



wwPDB EM Validation Summary Report ⓘ

Nov 19, 2022 – 07:03 pm GMT

PDB ID : 5OPT
EMDB ID : EMD-3844
Title : Structure of KSRP in context of Trypanosoma cruzi 40S
Authors : Brito Querido, J.; Mancera-Martinez, E.; Vicens, Q.; Bochler, A.; Chicher, J.; Simonetti, A.; Hashem, Y.
Deposited on : 2017-08-10
Resolution : 4.00 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:

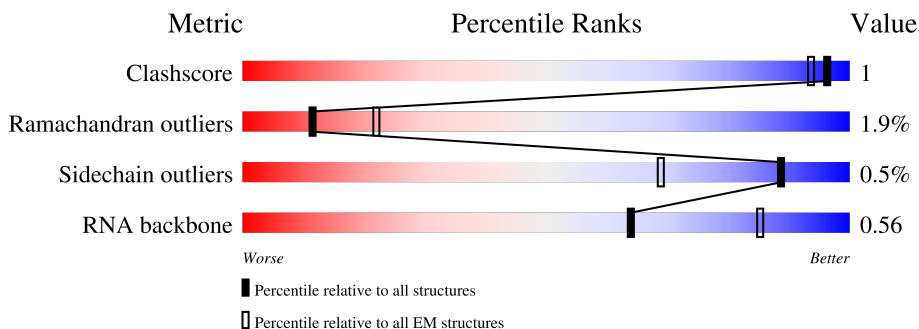
EMDB validation analysis : 0.0.1.dev43
MolProbity : 4.02b-467
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ : 1.9.9
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.31.2

1 Overall quality at a glance i

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

The reported resolution of this entry is 4.00 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	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826
RNA backbone	4643	859

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

Mol	Chain	Length	Quality of chain
1	p	318	85% (Poor fit) 95% (0 outliers)
2	q	57	37% (Poor fit) 63% (0 outliers), 33% (Not modelled)
3	r	149	50% (Poor fit) 84% (0 outliers), 9% (1 outlier), 6% (Not modelled)
4	t	152	55% (Poor fit) 74% (0 outliers), 22% (Not modelled)
5	u	153	51% (Poor fit) 74% (0 outliers), 22% (Not modelled)
6	L	273	26% (Poor fit) 94% (0 outliers), 5% (Not modelled)
7	M	143	22% (Poor fit) 99% (0 outliers)

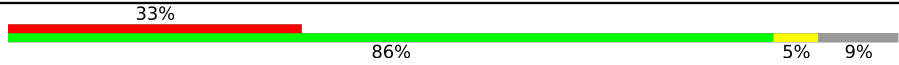


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Mol	Chain	Length	Quality of chain
8	O	190	58% 95% 5%
9	Q	211	22% 91% 5%
10	R	151	25% 92% 7%
11	S	86	37% 93% 5%
12	T	112	32% 93% 7%
13	U	112	43% 60% 39%
14	V	144	33% 92% 6%
15	W	261	21% 81% 17%
16	X	173	27% 84% 14%
17	Y	137	13% 90% 10%
18	Z	221	15% 77% 21%
19	b	190	17% 85% 14%
20	f	245	23% 82% 16%
21	d	263	24% 84% 15%
22	e	130	19% 98% ...
23	g	236	11% 35% 65%
24	a	110	40% 56% 7% 36%
25	i	141	79% 82% 14%
26	j	150	35% 38% 57%
27	P	250	27% 99% .
28	k	196	32% 59% 40%
29	l	117	57% 85% 15%
30	m	214	67% 88% 5% 7%
31	n	161	41% 55% 42%
32	o	167	44% 79% 16%

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Mol	Chain	Length	Quality of chain
33	c	66	
34	h	257	
35	E	2319	

2 Entry composition [i](#)

There are 35 unique types of molecules in this entry. The entry contains 82219 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 protein called Activated protein kinase C receptor, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	p	310	2405	1505	424	463	13	0	0

- Molecule 2 is a protein called Ribosomal protein S29, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	q	38	311	191	64	52	4	0	0

- Molecule 3 is a protein called 40S ribosomal protein S16, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	r	140	1113	706	212	192	3	0	0

- Molecule 4 is a protein called 40S ribosomal protein S15, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	t	119	969	615	185	165	4	0	0

- Molecule 5 is a protein called 40S ribosomal protein S18, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	u	120	981	614	194	169	4	0	0

- Molecule 6 is a protein called 40S ribosomal protein S4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	L	258	2038	1290	383	354	11	0	0

- Molecule 7 is a protein called 40S ribosomal protein S23, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
7	M	142	1116	706	220	188	2	0	0

- Molecule 8 is a protein called 40S ribosomal protein S5, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
8	O	190	1493	932	286	269	6	0	0

- Molecule 9 is a protein called Ribosomal protein S7, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
9	Q	200	1670	1063	324	277	6	0	0

- Molecule 10 is a protein called 40S ribosomal protein S13, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
10	R	141	1143	724	221	190	8	0	0

- Molecule 11 is a protein called 40S ribosomal protein S27, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
11	S	82	630	384	121	116	9	0	0

- Molecule 12 is a protein called 40S ribosomal protein S26.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
12	T	104	829	510	177	132	10	0	0

- Molecule 13 is a protein called 40S ribosomal protein S33, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
13	U	68	526	315	107	100	4	0	0

- Molecule 14 is a protein called 40S ribosomal protein S14, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	V	135	Total	C	N	O	S	0	0
			1011	620	195	187	9		

- Molecule 15 is a protein called 40S ribosomal protein S3a-2.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	W	217	Total	C	N	O	S	0	0
			1781	1124	337	313	7		

- Molecule 16 is a protein called 40S ribosomal protein S11, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	X	148	Total	C	N	O	S	0	0
			1212	760	239	207	6		

- Molecule 17 is a protein called 40S ribosomal protein S24.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	Y	123	Total	C	N	O	S	0	0
			989	628	194	165	2		

- Molecule 18 is a protein called 40S ribosomal protein S8.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	Z	175	Total	C	N	O	S	0	0
			1404	885	283	233	3		

- Molecule 19 is a protein called 40S ribosomal protein S9, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	b	164	Total	C	N	O	S	0	0
			1365	864	266	227	8		

- Molecule 20 is a protein called 40S ribosomal protein SA.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	f	207	Total	C	N	O	S	0	0
			1658	1060	299	288	11		

- Molecule 21 is a protein called 40S ribosomal protein S2, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
21	d	223	1726	1098	304	314	10	0	0

- Molecule 22 is a protein called 40S ribosomal protein S15a, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
22	e	129	1019	647	188	176	8	0	0

- Molecule 23 is a protein called 40S ribosomal protein S21, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
23	g	83	635	395	116	122	2	0	0

- Molecule 24 is a protein called Ribosomal protein S25, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
24	a	70	553	356	97	97	3	0	0

- Molecule 25 is a protein called 40S ribosomal protein S12.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
25	i	121	958	594	174	185	5	0	0

- Molecule 26 is a protein called Ubiquitin/ribosomal protein S27a, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
26	j	64	518	324	98	90	6	0	0

- Molecule 27 is a protein called 40S ribosomal protein S6.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
27	P	249	1983	1244	402	333	4	0	0

- Molecule 28 is a protein called 40S ribosomal protein S17, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	k	118	Total	C	N	O	S	0	0
			972	610	187	170	5		

- Molecule 29 is a protein called Ribosomal protein S20, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	l	99	Total	C	N	O	S	0	0
			784	497	144	140	3		

- Molecule 30 is a protein called 40S ribosomal protein S3, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	m	200	Total	C	N	O	S	0	0
			1587	995	302	279	11		

- Molecule 31 is a protein called 40S ribosomal protein S10, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	n	93	Total	C	N	O	S	0	0
			780	508	136	132	4		

- Molecule 32 is a protein called Ribosomal protein S19, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	o	140	Total	C	N	O	S	0	0
			1116	702	221	185	8		

- Molecule 33 is a protein called 40S ribosomal protein S30.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	c	60	Total	C	N	O	S	0	0
			480	303	98	78	1		

- Molecule 34 is a protein called RNA-binding protein, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	h	173	Total	C	N	O	S	0	0
			1358	862	259	234	3		

- Molecule 35 is a RNA chain called 18S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
35	E	2022	43106	19268	7710	14111	2017	0	0

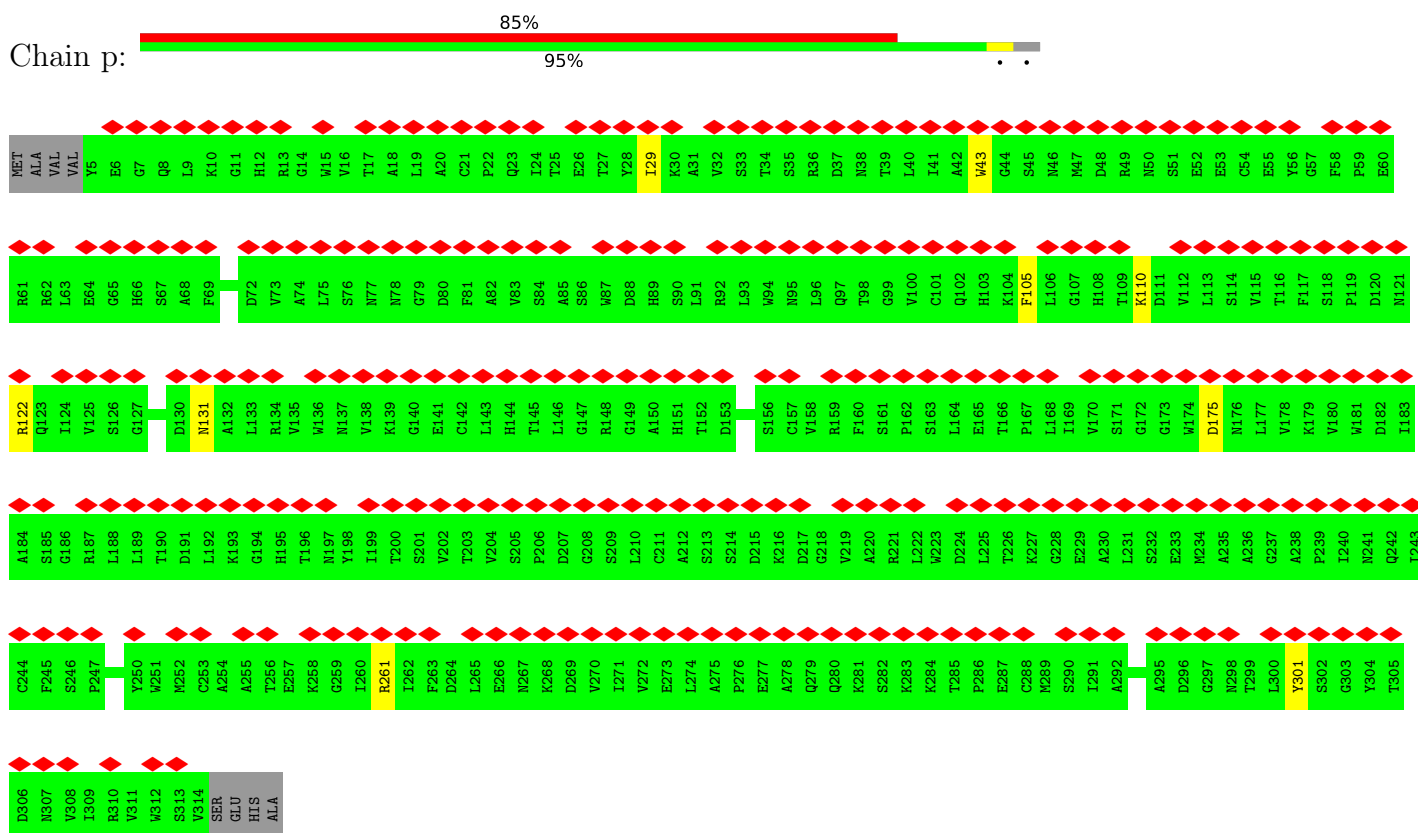
There are 5 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
E	143	C	A	conflict	GB 320364483
E	805	C	U	conflict	GB 320364483
E	2316	U	-	insertion	GB 320364483
E	2317	U	-	insertion	GB 320364483
E	2318	U	-	insertion	GB 320364483

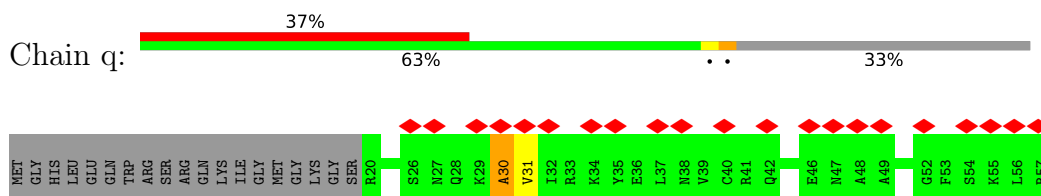
3 Residue-property plots [i](#)

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

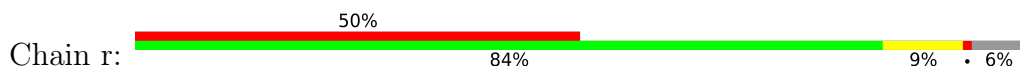
- Molecule 1: Activated protein kinase C receptor, putative

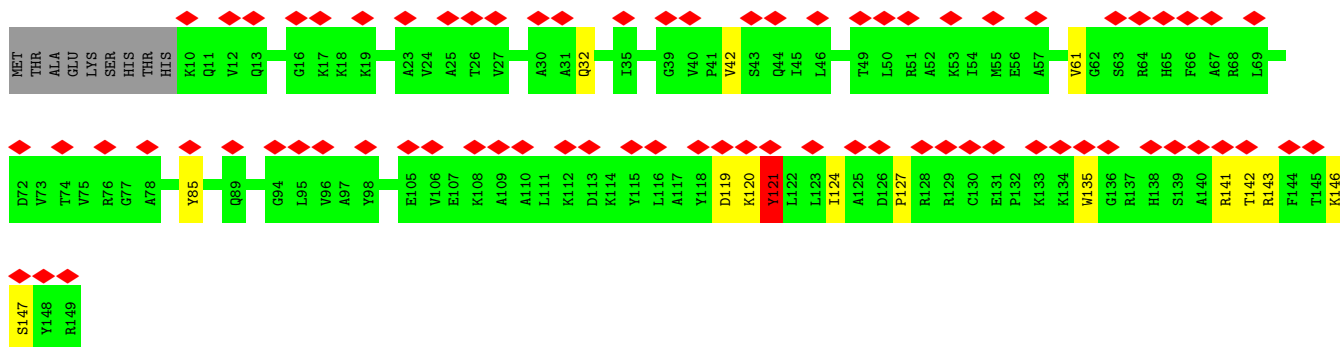


- Molecule 2: Ribosomal protein S29, putative

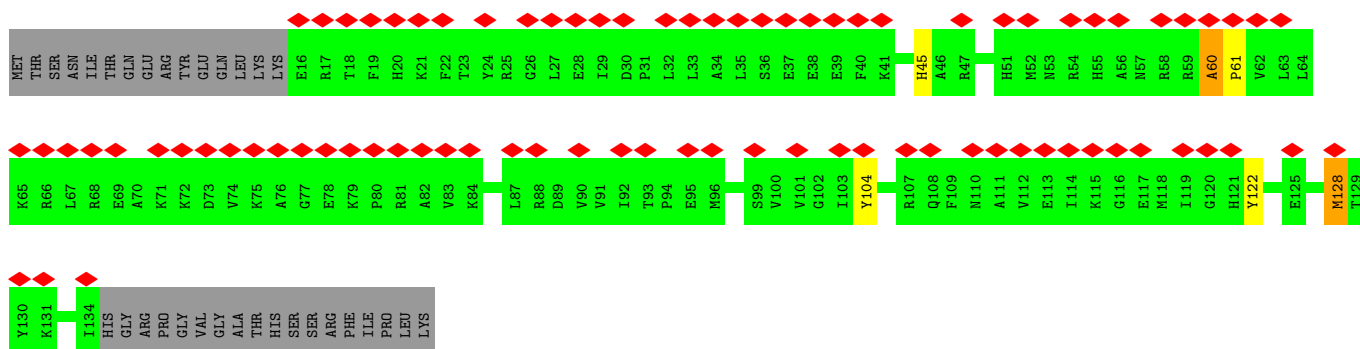


- Molecule 3: 40S ribosomal protein S16, putative

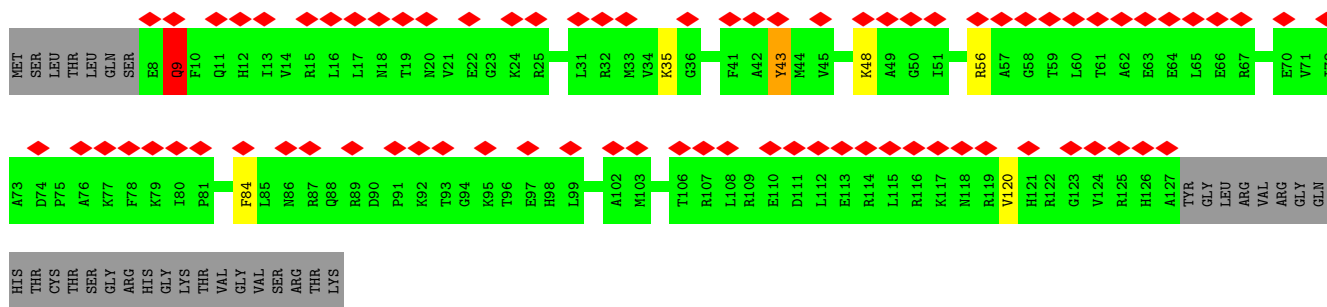




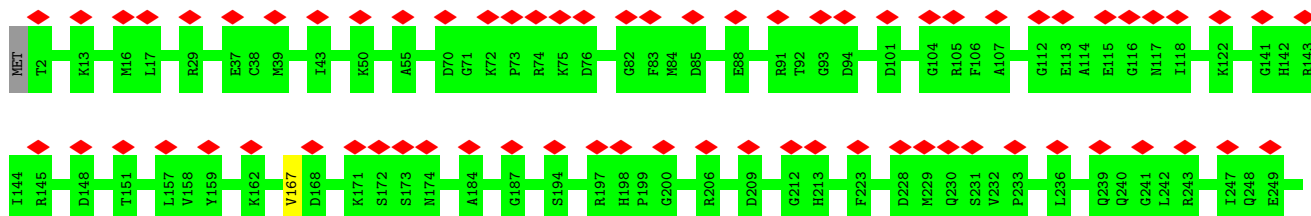
• Molecule 4: 40S ribosomal protein S15, putative

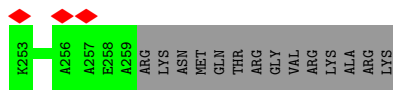


• Molecule 5: 40S ribosomal protein S18, putative

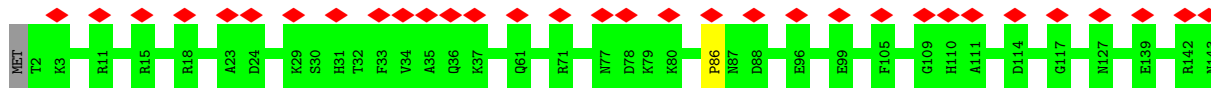


• Molecule 6: 40S ribosomal protein S4

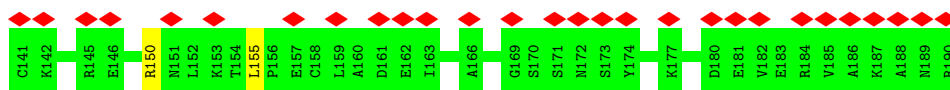
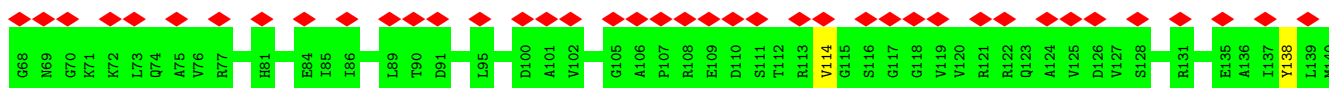
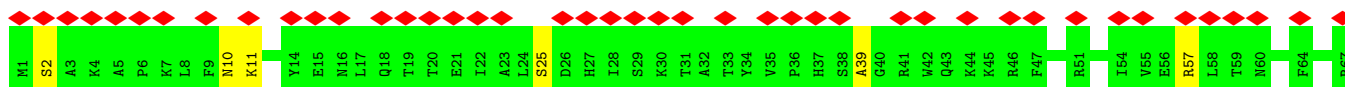




- Molecule 7: 40S ribosomal protein S23, putative



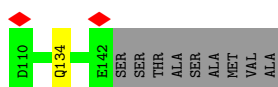
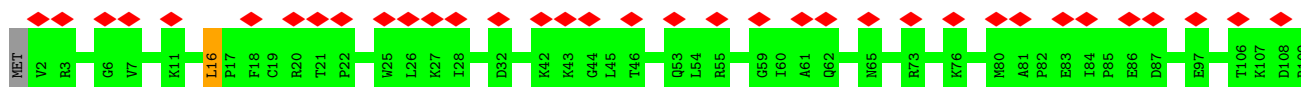
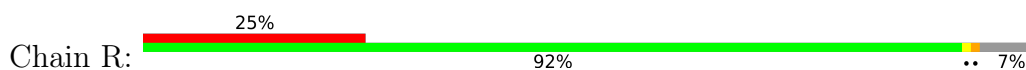
- Molecule 8: 40S ribosomal protein S5, putative



- Molecule 9: Ribosomal protein S7, putative



- Molecule 10: 40S ribosomal protein S13, putative

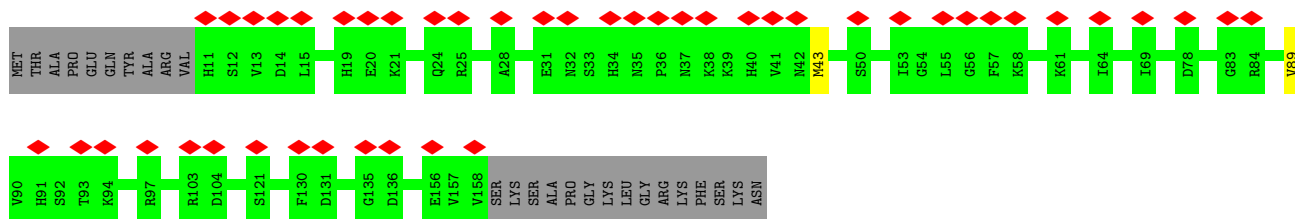


- Molecule 11: 40S ribosomal protein S27, putative

GLU
ALA
ARG
VAL
VAL
GLU
GLU
ALA
GLN
GLU
ALA
ALA
PRO
ALA
ALA
ALA
ALA
THR
ALA

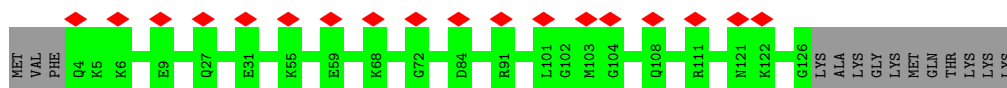
- Molecule 16: 40S ribosomal protein S11, putative

Chain X: 27% 84% 14%



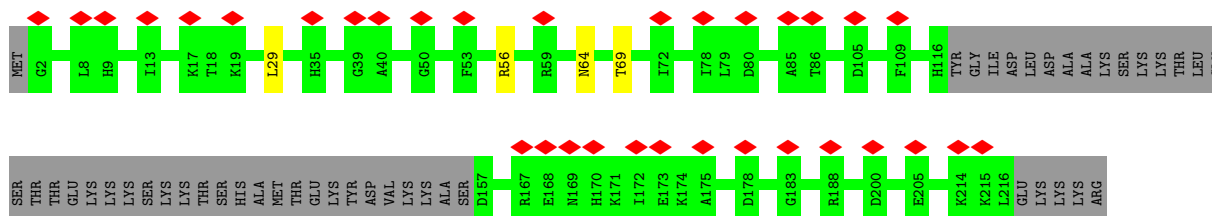
- Molecule 17: 40S ribosomal protein S24

Chain Y: 13% 90% 10%



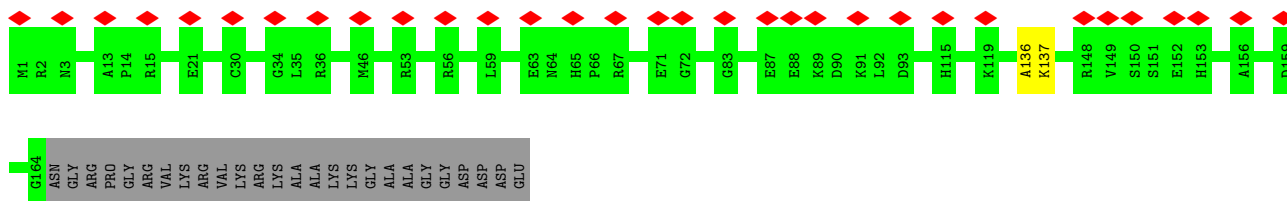
- Molecule 18: 40S ribosomal protein S8

Chain Z: 15% 77% 21%



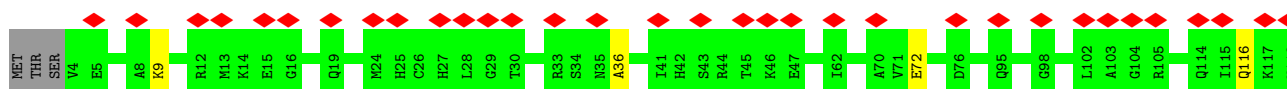
- Molecule 19: 40S ribosomal protein S9, putative

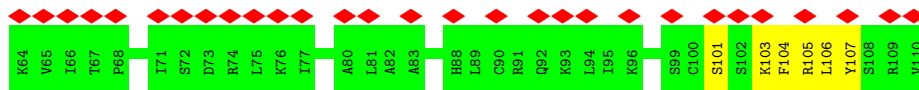
Chain b: 17% 85% 14%



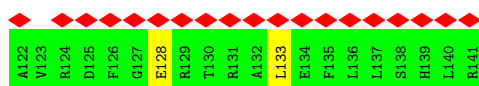
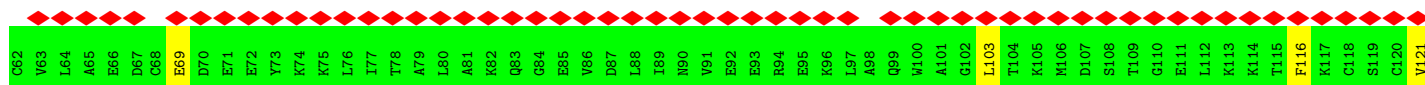
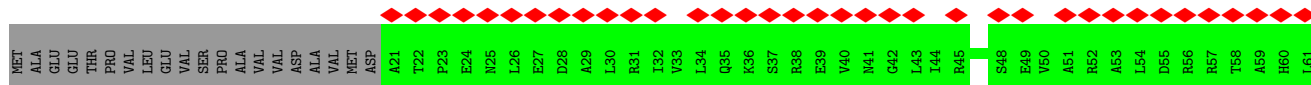
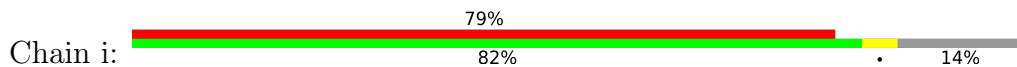
- Molecule 20: 40S ribosomal protein SA

Chain f: 23% 82% 16%

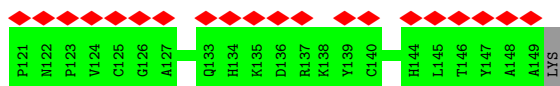
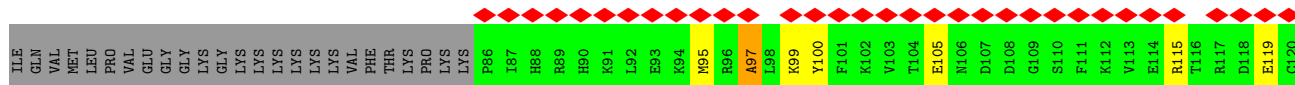
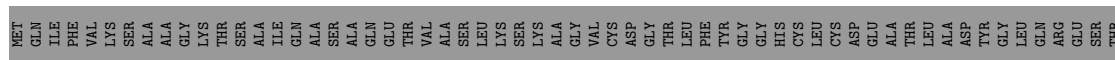




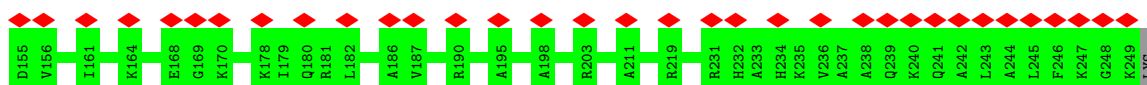
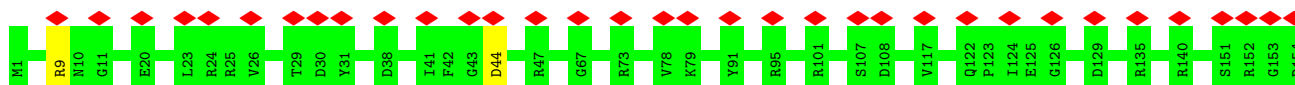
• Molecule 25: 40S ribosomal protein S12



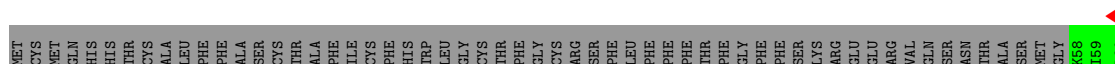
• Molecule 26: Ubiquitin/ribosomal protein S27a, putative

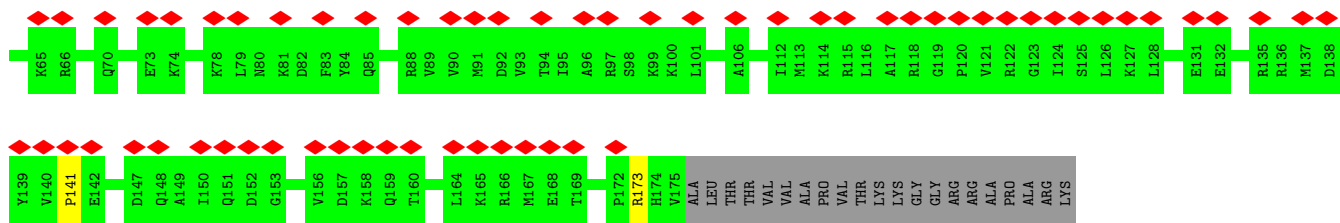


• Molecule 27: 40S ribosomal protein S6

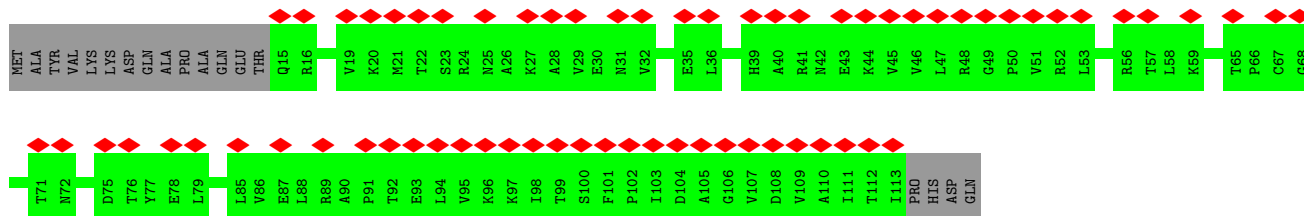
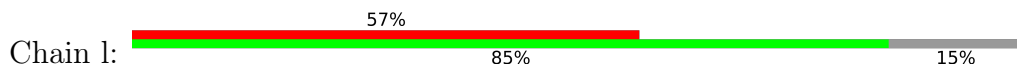


• Molecule 28: 40S ribosomal protein S17, putative

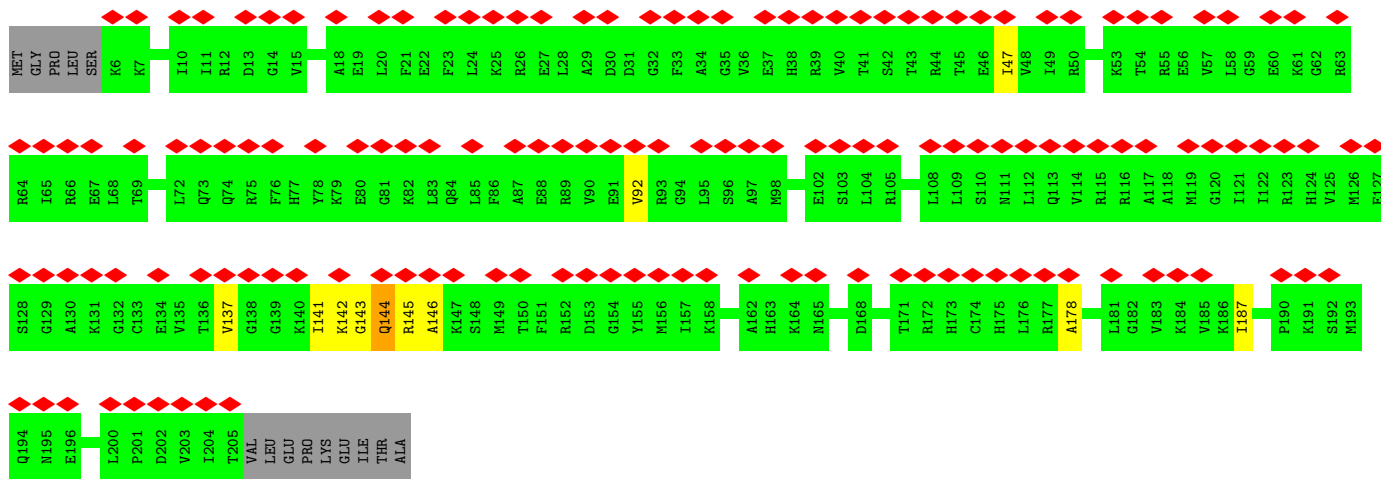
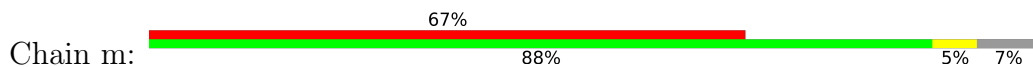




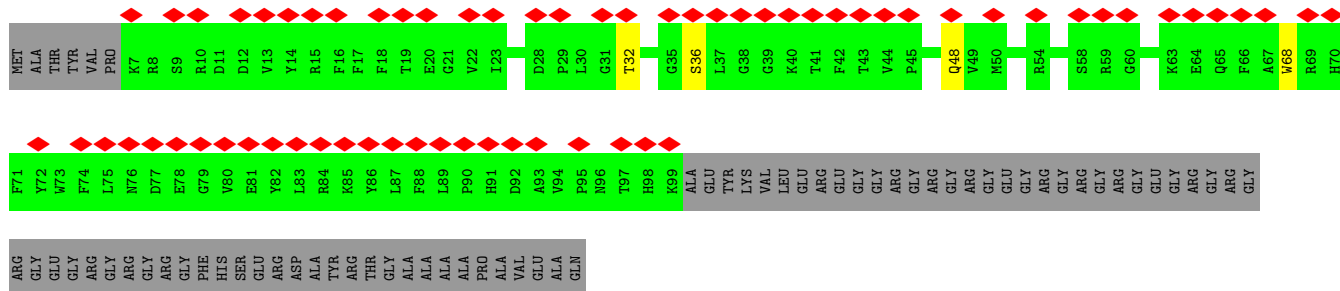
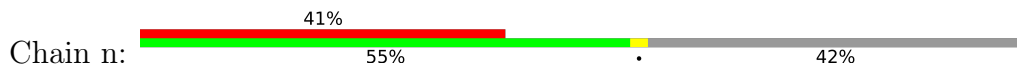
• Molecule 29: Ribosomal protein S20, putative

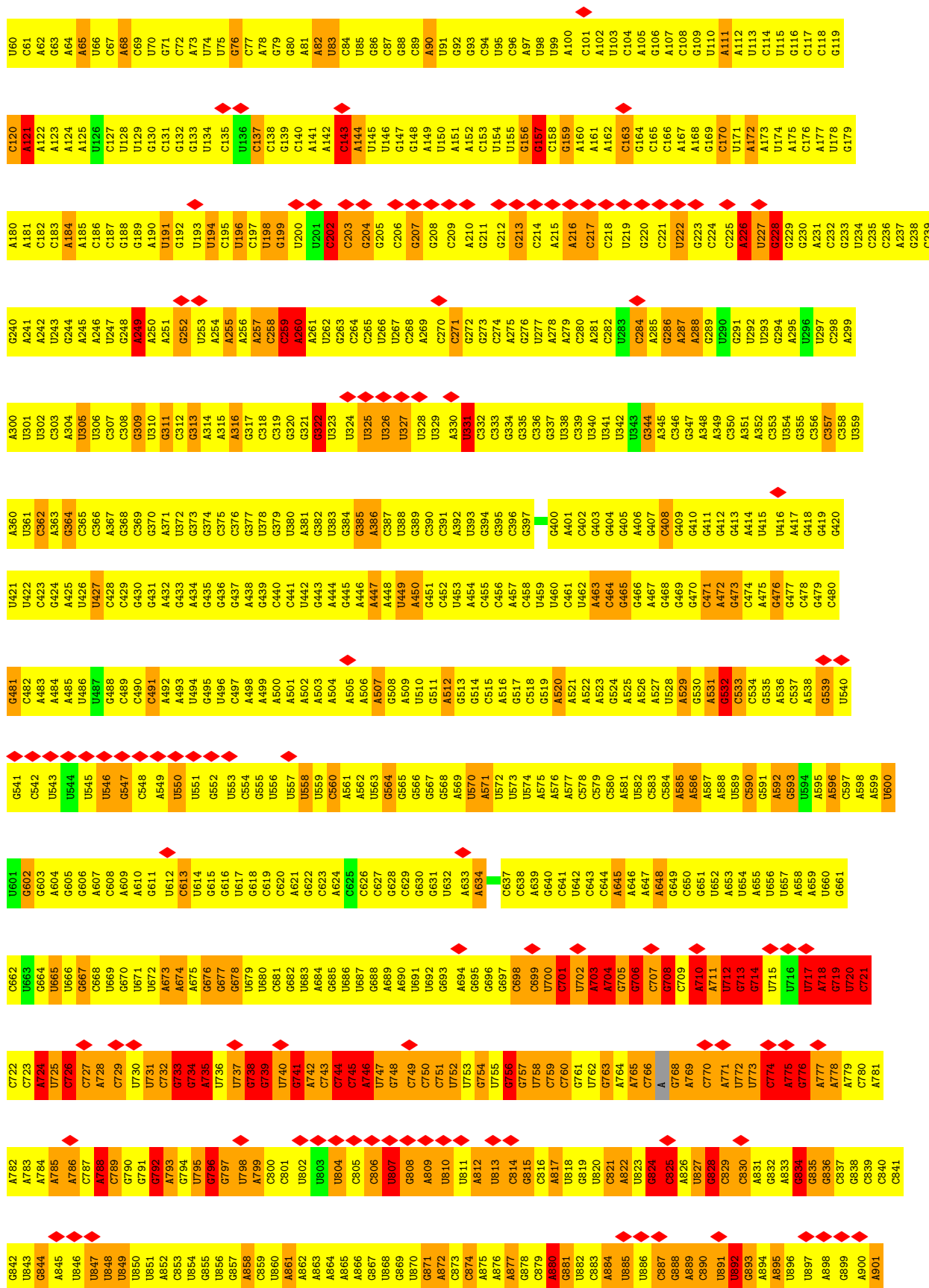


• Molecule 30: 40S ribosomal protein S3, putative



• Molecule 31: 40S ribosomal protein S10, putative





U1682	G1622	G1322	G1262	G1202	U1082	A962	A902
C1683	G1623	A1323	G1263	G1203	G1083	G963	G903
C1684	U1594	U1324	A1264	U1204	G1084	U964	C904
G1685	G1384	C1325	A1265	A1205	G1085	C965	C905
G1686	A1385	G1326	G1266	G1206	A1086	C966	U906
C1687	G	U1327	U1267	U1207	U1087	A967	G907
A1628	U	A1328	A1268	U1208	A1088	U968	G908
C1629	U	G1329	C1269	C1209	A1089	U969	G909
A1630	U	A1330	G1270	G1210	C	G970	A910
A1631	A	U1331	G1271	G1211	C	U971	U911
G1632	A	G1332	C1272	G1212	U	A972	A912
A1633	C	A1333	G1273	G1213	C	G973	A913
C1634	A	U1334	A1274	G1214	C	U974	C914
G1635	C	U1335	A1275	A1215	U	U975	A915
U1636	G	A1336	G1276	G1216	U	U976	A916
G1637	U	G1337	A1277	A1217	U	U977	A917
A1638	A	A1338	C1278	A1218	U	U978	G918
G1639	U	G1339	A1279	C1219	U	G979	G919
C1640	A	A1340	U1280	G1220	U	G980	A920
A1641	A	C1341	U1281	U1221	U	G981	G921
G1642	U	G1342	C1282	A1222	C	G982	C922
U1643	U	U1343	U1283	U1223	G	C983	A923
G1644	A	G1344	U1284	U1224	U	A984	G924
C1645	C	U1345	A1285	G1225	C	G985	C925
U1646	G	U1346	A1286	G1226	C	U986	C926
G1647	U	C1347	A1287	U1227	U	G987	U927
U1648	U	A1348	G1288	G1228	U	U988	C928
U1649	C	G1349	U1289	C1229	U	U989	U929
U1650	A	U1350	A1290	U1230	A	G990	G930
A1651	U	C1351	U1291	U1231	U	C991	G931
U1652	A	U1352	A1292	C1232	U	A992	G932
G1653	U	A1353	C1293	A1233	U	G993	C933
U1654	U	C1354	U1294	U1234	U	A994	A934
A1655	C	A1355	U1295	U1235	U	A995	A935
U1656	U	U1356	C1296	A1236	U	C996	C936
G1657	U	U1357	G1297	G1237	U	G997	C937
U1658	U	A1358	C1298	U1238	U	U998	G938
A1659	U	C1359	U1299	G1239	U	U999	U939
U1660	U	A1360	C1300	G1239	C	G	U940
A1661	G	U1361	A1301	A1241	U	G	U941
C1662	U	A1362	A1302	U1242	U	G	C942
G1663	U	C1363	U1303	U1243	U	G	G943
A1664	C	U1364	A1304	U1244	U	G	G944
U1665	U	A1365	C1305	C1245	U	G	C945
A1606	U	U1366	A1306	U1246	U	G	U946
U1607	C	G1367	G1307	U1247	U	G	U947
G1608	C	A1368	A1308	U1248	U	G	U948
A1609	U	C1369	A1309	G1249	U	A	G949
U1610	U	A1370	C1310	U1250	U	U	U951
A1611	U	C1371	C1311	C1251	U	U	U952
U1612	U	C1372	A1312	C1252	U	C	G953
U1613	U	G1373	A1313	G1253	U	C	G954
G1614	U	A1374	A1314	C1254	U	C	U955
A1615	U	U1375	G1315	G1191	U	C	U956
C1616	A	G1376	U1316	A1192	U	C	U957
U1617	C	A1377	G1317	C1256	U	C	U958
G1618	U	A1378	U1318	C1257	U	C	A959
A1619	G	U1379	G1319	A1258	U	C	U960
U1620	C	U1380	U1320	G1260	U	C	A961
A1681	G	U1381	G1321	A1261	U	C	A
G1682	A	C	C	C	C	C	C
C1683	G	U	U	U	U	U	U
U1684	G	U	U	U	U	U	U
A1685	G	U	U	U	U	U	U
G1686	G	U	U	U	U	U	U
C1687	C	U	U	U	U	U	U
A1628	U	U	U	U	U	U	U
C1629	U	U	U	U	U	U	U
A1630	U	U	U	U	U	U	U
A1631	A	U	U	U	U	U	U
G1632	A	A	U	U	U	U	U
C1633	C	A	U	U	U	U	U
A1634	G	U	U	U	U	U	U
G1635	G	U	U	U	U	U	U
U1636	G	U	U	U	U	U	U
G1637	U	U	U	U	U	U	U
A1638	A	U	U	U	U	U	U
G1639	U	A	U	U	U	U	U
C1640	A	A	U	U	U	U	U
A1641	U	C	U	U	U	U	U
G1642	C	U	U	U	U	U	U
U1643	C1523	U	U	U	U	U	U
G1644	U1524	U	U	U	U	U	U
C1645	C1525	U	U	U	U	U	U
U1646	A1526	U	U	U	U	U	U
G1647	G1527	U	U	U	U	U	U
U1648	C1528	U	U	U	U	U	U
U1649	A1529	U	U	U	U	U	U
U1650	G1530	U	U	U	U	U	U
A1651	U1531	U	U	U	U	U	U
U1652	U1532	U	U	U	U	U	U
G1653	U1533	U	U	U	U	U	U
U1654	A1534	U	U	U	U	U	U
U1655	U1535	U	U	U	U	U	U
G1656	C1536	U	U	U	U	U	U
U1657	U1537	U	U	U	U	U	U
C1658	G1538	U	U	U	U	U	U
U1659	A1539	U	U	U	U	U	U
U1660	U1540	U	U	U	U	U	U
A1661	U1541	U	U	U	U	U	U
C1662	U1542	U	U	U	U	U	U
U1663	C1543	U	U	U	U	U	U
A1664	U1544	U	U	U	U	U	U
U1665	U1545	U	U	U	U	U	U
G1666	A1606	U	U	U	U	U	U
U1667	G1607	U	U	U	U	U	U
G1668	A1608	U	U	U	U	U	U
U1669	A1609	U	U	U	U	U	U
A1670	A1610	U	U	U	U	U	U
U1671	A1611	U	U	U	U	U	U
C1672	U1612	U	U	U	U	U	U
U1673	U1613	U	U	U	U	U	U
G1674	G1614	U	U	U	U	U	U
U1675	A1615	U	U	U	U	U	U
A1676	C1616	U	U	U	U	U	U
G1677	U1617	U	U	U	U	U	U
U1678	G1618	U	U	U	U	U	U
A1679	A1619	U	U	U	U	U	U
G1680	U1620	U	U	U	U	U	U
A1681	G1681	U	U	U	U	U	U
G1739	U1739	U	U	U	U	U	U
U1740	U1740	U	U	U	U	U	U
G1741	U1741	U	U	U	U	U	U

A2284	G2224	U2164	A2104	U1983	U1923	C1863	A1803	C1742
G2285	C2225	A2165	C2105	A1884	G1924	C1864	A1804	A1743
G2286	U2226	C2166	A2107	C1985	A1925	C1865	G1805	U1744
G2288	U2227	A2167	G2108	A1986	G1926	C1866	G1806	G1745
G2289	C2228	C2168	G2109	U1988	A1927	A1866	U1807	G1746
C2290	A2229	A2169	A2110	G1989	U1928	G1867	G1808	C1747
U2291	A2230	C2170	A2111	U1990	U1930	G1868	C1809	C1748
U2292	C2231	G2171	U2112	C1991	U1931	G1869	C1810	G1749
U2293	U2232	C2172	G2113	U1992	G1932	G1870	C1811	C1750
G2294	U2233	C2173	U2114	A1993	G1933	A1871	A1812	U1751
G2295	G2234	C2174	C2115	U1994	G1934	G1871	G1813	U1754
G2296	A2235	C2175	G2116	G1995	G1935	G1872	U1814	G1755
U2297	C2236	G2176	A2054	A1996	C1936	C1874	G1756	G1756
G2298	G2237	U2177	A2055	G1997	A1937	G1875	U1757	U1757
G2299	G2238	C2178	A2056	A1998	C1938	G1876	G1816	G1759
A2300	A2239	C2179	U2057	U1999	A1939	U1877	U1819	G1760
C2301	A2240	U2180	A2058	C2000	G1940	A1878	U1761	U1761
C2302	G2241	U2181	A2059	A2001	C1941	U1879	C1821	G1762
C2303	G2242	G2182	C2060	A2002	A1942	U1880	G1763	G1763
G2304	U2243	U2183	U2061	G2003	G1943	C1881	A1764	A1764
C2305	U2244	C2184	U2062	A2004	G1944	U1882	G1823	G1765
A2306	C2245	U2185	A2063	A2005	U1945	G1882	A1824	U1766
G2307	A2246	C2186	G2064	A2006	U1946	C1883	A1826	U1766
C2308	C2247	C2187	A2065	A2007	U1947	C1884	U1827	G1767
U2309	G2248	G2188	C2066	A2008	G1948	U1885	U1768	A1768
G2310	A2249	U2190	C2068	C2009	G1949	U1886	U1769	U1770
G2311	U2250	C2191	A2069	G2010	G1950	G1886	C1829	C1829
A2312	A2251	U2192	C2070	A2011	U1951	U1887	C1830	U1771
U2313	U2252	U2193	U2071	C2012	U1952	A1888	A1832	G1772
C2314	U2253	A2134	U2072	U2013	G1953	U1889	U1833	U1773
A2315	U2254	U2194	G2073	C2014	U1954	C1890	A	U1774
U2316	C2255	U2195	G2074	U2015	U1955	C1891	G	U1775
U2317	U2256	C2196	A2075	U2016	C1956	C1892	C	G1777
U2318	G2257	C2197	G2076	U2017	U1957	U1892	U	U1778
	U2258	A2199	C2077	G2018	U1958	U1893	A	U1779
	A2259	U2200	C2078	U2019	C1959	C1894	A	G1780
	U2260	A2201	G2079	G2020	A1960	U1895	A	A1781
	U2261	C2202	A2080	G2021	U1961	C1896	C	U1782
	A2262	C2203	G2081	A2022	U1962	U1897	C	U1783
	G2263	A2204	U2082	C2023	G1963	C1898	A	U1784
	G2264	G2205	A2083	U2024	U1964	G1899	A	C1785
	A2265	G2206	U2084	U2025	G1965	G1900	A	C1786
	G2266	U2207	U2085	A2026	U1966	G1901	U	U1787
	A2267	G2208	U2086	C2027	U1967	G1902	C1845	C1788
	G2268	A2209	U2088	U2028	G1968	A1903	C1846	C1847
	G2269	C2210	A2089	G2029	G1969	U1904	U1848	U1790
	C2270	C2211	U2090	G2030	G1970	C1906	U1849	C1791
	A2271	G2212	G2091	A2031	C1971	C1907	U1850	G1792
	A2272	G2213	A2092	U2032	G1972	U1908	C1851	G1793
	A2273	A2214	U2154	A2033	A1973	U1909	G1852	C1795
	A2274	C2215	G2155	A2035	C1974	G1910	C1853	G1796
	G2275	A2216	G2156	A2036	A1975	U1911	C1854	U1797
	U2276	G2217	G2096	A2037	C1976	U1912	G1855	G1798
	C2277	U2218	U2097	G2038	G1977	U1913	G1856	A1799
	G2278	G2219	C2098	A2039	U1978	U1914	U1857	U1800
	U2279	A2220	G2099	G2040	G1979	U1915	U1858	C1801
	A2280	A2221	G2100	U2041	U1980	C1916	U1859	U1802
	A2281	G2222	G2101	C2102	A1981	G1917	U1860	A1861
	C2282	U2223	C2102	G2042	C1982	C1918	U1862	C1862
	A2283		C2103			C1919		
						A1919		
						U1920		
						G1921		
						G1922		

4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	86000	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	2.2	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	0.257	Depositor
Minimum map value	-0.132	Depositor
Average map value	-0.000	Depositor
Map value standard deviation	0.017	Depositor
Recommended contour level	0.0549	Depositor
Map size (Å)	499.19998, 499.19998, 499.19998	wwPDB
Map dimensions	320, 320, 320	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.56, 1.56, 1.56	Depositor

5 Model quality i

5.1 Standard geometry i

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	p	0.94	0/2461	1.01	3/3347 (0.1%)
2	q	1.09	0/314	1.04	1/416 (0.2%)
3	r	1.02	0/1131	1.11	5/1520 (0.3%)
4	t	1.02	0/988	1.05	3/1325 (0.2%)
5	u	1.05	0/996	1.10	5/1334 (0.4%)
6	L	0.99	0/2073	0.98	0/2787
7	M	0.97	0/1137	0.94	0/1520
8	O	0.99	0/1515	0.96	0/2034
9	Q	1.06	0/1703	1.01	0/2290
10	R	1.00	0/1164	0.96	0/1559
11	S	0.99	0/641	1.01	1/858 (0.1%)
12	T	1.13	0/845	1.00	0/1129
13	U	1.13	0/527	1.04	0/702
14	V	1.04	0/1026	1.02	1/1376 (0.1%)
15	W	1.03	0/1809	1.01	1/2437 (0.0%)
16	X	1.02	0/1238	0.96	0/1662
17	Y	1.01	0/1004	0.98	0/1335
18	Z	1.06	0/1424	1.01	0/1904
19	b	1.03	0/1394	0.95	0/1874
20	f	0.97	0/1693	1.01	5/2290 (0.2%)
21	d	0.94	0/1760	1.03	2/2376 (0.1%)
22	e	1.00	0/1037	1.03	0/1391
23	g	0.92	0/644	0.89	0/875
24	a	0.92	0/559	1.03	1/748 (0.1%)
25	i	0.98	0/966	0.97	2/1295 (0.2%)
26	j	0.98	0/530	1.10	3/707 (0.4%)
27	P	1.09	0/2008	0.98	0/2678
28	k	1.00	0/985	0.98	0/1313
29	l	0.99	0/794	1.06	0/1076
30	m	1.03	0/1606	1.02	4/2141 (0.2%)
31	n	0.98	0/804	0.99	0/1082
32	o	1.00	0/1140	1.09	2/1524 (0.1%)
33	c	0.98	0/488	0.97	0/644
34	h	1.06	0/1381	1.22	4/1857 (0.2%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
35	E	1.63	86/48215 (0.2%)	2.51	5573/75140 (7.4%)
All	All	1.38	86/88000 (0.1%)	2.03	5616/128546 (4.4%)

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
1	p	0	3
3	r	0	7
4	t	0	2
5	u	0	4
8	O	0	3
9	Q	0	3
15	W	0	1
18	Z	0	1
22	e	0	1
24	a	0	2
26	j	0	1
27	P	0	2
28	k	0	1
30	m	0	2
32	o	0	2
33	c	0	2
34	h	0	22
35	E	4	121
All	All	4	180

The worst 5 of 86 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	E	724	A	N9-C4	-14.62	1.29	1.37
35	E	734	G	N9-C4	-13.56	1.27	1.38
35	E	711	A	N9-C4	-10.05	1.31	1.37
35	E	718	A	N9-C4	-9.61	1.32	1.37
35	E	738	G	N9-C4	-8.96	1.30	1.38

The worst 5 of 5616 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
35	E	774	C	P-O3'-C3'	37.91	165.19	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
35	E	1187	C	P-O3'-C3'	33.90	160.37	119.70
35	E	976	U	O5'-P-OP2	-24.56	81.23	110.70
35	E	976	U	O5'-P-OP1	-24.39	81.44	110.70
35	E	703	A	P-O3'-C3'	23.77	148.22	119.70

All (4) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
35	E	325	U	C3'
35	E	702	U	C1'
35	E	810	U	C3'
35	E	1903	A	C3'

5 of 180 planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	p	110	LYS	Peptide
1	p	261	ARG	Sidechain
1	p	43	TRP	Peptide
3	r	32	GLN	Peptide
3	r	42	VAL	Peptide

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	p	2405	0	2323	0	0
2	q	311	0	319	0	0
3	r	1113	0	1175	0	0
4	t	969	0	1003	0	0
5	u	981	0	1021	0	0
6	L	2038	0	2142	0	0
7	M	1116	0	1169	0	0
8	O	1493	0	1562	0	0
9	Q	1670	0	1778	1	0
10	R	1143	0	1226	1	0
11	S	630	0	630	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
12	T	829	0	866	0	0
13	U	526	0	550	0	0
14	V	1011	0	1019	0	0
15	W	1781	0	1853	0	0
16	X	1212	0	1250	0	0
17	Y	989	0	1065	0	0
18	Z	1404	0	1503	1	0
19	b	1365	0	1410	0	0
20	f	1658	0	1704	0	0
21	d	1726	0	1774	0	0
22	e	1019	0	1050	0	0
23	g	635	0	631	0	0
24	a	553	0	608	0	0
25	i	958	0	981	0	0
26	j	518	0	513	0	0
27	P	1983	0	2131	0	0
28	k	972	0	1031	0	0
29	l	784	0	848	0	0
30	m	1587	0	1662	0	0
31	n	780	0	771	0	0
32	o	1116	0	1166	0	0
33	c	480	0	532	0	0
34	h	1358	0	1419	0	0
35	E	43106	0	21756	87	0
All	All	82219	0	62441	87	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 1.

The worst 5 of 87 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)
35:E:725:U:H3	35:E:733:G:H1	1.12	0.96
35:E:1849:U:H3	35:E:1869:G:H1	1.26	0.83
35:E:207:G:H1	35:E:222:U:H3	1.30	0.78
35:E:2220:G:H1	35:E:2232:U:H3	1.32	0.77
35:E:711:A:N1	35:E:746:A:N1	2.33	0.77

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all 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	
1	p	308/318 (97%)	288 (94%)	18 (6%)	2 (1%)	25	63
2	q	36/57 (63%)	28 (78%)	6 (17%)	2 (6%)	2	20
3	r	138/149 (93%)	113 (82%)	18 (13%)	7 (5%)	2	22
4	t	117/152 (77%)	105 (90%)	8 (7%)	4 (3%)	3	30
5	u	118/153 (77%)	102 (86%)	13 (11%)	3 (2%)	5	35
6	L	256/273 (94%)	239 (93%)	16 (6%)	1 (0%)	34	71
7	M	140/143 (98%)	131 (94%)	8 (6%)	1 (1%)	22	61
8	O	188/190 (99%)	165 (88%)	16 (8%)	7 (4%)	3	28
9	Q	198/211 (94%)	178 (90%)	16 (8%)	4 (2%)	7	40
10	R	139/151 (92%)	127 (91%)	11 (8%)	1 (1%)	22	61
11	S	80/86 (93%)	73 (91%)	5 (6%)	2 (2%)	5	35
12	T	102/112 (91%)	90 (88%)	12 (12%)	0	100	100
13	U	66/112 (59%)	62 (94%)	3 (4%)	1 (2%)	10	45
14	V	133/144 (92%)	116 (87%)	16 (12%)	1 (1%)	19	58
15	W	215/261 (82%)	200 (93%)	13 (6%)	2 (1%)	17	55
16	X	146/173 (84%)	133 (91%)	11 (8%)	2 (1%)	11	46
17	Y	121/137 (88%)	113 (93%)	8 (7%)	0	100	100
18	Z	171/221 (77%)	157 (92%)	12 (7%)	2 (1%)	13	49
19	b	162/190 (85%)	143 (88%)	17 (10%)	2 (1%)	13	49
20	f	205/245 (84%)	190 (93%)	12 (6%)	3 (2%)	10	45
21	d	221/263 (84%)	205 (93%)	14 (6%)	2 (1%)	17	55
22	e	127/130 (98%)	118 (93%)	8 (6%)	1 (1%)	19	58
23	g	81/236 (34%)	78 (96%)	3 (4%)	0	100	100
24	a	68/110 (62%)	58 (85%)	6 (9%)	4 (6%)	1	19
25	i	119/141 (84%)	111 (93%)	7 (6%)	1 (1%)	19	58

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
26	j	62/150 (41%)	47 (76%)	11 (18%)	4 (6%)	1	18
27	P	247/250 (99%)	226 (92%)	21 (8%)	0	100	100
28	k	116/196 (59%)	102 (88%)	13 (11%)	1 (1%)	17	55
29	l	97/117 (83%)	82 (84%)	15 (16%)	0	100	100
30	m	198/214 (92%)	179 (90%)	14 (7%)	5 (2%)	5	35
31	n	91/161 (56%)	83 (91%)	5 (6%)	3 (3%)	4	30
32	o	138/167 (83%)	112 (81%)	21 (15%)	5 (4%)	3	28
33	c	58/66 (88%)	53 (91%)	4 (7%)	1 (2%)	9	43
34	h	171/257 (66%)	123 (72%)	31 (18%)	17 (10%)	0	9
All	All	4833/5936 (81%)	4330 (90%)	412 (8%)	91 (2%)	11	40

5 of 91 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	r	121	TYR
3	r	124	ILE
5	u	120	VAL
9	Q	138	CYS
21	d	81	SER

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	
1	p	262/268 (98%)	260 (99%)	2 (1%)	81	89
2	q	34/49 (69%)	34 (100%)	0	100	100
3	r	113/121 (93%)	113 (100%)	0	100	100
4	t	102/131 (78%)	102 (100%)	0	100	100
5	u	104/132 (79%)	104 (100%)	0	100	100
6	L	217/230 (94%)	217 (100%)	0	100	100
7	M	116/117 (99%)	116 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
8	O	160/160 (100%)	160 (100%)	0	100	100
9	Q	188/195 (96%)	188 (100%)	0	100	100
10	R	125/132 (95%)	124 (99%)	1 (1%)	81	89
11	S	70/73 (96%)	70 (100%)	0	100	100
12	T	87/93 (94%)	87 (100%)	0	100	100
13	U	57/97 (59%)	57 (100%)	0	100	100
14	V	103/112 (92%)	102 (99%)	1 (1%)	76	86
15	W	194/223 (87%)	192 (99%)	2 (1%)	76	86
16	X	137/157 (87%)	137 (100%)	0	100	100
17	Y	104/116 (90%)	104 (100%)	0	100	100
18	Z	143/184 (78%)	143 (100%)	0	100	100
19	b	148/165 (90%)	148 (100%)	0	100	100
20	f	182/211 (86%)	181 (100%)	1 (0%)	88	93
21	d	187/208 (90%)	187 (100%)	0	100	100
22	e	110/111 (99%)	109 (99%)	1 (1%)	78	88
23	g	68/186 (37%)	68 (100%)	0	100	100
24	a	64/96 (67%)	63 (98%)	1 (2%)	62	79
25	i	103/120 (86%)	99 (96%)	4 (4%)	32	58
26	j	55/123 (45%)	54 (98%)	1 (2%)	59	77
27	P	204/205 (100%)	204 (100%)	0	100	100
28	k	108/172 (63%)	108 (100%)	0	100	100
29	l	89/104 (86%)	89 (100%)	0	100	100
30	m	167/179 (93%)	166 (99%)	1 (1%)	86	92
31	n	84/125 (67%)	83 (99%)	1 (1%)	71	84
32	o	118/139 (85%)	117 (99%)	1 (1%)	81	89
33	c	49/53 (92%)	49 (100%)	0	100	100
34	h	138/191 (72%)	133 (96%)	5 (4%)	35	61
All	All	4190/4978 (84%)	4168 (100%)	22 (0%)	89	93

5 of 22 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
30	m	137	VAL

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Mol	Chain	Res	Type
34	h	94	VAL
32	o	116	LEU
34	h	103	TYR
20	f	72	GLU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 13 such sidechains are listed below:

Mol	Chain	Res	Type
15	W	193	ASN
16	X	11	HIS
30	m	163	HIS
18	Z	64	ASN
20	f	121	GLN

5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
35	E	2017/2319 (86%)	437 (21%)	86 (4%)

5 of 437 RNA backbone outliers are listed below:

Mol	Chain	Res	Type
35	E	4	C
35	E	5	U
35	E	17	C
35	E	25	C
35	E	26	A

5 of 86 RNA pucker outliers are listed below:

Mol	Chain	Res	Type
35	E	1187	C
35	E	1903	A
35	E	1191	G
35	E	1712	U
35	E	2017	G

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](#)

There are no chain breaks in this entry.

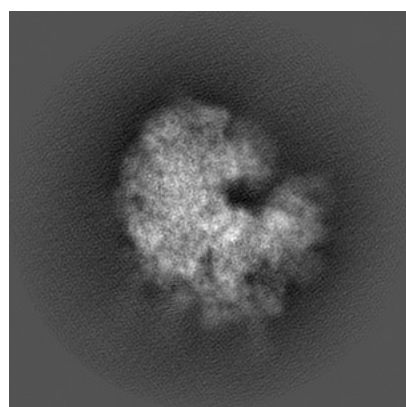
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-3844. These allow visual inspection of the internal detail of the map and identification of artifacts.

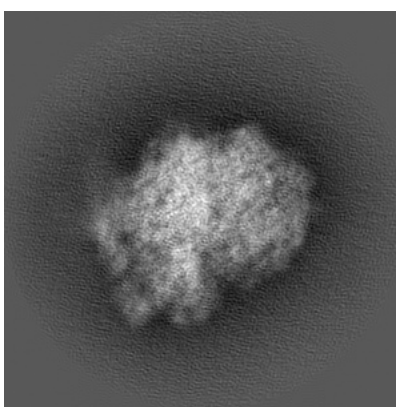
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

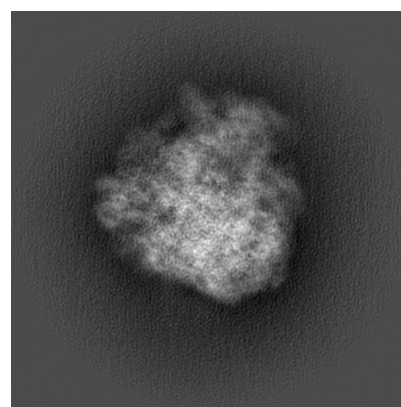
6.1.1 Primary map



X



Y

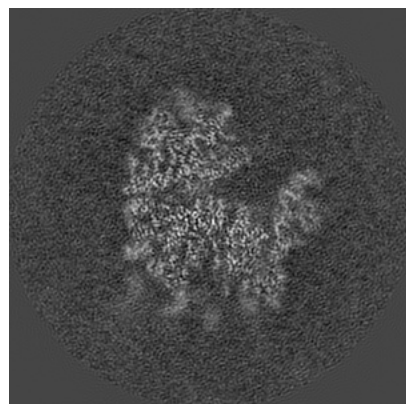


Z

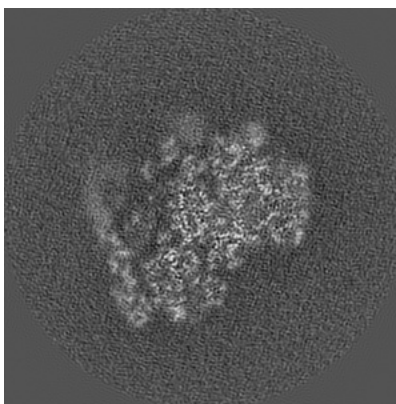
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

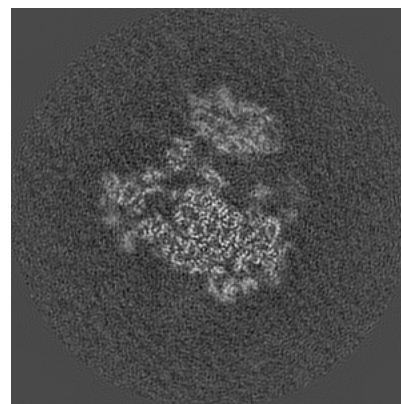
6.2.1 Primary map



X Index: 160



Y Index: 160

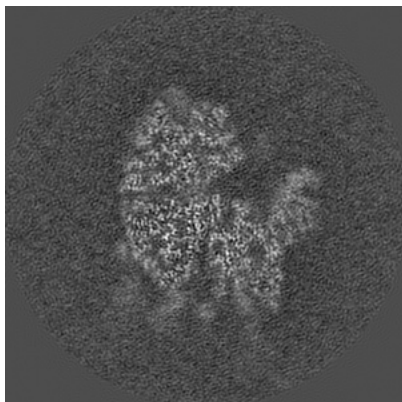


Z Index: 160

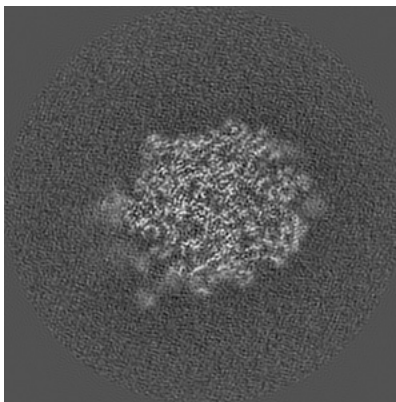
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

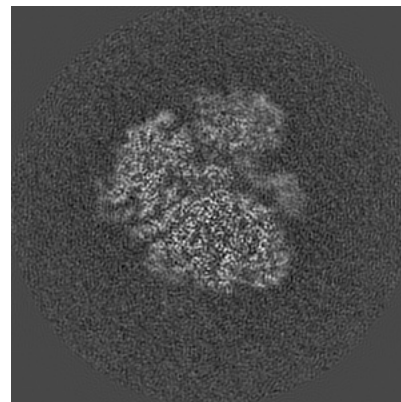
6.3.1 Primary map



X Index: 157



Y Index: 134



Z Index: 147

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

6.4 Orthogonal surface views [i](#)

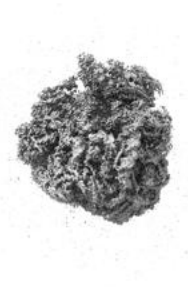
6.4.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.0549. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

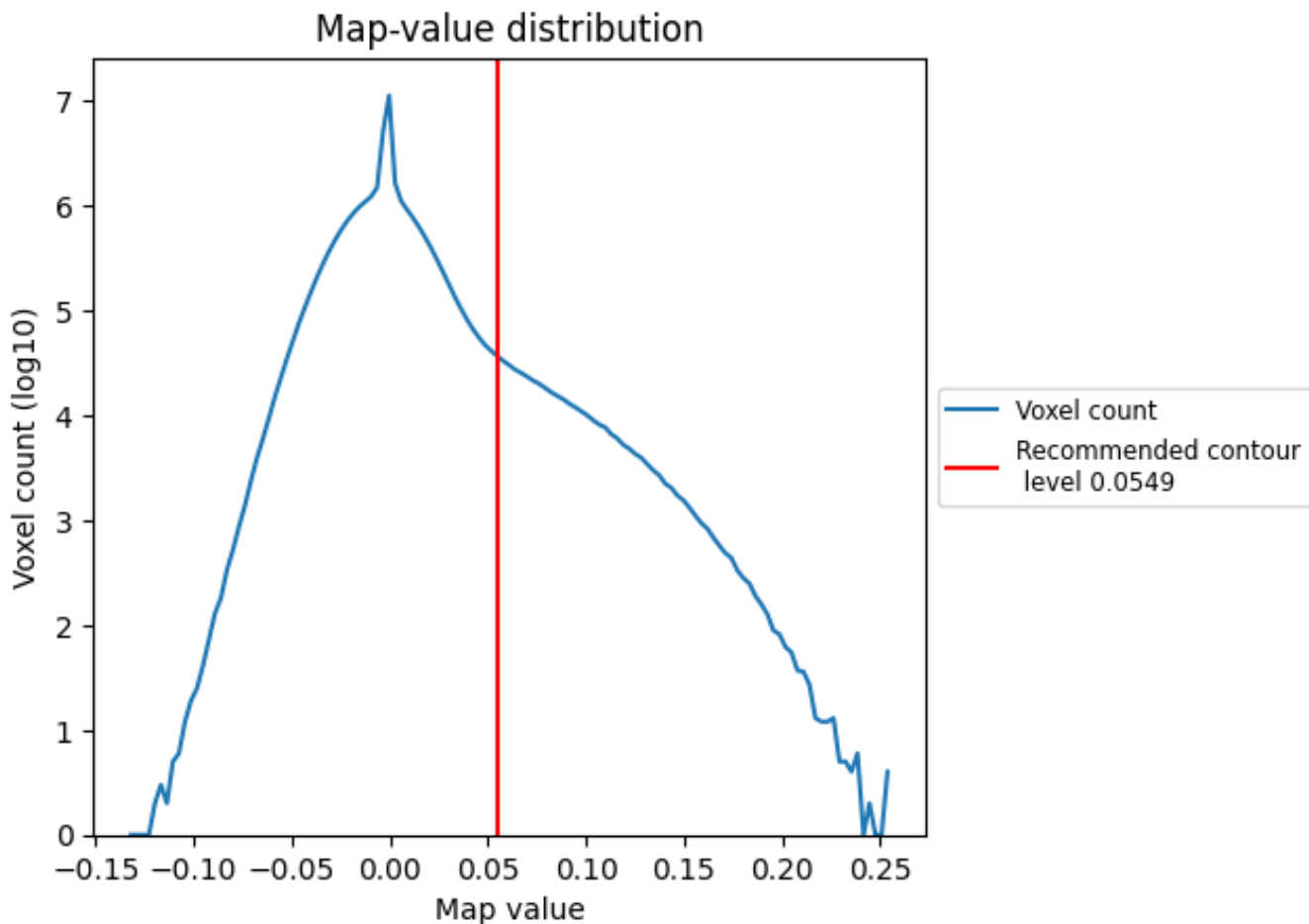
6.5 Mask visualisation

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

7 Map analysis [i](#)

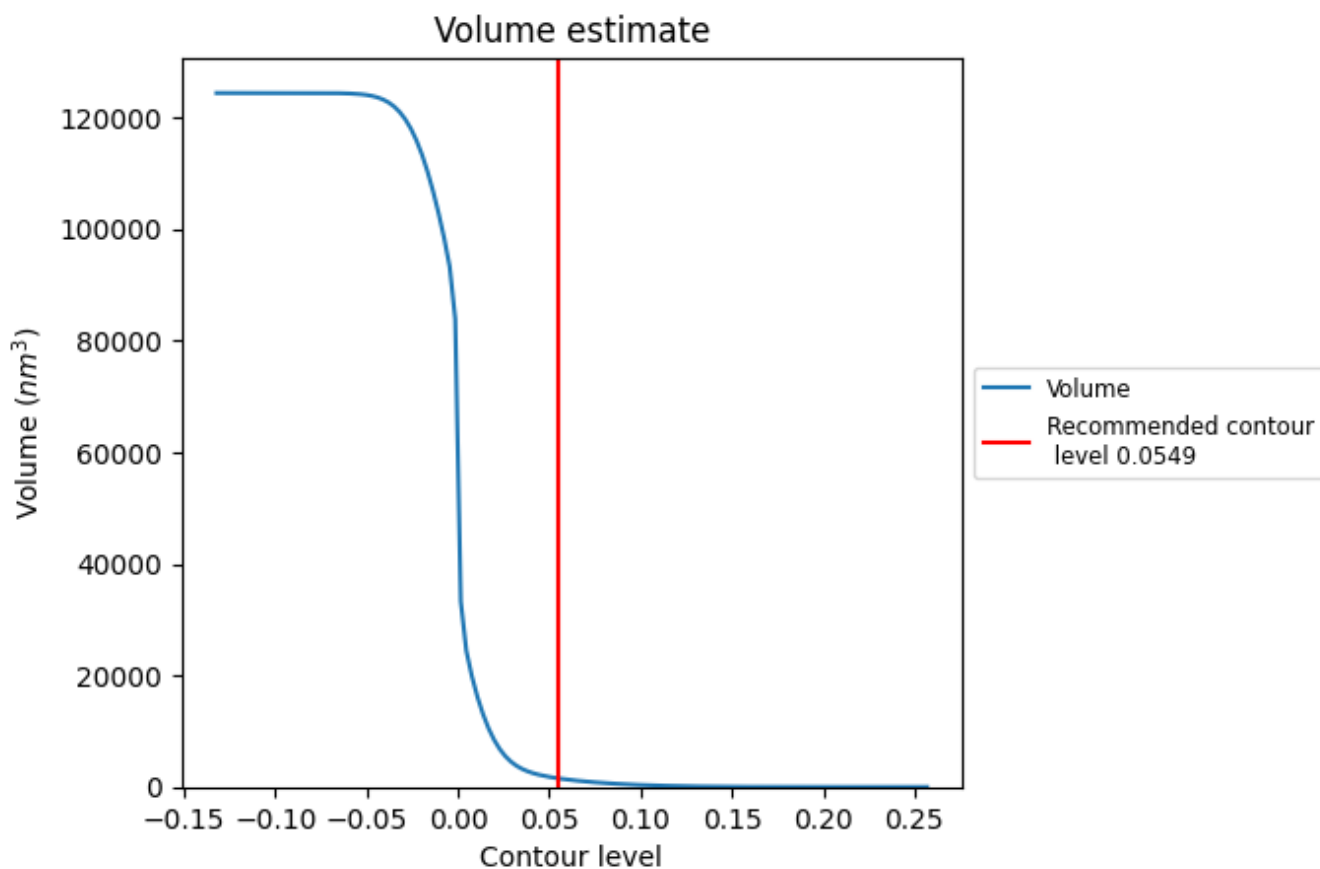
This section contains the results of statistical analysis of the map.

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.

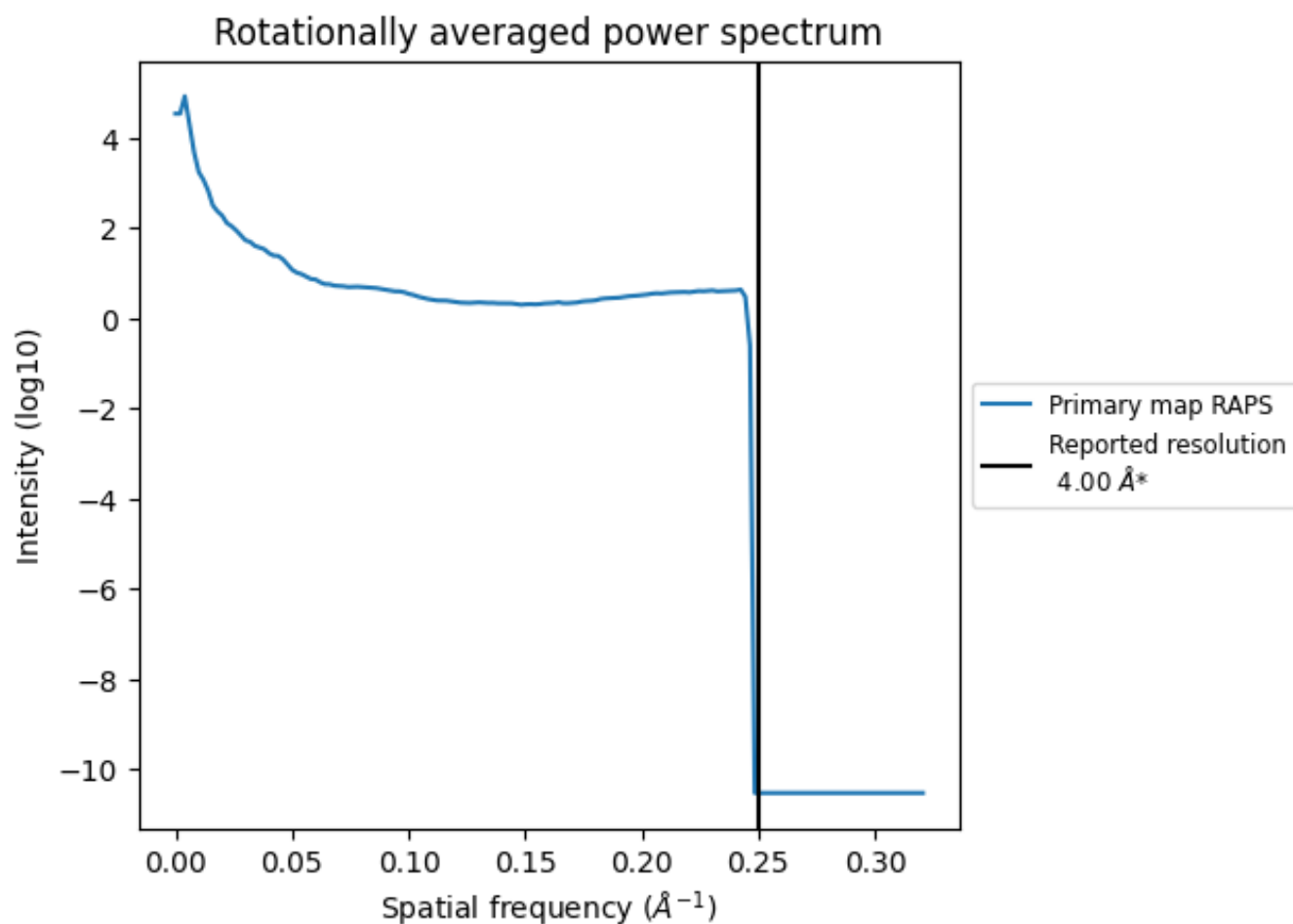
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 1549 nm³; this corresponds to an approximate mass of 1400 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 0.250 Å⁻¹

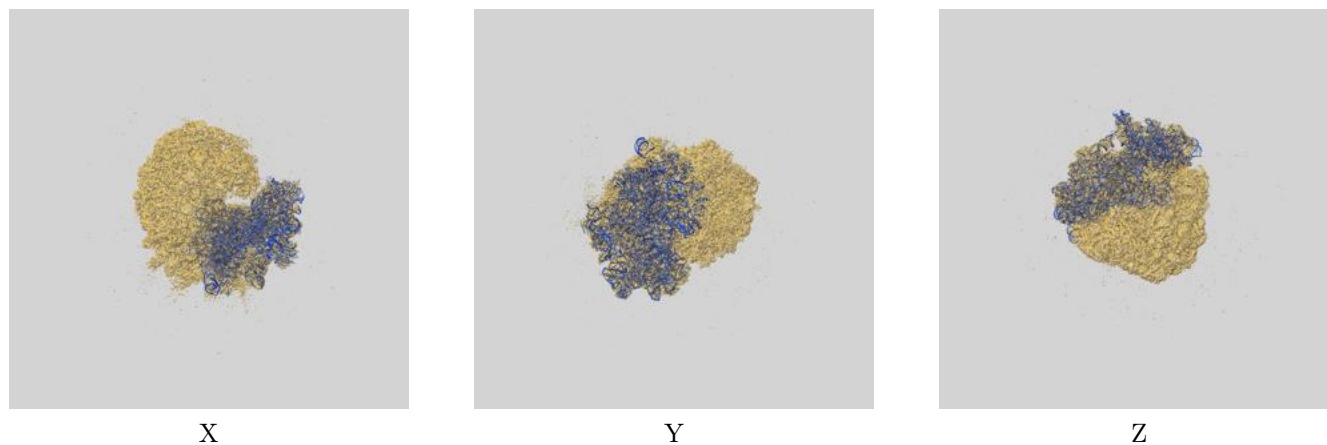
8 Fourier-Shell correlation

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

9 Map-model fit [i](#)

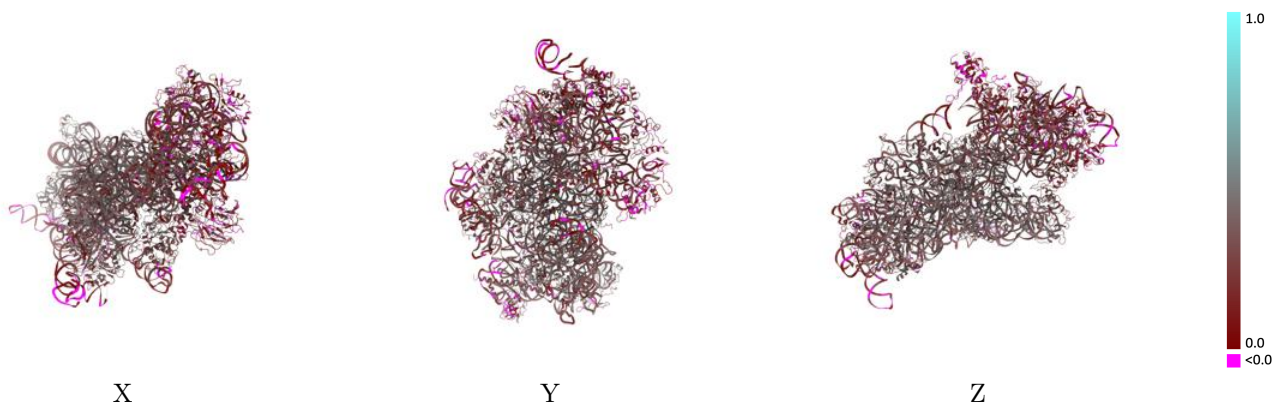
This section contains information regarding the fit between EMDB map EMD-3844 and PDB model 5OPT. Per-residue inclusion information can be found in section 3 on page 11.

9.1 Map-model overlay [i](#)



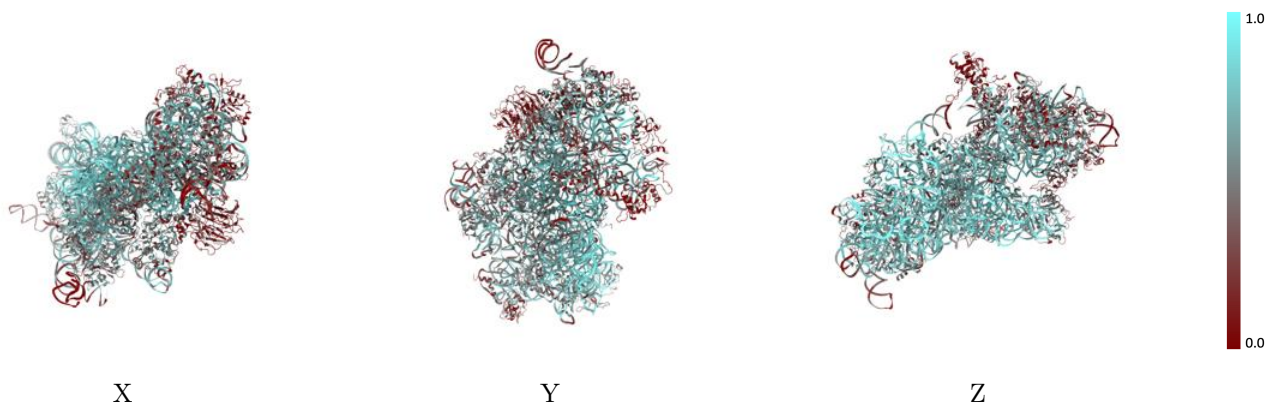
The images above show the 3D surface view of the map at the recommended contour level 0.0549 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



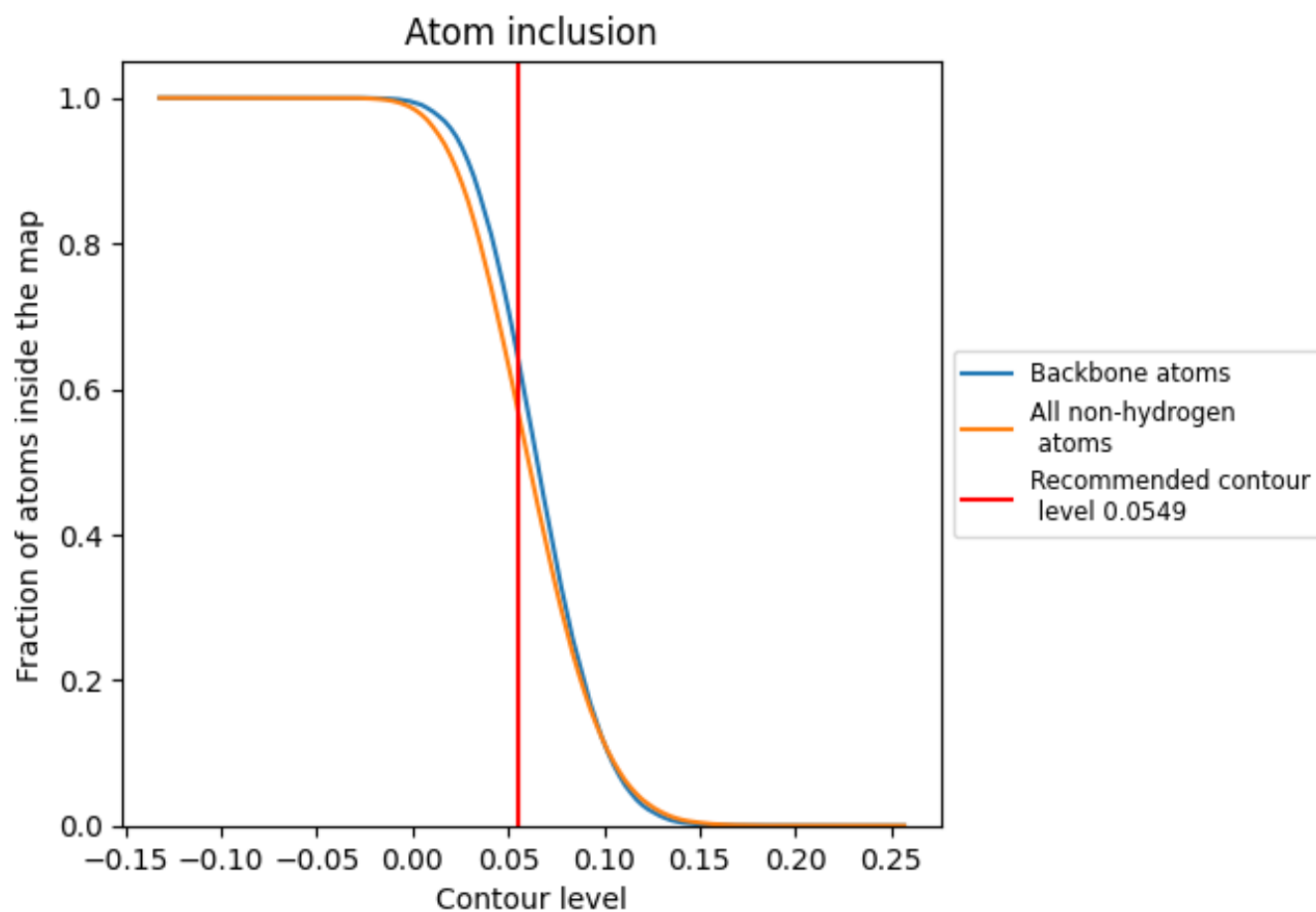
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.0549).









































































9.4 Atom inclusion [i](#)



At the recommended contour level, 65% of all backbone atoms, 57% 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 (0.0549) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.5724	 0.2840
E	 0.6987	 0.2970
L	 0.5232	 0.3590
M	 0.5606	 0.3500
O	 0.3579	 0.2240
P	 0.5280	 0.2910
Q	 0.5311	 0.3060
R	 0.5204	 0.3280
S	 0.4421	 0.3200
T	 0.5044	 0.3360
U	 0.2609	 0.2090
V	 0.4923	 0.3140
W	 0.5513	 0.3340
X	 0.5149	 0.3370
Y	 0.5848	 0.3250
Z	 0.5968	 0.3600
a	 0.2983	 0.1260
b	 0.5505	 0.3240
c	 0.4765	 0.2910
d	 0.5234	 0.3260
e	 0.5473	 0.3480
f	 0.5207	 0.3120
g	 0.5169	 0.3330
h	 0.2966	 0.1270
i	 0.1113	 0.0940
j	 0.1861	 0.1000
k	 0.3771	 0.2550
l	 0.2936	 0.2240
m	 0.2931	 0.2600
n	 0.2964	 0.2120
o	 0.3843	 0.1690
p	 0.1712	 0.1680
q	 0.3767	 0.2290
r	 0.3924	 0.2380
t	 0.2790	 0.1820
u	 0.3231	 0.1910

