



## wwPDB EM Validation Summary Report ⓘ

Dec 11, 2022 – 01:29 pm GMT

PDB ID : 6SPF  
EMDB ID : EMD-10284  
Title : Pseudomonas aeruginosa 70s ribosome from an aminoglycoside resistant clinical isolate  
Authors : Halfon, Y.; Jimenez-Fernande, A.; La Ros, R.; Espinos, R.; Krogh Johansen, H.; Matzov, D.; Eyal, Z.; Bashan, A.; Zimmerman, E.; Belousoff, M.; Molin, S.; Yonath, A.  
Deposited on : 2019-09-01  
Resolution : 2.89 Å(reported)

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

We welcome your comments at [validation@mail.wwpdb.org](mailto: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.dev43  
MolProbity : 4.02b-467  
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) : 2.31.3

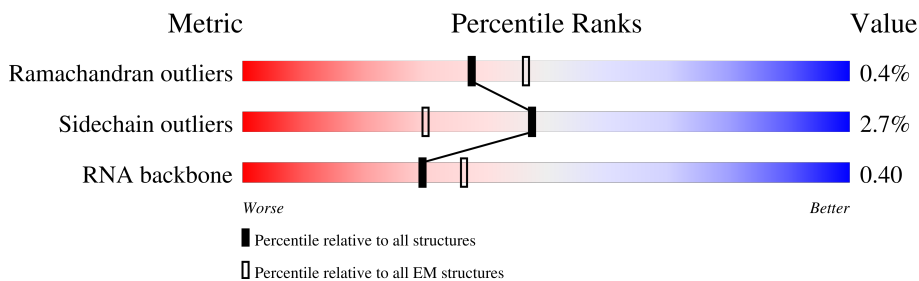
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*ELECTRON MICROSCOPY*

The reported resolution of this entry is 2.89 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  $\geq 3$ , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions  $\leq 5\%$ . The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion  $< 40\%$ ). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	2888	
2	B	117	
3	C	271	
4	D	207	
5	E	199	
6	F	174	
7	G	169	
8	H	78	

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
9	I	140	100% 98%
10	J	141	99%
11	K	120	97%
12	L	144	98%
13	M	136	99%
14	N	120	98%
15	O	115	38% 96%
16	P	114	97%
17	Q	117	97%
18	R	102	5% 95% 5%
19	S	110	98%
20	T	94	97%
21	U	103	6% 99%
22	V	188	97%
23	W	76	99%
24	X	77	99%
25	Y	60	98%
26	Z	57	96%
27	1	31	100% 100%
28	2	53	98%
29	3	50	44% 98%
30	4	44	98%
31	5	63	97%
32	6	38	97%
33	a	1521	32% 51% 38% 9%

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
34	b	226	80% 94% ..
35	c	203	99% 100%
36	d	204	76% 98% .
37	e	150	70% 97% ..
38	f	100	87% 99% .
39	g	154	97% 98% .
40	h	129	58% 95% 5% .
41	i	126	91% 97% .
42	j	96	99% 99% .
43	k	115	83% 98% .
44	l	120	72% 97% .
45	m	110	93% 95% ..
46	n	98	98% 98% .
47	o	87	59% 91% 9%
48	p	78	46% 99% .
49	q	76	34% 96% .
50	r	56	82% 98% .
51	s	80	95% 96% ..
52	t	86	29% 100%
53	u	34	97% 100%

## 2 Entry composition [i](#)

There are 53 unique types of molecules in this entry. The entry contains 138296 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 Pseudomonas aeruginosa strain PAO1 23S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
1	A	2885	61899	27618	11351	20046	2884	0	0

- Molecule 2 is a RNA chain called 5S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
2	B	117	2495	1114	448	816	117	0	0

- Molecule 3 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	C	271	2048	1258	422	362	6	0	0

- Molecule 4 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	D	207	1549	960	297	287	5	0	0

- Molecule 5 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	E	199	1509	948	281	278	2	0	0

- Molecule 6 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	F	174	1278	806	225	244	3	0	0

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
F	7	LEU	ILE	conflict	UNP A0A072ZMU2

- Molecule 7 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
7	G	169	1264	795	233	234	2	0	0

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
G	?	-	GLY	deletion	UNP A0A2V3F3S9
G	?	-	TYR	deletion	UNP A0A2V3F3S9
G	?	-	LYS	deletion	UNP A0A2V3F3S9
G	?	-	ALA	deletion	UNP A0A2V3F3S9

- Molecule 8 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
8	H	78	577	363	104	110	0	0

- Molecule 9 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
9	I	140	1026	642	183	198	3	0	0

- Molecule 10 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
10	J	141	1122	713	205	201	3	0	0

- Molecule 11 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
11	K	120	922	576	178	162	6	0	0

- Molecule 12 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
12	L	144	1063	653	214	193	3	0	0

- Molecule 13 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
13	M	136	1076	684	210	179	3	0	0

- Molecule 14 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
14	N	120	959	600	192	162	5	0	0

- Molecule 15 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
15	O	115	881	544	174	161	2	0	0

- Molecule 16 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
16	P	114	901	567	171	162	1	0	0

- Molecule 17 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
17	Q	117	936	592	196	148	0	0

- Molecule 18 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
18	R	102	801	509	154	136	2	0	0

- Molecule 19 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	S	110	Total	C	N	O	S	0	0
			833	515	161	153	4		

- Molecule 20 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	T	94	Total	C	N	O	S	0	0
			732	469	132	130	1		

- Molecule 21 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	U	103	Total	C	N	O	S	0	0
			801	503	152	144	2		

- Molecule 22 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	V	188	Total	C	N	O	S	0	0
			1397	888	254	253	2		

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
V	6	VAL	LEU	conflict	UNP A0A072ZBM5
V	71	VAL	ALA	conflict	UNP A0A072ZBM5

- Molecule 23 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms				AltConf	Trace
23	W	76	Total	C	N	O	0	0
			574	365	110	99		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
W	40	LEU	GLN	conflict	UNP A0A071LFT4

- Molecule 24 is a protein called 50S ribosomal protein L28.



Mol	Chain	Residues	Atoms					AltConf	Trace
24	X	77	Total	C	N	O	S	0	0
			626	389	134	101	2		

- Molecule 25 is a protein called Ribosomal protein uL29.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	Y	60	Total	C	N	O	S	0	0
			468	286	96	85	1		

- Molecule 26 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	Z	57	Total	C	N	O	S	0	0
			445	277	87	79	2		

- Molecule 27 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	1	31	Total	C	N	O	S	0	0
			232	144	40	45	3		

- Molecule 28 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	2	53	Total	C	N	O	S	0	0
			419	251	89	78	1		

- Molecule 29 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms				AltConf	Trace
29	3	50	Total	C	N	O	0	0
			408	262	74	72		

- Molecule 30 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	4	44	Total	C	N	O	S	0	0
			364	222	87	53	2		

- Molecule 31 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	5	63	Total	C	N	O	S	0	0
			502	311	107	81	3		

- Molecule 32 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	6	38	Total	C	N	O	S	0	0
			303	184	69	46	4		

- Molecule 33 is a RNA chain called 16S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	a	1390	Total	C	N	O	P	0	0
			29826	13303	5479	9654	1390		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
a	101	A	G	conflict	GB 1378074500

- Molecule 34 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	b	221	Total	C	N	O	S	0	0
			1698	1070	309	310	9		

- Molecule 35 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	c	203	Total	C	N	O	S	0	0
			1609	1017	303	284	5		

- Molecule 36 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	d	204	Total	C	N	O	S	0	0
			1596	988	310	293	5		

- Molecule 37 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	e	149	Total	C	N	O	S	0	0
			1092	687	202	197	6		

- Molecule 38 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	f	100	Total	C	N	O	S	0	0
			802	497	152	149	4		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
f	80	ALA	TYR	conflict	UNP A0A069Q263

- Molecule 39 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	g	154	Total	C	N	O	S	0	0
			1190	747	227	211	5		

- Molecule 40 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	h	129	Total	C	N	O	S	0	0
			965	608	171	180	6		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
h	94	ALA	LYS	conflict	UNP E2RXT9

- Molecule 41 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	i	126	Total	C	N	O	S	0	0
			994	616	198	179	1		

- Molecule 42 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	j	96	Total	C	N	O	S	0	0
			763	479	143	140	1		

- Molecule 43 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
43	k	115	832	514	160	156	2	0	0

- Molecule 44 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
44	l	120	942	577	195	166	4	0	0

- Molecule 45 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
45	m	109	847	515	173	155	4	0	0

- Molecule 46 is a protein called 30S ribosomal protein S14.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
46	n	98	776	479	163	131	3	0	0

- Molecule 47 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
47	o	87	691	428	135	127	1	0	0

- Molecule 48 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
48	p	78	609	381	120	107	1	0	0

- Molecule 49 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
49	q	76	619	387	120	110	2	0	0

- Molecule 50 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				AltConf	Trace
50	r	56	Total	C	N	O	0	0
			443	283	79	81		

- Molecule 51 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	s	80	Total	C	N	O	S	0	0
			635	405	121	106	3		

- Molecule 52 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	t	86	Total	C	N	O	S	0	0
			662	410	137	113	2		

- Molecule 53 is a protein called 30S ribosomal protein S21.

Mol	Chain	Residues	Atoms				AltConf	Trace
53	u	34	Total	C	N	O	0	0
			295	178	70	47		

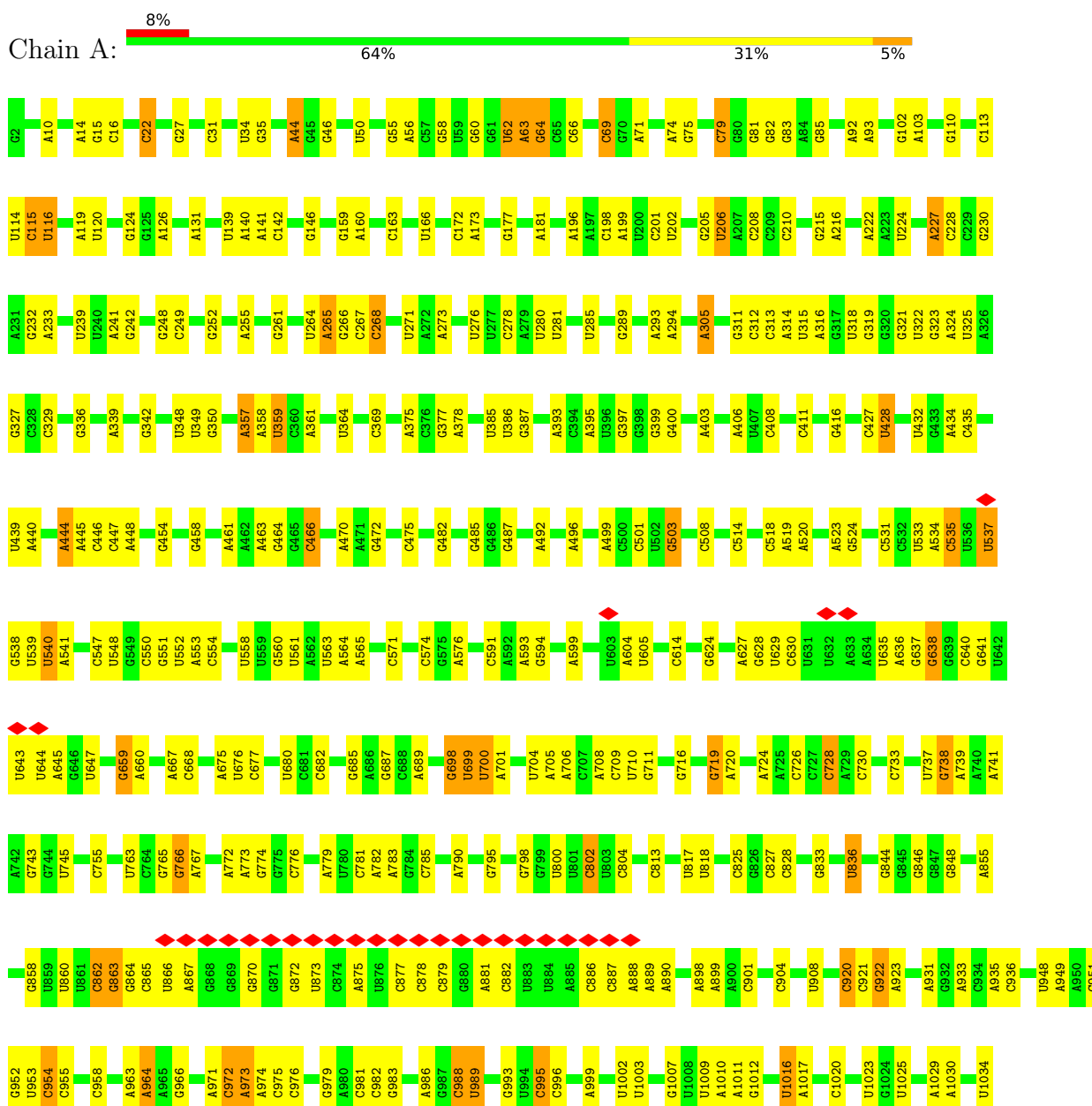
There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
u	46	ARG	LYS	conflict	UNP A0A069QC99

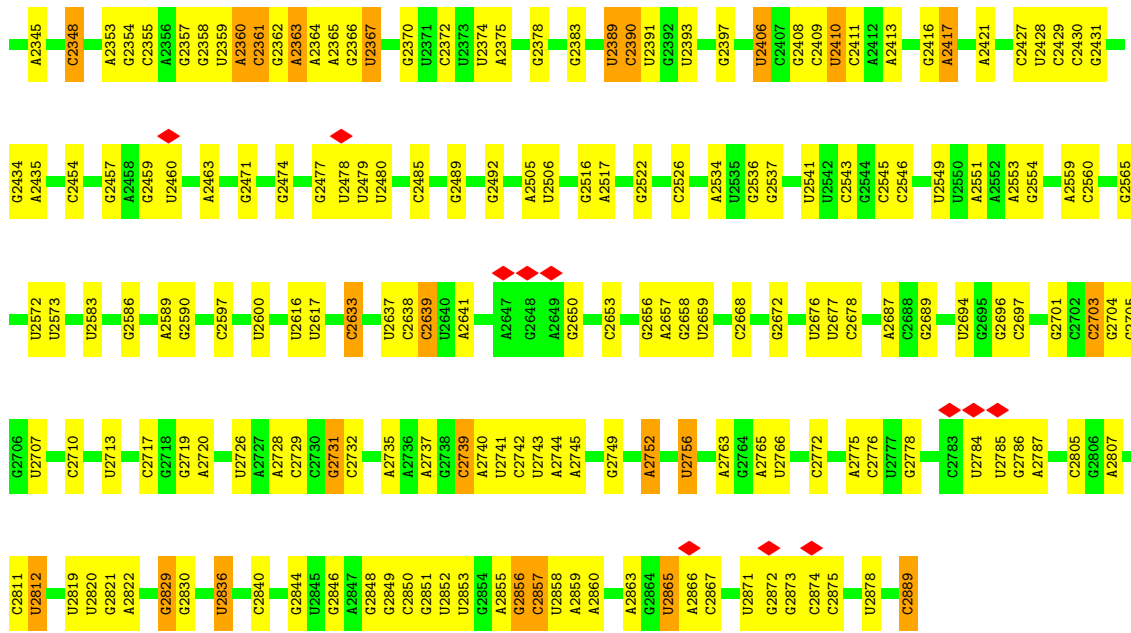
### 3 Residue-property plots

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

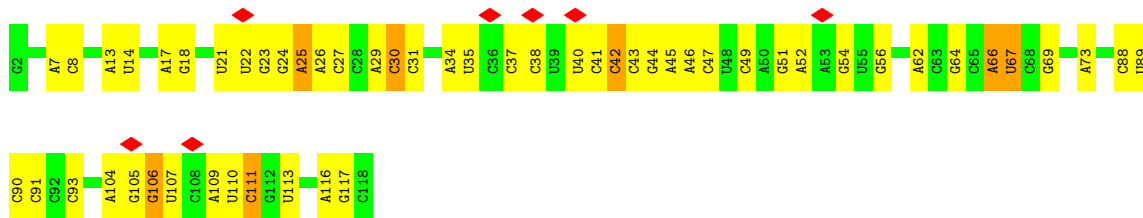
- Molecule 1: *Pseudomonas aeruginosa* strain PAO1 23S ribosomal RNA



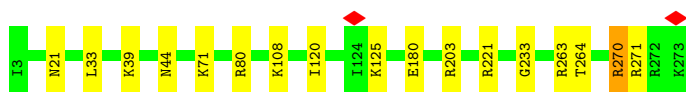
A2274	A2275	G2276	G2277	G2278	C2280	G2281	G2282	G2283	C2289	G2290	G2291	G2292	G2293	G2294	G2295	A2296	A2297	G2298	G2299	C2300	G2301	C2304	G2305	C2306	A2307	G2308	A2312	G2313	A2314	A2315	A2316	G2317	C2318	C2319	A2320	A2321	A2322	A2323	G2324	G2325	G2326	G2327	G2328	C2329	U2330	U2331	G2332	A2333	C2334	G2337	G2338	A2339	C2342						
U2154	G2155	A2156	A2157	A2158	U2159	A2160	C2161	C2162	A2163	C2164	C2165	C2166	G2167	G2168	G2169	C2170	A2171	U2172	G2173	C2174	U2175	C2176	G2177	A2178	A2185	U2189	U2190	G2191	C2194	A2199	A2212	G2225	G2226	A2228	G2229	U2230	G2237	U2246	U2252	A2253	A2254	G2257	G2258	A2265	U2270														
C2094	U2095	U2096	G2097	U2098	G2099	U2100	A2101	G2102	G2103	A2104	U2105	A2106	G2107	G2108	U2109	G2110	G2111	G2112	A2113	G2114	C2115	C2116	U2117	U2118	U2119	G2120	A2121	A2122	G2123	C2124	G2125	U2126	G2127	G2128	A2129	C2130	G2131	C2132	C2133	A2134	G2135	U2136	U2137	C2138	G2139	C2140	G2141	U2142	G2143	G2144	A2145	G2146	C2147	C2148	A2149	U2150	C2151	C2152	U2153
C1883	C1884	C1887	G1891	G1892	C1893	C1896	U2003	A2006	A2007	C2010	G2011	C2012	A2018	G2019	A2020	U2021	G2022	C2023	U2030	C2031	C2034	A2039	C2042	G2043	A2047	G2048	A2049	G2054	U2055	G2056	C2059	C2060	U2063	A2064	U2079	G2080	G2081	A2082	C2083	U2084	C2090	G2091	U2092	G2093															
C1874	G1875	G1890	G1893	G1894	C1895	C1896	U1897	U1898	A1899	A1900	C1901	U1902	A1903	U1904	A1905	C1907	G1908	G1909	U1910	C1911	G1912	U1913	G1916	G1917	U1918	A1924	A1925	U1926	U1927	U1930	U1938	U1942	U1943	C1952	A1953	C1954	A1957	U1958	G1959	U1968	U1969	A1968	U1969	C1972	U1976	U1979	U1980												
U1769	A1770	A1771	A1774	C1775	C1780	C1787	A1788	A1789	A1790	C1791	A1795	A1796	A1797	G1798	G1801	A1802	C1803	U1807	U1814	C1817	C1820	C1823	G1829	A1834	A1835	U1838	A1841	A1853	G1854	C1855	G1856	C1857	A1858	A1859	G1860	C1861	A1862	G1863	A1864	A1865	G1871	A1872	U1873																
G1643	U1652	G1657	C1660	G1664	C1665	A1666	G1671	U1683	C1684	G1685	G1686	G1700	U1708	U1709	A1710	A1711	U1715	U1716	U1717	A1718	U1719	U1720	U1724	A1725	G1736	C1739	G1740	A1741	A1742	U1745	A1746	G1750	G1751	C1755	U1756	G1757	G1758	U1759	A1760	C1761	U1762	G1763	U1768																
G1306	C1307	A1308	G1311	U1316	C1317	C1320	U1327	U1328	U1331	C1332	G1333	U1334	U1339	A1346	C1349	A1352	A1355	G1356	C1357	G1361	U1362	C1363	U1366	A1367	G1368	G1369	A1370	A1371	A1372	C1373	A1382	C1385	G1397	G1403	C1404	G1405	U1407	G1408	A1414	C1415																			
U1035	A1036	G1037	A1038	G1041	C1042	U1043	A1044	G1045	G1046	A1047	G1048	G1049	U1050	U1051	G1052	G1053	C1054	U1055	U1056	A1057	G1058	A1059	A1060	G1061	C1062	A1063	G1064	C1065	C1066	A1067	C1068	C1069	C1070	U1071	U1072	U1073	A1074	A1075	A1076	G1077	A1078	A1079	A1080	G1081	C1082	G1083	U1084	A1085	A1086	U1087	A1088	G1089	C1090	U1091	C1092	A1093	C1094	U1095	
A1096	G1097	U1098	C1099	G1100	A1101	G1102	U1103	C1104	G1105	U1106	C1107	A1117	G1118	A1119	U1120	G1121	A1122	A1123	C1125	G1129	U1130	U1131	C1132	A1133	A1138	A1142	A1146	A1147	G1148	G1154	G1155	G1157	C1161	G1162	U1163	A1164	A1165	G1166	U1167	G1168	A1169	C1170	A1191	A1192	U1300	C1301													
G1199	U1204	G1205	A1211	G1212	A1213	A1214	C1220	U1221	G1222	G1223	A1224	G1225	U1227	A1228	U1229	A1233	A1234	G1235	U1236	G1237	C1238	G1239	A1240	A1241	U1242	G1243	A1249	G1253	U1254	G1258	A1259	C1260	A1261	U1262	U1263	A1271	C1276	A1281	A1288	C1292	C1293	U1299	U1300	C1301															
A1420	A1421	C1424	C1430	A1431	G1432	U1434	G1439	U1440	U1441	G1442	U1447	G1448	U1454	U1463	U1468	G1469	U1475	U1480	A1481	U1484	U1492	A1495	A1496	G1497	C1500	G1503	C1506	U1507	G1508	A1509	U1510	G1511	A1515	G1516	U1517	C1518	G1519	U1520	C1521	U1522																			
U	U	A1526	G1527	U1528	U1529	A1531	C1532	U1537	G1542	U1549	C1555	A1556	A1557	G1558	A1560	U1568	G1571	C1572	U1573	U1574	G1575	A1576	A1580	C1596	A1597	A1598	A1600	C1601	C1602	G1603	G1616	A1622	G1623	A1624	C1629	C1634	G1635	C1636	U1637	U1638	G1639	A1640	A1641	A1642															



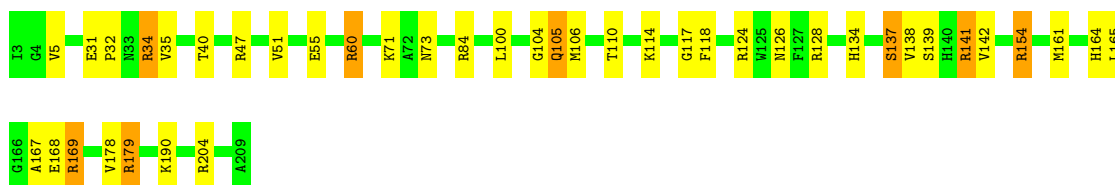
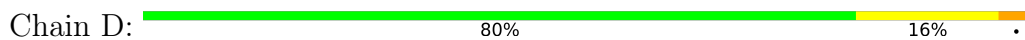
• Molecule 2: 5S rRNA



• Molecule 3: 50S ribosomal protein L2



• Molecule 4: 50S ribosomal protein L3

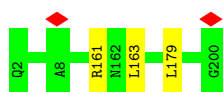


• Molecule 5: 50S ribosomal protein L4



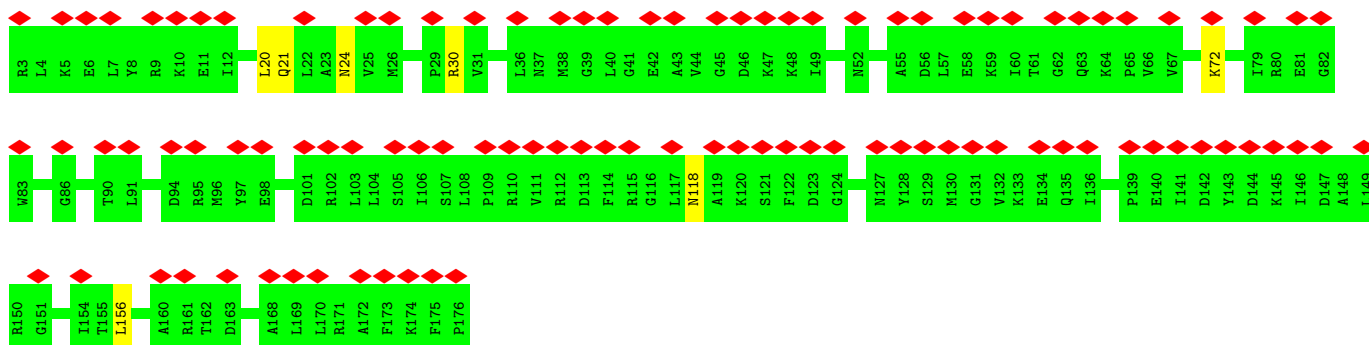


Chain E:  98%



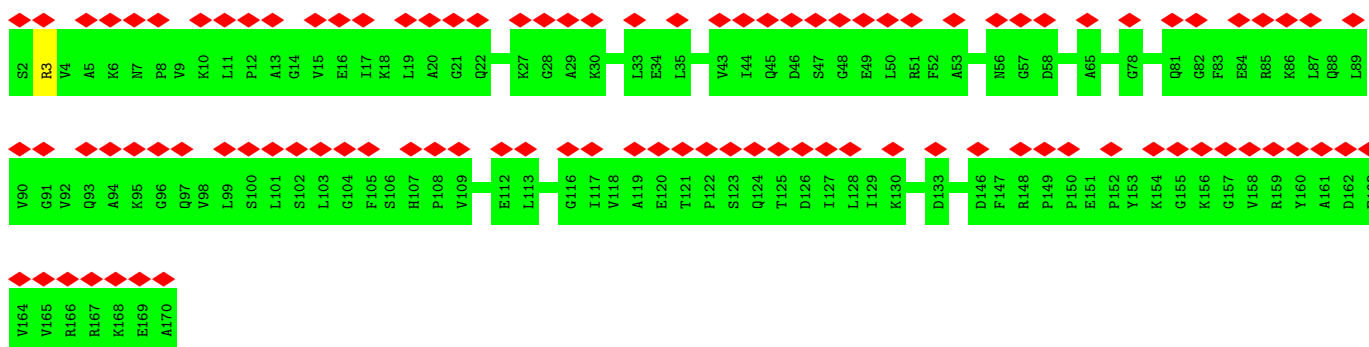
- Molecule 6: 50S ribosomal protein L5

Chain F:  96%



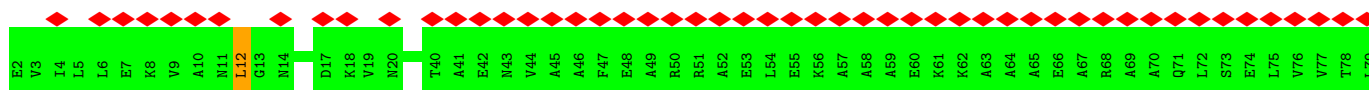
- Molecule 7: 50S ribosomal protein L6

Chain G:  99%



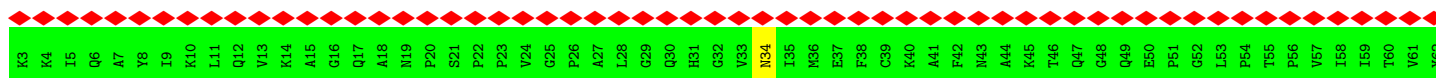
- Molecule 8: 50S ribosomal protein L9

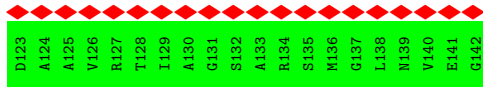
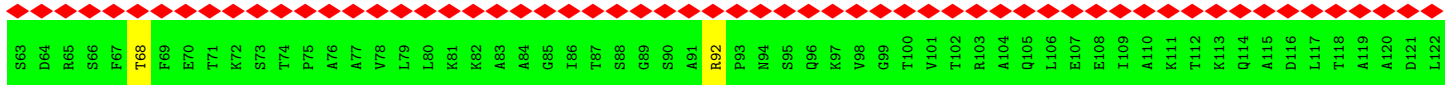
Chain H:  99%



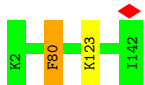
- Molecule 9: 50S ribosomal protein L11

Chain I:  98%





- Molecule 10: 50S ribosomal protein L13



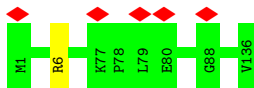
- Molecule 11: 50S ribosomal protein L14



- Molecule 12: 50S ribosomal protein L15



- Molecule 13: 50S ribosomal protein L16

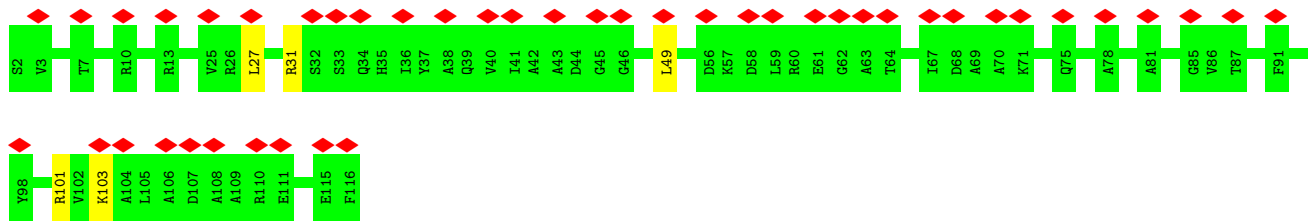


- Molecule 14: 50S ribosomal protein L17

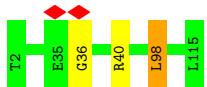


- Molecule 15: 50S ribosomal protein L18

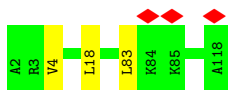




- Molecule 16: 50S ribosomal protein L19



- Molecule 17: 50S ribosomal protein L20



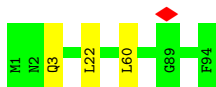
- Molecule 18: 50S ribosomal protein L21



- Molecule 19: 50S ribosomal protein L22

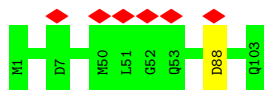


- Molecule 20: 50S ribosomal protein L23

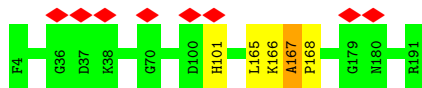


- Molecule 21: 50S ribosomal protein L24

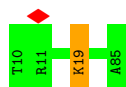




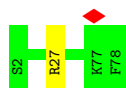
- Molecule 22: 50S ribosomal protein L25



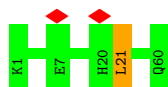
- Molecule 23: 50S ribosomal protein L27



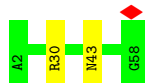
- Molecule 24: 50S ribosomal protein L28



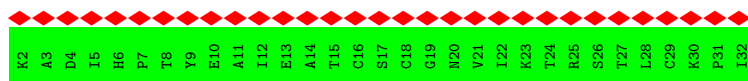
- Molecule 25: Ribosomal protein uL29



- Molecule 26: 50S ribosomal protein L30



- Molecule 27: 50S ribosomal protein L31

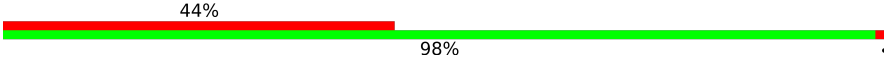


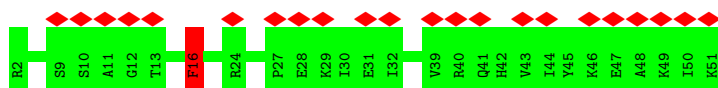
- Molecule 28: 50S ribosomal protein L32

Chain 2:  98%



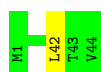
• Molecule 29: 50S ribosomal protein L33

Chain 3:  44% 98%



• Molecule 30: 50S ribosomal protein L34

Chain 4:  98%



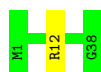
• Molecule 31: 50S ribosomal protein L35

Chain 5:  97%



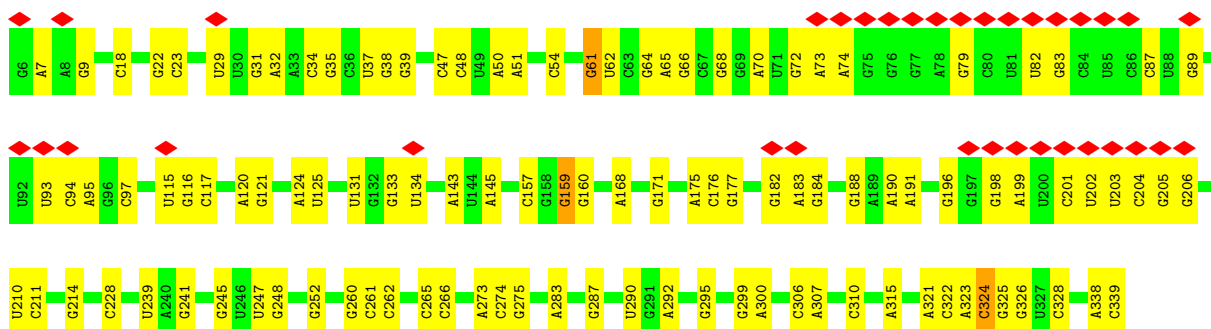
• Molecule 32: 50S ribosomal protein L36

Chain 6:  97%

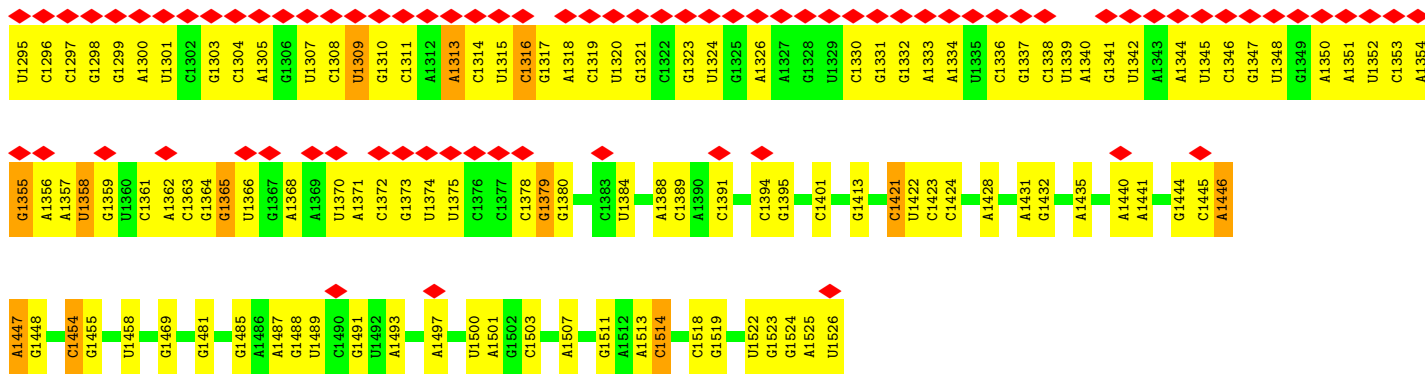


• Molecule 33: 16S rRNA

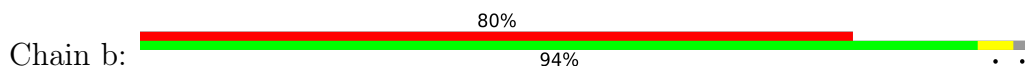
Chain a:  32% 51% 38% 9%



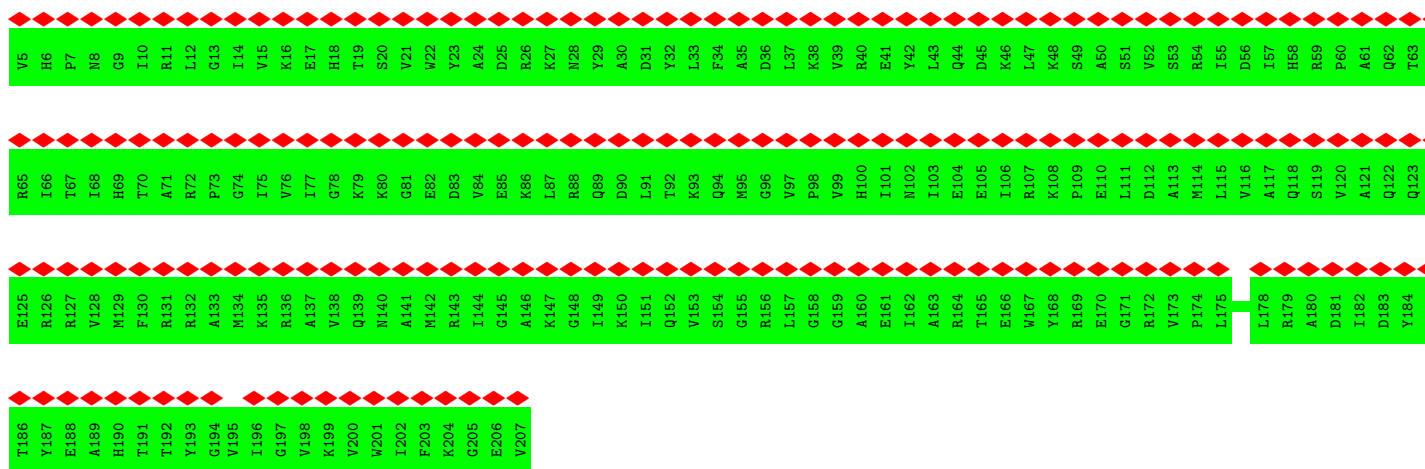




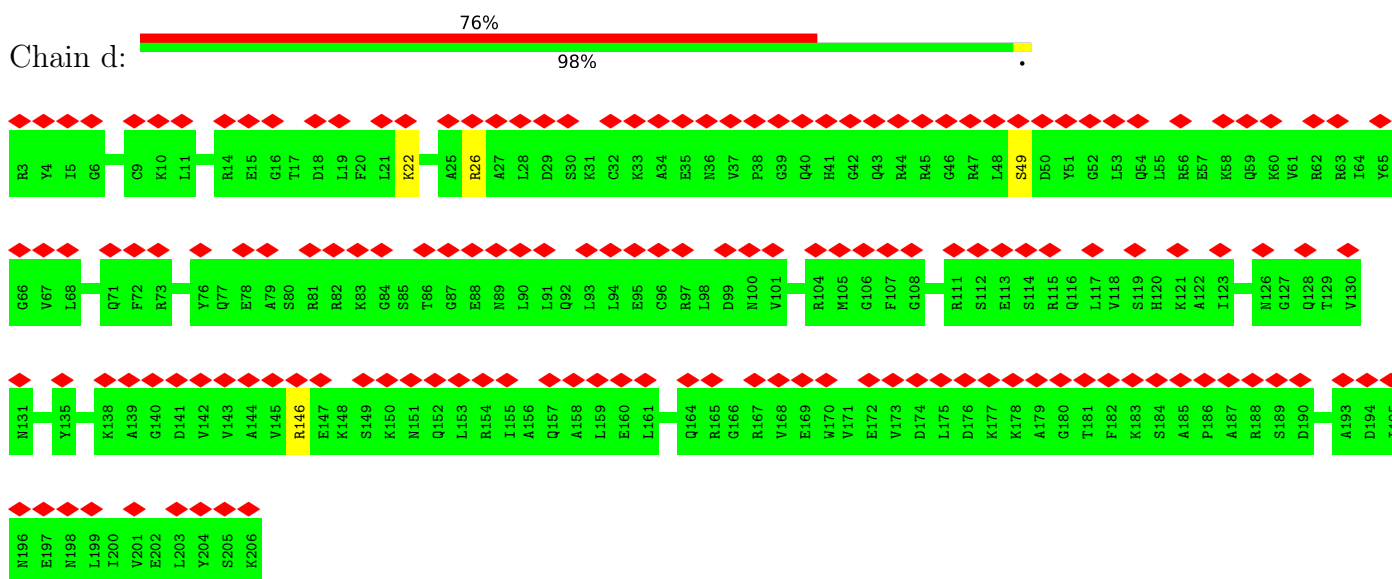
• Molecule 34: 30S ribosomal protein S2



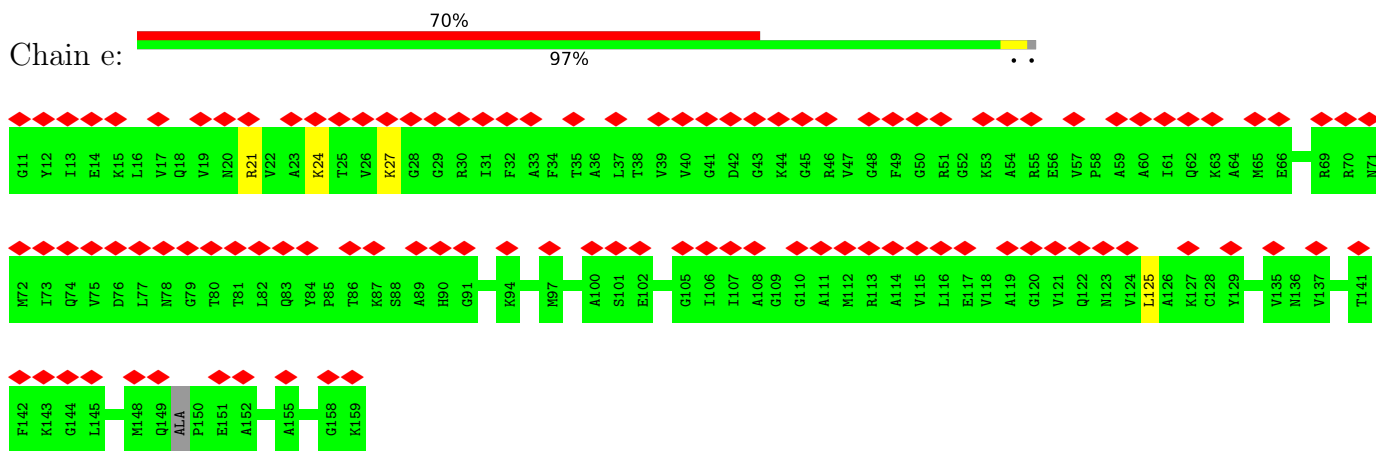
• Molecule 35: 30S ribosomal protein S3



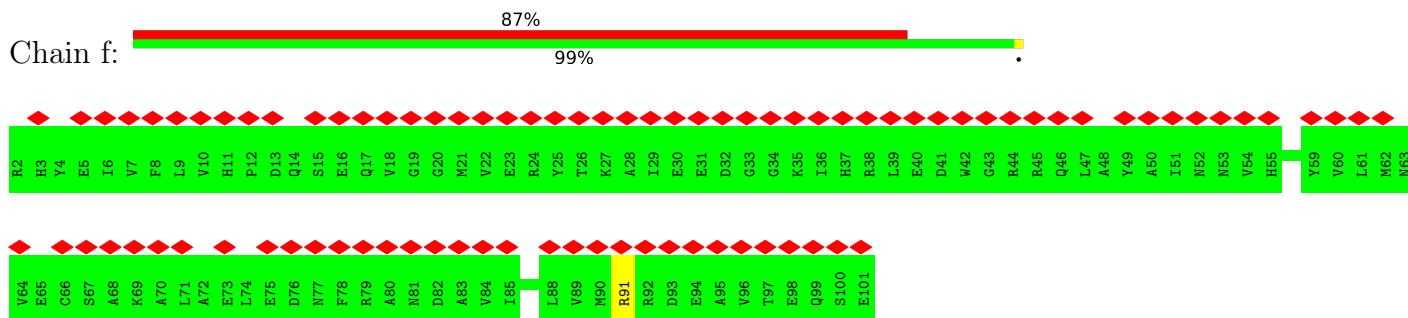
• Molecule 36: 30S ribosomal protein S4



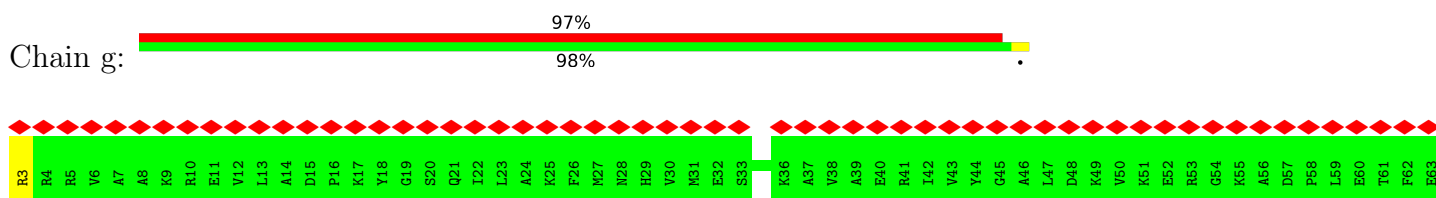
• Molecule 37: 30S ribosomal protein S5



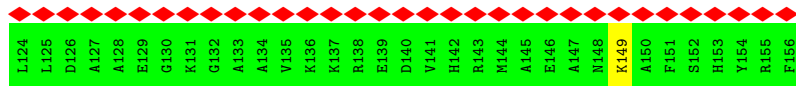
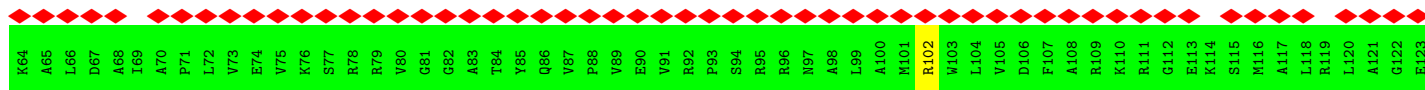
• Molecule 38: 30S ribosomal protein S6



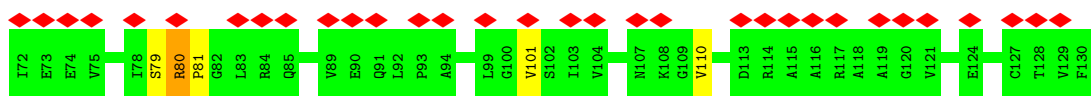
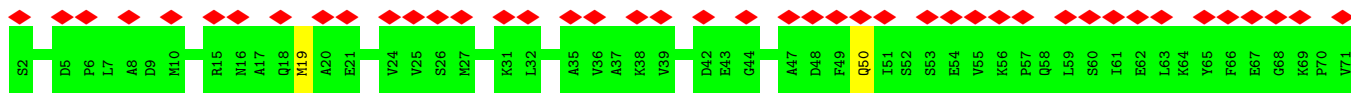
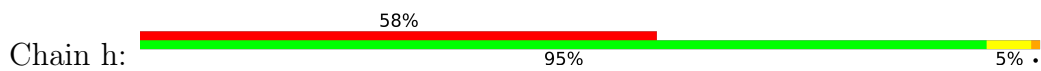
• Molecule 39: 30S ribosomal protein S7



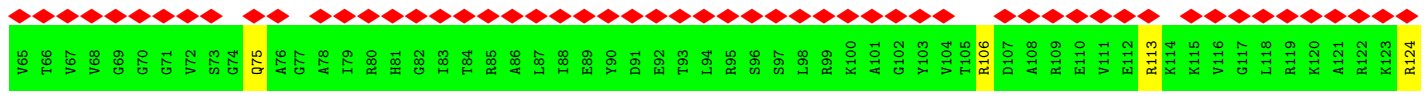
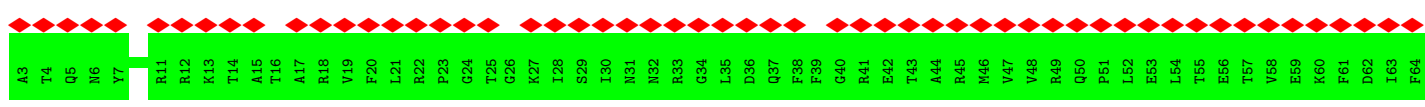
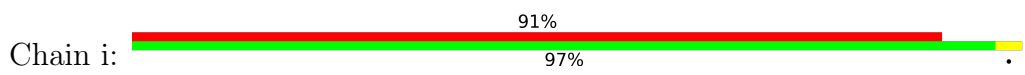




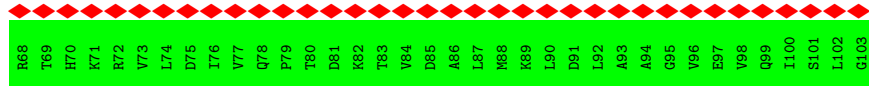
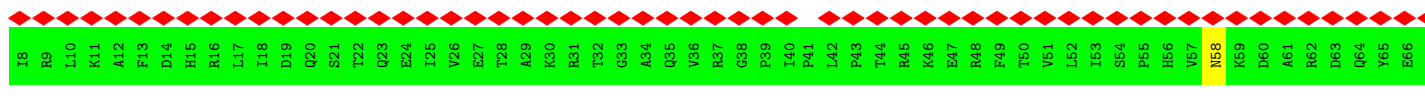
• Molecule 40: 30S ribosomal protein S8



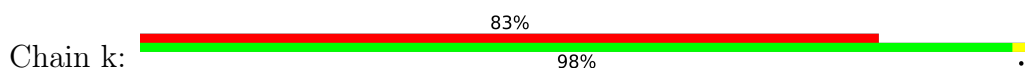
• Molecule 41: 30S ribosomal protein S9



• Molecule 42: 30S ribosomal protein S10



• Molecule 43: 30S ribosomal protein S11





• Molecule 44: 30S ribosomal protein S12



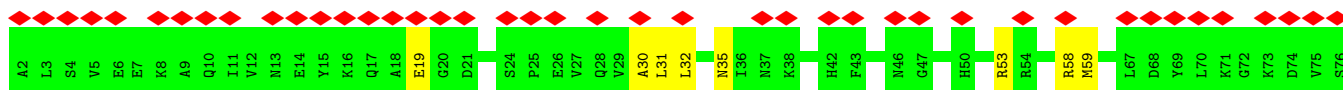
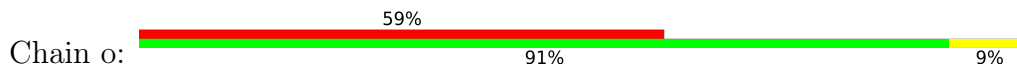
• Molecule 45: 30S ribosomal protein S13

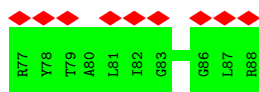


• Molecule 46: 30S ribosomal protein S14

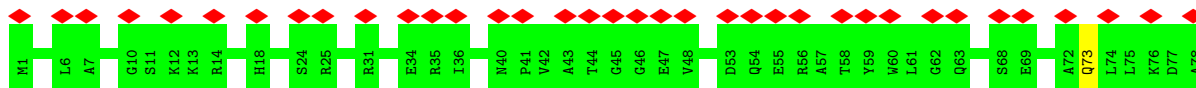


• Molecule 47: 30S ribosomal protein S15

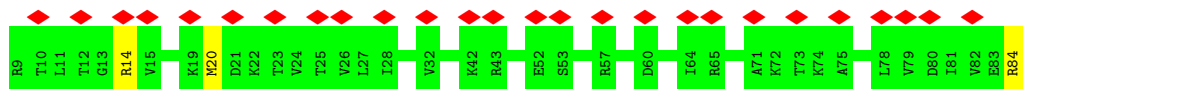




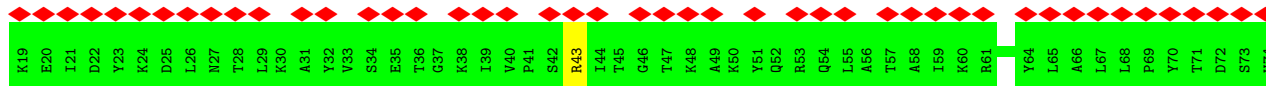
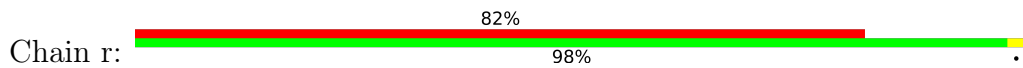
- Molecule 48: 30S ribosomal protein S16



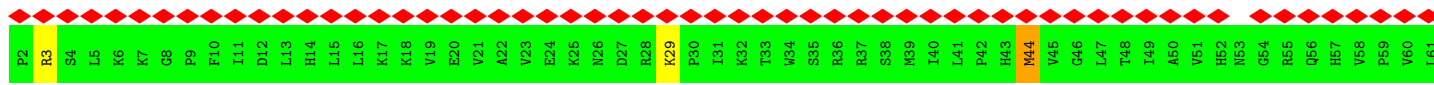
- Molecule 49: 30S ribosomal protein S17



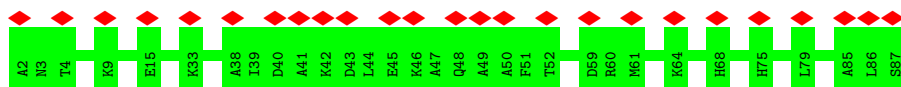
- Molecule 50: 30S ribosomal protein S18



- Molecule 51: 30S ribosomal protein S19



- Molecule 52: 30S ribosomal protein S20



- Molecule 53: 30S ribosomal protein S21



S34	R35	E36	F37	Y38	E39	K40	P41	T42	A43	E44	R45	R46	R47	K48	A49	A50	A51	A52	V53	K54	R55	H56	A57	K58	K59	V60	D61	R62	E63	Q64	R65	R66	R67
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

## 4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	319022	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	NONE	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ( $e^-/\text{\AA}^2$ )	1.0	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	FEI FALCON II (4k x 4k)	Depositor
Maximum map value	0.788	Depositor
Minimum map value	-0.478	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.017	Depositor
Recommended contour level	0.0491	Depositor
Map size ( $\text{\AA}$ )	440.0, 440.0, 440.0	wwPDB
Map dimensions	400, 400, 400	wwPDB
Map angles ( $^\circ$ )	90.0, 90.0, 90.0	wwPDB
Pixel spacing ( $\text{\AA}$ )	1.1, 1.1, 1.1	Depositor

## 5 Model quality

### 5.1 Standard geometry

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	A	0.96	13/69320 (0.0%)	1.26	713/108135 (0.7%)
2	B	0.61	0/2789	1.23	26/4345 (0.6%)
3	C	0.54	0/2084	0.73	0/2800
4	D	0.59	0/1572	0.82	2/2118 (0.1%)
5	E	0.48	0/1529	0.70	1/2060 (0.0%)
6	F	0.32	0/1294	0.73	0/1754
7	G	0.30	0/1280	0.62	0/1726
8	H	0.30	0/580	0.60	1/781 (0.1%)
9	I	0.32	0/1041	0.66	0/1408
10	J	0.52	0/1148	0.66	1/1549 (0.1%)
11	K	0.58	0/931	0.74	1/1247 (0.1%)
12	L	0.48	0/1075	0.69	1/1432 (0.1%)
13	M	0.37	0/1096	0.60	0/1466
14	N	0.51	0/975	0.71	0/1304
15	O	0.33	0/888	0.74	2/1183 (0.2%)
16	P	0.52	0/910	0.72	1/1218 (0.1%)
17	Q	0.59	0/946	0.71	2/1257 (0.2%)
18	R	0.48	0/814	0.67	0/1091
19	S	0.49	0/837	0.64	0/1114
20	T	0.47	0/742	0.74	2/993 (0.2%)
21	U	0.39	0/809	0.65	0/1079
22	V	0.36	0/1420	0.71	1/1927 (0.1%)
23	W	0.51	0/582	0.87	1/773 (0.1%)
24	X	0.45	0/637	0.62	0/849
25	Y	0.36	0/471	0.71	1/630 (0.2%)
26	Z	0.46	0/449	0.67	0/602
27	1	0.27	0/235	0.51	0/318
28	2	0.51	0/425	0.66	1/568 (0.2%)
29	3	0.38	0/415	0.73	1/554 (0.2%)
30	4	0.60	0/367	0.84	1/482 (0.2%)
31	5	0.40	0/507	0.73	0/664
32	6	0.36	0/304	0.69	0/399
33	a	0.78	11/33391 (0.0%)	1.55	179/52073 (0.3%)
34	b	0.30	0/1724	0.64	2/2319 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
35	c	0.26	0/1638	0.56	0/2209
36	d	0.28	0/1615	0.60	0/2163
37	e	0.32	0/1106	0.66	0/1488
38	f	0.31	0/815	0.69	0/1098
39	g	0.30	0/1207	0.61	0/1616
40	h	0.29	0/976	0.66	0/1314
41	i	0.30	0/1006	0.65	0/1347
42	j	0.27	0/773	0.58	0/1045
43	k	0.28	0/848	0.57	0/1152
44	l	0.32	0/955	0.66	0/1280
45	m	0.28	0/853	0.66	1/1144 (0.1%)
46	n	0.29	0/786	0.60	0/1047
47	o	0.30	0/698	0.74	2/933 (0.2%)
48	p	0.31	0/620	0.65	0/835
49	q	0.28	0/627	0.59	0/844
50	r	0.27	0/450	0.53	0/608
51	s	4.72	1/649 (0.2%)	0.68	0/874
52	t	0.29	0/669	0.55	0/891
53	u	0.29	0/298	0.46	0/391
All	All	0.84	25/150176 (0.0%)	1.21	943/224497 (0.4%)

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
3	C	0	2
4	D	0	10
5	E	0	1
6	F	0	2
9	I	0	2
16	P	0	1
17	Q	0	1
18	R	0	1
22	V	0	3
29	3	0	1
36	d	0	1
40	h	0	3
41	i	0	1
44	l	0	1
45	m	0	2

*Continued on next page...*

Continued from previous page...

Mol	Chain	#Chirality outliers	#Planarity outliers
46	n	0	1
47	o	0	1
48	p	0	1
51	s	0	1
All	All	0	36

The worst 5 of 25 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
51	s	3	ARG	CB-CG	120.12	4.76	1.52
33	a	1313	A	N3-C4	56.98	1.69	1.34
33	a	1313	A	C6-N1	52.01	1.72	1.35
33	a	1219	A	N9-C4	43.52	1.64	1.37
33	a	1313	A	C5-C4	41.61	1.67	1.38

The worst 5 of 943 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
33	a	1219	A	N7-C8-N9	-145.93	40.83	113.80
33	a	1219	A	C4-C5-N7	-137.41	42.00	110.70
33	a	1219	A	C8-N9-C4	-132.12	52.95	105.80
33	a	1219	A	C5-N7-C8	58.62	133.21	103.90
33	a	1219	A	C6-C5-N7	37.35	158.44	132.30

There are no chirality outliers.

5 of 36 planarity outliers are listed below:

Mol	Chain	Res	Type	Group
3	C	270	ARG	Sidechain
3	C	271	ARG	Sidechain
4	D	34	ARG	Sidechain
4	D	60	ARG	Sidechain
4	D	84	ARG	Sidechain

## 5.2 Too-close contacts

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



## 5.3 Torsion angles

### 5.3.1 Protein backbone

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
3	C	269/271 (99%)	239 (89%)	28 (10%)	2 (1%)	22	54
4	D	205/207 (99%)	176 (86%)	19 (9%)	10 (5%)	2	8
5	E	197/199 (99%)	191 (97%)	6 (3%)	0	100	100
6	F	172/174 (99%)	138 (80%)	34 (20%)	0	100	100
7	G	167/169 (99%)	152 (91%)	15 (9%)	0	100	100
8	H	76/78 (97%)	70 (92%)	6 (8%)	0	100	100
9	I	138/140 (99%)	118 (86%)	20 (14%)	0	100	100
10	J	139/141 (99%)	129 (93%)	10 (7%)	0	100	100
11	K	118/120 (98%)	111 (94%)	7 (6%)	0	100	100
12	L	142/144 (99%)	132 (93%)	10 (7%)	0	100	100
13	M	134/136 (98%)	127 (95%)	7 (5%)	0	100	100
14	N	118/120 (98%)	109 (92%)	9 (8%)	0	100	100
15	O	113/115 (98%)	96 (85%)	17 (15%)	0	100	100
16	P	112/114 (98%)	97 (87%)	15 (13%)	0	100	100
17	Q	115/117 (98%)	113 (98%)	2 (2%)	0	100	100
18	R	100/102 (98%)	91 (91%)	8 (8%)	1 (1%)	15	45
19	S	108/110 (98%)	104 (96%)	4 (4%)	0	100	100
20	T	92/94 (98%)	84 (91%)	7 (8%)	1 (1%)	14	42
21	U	101/103 (98%)	90 (89%)	10 (10%)	1 (1%)	15	45
22	V	186/188 (99%)	158 (85%)	26 (14%)	2 (1%)	14	42
23	W	74/76 (97%)	60 (81%)	13 (18%)	1 (1%)	11	36
24	X	75/77 (97%)	70 (93%)	5 (7%)	0	100	100
25	Y	58/60 (97%)	55 (95%)	3 (5%)	0	100	100
26	Z	55/57 (96%)	53 (96%)	2 (4%)	0	100	100
27	1	29/31 (94%)	26 (90%)	3 (10%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
28	2	51/53 (96%)	48 (94%)	3 (6%)	0	100	100
29	3	48/50 (96%)	36 (75%)	12 (25%)	0	100	100
30	4	42/44 (96%)	41 (98%)	1 (2%)	0	100	100
31	5	61/63 (97%)	55 (90%)	6 (10%)	0	100	100
32	6	36/38 (95%)	31 (86%)	5 (14%)	0	100	100
34	b	217/226 (96%)	199 (92%)	18 (8%)	0	100	100
35	c	201/203 (99%)	174 (87%)	27 (13%)	0	100	100
36	d	202/204 (99%)	177 (88%)	25 (12%)	0	100	100
37	e	147/150 (98%)	138 (94%)	9 (6%)	0	100	100
38	f	98/100 (98%)	88 (90%)	10 (10%)	0	100	100
39	g	152/154 (99%)	134 (88%)	18 (12%)	0	100	100
40	h	127/129 (98%)	111 (87%)	14 (11%)	2 (2%)	9	32
41	i	124/126 (98%)	107 (86%)	17 (14%)	0	100	100
42	j	94/96 (98%)	81 (86%)	13 (14%)	0	100	100
43	k	113/115 (98%)	95 (84%)	18 (16%)	0	100	100
44	l	118/120 (98%)	100 (85%)	17 (14%)	1 (1%)	19	51
45	m	105/110 (96%)	92 (88%)	13 (12%)	0	100	100
46	n	96/98 (98%)	81 (84%)	15 (16%)	0	100	100
47	o	85/87 (98%)	78 (92%)	6 (7%)	1 (1%)	13	40
48	p	76/78 (97%)	68 (90%)	8 (10%)	0	100	100
49	q	74/76 (97%)	71 (96%)	3 (4%)	0	100	100
50	r	54/56 (96%)	50 (93%)	4 (7%)	0	100	100
51	s	78/80 (98%)	59 (76%)	19 (24%)	0	100	100
52	t	84/86 (98%)	83 (99%)	1 (1%)	0	100	100
53	u	32/34 (94%)	32 (100%)	0	0	100	100
All	All	5608/5719 (98%)	5018 (90%)	568 (10%)	22 (0%)	38	66

5 of 22 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	C	120	ILE
4	D	105	GLN
4	D	134	HIS

Continued on next page...

*Continued from previous page...*

Mol	Chain	Res	Type
20	T	3	GLN
22	V	167	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 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	
3	C	206/212 (97%)	192 (93%)	14 (7%)	16	42
4	D	157/159 (99%)	129 (82%)	28 (18%)	2	5
5	E	155/157 (99%)	154 (99%)	1 (1%)	86	96
6	F	122/149 (82%)	117 (96%)	5 (4%)	30	64
7	G	131/135 (97%)	130 (99%)	1 (1%)	81	94
8	H	55/55 (100%)	54 (98%)	1 (2%)	59	85
9	I	108/108 (100%)	107 (99%)	1 (1%)	78	93
10	J	118/118 (100%)	116 (98%)	2 (2%)	60	86
11	K	100/100 (100%)	97 (97%)	3 (3%)	41	75
12	L	105/106 (99%)	103 (98%)	2 (2%)	57	84
13	M	109/109 (100%)	108 (99%)	1 (1%)	78	93
14	N	99/99 (100%)	97 (98%)	2 (2%)	55	82
15	O	86/86 (100%)	83 (96%)	3 (4%)	36	70
16	P	96/96 (100%)	94 (98%)	2 (2%)	53	81
17	Q	87/87 (100%)	86 (99%)	1 (1%)	73	92
18	R	82/86 (95%)	79 (96%)	3 (4%)	34	68
19	S	87/87 (100%)	85 (98%)	2 (2%)	50	80
20	T	77/79 (98%)	77 (100%)	0	100	100
21	U	88/88 (100%)	88 (100%)	0	100	100
22	V	144/153 (94%)	144 (100%)	0	100	100
23	W	56/56 (100%)	56 (100%)	0	100	100
24	X	65/66 (98%)	64 (98%)	1 (2%)	65	87

*Continued on next page...*

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
25	Y	51/53 (96%)	50 (98%)	1 (2%)	55	82
26	Z	48/48 (100%)	46 (96%)	2 (4%)	30	63
27	1	27/27 (100%)	27 (100%)	0	100	100
28	2	45/46 (98%)	45 (100%)	0	100	100
29	3	44/46 (96%)	43 (98%)	1 (2%)	50	80
30	4	37/37 (100%)	37 (100%)	0	100	100
31	5	53/54 (98%)	51 (96%)	2 (4%)	33	67
32	6	33/34 (97%)	32 (97%)	1 (3%)	41	75
34	b	174/188 (93%)	167 (96%)	7 (4%)	31	65
35	c	163/169 (96%)	163 (100%)	0	100	100
36	d	166/173 (96%)	163 (98%)	3 (2%)	59	85
37	e	108/109 (99%)	104 (96%)	4 (4%)	34	68
38	f	81/85 (95%)	80 (99%)	1 (1%)	71	91
39	g	116/120 (97%)	113 (97%)	3 (3%)	46	77
40	h	104/107 (97%)	101 (97%)	3 (3%)	42	76
41	i	102/102 (100%)	99 (97%)	3 (3%)	42	76
42	j	85/85 (100%)	84 (99%)	1 (1%)	71	91
43	k	83/87 (95%)	81 (98%)	2 (2%)	49	79
44	l	104/104 (100%)	102 (98%)	2 (2%)	57	84
45	m	91/92 (99%)	90 (99%)	1 (1%)	73	92
46	n	78/80 (98%)	77 (99%)	1 (1%)	69	90
47	o	73/73 (100%)	69 (94%)	4 (6%)	21	53
48	p	61/63 (97%)	61 (100%)	0	100	100
49	q	70/70 (100%)	67 (96%)	3 (4%)	29	62
50	r	46/48 (96%)	45 (98%)	1 (2%)	52	81
51	s	69/71 (97%)	67 (97%)	2 (3%)	42	76
52	t	68/68 (100%)	68 (100%)	0	100	100
53	u	28/28 (100%)	28 (100%)	0	100	100
All	All	4541/4658 (98%)	4420 (97%)	121 (3%)	48	77

5 of 121 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
12	L	78	ARG
46	n	75	ARG
19	S	92	ARG
45	m	40	ASN
50	r	43	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 61 such sidechains are listed below:

Mol	Chain	Res	Type
24	X	34	GLN
47	o	42	HIS
34	b	36	ASN
47	o	35	ASN
51	s	57	HIS

### 5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	A	2883/2888 (99%)	817 (28%)	36 (1%)
2	B	116/117 (99%)	48 (41%)	4 (3%)
33	a	1382/1521 (90%)	573 (41%)	0
All	All	4381/4526 (96%)	1438 (32%)	40 (0%)

5 of 1438 RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	A	10	A
1	A	14	A
1	A	15	G
1	A	22	C
1	A	34	U

5 of 40 RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	A	2274	A
1	A	2743	U
1	A	2317	G
1	A	2536	G
2	B	34	A

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

There are no non-standard protein/DNA/RNA residues in this entry.

## 5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

## 5.6 Ligand geometry [i](#)

There are no ligands in this entry.

## 5.7 Other polymers [i](#)

There are no such residues in this entry.

## 5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
33	a	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	a	1376:C	O3'	1377:C	P	3.50

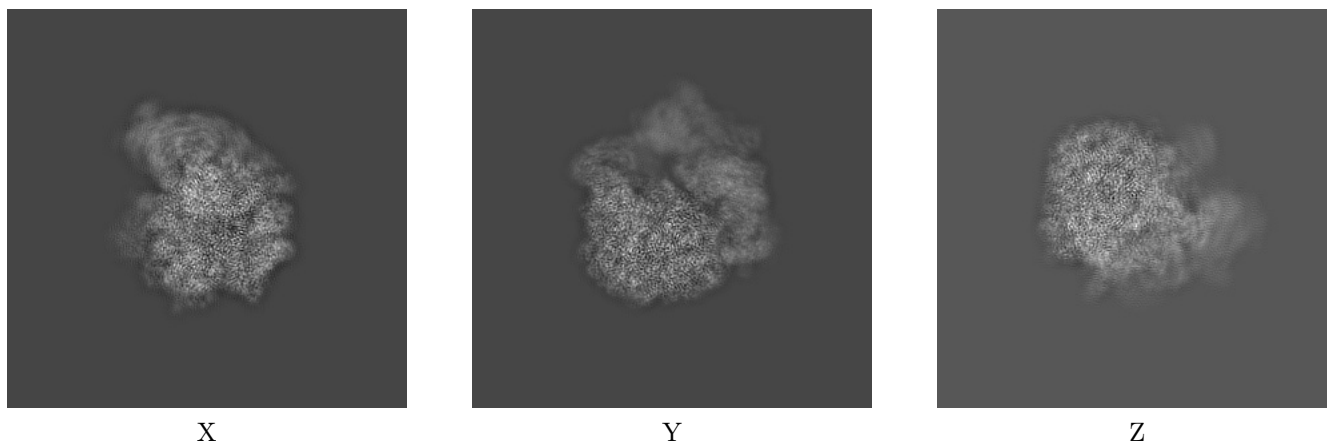
## 6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-10284. These allow visual inspection of the internal detail of the map and identification of artifacts.

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

### 6.1 Orthogonal projections [i](#)

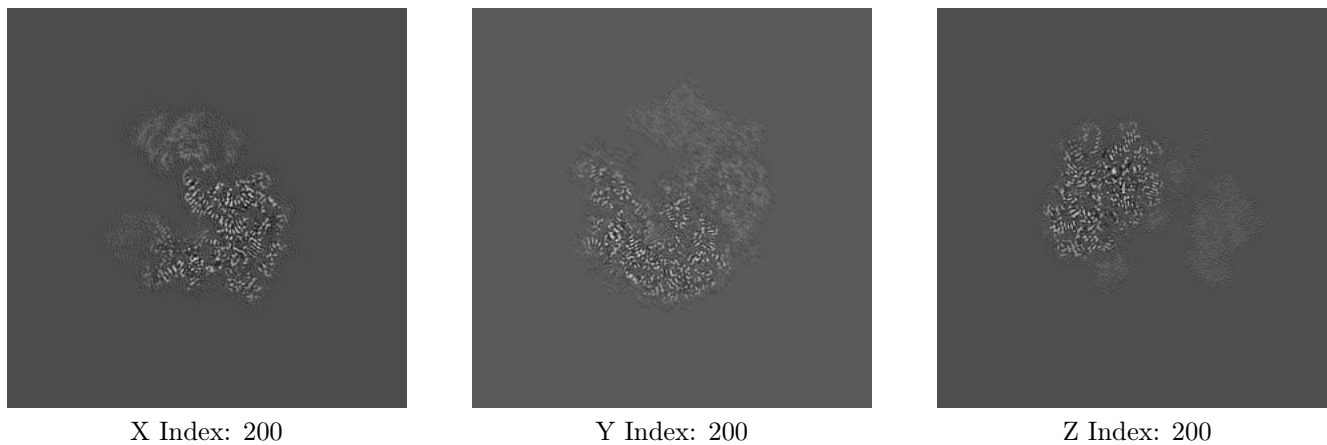
#### 6.1.1 Primary map



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

### 6.2 Central slices [i](#)

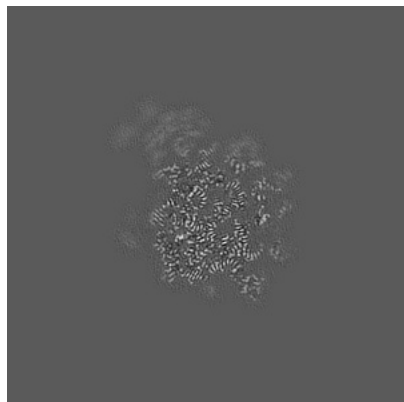
#### 6.2.1 Primary map



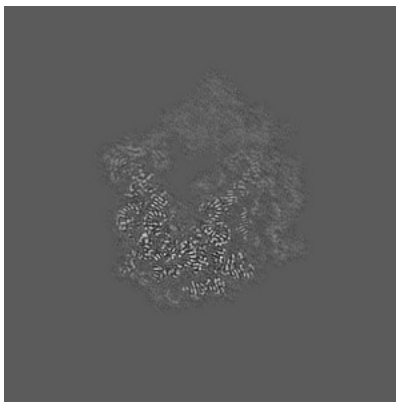
The images above show central slices of the map in three orthogonal directions.

## 6.3 Largest variance slices [i](#)

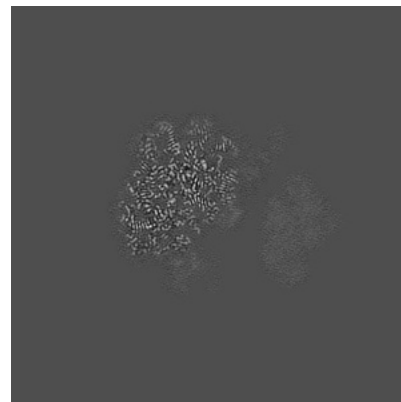
### 6.3.1 Primary map



X Index: 153



Y Index: 187



Z Index: 198

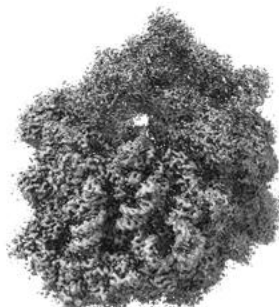
The images above show the largest variance slices of the map in three orthogonal directions.

## 6.4 Orthogonal surface views [i](#)

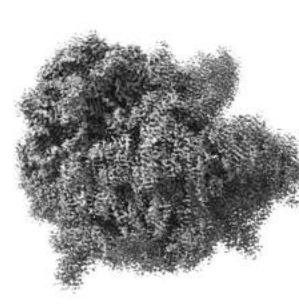
### 6.4.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.0491. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.



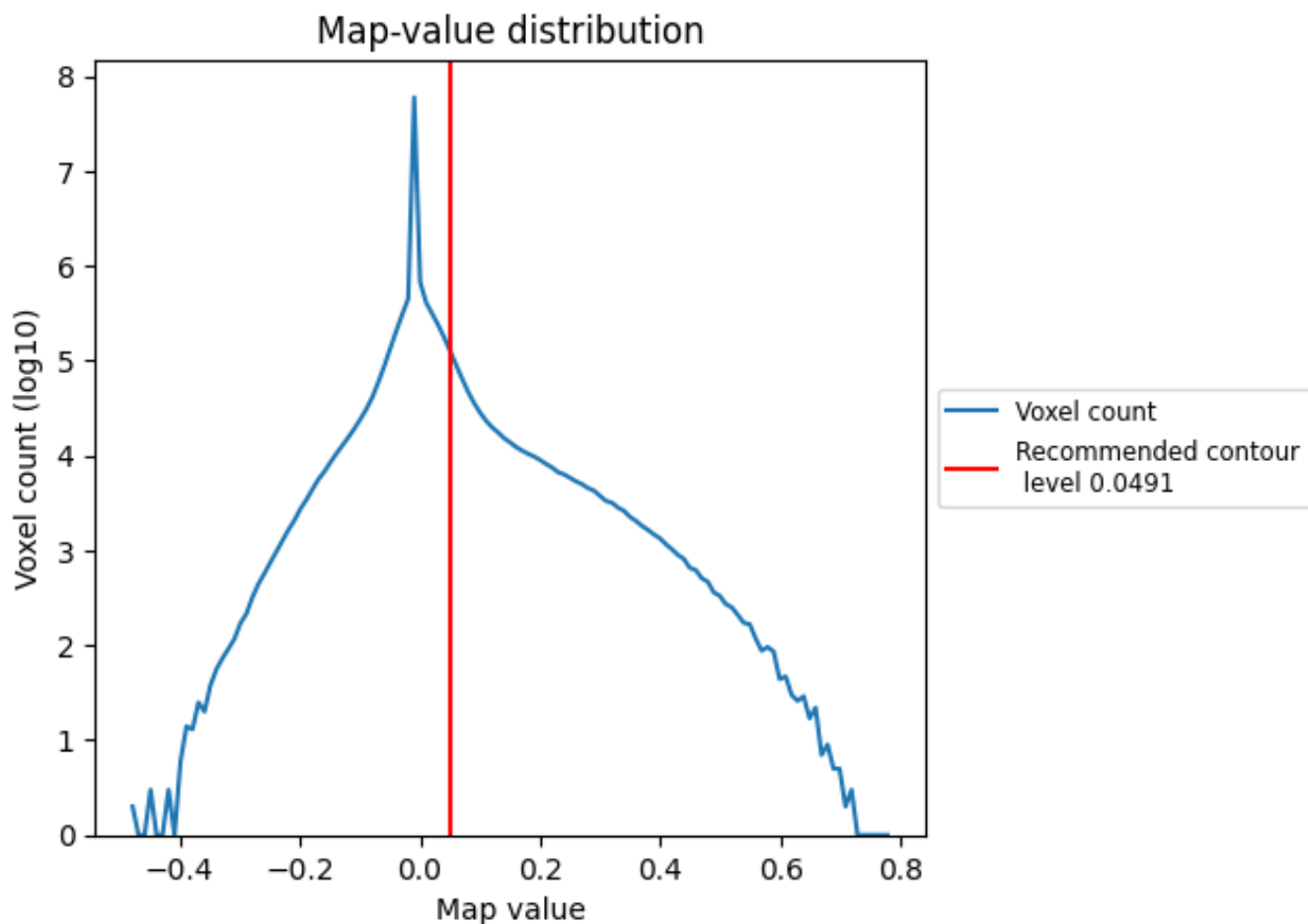
## 6.5 Mask visualisation

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

## 7 Map analysis [i](#)

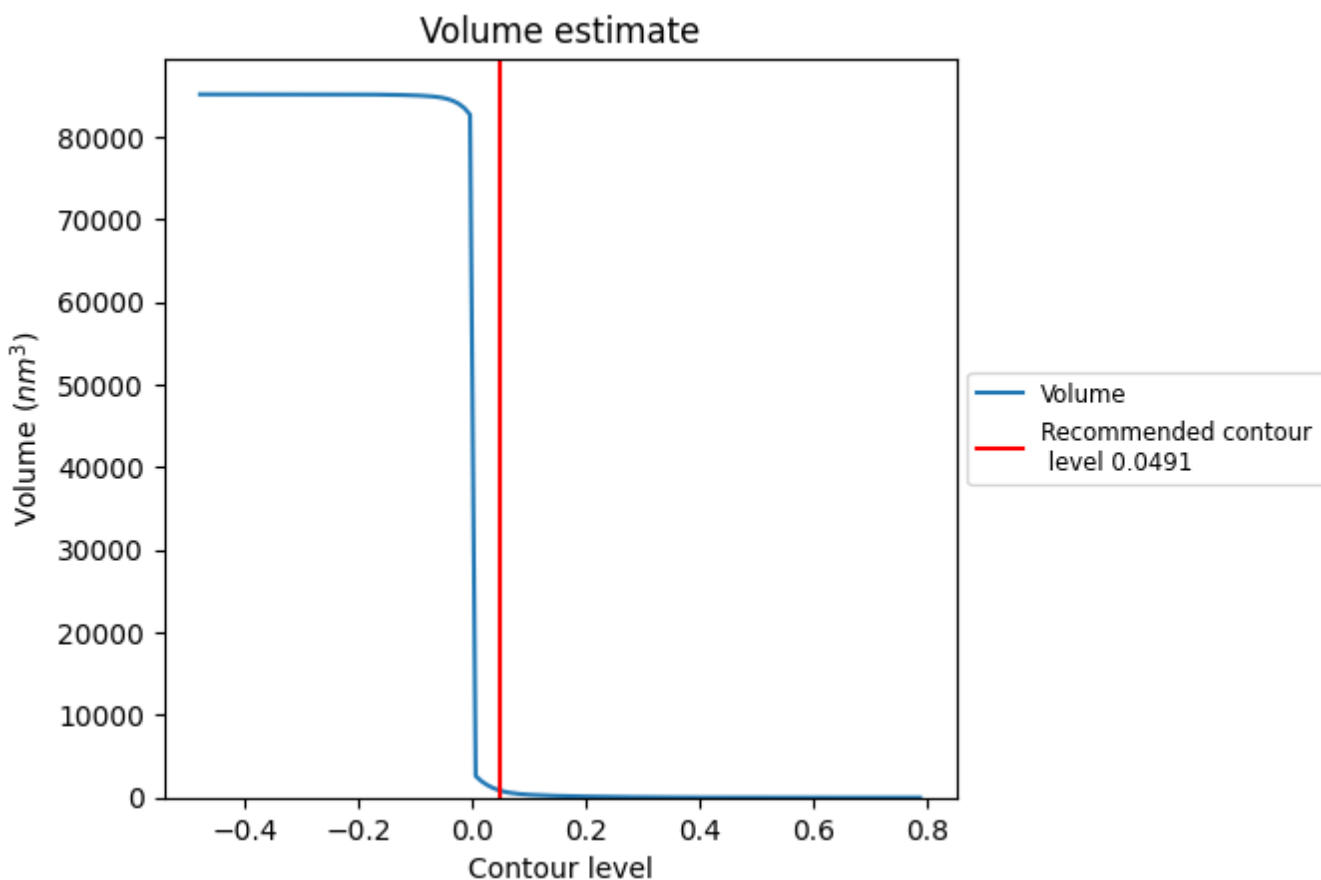
This section contains the results of statistical analysis of the map.

### 7.1 Map-value distribution [i](#)



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

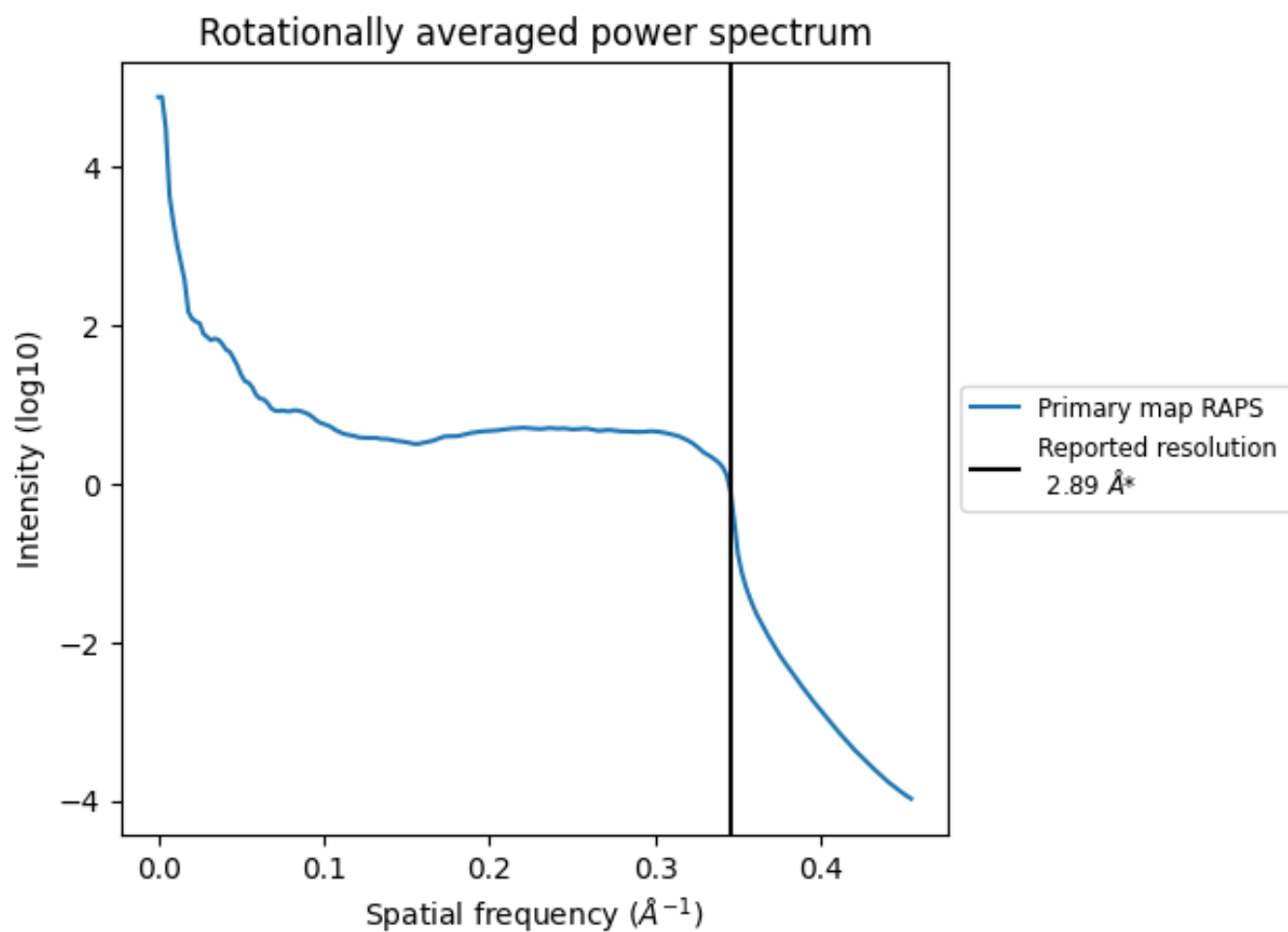
## 7.2 Volume estimate [i](#)



The volume at the recommended contour level is 861 nm<sup>3</sup>; this corresponds to an approximate mass of 778 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 0.346 Å<sup>-1</sup>

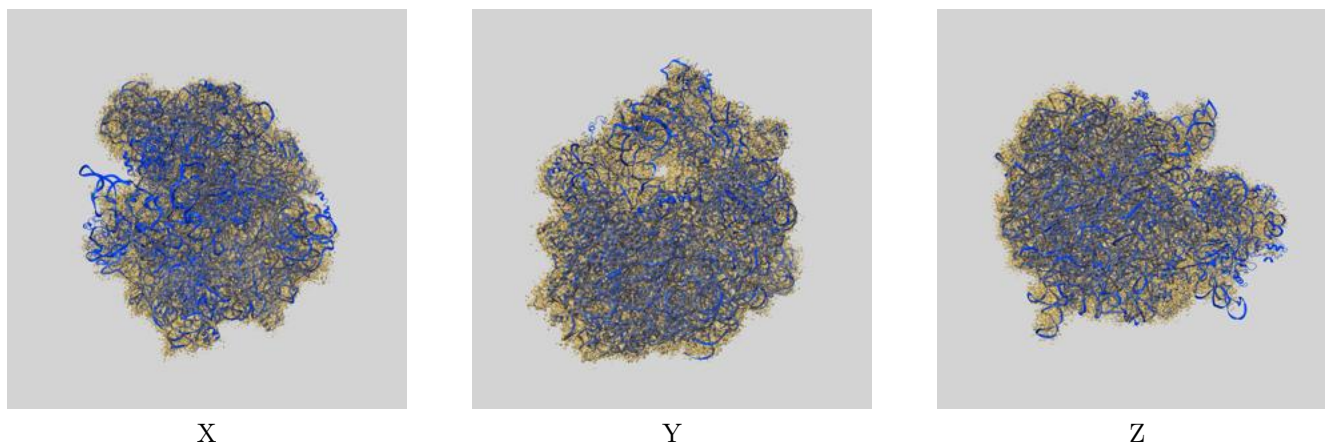
## 8 Fourier-Shell correlation

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

## 9 Map-model fit [i](#)

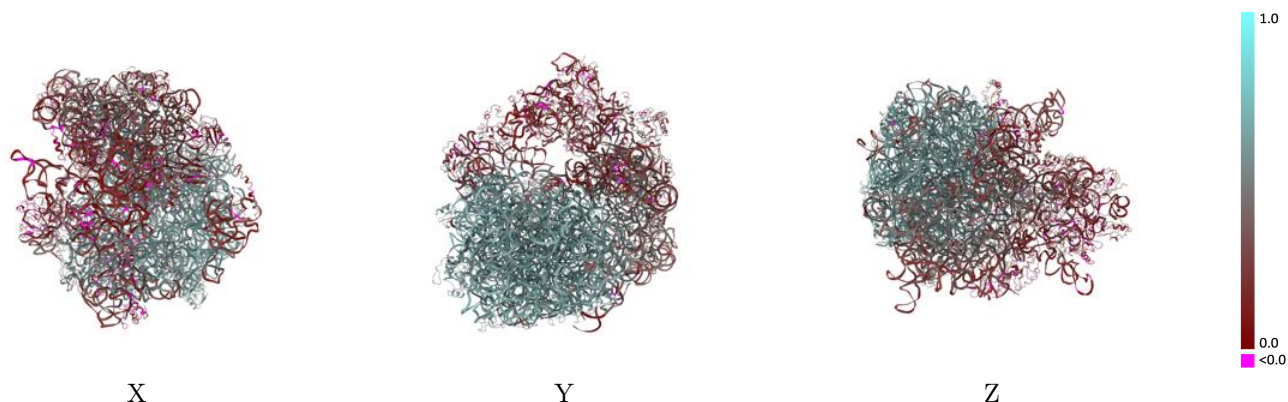
This section contains information regarding the fit between EMDB map EMD-10284 and PDB model 6SPF. Per-residue inclusion information can be found in section 3 on page 14.

### 9.1 Map-model overlay [i](#)



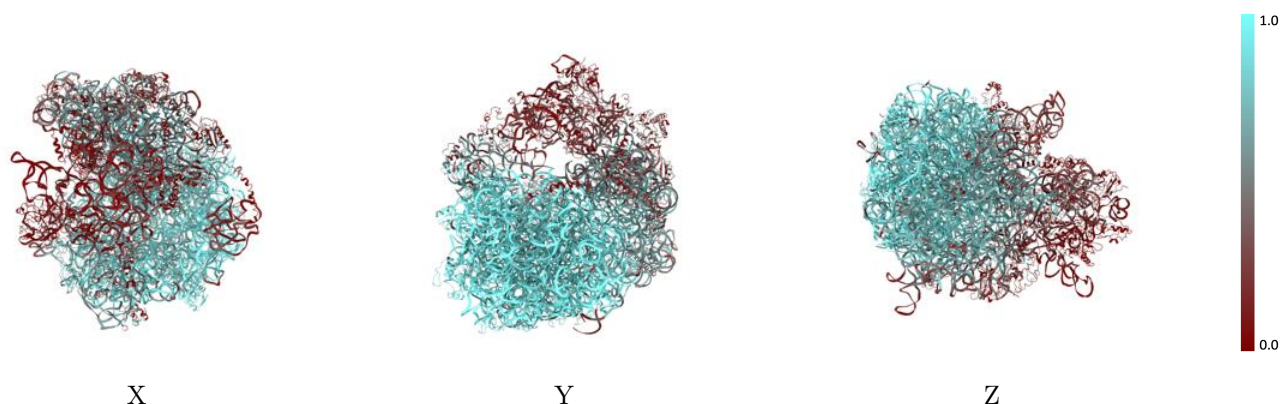
The images above show the 3D surface view of the map at the recommended contour level 0.0491 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



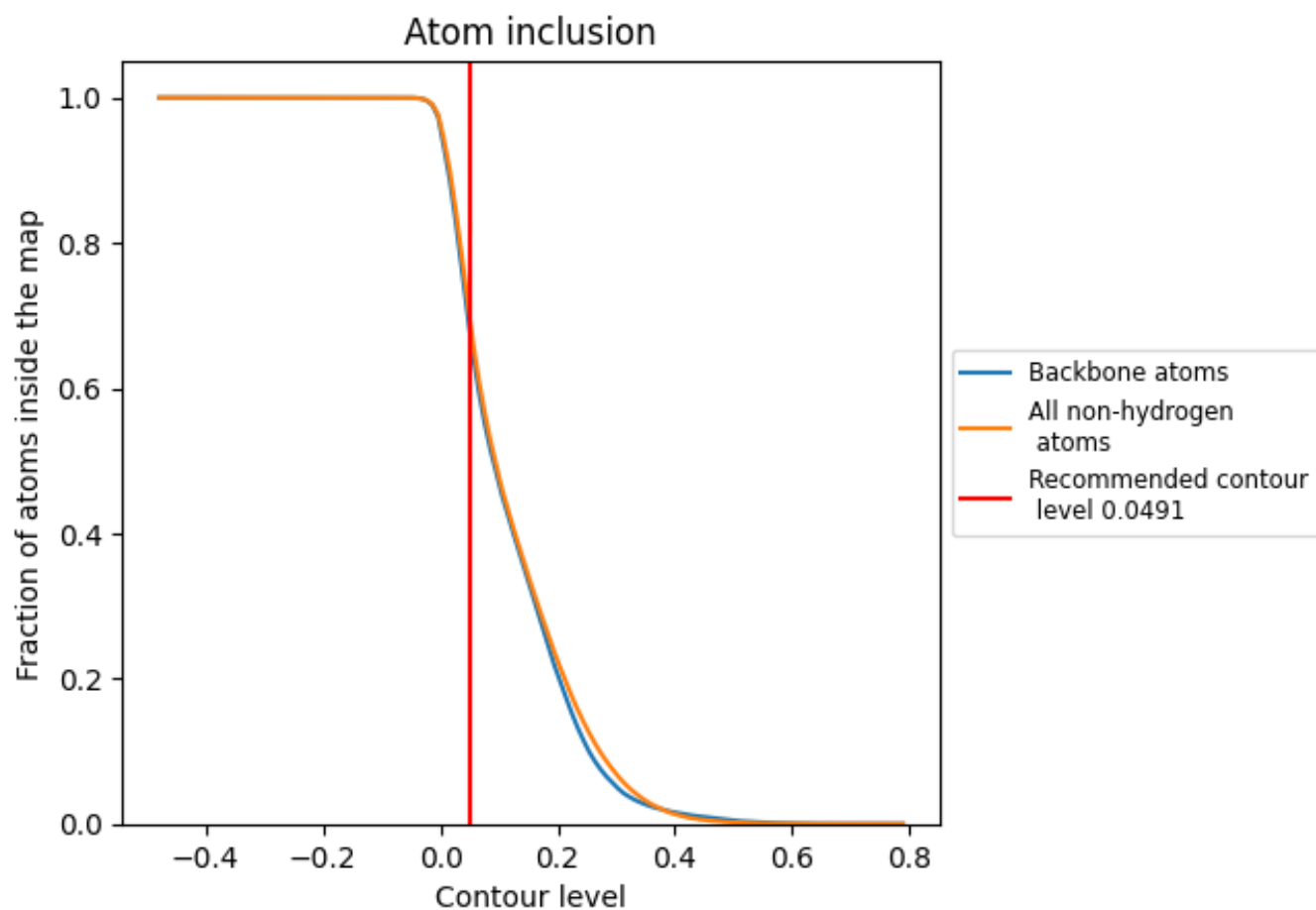
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

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



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.0491).

## 9.4 Atom inclusion [i](#)









































































At the recommended contour level, 69% of all backbone atoms, 70% 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 (0.0491) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.7027	 0.4610
1	 0.0000	 0.1520
2	 0.9356	 0.6140
3	 0.5088	 0.3640
4	 0.9708	 0.6320
5	 0.8909	 0.5960
6	 0.8201	 0.5610
A	 0.8871	 0.5680
B	 0.7483	 0.3920
C	 0.9333	 0.6170
D	 0.9490	 0.6250
E	 0.9199	 0.5960
F	 0.3800	 0.2220
G	 0.3761	 0.3870
H	 0.3081	 0.2770
I	 0.0286	 0.1110
J	 0.9425	 0.6150
K	 0.9064	 0.6100
L	 0.9130	 0.5920
M	 0.8165	 0.5770
N	 0.9535	 0.6200
O	 0.5129	 0.2330
P	 0.8938	 0.5950
Q	 0.9228	 0.6060
R	 0.8799	 0.5620
S	 0.9227	 0.6200
T	 0.8986	 0.5870
U	 0.8310	 0.5470
V	 0.7333	 0.4960
W	 0.8946	 0.5910
X	 0.9101	 0.6020
Y	 0.8865	 0.5720
Z	 0.9307	 0.6070
a	 0.5372	 0.3220
b	 0.2520	 0.2730



*Continued on next page...*

*Continued from previous page...*

Chain	Atom inclusion	Q-score
c	 0.0564	 0.1670
d	 0.2677	 0.2390
e	 0.2913	 0.3050
f	 0.2169	 0.2100
g	 0.0944	 0.2300
h	 0.3721	 0.3130
i	 0.1352	 0.1730
j	 0.0632	 0.1880
k	 0.1993	 0.2160
l	 0.2991	 0.3490
m	 0.1089	 0.1710
n	 0.0577	 0.1730
o	 0.3765	 0.2550
p	 0.4437	 0.3410
q	 0.4799	 0.3650
r	 0.2209	 0.1440
s	 0.1337	 0.1910
t	 0.5597	 0.3880
u	 0.1232	 0.2450