



Full wwPDB EM Validation Report ⓘ

Sep 23, 2024 – 10:47 AM EDT

PDB ID : 8VDR
EMDB ID : EMD-43156
Title : Cryogenic electron microscopy model of full-length talin without R12 and FABD
Authors : Izard, T.; Rangarajan, E.S.
Deposited on : 2023-12-17
Resolution : 3.70 Å(reported)
Based on initial model : 6r9t

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

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

<https://www.wwpdb.org/validation/2017/EMValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

The following versions of software and data (see [references ⓘ](#)) were used in the production of this report:

EMDB validation analysis : 0.0.1.dev112
MolProbity : 4.02b-467
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) : 2.38.3

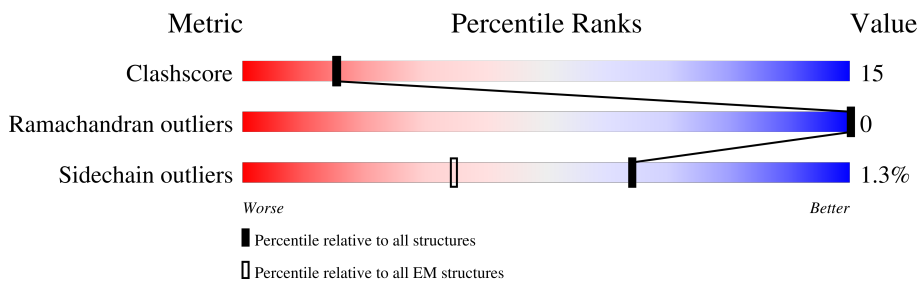
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.70 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	210492	15764
Ramachandran outliers	207382	16835
Sidechain outliers	206894	16415

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	A	2804	

2 Entry composition

There is only 1 type of molecule in this entry. The entry contains 13547 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 Green fluorescent protein, Talin-1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	1852	13547	8340	2412	2729	66	0	0

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	639	LEU	GLN	conflict	UNP P26039
A	673	ASN	LYS	conflict	UNP P26039
A	1227	LEU	SER	conflict	UNP P26039
A	2349	VAL	ALA	conflict	UNP P26039

A3083	L1937	L1814	D1676	L1542	A1406	G1290	A1195	G1081	H919	Q776	V675	I543	SER
T2054	T1946	M1815	E1816	T1543	M1407	Q1291	A1198	E1082	T929	A777	A676	I546	VAL
R2057	V1961	E1817	R1544	R1543	T1408	A1292	R1198	K1086	N799	L778	S677	Q546	ALA
V2062	V1964	S1819	A1545	A1544	I1410	P1293	S1201	T1088	I932	E780	A678	V547	PRO
G2065	L1968	V1824	F1683	F1550	K1415	Q1295	G1202	T1089	A933	L781	A679	D548	ALA
A2066	L1975	G1885	Q1686	T1551	M1418	E1296	L1203	Q1089	A934	L782	V683	A549	ILE
D2073	T1976	L1829	E1552	E1553	M1419	R1298	P1204	D1090	A936	H784	L684	T550	MET
P2074	A1977	N1554	N1554	N1554	P1420	Q1300	Q1206	S1094	A939	K785	K687	T554	GLY
E2075	C1978	I1831	A1556	R1555	A1425	V1301	R1207	A1101	S940	A787	V689	T555	ALA
T2076	I1979	T1835	Q1557	Q1557	A1429	S1302	V1209	K1104	P942	H788	A690	D569	SER
Q2077	I1989	L1838	R1559	R1559	F1436	N1304	D1210	E1108	F943	Q800	Q691	T570	GLY
V2078	L1990	T1562	T1562	T1562	T1437	L1305	L1213	E1109	P948	A801	R692	T571	PRO
L2080	D1991	A1563	A1563	A1563	T1437	K1306	R1214	A1110	L951	T802	L693	A572	GLU
N2082	M1997	L1564	L1564	L1564	A1440	M1310	A1215	Q1111	L951	I805	L698	V573	ASN
A2083	F1998	L1565	L1565	L1565	L1446	K1314	S1220	N1113	C956	F813	Q699	G574	PHE
K2084	G2002	Q1572	L1572	L1572	L1455	L1316	R1222	E1114	Q968	L829	Q701	C575	GLN
D2086	R2006	Q1587	Q1587	Q1587	Q1458	L1332	R1223	N1116	L986	L836	I703	A576	VAL
V2087	E2010	L1607	L1607	L1607	Q1459	S1333	L1224	Y1116	Q991	I840	A704	V577	GLY
A2088	T2011	A1610	A1610	A1610	Q1472	A1338	S1225	L1128	I840	I840	M687	M687	GLN
L2091	F2012	G1611	G1611	G1611	Q1475	M1347	D1226	R1136	L994	R854	Q708	L693	GLN
G2092	L2013	L1612	L1612	L1612	M1476	Q1348	L1228	A1139	Q995	K855	C709	L597	ILE
I2095	D2014	L1614	L1614	L1614	A1477	Q1348	P1229	L1141	L1020	S858	L711	L598	THR
K2099	H2015	Q1615	Q1615	Q1615	C1478	M1351	T1234	T1142	K1025	L863	S712	E601	SER
A2102	L2016	R1618	R1618	R1618	Q1479	M1352	F1235	S1143	K1025	L863	T713	E601	GLN
D2108	L2020	L1619	L1619	L1619	S1480	C1353	Q1236	D1144	L1031	T867	Q715	V619	MET
P2109	K2021	L1620	L1620	L1620	E1483	Q1360	E1237	Q1148	R1035	V871	V723	Q627	HIS
A2110	T2022	D1626	D1626	D1626	P1484	Q1365	R1241	V1151	Q1039	I727	I727	R634	P486
W2112	K2024	P1627	P1627	P1627	C1485	N1365	T1254	L1152	K1040	S728	R634	P487	P487
Q2113	V2025	R1628	R1628	R1628	T1487	R1368	E1255	D1153	E892	L637	L637	L637	L499
L2114	L2026	R1629	R1629	R1629	Q1488	R1373	L1256	D1157	Q1042	C732	L651	L499	L499
K2115	T2030	M1630	M1630	M1630	A1489	V1374	V1257	V1158	E1043	Q733	L652	M500	M500
V2120	K2031	S1631	S1631	S1631	Q1490	E1375	Q1258	L1159	A1044	V737	I655	S502	S502
M2121	V2032	L1633	L1633	L1633	C1509	I1384	S1260	D1160	L1048	R741	E657	V506	V506
T2123	L2033	H1636	H1636	H1636	A1512	T1388	L1267	A1169	D1051	A753	S658	E517	E517
V2034	Q2035	R1637	R1637	R1637	T1516	Y1389	L1267	S1173	S1055	D659	T660	T518	T518
N2124	R2036	R1638	R1638	R1638	R1523	F1390	F1278	E1180	K1068	A908	D760	L522	L522
L2128	A2037	D1642	D1642	D1642	Q1527	S1395	L1282	E1180	A1069	G761	Q665	L522	L522
L2129	Q2046	K1645	K1645	K1645	V1532	V1396	E1283	R1184	A1070	Q762	Q665	L522	L522
K2130	A2047	E1660	E1660	E1660	S1535	M1397	V1286	L1185	L1076	R765	Q670	SE28	SE28
V2132	L2131	L1668	L1668	L1668	T1536	N1399	F1287	A1186	L1079	T772	A674	M531	M531
A2048	Q2049	L1688	L1688	L1688	L1536	E1405	M1288	A1189	P1080	E918	A674	N534	N534

4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	91849	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	JEOL CRYO ARM 300	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	48	Depositor
Minimum defocus (nm)	1000	Depositor
Maximum defocus (nm)	2400	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	1.273	Depositor
Minimum map value	-0.684	Depositor
Average map value	-0.000	Depositor
Map value standard deviation	0.023	Depositor
Recommended contour level	0.124	Depositor
Map size (\AA)	368.64, 368.64, 368.64	wwPDB
Map dimensions	256, 256, 256	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (\AA)	1.44, 1.44, 1.44	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	A	0.32	0/13699	0.48	0/18572

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

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	A	13547	0	13649	395	0
All	All	13547	0	13649	395	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 15.

All (395) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1373:VAL:HB	1:A:1437:THR:HG21	1.55	0.85
1:A:1147:VAL:HG13	1:A:1204:PRO:HG2	1.59	0.84
1:A:783:GLN:HE22	1:A:786:LYS:HE2	1.44	0.82
1:A:522:LEU:HD11	1:A:1080:PRO:HD3	1.63	0.79
1:A:1304:ASN:ND2	1:A:1353:CYS:SG	2.55	0.79

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1613:LEU:HD13	1:A:1636:HIS:HB2	1.68	0.75
1:A:244:GLN:NE2	1:A:287:GLY:O	2.20	0.74
1:A:1713:ILE:HG12	1:A:1803:MET:HE3	1.70	0.73
1:A:534:ASN:ND2	1:A:968:GLN:OE1	2.23	0.71
1:A:760:ASP:HB3	1:A:762:GLN:HG2	1.73	0.70
1:A:1086:LYS:O	1:A:1089:GLN:NE2	2.24	0.70
1:A:333:THR:HB	1:A:336:CYS:H	1.56	0.69
1:A:322:LYS:HD3	1:A:1802:MET:HG2	1.74	0.69
1:A:932:ILE:HG13	1:A:956:CYS:SG	2.33	0.69
1:A:1484:PRO:HA	1:A:1559:ARG:HH21	1.58	0.68
1:A:1207:ARG:HE	1:A:1208:ASP:H	1.39	0.68
1:A:1113:ASN:ND2	1:A:1173:SER:O	2.26	0.68
1:A:281:GLN:HA	1:A:284:LYS:HE2	1.76	0.67
1:A:1261:ARG:NH2	1:A:1375:GLU:OE1	2.27	0.67
1:A:1485:GLY:O	1:A:1490:GLN:NE2	2.28	0.66
1:A:357:LYS:NZ	1:A:370:PHE:O	2.21	0.66
1:A:2006:ARG:NH2	1:A:2010:GLU:O	2.28	0.66
1:A:2046:GLN:O	1:A:2050:SER:N	2.25	0.65
1:A:365:SER:HA	1:A:381:GLN:HA	1.78	0.64
1:A:2017:GLU:HG3	1:A:2021:LYS:HZ3	1.60	0.64
1:A:2108:ASP:HB3	1:A:2111:VAL:HG13	1.79	0.64
1:A:1886:ALA:HB1	1:A:1931:VAL:HG13	1.78	0.64
1:A:279:ILE:O	1:A:283:HIS:ND1	2.31	0.63
1:A:760:ASP:OD1	1:A:761:GLY:N	2.30	0.63
1:A:1562:THR:HG22	1:A:1566:LEU:HD23	1.80	0.63
1:A:1826:GLY:HA2	1:A:1829:ASP:HB3	1.79	0.63
1:A:1550:PHE:O	1:A:1555:ARG:NH1	2.31	0.63
1:A:1180:GLU:OE1	1:A:1184:ARG:NE	2.29	0.63
1:A:1486:CYS:HA	1:A:1490:GLN:HE21	1.64	0.63
1:A:1259:ALA:HB1	1:A:1267:LEU:HA	1.80	0.63
1:A:279:ILE:HG22	1:A:283:HIS:CE1	2.33	0.62
1:A:1223:LEU:HD12	1:A:1227:LEU:HD11	1.81	0.62
1:A:1235:PHE:HD2	1:A:1291:GLN:HG3	1.64	0.62
1:A:1975:THR:HG22	1:A:1977:ALA:H	1.64	0.62
1:A:1613:LEU:HD11	1:A:1633:LEU:HD12	1.81	0.62
1:A:329:LEU:HD13	1:A:342:GLU:HA	1.80	0.62
1:A:543:ILE:HD11	1:A:587:MET:HG3	1.81	0.62
1:A:299:VAL:O	1:A:303:ARG:HG2	2.00	0.61
1:A:547:VAL:HG21	1:A:652:LEU:HD21	1.81	0.61
1:A:929:THR:HA	1:A:932:ILE:HG22	1.81	0.61
1:A:889:ARG:NH1	1:A:892:GLU:OE2	2.32	0.61

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1488:GLN:HG2	1:A:1550:PHE:HZ	1.66	0.61
1:A:1542:THR:HG23	1:A:1557:GLN:HG3	1.83	0.61
1:A:220:ARG:NH1	1:A:242:GLN:HG2	2.16	0.61
1:A:377:TYR:N	1:A:1676:ASP:OD2	2.32	0.60
1:A:2066:ALA:O	1:A:2077:GLN:NE2	2.29	0.60
1:A:1070:ALA:HB1	1:A:1076:LEU:HD21	1.83	0.59
1:A:802:THR:HG21	1:A:908:ALA:HB3	1.85	0.59
1:A:671:LEU:HB3	1:A:780:GLU:HG2	1.84	0.59
1:A:673:ASN:O	1:A:677:SER:N	2.32	0.59
1:A:1090:ASP:O	1:A:1094:SER:N	2.34	0.59
1:A:2032:VAL:HA	1:A:2035:GLN:HG2	1.85	0.58
1:A:310:VAL:HG23	1:A:312:PHE:CE2	2.38	0.58
1:A:729:SER:OG	1:A:732:CYS:SG	2.53	0.58
1:A:1486:CYS:HB2	1:A:1555:ARG:HD2	1.84	0.58
1:A:1390:PHE:HD2	1:A:1785:ASN:HA	1.69	0.58
1:A:574:GLY:HA2	1:A:577:VAL:HG22	1.86	0.58
1:A:1458:GLN:O	1:A:1459:GLN:HG2	2.04	0.58
1:A:1472:GLN:HA	1:A:1475:GLN:HE21	1.69	0.57
1:A:517:GLU:OE1	1:A:518:THR:OG1	2.18	0.57
1:A:584:LEU:HD22	1:A:619:VAL:HG11	1.84	0.57
1:A:723:VAL:HG13	1:A:732:CYS:HB3	1.87	0.57
1:A:1620:LEU:HD11	1:A:1629:ARG:HB3	1.86	0.57
1:A:1710:SER:HB2	1:A:1807:VAL:HG11	1.85	0.57
1:A:1977:ALA:HB1	1:A:2048:ALA:HB3	1.87	0.56
1:A:2034:VAL:HB	1:A:2114:LEU:HD21	1.86	0.56
1:A:733:GLN:OE1	1:A:788:HIS:ND1	2.38	0.56
1:A:863:LEU:O	1:A:867:THR:N	2.30	0.56
1:A:1509:CYS:SG	1:A:1572:LEU:HD11	2.45	0.56
1:A:1304:ASN:OD1	1:A:1348:GLN:NE2	2.32	0.56
1:A:729:SER:HG	1:A:732:CYS:HG	1.45	0.56
1:A:1082:GLU:OE1	1:A:1082:GLU:N	2.38	0.56
1:A:2054:THR:HA	1:A:2057:ARG:HH11	1.70	0.56
1:A:1347:ASN:O	1:A:1351:THR:HG23	2.05	0.56
1:A:737:VAL:O	1:A:741:ARG:N	2.33	0.55
1:A:829:LEU:HD21	1:A:897:LEU:HD21	1.87	0.55
1:A:1488:GLN:HG2	1:A:1550:PHE:CZ	2.41	0.55
1:A:1554:ASN:OD1	1:A:1557:GLN:NE2	2.40	0.55
1:A:1302:VAL:O	1:A:1306:LYS:N	2.35	0.55
1:A:1365:ASN:OD1	1:A:1368:ARG:NH1	2.39	0.55
1:A:336:CYS:SG	1:A:350:GLU:HG2	2.46	0.55
1:A:2017:GLU:HG3	1:A:2021:LYS:NZ	2.20	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1201:SER:HA	1:A:1206:GLN:HE22	1.72	0.55
1:A:991:GLN:NE2	1:A:1042:GLN:OE1	2.39	0.55
1:A:249:PRO:HB3	1:A:288:GLN:HB3	1.89	0.54
1:A:1816:GLU:O	1:A:1819:SER:OG	2.24	0.54
1:A:308:TYR:CD1	1:A:309:GLY:N	2.76	0.54
1:A:1260:SER:HA	1:A:1267:LEU:HD12	1.89	0.54
1:A:506:VAL:HG22	1:A:584:LEU:HD23	1.90	0.54
1:A:2062:VAL:HG11	1:A:2084:VAL:HG11	1.88	0.54
1:A:293:GLU:HA	1:A:296:VAL:HG12	1.90	0.54
1:A:1088:THR:HG22	1:A:1203:LEU:HD11	1.90	0.54
1:A:1835:ILE:HD11	1:A:1924:GLY:HA3	1.89	0.54
1:A:855:LYS:HA	1:A:858:SER:HB3	1.89	0.53
1:A:242:GLN:NE2	1:A:265:PHE:O	2.41	0.53
1:A:543:ILE:CD1	1:A:587:MET:HG3	2.38	0.53
1:A:2108:ASP:O	1:A:2111:VAL:HG22	2.09	0.53
1:A:234:LYS:HZ1	1:A:301:LEU:HB3	1.73	0.53
1:A:296:VAL:HA	1:A:299:VAL:HG12	1.90	0.53
1:A:1660:GLU:OE2	1:A:1728:GLY:HA2	2.09	0.53
1:A:1216:VAL:HG22	1:A:1278:PHE:CD2	2.43	0.53
1:A:781:LEU:O	1:A:784:HIS:HB3	2.08	0.53
1:A:1989:ILE:HD11	1:A:2088:ALA:HB3	1.90	0.53
1:A:1293:PRO:O	1:A:1295:GLN:NE2	2.39	0.53
1:A:325:LEU:HD22	1:A:381:GLN:HE22	1.74	0.53
1:A:1223:LEU:HA	1:A:1227:LEU:HD21	1.91	0.53
1:A:1111:GLN:OE1	1:A:1523:ARG:NH1	2.42	0.52
1:A:1396:VAL:HG13	1:A:1436:PHE:CE1	2.44	0.52
1:A:729:SER:O	1:A:733:GLN:NE2	2.43	0.52
1:A:1111:GLN:HG3	1:A:1527:GLN:HG3	1.90	0.52
1:A:1144:ASP:HB3	1:A:1147:VAL:HB	1.91	0.52
1:A:1300:GLN:HG3	1:A:1304:ASN:HD21	1.75	0.52
1:A:601:GLU:OE2	1:A:601:GLU:N	2.43	0.52
1:A:690:ALA:O	1:A:693:THR:OG1	2.26	0.52
1:A:1254:THR:O	1:A:1258:GLN:NE2	2.40	0.52
1:A:502:SER:HB2	1:A:581:SER:HB3	1.92	0.51
1:A:1142:THR:HG23	1:A:1148:GLN:HG2	1.92	0.51
1:A:1186:ALA:HA	1:A:1189:ALA:HB3	1.91	0.51
1:A:2011:THR:O	1:A:2015:HIS:NE2	2.43	0.51
1:A:1301:VAL:HA	1:A:1304:ASN:HD22	1.74	0.51
1:A:896:GLY:O	1:A:900:ALA:N	2.41	0.51
1:A:2014:ASP:OD1	1:A:2015:HIS:N	2.44	0.51
1:A:1405:GLU:O	1:A:1408:THR:OG1	2.21	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1749:ALA:HB1	1:A:1758:GLN:HB2	1.93	0.51
1:A:313:PHE:HB3	1:A:384:GLU:OE2	2.10	0.51
1:A:522:LEU:HD21	1:A:1080:PRO:HG3	1.91	0.51
1:A:1288:MET:HA	1:A:1291:GLN:HB2	1.93	0.51
1:A:1415:LYS:HG3	1:A:1630:TRP:CH2	2.46	0.51
1:A:1388:SER:OG	1:A:1389:TYR:N	2.44	0.50
1:A:228:HIS:HE1	1:A:305:LEU:HD23	1.77	0.50
1:A:1532:VAL:O	1:A:1536:THR:N	2.37	0.50
1:A:1610:ALA:O	1:A:1614:ILE:HG12	2.11	0.50
1:A:2080:LEU:HD11	1:A:2135:VAL:HG11	1.93	0.50
1:A:233:ASP:HA	1:A:278:LYS:NZ	2.26	0.50
1:A:800:GLN:N	1:A:800:GLN:OE1	2.39	0.50
1:A:1702:MET:HG2	1:A:1814:LEU:HD21	1.94	0.50
1:A:593:LEU:O	1:A:597:LEU:HD23	2.11	0.50
1:A:1039:GLN:HE22	1:A:1918:HIS:HB3	1.76	0.50
1:A:1079:LEU:HG	1:A:1136:ARG:NH1	2.26	0.50
1:A:1975:THR:O	1:A:1979:ILE:HD12	2.12	0.50
1:A:1128:LEU:HD22	1:A:1159:LEU:HD13	1.93	0.50
1:A:670:GLN:O	1:A:674:ALA:N	2.35	0.49
1:A:1315:LEU:HA	1:A:1338:ALA:HB1	1.94	0.49
1:A:364:LYS:O	1:A:382:THR:N	2.43	0.49
1:A:531:TRP:CZ2	1:A:1080:PRO:HG2	2.48	0.49
1:A:337:VAL:O	1:A:351:TRP:N	2.43	0.49
1:A:762:GLN:HA	1:A:765:ARG:HG2	1.93	0.49
1:A:727:ILE:HD11	1:A:784:HIS:CE1	2.48	0.49
1:A:2073:ASP:OD2	1:A:2073:ASP:N	2.46	0.49
1:A:263:LYS:HA	1:A:271:VAL:HG11	1.94	0.49
1:A:571:THR:O	1:A:575:CYS:N	2.35	0.49
1:A:1396:VAL:HG13	1:A:1436:PHE:HE1	1.78	0.49
1:A:684:LEU:O	1:A:688:SER:N	2.41	0.49
1:A:2087:VAL:HG22	1:A:2124:ASN:HB3	1.95	0.49
1:A:2084:VAL:HG12	1:A:2128:LEU:HD11	1.94	0.48
1:A:700:THR:HA	1:A:703:ILE:HB	1.95	0.48
1:A:1216:VAL:HG13	1:A:1278:PHE:CE2	2.48	0.48
1:A:1679:SER:O	1:A:1683:VAL:HG23	2.12	0.48
1:A:675:VAL:HG22	1:A:776:GLN:HB3	1.95	0.48
1:A:687:LYS:HZ2	1:A:703:ILE:HG23	1.79	0.48
1:A:1201:SER:HA	1:A:1206:GLN:NE2	2.29	0.48
1:A:995:GLN:HA	1:A:995:GLN:OE1	2.14	0.48
1:A:1035:ARG:HD2	1:A:1921:GLN:OE1	2.13	0.48
1:A:1824:VAL:HG21	1:A:1931:VAL:HG12	1.95	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1961:VAL:HA	1:A:1964:VAL:HG12	1.96	0.48
1:A:2021:LYS:HA	1:A:2024:LYS:HZ3	1.79	0.48
1:A:1838:LEU:HD11	1:A:1900:ALA:HB3	1.95	0.48
1:A:2073:ASP:O	1:A:2076:THR:OG1	2.27	0.48
1:A:1851:VAL:O	1:A:1854:GLN:N	2.47	0.47
1:A:233:ASP:HA	1:A:278:LYS:HZ1	1.78	0.47
1:A:1778:THR:O	1:A:1782:ALA:N	2.40	0.47
1:A:2074:PRO:O	1:A:2078:VAL:HG23	2.14	0.47
1:A:216:TYR:OH	1:A:220:ARG:NH2	2.47	0.47
1:A:1410:ILE:HG23	1:A:1425:ALA:HB3	1.96	0.47
1:A:1863:ALA:HA	1:A:1866:VAL:HG12	1.96	0.47
1:A:1079:LEU:N	1:A:1082:GLU:OE2	2.48	0.47
1:A:1360:GLN:HB2	1:A:1618:ARG:HH11	1.79	0.47
1:A:280:PHE:HA	1:A:283:HIS:ND1	2.30	0.47
1:A:375:ASP:OD1	1:A:375:ASP:N	2.46	0.47
1:A:1139:ALA:HB2	1:A:1152:LEU:HD11	1.97	0.47
1:A:1139:ALA:HA	1:A:1142:THR:HG22	1.96	0.47
1:A:1976:GLN:N	1:A:1976:GLN:OE1	2.47	0.47
1:A:286:CYS:O	1:A:289:MET:HG3	2.15	0.47
1:A:499:ILE:HG13	1:A:500:ASN:N	2.28	0.47
1:A:1101:ALA:O	1:A:1104:LYS:HB2	2.14	0.47
1:A:1512:ALA:O	1:A:1516:THR:HG23	2.15	0.47
1:A:1626:ASP:OD2	1:A:1629:ARG:HG3	2.15	0.47
1:A:1733:GLN:HA	1:A:1736:GLN:HE21	1.80	0.47
1:A:1789:ALA:HB3	1:A:1791:HIS:CE1	2.50	0.47
1:A:2021:LYS:HG3	1:A:2024:LYS:HZ3	1.79	0.47
1:A:353:LEU:O	1:A:356:ILE:HG22	2.15	0.47
1:A:546:GLN:O	1:A:550:ILE:HG12	2.13	0.47
1:A:1483:GLU:OE2	1:A:1490:GLN:NE2	2.43	0.47
1:A:1203:LEU:HD23	1:A:1205:GLY:H	1.80	0.47
1:A:1160:ASP:OD1	1:A:1161:LYS:N	2.48	0.47
1:A:1921:GLN:O	1:A:1924:GLY:N	2.47	0.47
1:A:2016:ARG:O	1:A:2020:LEU:HG	2.15	0.47
1:A:2031:LYS:HA	1:A:2034:VAL:HG22	1.97	0.47
1:A:2091:LEU:O	1:A:2095:ILE:HG13	2.15	0.47
1:A:1551:THR:HB	1:A:1554:ASN:HB2	1.97	0.46
1:A:333:THR:HB	1:A:336:CYS:N	2.27	0.46
1:A:1302:VAL:O	1:A:1306:LYS:HG2	2.15	0.46
1:A:702:VAL:HG22	1:A:753:ALA:HB1	1.98	0.46
1:A:260:LEU:HD11	1:A:265:PHE:CG	2.50	0.46
1:A:279:ILE:HG22	1:A:283:HIS:HE1	1.79	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1927:CYS:O	1:A:1931:VAL:HG23	2.16	0.46
1:A:219:ALA:O	1:A:223:ILE:HG12	2.16	0.46
1:A:709:CYS:O	1:A:713:THR:HG23	2.14	0.46
1:A:836:LEU:O	1:A:840:ILE:HG22	2.15	0.46
1:A:1108:GLU:OE2	1:A:1114:GLU:HB2	2.15	0.46
1:A:1478:CYS:HB2	1:A:1562:THR:HG23	1.98	0.46
1:A:2049:GLN:HA	1:A:2052:VAL:HG22	1.97	0.46
1:A:2084:VAL:HA	1:A:2087:VAL:HB	1.97	0.46
1:A:213:ASN:HB2	1:A:295:LYS:NZ	2.31	0.46
1:A:863:LEU:HD22	1:A:900:ALA:HB1	1.96	0.46
1:A:1086:LYS:HG2	1:A:1089:GLN:NE2	2.30	0.46
1:A:1418:ASN:OD1	1:A:1420:PRO:HD2	2.16	0.46
1:A:2012:PHE:HA	1:A:2015:HIS:CD2	2.50	0.46
1:A:802:THR:O	1:A:805:ILE:HG12	2.15	0.46
1:A:913:LEU:HD12	1:A:1044:ALA:HB2	1.98	0.46
1:A:1398:GLU:OE2	1:A:1399:ASN:ND2	2.48	0.46
1:A:2132:VAL:HA	1:A:2135:VAL:HG12	1.97	0.46
1:A:314:LEU:HD12	1:A:314:LEU:HA	1.79	0.45
1:A:948:PRO:O	1:A:951:LEU:HG	2.17	0.45
1:A:234:LYS:NZ	1:A:301:LEU:HB3	2.30	0.45
1:A:1314:LYS:HA	1:A:1317:LEU:HB2	1.98	0.45
1:A:1689:PRO:HA	1:A:1750:SER:OG	2.17	0.45
1:A:243:CYS:HB3	1:A:283:HIS:HD2	1.81	0.45
1:A:1141:LEU:HD23	1:A:1141:LEU:HA	1.72	0.45
1:A:1824:VAL:HG13	1:A:1824:VAL:O	2.15	0.45
1:A:2017:GLU:HA	1:A:2020:LEU:HD12	1.98	0.45
1:A:349:GLN:OE1	1:A:350:GLU:N	2.50	0.45
1:A:1220:SER:O	1:A:1224:LEU:N	2.49	0.45
1:A:1390:PHE:CD2	1:A:1785:ASN:HA	2.51	0.45
1:A:689:VAL:O	1:A:693:THR:HG23	2.17	0.45
1:A:268:LYS:O	1:A:272:LYS:NZ	2.47	0.45
1:A:337:VAL:HG23	1:A:353:LEU:HD23	1.98	0.45
1:A:551:THR:O	1:A:554:THR:OG1	2.31	0.45
1:A:1040:LYS:HA	1:A:1040:LYS:HD3	1.70	0.45
1:A:1222:ARG:NH1	1:A:1283:GLU:OE2	2.49	0.45
1:A:1713:ILE:HG12	1:A:1803:MET:CE	2.42	0.45
1:A:267:PRO:O	1:A:271:VAL:HG13	2.16	0.45
1:A:651:LEU:O	1:A:655:ILE:HG12	2.17	0.45
1:A:868:ALA:HA	1:A:871:VAL:HB	1.99	0.45
1:A:700:THR:O	1:A:704:ALA:N	2.40	0.45
1:A:854:ARG:O	1:A:858:SER:N	2.32	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2022:THR:O	1:A:2026:LEU:N	2.42	0.44
1:A:2054:THR:HA	1:A:2057:ARG:NH1	2.31	0.44
1:A:239:ALA:HB1	1:A:265:PHE:CE1	2.52	0.44
1:A:1234:THR:HB	1:A:1237:GLU:HB3	2.00	0.44
1:A:783:GLN:NE2	1:A:786:LYS:HE2	2.24	0.44
1:A:1153:ASP:O	1:A:1157:ASP:N	2.43	0.44
1:A:1739:GLU:N	1:A:1740:PRO:HD2	2.32	0.44
1:A:278:LYS:HA	1:A:281:GLN:CD	2.38	0.44
1:A:1051:ASP:O	1:A:1055:SER:N	2.42	0.44
1:A:2092:GLY:HA2	1:A:2095:ILE:HD12	1.99	0.44
1:A:2047:ALA:O	1:A:2050:SER:OG	2.24	0.44
1:A:223:ILE:HG13	1:A:224:LEU:N	2.32	0.44
1:A:502:SER:O	1:A:506:VAL:HG23	2.17	0.44
1:A:634:ARG:HE	1:A:637:LEU:HD23	1.81	0.44
1:A:1306:LYS:HB3	1:A:1310:MET:HE1	1.99	0.44
1:A:1627:PRO:O	1:A:1631:SER:N	2.50	0.44
1:A:1295:GLN:O	1:A:1298:ARG:HB3	2.17	0.44
1:A:316:LYS:NZ	1:A:327:PRO:HG3	2.33	0.44
1:A:1213:LEU:HD12	1:A:1214:ARG:N	2.33	0.44
1:A:1220:SER:HA	1:A:1223:LEU:HB3	2.00	0.44
1:A:1882:LEU:HD11	1:A:1937:LEU:HD23	2.00	0.44
1:A:1446:LEU:HD13	1:A:1725:SER:HB3	2.00	0.43
1:A:1455:GLN:HG2	1:A:1587:GLN:HB3	1.99	0.43
1:A:2021:LYS:HA	1:A:2024:LYS:NZ	2.33	0.43
1:A:2037:ALA:O	1:A:2102:ALA:HA	2.18	0.43
1:A:1865:ALA:HB2	1:A:1961:VAL:HG11	2.00	0.43
1:A:1901:LYS:CG	1:A:1902:PRO:HD3	2.48	0.43
1:A:1638:ARG:O	1:A:1642:ASP:N	2.38	0.43
1:A:1733:GLN:HA	1:A:1736:GLN:NE2	2.33	0.43
1:A:2026:LEU:O	1:A:2030:THR:N	2.46	0.43
1:A:1219:ALA:HB1	1:A:1282:LEU:HD23	2.01	0.43
1:A:1300:GLN:HG3	1:A:1304:ASN:ND2	2.33	0.43
1:A:939:ALA:O	1:A:942:PRO:HD2	2.18	0.43
1:A:1195:ALA:HA	1:A:1198:ARG:HH12	1.83	0.43
1:A:569:ASP:OD1	1:A:571:THR:OG1	2.22	0.43
1:A:777:ALA:O	1:A:781:LEU:HG	2.19	0.43
1:A:1237:GLU:O	1:A:1241:ARG:N	2.43	0.43
1:A:502:SER:HB2	1:A:581:SER:CB	2.48	0.43
1:A:1436:PHE:O	1:A:1440:ALA:N	2.49	0.43
1:A:486:PRO:N	1:A:487:PRO:HD2	2.34	0.43
1:A:704:ALA:O	1:A:707:THR:OG1	2.34	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1553:GLU:HA	1:A:1556:ALA:HB3	1.99	0.43
1:A:1620:LEU:HD11	1:A:1629:ARG:CB	2.49	0.43
1:A:229:PRO:HB2	1:A:345:LYS:HB3	2.01	0.43
1:A:1207:ARG:NH2	1:A:1210:ASP:HB2	2.33	0.43
1:A:1256:LEU:HD23	1:A:1256:LEU:HA	1.90	0.43
1:A:1978:CYS:HB3	1:A:2099:LYS:HB2	2.01	0.43
1:A:310:VAL:HG12	1:A:333:THR:HA	2.00	0.43
1:A:1899:GLN:C	1:A:1902:PRO:HD2	2.39	0.43
1:A:2112:TRP:HA	1:A:2115:LYS:HE2	2.01	0.43
1:A:356:ILE:HD11	1:A:359:TRP:HB3	2.01	0.42
1:A:679:ALA:O	1:A:683:VAL:HG23	2.19	0.42
1:A:712:SER:O	1:A:715:GLN:HB3	2.19	0.42
1:A:1607:LEU:O	1:A:1611:GLY:N	2.44	0.42
1:A:2082:ASN:HA	1:A:2085:LYS:HB3	2.01	0.42
1:A:328:ARG:HE	1:A:339:ARG:HD2	1.84	0.42
1:A:1395:SER:O	1:A:1399:ASN:ND2	2.47	0.42
1:A:917:LEU:HD23	1:A:986:LEU:HG	2.02	0.42
1:A:1051:ASP:OD1	1:A:1051:ASP:N	2.52	0.42
1:A:1144:ASP:O	1:A:1148:GLN:HG3	2.19	0.42
1:A:1406:ALA:HB1	1:A:1429:ALA:HB2	2.01	0.42
1:A:1068:LYS:HG3	1:A:1152:LEU:HD23	2.00	0.42
1:A:1207:ARG:HE	1:A:1208:ASP:N	2.14	0.42
1:A:1480:SER:O	1:A:1483:GLU:HG3	2.19	0.42
1:A:1668:LEU:HA	1:A:1668:LEU:HD12	1.71	0.42
1:A:278:LYS:HA	1:A:281:GLN:NE2	2.34	0.42
1:A:692:ARG:HG2	1:A:762:GLN:NE2	2.35	0.42
1:A:1031:LEU:HD23	1:A:1031:LEU:HA	1.82	0.42
1:A:1360:GLN:CB	1:A:1618:ARG:HE	2.33	0.42
1:A:1853:TYR:HD2	1:A:1903:ALA:HA	1.83	0.42
1:A:1908:GLU:HG2	1:A:1909:ASN:N	2.33	0.42
1:A:1919:ARG:HH21	1:A:1922:GLU:CD	2.23	0.42
1:A:2015:HIS:CD2	1:A:2065:GLY:HA2	2.54	0.42
1:A:1195:ALA:HA	1:A:1198:ARG:NH1	2.34	0.42
1:A:1937:LEU:HD13	1:A:1946:THR:HG22	2.01	0.42
1:A:896:GLY:HA2	1:A:899:MET:HB3	2.01	0.42
1:A:940:SER:O	1:A:943:LYS:HG3	2.19	0.42
1:A:1203:LEU:HD23	1:A:1205:GLY:N	2.34	0.42
1:A:598:LEU:HD23	1:A:598:LEU:HA	1.83	0.42
1:A:1734:MET:O	1:A:1734:MET:HG2	2.20	0.42
1:A:229:PRO:HB3	1:A:329:LEU:HD22	2.01	0.42
1:A:1476:MET:HE2	1:A:1476:MET:HA	2.01	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1788:GLN:HE22	1:A:1793:GLN:HB2	1.85	0.42
1:A:337:VAL:HB	1:A:351:TRP:HB2	2.02	0.41
1:A:673:ASN:HA	1:A:676:ALA:HB3	2.01	0.41
1:A:1298:ARG:HA	1:A:1301:VAL:HG22	2.02	0.41
1:A:687:LYS:HD3	1:A:687:LYS:HA	1.75	0.41
1:A:1241:ARG:HE	1:A:1241:ARG:HB3	1.73	0.41
1:A:1535:SER:OG	1:A:1564:PRO:HB2	2.20	0.41
1:A:932:ILE:O	1:A:936:GLN:HG2	2.20	0.41
1:A:1108:GLU:OE2	1:A:1116:TYR:HB2	2.20	0.41
1:A:813:PHE:HZ	1:A:895:GLU:HA	1.85	0.41
1:A:1998:PHE:O	1:A:2002:GLY:N	2.54	0.41
1:A:2079:VAL:O	1:A:2083:ALA:N	2.52	0.41
1:A:517:GLU:O	1:A:518:THR:HG23	2.20	0.41
1:A:546:GLN:O	1:A:549:ALA:N	2.54	0.41
1:A:1151:VAL:HG23	1:A:1152:LEU:HD12	2.03	0.41
1:A:1975:THR:O	1:A:1978:CYS:N	2.54	0.41
1:A:889:ARG:O	1:A:892:GLU:HG2	2.21	0.41
1:A:1684:SER:HB2	1:A:1686:GLN:HE22	1.85	0.41
1:A:1744:ALA:O	1:A:1748:ALA:N	2.44	0.41
1:A:266:LEU:HA	1:A:266:LEU:HD23	1.82	0.41
1:A:362:SER:HB3	1:A:365:SER:HB2	2.03	0.41
1:A:506:VAL:HG13	1:A:584:LEU:HD21	2.03	0.41
1:A:1207:ARG:HH21	1:A:1210:ASP:HB2	1.85	0.41
1:A:499:ILE:HD11	1:A:627:GLN:HG3	2.01	0.41
1:A:522:LEU:HD12	1:A:528:SER:OG	2.21	0.41
1:A:572:ALA:O	1:A:576:ALA:N	2.53	0.41
1:A:1407:MET:SD	1:A:1408:THR:HG23	2.61	0.41
1:A:1642:ASP:HA	1:A:1645:LYS:HG2	2.03	0.41
1:A:1227:LEU:HD22	1:A:1286:VAL:HB	2.03	0.41
1:A:2110:ALA:O	1:A:2113:GLN:HB3	2.21	0.41
1:A:334:LYS:HA	1:A:395:TYR:CE1	2.56	0.40
1:A:372:ASP:OD1	1:A:372:ASP:N	2.54	0.40
1:A:374:GLN:NE2	1:A:375:ASP:O	2.55	0.40
1:A:913:LEU:HD23	1:A:913:LEU:HA	1.79	0.40
1:A:1543:ILE:HD12	1:A:1543:ILE:HA	1.98	0.40
1:A:2087:VAL:O	1:A:2121:MET:HE1	2.22	0.40
1:A:1039:GLN:HE22	1:A:1918:HIS:CB	2.34	0.40
1:A:1545:ALA:O	1:A:1554:ASN:ND2	2.28	0.40
1:A:1612:GLY:O	1:A:1615:GLN:HG3	2.22	0.40
1:A:1627:PRO:HB2	1:A:1628:PRO:HD3	2.03	0.40
1:A:1831:ILE:HG12	1:A:1893:TYR:HD2	1.86	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:711:LEU:HD12	1:A:712:SER:N	2.36	0.40
1:A:934:ALA:O	1:A:1020:LEU:HD13	2.21	0.40
1:A:1203:LEU:HA	1:A:1204:PRO:HD3	1.94	0.40
1:A:1486:CYS:HA	1:A:1490:GLN:NE2	2.32	0.40
1:A:695:ASP:HB3	1:A:698:LEU:HB3	2.02	0.40
1:A:994:LEU:HD23	1:A:994:LEU:HA	1.79	0.40
1:A:1086:LYS:HG2	1:A:1089:GLN:HE21	1.85	0.40
1:A:1109:ILE:HD11	1:A:1169:ALA:HB1	2.02	0.40
1:A:1229:PRO:HD3	1:A:1290:GLY:HA3	2.04	0.40
1:A:1314:LYS:HA	1:A:1317:LEU:HD12	2.04	0.40
1:A:1693:ILE:HG21	1:A:1698:LEU:HD21	2.04	0.40
1:A:1857:MET:SD	1:A:1968:LEU:HD21	2.61	0.40
1:A:1889:LEU:HD11	1:A:1927:CYS:SG	2.61	0.40
1:A:2120:VAL:HA	1:A:2123:THR:HG22	2.04	0.40
1:A:212:LEU:HD23	1:A:295:LYS:HE2	2.03	0.40
1:A:230:VAL:HG21	1:A:238:PHE:HE2	1.85	0.40
1:A:357:LYS:HE3	1:A:357:LYS:HB3	1.93	0.40
1:A:727:ILE:O	1:A:733:GLN:NE2	2.54	0.40
1:A:919:HIS:O	1:A:919:HIS:CG	2.74	0.40
1:A:1831:ILE:HG13	1:A:1890:THR:OG1	2.22	0.40
1:A:2133:LYS:HA	1:A:2133:LYS:HD2	1.76	0.40

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	A	1848/2804 (66%)	1797 (97%)	51 (3%)	0	100 100

There are no Ramachandran outliers to report.

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	A	1417/2215 (64%)	1398 (99%)	19 (1%)	65 77

All (19) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	657	GLU
1	A	660	THR
1	A	665	GLN
1	A	772	THR
1	A	776	GLN
1	A	778	LEU
1	A	780	GLU
1	A	907	ASN
1	A	909	ILE
1	A	910	LYS
1	A	1025	LYS
1	A	1043	GLU
1	A	1048	LEU
1	A	1332	LYS
1	A	1333	SER
1	A	1384	ILE
1	A	1991	ASP
1	A	1997	MET
1	A	2130	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (7) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	228	HIS
1	A	665	GLN
1	A	733	GLN
1	A	776	GLN
1	A	779	ASN
1	A	783	GLN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	1736	GLN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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 oligosaccharides 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.

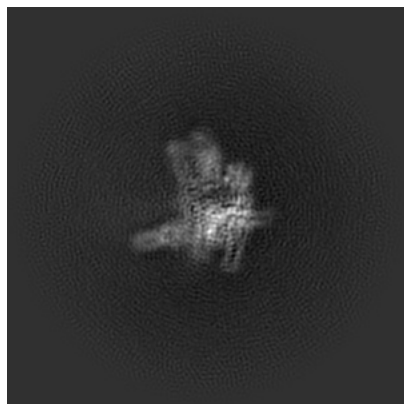
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-43156. These allow visual inspection of the internal detail of the map and identification of artifacts.

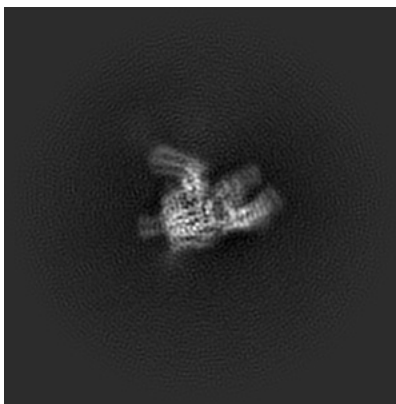
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

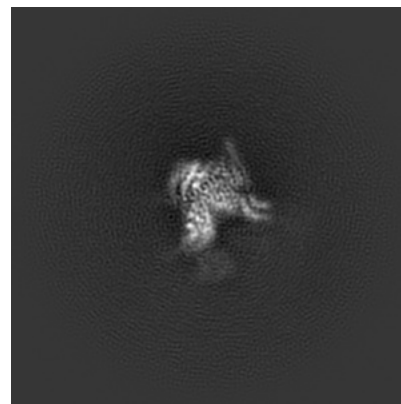
6.1.1 Primary map



X

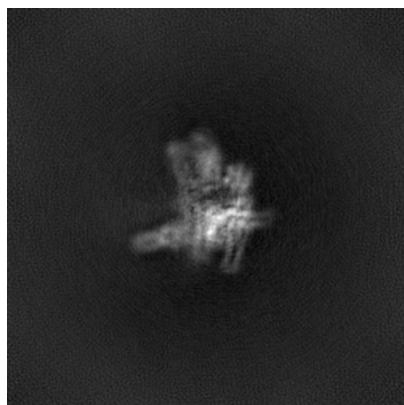


Y

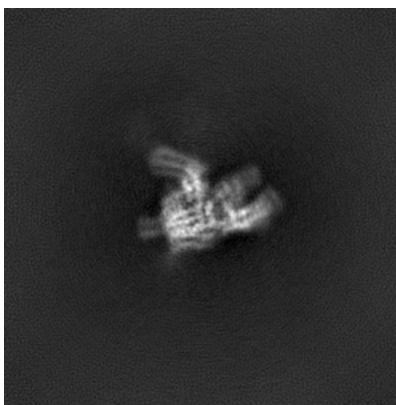


Z

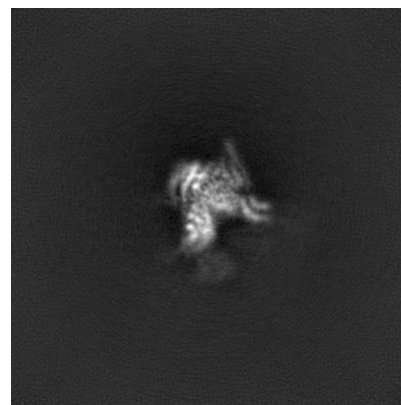
6.1.2 Raw map



X



Y

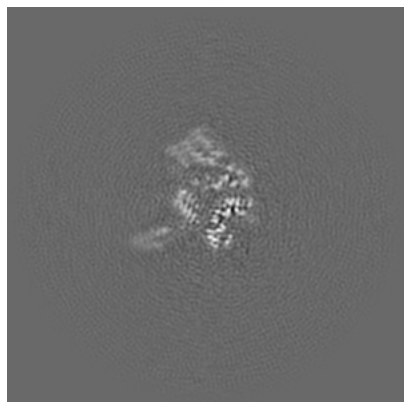


Z

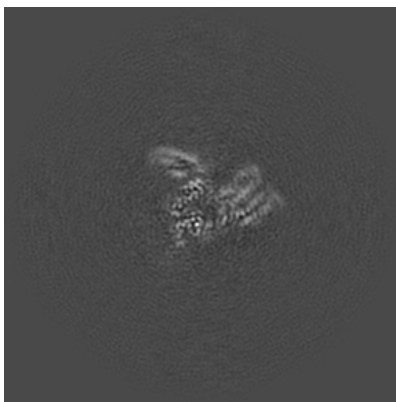
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

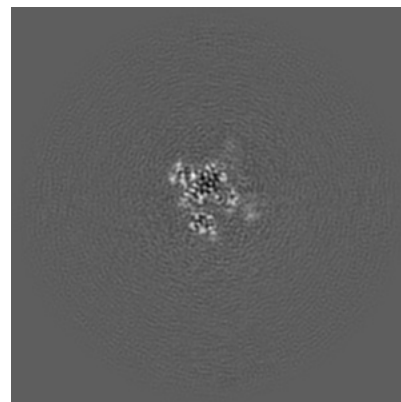
6.2.1 Primary map



X Index: 128

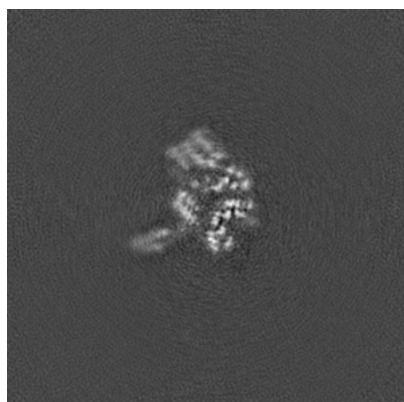


Y Index: 128



Z Index: 128

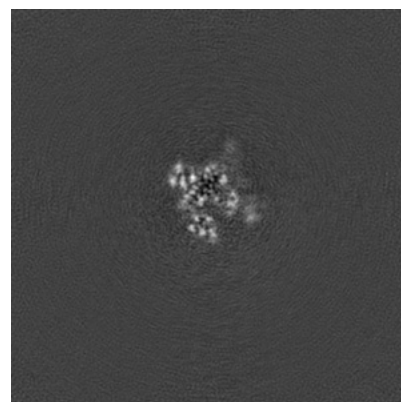
6.2.2 Raw map



X Index: 128



Y Index: 128

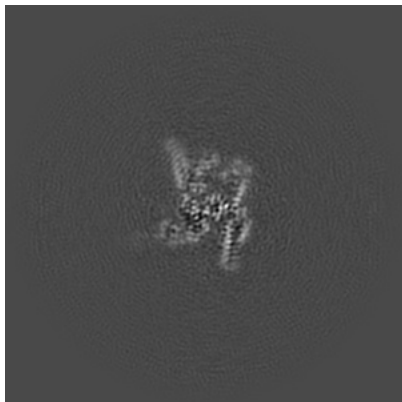


Z Index: 128

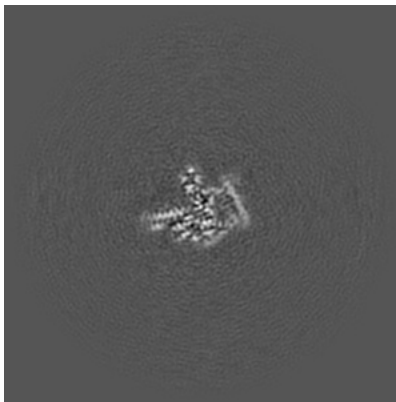
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

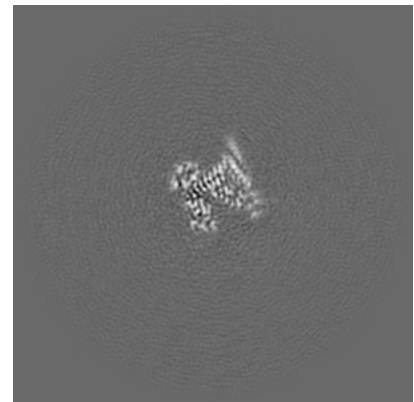
6.3.1 Primary map



X Index: 117



Y Index: 148

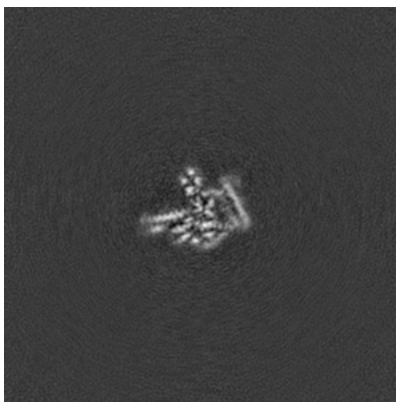


Z Index: 124

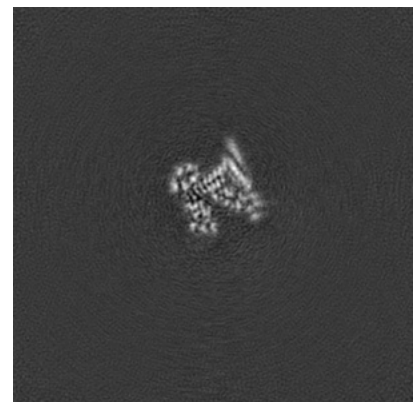
6.3.2 Raw map



X Index: 117



Y Index: 148

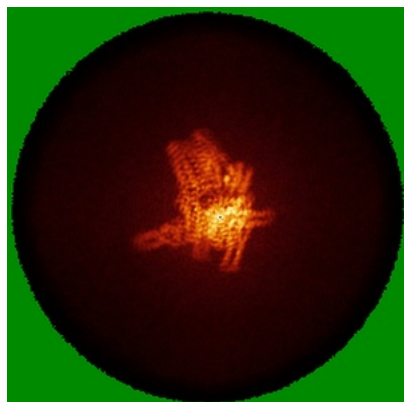


Z Index: 124

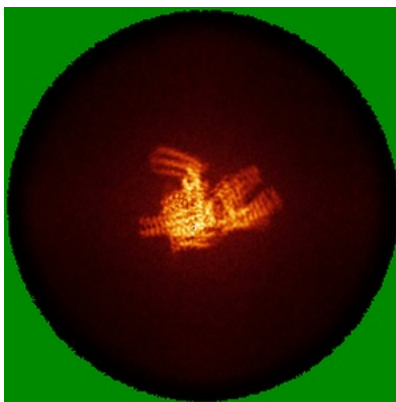
The images above show the largest variance slices of the map in three orthogonal directions.

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

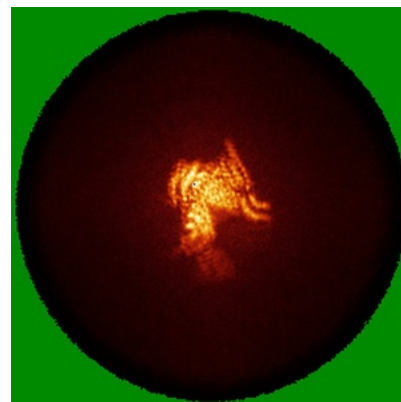
6.4.1 Primary map



X

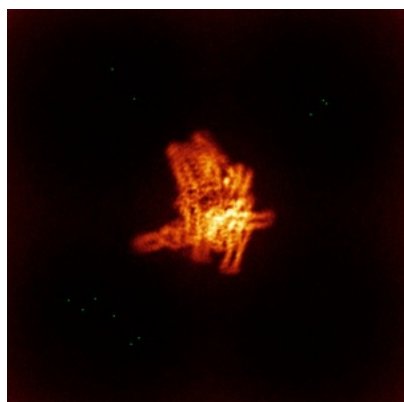


Y



Z

6.4.2 Raw map



X



Y

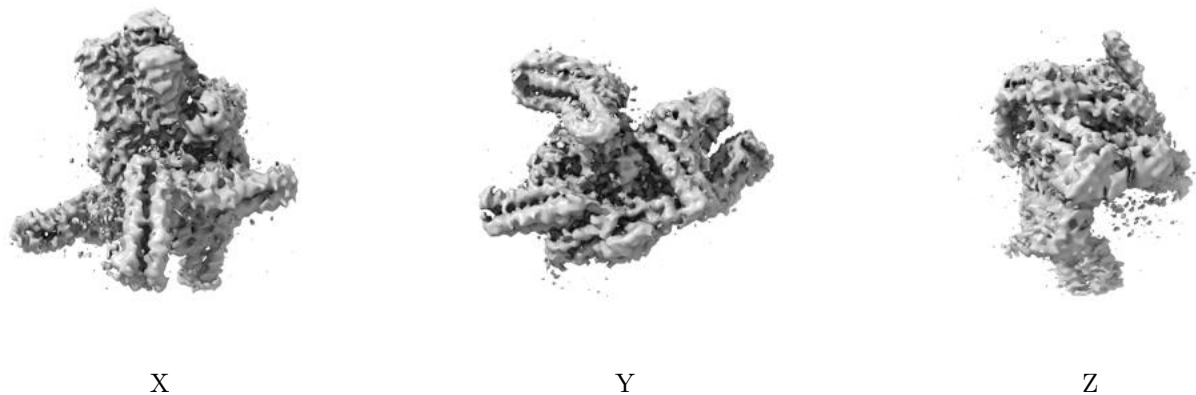


Z

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 0.124. 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.

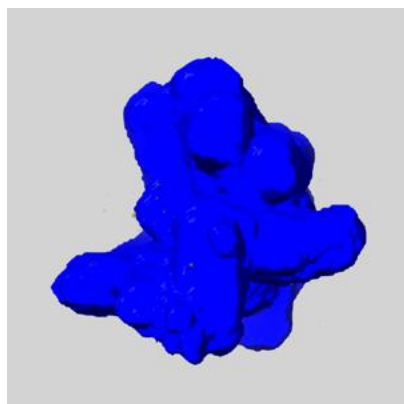
6.6 Mask visualisation [i](#)

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

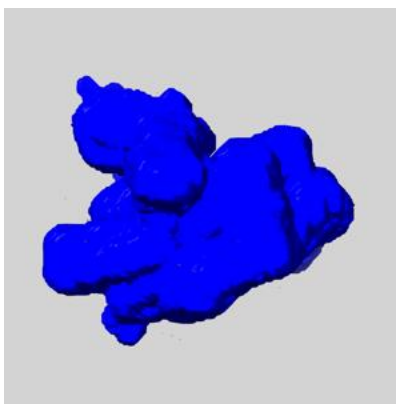
A mask typically either:

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

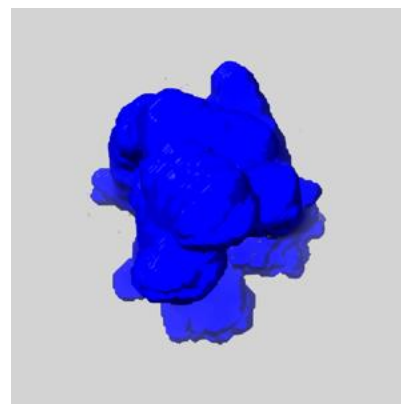
6.6.1 emd_43156_msk_1.map [i](#)



X



Y

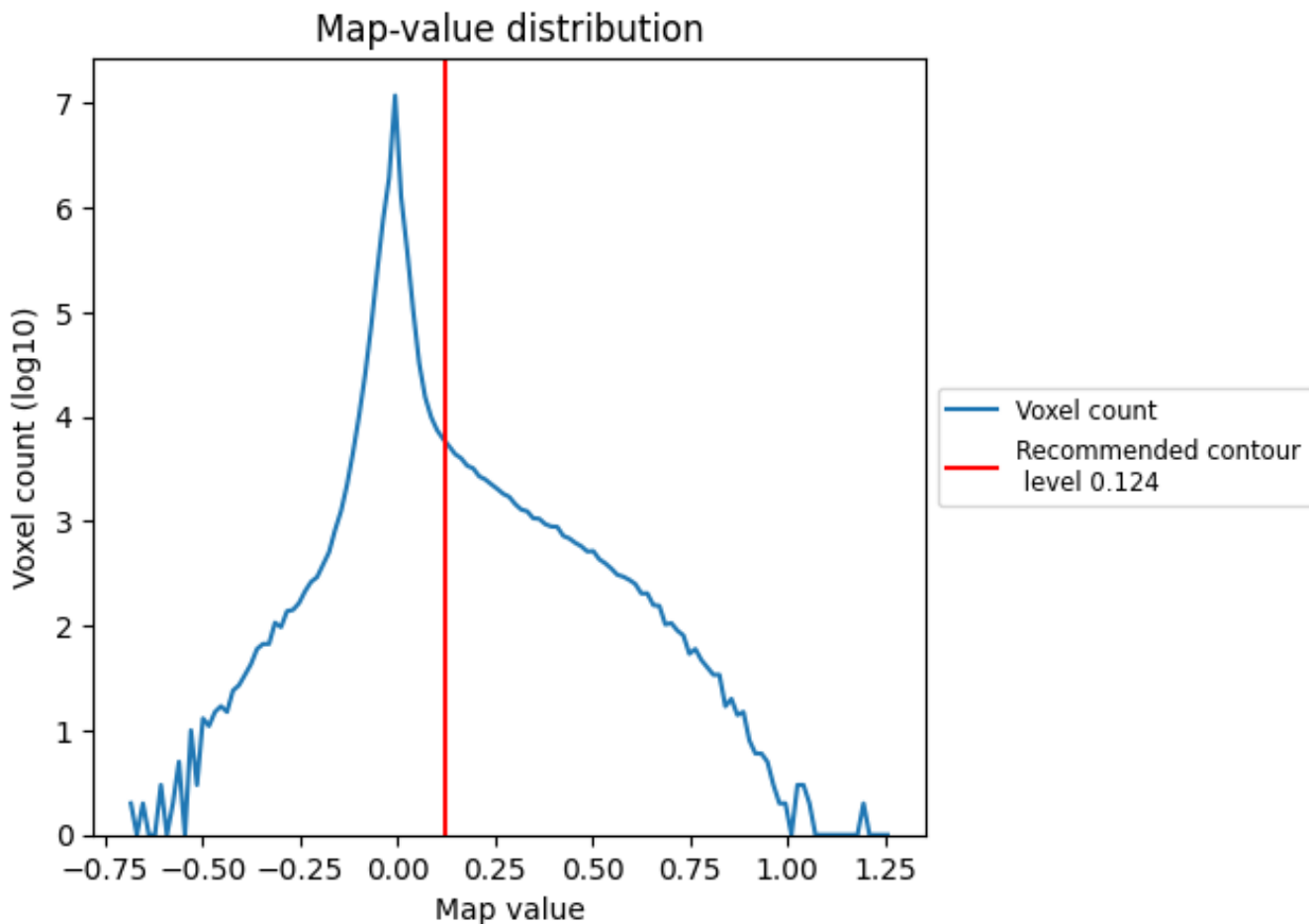


Z

7 Map analysis [i](#)

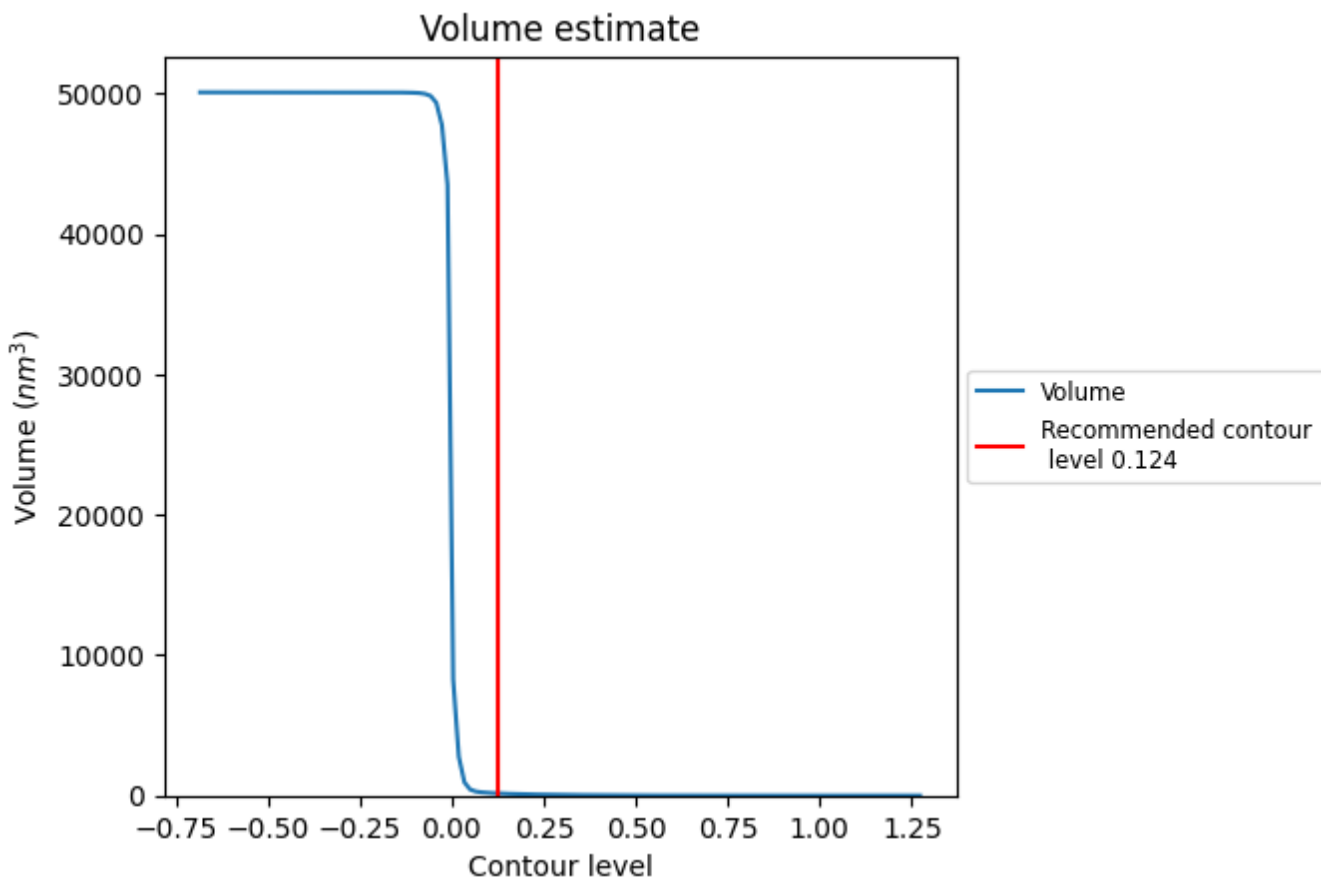
This section contains the results of statistical analysis of the map.

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.

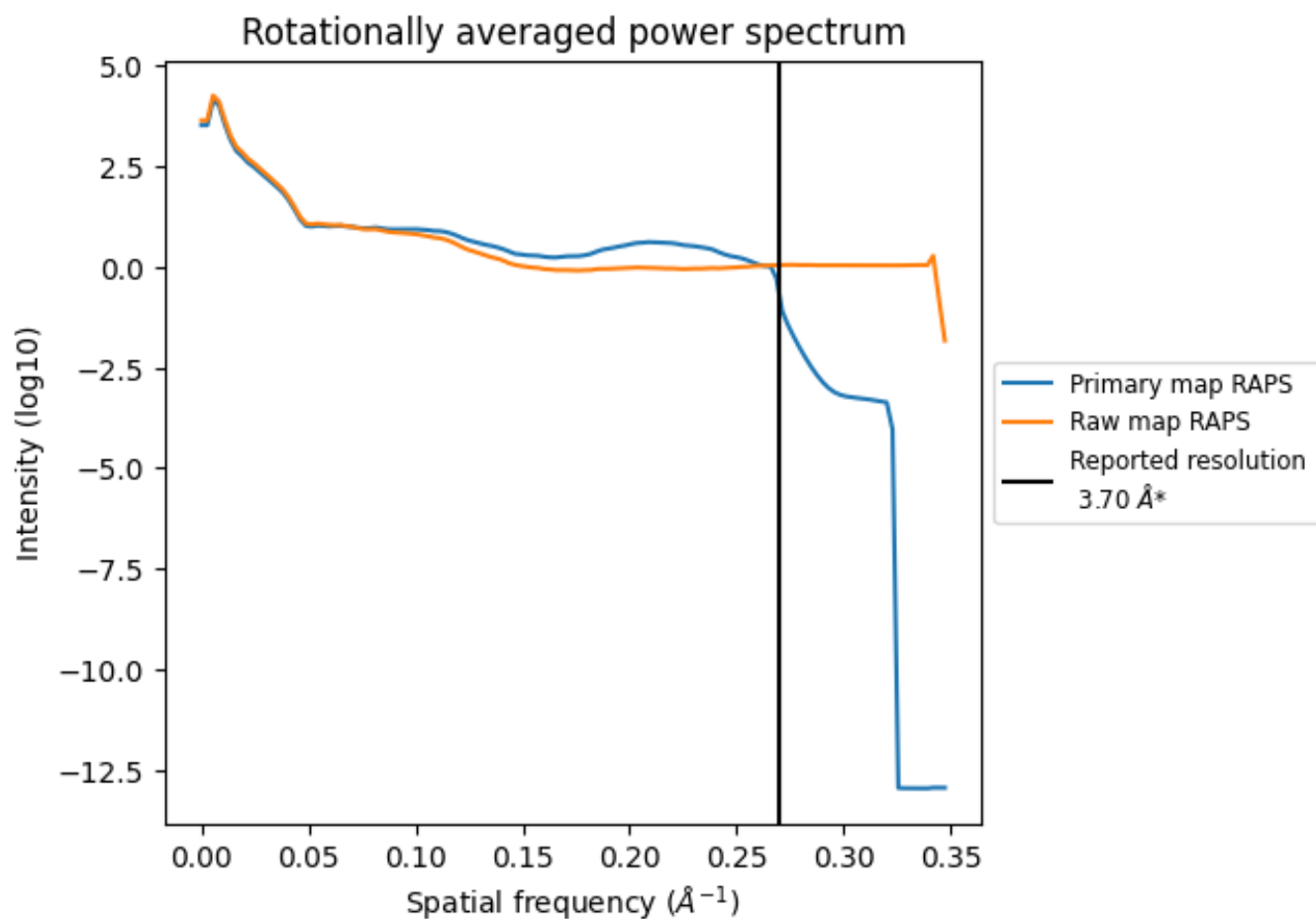
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 158 nm³; this corresponds to an approximate mass of 143 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](#)

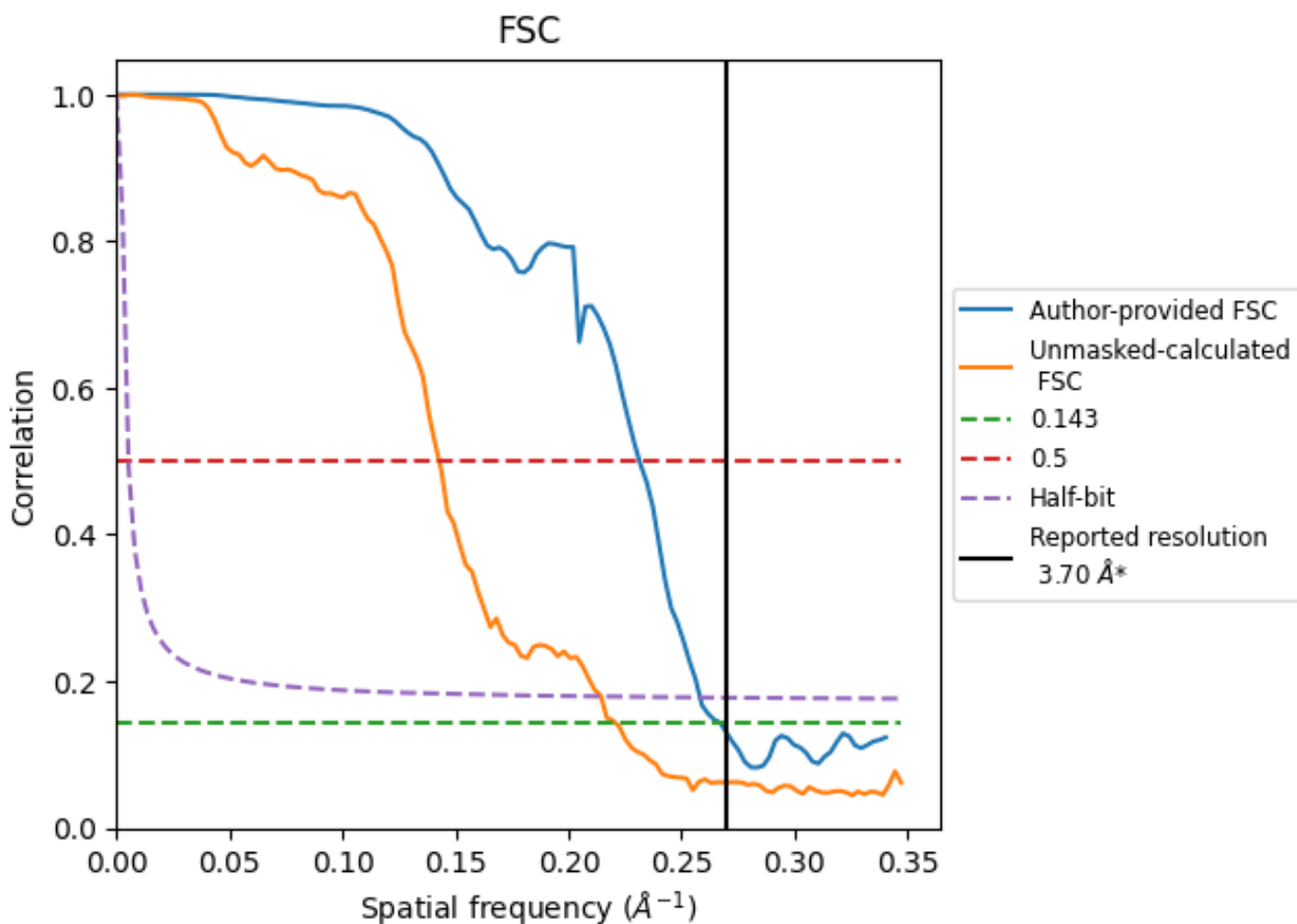


*Reported resolution corresponds to spatial frequency of 0.270 Å⁻¹

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 0.270 Å⁻¹

8.2 Resolution estimates [i](#)

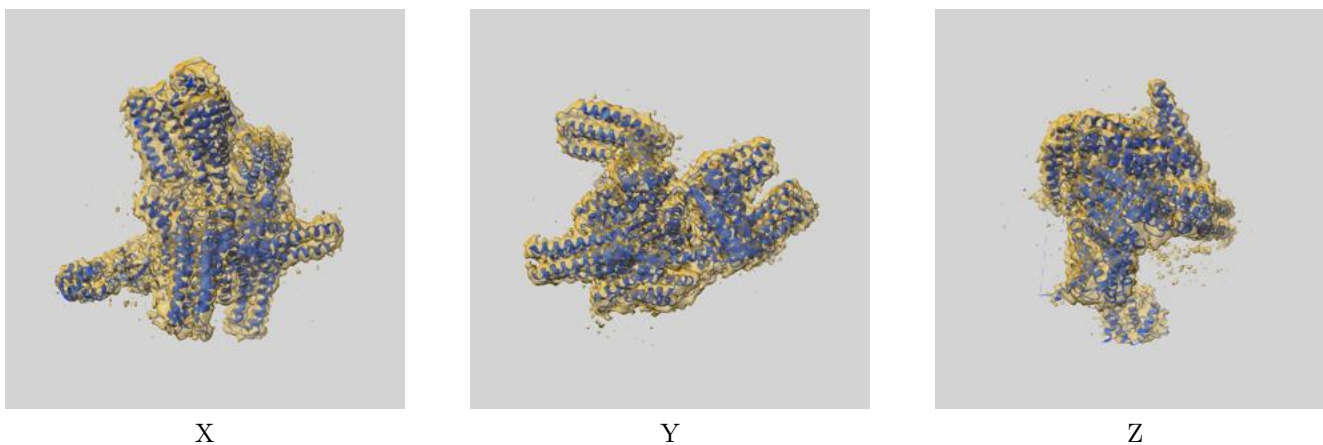
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.70	-	-
Author-provided FSC curve	3.74	4.32	3.87
Unmasked-calculated*	4.53	7.00	4.66

*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 4.53 differs from the reported value 3.7 by more than 10 %

9 Map-model fit [i](#)

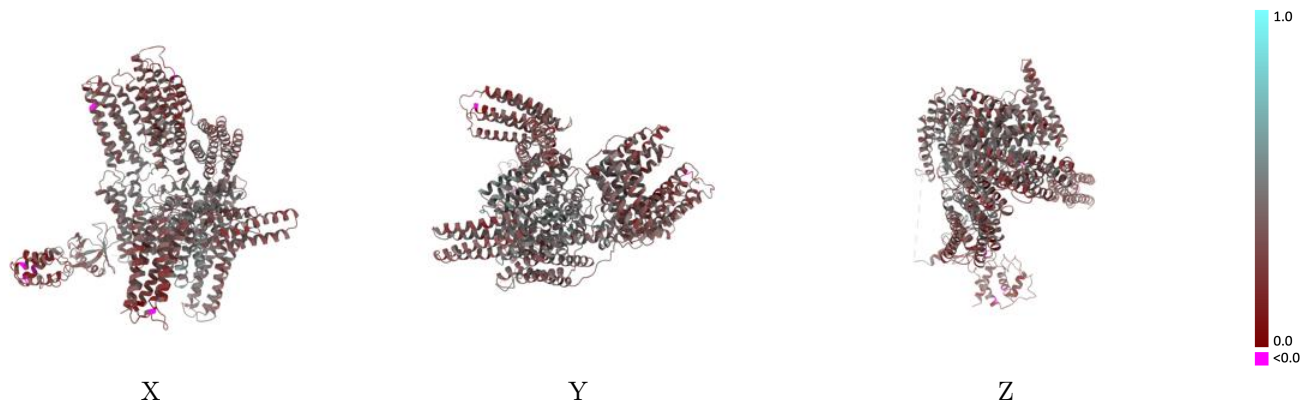
This section contains information regarding the fit between EMDB map EMD-43156 and PDB model 8VDR. Per-residue inclusion information can be found in section [3](#) on page [4](#).

9.1 Map-model overlay [i](#)



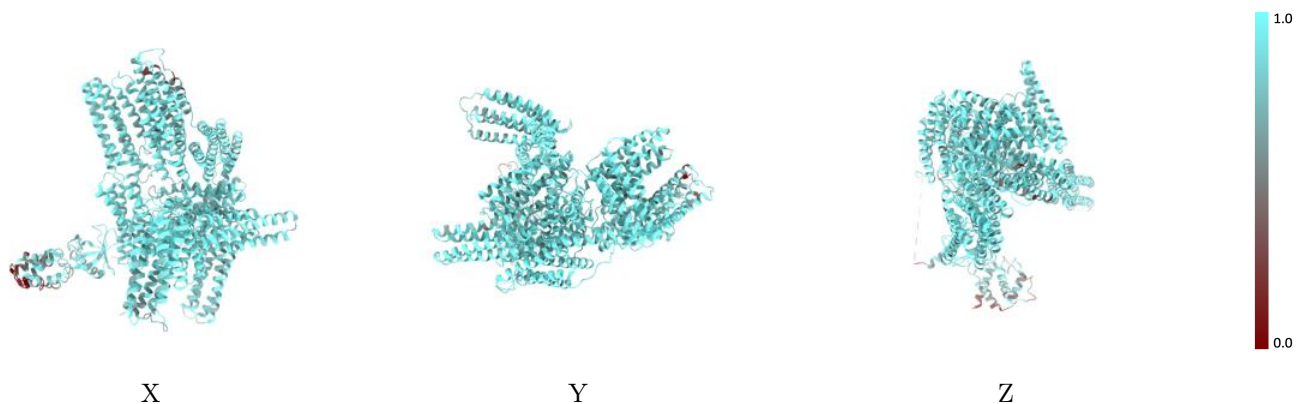
The images above show the 3D surface view of the map at the recommended contour level 0.124 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



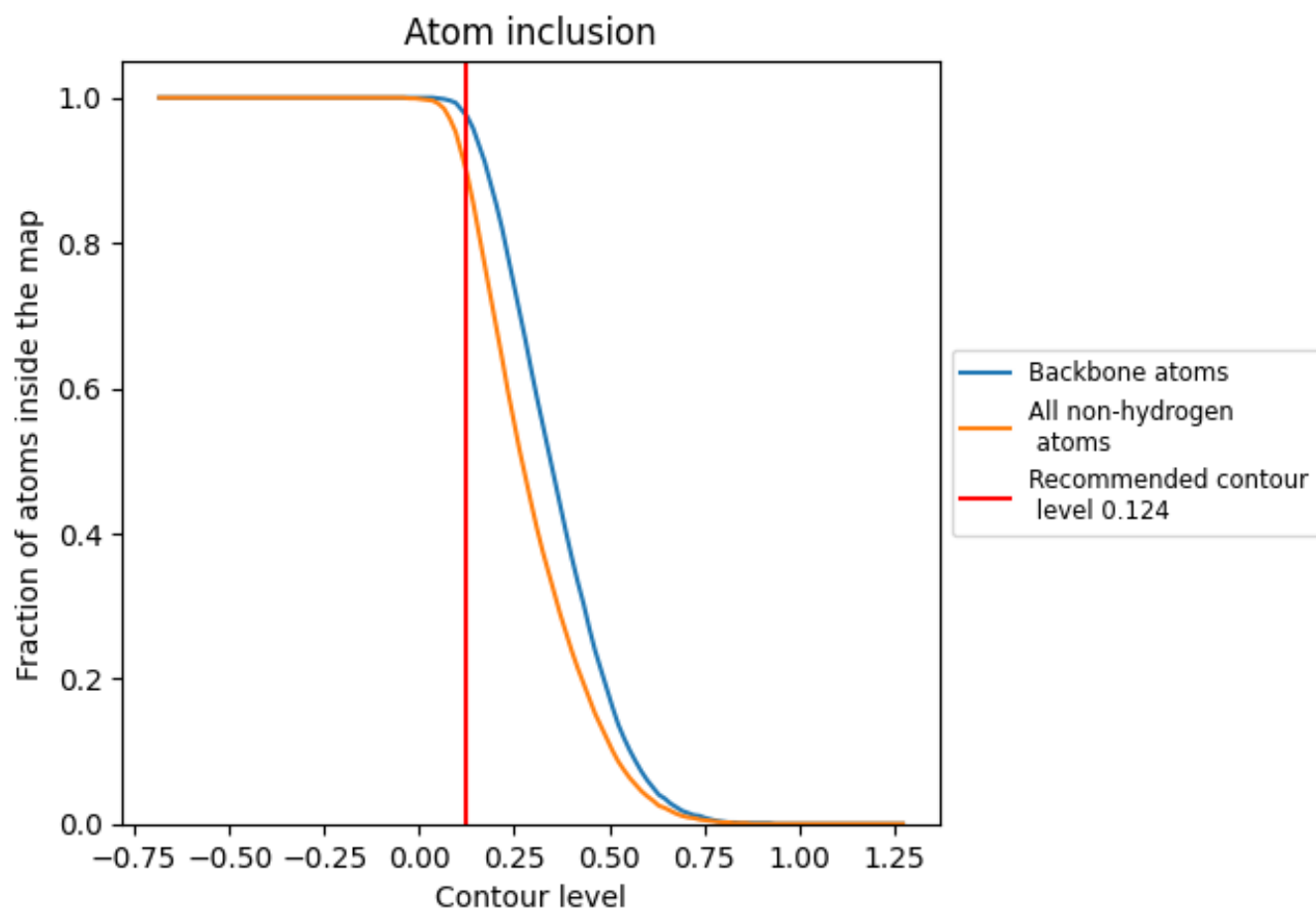
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.124).





9.4 Atom inclusion [i](#)



At the recommended contour level, 98% of all backbone atoms, 90% 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 (0.124) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.8980	 0.3660
A	 0.8980	 0.3660

