Full wwPDB EM Validation Report

May 19, 2025 – 10:38 AM JST

PDB ID	:	8WGC / pdb_00008wgc
EMDB ID	:	EMD-37508
Title	:	heterodimer of mGlu2 and mGlu4 bound with mGlu2 agonist LY379268
Authors	:	Zhang, Y.; Liu, J.
Deposited on	:	2023-09-20
Resolution	:	5.95 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:

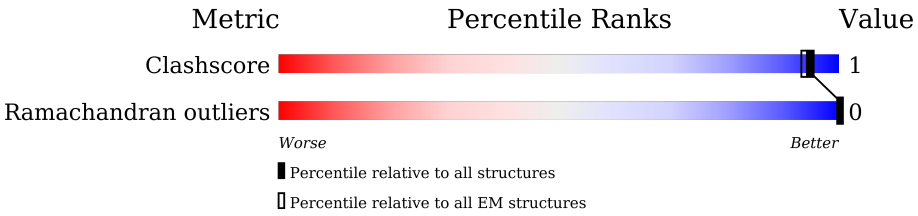
EMDB validation analysis	:	0.0.1.dev118
Mogul	:	1.8.5 (274361), CSD as541be (2020)
MolProbity	:	4-5-2 with Phenix2.0rc1
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.43.1

1 Overall quality at a glance

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

The reported resolution of this entry is 5.95 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

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 <=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	D	854	39% 84% · 11%
2	A	880	33% 84% 5% 11%

2 Entry composition

There are 3 unique types of molecules in this entry. The entry contains 6193 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.

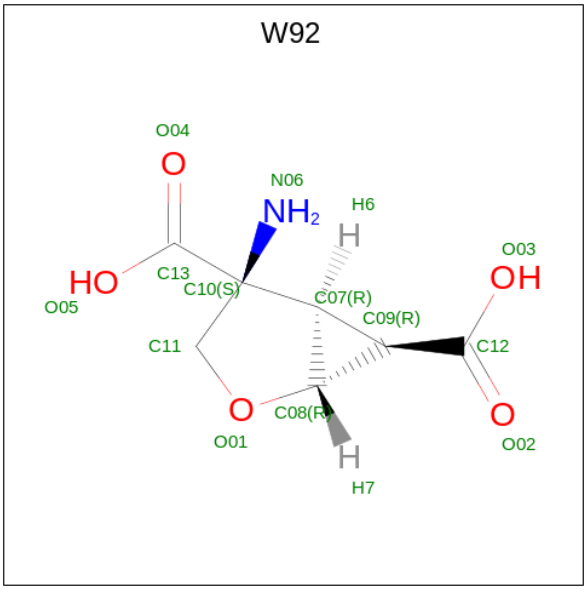
- Molecule 1 is a protein called Metabotropic glutamate receptor 2.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
1	D	762	3048	1524	762	762	0	0

- Molecule 2 is a protein called Metabotropic glutamate receptor 4.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
2	A	783	3132	1566	783	783	0	0

- Molecule 3 is (1R,4R,5S,6R)-4-azanyl-2-oxabicyclo[3.1.0]hexane-4,6-dicarboxylic acid (CCD ID: W92) (formula: $C_7H_9NO_5$) (labeled as "Ligand of Interest" by depositor).



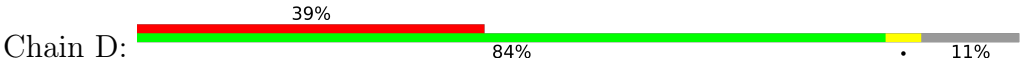
Mol	Chain	Residues	Atoms				AltConf
			Total	C	N	O	
3	D	1	13	7	1	5	0

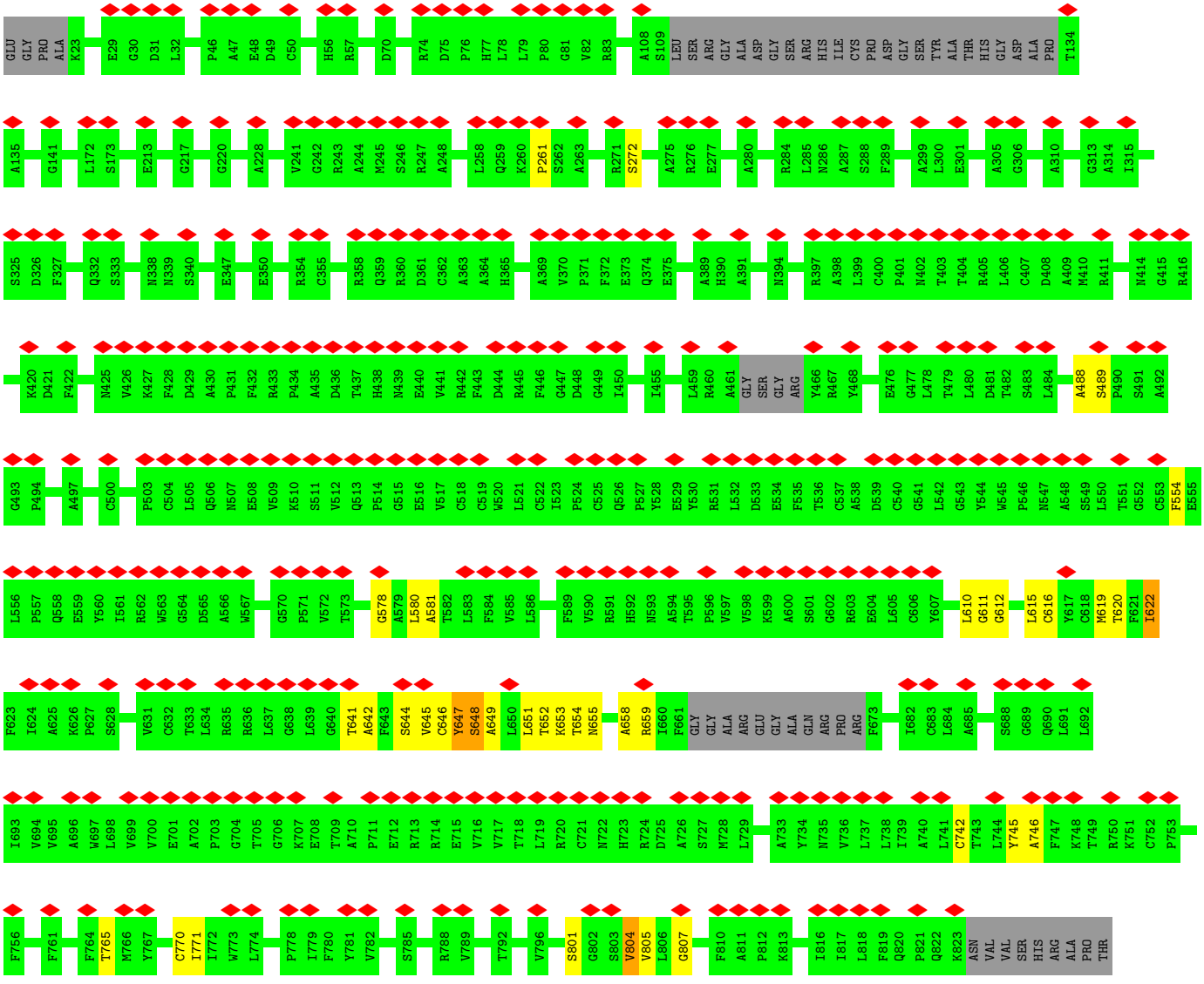
3 Residue-property plots (i)

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: Metabotropic glutamate receptor 2

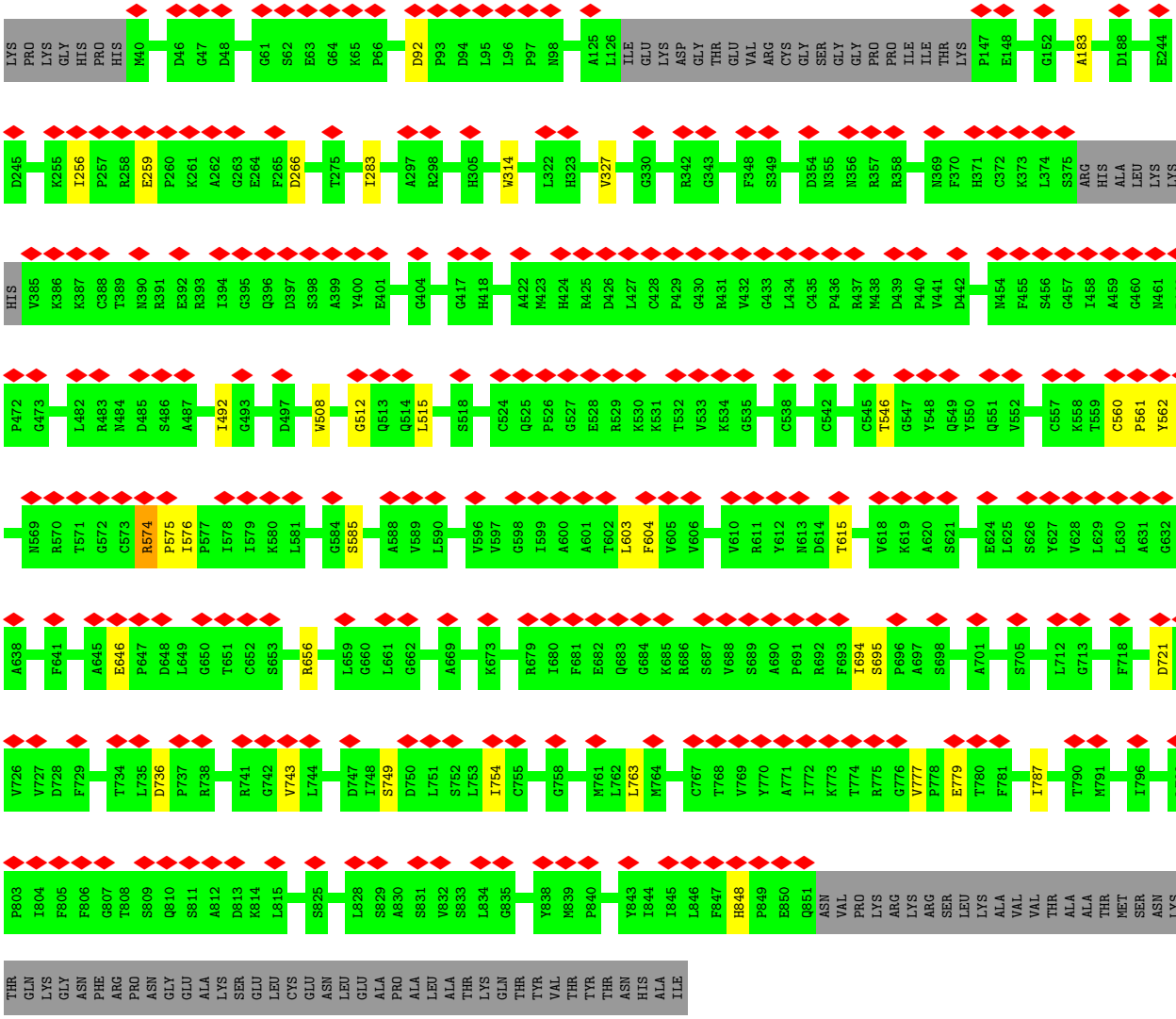
Chain D:





• Molecule 2: Metabotropic glutamate receptor 4

Chain A:



4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	106936	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 ($e^-/Å^2$)	52	Depositor
Minimum defocus (nm)	600	Depositor
Maximum defocus (nm)	1700	Depositor
Magnification	Not provided	
Image detector	FEI FALCON IV (4k x 4k)	Depositor
Maximum map value	2.395	Depositor
Minimum map value	-0.896	Depositor
Average map value	0.010	Depositor
Map value standard deviation	0.048	Depositor
Recommended contour level	0.526	Depositor
Map size (Å)	386.88, 386.88, 386.88	wwPDB
Map dimensions	416, 416, 416	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.93, 0.93, 0.93	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: W92

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	D	1.02	18/3044 (0.6%)	1.57	42/3798 (1.1%)
2	A	0.94	4/3129 (0.1%)	1.65	53/3906 (1.4%)
All	All	0.98	22/6173 (0.4%)	1.61	95/7704 (1.2%)

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	D	0	1
2	A	0	1
All	All	0	2

All (22) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	D	642	ALA	C-O	10.82	1.38	1.24
1	D	645	VAL	CA-C	-10.63	1.38	1.52
2	A	561	PRO	CA-C	-10.19	1.39	1.52
1	D	642	ALA	N-CA	-8.74	1.35	1.46
2	A	563	ASP	N-CA	-8.59	1.37	1.46
1	D	801	SER	C-O	7.77	1.33	1.24
1	D	615	LEU	CA-C	-7.58	1.43	1.52
2	A	562	TYR	CA-C	-7.56	1.43	1.52
1	D	649	ALA	C-O	7.46	1.32	1.24
2	A	562	TYR	N-CA	-6.19	1.38	1.45
1	D	647	TYR	CA-C	-6.13	1.44	1.52
1	D	612	GLY	CA-C	-5.99	1.45	1.52
1	D	646	CYS	CA-C	-5.86	1.44	1.52
1	D	745	TYR	C-O	5.82	1.30	1.24

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	D	610	LEU	CA-C	-5.71	1.44	1.52
1	D	620	THR	C-O	5.63	1.31	1.24
1	D	658	ALA	CA-C	-5.60	1.45	1.52
1	D	616	CYS	N-CA	-5.53	1.39	1.46
1	D	612	GLY	N-CA	-5.51	1.38	1.45
1	D	765	THR	CA-C	-5.23	1.46	1.52
1	D	651	LEU	CA-C	-5.05	1.46	1.52
1	D	648	SER	N-CA	-5.01	1.40	1.46

All (95) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	A	562	TYR	N-CA-C	19.68	139.89	108.99
1	D	642	ALA	N-CA-C	-17.90	91.57	113.41
2	A	563	ASP	N-CA-C	-16.99	86.35	113.19
1	D	581	ALA	N-CA-C	-15.81	94.13	111.36
1	D	648	SER	N-CA-C	-14.62	95.35	111.14
1	D	611	GLY	N-CA-C	-12.39	98.13	112.50
1	D	644	SER	CA-C-N	-11.93	108.44	122.63
1	D	644	SER	C-N-CA	-11.93	108.44	122.63
1	D	612	GLY	N-CA-C	11.33	126.32	112.73
1	D	578	GLY	N-CA-C	-11.21	98.92	112.49
1	D	658	ALA	N-CA-C	-11.00	98.17	111.69
1	D	646	CYS	CA-C-N	-10.14	104.71	122.26
1	D	646	CYS	C-N-CA	-10.14	104.71	122.26
1	D	619	MET	N-CA-C	9.87	122.12	111.36
2	A	561	PRO	N-CA-C	-9.71	95.99	111.14
2	A	561	PRO	CA-C-N	-9.50	105.04	121.85
2	A	561	PRO	C-N-CA	-9.50	105.04	121.85
1	D	655	ASN	N-CA-C	-9.13	101.40	111.36
2	A	787	ILE	N-CA-C	-8.96	101.24	111.00
1	D	645	VAL	CA-C-N	-8.91	105.52	120.68
1	D	645	VAL	C-N-CA	-8.91	105.52	120.68
1	D	645	VAL	N-CA-C	8.62	119.86	111.67
1	D	649	ALA	CA-C-N	-8.57	106.11	120.68
1	D	649	ALA	C-N-CA	-8.57	106.11	120.68
1	D	771	ILE	N-CA-C	8.11	118.20	110.42
1	D	641	THR	N-CA-C	8.09	122.72	113.02
2	A	736	ASP	CA-C-N	7.93	127.65	119.56
2	A	736	ASP	C-N-CA	7.93	127.65	119.56
1	D	770	CYS	N-CA-C	-7.87	102.71	111.28
1	D	642	ALA	O-C-N	-7.70	111.43	122.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	D	746	ALA	N-CA-C	-7.65	102.94	111.28
2	A	777	VAL	CA-C-N	7.56	127.60	119.89
2	A	777	VAL	C-N-CA	7.56	127.60	119.89
2	A	283	ILE	N-CA-C	7.56	118.69	108.11
2	A	763	LEU	N-CA-C	-7.48	103.21	111.36
2	A	721	ASP	CA-C-N	7.40	127.41	119.78
2	A	721	ASP	C-N-CA	7.40	127.41	119.78
2	A	754	ILE	N-CA-C	-7.37	103.77	111.58
2	A	848	HIS	CA-C-N	7.29	127.00	119.56
2	A	848	HIS	C-N-CA	7.29	127.00	119.56
2	A	546	THR	N-CA-C	7.23	117.81	108.34
2	A	314	TRP	N-CA-C	-7.12	101.92	111.96
1	D	653	LYS	N-CA-C	-7.08	103.60	111.82
2	A	183	ALA	CA-C-N	7.07	126.70	119.56
2	A	183	ALA	C-N-CA	7.07	126.70	119.56
2	A	492	ILE	N-CA-C	-6.88	105.89	111.81
2	A	259	GLU	CA-C-N	6.77	126.75	119.78
2	A	259	GLU	C-N-CA	6.77	126.75	119.78
2	A	576	ILE	CA-C-N	6.75	126.78	119.90
2	A	576	ILE	C-N-CA	6.75	126.78	119.90
1	D	804	VAL	CA-C-N	-6.71	112.11	120.56
1	D	804	VAL	C-N-CA	-6.71	112.11	120.56
2	A	574	ARG	CA-C-N	6.62	126.57	119.76
2	A	574	ARG	C-N-CA	6.62	126.57	119.76
2	A	802	ILE	CA-C-N	6.61	126.30	119.56
2	A	802	ILE	C-N-CA	6.61	126.30	119.56
1	D	622	ILE	N-CA-C	-6.49	102.98	111.09
1	D	807	GLY	N-CA-C	-6.48	104.96	112.73
2	A	615	THR	CA-C-N	6.45	126.67	119.32
2	A	615	THR	C-N-CA	6.45	126.67	119.32
1	D	580	LEU	N-CA-C	6.41	120.30	112.23
2	A	92	ASP	CA-C-N	6.38	126.07	119.56
2	A	92	ASP	C-N-CA	6.38	126.07	119.56
2	A	266	ASP	N-CA-C	-6.38	104.20	112.23
2	A	646	GLU	CA-C-N	6.37	126.71	119.83
2	A	646	GLU	C-N-CA	6.37	126.71	119.83
1	D	742	CYS	N-CA-C	-6.35	104.36	111.28
2	A	585	SER	CA-C-N	6.26	126.73	119.47
2	A	585	SER	C-N-CA	6.26	126.73	119.47
1	D	649	ALA	CA-C-O	6.10	127.02	120.55
1	D	654	THR	N-CA-C	6.09	118.00	111.36
2	A	575	PRO	N-CA-C	6.05	120.58	111.14

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	D	261	PRO	CA-C-N	5.95	130.12	120.60
1	D	261	PRO	C-N-CA	5.95	130.12	120.60
1	D	610	LEU	N-CA-C	-5.92	106.06	113.28
2	A	801	PHE	CA-C-N	-5.91	116.52	120.24
2	A	801	PHE	C-N-CA	-5.91	116.52	120.24
2	A	471	ALA	CA-C-N	5.89	125.85	119.78
2	A	471	ALA	C-N-CA	5.89	125.85	119.78
1	D	647	TYR	N-CA-C	5.76	120.46	113.38
2	A	256	ILE	CA-C-N	5.48	125.43	119.78
2	A	256	ILE	C-N-CA	5.48	125.43	119.78
1	D	554	PHE	O-C-N	5.38	129.34	123.27
1	D	652	THR	CA-C-N	-5.33	112.20	120.31
1	D	652	THR	C-N-CA	-5.33	112.20	120.31
1	D	659	ARG	N-CA-C	-5.32	105.56	111.36
2	A	743	VAL	N-CA-C	5.32	115.78	108.12
2	A	656	ARG	N-CA-C	-5.29	106.41	112.92
2	A	327	VAL	N-CA-C	-5.29	106.53	111.45
1	D	801	SER	CA-C-O	5.25	125.99	120.42
2	A	515	LEU	CA-C-N	5.05	125.49	120.14
2	A	515	LEU	C-N-CA	5.05	125.49	120.14
2	A	749	SER	N-CA-C	5.01	117.57	110.50
2	A	779	GLU	N-CA-C	5.01	118.49	112.38
1	D	615	LEU	N-CA-C	-5.00	105.82	111.28

There are no chirality outliers.

All (2) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
2	A	560	CYS	Mainchain
1	D	622	ILE	Mainchain

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	D	3048	0	819	4	0
2	A	3132	0	851	4	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	D	13	0	0	1	0
All	All	6193	0	1670	8	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 1.

All (8) 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:D:272:SER:O	3:D:901:W92:N06	2.43	0.51
2:A:603:LEU:O	2:A:604:PHE:C	2.52	0.51
1:D:804:VAL:O	1:D:805:VAL:C	2.51	0.49
1:D:488:ALA:O	1:D:489:SER:C	2.57	0.48
2:A:694:ILE:O	2:A:695:SER:C	2.61	0.43
1:D:647:TYR:O	1:D:648:SER:C	2.59	0.42
2:A:508:TRP:O	2:A:512:GLY:N	2.50	0.42
2:A:565:ARG:N	2:A:574:ARG:O	2.50	0.41

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	D	754/854 (88%)	708 (94%)	46 (6%)	0	100	100
2	A	777/880 (88%)	754 (97%)	23 (3%)	0	100	100
All	All	1531/1734 (88%)	1462 (96%)	69 (4%)	0	100	100

There are no Ramachandran outliers to report.

5.3.2 Protein sidechains

There are no protein residues with a non-rotameric sidechain to report in this entry.

5.3.3 RNA

There are no RNA molecules in this entry.

5.4 Non-standard residues in protein, DNA, RNA chains

There are no non-standard protein/DNA/RNA residues in this entry.

5.5 Carbohydrates

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	$\#\|Z\| > 2$
3	W92	D	901	-	10,14,14	4.18	5 (50%)	8,23,23	4.24	3 (37%)

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
3	W92	D	901	-	-	4/8/31/31	0/2/2/2

All (5) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	D	901	W92	C09-C07	7.78	1.62	1.52
3	D	901	W92	C07-C08	7.60	1.61	1.49
3	D	901	W92	O01-C11	5.85	1.54	1.43
3	D	901	W92	O01-C08	-2.94	1.37	1.43
3	D	901	W92	C11-C10	2.43	1.57	1.54

All (3) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	D	901	W92	O01-C11-C10	-10.65	93.91	103.79
3	D	901	W92	C11-O01-C08	-3.23	101.74	107.65
3	D	901	W92	O05-C13-C10	2.98	121.66	113.60

There are no chirality outliers.

All (4) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	D	901	W92	C08-C09-C12-O02
3	D	901	W92	C08-C09-C12-O03
3	D	901	W92	C07-C09-C12-O02
3	D	901	W92	C07-C09-C12-O03

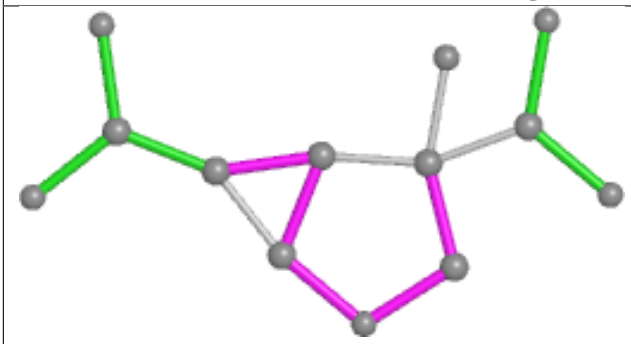
There are no ring outliers.

1 monomer is involved in 1 short contact:

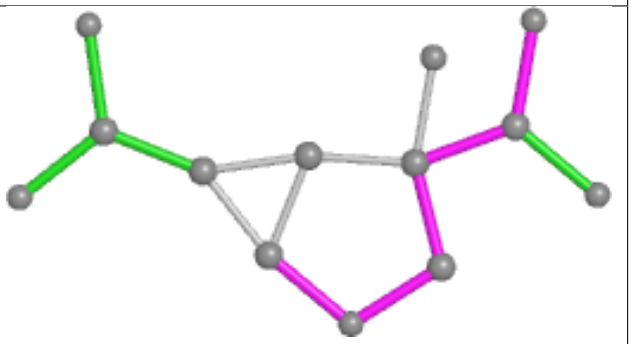
Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	D	901	W92	1	0

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 then 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.

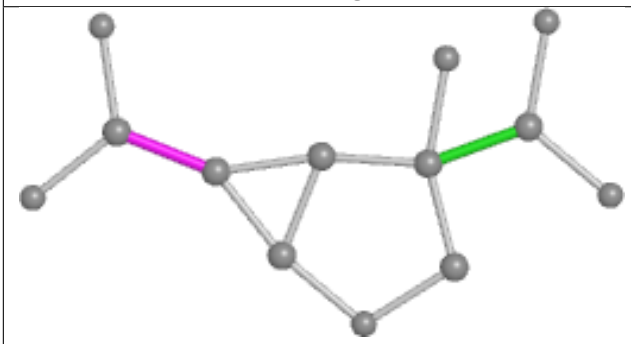
Ligand W92 D 901



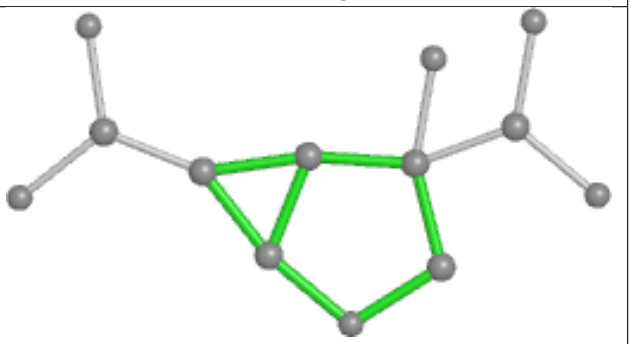
Bond lengths



Bond angles



Torsions



Rings

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

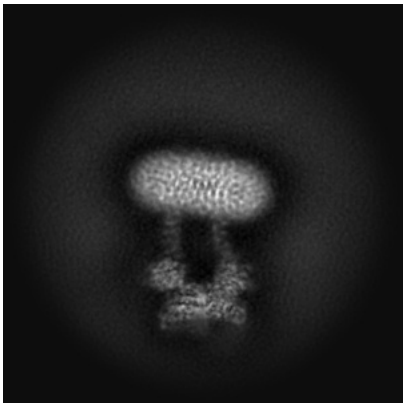
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-37508. These allow visual inspection of the internal detail of the map and identification of artifacts.

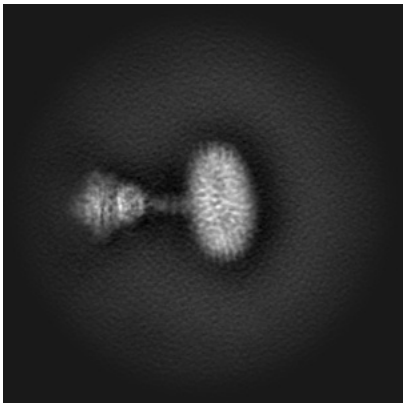
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

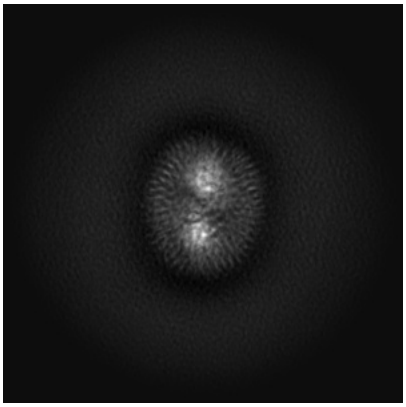
6.1.1 Primary map



X



Y

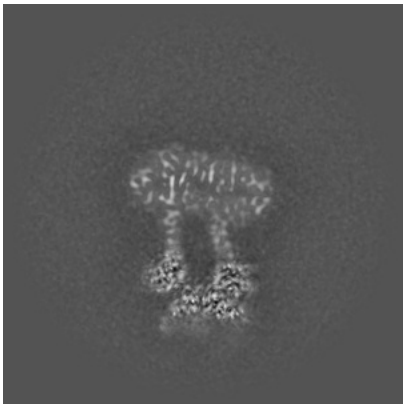


Z

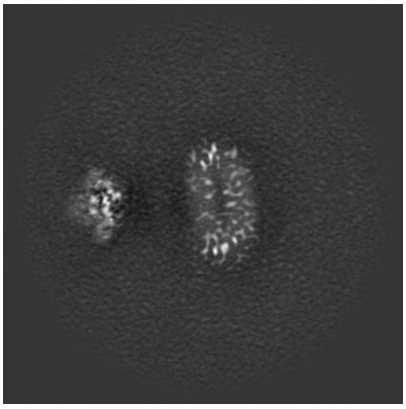
The images above show the map projected in three orthogonal directions.

6.2 Central slices

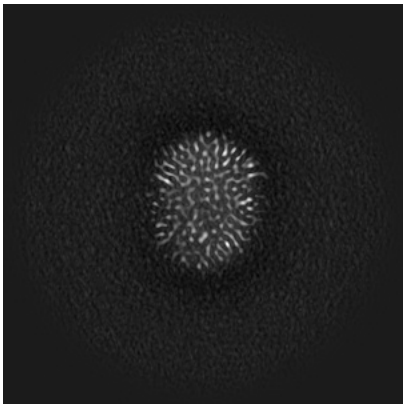
6.2.1 Primary map



X Index: 208



Y Index: 208

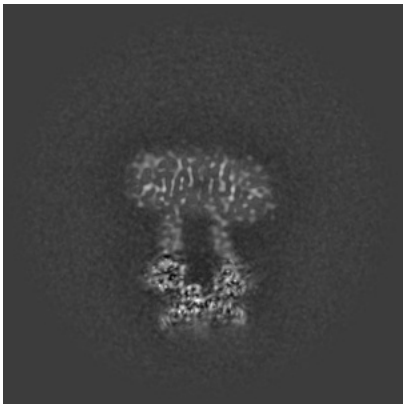


Z Index: 208

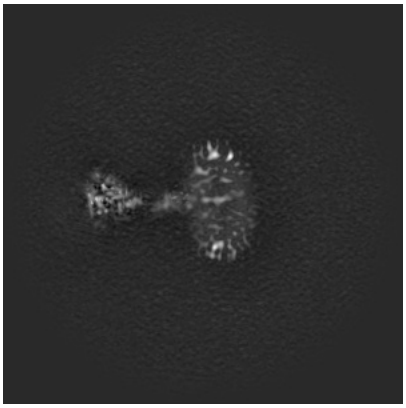
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

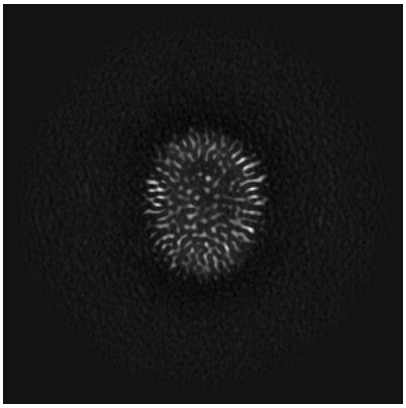
6.3.1 Primary map



X Index: 204



Y Index: 223

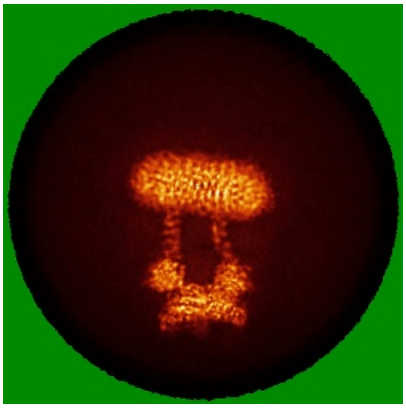


Z Index: 219

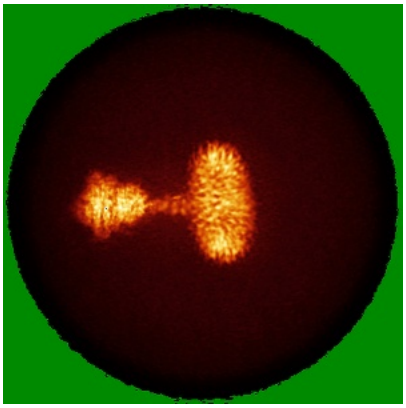
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) (i)

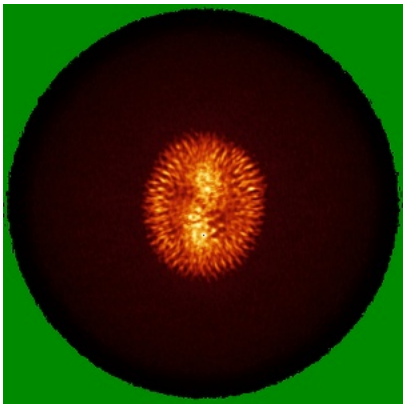
6.4.1 Primary map



X



Y

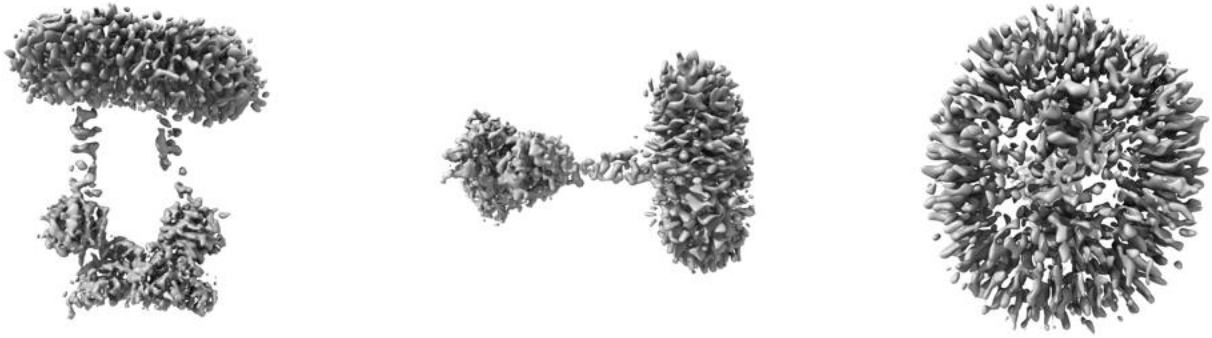


Z

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 0.526. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

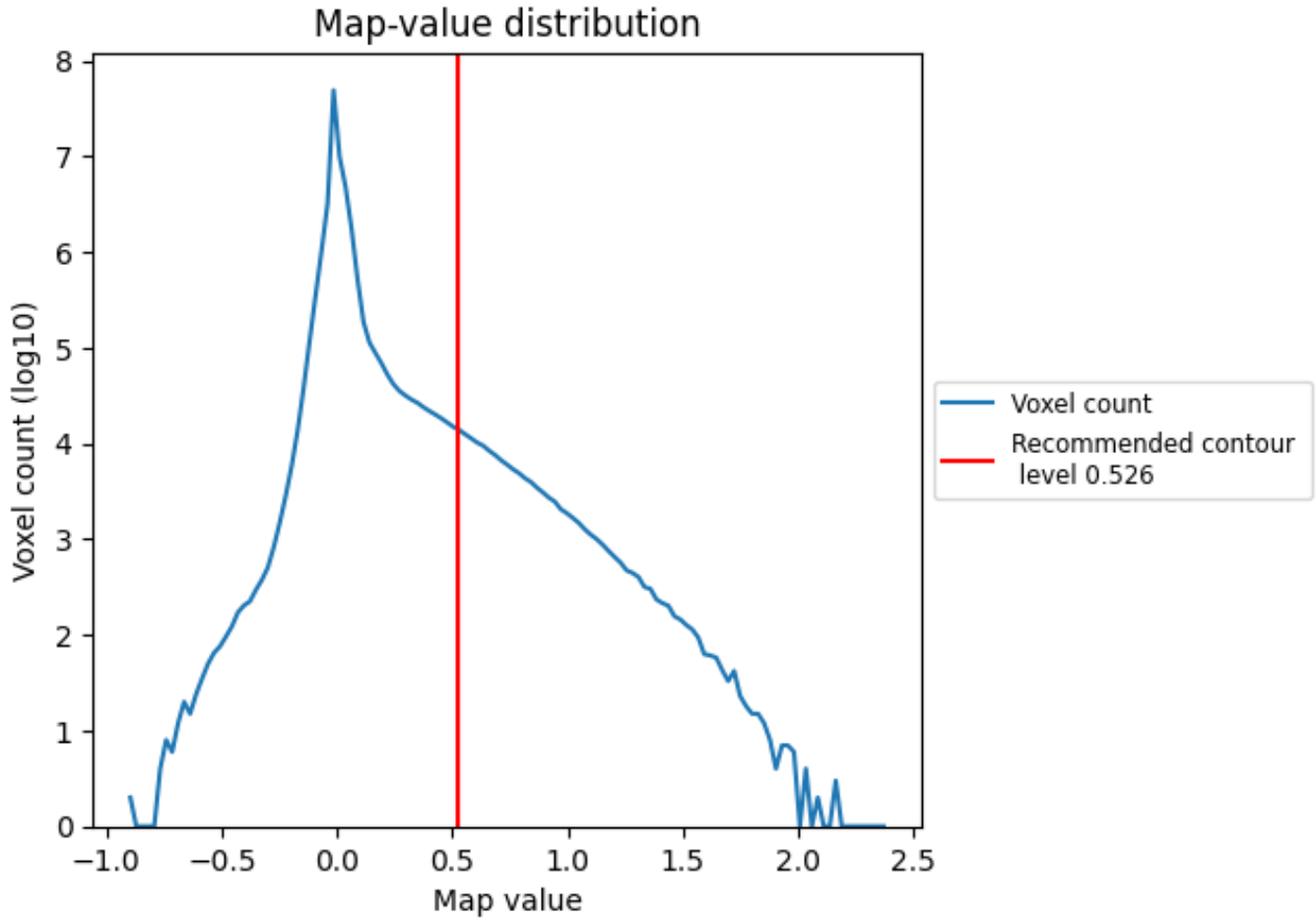
6.6 Mask visualisation (i)

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

7 Map analysis

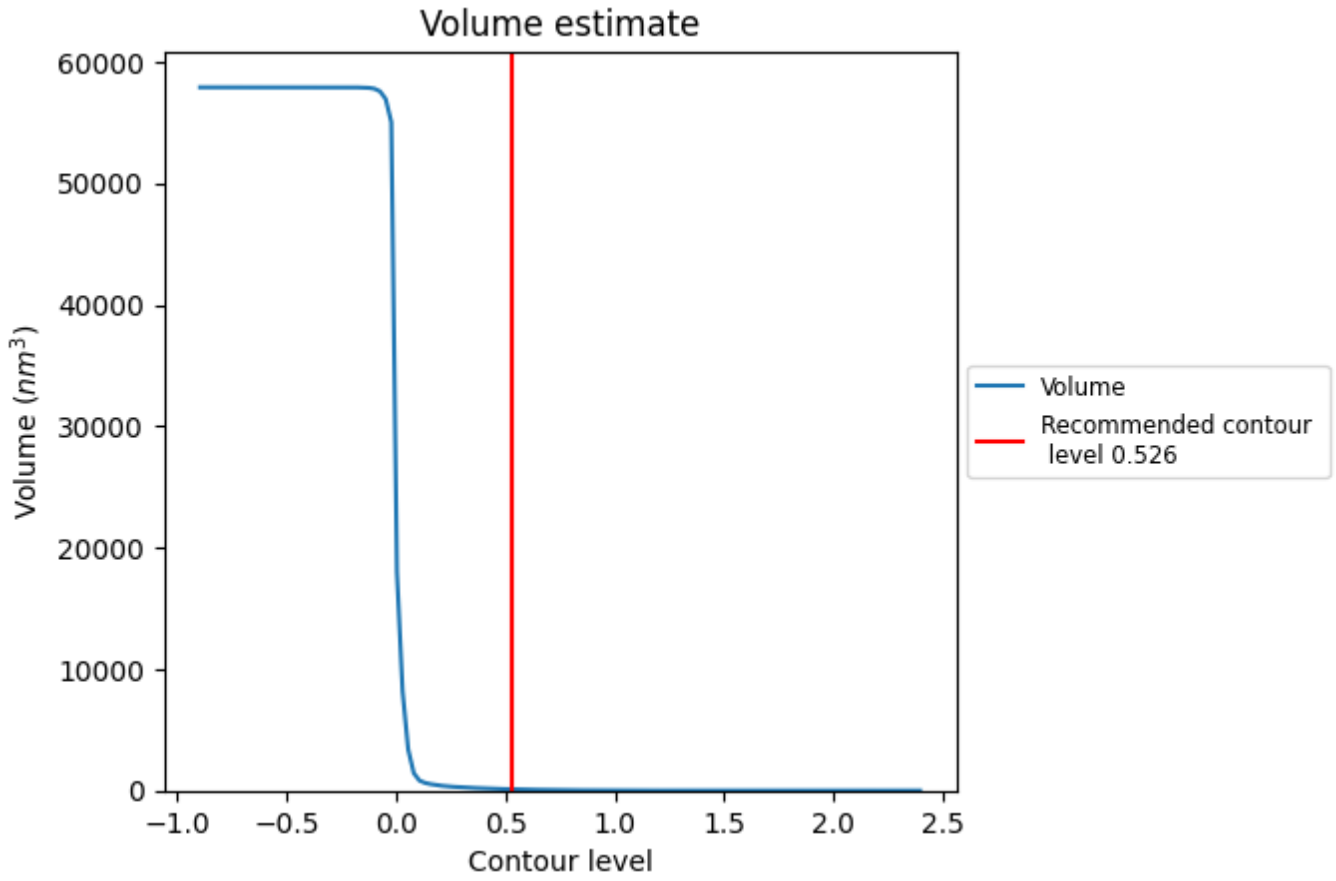
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



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.

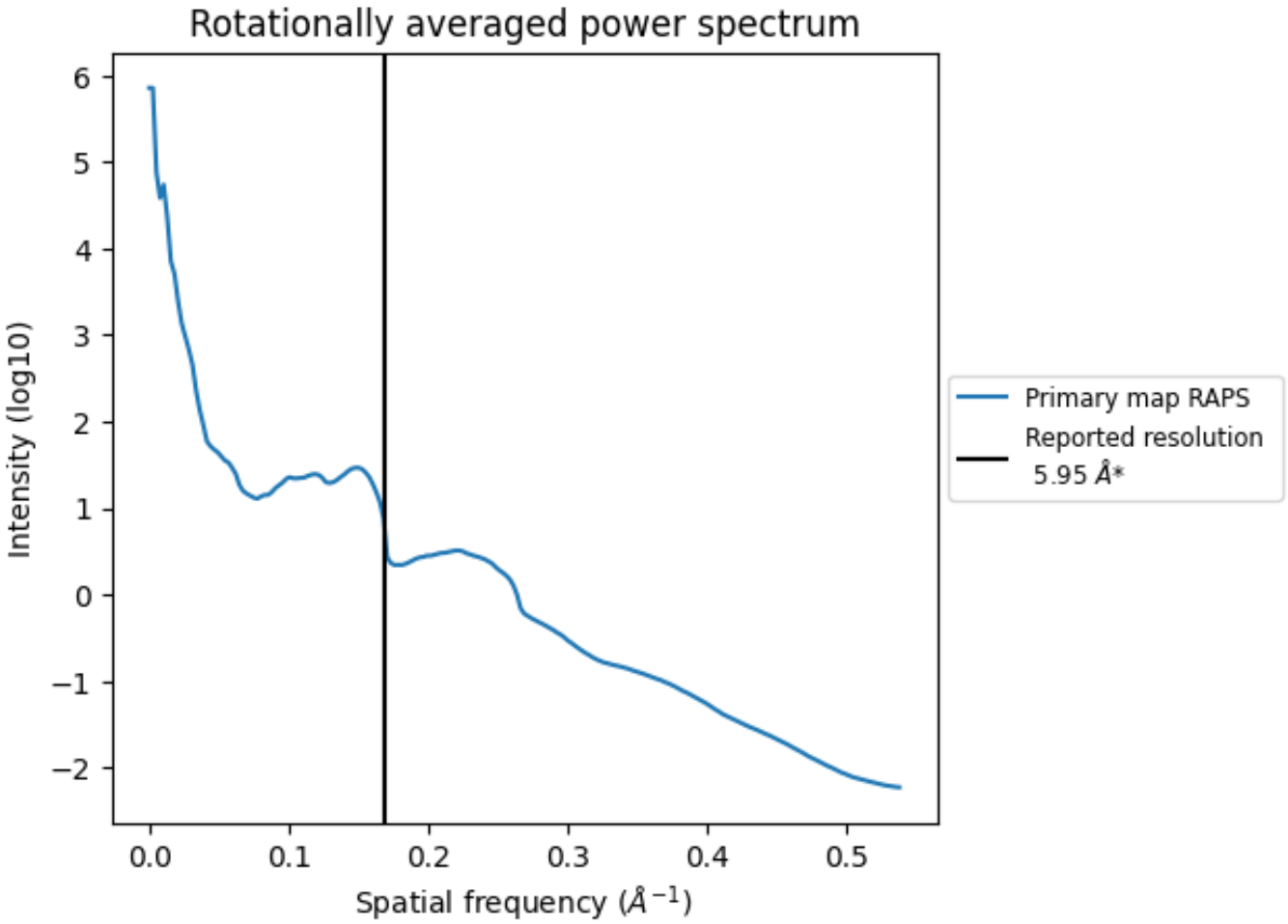
7.2 Volume estimate (i)



The volume at the recommended contour level is 109 nm^3; this corresponds to an approximate mass of 98 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 0.168 Å^{-1}

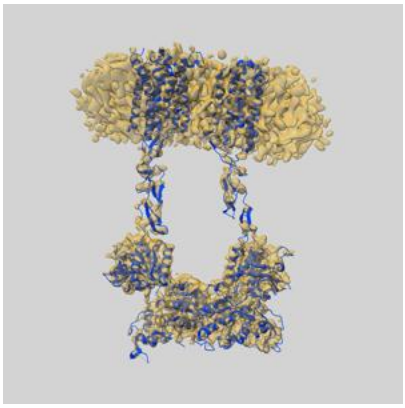
8 Fourier-Shell correlation (i)

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

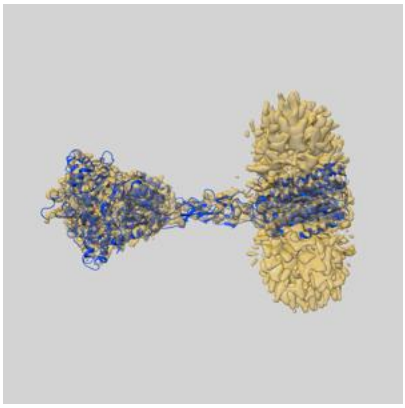
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-37508 and PDB model 8WGC. Per-residue inclusion information can be found in section 3 on page 4.

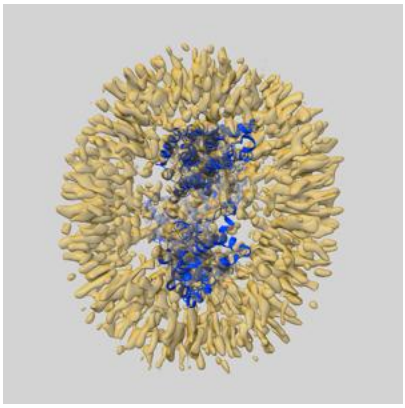
9.1 Map-model overlay



X



Y



Z

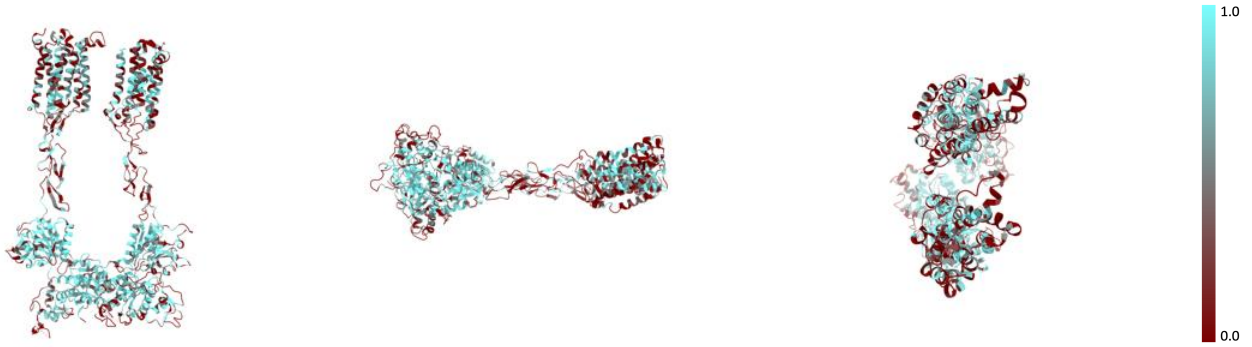
The images above show the 3D surface view of the map at the recommended contour level 0.526 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model (i)

X Y Z

The images above show the model with each residue coloured according 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.

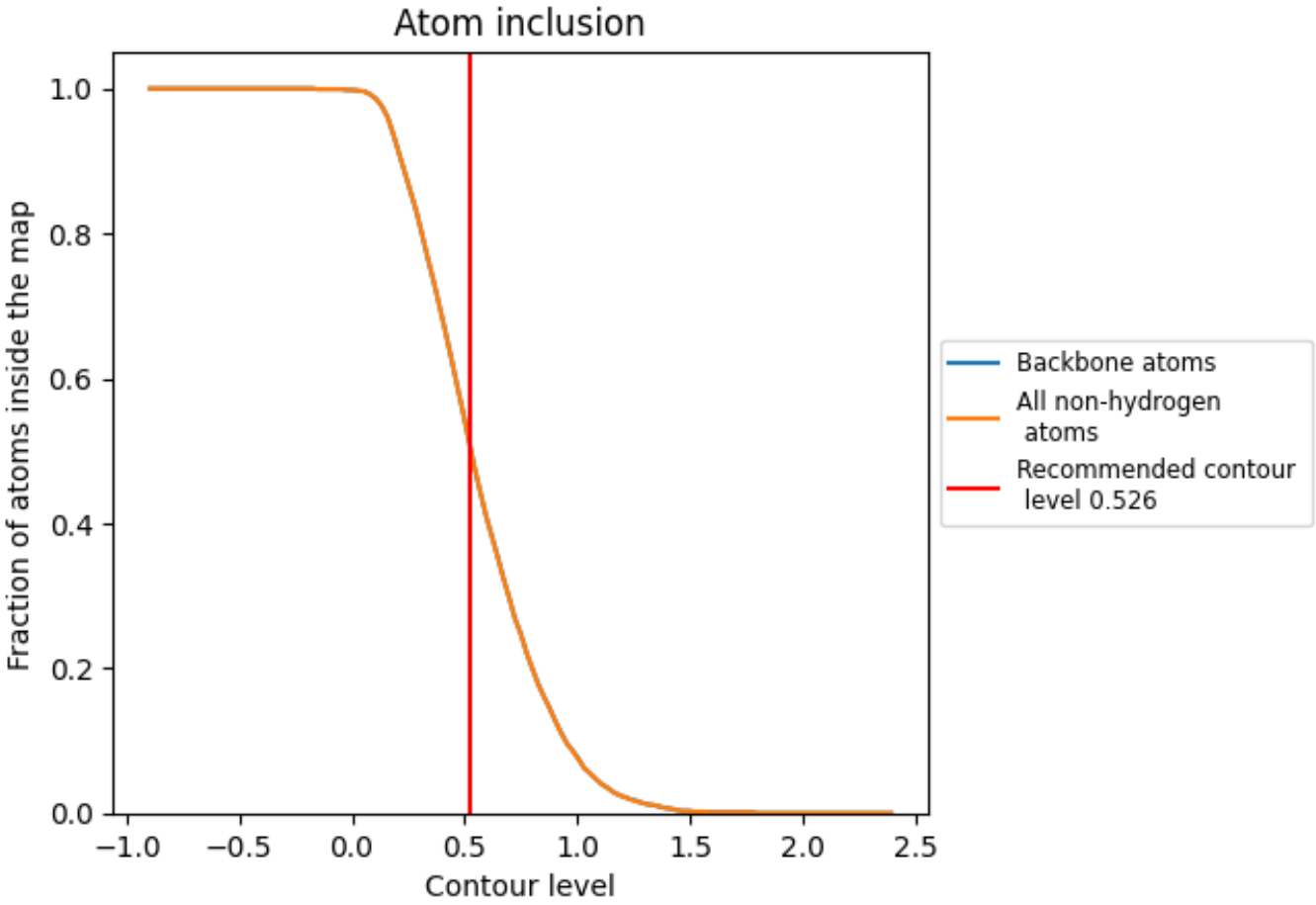
9.3 Atom inclusion mapped to coordinate model (i)



X Y Z

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 (0.526).

9.4 Atom inclusion (i)



At the recommended contour level, 50% of all backbone atoms, 50% 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 (0.526) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.5050	0.2150
A	0.5290	0.2240
D	0.4800	0.2060