



wwPDB X-ray Structure Validation Summary Report ⓘ

Aug 27, 2023 – 04:07 AM EDT

PDB ID : 3G6E
Title : Co-crystal structure of Homoharringtonine bound to the large ribosomal subunit
Authors : Gurel, G.; Blaha, G.; Moore, P.B.; Steitz, T.A.
Deposited on : 2009-02-06
Resolution : 2.70 Å(reported)

This is a wwPDB X-ray Structure Validation Summary 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/XrayValidationReportHelp>

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:

MolProbity : 4.02b-467
Mogul : 1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix) : 1.13
EDS : 2.35
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac : 5.8.0158
CCP4 : 7.0.044 (Gargrove)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.35

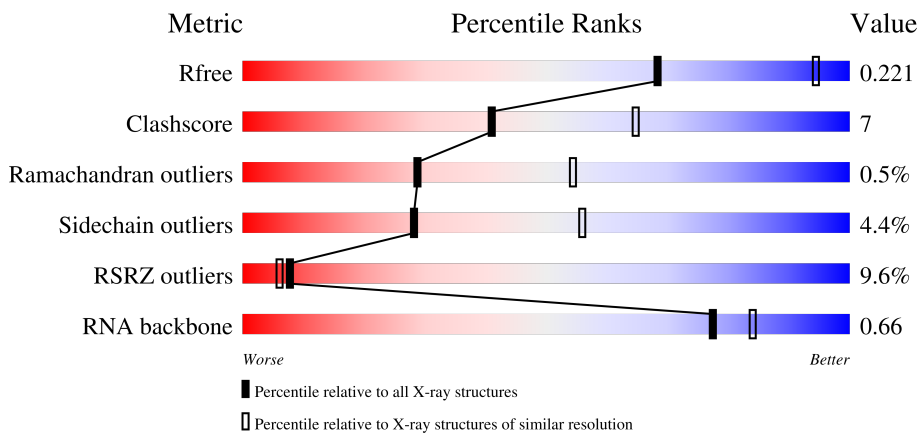
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.70 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)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	2808 (2.70-2.70)
Clashscore	141614	3122 (2.70-2.70)
Ramachandran outliers	138981	3069 (2.70-2.70)
Sidechain outliers	138945	3069 (2.70-2.70)
RSRZ outliers	127900	2737 (2.70-2.70)
RNA backbone	3102	1159 (3.00-2.40)

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

Mol	Chain	Length	Quality of chain
1	0	2923	
2	A	237	
3	B	337	
4	C	246	

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Mol	Chain	Length	Quality of chain
5	D	177	46% 65% 14% 21%
6	E	172	10% 91% 9%
7	F	119	30% 92% 8%
8	G	348	3% 8% 92%
9	H	177	28% 79% 11% 10%
10	I	70	93% 94% 6%
11	J	142	2% 87% 13%
12	K	132	4% 90% 9%
13	L	165	22% 78% 10% 12%
14	M	194	% 86% 13%
15	N	186	30% 85% 15%
16	O	115	5% 96%
17	P	143	5% 90% 10%
18	Q	95	87% 12%
19	R	150	89% 9%
20	S	81	20% 93% 7%
21	T	119	16% 86% 13%
22	U	53	6% 94% 6%
23	V	65	54% 92% 8%
24	W	154	2% 81% 18%
25	X	82	11% 83% 16%
26	Y	142	4% 92% 7%
27	Z	73	49% 90% 10%
28	1	56	84% 16%
29	2	50	16% 74% 18% 8%

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Mol	Chain	Length	Quality of chain
30	3	92	
31	9	122	

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
32	MG	0	8030	-	-	-	X
34	NA	0	8522	-	-	-	X
34	NA	0	8546	-	-	-	X
34	NA	0	8561	-	-	-	X
34	NA	0	8562	-	-	-	X
36	SR	0	8913	-	-	-	X
36	SR	0	8923	-	-	-	X
36	SR	0	8933	-	-	-	X
36	SR	0	8934	-	-	-	X
36	SR	0	8957	-	-	-	X
36	SR	0	8974	-	-	-	X
36	SR	0	8976	-	-	-	X
36	SR	0	8982	-	-	-	X
36	SR	0	8994	-	-	-	X
36	SR	0	9004	-	-	-	X
36	SR	0	9006	-	-	-	X
36	SR	B	8987	-	-	-	X
36	SR	J	8986	-	-	-	X

2 Entry composition [i](#)

There are 39 unique types of molecules in this entry. The entry contains 99174 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, 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 23S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
1	0	2754	59021	26349	10873	19054	2745	0	0	0

- Molecule 2 is a protein called 50S ribosomal protein L2P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
2	A	237	1754	1072	352	325	5	0	0	0

- Molecule 3 is a protein called 50S ribosomal protein L3P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
3	B	337	2625	1616	493	511	5	0	0	0

- Molecule 4 is a protein called 50S ribosomal protein L4P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
4	C	246	1860	1130	345	384	1	0	0	0

- Molecule 5 is a protein called 50S ribosomal protein L5P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
5	D	140	1094	685	195	210	4	0	0	0

- Molecule 6 is a protein called 50S ribosomal protein L6P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
6	E	172	1358	840	224	290	4	0	0	0

- Molecule 7 is a protein called 50S ribosomal protein L7Ae.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
7	F	119	890	551	141	197	1	0	0	0

- Molecule 8 is a protein called 50S ribosomal protein L10E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
8	G	29	240	149	39	51	1	0	0	0

- Molecule 9 is a protein called 50S ribosomal protein L10e.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
9	H	160	1282	798	240	238	6	0	0	0

- Molecule 10 is a protein called 50S ribosomal protein L11P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
10	I	70	520	323	81	115	1	0	0	0

- Molecule 11 is a protein called 50S ribosomal protein L13P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
11	J	142	1120	696	199	222	3	0	0	0

- Molecule 12 is a protein called 50S ribosomal protein L14P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
12	K	132	994	609	189	192	4	0	0	0

- Molecule 13 is a protein called 50S ribosomal protein L15P.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
			Total	C	N	O			
13	L	145	1118	670	222	226	0	0	0

- Molecule 14 is a protein called 50S ribosomal protein L15e.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
14	M	194	1559	943	333	282	1	0	0	0

- Molecule 15 is a protein called 50S ribosomal protein L18P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
15	N	186	1445	895	262	286	2	0	0	0

- Molecule 16 is a protein called 50S ribosomal protein L18e.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
			Total	C	N	O			
16	O	115	865	529	161	175	0	0	0

- Molecule 17 is a protein called 50S ribosomal protein L19e.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
			Total	C	N	O			
17	P	143	1137	683	229	225	0	0	0

- Molecule 18 is a protein called 50S ribosomal protein L21e.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
			Total	C	N	O			
18	Q	95	735	450	141	144	0	0	0

- Molecule 19 is a protein called 50S ribosomal protein L22P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
19	R	150	1150	713	209	224	4	0	0	0

- Molecule 20 is a protein called 50S ribosomal protein L23P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
20	S	81	642	389	111	139	3	0	0	0

- Molecule 21 is a protein called 50S ribosomal protein L24P.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
21	T	119	Total	C	N	O	0	0	0
			950	568	180	202			

- Molecule 22 is a protein called 50S ribosomal protein L24e.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	U	53	Total	C	N	O	S	0	0	0
			411	244	75	87	5			

- Molecule 23 is a protein called 50S ribosomal protein L29P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	V	65	Total	C	N	O	S	0	0	0
			500	304	94	101	1			

- Molecule 24 is a protein called 50S ribosomal protein L30P.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	W	154	Total	C	N	O	S	0	0	0
			1196	737	209	244	6			

- Molecule 25 is a protein called 50S ribosomal protein L31e.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	X	82	Total	C	N	O	S	0	0	0
			655	402	129	123	1			

- Molecule 26 is a protein called 50S ribosomal protein L32e.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
26	Y	142	Total	C	N	O	0	0	0
			1131	686	228	217			

- Molecule 27 is a protein called 50S ribosomal protein L37Ae.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	Z	73	Total	C	N	O	S	0	0	0
			574	343	113	113	5			

- Molecule 28 is a protein called 50S ribosomal protein L37e.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	1	56	Total	C	N	O	S	0	0	0
			431	258	86	83	4			

- Molecule 29 is a protein called 50S ribosomal protein L39e.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	2	46	Total	C	N	O	S	0	0	0
			396	239	89	67	1			

- Molecule 30 is a protein called 50S ribosomal protein L44E.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	3	92	Total	C	N	O	S	0	0	0
			755	458	153	137	7			

- Molecule 31 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	9	122	Total	C	N	O	P	0	0	0
			2599	1160	471	847	121			

- Molecule 32 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
32	0	85	Total	Mg	0	0
			85	85		
32	A	1	Total	Mg	0	0
			1	1		
32	B	1	Total	Mg	0	0
			1	1		
32	K	1	Total	Mg	0	0
			1	1		
32	T	1	Total	Mg	0	0
			1	1		
32	Y	1	Total	Mg	0	0
			1	1		
32	2	1	Total	Mg	0	0
			1	1		
32	9	2	Total	Mg	0	0
			2	2		

- Molecule 33 is POTASSIUM ION (three-letter code: K) (formula: K).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
33	0	2	Total K 2 2	0	0

- Molecule 34 is SODIUM ION (three-letter code: NA) (formula: Na).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
34	0	66	Total Na 66 66	0	0
34	C	1	Total Na 1 1	0	0
34	J	1	Total Na 1 1	0	0
34	M	1	Total Na 1 1	0	0
34	Q	1	Total Na 1 1	0	0
34	R	1	Total Na 1 1	0	0
34	S	1	Total Na 1 1	0	0
34	9	3	Total Na 3 3	0	0

- Molecule 35 is CHLORIDE ION (three-letter code: CL) (formula: Cl).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
35	0	10	Total Cl 10 10	0	0
35	A	1	Total Cl 1 1	0	0
35	B	1	Total Cl 1 1	0	0
35	J	3	Total Cl 3 3	0	0
35	L	1	Total Cl 1 1	0	0
35	M	1	Total Cl 1 1	0	0
35	N	1	Total Cl 1 1	0	0
35	O	1	Total Cl 1 1	0	0
35	R	1	Total Cl 1 1	0	0

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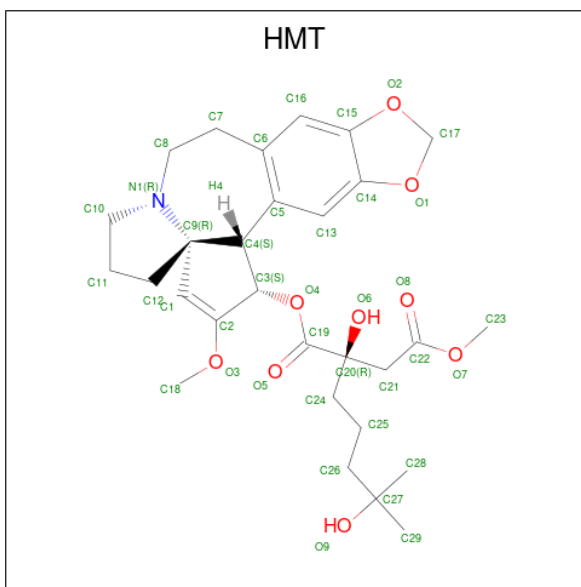
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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
35	Y	1	Total Cl 1 1	0	0
35	3	1	Total Cl 1 1	0	0

- Molecule 36 is STRONTIUM ION (three-letter code: SR) (formula: Sr).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
36	0	93	Total Sr 93 93	0	0
36	A	3	Total Sr 3 3	0	0
36	B	2	Total Sr 2 2	0	0
36	F	1	Total Sr 1 1	0	0
36	J	1	Total Sr 1 1	0	0
36	R	1	Total Sr 1 1	0	0
36	S	1	Total Sr 1 1	0	0
36	1	1	Total Sr 1 1	0	0
36	3	2	Total Sr 2 2	0	0
36	9	3	Total Sr 3 3	0	0

- Molecule 37 is (3beta)-O 3 -[(2R)-2,6-dihydroxy-2-(2-methoxy-2-oxoethyl)-6-methylheptano yl]cephalotaxine (three-letter code: HMT) (formula: C₂₉H₃₉NO₉).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
37	0	1	Total	C	N	O	0	0
			39	29	1	9		

- Molecule 38 is CADMIUM ION (three-letter code: CD) (formula: Cd).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
38	O	1	Total	Cd	0	0
			1	1		
38	U	1	Total	Cd	0	0
			1	1		
38	Z	1	Total	Cd	0	0
			1	1		
38	1	1	Total	Cd	0	0
			1	1		
38	3	1	Total	Cd	0	0
			1	1		

- Molecule 39 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
39	0	5969	Total	O	0	0
			5969	5969		
39	A	111	Total	O	0	0
			111	111		
39	B	138	Total	O	0	0
			138	138		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
39	C	169	Total 169	O 169	0	0
39	D	44	Total 44	O 44	0	0
39	E	45	Total 45	O 45	0	0
39	F	26	Total 26	O 26	0	0
39	G	17	Total 17	O 17	0	0
39	H	65	Total 65	O 65	0	0
39	I	6	Total 6	O 6	0	0
39	J	51	Total 51	O 51	0	0
39	K	59	Total 59	O 59	0	0
39	L	84	Total 84	O 84	0	0
39	M	119	Total 119	O 119	0	0
39	N	60	Total 60	O 60	0	0
39	O	37	Total 37	O 37	0	0
39	P	67	Total 67	O 67	0	0
39	Q	42	Total 42	O 42	0	0
39	R	81	Total 81	O 81	0	0
39	S	30	Total 30	O 30	0	0
39	T	34	Total 34	O 34	0	0
39	U	26	Total 26	O 26	0	0
39	V	10	Total 10	O 10	0	0
39	W	67	Total 67	O 67	0	0

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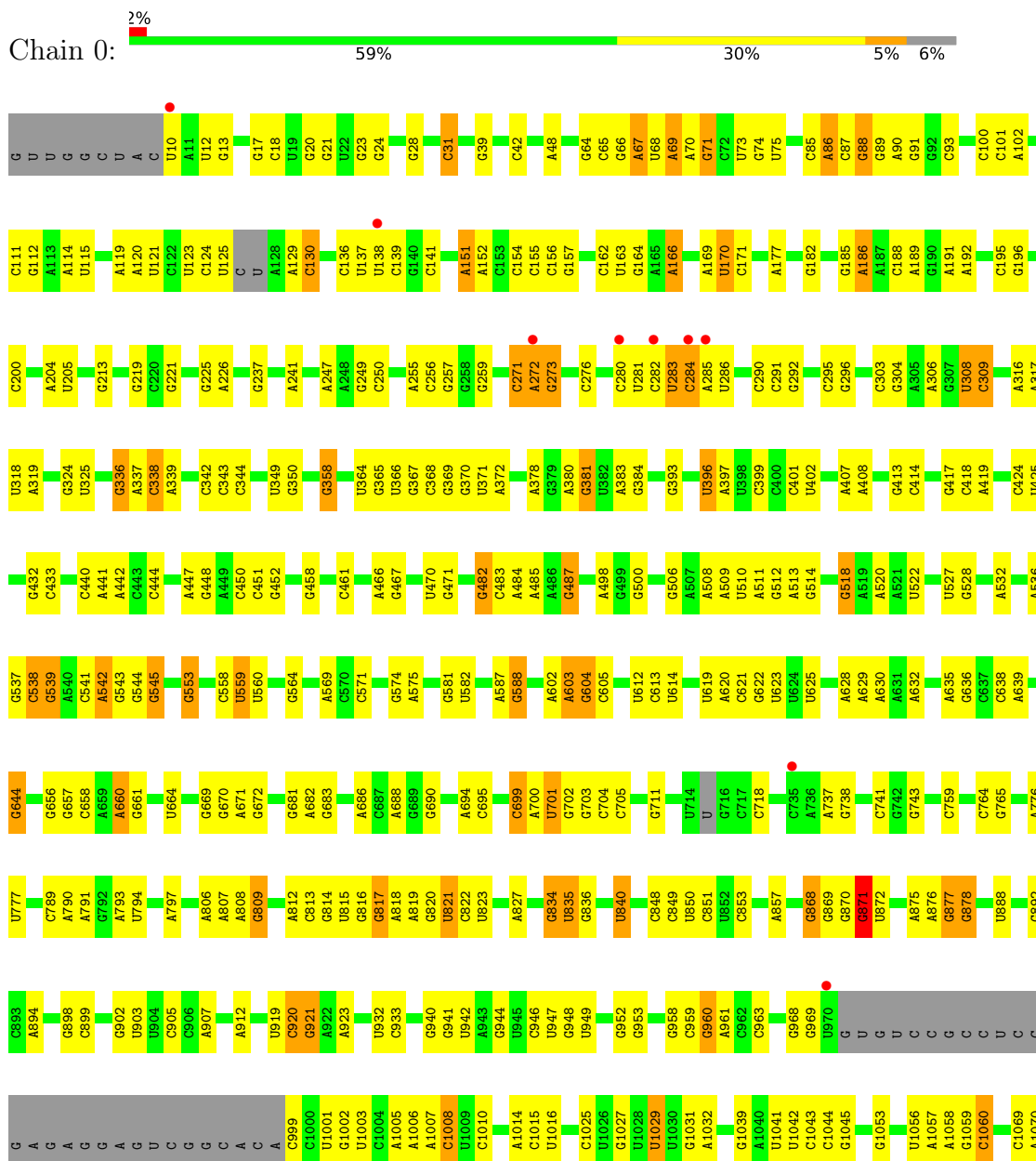
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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
39	X	25	Total O 25 25	0	0
39	Y	96	Total O 96 96	0	0
39	Z	32	Total O 32 32	0	0
39	1	52	Total O 52 52	0	0
39	2	44	Total O 44 44	0	0
39	3	66	Total O 66 66	0	0
39	9	151	Total O 151 151	0	0

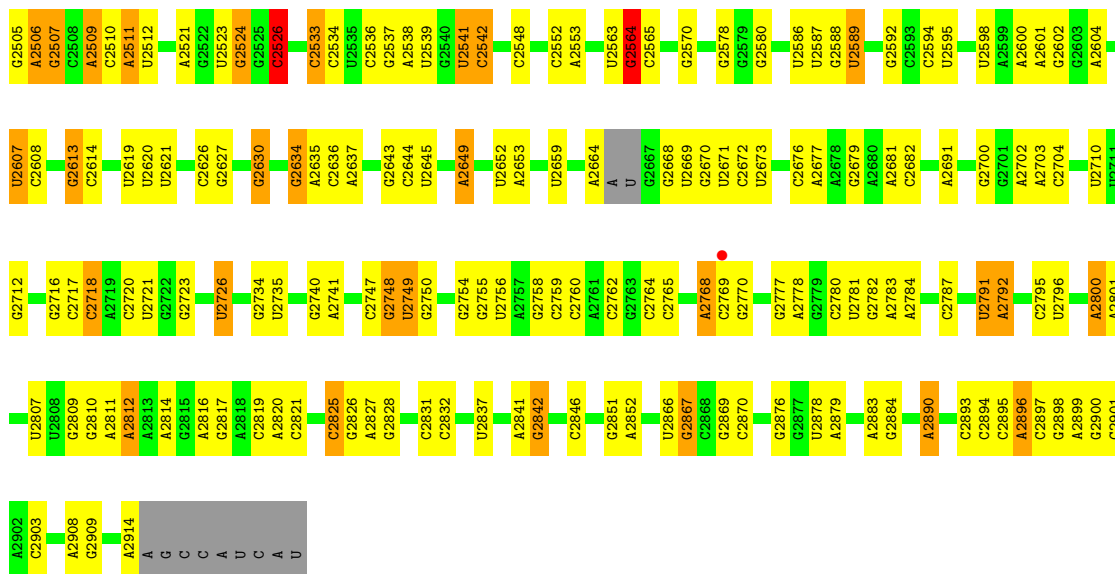
3 Residue-property plots [i](#)

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 electron 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 dot above a residue indicates a poor fit to the electron density ($RSRZ > 2$). 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.

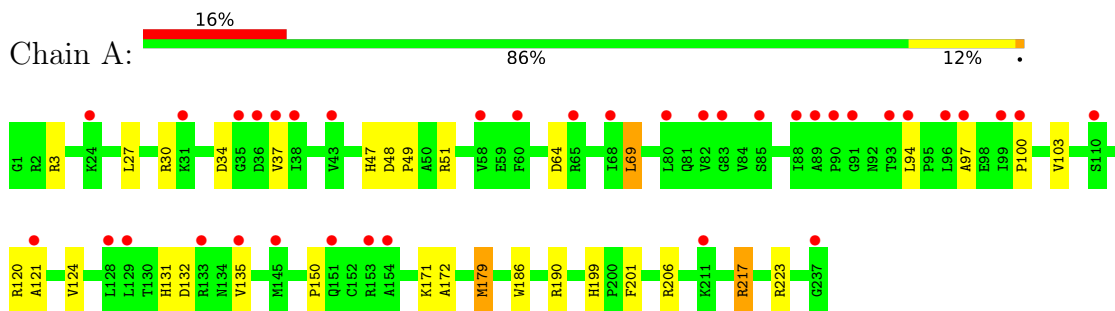
• Molecule 1: 23S ribosomal RNA



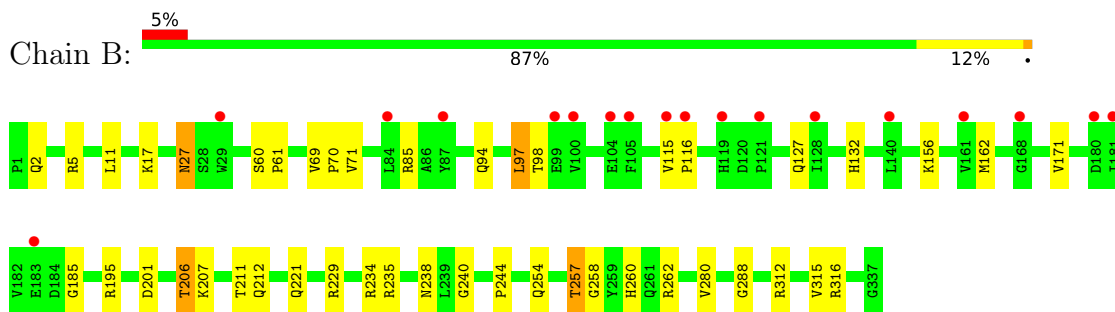
A2402	U2297	A	C	G2033	C1940	G1706	G1605	U1500	G1385	A1246	G1175	G1071
A2408	A2300	A	G	U2034	A1941	C1714	A1815	U1503	G1386	U1249	C1176	G1072
A2412	A2301	U	A	G	A1942	C1715	C1816	A1504	G1387	C1250	G1177	A1073
A2414	A2302	U	U	C2040	C1946	A1716	G1819	U1505	G1391	C1251	G1178	A1078
A2415	A2308	U	C	G2050	G1947	A1616	A1615	U1506	A1392	C1268	U1180	A1081
G2416	C2309	C	C	A	G1948	A1617	G1618	U1524	G1398	G1269	A1181	A1088
U2419	C2313	A	G	A	A1829	U1722	G1619	G1525	A1399	C1273	C1183	U1096
G2420	G2314	C	G	U2064	C1830	G1723	A1620	A1526	A1406	U1279	C1184	A1097
G2421	C2315	C	A	C2066	A	U1724	G1621	A1527	A1407	C1278	C1186	A1098
U2422	G2316	U	A	A	A1837	C1725	G1622	A1528	U1408	U1279	U1187	G1099
G2426	C2317	C	A	C	G1837	G1730	A1624	G1529	G1409	C1289	A1188	C1102
A2433	U2320	C	G	G2072	U1838	C1731	A1626	G1535	G1410	G1290	G1190	C1103
A2434	A2321	C	G	A1732	A1839	A1733	A1627	C1537	A1413	A1294	A1191	C1104
U2435	C2338	C	A	A1840	A1840	U1741	G1630	U1544	G1414	G1295	A1192	U1109
C2443	A	G	G	A1845	U1846	A1742	A1631	C1545	G1415	G1299	A1193	G1110
U2444	C	C	C	U1846	A1632	C1750	A1632	U1548	U1419	G1300	U1198	G1116
U2445	A	U	U	G1848	G1633	G1751	G1634	U1552	C1420	G1306	A1200	U1117
G2446	G	C	G	G1849	G1634	G1752	A1635	G1553	C1421	U1307	C1201	A1118
A2456	C2344	C	C	C1853	G1636	C1753	U1635	G1554	C1423	A1307	A1202	G1119
U2457	A2345	U	U	C1854	A1637	A1755	G1636	G1555	A1424	A1308	G1203	G1120
G2462	C2346	C	A	G1855	A1641	G1756	A1642	G1556	G1426	U1309	C1204	G1121
C2465	C2347	C	C	C1856	A1642	C1762	A1643	G1566	A1427	U1310	U1205	U1122
A2466	A2353	C	A	C1857	A1643	U1766	A1644	A1559	A1439	A1328	A1207	A1123
A2468	A2354	G	G	U1857	G1644	A1767	G1645	U	U1440	G1329	C1208	C1129
A2469	A2361	U	A	G1867	G1645	G1768	A1652	C1562	U1441	A1330	C1209	U1130
A2470	G2363	U	U	G1868	A1654	C1769	A1653	G1567	A1442	G1331	G1210	G1131
G2471	A2364	C	C	G1868	G1655	U1770	G1654	U1577	G1443	U1333	G1211	A1132
C2472	G2365	C	C	G1873	A1656	U1771	A1656	U1569	G1444	C1334	C1212	G1137
A2473	C2370	C	A	U1877	A1666	G1772	C1666	A1573	U1445	G1340	A1215	G1137
A2474	G2371	G	G	G1877	U1668	C1773	A1667	C1574	U1446	A1341	G1216	G1151
C2475	A2372	G	C	U1879	U1688	G1774	U1688	G1575	G1453	C1342	G1217	A1154
A2483	U2373	U	U	A1881	A1677	A1778	A1678	U1576	U1454	C1343	U1218	G1155
U2484	G2379	C	A	A1886	A1679	A1779	C1679	U1583	G1456	G1351	U1219	A1154
A2485	A2380	C	G	A1886	C1680	U1783	C1680	C1584	U1457	A1352	U1220	G1158
A2486	C2381	G	C	A1904	G1681	U1784	A1681	U1588	U1463	C1353	G1226	G1159
C2487	A2382	C	C	U1905	G1682	C1787	A1682	G1589	C1464	C1360	C1229	A1161
A2490	C2382	C	C	A1909	A1685	G1790	G1683	U1592	C1474	G1364	A1230	G1162
C2493	G2385	C	C	A1919	C1686	U1791	A1686	C1593	G1477	C1366	U1234	U1164
C2498	U2387	C	A	C1920	G1688	G1795	A1687	C1594	U1478	G1366	G1235	G1166
U2499	C2388	C	U	A1921	A1688	A1796	G1688	U1595	U1482	A1372	U1237	G1167
C2502	U2389	C	C	A1922	C1692	C1797	G1688	A1597	A1482	G1375	C1238	C1168
A2503	C2392	A	U	G1925	A1701	G1799	A1688	A1598	C1483	C1377	G1239	U1169
A2504	A2401	G	C	G1926	U1702	U1800	A1689	C1599	G1484	A1352	A1242	U1170
		C	C	A1927	C1705	G1809	A1689	G1602	A1485	G1378	C1243	A1171
		C	C	U2032			A1690	A1603			U1244	G1172
		C	C				U1688	G1604			C1245	A1174



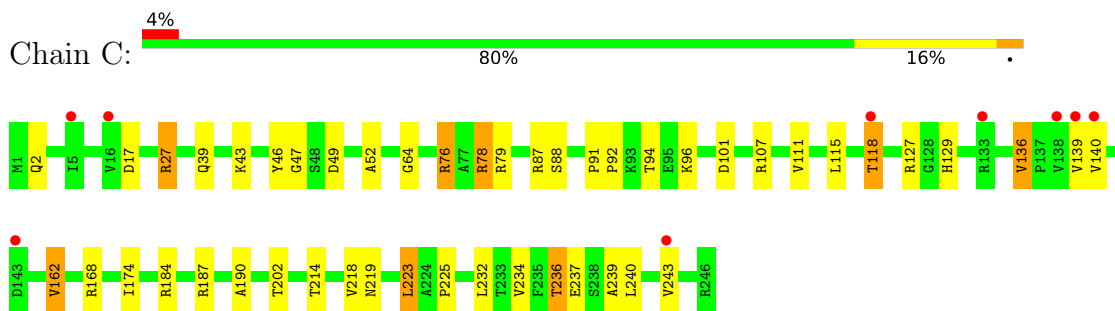
• Molecule 2: 50S ribosomal protein L2P



• Molecule 3: 50S ribosomal protein L3P



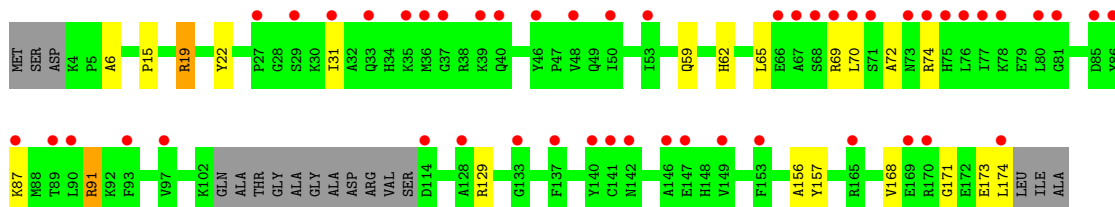
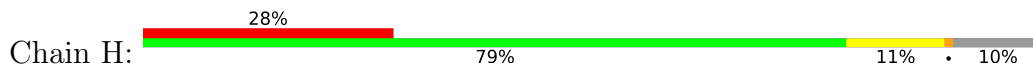
• Molecule 4: 50S ribosomal protein L4P



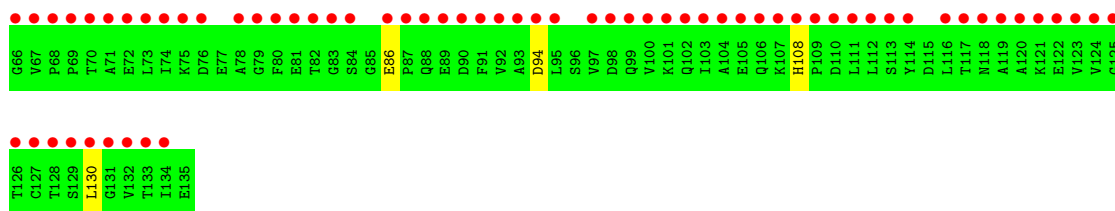
ALA
ARG
GLY
ASN
ALA
LYS
SER
LEU
ALA
LEU
GLN
LEU
ALA
ALA
ILE
GLU
ASP
ALA
ASP
PRO
GLU
VAL
VAL
PRO
GLU
LEU
ASP
VAL
SER
LYS
ASP
ALA
GLN
VAL
VAL
ALA
GLY
LEU
ALA
SER
GLN
ILE
ASP
GLU
ALA
LEU
LEU
PRO
GLU
GLU
LEU
LEU
GLY
VAL
GLY
LEU
ALA
VAL
ALA
THR
GLU
PRO

THR
ASP
ASP
GLN
ASP
P5
A6
P15
R19
Y22
P27
G28
S29
K30
I31
A32
Q33
H34
K35
M36
G37
R38
K39
Q40
Y46
P47
V48
Q49
I50
I53
Q59
H62
L65
E66
A67
S68
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H75
L76
I77
K78
E79
L80
G81
D85
Y86

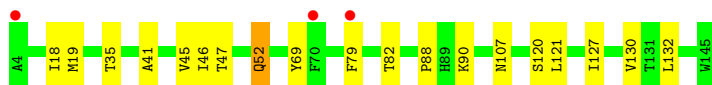
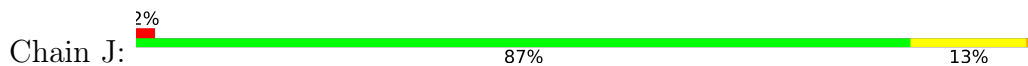
● Molecule 9: 50S ribosomal protein L10e



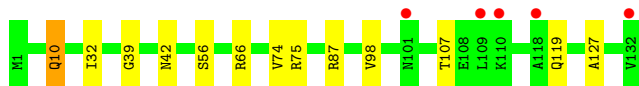
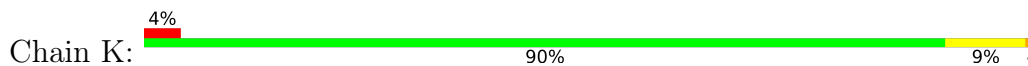
● Molecule 10: 50S ribosomal protein L11P



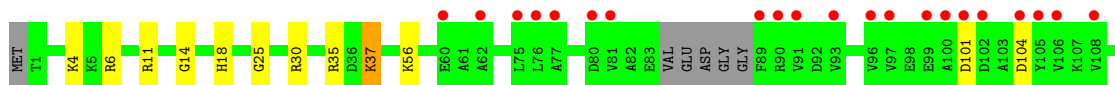
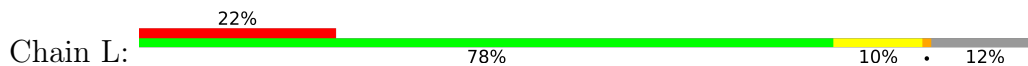
● Molecule 11: 50S ribosomal protein L13P

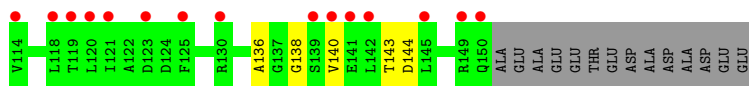


● Molecule 12: 50S ribosomal protein L14P

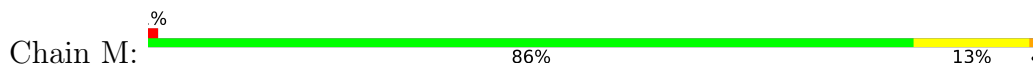


● Molecule 13: 50S ribosomal protein L15P

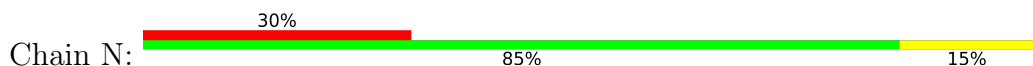




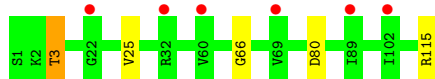
- Molecule 14: 50S ribosomal protein L15e



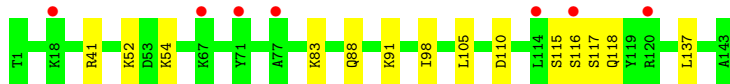
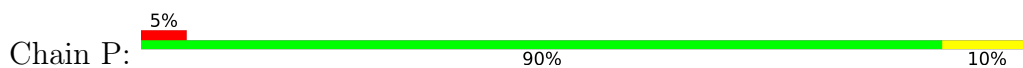
- Molecule 15: 50S ribosomal protein L18P



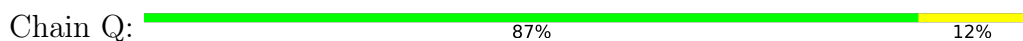
- Molecule 16: 50S ribosomal protein L18e



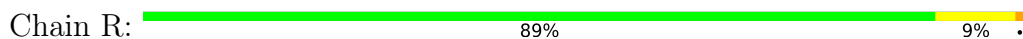
- Molecule 17: 50S ribosomal protein L19e



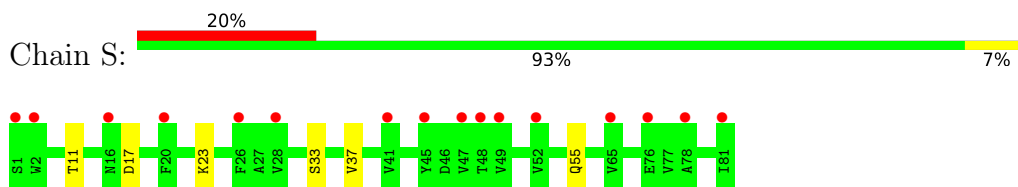
- Molecule 18: 50S ribosomal protein L21e



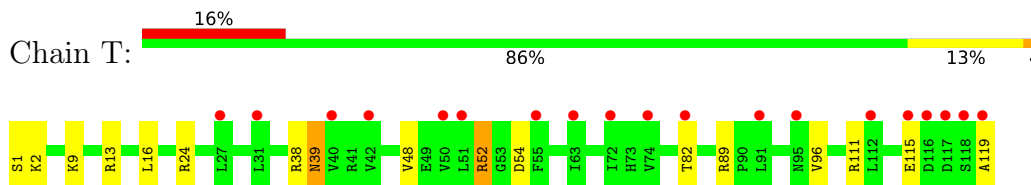
- Molecule 19: 50S ribosomal protein L22P



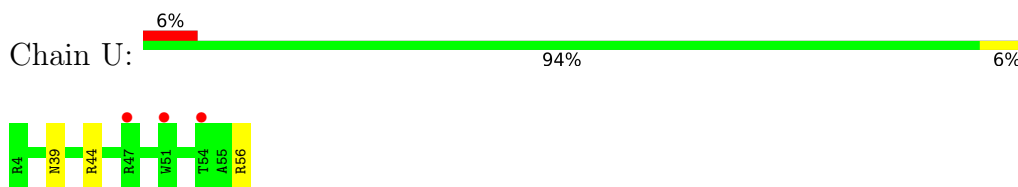
- Molecule 20: 50S ribosomal protein L23P



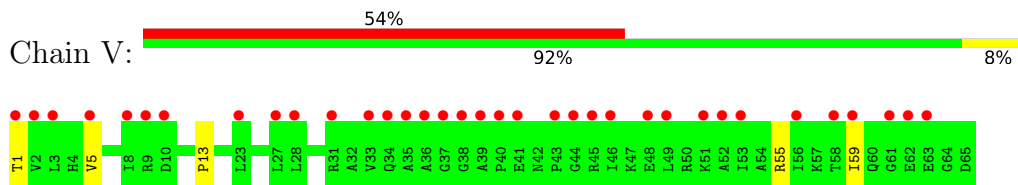
- Molecule 21: 50S ribosomal protein L24P



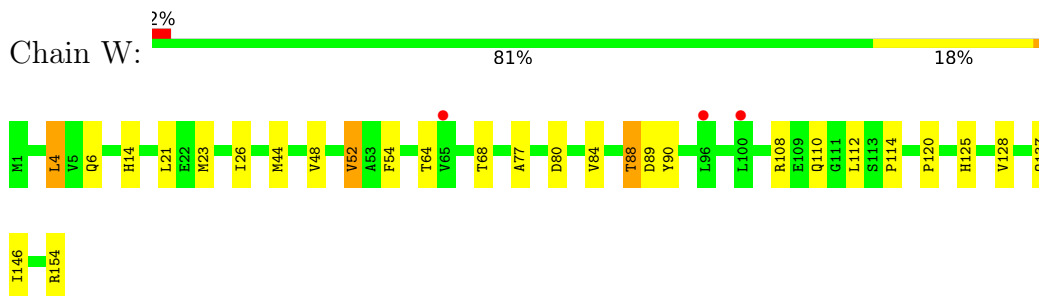
- Molecule 22: 50S ribosomal protein L24e



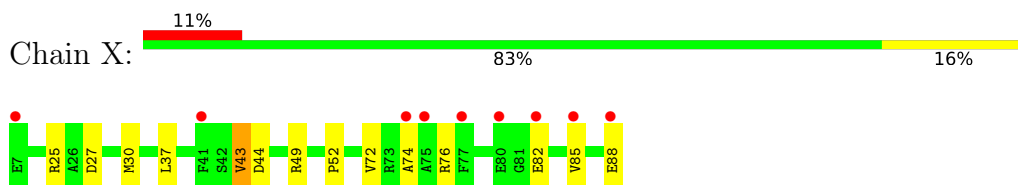
- Molecule 23: 50S ribosomal protein L29P



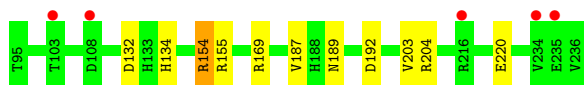
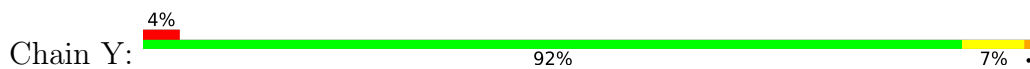
- Molecule 24: 50S ribosomal protein L30P



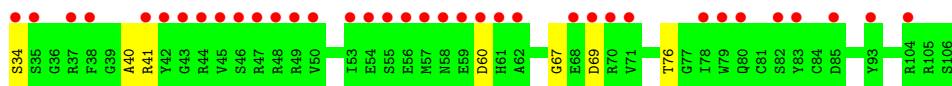
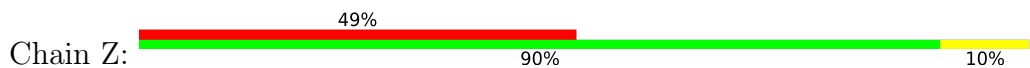
- Molecule 25: 50S ribosomal protein L31e



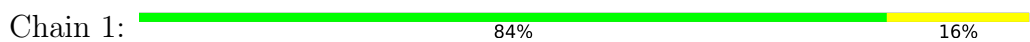
- Molecule 26: 50S ribosomal protein L32e



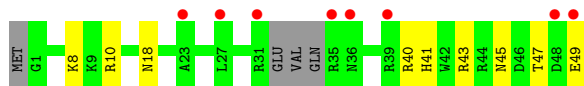
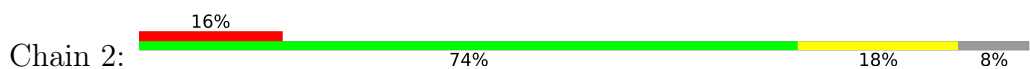
- Molecule 27: 50S ribosomal protein L37Ae



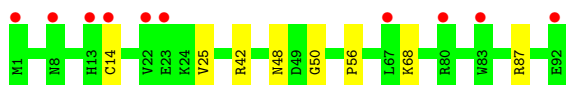
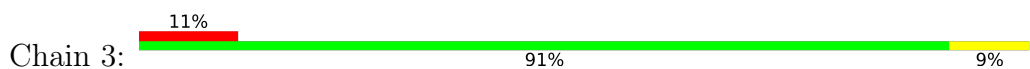
- Molecule 28: 50S ribosomal protein L37e



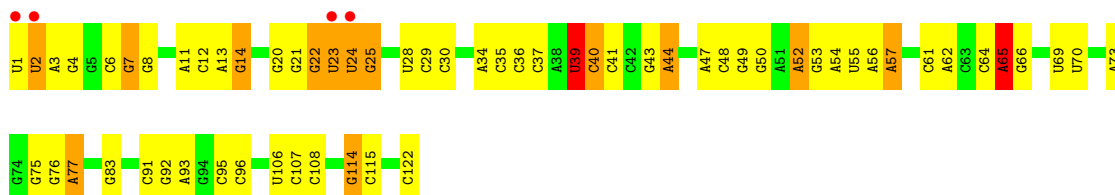
- Molecule 29: 50S ribosomal protein L39e



- Molecule 30: 50S ribosomal protein L44E



- Molecule 31: 5S ribosomal RNA



4 Data and refinement statistics

Property	Value	Source
Space group	C 2 2 21	Depositor
Cell constants a, b, c, α , β , γ	211.86Å 299.42Å 574.09Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	49.90 – 2.70 85.51 – 2.40	Depositor EDS
% Data completeness (in resolution range)	94.0 (49.90-2.70) 92.7 (85.51-2.40)	Depositor EDS
R_{merge}	0.07	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	0.00 (at 2.40Å)	Xtrriage
Refinement program	CNS 1.0	Depositor
R, R_{free}	0.190 , 0.229 0.183 , 0.221	Depositor DCC
R_{free} test set	6547 reflections (0.98%)	wwPDB-VP
Wilson B-factor (Å ²)	52.8	Xtrriage
Anisotropy	0.146	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.31 , 72.0	EDS
L-test for twinning ²	$\langle L \rangle = 0.49$, $\langle L^2 \rangle = 0.32$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
F_o, F_c correlation	0.95	EDS
Total number of atoms	99174	wwPDB-VP
Average B, all atoms (Å ²)	60.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.64% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality [i](#)

5.1 Standard geometry [i](#)

Bond lengths and bond angles in the following residue types are not validated in this section: MG, NA, CL, UR3, SR, CD, K, OMU, PSU, OMG, HMT, 1MA

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	0	0.37	0/65958	0.68	11/102869 (0.0%)
2	A	0.51	0/1787	0.77	1/2408 (0.0%)
3	B	0.54	0/2690	0.78	0/3652
4	C	0.56	0/1885	0.79	0/2552
5	D	0.64	0/1111	0.70	1/1498 (0.1%)
6	E	0.60	0/1383	0.68	0/1880
7	F	0.54	0/901	0.69	0/1224
8	G	0.51	0/241	0.65	0/324
9	H	0.61	0/1302	0.77	0/1743
10	I	0.59	0/527	0.61	0/716
11	J	0.62	0/1136	0.72	0/1530
12	K	0.50	0/1004	0.80	0/1351
13	L	0.52	0/1130	0.75	0/1509
14	M	0.51	0/1583	0.77	0/2116
15	N	0.56	0/1474	0.76	0/1999
16	O	0.49	0/874	0.72	1/1181 (0.1%)
17	P	0.53	0/1148	0.66	0/1528
18	Q	0.51	0/749	0.77	0/1005
19	R	0.55	0/1173	0.75	0/1578
20	S	0.55	0/649	0.67	0/875
21	T	0.48	0/958	0.75	1/1289 (0.1%)
22	U	0.59	0/418	0.70	0/562
23	V	0.44	0/503	0.65	0/675
24	W	0.53	0/1219	0.77	1/1655 (0.1%)
25	X	0.53	0/665	0.73	0/895
26	Y	0.53	0/1147	0.73	0/1536
27	Z	0.67	0/585	0.72	0/781
28	1	0.57	0/438	0.73	0/578
29	2	0.46	0/401	0.69	0/529
30	3	0.57	0/771	0.68	0/1024
31	9	0.33	0/2904	0.68	1/4526 (0.0%)
All	All	0.43	0/98714	0.70	17/147588 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	0	0	42
24	W	0	1
31	9	0	2
All	All	0	45

There are no bond length outliers.

The worst 5 of 17 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	0	871	G	C5'-C4'-O4'	-7.15	100.52	109.10
1	0	1942	A	C5'-C4'-C3'	7.11	127.37	116.00
24	W	4	LEU	CA-CB-CG	5.76	128.54	115.30
1	0	1504	A	C1'-O4'-C4'	-5.73	105.32	109.90
1	0	2726	U	N1-C1'-C2'	5.64	121.34	114.00

There are no chirality outliers.

5 of 45 planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	0	221	G	Sidechain
1	0	396	U	Sidechain
1	0	458	G	Sidechain
1	0	470	U	Sidechain
1	0	48	A	Sidechain

5.2 Too-close contacts [i](#)

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	0	59021	0	29812	849	0
2	A	1754	0	1766	20	0
3	B	2625	0	2533	28	0
4	C	1860	0	1813	27	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
5	D	1094	0	1085	11	0
6	E	1358	0	1266	8	0
7	F	890	0	843	4	0
8	G	240	0	231	2	0
9	H	1282	0	1292	14	0
10	I	520	0	500	2	0
11	J	1120	0	1098	15	0
12	K	994	0	1027	9	0
13	L	1118	0	1076	11	0
14	M	1559	0	1573	21	0
15	N	1445	0	1401	21	0
16	O	865	0	873	2	0
17	P	1137	0	1123	10	0
18	Q	735	0	729	8	0
19	R	1150	0	1122	12	0
20	S	642	0	605	4	0
21	T	950	0	924	11	0
22	U	411	0	364	2	0
23	V	500	0	511	3	0
24	W	1196	0	1137	17	0
25	X	655	0	653	6	0
26	Y	1131	0	1133	10	0
27	Z	574	0	532	6	0
28	1	431	0	426	8	0
29	2	396	0	413	8	0
30	3	755	0	729	4	0
31	9	2599	0	1325	69	0
32	0	85	0	0	0	0
32	2	1	0	0	0	0
32	9	2	0	0	0	0
32	A	1	0	0	0	0
32	B	1	0	0	0	0
32	K	1	0	0	0	0
32	T	1	0	0	0	0
32	Y	1	0	0	0	0
33	0	2	0	0	0	0
34	0	66	0	0	0	0
34	9	3	0	0	0	0
34	C	1	0	0	0	0
34	J	1	0	0	0	0
34	M	1	0	0	0	0
34	Q	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
34	R	1	0	0	0	0
34	S	1	0	0	0	0
35	0	10	0	0	0	0
35	3	1	0	0	0	0
35	A	1	0	0	0	0
35	B	1	0	0	0	0
35	J	3	0	0	1	0
35	L	1	0	0	0	0
35	M	1	0	0	0	0
35	N	1	0	0	0	0
35	O	1	0	0	0	0
35	R	1	0	0	0	0
35	Y	1	0	0	0	0
36	0	93	0	0	0	0
36	1	1	0	0	0	0
36	3	2	0	0	0	0
36	9	3	0	0	0	0
36	A	3	0	0	0	0
36	B	2	0	0	0	0
36	F	1	0	0	0	0
36	J	1	0	0	0	0
36	R	1	0	0	0	0
36	S	1	0	0	0	0
37	0	39	0	39	11	0
38	1	1	0	0	0	0
38	3	1	0	0	0	0
38	O	1	0	0	0	0
38	U	1	0	0	0	0
38	Z	1	0	0	0	0
39	0	5969	0	0	110	0
39	1	52	0	0	0	0
39	2	44	0	0	0	0
39	3	66	0	0	0	0
39	9	151	0	0	4	0
39	A	111	0	0	2	0
39	B	138	0	0	0	0
39	C	169	0	0	4	0
39	D	44	0	0	0	0
39	E	45	0	0	1	0
39	F	26	0	0	0	0
39	G	17	0	0	0	0
39	H	65	0	0	3	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
39	I	6	0	0	0	0
39	J	51	0	0	1	0
39	K	59	0	0	0	0
39	L	84	0	0	2	0
39	M	119	0	0	0	0
39	N	60	0	0	1	0
39	O	37	0	0	0	0
39	P	67	0	0	0	0
39	Q	42	0	0	0	0
39	R	81	0	0	0	0
39	S	30	0	0	0	0
39	T	34	0	0	0	0
39	U	26	0	0	0	0
39	V	10	0	0	1	0
39	W	67	0	0	1	0
39	X	25	0	0	1	0
39	Y	96	0	0	0	0
39	Z	32	0	0	1	0
All	All	99174	0	59954	1065	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 7.

The worst 5 of 1065 close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1160:G:H5'	1:0:1161:A:H5'	1.19	1.14
31:9:76:G:H3'	31:9:77:A:H5''	1.38	1.04
1:0:871:G:H5'	1:0:871:G:C8	1.96	0.98
1:0:1242:A:H5'	11:J:82:THR:HG23	1.46	0.98
31:9:56:A:H2'	31:9:57:A:H5''	1.47	0.96

There are no symmetry-related clashes.

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 X-ray entries followed by that with respect to entries of similar resolution.

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	A	235/237 (99%)	219 (93%)	13 (6%)	3 (1%)	12	30
3	B	335/337 (99%)	314 (94%)	18 (5%)	3 (1%)	17	40
4	C	244/246 (99%)	227 (93%)	17 (7%)	0	100	100
5	D	134/177 (76%)	121 (90%)	11 (8%)	2 (2%)	10	26
6	E	170/172 (99%)	161 (95%)	9 (5%)	0	100	100
7	F	117/119 (98%)	112 (96%)	3 (3%)	2 (2%)	9	23
8	G	25/348 (7%)	25 (100%)	0	0	100	100
9	H	156/177 (88%)	149 (96%)	5 (3%)	2 (1%)	12	30
10	I	68/70 (97%)	56 (82%)	11 (16%)	1 (2%)	10	26
11	J	140/142 (99%)	135 (96%)	5 (4%)	0	100	100
12	K	130/132 (98%)	124 (95%)	5 (4%)	1 (1%)	19	43
13	L	141/165 (86%)	132 (94%)	9 (6%)	0	100	100
14	M	192/194 (99%)	188 (98%)	4 (2%)	0	100	100
15	N	184/186 (99%)	173 (94%)	8 (4%)	3 (2%)	9	24
16	O	113/115 (98%)	111 (98%)	2 (2%)	0	100	100
17	P	141/143 (99%)	141 (100%)	0	0	100	100
18	Q	93/95 (98%)	89 (96%)	4 (4%)	0	100	100
19	R	148/150 (99%)	143 (97%)	5 (3%)	0	100	100
20	S	79/81 (98%)	77 (98%)	2 (2%)	0	100	100
21	T	117/119 (98%)	112 (96%)	5 (4%)	0	100	100
22	U	51/53 (96%)	48 (94%)	3 (6%)	0	100	100
23	V	63/65 (97%)	60 (95%)	3 (5%)	0	100	100
24	W	152/154 (99%)	148 (97%)	3 (2%)	1 (1%)	22	46
25	X	80/82 (98%)	77 (96%)	3 (4%)	0	100	100
26	Y	140/142 (99%)	137 (98%)	3 (2%)	0	100	100
27	Z	71/73 (97%)	65 (92%)	5 (7%)	1 (1%)	11	28
28	1	54/56 (96%)	52 (96%)	2 (4%)	0	100	100
29	2	42/50 (84%)	42 (100%)	0	0	100	100
30	3	90/92 (98%)	89 (99%)	1 (1%)	0	100	100
All	All	3705/4172 (89%)	3527 (95%)	159 (4%)	19 (0%)	29	54

5 of 19 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	A	37	VAL
15	N	154	LEU
2	A	27	LEU
9	H	19	ARG
24	W	77	ALA

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 X-ray entries followed by that with respect to entries of similar resolution.

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
2	A	179/179 (100%)	171 (96%)	8 (4%)	27 55
3	B	282/282 (100%)	270 (96%)	12 (4%)	29 57
4	C	193/193 (100%)	174 (90%)	19 (10%)	8 18
5	D	117/148 (79%)	110 (94%)	7 (6%)	19 42
6	E	152/152 (100%)	148 (97%)	4 (3%)	46 75
7	F	93/93 (100%)	91 (98%)	2 (2%)	52 79
8	G	27/282 (10%)	27 (100%)	0	100 100
9	H	134/145 (92%)	128 (96%)	6 (4%)	27 55
10	I	58/58 (100%)	57 (98%)	1 (2%)	60 84
11	J	118/118 (100%)	110 (93%)	8 (7%)	16 36
12	K	106/106 (100%)	102 (96%)	4 (4%)	33 62
13	L	113/127 (89%)	106 (94%)	7 (6%)	18 40
14	M	158/158 (100%)	152 (96%)	6 (4%)	33 62
15	N	149/149 (100%)	143 (96%)	6 (4%)	31 60
16	O	93/93 (100%)	89 (96%)	4 (4%)	29 57
17	P	113/113 (100%)	109 (96%)	4 (4%)	36 65
18	Q	79/79 (100%)	75 (95%)	4 (5%)	24 50
19	R	117/117 (100%)	113 (97%)	4 (3%)	37 66
20	S	71/71 (100%)	71 (100%)	0	100 100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
21	T	105/105 (100%)	99 (94%)	6 (6%)	20	44
22	U	44/44 (100%)	44 (100%)	0	100	100
23	V	51/51 (100%)	50 (98%)	1 (2%)	55	81
24	W	130/130 (100%)	123 (95%)	7 (5%)	22	47
25	X	66/66 (100%)	59 (89%)	7 (11%)	6	15
26	Y	120/120 (100%)	116 (97%)	4 (3%)	38	67
27	Z	60/60 (100%)	60 (100%)	0	100	100
28	1	46/46 (100%)	46 (100%)	0	100	100
29	2	42/46 (91%)	41 (98%)	1 (2%)	49	77
30	3	79/79 (100%)	76 (96%)	3 (4%)	33	62
All	All	3095/3410 (91%)	2960 (96%)	135 (4%)	28	56

5 of 135 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
24	W	88	THR
24	W	146	ILE
26	Y	220	GLU
6	E	156	ASP
6	E	102	VAL

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 70 such sidechains are listed below:

Mol	Chain	Res	Type
24	W	141	HIS
26	Y	133	HIS
29	2	18	ASN
11	J	142	ASN
11	J	107	ASN

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	0	2745/2923 (93%)	224 (8%)	30 (1%)
31	9	121/122 (99%)	18 (14%)	1 (0%)
All	All	2866/3045 (94%)	242 (8%)	31 (1%)

5 of 242 RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	0	31	C
1	0	67	A
1	0	69	A
1	0	70	A
1	0	71	G

5 of 31 RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	0	1352	A
1	0	2718	C
1	0	1685	A
1	0	2791	U
1	0	2541	U

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

5 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	$\# Z > 2$
1	1MA	0	628	1,34	16,25,26	1.34	3 (18%)	18,37,40	1.07	2 (11%)
1	PSU	0	2621	1	18,21,22	1.35	2 (11%)	22,30,33	1.17	3 (13%)
1	OMG	0	2588	1	18,26,27	1.02	2 (11%)	19,38,41	0.72	1 (5%)
1	OMU	0	2587	1,34	19,22,23	0.31	0	26,31,34	0.43	0
1	UR3	0	2619	1	19,22,23	0.53	0	26,32,35	0.61	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
1	1MA	0	628	1,34	-	0/3/25/26	0/3/3/3
1	PSU	0	2621	1	-	0/7/25/26	0/2/2/2
1	OMG	0	2588	1	-	0/5/27/28	0/3/3/3
1	OMU	0	2587	1,34	-	0/9/27/28	0/2/2/2
1	UR3	0	2619	1	-	0/7/25/26	0/2/2/2

The worst 5 of 7 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	0	2621	PSU	C2-N1	4.44	1.42	1.36
1	0	628	1MA	C2-N3	3.52	1.33	1.29
1	0	2588	OMG	C5-C6	-2.58	1.42	1.47
1	0	2621	PSU	C6-C5	2.57	1.38	1.35
1	0	2588	OMG	C8-N7	-2.48	1.30	1.35

The worst 5 of 7 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	0	2621	PSU	C6-C5-C4	2.99	120.29	118.20
1	0	628	1MA	N1-C2-N3	2.82	129.31	126.02
1	0	2621	PSU	C6-N1-C2	-2.60	120.03	122.68
1	0	628	1MA	C5-C6-N1	2.52	117.66	113.90
1	0	2621	PSU	O2-C2-N1	2.45	125.49	122.79

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

1 monomer is involved in 1 short contact:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
1	0	2587	OMU	1	0

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 306 ligands modelled in this entry, 305 are monoatomic - leaving 1 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	$\# Z > 2$
37	HMT	0	9101	-	40,43,43	0.66	0	41,66,66	2.05	13 (31%)

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
37	HMT	0	9101	-	-	5/27/74/74	0/5/5/5

There are no bond length outliers.

The worst 5 of 13 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed($^{\circ}$)	Ideal($^{\circ}$)
37	0	9101	HMT	O7-C22-C21	4.55	119.71	111.19
37	0	9101	HMT	O4-C19-C20	4.22	119.11	111.27
37	0	9101	HMT	O1-C17-O2	-4.12	101.49	108.08
37	0	9101	HMT	C18-O3-C2	-3.54	110.58	116.52
37	0	9101	HMT	O1-C14-C13	3.18	132.10	127.85

There are no chirality outliers.

All (5) torsion outliers are listed below:

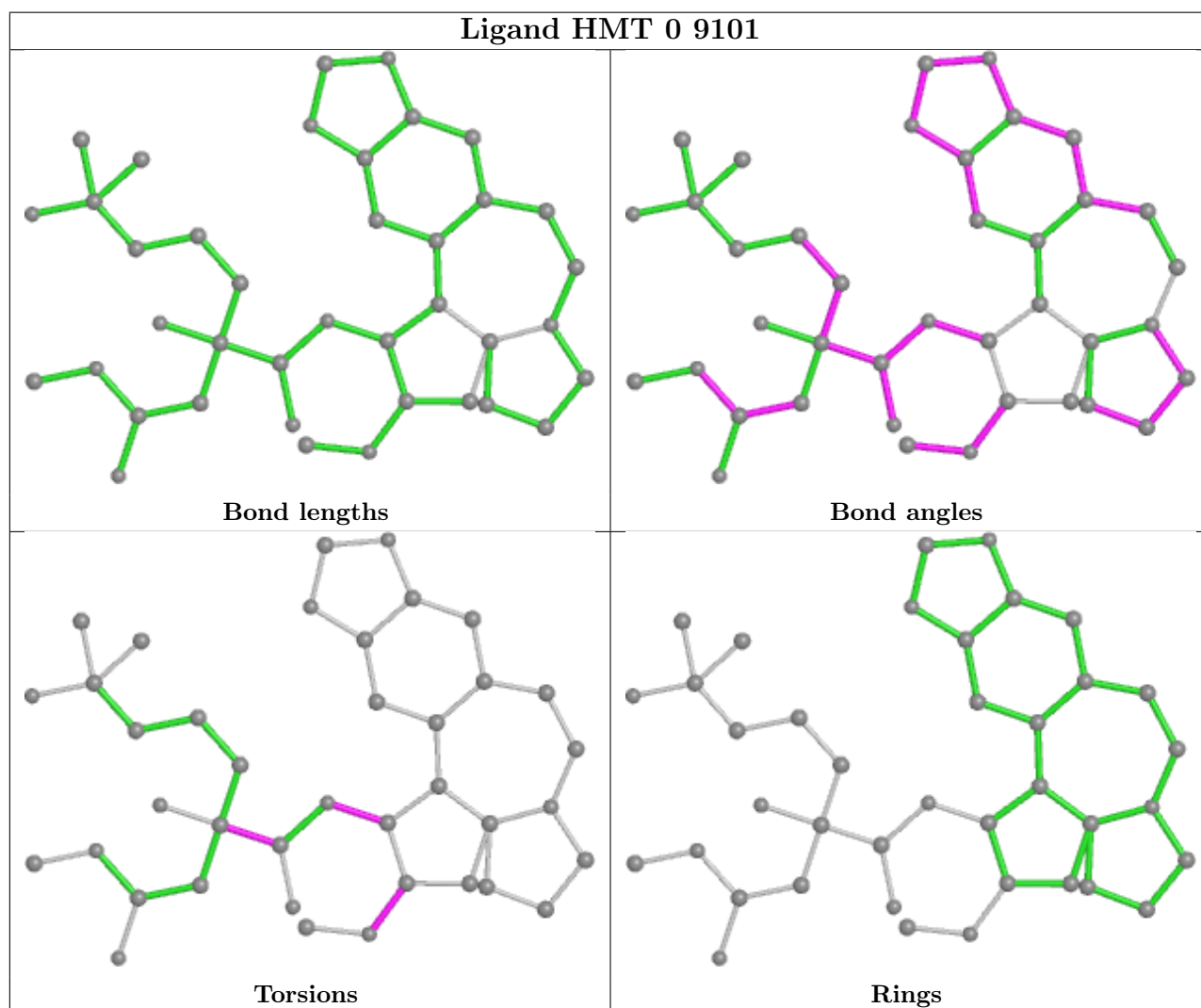
Mol	Chain	Res	Type	Atoms
37	0	9101	HMT	C1-C2-O3-C18
37	0	9101	HMT	C3-C2-O3-C18
37	0	9101	HMT	O5-C19-C20-C24
37	0	9101	HMT	O4-C19-C20-C24
37	0	9101	HMT	C2-C3-O4-C19

There are no ring outliers.

1 monomer is involved in 11 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
37	0	9101	HMT	11	0

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



5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data [i](#)

6.1 Protein, DNA and RNA chains [i](#)

In the following table, the column labelled '#RSRZ > 2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95th percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled 'Q < 0.9' lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	0	2749/2923 (94%)	-0.36	47 (1%) 70 72	22, 50, 99, 170	0
2	A	237/237 (100%)	0.86	37 (15%) 2 1	30, 62, 104, 124	0
3	B	337/337 (100%)	0.39	18 (5%) 26 25	30, 59, 88, 105	0
4	C	246/246 (100%)	0.46	9 (3%) 41 41	25, 51, 78, 88	0
5	D	140/177 (79%)	2.76	82 (58%) 0 0	70, 112, 138, 148	0
6	E	172/172 (100%)	0.74	18 (10%) 6 4	51, 76, 98, 104	0
7	F	119/119 (100%)	1.47	36 (30%) 0 0	58, 83, 116, 132	0
8	G	29/348 (8%)	2.03	12 (41%) 0 0	78, 102, 109, 111	0
9	H	160/177 (90%)	1.40	49 (30%) 0 0	49, 73, 112, 120	0
10	I	70/70 (100%)	5.45	65 (92%) 0 0	140, 157, 176, 177	0
11	J	142/142 (100%)	0.27	3 (2%) 63 65	39, 56, 79, 98	0
12	K	132/132 (100%)	0.28	5 (3%) 40 39	39, 56, 81, 85	0
13	L	145/165 (87%)	1.24	36 (24%) 0 0	30, 76, 128, 140	0
14	M	194/194 (100%)	0.22	2 (1%) 82 83	35, 49, 67, 73	0
15	N	186/186 (100%)	1.43	56 (30%) 0 0	48, 75, 130, 137	0
16	O	115/115 (100%)	0.58	6 (5%) 27 25	42, 61, 79, 88	0
17	P	143/143 (100%)	0.52	7 (4%) 29 28	43, 63, 80, 87	0
18	Q	95/95 (100%)	0.17	0 100 100	40, 53, 67, 79	0
19	R	150/150 (100%)	0.10	0 100 100	33, 51, 71, 82	0
20	S	81/81 (100%)	1.08	16 (19%) 1 0	49, 68, 90, 99	0
21	T	119/119 (100%)	1.06	19 (15%) 1 1	42, 66, 92, 119	0
22	U	53/53 (100%)	0.60	3 (5%) 23 22	46, 63, 84, 89	0
23	V	65/65 (100%)	2.96	35 (53%) 0 0	62, 87, 128, 136	0
24	W	154/154 (100%)	0.41	3 (1%) 66 69	38, 56, 73, 83	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
25	X	82/82 (100%)	0.65	9 (10%) 5 4	50, 68, 93, 107	0
26	Y	142/142 (100%)	0.31	5 (3%) 44 44	26, 50, 75, 96	0
27	Z	73/73 (100%)	2.31	36 (49%) 0 0	69, 94, 110, 115	0
28	1	56/56 (100%)	0.12	0 100 100	30, 36, 44, 54	0
29	2	46/50 (92%)	0.74	8 (17%) 1 1	41, 70, 100, 111	0
30	3	92/92 (100%)	0.86	10 (10%) 5 4	42, 70, 83, 95	0
31	9	122/122 (100%)	-0.42	4 (3%) 46 46	42, 72, 98, 150	0
All	All	6646/7217 (92%)	0.36	636 (9%) 8 6	22, 58, 112, 177	0

The worst 5 of 636 RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
23	V	1	THR	18.1
23	V	39	ALA	16.9
10	I	74	ILE	13.1
5	D	63	ILE	12.3
10	I	128	THR	11.3

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

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
1	1MA	0	628	23/24	0.98	0.18	31,34,35,38	0
1	OMG	0	2588	24/25	0.98	0.15	35,38,39,41	0
1	UR3	0	2619	21/22	0.98	0.16	40,43,45,50	0
1	PSU	0	2621	20/21	0.98	0.15	26,30,42,42	0
1	OMU	0	2587	21/22	0.99	0.14	35,38,41,42	0

6.3 Carbohydrates [i](#)

There are no monosaccharides in this entry.

6.4 Ligands i

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
36	SR	0	8924	1/1	-0.05	0.23	166,166,166,166	0
36	SR	0	9006	1/1	-0.02	0.84	200,200,200,200	0
36	SR	0	8976	1/1	0.06	0.55	199,199,199,199	0
36	SR	J	8986	1/1	0.15	2.11	200,200,200,200	0
36	SR	0	8923	1/1	0.25	0.50	192,192,192,192	0
36	SR	0	8953	1/1	0.31	0.26	179,179,179,179	0
36	SR	0	8956	1/1	0.35	0.21	183,183,183,183	0
34	NA	0	8571	1/1	0.36	0.39	96,96,96,96	0
36	SR	A	8977	1/1	0.40	0.12	182,182,182,182	0
36	SR	B	8987	1/1	0.42	0.79	200,200,200,200	0
36	SR	0	8959	1/1	0.44	0.26	189,189,189,189	0
36	SR	0	8982	1/1	0.45	0.99	200,200,200,200	0
32	MG	A	8051	1/1	0.47	0.31	92,92,92,92	0
36	SR	9	9003	1/1	0.49	0.13	194,194,194,194	0
34	NA	0	8522	1/1	0.52	0.47	96,96,96,96	0
34	NA	0	8561	1/1	0.55	0.68	99,99,99,99	0
36	SR	0	8983	1/1	0.57	0.26	191,191,191,191	0
36	SR	0	8938	1/1	0.57	0.15	198,198,198,198	0
36	SR	0	8913	1/1	0.58	1.02	169,169,169,169	0
36	SR	0	8984	1/1	0.60	0.13	157,157,157,157	0
36	SR	0	8922	1/1	0.60	0.37	158,158,158,158	0
36	SR	0	8934	1/1	0.61	0.91	172,172,172,172	0
36	SR	0	8955	1/1	0.63	0.28	200,200,200,200	0
36	SR	0	8957	1/1	0.63	0.68	200,200,200,200	0
36	SR	9	8978	1/1	0.64	0.22	165,165,165,165	0
36	SR	0	8998	1/1	0.66	0.23	155,155,155,155	0
36	SR	B	8950	1/1	0.66	0.24	123,123,123,123	0
36	SR	0	8979	1/1	0.66	0.20	196,196,196,196	0
36	SR	0	8949	1/1	0.67	0.20	134,134,134,134	0
36	SR	0	8995	1/1	0.67	0.18	148,148,148,148	0
36	SR	0	8919	1/1	0.67	0.17	168,168,168,168	0
34	NA	0	8525	1/1	0.67	0.23	70,70,70,70	0
36	SR	0	8971	1/1	0.67	0.13	181,181,181,181	0
34	NA	0	8546	1/1	0.69	0.66	107,107,107,107	0
36	SR	0	9004	1/1	0.69	0.56	200,200,200,200	0
36	SR	9	8980	1/1	0.69	0.10	188,188,188,188	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
34	NA	9	8572	1/1	0.69	0.29	82,82,82,82	0
36	SR	0	8994	1/1	0.70	0.76	200,200,200,200	0
34	NA	0	8523	1/1	0.70	0.27	54,54,54,54	0
36	SR	0	8933	1/1	0.70	0.47	159,159,159,159	0
36	SR	0	8916	1/1	0.73	0.15	118,118,118,118	0
36	SR	0	8974	1/1	0.74	0.42	183,183,183,183	0
34	NA	0	8533	1/1	0.74	0.23	73,73,73,73	0
36	SR	0	8988	1/1	0.74	0.12	182,182,182,182	0
36	SR	0	8993	1/1	0.74	0.12	186,186,186,186	0
36	SR	0	8990	1/1	0.75	0.30	161,161,161,161	0
34	NA	0	8573	1/1	0.75	0.30	92,92,92,92	0
36	SR	0	8968	1/1	0.76	0.13	168,168,168,168	0
36	SR	0	8992	1/1	0.76	0.17	132,132,132,132	0
36	SR	0	8981	1/1	0.76	0.21	159,159,159,159	0
32	MG	0	8010	1/1	0.77	0.29	52,52,52,52	0
34	NA	0	8562	1/1	0.77	0.56	63,63,63,63	0
32	MG	0	8030	1/1	0.77	0.53	91,91,91,91	0
36	SR	0	8948	1/1	0.78	0.16	107,107,107,107	0
32	MG	0	8083	1/1	0.78	0.15	68,68,68,68	0
36	SR	0	8965	1/1	0.79	0.19	145,145,145,145	0
36	SR	0	8917	1/1	0.79	0.15	117,117,117,117	0
36	SR	0	8989	1/1	0.80	0.34	191,191,191,191	0
34	NA	0	8511	1/1	0.80	0.56	91,91,91,91	0
36	SR	0	8942	1/1	0.80	0.18	138,138,138,138	0
36	SR	0	8944	1/1	0.80	0.18	187,187,187,187	0
32	MG	0	8063	1/1	0.80	0.29	79,79,79,79	0
32	MG	0	8075	1/1	0.80	0.13	58,58,58,58	0
32	MG	9	8074	1/1	0.80	0.18	71,71,71,71	0
34	NA	0	8506	1/1	0.80	0.17	65,65,65,65	0
34	NA	0	8549	1/1	0.81	0.45	64,64,64,64	0
34	NA	0	8509	1/1	0.81	0.33	71,71,71,71	0
32	MG	0	8071	1/1	0.82	0.27	72,72,72,72	0
32	MG	0	8069	1/1	0.82	0.62	82,82,82,82	0
36	SR	0	8969	1/1	0.82	0.14	149,149,149,149	0
34	NA	0	8554	1/1	0.82	0.78	72,72,72,72	0
36	SR	0	8958	1/1	0.83	0.14	105,105,105,105	0
36	SR	0	9001	1/1	0.83	0.17	187,187,187,187	0
36	SR	0	8920	1/1	0.83	0.56	200,200,200,200	0
34	NA	0	8559	1/1	0.83	0.42	98,98,98,98	0
36	SR	A	8930	1/1	0.83	0.15	147,147,147,147	0
32	MG	0	8049	1/1	0.83	0.92	95,95,95,95	0
34	NA	0	8570	1/1	0.84	0.18	59,59,59,59	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
36	SR	0	8947	1/1	0.84	0.49	199,199,199,199	0
34	NA	0	8530	1/1	0.84	0.43	56,56,56,56	0
32	MG	T	8057	1/1	0.84	0.09	70,70,70,70	0
34	NA	0	8564	1/1	0.84	0.36	74,74,74,74	0
37	HMT	0	9101	39/39	0.84	0.30	69,75,86,87	0
36	SR	0	8991	1/1	0.85	0.20	199,199,199,199	0
34	NA	0	8560	1/1	0.85	0.60	73,73,73,73	0
36	SR	0	8945	1/1	0.85	0.11	117,117,117,117	0
34	NA	0	8518	1/1	0.85	0.46	96,96,96,96	0
34	NA	0	8531	1/1	0.85	0.24	56,56,56,56	0
34	NA	0	8548	1/1	0.85	0.34	61,61,61,61	0
36	SR	0	8928	1/1	0.86	0.12	140,140,140,140	0
36	SR	0	8985	1/1	0.86	0.08	122,122,122,122	0
32	MG	0	8039	1/1	0.86	0.31	56,56,56,56	0
32	MG	0	8031	1/1	0.86	0.47	83,83,83,83	0
36	SR	0	9000	1/1	0.86	0.29	180,180,180,180	0
36	SR	S	8961	1/1	0.86	0.09	141,141,141,141	0
32	MG	0	8050	1/1	0.86	0.20	48,48,48,48	0
36	SR	0	9002	1/1	0.86	0.12	176,176,176,176	0
36	SR	0	8970	1/1	0.86	0.06	131,131,131,131	0
34	NA	0	8529	1/1	0.86	0.09	46,46,46,46	0
32	MG	0	8092	1/1	0.87	0.10	80,80,80,80	0
32	MG	0	8066	1/1	0.87	0.22	62,62,62,62	0
36	SR	0	8996	1/1	0.87	0.72	200,200,200,200	0
36	SR	0	8997	1/1	0.87	1.14	200,200,200,200	0
34	NA	0	8575	1/1	0.87	0.38	100,100,100,100	0
34	NA	R	8532	1/1	0.87	0.17	59,59,59,59	0
34	NA	0	8519	1/1	0.87	0.27	42,42,42,42	0
34	NA	0	8556	1/1	0.87	0.32	47,47,47,47	0
34	NA	0	8569	1/1	0.87	0.37	70,70,70,70	0
34	NA	0	8521	1/1	0.87	0.28	67,67,67,67	0
36	SR	0	8960	1/1	0.88	0.08	162,162,162,162	0
32	MG	K	8054	1/1	0.88	0.22	44,44,44,44	0
34	NA	J	8538	1/1	0.88	0.18	62,62,62,62	0
32	MG	9	8040	1/1	0.88	0.45	103,103,103,103	0
34	NA	0	8516	1/1	0.88	0.30	39,39,39,39	0
34	NA	0	8501	1/1	0.89	0.23	43,43,43,43	0
36	SR	0	8926	1/1	0.89	0.12	132,132,132,132	0
32	MG	0	8037	1/1	0.89	0.23	83,83,83,83	0
36	SR	F	9005	1/1	0.89	0.08	138,138,138,138	0
34	NA	Q	8540	1/1	0.89	0.18	67,67,67,67	0
34	NA	0	8507	1/1	0.89	0.26	49,49,49,49	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
32	MG	0	8047	1/1	0.89	0.49	61,61,61,61	0
36	SR	0	9007	1/1	0.89	0.44	200,200,200,200	0
36	SR	A	8929	1/1	0.89	0.22	134,134,134,134	0
33	K	0	8401	1/1	0.89	0.45	130,130,130,130	0
34	NA	0	8553	1/1	0.90	0.40	75,75,75,75	0
32	MG	0	8056	1/1	0.90	0.17	67,67,67,67	0
32	MG	0	8034	1/1	0.90	0.15	48,48,48,48	0
32	MG	0	8081	1/1	0.90	0.19	63,63,63,63	0
36	SR	0	8918	1/1	0.90	0.17	87,87,87,87	0
34	NA	0	8567	1/1	0.91	0.48	81,81,81,81	0
34	NA	0	8542	1/1	0.91	0.47	52,52,52,52	0
32	MG	0	8065	1/1	0.91	0.18	45,45,45,45	0
35	CL	0	8822	1/1	0.91	0.36	74,74,74,74	0
32	MG	0	8087	1/1	0.91	0.17	38,38,38,38	0
32	MG	0	8001	1/1	0.91	0.22	32,32,32,32	0
34	NA	0	8574	1/1	0.91	0.64	75,75,75,75	0
36	SR	0	8975	1/1	0.91	0.17	150,150,150,150	0
32	MG	0	8020	1/1	0.91	0.12	66,66,66,66	0
34	NA	C	8503	1/1	0.91	0.27	40,40,40,40	0
34	NA	0	8524	1/1	0.91	0.37	57,57,57,57	0
34	NA	0	8552	1/1	0.92	0.35	73,73,73,73	0
34	NA	0	8514	1/1	0.92	0.27	47,47,47,47	0
36	SR	0	8963	1/1	0.92	0.15	132,132,132,132	0
34	NA	0	8528	1/1	0.92	0.21	50,50,50,50	0
34	NA	0	8515	1/1	0.92	0.23	43,43,43,43	0
34	NA	0	8557	1/1	0.92	0.15	77,77,77,77	0
34	NA	M	8539	1/1	0.92	0.16	42,42,42,42	0
32	MG	0	8073	1/1	0.92	0.28	96,96,96,96	0
36	SR	0	8936	1/1	0.92	0.15	106,106,106,106	0
32	MG	0	8045	1/1	0.92	0.13	36,36,36,36	0
34	NA	0	8504	1/1	0.92	0.26	34,34,34,34	0
36	SR	0	8943	1/1	0.92	0.11	97,97,97,97	0
34	NA	0	8534	1/1	0.92	0.35	44,44,44,44	0
36	SR	0	8901	1/1	0.92	0.14	93,93,93,93	0
36	SR	0	8911	1/1	0.92	0.09	92,92,92,92	0
34	NA	0	8536	1/1	0.92	0.09	56,56,56,56	0
36	SR	0	8914	1/1	0.92	0.29	113,113,113,113	0
36	SR	0	8951	1/1	0.92	0.05	144,144,144,144	0
34	NA	0	8565	1/1	0.92	0.67	73,73,73,73	0
32	MG	0	8067	1/1	0.92	0.31	35,35,35,35	0
32	MG	0	8032	1/1	0.92	0.08	41,41,41,41	0
32	MG	0	8085	1/1	0.92	0.14	89,89,89,89	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
32	MG	0	8055	1/1	0.92	0.27	44,44,44,44	0
35	CL	J	8802	1/1	0.93	0.12	72,72,72,72	0
35	CL	3	8804	1/1	0.93	0.07	65,65,65,65	0
32	MG	0	8041	1/1	0.93	0.34	26,26,26,26	0
32	MG	0	8088	1/1	0.93	0.17	42,42,42,42	0
32	MG	0	8090	1/1	0.93	0.25	96,96,96,96	0
32	MG	0	8070	1/1	0.93	0.21	58,58,58,58	0
36	SR	0	8915	1/1	0.93	0.09	128,128,128,128	0
32	MG	0	8044	1/1	0.93	0.13	55,55,55,55	0
32	MG	B	8042	1/1	0.93	0.16	60,60,60,60	0
34	NA	0	8568	1/1	0.93	0.32	60,60,60,60	0
34	NA	0	8541	1/1	0.93	0.31	59,59,59,59	0
32	MG	0	8072	1/1	0.93	0.24	62,62,62,62	0
32	MG	0	8059	1/1	0.93	0.11	50,50,50,50	0
34	NA	0	8547	1/1	0.93	0.55	49,49,49,49	0
32	MG	2	8060	1/1	0.93	0.12	56,56,56,56	0
34	NA	0	8520	1/1	0.93	0.24	60,60,60,60	0
36	SR	0	9008	1/1	0.93	0.15	96,96,96,96	0
36	SR	0	8927	1/1	0.93	0.19	172,172,172,172	0
36	SR	0	8972	1/1	0.93	0.15	135,135,135,135	0
32	MG	0	8018	1/1	0.93	0.27	39,39,39,39	0
32	MG	0	8079	1/1	0.93	0.32	60,60,60,60	0
32	MG	0	8036	1/1	0.93	0.10	50,50,50,50	0
32	MG	0	8016	1/1	0.93	0.32	50,50,50,50	0
34	NA	0	8502	1/1	0.93	0.27	69,69,69,69	0
36	SR	0	8941	1/1	0.93	0.17	113,113,113,113	0
36	SR	3	8999	1/1	0.93	0.11	110,110,110,110	0
34	NA	9	8544	1/1	0.93	0.23	68,68,68,68	0
34	NA	0	8558	1/1	0.93	0.48	50,50,50,50	0
35	CL	0	8805	1/1	0.93	0.10	70,70,70,70	0
32	MG	0	8025	1/1	0.93	0.14	28,28,28,28	0
32	MG	0	8089	1/1	0.94	0.11	45,45,45,45	0
35	CL	Y	8820	1/1	0.94	0.09	45,45,45,45	0
34	NA	0	8563	1/1	0.94	0.34	70,70,70,70	0
34	NA	0	8537	1/1	0.94	0.19	45,45,45,45	0
36	SR	0	8908	1/1	0.94	0.12	100,100,100,100	0
36	SR	0	8910	1/1	0.94	0.20	108,108,108,108	0
32	MG	0	8064	1/1	0.94	0.26	46,46,46,46	0
34	NA	0	8566	1/1	0.94	0.34	47,47,47,47	0
36	SR	0	8962	1/1	0.94	0.20	168,168,168,168	0
32	MG	0	8029	1/1	0.94	0.18	49,49,49,49	0
36	SR	0	8964	1/1	0.94	0.10	130,130,130,130	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
32	MG	0	8023	1/1	0.94	0.22	28,28,28,28	0
34	NA	S	8510	1/1	0.94	0.22	51,51,51,51	0
32	MG	0	8062	1/1	0.94	0.32	55,55,55,55	0
32	MG	0	8021	1/1	0.94	0.18	40,40,40,40	0
32	MG	0	8078	1/1	0.94	0.30	49,49,49,49	0
34	NA	0	8550	1/1	0.94	0.30	59,59,59,59	0
36	SR	0	8921	1/1	0.94	0.14	94,94,94,94	0
35	CL	J	8801	1/1	0.94	0.20	70,70,70,70	0
35	CL	0	8816	1/1	0.95	0.14	63,63,63,63	0
34	NA	0	8508	1/1	0.95	0.34	46,46,46,46	0
32	MG	0	8077	1/1	0.95	0.17	38,38,38,38	0
34	NA	9	8543	1/1	0.95	0.20	50,50,50,50	0
36	SR	0	8935	1/1	0.95	0.13	89,89,89,89	0
35	CL	L	8810	1/1	0.95	0.14	54,54,54,54	0
32	MG	0	8024	1/1	0.95	0.22	47,47,47,47	0
32	MG	0	8027	1/1	0.95	0.12	41,41,41,41	0
32	MG	0	8053	1/1	0.95	0.09	79,79,79,79	0
36	SR	0	8966	1/1	0.96	0.08	113,113,113,113	0
36	SR	0	8967	1/1	0.96	0.06	132,132,132,132	0
36	SR	0	8939	1/1	0.96	0.14	147,147,147,147	0
32	MG	0	8013	1/1	0.96	0.08	35,35,35,35	0
33	K	0	8402	1/1	0.96	0.11	65,65,65,65	0
32	MG	0	8068	1/1	0.96	0.09	57,57,57,57	0
32	MG	0	8061	1/1	0.96	0.30	30,30,30,30	0
36	SR	0	8973	1/1	0.96	0.16	139,139,139,139	0
32	MG	0	8093	1/1	0.96	0.10	42,42,42,42	0
34	NA	0	8505	1/1	0.96	0.48	42,42,42,42	0
32	MG	0	8080	1/1	0.96	0.35	75,75,75,75	0
35	CL	0	8811	1/1	0.96	0.14	65,65,65,65	0
35	CL	0	8815	1/1	0.96	0.16	66,66,66,66	0
32	MG	0	8009	1/1	0.96	0.29	31,31,31,31	0
32	MG	0	8082	1/1	0.96	0.31	70,70,70,70	0
34	NA	0	8551	1/1	0.96	0.30	49,49,49,49	0
32	MG	0	8008	1/1	0.96	0.20	29,29,29,29	0
32	MG	0	8043	1/1	0.96	0.13	45,45,45,45	0
36	SR	R	8912	1/1	0.96	0.21	90,90,90,90	0
34	NA	0	8512	1/1	0.96	0.35	48,48,48,48	0
36	SR	1	8952	1/1	0.96	0.16	85,85,85,85	0
34	NA	0	8555	1/1	0.96	0.52	59,59,59,59	0
34	NA	0	8513	1/1	0.96	0.20	53,53,53,53	0
32	MG	0	8035	1/1	0.96	0.22	63,63,63,63	0
32	MG	0	8019	1/1	0.96	0.35	28,28,28,28	0

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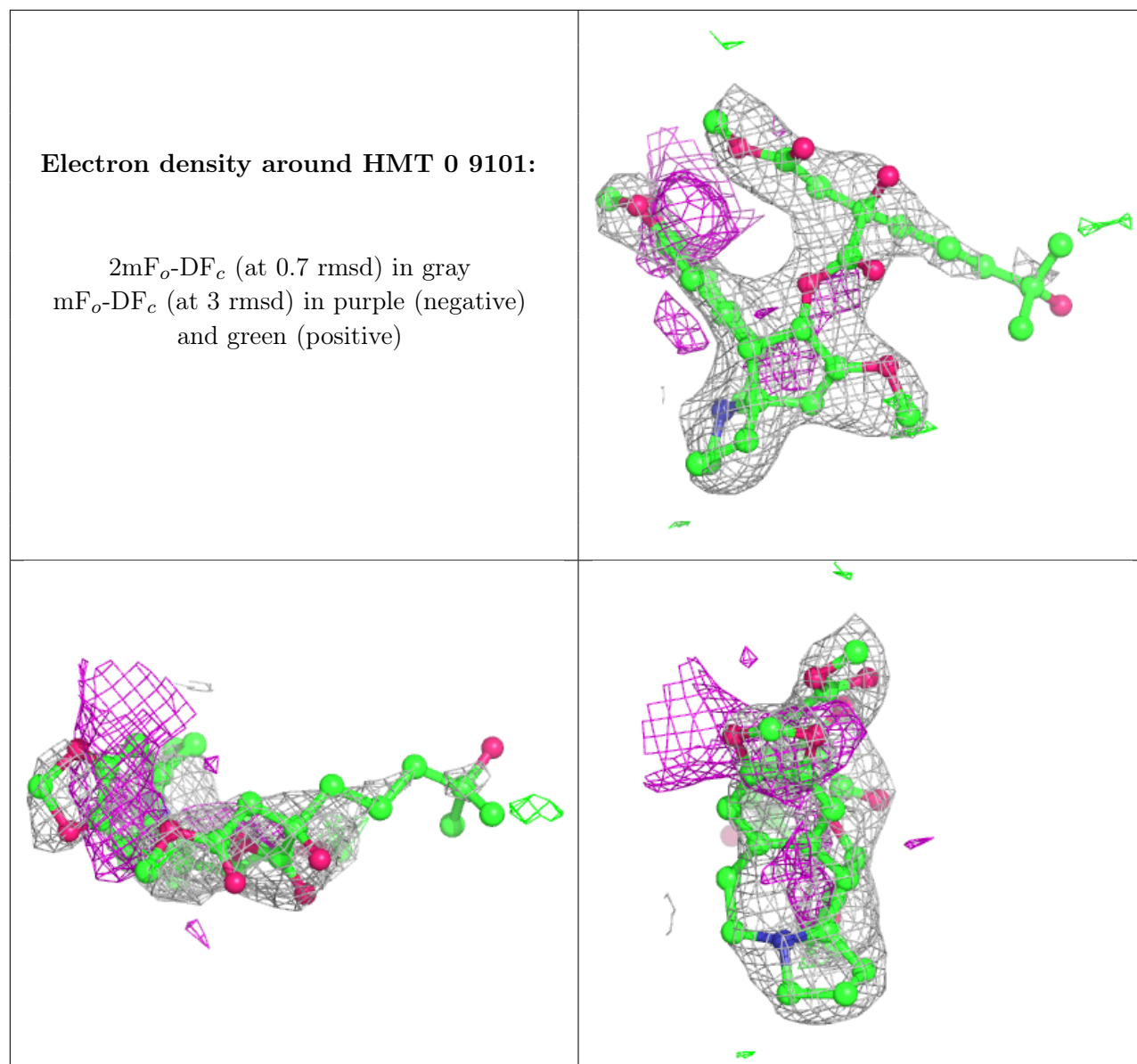
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
34	NA	0	8535	1/1	0.96	0.21	52,52,52,52	0
32	MG	0	8022	1/1	0.97	0.21	38,38,38,38	0
32	MG	0	8011	1/1	0.97	0.35	31,31,31,31	0
32	MG	0	8046	1/1	0.97	0.17	39,39,39,39	0
36	SR	0	8940	1/1	0.97	0.11	84,84,84,84	0
32	MG	0	8004	1/1	0.97	0.23	29,29,29,29	0
32	MG	0	8038	1/1	0.97	0.07	63,63,63,63	0
32	MG	0	8084	1/1	0.97	0.18	40,40,40,40	0
32	MG	0	8002	1/1	0.97	0.19	25,25,25,25	0
36	SR	0	8902	1/1	0.97	0.18	59,59,59,59	0
36	SR	0	8946	1/1	0.97	0.19	117,117,117,117	0
32	MG	Y	8086	1/1	0.97	0.14	46,46,46,46	0
36	SR	0	8909	1/1	0.97	0.16	100,100,100,100	0
32	MG	0	8052	1/1	0.97	0.10	54,54,54,54	0
35	CL	0	8813	1/1	0.97	0.08	53,53,53,53	0
36	SR	0	8931	1/1	0.97	0.10	114,114,114,114	0
36	SR	0	8954	1/1	0.97	0.12	109,109,109,109	0
32	MG	0	8033	1/1	0.97	0.16	54,54,54,54	0
32	MG	0	8017	1/1	0.97	0.23	39,39,39,39	0
35	CL	0	8817	1/1	0.97	0.11	64,64,64,64	0
35	CL	0	8814	1/1	0.98	0.11	49,49,49,49	0
34	NA	0	8526	1/1	0.98	0.07	47,47,47,47	0
34	NA	0	8527	1/1	0.98	0.22	55,55,55,55	0
32	MG	0	8048	1/1	0.98	0.29	28,28,28,28	0
34	NA	0	8517	1/1	0.98	0.20	38,38,38,38	0
35	CL	A	8809	1/1	0.98	0.35	72,72,72,72	0
35	CL	B	8819	1/1	0.98	0.16	52,52,52,52	0
32	MG	0	8028	1/1	0.98	0.28	33,33,33,33	0
35	CL	0	8803	1/1	0.98	0.08	53,53,53,53	0
36	SR	0	8937	1/1	0.98	0.27	104,104,104,104	0
35	CL	J	8821	1/1	0.98	0.12	57,57,57,57	0
32	MG	0	8006	1/1	0.98	0.19	30,30,30,30	0
36	SR	3	8932	1/1	0.98	0.15	84,84,84,84	0
35	CL	N	8807	1/1	0.98	0.17	68,68,68,68	0
35	CL	O	8808	1/1	0.98	0.27	69,69,69,69	0
34	NA	0	8545	1/1	0.98	0.14	35,35,35,35	0
35	CL	0	8812	1/1	0.98	0.09	46,46,46,46	0
32	MG	0	8012	1/1	0.98	0.24	22,22,22,22	0
38	CD	Z	8703	1/1	0.98	0.07	98,98,98,98	0
32	MG	0	8076	1/1	0.99	0.13	41,41,41,41	0
32	MG	0	8014	1/1	0.99	0.22	30,30,30,30	0
35	CL	M	8818	1/1	0.99	0.11	46,46,46,46	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
32	MG	0	8015	1/1	0.99	0.22	36,36,36,36	0
32	MG	0	8026	1/1	0.99	0.12	36,36,36,36	0
35	CL	R	8806	1/1	0.99	0.16	47,47,47,47	0
32	MG	0	8005	1/1	0.99	0.30	34,34,34,34	0
32	MG	0	8003	1/1	0.99	0.21	34,34,34,34	0
32	MG	0	8091	1/1	0.99	0.06	60,60,60,60	0
32	MG	0	8058	1/1	0.99	0.12	30,30,30,30	0
36	SR	0	8903	1/1	0.99	0.21	58,58,58,58	0
36	SR	0	8904	1/1	0.99	0.20	56,56,56,56	0
36	SR	0	8905	1/1	0.99	0.30	68,68,68,68	0
36	SR	0	8906	1/1	0.99	0.24	59,59,59,59	0
36	SR	0	8907	1/1	0.99	0.17	57,57,57,57	0
36	SR	0	8925	1/1	0.99	0.13	97,97,97,97	0
38	CD	O	8705	1/1	0.99	0.06	99,99,99,99	0
38	CD	U	8701	1/1	0.99	0.18	72,72,72,72	0
32	MG	0	8007	1/1	0.99	0.26	31,31,31,31	0
38	CD	3	8704	1/1	0.99	0.08	76,76,76,76	0
38	CD	1	8702	1/1	1.00	0.09	57,57,57,57	0

The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.



6.5 Other polymers [i](#)

There are no such residues in this entry.