



Full wwPDB EM Validation Report ⓘ

Nov 7, 2023 – 03:12 PM EST

PDB ID : 8G5Y
EMDB ID : EMD-29757
Title : mRNA decoding in human is kinetically and structurally distinct from bacteria (IC state)
Authors : Holm, M.; Natchiar, K.S.; Rundlet, E.J.; Myasnikov, A.G.; Altman, R.B.; Blanchard, S.C.
Deposited on : 2023-02-14
Resolution : 2.29 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:

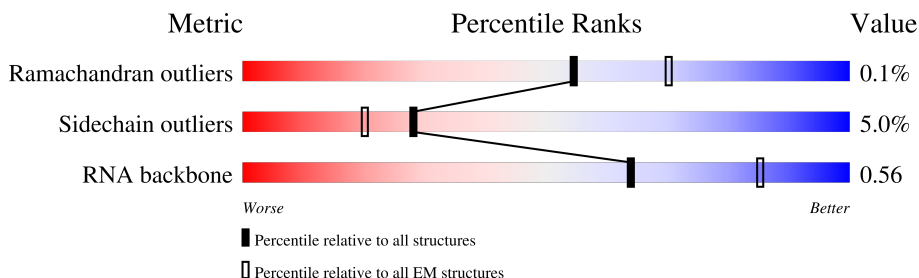
EMDB validation analysis : 0.0.1.dev70
Mogul : 1.8.5 (274361), CSD as541be (2020)
MolProbity : 4.02b-467
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ : 1.9.9
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.36

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 2.29 Å.

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



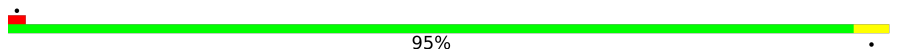



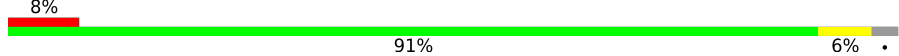
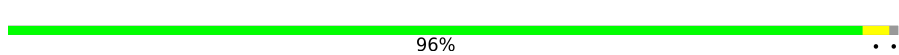
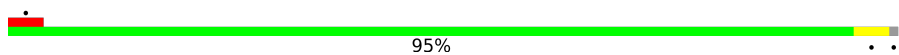
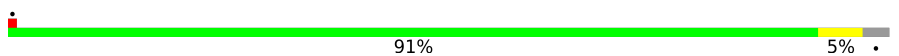



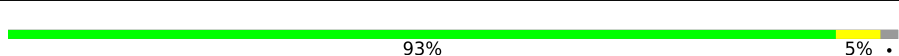
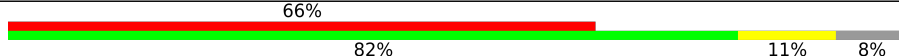
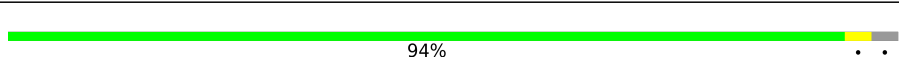
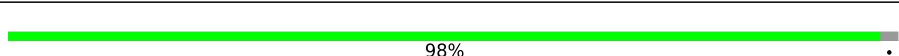
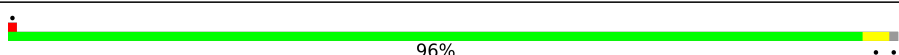
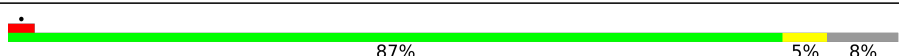
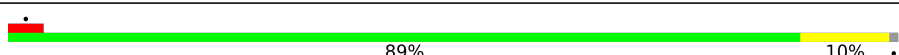
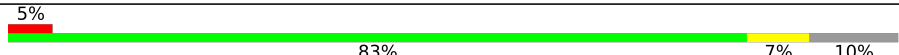
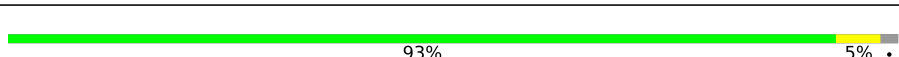
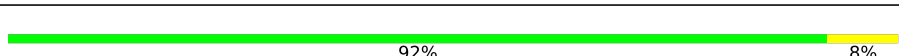
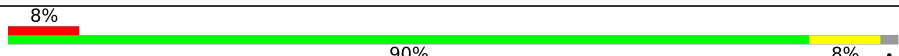


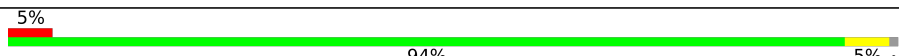
Metric	Whole archive (#Entries)	EM structures (#Entries)
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826
RNA backbone	4643	859

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion $< 40\%$). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	S2	1869	
2	L8	156	
3	L5	5069	
4	L7	120	
5	SB	264	
6	SA	295	
7	SD	243	
8	SJ	194	

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Mol	Chain	Length	Quality of chain
9	SE	263	 95%
10	SC	293	 71% 5% 24%
11	SG	249	 89% 6% 5% 8%
12	SF	204	 89% 7%
13	SH	194	 91% 6%
14	SW	130	 96%
15	SI	208	 95%
16	SQ	146	 91% 5%
17	SU	119	 78% 7% 15% 10%
18	SK	165	 55% 42%
19	SO	151	 87% 11%
20	SX	143	 93% 5%
21	SM	132	 82% 11% 8% 66%
22	SS	152	 94%
23	Sd	56	 98%
24	SN	151	 96%
25	SL	158	 87% 5% 8%
26	SR	135	 89% 10%
27	SP	145	 83% 7% 10% 5%
28	ST	145	 93% 5%
29	SV	83	 92% 8%
30	SY	133	 90% 8%
31	SZ	125	 64% 33%
32	Sa	115	 85% 14%
33	Sb	84	 94% 5%





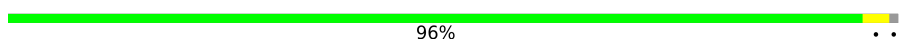

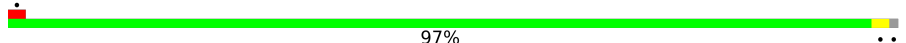



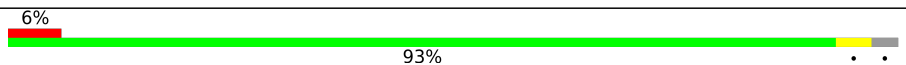
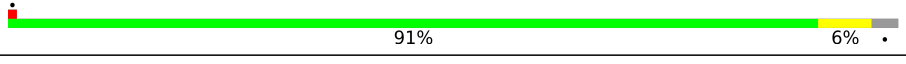




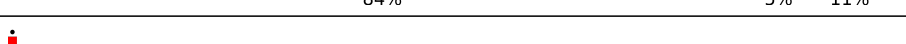
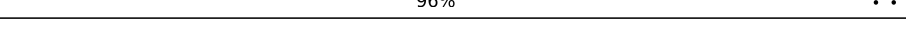
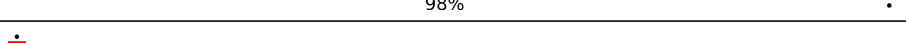

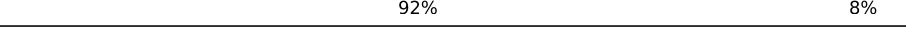
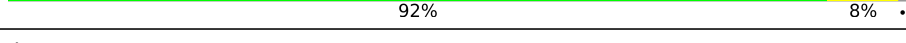
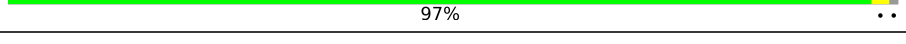


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Mol	Chain	Length	Quality of chain
34	Sc	69	9% 84% 10% 6%
35	Se	133	35% 62%
36	Sf	156	19% 31% 9% 60%
37	Sg	317	7% 89% 10%
38	Lz	217	73% 85% 12%
39	LA	257	96%
40	LB	403	99%
41	LC	427	84% 14%
42	LJ	178	91%
43	LH	192	96%
44	LE	288	76% 23%
45	LG	266	9% 88% 9%
46	LO	203	96%
47	LL	211	94%
48	LV	140	91% 5%
49	LM	215	62% 37%
50	La	148	95%
51	LN	204	99%
52	LI	214	92% 5%
53	LD	297	94% 5%
54	LQ	188	98%
55	LR	196	6% 90% 5% 5%
56	LS	176	99%
57	LT	160	98%
58	LP	184	80% 17%

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Mol	Chain	Length	Quality of chain
59	LU	128	
60	LX	156	
61	LY	145	
62	LW	157	
63	LZ	136	
64	Lr	137	
65	Lh	123	
66	Lb	159	
67	LF	248	
68	Lc	115	
69	Ld	125	
70	Le	135	
71	Lf	110	
72	Lg	117	
73	Li	105	
74	Lj	97	
75	Lk	70	
76	Ll	51	
77	Lm	128	
78	Ln	25	
79	Lo	106	
80	Lp	92	
81	mR	60	
82	Pt	77	
83	5A	154	

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

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

2 Entry composition [i](#)

There are 92 unique types of molecules in this entry. The entry contains 219823 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a RNA chain called 18S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
1	S2	1680	35800	16005	6403	11713	1679	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
2	L8	156	3316	1482	585	1094	155	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
3	L5	3721	79154	35258	14402	25772	3722	2	0

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

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	SB	223	1806	1145	325	322	14	0	0

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- Molecule 20 is a protein called uS12.

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
21	SM	122	950	596	168	177	9	0	0

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

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
23	Sd	55	458	286	94	73	5	0	0

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

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
25	SL	146	1200	766	226	202	6	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
26	SR	134	1082	680	201	197	4	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
27	SP	131	1078	684	204	183	7	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
28	ST	142	1121	707	212	199	3	1	0

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

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

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

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
31	SZ	84	674	433	126	114	1	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
32	Sa	99	800	497	168	130	5	1	0

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

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
34	Sc	65	512	311	103	96	2	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
35	Se	50	Total	C	N	O	S	0	0
			394	241	88	64	1		

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

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

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

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
38	Lz	211	Total	C	N	O	S	0	0
			1695	1086	304	297	8		

- Molecule 39 is a protein called uL2.

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
40	LB	402	Total	C	N	O	S	0	0
			3239	2061	608	556	14		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
41	LC	366	Total	C	N	O	S	0	0
			2914	1832	581	487	14		

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

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

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

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
44	LE	223	Total	C	N	O	S	0	0
			1786	1150	339	293	4		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
45	LG	241	Total	C	N	O	S	0	0
			1926	1228	371	323	4		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
46	LO	199	Total	C	N	O	S	0	0
			1633	1053	319	256	5		

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

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

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
52	LI	203	1645	1045	317	270	13	0	0

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
57	LT	159	1311	833	256	216	6	2	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
58	LP	153	1248	780	242	217	9	1	0

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

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
60	LX	118	966	618	181	166	1	0	0

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

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
62	LW	118	955	599	192	159	5	1	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
63	LZ	135	1115	719	211	182	3	1	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
64	Lr	125	1011	629	208	169	5	1	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
65	Lh	122	1014	641	205	167	1	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
66	Lb	111	898	560	195	139	4	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
67	LF	225	1869	1202	358	300	9	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
68	Lc	99	770	488	136	140	6	0	0

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

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

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

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
71	Lf	110	883	560	175	144	4	0	0

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

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

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

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
74	Lj	86	712	439	157	111	5	1	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
75	Lk	69	568	366	103	98	1	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
76	Ll	50	443	281	98	63	1	0	0

- Molecule 77 is a protein called eL40.

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

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

Mol	Chain	Residues	Atoms					AltConf	Trace
78	Ln	25	Total	C	N	O	S	0	0
			239	145	64	27	3		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
79	Lo	105	Total	C	N	O	S	2	0
			878	553	180	139	6		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
80	Lp	91	Total	C	N	O	S	1	0
			715	450	139	119	7		

- Molecule 81 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
81	mR	8	Total	C	N	O	P	0	0
			172	77	32	55	8		

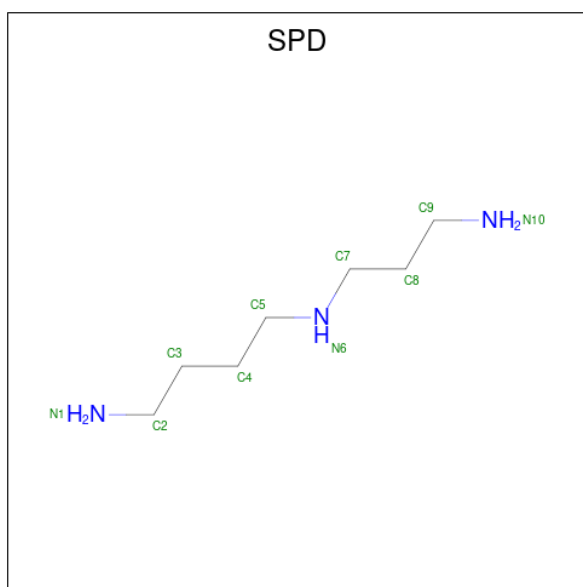
- Molecule 82 is a RNA chain called P-site tRNA.

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

- Molecule 83 is a protein called eIF5A1.

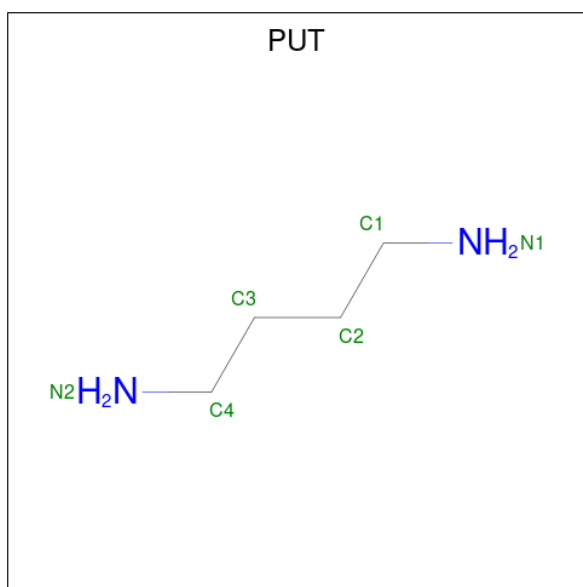
Mol	Chain	Residues	Atoms					AltConf	Trace
83	5A	138	Total	C	N	O	S	1	0
			1073	676	184	204	9		

- Molecule 84 is SPERMIDINE (three-letter code: SPD) (formula: C₇H₁₉N₃).



Mol	Chain	Residues	Atoms			AltConf
			Total	C	N	
84	S2	1	10	7	3	0
84	L5	1	10	7	3	0
84	L5	1	10	7	3	0
84	L5	1	10	7	3	0
84	L5	1	10	7	3	0
84	L5	1	10	7	3	0
84	L5	1	10	7	3	0
84	L5	1	10	7	3	0
84	L5	1	10	7	3	0
84	L5	1	10	7	3	0
84	L5	1	10	7	3	0
84	L5	1	10	7	3	0
84	L5	1	10	7	3	0

- Molecule 85 is 1,4-DIAMINOBUTANE (three-letter code: PUT) (formula: C₄H₁₂N₂).



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

- Molecule 86 is POTASSIUM ION (three-letter code: K) (formula: K).

Mol	Chain	Residues	Atoms		AltConf
86	S2	17	Total	K	0
			17	17	

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Mol	Chain	Residues	Atoms	AltConf
86	L8	1	Total K 1 1	0
86	L5	52	Total K 52 52	0
86	L7	1	Total K 1 1	0
86	SL	1	Total K 1 1	0
86	Sa	1	Total K 1 1	0
86	LA	1	Total K 1 1	0
86	LH	1	Total K 1 1	0
86	Lf	1	Total K 1 1	0
86	Lg	1	Total K 1 1	0

- Molecule 87 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms	AltConf
87	S2	124	Total Mg 124 124	0
87	L8	10	Total Mg 10 10	0
87	L5	344	Total Mg 344 344	0
87	L7	5	Total Mg 5 5	0
87	SJ	1	Total Mg 1 1	0
87	SE	1	Total Mg 1 1	0
87	SC	1	Total Mg 1 1	0
87	SX	1	Total Mg 1 1	0
87	Sd	1	Total Mg 1 1	0
87	SN	1	Total Mg 1 1	0

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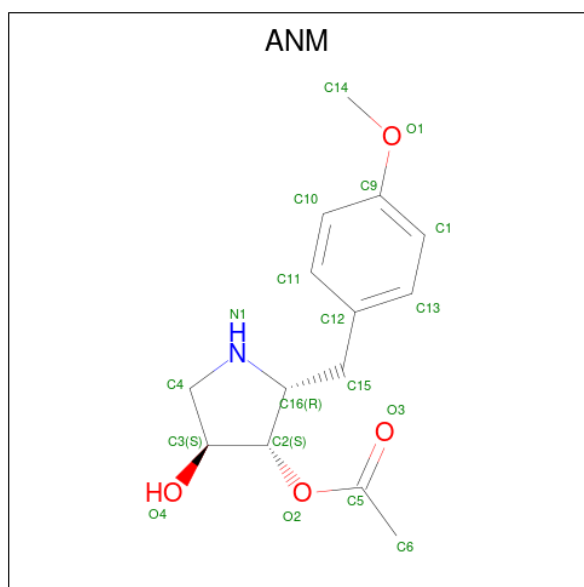
Mol	Chain	Residues	Atoms		AltConf
			Total	Mg	
87	ST	1	1	1	0
87	Sb	1	1	1	0
87	LA	2	2	2	0
87	LB	2	2	2	0
87	LC	2	2	2	0
87	LO	1	1	1	0
87	LL	2	2	2	0
87	LV	1	1	1	0
87	LN	1	1	1	0
87	LI	1	1	1	0
87	LD	1	1	1	0
87	LQ	1	1	1	0
87	LR	2	2	2	0
87	LS	2	2	2	0
87	LP	3	3	3	0
87	Lr	1	1	1	0
87	Lc	1	1	1	0
87	Le	1	1	1	0
87	Lg	1	1	1	0
87	Lj	1	1	1	0
87	Lo	1	1	1	0

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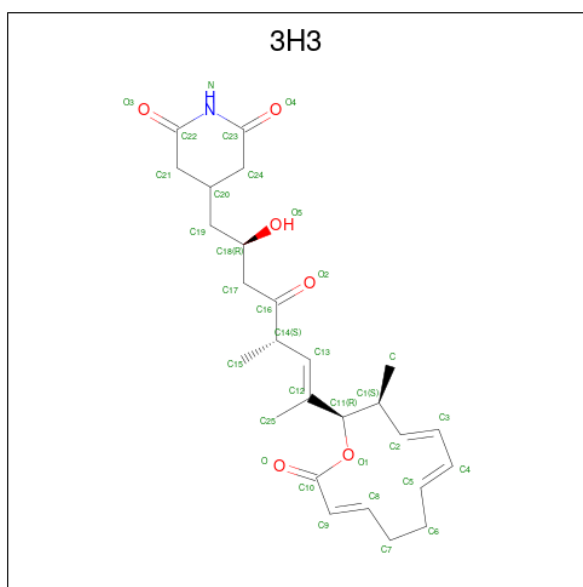
Mol	Chain	Residues	Atoms		AltConf
87	Lp	1	Total	Mg	0
			1	1	
87	Pt	4	Total	Mg	0
			4	4	
87	5A	1	Total	Mg	0
			1	1	

- Molecule 88 is ANISOMYCIN (three-letter code: ANM) (formula: $C_{14}H_{19}NO_4$).



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

- Molecule 89 is 4-{(2R,5S,6E)-2-hydroxy-5-methyl-7-[(2R,3S,4E,6Z,10E)-3-methyl-12-oxooxacyclododeca-4,6,10-trien-2-yl]-4-oxooct-6-en-1-yl}piperidine-2,6-dione (three-letter code: 3H3) (formula: $C_{26}H_{35}NO_6$) (labeled as "Ligand of Interest" by depositor).

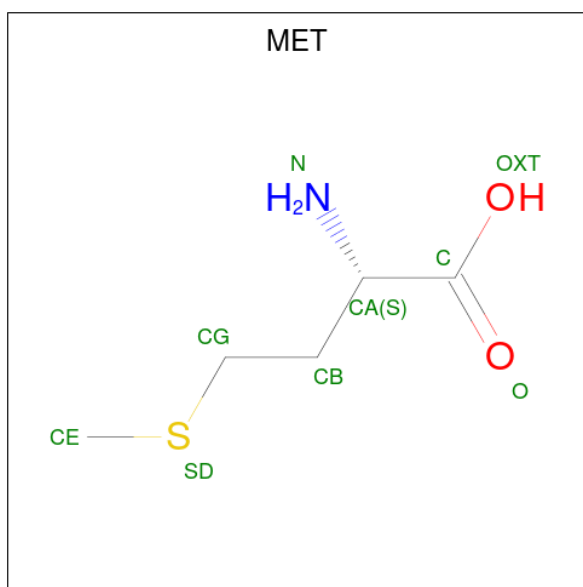


Mol	Chain	Residues	Atoms				AltConf
89	L5	1	Total	C	N	O	0
			33	26	1	6	

- Molecule 90 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
90	Sd	1	Total	Zn	0
			1	1	
90	Sa	1	Total	Zn	0
			1	1	
90	Sf	1	Total	Zn	0
			1	1	
90	Lg	1	Total	Zn	0
			1	1	
90	Lj	1	Total	Zn	0
			1	1	
90	Lm	1	Total	Zn	0
			1	1	
90	Lo	1	Total	Zn	0
			1	1	
90	Lp	1	Total	Zn	0
			1	1	

- Molecule 91 is METHIONINE (three-letter code: MET) (formula: C₅H₁₁NO₂S).



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

- Molecule 92 is water.

Mol	Chain	Residues	Atoms		AltConf
92	S2	123	Total	O	0
			123	123	
92	L8	11	Total	O	0
			11	11	
92	L5	996	Total	O	0
			996	996	
92	L7	8	Total	O	0
			8	8	
92	SA	1	Total	O	0
			1	1	
92	SF	1	Total	O	0
			1	1	
92	SQ	1	Total	O	0
			1	1	
92	SS	1	Total	O	0
			1	1	
92	SN	1	Total	O	0
			1	1	
92	Sa	3	Total	O	0
			3	3	
92	LA	18	Total	O	0
			18	18	

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Mol	Chain	Residues	Atoms		AltConf
92	LB	8	Total 8	O 8	0
92	LC	21	Total 21	O 21	0
92	LO	3	Total 3	O 3	0
92	LL	3	Total 3	O 3	0
92	LV	2	Total 2	O 2	0
92	La	10	Total 10	O 10	0
92	LN	4	Total 4	O 4	0
92	LI	2	Total 2	O 2	0
92	LD	1	Total 1	O 1	0
92	LQ	6	Total 6	O 6	0
92	LR	1	Total 1	O 1	0
92	LT	1	Total 1	O 1	0
92	LP	2	Total 2	O 2	0
92	LX	2	Total 2	O 2	0
92	LZ	1	Total 1	O 1	0
92	Lr	1	Total 1	O 1	0
92	Lb	2	Total 2	O 2	0
92	LF	4	Total 4	O 4	0
92	Lc	1	Total 1	O 1	0
92	Ld	1	Total 1	O 1	0
92	Le	14	Total 14	O 14	0

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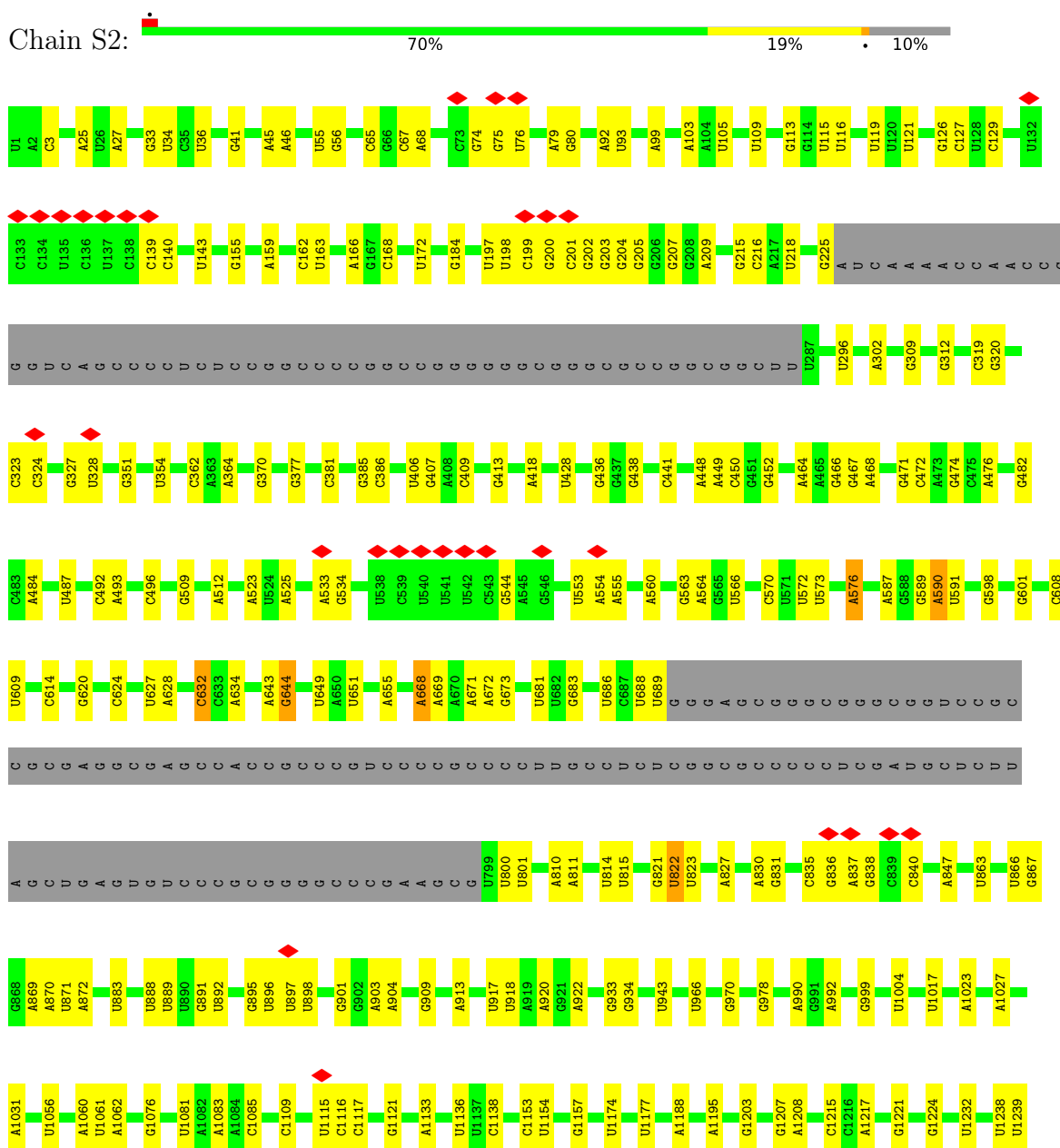
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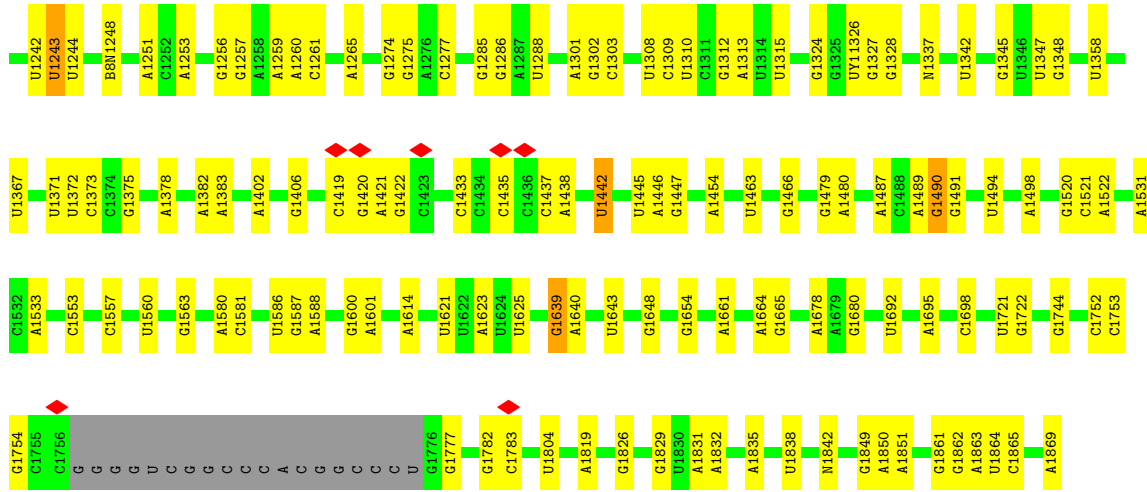
Mol	Chain	Residues	Atoms		AltConf
92	Lf	3	Total 3	O 3	0
92	Lg	4	Total 4	O 4	0
92	Lj	6	Total 6	O 6	0
92	Ln	1	Total 1	O 1	0
92	Lo	1	Total 1	O 1	0
92	Lp	2	Total 2	O 2	0
92	Pt	1	Total 1	O 1	0
92	5A	1	Total 1	O 1	0

3 Residue-property plots

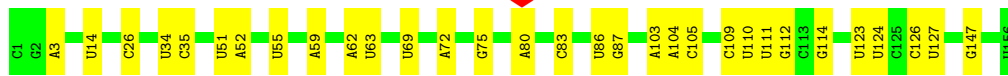
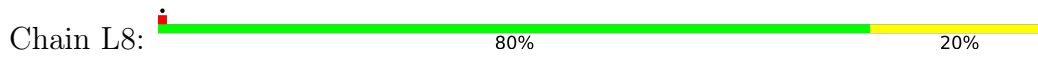
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion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

• Molecule 1: 18S rRNA

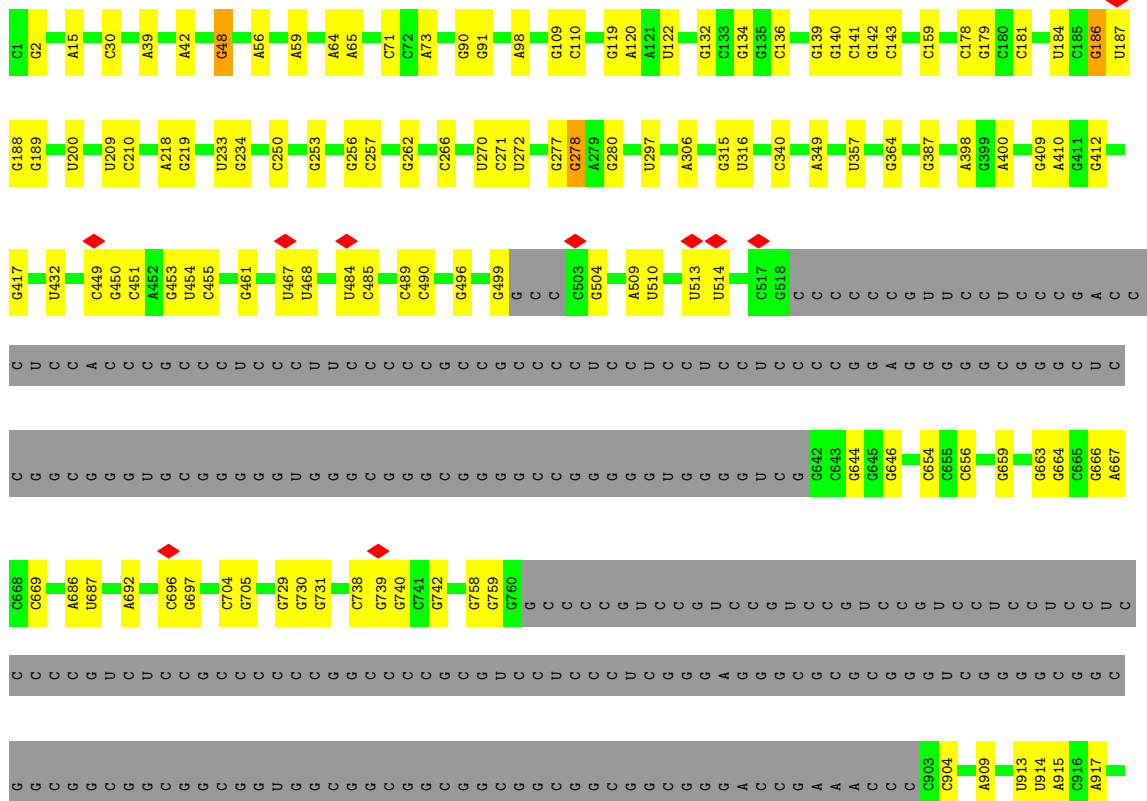


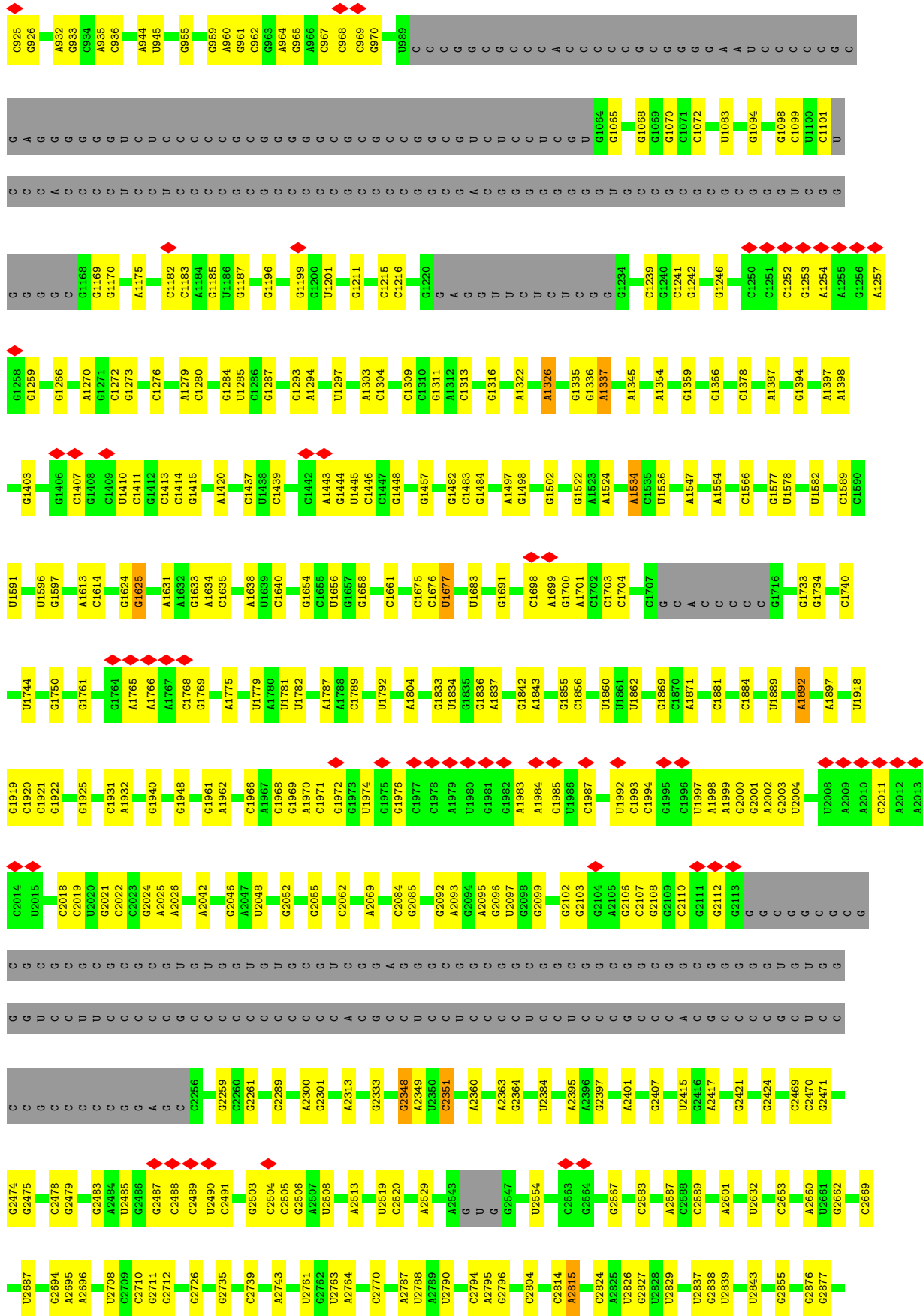


• Molecule 2: 5.8S rRNA

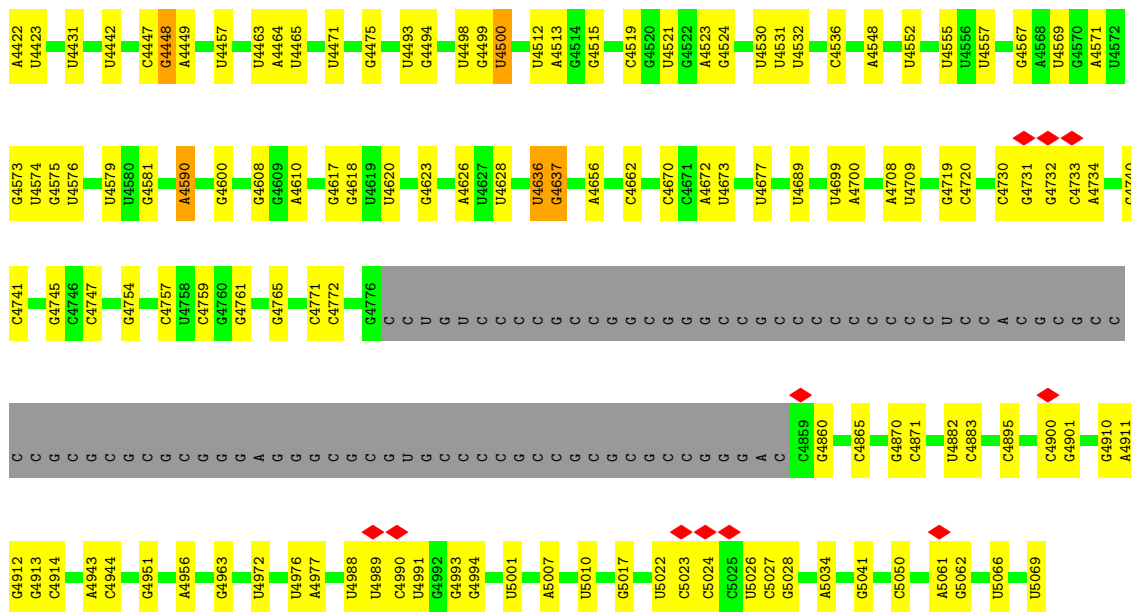


• Molecule 3: 28S rRNA

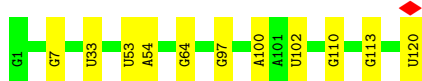




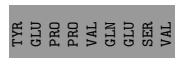
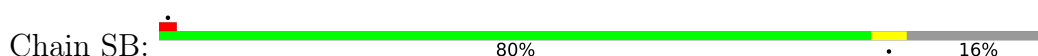
A4251	G4266	U4113	G4026	A3966	U8222	A3662	G
C4252	G4267	C4114	G4027	G3967	U8222	A3662	C
A4253	A4268	C4115	C4028	U3968	A3225	C3673	G
G4254	G4267	C4116	C4029	G3969	A3225	C3673	G
G4266	A4273	C4119	C4030	G3970	A3330	U3695	U
G4267	A4281	C4122	C4031	A3971	A3330	U3695	U
A4268	A4281	G4122	G4032	G3839	G3839	U3713	C
A4273	A4281	A4127	G4032	U3840	U3840	G3714	G
A4281	A4281	C4133	C4033	C3841	C3841	U3715	G
G4291	G4292	G4136	G4034	U3844	U3844	A3718	C
A4292	A4293	C4137	C4037	U3851	U3851	A3723	C
U4293	U4293	G4137	G4038	A3852	A3852	A3724	C
U4296	U4296	C4140	C4040	U3853	U3853	U3729	C
U4299	U4299	G4141	G4041	A3867	A3867	U3734	C
G4305	U4306	C4142	G4042	G3868	G3868	G3741	C
U4306	U4312	G4143	U4044	C3869	C3869	C3741	C
U4312	A4313	C4144	G4045	A3876	A3876	G3744	C
A4313	C4314	C4145	A4046	A3877	A3877	G3744	C
C4314	G4329	C4146	A4047	C3878	C3878	A3748	C
G4329	G4330	G4147	U4048	G3879	G3879	A3748	C
G4330	A4339	C4148	U4049	U3884	U3884	G3753	C
A4339	U4353	C4149	A4050	G3897	G3897	U3758	C
U4353	U4361	C4150	C4051	C3898	C3898	U3758	C
U4361	G4370	C4151	G4052	C3899	C3899	A3759	C
G4370	U4373	C4152	A4053	C3900	C3900	A3760	C
U4373	A4376	C4153	C4054	G3901	G3901	C3761	C
A4376	A4377	C4154	A4055	G3902	G3902	U3762	C
A4377	A4378	C4155	A4056	U3903	U3903	A3763	C
A4378	A4385	C4156	G4057	U3904	U3904	U3763	C
A4385	A4386	C4157	G4058	G3905	G3905	G3764	C
A4386	A4387	C4158	U4059	C3906	C3906	U3765	C
A4387	G4391	C4159	U4060	C3907	C3907	A3766	C
G4391	G4392	C4160	G4094	G3908	G3908	G3767	C
G4392	A4393	C4161	G4095	C3909	C3909	A3768	C
A4393	A4394	C4162	G4096	C3910	C3910	U3768	C
A4394	U4395	C4163	C4097	G3911	G3911	C3769	C
A4395	A4396	C4164	G4098	U3912	U3912	U3770	C
A4396	U4403	C4165	A4099	U3914	U3914	U3606	C
U4403	U4420	C4166	G4099	C3915	C3915	U3606	C
U4420	C4421	C4167	C4100	U3916	U3916	G3615	C
C4421		C4168	C4101	C3917	C3917	U3616	C
		C4169	C4102	C3918	C3918	G3617	C
		C4170	C4103	U3919	U3919	C3618	C
		C4171	C4104	U3920	U3920	A3621	C
		C4172	G4104	U3921	U3921	G3626	C
		C4173	A4105	U3922	U3922	G3627	C
		C4174	A4106	G3944	G3944	G3627	C
		C4175	G4107	U3950	U3950	A3635	C
		C4176	A4108	C3951	C3951	C3636	C
		C4177	G4109	G3956	G3956	U3637	C
		C4178	C4110	U3957	U3957	U3638	C
		C4179	U4111	C3958	C3958	U3639	C
		C4180	C4112	G3959	G3959	U3644	C
		C4181		U3960	U3960		C
		C4182		C3961	C3961		C
		C4183		A3962	A3962		C
		C4184		U3964	U3964		C
		C4185		A3965	A3965		C
		C4186		U3965	U3965		C
		C4187					C
		C4188					C
		C4189					C
		C4190					C
		C4191					C
		C4192					C
		C4193					C
		C4194					C
		C4195					C
		C4196					C
		C4197					C
		C4198					C
		C4199					C
		C4200					C
		C4201					C
		C4202					C
		C4203					C
		C4204					C
		C4205					C



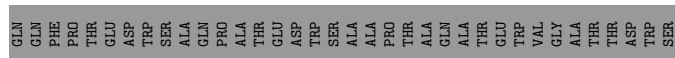
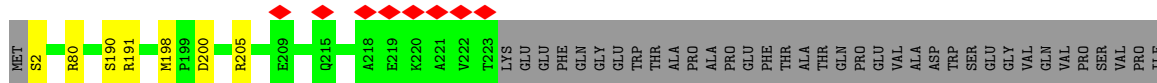
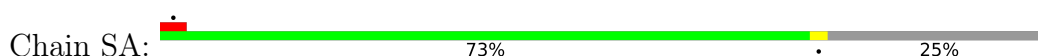
• Molecule 4: 5S rRNA



• Molecule 5: 40S ribosomal protein S3a

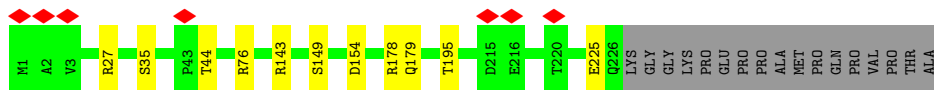


• Molecule 6: 40S ribosomal protein SA

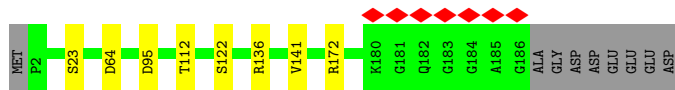
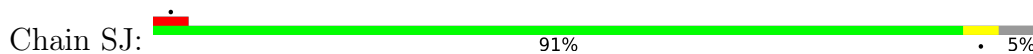


• Molecule 7: 40S ribosomal protein S3





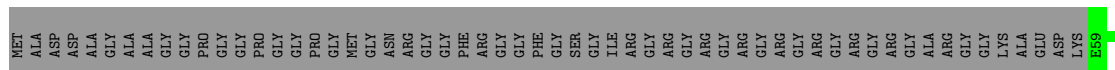
• Molecule 8: 40S ribosomal protein S9



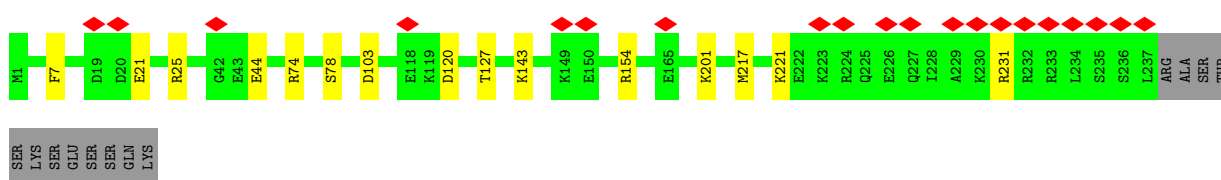
• Molecule 9: 40S ribosomal protein S4, X isoform



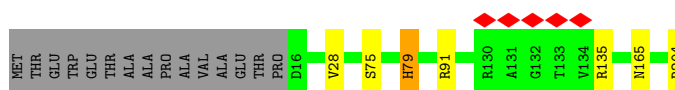
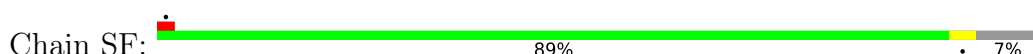
• Molecule 10: 40S ribosomal protein S2



• Molecule 11: 40S ribosomal protein S6



• Molecule 12: 40S ribosomal protein S5



• Molecule 13: 40S ribosomal protein S7





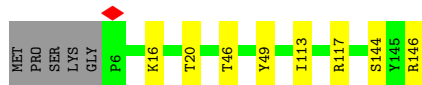
• Molecule 14: 40S ribosomal protein S15a



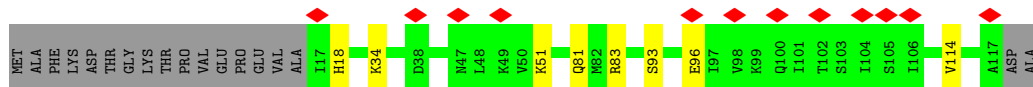
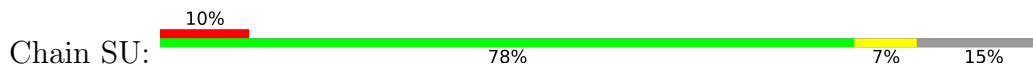
• Molecule 15: 40S ribosomal protein S8



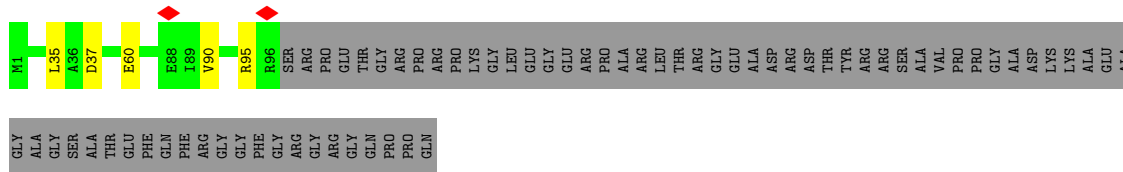
• Molecule 16: 40S ribosomal protein S16



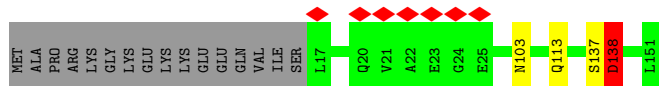
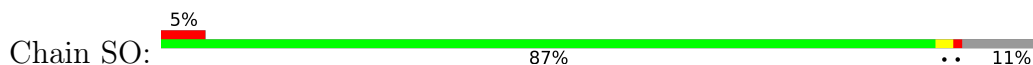
• Molecule 17: 40S ribosomal protein S20



• Molecule 18: 40S ribosomal protein S10



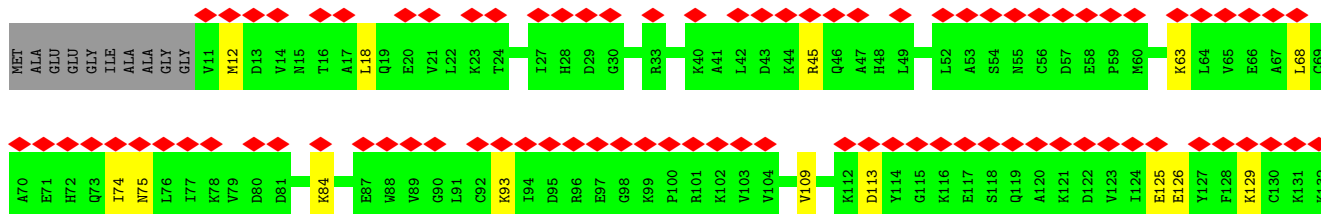
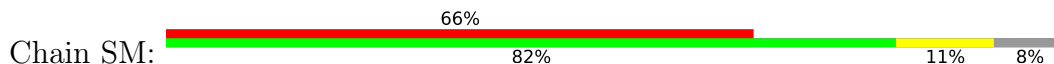
• Molecule 19: 40S ribosomal protein S14



• Molecule 20: uS12



• Molecule 21: 40S ribosomal protein S12



• Molecule 22: 40S ribosomal protein S18



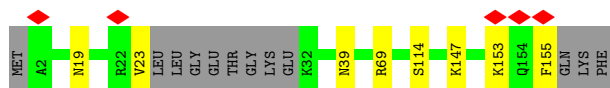
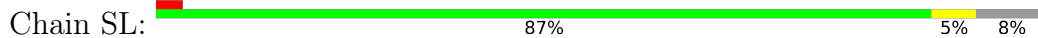
• Molecule 23: 40S ribosomal protein S29



• Molecule 24: 40S ribosomal protein S13

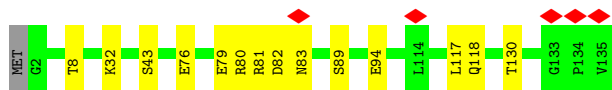


• Molecule 25: 40S ribosomal protein S11

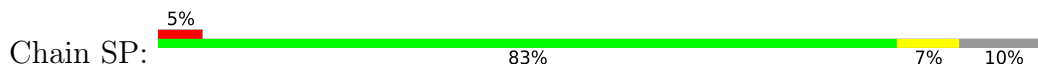


• Molecule 26: 40S ribosomal protein S17





• Molecule 27: 40S ribosomal protein S15



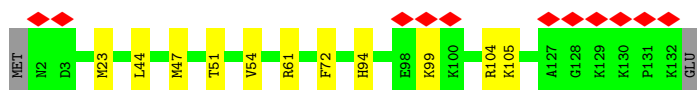
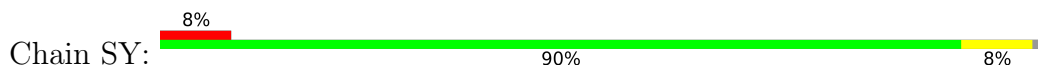
• Molecule 28: 40S ribosomal protein S19



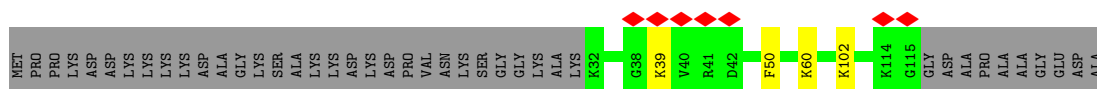
• Molecule 29: 40S ribosomal protein S21



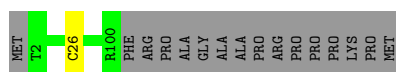
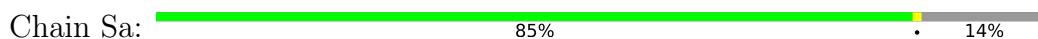
• Molecule 30: 40S ribosomal protein S24



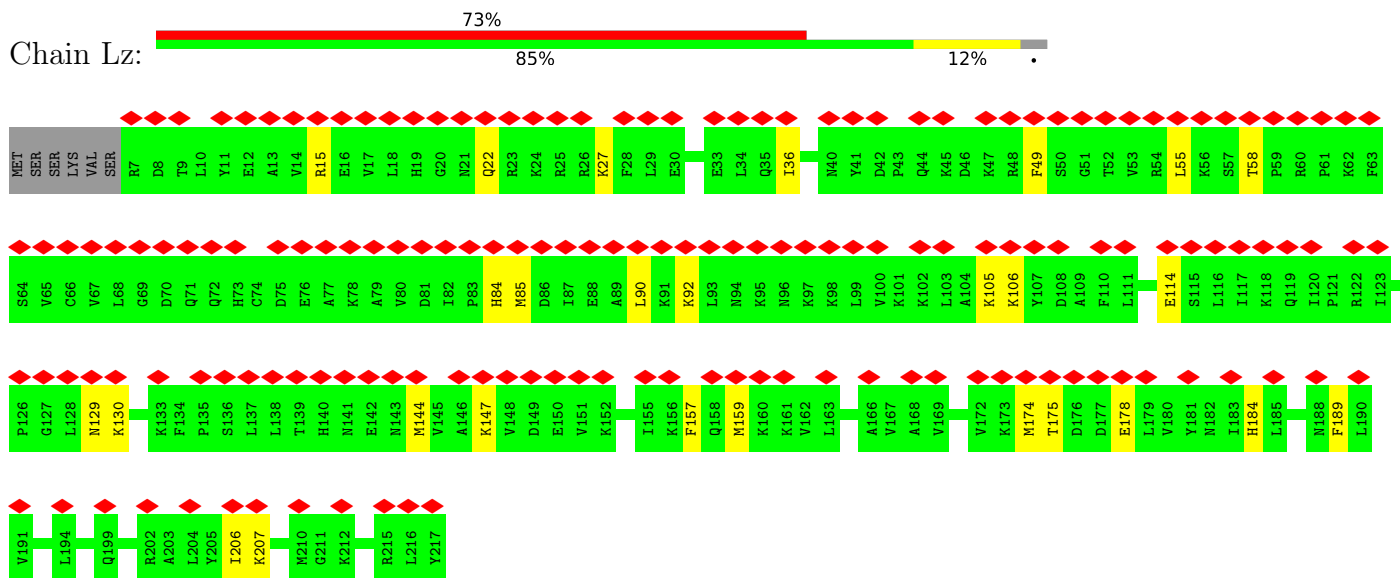
• Molecule 31: 40S ribosomal protein S25



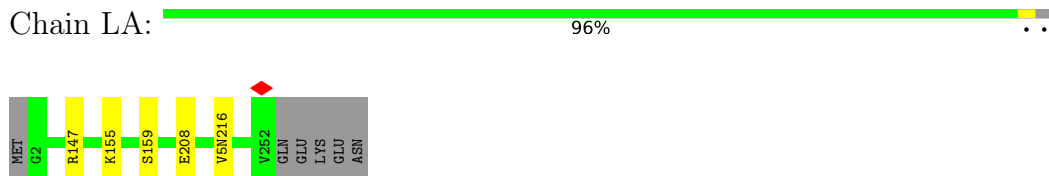
• Molecule 32: 40S ribosomal protein S26



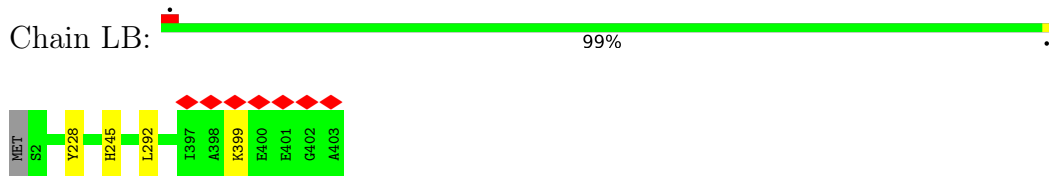
• Molecule 33: 40S ribosomal protein S27



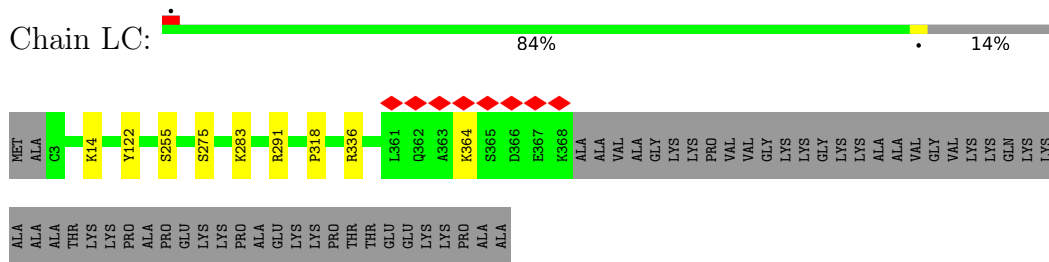
• Molecule 39: uL2



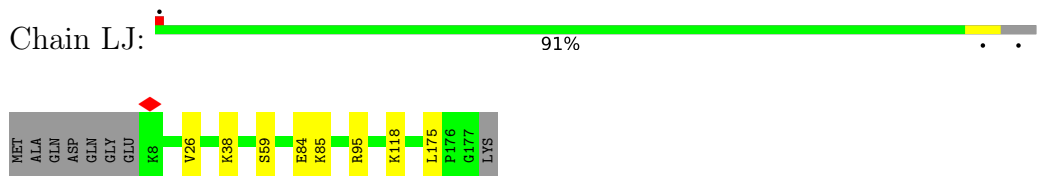
• Molecule 40: 60S ribosomal protein L3



• Molecule 41: 60S ribosomal protein L4



• Molecule 42: 60S ribosomal protein L11


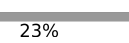


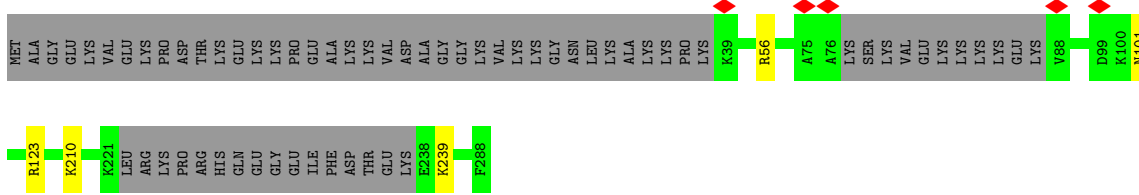
• Molecule 43: 60S ribosomal protein L9

Chain LH:  96%






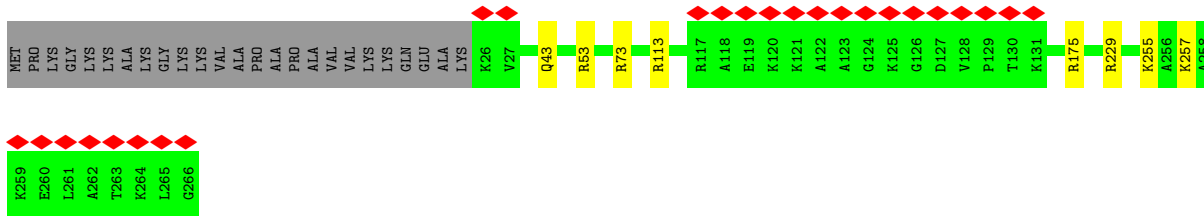
- Molecule 44: 60S ribosomal protein L6

Chain LE:  76%  23%



- Molecule 45: 60S ribosomal protein L7a

Chain LG:  9%  88%  9%



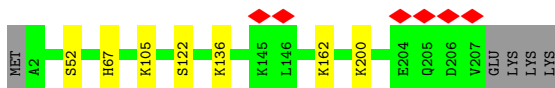
- Molecule 46: 60S ribosomal protein L13a

Chain LO:  96%



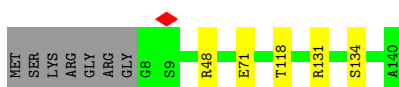
- Molecule 47: 60S ribosomal protein L13

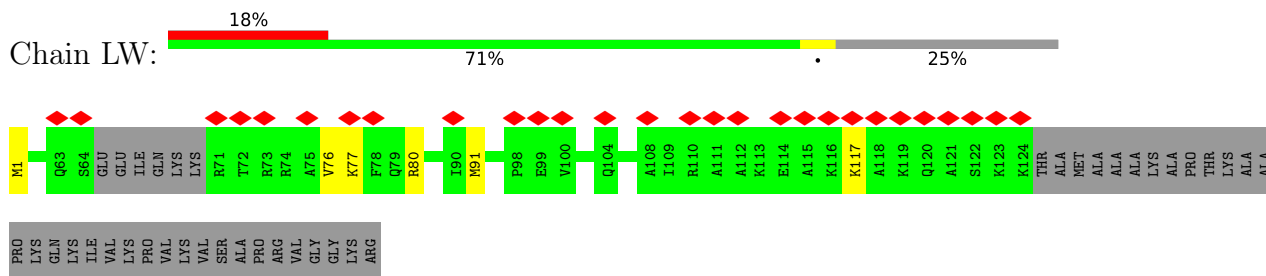
Chain LL:  94%



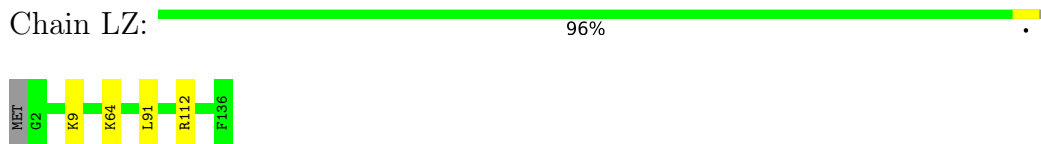
- Molecule 48: 60S ribosomal protein L23

Chain LV:  91%  5%

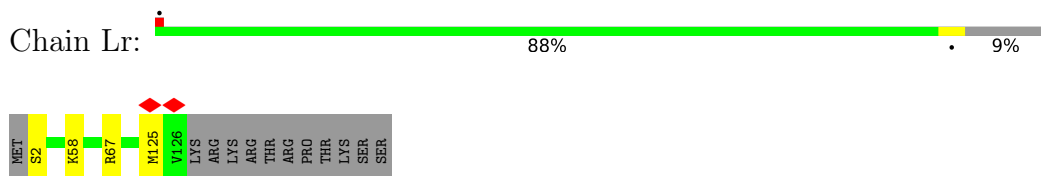




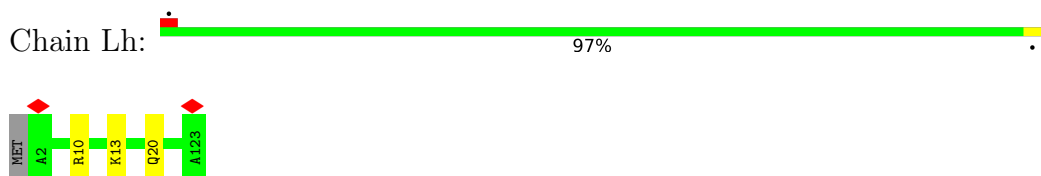
- Molecule 63: 60S ribosomal protein L27



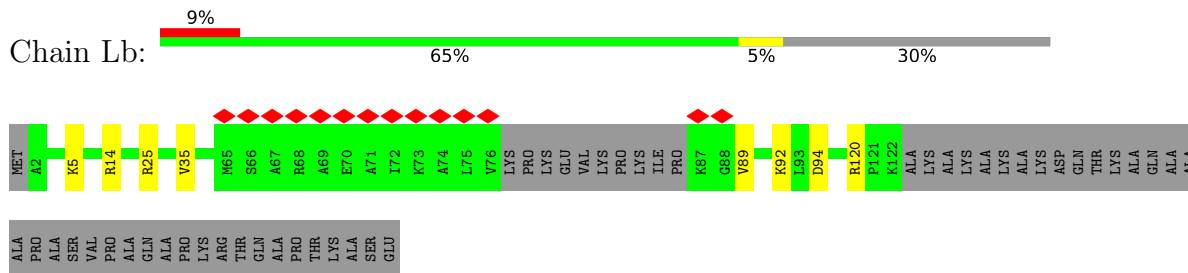
- Molecule 64: 60S ribosomal protein L28



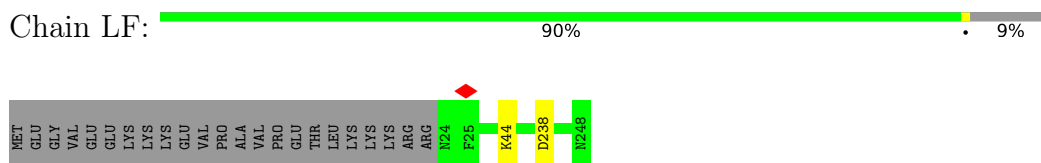
- Molecule 65: 60S ribosomal protein L35



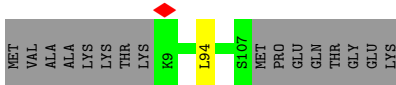
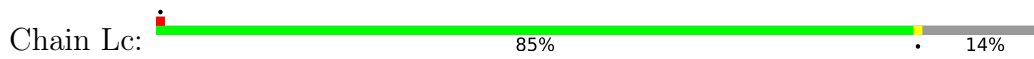
- Molecule 66: 60S ribosomal protein L29



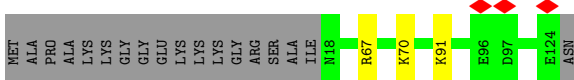
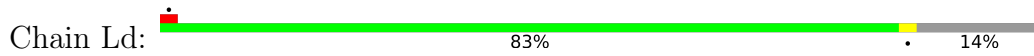
- Molecule 67: 60S ribosomal protein L7



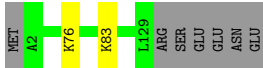
- Molecule 68: 60S ribosomal protein L30



- Molecule 69: 60S ribosomal protein L31



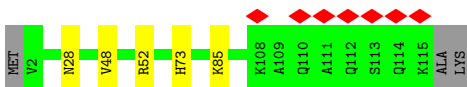
- Molecule 70: 60S ribosomal protein L32



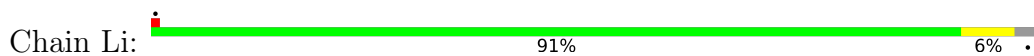
- Molecule 71: 60S ribosomal protein L35a



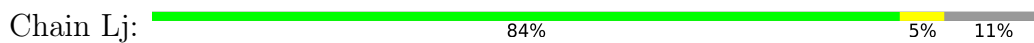
- Molecule 72: 60S ribosomal protein L34



- Molecule 73: 60S ribosomal protein L36

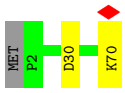


- Molecule 74: 60S ribosomal protein L37



- Molecule 75: 60S ribosomal protein L38

Chain Lk:  96%



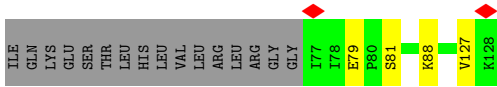
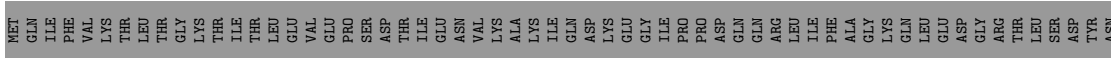
- Molecule 76: 60S ribosomal protein L39

Chain Ll:  98%



- Molecule 77: eL40

Chain Lm:  38%



- Molecule 78: 60S ribosomal protein L41

Chain Ln:  92%



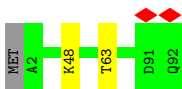
- Molecule 79: 60S ribosomal protein L36a

Chain Lo:  92%



- Molecule 80: 60S ribosomal protein L37a

Chain Lp:  97%



- Molecule 81: mRNA

Chain mR:  10%

4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	55836	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING ONLY	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	79	Depositor
Minimum defocus (nm)	-500	Depositor
Maximum defocus (nm)	-1500	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	0.053	Depositor
Minimum map value	-0.014	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.001	Depositor
Recommended contour level	0.005	Depositor
Map size (\AA)	528.64, 528.64, 528.64	wwPDB
Map dimensions	640, 640, 640	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (\AA)	0.82600003, 0.82600003, 0.82600003	Depositor

5 Model quality

5.1 Standard geometry

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

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	S2	0.75	0/38000	0.83	9/59217 (0.0%)
2	L8	0.90	0/3609	0.90	1/5623 (0.0%)
3	L5	0.87	3/85432 (0.0%)	0.97	50/133204 (0.0%)
4	L7	0.91	0/2858	0.86	0/4455
5	SB	0.34	0/1832	0.52	0/2449
6	SA	0.36	0/1778	0.50	0/2416
7	SD	0.34	0/1784	0.54	0/2403
8	SJ	0.33	0/1550	0.55	0/2069
9	SE	0.34	0/2118	0.55	0/2849
10	SC	0.37	0/1762	0.49	0/2381
11	SG	0.30	0/1946	0.55	0/2590
12	SF	0.34	0/1515	0.53	0/2037
13	SH	0.30	0/1540	0.53	0/2064
14	SW	0.35	0/1051	0.56	0/1406
15	SI	0.38	0/1715	0.57	0/2287
16	SQ	0.36	0/1141	0.53	0/1528
17	SU	0.33	0/813	0.56	0/1092
18	SK	0.33	0/834	0.54	1/1125 (0.1%)
19	SO	0.34	0/1022	0.58	0/1372
20	SX	0.36	0/1096	0.54	0/1461
21	SM	0.25	0/960	0.58	0/1286
22	SS	0.32	0/1232	0.57	0/1651
23	Sd	0.38	0/469	0.59	0/623
24	SN	0.36	0/1242	0.54	0/1671
25	SL	0.40	0/1221	0.57	0/1632
26	SR	0.37	0/1097	0.57	0/1474
27	SP	0.33	0/1100	0.54	0/1470
28	ST	0.34	0/1148	0.53	0/1540
29	SV	0.38	0/635	0.54	0/850
30	SY	0.31	0/1083	0.55	0/1438
31	SZ	0.29	0/682	0.52	0/911

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
32	Sa	0.38	0/816	0.60	0/1093
33	Sb	0.34	0/665	0.51	0/891
34	Sc	0.33	0/514	0.62	0/688
35	Se	0.31	0/396	0.55	0/519
36	Sf	0.37	0/525	0.62	0/695
37	Sg	0.30	0/2493	0.55	0/3394
38	Lz	0.26	0/1723	0.54	0/2313
39	LA	0.43	0/1958	0.64	0/2623
40	LB	0.41	0/3294	0.56	0/4406
41	LC	0.40	0/2968	0.59	0/3985
42	LJ	0.35	0/1385	0.55	0/1852
43	LH	0.36	0/1537	0.52	0/2066
44	LE	0.35	0/1820	0.54	0/2442
45	LG	0.36	0/1959	0.52	0/2637
46	LO	0.38	0/1665	0.56	0/2228
47	LL	0.37	0/1695	0.62	0/2270
48	LV	0.38	0/1002	0.57	0/1345
49	LM	0.37	0/1142	0.54	0/1527
50	La	0.43	0/1178	0.62	0/1573
51	LN	0.47	0/1745	0.65	0/2338
52	LI	0.38	0/1683	0.55	0/2247
53	LD	0.39	0/2437	0.52	0/3263
54	LQ	0.40	0/1536	0.65	0/2052
55	LR	0.33	0/1582	0.57	0/2091
56	LS	0.45	0/1500	0.58	0/2013
57	LT	0.42	0/1345	0.55	0/1795
58	LP	0.39	0/1277	0.57	0/1713
59	LU	0.34	0/822	0.51	0/1103
60	LX	0.41	0/983	0.54	0/1323
61	LY	0.39	0/1132	0.57	0/1504
62	LW	0.35	0/972	0.55	0/1288
63	LZ	0.41	0/1141	0.54	0/1521
64	Lr	0.39	0/1020	0.59	0/1367
65	Lh	0.34	0/1022	0.55	0/1351
66	Lb	0.38	0/900	0.55	0/1187
67	LF	0.43	0/1904	0.57	0/2539
68	Lc	0.40	0/780	0.52	0/1046
69	Ld	0.38	0/903	0.59	0/1216
70	Le	0.44	0/1071	0.64	0/1429
71	Lf	0.43	0/902	0.62	0/1208
72	Lg	0.41	0/916	0.59	0/1220
73	Li	0.35	0/843	0.57	0/1115
74	Lj	0.47	0/731	0.64	0/967

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
75	Lk	0.36	0/574	0.51	0/761
76	Ll	0.38	0/453	0.59	0/599
77	Lm	0.41	0/425	0.59	0/564
78	Ln	0.41	0/240	0.79	0/305
79	Lo	0.42	0/888	0.59	0/1170
80	Lp	0.37	0/728	0.59	0/967
81	mR	0.43	0/192	0.76	0/297
82	Pt	0.86	6/1721 (0.3%)	1.03	11/2679 (0.4%)
83	5A	0.31	0/1060	0.61	0/1425
All	All	0.68	9/228428 (0.0%)	0.80	72/334784 (0.0%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
19	SO	0	1

All (9) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
82	Pt	77	A	C5-C4	11.16	1.46	1.38
82	Pt	1	C	OP3-P	-10.42	1.48	1.61
82	Pt	77	A	N7-C5	-7.90	1.34	1.39
82	Pt	77	A	N9-C4	-7.68	1.33	1.37
82	Pt	77	A	C5-C6	6.85	1.47	1.41
82	Pt	77	A	C8-N7	6.15	1.35	1.31
3	L5	1337	A	N9-C4	-5.42	1.34	1.37
3	L5	3621	A	N9-C4	-5.25	1.34	1.37
3	L5	4977	A	N9-C4	-5.11	1.34	1.37

All (72) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
82	Pt	77	A	C2-N3-C4	20.00	120.60	110.60
82	Pt	77	A	N1-C2-N3	-11.94	123.33	129.30
82	Pt	77	A	N3-C4-C5	-10.89	119.18	126.80
82	Pt	77	A	N3-C4-N9	9.14	134.72	127.40
82	Pt	77	A	C4-C5-N7	-7.65	106.87	110.70
82	Pt	77	A	C8-N9-C4	7.62	108.85	105.80
82	Pt	77	A	C5-N7-C8	6.82	107.31	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
82	Pt	77	A	C6-N1-C2	6.10	122.26	118.60
1	S2	1261	C	C6-N1-C2	-5.95	117.92	120.30
3	L5	2469	C	C2-N1-C1'	5.91	125.30	118.80
3	L5	2349	A	N1-C6-N6	5.88	122.13	118.60
18	SK	35	LEU	CA-CB-CG	5.88	128.82	115.30
82	Pt	77	A	N7-C8-N9	-5.87	110.86	113.80
3	L5	4208	U	O5'-P-OP2	-5.83	100.46	105.70
3	L5	1656	U	C5-C6-N1	-5.80	119.80	122.70
3	L5	1658	G	C2-N3-C4	5.79	114.80	111.90
3	L5	4385	A	N1-C6-N6	5.79	122.07	118.60
3	L5	186	G	C4-N9-C1'	5.77	134.01	126.50
3	L5	1577	G	N1-C6-O6	-5.76	116.45	119.90
3	L5	357	U	C5-C6-N1	-5.74	119.83	122.70
3	L5	3636	C	C6-N1-C2	-5.71	118.02	120.30
3	L5	364	G	C8-N9-C4	5.70	108.68	106.40
3	L5	1589	C	N3-C4-C5	-5.69	119.62	121.90
3	L5	2469	C	C6-N1-C2	-5.66	118.04	120.30
3	L5	1589	C	C6-N1-C2	-5.64	118.05	120.30
3	L5	1309	C	C6-N1-C2	-5.61	118.06	120.30
3	L5	90	G	N1-C6-O6	-5.58	116.55	119.90
3	L5	2348	G	N7-C8-N9	-5.58	110.31	113.10
3	L5	1597	G	O4'-C1'-N9	5.58	112.66	108.20
1	S2	1261	C	C2-N1-C1'	5.55	124.91	118.80
82	Pt	77	A	C6-C5-N7	5.49	136.14	132.30
3	L5	4448	G	C5-C6-O6	-5.48	125.31	128.60
2	L8	26	C	C6-N1-C2	-5.47	118.11	120.30
3	L5	4187	G	C2-N3-C4	5.45	114.63	111.90
3	L5	1884	C	C6-N1-C2	-5.45	118.12	120.30
3	L5	2407	G	O4'-C1'-N9	5.43	112.55	108.20
3	L5	278	G	O4'-C1'-N9	-5.43	103.86	108.20
1	S2	1076	G	N3-C4-N9	-5.42	122.75	126.00
3	L5	4626	A	O4'-C1'-N9	5.40	112.52	108.20
3	L5	4393	G	O4'-C1'-N9	5.39	112.51	108.20
3	L5	4555	U	C5-C4-O4	5.39	129.13	125.90
3	L5	3777	G	C8-N9-C4	5.39	108.56	106.40
3	L5	1892	A	O4'-C1'-N9	5.36	112.49	108.20
3	L5	4376	A	C8-N9-C4	-5.34	103.67	105.80
3	L5	3913	G	C2-N3-C4	5.33	114.57	111.90
82	Pt	77	A	N1-C6-N6	5.31	121.78	118.60
3	L5	1635	C	C2-N1-C1'	-5.29	112.98	118.80
3	L5	4463	U	O4'-C1'-N1	5.29	112.43	108.20
3	L5	1345	A	N1-C2-N3	-5.29	126.66	129.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	30	C	C6-N1-C2	-5.28	118.19	120.30
3	L5	1336	G	C8-N9-C4	5.27	108.51	106.40
3	L5	3900	G	C2-N3-C4	5.26	114.53	111.90
1	S2	1261	C	N3-C2-O2	-5.24	118.23	121.90
1	S2	1520	G	C4-N9-C1'	5.21	133.28	126.50
1	S2	632	C	C2-N1-C1'	5.21	124.53	118.80
3	L5	186	G	C8-N9-C1'	-5.20	120.24	127.00
3	L5	1658	G	C6-C5-N7	5.20	133.52	130.40
3	L5	48	G	C8-N9-C4	5.19	108.48	106.40
3	L5	4396	A	N1-C2-N3	-5.18	126.71	129.30
3	L5	1889	U	C5-C4-O4	5.17	129.00	125.90
3	L5	1740	C	O4'-C1'-N1	5.16	112.33	108.20
3	L5	1856	C	C6-N1-C2	-5.16	118.24	120.30
1	S2	1520	G	C8-N9-C1'	-5.15	120.30	127.00
3	L5	4662	C	C6-N1-C2	-5.14	118.25	120.30
3	L5	1335	G	C5-C6-O6	-5.14	125.52	128.60
1	S2	1520	G	N3-C4-N9	5.13	129.08	126.00
3	L5	1675	C	C2-N1-C1'	-5.13	113.16	118.80
3	L5	1311	G	C4-C5-N7	-5.08	108.77	110.80
3	L5	3741	C	N3-C2-O2	-5.08	118.35	121.90
1	S2	1446	A	O4'-C1'-N9	5.03	112.22	108.20
3	L5	4555	U	C2-N1-C1'	-5.03	111.67	117.70
3	L5	4376	A	N9-C4-C5	5.00	107.80	105.80

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
19	SO	138	ASP	Peptide

5.2 Too-close contacts [i](#)

Due to software issues we are unable to calculate clashes - this section is therefore empty.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
5	SB	219/264 (83%)	213 (97%)	6 (3%)	0	100	100
6	SA	220/295 (75%)	215 (98%)	5 (2%)	0	100	100
7	SD	224/243 (92%)	212 (95%)	12 (5%)	0	100	100
8	SJ	183/194 (94%)	179 (98%)	4 (2%)	0	100	100
9	SE	260/263 (99%)	252 (97%)	8 (3%)	0	100	100
10	SC	220/293 (75%)	215 (98%)	5 (2%)	0	100	100
11	SG	235/249 (94%)	229 (97%)	6 (3%)	0	100	100
12	SF	187/204 (92%)	180 (96%)	6 (3%)	1 (0%)	29	35
13	SH	187/194 (96%)	179 (96%)	8 (4%)	0	100	100
14	SW	127/130 (98%)	123 (97%)	4 (3%)	0	100	100
15	SI	204/208 (98%)	197 (97%)	7 (3%)	0	100	100
16	SQ	139/146 (95%)	135 (97%)	4 (3%)	0	100	100
17	SU	99/119 (83%)	97 (98%)	2 (2%)	0	100	100
18	SK	94/165 (57%)	89 (95%)	5 (5%)	0	100	100
19	SO	133/151 (88%)	129 (97%)	3 (2%)	1 (1%)	19	23
20	SX	137/143 (96%)	134 (98%)	3 (2%)	0	100	100
21	SM	120/132 (91%)	117 (98%)	3 (2%)	0	100	100
22	SS	146/152 (96%)	143 (98%)	3 (2%)	0	100	100
23	Sd	53/56 (95%)	53 (100%)	0	0	100	100
24	SN	149/151 (99%)	147 (99%)	2 (1%)	0	100	100
25	SL	142/158 (90%)	138 (97%)	4 (3%)	0	100	100
26	SR	132/135 (98%)	123 (93%)	9 (7%)	0	100	100
27	SP	129/145 (89%)	125 (97%)	4 (3%)	0	100	100
28	ST	142/145 (98%)	135 (95%)	7 (5%)	0	100	100
29	SV	81/83 (98%)	81 (100%)	0	0	100	100
30	SY	129/133 (97%)	126 (98%)	3 (2%)	0	100	100
31	SZ	82/125 (66%)	79 (96%)	3 (4%)	0	100	100
32	Sa	98/115 (85%)	98 (100%)	0	0	100	100
33	Sb	81/84 (96%)	77 (95%)	4 (5%)	0	100	100
34	Sc	63/69 (91%)	59 (94%)	4 (6%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
35	Se	46/133 (35%)	45 (98%)	0	1 (2%)	6	5
36	Sf	61/156 (39%)	49 (80%)	10 (16%)	2 (3%)	4	2
37	Sg	311/317 (98%)	287 (92%)	23 (7%)	1 (0%)	41	50
38	Lz	209/217 (96%)	201 (96%)	8 (4%)	0	100	100
39	LA	249/257 (97%)	240 (96%)	9 (4%)	0	100	100
40	LB	399/403 (99%)	390 (98%)	9 (2%)	0	100	100
41	LC	364/427 (85%)	359 (99%)	5 (1%)	0	100	100
42	LJ	168/178 (94%)	166 (99%)	2 (1%)	0	100	100
43	LH	188/192 (98%)	186 (99%)	2 (1%)	0	100	100
44	LE	217/288 (75%)	212 (98%)	5 (2%)	0	100	100
45	LG	239/266 (90%)	230 (96%)	9 (4%)	0	100	100
46	LO	197/203 (97%)	194 (98%)	3 (2%)	0	100	100
47	LL	204/211 (97%)	195 (96%)	9 (4%)	0	100	100
48	LV	131/140 (94%)	130 (99%)	1 (1%)	0	100	100
49	LM	134/215 (62%)	130 (97%)	4 (3%)	0	100	100
50	La	144/148 (97%)	143 (99%)	1 (1%)	0	100	100
51	LN	201/204 (98%)	198 (98%)	3 (2%)	0	100	100
52	LI	199/214 (93%)	197 (99%)	2 (1%)	0	100	100
53	LD	292/297 (98%)	286 (98%)	6 (2%)	0	100	100
54	LQ	185/188 (98%)	180 (97%)	5 (3%)	0	100	100
55	LR	185/196 (94%)	184 (100%)	1 (0%)	0	100	100
56	LS	174/176 (99%)	171 (98%)	3 (2%)	0	100	100
57	LT	159/160 (99%)	157 (99%)	2 (1%)	0	100	100
58	LP	152/184 (83%)	149 (98%)	3 (2%)	0	100	100
59	LU	97/128 (76%)	96 (99%)	1 (1%)	0	100	100
60	LX	116/156 (74%)	115 (99%)	1 (1%)	0	100	100
61	LY	132/145 (91%)	132 (100%)	0	0	100	100
62	LW	114/157 (73%)	110 (96%)	4 (4%)	0	100	100
63	LZ	134/136 (98%)	131 (98%)	3 (2%)	0	100	100
64	Lr	124/137 (90%)	124 (100%)	0	0	100	100
65	Lh	120/123 (98%)	120 (100%)	0	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
66	Lb	106/159 (67%)	104 (98%)	2 (2%)	0	100	100
67	LF	223/248 (90%)	217 (97%)	6 (3%)	0	100	100
68	Lc	97/115 (84%)	97 (100%)	0	0	100	100
69	Ld	105/125 (84%)	104 (99%)	1 (1%)	0	100	100
70	Le	126/135 (93%)	125 (99%)	1 (1%)	0	100	100
71	Lf	108/110 (98%)	107 (99%)	1 (1%)	0	100	100
72	Lg	112/117 (96%)	110 (98%)	2 (2%)	0	100	100
73	Li	100/105 (95%)	98 (98%)	2 (2%)	0	100	100
74	Lj	85/97 (88%)	83 (98%)	2 (2%)	0	100	100
75	Lk	67/70 (96%)	67 (100%)	0	0	100	100
76	Ll	48/51 (94%)	47 (98%)	1 (2%)	0	100	100
77	Lm	49/128 (38%)	48 (98%)	1 (2%)	0	100	100
78	Ln	23/25 (92%)	23 (100%)	0	0	100	100
79	Lo	104/106 (98%)	103 (99%)	1 (1%)	0	100	100
80	Lp	90/92 (98%)	85 (94%)	5 (6%)	0	100	100
83	5A	135/154 (88%)	127 (94%)	7 (5%)	1 (1%)	22	26
All	All	11638/13133 (89%)	11331 (97%)	300 (3%)	7 (0%)	54	64

All (7) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
12	SF	79	HIS
35	Se	119	VAL
37	Sg	234	ASP
83	5A	141	MET
19	SO	138	ASP
36	Sf	123	SER
36	Sf	122	PRO

5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
5	SB	202/231 (87%)	191 (95%)	11 (5%)	22	30
6	SA	183/242 (76%)	177 (97%)	6 (3%)	38	53
7	SD	189/202 (94%)	178 (94%)	11 (6%)	20	27
8	SJ	161/168 (96%)	153 (95%)	8 (5%)	24	34
9	SE	224/225 (100%)	213 (95%)	11 (5%)	25	35
10	SC	188/225 (84%)	174 (93%)	14 (7%)	13	17
11	SG	207/218 (95%)	192 (93%)	15 (7%)	14	18
12	SF	159/170 (94%)	152 (96%)	7 (4%)	28	39
13	SH	168/174 (97%)	156 (93%)	12 (7%)	14	19
14	SW	112/113 (99%)	108 (96%)	4 (4%)	35	49
15	SI	178/180 (99%)	169 (95%)	9 (5%)	24	33
16	SQ	117/121 (97%)	109 (93%)	8 (7%)	16	21
17	SU	93/107 (87%)	85 (91%)	8 (9%)	10	12
18	SK	87/136 (64%)	83 (95%)	4 (5%)	27	38
19	SO	105/119 (88%)	101 (96%)	4 (4%)	33	47
20	SX	111/114 (97%)	105 (95%)	6 (5%)	22	30
21	SM	104/108 (96%)	90 (86%)	14 (14%)	4	4
22	SS	128/132 (97%)	123 (96%)	5 (4%)	32	46
23	Sd	48/49 (98%)	48 (100%)	0	100	100
24	SN	131/131 (100%)	125 (95%)	6 (5%)	27	38
25	SL	132/142 (93%)	124 (94%)	8 (6%)	18	25
26	SR	121/122 (99%)	107 (88%)	14 (12%)	5	6
27	SP	117/130 (90%)	107 (92%)	10 (8%)	10	13
28	ST	114/115 (99%)	107 (94%)	7 (6%)	18	25
29	SV	66/66 (100%)	60 (91%)	6 (9%)	9	11
30	SY	113/115 (98%)	102 (90%)	11 (10%)	8	9
31	SZ	74/103 (72%)	70 (95%)	4 (5%)	22	30
32	Sa	87/98 (89%)	86 (99%)	1 (1%)	73	86
33	Sb	75/76 (99%)	71 (95%)	4 (5%)	22	31
34	Sc	58/62 (94%)	51 (88%)	7 (12%)	5	5
35	Se	40/104 (38%)	38 (95%)	2 (5%)	24	34
36	Sf	56/140 (40%)	44 (79%)	12 (21%)	1	1

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
37	Sg	272/275 (99%)	240 (88%)	32 (12%)	5	5
38	Lz	189/196 (96%)	162 (86%)	27 (14%)	3	3
39	LA	193/198 (98%)	189 (98%)	4 (2%)	53	70
40	LB	347/348 (100%)	344 (99%)	3 (1%)	78	89
41	LC	305/348 (88%)	296 (97%)	9 (3%)	41	57
42	LJ	143/149 (96%)	135 (94%)	8 (6%)	21	29
43	LH	169/171 (99%)	163 (96%)	6 (4%)	35	49
44	LE	196/252 (78%)	191 (97%)	5 (3%)	46	63
45	LG	203/223 (91%)	195 (96%)	8 (4%)	32	46
46	LO	171/174 (98%)	167 (98%)	4 (2%)	50	67
47	LL	172/177 (97%)	165 (96%)	7 (4%)	30	43
48	LV	102/107 (95%)	97 (95%)	5 (5%)	25	35
49	LM	116/161 (72%)	113 (97%)	3 (3%)	46	63
50	La	119/120 (99%)	114 (96%)	5 (4%)	30	42
51	LN	171/172 (99%)	169 (99%)	2 (1%)	71	84
52	LI	173/181 (96%)	167 (96%)	6 (4%)	36	50
53	LD	247/250 (99%)	232 (94%)	15 (6%)	18	25
54	LQ	164/165 (99%)	161 (98%)	3 (2%)	59	75
55	LR	166/175 (95%)	156 (94%)	10 (6%)	19	26
56	LS	157/157 (100%)	155 (99%)	2 (1%)	69	82
57	LT	141/140 (101%)	139 (99%)	2 (1%)	67	81
58	LP	135/163 (83%)	128 (95%)	7 (5%)	23	32
59	LU	89/115 (77%)	83 (93%)	6 (7%)	16	21
60	LX	106/133 (80%)	103 (97%)	3 (3%)	43	60
61	LY	124/135 (92%)	117 (94%)	7 (6%)	21	29
62	LW	96/126 (76%)	89 (93%)	7 (7%)	14	18
63	LZ	118/118 (100%)	114 (97%)	4 (3%)	37	51
64	Lr	109/120 (91%)	106 (97%)	3 (3%)	43	60
65	Lh	109/110 (99%)	106 (97%)	3 (3%)	43	60
66	Lb	90/125 (72%)	83 (92%)	7 (8%)	12	16
67	LF	194/215 (90%)	192 (99%)	2 (1%)	76	87

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
68	Lc	84/97 (87%)	83 (99%)	1 (1%)	71	84
69	Ld	98/110 (89%)	95 (97%)	3 (3%)	40	55
70	Le	114/121 (94%)	112 (98%)	2 (2%)	59	75
71	Lf	89/89 (100%)	86 (97%)	3 (3%)	37	51
72	Lg	98/100 (98%)	93 (95%)	5 (5%)	24	33
73	Li	86/89 (97%)	80 (93%)	6 (7%)	15	19
74	Lj	74/80 (92%)	69 (93%)	5 (7%)	16	21
75	Lk	64/65 (98%)	62 (97%)	2 (3%)	40	55
76	Ll	47/48 (98%)	47 (100%)	0	100	100
77	Lm	47/115 (41%)	43 (92%)	4 (8%)	10	13
78	Ln	24/24 (100%)	22 (92%)	2 (8%)	11	14
79	Lo	94/93 (101%)	86 (92%)	8 (8%)	10	13
80	Lp	75/75 (100%)	73 (97%)	2 (3%)	44	61
83	5A	114/127 (90%)	109 (96%)	5 (4%)	28	39
All	All	10142/11170 (91%)	9630 (95%)	512 (5%)	28	34

All (512) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
5	SB	9	LEU
5	SB	27	LYS
5	SB	43	ASN
5	SB	59	SER
5	SB	76	ASN
5	SB	89	GLU
5	SB	103	MET
5	SB	128	LYS
5	SB	131	ASP
5	SB	225	LEU
5	SB	232	HIS
6	SA	80	ARG
6	SA	190	SER
6	SA	191	ARG
6	SA	198	MET
6	SA	200	ASP
6	SA	205	ARG
7	SD	27	ARG

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Mol	Chain	Res	Type
7	SD	35	SER
7	SD	44	THR
7	SD	76	ARG
7	SD	143	ARG
7	SD	149	SER
7	SD	154	ASP
7	SD	178	ARG
7	SD	179	GLN
7	SD	195	THR
7	SD	225	GLU
8	SJ	23	SER
8	SJ	64	ASP
8	SJ	95	ASP
8	SJ	112	THR
8	SJ	122	SER
8	SJ	136	ARG
8	SJ	141	VAL
8	SJ	172	ARG
9	SE	19	MET
9	SE	49	ARG
9	SE	69	PHE
9	SE	122	LYS
9	SE	145	ARG
9	SE	148	ARG
9	SE	211	LYS
9	SE	233	LYS
9	SE	240	ARG
9	SE	246	LEU
9	SE	259	LYS
10	SC	98	LEU
10	SC	103	LYS
10	SC	110	MET
10	SC	120	GLN
10	SC	121	ARG
10	SC	137	VAL
10	SC	184	VAL
10	SC	206	SER
10	SC	227	ARG
10	SC	236	PHE
10	SC	248	TYR
10	SC	249	SER
10	SC	258	GLU

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Mol	Chain	Res	Type
10	SC	271	ASP
11	SG	7	PHE
11	SG	21	GLU
11	SG	25	ARG
11	SG	44	GLU
11	SG	74	ARG
11	SG	78	SER
11	SG	103	ASP
11	SG	120	ASP
11	SG	127	THR
11	SG	143	LYS
11	SG	154	ARG
11	SG	201	LYS
11	SG	217	MET
11	SG	221	LYS
11	SG	231	ARG
12	SF	28	VAL
12	SF	75	SER
12	SF	79	HIS
12	SF	91	ARG
12	SF	135	ARG
12	SF	165	ASN
12	SF	204	ARG
13	SH	5	SER
13	SH	7	LYS
13	SH	17	ASP
13	SH	28	LEU
13	SH	32	MET
13	SH	36	LEU
13	SH	72	PHE
13	SH	108	SER
13	SH	115	LYS
13	SH	147	LYS
13	SH	162	GLN
13	SH	188	GLU
14	SW	12	LYS
14	SW	18	GLU
14	SW	30	CYS
14	SW	84	LYS
15	SI	6	ASP
15	SI	86	SER
15	SI	91	VAL

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Mol	Chain	Res	Type
15	SI	110	ARG
15	SI	139	LYS
15	SI	141	ARG
15	SI	144	LYS
15	SI	148	LYS
15	SI	155	ASN
16	SQ	16	LYS
16	SQ	20	THR
16	SQ	46	THR
16	SQ	49	TYR
16	SQ	113	ILE
16	SQ	117	ARG
16	SQ	144	SER
16	SQ	146	ARG
17	SU	18	HIS
17	SU	34	LYS
17	SU	51	LYS
17	SU	81	GLN
17	SU	83	ARG
17	SU	93	SER
17	SU	96	GLU
17	SU	114	VAL
18	SK	37	ASP
18	SK	60	GLU
18	SK	90	VAL
18	SK	95	ARG
19	SO	103	ASN
19	SO	113	GLN
19	SO	137	SER
19	SO	138	ASP
20	SX	25	LYS
20	SX	32	LEU
20	SX	98	ASP
20	SX	105	PHE
20	SX	108	LYS
20	SX	119	ARG
21	SM	12	MET
21	SM	18	LEU
21	SM	45	ARG
21	SM	63	LYS
21	SM	68	LEU
21	SM	74	ILE

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Mol	Chain	Res	Type
21	SM	75	ASN
21	SM	84	LYS
21	SM	93	LYS
21	SM	109	VAL
21	SM	113	ASP
21	SM	125	GLU
21	SM	126	GLU
21	SM	129	LYS
22	SS	76	GLN
22	SS	94	LYS
22	SS	136	THR
22	SS	142	ARG
22	SS	145	THR
24	SN	30	SER
24	SN	43	LYS
24	SN	103	GLU
24	SN	123[A]	HIS
24	SN	123[B]	HIS
24	SN	133	ARG
25	SL	19	ASN
25	SL	23	VAL
25	SL	39	ASN
25	SL	69	ARG
25	SL	114	SER
25	SL	147	LYS
25	SL	153	LYS
25	SL	155	PHE
26	SR	8	THR
26	SR	32	LYS
26	SR	43	SER
26	SR	76	GLU
26	SR	79	GLU
26	SR	80	ARG
26	SR	81	ARG
26	SR	82	ASP
26	SR	83	ASN
26	SR	89	SER
26	SR	94	GLU
26	SR	117	LEU
26	SR	118	GLN
26	SR	130	THR
27	SP	14	LYS

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Mol	Chain	Res	Type
27	SP	32	GLN
27	SP	51	ARG
27	SP	53	GLN
27	SP	55	SER
27	SP	70	MET
27	SP	72	LYS
27	SP	76	VAL
27	SP	92	SER
27	SP	140	ARG
28	ST	23	LYS
28	ST	24	LYS
28	ST	25	SER
28	ST	37	VAL
28	ST	38	LYS
28	ST	87	VAL
28	ST	96	SER
29	SV	10	ASP
29	SV	22	ARG
29	SV	51	LYS
29	SV	66	ASP
29	SV	80	SER
29	SV	81	LYS
30	SY	23	MET
30	SY	44	LEU
30	SY	47	MET
30	SY	51	THR
30	SY	54	VAL
30	SY	61	ARG
30	SY	72	PHE
30	SY	94	HIS
30	SY	99	LYS
30	SY	104	ARG
30	SY	105	LYS
31	SZ	39	LYS
31	SZ	50	PHE
31	SZ	60	LYS
31	SZ	102	LYS
32	Sa	26	CYS
33	Sb	16	LYS
33	Sb	24	LEU
33	Sb	33	MET
33	Sb	37	CYS

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Mol	Chain	Res	Type
34	Sc	36	ASP
34	Sc	40	ARG
34	Sc	41	SER
34	Sc	51	ARG
34	Sc	57	THR
34	Sc	60	GLU
34	Sc	61	SER
35	Se	100	LYS
35	Se	114	ARG
36	Sf	89	LYS
36	Sf	100	LEU
36	Sf	102	VAL
36	Sf	104	LYS
36	Sf	118	ARG
36	Sf	119	ARG
36	Sf	121	CYS
36	Sf	125	GLU
36	Sf	138	ARG
36	Sf	140	TYR
36	Sf	141	CYS
36	Sf	143	LYS
37	Sg	8	ARG
37	Sg	33	SER
37	Sg	47	ARG
37	Sg	48	ASP
37	Sg	57	ARG
37	Sg	89	LEU
37	Sg	105	THR
37	Sg	107	ASP
37	Sg	108	VAL
37	Sg	110	SER
37	Sg	113	PHE
37	Sg	117	ASN
37	Sg	134	THR
37	Sg	140	TYR
37	Sg	141	THR
37	Sg	155	ARG
37	Sg	177	TRP
37	Sg	181	ASN
37	Sg	182	CYS
37	Sg	212	LYS
37	Sg	220	ASP

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Mol	Chain	Res	Type
37	Sg	225	LYS
37	Sg	228	TYR
37	Sg	234	ASP
37	Sg	235	ILE
37	Sg	236	ILE
37	Sg	259	TRP
37	Sg	270	LEU
37	Sg	271	LYS
37	Sg	275	ILE
37	Sg	280	LYS
37	Sg	285	GLN
38	Lz	15	ARG
38	Lz	22	GLN
38	Lz	27	LYS
38	Lz	36	ILE
38	Lz	49	PHE
38	Lz	55	LEU
38	Lz	58	THR
38	Lz	84	HIS
38	Lz	85	MET
38	Lz	90	LEU
38	Lz	92	LYS
38	Lz	105	LYS
38	Lz	106	LYS
38	Lz	114	GLU
38	Lz	129	ASN
38	Lz	130	LYS
38	Lz	144	MET
38	Lz	147	LYS
38	Lz	157	PHE
38	Lz	159	MET
38	Lz	174	MET
38	Lz	175	THR
38	Lz	178	GLU
38	Lz	184	HIS
38	Lz	189	PHE
38	Lz	206	ILE
38	Lz	207	LYS
39	LA	147	ARG
39	LA	155	LYS
39	LA	159	SER
39	LA	208	GLU

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Mol	Chain	Res	Type
40	LB	228	TYR
40	LB	292	LEU
40	LB	399	LYS
41	LC	14	LYS
41	LC	122	TYR
41	LC	255	SER
41	LC	275	SER
41	LC	283	LYS
41	LC	291	ARG
41	LC	318	PRO
41	LC	336	ARG
41	LC	364	LYS
42	LJ	26	VAL
42	LJ	38	LYS
42	LJ	59	SER
42	LJ	84	GLU
42	LJ	85	LYS
42	LJ	95	ARG
42	LJ	118	LYS
42	LJ	175	LEU
43	LH	2	LYS
43	LH	6	SER
43	LH	19	THR
43	LH	37	ASP
43	LH	110	SER
43	LH	121	LYS
44	LE	56	ARG
44	LE	101	ASN
44	LE	123	ARG
44	LE	210	LYS
44	LE	239	LYS
45	LG	43	GLN
45	LG	53	ARG
45	LG	73	ARG
45	LG	113	ARG
45	LG	175	ARG
45	LG	229	ARG
45	LG	255	LYS
45	LG	257	LYS
46	LO	31	ARG
46	LO	116	LYS
46	LO	117	ARG

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Mol	Chain	Res	Type
46	LO	187	LYS
47	LL	52	SER
47	LL	67	HIS
47	LL	105	LYS
47	LL	122	SER
47	LL	136	LYS
47	LL	162	LYS
47	LL	200	LYS
48	LV	48	ARG
48	LV	71	GLU
48	LV	118	THR
48	LV	131	ARG
48	LV	134	SER
49	LM	67	SER
49	LM	81	ASP
49	LM	103	LYS
50	La	7	LYS
50	La	95	THR
50	La	116	LYS
50	La	119	LYS
50	La	134	GLU
51	LN	5	LYS
51	LN	124	ASP
52	LI	21	ARG
52	LI	36	LEU
52	LI	44	ASP
52	LI	123	GLN
52	LI	162	ARG
52	LI	188	LYS
53	LD	4	VAL
53	LD	51	MET
53	LD	75	VAL
53	LD	85	LYS
53	LD	89	LYS
53	LD	90	VAL
53	LD	112	ARG
53	LD	124	GLU
53	LD	136	ASP
53	LD	217	ASP
53	LD	232	THR
53	LD	258	LYS
53	LD	259	LYS

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Mol	Chain	Res	Type
53	LD	263	LYS
53	LD	267	ASN
54	LQ	14	ARG
54	LQ	17	GLU
54	LQ	19	LYS
55	LR	2	SER
55	LR	16	ARG
55	LR	111	GLU
55	LR	112	SER
55	LR	117	ARG
55	LR	122	SER
55	LR	135	LYS
55	LR	160	GLU
55	LR	162	ARG
55	LR	181	LYS
56	LS	6	THR
56	LS	150	ILE
57	LT	83	LYS
57	LT	122	LYS
58	LP	3	ARG
58	LP	17	SER
58	LP	57	CYS
58	LP	75[A]	GLN
58	LP	75[B]	GLN
58	LP	100	SER
58	LP	126	ARG
59	LU	25	CYS
59	LU	31	ASP
59	LU	52	LYS
59	LU	98	ASP
59	LU	105	ASN
59	LU	106	SER
60	LX	72	ASP
60	LX	85	SER
60	LX	131	ASP
61	LY	28	LYS
61	LY	36	LYS
61	LY	40	GLN
61	LY	74	TYR
61	LY	114	ASP
61	LY	115	ARG
61	LY	130	LYS

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Mol	Chain	Res	Type
62	LW	1[A]	MET
62	LW	1[B]	MET
62	LW	76	VAL
62	LW	77	LYS
62	LW	80	ARG
62	LW	91	MET
62	LW	117	LYS
63	LZ	9	LYS
63	LZ	64	LYS
63	LZ	91	LEU
63	LZ	112	ARG
64	Lr	58	LYS
64	Lr	67	ARG
64	Lr	125	MET
65	Lh	10	ARG
65	Lh	13	LYS
65	Lh	20	GLN
66	Lb	14	ARG
66	Lb	25	ARG
66	Lb	35	VAL
66	Lb	89	VAL
66	Lb	92	LYS
66	Lb	94	ASP
66	Lb	120	ARG
67	LF	44	LYS
67	LF	238	ASP
68	Lc	94	LEU
69	Ld	67	ARG
69	Ld	70	LYS
69	Ld	91	LYS
70	Le	76	LYS
70	Le	83	LYS
71	Lf	1	MET
71	Lf	37	ASP
71	Lf	46	ARG
72	Lg	28	ASN
72	Lg	48	VAL
72	Lg	52	ARG
72	Lg	73	HIS
72	Lg	85	LYS
73	Li	18	THR
73	Li	23	LYS

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Mol	Chain	Res	Type
73	Li	56	ARG
73	Li	66	ASP
73	Li	79	THR
73	Li	99	LYS
74	Lj	20	ARG
74	Lj	36	LYS
74	Lj	55	ARG
74	Lj	63	ARG
74	Lj	65	ARG
75	Lk	30	ASP
75	Lk	70	LYS
77	Lm	79	GLU
77	Lm	81	SER
77	Lm	88	LYS
77	Lm	127	VAL
78	Ln	16	LYS
78	Ln	25	LYS
79	Lo	22	LYS
79	Lo	27	LYS
79	Lo	30	LYS
79	Lo	59	LYS
79	Lo	78	ARG
79	Lo	79	SER
79	Lo	97	LYS
79	Lo	105	GLN
80	Lp	48	LYS
80	Lp	63	THR
83	5A	20	MET
83	5A	51	HIS
83	5A	59	VAL
83	5A	79	MET
83	5A	129	CYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (15) such sidechains are listed below:

Mol	Chain	Res	Type
11	SG	13	GLN
11	SG	155	GLN
13	SH	91	HIS
13	SH	193	GLN
21	SM	55	ASN
28	ST	83	GLN

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Mol	Chain	Res	Type
28	ST	85	ASN
29	SV	2	GLN
36	Sf	139	HIS
37	Sg	222	ASN
38	Lz	182	ASN
40	LB	354	GLN
43	LH	8	GLN
50	La	89	ASN
70	Le	23	HIS

5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	S2	1661/1869 (88%)	298 (17%)	2 (0%)
2	L8	155/156 (99%)	26 (16%)	0
3	L5	3650/5069 (72%)	634 (17%)	20 (0%)
4	L7	119/120 (99%)	11 (9%)	0
81	mR	7/60 (11%)	2 (28%)	0
82	Pt	76/77 (98%)	11 (14%)	0
All	All	5668/7351 (77%)	982 (17%)	22 (0%)

All (982) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	S2	3	C
1	S2	25	A
1	S2	33	G
1	S2	41	G
1	S2	45	A
1	S2	46	A
1	S2	55	U
1	S2	56	G
1	S2	65	C
1	S2	67	C
1	S2	68	A
1	S2	74	G
1	S2	75	G
1	S2	76	U
1	S2	79	A
1	S2	80	G
1	S2	92	A

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Mol	Chain	Res	Type
1	S2	103	A
1	S2	113	G
1	S2	115	U
1	S2	126	G
1	S2	127	C
1	S2	129	C
1	S2	139	C
1	S2	140	C
1	S2	143	U
1	S2	155	G
1	S2	162	C
1	S2	163	U
1	S2	168	C
1	S2	184	G
1	S2	197	U
1	S2	198	U
1	S2	199	C
1	S2	200	G
1	S2	201	C
1	S2	202	G
1	S2	203	G
1	S2	204	G
1	S2	205	G
1	S2	207	G
1	S2	209	A
1	S2	215	G
1	S2	216	C
1	S2	225	G
1	S2	302	A
1	S2	309	G
1	S2	312	G
1	S2	319	C
1	S2	320	G
1	S2	323	C
1	S2	324	C
1	S2	327	G
1	S2	328	U
1	S2	351	G
1	S2	362	C
1	S2	364	A
1	S2	370	G
1	S2	377	G

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Mol	Chain	Res	Type
1	S2	381	C
1	S2	385	G
1	S2	386	C
1	S2	407	G
1	S2	409	C
1	S2	413	G
1	S2	418	A
1	S2	438	G
1	S2	441	C
1	S2	448	A
1	S2	449	A
1	S2	450	C
1	S2	452	G
1	S2	464	A
1	S2	466	G
1	S2	467	G
1	S2	471	G
1	S2	472	C
1	S2	474	G
1	S2	476	A
1	S2	482	G
1	S2	487	U
1	S2	492	C
1	S2	493	A
1	S2	496	C
1	S2	523	A
1	S2	525	A
1	S2	533	A
1	S2	534	G
1	S2	544	G
1	S2	553	U
1	S2	554	A
1	S2	555	A
1	S2	560	A
1	S2	563	G
1	S2	564	A
1	S2	566	U
1	S2	570	C
1	S2	576	A2M
1	S2	587	A
1	S2	589	G
1	S2	590	A2M

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Mol	Chain	Res	Type
1	S2	591	U
1	S2	598	G
1	S2	608	C
1	S2	614	C
1	S2	620	G
1	S2	624	C
1	S2	628	A
1	S2	632	C
1	S2	634	A
1	S2	643	A
1	S2	644	OMG
1	S2	655	A
1	S2	668	A2M
1	S2	669	A
1	S2	671	A
1	S2	672	A
1	S2	673	G
1	S2	688	U
1	S2	689	U
1	S2	800	U
1	S2	810	A
1	S2	811	A
1	S2	821	G
1	S2	822	PSU
1	S2	823	U
1	S2	827	A
1	S2	830	A
1	S2	831	G
1	S2	835	C
1	S2	836	G
1	S2	837	A
1	S2	838	G
1	S2	840	C
1	S2	847	A
1	S2	869	A
1	S2	870	A
1	S2	871	U
1	S2	872	A
1	S2	883	U
1	S2	888	U
1	S2	889	U
1	S2	891	G

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Mol	Chain	Res	Type
1	S2	892	U
1	S2	895	G
1	S2	896	U
1	S2	897	U
1	S2	898	U
1	S2	901	G
1	S2	903	A
1	S2	904	A
1	S2	909	G
1	S2	913	A
1	S2	917	U
1	S2	920	A
1	S2	922	A
1	S2	933	G
1	S2	934	G
1	S2	943	U
1	S2	970	G
1	S2	978	G
1	S2	990	A
1	S2	992	A
1	S2	999	G
1	S2	1017	U
1	S2	1023	A
1	S2	1027	A
1	S2	1060	A
1	S2	1061	U
1	S2	1062	A
1	S2	1083	A
1	S2	1085	C
1	S2	1109	C
1	S2	1115	U
1	S2	1116	C
1	S2	1117	C
1	S2	1121	G
1	S2	1133	A
1	S2	1138	C
1	S2	1153	C
1	S2	1154	U
1	S2	1157	G
1	S2	1188	A
1	S2	1195	A
1	S2	1203	G

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Mol	Chain	Res	Type
1	S2	1207	G
1	S2	1208	A
1	S2	1215	C
1	S2	1217	A
1	S2	1221	G
1	S2	1224	G
1	S2	1242	U
1	S2	1243	PSU
1	S2	1251	A
1	S2	1253	A
1	S2	1256	G
1	S2	1257	G
1	S2	1259	A
1	S2	1260	A
1	S2	1265	A
1	S2	1274	G
1	S2	1275	G
1	S2	1277	C
1	S2	1285	G
1	S2	1286	G
1	S2	1301	A
1	S2	1302	G
1	S2	1303	C
1	S2	1308	U
1	S2	1309	C
1	S2	1310	U
1	S2	1312	G
1	S2	1313	A
1	S2	1315	U
1	S2	1324	G
1	S2	1327	G
1	S2	1342	U
1	S2	1345	G
1	S2	1348	G
1	S2	1358	U
1	S2	1371	U
1	S2	1372	U
1	S2	1373	C
1	S2	1375	G
1	S2	1378	A
1	S2	1382	A
1	S2	1402	A

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Mol	Chain	Res	Type
1	S2	1406	G
1	S2	1419	C
1	S2	1420	G
1	S2	1421	A
1	S2	1422	G
1	S2	1433	C
1	S2	1435	C
1	S2	1437	C
1	S2	1438	A
1	S2	1442	OMU
1	S2	1454	A
1	S2	1463	U
1	S2	1466	G
1	S2	1479	G
1	S2	1480	A
1	S2	1487	A
1	S2	1489	A
1	S2	1490	OMG
1	S2	1491	G
1	S2	1494	U
1	S2	1498	A
1	S2	1521	C
1	S2	1522	A
1	S2	1531	A
1	S2	1533	A
1	S2	1553	C
1	S2	1557	C
1	S2	1560	U
1	S2	1563	G
1	S2	1580	A
1	S2	1581	C
1	S2	1586	U
1	S2	1587	G
1	S2	1588	A
1	S2	1600	G
1	S2	1601	A
1	S2	1614	A
1	S2	1621	U
1	S2	1623	A
1	S2	1639	G7M
1	S2	1640	A
1	S2	1648	G

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Mol	Chain	Res	Type
1	S2	1654	G
1	S2	1661	A
1	S2	1664	A
1	S2	1665	G
1	S2	1680	G
1	S2	1695	A
1	S2	1698	C
1	S2	1721	U
1	S2	1722	G
1	S2	1744	G
1	S2	1752	C
1	S2	1753	C
1	S2	1754	G
1	S2	1777	G
1	S2	1782	G
1	S2	1783	C
1	S2	1819	A
1	S2	1826	G
1	S2	1829	G
1	S2	1831	A
1	S2	1835	A
1	S2	1838	U
1	S2	1849	G
1	S2	1861	G
1	S2	1862	G
1	S2	1863	A
1	S2	1864	U
1	S2	1865	C
1	S2	1869	A
2	L8	3	A
2	L8	34	U
2	L8	35	C
2	L8	51	U
2	L8	52	A
2	L8	59	A
2	L8	62	A
2	L8	63	U
2	L8	72	A
2	L8	80	A
2	L8	83	C
2	L8	86	U
2	L8	87	G

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Mol	Chain	Res	Type
2	L8	103	A
2	L8	104	A
2	L8	105	C
2	L8	109	C
2	L8	110	U
2	L8	111	U
2	L8	112	G
2	L8	114	G
2	L8	123	U
2	L8	124	U
2	L8	126	C
2	L8	127	U
2	L8	147	G
3	L5	2	G
3	L5	15	A
3	L5	39	A
3	L5	48	G
3	L5	56	A
3	L5	59	A
3	L5	64	A
3	L5	65	A
3	L5	71	C
3	L5	73	A
3	L5	91	G
3	L5	98	A
3	L5	109	G
3	L5	110	C
3	L5	119	G
3	L5	120	A
3	L5	122	U
3	L5	132	G
3	L5	134	G
3	L5	136	C
3	L5	139	G
3	L5	140	G
3	L5	141	C
3	L5	142	G
3	L5	143	C
3	L5	159	C
3	L5	178	C
3	L5	179	G
3	L5	181	C

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Mol	Chain	Res	Type
3	L5	184	U
3	L5	186	G
3	L5	187	U
3	L5	188	G
3	L5	189	G
3	L5	200	U
3	L5	209	U
3	L5	210	C
3	L5	218	A
3	L5	219	G
3	L5	233	U
3	L5	234	G
3	L5	250	C
3	L5	253	G
3	L5	256	G
3	L5	257	C
3	L5	262	G
3	L5	266	C
3	L5	270	U
3	L5	271	C
3	L5	272	U
3	L5	277	G
3	L5	280	G
3	L5	297	U
3	L5	306	A
3	L5	315	G
3	L5	316	U
3	L5	340	C
3	L5	349	A
3	L5	387	G
3	L5	409	G
3	L5	410	A
3	L5	412	G
3	L5	432	U
3	L5	449	C
3	L5	450	G
3	L5	451	C
3	L5	453	G
3	L5	454	U
3	L5	455	C
3	L5	461	G
3	L5	467	U

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Mol	Chain	Res	Type
3	L5	468	U
3	L5	484	U
3	L5	485	C
3	L5	489	C
3	L5	490	C
3	L5	496	G
3	L5	499	G
3	L5	504	G
3	L5	509	A
3	L5	510	U
3	L5	513	U
3	L5	514	U
3	L5	644	G
3	L5	646	G
3	L5	654	C
3	L5	656	C
3	L5	659	G
3	L5	663	G
3	L5	664	G
3	L5	666	G
3	L5	667	A
3	L5	669	C
3	L5	686	A
3	L5	687	U
3	L5	692	A
3	L5	696	C
3	L5	697	G
3	L5	704	C
3	L5	705	G
3	L5	729	G
3	L5	730	G
3	L5	731	G
3	L5	738	C
3	L5	739	G
3	L5	740	G
3	L5	742	G
3	L5	758	G
3	L5	759	G
3	L5	904	C
3	L5	909	A
3	L5	913	U
3	L5	914	U

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Mol	Chain	Res	Type
3	L5	915	A
3	L5	917	A
3	L5	925	C
3	L5	926	G
3	L5	932	A
3	L5	933	G
3	L5	935	A
3	L5	936	C
3	L5	944	A
3	L5	945	U
3	L5	959	G
3	L5	960	A
3	L5	961	G
3	L5	962	C
3	L5	964	A
3	L5	965	G
3	L5	967	C
3	L5	968	C
3	L5	969	C
3	L5	970	G
3	L5	1065	G
3	L5	1068	G
3	L5	1070	G
3	L5	1072	C
3	L5	1083	U
3	L5	1094	G
3	L5	1098	G
3	L5	1099	C
3	L5	1101	C
3	L5	1169	G
3	L5	1170	G
3	L5	1175	A
3	L5	1182	C
3	L5	1183	C
3	L5	1185	G
3	L5	1187	G
3	L5	1196	G
3	L5	1199	G
3	L5	1201	U
3	L5	1211	G
3	L5	1215	C
3	L5	1216	C

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Mol	Chain	Res	Type
3	L5	1239	C
3	L5	1241	C
3	L5	1242	G
3	L5	1246	G
3	L5	1252	C
3	L5	1253	G
3	L5	1254	A
3	L5	1257	A
3	L5	1259	G
3	L5	1266	G
3	L5	1270	A
3	L5	1272	C
3	L5	1273	G
3	L5	1276	C
3	L5	1279	A
3	L5	1280	C
3	L5	1284	G
3	L5	1285	U
3	L5	1287	G
3	L5	1293	G
3	L5	1294	A
3	L5	1297	U
3	L5	1303	A
3	L5	1304	C
3	L5	1313	C
3	L5	1326	A2M
3	L5	1337	A
3	L5	1354	A
3	L5	1359	G
3	L5	1366	G
3	L5	1378	C
3	L5	1387	A
3	L5	1394	G
3	L5	1397	A
3	L5	1398	A
3	L5	1403	G
3	L5	1407	C
3	L5	1410	U
3	L5	1411	C
3	L5	1413	C
3	L5	1414	C
3	L5	1415	G

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Mol	Chain	Res	Type
3	L5	1420	A
3	L5	1437	C
3	L5	1439	C
3	L5	1443	A
3	L5	1444	G
3	L5	1445	U
3	L5	1446	C
3	L5	1448	G
3	L5	1457	G
3	L5	1482	G
3	L5	1483	C
3	L5	1484	G
3	L5	1497	A
3	L5	1498	G
3	L5	1502	G
3	L5	1534	A2M
3	L5	1547	A
3	L5	1554	A
3	L5	1566	C
3	L5	1578	U
3	L5	1591	U
3	L5	1596	U
3	L5	1614	C
3	L5	1624	G
3	L5	1625	OMG
3	L5	1631	A
3	L5	1633	G
3	L5	1634	A
3	L5	1638	A
3	L5	1640	C
3	L5	1654	G
3	L5	1661	C
3	L5	1676	C
3	L5	1677	PSU
3	L5	1691	G
3	L5	1698	C
3	L5	1699	A
3	L5	1700	G
3	L5	1701	A
3	L5	1703	C
3	L5	1704	C
3	L5	1734	G

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Mol	Chain	Res	Type
3	L5	1750	G
3	L5	1761	G
3	L5	1765	A
3	L5	1766	A
3	L5	1768	C
3	L5	1769	G
3	L5	1775	A
3	L5	1787	A
3	L5	1789	C
3	L5	1804	A
3	L5	1833	G
3	L5	1834	U
3	L5	1836	G
3	L5	1837	A
3	L5	1842	G
3	L5	1843	A
3	L5	1855	G
3	L5	1869	G
3	L5	1892	A
3	L5	1897	A
3	L5	1918	U
3	L5	1919	G
3	L5	1920	C
3	L5	1921	C
3	L5	1922	G
3	L5	1925	G
3	L5	1931	C
3	L5	1932	A
3	L5	1940	G
3	L5	1948	G
3	L5	1961	G
3	L5	1962	A
3	L5	1966	C
3	L5	1968	G
3	L5	1969	G
3	L5	1970	A
3	L5	1971	C
3	L5	1972	G
3	L5	1974	U
3	L5	1976	G
3	L5	1983	A
3	L5	1984	A

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Mol	Chain	Res	Type
3	L5	1985	G
3	L5	1987	C
3	L5	1992	U
3	L5	1993	C
3	L5	1994	C
3	L5	1997	U
3	L5	1998	A
3	L5	1999	A
3	L5	2000	G
3	L5	2001	G
3	L5	2002	A
3	L5	2003	G
3	L5	2004	U
3	L5	2011	C
3	L5	2018	C
3	L5	2019	C
3	L5	2021	G
3	L5	2022	C
3	L5	2024	G
3	L5	2025	A
3	L5	2026	A
3	L5	2042	A
3	L5	2046	G
3	L5	2048	U
3	L5	2052	G
3	L5	2055	G
3	L5	2062	C
3	L5	2069	A
3	L5	2084	C
3	L5	2085	G
3	L5	2092	G
3	L5	2093	A
3	L5	2095	A
3	L5	2096	G
3	L5	2097	U
3	L5	2099	G
3	L5	2102	G
3	L5	2103	G
3	L5	2106	G
3	L5	2107	C
3	L5	2108	G
3	L5	2110	C

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Mol	Chain	Res	Type
3	L5	2112	G
3	L5	2259	G
3	L5	2261	G
3	L5	2289	C
3	L5	2300	A
3	L5	2301	G
3	L5	2313	A
3	L5	2333	G
3	L5	2348	G
3	L5	2351	OMC
3	L5	2360	A
3	L5	2384	U
3	L5	2395	A
3	L5	2397	G
3	L5	2417	A
3	L5	2421	G
3	L5	2470	C
3	L5	2471	G
3	L5	2474	G
3	L5	2475	G
3	L5	2478	C
3	L5	2479	G
3	L5	2483	G
3	L5	2485	U
3	L5	2487	G
3	L5	2488	C
3	L5	2489	C
3	L5	2490	U
3	L5	2491	C
3	L5	2503	G
3	L5	2504	C
3	L5	2505	C
3	L5	2506	G
3	L5	2513	A
3	L5	2519	U
3	L5	2520	C
3	L5	2529	A
3	L5	2554	U
3	L5	2567	G
3	L5	2583	C
3	L5	2587	A
3	L5	2589	C

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Mol	Chain	Res	Type
3	L5	2601	A
3	L5	2653	C
3	L5	2660	A
3	L5	2662	G
3	L5	2669	C
3	L5	2687	U
3	L5	2694	G
3	L5	2695	A
3	L5	2696	A
3	L5	2708	U
3	L5	2710	C
3	L5	2711	G
3	L5	2712	G
3	L5	2726	G
3	L5	2735	G
3	L5	2739	C
3	L5	2743	A
3	L5	2761	U
3	L5	2763	U
3	L5	2764	A
3	L5	2770	C
3	L5	2788	U
3	L5	2790	U
3	L5	2794	C
3	L5	2795	A
3	L5	2796	G
3	L5	2814	C
3	L5	2815	A2M
3	L5	2826	U
3	L5	2827	G
3	L5	2829	U
3	L5	2838	G
3	L5	2855	G
3	L5	2877	G
3	L5	2899	C
3	L5	3596	A
3	L5	3599	A
3	L5	3606	U
3	L5	3615	G
3	L5	3616	U
3	L5	3618	C
3	L5	3626	G

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Mol	Chain	Res	Type
3	L5	3635	A
3	L5	3644	U
3	L5	3662	A
3	L5	3673	C
3	L5	3713	U
3	L5	3714	G
3	L5	3748	A
3	L5	3753	G
3	L5	3760	A2M
3	L5	3761	C
3	L5	3766	A
3	L5	3776	G
3	L5	3777	G
3	L5	3783	A
3	L5	3784	A
3	L5	3811	G
3	L5	3814	U
3	L5	3817	A
3	L5	3819	G
3	L5	3822	U
3	L5	3839	G
3	L5	3840	U
3	L5	3876	A
3	L5	3877	A
3	L5	3878	C
3	L5	3879	G
3	L5	3897	G
3	L5	3898	G
3	L5	3901	A
3	L5	3906	A
3	L5	3907	G
3	L5	3915	U
3	L5	3944	OMG
3	L5	3951	G
3	L5	3956	G
3	L5	3957	U
3	L5	3958	G
3	L5	3959	U
3	L5	3961	G
3	L5	3962	A
3	L5	3963	A
3	L5	3965	A

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Mol	Chain	Res	Type
3	L5	3966	A
3	L5	3967	G
3	L5	3968	U
3	L5	3969	G
3	L5	3971	G
3	L5	3972	A
3	L5	3974	G
3	L5	3975	C
3	L5	3977	C
3	L5	3978	C
3	L5	4034	G
3	L5	4037	C
3	L5	4038	C
3	L5	4039	G
3	L5	4040	C
3	L5	4041	C
3	L5	4042	G
3	L5	4043	G
3	L5	4045	G
3	L5	4046	A
3	L5	4047	A
3	L5	4048	A
3	L5	4049	U
3	L5	4050	A
3	L5	4051	C
3	L5	4053	A
3	L5	4054	C
3	L5	4056	A
3	L5	4059	C
3	L5	4061	G
3	L5	4062	A
3	L5	4063	U
3	L5	4064	C
3	L5	4065	G
3	L5	4076	G
3	L5	4094	G
3	L5	4096	C
3	L5	4097	G
3	L5	4099	G
3	L5	4102	C
3	L5	4103	C
3	L5	4105	A

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Mol	Chain	Res	Type
3	L5	4106	G
3	L5	4110	C
3	L5	4111	U
3	L5	4114	C
3	L5	4116	C
3	L5	4119	C
3	L5	4122	G
3	L5	4127	A
3	L5	4133	C
3	L5	4136	G
3	L5	4137	C
3	L5	4140	C
3	L5	4141	G
3	L5	4142	C
3	L5	4144	C
3	L5	4145	C
3	L5	4147	G
3	L5	4150	G
3	L5	4158	C
3	L5	4162	C
3	L5	4163	U
3	L5	4164	C
3	L5	4170	A
3	L5	4183	G
3	L5	4184	G
3	L5	4191	G
3	L5	4203	A
3	L5	4214	A
3	L5	4222	G
3	L5	4229	U
3	L5	4233	A
3	L5	4251	A
3	L5	4252	C
3	L5	4253	A
3	L5	4254	G
3	L5	4266	G
3	L5	4268	A
3	L5	4273	A
3	L5	4281	A
3	L5	4291	G
3	L5	4305	G
3	L5	4306	OMU

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Mol	Chain	Res	Type
3	L5	4314	C
3	L5	4329	G
3	L5	4330	G
3	L5	4339	A
3	L5	4373	G
3	L5	4376	A
3	L5	4377	G
3	L5	4378	A
3	L5	4387	C
3	L5	4391	G
3	L5	4393	G
3	L5	4394	A
3	L5	4420	PSU
3	L5	4422	A
3	L5	4448	G
3	L5	4464	A
3	L5	4465	U
3	L5	4475	G
3	L5	4500	PSU
3	L5	4512	U
3	L5	4513	A
3	L5	4515	G
3	L5	4519	C
3	L5	4524	G
3	L5	4548	A
3	L5	4557	U
3	L5	4567	G
3	L5	4573	G
3	L5	4574	U
3	L5	4575	G
3	L5	4581	G
3	L5	4590	A2M
3	L5	4600	G
3	L5	4608	G
3	L5	4610	A
3	L5	4617	G
3	L5	4636	PSU
3	L5	4637	OMG
3	L5	4656	A
3	L5	4670	C
3	L5	4672	A
3	L5	4677	U

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Mol	Chain	Res	Type
3	L5	4700	A
3	L5	4708	A
3	L5	4709	U
3	L5	4719	G
3	L5	4720	C
3	L5	4730	C
3	L5	4731	G
3	L5	4732	G
3	L5	4733	C
3	L5	4734	A
3	L5	4740	G
3	L5	4741	C
3	L5	4745	G
3	L5	4747	C
3	L5	4754	G
3	L5	4757	C
3	L5	4759	C
3	L5	4761	G
3	L5	4765	G
3	L5	4771	C
3	L5	4772	C
3	L5	4860	G
3	L5	4865	C
3	L5	4870	G
3	L5	4871	C
3	L5	4882	U
3	L5	4883	C
3	L5	4895	C
3	L5	4900	C
3	L5	4901	G
3	L5	4910	G
3	L5	4911	A
3	L5	4912	G
3	L5	4914	C
3	L5	4943	A
3	L5	4944	C
3	L5	4951	G
3	L5	4956	A
3	L5	4963	G
3	L5	4976	U
3	L5	4988	U
3	L5	4989	U

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Mol	Chain	Res	Type
3	L5	4990	C
3	L5	4991	U
3	L5	4994	G
3	L5	5007	A
3	L5	5017	G
3	L5	5022	U
3	L5	5023	C
3	L5	5024	C
3	L5	5027	C
3	L5	5028	G
3	L5	5034	A
3	L5	5041	G
3	L5	5050	C
3	L5	5061	A
3	L5	5062	G
3	L5	5066	U
3	L5	5069	U
4	L7	7	G
4	L7	33	U
4	L7	53	U
4	L7	54	A
4	L7	64	G
4	L7	97	G
4	L7	100	A
4	L7	102	U
4	L7	110	G
4	L7	113	G
4	L7	120	U
81	mR	33	A
81	mR	36	U
82	Pt	2	G
82	Pt	9	G
82	Pt	16	C
82	Pt	19	G
82	Pt	21	H2U
82	Pt	43	G
82	Pt	47	G7M
82	Pt	48	U
82	Pt	65	G
82	Pt	71	G
82	Pt	77	A

All (22) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	S2	1490	OMG
1	S2	1753	C
3	L5	42	A
3	L5	278	G
3	L5	417	G
3	L5	955	G
3	L5	1482	G
3	L5	1613	A
3	L5	1633	G
3	L5	1677	PSU
3	L5	1700	G
3	L5	1733	G
3	L5	2794	C
3	L5	3876	A
3	L5	3958	G
3	L5	3964	U
3	L5	4115	G
3	L5	4449	A
3	L5	4699	U
3	L5	4913	G
3	L5	4993	G
3	L5	5026	U

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

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

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
3	OMC	L5	4456	3	19,22,23	0.84	0	26,31,34	0.69	0
3	PSU	L5	2508	3	18,21,22	1.31	2 (11%)	22,30,33	1.84	4 (18%)
3	PSU	L5	2632	3	18,21,22	1.42	4 (22%)	22,30,33	1.90	4 (18%)
1	OMG	S2	1447	1	18,26,27	0.98	1 (5%)	19,38,41	1.12	2 (10%)
1	PSU	S2	814	1	18,21,22	1.43	3 (16%)	22,30,33	1.89	3 (13%)
3	PSU	L5	1779	3	18,21,22	1.41	4 (22%)	22,30,33	1.93	3 (13%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
1	G7M	S2	1639	82,1	20,26,27	2.55	5 (25%)	17,39,42	1.07	2 (11%)
1	PSU	S2	1244	1	18,21,22	1.41	4 (22%)	22,30,33	1.97	3 (13%)
3	PSU	L5	3695	3	18,21,22	1.41	4 (22%)	22,30,33	2.00	3 (13%)
3	PSU	L5	3920	87,3	18,21,22	1.43	3 (16%)	22,30,33	2.15	4 (18%)
3	PSU	L5	4361	3	18,21,22	1.41	3 (16%)	22,30,33	1.93	4 (18%)
3	OMG	L5	1625	86,87,3	18,26,27	1.07	1 (5%)	19,38,41	1.27	4 (21%)
1	MA6	S2	1850	1	19,26,27	0.83	0	18,38,41	1.49	3 (16%)
3	PSU	L5	4431	3	18,21,22	1.42	3 (16%)	22,30,33	1.86	4 (18%)
3	PSU	L5	2843	3	18,21,22	1.46	3 (16%)	22,30,33	2.08	5 (22%)
1	OMG	S2	601	1	18,26,27	1.03	1 (5%)	19,38,41	1.04	2 (10%)
1	OMG	S2	436	1	18,26,27	1.01	1 (5%)	19,38,41	1.18	2 (10%)
3	OMG	L5	4618	3	18,26,27	0.91	1 (5%)	19,38,41	1.22	2 (10%)
1	A2M	S2	468	1	18,25,26	0.96	1 (5%)	18,36,39	1.29	3 (16%)
1	PSU	S2	1239	1	18,21,22	1.43	4 (22%)	22,30,33	1.98	3 (13%)
1	PSU	S2	815	1	18,21,22	1.39	3 (16%)	22,30,33	1.90	4 (18%)
3	PSU	L5	4552	3	18,21,22	1.50	5 (27%)	22,30,33	1.88	4 (18%)
1	PSU	S2	649	1	18,21,22	1.39	4 (22%)	22,30,33	2.03	3 (13%)
1	A2M	S2	1031	1	18,25,26	0.91	1 (5%)	18,36,39	1.30	3 (16%)
1	PSU	S2	651	1	18,21,22	1.45	4 (22%)	22,30,33	1.98	3 (13%)
3	PSU	L5	4293	3	18,21,22	1.46	3 (16%)	22,30,33	1.98	5 (22%)
1	OMU	S2	1442	1,87	19,22,23	1.26	3 (15%)	26,31,34	1.70	4 (15%)
3	OMC	L5	2804	3	19,22,23	0.81	0	26,31,34	0.95	2 (7%)
40	HIC	LB	245	40	8,11,12	1.62	2 (25%)	6,14,16	1.10	0
3	A2M	L5	4590	3	18,25,26	1.02	2 (11%)	18,36,39	1.50	4 (22%)
3	PSU	L5	4296	3	18,21,22	1.44	4 (22%)	22,30,33	2.01	4 (18%)
3	OMU	L5	2837	3	19,22,23	1.33	3 (15%)	26,31,34	1.93	6 (23%)
3	OMC	L5	3808	87,3	19,22,23	0.83	0	26,31,34	0.80	1 (3%)
1	OMU	S2	354	1	19,22,23	1.26	3 (15%)	26,31,34	1.68	4 (15%)
3	PSU	L5	3729	3	18,21,22	1.40	3 (16%)	22,30,33	1.95	3 (13%)
3	OMG	L5	4370	3	18,26,27	0.91	1 (5%)	19,38,41	1.15	3 (15%)
3	A2M	L5	1871	87,3	18,25,26	0.82	0	18,36,39	1.52	2 (11%)
3	A2M	L5	3718	3	18,25,26	0.94	1 (5%)	18,36,39	1.17	2 (11%)
1	OMC	S2	1703	1,87	19,22,23	0.77	0	26,31,34	0.73	0
3	PSU	L5	4531	3	18,21,22	1.39	4 (22%)	22,30,33	1.94	3 (13%)
3	OMC	L5	4536	3	19,22,23	0.90	2 (10%)	26,31,34	0.95	1 (3%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
3	A2M	L5	1326	3	18,25,26	0.98	1 (5%)	18,36,39	1.68	5 (27%)
3	OMG	L5	2876	3	18,26,27	1.05	1 (5%)	19,38,41	1.16	2 (10%)
1	PSU	S2	1232	1	18,21,22	1.49	4 (22%)	22,30,33	2.00	4 (18%)
3	PSU	L5	1744	87,3	18,21,22	1.43	3 (16%)	22,30,33	1.93	3 (13%)
1	OMG	S2	1490	1,87	18,26,27	1.04	1 (5%)	19,38,41	1.25	3 (15%)
3	PSU	L5	4423	3	18,21,22	1.46	3 (16%)	22,30,33	2.02	4 (18%)
1	PSU	S2	609	1	18,21,22	1.42	4 (22%)	22,30,33	1.94	3 (13%)
3	PSU	L5	3851	87,3	18,21,22	1.46	4 (22%)	22,30,33	1.98	6 (27%)
1	PSU	S2	866	1	18,21,22	1.40	3 (16%)	22,30,33	1.94	3 (13%)
3	OMG	L5	1316	3	18,26,27	1.05	1 (5%)	19,38,41	1.34	3 (15%)
6	SAC	SA	2	6	7,8,9	3.75	2 (28%)	8,9,11	4.33	4 (50%)
3	PSU	L5	4569	3	18,21,22	1.46	4 (22%)	22,30,33	2.12	6 (27%)
3	OMC	L5	2365	87,3	19,22,23	0.79	0	26,31,34	0.78	0
3	PSU	L5	4353	3	18,21,22	1.51	4 (22%)	22,30,33	2.12	3 (13%)
1	OMU	S2	116	1	19,22,23	1.27	3 (15%)	26,31,34	1.67	4 (15%)
1	PSU	S2	1081	1	18,21,22	1.46	4 (22%)	22,30,33	1.94	5 (22%)
3	A2M	L5	398	3	18,25,26	0.99	1 (5%)	18,36,39	1.23	2 (11%)
3	OMG	L5	4499	3	18,26,27	0.97	1 (5%)	19,38,41	1.13	2 (10%)
3	PSU	L5	3762	3	18,21,22	1.38	3 (16%)	22,30,33	1.91	3 (13%)
1	A2M	S2	512	1	18,25,26	0.91	1 (5%)	18,36,39	1.17	2 (11%)
1	OMC	S2	174	1	19,22,23	0.80	0	26,31,34	0.87	0
1	PSU	S2	406	1	18,21,22	1.43	4 (22%)	22,30,33	1.96	4 (18%)
3	PSU	L5	4493	87,3	18,21,22	1.42	4 (22%)	22,30,33	1.88	3 (13%)
3	PSU	L5	3639	3	18,21,22	1.69	4 (22%)	22,30,33	1.88	5 (22%)
3	A2M	L5	3724	3	18,25,26	0.96	1 (5%)	18,36,39	1.27	2 (11%)
1	PSU	S2	1174	1,87	18,21,22	1.44	4 (22%)	22,30,33	1.94	4 (18%)
64	SAC	Lr	2	64	7,8,9	3.76	2 (28%)	8,9,11	4.27	4 (50%)
1	PSU	S2	918	1	18,21,22	1.55	5 (27%)	22,30,33	2.13	5 (22%)
1	PSU	S2	1004	1	18,21,22	1.60	5 (27%)	22,30,33	2.02	4 (18%)
3	A2M	L5	4523	87,3	18,25,26	0.88	1 (5%)	18,36,39	1.44	3 (16%)
3	PSU	L5	4532	3	18,21,22	1.55	3 (16%)	22,30,33	1.81	4 (18%)
3	1MA	L5	1322	87,3	16,25,26	1.45	3 (18%)	18,37,40	1.23	3 (16%)
1	PSU	S2	822	1	18,21,22	1.45	3 (16%)	22,30,33	2.13	5 (22%)
1	PSU	S2	1243	1	18,21,22	1.45	4 (22%)	22,30,33	1.98	3 (13%)
3	PSU	L5	3715	3	18,21,22	1.41	4 (22%)	22,30,33	2.05	4 (18%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
3	PSU	L5	1782	3	18,21,22	1.40	3 (16%)	22,30,33	1.96	3 (13%)
1	A2M	S2	27	1,87	18,25,26	0.94	1 (5%)	18,36,39	1.28	3 (16%)
3	PSU	L5	3637	86,87,3	18,21,22	1.39	2 (11%)	22,30,33	2.25	3 (13%)
82	H2U	Pt	21	82	18,21,22	0.97	2 (11%)	21,30,33	1.42	2 (9%)
1	PSU	S2	801	1	18,21,22	1.38	3 (16%)	22,30,33	1.94	4 (18%)
3	A2M	L5	3825	3	18,25,26	1.00	1 (5%)	18,36,39	1.43	4 (22%)
1	PSU	S2	1692	1	18,21,22	1.45	4 (22%)	22,30,33	1.94	3 (13%)
3	PSU	L5	4471	3	18,21,22	1.41	3 (16%)	22,30,33	1.82	3 (13%)
3	PSU	L5	4500	3	18,21,22	1.38	4 (22%)	22,30,33	2.03	4 (18%)
3	PSU	L5	1536	3	18,21,22	1.40	3 (16%)	22,30,33	2.09	4 (18%)
3	OMG	L5	2364	3	18,26,27	1.23	1 (5%)	19,38,41	1.16	2 (10%)
39	V5N	LA	216	39	4,11,12	0.38	0	5,14,16	1.61	2 (40%)
3	OMC	L5	3841	3	19,22,23	0.82	1 (5%)	26,31,34	0.94	0
1	A2M	S2	668	1,87	18,25,26	0.93	1 (5%)	18,36,39	1.60	4 (22%)
1	PSU	S2	573	1	18,21,22	1.41	3 (16%)	22,30,33	1.93	3 (13%)
79	MLZ	Lo	53	79	8,9,10	0.72	0	4,9,11	0.80	0
1	OMG	S2	1328	1,86	18,26,27	0.96	1 (5%)	19,38,41	1.05	2 (10%)
3	OMG	L5	4637	86,3	18,26,27	1.00	1 (5%)	19,38,41	1.11	2 (10%)
2	OMG	L8	75	2	18,26,27	0.95	1 (5%)	19,38,41	1.10	2 (10%)
1	PSU	S2	36	1	18,21,22	1.42	4 (22%)	22,30,33	1.90	3 (13%)
1	OMU	S2	428	1	19,22,23	1.22	3 (15%)	26,31,34	1.75	5 (19%)
3	OMC	L5	2351	87,3	19,22,23	0.83	0	26,31,34	1.20	3 (11%)
3	OMU	L5	2415	3	19,22,23	1.29	2 (10%)	26,31,34	1.71	5 (19%)
3	PSU	L5	1683	86,3	18,21,22	1.44	4 (22%)	22,30,33	2.05	3 (13%)
1	OMC	S2	462	1	19,22,23	0.81	0	26,31,34	0.80	0
1	PSU	S2	1367	1	18,21,22	1.47	4 (22%)	22,30,33	1.96	3 (13%)
1	MA6	S2	1851	1	19,26,27	0.79	1 (5%)	18,38,41	1.51	3 (16%)
1	A2M	S2	1383	1	18,25,26	1.01	1 (5%)	18,36,39	1.32	2 (11%)
3	A2M	L5	3785	3	18,25,26	0.89	0	18,36,39	1.47	2 (11%)
3	PSU	L5	2839	3	18,21,22	1.60	3 (16%)	22,30,33	1.79	4 (18%)
1	PSU	S2	119	1	18,21,22	1.37	4 (22%)	22,30,33	1.96	4 (18%)
3	A2M	L5	1534	87,3	18,25,26	0.98	1 (5%)	18,36,39	1.37	3 (16%)
3	A2M	L5	3830	3	18,25,26	0.90	1 (5%)	18,36,39	1.51	3 (16%)
3	PSU	L5	3758	3	18,21,22	1.44	4 (22%)	22,30,33	1.94	4 (18%)
1	PSU	S2	1136	1	18,21,22	1.44	3 (16%)	22,30,33	2.06	4 (18%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
1	PSU	S2	93	1	18,21,22	1.52	3 (16%)	22,30,33	1.81	4 (18%)
1	PSU	S2	109	1,86	18,21,22	1.66	6 (33%)	22,30,33	2.18	4 (18%)
1	OMG	S2	683	1	18,26,27	0.91	1 (5%)	19,38,41	1.20	2 (10%)
3	OMG	L5	3744	3	18,26,27	0.88	1 (5%)	19,38,41	1.24	3 (15%)
3	OMC	L5	2861	3	19,22,23	0.75	0	26,31,34	0.71	0
3	PSU	L5	1792	3	18,21,22	1.40	3 (16%)	22,30,33	1.90	3 (13%)
3	OMC	L5	3887	3	19,22,23	0.84	0	26,31,34	0.80	0
3	OMU	L5	4227	3	19,22,23	1.25	2 (10%)	26,31,34	1.73	5 (19%)
3	OMU	L5	4306	3	19,22,23	1.21	2 (10%)	26,31,34	1.50	5 (19%)
3	PSU	L5	4521	86,87,3	18,21,22	1.48	3 (16%)	22,30,33	2.03	5 (22%)
3	OMG	L5	4623	3	18,26,27	1.01	1 (5%)	19,38,41	1.04	2 (10%)
3	A2M	L5	2815	87,3	18,25,26	0.86	0	18,36,39	1.41	2 (11%)
3	OMG	L5	1522	3	18,26,27	0.89	0	19,38,41	1.26	4 (21%)
3	OMG	L5	4196	87,82,3	18,26,27	1.00	1 (5%)	19,38,41	0.98	2 (10%)
3	PSU	L5	5001	87,3	18,21,22	1.53	4 (22%)	22,30,33	2.06	5 (22%)
1	PSU	S2	572	1	18,21,22	1.42	3 (16%)	22,30,33	1.97	4 (18%)
1	PSU	S2	296	1	18,21,22	1.42	4 (22%)	22,30,33	1.95	3 (13%)
1	6MZ	S2	1832	87,1,86	18,25,26	0.82	1 (5%)	16,36,39	2.38	3 (18%)
83	5CT	5A	50[B]	-	13,14,15	1.06	1 (7%)	9,15,17	1.09	0
29	AME	SV	1	29	9,10,11	3.20	2 (22%)	9,11,13	4.44	4 (44%)
3	PSU	L5	3734	3	18,21,22	1.36	2 (11%)	22,30,33	1.88	4 (18%)
3	OMG	L5	4392	3	18,26,27	0.95	1 (5%)	19,38,41	1.09	2 (10%)
1	4AC	S2	1842	1	21,24,25	1.10	2 (9%)	29,34,37	1.26	5 (17%)
50	V5N	La	39	50	4,11,12	0.52	0	5,14,16	1.99	3 (60%)
3	PSU	L5	3884	87,3	18,21,22	1.43	3 (16%)	22,30,33	2.12	4 (18%)
20	HY3	SX	62	20	6,8,9	1.43	1 (16%)	5,10,12	1.13	0
1	OMU	S2	121	1	19,22,23	1.29	3 (15%)	26,31,34	1.70	4 (15%)
3	PSU	L5	3844	3	18,21,22	1.50	5 (27%)	22,30,33	1.95	4 (18%)
1	PSU	S2	1625	1	18,21,22	1.44	3 (16%)	22,30,33	1.95	3 (13%)
1	PSU	S2	34	1	18,21,22	1.44	4 (22%)	22,30,33	2.03	4 (18%)
2	OMU	L8	14	2,3	19,22,23	1.27	3 (15%)	26,31,34	1.55	5 (19%)
3	PSU	L5	4457	3	18,21,22	1.52	4 (22%)	22,30,33	1.79	3 (13%)
1	A2M	S2	159	1	18,25,26	0.96	1 (5%)	18,36,39	1.26	2 (11%)
1	OMG	S2	509	1,87	18,26,27	0.92	1 (5%)	19,38,41	1.15	2 (10%)
1	A2M	S2	166	1	18,25,26	0.99	1 (5%)	18,36,39	1.22	2 (11%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
3	5MC	L5	3782	87,3	18,22,23	1.04	2 (11%)	26,32,35	1.18	3 (11%)
3	OMC	L5	2824	3	19,22,23	0.83	1 (5%)	26,31,34	0.84	0
3	OMG	L5	3944	3	18,26,27	0.96	1 (5%)	19,38,41	1.12	2 (10%)
3	A2M	L5	2401	3	18,25,26	0.95	1 (5%)	18,36,39	1.37	2 (11%)
3	PSU	L5	4442	3	18,21,22	1.47	5 (27%)	22,30,33	1.99	5 (22%)
1	PSU	S2	686	1	18,21,22	1.42	4 (22%)	22,30,33	1.96	3 (13%)
3	PSU	L5	4972	3	18,21,22	1.62	5 (27%)	22,30,33	2.15	5 (22%)
3	OMC	L5	2422	87,3	19,22,23	0.83	0	26,31,34	0.79	0
3	PSU	L5	4576	3	18,21,22	1.41	4 (22%)	22,30,33	1.95	3 (13%)
1	PSU	S2	105	1	18,21,22	1.50	4 (22%)	22,30,33	2.02	4 (18%)
3	PSU	L5	4636	3	18,21,22	1.50	4 (22%)	22,30,33	1.95	4 (18%)
3	PSU	L5	4673	87,3	18,21,22	1.44	3 (16%)	22,30,33	1.92	5 (22%)
1	A2M	S2	99	1,87	18,25,26	0.98	1 (5%)	18,36,39	1.22	2 (11%)
3	UY1	L5	3818	86,87,3	19,22,23	1.49	4 (21%)	22,31,34	1.85	4 (18%)
1	OMU	S2	172	1	19,22,23	1.25	4 (21%)	26,31,34	1.77	5 (19%)
3	PSU	L5	1677	3	18,21,22	1.52	5 (27%)	22,30,33	2.21	4 (18%)
66	MLZ	Lb	5	66	8,9,10	0.95	0	4,9,11	1.17	1 (25%)
1	OMC	S2	517	1	19,22,23	0.80	0	26,31,34	0.68	0
77	M3L	Lm	98	77	10,11,12	0.55	0	9,14,16	0.49	0
1	A2M	S2	484	1	18,25,26	0.95	1 (5%)	18,36,39	1.26	2 (11%)
3	A2M	L5	3723	3	18,25,26	0.98	1 (5%)	18,36,39	1.18	2 (11%)
3	OMC	L5	3701	86,3	19,22,23	0.84	0	26,31,34	0.98	0
3	OMC	L5	3869	3	19,22,23	0.85	1 (5%)	26,31,34	1.04	1 (3%)
3	OMG	L5	3627	3	18,26,27	0.99	1 (5%)	19,38,41	1.21	2 (10%)
3	PSU	L5	3853	87,3	18,21,22	1.42	3 (16%)	22,30,33	2.12	4 (18%)
1	UY1	S2	1326	1,87	19,22,23	1.47	4 (21%)	22,31,34	2.14	4 (18%)
1	A2M	S2	590	1	18,25,26	0.95	1 (5%)	18,36,39	1.21	2 (11%)
3	A2M	L5	3760	87,1,3	18,25,26	0.99	1 (5%)	18,36,39	1.14	2 (11%)
2	PSU	L8	55	2	18,21,22	1.43	3 (16%)	22,30,33	1.93	4 (18%)
3	PSU	L5	5010	3	18,21,22	1.47	4 (22%)	22,30,33	1.99	3 (13%)
3	PSU	L5	1582	3	18,21,22	1.50	4 (22%)	22,30,33	1.95	4 (18%)
1	PSU	S2	966	1	18,21,22	1.42	4 (22%)	22,30,33	1.92	3 (13%)
82	OMC	Pt	33	82	19,22,23	0.82	0	26,31,34	0.72	0
2	PSU	L8	69	2	18,21,22	1.44	3 (16%)	22,30,33	1.94	4 (18%)
3	A2M	L5	2363	87,3	18,25,26	1.00	0	18,36,39	1.32	2 (11%)
3	6MZ	L5	4220	3	18,25,26	0.86	1 (5%)	16,36,39	2.52	4 (25%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
3	UR3	L5	4530	3	19,22,23	0.83	1 (5%)	26,32,35	1.50	2 (7%)
1	A2M	S2	1678	1	18,25,26	0.96	1 (5%)	18,36,39	1.25	2 (11%)
1	PSU	S2	218	1	18,21,22	1.41	4 (22%)	22,30,33	1.95	4 (18%)
3	OMU	L5	4498	87,3	19,22,23	1.30	3 (15%)	26,31,34	1.77	5 (19%)
1	B8N	S2	1248	1	24,29,30	0.91	1 (4%)	29,42,45	1.64	7 (24%)
1	OMU	S2	1804	1	19,22,23	1.30	3 (15%)	26,31,34	1.82	5 (19%)
82	4SU	Pt	8	82	18,21,22	2.03	4 (22%)	26,30,33	2.40	5 (19%)
1	PSU	S2	1445	1	18,21,22	1.37	3 (16%)	22,30,33	1.90	3 (13%)
3	OMC	L5	1881	87,3	19,22,23	0.83	0	26,31,34	1.05	1 (3%)
1	OMG	S2	867	1	18,26,27	0.90	1 (5%)	19,38,41	1.09	2 (10%)
1	A2M	S2	576	1	18,25,26	0.93	1 (5%)	18,36,39	1.21	2 (11%)
1	PSU	S2	1238	1	18,21,22	1.40	4 (22%)	22,30,33	1.91	3 (13%)
1	OMU	S2	1288	1	19,22,23	1.27	3 (15%)	26,31,34	1.87	6 (23%)
3	OMU	L5	3925	3	19,22,23	1.30	2 (10%)	26,31,34	1.91	5 (19%)
3	PSU	L5	4403	3	18,21,22	1.46	4 (22%)	22,30,33	1.99	4 (18%)
3	PSU	L5	4312	3	18,21,22	1.40	3 (16%)	22,30,33	1.86	3 (13%)
1	OMC	S2	1391	1	19,22,23	0.81	0	26,31,34	0.82	0
3	PSU	L5	3764	3	18,21,22	1.45	4 (22%)	22,30,33	1.90	3 (13%)
1	PSU	S2	1056	1	18,21,22	1.43	3 (16%)	22,30,33	1.98	5 (22%)
3	A2M	L5	4571	3	18,25,26	1.02	1 (5%)	18,36,39	1.26	2 (11%)
3	PSU	L5	1860	3	18,21,22	1.39	3 (16%)	22,30,33	1.85	4 (18%)
3	OMG	L5	3792	3	18,26,27	0.91	1 (5%)	19,38,41	1.09	3 (15%)
82	G7M	Pt	47	82	20,26,27	2.38	3 (15%)	17,39,42	0.71	0
3	OMG	L5	4228	3	18,26,27	0.88	1 (5%)	19,38,41	1.27	3 (15%)
1	PSU	S2	1177	1	18,21,22	1.54	4 (22%)	22,30,33	1.90	3 (13%)
1	OMU	S2	627	1	19,22,23	1.21	2 (10%)	26,31,34	1.74	5 (19%)
1	PSU	S2	681	1	18,21,22	1.46	4 (22%)	22,30,33	2.01	4 (18%)
3	OMG	L5	4494	87,3	18,26,27	1.08	1 (5%)	19,38,41	1.17	2 (10%)
3	5MC	L5	4447	86,3	18,22,23	1.03	2 (11%)	26,32,35	1.31	3 (11%)
82	PSU	Pt	56	82	18,21,22	1.34	3 (16%)	22,30,33	1.94	4 (18%)
1	PSU	S2	863	1	18,21,22	1.40	4 (22%)	22,30,33	1.91	3 (13%)
3	A2M	L5	3867	3	18,25,26	0.99	1 (5%)	18,36,39	1.47	3 (16%)
3	A2M	L5	1524	3	18,25,26	0.94	1 (5%)	18,36,39	1.52	2 (11%)
3	PSU	L5	4420	3	18,21,22	1.47	5 (27%)	22,30,33	1.87	3 (13%)
1	PSU	S2	1347	1	18,21,22	1.49	4 (22%)	22,30,33	1.95	4 (18%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
83	5CT	5A	50[A]	87	13,14,15	1.04	1 (7%)	9,15,17	1.36	1 (11%)
3	A2M	L5	400	3	18,25,26	0.95	1 (5%)	18,36,39	1.24	2 (11%)
3	OMU	L5	4620	3	19,22,23	1.23	3 (15%)	26,31,34	1.81	5 (19%)
3	PSU	L5	1781	3	18,21,22	1.49	4 (22%)	22,30,33	1.98	3 (13%)
1	4AC	S2	1337	1	21,24,25	1.08	2 (9%)	29,34,37	1.13	4 (13%)
3	PSU	L5	3770	3	18,21,22	1.47	5 (27%)	22,30,33	1.97	3 (13%)
3	PSU	L5	4299	3	18,21,22	1.52	5 (27%)	22,30,33	1.96	3 (13%)
3	OMG	L5	2424	3	18,26,27	0.97	1 (5%)	19,38,41	1.04	2 (10%)
1	PSU	S2	1643	1,87	18,21,22	1.48	3 (16%)	22,30,33	1.99	4 (18%)
3	PSU	L5	4628	3	18,21,22	1.44	5 (27%)	22,30,33	2.02	5 (22%)
3	A2M	L5	2787	3	18,25,26	1.04	1 (5%)	18,36,39	1.58	3 (16%)
3	PSU	L5	4579	3	18,21,22	1.45	4 (22%)	22,30,33	1.89	3 (13%)
3	OMG	L5	3899	3	18,26,27	0.92	1 (5%)	19,38,41	1.25	3 (15%)
3	OMC	L5	1340	3	19,22,23	0.76	0	26,31,34	0.92	0
1	OMG	S2	644	1	18,26,27	0.98	1 (5%)	19,38,41	1.11	2 (10%)
3	PSU	L5	4689	3	18,21,22	1.47	4 (22%)	22,30,33	2.04	4 (18%)
3	PSU	L5	3768	3	18,21,22	1.40	4 (22%)	22,30,33	1.99	3 (13%)
3	PSU	L5	1862	3	18,21,22	1.55	3 (16%)	22,30,33	1.84	5 (22%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	OMC	L5	4456	3	-	0/9/27/28	0/2/2/2
3	PSU	L5	2508	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	2632	3	-	0/7/25/26	0/2/2/2
1	OMG	S2	1447	1	-	3/5/27/28	0/3/3/3
1	PSU	S2	814	1	-	0/7/25/26	0/2/2/2
3	PSU	L5	1779	3	-	0/7/25/26	0/2/2/2
1	G7M	S2	1639	82,1	-	0/3/25/26	0/3/3/3
1	PSU	S2	1244	1	-	0/7/25/26	0/2/2/2
3	PSU	L5	3695	3	-	1/7/25/26	0/2/2/2
3	PSU	L5	3920	87,3	-	0/7/25/26	0/2/2/2
3	PSU	L5	4361	3	-	0/7/25/26	0/2/2/2
3	OMG	L5	1625	86,87,3	-	2/5/27/28	0/3/3/3
1	MA6	S2	1850	1	-	0/7/29/30	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	PSU	L5	4431	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	2843	3	-	0/7/25/26	0/2/2/2
1	OMG	S2	601	1	-	0/5/27/28	0/3/3/3
1	OMG	S2	436	1	-	0/5/27/28	0/3/3/3
3	OMG	L5	4618	3	-	0/5/27/28	0/3/3/3
1	A2M	S2	468	1	-	0/5/27/28	0/3/3/3
1	PSU	S2	1239	1	-	0/7/25/26	0/2/2/2
1	PSU	S2	815	1	-	0/7/25/26	0/2/2/2
3	PSU	L5	4552	3	-	0/7/25/26	0/2/2/2
1	PSU	S2	649	1	-	0/7/25/26	0/2/2/2
1	A2M	S2	1031	1	-	0/5/27/28	0/3/3/3
1	PSU	S2	651	1	-	0/7/25/26	0/2/2/2
3	PSU	L5	4293	3	-	0/7/25/26	0/2/2/2
1	OMU	S2	1442	1,87	-	3/9/27/28	0/2/2/2
3	OMC	L5	2804	3	-	1/9/27/28	0/2/2/2
40	HIC	LB	245	40	-	0/5/6/8	0/1/1/1
3	A2M	L5	4590	3	-	1/5/27/28	0/3/3/3
3	PSU	L5	4296	3	-	0/7/25/26	0/2/2/2
3	OMU	L5	2837	3	-	0/9/27/28	0/2/2/2
3	OMC	L5	3808	87,3	-	0/9/27/28	0/2/2/2
1	OMU	S2	354	1	-	0/9/27/28	0/2/2/2
3	PSU	L5	3729	3	-	0/7/25/26	0/2/2/2
3	OMG	L5	4370	3	-	1/5/27/28	0/3/3/3
3	A2M	L5	1871	87,3	-	0/5/27/28	0/3/3/3
3	A2M	L5	3718	3	-	1/5/27/28	0/3/3/3
1	OMC	S2	1703	1,87	-	0/9/27/28	0/2/2/2
3	PSU	L5	4531	3	-	0/7/25/26	0/2/2/2
3	OMC	L5	4536	3	-	0/9/27/28	0/2/2/2
3	A2M	L5	1326	3	-	1/5/27/28	0/3/3/3
3	OMG	L5	2876	3	-	0/5/27/28	0/3/3/3
1	PSU	S2	1232	1	-	0/7/25/26	0/2/2/2
3	PSU	L5	1744	87,3	-	0/7/25/26	0/2/2/2
1	OMG	S2	1490	1,87	-	3/5/27/28	0/3/3/3
3	PSU	L5	4423	3	-	0/7/25/26	0/2/2/2
1	PSU	S2	609	1	-	0/7/25/26	0/2/2/2
3	PSU	L5	3851	87,3	-	1/7/25/26	0/2/2/2
1	PSU	S2	866	1	-	0/7/25/26	0/2/2/2
3	OMG	L5	1316	3	-	0/5/27/28	0/3/3/3
6	SAC	SA	2	6	-	4/7/8/10	-
3	PSU	L5	4569	3	-	0/7/25/26	0/2/2/2
3	OMC	L5	2365	87,3	-	0/9/27/28	0/2/2/2
3	PSU	L5	4353	3	-	0/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
1	OMU	S2	116	1	-	0/9/27/28	0/2/2/2
1	PSU	S2	1081	1	-	1/7/25/26	0/2/2/2
3	A2M	L5	398	3	-	1/5/27/28	0/3/3/3
3	OMG	L5	4499	3	-	0/5/27/28	0/3/3/3
3	PSU	L5	3762	3	-	0/7/25/26	0/2/2/2
1	A2M	S2	512	1	-	0/5/27/28	0/3/3/3
1	OMC	S2	174	1	-	0/9/27/28	0/2/2/2
1	PSU	S2	406	1	-	0/7/25/26	0/2/2/2
3	PSU	L5	4493	87,3	-	0/7/25/26	0/2/2/2
3	PSU	L5	3639	3	-	0/7/25/26	0/2/2/2
3	A2M	L5	3724	3	-	1/5/27/28	0/3/3/3
1	PSU	S2	1174	1,87	-	0/7/25/26	0/2/2/2
64	SAC	Lr	2	64	-	4/7/8/10	-
1	PSU	S2	918	1	-	0/7/25/26	0/2/2/2
1	PSU	S2	1004	1	-	0/7/25/26	0/2/2/2
3	A2M	L5	4523	87,3	-	1/5/27/28	0/3/3/3
3	PSU	L5	4532	3	-	0/7/25/26	0/2/2/2
3	1MA	L5	1322	87,3	-	0/3/25/26	0/3/3/3
1	PSU	S2	822	1	-	1/7/25/26	0/2/2/2
1	PSU	S2	1243	1	-	2/7/25/26	0/2/2/2
3	PSU	L5	3715	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	1782	3	-	0/7/25/26	0/2/2/2
1	A2M	S2	27	1,87	-	1/5/27/28	0/3/3/3
3	PSU	L5	3637	86,87,3	-	0/7/25/26	0/2/2/2
82	H2U	Pt	21	82	-	3/7/38/39	0/2/2/2
1	PSU	S2	801	1	-	0/7/25/26	0/2/2/2
3	A2M	L5	3825	3	-	0/5/27/28	0/3/3/3
1	PSU	S2	1692	1	-	0/7/25/26	0/2/2/2
3	PSU	L5	4471	3	-	1/7/25/26	0/2/2/2
3	PSU	L5	4500	3	-	3/7/25/26	0/2/2/2
3	PSU	L5	1536	3	-	0/7/25/26	0/2/2/2
3	OMG	L5	2364	3	-	2/5/27/28	0/3/3/3
39	V5N	LA	216	39	-	1/5/10/12	0/1/1/1
3	OMC	L5	3841	3	-	0/9/27/28	0/2/2/2
1	A2M	S2	668	1,87	-	3/5/27/28	0/3/3/3
1	PSU	S2	573	1	-	1/7/25/26	0/2/2/2
79	MLZ	Lo	53	79	-	3/7/8/10	-
1	OMG	S2	1328	1,86	-	1/5/27/28	0/3/3/3
3	OMG	L5	4637	86,3	-	1/5/27/28	0/3/3/3
2	OMG	L8	75	2	-	0/5/27/28	0/3/3/3
1	PSU	S2	36	1	-	0/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
1	OMU	S2	428	1	-	2/9/27/28	0/2/2/2
3	OMC	L5	2351	87,3	-	3/9/27/28	0/2/2/2
3	OMU	L5	2415	3	-	1/9/27/28	0/2/2/2
3	PSU	L5	1683	86,3	-	0/7/25/26	0/2/2/2
1	OMC	S2	462	1	-	1/9/27/28	0/2/2/2
1	PSU	S2	1367	1	-	0/7/25/26	0/2/2/2
1	MA6	S2	1851	1	-	3/7/29/30	0/3/3/3
1	A2M	S2	1383	1	-	1/5/27/28	0/3/3/3
3	A2M	L5	3785	3	-	2/5/27/28	0/3/3/3
3	PSU	L5	2839	3	-	0/7/25/26	0/2/2/2
1	PSU	S2	119	1	-	0/7/25/26	0/2/2/2
3	A2M	L5	1534	87,3	-	3/5/27/28	0/3/3/3
3	A2M	L5	3830	3	-	0/5/27/28	0/3/3/3
3	PSU	L5	3758	3	-	0/7/25/26	0/2/2/2
1	PSU	S2	1136	1	-	0/7/25/26	0/2/2/2
1	PSU	S2	93	1	-	0/7/25/26	0/2/2/2
1	PSU	S2	109	1,86	-	0/7/25/26	0/2/2/2
1	OMG	S2	683	1	-	2/5/27/28	0/3/3/3
3	OMG	L5	3744	3	-	0/5/27/28	0/3/3/3
3	OMC	L5	2861	3	-	0/9/27/28	0/2/2/2
3	PSU	L5	1792	3	-	1/7/25/26	0/2/2/2
3	OMC	L5	3887	3	-	0/9/27/28	0/2/2/2
3	OMU	L5	4227	3	-	0/9/27/28	0/2/2/2
3	OMU	L5	4306	3	-	0/9/27/28	0/2/2/2
3	PSU	L5	4521	86,87,3	-	2/7/25/26	0/2/2/2
3	OMG	L5	4623	3	-	0/5/27/28	0/3/3/3
3	A2M	L5	2815	87,3	-	4/5/27/28	0/3/3/3
3	OMG	L5	1522	3	-	0/5/27/28	0/3/3/3
3	OMG	L5	4196	87,82,3	-	0/5/27/28	0/3/3/3
3	PSU	L5	5001	87,3	-	0/7/25/26	0/2/2/2
1	PSU	S2	572	1	-	0/7/25/26	0/2/2/2
1	PSU	S2	296	1	-	0/7/25/26	0/2/2/2
1	6MZ	S2	1832	87,1,86	-	0/5/27/28	0/3/3/3
83	5CT	5A	50[B]	-	-	9/13/14/16	-
29	AME	SV	1	29	-	3/9/10/12	-
3	PSU	L5	3734	3	-	0/7/25/26	0/2/2/2
3	OMG	L5	4392	3	-	0/5/27/28	0/3/3/3
1	4AC	S2	1842	1	-	0/11/29/30	0/2/2/2
50	V5N	La	39	50	-	0/5/10/12	0/1/1/1
3	PSU	L5	3884	87,3	-	0/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
20	HY3	SX	62	20	-	1/1/12/14	0/1/1/1
1	OMU	S2	121	1	-	0/9/27/28	0/2/2/2
3	PSU	L5	3844	3	-	1/7/25/26	0/2/2/2
1	PSU	S2	1625	1	-	0/7/25/26	0/2/2/2
1	PSU	S2	34	1	-	0/7/25/26	0/2/2/2
2	OMU	L8	14	2,3	-	1/9/27/28	0/2/2/2
3	PSU	L5	4457	3	-	0/7/25/26	0/2/2/2
1	A2M	S2	159	1	-	1/5/27/28	0/3/3/3
1	OMG	S2	509	1,87	-	0/5/27/28	0/3/3/3
1	A2M	S2	166	1	-	1/5/27/28	0/3/3/3
3	5MC	L5	3782	87,3	-	0/7/25/26	0/2/2/2
3	OMC	L5	2824	3	-	0/9/27/28	0/2/2/2
3	OMG	L5	3944	3	-	2/5/27/28	0/3/3/3
3	A2M	L5	2401	3	-	1/5/27/28	0/3/3/3
3	PSU	L5	4442	3	-	0/7/25/26	0/2/2/2
1	PSU	S2	686	1	-	0/7/25/26	0/2/2/2
3	PSU	L5	4972	3	-	0/7/25/26	0/2/2/2
3	OMC	L5	2422	87,3	-	2/9/27/28	0/2/2/2
3	PSU	L5	4576	3	-	0/7/25/26	0/2/2/2
1	PSU	S2	105	1	-	0/7/25/26	0/2/2/2
3	PSU	L5	4636	3	-	2/7/25/26	0/2/2/2
3	PSU	L5	4673	87,3	-	0/7/25/26	0/2/2/2
1	A2M	S2	99	1,87	-	0/5/27/28	0/3/3/3
3	UY1	L5	3818	86,87,3	-	1/9/27/28	0/2/2/2
1	OMU	S2	172	1	-	1/9/27/28	0/2/2/2
3	PSU	L5	1677	3	-	0/7/25/26	0/2/2/2
66	MLZ	Lb	5	66	-	0/7/8/10	-
1	OMC	S2	517	1	-	0/9/27/28	0/2/2/2
77	M3L	Lm	98	77	-	0/9/10/12	-
1	A2M	S2	484	1	-	1/5/27/28	0/3/3/3
3	A2M	L5	3723	3	-	1/5/27/28	0/3/3/3
3	OMC	L5	3701	86,3	-	4/9/27/28	0/2/2/2
3	OMC	L5	3869	3	-	0/9/27/28	0/2/2/2
3	OMG	L5	3627	3	-	0/5/27/28	0/3/3/3
3	PSU	L5	3853	87,3	-	0/7/25/26	0/2/2/2
1	UY1	S2	1326	1,87	-	3/9/27/28	0/2/2/2
1	A2M	S2	590	1	-	3/5/27/28	0/3/3/3
3	A2M	L5	3760	87,1,3	-	3/5/27/28	0/3/3/3
2	PSU	L8	55	2	-	0/7/25/26	0/2/2/2
3	PSU	L5	5010	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	1582	3	-	0/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
1	PSU	S2	966	1	-	0/7/25/26	0/2/2/2
82	OMC	Pt	33	82	-	0/9/27/28	0/2/2/2
2	PSU	L8	69	2	-	0/7/25/26	0/2/2/2
3	A2M	L5	2363	87,3	-	0/5/27/28	0/3/3/3
3	6MZ	L5	4220	3	-	1/5/27/28	0/3/3/3
3	UR3	L5	4530	3	-	0/7/25/26	0/2/2/2
1	A2M	S2	1678	1	-	1/5/27/28	0/3/3/3
1	PSU	S2	218	1	-	0/7/25/26	0/2/2/2
3	OMU	L5	4498	87,3	-	0/9/27/28	0/2/2/2
1	B8N	S2	1248	1	-	2/16/34/35	0/2/2/2
1	OMU	S2	1804	1	-	0/9/27/28	0/2/2/2
82	4SU	Pt	8	82	-	0/7/25/26	0/2/2/2
1	PSU	S2	1445	1	-	0/7/25/26	0/2/2/2
3	OMC	L5	1881	87,3	-	0/9/27/28	0/2/2/2
1	OMG	S2	867	1	-	1/5/27/28	0/3/3/3
1	A2M	S2	576	1	-	2/5/27/28	0/3/3/3
1	PSU	S2	1238	1	-	0/7/25/26	0/2/2/2
1	OMU	S2	1288	1	-	1/9/27/28	0/2/2/2
3	OMU	L5	3925	3	-	1/9/27/28	0/2/2/2
3	PSU	L5	4403	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	4312	3	-	0/7/25/26	0/2/2/2
1	OMC	S2	1391	1	-	0/9/27/28	0/2/2/2
3	PSU	L5	3764	3	-	2/7/25/26	0/2/2/2
1	PSU	S2	1056	1	-	0/7/25/26	0/2/2/2
3	A2M	L5	4571	3	-	1/5/27/28	0/3/3/3
3	PSU	L5	1860	3	-	0/7/25/26	0/2/2/2
3	OMG	L5	3792	3	-	0/5/27/28	0/3/3/3
82	G7M	Pt	47	82	-	1/3/25/26	0/3/3/3
3	OMG	L5	4228	3	-	1/5/27/28	0/3/3/3
1	PSU	S2	1177	1	-	0/7/25/26	0/2/2/2
1	OMU	S2	627	1	-	0/9/27/28	0/2/2/2
1	PSU	S2	681	1	-	0/7/25/26	0/2/2/2
3	OMG	L5	4494	87,3	-	0/5/27/28	0/3/3/3
3	5MC	L5	4447	86,3	-	4/7/25/26	0/2/2/2
82	PSU	Pt	56	82	-	0/7/25/26	0/2/2/2
1	PSU	S2	863	1	-	0/7/25/26	0/2/2/2
3	A2M	L5	3867	3	-	1/5/27/28	0/3/3/3
3	A2M	L5	1524	3	-	1/5/27/28	0/3/3/3
3	PSU	L5	4420	3	-	2/7/25/26	0/2/2/2
1	PSU	S2	1347	1	-	0/7/25/26	0/2/2/2
83	5CT	5A	50[A]	87	-	9/13/14/16	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	A2M	L5	400	3	-	1/5/27/28	0/3/3/3
3	OMU	L5	4620	3	-	0/9/27/28	0/2/2/2
3	PSU	L5	1781	3	-	1/7/25/26	0/2/2/2
1	4AC	S2	1337	1	-	0/11/29/30	0/2/2/2
3	PSU	L5	3770	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	4299	3	-	0/7/25/26	0/2/2/2
3	OMG	L5	2424	3	-	1/5/27/28	0/3/3/3
1	PSU	S2	1643	1,87	-	0/7/25/26	0/2/2/2
3	PSU	L5	4628	3	-	0/7/25/26	0/2/2/2
3	A2M	L5	2787	3	-	0/5/27/28	0/3/3/3
3	PSU	L5	4579	3	-	0/7/25/26	0/2/2/2
3	OMG	L5	3899	3	-	0/5/27/28	0/3/3/3
3	OMC	L5	1340	3	-	0/9/27/28	0/2/2/2
1	OMG	S2	644	1	-	4/5/27/28	0/3/3/3
3	PSU	L5	4689	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	3768	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	1862	3	-	0/7/25/26	0/2/2/2

All (546) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
64	Lr	2	SAC	OAC-C1A	8.94	1.43	1.23
6	SA	2	SAC	OAC-C1A	8.86	1.43	1.23
29	SV	1	AME	OT-CT1	8.71	1.42	1.23
82	Pt	47	G7M	C8-N9	7.04	1.46	1.33
1	S2	1639	G7M	C8-N9	6.88	1.45	1.33
82	Pt	47	G7M	C8-N7	6.68	1.45	1.33
1	S2	1639	G7M	C8-N7	6.59	1.45	1.33
82	Pt	8	4SU	C4-S4	-5.14	1.58	1.68
3	L5	4532	PSU	C6-C5	4.21	1.40	1.35
3	L5	3639	PSU	C4-N3	-4.10	1.31	1.38
82	Pt	8	4SU	C4-N3	-3.99	1.33	1.37
64	Lr	2	SAC	C1A-N	3.90	1.47	1.34
6	SA	2	SAC	C1A-N	3.87	1.47	1.34
3	L5	1322	1MA	C2-N3	3.68	1.33	1.29
3	L5	4972	PSU	C4-N3	-3.66	1.32	1.38
3	L5	2364	OMG	C6-N1	-3.59	1.32	1.37
1	S2	1639	G7M	C5-C4	3.56	1.46	1.39
3	L5	2839	PSU	C6-C5	3.55	1.39	1.35
1	S2	1177	PSU	C4-N3	-3.53	1.32	1.38
3	L5	3884	PSU	C4-N3	-3.52	1.32	1.38
3	L5	4442	PSU	C4-N3	-3.50	1.32	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
83	5A	50[A]	5CT	O-C	3.50	1.33	1.19
83	5A	50[B]	5CT	O-C	3.50	1.33	1.19
3	L5	1582	PSU	C6-C5	3.49	1.39	1.35
3	L5	2843	PSU	C4-N3	-3.49	1.32	1.38
3	L5	4494	OMG	C6-N1	-3.44	1.32	1.37
3	L5	1862	PSU	C4-N3	-3.43	1.32	1.38
1	S2	105	PSU	C4-N3	-3.43	1.32	1.38
3	L5	3818	UY1	C4-N3	-3.43	1.32	1.38
1	S2	93	PSU	C6-C5	3.42	1.39	1.35
3	L5	5001	PSU	C4-N3	-3.42	1.32	1.38
29	SV	1	AME	CT1-N	3.42	1.46	1.34
1	S2	109	PSU	C4-N3	-3.42	1.32	1.38
3	L5	2839	PSU	C4-N3	-3.41	1.32	1.38
1	S2	1347	PSU	C4-N3	-3.39	1.32	1.38
1	S2	1004	PSU	C4-N3	-3.38	1.32	1.38
3	L5	4457	PSU	C6-C5	3.37	1.39	1.35
3	L5	2876	OMG	C6-N1	-3.36	1.32	1.37
1	S2	1326	UY1	C4-N3	-3.34	1.32	1.38
3	L5	4423	PSU	C4-N3	-3.33	1.32	1.38
3	L5	4689	PSU	C4-N3	-3.33	1.32	1.38
1	S2	1643	PSU	C4-N3	-3.33	1.32	1.38
1	S2	93	PSU	C4-N3	-3.33	1.32	1.38
1	S2	681	PSU	C4-N3	-3.32	1.32	1.38
3	L5	4361	PSU	C4-N3	-3.32	1.32	1.38
3	L5	4293	PSU	C6-C5	3.31	1.39	1.35
3	L5	4498	OMU	C4-N3	-3.31	1.32	1.38
3	L5	1781	PSU	C4-N3	-3.30	1.32	1.38
3	L5	3639	PSU	C6-C5	3.29	1.39	1.35
3	L5	4552	PSU	C4-N3	-3.29	1.32	1.38
3	L5	2837	OMU	C2-N3	-3.28	1.32	1.38
3	L5	4299	PSU	C4-N3	-3.27	1.32	1.38
1	S2	918	PSU	C4-N3	-3.27	1.32	1.38
1	S2	1136	PSU	C4-N3	-3.25	1.32	1.38
1	S2	406	PSU	C4-N3	-3.25	1.32	1.38
3	L5	1862	PSU	C6-C5	3.25	1.39	1.35
3	L5	4673	PSU	C4-N3	-3.25	1.32	1.38
1	S2	601	OMG	C6-N1	-3.24	1.33	1.37
3	L5	3925	OMU	C4-N3	-3.24	1.32	1.38
3	L5	1625	OMG	C6-N1	-3.24	1.33	1.37
3	L5	3695	PSU	C4-N3	-3.23	1.32	1.38
3	L5	4403	PSU	C4-N3	-3.23	1.32	1.38
3	L5	4521	PSU	C6-C5	3.22	1.39	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	S2	686	PSU	C4-N3	-3.22	1.32	1.38
3	L5	3758	PSU	C4-N3	-3.21	1.32	1.38
3	L5	3853	PSU	C4-N3	-3.20	1.32	1.38
20	SX	62	HY3	C3-CA	-3.20	1.51	1.55
3	L5	1582	PSU	C4-N3	-3.19	1.32	1.38
1	S2	1243	PSU	C4-N3	-3.19	1.32	1.38
1	S2	1232	PSU	C4-N3	-3.18	1.32	1.38
3	L5	4499	OMG	C6-N1	-3.18	1.33	1.37
1	S2	1239	PSU	C4-N3	-3.18	1.32	1.38
2	L8	55	PSU	C4-N3	-3.17	1.33	1.38
3	L5	5010	PSU	C4-N3	-3.17	1.33	1.38
3	L5	4431	PSU	C4-N3	-3.16	1.33	1.38
1	S2	966	PSU	C4-N3	-3.16	1.33	1.38
1	S2	1081	PSU	C4-N3	-3.16	1.33	1.38
3	L5	3729	PSU	C4-N3	-3.16	1.33	1.38
1	S2	1842	4AC	C4-N4	-3.16	1.35	1.39
1	S2	1367	PSU	C4-N3	-3.15	1.33	1.38
3	L5	4493	PSU	C4-N3	-3.14	1.33	1.38
3	L5	3627	OMG	C6-N1	-3.14	1.33	1.37
3	L5	2839	PSU	C2-N3	-3.14	1.32	1.37
3	L5	4293	PSU	C4-N3	-3.14	1.33	1.38
1	S2	863	PSU	C4-N3	-3.14	1.33	1.38
82	Pt	8	4SU	C5-C4	-3.14	1.38	1.42
1	S2	822	PSU	C4-N3	-3.14	1.33	1.38
3	L5	1316	OMG	C6-N1	-3.13	1.33	1.37
2	L8	69	PSU	C4-N3	-3.13	1.33	1.38
3	L5	4637	OMG	C6-N1	-3.13	1.33	1.37
3	L5	1782	PSU	C4-N3	-3.13	1.33	1.38
3	L5	3715	PSU	C4-N3	-3.12	1.33	1.38
1	S2	644	OMG	C6-N1	-3.12	1.33	1.37
1	S2	119	PSU	C4-N3	-3.11	1.33	1.38
3	L5	2508	PSU	C6-C5	3.11	1.38	1.35
3	L5	4579	PSU	C4-N3	-3.10	1.33	1.38
3	L5	1779	PSU	C4-N3	-3.10	1.33	1.38
3	L5	4296	PSU	C4-N3	-3.10	1.33	1.38
3	L5	2837	OMU	C4-N3	-3.10	1.33	1.38
2	L8	14	OMU	C4-N3	-3.09	1.33	1.38
1	S2	815	PSU	C4-N3	-3.09	1.33	1.38
1	S2	36	PSU	C4-N3	-3.09	1.33	1.38
1	S2	354	OMU	C4-N3	-3.09	1.33	1.38
1	S2	651	PSU	C4-N3	-3.08	1.33	1.38
1	S2	866	PSU	C6-C5	3.08	1.38	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	L5	1683	PSU	C4-N3	-3.08	1.33	1.38
3	L5	1683	PSU	C6-C5	3.08	1.38	1.35
3	L5	4471	PSU	C4-N3	-3.08	1.33	1.38
1	S2	1238	PSU	C4-N3	-3.07	1.33	1.38
3	L5	4636	PSU	C4-N3	-3.07	1.33	1.38
1	S2	296	PSU	C4-N3	-3.06	1.33	1.38
3	L5	2415	OMU	C4-N3	-3.06	1.33	1.38
40	LB	245	HIC	CD2-CG	3.06	1.40	1.36
3	L5	3768	PSU	C4-N3	-3.06	1.33	1.38
3	L5	2632	PSU	C4-N3	-3.05	1.33	1.38
1	S2	218	PSU	C4-N3	-3.05	1.33	1.38
1	S2	436	OMG	C6-N1	-3.05	1.33	1.37
3	L5	3920	PSU	C6-C5	3.05	1.38	1.35
3	L5	4353	PSU	C4-N3	-3.05	1.33	1.38
1	S2	814	PSU	C4-N3	-3.05	1.33	1.38
3	L5	3920	PSU	C4-N3	-3.05	1.33	1.38
3	L5	4576	PSU	C4-N3	-3.04	1.33	1.38
2	L8	75	OMG	C6-N1	-3.04	1.33	1.37
3	L5	3637	PSU	C6-C5	3.04	1.38	1.35
3	L5	3844	PSU	C4-N3	-3.04	1.33	1.38
3	L5	4636	PSU	C6-C5	3.03	1.38	1.35
1	S2	801	PSU	C4-N3	-3.03	1.33	1.38
1	S2	1244	PSU	C4-N3	-3.02	1.33	1.38
1	S2	1056	PSU	C4-N3	-3.02	1.33	1.38
3	L5	4227	OMU	C4-N3	-3.01	1.33	1.38
1	S2	1232	PSU	C6-C5	3.01	1.38	1.35
1	S2	1174	PSU	C4-N3	-3.01	1.33	1.38
1	S2	1625	PSU	C4-N3	-3.01	1.33	1.38
1	S2	609	PSU	C4-N3	-3.00	1.33	1.38
1	S2	649	PSU	C4-N3	-3.00	1.33	1.38
3	L5	4532	PSU	C4-N3	-3.00	1.33	1.38
1	S2	573	PSU	C4-N3	-2.99	1.33	1.38
1	S2	121	OMU	C4-N3	-2.99	1.33	1.38
3	L5	4457	PSU	C4-N3	-2.99	1.33	1.38
3	L5	3770	PSU	C4-N3	-2.99	1.33	1.38
3	L5	2424	OMG	C6-N1	-2.99	1.33	1.37
3	L5	4623	OMG	C6-N1	-2.98	1.33	1.37
3	L5	4569	PSU	C4-N3	-2.98	1.33	1.38
1	S2	1692	PSU	C4-N3	-2.98	1.33	1.38
3	L5	4569	PSU	C6-C5	2.97	1.38	1.35
1	S2	1447	OMG	C6-N1	-2.97	1.33	1.37
1	S2	1177	PSU	C6-C5	2.96	1.38	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	S2	572	PSU	C4-N3	-2.96	1.33	1.38
3	L5	1792	PSU	C4-N3	-2.96	1.33	1.38
3	L5	4521	PSU	C4-N3	-2.96	1.33	1.38
3	L5	3764	PSU	C4-N3	-2.95	1.33	1.38
1	S2	34	PSU	C4-N3	-2.95	1.33	1.38
1	S2	1337	4AC	C4-N4	-2.94	1.35	1.39
1	S2	1490	OMG	C6-N1	-2.94	1.33	1.37
1	S2	866	PSU	C4-N3	-2.93	1.33	1.38
1	S2	1445	PSU	C4-N3	-2.93	1.33	1.38
3	L5	3734	PSU	C6-C5	2.93	1.38	1.35
1	S2	1174	PSU	C6-C5	2.93	1.38	1.35
1	S2	1804	OMU	C4-N3	-2.93	1.33	1.38
3	L5	4353	PSU	C6-C5	2.92	1.38	1.35
1	S2	1081	PSU	C6-C5	2.91	1.38	1.35
1	S2	572	PSU	C6-C5	2.91	1.38	1.35
1	S2	573	PSU	C6-C5	2.91	1.38	1.35
3	L5	1744	PSU	C4-N3	-2.91	1.33	1.38
3	L5	1860	PSU	C4-N3	-2.91	1.33	1.38
1	S2	1639	G7M	C6-N1	-2.90	1.33	1.37
3	L5	3851	PSU	C4-N3	-2.90	1.33	1.38
1	S2	1328	OMG	C6-N1	-2.90	1.33	1.37
3	L5	4312	PSU	C4-N3	-2.90	1.33	1.38
3	L5	3851	PSU	C6-C5	2.89	1.38	1.35
3	L5	3637	PSU	C4-N3	-2.89	1.33	1.38
3	L5	3762	PSU	C4-N3	-2.89	1.33	1.38
3	L5	3734	PSU	C4-N3	-2.89	1.33	1.38
1	S2	966	PSU	C6-C5	2.88	1.38	1.35
3	L5	3770	PSU	C6-C5	2.88	1.38	1.35
3	L5	3782	5MC	C6-C5	2.88	1.39	1.34
1	S2	609	PSU	C6-C5	2.88	1.38	1.35
1	S2	1625	PSU	C6-C5	2.87	1.38	1.35
3	L5	3729	PSU	C6-C5	2.87	1.38	1.35
3	L5	1536	PSU	C4-N3	-2.86	1.33	1.38
1	S2	1248	B8N	C6-C5	2.86	1.39	1.34
3	L5	1744	PSU	C6-C5	2.85	1.38	1.35
3	L5	4306	OMU	C4-N3	-2.85	1.33	1.38
3	L5	1862	PSU	C2-N3	-2.84	1.32	1.37
3	L5	4628	PSU	C4-N3	-2.84	1.33	1.38
1	S2	116	OMU	C4-N3	-2.83	1.33	1.38
3	L5	5010	PSU	C6-C5	2.83	1.38	1.35
3	L5	4500	PSU	C4-N3	-2.83	1.33	1.38
1	S2	1367	PSU	C2-N1	-2.83	1.32	1.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	L5	3925	OMU	C2-N3	-2.82	1.32	1.38
3	L5	4498	OMU	C2-N3	-2.82	1.32	1.38
1	S2	1692	PSU	C6-C5	2.82	1.38	1.35
3	L5	3762	PSU	C6-C5	2.82	1.38	1.35
1	S2	428	OMU	C4-N3	-2.82	1.33	1.38
3	L5	4227	OMU	C2-N3	-2.82	1.32	1.38
3	L5	4228	OMG	C6-N1	-2.81	1.33	1.37
1	S2	1442	OMU	C4-N3	-2.80	1.33	1.38
1	S2	683	OMG	C6-N1	-2.79	1.33	1.37
3	L5	3944	OMG	C6-N1	-2.79	1.33	1.37
3	L5	4196	OMG	C6-N1	-2.78	1.33	1.37
3	L5	3792	OMG	C6-N1	-2.78	1.33	1.37
3	L5	1781	PSU	C6-C5	2.78	1.38	1.35
3	L5	4620	OMU	C4-N3	-2.77	1.33	1.38
3	L5	1677	PSU	C4-N3	-2.77	1.33	1.38
3	L5	3744	OMG	C6-N1	-2.77	1.33	1.37
3	L5	3899	OMG	C6-N1	-2.77	1.33	1.37
3	L5	4579	PSU	C6-C5	2.77	1.38	1.35
3	L5	4392	OMG	C6-N1	-2.75	1.33	1.37
1	S2	814	PSU	C6-C5	2.75	1.38	1.35
1	S2	918	PSU	O4'-C1'	-2.74	1.40	1.43
1	S2	801	PSU	C6-C5	2.74	1.38	1.35
1	S2	1643	PSU	C6-C5	2.74	1.38	1.35
1	S2	109	PSU	C2'-C1'	-2.73	1.50	1.53
3	L5	4521	PSU	C2-N3	-2.73	1.32	1.37
3	L5	1677	PSU	C2-N1	-2.73	1.33	1.36
3	L5	4299	PSU	C2-N3	-2.73	1.32	1.37
3	L5	3818	UY1	C2-N3	-2.72	1.32	1.37
3	L5	4673	PSU	C6-C5	2.72	1.38	1.35
82	Pt	56	PSU	C4-N3	-2.71	1.33	1.38
3	L5	4500	PSU	C6-C5	2.71	1.38	1.35
3	L5	1536	PSU	C6-C5	2.70	1.38	1.35
1	S2	172	OMU	C4-N3	-2.70	1.33	1.38
3	L5	4420	PSU	C4-N3	-2.70	1.33	1.38
1	S2	509	OMG	C6-N1	-2.70	1.33	1.37
1	S2	686	PSU	C6-C5	2.70	1.38	1.35
3	L5	2843	PSU	C6-C5	2.69	1.38	1.35
1	S2	1136	PSU	C6-C5	2.69	1.38	1.35
3	L5	5001	PSU	C6-C5	2.69	1.38	1.35
3	L5	1860	PSU	C2-N3	-2.69	1.32	1.37
3	L5	4420	PSU	C6-C5	2.68	1.38	1.35
3	L5	1860	PSU	C6-C5	2.68	1.38	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	L5	3782	5MC	C6-N1	-2.68	1.33	1.38
2	L8	55	PSU	C6-C5	2.67	1.38	1.35
82	Pt	8	4SU	C2-N3	-2.67	1.33	1.38
3	L5	2508	PSU	C4-N3	-2.67	1.33	1.38
3	L5	4531	PSU	C6-C5	2.67	1.38	1.35
1	S2	93	PSU	C2-N3	-2.66	1.32	1.37
1	S2	218	PSU	C6-C5	2.66	1.38	1.35
1	S2	34	PSU	C6-C5	2.65	1.38	1.35
3	L5	4552	PSU	C6-C5	2.65	1.38	1.35
3	L5	1782	PSU	C6-C5	2.64	1.38	1.35
3	L5	4370	OMG	C6-N1	-2.64	1.33	1.37
3	L5	4353	PSU	C2-N1	-2.63	1.33	1.36
1	S2	918	PSU	C6-C5	2.63	1.38	1.35
1	S2	651	PSU	C6-C5	2.62	1.38	1.35
1	S2	354	OMU	C2-N3	-2.62	1.33	1.38
3	L5	4312	PSU	C2-N3	-2.62	1.33	1.37
1	S2	815	PSU	C6-C5	2.62	1.38	1.35
2	L8	69	PSU	C6-C5	2.62	1.38	1.35
3	L5	4673	PSU	C2-N3	-2.62	1.33	1.37
1	S2	121	OMU	C2-N3	-2.62	1.33	1.38
3	L5	4618	OMG	C6-N1	-2.62	1.34	1.37
1	S2	681	PSU	C6-C5	2.61	1.38	1.35
1	S2	1288	OMU	C4-N3	-2.61	1.33	1.38
3	L5	3844	PSU	C6-C5	2.61	1.38	1.35
3	L5	4420	PSU	O4'-C1'	-2.61	1.40	1.43
1	S2	1243	PSU	C6-C5	2.60	1.38	1.35
3	L5	2415	OMU	C2-N3	-2.60	1.33	1.38
3	L5	1322	1MA	C6-N6	2.60	1.34	1.27
1	S2	36	PSU	C6-C5	2.60	1.38	1.35
3	L5	4972	PSU	C2-N3	-2.60	1.33	1.37
82	Pt	56	PSU	C6-C5	2.59	1.38	1.35
3	L5	4493	PSU	C6-C5	2.59	1.38	1.35
3	L5	4403	PSU	C2-N1	-2.59	1.33	1.36
1	S2	1445	PSU	C6-C5	2.59	1.38	1.35
3	L5	3639	PSU	C2-N3	-2.58	1.33	1.37
1	S2	1177	PSU	C2-N3	-2.58	1.33	1.37
3	L5	4689	PSU	C6-C5	2.58	1.38	1.35
3	L5	4471	PSU	C6-C5	2.58	1.38	1.35
3	L5	5001	PSU	C2-N3	-2.57	1.33	1.37
3	L5	4431	PSU	C2-N3	-2.56	1.33	1.37
1	S2	649	PSU	C6-C5	2.56	1.38	1.35
1	S2	1056	PSU	C2-N3	-2.56	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	L5	4447	5MC	C6-N1	-2.55	1.33	1.38
1	S2	1347	PSU	C2-N3	-2.55	1.33	1.37
1	S2	1239	PSU	C6-C5	2.55	1.38	1.35
3	L5	4576	PSU	C6-C5	2.55	1.38	1.35
3	L5	4636	PSU	C2-N3	-2.54	1.33	1.37
3	L5	4293	PSU	C2-N3	-2.54	1.33	1.37
3	L5	4628	PSU	C2-N3	-2.54	1.33	1.37
1	S2	1347	PSU	C6-C5	2.54	1.38	1.35
3	L5	4403	PSU	C2-N3	-2.53	1.33	1.37
1	S2	867	OMG	C6-N1	-2.53	1.34	1.37
3	L5	3884	PSU	C2-N3	-2.53	1.33	1.37
2	L8	14	OMU	C2-N3	-2.52	1.33	1.38
3	L5	3853	PSU	C2-N3	-2.52	1.33	1.37
3	L5	4312	PSU	C6-C5	2.52	1.38	1.35
1	S2	116	OMU	C2-N3	-2.52	1.33	1.38
82	Pt	21	H2U	C2-N3	-2.52	1.33	1.38
1	S2	681	PSU	C2-N3	-2.51	1.33	1.37
3	L5	3768	PSU	C6-C5	2.51	1.38	1.35
1	S2	1004	PSU	C2'-C1'	-2.51	1.50	1.53
1	S2	1639	G7M	C2'-C1'	-2.51	1.50	1.53
1	S2	428	OMU	C2-N3	-2.50	1.33	1.38
1	S2	1442	OMU	C2-N3	-2.50	1.33	1.38
3	L5	4296	PSU	C2-N3	-2.49	1.33	1.37
3	L5	4579	PSU	C2-N3	-2.49	1.33	1.37
40	LB	245	HIC	CZ-NE2	-2.49	1.41	1.48
1	S2	296	PSU	C6-C5	2.49	1.38	1.35
1	S2	1004	PSU	C2-N3	-2.49	1.33	1.37
1	S2	109	PSU	C2-N3	-2.48	1.33	1.37
1	S2	105	PSU	C2-N3	-2.48	1.33	1.37
1	S2	1367	PSU	C2-N3	-2.48	1.33	1.37
1	S2	1804	OMU	C2-N3	-2.47	1.33	1.38
1	S2	627	OMU	C4-N3	-2.47	1.34	1.38
3	L5	1677	PSU	O4'-C1'	-2.47	1.40	1.43
3	L5	1792	PSU	C6-C5	2.47	1.38	1.35
3	L5	4299	PSU	C2-N1	-2.47	1.33	1.36
3	L5	4689	PSU	C2-N3	-2.47	1.33	1.37
1	S2	172	OMU	C2-N3	-2.46	1.33	1.38
3	L5	1792	PSU	C2-N1	-2.46	1.33	1.36
3	L5	4423	PSU	C6-C5	2.46	1.38	1.35
3	L5	1536	PSU	C2-N3	-2.46	1.33	1.37
3	L5	4431	PSU	C6-C5	2.45	1.38	1.35
3	L5	3851	PSU	C2-N3	-2.45	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	S2	1238	PSU	C6-C5	2.45	1.38	1.35
1	S2	1174	PSU	C2-N3	-2.45	1.33	1.37
3	L5	1779	PSU	C6-C5	2.45	1.38	1.35
1	S2	1243	PSU	C2-N3	-2.44	1.33	1.37
3	L5	4296	PSU	C6-C5	2.44	1.38	1.35
1	S2	822	PSU	C6-C5	2.44	1.38	1.35
1	S2	406	PSU	C2-N3	-2.44	1.33	1.37
1	S2	1244	PSU	C6-C5	2.44	1.38	1.35
1	S2	815	PSU	C2-N3	-2.44	1.33	1.37
3	L5	3853	PSU	C6-C5	2.43	1.38	1.35
1	S2	863	PSU	C2-N3	-2.43	1.33	1.37
3	L5	4423	PSU	C2-N3	-2.43	1.33	1.37
3	L5	3825	A2M	C5-C4	2.43	1.47	1.40
3	L5	4457	PSU	C2-N3	-2.42	1.33	1.37
3	L5	4620	OMU	C2-N3	-2.42	1.33	1.38
1	S2	814	PSU	C2-N3	-2.42	1.33	1.37
3	L5	2787	A2M	C5-C4	2.42	1.47	1.40
3	L5	3758	PSU	C2-N1	-2.42	1.33	1.36
1	S2	1804	OMU	C5-C4	-2.41	1.38	1.43
1	S2	918	PSU	C2-N3	-2.41	1.33	1.37
1	S2	109	PSU	C2-N1	-2.41	1.33	1.36
1	S2	36	PSU	C2-N3	-2.40	1.33	1.37
3	L5	5010	PSU	C2-N3	-2.40	1.33	1.37
1	S2	1239	PSU	C2-N3	-2.40	1.33	1.37
1	S2	1692	PSU	C2-N3	-2.39	1.33	1.37
1	S2	1056	PSU	C6-C5	2.39	1.38	1.35
3	L5	4299	PSU	C6-C5	2.39	1.38	1.35
1	S2	1288	OMU	C2-N3	-2.39	1.33	1.38
1	S2	1136	PSU	C2-N3	-2.39	1.33	1.37
3	L5	3844	PSU	C2-N1	-2.38	1.33	1.36
1	S2	966	PSU	C2-N3	-2.38	1.33	1.37
3	L5	1744	PSU	C2-N3	-2.38	1.33	1.37
1	S2	34	PSU	C2-N3	-2.37	1.33	1.37
3	L5	4620	OMU	C5-C4	-2.37	1.38	1.43
1	S2	1238	PSU	C2-N3	-2.37	1.33	1.37
1	S2	1326	UY1	C2-N3	-2.37	1.33	1.37
3	L5	3715	PSU	C2-N3	-2.37	1.33	1.37
3	L5	3760	A2M	C5-C4	2.37	1.47	1.40
1	S2	1643	PSU	C2-N3	-2.37	1.33	1.37
2	L8	55	PSU	C2-N3	-2.36	1.33	1.37
3	L5	2843	PSU	C2-N3	-2.36	1.33	1.37
1	S2	651	PSU	C2-N3	-2.36	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	S2	105	PSU	C6-C5	2.36	1.38	1.35
3	L5	3764	PSU	C6-C5	2.36	1.38	1.35
1	S2	1177	PSU	C2-N1	-2.36	1.33	1.36
1	S2	822	PSU	C2-N3	-2.36	1.33	1.37
3	L5	1781	PSU	C2-N3	-2.36	1.33	1.37
3	L5	4361	PSU	C6-C5	2.36	1.38	1.35
1	S2	1081	PSU	C2-N3	-2.36	1.33	1.37
3	L5	4531	PSU	C4-N3	-2.35	1.34	1.38
1	S2	1347	PSU	C2-N1	-2.35	1.33	1.36
3	L5	3764	PSU	C2-N3	-2.35	1.33	1.37
3	L5	2632	PSU	C2-N3	-2.34	1.33	1.37
1	S2	1004	PSU	C2-N1	-2.34	1.33	1.36
82	Pt	21	H2U	C4-N3	-2.34	1.33	1.37
1	S2	576	A2M	C5-C4	2.33	1.47	1.40
3	L5	3844	PSU	C6-N1	-2.33	1.32	1.36
3	L5	3818	UY1	C2-N1	-2.33	1.33	1.36
3	L5	1534	A2M	C5-C4	2.32	1.47	1.40
3	L5	4523	A2M	C5-C4	2.32	1.47	1.40
1	S2	1383	A2M	C5-C4	2.32	1.47	1.40
3	L5	1779	PSU	C2-N3	-2.32	1.33	1.37
1	S2	218	PSU	C2-N3	-2.31	1.33	1.37
3	L5	4576	PSU	C2-N1	-2.31	1.33	1.36
3	L5	2632	PSU	C6-C5	2.31	1.38	1.35
1	S2	159	A2M	C5-C4	2.31	1.47	1.40
1	S2	1232	PSU	C2-N3	-2.30	1.33	1.37
1	S2	1081	PSU	O4'-C1'	-2.30	1.40	1.43
1	S2	1244	PSU	C2-N3	-2.30	1.33	1.37
1	S2	590	A2M	C5-C4	2.30	1.47	1.40
3	L5	1779	PSU	C2-N1	-2.29	1.33	1.36
3	L5	4306	OMU	C2-N3	-2.29	1.33	1.38
3	L5	4536	OMC	C5-C4	-2.28	1.37	1.42
3	L5	4532	PSU	C2-N3	-2.28	1.33	1.37
1	S2	296	PSU	C2-N3	-2.28	1.33	1.37
3	L5	4972	PSU	C2'-C1'	-2.28	1.50	1.53
3	L5	3723	A2M	C5-C4	2.28	1.47	1.40
3	L5	4569	PSU	O4'-C1'	-2.28	1.40	1.43
3	L5	3758	PSU	C2-N3	-2.28	1.33	1.37
3	L5	4403	PSU	C6-C5	2.28	1.38	1.35
1	S2	105	PSU	C2-N1	-2.27	1.33	1.36
3	L5	3715	PSU	C6-C5	2.27	1.38	1.35
3	L5	3830	A2M	C5-C4	2.27	1.46	1.40
3	L5	1582	PSU	C2-N3	-2.27	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	L5	3768	PSU	C2-N3	-2.27	1.33	1.37
1	S2	406	PSU	C2-N1	-2.26	1.33	1.36
3	L5	3764	PSU	C2-N1	-2.26	1.33	1.36
1	S2	406	PSU	C6-C5	2.26	1.38	1.35
3	L5	4972	PSU	C2-N1	-2.26	1.33	1.36
3	L5	3695	PSU	C6-C5	2.26	1.38	1.35
1	S2	627	OMU	C2-N3	-2.25	1.33	1.38
3	L5	3920	PSU	C2-N3	-2.25	1.33	1.37
3	L5	4590	A2M	C5-C4	2.25	1.46	1.40
3	L5	3867	A2M	C5-C4	2.25	1.46	1.40
3	L5	4442	PSU	C2-N3	-2.25	1.33	1.37
3	L5	3884	PSU	C6-C5	2.25	1.37	1.35
1	S2	1244	PSU	C2-N1	-2.25	1.33	1.36
1	S2	649	PSU	C2-N1	-2.24	1.33	1.36
1	S2	484	A2M	C5-C4	2.24	1.46	1.40
1	S2	1442	OMU	C5-C4	-2.24	1.38	1.43
1	S2	863	PSU	C6-C5	2.24	1.37	1.35
1	S2	172	OMU	C5-C4	-2.24	1.38	1.43
3	L5	1582	PSU	O4'-C1'	-2.24	1.40	1.43
3	L5	2632	PSU	C2-N1	-2.24	1.33	1.36
1	S2	918	PSU	C2-N1	-2.24	1.33	1.36
3	L5	3718	A2M	C5-C4	2.24	1.46	1.40
3	L5	3695	PSU	C2-N1	-2.24	1.33	1.36
1	S2	116	OMU	C5-C4	-2.23	1.38	1.43
3	L5	1781	PSU	C2-N1	-2.23	1.33	1.36
1	S2	572	PSU	C2-N3	-2.23	1.33	1.37
3	L5	4552	PSU	C2-N3	-2.23	1.33	1.37
1	S2	119	PSU	C6-C5	2.23	1.37	1.35
1	S2	1326	UY1	C6-C5	2.23	1.37	1.35
3	L5	3818	UY1	C6-C5	2.23	1.37	1.35
3	L5	4972	PSU	C6-C5	2.23	1.37	1.35
3	L5	3844	PSU	C2-N3	-2.22	1.33	1.37
1	S2	1625	PSU	C2-N3	-2.22	1.33	1.37
3	L5	3770	PSU	C2-N3	-2.22	1.33	1.37
3	L5	4628	PSU	C2-N1	-2.22	1.33	1.36
1	S2	119	PSU	C2-N3	-2.22	1.33	1.37
1	S2	99	A2M	C5-C4	2.22	1.46	1.40
1	S2	1832	6MZ	C5-C4	2.22	1.46	1.40
3	L5	5010	PSU	C2-N1	-2.21	1.33	1.36
3	L5	4576	PSU	C2-N3	-2.21	1.33	1.37
1	S2	801	PSU	C2-N3	-2.21	1.33	1.37
1	S2	166	A2M	C5-C4	2.21	1.46	1.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	L5	398	A2M	C5-C4	2.21	1.46	1.40
82	Pt	47	G7M	C5-C6	-2.21	1.39	1.45
3	L5	4493	PSU	C2-N3	-2.21	1.33	1.37
1	S2	1004	PSU	C6-C5	2.21	1.37	1.35
1	S2	649	PSU	C2-N3	-2.20	1.33	1.37
3	L5	3758	PSU	C6-C5	2.20	1.37	1.35
3	L5	1782	PSU	C2-N3	-2.20	1.33	1.37
3	L5	4353	PSU	C2-N3	-2.20	1.33	1.37
3	L5	4500	PSU	C2-N1	-2.19	1.33	1.36
3	L5	3695	PSU	C2-N3	-2.19	1.33	1.37
3	L5	1677	PSU	C6-N1	-2.19	1.32	1.36
3	L5	3768	PSU	C2-N1	-2.19	1.33	1.36
3	L5	5001	PSU	C2-N1	-2.19	1.33	1.36
1	S2	1243	PSU	C2-N1	-2.19	1.33	1.36
3	L5	400	A2M	C5-C4	2.19	1.46	1.40
1	S2	1337	4AC	C7-N4	-2.18	1.33	1.37
3	L5	4442	PSU	C2-N1	-2.18	1.33	1.36
1	S2	468	A2M	C5-C4	2.17	1.46	1.40
3	L5	4628	PSU	C6-N1	-2.17	1.32	1.36
3	L5	3762	PSU	C2-N3	-2.17	1.33	1.37
3	L5	3841	OMC	C6-C5	2.17	1.40	1.35
3	L5	4361	PSU	C2-N3	-2.17	1.33	1.37
3	L5	4471	PSU	C2-N3	-2.17	1.33	1.37
1	S2	354	OMU	C5-C4	-2.16	1.38	1.43
1	S2	686	PSU	C2-N3	-2.16	1.33	1.37
1	S2	109	PSU	C6-C5	2.16	1.37	1.35
3	L5	4569	PSU	C2-N3	-2.16	1.33	1.37
3	L5	3770	PSU	C2-N1	-2.16	1.33	1.36
3	L5	1683	PSU	C2-N1	-2.16	1.33	1.36
2	L8	69	PSU	C2-N1	-2.16	1.33	1.36
2	L8	14	OMU	C5-C4	-2.15	1.38	1.43
3	L5	1677	PSU	C6-C5	2.15	1.37	1.35
1	S2	573	PSU	C2-N3	-2.15	1.33	1.37
1	S2	1238	PSU	C2-N1	-2.15	1.33	1.36
3	L5	4447	5MC	C6-C5	2.15	1.38	1.34
1	S2	218	PSU	C2-N1	-2.14	1.33	1.36
3	L5	4420	PSU	C2-N1	-2.14	1.33	1.36
3	L5	4299	PSU	O4'-C1'	-2.13	1.40	1.43
3	L5	4500	PSU	O4'-C1'	-2.13	1.40	1.43
1	S2	27	A2M	C5-C4	2.13	1.46	1.40
3	L5	1322	1MA	C2'-C1'	-2.13	1.50	1.53
1	S2	651	PSU	C2-N1	-2.13	1.33	1.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	S2	681	PSU	C2-N1	-2.12	1.33	1.36
3	L5	3724	A2M	C5-C4	2.12	1.46	1.40
3	L5	4493	PSU	C2-N1	-2.12	1.33	1.36
1	S2	1174	PSU	C2-N1	-2.12	1.33	1.36
3	L5	4552	PSU	C2-N1	-2.12	1.33	1.36
1	S2	609	PSU	C2-N1	-2.12	1.33	1.36
1	S2	119	PSU	C2-N1	-2.11	1.33	1.36
3	L5	4296	PSU	C2-N1	-2.11	1.33	1.36
1	S2	296	PSU	C2-N1	-2.10	1.33	1.36
1	S2	34	PSU	C2-N1	-2.10	1.33	1.36
1	S2	609	PSU	C2-N3	-2.10	1.33	1.37
1	S2	863	PSU	C2-N1	-2.10	1.33	1.36
3	L5	4579	PSU	C2-N1	-2.10	1.33	1.36
3	L5	4689	PSU	C2-N1	-2.10	1.33	1.36
3	L5	4457	PSU	C2-N1	-2.09	1.33	1.36
3	L5	1326	A2M	C5-C4	2.09	1.46	1.40
3	L5	1524	A2M	C5-C4	2.09	1.46	1.40
1	S2	1239	PSU	C2-N1	-2.09	1.33	1.36
1	S2	1232	PSU	C2-N1	-2.08	1.33	1.36
1	S2	1288	OMU	C5-C4	-2.08	1.39	1.43
3	L5	4552	PSU	O4'-C1'	-2.08	1.41	1.43
82	Pt	56	PSU	C2-N3	-2.08	1.33	1.37
1	S2	1692	PSU	C2-N1	-2.08	1.33	1.36
3	L5	3851	PSU	C2-N1	-2.08	1.33	1.36
1	S2	1678	A2M	C5-C4	2.07	1.46	1.40
3	L5	4571	A2M	C5-C4	2.07	1.46	1.40
3	L5	3869	OMC	C6-C5	2.07	1.39	1.35
3	L5	4442	PSU	C6-C5	2.07	1.37	1.35
1	S2	1326	UY1	C2-N1	-2.07	1.33	1.36
1	S2	109	PSU	C6-N1	-2.07	1.32	1.36
3	L5	3729	PSU	C2-N3	-2.06	1.34	1.37
1	S2	1367	PSU	C6-C5	2.06	1.37	1.35
3	L5	4636	PSU	O4'-C1'	-2.06	1.41	1.43
3	L5	4530	UR3	C6-C5	2.06	1.39	1.35
1	S2	121	OMU	C5-C4	-2.06	1.39	1.43
1	S2	172	OMU	C6-N1	-2.06	1.33	1.38
1	S2	512	A2M	C5-C4	2.05	1.46	1.40
1	S2	668	A2M	C5-C4	2.05	1.46	1.40
1	S2	1445	PSU	C2-N3	-2.05	1.34	1.37
3	L5	2401	A2M	C5-C4	2.05	1.46	1.40
1	S2	686	PSU	C2-N1	-2.05	1.34	1.36
1	S2	866	PSU	C2-N1	-2.05	1.34	1.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	L5	3715	PSU	C2-N1	-2.05	1.34	1.36
3	L5	2837	OMU	C5-C4	-2.04	1.39	1.43
3	L5	4420	PSU	C2-N3	-2.04	1.34	1.37
1	S2	1842	4AC	C7-N4	-2.03	1.33	1.37
1	S2	1031	A2M	C5-C4	2.03	1.46	1.40
3	L5	4590	A2M	O4'-C1'	2.03	1.43	1.41
3	L5	2824	OMC	C6-N1	-2.03	1.33	1.38
3	L5	1683	PSU	C2-N3	-2.03	1.34	1.37
3	L5	4498	OMU	C5-C4	-2.02	1.39	1.43
1	S2	1851	MA6	C5-C4	2.02	1.46	1.40
3	L5	4531	PSU	C2-N1	-2.02	1.34	1.36
1	S2	966	PSU	C2-N1	-2.02	1.34	1.36
3	L5	4442	PSU	O4'-C1'	-2.02	1.41	1.43
3	L5	3770	PSU	O4'-C1'	-2.02	1.41	1.43
3	L5	4536	OMC	C6-N1	-2.02	1.33	1.38
3	L5	4628	PSU	C6-C5	2.01	1.37	1.35
3	L5	4220	6MZ	C5-C4	2.01	1.46	1.40
1	S2	36	PSU	C2-N1	-2.00	1.34	1.36
3	L5	3639	PSU	C2-N1	-2.00	1.34	1.36
1	S2	428	OMU	C5-C4	-2.00	1.39	1.43
3	L5	4531	PSU	C6-N1	-2.00	1.32	1.36

All (714) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	S2	1832	6MZ	C2-N1-C6	8.00	123.45	116.59
6	SA	2	SAC	OAC-C1A-C2A	-7.97	107.26	122.06
29	SV	1	AME	OT-CT1-N	-7.55	108.06	121.95
3	L5	4220	6MZ	C2-N1-C6	7.54	123.06	116.59
82	Pt	8	4SU	C4-N3-C2	-7.33	120.22	127.34
64	Lr	2	SAC	OAC-C1A-N	-7.23	108.67	121.95
3	L5	3637	PSU	N1-C2-N3	7.15	123.23	115.13
29	SV	1	AME	CA-N-CT1	-6.99	110.25	123.15
1	S2	109	PSU	N1-C2-N3	6.98	123.04	115.13
3	L5	4972	PSU	N1-C2-N3	6.87	122.92	115.13
29	SV	1	AME	OT-CT1-CT2	-6.76	109.50	122.06
82	Pt	8	4SU	C5-C4-N3	6.73	120.93	114.69
3	L5	4353	PSU	N1-C2-N3	6.68	122.69	115.13
3	L5	2843	PSU	N1-C2-N3	6.66	122.68	115.13
1	S2	918	PSU	N1-C2-N3	6.65	122.66	115.13
3	L5	4442	PSU	N1-C2-N3	6.63	122.64	115.13
3	L5	4569	PSU	N1-C2-N3	6.60	122.61	115.13

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	5001	PSU	N1-C2-N3	6.59	122.59	115.13
3	L5	3884	PSU	N1-C2-N3	6.56	122.57	115.13
3	L5	4689	PSU	N1-C2-N3	6.55	122.55	115.13
3	L5	3695	PSU	N1-C2-N3	6.53	122.53	115.13
1	S2	105	PSU	N1-C2-N3	6.51	122.50	115.13
3	L5	3851	PSU	N1-C2-N3	6.51	122.50	115.13
3	L5	4423	PSU	N1-C2-N3	6.50	122.49	115.13
1	S2	1004	PSU	N1-C2-N3	6.47	122.47	115.13
3	L5	1781	PSU	N1-C2-N3	6.47	122.46	115.13
1	S2	34	PSU	N1-C2-N3	6.46	122.45	115.13
3	L5	3920	PSU	N1-C2-N3	6.46	122.44	115.13
3	L5	3853	PSU	N1-C2-N3	6.44	122.43	115.13
1	S2	1136	PSU	N1-C2-N3	6.44	122.42	115.13
3	L5	1536	PSU	N1-C2-N3	6.42	122.40	115.13
3	L5	4293	PSU	N1-C2-N3	6.39	122.37	115.13
3	L5	1683	PSU	N1-C2-N3	6.38	122.36	115.13
1	S2	1326	UY1	N1-C2-N3	6.37	122.35	115.13
3	L5	3639	PSU	N1-C2-N3	6.36	122.34	115.13
1	S2	822	PSU	N1-C2-N3	6.35	122.33	115.13
3	L5	1677	PSU	N1-C2-N3	6.34	122.31	115.13
3	L5	3770	PSU	N1-C2-N3	6.34	122.31	115.13
1	S2	1232	PSU	N1-C2-N3	6.34	122.31	115.13
1	S2	1643	PSU	N1-C2-N3	6.33	122.30	115.13
3	L5	4636	PSU	N1-C2-N3	6.33	122.30	115.13
3	L5	4530	UR3	C4-N3-C2	-6.32	118.61	124.56
1	S2	1244	PSU	N1-C2-N3	6.32	122.29	115.13
1	S2	1243	PSU	N1-C2-N3	6.32	122.28	115.13
1	S2	649	PSU	N1-C2-N3	6.31	122.28	115.13
64	Lr	2	SAC	CA-N-C1A	-6.30	111.53	123.15
1	S2	651	PSU	N1-C2-N3	6.29	122.26	115.13
3	L5	5010	PSU	N1-C2-N3	6.29	122.26	115.13
3	L5	4299	PSU	N1-C2-N3	6.27	122.24	115.13
1	S2	1239	PSU	N1-C2-N3	6.26	122.23	115.13
3	L5	4361	PSU	N1-C2-N3	6.26	122.22	115.13
1	S2	572	PSU	N1-C2-N3	6.25	122.21	115.13
3	L5	3715	PSU	N1-C2-N3	6.25	122.21	115.13
1	S2	1347	PSU	N1-C2-N3	6.24	122.20	115.13
3	L5	1782	PSU	N1-C2-N3	6.24	122.20	115.13
3	L5	4403	PSU	N1-C2-N3	6.24	122.20	115.13
3	L5	4500	PSU	N1-C2-N3	6.22	122.17	115.13
1	S2	966	PSU	N1-C2-N3	6.22	122.17	115.13
1	S2	1625	PSU	N1-C2-N3	6.22	122.17	115.13

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	S2	1367	PSU	N1-C2-N3	6.20	122.15	115.13
3	L5	1744	PSU	N1-C2-N3	6.20	122.15	115.13
1	S2	866	PSU	N1-C2-N3	6.19	122.14	115.13
1	S2	119	PSU	N1-C2-N3	6.18	122.13	115.13
1	S2	406	PSU	N1-C2-N3	6.18	122.13	115.13
1	S2	681	PSU	N1-C2-N3	6.17	122.12	115.13
3	L5	3729	PSU	N1-C2-N3	6.16	122.11	115.13
1	S2	801	PSU	N1-C2-N3	6.15	122.10	115.13
1	S2	1177	PSU	N1-C2-N3	6.15	122.10	115.13
6	SA	2	SAC	OAC-C1A-N	-6.14	110.67	121.95
1	S2	573	PSU	N1-C2-N3	6.13	122.08	115.13
1	S2	296	PSU	N1-C2-N3	6.13	122.07	115.13
2	L8	55	PSU	N1-C2-N3	6.12	122.07	115.13
3	L5	3768	PSU	N1-C2-N3	6.11	122.06	115.13
1	S2	686	PSU	N1-C2-N3	6.11	122.06	115.13
3	L5	3762	PSU	N1-C2-N3	6.11	122.05	115.13
3	L5	4532	PSU	N1-C2-N3	6.09	122.03	115.13
1	S2	1056	PSU	N1-C2-N3	6.09	122.03	115.13
3	L5	4493	PSU	N1-C2-N3	6.09	122.03	115.13
1	S2	218	PSU	N1-C2-N3	6.09	122.03	115.13
64	Lr	2	SAC	OAC-C1A-C2A	-6.08	110.77	122.06
3	L5	1779	PSU	N1-C2-N3	6.08	122.01	115.13
3	L5	4521	PSU	N1-C2-N3	6.06	122.00	115.13
2	L8	69	PSU	N1-C2-N3	6.05	121.99	115.13
3	L5	3758	PSU	N1-C2-N3	6.04	121.97	115.13
1	S2	1692	PSU	N1-C2-N3	6.04	121.97	115.13
3	L5	1860	PSU	N1-C2-N3	6.03	121.96	115.13
3	L5	1862	PSU	N1-C2-N3	6.03	121.96	115.13
3	L5	3818	UY1	N1-C2-N3	6.03	121.96	115.13
3	L5	4628	PSU	N1-C2-N3	6.02	121.95	115.13
3	L5	4296	PSU	N1-C2-N3	6.01	121.94	115.13
1	S2	814	PSU	N1-C2-N3	6.01	121.94	115.13
3	L5	4457	PSU	N1-C2-N3	6.01	121.94	115.13
3	L5	4576	PSU	N1-C2-N3	6.01	121.94	115.13
1	S2	609	PSU	N1-C2-N3	5.99	121.92	115.13
1	S2	815	PSU	N1-C2-N3	5.98	121.90	115.13
1	S2	36	PSU	N1-C2-N3	5.98	121.90	115.13
82	Pt	56	PSU	N1-C2-N3	5.96	121.89	115.13
3	L5	4579	PSU	N1-C2-N3	5.95	121.88	115.13
3	L5	4673	PSU	N1-C2-N3	5.95	121.88	115.13
3	L5	4531	PSU	N1-C2-N3	5.94	121.86	115.13
1	S2	1238	PSU	N1-C2-N3	5.94	121.86	115.13

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	3764	PSU	N1-C2-N3	5.93	121.85	115.13
1	S2	1174	PSU	N1-C2-N3	5.93	121.84	115.13
1	S2	863	PSU	N1-C2-N3	5.91	121.83	115.13
3	L5	3734	PSU	N1-C2-N3	5.91	121.82	115.13
3	L5	1792	PSU	N1-C2-N3	5.90	121.81	115.13
3	L5	2632	PSU	N1-C2-N3	5.88	121.79	115.13
1	S2	1081	PSU	N1-C2-N3	5.87	121.78	115.13
3	L5	1582	PSU	N1-C2-N3	5.87	121.78	115.13
3	L5	4552	PSU	N1-C2-N3	5.86	121.77	115.13
3	L5	4312	PSU	N1-C2-N3	5.84	121.75	115.13
3	L5	4471	PSU	N1-C2-N3	5.84	121.74	115.13
1	S2	1445	PSU	N1-C2-N3	5.82	121.73	115.13
1	S2	93	PSU	N1-C2-N3	5.81	121.71	115.13
3	L5	2839	PSU	N1-C2-N3	5.80	121.70	115.13
3	L5	4420	PSU	N1-C2-N3	5.73	121.62	115.13
3	L5	4431	PSU	N1-C2-N3	5.67	121.56	115.13
3	L5	2508	PSU	N1-C2-N3	5.48	121.34	115.13
3	L5	3844	PSU	N1-C2-N3	5.48	121.34	115.13
1	S2	1248	B8N	C4-N3-C2	-5.20	118.88	125.46
3	L5	3925	OMU	N3-C2-N1	5.20	121.80	114.89
82	Pt	21	H2U	C4-N3-C2	-5.08	121.58	125.79
6	SA	2	SAC	CA-N-C1A	-4.87	114.17	123.15
1	S2	428	OMU	C4-N3-C2	-4.85	120.19	126.58
3	L5	3920	PSU	C4-N3-C2	-4.84	119.37	126.34
1	S2	1288	OMU	C4-N3-C2	-4.83	120.21	126.58
3	L5	1677	PSU	C4-N3-C2	-4.81	119.41	126.34
3	L5	3925	OMU	C4-N3-C2	-4.81	120.23	126.58
3	L5	3637	PSU	C4-N3-C2	-4.80	119.42	126.34
3	L5	4569	PSU	C4-N3-C2	-4.80	119.42	126.34
3	L5	3884	PSU	C4-N3-C2	-4.68	119.59	126.34
1	S2	1804	OMU	C4-N3-C2	-4.68	120.41	126.58
1	S2	627	OMU	C4-N3-C2	-4.66	120.44	126.58
3	L5	4972	PSU	C4-N3-C2	-4.65	119.65	126.34
3	L5	2415	OMU	C4-N3-C2	-4.63	120.47	126.58
3	L5	4521	PSU	C4-N3-C2	-4.62	119.68	126.34
3	L5	1677	PSU	O2-C2-N1	-4.62	117.70	122.79
3	L5	4498	OMU	C4-N3-C2	-4.60	120.51	126.58
3	L5	4227	OMU	C4-N3-C2	-4.60	120.52	126.58
3	L5	4531	PSU	O2-C2-N1	-4.59	117.74	122.79
3	L5	2837	OMU	C4-N3-C2	-4.58	120.54	126.58
29	SV	1	AME	CT2-CT1-N	-4.58	108.35	116.10
3	L5	1536	PSU	C4-N3-C2	-4.57	119.75	126.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	3715	PSU	C4-N3-C2	-4.56	119.77	126.34
3	L5	5001	PSU	C4-N3-C2	-4.56	119.77	126.34
1	S2	109	PSU	C4-N3-C2	-4.55	119.78	126.34
1	S2	1326	UY1	C4-N3-C2	-4.55	119.78	126.34
3	L5	2843	PSU	C4-N3-C2	-4.55	119.78	126.34
1	S2	1056	PSU	C4-N3-C2	-4.52	119.83	126.34
3	L5	4628	PSU	C4-N3-C2	-4.52	119.83	126.34
3	L5	3853	PSU	C4-N3-C2	-4.51	119.84	126.34
1	S2	172	OMU	C4-N3-C2	-4.51	120.64	126.58
3	L5	4620	OMU	C4-N3-C2	-4.49	120.66	126.58
1	S2	1442	OMU	C4-N3-C2	-4.48	120.67	126.58
1	S2	121	OMU	C4-N3-C2	-4.48	120.68	126.58
1	S2	1136	PSU	C4-N3-C2	-4.46	119.91	126.34
1	S2	681	PSU	C4-N3-C2	-4.43	119.96	126.34
6	SA	2	SAC	C2A-C1A-N	-4.40	108.64	116.10
3	L5	4353	PSU	C4-N3-C2	-4.39	120.02	126.34
1	S2	822	PSU	C4-N3-C2	-4.37	120.04	126.34
3	L5	2837	OMU	N3-C2-N1	4.36	120.68	114.89
3	L5	4296	PSU	C4-N3-C2	-4.36	120.06	126.34
1	S2	116	OMU	C4-N3-C2	-4.34	120.85	126.58
3	L5	4423	PSU	C4-N3-C2	-4.34	120.08	126.34
3	L5	4361	PSU	C4-N3-C2	-4.34	120.09	126.34
3	L5	4220	6MZ	N3-C2-N1	-4.32	121.92	128.68
3	L5	4403	PSU	C4-N3-C2	-4.32	120.12	126.34
1	S2	1288	OMU	N3-C2-N1	4.31	120.61	114.89
1	S2	649	PSU	C4-N3-C2	-4.30	120.14	126.34
1	S2	1692	PSU	C4-N3-C2	-4.29	120.16	126.34
3	L5	4353	PSU	O2-C2-N1	-4.29	118.07	122.79
1	S2	1643	PSU	C4-N3-C2	-4.29	120.16	126.34
3	L5	4689	PSU	C4-N3-C2	-4.28	120.17	126.34
1	S2	105	PSU	C4-N3-C2	-4.27	120.19	126.34
3	L5	4498	OMU	C5-C4-N3	4.27	121.22	114.84
3	L5	3768	PSU	C4-N3-C2	-4.27	120.19	126.34
1	S2	1442	OMU	N3-C2-N1	4.26	120.54	114.89
1	S2	406	PSU	C4-N3-C2	-4.26	120.21	126.34
3	L5	4299	PSU	C4-N3-C2	-4.26	120.21	126.34
1	S2	34	PSU	C4-N3-C2	-4.25	120.21	126.34
3	L5	2415	OMU	N3-C2-N1	4.25	120.53	114.89
1	S2	1239	PSU	C4-N3-C2	-4.23	120.24	126.34
1	S2	121	OMU	N3-C2-N1	4.23	120.51	114.89
3	L5	4500	PSU	O2-C2-N1	-4.23	118.13	122.79
1	S2	1804	OMU	N3-C2-N1	4.21	120.48	114.89

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	S2	428	OMU	N3-C2-N1	4.21	120.47	114.89
1	S2	119	PSU	C4-N3-C2	-4.21	120.28	126.34
1	S2	1004	PSU	C4-N3-C2	-4.20	120.28	126.34
3	L5	4673	PSU	C4-N3-C2	-4.20	120.28	126.34
1	S2	918	PSU	C4-N3-C2	-4.20	120.29	126.34
3	L5	4227	OMU	C5-C4-N3	4.19	121.11	114.84
1	S2	1174	PSU	C4-N3-C2	-4.18	120.32	126.34
3	L5	4498	OMU	N3-C2-N1	4.17	120.42	114.89
1	S2	686	PSU	C4-N3-C2	-4.17	120.34	126.34
1	S2	1232	PSU	C4-N3-C2	-4.16	120.34	126.34
1	S2	572	PSU	C4-N3-C2	-4.16	120.34	126.34
1	S2	354	OMU	C4-N3-C2	-4.15	121.11	126.58
3	L5	3758	PSU	C4-N3-C2	-4.14	120.38	126.34
1	S2	172	OMU	N3-C2-N1	4.13	120.38	114.89
3	L5	1683	PSU	C4-N3-C2	-4.13	120.39	126.34
2	L8	55	PSU	C4-N3-C2	-4.13	120.39	126.34
3	L5	4620	OMU	C5-C4-N3	4.13	121.02	114.84
1	S2	1081	PSU	C4-N3-C2	-4.13	120.39	126.34
3	L5	1782	PSU	C4-N3-C2	-4.13	120.39	126.34
1	S2	109	PSU	O2-C2-N1	-4.12	118.25	122.79
1	S2	651	PSU	C4-N3-C2	-4.12	120.40	126.34
1	S2	863	PSU	C4-N3-C2	-4.11	120.41	126.34
3	L5	5010	PSU	C4-N3-C2	-4.11	120.42	126.34
3	L5	3729	PSU	C4-N3-C2	-4.10	120.43	126.34
1	S2	354	OMU	N3-C2-N1	4.10	120.34	114.89
1	S2	296	PSU	C4-N3-C2	-4.10	120.43	126.34
3	L5	3762	PSU	C4-N3-C2	-4.10	120.43	126.34
3	L5	1582	PSU	C4-N3-C2	-4.09	120.44	126.34
1	S2	1238	PSU	C4-N3-C2	-4.09	120.45	126.34
1	S2	1243	PSU	C4-N3-C2	-4.09	120.45	126.34
3	L5	4552	PSU	C4-N3-C2	-4.08	120.45	126.34
1	S2	573	PSU	C4-N3-C2	-4.08	120.46	126.34
82	Pt	56	PSU	C4-N3-C2	-4.08	120.46	126.34
3	L5	3695	PSU	C4-N3-C2	-4.08	120.47	126.34
3	L5	3920	PSU	O2-C2-N1	-4.07	118.30	122.79
3	L5	4220	6MZ	C9-N6-C6	-4.07	119.36	122.87
1	S2	218	PSU	C4-N3-C2	-4.06	120.49	126.34
3	L5	3637	PSU	O2-C2-N1	-4.06	118.32	122.79
1	S2	815	PSU	C4-N3-C2	-4.05	120.50	126.34
3	L5	4227	OMU	N3-C2-N1	4.05	120.27	114.89
3	L5	1744	PSU	C4-N3-C2	-4.05	120.50	126.34
1	S2	1625	PSU	C4-N3-C2	-4.04	120.52	126.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	S2	1244	PSU	C4-N3-C2	-4.04	120.52	126.34
3	L5	2632	PSU	C4-N3-C2	-4.03	120.53	126.34
1	S2	801	PSU	C4-N3-C2	-4.02	120.54	126.34
3	L5	4293	PSU	C4-N3-C2	-4.02	120.54	126.34
2	L8	14	OMU	C4-N3-C2	-4.02	121.28	126.58
3	L5	4312	PSU	C4-N3-C2	-4.02	120.55	126.34
3	L5	3770	PSU	C4-N3-C2	-4.01	120.56	126.34
3	L5	4500	PSU	C4-N3-C2	-4.01	120.56	126.34
1	S2	116	OMU	C5-C4-N3	4.01	120.83	114.84
1	S2	1347	PSU	C4-N3-C2	-4.00	120.58	126.34
3	L5	2508	PSU	C4-N3-C2	-4.00	120.58	126.34
3	L5	1779	PSU	C4-N3-C2	-4.00	120.58	126.34
3	L5	2787	A2M	C4-C5-N7	-3.97	105.26	109.40
82	Pt	8	4SU	N3-C2-N1	3.97	120.16	114.89
3	L5	4576	PSU	O2-C2-N1	-3.97	118.42	122.79
1	S2	814	PSU	C4-N3-C2	-3.97	120.62	126.34
1	S2	866	PSU	C4-N3-C2	-3.97	120.62	126.34
3	L5	4431	PSU	C4-N3-C2	-3.96	120.63	126.34
82	Pt	8	4SU	C5-C4-S4	-3.96	119.36	124.47
3	L5	1781	PSU	C4-N3-C2	-3.96	120.64	126.34
3	L5	4628	PSU	O2-C2-N1	-3.95	118.44	122.79
3	L5	3818	UY1	C4-N3-C2	-3.95	120.65	126.34
1	S2	627	OMU	N3-C2-N1	3.94	120.12	114.89
3	L5	3764	PSU	C4-N3-C2	-3.94	120.66	126.34
2	L8	69	PSU	C4-N3-C2	-3.94	120.66	126.34
3	L5	4576	PSU	C4-N3-C2	-3.94	120.67	126.34
1	S2	1445	PSU	C4-N3-C2	-3.94	120.67	126.34
3	L5	4523	A2M	N3-C2-N1	-3.93	122.54	128.68
1	S2	609	PSU	C4-N3-C2	-3.92	120.69	126.34
1	S2	428	OMU	C5-C4-N3	3.92	120.70	114.84
3	L5	3853	PSU	O2-C2-N1	-3.91	118.49	122.79
3	L5	4579	PSU	C4-N3-C2	-3.90	120.71	126.34
3	L5	1683	PSU	O2-C2-N1	-3.90	118.50	122.79
3	L5	4636	PSU	C4-N3-C2	-3.90	120.72	126.34
1	S2	1367	PSU	C4-N3-C2	-3.90	120.72	126.34
3	L5	4442	PSU	C4-N3-C2	-3.88	120.74	126.34
1	S2	36	PSU	C4-N3-C2	-3.85	120.78	126.34
3	L5	3844	PSU	C4-N3-C2	-3.84	120.80	126.34
3	L5	4471	PSU	C4-N3-C2	-3.84	120.81	126.34
3	L5	2815	A2M	N3-C2-N1	-3.83	122.69	128.68
3	L5	1536	PSU	O2-C2-N1	-3.83	118.58	122.79
3	L5	2837	OMU	O2-C2-N1	-3.82	117.70	122.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	2837	OMU	C5-C4-N3	3.80	120.53	114.84
3	L5	4296	PSU	O2-C2-N1	-3.79	118.61	122.79
3	L5	1860	PSU	C4-N3-C2	-3.79	120.89	126.34
3	L5	4420	PSU	C4-N3-C2	-3.78	120.89	126.34
3	L5	1524	A2M	N3-C2-N1	-3.78	122.77	128.68
3	L5	3844	PSU	C6-C5-C4	-3.77	115.56	118.20
2	L8	14	OMU	C5-C4-N3	3.77	120.48	114.84
1	S2	966	PSU	C4-N3-C2	-3.77	120.91	126.34
3	L5	2415	OMU	C5-C4-N3	3.77	120.47	114.84
3	L5	1792	PSU	C4-N3-C2	-3.76	120.92	126.34
1	S2	1804	OMU	C5-C4-N3	3.76	120.47	114.84
1	S2	1367	PSU	O2-C2-N1	-3.76	118.65	122.79
2	L8	14	OMU	N3-C2-N1	3.76	119.88	114.89
1	S2	1288	OMU	C5-C4-N3	3.75	120.45	114.84
3	L5	1792	PSU	O2-C2-N1	-3.74	118.67	122.79
1	S2	34	PSU	O2-C2-N1	-3.74	118.68	122.79
1	S2	121	OMU	C5-C4-N3	3.73	120.42	114.84
3	L5	3734	PSU	C4-N3-C2	-3.73	120.97	126.34
1	S2	1177	PSU	C4-N3-C2	-3.71	120.99	126.34
3	L5	4306	OMU	N3-C2-N1	3.71	119.81	114.89
1	S2	609	PSU	O2-C2-N1	-3.70	118.72	122.79
3	L5	3830	A2M	N3-C2-N1	-3.69	122.90	128.68
1	S2	93	PSU	C4-N3-C2	-3.69	121.02	126.34
3	L5	1871	A2M	N3-C2-N1	-3.69	122.91	128.68
3	L5	4493	PSU	C4-N3-C2	-3.68	121.04	126.34
3	L5	1862	PSU	C4-N3-C2	-3.68	121.04	126.34
3	L5	3844	PSU	O2-C2-N1	-3.68	118.74	122.79
1	S2	649	PSU	O2-C2-N1	-3.67	118.75	122.79
1	S2	1244	PSU	O2-C2-N1	-3.67	118.75	122.79
3	L5	3764	PSU	O2-C2-N1	-3.66	118.76	122.79
82	Pt	56	PSU	O2-C2-N1	-3.66	118.76	122.79
3	L5	5010	PSU	O2-C2-N1	-3.66	118.76	122.79
1	S2	1004	PSU	O2-C2-N1	-3.66	118.77	122.79
2	L8	69	PSU	O2-C2-N1	-3.65	118.77	122.79
1	S2	627	OMU	C5-C4-N3	3.64	120.29	114.84
1	S2	354	OMU	C5-C4-N3	3.64	120.29	114.84
3	L5	3825	A2M	N3-C2-N1	-3.64	122.99	128.68
3	L5	1326	A2M	N3-C2-N1	-3.62	123.01	128.68
1	S2	1442	OMU	C5-C4-N3	3.62	120.26	114.84
3	L5	3770	PSU	O2-C2-N1	-3.62	118.80	122.79
3	L5	3734	PSU	O2-C2-N1	-3.62	118.81	122.79
3	L5	3715	PSU	O2-C2-N1	-3.62	118.81	122.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	S2	119	PSU	O2-C2-N1	-3.61	118.81	122.79
3	L5	4620	OMU	N3-C2-N1	3.61	119.68	114.89
1	S2	918	PSU	O2-C2-N1	-3.61	118.82	122.79
1	S2	651	PSU	O2-C2-N1	-3.59	118.84	122.79
1	S2	1445	PSU	O2-C2-N1	-3.59	118.84	122.79
1	S2	1832	6MZ	N3-C2-N1	-3.57	123.10	128.68
3	L5	3758	PSU	O2-C2-N1	-3.55	118.88	122.79
1	S2	866	PSU	O2-C2-N1	-3.55	118.88	122.79
1	S2	1326	UY1	O2-C2-N1	-3.54	118.89	122.79
3	L5	4420	PSU	O2-C2-N1	-3.54	118.89	122.79
3	L5	4306	OMU	C4-N3-C2	-3.54	121.91	126.58
3	L5	4620	OMU	O4-C4-C5	-3.54	118.94	125.16
1	S2	1248	B8N	C31-N3-C4	3.54	122.52	117.31
1	S2	105	PSU	O2-C2-N1	-3.53	118.90	122.79
1	S2	668	A2M	N3-C2-N1	-3.53	123.17	128.68
1	S2	1136	PSU	O2-C2-N1	-3.53	118.91	122.79
3	L5	2839	PSU	C4-N3-C2	-3.52	121.27	126.34
1	S2	1851	MA6	C4-C5-N7	-3.52	105.73	109.40
1	S2	1232	PSU	O2-C2-N1	-3.52	118.92	122.79
1	S2	1625	PSU	O2-C2-N1	-3.51	118.93	122.79
1	S2	1850	MA6	C4-C5-N7	-3.51	105.75	109.40
1	S2	172	OMU	C5-C4-N3	3.50	120.08	114.84
1	S2	116	OMU	N3-C2-N1	3.50	119.53	114.89
1	S2	296	PSU	O2-C2-N1	-3.49	118.94	122.79
1	S2	822	PSU	C3'-C2'-C1'	3.49	105.70	101.64
1	S2	822	PSU	O2-C2-N1	-3.48	118.95	122.79
3	L5	1781	PSU	O2-C2-N1	-3.48	118.96	122.79
3	L5	4532	PSU	C4-N3-C2	-3.48	121.32	126.34
3	L5	2632	PSU	O2-C2-N1	-3.48	118.96	122.79
1	S2	27	A2M	N3-C2-N1	-3.47	123.25	128.68
3	L5	4447	5MC	C5-C6-N1	-3.45	119.78	123.34
3	L5	3724	A2M	N3-C2-N1	-3.44	123.30	128.68
1	S2	686	PSU	O2-C2-N1	-3.44	119.00	122.79
3	L5	3851	PSU	C4-N3-C2	-3.43	121.40	126.34
1	S2	1031	A2M	N3-C2-N1	-3.43	123.32	128.68
1	S2	468	A2M	N3-C2-N1	-3.42	123.33	128.68
1	S2	1851	MA6	N3-C2-N1	-3.41	123.35	128.68
3	L5	2363	A2M	N3-C2-N1	-3.40	123.37	128.68
3	L5	3782	5MC	C5-C6-N1	-3.40	119.84	123.34
3	L5	3639	PSU	C4-N3-C2	-3.39	121.45	126.34
1	S2	1239	PSU	O2-C2-N1	-3.39	119.06	122.79
3	L5	3768	PSU	O2-C2-N1	-3.38	119.06	122.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	S2	1850	MA6	N3-C2-N1	-3.38	123.40	128.68
3	L5	4493	PSU	O2-C2-N1	-3.38	119.07	122.79
1	S2	590	A2M	N3-C2-N1	-3.36	123.43	128.68
1	S2	1243	PSU	O2-C2-N1	-3.35	119.10	122.79
3	L5	1779	PSU	O2-C2-N1	-3.35	119.10	122.79
3	L5	1782	PSU	O2-C2-N1	-3.35	119.10	122.79
3	L5	3723	A2M	N3-C2-N1	-3.35	123.44	128.68
1	S2	863	PSU	O2-C2-N1	-3.34	119.11	122.79
1	S2	484	A2M	N3-C2-N1	-3.34	123.46	128.68
1	S2	1678	A2M	N3-C2-N1	-3.34	123.46	128.68
3	L5	4531	PSU	C4-N3-C2	-3.33	121.55	126.34
1	S2	166	A2M	N3-C2-N1	-3.32	123.49	128.68
3	L5	3785	A2M	N3-C2-N1	-3.31	123.50	128.68
3	L5	3925	OMU	C5-C4-N3	3.31	119.79	114.84
1	S2	1804	OMU	O4-C4-C5	-3.31	119.34	125.16
1	S2	572	PSU	O2-C2-N1	-3.29	119.17	122.79
1	S2	116	OMU	O4-C4-C5	-3.29	119.38	125.16
3	L5	3925	OMU	O2-C2-N1	-3.28	118.42	122.79
3	L5	3729	PSU	O2-C2-N1	-3.27	119.19	122.79
64	Lr	2	SAC	C2A-C1A-N	-3.26	110.58	116.10
1	S2	681	PSU	O2-C2-N1	-3.26	119.21	122.79
1	S2	1851	MA6	C1'-N9-C4	-3.26	120.92	126.64
1	S2	1248	B8N	N3-C2-N1	3.25	121.35	116.76
1	S2	1347	PSU	O2-C2-N1	-3.23	119.23	122.79
3	L5	4636	PSU	O2-C2-N1	-3.23	119.23	122.79
3	L5	2401	A2M	N3-C2-N1	-3.23	123.63	128.68
3	L5	3884	PSU	O2-C2-N1	-3.21	119.25	122.79
1	S2	36	PSU	O2-C2-N1	-3.21	119.25	122.79
1	S2	573	PSU	O2-C2-N1	-3.21	119.26	122.79
3	L5	4457	PSU	C4-N3-C2	-3.21	121.71	126.34
1	S2	159	A2M	N3-C2-N1	-3.21	123.66	128.68
3	L5	1744	PSU	O2-C2-N1	-3.20	119.26	122.79
3	L5	1871	A2M	C4-C5-N7	-3.20	106.06	109.40
1	S2	1383	A2M	N3-C2-N1	-3.19	123.70	128.68
3	L5	4972	PSU	O2-C2-N1	-3.17	119.30	122.79
3	L5	4447	5MC	C5-C4-N3	-3.16	118.26	121.67
1	S2	406	PSU	O2-C2-N1	-3.16	119.31	122.79
3	L5	4423	PSU	O2-C2-N1	-3.16	119.32	122.79
1	S2	1692	PSU	O2-C2-N1	-3.15	119.32	122.79
1	S2	218	PSU	O2-C2-N1	-3.15	119.32	122.79
3	L5	4579	PSU	O2-C2-N1	-3.15	119.33	122.79
3	L5	4689	PSU	O2-C2-N1	-3.15	119.33	122.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	4620	OMU	O2-C2-N1	-3.15	118.61	122.79
1	S2	1174	PSU	O2-C2-N1	-3.14	119.34	122.79
1	S2	1832	6MZ	C4-C5-N7	-3.13	106.14	109.40
3	L5	4590	A2M	N3-C2-N1	-3.12	123.80	128.68
3	L5	2401	A2M	C4-C5-N7	-3.11	106.16	109.40
3	L5	4447	5MC	O2-C2-N3	-3.10	117.28	122.33
3	L5	1582	PSU	C6-C5-C4	-3.10	116.03	118.20
1	S2	966	PSU	O2-C2-N1	-3.10	119.38	122.79
3	L5	3762	PSU	O2-C2-N1	-3.10	119.38	122.79
1	S2	668	A2M	C4-C5-N7	-3.09	106.18	109.40
3	L5	3695	PSU	O2-C2-N1	-3.09	119.39	122.79
1	S2	512	A2M	N3-C2-N1	-3.07	123.88	128.68
3	L5	3867	A2M	N3-C2-N1	-3.07	123.88	128.68
3	L5	2876	OMG	C5-C6-N1	3.07	119.36	113.95
3	L5	4494	OMG	C5-C6-N1	3.06	119.36	113.95
3	L5	3867	A2M	C4-C5-N7	-3.06	106.21	109.40
3	L5	4571	A2M	N3-C2-N1	-3.05	123.91	128.68
3	L5	2787	A2M	N3-C2-N1	-3.04	123.92	128.68
1	S2	1288	OMU	O4-C4-C5	-3.04	119.81	125.16
1	S2	1850	MA6	N1-C6-N6	3.04	120.26	117.06
1	S2	1238	PSU	O2-C2-N1	-3.04	119.45	122.79
1	S2	1643	PSU	O2-C2-N1	-3.03	119.45	122.79
3	L5	3851	PSU	O2-C2-N1	-3.03	119.45	122.79
1	S2	1177	PSU	O2-C2-N1	-3.03	119.46	122.79
3	L5	398	A2M	C4-C5-N7	-3.03	106.25	109.40
1	S2	801	PSU	O2-C2-N1	-3.02	119.47	122.79
1	S2	99	A2M	N3-C2-N1	-3.01	123.97	128.68
1	S2	172	OMU	O4-C4-C5	-3.01	119.86	125.16
3	L5	4471	PSU	O2-C2-N1	-3.01	119.47	122.79
3	L5	4403	PSU	O2-C2-N1	-3.00	119.48	122.79
3	L5	4306	OMU	C5-C4-N3	3.00	119.33	114.84
1	S2	1842	4AC	O2-C2-N3	-2.99	117.46	122.33
3	L5	398	A2M	N3-C2-N1	-2.99	124.00	128.68
1	S2	627	OMU	O4-C4-C5	-2.98	119.91	125.16
3	L5	4569	PSU	O2-C2-N1	-2.98	119.52	122.79
1	S2	1442	OMU	O4-C4-C5	-2.97	119.94	125.16
3	L5	400	A2M	N3-C2-N1	-2.96	124.06	128.68
3	L5	2351	OMC	C1'-N1-C2	2.95	124.99	118.42
3	L5	1522	OMG	C5-C6-N1	2.93	119.12	113.95
3	L5	1534	A2M	C4-C5-N7	-2.92	106.36	109.40
3	L5	3782	5MC	C5-C4-N3	-2.92	118.53	121.67
3	L5	4312	PSU	O2-C2-N1	-2.91	119.59	122.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	1316	OMG	C5-C6-N1	2.90	119.06	113.95
3	L5	3830	A2M	C4-C5-N7	-2.89	106.38	109.40
3	L5	4498	OMU	O4-C4-C5	-2.88	120.09	125.16
1	S2	814	PSU	O2-C2-N1	-2.88	119.62	122.79
3	L5	4552	PSU	O2-C2-N1	-2.87	119.63	122.79
3	L5	1534	A2M	N3-C2-N1	-2.87	124.20	128.68
1	S2	484	A2M	C4-C5-N7	-2.87	106.41	109.40
3	L5	3818	UY1	O2-C2-N1	-2.86	119.64	122.79
3	L5	4227	OMU	O4-C4-C5	-2.86	120.13	125.16
3	L5	5001	PSU	O2-C2-N1	-2.86	119.65	122.79
3	L5	1677	PSU	C5-C6-N1	-2.85	117.83	122.11
1	S2	576	A2M	N3-C2-N1	-2.85	124.22	128.68
1	S2	1288	OMU	C2'-C1'-N1	-2.85	108.69	114.22
1	S2	1383	A2M	C4-C5-N7	-2.85	106.43	109.40
1	S2	815	PSU	O2-C2-N1	-2.85	119.66	122.79
3	L5	4299	PSU	O2-C2-N1	-2.85	119.66	122.79
3	L5	3639	PSU	O2-C2-N1	-2.83	119.67	122.79
1	S2	159	A2M	C4-C5-N7	-2.83	106.45	109.40
2	L8	55	PSU	O2-C2-N1	-2.82	119.68	122.79
1	S2	1326	UY1	C5-C6-N1	-2.82	117.88	122.11
1	S2	1056	PSU	O2-C2-N1	-2.82	119.69	122.79
1	S2	428	OMU	O4-C4-C5	-2.82	120.21	125.16
3	L5	2839	PSU	O2-C2-N3	-2.81	116.52	121.82
3	L5	4293	PSU	O2-C2-N1	-2.80	119.70	122.79
3	L5	4571	A2M	C4-C5-N7	-2.79	106.49	109.40
3	L5	4972	PSU	C5-C6-N1	-2.79	117.92	122.11
3	L5	2508	PSU	O2-C2-N1	-2.77	119.74	122.79
3	L5	4521	PSU	C6-C5-C4	-2.77	116.26	118.20
3	L5	4228	OMG	C8-N7-C5	2.76	108.25	102.99
3	L5	4442	PSU	O2-C2-N1	-2.76	119.75	122.79
3	L5	3785	A2M	C4-C5-N7	-2.76	106.52	109.40
3	L5	3760	A2M	N3-C2-N1	-2.75	124.38	128.68
3	L5	4392	OMG	C8-N7-C5	2.75	108.23	102.99
1	S2	27	A2M	C4-C5-N7	-2.75	106.53	109.40
3	L5	3899	OMG	C8-N7-C5	2.75	108.23	102.99
83	5A	50[A]	5CT	C4-C3-C2	-2.75	107.68	113.47
1	S2	1337	4AC	C6-C5-C4	2.74	120.32	116.96
1	S2	576	A2M	C4-C5-N7	-2.74	106.55	109.40
3	L5	1316	OMG	O6-C6-C5	-2.74	119.03	124.37
3	L5	1326	A2M	C4-C5-N7	-2.73	106.55	109.40
3	L5	1322	1MA	N1-C2-N3	-2.72	122.86	126.02
3	L5	4457	PSU	O2-C2-N1	-2.70	119.81	122.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	S2	121	OMU	O4-C4-C5	-2.70	120.42	125.16
3	L5	3869	OMC	O2-C2-N3	-2.69	117.95	122.33
1	S2	354	OMU	O4-C4-C5	-2.69	120.44	125.16
1	S2	1678	A2M	C4-C5-N7	-2.69	106.60	109.40
3	L5	1625	OMG	C8-N7-C5	2.69	108.11	102.99
3	L5	400	A2M	C4-C5-N7	-2.68	106.61	109.40
1	S2	99	A2M	C4-C5-N7	-2.67	106.62	109.40
3	L5	3724	A2M	C4-C5-N7	-2.66	106.62	109.40
1	S2	436	OMG	C5-C6-N1	2.66	118.65	113.95
3	L5	4306	OMU	O2-C2-N1	-2.64	119.28	122.79
3	L5	2415	OMU	O4-C4-C5	-2.64	120.52	125.16
1	S2	468	A2M	C4-C5-N7	-2.64	106.65	109.40
3	L5	4306	OMU	O4-C4-C5	-2.64	120.52	125.16
1	S2	1639	G7M	CN7-N7-C8	-2.63	112.80	125.43
3	L5	2843	PSU	C5-C6-N1	-2.62	118.18	122.11
3	L5	4431	PSU	O2-C2-N1	-2.61	119.91	122.79
3	L5	1862	PSU	C5-C6-N1	-2.61	118.19	122.11
3	L5	1582	PSU	O2-C2-N1	-2.60	119.93	122.79
3	L5	4673	PSU	C5-C6-N1	-2.59	118.22	122.11
3	L5	1326	A2M	O2'-C2'-C1'	2.59	114.23	109.09
3	L5	4618	OMG	C5-C6-N1	2.59	118.52	113.95
2	L8	75	OMG	C5-C6-N1	2.59	118.52	113.95
1	S2	1081	PSU	C6-C5-C4	-2.58	116.39	118.20
3	L5	4618	OMG	C8-N7-C5	2.58	107.90	102.99
3	L5	4499	OMG	C5-C6-N1	2.57	118.49	113.95
1	S2	166	A2M	C4-C5-N7	-2.57	106.72	109.40
1	S2	683	OMG	C5-C6-N1	2.57	118.49	113.95
3	L5	3715	PSU	C5-C6-N1	-2.57	118.26	122.11
3	L5	4361	PSU	O2-C2-N1	-2.55	119.98	122.79
3	L5	2363	A2M	C4-C5-N7	-2.54	106.75	109.40
3	L5	2364	OMG	C8-N7-C5	2.53	107.81	102.99
3	L5	3782	5MC	O2-C2-N3	-2.53	118.22	122.33
1	S2	512	A2M	C4-C5-N7	-2.52	106.77	109.40
1	S2	918	PSU	O4'-C1'-C2'	2.52	108.70	105.14
3	L5	2364	OMG	C5-C6-N1	2.52	118.40	113.95
3	L5	3627	OMG	C8-N7-C5	2.52	107.79	102.99
3	L5	3718	A2M	N3-C2-N1	-2.52	124.74	128.68
3	L5	1322	1MA	C5-C6-N1	2.52	117.65	113.90
1	S2	590	A2M	C4-C5-N7	-2.52	106.78	109.40
1	S2	1842	4AC	C6-C5-C4	2.51	120.04	116.96
1	S2	1031	A2M	C4-C5-N7	-2.51	106.79	109.40
3	L5	3825	A2M	C2-N1-C6	2.49	123.01	118.75

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	S2	1490	OMG	C5-C6-N1	2.49	118.34	113.95
3	L5	4499	OMG	C8-N7-C5	2.48	107.72	102.99
3	L5	4370	OMG	C5-C6-N1	2.48	118.33	113.95
1	S2	1447	OMG	C5-C6-N1	2.48	118.33	113.95
3	L5	3627	OMG	C5-C6-N1	2.48	118.33	113.95
3	L5	3944	OMG	C5-C6-N1	2.47	118.32	113.95
1	S2	509	OMG	C8-N7-C5	2.47	107.69	102.99
1	S2	601	OMG	C5-C6-N1	2.46	118.30	113.95
3	L5	3899	OMG	C5-C6-N1	2.46	118.29	113.95
1	S2	436	OMG	C8-N7-C5	2.46	107.67	102.99
1	S2	1337	4AC	O2-C2-N3	-2.46	118.34	122.33
3	L5	4196	OMG	C8-N7-C5	2.45	107.66	102.99
3	L5	3851	PSU	C6-C5-C4	-2.45	116.49	118.20
3	L5	4521	PSU	O2-C2-N3	-2.45	117.20	121.82
3	L5	4590	A2M	C4-C5-N7	-2.45	106.85	109.40
3	L5	2843	PSU	O2-C2-N3	-2.44	117.21	121.82
3	L5	3718	A2M	C4-C5-N7	-2.44	106.86	109.40
3	L5	3760	A2M	C4-C5-N7	-2.44	106.86	109.40
3	L5	2843	PSU	O2-C2-N1	-2.44	120.11	122.79
1	S2	1056	PSU	C5-C6-N1	-2.43	118.46	122.11
1	S2	1328	OMG	C5-C6-N1	2.43	118.25	113.95
3	L5	3825	A2M	C4-C5-N7	-2.43	106.87	109.40
50	La	39	V5N	CD2-NE2-CE1	2.42	109.56	105.78
3	L5	3744	OMG	C5-C6-N1	2.42	118.22	113.95
3	L5	4523	A2M	C2-N1-C6	2.41	122.88	118.75
2	L8	14	OMU	O4-C4-C5	-2.41	120.92	125.16
3	L5	3853	PSU	C6-C5-C4	-2.41	116.51	118.20
3	L5	3920	PSU	C5-C6-N1	-2.41	118.50	122.11
3	L5	4423	PSU	C5-C6-N1	-2.41	118.50	122.11
3	L5	1625	OMG	C5-C6-N1	2.40	118.19	113.95
1	S2	428	OMU	O2-C2-N1	-2.40	119.60	122.79
1	S2	644	OMG	C8-N7-C5	2.40	107.56	102.99
1	S2	681	PSU	C5-C6-N1	-2.39	118.52	122.11
3	L5	4370	OMG	C8-N7-C5	2.39	107.54	102.99
1	S2	1842	4AC	C1'-N1-C2	2.39	123.75	118.42
1	S2	1643	PSU	C5-C6-N1	-2.38	118.55	122.11
3	L5	4228	OMG	C5-C6-N1	2.38	118.15	113.95
3	L5	4637	OMG	C8-N7-C5	2.37	107.51	102.99
1	S2	509	OMG	C5-C6-N1	2.37	118.14	113.95
3	L5	3830	A2M	C2-N1-C6	2.37	122.81	118.75
1	S2	1447	OMG	C8-N7-C5	2.36	107.49	102.99
1	S2	109	PSU	C5-C6-N1	-2.36	118.57	122.11

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	S2	867	OMG	C5-C6-N1	2.36	118.12	113.95
1	S2	644	OMG	C5-C6-N1	2.35	118.11	113.95
3	L5	2876	OMG	C8-N7-C5	2.35	107.47	102.99
3	L5	1860	PSU	O2-C2-N1	-2.35	120.21	122.79
3	L5	4532	PSU	O2-C2-N3	-2.34	117.40	121.82
3	L5	4296	PSU	C5-C6-N1	-2.34	118.60	122.11
3	L5	3851	PSU	C6-N1-C2	-2.34	120.29	122.68
3	L5	5001	PSU	C5-C6-N1	-2.34	118.61	122.11
1	S2	668	A2M	C2-N1-C6	2.33	122.74	118.75
3	L5	4569	PSU	C5-C6-N1	-2.33	118.62	122.11
3	L5	4494	OMG	C8-N7-C5	2.33	107.42	102.99
3	L5	4523	A2M	C4-C5-N7	-2.32	106.98	109.40
3	L5	2839	PSU	C5-C6-N1	-2.32	118.63	122.11
3	L5	4637	OMG	C5-C6-N1	2.32	118.05	113.95
3	L5	2424	OMG	C5-C6-N1	2.32	118.05	113.95
3	L5	4431	PSU	C6-C5-C4	-2.31	116.58	118.20
1	S2	1031	A2M	C2-N1-C6	2.31	122.71	118.75
3	L5	1522	OMG	O6-C6-C5	-2.31	119.86	124.37
50	La	39	V5N	O-C-CA	-2.29	118.77	124.78
3	L5	4498	OMU	O2-C2-N1	-2.29	119.74	122.79
3	L5	1322	1MA	C8-N7-C5	2.29	107.36	102.99
1	S2	683	OMG	C8-N7-C5	2.29	107.35	102.99
2	L8	69	PSU	O4'-C1'-C2'	2.28	108.36	105.14
1	S2	668	A2M	C1'-N9-C4	-2.28	122.64	126.64
1	S2	1328	OMG	C8-N7-C5	2.27	107.31	102.99
3	L5	3792	OMG	C5-C6-N1	2.26	117.95	113.95
3	L5	1524	A2M	O2'-C2'-C1'	-2.26	104.61	109.09
3	L5	3944	OMG	C8-N7-C5	2.26	107.30	102.99
3	L5	3925	OMU	O4-C4-C5	-2.26	121.18	125.16
1	S2	822	PSU	C5-C6-N1	-2.26	118.72	122.11
1	S2	1842	4AC	C5-C4-N3	-2.26	118.96	122.59
50	La	39	V5N	CG-CD2-NE2	-2.25	104.75	108.67
1	S2	1136	PSU	C5-C6-N1	-2.25	118.74	122.11
3	L5	4673	PSU	O2-C2-N1	-2.24	120.32	122.79
3	L5	4442	PSU	O2-C2-N3	-2.24	117.59	121.82
1	S2	1490	OMG	O6-C6-C5	-2.24	120.00	124.37
1	S2	1490	OMG	C8-N7-C5	2.24	107.25	102.99
3	L5	4623	OMG	C8-N7-C5	2.23	107.25	102.99
3	L5	4590	A2M	C2-N1-C6	2.23	122.58	118.75
3	L5	4569	PSU	O4-C4-C5	-2.23	118.21	124.05
1	S2	1174	PSU	C6-C5-C4	-2.23	116.64	118.20
3	L5	1862	PSU	O2-C2-N3	-2.23	117.62	121.82

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	2424	OMG	C8-N7-C5	2.22	107.23	102.99
3	L5	1536	PSU	C5-C6-N1	-2.22	118.77	122.11
3	L5	4370	OMG	O6-C6-C5	-2.22	120.03	124.37
1	S2	93	PSU	O2-C2-N3	-2.22	117.63	121.82
3	L5	1326	A2M	C2-N1-C6	2.22	122.55	118.75
1	S2	1288	OMU	O2-C2-N1	-2.22	119.84	122.79
3	L5	4293	PSU	C6-C5-C4	-2.21	116.65	118.20
3	L5	4552	PSU	C5-C6-N1	-2.21	118.79	122.11
2	L8	75	OMG	C8-N7-C5	2.21	107.20	102.99
1	S2	406	PSU	C5-C6-N1	-2.21	118.79	122.11
3	L5	3744	OMG	C8-N7-C5	2.20	107.19	102.99
1	S2	1804	OMU	O2-C2-N1	-2.20	119.86	122.79
1	S2	867	OMG	C8-N7-C5	2.20	107.18	102.99
3	L5	4403	PSU	C5-C6-N1	-2.19	118.82	122.11
3	L5	3867	A2M	O2'-C2'-C1'	-2.19	104.76	109.09
1	S2	34	PSU	C5-C6-N1	-2.19	118.83	122.11
1	S2	601	OMG	C8-N7-C5	2.19	107.16	102.99
3	L5	4442	PSU	O4'-C1'-C2'	2.18	108.22	105.14
3	L5	4628	PSU	O4'-C1'-C2'	2.17	108.21	105.14
82	Pt	21	H2U	C5-C6-N1	-2.17	104.47	111.61
3	L5	3744	OMG	O6-C6-C5	-2.17	120.14	124.37
3	L5	2804	OMC	C6-C5-C4	2.16	121.00	117.50
3	L5	4392	OMG	C5-C6-N1	2.16	117.77	113.95
3	L5	1326	A2M	N6-C6-N1	2.16	123.06	118.57
3	L5	3792	OMG	C8-N7-C5	2.16	107.10	102.99
3	L5	1862	PSU	O2-C2-N1	-2.16	120.42	122.79
1	S2	1081	PSU	O2-C2-N3	-2.16	117.75	121.82
1	S2	1248	B8N	O36-C34-O35	-2.15	119.20	124.09
3	L5	5001	PSU	O2-C2-N3	-2.15	117.76	121.82
3	L5	4972	PSU	O2-C2-N3	-2.14	117.78	121.82
3	L5	4623	OMG	C5-C6-N1	2.14	117.73	113.95
3	L5	4628	PSU	C5-C6-N1	-2.14	118.91	122.11
3	L5	4196	OMG	C5-C6-N1	2.13	117.72	113.95
3	L5	4220	6MZ	C4-C5-N7	-2.13	107.18	109.40
1	S2	1337	4AC	C5-C4-N3	-2.13	119.16	122.59
3	L5	4361	PSU	O2-C2-N3	-2.13	117.80	121.82
1	S2	1248	B8N	O2-C2-N3	-2.13	119.03	121.99
3	L5	4673	PSU	O2-C2-N3	-2.13	117.80	121.82
1	S2	1639	G7M	C3'-C2'-C1'	2.12	104.18	100.98
3	L5	3639	PSU	C5-C6-N1	-2.12	118.93	122.11
3	L5	4521	PSU	C5-C6-N1	-2.12	118.93	122.11
3	L5	2815	A2M	C4-C5-N7	-2.12	107.19	109.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	L5	1860	PSU	O2-C2-N3	-2.11	117.83	121.82
3	L5	4689	PSU	C5-C6-N1	-2.11	118.94	122.11
3	L5	3818	UY1	C5-C6-N1	-2.11	118.94	122.11
1	S2	1081	PSU	O2-C2-N1	-2.11	120.47	122.79
3	L5	2351	OMC	O2-C2-N3	-2.11	118.91	122.33
3	L5	2837	OMU	C2'-C1'-N1	-2.11	110.13	114.22
3	L5	1316	OMG	C8-N7-C5	2.10	106.99	102.99
3	L5	4530	UR3	C3U-N3-C2	2.09	120.98	117.31
39	LA	216	V5N	CD2-NE2-CE1	2.09	109.05	105.78
3	L5	4569	PSU	O2-C2-N3	-2.09	117.88	121.82
1	S2	572	PSU	C5-C6-N1	-2.09	118.97	122.11
3	L5	2837	OMU	O4-C4-C5	-2.09	121.49	125.16
3	L5	3792	OMG	O6-C6-C5	-2.09	120.29	124.37
3	L5	3884	PSU	C5-C6-N1	-2.09	118.98	122.11
3	L5	4536	OMC	C6-C5-C4	2.08	120.86	117.50
2	L8	55	PSU	C5-C6-N1	-2.08	118.99	122.11
82	Pt	56	PSU	C5-C6-N1	-2.08	119.00	122.11
1	S2	105	PSU	C5-C6-N1	-2.08	119.00	122.11
1	S2	1337	4AC	O7-C7-N4	2.07	125.17	121.82
1	S2	1248	B8N	O36-C34-C33	2.07	120.44	113.38
3	L5	1881	OMC	O2'-C2'-C1'	2.07	113.12	109.08
3	L5	3899	OMG	O6-C6-C5	-2.07	120.33	124.37
3	L5	4590	A2M	O4'-C4'-C3'	-2.07	101.02	105.11
1	S2	1232	PSU	C5-C6-N1	-2.07	119.00	122.11
3	L5	4293	PSU	O2-C2-N3	-2.07	117.92	121.82
3	L5	4228	OMG	O6-C6-C5	-2.07	120.34	124.37
3	L5	1534	A2M	C2-N1-C6	2.07	122.29	118.75
1	S2	1056	PSU	O4'-C1'-C2'	2.06	108.05	105.14
1	S2	119	PSU	C5-C6-N1	-2.06	119.02	122.11
39	LA	216	V5N	CG-CD2-NE2	-2.06	105.09	108.67
1	S2	627	OMU	O2-C2-N1	-2.06	120.05	122.79
3	L5	1625	OMG	O6-C6-C5	-2.05	120.36	124.37
1	S2	918	PSU	C5-C6-N1	-2.05	119.03	122.11
3	L5	3723	A2M	C4-C5-N7	-2.05	107.27	109.40
2	L8	14	OMU	O2-C2-N1	-2.04	120.07	122.79
3	L5	4227	OMU	O2-C2-N1	-2.04	120.07	122.79
1	S2	172	OMU	O2-C2-N1	-2.04	120.07	122.79
3	L5	2787	A2M	C5'-C4'-C3'	-2.04	107.53	115.18
1	S2	27	A2M	C2-N1-C6	2.04	122.24	118.75
3	L5	2508	PSU	C5-C6-N1	-2.04	119.05	122.11
1	S2	1248	B8N	O4'-C1'-C2'	2.04	108.02	105.14
3	L5	2415	OMU	C1'-N1-C2	2.03	121.25	117.57

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	S2	1004	PSU	C5-C6-N1	-2.03	119.06	122.11
3	L5	3808	OMC	O2-C2-N3	-2.03	119.03	122.33
3	L5	3639	PSU	O2-C2-N3	-2.03	117.99	121.82
66	Lb	5	MLZ	CD-CG-CB	-2.03	106.44	113.62
1	S2	218	PSU	C6-C5-C4	-2.03	116.78	118.20
3	L5	3758	PSU	C5-C6-N1	-2.02	119.07	122.11
82	Pt	8	4SU	O2-C2-N1	-2.02	120.10	122.79
3	L5	4532	PSU	O2-C2-N1	-2.02	120.56	122.79
3	L5	4500	PSU	O4'-C1'-C2'	2.02	107.99	105.14
1	S2	93	PSU	C5-C6-N1	-2.02	119.08	122.11
1	S2	468	A2M	C2-N1-C6	2.02	122.21	118.75
1	S2	1842	4AC	N4-C4-N3	2.02	117.24	113.85
1	S2	801	PSU	C5-C6-N1	-2.02	119.08	122.11
1	S2	1347	PSU	C5-C6-N1	-2.02	119.09	122.11
3	L5	3825	A2M	C5-C6-N6	2.01	123.41	120.35
3	L5	2804	OMC	O2-C2-N3	-2.01	119.06	122.33
3	L5	2632	PSU	O4'-C1'-C2'	2.01	107.98	105.14
1	S2	815	PSU	C5-C6-N1	-2.01	119.09	122.11
3	L5	1522	OMG	C2-N1-C6	-2.01	121.40	125.10
3	L5	4636	PSU	O4'-C1'-C2'	2.01	107.97	105.14
3	L5	1625	OMG	C2-N1-C6	-2.00	121.41	125.10
3	L5	2351	OMC	N4-C4-N3	2.00	121.48	117.97
3	L5	1522	OMG	C8-N7-C5	2.00	106.80	102.99
3	L5	3734	PSU	O4'-C1'-C2'	2.00	107.97	105.14
3	L5	3851	PSU	O2-C2-N3	-2.00	118.04	121.82

There are no chirality outliers.

All (157) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	L8	14	OMU	C1'-C2'-O2'-CM2
6	SA	2	SAC	OAC-C1A-N-CA
6	SA	2	SAC	CB-CA-N-C1A
6	SA	2	SAC	O-C-CA-CB
29	SV	1	AME	OT-CT1-N-CA
64	Lr	2	SAC	C2A-C1A-N-CA
1	S2	27	A2M	C1'-C2'-O2'-CM'
1	S2	159	A2M	C1'-C2'-O2'-CM'
1	S2	166	A2M	C1'-C2'-O2'-CM'
1	S2	462	OMC	C1'-C2'-O2'-CM2
1	S2	484	A2M	C1'-C2'-O2'-CM'
1	S2	576	A2M	C3'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
1	S2	644	OMG	O4'-C4'-C5'-O5'
1	S2	644	OMG	C1'-C2'-O2'-CM2
1	S2	668	A2M	C1'-C2'-O2'-CM'
1	S2	867	OMG	C1'-C2'-O2'-CM2
1	S2	1243	PSU	O4'-C4'-C5'-O5'
1	S2	1288	OMU	C1'-C2'-O2'-CM2
1	S2	1326	UY1	C2'-C1'-C5-C6
1	S2	1383	A2M	C1'-C2'-O2'-CM'
1	S2	1442	OMU	O4'-C4'-C5'-O5'
1	S2	1447	OMG	C1'-C2'-O2'-CM2
1	S2	1490	OMG	C1'-C2'-O2'-CM2
1	S2	1678	A2M	C1'-C2'-O2'-CM'
3	L5	398	A2M	C1'-C2'-O2'-CM'
3	L5	2415	OMU	C1'-C2'-O2'-CM2
3	L5	2424	OMG	C1'-C2'-O2'-CM2
3	L5	2815	A2M	C1'-C2'-O2'-CM'
3	L5	3701	OMC	C2'-C1'-N1-C6
3	L5	3718	A2M	C1'-C2'-O2'-CM'
3	L5	3723	A2M	C1'-C2'-O2'-CM'
3	L5	3760	A2M	C1'-C2'-O2'-CM'
3	L5	3925	OMU	C1'-C2'-O2'-CM2
3	L5	3944	OMG	C3'-C4'-C5'-O5'
3	L5	4220	6MZ	N1-C6-N6-C9
3	L5	4370	OMG	C1'-C2'-O2'-CM2
3	L5	4420	PSU	C3'-C4'-C5'-O5'
3	L5	4420	PSU	O4'-C4'-C5'-O5'
3	L5	4500	PSU	C3'-C4'-C5'-O5'
3	L5	4523	A2M	C1'-C2'-O2'-CM'
3	L5	4571	A2M	C1'-C2'-O2'-CM'
3	L5	4590	A2M	C4'-C5'-O5'-P
3	L5	4636	PSU	C3'-C4'-C5'-O5'
39	LA	216	V5N	O-C-CA-CB
83	5A	50[A]	5CT	C2-C1-NZ-CE
83	5A	50[A]	5CT	NZ-C1-C2-C3
83	5A	50[A]	5CT	NZ-C1-C2-O1
83	5A	50[A]	5CT	C2-C3-C4-N1
83	5A	50[A]	5CT	C-CA-CB-CG
83	5A	50[A]	5CT	N-CA-CB-CG
83	5A	50[B]	5CT	CD-CE-NZ-C1
83	5A	50[B]	5CT	NZ-C1-C2-C3
83	5A	50[B]	5CT	NZ-C1-C2-O1
83	5A	50[B]	5CT	C1-C2-C3-C4

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Mol	Chain	Res	Type	Atoms
83	5A	50[B]	5CT	O1-C2-C3-C4
83	5A	50[B]	5CT	C-CA-CB-CG
83	5A	50[B]	5CT	N-CA-CB-CG
3	L5	3701	OMC	C2'-C1'-N1-C2
79	Lo	53	MLZ	CG-CD-CE-NZ
1	S2	590	A2M	O4'-C4'-C5'-O5'
1	S2	590	A2M	C3'-C4'-C5'-O5'
1	S2	644	OMG	C3'-C4'-C5'-O5'
1	S2	668	A2M	O4'-C4'-C5'-O5'
1	S2	1243	PSU	C3'-C4'-C5'-O5'
1	S2	1442	OMU	C3'-C4'-C5'-O5'
1	S2	1851	MA6	O4'-C4'-C5'-O5'
3	L5	2815	A2M	C3'-C4'-C5'-O5'
3	L5	3785	A2M	O4'-C4'-C5'-O5'
3	L5	3944	OMG	O4'-C4'-C5'-O5'
3	L5	4500	PSU	O4'-C4'-C5'-O5'
82	Pt	21	H2U	O4'-C4'-C5'-O5'
6	SA	2	SAC	C2A-C1A-N-CA
64	Lr	2	SAC	OAC-C1A-N-CA
83	5A	50[A]	5CT	CD-CE-NZ-C1
1	S2	668	A2M	C3'-C4'-C5'-O5'
1	S2	683	OMG	O4'-C4'-C5'-O5'
1	S2	1851	MA6	C3'-C4'-C5'-O5'
3	L5	2364	OMG	O4'-C4'-C5'-O5'
3	L5	2815	A2M	O4'-C4'-C5'-O5'
3	L5	3785	A2M	C3'-C4'-C5'-O5'
3	L5	4636	PSU	O4'-C4'-C5'-O5'
3	L5	1625	OMG	C3'-C2'-O2'-CM2
3	L5	4228	OMG	C3'-C2'-O2'-CM2
29	SV	1	AME	CA-CB-CG-SD
1	S2	576	A2M	O4'-C4'-C5'-O5'
1	S2	683	OMG	C3'-C4'-C5'-O5'
1	S2	1447	OMG	C3'-C4'-C5'-O5'
3	L5	3764	PSU	C3'-C4'-C5'-O5'
3	L5	4447	5MC	C2'-C1'-N1-C6
3	L5	2422	OMC	O4'-C4'-C5'-O5'
3	L5	3867	A2M	C3'-C4'-C5'-O5'
3	L5	2422	OMC	C3'-C4'-C5'-O5'
82	Pt	21	H2U	C3'-C4'-C5'-O5'
29	SV	1	AME	N-CA-CB-CG
3	L5	3760	A2M	O4'-C4'-C5'-O5'
83	5A	50[B]	5CT	CE-CD-CG-CB

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Mol	Chain	Res	Type	Atoms
3	L5	3764	PSU	O4'-C4'-C5'-O5'
83	5A	50[A]	5CT	C1-C2-C3-C4
3	L5	400	A2M	C1'-C2'-O2'-CM'
3	L5	3724	A2M	C1'-C2'-O2'-CM'
3	L5	4637	OMG	C1'-C2'-O2'-CM2
20	SX	62	HY3	O-C-CA-C3
1	S2	1248	B8N	C31-C32-C33-N34
83	5A	50[A]	5CT	CG-CD-CE-NZ
3	L5	1326	A2M	C4'-C5'-O5'-P
64	Lr	2	SAC	C-CA-N-C1A
64	Lr	2	SAC	CB-CA-N-C1A
1	S2	172	OMU	C3'-C2'-O2'-CM2
3	L5	1534	A2M	C3'-C2'-O2'-CM'
3	L5	3701	OMC	O4'-C1'-N1-C6
3	L5	4447	5MC	O4'-C1'-N1-C6
3	L5	4500	PSU	C4'-C5'-O5'-P
1	S2	822	PSU	C3'-C4'-C5'-O5'
3	L5	3701	OMC	O4'-C1'-N1-C2
3	L5	1534	A2M	C4'-C5'-O5'-P
3	L5	3818	UY1	C4'-C5'-O5'-P
3	L5	4447	5MC	O4'-C1'-N1-C2
1	S2	1447	OMG	O4'-C4'-C5'-O5'
3	L5	1781	PSU	C3'-C4'-C5'-O5'
1	S2	1248	B8N	C32-C31-N3-C4
1	S2	590	A2M	C4'-C5'-O5'-P
1	S2	644	OMG	C4'-C5'-O5'-P
1	S2	1490	OMG	C4'-C5'-O5'-P
1	S2	1851	MA6	C4'-C5'-O5'-P
82	Pt	47	G7M	C4'-C5'-O5'-P
3	L5	3760	A2M	C3'-C4'-C5'-O5'
3	L5	4447	5MC	C2'-C1'-N1-C2
1	S2	573	PSU	O4'-C1'-C5-C4
1	S2	1326	UY1	O4'-C1'-C5-C4
3	L5	3695	PSU	O4'-C1'-C5-C4
3	L5	4521	PSU	O4'-C1'-C5-C4
1	S2	428	OMU	O4'-C1'-N1-C6
1	S2	428	OMU	C2'-C1'-N1-C6
3	L5	2815	A2M	C4'-C5'-O5'-P
3	L5	3851	PSU	C3'-C4'-C5'-O5'
79	Lo	53	MLZ	CA-CB-CG-CD
82	Pt	21	H2U	C4'-C5'-O5'-P
83	5A	50[B]	5CT	CA-CB-CG-CD

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Mol	Chain	Res	Type	Atoms
1	S2	1490	OMG	O4'-C4'-C5'-O5'
3	L5	1625	OMG	C3'-C4'-C5'-O5'
3	L5	2364	OMG	C3'-C4'-C5'-O5'
1	S2	1328	OMG	C1'-C2'-O2'-CM2
1	S2	1442	OMU	C1'-C2'-O2'-CM2
3	L5	2804	OMC	C1'-C2'-O2'-CM2
3	L5	2351	OMC	C2'-C1'-N1-C2
1	S2	1081	PSU	C4'-C5'-O5'-P
1	S2	1326	UY1	O4'-C1'-C5-C6
3	L5	4521	PSU	O4'-C1'-C5-C6
3	L5	3844	PSU	C4'-C5'-O5'-P
3	L5	1534	A2M	O4'-C4'-C5'-O5'
3	L5	2351	OMC	O4'-C4'-C5'-O5'
3	L5	1524	A2M	C3'-C2'-O2'-CM'
3	L5	2401	A2M	C3'-C2'-O2'-CM'
3	L5	1792	PSU	O4'-C4'-C5'-O5'
3	L5	4471	PSU	C3'-C4'-C5'-O5'
3	L5	2351	OMC	C2'-C1'-N1-C6
79	Lo	53	MLZ	N-CA-CB-CG

There are no ring outliers.

No monomer is involved in short contacts.

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 636 ligands modelled in this entry, 609 are monoatomic - leaving 27 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
84	SPD	L5	5505	-	9,9,9	0.42	0	8,8,8	1.11	1 (12%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
91	MET	Pt	78	82	6,7,8	0.69	0	2,7,9	1.99	1 (50%)
85	PUT	L5	5521	-	5,5,5	0.09	0	4,4,4	0.22	0
85	PUT	L5	5515	-	5,5,5	0.15	0	4,4,4	0.18	0
84	SPD	L5	5507	-	9,9,9	0.33	0	8,8,8	0.81	0
84	SPD	L5	5513	-	9,9,9	0.29	0	8,8,8	0.80	0
85	PUT	S2	1902	-	5,5,5	0.12	0	4,4,4	0.17	0
85	PUT	L5	5522	-	5,5,5	0.07	0	4,4,4	0.17	0
84	SPD	L5	5506	-	9,9,9	0.16	0	8,8,8	0.22	0
85	PUT	L5	5516	-	5,5,5	0.13	0	4,4,4	0.18	0
85	PUT	L5	5519	-	5,5,5	0.16	0	4,4,4	0.23	0
84	SPD	L5	5511	-	9,9,9	0.28	0	8,8,8	0.97	1 (12%)
85	PUT	L5	5520	-	5,5,5	0.18	0	4,4,4	0.23	0
89	3H3	L5	5523	-	33,34,34	3.33	13 (39%)	34,45,45	3.99	19 (55%)
84	SPD	L5	5509	-	9,9,9	0.23	0	8,8,8	0.49	0
84	SPD	L5	5502	-	9,9,9	0.35	0	8,8,8	0.71	0
84	SPD	L5	5512	-	9,9,9	0.38	0	8,8,8	0.61	0
84	SPD	L5	5504	-	9,9,9	0.39	0	8,8,8	1.02	0
85	PUT	L5	5518	-	5,5,5	0.17	0	4,4,4	0.22	0
84	SPD	S2	1901	-	9,9,9	0.31	0	8,8,8	0.68	0
85	PUT	L5	5517	-	5,5,5	0.13	0	4,4,4	0.15	0
88	ANM	L5	5501	86	20,20,20	1.20	2 (10%)	22,27,27	1.58	5 (22%)
84	SPD	L5	5503	-	9,9,9	0.29	0	8,8,8	1.03	1 (12%)
84	SPD	L5	5508	-	9,9,9	0.36	0	8,8,8	0.56	0
85	PUT	L5	5514	-	5,5,5	0.15	0	4,4,4	0.19	0
85	PUT	S2	1903	-	5,5,5	0.08	0	4,4,4	0.17	0
84	SPD	L5	5510	-	9,9,9	0.29	0	8,8,8	0.75	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
84	SPD	L5	5505	-	-	4/7/7/7	-
91	MET	Pt	78	82	-	2/5/6/8	-
85	PUT	L5	5521	-	-	0/3/3/3	-
85	PUT	L5	5515	-	-	1/3/3/3	-
84	SPD	L5	5507	-	-	4/7/7/7	-
84	SPD	L5	5513	-	-	2/7/7/7	-
85	PUT	S2	1902	-	-	1/3/3/3	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
85	PUT	L5	5522	-	-	2/3/3/3	-
84	SPD	L5	5506	-	-	4/7/7/7	-
85	PUT	L5	5516	-	-	2/3/3/3	-
85	PUT	L5	5519	-	-	1/3/3/3	-
84	SPD	L5	5511	-	-	3/7/7/7	-
85	PUT	L5	5520	-	-	1/3/3/3	-
89	3H3	L5	5523	-	-	16/39/51/51	0/1/2/2
84	SPD	L5	5509	-	-	3/7/7/7	-
84	SPD	L5	5502	-	-	0/7/7/7	-
84	SPD	L5	5512	-	-	2/7/7/7	-
84	SPD	L5	5504	-	-	4/7/7/7	-
85	PUT	L5	5518	-	-	1/3/3/3	-
84	SPD	S2	1901	-	-	4/7/7/7	-
85	PUT	L5	5517	-	-	0/3/3/3	-
88	ANM	L5	5501	86	-	2/10/23/23	0/2/2/2
84	SPD	L5	5503	-	-	3/7/7/7	-
84	SPD	L5	5508	-	-	2/7/7/7	-
85	PUT	L5	5514	-	-	0/3/3/3	-
85	PUT	S2	1903	-	-	0/3/3/3	-
84	SPD	L5	5510	-	-	4/7/7/7	-

All (15) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
89	L5	5523	3H3	C13-C12	9.39	1.53	1.33
89	L5	5523	3H3	O3-C22	7.47	1.38	1.23
89	L5	5523	3H3	O4-C23	7.09	1.37	1.23
89	L5	5523	3H3	C23-N	6.52	1.48	1.37
89	L5	5523	3H3	C22-N	5.47	1.46	1.37
89	L5	5523	3H3	C3-C2	5.15	1.54	1.33
88	L5	5501	ANM	O2-C5	4.39	1.45	1.35
89	L5	5523	3H3	C19-C20	3.63	1.58	1.53
89	L5	5523	3H3	O1-C11	-3.10	1.39	1.44
89	L5	5523	3H3	C4-C3	3.07	1.53	1.44
89	L5	5523	3H3	O1-C10	2.27	1.39	1.34
89	L5	5523	3H3	O-C10	-2.21	1.17	1.21
88	L5	5501	ANM	O2-C2	-2.19	1.41	1.44
89	L5	5523	3H3	C24-C20	-2.14	1.49	1.53
89	L5	5523	3H3	O2-C16	-2.12	1.18	1.21

All (28) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
89	L5	5523	3H3	O3-C22-N	-9.93	104.55	120.28
89	L5	5523	3H3	C22-N-C23	-9.43	114.34	125.78
89	L5	5523	3H3	O4-C23-N	-8.53	106.76	120.28
89	L5	5523	3H3	O1-C11-C1	8.01	116.77	106.31
89	L5	5523	3H3	O3-C22-C21	-6.43	110.10	122.62
89	L5	5523	3H3	C15-C14-C13	-6.15	104.99	110.75
89	L5	5523	3H3	O4-C23-C24	-5.12	112.65	122.62
89	L5	5523	3H3	C11-C12-C13	-4.03	108.62	120.93
88	L5	5501	ANM	O2-C5-C6	3.83	118.14	111.09
89	L5	5523	3H3	C25-C12-C13	-3.46	114.34	123.45
89	L5	5523	3H3	C21-C22-N	-3.39	111.80	115.95
89	L5	5523	3H3	C7-C8-C9	-2.87	119.69	125.85
88	L5	5501	ANM	C15-C16-N1	2.81	114.93	111.47
89	L5	5523	3H3	O1-C10-C9	2.80	117.74	111.38
91	Pt	78	MET	CE-SD-CG	2.74	109.82	100.40
89	L5	5523	3H3	C8-C9-C10	-2.58	116.34	122.92
89	L5	5523	3H3	C4-C3-C2	-2.57	106.06	124.42
88	L5	5501	ANM	O2-C5-O3	-2.40	118.20	122.96
89	L5	5523	3H3	C1-C2-C3	-2.38	121.15	126.16
89	L5	5523	3H3	C25-C12-C11	-2.32	111.67	115.68
88	L5	5501	ANM	C14-O1-C9	2.29	122.48	117.51
89	L5	5523	3H3	C19-C18-C17	-2.24	108.72	113.19
89	L5	5523	3H3	C6-C7-C8	-2.24	107.04	112.92
89	L5	5523	3H3	C24-C23-N	-2.22	113.23	115.95
84	L5	5511	SPD	C7-C8-C9	-2.18	106.28	114.28
84	L5	5505	SPD	C4-C5-N6	-2.18	106.27	112.14
88	L5	5501	ANM	C2-O2-C5	-2.10	114.47	117.72
84	L5	5503	SPD	C4-C5-N6	-2.02	106.69	112.14

There are no chirality outliers.

All (68) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
84	S2	1901	SPD	C4-C5-N6-C7
84	L5	5509	SPD	C8-C7-N6-C5
89	L5	5523	3H3	C2-C1-C11-O1
89	L5	5523	3H3	C2-C1-C11-C12
89	L5	5523	3H3	C-C1-C11-O1
89	L5	5523	3H3	C-C1-C11-C12
89	L5	5523	3H3	C1-C11-O1-C10
89	L5	5523	3H3	C12-C11-O1-C10

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Mol	Chain	Res	Type	Atoms
89	L5	5523	3H3	C9-C10-O1-C11
89	L5	5523	3H3	C12-C13-C14-C16
89	L5	5523	3H3	C25-C12-C13-C14
89	L5	5523	3H3	C1-C11-C12-C25
91	Pt	78	MET	CA-CB-CG-SD
84	L5	5503	SPD	N6-C7-C8-C9
84	L5	5513	SPD	N6-C7-C8-C9
84	L5	5508	SPD	C3-C4-C5-N6
84	L5	5511	SPD	C3-C4-C5-N6
89	L5	5523	3H3	O-C10-O1-C11
84	L5	5504	SPD	C3-C4-C5-N6
84	L5	5511	SPD	N6-C7-C8-C9
89	L5	5523	3H3	C2-C3-C4-C5
84	L5	5506	SPD	C3-C4-C5-N6
84	L5	5504	SPD	N6-C7-C8-C9
84	L5	5506	SPD	N6-C7-C8-C9
89	L5	5523	3H3	O1-C10-C9-C8
84	L5	5507	SPD	C2-C3-C4-C5
85	L5	5518	PUT	N1-C1-C2-C3
91	Pt	78	MET	CB-CG-SD-CE
84	L5	5511	SPD	C8-C7-N6-C5
85	L5	5522	PUT	C1-C2-C3-C4
84	S2	1901	SPD	C7-C8-C9-N10
84	L5	5509	SPD	C7-C8-C9-N10
84	S2	1901	SPD	N6-C7-C8-C9
84	L5	5509	SPD	C4-C5-N6-C7
84	L5	5510	SPD	N1-C2-C3-C4
84	L5	5505	SPD	N6-C7-C8-C9
84	L5	5503	SPD	C2-C3-C4-C5
85	L5	5515	PUT	C1-C2-C3-C4
84	L5	5505	SPD	C3-C4-C5-N6
89	L5	5523	3H3	O1-C11-C12-C25
84	L5	5510	SPD	N6-C7-C8-C9
89	L5	5523	3H3	O-C10-C9-C8
84	L5	5504	SPD	C7-C8-C9-N10
84	L5	5505	SPD	C7-C8-C9-N10
84	L5	5513	SPD	C7-C8-C9-N10
84	L5	5506	SPD	C2-C3-C4-C5
84	L5	5504	SPD	C4-C5-N6-C7
85	S2	1902	PUT	C1-C2-C3-C4
84	L5	5512	SPD	C2-C3-C4-C5
85	L5	5519	PUT	C1-C2-C3-C4

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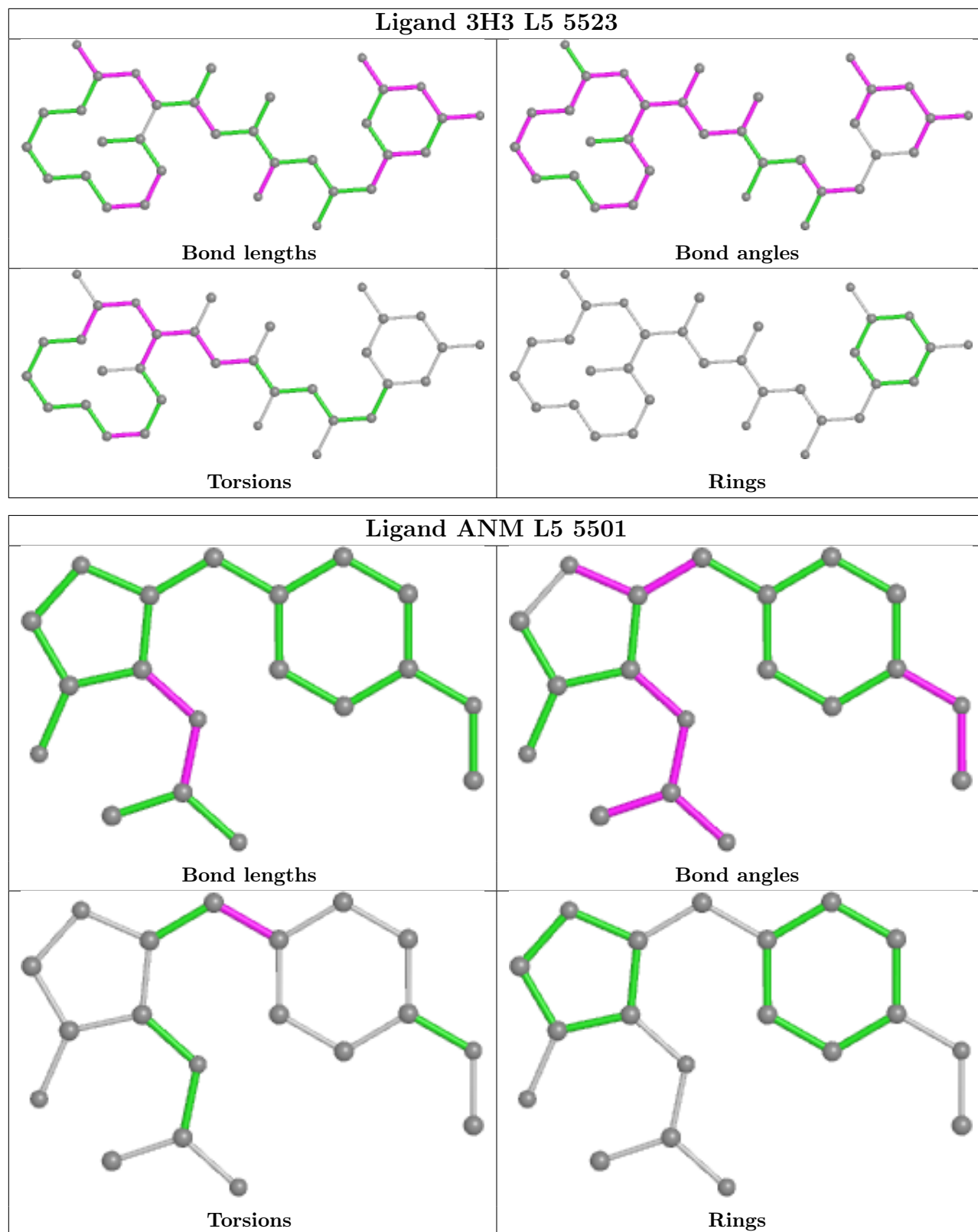
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Mol	Chain	Res	Type	Atoms
85	L5	5520	PUT	C1-C2-C3-C4
84	L5	5508	SPD	C2-C3-C4-C5
84	L5	5510	SPD	C4-C5-N6-C7
89	L5	5523	3H3	C12-C13-C14-C15
84	L5	5505	SPD	C2-C3-C4-C5
84	L5	5507	SPD	C4-C5-N6-C7
84	L5	5506	SPD	C4-C5-N6-C7
84	L5	5512	SPD	C4-C5-N6-C7
88	L5	5501	ANM	C11-C12-C15-C16
85	L5	5516	PUT	C1-C2-C3-C4
88	L5	5501	ANM	C13-C12-C15-C16
84	S2	1901	SPD	C8-C7-N6-C5
84	L5	5510	SPD	C7-C8-C9-N10
84	L5	5507	SPD	N6-C7-C8-C9
84	L5	5507	SPD	N1-C2-C3-C4
85	L5	5516	PUT	C2-C3-C4-N2
84	L5	5503	SPD	C8-C7-N6-C5
85	L5	5522	PUT	C2-C3-C4-N2

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.



5.7 Other polymers [\(i\)](#)

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

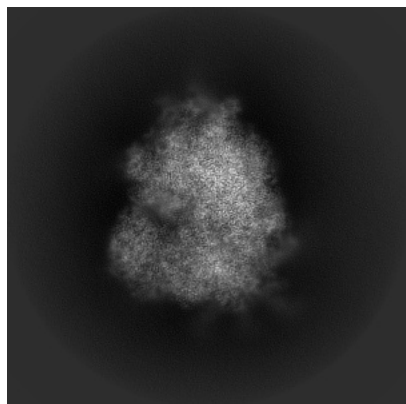
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-29757. These allow visual inspection of the internal detail of the map and identification of artifacts.

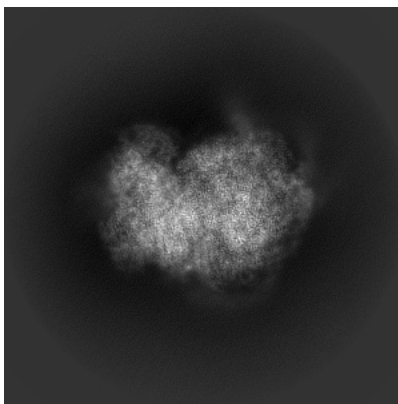
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

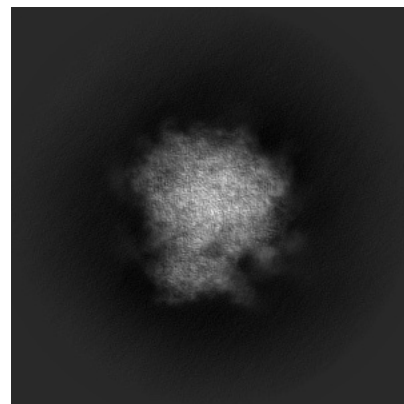
6.1.1 Primary map



X

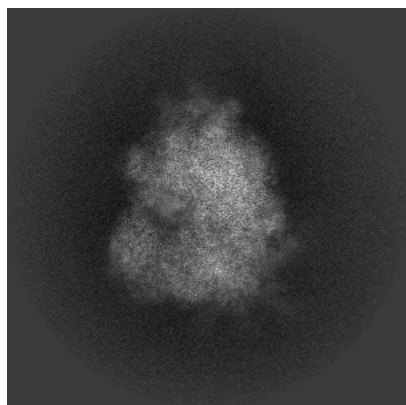


Y

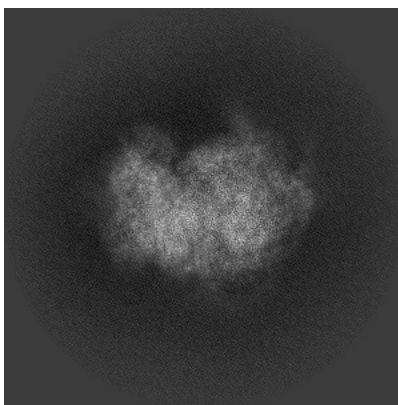


Z

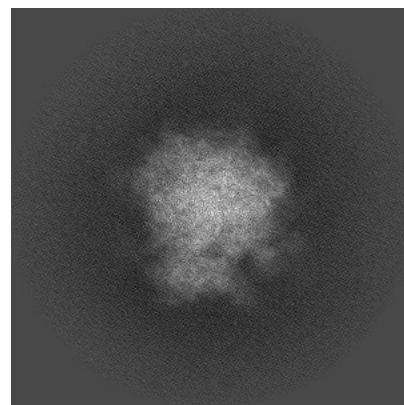
6.1.2 Raw map



X



Y

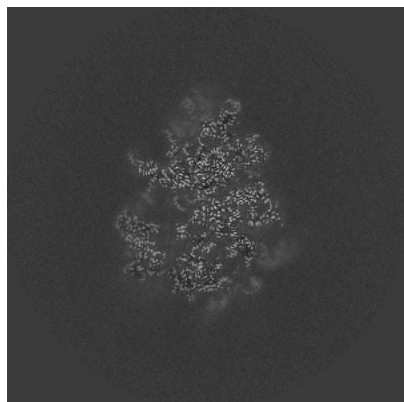


Z

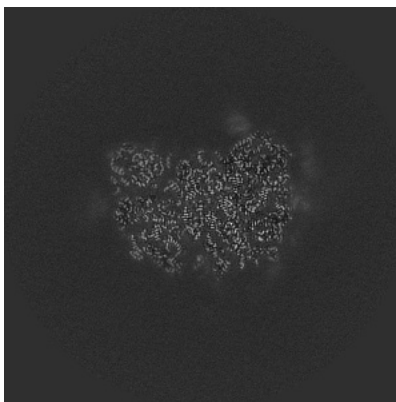
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

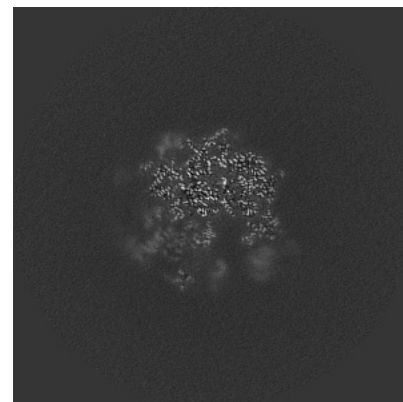
6.2.1 Primary map



X Index: 320

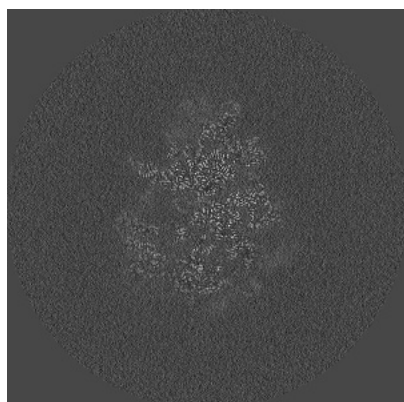


Y Index: 320

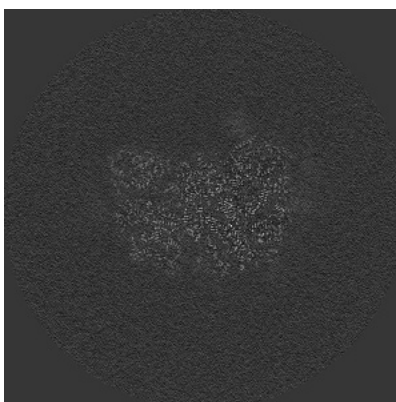


Z Index: 320

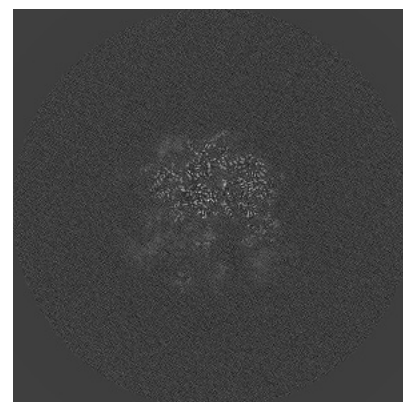
6.2.2 Raw map



X Index: 320



Y Index: 320

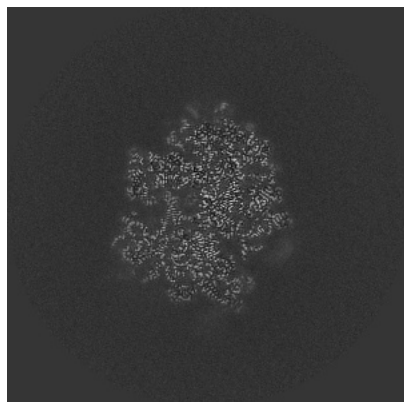


Z Index: 320

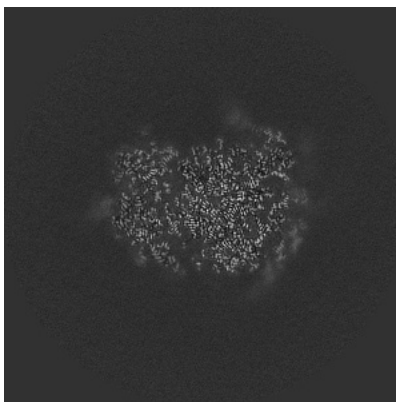
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

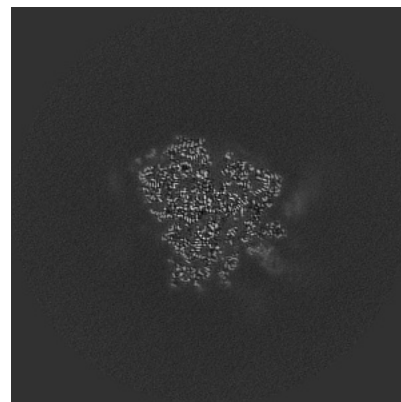
6.3.1 Primary map



X Index: 298

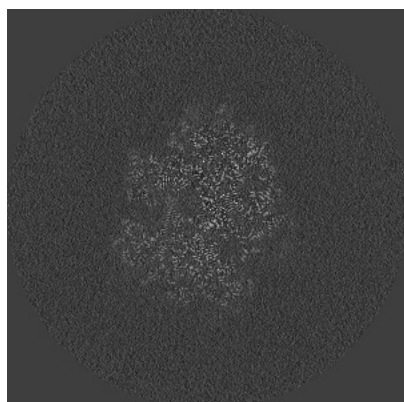


Y Index: 332

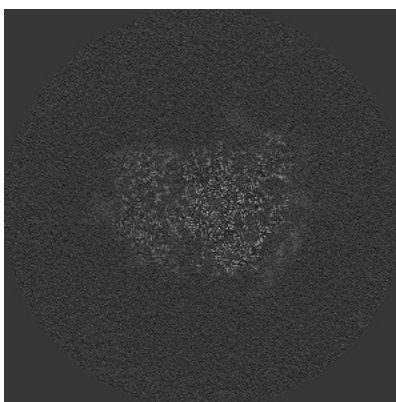


Z Index: 367

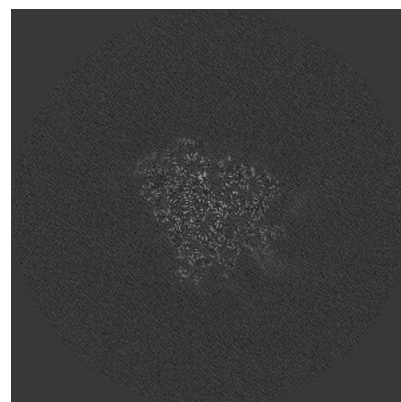
6.3.2 Raw map



X Index: 299



Y Index: 332

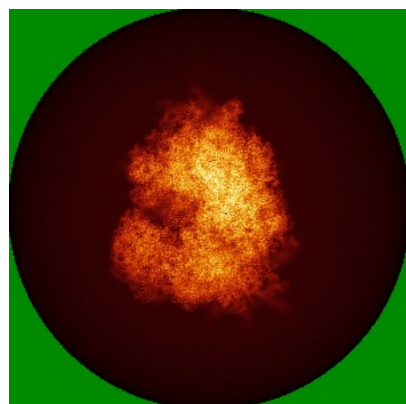


Z Index: 362

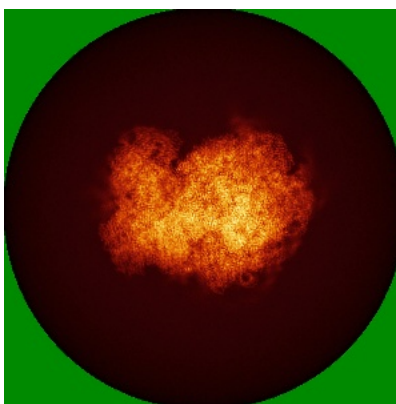
The images above show the largest variance slices of the map in three orthogonal directions.

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

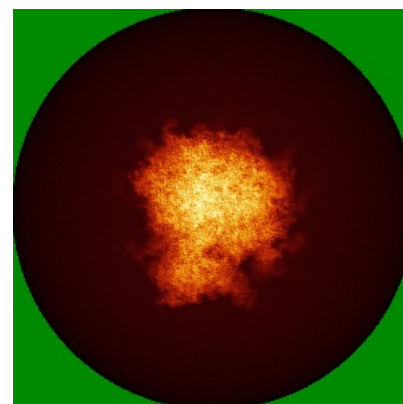
6.4.1 Primary map



X

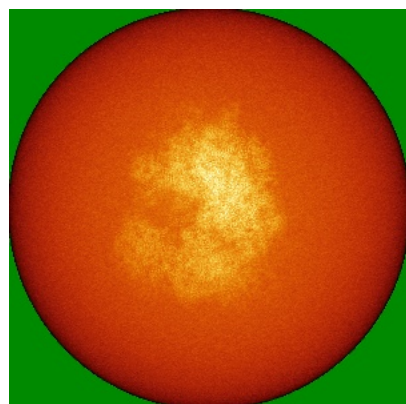


Y

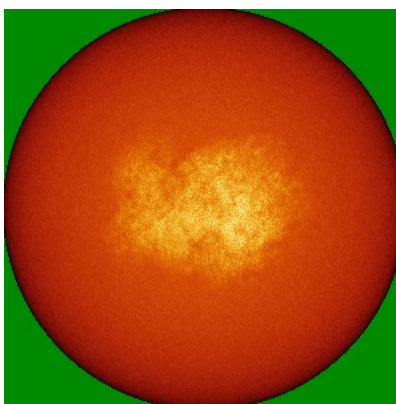


Z

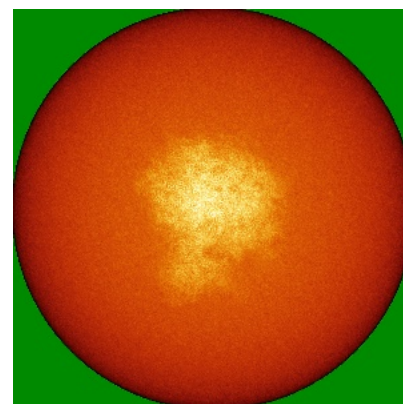
6.4.2 Raw map



X



Y

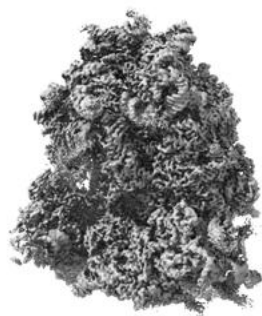


Z

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

6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



X



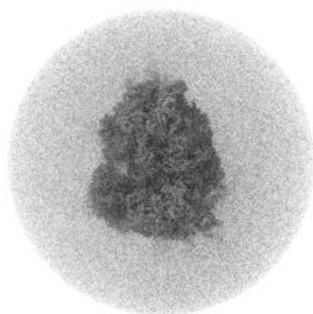
Y



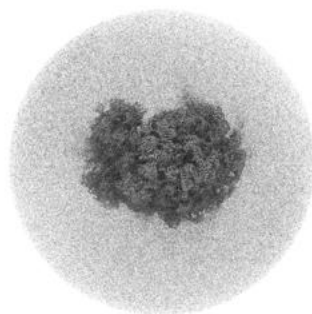
Z

The images above show the 3D surface view of the map at the recommended contour level 0.005. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

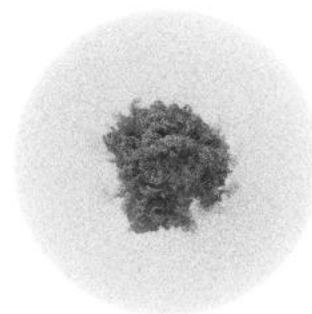
6.5.2 Raw map



X



Y



Z

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

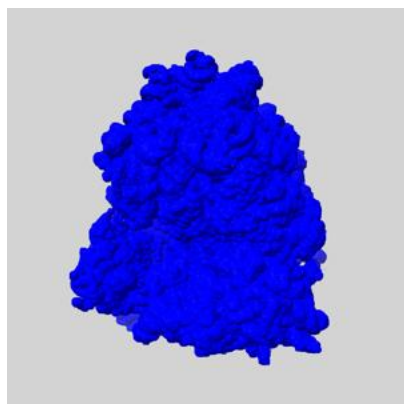
6.6 Mask visualisation [i](#)

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

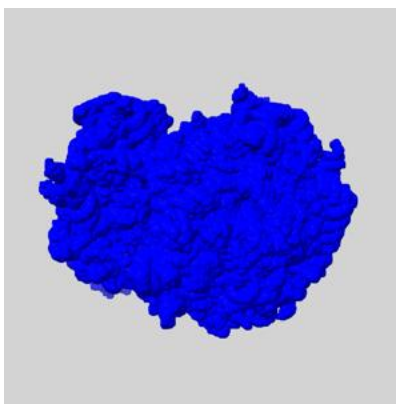
A mask typically either:

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

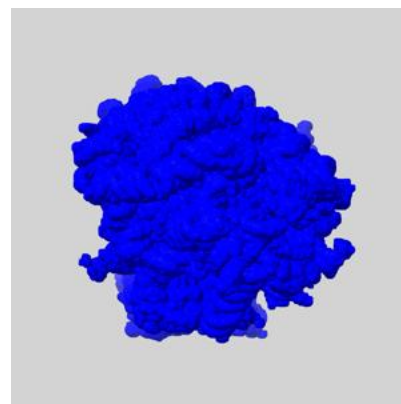
6.6.1 emd_29757_msk_1.map [i](#)



X



Y

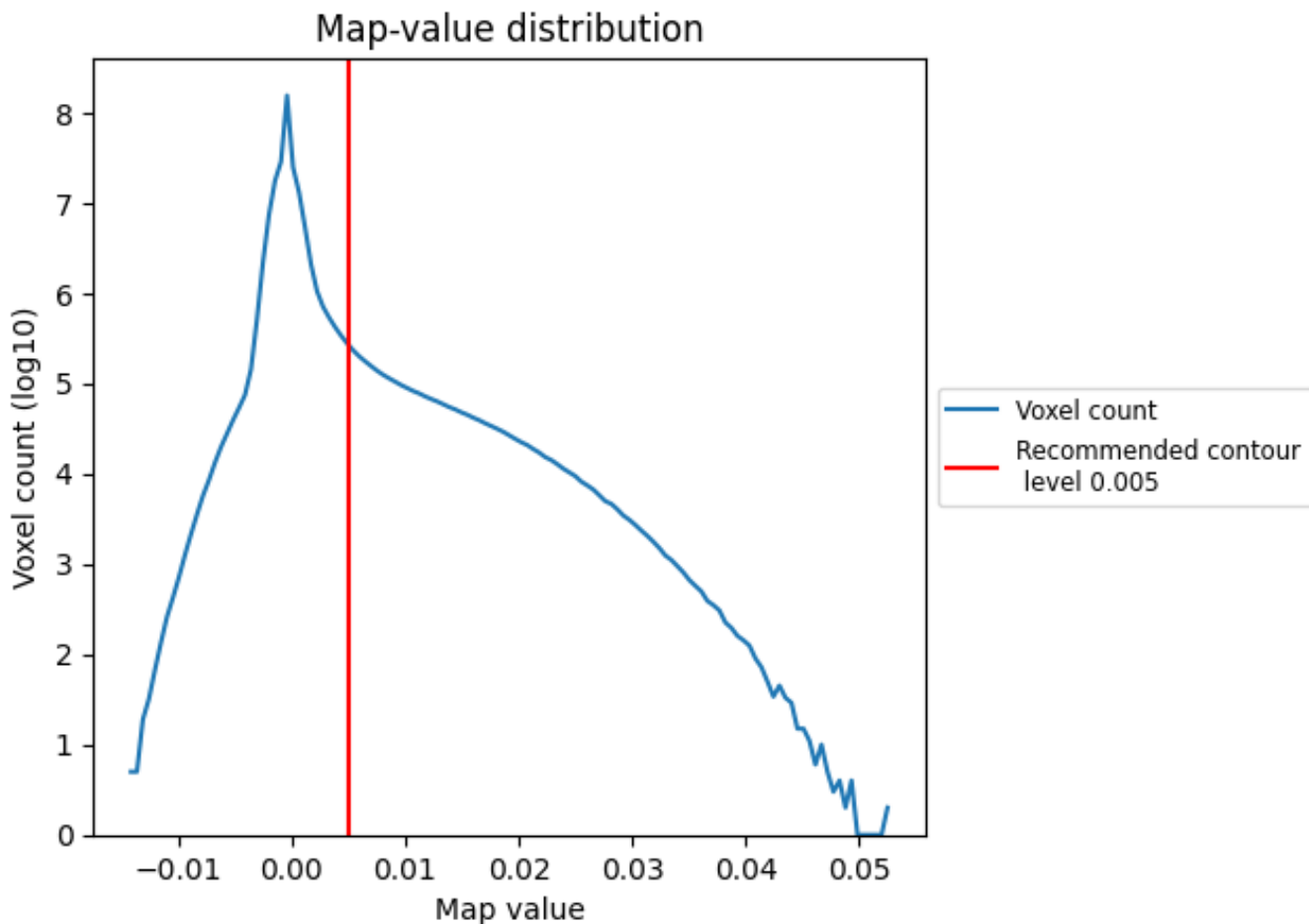


Z

7 Map analysis [i](#)

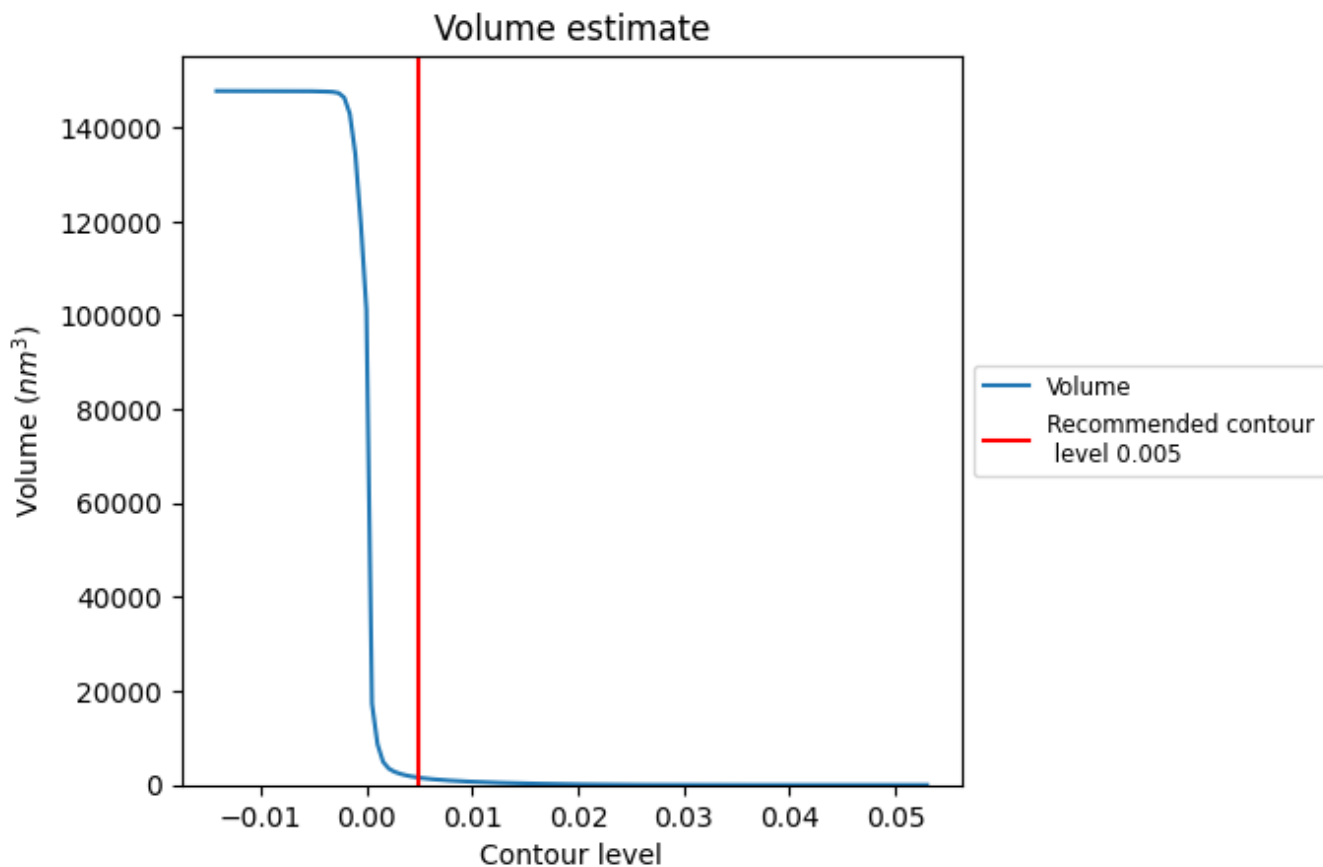
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

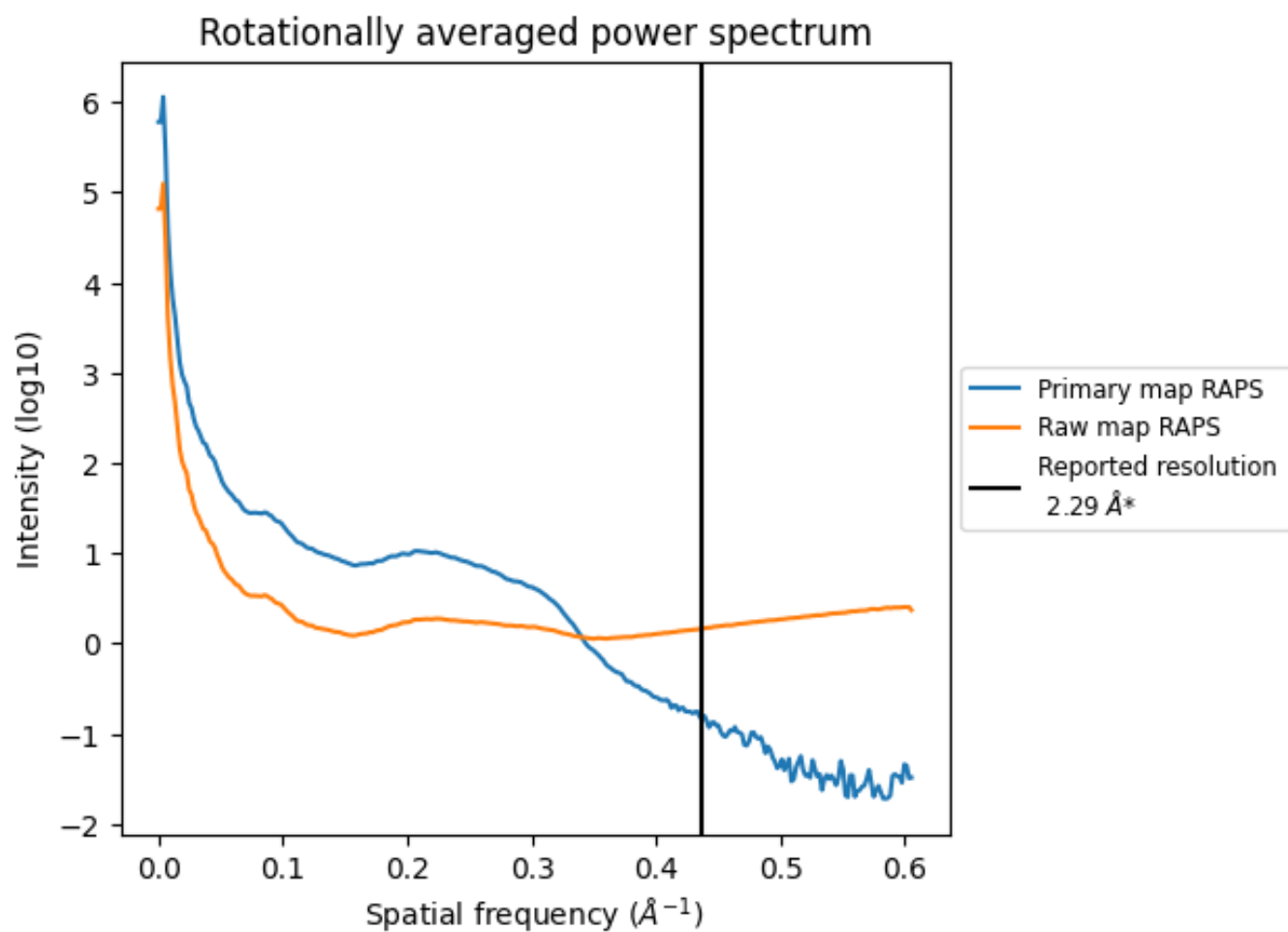
7.2 Volume estimate [\(i\)](#)



The volume at the recommended contour level is 1549 nm³; this corresponds to an approximate mass of 1399 kDa.

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

7.3 Rotationally averaged power spectrum i

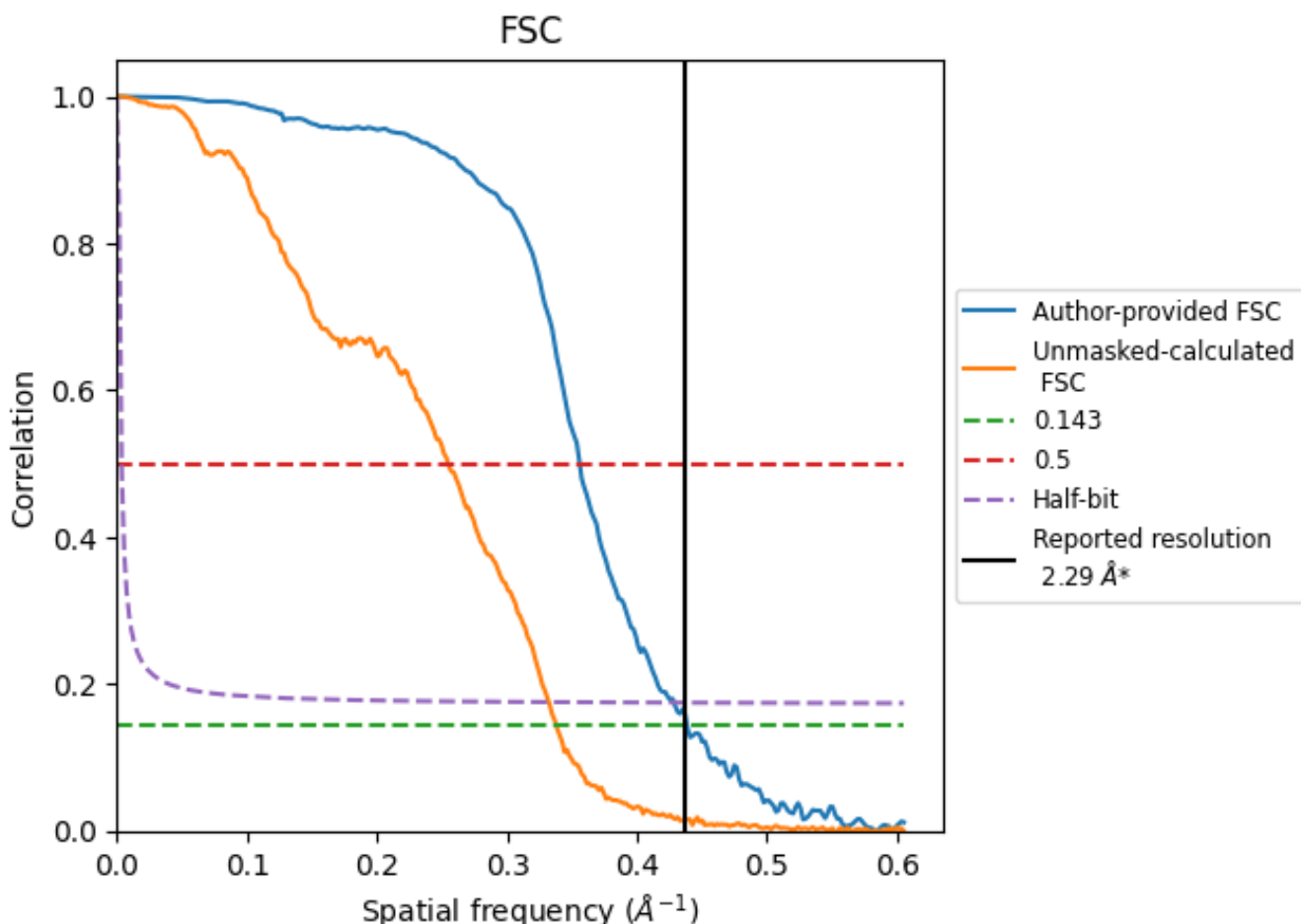


*Reported resolution corresponds to spatial frequency of 0.437 Å⁻¹

8 Fourier-Shell correlation [i](#)

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

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of 0.437 Å⁻¹

8.2 Resolution estimates [i](#)

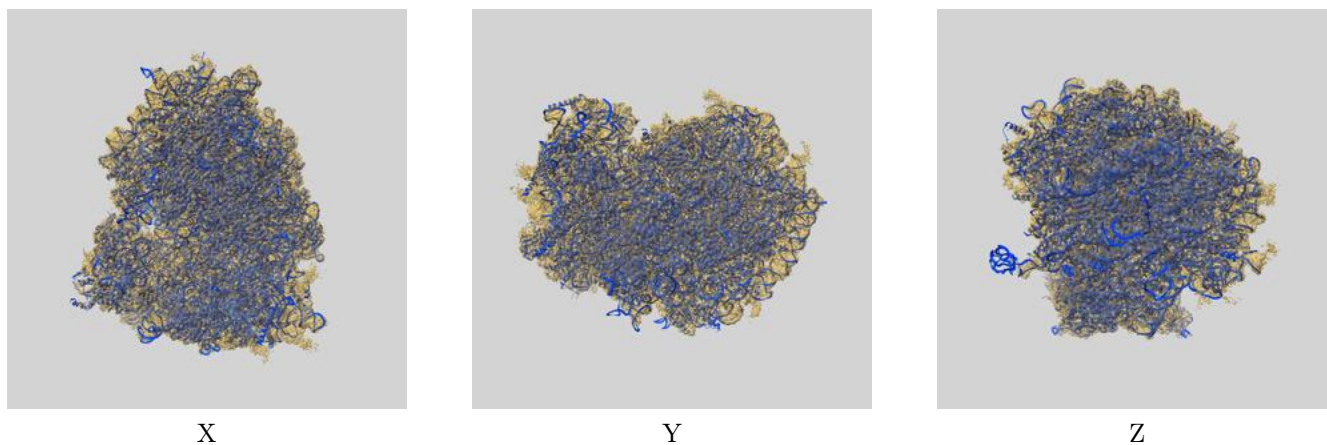
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	2.29	-	-
Author-provided FSC curve	2.28	2.81	2.33
Unmasked-calculated*	2.96	3.92	3.01

*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 2.96 differs from the reported value 2.29 by more than 10 %

9 Map-model fit [i](#)

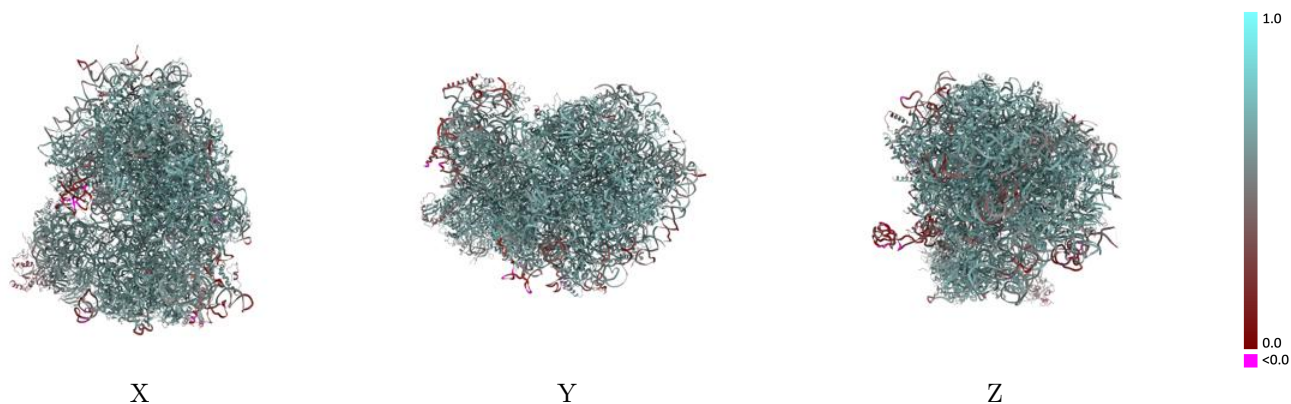
This section contains information regarding the fit between EMDB map EMD-29757 and PDB model 8G5Y. Per-residue inclusion information can be found in section 3 on page 28.

9.1 Map-model overlay [i](#)



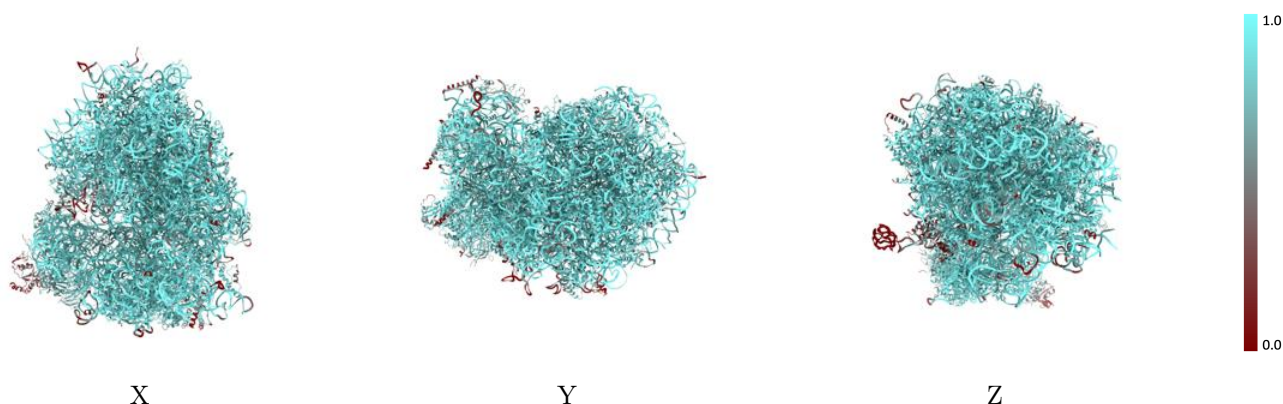
The images above show the 3D surface view of the map at the recommended contour level 0.005 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



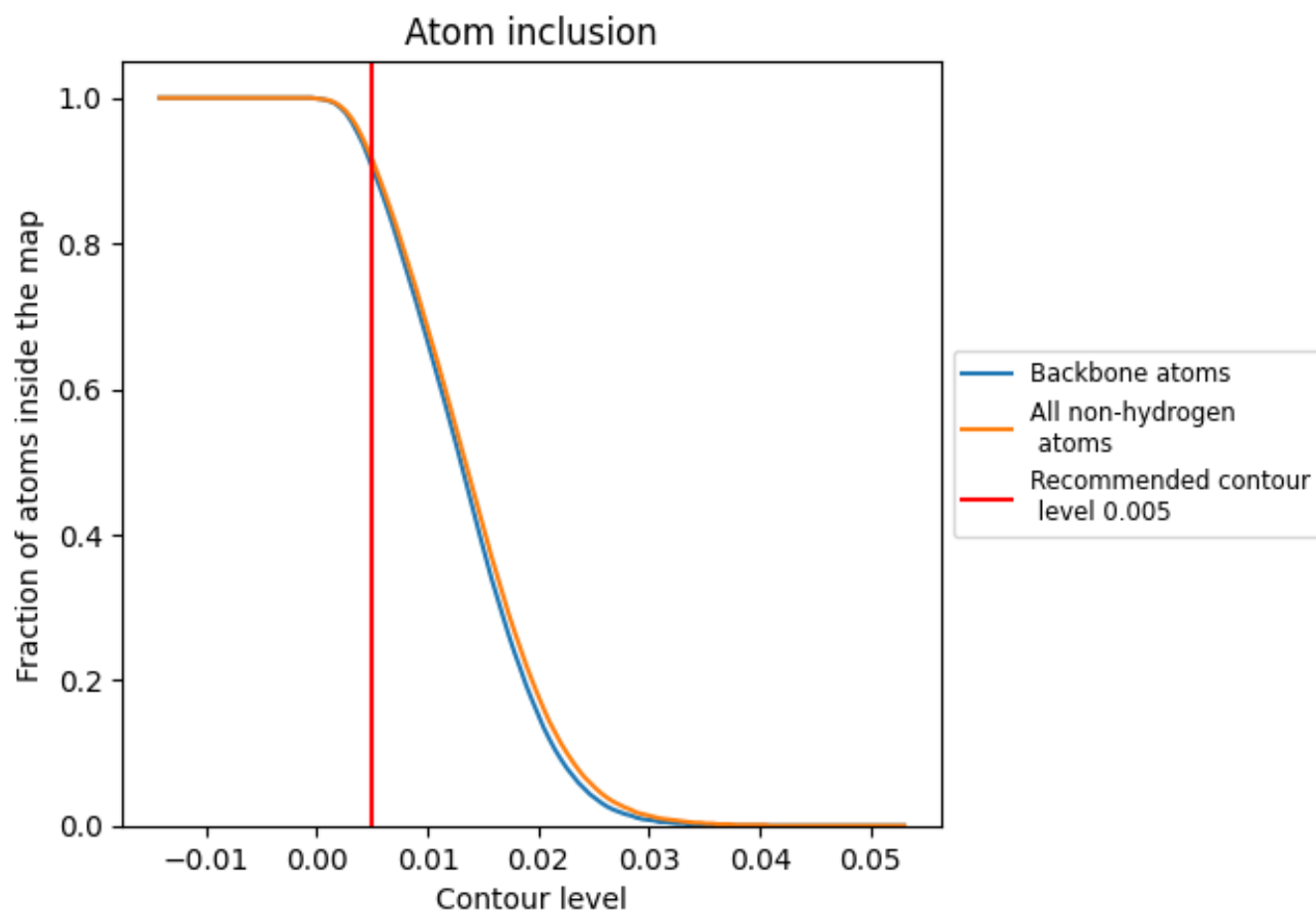
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

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



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.005).







































































9.4 Atom inclusion [i](#)



At the recommended contour level, 90% of all backbone atoms, 92% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary





















































































The table lists the average atom inclusion at the recommended contour level (0.005) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.9160	 0.6050
5A	 0.5350	 0.4730
L5	 0.9360	 0.5990
L7	 0.9940	 0.6520
L8	 0.9780	 0.6360
LA	 0.9730	 0.6720
LB	 0.9410	 0.6550
LC	 0.9530	 0.6590
LD	 0.9220	 0.6310
LE	 0.9180	 0.6290
LF	 0.9600	 0.6610
LG	 0.8380	 0.5950
LH	 0.9200	 0.6300
LI	 0.9480	 0.6450
LJ	 0.9110	 0.6190
LL	 0.9140	 0.6320
LM	 0.9500	 0.6420
LN	 0.9910	 0.6740
LO	 0.9590	 0.6590
LP	 0.9620	 0.6700
LQ	 0.9780	 0.6750
LR	 0.8830	 0.6220
LS	 0.9750	 0.6590
LT	 0.9380	 0.6500
LU	 0.8470	 0.5820
LV	 0.9540	 0.6580
LW	 0.6950	 0.5080
LX	 0.9400	 0.6470
LY	 0.9260	 0.6400
LZ	 0.9380	 0.6400
La	 0.9810	 0.6760
Lb	 0.8220	 0.5910
Lc	 0.9320	 0.6460
Ld	 0.9240	 0.6330
Le	 0.9800	 0.6750

















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Chain	Atom inclusion	Q-score
Lf	 0.9680	 0.6710
Lg	 0.9020	 0.6420
Lh	 0.9280	 0.6430
Li	 0.9010	 0.6210
Lj	 0.9900	 0.6780
Lk	 0.8510	 0.6130
Ll	 0.9620	 0.6510
Lm	 0.9230	 0.6360
Ln	 0.9360	 0.6470
Lo	 0.9480	 0.6490
Lp	 0.9390	 0.6600
Lr	 0.9670	 0.6610
Lz	 0.2670	 0.3690
Pt	 0.9600	 0.5990
S2	 0.9610	 0.5960
SA	 0.9030	 0.6160
SB	 0.8790	 0.6200
SC	 0.9160	 0.6260
SD	 0.8260	 0.5680
SE	 0.9010	 0.6150
SF	 0.8830	 0.6050
SG	 0.7700	 0.5370
SH	 0.7770	 0.5500
SI	 0.8900	 0.6060
SJ	 0.8850	 0.5950
SK	 0.8190	 0.5380
SL	 0.9120	 0.6330
SM	 0.2660	 0.2970
SN	 0.9370	 0.6410
SO	 0.9200	 0.6320
SP	 0.8220	 0.5660
SQ	 0.9090	 0.6100
SR	 0.8150	 0.5660
SS	 0.8920	 0.6040
ST	 0.8930	 0.6030
SU	 0.7750	 0.5470
SV	 0.9090	 0.6230
SW	 0.9680	 0.6480
SX	 0.9460	 0.6390
SY	 0.8040	 0.5550
SZ	 0.7920	 0.5760
Sa	 0.9420	 0.6350

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Chain	Atom inclusion	Q-score
Sb	 0.8420	 0.6070
Sc	 0.8070	 0.5720
Sd	 0.9570	 0.6210
Se	 0.8440	 0.5940
Sf	 0.4420	 0.3830
Sg	 0.7590	 0.5360
mR	 0.6110	 0.5240