



Full wwPDB EM Validation Report ⓘ

Dec 16, 2024 – 07:54 PM EST

PDB ID : 6DVZ
EMDB ID : EMD-8921
Title : Cryo-EM structure of mouse TRPV3-Y564A in complex with 2-Aminoethoxy diphenyl borate (2-APB)
Authors : Singh, A.K.; McGoldrick, L.L.; Sobolevsky, A.I.
Deposited on : 2018-06-25
Resolution : 4.24 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:

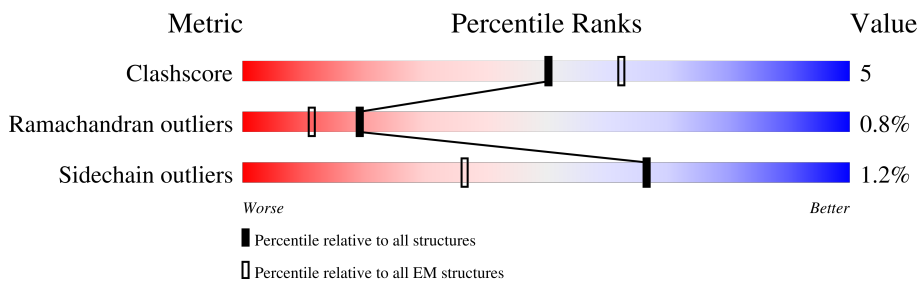
EMDB validation analysis : 0.0.1.dev113
Mogul : 2022.3.0, CSD as543be (2022)
MolProbity : 4.02b-467
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.40

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 4.24 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	791	
1	B	791	
1	C	791	
1	D	791	

2 Entry composition [i](#)

There are 2 unique types of molecules in this entry. The entry contains 20976 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.

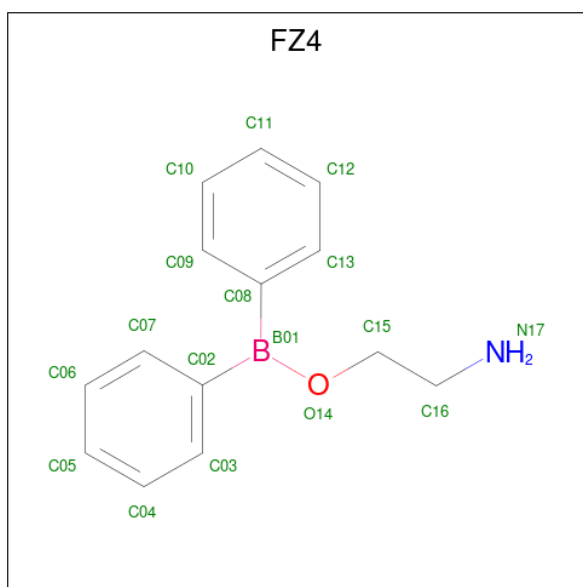
- Molecule 1 is a protein called Transient receptor potential cation channel subfamily V member 3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	643	5193	3372	860	930	31	0	0
1	B	643	5193	3372	860	930	31	0	0
1	C	643	5193	3372	860	930	31	0	0
1	D	643	5193	3372	860	930	31	0	0

There are 12 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	1	MET	-	initiating methionine	UNP Q8K424
A	2	GLY	-	expression tag	UNP Q8K424
A	564	ALA	TYR	engineered mutation	UNP Q8K424
B	1	MET	-	initiating methionine	UNP Q8K424
B	2	GLY	-	expression tag	UNP Q8K424
B	564	ALA	TYR	engineered mutation	UNP Q8K424
C	1	MET	-	initiating methionine	UNP Q8K424
C	2	GLY	-	expression tag	UNP Q8K424
C	564	ALA	TYR	engineered mutation	UNP Q8K424
D	1	MET	-	initiating methionine	UNP Q8K424
D	2	GLY	-	expression tag	UNP Q8K424
D	564	ALA	TYR	engineered mutation	UNP Q8K424

- Molecule 2 is 2-aminoethyl diphenylborinate (three-letter code: FZ4) (formula: C₁₄H₁₆BNO).

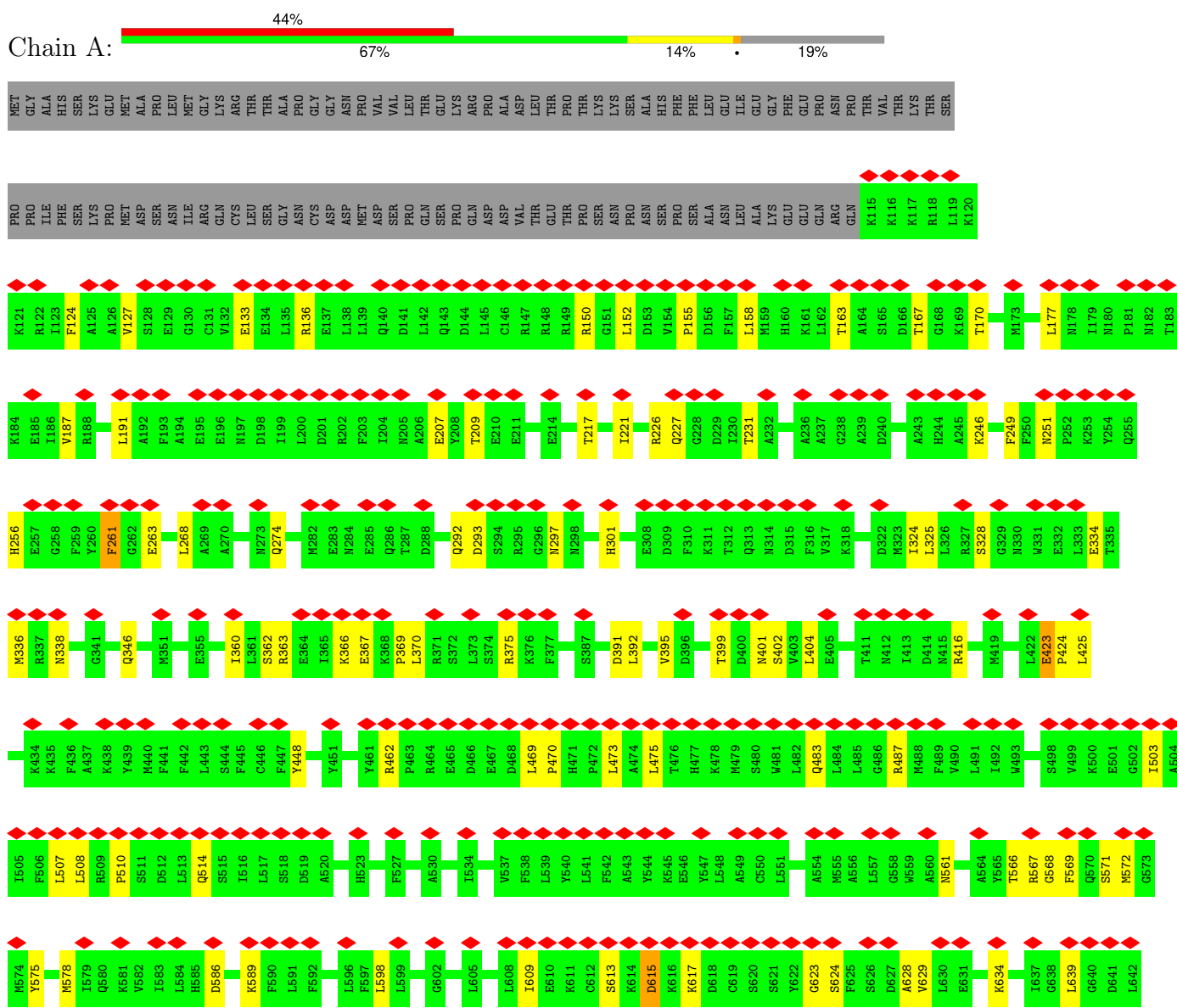


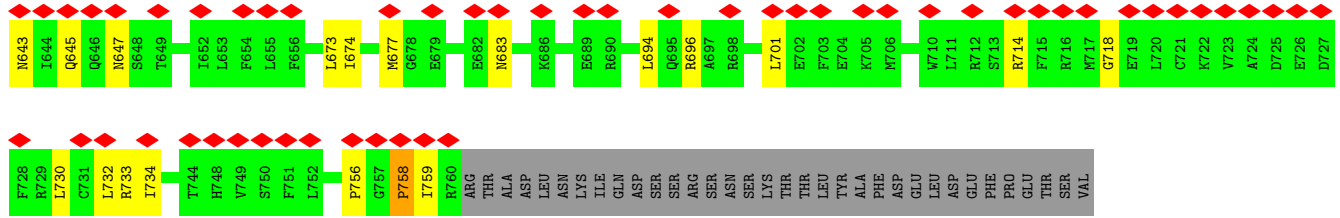
Mol	Chain	Residues	Atoms					AltConf
			Total	B	C	N	O	
2	A	1	Total 17	B 1	C 14	N 1	O 1	0
2	A	1	Total 17	B 1	C 14	N 1	O 1	0
2	A	1	Total 17	B 1	C 14	N 1	O 1	0
2	B	1	Total 17	B 1	C 14	N 1	O 1	0
2	B	1	Total 17	B 1	C 14	N 1	O 1	0
2	B	1	Total 17	B 1	C 14	N 1	O 1	0
2	C	1	Total 17	B 1	C 14	N 1	O 1	0
2	C	1	Total 17	B 1	C 14	N 1	O 1	0
2	C	1	Total 17	B 1	C 14	N 1	O 1	0
2	D	1	Total 17	B 1	C 14	N 1	O 1	0
2	D	1	Total 17	B 1	C 14	N 1	O 1	0
2	D	1	Total 17	B 1	C 14	N 1	O 1	0

3 Residue-property plots [i](#)

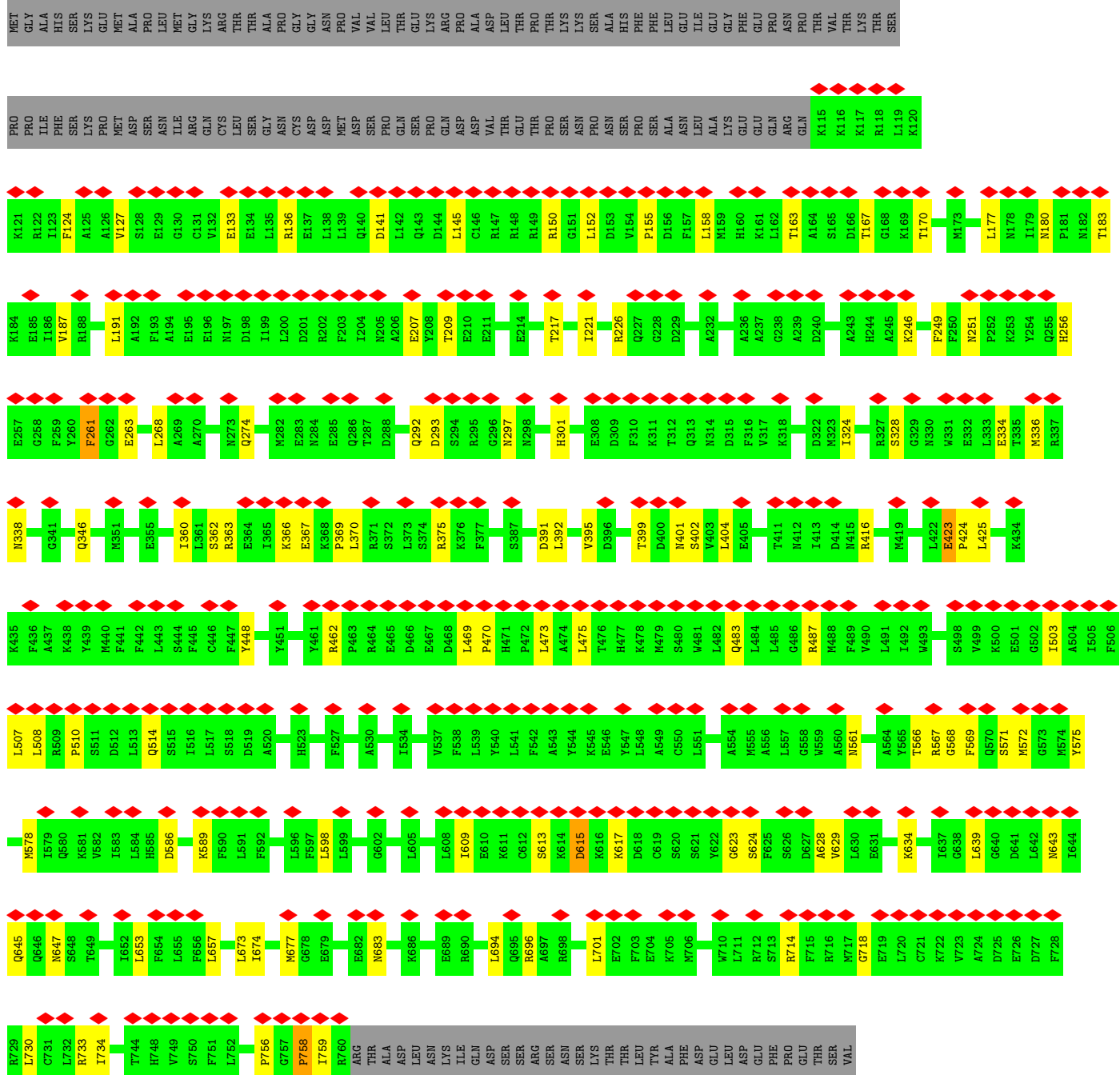
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion 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: Transient receptor potential cation channel subfamily V member 3





• Molecule 1: Transient receptor potential cation channel subfamily V member 3



PRO	PRO	ILE	PHE	SER	LYS	PRO	MET	ASP	SER	ASN	ILE	ARG	GLN	CYS	LEU	SER	GLY	ASN	CYS	ASP	MET	ASP	SER	PRO	GLN	SER	PRO	GLM	GLM	ASP	VAL	THR	GLU	THR	PRO	SER	ASN	PRO	ASN	ASN	PRO	ALA	ALA	LEU	ALA	LYS	GLU	GLU	GLN	ARG	GLN	K115	K116	K117	R118	L119	K120	
K121	R122	I123	F124	A125	A126	V127	S128	E129	G130	C131	V132	E133	E134	L135	R136	E137	L138	L139	Q140	D141	L142	Q143	D144	L145	C146	R147	R148	R149	R150	G151	L152	D153	V154	P155	D156	F157	L158	M159	H160	K161	L162	T163	A164	S165	D166	T167	G168	K169	T170	M173	F249	L177	M178	I179	N180	P181	N182	T183
K184	E185	I186	V187	R188	L191	A192	F193	A194	E195	E196	D197	I198	I199	L200	D201	R202	F203	I204	N205	A206	E207	Y208	T209	E210	E211	E214	T217	A218	L219	N220	I221	R226	Q227	G228	D229	A232	A236	A237	G238	D240	A243	H244	A245	K246	F249	N251	P252	K253	Y254									
Q255	R256	E257	G258	F259	T260	F261	G262	E263	L268	A269	A270	M273	Q274	M282	E283	N284	E285	Q286	T287	D288	Q292	D293	S294	R295	G296	N297	N298	H301	E308	D309	F310	K311	K312	Q313	N314	D315	F316	V317	K318	D322	M323	L325	L326	R327	S328	G329	N330	V331	E332	L333	E334							
T335	M336	R337	N338	G341	Q346	H351	E355	I360	L361	S362	R363	E364	K366	E367	P369	L370	R371	S372	L373	S374	R375	K376	F377	S387	D391	L392	V395	D396	F310	K311	K312	Q313	N314	D315	F316	V317	K318	D322	M323	L325	L326	R327	S328	G329	N330	V331	E332	L333	E334									
L425	K434	F436	A437	Y439	M440	F441	F442	L443	S444	F445	C446	F447	Y448	Y451	Y461	R462	P463	R464	E465	D466	E467	D468	L469	P470	H471	P472	L473	A474	L475	T476	H477	K478	M479	S480	W481	L482	Q483	L484	L485	G486	R487	M488	F489	V490	L491	L492	W493	S498	V499	K500	E501	G502	L503					
A504	L505	F506	L507	L508	R509	P510	S511	D512	L513	Q514	S515	L516	L517	S518	D519	A520	H523	F527	A530	L534	V537	F538	L539	L540	L541	F542	A543	F544	K545	E546	Y547	L548	A549	C550	L551	A554	M555	A556	L557	G558	M559	A560	H561	A564	Y565	T566	R567	G568	F569	Q570	S571	M572						
G573	M574	Y575	M578	I579	Q580	K581	V582	L583	L584	H585	D586	K589	F590	L591	F592	L596	F597	L598	L599	G602	L605	L608	I609	E610	K611	C612	S613	K614	D615	K616	K617	D618	S620	S621	Y622	G623	S624	F625	S626	D627	A628	V629	L630	E631	K634	I637	G638	L639	G640	P641								
L642	N643	I644	Q645	Q646	N647	S648	T649	L652	L653	F654	L655	F656	L657	L669	M672	L673	L674	M677	G678	E679	F682	N683	K686	E689	R690	L694	Q695	R696	A697	R698	L701	E702	F703	E704	K705	M706	W710	L711	R712	S713	R714	F715	R716	H717	G718	E719	L720	C721	K722									
V723	A724	D725	E726	D727	F728	R729	L730	C731	L732	R733	I734	T744	H748	V749	S750	F751	L752	P756	G757	P758	I759	R760	ARG	THR	ALA	LEU	ASN	LYS	ILE	GLN	ASP	SER	SER	ARG	ASN	SER	SER	LYS	THR	THR	LEU	TYR	ALA	PHE	ASP	GLU	LEU	ASP	GLU	PRO	PRO	GLU	THR	SER	VAL			

4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	28075	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 ($e^-/\text{\AA}^2$)	50.0	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	0.139	Depositor
Minimum map value	-0.084	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.008	Depositor
Recommended contour level	0.057	Depositor
Map size (Å)	233.19998, 233.19998, 233.19998	wwPDB
Map dimensions	220, 220, 220	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.06, 1.06, 1.06	Depositor

5 Model quality [i](#)

5.1 Standard geometry [i](#)

Bond lengths and bond angles in the following residue types are not validated in this section: FZ4

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	0.43	0/5301	0.67	4/7171 (0.1%)
1	B	0.43	0/5301	0.67	4/7171 (0.1%)
1	C	0.43	0/5301	0.67	4/7171 (0.1%)
1	D	0.43	0/5301	0.67	4/7171 (0.1%)
All	All	0.43	0/21204	0.67	16/28684 (0.1%)

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	A	0	5
1	B	0	5
1	C	0	5
1	D	0	5
All	All	0	20

There are no bond length outliers.

All (16) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	615	ASP	CB-CG-OD1	6.67	124.31	118.30
1	D	615	ASP	CB-CG-OD1	6.66	124.29	118.30
1	A	615	ASP	CB-CG-OD1	6.63	124.27	118.30
1	C	615	ASP	CB-CG-OD1	6.63	124.27	118.30
1	C	758	PRO	N-CA-CB	6.59	111.21	103.30
1	A	758	PRO	N-CA-CB	6.58	111.20	103.30
1	D	758	PRO	N-CA-CB	6.58	111.20	103.30
1	B	758	PRO	N-CA-CB	6.56	111.17	103.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	D	756	PRO	N-CA-CB	6.23	110.78	103.30
1	A	756	PRO	N-CA-CB	6.20	110.74	103.30
1	B	756	PRO	N-CA-CB	6.20	110.74	103.30
1	C	756	PRO	N-CA-CB	6.20	110.74	103.30
1	C	152	LEU	CA-CB-CG	5.86	128.77	115.30
1	B	152	LEU	CA-CB-CG	5.84	128.74	115.30
1	D	152	LEU	CA-CB-CG	5.83	128.71	115.30
1	A	152	LEU	CA-CB-CG	5.83	128.70	115.30

There are no chirality outliers.

All (20) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	249	PHE	Peptide
1	A	261	PHE	Peptide
1	A	423	GLU	Peptide
1	A	469	LEU	Peptide
1	A	733	ARG	Peptide
1	B	249	PHE	Peptide
1	B	261	PHE	Peptide
1	B	423	GLU	Peptide
1	B	469	LEU	Peptide
1	B	733	ARG	Peptide
1	C	249	PHE	Peptide
1	C	261	PHE	Peptide
1	C	423	GLU	Peptide
1	C	469	LEU	Peptide
1	C	733	ARG	Peptide
1	D	249	PHE	Peptide
1	D	261	PHE	Peptide
1	D	423	GLU	Peptide
1	D	469	LEU	Peptide
1	D	733	ARG	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	5193	0	5243	57	0
1	B	5193	0	5243	56	0
1	C	5193	0	5243	58	0
1	D	5193	0	5243	57	0
2	A	51	0	0	1	0
2	B	51	0	0	1	0
2	C	51	0	0	1	0
2	D	51	0	0	1	0
All	All	20976	0	20972	228	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 5.

All (228) 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:718:GLY:HA2	1:A:730:LEU:HB2	1.78	0.66
1:D:718:GLY:HA2	1:D:730:LEU:HB2	1.78	0.66
1:B:718:GLY:HA2	1:B:730:LEU:HB2	1.78	0.65
1:C:718:GLY:HA2	1:C:730:LEU:HB2	1.78	0.64
1:A:483:GLN:HG3	1:A:487:ARG:HH11	1.63	0.63
1:D:483:GLN:HG3	1:D:487:ARG:HH11	1.63	0.62
1:C:483:GLN:HG3	1:C:487:ARG:HH11	1.63	0.62
1:B:483:GLN:HG3	1:B:487:ARG:HH11	1.63	0.62
1:A:367:GLU:HB3	1:A:370:LEU:HB2	1.82	0.61
1:B:367:GLU:HG3	1:B:369:PRO:HD2	1.83	0.61
1:B:367:GLU:HB3	1:B:370:LEU:HB2	1.82	0.61
1:A:367:GLU:HG3	1:A:369:PRO:HD2	1.83	0.60
1:C:367:GLU:HG3	1:C:369:PRO:HD2	1.83	0.60
1:D:367:GLU:HB3	1:D:370:LEU:HB2	1.82	0.60
1:C:367:GLU:HB3	1:C:370:LEU:HB2	1.82	0.59
1:C:510:PRO:O	1:C:514:GLN:NE2	2.36	0.59
1:D:367:GLU:HG3	1:D:369:PRO:HD2	1.83	0.59
1:A:510:PRO:O	1:A:514:GLN:NE2	2.35	0.59
1:D:163:THR:HG22	1:D:170:THR:HA	1.84	0.59
1:B:510:PRO:O	1:B:514:GLN:NE2	2.36	0.59
1:D:510:PRO:O	1:D:514:GLN:NE2	2.35	0.58
1:A:163:THR:HG22	1:A:170:THR:HA	1.84	0.58
1:C:163:THR:HG22	1:C:170:THR:HA	1.85	0.58
1:A:346:GLN:NE2	1:A:401:ASN:O	2.37	0.58
1:D:346:GLN:NE2	1:D:401:ASN:O	2.37	0.58
1:C:251:ASN:ND2	1:C:256:HIS:O	2.37	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:346:GLN:NE2	1:C:401:ASN:O	2.37	0.58
1:B:251:ASN:ND2	1:B:256:HIS:O	2.37	0.57
1:B:163:THR:HG22	1:B:170:THR:HA	1.84	0.57
1:B:346:GLN:NE2	1:B:401:ASN:O	2.37	0.57
1:A:251:ASN:ND2	1:A:256:HIS:O	2.37	0.57
2:D:801:FZ4:C03	2:D:801:FZ4:C08	2.83	0.57
1:D:251:ASN:ND2	1:D:256:HIS:O	2.37	0.56
1:A:448:TYR:OH	1:A:561:ASN:ND2	2.39	0.56
2:A:801:FZ4:C03	2:A:801:FZ4:C08	2.83	0.56
2:B:801:FZ4:C03	2:B:801:FZ4:C08	2.83	0.56
1:C:334:GLU:OE2	1:C:363:ARG:NH1	2.39	0.55
1:D:448:TYR:OH	1:D:561:ASN:ND2	2.39	0.55
1:C:448:TYR:OH	1:C:561:ASN:ND2	2.39	0.55
1:A:334:GLU:OE2	1:A:363:ARG:NH1	2.39	0.55
1:B:334:GLU:OE2	1:B:363:ARG:NH1	2.39	0.55
1:B:416:ARG:HD2	1:B:694:LEU:HD21	1.89	0.54
1:B:448:TYR:OH	1:B:561:ASN:ND2	2.39	0.54
1:D:334:GLU:OE2	1:D:363:ARG:NH1	2.39	0.54
1:A:416:ARG:HD2	1:A:694:LEU:HD21	1.89	0.54
1:A:674:ILE:HA	1:A:677:MET:HB3	1.90	0.54
2:C:801:FZ4:C03	2:C:801:FZ4:C08	2.83	0.54
1:C:416:ARG:HD2	1:C:694:LEU:HD21	1.89	0.54
1:D:674:ILE:HA	1:D:677:MET:HB3	1.90	0.54
1:C:674:ILE:HA	1:C:677:MET:HB3	1.90	0.54
1:B:674:ILE:HA	1:B:677:MET:HB3	1.90	0.53
1:C:261:PHE:HB2	1:C:263:GLU:H	1.73	0.53
1:D:416:ARG:HD2	1:D:694:LEU:HD21	1.89	0.53
1:D:261:PHE:HB2	1:D:263:GLU:H	1.73	0.53
1:B:392:LEU:HD12	1:B:395:VAL:HB	1.91	0.53
1:B:261:PHE:HB2	1:B:263:GLU:H	1.73	0.53
1:C:392:LEU:HD12	1:C:395:VAL:HB	1.91	0.53
1:D:292:GLN:NE2	1:D:336:MET:SD	2.76	0.53
1:D:226:ARG:HG2	1:D:274:GLN:HE21	1.74	0.52
1:A:261:PHE:HB2	1:A:263:GLU:H	1.73	0.52
1:B:292:GLN:NE2	1:B:336:MET:SD	2.76	0.52
1:B:375:ARG:NH1	1:B:391:ASP:OD2	2.43	0.52
1:C:375:ARG:NH1	1:C:391:ASP:OD2	2.43	0.52
1:D:392:LEU:HD12	1:D:395:VAL:HB	1.91	0.52
1:A:167:THR:O	1:A:209:THR:OG1	2.27	0.52
1:A:226:ARG:HG2	1:A:274:GLN:HE21	1.74	0.52
1:B:226:ARG:HG2	1:B:274:GLN:HE21	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:643:ASN:HA	1:D:645:GLN:HE22	1.75	0.52
1:A:392:LEU:HD12	1:A:395:VAL:HB	1.91	0.52
1:B:643:ASN:HA	1:B:645:GLN:HE22	1.75	0.51
1:C:643:ASN:HA	1:C:645:GLN:HE22	1.75	0.51
1:D:167:THR:O	1:D:209:THR:OG1	2.27	0.51
1:D:360:ILE:O	1:D:363:ARG:NH2	2.44	0.51
1:A:360:ILE:O	1:A:363:ARG:NH2	2.44	0.51
1:A:643:ASN:HA	1:A:645:GLN:HE22	1.75	0.51
1:C:226:ARG:HG2	1:C:274:GLN:HE21	1.74	0.51
1:C:292:GLN:NE2	1:C:336:MET:SD	2.76	0.51
1:D:375:ARG:NH1	1:D:391:ASP:OD2	2.43	0.51
1:A:292:GLN:NE2	1:A:336:MET:SD	2.76	0.51
1:B:598:LEU:HD11	1:B:629:VAL:HG13	1.93	0.51
1:C:360:ILE:O	1:C:363:ARG:NH2	2.44	0.51
1:C:598:LEU:HD11	1:C:629:VAL:HG13	1.93	0.51
1:A:375:ARG:NH1	1:A:391:ASP:OD2	2.43	0.50
1:B:360:ILE:O	1:B:363:ARG:NH2	2.44	0.50
1:B:167:THR:O	1:B:209:THR:OG1	2.27	0.50
1:D:598:LEU:HD11	1:D:629:VAL:HG13	1.93	0.50
1:A:598:LEU:HD11	1:A:629:VAL:HG13	1.93	0.50
1:C:167:THR:O	1:C:209:THR:OG1	2.27	0.49
1:D:133:GLU:OE2	1:D:136:ARG:NH2	2.46	0.49
1:B:399:THR:O	1:B:402:SER:OG	2.30	0.48
1:D:423:GLU:O	1:D:425:LEU:N	2.46	0.48
1:B:423:GLU:O	1:B:425:LEU:N	2.46	0.48
1:D:293:ASP:HB3	1:D:297:ASN:H	1.79	0.48
1:A:133:GLU:OE2	1:A:136:ARG:NH2	2.46	0.48
1:B:609:ILE:HD13	1:B:623:GLY:HA2	1.96	0.48
1:C:133:GLU:OE2	1:C:136:ARG:NH2	2.46	0.48
1:C:423:GLU:O	1:C:425:LEU:N	2.46	0.48
1:B:293:ASP:HB3	1:B:297:ASN:H	1.79	0.48
1:A:423:GLU:O	1:A:425:LEU:N	2.46	0.48
1:C:293:ASP:HB3	1:C:297:ASN:H	1.78	0.48
1:B:133:GLU:OE2	1:B:136:ARG:NH2	2.46	0.48
1:C:609:ILE:HD13	1:C:623:GLY:HA2	1.96	0.48
1:C:399:THR:O	1:C:402:SER:OG	2.30	0.48
1:A:293:ASP:HB3	1:A:297:ASN:H	1.78	0.47
1:C:367:GLU:HG2	1:C:370:LEU:HD12	1.96	0.47
1:D:367:GLU:HG2	1:D:370:LEU:HD12	1.96	0.47
1:D:609:ILE:HD13	1:D:623:GLY:HA2	1.96	0.47
1:C:613:SER:HB3	1:C:617:LYS:HA	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:187:VAL:O	1:B:191:LEU:N	2.42	0.47
1:B:367:GLU:HG2	1:B:370:LEU:HD12	1.96	0.47
1:D:187:VAL:O	1:D:191:LEU:N	2.42	0.47
1:D:613:SER:HB3	1:D:617:LYS:HA	1.97	0.47
1:A:613:SER:HB3	1:A:617:LYS:HA	1.97	0.47
1:B:613:SER:HB3	1:B:617:LYS:HA	1.97	0.47
1:A:367:GLU:HG2	1:A:370:LEU:HD12	1.96	0.46
1:A:568:GLY:O	1:A:696:ARG:NH2	2.49	0.46
1:A:609:ILE:HD13	1:A:623:GLY:HA2	1.96	0.46
1:C:568:GLY:O	1:C:696:ARG:NH2	2.49	0.46
1:B:566:THR:HB	1:B:572:MET:HB3	1.97	0.46
1:A:566:THR:HB	1:A:572:MET:HB3	1.97	0.46
1:B:568:GLY:O	1:B:696:ARG:NH2	2.49	0.46
1:C:207:GLU:HB3	1:C:217:THR:HG22	1.98	0.46
1:D:207:GLU:HB3	1:D:217:THR:HG22	1.98	0.46
1:D:566:THR:HB	1:D:572:MET:HB3	1.97	0.46
1:D:568:GLY:O	1:D:696:ARG:NH2	2.49	0.46
1:A:187:VAL:O	1:A:191:LEU:N	2.42	0.45
1:C:566:THR:HB	1:C:572:MET:HB3	1.97	0.45
1:A:634:LYS:HB3	1:A:639:LEU:HB2	1.97	0.45
1:B:207:GLU:HB3	1:B:217:THR:HG22	1.98	0.45
1:B:567:ARG:O	1:B:569:PHE:N	2.50	0.45
1:C:634:LYS:HB3	1:C:639:LEU:HB2	1.97	0.45
1:D:634:LYS:HB3	1:D:639:LEU:HB2	1.97	0.45
1:A:575:TYR:HA	1:A:578:MET:HE2	1.98	0.45
1:B:324:ILE:O	1:B:328:SER:N	2.50	0.45
1:C:653:LEU:O	1:C:657:LEU:N	2.36	0.45
1:D:567:ARG:O	1:D:569:PHE:N	2.50	0.45
1:B:124:PHE:HA	1:B:127:VAL:HB	1.98	0.45
1:B:634:LYS:HB3	1:B:639:LEU:HB2	1.97	0.45
1:D:324:ILE:O	1:D:328:SER:N	2.50	0.45
1:A:567:ARG:O	1:A:569:PHE:N	2.50	0.45
1:A:399:THR:O	1:A:402:SER:OG	2.30	0.45
1:A:124:PHE:HA	1:A:127:VAL:HB	1.99	0.44
1:A:207:GLU:HB3	1:A:217:THR:HG22	1.98	0.44
1:A:261:PHE:HD1	1:A:268:LEU:HD13	1.83	0.44
1:C:124:PHE:HA	1:C:127:VAL:HB	1.99	0.44
1:B:575:TYR:HA	1:B:578:MET:HE2	2.00	0.44
1:C:567:ARG:O	1:C:569:PHE:N	2.50	0.44
1:D:261:PHE:HD1	1:D:268:LEU:HD13	1.83	0.44
1:C:324:ILE:O	1:C:328:SER:N	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:575:TYR:HA	1:C:578:MET:HE2	2.00	0.44
1:D:399:THR:O	1:D:402:SER:OG	2.30	0.44
1:B:141:ASP:O	1:B:145:LEU:N	2.47	0.44
1:C:673:LEU:O	1:C:677:MET:N	2.40	0.43
1:D:124:PHE:HA	1:D:127:VAL:HB	1.99	0.43
1:C:261:PHE:HD1	1:C:268:LEU:HD13	1.83	0.43
1:A:324:ILE:O	1:A:328:SER:N	2.50	0.43
1:B:624:SER:O	1:B:628:ALA:N	2.48	0.43
1:B:261:PHE:HD1	1:B:268:LEU:HD13	1.83	0.43
1:A:673:LEU:O	1:A:677:MET:N	2.41	0.43
1:D:624:SER:O	1:D:628:ALA:N	2.48	0.43
1:A:227:GLN:O	1:A:231:THR:OG1	2.29	0.43
1:B:226:ARG:HG2	1:B:274:GLN:NE2	2.34	0.43
1:C:404:LEU:HG	1:C:701:LEU:HD11	2.01	0.43
1:D:375:ARG:HB3	1:D:391:ASP:HB2	2.01	0.43
1:A:375:ARG:HB3	1:A:391:ASP:HB2	2.01	0.43
1:C:155:PRO:HA	1:C:158:LEU:HD12	2.01	0.43
1:A:155:PRO:HA	1:A:158:LEU:HD12	2.01	0.42
1:C:177:LEU:HG	1:C:221:ILE:HD11	2.01	0.42
1:C:226:ARG:HG2	1:C:274:GLN:NE2	2.34	0.42
1:B:673:LEU:O	1:B:677:MET:N	2.41	0.42
1:D:155:PRO:HA	1:D:158:LEU:HD12	2.01	0.42
1:B:177:LEU:HG	1:B:221:ILE:HD11	2.01	0.42
1:A:589:LYS:HE2	1:B:571:SER:HB2	2.02	0.42
1:A:624:SER:O	1:A:628:ALA:N	2.48	0.42
1:D:362:SER:OG	1:D:363:ARG:N	2.53	0.42
1:D:732:LEU:HD23	1:D:732:LEU:HA	1.89	0.42
1:B:375:ARG:HB3	1:B:391:ASP:HB2	2.01	0.42
1:C:180:ASN:OD1	1:C:183:THR:OG1	2.27	0.42
1:D:177:LEU:HG	1:D:221:ILE:HD11	2.01	0.42
1:A:362:SER:OG	1:A:363:ARG:N	2.53	0.42
1:B:404:LEU:HG	1:B:701:LEU:HD11	2.01	0.42
1:B:589:LYS:HE2	1:C:571:SER:HB2	2.02	0.42
1:D:673:LEU:O	1:D:677:MET:N	2.40	0.42
1:B:155:PRO:HA	1:B:158:LEU:HD12	2.01	0.42
1:C:187:VAL:O	1:C:191:LEU:N	2.42	0.42
1:C:362:SER:OG	1:C:363:ARG:N	2.53	0.42
1:A:177:LEU:HG	1:A:221:ILE:HD11	2.01	0.42
1:D:180:ASN:OD1	1:D:183:THR:OG1	2.26	0.42
1:D:575:TYR:HA	1:D:578:MET:HE2	2.02	0.42
1:B:653:LEU:O	1:B:657:LEU:N	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:375:ARG:HB3	1:C:391:ASP:HB2	2.01	0.41
1:D:226:ARG:HG2	1:D:274:GLN:NE2	2.34	0.41
1:A:404:LEU:HG	1:A:701:LEU:HD11	2.01	0.41
1:D:404:LEU:HG	1:D:701:LEU:HD11	2.01	0.41
1:C:589:LYS:HE2	1:D:571:SER:HB2	2.02	0.41
1:C:669:LEU:HD23	1:C:669:LEU:HA	1.86	0.41
1:A:226:ARG:HG2	1:A:274:GLN:NE2	2.34	0.41
1:B:734:ILE:HD11	1:B:759:ILE:HA	2.03	0.41
1:A:508:LEU:HD13	1:A:508:LEU:HA	1.93	0.41
1:A:732:LEU:HD23	1:A:732:LEU:HA	1.89	0.41
1:B:503:ILE:HG22	1:B:507:LEU:HG	2.03	0.41
1:D:503:ILE:HG22	1:D:507:LEU:HG	2.03	0.41
1:D:653:LEU:O	1:D:657:LEU:N	2.36	0.41
1:A:301:HIS:HE1	1:A:338:ASN:HB3	1.86	0.41
1:A:503:ILE:HG22	1:A:507:LEU:HG	2.03	0.41
1:A:571:SER:HB2	1:D:589:LYS:HE2	2.02	0.41
1:B:180:ASN:OD1	1:B:183:THR:OG1	2.27	0.41
1:B:301:HIS:HE1	1:B:338:ASN:HB3	1.86	0.41
1:B:362:SER:OG	1:B:363:ARG:N	2.53	0.41
1:B:473:LEU:HD11	1:B:475:LEU:HD23	2.03	0.41
1:C:141:ASP:O	1:C:145:LEU:N	2.47	0.41
1:C:734:ILE:HD11	1:C:759:ILE:HA	2.03	0.41
1:D:669:LEU:HA	1:D:672:MET:HB3	2.03	0.41
1:D:411:THR:OG1	1:D:412:ASN:N	2.54	0.41
1:A:473:LEU:HD11	1:A:475:LEU:HD23	2.03	0.40
1:D:219:LEU:HD23	1:D:219:LEU:HA	1.92	0.40
1:D:473:LEU:HD11	1:D:475:LEU:HD23	2.03	0.40
1:A:734:ILE:HD11	1:A:759:ILE:HA	2.03	0.40
1:C:301:HIS:HE1	1:C:338:ASN:HB3	1.86	0.40
1:C:473:LEU:HD11	1:C:475:LEU:HD23	2.03	0.40
1:C:503:ILE:HG22	1:C:507:LEU:HG	2.03	0.40
1:C:563:LEU:O	1:C:566:THR:OG1	2.32	0.40
1:D:325:LEU:HD23	1:D:325:LEU:HA	1.90	0.40
1:A:325:LEU:HA	1:A:325:LEU:HD23	1.90	0.40
1:A:701:LEU:HD23	1:A:701:LEU:HA	1.90	0.40
1:B:508:LEU:HD13	1:B:508:LEU:HA	1.93	0.40
1:C:669:LEU:HA	1:C:672:MET:HB3	2.03	0.40
1:C:411:THR:OG1	1:C:412:ASN:N	2.54	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	639/791 (81%)	528 (83%)	106 (17%)	5 (1%)	16	53
1	B	639/791 (81%)	528 (83%)	106 (17%)	5 (1%)	16	53
1	C	639/791 (81%)	528 (83%)	106 (17%)	5 (1%)	16	53
1	D	639/791 (81%)	527 (82%)	107 (17%)	5 (1%)	16	53
All	All	2556/3164 (81%)	2111 (83%)	425 (17%)	20 (1%)	19	53

All (20) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	758	PRO
1	B	758	PRO
1	C	758	PRO
1	D	758	PRO
1	A	586	ASP
1	A	615	ASP
1	B	586	ASP
1	B	615	ASP
1	C	586	ASP
1	C	615	ASP
1	D	586	ASP
1	D	615	ASP
1	A	424	PRO
1	B	424	PRO
1	C	424	PRO
1	D	424	PRO
1	A	470	PRO
1	B	470	PRO
1	C	470	PRO
1	D	470	PRO

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	561/706 (80%)	554 (99%)	7 (1%)	67 79
1	B	561/706 (80%)	554 (99%)	7 (1%)	67 79
1	C	561/706 (80%)	554 (99%)	7 (1%)	67 79
1	D	561/706 (80%)	554 (99%)	7 (1%)	67 79
All	All	2244/2824 (80%)	2216 (99%)	28 (1%)	66 79

All (28) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	150	ARG
1	A	246	LYS
1	A	366	LYS
1	A	462	ARG
1	A	647	ASN
1	A	683	ASN
1	A	714	ARG
1	B	150	ARG
1	B	246	LYS
1	B	366	LYS
1	B	462	ARG
1	B	647	ASN
1	B	683	ASN
1	B	714	ARG
1	C	150	ARG
1	C	246	LYS
1	C	366	LYS
1	C	462	ARG
1	C	647	ASN
1	C	683	ASN
1	C	714	ARG
1	D	150	ARG
1	D	246	LYS
1	D	366	LYS

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Mol	Chain	Res	Type
1	D	462	ARG
1	D	647	ASN
1	D	683	ASN
1	D	714	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (20) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	178	ASN
1	A	645	GLN
1	A	647	ASN
1	A	671	ASN
1	A	683	ASN
1	B	178	ASN
1	B	645	GLN
1	B	647	ASN
1	B	671	ASN
1	B	683	ASN
1	C	178	ASN
1	C	645	GLN
1	C	647	ASN
1	C	671	ASN
1	C	683	ASN
1	D	178	ASN
1	D	645	GLN
1	D	647	ASN
1	D	671	ASN
1	D	683	ASN

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

12 ligands are modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	FZ4	A	803	-	17,18,18	0.73	0	18,22,22	1.63	3 (16%)
2	FZ4	D	802	-	17,18,18	0.69	0	18,22,22	1.63	6 (33%)
2	FZ4	D	803	-	17,18,18	0.72	0	18,22,22	1.61	3 (16%)
2	FZ4	C	802	-	17,18,18	0.68	0	18,22,22	1.62	6 (33%)
2	FZ4	D	801	-	17,18,18	0.92	1 (5%)	18,22,22	1.84	6 (33%)
2	FZ4	C	801	-	17,18,18	0.93	1 (5%)	18,22,22	1.83	6 (33%)
2	FZ4	B	803	-	17,18,18	0.72	0	18,22,22	1.63	4 (22%)
2	FZ4	B	802	-	17,18,18	0.69	0	18,22,22	1.62	6 (33%)
2	FZ4	B	801	-	17,18,18	0.93	1 (5%)	18,22,22	1.84	6 (33%)
2	FZ4	A	802	-	17,18,18	0.70	0	18,22,22	1.62	6 (33%)
2	FZ4	C	803	-	17,18,18	0.72	0	18,22,22	1.62	3 (16%)
2	FZ4	A	801	-	17,18,18	0.93	1 (5%)	18,22,22	1.84	6 (33%)

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
2	FZ4	A	803	-	-	8/12/12/12	0/2/2/2
2	FZ4	D	802	-	-	4/12/12/12	0/2/2/2
2	FZ4	D	803	-	-	8/12/12/12	0/2/2/2
2	FZ4	C	802	-	-	4/12/12/12	0/2/2/2
2	FZ4	D	801	-	-	6/12/12/12	0/2/2/2
2	FZ4	C	801	-	-	6/12/12/12	0/2/2/2
2	FZ4	B	803	-	-	8/12/12/12	0/2/2/2
2	FZ4	B	802	-	-	4/12/12/12	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	FZ4	B	801	-	-	6/12/12/12	0/2/2/2
2	FZ4	A	802	-	-	4/12/12/12	0/2/2/2
2	FZ4	C	803	-	-	8/12/12/12	0/2/2/2
2	FZ4	A	801	-	-	6/12/12/12	0/2/2/2

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	801	FZ4	C03-C02	-2.35	1.37	1.40
2	A	801	FZ4	C03-C02	-2.28	1.37	1.40
2	C	801	FZ4	C03-C02	-2.26	1.37	1.40
2	D	801	FZ4	C03-C02	-2.24	1.37	1.40

All (61) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	D	801	FZ4	B01-C02-C03	-4.43	115.10	121.51
2	A	801	FZ4	B01-C02-C03	-4.41	115.12	121.51
2	B	801	FZ4	B01-C02-C03	-4.39	115.15	121.51
2	C	801	FZ4	B01-C02-C03	-4.39	115.15	121.51
2	C	802	FZ4	C07-C02-C03	3.80	121.22	116.86
2	D	802	FZ4	C07-C02-C03	3.79	121.21	116.86
2	B	802	FZ4	C07-C02-C03	3.76	121.18	116.86
2	A	802	FZ4	C07-C02-C03	3.75	121.17	116.86
2	A	803	FZ4	C13-C08-C09	3.37	120.73	116.86
2	C	803	FZ4	C13-C08-C09	3.34	120.70	116.86
2	D	803	FZ4	C13-C08-C09	3.32	120.67	116.86
2	B	803	FZ4	C13-C08-C09	3.31	120.66	116.86
2	B	801	FZ4	C07-C02-C03	3.07	120.38	116.86
2	B	803	FZ4	C07-C02-C03	3.04	120.35	116.86
2	A	801	FZ4	C07-C02-C03	3.04	120.34	116.86
2	D	801	FZ4	C07-C02-C03	3.03	120.34	116.86
2	C	801	FZ4	C07-C02-C03	3.00	120.30	116.86
2	A	803	FZ4	C07-C02-C03	2.99	120.30	116.86
2	C	803	FZ4	C07-C02-C03	2.97	120.27	116.86
2	D	803	FZ4	C07-C02-C03	2.93	120.22	116.86
2	A	802	FZ4	C13-C08-C09	2.70	119.96	116.86
2	B	802	FZ4	C13-C08-C09	2.66	119.92	116.86
2	D	802	FZ4	C04-C03-C02	-2.64	119.05	121.58
2	D	802	FZ4	C13-C08-C09	2.64	119.89	116.86
2	A	802	FZ4	C04-C03-C02	-2.64	119.06	121.58

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	C	802	FZ4	C04-C03-C02	-2.64	119.06	121.58
2	C	802	FZ4	C13-C08-C09	2.63	119.88	116.86
2	B	802	FZ4	C04-C03-C02	-2.62	119.07	121.58
2	A	803	FZ4	C10-C09-C08	-2.53	119.16	121.58
2	D	803	FZ4	C10-C09-C08	-2.51	119.18	121.58
2	B	803	FZ4	C10-C09-C08	-2.50	119.19	121.58
2	C	803	FZ4	C10-C09-C08	-2.50	119.19	121.58
2	D	801	FZ4	C04-C03-C02	-2.46	119.22	121.58
2	B	801	FZ4	C04-C03-C02	-2.44	119.25	121.58
2	A	801	FZ4	C04-C03-C02	-2.43	119.25	121.58
2	C	801	FZ4	C04-C03-C02	-2.40	119.28	121.58
2	B	802	FZ4	C10-C09-C08	-2.31	119.37	121.58
2	A	802	FZ4	C10-C09-C08	-2.31	119.37	121.58
2	A	801	FZ4	C05-C04-C03	2.29	123.07	120.24
2	B	801	FZ4	C05-C04-C03	2.29	123.07	120.24
2	C	801	FZ4	C05-C04-C03	2.29	123.07	120.24
2	D	801	FZ4	C05-C04-C03	2.29	123.07	120.24
2	D	802	FZ4	C10-C09-C08	-2.28	119.40	121.58
2	C	802	FZ4	C10-C09-C08	-2.26	119.42	121.58
2	C	802	FZ4	C06-C07-C02	-2.12	119.55	121.58
2	D	801	FZ4	B01-C02-C07	2.10	124.55	121.51
2	D	802	FZ4	C06-C07-C02	-2.10	119.57	121.58
2	C	801	FZ4	B01-C02-C07	2.09	124.54	121.51
2	D	802	FZ4	B01-C02-C07	-2.09	118.48	121.51
2	A	801	FZ4	B01-C02-C07	2.08	124.52	121.51
2	C	802	FZ4	B01-C02-C07	-2.08	118.50	121.51
2	B	802	FZ4	C06-C07-C02	-2.07	119.60	121.58
2	B	802	FZ4	B01-C02-C07	-2.07	118.51	121.51
2	A	802	FZ4	C06-C07-C02	-2.05	119.62	121.58
2	A	802	FZ4	B01-C02-C07	-2.04	118.56	121.51
2	A	801	FZ4	C13-C08-C09	2.04	119.20	116.86
2	B	801	FZ4	C13-C08-C09	2.04	119.20	116.86
2	C	801	FZ4	C13-C08-C09	2.04	119.20	116.86
2	D	801	FZ4	C13-C08-C09	2.04	119.20	116.86
2	B	801	FZ4	B01-C02-C07	2.04	124.46	121.51
2	B	803	FZ4	C06-C07-C02	-2.02	119.65	121.58

There are no chirality outliers.

All (72) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	A	801	FZ4	O14-B01-C08-C09

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Mol	Chain	Res	Type	Atoms
2	A	801	FZ4	O14-B01-C08-C13
2	A	801	FZ4	C02-B01-O14-C15
2	A	801	FZ4	C08-B01-O14-C15
2	A	802	FZ4	C08-B01-O14-C15
2	A	802	FZ4	O14-C15-C16-N17
2	A	803	FZ4	O14-B01-C02-C03
2	A	803	FZ4	O14-B01-C02-C07
2	A	803	FZ4	C02-B01-O14-C15
2	A	803	FZ4	C08-B01-O14-C15
2	A	803	FZ4	O14-C15-C16-N17
2	B	801	FZ4	O14-B01-C08-C09
2	B	801	FZ4	O14-B01-C08-C13
2	B	801	FZ4	C02-B01-O14-C15
2	B	801	FZ4	C08-B01-O14-C15
2	B	802	FZ4	C08-B01-O14-C15
2	B	802	FZ4	O14-C15-C16-N17
2	B	803	FZ4	O14-B01-C02-C03
2	B	803	FZ4	O14-B01-C02-C07
2	B	803	FZ4	C02-B01-O14-C15
2	B	803	FZ4	C08-B01-O14-C15
2	B	803	FZ4	O14-C15-C16-N17
2	C	801	FZ4	O14-B01-C08-C09
2	C	801	FZ4	O14-B01-C08-C13
2	C	801	FZ4	C02-B01-O14-C15
2	C	801	FZ4	C08-B01-O14-C15
2	C	802	FZ4	C08-B01-O14-C15
2	C	802	FZ4	O14-C15-C16-N17
2	C	803	FZ4	O14-B01-C02-C03
2	C	803	FZ4	O14-B01-C02-C07
2	C	803	FZ4	C02-B01-O14-C15
2	C	803	FZ4	C08-B01-O14-C15
2	C	803	FZ4	O14-C15-C16-N17
2	D	801	FZ4	O14-B01-C08-C09
2	D	801	FZ4	O14-B01-C08-C13
2	D	801	FZ4	C02-B01-O14-C15
2	D	801	FZ4	C08-B01-O14-C15
2	D	802	FZ4	C08-B01-O14-C15
2	D	802	FZ4	O14-C15-C16-N17
2	D	803	FZ4	O14-B01-C02-C03
2	D	803	FZ4	O14-B01-C02-C07
2	D	803	FZ4	C02-B01-O14-C15
2	D	803	FZ4	C08-B01-O14-C15

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Mol	Chain	Res	Type	Atoms
2	D	803	FZ4	O14-C15-C16-N17
2	A	801	FZ4	C02-B01-C08-C13
2	B	801	FZ4	C02-B01-C08-C13
2	C	801	FZ4	C02-B01-C08-C13
2	D	801	FZ4	C02-B01-C08-C13
2	A	801	FZ4	C02-B01-C08-C09
2	A	803	FZ4	C08-B01-C02-C03
2	A	803	FZ4	C08-B01-C02-C07
2	B	801	FZ4	C02-B01-C08-C09
2	B	803	FZ4	C08-B01-C02-C03
2	B	803	FZ4	C08-B01-C02-C07
2	C	801	FZ4	C02-B01-C08-C09
2	C	803	FZ4	C08-B01-C02-C03
2	C	803	FZ4	C08-B01-C02-C07
2	D	801	FZ4	C02-B01-C08-C09
2	D	803	FZ4	C08-B01-C02-C03
2	D	803	FZ4	C08-B01-C02-C07
2	A	802	FZ4	O14-B01-C08-C09
2	A	802	FZ4	O14-B01-C08-C13
2	A	803	FZ4	O14-B01-C08-C09
2	B	802	FZ4	O14-B01-C08-C09
2	B	802	FZ4	O14-B01-C08-C13
2	B	803	FZ4	O14-B01-C08-C09
2	C	802	FZ4	O14-B01-C08-C09
2	C	802	FZ4	O14-B01-C08-C13
2	C	803	FZ4	O14-B01-C08-C09
2	D	802	FZ4	O14-B01-C08-C09
2	D	802	FZ4	O14-B01-C08-C13
2	D	803	FZ4	O14-B01-C08-C09

There are no ring outliers.

4 monomers are involved in 4 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	D	801	FZ4	1	0
2	C	801	FZ4	1	0
2	B	801	FZ4	1	0
2	A	801	FZ4	1	0

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
1	A	1
1	B	1
1	C	1
1	D	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	A	744:THR	C	748:HIS	N	35.64
1	B	744:THR	C	748:HIS	N	35.64
1	C	744:THR	C	748:HIS	N	35.64
1	D	744:THR	C	748:HIS	N	35.64

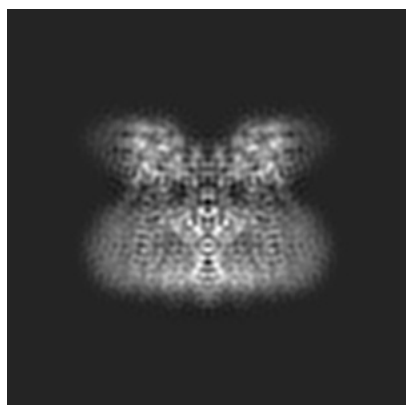
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-8921. These allow visual inspection of the internal detail of the map and identification of artifacts.

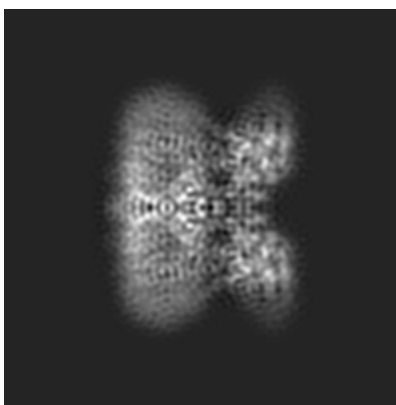
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

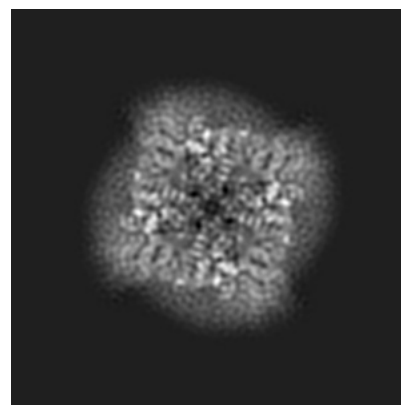
6.1.1 Primary map



X



Y

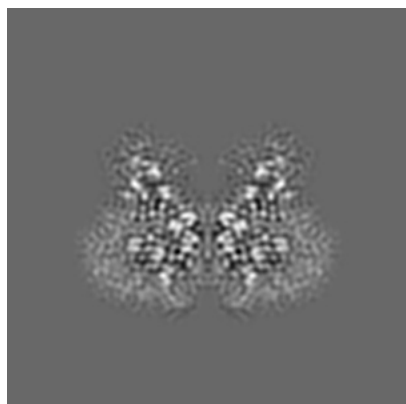


Z

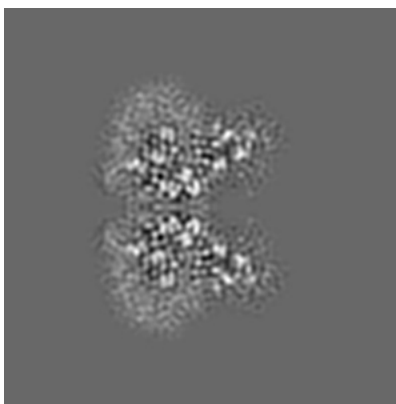
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

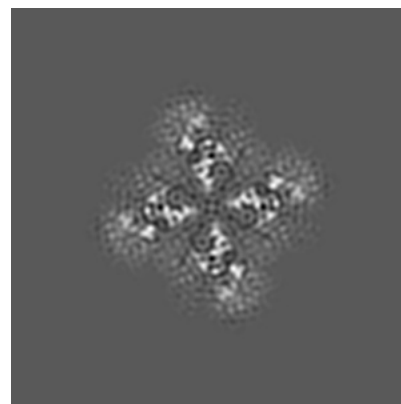
6.2.1 Primary map



X Index: 110



Y Index: 110



Z Index: 110

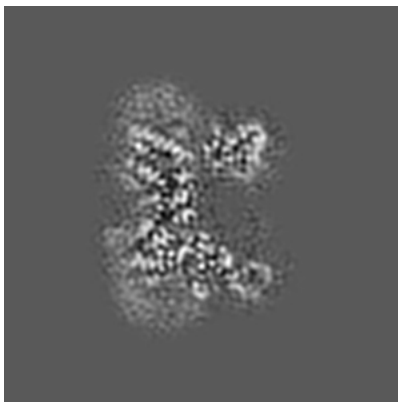
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

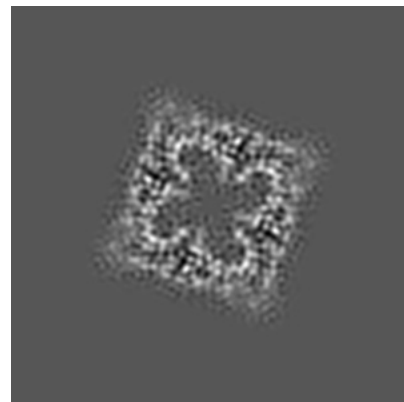
6.3.1 Primary map



X Index: 104



Y Index: 104

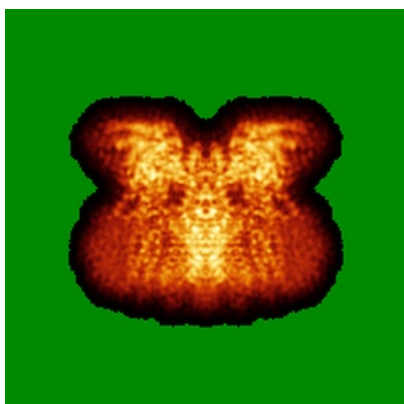


Z Index: 134

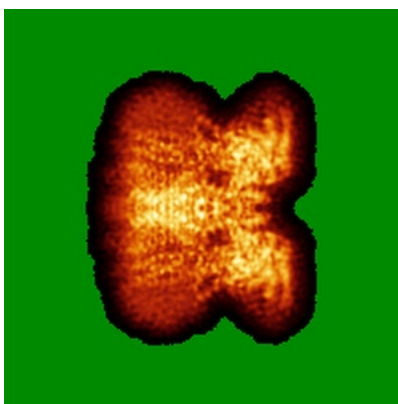
The images above show the largest variance slices of the map in three orthogonal directions.

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

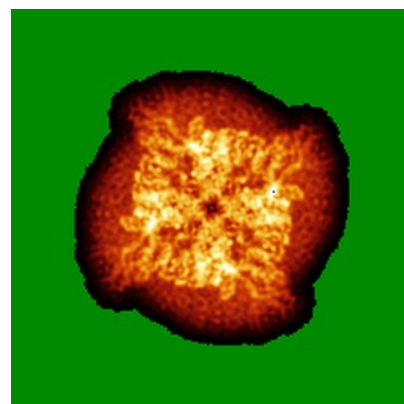
6.4.1 Primary map



X



Y



Z

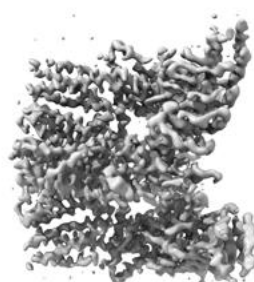
The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views [i](#)

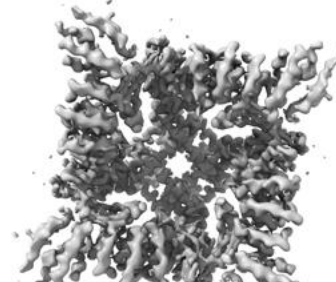
6.5.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.057. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

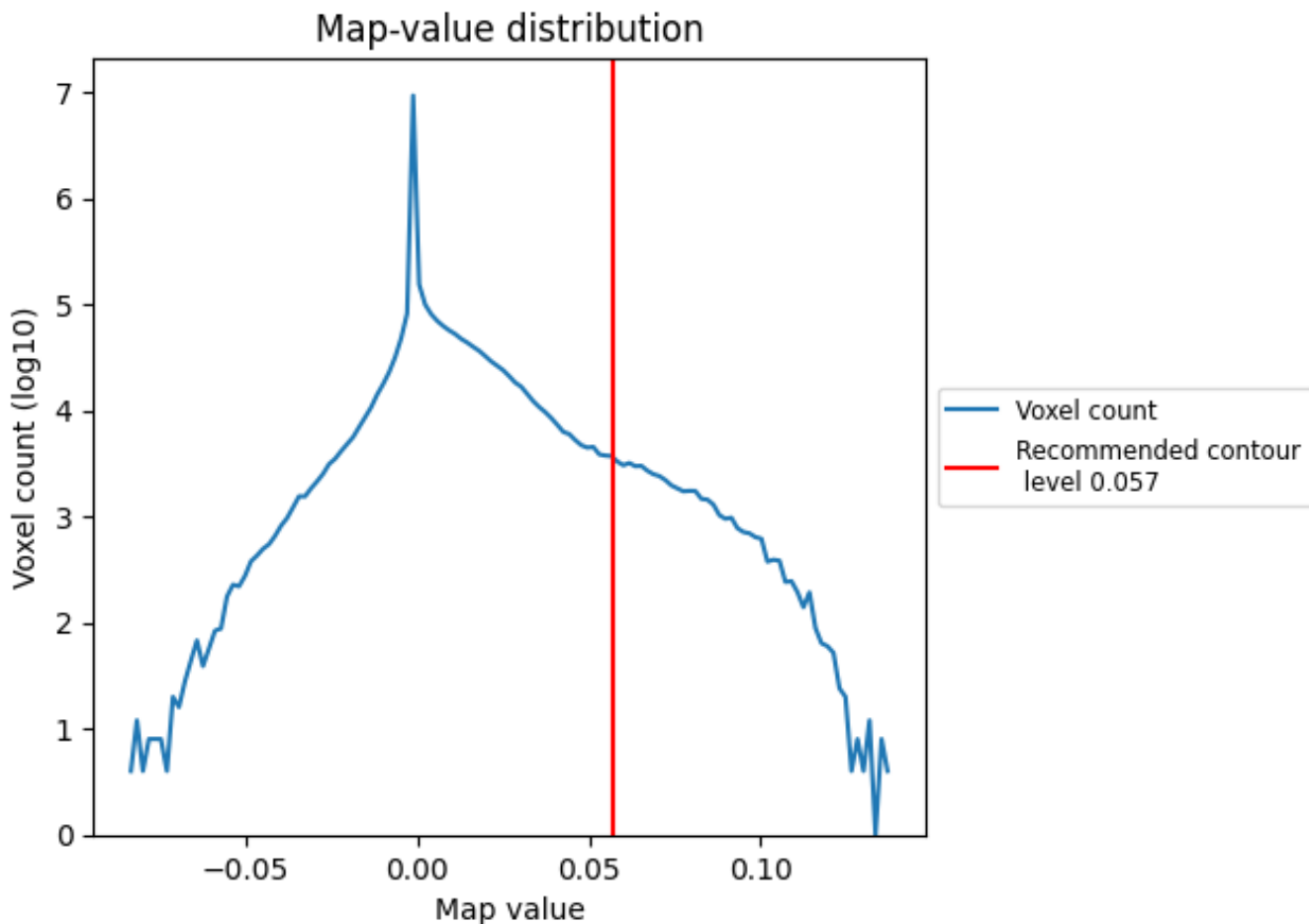
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

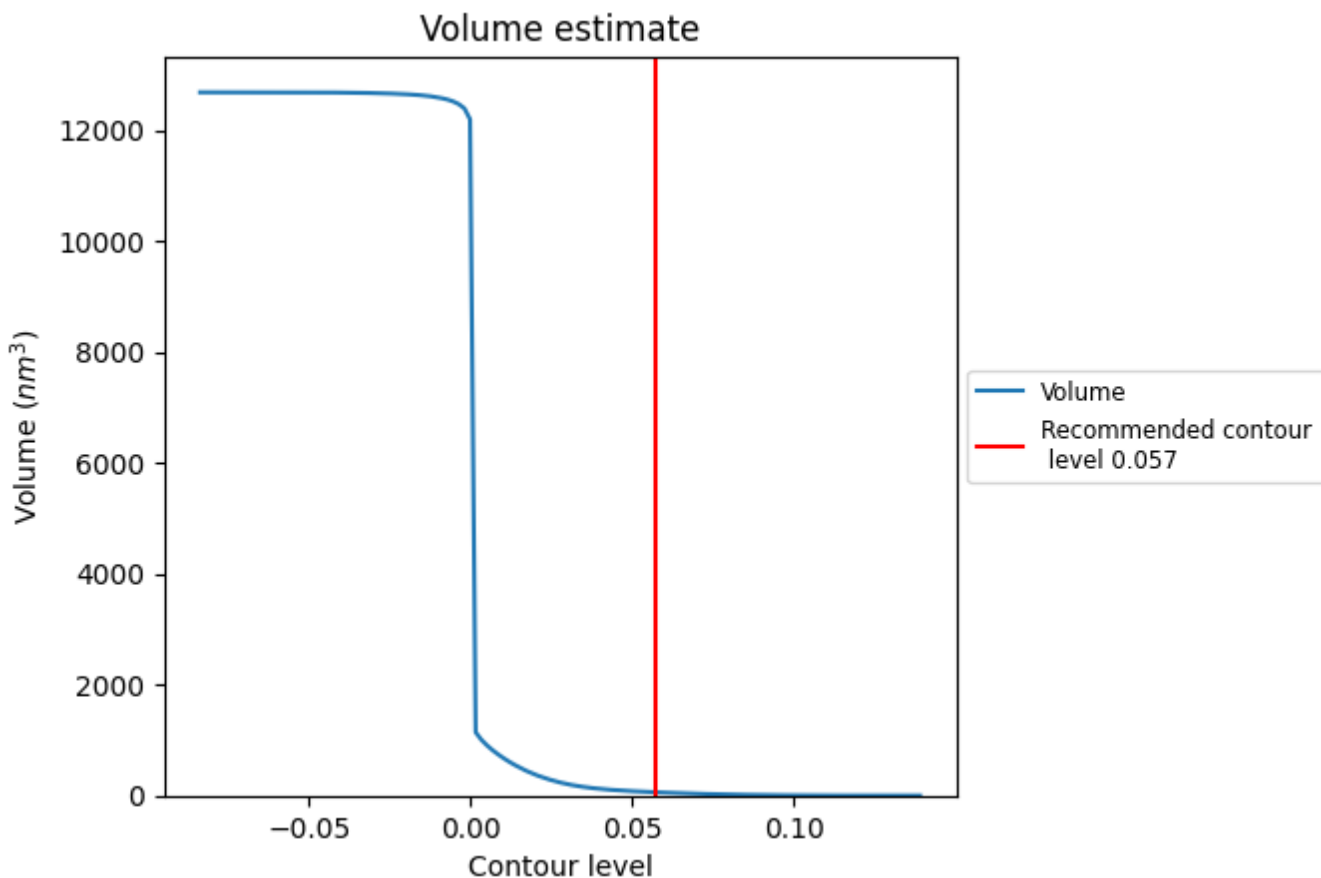
This section contains the results of statistical analysis of the map.

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.

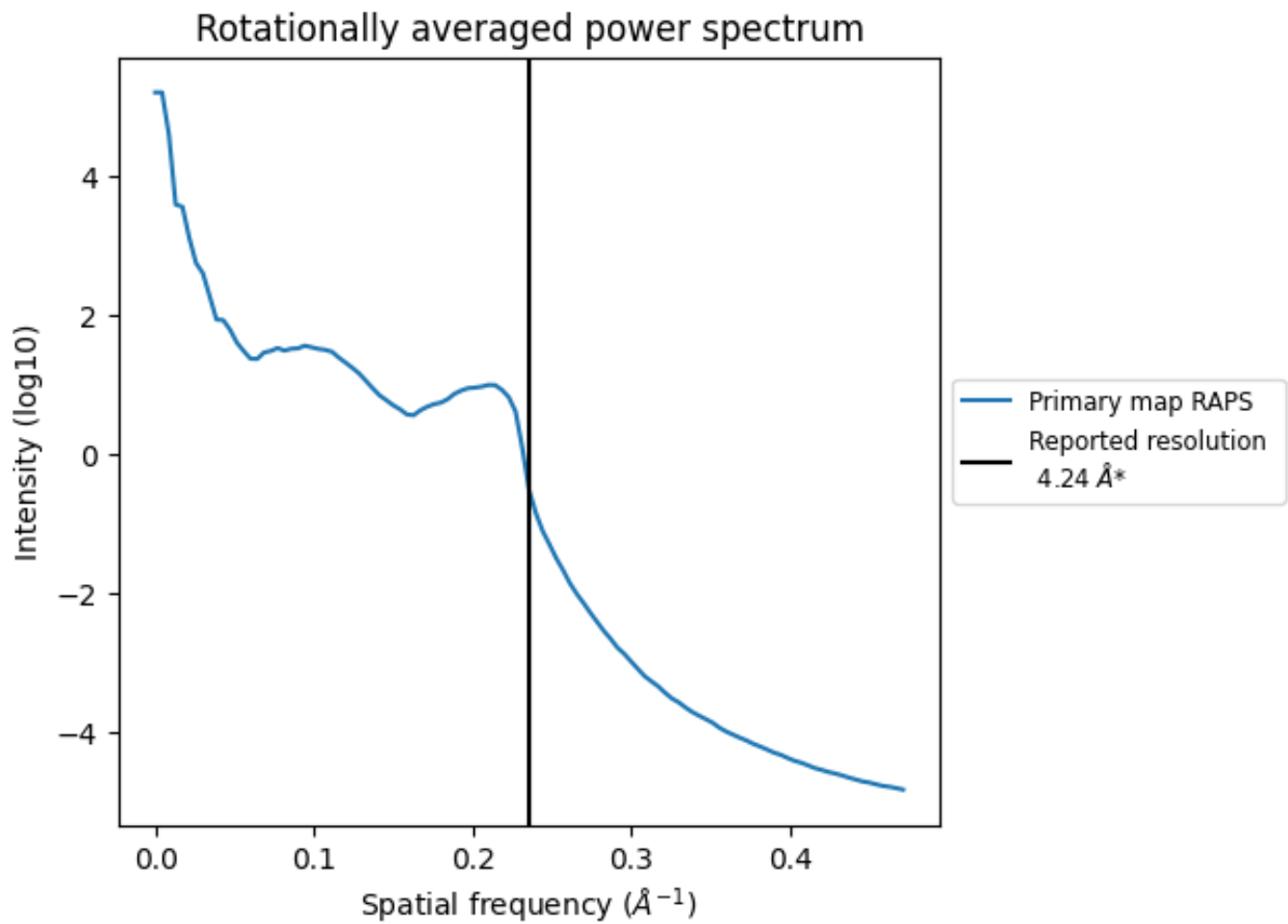
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 60 nm³; this corresponds to an approximate mass of 54 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 0.236\AA^{-1}

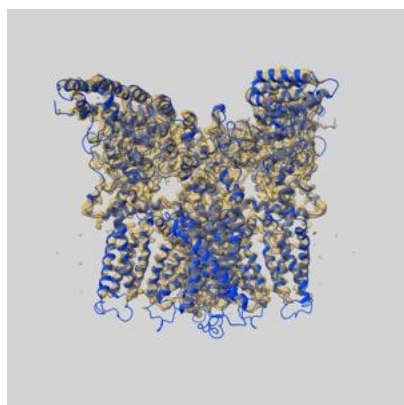
8 Fourier-Shell correlation

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

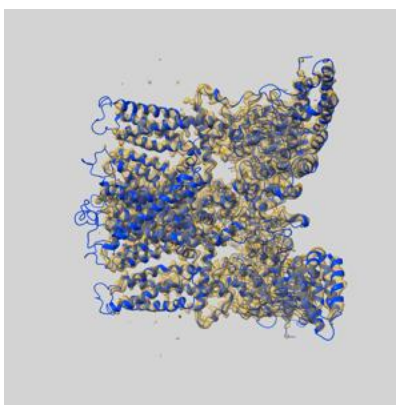
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-8921 and PDB model 6DVZ. Per-residue inclusion information can be found in section 3 on page 5.

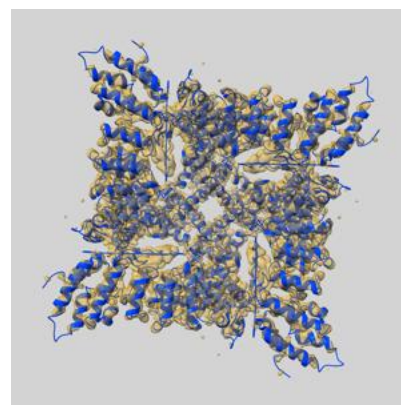
9.1 Map-model overlay [i](#)



X



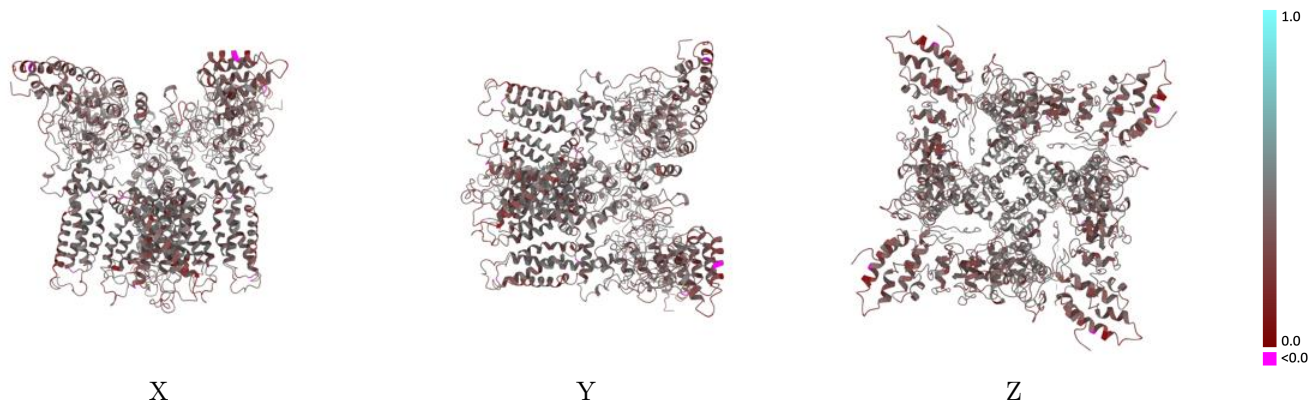
Y



Z

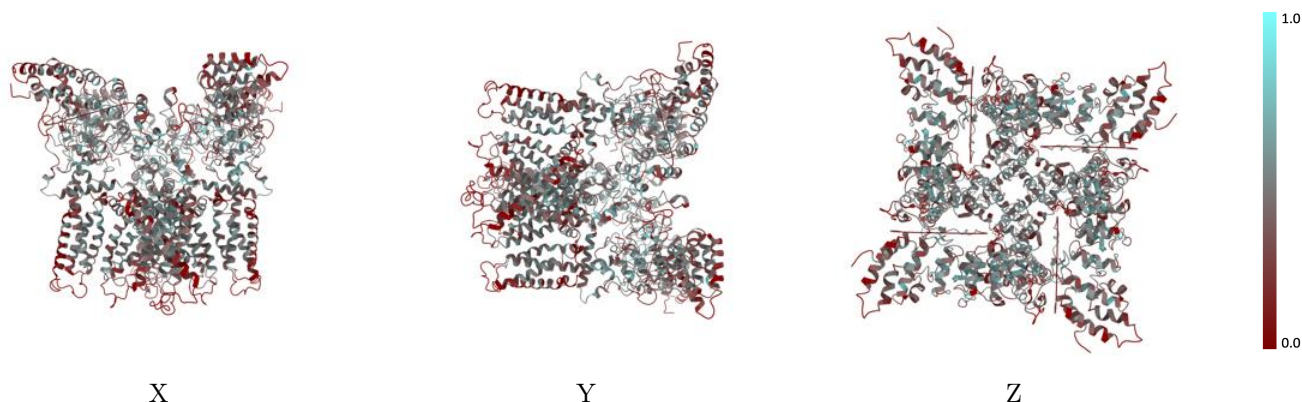
The images above show the 3D surface view of the map at the recommended contour level 0.057 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



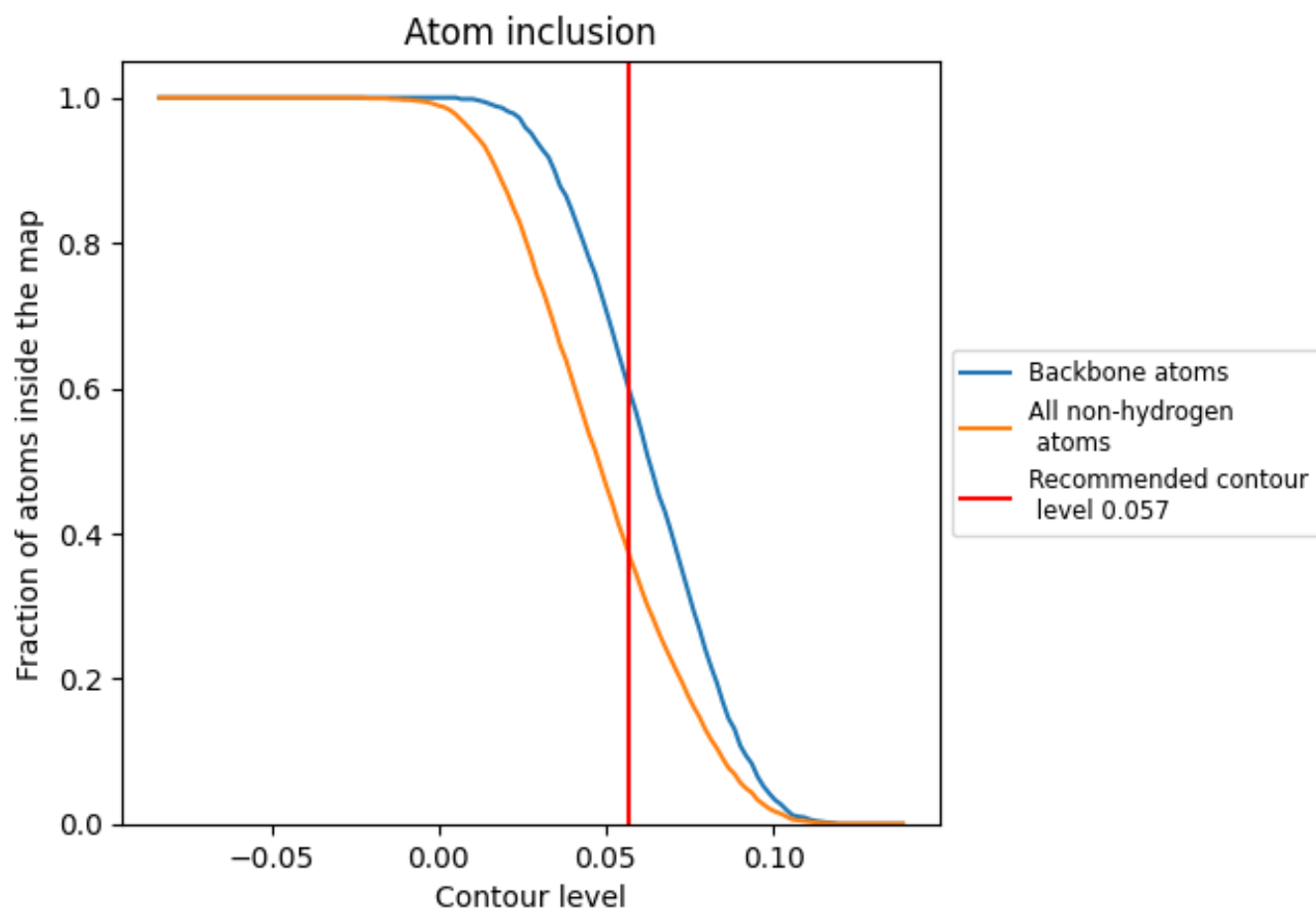
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.057).

9.4 Atom inclusion [i](#)



At the recommended contour level, 60% of all backbone atoms, 37% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary [i](#)

The table lists the average atom inclusion at the recommended contour level (0.057) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.3710	0.3870
A	0.3700	0.3850
B	0.3700	0.3870
C	0.3700	0.3880
D	0.3710	0.3860

