



Full wwPDB EM Validation Report ⓘ

Mar 7, 2026 – 11:57 PM UTC

PDB ID : 8FXI / pdb_00008fxi
EMDB ID : EMD-29534
Title : Cryo-EM structure of Stanieria sp. CphA2 in complex with ADPCP and 4x(beta-Asp-Arg)
Authors : Markus, L.M.; Sharon, I.; Strauss, M.; Schmeing, T.M.
Deposited on : 2023-01-24
Resolution : 2.70 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:

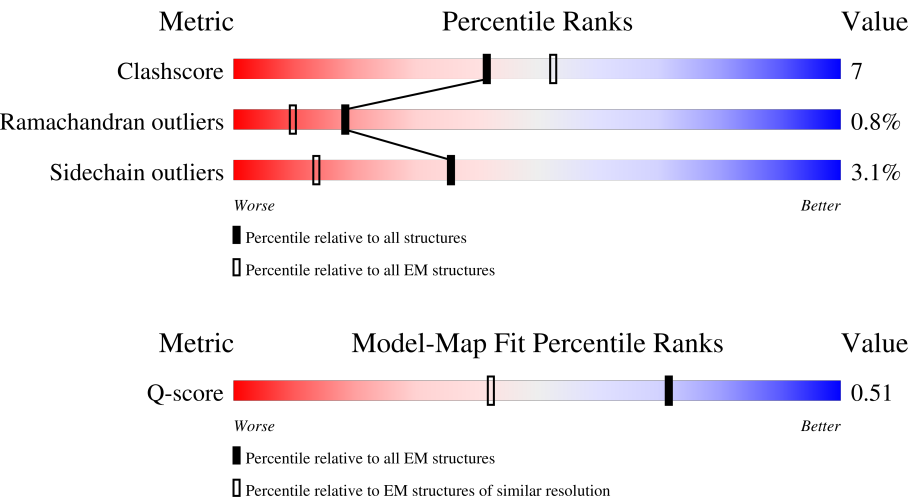
EMDB validation analysis : 0.0.1.dev132
Mogul : 2022.3.0, CSD as543be (2022)
MolProbity : 4-5-2 with Phenix2.0
Buster-report : wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data 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 i

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

The reported resolution of this entry is 2.70 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
Q-score	-	25397	10327 (2.20 - 3.20)

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	642	24% 71% 13% 7% 7%
1	B	642	19% 79% 11%
1	C	642	15% 81% 13%
1	D	642	15% 81% 13%

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Mol	Chain	Length	Quality of chain
1	E	642	19% 79% 11% 5%
1	F	642	24% 71% 14% 7%
2	G	4	25% 50% 25%
2	H	4	25% 50% 25%

2 Entry composition

There are 5 unique types of molecules in this entry. The entry contains 29641 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 RimK domain-containing protein ATP-grasp.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	594	Total	C	N	O	S	0	0
			4777	3047	803	913	14		
1	B	615	Total	C	N	O	S	0	0
			4921	3143	825	939	14		
1	C	630	Total	C	N	O	S	0	0
			5033	3211	844	964	14		
1	D	630	Total	C	N	O	S	0	0
			5033	3211	844	964	14		
1	E	615	Total	C	N	O	S	0	0
			4921	3143	825	939	14		
1	F	594	Total	C	N	O	S	0	0
			4777	3047	803	913	14		

There are 36 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	637	GLU	-	expression tag	UNP A0A140K0M0
A	638	ASN	-	expression tag	UNP A0A140K0M0
A	639	LEU	-	expression tag	UNP A0A140K0M0
A	640	TYR	-	expression tag	UNP A0A140K0M0
A	641	PHE	-	expression tag	UNP A0A140K0M0
A	642	GLN	-	expression tag	UNP A0A140K0M0
B	637	GLU	-	expression tag	UNP A0A140K0M0
B	638	ASN	-	expression tag	UNP A0A140K0M0
B	639	LEU	-	expression tag	UNP A0A140K0M0
B	640	TYR	-	expression tag	UNP A0A140K0M0
B	641	PHE	-	expression tag	UNP A0A140K0M0
B	642	GLN	-	expression tag	UNP A0A140K0M0
C	637	GLU	-	expression tag	UNP A0A140K0M0
C	638	ASN	-	expression tag	UNP A0A140K0M0
C	639	LEU	-	expression tag	UNP A0A140K0M0
C	640	TYR	-	expression tag	UNP A0A140K0M0
C	641	PHE	-	expression tag	UNP A0A140K0M0
C	642	GLN	-	expression tag	UNP A0A140K0M0

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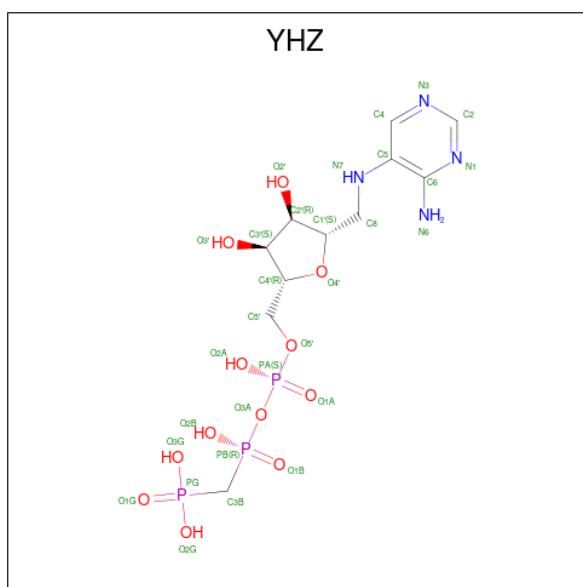
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Chain	Residue	Modelled	Actual	Comment	Reference
D	637	GLU	-	expression tag	UNP A0A140K0M0
D	638	ASN	-	expression tag	UNP A0A140K0M0
D	639	LEU	-	expression tag	UNP A0A140K0M0
D	640	TYR	-	expression tag	UNP A0A140K0M0
D	641	PHE	-	expression tag	UNP A0A140K0M0
D	642	GLN	-	expression tag	UNP A0A140K0M0
E	637	GLU	-	expression tag	UNP A0A140K0M0
E	638	ASN	-	expression tag	UNP A0A140K0M0
E	639	LEU	-	expression tag	UNP A0A140K0M0
E	640	TYR	-	expression tag	UNP A0A140K0M0
E	641	PHE	-	expression tag	UNP A0A140K0M0
E	642	GLN	-	expression tag	UNP A0A140K0M0
F	637	GLU	-	expression tag	UNP A0A140K0M0
F	638	ASN	-	expression tag	UNP A0A140K0M0
F	639	LEU	-	expression tag	UNP A0A140K0M0
F	640	TYR	-	expression tag	UNP A0A140K0M0
F	641	PHE	-	expression tag	UNP A0A140K0M0
F	642	GLN	-	expression tag	UNP A0A140K0M0

- Molecule 2 is a protein called 4x(beta-Asp-Arg).

Mol	Chain	Residues	Atoms				AltConf	Trace
2	G	3	Total	C	N	O	0	0
			57	30	15	12		
2	H	3	Total	C	N	O	0	0
			57	30	15	12		

- Molecule 3 is 1-[(4-aminopyrimidin-5-yl)amino]-2,5-anhydro-1-deoxy-6-O-[(S)-hydroxy{[(R)-hydroxy(phosphonomethyl)phosphoryl]oxy}phosphoryl]-D-allitol (CCD ID: YHZ) (formula: C₁₁H₂₁N₄O₁₂P₃) (labeled as "Ligand of Interest" by depositor).

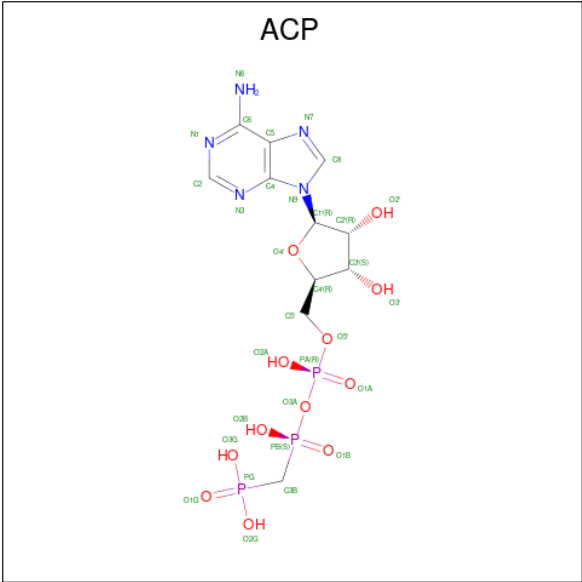


Mol	Chain	Residues	Atoms					AltConf
3	C	1	Total	C	N	O	P	0
			30	11	4	12	3	

- Molecule 4 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
4	C	2	Total	Mg	0
			2	2	
4	D	2	Total	Mg	0
			2	2	

- Molecule 5 is PHOSPHOMETHYLPHOSPHONIC ACID ADENYLATE ESTER (CCD ID: ACP) (formula: $C_{11}H_{18}N_5O_{12}P_3$).

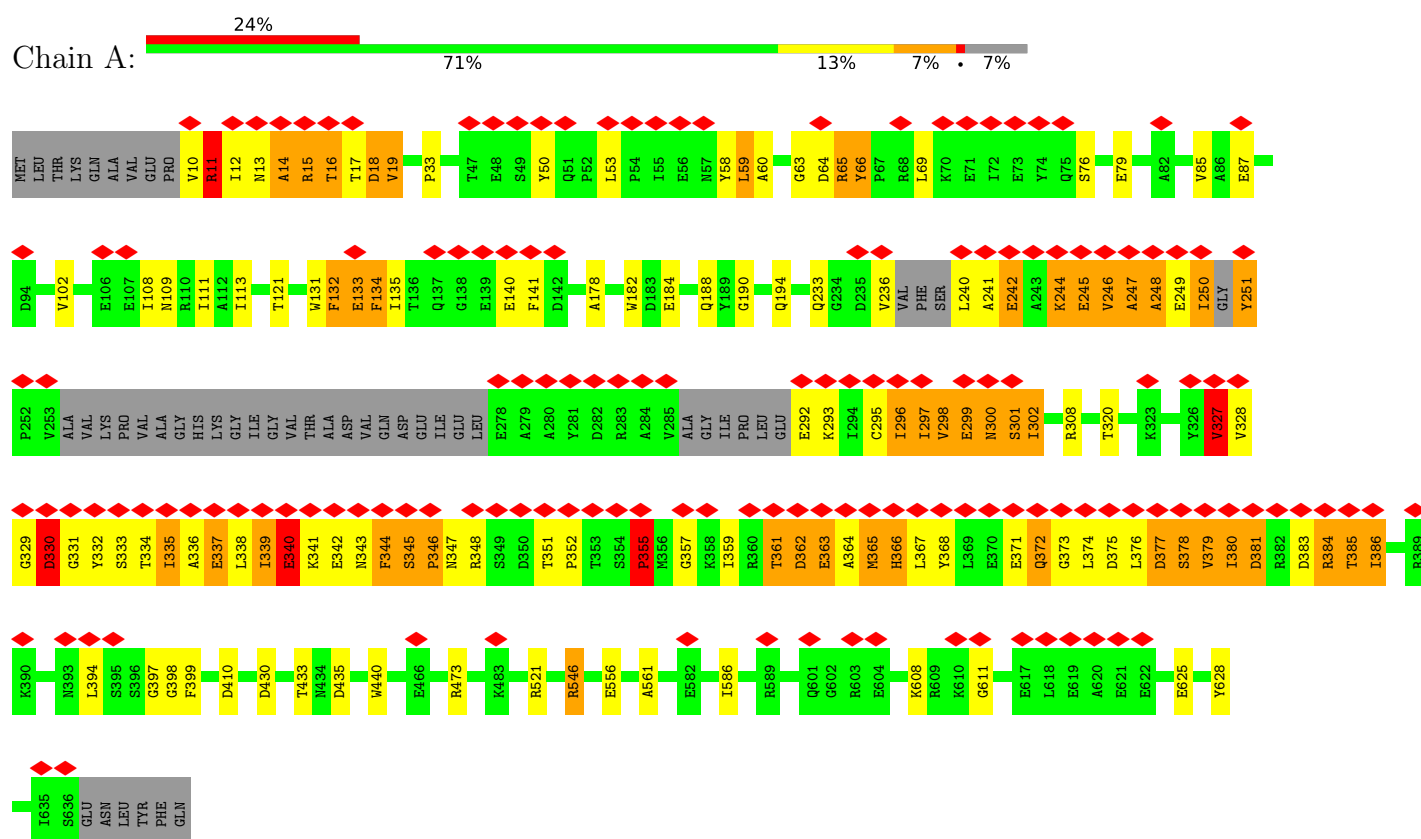


Mol	Chain	Residues	Atoms					AltConf
5	D	1	Total	C	N	O	P	0
			31	11	5	12	3	

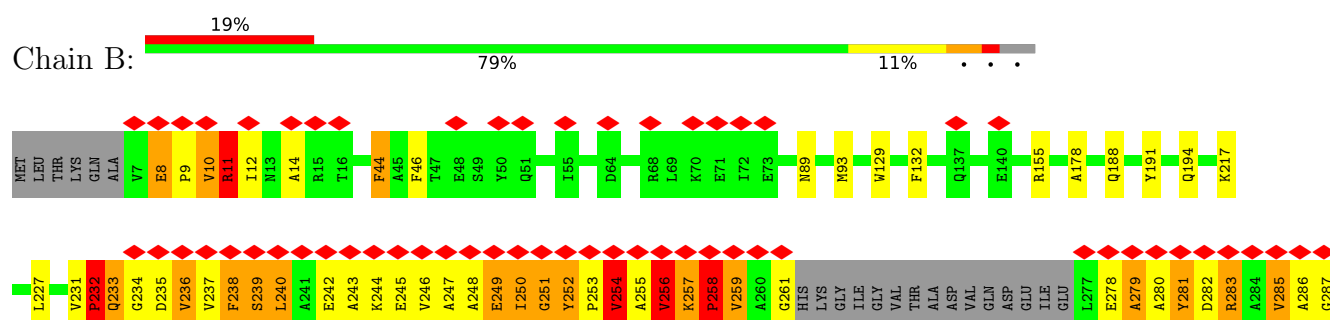
3 Residue-property plots

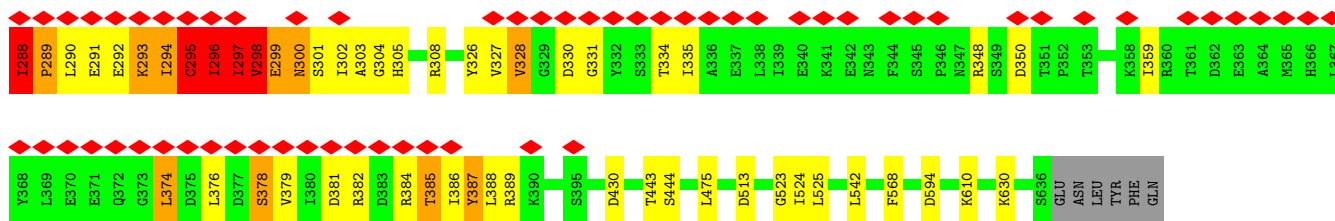
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion 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: RimK domain-containing protein ATP-grasp

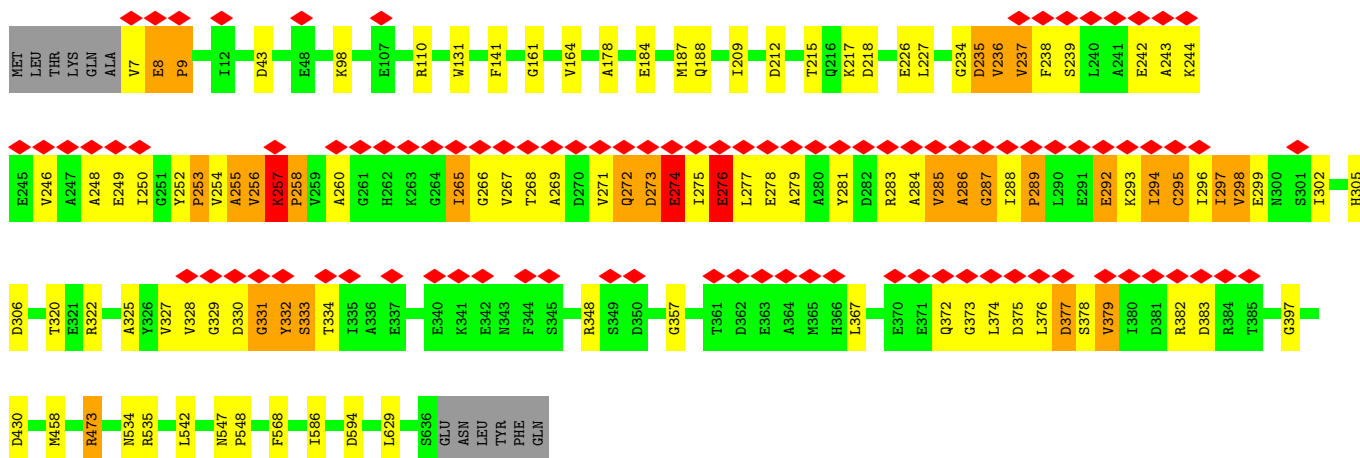
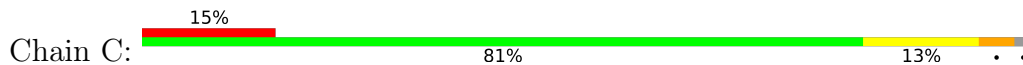


- Molecule 1: RimK domain-containing protein ATP-grasp

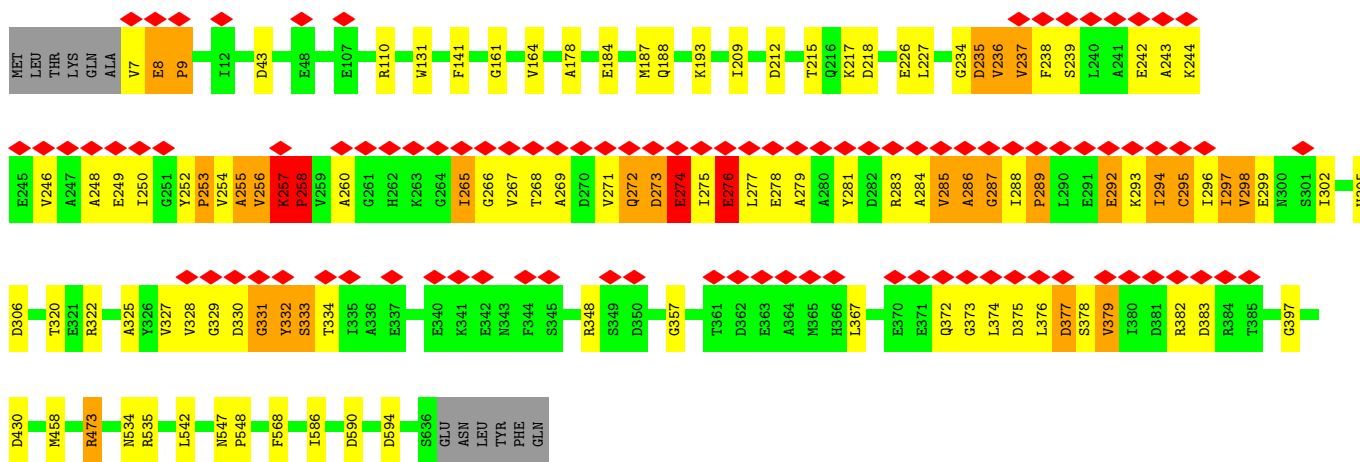
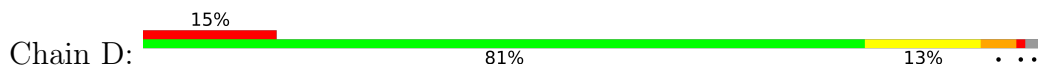




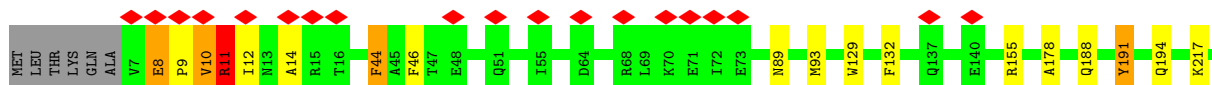
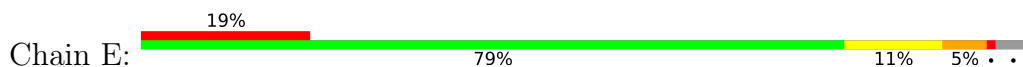
• Molecule 1: RimK domain-containing protein ATP-grasp

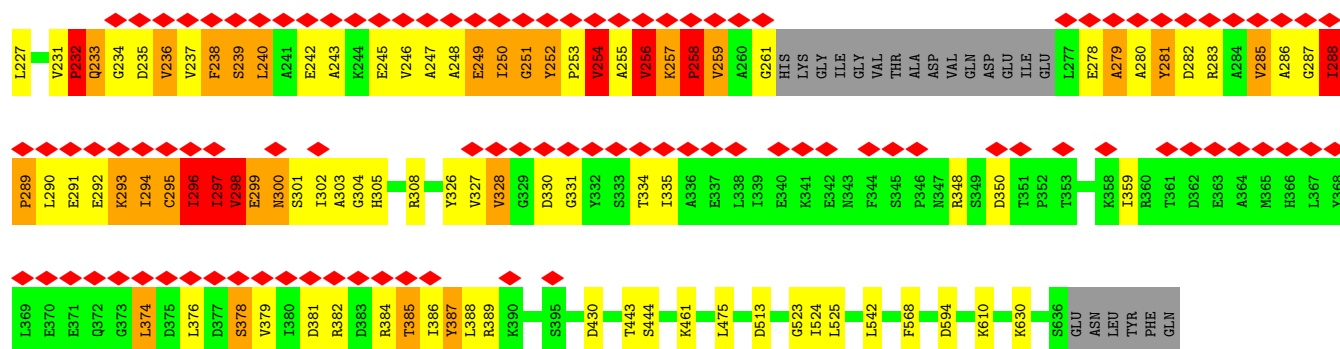


• Molecule 1: RimK domain-containing protein ATP-grasp

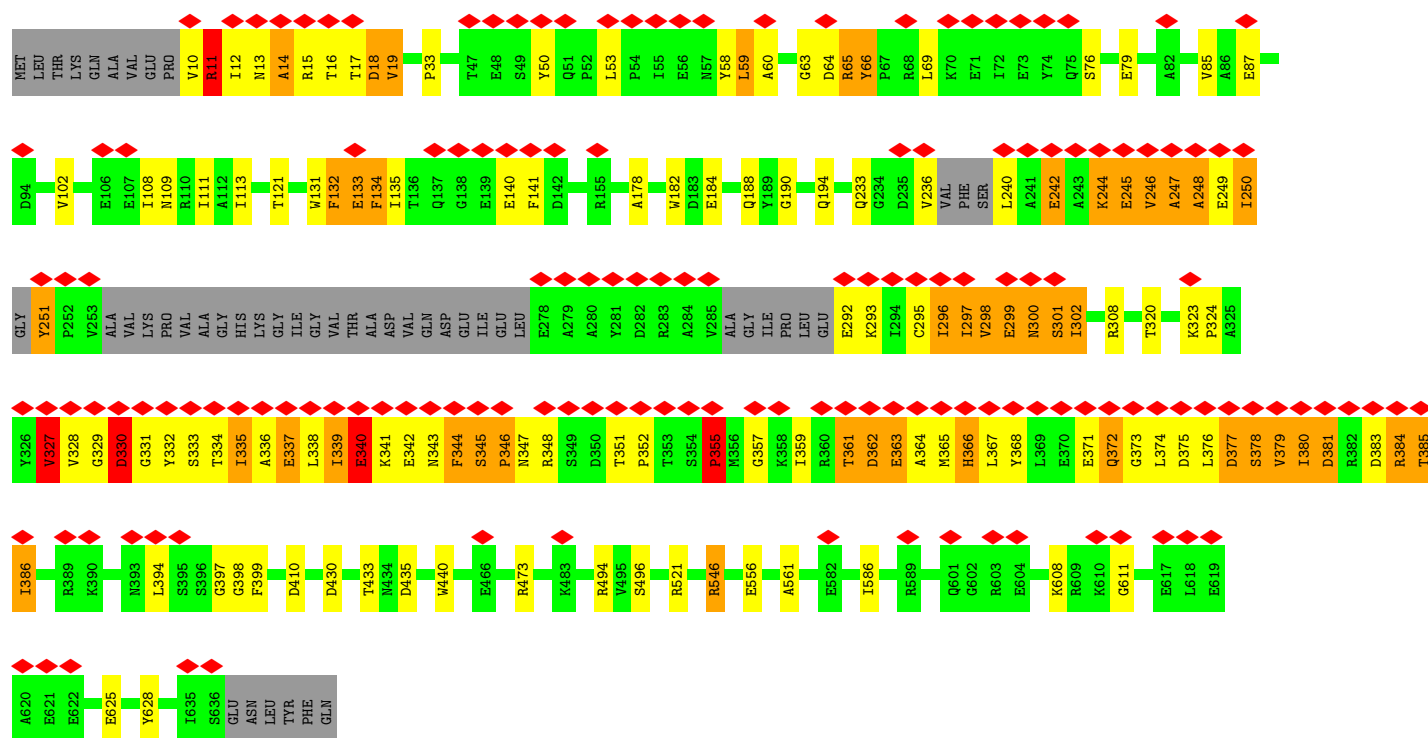


• Molecule 1: RimK domain-containing protein ATP-grasp





• Molecule 1: RimK domain-containing protein ATP-grasp



• Molecule 2: 4x(beta-Asp-Arg)



• Molecule 2: 4x(beta-Asp-Arg)



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	549663	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 ($e^-/\text{\AA}^2$)	80	Depositor
Minimum defocus (nm)	-1.0	Depositor
Maximum defocus (nm)	-2.5	Depositor
Magnification	Not provided	
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor
Maximum map value	2.292	Depositor
Minimum map value	-1.691	Depositor
Average map value	0.002	Depositor
Map value standard deviation	0.039	Depositor
Recommended contour level	0.165	Depositor
Map size (Å)	345.6, 345.6, 345.6	wwPDB
Map dimensions	512, 512, 512	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.675, 0.675, 0.675	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: MG, 7ID, YHZ, ACP

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	0.78	22/4871 (0.5%)	1.56	119/6605 (1.8%)
1	B	0.86	24/5021 (0.5%)	1.41	90/6815 (1.3%)
1	C	0.72	20/5135 (0.4%)	1.23	92/6971 (1.3%)
1	D	0.72	20/5135 (0.4%)	1.23	92/6971 (1.3%)
1	E	0.86	24/5021 (0.5%)	1.41	90/6815 (1.3%)
1	F	0.78	22/4871 (0.5%)	1.55	121/6605 (1.8%)
All	All	0.79	132/30054 (0.4%)	1.40	604/40782 (1.5%)

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	1	3
1	B	0	3
1	C	0	3
1	D	0	3
1	E	0	3
1	F	1	3
All	All	2	18

All (132) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B	327	VAL	C-N	-22.62	1.05	1.33
1	E	327	VAL	C-N	-22.62	1.05	1.33
1	D	257	LYS	C-N	21.10	1.58	1.33
1	C	257	LYS	C-N	21.07	1.58	1.33
1	A	245	GLU	C-N	18.87	1.57	1.33
1	F	245	GLU	C-N	18.86	1.57	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B	328	VAL	C-N	17.59	1.60	1.32
1	E	328	VAL	C-N	17.59	1.60	1.32
1	A	18	ASP	C-N	-17.34	1.12	1.33
1	F	18	ASP	C-N	-17.34	1.12	1.33
1	F	352	PRO	C-N	16.92	1.58	1.33
1	A	352	PRO	C-N	16.91	1.58	1.33
1	B	232	PRO	C-N	16.64	1.54	1.33
1	E	232	PRO	C-N	16.63	1.54	1.33
1	B	326	TYR	C-N	-16.31	1.11	1.33
1	E	326	TYR	C-N	-16.31	1.11	1.33
1	A	240	LEU	C-N	-15.03	1.12	1.33
1	F	240	LEU	C-N	-15.03	1.12	1.33
1	E	258	PRO	C-N	14.34	1.53	1.33
1	B	258	PRO	C-N	14.30	1.53	1.33
1	D	329	GLY	C-N	14.26	1.52	1.33
1	C	329	GLY	C-N	14.22	1.52	1.33
1	B	524	ILE	C-N	13.98	1.52	1.33
1	E	524	ILE	C-N	13.98	1.52	1.33
1	C	374	LEU	C-N	13.63	1.52	1.33
1	D	374	LEU	C-N	13.60	1.51	1.33
1	A	133	GLU	C-N	13.51	1.54	1.33
1	F	133	GLU	C-N	13.50	1.54	1.33
1	B	387	TYR	C-N	-13.19	1.15	1.33
1	E	387	TYR	C-N	-13.19	1.15	1.33
1	C	7	VAL	C-N	-12.26	1.08	1.33
1	D	7	VAL	C-N	-12.26	1.08	1.33
1	B	290	LEU	C-N	12.21	1.48	1.33
1	E	290	LEU	C-N	12.21	1.48	1.33
1	B	523	GLY	C-N	-11.89	1.17	1.33
1	E	523	GLY	C-N	-11.86	1.17	1.33
1	C	253	PRO	C-N	-10.88	1.18	1.33
1	D	253	PRO	C-N	-10.88	1.18	1.33
1	A	345	SER	C-N	10.79	1.59	1.33
1	F	345	SER	C-N	10.79	1.59	1.33
1	A	355	PRO	C-N	10.52	1.47	1.33
1	F	355	PRO	C-N	10.52	1.47	1.33
1	D	327	VAL	C-N	-10.02	1.20	1.33
1	C	327	VAL	C-N	-9.97	1.20	1.33
1	A	295	CYS	C-N	-9.54	1.21	1.33
1	F	295	CYS	C-N	-9.54	1.21	1.33
1	B	129	TRP	C-N	9.42	1.46	1.33
1	E	129	TRP	C-N	9.42	1.46	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	E	295	CYS	CA-C	9.31	1.58	1.52
1	B	295	CYS	CA-C	9.22	1.57	1.52
1	C	284	ALA	C-N	-9.17	1.22	1.33
1	D	284	ALA	C-N	-9.17	1.22	1.33
1	B	256	VAL	C-N	9.09	1.60	1.33
1	E	256	VAL	C-N	9.09	1.60	1.33
1	D	255	ALA	C-N	-8.88	1.22	1.33
1	C	255	ALA	C-N	-8.86	1.22	1.33
1	E	374	LEU	C-N	8.81	1.46	1.33
1	B	374	LEU	C-N	8.76	1.46	1.33
1	A	132	PHE	C-N	-8.70	1.22	1.34
1	F	132	PHE	C-N	-8.70	1.22	1.34
1	A	134	PHE	C-N	8.62	1.43	1.34
1	F	134	PHE	C-N	8.56	1.42	1.34
1	B	281	TYR	C-N	8.19	1.45	1.33
1	E	281	TYR	C-N	8.19	1.45	1.33
1	A	340	GLU	C-N	8.03	1.45	1.33
1	F	340	GLU	C-N	8.03	1.45	1.33
1	C	275	ILE	C-N	-8.01	1.22	1.33
1	D	275	ILE	C-N	-7.95	1.22	1.33
1	A	233	GLN	C-N	-7.89	1.20	1.33
1	F	233	GLN	C-N	-7.89	1.20	1.33
1	C	294	ILE	C-N	-7.79	1.23	1.33
1	D	294	ILE	C-N	-7.78	1.23	1.33
1	C	331	GLY	C-N	-7.77	1.23	1.33
1	D	331	GLY	C-N	-7.77	1.23	1.33
1	A	250	ILE	C-N	-7.69	1.22	1.33
1	F	250	ILE	C-N	-7.69	1.22	1.33
1	C	332	TYR	C-N	7.57	1.44	1.33
1	D	332	TYR	C-N	7.54	1.44	1.33
1	C	258	PRO	N-CD	7.49	1.58	1.47
1	D	258	PRO	N-CD	7.49	1.58	1.47
1	E	258	PRO	N-CD	7.39	1.58	1.47
1	B	258	PRO	N-CD	7.38	1.58	1.47
1	A	242	GLU	C-N	-7.23	1.24	1.33
1	F	242	GLU	C-N	-7.20	1.24	1.33
1	B	294	ILE	C-N	-7.20	1.25	1.34
1	E	294	ILE	C-N	-7.20	1.25	1.34
1	A	248	ALA	C-N	7.02	1.43	1.33
1	F	248	ALA	C-N	7.01	1.42	1.33
1	B	257	LYS	C-N	6.90	1.50	1.33
1	E	257	LYS	C-N	6.90	1.50	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	F	362	ASP	C-N	-6.89	1.24	1.33
1	A	362	ASP	C-N	-6.84	1.24	1.33
1	A	15	ARG	C-N	-6.80	1.24	1.33
1	F	15	ARG	C-N	-6.80	1.24	1.33
1	A	338	LEU	C-N	6.79	1.42	1.33
1	F	338	LEU	C-N	6.77	1.42	1.33
1	B	291	GLU	C-N	-6.62	1.24	1.33
1	E	291	GLU	C-N	-6.62	1.24	1.33
1	A	344	PHE	C-N	6.52	1.47	1.33
1	F	344	PHE	C-N	6.51	1.47	1.33
1	E	292	GLU	C-N	-6.38	1.24	1.33
1	D	254	VAL	C-N	-6.36	1.25	1.33
1	B	376	LEU	C-N	-6.36	1.24	1.33
1	E	376	LEU	C-N	-6.36	1.24	1.33
1	B	292	GLU	C-N	-6.36	1.24	1.33
1	C	254	VAL	C-N	-6.34	1.25	1.33
1	B	381	ASP	C-N	-6.28	1.25	1.33
1	E	381	ASP	C-N	-6.28	1.25	1.33
1	C	373	GLY	C-N	-6.25	1.24	1.33
1	D	373	GLY	C-N	-6.24	1.24	1.33
1	B	237	VAL	C-N	6.19	1.43	1.33
1	E	237	VAL	C-N	6.19	1.43	1.33
1	C	252	TYR	C-N	-6.16	1.19	1.33
1	D	252	TYR	C-N	-6.16	1.19	1.33
1	A	339	ILE	C-N	5.99	1.42	1.33
1	F	339	ILE	C-N	5.99	1.42	1.33
1	C	287	GLY	C-N	-5.96	1.27	1.33
1	D	287	GLY	C-N	-5.96	1.27	1.33
1	B	238	PHE	C-N	-5.89	1.25	1.33
1	E	238	PHE	C-N	-5.89	1.25	1.33
1	C	378	SER	C-N	-5.79	1.27	1.33
1	D	378	SER	C-N	-5.71	1.27	1.33
1	C	8	GLU	C-N	5.46	1.41	1.33
1	D	8	GLU	C-N	5.41	1.40	1.33
1	C	265	ILE	C-N	-5.38	1.26	1.33
1	D	265	ILE	C-N	-5.38	1.26	1.33
1	A	10	VAL	C-N	-5.26	1.26	1.33
1	F	10	VAL	C-N	-5.23	1.26	1.33
1	B	259	VAL	C-N	5.13	1.40	1.33
1	E	259	VAL	C-N	5.06	1.40	1.33
1	A	19	VAL	C-N	-5.04	1.26	1.33
1	F	19	VAL	C-N	-5.04	1.26	1.33

All (604) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	C	376	LEU	N-CA-C	34.74	158.89	112.68
1	D	376	LEU	N-CA-C	34.74	158.89	112.68
1	E	279	ALA	N-CA-C	31.38	145.49	111.28
1	B	279	ALA	N-CA-C	31.38	145.48	111.28
1	A	377	ASP	O-C-N	-28.86	87.55	122.48
1	A	297	ILE	N-CA-C	28.05	167.67	109.34
1	F	297	ILE	N-CA-C	28.03	167.64	109.34
1	F	332	TYR	N-CA-C	26.68	140.37	111.28
1	A	332	TYR	N-CA-C	26.67	140.35	111.28
1	F	377	ASP	O-C-N	-26.07	87.55	122.49
1	E	298	VAL	N-CA-C	25.43	136.56	110.62
1	B	298	VAL	N-CA-C	25.40	136.53	110.62
1	C	9	PRO	O-C-N	25.14	154.18	123.01
1	D	9	PRO	O-C-N	25.11	154.15	123.01
1	B	304	GLY	N-CA-C	24.99	141.49	112.50
1	E	304	GLY	N-CA-C	24.97	141.47	112.50
1	E	295	CYS	N-CA-C	23.89	147.90	108.48
1	B	295	CYS	N-CA-C	23.88	147.88	108.48
1	E	280	ALA	N-CA-C	-22.80	84.77	112.59
1	B	280	ALA	N-CA-C	-22.78	84.80	112.59
1	F	385	THR	N-CA-C	-22.44	75.84	108.60
1	A	385	THR	N-CA-C	-22.42	75.87	108.60
1	F	337	GLU	N-CA-C	22.30	135.22	111.14
1	A	337	GLU	N-CA-C	22.29	135.22	111.14
1	A	364	ALA	N-CA-C	-21.04	87.84	114.56
1	F	364	ALA	N-CA-C	-21.01	87.87	114.56
1	F	300	ASN	N-CA-C	20.96	133.78	111.14
1	A	300	ASN	N-CA-C	20.95	133.77	111.14
1	B	381	ASP	O-C-N	-19.67	99.72	122.15
1	E	381	ASP	O-C-N	-19.65	99.75	122.15
1	D	238	PHE	N-CA-C	18.98	131.38	111.07
1	C	238	PHE	N-CA-C	18.95	131.34	111.07
1	B	293	LYS	N-CA-C	18.77	150.77	110.80
1	E	293	LYS	N-CA-C	18.77	150.77	110.80
1	F	338	LEU	N-CA-C	-18.47	89.99	112.89
1	A	338	LEU	N-CA-C	-18.44	90.03	112.89
1	A	344	PHE	N-CA-C	18.18	130.78	111.14
1	F	379	VAL	N-CA-C	18.17	136.50	108.89
1	A	379	VAL	N-CA-C	18.14	136.47	108.89
1	F	344	PHE	N-CA-C	18.13	130.72	111.14
1	F	373	GLY	N-CA-C	18.03	142.67	114.90
1	A	373	GLY	N-CA-C	18.01	142.63	114.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	F	363	GLU	CB-CA-C	-17.77	75.06	110.42
1	A	363	GLU	CB-CA-C	-17.76	75.08	110.42
1	E	378	SER	O-C-N	17.43	143.43	122.86
1	B	378	SER	O-C-N	17.42	143.41	122.86
1	A	297	ILE	CB-CA-C	-16.88	83.60	111.29
1	F	297	ILE	CB-CA-C	-16.88	83.60	111.29
1	B	378	SER	CA-C-N	-16.43	101.76	123.12
1	B	378	SER	C-N-CA	-16.43	101.76	123.12
1	E	378	SER	CA-C-N	-16.43	101.75	123.12
1	E	378	SER	C-N-CA	-16.43	101.75	123.12
1	A	299	GLU	N-CA-C	15.55	127.71	111.07
1	F	299	GLU	N-CA-C	15.55	127.71	111.07
1	A	376	LEU	CA-C-N	15.53	147.57	122.11
1	A	376	LEU	C-N-CA	15.53	147.57	122.11
1	A	384	ARG	N-CA-C	15.13	131.30	108.31
1	F	384	ARG	N-CA-C	15.11	131.27	108.31
1	F	376	LEU	CA-C-N	14.85	147.61	121.92
1	F	376	LEU	C-N-CA	14.85	147.61	121.92
1	E	295	CYS	N-CA-CB	-14.58	82.72	111.15
1	B	295	CYS	N-CA-CB	-14.58	82.73	111.15
1	C	9	PRO	CA-C-N	-14.49	100.77	120.91
1	C	9	PRO	C-N-CA	-14.49	100.77	120.91
1	D	9	PRO	CA-C-N	-14.49	100.77	120.91
1	D	9	PRO	C-N-CA	-14.49	100.77	120.91
1	B	305	HIS	N-CA-C	14.37	131.43	110.59
1	E	305	HIS	N-CA-C	14.37	131.42	110.59
1	C	252	TYR	O-C-N	14.11	137.54	121.32
1	D	252	TYR	O-C-N	14.08	137.51	121.32
1	B	303	ALA	CB-CA-C	-13.93	84.68	109.62
1	E	303	ALA	CB-CA-C	-13.93	84.69	109.62
1	A	340	GLU	O-C-N	-13.78	103.36	122.37
1	F	340	GLU	O-C-N	-13.74	103.40	122.37
1	D	238	PHE	N-CA-CB	-13.67	90.19	110.01
1	C	238	PHE	N-CA-CB	-13.65	90.21	110.01
1	D	272	GLN	N-CA-C	13.53	134.29	113.72
1	C	272	GLN	N-CA-C	13.52	134.27	113.72
1	A	330	ASP	N-CA-C	13.35	125.91	111.36
1	F	330	ASP	N-CA-C	13.35	125.91	111.36
1	B	327	VAL	O-C-N	13.23	137.73	123.05
1	E	327	VAL	O-C-N	13.23	137.73	123.05
1	B	294	ILE	O-C-N	-13.15	109.06	123.26
1	E	294	ILE	O-C-N	-13.15	109.06	123.26

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	279	ALA	N-CA-CB	-12.99	91.03	110.12
1	E	279	ALA	N-CA-CB	-12.96	91.06	110.12
1	B	249	GLU	N-CA-C	-12.86	97.26	111.28
1	B	327	VAL	CA-C-N	-12.85	103.05	122.70
1	B	327	VAL	C-N-CA	-12.85	103.05	122.70
1	E	327	VAL	CA-C-N	-12.83	103.07	122.70
1	E	327	VAL	C-N-CA	-12.83	103.07	122.70
1	E	249	GLU	N-CA-C	-12.83	97.30	111.28
1	F	292	GLU	N-CA-C	-12.72	75.39	111.00
1	A	292	GLU	N-CA-C	-12.71	75.42	111.00
1	C	252	TYR	CA-C-N	-12.64	104.04	119.84
1	C	252	TYR	C-N-CA	-12.64	104.04	119.84
1	D	252	TYR	CA-C-N	-12.61	104.08	119.84
1	D	252	TYR	C-N-CA	-12.61	104.08	119.84
1	E	12	ILE	N-CA-C	-12.54	97.82	110.62
1	B	12	ILE	N-CA-C	-12.54	97.83	110.62
1	A	379	VAL	CB-CA-C	-12.18	91.34	110.95
1	F	379	VAL	CB-CA-C	-12.17	91.36	110.95
1	C	284	ALA	N-CA-C	-12.07	98.03	113.12
1	D	284	ALA	N-CA-C	-12.07	98.03	113.12
1	A	378	SER	N-CA-C	12.05	126.82	110.55
1	F	378	SER	N-CA-C	12.00	126.75	110.55
1	F	386	ILE	N-CA-C	-11.91	89.98	108.44
1	A	386	ILE	N-CA-C	-11.88	90.03	108.44
1	D	249	GLU	N-CA-C	11.80	124.22	111.36
1	A	11	ARG	N-CA-C	-11.79	92.27	109.96
1	F	11	ARG	N-CA-C	-11.79	92.27	109.96
1	C	249	GLU	N-CA-C	11.79	124.21	111.36
1	C	286	ALA	N-CA-C	11.67	127.08	113.19
1	D	286	ALA	N-CA-C	11.67	127.07	113.19
1	E	305	HIS	N-CA-CB	-11.64	92.72	110.42
1	B	305	HIS	N-CA-CB	-11.63	92.73	110.42
1	D	265	ILE	CB-CA-C	-11.57	95.08	111.40
1	C	265	ILE	CB-CA-C	-11.57	95.08	111.40
1	D	379	VAL	N-CA-C	-11.46	92.77	108.12
1	B	283	ARG	N-CA-C	-11.45	99.30	113.38
1	C	379	VAL	N-CA-C	-11.44	92.79	108.12
1	E	283	ARG	N-CA-C	-11.44	99.31	113.38
1	C	250	ILE	N-CA-C	-11.42	93.67	109.21
1	D	250	ILE	N-CA-C	-11.40	93.70	109.21
1	F	248	ALA	N-CA-C	-11.23	97.81	112.41
1	C	254	VAL	O-C-N	-11.22	108.54	122.57

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	E	385	THR	O-C-N	-11.22	110.15	123.16
1	B	385	THR	O-C-N	-11.21	110.16	123.16
1	D	254	VAL	O-C-N	-11.19	108.58	122.57
1	A	248	ALA	N-CA-C	-11.18	97.88	112.41
1	F	330	ASP	N-CA-CB	-11.15	93.65	110.16
1	A	330	ASP	N-CA-CB	-11.13	93.68	110.16
1	A	296	ILE	CB-CA-C	10.90	126.31	112.02
1	F	296	ILE	CB-CA-C	10.90	126.31	112.02
1	D	376	LEU	CB-CA-C	-10.87	92.09	110.24
1	F	381	ASP	N-CA-C	10.86	127.03	108.02
1	C	376	LEU	CB-CA-C	-10.85	92.11	110.24
1	A	381	ASP	N-CA-C	10.84	127.00	108.02
1	B	381	ASP	CA-C-N	10.78	141.29	122.32
1	B	381	ASP	C-N-CA	10.78	141.29	122.32
1	B	298	VAL	N-CA-CB	-10.76	95.90	110.54
1	E	381	ASP	CA-C-N	10.76	141.26	122.32
1	E	381	ASP	C-N-CA	10.76	141.26	122.32
1	E	298	VAL	N-CA-CB	-10.76	95.91	110.54
1	A	347	ASN	N-CA-C	-10.73	89.77	108.23
1	F	347	ASN	N-CA-C	-10.73	89.78	108.23
1	A	247	ALA	N-CA-C	-10.72	87.97	110.80
1	F	247	ALA	N-CA-C	-10.72	87.97	110.80
1	B	384	ARG	CA-C-N	10.67	137.88	122.09
1	B	384	ARG	C-N-CA	10.67	137.88	122.09
1	C	288	ILE	N-CA-C	10.66	120.58	108.96
1	B	258	PRO	O-C-N	10.64	137.00	122.64
1	E	384	ARG	CA-C-N	10.64	137.83	122.09
1	E	384	ARG	C-N-CA	10.64	137.83	122.09
1	D	288	ILE	N-CA-C	10.63	120.54	108.96
1	E	258	PRO	O-C-N	10.62	136.98	122.64
1	C	375	ASP	N-CA-CB	-10.59	94.72	110.07
1	D	375	ASP	N-CA-CB	-10.55	94.77	110.07
1	A	134	PHE	O-C-N	-10.52	105.58	122.41
1	F	134	PHE	O-C-N	-10.49	105.62	122.41
1	B	9	PRO	N-CA-C	-10.41	103.85	114.68
1	E	9	PRO	N-CA-C	-10.38	103.89	114.68
1	B	303	ALA	N-CA-CB	-10.34	94.84	110.04
1	E	303	ALA	N-CA-CB	-10.34	94.84	110.04
1	B	292	GLU	O-C-N	10.32	136.74	123.01
1	E	292	GLU	O-C-N	10.31	136.73	123.01
1	D	378	SER	N-CA-C	-10.29	91.57	109.06
1	C	378	SER	N-CA-C	-10.26	91.62	109.06

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	C	377	ASP	O-C-N	-10.06	111.08	123.36
1	F	345	SER	O-C-N	-10.06	109.75	121.32
1	D	377	ASP	O-C-N	-10.06	111.09	123.36
1	A	364	ALA	N-CA-CB	-10.04	97.64	111.00
1	B	523	GLY	CA-C-N	10.04	136.95	122.99
1	B	523	GLY	C-N-CA	10.04	136.95	122.99
1	A	345	SER	O-C-N	-10.02	109.80	121.32
1	E	523	GLY	CA-C-N	10.02	136.91	122.99
1	E	523	GLY	C-N-CA	10.02	136.91	122.99
1	F	364	ALA	N-CA-CB	-10.01	97.68	111.00
1	C	276	GLU	O-C-N	-10.00	108.93	122.33
1	D	276	GLU	O-C-N	-10.00	108.93	122.33
1	D	375	ASP	CB-CA-C	9.96	126.63	110.90
1	A	339	ILE	CA-C-N	-9.95	104.37	122.38
1	A	339	ILE	C-N-CA	-9.95	104.37	122.38
1	F	339	ILE	CA-C-N	-9.95	104.37	122.38
1	F	339	ILE	C-N-CA	-9.95	104.37	122.38
1	C	375	ASP	CB-CA-C	9.94	126.61	110.90
1	C	374	LEU	CB-CA-C	-9.75	90.75	109.37
1	D	374	LEU	CB-CA-C	-9.73	90.78	109.37
1	B	237	VAL	N-CA-C	9.72	121.59	108.27
1	E	237	VAL	N-CA-C	9.71	121.58	108.27
1	F	249	GLU	N-CA-C	9.53	125.14	108.56
1	A	249	GLU	N-CA-C	9.52	125.12	108.56
1	F	378	SER	N-CA-CB	-9.47	96.06	110.45
1	A	378	SER	N-CA-CB	-9.45	96.08	110.45
1	F	245	GLU	N-CA-C	-9.44	98.36	111.39
1	A	245	GLU	N-CA-C	-9.44	98.36	111.39
1	B	524	ILE	O-C-N	9.44	133.39	123.20
1	E	524	ILE	O-C-N	9.44	133.39	123.20
1	A	348	ARG	N-CA-C	-9.30	88.24	107.67
1	F	348	ARG	N-CA-C	-9.28	88.27	107.67
1	C	374	LEU	N-CA-C	9.21	124.41	109.40
1	D	374	LEU	N-CA-C	9.21	124.41	109.40
1	F	333	SER	N-CA-C	-9.13	92.03	108.02
1	A	333	SER	N-CA-C	-9.13	92.04	108.02
1	F	12	ILE	N-CA-C	-9.06	102.01	110.53
1	A	12	ILE	N-CA-C	-9.04	102.03	110.53
1	E	258	PRO	CA-C-N	-9.03	105.72	121.97
1	E	258	PRO	C-N-CA	-9.03	105.72	121.97
1	B	258	PRO	CA-C-N	-9.02	105.73	121.97
1	B	258	PRO	C-N-CA	-9.02	105.73	121.97

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	237	VAL	O-C-N	9.01	133.39	123.03
1	B	293	LYS	N-CA-CB	-8.99	95.29	110.49
1	E	237	VAL	O-C-N	8.98	133.36	123.03
1	C	375	ASP	N-CA-C	8.98	120.83	111.14
1	E	293	LYS	N-CA-CB	-8.97	95.33	110.49
1	B	293	LYS	CA-C-N	-8.94	111.42	123.14
1	B	293	LYS	C-N-CA	-8.94	111.42	123.14
1	D	375	ASP	N-CA-C	8.94	120.79	111.14
1	E	293	LYS	CA-C-N	-8.91	111.47	123.14
1	E	293	LYS	C-N-CA	-8.91	111.47	123.14
1	B	326	TYR	O-C-N	-8.84	113.98	123.26
1	E	326	TYR	O-C-N	-8.84	113.98	123.26
1	E	299	GLU	N-CA-CB	8.70	126.64	112.63
1	B	299	GLU	N-CA-CB	8.68	126.61	112.63
1	A	300	ASN	N-CA-CB	-8.64	97.54	110.07
1	F	300	ASN	N-CA-CB	-8.64	97.54	110.07
1	D	257	LYS	O-C-N	-8.56	113.66	121.37
1	C	257	LYS	O-C-N	-8.56	113.67	121.37
1	A	292	GLU	N-CA-CB	8.48	124.91	110.50
1	A	397	GLY	N-CA-C	8.48	126.59	115.40
1	F	397	GLY	N-CA-C	8.48	126.59	115.40
1	F	292	GLU	N-CA-CB	8.47	124.89	110.50
1	A	295	CYS	N-CA-C	-8.42	93.17	107.99
1	F	295	CYS	N-CA-C	-8.40	93.21	107.99
1	E	235	ASP	N-CA-C	8.38	121.89	109.24
1	B	235	ASP	N-CA-C	8.36	121.86	109.24
1	B	297	ILE	CB-CA-C	-8.35	97.60	111.29
1	E	297	ILE	CB-CA-C	-8.33	97.62	111.29
1	E	292	GLU	N-CA-CB	-8.30	96.40	109.51
1	B	292	GLU	N-CA-CB	-8.29	96.42	109.51
1	F	249	GLU	CA-C-N	-8.28	111.48	122.99
1	F	249	GLU	C-N-CA	-8.28	111.48	122.99
1	A	249	GLU	CA-C-N	-8.27	111.49	122.99
1	A	249	GLU	C-N-CA	-8.27	111.49	122.99
1	A	242	GLU	O-C-N	-8.27	111.59	122.59
1	F	242	GLU	O-C-N	-8.24	111.63	122.59
1	F	247	ALA	N-CA-CB	8.23	124.41	110.49
1	A	247	ALA	N-CA-CB	8.23	124.40	110.49
1	F	380	ILE	N-CA-CB	-8.18	97.23	112.36
1	A	380	ILE	N-CA-CB	-8.16	97.27	112.36
1	C	377	ASP	N-CA-C	-8.10	94.35	108.69
1	D	377	ASP	N-CA-C	-8.10	94.35	108.69

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	D	305	HIS	N-CA-C	8.06	121.92	110.23
1	C	305	HIS	N-CA-C	8.05	121.90	110.23
1	E	291	GLU	CB-CA-C	-7.99	95.44	111.91
1	B	291	GLU	CB-CA-C	-7.99	95.45	111.91
1	B	291	GLU	N-CA-C	-7.98	97.61	108.38
1	C	267	VAL	N-CA-C	-7.98	95.96	107.77
1	D	267	VAL	N-CA-C	-7.98	95.96	107.77
1	D	248	ALA	N-CA-C	-7.97	102.54	111.07
1	E	291	GLU	N-CA-C	-7.97	97.62	108.38
1	C	248	ALA	N-CA-C	-7.96	102.56	111.07
1	B	233	GLN	N-CA-C	7.92	119.71	108.54
1	E	233	GLN	N-CA-C	7.90	119.68	108.54
1	E	290	LEU	CB-CA-C	7.84	125.43	109.67
1	B	290	LEU	CB-CA-C	7.83	125.42	109.67
1	F	366	HIS	N-CA-C	-7.83	102.75	111.28
1	A	366	HIS	N-CA-C	-7.83	102.75	111.28
1	E	292	GLU	CA-C-N	-7.77	106.69	121.54
1	E	292	GLU	C-N-CA	-7.77	106.69	121.54
1	A	292	GLU	CB-CA-C	7.76	124.85	110.10
1	B	292	GLU	CA-C-N	-7.76	106.72	121.54
1	B	292	GLU	C-N-CA	-7.76	106.72	121.54
1	F	292	GLU	CB-CA-C	7.76	124.84	110.10
1	B	257	LYS	CA-C-N	-7.71	110.21	119.84
1	B	257	LYS	C-N-CA	-7.71	110.21	119.84
1	E	257	LYS	CA-C-N	-7.71	110.21	119.84
1	E	257	LYS	C-N-CA	-7.71	110.21	119.84
1	C	255	ALA	O-C-N	-7.70	115.18	123.42
1	D	255	ALA	O-C-N	-7.69	115.19	123.42
1	A	378	SER	CB-CA-C	-7.69	94.46	109.76
1	F	378	SER	CB-CA-C	-7.69	94.46	109.76
1	A	342	GLU	N-CA-C	-7.65	102.94	111.28
1	C	237	VAL	N-CA-C	7.63	119.74	108.45
1	F	342	GLU	N-CA-C	-7.62	102.97	111.28
1	A	379	VAL	N-CA-CB	-7.62	93.83	111.81
1	D	237	VAL	N-CA-C	7.62	119.73	108.45
1	F	379	VAL	N-CA-CB	-7.61	93.84	111.81
1	B	231	VAL	O-C-N	7.61	129.77	121.10
1	E	231	VAL	O-C-N	7.60	129.77	121.10
1	E	11	ARG	N-CA-C	-7.59	97.32	109.39
1	C	256	VAL	N-CA-C	7.58	121.49	108.90
1	B	11	ARG	N-CA-C	-7.58	97.33	109.39
1	D	256	VAL	N-CA-C	7.55	121.44	108.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	D	249	GLU	CB-CA-C	-7.55	98.02	110.85
1	C	249	GLU	CB-CA-C	-7.54	98.04	110.85
1	C	286	ALA	CB-CA-C	-7.45	95.83	110.27
1	F	344	PHE	CB-CA-C	-7.44	99.15	110.90
1	A	244	LYS	N-CA-C	-7.43	91.99	107.67
1	D	286	ALA	CB-CA-C	-7.43	95.86	110.27
1	F	244	LYS	N-CA-C	-7.43	91.99	107.67
1	D	285	VAL	CA-C-N	-7.43	104.14	121.52
1	D	285	VAL	C-N-CA	-7.43	104.14	121.52
1	A	344	PHE	CB-CA-C	-7.42	99.17	110.90
1	C	285	VAL	CA-C-N	-7.42	104.14	121.52
1	C	285	VAL	C-N-CA	-7.42	104.14	121.52
1	B	256	VAL	O-C-N	-7.41	113.30	122.57
1	E	256	VAL	O-C-N	-7.41	113.30	122.57
1	A	301	SER	CB-CA-C	7.39	126.42	111.78
1	F	301	SER	CB-CA-C	7.39	126.42	111.78
1	F	246	VAL	O-C-N	-7.31	114.74	121.91
1	A	352	PRO	O-C-N	-7.28	110.01	122.17
1	F	352	PRO	O-C-N	-7.28	110.01	122.17
1	D	327	VAL	CA-C-N	7.28	135.07	121.97
1	D	327	VAL	C-N-CA	7.28	135.07	121.97
1	A	246	VAL	O-C-N	-7.27	114.78	121.91
1	C	327	VAL	CA-C-N	7.26	135.04	121.97
1	C	327	VAL	C-N-CA	7.26	135.04	121.97
1	A	298	VAL	N-CA-CB	-7.25	99.27	111.23
1	F	298	VAL	N-CA-CB	-7.24	99.28	111.23
1	A	246	VAL	N-CA-C	-7.20	103.50	110.42
1	F	246	VAL	N-CA-C	-7.20	103.50	110.42
1	E	235	ASP	N-CA-CB	-7.18	99.20	111.69
1	B	235	ASP	N-CA-CB	-7.16	99.22	111.69
1	F	302	ILE	N-CA-CB	7.11	122.96	111.23
1	A	302	ILE	N-CA-CB	7.10	122.94	111.23
1	A	340	GLU	N-CA-C	-7.09	104.36	113.16
1	F	340	GLU	N-CA-C	-7.07	104.40	113.16
1	E	294	ILE	N-CA-C	7.06	118.00	108.11
1	B	294	ILE	N-CA-C	7.02	117.94	108.11
1	A	247	ALA	CB-CA-C	-7.01	96.47	110.42
1	F	247	ALA	CB-CA-C	-6.99	96.51	110.42
1	A	374	LEU	N-CA-C	6.99	121.06	109.95
1	D	253	PRO	O-C-N	-6.99	113.21	122.64
1	F	374	LEU	N-CA-C	6.99	121.06	109.95
1	C	253	PRO	O-C-N	-6.98	113.22	122.64

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	352	PRO	CA-C-N	6.96	133.64	123.13
1	A	352	PRO	C-N-CA	6.96	133.64	123.13
1	D	373	GLY	N-CA-C	-6.96	99.65	111.27
1	F	352	PRO	CA-C-N	6.96	133.63	123.13
1	F	352	PRO	C-N-CA	6.96	133.63	123.13
1	C	373	GLY	N-CA-C	-6.95	99.66	111.27
1	A	13	ASN	N-CA-C	6.94	121.01	112.54
1	F	13	ASN	N-CA-C	6.93	121.00	112.54
1	F	361	THR	N-CA-C	6.82	125.33	110.80
1	E	303	ALA	N-CA-C	-6.82	101.08	110.35
1	A	361	THR	N-CA-C	6.81	125.30	110.80
1	B	303	ALA	N-CA-C	-6.80	101.10	110.35
1	C	254	VAL	CA-C-N	6.80	134.06	121.62
1	C	254	VAL	C-N-CA	6.80	134.06	121.62
1	D	254	VAL	CA-C-N	6.78	134.03	121.62
1	D	254	VAL	C-N-CA	6.78	134.03	121.62
1	E	302	ILE	N-CA-C	-6.78	104.72	111.77
1	B	302	ILE	N-CA-C	-6.76	104.73	111.77
1	E	254	VAL	N-CA-C	-6.76	103.73	110.62
1	C	331	GLY	O-C-N	-6.75	115.71	122.19
1	D	331	GLY	O-C-N	-6.75	115.71	122.19
1	B	254	VAL	N-CA-C	-6.69	103.79	110.62
1	B	387	TYR	O-C-N	-6.66	114.16	122.35
1	E	387	TYR	O-C-N	-6.66	114.16	122.35
1	B	231	VAL	CA-C-N	-6.65	111.53	119.84
1	B	231	VAL	C-N-CA	-6.65	111.53	119.84
1	E	231	VAL	CA-C-N	-6.64	111.54	119.84
1	E	231	VAL	C-N-CA	-6.64	111.54	119.84
1	B	247	ALA	N-CA-C	-6.64	104.28	112.38
1	F	344	PHE	O-C-N	-6.62	114.94	122.09
1	E	247	ALA	N-CA-C	-6.61	104.32	112.38
1	A	344	PHE	O-C-N	-6.58	114.98	122.09
1	A	293	LYS	N-CA-CB	6.56	121.27	111.23
1	F	293	LYS	N-CA-CB	6.55	121.25	111.23
1	A	362	ASP	N-CA-C	-6.50	102.42	111.39
1	A	374	LEU	N-CA-CB	-6.50	100.46	110.85
1	B	280	ALA	N-CA-CB	6.50	121.31	110.92
1	C	246	VAL	CB-CA-C	-6.50	103.66	111.97
1	D	246	VAL	CB-CA-C	-6.50	103.66	111.97
1	E	280	ALA	N-CA-CB	6.50	121.31	110.92
1	F	374	LEU	N-CA-CB	-6.49	100.46	110.85
1	B	294	ILE	CA-C-N	6.48	129.42	121.64

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	294	ILE	C-N-CA	6.48	129.42	121.64
1	C	287	GLY	N-CA-C	-6.46	106.34	114.16
1	E	294	ILE	CA-C-N	6.46	129.39	121.64
1	E	294	ILE	C-N-CA	6.46	129.39	121.64
1	F	362	ASP	N-CA-C	-6.46	102.48	111.39
1	D	287	GLY	N-CA-C	-6.45	106.36	114.16
1	A	365	MET	N-CA-C	-6.44	105.72	112.93
1	C	273	ASP	O-C-N	6.44	130.74	123.27
1	D	267	VAL	N-CA-CB	6.43	120.57	111.82
1	C	267	VAL	N-CA-CB	6.43	120.56	111.82
1	F	66	TYR	CA-C-N	6.42	126.04	119.56
1	F	66	TYR	C-N-CA	6.42	126.04	119.56
1	E	300	ASN	N-CA-C	-6.42	104.38	111.82
1	D	273	ASP	O-C-N	6.40	130.69	123.27
1	B	300	ASN	N-CA-C	-6.38	104.41	111.82
1	A	66	TYR	CA-C-N	6.38	126.00	119.56
1	A	66	TYR	C-N-CA	6.38	126.00	119.56
1	A	132	PHE	O-C-N	-6.38	115.50	122.07
1	F	132	PHE	O-C-N	-6.38	115.50	122.07
1	B	252	TYR	CB-CA-C	6.37	119.17	109.56
1	E	252	TYR	CB-CA-C	6.37	119.17	109.56
1	F	298	VAL	CB-CA-C	-6.36	100.86	111.29
1	A	298	VAL	CB-CA-C	-6.36	100.86	111.29
1	F	299	GLU	N-CA-CB	-6.34	100.82	110.01
1	A	299	GLU	N-CA-CB	-6.33	100.83	110.01
1	E	236	VAL	O-C-N	-6.33	117.08	122.65
1	B	236	VAL	O-C-N	-6.30	117.11	122.65
1	F	332	TYR	N-CA-CB	-6.28	100.89	110.12
1	A	332	TYR	N-CA-CB	-6.27	100.90	110.12
1	D	276	GLU	N-CA-C	-6.27	104.33	112.23
1	C	276	GLU	N-CA-C	-6.26	104.34	112.23
1	D	275	ILE	CB-CA-C	-6.26	103.87	111.88
1	C	376	LEU	N-CA-CB	-6.25	99.82	110.33
1	C	275	ILE	CB-CA-C	-6.25	103.88	111.88
1	D	376	LEU	N-CA-CB	-6.25	99.83	110.33
1	A	249	GLU	CB-CA-C	-6.18	102.39	112.03
1	F	249	GLU	CB-CA-C	-6.18	102.39	112.03
1	C	332	TYR	N-CA-C	-6.17	100.96	113.29
1	D	332	TYR	N-CA-C	-6.17	100.96	113.29
1	D	306	ASP	N-CA-C	6.17	119.60	110.48
1	F	327	VAL	N-CA-C	6.16	116.89	107.77
1	C	306	ASP	N-CA-C	6.14	119.57	110.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	355	PRO	O-C-N	6.14	130.93	122.64
1	F	355	PRO	O-C-N	6.14	130.93	122.64
1	B	630	LYS	N-CA-C	6.14	118.94	111.82
1	A	327	VAL	N-CA-C	6.13	116.84	107.77
1	C	305	HIS	CB-CA-C	-6.13	99.55	109.72
1	D	305	HIS	CB-CA-C	-6.12	99.56	109.72
1	E	630	LYS	N-CA-C	6.12	118.92	111.82
1	D	260	ALA	N-CA-C	-6.12	102.18	110.68
1	F	365	MET	N-CA-C	-6.11	105.69	113.02
1	C	260	ALA	N-CA-C	-6.10	102.20	110.68
1	F	242	GLU	N-CA-C	-6.10	97.81	110.80
1	A	242	GLU	N-CA-C	-6.09	97.82	110.80
1	C	372	GLN	CB-CA-C	-6.07	103.12	111.73
1	D	372	GLN	CB-CA-C	-6.06	103.13	111.73
1	E	292	GLU	CB-CA-C	6.05	118.88	110.16
1	E	281	TYR	N-CA-C	-6.04	100.02	109.25
1	B	292	GLU	CB-CA-C	6.03	118.85	110.16
1	B	281	TYR	N-CA-C	-6.01	100.05	109.25
1	A	380	ILE	CB-CA-C	-6.00	100.16	110.30
1	D	255	ALA	N-CA-C	6.00	117.97	108.79
1	F	380	ILE	CB-CA-C	-5.98	100.19	110.30
1	C	255	ALA	N-CA-C	5.97	117.93	108.79
1	A	134	PHE	CA-C-N	5.97	130.71	121.34
1	A	134	PHE	C-N-CA	5.97	130.71	121.34
1	C	287	GLY	O-C-N	-5.96	115.94	122.68
1	D	287	GLY	O-C-N	-5.96	115.94	122.68
1	A	251	TYR	CA-CB-CG	5.96	124.62	113.90
1	F	134	PHE	CA-C-N	5.95	130.69	121.34
1	F	134	PHE	C-N-CA	5.95	130.69	121.34
1	F	251	TYR	CA-CB-CG	5.95	124.61	113.90
1	A	295	CYS	CA-C-N	5.92	128.14	120.56
1	A	295	CYS	C-N-CA	5.92	128.14	120.56
1	B	350	ASP	N-CA-C	5.92	117.84	108.67
1	E	350	ASP	N-CA-C	5.91	117.83	108.67
1	F	295	CYS	CA-C-N	5.90	128.11	120.56
1	F	295	CYS	C-N-CA	5.90	128.11	120.56
1	F	337	GLU	N-CA-CB	-5.86	101.57	110.07
1	A	337	GLU	N-CA-CB	-5.84	101.60	110.07
1	A	15	ARG	CB-CA-C	-5.83	100.45	110.95
1	F	15	ARG	CB-CA-C	-5.82	100.47	110.95
1	A	295	CYS	O-C-N	-5.81	115.30	122.68
1	F	295	CYS	O-C-N	-5.81	115.30	122.68

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	C	302	ILE	N-CA-C	5.79	116.75	108.93
1	D	302	ILE	N-CA-C	5.79	116.75	108.93
1	A	355	PRO	CA-C-N	-5.78	112.85	122.21
1	A	355	PRO	C-N-CA	-5.78	112.85	122.21
1	F	355	PRO	CA-C-N	-5.78	112.85	122.21
1	F	355	PRO	C-N-CA	-5.78	112.85	122.21
1	A	398	GLY	N-CA-C	-5.77	104.29	112.37
1	F	398	GLY	N-CA-C	-5.77	104.29	112.37
1	D	327	VAL	O-C-N	-5.75	116.65	123.04
1	F	131	TRP	O-C-N	5.72	128.68	122.15
1	C	327	VAL	O-C-N	-5.72	116.69	123.04
1	A	377	ASP	N-CA-C	-5.72	106.65	113.97
1	C	284	ALA	CA-C-N	5.71	127.86	120.56
1	C	284	ALA	C-N-CA	5.71	127.86	120.56
1	D	284	ALA	CA-C-N	5.71	127.86	120.56
1	D	284	ALA	C-N-CA	5.71	127.86	120.56
1	A	131	TRP	O-C-N	5.69	128.63	122.15
1	C	258	PRO	O-C-N	5.65	130.03	123.14
1	B	251	GLY	N-CA-C	-5.64	101.07	111.34
1	E	251	GLY	N-CA-C	-5.63	101.09	111.34
1	C	383	ASP	N-CA-C	5.62	119.32	111.74
1	F	333	SER	N-CA-CB	5.62	119.52	110.65
1	D	258	PRO	O-C-N	5.61	129.99	123.14
1	A	333	SER	N-CA-CB	5.61	119.51	110.65
1	C	236	VAL	CB-CA-C	-5.59	102.36	110.63
1	D	236	VAL	CB-CA-C	-5.59	102.36	110.63
1	D	383	ASP	N-CA-C	5.59	119.28	111.74
1	C	329	GLY	N-CA-C	5.57	119.42	111.12
1	D	237	VAL	CA-C-N	5.57	127.67	120.44
1	D	237	VAL	C-N-CA	5.57	127.67	120.44
1	F	245	GLU	O-C-N	-5.57	115.65	122.55
1	D	238	PHE	CB-CA-C	5.56	119.61	110.88
1	C	238	PHE	CB-CA-C	5.56	119.61	110.88
1	F	377	ASP	N-CA-C	-5.56	106.66	113.50
1	A	245	GLU	O-C-N	-5.56	115.66	122.55
1	D	329	GLY	N-CA-C	5.55	119.39	111.12
1	A	351	THR	CA-C-N	-5.54	113.97	120.12
1	A	351	THR	C-N-CA	-5.54	113.97	120.12
1	C	237	VAL	CA-C-N	5.54	127.64	120.44
1	C	237	VAL	C-N-CA	5.54	127.64	120.44
1	F	351	THR	CA-C-N	-5.53	113.98	120.12
1	F	351	THR	C-N-CA	-5.53	113.98	120.12

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	280	ALA	O-C-N	-5.50	115.49	122.26
1	E	280	ALA	O-C-N	-5.50	115.49	122.26
1	F	13	ASN	CB-CA-C	-5.50	98.81	110.31
1	A	13	ASN	CB-CA-C	-5.49	98.84	110.31
1	C	257	LYS	CA-C-N	-5.48	114.94	120.31
1	C	257	LYS	C-N-CA	-5.48	114.94	120.31
1	C	234	GLY	O-C-N	-5.48	117.39	123.58
1	D	257	LYS	CA-C-N	-5.47	114.95	120.31
1	D	257	LYS	C-N-CA	-5.47	114.95	120.31
1	D	294	ILE	O-C-N	-5.47	117.27	123.18
1	C	294	ILE	O-C-N	-5.45	117.30	123.18
1	D	234	GLY	O-C-N	-5.45	117.42	123.58
1	C	237	VAL	CB-CA-C	-5.43	101.31	110.71
1	D	237	VAL	CB-CA-C	-5.43	101.31	110.71
1	C	239	SER	N-CA-CB	-5.38	102.49	111.20
1	C	333	SER	N-CA-C	5.38	118.69	110.36
1	C	256	VAL	CA-C-N	-5.36	116.57	123.16
1	C	256	VAL	C-N-CA	-5.36	116.57	123.16
1	C	272	GLN	N-CA-CB	-5.36	105.78	113.65
1	D	272	GLN	N-CA-CB	-5.36	105.78	113.65
1	D	333	SER	N-CA-C	5.35	118.66	110.36
1	D	256	VAL	CA-C-N	-5.34	116.59	123.16
1	D	256	VAL	C-N-CA	-5.34	116.59	123.16
1	A	386	ILE	N-CA-CB	-5.34	101.06	112.00
1	E	257	LYS	O-C-N	5.34	128.28	121.34
1	D	239	SER	N-CA-CB	-5.33	102.56	111.20
1	B	257	LYS	O-C-N	5.33	128.27	121.34
1	F	386	ILE	N-CA-CB	-5.33	101.08	112.00
1	E	288	ILE	N-CA-CB	5.32	118.66	111.21
1	B	288	ILE	N-CA-CB	5.30	118.64	111.21
1	B	10	VAL	CB-CA-C	-5.29	102.61	111.29
1	E	10	VAL	CB-CA-C	-5.29	102.61	111.29
1	F	66	TYR	O-C-N	-5.29	115.23	121.32
1	C	269	ALA	N-CA-C	5.29	117.35	110.53
1	D	329	GLY	CA-C-N	-5.29	115.88	125.66
1	D	329	GLY	C-N-CA	-5.29	115.88	125.66
1	C	329	GLY	CA-C-N	-5.28	115.89	125.66
1	C	329	GLY	C-N-CA	-5.28	115.89	125.66
1	A	66	TYR	O-C-N	-5.27	115.26	121.32
1	F	14	ALA	N-CA-C	-5.27	102.25	110.10
1	D	372	GLN	CA-C-N	-5.26	111.68	121.15
1	D	372	GLN	C-N-CA	-5.26	111.68	121.15

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	C	372	GLN	CA-C-N	-5.25	111.70	121.15
1	C	372	GLN	C-N-CA	-5.25	111.70	121.15
1	D	269	ALA	N-CA-C	5.25	117.30	110.53
1	A	14	ALA	N-CA-C	-5.24	102.29	110.10
1	C	274	GLU	N-CA-C	-5.24	106.72	113.01
1	D	274	GLU	N-CA-C	-5.24	106.72	113.01
1	A	327	VAL	CB-CA-C	-5.23	103.36	110.42
1	F	327	VAL	CB-CA-C	-5.23	103.36	110.42
1	E	301	SER	N-CA-C	-5.23	99.42	108.52
1	B	301	SER	N-CA-C	-5.23	99.43	108.52
1	A	245	GLU	N-CA-CB	5.22	119.43	111.70
1	F	245	GLU	N-CA-CB	5.22	119.43	111.70
1	F	248	ALA	N-CA-CB	5.21	119.79	111.20
1	F	383	ASP	N-CA-C	-5.20	100.69	108.96
1	C	331	GLY	N-CA-C	5.19	118.96	112.73
1	A	248	ALA	N-CA-CB	5.18	119.75	111.20
1	A	383	ASP	N-CA-C	-5.18	100.72	108.96
1	D	331	GLY	N-CA-C	5.16	118.93	112.73
1	A	141	PHE	N-CA-CB	-5.15	103.73	111.56
1	B	237	VAL	CB-CA-C	-5.14	101.60	110.65
1	D	285	VAL	O-C-N	5.14	127.25	121.90
1	E	237	VAL	CB-CA-C	-5.14	101.61	110.65
1	F	372	GLN	CB-CA-C	-5.13	99.70	110.17
1	F	141	PHE	N-CA-CB	-5.13	103.76	111.56
1	F	384	ARG	CB-CA-C	-5.13	110.64	116.54
1	A	329	GLY	N-CA-C	-5.12	101.03	113.18
1	E	523	GLY	O-C-N	-5.12	117.73	123.67
1	A	384	ARG	CB-CA-C	-5.12	110.66	116.54
1	A	372	GLN	CB-CA-C	-5.11	99.74	110.17
1	B	328	VAL	CA-C-N	-5.11	115.74	121.83
1	B	328	VAL	C-N-CA	-5.11	115.74	121.83
1	C	285	VAL	O-C-N	5.11	127.21	121.90
1	F	329	GLY	N-CA-C	-5.11	101.07	113.18
1	A	381	ASP	CB-CA-C	-5.10	102.52	110.74
1	F	381	ASP	CB-CA-C	-5.10	102.53	110.74
1	A	380	ILE	N-CA-C	5.10	117.36	108.90
1	B	523	GLY	O-C-N	-5.09	117.76	123.67
1	B	250	ILE	N-CA-C	5.09	113.92	106.55
1	E	250	ILE	N-CA-C	5.08	113.92	106.55
1	E	328	VAL	CA-C-N	-5.08	115.78	121.83
1	E	328	VAL	C-N-CA	-5.08	115.78	121.83
1	E	296	ILE	N-CA-C	5.07	119.89	109.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	F	380	ILE	N-CA-C	5.07	117.32	108.90
1	C	295	CYS	CB-CA-C	-5.07	101.82	110.95
1	F	131	TRP	CA-C-N	-5.07	113.85	120.44
1	F	131	TRP	C-N-CA	-5.07	113.85	120.44
1	D	295	CYS	CB-CA-C	-5.06	101.85	110.95
1	B	296	ILE	N-CA-C	5.05	119.85	109.34
1	C	235	ASP	N-CA-C	5.05	115.97	108.60
1	D	235	ASP	N-CA-C	5.05	115.97	108.60
1	D	239	SER	N-CA-C	5.04	117.81	109.85
1	A	131	TRP	CA-C-N	-5.04	113.89	120.44
1	A	131	TRP	C-N-CA	-5.04	113.89	120.44
1	C	239	SER	N-CA-C	5.04	117.81	109.85
1	B	250	ILE	CB-CA-C	-5.03	106.95	112.68
1	E	250	ILE	CB-CA-C	-5.03	106.95	112.68
1	F	338	LEU	CA-C-N	-5.01	111.68	120.29
1	F	338	LEU	C-N-CA	-5.01	111.68	120.29

All (2) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
1	A	297	ILE	CA
1	F	297	ILE	CA

All (18) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	340	GLU	Mainchain
1	A	345	SER	Mainchain
1	A	377	ASP	Mainchain
1	B	294	ILE	Mainchain
1	B	382	ARG	Sidechain
1	B	385	THR	Mainchain
1	C	258	PRO	Mainchain
1	C	273	ASP	Mainchain
1	C	276	GLU	Mainchain
1	D	258	PRO	Mainchain
1	D	273	ASP	Mainchain
1	D	276	GLU	Mainchain
1	E	294	ILE	Mainchain
1	E	382	ARG	Sidechain
1	E	385	THR	Mainchain
1	F	340	GLU	Mainchain

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Mol	Chain	Res	Type	Group
1	F	345	SER	Mainchain
1	F	377	ASP	Mainchain

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	4777	0	4723	80	0
1	B	4921	0	4876	54	0
1	C	5033	0	4985	66	0
1	D	5033	0	4985	68	0
1	E	4921	0	4876	53	0
1	F	4777	0	4723	76	0
2	G	57	0	0	5	0
2	H	57	0	0	5	0
3	C	30	0	0	2	0
4	C	2	0	0	0	0
4	D	2	0	0	0	0
5	D	31	0	14	0	0
All	All	29641	0	29182	399	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 7.

All (399) 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)
3:C:701:YHZ:C8	3:C:701:YHZ:C1'	2.52	0.87
3:C:701:YHZ:C1'	3:C:701:YHZ:C4	2.54	0.86
1:C:164:VAL:HG23	2:G:2:7ID:CD2	2.09	0.82
1:D:236:VAL:HG22	1:D:296:ILE:HG12	1.62	0.81
1:D:164:VAL:HG23	2:H:2:7ID:CD2	2.09	0.81
1:C:236:VAL:HG22	1:C:296:ILE:HG12	1.62	0.79
1:C:256:VAL:HG23	1:C:299:GLU:OE1	1.88	0.74
1:D:256:VAL:HG23	1:D:299:GLU:OE1	1.88	0.74
1:C:257:LYS:HG2	1:C:297:ILE:HG23	1.72	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:257:LYS:HG2	1:D:297:ILE:HG23	1.72	0.70
1:C:256:VAL:HG13	1:C:266:GLY:O	1.95	0.67
1:D:256:VAL:HG13	1:D:266:GLY:O	1.95	0.67
1:D:257:LYS:HG2	1:D:297:ILE:CG2	2.27	0.64
1:C:257:LYS:HG2	1:C:297:ILE:CG2	2.27	0.64
1:A:335:ILE:HG12	1:A:336:ALA:H	1.65	0.62
1:E:255:ALA:O	1:E:256:VAL:C	2.42	0.62
1:B:255:ALA:O	1:B:256:VAL:C	2.42	0.61
1:D:209:ILE:HG12	2:G:1:7ID:CD2	2.32	0.60
1:F:335:ILE:HG12	1:F:336:ALA:H	1.65	0.60
1:C:209:ILE:HG12	2:H:1:7ID:CD2	2.32	0.59
1:E:279:ALA:C	1:E:281:TYR:H	2.10	0.59
1:B:279:ALA:C	1:B:281:TYR:H	2.10	0.58
1:C:164:VAL:HG23	2:G:2:7ID:NE2	2.19	0.56
1:D:161:GLY:HA3	2:H:2:7ID:NE2	2.20	0.56
1:D:164:VAL:HG23	2:H:2:7ID:NE2	2.19	0.56
1:C:281:TYR:CE1	1:C:285:VAL:HG21	2.40	0.56
1:D:271:VAL:C	1:D:272:GLN:HG2	2.30	0.56
1:C:271:VAL:C	1:C:272:GLN:HG2	2.30	0.56
1:E:250:ILE:O	1:E:251:GLY:C	2.49	0.56
1:F:433:THR:HG22	1:F:435:ASP:H	1.71	0.56
1:B:250:ILE:O	1:B:251:GLY:C	2.49	0.56
1:D:281:TYR:CE1	1:D:285:VAL:HG21	2.40	0.56
1:A:334:THR:O	1:A:335:ILE:C	2.48	0.56
1:C:161:GLY:HA3	2:G:2:7ID:NE2	2.20	0.55
1:A:433:THR:HG22	1:A:435:ASP:H	1.71	0.55
1:F:334:THR:O	1:F:335:ILE:C	2.48	0.55
1:A:108:ILE:HG22	1:A:109:ASN:N	2.22	0.55
1:F:410:ASP:OD1	1:F:440:TRP:NE1	2.40	0.55
1:A:410:ASP:OD1	1:A:440:TRP:NE1	2.40	0.55
1:A:298:VAL:HG12	1:A:298:VAL:O	2.06	0.55
1:B:258:PRO:HB3	1:B:296:ILE:HG22	1.89	0.55
1:D:265:ILE:O	1:D:265:ILE:HG23	2.06	0.55
1:D:274:GLU:HB2	1:D:277:LEU:HD12	1.89	0.54
1:F:298:VAL:HG12	1:F:298:VAL:O	2.06	0.54
1:D:235:ASP:O	1:D:296:ILE:HG23	2.07	0.54
1:C:235:ASP:O	1:C:296:ILE:HG23	2.07	0.54
1:C:274:GLU:HB2	1:C:277:LEU:HD12	1.89	0.54
1:F:108:ILE:HG22	1:F:109:ASN:N	2.21	0.54
1:D:330:ASP:HB2	1:D:382:ARG:HA	1.90	0.53
1:E:258:PRO:HB3	1:E:296:ILE:HG22	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:301:SER:O	1:A:302:ILE:HG23	2.07	0.53
1:F:301:SER:O	1:F:302:ILE:HG23	2.07	0.53
1:D:265:ILE:HG13	1:D:266:GLY:N	2.23	0.53
1:A:339:ILE:HG23	1:A:359:ILE:HD12	1.91	0.53
1:A:363:GLU:HB3	1:A:366:HIS:HB3	1.90	0.53
1:B:10:VAL:HG23	1:B:10:VAL:O	2.09	0.53
1:C:330:ASP:HB2	1:C:382:ARG:HA	1.90	0.52
1:C:237:VAL:CG1	1:C:242:GLU:HB3	2.40	0.52
1:D:322:ARG:NH2	1:D:430:ASP:OD2	2.42	0.52
1:F:18:ASP:CG	1:F:133:GLU:HG3	2.35	0.52
1:C:331:GLY:O	1:C:332:TYR:CG	2.63	0.52
1:F:546:ARG:HD2	1:F:546:ARG:O	2.10	0.52
1:C:322:ARG:NH2	1:C:430:ASP:OD2	2.42	0.52
1:D:331:GLY:O	1:D:332:TYR:CG	2.63	0.52
1:A:18:ASP:CG	1:A:133:GLU:HG3	2.35	0.52
1:B:308:ARG:NH1	1:B:430:ASP:OD1	2.43	0.52
1:C:265:ILE:HG13	1:C:266:GLY:N	2.23	0.52
1:F:363:GLU:HB3	1:F:366:HIS:HB3	1.90	0.52
1:D:253:PRO:HB3	1:D:272:GLN:H	1.75	0.52
1:A:546:ARG:HD2	1:A:546:ARG:O	2.10	0.52
1:B:239:SER:O	1:B:240:LEU:C	2.53	0.52
1:F:339:ILE:HG23	1:F:359:ILE:HD12	1.91	0.51
1:A:340:GLU:HA	1:A:343:ASN:HB2	1.93	0.51
1:E:278:GLU:C	1:E:281:TYR:HB3	2.36	0.51
1:E:308:ARG:NH1	1:E:430:ASP:OD1	2.43	0.51
1:B:242:GLU:O	1:B:243:ALA:C	2.54	0.51
1:B:246:VAL:HA	1:B:249:GLU:HB3	1.93	0.51
1:F:17:THR:HG21	1:F:50:TYR:CE2	2.46	0.51
1:F:244:LYS:O	1:F:245:GLU:C	2.53	0.51
1:A:113:ILE:HD11	1:A:121:THR:CG2	2.41	0.51
1:B:513:ASP:OD1	1:B:513:ASP:N	2.44	0.51
1:D:332:TYR:HA	1:D:379:VAL:HA	1.93	0.51
1:E:246:VAL:HA	1:E:249:GLU:HB3	1.93	0.51
1:E:513:ASP:OD1	1:E:513:ASP:N	2.44	0.51
1:D:237:VAL:CG1	1:D:242:GLU:HB3	2.40	0.51
1:F:340:GLU:HA	1:F:343:ASN:HB2	1.93	0.51
1:F:608:LYS:HE3	1:F:611:GLY:HA2	1.93	0.51
1:A:17:THR:HG21	1:A:50:TYR:CE2	2.46	0.51
1:E:234:GLY:HA3	1:E:297:ILE:HA	1.93	0.51
1:E:334:THR:HG22	1:E:335:ILE:N	2.25	0.51
1:F:113:ILE:HD11	1:F:121:THR:CG2	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:244:LYS:O	1:A:245:GLU:C	2.53	0.51
1:B:443:THR:OG1	1:B:444:SER:N	2.43	0.51
1:C:332:TYR:HA	1:C:379:VAL:HA	1.93	0.51
1:E:10:VAL:O	1:E:10:VAL:HG23	2.09	0.51
1:F:58:TYR:CE2	1:F:135:ILE:HG21	2.46	0.51
1:A:608:LYS:HE3	1:A:611:GLY:HA2	1.93	0.51
1:A:58:TYR:CE2	1:A:135:ILE:HG21	2.46	0.50
1:C:253:PRO:HB3	1:C:272:GLN:H	1.75	0.50
1:C:265:ILE:O	1:C:265:ILE:HG23	2.06	0.50
1:F:246:VAL:HG13	1:F:247:ALA:N	2.26	0.50
1:C:237:VAL:HG11	1:C:242:GLU:HB3	1.94	0.50
1:F:361:THR:O	1:F:362:ASP:C	2.54	0.50
1:B:334:THR:HG22	1:B:335:ILE:N	2.26	0.50
1:E:443:THR:OG1	1:E:444:SER:N	2.43	0.50
1:F:66:TYR:HB2	1:F:69:LEU:HD13	1.93	0.50
1:B:252:TYR:CE1	1:B:254:VAL:HB	2.46	0.50
1:E:242:GLU:O	1:E:243:ALA:C	2.54	0.50
1:A:66:TYR:HB2	1:A:69:LEU:HD13	1.93	0.50
1:A:361:THR:O	1:A:362:ASP:C	2.54	0.50
1:B:234:GLY:HA3	1:B:297:ILE:HA	1.93	0.50
1:E:239:SER:O	1:E:240:LEU:C	2.53	0.50
1:B:298:VAL:HG13	1:B:300:ASN:H	1.77	0.50
1:B:278:GLU:C	1:B:281:TYR:HB3	2.36	0.50
1:D:237:VAL:HG11	1:D:242:GLU:HB3	1.94	0.50
1:E:252:TYR:CE1	1:E:254:VAL:HB	2.46	0.50
1:F:182:TRP:O	1:F:184:GLU:N	2.45	0.50
1:A:244:LYS:O	1:A:244:LYS:HG3	2.11	0.50
1:A:182:TRP:O	1:A:184:GLU:N	2.45	0.49
1:F:244:LYS:O	1:F:244:LYS:HG3	2.11	0.49
1:A:53:LEU:HB2	1:A:58:TYR:CE1	2.47	0.49
1:F:330:ASP:O	1:F:331:GLY:C	2.55	0.49
1:C:287:GLY:O	1:C:289:PRO:HD3	2.12	0.49
1:D:265:ILE:O	1:D:265:ILE:CG2	2.58	0.49
1:F:53:LEU:HB2	1:F:58:TYR:CE1	2.47	0.49
1:F:245:GLU:HA	1:F:248:ALA:HB3	1.94	0.49
1:E:257:LYS:HG3	1:E:258:PRO:N	2.27	0.49
1:A:108:ILE:CG2	1:A:109:ASN:N	2.76	0.49
1:A:245:GLU:HA	1:A:248:ALA:HB3	1.94	0.49
1:D:590:ASP:OD1	1:D:590:ASP:N	2.46	0.49
1:A:330:ASP:O	1:A:331:GLY:C	2.55	0.49
1:B:386:ILE:HG22	1:B:387:TYR:N	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:346:PRO:HB2	1:F:355:PRO:HG3	1.95	0.49
1:B:245:GLU:O	1:B:249:GLU:N	2.45	0.49
1:B:257:LYS:HG3	1:B:258:PRO:N	2.27	0.49
1:A:246:VAL:HG13	1:A:247:ALA:N	2.26	0.49
1:D:287:GLY:O	1:D:289:PRO:HD3	2.12	0.49
1:F:108:ILE:CG2	1:F:109:ASN:N	2.76	0.49
1:A:308:ARG:NH1	1:A:430:ASP:OD1	2.46	0.49
1:A:341:LYS:HA	1:A:344:PHE:CD2	2.48	0.49
1:A:521:ARG:HH12	1:A:561:ALA:HB2	1.77	0.49
1:B:299:GLU:O	1:B:299:GLU:HG2	2.13	0.49
1:E:386:ILE:HG22	1:E:387:TYR:N	2.28	0.49
1:E:245:GLU:O	1:E:249:GLU:N	2.45	0.48
1:E:299:GLU:O	1:E:299:GLU:HG2	2.13	0.48
1:B:287:GLY:C	1:B:288:ILE:HG13	2.39	0.48
1:E:232:PRO:HB3	1:E:298:VAL:HG12	1.95	0.48
1:F:521:ARG:HH12	1:F:561:ALA:HB2	1.77	0.48
1:E:298:VAL:HG13	1:E:300:ASN:H	1.77	0.48
1:F:308:ARG:NH1	1:F:430:ASP:OD1	2.46	0.48
1:B:288:ILE:O	1:B:289:PRO:C	2.57	0.48
1:D:242:GLU:O	1:D:243:ALA:C	2.57	0.48
1:E:233:GLN:H	1:E:298:VAL:HG11	1.78	0.48
1:A:76:SER:OG	1:A:79:GLU:OE1	2.32	0.48
1:D:257:LYS:HE3	1:D:297:ILE:HD13	1.95	0.48
1:B:232:PRO:HB3	1:B:298:VAL:HG12	1.95	0.48
1:C:594:ASP:OD1	1:C:594:ASP:N	2.47	0.48
1:F:301:SER:O	1:F:302:ILE:CG2	2.62	0.48
1:B:253:PRO:HA	1:B:256:VAL:HG23	1.96	0.48
1:E:287:GLY:C	1:E:288:ILE:HG13	2.39	0.48
1:E:288:ILE:O	1:E:289:PRO:C	2.57	0.48
1:F:341:LYS:HA	1:F:344:PHE:CD2	2.48	0.48
1:A:346:PRO:HB2	1:A:355:PRO:HG3	1.95	0.48
1:B:238:PHE:HA	1:B:293:LYS:HB3	1.96	0.48
1:E:238:PHE:HA	1:E:293:LYS:HB3	1.96	0.48
1:B:8:GLU:C	1:B:10:VAL:H	2.21	0.47
1:C:367:LEU:HD12	1:C:367:LEU:H	1.78	0.47
1:E:253:PRO:HA	1:E:256:VAL:HG23	1.96	0.47
1:D:277:LEU:O	1:D:281:TYR:N	2.44	0.47
1:D:283:ARG:HA	1:D:286:ALA:HB3	1.97	0.47
1:A:59:LEU:O	1:A:60:ALA:C	2.58	0.47
1:A:363:GLU:O	1:A:366:HIS:HD2	1.98	0.47
1:C:257:LYS:HE3	1:C:297:ILE:HD13	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:132:PHE:O	1:F:135:ILE:HG22	2.14	0.47
1:F:242:GLU:HB3	1:F:246:VAL:HB	1.96	0.47
1:C:178:ALA:HA	1:C:188:GLN:O	2.15	0.47
1:D:594:ASP:N	1:D:594:ASP:OD1	2.47	0.47
1:E:8:GLU:C	1:E:10:VAL:H	2.21	0.47
1:E:374:LEU:HB2	1:E:378:SER:HB2	1.97	0.47
1:F:59:LEU:O	1:F:60:ALA:C	2.58	0.47
1:C:283:ARG:HA	1:C:286:ALA:HB3	1.97	0.47
1:C:331:GLY:O	1:C:332:TYR:CD2	2.68	0.47
1:D:226:GLU:C	1:D:227:LEU:HD12	2.40	0.47
1:B:233:GLN:H	1:B:298:VAL:HG11	1.78	0.47
1:A:132:PHE:O	1:A:135:ILE:HG22	2.14	0.47
1:D:331:GLY:O	1:D:332:TYR:CD2	2.68	0.47
1:D:367:LEU:H	1:D:367:LEU:HD12	1.78	0.47
1:E:256:VAL:HG22	1:E:298:VAL:HA	1.96	0.47
1:A:301:SER:O	1:A:302:ILE:CG2	2.62	0.47
1:C:255:ALA:HA	1:C:299:GLU:HB3	1.97	0.47
1:E:287:GLY:O	1:E:288:ILE:C	2.58	0.47
1:C:292:GLU:O	1:C:293:LYS:C	2.58	0.47
1:C:215:THR:HG22	1:C:215:THR:O	2.14	0.47
1:C:534:ASN:OD1	1:C:535:ARG:N	2.48	0.47
1:F:372:GLN:O	1:F:372:GLN:HG3	2.15	0.47
1:B:374:LEU:HB2	1:B:378:SER:HB2	1.97	0.46
1:C:226:GLU:C	1:C:227:LEU:HD12	2.40	0.46
1:D:178:ALA:HA	1:D:188:GLN:O	2.14	0.46
1:A:372:GLN:O	1:A:372:GLN:HG3	2.15	0.46
1:C:242:GLU:O	1:C:243:ALA:C	2.57	0.46
1:D:215:THR:O	1:D:215:THR:HG22	2.14	0.46
1:F:59:LEU:O	1:F:63:GLY:N	2.48	0.46
1:A:379:VAL:CG1	1:A:380:ILE:N	2.70	0.46
1:C:131:TRP:CD1	1:C:141:PHE:HE1	2.34	0.46
1:E:594:ASP:OD1	1:E:610:LYS:NZ	2.46	0.46
1:A:242:GLU:HB3	1:A:246:VAL:HB	1.96	0.46
1:A:368:TYR:O	1:A:371:GLU:HB2	2.16	0.46
1:D:131:TRP:CD1	1:D:141:PHE:HE1	2.33	0.46
1:A:59:LEU:O	1:A:63:GLY:N	2.48	0.46
1:E:11:ARG:HD3	1:E:14:ALA:HB2	1.98	0.46
1:F:188:GLN:NE2	1:F:190:GLY:O	2.44	0.46
1:F:363:GLU:O	1:F:366:HIS:HD2	1.98	0.46
1:B:287:GLY:O	1:B:288:ILE:C	2.58	0.46
1:B:11:ARG:HD3	1:B:14:ALA:HB2	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:534:ASN:OD1	1:D:535:ARG:N	2.48	0.46
1:B:542:LEU:HD12	1:B:568:PHE:CZ	2.50	0.46
1:E:542:LEU:HD12	1:E:568:PHE:CZ	2.50	0.46
1:B:256:VAL:HG22	1:B:298:VAL:HA	1.96	0.46
1:B:257:LYS:CG	1:B:258:PRO:N	2.79	0.46
1:B:594:ASP:OD1	1:B:610:LYS:NZ	2.46	0.46
1:F:368:TYR:O	1:F:371:GLU:HB2	2.16	0.46
1:A:336:ALA:O	1:A:340:GLU:N	2.49	0.45
1:D:274:GLU:O	1:D:277:LEU:HB2	2.16	0.45
1:D:292:GLU:O	1:D:293:LYS:C	2.58	0.45
1:F:76:SER:OG	1:F:79:GLU:OE1	2.32	0.45
1:A:300:ASN:O	1:A:301:SER:HB3	2.16	0.45
1:E:257:LYS:CG	1:E:258:PRO:N	2.79	0.45
1:F:379:VAL:C	1:F:380:ILE:HG13	2.41	0.45
1:C:281:TYR:CZ	1:C:285:VAL:HG21	2.52	0.45
1:D:255:ALA:HA	1:D:299:GLU:HB3	1.97	0.45
1:F:300:ASN:O	1:F:301:SER:HB3	2.16	0.45
1:A:379:VAL:C	1:A:380:ILE:HG13	2.41	0.45
1:A:380:ILE:HG22	1:A:381:ASP:N	2.31	0.45
1:D:193:LYS:HE2	1:D:193:LYS:HB3	1.76	0.45
1:F:178:ALA:HA	1:F:188:GLN:O	2.17	0.45
1:A:11:ARG:HB3	1:A:14:ALA:HB2	1.99	0.45
1:E:331:GLY:HA2	1:E:379:VAL:HG13	1.99	0.45
1:F:336:ALA:O	1:F:340:GLU:N	2.49	0.45
1:F:250:ILE:HB	1:F:299:GLU:HB3	1.99	0.45
1:F:335:ILE:HG12	1:F:336:ALA:N	2.32	0.45
1:A:11:ARG:NH2	1:A:18:ASP:OD2	2.50	0.45
1:C:274:GLU:O	1:C:277:LEU:HB2	2.16	0.45
1:C:473:ARG:HD3	1:C:473:ARG:HA	1.88	0.45
1:D:226:GLU:O	1:D:227:LEU:HD12	2.17	0.45
1:F:69:LEU:HD11	1:F:87:GLU:HG3	1.99	0.45
1:A:178:ALA:HA	1:A:188:GLN:O	2.17	0.45
1:F:375:ASP:HB2	1:F:378:SER:HB2	1.99	0.45
1:F:380:ILE:HG22	1:F:381:ASP:N	2.31	0.45
1:B:178:ALA:HA	1:B:188:GLN:O	2.17	0.44
1:E:89:ASN:O	1:E:89:ASN:ND2	2.48	0.44
1:F:11:ARG:HB3	1:F:14:ALA:HB2	1.99	0.44
1:F:18:ASP:O	1:F:19:VAL:C	2.58	0.44
1:A:18:ASP:O	1:A:19:VAL:C	2.58	0.44
1:A:188:GLN:NE2	1:A:190:GLY:O	2.44	0.44
1:D:281:TYR:CZ	1:D:285:VAL:HG21	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:298:VAL:HG13	1:E:299:GLU:N	2.33	0.44
1:A:250:ILE:HB	1:A:299:GLU:HB3	1.99	0.44
1:A:296:ILE:HD12	1:A:296:ILE:HA	1.91	0.44
1:C:226:GLU:O	1:C:227:LEU:HD12	2.17	0.44
1:A:375:ASP:HB2	1:A:378:SER:HB2	1.99	0.44
1:E:217:LYS:HZ1	1:E:261:GLY:C	2.26	0.44
1:A:15:ARG:C	1:A:16:THR:HG1	2.23	0.44
1:A:102:VAL:HG22	1:A:111:ILE:HG12	1.99	0.44
1:D:276:GLU:O	1:D:277:LEU:C	2.60	0.44
1:E:178:ALA:HA	1:E:188:GLN:O	2.17	0.44
1:F:11:ARG:NH2	1:F:18:ASP:OD2	2.50	0.44
1:A:64:ASP:O	1:A:66:TYR:N	2.51	0.44
1:A:69:LEU:HD11	1:A:87:GLU:HG3	1.99	0.44
1:B:217:LYS:HZ1	1:B:261:GLY:C	2.25	0.44
1:B:298:VAL:HG13	1:B:299:GLU:N	2.33	0.44
1:B:331:GLY:HA2	1:B:379:VAL:HG13	1.99	0.44
1:C:265:ILE:O	1:C:265:ILE:CG2	2.58	0.44
1:F:64:ASP:O	1:F:66:TYR:N	2.51	0.44
1:F:102:VAL:HG22	1:F:111:ILE:HG12	1.99	0.44
1:C:8:GLU:HB3	1:C:9:PRO:CD	2.48	0.43
1:D:379:VAL:O	1:D:379:VAL:HG23	2.18	0.43
1:B:295:CYS:HB3	1:B:296:ILE:H	1.56	0.43
1:C:274:GLU:HA	1:C:277:LEU:HD12	2.00	0.43
1:F:334:THR:O	1:F:337:GLU:N	2.51	0.43
1:F:85:VAL:HG11	1:F:113:ILE:HD13	2.00	0.43
1:F:134:PHE:HD2	1:F:140:GLU:O	2.01	0.43
1:B:386:ILE:CG2	1:B:387:TYR:N	2.82	0.43
1:C:276:GLU:O	1:C:277:LEU:C	2.61	0.43
1:D:278:GLU:O	1:D:279:ALA:C	2.60	0.43
1:D:320:THR:HG21	1:D:458:MET:HE2	2.01	0.43
1:A:334:THR:O	1:A:337:GLU:N	2.51	0.43
1:D:256:VAL:O	1:D:297:ILE:HA	2.19	0.43
1:F:379:VAL:CG1	1:F:380:ILE:N	2.70	0.43
1:C:629:LEU:HD23	1:C:629:LEU:HA	1.89	0.43
1:E:93:MET:HE1	1:E:155:ARG:HE	1.84	0.43
1:A:134:PHE:HD2	1:A:140:GLU:O	2.01	0.43
1:C:274:GLU:HA	1:C:277:LEU:CG	2.49	0.43
1:C:278:GLU:O	1:C:279:ALA:C	2.60	0.43
1:C:542:LEU:HD12	1:C:568:PHE:CZ	2.54	0.43
1:D:256:VAL:CG1	1:D:257:LYS:N	2.82	0.43
1:D:274:GLU:HA	1:D:277:LEU:HD12	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:461:LYS:HE3	1:E:461:LYS:HB2	1.90	0.43
1:C:217:LYS:H	1:C:217:LYS:HG2	1.65	0.43
1:B:89:ASN:O	1:B:89:ASN:ND2	2.48	0.42
1:C:379:VAL:O	1:C:379:VAL:HG23	2.18	0.42
1:D:8:GLU:HB3	1:D:9:PRO:CD	2.48	0.42
1:D:542:LEU:HD12	1:D:568:PHE:CZ	2.54	0.42
1:E:387:TYR:O	1:E:388:LEU:HB2	2.19	0.42
1:F:135:ILE:HG12	1:F:135:ILE:O	2.19	0.42
1:D:348:ARG:NH1	1:D:357:GLY:O	2.52	0.42
1:C:256:VAL:CG1	1:C:257:LYS:N	2.82	0.42
1:A:242:GLU:O	1:A:244:LYS:N	2.53	0.42
1:A:250:ILE:HG22	1:A:251:TYR:HD2	1.85	0.42
1:A:625:GLU:HA	1:A:628:TYR:CE2	2.55	0.42
1:C:256:VAL:O	1:C:297:ILE:HA	2.19	0.42
1:C:271:VAL:O	1:C:272:GLN:HG2	2.19	0.42
1:D:256:VAL:HG12	1:D:257:LYS:N	2.35	0.42
1:F:250:ILE:HG22	1:F:251:TYR:HD2	1.85	0.42
1:A:79:GLU:OE1	1:A:79:GLU:N	2.52	0.42
1:D:334:THR:HA	1:D:377:ASP:HA	2.02	0.42
1:E:386:ILE:CG2	1:E:387:TYR:N	2.82	0.42
1:C:547:ASN:HA	1:C:548:PRO:HD3	1.93	0.42
1:A:341:LYS:O	1:A:344:PHE:HB2	2.20	0.42
1:B:278:GLU:O	1:B:281:TYR:HB3	2.20	0.42
1:A:85:VAL:HG11	1:A:113:ILE:HD13	2.00	0.42
1:B:296:ILE:C	1:B:297:ILE:HG12	2.45	0.42
1:C:242:GLU:C	1:C:244:LYS:N	2.74	0.42
1:E:8:GLU:HG3	1:E:10:VAL:CG2	2.50	0.42
1:E:44:PHE:HD1	1:E:44:PHE:HA	1.73	0.42
1:E:155:ARG:HD3	1:E:155:ARG:HA	1.91	0.42
1:B:93:MET:HE1	1:B:155:ARG:HE	1.84	0.42
1:C:320:THR:HG21	1:C:458:MET:HE2	2.01	0.42
1:C:325:ALA:HB2	1:C:397:GLY:O	2.20	0.42
1:D:547:ASN:HA	1:D:548:PRO:HD3	1.93	0.42
1:E:8:GLU:C	1:E:10:VAL:N	2.77	0.42
1:F:625:GLU:HA	1:F:628:TYR:CE2	2.55	0.42
1:A:337:GLU:C	1:A:339:ILE:N	2.70	0.41
1:D:274:GLU:HA	1:D:277:LEU:CG	2.49	0.41
1:D:473:ARG:HD3	1:D:473:ARG:HA	1.88	0.41
1:F:327:VAL:HG11	1:F:339:ILE:HG12	2.02	0.41
1:A:241:ALA:O	1:A:242:GLU:C	2.63	0.41
1:B:248:ALA:O	1:B:249:GLU:C	2.63	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:242:GLU:C	1:D:244:LYS:N	2.74	0.41
1:F:64:ASP:O	1:F:65:ARG:C	2.64	0.41
1:A:335:ILE:HG12	1:A:336:ALA:N	2.32	0.41
1:A:365:MET:O	1:A:368:TYR:HB3	2.21	0.41
1:B:8:GLU:HG3	1:B:10:VAL:CG2	2.50	0.41
1:C:298:VAL:O	1:C:299:GLU:HB2	2.20	0.41
1:C:348:ARG:NH1	1:C:357:GLY:O	2.52	0.41
1:D:325:ALA:HB2	1:D:397:GLY:O	2.20	0.41
1:F:242:GLU:O	1:F:244:LYS:N	2.53	0.41
1:D:212:ASP:HB2	2:G:1:7ID:NH2	2.36	0.41
1:E:296:ILE:C	1:E:297:ILE:HG12	2.45	0.41
1:F:297:ILE:HG13	1:F:298:VAL:HG23	2.03	0.41
1:F:341:LYS:O	1:F:344:PHE:HB2	2.20	0.41
1:A:363:GLU:O	1:A:366:HIS:CD2	2.74	0.41
1:A:384:ARG:C	1:A:385:THR:HG23	2.45	0.41
1:B:286:ALA:O	1:B:289:PRO:HD3	2.21	0.41
1:C:187:MET:HE2	1:C:187:MET:HB2	1.95	0.41
1:C:334:THR:HA	1:C:377:ASP:HA	2.02	0.41
1:E:286:ALA:O	1:E:289:PRO:HD3	2.21	0.41
1:F:363:GLU:O	1:F:366:HIS:CD2	2.74	0.41
1:A:135:ILE:HG12	1:A:135:ILE:O	2.19	0.41
1:B:44:PHE:HD1	1:B:44:PHE:HA	1.73	0.41
1:B:387:TYR:O	1:B:388:LEU:HB2	2.19	0.41
1:E:248:ALA:C	1:E:250:ILE:N	2.75	0.41
1:F:296:ILE:HD12	1:F:296:ILE:HA	1.91	0.41
1:F:494:ARG:NH2	1:F:496:SER:OG	2.54	0.41
1:F:384:ARG:C	1:F:385:THR:HG23	2.46	0.41
1:B:348:ARG:HD3	1:B:359:ILE:HG13	2.02	0.41
1:E:278:GLU:O	1:E:281:TYR:HB3	2.20	0.41
1:B:242:GLU:C	1:B:244:LYS:N	2.77	0.41
1:D:43:ASP:OD1	1:D:110:ARG:HG2	2.20	0.41
1:D:187:MET:HE2	1:D:187:MET:HB2	1.95	0.41
1:D:271:VAL:O	1:D:272:GLN:HG2	2.19	0.41
1:E:348:ARG:HD3	1:E:359:ILE:HG13	2.02	0.41
1:B:246:VAL:C	1:B:248:ALA:N	2.78	0.41
1:B:248:ALA:C	1:B:250:ILE:N	2.75	0.41
1:C:98:LYS:HE2	1:C:98:LYS:HB3	1.90	0.41
1:F:296:ILE:C	1:F:297:ILE:HG12	2.46	0.41
1:C:43:ASP:OD1	1:C:110:ARG:HG2	2.20	0.40
1:C:277:LEU:O	1:C:281:TYR:N	2.44	0.40
1:D:217:LYS:H	1:D:217:LYS:HG2	1.65	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:323:LYS:HA	1:F:324:PRO:HD3	1.94	0.40
1:F:366:HIS:CE1	1:F:367:LEU:HG	2.56	0.40
1:A:64:ASP:O	1:A:65:ARG:C	2.64	0.40
1:A:327:VAL:HG11	1:A:339:ILE:HG12	2.02	0.40
1:A:341:LYS:HG2	1:A:344:PHE:CE2	2.57	0.40
1:B:283:ARG:O	1:B:283:ARG:HG3	2.21	0.40
1:C:212:ASP:HB2	2:H:1:7ID:NH2	2.36	0.40
1:F:33:PRO:HA	1:F:586:ILE:HD12	2.03	0.40
1:A:33:PRO:HA	1:A:586:ILE:HD12	2.03	0.40
1:A:297:ILE:HG13	1:A:298:VAL:HG23	2.03	0.40
1:A:366:HIS:CE1	1:A:367:LEU:HG	2.57	0.40
1:C:256:VAL:HG12	1:C:257:LYS:N	2.35	0.40
1:D:298:VAL:O	1:D:299:GLU:HB2	2.20	0.40
1:A:296:ILE:C	1:A:297:ILE:HG12	2.46	0.40
1:D:242:GLU:O	1:D:244:LYS:N	2.55	0.40
1:E:191:TYR:HD1	1:E:191:TYR:HA	1.69	0.40
1:F:341:LYS:HG2	1:F:344:PHE:CE2	2.57	0.40
1:A:335:ILE:HG23	1:A:337:GLU:H	1.86	0.40
1:A:381:ASP:OD1	1:A:381:ASP:C	2.65	0.40
1:D:256:VAL:HG12	1:D:258:PRO:HD3	2.03	0.40
1:F:337:GLU:C	1:F:339:ILE:N	2.70	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	586/642 (91%)	537 (92%)	43 (7%)	6 (1%)	12	32
1	B	611/642 (95%)	564 (92%)	40 (6%)	7 (1%)	11	29
1	C	628/642 (98%)	579 (92%)	46 (7%)	3 (0%)	24	48
1	D	628/642 (98%)	580 (92%)	45 (7%)	3 (0%)	24	48

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	E	611/642 (95%)	564 (92%)	41 (7%)	6 (1%)	12	32
1	F	586/642 (91%)	537 (92%)	43 (7%)	6 (1%)	12	32
All	All	3650/3852 (95%)	3361 (92%)	258 (7%)	31 (1%)	18	37

All (31) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	B	258	PRO
1	B	285	VAL
1	C	289	PRO
1	D	289	PRO
1	E	258	PRO
1	E	285	VAL
1	A	335	ILE
1	A	346	PRO
1	F	335	ILE
1	F	346	PRO
1	A	16	THR
1	A	65	ARG
1	C	268	THR
1	D	268	THR
1	F	16	THR
1	F	65	ARG
1	A	357	GLY
1	B	282	ASP
1	E	282	ASP
1	F	357	GLY
1	B	256	VAL
1	C	328	VAL
1	D	328	VAL
1	E	256	VAL
1	B	259	VAL
1	E	259	VAL
1	A	355	PRO
1	F	355	PRO
1	B	232	PRO
1	B	297	ILE
1	E	232	PRO

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	520/558 (93%)	506 (97%)	14 (3%)	39	69
1	B	535/558 (96%)	511 (96%)	24 (4%)	24	52
1	C	547/558 (98%)	535 (98%)	12 (2%)	45	74
1	D	547/558 (98%)	535 (98%)	12 (2%)	45	74
1	E	535/558 (96%)	511 (96%)	24 (4%)	24	52
1	F	520/558 (93%)	506 (97%)	14 (3%)	39	69
All	All	3204/3348 (96%)	3104 (97%)	100 (3%)	36	65

All (100) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	11	ARG
1	A	59	LEU
1	A	194	GLN
1	A	236	VAL
1	A	320	THR
1	A	327	VAL
1	A	328	VAL
1	A	330	ASP
1	A	386	ILE
1	A	394	LEU
1	A	399	PHE
1	A	473	ARG
1	A	546	ARG
1	A	556	GLU
1	B	8	GLU
1	B	11	ARG
1	B	44	PHE
1	B	46	PHE
1	B	132	PHE
1	B	191	TYR
1	B	194	GLN
1	B	227	LEU

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Mol	Chain	Res	Type
1	B	236	VAL
1	B	239	SER
1	B	240	LEU
1	B	254	VAL
1	B	285	VAL
1	B	288	ILE
1	B	289	PRO
1	B	295	CYS
1	B	296	ILE
1	B	297	ILE
1	B	298	VAL
1	B	328	VAL
1	B	330	ASP
1	B	389	ARG
1	B	475	LEU
1	B	525	LEU
1	C	184	GLU
1	C	218	ASP
1	C	257	LYS
1	C	274	GLU
1	C	292	GLU
1	C	294	ILE
1	C	295	CYS
1	C	297	ILE
1	C	298	VAL
1	C	333	SER
1	C	473	ARG
1	C	586	ILE
1	D	184	GLU
1	D	218	ASP
1	D	257	LYS
1	D	274	GLU
1	D	292	GLU
1	D	294	ILE
1	D	295	CYS
1	D	297	ILE
1	D	298	VAL
1	D	333	SER
1	D	473	ARG
1	D	586	ILE
1	E	8	GLU
1	E	11	ARG

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Mol	Chain	Res	Type
1	E	44	PHE
1	E	46	PHE
1	E	132	PHE
1	E	191	TYR
1	E	194	GLN
1	E	227	LEU
1	E	236	VAL
1	E	239	SER
1	E	240	LEU
1	E	254	VAL
1	E	285	VAL
1	E	288	ILE
1	E	289	PRO
1	E	295	CYS
1	E	296	ILE
1	E	297	ILE
1	E	298	VAL
1	E	328	VAL
1	E	330	ASP
1	E	389	ARG
1	E	475	LEU
1	E	525	LEU
1	F	11	ARG
1	F	59	LEU
1	F	194	GLN
1	F	236	VAL
1	F	320	THR
1	F	327	VAL
1	F	328	VAL
1	F	330	ASP
1	F	386	ILE
1	F	394	LEU
1	F	399	PHE
1	F	473	ARG
1	F	546	ARG
1	F	556	GLU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (23) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	24	ASN
1	A	36	ASN

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Mol	Chain	Res	Type
1	A	57	ASN
1	A	117	HIS
1	A	366	HIS
1	B	109	ASN
1	B	372	GLN
1	B	416	GLN
1	B	573	ASN
1	C	156	ASN
1	C	233	GLN
1	C	416	GLN
1	D	156	ASN
1	D	208	HIS
1	D	233	GLN
1	D	416	GLN
1	E	372	GLN
1	E	416	GLN
1	E	573	ASN
1	F	24	ASN
1	F	57	ASN
1	F	117	HIS
1	F	366	HIS

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

6 non-standard protein/DNA/RNA residues 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	7ID	G	3	2	17,18,19	0.62	0	16,22,24	0.73	0
2	7ID	G	2	2	17,18,19	0.62	0	16,22,24	0.64	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	7ID	H	3	2	17,18,19	0.62	0	16,22,24	0.73	0
2	7ID	H	1	2	17,18,19	0.60	0	16,22,24	0.77	0
2	7ID	G	1	2	17,18,19	0.60	0	16,22,24	0.77	0
2	7ID	H	2	2	17,18,19	0.62	0	16,22,24	0.64	0

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	7ID	G	3	2	-	5/20/21/23	-
2	7ID	G	2	2	-	14/20/21/23	-
2	7ID	H	3	2	-	5/20/21/23	-
2	7ID	H	1	2	-	9/20/21/23	-
2	7ID	G	1	2	-	9/20/21/23	-
2	7ID	H	2	2	-	14/20/21/23	-

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (56) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	G	1	7ID	C-CA-CB-CG
2	G	1	7ID	O-C-CA-CB
2	G	1	7ID	NH1-CZ2-NE2-CD2
2	G	1	7ID	NH2-CZ2-NE2-CD2
2	H	1	7ID	C-CA-CB-CG
2	H	1	7ID	O-C-CA-CB
2	H	1	7ID	NH1-CZ2-NE2-CD2
2	H	1	7ID	NH2-CZ2-NE2-CD2
2	G	2	7ID	C-CA-CB-CG
2	G	2	7ID	CB-CG-N2-CA2
2	G	2	7ID	OD1-CG-N2-CA2
2	G	2	7ID	CG2-CD2-NE2-CZ2
2	G	2	7ID	NH1-CZ2-NE2-CD2
2	G	2	7ID	NH2-CZ2-NE2-CD2
2	H	2	7ID	C-CA-CB-CG

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Mol	Chain	Res	Type	Atoms
2	H	2	7ID	CB-CG-N2-CA2
2	H	2	7ID	OD1-CG-N2-CA2
2	H	2	7ID	CG2-CD2-NE2-CZ2
2	H	2	7ID	NH1-CZ2-NE2-CD2
2	H	2	7ID	NH2-CZ2-NE2-CD2
2	G	3	7ID	O-C-CA-CB
2	G	3	7ID	NH1-CZ2-NE2-CD2
2	G	3	7ID	NH2-CZ2-NE2-CD2
2	H	3	7ID	O-C-CA-CB
2	H	3	7ID	NH1-CZ2-NE2-CD2
2	H	3	7ID	NH2-CZ2-NE2-CD2
2	G	1	7ID	N2-CA2-CB2-CG2
2	H	1	7ID	N2-CA2-CB2-CG2
2	G	2	7ID	N2-CA2-CB2-CG2
2	H	2	7ID	N2-CA2-CB2-CG2
2	G	1	7ID	CO2-CA2-CB2-CG2
2	H	1	7ID	CO2-CA2-CB2-CG2
2	G	1	7ID	NE2-CD2-CG2-CB2
2	H	1	7ID	NE2-CD2-CG2-CB2
2	G	2	7ID	CO2-CA2-CB2-CG2
2	H	2	7ID	CO2-CA2-CB2-CG2
2	G	1	7ID	CA2-CB2-CG2-CD2
2	H	1	7ID	CA2-CB2-CG2-CD2
2	G	2	7ID	N2-CA2-CO2-O2
2	G	2	7ID	N2-CA2-CO2-OX2
2	H	2	7ID	N2-CA2-CO2-O2
2	H	2	7ID	N2-CA2-CO2-OX2
2	G	1	7ID	N-CA-CB-CG
2	H	1	7ID	N-CA-CB-CG
2	G	2	7ID	N-CA-CB-CG
2	H	2	7ID	N-CA-CB-CG
2	G	3	7ID	CA2-CB2-CG2-CD2
2	H	3	7ID	CA2-CB2-CG2-CD2
2	G	2	7ID	NE2-CD2-CG2-CB2
2	H	2	7ID	NE2-CD2-CG2-CB2
2	G	2	7ID	CA2-CB2-CG2-CD2
2	H	2	7ID	CA2-CB2-CG2-CD2
2	G	3	7ID	N2-CA2-CO2-O2
2	H	3	7ID	N2-CA2-CO2-O2
2	G	2	7ID	CO2-CA2-N2-CG
2	H	2	7ID	CO2-CA2-N2-CG

There are no ring outliers.

4 monomers are involved in 10 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	G	2	7ID	3	0
2	H	1	7ID	2	0
2	G	1	7ID	2	0
2	H	2	7ID	3	0

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 6 ligands modelled in this entry, 4 are monoatomic - leaving 2 for Mogul analysis.

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	$\# Z > 2$
5	ACP	D	701	4	31,33,33	0.74	1 (3%)	47,52,52	0.62	1 (2%)
3	YHZ	C	701	4	28,31,31	8.51	3 (10%)	35,47,47	2.77	5 (14%)

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
5	ACP	D	701	4	-	5/19/38/38	0/3/3/3
3	YHZ	C	701	4	-	8/20/39/39	0/2/2/2

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	C	701	YHZ	C8-C1'	44.14	2.52	1.52
3	C	701	YHZ	C8-N7	-7.59	1.31	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	D	701	ACP	PB-O2B	-2.34	1.50	1.56
3	C	701	YHZ	PB-O2B	-2.34	1.50	1.56

All (6) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	C	701	YHZ	C1'-C8-N7	14.46	141.12	112.99
3	C	701	YHZ	C6-C5-N7	4.26	132.21	120.58
3	C	701	YHZ	C4-N3-C2	-4.10	110.96	115.80
5	D	701	ACP	O1G-PG-C3B	-2.34	106.27	111.37
3	C	701	YHZ	O1G-PG-C3B	-2.33	106.30	111.37
3	C	701	YHZ	C5-C4-N3	2.08	126.44	122.04

There are no chirality outliers.

All (13) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	C	701	YHZ	C2'-C1'-C8-N7
3	C	701	YHZ	C1'-C8-N7-C5
3	C	701	YHZ	O4'-C4'-C5'-O5'
5	D	701	ACP	O4'-C4'-C5'-O5'
3	C	701	YHZ	C3'-C4'-C5'-O5'
5	D	701	ACP	C3'-C4'-C5'-O5'
3	C	701	YHZ	O4'-C1'-C8-N7
3	C	701	YHZ	C5'-O5'-PA-O1A
3	C	701	YHZ	C5'-O5'-PA-O2A
3	C	701	YHZ	C5'-O5'-PA-O3A
5	D	701	ACP	C5'-O5'-PA-O1A
5	D	701	ACP	C5'-O5'-PA-O2A
5	D	701	ACP	C5'-O5'-PA-O3A

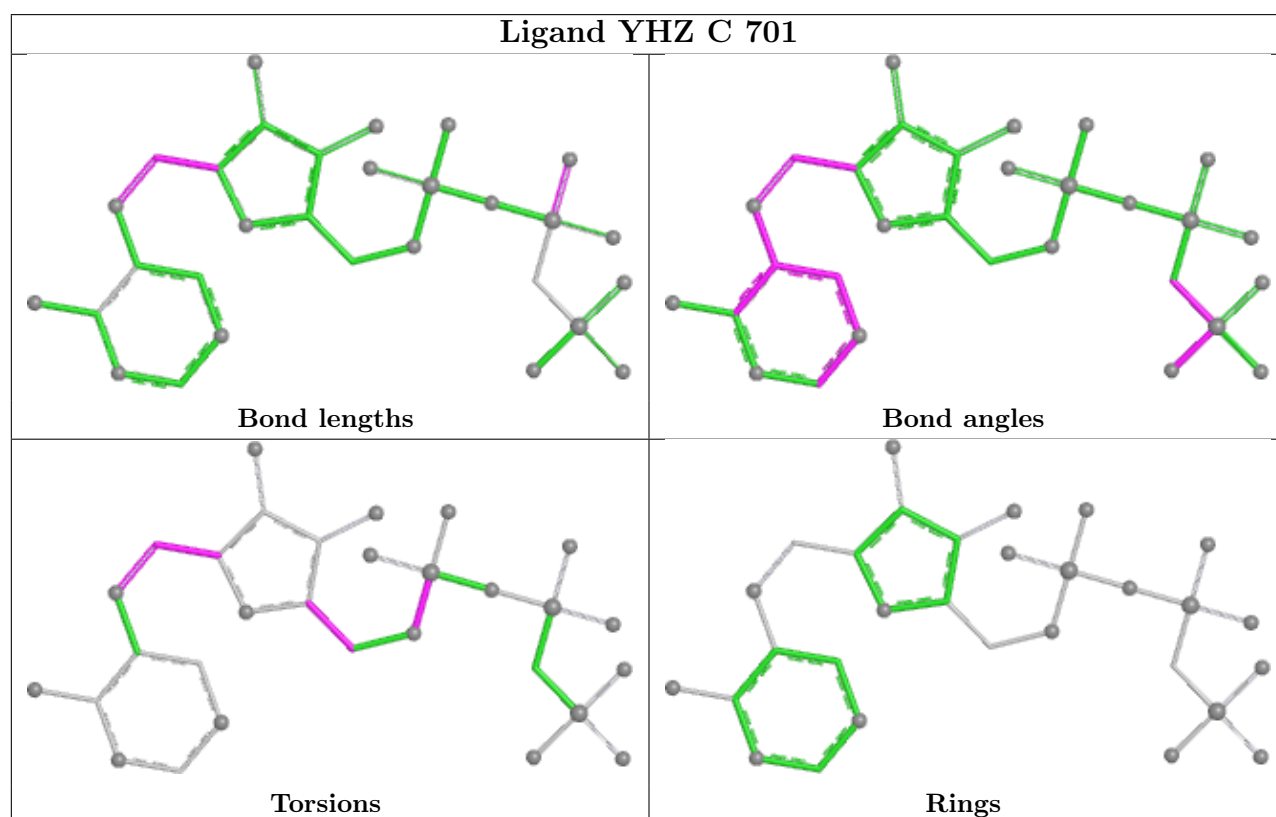
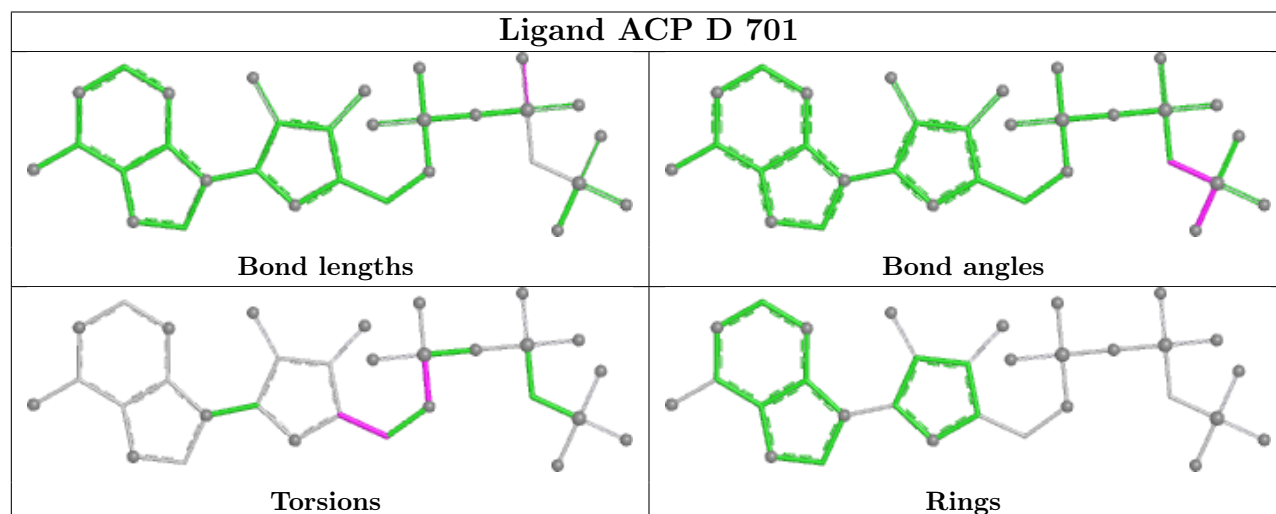
There are no ring outliers.

1 monomer is involved in 2 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	C	701	YHZ	2	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](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
1	B	5
1	E	5
1	C	4
1	D	4
1	A	3
1	F	3

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	B	256:VAL	C	257:LYS	N	1.60
1	E	256:VAL	C	257:LYS	N	1.60
1	A	233:GLN	C	234:GLY	N	1.20
1	C	327:VAL	C	328:VAL	N	1.20
1	D	327:VAL	C	328:VAL	N	1.20
1	F	233:GLN	C	234:GLY	N	1.20
1	C	252:TYR	C	253:PRO	N	1.19
1	D	252:TYR	C	253:PRO	N	1.19
1	C	253:PRO	C	254:VAL	N	1.18
1	D	253:PRO	C	254:VAL	N	1.18
1	B	523:GLY	C	524:ILE	N	1.17
1	E	523:GLY	C	524:ILE	N	1.17
1	B	387:TYR	C	388:LEU	N	1.15
1	E	387:TYR	C	388:LEU	N	1.15
1	A	18:ASP	C	19:VAL	N	1.12
1	A	240:LEU	C	241:ALA	N	1.12
1	F	18:ASP	C	19:VAL	N	1.12
1	F	240:LEU	C	241:ALA	N	1.12
1	B	326:TYR	C	327:VAL	N	1.11
1	E	326:TYR	C	327:VAL	N	1.11
1	C	7:VAL	C	8:GLU	N	1.08
1	D	7:VAL	C	8:GLU	N	1.08
1	B	327:VAL	C	328:VAL	N	1.05
1	E	327:VAL	C	328:VAL	N	1.05

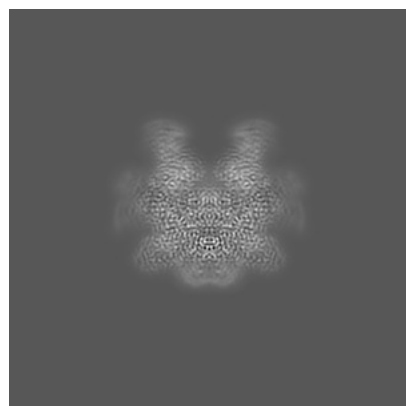
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-29534. These allow visual inspection of the internal detail of the map and identification of artifacts.

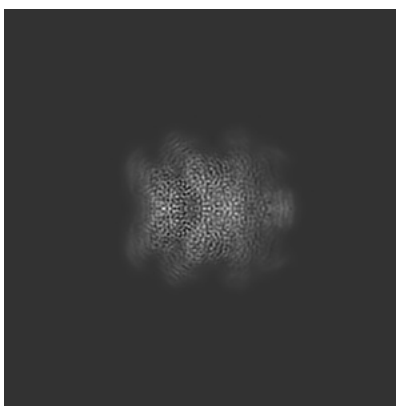
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

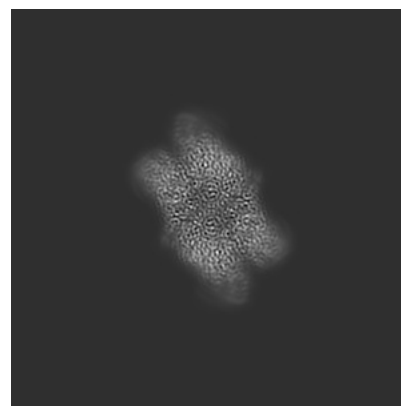
6.1.1 Primary map



X

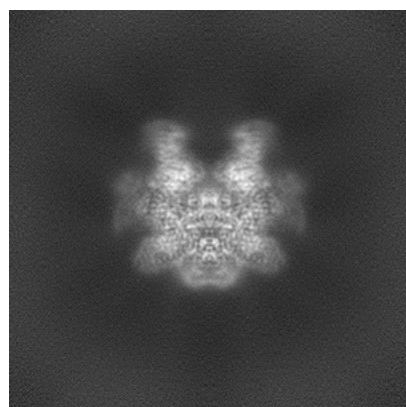


Y

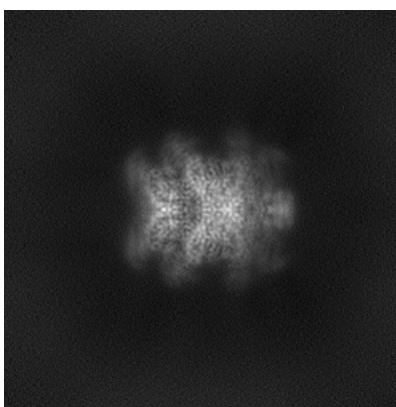


Z

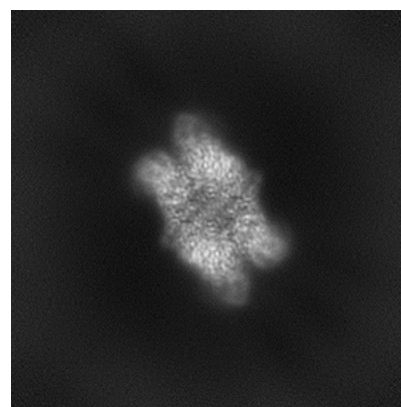
6.1.2 Raw map



X



Y



Z

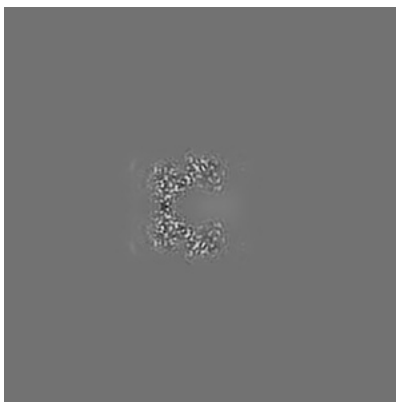
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

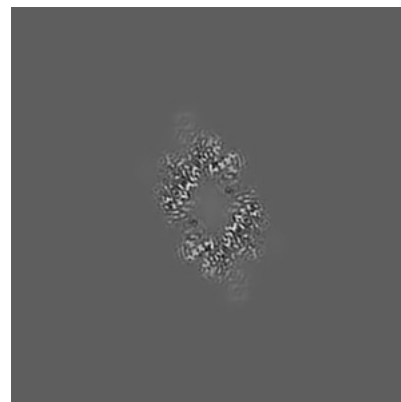
6.2.1 Primary map



X Index: 256

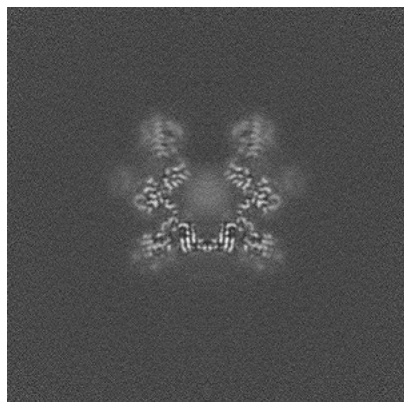


Y Index: 256

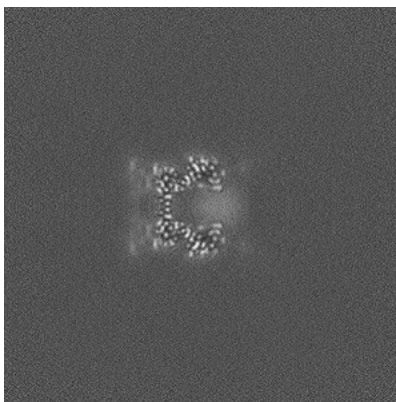


Z Index: 256

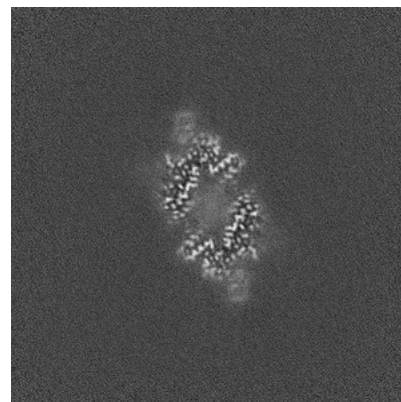
6.2.2 Raw map



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](#)

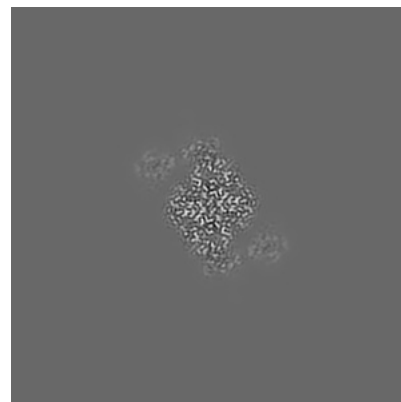
6.3.1 Primary map



X Index: 256

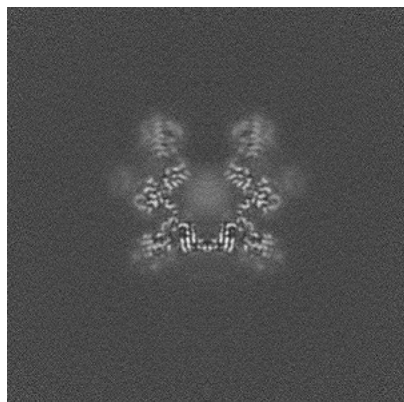


Y Index: 280

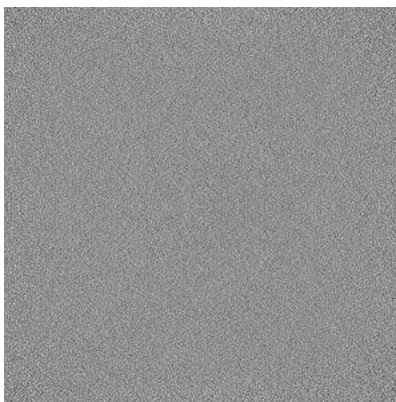


Z Index: 213

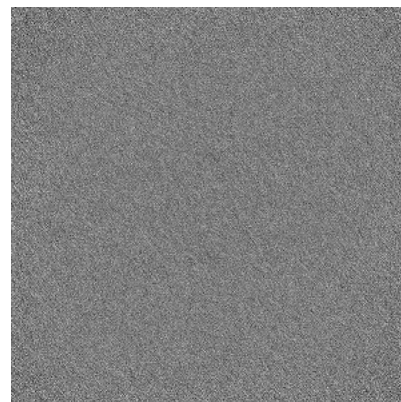
6.3.2 Raw map



X Index: 256



Y Index: 0

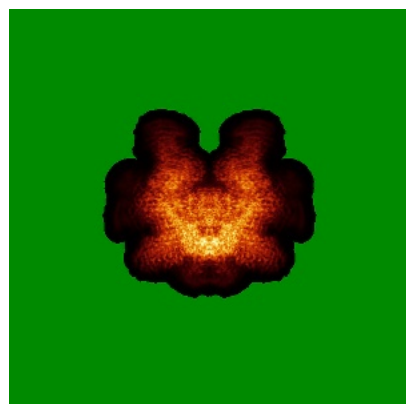


Z Index: 0

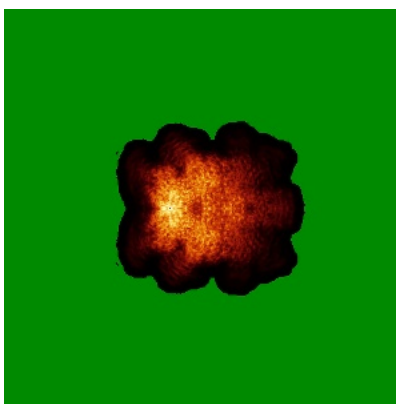
The images above show the largest variance slices of the map in three orthogonal directions.

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

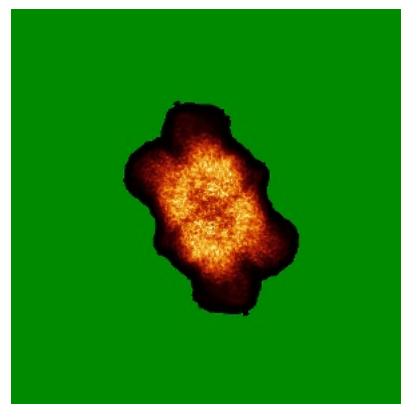
6.4.1 Primary map



X

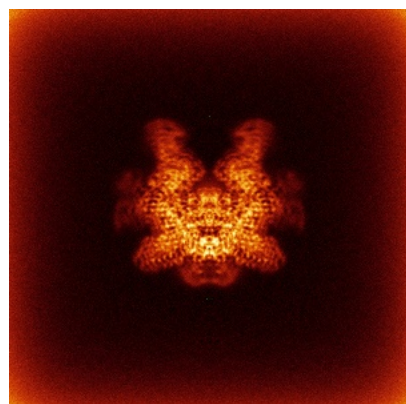


Y

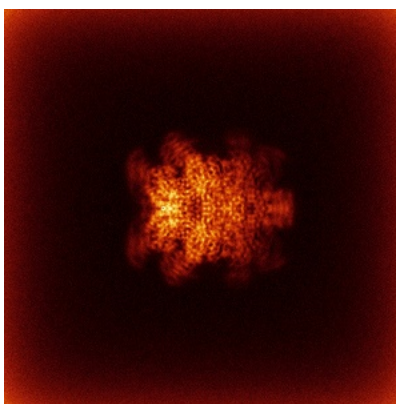


Z

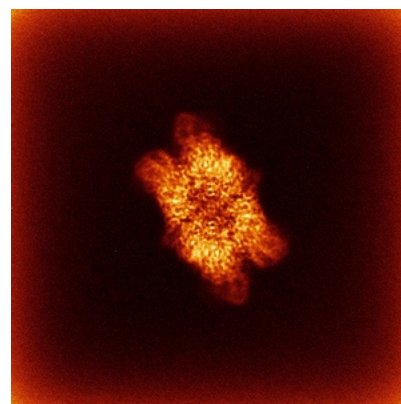
6.4.2 Raw map



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

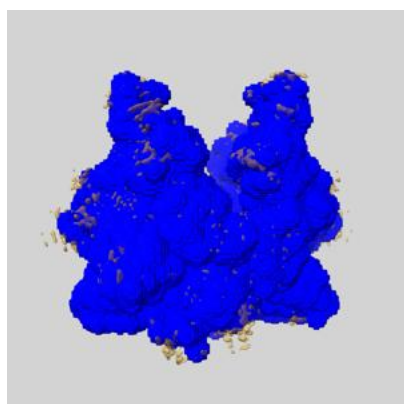
6.6 Mask visualisation [i](#)

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

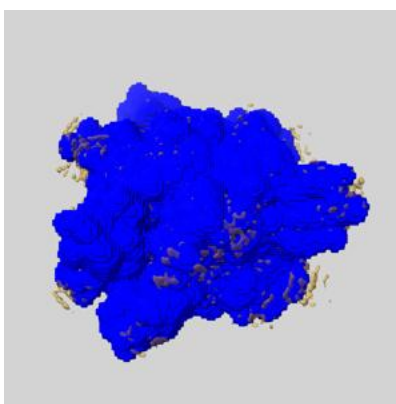
A mask typically either:

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

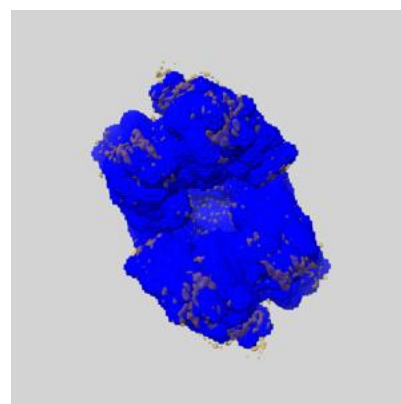
6.6.1 emd_29534_msk_1.map [i](#)



X



Y

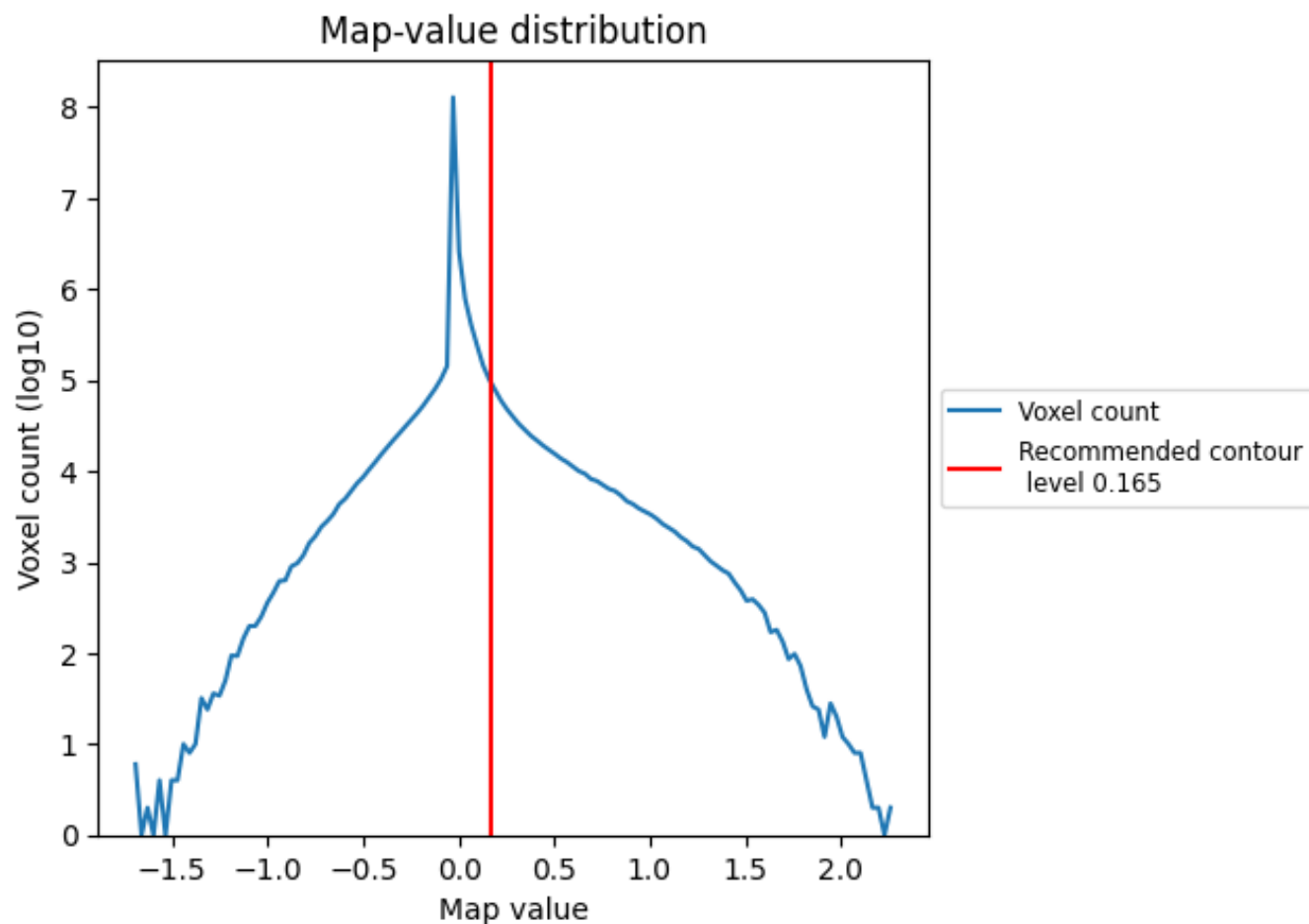


Z

7 Map analysis [i](#)

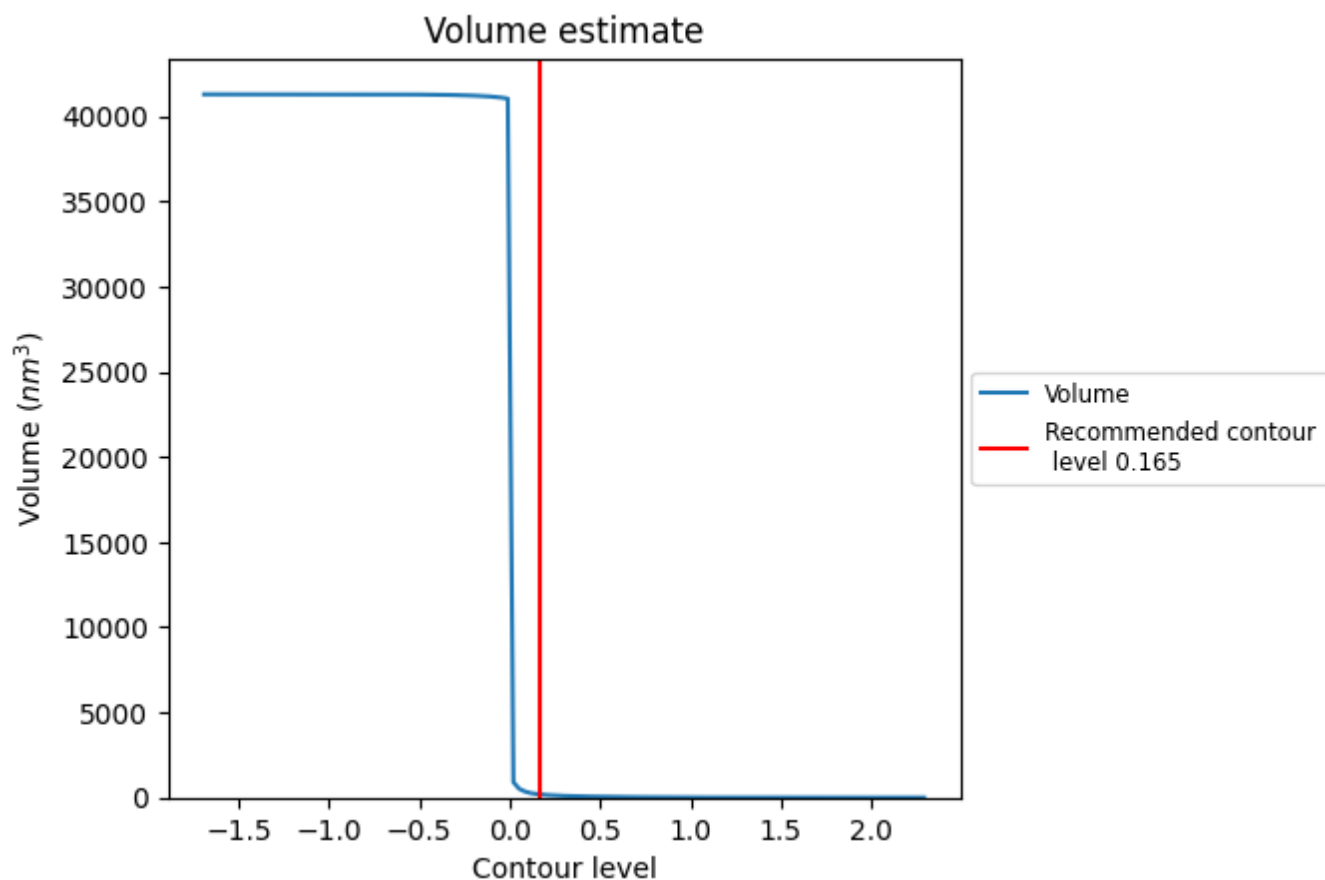
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

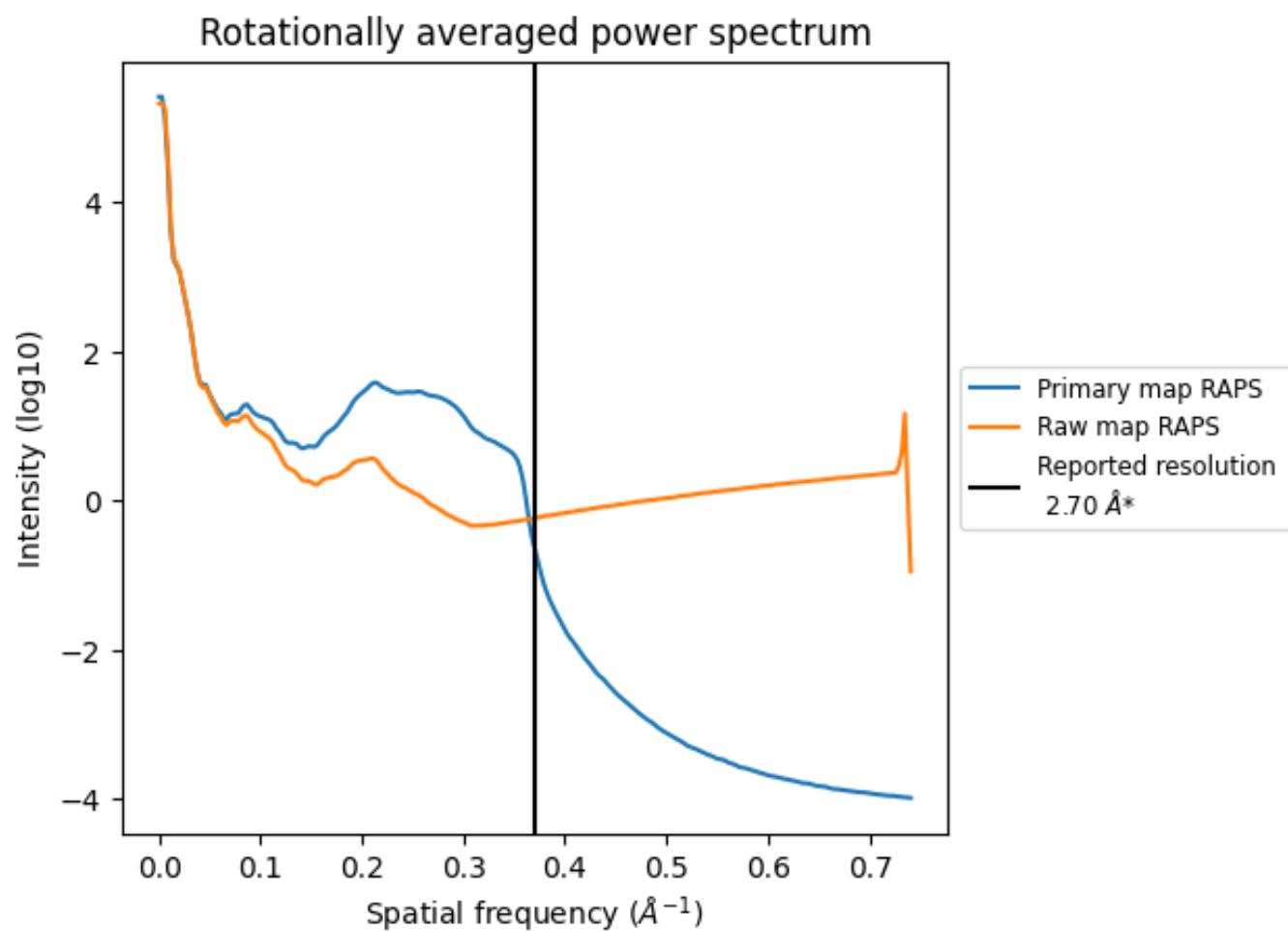
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 188 nm^3 ; this corresponds to an approximate mass of 170 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 ⓘ

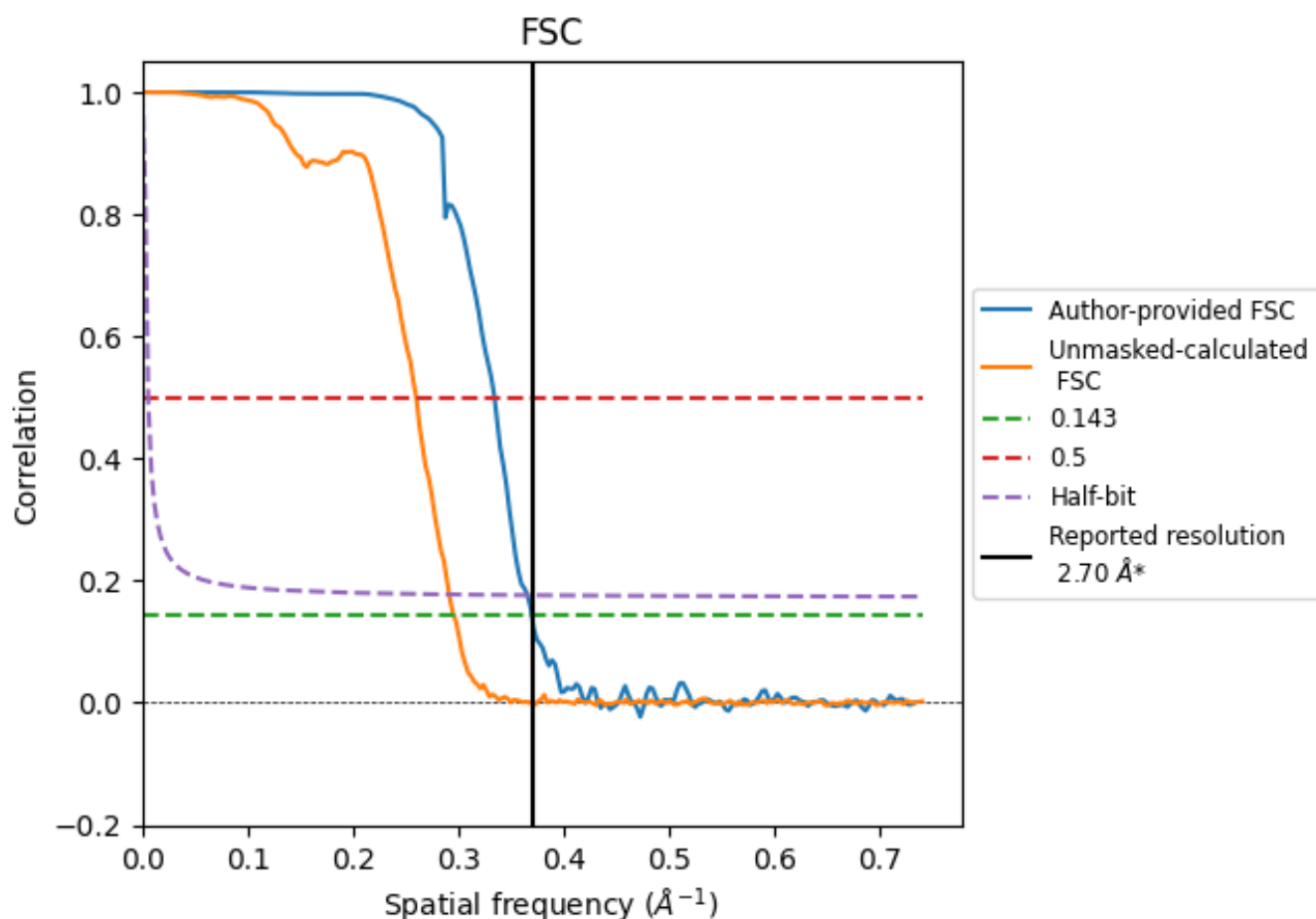


*Reported resolution corresponds to spatial frequency of 0.370 $\text{\AA}^{-1}$

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 0.370 $\text{\AA}^{-1}$

8.2 Resolution estimates [i](#)

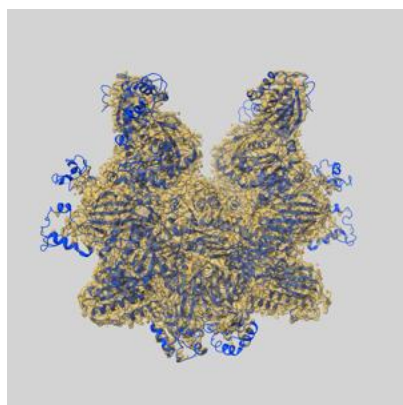
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	2.70	-	-
Author-provided FSC curve	2.70	2.99	2.73
Unmasked-calculated*	3.38	3.84	3.43

*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 3.38 differs from the reported value 2.7 by more than 10 %

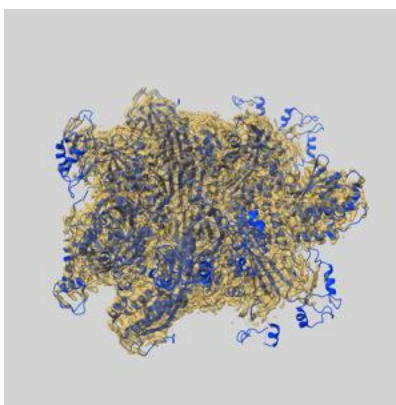
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-29534 and PDB model 8FXI. Per-residue inclusion information can be found in section [3](#) on page [8](#).

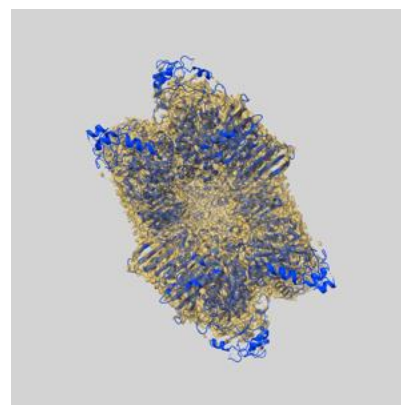
9.1 Map-model overlay [i](#)



X



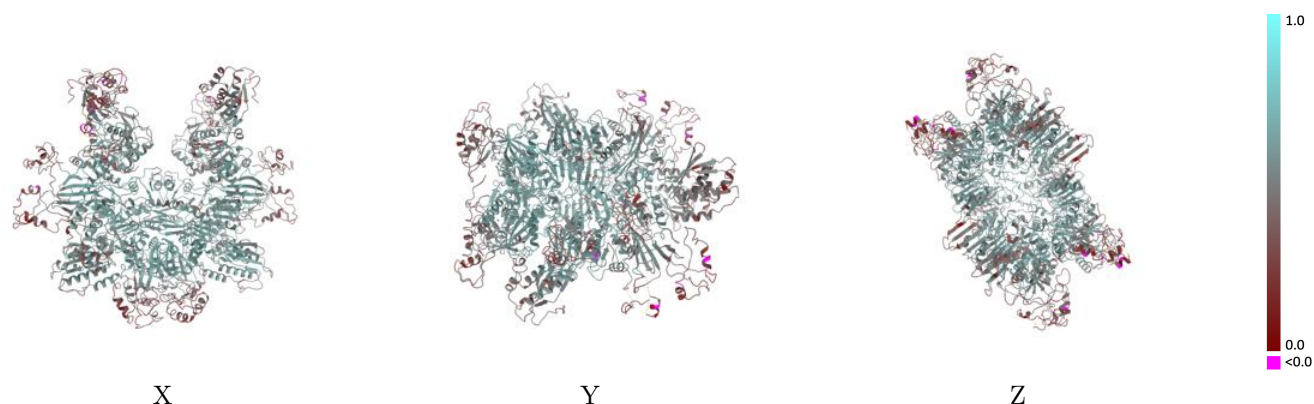
Y



Z

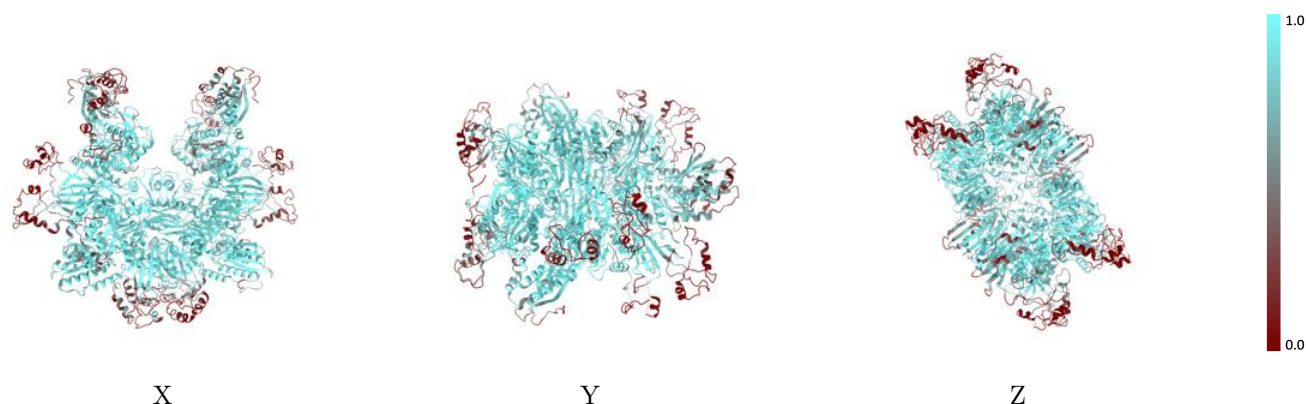
The images above show the 3D surface view of the map at the recommended contour level 0.165 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



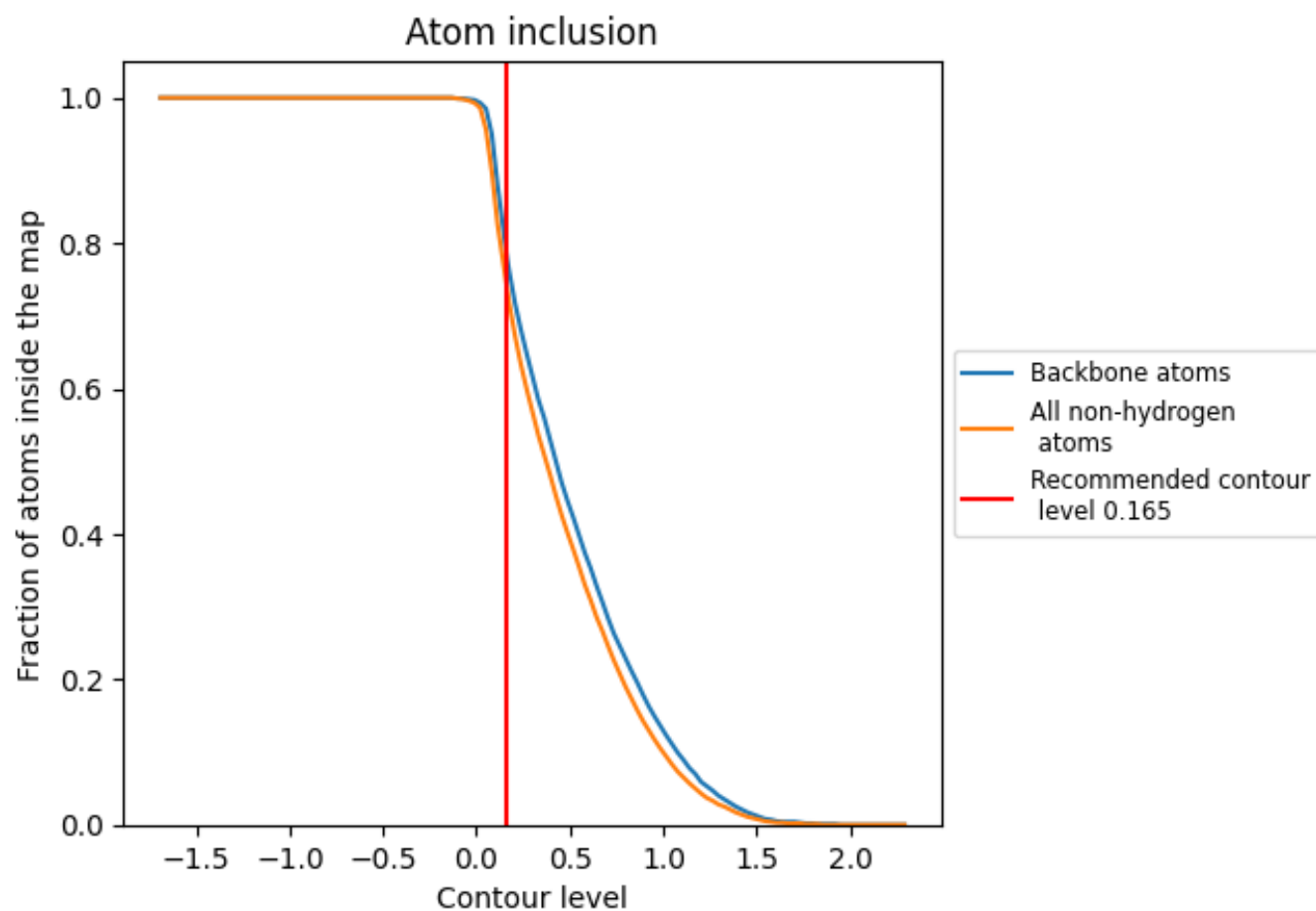
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.165).

9.4 Atom inclusion [i](#)



At the recommended contour level, 78% of all backbone atoms, 74% 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 (0.165) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.7350	0.5100
A	0.6590	0.4630
B	0.7450	0.5150
C	0.7980	0.5500
D	0.7980	0.5510
E	0.7440	0.5160
F	0.6570	0.4630
G	0.7450	0.4920
H	0.7450	0.4870

