



Full wwPDB EM Validation Report ⓘ

Oct 1, 2024 – 10:27 AM JST

PDB ID : 6KG7
EMDB ID : EMD-9975
Title : Cryo-EM Structure of the Mammalian Tactile Channel Piezo2
Authors : Wang, L.; Zhou, H.; Zhang, M.; Liu, W.; Deng, T.; Zhao, Q.; Li, Y.; Lei, J.;
Li, X.; Xiao, B.
Deposited on : 2019-07-11
Resolution : 3.80 Å(reported)

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

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

A user guide is available at

<https://www.wwpdb.org/validation/2017/EMValidationReportHelp>
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

EMDB validation analysis : 0.0.1.dev113
Mogul : 1.8.5 (274361), CSD as541be (2020)
MolProbity : 4.02b-467
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.39

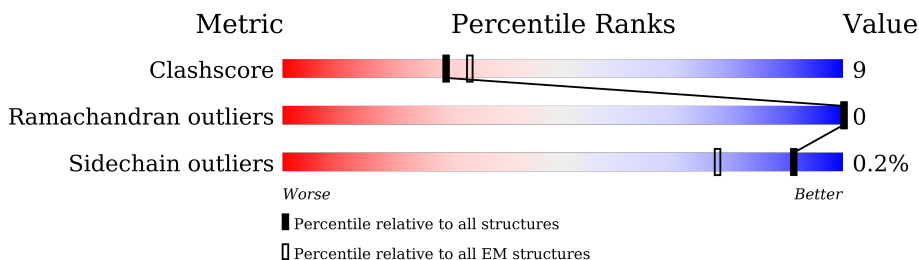
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.80 Å.

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



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

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion $< 40\%$). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	2822	 50% 14% 36%
1	B	2822	 50% 14% 36%
1	C	2822	 50% 14% 36%

2 Entry composition [i](#)

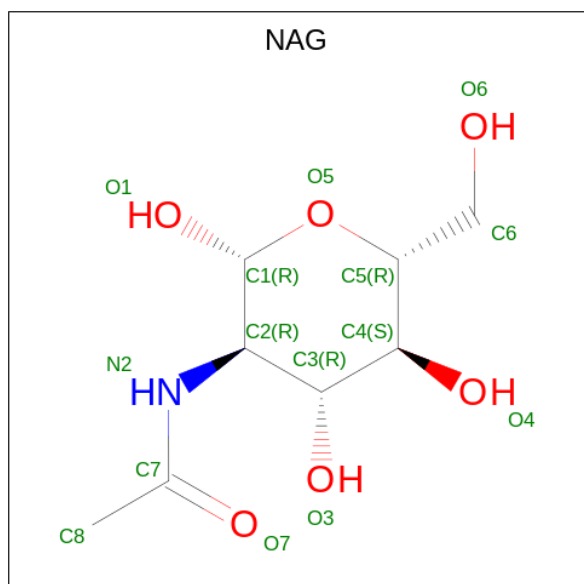
There are 2 unique types of molecules in this entry. The entry contains 44892 atoms, of which 0 are hydrogens and 0 are deuteriums.

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 Piezo-type mechanosensitive ion channel component 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	1817	Total	C	N	O	S	1	0
			14908	9922	2377	2508	101		
1	B	1817	Total	C	N	O	S	1	0
			14908	9922	2377	2508	101		
1	C	1817	Total	C	N	O	S	1	0
			14908	9922	2377	2508	101		

- Molecule 2 is 2-acetamido-2-deoxy-beta-D-glucopyranose (three-letter code: NAG) (formula: $C_8H_{15}NO_6$).



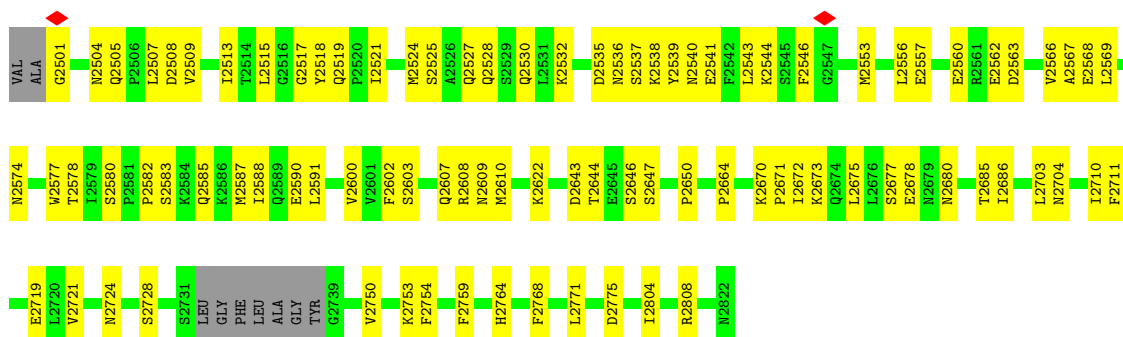
Mol	Chain	Residues	Atoms				AltConf
2	A	1	Total	C	N	O	0
			14	8	1	5	
2	A	1	Total	C	N	O	0
			14	8	1	5	
2	A	1	Total	C	N	O	0
			14	8	1	5	

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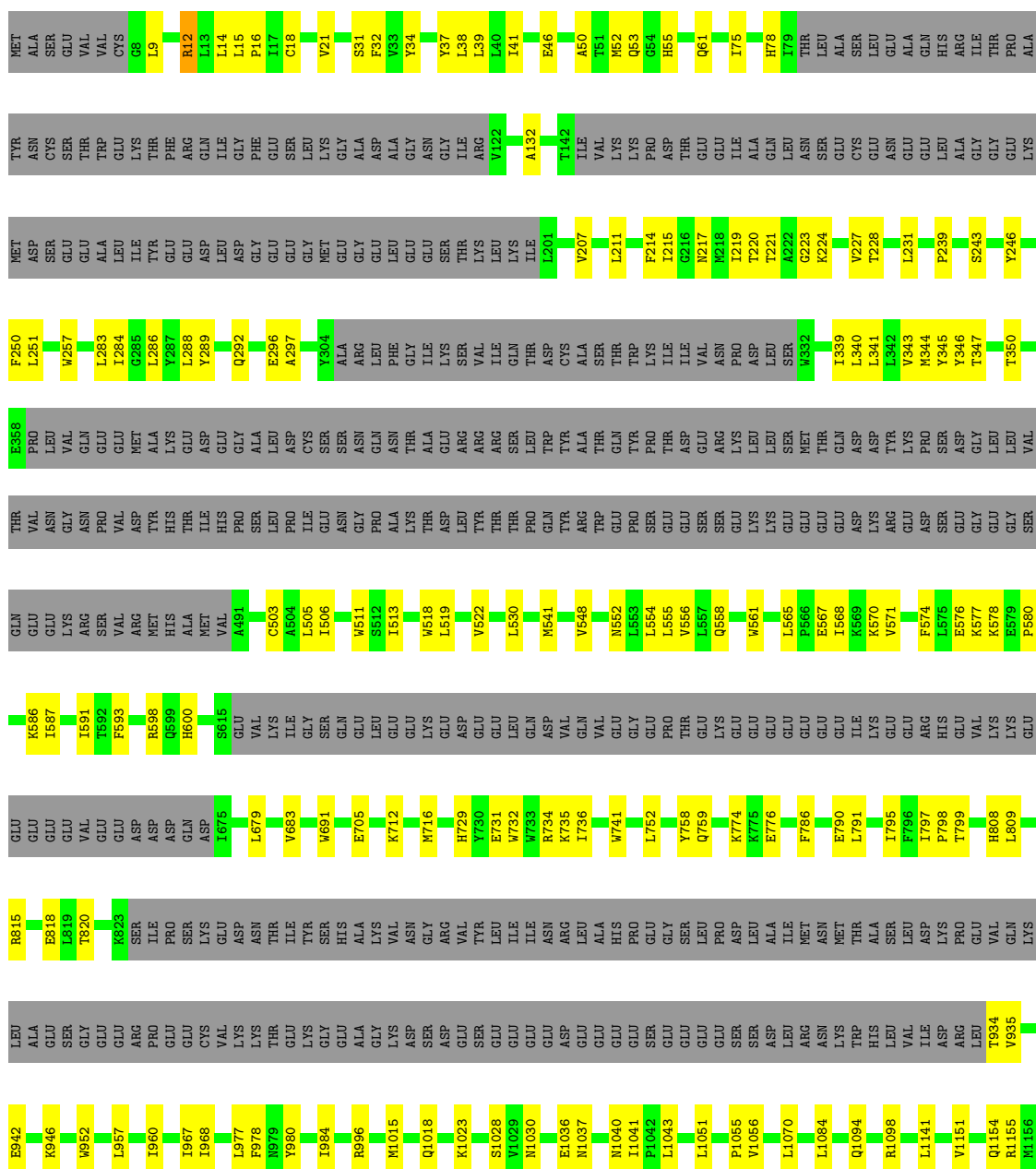
Mol	Chain	Residues	Atoms				AltConf
2	A	1	Total	C	N	O	0
			14	8	1	5	
2	B	1	Total	C	N	O	0
			14	8	1	5	
2	B	1	Total	C	N	O	0
			14	8	1	5	
2	B	1	Total	C	N	O	0
			14	8	1	5	
2	B	1	Total	C	N	O	0
			14	8	1	5	
2	C	1	Total	C	N	O	0
			14	8	1	5	
2	C	1	Total	C	N	O	0
			14	8	1	5	
2	C	1	Total	C	N	O	0
			14	8	1	5	
2	C	1	Total	C	N	O	0
			14	8	1	5	





● Molecule 1: Piezo-type mechanosensitive ion channel component 2

Chain B:





L2674	Q2544	V2486	P2300	SER	ASN	PHE	LEU	ALA	SER	V1695	LYS	GLY	F1323
L2675	F2555	V2487	L2304	LEU	LEU	PRO	PRO	SER	ARG	S1686	LEU	LYS	I1330
L2676	F2488	SER	L2305	GLN	ALA	TRP	LEU	GLU	ASP	I1687	PRO	LYS	
S2677	F2489	LEU	M2306	SER	VAL	LYS	THR	THR	ILE	R1689	GLN	GLY	F1333
L2678	L2491	GLY	SER	SER	VAL	ASP	HIS	GLU	SER	D1693	GLN	TRP	
L2679	F2492	LEU	LYS	ARG	GLY	LEU	GLU	PRO	CYS	T1706	ARG	TRP	C1341
N2680	MET	SER	ARG	GLY	SER	ILE	GLU	THR	LYS	R1707	GLU	ARG	L1351
T2685	LEU	HIS	VAL	VAL	VAL	TYR	M1955	PHE	THR	E1708	PRO	TRP	
L2686	ILE	LEU	VAL	VAL	VAL	GLY	S1956	SER	GLU	T1709	ARG		I1356
L2703	LYS	LYS	THR	THR	PHE	GLY	M1957	THR	ALA	K1710	LYS		L1360
N2704	SER	GLY	PRO	PRO	PRO	ASP	K1958	ASP	SER	K1711	GLY		
L2710	VAL	VAL	LYS	LYS	PRO	LYS	F1959	ASP	LEU	G1712	SER		W1363
F2711	ALA	ALA	GLN	GLN	GLN	PHE	H1960	CYS	GLY	T1716	GLY		
	G2501	ALA	PRO	PRO	ALA	PRO	D1961	ALA	THR	R1717	GLY		W1366
N2574	G2501	ALA	PRO	PRO	ALA	PRO	E1962	ALA	THR	E1718	GLY		L1367
W2577	N2504	ALA	ALA	ALA	ALA	PRO	L1964	PRO	GLY	S1719	VAL		I1368
T2578	Q2505	ILE	ILE	ILE	ILE	THR	E1968	THR	SER	I1720	GLY		Y1369
L2579	F2506	ARG	ARG	ARG	ARG	TYR	K1969	TYR	GLN	H1721	TRP		
S2580	L2507	LYS	LYS	LYS	LYS	ILE	F1970	GLY	SER	M1722	GLY		GLY
P2581	D2508	ALA	ALA	ALA	ALA	VAL	Y1971	VAL	ASP	Y1723	LEU		ALA
P2582	V2509	ALA	ALA	ALA	ALA	VAL	V1972	VAL	LEU	Y1724	LYS		GLY
S2583	T2513	THR	PHE	THR	CYS	ASP	V1982	SER	ASP	H1727	GLY		TYR
K2584	T2514	ILE	ILE	ILE	SER	ASP	Y1982	GLY	GLY	I1727	GLY		ALA
Q2585	L2515	LYS	LYS	LYS	SER	ASP	N1986	GLY	MET	I1728	ASP		GLY
K2586	G2516	LYS	LYS	LYS	SER	ILE	T1987	HIS	GLY	E1718	GLY		ILE
M2587	G2517	THR	THR	THR	GLN	VAL	N1988	LEU	ASN	R1483	LEU		ALA
L2588	G2517	GLY	GLY	GLY	ILE	ASP	V1989	SER	PRO	I1484	LEU		LEU
Q2589	T2518	LEU	LEU	LEU	SER	ASP	A1990	PHE	VAL	Q1473	PRO		VAL
E2590	Q2520	THR	THR	THR	PRO	SER	E1991	ALA	LYS	V1477	THR		THR
L2591	F2520	ILE	ILE	ILE	ARG	ASN	S1992	GLY	GLN	S1466	ARG		ASN
V2750	T2521	LYS	LYS	LYS	SER	THR	E1993	GLY	SER	Q1473	GLY		GLY
K2524	Q2524	HIS	N2391	THR	THR	ASP	M1994	ASP	ALA	GLY	LEU		VAL
S2525	S2525	GLY	T2394	PHE	PHE	LYS	V1995	SER	PRO	GLY	GLY		GLY
K2526	K2526	ALA	K2395	SER	SER	GLY	C1996	GLY	ALA	GLY	GLY		ILE
Q2527	Q2527	ALA	L2416	SER	ASN	GLY	Y1997	ALA	PRO	ILE	GLN		ALA
S2529	S2529	ASP	E2416	ARG	ARG	ASP	F1998	LYS	ARG	LYS	ASP		ALA
Q2530	Q2530	THR	L2430	SER	SER	ASP	V1999	ASN	LEU	ARG	ILE		PHE
L2531	L2531	LEU	L2430	LYS	LYS	ASP	S2009	HIS	ARG	ILE	GLN		SER
K2532	K2532	GLY	S2434	ARG	ARG	GLY	I2010	ALA	LYS	THR	ALA		LEU
D2535	D2535	HIS	K2449	GLY	GLY	LEU	L2014	VAL	THR	ILE	VAL		ALA
N2536	N2536	SER	K2452	SER	SER	LEU	L2014	LYS	PHE	ILE	VAL		CYS
S2537	S2537	ALA	R2452	ALA	THR	ASP	F2020	THR	SER	LYS	SER		GLY
K2538	K2538	ALA	P2461	ALA	THR	GLY	L2021	PRO	LEU	ASP	GLY		THR
V2539	V2539	ASP	R2462	ASP	ASN	ARG	F2021	ASP	ASP	THR	ASP		LYS
N2540	N2540	ILE	Q2463	ILE	ARG	ARG	V2027	ASP	MET	ALA	ALA		GLY
F2541	F2541	THR	Q2463	THR	SER	GLY	P2028	ARG	SER	L1672	GLN		LEU
L2542	L2542	SER	Q2464	SER	SER	THR	P2028	THR	SER	L1673	ARG		GLY
K2544	K2544	SER	K2465	SER	GLN	SER	Y2041	ALA	SER	L1674	ALA		PRO
V2480	V2480	LEU	V2480	LEU	LYS	ASP	Q2063	GLY	ALA	V1677	ARG		GLY
G2547	G2547	SER	L2481	SER	GLY	SER	Q2063	VAL	ASP	LYS	ASP		ASP
L2482	L2482	GLY	L2482	GLU	SER	LEU	F2054	GLY	SER	LYS	GLN		GLY
I2483	I2483	VAL	I2483	ASP	VAL	SER	G2055	ILE	GLY	T1681	LYS		ARG
K2553	K2553	LEU	V2299	ILE	LEU	ILE	PHE	SER	VAL	L1684	LYS		CYS

4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C3	Depositor
Number of particles used	2721959	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	50	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	49.744	Depositor
Minimum map value	-19.493	Depositor
Average map value	0.078	Depositor
Map value standard deviation	1.367	Depositor
Recommended contour level	5.69	Depositor
Map size ($\text{\AA}$)	448.32, 448.32, 448.32	wwPDB
Map dimensions	320, 320, 320	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing ($\text{\AA}$)	1.401, 1.401, 1.401	Depositor

5 Model quality [i](#)

5.1 Standard geometry [i](#)

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

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	0.27	0/15321	0.42	0/20784
1	B	0.27	0/15321	0.42	0/20784
1	C	0.27	0/15321	0.42	0/20784
All	All	0.27	0/45963	0.42	0/62352

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts [i](#)

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	14908	0	15077	281	0
1	B	14908	0	15077	280	0
1	C	14908	0	15077	289	0
2	A	56	0	52	5	0
2	B	56	0	52	5	0
2	C	56	0	52	5	0
All	All	44892	0	45387	819	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 9.

All (819) 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:B:2650:PRO:HB2	1:B:2685:THR:HG22	1.33	1.11
1:C:2650:PRO:HB2	1:C:2685:THR:HG22	1.33	1.08
1:A:2650:PRO:HB2	1:A:2685:THR:HG22	1.33	1.06
1:A:2650:PRO:HB2	1:A:2685:THR:CG2	1.89	1.02
1:C:2650:PRO:HB2	1:C:2685:THR:CG2	1.89	1.02
1:B:2650:PRO:HB2	1:B:2685:THR:CG2	1.89	1.02
1:A:2753:LYS:NZ	1:B:2754:PHE:CE1	2.29	1.01
1:A:2754:PHE:CE1	1:C:2753:LYS:NZ	2.30	1.00
1:B:2753:LYS:NZ	1:C:2754:PHE:CE1	2.29	1.00
1:A:2622:LYS:NZ	1:B:2607:GLN:HE22	1.67	0.92
1:B:2622:LYS:NZ	1:C:2607:GLN:HE22	1.69	0.91
1:A:2607:GLN:HE22	1:C:2622:LYS:NZ	1.69	0.91
1:A:2622:LYS:HZ1	1:B:2607:GLN:HE22	1.16	0.90
1:C:1040:ASN:OD1	1:C:1217:LYS:HA	1.80	0.81
1:A:2607:GLN:HE22	1:C:2622:LYS:HZ1	1.27	0.81
1:A:1040:ASN:OD1	1:A:1217:LYS:HA	1.80	0.81
1:B:1040:ASN:OD1	1:B:1217:LYS:HA	1.80	0.80
1:C:1992:SER:HG	1:C:2099:HIS:HD1	1.28	0.80
2:B:3002:NAG:H83	2:B:3002:NAG:H3	1.64	0.80
1:B:2622:LYS:HZ1	1:C:2607:GLN:HE22	1.29	0.80
2:A:3002:NAG:H3	2:A:3002:NAG:H83	1.64	0.80
1:B:2753:LYS:NZ	1:C:2754:PHE:CD1	2.50	0.79
1:A:2753:LYS:NZ	1:B:2754:PHE:CD1	2.49	0.79
1:A:2754:PHE:CD1	1:C:2753:LYS:NZ	2.51	0.79
2:C:3002:NAG:H3	2:C:3002:NAG:H83	1.64	0.77
2:A:3002:NAG:H82	2:A:3002:NAG:C1	2.19	0.73
1:C:1030:ASN:OD1	1:C:1055:PRO:HB3	1.89	0.73
1:B:1030:ASN:OD1	1:B:1055:PRO:HB3	1.89	0.73
2:C:3002:NAG:C1	2:C:3002:NAG:H82	2.19	0.72
1:B:2670:LYS:HD3	1:B:2671:PRO:HD2	1.71	0.72
2:B:3002:NAG:C1	2:B:3002:NAG:H82	2.19	0.72
1:A:1030:ASN:OD1	1:A:1055:PRO:HB3	1.89	0.72
1:A:2670:LYS:HD3	1:A:2671:PRO:HD2	1.71	0.72
1:A:296:GLU:HG3	1:A:297:ALA:H	1.55	0.72
1:C:296:GLU:HG3	1:C:297:ALA:H	1.54	0.71
1:C:2021:LEU:HD11	1:C:2337:VAL:HG11	1.72	0.71
1:A:2021:LEU:HD11	1:A:2337:VAL:HG11	1.72	0.71
1:C:2670:LYS:HD3	1:C:2671:PRO:HD2	1.71	0.71
1:B:61:GLN:HE21	1:B:132:ALA:HB1	1.56	0.71
1:C:61:GLN:HE21	1:C:132:ALA:HB1	1.56	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2021:LEU:HD11	1:B:2337:VAL:HG11	1.72	0.70
1:B:296:GLU:HG3	1:B:297:ALA:H	1.54	0.70
1:B:1957:LYS:HD3	1:B:1960:HIS:HB3	1.74	0.70
1:A:1957:LYS:HD3	1:A:1960:HIS:HB3	1.74	0.70
1:A:2464:GLN:HG2	1:A:2465:LYS:H	1.57	0.70
1:C:1957:LYS:HD3	1:C:1960:HIS:HB3	1.74	0.69
1:A:61:GLN:HE21	1:A:132:ALA:HB1	1.56	0.69
1:B:2464:GLN:HG2	1:B:2465:LYS:H	1.57	0.69
1:C:2464:GLN:HG2	1:C:2465:LYS:H	1.57	0.68
1:A:576:GLU:OE2	1:A:578:LYS:NZ	2.28	0.67
1:C:2461:PRO:HD2	1:C:2464:GLN:HE22	1.60	0.67
1:C:2270:ASP:OD2	1:C:2310:GLN:NE2	2.28	0.67
1:A:2270:ASP:OD2	1:A:2310:GLN:NE2	2.28	0.66
1:A:2677:SER:O	1:A:2680:ASN:ND2	2.28	0.66
1:B:2270:ASP:OD2	1:B:2310:GLN:NE2	2.28	0.66
1:B:2461:PRO:HD2	1:B:2464:GLN:HE22	1.60	0.66
1:A:2461:PRO:HD2	1:A:2464:GLN:HE22	1.60	0.66
1:C:2677:SER:O	1:C:2680:ASN:ND2	2.28	0.66
2:A:3002:NAG:H3	2:A:3002:NAG:C8	2.26	0.66
1:B:2677:SER:O	1:B:2680:ASN:ND2	2.28	0.66
1:C:2560:GLU:HG3	1:C:2562:GLU:H	1.61	0.66
1:B:576:GLU:OE2	1:B:578:LYS:NZ	2.28	0.65
2:B:3002:NAG:H3	2:B:3002:NAG:C8	2.26	0.65
1:A:2622:LYS:NZ	1:B:2607:GLN:NE2	2.44	0.65
1:B:231:LEU:HD22	1:B:344:MET:HE2	1.79	0.65
1:B:1155:ARG:NH2	1:B:1246:ASP:OD1	2.30	0.65
1:C:1155:ARG:NH2	1:C:1246:ASP:OD1	2.30	0.65
1:C:231:LEU:HD22	1:C:344:MET:HE2	1.79	0.65
1:C:576:GLU:OE2	1:C:578:LYS:NZ	2.28	0.65
1:A:2560:GLU:HG3	1:A:2562:GLU:H	1.61	0.64
1:B:2560:GLU:HG3	1:B:2562:GLU:H	1.61	0.64
2:C:3002:NAG:H3	2:C:3002:NAG:C8	2.26	0.64
1:B:2622:LYS:NZ	1:C:2607:GLN:NE2	2.45	0.64
1:C:38:LEU:HA	1:C:41:ILE:HD12	1.80	0.64
1:C:691:TRP:HD1	1:C:808:HIS:HD1	1.46	0.64
1:A:1708:GLU:O	1:A:1712:GLY:N	2.30	0.63
1:A:2607:GLN:NE2	1:C:2622:LYS:NZ	2.45	0.63
1:B:734:ARG:NH1	1:B:820:THR:O	2.32	0.63
1:B:2449:LYS:NZ	1:B:2775:ASP:OD2	2.32	0.63
1:A:231:LEU:HD22	1:A:344:MET:HE2	1.80	0.63
1:A:38:LEU:HA	1:A:41:ILE:HD12	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:38:LEU:HA	1:B:41:ILE:HD12	1.80	0.63
1:B:2505:GLN:NE2	1:B:2562:GLU:O	2.32	0.62
1:C:734:ARG:NH1	1:C:820:THR:O	2.32	0.62
1:C:2449:LYS:NZ	1:C:2775:ASP:OD2	2.32	0.62
1:A:2449:LYS:NZ	1:A:2775:ASP:OD2	2.32	0.62
1:A:2505:GLN:NE2	1:A:2562:GLU:O	2.32	0.62
1:B:1708:GLU:O	1:B:1712:GLY:N	2.30	0.62
1:A:734:ARG:NH1	1:A:820:THR:O	2.32	0.62
1:C:1982:TYR:O	1:C:1986:ASN:ND2	2.33	0.62
1:C:2505:GLN:NE2	1:C:2562:GLU:O	2.32	0.62
1:A:1155:ARG:NH2	1:A:1246:ASP:OD1	2.30	0.62
1:C:215:ILE:O	1:C:219:ILE:HG12	2.00	0.61
1:A:215:ILE:O	1:A:219:ILE:HG12	2.01	0.61
1:B:215:ILE:O	1:B:219:ILE:HG12	2.01	0.61
1:C:1708:GLU:O	1:C:1712:GLY:N	2.30	0.61
1:C:2508:ASP:HB3	1:C:2607:GLN:HB3	1.83	0.60
1:A:224:LYS:O	1:A:228:THR:HG23	2.02	0.60
1:B:2535:ASP:O	1:B:2539:TYR:N	2.31	0.60
1:A:2508:ASP:HB3	1:A:2607:GLN:HB3	1.83	0.60
1:B:1982:TYR:O	1:B:1986:ASN:ND2	2.33	0.60
1:B:224:LYS:O	1:B:228:THR:HG23	2.02	0.60
1:B:1036:GLU:O	1:B:1040:ASN:ND2	2.28	0.59
1:A:2379:GLN:NE2	1:A:2383:GLY:O	2.35	0.59
1:B:980:TYR:O	1:B:984:ILE:HG12	2.03	0.59
1:A:503:CYS:HA	1:A:506:ILE:HG22	1.85	0.59
1:C:503:CYS:HA	1:C:506:ILE:HG22	1.85	0.59
1:A:1982:TYR:O	1:A:1986:ASN:ND2	2.33	0.59
1:C:224:LYS:O	1:C:228:THR:HG23	2.02	0.59
1:B:716:MET:HB3	1:B:1015:MET:HE1	1.85	0.58
1:B:2274:ILE:HD11	1:B:2306:MET:HG2	1.85	0.58
1:C:716:MET:HB3	1:C:1015:MET:HE1	1.85	0.58
1:C:2379:GLN:NE2	1:C:2383:GLY:O	2.35	0.58
1:A:505:LEU:HD13	1:A:530:LEU:HD23	1.84	0.58
1:B:505:LEU:HD13	1:B:530:LEU:HD23	1.84	0.58
1:C:75:ILE:O	1:C:78:HIS:NE2	2.36	0.58
1:C:284:ILE:O	1:C:288:LEU:HB3	2.04	0.58
1:A:980:TYR:O	1:A:984:ILE:HG12	2.03	0.58
1:B:75:ILE:O	1:B:78:HIS:NE2	2.36	0.58
1:B:934:THR:OG1	1:B:935:VAL:N	2.37	0.58
1:C:934:THR:OG1	1:C:935:VAL:N	2.37	0.58
1:A:75:ILE:O	1:A:78:HIS:NE2	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:934:THR:OG1	1:A:935:VAL:N	2.37	0.58
1:A:1036:GLU:O	1:A:1040:ASN:ND2	2.28	0.58
1:C:505:LEU:HD13	1:C:530:LEU:HD23	1.84	0.58
1:B:503:CYS:HA	1:B:506:ILE:HG22	1.85	0.58
1:B:2508:ASP:HB3	1:B:2607:GLN:HB3	1.83	0.58
1:C:980:TYR:O	1:C:984:ILE:HG12	2.03	0.58
1:C:2536:ASN:OD1	1:C:2537:SER:N	2.37	0.58
1:B:284:ILE:O	1:B:288:LEU:HB3	2.04	0.58
1:C:2530:GLN:HB3	1:C:2568:GLU:HB3	1.86	0.58
1:C:2566:VAL:HG21	1:C:2711:PHE:HZ	1.69	0.58
1:B:2622:LYS:HZ3	1:C:2607:GLN:HE22	1.51	0.58
1:B:2379:GLN:NE2	1:B:2383:GLY:O	2.35	0.58
1:A:284:ILE:O	1:A:288:LEU:HB3	2.04	0.57
1:A:967:ILE:HD11	1:A:1084:LEU:HD21	1.86	0.57
1:A:1992:SER:OG	1:A:2099:HIS:ND1	2.33	0.57
1:B:2566:VAL:HG21	1:B:2711:PHE:HZ	1.69	0.57
1:C:967:ILE:HD11	1:C:1084:LEU:HD21	1.86	0.57
1:B:2536:ASN:OD1	1:B:2537:SER:N	2.37	0.57
1:C:552:ASN:O	1:C:556:VAL:HG23	2.05	0.57
1:C:758:TYR:O	1:C:759:GLN:NE2	2.38	0.57
1:A:552:ASN:O	1:A:556:VAL:HG23	2.04	0.57
1:A:2566:VAL:HG21	1:A:2711:PHE:HZ	1.69	0.57
1:A:758:TYR:O	1:A:759:GLN:NE2	2.38	0.57
1:A:2530:GLN:HB3	1:A:2568:GLU:HB3	1.86	0.57
1:A:2535:ASP:O	1:A:2539:TYR:N	2.31	0.57
1:B:1992:SER:OG	1:B:2099:HIS:ND1	2.33	0.57
1:B:2530:GLN:HB3	1:B:2568:GLU:HB3	1.86	0.57
1:C:2274:ILE:HD11	1:C:2306:MET:HG2	1.85	0.57
1:B:967:ILE:HD11	1:B:1084:LEU:HD21	1.86	0.57
1:C:2508:ASP:OD1	1:C:2527:GLN:NE2	2.31	0.57
1:A:1677:VAL:O	1:A:1681:THR:HG23	2.06	0.56
1:A:2536:ASN:OD1	1:A:2537:SER:N	2.37	0.56
1:B:2517:GLY:O	1:C:2525:SER:OG	2.23	0.56
1:B:758:TYR:O	1:B:759:GLN:NE2	2.38	0.56
1:A:980:TYR:CZ	1:A:984:ILE:HD11	2.40	0.56
1:B:548:VAL:HG22	1:B:593:PHE:HB3	1.87	0.56
1:B:1677:VAL:O	1:B:1681:THR:HG23	2.05	0.56
1:C:548:VAL:HG22	1:C:593:PHE:HB3	1.88	0.56
1:C:1151:VAL:HG22	1:C:1245:TYR:HB3	1.87	0.56
1:B:552:ASN:O	1:B:556:VAL:HG23	2.04	0.56
1:A:548:VAL:HG22	1:A:593:PHE:HB3	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2274:ILE:HD11	1:A:2306:MET:HG2	1.85	0.56
1:A:2304:LEU:HD11	1:C:2490:LEU:HB3	1.87	0.56
1:B:1151:VAL:HG22	1:B:1245:TYR:HB3	1.87	0.56
1:B:729:HIS:CD2	1:B:731:GLU:HB3	2.41	0.56
1:C:2710:ILE:HG22	1:C:2711:PHE:H	1.71	0.56
1:A:729:HIS:CD2	1:A:731:GLU:HB3	2.41	0.56
1:C:1677:VAL:O	1:C:1681:THR:HG23	2.05	0.56
1:B:343:VAL:O	1:B:347:THR:HG23	2.05	0.56
1:C:1155:ARG:NH2	1:C:1197:GLN:OE1	2.39	0.56
1:C:1483:ARG:NH1	1:C:2256:VAL:O	2.39	0.56
1:A:1155:ARG:NH2	1:A:1197:GLN:OE1	2.39	0.55
1:B:977:LEU:HG	1:B:978:PHE:H	1.71	0.55
1:A:1151:VAL:HG22	1:A:1245:TYR:HB3	1.87	0.55
1:B:980:TYR:CZ	1:B:984:ILE:HD11	2.40	0.55
1:A:1483:ARG:NH1	1:A:2256:VAL:O	2.39	0.55
1:B:2710:ILE:HG22	1:B:2711:PHE:H	1.71	0.55
1:C:729:HIS:CD2	1:C:731:GLU:HB3	2.41	0.55
1:C:1684:LEU:HD13	1:C:1687:ILE:HD11	1.87	0.55
1:A:346:TYR:O	1:A:350:THR:HG23	2.07	0.55
1:A:716:MET:HB3	1:A:1015:MET:HE1	1.88	0.55
1:A:2490:LEU:HB3	1:B:2304:LEU:HD11	1.89	0.55
1:B:1155:ARG:NH2	1:B:1197:GLN:OE1	2.39	0.55
1:B:1684:LEU:HD13	1:B:1687:ILE:HD11	1.87	0.55
1:C:977:LEU:HG	1:C:978:PHE:H	1.71	0.55
1:C:343:VAL:O	1:C:347:THR:HG23	2.05	0.55
1:A:343:VAL:O	1:A:347:THR:HG23	2.05	0.55
1:C:346:TYR:O	1:C:350:THR:HG23	2.07	0.55
1:A:977:LEU:HG	1:A:978:PHE:H	1.71	0.55
1:A:1564:ARG:NH2	1:C:2452:ARG:NH2	2.54	0.55
1:A:2508:ASP:OD1	1:A:2527:GLN:NE2	2.31	0.55
1:B:1483:ARG:NH1	1:B:2256:VAL:O	2.39	0.55
1:C:980:TYR:CZ	1:C:984:ILE:HD11	2.40	0.55
1:C:2535:ASP:O	1:C:2539:TYR:N	2.31	0.55
1:A:251:LEU:HD11	1:A:552:ASN:HB2	1.89	0.55
1:A:1684:LEU:HD13	1:A:1687:ILE:HD11	1.87	0.55
1:A:2710:ILE:HG22	1:A:2711:PHE:H	1.71	0.55
1:B:346:TYR:O	1:B:350:THR:HG23	2.07	0.55
1:B:251:LEU:HD11	1:B:552:ASN:HB2	1.89	0.55
1:B:2508:ASP:OD1	1:B:2527:GLN:NE2	2.31	0.55
2:A:3002:NAG:C1	2:A:3002:NAG:C8	2.86	0.54
1:C:513:ILE:HG23	1:C:791:LEU:HD22	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:513:ILE:HG23	1:A:791:LEU:HD22	1.90	0.54
1:B:2452:ARG:NH2	1:C:1564:ARG:NH2	2.56	0.54
1:C:1036:GLU:O	1:C:1040:ASN:ND2	2.28	0.54
1:A:980:TYR:HD1	1:A:1198:TYR:HD2	1.56	0.54
1:A:2518:TYR:OH	1:A:2590:GLU:OE1	2.25	0.54
1:C:2509:VAL:HG21	1:C:2567:ALA:HB1	1.90	0.54
1:A:2452:ARG:NH2	1:B:1564:ARG:NH2	2.55	0.54
1:A:2517:GLY:O	1:B:2525:SER:OG	2.22	0.54
1:B:15:LEU:HA	1:B:18:CYS:SG	2.48	0.54
1:B:243:SER:HA	1:B:246:TYR:HD2	1.73	0.54
1:B:2490:LEU:HB3	1:C:2304:LEU:HD11	1.88	0.54
1:B:2750:VAL:HG12	1:B:2754:PHE:CE2	2.43	0.54
1:C:243:SER:HA	1:C:246:TYR:HD2	1.73	0.54
1:A:2509:VAL:HG21	1:A:2567:ALA:HB1	1.90	0.54
1:B:2340:ILE:HD12	1:B:2365:TRP:HH2	1.73	0.54
1:A:243:SER:HA	1:A:246:TYR:HD2	1.73	0.54
1:A:2525:SER:OG	1:C:2517:GLY:O	2.23	0.54
1:A:2750:VAL:HG12	1:A:2754:PHE:CE2	2.43	0.54
1:B:980:TYR:HD1	1:B:1198:TYR:HD2	1.56	0.54
1:B:2643:ASP:OD1	1:B:2646:SER:N	2.41	0.54
1:C:15:LEU:HA	1:C:18:CYS:SG	2.48	0.54
1:C:2464:GLN:HG2	1:C:2465:LYS:N	2.23	0.54
1:C:2750:VAL:HG12	1:C:2754:PHE:CE2	2.43	0.54
1:B:2602:PHE:O	1:B:2622:LYS:HB2	2.08	0.53
1:C:2602:PHE:O	1:C:2622:LYS:HB2	2.08	0.53
1:A:15:LEU:HA	1:A:18:CYS:SG	2.48	0.53
1:B:513:ILE:HG23	1:B:791:LEU:HD22	1.90	0.53
1:A:2672:ILE:HG21	1:A:2675:LEU:HD23	1.90	0.53
1:A:2513:ILE:HG13	1:A:2602:PHE:HD1	1.74	0.53
1:B:289:TYR:HA	1:B:292:GLN:HE21	1.73	0.53
1:B:2646:SER:OG	1:B:2647:SER:N	2.42	0.53
1:C:251:LEU:HD11	1:C:552:ASN:HB2	1.89	0.53
1:A:2602:PHE:O	1:A:2622:LYS:HB2	2.08	0.53
1:B:2509:VAL:HG21	1:B:2567:ALA:HB1	1.90	0.53
1:B:2622:LYS:HZ3	1:C:2607:GLN:NE2	2.07	0.53
1:C:289:TYR:HA	1:C:292:GLN:HE21	1.73	0.53
1:C:2518:TYR:OH	1:C:2590:GLU:OE1	2.25	0.53
1:A:2553:MET:O	1:A:2557:GLU:HG2	2.09	0.53
1:B:283:LEU:HD21	1:B:341:LEU:HB3	1.91	0.53
1:A:289:TYR:HA	1:A:292:GLN:HE21	1.73	0.53
1:A:1689:ARG:NH1	1:A:1693:ASP:OD2	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1689:ARG:NH1	1:B:1693:ASP:OD2	2.42	0.53
1:C:980:TYR:HD1	1:C:1198:TYR:HD2	1.56	0.53
1:C:2340:ILE:HD12	1:C:2365:TRP:HH2	1.73	0.53
1:A:283:LEU:HD21	1:A:341:LEU:HB3	1.91	0.53
1:A:2607:GLN:HE22	1:C:2622:LYS:HZ3	1.53	0.53
1:B:2686:ILE:HG22	1:B:2703:LEU:HD22	1.91	0.53
1:C:2686:ILE:HG22	1:C:2703:LEU:HD22	1.91	0.53
1:B:2553:MET:O	1:B:2557:GLU:HG2	2.09	0.53
1:C:2513:ILE:HG13	1:C:2602:PHE:HD1	1.74	0.53
1:C:2643:ASP:OD1	1:C:2646:SER:N	2.41	0.53
1:C:2646:SER:OG	1:C:2647:SER:N	2.42	0.53
2:C:3002:NAG:C1	2:C:3002:NAG:C8	2.86	0.53
1:A:2340:ILE:HD12	1:A:2365:TRP:HH2	1.73	0.52
1:C:2672:ILE:HG21	1:C:2675:LEU:HD23	1.90	0.52
1:A:2646:SER:OG	1:A:2647:SER:N	2.42	0.52
1:A:2686:ILE:HG22	1:A:2703:LEU:HD22	1.91	0.52
1:C:1689:ARG:NH1	1:C:1693:ASP:OD2	2.42	0.52
1:B:1269:ARG:HA	1:B:1273:GLY:HA3	1.92	0.52
1:C:283:LEU:HD21	1:C:341:LEU:HB3	1.91	0.52
1:C:2501:GLY:HA2	1:C:2728:SER:HA	1.92	0.52
1:A:223:GLY:O	1:A:227:VAL:HG23	2.10	0.52
1:A:2464:GLN:HG2	1:A:2465:LYS:N	2.23	0.52
1:C:2553:MET:O	1:C:2557:GLU:HG2	2.09	0.52
1:A:2643:ASP:OD1	1:A:2646:SER:N	2.41	0.52
1:B:1716:THR:O	1:B:1719:SER:N	2.40	0.52
1:C:2330:VAL:HG12	1:C:2380:ILE:HD13	1.92	0.52
1:A:2501:GLY:HA2	1:A:2728:SER:HA	1.92	0.52
1:A:2330:VAL:HG12	1:A:2380:ILE:HD13	1.92	0.52
1:B:1199:PHE:O	1:B:1202:ILE:HG22	2.10	0.52
1:C:1199:PHE:O	1:C:1202:ILE:HG22	2.10	0.52
1:B:2330:VAL:HG12	1:B:2380:ILE:HD13	1.92	0.52
1:B:2672:ILE:HG21	1:B:2675:LEU:HD23	1.91	0.52
1:C:1280:MET:HA	1:C:1356:ILE:HD11	1.92	0.52
1:A:12:ARG:O	1:A:16:PRO:HD2	2.10	0.52
1:A:2480:VAL:HA	1:A:2483:ILE:HG22	1.92	0.52
1:C:2608:ARG:NH1	1:C:2664:PRO:O	2.33	0.52
1:A:2515:LEU:HD12	1:A:2600:VAL:HG13	1.93	0.51
1:B:12:ARG:O	1:B:16:PRO:HD2	2.10	0.51
1:B:1574:ASP:N	1:B:1574:ASP:OD1	2.43	0.51
1:B:2501:GLY:HA2	1:B:2728:SER:HA	1.92	0.51
1:C:2515:LEU:HD12	1:C:2600:VAL:HG13	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1141:LEU:HD11	1:A:1260:PHE:HZ	1.76	0.51
1:A:1269:ARG:HA	1:A:1273:GLY:HA3	1.92	0.51
1:A:1280:MET:HA	1:A:1356:ILE:HD11	1.92	0.51
1:B:52:MET:O	1:B:55:HIS:ND1	2.43	0.51
1:A:1574:ASP:OD1	1:A:1574:ASP:N	2.43	0.51
1:A:1716:THR:O	1:A:1719:SER:N	2.40	0.51
1:B:2513:ILE:HG13	1:B:2602:PHE:HD1	1.74	0.51
1:C:1141:LEU:HD11	1:C:1260:PHE:HZ	1.75	0.51
1:C:2685:THR:HB	1:C:2704:ASN:HB3	1.93	0.51
1:A:52:MET:O	1:A:55:HIS:ND1	2.43	0.51
1:A:1199:PHE:O	1:A:1202:ILE:HG22	2.10	0.51
1:A:1330:ILE:HD12	1:A:1330:ILE:H	1.75	0.51
1:B:2480:VAL:HA	1:B:2483:ILE:HG22	1.92	0.51
1:A:217:ASN:HA	1:A:220:THR:HG22	1.93	0.51
1:B:1280:MET:HA	1:B:1356:ILE:HD11	1.92	0.51
1:B:1330:ILE:H	1:B:1330:ILE:HD12	1.76	0.51
1:B:1141:LEU:HD11	1:B:1260:PHE:HZ	1.75	0.51
1:C:2027:VAL:HB	1:C:2028:PRO:HD3	1.93	0.51
1:B:223:GLY:O	1:B:227:VAL:HG23	2.10	0.51
1:B:2685:THR:HB	1:B:2704:ASN:HB3	1.93	0.51
1:C:1141:LEU:HD13	1:C:1179:ILE:HD11	1.93	0.51
1:C:1269:ARG:HA	1:C:1273:GLY:HA3	1.92	0.51
1:C:52:MET:O	1:C:55:HIS:ND1	2.43	0.51
1:C:223:GLY:O	1:C:227:VAL:HG23	2.10	0.51
1:A:1141:LEU:HD13	1:A:1179:ILE:HD11	1.93	0.50
1:A:2685:THR:HB	1:A:2704:ASN:HB3	1.93	0.50
1:B:2464:GLN:HG2	1:B:2465:LYS:N	2.23	0.50
1:C:2524:MET:HG2	1:C:2569:LEU:HB3	1.94	0.50
1:B:12:ARG:NE	1:B:46:GLU:OE2	2.44	0.50
1:B:217:ASN:HA	1:B:220:THR:HG22	1.93	0.50
1:C:12:ARG:O	1:C:16:PRO:HD2	2.10	0.50
1:C:1330:ILE:HD12	1:C:1330:ILE:H	1.76	0.50
1:C:2480:VAL:HA	1:C:2483:ILE:HG22	1.93	0.50
1:C:2551:GLY:O	1:C:2554:GLN:NE2	2.31	0.50
1:A:2524:MET:HG2	1:A:2569:LEU:HB3	1.94	0.50
1:B:2524:MET:HG2	1:B:2569:LEU:HB3	1.94	0.50
1:C:217:ASN:HA	1:C:220:THR:HG22	1.93	0.50
1:A:2608:ARG:NH1	1:A:2664:PRO:O	2.33	0.50
1:A:565:LEU:HD13	1:A:567:GLU:HG2	1.93	0.50
1:B:2027:VAL:HB	1:B:2028:PRO:HD3	1.93	0.50
1:B:2515:LEU:HD12	1:B:2600:VAL:HG13	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:12:ARG:NE	1:A:46:GLU:OE2	2.44	0.50
1:A:2585:GLN:HA	1:A:2588:ILE:HG12	1.94	0.50
1:B:257:TRP:O	1:B:598:ARG:NH1	2.45	0.50
1:C:257:TRP:O	1:C:598:ARG:NH1	2.45	0.50
1:C:1211:ASP:OD1	1:C:1212:TYR:N	2.38	0.50
1:A:1707:ARG:NE	1:A:1961:ASP:OD2	2.45	0.49
1:B:565:LEU:HD13	1:B:567:GLU:HG2	1.93	0.49
1:B:2504:ASN:O	1:B:2724:ASN:ND2	2.45	0.49
1:C:2673:LYS:HZ2	1:C:2678:GLU:H	1.60	0.49
1:B:2271:PHE:HA	1:B:2274:ILE:HG22	1.94	0.49
1:A:2607:GLN:NE2	1:C:2622:LYS:HZ3	2.09	0.49
1:C:12:ARG:NE	1:C:46:GLU:OE2	2.44	0.49
1:C:2566:VAL:HG21	1:C:2711:PHE:CZ	2.47	0.49
1:A:257:TRP:O	1:A:598:ARG:NH1	2.45	0.49
1:A:1173:ARG:HB2	1:A:1179:ILE:HG22	1.94	0.49
1:B:2020:PHE:HZ	1:B:2370:CYS:HB3	1.78	0.49
1:A:2027:VAL:HB	1:A:2028:PRO:HD3	1.93	0.49
1:A:2504:ASN:O	1:A:2724:ASN:ND2	2.45	0.49
1:C:1707:ARG:NE	1:C:1961:ASP:OD2	2.45	0.49
1:C:2504:ASN:O	1:C:2724:ASN:ND2	2.45	0.49
1:C:2585:GLN:HA	1:C:2588:ILE:HG12	1.94	0.49
1:A:18:CYS:HA	1:A:21:VAL:HG22	1.94	0.49
1:B:1028:SER:OG	1:B:1055:PRO:HB2	2.13	0.49
1:B:1563:VAL:HG13	1:B:1564:ARG:HG3	1.95	0.49
1:C:565:LEU:HD13	1:C:567:GLU:HG2	1.93	0.49
1:C:1563:VAL:HG13	1:C:1564:ARG:HG3	1.95	0.49
1:A:942:GLU:HG3	1:A:946:LYS:HE3	1.95	0.49
1:A:2020:PHE:HZ	1:A:2370:CYS:HB3	1.78	0.49
1:A:2673:LYS:HZ2	1:A:2678:GLU:H	1.60	0.49
1:B:942:GLU:HG3	1:B:946:LYS:HE3	1.95	0.49
1:B:1141:LEU:HD13	1:B:1179:ILE:HD11	1.93	0.49
1:B:1707:ARG:NE	1:B:1961:ASP:OD2	2.46	0.49
1:C:942:GLU:HG3	1:C:946:LYS:HE3	1.95	0.49
1:C:1028:SER:OG	1:C:1055:PRO:HB2	2.13	0.49
1:A:1028:SER:OG	1:A:1055:PRO:HB2	2.13	0.49
1:A:2566:VAL:HG21	1:A:2711:PHE:CZ	2.47	0.49
1:B:2585:GLN:HA	1:B:2588:ILE:HG12	1.94	0.49
1:B:18:CYS:HA	1:B:21:VAL:HG22	1.94	0.48
1:B:2566:VAL:HG21	1:B:2711:PHE:CZ	2.47	0.48
1:A:2271:PHE:HA	1:A:2274:ILE:HG22	1.94	0.48
1:C:18:CYS:HA	1:C:21:VAL:HG22	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1333:PHE:O	1:C:1369:TYR:OH	2.30	0.48
1:A:1429:ILE:HG13	1:A:1429:ILE:O	2.14	0.48
1:C:2020:PHE:HZ	1:C:2370:CYS:HB3	1.78	0.48
1:C:2753:LYS:HD2	1:C:2753:LYS:O	2.14	0.48
1:C:1173:ARG:HB2	1:C:1179:ILE:HG22	1.95	0.48
1:B:1173:ARG:HB2	1:B:1179:ILE:HG22	1.94	0.48
1:C:1429:ILE:O	1:C:1429:ILE:HG13	2.14	0.48
1:C:1716:THR:O	1:C:1719:SER:N	2.40	0.48
1:C:2507:LEU:HD21	1:C:2610:MET:HG2	1.96	0.48
1:A:1037:ASN:O	1:A:1217:LYS:HB2	2.14	0.48
1:A:1563:VAL:HG13	1:A:1564:ARG:HG3	1.95	0.48
1:A:2563:ASP:O	1:A:2724:ASN:N	2.46	0.48
1:B:2518:TYR:OH	1:B:2590:GLU:OE1	2.25	0.48
1:A:1955:MET:SD	1:A:1955:MET:N	2.87	0.48
1:B:2563:ASP:O	1:B:2724:ASN:N	2.46	0.48
1:C:1955:MET:SD	1:C:1955:MET:N	2.87	0.48
1:C:2271:PHE:HA	1:C:2274:ILE:HG22	1.94	0.48
1:C:2603:SER:CB	1:C:2622:LYS:HB3	2.44	0.48
1:A:2753:LYS:HD2	1:A:2753:LYS:O	2.14	0.48
1:B:1955:MET:SD	1:B:1955:MET:N	2.87	0.48
1:A:1991:ARG:O	1:A:1995:VAL:HG23	2.14	0.48
1:C:1991:ARG:O	1:C:1995:VAL:HG23	2.14	0.47
1:C:2563:ASP:O	1:C:2724:ASN:N	2.46	0.47
1:A:1968:GLU:O	1:A:1972:VAL:HG13	2.15	0.47
1:B:2603:SER:CB	1:B:2622:LYS:HB3	2.44	0.47
1:C:39:LEU:HG	1:C:345:TYR:CZ	2.50	0.47
1:B:1367:ILE:HD11	1:B:1439:LEU:HB3	1.97	0.47
1:C:1574:ASP:OD1	1:C:1574:ASP:N	2.43	0.47
1:C:555:LEU:HD21	1:C:587:ILE:HD13	1.97	0.47
1:C:1037:ASN:O	1:C:1217:LYS:HB2	2.14	0.47
1:B:2507:LEU:HD21	1:B:2610:MET:HG2	1.96	0.47
1:A:231:LEU:HB3	1:A:250:PHE:HB2	1.97	0.47
1:A:541:MET:HB3	1:A:600:HIS:CD2	2.50	0.47
1:B:231:LEU:HB3	1:B:250:PHE:HB2	1.97	0.47
1:B:1968:GLU:O	1:B:1972:VAL:HG13	2.15	0.47
1:A:14:LEU:HD12	1:A:14:LEU:H	1.80	0.47
1:A:39:LEU:HG	1:A:345:TYR:CZ	2.50	0.47
1:A:1018:GLN:HG3	1:A:1070:LEU:HD13	1.96	0.47
1:A:1333:PHE:O	1:A:1369:TYR:OH	2.30	0.47
1:A:1969:LYS:HA	1:A:1972:VAL:HG22	1.96	0.47
1:A:2009:SER:OG	1:A:2010:ILE:N	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2507:LEU:HD21	1:A:2610:MET:HG2	1.96	0.47
1:A:2603:SER:CB	1:A:2622:LYS:HB3	2.44	0.47
1:B:1333:PHE:O	1:B:1369:TYR:OH	2.30	0.47
1:B:1991:ARG:O	1:B:1995:VAL:HG23	2.14	0.47
1:B:2753:LYS:O	1:B:2753:LYS:HD2	2.14	0.47
1:C:541:MET:HB3	1:C:600:HIS:CD2	2.50	0.47
1:C:1968:GLU:O	1:C:1972:VAL:HG13	2.15	0.47
1:C:2462:ARG:HG3	1:C:2463:GLY:H	1.79	0.47
1:B:39:LEU:HG	1:B:345:TYR:CZ	2.50	0.47
1:B:1969:LYS:HA	1:B:1972:VAL:HG22	1.97	0.47
1:B:2009:SER:OG	1:B:2010:ILE:N	2.47	0.47
1:A:50:ALA:HB3	1:A:53:GLN:HE21	1.80	0.47
1:B:541:MET:HB3	1:B:600:HIS:CD2	2.50	0.47
1:B:1429:ILE:HG13	1:B:1429:ILE:O	2.14	0.47
1:C:1969:LYS:HA	1:C:1972:VAL:HG22	1.96	0.47
1:A:1323:PHE:HB2	1:A:1341:CYS:SG	2.55	0.47
1:A:1956:SER:O	1:A:1956:SER:OG	2.33	0.47
1:B:339:ILE:HG13	1:B:340:LEU:N	2.31	0.47
1:B:1018:GLN:HG3	1:B:1070:LEU:HD13	1.96	0.47
1:B:2608:ARG:HG2	1:B:2608:ARG:HH21	1.79	0.47
1:C:1269:ARG:HG3	1:C:1274:ASP:H	1.80	0.47
1:A:2608:ARG:HH21	1:A:2608:ARG:HG2	1.79	0.46
1:B:1037:ASN:O	1:B:1217:LYS:HB2	2.14	0.46
1:B:2551:GLY:O	1:B:2554:GLN:NE2	2.31	0.46
1:C:14:LEU:H	1:C:14:LEU:HD12	1.80	0.46
1:C:231:LEU:HB3	1:C:250:PHE:HB2	1.97	0.46
1:C:797:ILE:HB	1:C:798:PRO:HD3	1.98	0.46
1:C:2009:SER:OG	1:C:2010:ILE:N	2.47	0.46
1:A:284:ILE:O	1:A:288:LEU:CB	2.64	0.46
1:B:14:LEU:HD12	1:B:14:LEU:H	1.80	0.46
1:B:741:TRP:HB2	1:B:809:LEU:HD12	1.98	0.46
1:B:797:ILE:HB	1:B:798:PRO:HD3	1.97	0.46
1:B:1323:PHE:HB2	1:B:1341:CYS:SG	2.55	0.46
2:B:3002:NAG:C1	2:B:3002:NAG:C8	2.86	0.46
1:C:2608:ARG:HG2	1:C:2608:ARG:HH21	1.79	0.46
1:B:555:LEU:HD21	1:B:587:ILE:HD13	1.97	0.46
1:A:555:LEU:HD21	1:A:587:ILE:HD13	1.97	0.46
1:B:2535:ASP:HB3	1:B:2538:LYS:HB2	1.97	0.46
1:B:2608:ARG:NH1	1:B:2664:PRO:O	2.33	0.46
1:C:339:ILE:HG13	1:C:340:LEU:N	2.31	0.46
1:B:1269:ARG:HG3	1:B:1274:ASP:H	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1051:LEU:HD23	1:B:1056:VAL:HG11	1.98	0.46
1:B:2462:ARG:HG3	1:B:2463:GLY:H	1.80	0.46
1:C:211:LEU:HA	1:C:214:PHE:CD1	2.51	0.46
1:C:1323:PHE:HB2	1:C:1341:CYS:SG	2.55	0.46
1:B:2519:GLN:HE22	1:B:2578:THR:HG22	1.81	0.46
1:C:1051:LEU:HD23	1:C:1056:VAL:HG11	1.98	0.46
1:C:2535:ASP:HB3	1:C:2538:LYS:HB2	1.97	0.46
1:A:211:LEU:HA	1:A:214:PHE:CD1	2.51	0.46
1:A:339:ILE:HG13	1:A:340:LEU:N	2.31	0.46
1:A:1367:ILE:HD11	1:A:1439:LEU:HB3	1.97	0.46
1:B:1366:LEU:HG	1:B:1439:LEU:HD21	1.98	0.46
1:C:1018:GLN:HG3	1:C:1070:LEU:HD13	1.96	0.46
1:C:1323:PHE:CD1	1:C:2090:LEU:HD13	2.51	0.46
1:C:1367:ILE:HD11	1:C:1439:LEU:HB3	1.97	0.46
1:A:797:ILE:HB	1:A:798:PRO:HD3	1.98	0.46
1:A:2462:ARG:HG3	1:A:2463:GLY:H	1.80	0.46
1:A:2519:GLN:HE22	1:A:2578:THR:HG22	1.81	0.46
1:B:284:ILE:O	1:B:288:LEU:CB	2.64	0.46
1:C:2566:VAL:HB	1:C:2719:GLU:OE2	2.16	0.46
1:A:952:TRP:HB3	1:A:1094:GLN:NE2	2.31	0.45
1:A:1473:GLN:O	1:A:1477:VAL:HG13	2.16	0.45
1:B:211:LEU:HA	1:B:214:PHE:CD1	2.51	0.45
1:B:1323:PHE:CD1	1:B:2090:LEU:HD13	2.51	0.45
1:C:284:ILE:O	1:C:288:LEU:CB	2.63	0.45
1:C:952:TRP:HB3	1:C:1094:GLN:NE2	2.32	0.45
1:A:1269:ARG:HG3	1:A:1274:ASP:H	1.80	0.45
1:A:2808:ARG:NH1	1:C:2771:LEU:HD23	2.31	0.45
1:C:741:TRP:HB2	1:C:809:LEU:HD12	1.97	0.45
1:A:251:LEU:HD21	1:A:552:ASN:HD22	1.81	0.45
1:A:1706:THR:HA	1:A:1709:ILE:HG22	1.99	0.45
1:A:2574:ASN:HA	1:C:2583:SER:HB3	1.98	0.45
1:B:251:LEU:HD21	1:B:552:ASN:HD22	1.81	0.45
1:B:1706:THR:HA	1:B:1709:ILE:HG22	1.99	0.45
1:A:561:TRP:CE3	1:A:568:ILE:HD12	2.52	0.45
1:A:1366:LEU:HG	1:A:1439:LEU:HD21	1.98	0.45
1:B:952:TRP:HB3	1:B:1094:GLN:NE2	2.32	0.45
1:C:1366:LEU:HG	1:C:1439:LEU:HD21	1.98	0.45
1:A:2535:ASP:HB3	1:A:2538:LYS:HB2	1.97	0.45
1:C:2519:GLN:HE22	1:C:2578:THR:HG22	1.81	0.45
1:A:1323:PHE:CD1	1:A:2090:LEU:HD13	2.51	0.45
1:A:2771:LEU:HD23	1:B:2808:ARG:NH1	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2583:SER:HB3	1:C:2574:ASN:HA	1.97	0.45
1:B:2673:LYS:HZ2	1:B:2678:GLU:H	1.65	0.45
1:A:2566:VAL:HB	1:A:2719:GLU:OE2	2.16	0.45
1:C:1230:TYR:OH	1:C:1239:ASN:O	2.35	0.45
1:A:31:SER:HA	1:A:34:TYR:CD2	2.52	0.45
1:A:2583:SER:HB3	1:B:2574:ASN:HA	1.98	0.45
1:B:2364:LEU:O	1:B:2368:VAL:HG22	2.17	0.45
1:B:2391:ASN:HB3	1:B:2394:THR:CG2	2.47	0.45
1:A:2391:ASN:HB3	1:A:2394:THR:CG2	2.47	0.45
1:B:50:ALA:HB3	1:B:53:GLN:HE21	1.80	0.45
1:B:1037:ASN:OD1	2:B:3003:NAG:O7	2.35	0.45
1:B:1956:SER:O	1:B:1956:SER:OG	2.33	0.45
1:B:2566:VAL:HB	1:B:2719:GLU:OE2	2.16	0.45
1:C:555:LEU:HD12	1:C:555:LEU:HA	1.83	0.45
1:C:561:TRP:CE3	1:C:568:ILE:HD12	2.52	0.45
1:C:1215:ARG:HH12	1:C:1235:ILE:HG21	1.82	0.45
1:C:1473:GLN:O	1:C:1477:VAL:HG13	2.16	0.45
1:A:741:TRP:HB2	1:A:809:LEU:HD12	1.97	0.44
1:A:1302:TYR:HA	1:A:1970:PHE:CZ	2.52	0.44
1:A:2014:LEU:HD22	1:A:2041:TYR:CZ	2.52	0.44
1:A:2482:LEU:O	1:A:2486:VAL:HG12	2.17	0.44
1:C:31:SER:HA	1:C:34:TYR:CD2	2.52	0.44
1:A:960:ILE:HD13	1:A:996:ARG:HD3	1.99	0.44
1:A:1297:ILE:HD13	1:A:1457:ASP:HB2	2.00	0.44
1:A:1962:ASP:N	1:A:1962:ASP:OD1	2.49	0.44
1:A:2540:ASN:O	1:A:2544:LYS:HG2	2.17	0.44
1:B:2482:LEU:O	1:B:2486:VAL:HG12	2.17	0.44
1:B:2540:ASN:O	1:B:2544:LYS:HG2	2.17	0.44
1:C:960:ILE:HD13	1:C:996:ARG:HD3	1.99	0.44
1:C:1037:ASN:OD1	2:C:3003:NAG:O7	2.35	0.44
1:B:960:ILE:HD13	1:B:996:ARG:HD3	1.99	0.44
1:B:2014:LEU:HD22	1:B:2041:TYR:CZ	2.52	0.44
1:B:2650:PRO:HB2	1:B:2685:THR:HG21	1.91	0.44
1:A:705:GLU:O	1:A:712:LYS:NZ	2.43	0.44
1:A:1037:ASN:OD1	2:A:3003:NAG:O7	2.35	0.44
1:A:2764:HIS:HA	1:B:2768:PHE:CE2	2.53	0.44
1:B:31:SER:HA	1:B:34:TYR:CD2	2.52	0.44
1:B:705:GLU:O	1:B:712:LYS:NZ	2.43	0.44
1:B:1302:TYR:HA	1:B:1970:PHE:CZ	2.52	0.44
1:B:1473:GLN:O	1:B:1477:VAL:HG13	2.16	0.44
1:C:50:ALA:HB3	1:C:53:GLN:HE21	1.80	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2364:LEU:O	1:A:2368:VAL:HG22	2.17	0.44
1:A:2603:SER:OG	1:A:2622:LYS:HB3	2.18	0.44
1:B:561:TRP:HE3	1:B:568:ILE:HD12	1.83	0.44
1:B:2462:ARG:HD2	1:B:2462:ARG:HA	1.75	0.44
1:B:2603:SER:OG	1:B:2622:LYS:HB3	2.18	0.44
1:B:2771:LEU:HD23	1:C:2808:ARG:NH1	2.32	0.44
1:C:251:LEU:HD21	1:C:552:ASN:HD22	1.81	0.44
1:C:2053:GLN:HE22	1:C:2082:LYS:HA	1.83	0.44
1:C:2364:LEU:O	1:C:2368:VAL:HG22	2.17	0.44
1:C:2391:ASN:HB3	1:C:2394:THR:CG2	2.47	0.44
1:A:561:TRP:HE3	1:A:568:ILE:HD12	1.82	0.44
1:A:1230:TYR:OH	1:A:1239:ASN:O	2.35	0.44
1:C:1706:THR:HA	1:C:1709:ILE:HG22	1.99	0.44
1:A:1051:LEU:HD23	1:A:1056:VAL:HG11	1.98	0.44
1:C:1302:TYR:HA	1:C:1970:PHE:CZ	2.52	0.44
1:C:2014:LEU:HD22	1:C:2041:TYR:CZ	2.52	0.44
1:C:2265:LEU:HD23	1:C:2265:LEU:HA	1.82	0.44
1:B:561:TRP:CE3	1:B:568:ILE:HD12	2.52	0.44
1:C:1956:SER:O	1:C:1956:SER:OG	2.33	0.44
1:A:1215:ARG:HH12	1:A:1235:ILE:HG21	1.82	0.44
1:B:1673:PHE:O	1:B:1677:VAL:HG13	2.18	0.44
1:C:571:VAL:HG11	1:C:574:PHE:HB2	2.00	0.44
1:A:2299:VAL:HB	1:A:2300:PRO:HD3	2.00	0.43
1:B:2753:LYS:NZ	1:C:2754:PHE:CZ	2.61	0.43
1:C:968:ILE:HG13	1:C:1247:PHE:CD1	2.53	0.43
1:A:679:LEU:O	1:A:683:VAL:HG22	2.19	0.43
1:A:1154:GLN:NE2	1:A:1245:TYR:OH	2.51	0.43
1:A:1996:CYS:HA	1:A:1999:VAL:HG12	2.00	0.43
1:B:1215:ARG:HH12	1:B:1235:ILE:HG21	1.82	0.43
1:B:1962:ASP:OD1	1:B:1962:ASP:N	2.49	0.43
1:B:2053:GLN:HE22	1:B:2082:LYS:HA	1.83	0.43
1:B:2541:GLU:HA	1:B:2544:LYS:HZ3	1.83	0.43
1:C:32:PHE:HE1	1:C:284:ILE:HD12	1.84	0.43
1:C:2461:PRO:HD2	1:C:2464:GLN:NE2	2.31	0.43
1:C:2482:LEU:O	1:C:2486:VAL:HG12	2.17	0.43
1:A:2395:LYS:HE2	1:A:2395:LYS:HB3	1.89	0.43
1:B:968:ILE:HG13	1:B:1247:PHE:CD1	2.53	0.43
1:B:2299:VAL:HB	1:B:2300:PRO:HD3	2.00	0.43
1:C:2603:SER:OG	1:C:2622:LYS:HB3	2.18	0.43
1:A:968:ILE:HG13	1:A:1247:PHE:CD1	2.53	0.43
1:B:1435:CYS:O	1:B:1439:LEU:HD13	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2020:PHE:CZ	1:B:2370:CYS:HB3	2.54	0.43
1:C:217:ASN:O	1:C:221:THR:HG23	2.19	0.43
1:C:1177:LYS:HE3	1:C:1177:LYS:HB2	1.87	0.43
1:C:1673:PHE:O	1:C:1677:VAL:HG13	2.18	0.43
1:C:1957:LYS:HB3	1:C:1957:LYS:HE3	1.83	0.43
1:A:1435:CYS:O	1:A:1439:LEU:HD13	2.19	0.43
1:B:1721:HIS:HA	1:B:1724:TYR:CD1	2.53	0.43
1:C:1154:GLN:NE2	1:C:1245:TYR:OH	2.51	0.43
1:C:1996:CYS:HA	1:C:1999:VAL:HG12	2.00	0.43
1:C:2540:ASN:O	1:C:2544:LYS:HG2	2.17	0.43
1:A:32:PHE:HE1	1:A:284:ILE:HD12	1.84	0.43
1:A:2462:ARG:HD2	1:A:2462:ARG:HA	1.75	0.43
1:B:32:PHE:HE1	1:B:284:ILE:HD12	1.84	0.43
1:A:2053:GLN:HE22	1:A:2082:LYS:HA	1.83	0.43
1:B:571:VAL:HG11	1:B:574:PHE:HB2	2.00	0.43
1:B:1721:HIS:HA	1:B:1724:TYR:CE1	2.54	0.43
1:B:1996:CYS:HA	1:B:1999:VAL:HG12	2.00	0.43
1:C:679:LEU:O	1:C:683:VAL:HG22	2.19	0.43
1:C:1962:ASP:OD1	1:C:1962:ASP:N	2.49	0.43
1:A:217:ASN:O	1:A:221:THR:HG23	2.19	0.43
1:A:2020:PHE:CZ	1:A:2370:CYS:HB3	2.54	0.43
1:A:1721:HIS:HA	1:A:1724:TYR:CD1	2.53	0.43
1:B:2271:PHE:O	1:B:2274:ILE:HG22	2.19	0.43
1:C:2299:VAL:HB	1:C:2300:PRO:HD3	2.00	0.43
1:A:1363:TRP:O	1:A:1367:ILE:HG12	2.19	0.43
1:A:2587:MET:O	1:A:2590:GLU:HG2	2.19	0.43
1:A:2768:PHE:CE2	1:C:2764:HIS:HA	2.53	0.43
1:B:1297:ILE:HD13	1:B:1457:ASP:HB2	2.00	0.43
1:C:561:TRP:HE3	1:C:568:ILE:HD12	1.82	0.43
1:A:558:GLN:HE22	1:A:578:LYS:HB2	1.84	0.42
1:A:1673:PHE:O	1:A:1677:VAL:HG13	2.18	0.42
1:B:679:LEU:O	1:B:683:VAL:HG22	2.19	0.42
1:B:1023:LYS:HD3	1:B:1023:LYS:HA	1.82	0.42
1:C:1307:LYS:HA	1:C:1307:LYS:HD3	1.81	0.42
1:C:1721:HIS:HA	1:C:1724:TYR:CD1	2.53	0.42
1:C:2271:PHE:O	1:C:2274:ILE:HG22	2.19	0.42
1:A:2271:PHE:O	1:A:2274:ILE:HG22	2.19	0.42
1:B:217:ASN:O	1:B:221:THR:HG23	2.19	0.42
1:B:1154:GLN:NE2	1:B:1245:TYR:OH	2.52	0.42
1:C:511:TRP:NE1	1:C:586:LYS:HD2	2.34	0.42
1:C:2532:LYS:HB2	1:C:2566:VAL:CG2	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:571:VAL:HG11	1:A:574:PHE:HB2	2.00	0.42
1:B:9:LEU:HD23	1:B:9:LEU:H	1.84	0.42
1:B:1363:TRP:O	1:B:1367:ILE:HG12	2.19	0.42
1:B:2764:HIS:HA	1:C:2768:PHE:CE2	2.54	0.42
1:C:1435:CYS:O	1:C:1439:LEU:HD13	2.19	0.42
1:C:1721:HIS:HA	1:C:1724:TYR:CE1	2.54	0.42
1:A:774:LYS:HD3	1:A:776:GLU:H	1.84	0.42
1:B:977:LEU:O	1:B:978:PHE:HB2	2.20	0.42
1:B:1690:GLU:OE1	1:B:1690:GLU:N	2.50	0.42
1:C:9:LEU:HD23	1:C:9:LEU:H	1.84	0.42
1:C:1094:GLN:O	1:C:1098:ARG:HG2	2.20	0.42
1:C:1109:LYS:H	1:C:1109:LYS:HG2	1.66	0.42
1:C:1363:TRP:O	1:C:1367:ILE:HG12	2.19	0.42
1:A:762:ASN:OD1	1:A:762:ASN:N	2.53	0.42
1:A:1307:LYS:HD3	1:A:1307:LYS:HA	1.81	0.42
1:A:1686:SER:HA	1:A:1689:ARG:HG3	2.02	0.42
1:B:2532:LYS:HB2	1:B:2566:VAL:CG2	2.49	0.42
1:C:1297:ILE:HD13	1:C:1457:ASP:HB2	1.99	0.42
1:A:2532:LYS:HB2	1:A:2566:VAL:CG2	2.49	0.42
1:C:558:GLN:HE22	1:C:578:LYS:HB2	1.85	0.42
1:C:568:ILE:HD11	1:C:577:LYS:HD3	2.02	0.42
1:C:1023:LYS:HD3	1:C:1023:LYS:HA	1.82	0.42
1:C:1686:SER:HA	1:C:1689:ARG:HG3	2.02	0.42
1:A:587:ILE:O	1:A:591:ILE:HG23	2.20	0.42
1:A:1266:ALA:HA	1:A:1269:ARG:HB3	2.02	0.42
1:A:2313:THR:HA	1:A:2316:VAL:HG12	2.01	0.42
1:B:568:ILE:HD11	1:B:577:LYS:HD3	2.02	0.42
1:B:2527:GLN:O	1:B:2528:GLN:HG2	2.19	0.42
1:A:568:ILE:HD11	1:A:577:LYS:HD3	2.02	0.42
1:A:691:TRP:HD1	1:A:808:HIS:ND1	2.18	0.42
1:A:1690:GLU:OE1	1:A:1690:GLU:N	2.50	0.42
1:A:1721:HIS:HA	1:A:1724:TYR:CE1	2.54	0.42
1:B:1686:SER:HA	1:B:1689:ARG:HG3	2.02	0.42
1:B:2587:MET:O	1:B:2590:GLU:HG2	2.19	0.42
1:C:2527:GLN:O	1:C:2528:GLN:HG2	2.19	0.42
1:A:1200:VAL:HG13	1:A:1232:PRO:HD3	2.02	0.42
1:A:2521:ILE:HA	1:A:2577:TRP:CD1	2.55	0.42
1:B:511:TRP:NE1	1:B:586:LYS:HD2	2.34	0.42
1:B:691:TRP:HD1	1:B:808:HIS:ND1	2.18	0.42
1:B:735:LYS:HE3	1:B:735:LYS:HB3	1.91	0.42
1:B:1094:GLN:O	1:B:1098:ARG:HG2	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1351:LEU:HD23	1:B:1351:LEU:HA	1.85	0.42
1:B:1986:ASN:HA	1:B:1989:VAL:HG12	2.02	0.42
1:C:587:ILE:O	1:C:591:ILE:HG23	2.20	0.42
1:C:2348:LEU:HD23	1:C:2353:GLU:HG2	2.02	0.42
1:C:2521:ILE:HA	1:C:2577:TRP:CD1	2.55	0.42
1:A:1094:GLN:O	1:A:1098:ARG:HG2	2.20	0.42
1:B:558:GLN:HE22	1:B:578:LYS:HB2	1.85	0.42
1:B:2313:THR:HA	1:B:2316:VAL:HG12	2.01	0.42
1:C:1986:ASN:HA	1:C:1989:VAL:HG12	2.02	0.42
1:A:1684:LEU:HD12	1:A:1987:THR:OG1	2.20	0.41
1:A:2430:LEU:HB3	1:A:2434:SER:HB2	2.02	0.41
1:B:75:ILE:HD12	1:B:75:ILE:HA	1.91	0.41
1:B:1669:THR:O	1:B:1672:LEU:HG	2.20	0.41
1:B:2507:LEU:HD13	1:B:2609:ASN:H	1.85	0.41
1:C:1440:LEU:HD23	1:C:1440:LEU:HA	1.88	0.41
1:C:1669:THR:O	1:C:1672:LEU:HG	2.20	0.41
1:C:2587:MET:O	1:C:2590:GLU:HG2	2.19	0.41
1:A:977:LEU:O	1:A:978:PHE:HB2	2.20	0.41
1:A:1957:LYS:HB3	1:A:1957:LYS:HE3	1.83	0.41
1:A:2527:GLN:O	1:A:2528:GLN:HG2	2.19	0.41
1:B:587:ILE:O	1:B:591:ILE:HG23	2.20	0.41
1:B:2580:SER:HB2	1:B:2582:PRO:HD2	2.02	0.41
1:C:207:VAL:O	1:C:211:LEU:HG	2.20	0.41
1:C:774:LYS:HD3	1:C:776:GLU:H	1.85	0.41
1:C:977:LEU:O	1:C:978:PHE:HB2	2.20	0.41
1:C:2580:SER:HB2	1:C:2582:PRO:HD2	2.02	0.41
1:A:511:TRP:NE1	1:A:586:LYS:HD2	2.34	0.41
1:A:2507:LEU:HD13	1:A:2609:ASN:H	1.85	0.41
1:A:2580:SER:HB2	1:A:2582:PRO:HD2	2.02	0.41
1:C:1351:LEU:HD23	1:C:1351:LEU:HA	1.85	0.41
1:C:1707:ARG:HD3	1:C:1959:PHE:HZ	1.85	0.41
1:C:2369:LYS:HD3	1:C:2369:LYS:HA	1.86	0.41
1:A:1041:ILE:HG22	1:A:1043:LEU:H	1.86	0.41
1:A:1669:THR:O	1:A:1672:LEU:HG	2.20	0.41
1:A:1993:GLU:HG2	1:A:1997:TYR:CE2	2.55	0.41
1:A:2754:PHE:CZ	1:C:2753:LYS:NZ	2.62	0.41
1:B:37:TYR:O	1:B:41:ILE:HG13	2.20	0.41
1:B:774:LYS:HD3	1:B:776:GLU:H	1.85	0.41
1:B:795:ILE:O	1:B:799:THR:OG1	2.35	0.41
1:B:2348:LEU:HD23	1:B:2353:GLU:HG2	2.02	0.41
1:B:2430:LEU:HB3	1:B:2434:SER:HB2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2587:MET:O	1:C:2591:LEU:HG	2.20	0.41
1:A:1674:LEU:HA	1:A:1677:VAL:HG22	2.03	0.41
1:A:2587:MET:O	1:A:2591:LEU:HG	2.20	0.41
1:B:1993:GLU:HG2	1:B:1997:TYR:CE2	2.55	0.41
1:C:752:LEU:HD21	1:C:798:PRO:HB2	2.03	0.41
1:C:762:ASN:OD1	1:C:762:ASN:N	2.53	0.41
1:C:786:PHE:HB3	1:C:790:GLU:HG3	2.03	0.41
1:C:1200:VAL:HG13	1:C:1232:PRO:HD3	2.02	0.41
1:C:1266:ALA:HA	1:C:1269:ARG:HB3	2.02	0.41
1:C:1466:SER:HG	1:C:1717:ARG:HE	1.65	0.41
1:C:2020:PHE:CZ	1:C:2370:CYS:HB3	2.54	0.41
1:A:207:VAL:O	1:A:211:LEU:HG	2.20	0.41
1:A:1986:ASN:HA	1:A:1989:VAL:HG12	2.02	0.41
1:A:2348:LEU:HD23	1:A:2353:GLU:HG2	2.02	0.41
1:A:2643:ASP:O	1:A:2644:THR:HG22	2.21	0.41
1:B:1718:GLU:O	1:B:1722:MET:HG2	2.21	0.41
1:B:2464:GLN:O	1:B:2465:LYS:HG2	2.21	0.41
1:C:511:TRP:CZ2	1:C:554:LEU:HD11	2.56	0.41
1:C:1684:LEU:HD12	1:C:1987:THR:OG1	2.20	0.41
1:C:2539:TYR:O	1:C:2543:LEU:HG	2.21	0.41
1:A:289:TYR:OH	1:A:294:PHE:O	2.39	0.41
1:A:1215:ARG:NH2	1:A:1223:ASP:OD1	2.54	0.41
1:A:2464:GLN:O	1:A:2465:LYS:HG2	2.21	0.41
1:B:752:LEU:HD21	1:B:798:PRO:HB2	2.03	0.41
1:B:1211:ASP:OD1	1:B:1212:TYR:N	2.38	0.41
1:B:1266:ALA:HA	1:B:1269:ARG:HB3	2.02	0.41
1:C:37:TYR:O	1:C:41:ILE:HG13	2.20	0.41
1:C:264:ASP:CG	1:C:265:PRO:HD2	2.41	0.41
1:C:815:ARG:HA	1:C:818:GLU:HG2	2.03	0.41
1:C:952:TRP:HZ3	1:C:1090:VAL:HA	1.85	0.41
1:C:1215:ARG:NH2	1:C:1223:ASP:OD1	2.54	0.41
1:A:588:LEU:HD12	1:A:591:ILE:HD11	2.03	0.41
1:A:815:ARG:HA	1:A:818:GLU:HG2	2.03	0.41
1:A:952:TRP:HZ3	1:A:1090:VAL:HA	1.85	0.41
1:A:1023:LYS:HA	1:A:1023:LYS:HD3	1.82	0.41
1:A:2759:PHE:CZ	1:B:2416:GLU:HB2	2.55	0.41
1:A:2804:ILE:HD13	1:A:2804:ILE:HA	1.94	0.41
1:B:519:LEU:O	1:B:522:VAL:HG12	2.21	0.41
1:B:1684:LEU:HD12	1:B:1987:THR:OG1	2.20	0.41
1:B:2521:ILE:HA	1:B:2577:TRP:CD1	2.55	0.41
1:C:2313:THR:HA	1:C:2316:VAL:HG12	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:9:LEU:H	1:A:9:LEU:HD23	1.84	0.41
1:A:239:PRO:HG3	1:A:580:PRO:HB3	2.03	0.41
1:A:284:ILE:HD13	1:A:284:ILE:HA	1.97	0.41
1:A:519:LEU:O	1:A:522:VAL:HG12	2.21	0.41
1:A:555:LEU:HD12	1:A:555:LEU:HA	1.83	0.41
1:A:1484:ILE:HG13	1:A:1485:GLU:N	2.36	0.41
1:A:2261:VAL:HG13	1:A:2262:LEU:HD22	2.03	0.41
1:A:2488:PHE:N	1:A:2489:PRO:HD2	2.36	0.41
1:B:251:LEU:HD21	1:B:552:ASN:ND2	2.36	0.41
1:B:786:PHE:HB3	1:B:790:GLU:HG3	2.03	0.41
1:B:1041:ILE:HG22	1:B:1043:LEU:H	1.86	0.41
1:B:1159:TYR:O	1:B:1163:HIS:ND1	2.50	0.41
1:B:2546:PHE:CE2	1:B:2675:LEU:HD12	2.56	0.41
1:C:289:TYR:OH	1:C:294:PHE:O	2.39	0.41
1:C:1041:ILE:HG22	1:C:1043:LEU:H	1.86	0.41
1:C:1674:LEU:HA	1:C:1677:VAL:HG22	2.03	0.41
1:C:1718:GLU:O	1:C:1722:MET:HG2	2.21	0.41
1:C:1993:GLU:HG2	1:C:1997:TYR:CE2	2.55	0.41
1:C:2488:PHE:N	1:C:2489:PRO:HD2	2.36	0.41
1:A:251:LEU:HD21	1:A:552:ASN:ND2	2.36	0.41
1:A:264:ASP:CG	1:A:265:PRO:HD2	2.41	0.41
1:A:1117:ARG:HB2	1:A:1272:ALA:HA	2.03	0.41
1:A:2310:GLN:O	1:A:2313:THR:HG22	2.21	0.41
1:A:2416:GLU:HB2	1:C:2759:PHE:CZ	2.55	0.41
1:A:2541:GLU:HG3	1:A:2544:LYS:HE2	2.03	0.41
1:A:2546:PHE:CE2	1:A:2675:LEU:HD12	2.56	0.41
1:B:2310:GLN:O	1:B:2313:THR:HG22	2.21	0.41
1:C:1131:PHE:O	1:C:1135:PHE:HB2	2.21	0.41
1:C:1360:LEU:HD23	1:C:1360:LEU:HA	1.87	0.41
1:C:1484:ILE:HG13	1:C:1485:GLU:N	2.36	0.41
1:C:1964:LEU:O	1:C:1968:GLU:HG2	2.21	0.41
1:C:2507:LEU:HD13	1:C:2609:ASN:H	1.85	0.41
1:C:2541:GLU:HG3	1:C:2544:LYS:HE2	2.03	0.41
1:A:2539:TYR:O	1:A:2543:LEU:HG	2.21	0.40
1:B:732:TRP:O	1:B:736:ILE:HG12	2.21	0.40
1:B:957:LEU:HD12	1:B:957:LEU:HA	1.94	0.40
1:B:1200:VAL:HG13	1:B:1232:PRO:HD3	2.02	0.40
1:B:1215:ARG:NH2	1:B:1223:ASP:OD1	2.54	0.40
1:B:2556:LEU:HD23	1:B:2675:LEU:HD11	2.03	0.40
1:C:2430:LEU:HB3	1:C:2434:SER:HB2	2.02	0.40
1:C:2464:GLN:O	1:C:2465:LYS:HG2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:37:TYR:O	1:A:41:ILE:HG13	2.20	0.40
1:A:245:VAL:O	1:A:249:VAL:HG12	2.21	0.40
1:A:1707:ARG:HD3	1:A:1959:PHE:HZ	1.85	0.40
1:B:511:TRP:CZ2	1:B:554:LEU:HD11	2.56	0.40
1:B:815:ARG:HA	1:B:818:GLU:HG2	2.03	0.40
1:B:1964:LEU:O	1:B:1968:GLU:HG2	2.21	0.40
1:B:2566:VAL:HG12	1:B:2721:VAL:HG13	2.04	0.40
1:B:2586:LYS:HE3	1:C:2570:GLU:OE2	2.22	0.40
1:B:2587:MET:O	1:B:2591:LEU:HG	2.21	0.40
1:C:705:GLU:O	1:C:712:LYS:NZ	2.43	0.40
1:C:732:TRP:O	1:C:736:ILE:HG12	2.21	0.40
1:C:1709:ILE:HD12	1:C:1709:ILE:HA	1.89	0.40
1:C:2765:SER:O	1:C:2765:SER:OG	2.38	0.40
1:A:261:ARG:HD2	1:A:261:ARG:HA	1.91	0.40
1:A:732:TRP:O	1:A:736:ILE:HG12	2.21	0.40
1:A:1131:PHE:O	1:A:1135:PHE:HB2	2.22	0.40
1:A:1718:GLU:O	1:A:1722:MET:HG2	2.21	0.40
1:A:2553:MET:O	1:A:2556:LEU:HG	2.21	0.40
1:A:2566:VAL:HG12	1:A:2721:VAL:HG13	2.03	0.40
1:B:286:LEU:HD23	1:B:286:LEU:HA	1.95	0.40
1:B:1230:TYR:OH	1:B:1239:ASN:O	2.35	0.40
1:B:2541:GLU:HG3	1:B:2544:LYS:HE2	2.03	0.40
1:C:2395:LYS:HE2	1:C:2395:LYS:HB3	1.89	0.40
1:B:207:VAL:O	1:B:211:LEU:HG	2.20	0.40
1:B:1707:ARG:HD3	1:B:1959:PHE:HZ	1.85	0.40
1:B:2237:ILE:HD12	1:B:2237:ILE:HA	1.95	0.40
1:B:2710:ILE:HG22	1:B:2711:PHE:N	2.35	0.40
1:C:239:PRO:HG3	1:C:580:PRO:HB3	2.03	0.40
1:C:1711:LYS:HE3	1:C:1711:LYS:HB3	1.94	0.40
1:C:2556:LEU:HD23	1:C:2675:LEU:HD11	2.04	0.40
1:C:2643:ASP:O	1:C:2644:THR:HG22	2.21	0.40
1:A:511:TRP:CZ2	1:A:554:LEU:HD11	2.56	0.40
1:A:2461:PRO:HD2	1:A:2464:GLN:NE2	2.31	0.40
1:B:239:PRO:HG3	1:B:580:PRO:HB3	2.03	0.40
1:B:1157:ASP:HB2	1:B:1228:TRP:O	2.21	0.40
1:B:2261:VAL:HG13	1:B:2262:LEU:HD22	2.03	0.40
1:B:2488:PHE:N	1:B:2489:PRO:HD2	2.36	0.40
1:B:2643:ASP:O	1:B:2644:THR:HG22	2.21	0.40
1:B:2759:PHE:CZ	1:C:2416:GLU:HB2	2.56	0.40
1:C:519:LEU:O	1:C:522:VAL:HG12	2.21	0.40
1:C:588:LEU:HD12	1:C:591:ILE:HD11	2.03	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	1786/2822 (63%)	1683 (94%)	103 (6%)	0	100	100
1	B	1786/2822 (63%)	1684 (94%)	102 (6%)	0	100	100
1	C	1786/2822 (63%)	1684 (94%)	102 (6%)	0	100	100
All	All	5358/8466 (63%)	5051 (94%)	307 (6%)	0	100	100

There are no Ramachandran outliers to report.

5.3.2 Protein sidechains [i](#)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	1626/2541 (64%)	1622 (100%)	4 (0%)	92	94
1	B	1626/2541 (64%)	1622 (100%)	4 (0%)	92	94
1	C	1626/2541 (64%)	1622 (100%)	4 (0%)	92	94
All	All	4878/7623 (64%)	4866 (100%)	12 (0%)	91	94

All (12) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	12	ARG
1	A	518	TRP

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Mol	Chain	Res	Type
1	A	570	LYS
1	A	2369	LYS
1	B	12	ARG
1	B	518	TRP
1	B	570	LYS
1	B	2369	LYS
1	C	12	ARG
1	C	518	TRP
1	C	570	LYS
1	C	2369	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (59) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	53	GLN
1	A	61	GLN
1	A	292	GLN
1	A	357	GLN
1	A	558	GLN
1	A	600	HIS
1	A	729	HIS
1	A	785	GLN
1	A	1018	GLN
1	A	1076	ASN
1	A	1094	GLN
1	A	1154	GLN
1	A	1370	ASN
1	A	1506	GLN
1	A	1727	HIS
1	A	2310	GLN
1	A	2460	GLN
1	A	2528	GLN
1	A	2607	GLN
1	A	2609	ASN
1	B	53	GLN
1	B	61	GLN
1	B	292	GLN
1	B	357	GLN
1	B	558	GLN
1	B	600	HIS
1	B	729	HIS
1	B	1018	GLN

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Mol	Chain	Res	Type
1	B	1076	ASN
1	B	1094	GLN
1	B	1154	GLN
1	B	1370	ASN
1	B	1506	GLN
1	B	1727	HIS
1	B	2310	GLN
1	B	2460	GLN
1	B	2528	GLN
1	B	2607	GLN
1	B	2609	ASN
1	C	53	GLN
1	C	61	GLN
1	C	292	GLN
1	C	357	GLN
1	C	558	GLN
1	C	600	HIS
1	C	729	HIS
1	C	785	GLN
1	C	1018	GLN
1	C	1076	ASN
1	C	1094	GLN
1	C	1154	GLN
1	C	1370	ASN
1	C	1506	GLN
1	C	1727	HIS
1	C	2310	GLN
1	C	2460	GLN
1	C	2528	GLN
1	C	2607	GLN
1	C	2609	ASN

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 [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

12 ligands are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	NAG	C	3001	1	14,14,15	0.33	0	17,19,21	0.70	1 (5%)
2	NAG	B	3002	1	14,14,15	1.33	2 (14%)	17,19,21	0.90	1 (5%)
2	NAG	A	3002	1	14,14,15	1.33	2 (14%)	17,19,21	0.90	1 (5%)
2	NAG	C	3004	1	14,14,15	1.36	2 (14%)	17,19,21	0.59	0
2	NAG	B	3004	1	14,14,15	1.35	2 (14%)	17,19,21	0.60	0
2	NAG	C	3003	1	14,14,15	1.33	2 (14%)	17,19,21	0.69	0
2	NAG	C	3002	1	14,14,15	1.33	2 (14%)	17,19,21	0.90	1 (5%)
2	NAG	B	3001	1	14,14,15	0.34	0	17,19,21	0.70	1 (5%)
2	NAG	A	3004	1	14,14,15	1.36	2 (14%)	17,19,21	0.60	0
2	NAG	B	3003	1	14,14,15	1.34	2 (14%)	17,19,21	0.70	0
2	NAG	A	3003	1	14,14,15	1.33	2 (14%)	17,19,21	0.69	0
2	NAG	A	3001	1	14,14,15	0.33	0	17,19,21	0.71	1 (5%)

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	NAG	C	3001	1	-	3/6/23/26	0/1/1/1
2	NAG	B	3002	1	-	5/6/23/26	0/1/1/1
2	NAG	A	3002	1	-	5/6/23/26	0/1/1/1
2	NAG	C	3004	1	-	2/6/23/26	0/1/1/1

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	NAG	B	3004	1	-	2/6/23/26	0/1/1/1
2	NAG	C	3003	1	-	3/6/23/26	0/1/1/1
2	NAG	C	3002	1	-	5/6/23/26	0/1/1/1
2	NAG	B	3001	1	-	3/6/23/26	0/1/1/1
2	NAG	A	3004	1	-	2/6/23/26	0/1/1/1
2	NAG	B	3003	1	-	3/6/23/26	0/1/1/1
2	NAG	A	3003	1	-	3/6/23/26	0/1/1/1
2	NAG	A	3001	1	-	3/6/23/26	0/1/1/1

All (18) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	A	3004	NAG	O5-C1	4.48	1.50	1.43
2	C	3004	NAG	O5-C1	4.47	1.50	1.43
2	B	3004	NAG	O5-C1	4.46	1.50	1.43
2	B	3003	NAG	O5-C1	4.36	1.50	1.43
2	B	3002	NAG	O5-C1	4.35	1.50	1.43
2	C	3003	NAG	O5-C1	4.33	1.50	1.43
2	A	3003	NAG	O5-C1	4.33	1.50	1.43
2	A	3002	NAG	O5-C1	4.31	1.50	1.43
2	C	3002	NAG	O5-C1	4.30	1.50	1.43
2	A	3003	NAG	O5-C5	2.20	1.47	1.43
2	C	3002	NAG	O5-C5	2.18	1.47	1.43
2	C	3003	NAG	O5-C5	2.18	1.47	1.43
2	B	3003	NAG	O5-C5	2.18	1.47	1.43
2	A	3002	NAG	O5-C5	2.17	1.47	1.43
2	B	3002	NAG	O5-C5	2.16	1.47	1.43
2	C	3004	NAG	O5-C5	2.10	1.47	1.43
2	A	3004	NAG	O5-C5	2.08	1.47	1.43
2	B	3004	NAG	O5-C5	2.07	1.47	1.43

All (6) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	3002	NAG	O5-C5-C6	2.22	110.68	107.20
2	C	3002	NAG	O5-C5-C6	2.21	110.67	107.20
2	B	3002	NAG	O5-C5-C6	2.20	110.66	107.20
2	A	3001	NAG	C1-O5-C5	2.11	115.06	112.19
2	C	3001	NAG	C1-O5-C5	2.09	115.03	112.19
2	B	3001	NAG	C1-O5-C5	2.08	115.02	112.19

There are no chirality outliers.

All (39) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	A	3002	NAG	C8-C7-N2-C2
2	B	3002	NAG	C8-C7-N2-C2
2	C	3002	NAG	C8-C7-N2-C2
2	A	3002	NAG	O5-C5-C6-O6
2	B	3002	NAG	O5-C5-C6-O6
2	C	3002	NAG	O5-C5-C6-O6
2	A	3002	NAG	O7-C7-N2-C2
2	B	3002	NAG	O7-C7-N2-C2
2	C	3002	NAG	O7-C7-N2-C2
2	A	3004	NAG	C4-C5-C6-O6
2	B	3004	NAG	C4-C5-C6-O6
2	C	3004	NAG	C4-C5-C6-O6
2	A	3002	NAG	C4-C5-C6-O6
2	B	3002	NAG	C4-C5-C6-O6
2	C	3002	NAG	C4-C5-C6-O6
2	A	3001	NAG	C8-C7-N2-C2
2	B	3001	NAG	C8-C7-N2-C2
2	C	3001	NAG	C8-C7-N2-C2
2	A	3004	NAG	O5-C5-C6-O6
2	B	3004	NAG	O5-C5-C6-O6
2	C	3004	NAG	O5-C5-C6-O6
2	A	3001	NAG	O7-C7-N2-C2
2	B	3001	NAG	O7-C7-N2-C2
2	C	3001	NAG	O7-C7-N2-C2
2	A	3003	NAG	C1-C2-N2-C7
2	B	3003	NAG	C1-C2-N2-C7
2	C	3003	NAG	C1-C2-N2-C7
2	A	3003	NAG	C4-C5-C6-O6
2	B	3003	NAG	C4-C5-C6-O6
2	C	3003	NAG	C4-C5-C6-O6
2	A	3002	NAG	C1-C2-N2-C7
2	B	3002	NAG	C1-C2-N2-C7
2	C	3002	NAG	C1-C2-N2-C7
2	A	3003	NAG	O5-C5-C6-O6
2	B	3003	NAG	O5-C5-C6-O6
2	C	3003	NAG	O5-C5-C6-O6
2	A	3001	NAG	O5-C5-C6-O6
2	B	3001	NAG	O5-C5-C6-O6
2	C	3001	NAG	O5-C5-C6-O6

There are no ring outliers.

6 monomers are involved in 15 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	B	3002	NAG	4	0
2	A	3002	NAG	4	0
2	C	3003	NAG	1	0
2	C	3002	NAG	4	0
2	B	3003	NAG	1	0
2	A	3003	NAG	1	0

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

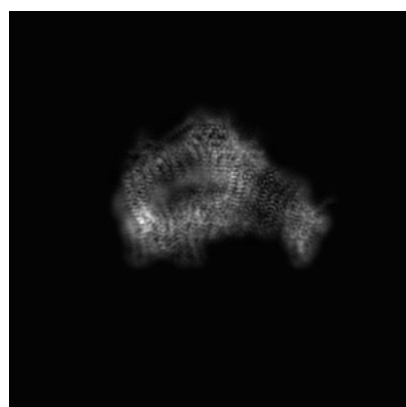
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-9975. These allow visual inspection of the internal detail of the map and identification of artifacts.

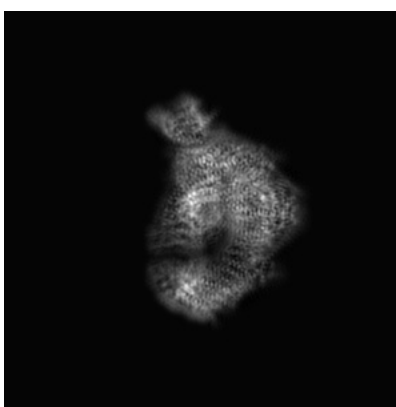
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

6.1.1 Primary map



X



Y

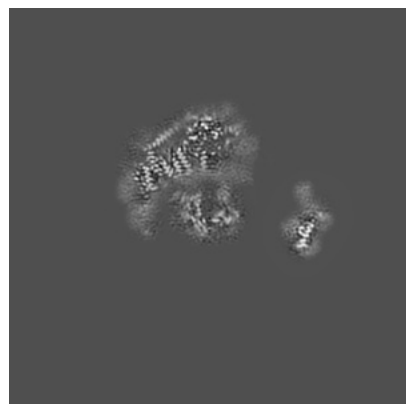


Z

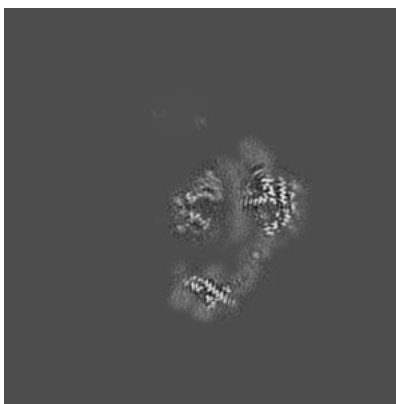
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

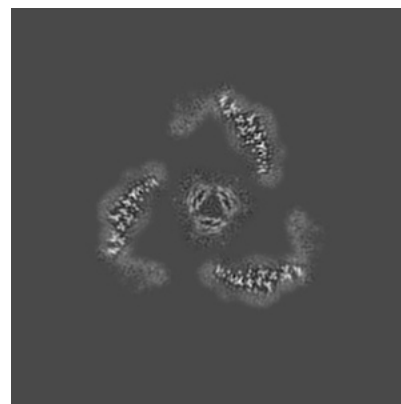
6.2.1 Primary map



X Index: 160



Y Index: 160

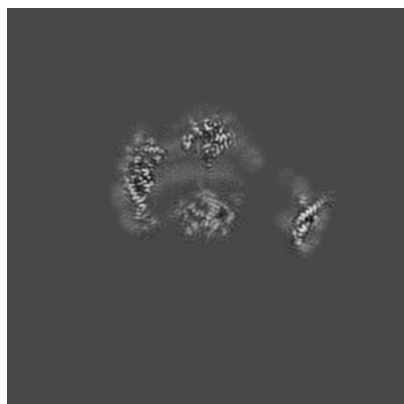


Z Index: 160

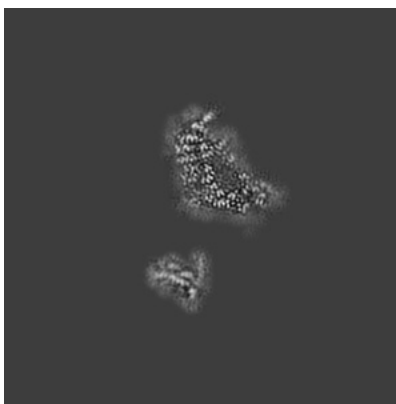
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

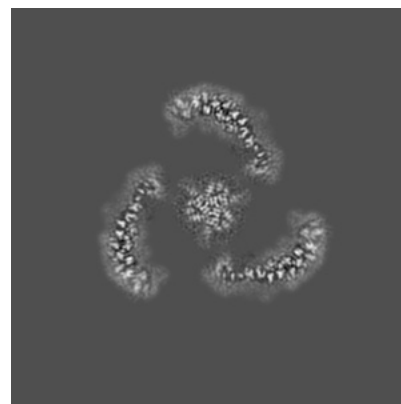
6.3.1 Primary map



X Index: 168



Y Index: 107

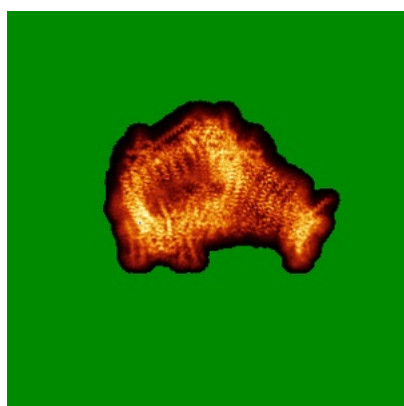


Z Index: 150

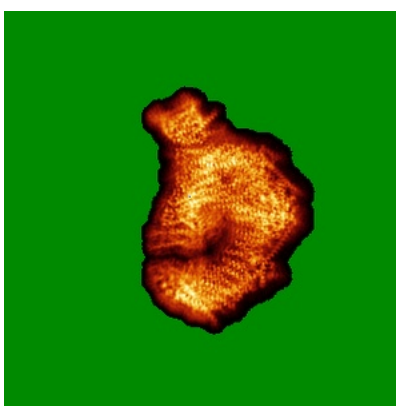
The images above show the largest variance slices of the map in three orthogonal directions.

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

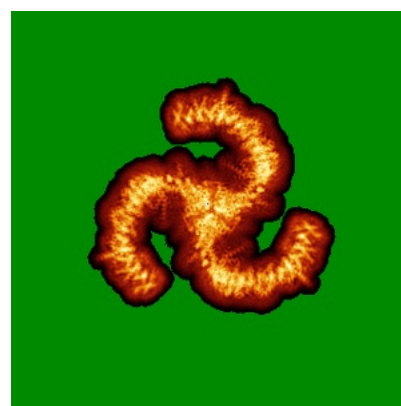
6.4.1 Primary map



X



Y

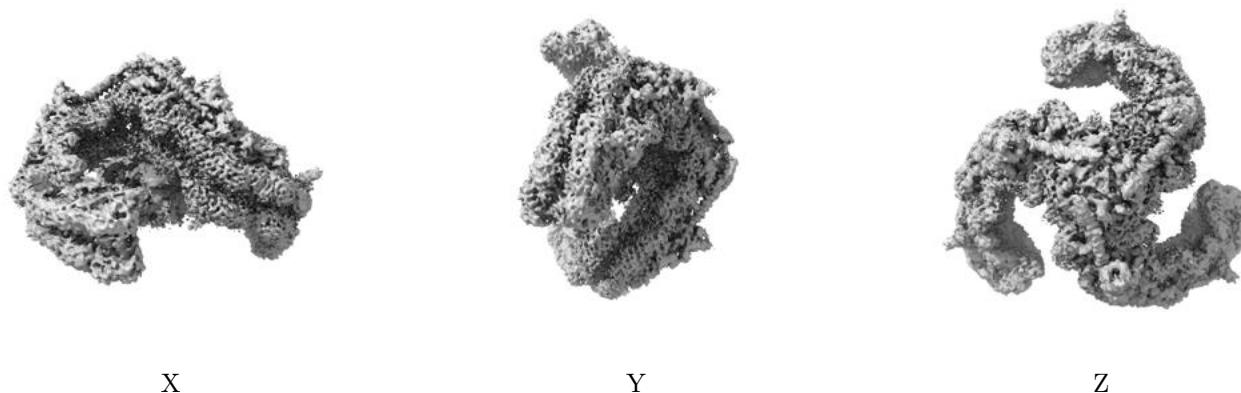


Z

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



The images above show the 3D surface view of the map at the recommended contour level 5.69. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

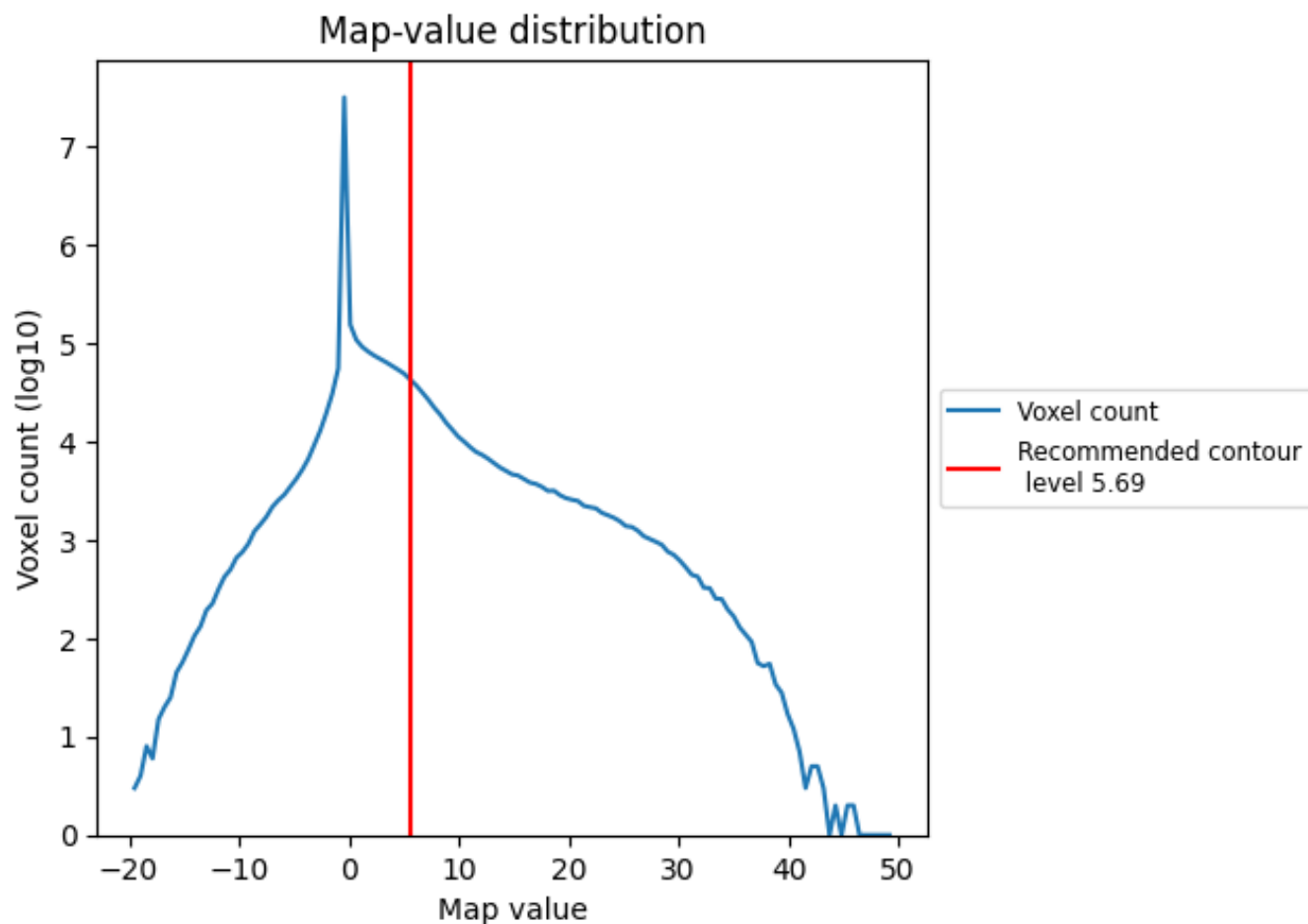
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

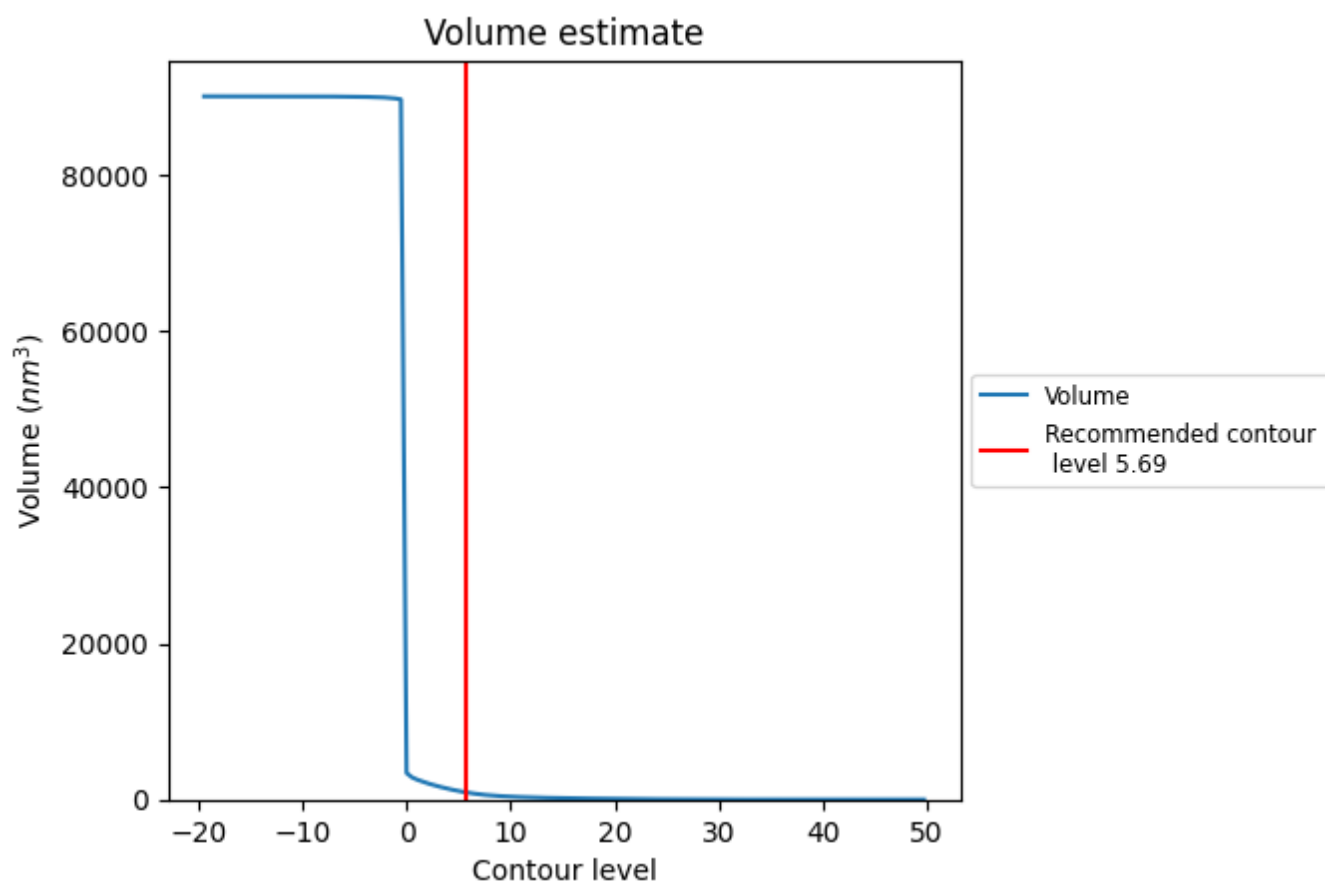
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

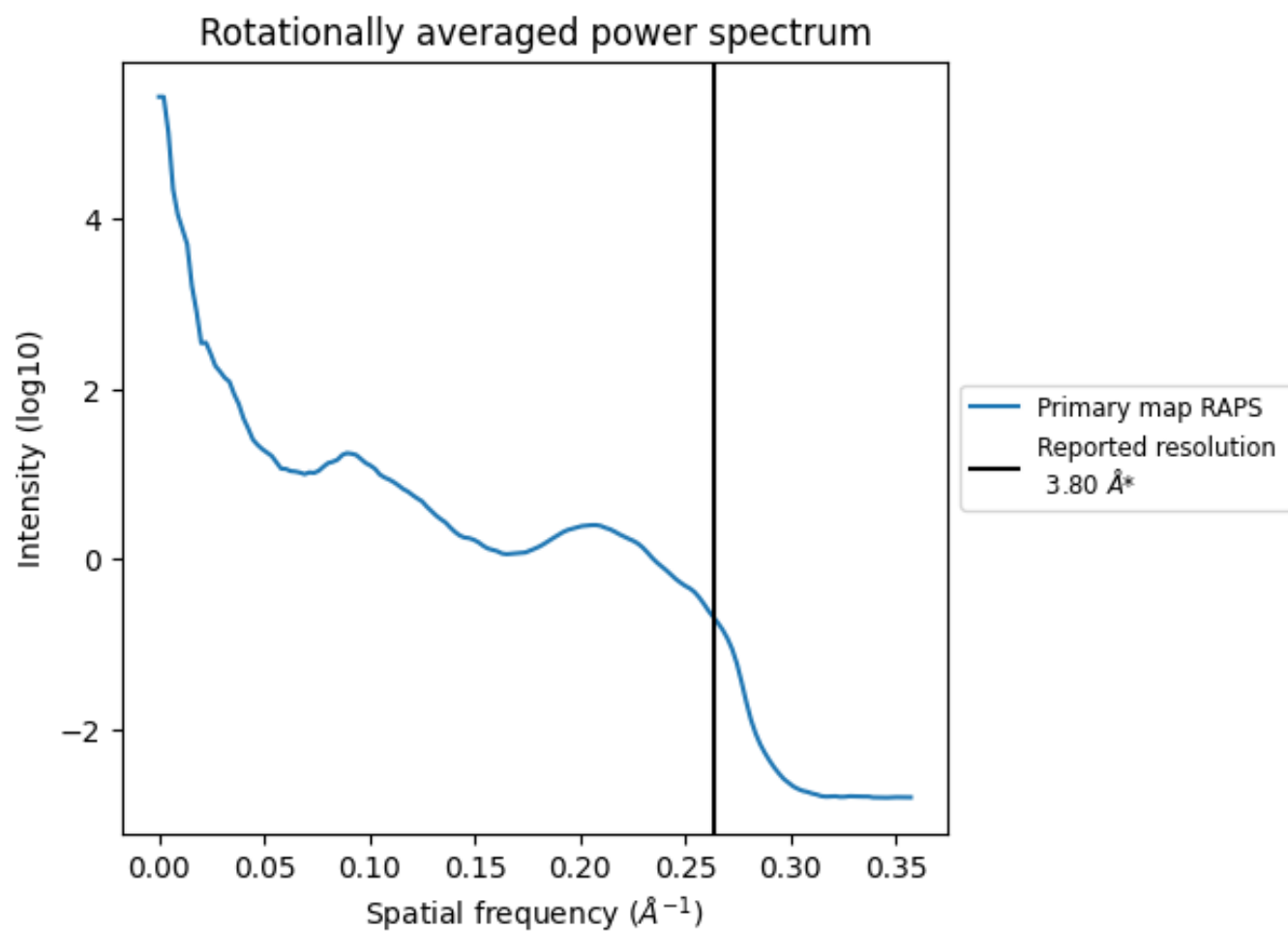
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 925 nm³; this corresponds to an approximate mass of 836 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 0.263 $\text{\AA}^{-1}$

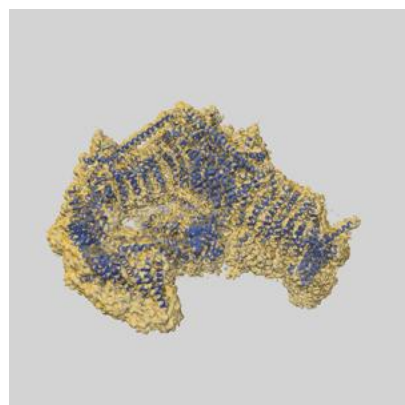
8 Fourier-Shell correlation

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

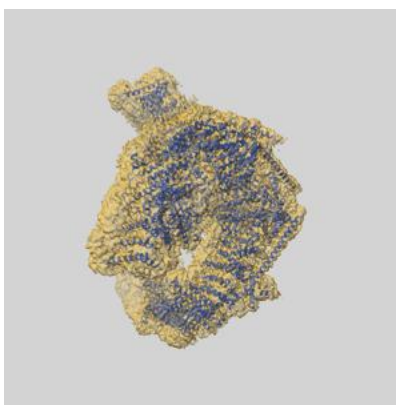
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-9975 and PDB model 6KG7. Per-residue inclusion information can be found in section 3 on page 5.

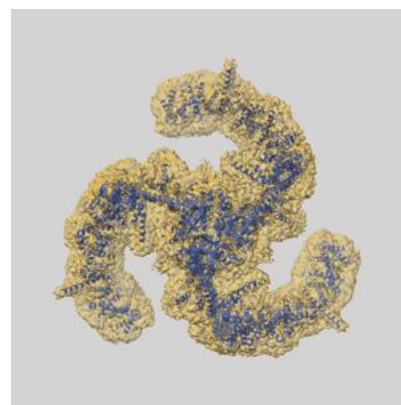
9.1 Map-model overlay [i](#)



X



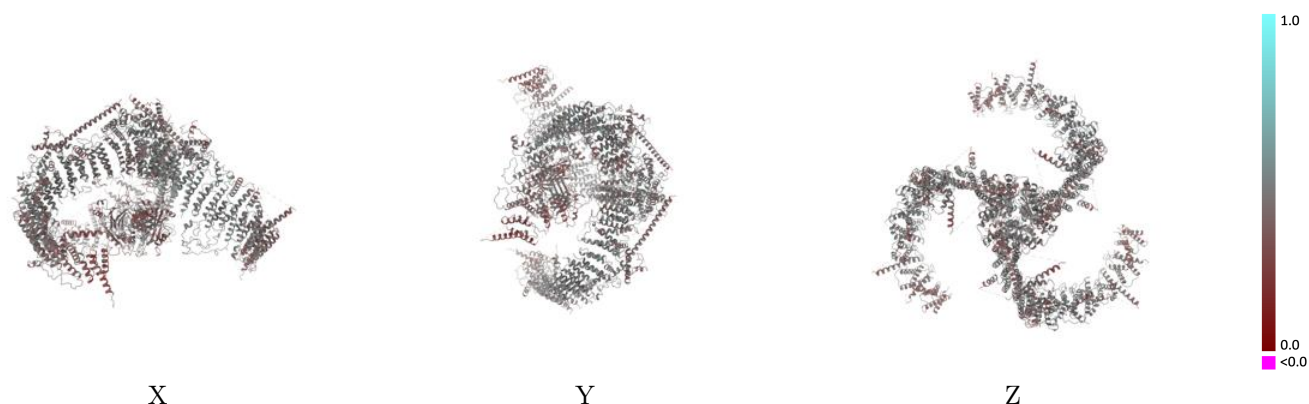
Y



Z

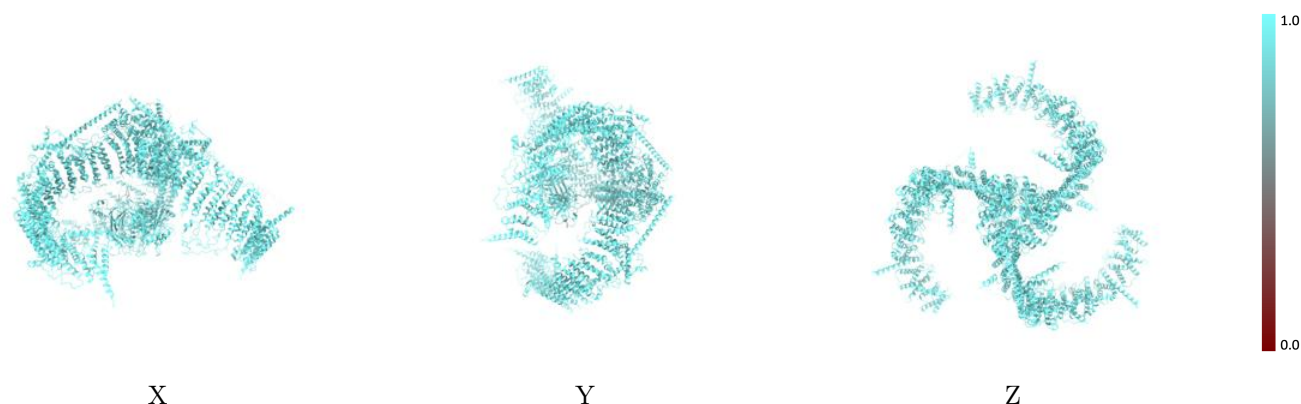
The images above show the 3D surface view of the map at the recommended contour level 5.69 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



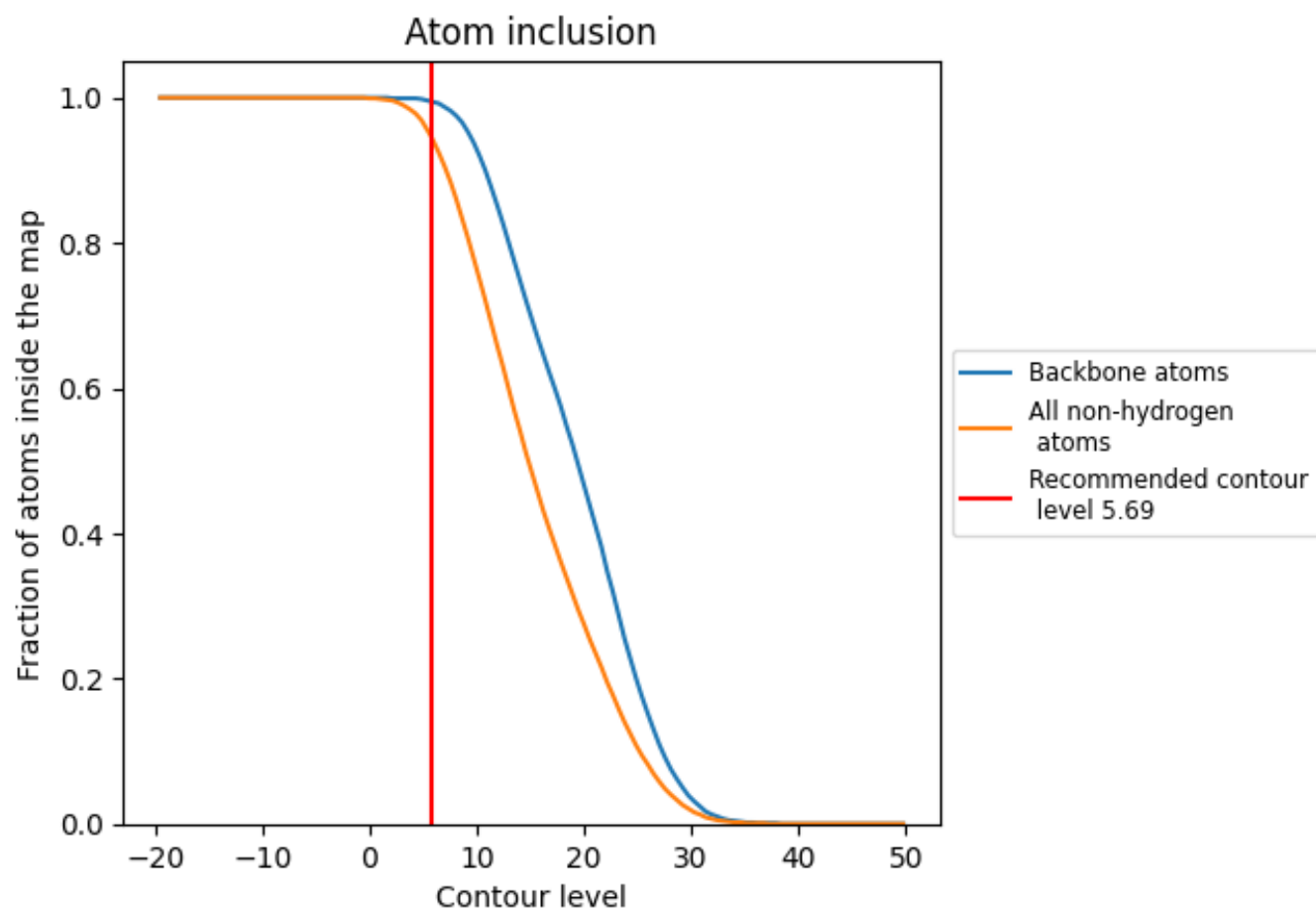
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (5.69).

9.4 Atom inclusion ⓘ



At the recommended contour level, 100% of all backbone atoms, 95% 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 (5.69) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.9480	0.4370
A	0.9460	0.4410
B	0.9490	0.4370
C	0.9480	0.4320

