



wwPDB EM Validation Summary Report ⓘ

Aug 18, 2025 – 05:01 PM EDT

PDB ID : 8UX8 / pdb_00008ux8
EMDB ID : EMD-42714
Title : E. coli 70S ribosome with unmodified Lys-tRNA^{Pro}(GGG) bound to slippery P-site CCC-C codon in the +1 mRNA reading frame
Authors : Kimbrough, E.M.; Dunham, C.M.; Nguyen, H.A.
Deposited on : 2023-11-09
Resolution : 3.60 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

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.dev126
Mogul : 2022.3.0, CSD as543be (2022)
MolProbity : 4-5-2 with Phenix2.0rc1
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.45.1

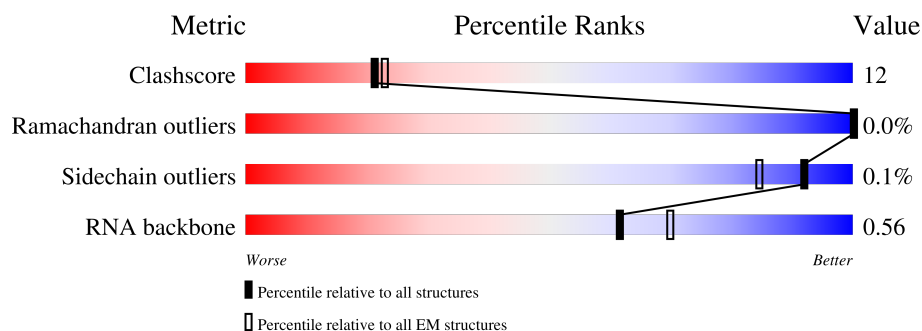
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.60 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)
Clashscore	210492	15764
Ramachandran outliers	207382	16835
Sidechain outliers	206894	16415
RNA backbone	6643	2191

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

Mol	Chain	Length	Quality of chain
1	1	2904	
2	2	1540	
3	3	120	
4	4	18	
5	5	77	
6	A	229	
7	B	273	

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Mol	Chain	Length	Quality of chain
8	C	209	
9	D	201	
10	E	179	
11	F	177	
12	G	149	
13	J	142	
14	K	123	
15	L	144	
16	M	136	
17	N	127	
18	O	117	
19	P	115	
20	Q	118	
21	R	103	
22	S	110	
23	T	100	
24	U	104	
25	V	94	
26	W	84	
27	X	78	
28	Y	63	
29	Z	59	
30	a	70	
31	b	57	
32	c	55	

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Mol	Chain	Length	Quality of chain
33	d	46	
34	e	65	
35	f	38	
36	g	241	
37	h	233	
38	i	206	
39	j	167	
40	k	135	
41	l	179	
42	m	130	
43	n	130	
44	o	103	
45	p	129	
46	q	124	
47	r	118	
48	s	101	
49	t	89	
50	u	82	
51	v	84	
52	w	75	
53	x	92	
54	y	87	
55	z	71	

2 Entry composition

There are 58 unique types of molecules in this entry. The entry contains 146547 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 23S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	1	2903	Total	C	N	O	P	0	0
			62334	27814	11470	20147	2903		

- Molecule 2 is a RNA chain called 16S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	2	1534	Total	C	N	O	P	0	0
			32929	14693	6041	10661	1534		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
3	3	120	Total	C	N	O	P	0	0
			2569	1144	468	837	120		

- Molecule 4 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	4	11	Total	C	N	O	P	0	0
			230	103	38	78	11		

- Molecule 5 is a RNA chain called Lys-tRNA^{pro}L.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	5	77	Total	C	N	O	P	0	0
			1648	733	297	541	77		

- Molecule 6 is a protein called Large ribosomal subunit protein uL1.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	A	67	Total	C	N	O	S	0	0
			507	321	90	95	1		

- Molecule 7 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	B	271	Total	C	N	O	S	0	0
			2082	1288	423	364	7		

- Molecule 8 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	C	209	Total	C	N	O	S	0	0
			1565	979	288	294	4		

- Molecule 9 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	D	201	Total	C	N	O	S	0	0
			1552	974	283	290	5		

- Molecule 10 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	E	177	Total	C	N	O	S	0	0
			1410	899	249	256	6		

- Molecule 11 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	F	175	Total	C	N	O	S	0	0
			1313	826	241	244	2		

- Molecule 12 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	G	149	Total	C	N	O	S	0	0
			1111	699	197	214	1		

- Molecule 13 is a protein called Large ribosomal subunit protein uL13.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	J	142	Total	C	N	O	S	0	0
			1129	714	212	199	4		

- Molecule 14 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	K	123	Total	C	N	O	S	0	0
			946	593	181	166	6		

- Molecule 15 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	L	144	Total	C	N	O	S	0	0
			1053	654	207	190	2		

- Molecule 16 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	M	136	Total	C	N	O	S	0	0
			1074	686	205	177	6		

- Molecule 17 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	N	119	Total	C	N	O	S	0	0
			951	588	195	163	5		

- Molecule 18 is a protein called Large ribosomal subunit protein uL18.

Mol	Chain	Residues	Atoms				AltConf	Trace
18	O	116	Total	C	N	O	0	0
			892	552	178	162		

- Molecule 19 is a protein called Large ribosomal subunit protein bL19.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	P	114	Total	C	N	O	S	0	0
			917	574	179	163	1		

- Molecule 20 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms				AltConf	Trace
20	Q	117	Total	C	N	O	0	0
			947	604	192	151		

- Molecule 21 is a protein called Ribosomal protein L21.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	R	103	Total	C	N	O	S	0	0
			816	516	153	145	2		

- Molecule 22 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	S	110	Total	C	N	O	S	0	0
			857	532	166	156	3		

- Molecule 23 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	T	94	Total	C	N	O	S	0	0
			746	470	140	134	2		

- Molecule 24 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	U	103	Total	C	N	O		0	0
			788	498	148	142			

- Molecule 25 is a protein called Large ribosomal subunit protein bL25.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	V	94	Total	C	N	O	S	0	0
			753	479	137	134	3		

- Molecule 26 is a protein called Large ribosomal subunit protein bL27.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	W	76	Total	C	N	O	S	0	0
			582	360	117	104	1		

- Molecule 27 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	X	77	Total	C	N	O	S	0	0
			625	388	129	106	2		

- Molecule 28 is a protein called Large ribosomal subunit protein uL29.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	Y	62	Total	C	N	O	S	0	0
			501	308	98	94	1		

- Molecule 29 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	Z	58	Total	C	N	O	S	0	0
			448	281	87	78	2		

- Molecule 30 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	a	66	Total	C	N	O	S	0	0
			522	323	99	94	6		

- Molecule 31 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	b	56	Total	C	N	O	S	0	0
			444	269	94	80	1		

- Molecule 32 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms				AltConf	Trace
32	c	52	Total	C	N	O	0	0
			426	275	78	73		

- Molecule 33 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	d	46	Total	C	N	O	S	0	0
			377	228	90	57	2		

- Molecule 34 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	e	64	Total	C	N	O	S	0	0
			504	323	105	74	2		

- Molecule 35 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	f	38	Total	C	N	O	S	0	0
			302	185	65	48	4		

- Molecule 36 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	g	225	Total	C	N	O	S	0	0
			1760	1113	316	323	8		

- Molecule 37 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	h	208	Total	C	N	O	S	0	0
			1636	1036	307	290	3		

- Molecule 38 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	i	205	Total	C	N	O	S	0	0
			1643	1026	315	298	4		

- Molecule 39 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	j	156	Total	C	N	O	S	0	0
			1152	717	217	212	6		

- Molecule 40 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	k	104	Total	C	N	O	S	0	0
			848	536	153	152	7		

- Molecule 41 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	l	151	Total	C	N	O	S	0	0
			1181	735	227	215	4		

- Molecule 42 is a protein called Small ribosomal subunit protein uS8.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	m	129	Total	C	N	O	S	0	0
			979	616	173	184	6		

- Molecule 43 is a protein called Small ribosomal subunit protein uS9.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	n	127	Total	C	N	O	S	0	0
			1022	634	206	179	3		

- Molecule 44 is a protein called Small ribosomal subunit protein uS10.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	o	99	Total	C	N	O	S	0	0
			790	495	151	143	1		

- Molecule 45 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	p	117	Total	C	N	O	S	0	0
			877	540	174	160	3		

- Molecule 46 is a protein called Small ribosomal subunit protein uS12.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	q	123	Total	C	N	O	S	0	0
			957	591	196	165	5		

- Molecule 47 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	r	116	Total	C	N	O	S	0	0
			900	558	181	158	3		

- Molecule 48 is a protein called Small ribosomal subunit protein uS14.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	s	100	Total	C	N	O	S	0	0
			805	499	164	139	3		

- Molecule 49 is a protein called Small ribosomal subunit protein uS15.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	t	88	Total	C	N	O	S	0	0
			714	439	144	130	1		

- Molecule 50 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	u	82	Total	C	N	O	S	0	0
			649	406	128	114	1		

- Molecule 51 is a protein called Small ribosomal subunit protein uS17.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	v	80	Total	C	N	O	S	0	0
			648	411	121	113	3		

- Molecule 52 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	w	66	Total	C	N	O	S	0	0
			544	344	102	97	1		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
53	x	83	Total	C	N	O	S	0	0
			663	424	126	111	2		

- Molecule 54 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	y	86	Total	C	N	O	S	0	0
			669	414	138	114	3		

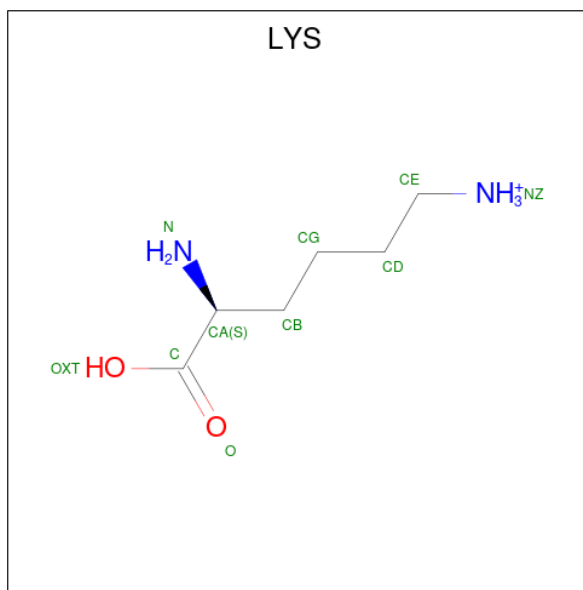
- Molecule 55 is a protein called 30S ribosomal protein S21.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	z	70	Total	C	N	O	S	0	0
			589	366	125	97	1		

- Molecule 56 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
56	1	262	Total 262	Mg 262	0
56	2	111	Total 111	Mg 111	0
56	3	10	Total 10	Mg 10	0
56	5	1	Total 1	Mg 1	0
56	B	3	Total 3	Mg 3	0
56	L	2	Total 2	Mg 2	0
56	M	1	Total 1	Mg 1	0
56	Q	1	Total 1	Mg 1	0
56	X	1	Total 1	Mg 1	0
56	b	1	Total 1	Mg 1	0
56	l	1	Total 1	Mg 1	0
56	z	1	Total 1	Mg 1	0

- Molecule 57 is LYSINE (CCD ID: LYS) (formula: $C_6H_{15}N_2O_2$).



Mol	Chain	Residues	Atoms				AltConf
57	5	1	Total	C	N	O	0
			9	6	2	1	

- Molecule 58 is water.

Mol	Chain	Residues	Atoms				AltConf
58	1	700	Total	O			0
			700	700			
58	2	341	Total	O			0
			341	341			
58	3	7	Total	O			0
			7	7			
58	4	1	Total	O			0
			1	1			
58	5	10	Total	O			0
			10	10			
58	B	2	Total	O			0
			2	2			
58	C	7	Total	O			0
			7	7			
58	D	10	Total	O			0
			10	10			
58	E	4	Total	O			0
			4	4			
58	F	6	Total	O			0
			6	6			
58	G	12	Total	O			0
			12	12			
58	J	7	Total	O			0
			7	7			
58	K	4	Total	O			0
			4	4			
58	L	3	Total	O			0
			3	3			
58	M	2	Total	O			0
			2	2			
58	N	2	Total	O			0
			2	2			
58	O	6	Total	O			0
			6	6			
58	P	6	Total	O			0
			6	6			
58	Q	7	Total	O			0
			7	7			

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Mol	Chain	Residues	Atoms		AltConf
58	R	7	Total 7	O 7	0
58	S	4	Total 4	O 4	0
58	T	2	Total 2	O 2	0
58	U	6	Total 6	O 6	0
58	V	1	Total 1	O 1	0
58	W	2	Total 2	O 2	0
58	Y	8	Total 8	O 8	0
58	Z	2	Total 2	O 2	0
58	a	2	Total 2	O 2	0
58	b	2	Total 2	O 2	0
58	f	1	Total 1	O 1	0
58	g	20	Total 20	O 20	0
58	h	14	Total 14	O 14	0
58	i	8	Total 8	O 8	0
58	j	3	Total 3	O 3	0
58	k	7	Total 7	O 7	0
58	l	5	Total 5	O 5	0
58	m	3	Total 3	O 3	0
58	n	4	Total 4	O 4	0
58	o	3	Total 3	O 3	0
58	p	5	Total 5	O 5	0

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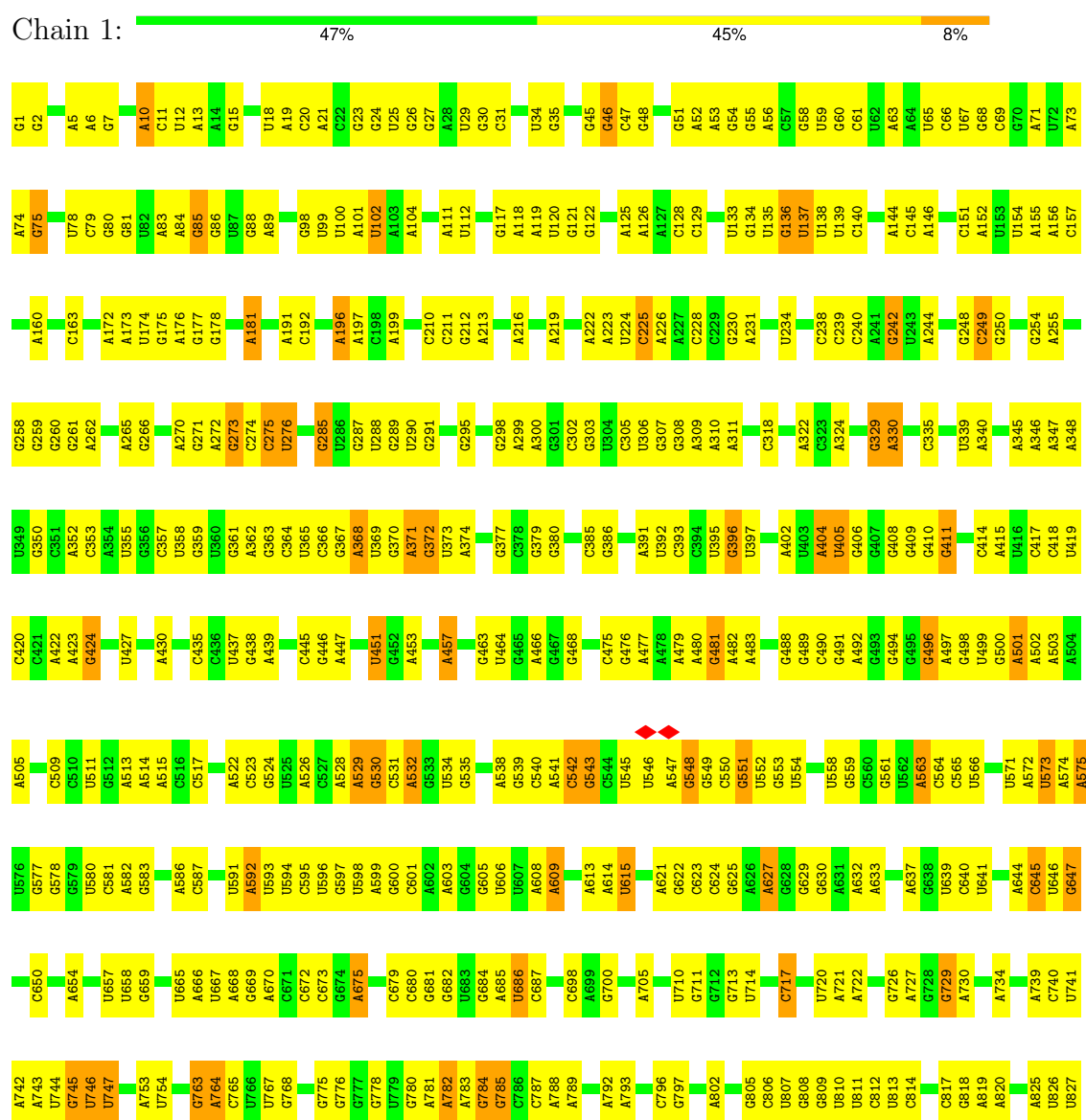
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Mol	Chain	Residues	Atoms		AltConf
58	q	1	Total 1	O 1	0
58	r	4	Total 4	O 4	0
58	t	1	Total 1	O 1	0
58	u	4	Total 4	O 4	0
58	v	3	Total 3	O 3	0
58	w	3	Total 3	O 3	0
58	x	1	Total 1	O 1	0
58	z	4	Total 4	O 4	0

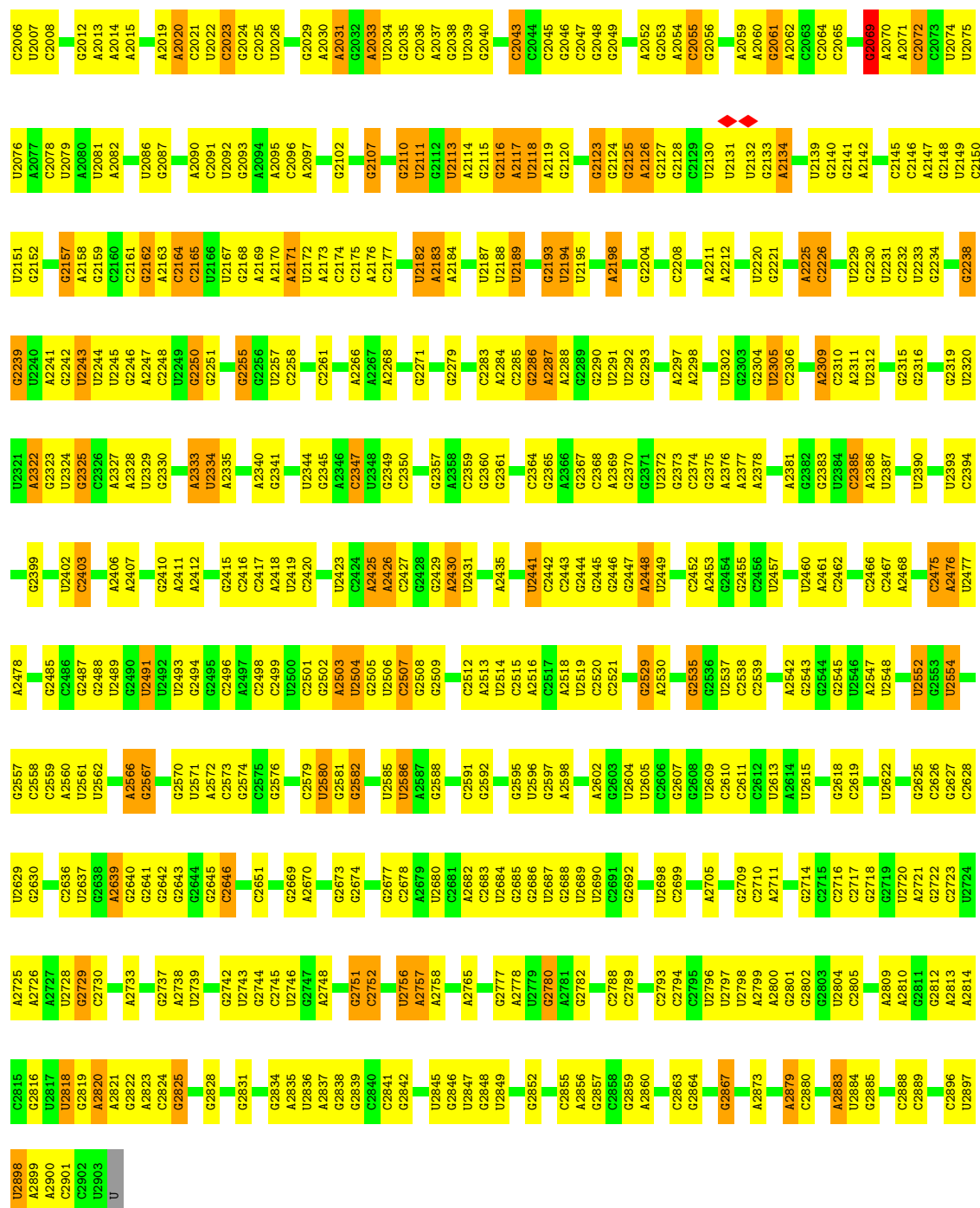
3 Residue-property plots

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

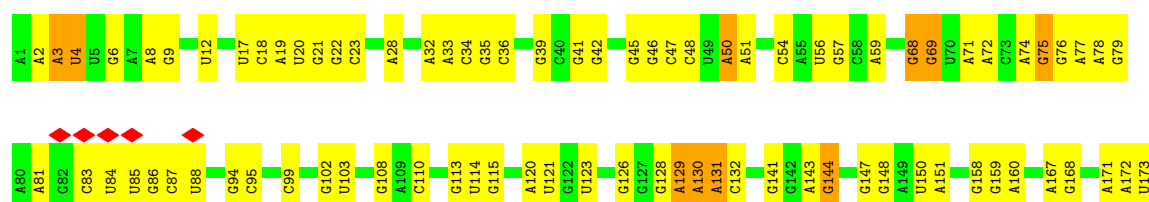
• Molecule 1: 23S rRNA



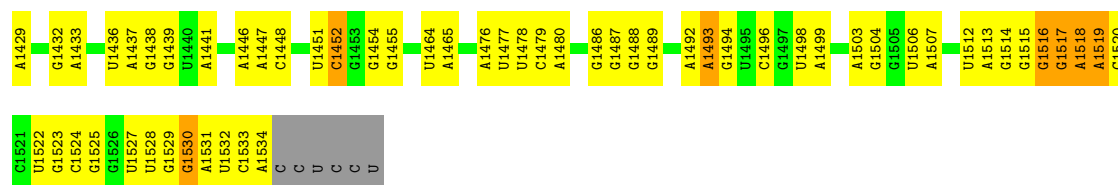
G1906	G1907	G1910	G1911	G1912	A1913	C1914	U1915	A1916	U1917	A1918	G1921	C1924	C1925	U1926	A1927	A1928	G1929	G1930	U1931	A1937	A1938	U1939	A1953	U1954	U1955	U1956	C1962	U1963	G1964	C1967	A1970	U1971	G1972	A1977	A1987	G1988	U1991	G1992	U1993	U1995	C1996	C1997	A1998	G2002	A2005									
C1816	G1817	U1818	A1819	U1820	A1821	C1822	U1825	G1826	U1827	G1828	A1829	C1830	G1831	C1832	C1833	U1834	G1835	C1836	C1837	C1844	G1845	A1848	G1849	G1850	U1851	U1852	A1853	A1854	G1857	A1858	U1859	U1864	U1865	A1866	G1867	C1868	U1869	C1870	A1871	A1872	G1873	C1874	G1875	U1882	U1883	G1884	U1889	A1901	G1904	C1905				
A1739	A1744	A1745	A1746	U1747	C1748	A1749	U1750	U1751	C1752	G1753	A1754	A1755	G1756	A1757	C1760	C1761	A1762	G1763	C1764	C1771	A1772	A1773	U1778	U1779	U1780	U1781	A1784	C1788	A1789	C1790	A1791	A1794	C1795	U1798	G1799	C1800	A1801	A1802	A1803	C1804	A1805	C1806	G1807	A1808	A1809	A1810	G1811	U1812	G1813	G1814	A1815			
G1663	G1666	G1667	A1668	G1669	G1670	U1671	A1672	G1673	G1674	G1675	A1676	A1677	A1678	A1679	U1680	G1681	G1684	G1687	U1688	G1696	A1614	C1615	U1616	A1617	A1618	G1619	U1705	C1706	G1707	C1708	U1709	G1710	A1711	U1712	U1713	U1714	G1715	G1721	C1724	U1725	C1726	C1727	C1728	U1729	U1730	G1731	C1732	U1733	G1734	U1736	G1737	G1738		
C1577	U1578	G1581	C1582	A1583	U1589	A1590	A1591	C1592	U1593	A1594	C1595	A1596	A1597	U1598	U1599	C1600	G1601	C1604	C1605	A1610	A1614	C1615	U1616	A1617	A1618	G1619	U1629	U1630	A1631	A1632	A1635	U1636	A1637	C1638	C1639	G1643	C1644	U1645	C1646	U1647	U1648	G1649	A1650	G1651	A1652	G1653	A1654	A1655	C1656	U1657	C1658			
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U1415	G1416	C1417	A1420	G1421	G1422	G1423	G1424	G1425	G1426	A1427	G1428	G1429	G1430	A1431	G1432	A1433	A1434	G1436	C1437	A1438	A1439	U1440	G1441	U1442	U1443	G1444	G1445	C1446	G1447	U1448	U1458	G1459	U1460	G1464	G1465	U1466	U1467	U1468	A1469	A1470	G1473	U1474	G1475	U1476	A1477	G1478	G1482	U1486	U1487					
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A1321	A1322	U1325	U1326	U1329	C1330	G1339	C1345	C1351	U1352	A1353	A1354	A1359	G1360	G1361	C1362	C1363	G1364	A1365	G1368	G1371	A1378	U1379	G1380	G1381	G1382	A1383	A1384	A1385	C1386	A1387	G1388	G1389	A1392	C1399	U1400	G1401	U1402	U1405	U1406	G1407	G1408	U1409	G1410	A1413	C1414									
A1165	A1169	C1170	G1171	C1172	U1173	U1174	A1175	U1176	C1177	C1178	G1179	G1182	U1183	U1184	G1185	U1187	U1188	A1189	G1190	G1191	U1192	G1193	C1196	G1197	U1198	U1199	C1200	G1202	U1203	A1204	A1205	G1206	U1209	G1210	A1211	G1212	A1213	A1214	G1215	G1216	U1217	G1218	U1219	G1220	U1224	G1225	C1233	U1234	G1235	G1236	A1237			
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C992	G993	C994	G914	C995	A996	A1000	A1001	C1007	A1008	A1009	A1010	G1011	U1012	C1013	G1016	G1024	G1025	A936	C937	U934	C935	A941	C942	A943	C946	A947	C948	G949	G953	C1042	G1043	C1044	U955	A959	A960	G961	G962	C982	C983	G969	U970	A971	A972	A973	G974	A975	G976	A979	A980	A981	C982	A983	A984	C987
U828	A829	G830	G831	U832	A833	G834	C835	G836	U839	G843	A844	U845	U846	U847	C848	A849	U850	C851	U852	G858	G859	A863	G864	C865	U870	U871	U872	C873	A877	C879	G880	G881	G882	C883	U884	C885	A886	A887	C888	C889	C893	U894	U895	A896	C897	A900	C901	C902	C903					



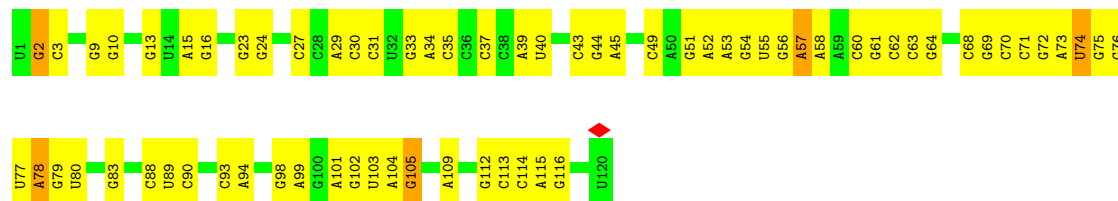
• Molecule 2: 16S ribosomal RNA



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G1338	G1255	A1163	U1085	G1006	G925	G843	A753	G674	A574	C501	A336	G254	G176
C1342	A1256	A1167	U1085	U1007	G926	G844	G755	A675	C576	A502	A338	G258	C178
G1343	G1257	U1168	A1092	U1008	G927	G845	A759	U677	G577	G505	C339	G259	A179
G1347	C1258	A1169	A1093	U1009	G932	G846	A759	C679	C578	G506	U340	G260	U180
A1350	G1260	A1170	G1094	U1010	G933	G849	G763	C679	A579	G507	G347	U261	A181
C1352	A1261	A1171	U1095	A1012	A935	G851	G765	U684	C581	U508	C264	G264	A182
G1353	A1266	U1173	G1013	G1014	A938	G852	G769	A687	U591	A510	G351	G265	G184
U1351	G1267	A1176	C1100	A1015	G939	U855	G769	G688	G592	C511	C352	G266	G185
G1353	G1268	G1177	A1101	A1016	G944	U859	G773	C689	U593	U512	A353	G267	C186
U1354	A1269	G1178	A1102	U1017	G945	G859	A777	G690	U594	C513	C354	U268	G187
G1355	G1179	G1178	G1108	A1019	G946	A860	C778	A695	A595	C514	A356	C269	
G1356	A1274	A1179	C1109	A1020	G947	A865	C779	A696	G597	U516	U358	C271	C193
A1357	A1275	G1180	C1109	A1021	G947	C866	A780	U697	U598	G517	G359	G275	A195
A1363	G1279	G1182	U1115	A1022	U952	U875	A794	A706	A600	C519	G360	A279	A196
C1367	A1280	U1183	U1116	U1023	G953	C876	C797	C708	G601	A520	G361	A279	A197
U1376	U1286	G1184	C1119	G1024	G954	U870	A790	A704	A602	G521	A363	G280	G202
G1370	A1287	G1185	C1120	U1025	U955	U871	A790	G705	U603	A523	U367	G281	G203
C1378	G1187	G1187	U1121	C1027	U956	U875	C797	A706	G604	A523	U368	C286	A205
A1374	G1193	G1193	U1122	C1028	U957	C876	A794	A715	U605	C526	U368	C286	C206
A1375	U1298	G1123	U1123	U1029	A958	A889	A807	A716	A621	G538	C380	A300	
U1376	U1298	G1124	G1124	A959	A959	A889	A807	A716	A621	G538	C380	A300	
A1377	A1196	U1030	U1030	U1030	U960	C883	C797	C708	A609	C527	C372	G289	U209
G1379	A1197	G1031	U1031	C1031	U961	U884	U798	U709	C613	A532	A373	G292	C210
C1378	U1301	U1126	G1127	G1032	G962	G885	G799	G713	C614	A532	A374	G292	G211
C1302	G1207	G1207	U1127	G1032	G963	G886	G799	G714	C614	C536	U375	G292	G212
C1303	C1208	C1208	C1129	G1033	G963	G887	U801	A715	U619	C537	G376	G297	G213
G1304	C1209	G1209	A1130	G1034	U965	G888	A807	A716	C620	G538	U368	G297	G214
G1305			G1131	G1041	G966	A889	A807	A716	C620	G538	U368	G297	G214
	A1213		C1132	A1042	G967	G890	C811	G721	A621	A539	C381	A300	U216
U1391	G1308	G1214	G1133	G1043	C987	C890	C811	G721	A621	A539	C381	A300	U216
G1392	C1309	C1215	G1134	G1043	A968	U891	G812	U723	A629	G540	A382	A306	
C1397	G1310	A1216	U1135	A1044	A969	A892	C812	U723	A630	G542	A383	A306	
A1396	A1311	A1217	U1136	C1045	C970	G895	A815	G727	G633	U543	C385	G310	C221
C1397	G1312	C1218	C1137	G1053	G971	C896	A815	G727	G633	G544	U387	C312	C222
A1398	U1313	A1219	G1138	C1054	A975	C896	A816	G730	C634	C545	G388	C312	A223
C1399	C1314	G1220	U1139	A1055	G976	A901	C817	G731	A635	A546	A313	A314	U224
C1400	U1315	C1226	C1140	G1058	A977	G902	U820	C732	A642	U548	U390	C314	G226
G1401	G1316	G1226	A1141	C1059	A978	G903	U820	C732	A642	U548	U390	C314	G226
C1402	A1318	C1227	G1142	C1059	C979	U904	U822	G734	C647	C549	C392	G318	U229
C1403	A1319	A1228	G1143	U1060	C980	U905	C823	C735	A648	U552	A393	G319	G230
	C1320	G1230	A1145	G1061	U981	A908	G824	C736	A649	A553	G394	A320	U231
C1409	C1409	G1231	A1146	G1064	C984	A909	A825	C737	G650	A554	C394	A320	G232
C1411	C1322	U1321	U1147	U1065	C985	C910	A825	C738	U653	A559	U398	A321	G232
A1412	G1323	A1236	C1148	C1066	C985	U911	U827	C738	U653	A559	G399	A322	C235
A1413	C1324	C1237	U1149	U1066	C985	U911	U827	C738	U653	A559	G399	A322	C235
U1414	A1325	A1238	C1149	C1066	C985	U911	U827	C738	U653	A559	G399	A322	C235
G1415	U1326	A1239	A1150	U1066	C985	U911	U827	C738	U653	A559	G399	A322	C235
G1416	C1327	U1240	A1151	C1066	C985	U911	U827	C738	U653	A559	G399	A322	C235
G1419	A1329	G1242	C1157	G1074	A995	G917	G829	G741	G660	A560	C400	G324	A236
U1330	U1330	A1250	U1159	G1077	A996	U921	G838	C750	G671	U571	C401	G324	G237
A1428													



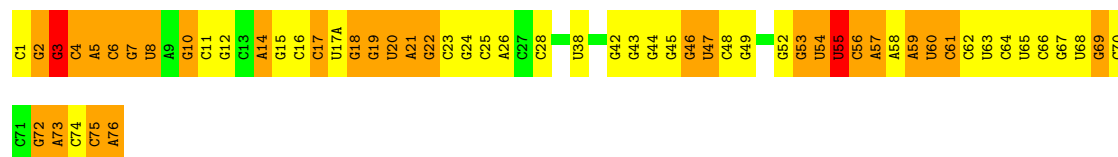
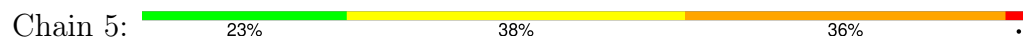
- Molecule 3: 5S ribosomal RNA



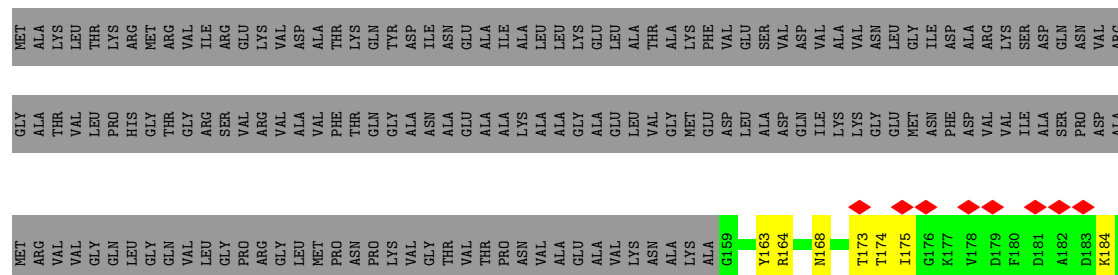
- Molecule 4: mRNA



- Molecule 5: Lys-tRNA^{proL}

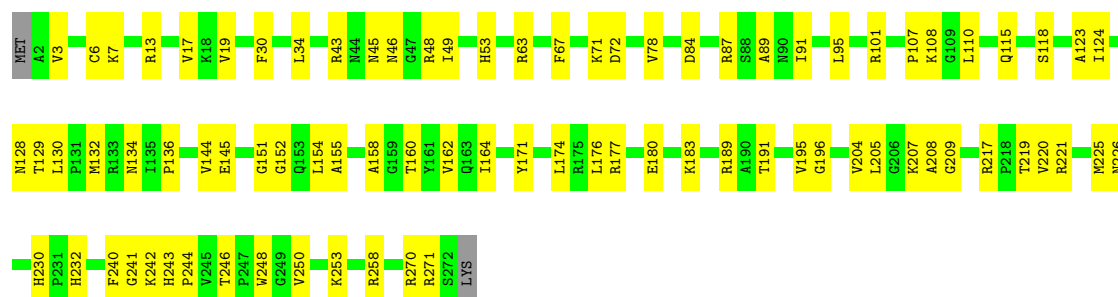


- Molecule 6: Large ribosomal subunit protein uL1



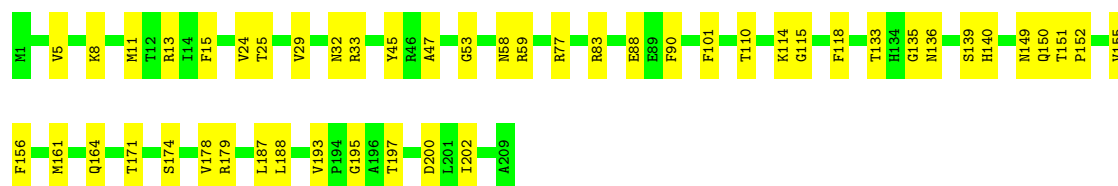
- Molecule 7: 50S ribosomal protein L2

Chain B: 



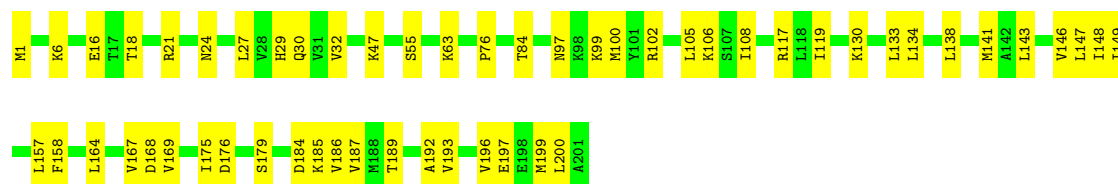
- Molecule 8: 50S ribosomal protein L3

Chain C: 



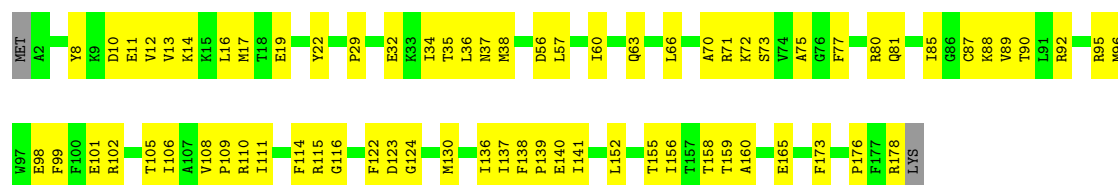
- Molecule 9: 50S ribosomal protein L4

Chain D: 



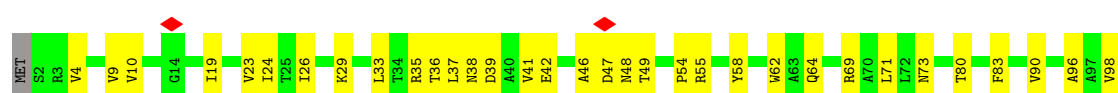
- Molecule 10: 50S ribosomal protein L5

Chain E: 



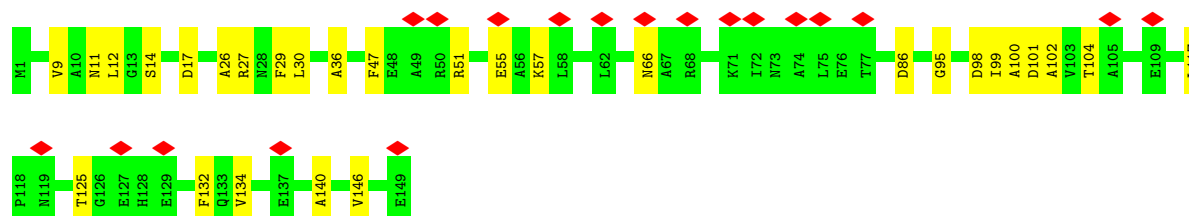
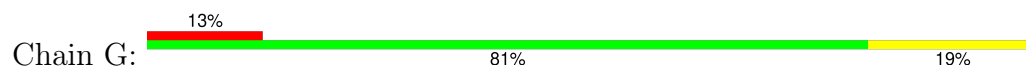
- Molecule 11: 50S ribosomal protein L6

Chain F: 

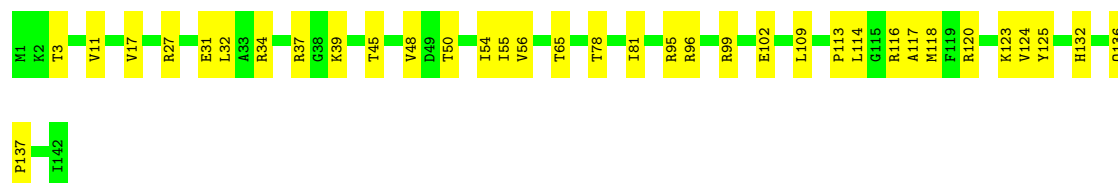




- Molecule 12: 50S ribosomal protein L9



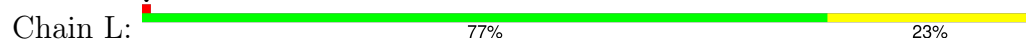
- Molecule 13: Large ribosomal subunit protein uL13



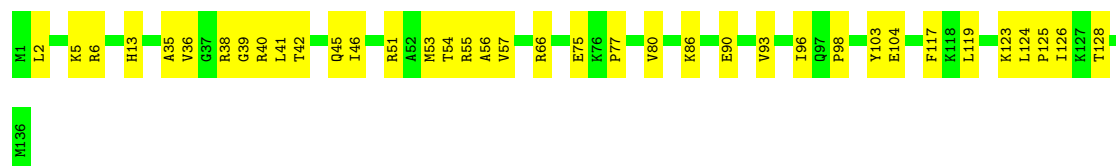
- Molecule 14: 50S ribosomal protein L14



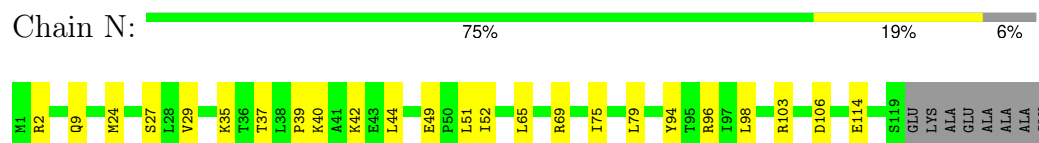
- Molecule 15: 50S ribosomal protein L15



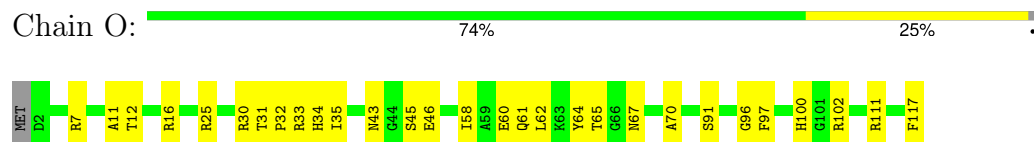
- Molecule 16: 50S ribosomal protein L16



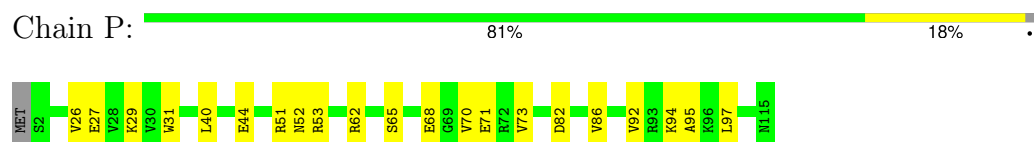
- Molecule 17: 50S ribosomal protein L17



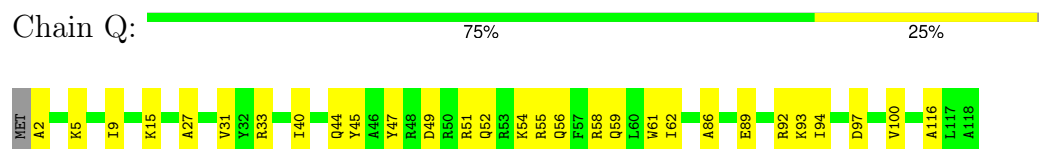
- Molecule 18: Large ribosomal subunit protein uL18



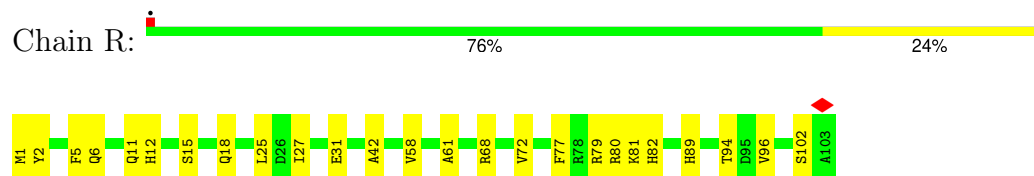
- Molecule 19: Large ribosomal subunit protein bL19



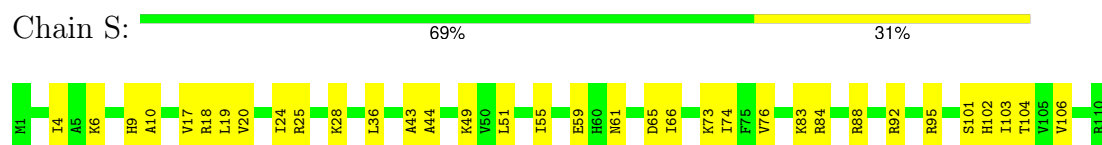
- Molecule 20: 50S ribosomal protein L20



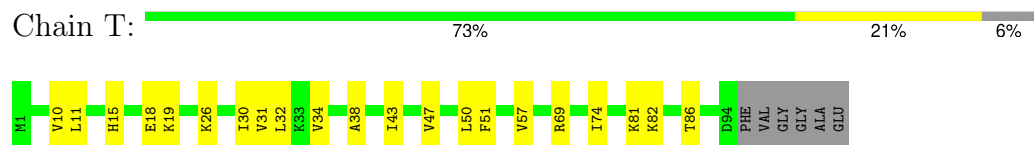
- Molecule 21: Ribosomal protein L21



- Molecule 22: 50S ribosomal protein L22



- Molecule 23: 50S ribosomal protein L23



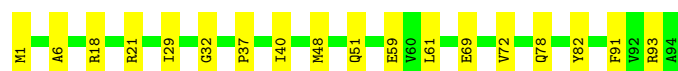
- Molecule 24: 50S ribosomal protein L24

Chain U:  75% 24%



- Molecule 25: Large ribosomal subunit protein bL25

Chain V:  81% 19%



- Molecule 26: Large ribosomal subunit protein bL27

Chain W:  67% 24% 10%



- Molecule 27: 50S ribosomal protein L28

Chain X:  79% 19%



- Molecule 28: Large ribosomal subunit protein uL29

Chain Y:  84% 14%



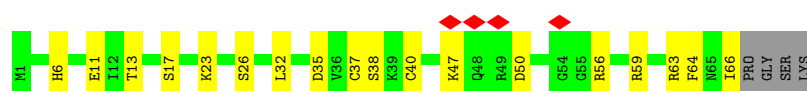
- Molecule 29: 50S ribosomal protein L30

Chain Z:  75% 24%



- Molecule 30: 50S ribosomal protein L31

Chain a:  6% 69% 26% 6%



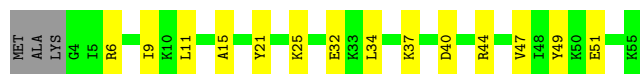
- Molecule 31: 50S ribosomal protein L32

Chain b:  74% 25% .



- Molecule 32: 50S ribosomal protein L33

Chain c:  69% 25% 5%



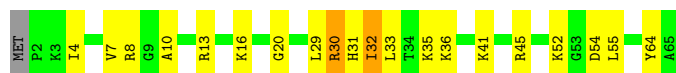
- Molecule 33: 50S ribosomal protein L34

Chain d:  70% 30%



- Molecule 34: 50S ribosomal protein L35

Chain e:  68% 28% . .



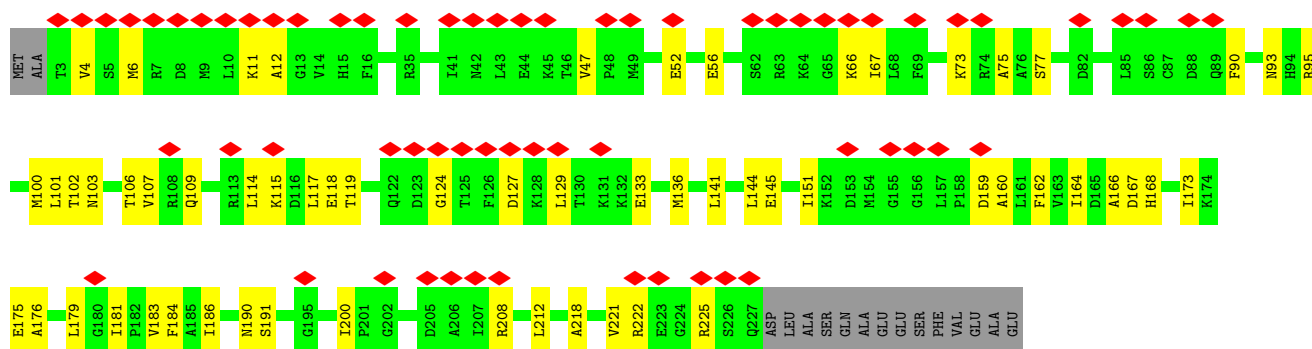
- Molecule 35: 50S ribosomal protein L36

Chain f:  74% 26%



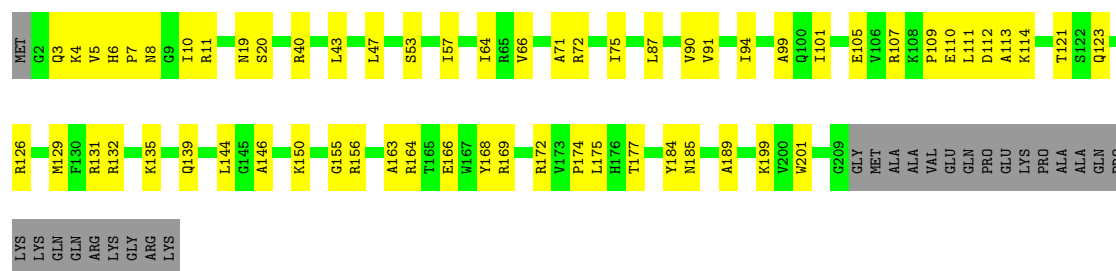
- Molecule 36: 30S ribosomal protein S2

Chain g:  27% 68% 25% 7%



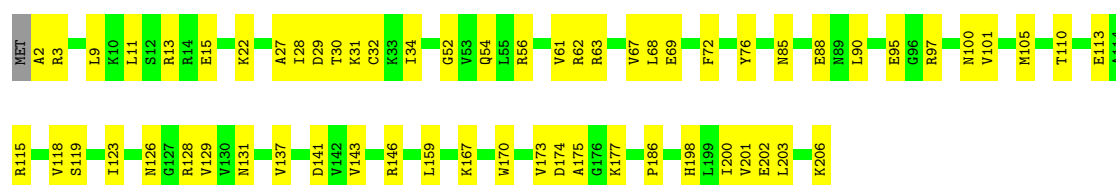
- Molecule 37: 30S ribosomal protein S3

Chain h:  63% 26% 11%



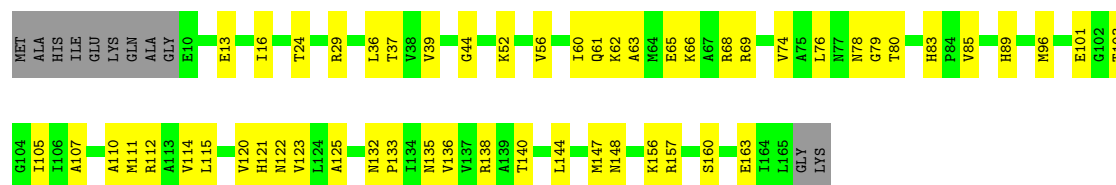
• Molecule 38: 30S ribosomal protein S4

Chain i:  70% 30%



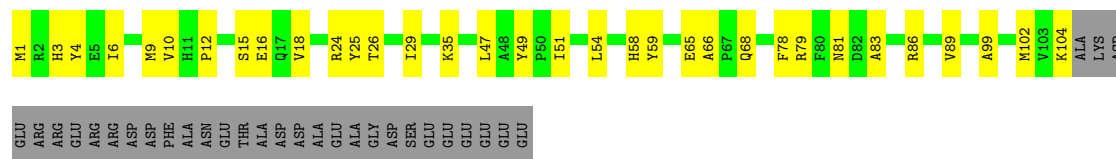
• Molecule 39: 30S ribosomal protein S5

Chain j:  61% 32% 7%



• Molecule 40: 30S ribosomal protein S6

Chain k:  53% 24% 23%



• Molecule 41: 30S ribosomal protein S7

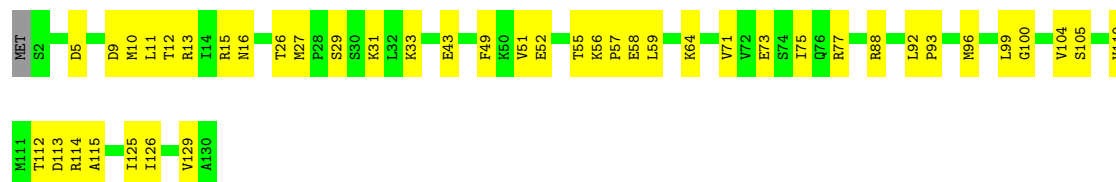
Chain l:  58% 26% 16%





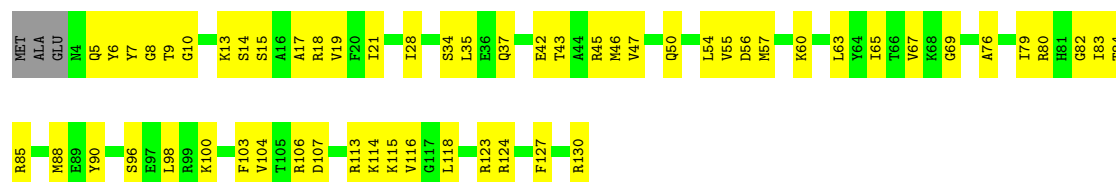
- Molecule 42: Small ribosomal subunit protein uS8

Chain m: 66% 33% .



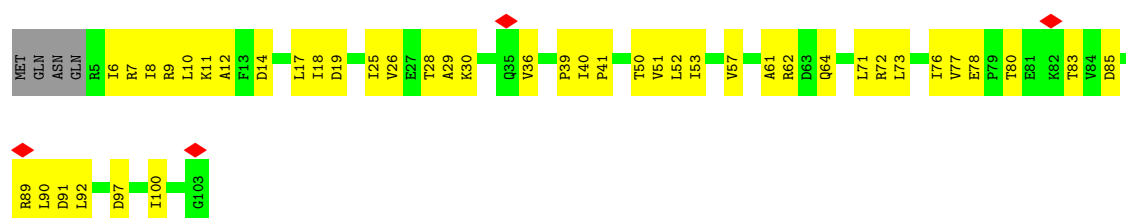
- Molecule 43: Small ribosomal subunit protein uS9

Chain n: 54% 44% .



- Molecule 44: Small ribosomal subunit protein uS10

Chain o: 54% 42% .



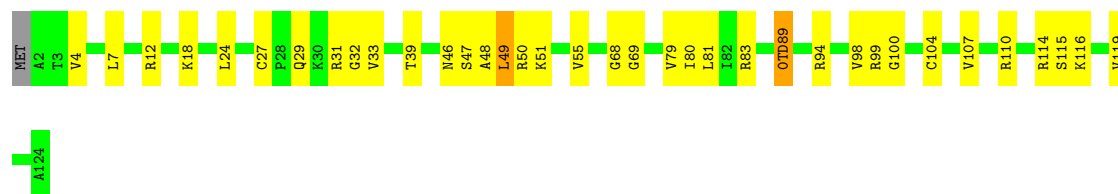
- Molecule 45: 30S ribosomal protein S11

Chain p: 67% 23% 9%

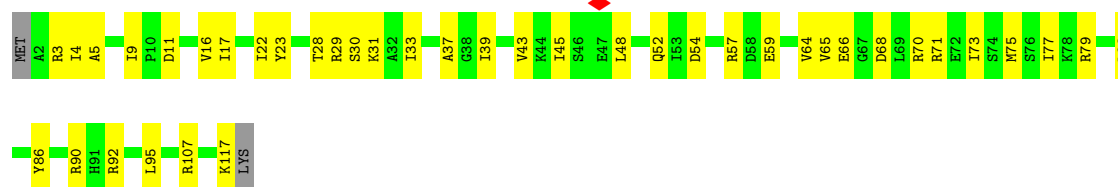


- Molecule 46: Small ribosomal subunit protein uS12

Chain q: 70% 27% ..



- Molecule 47: 30S ribosomal protein S13



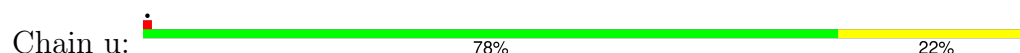
- Molecule 48: Small ribosomal subunit protein uS14



- Molecule 49: Small ribosomal subunit protein uS15



- Molecule 50: 30S ribosomal protein S16

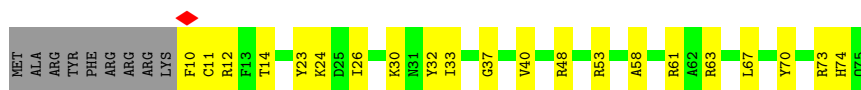


- Molecule 51: Small ribosomal subunit protein uS17



- Molecule 52: 30S ribosomal protein S18





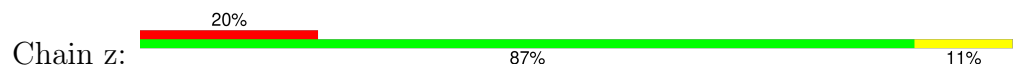
- Molecule 53: Small ribosomal subunit protein uS19



- Molecule 54: 30S ribosomal protein S20



- Molecule 55: 30S ribosomal protein S21



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	69316	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TALOS ARCTICA	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	61.23	Depositor
Minimum defocus (nm)	800	Depositor
Maximum defocus (nm)	2700	Depositor
Magnification	Not provided	
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor
Maximum map value	0.056	Depositor
Minimum map value	-0.009	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.003	Depositor
Recommended contour level	0.012	Depositor
Map size (Å)	547.328, 547.328, 547.328	wwPDB
Map dimensions	512, 512, 512	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.069, 1.069, 1.069	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: 6MZ, G7M, 2MA, MA6, 2MG, 7MG, OMU, 1MG, 5MU, OMG, 5MC, PSU, 0TD, UR3, OMC, 4OC, MG

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	1	0.14	0/69335	0.25	0/108168
2	2	0.13	0/36590	0.23	0/57074
3	3	0.11	0/2872	0.23	0/4478
4	4	0.34	0/255	0.55	0/394
5	5	0.30	0/1841	0.54	2/2870 (0.1%)
6	A	0.10	0/511	0.28	0/685
7	B	0.14	0/2121	0.29	0/2852
8	C	0.14	0/1586	0.32	0/2134
9	D	0.15	0/1571	0.35	0/2113
10	E	0.14	0/1434	0.38	0/1926
11	F	0.12	0/1333	0.28	0/1805
12	G	0.13	0/1122	0.33	0/1515
13	J	0.16	0/1152	0.34	0/1551
14	K	0.12	0/955	0.25	0/1279
15	L	0.14	0/1062	0.28	0/1413
16	M	0.14	0/1093	0.29	0/1460
17	N	0.15	0/964	0.34	0/1289
18	O	0.13	0/902	0.31	0/1209
19	P	0.14	0/929	0.28	0/1242
20	Q	0.17	0/960	0.33	0/1278
21	R	0.14	0/829	0.34	0/1107
22	S	0.16	0/864	0.35	0/1156
23	T	0.13	0/752	0.29	0/1005
24	U	0.14	0/796	0.32	0/1062
25	V	0.15	0/766	0.36	0/1025
26	W	0.13	0/589	0.25	0/779
27	X	0.15	0/635	0.31	0/848
28	Y	0.13	0/502	0.33	0/667
29	Z	0.13	0/452	0.27	0/605
30	a	0.12	0/531	0.30	0/709
31	b	0.13	0/450	0.29	0/599

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
32	c	0.13	0/433	0.26	0/576
33	d	0.14	0/380	0.26	0/498
34	e	0.39	0/513	0.62	1/676 (0.1%)
35	f	0.13	0/303	0.33	0/397
36	g	0.14	0/1791	0.39	0/2413
37	h	0.14	0/1663	0.36	0/2241
38	i	0.12	0/1665	0.26	0/2227
39	j	0.16	0/1165	0.36	0/1568
40	k	0.15	0/867	0.37	0/1171
41	l	0.14	0/1195	0.37	0/1602
42	m	0.16	0/989	0.39	0/1326
43	n	0.22	0/1034	0.50	0/1375
44	o	0.15	0/800	0.38	0/1082
45	p	0.19	0/893	0.37	0/1205
46	q	0.27	0/960	0.40	0/1286
47	r	0.13	0/909	0.35	0/1215
48	s	0.12	0/817	0.27	0/1088
49	t	0.13	0/722	0.31	0/964
50	u	0.16	0/659	0.33	0/884
51	v	0.12	0/657	0.31	0/881
52	w	0.17	0/553	0.29	0/743
53	x	0.12	0/680	0.28	0/915
54	y	0.16	0/675	0.34	0/895
55	z	0.10	0/597	0.24	0/792
All	All	0.14	0/156674	0.28	3/234317 (0.0%)

There are no bond length outliers.

All (3) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	e	30	ARG	N-CA-C	-11.61	92.49	108.86
5	5	55	U	C3'-C2'-O2'	6.24	120.05	110.70
5	5	3	G	C4'-C3'-O3'	5.85	118.18	109.40

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts

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	1	62334	0	31367	1170	0
2	2	32929	0	16587	576	0
3	3	2569	0	1301	46	0
4	4	230	0	119	8	0
5	5	1648	0	833	73	0
6	A	507	0	542	10	0
7	B	2082	0	2154	58	0
8	C	1565	0	1616	40	0
9	D	1552	0	1619	50	0
10	E	1410	0	1444	53	0
11	F	1313	0	1358	32	0
12	G	1111	0	1148	18	0
13	J	1129	0	1162	34	0
14	K	946	0	1023	25	0
15	L	1053	0	1129	30	0
16	M	1074	0	1157	29	0
17	N	951	0	994	17	0
18	O	892	0	923	26	0
19	P	917	0	962	18	0
20	Q	947	0	1019	30	0
21	R	816	0	839	25	0
22	S	857	0	922	26	0
23	T	746	0	811	15	0
24	U	788	0	844	18	0
25	V	753	0	780	17	0
26	W	582	0	599	15	0
27	X	625	0	652	11	0
28	Y	501	0	531	10	0
29	Z	448	0	488	11	0
30	a	522	0	524	19	0
31	b	444	0	458	16	0
32	c	426	0	464	11	0
33	d	377	0	418	16	0
34	e	504	0	572	25	0
35	f	302	0	343	9	0
36	g	1760	0	1787	39	0
37	h	1636	0	1710	42	0
38	i	1643	0	1707	45	0
39	j	1152	0	1196	40	0
40	k	848	0	846	27	0
41	l	1181	0	1238	35	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
42	m	979	0	1031	35	0
43	n	1022	0	1070	44	0
44	o	790	0	831	36	0
45	p	877	0	887	28	0
46	q	957	0	1017	34	0
47	r	900	0	965	31	0
48	s	805	0	844	27	0
49	t	714	0	734	23	0
50	u	649	0	666	16	0
51	v	648	0	691	18	0
52	w	544	0	560	15	0
53	x	663	0	688	32	0
54	y	669	0	719	19	0
55	z	589	0	629	6	0
56	1	262	0	0	0	0
56	2	111	0	0	0	0
56	3	10	0	0	0	0
56	5	1	0	0	0	0
56	B	3	0	0	0	0
56	L	2	0	0	0	0
56	M	1	0	0	0	0
56	Q	1	0	0	0	0
56	X	1	0	0	0	0
56	b	1	0	0	0	0
56	l	1	0	0	0	0
56	z	1	0	0	0	0
57	5	9	0	12	0	0
58	1	700	0	0	22	0
58	2	341	0	0	5	0
58	3	7	0	0	0	0
58	4	1	0	0	0	0
58	5	10	0	0	3	0
58	B	2	0	0	0	0
58	C	7	0	0	0	0
58	D	10	0	0	2	0
58	E	4	0	0	1	0
58	F	6	0	0	1	0
58	G	12	0	0	0	0
58	J	7	0	0	3	0
58	K	4	0	0	2	0
58	L	3	0	0	3	0
58	M	2	0	0	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
58	N	2	0	0	0	0
58	O	6	0	0	1	0
58	P	6	0	0	0	0
58	Q	7	0	0	1	0
58	R	7	0	0	5	0
58	S	4	0	0	1	0
58	T	2	0	0	0	0
58	U	6	0	0	0	0
58	V	1	0	0	0	0
58	W	2	0	0	0	0
58	Y	8	0	0	2	0
58	Z	2	0	0	1	0
58	a	2	0	0	0	0
58	b	2	0	0	0	0
58	f	1	0	0	0	0
58	g	20	0	0	1	0
58	h	14	0	0	2	0
58	i	8	0	0	2	0
58	j	3	0	0	0	0
58	k	7	0	0	1	0
58	l	5	0	0	1	0
58	m	3	0	0	0	0
58	n	4	0	0	0	0
58	o	3	0	0	0	0
58	p	5	0	0	1	0
58	q	1	0	0	0	0
58	r	4	0	0	0	0
58	t	1	0	0	0	0
58	u	4	0	0	0	0
58	v	3	0	0	0	0
58	w	3	0	0	1	0
58	x	1	0	0	0	0
58	z	4	0	0	0	0
All	All	146547	0	97530	2747	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 12.

The worst 5 of 2747 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)
5:5:67:G:H5'	58:5:206:HOH:O	1.65	0.95
1:1:408:G:H1	1:1:419:U:H3	1.16	0.94
5:5:18:G:H1	5:5:57:A:N6	1.68	0.91
54:y:57:ILE:HG13	54:y:61:GLN:HE22	1.36	0.89
1:1:1270:C:H5''	1:1:1271:G:H5'	1.55	0.88

There are no symmetry-related clashes.

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	
6	A	65/229 (28%)	63 (97%)	2 (3%)	0	100	100
7	B	269/273 (98%)	257 (96%)	12 (4%)	0	100	100
8	C	207/209 (99%)	196 (95%)	11 (5%)	0	100	100
9	D	199/201 (99%)	196 (98%)	3 (2%)	0	100	100
10	E	175/179 (98%)	165 (94%)	10 (6%)	0	100	100
11	F	173/177 (98%)	168 (97%)	4 (2%)	1 (1%)	22	55
12	G	147/149 (99%)	142 (97%)	5 (3%)	0	100	100
13	J	140/142 (99%)	138 (99%)	2 (1%)	0	100	100
14	K	121/123 (98%)	118 (98%)	3 (2%)	0	100	100
15	L	142/144 (99%)	138 (97%)	4 (3%)	0	100	100
16	M	134/136 (98%)	132 (98%)	2 (2%)	0	100	100
17	N	117/127 (92%)	112 (96%)	5 (4%)	0	100	100
18	O	114/117 (97%)	109 (96%)	5 (4%)	0	100	100
19	P	112/115 (97%)	112 (100%)	0	0	100	100
20	Q	115/118 (98%)	115 (100%)	0	0	100	100
21	R	101/103 (98%)	95 (94%)	6 (6%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
22	S	108/110 (98%)	103 (95%)	5 (5%)	0	100	100
23	T	92/100 (92%)	89 (97%)	3 (3%)	0	100	100
24	U	101/104 (97%)	98 (97%)	3 (3%)	0	100	100
25	V	92/94 (98%)	91 (99%)	1 (1%)	0	100	100
26	W	74/84 (88%)	70 (95%)	4 (5%)	0	100	100
27	X	75/78 (96%)	73 (97%)	2 (3%)	0	100	100
28	Y	60/63 (95%)	56 (93%)	4 (7%)	0	100	100
29	Z	56/59 (95%)	53 (95%)	3 (5%)	0	100	100
30	a	64/70 (91%)	59 (92%)	5 (8%)	0	100	100
31	b	54/57 (95%)	52 (96%)	2 (4%)	0	100	100
32	c	50/55 (91%)	50 (100%)	0	0	100	100
33	d	44/46 (96%)	42 (96%)	2 (4%)	0	100	100
34	e	62/65 (95%)	57 (92%)	5 (8%)	0	100	100
35	f	36/38 (95%)	36 (100%)	0	0	100	100
36	g	223/241 (92%)	214 (96%)	9 (4%)	0	100	100
37	h	206/233 (88%)	196 (95%)	10 (5%)	0	100	100
38	i	203/206 (98%)	196 (97%)	7 (3%)	0	100	100
39	j	154/167 (92%)	145 (94%)	9 (6%)	0	100	100
40	k	102/135 (76%)	100 (98%)	2 (2%)	0	100	100
41	l	149/179 (83%)	142 (95%)	7 (5%)	0	100	100
42	m	127/130 (98%)	126 (99%)	1 (1%)	0	100	100
43	n	125/130 (96%)	120 (96%)	5 (4%)	0	100	100
44	o	97/103 (94%)	89 (92%)	8 (8%)	0	100	100
45	p	115/129 (89%)	114 (99%)	1 (1%)	0	100	100
46	q	120/124 (97%)	108 (90%)	12 (10%)	0	100	100
47	r	114/118 (97%)	107 (94%)	7 (6%)	0	100	100
48	s	98/101 (97%)	96 (98%)	2 (2%)	0	100	100
49	t	86/89 (97%)	83 (96%)	3 (4%)	0	100	100
50	u	80/82 (98%)	77 (96%)	3 (4%)	0	100	100
51	v	78/84 (93%)	74 (95%)	4 (5%)	0	100	100
52	w	64/75 (85%)	62 (97%)	2 (3%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
53	x	81/92 (88%)	80 (99%)	1 (1%)	0	100	100
54	y	84/87 (97%)	83 (99%)	1 (1%)	0	100	100
55	z	68/71 (96%)	68 (100%)	0	0	100	100
All	All	5673/6141 (92%)	5465 (96%)	207 (4%)	1 (0%)	100	100

All (1) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
11	F	47	ASP

5.3.2 Protein sidechains ⓘ

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	
6	A	54/177 (30%)	54 (100%)	0	100	100
7	B	216/218 (99%)	215 (100%)	1 (0%)	86	93
8	C	164/164 (100%)	164 (100%)	0	100	100
9	D	165/165 (100%)	165 (100%)	0	100	100
10	E	148/150 (99%)	148 (100%)	0	100	100
11	F	136/138 (99%)	136 (100%)	0	100	100
12	G	114/114 (100%)	114 (100%)	0	100	100
13	J	116/116 (100%)	116 (100%)	0	100	100
14	K	104/104 (100%)	104 (100%)	0	100	100
15	L	103/103 (100%)	103 (100%)	0	100	100
16	M	109/109 (100%)	109 (100%)	0	100	100
17	N	99/103 (96%)	99 (100%)	0	100	100
18	O	86/87 (99%)	86 (100%)	0	100	100
19	P	99/100 (99%)	99 (100%)	0	100	100
20	Q	89/90 (99%)	89 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
21	R	84/84 (100%)	84 (100%)	0	100	100
22	S	93/93 (100%)	93 (100%)	0	100	100
23	T	81/84 (96%)	81 (100%)	0	100	100
24	U	84/85 (99%)	84 (100%)	0	100	100
25	V	78/78 (100%)	78 (100%)	0	100	100
26	W	58/62 (94%)	58 (100%)	0	100	100
27	X	67/68 (98%)	67 (100%)	0	100	100
28	Y	54/55 (98%)	54 (100%)	0	100	100
29	Z	48/49 (98%)	48 (100%)	0	100	100
30	a	59/62 (95%)	59 (100%)	0	100	100
31	b	47/48 (98%)	47 (100%)	0	100	100
32	c	47/49 (96%)	47 (100%)	0	100	100
33	d	38/38 (100%)	38 (100%)	0	100	100
34	e	51/52 (98%)	49 (96%)	2 (4%)	27	57
35	f	34/34 (100%)	34 (100%)	0	100	100
36	g	187/199 (94%)	187 (100%)	0	100	100
37	h	171/190 (90%)	171 (100%)	0	100	100
38	i	172/173 (99%)	172 (100%)	0	100	100
39	j	119/126 (94%)	119 (100%)	0	100	100
40	k	91/116 (78%)	91 (100%)	0	100	100
41	l	124/147 (84%)	124 (100%)	0	100	100
42	m	104/105 (99%)	104 (100%)	0	100	100
43	n	105/107 (98%)	103 (98%)	2 (2%)	52	73
44	o	86/90 (96%)	86 (100%)	0	100	100
45	p	90/99 (91%)	90 (100%)	0	100	100
46	q	102/103 (99%)	100 (98%)	2 (2%)	50	72
47	r	94/96 (98%)	94 (100%)	0	100	100
48	s	83/84 (99%)	83 (100%)	0	100	100
49	t	76/77 (99%)	76 (100%)	0	100	100
50	u	65/65 (100%)	65 (100%)	0	100	100
51	v	74/78 (95%)	74 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
52	w	57/65 (88%)	57 (100%)	0	100	100
53	x	72/79 (91%)	72 (100%)	0	100	100
54	y	65/66 (98%)	65 (100%)	0	100	100
55	z	60/61 (98%)	60 (100%)	0	100	100
All	All	4722/5005 (94%)	4715 (100%)	7 (0%)	92	97

5 of 7 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
43	n	5	GLN
43	n	9	THR
46	q	49	LEU
46	q	47	SER
34	e	32	ILE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 40 such sidechains are listed below:

Mol	Chain	Res	Type
38	i	136	GLN
49	t	80	GLN
40	k	14	GLN
41	l	148	ASN
53	x	52	HIS

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	1	2902/2904 (99%)	456 (15%)	10 (0%)
2	2	1532/1540 (99%)	228 (14%)	3 (0%)
3	3	119/120 (99%)	20 (16%)	0
4	4	10/18 (55%)	8 (80%)	0
5	5	76/77 (98%)	34 (44%)	5 (6%)
All	All	4639/4659 (99%)	746 (16%)	18 (0%)

5 of 746 RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	1	10	A

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Mol	Chain	Res	Type
1	1	27	G
1	1	34	U
1	1	35	G
1	1	46	G

5 of 18 RNA pucker outliers are listed below:

Mol	Chain	Res	Type
5	5	3	G
5	5	72	G
5	5	59	A
1	1	2425	A
5	5	2	G

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

32 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	PSU	1	2457	1	18,21,22	1.07	1 (5%)	21,30,33	1.92	6 (28%)
2	UR3	2	1498	2	19,22,23	2.80	8 (42%)	26,32,35	1.58	4 (15%)
1	PSU	1	2504	1	18,21,22	1.57	5 (27%)	21,30,33	2.11	4 (19%)
1	2MA	1	2503	1,56	18,25,26	4.77	11 (61%)	20,37,40	2.53	4 (20%)
2	MA6	2	1518	2	19,26,27	1.81	3 (15%)	18,38,41	3.37	3 (16%)
2	2MG	2	1207	2	18,26,27	1.17	2 (11%)	16,38,41	0.86	1 (6%)
2	MA6	2	1519	2	19,26,27	1.80	3 (15%)	18,38,41	3.47	3 (16%)
2	5MC	2	1407	2	19,22,23	0.55	0	26,32,35	0.63	0
1	PSU	1	955	1	18,21,22	1.13	1 (5%)	21,30,33	1.85	4 (19%)
1	PSU	1	2605	1	18,21,22	1.13	1 (5%)	21,30,33	1.96	5 (23%)
1	PSU	1	2580	1	18,21,22	1.10	2 (11%)	21,30,33	2.17	6 (28%)
2	7MG	2	527	2	23,26,27	1.09	1 (4%)	27,39,42	0.89	2 (7%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
1	PSU	1	746	1,56	18,21,22	1.09	1 (5%)	21,30,33	1.87	5 (23%)
1	6MZ	1	1618	1	17,25,26	3.88	6 (35%)	15,36,39	4.52	6 (40%)
1	OMC	1	2498	1	19,22,23	0.55	0	25,31,34	0.67	0
1	5MU	1	747	1	19,22,23	0.43	0	27,32,35	0.57	0
1	G7M	1	2069	1	20,26,27	2.67	7 (35%)	16,39,42	1.17	1 (6%)
46	0TD	q	89	46	8,9,10	1.78	2 (25%)	6,11,13	1.77	1 (16%)
1	PSU	1	1917	1	18,21,22	1.10	1 (5%)	21,30,33	1.96	5 (23%)
1	2MG	1	1835	1	18,26,27	1.18	2 (11%)	16,38,41	0.83	1 (6%)
1	5MU	1	1939	1,56	19,22,23	0.42	0	27,32,35	0.49	0
1	OMG	1	2251	5,1	19,26,27	1.16	2 (10%)	21,38,41	0.81	1 (4%)
2	2MG	2	966	2	18,26,27	1.05	1 (5%)	16,38,41	1.42	3 (18%)
1	OMU	1	2552	1	19,22,23	3.07	8 (42%)	25,31,34	1.82	5 (20%)
2	4OC	2	1402	2	20,23,24	3.20	8 (40%)	25,32,35	0.88	1 (4%)
1	1MG	1	745	1	19,26,27	3.11	7 (36%)	18,39,42	1.61	4 (22%)
2	PSU	2	516	2	18,21,22	1.08	1 (5%)	21,30,33	1.87	5 (23%)
2	2MG	2	1516	2	18,26,27	1.21	2 (11%)	16,38,41	0.91	1 (6%)
1	2MG	1	2445	1	18,26,27	1.19	2 (11%)	16,38,41	0.92	1 (6%)
1	5MC	1	1962	1	19,22,23	0.57	0	26,32,35	0.58	0
2	5MC	2	967	2	19,22,23	1.53	3 (15%)	26,32,35	1.35	4 (15%)
1	PSU	1	1911	1	18,21,22	1.13	1 (5%)	21,30,33	1.95	5 (23%)

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	PSU	1	2457	1	-	0/7/25/26	0/2/2/2
2	UR3	2	1498	2	-	2/7/25/26	0/2/2/2
1	PSU	1	2504	1	-	2/7/25/26	0/2/2/2
1	2MA	1	2503	1,56	-	3/3/25/26	0/3/3/3
2	MA6	2	1518	2	-	0/7/29/30	0/3/3/3
2	2MG	2	1207	2	-	0/5/27/28	0/3/3/3
2	MA6	2	1519	2	-	3/7/29/30	0/3/3/3
2	5MC	2	1407	2	-	0/7/25/26	0/2/2/2
1	PSU	1	955	1	-	0/7/25/26	0/2/2/2
1	PSU	1	2605	1	-	0/7/25/26	0/2/2/2
1	PSU	1	2580	1	-	0/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	7MG	2	527	2	-	3/7/37/38	0/3/3/3
1	PSU	1	746	1,56	-	0/7/25/26	0/2/2/2
1	6MZ	1	1618	1	-	1/5/27/28	0/3/3/3
1	OMC	1	2498	1	-	0/9/27/28	0/2/2/2
1	5MU	1	747	1	-	0/7/25/26	0/2/2/2
1	G7M	1	2069	1	-	0/3/25/26	0/3/3/3
46	0TD	q	89	46	-	3/7/12/14	-
1	PSU	1	1917	1	-	0/7/25/26	0/2/2/2
1	2MG	1	1835	1	-	2/5/27/28	0/3/3/3
1	5MU	1	1939	1,56	-	0/7/25/26	0/2/2/2
1	OMG	1	2251	5,1	-	0/5/27/28	0/3/3/3
2	2MG	2	966	2	-	0/5/27/28	0/3/3/3
1	OMU	1	2552	1	-	0/9/27/28	0/2/2/2
2	4OC	2	1402	2	-	1/9/29/30	0/2/2/2
1	1MG	1	745	1	-	0/3/25/26	0/3/3/3
2	PSU	2	516	2	-	2/7/25/26	0/2/2/2
2	2MG	2	1516	2	-	0/5/27/28	0/3/3/3
1	2MG	1	2445	1	-	0/5/27/28	0/3/3/3
1	5MC	1	1962	1	-	0/7/25/26	0/2/2/2
2	5MC	2	967	2	-	2/7/25/26	0/2/2/2
1	PSU	1	1911	1	-	0/7/25/26	0/2/2/2

The worst 5 of 92 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	1	1618	6MZ	C3'-C4'	-9.25	1.29	1.53
1	1	2503	2MA	C3'-C4'	-9.14	1.29	1.53
1	1	745	1MG	C2-N3	8.85	1.47	1.33
1	1	2503	2MA	C4-N3	8.41	1.48	1.35
1	1	2503	2MA	O4'-C1'	-7.88	1.30	1.40

The worst 5 of 91 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1	1618	6MZ	C1'-N9-C4	13.56	150.46	126.64
2	2	1519	MA6	N1-C6-N6	-12.61	102.26	116.83
2	2	1518	MA6	N1-C6-N6	-12.20	102.74	116.83
1	1	2503	2MA	C1'-N9-C4	8.71	141.94	126.64
1	1	2504	PSU	N1-C2-N3	6.66	122.19	115.17

There are no chirality outliers.

5 of 24 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	2	516	PSU	O4'-C1'-C5-C4
2	2	516	PSU	O4'-C1'-C5-C6
1	1	2504	PSU	O4'-C4'-C5'-O5'
2	2	967	5MC	O4'-C4'-C5'-O5'
2	2	1519	MA6	O4'-C4'-C5'-O5'

There are no ring outliers.

15 monomers are involved in 24 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	2	1518	MA6	1	0
1	1	955	PSU	1	0
1	1	2580	PSU	2	0
1	1	746	PSU	1	0
1	1	747	5MU	1	0
1	1	2069	G7M	1	0
46	q	89	0TD	4	0
1	1	1917	PSU	1	0
1	1	1939	5MU	1	0
1	1	2552	OMU	2	0
2	2	1402	4OC	2	0
1	1	745	1MG	1	0
2	2	516	PSU	1	0
2	2	1516	2MG	2	0
1	1	1962	5MC	3	0

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 396 ligands modelled in this entry, 395 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
57	LYS	5	101	5	7,8,9	1.10	1 (14%)	3,8,10	0.54	0

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
57	LYS	5	101	5	-	3/6/7/9	-

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
57	5	101	LYS	O-C	2.61	1.29	1.20

There are no bond angle outliers.

There are no chirality outliers.

All (3) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
57	5	101	LYS	CE-CD-CG-CB
57	5	101	LYS	CG-CD-CE-NZ
57	5	101	LYS	CA-CB-CG-CD

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

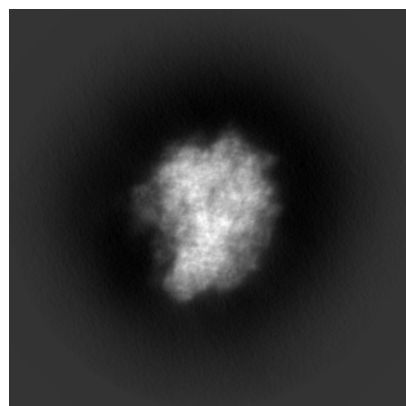
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-42714. These allow visual inspection of the internal detail of the map and identification of artifacts.

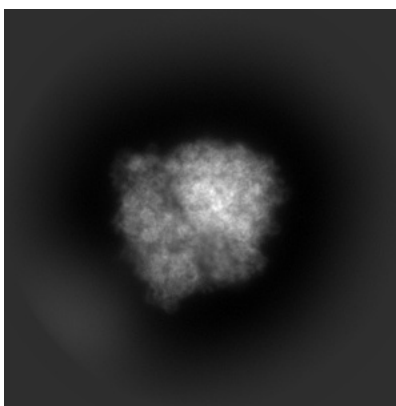
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

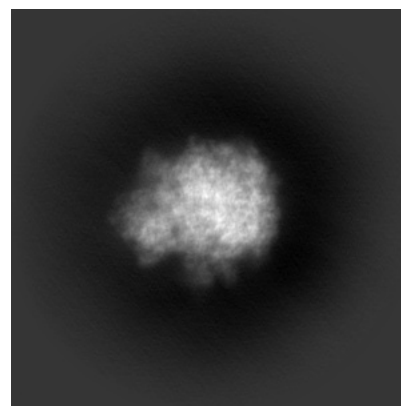
6.1.1 Primary map



X

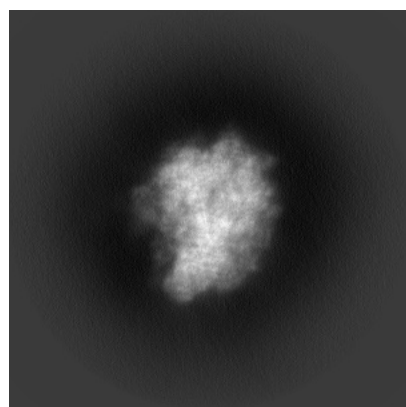


Y

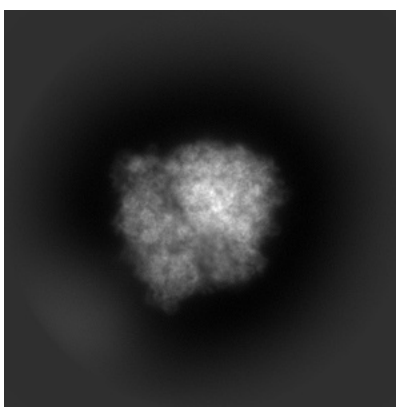


Z

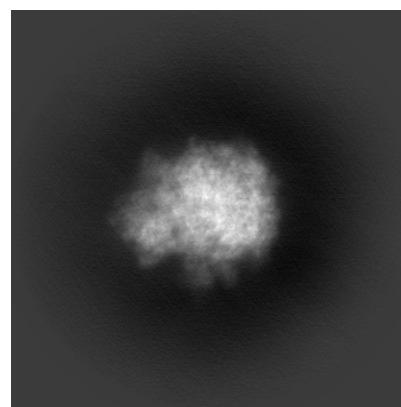
6.1.2 Raw map



X



Y

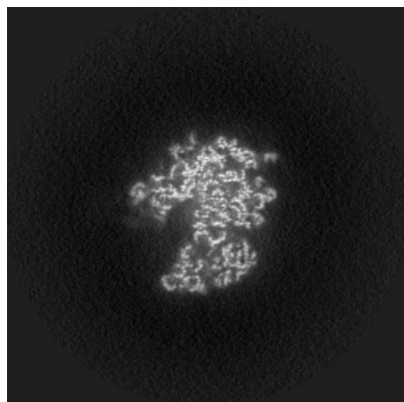


Z

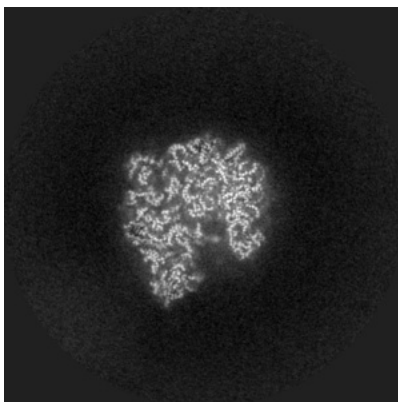
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

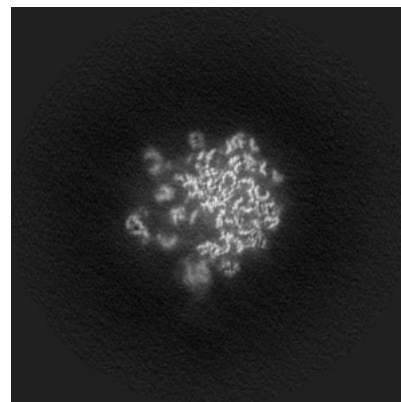
6.2.1 Primary map



X Index: 256

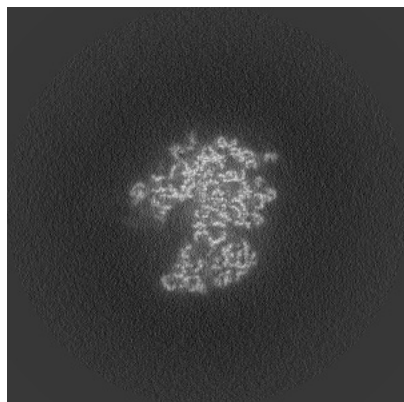


Y Index: 256

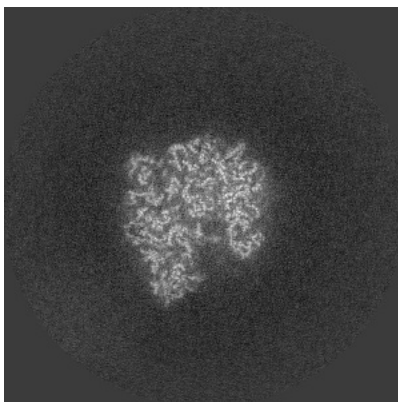


Z Index: 256

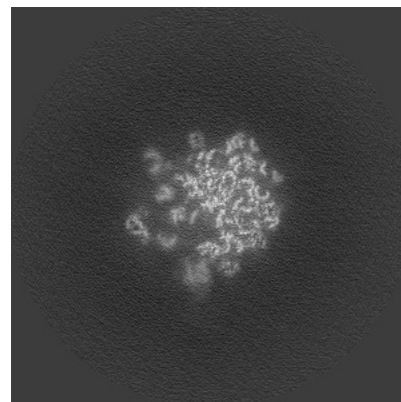
6.2.2 Raw map



X Index: 256



Y Index: 256

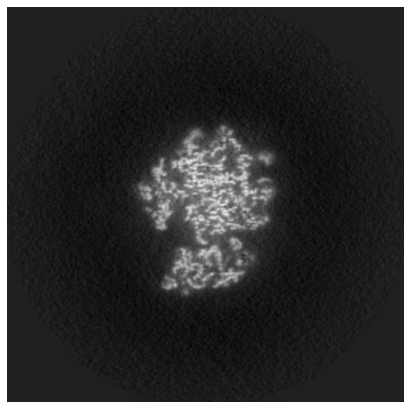


Z Index: 256

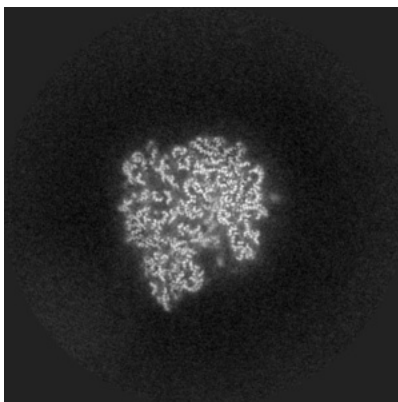
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

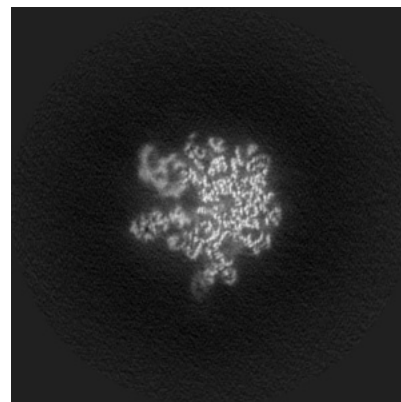
6.3.1 Primary map



X Index: 264

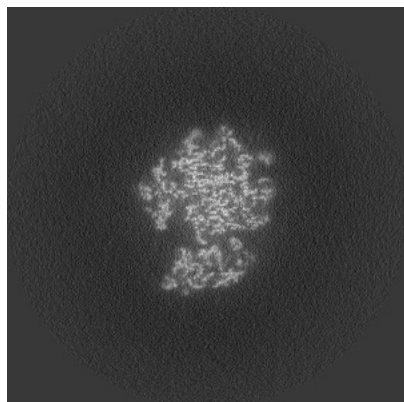


Y Index: 250

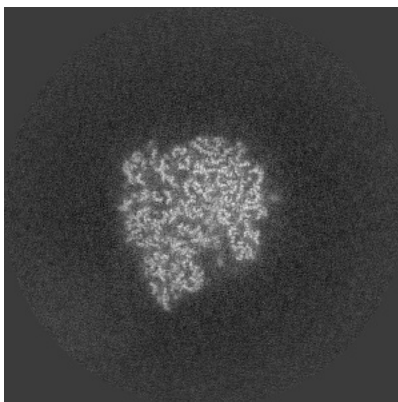


Z Index: 274

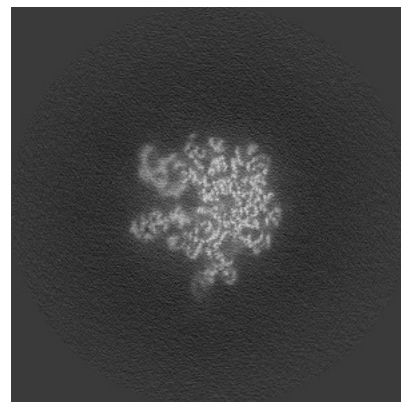
6.3.2 Raw map



X Index: 264



Y Index: 250

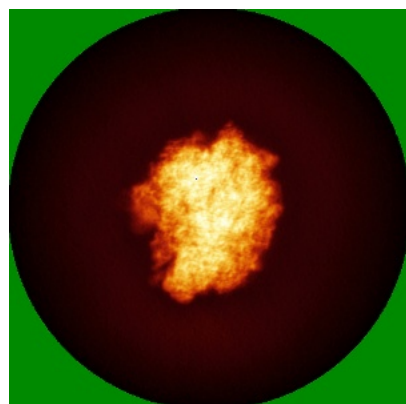


Z Index: 274

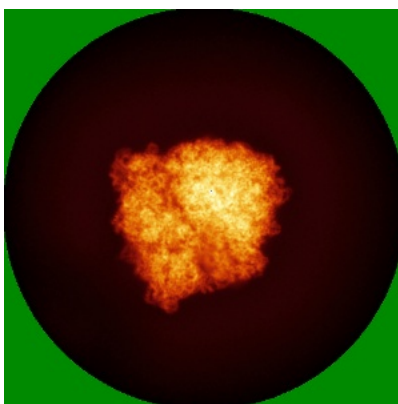
The images above show the largest variance slices of the map in three orthogonal directions.

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

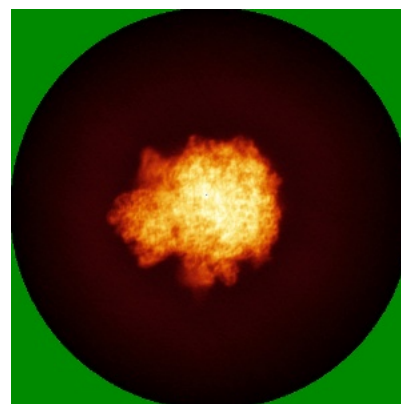
6.4.1 Primary map



X

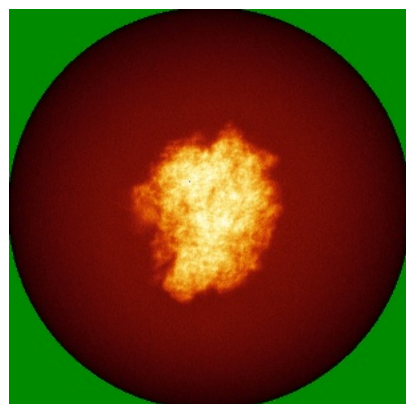


Y

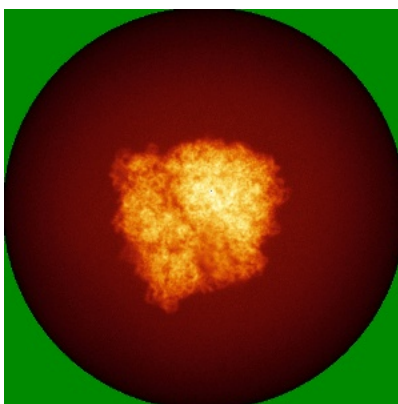


Z

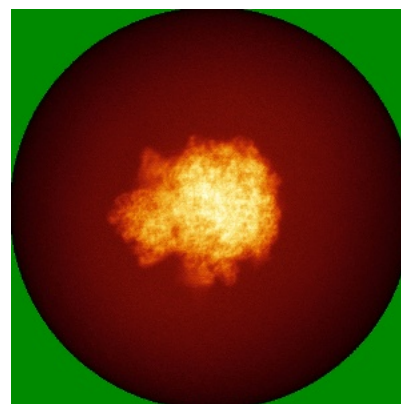
6.4.2 Raw map



X



Y

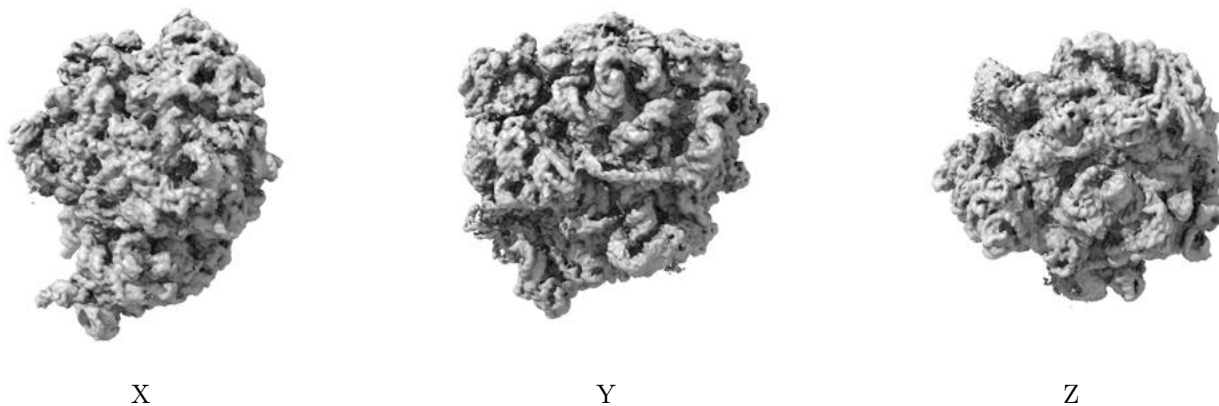


Z

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

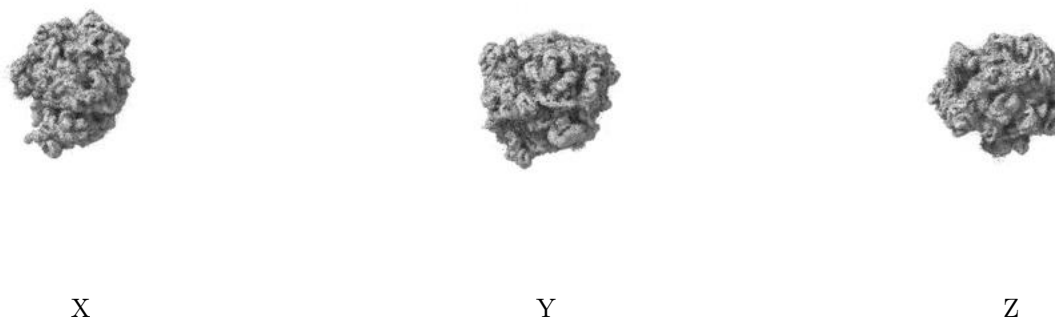
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.012. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map



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

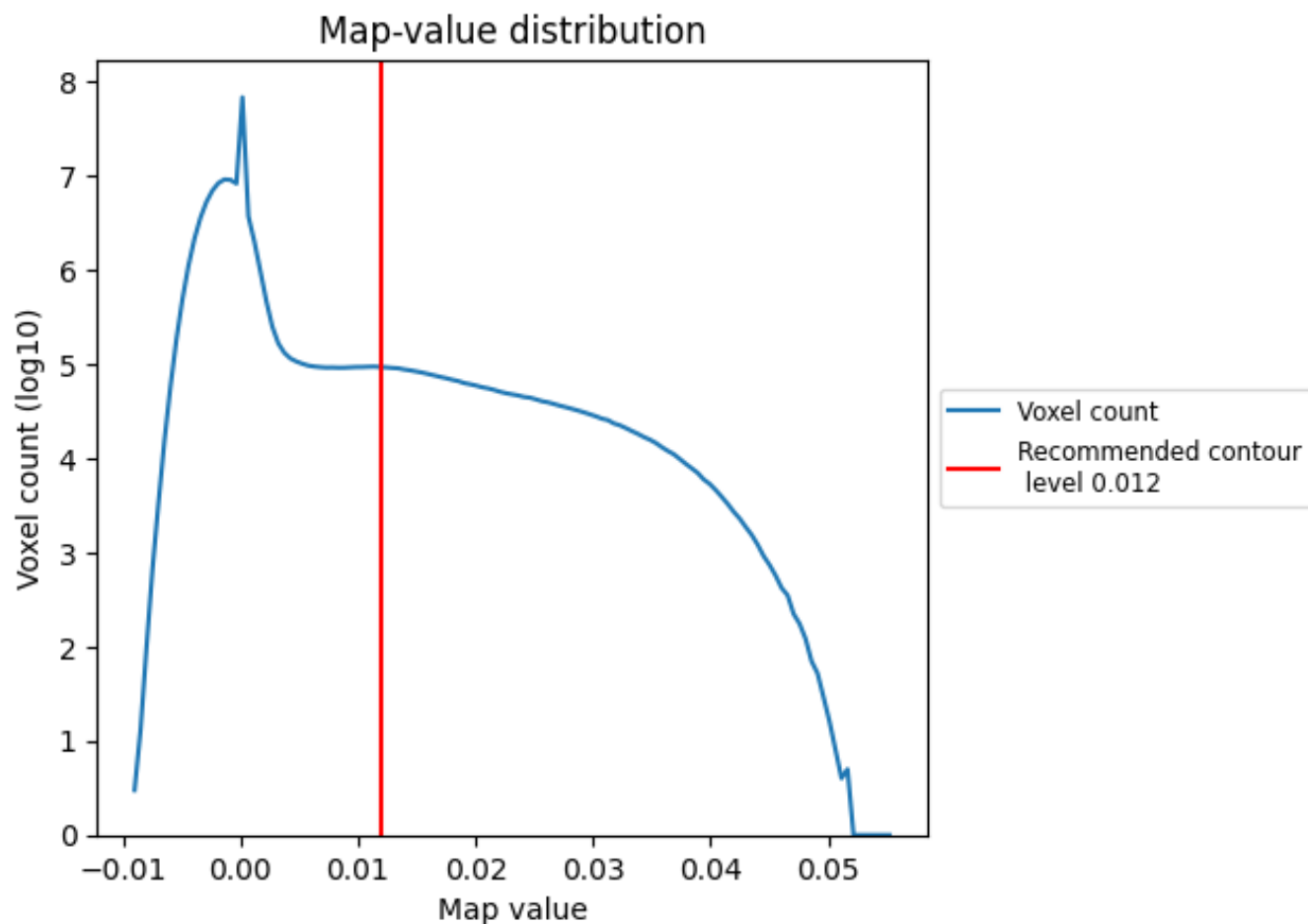
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

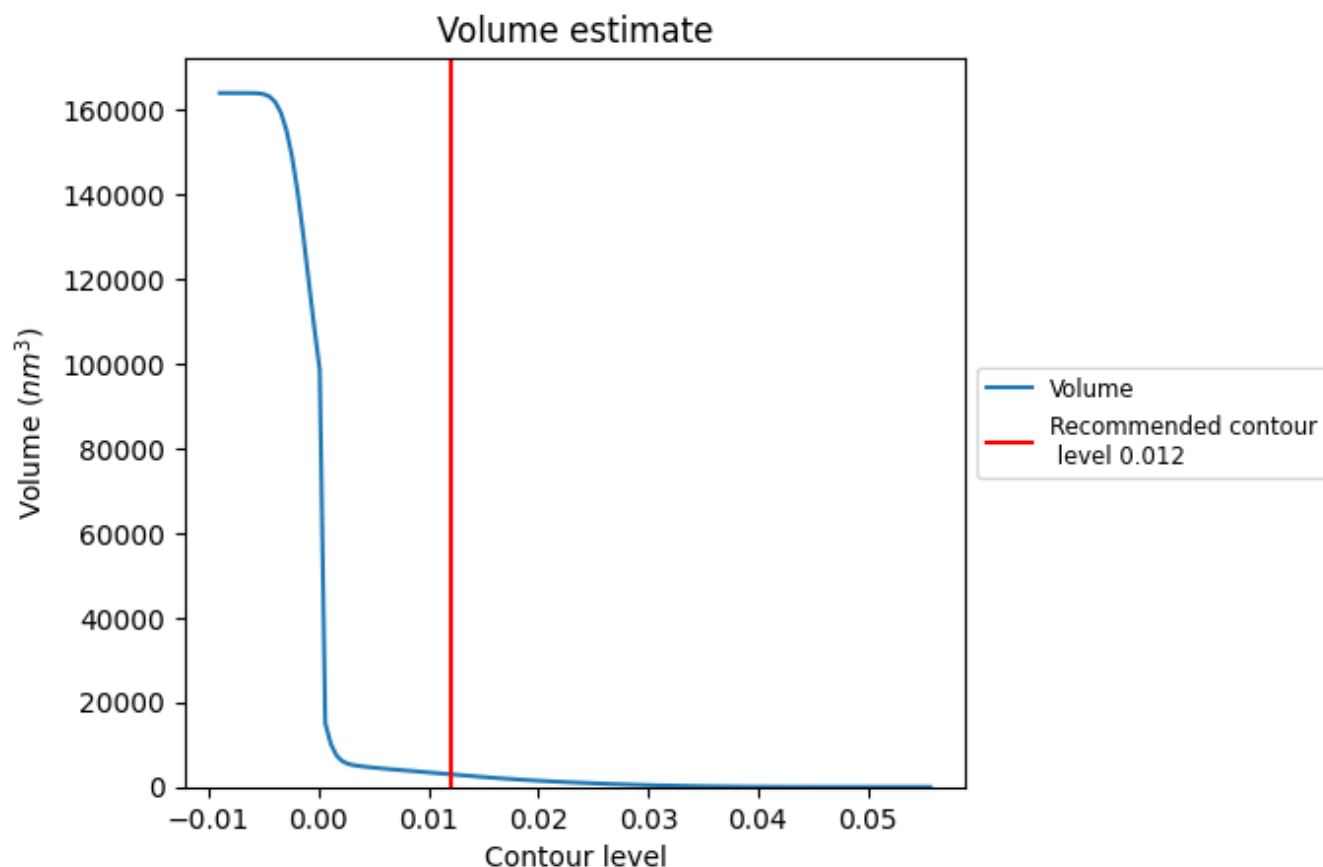
This section contains the results of statistical analysis of the map.

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.

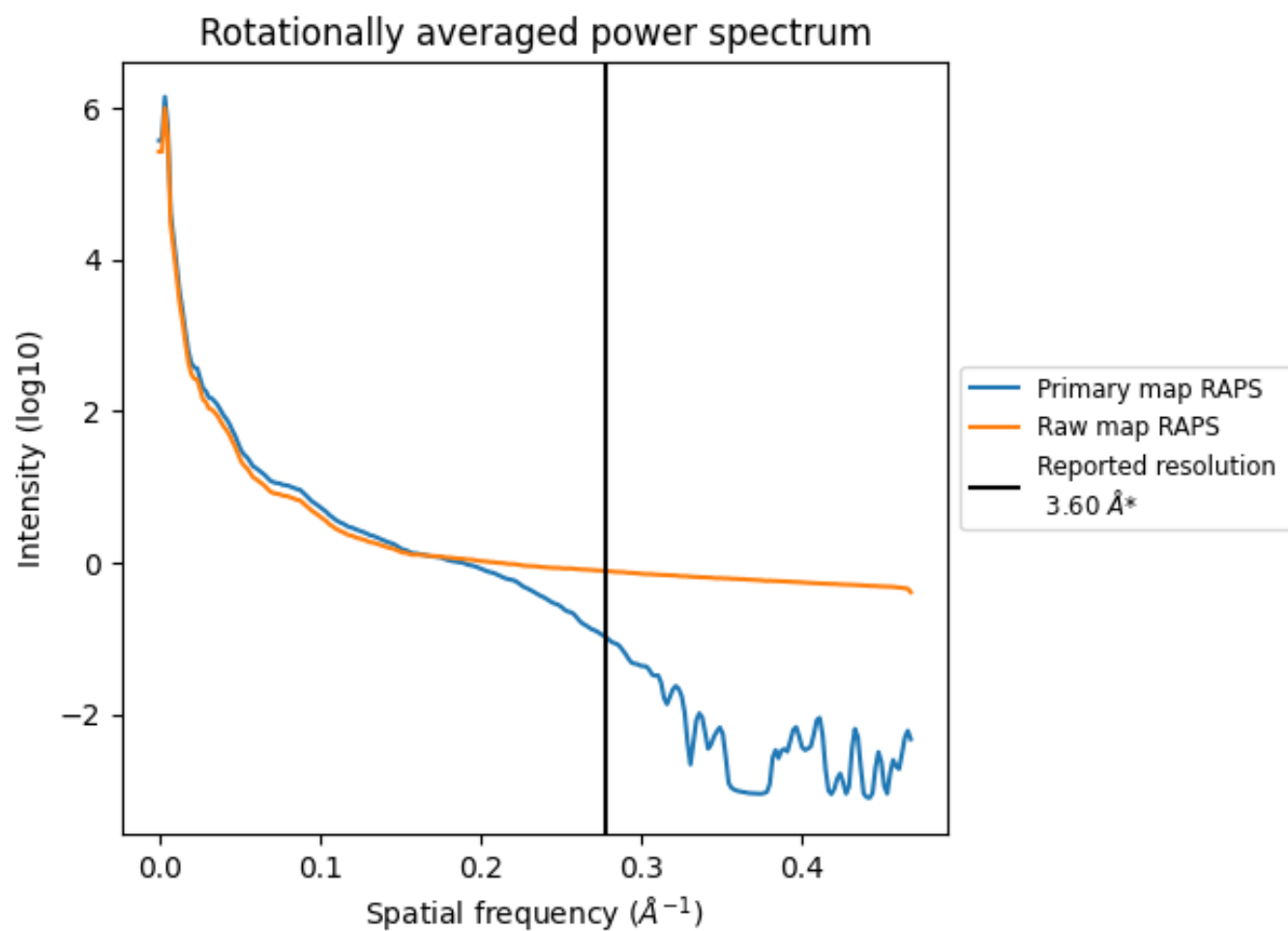
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 2984 nm³; this corresponds to an approximate mass of 2696 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 ⓘ

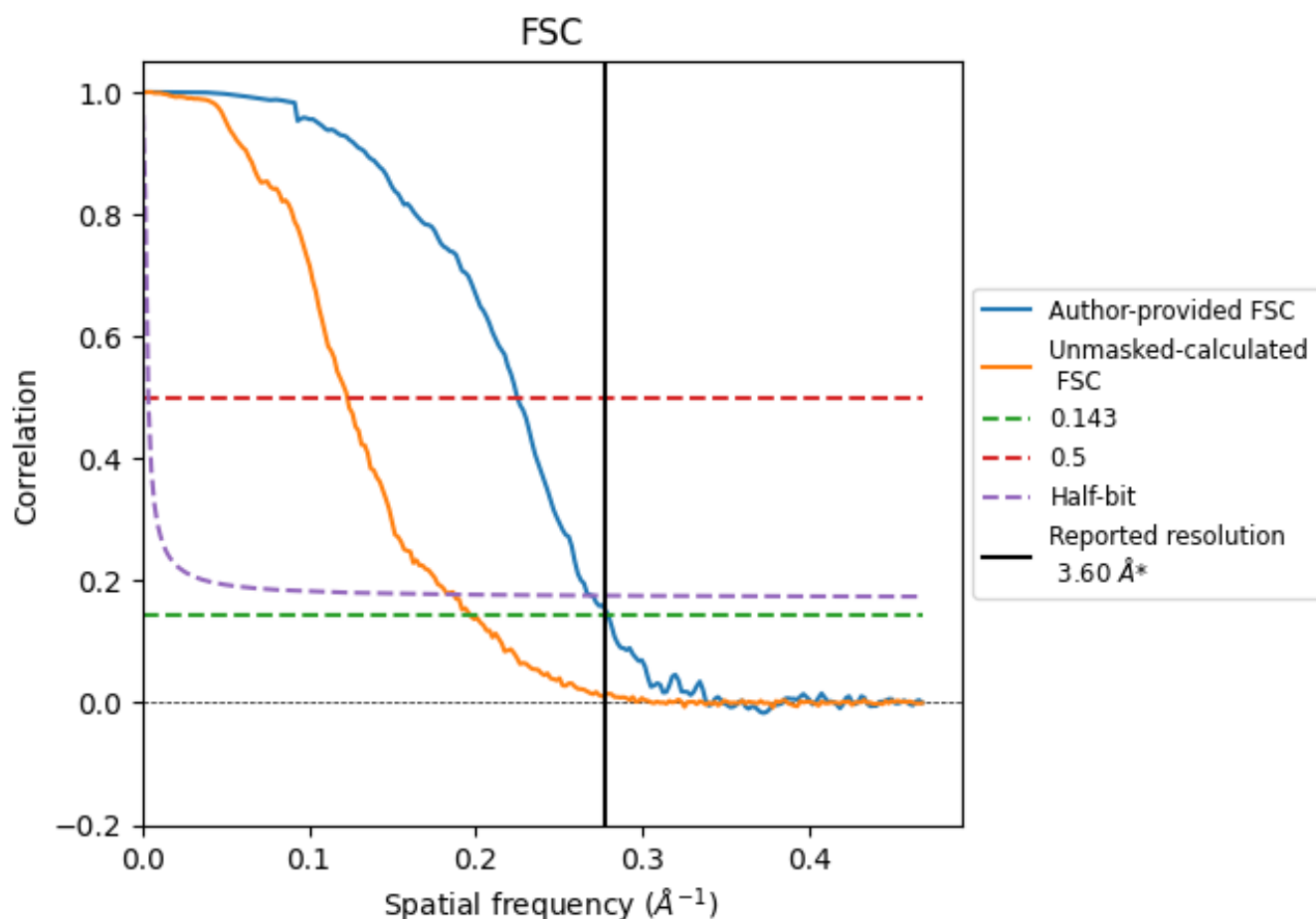


*Reported resolution corresponds to spatial frequency of 0.278 Å⁻¹

8 Fourier-Shell correlation [i](#)

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

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of 0.278 $\text{\AA}^{-1}$

8.2 Resolution estimates [i](#)

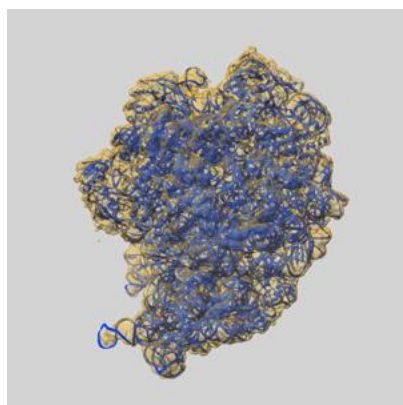
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.60	-	-
Author-provided FSC curve	3.58	4.44	3.71
Unmasked-calculated*	5.08	8.13	5.35

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 5.08 differs from the reported value 3.6 by more than 10 %

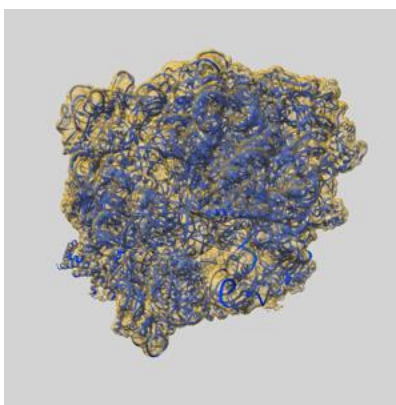
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-42714 and PDB model 8UX8. Per-residue inclusion information can be found in section [3](#) on page [17](#).

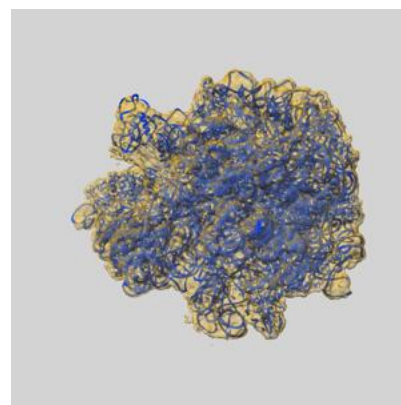
9.1 Map-model overlay [i](#)



X



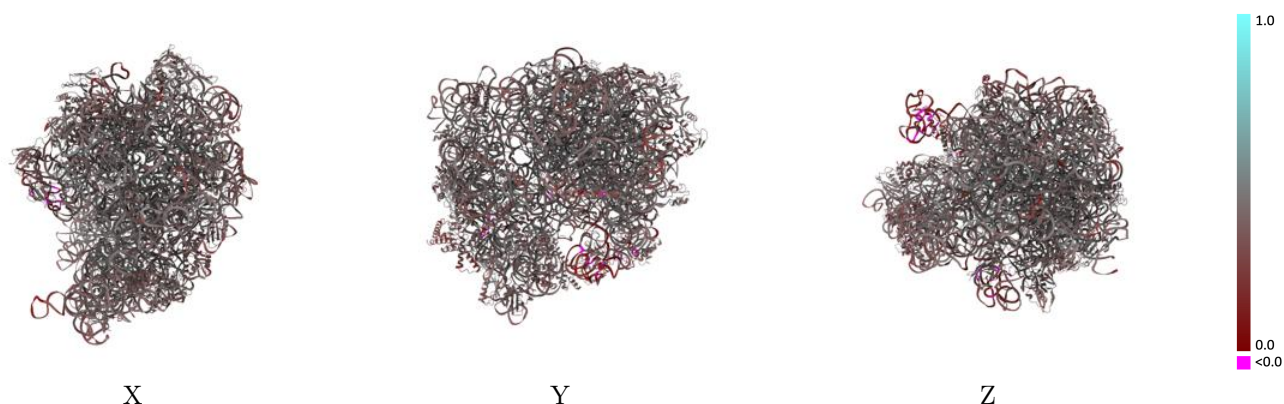
Y



Z

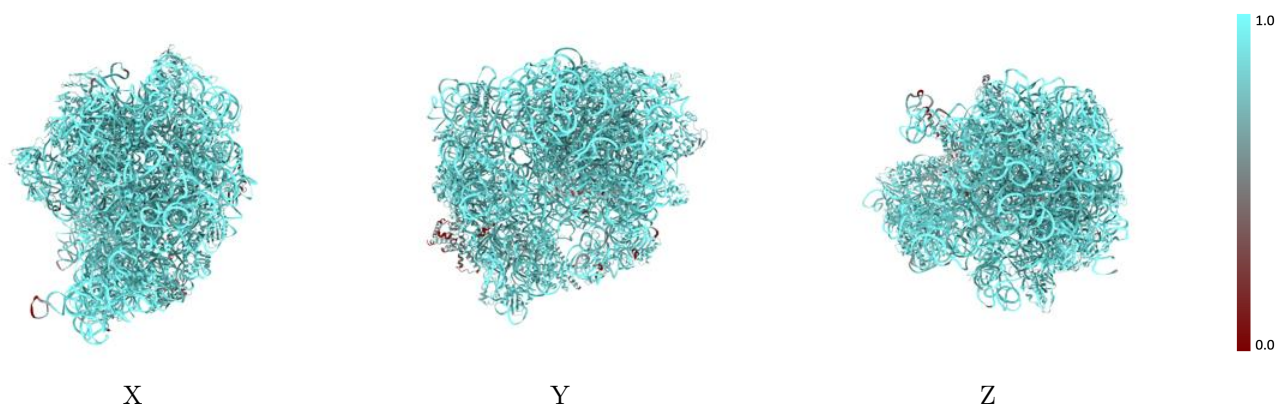
The images above show the 3D surface view of the map at the recommended contour level 0.012 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



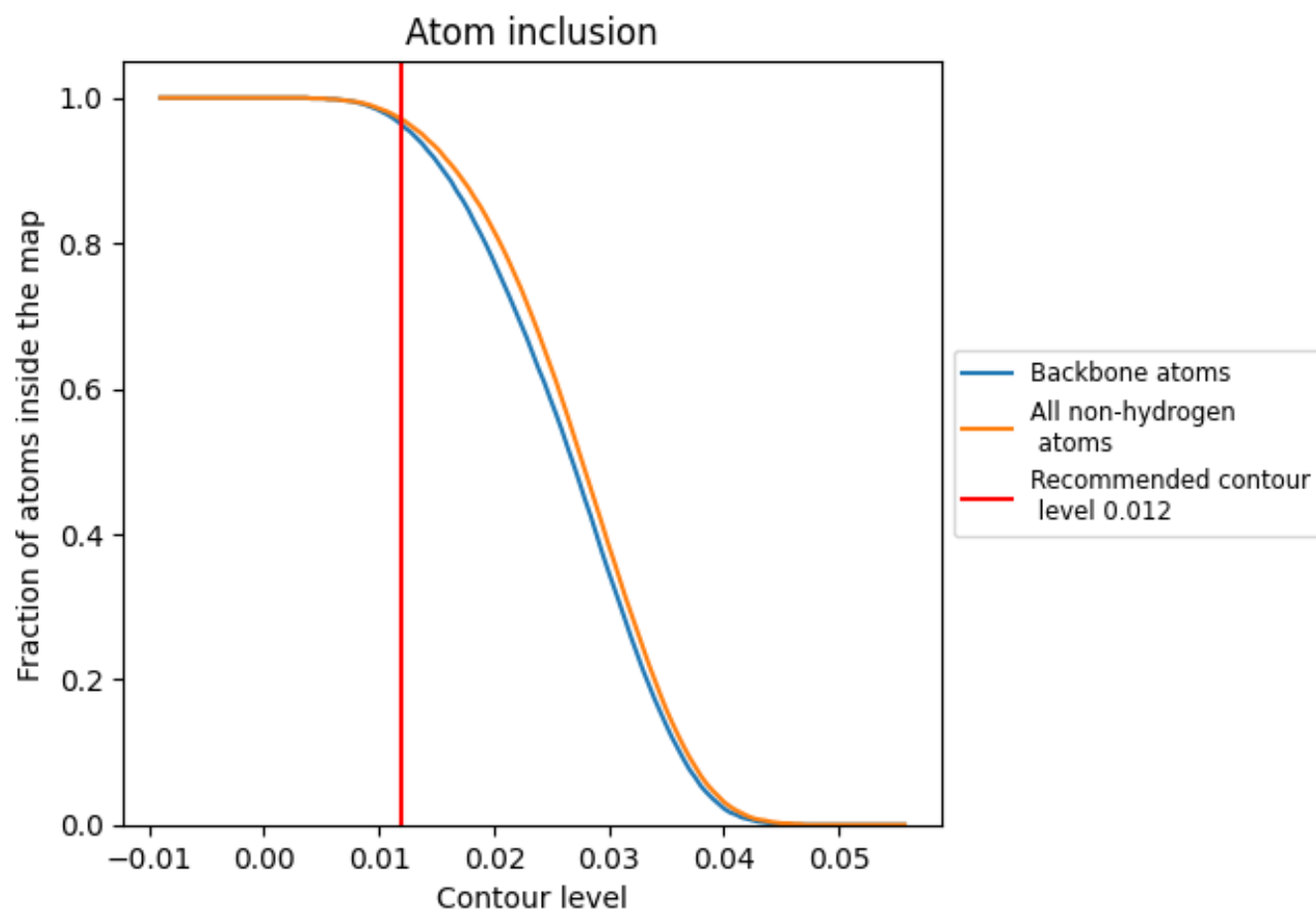
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.012).

9.4 Atom inclusion ⓘ



At the recommended contour level, 96% of all backbone atoms, 97% 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 (0.012) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.9700	 0.4060
1	 0.9890	 0.4060
2	 0.9870	 0.4080
3	 0.9770	 0.3810
4	 1.0000	 0.3440
5	 1.0000	 0.3840
A	 0.7680	 0.1920
B	 0.9980	 0.4600
C	 0.9680	 0.4520
D	 0.9180	 0.4220
E	 0.9290	 0.3660
F	 0.9180	 0.3970
G	 0.7430	 0.3310
J	 0.9860	 0.4350
K	 0.9970	 0.4530
L	 0.9570	 0.4370
M	 0.9920	 0.4400
N	 0.9950	 0.4330
O	 0.9470	 0.4010
P	 0.9800	 0.4490
Q	 0.9770	 0.4080
R	 0.9320	 0.4390
S	 0.9870	 0.4400
T	 0.9600	 0.4270
U	 0.9250	 0.4120
V	 0.9270	 0.4140
W	 0.9950	 0.4500
X	 0.9870	 0.4330
Y	 0.9280	 0.3600
Z	 0.9470	 0.4310
a	 0.8200	 0.3530
b	 0.9860	 0.4470
c	 0.9950	 0.4220
d	 1.0000	 0.4510
e	 1.0000	 0.4430



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Chain	Atom inclusion	Q-score
f	 1.0000	 0.4460
g	 0.5550	 0.3390
h	 0.9580	 0.4090
i	 0.9280	 0.3870
j	 0.9780	 0.4190
k	 0.9380	 0.4030
l	 0.9550	 0.3640
m	 0.9540	 0.4270
n	 0.9350	 0.4010
o	 0.8710	 0.3690
p	 0.9730	 0.4190
q	 0.9890	 0.4310
r	 0.9230	 0.3740
s	 0.9700	 0.3920
t	 0.9830	 0.3800
u	 0.9390	 0.4220
v	 0.9830	 0.4110
w	 0.9430	 0.3650
x	 0.9400	 0.3940
y	 0.9760	 0.3600
z	 0.7110	 0.3290