Full wwPDB EM Validation Report ⓘ

Nov 4, 2023 – 10:31 PM EDT

PDB ID	:	8G60
EMDB ID	:	EMD-29759
Title	:	mRNA decoding in human is kinetically and structurally distinct from bacteria (CR 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	:	2.54 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:

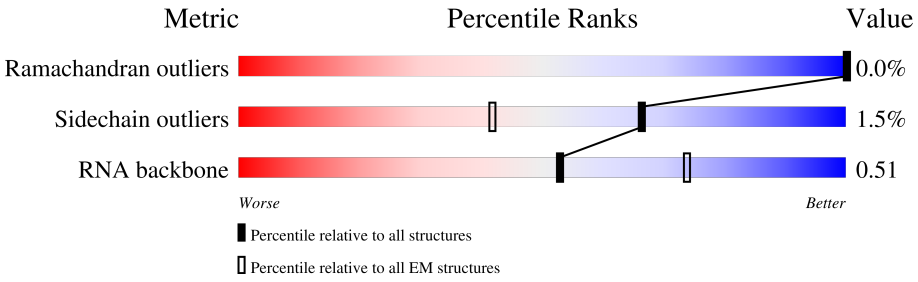
EMDB validation analysis	:	0.0.1.dev70
Mogul	:	1.8.5 (274361), CSD as541be (2020)
MolProbity	:	4.02b-467
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	1.9.9
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry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

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
ELECTRON MICROSCOPY

The reported resolution of this entry is 2.54 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 <=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	67% 21% · 12%
2	L8	156	81% 19%
3	L5	5069	56% 15% 28%
4	L7	120	89% 11%
5	SB	264	84% 16%
6	SA	295	74% · 25%
7	SD	243	6% 90% · 7%
8	SJ	194	95% 5%

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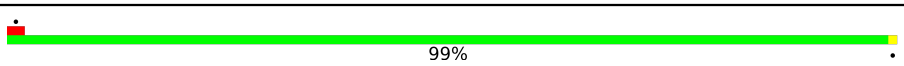
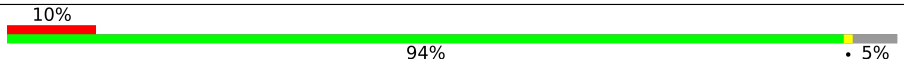
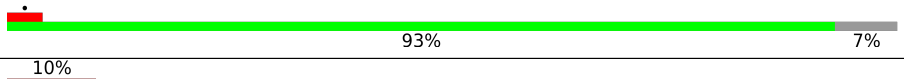
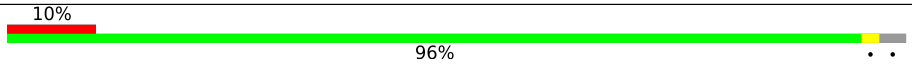
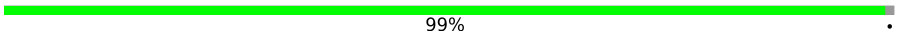
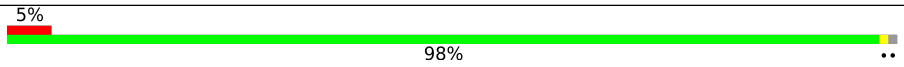
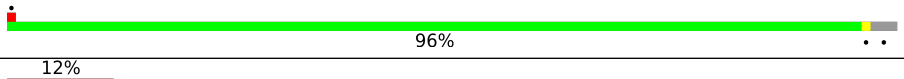
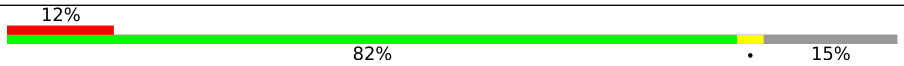
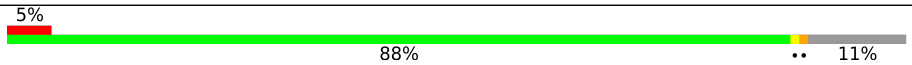
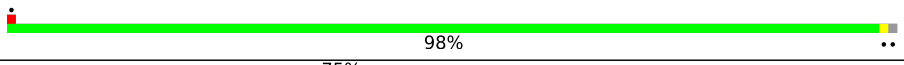
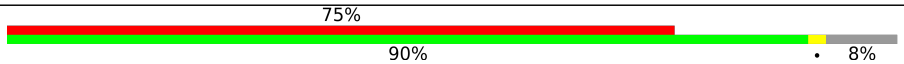
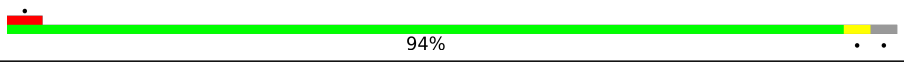
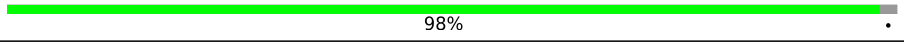
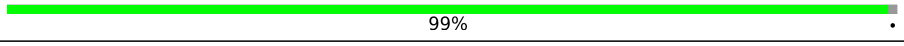
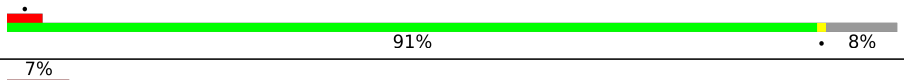
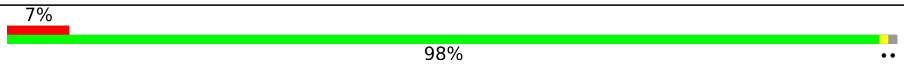
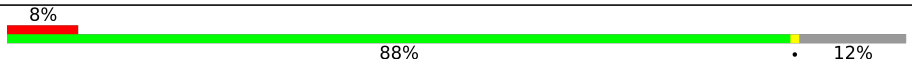
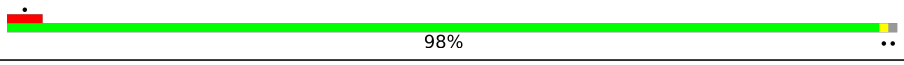
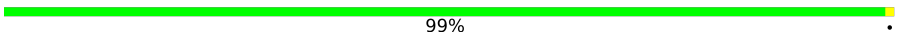
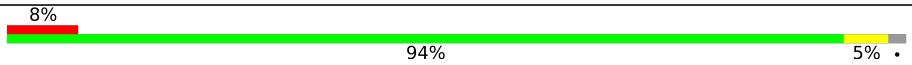
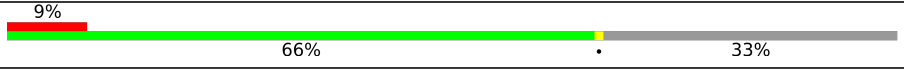
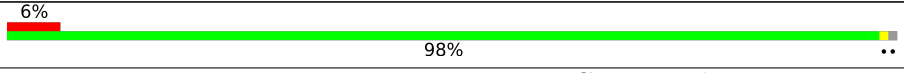
Mol	Chain	Length	Quality of chain
9	SE	263	
10	SC	293	
11	SG	249	
12	SF	204	
13	SH	194	
14	SW	130	
15	SI	208	
16	SQ	146	
17	SU	119	
18	SK	165	
19	SO	151	
20	SX	143	
21	SM	132	
22	SS	152	
23	Sd	56	
24	SN	151	
25	SL	158	
26	SR	135	
27	SP	145	
28	ST	145	
29	SV	83	
30	SY	133	
31	SZ	125	
32	Sa	115	
33	Sb	84	

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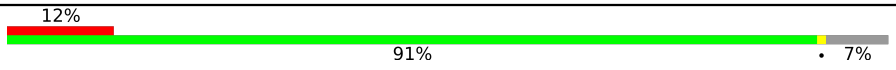
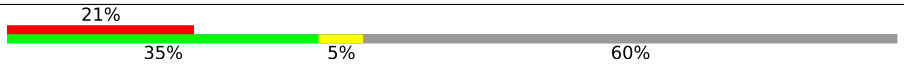
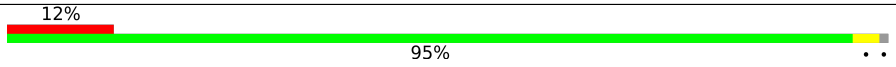
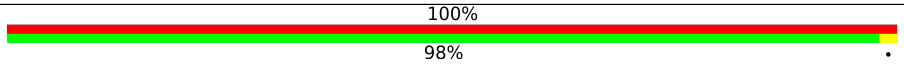
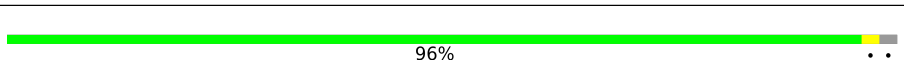
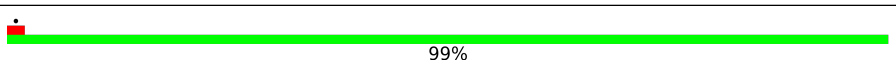
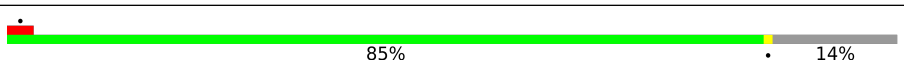
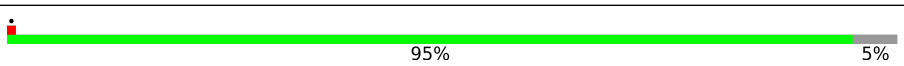
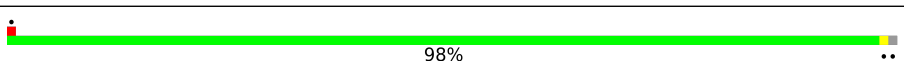
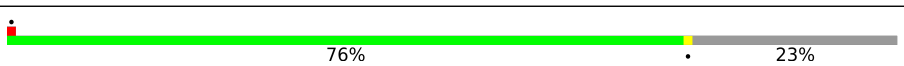
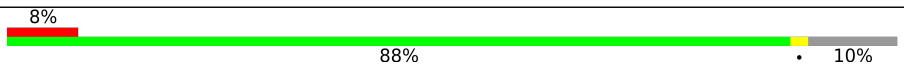
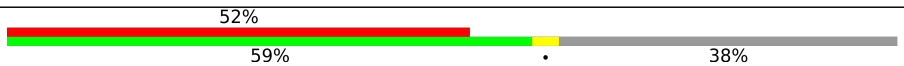
Mol	Chain	Length	Quality of chain
34	Sc	69	
35	Se	133	
36	Sf	156	
37	Sg	317	
38	Lz	217	
39	LA	257	
40	LB	403	
41	LC	427	
42	LJ	178	
43	LH	192	
44	LE	288	
45	LG	266	
46	Lq	317	
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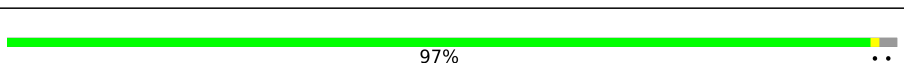
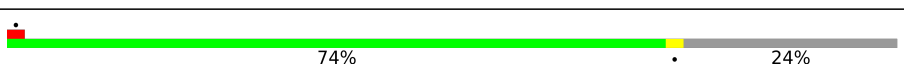
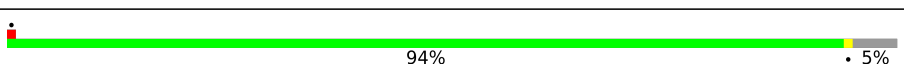
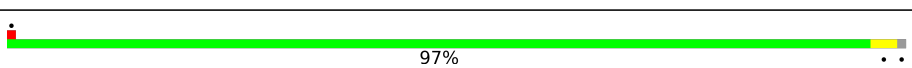
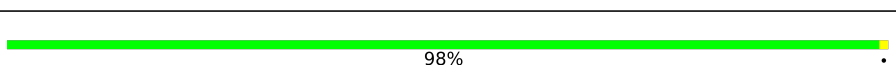
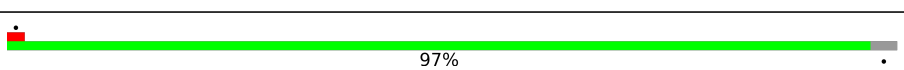
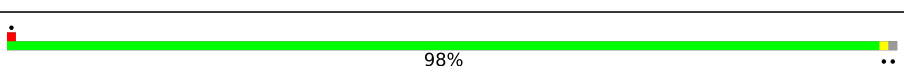
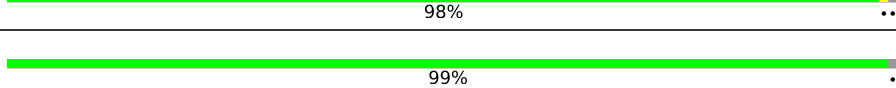
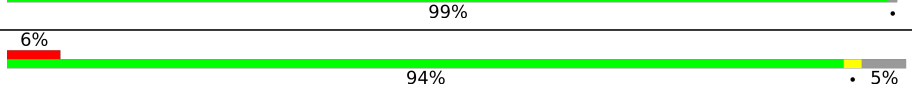
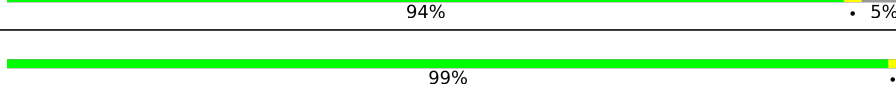
48	LO	203	
49	LL	270	
50	LV	140	
51	LM	215	
52	La	148	
53	LN	204	
54	LI	214	
55	LD	297	
56	LQ	188	
57	LR	196	
58	LS	176	

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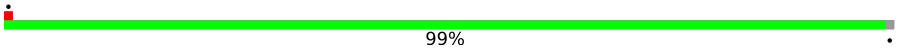
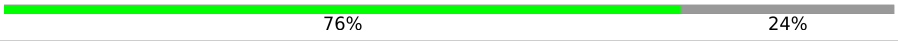
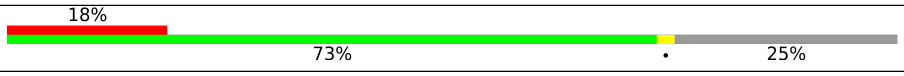
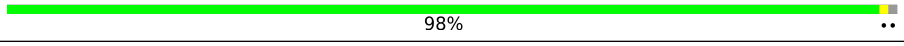
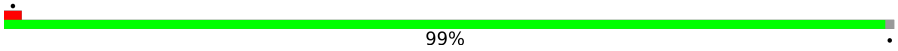
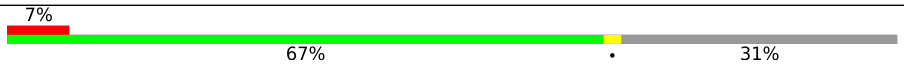
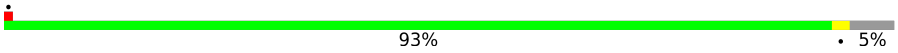
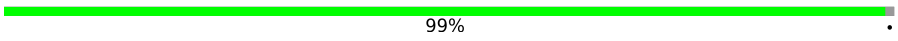
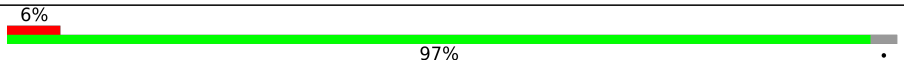
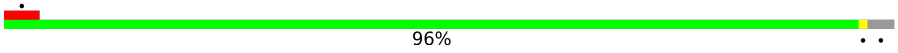
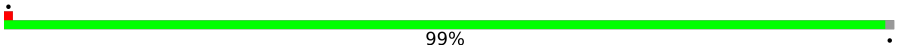
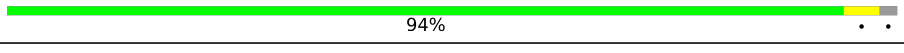
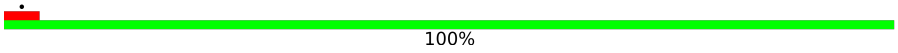
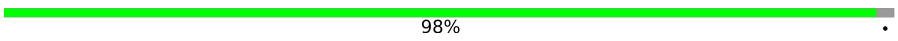
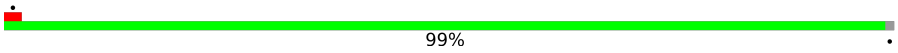
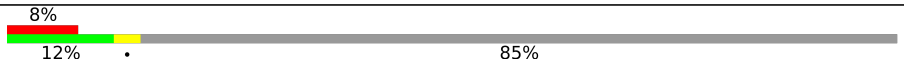
Mol	Chain	Length	Quality of chain
59	LT	160	
60	LP	184	
61	LU	128	
62	LX	156	
63	LY	145	
64	LW	157	
65	LZ	136	
66	Lr	137	
67	Lh	123	
68	Lb	159	
69	LF	248	
70	Lc	115	
71	Ld	125	
72	Le	135	
73	Lf	110	
74	Lg	117	
75	Li	105	
76	Lj	97	
77	Lk	70	
78	Ll	51	
79	Lm	128	
80	Ln	25	
81	Lo	106	
82	Lp	92	
83	mR	60	

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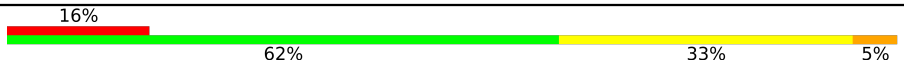
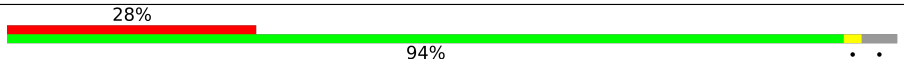
Mol	Chain	Length	Quality of chain
84	At	76	
85	Pt	77	
86	EF	462	

2 Entry composition

There are 98 unique types of molecules in this entry. The entry contains 223755 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	1654	35359	15812	6338	11555	1654	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	3320	1482	585	1097	156	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
3	L5	3637	78069	34805	14275	25351	3638	1	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
4	L7	120	2562	1141	456	845	120	0	0

- Molecule 5 is a protein called eS1.

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 uS2.

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 uS3.

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

- Molecule 8 is a protein called uS4.

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

- Molecule 9 is a protein called eS4.

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

- Molecule 10 is a protein called uS5.

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

- Molecule 11 is a protein called eS6.

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

- Molecule 12 is a protein called uS7.

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

- Molecule 13 is a protein called eS7.

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

- Molecule 14 is a protein called uS8.

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

- Molecule 15 is a protein called eS8.

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

- Molecule 16 is a protein called uS9.

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

- Molecule 17 is a protein called uS10.

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

- Molecule 18 is a protein called eS10.

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

- Molecule 19 is a protein called uS11.

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

- Molecule 20 is a protein called uS12.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	SX	142	Total	C	N	O	S	0	0
			1105	696	220	186	3		

- Molecule 21 is a protein called eS12.

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

- Molecule 22 is a protein called uS13.

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

- Molecule 23 is a protein called uS14.

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

- Molecule 24 is a protein called uS15.

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

- Molecule 25 is a protein called uS17.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	SL	145	Total	C	N	O	S	0	0
			1189	757	225	201	6		

- Molecule 26 is a protein called eS17.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	SR	134	Total	C	N	O	S	0	0
			1083	680	201	198	4		

- Molecule 27 is a protein called uS19.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	SP	128	Total	C	N	O	S	0	0
			1050	666	198	179	7		

- Molecule 28 is a protein called eS19.

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

- Molecule 29 is a protein called eS21.

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

- Molecule 30 is a protein called eS24.

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

- Molecule 31 is a protein called eS25.

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

- Molecule 32 is a protein called eS26.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	Sa	99	Total	C	N	O	S	0	0
			792	492	165	130	5		

- Molecule 33 is a protein called eS27.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	Sb	83	Total	C	N	O	S	0	0
			650	408	121	114	7		

- Molecule 34 is a protein called eS28.

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

- Molecule 35 is a protein called eS30.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	Se	51	Total	C	N	O	S	0	0
			406	248	92	65	1		

- Molecule 36 is a protein called eS31.

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 RACK1.

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 uL1.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	Lz	217	Total	C	N	O	S	0	0
			1741	1113	312	307	9		

- 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 uL3.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	LB	402	Total	C	N	O	S	0	0
			3240	2061	608	557	14		

- Molecule 41 is a protein called uL4.

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

- Molecule 42 is a protein called uL5.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	LJ	169	Total	C	N	O	S	0	0
			1358	859	253	240	6		

- Molecule 43 is a protein called uL6.

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 eL6.

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 eL8.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	LG	239	Total	C	N	O	S	0	0
			1910	1217	368	321	4		

- Molecule 46 is a protein called uL10.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	Lq	196	Total	C	N	O	S	0	0
			1506	958	263	276	9		

- Molecule 47 is a protein called uL11.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	LK	147	Total	C	N	O	S	0	0
			1121	700	211	207	3		

- Molecule 48 is a protein called uL13.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	LO	199	Total	C	N	O	S	0	0
			1634	1053	319	257	5		

- Molecule 49 is a protein called eL13.

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

- Molecule 50 is a protein called uL14.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	LV	133	Total	C	N	O	S	0	0
			989	623	186	175	5		

- Molecule 51 is a protein called eL14.

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

- Molecule 52 is a protein called uL15.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	La	147	Total	C	N	O	S	0	0
			1163	736	237	187	3		

- Molecule 53 is a protein called eL15.

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

- Molecule 54 is a protein called uL16.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	LI	208	Total	C	N	O	S	0	0
			1680	1065	323	278	14		

- Molecule 55 is a protein called uL18.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	LD	293	Total	C	N	O	S	0	0
			2387	1511	435	427	14		

- Molecule 56 is a protein called eL18.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	LQ	187	Total	C	N	O	S	0	0
			1511	944	314	248	5		

- Molecule 57 is a protein called eL19.

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

- Molecule 58 is a protein called eL20.

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

- Molecule 59 is a protein called eL21.

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

- Molecule 60 is a protein called uL22.

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

- Molecule 61 is a protein called eL22.

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

- Molecule 62 is a protein called uL23.

Mol	Chain	Residues	Atoms					AltConf	Trace
62	LX	118	Total	C	N	O	S	0	0
			967	618	181	167	1		

- Molecule 63 is a protein called uL24.

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

- Molecule 64 is a protein called eL24.

Mol	Chain	Residues	Atoms					AltConf	Trace
64	LW	117	Total	C	N	O	S	0	0
			944	592	191	157	4		

- Molecule 65 is a protein called eL27.

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

- Molecule 66 is a protein called eL28.

Mol	Chain	Residues	Atoms					AltConf	Trace
66	Lr	125	Total	C	N	O	S	0	0
			1005	624	207	169	5		

- Molecule 67 is a protein called uL29.

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

- Molecule 68 is a protein called eL29.

Mol	Chain	Residues	Atoms					AltConf	Trace
68	Lb	109	Total	C	N	O	S	0	0
			885	552	192	137	4		

- Molecule 69 is a protein called uL30.

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

- Molecule 70 is a protein called eL30.

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

- Molecule 71 is a protein called eL31.

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

- Molecule 72 is a protein called eL32.

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

- Molecule 73 is a protein called eL33.

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

- Molecule 74 is a protein called eL34.

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

- Molecule 75 is a protein called eL36.

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

- Molecule 76 is a protein called eL37.

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

- Molecule 77 is a protein called eL38.

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

- Molecule 78 is a protein called eL39.

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

- Molecule 79 is a protein called eL40.

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

- Molecule 80 is a protein called eL41.

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

- Molecule 81 is a protein called eL42.

Mol	Chain	Residues	Atoms					AltConf	Trace
81	Lo	104	Total	C	N	O	S	0	0
			852	534	174	138	6		

- Molecule 82 is a protein called eL43.

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

- Molecule 83 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
83	mR	9	Total	C	N	O	P	0	0
			188	84	29	66	9		

- Molecule 84 is a RNA chain called A-site tRNA.

Mol	Chain	Residues	Atoms						AltConf	Trace
84	At	76	Total	C	N	O	P	S	0	0
			1630	730	290	532	76	2		

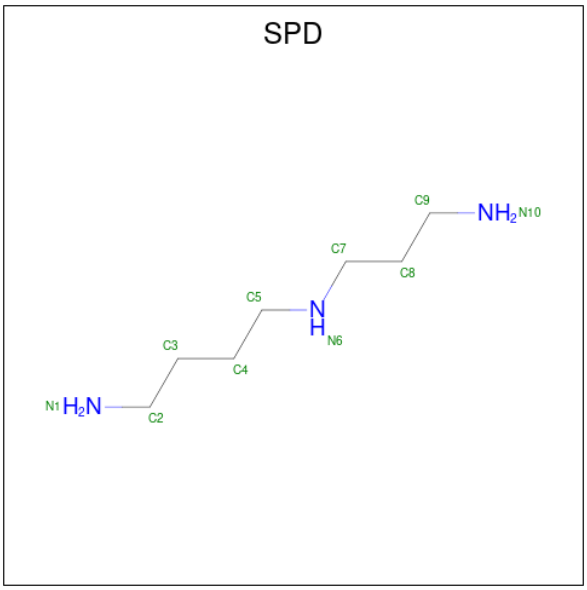
- Molecule 85 is a RNA chain called P-site tRNA.

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

- Molecule 86 is a protein called eEF1A.

Mol	Chain	Residues	Atoms					AltConf	Trace
86	EF	443	Total	C	N	O	S	1	0
			3401	2165	584	635	17		

- Molecule 87 is SPERMIDINE (three-letter code: SPD) (formula: $C_7H_{19}N_3$).



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

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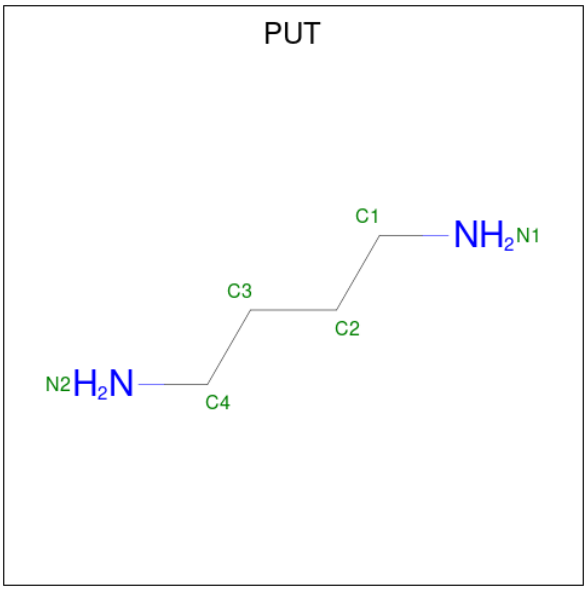
Mol	Chain	Residues	Atoms	AltConf
87	L5	1	Total C N 10 7 3	0
87	L5	1	Total C N 10 7 3	0
87	L5	1	Total C N 10 7 3	0
87	L5	1	Total C N 10 7 3	0

- Molecule 88 is 1,4-DIAMINOBUTANE (three-letter code: PUT) (formula: $C_4H_{12}N_2$).



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

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

- Molecule 89 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms	AltConf
89	S2	112	Total Mg 112 112	0
89	L8	7	Total Mg 7 7	0
89	L5	307	Total Mg 307 307	0
89	L7	7	Total Mg 7 7	0
89	SG	1	Total Mg 1 1	0
89	SO	1	Total Mg 1 1	0
89	SS	2	Total Mg 2 2	0
89	SN	1	Total Mg 1 1	0
89	SP	1	Total Mg 1 1	0
89	Sa	1	Total Mg 1 1	0
89	LA	1	Total Mg 1 1	0
89	LB	3	Total Mg 3 3	0
89	LC	1	Total Mg 1 1	0
89	LL	1	Total Mg 1 1	0
89	LV	1	Total Mg 1 1	0
89	LN	1	Total Mg 1 1	0

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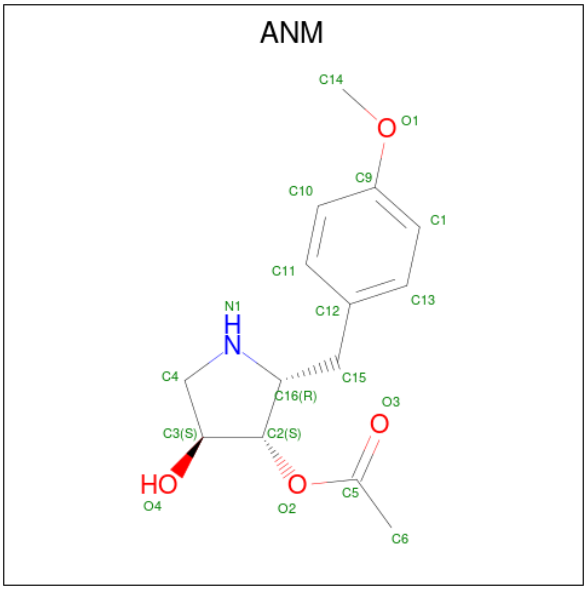
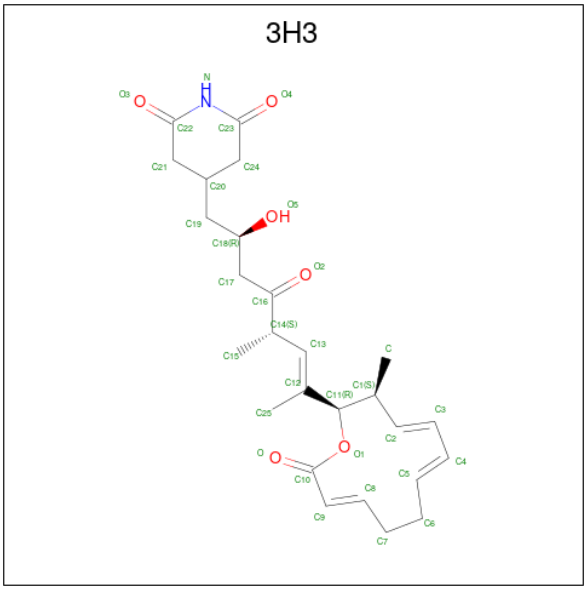
Mol	Chain	Residues	Atoms	AltConf
89	LI	1	Total Mg 1 1	0
89	LR	1	Total Mg 1 1	0
89	LS	1	Total Mg 1 1	0
89	LP	2	Total Mg 2 2	0
89	Le	1	Total Mg 1 1	0
89	Lf	1	Total Mg 1 1	0
89	Lg	2	Total Mg 2 2	0
89	Lj	1	Total Mg 1 1	0
89	Pt	2	Total Mg 2 2	0
89	EF	1	Total Mg 1 1	0

- Molecule 90 is ANISOMYCIN (three-letter code: ANM) (formula: $C_{14}H_{19}NO_4$).



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

- Molecule 91 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: $C_{26}H_{35}NO_6$).



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

- Molecule 92 is POTASSIUM ION (three-letter code: K) (formula: K).

Mol	Chain	Residues	Atoms	AltConf
92	L5	10	Total K 10 10	0

- Molecule 93 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms	AltConf
93	Sd	1	Total Zn 1 1	0
93	Sa	1	Total Zn 1 1	0
93	Lg	1	Total Zn 1 1	0
93	Lj	1	Total Zn 1 1	0
93	Lm	1	Total Zn 1 1	0
93	Lo	1	Total Zn 1 1	0

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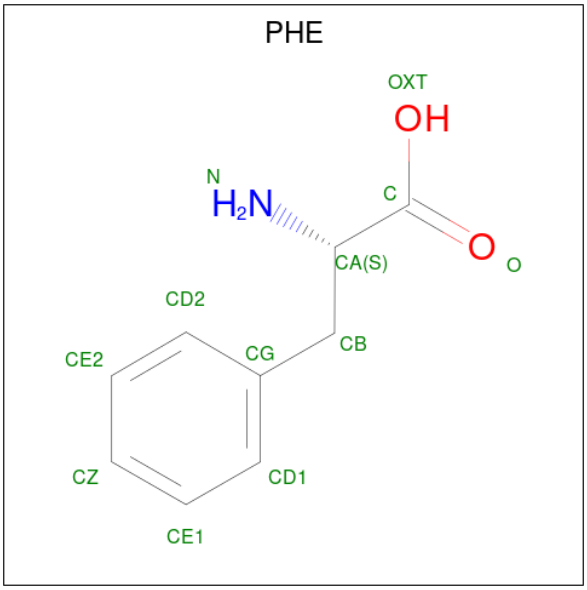
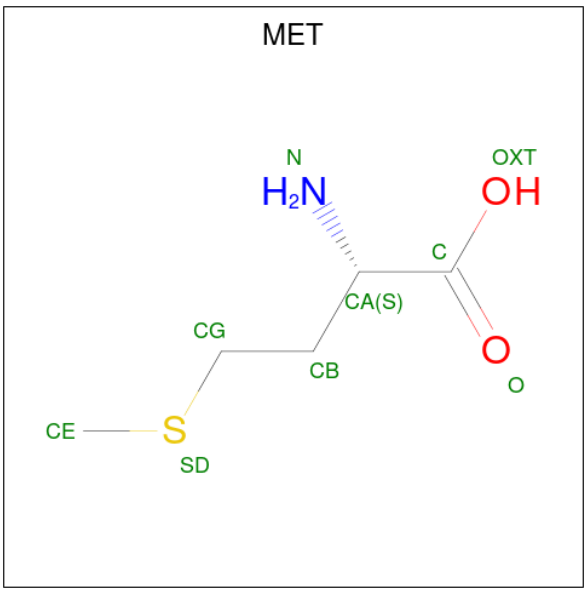
Mol	Chain	Residues	Atoms	AltConf
93	Lp	1	Total Zn 1 1	0

- Molecule 94 is PHENYLALANINE (three-letter code: PHE) (formula: $C_9H_{11}NO_2$).



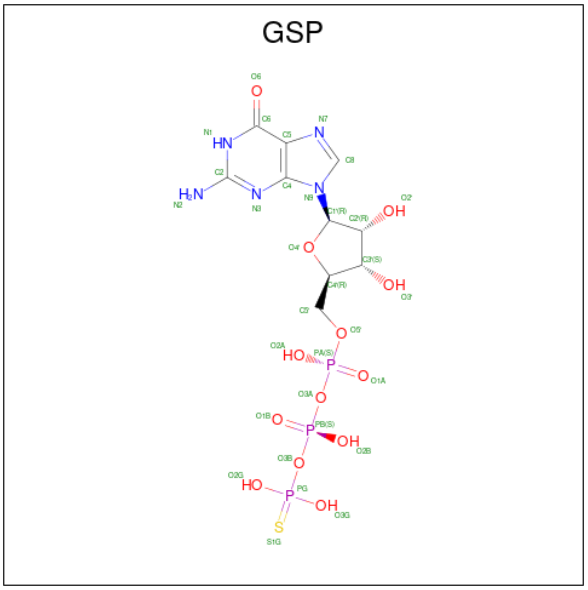
Mol	Chain	Residues	Atoms	AltConf
94	At	1	Total C N O 11 9 1 1	0

- Molecule 95 is METHIONINE (three-letter code: MET) (formula: $C_5H_{11}NO_2S$).



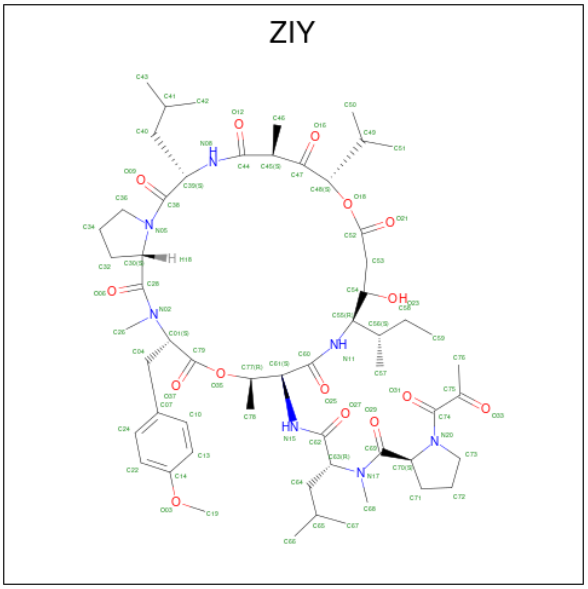
Mol	Chain	Residues	Atoms					AltConf
95	Pt	1	Total	C	N	O	S	0
			8	5	1	1	1	

- Molecule 96 is 5'-GUANOSINE-DIPHOSPHATE-MONOTHIOPHOSPHATE (three-letter code: GSP) (formula: $C_{10}H_{16}N_5O_{13}P_3S$).



Mol	Chain	Residues	Atoms						AltConf
96	EF	1	Total	C	N	O	P	S	0
			32	10	5	13	3	1	

- Molecule 97 is plitidepsin (three-letter code: ZIY) (formula: $C_{57}H_{87}N_7O_{15}$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				AltConf
97	EF	1	Total	C	N	O	0
			79	57	7	15	

- Molecule 98 is water.

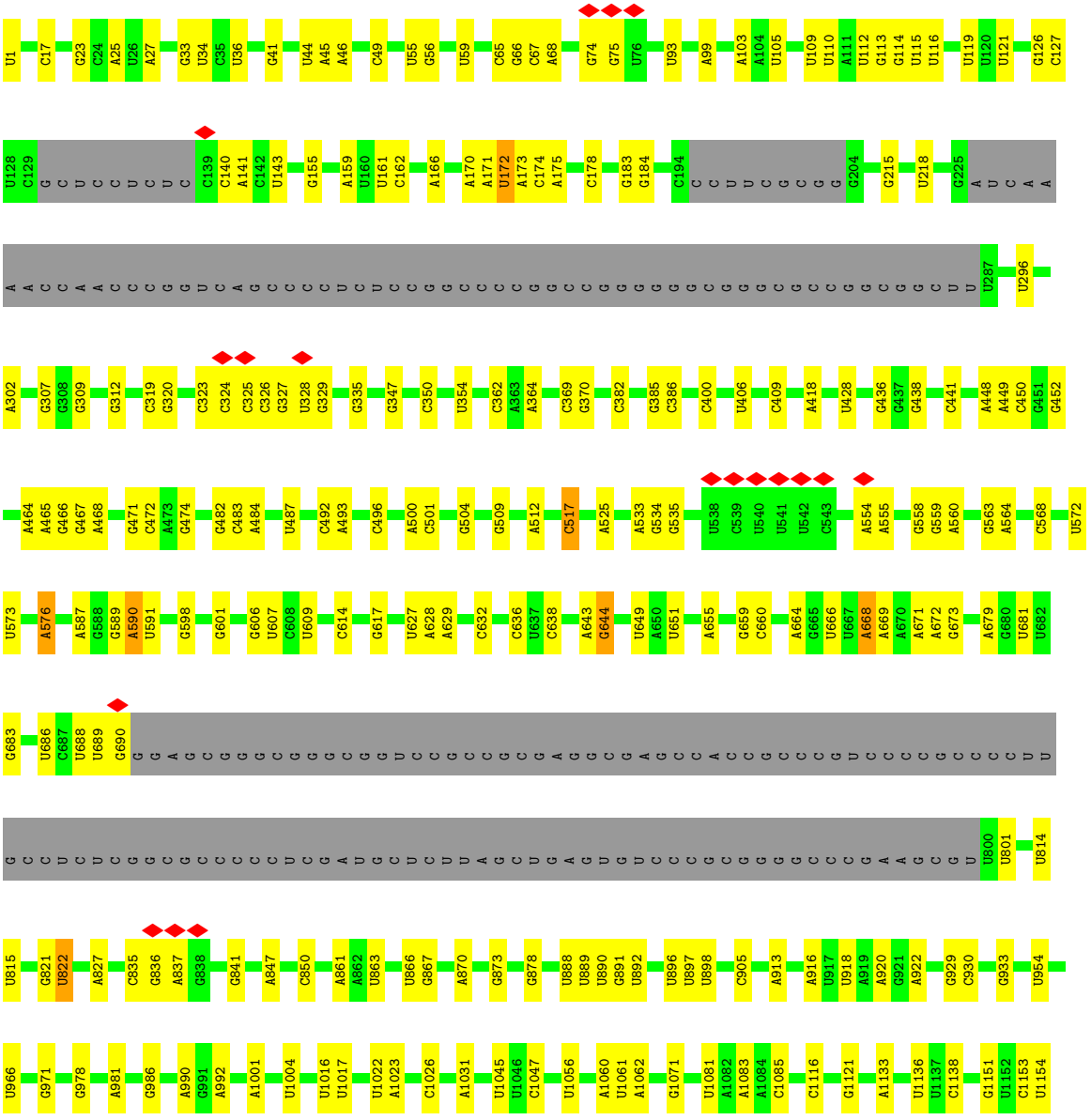
Mol	Chain	Residues	Atoms		AltConf
98	S2	9	Total	O	0
			9	9	
98	L8	3	Total	O	0
			3	3	
98	L5	228	Total	O	0
			228	228	
98	L7	1	Total	O	0
			1	1	
98	SQ	1	Total	O	0
			1	1	
98	SO	1	Total	O	0
			1	1	
98	LA	7	Total	O	0
			7	7	
98	LB	1	Total	O	0
			1	1	
98	LC	1	Total	O	0
			1	1	
98	LH	1	Total	O	0
			1	1	
98	LL	1	Total	O	0
			1	1	
98	LQ	1	Total	O	0
			1	1	
98	LS	1	Total	O	0
			1	1	
98	Lb	2	Total	O	0
			2	2	
98	LF	1	Total	O	0
			1	1	
98	Le	2	Total	O	0
			2	2	
98	Lo	2	Total	O	0
			2	2	

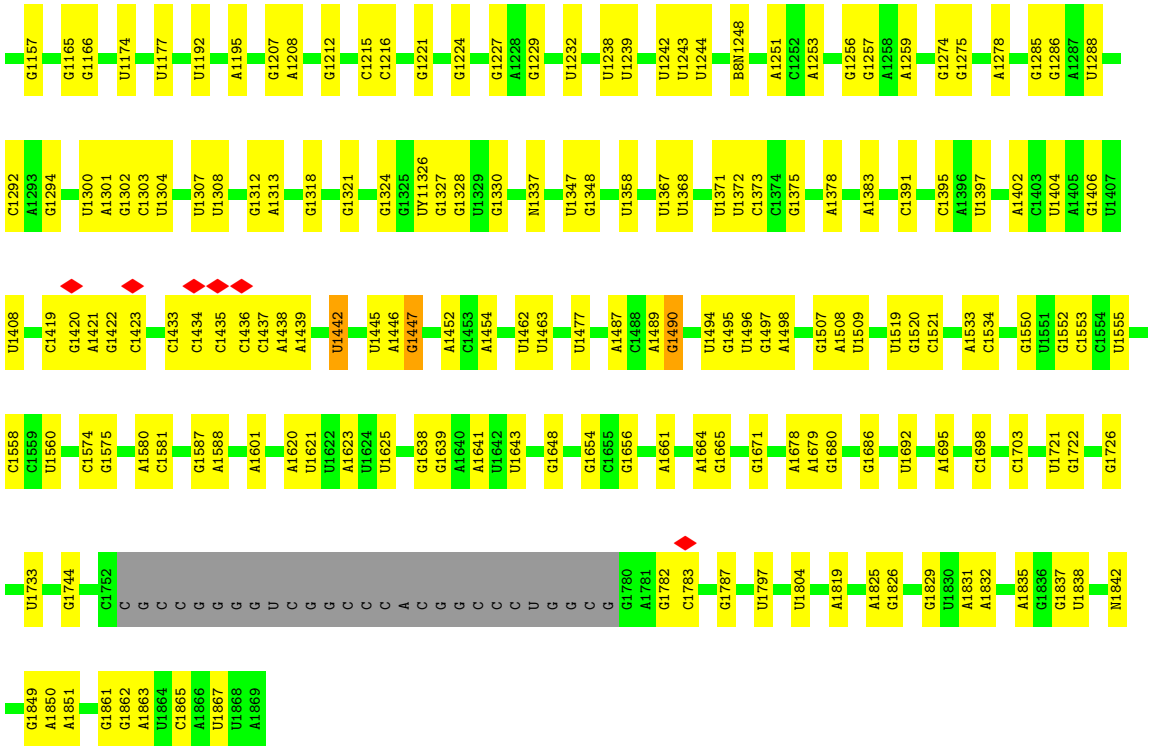
3 Residue-property plots (i)

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

- Molecule 1: 18S rRNA

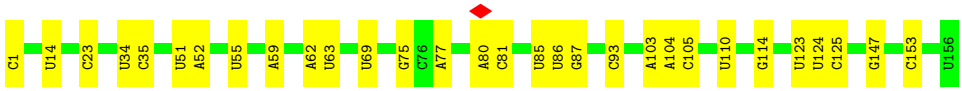
Chain S2:





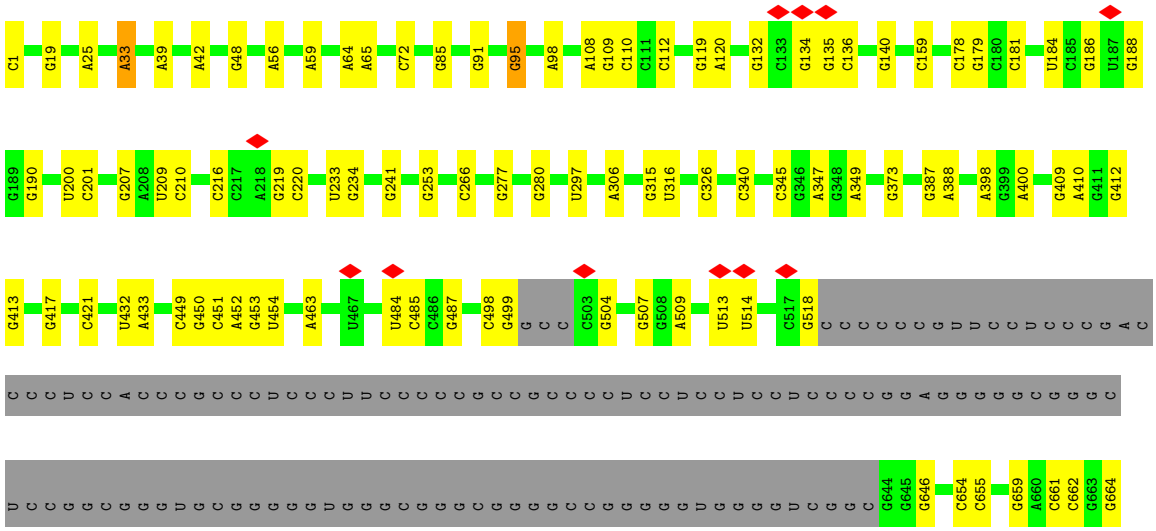
• Molecule 2: 5.8S rRNA

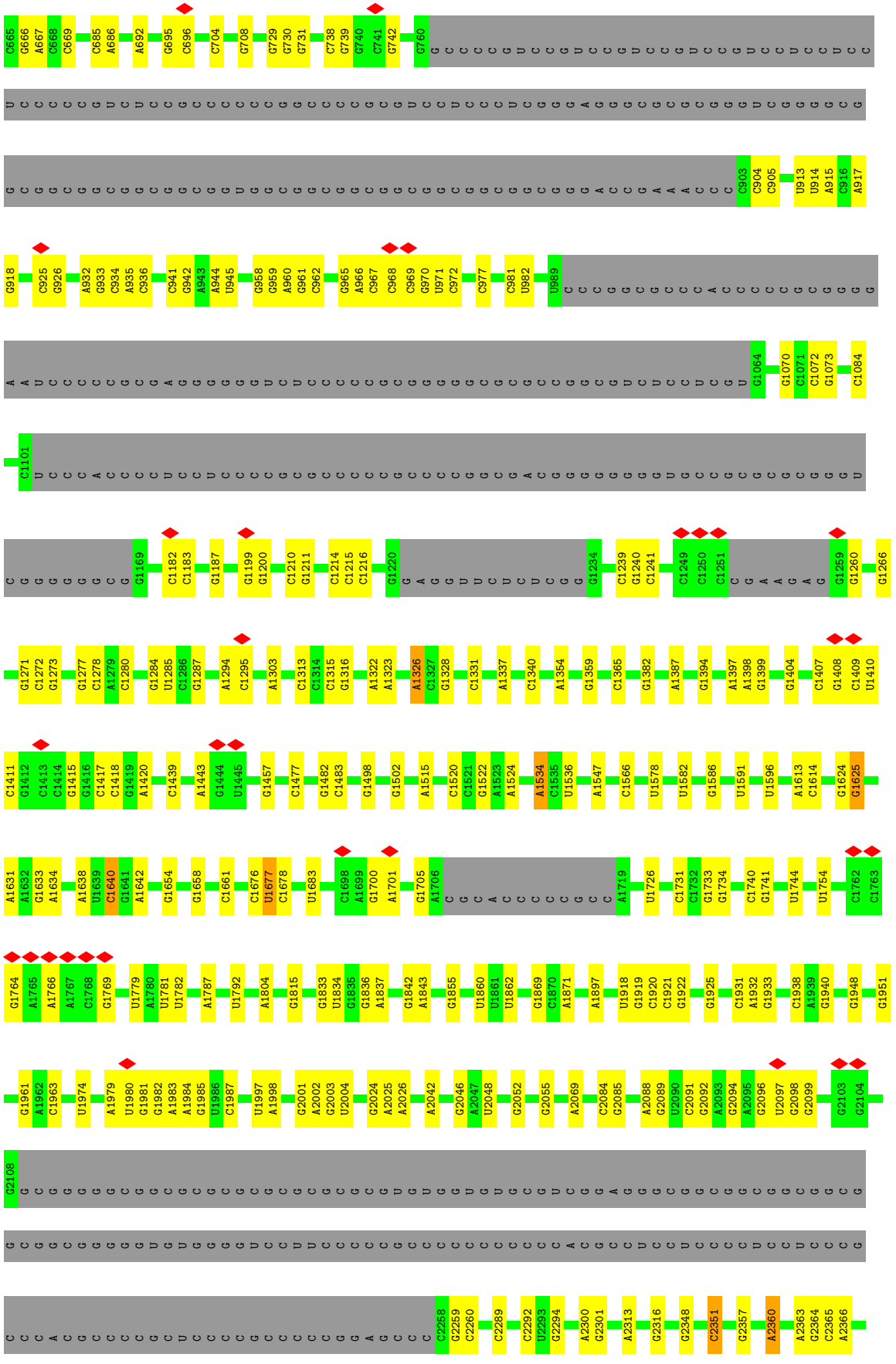
Chain L8:

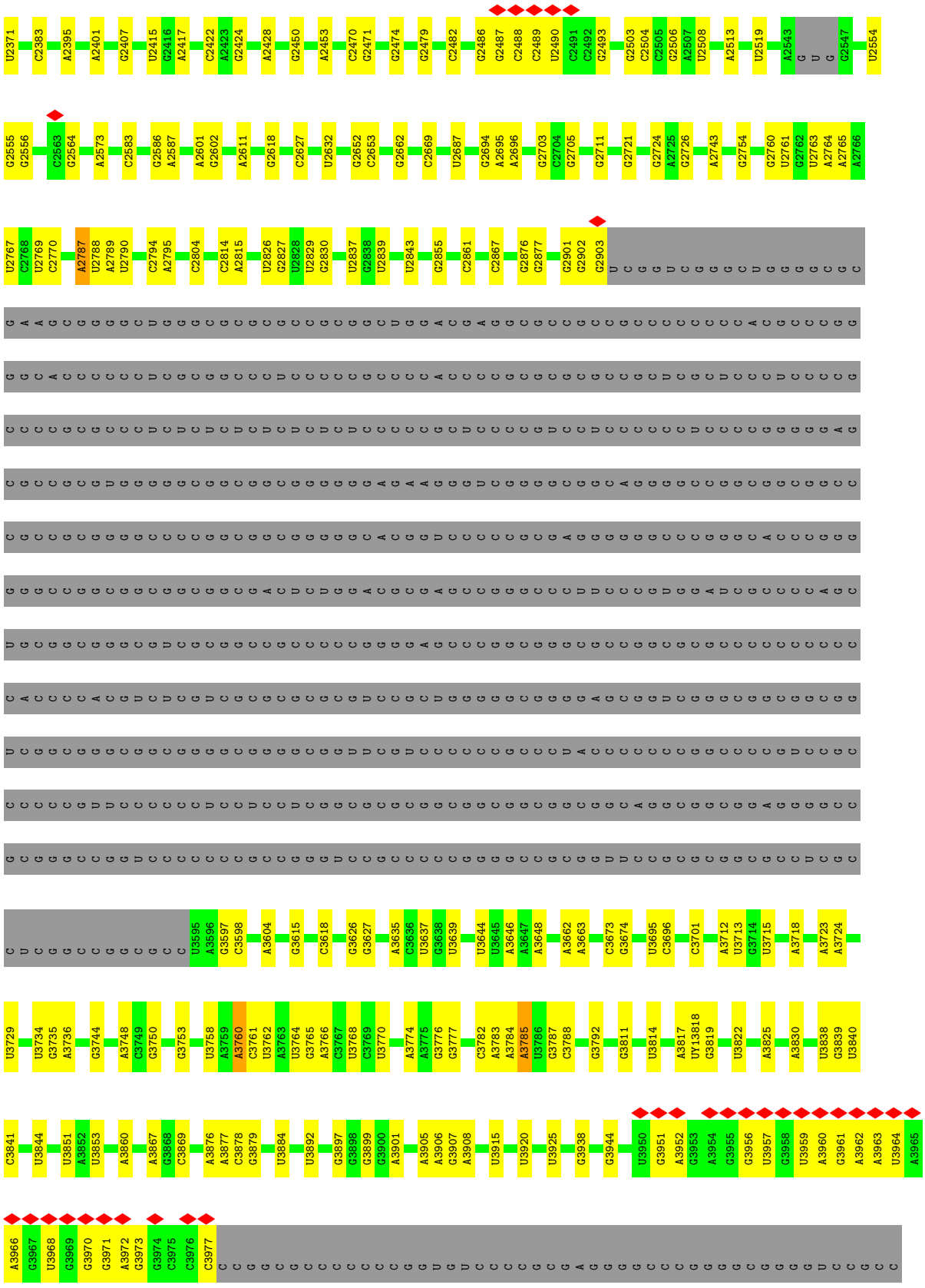


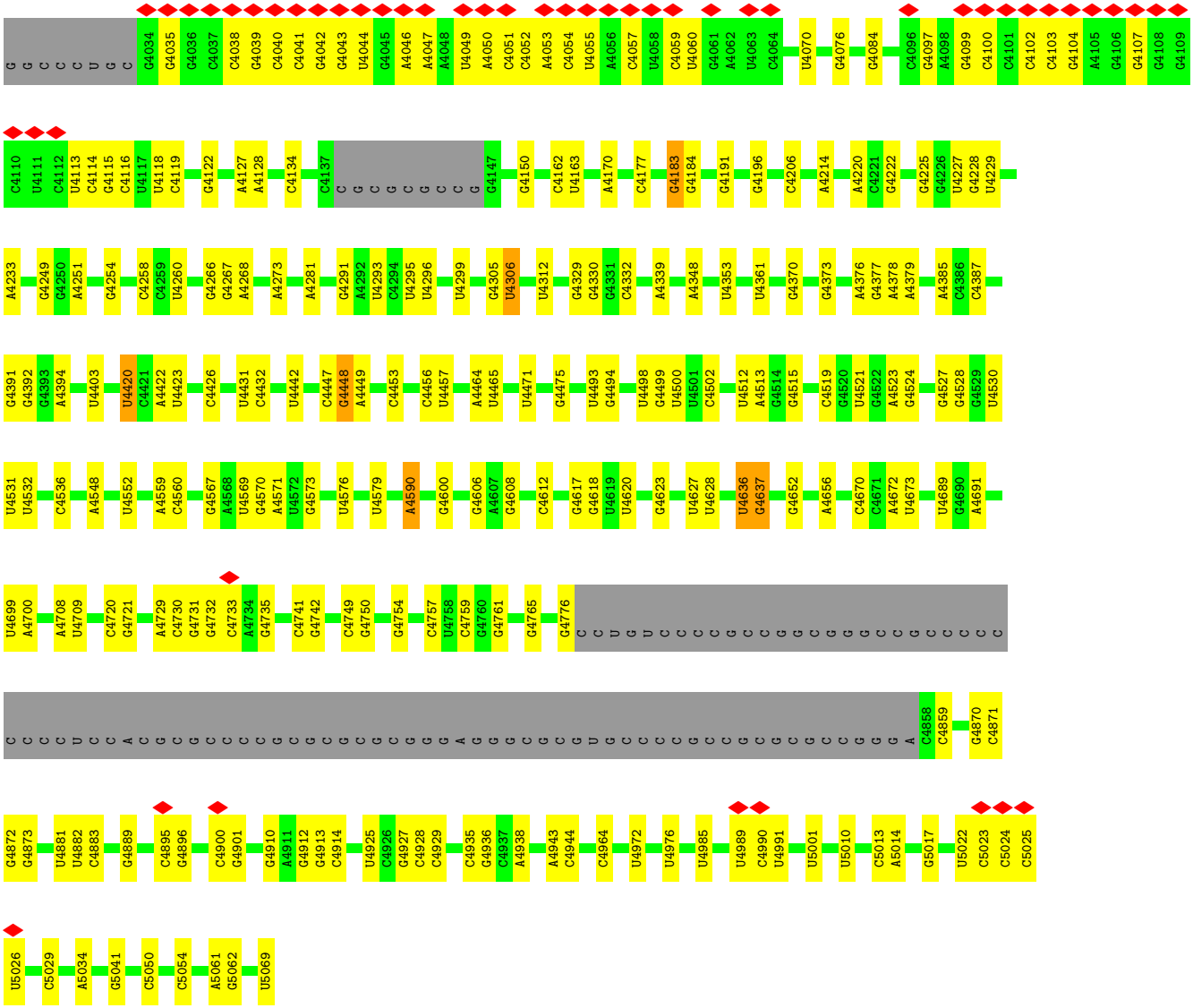
• Molecule 3: 28S rRNA

Chain L5:



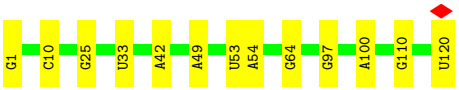






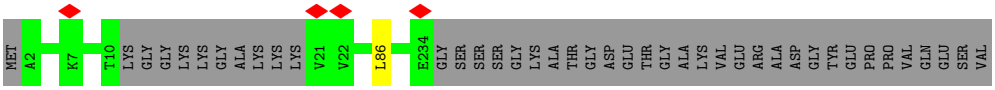
• Molecule 4: 5S rRNA

Chain L7:



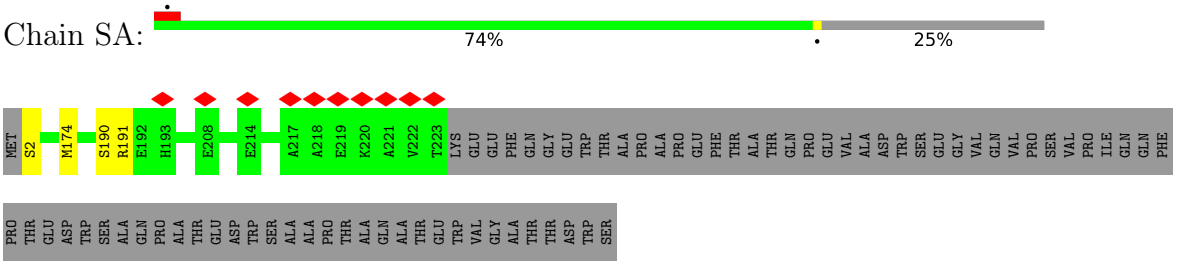
• Molecule 5: eS1

Chain SB:



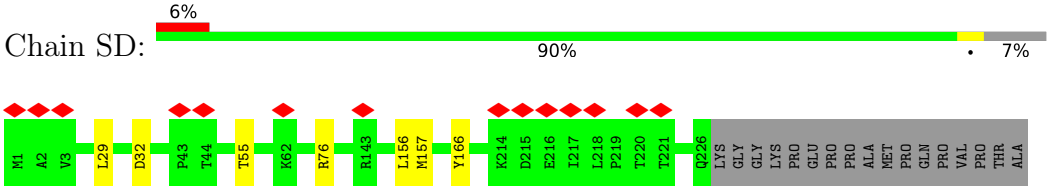
• Molecule 6: uS2

Chain SA:



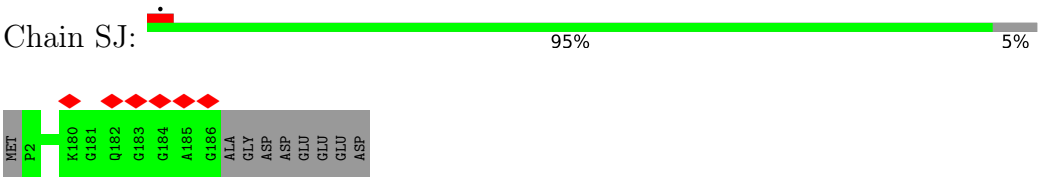
• Molecule 7: uS3

Chain SD:



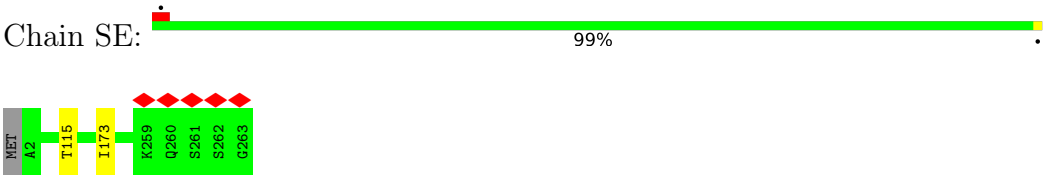
• Molecule 8: uS4

Chain SJ:



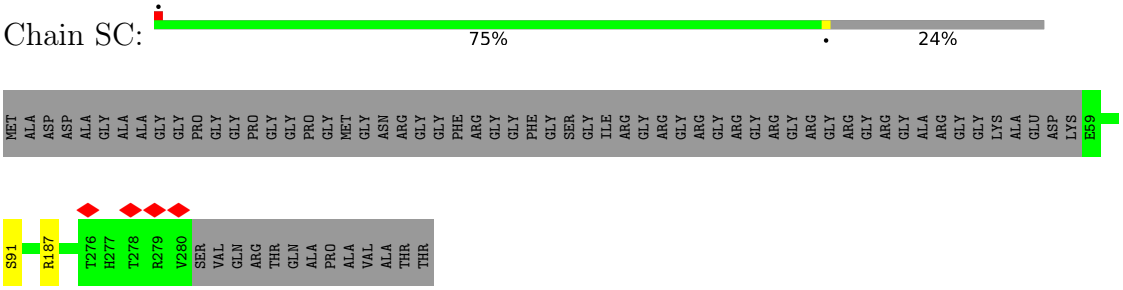
• Molecule 9: eS4

Chain SE:



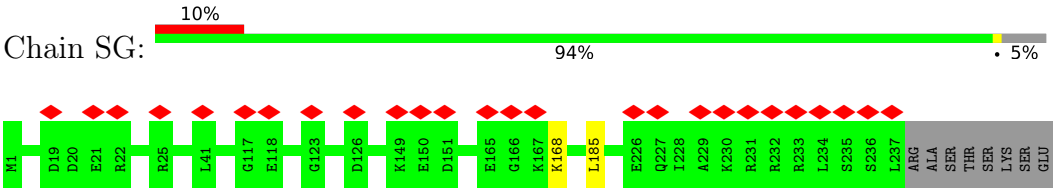
• Molecule 10: uS5

Chain SC:



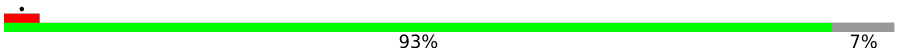
• Molecule 11: eS6

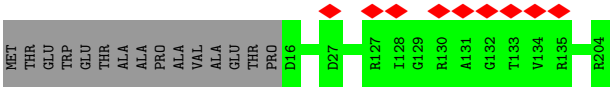
Chain SG:



• Molecule 12: uS7

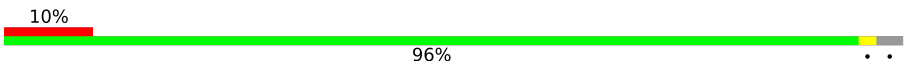
Chain SF:

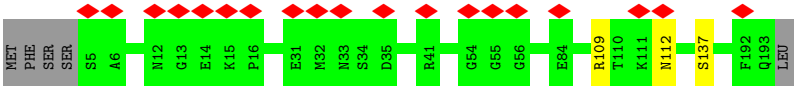




• Molecule 13: eS7

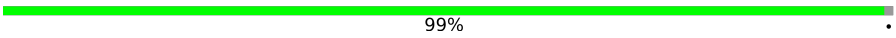
Chain SH:





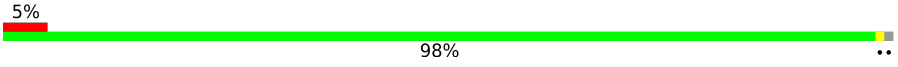
• Molecule 14: uS8

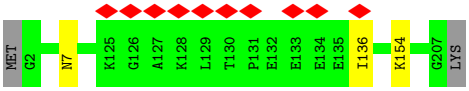
Chain SW:



• Molecule 15: eS8

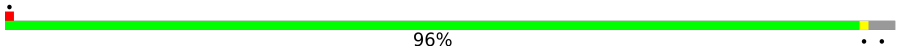
Chain SI:

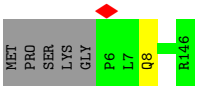




• Molecule 16: uS9

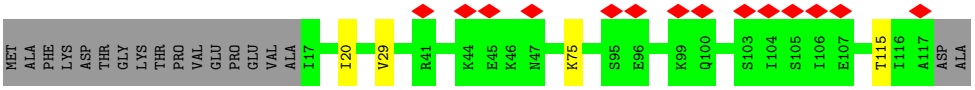
Chain SQ:





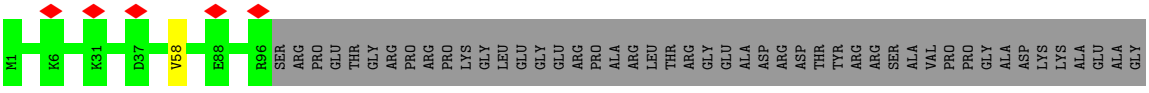
• Molecule 17: uS10

Chain SU:



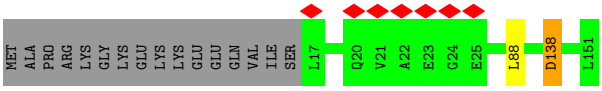
• Molecule 18: eS10

Chain SK:



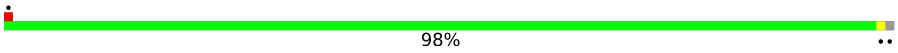
• Molecule 19: uS11

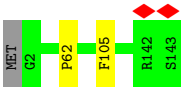
Chain SO:



• Molecule 20: uS12

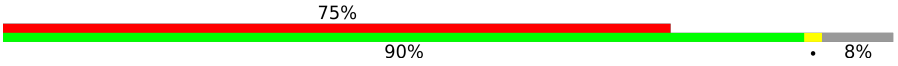
Chain SX:

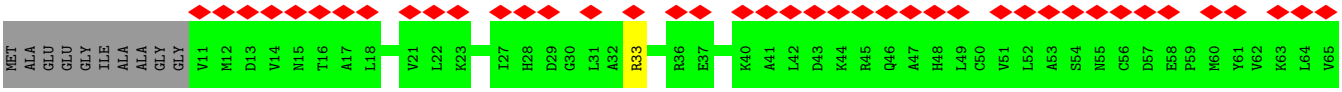


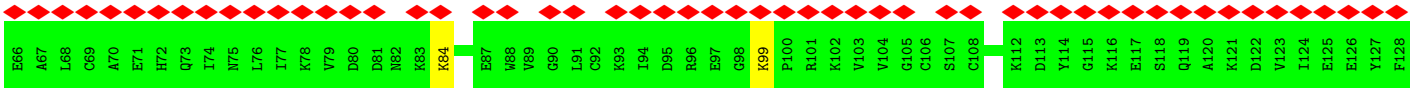


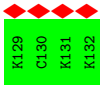
• Molecule 21: eS12

Chain SM:



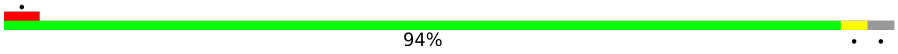


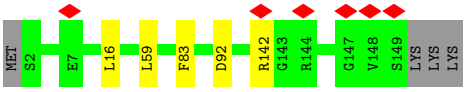




• Molecule 22: uS13

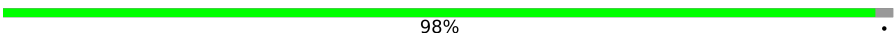
Chain SS:





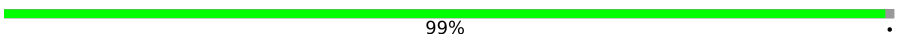
• Molecule 23: uS14

Chain Sd:



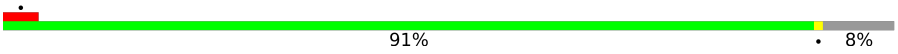
• Molecule 24: uS15

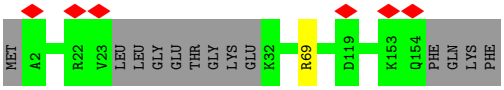
Chain SN:



• Molecule 25: uS17

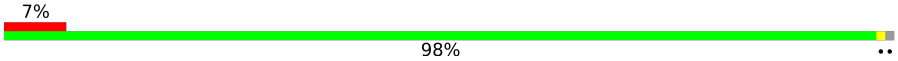
Chain SL:

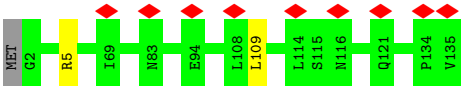




• Molecule 26: eS17

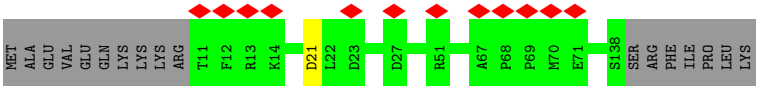
Chain SR:





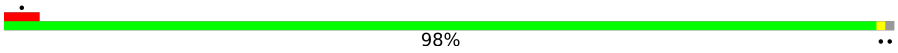
• Molecule 27: uS19

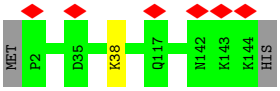
Chain SP:



• Molecule 28: eS19

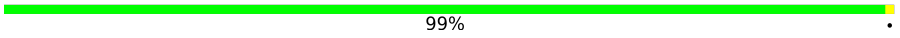
Chain ST:





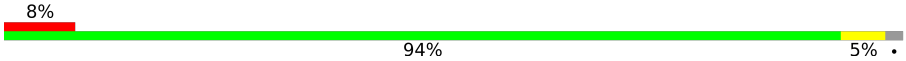
• Molecule 29: eS21

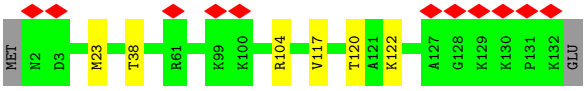
Chain SV:



• Molecule 30: eS24

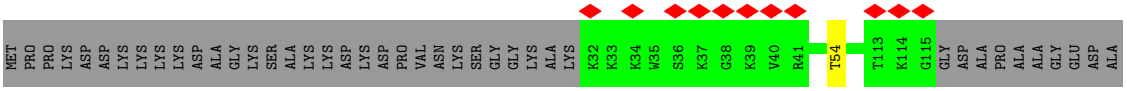
Chain SY:





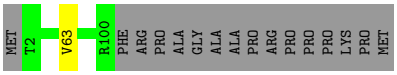
• Molecule 31: eS25

Chain SZ:



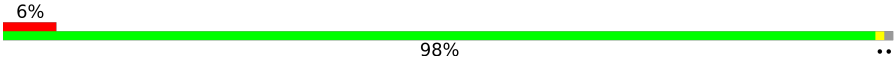
• Molecule 32: eS26

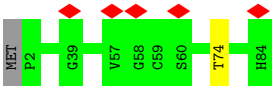
Chain Sa:



• Molecule 33: eS27

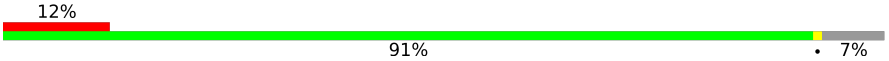
Chain Sb:

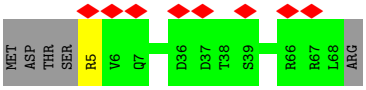




• Molecule 34: eS28

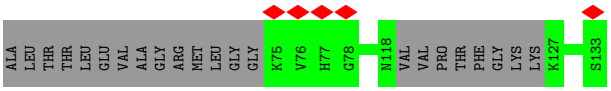
Chain Sc:





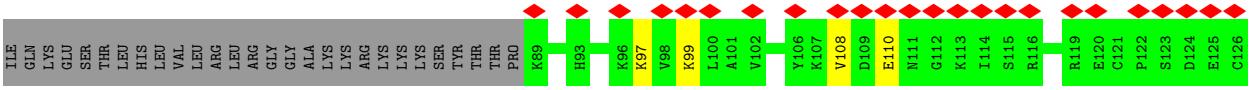
• Molecule 35: eS30

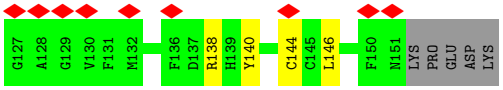
Chain Se:



• Molecule 36: eS31

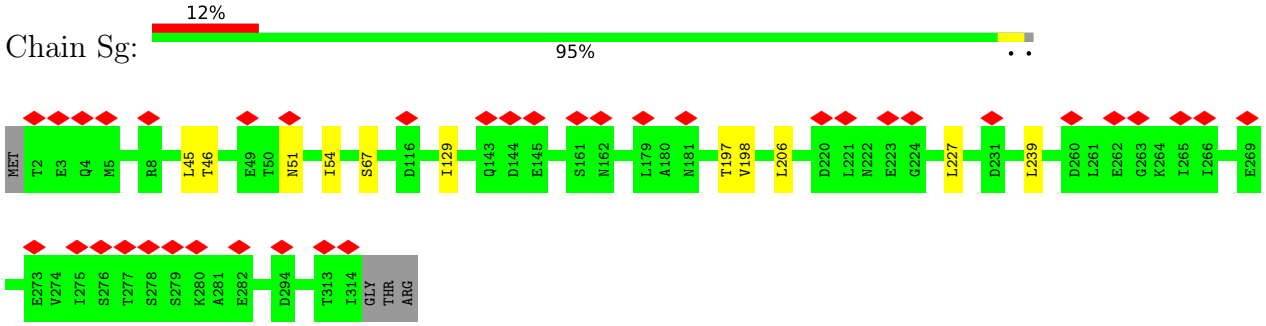
Chain Sf:





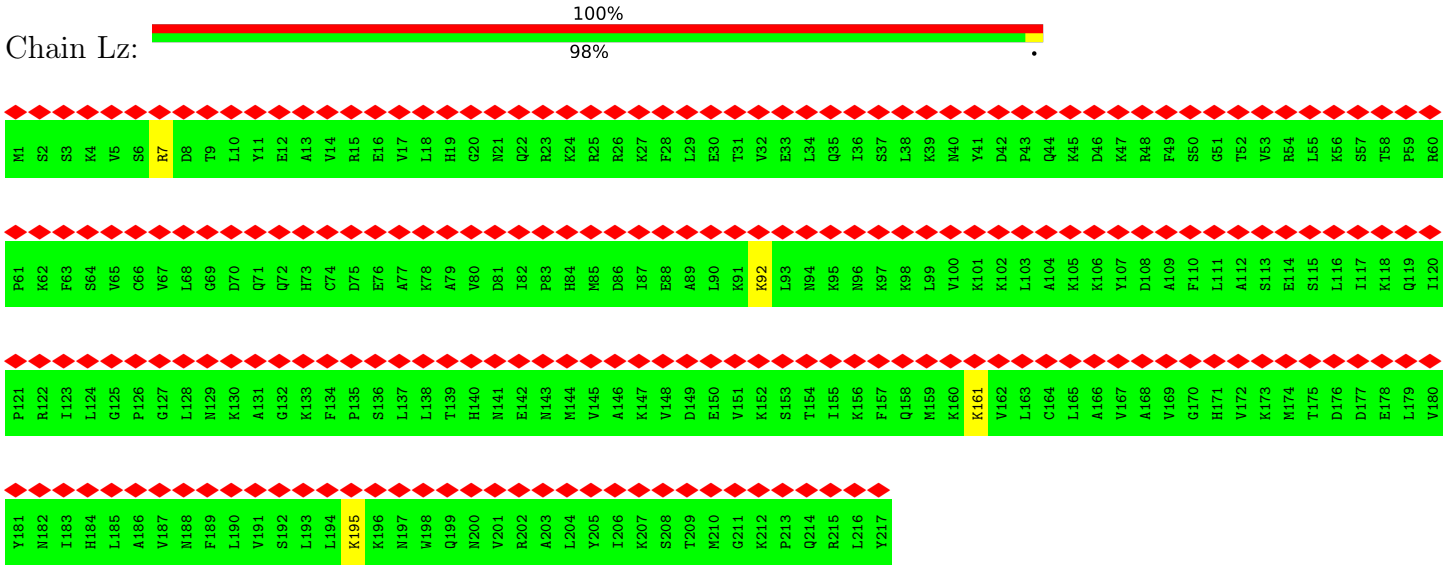
• Molecule 37: RACK1

Chain Sg:



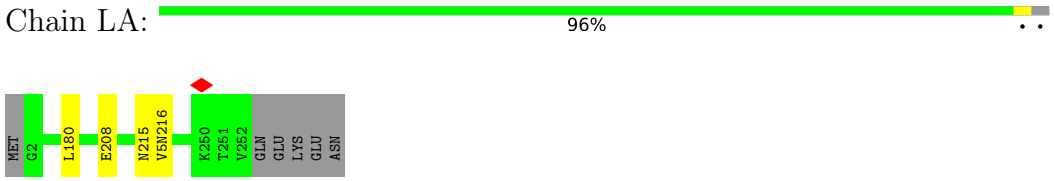
• Molecule 38: uL1

Chain Lz:



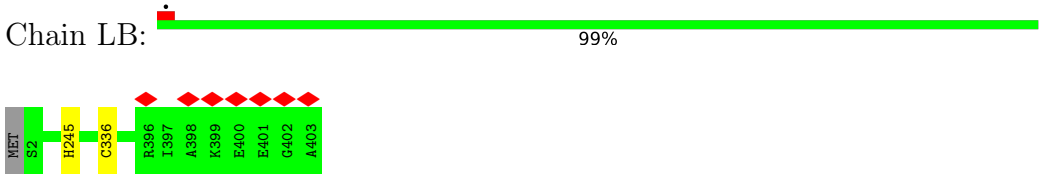
• Molecule 39: uL2

Chain LA:



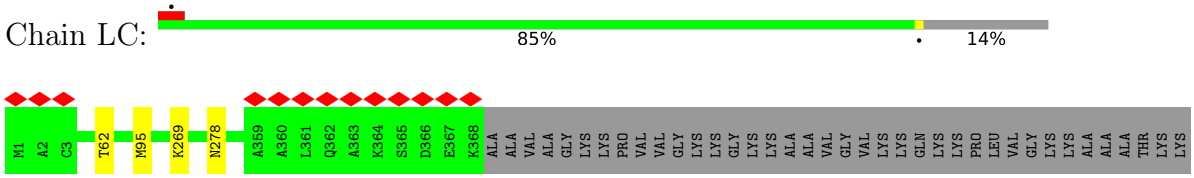
• Molecule 40: uL3

Chain LB:



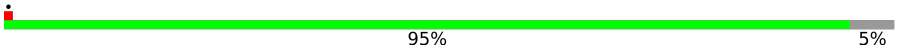
• Molecule 41: uL4

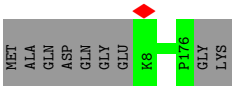
Chain LC:



• Molecule 42: uL5

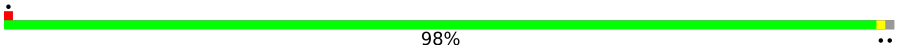
Chain LJ:

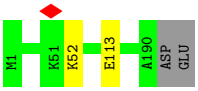




• Molecule 43: uL6

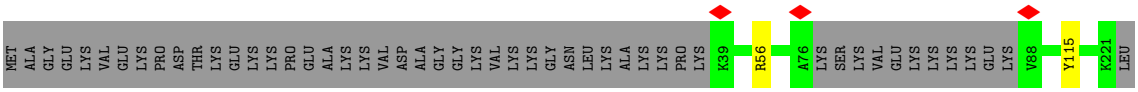
Chain LH:

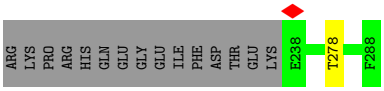




• Molecule 44: eL6

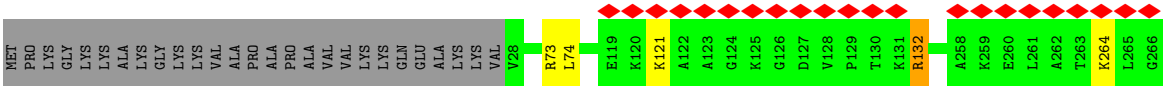
Chain LE:





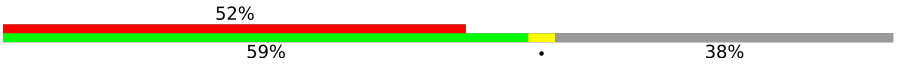
• Molecule 45: eL8

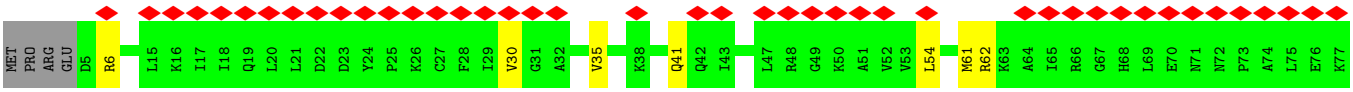
Chain LG:

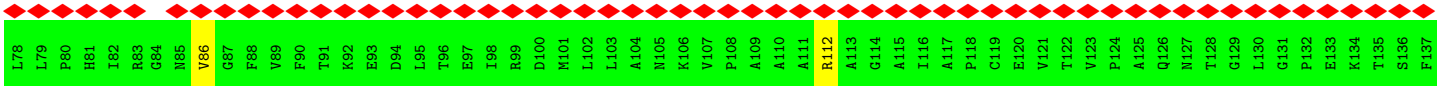


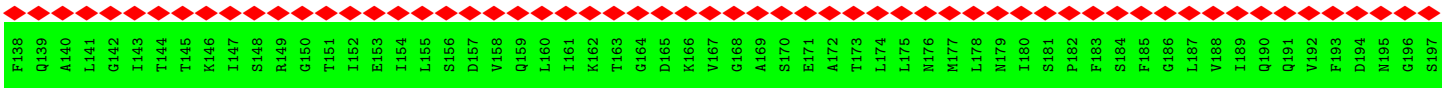
• Molecule 46: uL10

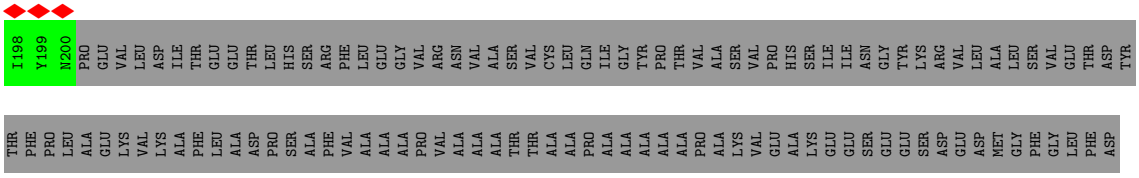
Chain Lq:





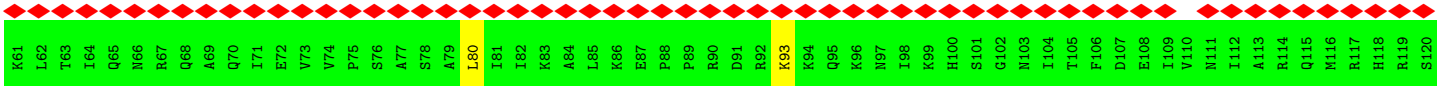


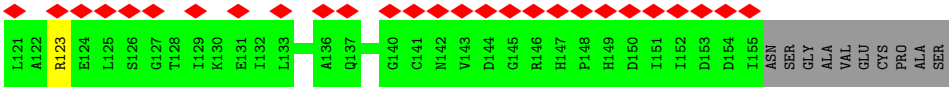




• Molecule 47: uL11

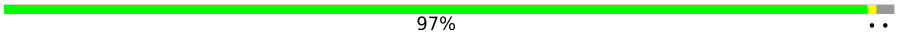
Chain LK:

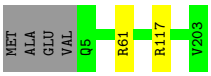




• Molecule 48: uL13

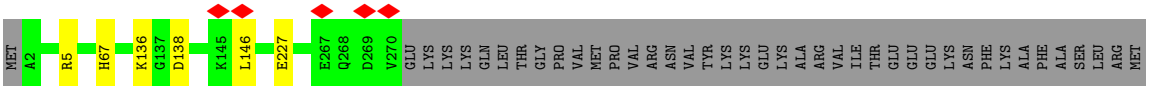
Chain LO:





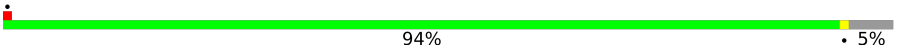
• Molecule 49: eL13

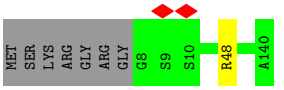
Chain LL:



• Molecule 50: uL14

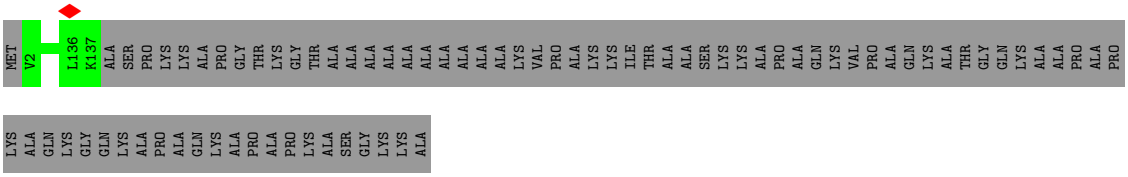
Chain LV:





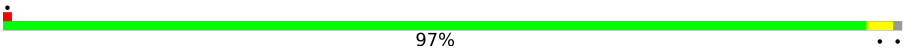
• Molecule 51: eL14

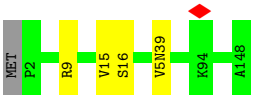
Chain LM:



• Molecule 52: uL15

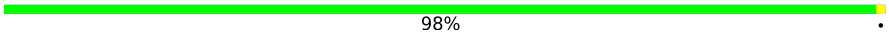
Chain La:





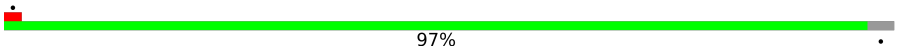
• Molecule 53: eL15

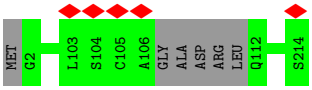
Chain LN:



• Molecule 54: uL16

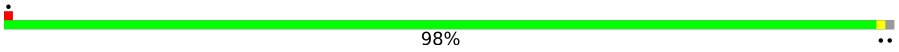
Chain LI:

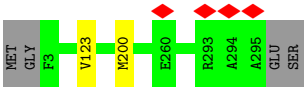




• Molecule 55: uL18

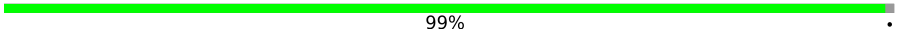
Chain LD:





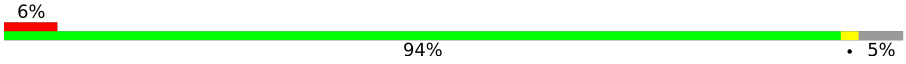
• Molecule 56: eL18

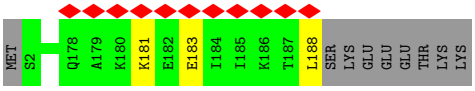
Chain LQ:



• Molecule 57: eL19

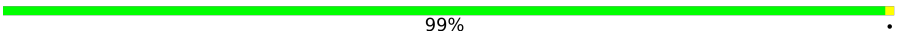
Chain LR:





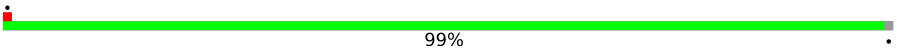
• Molecule 58: eL20

Chain LS:



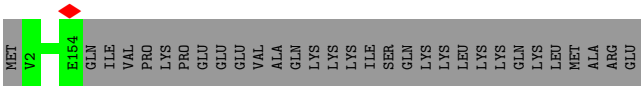
• Molecule 59: eL21

Chain LT:



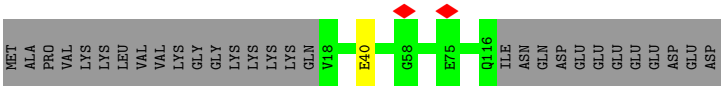
• Molecule 60: uL22

Chain LP:



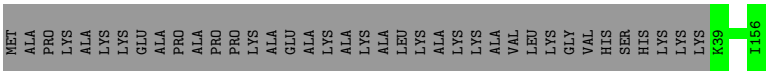
• Molecule 61: eL22

Chain LU:



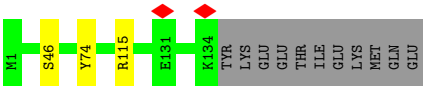
• Molecule 62: uL23

Chain LX:



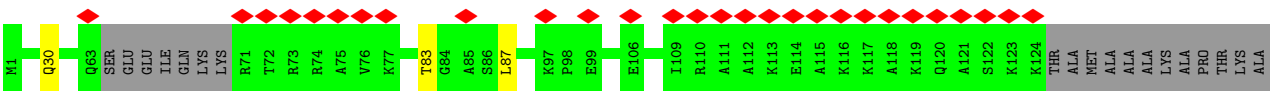
• Molecule 63: uL24

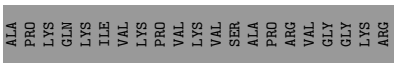
Chain LY:



• Molecule 64: eL24

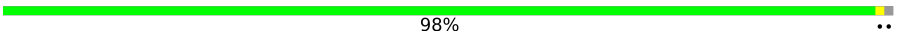
Chain LW:

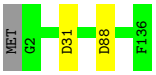




• Molecule 65: eL27

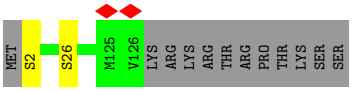
Chain LZ:





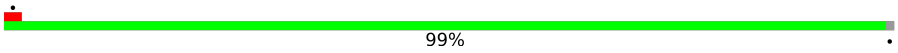
• Molecule 66: eL28

Chain Lr:



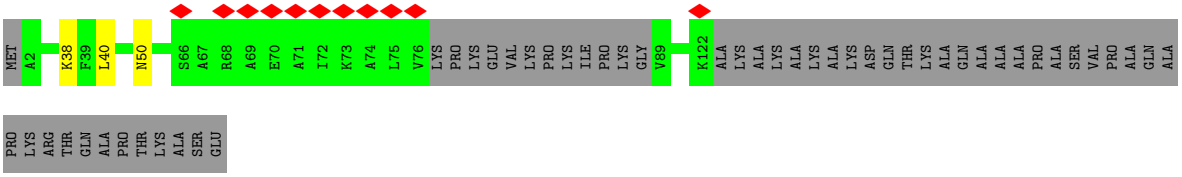
• Molecule 67: uL29

Chain Lh:



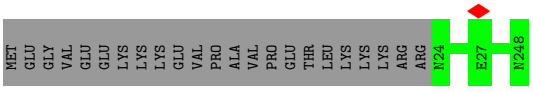
• Molecule 68: eL29

Chain Lb:



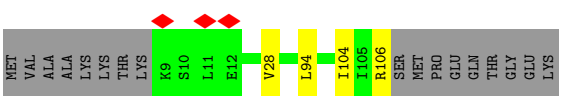
• Molecule 69: uL30

Chain LF:



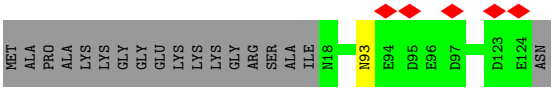
• Molecule 70: eL30

Chain Lc:



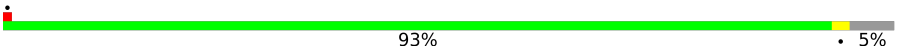
• Molecule 71: eL31

Chain Ld:



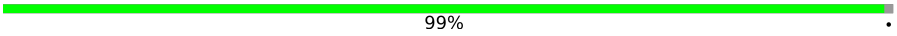
- Molecule 72: eL32

Chain Le:



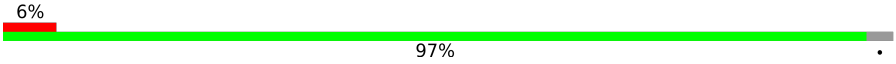
- Molecule 73: eL33

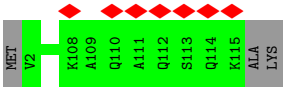
Chain Lf:



- Molecule 74: eL34

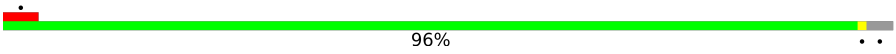
Chain Lg:

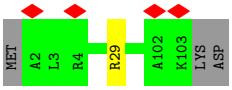




- Molecule 75: eL36

Chain Li:



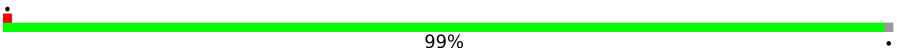


- Molecule 76: eL37

Chain Lj:

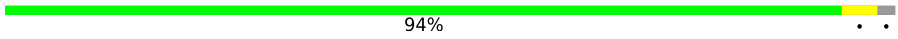
- Molecule 77: eL38

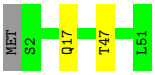
Chain Lk:



- Molecule 78: eL39

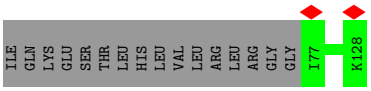
Chain Ll:





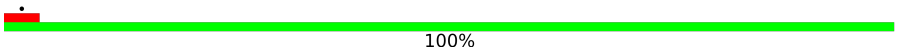
• Molecule 79: eL40

Chain Lm:



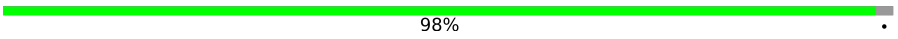
• Molecule 80: eL41

Chain Ln:



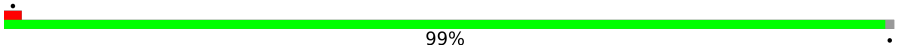
• Molecule 81: eL42

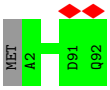
Chain Lo:



• Molecule 82: eL43

Chain Lp:



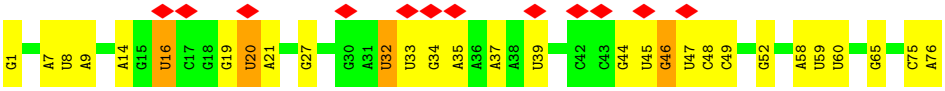


• Molecule 83: mRNA

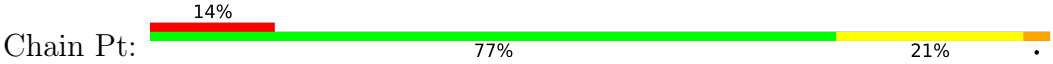
Chain mR:

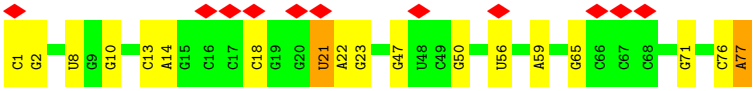
• Molecule 84: A-site tRNA

Chain At:

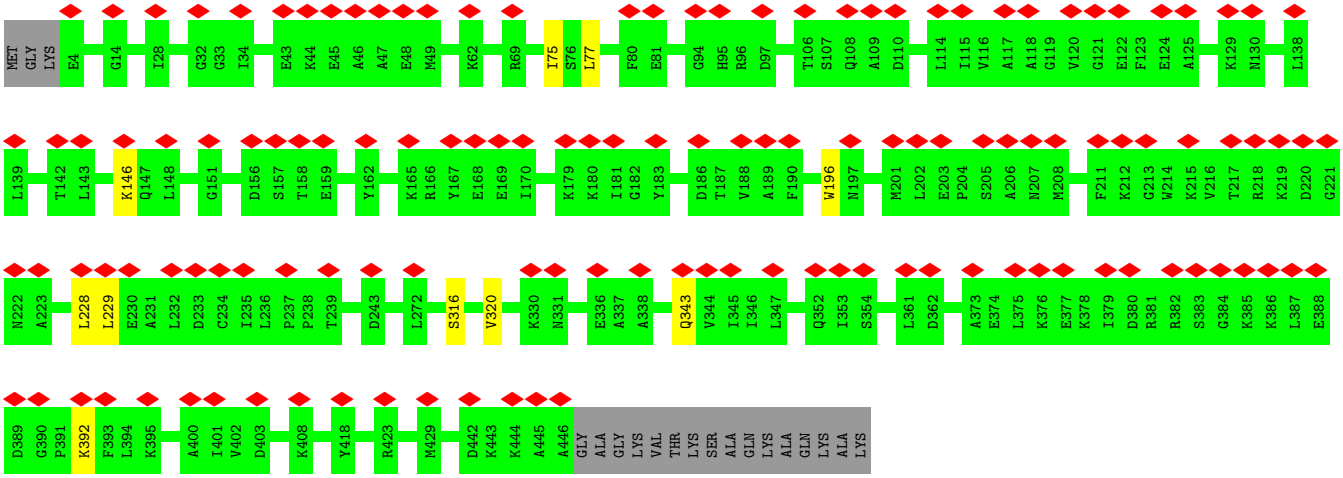


• Molecule 85: P-site tRNA





• Molecule 86: eEF1A



4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	21942	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 ($e^-/Å^2$)	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	0.045	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 (Å)	528.64, 528.64, 528.64	wwPDB
Map dimensions	640, 640, 640	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	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: OMC, 4SU, ZIY, G7M, ANM, HY3, B8N, GSP, PUT, 6MZ, ZN, M3L, SPD, 3H3, OMU, K, 4AC, AME, MLZ, UR3, MA6, MIA, UY1, V5N, 5MC, MG, OMG, SAC, MLY, HIC, PSU, H2U, 1MA, A2M

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	0.61	1/37514 (0.0%)	0.74	4/58464 (0.0%)
2	L8	0.78	1/3613 (0.0%)	0.82	0/5627
3	L5	0.76	4/84265 (0.0%)	0.83	20/131451 (0.0%)
4	L7	0.82	1/2862 (0.0%)	0.80	0/4459
5	SB	0.37	0/1832	0.54	0/2449
6	SA	0.46	0/1778	0.64	0/2416
7	SD	0.45	0/1784	0.66	0/2403
8	SJ	0.39	0/1550	0.58	0/2069
9	SE	0.41	0/2118	0.61	0/2849
10	SC	0.42	0/1762	0.56	0/2381
11	SG	0.41	0/1946	0.63	0/2590
12	SF	0.38	0/1515	0.55	0/2037
13	SH	0.34	0/1540	0.56	0/2064
14	SW	0.40	0/1051	0.57	0/1406
15	SI	0.47	0/1715	0.62	0/2287
16	SQ	0.40	0/1141	0.61	0/1528
17	SU	0.48	0/813	0.68	0/1092
18	SK	0.35	0/834	0.52	0/1125
19	SO	0.41	0/1022	0.68	1/1372 (0.1%)
20	SX	0.40	0/1113	0.58	0/1483
21	SM	0.36	0/950	0.54	0/1275
22	SS	0.39	0/1232	0.64	0/1651
23	Sd	0.37	0/469	0.56	0/623
24	SN	0.42	0/1242	0.59	0/1671
25	SL	0.43	0/1209	0.57	0/1616
26	SR	0.33	0/1098	0.57	0/1474
27	SP	0.41	0/1071	0.60	0/1432
28	ST	0.47	0/1131	0.63	0/1515
29	SV	0.44	0/635	0.61	0/850
30	SY	0.46	0/1083	0.67	0/1438

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
31	SZ	0.42	0/682	0.57	0/911
32	Sa	0.45	0/805	0.64	0/1079
33	Sb	0.39	0/664	0.55	0/891
34	Sc	0.32	0/508	0.62	0/680
35	Se	0.44	0/409	0.65	0/535
36	Sf	0.53	0/525	0.75	0/695
37	Sg	0.43	0/2493	0.64	0/3394
38	Lz	0.29	0/1769	0.55	0/2371
39	LA	0.47	0/1958	0.69	2/2623 (0.1%)
40	LB	0.44	0/3295	0.60	0/4406
41	LC	0.44	0/2981	0.64	0/4002
42	LJ	0.40	0/1381	0.63	0/1847
43	LH	0.38	0/1537	0.57	0/2066
44	LE	0.40	0/1820	0.60	0/2442
45	LG	0.41	0/1943	0.57	0/2616
46	Lq	0.37	0/1529	0.58	0/2063
47	LK	0.36	0/1135	0.56	0/1529
48	LO	0.44	0/1666	0.60	0/2228
49	LL	0.44	0/1695	0.67	0/2270
50	LV	0.40	0/1003	0.62	0/1345
51	LM	0.39	0/1142	0.53	0/1527
52	La	0.44	0/1179	0.64	0/1573
53	LN	0.49	0/1746	0.69	1/2338 (0.0%)
54	LI	0.43	0/1718	0.60	0/2293
55	LD	0.46	0/2433	0.60	0/3258
56	LQ	0.44	0/1535	0.66	0/2050
57	LR	0.42	0/1582	0.63	0/2091
58	LS	0.47	0/1500	0.63	1/2013 (0.0%)
59	LT	0.46	0/1326	0.58	0/1770
60	LP	0.45	0/1268	0.62	0/1701
61	LU	0.40	0/822	0.60	0/1103
62	LX	0.38	0/984	0.56	0/1323
63	LY	0.46	0/1132	0.68	0/1504
64	LW	0.42	0/958	0.61	0/1270
65	LZ	0.48	0/1130	0.64	0/1507
66	Lr	0.44	0/1011	0.64	0/1356
67	Lh	0.39	0/1023	0.57	0/1351
68	Lb	0.41	0/887	0.60	0/1171
69	LF	0.44	0/1905	0.59	0/2539
70	Lc	0.50	0/774	0.63	0/1038
71	Ld	0.43	0/903	0.62	0/1216
72	Le	0.47	0/1071	0.66	0/1429
73	Lf	0.50	0/895	0.66	0/1198

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
74	Lg	0.45	0/916	0.63	0/1220
75	Li	0.37	0/843	0.58	0/1115
76	Lj	0.49	0/720	0.71	0/952
77	Lk	0.39	0/574	0.54	0/761
78	Ll	0.51	0/453	0.80	0/599
79	Lm	0.38	0/425	0.62	0/564
80	Ln	0.41	0/240	0.74	0/305
81	Lo	0.43	0/854	0.61	0/1125
82	Lp	0.48	0/718	0.62	0/953
83	mR	0.34	0/208	0.80	0/321
84	At	0.61	6/1650 (0.4%)	0.96	10/2566 (0.4%)
85	Pt	0.67	6/1721 (0.3%)	0.95	11/2679 (0.4%)
86	EF	0.36	0/3424	0.55	0/4639
All	All	0.61	19/233356 (0.0%)	0.74	50/341508 (0.0%)

All (19) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
85	Pt	77	A	C5-C4	11.52	1.46	1.38
84	At	76	A	C5-C4	11.06	1.46	1.38
2	L8	1	C	OP3-P	-10.86	1.48	1.61
85	Pt	1	C	OP3-P	-10.80	1.48	1.61
4	L7	1	G	OP3-P	-10.78	1.48	1.61
84	At	1	G	OP3-P	-10.73	1.48	1.61
3	L5	1	C	OP3-P	-10.64	1.48	1.61
1	S2	1	U	OP3-P	-10.39	1.48	1.61
85	Pt	77	A	N9-C4	-9.15	1.32	1.37
85	Pt	77	A	N7-C5	-7.98	1.34	1.39
84	At	76	A	N9-C4	-7.89	1.33	1.37
84	At	76	A	C5-C6	7.64	1.48	1.41
84	At	76	A	N7-C5	-7.40	1.34	1.39
85	Pt	77	A	C5-C6	7.11	1.47	1.41
84	At	76	A	C8-N7	6.41	1.36	1.31
85	Pt	77	A	C8-N7	6.04	1.35	1.31
3	L5	4448	G	C8-N7	-5.66	1.27	1.30
3	L5	2360	A	N9-C4	-5.56	1.34	1.37
3	L5	4385	A	N9-C4	-5.53	1.34	1.37

All (50) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
84	At	76	A	C2-N3-C4	21.87	121.53	110.60

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
85	Pt	77	A	C2-N3-C4	18.74	119.97	110.60
84	At	76	A	N1-C2-N3	-13.33	122.64	129.30
85	Pt	77	A	N1-C2-N3	-11.42	123.59	129.30
84	At	76	A	N3-C4-C5	-10.92	119.16	126.80
85	Pt	77	A	N3-C4-C5	-9.84	119.91	126.80
84	At	76	A	N3-C4-N9	8.90	134.52	127.40
84	At	76	A	C4-C5-N7	-7.98	106.71	110.70
85	Pt	77	A	N3-C4-N9	7.86	133.69	127.40
84	At	76	A	C8-N9-C4	7.71	108.89	105.80
19	SO	138	ASP	CB-CA-C	7.65	125.70	110.40
85	Pt	77	A	C4-C5-N7	-7.44	106.98	110.70
84	At	76	A	C5-N7-C8	6.99	107.39	103.90
84	At	76	A	C6-C5-N7	6.82	137.07	132.30
85	Pt	77	A	C6-N1-C2	6.78	122.67	118.60
85	Pt	77	A	C8-N9-C4	6.68	108.47	105.80
84	At	76	A	N7-C8-N9	-6.22	110.69	113.80
1	S2	659	G	C4-N9-C1'	5.86	134.12	126.50
58	LS	84	TYR	CB-CG-CD2	-5.84	117.50	121.00
84	At	76	A	C6-N1-C2	5.82	122.09	118.60
1	S2	666	U	C2-N1-C1'	5.76	124.61	117.70
85	Pt	77	A	C5-N7-C8	5.72	106.76	103.90
85	Pt	77	A	C6-C5-N7	5.66	136.26	132.30
3	L5	1933	G	N3-C4-N9	5.61	129.37	126.00
3	L5	1520	C	C6-N1-C2	-5.56	118.07	120.30
3	L5	1938	C	C6-N1-C2	-5.55	118.08	120.30
3	L5	95	G	O5'-P-OP2	-5.52	100.73	105.70
1	S2	1022	U	C2-N1-C1'	5.49	124.29	117.70
3	L5	4527	G	O4'-C1'-N9	5.44	112.55	108.20
3	L5	1640	C	C6-N1-C2	-5.43	118.13	120.30
3	L5	1658	G	C2-N3-C4	5.38	114.59	111.90
3	L5	4183	G	C8-N9-C4	-5.33	104.27	106.40
53	LN	134	LEU	CA-CB-CG	5.28	127.45	115.30
3	L5	2294	G	C4-C5-N7	-5.22	108.71	110.80
85	Pt	77	A	C3'-C2'-C1'	5.22	105.68	101.50
85	Pt	77	A	N1-C6-N6	5.22	121.73	118.60
3	L5	4295	U	C2-N1-C1'	-5.21	111.45	117.70
3	L5	2292	C	C6-N1-C2	-5.20	118.22	120.30
3	L5	1382	G	N3-C4-N9	5.20	129.12	126.00
1	S2	659	G	C8-N9-C1'	-5.19	120.25	127.00
39	LA	180	LEU	CA-CB-CG	5.18	127.21	115.30
3	L5	2407	G	O4'-C1'-N9	5.17	112.34	108.20
3	L5	2555	G	P-O3'-C3'	5.12	125.84	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	L5	4448	G	O5'-P-OP2	-5.11	101.10	105.70
3	L5	1524	A2M	OP1-P-O3'	5.09	116.40	105.20
3	L5	421	C	N3-C2-O2	-5.07	118.36	121.90
3	L5	3648	A	O4'-C1'-N9	5.04	112.23	108.20
3	L5	33	A	O5'-P-OP1	-5.01	101.19	105.70
3	L5	1331	C	C6-N1-C2	-5.01	118.30	120.30
39	LA	215	ASN	CB-CA-C	5.01	120.41	110.40

There are no chirality outliers.

There are no planarity outliers.

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%)	214 (98%)	5 (2%)	0	100	100
6	SA	220/295 (75%)	214 (97%)	6 (3%)	0	100	100
7	SD	224/243 (92%)	219 (98%)	4 (2%)	1 (0%)	34	46
8	SJ	183/194 (94%)	178 (97%)	5 (3%)	0	100	100
9	SE	260/263 (99%)	253 (97%)	7 (3%)	0	100	100
10	SC	220/293 (75%)	216 (98%)	4 (2%)	0	100	100
11	SG	235/249 (94%)	232 (99%)	3 (1%)	0	100	100
12	SF	187/204 (92%)	175 (94%)	12 (6%)	0	100	100
13	SH	187/194 (96%)	178 (95%)	9 (5%)	0	100	100
14	SW	127/130 (98%)	124 (98%)	3 (2%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
15	SI	204/208 (98%)	202 (99%)	2 (1%)	0	100	100
16	SQ	139/146 (95%)	137 (99%)	2 (1%)	0	100	100
17	SU	99/119 (83%)	95 (96%)	4 (4%)	0	100	100
18	SK	94/165 (57%)	86 (92%)	8 (8%)	0	100	100
19	SO	133/151 (88%)	128 (96%)	5 (4%)	0	100	100
20	SX	139/143 (97%)	137 (99%)	2 (1%)	0	100	100
21	SM	120/132 (91%)	109 (91%)	11 (9%)	0	100	100
22	SS	146/152 (96%)	139 (95%)	6 (4%)	1 (1%)	22	30
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	141/158 (89%)	133 (94%)	8 (6%)	0	100	100
26	SR	132/135 (98%)	125 (95%)	7 (5%)	0	100	100
27	SP	126/145 (87%)	117 (93%)	9 (7%)	0	100	100
28	ST	141/145 (97%)	136 (96%)	5 (4%)	0	100	100
29	SV	81/83 (98%)	77 (95%)	4 (5%)	0	100	100
30	SY	129/133 (97%)	124 (96%)	5 (4%)	0	100	100
31	SZ	82/125 (66%)	78 (95%)	4 (5%)	0	100	100
32	Sa	97/115 (84%)	95 (98%)	2 (2%)	0	100	100
33	Sb	81/84 (96%)	76 (94%)	5 (6%)	0	100	100
34	Sc	62/69 (90%)	59 (95%)	3 (5%)	0	100	100
35	Se	47/133 (35%)	47 (100%)	0	0	100	100
36	Sf	61/156 (39%)	55 (90%)	5 (8%)	1 (2%)	9	12
37	Sg	311/317 (98%)	290 (93%)	21 (7%)	0	100	100
38	Lz	215/217 (99%)	187 (87%)	28 (13%)	0	100	100
39	LA	249/257 (97%)	239 (96%)	10 (4%)	0	100	100
40	LB	399/403 (99%)	390 (98%)	9 (2%)	0	100	100
41	LC	366/427 (86%)	361 (99%)	5 (1%)	0	100	100
42	LJ	167/178 (94%)	166 (99%)	1 (1%)	0	100	100
43	LH	188/192 (98%)	186 (99%)	2 (1%)	0	100	100
44	LE	217/288 (75%)	210 (97%)	7 (3%)	0	100	100
45	LG	237/266 (89%)	227 (96%)	9 (4%)	1 (0%)	34	46

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
46	Lq	194/317 (61%)	181 (93%)	13 (7%)	0	100	100
47	LK	145/165 (88%)	131 (90%)	14 (10%)	0	100	100
48	LO	197/203 (97%)	195 (99%)	2 (1%)	0	100	100
49	LL	204/270 (76%)	196 (96%)	8 (4%)	0	100	100
50	LV	131/140 (94%)	129 (98%)	2 (2%)	0	100	100
51	LM	134/215 (62%)	131 (98%)	3 (2%)	0	100	100
52	La	144/148 (97%)	138 (96%)	5 (4%)	1 (1%)	22	30
53	LN	201/204 (98%)	196 (98%)	5 (2%)	0	100	100
54	LI	204/214 (95%)	193 (95%)	11 (5%)	0	100	100
55	LD	291/297 (98%)	287 (99%)	4 (1%)	0	100	100
56	LQ	185/188 (98%)	182 (98%)	3 (2%)	0	100	100
57	LR	185/196 (94%)	183 (99%)	2 (1%)	0	100	100
58	LS	174/176 (99%)	173 (99%)	1 (1%)	0	100	100
59	LT	157/160 (98%)	155 (99%)	2 (1%)	0	100	100
60	LP	151/184 (82%)	148 (98%)	3 (2%)	0	100	100
61	LU	97/128 (76%)	90 (93%)	7 (7%)	0	100	100
62	LX	116/156 (74%)	115 (99%)	1 (1%)	0	100	100
63	LY	132/145 (91%)	130 (98%)	2 (2%)	0	100	100
64	LW	113/157 (72%)	111 (98%)	2 (2%)	0	100	100
65	LZ	133/136 (98%)	129 (97%)	4 (3%)	0	100	100
66	Lr	123/137 (90%)	117 (95%)	6 (5%)	0	100	100
67	Lh	120/123 (98%)	117 (98%)	3 (2%)	0	100	100
68	Lb	104/159 (65%)	99 (95%)	5 (5%)	0	100	100
69	LF	223/248 (90%)	215 (96%)	8 (4%)	0	100	100
70	Lc	96/115 (84%)	95 (99%)	1 (1%)	0	100	100
71	Ld	105/125 (84%)	103 (98%)	2 (2%)	0	100	100
72	Le	126/135 (93%)	125 (99%)	1 (1%)	0	100	100
73	Lf	107/110 (97%)	107 (100%)	0	0	100	100
74	Lg	112/117 (96%)	111 (99%)	1 (1%)	0	100	100
75	Li	100/105 (95%)	96 (96%)	4 (4%)	0	100	100
76	Lj	84/97 (87%)	83 (99%)	1 (1%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
77	Lk	67/70 (96%)	67 (100%)	0	0	100	100
78	Ll	48/51 (94%)	48 (100%)	0	0	100	100
79	Lm	49/128 (38%)	49 (100%)	0	0	100	100
80	Ln	23/25 (92%)	23 (100%)	0	0	100	100
81	Lo	101/106 (95%)	99 (98%)	2 (2%)	0	100	100
82	Lp	89/92 (97%)	84 (94%)	5 (6%)	0	100	100
86	EF	437/462 (95%)	413 (94%)	24 (6%)	0	100	100
All	All	12269/13982 (88%)	11858 (97%)	406 (3%)	5 (0%)	100	100

All (5) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
52	La	15	VAL
7	SD	157	MET
22	SS	92	ASP
36	Sf	97	LYS
45	LG	132	ARG

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%)	201 (100%)	1 (0%)	88	93
6	SA	183/242 (76%)	180 (98%)	3 (2%)	62	77
7	SD	189/202 (94%)	183 (97%)	6 (3%)	39	53
8	SJ	161/168 (96%)	161 (100%)	0	100	100
9	SE	224/225 (100%)	222 (99%)	2 (1%)	78	86
10	SC	188/225 (84%)	186 (99%)	2 (1%)	73	83
11	SG	207/218 (95%)	205 (99%)	2 (1%)	76	84
12	SF	159/170 (94%)	159 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
13	SH	168/174 (97%)	165 (98%)	3 (2%)	59 74
14	SW	112/113 (99%)	112 (100%)	0	100 100
15	SI	178/180 (99%)	175 (98%)	3 (2%)	60 75
16	SQ	117/121 (97%)	116 (99%)	1 (1%)	78 86
17	SU	93/107 (87%)	89 (96%)	4 (4%)	29 39
18	SK	87/136 (64%)	86 (99%)	1 (1%)	73 83
19	SO	105/119 (88%)	103 (98%)	2 (2%)	57 72
20	SX	113/114 (99%)	112 (99%)	1 (1%)	78 86
21	SM	102/108 (94%)	99 (97%)	3 (3%)	42 57
22	SS	128/132 (97%)	124 (97%)	4 (3%)	40 54
23	Sd	48/49 (98%)	48 (100%)	0	100 100
24	SN	131/131 (100%)	131 (100%)	0	100 100
25	SL	131/142 (92%)	130 (99%)	1 (1%)	81 88
26	SR	121/122 (99%)	119 (98%)	2 (2%)	60 75
27	SP	114/130 (88%)	113 (99%)	1 (1%)	78 86
28	ST	113/115 (98%)	112 (99%)	1 (1%)	78 86
29	SV	66/66 (100%)	66 (100%)	0	100 100
30	SY	113/115 (98%)	107 (95%)	6 (5%)	22 30
31	SZ	74/103 (72%)	73 (99%)	1 (1%)	67 79
32	Sa	86/98 (88%)	85 (99%)	1 (1%)	71 81
33	Sb	75/76 (99%)	74 (99%)	1 (1%)	69 80
34	Sc	57/62 (92%)	56 (98%)	1 (2%)	59 74
35	Se	41/104 (39%)	41 (100%)	0	100 100
36	Sf	56/140 (40%)	49 (88%)	7 (12%)	4 4
37	Sg	272/275 (99%)	261 (96%)	11 (4%)	31 43
38	Lz	195/196 (100%)	191 (98%)	4 (2%)	53 68
39	LA	193/198 (98%)	192 (100%)	1 (0%)	88 93
40	LB	347/348 (100%)	346 (100%)	1 (0%)	92 96
41	LC	306/348 (88%)	302 (99%)	4 (1%)	69 80
42	LJ	143/149 (96%)	143 (100%)	0	100 100
43	LH	169/171 (99%)	167 (99%)	2 (1%)	71 81

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
44	LE	196/252 (78%)	193 (98%)	3 (2%)	65 77
45	LG	201/223 (90%)	196 (98%)	5 (2%)	47 62
46	Lq	164/258 (64%)	155 (94%)	9 (6%)	21 29
47	LK	122/137 (89%)	119 (98%)	3 (2%)	47 62
48	LO	171/174 (98%)	169 (99%)	2 (1%)	71 81
49	LL	172/224 (77%)	166 (96%)	6 (4%)	36 49
50	LV	102/107 (95%)	101 (99%)	1 (1%)	76 84
51	LM	116/161 (72%)	116 (100%)	0	100 100
52	La	119/120 (99%)	117 (98%)	2 (2%)	60 75
53	LN	171/172 (99%)	169 (99%)	2 (1%)	71 81
54	LI	177/181 (98%)	177 (100%)	0	100 100
55	LD	247/250 (99%)	245 (99%)	2 (1%)	81 88
56	LQ	164/165 (99%)	164 (100%)	0	100 100
57	LR	166/175 (95%)	163 (98%)	3 (2%)	59 74
58	LS	157/157 (100%)	156 (99%)	1 (1%)	86 92
59	LT	139/140 (99%)	139 (100%)	0	100 100
60	LP	134/163 (82%)	134 (100%)	0	100 100
61	LU	89/115 (77%)	88 (99%)	1 (1%)	73 83
62	LX	106/133 (80%)	106 (100%)	0	100 100
63	LY	124/135 (92%)	121 (98%)	3 (2%)	49 64
64	LW	94/126 (75%)	91 (97%)	3 (3%)	39 53
65	LZ	117/118 (99%)	115 (98%)	2 (2%)	60 75
66	Lr	108/120 (90%)	107 (99%)	1 (1%)	78 86
67	Lh	109/110 (99%)	109 (100%)	0	100 100
68	Lb	89/125 (71%)	86 (97%)	3 (3%)	37 50
69	LF	194/215 (90%)	194 (100%)	0	100 100
70	Lc	83/97 (86%)	79 (95%)	4 (5%)	25 34
71	Ld	98/110 (89%)	97 (99%)	1 (1%)	76 84
72	Le	114/121 (94%)	111 (97%)	3 (3%)	46 61
73	Lf	88/89 (99%)	88 (100%)	0	100 100
74	Lg	98/100 (98%)	98 (100%)	0	100 100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
75	Li	86/89 (97%)	85 (99%)	1 (1%)	71 81
76	Lj	73/80 (91%)	73 (100%)	0	100 100
77	Lk	64/65 (98%)	64 (100%)	0	100 100
78	Ll	47/48 (98%)	45 (96%)	2 (4%)	29 39
79	Lm	47/115 (41%)	47 (100%)	0	100 100
80	Ln	24/24 (100%)	24 (100%)	0	100 100
81	Lo	91/93 (98%)	91 (100%)	0	100 100
82	Lp	74/75 (99%)	74 (100%)	0	100 100
86	EF	363/375 (97%)	353 (97%)	10 (3%)	43 58
All	All	10665/11860 (90%)	10509 (98%)	156 (2%)	66 77

All (156) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
5	SB	86	LEU
6	SA	174	MET
6	SA	190	SER
6	SA	191	ARG
7	SD	29	LEU
7	SD	32	ASP
7	SD	55	THR
7	SD	76	ARG
7	SD	156	LEU
7	SD	166	TYR
9	SE	115	THR
9	SE	173	ILE
10	SC	91	SER
10	SC	187	ARG
11	SG	168	LYS
11	SG	185	LEU
13	SH	109	ARG
13	SH	112	ASN
13	SH	137	SER
15	SI	7	ASN
15	SI	136	ILE
15	SI	154	LYS
16	SQ	8	GLN
17	SU	20	ILE
17	SU	29	VAL

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Mol	Chain	Res	Type
17	SU	75	LYS
17	SU	115	THR
18	SK	58	VAL
19	SO	88	LEU
19	SO	138	ASP
20	SX	105	PHE
21	SM	33	ARG
21	SM	84	LYS
21	SM	99	LYS
22	SS	16	LEU
22	SS	59	LEU
22	SS	83	PHE
22	SS	142	ARG
25	SL	69	ARG
26	SR	5	ARG
26	SR	109	LEU
27	SP	21	ASP
28	ST	38	LYS
30	SY	23	MET
30	SY	38	THR
30	SY	104	ARG
30	SY	117	VAL
30	SY	120	THR
30	SY	122	LYS
31	SZ	54	THR
32	Sa	63	VAL
33	Sb	74	THR
34	Sc	5	ARG
36	Sf	99	LYS
36	Sf	108	VAL
36	Sf	110	GLU
36	Sf	138	ARG
36	Sf	140	TYR
36	Sf	144	CYS
36	Sf	146	LEU
37	Sg	45	LEU
37	Sg	46	THR
37	Sg	51	ASN
37	Sg	54	ILE
37	Sg	67	SER
37	Sg	129	ILE
37	Sg	197	THR

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Mol	Chain	Res	Type
37	Sg	198	VAL
37	Sg	206	LEU
37	Sg	227	LEU
37	Sg	239	LEU
38	Lz	7	ARG
38	Lz	92	LYS
38	Lz	161	LYS
38	Lz	195	LYS
39	LA	208	GLU
40	LB	336	CYS
41	LC	62	THR
41	LC	95	MET
41	LC	269	LYS
41	LC	278	ASN
43	LH	52	LYS
43	LH	113	GLU
44	LE	56	ARG
44	LE	115	TYR
44	LE	278	THR
45	LG	73	ARG
45	LG	74	LEU
45	LG	121	LYS
45	LG	132	ARG
45	LG	264	LYS
46	Lq	6	ARG
46	Lq	30	VAL
46	Lq	35	VAL
46	Lq	41	GLN
46	Lq	54	LEU
46	Lq	61	MET
46	Lq	62	ARG
46	Lq	86	VAL
46	Lq	112	ARG
47	LK	80	LEU
47	LK	93	LYS
47	LK	123	ARG
48	LO	61	ARG
48	LO	117	ARG
49	LL	5	ARG
49	LL	67	HIS
49	LL	136	LYS
49	LL	138	ASP

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Mol	Chain	Res	Type
49	LL	146	LEU
49	LL	227	GLU
50	LV	48	ARG
52	La	9	ARG
52	La	16	SER
53	LN	182	HIS
53	LN	188	ARG
55	LD	123	VAL
55	LD	200	MET
57	LR	181	LYS
57	LR	183	GLU
57	LR	188	LEU
58	LS	112	ASP
61	LU	40	GLU
63	LY	46	SER
63	LY	74	TYR
63	LY	115	ARG
64	LW	30	GLN
64	LW	83	THR
64	LW	87	LEU
65	LZ	31	ASP
65	LZ	88	ASP
66	Lr	26	SER
68	Lb	38	LYS
68	Lb	40	LEU
68	Lb	50	ASN
70	Lc	28	VAL
70	Lc	94	LEU
70	Lc	104	ILE
70	Lc	106	ARG
71	Ld	93	ASN
72	Le	102	ASN
72	Le	123	THR
72	Le	129	LEU
75	Li	29	ARG
78	Ll	17	GLN
78	Ll	47	THR
86	EF	75	ILE
86	EF	77	LEU
86	EF	146	LYS
86	EF	196	TRP
86	EF	228	LEU

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Mol	Chain	Res	Type
86	EF	229	LEU
86	EF	316	SER
86	EF	320	VAL
86	EF	343	GLN
86	EF	392	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (45) such sidechains are listed below:

Mol	Chain	Res	Type
6	SA	84	GLN
6	SA	113	GLN
6	SA	164	ASN
9	SE	67	GLN
12	SF	29	GLN
13	SH	68	GLN
13	SH	114	GLN
14	SW	24	GLN
15	SI	111	GLN
15	SI	146	GLN
16	SQ	8	GLN
16	SQ	11	GLN
16	SQ	97	GLN
18	SK	32	HIS
21	SM	72	HIS
21	SM	119	GLN
26	SR	62	GLN
28	ST	12	GLN
28	ST	83	GLN
28	ST	137	GLN
30	SY	2	ASN
33	Sb	65	GLN
36	Sf	135	HIS
37	Sg	147	HIS
37	Sg	188	HIS
37	Sg	311	GLN
40	LB	213	GLN
41	LC	278	ASN
41	LC	321	ASN
42	LJ	23	ASN
42	LJ	46	GLN
42	LJ	71	HIS
47	LK	142	ASN

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Mol	Chain	Res	Type
49	LL	67	HIS
55	LD	244	HIS
59	LT	112	ASN
60	LP	137	ASN
64	LW	30	GLN
64	LW	95	ASN
70	Lc	50	ASN
72	Le	23	HIS
78	Ll	17	GLN
78	Ll	25	GLN
86	EF	26	HIS
86	EF	147	GLN

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	S2	1641/1869 (87%)	322 (19%)	28 (1%)
2	L8	155/156 (99%)	25 (16%)	1 (0%)
3	L5	3619/5069 (71%)	628 (17%)	54 (1%)
4	L7	119/120 (99%)	12 (10%)	0
83	mR	8/60 (13%)	2 (25%)	0
84	At	74/76 (97%)	24 (32%)	0
85	Pt	76/77 (98%)	14 (18%)	0
All	All	5692/7427 (76%)	1027 (18%)	83 (1%)

All (1027) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	S2	17	C
1	S2	23	G
1	S2	25	A
1	S2	33	G
1	S2	41	G
1	S2	44	U
1	S2	45	A
1	S2	46	A
1	S2	49	C
1	S2	55	U
1	S2	56	G
1	S2	59	U
1	S2	65	C

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Mol	Chain	Res	Type
1	S2	66	G
1	S2	67	C
1	S2	68	A
1	S2	74	G
1	S2	75	G
1	S2	103	A
1	S2	110	U
1	S2	113	G
1	S2	114	G
1	S2	115	U
1	S2	126	G
1	S2	127	C
1	S2	140	C
1	S2	141	A
1	S2	143	U
1	S2	155	G
1	S2	161	U
1	S2	162	C
1	S2	170	A
1	S2	171	A
1	S2	172	OMU
1	S2	173	A
1	S2	175	A
1	S2	178	C
1	S2	183	G
1	S2	184	G
1	S2	215	G
1	S2	302	A
1	S2	307	G
1	S2	309	G
1	S2	312	G
1	S2	319	C
1	S2	320	G
1	S2	324	C
1	S2	325	C
1	S2	326	C
1	S2	327	G
1	S2	328	U
1	S2	329	G
1	S2	335	G
1	S2	347	G
1	S2	350	C

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Mol	Chain	Res	Type
1	S2	362	C
1	S2	364	A
1	S2	370	G
1	S2	382	C
1	S2	385	G
1	S2	386	C
1	S2	400	C
1	S2	409	C
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	465	A
1	S2	466	G
1	S2	467	G
1	S2	471	G
1	S2	472	C
1	S2	474	G
1	S2	482	G
1	S2	483	C
1	S2	487	U
1	S2	492	C
1	S2	493	A
1	S2	496	C
1	S2	500	A
1	S2	501	C
1	S2	504	G
1	S2	517	OMC
1	S2	525	A
1	S2	533	A
1	S2	534	G
1	S2	535	G
1	S2	554	A
1	S2	555	A
1	S2	558	G
1	S2	559	G
1	S2	560	A
1	S2	563	G

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Mol	Chain	Res	Type
1	S2	564	A
1	S2	568	C
1	S2	576	A2M
1	S2	587	A
1	S2	589	G
1	S2	590	A2M
1	S2	591	U
1	S2	598	G
1	S2	606	G
1	S2	607	U
1	S2	614	C
1	S2	617	G
1	S2	628	A
1	S2	629	A
1	S2	632	C
1	S2	636	C
1	S2	638	C
1	S2	643	A
1	S2	644	OMG
1	S2	655	A
1	S2	660	C
1	S2	664	A
1	S2	668	A2M
1	S2	669	A
1	S2	671	A
1	S2	672	A
1	S2	673	G
1	S2	679	A
1	S2	688	U
1	S2	689	U
1	S2	690	G
1	S2	821	G
1	S2	822	PSU
1	S2	827	A
1	S2	835	C
1	S2	836	G
1	S2	837	A
1	S2	841	G
1	S2	847	A
1	S2	850	C
1	S2	861	A
1	S2	870	A

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Mol	Chain	Res	Type
1	S2	873	G
1	S2	878	G
1	S2	888	U
1	S2	889	U
1	S2	890	U
1	S2	891	G
1	S2	892	U
1	S2	896	U
1	S2	897	U
1	S2	898	U
1	S2	905	C
1	S2	913	A
1	S2	916	A
1	S2	920	A
1	S2	922	A
1	S2	929	G
1	S2	930	C
1	S2	933	G
1	S2	954	U
1	S2	971	G
1	S2	978	G
1	S2	981	A
1	S2	986	G
1	S2	990	A
1	S2	992	A
1	S2	1001	A
1	S2	1017	U
1	S2	1023	A
1	S2	1026	C
1	S2	1045	U
1	S2	1047	C
1	S2	1060	A
1	S2	1061	U
1	S2	1062	A
1	S2	1071	G
1	S2	1083	A
1	S2	1085	C
1	S2	1116	C
1	S2	1121	G
1	S2	1133	A
1	S2	1138	C
1	S2	1151	G

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Mol	Chain	Res	Type
1	S2	1153	C
1	S2	1154	U
1	S2	1157	G
1	S2	1166	G
1	S2	1192	U
1	S2	1195	A
1	S2	1207	G
1	S2	1208	A
1	S2	1212	G
1	S2	1215	C
1	S2	1216	C
1	S2	1221	G
1	S2	1224	G
1	S2	1227	G
1	S2	1229	G
1	S2	1242	U
1	S2	1251	A
1	S2	1253	A
1	S2	1256	G
1	S2	1257	G
1	S2	1259	A
1	S2	1274	G
1	S2	1275	G
1	S2	1278	A
1	S2	1285	G
1	S2	1286	G
1	S2	1292	C
1	S2	1294	G
1	S2	1300	U
1	S2	1301	A
1	S2	1302	G
1	S2	1303	C
1	S2	1304	U
1	S2	1307	U
1	S2	1308	U
1	S2	1312	G
1	S2	1313	A
1	S2	1318	G
1	S2	1321	G
1	S2	1324	G
1	S2	1327	G
1	S2	1330	G

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Mol	Chain	Res	Type
1	S2	1348	G
1	S2	1358	U
1	S2	1368	U
1	S2	1371	U
1	S2	1372	U
1	S2	1373	C
1	S2	1375	G
1	S2	1378	A
1	S2	1395	C
1	S2	1397	U
1	S2	1402	A
1	S2	1404	U
1	S2	1406	G
1	S2	1408	U
1	S2	1419	C
1	S2	1420	G
1	S2	1421	A
1	S2	1422	G
1	S2	1423	C
1	S2	1433	C
1	S2	1434	C
1	S2	1435	C
1	S2	1436	C
1	S2	1437	C
1	S2	1438	A
1	S2	1439	A
1	S2	1442	OMU
1	S2	1447	OMG
1	S2	1452	A
1	S2	1454	A
1	S2	1462	U
1	S2	1463	U
1	S2	1477	U
1	S2	1487	A
1	S2	1489	A
1	S2	1490	OMG
1	S2	1494	U
1	S2	1495	G
1	S2	1496	U
1	S2	1497	G
1	S2	1498	A
1	S2	1507	G

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Mol	Chain	Res	Type
1	S2	1508	A
1	S2	1509	U
1	S2	1520	G
1	S2	1521	C
1	S2	1533	A
1	S2	1550	G
1	S2	1552	G
1	S2	1553	C
1	S2	1558	C
1	S2	1560	U
1	S2	1574	C
1	S2	1575	G
1	S2	1580	A
1	S2	1581	C
1	S2	1587	G
1	S2	1588	A
1	S2	1601	A
1	S2	1620	A
1	S2	1621	U
1	S2	1623	A
1	S2	1638	G
1	S2	1641	A
1	S2	1648	G
1	S2	1654	G
1	S2	1656	G
1	S2	1661	A
1	S2	1664	A
1	S2	1665	G
1	S2	1671	G
1	S2	1679	A
1	S2	1680	G
1	S2	1686	G
1	S2	1695	A
1	S2	1698	C
1	S2	1721	U
1	S2	1722	G
1	S2	1726	G
1	S2	1733	U
1	S2	1744	G
1	S2	1782	G
1	S2	1783	C
1	S2	1787	G

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Mol	Chain	Res	Type
1	S2	1797	U
1	S2	1819	A
1	S2	1825	A
1	S2	1826	G
1	S2	1829	G
1	S2	1831	A
1	S2	1835	A
1	S2	1837	G
1	S2	1838	U
1	S2	1849	G
1	S2	1861	G
1	S2	1862	G
1	S2	1863	A
1	S2	1865	C
1	S2	1867	U
2	L8	23	C
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	77	A
2	L8	80	A
2	L8	81	C
2	L8	85	U
2	L8	86	U
2	L8	87	G
2	L8	93	C
2	L8	103	A
2	L8	104	A
2	L8	105	C
2	L8	110	U
2	L8	114	G
2	L8	123	U
2	L8	124	U
2	L8	125	C
2	L8	147	G
2	L8	153	C
3	L5	19	G
3	L5	25	A

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Mol	Chain	Res	Type
3	L5	33	A
3	L5	39	A
3	L5	42	A
3	L5	48	G
3	L5	56	A
3	L5	59	A
3	L5	64	A
3	L5	65	A
3	L5	72	C
3	L5	85	G
3	L5	91	G
3	L5	95	G
3	L5	98	A
3	L5	108	A
3	L5	109	G
3	L5	110	C
3	L5	112	C
3	L5	119	G
3	L5	120	A
3	L5	132	G
3	L5	134	G
3	L5	135	G
3	L5	136	C
3	L5	140	G
3	L5	159	C
3	L5	178	C
3	L5	179	G
3	L5	181	C
3	L5	184	U
3	L5	186	G
3	L5	188	G
3	L5	190	G
3	L5	200	U
3	L5	201	C
3	L5	207	G
3	L5	210	C
3	L5	216	C
3	L5	219	G
3	L5	220	C
3	L5	233	U
3	L5	234	G
3	L5	241	G

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Mol	Chain	Res	Type
3	L5	253	G
3	L5	266	C
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	326	C
3	L5	340	C
3	L5	345	C
3	L5	347	A
3	L5	349	A
3	L5	373	G
3	L5	387	G
3	L5	388	A
3	L5	409	G
3	L5	410	A
3	L5	412	G
3	L5	413	G
3	L5	432	U
3	L5	433	A
3	L5	449	C
3	L5	450	G
3	L5	451	C
3	L5	452	A
3	L5	453	G
3	L5	454	U
3	L5	463	A
3	L5	484	U
3	L5	485	C
3	L5	487	G
3	L5	498	C
3	L5	499	G
3	L5	504	G
3	L5	507	G
3	L5	509	A
3	L5	513	U
3	L5	514	U
3	L5	518	G
3	L5	646	G
3	L5	654	C

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Mol	Chain	Res	Type
3	L5	655	C
3	L5	659	G
3	L5	661	C
3	L5	662	C
3	L5	664	G
3	L5	666	G
3	L5	667	A
3	L5	669	C
3	L5	685	C
3	L5	686	A
3	L5	692	A
3	L5	695	G
3	L5	696	C
3	L5	704	C
3	L5	708	G
3	L5	729	G
3	L5	730	G
3	L5	731	G
3	L5	738	C
3	L5	739	G
3	L5	742	G
3	L5	904	C
3	L5	905	C
3	L5	913	U
3	L5	914	U
3	L5	915	A
3	L5	917	A
3	L5	918	G
3	L5	925	C
3	L5	926	G
3	L5	932	A
3	L5	933	G
3	L5	934	C
3	L5	935	A
3	L5	936	C
3	L5	941	C
3	L5	942	G
3	L5	944	A
3	L5	945	U
3	L5	958	G
3	L5	959	G
3	L5	960	A

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Mol	Chain	Res	Type
3	L5	961	G
3	L5	962	C
3	L5	965	G
3	L5	966	A
3	L5	967	C
3	L5	968	C
3	L5	969	C
3	L5	970	G
3	L5	971	U
3	L5	972	C
3	L5	977	C
3	L5	981	C
3	L5	982	U
3	L5	1070	G
3	L5	1072	C
3	L5	1073	G
3	L5	1084	C
3	L5	1182	C
3	L5	1183	C
3	L5	1187	G
3	L5	1199	G
3	L5	1200	G
3	L5	1210	C
3	L5	1211	G
3	L5	1214	C
3	L5	1215	C
3	L5	1216	C
3	L5	1239	C
3	L5	1241	C
3	L5	1260	G
3	L5	1266	G
3	L5	1271	G
3	L5	1272	C
3	L5	1273	G
3	L5	1277	G
3	L5	1278	C
3	L5	1280	C
3	L5	1284	G
3	L5	1285	U
3	L5	1287	G
3	L5	1294	A
3	L5	1295	C

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Mol	Chain	Res	Type
3	L5	1303	A
3	L5	1313	C
3	L5	1315	C
3	L5	1323	A
3	L5	1326	A2M
3	L5	1328	G
3	L5	1337	A
3	L5	1354	A
3	L5	1359	G
3	L5	1365	C
3	L5	1387	A
3	L5	1394	G
3	L5	1397	A
3	L5	1398	A
3	L5	1399	G
3	L5	1404	G
3	L5	1407	C
3	L5	1408	G
3	L5	1409	C
3	L5	1410	U
3	L5	1411	C
3	L5	1415	G
3	L5	1417	C
3	L5	1418	C
3	L5	1420	A
3	L5	1439	C
3	L5	1443	A
3	L5	1457	G
3	L5	1477	C
3	L5	1483	C
3	L5	1498	G
3	L5	1502	G
3	L5	1515	A
3	L5	1534	A2M
3	L5	1547	A
3	L5	1566	C
3	L5	1578	U
3	L5	1586	G
3	L5	1591	U
3	L5	1596	U
3	L5	1613	A
3	L5	1614	C

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Mol	Chain	Res	Type
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	1642	A
3	L5	1654	G
3	L5	1661	C
3	L5	1676	C
3	L5	1677	PSU
3	L5	1701	A
3	L5	1705	G
3	L5	1726	U
3	L5	1731	C
3	L5	1733	G
3	L5	1734	G
3	L5	1740	C
3	L5	1741	G
3	L5	1754	U
3	L5	1764	G
3	L5	1766	A
3	L5	1769	G
3	L5	1787	A
3	L5	1804	A
3	L5	1815	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	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

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Mol	Chain	Res	Type
3	L5	1932	A
3	L5	1940	G
3	L5	1948	G
3	L5	1951	G
3	L5	1961	G
3	L5	1963	C
3	L5	1974	U
3	L5	1979	A
3	L5	1980	U
3	L5	1981	G
3	L5	1982	G
3	L5	1983	A
3	L5	1984	A
3	L5	1985	G
3	L5	1987	C
3	L5	1997	U
3	L5	1998	A
3	L5	2001	G
3	L5	2002	A
3	L5	2003	G
3	L5	2004	U
3	L5	2024	G
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	2069	A
3	L5	2084	C
3	L5	2085	G
3	L5	2089	G
3	L5	2091	C
3	L5	2092	G
3	L5	2094	G
3	L5	2096	G
3	L5	2098	G
3	L5	2099	G
3	L5	2259	G
3	L5	2260	C
3	L5	2289	C
3	L5	2300	A

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Mol	Chain	Res	Type
3	L5	2301	G
3	L5	2313	A
3	L5	2316	G
3	L5	2348	G
3	L5	2351	OMC
3	L5	2357	G
3	L5	2360	A
3	L5	2366	A
3	L5	2371	U
3	L5	2383	C
3	L5	2395	A
3	L5	2417	A
3	L5	2450	G
3	L5	2453	A
3	L5	2470	C
3	L5	2471	G
3	L5	2474	G
3	L5	2479	G
3	L5	2482	C
3	L5	2486	G
3	L5	2487	G
3	L5	2488	C
3	L5	2489	C
3	L5	2490	U
3	L5	2493	G
3	L5	2503	G
3	L5	2504	C
3	L5	2506	G
3	L5	2513	A
3	L5	2519	U
3	L5	2554	U
3	L5	2556	G
3	L5	2564	G
3	L5	2573	A
3	L5	2583	C
3	L5	2586	G
3	L5	2587	A
3	L5	2601	A
3	L5	2602	G
3	L5	2611	A
3	L5	2618	G
3	L5	2627	C

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Mol	Chain	Res	Type
3	L5	2653	C
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	2703	G
3	L5	2705	G
3	L5	2711	G
3	L5	2721	G
3	L5	2724	G
3	L5	2726	G
3	L5	2743	A
3	L5	2754	G
3	L5	2760	G
3	L5	2763	U
3	L5	2764	A
3	L5	2765	A
3	L5	2767	U
3	L5	2769	U
3	L5	2770	C
3	L5	2787	A2M
3	L5	2788	U
3	L5	2790	U
3	L5	2795	A
3	L5	2814	C
3	L5	2826	U
3	L5	2827	G
3	L5	2829	U
3	L5	2830	G
3	L5	2855	G
3	L5	2867	C
3	L5	2877	G
3	L5	2901	G
3	L5	2902	G
3	L5	2903	G
3	L5	3597	G
3	L5	3598	C
3	L5	3604	A
3	L5	3615	G
3	L5	3618	C

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Mol	Chain	Res	Type
3	L5	3626	G
3	L5	3635	A
3	L5	3644	U
3	L5	3646	A
3	L5	3662	A
3	L5	3663	A
3	L5	3673	C
3	L5	3674	G
3	L5	3696	C
3	L5	3712	A
3	L5	3713	U
3	L5	3735	G
3	L5	3736	A
3	L5	3748	A
3	L5	3750	G
3	L5	3753	G
3	L5	3760	A2M
3	L5	3761	C
3	L5	3766	A
3	L5	3774	A
3	L5	3776	G
3	L5	3777	G
3	L5	3783	A
3	L5	3784	A
3	L5	3785	A2M
3	L5	3787	G
3	L5	3788	C
3	L5	3811	G
3	L5	3814	U
3	L5	3817	A
3	L5	3819	G
3	L5	3822	U
3	L5	3838	U
3	L5	3839	G
3	L5	3840	U
3	L5	3860	A
3	L5	3876	A
3	L5	3877	A
3	L5	3878	C
3	L5	3879	G
3	L5	3892	U
3	L5	3897	G

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Mol	Chain	Res	Type
3	L5	3901	A
3	L5	3905	A
3	L5	3906	A
3	L5	3907	G
3	L5	3908	A
3	L5	3915	U
3	L5	3938	G
3	L5	3951	G
3	L5	3952	A
3	L5	3957	U
3	L5	3959	U
3	L5	3960	A
3	L5	3961	G
3	L5	3962	A
3	L5	3963	A
3	L5	3964	U
3	L5	3966	A
3	L5	3968	U
3	L5	3970	G
3	L5	3971	G
3	L5	3972	A
3	L5	3973	G
3	L5	3977	C
3	L5	4035	G
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	4044	U
3	L5	4046	A
3	L5	4047	A
3	L5	4049	U
3	L5	4050	A
3	L5	4051	C
3	L5	4052	C
3	L5	4053	A
3	L5	4054	C
3	L5	4055	U
3	L5	4057	C
3	L5	4059	C

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Mol	Chain	Res	Type
3	L5	4060	U
3	L5	4070	U
3	L5	4076	G
3	L5	4084	G
3	L5	4097	G
3	L5	4099	G
3	L5	4100	C
3	L5	4102	C
3	L5	4103	C
3	L5	4104	G
3	L5	4107	G
3	L5	4113	U
3	L5	4114	C
3	L5	4115	G
3	L5	4116	C
3	L5	4118	U
3	L5	4119	C
3	L5	4122	G
3	L5	4127	A
3	L5	4128	A
3	L5	4134	C
3	L5	4150	G
3	L5	4162	C
3	L5	4163	U
3	L5	4170	A
3	L5	4177	C
3	L5	4183	G
3	L5	4184	G
3	L5	4191	G
3	L5	4206	C
3	L5	4214	A
3	L5	4222	G
3	L5	4225	G
3	L5	4229	U
3	L5	4233	A
3	L5	4249	G
3	L5	4251	A
3	L5	4254	G
3	L5	4258	C
3	L5	4260	U
3	L5	4266	G
3	L5	4267	G

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Mol	Chain	Res	Type
3	L5	4268	A
3	L5	4273	A
3	L5	4281	A
3	L5	4291	G
3	L5	4305	G
3	L5	4306	OMU
3	L5	4329	G
3	L5	4330	G
3	L5	4332	C
3	L5	4339	A
3	L5	4348	A
3	L5	4373	G
3	L5	4376	A
3	L5	4377	G
3	L5	4378	A
3	L5	4379	A
3	L5	4387	C
3	L5	4391	G
3	L5	4394	A
3	L5	4420	PSU
3	L5	4422	A
3	L5	4426	C
3	L5	4432	C
3	L5	4448	G
3	L5	4449	A
3	L5	4453	C
3	L5	4464	A
3	L5	4465	U
3	L5	4475	G
3	L5	4502	C
3	L5	4512	U
3	L5	4513	A
3	L5	4515	G
3	L5	4519	C
3	L5	4524	G
3	L5	4528	G
3	L5	4548	A
3	L5	4559	A
3	L5	4560	C
3	L5	4567	G
3	L5	4570	G
3	L5	4573	G

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Mol	Chain	Res	Type
3	L5	4590	A2M
3	L5	4600	G
3	L5	4606	G
3	L5	4608	G
3	L5	4612	C
3	L5	4617	G
3	L5	4627	U
3	L5	4636	PSU
3	L5	4637	OMG
3	L5	4652	G
3	L5	4656	A
3	L5	4670	C
3	L5	4672	A
3	L5	4691	A
3	L5	4700	A
3	L5	4708	A
3	L5	4709	U
3	L5	4720	C
3	L5	4721	G
3	L5	4729	A
3	L5	4730	C
3	L5	4731	G
3	L5	4732	G
3	L5	4733	C
3	L5	4735	G
3	L5	4741	C
3	L5	4742	G
3	L5	4749	C
3	L5	4754	G
3	L5	4757	C
3	L5	4759	C
3	L5	4761	G
3	L5	4765	G
3	L5	4776	G
3	L5	4859	C
3	L5	4870	G
3	L5	4871	C
3	L5	4873	G
3	L5	4881	U
3	L5	4882	U
3	L5	4883	C
3	L5	4889	G

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Mol	Chain	Res	Type
3	L5	4895	C
3	L5	4896	G
3	L5	4900	C
3	L5	4901	G
3	L5	4910	G
3	L5	4912	G
3	L5	4913	G
3	L5	4914	C
3	L5	4925	U
3	L5	4928	C
3	L5	4929	C
3	L5	4935	C
3	L5	4936	G
3	L5	4938	A
3	L5	4943	A
3	L5	4944	C
3	L5	4964	C
3	L5	4976	U
3	L5	4985	U
3	L5	4989	U
3	L5	4990	C
3	L5	4991	U
3	L5	5013	C
3	L5	5014	A
3	L5	5017	G
3	L5	5022	U
3	L5	5023	C
3	L5	5024	C
3	L5	5025	C
3	L5	5026	U
3	L5	5029	C
3	L5	5034	A
3	L5	5041	G
3	L5	5050	C
3	L5	5054	C
3	L5	5061	A
3	L5	5062	G
3	L5	5069	U
4	L7	10	C
4	L7	25	G
4	L7	33	U
4	L7	42	A

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Mol	Chain	Res	Type
4	L7	49	A
4	L7	53	U
4	L7	54	A
4	L7	64	G
4	L7	97	G
4	L7	100	A
4	L7	110	G
4	L7	120	U
83	mR	35	G
83	mR	42	C
84	At	7	A
84	At	9	A
84	At	14	A
84	At	16	H2U
84	At	19	G
84	At	20	H2U
84	At	21	A
84	At	27	G
84	At	32	PSU
84	At	33	U
84	At	34	G
84	At	35	A
84	At	44	G
84	At	45	U
84	At	46	G7M
84	At	47	U
84	At	48	C
84	At	49	C
84	At	52	G
84	At	58	A
84	At	59	U
84	At	60	U
84	At	65	G
84	At	75	C
85	Pt	2	G
85	Pt	10	G
85	Pt	13	C
85	Pt	14	A
85	Pt	18	C
85	Pt	21	H2U
85	Pt	22	A
85	Pt	23	G

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Mol	Chain	Res	Type
85	Pt	50	G
85	Pt	59	A
85	Pt	65	G
85	Pt	71	G
85	Pt	76	C
85	Pt	77	A

All (83) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	S2	74	G
1	S2	112	U
1	S2	323	C
1	S2	325	C
1	S2	326	C
1	S2	369	C
1	S2	370	G
1	S2	385	G
1	S2	448	A
1	S2	500	A
1	S2	587	A
1	S2	628	A
1	S2	688	U
1	S2	896	U
1	S2	1016	U
1	S2	1165	G
1	S2	1215	C
1	S2	1285	G
1	S2	1303	C
1	S2	1420	G
1	S2	1422	G
1	S2	1437	C
1	S2	1446	A
1	S2	1494	U
1	S2	1519	U
1	S2	1534	C
1	S2	1555	U
1	S2	1679	A
2	L8	51	U
3	L5	42	A
3	L5	209	U
3	L5	234	G

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Mol	Chain	Res	Type
3	L5	409	G
3	L5	417	G
3	L5	453	G
3	L5	685	C
3	L5	967	C
3	L5	968	C
3	L5	971	U
3	L5	1215	C
3	L5	1240	G
3	L5	1294	A
3	L5	1407	C
3	L5	1410	U
3	L5	1420	A
3	L5	1482	G
3	L5	1613	A
3	L5	1633	G
3	L5	1678	C
3	L5	1700	G
3	L5	1733	G
3	L5	1833	G
3	L5	1961	G
3	L5	1984	A
3	L5	2002	A
3	L5	2025	A
3	L5	2088	A
3	L5	2091	C
3	L5	2097	U
3	L5	2259	G
3	L5	2428	A
3	L5	2503	G
3	L5	2513	A
3	L5	2587	A
3	L5	2652	G
3	L5	2724	G
3	L5	2761	U
3	L5	2789	A
3	L5	2794	C
3	L5	3765	G
3	L5	3876	A
3	L5	3956	G
3	L5	4043	G
3	L5	4115	G

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Mol	Chain	Res	Type
3	L5	4420	PSU
3	L5	4699	U
3	L5	4729	A
3	L5	4731	G
3	L5	4750	G
3	L5	4872	G
3	L5	4927	G
3	L5	4938	A
3	L5	5061	A

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

244 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	$\#\|Z\| > 2$
6	SAC	SA	2	6	7,8,9	3.61	2 (28%)	8,9,11	4.35	5 (62%)
1	PSU	S2	296	1	18,21,22	1.38	4 (22%)	22,30,33	1.96	3 (13%)
3	PSU	L5	4579	3	18,21,22	1.51	4 (22%)	22,30,33	1.98	3 (13%)
52	V5N	La	39	52	4,11,12	0.46	0	5,14,16	1.93	3 (60%)
3	PSU	L5	3851	3	18,21,22	1.57	4 (22%)	22,30,33	2.05	6 (27%)
1	PSU	S2	814	1	18,21,22	1.50	4 (22%)	22,30,33	2.00	4 (18%)
1	PSU	S2	609	1	18,21,22	1.40	4 (22%)	22,30,33	1.93	3 (13%)
1	PSU	S2	1136	1	18,21,22	1.48	3 (16%)	22,30,33	1.90	4 (18%)
1	A2M	S2	590	1	18,25,26	0.95	1 (5%)	18,36,39	1.23	2 (11%)
3	PSU	L5	2508	3	18,21,22	1.41	3 (16%)	22,30,33	1.83	3 (13%)
3	A2M	L5	3825	3	18,25,26	0.86	0	18,36,39	1.23	1 (5%)
1	OMG	S2	644	1	18,26,27	0.99	1 (5%)	19,38,41	1.22	3 (15%)
1	OMG	S2	683	1	18,26,27	1.04	1 (5%)	19,38,41	1.11	2 (10%)
3	OMC	L5	1881	89,3	19,22,23	0.81	0	26,31,34	0.89	0
3	PSU	L5	4552	3	18,21,22	1.63	4 (22%)	22,30,33	2.04	3 (13%)
1	A2M	S2	576	1	18,25,26	0.94	1 (5%)	18,36,39	1.28	2 (11%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
3	OMG	L5	1625	89,3	18,26,27	1.04	1 (5%)	19,38,41	1.29	2 (10%)
81	MLZ	Lo	53	81	8,9,10	0.63	0	4,9,11	0.85	0
3	OMG	L5	3899	3	18,26,27	1.01	1 (5%)	19,38,41	1.19	2 (10%)
2	OMG	L8	75	2	18,26,27	1.02	1 (5%)	19,38,41	1.14	2 (10%)
3	OMC	L5	4536	3	19,22,23	0.85	0	26,31,34	1.03	2 (7%)
84	PSU	At	32	84	18,21,22	1.42	3 (16%)	22,30,33	1.90	5 (22%)
1	PSU	S2	1347	1	18,21,22	1.42	4 (22%)	22,30,33	1.94	3 (13%)
3	OMC	L5	2804	3	19,22,23	0.85	1 (5%)	26,31,34	0.98	1 (3%)
3	A2M	L5	4590	3	18,25,26	0.96	1 (5%)	18,36,39	1.34	3 (16%)
1	OMC	S2	517	1	19,22,23	0.85	0	26,31,34	1.00	2 (7%)
1	B8N	S2	1248	1	24,29,30	0.97	1 (4%)	29,42,45	1.48	6 (20%)
1	PSU	S2	918	1	18,21,22	1.43	3 (16%)	22,30,33	2.22	4 (18%)
1	PSU	S2	651	1	18,21,22	1.43	4 (22%)	22,30,33	1.86	4 (18%)
85	H2U	Pt	21	85	18,21,22	1.01	2 (11%)	21,30,33	1.50	1 (4%)
1	OMG	S2	1490	89,1	18,26,27	1.03	1 (5%)	19,38,41	1.07	2 (10%)
3	PSU	L5	4457	3	18,21,22	1.50	4 (22%)	22,30,33	2.03	5 (22%)
3	OMU	L5	2415	3	19,22,23	1.37	3 (15%)	26,31,34	1.82	4 (15%)
3	5MC	L5	3782	89,3	18,22,23	1.02	2 (11%)	26,32,35	1.35	3 (11%)
3	A2M	L5	3867	3	18,25,26	0.95	1 (5%)	18,36,39	1.34	2 (11%)
84	H2U	At	16	84	18,21,22	1.01	2 (11%)	21,30,33	1.41	2 (9%)
3	A2M	L5	1871	89,3	18,25,26	0.89	1 (5%)	18,36,39	1.39	3 (16%)
3	OMG	L5	4623	3	18,26,27	0.99	1 (5%)	19,38,41	1.20	3 (15%)
2	PSU	L8	69	2	18,21,22	1.54	6 (33%)	22,30,33	2.12	5 (22%)
3	OMC	L5	3869	3	19,22,23	0.83	0	26,31,34	1.01	1 (3%)
3	PSU	L5	4403	3	18,21,22	1.56	4 (22%)	22,30,33	2.01	5 (22%)
3	PSU	L5	4296	3	18,21,22	1.45	3 (16%)	22,30,33	2.08	4 (18%)
1	A2M	S2	468	1	18,25,26	0.98	1 (5%)	18,36,39	1.26	2 (11%)
3	PSU	L5	4673	3	18,21,22	1.35	3 (16%)	22,30,33	1.73	3 (13%)
1	A2M	S2	1031	1	18,25,26	0.95	1 (5%)	18,36,39	1.59	3 (16%)
3	PSU	L5	1781	3	18,21,22	1.37	2 (11%)	22,30,33	1.98	4 (18%)
3	PSU	L5	3639	3	18,21,22	1.55	5 (27%)	22,30,33	1.85	3 (13%)
3	A2M	L5	4523	89,3	18,25,26	0.88	0	18,36,39	1.38	2 (11%)
3	PSU	L5	3920	89,3	18,21,22	1.56	4 (22%)	22,30,33	2.13	4 (18%)
1	PSU	S2	93	1	18,21,22	1.37	2 (11%)	22,30,33	1.89	3 (13%)
3	A2M	L5	398	3	18,25,26	0.96	1 (5%)	18,36,39	1.34	2 (11%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
3	A2M	L5	3760	1,3	18,25,26	1.00	1 (5%)	18,36,39	1.21	2 (11%)
3	OMU	L5	4227	3	19,22,23	1.38	2 (10%)	26,31,34	1.90	5 (19%)
1	PSU	S2	119	1	18,21,22	1.46	4 (22%)	22,30,33	1.99	5 (22%)
3	PSU	L5	3844	3	18,21,22	1.58	5 (27%)	22,30,33	1.97	3 (13%)
3	A2M	L5	400	3	18,25,26	0.97	1 (5%)	18,36,39	1.22	2 (11%)
1	A2M	S2	512	1	18,25,26	0.94	1 (5%)	18,36,39	1.23	2 (11%)
1	PSU	S2	406	1	18,21,22	1.49	4 (22%)	22,30,33	1.98	3 (13%)
3	PSU	L5	4361	3	18,21,22	1.47	4 (22%)	22,30,33	1.96	3 (13%)
3	UR3	L5	4530	3	19,22,23	0.86	0	26,32,35	1.72	4 (15%)
1	A2M	S2	166	1	18,25,26	0.94	1 (5%)	18,36,39	1.33	2 (11%)
1	PSU	S2	966	1	18,21,22	1.51	3 (16%)	22,30,33	1.83	4 (18%)
66	SAC	Lr	2	66	7,8,9	3.63	2 (28%)	8,9,11	4.43	4 (50%)
3	OMG	L5	4392	3	18,26,27	1.11	1 (5%)	19,38,41	1.12	2 (10%)
1	OMC	S2	1391	1	19,22,23	0.85	0	26,31,34	1.01	2 (7%)
3	PSU	L5	1677	3	18,21,22	1.58	4 (22%)	22,30,33	2.14	6 (27%)
3	PSU	L5	4493	3	18,21,22	1.58	4 (22%)	22,30,33	2.09	5 (22%)
3	PSU	L5	3764	3	18,21,22	1.49	2 (11%)	22,30,33	1.95	4 (18%)
3	A2M	L5	2401	3	18,25,26	0.89	1 (5%)	18,36,39	1.33	3 (16%)
3	OMG	L5	1522	3	18,26,27	0.67	0	19,38,41	1.52	3 (15%)
3	PSU	L5	4532	3	18,21,22	1.55	4 (22%)	22,30,33	2.07	6 (27%)
84	PSU	At	39	84	18,21,22	1.34	2 (11%)	22,30,33	1.96	4 (18%)
86	M3L	EF	36	86	10,11,12	0.49	0	9,14,16	0.49	0
1	PSU	S2	649	1	18,21,22	1.49	4 (22%)	22,30,33	2.01	3 (13%)
3	PSU	L5	4431	3	18,21,22	1.56	5 (27%)	22,30,33	2.04	3 (13%)
3	PSU	L5	4442	3	18,21,22	1.52	4 (22%)	22,30,33	2.10	5 (22%)
1	PSU	S2	866	1	18,21,22	1.49	4 (22%)	22,30,33	1.70	3 (13%)
3	1MA	L5	1322	89,3	16,25,26	1.34	2 (12%)	18,37,40	1.12	2 (11%)
3	PSU	L5	1792	3	18,21,22	1.49	4 (22%)	22,30,33	2.06	4 (18%)
3	PSU	L5	4576	3	18,21,22	1.50	3 (16%)	22,30,33	1.74	5 (22%)
3	OMG	L5	4196	89,85,3	18,26,27	1.05	1 (5%)	19,38,41	0.97	2 (10%)
1	OMU	S2	1288	1	19,22,23	1.22	2 (10%)	26,31,34	1.77	5 (19%)
3	PSU	L5	1582	3	18,21,22	1.54	5 (27%)	22,30,33	1.81	4 (18%)
3	A2M	L5	1534	89,3	18,25,26	1.00	1 (5%)	18,36,39	1.48	3 (16%)
3	PSU	L5	3770	3	18,21,22	1.41	2 (11%)	22,30,33	1.92	3 (13%)
3	OMC	L5	3841	3	19,22,23	0.83	1 (5%)	26,31,34	0.91	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
3	OMG	L5	2876	3	18,26,27	1.03	1 (5%)	19,38,41	1.07	2 (10%)
3	PSU	L5	4972	3	18,21,22	1.51	4 (22%)	22,30,33	1.90	3 (13%)
84	H2U	At	20	84	18,21,22	1.00	2 (11%)	21,30,33	1.35	2 (9%)
1	PSU	S2	1232	1	18,21,22	1.51	4 (22%)	22,30,33	1.97	3 (13%)
3	OMU	L5	4306	3	19,22,23	1.38	3 (15%)	26,31,34	1.98	4 (15%)
1	PSU	S2	1081	1	18,21,22	1.56	5 (27%)	22,30,33	2.03	4 (18%)
3	PSU	L5	3715	3	18,21,22	1.41	4 (22%)	22,30,33	1.90	3 (13%)
3	PSU	L5	4312	3	18,21,22	1.53	4 (22%)	22,30,33	1.89	3 (13%)
3	PSU	L5	3762	3	18,21,22	1.35	2 (11%)	22,30,33	1.99	5 (22%)
3	OMG	L5	2364	3	18,26,27	0.87	1 (5%)	19,38,41	1.30	3 (15%)
1	MA6	S2	1851	1	19,26,27	0.86	1 (5%)	18,38,41	1.27	2 (11%)
3	A2M	L5	3718	3	18,25,26	0.95	1 (5%)	18,36,39	1.14	2 (11%)
1	PSU	S2	1239	1	18,21,22	1.46	4 (22%)	22,30,33	1.95	4 (18%)
1	OMC	S2	462	1	19,22,23	0.89	0	26,31,34	0.84	0
3	A2M	L5	3723	3	18,25,26	0.94	1 (5%)	18,36,39	1.31	3 (16%)
3	OMG	L5	4494	3	18,26,27	1.00	1 (5%)	19,38,41	1.08	2 (10%)
3	PSU	L5	5001	3	18,21,22	1.41	3 (16%)	22,30,33	1.96	3 (13%)
1	UY1	S2	1326	89,1	19,22,23	1.34	3 (15%)	22,31,34	2.05	4 (18%)
3	OMG	L5	3944	3	18,26,27	1.04	1 (5%)	19,38,41	1.25	3 (15%)
85	OMC	Pt	33	85	19,22,23	0.84	0	26,31,34	0.80	0
20	HY3	SX	62	20	6,8,9	1.70	1 (16%)	5,10,12	1.35	0
1	PSU	S2	1692	1	18,21,22	1.43	4 (22%)	22,30,33	2.01	3 (13%)
3	PSU	L5	3768	3	18,21,22	1.51	4 (22%)	22,30,33	1.77	3 (13%)
3	PSU	L5	1744	92,3	18,21,22	1.44	2 (11%)	22,30,33	1.96	3 (13%)
40	HIC	LB	245	40	8,11,12	1.30	1 (12%)	6,14,16	1.15	0
39	V5N	LA	216	39	4,11,12	0.62	0	5,14,16	1.93	3 (60%)
3	PSU	L5	3734	3	18,21,22	1.39	4 (22%)	22,30,33	2.08	4 (18%)
1	OMU	S2	1442	89,1	19,22,23	1.32	3 (15%)	26,31,34	1.82	5 (19%)
1	OMU	S2	354	1	19,22,23	1.44	3 (15%)	26,31,34	1.98	5 (19%)
3	PSU	L5	1782	3	18,21,22	1.53	4 (22%)	22,30,33	1.92	5 (22%)
3	A2M	L5	1524	3	18,25,26	1.02	1 (5%)	18,36,39	1.48	4 (22%)
3	PSU	L5	3853	89,3	18,21,22	1.58	3 (16%)	22,30,33	1.74	4 (18%)
1	OMU	S2	627	1	19,22,23	1.24	2 (10%)	26,31,34	1.86	5 (19%)
3	PSU	L5	3729	3	18,21,22	1.47	3 (16%)	22,30,33	2.01	4 (18%)
3	PSU	L5	4636	3	18,21,22	1.46	3 (16%)	22,30,33	2.01	5 (22%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
1	OMU	S2	172	1	19,22,23	1.33	4 (21%)	26,31,34	2.03	8 (30%)
1	A2M	S2	668	89,1	18,25,26	0.86	0	18,36,39	1.17	2 (11%)
3	PSU	L5	5010	3	18,21,22	1.50	4 (22%)	22,30,33	1.95	3 (13%)
3	OMG	L5	2424	3	18,26,27	1.04	1 (5%)	19,38,41	1.06	2 (10%)
3	OMC	L5	2422	89,3	19,22,23	0.85	0	26,31,34	0.95	1 (3%)
1	PSU	S2	573	1	18,21,22	1.38	3 (16%)	22,30,33	1.88	3 (13%)
1	PSU	S2	1174	89,1	18,21,22	1.53	5 (27%)	22,30,33	1.86	3 (13%)
1	OMG	S2	509	89,1	18,26,27	0.97	1 (5%)	19,38,41	1.13	2 (10%)
3	OMG	L5	4499	3	18,26,27	1.01	1 (5%)	19,38,41	1.14	2 (10%)
1	PSU	S2	1056	1	18,21,22	1.46	3 (16%)	22,30,33	2.01	4 (18%)
84	G7M	At	46	84	20,26,27	2.63	4 (20%)	17,39,42	0.99	1 (5%)
3	OMG	L5	4228	3	18,26,27	0.96	1 (5%)	19,38,41	1.45	5 (26%)
3	5MC	L5	4447	3	18,22,23	1.06	2 (11%)	26,32,35	1.54	3 (11%)
3	OMG	L5	3744	3	18,26,27	1.00	1 (5%)	19,38,41	1.12	3 (15%)
1	G7M	S2	1639	85,1	20,26,27	2.69	4 (20%)	17,39,42	0.98	1 (5%)
1	PSU	S2	1243	1	18,21,22	1.53	5 (27%)	22,30,33	2.13	4 (18%)
3	A2M	L5	2363	89,3	18,25,26	0.95	1 (5%)	18,36,39	1.26	2 (11%)
3	OMG	L5	3792	3	18,26,27	1.05	1 (5%)	19,38,41	1.07	2 (10%)
3	PSU	L5	4471	3	18,21,22	1.53	3 (16%)	22,30,33	1.64	3 (13%)
2	OMU	L8	14	2,3	19,22,23	1.41	4 (21%)	26,31,34	1.88	6 (23%)
1	PSU	S2	1177	1	18,21,22	1.45	4 (22%)	22,30,33	1.91	3 (13%)
3	OMG	L5	4637	3	18,26,27	1.14	1 (5%)	19,38,41	1.16	2 (10%)
1	OMC	S2	174	89,1	19,22,23	0.87	0	26,31,34	0.96	1 (3%)
3	UY1	L5	3818	89,3	19,22,23	1.38	4 (21%)	22,31,34	1.96	4 (18%)
1	OMU	S2	428	1	19,22,23	1.21	2 (10%)	26,31,34	1.95	6 (23%)
86	M3L	EF	318	86	10,11,12	0.46	0	9,14,16	0.10	0
1	PSU	S2	1004	1	18,21,22	1.56	5 (27%)	22,30,33	1.82	3 (13%)
3	OMG	L5	3627	3	18,26,27	0.99	1 (5%)	19,38,41	1.21	2 (10%)
3	PSU	L5	4521	89,3	18,21,22	1.60	4 (22%)	22,30,33	2.18	6 (27%)
3	PSU	L5	4500	3	18,21,22	1.58	5 (27%)	22,30,33	1.93	4 (18%)
1	4AC	S2	1337	1	21,24,25	1.11	1 (4%)	29,34,37	1.20	3 (10%)
1	PSU	S2	863	1	18,21,22	1.45	3 (16%)	22,30,33	1.88	3 (13%)
3	OMC	L5	2351	3	19,22,23	0.92	1 (5%)	26,31,34	0.96	1 (3%)
1	PSU	S2	572	1	18,21,22	1.39	4 (22%)	22,30,33	1.89	4 (18%)
3	A2M	L5	3785	3	18,25,26	0.85	0	18,36,39	1.42	3 (16%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
3	OMU	L5	2837	3	19,22,23	1.29	3 (15%)	26,31,34	1.89	5 (19%)
3	PSU	L5	3637	89,3	18,21,22	1.56	3 (16%)	22,30,33	2.08	6 (27%)
85	PSU	Pt	56	85	18,21,22	1.37	3 (16%)	22,30,33	1.93	3 (13%)
3	PSU	L5	2843	3	18,21,22	1.54	4 (22%)	22,30,33	2.03	4 (18%)
3	OMG	L5	1316	3	18,26,27	1.10	1 (5%)	19,38,41	1.17	2 (10%)
3	PSU	L5	4420	3	18,21,22	1.54	4 (22%)	22,30,33	1.89	3 (13%)
3	PSU	L5	3758	3	18,21,22	1.41	4 (22%)	22,30,33	1.87	4 (18%)
3	PSU	L5	4628	3	18,21,22	1.42	4 (22%)	22,30,33	1.83	4 (18%)
1	A2M	S2	484	1	18,25,26	0.94	1 (5%)	18,36,39	1.19	2 (11%)
3	OMC	L5	3887	3	19,22,23	0.85	0	26,31,34	0.86	0
1	PSU	S2	1367	1	18,21,22	1.53	3 (16%)	22,30,33	1.98	4 (18%)
1	OMG	S2	867	1	18,26,27	0.97	1 (5%)	19,38,41	1.04	2 (10%)
3	PSU	L5	4531	3	18,21,22	1.44	3 (16%)	22,30,33	2.23	4 (18%)
1	A2M	S2	27	89,1	18,25,26	0.90	1 (5%)	18,36,39	1.19	2 (11%)
1	PSU	S2	822	1	18,21,22	1.49	4 (22%)	22,30,33	2.08	4 (18%)
3	PSU	L5	1860	3	18,21,22	1.53	4 (22%)	22,30,33	1.95	3 (13%)
3	OMG	L5	4370	3	18,26,27	0.88	1 (5%)	19,38,41	1.06	2 (10%)
3	OMC	L5	2861	3	19,22,23	0.73	0	26,31,34	0.77	1 (3%)
3	PSU	L5	4689	3	18,21,22	1.46	3 (16%)	22,30,33	2.01	5 (22%)
1	OMG	S2	1447	1	18,26,27	1.08	1 (5%)	19,38,41	1.38	3 (15%)
3	A2M	L5	3830	3	18,25,26	0.88	0	18,36,39	1.28	2 (11%)
1	PSU	S2	109	1	18,21,22	1.52	4 (22%)	22,30,33	2.01	3 (13%)
1	OMG	S2	601	1	18,26,27	1.03	1 (5%)	19,38,41	1.00	2 (10%)
3	OMU	L5	3925	3	19,22,23	1.36	3 (15%)	26,31,34	1.75	5 (19%)
85	4SU	Pt	8	85	18,21,22	1.86	4 (22%)	26,30,33	2.18	5 (19%)
1	A2M	S2	99	89,1	18,25,26	0.93	1 (5%)	18,36,39	1.24	2 (11%)
1	PSU	S2	801	1	18,21,22	1.38	2 (11%)	22,30,33	1.95	3 (13%)
1	PSU	S2	1238	1	18,21,22	1.51	3 (16%)	22,30,33	1.96	4 (18%)
3	6MZ	L5	4220	3	18,25,26	0.78	0	16,36,39	2.10	4 (25%)
86	M3L	EF	79	86	10,11,12	0.46	0	9,14,16	0.10	0
1	PSU	S2	1625	1	18,21,22	1.37	2 (11%)	22,30,33	1.89	3 (13%)
3	OMC	L5	2824	3	19,22,23	0.76	0	26,31,34	0.68	0
3	PSU	L5	4423	3	18,21,22	1.39	4 (22%)	22,30,33	1.91	3 (13%)
1	OMG	S2	436	1	18,26,27	1.02	1 (5%)	19,38,41	1.11	2 (10%)
3	PSU	L5	1862	3	18,21,22	1.58	4 (22%)	22,30,33	1.85	3 (13%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
85	G7M	Pt	47	85	20,26,27	2.42	3 (15%)	17,39,42	0.61	0
84	MIA	At	37	84	24,31,32	2.19	3 (12%)	26,44,47	2.67	10 (38%)
86	MLY	EF	55	86	9,10,11	0.47	0	6,11,13	0.89	0
3	A2M	L5	1326	3	18,25,26	0.93	1 (5%)	18,36,39	1.46	3 (16%)
68	MLZ	Lb	5	68	8,9,10	0.92	0	4,9,11	0.98	0
1	PSU	S2	1643	89,1	18,21,22	1.53	5 (27%)	22,30,33	1.99	4 (18%)
3	PSU	L5	3884	3	18,21,22	1.37	3 (16%)	22,30,33	1.72	4 (18%)
1	MA6	S2	1850	1	19,26,27	0.84	1 (5%)	18,38,41	1.35	2 (11%)
2	PSU	L8	55	2	18,21,22	1.43	3 (16%)	22,30,33	2.07	4 (18%)
1	PSU	S2	686	1	18,21,22	1.47	4 (22%)	22,30,33	2.03	3 (13%)
1	6MZ	S2	1832	89,1	18,25,26	0.75	0	16,36,39	2.64	3 (18%)
3	PSU	L5	3695	89,3	18,21,22	1.49	3 (16%)	22,30,33	2.06	6 (27%)
3	PSU	L5	1683	89,3	18,21,22	1.66	5 (27%)	22,30,33	2.00	3 (13%)
3	A2M	L5	2787	89,3	18,25,26	0.97	0	18,36,39	1.42	3 (16%)
1	PSU	S2	681	1	18,21,22	1.54	5 (27%)	22,30,33	2.06	3 (13%)
1	PSU	S2	1445	1	18,21,22	1.56	5 (27%)	22,30,33	2.07	3 (13%)
3	OMG	L5	4618	3	18,26,27	1.06	1 (5%)	19,38,41	1.16	2 (10%)
1	A2M	S2	1383	1	18,25,26	1.01	2 (11%)	18,36,39	1.46	2 (11%)
1	PSU	S2	105	1	18,21,22	1.59	5 (27%)	22,30,33	2.08	4 (18%)
1	OMU	S2	1804	1	19,22,23	1.31	3 (15%)	26,31,34	1.74	5 (19%)
3	OMC	L5	1340	3	19,22,23	0.87	1 (5%)	26,31,34	0.91	0
3	OMU	L5	4498	3	19,22,23	1.29	3 (15%)	26,31,34	1.87	5 (19%)
1	OMU	S2	116	1	19,22,23	1.29	3 (15%)	26,31,34	1.74	4 (15%)
3	PSU	L5	1536	3	18,21,22	1.67	5 (27%)	22,30,33	2.05	3 (13%)
3	OMC	L5	4456	3	19,22,23	0.95	0	26,31,34	0.99	1 (3%)
79	M3L	Lm	98	79	10,11,12	0.37	0	9,14,16	0.09	0
1	OMG	S2	1328	1	18,26,27	1.05	1 (5%)	19,38,41	1.04	2 (10%)
3	PSU	L5	1779	3	18,21,22	1.57	5 (27%)	22,30,33	1.96	3 (13%)
3	PSU	L5	4299	3	18,21,22	1.53	4 (22%)	22,30,33	1.93	4 (18%)
3	PSU	L5	4569	3	18,21,22	1.45	5 (27%)	22,30,33	2.07	4 (18%)
3	A2M	L5	3724	3	18,25,26	0.91	1 (5%)	18,36,39	1.42	2 (11%)
1	PSU	S2	1244	1	18,21,22	1.44	3 (16%)	22,30,33	1.91	3 (13%)
3	A2M	L5	2815	89,3	18,25,26	1.00	1 (5%)	18,36,39	1.27	3 (16%)
3	PSU	L5	2839	3	18,21,22	1.50	5 (27%)	22,30,33	2.00	4 (18%)
1	PSU	S2	815	1	18,21,22	1.46	3 (16%)	22,30,33	1.89	5 (22%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
3	PSU	L5	4293	3	18,21,22	1.46	4 (22%)	22,30,33	1.81	4 (18%)
3	OMU	L5	4620	3	19,22,23	1.35	3 (15%)	26,31,34	1.90	6 (23%)
84	4SU	At	8	84	18,21,22	1.88	4 (22%)	26,30,33	2.46	7 (26%)
1	OMC	S2	1703	1	19,22,23	0.83	1 (5%)	26,31,34	0.79	0
1	PSU	S2	218	1	18,21,22	1.47	4 (22%)	22,30,33	1.99	4 (18%)
1	A2M	S2	159	1	18,25,26	0.96	1 (5%)	18,36,39	1.24	2 (11%)
1	PSU	S2	34	1	18,21,22	1.42	4 (22%)	22,30,33	1.92	4 (18%)
3	OMC	L5	3701	92,3	19,22,23	0.98	0	26,31,34	1.19	2 (7%)
3	OMC	L5	3808	3	19,22,23	0.80	0	26,31,34	0.84	0
1	4AC	S2	1842	1	21,24,25	1.05	1 (4%)	29,34,37	1.18	4 (13%)
3	A2M	L5	4571	3	18,25,26	0.98	1 (5%)	18,36,39	1.25	3 (16%)
1	PSU	S2	36	1	18,21,22	1.53	5 (27%)	22,30,33	1.95	3 (13%)
3	PSU	L5	2632	3	18,21,22	1.43	4 (22%)	22,30,33	1.94	3 (13%)
1	OMU	S2	121	1	19,22,23	1.43	3 (15%)	26,31,34	1.68	5 (19%)
3	PSU	L5	4353	3	18,21,22	1.56	4 (22%)	22,30,33	1.96	3 (13%)
1	A2M	S2	1678	1	18,25,26	0.95	1 (5%)	18,36,39	1.21	2 (11%)
29	AME	SV	1	29	9,10,11	3.29	2 (22%)	9,11,13	4.40	4 (44%)
3	OMC	L5	2365	89,3	19,22,23	0.83	0	26,31,34	0.89	1 (3%)

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
6	SAC	SA	2	6	-	1/7/8/10	-
1	PSU	S2	296	1	-	0/7/25/26	0/2/2/2
3	PSU	L5	4579	3	-	0/7/25/26	0/2/2/2
52	V5N	La	39	52	-	0/5/10/12	0/1/1/1
3	PSU	L5	3851	3	-	2/7/25/26	0/2/2/2
1	PSU	S2	814	1	-	0/7/25/26	0/2/2/2
1	PSU	S2	609	1	-	0/7/25/26	0/2/2/2
1	PSU	S2	1136	1	-	0/7/25/26	0/2/2/2
1	A2M	S2	590	1	-	3/5/27/28	0/3/3/3
3	PSU	L5	2508	3	-	0/7/25/26	0/2/2/2
3	A2M	L5	3825	3	-	0/5/27/28	0/3/3/3
1	OMG	S2	644	1	-	4/5/27/28	0/3/3/3
1	OMG	S2	683	1	-	2/5/27/28	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	OMC	L5	1881	89,3	-	0/9/27/28	0/2/2/2
3	PSU	L5	4552	3	-	0/7/25/26	0/2/2/2
1	A2M	S2	576	1	-	3/5/27/28	0/3/3/3
3	OMG	L5	1625	89,3	-	3/5/27/28	0/3/3/3
81	MLZ	Lo	53	81	-	2/7/8/10	-
3	OMG	L5	3899	3	-	0/5/27/28	0/3/3/3
2	OMG	L8	75	2	-	0/5/27/28	0/3/3/3
3	OMC	L5	4536	3	-	0/9/27/28	0/2/2/2
84	PSU	At	32	84	-	2/7/25/26	0/2/2/2
1	PSU	S2	1347	1	-	0/7/25/26	0/2/2/2
3	OMC	L5	2804	3	-	0/9/27/28	0/2/2/2
3	A2M	L5	4590	3	-	1/5/27/28	0/3/3/3
1	OMC	S2	517	1	-	0/9/27/28	0/2/2/2
1	B8N	S2	1248	1	-	4/16/34/35	0/2/2/2
1	PSU	S2	918	1	-	0/7/25/26	0/2/2/2
1	PSU	S2	651	1	-	0/7/25/26	0/2/2/2
85	H2U	Pt	21	85	-	3/7/38/39	0/2/2/2
1	OMG	S2	1490	89,1	-	2/5/27/28	0/3/3/3
3	PSU	L5	4457	3	-	0/7/25/26	0/2/2/2
3	OMU	L5	2415	3	-	1/9/27/28	0/2/2/2
3	5MC	L5	3782	89,3	-	0/7/25/26	0/2/2/2
3	A2M	L5	3867	3	-	0/5/27/28	0/3/3/3
84	H2U	At	16	84	-	3/7/38/39	0/2/2/2
3	A2M	L5	1871	89,3	-	0/5/27/28	0/3/3/3
3	OMG	L5	4623	3	-	0/5/27/28	0/3/3/3
2	PSU	L8	69	2	-	0/7/25/26	0/2/2/2
3	OMC	L5	3869	3	-	0/9/27/28	0/2/2/2
3	PSU	L5	4403	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	4296	3	-	0/7/25/26	0/2/2/2
1	A2M	S2	468	1	-	0/5/27/28	0/3/3/3
3	PSU	L5	4673	3	-	0/7/25/26	0/2/2/2
1	A2M	S2	1031	1	-	0/5/27/28	0/3/3/3
3	PSU	L5	1781	3	-	2/7/25/26	0/2/2/2
3	PSU	L5	3639	3	-	0/7/25/26	0/2/2/2
3	A2M	L5	4523	89,3	-	0/5/27/28	0/3/3/3
3	PSU	L5	3920	89,3	-	0/7/25/26	0/2/2/2
1	PSU	S2	93	1	-	0/7/25/26	0/2/2/2
3	A2M	L5	398	3	-	2/5/27/28	0/3/3/3
3	A2M	L5	3760	1,3	-	2/5/27/28	0/3/3/3
3	OMU	L5	4227	3	-	0/9/27/28	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
1	PSU	S2	119	1	-	0/7/25/26	0/2/2/2
3	PSU	L5	3844	3	-	1/7/25/26	0/2/2/2
3	A2M	L5	400	3	-	1/5/27/28	0/3/3/3
1	A2M	S2	512	1	-	1/5/27/28	0/3/3/3
1	PSU	S2	406	1	-	0/7/25/26	0/2/2/2
3	PSU	L5	4361	3	-	0/7/25/26	0/2/2/2
3	UR3	L5	4530	3	-	0/7/25/26	0/2/2/2
1	A2M	S2	166	1	-	0/5/27/28	0/3/3/3
1	PSU	S2	966	1	-	0/7/25/26	0/2/2/2
66	SAC	Lr	2	66	-	2/7/8/10	-
3	OMG	L5	4392	3	-	0/5/27/28	0/3/3/3
1	OMC	S2	1391	1	-	0/9/27/28	0/2/2/2
3	PSU	L5	1677	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	4493	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	3764	3	-	0/7/25/26	0/2/2/2
3	A2M	L5	2401	3	-	2/5/27/28	0/3/3/3
3	OMG	L5	1522	3	-	0/5/27/28	0/3/3/3
3	PSU	L5	4532	3	-	0/7/25/26	0/2/2/2
84	PSU	At	39	84	-	0/7/25/26	0/2/2/2
86	M3L	EF	36	86	-	0/9/10/12	-
1	PSU	S2	649	1	-	0/7/25/26	0/2/2/2
3	PSU	L5	4431	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	4442	3	-	0/7/25/26	0/2/2/2
1	PSU	S2	866	1	-	0/7/25/26	0/2/2/2
3	1MA	L5	1322	89,3	-	0/3/25/26	0/3/3/3
3	PSU	L5	1792	3	-	2/7/25/26	0/2/2/2
3	PSU	L5	4576	3	-	0/7/25/26	0/2/2/2
3	OMG	L5	4196	89,85,3	-	0/5/27/28	0/3/3/3
1	OMU	S2	1288	1	-	3/9/27/28	0/2/2/2
3	PSU	L5	1582	3	-	0/7/25/26	0/2/2/2
3	A2M	L5	1534	89,3	-	2/5/27/28	0/3/3/3
3	PSU	L5	3770	3	-	0/7/25/26	0/2/2/2
3	OMC	L5	3841	3	-	0/9/27/28	0/2/2/2
3	OMG	L5	2876	3	-	0/5/27/28	0/3/3/3
3	PSU	L5	4972	3	-	0/7/25/26	0/2/2/2
84	H2U	At	20	84	-	6/7/38/39	0/2/2/2
1	PSU	S2	1232	1	-	0/7/25/26	0/2/2/2
3	OMU	L5	4306	3	-	0/9/27/28	0/2/2/2
1	PSU	S2	1081	1	-	1/7/25/26	0/2/2/2
3	PSU	L5	3715	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	4312	3	-	0/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	PSU	L5	3762	3	-	0/7/25/26	0/2/2/2
3	OMG	L5	2364	3	-	2/5/27/28	0/3/3/3
1	MA6	S2	1851	1	-	2/7/29/30	0/3/3/3
3	A2M	L5	3718	3	-	1/5/27/28	0/3/3/3
1	PSU	S2	1239	1	-	0/7/25/26	0/2/2/2
1	OMC	S2	462	1	-	0/9/27/28	0/2/2/2
3	A2M	L5	3723	3	-	1/5/27/28	0/3/3/3
3	OMG	L5	4494	3	-	1/5/27/28	0/3/3/3
3	PSU	L5	5001	3	-	0/7/25/26	0/2/2/2
1	UY1	S2	1326	89,1	-	2/9/27/28	0/2/2/2
3	OMG	L5	3944	3	-	1/5/27/28	0/3/3/3
85	OMC	Pt	33	85	-	0/9/27/28	0/2/2/2
20	HY3	SX	62	20	-	1/1/12/14	0/1/1/1
1	PSU	S2	1692	1	-	0/7/25/26	0/2/2/2
3	PSU	L5	3768	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	1744	92,3	-	0/7/25/26	0/2/2/2
40	HIC	LB	245	40	-	1/5/6/8	0/1/1/1
39	V5N	LA	216	39	-	1/5/10/12	0/1/1/1
3	PSU	L5	3734	3	-	0/7/25/26	0/2/2/2
1	OMU	S2	1442	89,1	-	2/9/27/28	0/2/2/2
1	OMU	S2	354	1	-	0/9/27/28	0/2/2/2
3	PSU	L5	1782	3	-	0/7/25/26	0/2/2/2
3	A2M	L5	1524	3	-	0/5/27/28	0/3/3/3
3	PSU	L5	3853	89,3	-	0/7/25/26	0/2/2/2
1	OMU	S2	627	1	-	0/9/27/28	0/2/2/2
3	PSU	L5	3729	3	-	2/7/25/26	0/2/2/2
3	PSU	L5	4636	3	-	2/7/25/26	0/2/2/2
1	OMU	S2	172	1	-	4/9/27/28	0/2/2/2
1	A2M	S2	668	89,1	-	2/5/27/28	0/3/3/3
3	PSU	L5	5010	3	-	0/7/25/26	0/2/2/2
3	OMG	L5	2424	3	-	1/5/27/28	0/3/3/3
3	OMC	L5	2422	89,3	-	0/9/27/28	0/2/2/2
1	PSU	S2	573	1	-	0/7/25/26	0/2/2/2
1	PSU	S2	1174	89,1	-	0/7/25/26	0/2/2/2
1	OMG	S2	509	89,1	-	0/5/27/28	0/3/3/3
3	OMG	L5	4499	3	-	0/5/27/28	0/3/3/3
1	PSU	S2	1056	1	-	0/7/25/26	0/2/2/2
84	G7M	At	46	84	-	2/3/25/26	0/3/3/3
3	OMG	L5	4228	3	-	0/5/27/28	0/3/3/3
3	5MC	L5	4447	3	-	4/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	OMG	L5	3744	3	-	1/5/27/28	0/3/3/3
1	G7M	S2	1639	85,1	-	0/3/25/26	0/3/3/3
1	PSU	S2	1243	1	-	1/7/25/26	0/2/2/2
3	A2M	L5	2363	89,3	-	0/5/27/28	0/3/3/3
3	OMG	L5	3792	3	-	1/5/27/28	0/3/3/3
3	PSU	L5	4471	3	-	0/7/25/26	0/2/2/2
2	OMU	L8	14	2,3	-	1/9/27/28	0/2/2/2
1	PSU	S2	1177	1	-	0/7/25/26	0/2/2/2
3	OMG	L5	4637	3	-	3/5/27/28	0/3/3/3
1	OMC	S2	174	89,1	-	1/9/27/28	0/2/2/2
3	UY1	L5	3818	89,3	-	2/9/27/28	0/2/2/2
1	OMU	S2	428	1	-	2/9/27/28	0/2/2/2
86	M3L	EF	318	86	-	7/9/10/12	-
1	PSU	S2	1004	1	-	0/7/25/26	0/2/2/2
3	OMG	L5	3627	3	-	0/5/27/28	0/3/3/3
3	PSU	L5	4521	89,3	-	0/7/25/26	0/2/2/2
3	PSU	L5	4500	3	-	1/7/25/26	0/2/2/2
1	4AC	S2	1337	1	-	4/11/29/30	0/2/2/2
1	PSU	S2	863	1	-	0/7/25/26	0/2/2/2
3	OMC	L5	2351	3	-	1/9/27/28	0/2/2/2
1	PSU	S2	572	1	-	0/7/25/26	0/2/2/2
3	A2M	L5	3785	3	-	2/5/27/28	0/3/3/3
3	OMU	L5	2837	3	-	0/9/27/28	0/2/2/2
3	PSU	L5	3637	89,3	-	0/7/25/26	0/2/2/2
85	PSU	Pt	56	85	-	0/7/25/26	0/2/2/2
3	PSU	L5	2843	3	-	0/7/25/26	0/2/2/2
3	OMG	L5	1316	3	-	0/5/27/28	0/3/3/3
3	PSU	L5	4420	3	-	2/7/25/26	0/2/2/2
3	PSU	L5	3758	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	4628	3	-	0/7/25/26	0/2/2/2
1	A2M	S2	484	1	-	1/5/27/28	0/3/3/3
3	OMC	L5	3887	3	-	0/9/27/28	0/2/2/2
1	PSU	S2	1367	1	-	0/7/25/26	0/2/2/2
1	OMG	S2	867	1	-	1/5/27/28	0/3/3/3
3	PSU	L5	4531	3	-	2/7/25/26	0/2/2/2
1	A2M	S2	27	89,1	-	1/5/27/28	0/3/3/3
1	PSU	S2	822	1	-	1/7/25/26	0/2/2/2
3	PSU	L5	1860	3	-	0/7/25/26	0/2/2/2
3	OMG	L5	4370	3	-	0/5/27/28	0/3/3/3
3	OMC	L5	2861	3	-	0/9/27/28	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	PSU	L5	4689	3	-	0/7/25/26	0/2/2/2
1	OMG	S2	1447	1	-	1/5/27/28	0/3/3/3
3	A2M	L5	3830	3	-	0/5/27/28	0/3/3/3
1	PSU	S2	109	1	-	0/7/25/26	0/2/2/2
1	OMG	S2	601	1	-	0/5/27/28	0/3/3/3
3	OMU	L5	3925	3	-	1/9/27/28	0/2/2/2
85	4SU	Pt	8	85	-	0/7/25/26	0/2/2/2
1	A2M	S2	99	89,1	-	1/5/27/28	0/3/3/3
1	PSU	S2	801	1	-	0/7/25/26	0/2/2/2
1	PSU	S2	1238	1	-	0/7/25/26	0/2/2/2
3	6MZ	L5	4220	3	-	0/5/27/28	0/3/3/3
86	M3L	EF	79	86	-	3/9/10/12	-
1	PSU	S2	1625	1	-	0/7/25/26	0/2/2/2
3	OMC	L5	2824	3	-	1/9/27/28	0/2/2/2
3	PSU	L5	4423	3	-	0/7/25/26	0/2/2/2
1	OMG	S2	436	1	-	0/5/27/28	0/3/3/3
3	PSU	L5	1862	3	-	0/7/25/26	0/2/2/2
85	G7M	Pt	47	85	-	0/3/25/26	0/3/3/3
84	MIA	At	37	84	-	2/11/33/34	0/3/3/3
86	MLY	EF	55	86	-	3/8/9/11	-
3	A2M	L5	1326	3	-	3/5/27/28	0/3/3/3
68	MLZ	Lb	5	68	-	2/7/8/10	-
1	PSU	S2	1643	89,1	-	0/7/25/26	0/2/2/2
3	PSU	L5	3884	3	-	0/7/25/26	0/2/2/2
1	MA6	S2	1850	1	-	0/7/29/30	0/3/3/3
2	PSU	L8	55	2	-	0/7/25/26	0/2/2/2
1	PSU	S2	686	1	-	0/7/25/26	0/2/2/2
1	6MZ	S2	1832	89,1	-	2/5/27/28	0/3/3/3
3	PSU	L5	3695	89,3	-	0/7/25/26	0/2/2/2
3	PSU	L5	1683	89,3	-	0/7/25/26	0/2/2/2
3	A2M	L5	2787	89,3	-	2/5/27/28	0/3/3/3
1	PSU	S2	681	1	-	0/7/25/26	0/2/2/2
1	PSU	S2	1445	1	-	0/7/25/26	0/2/2/2
3	OMG	L5	4618	3	-	1/5/27/28	0/3/3/3
1	A2M	S2	1383	1	-	1/5/27/28	0/3/3/3
1	PSU	S2	105	1	-	0/7/25/26	0/2/2/2
1	OMU	S2	1804	1	-	0/9/27/28	0/2/2/2
3	OMC	L5	1340	3	-	0/9/27/28	0/2/2/2
3	OMU	L5	4498	3	-	0/9/27/28	0/2/2/2
1	OMU	S2	116	1	-	0/9/27/28	0/2/2/2
3	PSU	L5	1536	3	-	0/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	OMC	L5	4456	3	-	1/9/27/28	0/2/2/2
79	M3L	Lm	98	79	-	0/9/10/12	-
1	OMG	S2	1328	1	-	1/5/27/28	0/3/3/3
3	PSU	L5	1779	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	4299	3	-	0/7/25/26	0/2/2/2
3	PSU	L5	4569	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	1244	1	-	0/7/25/26	0/2/2/2
3	A2M	L5	2815	89,3	-	0/5/27/28	0/3/3/3
3	PSU	L5	2839	3	-	0/7/25/26	0/2/2/2
1	PSU	S2	815	1	-	0/7/25/26	0/2/2/2
3	PSU	L5	4293	3	-	0/7/25/26	0/2/2/2
3	OMU	L5	4620	3	-	0/9/27/28	0/2/2/2
84	4SU	At	8	84	-	2/7/25/26	0/2/2/2
1	OMC	S2	1703	1	-	0/9/27/28	0/2/2/2
1	PSU	S2	218	1	-	0/7/25/26	0/2/2/2
1	A2M	S2	159	1	-	0/5/27/28	0/3/3/3
1	PSU	S2	34	1	-	0/7/25/26	0/2/2/2
3	OMC	L5	3701	92,3	-	4/9/27/28	0/2/2/2
3	OMC	L5	3808	3	-	0/9/27/28	0/2/2/2
1	4AC	S2	1842	1	-	0/11/29/30	0/2/2/2
3	A2M	L5	4571	3	-	0/5/27/28	0/3/3/3
1	PSU	S2	36	1	-	0/7/25/26	0/2/2/2
3	PSU	L5	2632	3	-	0/7/25/26	0/2/2/2
1	OMU	S2	121	1	-	1/9/27/28	0/2/2/2
3	PSU	L5	4353	3	-	0/7/25/26	0/2/2/2
1	A2M	S2	1678	1	-	1/5/27/28	0/3/3/3
29	AME	SV	1	29	-	2/9/10/12	-
3	OMC	L5	2365	89,3	-	0/9/27/28	0/2/2/2

All (566) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
29	SV	1	AME	OT-CT1	8.88	1.43	1.23
66	Lr	2	SAC	OAC-C1A	8.75	1.43	1.23
6	SA	2	SAC	OAC-C1A	8.52	1.42	1.23
1	S2	1639	G7M	C8-N9	7.47	1.46	1.33
85	Pt	47	G7M	C8-N9	7.32	1.46	1.33
84	At	46	G7M	C8-N9	7.25	1.46	1.33
1	S2	1639	G7M	C8-N7	7.07	1.46	1.33
84	At	46	G7M	C8-N7	7.05	1.46	1.33
84	At	37	MIA	C13-C14	7.02	1.52	1.32

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
85	Pt	47	G7M	C8-N7	6.94	1.45	1.33
84	At	37	MIA	C2-S10	-6.87	1.69	1.75
84	At	8	4SU	C4-S4	-5.03	1.58	1.68
85	Pt	8	4SU	C4-S4	-4.69	1.59	1.68
1	S2	1639	G7M	C5-C4	4.47	1.48	1.39
84	At	46	G7M	C5-C4	4.06	1.47	1.39
3	L5	4521	PSU	C4-N3	-4.01	1.31	1.38
20	SX	62	HY3	C3-CA	-3.90	1.51	1.55
3	L5	4637	OMG	C6-N1	-3.88	1.32	1.37
6	SA	2	SAC	C1A-N	3.88	1.47	1.34
3	L5	1322	1MA	C2-N3	3.80	1.33	1.29
3	L5	2843	PSU	C4-N3	-3.79	1.31	1.38
66	Lr	2	SAC	C1A-N	3.71	1.47	1.34
3	L5	4392	OMG	C6-N1	-3.71	1.32	1.37
3	L5	3853	PSU	C6-C5	3.70	1.39	1.35
29	SV	1	AME	CT1-N	3.69	1.47	1.34
3	L5	4299	PSU	C4-N3	-3.60	1.32	1.38
3	L5	3637	PSU	C4-N3	-3.59	1.32	1.38
3	L5	1683	PSU	C4-N3	-3.59	1.32	1.38
85	Pt	8	4SU	C4-N3	-3.57	1.33	1.37
3	L5	1536	PSU	C4-N3	-3.56	1.32	1.38
84	At	8	4SU	C4-N3	-3.55	1.33	1.37
3	L5	4552	PSU	C4-N3	-3.53	1.32	1.38
1	S2	1081	PSU	C4-N3	-3.52	1.32	1.38
3	L5	1862	PSU	C4-N3	-3.51	1.32	1.38
1	S2	1367	PSU	C4-N3	-3.51	1.32	1.38
3	L5	4353	PSU	C4-N3	-3.48	1.32	1.38
3	L5	4306	OMU	C2-N3	-3.48	1.31	1.38
3	L5	4576	PSU	C4-N3	-3.47	1.32	1.38
1	S2	1136	PSU	C4-N3	-3.44	1.32	1.38
3	L5	3920	PSU	C4-N3	-3.42	1.32	1.38
3	L5	4442	PSU	C4-N3	-3.41	1.32	1.38
1	S2	121	OMU	C4-N3	-3.41	1.32	1.38
3	L5	3695	PSU	C4-N3	-3.40	1.32	1.38
3	L5	1782	PSU	C4-N3	-3.40	1.32	1.38
3	L5	2876	OMG	C6-N1	-3.40	1.32	1.37
3	L5	4431	PSU	C4-N3	-3.39	1.32	1.38
1	S2	354	OMU	C4-N3	-3.38	1.32	1.38
3	L5	4972	PSU	C4-N3	-3.37	1.32	1.38
3	L5	2508	PSU	C4-N3	-3.37	1.32	1.38
3	L5	4196	OMG	C6-N1	-3.37	1.32	1.37
3	L5	4493	PSU	C4-N3	-3.37	1.32	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	S2	601	OMG	C6-N1	-3.37	1.32	1.37
1	S2	105	PSU	C4-N3	-3.35	1.32	1.38
3	L5	4457	PSU	C4-N3	-3.34	1.32	1.38
1	S2	1004	PSU	C4-N3	-3.34	1.32	1.38
3	L5	4361	PSU	C4-N3	-3.34	1.32	1.38
3	L5	4500	PSU	C4-N3	-3.33	1.32	1.38
1	S2	1174	PSU	C4-N3	-3.33	1.32	1.38
3	L5	1582	PSU	C4-N3	-3.33	1.32	1.38
1	S2	1232	PSU	C6-C5	3.33	1.39	1.35
1	S2	109	PSU	C4-N3	-3.32	1.32	1.38
1	S2	1243	PSU	C4-N3	-3.31	1.32	1.38
1	S2	1232	PSU	C4-N3	-3.31	1.32	1.38
3	L5	4494	OMG	C6-N1	-3.31	1.32	1.37
3	L5	3770	PSU	C6-C5	3.30	1.39	1.35
1	S2	649	PSU	C4-N3	-3.29	1.32	1.38
3	L5	1860	PSU	C4-N3	-3.29	1.32	1.38
2	L8	14	OMU	C4-N3	-3.29	1.32	1.38
3	L5	3853	PSU	C4-N3	-3.28	1.32	1.38
1	S2	1238	PSU	C4-N3	-3.28	1.32	1.38
3	L5	1792	PSU	C4-N3	-3.28	1.32	1.38
3	L5	3729	PSU	C4-N3	-3.28	1.32	1.38
1	S2	93	PSU	C6-C5	3.26	1.39	1.35
3	L5	4296	PSU	C4-N3	-3.26	1.32	1.38
3	L5	5010	PSU	C4-N3	-3.26	1.32	1.38
1	S2	1445	PSU	C4-N3	-3.25	1.32	1.38
3	L5	3925	OMU	C4-N3	-3.24	1.32	1.38
1	S2	406	PSU	C4-N3	-3.24	1.32	1.38
3	L5	1779	PSU	C4-N3	-3.23	1.32	1.38
3	L5	4689	PSU	C4-N3	-3.23	1.32	1.38
3	L5	3627	OMG	C6-N1	-3.23	1.33	1.37
1	S2	801	PSU	C6-C5	3.23	1.39	1.35
3	L5	1781	PSU	C6-C5	3.23	1.39	1.35
1	S2	966	PSU	C6-C5	3.22	1.39	1.35
3	L5	3764	PSU	C6-C5	3.22	1.39	1.35
3	L5	4312	PSU	C4-N3	-3.22	1.32	1.38
3	L5	4312	PSU	C6-C5	3.22	1.39	1.35
3	L5	2415	OMU	C4-N3	-3.22	1.32	1.38
1	S2	966	PSU	C4-N3	-3.22	1.32	1.38
1	S2	436	OMG	C6-N1	-3.21	1.33	1.37
1	S2	1056	PSU	C4-N3	-3.21	1.32	1.38
3	L5	4403	PSU	C4-N3	-3.21	1.32	1.38
1	S2	218	PSU	C4-N3	-3.20	1.32	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	L5	3851	PSU	C4-N3	-3.20	1.32	1.38
1	S2	1347	PSU	C4-N3	-3.20	1.32	1.38
1	S2	686	PSU	C4-N3	-3.20	1.32	1.38
1	S2	681	PSU	C4-N3	-3.19	1.32	1.38
3	L5	3758	PSU	C4-N3	-3.19	1.32	1.38
3	L5	4636	PSU	C4-N3	-3.18	1.32	1.38
3	L5	1316	OMG	C6-N1	-3.18	1.33	1.37
3	L5	4628	PSU	C4-N3	-3.18	1.32	1.38
3	L5	4420	PSU	O4'-C1'	-3.17	1.39	1.43
1	S2	1239	PSU	C4-N3	-3.17	1.32	1.38
1	S2	1367	PSU	C6-C5	3.17	1.39	1.35
1	S2	866	PSU	C4-N3	-3.17	1.32	1.38
1	S2	1625	PSU	C6-C5	3.17	1.39	1.35
1	S2	651	PSU	C4-N3	-3.16	1.33	1.38
1	S2	36	PSU	C4-N3	-3.16	1.33	1.38
3	L5	3639	PSU	C4-N3	-3.15	1.33	1.38
3	L5	4227	OMU	C4-N3	-3.14	1.32	1.38
1	S2	863	PSU	C4-N3	-3.14	1.33	1.38
3	L5	4471	PSU	C6-C5	3.14	1.39	1.35
3	L5	2839	PSU	C6-C5	3.13	1.39	1.35
1	S2	1643	PSU	C4-N3	-3.13	1.33	1.38
3	L5	3818	UY1	C4-N3	-3.13	1.33	1.38
1	S2	354	OMU	C2-N3	-3.12	1.32	1.38
3	L5	3764	PSU	C4-N3	-3.12	1.33	1.38
3	L5	3884	PSU	C4-N3	-3.12	1.33	1.38
3	L5	3844	PSU	C4-N3	-3.11	1.33	1.38
3	L5	4293	PSU	C4-N3	-3.11	1.33	1.38
2	L8	69	PSU	C4-N3	-3.11	1.33	1.38
3	L5	4569	PSU	C4-N3	-3.11	1.33	1.38
1	S2	814	PSU	C6-C5	3.11	1.38	1.35
3	L5	3851	PSU	C6-C5	3.10	1.38	1.35
3	L5	1625	OMG	C6-N1	-3.10	1.33	1.37
3	L5	2632	PSU	C4-N3	-3.10	1.33	1.38
1	S2	822	PSU	C4-N3	-3.10	1.33	1.38
3	L5	3715	PSU	C4-N3	-3.09	1.33	1.38
3	L5	4579	PSU	C4-N3	-3.09	1.33	1.38
2	L8	55	PSU	C4-N3	-3.08	1.33	1.38
84	At	32	PSU	C6-C5	3.08	1.38	1.35
3	L5	4532	PSU	C4-N3	-3.08	1.33	1.38
3	L5	2837	OMU	C4-N3	-3.08	1.33	1.38
1	S2	1177	PSU	C4-N3	-3.08	1.33	1.38
1	S2	119	PSU	C4-N3	-3.07	1.33	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	S2	1326	UY1	C4-N3	-3.07	1.33	1.38
3	L5	1677	PSU	C4-N3	-3.06	1.33	1.38
3	L5	4471	PSU	C4-N3	-3.06	1.33	1.38
3	L5	3768	PSU	C6-C5	3.06	1.38	1.35
84	At	39	PSU	C6-C5	3.05	1.38	1.35
2	L8	55	PSU	C6-C5	3.05	1.38	1.35
1	S2	509	OMG	C6-N1	-3.04	1.33	1.37
3	L5	4306	OMU	C4-N3	-3.03	1.33	1.38
1	S2	863	PSU	C6-C5	3.03	1.38	1.35
1	S2	815	PSU	C4-N3	-3.01	1.33	1.38
3	L5	4493	PSU	C6-C5	3.01	1.38	1.35
3	L5	1744	PSU	C6-C5	3.01	1.38	1.35
1	S2	121	OMU	C2-N3	-3.00	1.32	1.38
1	S2	1804	OMU	C4-N3	-3.00	1.33	1.38
1	S2	1692	PSU	C4-N3	-3.00	1.33	1.38
3	L5	5001	PSU	C4-N3	-3.00	1.33	1.38
3	L5	3899	OMG	C6-N1	-3.00	1.33	1.37
85	Pt	56	PSU	C6-C5	3.00	1.38	1.35
3	L5	4620	OMU	C4-N3	-3.00	1.33	1.38
3	L5	3637	PSU	C6-C5	3.00	1.38	1.35
3	L5	4447	5MC	C6-C5	3.00	1.39	1.34
1	S2	918	PSU	C4-N3	-2.99	1.33	1.38
2	L8	14	OMU	C2-N3	-2.98	1.32	1.38
3	L5	2839	PSU	C4-N3	-2.98	1.33	1.38
85	Pt	56	PSU	C4-N3	-2.98	1.33	1.38
3	L5	3792	OMG	C6-N1	-2.98	1.33	1.37
3	L5	3844	PSU	C6-C5	2.97	1.38	1.35
1	S2	116	OMU	C4-N3	-2.97	1.33	1.38
1	S2	1248	B8N	C6-C5	2.97	1.39	1.34
85	Pt	8	4SU	C5-C4	-2.97	1.38	1.42
3	L5	4531	PSU	C6-C5	2.96	1.38	1.35
1	S2	1244	PSU	C4-N3	-2.96	1.33	1.38
1	S2	814	PSU	C4-N3	-2.96	1.33	1.38
1	S2	681	PSU	C6-C5	2.95	1.38	1.35
3	L5	1744	PSU	C4-N3	-2.95	1.33	1.38
3	L5	4623	OMG	C6-N1	-2.95	1.33	1.37
3	L5	2415	OMU	C2-N3	-2.94	1.32	1.38
84	At	8	4SU	C5-C4	-2.93	1.38	1.42
1	S2	34	PSU	C4-N3	-2.93	1.33	1.38
1	S2	1244	PSU	C6-C5	2.93	1.38	1.35
1	S2	866	PSU	C6-C5	2.93	1.38	1.35
3	L5	4293	PSU	C6-C5	2.92	1.38	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	S2	609	PSU	C4-N3	-2.92	1.33	1.38
3	L5	3851	PSU	C2-N3	-2.91	1.32	1.37
3	L5	4972	PSU	C6-C5	2.91	1.38	1.35
1	S2	1490	OMG	C6-N1	-2.90	1.33	1.37
1	S2	573	PSU	C4-N3	-2.90	1.33	1.38
3	L5	4403	PSU	C2-N3	-2.90	1.32	1.37
3	L5	4403	PSU	C6-C5	2.89	1.38	1.35
1	S2	1447	OMG	C6-N1	-2.88	1.33	1.37
3	L5	4576	PSU	C6-C5	2.88	1.38	1.35
3	L5	3920	PSU	C2-N3	-2.87	1.32	1.37
3	L5	2843	PSU	C2-N3	-2.87	1.32	1.37
3	L5	3637	PSU	C2-N3	-2.87	1.32	1.37
3	L5	1779	PSU	C6-C5	2.87	1.38	1.35
1	S2	296	PSU	C4-N3	-2.87	1.33	1.38
1	S2	686	PSU	C6-C5	2.87	1.38	1.35
3	L5	4673	PSU	C4-N3	-2.86	1.33	1.38
3	L5	3768	PSU	C4-N3	-2.86	1.33	1.38
84	At	32	PSU	C4-N3	-2.86	1.33	1.38
1	S2	172	OMU	C4-N3	-2.86	1.33	1.38
1	S2	1328	OMG	C6-N1	-2.86	1.33	1.37
1	S2	572	PSU	C4-N3	-2.86	1.33	1.38
3	L5	4618	OMG	C6-N1	-2.85	1.33	1.37
1	S2	1239	PSU	C6-C5	2.85	1.38	1.35
1	S2	1442	OMU	C4-N3	-2.84	1.33	1.38
1	S2	573	PSU	C6-C5	2.84	1.38	1.35
3	L5	3734	PSU	C4-N3	-2.83	1.33	1.38
3	L5	1862	PSU	C6-C5	2.83	1.38	1.35
3	L5	4299	PSU	C2-N3	-2.83	1.32	1.37
1	S2	1337	4AC	C4-N4	-2.83	1.35	1.39
3	L5	1782	PSU	C2-N3	-2.82	1.32	1.37
3	L5	3744	OMG	C6-N1	-2.82	1.33	1.37
3	L5	4532	PSU	C6-C5	2.82	1.38	1.35
3	L5	4423	PSU	C4-N3	-2.81	1.33	1.38
3	L5	4498	OMU	C4-N3	-2.81	1.33	1.38
3	L5	3695	PSU	C6-C5	2.81	1.38	1.35
3	L5	4227	OMU	C2-N3	-2.80	1.33	1.38
1	S2	609	PSU	C6-C5	2.80	1.38	1.35
1	S2	1177	PSU	C6-C5	2.79	1.38	1.35
1	S2	1238	PSU	C6-C5	2.78	1.38	1.35
1	S2	683	OMG	C6-N1	-2.78	1.33	1.37
3	L5	3925	OMU	C2-N3	-2.78	1.33	1.38
3	L5	4499	OMG	C6-N1	-2.78	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	S2	34	PSU	C6-C5	2.77	1.38	1.35
3	L5	4636	PSU	C6-C5	2.77	1.38	1.35
3	L5	3770	PSU	C4-N3	-2.76	1.33	1.38
3	L5	1683	PSU	C2-N1	-2.76	1.33	1.36
3	L5	3782	5MC	C6-C5	2.76	1.39	1.34
3	L5	2508	PSU	C6-C5	2.76	1.38	1.35
1	S2	815	PSU	C6-C5	2.76	1.38	1.35
3	L5	1792	PSU	C2-N3	-2.75	1.32	1.37
84	At	46	G7M	C6-N1	-2.75	1.33	1.37
1	S2	918	PSU	C6-C5	2.75	1.38	1.35
3	L5	1781	PSU	C4-N3	-2.74	1.33	1.38
1	S2	1842	4AC	C4-N4	-2.74	1.35	1.39
3	L5	3762	PSU	C6-C5	2.73	1.38	1.35
1	S2	822	PSU	C6-C5	2.73	1.38	1.35
3	L5	1860	PSU	C6-C5	2.73	1.38	1.35
1	S2	1056	PSU	C6-C5	2.72	1.38	1.35
1	S2	801	PSU	C4-N3	-2.71	1.33	1.38
3	L5	2424	OMG	C6-N1	-2.71	1.33	1.37
3	L5	1683	PSU	C2-N3	-2.70	1.32	1.37
3	L5	4420	PSU	C4-N3	-2.69	1.33	1.38
3	L5	4552	PSU	C2-N3	-2.69	1.32	1.37
3	L5	2837	OMU	C2-N3	-2.69	1.33	1.38
1	S2	1347	PSU	C6-C5	2.69	1.38	1.35
3	L5	1536	PSU	C2-N1	-2.69	1.33	1.36
3	L5	4498	OMU	C2-N3	-2.68	1.33	1.38
3	L5	2632	PSU	C6-C5	2.68	1.38	1.35
3	L5	5010	PSU	C6-C5	2.68	1.38	1.35
3	L5	1536	PSU	C2-N3	-2.68	1.32	1.37
3	L5	4521	PSU	C2-N3	-2.67	1.32	1.37
1	S2	1326	UY1	C6-C5	2.66	1.38	1.35
3	L5	3639	PSU	C2-N3	-2.66	1.33	1.37
3	L5	3944	OMG	C6-N1	-2.66	1.33	1.37
3	L5	4579	PSU	C2-N1	-2.66	1.33	1.36
3	L5	4579	PSU	C2-N3	-2.65	1.33	1.37
3	L5	3639	PSU	C6-C5	2.65	1.38	1.35
1	S2	296	PSU	C6-C5	2.65	1.38	1.35
3	L5	4431	PSU	C6-C5	2.65	1.38	1.35
1	S2	1625	PSU	C4-N3	-2.64	1.33	1.38
84	At	16	H2U	C2-N3	-2.64	1.33	1.38
1	S2	1643	PSU	C6-C5	2.63	1.38	1.35
3	L5	3884	PSU	C2-N3	-2.63	1.33	1.37
3	L5	1782	PSU	C6-C5	2.63	1.38	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
84	At	39	PSU	C4-N3	-2.63	1.34	1.38
1	S2	1136	PSU	C6-C5	2.62	1.38	1.35
1	S2	105	PSU	C2-N3	-2.62	1.33	1.37
1	S2	1004	PSU	C2-N1	-2.62	1.33	1.36
3	L5	1536	PSU	C2'-C1'	-2.61	1.50	1.53
3	L5	3762	PSU	C4-N3	-2.61	1.34	1.38
40	LB	245	HIC	CD2-CG	2.61	1.40	1.36
3	L5	4552	PSU	C2-N1	-2.61	1.33	1.36
3	L5	4312	PSU	C2-N3	-2.60	1.33	1.37
1	S2	1243	PSU	C6-C5	2.60	1.38	1.35
1	S2	93	PSU	C4-N3	-2.59	1.34	1.38
2	L8	69	PSU	C2'-C1'	-2.59	1.50	1.53
3	L5	4353	PSU	C6-C5	2.59	1.38	1.35
3	L5	4296	PSU	C6-C5	2.59	1.38	1.35
3	L5	4531	PSU	C4-N3	-2.59	1.34	1.38
1	S2	1692	PSU	C6-C5	2.59	1.38	1.35
3	L5	3729	PSU	C6-C5	2.58	1.38	1.35
1	S2	1136	PSU	C2-N3	-2.58	1.33	1.37
1	S2	428	OMU	C4-N3	-2.58	1.33	1.38
1	S2	815	PSU	C2-N3	-2.58	1.33	1.37
1	S2	218	PSU	C6-C5	2.57	1.38	1.35
1	S2	105	PSU	C6-C5	2.57	1.38	1.35
1	S2	649	PSU	C6-C5	2.57	1.38	1.35
3	L5	3844	PSU	C2-N1	-2.57	1.33	1.36
3	L5	4689	PSU	C6-C5	2.57	1.38	1.35
1	S2	644	OMG	C6-N1	-2.57	1.34	1.37
1	S2	116	OMU	C2-N3	-2.57	1.33	1.38
3	L5	3734	PSU	C6-C5	2.56	1.38	1.35
3	L5	4353	PSU	C2-N3	-2.56	1.33	1.37
3	L5	4442	PSU	C2-N3	-2.56	1.33	1.37
3	L5	5001	PSU	C6-C5	2.56	1.38	1.35
3	L5	1860	PSU	C2-N3	-2.56	1.33	1.37
1	S2	109	PSU	C6-C5	2.56	1.38	1.35
3	L5	1683	PSU	C6-C5	2.55	1.38	1.35
3	L5	1322	1MA	C6-N6	2.55	1.34	1.27
1	S2	36	PSU	C6-C5	2.55	1.38	1.35
3	L5	4457	PSU	C2-N3	-2.55	1.33	1.37
1	S2	1643	PSU	C2-N1	-2.55	1.33	1.36
1	S2	1004	PSU	C2-N3	-2.55	1.33	1.37
1	S2	1056	PSU	C2-N3	-2.54	1.33	1.37
1	S2	627	OMU	C4-N3	-2.54	1.34	1.38
3	L5	4493	PSU	C2-N3	-2.54	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	S2	572	PSU	C6-C5	2.54	1.38	1.35
1	S2	406	PSU	C2-N1	-2.54	1.33	1.36
1	S2	1804	OMU	C5-C4	-2.53	1.38	1.43
3	L5	4620	OMU	C2-N3	-2.53	1.33	1.38
1	S2	218	PSU	C2-N3	-2.52	1.33	1.37
1	S2	1238	PSU	C2-N3	-2.52	1.33	1.37
3	L5	4370	OMG	C6-N1	-2.52	1.34	1.37
1	S2	1692	PSU	C2-N3	-2.51	1.33	1.37
3	L5	4576	PSU	C2-N3	-2.50	1.33	1.37
3	L5	1862	PSU	C2-N1	-2.50	1.33	1.36
3	L5	4361	PSU	C6-C5	2.50	1.38	1.35
3	L5	4420	PSU	C6-C5	2.50	1.38	1.35
3	L5	4471	PSU	C2-N3	-2.50	1.33	1.37
1	S2	406	PSU	C6-C5	2.50	1.38	1.35
3	L5	4457	PSU	C6-C5	2.50	1.38	1.35
1	S2	1643	PSU	C2-N3	-2.50	1.33	1.37
3	L5	1862	PSU	C2-N3	-2.49	1.33	1.37
1	S2	1081	PSU	C2-N3	-2.49	1.33	1.37
3	L5	3884	PSU	C6-C5	2.49	1.38	1.35
3	L5	4569	PSU	C6-C5	2.49	1.38	1.35
3	L5	2508	PSU	C2-N3	-2.49	1.33	1.37
3	L5	3758	PSU	C2-N3	-2.49	1.33	1.37
3	L5	3715	PSU	C6-C5	2.49	1.38	1.35
3	L5	3920	PSU	C6-C5	2.48	1.38	1.35
1	S2	1081	PSU	O4'-C1'	-2.48	1.40	1.43
1	S2	649	PSU	C2-N3	-2.48	1.33	1.37
3	L5	4431	PSU	C2-N3	-2.48	1.33	1.37
1	S2	866	PSU	C2-N3	-2.47	1.33	1.37
3	L5	3729	PSU	C2-N3	-2.47	1.33	1.37
3	L5	3695	PSU	C2-N3	-2.47	1.33	1.37
3	L5	1582	PSU	C6-C5	2.47	1.38	1.35
3	L5	4228	OMG	C6-N1	-2.47	1.34	1.37
3	L5	4552	PSU	C6-C5	2.47	1.38	1.35
1	S2	651	PSU	C2-N3	-2.46	1.33	1.37
1	S2	1442	OMU	C2-N3	-2.46	1.33	1.38
85	Pt	21	H2U	C2-N3	-2.46	1.33	1.38
84	At	20	H2U	C2-N3	-2.46	1.33	1.38
84	At	37	MIA	C5-C4	2.46	1.47	1.40
3	L5	4532	PSU	C2-N1	-2.45	1.33	1.36
1	S2	1445	PSU	C6-C5	2.45	1.38	1.35
1	S2	966	PSU	C2-N3	-2.45	1.33	1.37
1	S2	1174	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	1288	OMU	C4-N3	-2.45	1.34	1.38
1	S2	1445	PSU	C2'-C1'	-2.44	1.50	1.53
3	L5	4689	PSU	C2-N3	-2.44	1.33	1.37
84	At	16	H2U	C4-N3	-2.44	1.33	1.37
1	S2	36	PSU	C2-N1	-2.43	1.33	1.36
85	Pt	8	4SU	C2-N3	-2.43	1.33	1.38
1	S2	116	OMU	C5-C4	-2.43	1.38	1.43
1	S2	406	PSU	C2-N3	-2.43	1.33	1.37
1	S2	121	OMU	C5-C4	-2.42	1.38	1.43
3	L5	1779	PSU	C2-N3	-2.42	1.33	1.37
3	L5	4636	PSU	C2-N3	-2.42	1.33	1.37
3	L5	4972	PSU	C2-N3	-2.42	1.33	1.37
1	S2	1442	OMU	C5-C4	-2.42	1.38	1.43
3	L5	3768	PSU	C2-N3	-2.42	1.33	1.37
3	L5	4361	PSU	C2-N1	-2.41	1.33	1.36
3	L5	3853	PSU	C2-N3	-2.41	1.33	1.37
1	S2	119	PSU	C6-C5	2.41	1.38	1.35
1	S2	172	OMU	C2-N1	2.41	1.42	1.38
1	S2	1239	PSU	C2-N3	-2.41	1.33	1.37
3	L5	4361	PSU	C2-N3	-2.41	1.33	1.37
3	L5	3851	PSU	C2-N1	-2.41	1.33	1.36
1	S2	354	OMU	C5-C4	-2.41	1.38	1.43
3	L5	4442	PSU	C2-N1	-2.40	1.33	1.36
3	L5	4493	PSU	C2-N1	-2.40	1.33	1.36
1	S2	1174	PSU	C6-C5	2.40	1.38	1.35
1	S2	627	OMU	C2-N3	-2.39	1.33	1.38
3	L5	5010	PSU	C2-N3	-2.39	1.33	1.37
3	L5	4500	PSU	C2-N3	-2.39	1.33	1.37
3	L5	4620	OMU	C5-C4	-2.39	1.38	1.43
3	L5	4628	PSU	C6-C5	2.39	1.38	1.35
1	S2	1081	PSU	C6-C5	2.38	1.38	1.35
3	L5	3844	PSU	C2-N3	-2.38	1.33	1.37
2	L8	69	PSU	C2-N1	-2.38	1.33	1.36
1	S2	1004	PSU	C6-C5	2.38	1.38	1.35
1	S2	1639	G7M	C6-N1	-2.37	1.34	1.37
1	S2	867	OMG	C6-N1	-2.37	1.34	1.37
3	L5	1582	PSU	C2-N3	-2.37	1.33	1.37
1	S2	1174	PSU	C2-N1	-2.37	1.33	1.36
3	L5	2632	PSU	C2-N3	-2.37	1.33	1.37
1	S2	119	PSU	C2-N1	-2.36	1.33	1.36
3	L5	4431	PSU	C2-N1	-2.36	1.33	1.36
3	L5	4403	PSU	C2-N1	-2.36	1.33	1.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	S2	1804	OMU	C2-N3	-2.36	1.33	1.38
1	S2	119	PSU	C2-N3	-2.36	1.33	1.37
3	L5	4532	PSU	C2-N3	-2.36	1.33	1.37
1	S2	1367	PSU	C2-N3	-2.36	1.33	1.37
85	Pt	21	H2U	C4-N3	-2.36	1.33	1.37
1	S2	109	PSU	C2-N1	-2.35	1.33	1.36
84	At	20	H2U	C4-N3	-2.35	1.33	1.37
3	L5	3718	A2M	C5-C4	2.35	1.47	1.40
3	L5	3760	A2M	C5-C4	2.34	1.47	1.40
3	L5	4972	PSU	C2-N1	-2.34	1.33	1.36
1	S2	822	PSU	C2-N1	-2.34	1.33	1.36
3	L5	4423	PSU	C6-C5	2.34	1.38	1.35
1	S2	863	PSU	C2-N3	-2.34	1.33	1.37
3	L5	1792	PSU	C6-C5	2.34	1.38	1.35
1	S2	1445	PSU	C2-N3	-2.34	1.33	1.37
2	L8	55	PSU	C2-N3	-2.33	1.33	1.37
3	L5	4353	PSU	C2-N1	-2.33	1.33	1.36
3	L5	3818	UY1	C2-N3	-2.32	1.33	1.37
1	S2	172	OMU	C2-N3	-2.32	1.33	1.38
3	L5	4498	OMU	C5-C4	-2.31	1.38	1.43
3	L5	4296	PSU	C2-N3	-2.31	1.33	1.37
3	L5	4299	PSU	C2-N1	-2.31	1.33	1.36
1	S2	109	PSU	C2-N3	-2.31	1.33	1.37
1	S2	681	PSU	C2-N3	-2.31	1.33	1.37
3	L5	1792	PSU	C2-N1	-2.30	1.33	1.36
3	L5	2415	OMU	C5-C4	-2.30	1.38	1.43
1	S2	1347	PSU	C2-N3	-2.29	1.33	1.37
1	S2	1243	PSU	C2-N3	-2.29	1.33	1.37
3	L5	4571	A2M	C5-C4	2.29	1.47	1.40
3	L5	4293	PSU	C2-N3	-2.29	1.33	1.37
1	S2	105	PSU	C2'-C1'	-2.29	1.50	1.53
3	L5	4299	PSU	C6-C5	2.29	1.38	1.35
3	L5	1782	PSU	C2-N1	-2.29	1.33	1.36
3	L5	3818	UY1	C2-N1	-2.29	1.33	1.36
1	S2	1031	A2M	C5-C4	2.29	1.47	1.40
2	L8	75	OMG	C6-N1	-2.28	1.34	1.37
3	L5	4590	A2M	C5-C4	2.28	1.47	1.40
3	L5	3758	PSU	C6-C5	2.28	1.38	1.35
1	S2	576	A2M	C5-C4	2.28	1.47	1.40
3	L5	1582	PSU	O4'-C1'	-2.28	1.40	1.43
3	L5	4500	PSU	C6-C5	2.28	1.38	1.35
1	S2	159	A2M	C5-C4	2.28	1.47	1.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	S2	822	PSU	C2-N3	-2.28	1.33	1.37
3	L5	1779	PSU	C2-N1	-2.28	1.33	1.36
3	L5	4457	PSU	C2-N1	-2.28	1.33	1.36
1	S2	651	PSU	C2-N1	-2.28	1.33	1.36
3	L5	4673	PSU	C6-C5	2.27	1.38	1.35
1	S2	36	PSU	C2-N3	-2.27	1.33	1.37
1	S2	649	PSU	C2-N1	-2.26	1.33	1.36
3	L5	4442	PSU	C6-C5	2.26	1.38	1.35
3	L5	5001	PSU	C2-N3	-2.26	1.33	1.37
3	L5	3844	PSU	C6-N1	-2.25	1.32	1.36
3	L5	4423	PSU	C2-N1	-2.25	1.33	1.36
3	L5	4293	PSU	C2-N1	-2.25	1.33	1.36
1	S2	34	PSU	C2-N3	-2.25	1.33	1.37
3	L5	4628	PSU	C2-N3	-2.25	1.33	1.37
3	L5	2815	A2M	C5-C4	2.24	1.46	1.40
2	L8	69	PSU	C6-C5	2.24	1.37	1.35
3	L5	2363	A2M	C5-C4	2.24	1.46	1.40
3	L5	2843	PSU	C2-N1	-2.24	1.33	1.36
84	At	8	4SU	C2-N1	2.24	1.42	1.38
1	S2	866	PSU	C2-N1	-2.24	1.33	1.36
3	L5	1779	PSU	C2'-C1'	-2.23	1.50	1.53
3	L5	3768	PSU	C2-N1	-2.23	1.33	1.36
3	L5	3639	PSU	C2'-C1'	-2.23	1.50	1.53
1	S2	1445	PSU	C2-N1	-2.23	1.33	1.36
3	L5	1677	PSU	C2-N3	-2.23	1.33	1.37
3	L5	4521	PSU	C2-N1	-2.23	1.33	1.36
3	L5	2843	PSU	C6-C5	2.23	1.37	1.35
3	L5	4569	PSU	C2-N1	-2.23	1.33	1.36
3	L5	2351	OMC	C5-C4	-2.22	1.37	1.42
1	S2	651	PSU	C6-C5	2.22	1.37	1.35
3	L5	4447	5MC	C6-N1	-2.22	1.34	1.38
3	L5	2364	OMG	C6-N1	-2.22	1.34	1.37
85	Pt	47	G7M	C6-N1	2.21	1.41	1.37
1	S2	1243	PSU	C2-N1	-2.21	1.33	1.36
1	S2	590	A2M	C5-C4	2.21	1.46	1.40
3	L5	4569	PSU	C6-N1	-2.21	1.32	1.36
3	L5	2632	PSU	C2-N1	-2.21	1.33	1.36
3	L5	4500	PSU	C2-N1	-2.21	1.33	1.36
1	S2	1081	PSU	C2-N1	-2.21	1.33	1.36
1	S2	1288	OMU	C2-N3	-2.20	1.34	1.38
3	L5	3925	OMU	C5-C4	-2.20	1.38	1.43
1	S2	296	PSU	C2-N3	-2.20	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	S2	686	PSU	C2-N3	-2.20	1.33	1.37
3	L5	1677	PSU	C2'-C1'	-2.20	1.50	1.53
1	S2	1244	PSU	C2-N3	-2.20	1.33	1.37
3	L5	4579	PSU	C6-C5	2.20	1.37	1.35
3	L5	4628	PSU	C2-N1	-2.20	1.33	1.36
3	L5	3639	PSU	C2-N1	-2.20	1.33	1.36
1	S2	1347	PSU	C2-N1	-2.19	1.33	1.36
3	L5	5010	PSU	C2-N1	-2.19	1.33	1.36
3	L5	3782	5MC	C6-N1	-2.18	1.34	1.38
1	S2	814	PSU	C2-N3	-2.18	1.33	1.37
1	S2	1383	A2M	O4'-C1'	2.18	1.44	1.41
1	S2	1232	PSU	C2-N1	-2.18	1.33	1.36
3	L5	3818	UY1	C6-C5	2.17	1.37	1.35
3	L5	3920	PSU	C2-N1	-2.17	1.33	1.36
1	S2	681	PSU	C2'-C1'	-2.17	1.50	1.53
3	L5	4673	PSU	C2-N3	-2.17	1.33	1.37
2	L8	69	PSU	C6-N1	-2.17	1.32	1.36
1	S2	686	PSU	C2-N1	-2.17	1.33	1.36
3	L5	1860	PSU	C2-N1	-2.17	1.33	1.36
1	S2	1326	UY1	C2-N3	-2.16	1.33	1.37
3	L5	3867	A2M	C5-C4	2.16	1.46	1.40
1	S2	1239	PSU	C2-N1	-2.16	1.33	1.36
1	S2	468	A2M	C5-C4	2.16	1.46	1.40
1	S2	218	PSU	C2-N1	-2.16	1.33	1.36
3	L5	1677	PSU	C6-C5	2.15	1.37	1.35
3	L5	4500	PSU	C2'-C1'	-2.15	1.51	1.53
3	L5	1524	A2M	C5-C4	2.15	1.46	1.40
3	L5	398	A2M	C5-C4	2.14	1.46	1.40
1	S2	1383	A2M	C5-C4	2.14	1.46	1.40
2	L8	69	PSU	C2-N3	-2.14	1.33	1.37
1	S2	428	OMU	C2-N3	-2.14	1.34	1.38
3	L5	1326	A2M	C5-C4	2.13	1.46	1.40
1	S2	36	PSU	C2'-C1'	-2.13	1.51	1.53
3	L5	4312	PSU	C2-N1	-2.13	1.33	1.36
1	S2	1177	PSU	C2-N3	-2.12	1.33	1.37
1	S2	572	PSU	C2-N3	-2.12	1.33	1.37
3	L5	3723	A2M	C5-C4	2.12	1.46	1.40
1	S2	573	PSU	C2-N3	-2.12	1.33	1.37
3	L5	4420	PSU	C2-N3	-2.11	1.33	1.37
3	L5	4431	PSU	C2'-C1'	-2.11	1.51	1.53
3	L5	4423	PSU	C2-N3	-2.11	1.33	1.37
1	S2	814	PSU	C2'-C1'	-2.11	1.51	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	S2	105	PSU	C2-N1	-2.10	1.33	1.36
3	L5	4306	OMU	C5-C4	-2.10	1.39	1.43
1	S2	484	A2M	C5-C4	2.09	1.46	1.40
3	L5	1534	A2M	C5-C4	2.09	1.46	1.40
1	S2	1850	MA6	C5-C4	2.09	1.46	1.40
1	S2	609	PSU	C2-N1	-2.09	1.33	1.36
3	L5	3758	PSU	C2-N1	-2.09	1.33	1.36
3	L5	1582	PSU	C2-N1	-2.09	1.33	1.36
3	L5	3734	PSU	C2-N3	-2.08	1.33	1.37
1	S2	1851	MA6	C5-C4	2.08	1.46	1.40
3	L5	2839	PSU	C2-N1	-2.08	1.33	1.36
3	L5	3715	PSU	C2-N3	-2.08	1.33	1.37
1	S2	296	PSU	C2-N1	-2.08	1.33	1.36
3	L5	1683	PSU	C6-N1	-2.07	1.32	1.36
1	S2	1692	PSU	C2-N1	-2.07	1.33	1.36
3	L5	4569	PSU	C2-N3	-2.07	1.34	1.37
3	L5	400	A2M	C5-C4	2.07	1.46	1.40
3	L5	2839	PSU	O4'-C1'	-2.06	1.41	1.43
1	S2	512	A2M	C5-C4	2.06	1.46	1.40
85	Pt	56	PSU	C2-N3	-2.06	1.34	1.37
3	L5	2401	A2M	C5-C4	2.06	1.46	1.40
1	S2	166	A2M	C5-C4	2.06	1.46	1.40
3	L5	4531	PSU	C2-N1	-2.05	1.33	1.36
3	L5	3734	PSU	C2-N1	-2.05	1.34	1.36
1	S2	1643	PSU	O4'-C1'	-2.05	1.41	1.43
1	S2	99	A2M	C5-C4	2.05	1.46	1.40
3	L5	1340	OMC	C5-C4	-2.05	1.38	1.42
1	S2	1004	PSU	C2'-C1'	-2.05	1.51	1.53
1	S2	34	PSU	C2-N1	-2.05	1.34	1.36
3	L5	4521	PSU	O4'-C1'	-2.04	1.41	1.43
1	S2	27	A2M	C5-C4	2.04	1.46	1.40
3	L5	3715	PSU	C2-N1	-2.04	1.34	1.36
1	S2	172	OMU	C5-C4	-2.04	1.39	1.43
3	L5	3724	A2M	C5-C4	2.04	1.46	1.40
1	S2	1177	PSU	C2-N1	-2.04	1.34	1.36
1	S2	1232	PSU	C2-N3	-2.04	1.34	1.37
2	L8	14	OMU	C5-C4	-2.03	1.39	1.43
1	S2	681	PSU	C2-N1	-2.03	1.34	1.36
1	S2	572	PSU	C2-N1	-2.03	1.34	1.36
1	S2	1703	OMC	C6-N1	-2.03	1.33	1.38
3	L5	1871	A2M	C5-C4	2.02	1.46	1.40
2	L8	14	OMU	C2-N1	2.02	1.41	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	L5	2837	OMU	C5-C4	-2.02	1.39	1.43
1	S2	609	PSU	C2-N3	-2.01	1.34	1.37
3	L5	1536	PSU	C6-N1	-2.01	1.32	1.36
1	S2	1243	PSU	C2'-C1'	-2.01	1.51	1.53
84	At	32	PSU	C2-N3	-2.01	1.34	1.37
3	L5	2804	OMC	C5-C4	-2.01	1.38	1.42
1	S2	1174	PSU	C6-N1	-2.01	1.32	1.36
1	S2	918	PSU	C2-N3	-2.00	1.34	1.37
3	L5	3841	OMC	C6-N1	-2.00	1.33	1.38
1	S2	1678	A2M	C5-C4	2.00	1.46	1.40
3	L5	2839	PSU	C6-N1	-2.00	1.32	1.36

All (746) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	S2	1832	6MZ	C2-N1-C6	9.00	124.31	116.59
84	At	37	MIA	C12-C13-C14	-8.58	110.44	127.14
29	SV	1	AME	CA-N-CT1	-7.61	109.11	123.15
66	Lr	2	SAC	OAC-C1A-N	-7.55	108.06	121.95
6	SA	2	SAC	OAC-C1A-C2A	-7.35	108.41	122.06
3	L5	4521	PSU	N1-C2-N3	7.25	123.35	115.13
29	SV	1	AME	OT-CT1-N	-7.11	108.89	121.95
3	L5	4493	PSU	N1-C2-N3	6.92	122.97	115.13
1	S2	1243	PSU	N1-C2-N3	6.90	122.95	115.13
1	S2	105	PSU	N1-C2-N3	6.88	122.93	115.13
3	L5	4531	PSU	N1-C2-N3	6.83	122.86	115.13
1	S2	1367	PSU	N1-C2-N3	6.75	122.78	115.13
3	L5	3920	PSU	N1-C2-N3	6.74	122.77	115.13
3	L5	3851	PSU	N1-C2-N3	6.68	122.69	115.13
1	S2	918	PSU	N1-C2-N3	6.66	122.68	115.13
3	L5	3734	PSU	N1-C2-N3	6.63	122.64	115.13
3	L5	3637	PSU	N1-C2-N3	6.63	122.64	115.13
29	SV	1	AME	OT-CT1-CT2	-6.61	109.78	122.06
3	L5	3695	PSU	N1-C2-N3	6.61	122.62	115.13
1	S2	686	PSU	N1-C2-N3	6.59	122.59	115.13
84	At	8	4SU	C5-C4-N3	6.58	120.79	114.69
84	At	8	4SU	C4-N3-C2	-6.55	120.98	127.34
1	S2	1081	PSU	N1-C2-N3	6.53	122.53	115.13
1	S2	1445	PSU	N1-C2-N3	6.52	122.52	115.13
66	Lr	2	SAC	OAC-C1A-C2A	-6.52	109.95	122.06
2	L8	55	PSU	N1-C2-N3	6.50	122.49	115.13
3	L5	1683	PSU	N1-C2-N3	6.49	122.49	115.13

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	S2	822	PSU	N1-C2-N3	6.48	122.48	115.13
3	L5	4220	6MZ	C2-N1-C6	6.47	122.14	116.59
3	L5	4403	PSU	N1-C2-N3	6.45	122.44	115.13
3	L5	4552	PSU	N1-C2-N3	6.45	122.44	115.13
3	L5	4353	PSU	N1-C2-N3	6.45	122.44	115.13
3	L5	4296	PSU	N1-C2-N3	6.45	122.44	115.13
1	S2	1232	PSU	N1-C2-N3	6.45	122.43	115.13
6	SA	2	SAC	CA-N-C1A	-6.43	111.30	123.15
3	L5	3844	PSU	N1-C2-N3	6.43	122.41	115.13
1	S2	681	PSU	N1-C2-N3	6.42	122.41	115.13
3	L5	4689	PSU	N1-C2-N3	6.42	122.40	115.13
3	L5	4442	PSU	N1-C2-N3	6.41	122.40	115.13
1	S2	649	PSU	N1-C2-N3	6.41	122.39	115.13
1	S2	1643	PSU	N1-C2-N3	6.40	122.39	115.13
6	SA	2	SAC	OAC-C1A-N	-6.40	110.19	121.95
3	L5	4431	PSU	N1-C2-N3	6.40	122.38	115.13
1	S2	109	PSU	N1-C2-N3	6.39	122.37	115.13
3	L5	4569	PSU	N1-C2-N3	6.39	122.37	115.13
3	L5	2839	PSU	N1-C2-N3	6.36	122.33	115.13
1	S2	1056	PSU	N1-C2-N3	6.35	122.33	115.13
3	L5	3729	PSU	N1-C2-N3	6.34	122.32	115.13
3	L5	4636	PSU	N1-C2-N3	6.33	122.30	115.13
3	L5	4312	PSU	N1-C2-N3	6.32	122.30	115.13
1	S2	1692	PSU	N1-C2-N3	6.32	122.29	115.13
3	L5	2632	PSU	N1-C2-N3	6.32	122.29	115.13
1	S2	1326	UY1	N1-C2-N3	6.31	122.28	115.13
3	L5	1860	PSU	N1-C2-N3	6.29	122.26	115.13
1	S2	218	PSU	N1-C2-N3	6.29	122.25	115.13
3	L5	5010	PSU	N1-C2-N3	6.28	122.25	115.13
1	S2	406	PSU	N1-C2-N3	6.27	122.24	115.13
3	L5	1536	PSU	N1-C2-N3	6.27	122.23	115.13
1	S2	1238	PSU	N1-C2-N3	6.26	122.22	115.13
3	L5	2843	PSU	N1-C2-N3	6.24	122.20	115.13
3	L5	4530	UR3	C4-N3-C2	-6.24	118.69	124.56
1	S2	36	PSU	N1-C2-N3	6.24	122.20	115.13
3	L5	4579	PSU	N1-C2-N3	6.24	122.20	115.13
2	L8	69	PSU	N1-C2-N3	6.23	122.19	115.13
3	L5	1677	PSU	N1-C2-N3	6.22	122.18	115.13
3	L5	1792	PSU	N1-C2-N3	6.22	122.18	115.13
3	L5	1744	PSU	N1-C2-N3	6.20	122.16	115.13
3	L5	3764	PSU	N1-C2-N3	6.18	122.13	115.13
85	Pt	8	4SU	C4-N3-C2	-6.16	121.36	127.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	L5	5001	PSU	N1-C2-N3	6.15	122.10	115.13
66	Lr	2	SAC	CA-N-C1A	-6.15	111.80	123.15
1	S2	1177	PSU	N1-C2-N3	6.15	122.10	115.13
3	L5	4500	PSU	N1-C2-N3	6.15	122.10	115.13
1	S2	1347	PSU	N1-C2-N3	6.13	122.07	115.13
3	L5	4457	PSU	N1-C2-N3	6.12	122.06	115.13
84	At	39	PSU	N1-C2-N3	6.11	122.06	115.13
1	S2	34	PSU	N1-C2-N3	6.11	122.05	115.13
1	S2	814	PSU	N1-C2-N3	6.11	122.05	115.13
3	L5	1779	PSU	N1-C2-N3	6.11	122.05	115.13
1	S2	1244	PSU	N1-C2-N3	6.10	122.04	115.13
1	S2	863	PSU	N1-C2-N3	6.09	122.03	115.13
3	L5	4361	PSU	N1-C2-N3	6.08	122.02	115.13
1	S2	801	PSU	N1-C2-N3	6.08	122.01	115.13
3	L5	3762	PSU	N1-C2-N3	6.06	122.00	115.13
3	L5	1781	PSU	N1-C2-N3	6.05	121.98	115.13
3	L5	4299	PSU	N1-C2-N3	6.04	121.97	115.13
3	L5	4972	PSU	N1-C2-N3	6.04	121.97	115.13
1	S2	296	PSU	N1-C2-N3	6.03	121.96	115.13
3	L5	3715	PSU	N1-C2-N3	6.03	121.96	115.13
3	L5	4423	PSU	N1-C2-N3	6.02	121.95	115.13
1	S2	1136	PSU	N1-C2-N3	6.01	121.94	115.13
85	Pt	56	PSU	N1-C2-N3	5.98	121.90	115.13
1	S2	966	PSU	N1-C2-N3	5.96	121.89	115.13
1	S2	119	PSU	N1-C2-N3	5.96	121.89	115.13
1	S2	1625	PSU	N1-C2-N3	5.96	121.88	115.13
1	S2	1174	PSU	N1-C2-N3	5.96	121.88	115.13
1	S2	572	PSU	N1-C2-N3	5.95	121.88	115.13
3	L5	3770	PSU	N1-C2-N3	5.95	121.88	115.13
1	S2	609	PSU	N1-C2-N3	5.95	121.87	115.13
3	L5	4420	PSU	N1-C2-N3	5.95	121.87	115.13
1	S2	573	PSU	N1-C2-N3	5.94	121.86	115.13
1	S2	1239	PSU	N1-C2-N3	5.93	121.85	115.13
3	L5	3639	PSU	N1-C2-N3	5.93	121.85	115.13
1	S2	815	PSU	N1-C2-N3	5.89	121.81	115.13
3	L5	3758	PSU	N1-C2-N3	5.87	121.79	115.13
85	Pt	8	4SU	C5-C4-N3	5.87	120.13	114.69
84	At	32	PSU	N1-C2-N3	5.86	121.77	115.13
1	S2	651	PSU	N1-C2-N3	5.85	121.76	115.13
3	L5	1782	PSU	N1-C2-N3	5.83	121.73	115.13
3	L5	3818	UY1	N1-C2-N3	5.82	121.72	115.13
1	S2	1004	PSU	N1-C2-N3	5.81	121.72	115.13

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	L5	1862	PSU	N1-C2-N3	5.81	121.72	115.13
3	L5	3768	PSU	N1-C2-N3	5.81	121.71	115.13
3	L5	4532	PSU	N1-C2-N3	5.80	121.71	115.13
1	S2	93	PSU	N1-C2-N3	5.80	121.70	115.13
3	L5	2508	PSU	N1-C2-N3	5.75	121.65	115.13
3	L5	3853	PSU	N1-C2-N3	5.72	121.61	115.13
1	S2	866	PSU	N1-C2-N3	5.65	121.54	115.13
85	Pt	21	H2U	C4-N3-C2	-5.64	121.11	125.79
3	L5	4628	PSU	N1-C2-N3	5.63	121.51	115.13
3	L5	4576	PSU	N1-C2-N3	5.57	121.44	115.13
3	L5	4293	PSU	N1-C2-N3	5.53	121.39	115.13
3	L5	4673	PSU	N1-C2-N3	5.48	121.34	115.13
3	L5	4471	PSU	N1-C2-N3	5.47	121.32	115.13
3	L5	1582	PSU	N1-C2-N3	5.44	121.29	115.13
3	L5	4306	OMU	C4-N3-C2	-5.33	119.55	126.58
3	L5	2837	OMU	N3-C2-N1	5.26	121.88	114.89
3	L5	4306	OMU	N3-C2-N1	5.22	121.82	114.89
3	L5	4531	PSU	O2-C2-N1	-5.20	117.06	122.79
3	L5	3884	PSU	N1-C2-N3	5.18	121.00	115.13
84	At	16	H2U	C4-N3-C2	-5.16	121.51	125.79
1	S2	428	OMU	C4-N3-C2	-4.96	120.04	126.58
2	L8	14	OMU	C4-N3-C2	-4.96	120.04	126.58
3	L5	4227	OMU	C4-N3-C2	-4.85	120.18	126.58
3	L5	2415	OMU	C4-N3-C2	-4.82	120.22	126.58
3	L5	4498	OMU	C4-N3-C2	-4.76	120.30	126.58
1	S2	627	OMU	C4-N3-C2	-4.74	120.32	126.58
3	L5	4227	OMU	N3-C2-N1	4.72	121.15	114.89
1	S2	1248	B8N	C4-N3-C2	-4.66	119.56	125.46
3	L5	4447	5MC	C5-C6-N1	-4.61	118.59	123.34
3	L5	4636	PSU	C4-N3-C2	-4.59	119.72	126.34
1	S2	354	OMU	C4-N3-C2	-4.59	120.53	126.58
1	S2	116	OMU	C4-N3-C2	-4.55	120.57	126.58
3	L5	2837	OMU	C4-N3-C2	-4.52	120.61	126.58
3	L5	1792	PSU	C4-N3-C2	-4.49	119.87	126.34
1	S2	1442	OMU	C4-N3-C2	-4.49	120.66	126.58
1	S2	172	OMU	N3-C2-N1	4.48	120.84	114.89
3	L5	4442	PSU	C4-N3-C2	-4.48	119.89	126.34
2	L8	55	PSU	C4-N3-C2	-4.47	119.90	126.34
1	S2	105	PSU	C4-N3-C2	-4.46	119.92	126.34
1	S2	172	OMU	C4-N3-C2	-4.43	120.74	126.58
3	L5	3734	PSU	C4-N3-C2	-4.42	119.97	126.34
1	S2	1326	UY1	C4-N3-C2	-4.40	120.00	126.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	S2	1056	PSU	C4-N3-C2	-4.39	120.01	126.34
3	L5	3818	UY1	C4-N3-C2	-4.38	120.03	126.34
1	S2	1288	OMU	C4-N3-C2	-4.38	120.81	126.58
1	S2	1692	PSU	C4-N3-C2	-4.37	120.04	126.34
3	L5	4569	PSU	C4-N3-C2	-4.37	120.04	126.34
1	S2	1804	OMU	C4-N3-C2	-4.37	120.82	126.58
3	L5	2843	PSU	C4-N3-C2	-4.36	120.05	126.34
1	S2	1442	OMU	N3-C2-N1	4.36	120.68	114.89
3	L5	4689	PSU	C4-N3-C2	-4.35	120.08	126.34
3	L5	5001	PSU	C4-N3-C2	-4.34	120.08	126.34
3	L5	4296	PSU	C4-N3-C2	-4.34	120.09	126.34
2	L8	14	OMU	N3-C2-N1	4.33	120.64	114.89
3	L5	1677	PSU	C4-N3-C2	-4.30	120.15	126.34
3	L5	4521	PSU	C4-N3-C2	-4.29	120.15	126.34
29	SV	1	AME	CT2-CT1-N	-4.29	108.84	116.10
1	S2	218	PSU	C4-N3-C2	-4.29	120.16	126.34
3	L5	3844	PSU	O2-C2-N1	-4.29	118.07	122.79
1	S2	649	PSU	C4-N3-C2	-4.28	120.17	126.34
1	S2	1081	PSU	C4-N3-C2	-4.26	120.20	126.34
3	L5	3637	PSU	C4-N3-C2	-4.26	120.21	126.34
1	S2	918	PSU	C4-N3-C2	-4.25	120.21	126.34
3	L5	3920	PSU	C4-N3-C2	-4.25	120.21	126.34
2	L8	14	OMU	C5-C4-N3	4.25	121.20	114.84
1	S2	822	PSU	C4-N3-C2	-4.25	120.22	126.34
3	L5	4498	OMU	N3-C2-N1	4.24	120.52	114.89
1	S2	1243	PSU	C4-N3-C2	-4.24	120.23	126.34
1	S2	681	PSU	C4-N3-C2	-4.24	120.23	126.34
3	L5	3729	PSU	C4-N3-C2	-4.24	120.23	126.34
3	L5	2415	OMU	N3-C2-N1	4.23	120.50	114.89
84	At	8	4SU	C5-C4-S4	-4.23	119.02	124.47
1	S2	354	OMU	N3-C2-N1	4.20	120.47	114.89
3	L5	4361	PSU	C4-N3-C2	-4.20	120.29	126.34
84	At	37	MIA	C2-N3-C4	4.20	121.11	115.32
3	L5	4306	OMU	C5-C4-N3	4.20	121.12	114.84
3	L5	3925	OMU	C4-N3-C2	-4.18	121.06	126.58
3	L5	4457	PSU	C4-N3-C2	-4.17	120.33	126.34
1	S2	1238	PSU	C4-N3-C2	-4.16	120.35	126.34
1	S2	119	PSU	C4-N3-C2	-4.16	120.35	126.34
1	S2	918	PSU	O2-C2-N1	-4.16	118.22	122.79
3	L5	2415	OMU	C5-C4-N3	4.15	121.05	114.84
3	L5	1536	PSU	C4-N3-C2	-4.15	120.36	126.34
1	S2	121	OMU	N3-C2-N1	4.14	120.39	114.89

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	S2	686	PSU	C4-N3-C2	-4.14	120.38	126.34
3	L5	3851	PSU	C4-N3-C2	-4.13	120.39	126.34
3	L5	4403	PSU	C4-N3-C2	-4.13	120.39	126.34
1	S2	428	OMU	N3-C2-N1	4.12	120.36	114.89
1	S2	1288	OMU	N3-C2-N1	4.12	120.36	114.89
1	S2	1031	A2M	N3-C2-N1	-4.12	122.24	128.68
1	S2	354	OMU	C5-C4-N3	4.12	121.00	114.84
3	L5	2839	PSU	C4-N3-C2	-4.10	120.43	126.34
84	At	37	MIA	C15-C14-C13	-4.10	110.81	122.65
3	L5	4431	PSU	C4-N3-C2	-4.10	120.44	126.34
85	Pt	56	PSU	C4-N3-C2	-4.09	120.44	126.34
3	L5	3925	OMU	N3-C2-N1	4.09	120.32	114.89
3	L5	4493	PSU	C4-N3-C2	-4.08	120.46	126.34
1	S2	814	PSU	C4-N3-C2	-4.08	120.47	126.34
1	S2	296	PSU	C4-N3-C2	-4.07	120.48	126.34
3	L5	3762	PSU	O2-C2-N1	-4.07	118.31	122.79
1	S2	34	PSU	C4-N3-C2	-4.06	120.49	126.34
1	S2	109	PSU	C4-N3-C2	-4.06	120.49	126.34
3	L5	4498	OMU	C5-C4-N3	4.06	120.91	114.84
3	L5	4620	OMU	C4-N3-C2	-4.06	121.22	126.58
3	L5	4299	PSU	C4-N3-C2	-4.06	120.50	126.34
1	S2	1643	PSU	C4-N3-C2	-4.05	120.51	126.34
1	S2	1445	PSU	C4-N3-C2	-4.04	120.51	126.34
1	S2	1832	6MZ	N3-C2-N1	-4.04	122.36	128.68
3	L5	4569	PSU	O2-C2-N1	-4.04	118.35	122.79
3	L5	4579	PSU	O2-C2-N1	-4.03	118.35	122.79
3	L5	3695	PSU	C4-N3-C2	-4.03	120.54	126.34
3	L5	3758	PSU	C4-N3-C2	-4.03	120.54	126.34
1	S2	1136	PSU	C4-N3-C2	-4.02	120.54	126.34
3	L5	4620	OMU	N3-C2-N1	4.02	120.22	114.89
1	S2	651	PSU	C4-N3-C2	-4.01	120.56	126.34
3	L5	4423	PSU	C4-N3-C2	-4.01	120.56	126.34
2	L8	69	PSU	O2-C2-N1	-4.01	118.38	122.79
1	S2	116	OMU	N3-C2-N1	4.01	120.21	114.89
1	S2	573	PSU	C4-N3-C2	-4.00	120.58	126.34
1	S2	1244	PSU	C4-N3-C2	-3.99	120.59	126.34
3	L5	4579	PSU	C4-N3-C2	-3.99	120.59	126.34
1	S2	815	PSU	C4-N3-C2	-3.98	120.61	126.34
1	S2	116	OMU	C5-C4-N3	3.98	120.79	114.84
1	S2	406	PSU	C4-N3-C2	-3.98	120.61	126.34
84	At	37	MIA	C16-C14-C13	-3.98	111.16	122.65
1	S2	801	PSU	C4-N3-C2	-3.97	120.61	126.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	L5	1781	PSU	C4-N3-C2	-3.97	120.61	126.34
3	L5	3715	PSU	C4-N3-C2	-3.96	120.63	126.34
3	L5	4552	PSU	C4-N3-C2	-3.96	120.63	126.34
1	S2	1850	MA6	N3-C2-N1	-3.94	122.52	128.68
1	S2	863	PSU	C4-N3-C2	-3.94	120.66	126.34
1	S2	1804	OMU	C5-C4-N3	3.94	120.73	114.84
1	S2	572	PSU	C4-N3-C2	-3.94	120.67	126.34
3	L5	1582	PSU	C4-N3-C2	-3.94	120.67	126.34
1	S2	36	PSU	C4-N3-C2	-3.93	120.67	126.34
1	S2	172	OMU	C1'-N1-C2	3.93	124.69	117.57
3	L5	1683	PSU	C4-N3-C2	-3.93	120.67	126.34
1	S2	1177	PSU	C4-N3-C2	-3.93	120.68	126.34
84	At	39	PSU	C4-N3-C2	-3.92	120.69	126.34
3	L5	2839	PSU	O2-C2-N1	-3.92	118.47	122.79
1	S2	428	OMU	C5-C4-N3	3.91	120.69	114.84
1	S2	609	PSU	C4-N3-C2	-3.91	120.70	126.34
3	L5	1779	PSU	C4-N3-C2	-3.91	120.71	126.34
3	L5	4442	PSU	O2-C2-N1	-3.91	118.49	122.79
1	S2	1239	PSU	C4-N3-C2	-3.89	120.73	126.34
1	S2	354	OMU	C2'-C1'-N1	-3.89	106.67	114.22
1	S2	1174	PSU	C4-N3-C2	-3.89	120.73	126.34
3	L5	2632	PSU	C4-N3-C2	-3.89	120.73	126.34
3	L5	4972	PSU	C4-N3-C2	-3.88	120.75	126.34
3	L5	5010	PSU	C4-N3-C2	-3.88	120.75	126.34
3	L5	4532	PSU	O2-C2-N1	-3.87	118.53	122.79
84	At	32	PSU	C4-N3-C2	-3.87	120.77	126.34
3	L5	1862	PSU	C4-N3-C2	-3.86	120.77	126.34
3	L5	4227	OMU	C5-C4-N3	3.86	120.61	114.84
3	L5	3724	A2M	N3-C2-N1	-3.86	122.65	128.68
3	L5	4353	PSU	C4-N3-C2	-3.86	120.78	126.34
3	L5	1782	PSU	C4-N3-C2	-3.85	120.79	126.34
1	S2	1445	PSU	O2-C2-N1	-3.85	118.55	122.79
3	L5	1860	PSU	C4-N3-C2	-3.85	120.79	126.34
3	L5	4420	PSU	C4-N3-C2	-3.85	120.79	126.34
1	S2	627	OMU	C5-C4-N3	3.84	120.59	114.84
1	S2	1625	PSU	O2-C2-N1	-3.84	118.56	122.79
1	S2	109	PSU	O2-C2-N1	-3.84	118.56	122.79
1	S2	627	OMU	N3-C2-N1	3.84	119.99	114.89
3	L5	4531	PSU	C4-N3-C2	-3.83	120.82	126.34
3	L5	1744	PSU	O2-C2-N1	-3.83	118.58	122.79
1	S2	1804	OMU	N3-C2-N1	3.81	119.95	114.89
3	L5	3734	PSU	O2-C2-N1	-3.81	118.59	122.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	S2	406	PSU	O2-C2-N1	-3.81	118.59	122.79
1	S2	1347	PSU	C4-N3-C2	-3.81	120.86	126.34
3	L5	3762	PSU	C4-N3-C2	-3.80	120.86	126.34
1	S2	121	OMU	C4-N3-C2	-3.80	121.57	126.58
1	S2	966	PSU	C4-N3-C2	-3.80	120.87	126.34
3	L5	4628	PSU	C4-N3-C2	-3.80	120.87	126.34
2	L8	69	PSU	C4-N3-C2	-3.78	120.89	126.34
85	Pt	8	4SU	N3-C2-N1	3.78	119.91	114.89
3	L5	1744	PSU	C4-N3-C2	-3.77	120.91	126.34
85	Pt	8	4SU	C5-C4-S4	-3.77	119.61	124.47
3	L5	3770	PSU	C4-N3-C2	-3.76	120.92	126.34
3	L5	4431	PSU	O2-C2-N1	-3.76	118.65	122.79
3	L5	2508	PSU	C4-N3-C2	-3.75	120.93	126.34
1	S2	822	PSU	O2-C2-N1	-3.75	118.67	122.79
3	L5	4620	OMU	C5-C4-N3	3.74	120.44	114.84
1	S2	93	PSU	C4-N3-C2	-3.74	120.94	126.34
3	L5	4220	6MZ	N3-C2-N1	-3.74	122.84	128.68
3	L5	3764	PSU	C4-N3-C2	-3.73	120.97	126.34
1	S2	609	PSU	O2-C2-N1	-3.72	118.70	122.79
1	S2	1625	PSU	C4-N3-C2	-3.72	120.98	126.34
66	Lr	2	SAC	C2A-C1A-N	-3.72	109.81	116.10
1	S2	1232	PSU	C4-N3-C2	-3.71	120.99	126.34
3	L5	4532	PSU	C4-N3-C2	-3.70	121.00	126.34
3	L5	3884	PSU	C4-N3-C2	-3.70	121.00	126.34
1	S2	36	PSU	O2-C2-N1	-3.70	118.72	122.79
3	L5	3925	OMU	C5-C4-N3	3.69	120.36	114.84
84	At	39	PSU	O2-C2-N1	-3.69	118.73	122.79
3	L5	3782	5MC	C5-C6-N1	-3.69	119.55	123.34
3	L5	1536	PSU	O2-C2-N1	-3.68	118.73	122.79
84	At	20	H2U	C4-N3-C2	-3.68	122.74	125.79
1	S2	681	PSU	O2-C2-N1	-3.66	118.77	122.79
3	L5	3639	PSU	C4-N3-C2	-3.65	121.08	126.34
1	S2	1367	PSU	C4-N3-C2	-3.65	121.08	126.34
3	L5	4293	PSU	C4-N3-C2	-3.64	121.09	126.34
1	S2	166	A2M	N3-C2-N1	-3.64	123.00	128.68
3	L5	1522	OMG	O6-C6-C5	-3.63	117.29	124.37
3	L5	4673	PSU	C4-N3-C2	-3.62	121.12	126.34
2	L8	55	PSU	O2-C2-N1	-3.62	118.81	122.79
3	L5	4423	PSU	O2-C2-N1	-3.60	118.82	122.79
3	L5	3818	UY1	O2-C2-N1	-3.60	118.82	122.79
1	S2	1177	PSU	O2-C2-N1	-3.59	118.83	122.79
1	S2	1243	PSU	O2-C2-N1	-3.59	118.84	122.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	S2	1288	OMU	C5-C4-N3	3.58	120.19	114.84
1	S2	1442	OMU	C5-C4-N3	3.57	120.18	114.84
1	S2	686	PSU	O2-C2-N1	-3.57	118.86	122.79
3	L5	3844	PSU	C4-N3-C2	-3.56	121.21	126.34
1	S2	119	PSU	O2-C2-N1	-3.54	118.90	122.79
1	S2	1851	MA6	C4-C5-N7	-3.53	105.72	109.40
3	L5	3920	PSU	O2-C2-N1	-3.53	118.91	122.79
84	At	8	4SU	N3-C2-N1	3.51	119.55	114.89
84	At	37	MIA	C12-N6-C6	-3.50	117.36	122.55
3	L5	3715	PSU	O2-C2-N1	-3.49	118.95	122.79
2	L8	69	PSU	C3'-C2'-C1'	3.48	105.69	101.64
1	S2	296	PSU	O2-C2-N1	-3.48	118.96	122.79
3	L5	4552	PSU	O2-C2-N1	-3.47	118.97	122.79
3	L5	2401	A2M	N3-C2-N1	-3.47	123.26	128.68
3	L5	3729	PSU	O2-C2-N1	-3.47	118.97	122.79
3	L5	4353	PSU	O2-C2-N1	-3.46	118.98	122.79
3	L5	3723	A2M	N3-C2-N1	-3.46	123.28	128.68
3	L5	1792	PSU	O2-C2-N1	-3.45	118.99	122.79
3	L5	1779	PSU	O2-C2-N1	-3.44	119.00	122.79
1	S2	172	OMU	C5-C4-N3	3.44	119.98	114.84
1	S2	649	PSU	O2-C2-N1	-3.43	119.01	122.79
3	L5	4312	PSU	C4-N3-C2	-3.43	121.39	126.34
3	L5	1326	A2M	N3-C2-N1	-3.43	123.32	128.68
3	L5	3764	PSU	O2-C2-N1	-3.42	119.02	122.79
1	S2	1347	PSU	O2-C2-N1	-3.42	119.02	122.79
1	S2	590	A2M	N3-C2-N1	-3.42	123.33	128.68
1	S2	1692	PSU	O2-C2-N1	-3.41	119.04	122.79
1	S2	121	OMU	C5-C4-N3	3.41	119.94	114.84
1	S2	918	PSU	C3'-C2'-C1'	3.40	105.60	101.64
1	S2	1232	PSU	O2-C2-N1	-3.40	119.05	122.79
3	L5	4493	PSU	O2-C2-N1	-3.40	119.05	122.79
3	L5	3825	A2M	N3-C2-N1	-3.39	123.38	128.68
3	L5	4447	5MC	C5-C4-N3	-3.39	118.02	121.67
1	S2	814	PSU	O2-C2-N1	-3.39	119.06	122.79
3	L5	4420	PSU	O2-C2-N1	-3.37	119.08	122.79
3	L5	4500	PSU	C4-N3-C2	-3.37	121.48	126.34
1	S2	801	PSU	O2-C2-N1	-3.37	119.08	122.79
1	S2	572	PSU	O2-C2-N1	-3.36	119.09	122.79
3	L5	4457	PSU	O2-C2-N1	-3.36	119.10	122.79
1	S2	99	A2M	N3-C2-N1	-3.35	123.44	128.68
3	L5	4296	PSU	O2-C2-N1	-3.35	119.10	122.79
1	S2	1004	PSU	C4-N3-C2	-3.34	121.52	126.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	L5	2363	A2M	N3-C2-N1	-3.34	123.46	128.68
3	L5	3768	PSU	C4-N3-C2	-3.34	121.53	126.34
1	S2	1804	OMU	O4-C4-C5	-3.32	119.32	125.16
3	L5	400	A2M	N3-C2-N1	-3.31	123.50	128.68
1	S2	1643	PSU	O2-C2-N1	-3.30	119.15	122.79
1	S2	93	PSU	O2-C2-N1	-3.30	119.15	122.79
3	L5	4628	PSU	O2-C2-N1	-3.30	119.16	122.79
3	L5	2787	A2M	N3-C2-N1	-3.29	123.54	128.68
3	L5	3770	PSU	O2-C2-N1	-3.29	119.17	122.79
1	S2	1678	A2M	N3-C2-N1	-3.28	123.55	128.68
3	L5	398	A2M	N3-C2-N1	-3.27	123.56	128.68
1	S2	1442	OMU	O4-C4-C5	-3.27	119.41	125.16
1	S2	1239	PSU	O2-C2-N1	-3.27	119.19	122.79
3	L5	1683	PSU	O2-C2-N1	-3.26	119.20	122.79
1	S2	27	A2M	N3-C2-N1	-3.26	123.58	128.68
3	L5	4571	A2M	N3-C2-N1	-3.26	123.59	128.68
3	L5	4576	PSU	C4-N3-C2	-3.25	121.65	126.34
3	L5	2843	PSU	O2-C2-N1	-3.24	119.22	122.79
3	L5	4498	OMU	O4-C4-C5	-3.24	119.47	125.16
1	S2	1174	PSU	O2-C2-N1	-3.23	119.23	122.79
3	L5	1781	PSU	O2-C2-N1	-3.23	119.24	122.79
3	L5	4590	A2M	N3-C2-N1	-3.23	123.64	128.68
1	S2	34	PSU	O2-C2-N1	-3.22	119.24	122.79
1	S2	512	A2M	N3-C2-N1	-3.22	123.65	128.68
3	L5	2632	PSU	O2-C2-N1	-3.22	119.25	122.79
1	S2	1326	UY1	O2-C2-N1	-3.21	119.25	122.79
1	S2	116	OMU	O4-C4-C5	-3.21	119.52	125.16
3	L5	1677	PSU	O2-C2-N1	-3.21	119.26	122.79
1	S2	1842	4AC	C6-C5-C4	3.21	120.89	116.96
3	L5	3785	A2M	N3-C2-N1	-3.20	123.68	128.68
3	L5	3830	A2M	N3-C2-N1	-3.19	123.69	128.68
1	S2	1056	PSU	O2-C2-N1	-3.19	119.28	122.79
3	L5	5001	PSU	O2-C2-N1	-3.19	119.28	122.79
1	S2	159	A2M	N3-C2-N1	-3.19	123.70	128.68
3	L5	1522	OMG	C5-C6-N1	3.17	119.56	113.95
3	L5	1582	PSU	O2-C2-N1	-3.17	119.30	122.79
1	S2	1383	A2M	N3-C2-N1	-3.16	123.73	128.68
3	L5	1534	A2M	N3-C2-N1	-3.16	123.73	128.68
3	L5	5010	PSU	O2-C2-N1	-3.16	119.31	122.79
1	S2	1244	PSU	O2-C2-N1	-3.15	119.32	122.79
1	S2	1238	PSU	O2-C2-N1	-3.15	119.32	122.79
1	S2	218	PSU	O2-C2-N1	-3.15	119.32	122.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	L5	4293	PSU	O2-C2-N1	-3.14	119.34	122.79
1	S2	105	PSU	O2-C2-N1	-3.13	119.34	122.79
1	S2	428	OMU	O4-C4-C5	-3.13	119.65	125.16
3	L5	4530	UR3	C6-N1-C2	-3.13	118.99	121.79
3	L5	1871	A2M	N3-C2-N1	-3.12	123.79	128.68
1	S2	1004	PSU	O2-C2-N1	-3.12	119.35	122.79
3	L5	1871	A2M	C4-C5-N7	-3.12	106.15	109.40
1	S2	1031	A2M	C2-N1-C6	3.12	124.09	118.75
3	L5	4972	PSU	O2-C2-N1	-3.11	119.37	122.79
1	S2	1081	PSU	O2-C2-N1	-3.11	119.37	122.79
3	L5	4471	PSU	C4-N3-C2	-3.10	121.86	126.34
1	S2	468	A2M	N3-C2-N1	-3.09	123.85	128.68
3	L5	1524	A2M	N3-C2-N1	-3.09	123.85	128.68
3	L5	3760	A2M	N3-C2-N1	-3.08	123.86	128.68
3	L5	4620	OMU	O4-C4-C5	-3.07	119.76	125.16
84	At	32	PSU	O2-C2-N1	-3.07	119.41	122.79
1	S2	1288	OMU	O4-C4-C5	-3.06	119.77	125.16
3	L5	4299	PSU	O2-C2-N1	-3.06	119.42	122.79
1	S2	573	PSU	O2-C2-N1	-3.06	119.42	122.79
3	L5	3867	A2M	N3-C2-N1	-3.05	123.92	128.68
3	L5	3851	PSU	O2-C2-N1	-3.05	119.44	122.79
3	L5	3853	PSU	C4-N3-C2	-3.04	121.95	126.34
84	At	37	MIA	C5-C6-N1	-3.03	118.29	120.81
3	L5	4361	PSU	O2-C2-N1	-3.03	119.45	122.79
3	L5	3899	OMG	C8-N7-C5	3.02	108.75	102.99
1	S2	1136	PSU	O2-C2-N1	-3.02	119.47	122.79
85	Pt	56	PSU	O2-C2-N1	-3.02	119.47	122.79
3	L5	4521	PSU	O2-C2-N1	-3.02	119.47	122.79
3	L5	4403	PSU	O2-C2-N1	-3.02	119.47	122.79
3	L5	2837	OMU	O2-C2-N1	-3.01	118.79	122.79
1	S2	1851	MA6	N3-C2-N1	-3.00	123.98	128.68
3	L5	2415	OMU	O4-C4-C5	-3.00	119.88	125.16
1	S2	576	A2M	N3-C2-N1	-3.00	123.99	128.68
3	L5	1625	OMG	O6-C6-C5	-3.00	118.52	124.37
1	S2	651	PSU	O2-C2-N1	-3.00	119.49	122.79
1	S2	576	A2M	C4-C5-N7	-2.99	106.28	109.40
3	L5	4523	A2M	N3-C2-N1	-2.99	124.00	128.68
3	L5	4312	PSU	O2-C2-N1	-2.99	119.50	122.79
1	S2	627	OMU	O4-C4-C5	-2.98	119.91	125.16
3	L5	2837	OMU	C5-C4-N3	2.97	119.29	114.84
1	S2	1842	4AC	C5-C4-N3	-2.96	117.83	122.59
1	S2	484	A2M	N3-C2-N1	-2.95	124.07	128.68

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
84	At	8	4SU	C2'-C1'-N1	-2.94	104.87	113.22
3	L5	4500	PSU	O2-C2-N1	-2.94	119.55	122.79
1	S2	866	PSU	C4-N3-C2	-2.94	122.10	126.34
3	L5	4531	PSU	O3'-C3'-C2'	-2.94	102.32	111.82
1	S2	468	A2M	C4-C5-N7	-2.93	106.34	109.40
84	At	37	MIA	C2-N1-C6	2.93	122.43	117.19
3	L5	3758	PSU	O2-C2-N1	-2.92	119.57	122.79
3	L5	2815	A2M	C4-C5-N7	-2.92	106.36	109.40
3	L5	4689	PSU	O2-C2-N1	-2.91	119.58	122.79
3	L5	1860	PSU	O2-C2-N1	-2.91	119.59	122.79
3	L5	2804	OMC	O2-C2-N3	-2.90	117.62	122.33
1	S2	668	A2M	N3-C2-N1	-2.89	124.16	128.68
3	L5	4296	PSU	C5-C6-N1	-2.89	117.78	122.11
3	L5	2364	OMG	C5-C6-N1	2.89	119.05	113.95
3	L5	3768	PSU	O2-C2-N1	-2.89	119.61	122.79
3	L5	4620	OMU	C2'-C1'-N1	-2.88	108.64	114.22
1	S2	863	PSU	O2-C2-N1	-2.87	119.64	122.79
3	L5	3785	A2M	O4'-C1'-C2'	-2.86	101.62	106.59
3	L5	4523	A2M	C4-C5-N7	-2.86	106.42	109.40
1	S2	1832	6MZ	C4-C5-N7	-2.86	106.42	109.40
84	At	8	4SU	C1'-N1-C2	2.85	122.74	117.57
1	S2	172	OMU	O4'-C1'-N1	2.85	114.88	108.36
3	L5	1625	OMG	C5-C6-N1	2.85	118.99	113.95
3	L5	4536	OMC	C2'-C1'-N1	-2.84	108.70	114.22
1	S2	172	OMU	O4-C4-C5	-2.82	120.19	125.16
3	L5	4306	OMU	O4-C4-C5	-2.81	120.22	125.16
3	L5	1862	PSU	O2-C2-N1	-2.81	119.70	122.79
3	L5	1782	PSU	O2-C2-N1	-2.80	119.70	122.79
84	At	37	MIA	C11-S10-C2	-2.79	100.19	102.27
1	S2	428	OMU	O2-C2-N1	-2.78	119.09	122.79
1	S2	1239	PSU	C6-C5-C4	-2.78	116.25	118.20
1	S2	1639	G7M	CN7-N7-C8	-2.78	112.06	125.43
1	S2	866	PSU	O2-C2-N1	-2.77	119.74	122.79
3	L5	1534	A2M	C4-C5-N7	-2.77	106.51	109.40
3	L5	3782	5MC	O2-C2-N3	-2.77	117.83	122.33
1	S2	1248	B8N	N3-C2-N1	2.76	120.66	116.76
3	L5	3639	PSU	O2-C2-N1	-2.76	119.75	122.79
3	L5	4673	PSU	O2-C2-N1	-2.76	119.76	122.79
84	At	37	MIA	C4-C5-N7	-2.75	106.53	109.40
3	L5	4637	OMG	C8-N7-C5	2.74	108.21	102.99
1	S2	627	OMU	O2-C2-N1	-2.74	119.15	122.79
6	SA	2	SAC	C2A-C1A-N	-2.72	111.49	116.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	S2	815	PSU	O2-C2-N1	-2.71	119.81	122.79
3	L5	4392	OMG	C5-C6-N1	2.71	118.74	113.95
1	S2	484	A2M	C4-C5-N7	-2.70	106.58	109.40
1	S2	1850	MA6	C4-C5-N7	-2.70	106.58	109.40
3	L5	3920	PSU	C5-C6-N1	-2.70	118.06	122.11
2	L8	69	PSU	O2'-C2'-C1'	-2.70	104.80	111.23
3	L5	1677	PSU	C4'-O4'-C1'	-2.69	101.78	108.55
1	S2	1337	4AC	C2'-C1'-N1	-2.69	105.59	113.22
1	S2	354	OMU	O4-C4-C5	-2.69	120.43	125.16
3	L5	2876	OMG	C5-C6-N1	2.69	118.70	113.95
3	L5	3925	OMU	C2'-C1'-N1	-2.68	109.02	114.22
84	At	8	4SU	C3'-C2'-C1'	2.68	106.52	101.43
3	L5	3637	PSU	C5-C6-N1	-2.67	118.10	122.11
3	L5	2815	A2M	N3-C2-N1	-2.67	124.50	128.68
1	S2	517	OMC	C2'-C1'-N1	-2.66	109.06	114.22
3	L5	4590	A2M	C4-C5-N7	-2.66	106.63	109.40
84	At	20	H2U	C5-C4-N3	2.64	119.62	116.65
3	L5	4220	6MZ	C4-C5-N7	-2.64	106.65	109.40
1	S2	1367	PSU	O2-C2-N1	-2.63	119.89	122.79
3	L5	4623	OMG	C5-C6-N1	2.62	118.59	113.95
3	L5	2787	A2M	C4-C5-N7	-2.62	106.66	109.40
84	At	46	G7M	CN7-N7-C8	-2.61	112.86	125.43
3	L5	3782	5MC	C5-C4-N3	-2.61	118.86	121.67
1	S2	966	PSU	O2-C2-N1	-2.61	119.92	122.79
3	L5	2363	A2M	C4-C5-N7	-2.60	106.69	109.40
1	S2	512	A2M	C4-C5-N7	-2.60	106.69	109.40
3	L5	4442	PSU	C5-C6-N1	-2.60	118.21	122.11
1	S2	1678	A2M	C4-C5-N7	-2.59	106.69	109.40
3	L5	4637	OMG	C5-C6-N1	2.59	118.53	113.95
3	L5	3695	PSU	C3'-C2'-C1'	2.59	104.66	101.64
1	S2	159	A2M	C4-C5-N7	-2.59	106.70	109.40
3	L5	3701	OMC	C3'-C2'-C1'	-2.58	98.03	102.89
3	L5	3764	PSU	C3'-C2'-C1'	2.58	104.64	101.64
1	S2	668	A2M	C4-C5-N7	-2.57	106.72	109.40
3	L5	3695	PSU	O2-C2-N1	-2.57	119.96	122.79
3	L5	3627	OMG	C5-C6-N1	2.57	118.49	113.95
3	L5	4500	PSU	C3'-C2'-C1'	2.57	104.63	101.64
3	L5	2365	OMC	C2'-C1'-N1	-2.57	109.24	114.22
3	L5	400	A2M	C4-C5-N7	-2.57	106.72	109.40
1	S2	121	OMU	C2'-C1'-N1	-2.56	109.25	114.22
3	L5	3762	PSU	C3'-C2'-C1'	2.56	104.62	101.64
3	L5	1326	A2M	C4-C5-N7	-2.55	106.74	109.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	L5	2401	A2M	C4-C5-N7	-2.54	106.75	109.40
6	SA	2	SAC	O-C-CA	-2.54	118.11	124.78
3	L5	1792	PSU	C5-C6-N1	-2.54	118.31	122.11
3	L5	4636	PSU	C5-C6-N1	-2.54	118.31	122.11
3	L5	3944	OMG	C8-N7-C5	2.54	107.82	102.99
84	At	37	MIA	N3-C2-N1	-2.53	122.32	126.98
2	L8	14	OMU	O4-C4-C5	-2.53	120.71	125.16
1	S2	27	A2M	C4-C5-N7	-2.53	106.76	109.40
3	L5	4636	PSU	O2-C2-N3	-2.53	117.05	121.82
2	L8	55	PSU	C5-C6-N1	-2.52	118.32	122.11
1	S2	509	OMG	C5-C6-N1	2.50	118.37	113.95
3	L5	3925	OMU	O4-C4-C5	-2.50	120.77	125.16
3	L5	4532	PSU	C6-C5-C4	-2.49	116.46	118.20
1	S2	166	A2M	C4-C5-N7	-2.49	106.80	109.40
3	L5	2364	OMG	C8-N7-C5	2.48	107.71	102.99
3	L5	4521	PSU	C5-C6-N1	-2.48	118.39	122.11
3	L5	3744	OMG	C5-C6-N1	2.48	118.33	113.95
1	S2	121	OMU	O4-C4-C5	-2.48	120.81	125.16
1	S2	1081	PSU	C5-C6-N1	-2.47	118.40	122.11
3	L5	1322	1MA	C8-N7-C5	2.47	107.69	102.99
3	L5	1677	PSU	O2'-C2'-C1'	-2.46	105.36	111.23
3	L5	1534	A2M	O3'-C3'-C4'	-2.46	103.92	111.05
3	L5	4447	5MC	O2-C2-N3	-2.46	118.33	122.33
84	At	39	PSU	C3'-C2'-C1'	2.46	104.50	101.64
3	L5	4521	PSU	O2-C2-N3	-2.46	117.18	121.82
3	L5	3899	OMG	C5-C6-N1	2.45	118.28	113.95
3	L5	3637	PSU	O2-C2-N3	-2.45	117.20	121.82
1	S2	683	OMG	C5-C6-N1	2.45	118.28	113.95
1	S2	644	OMG	C5-C6-N1	2.45	118.27	113.95
3	L5	4499	OMG	C5-C6-N1	2.45	118.27	113.95
3	L5	3724	A2M	C2-N1-C6	2.45	122.94	118.75
1	S2	1248	B8N	O36-C34-O35	-2.44	118.55	124.09
3	L5	4569	PSU	C5-C6-N1	-2.44	118.46	122.11
1	S2	1447	OMG	C2'-C3'-C4'	-2.44	96.70	101.99
2	L8	14	OMU	C2'-C1'-N1	-2.43	109.51	114.22
3	L5	4618	OMG	C5-C6-N1	2.42	118.23	113.95
3	L5	4532	PSU	C3'-C2'-C1'	2.42	104.46	101.64
3	L5	1524	A2M	N6-C6-N1	2.42	123.60	118.57
3	L5	3729	PSU	C5-C6-N1	-2.42	118.48	122.11
3	L5	2837	OMU	O4-C4-C5	-2.42	120.91	125.16
3	L5	3760	A2M	C4-C5-N7	-2.42	106.88	109.40
1	S2	436	OMG	C5-C6-N1	2.42	118.22	113.95

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	L5	3830	A2M	C4-C5-N7	-2.42	106.88	109.40
1	S2	1804	OMU	C1'-N1-C2	2.41	121.94	117.57
3	L5	4299	PSU	C5-C6-N1	-2.40	118.50	122.11
3	L5	2422	OMC	O2-C2-N3	-2.40	118.42	122.33
3	L5	3637	PSU	O2-C2-N1	-2.40	120.15	122.79
1	S2	172	OMU	O2-C2-N3	-2.40	117.03	121.50
3	L5	4403	PSU	C5-C6-N1	-2.40	118.51	122.11
3	L5	1782	PSU	C6-C5-C4	-2.39	116.52	118.20
1	S2	1056	PSU	C5-C6-N1	-2.39	118.52	122.11
1	S2	1248	B8N	C31-N3-C4	2.39	120.83	117.31
3	L5	4228	OMG	C8-N7-C5	2.39	107.53	102.99
3	L5	2351	OMC	O2-C2-N3	-2.38	118.45	122.33
1	S2	1367	PSU	O2-C2-N3	-2.38	117.32	121.82
1	S2	174	OMC	O2-C2-N3	-2.38	118.46	122.33
1	S2	644	OMG	C8-N7-C5	2.38	107.52	102.99
3	L5	3627	OMG	C8-N7-C5	2.38	107.52	102.99
3	L5	1326	A2M	C2-N1-C6	2.37	122.81	118.75
1	S2	601	OMG	C5-C6-N1	2.36	118.11	113.95
3	L5	1677	PSU	C5-C6-N1	-2.36	118.57	122.11
3	L5	2876	OMG	C8-N7-C5	2.36	107.48	102.99
3	L5	2364	OMG	O6-C6-C5	-2.35	119.78	124.37
3	L5	4530	UR3	C3U-N3-C4	2.35	121.24	117.89
1	S2	1031	A2M	C4-C5-N7	-2.35	106.95	109.40
1	S2	590	A2M	C4-C5-N7	-2.34	106.96	109.40
3	L5	4293	PSU	C6-C5-C4	-2.34	116.56	118.20
3	L5	3884	PSU	C6-C5-C4	-2.34	116.56	118.20
3	L5	3695	PSU	O2-C2-N3	-2.33	117.42	121.82
3	L5	2424	OMG	C5-C6-N1	2.33	118.07	113.95
3	L5	2424	OMG	O6-C6-C5	-2.32	119.85	124.37
3	L5	4196	OMG	C8-N7-C5	2.32	107.40	102.99
3	L5	4196	OMG	C5-C6-N1	2.31	118.04	113.95
3	L5	4618	OMG	C8-N7-C5	2.31	107.39	102.99
3	L5	4228	OMG	N2-C2-N1	2.31	121.63	116.71
52	La	39	V5N	O-C-CA	-2.31	118.72	124.78
3	L5	4457	PSU	C3'-C2'-C1'	2.31	104.33	101.64
39	LA	216	V5N	CD2-NE2-CE1	2.31	109.38	105.78
3	L5	1316	OMG	C5-C6-N1	2.31	118.03	113.95
1	S2	683	OMG	C8-N7-C5	2.30	107.38	102.99
1	S2	1326	UY1	C5-C6-N1	-2.30	118.66	122.11
39	LA	216	V5N	CG-CD2-NE2	-2.30	104.67	108.67
1	S2	601	OMG	C8-N7-C5	2.30	107.37	102.99
2	L8	75	OMG	C8-N7-C5	2.30	107.37	102.99

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	L5	4370	OMG	C5-C6-N1	2.30	118.00	113.95
3	L5	2843	PSU	C5-C6-N1	-2.29	118.68	122.11
3	L5	4228	OMG	N2-C2-N3	-2.29	115.29	119.74
1	S2	1391	OMC	C2'-C1'-N1	-2.28	109.79	114.22
3	L5	3723	A2M	C4-C5-N7	-2.28	107.02	109.40
3	L5	3734	PSU	C5-C6-N1	-2.28	118.69	122.11
3	L5	3853	PSU	O2-C2-N1	-2.28	120.28	122.79
3	L5	3853	PSU	C6-C5-C4	-2.28	116.61	118.20
1	S2	1383	A2M	C4-C5-N7	-2.28	107.03	109.40
3	L5	3792	OMG	C8-N7-C5	2.27	107.32	102.99
3	L5	4494	OMG	C8-N7-C5	2.27	107.32	102.99
1	S2	436	OMG	C8-N7-C5	2.27	107.32	102.99
1	S2	1490	OMG	C5-C6-N1	2.27	117.95	113.95
3	L5	3792	OMG	C5-C6-N1	2.27	117.95	113.95
3	L5	3869	OMC	C2'-C1'-N1	-2.26	109.83	114.22
1	S2	119	PSU	C3'-C2'-C1'	2.26	104.27	101.64
1	S2	428	OMU	O2'-C2'-C1'	2.26	113.49	109.08
1	S2	1248	B8N	O36-C34-C33	2.26	121.07	113.38
3	L5	4498	OMU	O2-C2-N1	-2.26	119.79	122.79
1	S2	1136	PSU	C5-C6-N1	-2.25	118.73	122.11
2	L8	75	OMG	C5-C6-N1	2.25	117.93	113.95
1	S2	1328	OMG	C5-C6-N1	2.24	117.91	113.95
52	La	39	V5N	CD2-NE2-CE1	2.24	109.28	105.78
1	S2	1337	4AC	C6-C5-C4	2.24	119.70	116.96
3	L5	3818	UY1	C5-C6-N1	-2.24	118.75	122.11
1	S2	644	OMG	O6-C6-C5	-2.23	120.01	124.37
3	L5	4442	PSU	O4'-C1'-C2'	2.23	108.29	105.14
3	L5	3718	A2M	N3-C2-N1	-2.23	125.20	128.68
3	L5	398	A2M	C4-C5-N7	-2.22	107.08	109.40
84	At	16	H2U	C5-C6-N1	-2.22	104.29	111.61
1	S2	1328	OMG	C8-N7-C5	2.22	107.21	102.99
52	La	39	V5N	CG-CD2-NE2	-2.21	104.83	108.67
3	L5	2508	PSU	O2-C2-N3	-2.21	117.65	121.82
1	S2	1490	OMG	C8-N7-C5	2.21	107.20	102.99
3	L5	3744	OMG	C8-N7-C5	2.21	107.19	102.99
3	L5	4571	A2M	C4-C5-N7	-2.20	107.10	109.40
3	L5	3944	OMG	O4'-C4'-C3'	-2.20	100.76	105.11
85	Pt	8	4SU	C1'-N1-C2	2.20	121.56	117.57
3	L5	4521	PSU	O4'-C1'-C2'	2.20	108.25	105.14
1	S2	1288	OMU	C1'-N1-C2	2.20	121.55	117.57
1	S2	867	OMG	C5-C6-N1	2.20	117.83	113.95
1	S2	1337	4AC	O7-C7-N4	2.20	125.37	121.82

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	L5	4532	PSU	O2'-C2'-C3'	-2.19	104.73	111.82
3	L5	4370	OMG	C8-N7-C5	2.19	107.16	102.99
3	L5	4227	OMU	O4-C4-C5	-2.18	121.33	125.16
3	L5	4623	OMG	C8-N7-C5	2.17	107.12	102.99
1	S2	105	PSU	O2-C2-N3	-2.17	117.73	121.82
3	L5	3944	OMG	C5-C6-N1	2.17	117.78	113.95
1	S2	1442	OMU	C2'-C1'-N1	-2.16	110.02	114.22
84	At	32	PSU	C3'-C2'-C1'	2.16	104.16	101.64
3	L5	4227	OMU	C2'-C1'-N1	-2.16	110.02	114.22
1	S2	509	OMG	C8-N7-C5	2.16	107.11	102.99
3	L5	4499	OMG	C8-N7-C5	2.16	107.10	102.99
3	L5	3762	PSU	C6-C5-C4	-2.16	116.69	118.20
3	L5	3718	A2M	C4-C5-N7	-2.16	107.15	109.40
1	S2	1447	OMG	C8-N7-C5	2.16	107.10	102.99
1	S2	1447	OMG	C5-C6-N1	2.16	117.76	113.95
1	S2	815	PSU	C5-C6-N1	-2.16	118.88	122.11
1	S2	99	A2M	C4-C5-N7	-2.15	107.16	109.40
2	L8	14	OMU	O2-C2-N3	-2.15	117.49	121.50
1	S2	1391	OMC	O2-C2-N3	-2.15	118.83	122.33
3	L5	2861	OMC	O2-C2-N3	-2.15	118.83	122.33
3	L5	3723	A2M	C2-N1-C6	2.14	122.42	118.75
3	L5	1322	1MA	N1-C2-N3	-2.14	123.52	126.02
3	L5	1871	A2M	C2-N1-C6	2.14	122.42	118.75
3	L5	4456	OMC	C2'-C1'-N1	-2.13	110.09	114.22
1	S2	1238	PSU	C5-C6-N1	-2.13	118.92	122.11
1	S2	1842	4AC	O2-C2-N3	-2.13	118.87	122.33
3	L5	4620	OMU	O4'-C1'-N1	2.12	113.22	108.36
3	L5	4228	OMG	O3'-C3'-C4'	-2.12	104.93	111.05
3	L5	4623	OMG	O6-C6-C5	-2.11	120.25	124.37
3	L5	4457	PSU	C6-C5-C4	-2.11	116.72	118.20
3	L5	3867	A2M	O5'-C5'-C4'	-2.11	101.83	108.99
1	S2	572	PSU	O4'-C1'-C2'	2.11	108.11	105.14
3	L5	4628	PSU	C6-C5-C4	-2.11	116.73	118.20
3	L5	3637	PSU	C3'-C2'-C1'	2.10	104.08	101.64
3	L5	3851	PSU	O2-C2-N3	-2.09	117.87	121.82
3	L5	1522	OMG	O6-C6-N1	2.09	123.12	120.65
3	L5	2401	A2M	C2-N1-C6	2.09	122.33	118.75
3	L5	4636	PSU	O4'-C1'-C2'	2.09	108.09	105.14
3	L5	1316	OMG	CM2-O2'-C2'	-2.09	109.03	114.52
1	S2	867	OMG	C8-N7-C5	2.09	106.97	102.99
3	L5	4493	PSU	C5-C6-N1	-2.09	118.97	122.11
3	L5	3884	PSU	O2-C2-N3	-2.09	117.88	121.82

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	L5	4536	OMC	O2-C2-N3	-2.09	118.94	122.33
3	L5	2787	A2M	O4'-C1'-C2'	-2.09	102.97	106.59
84	At	32	PSU	C5-C6-N1	-2.09	118.98	122.11
1	S2	1248	B8N	O4'-C1'-C2'	2.09	108.08	105.14
3	L5	4403	PSU	O4'-C1'-C2'	2.08	108.08	105.14
3	L5	4530	UR3	O4'-C1'-N1	2.08	113.13	108.36
3	L5	1582	PSU	C5-C6-N1	-2.08	118.98	122.11
1	S2	815	PSU	C3'-C2'-C1'	2.08	104.06	101.64
3	L5	4590	A2M	C2-N1-C6	2.08	122.31	118.75
1	S2	119	PSU	C6-C5-C4	-2.08	116.75	118.20
3	L5	4576	PSU	C3'-C2'-C1'	2.07	104.05	101.64
1	S2	966	PSU	C5-C6-N1	-2.07	119.00	122.11
3	L5	3758	PSU	C5-C6-N1	-2.07	119.00	122.11
3	L5	4392	OMG	C8-N7-C5	2.07	106.94	102.99
3	L5	4471	PSU	O2-C2-N1	-2.07	120.51	122.79
1	S2	651	PSU	C5-C6-N1	-2.07	119.01	122.11
1	S2	1643	PSU	C5-C6-N1	-2.07	119.01	122.11
3	L5	1781	PSU	C5-C6-N1	-2.07	119.01	122.11
3	L5	4576	PSU	O2-C2-N1	-2.06	120.52	122.79
1	S2	1842	4AC	N4-C4-N3	2.06	117.31	113.85
3	L5	2815	A2M	C2-N1-C6	2.06	122.28	118.75
3	L5	3744	OMG	O6-C6-C5	-2.05	120.36	124.37
3	L5	3701	OMC	C5-C6-N1	-2.05	118.37	121.81
1	S2	814	PSU	O2'-C2'-C3'	-2.05	105.19	111.82
3	L5	4689	PSU	C5-C6-N1	-2.05	119.03	122.11
3	L5	1524	A2M	C4-C5-N7	-2.05	107.26	109.40
3	L5	3785	A2M	C4-C5-N7	-2.05	107.26	109.40
3	L5	4571	A2M	C2-N1-C6	2.04	122.25	118.75
3	L5	4493	PSU	O2-C2-N3	-2.04	117.97	121.82
1	S2	822	PSU	C5-C6-N1	-2.04	119.05	122.11
3	L5	3851	PSU	C5-C6-N1	-2.04	119.05	122.11
39	LA	216	V5N	O-C-CA	-2.04	119.44	124.78
3	L5	1782	PSU	O3'-C3'-C4'	2.03	116.93	111.05
3	L5	3695	PSU	C5-C6-N1	-2.03	119.06	122.11
1	S2	218	PSU	C6-C5-C4	-2.03	116.78	118.20
3	L5	4228	OMG	C5-C6-N1	2.03	117.53	113.95
1	S2	172	OMU	O2'-C2'-C1'	2.02	113.03	109.08
3	L5	4220	6MZ	C9-N6-C6	-2.02	121.13	122.87
3	L5	4689	PSU	O2-C2-N3	-2.02	118.01	121.82
3	L5	4494	OMG	C5-C6-N1	2.01	117.51	113.95
3	L5	1524	A2M	C2-N1-C6	2.01	122.18	118.75
1	S2	517	OMC	O2-C2-N3	-2.00	119.07	122.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	S2	34	PSU	C5-C6-N1	-2.00	119.10	122.11
3	L5	2839	PSU	C5-C6-N1	-2.00	119.10	122.11
1	S2	1243	PSU	C5-C6-N1	-2.00	119.11	122.11
3	L5	3851	PSU	O4'-C1'-C2'	2.00	107.97	105.14
3	L5	4576	PSU	O2-C2-N3	-2.00	118.05	121.82

There are no chirality outliers.

All (166) 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
29	SV	1	AME	OT-CT1-N-CA
40	LB	245	HIC	CA-CB-CG-ND1
66	Lr	2	SAC	C2A-C1A-N-CA
86	EF	79	M3L	N-CA-CB-CG
86	EF	79	M3L	C-CA-CB-CG
86	EF	79	M3L	O-C-CA-CB
86	EF	318	M3L	N-CA-CB-CG
86	EF	318	M3L	C-CA-CB-CG
1	S2	27	A2M	C1'-C2'-O2'-CM'
1	S2	172	OMU	O4'-C1'-N1-C2
1	S2	172	OMU	O4'-C1'-N1-C6
1	S2	174	OMC	C1'-C2'-O2'-CM2
1	S2	590	A2M	O4'-C4'-C5'-O5'
1	S2	644	OMG	C1'-C2'-O2'-CM2
1	S2	668	A2M	O4'-C4'-C5'-O5'
1	S2	867	OMG	C1'-C2'-O2'-CM2
1	S2	1248	B8N	N34-C33-C34-O35
1	S2	1288	OMU	O4'-C4'-C5'-O5'
1	S2	1328	OMG	C1'-C2'-O2'-CM2
1	S2	1337	4AC	N3-C4-N4-C7
1	S2	1337	4AC	C5-C4-N4-C7
1	S2	1337	4AC	O7-C7-N4-C4
1	S2	1337	4AC	CM7-C7-N4-C4
1	S2	1447	OMG	C1'-C2'-O2'-CM2
1	S2	1490	OMG	C1'-C2'-O2'-CM2
1	S2	1678	A2M	C1'-C2'-O2'-CM'
1	S2	1832	6MZ	N1-C6-N6-C9
3	L5	400	A2M	C1'-C2'-O2'-CM'
3	L5	2415	OMU	C1'-C2'-O2'-CM2
3	L5	2424	OMG	C1'-C2'-O2'-CM2

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Mol	Chain	Res	Type	Atoms
3	L5	2824	OMC	C1'-C2'-O2'-CM2
3	L5	3718	A2M	C1'-C2'-O2'-CM'
3	L5	3723	A2M	C1'-C2'-O2'-CM'
3	L5	3724	A2M	C1'-C2'-O2'-CM'
3	L5	3760	A2M	C1'-C2'-O2'-CM'
3	L5	3792	OMG	C1'-C2'-O2'-CM2
3	L5	3944	OMG	C1'-C2'-O2'-CM2
3	L5	4420	PSU	C3'-C4'-C5'-O5'
3	L5	4420	PSU	O4'-C4'-C5'-O5'
3	L5	4456	OMC	C1'-C2'-O2'-CM2
3	L5	4531	PSU	O4'-C1'-C5-C4
3	L5	4531	PSU	O4'-C1'-C5-C6
3	L5	4590	A2M	C4'-C5'-O5'-P
3	L5	4618	OMG	C1'-C2'-O2'-CM2
3	L5	4637	OMG	C1'-C2'-O2'-CM2
20	SX	62	HY3	O-C-CA-C3
39	LA	216	V5N	O-C-CA-CB
84	At	16	H2U	O4'-C4'-C5'-O5'
84	At	16	H2U	C3'-C4'-C5'-O5'
84	At	20	H2U	O4'-C1'-N1-C2
84	At	20	H2U	O4'-C1'-N1-C6
84	At	37	MIA	C12-C13-C14-C15
84	At	37	MIA	C12-C13-C14-C16
84	At	46	G7M	C3'-C4'-C5'-O5'
84	At	16	H2U	C4'-C5'-O5'-P
1	S2	172	OMU	O4'-C4'-C5'-O5'
1	S2	590	A2M	C3'-C4'-C5'-O5'
1	S2	644	OMG	O4'-C4'-C5'-O5'
1	S2	644	OMG	C3'-C4'-C5'-O5'
1	S2	1288	OMU	C3'-C4'-C5'-O5'
1	S2	1442	OMU	C3'-C4'-C5'-O5'
1	S2	1442	OMU	O4'-C4'-C5'-O5'
3	L5	1326	A2M	O4'-C4'-C5'-O5'
3	L5	1326	A2M	C3'-C4'-C5'-O5'
3	L5	3760	A2M	O4'-C4'-C5'-O5'
3	L5	3785	A2M	O4'-C4'-C5'-O5'
86	EF	318	M3L	CE-CD-CG-CB
66	Lr	2	SAC	OAC-C1A-N-CA
81	Lo	53	MLZ	CG-CD-CE-NZ
1	S2	1248	B8N	N34-C33-C34-O36
1	S2	668	A2M	C3'-C4'-C5'-O5'
1	S2	683	OMG	O4'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
3	L5	398	A2M	O4'-C4'-C5'-O5'
3	L5	3729	PSU	O4'-C4'-C5'-O5'
3	L5	3785	A2M	C3'-C4'-C5'-O5'
85	Pt	21	H2U	O4'-C4'-C5'-O5'
85	Pt	21	H2U	C3'-C4'-C5'-O5'
86	EF	318	M3L	CG-CD-CE-NZ
86	EF	318	M3L	CD-CE-NZ-CM3
1	S2	172	OMU	C3'-C2'-O2'-CM2
3	L5	1625	OMG	C3'-C2'-O2'-CM2
86	EF	55	MLY	CA-CB-CG-CD
86	EF	318	M3L	CD-CE-NZ-CM2
3	L5	3701	OMC	C2'-C1'-N1-C6
86	EF	318	M3L	CD-CE-NZ-CM1
1	S2	683	OMG	C3'-C4'-C5'-O5'
3	L5	2401	A2M	C3'-C4'-C5'-O5'
3	L5	3729	PSU	C3'-C4'-C5'-O5'
3	L5	3851	PSU	C3'-C4'-C5'-O5'
84	At	46	G7M	O4'-C4'-C5'-O5'
81	Lo	53	MLZ	CA-CB-CG-CD
68	Lb	5	MLZ	CD-CE-NZ-CM
1	S2	576	A2M	C3'-C4'-C5'-O5'
3	L5	1625	OMG	C3'-C4'-C5'-O5'
84	At	32	PSU	O4'-C4'-C5'-O5'
84	At	20	H2U	C4'-C5'-O5'-P
3	L5	4637	OMG	O4'-C4'-C5'-O5'
1	S2	1248	B8N	C32-C33-C34-O36
1	S2	1248	B8N	C32-C33-C34-O35
84	At	20	H2U	O4'-C4'-C5'-O5'
84	At	20	H2U	C3'-C4'-C5'-O5'
84	At	32	PSU	C3'-C4'-C5'-O5'
3	L5	3701	OMC	C2'-C1'-N1-C2
3	L5	4494	OMG	C3'-C2'-O2'-CM2
29	SV	1	AME	CB-CG-SD-CE
3	L5	4447	5MC	C2'-C1'-N1-C6
3	L5	1792	PSU	O4'-C4'-C5'-O5'
3	L5	2364	OMG	O4'-C4'-C5'-O5'
1	S2	99	A2M	C1'-C2'-O2'-CM'
1	S2	484	A2M	C1'-C2'-O2'-CM'
3	L5	3744	OMG	C1'-C2'-O2'-CM2
1	S2	576	A2M	C4'-C5'-O5'-P
3	L5	3818	UY1	C4'-C5'-O5'-P
3	L5	1625	OMG	O4'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
3	L5	3701	OMC	O4'-C1'-N1-C6
3	L5	4447	5MC	O4'-C1'-N1-C6
1	S2	1243	PSU	C4'-C5'-O5'-P
3	L5	4500	PSU	C4'-C5'-O5'-P
1	S2	644	OMG	C4'-C5'-O5'-P
3	L5	1326	A2M	C4'-C5'-O5'-P
3	L5	1534	A2M	C4'-C5'-O5'-P
3	L5	4447	5MC	O4'-C1'-N1-C2
85	Pt	21	H2U	C4'-C5'-O5'-P
1	S2	576	A2M	O4'-C4'-C5'-O5'
3	L5	2787	A2M	O4'-C4'-C5'-O5'
1	S2	1851	MA6	C4'-C5'-O5'-P
3	L5	3701	OMC	O4'-C1'-N1-C2
1	S2	590	A2M	C4'-C5'-O5'-P
3	L5	3844	PSU	C4'-C5'-O5'-P
1	S2	1490	OMG	C4'-C5'-O5'-P
86	EF	55	MLY	CE-CD-CG-CB
1	S2	1326	UY1	O4'-C1'-C5-C4
3	L5	3818	UY1	O4'-C1'-C5-C4
86	EF	55	MLY	CD-CE-NZ-CH2
1	S2	822	PSU	C3'-C4'-C5'-O5'
3	L5	2401	A2M	O4'-C4'-C5'-O5'
3	L5	3851	PSU	O4'-C4'-C5'-O5'
3	L5	4447	5MC	C2'-C1'-N1-C2
3	L5	1781	PSU	O4'-C4'-C5'-O5'
84	At	8	4SU	O4'-C4'-C5'-O5'
1	S2	1832	6MZ	C5-C6-N6-C9
84	At	20	H2U	C2'-C1'-N1-C6
3	L5	2364	OMG	C3'-C4'-C5'-O5'
3	L5	2787	A2M	C3'-C4'-C5'-O5'
3	L5	4637	OMG	C3'-C4'-C5'-O5'
1	S2	121	OMU	C1'-C2'-O2'-CM2
1	S2	512	A2M	C1'-C2'-O2'-CM'
1	S2	1288	OMU	C1'-C2'-O2'-CM2
1	S2	1383	A2M	C1'-C2'-O2'-CM'
3	L5	3925	OMU	C1'-C2'-O2'-CM2
68	Lb	5	MLZ	CA-CB-CG-CD
3	L5	1534	A2M	O4'-C4'-C5'-O5'
1	S2	1326	UY1	O4'-C1'-C5-C6
3	L5	4636	PSU	O4'-C1'-C5-C6
3	L5	1792	PSU	C3'-C4'-C5'-O5'
1	S2	428	OMU	O4'-C1'-N1-C6

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Mol	Chain	Res	Type	Atoms
1	S2	1851	MA6	C3'-C4'-C5'-O5'
3	L5	398	A2M	C3'-C4'-C5'-O5'
3	L5	1781	PSU	C3'-C4'-C5'-O5'
3	L5	2351	OMC	O4'-C4'-C5'-O5'
3	L5	4636	PSU	O4'-C4'-C5'-O5'
84	At	8	4SU	C3'-C4'-C5'-O5'
1	S2	428	OMU	C2'-C1'-N1-C6
1	S2	1081	PSU	C4'-C5'-O5'-P

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 502 ligands modelled in this entry, 478 are monoatomic - leaving 24 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
88	PUT	L5	5114	-	5,5,5	0.18	0	4,4,4	0.24	0
87	SPD	L5	5102	-	9,9,9	0.40	0	8,8,8	0.83	0
94	PHE	At	77	84	10,11,12	0.35	0	10,13,15	0.93	0
96	GSP	EF	501	89	26,34,34	1.05	2 (7%)	27,54,54	0.93	1 (3%)
88	PUT	L5	5111	-	5,5,5	0.13	0	4,4,4	0.18	0
87	SPD	L5	5104	-	9,9,9	0.33	0	8,8,8	0.79	0
87	SPD	L5	5103	-	9,9,9	0.39	0	8,8,8	0.97	1 (12%)
87	SPD	S2	1901	-	9,9,9	0.14	0	8,8,8	0.23	0
88	PUT	L5	5116	-	5,5,5	0.15	0	4,4,4	0.20	0
88	PUT	L5	5109	-	5,5,5	0.16	0	4,4,4	0.22	0
88	PUT	L5	5113	-	5,5,5	0.15	0	4,4,4	0.23	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
90	ANM	L5	5101	-	20,20,20	1.16	1 (5%)	22,27,27	1.34	3 (13%)
87	SPD	L5	5105	-	9,9,9	0.31	0	8,8,8	0.76	0
91	3H3	L5	5117	-	33,34,34	3.34	13 (39%)	34,45,45	3.99	19 (55%)
88	PUT	L5	5112	-	5,5,5	0.20	0	4,4,4	0.24	0
87	SPD	L5	5106	-	9,9,9	0.35	0	8,8,8	0.70	0
95	MET	Pt	78	85	6,7,8	0.58	0	2,7,9	1.86	1 (50%)
97	ZIY	EF	502	-	81,82,82	1.00	4 (4%)	111,117,117	1.40	13 (11%)
87	SPD	L5	5107	-	9,9,9	0.43	0	8,8,8	0.93	0
88	PUT	S2	1902	-	5,5,5	0.16	0	4,4,4	0.16	0
88	PUT	L5	5115	-	5,5,5	0.16	0	4,4,4	0.19	0
88	PUT	S2	1903	-	5,5,5	0.15	0	4,4,4	0.21	0
87	SPD	L5	5108	-	9,9,9	0.33	0	8,8,8	1.03	1 (12%)
88	PUT	L5	5110	-	5,5,5	0.08	0	4,4,4	0.18	0

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
88	PUT	L5	5114	-	-	0/3/3/3	-
87	SPD	L5	5102	-	-	0/7/7/7	-
94	PHE	At	77	84	-	3/5/6/8	0/1/1/1
96	GSP	EF	501	89	-	0/17/38/38	0/3/3/3
88	PUT	L5	5111	-	-	0/3/3/3	-
87	SPD	L5	5104	-	-	4/7/7/7	-
87	SPD	L5	5103	-	-	5/7/7/7	-
87	SPD	S2	1901	-	-	0/7/7/7	-
88	PUT	L5	5116	-	-	1/3/3/3	-
88	PUT	L5	5109	-	-	0/3/3/3	-
88	PUT	L5	5113	-	-	2/3/3/3	-
90	ANM	L5	5101	-	-	4/10/23/23	0/2/2/2
87	SPD	L5	5105	-	-	2/7/7/7	-
91	3H3	L5	5117	-	-	16/39/51/51	0/1/2/2
88	PUT	L5	5112	-	-	0/3/3/3	-
87	SPD	L5	5106	-	-	6/7/7/7	-
95	MET	Pt	78	85	-	3/5/6/8	-
97	ZIY	EF	502	-	-	12/120/140/140	0/3/4/4
87	SPD	L5	5107	-	-	3/7/7/7	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
88	PUT	S2	1902	-	-	1/3/3/3	-
88	PUT	L5	5115	-	-	1/3/3/3	-
88	PUT	S2	1903	-	-	0/3/3/3	-
87	SPD	L5	5108	-	-	2/7/7/7	-
88	PUT	L5	5110	-	-	3/3/3/3	-

All (20) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
91	L5	5117	3H3	C13-C12	9.38	1.53	1.33
91	L5	5117	3H3	O3-C22	7.52	1.38	1.23
91	L5	5117	3H3	O4-C23	7.06	1.37	1.23
91	L5	5117	3H3	C23-N	6.55	1.48	1.37
91	L5	5117	3H3	C22-N	5.45	1.46	1.37
91	L5	5117	3H3	C3-C2	5.14	1.53	1.33
90	L5	5101	ANM	O2-C5	4.61	1.45	1.35
97	EF	502	ZIY	C72-C71	-4.57	1.32	1.51
91	L5	5117	3H3	C19-C20	3.63	1.58	1.53
91	L5	5117	3H3	O1-C11	-3.10	1.39	1.44
91	L5	5117	3H3	C4-C3	3.07	1.53	1.44
96	EF	501	GSP	C5-C6	-2.71	1.41	1.47
97	EF	502	ZIY	C54-C55	-2.44	1.50	1.53
91	L5	5117	3H3	O-C10	-2.25	1.16	1.21
91	L5	5117	3H3	O1-C10	2.25	1.39	1.34
91	L5	5117	3H3	C24-C20	-2.14	1.49	1.53
91	L5	5117	3H3	O2-C16	-2.12	1.18	1.21
97	EF	502	ZIY	C45-C47	2.10	1.55	1.52
97	EF	502	ZIY	C53-C54	2.06	1.56	1.53
96	EF	501	GSP	C8-N7	-2.04	1.31	1.35

All (39) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
91	L5	5117	3H3	O3-C22-N	-9.93	104.55	120.28
91	L5	5117	3H3	C22-N-C23	-9.44	114.32	125.78
91	L5	5117	3H3	O4-C23-N	-8.53	106.76	120.28
91	L5	5117	3H3	O1-C11-C1	8.07	116.86	106.31
97	EF	502	ZIY	O33-C75-C74	6.66	126.68	118.96
91	L5	5117	3H3	O3-C22-C21	-6.44	110.08	122.62
91	L5	5117	3H3	C15-C14-C13	-6.12	105.02	110.75
91	L5	5117	3H3	O4-C23-C24	-5.08	112.74	122.62
90	L5	5101	ANM	O2-C5-C6	4.21	118.84	111.09

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
91	L5	5117	3H3	C11-C12-C13	-4.03	108.64	120.93
91	L5	5117	3H3	C25-C12-C13	-3.47	114.31	123.45
97	EF	502	ZIY	O35-C79-C01	3.46	118.40	110.78
91	L5	5117	3H3	C21-C22-N	-3.39	111.79	115.95
97	EF	502	ZIY	C70-C69-N17	3.28	124.94	119.10
97	EF	502	ZIY	C36-N05-C30	-3.02	107.20	112.00
91	L5	5117	3H3	C7-C8-C9	-2.84	119.76	125.85
91	L5	5117	3H3	O1-C10-C9	2.82	117.78	111.38
97	EF	502	ZIY	C30-C28-N02	2.71	123.93	119.10
97	EF	502	ZIY	C73-N20-C70	-2.67	107.76	112.00
97	EF	502	ZIY	C45-C44-N08	2.64	119.63	116.09
91	L5	5117	3H3	C4-C3-C2	-2.57	106.08	124.42
91	L5	5117	3H3	C8-C9-C10	-2.56	116.38	122.92
95	Pt	78	MET	CE-SD-CG	2.54	109.11	100.40
96	EF	501	GSP	O4'-C1'-C2'	-2.50	103.28	106.93
91	L5	5117	3H3	C1-C2-C3	-2.38	121.15	126.16
97	EF	502	ZIY	C77-O35-C79	2.37	120.93	117.51
97	EF	502	ZIY	O37-C79-C01	-2.30	119.30	124.49
91	L5	5117	3H3	C25-C12-C11	-2.27	111.75	115.68
97	EF	502	ZIY	C71-C70-C69	2.25	115.23	110.74
91	L5	5117	3H3	C19-C18-C17	-2.24	108.72	113.19
97	EF	502	ZIY	O29-C69-C70	-2.23	115.57	120.22
91	L5	5117	3H3	C6-C7-C8	-2.22	107.10	112.92
87	L5	5108	SPD	C7-C8-C9	-2.18	106.29	114.28
91	L5	5117	3H3	C24-C23-N	-2.18	113.28	115.95
90	L5	5101	ANM	O2-C5-O3	-2.12	118.75	122.96
97	EF	502	ZIY	C32-C30-C28	-2.09	106.54	110.74
87	L5	5103	SPD	C8-C7-N6	-2.09	106.49	112.14
90	L5	5101	ANM	C14-O1-C9	2.09	122.05	117.51
97	EF	502	ZIY	C53-C54-C55	-2.00	110.25	113.00

There are no chirality outliers.

All (68) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
91	L5	5117	3H3	C2-C1-C11-O1
91	L5	5117	3H3	C2-C1-C11-C12
91	L5	5117	3H3	C-C1-C11-O1
91	L5	5117	3H3	C-C1-C11-C12
91	L5	5117	3H3	C1-C11-O1-C10
91	L5	5117	3H3	C12-C11-O1-C10
91	L5	5117	3H3	C9-C10-O1-C11

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Mol	Chain	Res	Type	Atoms
91	L5	5117	3H3	C12-C13-C14-C16
91	L5	5117	3H3	C25-C12-C13-C14
91	L5	5117	3H3	C1-C11-C12-C25
95	Pt	78	MET	C-CA-CB-CG
95	Pt	78	MET	CA-CB-CG-SD
97	EF	502	ZIY	C47-C48-O18-C52
97	EF	502	ZIY	C62-C63-C64-C65
97	EF	502	ZIY	N20-C74-C75-O33
97	EF	502	ZIY	O31-C74-C75-O33
97	EF	502	ZIY	C13-C14-O03-C19
88	L5	5115	PUT	C1-C2-C3-C4
97	EF	502	ZIY	C22-C14-O03-C19
87	L5	5105	SPD	C3-C4-C5-N6
91	L5	5117	3H3	O-C10-O1-C11
91	L5	5117	3H3	C2-C3-C4-C5
87	L5	5103	SPD	C3-C4-C5-N6
87	L5	5108	SPD	N6-C7-C8-C9
97	EF	502	ZIY	N17-C63-C64-C65
87	L5	5106	SPD	N6-C7-C8-C9
97	EF	502	ZIY	C49-C48-O18-C52
91	L5	5117	3H3	O1-C10-C9-C8
87	L5	5106	SPD	C3-C4-C5-N6
90	L5	5101	ANM	C1-C9-O1-C14
87	L5	5106	SPD	C2-C3-C4-C5
90	L5	5101	ANM	C10-C9-O1-C14
87	L5	5103	SPD	C4-C5-N6-C7
87	L5	5105	SPD	C7-C8-C9-N10
87	L5	5106	SPD	C7-C8-C9-N10
87	L5	5104	SPD	C3-C4-C5-N6
94	At	77	PHE	N-CA-CB-CG
88	L5	5110	PUT	C1-C2-C3-C4
87	L5	5103	SPD	N6-C7-C8-C9
91	L5	5117	3H3	O1-C11-C12-C25
87	L5	5104	SPD	N6-C7-C8-C9
88	L5	5110	PUT	N1-C1-C2-C3
87	L5	5108	SPD	C2-C3-C4-C5
88	S2	1902	PUT	C1-C2-C3-C4
87	L5	5103	SPD	C8-C7-N6-C5
87	L5	5104	SPD	C4-C5-N6-C7
91	L5	5117	3H3	O-C10-C9-C8
87	L5	5107	SPD	N6-C7-C8-C9
87	L5	5104	SPD	C7-C8-C9-N10

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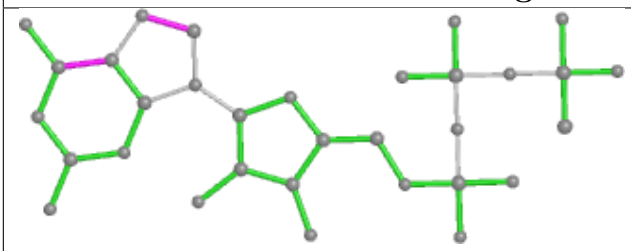
Mol	Chain	Res	Type	Atoms
97	EF	502	ZIY	C63-C64-C65-C66
88	L5	5113	PUT	C1-C2-C3-C4
91	L5	5117	3H3	C12-C13-C14-C15
94	At	77	PHE	CA-CB-CG-CD2
87	L5	5106	SPD	N1-C2-C3-C4
87	L5	5107	SPD	N1-C2-C3-C4
88	L5	5113	PUT	C2-C3-C4-N2
94	At	77	PHE	CA-CB-CG-CD1
97	EF	502	ZIY	C63-C64-C65-C67
90	L5	5101	ANM	C11-C12-C15-C16
88	L5	5110	PUT	C2-C3-C4-N2
87	L5	5106	SPD	C8-C7-N6-C5
87	L5	5107	SPD	C4-C5-N6-C7
90	L5	5101	ANM	C13-C12-C15-C16
97	EF	502	ZIY	N02-C01-C79-O37
97	EF	502	ZIY	N02-C01-C79-O35
87	L5	5103	SPD	N1-C2-C3-C4
95	Pt	78	MET	CB-CG-SD-CE
88	L5	5116	PUT	N1-C1-C2-C3

There are no ring outliers.

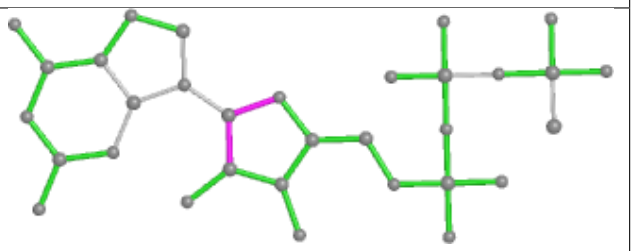
No monomer is involved in short contacts.

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 then 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.

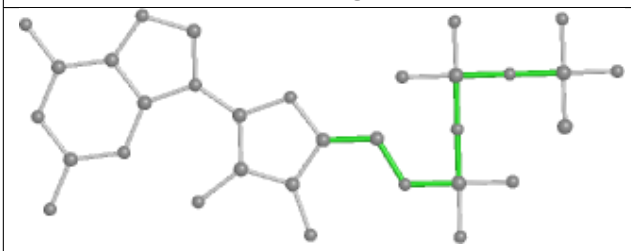
Ligand GSP EF 501



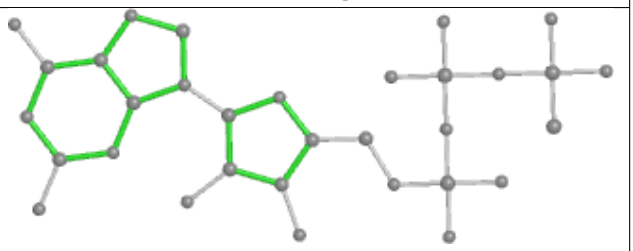
Bond lengths



Bond angles

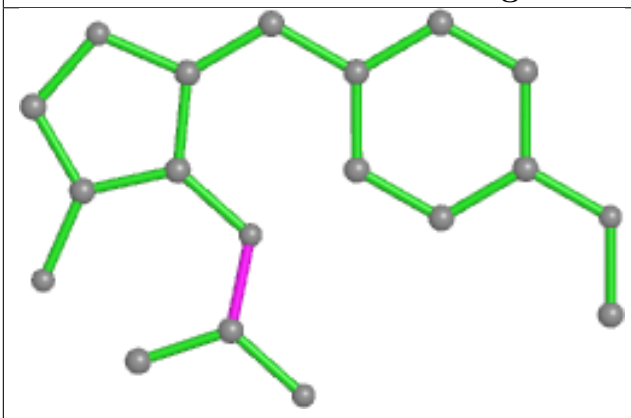


Torsions

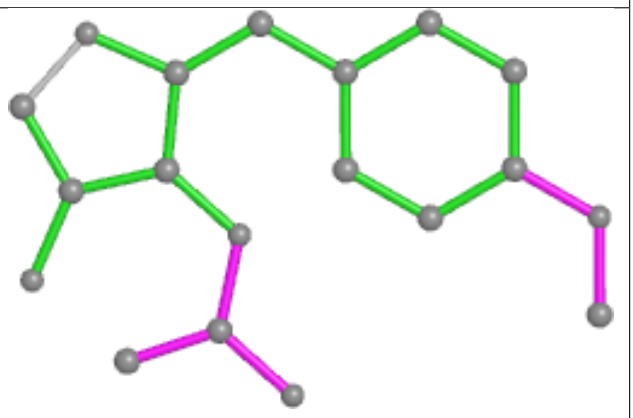


Rings

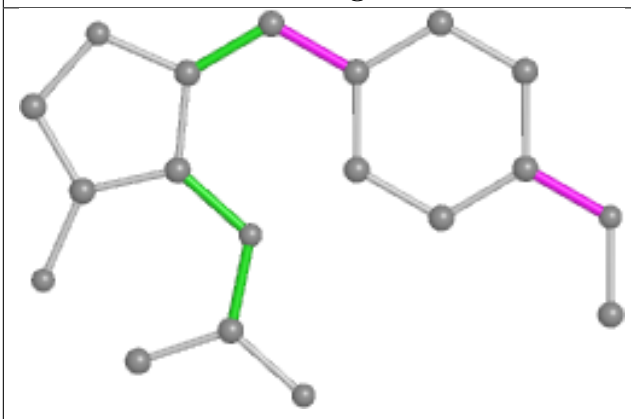
Ligand ANM L5 5101



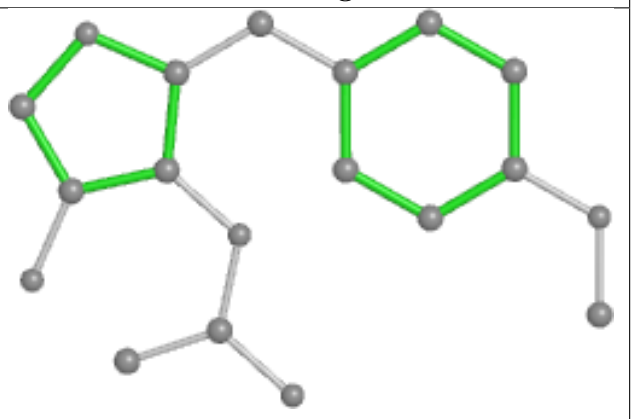
Bond lengths



Bond angles

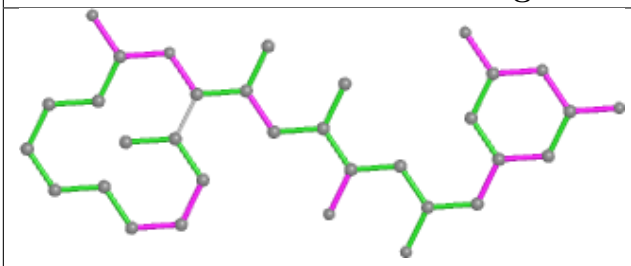


Torsions

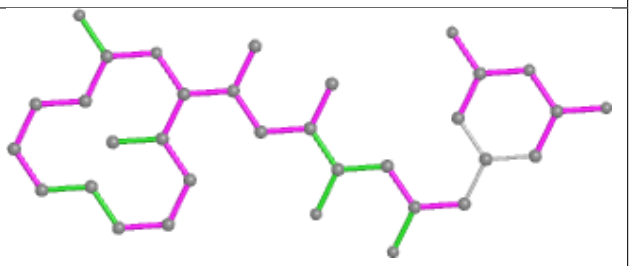


Rings

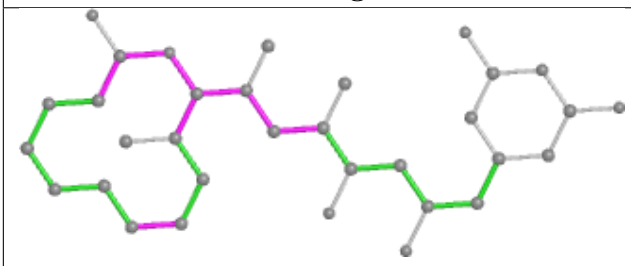
Ligand 3H3 L5 5117



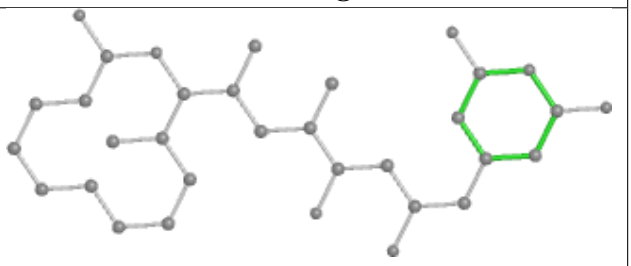
Bond lengths



Bond angles

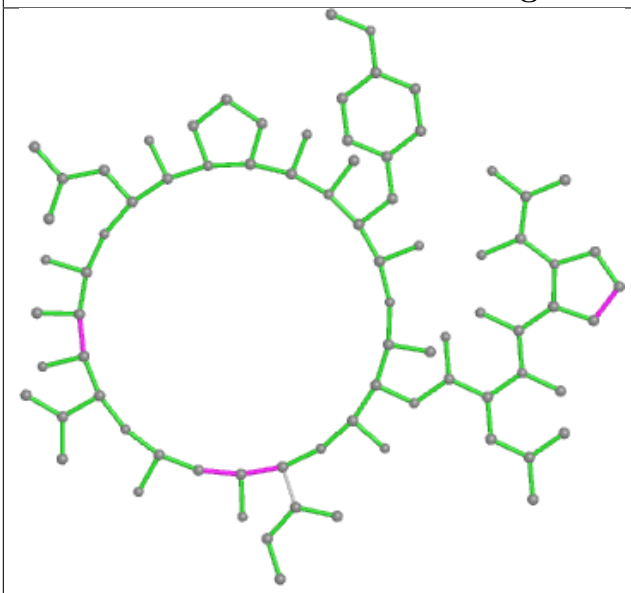


Torsions

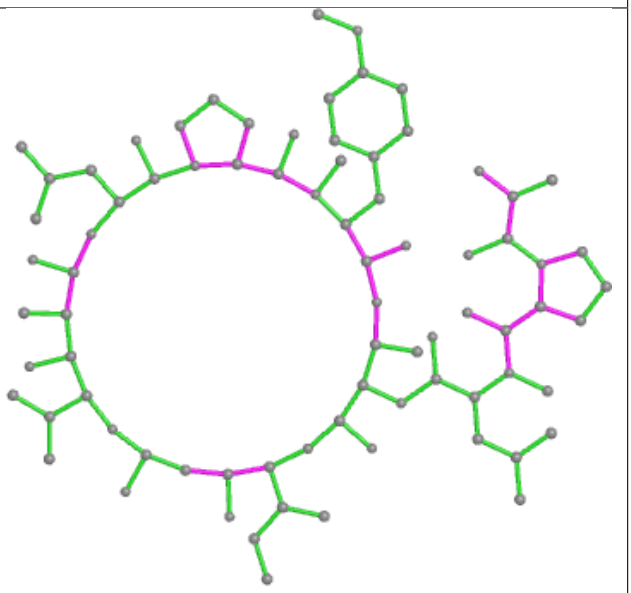


Rings

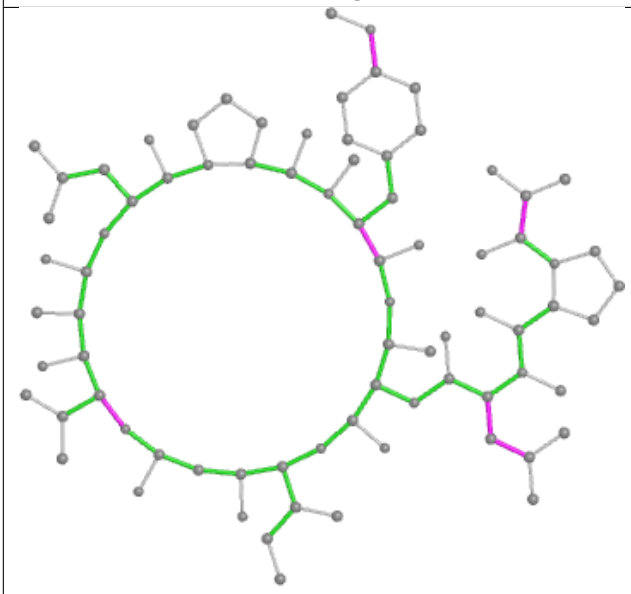
Ligand ZIY EF 502



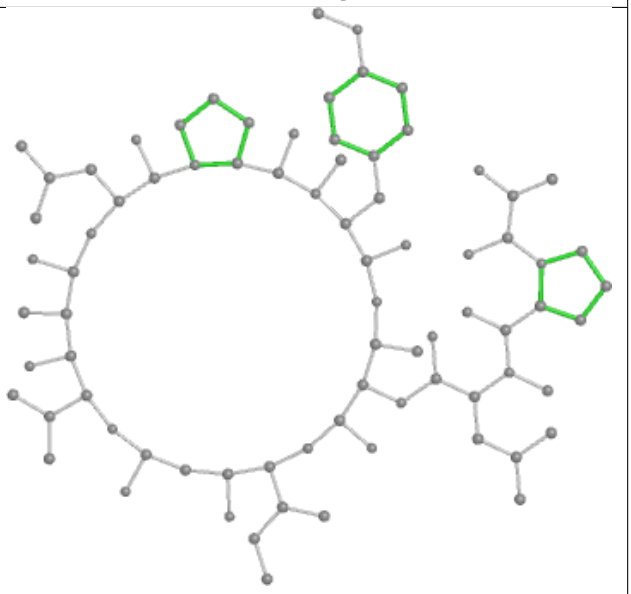
Bond lengths



Bond angles



Torsions



Rings

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

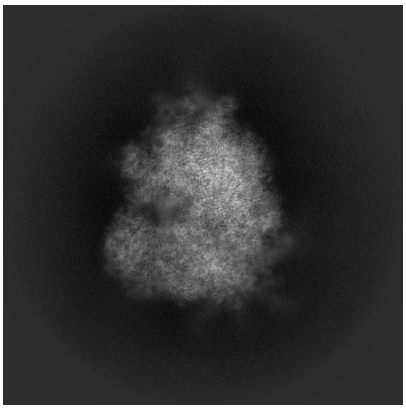
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-29759. These allow visual inspection of the internal detail of the map and identification of artifacts.

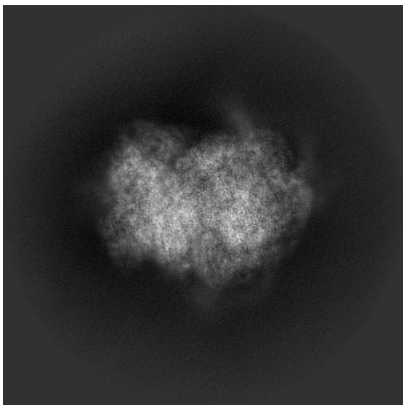
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

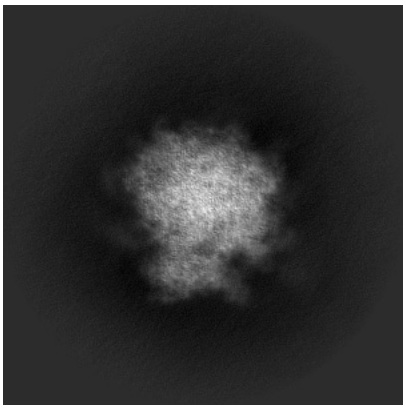
6.1.1 Primary map



X

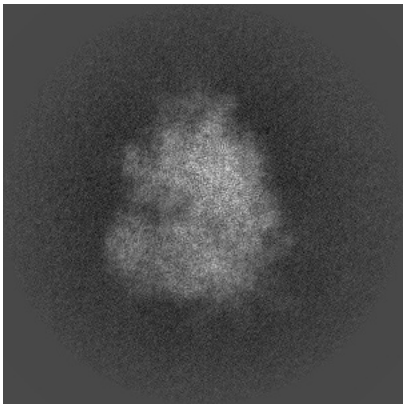


Y



Z

6.1.2 Raw map



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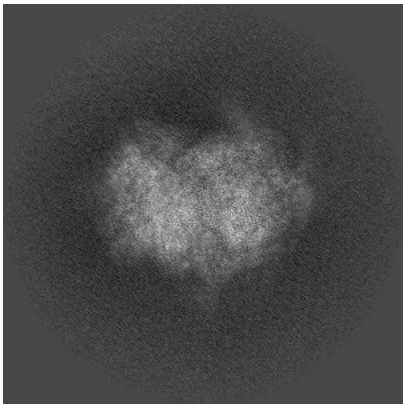
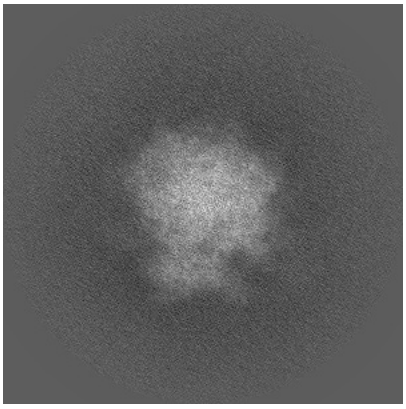


Y

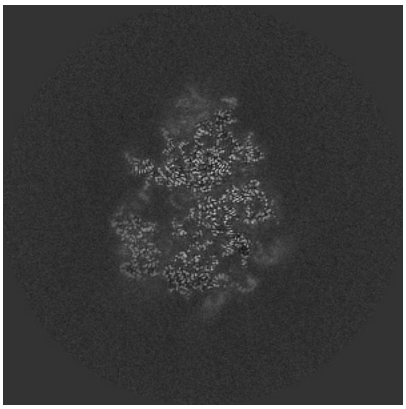


Z

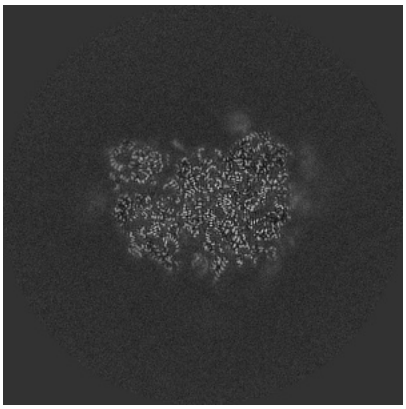
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

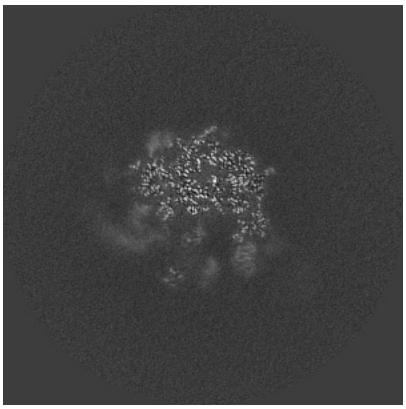
6.2.1 Primary map



X Index: 320

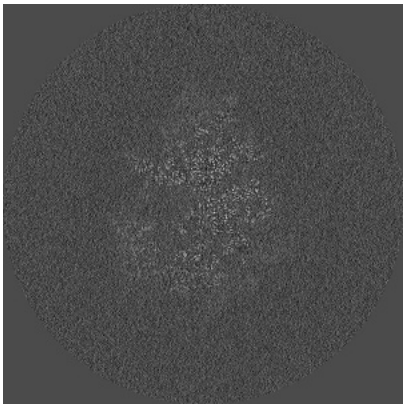


Y Index: 320

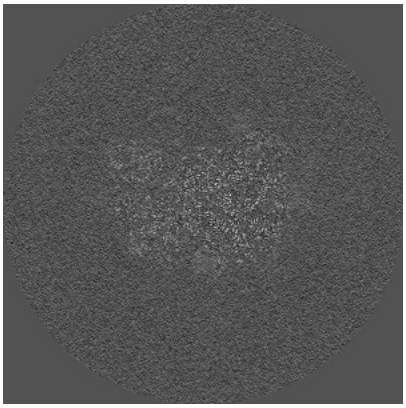


Z Index: 320

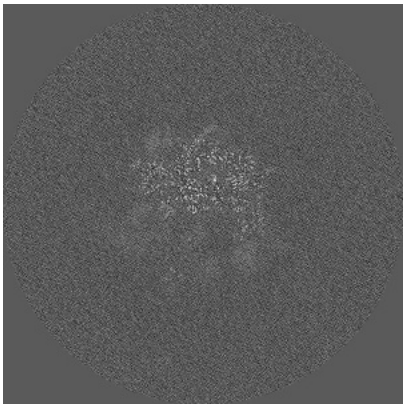
6.2.2 Raw map



X Index: 320



Y Index: 320

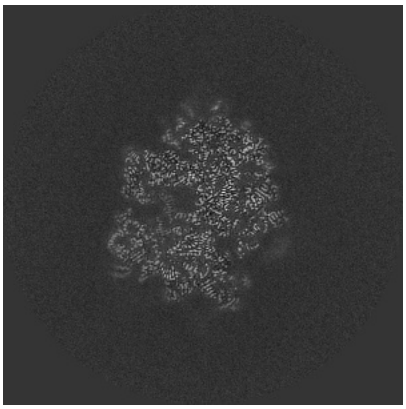


Z Index: 320

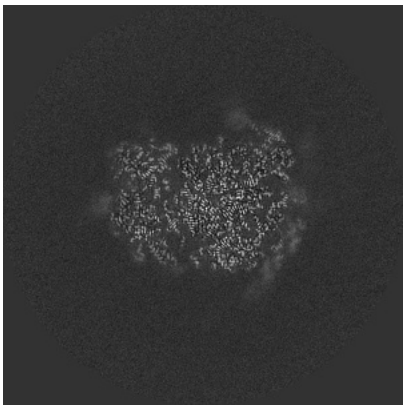
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

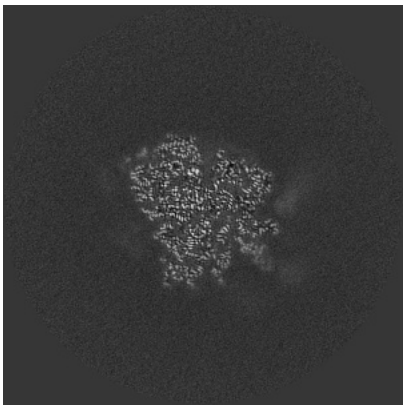
6.3.1 Primary map



X Index: 297

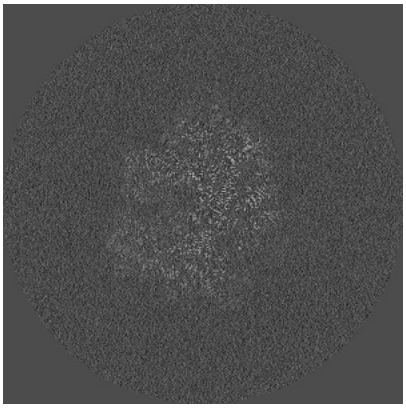


Y Index: 332

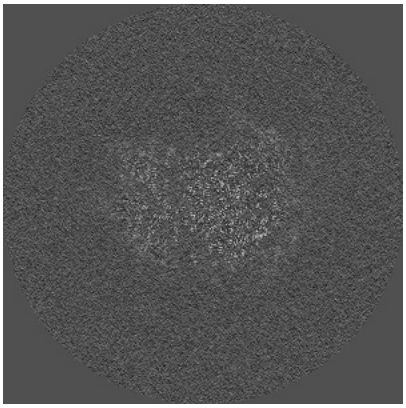


Z Index: 366

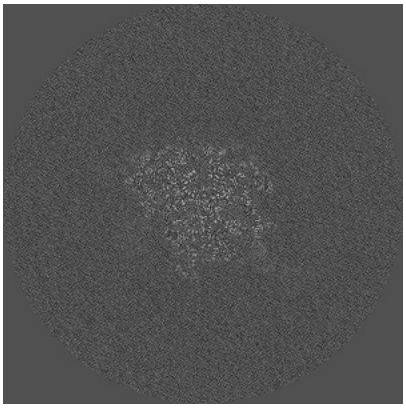
6.3.2 Raw map



X Index: 297



Y Index: 327

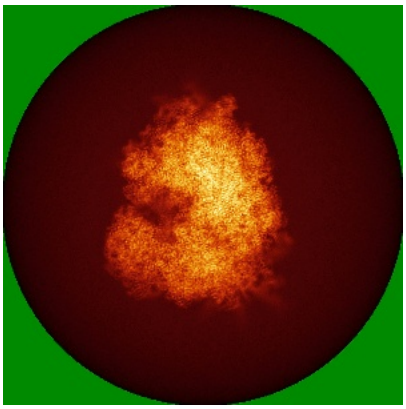


Z Index: 354

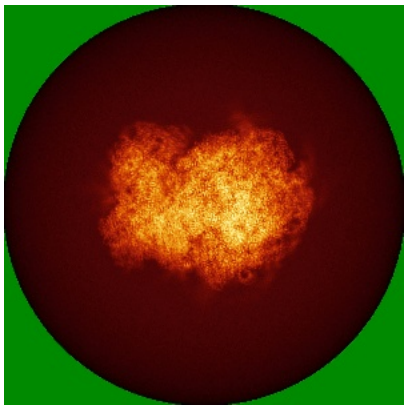
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) (i)

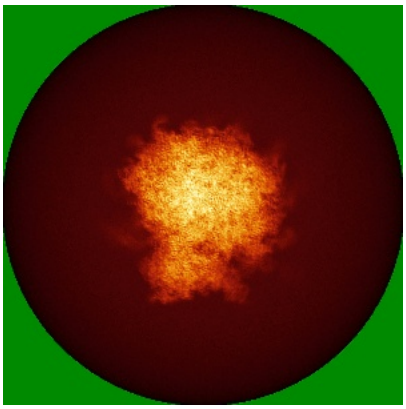
6.4.1 Primary map



X

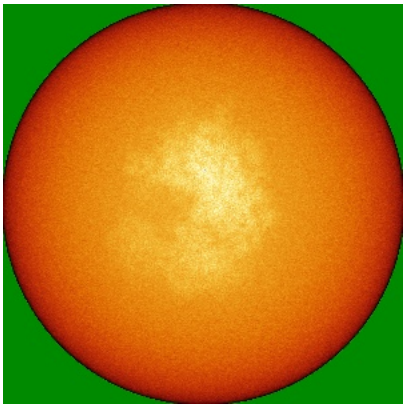


Y

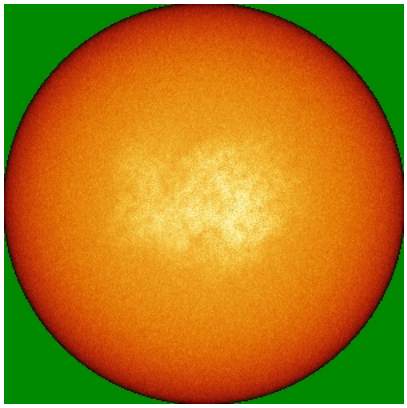


Z

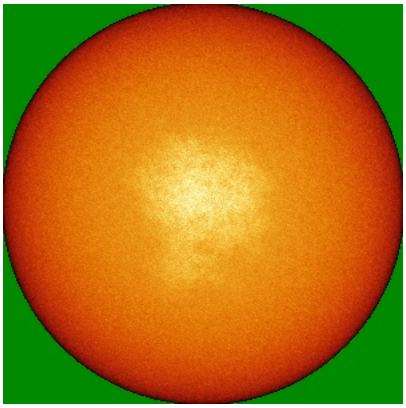
6.4.2 Raw map



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.

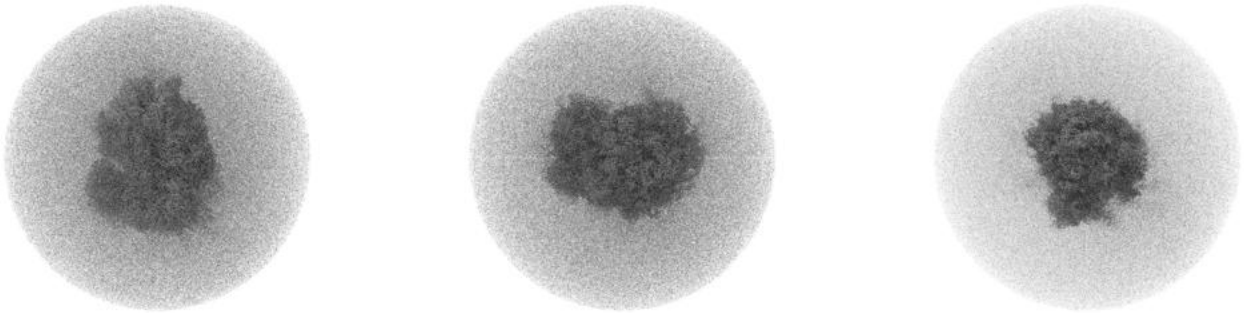
6.5 Orthogonal surface views (i)

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.

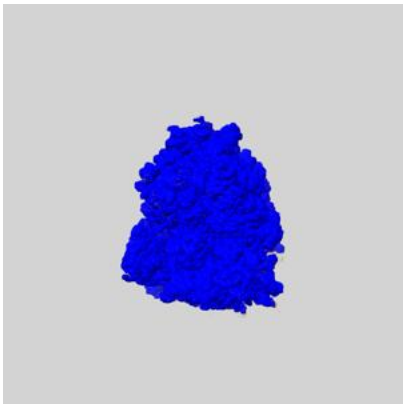
6.6 Mask visualisation

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

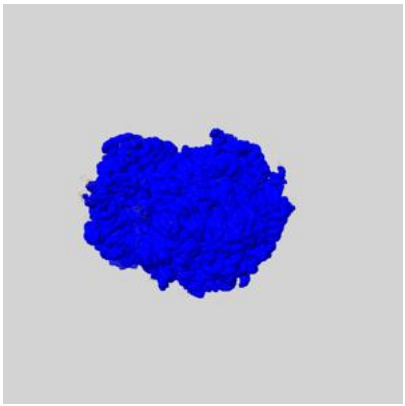
A mask typically either:

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

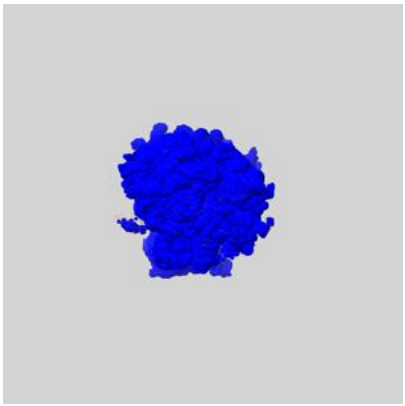
6.6.1 emd_29759_msk_1.map



X



Y

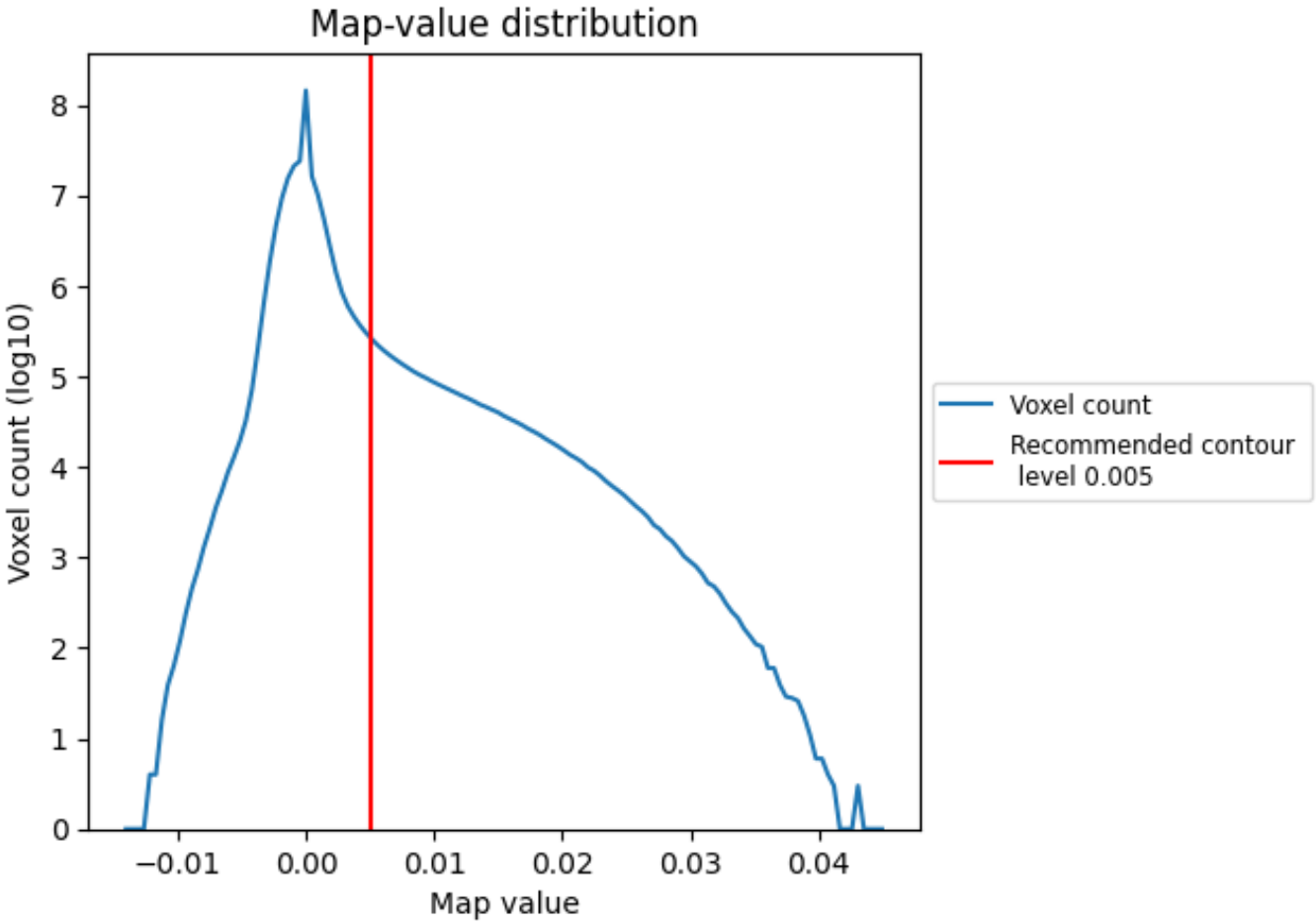


Z

7 Map analysis

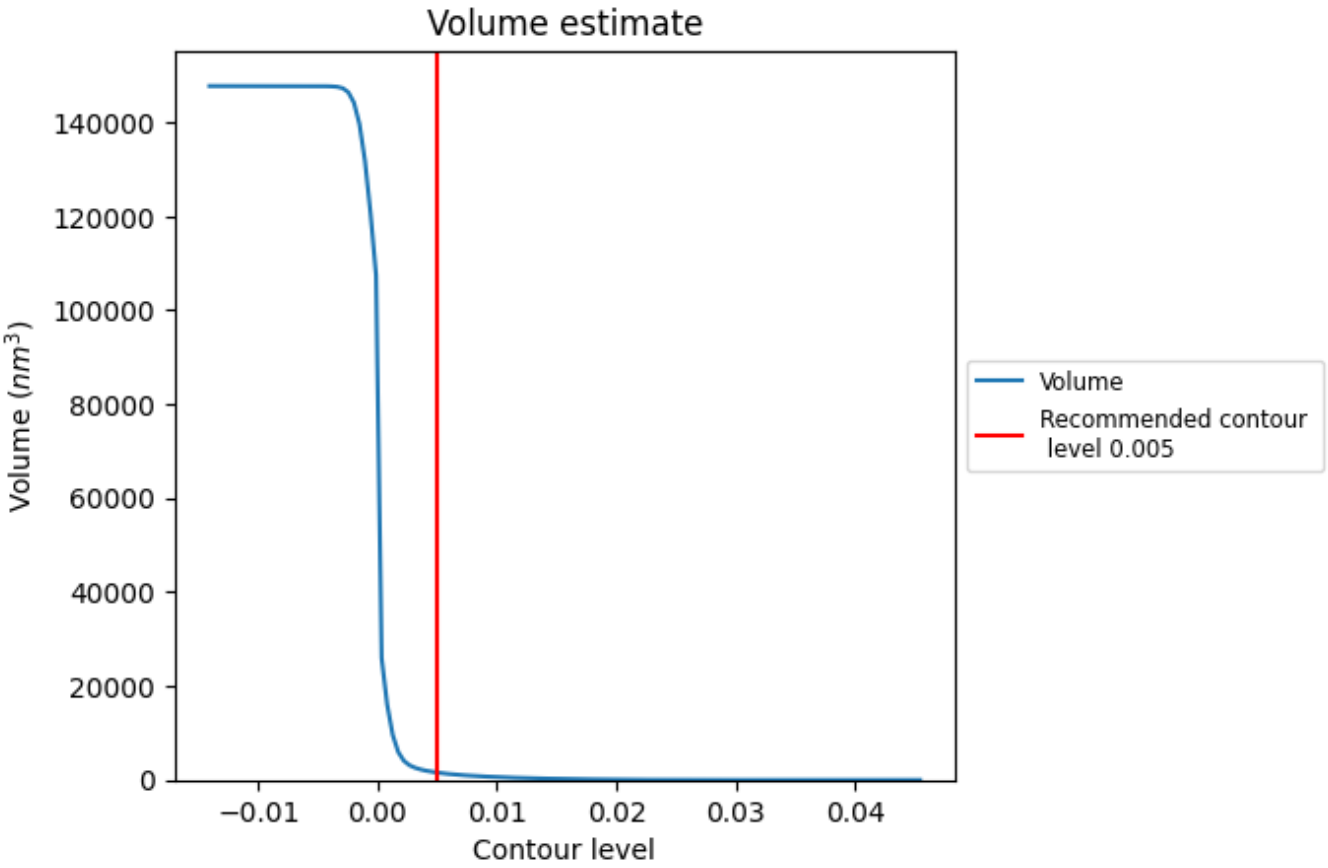
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



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.

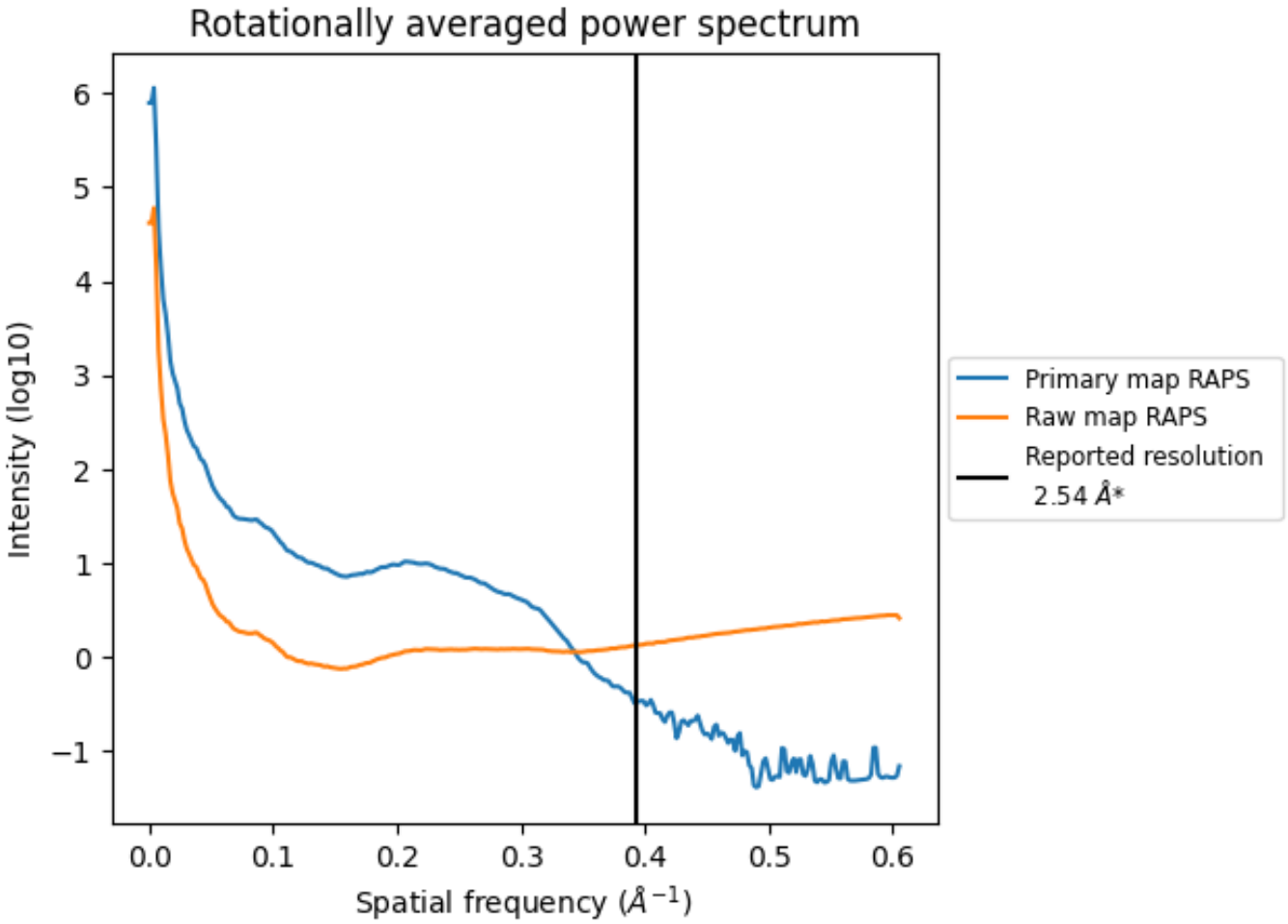
7.2 Volume estimate



The volume at the recommended contour level is 1563 nm^3; this corresponds to an approximate mass of 1412 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)

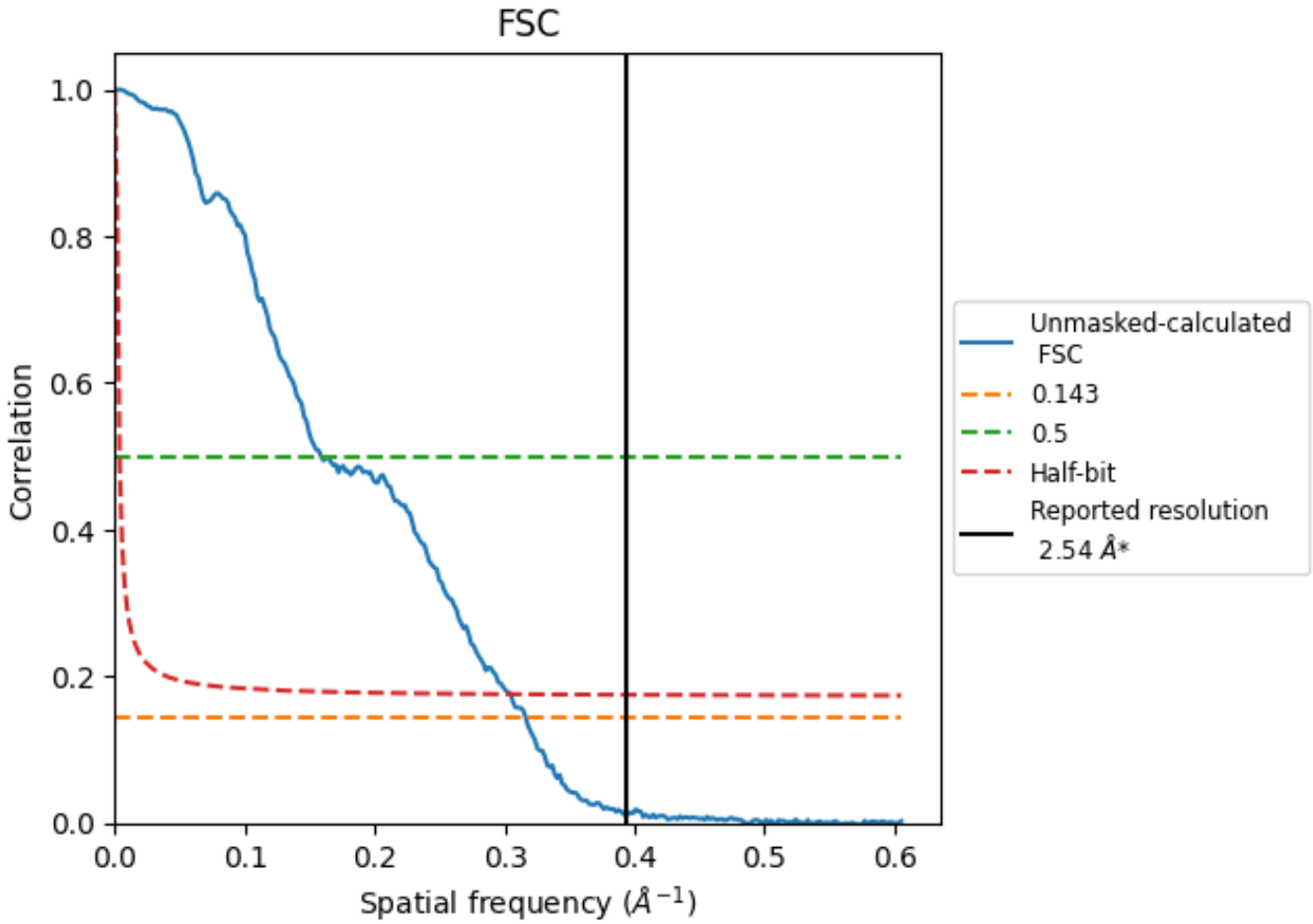


*Reported resolution corresponds to spatial frequency of 0.394 Å^{-1}

8 Fourier-Shell correlation

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



*Reported resolution corresponds to spatial frequency of 0.394 Å^{-1}

8.2 Resolution estimates (i)

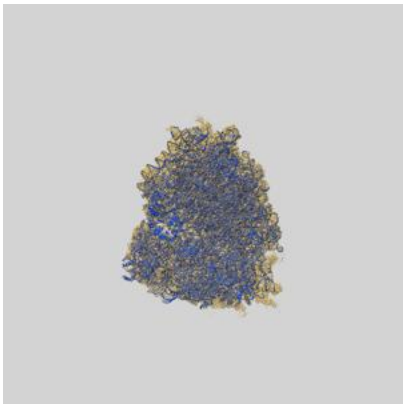
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	2.54	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	3.16	6.30	3.28

*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 3.16 differs from the reported value 2.54 by more than 10 %

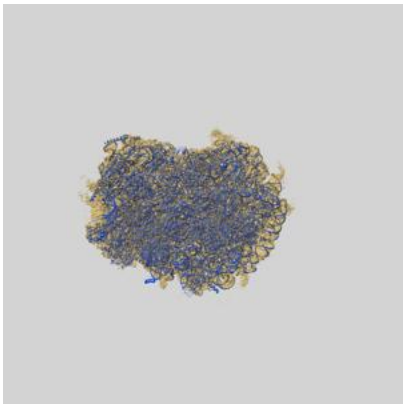
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-29759 and PDB model 8G60. Per-residue inclusion information can be found in section 3 on page 27.

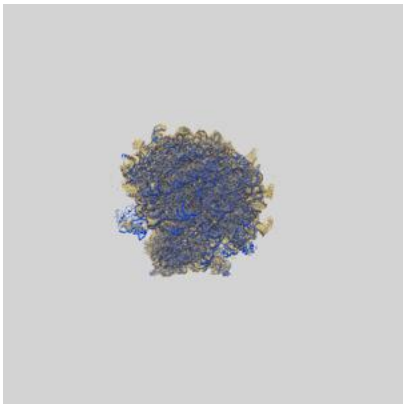
9.1 Map-model overlay



X



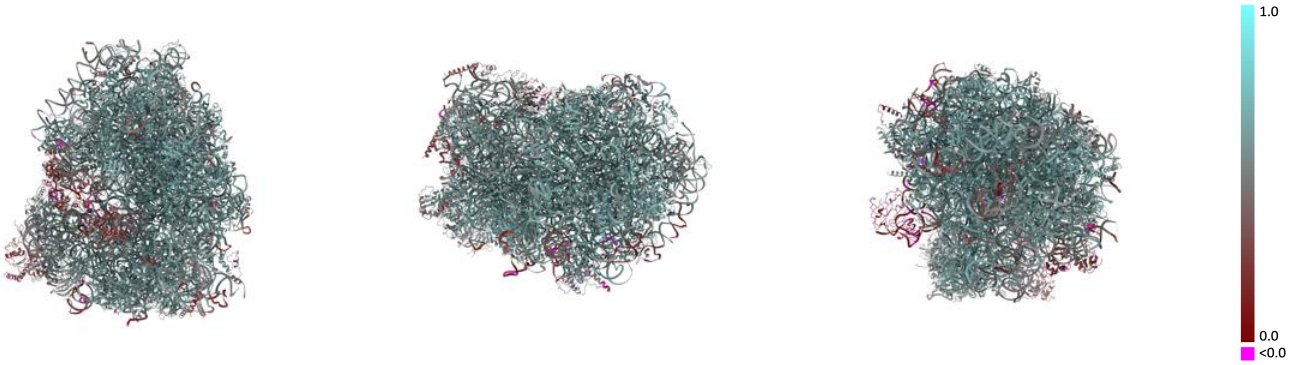
Y



Z

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.

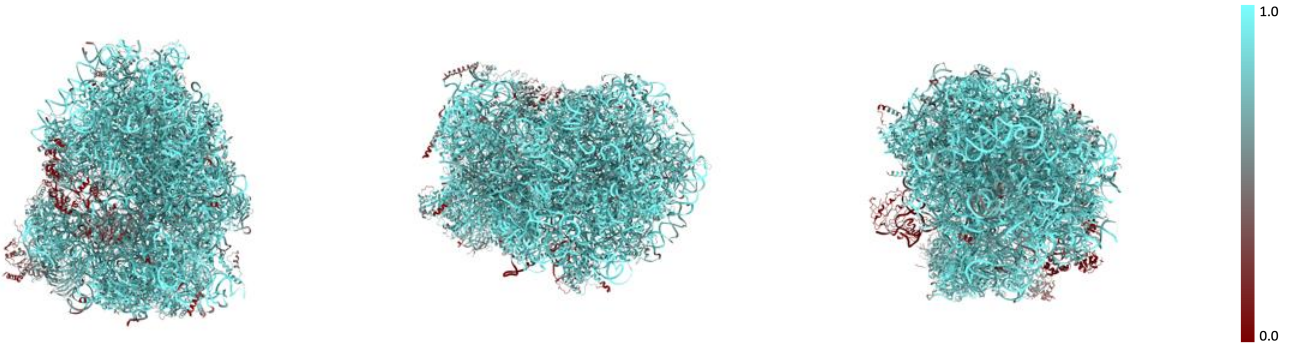
9.2 Q-score mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according 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.

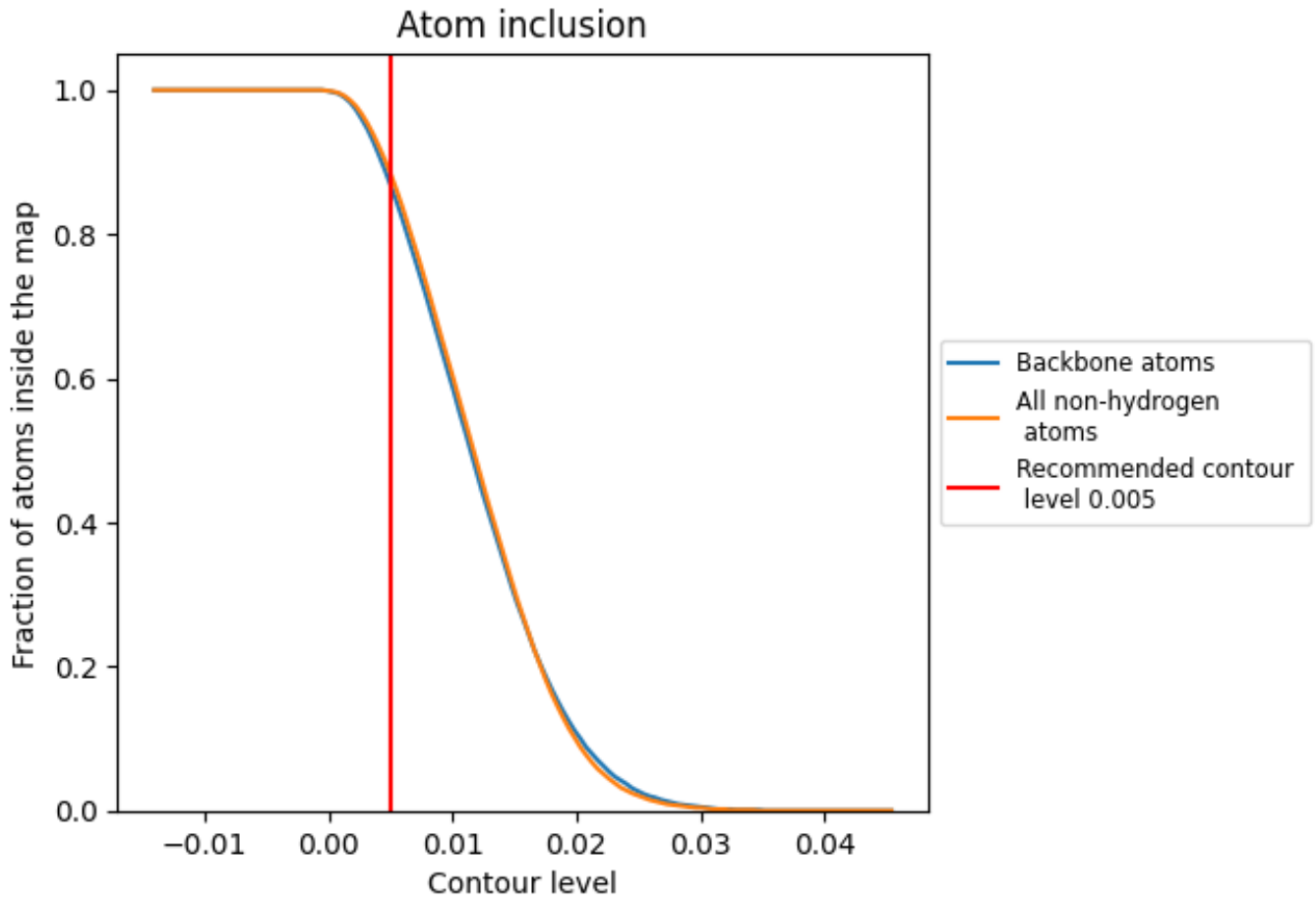
9.3 Atom inclusion mapped to coordinate model (i)



X Y Z

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, 87% of all backbone atoms, 88% 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	0.8840	0.5760
At	0.6780	0.3340
EF	0.5180	0.3890
L5	0.9380	0.5890
L7	0.9940	0.6390
L8	0.9760	0.6170
LA	0.9690	0.6560
LB	0.9230	0.6330
LC	0.9400	0.6360
LD	0.9010	0.6030
LE	0.8940	0.6050
LF	0.9450	0.6380
LG	0.8220	0.5570
LH	0.8990	0.6110
LI	0.9130	0.6190
LJ	0.8600	0.5920
LK	0.1030	0.2140
LL	0.8950	0.6090
LM	0.9250	0.6150
LN	0.9820	0.6550
LO	0.9440	0.6370
LP	0.9460	0.6470
LQ	0.9680	0.6570
LR	0.8550	0.5960
LS	0.9650	0.6420
LT	0.9190	0.6270
LU	0.8150	0.5430
LV	0.9200	0.6360
LW	0.6960	0.4990
LX	0.9100	0.6220
LY	0.9140	0.6170
LZ	0.9100	0.6060
La	0.9670	0.6550
Lb	0.7950	0.5640
Lc	0.8940	0.6130

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Chain	Atom inclusion	Q-score
Ld	0.8910	0.6080
Le	0.9670	0.6570
Lf	0.9680	0.6530
Lg	0.8990	0.6190
Lh	0.9130	0.6160
Li	0.8880	0.5980
Lj	0.9690	0.6560
Lk	0.8220	0.5690
Ll	0.9460	0.6250
Lm	0.9020	0.6150
Ln	0.9080	0.6230
Lo	0.9290	0.6310
Lp	0.9380	0.6420
Lq	0.1600	0.2630
Lr	0.9420	0.6360
Lz	0.0050	0.1450
Pt	0.6650	0.5440
S2	0.9600	0.5840
SA	0.8660	0.5840
SB	0.8560	0.5930
SC	0.8940	0.6050
SD	0.7650	0.5270
SE	0.8670	0.5900
SF	0.8350	0.5640
SG	0.7440	0.5050
SH	0.7420	0.5270
SI	0.8670	0.5860
SJ	0.8620	0.5750
SK	0.7540	0.4870
SL	0.8960	0.6160
SM	0.2280	0.2260
SN	0.9140	0.6160
SO	0.8940	0.6080
SP	0.7440	0.5070
SQ	0.8610	0.5710
SR	0.7820	0.5340
SS	0.8040	0.5500
ST	0.8300	0.5530
SU	0.7190	0.4980
SV	0.8800	0.6000
SW	0.9430	0.6310
SX	0.9160	0.6100

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Chain	Atom inclusion	Q-score
SY	0.7630	0.5130
SZ	0.6950	0.5130
Sa	0.9240	0.6160
Sb	0.8210	0.5810
Sc	0.7330	0.5380
Sd	0.9410	0.5890
Se	0.7800	0.5510
Sf	0.4130	0.3250
Sg	0.6850	0.4910
mR	0.4470	0.4820