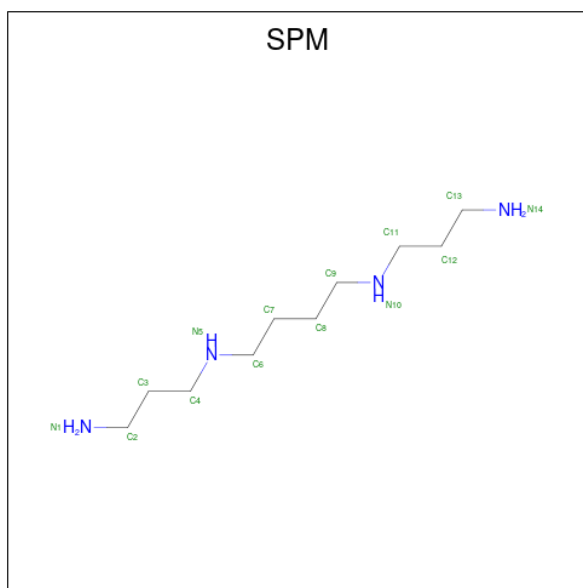
Mol	Chain	Residues	Atoms		AltConf
85	L5	179	Total	Mg	0
			179	179	
85	L7	3	Total	Mg	0
			3	3	
85	L8	5	Total	Mg	0
			5	5	

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Mol	Chain	Residues	Atoms		AltConf
85	LA	1	Total	Mg	0
			1	1	
85	LP	1	Total	Mg	0
			1	1	
85	LV	1	Total	Mg	0
			1	1	
85	Le	1	Total	Mg	0
			1	1	
85	SS	1	Total	Mg	0
			1	1	
85	SG	1	Total	Mg	0
			1	1	
85	S2	26	Total	Mg	0
			26	26	

- Molecule 86 is SPERMINE (CCD ID: SPM) (formula: $C_{10}H_{26}N_4$) (labeled as "Ligand of Interest" by depositor).



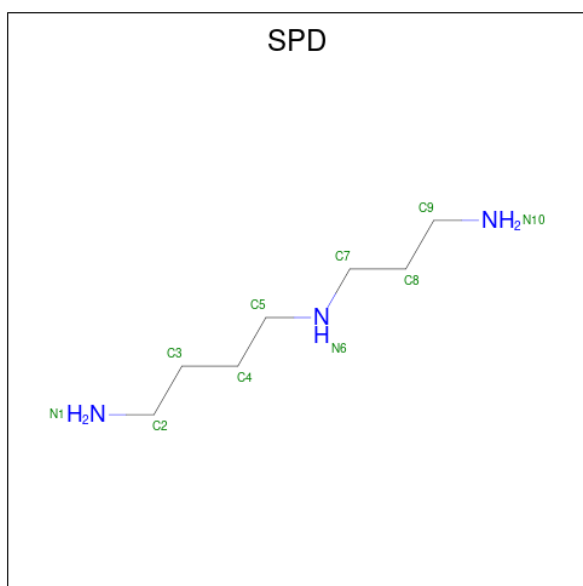
Mol	Chain	Residues	Atoms			AltConf
86	L5	1	Total	C	N	0
			14	10	4	
86	L5	1	Total	C	N	0
			14	10	4	
86	L5	1	Total	C	N	0
			14	10	4	
86	L5	1	Total	C	N	0
			14	10	4	

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

- Molecule 87 is SPERMIDINE (CCD ID: SPD) (formula: $C_7H_{19}N_3$) (labeled as "Ligand of Interest" by depositor).



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

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

- Molecule 88 is ZINC ION (CCD ID: ZN) (formula: Zn) (labeled as "Ligand of Interest" by depositor).

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

MolProbity failed to run properly - this section is therefore empty.

3 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	23406	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TECNAI F30	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	50	Depositor
Minimum defocus (nm)	1200	Depositor
Maximum defocus (nm)	2500	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	0.141	Depositor
Minimum map value	-0.065	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.006	Depositor
Recommended contour level	0.01	Depositor
Map size ($\text{\AA}$)	546.816, 546.816, 546.816	wwPDB
Map dimensions	512, 512, 512	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing ($\text{\AA}$)	1.068, 1.068, 1.068	Depositor

4 Model quality [i](#)

4.1 Standard geometry [i](#)

MolProbity failed to run properly - this section is therefore empty.

4.2 Too-close contacts [i](#)

MolProbity failed to run properly - this section is therefore empty.

4.3 Torsion angles [i](#)

4.3.1 Protein backbone [i](#)

MolProbity failed to run properly - this section is therefore empty.

4.3.2 Protein sidechains [i](#)

MolProbity failed to run properly - this section is therefore empty.

4.3.3 RNA [i](#)

MolProbity failed to run properly - this section is therefore empty.

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

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

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z > 2$	Counts	RMSZ	$\# Z > 2$
2	PSU	L5	1536	2	18,21,22	1.06	1 (5%)	21,30,33	2.00	4 (19%)
82	OMG	S2	683	82	19,26,27	1.20	2 (10%)	21,38,41	0.79	1 (4%)
2	PSU	L5	5010	2	18,21,22	1.06	2 (11%)	21,30,33	1.93	4 (19%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	OMG	L5	1316	2	19,26,27	1.31	3 (15%)	21,38,41	0.79	1 (4%)
2	A2M	L5	3867	2	18,25,26	1.42	4 (22%)	20,36,39	1.97	6 (30%)
2	UR3	L5	4530	2	19,22,23	2.65	7 (36%)	26,32,35	1.52	3 (11%)
82	PSU	S2	1004	82	18,21,22	1.08	1 (5%)	21,30,33	1.96	4 (19%)
2	PSU	L5	4353	2	18,21,22	1.09	2 (11%)	21,30,33	1.99	4 (19%)
82	A2M	S2	468	82	18,25,26	1.37	2 (11%)	20,36,39	2.15	6 (30%)
82	PSU	S2	1174	82	18,21,22	1.08	2 (11%)	21,30,33	1.98	4 (19%)
82	PSU	S2	686	82	18,21,22	1.05	1 (5%)	21,30,33	1.96	4 (19%)
2	OMU	L5	4498	2	19,22,23	3.19	7 (36%)	25,31,34	1.82	5 (20%)
82	OMG	S2	867	82	19,26,27	1.19	2 (10%)	21,38,41	0.87	1 (4%)
82	OMG	S2	509	82	19,26,27	1.19	2 (10%)	21,38,41	0.81	1 (4%)
2	PSU	L5	3639	2	18,21,22	1.06	2 (11%)	21,30,33	1.98	4 (19%)
2	PSU	L5	4689	2	18,21,22	1.04	2 (11%)	21,30,33	2.14	5 (23%)
2	OMG	L5	4196	2,1	19,26,27	1.24	3 (15%)	21,38,41	0.76	1 (4%)
82	PSU	S2	1367	82	18,21,22	1.09	1 (5%)	21,30,33	1.87	4 (19%)
82	G7M	S2	1639	1,82	20,26,27	2.41	6 (30%)	16,39,42	1.15	1 (6%)
2	OMG	L5	4499	2	19,26,27	1.21	3 (15%)	21,38,41	0.79	1 (4%)
82	4AC	S2	1842	82	21,24,25	0.40	0	28,34,37	0.47	0
2	PSU	L5	4521	2,85	18,21,22	1.06	2 (11%)	21,30,33	1.95	4 (19%)
2	PSU	L5	1782	2	18,21,22	1.08	1 (5%)	21,30,33	1.94	4 (19%)
2	OMU	L5	4306	2	19,22,23	3.22	7 (36%)	25,31,34	1.87	5 (20%)
2	PSU	L5	4576	2	18,21,22	1.07	2 (11%)	21,30,33	1.94	4 (19%)
82	4AC	S2	1337	82	21,24,25	0.40	0	28,34,37	0.70	1 (3%)
82	PSU	S2	649	82	18,21,22	1.04	1 (5%)	21,30,33	1.94	4 (19%)
82	PSU	S2	814	82	18,21,22	1.10	1 (5%)	21,30,33	1.87	4 (19%)
2	5MC	L5	3782	2,85	19,22,23	0.75	0	26,32,35	0.81	1 (3%)
2	OMG	L5	3899	2	19,26,27	1.26	3 (15%)	21,38,41	0.82	1 (4%)
2	OMG	L5	4618	2	19,26,27	1.29	3 (15%)	21,38,41	0.76	1 (4%)
2	PSU	L5	4471	2	18,21,22	1.06	2 (11%)	21,30,33	1.93	4 (19%)
82	A2M	S2	576	82	18,25,26	1.33	2 (11%)	20,36,39	1.99	5 (25%)
82	OMG	S2	644	82	19,26,27	1.19	3 (15%)	21,38,41	0.80	1 (4%)
2	PSU	L5	3851	2	18,21,22	1.04	1 (5%)	21,30,33	1.92	4 (19%)
82	PSU	S2	801	82	18,21,22	1.13	1 (5%)	21,30,33	1.91	4 (19%)
2	PSU	L5	3822	2	18,21,22	1.09	3 (16%)	21,30,33	2.07	6 (28%)
2	OMG	L5	1522	2	19,26,27	1.30	3 (15%)	21,38,41	0.82	1 (4%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	PSU	L5	3920	2,85	18,21,22	1.09	2 (11%)	21,30,33	2.02	5 (23%)
82	PSU	S2	863	82	18,21,22	1.06	1 (5%)	21,30,33	1.92	4 (19%)
2	OMG	L5	2364	2,85	19,26,27	1.25	3 (15%)	21,38,41	0.79	1 (4%)
4	PSU	L8	55	4	18,21,22	1.02	2 (11%)	21,30,33	1.89	4 (19%)
2	PSU	L5	4293	2	18,21,22	1.10	2 (11%)	21,30,33	2.12	4 (19%)
2	PSU	L5	4312	2	18,21,22	1.09	2 (11%)	21,30,33	1.93	4 (19%)
82	OMU	S2	354	82	19,22,23	3.23	7 (36%)	25,31,34	1.88	5 (20%)
2	OMC	L5	2804	2	19,22,23	0.65	0	25,31,34	0.62	0
82	OMU	S2	116	82	19,22,23	3.31	7 (36%)	25,31,34	1.75	5 (20%)
2	OMG	L5	4370	2	19,26,27	1.29	3 (15%)	21,38,41	0.78	1 (4%)
2	PSU	L5	4972	2	18,21,22	1.00	1 (5%)	21,30,33	1.99	5 (23%)
4	PSU	L8	69	4	18,21,22	1.08	2 (11%)	21,30,33	2.00	6 (28%)
2	PSU	L5	4403	2	18,21,22	1.00	2 (11%)	21,30,33	2.04	6 (28%)
82	PSU	S2	93	82	18,21,22	1.10	1 (5%)	21,30,33	1.79	4 (19%)
2	A2M	L5	2401	2	18,25,26	1.40	3 (16%)	20,36,39	2.09	5 (25%)
2	OMC	L5	4456	2	19,22,23	0.74	1 (5%)	25,31,34	0.87	1 (4%)
2	PSU	L5	4457	2	18,21,22	1.12	3 (16%)	21,30,33	1.98	5 (23%)
2	A2M	L5	398	2	18,25,26	1.41	4 (22%)	20,36,39	2.13	6 (30%)
82	6MZ	S2	1832	82,85	21,26,26	1.37	2 (9%)	22,39,39	1.82	3 (13%)
82	A2M	S2	1383	82	18,25,26	1.24	2 (11%)	20,36,39	2.31	6 (30%)
2	1MA	L5	1322	2,85	17,25,26	1.06	2 (11%)	17,37,40	1.18	3 (17%)
2	5MC	L5	4447	2	19,22,23	0.90	1 (5%)	26,32,35	0.72	0
82	PSU	S2	1177	82	18,21,22	1.06	2 (11%)	21,30,33	1.89	4 (19%)
2	PSU	L5	2632	2	18,21,22	1.08	1 (5%)	21,30,33	1.88	4 (19%)
2	A2M	L5	1524	2	18,25,26	1.45	3 (16%)	20,36,39	2.40	6 (30%)
2	OMG	L5	4494	2	19,26,27	1.34	3 (15%)	21,38,41	0.73	0
2	A2M	L5	1534	2,85	18,25,26	1.47	3 (16%)	20,36,39	1.89	7 (35%)
82	OMU	S2	1326	82	19,22,23	3.29	7 (36%)	25,31,34	1.88	5 (20%)
2	PSU	L5	4431	2	18,21,22	1.07	2 (11%)	21,30,33	1.95	4 (19%)
82	OMU	S2	1442	82	19,22,23	3.32	7 (36%)	25,31,34	1.81	4 (16%)
82	A2M	S2	166	82	18,25,26	1.38	3 (16%)	20,36,39	2.09	6 (30%)
2	PSU	L5	4673	2,85	18,21,22	1.02	2 (11%)	21,30,33	1.86	4 (19%)
2	OMC	L5	2351	2,85	19,22,23	0.70	0	25,31,34	1.23	2 (8%)
2	PSU	L5	4442	2	18,21,22	1.11	3 (16%)	21,30,33	2.06	6 (28%)
2	PSU	L5	1792	2	18,21,22	1.02	1 (5%)	21,30,33	1.91	4 (19%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	OMC	L5	3841	2	19,22,23	0.68	0	25,31,34	0.59	0
82	A2M	S2	99	82,85	18,25,26	1.35	2 (11%)	20,36,39	2.15	5 (25%)
82	OMC	S2	1272	82	19,22,23	0.50	0	25,31,34	0.76	0
2	A2M	L5	4590	2	18,25,26	1.33	3 (16%)	20,36,39	2.07	6 (30%)
82	OMC	S2	1703	82	19,22,23	0.59	0	25,31,34	0.61	0
2	PSU	L5	1781	2	18,21,22	1.06	1 (5%)	21,30,33	1.93	4 (19%)
82	OMU	S2	172	82	19,22,23	3.37	7 (36%)	25,31,34	1.83	4 (16%)
82	OMC	S2	174	82	19,22,23	0.57	0	25,31,34	0.65	0
2	PSU	L5	3637	2	18,21,22	1.03	1 (5%)	21,30,33	2.00	3 (14%)
82	OMU	S2	627	82	19,22,23	3.39	7 (36%)	25,31,34	1.81	5 (20%)
2	PSU	L5	4579	2	18,21,22	1.04	1 (5%)	21,30,33	1.96	4 (19%)
2	OMU	L5	2837	2	19,22,23	3.27	7 (36%)	25,31,34	1.84	5 (20%)
82	PSU	S2	105	82	18,21,22	1.10	1 (5%)	21,30,33	1.92	4 (19%)
2	PSU	L5	4532	2	18,21,22	1.07	1 (5%)	21,30,33	1.96	4 (19%)
2	OMG	L5	4623	2	19,26,27	1.31	3 (15%)	21,38,41	0.81	0
82	PSU	S2	109	82	18,21,22	1.09	2 (11%)	21,30,33	2.03	5 (23%)
2	OMG	L5	1625	2	19,26,27	1.32	3 (15%)	21,38,41	0.80	0
2	PSU	L5	4628	2	18,21,22	1.06	2 (11%)	21,30,33	2.00	4 (19%)
2	PSU	L5	1677	2	18,21,22	1.04	2 (11%)	21,30,33	1.98	5 (23%)
2	OMC	L5	2422	2,85	19,22,23	0.62	0	25,31,34	0.81	1 (4%)
2	PSU	L5	4636	2	18,21,22	1.13	2 (11%)	21,30,33	2.01	6 (28%)
82	OMG	S2	436	82	19,26,27	1.24	3 (15%)	21,38,41	0.83	1 (4%)
82	OMG	S2	1490	82	19,26,27	1.32	3 (15%)	21,38,41	0.67	0
82	A2M	S2	27	82	18,25,26	1.33	2 (11%)	20,36,39	2.01	6 (30%)
2	PSU	L5	3853	2,85	18,21,22	1.06	1 (5%)	21,30,33	1.90	4 (19%)
82	OMG	S2	1328	82	19,26,27	1.19	3 (15%)	21,38,41	0.80	1 (4%)
82	OMU	S2	1288	82	19,22,23	3.38	7 (36%)	25,31,34	1.77	5 (20%)
2	A2M	L5	1326	2	18,25,26	1.38	3 (16%)	20,36,39	1.85	7 (35%)
2	OMG	L5	2424	2	19,26,27	1.26	3 (15%)	21,38,41	0.74	1 (4%)
82	OMU	S2	121	82	19,22,23	3.35	7 (36%)	25,31,34	1.83	5 (20%)
2	OMG	L5	4228	2	19,26,27	1.27	3 (15%)	21,38,41	0.87	1 (4%)
2	A2M	L5	3718	2	18,25,26	1.39	3 (16%)	20,36,39	2.04	5 (25%)
82	OMC	S2	1391	82	19,22,23	0.57	0	25,31,34	0.85	1 (4%)
82	A2M	S2	159	82	18,25,26	1.25	1 (5%)	20,36,39	1.85	7 (35%)
2	PSU	L5	4299	2	18,21,22	1.01	1 (5%)	21,30,33	1.90	4 (19%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
82	PSU	S2	1244	82	18,21,22	1.05	1 (5%)	21,30,33	1.88	4 (19%)
2	OMC	L5	4536	2	19,22,23	0.68	0	25,31,34	0.68	0
2	A2M	L5	3785	2,85	18,25,26	1.42	2 (11%)	20,36,39	2.37	7 (35%)
2	PSU	L5	2839	2	18,21,22	1.03	2 (11%)	21,30,33	1.81	4 (19%)
2	OMU	L5	4227	2	19,22,23	3.25	7 (36%)	25,31,34	1.90	5 (20%)
82	OMU	S2	799	82	19,22,23	3.37	7 (36%)	25,31,34	1.84	5 (20%)
2	A2M	L5	2787	2	18,25,26	1.25	2 (11%)	20,36,39	1.80	6 (30%)
82	PSU	S2	1232	82	18,21,22	1.07	1 (5%)	21,30,33	1.92	4 (19%)
2	A2M	L5	1323	2	18,25,26	1.40	3 (16%)	20,36,39	1.99	7 (35%)
2	OMC	L5	3701	2	19,22,23	0.70	0	25,31,34	1.71	4 (16%)
82	OMC	S2	462	82	19,22,23	0.54	0	25,31,34	0.71	0
82	PSU	S2	866	82	18,21,22	1.07	1 (5%)	21,30,33	1.98	5 (23%)
82	A2M	S2	1031	82	18,25,26	1.33	3 (16%)	20,36,39	2.03	6 (30%)
2	OMC	L5	3887	2	19,22,23	0.60	0	25,31,34	0.74	0
2	A2M	L5	400	2	18,25,26	1.46	4 (22%)	20,36,39	2.03	7 (35%)
82	PSU	S2	1081	82	18,21,22	1.05	1 (5%)	21,30,33	1.98	5 (23%)
2	PSU	L5	1860	2	18,21,22	1.04	1 (5%)	21,30,33	1.82	4 (19%)
2	OMC	L5	2824	2	19,22,23	0.68	0	25,31,34	0.76	1 (4%)
2	OMC	L5	2365	2,85	19,22,23	0.64	0	25,31,34	0.62	0
82	PSU	S2	1045	82	18,21,22	1.07	1 (5%)	21,30,33	1.89	4 (19%)
2	PSU	L5	1862	2	18,21,22	1.02	1 (5%)	21,30,33	1.94	4 (19%)
2	A2M	L5	3830	2	18,25,26	1.37	2 (11%)	20,36,39	2.13	5 (25%)
2	PSU	L5	4361	2	18,21,22	1.03	1 (5%)	21,30,33	1.96	4 (19%)
2	OMG	L5	3627	2	19,26,27	1.27	3 (15%)	21,38,41	0.84	1 (4%)
2	6MZ	L5	4220	2	17,25,26	3.57	7 (41%)	15,36,39	2.62	4 (26%)
2	PSU	L5	4296	2	18,21,22	1.06	1 (5%)	21,30,33	2.00	4 (19%)
2	OMG	L5	4392	2	19,26,27	1.31	3 (15%)	21,38,41	0.80	1 (4%)
2	PSU	L5	4493	2	18,21,22	1.02	1 (5%)	21,30,33	1.78	4 (19%)
82	OMG	S2	601	82	19,26,27	1.19	3 (15%)	21,38,41	0.78	1 (4%)
82	PSU	S2	651	82	18,21,22	1.10	1 (5%)	21,30,33	2.01	5 (23%)
82	B8N	S2	1248	82	25,29,30	3.24	6 (24%)	28,42,45	1.97	8 (28%)
82	MA6	S2	1851	82	19,26,27	1.51	3 (15%)	18,38,41	3.50	3 (16%)
2	OMC	L5	1340	2	19,22,23	0.68	0	25,31,34	0.83	0
2	PSU	L5	3884	2	18,21,22	1.05	2 (11%)	21,30,33	1.98	4 (19%)
82	PSU	S2	406	82	18,21,22	1.08	1 (5%)	21,30,33	2.05	5 (23%)
82	A2M	S2	484	82	18,25,26	1.28	2 (11%)	20,36,39	1.80	5 (25%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	PSU	L5	1744	2,85	18,21,22	1.08	2 (11%)	21,30,33	1.91	6 (28%)
2	OMG	L5	3744	2	19,26,27	1.27	3 (15%)	21,38,41	0.77	1 (4%)
2	PSU	L5	3695	2	18,21,22	1.02	1 (5%)	21,30,33	1.96	5 (23%)
2	OMG	L5	4637	2	19,26,27	1.27	3 (15%)	21,38,41	0.79	1 (4%)
82	A2M	S2	668	82,85	18,25,26	1.43	3 (16%)	20,36,39	2.09	5 (25%)
2	OMC	L5	3869	2	19,22,23	0.65	0	25,31,34	0.72	0
2	A2M	L5	2815	2	18,25,26	1.36	3 (16%)	20,36,39	1.89	7 (35%)
2	PSU	L5	3844	2	18,21,22	1.09	2 (11%)	21,30,33	1.95	4 (19%)
2	OMG	L5	2876	2	19,26,27	1.28	3 (15%)	21,38,41	0.76	0
2	A2M	L5	2363	2,85	18,25,26	1.36	3 (16%)	20,36,39	1.95	6 (30%)
82	OMC	S2	517	82	19,22,23	0.58	0	25,31,34	0.65	0
2	OMC	L5	3808	2	19,22,23	0.67	0	25,31,34	0.85	2 (8%)
2	PSU	L5	4500	2	18,21,22	1.09	2 (11%)	21,30,33	2.08	5 (23%)
82	PSU	S2	1056	82	18,21,22	1.11	2 (11%)	21,30,33	2.05	5 (23%)
2	PSU	L5	1582	2	18,21,22	1.11	2 (11%)	21,30,33	1.91	4 (19%)
82	MA6	S2	1850	82	19,26,27	1.49	3 (15%)	18,38,41	3.49	3 (16%)
2	PSU	L5	4552	2	18,21,22	1.02	2 (11%)	21,30,33	1.97	5 (23%)
2	PSU	L5	4973	2	18,21,22	1.06	2 (11%)	21,30,33	1.94	5 (23%)
82	PSU	S2	681	82	18,21,22	1.07	2 (11%)	21,30,33	1.93	4 (19%)
82	OMU	S2	428	82	19,22,23	3.31	7 (36%)	25,31,34	1.89	5 (20%)
2	OMU	L5	4620	2	19,22,23	3.15	7 (36%)	25,31,34	1.74	5 (20%)
2	OMC	L5	2861	2	19,22,23	0.63	0	25,31,34	0.78	1 (4%)
2	UY1	L5	3818	2	19,22,23	4.81	8 (42%)	21,31,34	2.00	5 (23%)
2	OMU	L5	3925	2	19,22,23	3.20	7 (36%)	25,31,34	1.89	5 (20%)
2	PSU	L5	5001	2	18,21,22	1.10	2 (11%)	21,30,33	1.91	4 (19%)
4	OMG	L8	75	4	19,26,27	1.24	3 (15%)	21,38,41	0.77	1 (4%)
2	A2M	L5	1871	2,85	18,25,26	1.52	4 (22%)	20,36,39	2.19	7 (35%)
82	PSU	S2	1046	82	18,21,22	1.12	2 (11%)	21,30,33	1.98	6 (28%)
2	A2M	L5	4523	2,85	18,25,26	1.53	4 (22%)	20,36,39	2.19	5 (25%)
2	A2M	L5	4571	2	18,25,26	1.40	3 (16%)	20,36,39	1.93	7 (35%)
2	PSU	L5	1683	2	18,21,22	1.11	2 (11%)	21,30,33	1.96	4 (19%)
82	PSU	S2	966	82	18,21,22	1.09	2 (11%)	21,30,33	1.87	4 (19%)
2	OMG	L5	3792	2	19,26,27	1.26	3 (15%)	21,38,41	0.72	1 (4%)
2	A2M	L5	3825	2	18,25,26	1.33	3 (16%)	20,36,39	2.03	6 (30%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	PSU	L5	1536	2	-	2/7/25/26	0/2/2/2
82	OMG	S2	683	82	-	2/5/27/28	0/3/3/3
2	PSU	L5	5010	2	-	0/7/25/26	0/2/2/2
2	OMG	L5	1316	2	-	1/5/27/28	0/3/3/3
2	A2M	L5	3867	2	-	3/5/27/28	0/3/3/3
2	UR3	L5	4530	2	-	0/7/25/26	0/2/2/2
82	PSU	S2	1004	82	-	0/7/25/26	0/2/2/2
2	PSU	L5	4353	2	-	0/7/25/26	0/2/2/2
82	A2M	S2	468	82	-	1/5/27/28	0/3/3/3
82	PSU	S2	1174	82	-	0/7/25/26	0/2/2/2
82	PSU	S2	686	82	-	0/7/25/26	0/2/2/2
2	OMU	L5	4498	2	-	0/9/27/28	0/2/2/2
82	OMG	S2	867	82	-	2/5/27/28	0/3/3/3
82	OMG	S2	509	82	-	0/5/27/28	0/3/3/3
2	PSU	L5	3639	2	-	0/7/25/26	0/2/2/2
2	PSU	L5	4689	2	-	0/7/25/26	0/2/2/2
2	OMG	L5	4196	2,1	-	1/5/27/28	0/3/3/3
82	PSU	S2	1367	82	-	0/7/25/26	0/2/2/2
82	G7M	S2	1639	1,82	-	2/3/25/26	0/3/3/3
2	OMG	L5	4499	2	-	0/5/27/28	0/3/3/3
82	4AC	S2	1842	82	-	0/11/29/30	0/2/2/2
2	PSU	L5	4521	2,85	-	0/7/25/26	0/2/2/2
2	PSU	L5	1782	2	-	0/7/25/26	0/2/2/2
2	OMU	L5	4306	2	-	1/9/27/28	0/2/2/2
2	PSU	L5	4576	2	-	0/7/25/26	0/2/2/2
82	4AC	S2	1337	82	-	1/11/29/30	0/2/2/2
82	PSU	S2	649	82	-	0/7/25/26	0/2/2/2
82	PSU	S2	814	82	-	0/7/25/26	0/2/2/2
2	5MC	L5	3782	2,85	-	0/7/25/26	0/2/2/2
2	OMG	L5	3899	2	-	2/5/27/28	0/3/3/3
2	OMG	L5	4618	2	-	0/5/27/28	0/3/3/3
2	PSU	L5	4471	2	-	0/7/25/26	0/2/2/2
82	A2M	S2	576	82	-	4/5/27/28	0/3/3/3
82	OMG	S2	644	82	-	4/5/27/28	0/3/3/3
2	PSU	L5	3851	2	-	0/7/25/26	0/2/2/2
82	PSU	S2	801	82	-	2/7/25/26	0/2/2/2
2	PSU	L5	3822	2	-	0/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	OMG	L5	1522	2	-	0/5/27/28	0/3/3/3
2	PSU	L5	3920	2,85	-	0/7/25/26	0/2/2/2
82	PSU	S2	863	82	-	0/7/25/26	0/2/2/2
2	OMG	L5	2364	2,85	-	2/5/27/28	0/3/3/3
4	PSU	L8	55	4	-	0/7/25/26	0/2/2/2
2	PSU	L5	4293	2	-	0/7/25/26	0/2/2/2
2	PSU	L5	4312	2	-	0/7/25/26	0/2/2/2
82	OMU	S2	354	82	-	0/9/27/28	0/2/2/2
2	OMC	L5	2804	2	-	0/9/27/28	0/2/2/2
82	OMU	S2	116	82	-	1/9/27/28	0/2/2/2
2	OMG	L5	4370	2	-	1/5/27/28	0/3/3/3
2	PSU	L5	4972	2	-	0/7/25/26	0/2/2/2
4	PSU	L8	69	4	-	0/7/25/26	0/2/2/2
2	PSU	L5	4403	2	-	0/7/25/26	0/2/2/2
82	PSU	S2	93	82	-	0/7/25/26	0/2/2/2
2	A2M	L5	2401	2	-	2/5/27/28	0/3/3/3
2	OMC	L5	4456	2	-	0/9/27/28	0/2/2/2
2	PSU	L5	4457	2	-	0/7/25/26	0/2/2/2
2	A2M	L5	398	2	-	3/5/27/28	0/3/3/3
82	6MZ	S2	1832	82,85	-	5/8/28/28	0/3/3/3
82	A2M	S2	1383	82	-	0/5/27/28	0/3/3/3
2	1MA	L5	1322	2,85	-	0/3/25/26	0/3/3/3
2	5MC	L5	4447	2	-	4/7/25/26	0/2/2/2
82	PSU	S2	1177	82	-	0/7/25/26	0/2/2/2
2	PSU	L5	2632	2	-	2/7/25/26	0/2/2/2
2	A2M	L5	1524	2	-	2/5/27/28	0/3/3/3
2	OMG	L5	4494	2	-	1/5/27/28	0/3/3/3
2	A2M	L5	1534	2,85	-	1/5/27/28	0/3/3/3
82	OMU	S2	1326	82	-	0/9/27/28	0/2/2/2
2	PSU	L5	4431	2	-	0/7/25/26	0/2/2/2
82	OMU	S2	1442	82	-	2/9/27/28	0/2/2/2
82	A2M	S2	166	82	-	0/5/27/28	0/3/3/3
2	PSU	L5	4673	2,85	-	0/7/25/26	0/2/2/2
2	OMC	L5	2351	2,85	-	2/9/27/28	0/2/2/2
2	PSU	L5	4442	2	-	0/7/25/26	0/2/2/2
2	PSU	L5	1792	2	-	0/7/25/26	0/2/2/2
2	OMC	L5	3841	2	-	0/9/27/28	0/2/2/2
82	A2M	S2	99	82,85	-	2/5/27/28	0/3/3/3
82	OMC	S2	1272	82	-	2/9/27/28	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	A2M	L5	4590	2	-	4/5/27/28	0/3/3/3
82	OMC	S2	1703	82	-	1/9/27/28	0/2/2/2
2	PSU	L5	1781	2	-	2/7/25/26	0/2/2/2
82	OMU	S2	172	82	-	0/9/27/28	0/2/2/2
82	OMC	S2	174	82	-	0/9/27/28	0/2/2/2
2	PSU	L5	3637	2	-	0/7/25/26	0/2/2/2
82	OMU	S2	627	82	-	0/9/27/28	0/2/2/2
2	PSU	L5	4579	2	-	0/7/25/26	0/2/2/2
2	OMU	L5	2837	2	-	0/9/27/28	0/2/2/2
82	PSU	S2	105	82	-	0/7/25/26	0/2/2/2
2	PSU	L5	4532	2	-	0/7/25/26	0/2/2/2
2	OMG	L5	4623	2	-	2/5/27/28	0/3/3/3
82	PSU	S2	109	82	-	0/7/25/26	0/2/2/2
2	OMG	L5	1625	2	-	2/5/27/28	0/3/3/3
2	PSU	L5	4628	2	-	0/7/25/26	0/2/2/2
2	PSU	L5	1677	2	-	4/7/25/26	0/2/2/2
2	OMC	L5	2422	2,85	-	2/9/27/28	0/2/2/2
2	PSU	L5	4636	2	-	2/7/25/26	0/2/2/2
82	OMG	S2	436	82	-	0/5/27/28	0/3/3/3
82	OMG	S2	1490	82	-	2/5/27/28	0/3/3/3
82	A2M	S2	27	82	-	1/5/27/28	0/3/3/3
2	PSU	L5	3853	2,85	-	0/7/25/26	0/2/2/2
82	OMG	S2	1328	82	-	1/5/27/28	0/3/3/3
82	OMU	S2	1288	82	-	3/9/27/28	0/2/2/2
2	A2M	L5	1326	2	-	2/5/27/28	0/3/3/3
2	OMG	L5	2424	2	-	0/5/27/28	0/3/3/3
82	OMU	S2	121	82	-	0/9/27/28	0/2/2/2
2	OMG	L5	4228	2	-	1/5/27/28	0/3/3/3
2	A2M	L5	3718	2	-	0/5/27/28	0/3/3/3
82	OMC	S2	1391	82	-	0/9/27/28	0/2/2/2
82	A2M	S2	159	82	-	1/5/27/28	0/3/3/3
2	PSU	L5	4299	2	-	0/7/25/26	0/2/2/2
82	PSU	S2	1244	82	-	0/7/25/26	0/2/2/2
2	OMC	L5	4536	2	-	0/9/27/28	0/2/2/2
2	A2M	L5	3785	2,85	-	1/5/27/28	0/3/3/3
2	PSU	L5	2839	2	-	0/7/25/26	0/2/2/2
2	OMU	L5	4227	2	-	1/9/27/28	0/2/2/2
82	OMU	S2	799	82	-	2/9/27/28	0/2/2/2
2	A2M	L5	2787	2	-	3/5/27/28	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
82	PSU	S2	1232	82	-	0/7/25/26	0/2/2/2
2	A2M	L5	1323	2	-	2/5/27/28	0/3/3/3
2	OMC	L5	3701	2	-	6/9/27/28	0/2/2/2
82	OMC	S2	462	82	-	0/9/27/28	0/2/2/2
82	PSU	S2	866	82	-	0/7/25/26	0/2/2/2
82	A2M	S2	1031	82	-	0/5/27/28	0/3/3/3
2	OMC	L5	3887	2	-	1/9/27/28	0/2/2/2
2	A2M	L5	400	2	-	1/5/27/28	0/3/3/3
82	PSU	S2	1081	82	-	1/7/25/26	0/2/2/2
2	PSU	L5	1860	2	-	0/7/25/26	0/2/2/2
2	OMC	L5	2824	2	-	0/9/27/28	0/2/2/2
2	OMC	L5	2365	2,85	-	1/9/27/28	0/2/2/2
82	PSU	S2	1045	82	-	2/7/25/26	0/2/2/2
2	PSU	L5	1862	2	-	0/7/25/26	0/2/2/2
2	A2M	L5	3830	2	-	0/5/27/28	0/3/3/3
2	PSU	L5	4361	2	-	0/7/25/26	0/2/2/2
2	OMG	L5	3627	2	-	0/5/27/28	0/3/3/3
2	6MZ	L5	4220	2	-	2/5/27/28	0/3/3/3
2	PSU	L5	4296	2	-	0/7/25/26	0/2/2/2
2	OMG	L5	4392	2	-	0/5/27/28	0/3/3/3
2	PSU	L5	4493	2	-	0/7/25/26	0/2/2/2
82	OMG	S2	601	82	-	1/5/27/28	0/3/3/3
82	PSU	S2	651	82	-	0/7/25/26	0/2/2/2
82	B8N	S2	1248	82	-	5/16/34/35	0/2/2/2
82	MA6	S2	1851	82	-	1/7/29/30	0/3/3/3
2	OMC	L5	1340	2	-	1/9/27/28	0/2/2/2
2	PSU	L5	3884	2	-	0/7/25/26	0/2/2/2
82	PSU	S2	406	82	-	0/7/25/26	0/2/2/2
82	A2M	S2	484	82	-	0/5/27/28	0/3/3/3
2	PSU	L5	1744	2,85	-	0/7/25/26	0/2/2/2
2	OMG	L5	3744	2	-	0/5/27/28	0/3/3/3
2	PSU	L5	3695	2	-	0/7/25/26	0/2/2/2
2	OMG	L5	4637	2	-	3/5/27/28	0/3/3/3
82	A2M	S2	668	82,85	-	2/5/27/28	0/3/3/3
2	OMC	L5	3869	2	-	0/9/27/28	0/2/2/2
2	A2M	L5	2815	2	-	1/5/27/28	0/3/3/3
2	PSU	L5	3844	2	-	1/7/25/26	0/2/2/2
2	OMG	L5	2876	2	-	2/5/27/28	0/3/3/3
2	A2M	L5	2363	2,85	-	0/5/27/28	0/3/3/3
82	OMC	S2	517	82	-	2/9/27/28	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	OMC	L5	3808	2	-	0/9/27/28	0/2/2/2
2	PSU	L5	4500	2	-	4/7/25/26	0/2/2/2
82	PSU	S2	1056	82	-	0/7/25/26	0/2/2/2
2	PSU	L5	1582	2	-	0/7/25/26	0/2/2/2
82	MA6	S2	1850	82	-	0/7/29/30	0/3/3/3
2	PSU	L5	4552	2	-	0/7/25/26	0/2/2/2
2	PSU	L5	4973	2	-	0/7/25/26	0/2/2/2
82	PSU	S2	681	82	-	0/7/25/26	0/2/2/2
82	OMU	S2	428	82	-	6/9/27/28	0/2/2/2
2	OMU	L5	4620	2	-	1/9/27/28	0/2/2/2
2	OMC	L5	2861	2	-	1/9/27/28	0/2/2/2
2	UY1	L5	3818	2	-	3/9/27/28	0/2/2/2
2	OMU	L5	3925	2	-	1/9/27/28	0/2/2/2
2	PSU	L5	5001	2	-	0/7/25/26	0/2/2/2
4	OMG	L8	75	4	-	0/5/27/28	0/3/3/3
2	A2M	L5	1871	2,85	-	0/5/27/28	0/3/3/3
82	PSU	S2	1046	82	-	0/7/25/26	0/2/2/2
2	A2M	L5	4523	2,85	-	0/5/27/28	0/3/3/3
2	A2M	L5	4571	2	-	0/5/27/28	0/3/3/3
2	PSU	L5	1683	2	-	0/7/25/26	0/2/2/2
82	PSU	S2	966	82	-	0/7/25/26	0/2/2/2
2	OMG	L5	3792	2	-	2/5/27/28	0/3/3/3
2	A2M	L5	3825	2	-	0/5/27/28	0/3/3/3

All (433) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	L5	3818	UY1	C6-C5	12.48	1.49	1.35
2	L5	3818	UY1	C2-N1	11.65	1.51	1.36
82	S2	1288	OMU	C2-N1	8.65	1.52	1.38
82	S2	799	OMU	C2-N1	8.50	1.51	1.38
2	L5	4220	6MZ	C3'-C2'	-8.35	1.30	1.53
82	S2	172	OMU	C2-N1	8.34	1.51	1.38
82	S2	627	OMU	C2-N1	8.28	1.51	1.38
82	S2	1442	OMU	C2-N1	8.10	1.51	1.38
82	S2	121	OMU	C2-N1	8.06	1.51	1.38
82	S2	116	OMU	C2-N1	8.00	1.51	1.38
82	S2	1248	B8N	C4-N3	-7.92	1.26	1.40
82	S2	1326	OMU	C2-N1	7.92	1.50	1.38
82	S2	428	OMU	C2-N1	7.88	1.50	1.38
2	L5	4227	OMU	C2-N1	7.84	1.50	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	L5	4306	OMU	C2-N1	7.80	1.50	1.38
2	L5	2837	OMU	C2-N1	7.80	1.50	1.38
82	S2	354	OMU	C2-N1	7.76	1.50	1.38
82	S2	1248	B8N	C6-N1	7.75	1.55	1.36
2	L5	3925	OMU	C2-N1	7.73	1.50	1.38
2	L5	4498	OMU	C2-N1	7.56	1.50	1.38
2	L5	3818	UY1	C2-N3	7.56	1.49	1.37
2	L5	4220	6MZ	O4'-C1'	-7.55	1.31	1.40
2	L5	4620	OMU	C2-N1	7.44	1.50	1.38
82	S2	627	OMU	C2-N3	6.99	1.50	1.38
82	S2	172	OMU	C2-N3	6.96	1.50	1.38
82	S2	116	OMU	C2-N3	6.94	1.50	1.38
82	S2	121	OMU	C2-N3	6.94	1.50	1.38
82	S2	1248	B8N	C4-C5	6.93	1.63	1.47
82	S2	428	OMU	C2-N3	6.87	1.49	1.38
82	S2	1442	OMU	C2-N3	6.83	1.49	1.38
82	S2	799	OMU	C2-N3	6.82	1.49	1.38
82	S2	1326	OMU	C2-N3	6.81	1.49	1.38
82	S2	1288	OMU	C2-N3	6.79	1.49	1.38
2	L5	2837	OMU	C2-N3	6.79	1.49	1.38
2	L5	4227	OMU	C2-N3	6.66	1.49	1.38
82	S2	354	OMU	C2-N3	6.59	1.49	1.38
2	L5	4306	OMU	C2-N3	6.55	1.49	1.38
2	L5	3925	OMU	C2-N3	6.53	1.49	1.38
2	L5	4498	OMU	C2-N3	6.47	1.49	1.38
2	L5	4620	OMU	C2-N3	6.42	1.49	1.38
2	L5	4530	UR3	C6-C5	6.25	1.49	1.35
2	L5	4530	UR3	C2-N1	5.93	1.46	1.38
82	S2	1248	B8N	C2-N1	5.91	1.56	1.39
82	S2	428	OMU	C6-C5	5.88	1.48	1.35
82	S2	121	OMU	C6-C5	5.84	1.48	1.35
82	S2	627	OMU	C6-C5	5.79	1.48	1.35
82	S2	799	OMU	C6-C5	5.78	1.48	1.35
82	S2	172	OMU	C6-C5	5.78	1.48	1.35
82	S2	1288	OMU	C6-C5	5.77	1.48	1.35
2	L5	3925	OMU	O4-C4	-5.73	1.13	1.24
82	S2	116	OMU	C6-C5	5.73	1.48	1.35
2	L5	4227	OMU	C6-C5	5.72	1.48	1.35
82	S2	1326	OMU	C6-C5	5.72	1.48	1.35
82	S2	1442	OMU	C6-C5	5.72	1.48	1.35
2	L5	2837	OMU	C6-C5	5.69	1.48	1.35
2	L5	4620	OMU	O4-C4	-5.66	1.13	1.24

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	L5	4530	UR3	C2-N3	5.62	1.50	1.39
2	L5	4306	OMU	C6-C5	5.59	1.48	1.35
82	S2	354	OMU	C6-C5	5.59	1.48	1.35
2	L5	4498	OMU	C6-C5	5.59	1.48	1.35
2	L5	4620	OMU	C6-C5	5.59	1.48	1.35
82	S2	354	OMU	O4-C4	-5.58	1.13	1.24
2	L5	4306	OMU	O4-C4	-5.57	1.13	1.24
2	L5	3925	OMU	C6-C5	5.57	1.48	1.35
2	L5	4227	OMU	O4-C4	-5.54	1.13	1.24
2	L5	4498	OMU	O4-C4	-5.54	1.13	1.24
82	S2	116	OMU	O4-C4	-5.53	1.13	1.24
82	S2	121	OMU	O4-C4	-5.51	1.13	1.24
82	S2	1326	OMU	O4-C4	-5.50	1.13	1.24
82	S2	428	OMU	O4-C4	-5.50	1.13	1.24
82	S2	627	OMU	O4-C4	-5.50	1.13	1.24
82	S2	172	OMU	O4-C4	-5.48	1.13	1.24
2	L5	2837	OMU	O4-C4	-5.47	1.13	1.24
82	S2	1442	OMU	O4-C4	-5.45	1.13	1.24
82	S2	1288	OMU	O4-C4	-5.37	1.14	1.24
82	S2	799	OMU	O4-C4	-5.34	1.14	1.24
82	S2	1639	G7M	C2-N3	5.30	1.46	1.33
2	L5	3818	UY1	C6-N1	5.29	1.45	1.36
82	S2	1248	B8N	C6-C5	5.19	1.42	1.35
82	S2	1639	G7M	C4-N3	4.85	1.48	1.37
82	S2	1639	G7M	C2-N2	4.80	1.45	1.34
2	L5	4220	6MZ	O4'-C4'	4.73	1.55	1.45
2	L5	4220	6MZ	C6-C5	-4.61	1.37	1.44
2	L5	4220	6MZ	C5'-C4'	-4.53	1.38	1.51
82	S2	627	OMU	C4-N3	4.47	1.46	1.38
82	S2	1832	6MZ	C6-C5	-4.43	1.38	1.44
82	S2	1442	OMU	C4-N3	4.36	1.46	1.38
2	L5	2837	OMU	C4-N3	4.36	1.46	1.38
82	S2	172	OMU	C4-N3	4.33	1.46	1.38
82	S2	1326	OMU	C4-N3	4.31	1.46	1.38
82	S2	121	OMU	C4-N3	4.29	1.46	1.38
82	S2	799	OMU	C4-N3	4.27	1.45	1.38
2	L5	3818	UY1	C4-N3	4.25	1.46	1.38
82	S2	116	OMU	C4-N3	4.24	1.45	1.38
82	S2	428	OMU	C4-N3	4.22	1.45	1.38
82	S2	1288	OMU	C4-N3	4.21	1.45	1.38
82	S2	354	OMU	C4-N3	4.14	1.45	1.38
2	L5	4227	OMU	C4-N3	4.09	1.45	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	L5	4306	OMU	C4-N3	4.02	1.45	1.38
2	L5	4498	OMU	C4-N3	4.00	1.45	1.38
82	S2	1851	MA6	C6-C5	-3.95	1.38	1.44
2	L5	3925	OMU	C4-N3	3.90	1.45	1.38
82	S2	1850	MA6	C6-C5	-3.85	1.39	1.44
2	L5	4620	OMU	C4-N3	3.85	1.45	1.38
2	L5	3818	UY1	O4-C4	-3.72	1.16	1.23
82	S2	801	PSU	C6-C5	3.71	1.39	1.35
82	S2	1639	G7M	C6-N1	3.69	1.43	1.37
82	S2	1248	B8N	C1'-C5	3.59	1.58	1.50
2	L5	1323	A2M	O5'-C5'	-3.56	1.33	1.44
2	L5	3825	A2M	O5'-C5'	-3.55	1.33	1.44
82	S2	93	PSU	C6-C5	3.53	1.39	1.35
2	L5	2815	A2M	O5'-C5'	-3.52	1.33	1.44
2	L5	3785	A2M	O5'-C5'	-3.50	1.34	1.44
82	S2	814	PSU	C6-C5	3.50	1.39	1.35
82	S2	99	A2M	O5'-C5'	-3.49	1.34	1.44
82	S2	668	A2M	O5'-C5'	-3.49	1.34	1.44
82	S2	105	PSU	C6-C5	3.48	1.39	1.35
82	S2	484	A2M	O5'-C5'	-3.48	1.34	1.44
82	S2	966	PSU	C6-C5	3.46	1.39	1.35
82	S2	1850	MA6	C6-N6	3.46	1.45	1.37
2	L5	2787	A2M	O5'-C5'	-3.45	1.34	1.44
2	L5	3867	A2M	O5'-C5'	-3.45	1.34	1.44
2	L5	4523	A2M	O5'-C5'	-3.44	1.34	1.44
2	L5	1524	A2M	O5'-C5'	-3.44	1.34	1.44
2	L5	400	A2M	O5'-C5'	-3.44	1.34	1.44
82	S2	576	A2M	O5'-C5'	-3.43	1.34	1.44
2	L5	3830	A2M	O5'-C5'	-3.43	1.34	1.44
2	L5	2401	A2M	O5'-C5'	-3.43	1.34	1.44
2	L5	1871	A2M	O5'-C5'	-3.42	1.34	1.44
82	S2	468	A2M	O5'-C5'	-3.42	1.34	1.44
82	S2	1367	PSU	C6-C5	3.42	1.39	1.35
82	S2	1031	A2M	O5'-C5'	-3.41	1.34	1.44
2	L5	1326	A2M	O5'-C5'	-3.41	1.34	1.44
2	L5	4636	PSU	C6-C5	3.41	1.39	1.35
2	L5	2876	OMG	C8-N7	-3.41	1.29	1.34
2	L5	2363	A2M	O5'-C5'	-3.41	1.34	1.44
82	S2	651	PSU	C6-C5	3.40	1.39	1.35
82	S2	406	PSU	C6-C5	3.40	1.39	1.35
2	L5	4494	OMG	C8-N7	-3.40	1.29	1.34
82	S2	1383	A2M	O5'-C5'	-3.40	1.34	1.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
82	S2	1244	PSU	C6-C5	3.40	1.39	1.35
2	L5	3718	A2M	O5'-C5'	-3.39	1.34	1.44
2	L5	4571	A2M	O5'-C5'	-3.36	1.34	1.44
82	S2	866	PSU	C6-C5	3.35	1.39	1.35
82	S2	1490	OMG	C8-N7	-3.35	1.29	1.34
82	S2	1056	PSU	C6-C5	3.35	1.39	1.35
2	L5	1582	PSU	C6-C5	3.35	1.39	1.35
2	L5	4618	OMG	C8-N7	-3.34	1.29	1.34
82	S2	863	PSU	C6-C5	3.33	1.39	1.35
2	L5	398	A2M	O5'-C5'	-3.32	1.34	1.44
2	L5	4590	A2M	O5'-C5'	-3.32	1.34	1.44
82	S2	1851	MA6	C6-N6	3.31	1.45	1.37
2	L5	1782	PSU	C6-C5	3.31	1.39	1.35
82	S2	1046	PSU	C6-C5	3.31	1.39	1.35
82	S2	1232	PSU	C6-C5	3.29	1.38	1.35
82	S2	686	PSU	C6-C5	3.29	1.38	1.35
82	S2	1174	PSU	C6-C5	3.29	1.38	1.35
82	S2	27	A2M	O5'-C5'	-3.29	1.34	1.44
82	S2	1639	G7M	C5-C6	3.29	1.53	1.45
82	S2	166	A2M	O5'-C5'	-3.29	1.34	1.44
2	L5	2632	PSU	C6-C5	3.28	1.38	1.35
2	L5	4370	OMG	C8-N7	-3.28	1.29	1.34
2	L5	1683	PSU	C6-C5	3.27	1.38	1.35
2	L5	5001	PSU	C6-C5	3.27	1.38	1.35
2	L5	1522	OMG	C8-N7	-3.26	1.29	1.34
2	L5	1316	OMG	C8-N7	-3.26	1.29	1.34
2	L5	4312	PSU	C6-C5	3.25	1.38	1.35
82	S2	1004	PSU	C6-C5	3.25	1.38	1.35
82	S2	1045	PSU	C6-C5	3.25	1.38	1.35
2	L5	3792	OMG	C8-N7	-3.24	1.29	1.34
2	L5	1625	OMG	C8-N7	-3.23	1.29	1.34
2	L5	4532	PSU	C6-C5	3.23	1.38	1.35
2	L5	4296	PSU	C6-C5	3.23	1.38	1.35
2	L5	4623	OMG	C8-N7	-3.22	1.29	1.34
2	L5	4392	OMG	C8-N7	-3.22	1.29	1.34
2	L5	1781	PSU	C6-C5	3.20	1.38	1.35
82	S2	109	PSU	C6-C5	3.20	1.38	1.35
2	L5	4353	PSU	C6-C5	3.20	1.38	1.35
82	S2	1177	PSU	C6-C5	3.20	1.38	1.35
2	L5	3818	UY1	O2-C2	-3.19	1.16	1.23
2	L5	3818	UY1	C1'-C5	3.19	1.57	1.50
82	S2	649	PSU	C6-C5	3.19	1.38	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	L8	69	PSU	C6-C5	3.18	1.38	1.35
2	L5	1871	A2M	C1'-N9	-3.18	1.42	1.49
2	L5	1534	A2M	O5'-C5'	-3.17	1.34	1.44
2	L5	5010	PSU	C6-C5	3.17	1.38	1.35
2	L5	2364	OMG	C8-N7	-3.17	1.29	1.34
2	L5	1744	PSU	C6-C5	3.15	1.38	1.35
2	L5	4293	PSU	C6-C5	3.15	1.38	1.35
2	L5	4500	PSU	C6-C5	3.14	1.38	1.35
82	S2	681	PSU	C6-C5	3.13	1.38	1.35
2	L5	4431	PSU	C6-C5	3.13	1.38	1.35
82	S2	1490	OMG	C5-C6	-3.12	1.41	1.47
2	L5	4471	PSU	C6-C5	3.12	1.38	1.35
82	S2	159	A2M	O5'-C5'	-3.12	1.35	1.44
2	L5	4637	OMG	C8-N7	-3.11	1.30	1.34
2	L5	3627	OMG	C8-N7	-3.11	1.30	1.34
2	L5	4579	PSU	C6-C5	3.11	1.38	1.35
2	L5	4973	PSU	C6-C5	3.10	1.38	1.35
2	L5	3844	PSU	C6-C5	3.10	1.38	1.35
2	L5	4442	PSU	C6-C5	3.09	1.38	1.35
2	L5	2424	OMG	C8-N7	-3.08	1.30	1.34
2	L5	1862	PSU	C6-C5	3.07	1.38	1.35
2	L5	4196	OMG	C8-N7	-3.07	1.30	1.34
2	L5	3899	OMG	C8-N7	-3.06	1.30	1.34
2	L5	3744	OMG	C8-N7	-3.06	1.30	1.34
4	L8	75	OMG	C8-N7	-3.06	1.30	1.34
2	L5	4457	PSU	C6-C5	3.05	1.38	1.35
2	L5	4493	PSU	C6-C5	3.04	1.38	1.35
2	L5	3920	PSU	C6-C5	3.03	1.38	1.35
82	S2	509	OMG	C8-N7	-3.03	1.30	1.34
82	S2	436	OMG	C8-N7	-3.02	1.30	1.34
82	S2	468	A2M	C1'-N9	-3.02	1.42	1.49
82	S2	601	OMG	C8-N7	-3.02	1.30	1.34
2	L5	3851	PSU	C6-C5	3.02	1.38	1.35
2	L5	1860	PSU	C6-C5	3.01	1.38	1.35
82	S2	1081	PSU	C6-C5	3.01	1.38	1.35
2	L5	3853	PSU	C6-C5	3.00	1.38	1.35
82	S2	644	OMG	C8-N7	-3.00	1.30	1.34
2	L5	4299	PSU	C6-C5	3.00	1.38	1.35
2	L5	4521	PSU	C6-C5	2.99	1.38	1.35
2	L5	3822	PSU	C6-C5	2.98	1.38	1.35
2	L5	3637	PSU	C6-C5	2.98	1.38	1.35
82	S2	683	OMG	C8-N7	-2.98	1.30	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	L5	4392	OMG	C5-C6	-2.98	1.41	1.47
2	L5	4228	OMG	C8-N7	-2.97	1.30	1.34
2	L5	4494	OMG	C5-C6	-2.96	1.41	1.47
4	L8	55	PSU	C6-C5	2.96	1.38	1.35
2	L5	4499	OMG	C8-N7	-2.96	1.30	1.34
2	L5	1792	PSU	C6-C5	2.94	1.38	1.35
2	L5	4361	PSU	C6-C5	2.94	1.38	1.35
2	L5	4628	PSU	C6-C5	2.93	1.38	1.35
82	S2	867	OMG	C8-N7	-2.92	1.30	1.34
2	L5	1536	PSU	C6-C5	2.91	1.38	1.35
82	S2	1328	OMG	C8-N7	-2.91	1.30	1.34
2	L5	1625	OMG	C5-C6	-2.89	1.41	1.47
2	L5	3695	PSU	C6-C5	2.88	1.38	1.35
2	L5	2401	A2M	C1'-N9	-2.87	1.42	1.49
2	L5	4972	PSU	C6-C5	2.87	1.38	1.35
82	S2	428	OMU	C5-C4	2.87	1.49	1.43
2	L5	4576	PSU	C6-C5	2.86	1.38	1.35
82	S2	799	OMU	C5-C4	2.86	1.49	1.43
82	S2	627	OMU	C5-C4	2.85	1.49	1.43
2	L5	4623	OMG	C5-C6	-2.85	1.41	1.47
2	L5	3785	A2M	C1'-N9	-2.82	1.42	1.49
2	L5	4228	OMG	C5-C6	-2.82	1.41	1.47
2	L5	3744	OMG	C5-C6	-2.82	1.41	1.47
2	L5	2839	PSU	C6-C5	2.81	1.38	1.35
2	L5	3639	PSU	C6-C5	2.80	1.38	1.35
2	L5	4637	OMG	C5-C6	-2.80	1.41	1.47
82	S2	436	OMG	C5-C6	-2.80	1.41	1.47
2	L5	4673	PSU	C6-C5	2.80	1.38	1.35
2	L5	4530	UR3	O2-C2	-2.79	1.17	1.22
82	S2	1326	OMU	C5-C4	2.79	1.49	1.43
82	S2	1639	G7M	C2-N1	2.77	1.44	1.37
2	L5	4370	OMG	C5-C6	-2.76	1.42	1.47
2	L5	4552	PSU	C6-C5	2.76	1.38	1.35
2	L5	3792	OMG	C5-C6	-2.76	1.42	1.47
82	S2	121	OMU	C5-C4	2.76	1.49	1.43
2	L5	1316	OMG	C5-C6	-2.76	1.42	1.47
2	L5	4618	OMG	C5-C6	-2.75	1.42	1.47
82	S2	668	A2M	O4'-C4'	-2.74	1.38	1.45
4	L8	75	OMG	C5-C6	-2.74	1.42	1.47
82	S2	1288	OMU	C5-C4	2.74	1.49	1.43
82	S2	172	OMU	C5-C4	2.73	1.49	1.43
2	L5	1522	OMG	C5-C6	-2.73	1.42	1.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	L5	4196	OMG	C5-C6	-2.72	1.42	1.47
2	L5	4523	A2M	O4'-C4'	-2.72	1.39	1.45
2	L5	3884	PSU	C6-C5	2.71	1.38	1.35
2	L5	2364	OMG	C5-C6	-2.71	1.42	1.47
2	L5	1322	1MA	C8-N7	-2.71	1.30	1.34
82	S2	867	OMG	C5-C6	-2.70	1.42	1.47
2	L5	2424	OMG	C5-C6	-2.70	1.42	1.47
82	S2	1442	OMU	C5-C4	2.70	1.49	1.43
2	L5	3627	OMG	C5-C6	-2.69	1.42	1.47
2	L5	1534	A2M	C1'-N9	-2.68	1.43	1.49
82	S2	683	OMG	C5-C6	-2.67	1.42	1.47
82	S2	601	OMG	C5-C6	-2.67	1.42	1.47
2	L5	4590	A2M	C1'-N9	-2.67	1.43	1.49
82	S2	799	OMU	C6-N1	2.67	1.44	1.38
2	L5	398	A2M	C1'-N9	-2.66	1.43	1.49
2	L5	2876	OMG	C5-C6	-2.66	1.42	1.47
82	S2	1288	OMU	C6-N1	2.65	1.44	1.38
82	S2	627	OMU	C6-N1	2.65	1.44	1.38
82	S2	121	OMU	C6-N1	2.65	1.44	1.38
2	L5	4523	A2M	C1'-N9	-2.65	1.43	1.49
2	L5	4220	6MZ	O3'-C3'	2.65	1.49	1.43
82	S2	166	A2M	C1'-N9	-2.64	1.43	1.49
2	L5	4498	OMU	C5-C4	2.64	1.49	1.43
2	L5	400	A2M	C1'-N9	-2.63	1.43	1.49
2	L5	1322	1MA	C5-C4	-2.63	1.36	1.43
2	L5	1323	A2M	O4'-C4'	-2.63	1.39	1.45
2	L5	4227	OMU	C5-C4	2.63	1.49	1.43
82	S2	576	A2M	C1'-N9	-2.62	1.43	1.49
82	S2	1442	OMU	C6-N1	2.62	1.44	1.38
2	L5	3899	OMG	C5-C6	-2.61	1.42	1.47
82	S2	509	OMG	C5-C6	-2.60	1.42	1.47
82	S2	116	OMU	C5-C4	2.60	1.49	1.43
82	S2	644	OMG	C5-C6	-2.59	1.42	1.47
82	S2	1328	OMG	C5-C6	-2.59	1.42	1.47
2	L5	4306	OMU	C5-C4	2.55	1.49	1.43
82	S2	354	OMU	C5-C4	2.54	1.49	1.43
82	S2	428	OMU	C6-N1	2.54	1.44	1.38
2	L5	2837	OMU	C6-N1	2.54	1.44	1.38
2	L5	4689	PSU	C6-C5	2.54	1.38	1.35
2	L5	1524	A2M	C1'-N9	-2.53	1.43	1.49
2	L5	3718	A2M	C1'-N9	-2.53	1.43	1.49
2	L5	4499	OMG	C5-C6	-2.53	1.42	1.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
82	S2	172	OMU	C6-N1	2.53	1.44	1.38
82	S2	27	A2M	C1'-N9	-2.53	1.43	1.49
2	L5	1524	A2M	O4'-C4'	-2.52	1.39	1.45
82	S2	668	A2M	C1'-N9	-2.52	1.43	1.49
2	L5	2837	OMU	C5-C4	2.51	1.49	1.43
82	S2	1383	A2M	C1'-N9	-2.50	1.43	1.49
2	L5	4498	OMU	C6-N1	2.50	1.44	1.38
82	S2	116	OMU	C6-N1	2.50	1.44	1.38
82	S2	99	A2M	C1'-N9	-2.48	1.43	1.49
2	L5	400	A2M	O4'-C4'	-2.47	1.39	1.45
82	S2	354	OMU	C6-N1	2.47	1.44	1.38
82	S2	1326	OMU	C6-N1	2.47	1.44	1.38
2	L5	2815	A2M	C1'-N9	-2.45	1.43	1.49
2	L5	4227	OMU	C6-N1	2.45	1.43	1.38
2	L5	1677	PSU	C6-C5	2.45	1.38	1.35
2	L5	4530	UR3	C6-N1	2.44	1.43	1.38
2	L5	3830	A2M	C1'-N9	-2.44	1.43	1.49
82	S2	1031	A2M	C1'-N9	-2.44	1.43	1.49
82	S2	1851	MA6	C2-N3	2.43	1.35	1.32
2	L5	3925	OMU	C5-C4	2.43	1.49	1.43
2	L5	4306	OMU	C6-N1	2.41	1.43	1.38
2	L5	1522	OMG	C5-C4	-2.40	1.37	1.43
2	L5	4571	A2M	O4'-C4'	-2.39	1.39	1.45
2	L5	4571	A2M	C1'-N9	-2.36	1.44	1.49
2	L5	1326	A2M	O4'-C4'	-2.36	1.39	1.45
2	L5	1326	A2M	C1'-N9	-2.36	1.44	1.49
2	L5	4620	OMU	C5-C4	2.34	1.48	1.43
2	L5	1871	A2M	O4'-C4'	-2.34	1.39	1.45
2	L5	4403	PSU	C6-C5	2.34	1.37	1.35
2	L5	4392	OMG	C5-C4	-2.33	1.37	1.43
2	L5	4689	PSU	C4-C5	-2.33	1.37	1.44
2	L5	4523	A2M	O3'-C3'	-2.33	1.37	1.43
82	S2	1850	MA6	C2-N3	2.33	1.35	1.32
2	L5	4494	OMG	C5-C4	-2.32	1.37	1.43
2	L5	2815	A2M	O4'-C4'	-2.32	1.39	1.45
2	L5	4620	OMU	C6-N1	2.32	1.43	1.38
2	L5	1316	OMG	C5-C4	-2.32	1.37	1.43
2	L5	3867	A2M	C1'-N9	-2.31	1.44	1.49
2	L5	3925	OMU	C6-N1	2.29	1.43	1.38
2	L5	3627	OMG	C5-C4	-2.27	1.37	1.43
2	L5	2787	A2M	C1'-N9	-2.27	1.44	1.49
2	L5	1534	A2M	O4'-C4'	-2.27	1.39	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	L5	4228	OMG	C5-C4	-2.27	1.37	1.43
2	L5	1677	PSU	C4-C5	-2.26	1.38	1.44
2	L5	3844	PSU	C4-C5	-2.26	1.38	1.44
2	L5	3867	A2M	O4'-C4'	-2.26	1.40	1.45
2	L5	3825	A2M	C1'-N9	-2.25	1.44	1.49
2	L5	2424	OMG	C5-C4	-2.25	1.37	1.43
2	L5	1871	A2M	O3'-C3'	-2.24	1.37	1.43
2	L5	2363	A2M	O4'-C4'	-2.24	1.40	1.45
2	L5	3639	PSU	C4-C5	-2.23	1.38	1.44
2	L5	4293	PSU	C4-C5	-2.23	1.38	1.44
2	L5	3884	PSU	C4-C5	-2.22	1.38	1.44
2	L5	4530	UR3	C5-C4	2.22	1.49	1.43
2	L5	4370	OMG	C5-C4	-2.22	1.37	1.43
2	L5	2876	OMG	C5-C4	-2.21	1.37	1.43
2	L5	4623	OMG	C5-C4	-2.21	1.37	1.43
2	L5	1625	OMG	C5-C4	-2.21	1.37	1.43
2	L5	4576	PSU	C4-C5	-2.20	1.38	1.44
2	L5	4457	PSU	C4-C5	-2.19	1.38	1.44
2	L5	4628	PSU	C4-C5	-2.18	1.38	1.44
2	L5	4618	OMG	C5-C4	-2.18	1.37	1.43
4	L8	75	OMG	C5-C4	-2.18	1.37	1.43
2	L5	4637	OMG	C5-C4	-2.18	1.37	1.43
2	L5	3744	OMG	C5-C4	-2.17	1.37	1.43
2	L5	3920	PSU	C4-C5	-2.17	1.38	1.44
82	S2	1490	OMG	C5-C4	-2.17	1.37	1.43
2	L5	3899	OMG	C5-C4	-2.16	1.37	1.43
2	L5	4196	OMG	C5-C4	-2.16	1.37	1.43
2	L5	2364	OMG	C5-C4	-2.16	1.37	1.43
2	L5	4499	OMG	C5-C4	-2.16	1.37	1.43
2	L5	3867	A2M	O3'-C3'	-2.16	1.37	1.43
2	L5	3825	A2M	O4'-C4'	-2.16	1.40	1.45
2	L5	4403	PSU	C4-C5	-2.15	1.38	1.44
2	L5	3822	PSU	O4'-C1'	-2.15	1.40	1.43
2	L5	398	A2M	O4'-C4'	-2.14	1.40	1.45
2	L5	4442	PSU	C4-C5	-2.14	1.38	1.44
2	L5	2363	A2M	C1'-N9	-2.13	1.44	1.49
2	L5	2839	PSU	C4-C5	-2.13	1.38	1.44
2	L5	3822	PSU	C4-C5	-2.13	1.38	1.44
2	L5	1683	PSU	C4-C5	-2.13	1.38	1.44
2	L5	4353	PSU	C4-C5	-2.12	1.38	1.44
2	L5	1582	PSU	C4-C5	-2.12	1.38	1.44
2	L5	4312	PSU	C4-C5	-2.12	1.38	1.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	L5	1323	A2M	C1'-N9	-2.12	1.44	1.49
2	L5	4521	PSU	C4-C5	-2.12	1.38	1.44
2	L5	400	A2M	O3'-C3'	-2.11	1.37	1.43
2	L5	4590	A2M	O4'-C4'	-2.11	1.40	1.45
82	S2	1046	PSU	C4-C5	-2.10	1.38	1.44
2	L5	4973	PSU	C4-C5	-2.10	1.38	1.44
82	S2	1328	OMG	C5-C4	-2.10	1.37	1.43
2	L5	5001	PSU	C4-C5	-2.10	1.38	1.44
2	L5	4220	6MZ	C6-N1	-2.10	1.31	1.34
2	L5	4447	5MC	C5-C4	-2.10	1.42	1.44
82	S2	1174	PSU	C4-C5	-2.09	1.38	1.44
2	L5	4431	PSU	C4-C5	-2.09	1.38	1.44
2	L5	4500	PSU	C4-C5	-2.09	1.38	1.44
2	L5	4442	PSU	O4'-C1'	-2.09	1.41	1.43
2	L5	4552	PSU	C4-C5	-2.08	1.38	1.44
82	S2	644	OMG	C5-C4	-2.08	1.38	1.43
82	S2	436	OMG	C5-C4	-2.07	1.38	1.43
2	L5	3792	OMG	C5-C4	-2.07	1.38	1.43
2	L5	2401	A2M	O4'-C4'	-2.07	1.40	1.45
2	L5	4530	UR3	C3U-N3	2.06	1.50	1.47
82	S2	1031	A2M	O4'-C4'	-2.05	1.40	1.45
2	L5	4456	OMC	C4-N3	-2.05	1.30	1.34
2	L5	4471	PSU	C4-C5	-2.05	1.38	1.44
2	L5	4636	PSU	C4-C5	-2.04	1.38	1.44
2	L5	3718	A2M	O4'-C4'	-2.04	1.40	1.45
2	L5	1744	PSU	C4-C5	-2.04	1.38	1.44
2	L5	4673	PSU	C4-C5	-2.03	1.38	1.44
82	S2	1056	PSU	C4-C5	-2.03	1.38	1.44
82	S2	1177	PSU	C4-C5	-2.03	1.38	1.44
82	S2	1832	6MZ	C6-N1	-2.03	1.31	1.34
82	S2	109	PSU	C4-C5	-2.02	1.38	1.44
82	S2	601	OMG	C5-C4	-2.02	1.38	1.43
2	L5	4457	PSU	O4'-C1'	-2.02	1.41	1.43
82	S2	681	PSU	C4-C5	-2.02	1.38	1.44
82	S2	484	A2M	C1'-N9	-2.02	1.44	1.49
2	L5	5010	PSU	C4-C5	-2.01	1.38	1.44
4	L8	69	PSU	C4-C5	-2.01	1.38	1.44
2	L5	398	A2M	O3'-C3'	-2.01	1.38	1.43
4	L8	55	PSU	C4-C5	-2.00	1.38	1.44
82	S2	166	A2M	O3'-C3'	-2.00	1.38	1.43
82	S2	966	PSU	C4-C5	-2.00	1.38	1.44

All (640) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
82	S2	1851	MA6	N1-C6-N6	-12.75	102.11	116.83
82	S2	1850	MA6	N1-C6-N6	-12.72	102.14	116.83
2	L5	1524	A2M	C4'-O4'-C1'	-7.38	103.17	109.92
2	L5	3785	A2M	C4'-O4'-C1'	-7.20	103.33	109.92
2	L5	4220	6MZ	N3-C2-N1	-6.39	119.99	128.67
82	S2	1832	6MZ	N3-C2-N1	-6.38	120.01	128.67
82	S2	1851	MA6	N3-C2-N1	-6.38	120.02	128.67
82	S2	1850	MA6	N3-C2-N1	-6.28	120.15	128.67
2	L5	3925	OMU	C4-N3-C2	-5.97	119.20	126.61
82	S2	428	OMU	C4-N3-C2	-5.97	119.20	126.61
2	L5	4227	OMU	C4-N3-C2	-5.88	119.31	126.61
82	S2	1326	OMU	C4-N3-C2	-5.84	119.36	126.61
82	S2	1383	A2M	C4'-O4'-C1'	-5.79	104.62	109.92
2	L5	4306	OMU	C4-N3-C2	-5.76	119.46	126.61
82	S2	354	OMU	C4-N3-C2	-5.70	119.53	126.61
2	L5	4498	OMU	C4-N3-C2	-5.69	119.54	126.61
82	S2	627	OMU	C4-N3-C2	-5.66	119.59	126.61
2	L5	4523	A2M	C4'-O4'-C1'	-5.65	104.75	109.92
82	S2	172	OMU	C4-N3-C2	-5.53	119.74	126.61
82	S2	1442	OMU	C4-N3-C2	-5.53	119.74	126.61
82	S2	121	OMU	C4-N3-C2	-5.52	119.76	126.61
2	L5	2837	OMU	C4-N3-C2	-5.46	119.83	126.61
2	L5	4689	PSU	N1-C2-N3	5.46	120.93	115.17
82	S2	799	OMU	C4-N3-C2	-5.43	119.87	126.61
2	L5	4293	PSU	N1-C2-N3	5.38	120.84	115.17
2	L5	3830	A2M	C4'-O4'-C1'	-5.36	105.01	109.92
2	L5	1871	A2M	C4'-O4'-C1'	-5.33	105.04	109.92
2	L5	4293	PSU	C4-N3-C2	-5.30	119.07	126.37
82	S2	1248	B8N	C5-C4-N3	5.30	125.77	116.15
2	L5	3637	PSU	N1-C2-N3	5.29	120.75	115.17
82	S2	99	A2M	C4'-O4'-C1'	-5.28	105.09	109.92
2	L5	4636	PSU	C4-N3-C2	-5.27	119.11	126.37
2	L5	3701	OMC	C1'-N1-C2	5.26	130.07	118.44
82	S2	116	OMU	C4-N3-C2	-5.25	120.10	126.61
82	S2	668	A2M	C4'-O4'-C1'	-5.22	105.15	109.92
82	S2	406	PSU	N1-C2-N3	5.18	120.64	115.17
2	L5	4530	UR3	C4-N3-C2	-5.17	120.42	124.58
2	L5	1536	PSU	N1-C2-N3	5.16	120.61	115.17
82	S2	1288	OMU	C4-N3-C2	-5.16	120.21	126.61
82	S2	1056	PSU	N1-C2-N3	5.15	120.60	115.17
2	L5	4500	PSU	N1-C2-N3	5.14	120.59	115.17
82	S2	1056	PSU	C4-N3-C2	-5.13	119.30	126.37
2	L5	3637	PSU	C4-N3-C2	-5.13	119.31	126.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
82	S2	406	PSU	C4-N3-C2	-5.11	119.34	126.37
82	S2	1081	PSU	C4-N3-C2	-5.11	119.34	126.37
2	L5	4403	PSU	C4-N3-C2	-5.10	119.34	126.37
2	L5	3695	PSU	C4-N3-C2	-5.10	119.34	126.37
2	L5	4457	PSU	C4-N3-C2	-5.10	119.35	126.37
2	L5	1677	PSU	C4-N3-C2	-5.09	119.36	126.37
82	S2	109	PSU	C4-N3-C2	-5.09	119.36	126.37
2	L5	4296	PSU	C4-N3-C2	-5.09	119.36	126.37
2	L5	4620	OMU	C4-N3-C2	-5.08	120.30	126.61
2	L5	1862	PSU	C4-N3-C2	-5.08	119.37	126.37
2	L5	1782	PSU	C4-N3-C2	-5.08	119.37	126.37
2	L5	3920	PSU	N1-C2-N3	5.08	120.53	115.17
82	S2	651	PSU	N1-C2-N3	5.07	120.52	115.17
4	L8	69	PSU	N1-C2-N3	5.07	120.51	115.17
2	L5	4299	PSU	C4-N3-C2	-5.07	119.39	126.37
2	L5	4442	PSU	C4-N3-C2	-5.07	119.39	126.37
2	L5	4521	PSU	C4-N3-C2	-5.05	119.42	126.37
82	S2	166	A2M	C4'-O4'-C1'	-5.04	105.31	109.92
82	S2	109	PSU	N1-C2-N3	5.04	120.48	115.17
2	L5	4442	PSU	N1-C2-N3	5.03	120.48	115.17
82	S2	863	PSU	C4-N3-C2	-5.03	119.45	126.37
82	S2	1174	PSU	C4-N3-C2	-5.03	119.45	126.37
2	L5	4628	PSU	C4-N3-C2	-5.02	119.45	126.37
2	L5	4361	PSU	C4-N3-C2	-5.02	119.46	126.37
2	L5	3920	PSU	C4-N3-C2	-5.01	119.47	126.37
2	L5	4689	PSU	C4-N3-C2	-5.01	119.47	126.37
2	L5	4361	PSU	N1-C2-N3	5.01	120.45	115.17
82	S2	686	PSU	C4-N3-C2	-5.00	119.48	126.37
2	L5	4296	PSU	N1-C2-N3	5.00	120.45	115.17
82	S2	866	PSU	C4-N3-C2	-5.00	119.48	126.37
2	L5	4353	PSU	C4-N3-C2	-5.00	119.48	126.37
2	L5	3822	PSU	N1-C2-N3	5.00	120.44	115.17
2	L5	4353	PSU	N1-C2-N3	5.00	120.44	115.17
2	L5	1781	PSU	N1-C2-N3	4.99	120.43	115.17
2	L5	4500	PSU	C4-N3-C2	-4.99	119.50	126.37
82	S2	105	PSU	N1-C2-N3	4.99	120.43	115.17
2	L5	4628	PSU	N1-C2-N3	4.98	120.42	115.17
2	L5	4552	PSU	C4-N3-C2	-4.98	119.51	126.37
4	L8	55	PSU	C4-N3-C2	-4.97	119.52	126.37
2	L5	3884	PSU	N1-C2-N3	4.97	120.41	115.17
82	S2	649	PSU	C4-N3-C2	-4.97	119.52	126.37
2	L5	4579	PSU	C4-N3-C2	-4.97	119.52	126.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	L5	4532	PSU	C4-N3-C2	-4.97	119.53	126.37
82	S2	1081	PSU	N1-C2-N3	4.97	120.41	115.17
2	L5	4431	PSU	C4-N3-C2	-4.97	119.53	126.37
2	L5	4673	PSU	C4-N3-C2	-4.96	119.54	126.37
82	S2	866	PSU	N1-C2-N3	4.96	120.40	115.17
2	L5	4579	PSU	N1-C2-N3	4.96	120.40	115.17
2	L5	4972	PSU	N1-C2-N3	4.95	120.39	115.17
82	S2	801	PSU	N1-C2-N3	4.95	120.39	115.17
2	L5	4457	PSU	N1-C2-N3	4.95	120.39	115.17
2	L5	3818	UY1	C4-N3-C2	-4.95	119.55	126.37
2	L5	3639	PSU	N1-C2-N3	4.95	120.39	115.17
2	L5	4972	PSU	C4-N3-C2	-4.95	119.56	126.37
2	L5	4532	PSU	N1-C2-N3	4.94	120.38	115.17
82	S2	1046	PSU	N1-C2-N3	4.94	120.38	115.17
2	L5	4403	PSU	N1-C2-N3	4.94	120.38	115.17
82	S2	1045	PSU	C4-N3-C2	-4.93	119.58	126.37
82	S2	686	PSU	N1-C2-N3	4.93	120.37	115.17
82	S2	651	PSU	C4-N3-C2	-4.93	119.59	126.37
2	L5	3822	PSU	C4-N3-C2	-4.92	119.59	126.37
82	S2	649	PSU	N1-C2-N3	4.92	120.36	115.17
82	S2	1004	PSU	N1-C2-N3	4.90	120.34	115.17
82	S2	1174	PSU	N1-C2-N3	4.89	120.33	115.17
2	L5	4636	PSU	N1-C2-N3	4.89	120.32	115.17
2	L5	3884	PSU	C4-N3-C2	-4.88	119.64	126.37
2	L5	1677	PSU	N1-C2-N3	4.88	120.32	115.17
2	L5	3851	PSU	C4-N3-C2	-4.87	119.66	126.37
2	L5	4471	PSU	N1-C2-N3	4.87	120.31	115.17
2	L5	5010	PSU	N1-C2-N3	4.87	120.30	115.17
2	L5	3639	PSU	C4-N3-C2	-4.87	119.67	126.37
2	L5	4973	PSU	C4-N3-C2	-4.86	119.67	126.37
2	L5	4552	PSU	N1-C2-N3	4.86	120.30	115.17
2	L5	1792	PSU	C4-N3-C2	-4.86	119.68	126.37
2	L5	4431	PSU	N1-C2-N3	4.86	120.29	115.17
2	L5	1792	PSU	N1-C2-N3	4.85	120.29	115.17
2	L5	3844	PSU	N1-C2-N3	4.85	120.28	115.17
2	L5	1582	PSU	N1-C2-N3	4.85	120.28	115.17
82	S2	681	PSU	N1-C2-N3	4.84	120.28	115.17
2	L5	4576	PSU	C4-N3-C2	-4.84	119.71	126.37
2	L5	1683	PSU	N1-C2-N3	4.84	120.27	115.17
2	L5	4576	PSU	N1-C2-N3	4.84	120.27	115.17
82	S2	1232	PSU	C4-N3-C2	-4.83	119.72	126.37
2	L5	3851	PSU	N1-C2-N3	4.83	120.26	115.17

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	L8	69	PSU	C4-N3-C2	-4.83	119.72	126.37
82	S2	1244	PSU	C4-N3-C2	-4.82	119.72	126.37
2	L5	4471	PSU	C4-N3-C2	-4.82	119.73	126.37
2	L5	1536	PSU	C4-N3-C2	-4.82	119.73	126.37
2	L5	1582	PSU	C4-N3-C2	-4.82	119.74	126.37
2	L5	1862	PSU	N1-C2-N3	4.82	120.25	115.17
82	S2	1004	PSU	C4-N3-C2	-4.81	119.74	126.37
82	S2	1177	PSU	C4-N3-C2	-4.81	119.74	126.37
2	L5	4312	PSU	N1-C2-N3	4.81	120.24	115.17
2	L5	4973	PSU	N1-C2-N3	4.81	120.24	115.17
2	L5	1782	PSU	N1-C2-N3	4.80	120.24	115.17
2	L5	4312	PSU	C4-N3-C2	-4.80	119.76	126.37
2	L5	3695	PSU	N1-C2-N3	4.80	120.23	115.17
82	S2	1232	PSU	N1-C2-N3	4.79	120.22	115.17
82	S2	1046	PSU	C4-N3-C2	-4.79	119.77	126.37
2	L5	2632	PSU	N1-C2-N3	4.79	120.22	115.17
2	L5	5001	PSU	C4-N3-C2	-4.79	119.77	126.37
82	S2	681	PSU	C4-N3-C2	-4.79	119.77	126.37
2	L5	3844	PSU	C4-N3-C2	-4.79	119.77	126.37
2	L5	1781	PSU	C4-N3-C2	-4.78	119.78	126.37
2	L5	1860	PSU	C4-N3-C2	-4.78	119.78	126.37
2	L5	1744	PSU	N1-C2-N3	4.78	120.21	115.17
82	S2	863	PSU	N1-C2-N3	4.78	120.21	115.17
2	L5	4521	PSU	N1-C2-N3	4.77	120.20	115.17
2	L5	2632	PSU	C4-N3-C2	-4.77	119.81	126.37
2	L5	5001	PSU	N1-C2-N3	4.75	120.18	115.17
2	L5	4299	PSU	N1-C2-N3	4.74	120.17	115.17
2	L5	3853	PSU	C4-N3-C2	-4.74	119.84	126.37
2	L5	3853	PSU	N1-C2-N3	4.74	120.16	115.17
2	L5	5010	PSU	C4-N3-C2	-4.73	119.85	126.37
82	S2	1177	PSU	N1-C2-N3	4.72	120.15	115.17
82	S2	1244	PSU	N1-C2-N3	4.72	120.14	115.17
82	S2	105	PSU	C4-N3-C2	-4.72	119.88	126.37
2	L5	1683	PSU	C4-N3-C2	-4.71	119.89	126.37
82	S2	27	A2M	C4'-O4'-C1'	-4.70	105.62	109.92
2	L5	4493	PSU	C4-N3-C2	-4.70	119.89	126.37
82	S2	1248	B8N	C4-N3-C2	-4.70	119.83	125.62
82	S2	1045	PSU	N1-C2-N3	4.70	120.13	115.17
82	S2	814	PSU	N1-C2-N3	4.70	120.12	115.17
2	L5	2839	PSU	C4-N3-C2	-4.70	119.90	126.37
4	L8	55	PSU	N1-C2-N3	4.69	120.12	115.17
82	S2	1367	PSU	C4-N3-C2	-4.68	119.93	126.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
82	S2	814	PSU	C4-N3-C2	-4.67	119.94	126.37
82	S2	966	PSU	N1-C2-N3	4.65	120.07	115.17
2	L5	1744	PSU	C4-N3-C2	-4.64	119.97	126.37
82	S2	1383	A2M	C3'-C2'-C1'	-4.64	93.92	102.81
82	S2	1367	PSU	N1-C2-N3	4.64	120.06	115.17
82	S2	801	PSU	C4-N3-C2	-4.64	119.98	126.37
2	L5	4220	6MZ	C9-N6-C6	-4.63	118.55	122.85
82	S2	966	PSU	C4-N3-C2	-4.63	120.00	126.37
82	S2	468	A2M	C4'-O4'-C1'	-4.58	105.73	109.92
2	L5	4673	PSU	N1-C2-N3	4.57	119.99	115.17
2	L5	1860	PSU	N1-C2-N3	4.55	119.97	115.17
82	S2	93	PSU	C4-N3-C2	-4.55	120.10	126.37
82	S2	93	PSU	N1-C2-N3	4.55	119.96	115.17
82	S2	1031	A2M	C4'-O4'-C1'	-4.50	105.81	109.92
2	L5	3825	A2M	C4'-O4'-C1'	-4.48	105.82	109.92
2	L5	2839	PSU	N1-C2-N3	4.46	119.88	115.17
2	L5	4493	PSU	N1-C2-N3	4.46	119.88	115.17
2	L5	398	A2M	C4'-O4'-C1'	-4.45	105.85	109.92
2	L5	2401	A2M	C4'-O4'-C1'	-4.43	105.87	109.92
2	L5	3718	A2M	C4'-O4'-C1'	-4.40	105.90	109.92
2	L5	3818	UY1	N1-C2-N3	4.36	119.77	115.17
2	L5	4227	OMU	N3-C2-N1	4.32	120.52	114.89
2	L5	4590	A2M	C4'-O4'-C1'	-4.31	105.98	109.92
2	L5	1871	A2M	C1'-N9-C4	-4.31	119.07	126.64
2	L5	3701	OMC	C1'-N1-C6	-4.29	111.61	120.78
82	S2	468	A2M	C1'-N9-C4	-4.25	119.17	126.64
2	L5	400	A2M	C4'-O4'-C1'	-4.22	106.06	109.92
2	L5	2401	A2M	C1'-N9-C4	-4.11	119.42	126.64
82	S2	121	OMU	N3-C2-N1	4.11	120.24	114.89
82	S2	1383	A2M	C1'-N9-C4	-4.08	119.46	126.64
2	L5	4523	A2M	C1'-N9-C4	-4.06	119.51	126.64
2	L5	4590	A2M	C1'-N9-C4	-4.06	119.51	126.64
2	L5	4220	6MZ	C4'-O4'-C1'	-4.05	106.21	109.92
82	S2	1832	6MZ	C2-N1-C6	4.05	119.75	116.60
82	S2	428	OMU	N3-C2-N1	4.04	120.14	114.89
2	L5	1871	A2M	C3'-C2'-C1'	-4.02	95.10	102.81
2	L5	4306	OMU	N3-C2-N1	4.01	120.11	114.89
2	L5	2363	A2M	C4'-O4'-C1'	-4.01	106.25	109.92
82	S2	354	OMU	N3-C2-N1	4.00	120.10	114.89
2	L5	4523	A2M	C3'-C2'-C1'	-3.99	95.16	102.81
2	L5	4498	OMU	N3-C2-N1	3.97	120.05	114.89
82	S2	799	OMU	N3-C2-N1	3.96	120.05	114.89

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	L5	3830	A2M	C3'-C2'-C1'	-3.96	95.22	102.81
2	L5	3867	A2M	C4'-O4'-C1'	-3.96	106.30	109.92
82	S2	99	A2M	C3'-C2'-C1'	-3.95	95.25	102.81
2	L5	2837	OMU	N3-C2-N1	3.93	120.01	114.89
2	L5	3925	OMU	C5-C4-N3	3.91	120.28	114.80
2	L5	1534	A2M	C4'-O4'-C1'	-3.90	106.35	109.92
2	L5	400	A2M	C1'-N9-C4	-3.89	119.80	126.64
82	S2	1031	A2M	C1'-N9-C4	-3.87	119.84	126.64
2	L5	2351	OMC	C1'-N1-C2	3.87	126.99	118.44
2	L5	398	A2M	C3'-C2'-C1'	-3.87	95.40	102.81
82	S2	27	A2M	C1'-N9-C4	-3.85	119.87	126.64
2	L5	3925	OMU	N3-C2-N1	3.85	119.90	114.89
82	S2	166	A2M	C1'-N9-C4	-3.84	119.89	126.64
82	S2	484	A2M	C1'-N9-C4	-3.84	119.90	126.64
82	S2	576	A2M	C4'-O4'-C1'	-3.83	106.42	109.92
2	L5	3718	A2M	C1'-N9-C4	-3.81	119.95	126.64
82	S2	172	OMU	N3-C2-N1	3.80	119.84	114.89
82	S2	1850	MA6	C2-N1-C6	3.79	120.56	116.84
2	L5	398	A2M	C1'-N9-C4	-3.78	120.00	126.64
2	L5	4620	OMU	N3-C2-N1	3.77	119.80	114.89
82	S2	1326	OMU	C5-C4-N3	3.77	120.07	114.80
82	S2	668	A2M	C1'-N9-C4	-3.76	120.03	126.64
82	S2	1326	OMU	N3-C2-N1	3.76	119.79	114.89
2	L5	1323	A2M	C4'-O4'-C1'	-3.76	106.48	109.92
82	S2	627	OMU	C5-C4-N3	3.75	120.06	114.80
2	L5	3867	A2M	C1'-N9-C4	-3.75	120.06	126.64
82	S2	1288	OMU	N3-C2-N1	3.75	119.77	114.89
82	S2	428	OMU	C5-C4-N3	3.74	120.04	114.80
82	S2	1442	OMU	C5-C4-N3	3.73	120.02	114.80
82	S2	116	OMU	N3-C2-N1	3.71	119.73	114.89
82	S2	576	A2M	O3'-C3'-C2'	3.71	121.57	111.19
82	S2	99	A2M	C1'-N9-C4	-3.70	120.14	126.64
2	L5	4498	OMU	C5-C4-N3	3.69	119.97	114.80
82	S2	354	OMU	C5-C4-N3	3.68	119.95	114.80
82	S2	1442	OMU	N3-C2-N1	3.68	119.68	114.89
82	S2	468	A2M	C3'-C2'-C1'	-3.67	95.79	102.81
2	L5	4306	OMU	C5-C4-N3	3.65	119.92	114.80
82	S2	159	A2M	C1'-N9-C4	-3.63	120.25	126.64
82	S2	576	A2M	C3'-C2'-C1'	-3.63	95.85	102.81
2	L5	2401	A2M	C3'-C2'-C1'	-3.63	95.86	102.81
2	L5	1326	A2M	C4'-O4'-C1'	-3.62	106.61	109.92
2	L5	3825	A2M	C1'-N9-C4	-3.62	120.28	126.64

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
82	S2	627	OMU	N3-C2-N1	3.61	119.59	114.89
82	S2	468	A2M	O3'-C3'-C2'	3.61	121.28	111.19
82	S2	1383	A2M	O3'-C3'-C2'	3.59	121.23	111.19
2	L5	4220	6MZ	C2-N1-C6	3.57	119.37	116.60
2	L5	4227	OMU	C5-C4-N3	3.53	119.75	114.80
82	S2	799	OMU	C5-C4-N3	3.51	119.72	114.80
2	L5	4689	PSU	C6-N1-C2	-3.50	119.44	122.69
2	L5	3785	A2M	C1'-N9-C4	-3.50	120.49	126.64
82	S2	121	OMU	C5-C4-N3	3.49	119.69	114.80
2	L5	1683	PSU	O2-C2-N1	-3.49	119.19	122.79
2	L5	2363	A2M	C1'-N9-C4	-3.48	120.52	126.64
2	L5	398	A2M	O3'-C3'-C2'	3.48	120.93	111.19
82	S2	1851	MA6	C2-N1-C6	3.48	120.25	116.84
2	L5	2787	A2M	C1'-N9-C4	-3.48	120.53	126.64
2	L5	1536	PSU	O2-C2-N1	-3.45	119.23	122.79
82	S2	172	OMU	C5-C4-N3	3.45	119.63	114.80
2	L5	2815	A2M	C4'-O4'-C1'	-3.45	106.77	109.92
2	L5	2837	OMU	C5-C4-N3	3.45	119.63	114.80
2	L5	1534	A2M	C3'-C2'-C1'	-3.44	96.22	102.81
2	L5	1524	A2M	O3'-C3'-C2'	3.43	120.78	111.19
82	S2	116	OMU	C5-C4-N3	3.43	119.60	114.80
2	L5	4689	PSU	O2-C2-N1	-3.42	119.26	122.79
2	L5	4571	A2M	C4'-O4'-C1'	-3.41	106.80	109.92
2	L5	3718	A2M	C3'-C2'-C1'	-3.40	96.30	102.81
2	L5	4500	PSU	O2-C2-N1	-3.39	119.29	122.79
82	S2	1248	B8N	N3-C2-N1	3.38	120.84	116.72
2	L5	4620	OMU	C5-C4-N3	3.37	119.52	114.80
82	S2	1248	B8N	C1'-C5-C4	3.34	122.67	117.61
82	S2	159	A2M	O3'-C3'-C2'	3.31	120.44	111.19
82	S2	1288	OMU	C5-C4-N3	3.30	119.42	114.80
2	L5	3818	UY1	C6-C5-C4	3.27	120.38	118.17
2	L5	1326	A2M	C1'-N9-C4	-3.25	120.92	126.64
2	L5	3830	A2M	C1'-N9-C4	-3.25	120.93	126.64
2	L5	4530	UR3	C5-C4-N3	3.25	119.32	115.04
82	S2	576	A2M	C1'-N9-C4	-3.24	120.94	126.64
2	L5	1323	A2M	C1'-N9-C4	-3.24	120.95	126.64
2	L5	4590	A2M	C3'-C2'-C1'	-3.24	96.60	102.81
82	S2	99	A2M	O3'-C3'-C2'	3.23	120.23	111.19
2	L5	2401	A2M	O3'-C3'-C2'	3.20	120.15	111.19
2	L5	2787	A2M	O3'-C3'-C2'	3.18	120.08	111.19
2	L5	4571	A2M	C1'-N9-C4	-3.18	121.06	126.64
2	L5	3853	PSU	O2-C2-N1	-3.16	119.53	122.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	L5	4972	PSU	O2-C2-N1	-3.15	119.54	122.79
2	L5	4552	PSU	O2-C2-N1	-3.15	119.54	122.79
2	L5	2837	OMU	O4-C4-C5	-3.14	119.75	125.16
82	S2	166	A2M	C3'-C2'-C1'	-3.14	96.80	102.81
82	S2	1442	OMU	O4-C4-C5	-3.13	119.77	125.16
2	L5	1524	A2M	C1'-N9-C4	-3.13	121.15	126.64
2	L5	3825	A2M	C3'-C2'-C1'	-3.13	96.82	102.81
2	L5	4293	PSU	O2-C2-N1	-3.12	119.57	122.79
82	S2	1004	PSU	O2-C2-N1	-3.12	119.57	122.79
2	L5	1534	A2M	C1'-N9-C4	-3.11	121.17	126.64
82	S2	406	PSU	O2-C2-N1	-3.11	119.58	122.79
82	S2	354	OMU	O4-C4-C5	-3.11	119.81	125.16
82	S2	27	A2M	O3'-C3'-C2'	3.10	119.86	111.19
2	L5	4628	PSU	O2-C2-N1	-3.10	119.60	122.79
82	S2	1031	A2M	C3'-C2'-C1'	-3.09	96.88	102.81
82	S2	109	PSU	O2-C2-N1	-3.09	119.60	122.79
82	S2	801	PSU	O2-C2-N1	-3.09	119.60	122.79
2	L5	2815	A2M	C1'-N9-C4	-3.09	121.22	126.64
2	L5	3925	OMU	O4-C4-C5	-3.09	119.84	125.16
2	L5	4403	PSU	O2-C2-N1	-3.09	119.61	122.79
82	S2	1326	OMU	O4-C4-C5	-3.07	119.86	125.16
2	L5	3718	A2M	O3'-C3'-C2'	3.07	119.77	111.19
2	L5	5010	PSU	O2-C2-N1	-3.06	119.63	122.79
2	L5	400	A2M	C3'-C2'-C1'	-3.06	96.95	102.81
2	L5	3822	PSU	O2-C2-N1	-3.05	119.64	122.79
2	L5	1323	A2M	C2'-C1'-N9	3.05	119.33	112.56
2	L5	4590	A2M	O3'-C3'-C2'	3.05	119.72	111.19
2	L5	1323	A2M	O3'-C3'-C2'	3.04	119.70	111.19
2	L5	4471	PSU	O2-C2-N1	-3.04	119.65	122.79
82	S2	27	A2M	C3'-C2'-C1'	-3.03	97.00	102.81
2	L5	4530	UR3	C6-N1-C2	-3.03	119.32	121.80
2	L5	1677	PSU	O2-C2-N1	-3.03	119.67	122.79
2	L5	3884	PSU	O2-C2-N1	-3.03	119.67	122.79
2	L5	3920	PSU	O2-C2-N1	-3.02	119.67	122.79
82	S2	627	OMU	O4-C4-C5	-3.02	119.95	125.16
2	L5	3844	PSU	O2-C2-N1	-3.02	119.67	122.79
82	S2	166	A2M	O3'-C3'-C2'	3.02	119.63	111.19
82	S2	1031	A2M	O3'-C3'-C2'	3.01	119.62	111.19
82	S2	651	PSU	O2-C2-N1	-3.01	119.68	122.79
82	S2	966	PSU	O2-C2-N1	-3.01	119.68	122.79
82	S2	116	OMU	O4-C4-C5	-3.01	119.97	125.16
82	S2	1232	PSU	O2-C2-N1	-3.01	119.69	122.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	L5	5001	PSU	O2-C2-N1	-2.99	119.70	122.79
2	L5	3830	A2M	O3'-C3'-C2'	2.98	119.52	111.19
82	S2	172	OMU	O4-C4-C5	-2.97	120.04	125.16
2	L5	4296	PSU	O2-C2-N1	-2.96	119.74	122.79
2	L5	3825	A2M	O3'-C3'-C2'	2.96	119.46	111.19
82	S2	814	PSU	O2-C2-N1	-2.95	119.74	122.79
82	S2	1639	G7M	C2-N1-C6	-2.95	119.70	125.11
82	S2	799	OMU	C1'-N1-C2	2.94	122.88	117.59
2	L5	4227	OMU	O4-C4-C5	-2.94	120.09	125.16
2	L5	4306	OMU	O4-C4-C5	-2.94	120.09	125.16
4	L8	69	PSU	O2-C2-N1	-2.94	119.76	122.79
82	S2	801	PSU	C6-N1-C2	-2.93	119.97	122.69
2	L5	2351	OMC	C1'-N1-C6	-2.93	114.53	120.78
82	S2	1367	PSU	O2-C2-N1	-2.92	119.77	122.79
2	L5	1683	PSU	C6-N1-C2	-2.91	119.99	122.69
2	L5	1781	PSU	O2-C2-N1	-2.91	119.79	122.79
2	L5	3639	PSU	O2-C2-N1	-2.90	119.79	122.79
82	S2	428	OMU	O4-C4-C5	-2.90	120.17	125.16
2	L5	3818	UY1	C6-N1-C2	-2.89	120.01	122.69
82	S2	668	A2M	O3'-C3'-C2'	2.88	119.24	111.19
2	L5	3785	A2M	C4-C5-N7	2.88	112.38	109.34
82	S2	121	OMU	O4-C4-C5	-2.88	120.20	125.16
2	L5	2632	PSU	O2-C2-N1	-2.87	119.82	122.79
2	L5	4521	PSU	O2-C2-N1	-2.87	119.83	122.79
82	S2	1174	PSU	O2-C2-N1	-2.87	119.83	122.79
2	L5	4571	A2M	O3'-C3'-C2'	2.86	119.20	111.19
2	L5	1536	PSU	C6-N1-C2	-2.86	120.03	122.69
2	L5	4571	A2M	C2'-C1'-N9	2.86	118.90	112.56
82	S2	686	PSU	O2-C2-N1	-2.85	119.84	122.79
2	L5	4500	PSU	C6-N1-C2	-2.85	120.04	122.69
2	L5	5010	PSU	C6-N1-C2	-2.85	120.04	122.69
2	L5	3695	PSU	O2-C2-N1	-2.85	119.85	122.79
82	S2	863	PSU	O2-C2-N1	-2.85	119.85	122.79
82	S2	1288	OMU	C1'-N1-C2	2.85	122.71	117.59
4	L8	69	PSU	C6-N1-C2	-2.85	120.05	122.69
2	L5	4498	OMU	O4-C4-C5	-2.83	120.27	125.16
2	L5	3701	OMC	O2-C2-N3	-2.83	117.86	122.33
2	L5	4576	PSU	O2-C2-N1	-2.83	119.87	122.79
82	S2	649	PSU	O2-C2-N1	-2.82	119.88	122.79
82	S2	1244	PSU	O2-C2-N1	-2.82	119.88	122.79
2	L5	1792	PSU	O2-C2-N1	-2.82	119.88	122.79
2	L5	4353	PSU	O2-C2-N1	-2.81	119.89	122.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	L5	4532	PSU	O2-C2-N1	-2.81	119.89	122.79
82	S2	105	PSU	O2-C2-N1	-2.81	119.89	122.79
2	L5	4312	PSU	O2-C2-N1	-2.81	119.89	122.79
2	L5	4293	PSU	C6-N1-C2	-2.81	120.09	122.69
2	L5	3851	PSU	O2-C2-N1	-2.81	119.89	122.79
2	L5	3884	PSU	C6-N1-C2	-2.81	120.09	122.69
2	L5	3844	PSU	C6-N1-C2	-2.80	120.09	122.69
82	S2	105	PSU	C6-N1-C2	-2.80	120.09	122.69
2	L5	2815	A2M	O3'-C3'-C2'	2.79	118.99	111.19
2	L5	4431	PSU	O2-C2-N1	-2.78	119.92	122.79
2	L5	1781	PSU	C6-N1-C2	-2.77	120.12	122.69
2	L5	4620	OMU	O4-C4-C5	-2.76	120.40	125.16
82	S2	681	PSU	O2-C2-N1	-2.75	119.95	122.79
82	S2	1004	PSU	C6-N1-C2	-2.75	120.14	122.69
2	L5	4442	PSU	O2-C2-N1	-2.75	119.95	122.79
2	L5	4361	PSU	O2-C2-N1	-2.75	119.95	122.79
2	L5	1744	PSU	C6-N1-C2	-2.75	120.14	122.69
82	S2	484	A2M	C4'-O4'-C1'	-2.74	107.42	109.92
2	L5	3808	OMC	C1'-N1-C2	2.74	124.49	118.44
82	S2	1056	PSU	O2-C2-N1	-2.73	119.97	122.79
2	L5	3639	PSU	C6-N1-C2	-2.73	120.16	122.69
2	L5	3785	A2M	O3'-C3'-C2'	2.73	118.83	111.19
82	S2	799	OMU	O4-C4-C5	-2.73	120.46	125.16
2	L5	4973	PSU	O2-C2-N1	-2.73	119.97	122.79
2	L5	1871	A2M	O3'-C3'-C2'	2.72	118.80	111.19
82	S2	428	OMU	O2-C2-N1	-2.71	119.27	122.80
82	S2	1046	PSU	O2-C2-N1	-2.71	120.00	122.79
2	L5	400	A2M	O3'-C3'-C2'	2.71	118.76	111.19
2	L5	3822	PSU	C6-C5-C4	2.70	120.00	118.17
2	L5	3867	A2M	C2'-C1'-N9	2.70	118.54	112.56
2	L5	3920	PSU	C6-N1-C2	-2.69	120.20	122.69
2	L5	4571	A2M	C3'-C2'-C1'	-2.69	97.67	102.81
2	L5	1326	A2M	O3'-C3'-C2'	2.68	118.70	111.19
2	L5	3718	A2M	C4-C5-N7	2.67	112.16	109.34
2	L5	4628	PSU	C6-N1-C2	-2.67	120.21	122.69
82	S2	866	PSU	O2-C2-N1	-2.67	120.03	122.79
2	L5	2815	A2M	C2'-C1'-N9	2.67	118.49	112.56
82	S2	1288	OMU	O4-C4-C5	-2.66	120.57	125.16
2	L5	4523	A2M	O3'-C3'-C2'	2.66	118.63	111.19
82	S2	681	PSU	C6-N1-C2	-2.66	120.22	122.69
2	L5	1862	PSU	O2-C2-N1	-2.66	120.05	122.79
2	L5	4576	PSU	C6-N1-C2	-2.65	120.23	122.69

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	L5	5001	PSU	C6-N1-C2	-2.65	120.23	122.69
2	L5	4579	PSU	O2-C2-N1	-2.65	120.05	122.79
2	L5	2363	A2M	C3'-C2'-C1'	-2.65	97.74	102.81
2	L5	2787	A2M	C4-C5-N7	2.65	112.13	109.34
2	L5	2815	A2M	C4-C5-N7	2.64	112.13	109.34
82	S2	1046	PSU	C6-N1-C2	-2.63	120.25	122.69
82	S2	1248	B8N	O4-C4-N3	-2.63	115.72	119.99
2	L5	4673	PSU	O2-C2-N1	-2.63	120.08	122.79
2	L5	1582	PSU	C6-N1-C2	-2.63	120.25	122.69
2	L5	4471	PSU	C6-N1-C2	-2.63	120.25	122.69
82	S2	651	PSU	C6-N1-C2	-2.63	120.25	122.69
2	L5	2363	A2M	C2'-C1'-N9	2.62	118.38	112.56
82	S2	814	PSU	C6-N1-C2	-2.62	120.26	122.69
2	L5	4442	PSU	C6-N1-C2	-2.61	120.27	122.69
2	L5	4312	PSU	C6-N1-C2	-2.60	120.27	122.69
82	S2	966	PSU	C6-N1-C2	-2.60	120.27	122.69
2	L5	398	A2M	C4-C5-N7	2.60	112.09	109.34
2	L5	1744	PSU	O2-C2-N1	-2.60	120.11	122.79
2	L5	400	A2M	C4-C5-N7	2.60	112.08	109.34
2	L5	3867	A2M	C3'-C2'-C1'	-2.59	97.84	102.81
82	S2	1045	PSU	O2-C2-N1	-2.59	120.11	122.79
2	L5	1524	A2M	C4-C5-N7	2.58	112.06	109.34
2	L5	1582	PSU	O2-C2-N1	-2.58	120.13	122.79
2	L5	4457	PSU	C6-N1-C2	-2.58	120.30	122.69
2	L5	3825	A2M	C4-C5-N7	2.58	112.06	109.34
82	S2	166	A2M	C4-C5-N7	2.58	112.06	109.34
82	S2	1081	PSU	O2-C2-N1	-2.58	120.13	122.79
2	L5	3830	A2M	C4-C5-N7	2.57	112.06	109.34
2	L5	4431	PSU	C6-N1-C2	-2.57	120.31	122.69
82	S2	1383	A2M	C4-C5-N7	2.57	112.05	109.34
2	L5	4571	A2M	C4-C5-N7	2.56	112.05	109.34
2	L5	1524	A2M	O4'-C1'-C2'	2.56	110.98	106.61
2	L5	3701	OMC	O2-C2-N1	2.56	123.92	118.90
2	L5	4972	PSU	C6-N1-C2	-2.56	120.31	122.69
2	L5	4636	PSU	O2-C2-N1	-2.56	120.15	122.79
82	S2	484	A2M	O3'-C3'-C2'	2.56	118.34	111.19
2	L5	4973	PSU	C6-N1-C2	-2.56	120.32	122.69
2	L5	1860	PSU	O2-C2-N1	-2.55	120.15	122.79
82	S2	1046	PSU	C6-C5-C4	2.55	119.90	118.17
2	L5	3822	PSU	C6-N1-C2	-2.54	120.33	122.69
2	L5	4353	PSU	C6-N1-C2	-2.54	120.33	122.69
82	S2	1367	PSU	C6-N1-C2	-2.54	120.33	122.69

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	L5	3867	A2M	C4-C5-N7	2.54	112.02	109.34
82	S2	109	PSU	C6-N1-C2	-2.54	120.34	122.69
2	L5	4498	OMU	O2-C2-N1	-2.53	119.51	122.80
2	L5	1871	A2M	C4-C5-N7	2.52	112.00	109.34
2	L5	4590	A2M	C4-C5-N7	2.52	112.00	109.34
82	S2	1056	PSU	C6-C5-C4	2.51	119.87	118.17
2	L5	1677	PSU	C6-N1-C2	-2.51	120.36	122.69
2	L5	4457	PSU	O2-C2-N1	-2.51	120.20	122.79
82	S2	93	PSU	O2-C2-N1	-2.50	120.20	122.79
82	S2	1177	PSU	C6-N1-C2	-2.50	120.37	122.69
2	L5	2363	A2M	O3'-C3'-C2'	2.50	118.19	111.19
2	L5	1323	A2M	C3'-C2'-C1'	-2.50	98.01	102.81
2	L5	3822	PSU	O4'-C1'-C2'	2.50	108.61	105.15
2	L5	4361	PSU	C6-N1-C2	-2.50	120.37	122.69
2	L5	2632	PSU	C6-N1-C2	-2.50	120.37	122.69
2	L5	4579	PSU	C6-N1-C2	-2.50	120.38	122.69
2	L5	3853	PSU	C6-N1-C2	-2.49	120.38	122.69
82	S2	576	A2M	C4-C5-N7	2.49	111.97	109.34
2	L5	1534	A2M	C4-C5-N7	2.49	111.97	109.34
82	S2	1232	PSU	C6-N1-C2	-2.48	120.39	122.69
2	L5	1677	PSU	C6-C5-C4	2.48	119.85	118.17
2	L5	2815	A2M	O4'-C1'-C2'	2.47	110.82	106.61
82	S2	1337	4AC	N4-C4-N3	2.47	117.88	113.87
2	L5	3785	A2M	C3'-C2'-C1'	-2.47	98.07	102.81
82	S2	1174	PSU	C6-N1-C2	-2.47	120.40	122.69
2	L5	4500	PSU	C6-C5-C4	2.47	119.84	118.17
2	L5	1792	PSU	C6-N1-C2	-2.46	120.41	122.69
2	L5	4456	OMC	C1'-N1-C2	2.46	123.88	118.44
2	L5	3851	PSU	C6-N1-C2	-2.46	120.41	122.69
2	L5	2839	PSU	O2-C2-N1	-2.45	120.27	122.79
2	L5	3867	A2M	O3'-C3'-C2'	2.44	118.03	111.19
82	S2	93	PSU	C6-N1-C2	-2.44	120.42	122.69
82	S2	649	PSU	C6-N1-C2	-2.44	120.42	122.69
2	L5	2787	A2M	O4'-C1'-C2'	2.44	110.77	106.61
82	S2	668	A2M	O4'-C1'-C2'	2.44	110.77	106.61
4	L8	55	PSU	O2-C2-N1	-2.44	120.27	122.79
82	S2	1177	PSU	O2-C2-N1	-2.44	120.27	122.79
2	L5	1323	A2M	C4-C5-N7	2.43	111.91	109.34
2	L5	4227	OMU	O2-C2-N1	-2.43	119.63	122.80
82	S2	1031	A2M	C4-C5-N7	2.43	111.91	109.34
2	L5	3637	PSU	C6-N1-C2	-2.43	120.44	122.69
2	L5	2401	A2M	C4-C5-N7	2.42	111.90	109.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	L5	4523	A2M	C4-C5-N7	2.41	111.89	109.34
2	L5	3925	OMU	O2-C2-N1	-2.40	119.67	122.80
82	S2	406	PSU	C6-N1-C2	-2.40	120.47	122.69
82	S2	686	PSU	C6-N1-C2	-2.40	120.47	122.69
2	L5	1326	A2M	C4-C5-N7	2.40	111.87	109.34
2	L5	4403	PSU	C6-C5-C4	2.39	119.79	118.17
82	S2	509	OMG	O6-C6-C5	2.39	129.05	124.32
2	L5	2363	A2M	C4-C5-N7	2.38	111.85	109.34
82	S2	1056	PSU	C6-N1-C2	-2.38	120.48	122.69
2	L5	2824	OMC	C1'-N1-C2	2.38	123.70	118.44
2	L5	4442	PSU	O4'-C1'-C2'	2.37	108.43	105.15
82	S2	159	A2M	C4-C5-N7	2.37	111.84	109.34
2	L5	3825	A2M	C2'-C1'-N9	2.36	117.81	112.56
2	L5	4296	PSU	C6-N1-C2	-2.36	120.50	122.69
2	L5	2422	OMC	C1'-N1-C2	2.35	123.64	118.44
82	S2	1248	B8N	O4-C4-C5	-2.35	118.51	122.58
2	L5	4442	PSU	C6-C5-C4	2.35	119.76	118.17
82	S2	484	A2M	C4-C5-N7	2.35	111.82	109.34
2	L5	2839	PSU	C6-N1-C2	-2.35	120.51	122.69
82	S2	866	PSU	C6-C5-C4	2.35	119.76	118.17
2	L5	2861	OMC	C1'-N1-C2	2.35	123.62	118.44
2	L5	4299	PSU	O2-C2-N1	-2.35	120.37	122.79
82	S2	27	A2M	C4-C5-N7	2.34	111.81	109.34
82	S2	468	A2M	C4-C5-N7	2.34	111.81	109.34
82	S2	866	PSU	C6-N1-C2	-2.33	120.53	122.69
2	L5	4532	PSU	C6-N1-C2	-2.33	120.53	122.69
82	S2	1391	OMC	C1'-N1-C2	2.33	123.59	118.44
2	L5	3818	UY1	O2-C2-N1	-2.33	120.38	122.79
2	L5	1323	A2M	O4'-C1'-C2'	2.33	110.58	106.61
2	L5	1322	1MA	C5-C6-N1	-2.32	110.62	113.95
82	S2	99	A2M	C4-C5-N7	2.32	111.79	109.34
82	S2	121	OMU	O2-C2-N1	-2.31	119.78	122.80
2	L5	4403	PSU	O4'-C1'-C2'	2.30	108.34	105.15
82	S2	1248	B8N	O4'-C1'-C2'	2.30	108.34	105.15
2	L5	4403	PSU	C6-N1-C2	-2.30	120.56	122.69
82	S2	354	OMU	O2-C2-N1	-2.30	119.81	122.80
2	L5	2787	A2M	O4'-C4'-C3'	2.29	109.71	105.15
82	S2	1326	OMU	O2-C2-N1	-2.29	119.82	122.80
82	S2	406	PSU	C6-C5-C4	2.28	119.71	118.17
2	L5	3899	OMG	O6-C6-C5	2.28	128.84	124.32
2	L5	4521	PSU	C6-N1-C2	-2.27	120.58	122.69
82	S2	1328	OMG	O6-C6-C5	2.26	128.81	124.32

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
82	S2	1081	PSU	C6-N1-C2	-2.26	120.59	122.69
2	L5	4493	PSU	O2-C2-N1	-2.26	120.45	122.79
2	L5	1326	A2M	C3'-C2'-C1'	-2.26	98.48	102.81
82	S2	166	A2M	O4'-C1'-C2'	2.26	110.45	106.61
82	S2	668	A2M	C4-C5-N7	2.26	111.72	109.34
2	L5	4499	OMG	O6-C6-C5	2.25	128.79	124.32
2	L5	1326	A2M	C2'-C1'-N9	2.25	117.55	112.56
82	S2	1031	A2M	O4'-C1'-C2'	2.25	110.44	106.61
82	S2	644	OMG	O6-C6-C5	2.25	128.77	124.32
2	L5	1860	PSU	C6-N1-C2	-2.24	120.61	122.69
82	S2	27	A2M	O4'-C1'-C2'	2.24	110.43	106.61
2	L5	1522	OMG	O6-C6-C5	2.24	128.76	124.32
2	L5	4620	OMU	O2-C2-N1	-2.24	119.89	122.80
2	L5	4493	PSU	C6-N1-C2	-2.24	120.62	122.69
82	S2	683	OMG	O6-C6-C5	2.23	128.75	124.32
2	L5	2364	OMG	O6-C6-C5	2.23	128.75	124.32
82	S2	1244	PSU	C6-N1-C2	-2.23	120.62	122.69
2	L5	1322	1MA	CM1-N1-C6	-2.22	116.71	120.15
82	S2	601	OMG	O6-C6-C5	2.21	128.71	124.32
2	L5	3627	OMG	O6-C6-C5	2.21	128.70	124.32
82	S2	867	OMG	O6-C6-C5	2.21	128.69	124.32
2	L5	3785	A2M	O4'-C4'-C3'	2.20	109.53	105.15
2	L5	4552	PSU	C6-N1-C2	-2.20	120.65	122.69
2	L5	1782	PSU	O2-C2-N1	-2.20	120.52	122.79
2	L5	4590	A2M	O4'-C1'-C2'	2.20	110.36	106.61
2	L5	2787	A2M	C4'-O4'-C1'	-2.20	107.91	109.92
4	L8	55	PSU	C6-N1-C2	-2.19	120.66	122.69
82	S2	1081	PSU	O4'-C1'-C2'	2.19	108.18	105.15
2	L5	4571	A2M	O4'-C1'-C2'	2.19	110.34	106.61
82	S2	1045	PSU	C6-N1-C2	-2.18	120.67	122.69
82	S2	863	PSU	C6-N1-C2	-2.18	120.67	122.69
2	L5	4196	OMG	O6-C6-C5	2.17	128.63	124.32
82	S2	436	OMG	O6-C6-C5	2.17	128.63	124.32
2	L5	4392	OMG	O6-C6-C5	2.17	128.62	124.32
2	L5	1534	A2M	O3'-C3'-C4'	-2.17	104.86	111.08
2	L5	1322	1MA	N1-C6-N6	2.17	125.15	119.71
82	S2	1832	6MZ	C9-N6-C6	-2.16	120.84	122.85
2	L5	1326	A2M	O4'-C1'-C2'	2.16	110.30	106.61
82	S2	159	A2M	O4'-C1'-C2'	2.16	110.29	106.61
82	S2	484	A2M	O4'-C1'-C2'	2.16	110.29	106.61
4	L8	69	PSU	O4'-C1'-C2'	2.16	108.14	105.15
2	L5	3695	PSU	O4'-C1'-C2'	2.16	108.13	105.15

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	L5	400	A2M	O4'-C1'-C2'	2.15	110.27	106.61
2	L5	2837	OMU	O2-C2-N1	-2.15	120.00	122.80
2	L5	4673	PSU	C6-N1-C2	-2.15	120.69	122.69
2	L5	1871	A2M	O4'-C1'-C2'	2.15	110.27	106.61
2	L5	3744	OMG	O6-C6-C5	2.15	128.58	124.32
2	L5	3695	PSU	C6-N1-C2	-2.14	120.70	122.69
82	S2	159	A2M	C4'-O4'-C1'	-2.14	107.97	109.92
82	S2	468	A2M	O4'-C1'-C2'	2.14	110.25	106.61
82	S2	109	PSU	C6-C5-C4	2.13	119.61	118.17
82	S2	159	A2M	O3'-C3'-C4'	-2.13	104.98	111.08
2	L5	4636	PSU	O4'-C1'-C2'	2.12	108.09	105.15
2	L5	4457	PSU	O4'-C1'-C2'	2.12	108.08	105.15
2	L5	2424	OMG	O6-C6-C5	2.12	128.52	124.32
4	L8	69	PSU	C6-C5-C4	2.11	119.60	118.17
2	L5	400	A2M	C2'-C1'-N9	2.11	117.23	112.56
2	L5	4689	PSU	C6-C5-C4	2.11	119.59	118.17
82	S2	116	OMU	O2-C2-N1	-2.10	120.06	122.80
4	L8	75	OMG	O6-C6-C5	2.10	128.48	124.32
2	L5	2815	A2M	C3'-C2'-C1'	-2.10	98.79	102.81
82	S2	159	A2M	C3'-C2'-C1'	-2.09	98.80	102.81
2	L5	4228	OMG	O6-C6-C5	2.09	128.47	124.32
2	L5	1862	PSU	C6-N1-C2	-2.09	120.75	122.69
82	S2	1046	PSU	O4'-C1'-C2'	2.09	108.04	105.15
2	L5	3782	5MC	C1'-N1-C6	-2.08	117.72	121.15
2	L5	4636	PSU	C6-C5-C4	2.08	119.58	118.17
82	S2	651	PSU	C6-C5-C4	2.07	119.57	118.17
2	L5	4552	PSU	C6-C5-C4	2.07	119.57	118.17
2	L5	4973	PSU	C6-C5-C4	2.07	119.57	118.17
2	L5	3808	OMC	C1'-N1-C6	-2.07	116.36	120.78
82	S2	627	OMU	O2-C2-N1	-2.07	120.11	122.80
82	S2	1248	B8N	C31-N3-C4	2.07	120.10	117.18
2	L5	4618	OMG	O6-C6-C5	2.06	128.41	124.32
2	L5	398	A2M	O4'-C1'-C2'	2.06	110.12	106.61
2	L5	4370	OMG	O6-C6-C5	2.06	128.40	124.32
2	L5	4972	PSU	C6-C5-C4	2.05	119.56	118.17
2	L5	1744	PSU	C6-C5-C4	2.05	119.56	118.17
2	L5	4637	OMG	O6-C6-C5	2.05	128.39	124.32
2	L5	1744	PSU	O4'-C1'-C2'	2.04	107.98	105.15
2	L5	4636	PSU	C6-N1-C2	-2.03	120.81	122.69
2	L5	1534	A2M	C2'-C1'-N9	2.02	117.04	112.56
2	L5	1782	PSU	C6-N1-C2	-2.02	120.82	122.69
2	L5	1871	A2M	C6-C5-C4	-2.02	113.98	117.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	L5	1534	A2M	CM'-O2'-C2'	-2.01	109.30	114.47
2	L5	3792	OMG	O6-C6-C5	2.01	128.31	124.32
82	S2	1383	A2M	C6-C5-C4	-2.01	113.99	117.90
2	L5	4306	OMU	O2-C2-N1	-2.01	120.18	122.80
2	L5	3920	PSU	C6-C5-C4	2.01	119.53	118.17
2	L5	4299	PSU	C6-N1-C2	-2.01	120.83	122.69
2	L5	1316	OMG	O6-C6-C5	2.01	128.30	124.32
2	L5	3785	A2M	O4'-C1'-N9	2.00	111.40	108.75
2	L5	1524	A2M	CM'-O2'-C2'	-2.00	109.33	114.47

There are no chirality outliers.

All (150) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	L5	400	A2M	C1'-C2'-O2'-CM'
2	L5	1316	OMG	C1'-C2'-O2'-CM2
2	L5	1326	A2M	O4'-C4'-C5'-O5'
2	L5	1340	OMC	C1'-C2'-O2'-CM2
2	L5	1625	OMG	O4'-C4'-C5'-O5'
2	L5	1677	PSU	C2'-C1'-C5-C4
2	L5	2364	OMG	O4'-C4'-C5'-O5'
2	L5	2787	A2M	C1'-C2'-O2'-CM'
2	L5	2861	OMC	C1'-C2'-O2'-CM2
2	L5	3792	OMG	O4'-C4'-C5'-O5'
2	L5	3818	UY1	C1'-C2'-O2'-CM2
2	L5	3867	A2M	C1'-C2'-O2'-CM'
2	L5	3925	OMU	C1'-C2'-O2'-CM2
2	L5	4196	OMG	C1'-C2'-O2'-CM2
2	L5	4220	6MZ	O4'-C4'-C5'-O5'
2	L5	4227	OMU	C1'-C2'-O2'-CM2
2	L5	4620	OMU	C1'-C2'-O2'-CM2
2	L5	4637	OMG	O4'-C4'-C5'-O5'
2	L5	4637	OMG	C1'-C2'-O2'-CM2
82	S2	27	A2M	C1'-C2'-O2'-CM'
82	S2	116	OMU	C1'-C2'-O2'-CM2
82	S2	576	A2M	O4'-C4'-C5'-O5'
82	S2	644	OMG	O4'-C4'-C5'-O5'
82	S2	644	OMG	C1'-C2'-O2'-CM2
82	S2	1248	B8N	C31-C32-C33-C34
82	S2	1272	OMC	O4'-C4'-C5'-O5'
82	S2	1288	OMU	C1'-C2'-O2'-CM2
82	S2	1288	OMU	O4'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
82	S2	1328	OMG	C1'-C2'-O2'-CM2
82	S2	1337	4AC	N3-C4-N4-C7
82	S2	1490	OMG	C1'-C2'-O2'-CM2
82	S2	1832	6MZ	C5-C6-N6-C9
82	S2	1832	6MZ	N1-C6-N6-C9
2	L5	3701	OMC	C2'-C1'-N1-C2
2	L5	1323	A2M	O4'-C4'-C5'-O5'
2	L5	1524	A2M	C3'-C4'-C5'-O5'
2	L5	1781	PSU	C3'-C4'-C5'-O5'
2	L5	2401	A2M	C3'-C4'-C5'-O5'
2	L5	3701	OMC	O4'-C4'-C5'-O5'
2	L5	3899	OMG	O4'-C4'-C5'-O5'
2	L5	3899	OMG	C3'-C4'-C5'-O5'
2	L5	4500	PSU	C3'-C4'-C5'-O5'
2	L5	4500	PSU	O4'-C4'-C5'-O5'
2	L5	4590	A2M	O4'-C4'-C5'-O5'
2	L5	4590	A2M	C3'-C4'-C5'-O5'
82	S2	576	A2M	C3'-C4'-C5'-O5'
82	S2	867	OMG	C3'-C4'-C5'-O5'
82	S2	1272	OMC	C3'-C4'-C5'-O5'
82	S2	1288	OMU	C3'-C4'-C5'-O5'
82	S2	1442	OMU	C3'-C4'-C5'-O5'
82	S2	1442	OMU	O4'-C4'-C5'-O5'
2	L5	398	A2M	O4'-C4'-C5'-O5'
2	L5	1326	A2M	C3'-C4'-C5'-O5'
2	L5	1625	OMG	C3'-C4'-C5'-O5'
2	L5	2401	A2M	O4'-C4'-C5'-O5'
2	L5	2787	A2M	C3'-C4'-C5'-O5'
2	L5	3701	OMC	C3'-C4'-C5'-O5'
2	L5	3792	OMG	C3'-C4'-C5'-O5'
2	L5	3867	A2M	C3'-C4'-C5'-O5'
82	S2	428	OMU	C3'-C4'-C5'-O5'
82	S2	517	OMC	C3'-C4'-C5'-O5'
82	S2	517	OMC	O4'-C4'-C5'-O5'
82	S2	799	OMU	C3'-C4'-C5'-O5'
82	S2	799	OMU	O4'-C4'-C5'-O5'
82	S2	801	PSU	C3'-C4'-C5'-O5'
2	L5	3701	OMC	C2'-C1'-N1-C6
2	L5	4447	5MC	C2'-C1'-N1-C6
82	S2	428	OMU	C2'-C1'-N1-C6
2	L5	4637	OMG	C3'-C4'-C5'-O5'
82	S2	428	OMU	O4'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
82	S2	644	OMG	C3'-C4'-C5'-O5'
2	L5	1323	A2M	C3'-C4'-C5'-O5'
2	L5	1524	A2M	O4'-C4'-C5'-O5'
2	L5	1536	PSU	C3'-C4'-C5'-O5'
2	L5	2364	OMG	C3'-C4'-C5'-O5'
2	L5	4447	5MC	C2'-C1'-N1-C2
82	S2	428	OMU	C2'-C1'-N1-C2
2	L5	1677	PSU	O4'-C4'-C5'-O5'
2	L5	4220	6MZ	C3'-C4'-C5'-O5'
82	S2	99	A2M	O4'-C4'-C5'-O5'
82	S2	683	OMG	C3'-C4'-C5'-O5'
82	S2	867	OMG	O4'-C4'-C5'-O5'
82	S2	1832	6MZ	O4'-C4'-C5'-O5'
2	L5	1677	PSU	C3'-C4'-C5'-O5'
2	L5	1781	PSU	O4'-C4'-C5'-O5'
2	L5	2422	OMC	O4'-C4'-C5'-O5'
82	S2	668	A2M	O4'-C4'-C5'-O5'
82	S2	801	PSU	O4'-C4'-C5'-O5'
2	L5	2422	OMC	C3'-C4'-C5'-O5'
2	L5	3818	UY1	C4'-C5'-O5'-P
2	L5	398	A2M	C3'-C4'-C5'-O5'
2	L5	1536	PSU	O4'-C4'-C5'-O5'
2	L5	3867	A2M	O4'-C4'-C5'-O5'
82	S2	668	A2M	C3'-C4'-C5'-O5'
2	L5	4590	A2M	C4'-C5'-O5'-P
82	S2	1703	OMC	O4'-C4'-C5'-O5'
82	S2	1248	B8N	N34-C33-C34-O36
2	L5	4306	OMU	C1'-C2'-O2'-CM2
82	S2	159	A2M	C1'-C2'-O2'-CM'
2	L5	2787	A2M	O4'-C4'-C5'-O5'
82	S2	1045	PSU	O4'-C4'-C5'-O5'
82	S2	1832	6MZ	C5'-O5'-P-O1P
2	L5	2876	OMG	C3'-C4'-C5'-O5'
82	S2	1045	PSU	C3'-C4'-C5'-O5'
82	S2	1248	B8N	C31-C32-C33-N34
2	L5	4447	5MC	O4'-C1'-N1-C2
2	L5	4623	OMG	C3'-C4'-C5'-O5'
82	S2	428	OMU	O4'-C1'-N1-C2
2	L5	4447	5MC	O4'-C1'-N1-C6
2	L5	3701	OMC	O4'-C1'-N1-C6
82	S2	428	OMU	O4'-C1'-N1-C6
2	L5	4494	OMG	C3'-C2'-O2'-CM2

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Mol	Chain	Res	Type	Atoms
2	L5	4500	PSU	C4'-C5'-O5'-P
82	S2	576	A2M	C4'-C5'-O5'-P
2	L5	1677	PSU	O4'-C1'-C5-C4
2	L5	3818	UY1	O4'-C1'-C5-C4
2	L5	4500	PSU	O4'-C1'-C5-C4
82	S2	1248	B8N	O4'-C1'-C5-C4
82	S2	1639	G7M	C3'-C4'-C5'-O5'
2	L5	1534	A2M	C4'-C5'-O5'-P
2	L5	4623	OMG	O4'-C4'-C5'-O5'
82	S2	1851	MA6	C4'-C5'-O5'-P
82	S2	1490	OMG	C4'-C5'-O5'-P
2	L5	2815	A2M	O4'-C4'-C5'-O5'
82	S2	99	A2M	C3'-C4'-C5'-O5'
2	L5	3701	OMC	O4'-C1'-N1-C2
2	L5	3844	PSU	C4'-C5'-O5'-P
2	L5	3887	OMC	C4'-C5'-O5'-P
82	S2	644	OMG	C4'-C5'-O5'-P
2	L5	2351	OMC	C2'-C1'-N1-C6
2	L5	398	A2M	C1'-C2'-O2'-CM'
2	L5	2365	OMC	C1'-C2'-O2'-CM2
2	L5	4590	A2M	C1'-C2'-O2'-CM'
82	S2	468	A2M	C1'-C2'-O2'-CM'
82	S2	576	A2M	C1'-C2'-O2'-CM'
82	S2	601	OMG	C1'-C2'-O2'-CM2
2	L5	2632	PSU	C3'-C4'-C5'-O5'
2	L5	4636	PSU	O4'-C1'-C5-C6
82	S2	1248	B8N	O4'-C1'-C5-C6
2	L5	4228	OMG	C3'-C2'-O2'-CM2
2	L5	2876	OMG	O4'-C4'-C5'-O5'
82	S2	1639	G7M	O4'-C4'-C5'-O5'
2	L5	4370	OMG	C3'-C2'-O2'-CM2
2	L5	2632	PSU	O4'-C4'-C5'-O5'
82	S2	683	OMG	O4'-C4'-C5'-O5'
82	S2	1832	6MZ	C3'-C4'-C5'-O5'
2	L5	4636	PSU	C4'-C5'-O5'-P
82	S2	1081	PSU	C4'-C5'-O5'-P
2	L5	2351	OMC	O4'-C4'-C5'-O5'
2	L5	3785	A2M	O4'-C4'-C5'-O5'

There are no ring outliers.

No monomer is involved in short contacts.

4.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

4.6 Ligand geometry [i](#)

Of 242 ligands modelled in this entry, 225 are monoatomic - leaving 17 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z > 2$	Counts	RMSZ	$\# Z > 2$
86	SPM	L5	5289	-	13,13,13	0.36	0	12,12,12	0.86	0
87	SPD	L5	5285	-	9,9,9	0.31	0	8,8,8	0.83	0
87	SPD	L5	5287	-	9,9,9	0.33	0	8,8,8	0.82	0
86	SPM	L5	5292	-	13,13,13	0.36	0	12,12,12	0.95	0
87	SPD	L5	5291	-	9,9,9	0.32	0	8,8,8	0.90	0
87	SPD	L5	5284	-	9,9,9	0.33	0	8,8,8	0.80	0
87	SPD	L5	5290	-	9,9,9	0.33	0	8,8,8	0.85	0
87	SPD	L5	5261	-	9,9,9	0.31	0	8,8,8	1.00	0
87	SPD	L5	5288	-	9,9,9	0.34	0	8,8,8	0.81	0
86	SPM	L5	5259	-	13,13,13	0.35	0	12,12,12	0.95	0
86	SPM	L5	5294	-	13,13,13	0.36	0	12,12,12	0.73	0
87	SPD	L5	5283	-	9,9,9	0.32	0	8,8,8	0.84	0
86	SPM	L5	5264	-	13,13,13	0.37	0	12,12,12	1.01	0
87	SPD	L5	5286	-	9,9,9	0.34	0	8,8,8	0.81	0
86	SPM	L5	5263	-	13,13,13	0.35	0	12,12,12	0.95	0
87	SPD	L5	5293	-	9,9,9	0.35	0	8,8,8	0.80	0
86	SPM	L5	5267	-	13,13,13	0.36	0	12,12,12	0.97	0

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
86	SPM	L5	5289	-	-	5/11/11/11	-
87	SPD	L5	5285	-	-	3/7/7/7	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
87	SPD	L5	5287	-	-	4/7/7/7	-
86	SPM	L5	5292	-	-	5/11/11/11	-
87	SPD	L5	5291	-	-	3/7/7/7	-
87	SPD	L5	5284	-	-	1/7/7/7	-
87	SPD	L5	5290	-	-	3/7/7/7	-
87	SPD	L5	5261	-	-	2/7/7/7	-
87	SPD	L5	5288	-	-	2/7/7/7	-
86	SPM	L5	5259	-	-	2/11/11/11	-
86	SPM	L5	5294	-	-	2/11/11/11	-
87	SPD	L5	5283	-	-	1/7/7/7	-
86	SPM	L5	5264	-	-	3/11/11/11	-
87	SPD	L5	5286	-	-	1/7/7/7	-
86	SPM	L5	5263	-	-	2/11/11/11	-
87	SPD	L5	5293	-	-	5/7/7/7	-
86	SPM	L5	5267	-	-	3/11/11/11	-

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (47) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
87	L5	5293	SPD	C3-C4-C5-N6
86	L5	5292	SPM	C7-C8-C9-N10
86	L5	5294	SPM	N10-C11-C12-C13
87	L5	5290	SPD	N6-C7-C8-C9
86	L5	5264	SPM	N5-C6-C7-C8
87	L5	5293	SPD	N6-C7-C8-C9
86	L5	5289	SPM	C7-C8-C9-N10
87	L5	5285	SPD	C3-C4-C5-N6
86	L5	5289	SPM	C12-C11-N10-C9
86	L5	5292	SPM	N10-C11-C12-C13
86	L5	5264	SPM	C7-C6-N5-C4
86	L5	5259	SPM	N5-C6-C7-C8
86	L5	5267	SPM	C6-C7-C8-C9
86	L5	5289	SPM	C6-C7-C8-C9
87	L5	5285	SPD	N6-C7-C8-C9
87	L5	5288	SPD	C2-C3-C4-C5

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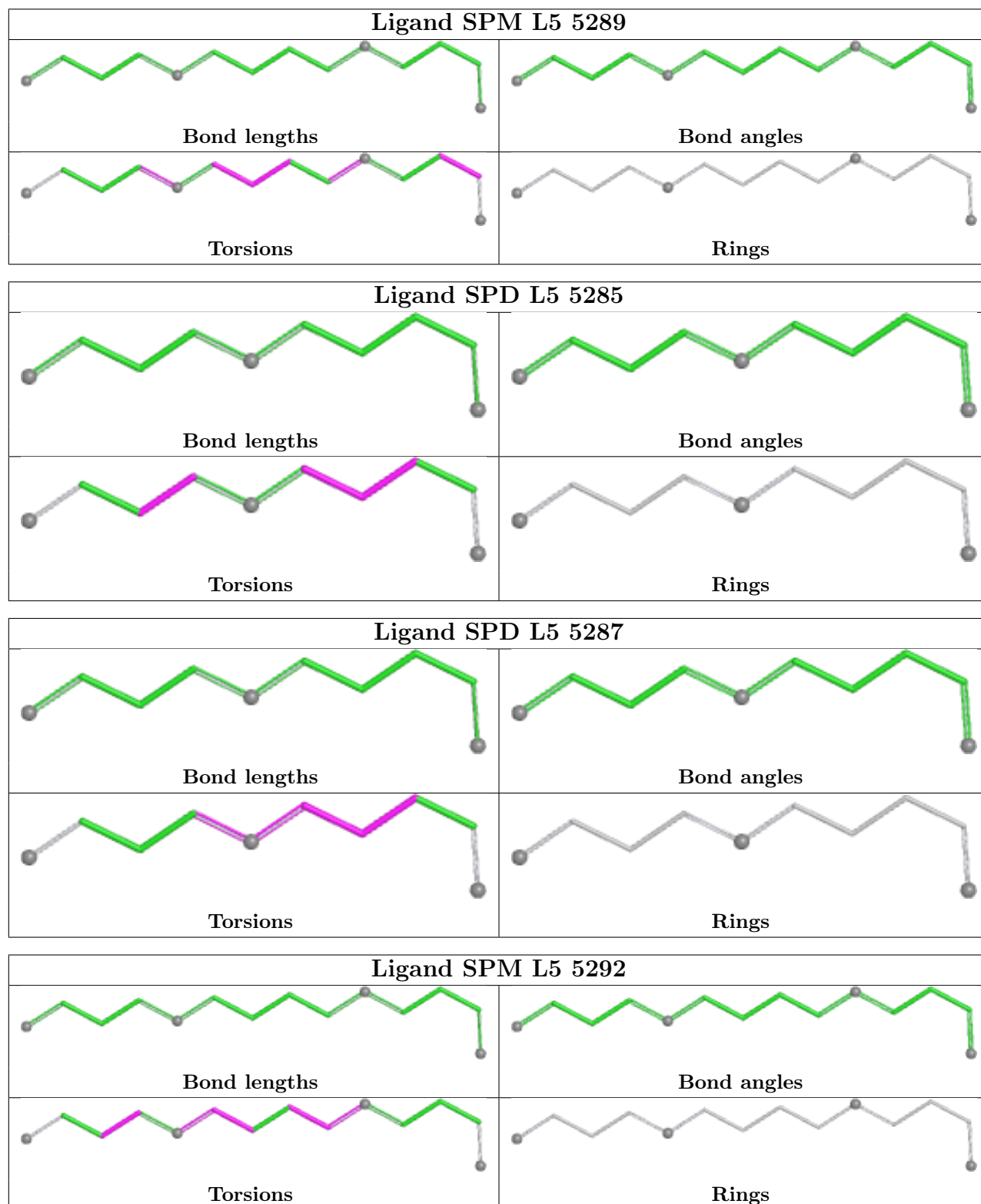
Mol	Chain	Res	Type	Atoms
86	L5	5263	SPM	C6-C7-C8-C9
87	L5	5285	SPD	C2-C3-C4-C5
86	L5	5259	SPM	C6-C7-C8-C9
87	L5	5293	SPD	C2-C3-C4-C5
87	L5	5291	SPD	N6-C7-C8-C9
87	L5	5286	SPD	C3-C4-C5-N6
86	L5	5292	SPM	N5-C6-C7-C8
87	L5	5284	SPD	C3-C4-C5-N6
87	L5	5288	SPD	C8-C7-N6-C5
87	L5	5261	SPD	C2-C3-C4-C5
86	L5	5289	SPM	N1-C2-C3-C4
87	L5	5291	SPD	C4-C5-N6-C7
87	L5	5290	SPD	N1-C2-C3-C4
86	L5	5267	SPM	C2-C3-C4-N5
87	L5	5261	SPD	N6-C7-C8-C9
86	L5	5267	SPM	C8-C9-N10-C11
87	L5	5290	SPD	C2-C3-C4-C5
87	L5	5283	SPD	C2-C3-C4-C5
87	L5	5287	SPD	C4-C5-N6-C7
87	L5	5293	SPD	C8-C7-N6-C5
86	L5	5264	SPM	N10-C11-C12-C13
87	L5	5287	SPD	C8-C7-N6-C5
87	L5	5287	SPD	C3-C4-C5-N6
86	L5	5289	SPM	C7-C6-N5-C4
86	L5	5292	SPM	C8-C9-N10-C11
86	L5	5294	SPM	C8-C9-N10-C11
87	L5	5293	SPD	C4-C5-N6-C7
86	L5	5292	SPM	C7-C6-N5-C4
87	L5	5291	SPD	C8-C7-N6-C5
87	L5	5287	SPD	C2-C3-C4-C5
86	L5	5263	SPM	C8-C9-N10-C11

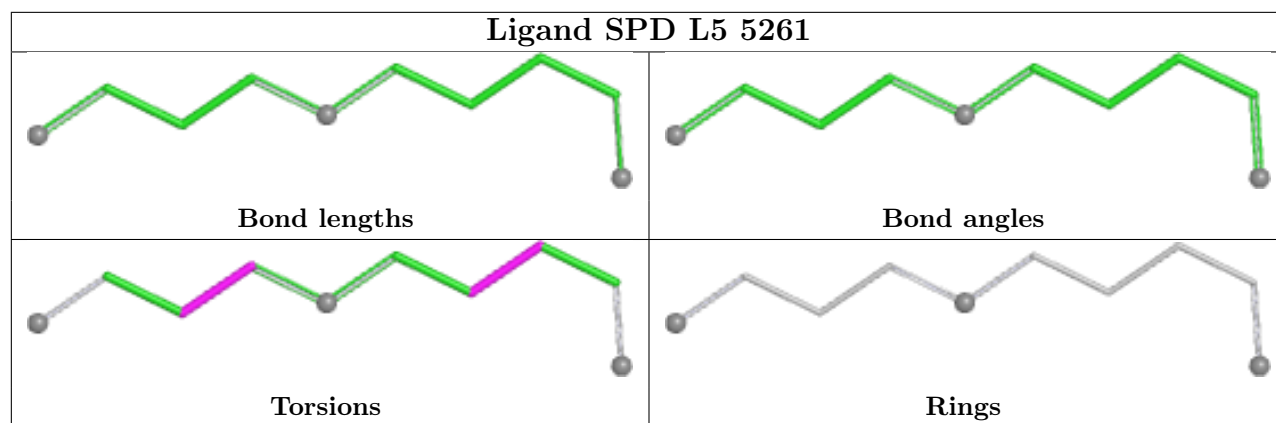
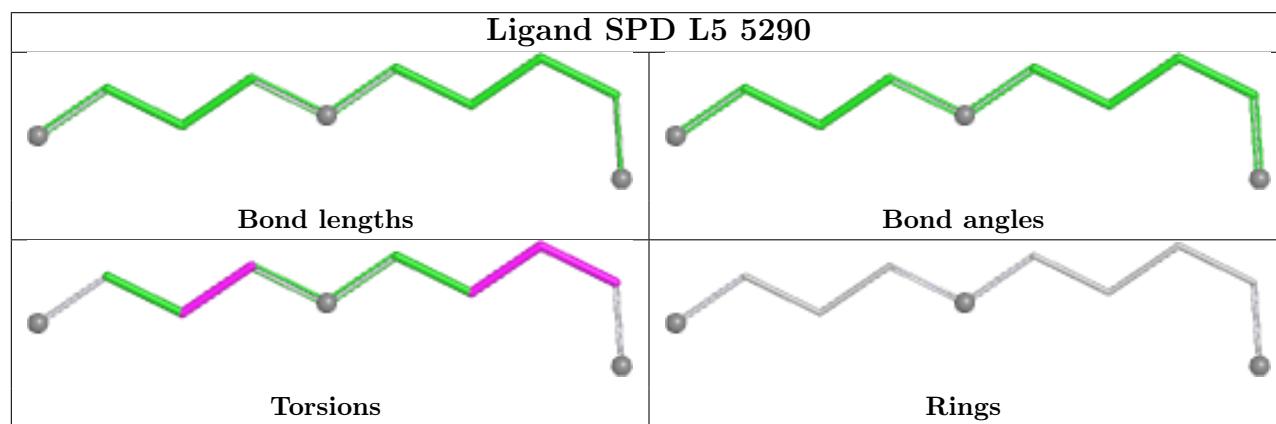
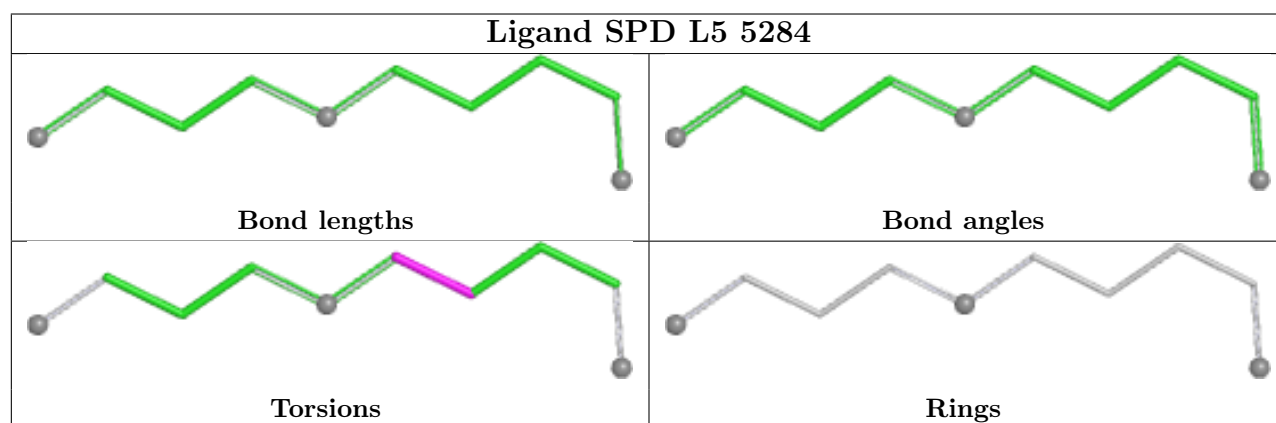
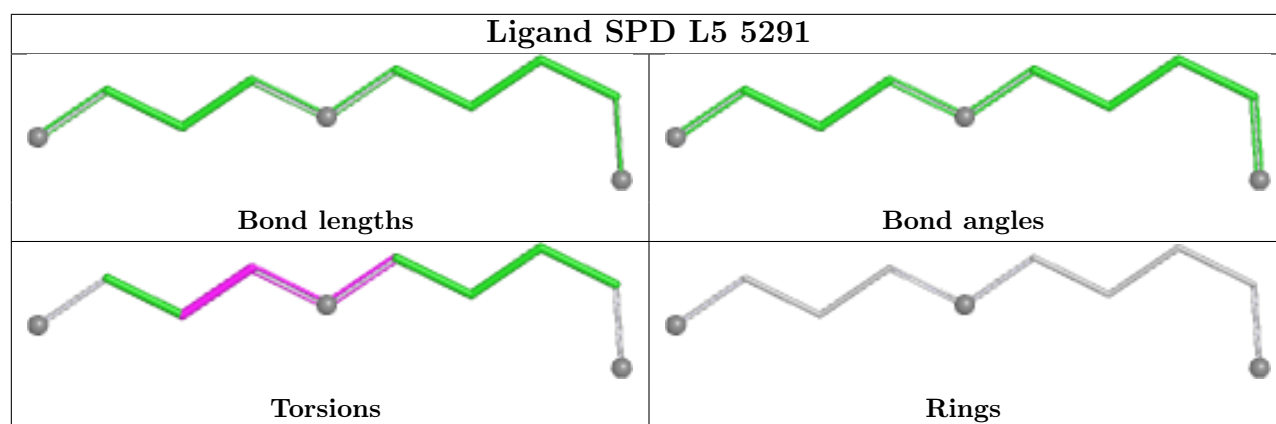
There are no ring outliers.

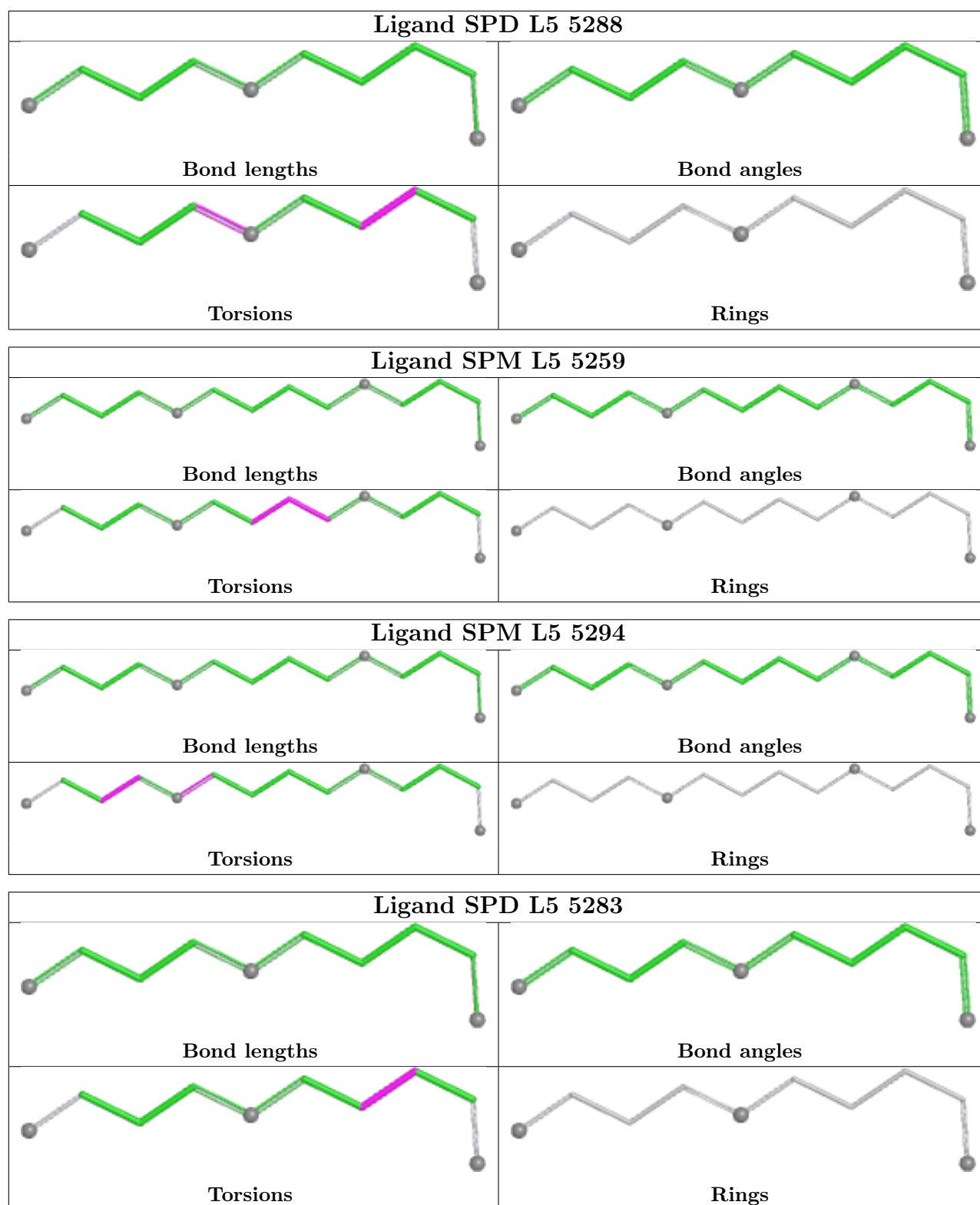
No monomer is involved in short contacts.

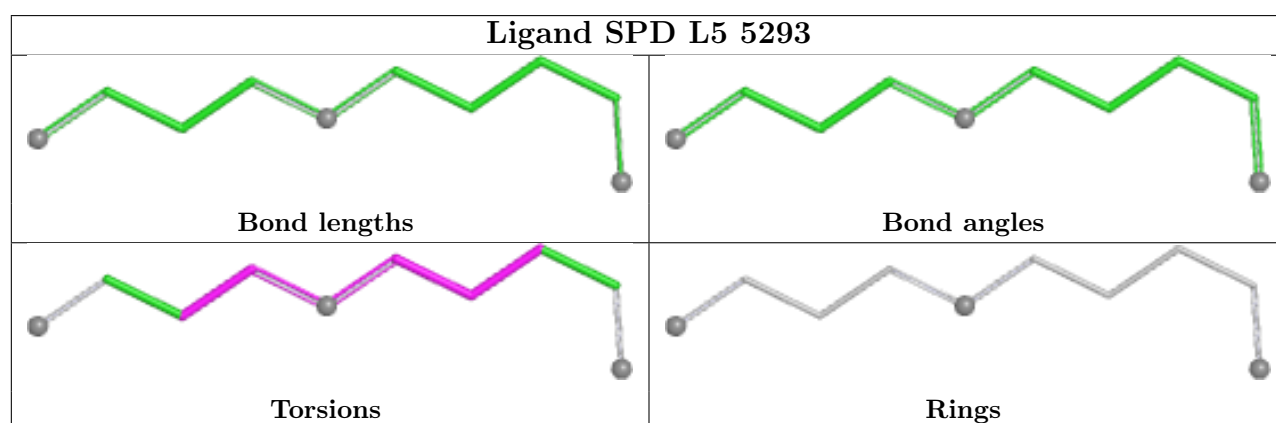
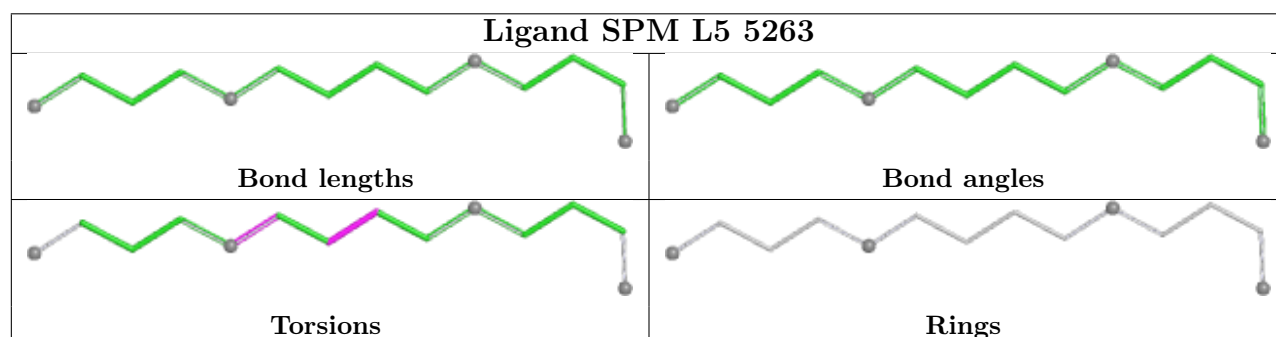
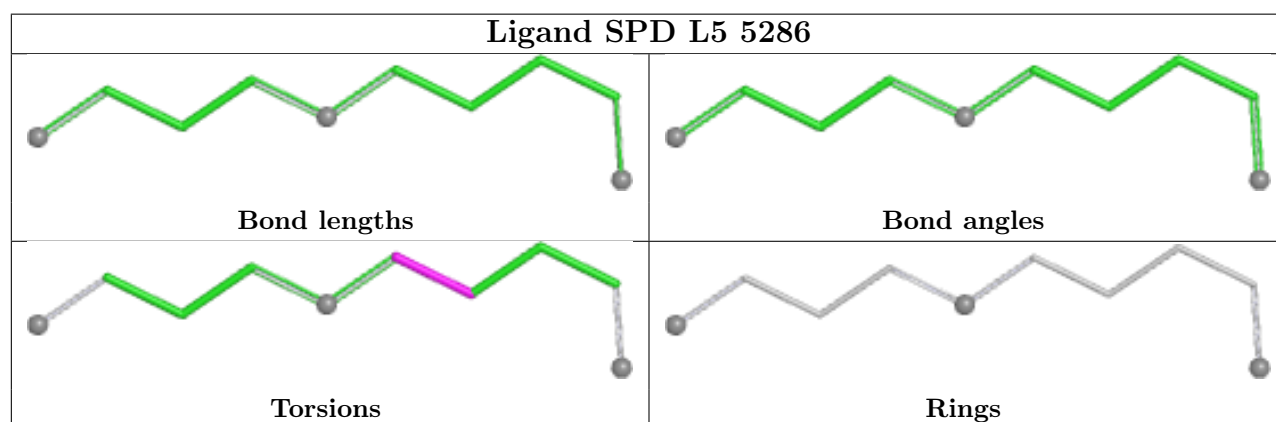
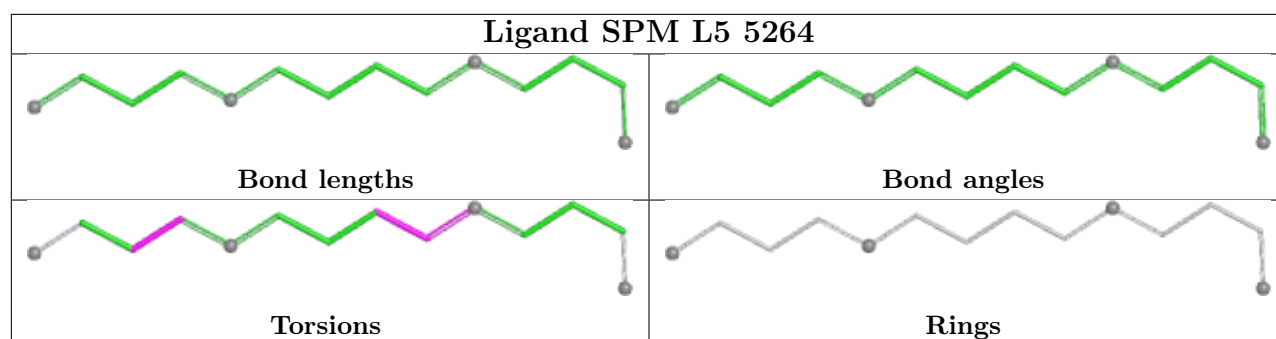
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the

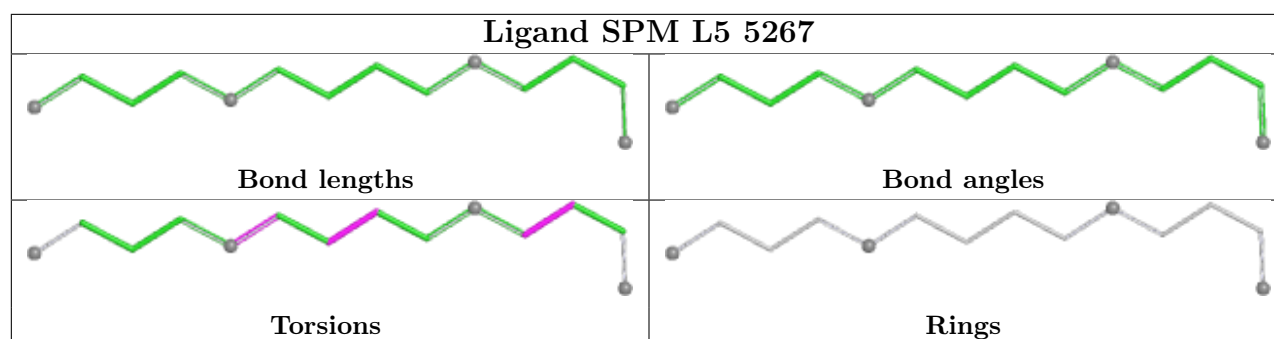
average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.











4.7 Other polymers [i](#)

There are no such residues in this entry.

4.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
2	L5	10
82	S2	5
31	Lb	1
9	LE	1
48	Lt	1
69	SH	1
1	Pt	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	Lb	76:VAL	C	89:VAL	N	34.07
1	S2	753:C	O3'	785:C	P	28.56
1	LE	76:ALA	C	87:LYS	N	23.14
1	L5	1706:A	O3'	1716:G	P	21.24
1	L5	2910:G	O3'	3584:C	P	20.98
1	L5	760:G	O3'	903:C	P	17.02
1	L5	519:C	O3'	642:G	P	15.66
1	S2	698:G	O3'	730:C	P	15.60
1	Lt	87:GLU	C	104:ILE	N	15.01
1	L5	4776:G	O3'	4858:C	P	14.77
1	L5	2112:G	O3'	2249:C	P	14.24
1	L5	3954:A	O3'	4056:A	P	13.37
1	S2	739:C	O3'	746:C	P	12.95
1	L5	990:C	O3'	1064:G	P	12.13

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Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	SH	107:LYS	C	111:LYS	N	11.37
1	Pt	15:G	O3'	18:G	P	9.79
1	L5	1222:A	O3'	1234:G	P	9.47
1	S2	225:G	O3'	287:U	P	8.09
1	L5	1100:U	O3'	1167:C	P	6.70
1	S2	1831:A	O3'	1832:6MZ	P	4.24

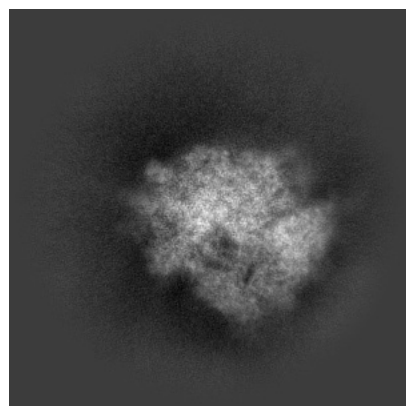
5 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-71329. These allow visual inspection of the internal detail of the map and identification of artifacts.

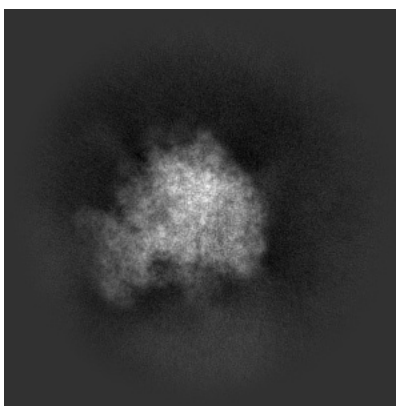
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

5.1 Orthogonal projections [i](#)

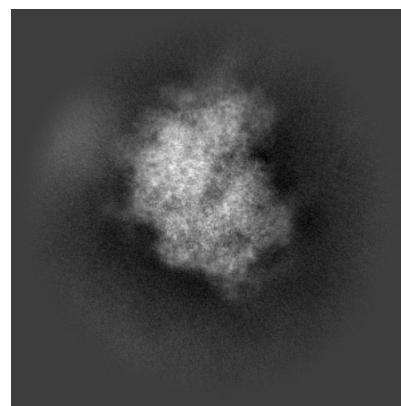
5.1.1 Primary map



X

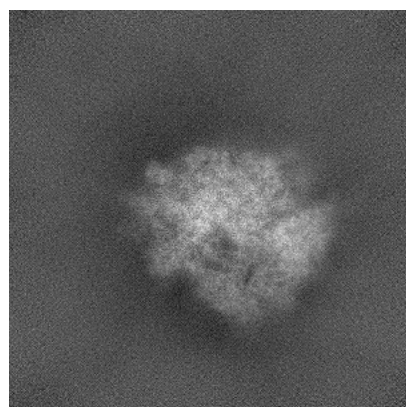


Y

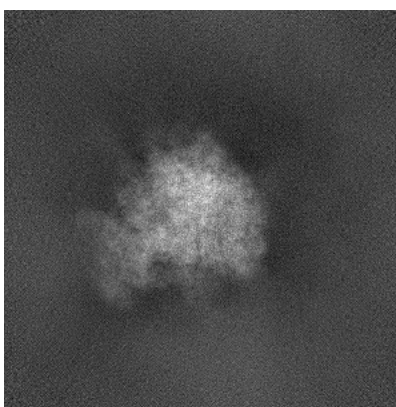


Z

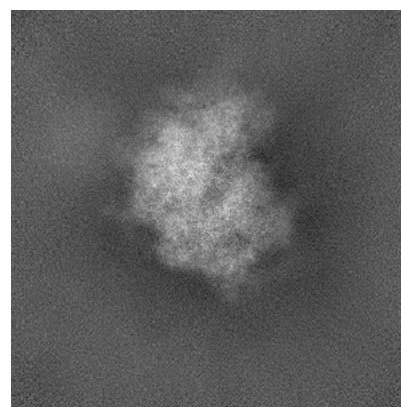
5.1.2 Raw map



X



Y

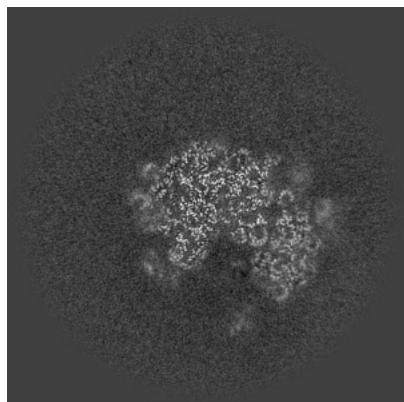


Z

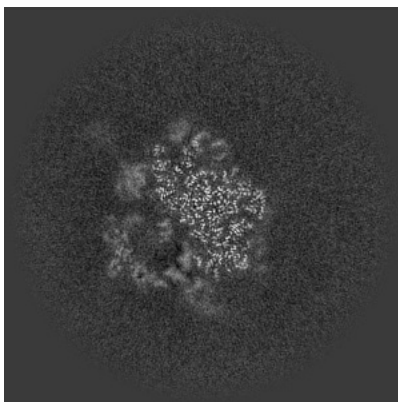
The images above show the map projected in three orthogonal directions.

5.2 Central slices [i](#)

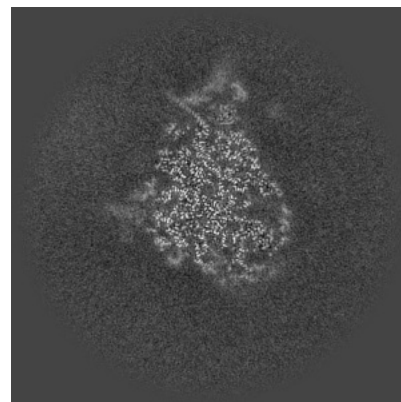
5.2.1 Primary map



X Index: 256

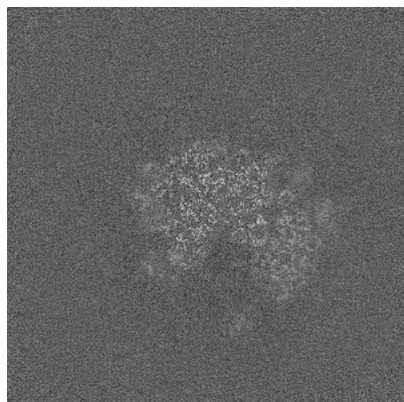


Y Index: 256

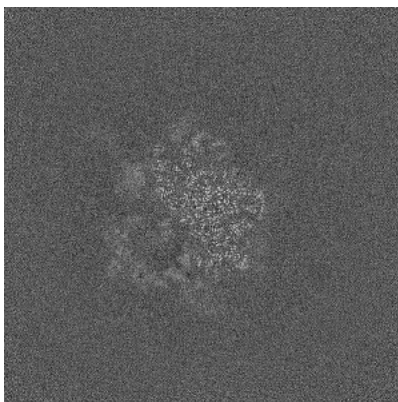


Z Index: 256

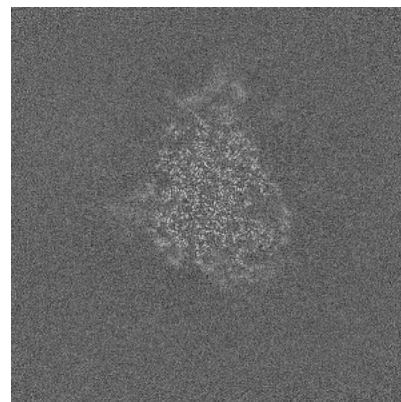
5.2.2 Raw map



X Index: 256



Y Index: 256

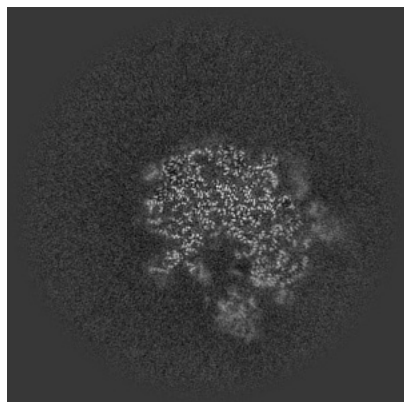


Z Index: 256

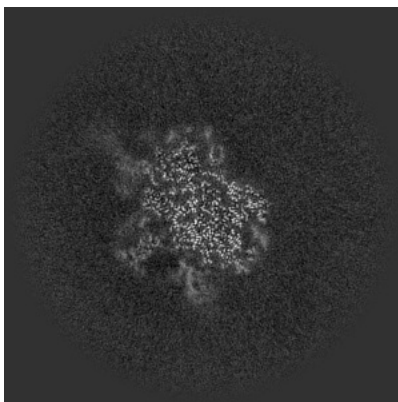
The images above show central slices of the map in three orthogonal directions.

5.3 Largest variance slices [i](#)

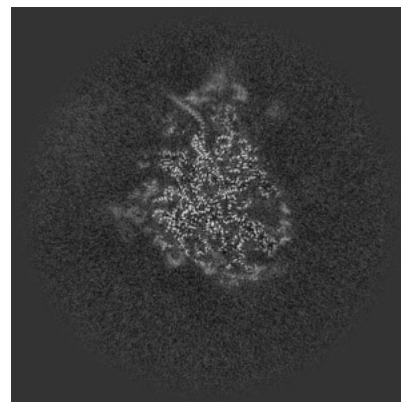
5.3.1 Primary map



X Index: 243

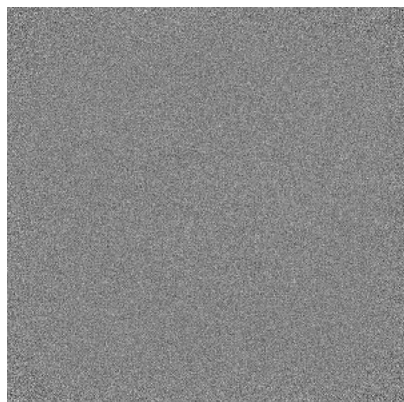


Y Index: 243

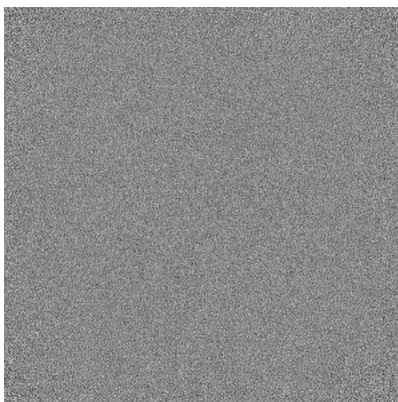


Z Index: 254

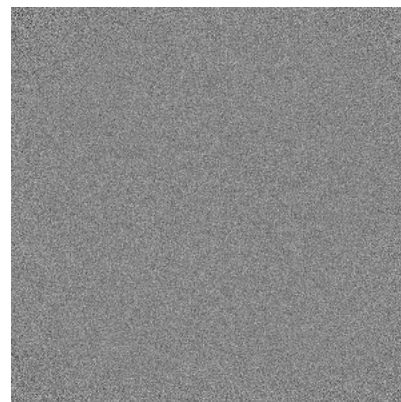
5.3.2 Raw map



X Index: 0



Y Index: 0

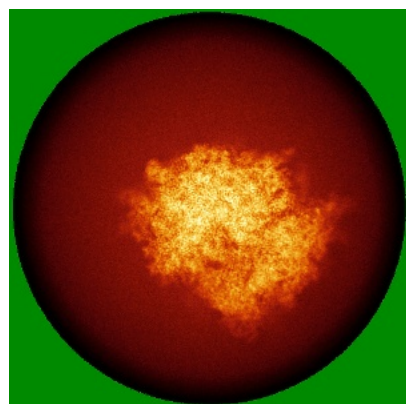


Z Index: 0

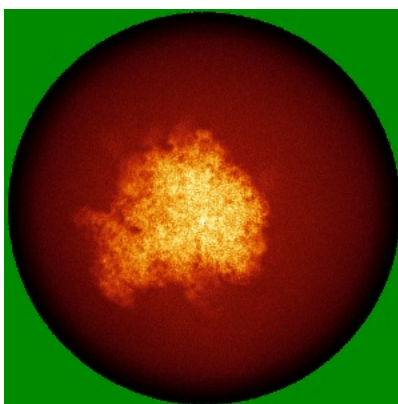
The images above show the largest variance slices of the map in three orthogonal directions.

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

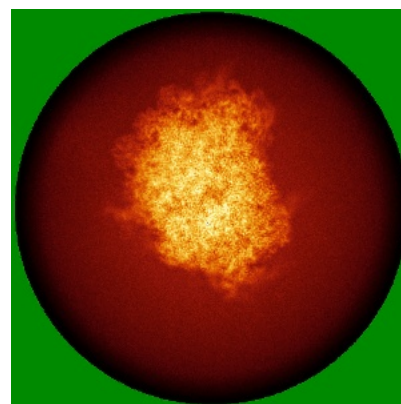
5.4.1 Primary map



X

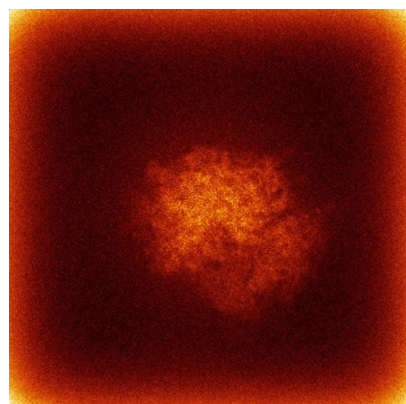


Y

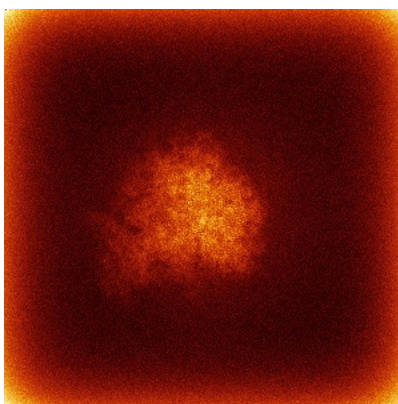


Z

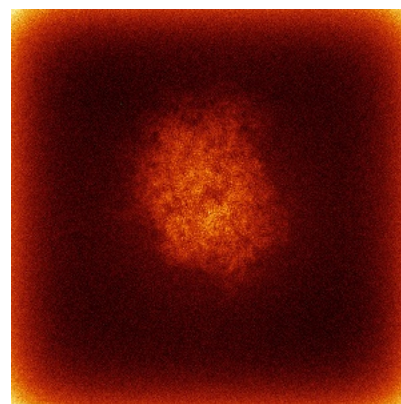
5.4.2 Raw map



X



Y



Z

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

5.5 Orthogonal surface views [i](#)

5.5.1 Primary map



X



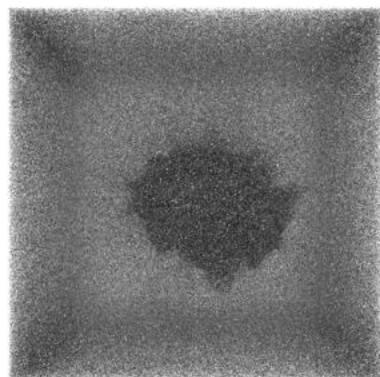
Y



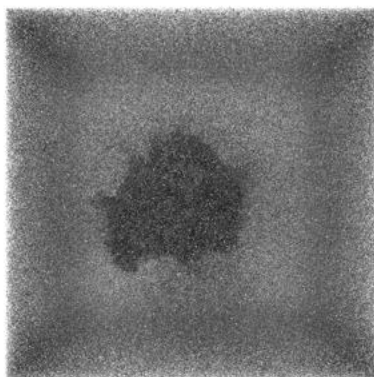
Z

The images above show the 3D surface view of the map at the recommended contour level 0.01. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

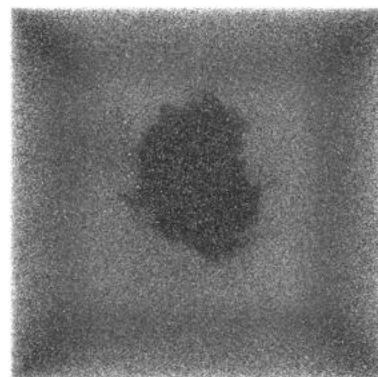
5.5.2 Raw map



X



Y



Z

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

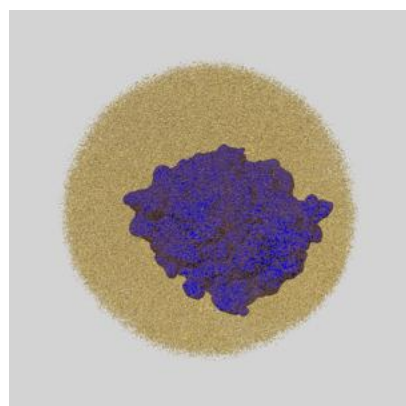
5.6 Mask visualisation [i](#)

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

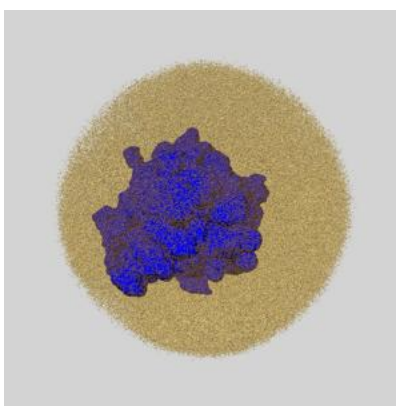
A mask typically either:

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

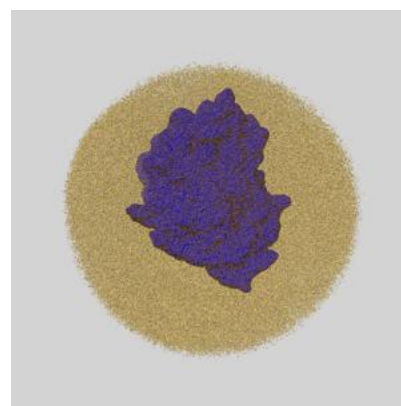
5.6.1 emd_71329_msk_1.map [i](#)



X



Y

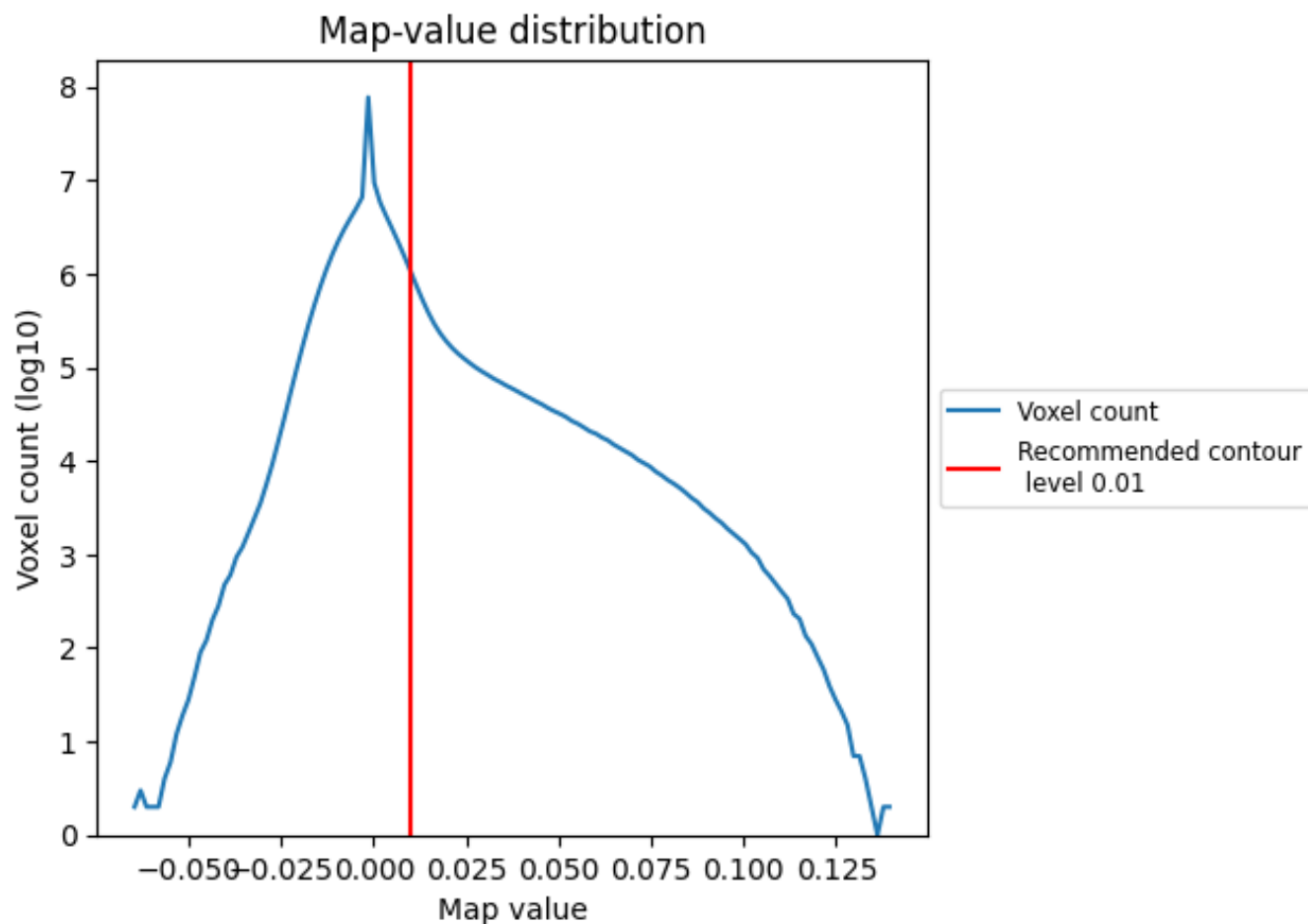


Z

6 Map analysis [i](#)

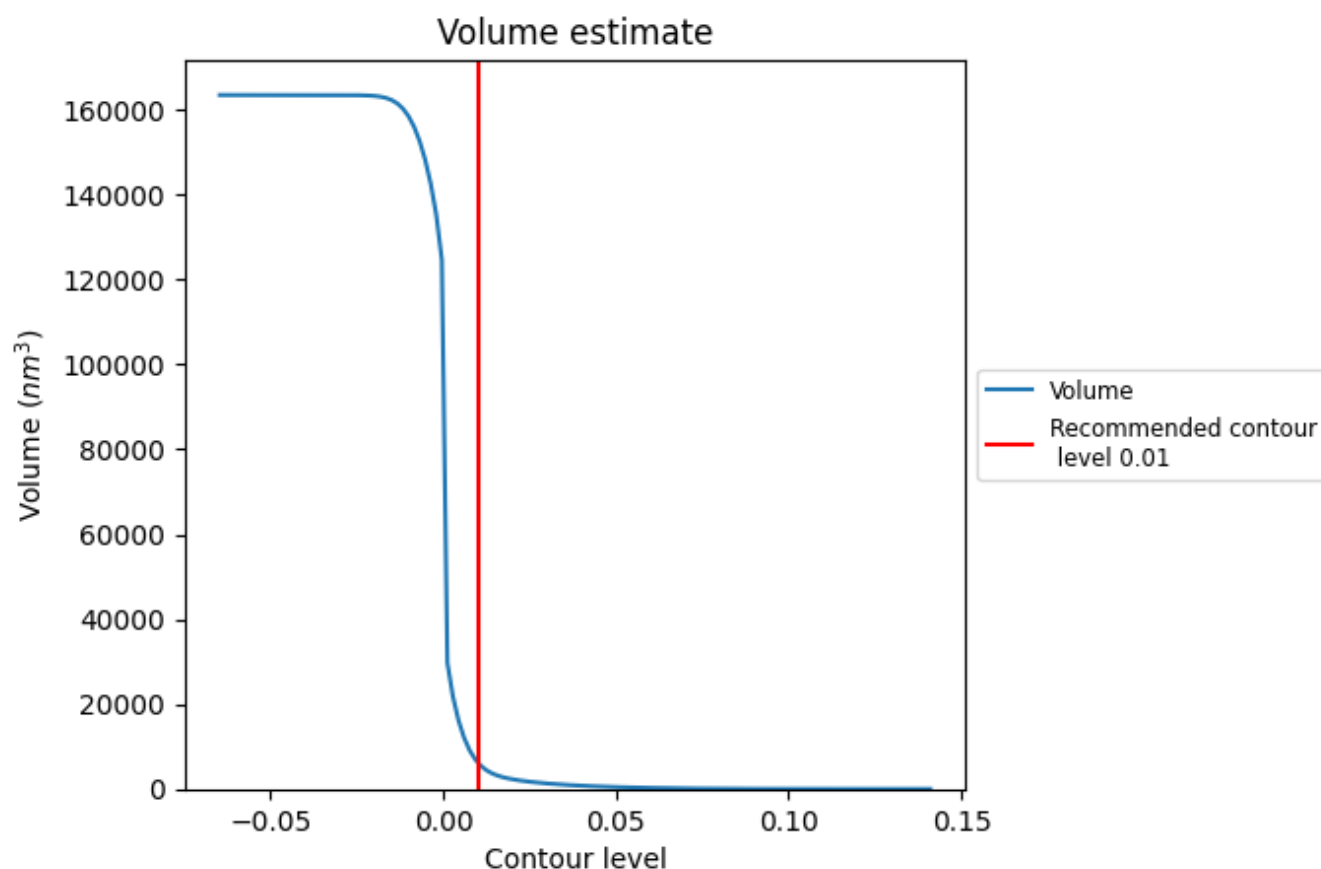
This section contains the results of statistical analysis of the map.

6.1 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.

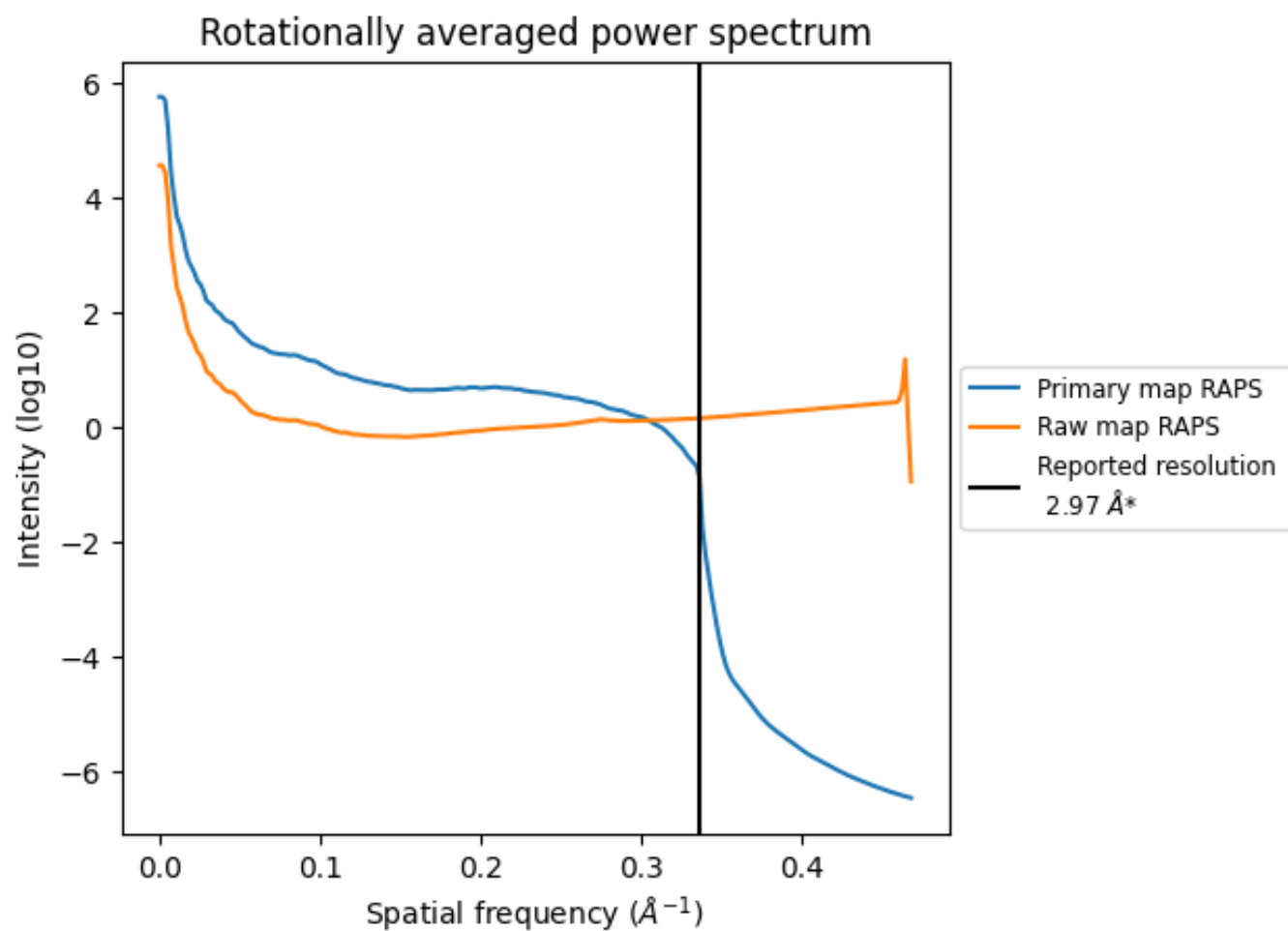
6.2 Volume estimate [i](#)



The volume at the recommended contour level is 6309 nm^3 ; this corresponds to an approximate mass of 5699 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.

6.3 Rotationally averaged power spectrum [i](#)

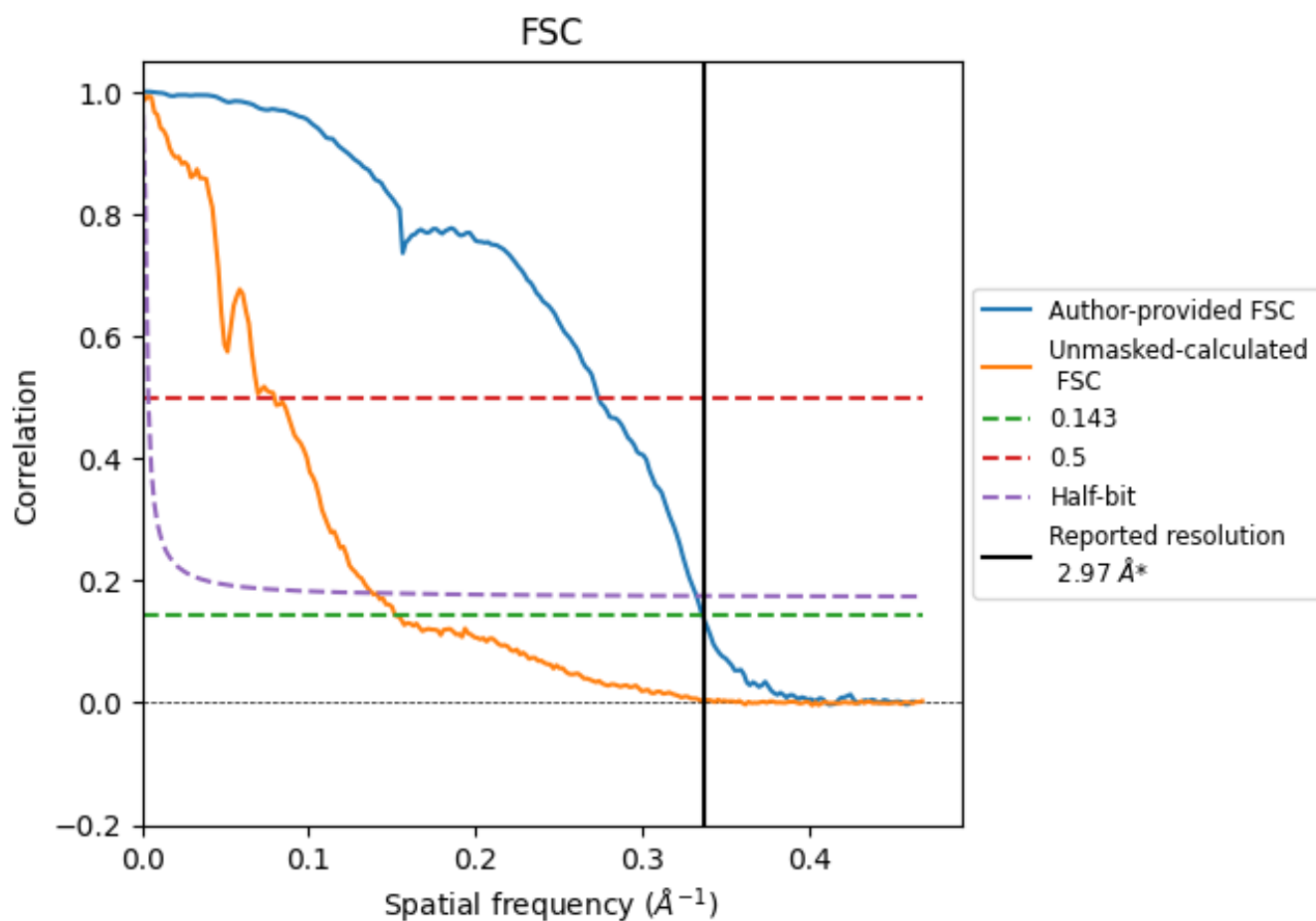


*Reported resolution corresponds to spatial frequency of 0.337 $\text{\AA}^{-1}$

7 Fourier-Shell correlation [i](#)

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

7.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of 0.337 Å⁻¹

7.2 Resolution estimates [i](#)

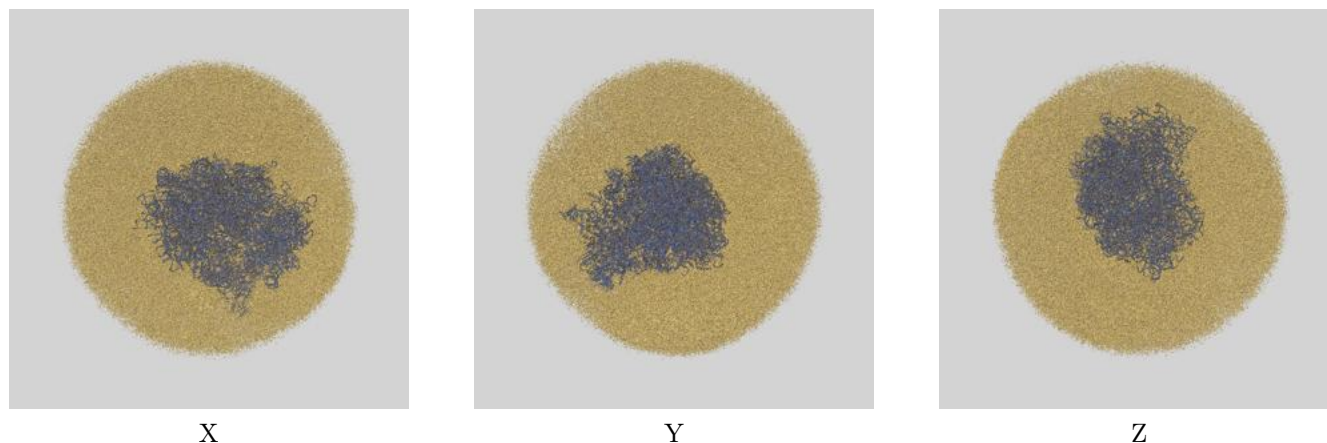
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	2.97	-	-
Author-provided FSC curve	2.97	3.65	3.01
Unmasked-calculated*	6.59	12.61	7.24

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 6.59 differs from the reported value 2.97 by more than 10 %

8 Map-model fit [i](#)

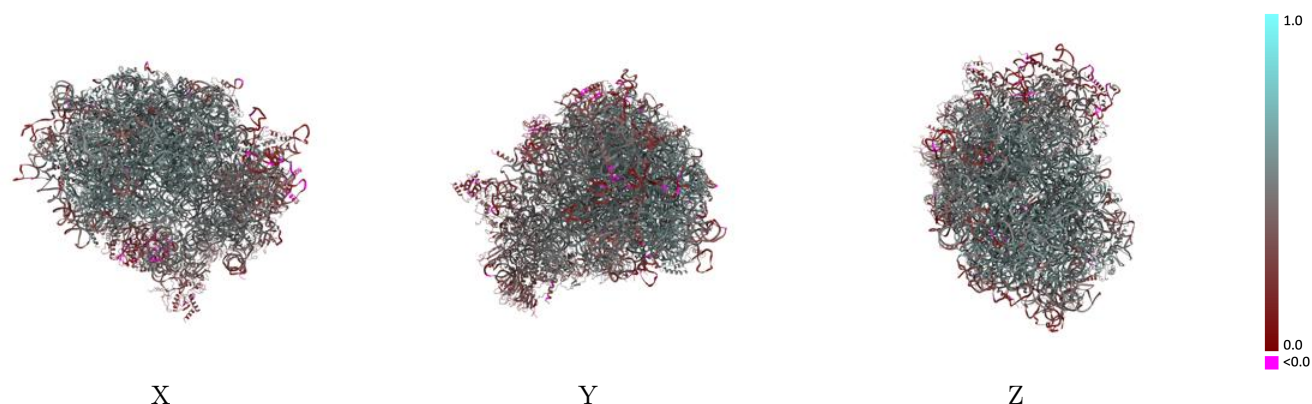
This section contains information regarding the fit between EMDB map EMD-71329 and PDB model 9P6Z. Per-residue inclusion information can be found in section ?? on page ??.

8.1 Map-model overlay [i](#)



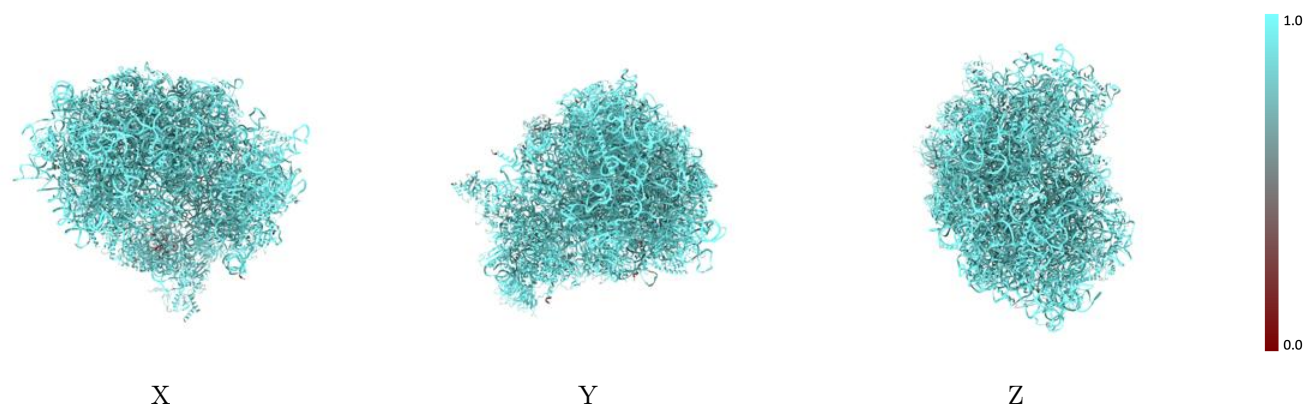
The images above show the 3D surface view of the map at the recommended contour level 0.01 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



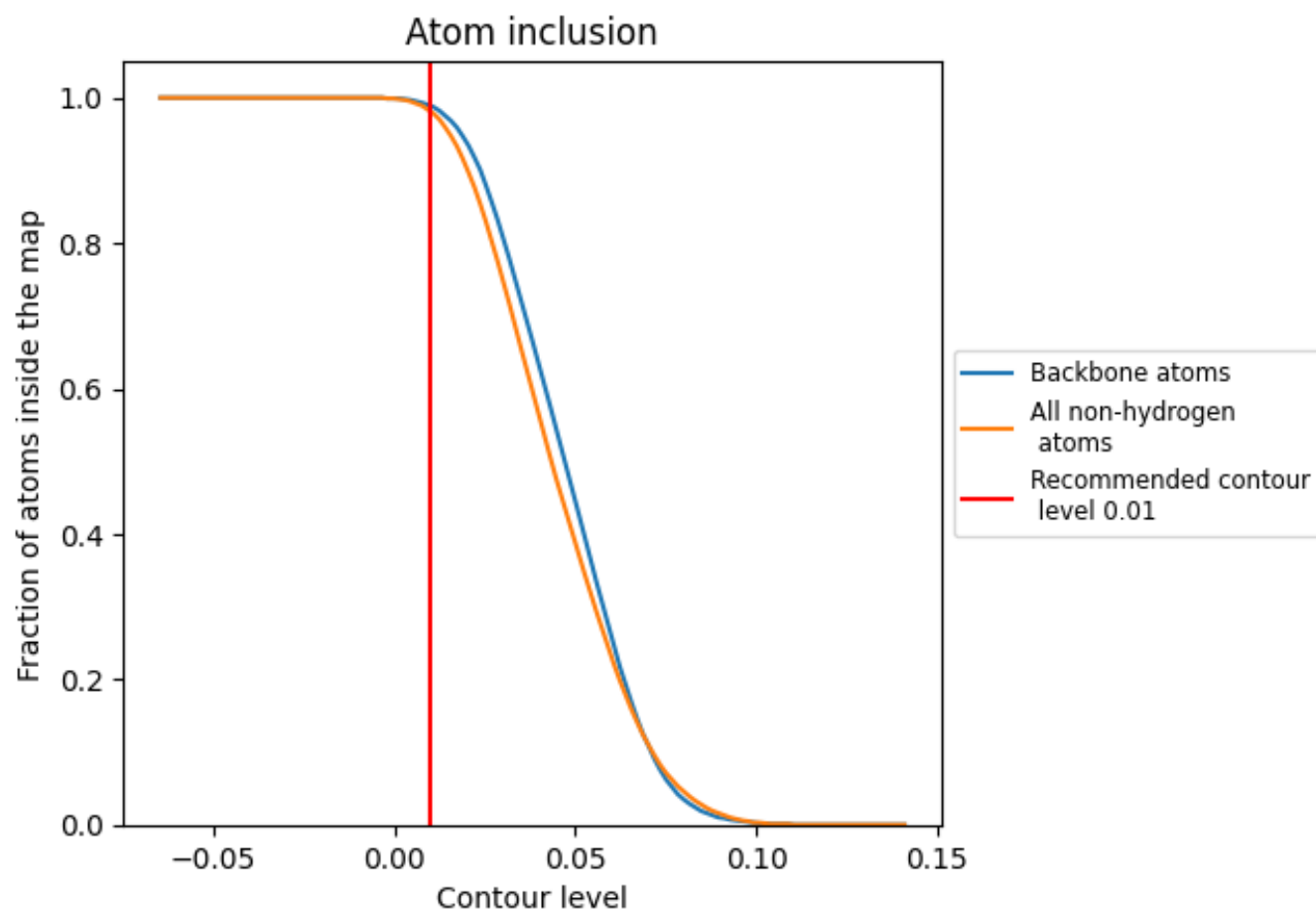
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

8.3 Atom inclusion mapped to coordinate model [i](#)



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.01).

8.4 Atom inclusion [i](#)



At the recommended contour level, 99% of all backbone atoms, 98% of all non-hydrogen atoms, are inside the map.

8.5 Map-model fit summary ⓘ

The table lists the average atom inclusion at the recommended contour level (0.01) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.9810	 0.4730
CI	 0.8620	 0.3560
L5	 0.9920	 0.4970
L7	 0.9990	 0.5400
L8	 0.9930	 0.5130
LA	 0.9940	 0.5620
LB	 0.9790	 0.5420
LC	 0.9810	 0.5370
LD	 0.9800	 0.4960
LE	 0.9730	 0.4750
LF	 0.9880	 0.5430
LG	 0.9550	 0.4790
LH	 0.9890	 0.5270
LI	 0.9810	 0.5300
LJ	 0.9640	 0.4790
LL	 0.9650	 0.5060
LM	 0.9870	 0.5190
LN	 0.9960	 0.5710
LO	 0.9890	 0.5410
LP	 0.9840	 0.5490
LQ	 0.9880	 0.5580
LR	 0.9550	 0.4860
LS	 0.9950	 0.5590
LT	 0.9800	 0.5230
LU	 0.9790	 0.4560
LV	 0.9880	 0.5520
LW	 0.9380	 0.3690
LX	 0.9790	 0.5270
LY	 0.9800	 0.5250
LZ	 0.9940	 0.5170
La	 0.9870	 0.5560
Lb	 0.9410	 0.4550
Lc	 0.9750	 0.5080
Ld	 0.9740	 0.5110
Le	 0.9900	 0.5560



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Chain	Atom inclusion	Q-score
Lf	 0.9940	 0.5680
Lg	 0.9840	 0.5280
Lh	 0.9820	 0.5090
Li	 0.9810	 0.5180
Lj	 0.9970	 0.5610
Lk	 0.9710	 0.4700
Ll	 0.9880	 0.5190
Lm	 0.9980	 0.5490
Ln	 0.9950	 0.5460
Lo	 0.9930	 0.5470
Lp	 0.9830	 0.5420
Lr	 0.9820	 0.5470
Ls	 0.7560	 0.1800
Lt	 0.7630	 0.1760
Pt	 0.9890	 0.4240
S2	 0.9940	 0.4440
SA	 0.9680	 0.4370
SB	 0.9640	 0.4680
SC	 0.9840	 0.4700
SD	 0.9700	 0.3850
SE	 0.9780	 0.4330
SF	 0.9620	 0.4150
SG	 0.9640	 0.3520
SH	 0.9460	 0.3640
SI	 0.9850	 0.4580
SJ	 0.9750	 0.4320
SK	 0.9520	 0.3480
SL	 0.9610	 0.4680
SM	 0.8620	 0.1770
SN	 0.9810	 0.4870
SO	 0.9620	 0.4770
SP	 0.9380	 0.3900
SQ	 0.9670	 0.4010
SR	 0.9550	 0.3980
SS	 0.9560	 0.4010
ST	 0.9740	 0.3850
SU	 0.9630	 0.3540
SV	 0.9780	 0.4550
SW	 0.9900	 0.4960
SX	 0.9780	 0.4970
SY	 0.9620	 0.3710
SZ	 0.9190	 0.3660

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Chain	Atom inclusion	Q-score
Sa	 0.9770	 0.4920
Sb	 0.9660	 0.4440
Sc	 0.9180	 0.3920
Sd	 0.9960	 0.4390
Se	 0.9170	 0.3680
Sf	 0.9010	 0.2460
Sg	 0.9610	 0.3140
Zt	 0.9400	 0.1770