



Full wwPDB EM Validation Report ⓘ

Mar 9, 2026 – 04:35 AM UTC

PDB ID : 9JY0 / pdb_00009jy0
EMDB ID : EMD-61883
Title : Fab-CD3-gamma epsilon-TCR complex
Authors : Wang, L.; Li, J.; Li, Z.
Deposited on : 2024-10-12
Resolution : 3.69 Å(reported)

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:

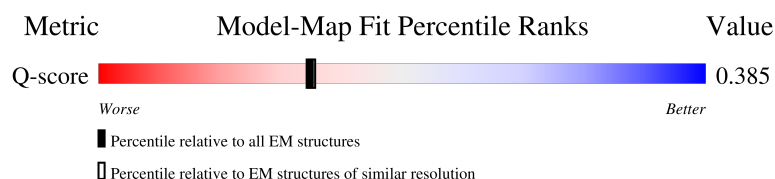
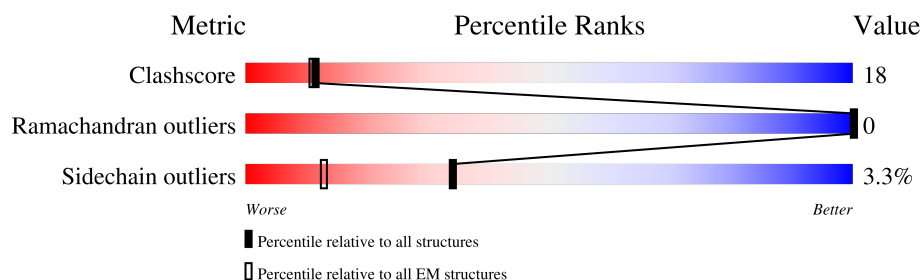
EMDB validation analysis : 0.0.1.dev132
Mogul : 2022.3.0, CSD as543be (2022)
MolProbity : 4-5-2 with Phenix2.0
Buster-report : wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.49

1 Overall quality at a glance

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

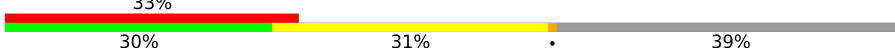
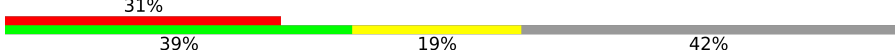
The reported resolution of this entry is 3.69 Å.

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)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
Q-score	-	25397	11284 (3.19 - 4.18)

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	166	
1	b	166	
2	d	171	
3	e	207	

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Mol	Chain	Length	Quality of chain
3	f	207	37%22%41%
4	m	292	7%5%88%
5	n	315	7%88%
6	g	182	43%20%37%
7	A	212	35%14%51%
8	B	222	35%19%45%

2 Entry composition

There are 9 unique types of molecules in this entry. The entry contains 6521 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 T-cell surface glycoprotein CD3 zeta chain.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	a	31	Total	C	N	O	S	0	0
			251	175	36	39	1		
1	b	29	Total	C	N	O	S	0	0
			237	166	34	36	1		

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
a	165	SER	-	expression tag	UNP P20963
a	166	ALA	-	expression tag	UNP P20963
b	165	SER	-	expression tag	UNP P20963
b	166	ALA	-	expression tag	UNP P20963

- Molecule 2 is a protein called T-cell surface glycoprotein CD3 delta chain.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	d	105	Total	C	N	O	S	0	0
			817	521	135	155	6		

- Molecule 3 is a protein called T-cell surface glycoprotein CD3 epsilon chain.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	e	121	Total	C	N	O	S	0	0
			959	609	151	191	8		
3	f	122	Total	C	N	O	S	0	0
			967	613	153	193	8		

- Molecule 4 is a protein called T cell receptor delta variable 2,T cell receptor delta constant.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	m	36	Total	C	N	O	S	0	0
			285	191	46	45	3		

There are 24 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
m	114	LEU	-	linker	UNP A0JD36
m	115	GLY	-	linker	UNP A0JD36
m	116	MET	-	linker	UNP A0JD36
m	117	GLY	-	linker	UNP A0JD36
m	118	GLY	-	linker	UNP A0JD36
m	119	GLU	-	linker	UNP A0JD36
m	120	TYR	-	linker	UNP A0JD36
m	121	THR	-	linker	UNP A0JD36
m	122	ASP	-	linker	UNP A0JD36
m	123	LYS	-	linker	UNP A0JD36
m	124	LEU	-	linker	UNP A0JD36
m	125	ILE	-	linker	UNP A0JD36
m	126	PHE	-	linker	UNP A0JD36
m	127	GLY	-	linker	UNP A0JD36
m	128	LYS	-	linker	UNP A0JD36
m	129	GLY	-	linker	UNP A0JD36
m	130	THR	-	linker	UNP A0JD36
m	131	ARG	-	linker	UNP A0JD36
m	132	VAL	-	linker	UNP A0JD36
m	133	THR	-	linker	UNP A0JD36
m	134	VAL	-	linker	UNP A0JD36
m	135	GLU	-	linker	UNP A0JD36
m	136	PRO	-	linker	UNP A0JD36
m	137	ARG	-	linker	UNP A0JD36

- Molecule 5 is a protein called T cell receptor gamma variable 9,T cell receptor gamma constant 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	n	38	Total	C	N	O	S	0	0
			310	207	47	53	3		

There are 22 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
n	104	ALA	-	linker	UNP Q99603
n	105	GLN	-	linker	UNP Q99603
n	106	GLN	-	linker	UNP Q99603
n	107	GLU	-	linker	UNP Q99603
n	108	LEU	-	linker	UNP Q99603
n	109	GLY	-	linker	UNP Q99603
n	110	LYS	-	linker	UNP Q99603

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Chain	Residue	Modelled	Actual	Comment	Reference
n	111	LYS	-	linker	UNP Q99603
n	112	ILE	-	linker	UNP Q99603
n	113	LYS	-	linker	UNP Q99603
n	114	VAL	-	linker	UNP Q99603
n	115	PHE	-	linker	UNP Q99603
n	116	GLY	-	linker	UNP Q99603
n	117	PRO	-	linker	UNP Q99603
n	118	GLY	-	linker	UNP Q99603
n	119	THR	-	linker	UNP Q99603
n	120	LYS	-	linker	UNP Q99603
n	121	LEU	-	linker	UNP Q99603
n	122	ILE	-	linker	UNP Q99603
n	123	ILE	-	linker	UNP Q99603
n	124	THR	-	linker	UNP Q99603
n	171	GLU	GLN	conflict	UNP P0CF51

- Molecule 6 is a protein called T-cell surface glycoprotein CD3 gamma chain.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	g	115	Total	C	N	O	S	0	0
			907	582	150	168	7		

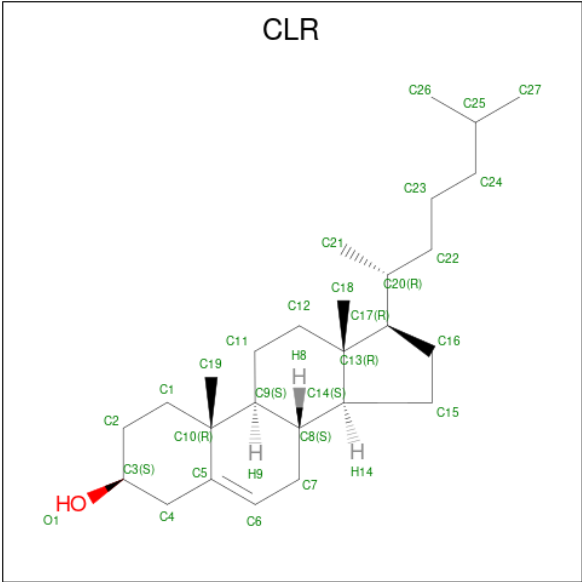
- Molecule 7 is a protein called Fab light chain.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	A	104	Total	C	N	O	S	0	0
			807	504	136	164	3		

- Molecule 8 is a protein called Fab heavy chain.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	B	121	Total	C	N	O	S	0	0
			953	609	150	188	6		

- Molecule 9 is CHOLESTEROL (CCD ID: CLR) (formula: C₂₇H₄₆O) (labeled as "Ligand of Interest" by depositor).

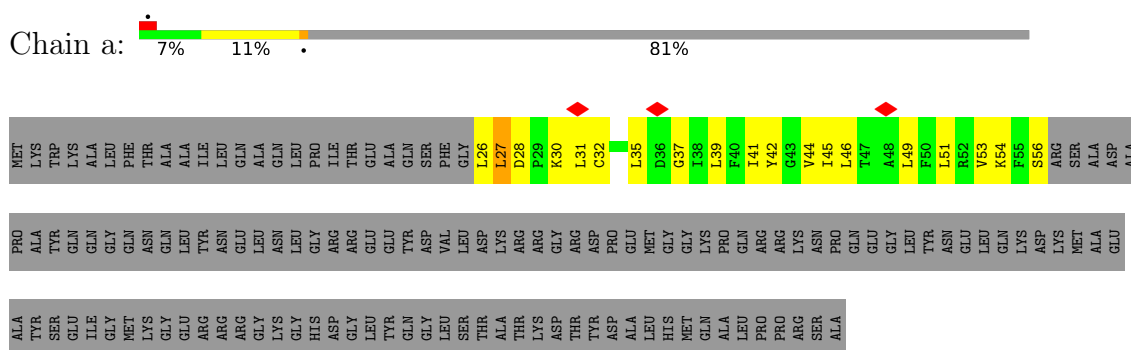


Mol	Chain	Residues	Atoms			AltConf
9	m	1	Total	C	O	0
			28	27	1	

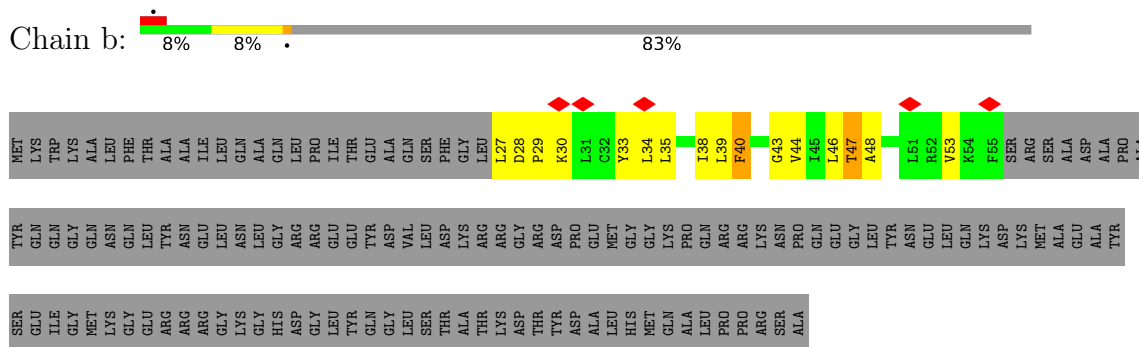
3 Residue-property plots

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.

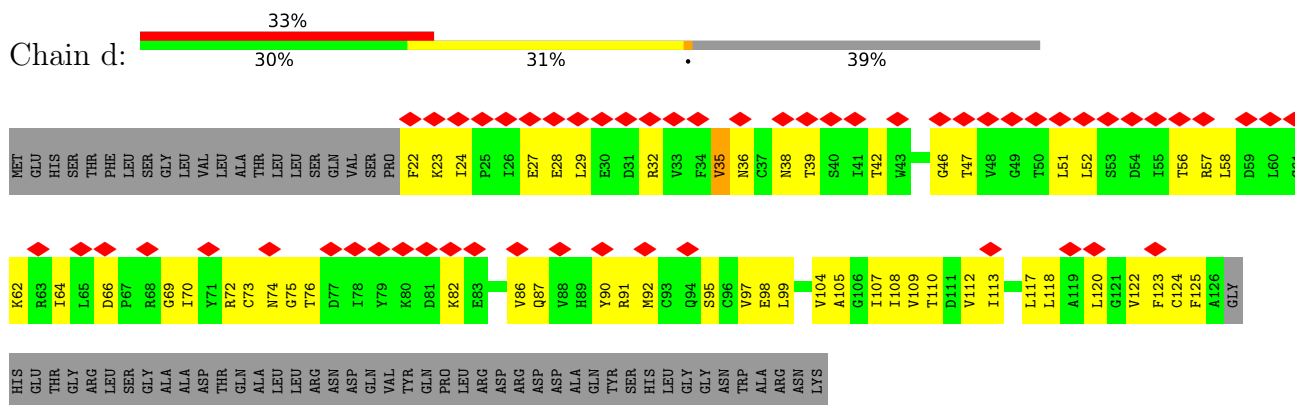
- Molecule 1: T-cell surface glycoprotein CD3 zeta chain



- Molecule 1: T-cell surface glycoprotein CD3 zeta chain

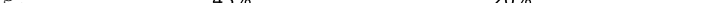


- Molecule 2: T-cell surface glycoprotein CD3 delta chain

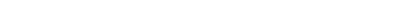


- Molecule 5: T cell receptor gamma variable 9,T cell receptor gamma constant 1

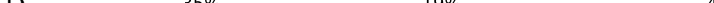
T268	VAL	PRO	GLU	ARG	MET
	ASP	ASP	ALA	PRO	LEU
	GLN	VAL	GLN	GLY	SER
	GLU	ILE	GLN	GLU	LEU
	ILE	LYS	GLU	VAL	LEU
	ILE	ILE	LEU	ILE	HIS
	PHE	HIS	GLY	GLN	THR
	PRO	TRP	LYS	PHE	THR
	PRO	GLU	LYS	LEU	THR
	ILE	GLU	ILE	VAL	LEU
T269	LYS	LYS	LYS	SER	ALA
	THR	LYS	VAL	ILE	VAL
	ASP	SER	PHE	SER	LEU
	VAL	ASN	GLY	THR	GLY
	ILE	THR	PRO	ASP	ALA
	THR	ILE	GLY	GLY	LEU
	MET	LEU	THR	THR	CYS
	ASP	GLY	LYS	VAL	VAL
	PRO	SER	LEU	ARG	TYR
	LYS	GLN	ILE	LYS	GLY
T270	ASP	GLU	ILE	GLU	ALA
	ASN	GLY	THR	SER	GLY
	CYS	ASN	ASP	GLY	HIS
	SER	THR	LYS	ILE	LEU
	LYS	MET	GLN	PRO	LEU
	ASP	LYS	LEU	GLY	GLN
	ALA	THR	ASP	GLY	PRO
	ASN	ASN	ASP	PHE	ILE
	D251	THR	VAL	GLU	SER
	T252	TYR	VAL	GLU	SER
T271	L253	MET	PRO	ASP	THR
	L254	LYS	LYS	ARG	LYS
	T258	PHE	PRO	ILE	THR
	N259	SER	THR	PRO	LEU
	T260	TRP	ILE	GLU	SER
	S261	LEU	PHE	THR	LYS
	A262	THR	LEU	SER	THR
		VAL	PRO	THR	ALA
	Y266	PRO	ILE	SER	ARG
	L267	GLU	ILE	THR	LEU
T272	L268	LYS	ALA	LEU	GLU
	L269	SER	GLU	THR	CYS
	L270	LEU	THR	ILE	VAL
	L271	ASP	LYS	HIS	VAL
	K272	LYS	LEU	ASN	SER
	S273	GLU	GLN	VAL	GLY
	V274	HIS	LYS	GLU	ILE
	V275	ARG	ALA	LYS	THR
	V276	CYS	GLY	GLN	ILE
	F277	ILE	THR	ASP	SER
T273	A278	VAL	TVR	ILE	ALA
	L279	ARG	LEU	ALA	THR
	I280	HIS	CYS	THR	SER
	T281	GLU	LEU	TYR	VAL
	C282	ASN	LEU	TYR	THR
	C283	ASN	GLU	CYS	TRP
	L284	LYS	LYS	ALA	TYR
	L285	ASN	PHE	LEU	ARG
		CYS	THR	THR	CYS

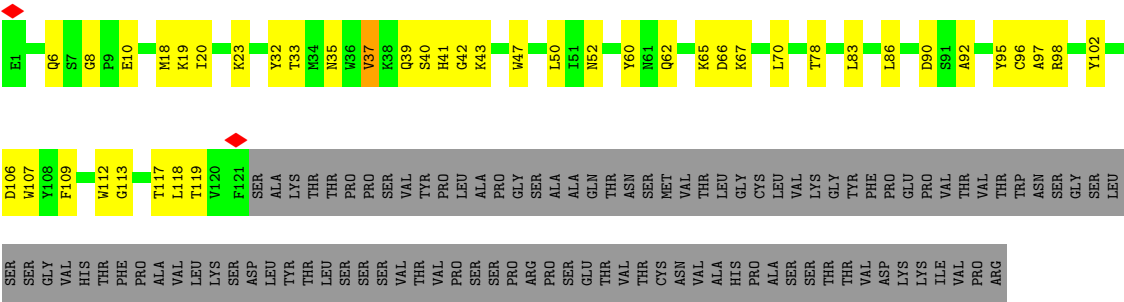
- Chain g: 

[illegible]

- Chain A:  35% 14% 51%

[illegible]

- Chain B: 



SER	SER	GLY	VAL	HIS	THR	PHE	PRO	ALA	VAL	LEU	LYS	SER	ASP	LEU	TYR	THR	LEU	SER	SER	SER	VAL	THR	VAL	PRO	SER	SER	PRO	PRO	ARG	PRO	SER	GLU	THR	VAL	THR	CYS	ASN	VAL	ALA	HIS	PRO	ALA	SER	SER	THR	THR	ASP	LYS	ILE	VAL	PRO	ARG
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4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	66602	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	TFS KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	50	Depositor
Minimum defocus (nm)	1400	Depositor
Maximum defocus (nm)	1800	Depositor
Magnification	Not provided	
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor
Maximum map value	1.086	Depositor
Minimum map value	-0.687	Depositor
Average map value	-0.000	Depositor
Map value standard deviation	0.013	Depositor
Recommended contour level	0.11	Depositor
Map size (Å)	421.888, 421.888, 421.888	wwPDB
Map dimensions	512, 512, 512	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.824, 0.824, 0.824	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: CLR

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	0.23	0/256	0.68	0/346
1	b	0.18	0/242	0.45	0/327
2	d	0.17	0/829	0.46	0/1127
3	e	0.17	0/980	0.42	0/1331
3	f	0.21	0/988	0.51	0/1342
4	m	0.23	0/289	0.61	0/388
5	n	0.20	0/314	0.56	0/427
6	g	0.15	0/925	0.40	0/1244
7	A	0.22	0/823	0.41	0/1117
8	B	0.21	0/978	0.44	0/1324
All	All	0.19	0/6624	0.47	0/8973

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

Mol	Chain	#Chirality outliers	#Planarity outliers
3	f	0	1

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
3	f	119	CYS	Peptide

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	a	251	0	276	18	0
1	b	237	0	260	15	0
2	d	817	0	828	55	0
3	e	959	0	921	37	0
3	f	967	0	925	39	0
4	m	285	0	312	25	0
5	n	310	0	336	22	0
6	g	907	0	897	35	0
7	A	807	0	780	19	0
8	B	953	0	910	30	0
9	m	28	0	46	4	0
All	All	6521	0	6491	231	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 18.

All (231) 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)
2:d:87:GLN:HE22	3:e:36:TYR:H	1.15	0.92
3:f:58:LEU:HD11	3:f:101:ARG:HH21	1.48	0.78
1:a:39:LEU:HB3	1:b:39:LEU:HD21	1.64	0.78
3:f:130:VAL:O	3:f:134:VAL:HG23	1.84	0.78
6:g:84:MET:HE1	6:g:98:GLN:HE21	1.51	0.76
6:g:42:VAL:HG13	6:g:74:LEU:HD13	1.70	0.74
3:f:61:HIS:HB3	3:f:66:ILE:HD12	1.69	0.74
8:B:6:GLN:NE2	8:B:96:CYS:SG	2.61	0.73
3:f:104:LYS:HZ1	8:B:107:TRP:CD1	2.07	0.73
1:a:54:LYS:HZ3	1:b:53:VAL:HG13	1.55	0.71
7:A:89:GLN:NE2	7:A:90:GLN:O	2.23	0.71
2:d:87:GLN:HE21	3:e:110:PHE:HZ	1.37	0.69
3:f:67:GLY:O	8:B:102:TYR:OH	2.11	0.69
2:d:46:GLY:HA3	2:d:69:GLY:HA2	1.75	0.68
2:d:36:ASN:ND2	2:d:56:THR:O	2.28	0.67
6:g:44:LEU:HG	6:g:74:LEU:HD11	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:B:20:ILE:HD11	8:B:118:LEU:HD21	1.77	0.66
3:e:34:THR:O	3:e:51:GLN:NE2	2.23	0.65
3:f:40:ILE:HG23	3:f:45:VAL:HG22	1.79	0.65
3:e:60:GLN:HG2	3:e:65:ASN:HA	1.79	0.65
6:g:56:PHE:HB2	6:g:86:GLN:HB2	1.79	0.64
8:B:6:GLN:HE22	8:B:96:CYS:H	1.46	0.63
7:A:6:GLN:OE1	7:A:102:THR:OG1	2.17	0.63
8:B:97:ALA:HB1	8:B:109:PHE:HB3	1.81	0.63
2:d:99:LEU:HA	4:m:261:MET:HE1	1.80	0.63
3:e:136:VAL:O	3:e:140:ILE:HG13	1.99	0.63
2:d:27:GLU:N	2:d:27:GLU:OE1	2.32	0.63
2:d:87:GLN:HE22	3:e:36:TYR:N	1.94	0.62
5:n:270:LEU:O	5:n:274:VAL:HG23	1.99	0.62
1:b:40:PHE:O	1:b:44:VAL:HG23	2.00	0.62
2:d:104:VAL:O	2:d:108:ILE:HG12	1.99	0.62
6:g:122:GLU:O	6:g:126:ILE:HG12	2.00	0.62
7:A:61:LYS:HG2	7:A:76:SER:HB2	1.82	0.62
4:m:262:MET:HE2	4:m:262:MET:HA	1.81	0.62
1:b:43:GLY:O	1:b:47:THR:OG1	2.18	0.61
2:d:105:ALA:O	2:d:109:VAL:HG22	2.00	0.61
6:g:102:ARG:NH1	6:g:104:CYS:SG	2.73	0.61
1:a:51:LEU:O	1:a:56:SER:OG	2.17	0.61
2:d:92:MET:HE3	3:e:117:ARG:HH12	1.65	0.60
3:f:56:GLU:OE2	8:B:52:ASN:ND2	2.33	0.60
5:n:271:LEU:HD21	3:f:134:VAL:HG13	1.84	0.60
2:d:95:SER:OG	3:e:124:GLU:OE2	2.16	0.60
4:m:287:LEU:HD21	6:g:136:ILE:HD13	1.84	0.60
1:a:27:LEU:HD22	1:a:31:LEU:HD11	1.85	0.59
2:d:87:GLN:NE2	3:e:36:TYR:H	1.95	0.59
3:e:140:ILE:O	3:e:144:LEU:HG	2.03	0.59
2:d:73:CYS:SG	2:d:74:ASN:N	2.76	0.58
8:B:37:VAL:HG22	8:B:95:TYR:HB2	1.85	0.58
5:n:276:TYR:HA	5:n:279:ILE:HD12	1.86	0.58
3:f:48:THR:OG1	3:f:81:HIS:ND1	2.37	0.58
6:g:55:TRP:HB2	6:g:63:GLY:HA3	1.85	0.58
8:B:18:MET:HE3	8:B:19:LYS:N	2.19	0.58
2:d:108:ILE:O	2:d:112:VAL:HG23	2.04	0.57
2:d:42:THR:OG1	2:d:72:ARG:O	2.23	0.57
3:f:79:GLU:N	3:f:79:GLU:OE2	2.31	0.57
6:g:120:PHE:O	6:g:124:VAL:HG22	2.04	0.57
2:d:64:ILE:HA	2:d:92:MET:HB2	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:a:35:LEU:HD21	4:m:271:MET:HE3	1.86	0.56
7:A:35:TRP:HD1	7:A:48:ILE:HD11	1.70	0.56
2:d:92:MET:HA	3:e:117:ARG:HH12	1.71	0.56
3:e:132:THR:O	3:e:136:VAL:HG12	2.04	0.56
2:d:51:LEU:HA	2:d:58:LEU:HD13	1.85	0.56
2:d:24:ILE:HG21	2:d:35:VAL:HG23	1.86	0.56
2:d:124:CYS:C	4:m:286:LYS:HZ3	2.14	0.56
2:d:92:MET:HE3	3:e:117:ARG:NH1	2.21	0.56
2:d:29:LEU:HD12	2:d:32:ARG:HB2	1.88	0.56
3:e:144:LEU:O	3:e:148:VAL:HG13	2.06	0.55
6:g:57:LYS:HB3	6:g:62:ILE:HD13	1.87	0.55
2:d:38:ASN:HB2	2:d:76:THR:HA	1.88	0.55
7:A:61:LYS:NZ	7:A:82:ASP:OD2	2.29	0.55
5:n:271:LEU:HD21	3:f:134:VAL:CG1	2.35	0.55
2:d:97:VAL:HG12	4:m:260:ASN:HB2	1.88	0.55
3:e:88:SER:OG	3:e:91:GLU:OE2	2.22	0.55
5:n:277:PHE:O	5:n:281:THR:HG22	2.07	0.55
4:m:287:LEU:HD11	6:g:136:ILE:HD13	1.89	0.55
4:m:288:PHE:HD2	9:m:301:CLR:H12	1.73	0.54
2:d:123:PHE:CD1	3:e:148:VAL:HB	2.43	0.54
3:f:126:ASP:O	3:f:130:VAL:HG13	2.08	0.54
5:n:254:LEU:O	5:n:258:THR:HG22	2.09	0.53
1:a:28:ASP:OD1	1:a:30:LYS:HG3	2.09	0.53
8:B:40:SER:OG	8:B:41:HIS:N	2.41	0.53
1:a:31:LEU:HD21	3:e:127:VAL:HG12	1.89	0.53
7:A:38:GLN:HG3	7:A:44:VAL:HB	1.91	0.52
3:f:136:VAL:O	3:f:140:ILE:HG22	2.09	0.52
1:a:49:LEU:O	1:a:53:VAL:HG23	2.09	0.52
6:g:84:MET:HE1	6:g:98:GLN:NE2	2.24	0.52
6:g:31:VAL:HG12	6:g:97:LEU:HD23	1.91	0.51
7:A:37:GLN:HE22	7:A:39:LYS:HG2	1.75	0.51
4:m:262:MET:HG3	5:n:259:ASN:OD1	2.10	0.51
3:f:101:ARG:HH11	8:B:50:LEU:HD11	1.75	0.51
8:B:33:THR:HG21	8:B:50:LEU:HD12	1.93	0.51
3:f:104:LYS:HE2	7:A:32:TYR:CZ	2.46	0.51
3:e:141:THR:O	3:e:145:LEU:HD23	2.11	0.51
7:A:38:GLN:HE22	8:B:39:GLN:HE22	1.57	0.51
7:A:47:LEU:HA	7:A:58:VAL:HG21	1.92	0.51
2:d:28:GLU:OE2	2:d:90:TYR:OH	2.29	0.51
1:a:27:LEU:HD11	4:m:260:ASN:HB3	1.93	0.51
7:A:54:LEU:HD23	7:A:58:VAL:HG12	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:B:62:GLN:HA	8:B:65:LYS:NZ	2.26	0.50
3:f:65:ASN:HB3	8:B:102:TYR:CE1	2.45	0.50
3:f:36:TYR:HB2	6:g:98:GLN:OE1	2.10	0.50
4:m:288:PHE:CD2	9:m:301:CLR:H12	2.47	0.50
7:A:94:LEU:HD23	7:A:95:PRO:HA	1.92	0.50
3:f:58:LEU:HD12	3:f:99:TYR:HE2	1.76	0.50
3:f:90:LEU:HD12	3:f:91:GLU:N	2.27	0.50
8:B:23:LYS:HG3	8:B:78:THR:HG22	1.93	0.50
6:g:82:ARG:NH1	6:g:101:TYR:O	2.41	0.50
1:a:41:ILE:HG13	1:a:42:TYR:N	2.27	0.49
8:B:32:TYR:HD1	8:B:98:ARG:HD2	1.77	0.49
2:d:107:ILE:HD11	4:m:265:THR:HG23	1.93	0.49
2:d:124:CYS:O	4:m:286:LYS:NZ	2.46	0.49
3:e:61:HIS:O	3:e:64:LYS:HG3	2.12	0.49
3:e:74:ASN:HA	3:e:85:LYS:HZ3	1.76	0.49
5:n:282:CYS:SG	5:n:283:CYS:N	2.85	0.49
4:m:271:MET:HE2	4:m:271:MET:HA	1.95	0.49
2:d:62:LYS:HG2	2:d:64:ILE:H	1.77	0.49
2:d:66:ASP:OD2	2:d:91:ARG:HA	2.13	0.49
3:f:133:ILE:HA	3:f:136:VAL:HG12	1.94	0.49
8:B:42:GLY:O	8:B:43:LYS:HD3	2.13	0.49
2:d:90:TYR:HD1	2:d:92:MET:SD	2.35	0.49
6:g:72:TRP:HE1	6:g:74:LEU:HG	1.78	0.49
1:b:27:LEU:HA	1:b:30:LYS:HD2	1.95	0.48
3:f:78:ASP:HB2	3:f:79:GLU:OE2	2.13	0.48
2:d:52:LEU:HD22	2:d:57:ARG:HB2	1.95	0.48
3:f:99:TYR:CD1	3:f:105:PRO:HA	2.49	0.48
3:f:129:SER:O	3:f:133:ILE:HG12	2.13	0.48
2:d:109:VAL:O	2:d:113:ILE:HG22	2.15	0.47
5:n:260:THR:HG23	6:g:108:ILE:HG22	1.96	0.47
2:d:99:LEU:HD23	3:e:121:ASN:O	2.15	0.47
2:d:120:LEU:HA	2:d:123:PHE:HB2	1.97	0.47
5:n:267:LEU:O	5:n:271:LEU:HD12	2.15	0.47
3:f:40:ILE:HD12	6:g:102:ARG:HD2	1.96	0.47
3:e:57:ILE:HA	3:e:100:PRO:HA	1.95	0.47
3:f:123:MET:SD	3:f:124:GLU:N	2.88	0.47
6:g:133:VAL:HA	6:g:136:ILE:HG22	1.95	0.46
1:a:41:ILE:HA	1:a:44:VAL:HG12	1.98	0.46
1:b:33:TYR:CE1	5:n:262:ALA:HB1	2.50	0.46
8:B:40:SER:HB2	8:B:92:ALA:HB2	1.98	0.46
2:d:22:PHE:CD2	2:d:82:LYS:HE2	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:n:281:THR:HA	5:n:284:LEU:HG	1.98	0.46
1:b:46:LEU:HD12	1:b:46:LEU:HA	1.75	0.46
3:f:112:LEU:HD21	3:f:114:LEU:HB2	1.98	0.46
3:f:125:MET:HE2	6:g:108:ILE:HG23	1.98	0.46
7:A:33:LEU:HD23	7:A:34:ASN:N	2.31	0.46
2:d:22:PHE:CZ	2:d:75:GLY:HA2	2.51	0.45
5:n:268:LEU:HA	5:n:271:LEU:HD13	1.99	0.45
5:n:272:LYS:HE2	6:g:126:ILE:HD11	1.99	0.45
6:g:111:ASN:O	6:g:115:ILE:HG12	2.16	0.45
6:g:72:TRP:NE1	6:g:74:LEU:HG	2.32	0.45
3:e:84:LEU:HD22	3:e:87:PHE:HD2	1.82	0.45
5:n:253:LEU:HD23	5:n:254:LEU:H	1.82	0.45
3:f:149:TYR:CD1	6:g:137:ALA:HB2	2.52	0.45
1:b:48:ALA:HB1	9:m:301:CLR:H152	1.98	0.45
1:a:37:GLY:O	1:a:41:ILE:HG23	2.17	0.45
4:m:256:THR:HG22	5:n:252:THR:HG21	1.97	0.45
7:A:35:TRP:CD1	7:A:48:ILE:HD11	2.50	0.45
7:A:77:ASN:OD1	7:A:77:ASN:N	2.50	0.45
8:B:37:VAL:HG21	8:B:112:TRP:HZ3	1.82	0.45
6:g:63:GLY:HA2	6:g:72:TRP:CZ3	2.52	0.44
8:B:83:LEU:HB3	8:B:86:LEU:HD13	1.99	0.44
2:d:92:MET:HE1	3:e:116:ALA:HA	1.99	0.44
3:e:62:ASN:OD1	3:e:95:TYR:N	2.44	0.44
1:a:54:LYS:HZ3	1:b:53:VAL:CG1	2.27	0.44
1:b:29:PRO:O	1:b:33:TYR:HD2	2.01	0.44
8:B:35:ASN:HB3	8:B:47:TRP:HE1	1.81	0.44
3:f:101:ARG:HD2	8:B:50:LEU:HD11	1.99	0.44
1:a:46:LEU:HD21	1:b:47:THR:N	2.34	0.43
3:e:36:TYR:CD2	3:e:112:LEU:HD12	2.53	0.43
4:m:275:LYS:O	4:m:279:VAL:HG12	2.18	0.43
3:f:144:LEU:HD23	6:g:126:ILE:HG21	1.99	0.43
1:b:33:TYR:CE1	5:n:266:TYR:HE2	2.36	0.43
2:d:91:ARG:HB3	3:e:116:ALA:HB2	1.99	0.43
2:d:24:ILE:HB	2:d:86:VAL:HG21	2.00	0.43
2:d:92:MET:SD	2:d:92:MET:N	2.92	0.43
9:m:301:CLR:H263	6:g:128:VAL:HG12	2.01	0.43
6:g:103:MET:HA	6:g:103:MET:HE3	2.01	0.43
8:B:117:THR:O	8:B:117:THR:OG1	2.36	0.43
3:f:117:ARG:HG3	6:g:103:MET:HE1	2.01	0.43
8:B:8:GLY:O	8:B:10:GLU:HG3	2.19	0.43
1:a:26:LEU:HA	4:m:260:ASN:ND2	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:a:27:LEU:CD1	4:m:260:ASN:HB3	2.48	0.42
2:d:122:VAL:O	2:d:125:PHE:HB3	2.19	0.42
4:m:263:SER:CA	5:n:259:ASN:HD21	2.32	0.42
2:d:110:THR:HA	2:d:113:ILE:HG22	2.01	0.42
1:b:34:LEU:O	1:b:38:ILE:HG12	2.18	0.42
2:d:22:PHE:HE1	2:d:76:THR:HG23	1.83	0.42
3:e:140:ILE:HG13	3:e:140:ILE:H	1.73	0.42
5:n:269:LEU:HD12	5:n:269:LEU:HA	1.71	0.42
7:A:15:LEU:HG	7:A:78:LEU:O	2.19	0.42
3:f:107:ASP:CG	7:A:30:ARG:HH22	2.25	0.42
1:a:32:CYS:HB3	4:m:270:ARG:HH12	1.85	0.42
3:f:148:VAL:O	3:f:152:SER:OG	2.34	0.42
8:B:67:LYS:HD2	8:B:90:ASP:OD1	2.19	0.42
2:d:70:ILE:HG23	2:d:87:GLN:HG2	2.00	0.42
3:f:134:VAL:O	3:f:138:ILE:HG22	2.20	0.42
8:B:6:GLN:HE21	8:B:113:GLY:HA3	1.85	0.42
8:B:60:TYR:CE1	8:B:70:LEU:HD12	2.55	0.42
2:d:97:VAL:HB	4:m:261:MET:CE	2.49	0.41
4:m:261:MET:HB2	4:m:261:MET:HE3	1.74	0.41
1:b:33:TYR:HE1	5:n:262:ALA:HB1	1.84	0.41
2:d:22:PHE:CE1	2:d:75:GLY:HA2	2.55	0.41
2:d:118:LEU:CD2	3:e:145:LEU:HD21	2.50	0.41
3:f:61:HIS:HB2	3:f:96:TYR:CE1	2.56	0.41
3:e:74:ASN:OD1	3:e:75:ILE:N	2.53	0.41
3:f:35:PRO:HB3	6:g:98:GLN:NE2	2.35	0.41
1:b:28:ASP:HB2	1:b:29:PRO:HD3	2.02	0.41
2:d:117:LEU:O	2:d:120:LEU:HG	2.21	0.41
3:e:78:ASP:N	3:e:81:HIS:O	2.45	0.41
6:g:51:LYS:HD3	6:g:51:LYS:HA	1.88	0.41
2:d:23:LYS:HD3	3:e:111:TYR:CD1	2.56	0.41
7:A:79:GLU:CD	7:A:79:GLU:N	2.79	0.41
8:B:106:ASP:OD1	8:B:106:ASP:C	2.64	0.41
2:d:39:THR:HG22	2:d:73:CYS:SG	2.61	0.41
2:d:92:MET:HA	3:e:117:ARG:NH1	2.36	0.41
4:m:288:PHE:CZ	6:g:135:PHE:HB3	2.56	0.41
3:f:125:MET:HB3	3:f:130:VAL:HG12	2.03	0.41
7:A:23:CYS:HB2	7:A:35:TRP:CH2	2.56	0.41
3:e:90:LEU:HD23	3:e:91:GLU:H	1.85	0.41
8:B:40:SER:OG	8:B:41:HIS:ND1	2.52	0.41
3:e:48:THR:O	3:e:50:PRO:HD3	2.21	0.40
6:g:72:TRP:CD1	6:g:74:LEU:HG	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:a:45:ILE:HG13	1:a:46:LEU:N	2.35	0.40
3:e:73:LYS:HD3	3:e:85:LYS:HZ1	1.86	0.40
2:d:91:ARG:HB3	3:e:116:ALA:CB	2.52	0.40
2:d:98:GLU:C	4:m:261:MET:HE1	2.47	0.40
2:d:122:VAL:HG23	4:m:282:LEU:HD21	2.04	0.40
5:n:275:VAL:O	5:n:279:ILE:HG13	2.21	0.40
3:f:58:LEU:HD12	3:f:99:TYR:CE2	2.56	0.40
6:g:57:LYS:HG2	6:g:58:ASP:OD1	2.21	0.40
5:n:272:LYS:NZ	6:g:122:GLU:OE1	2.44	0.40
3:f:136:VAL:HG13	3:f:137:ASP:OD2	2.22	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	29/166 (18%)	26 (90%)	3 (10%)	0	100	100
1	b	27/166 (16%)	26 (96%)	1 (4%)	0	100	100
2	d	103/171 (60%)	94 (91%)	9 (9%)	0	100	100
3	e	119/207 (58%)	111 (93%)	8 (7%)	0	100	100
3	f	120/207 (58%)	109 (91%)	11 (9%)	0	100	100
4	m	34/292 (12%)	34 (100%)	0	0	100	100
5	n	36/315 (11%)	36 (100%)	0	0	100	100
6	g	113/182 (62%)	103 (91%)	10 (9%)	0	100	100
7	A	102/212 (48%)	93 (91%)	9 (9%)	0	100	100
8	B	119/222 (54%)	116 (98%)	3 (2%)	0	100	100
All	All	802/2140 (38%)	748 (93%)	54 (7%)	0	100	100

There are no Ramachandran outliers to report.

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	
1	a	28/136 (21%)	27 (96%)	1 (4%)	31	54
1	b	26/136 (19%)	23 (88%)	3 (12%)	5	24
2	d	93/147 (63%)	91 (98%)	2 (2%)	45	63
3	e	109/177 (62%)	106 (97%)	3 (3%)	38	58
3	f	110/177 (62%)	107 (97%)	3 (3%)	39	59
4	m	32/259 (12%)	31 (97%)	1 (3%)	35	57
5	n	36/284 (13%)	34 (94%)	2 (6%)	19	46
6	g	97/155 (63%)	93 (96%)	4 (4%)	27	52
7	A	91/189 (48%)	89 (98%)	2 (2%)	45	63
8	B	104/193 (54%)	101 (97%)	3 (3%)	37	57
All	All	726/1853 (39%)	702 (97%)	24 (3%)	34	55

All (24) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	a	27	LEU
1	b	35	LEU
1	b	40	PHE
1	b	47	THR
2	d	35	VAL
2	d	47	THR
3	e	112	LEU
3	e	125	MET
3	e	139	CYS
4	m	255	HIS
5	n	261	SER
5	n	269	LEU
3	f	34	THR
3	f	38	VAL

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Mol	Chain	Res	Type
3	f	154	ASN
6	g	65	LEU
6	g	106	ASN
6	g	123	ILE
6	g	127	PHE
7	A	8	THR
7	A	19	VAL
8	B	37	VAL
8	B	66	ASP
8	B	119	THR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (12) such sidechains are listed below:

Mol	Chain	Res	Type
2	d	36	ASN
2	d	87	GLN
2	d	94	GLN
3	e	92	GLN
4	m	280	ASN
5	n	256	GLN
5	n	259	ASN
6	g	91	GLN
6	g	98	GLN
7	A	37	GLN
7	A	38	GLN
8	B	6	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

1 ligand is 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$
9	CLR	m	301	-	31,31,31	0.39	0	48,48,48	0.87	1 (2%)

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
9	CLR	m	301	-	-	2/10/68/68	0/4/4/4

There are no bond length outliers.

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	m	301	CLR	C16-C17-C20	-2.19	108.86	112.18

There are no chirality outliers.

All (2) torsion outliers are listed below:

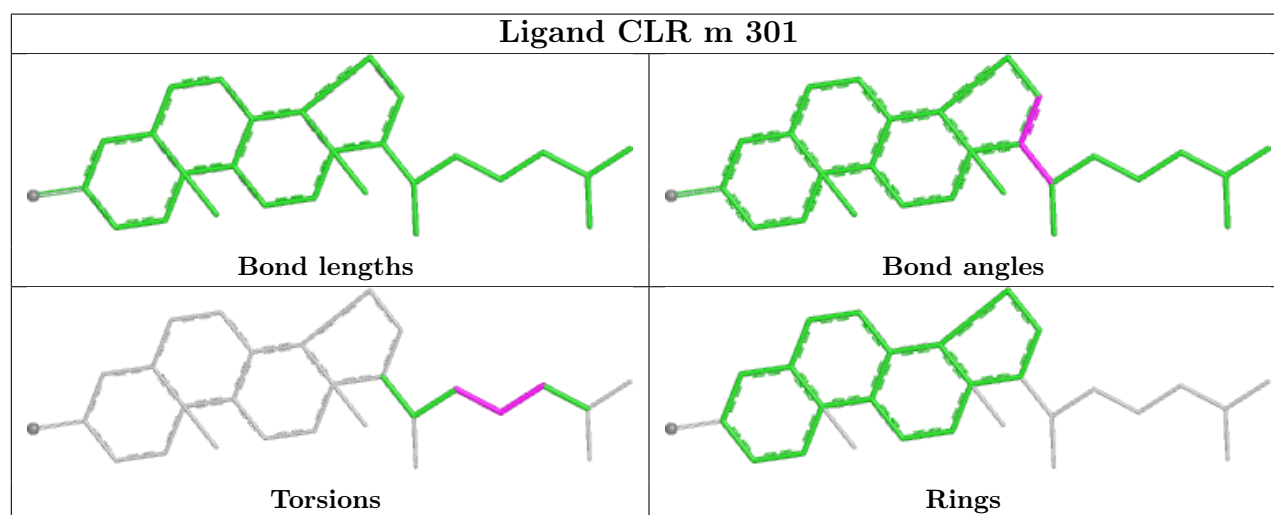
Mol	Chain	Res	Type	Atoms
9	m	301	CLR	C20-C22-C23-C24
9	m	301	CLR	C22-C23-C24-C25

There are no ring outliers.

1 monomer is involved in 4 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
9	m	301	CLR	4	0

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



5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

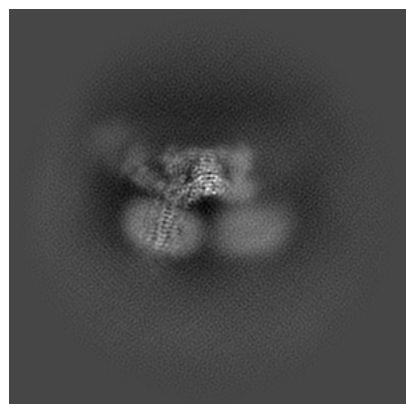
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-61883. These allow visual inspection of the internal detail of the map and identification of artifacts.

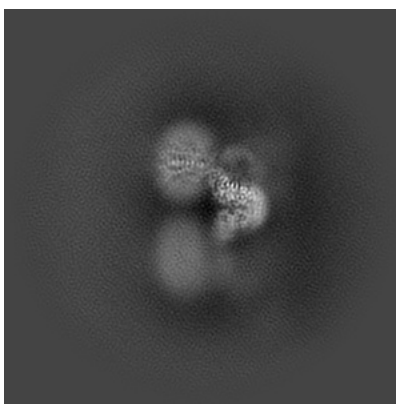
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

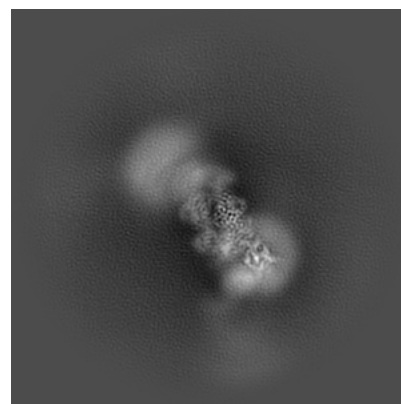
6.1.1 Primary map



X

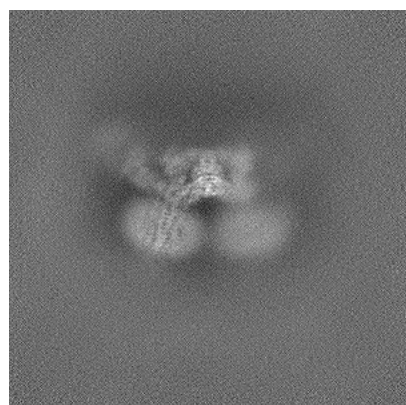


Y

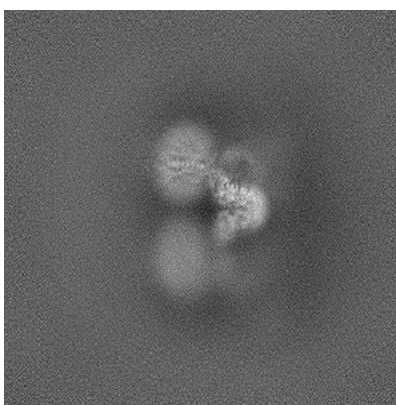


Z

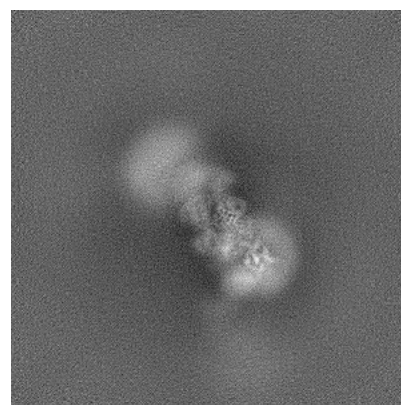
6.1.2 Raw map



X



Y

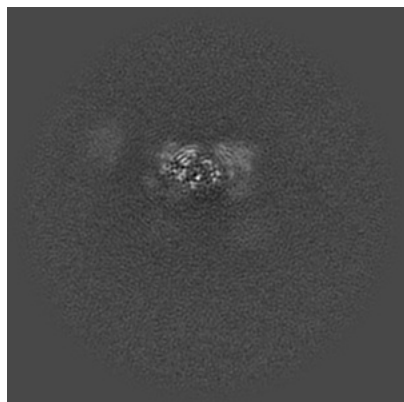


Z

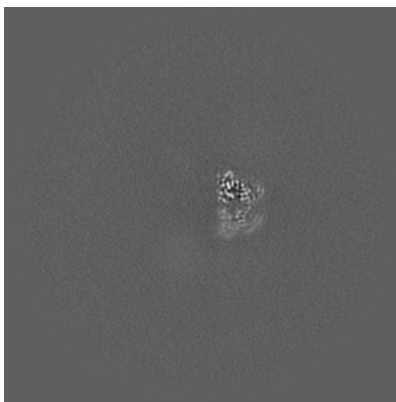
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

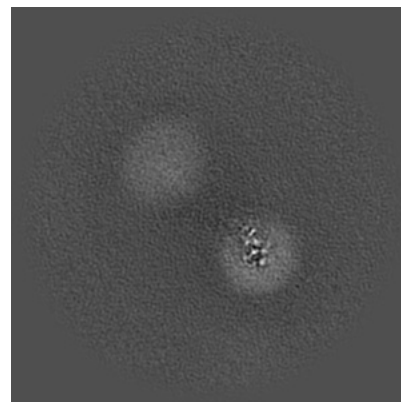
6.2.1 Primary map



X Index: 256

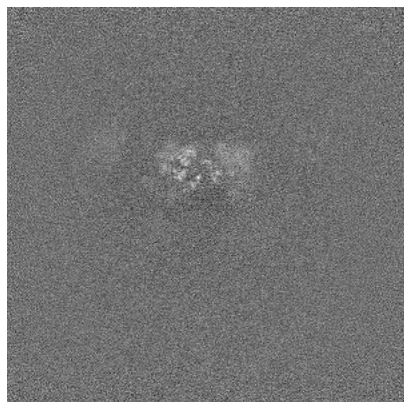


Y Index: 256

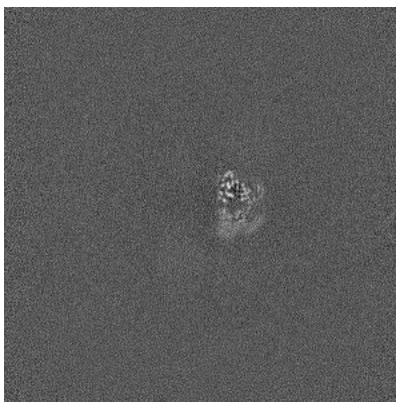


Z Index: 256

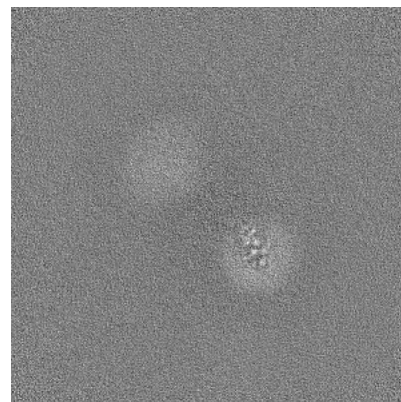
6.2.2 Raw map



X Index: 256



Y Index: 256

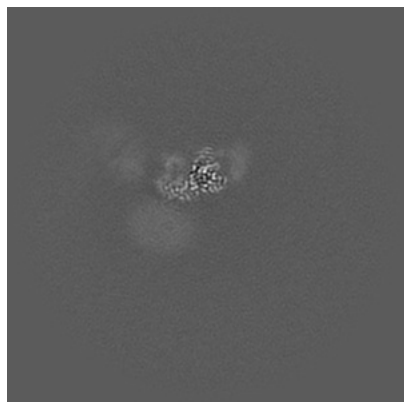


Z Index: 256

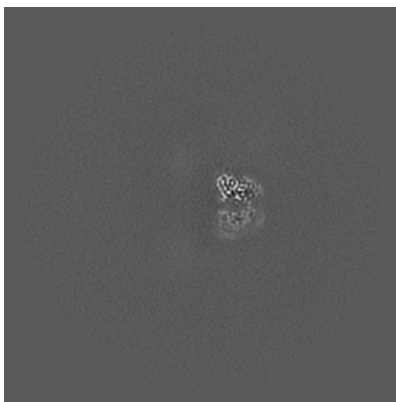
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

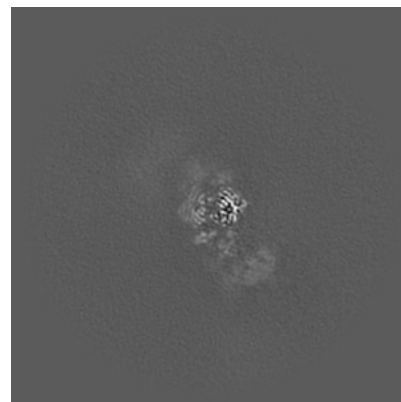
6.3.1 Primary map



X Index: 278

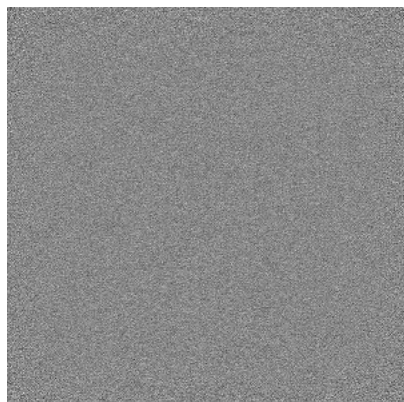


Y Index: 252

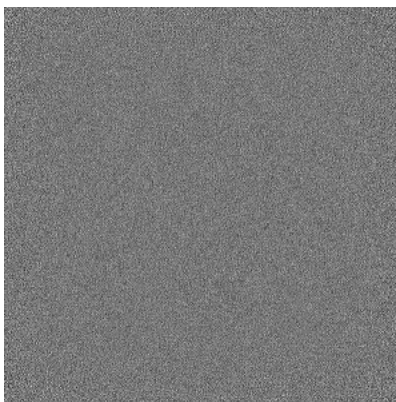


Z Index: 292

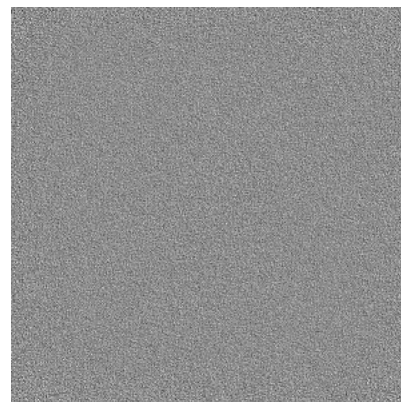
6.3.2 Raw map



X Index: 0



Y Index: 0

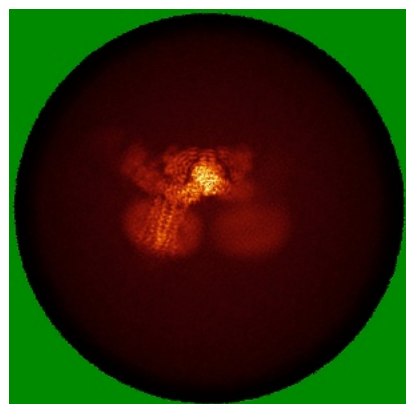


Z Index: 0

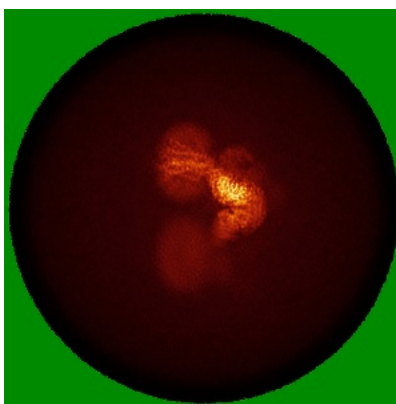
The images above show the largest variance slices of the map in three orthogonal directions.

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

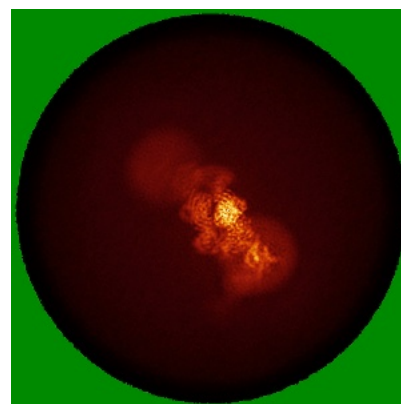
6.4.1 Primary map



X

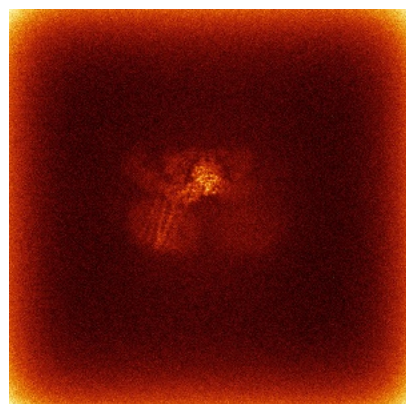


Y

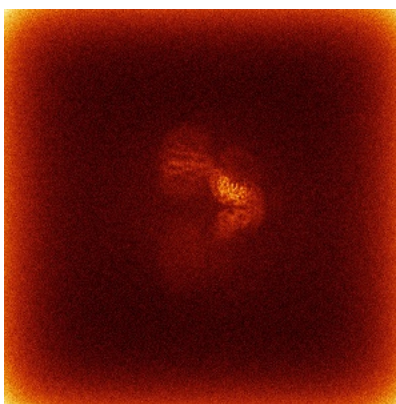


Z

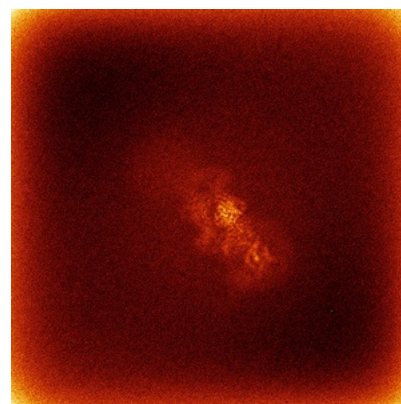
6.4.2 Raw map



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.

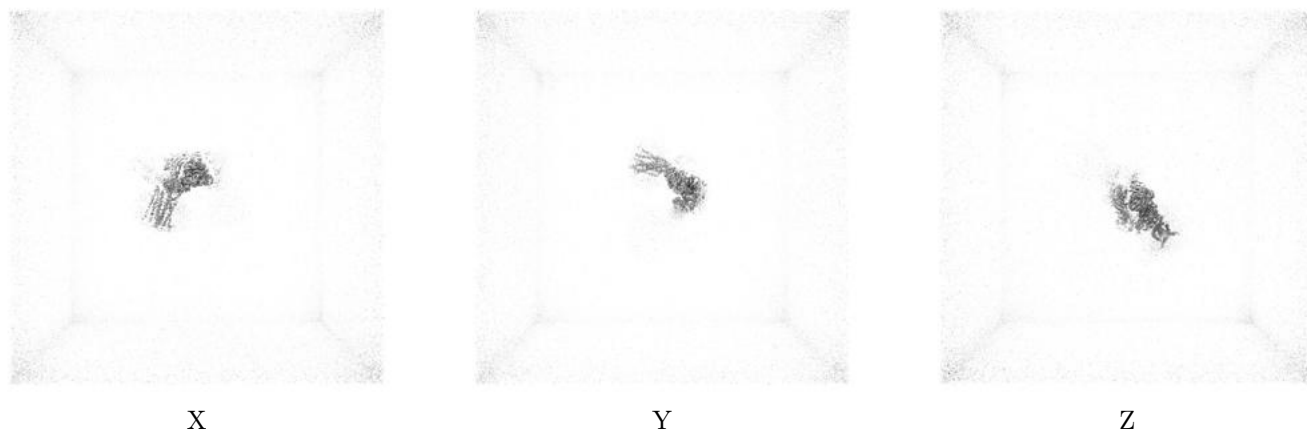
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.11. 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.

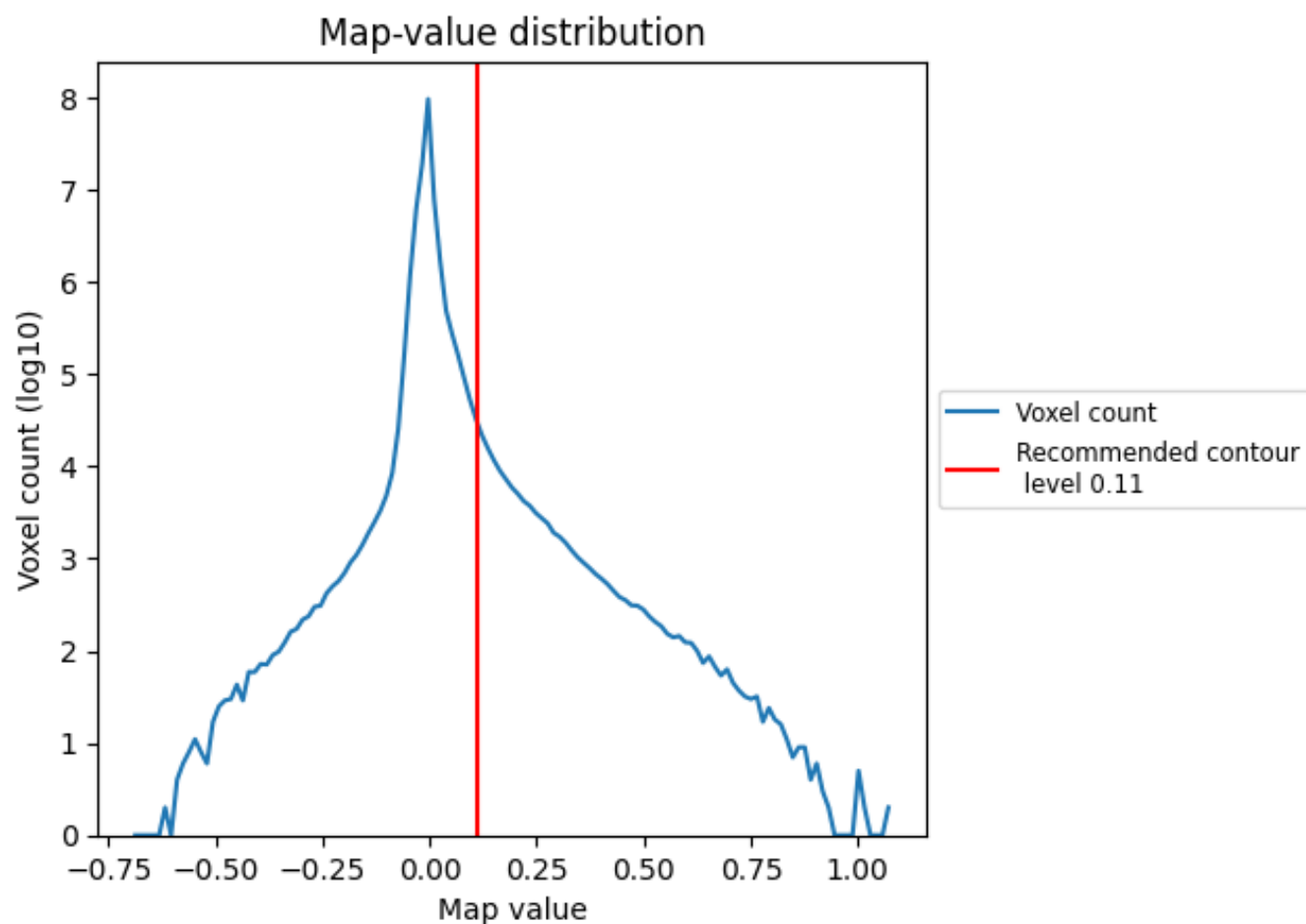
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

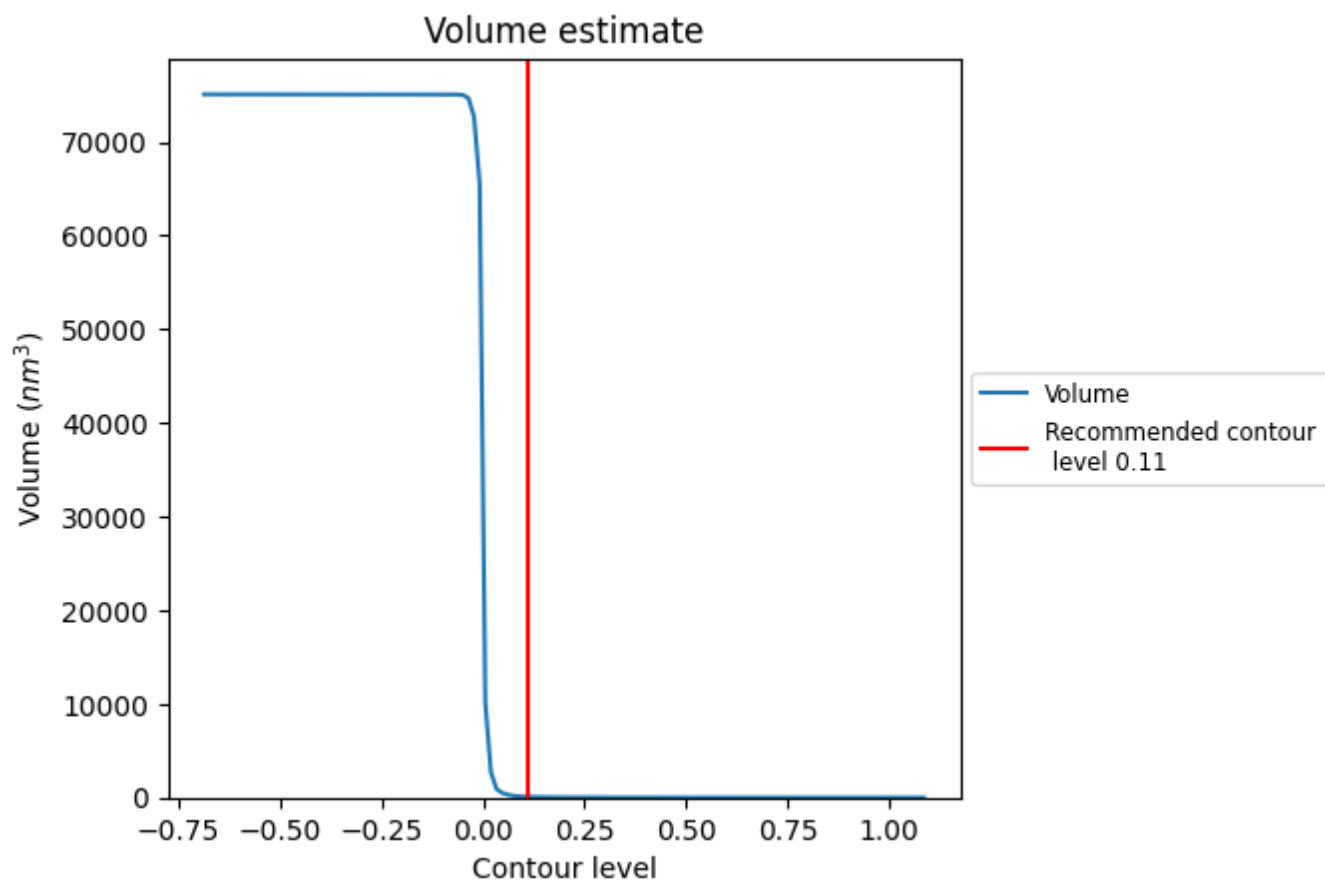
This section contains the results of statistical analysis of the map.

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.

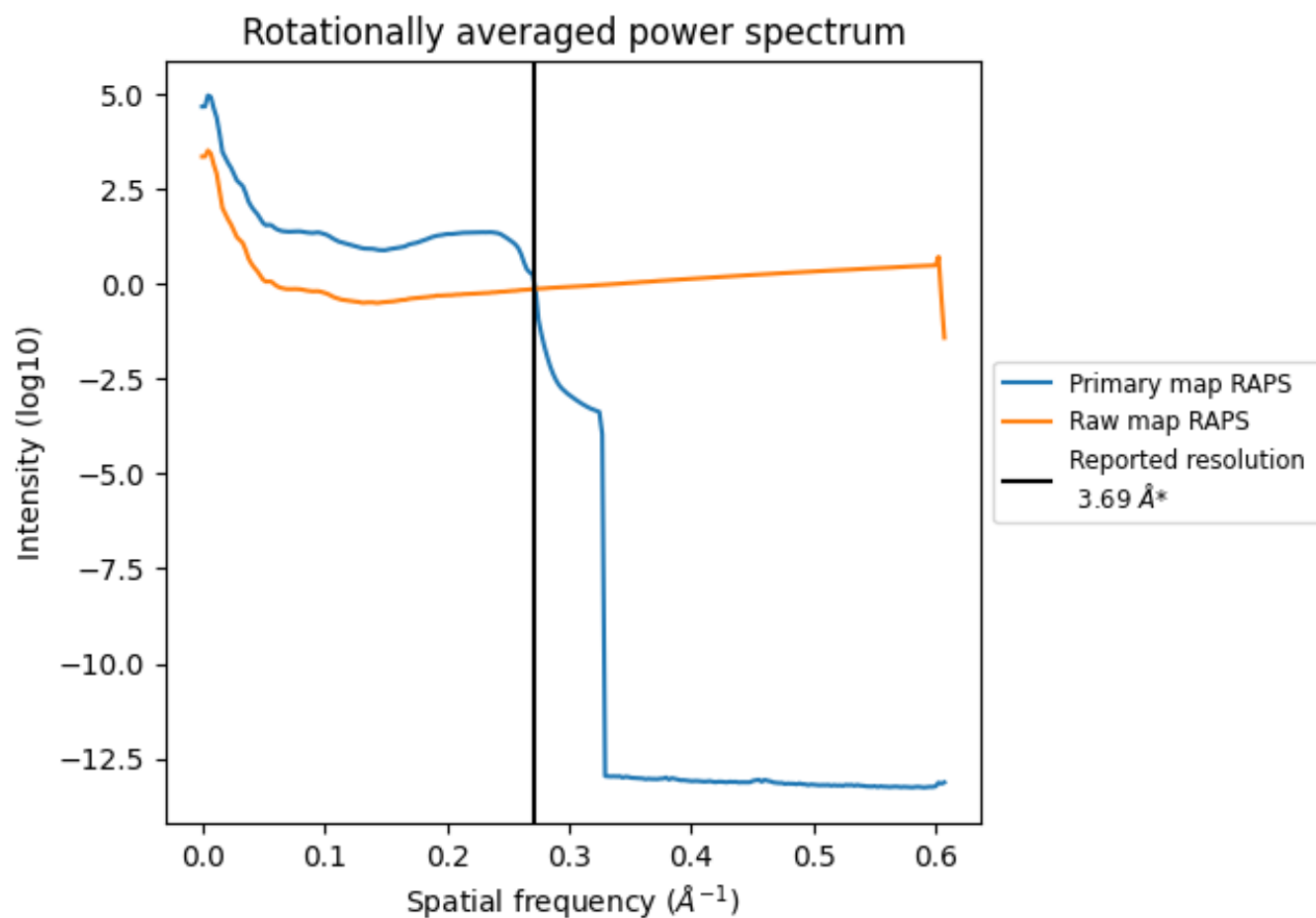
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 77 nm³; this corresponds to an approximate mass of 70 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 ⓘ

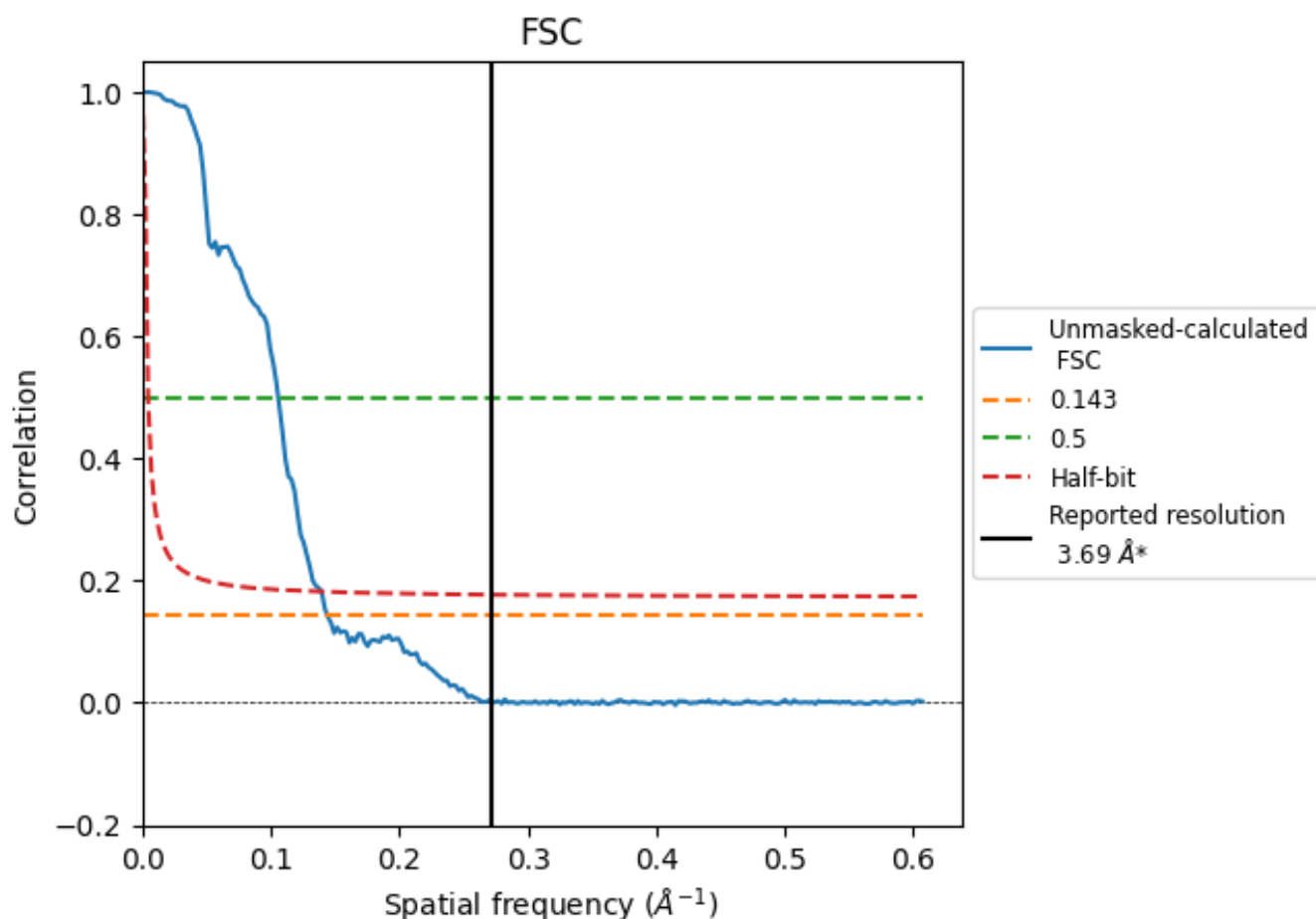


*Reported resolution corresponds to spatial frequency of 0.271 Å⁻¹

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 0.271 $\text{\AA}^{-1}$

8.2 Resolution estimates [i](#)

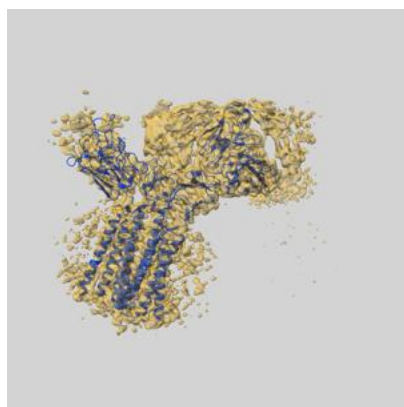
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.69	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	6.94	9.46	7.18

*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 6.94 differs from the reported value 3.69 by more than 10 %

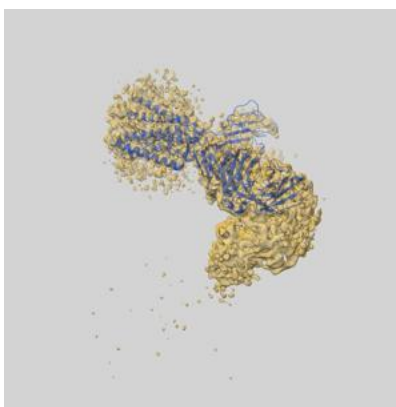
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-61883 and PDB model 9JY0. Per-residue inclusion information can be found in section [3](#) on page [8](#).

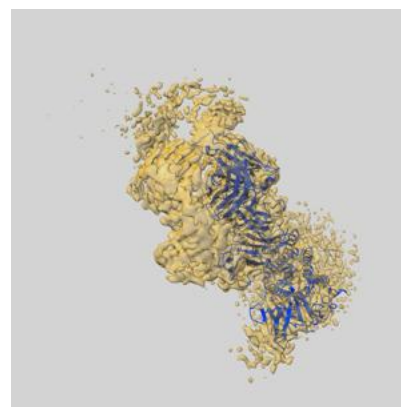
9.1 Map-model overlay [i](#)



X



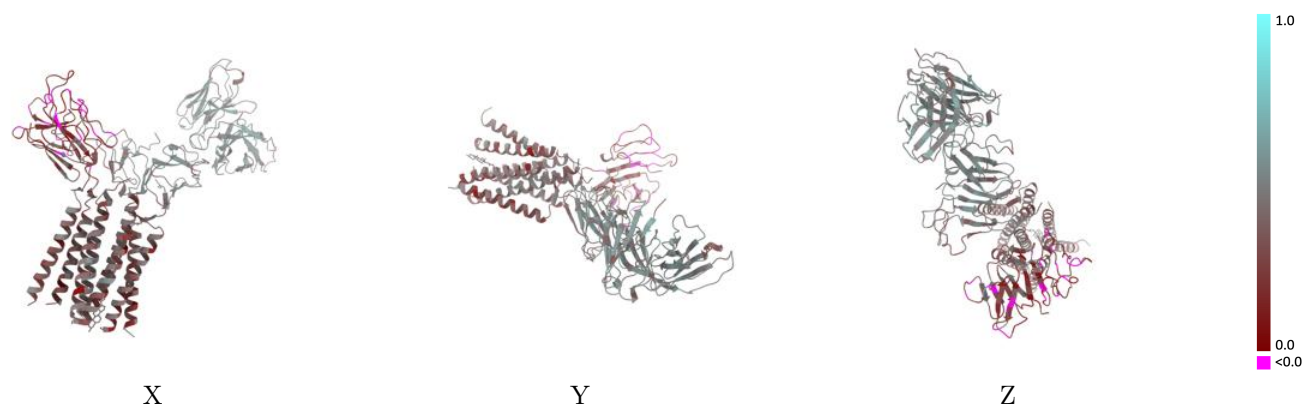
Y



Z

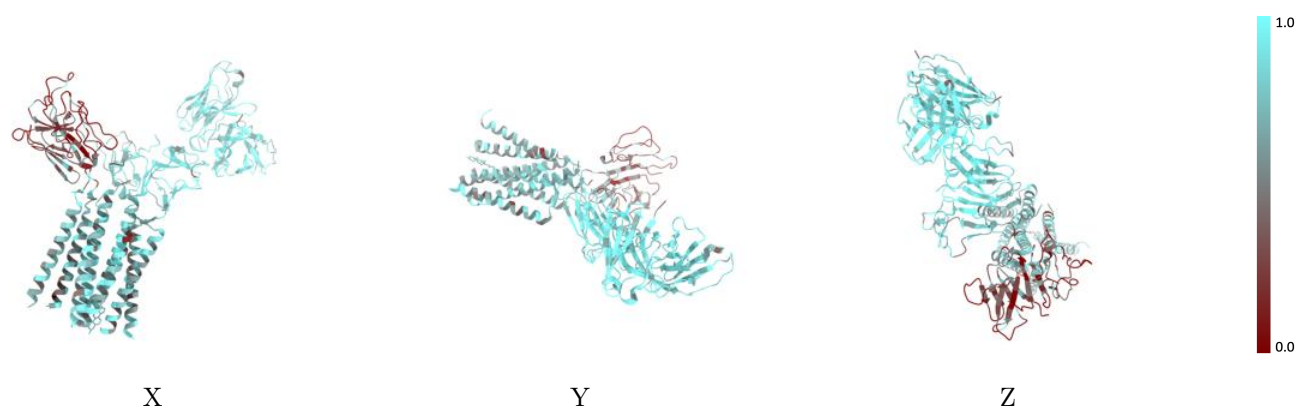
The images above show the 3D surface view of the map at the recommended contour level 0.11 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



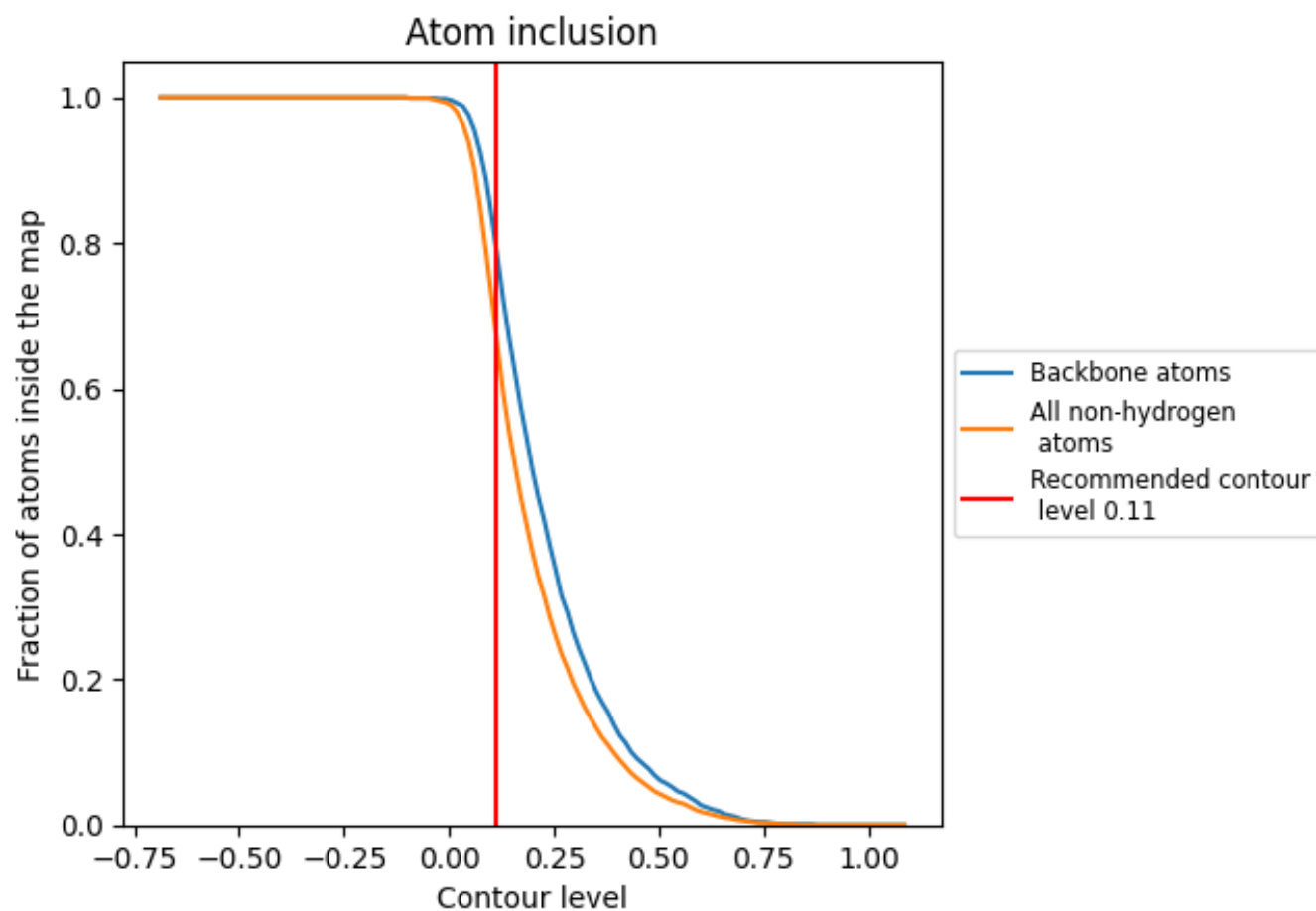
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.11).

9.4 Atom inclusion [i](#)



At the recommended contour level, 80% of all backbone atoms, 68% 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 (0.11) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.6850	 0.3850
A	 0.8740	 0.4910
B	 0.8540	 0.4930
a	 0.6720	 0.3470
b	 0.6610	 0.3400
d	 0.3730	 0.2170
e	 0.3850	 0.2750
f	 0.8120	 0.4320
g	 0.7550	 0.4090
m	 0.7490	 0.3970
n	 0.7750	 0.3900

