



Full wwPDB EM Validation Report ⓘ

Mar 7, 2026 – 01:17 AM UTC

PDB ID : 8X49 / pdb_00008x49
EMDB ID : EMD-38043
Title : Cryo-EM structure of Ryanodine receptor 1 (100 nM Ca²⁺)
Authors : Chen, Q.; Hu, H.
Deposited on : 2023-11-15
Resolution : 3.40 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
MolProbity : 4-5-2 with Phenix2.0
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.49

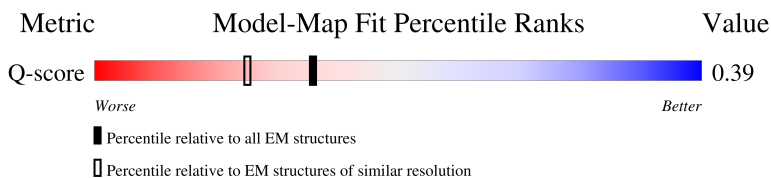
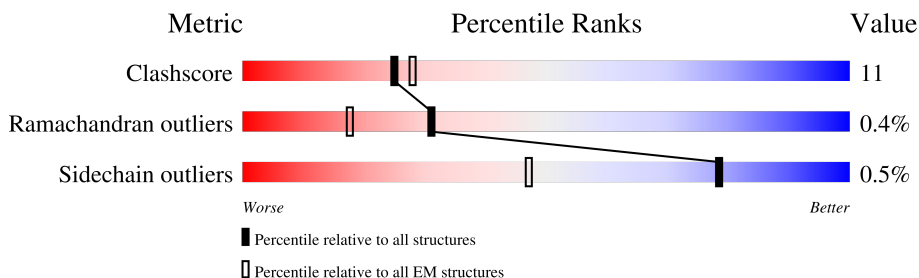
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.40 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	14717 (2.90 - 3.90)

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	5037	 5% 62% 16% • 22%
1	B	5037	 5% 62% 16% • 22%
1	C	5037	 5% 62% 16% • 22%
1	D	5037	 5% 62% 16% • 22%

2 Entry composition [i](#)

There are 3 unique types of molecules in this entry. The entry contains 117356 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 Ryanodine receptor 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	3952	Total	C	N	O	S	0	0
			29337	18674	5081	5394	188		
1	B	3952	Total	C	N	O	S	0	0
			29337	18674	5081	5394	188		
1	C	3952	Total	C	N	O	S	0	0
			29337	18674	5081	5394	188		
1	D	3952	Total	C	N	O	S	0	0
			29337	18674	5081	5394	188		

- Molecule 2 is CALCIUM ION (CCD ID: CA) (formula: Ca) (labeled as "Ligand of Interest" by depositor).

Mol	Chain	Residues	Atoms		AltConf
2	A	1	Total	Ca	0
			1	1	
2	B	1	Total	Ca	0
			1	1	
2	C	1	Total	Ca	0
			1	1	
2	D	1	Total	Ca	0
			1	1	

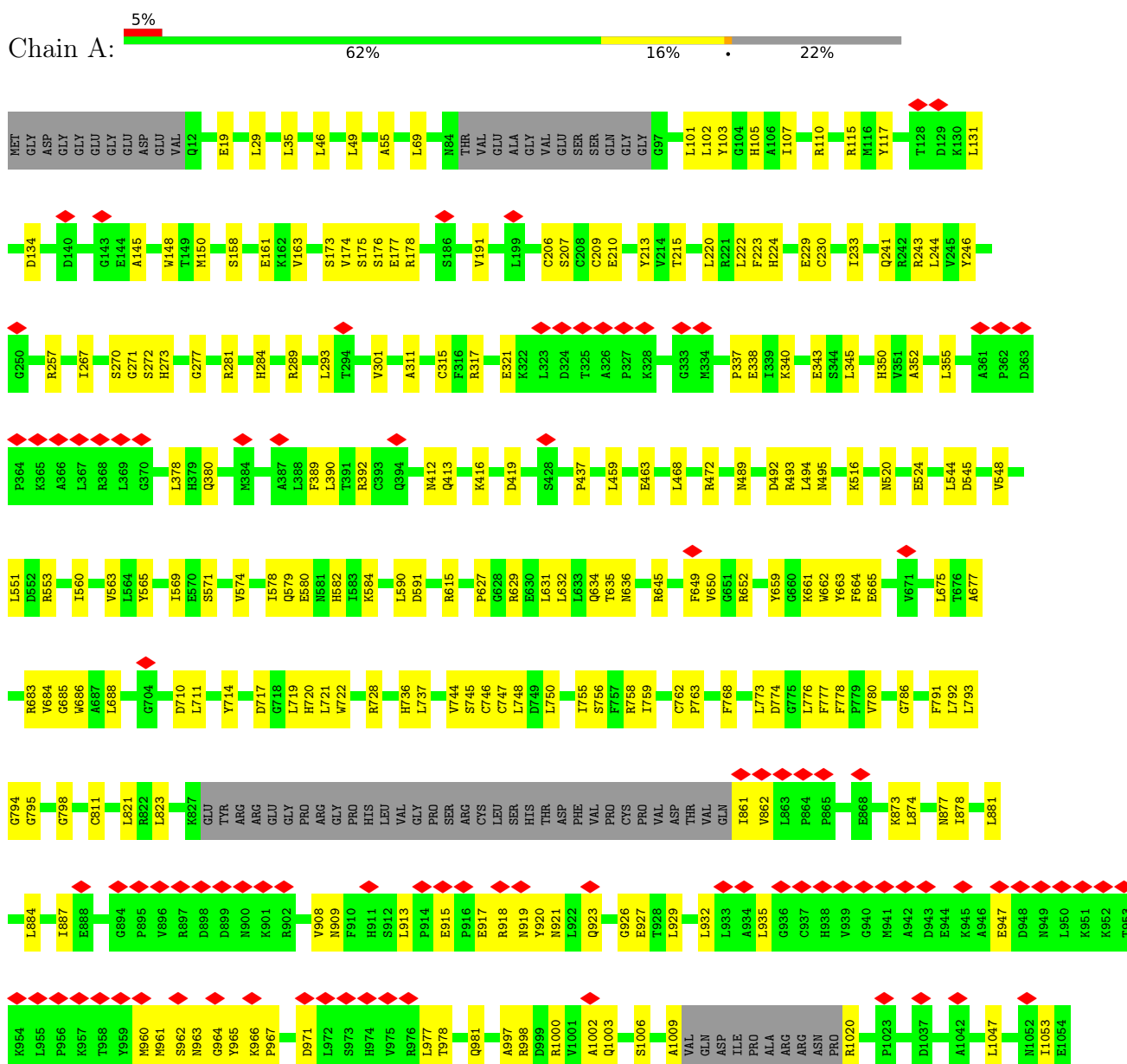
- Molecule 3 is ZINC ION (CCD ID: ZN) (formula: Zn) (labeled as "Ligand of Interest" by depositor).

Mol	Chain	Residues	Atoms		AltConf
3	A	1	Total	Zn	0
			1	1	
3	B	1	Total	Zn	0
			1	1	
3	C	1	Total	Zn	0
			1	1	
3	D	1	Total	Zn	0
			1	1	

3 Residue-property plots

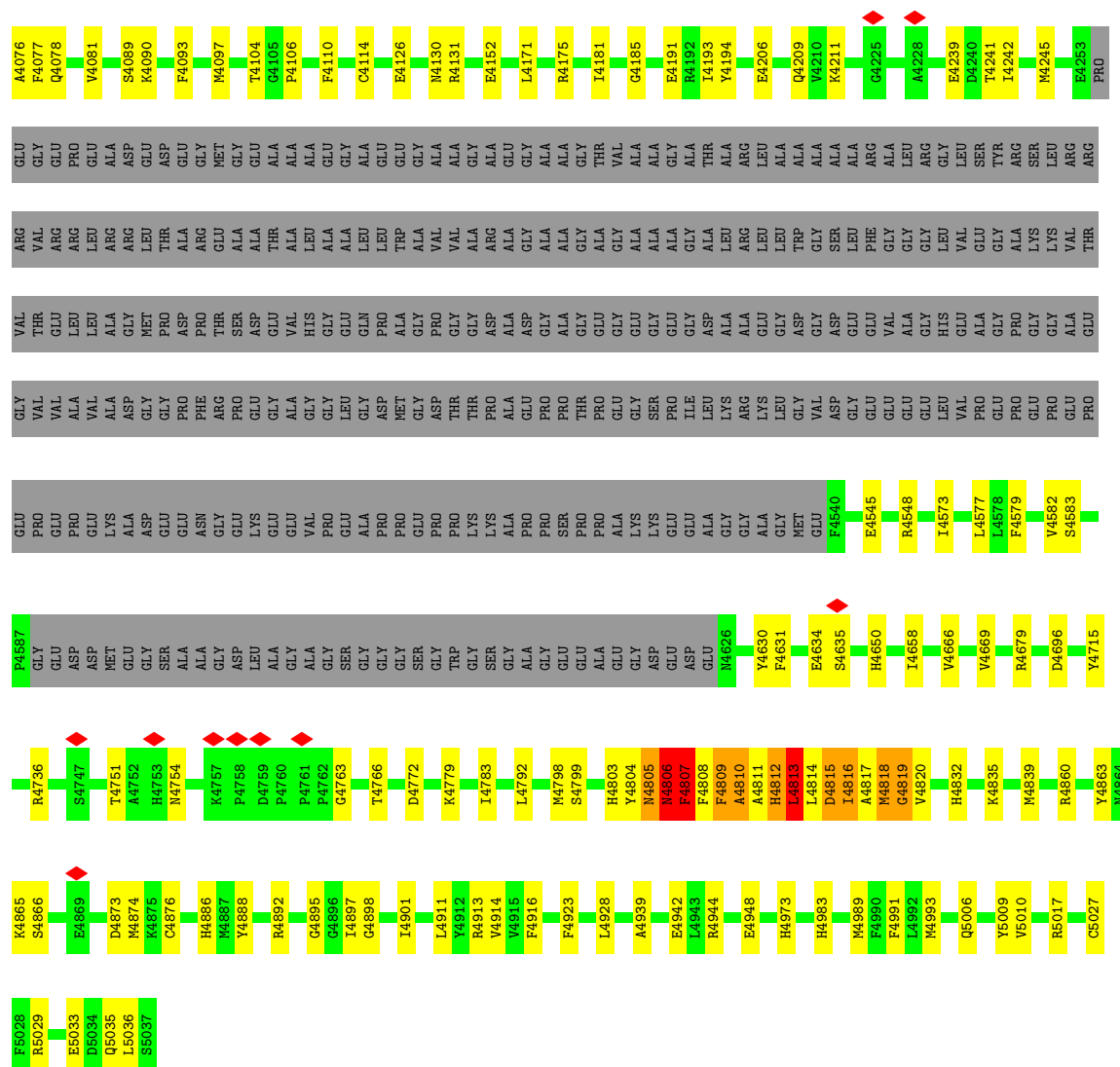
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

• Molecule 1: Ryanodine receptor 1

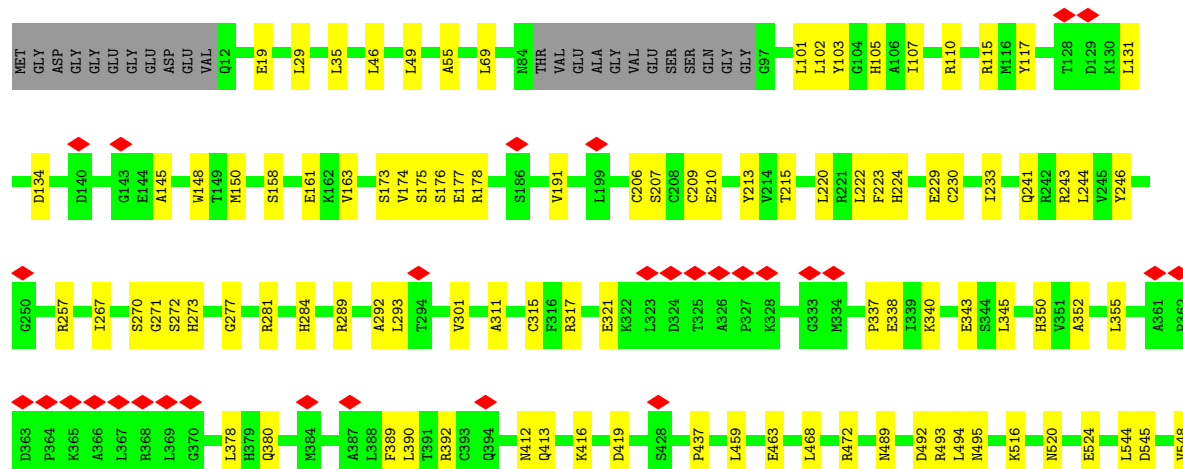




R3904	R3915	M3793	V3794	L3924	Q3927	E3928	F3933	F3934	Y3937	Q3946	R3949	A3954	F3962	T3966	E3967	W3986	V3989	V3990	G3991	L3992	L3993	H3994	M4000	M4001	K4002	M4023	M4026	M4039	R4042	M4047	S4051	S4052	E4056	M4057	I4058	M4064	K4069	E4075									
C3786	M3793	V3794	T3797	I3802	L3805	N3809	Y3812	K3815	M3816	L3817	K3821	G3827	Q3830	Q3833	A3834	L3835	L3842	D3843	L3844	K3852	M3856	V3859	N3860	V3865	I3866	N3867	R3868	Q3869	N3870	D3878	E3879	F3880	R3886	Q3889	L3890	E3893	N3901	L3903									
E3689	V3690	E3691	E3692	F3697	D3717	Y3722	Y3725	I3728	H3734	L3735	E3736	E3737	Q3739	E3740	N3741	GLY	GLU	ALA	GLU	E3747	E3748	V3749	E3750	V3751	S3752	F3753	E3754	E3755	K3756	E3757	K3758	E3759	K3760	Q3761	R3762	L3763	Q3767	R3768	R3769	L3770	H3771	T3772	R3773	E3777	R3778	V3779	I3783
L3603	E3607	Q3608	T3609	P3612	Y3613	L3615	L3615	L3615	ALA	VAL	TRP	HIS	L3615	L3615	L3615	GLY	ALA	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL
MET	ALA	ALA	ASP	ALA	GLN	SER	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY		
Y3263	T3264	E3265	M3266	I3272	P3292	P3293	P3294	D3310	N3313	S3314	W3334	T3359	P3360	V3372	E3376	E3391	L3392	L3393	V3394	R3395	D3396	F3397	S3398	S3399	V3400	Y3415	E3426	P3427	N3430	L3434	F3435	V3459	N3462	S3468	PHE	LEU	THR	ALA	GLU	ASP	LYS	LYS	LYS				
H3150	I3157	L3158	D3159	D3160	V3163	SER	TYR	ARG	THR	LEU	C3170	S3171	I3172	Y3182	R3187	L3190	A3195	R3196	L3197	A3198	A3199	F3205	P3208	Y3213	N3214	A3215	C3216	S3217	V3218	Y3219	I3229	L3232	N3234	S3235	V3236	E3237	G3254	GLY	LEU	ALA	GLU	SER	GLY	A3261	R3262		
PRO	GLY	ILE	VAL	ALA	GLY	LEU	ARG	SER	PHE	THR	SER	ALA	ASP	ILE	GLY	LYS	MET	VAL	VAL	ASN	LEU	ARG	GLN	ALA	THR	GLN	VAL	GLY	GLN	ASN	LEU	TYR	THR	THR	V3134	A3135	L3136	V3139	F3144	G3145	H3146	I3147	GLY	GLY	GLY	GLY	GLY
E2972	H2976	LEU	ALA	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	
LYS	LYS	THR	ARG	THR	ILE	SER	GLN	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR
TYR	GLY	GLY	ASN	VAL	ASP	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	
ALA	SER	TYR	GLY	VAL	ASP	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	



• Molecule 1: Ryanodine receptor 1



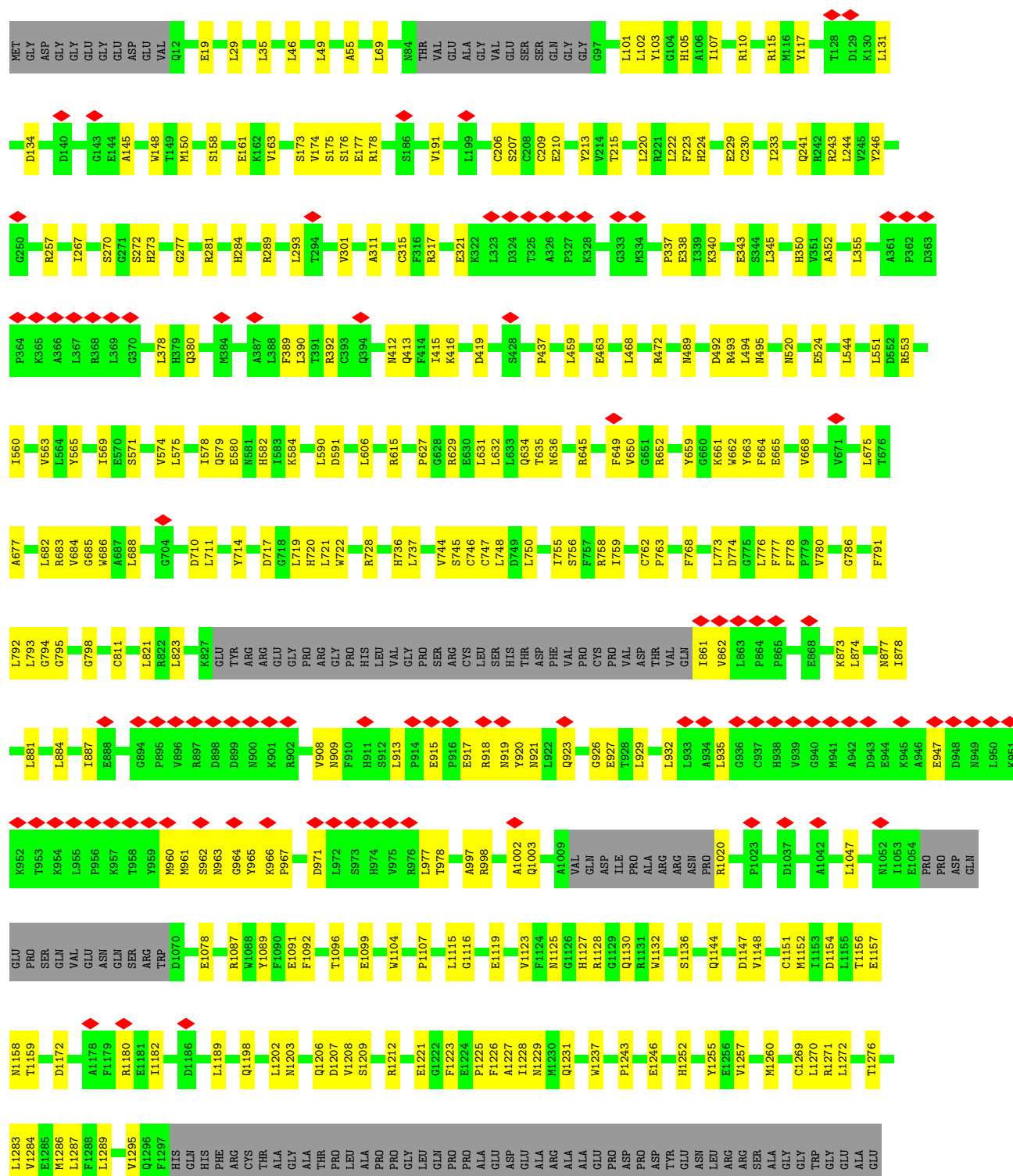






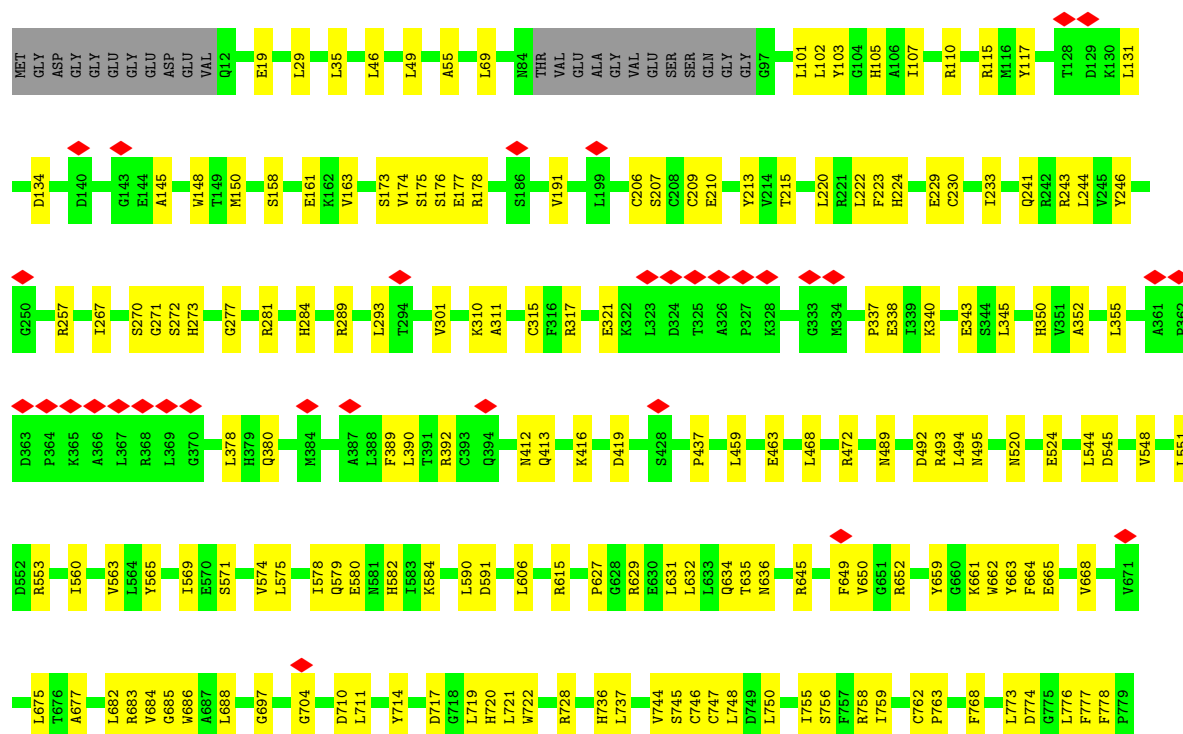


• Molecule 1: Ryanodine receptor 1















4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	183859	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)	1200	Depositor
Maximum defocus (nm)	2200	Depositor
Magnification	Not provided	
Image detector	FEI FALCON III (4k x 4k)	Depositor
Maximum map value	4.737	Depositor
Minimum map value	-2.523	Depositor
Average map value	-0.002	Depositor
Map value standard deviation	0.130	Depositor
Recommended contour level	0.466	Depositor
Map size (Å)	516.72003, 516.72003, 516.72003	wwPDB
Map dimensions	480, 480, 480	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.0765, 1.0765, 1.0765	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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

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	8/29956 (0.0%)	0.45	7/40772 (0.0%)
1	B	0.27	8/29956 (0.0%)	0.45	7/40772 (0.0%)
1	C	0.27	8/29956 (0.0%)	0.45	7/40772 (0.0%)
1	D	0.27	8/29956 (0.0%)	0.45	7/40772 (0.0%)
All	All	0.27	32/119824 (0.0%)	0.45	28/163088 (0.0%)

All (32) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	1835	GLU	CA-C	-9.41	1.44	1.53
1	B	1835	GLU	CA-C	-9.41	1.44	1.53
1	C	1835	GLU	CA-C	-9.41	1.44	1.53
1	D	1835	GLU	CA-C	-9.41	1.44	1.53
1	A	1835	GLU	C-O	-6.72	1.18	1.23
1	B	1835	GLU	C-O	-6.72	1.18	1.23
1	C	1835	GLU	C-O	-6.72	1.18	1.23
1	D	1835	GLU	C-O	-6.72	1.18	1.23
1	A	1833	SER	CA-C	-5.87	1.45	1.52
1	B	1833	SER	CA-C	-5.87	1.45	1.52
1	C	1833	SER	CA-C	-5.87	1.45	1.52
1	D	1833	SER	CA-C	-5.87	1.45	1.52
1	A	1845	VAL	CA-C	-5.38	1.45	1.52
1	B	1845	VAL	CA-C	-5.38	1.45	1.52
1	C	1845	VAL	CA-C	-5.38	1.45	1.52
1	D	1845	VAL	CA-C	-5.38	1.45	1.52
1	A	1829	PRO	CA-C	-5.29	1.46	1.52
1	B	1829	PRO	CA-C	-5.29	1.46	1.52
1	C	1829	PRO	CA-C	-5.29	1.46	1.52
1	D	1829	PRO	CA-C	-5.29	1.46	1.52
1	A	1845	VAL	C-O	-5.18	1.17	1.24
1	B	1845	VAL	C-O	-5.18	1.17	1.24

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	C	1845	VAL	C-O	-5.18	1.17	1.24
1	D	1845	VAL	C-O	-5.18	1.17	1.24
1	A	1834	VAL	CA-C	-5.17	1.46	1.52
1	B	1834	VAL	CA-C	-5.17	1.46	1.52
1	C	1834	VAL	CA-C	-5.17	1.46	1.52
1	D	1834	VAL	CA-C	-5.17	1.46	1.52
1	A	1834	VAL	CA-CB	-5.08	1.47	1.54
1	B	1834	VAL	CA-CB	-5.08	1.47	1.54
1	C	1834	VAL	CA-CB	-5.08	1.47	1.54
1	D	1834	VAL	CA-CB	-5.08	1.47	1.54

All (28) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	1844	LEU	N-CA-C	6.19	117.83	111.14
1	B	1844	LEU	N-CA-C	6.19	117.83	111.14
1	C	1844	LEU	N-CA-C	6.19	117.83	111.14
1	D	1844	LEU	N-CA-C	6.19	117.83	111.14
1	A	4810	ALA	N-CA-C	-6.07	105.53	113.12
1	B	4810	ALA	N-CA-C	-6.07	105.53	113.12
1	C	4810	ALA	N-CA-C	-6.07	105.53	113.12
1	D	4810	ALA	N-CA-C	-6.07	105.53	113.12
1	A	4807	PHE	N-CA-C	-5.80	98.44	110.80
1	B	4807	PHE	N-CA-C	-5.80	98.44	110.80
1	C	4807	PHE	N-CA-C	-5.80	98.44	110.80
1	D	4807	PHE	N-CA-C	-5.80	98.44	110.80
1	A	4813	LEU	N-CA-C	-5.29	106.78	113.18
1	B	4813	LEU	N-CA-C	-5.29	106.78	113.18
1	C	4813	LEU	N-CA-C	-5.29	106.78	113.18
1	D	4813	LEU	N-CA-C	-5.29	106.78	113.18
1	A	1828	ASP	CB-CA-C	-5.20	104.46	111.11
1	B	1828	ASP	CB-CA-C	-5.20	104.46	111.11
1	C	1828	ASP	CB-CA-C	-5.20	104.46	111.11
1	D	1828	ASP	CB-CA-C	-5.20	104.46	111.11
1	A	4803	HIS	N-CA-C	-5.08	107.08	113.28
1	B	4803	HIS	N-CA-C	-5.08	107.08	113.28
1	C	4803	HIS	N-CA-C	-5.08	107.08	113.28
1	D	4803	HIS	N-CA-C	-5.08	107.08	113.28
1	A	1841	VAL	N-CA-C	-5.02	107.83	111.90
1	B	1841	VAL	N-CA-C	-5.02	107.83	111.90
1	C	1841	VAL	N-CA-C	-5.02	107.83	111.90
1	D	1841	VAL	N-CA-C	-5.02	107.83	111.90

There are no chirality outliers.

There are no planarity outliers.

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	29337	0	27528	618	0
1	B	29337	0	27528	624	0
1	C	29337	0	27528	610	0
1	D	29337	0	27528	616	0
2	A	1	0	0	0	0
2	B	1	0	0	0	0
2	C	1	0	0	0	0
2	D	1	0	0	0	0
3	A	1	0	0	0	0
3	B	1	0	0	0	0
3	C	1	0	0	0	0
3	D	1	0	0	0	0
All	All	117356	0	110112	2391	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 11.

All (2391) 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:C:1965:TYR:CE2	1:C:1969:LEU:HD11	2.12	0.85
1:D:1965:TYR:CE2	1:D:1969:LEU:HD11	2.12	0.84
1:B:1965:TYR:CE2	1:B:1969:LEU:HD11	2.12	0.84
1:A:1965:TYR:CE2	1:A:1969:LEU:HD11	2.12	0.84
1:C:3990:VAL:HG23	1:C:4051:SER:HB3	1.61	0.82
1:A:3990:VAL:HG23	1:A:4051:SER:HB3	1.61	0.81
1:B:1830:VAL:O	1:B:1832:GLY:N	2.13	0.81
1:B:3990:VAL:HG23	1:B:4051:SER:HB3	1.61	0.81
1:D:3990:VAL:HG23	1:D:4051:SER:HB3	1.61	0.81
1:A:1830:VAL:O	1:A:1832:GLY:N	2.13	0.80
1:C:1830:VAL:O	1:C:1832:GLY:N	2.13	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1830:VAL:O	1:D:1832:GLY:N	2.13	0.80
1:A:1947:CYS:SG	1:A:2127:GLN:NE2	2.56	0.79
1:C:1947:CYS:SG	1:C:2127:GLN:NE2	2.56	0.79
1:C:2170:MET:HG3	1:C:2214:VAL:HG12	1.65	0.79
1:B:1947:CYS:SG	1:B:2127:GLN:NE2	2.56	0.79
1:B:2170:MET:HG3	1:B:2214:VAL:HG12	1.65	0.79
1:D:1947:CYS:SG	1:D:2127:GLN:NE2	2.56	0.78
1:A:4901:ILE:HD12	1:A:4913:ARG:HH22	1.48	0.78
1:D:2170:MET:HG3	1:D:2214:VAL:HG12	1.65	0.78
1:D:4901:ILE:HD12	1:D:4913:ARG:HH22	1.48	0.78
1:B:220:LEU:HD11	1:B:390:LEU:HD23	1.66	0.78
1:C:4901:ILE:HD12	1:C:4913:ARG:HH22	1.48	0.77
1:A:2170:MET:HG3	1:A:2214:VAL:HG12	1.65	0.77
1:C:220:LEU:HD11	1:C:390:LEU:HD23	1.66	0.77
1:C:1471:ALA:O	1:C:1473:THR:N	2.18	0.77
1:D:220:LEU:HD11	1:D:390:LEU:HD23	1.66	0.77
1:A:1471:ALA:O	1:A:1473:THR:N	2.18	0.77
1:A:220:LEU:HD11	1:A:390:LEU:HD23	1.66	0.77
1:B:4901:ILE:HD12	1:B:4913:ARG:HH22	1.48	0.77
1:C:1839:VAL:HG23	1:C:1935:VAL:HG12	1.67	0.77
1:B:1471:ALA:O	1:B:1473:THR:N	2.18	0.76
1:B:1839:VAL:HG23	1:B:1935:VAL:HG12	1.67	0.76
1:D:1471:ALA:O	1:D:1473:THR:N	2.18	0.76
1:A:1839:VAL:HG23	1:A:1935:VAL:HG12	1.67	0.75
1:B:213:TYR:HB3	1:B:273:HIS:HE1	1.52	0.75
1:D:1835:GLU:O	1:D:1837:GLN:N	2.20	0.75
1:D:1839:VAL:HG23	1:D:1935:VAL:HG12	1.67	0.75
1:A:1835:GLU:O	1:A:1837:GLN:N	2.20	0.75
1:B:1835:GLU:O	1:B:1837:GLN:N	2.20	0.75
1:A:747:CYS:SG	1:A:756:SER:OG	2.45	0.74
1:B:978:THR:HG1	1:C:3134:VAL:N	1.85	0.74
1:A:2336:ARG:O	1:A:2340:PHE:HB2	1.88	0.74
1:C:213:TYR:HB3	1:C:273:HIS:HE1	1.52	0.74
1:D:747:CYS:SG	1:D:756:SER:OG	2.45	0.74
1:A:4679:ARG:NH1	1:A:4715:TYR:OH	2.20	0.74
1:C:2336:ARG:O	1:C:2340:PHE:HB2	1.88	0.74
1:B:747:CYS:SG	1:B:756:SER:OG	2.45	0.74
1:B:2336:ARG:O	1:B:2340:PHE:HB2	1.88	0.74
1:D:4679:ARG:NH1	1:D:4715:TYR:OH	2.20	0.74
1:B:4679:ARG:NH1	1:B:4715:TYR:OH	2.20	0.74
1:C:1835:GLU:O	1:C:1837:GLN:N	2.20	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4679:ARG:NH1	1:C:4715:TYR:OH	2.20	0.74
1:C:747:CYS:SG	1:C:756:SER:OG	2.45	0.74
1:C:1965:TYR:CZ	1:C:1969:LEU:HD11	2.23	0.74
1:D:213:TYR:HB3	1:D:273:HIS:HE1	1.52	0.74
1:A:1965:TYR:CZ	1:A:1969:LEU:HD11	2.23	0.74
1:B:1965:TYR:CE2	1:B:1969:LEU:CD1	2.71	0.73
1:A:213:TYR:HB3	1:A:273:HIS:HE1	1.52	0.73
1:B:1965:TYR:CZ	1:B:1969:LEU:HD11	2.23	0.73
1:D:145:ALA:HA	1:D:175:SER:HB2	1.70	0.73
1:D:1284:VAL:HG22	1:D:1463:ASN:HB2	1.70	0.73
1:D:1965:TYR:CE2	1:D:1969:LEU:CD1	2.71	0.73
1:D:2336:ARG:O	1:D:2340:PHE:HB2	1.88	0.73
1:C:1965:TYR:CE2	1:C:1969:LEU:CD1	2.71	0.73
1:D:2584:HIS:CD2	1:D:2585:THR:H	2.07	0.73
1:D:1965:TYR:CZ	1:D:1969:LEU:HD11	2.23	0.73
1:C:978:THR:HG1	1:D:3134:VAL:N	1.87	0.73
1:C:2584:HIS:CD2	1:C:2585:THR:H	2.07	0.73
1:B:1284:VAL:HG22	1:B:1463:ASN:HB2	1.70	0.72
1:A:174:VAL:O	1:B:2452:ARG:NH1	2.22	0.72
1:A:1965:TYR:CE2	1:A:1969:LEU:CD1	2.71	0.72
1:C:1284:VAL:HG22	1:C:1463:ASN:HB2	1.70	0.72
1:C:3889:GLN:HG3	1:C:3967:GLU:HG3	1.72	0.72
1:D:3889:GLN:HG3	1:D:3967:GLU:HG3	1.72	0.72
1:A:1284:VAL:HG22	1:A:1463:ASN:HB2	1.70	0.72
1:A:2452:ARG:NH1	1:D:174:VAL:O	2.22	0.72
1:A:3889:GLN:HG3	1:A:3967:GLU:HG3	1.72	0.72
1:A:145:ALA:HA	1:A:175:SER:HB2	1.70	0.72
1:B:3889:GLN:HG3	1:B:3967:GLU:HG3	1.72	0.72
1:C:174:VAL:O	1:D:2452:ARG:NH1	2.22	0.72
1:B:174:VAL:O	1:C:2452:ARG:NH1	2.22	0.72
1:B:2584:HIS:CD2	1:B:2585:THR:H	2.07	0.71
1:A:978:THR:HG1	1:B:3134:VAL:N	1.88	0.71
1:A:2584:HIS:CD2	1:A:2585:THR:H	2.07	0.71
1:B:355:LEU:HD22	1:B:380:GLN:HA	1.73	0.71
1:A:3134:VAL:N	1:D:978:THR:HG1	1.88	0.71
1:B:145:ALA:HA	1:B:175:SER:HB2	1.70	0.71
1:A:209:CYS:SG	1:A:210:GLU:N	2.63	0.71
1:C:145:ALA:HA	1:C:175:SER:HB2	1.70	0.71
1:B:209:CYS:SG	1:B:210:GLU:N	2.63	0.71
1:B:997:ALA:HB1	1:B:1002:ALA:HB3	1.72	0.71
1:C:209:CYS:SG	1:C:210:GLU:N	2.63	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:997:ALA:HB1	1:C:1002:ALA:HB3	1.72	0.71
1:B:3767:GLN:OE1	1:B:3809:ASN:ND2	2.24	0.71
1:D:3767:GLN:OE1	1:D:3809:ASN:ND2	2.24	0.71
1:D:4126:GLU:O	1:D:4130:ASN:ND2	2.23	0.71
1:C:355:LEU:HD22	1:C:380:GLN:HA	1.73	0.71
1:A:3767:GLN:OE1	1:A:3809:ASN:ND2	2.24	0.70
1:A:4126:GLU:O	1:A:4130:ASN:ND2	2.23	0.70
1:B:4126:GLU:O	1:B:4130:ASN:ND2	2.23	0.70
1:C:3767:GLN:OE1	1:C:3809:ASN:ND2	2.24	0.70
1:A:355:LEU:HD22	1:A:380:GLN:HA	1.73	0.70
1:C:4126:GLU:O	1:C:4130:ASN:ND2	2.23	0.70
1:A:551:LEU:HB3	1:A:553:ARG:HH22	1.56	0.70
1:A:4817:ALA:C	1:A:4819:GLY:H	2.00	0.70
1:D:3049:LEU:HB3	1:D:3051:ARG:HG2	1.74	0.70
1:D:4817:ALA:C	1:D:4819:GLY:H	2.00	0.70
1:D:627:PRO:O	1:D:629:ARG:NH1	2.25	0.70
1:B:3049:LEU:HB3	1:B:3051:ARG:HG2	1.74	0.70
1:C:551:LEU:HB3	1:C:553:ARG:HH22	1.56	0.70
1:A:960:MET:HE1	1:A:966:LYS:HG3	1.74	0.70
1:C:960:MET:HE1	1:C:966:LYS:HG3	1.74	0.70
1:D:209:CYS:SG	1:D:210:GLU:N	2.63	0.70
1:D:551:LEU:HB3	1:D:553:ARG:HH22	1.56	0.70
1:A:997:ALA:HB1	1:A:1002:ALA:HB3	1.72	0.69
1:C:3049:LEU:HB3	1:C:3051:ARG:HG2	1.74	0.69
1:C:3671:ASP:OD1	1:C:3769:ARG:NH2	2.24	0.69
1:D:997:ALA:HB1	1:D:1002:ALA:HB3	1.72	0.69
1:B:960:MET:HE1	1:B:966:LYS:HG3	1.74	0.69
1:D:960:MET:HE1	1:D:966:LYS:HG3	1.74	0.69
1:D:3671:ASP:OD1	1:D:3769:ARG:NH2	2.24	0.69
1:D:355:LEU:HD22	1:D:380:GLN:HA	1.73	0.69
1:B:551:LEU:HB3	1:B:553:ARG:HH22	1.56	0.69
1:B:627:PRO:O	1:B:629:ARG:NH1	2.25	0.69
1:A:627:PRO:O	1:A:629:ARG:NH1	2.25	0.69
1:B:3772:THR:OG1	1:B:3815:LYS:NZ	2.26	0.69
1:B:4817:ALA:C	1:B:4819:GLY:H	2.00	0.69
1:C:627:PRO:O	1:C:629:ARG:NH1	2.25	0.69
1:C:4817:ALA:C	1:C:4819:GLY:H	2.00	0.69
1:A:3049:LEU:HB3	1:A:3051:ARG:HG2	1.74	0.69
1:C:3772:THR:OG1	1:C:3815:LYS:NZ	2.26	0.69
1:C:686:TRP:NE1	1:C:746:CYS:SG	2.66	0.69
1:B:1863:LEU:HD21	1:B:1870:VAL:HG11	1.76	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:110:ARG:HE	1:B:115:ARG:HE	1.42	0.68
1:A:4069:LYS:NZ	1:A:4130:ASN:OD1	2.27	0.68
1:D:4805:ASN:O	1:D:4806:ASN:C	2.36	0.68
1:B:686:TRP:NE1	1:B:746:CYS:SG	2.66	0.68
1:B:4805:ASN:O	1:B:4806:ASN:C	2.36	0.68
1:A:4805:ASN:O	1:A:4806:ASN:C	2.36	0.68
1:D:1863:LEU:HD21	1:D:1870:VAL:HG11	1.76	0.68
1:D:3772:THR:OG1	1:D:3815:LYS:NZ	2.26	0.68
1:B:2964:LEU:HA	1:B:2967:MET:HE3	1.76	0.67
1:A:459:LEU:HD21	1:A:463:GLU:HG2	1.76	0.67
1:C:459:LEU:HD21	1:C:463:GLU:HG2	1.76	0.67
1:A:686:TRP:NE1	1:A:746:CYS:SG	2.66	0.67
1:B:3671:ASP:OD1	1:B:3769:ARG:NH2	2.24	0.67
1:C:110:ARG:HE	1:C:115:ARG:HE	1.42	0.67
1:C:1863:LEU:HD21	1:C:1870:VAL:HG11	1.76	0.67
1:A:110:ARG:HE	1:A:115:ARG:HE	1.42	0.67
1:B:277:GLY:HA2	1:B:315:CYS:HB2	1.77	0.67
1:D:1269:CYS:SG	1:D:1471:ALA:HB1	2.35	0.67
1:B:19:GLU:HB3	1:B:206:CYS:HB3	1.77	0.67
1:C:1269:CYS:SG	1:C:1471:ALA:HB1	2.35	0.67
1:D:277:GLY:HA2	1:D:315:CYS:HB2	1.77	0.67
1:C:19:GLU:HB3	1:C:206:CYS:HB3	1.77	0.66
1:A:1276:THR:HA	1:A:1466:LEU:HD22	1.77	0.66
1:A:3772:THR:OG1	1:A:3815:LYS:NZ	2.26	0.66
1:B:459:LEU:HD21	1:B:463:GLU:HG2	1.76	0.66
1:D:747:CYS:HG	1:D:756:SER:HG	1.37	0.66
1:D:2205:GLU:O	1:D:2209:GLU:HG2	1.96	0.66
1:C:786:GLY:N	1:C:1630:CYS:O	2.29	0.66
1:D:675:LEU:HD23	1:D:677:ALA:H	1.60	0.66
1:D:2964:LEU:HA	1:D:2967:MET:HE3	1.76	0.66
1:B:675:LEU:HD23	1:B:677:ALA:H	1.60	0.66
1:D:459:LEU:HD21	1:D:463:GLU:HG2	1.76	0.66
1:D:3146:HIS:O	1:D:3150:HIS:ND1	2.25	0.66
1:A:1269:CYS:SG	1:A:1471:ALA:HB1	2.35	0.66
1:A:2964:LEU:HA	1:A:2967:MET:HE3	1.76	0.66
1:D:19:GLU:HB3	1:D:206:CYS:HB3	1.77	0.66
1:A:1156:THR:OG1	1:A:1157:GLU:OE1	2.13	0.66
1:A:4573:ILE:O	1:A:4577:LEU:HD12	1.96	0.66
1:B:1269:CYS:SG	1:B:1471:ALA:HB1	2.35	0.66
1:B:1501:VAL:HG22	1:B:1503:PRO:HD3	1.78	0.66
1:B:3146:HIS:O	1:B:3150:HIS:ND1	2.25	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1501:VAL:HG22	1:C:1503:PRO:HD3	1.78	0.66
1:A:19:GLU:HB3	1:A:206:CYS:HB3	1.77	0.66
1:A:3146:HIS:O	1:A:3150:HIS:ND1	2.25	0.66
1:C:1156:THR:OG1	1:C:1157:GLU:OE1	2.13	0.66
1:C:2964:LEU:HA	1:C:2967:MET:HE3	1.76	0.66
1:C:4805:ASN:O	1:C:4806:ASN:C	2.36	0.66
1:A:3671:ASP:OD1	1:A:3769:ARG:NH2	2.24	0.66
1:B:4069:LYS:NZ	1:B:4130:ASN:OD1	2.27	0.66
1:A:2205:GLU:O	1:A:2209:GLU:HG2	1.96	0.66
1:B:1156:THR:OG1	1:B:1157:GLU:OE1	2.13	0.66
1:B:1730:MET:O	1:B:1772:ARG:NH1	2.29	0.66
1:C:675:LEU:HD23	1:C:677:ALA:H	1.60	0.66
1:C:1730:MET:O	1:C:1772:ARG:NH1	2.29	0.66
1:C:3751:VAL:O	1:C:3756:LYS:NZ	2.29	0.66
1:B:786:GLY:N	1:B:1630:CYS:O	2.29	0.65
1:C:1276:THR:HA	1:C:1466:LEU:HD22	1.77	0.65
1:D:786:GLY:N	1:D:1630:CYS:O	2.29	0.65
1:D:1156:THR:OG1	1:D:1157:GLU:OE1	2.13	0.65
1:D:4069:LYS:NZ	1:D:4130:ASN:OD1	2.27	0.65
1:D:4573:ILE:O	1:D:4577:LEU:HD12	1.96	0.65
1:A:1730:MET:O	1:A:1772:ARG:NH1	2.29	0.65
1:C:257:ARG:O	1:C:284:HIS:NE2	2.30	0.65
1:C:2205:GLU:O	1:C:2209:GLU:HG2	1.96	0.65
1:D:110:ARG:HE	1:D:115:ARG:HE	1.42	0.65
1:D:794:GLY:H	1:D:798:GLY:HA3	1.62	0.65
1:A:277:GLY:HA2	1:A:315:CYS:HB2	1.77	0.65
1:A:1863:LEU:HD21	1:A:1870:VAL:HG11	1.76	0.65
1:A:3751:VAL:O	1:A:3756:LYS:NZ	2.29	0.65
1:A:3434:LEU:HD21	1:A:3533:ILE:HG12	1.78	0.65
1:D:686:TRP:NE1	1:D:746:CYS:SG	2.66	0.65
1:D:1276:THR:HA	1:D:1466:LEU:HD22	1.77	0.65
1:D:1730:MET:O	1:D:1772:ARG:NH1	2.29	0.65
1:D:1842:LEU:O	1:D:1843:LYS:C	2.40	0.65
1:A:675:LEU:HD23	1:A:677:ALA:H	1.60	0.65
1:A:786:GLY:N	1:A:1630:CYS:O	2.29	0.65
1:B:3459:VAL:O	1:B:3462:ASN:ND2	2.30	0.65
1:A:2495:VAL:HG12	1:A:2497:ASP:H	1.62	0.65
1:B:3434:LEU:HD21	1:B:3533:ILE:HG12	1.78	0.65
1:B:4573:ILE:O	1:B:4577:LEU:HD12	1.96	0.65
1:C:3146:HIS:O	1:C:3150:HIS:ND1	2.25	0.65
1:D:2495:VAL:HG12	1:D:2497:ASP:H	1.62	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1276:THR:HA	1:B:1466:LEU:HD22	1.77	0.65
1:B:3751:VAL:O	1:B:3756:LYS:NZ	2.29	0.65
1:D:1501:VAL:HG22	1:D:1503:PRO:HD3	1.78	0.65
1:A:1501:VAL:HG22	1:A:1503:PRO:HD3	1.78	0.65
1:A:4808:PHE:C	1:A:4810:ALA:H	2.05	0.65
1:B:2205:GLU:O	1:B:2209:GLU:HG2	1.96	0.65
1:C:3434:LEU:HD21	1:C:3533:ILE:HG12	1.78	0.65
1:C:4573:ILE:O	1:C:4577:LEU:HD12	1.96	0.65
1:D:3751:VAL:O	1:D:3756:LYS:NZ	2.29	0.65
1:A:257:ARG:O	1:A:284:HIS:NE2	2.30	0.65
1:A:1159:THR:HG22	1:A:1180:ARG:HH21	1.62	0.65
1:C:794:GLY:H	1:C:798:GLY:HA3	1.62	0.65
1:D:1159:THR:HG22	1:D:1180:ARG:HH21	1.62	0.65
1:D:4808:PHE:C	1:D:4810:ALA:H	2.05	0.65
1:B:1159:THR:HG22	1:B:1180:ARG:HH21	1.62	0.64
1:C:355:LEU:HB2	1:C:378:LEU:HG	1.79	0.64
1:C:1159:THR:HG22	1:C:1180:ARG:HH21	1.62	0.64
1:D:257:ARG:O	1:D:284:HIS:NE2	2.30	0.64
1:A:3459:VAL:O	1:A:3462:ASN:ND2	2.30	0.64
1:B:257:ARG:O	1:B:284:HIS:NE2	2.30	0.64
1:C:277:GLY:HA2	1:C:315:CYS:HB2	1.77	0.64
1:A:794:GLY:H	1:A:798:GLY:HA3	1.62	0.64
1:B:635:THR:CG2	1:B:1637:MET:HG2	2.28	0.64
1:C:635:THR:CG2	1:C:1637:MET:HG2	2.28	0.64
1:C:2500:ALA:O	1:C:2551:ASN:ND2	2.30	0.64
1:B:355:LEU:HB2	1:B:378:LEU:HG	1.79	0.64
1:D:635:THR:CG2	1:D:1637:MET:HG2	2.28	0.64
1:D:3434:LEU:HD21	1:D:3533:ILE:HG12	1.78	0.64
1:D:3459:VAL:O	1:D:3462:ASN:ND2	2.30	0.64
1:A:1728:ARG:HA	1:A:1731:LEU:HD12	1.80	0.64
1:A:2500:ALA:O	1:A:2551:ASN:ND2	2.30	0.64
1:B:4808:PHE:C	1:B:4810:ALA:H	2.05	0.64
1:C:3901:ASN:OD1	1:C:3904:ARG:NH2	2.29	0.64
1:C:1453:VAL:HG23	1:C:1454:THR:H	1.63	0.64
1:C:3459:VAL:O	1:C:3462:ASN:ND2	2.30	0.64
1:C:4069:LYS:NZ	1:C:4130:ASN:OD1	2.27	0.64
1:D:355:LEU:HB2	1:D:378:LEU:HG	1.79	0.64
1:A:635:THR:CG2	1:A:1637:MET:HG2	2.28	0.64
1:B:1728:ARG:HA	1:B:1731:LEU:HD12	1.80	0.64
1:B:2495:VAL:HG12	1:B:2497:ASP:H	1.62	0.64
1:B:2500:ALA:O	1:B:2551:ASN:ND2	2.30	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1271:ARG:NH2	1:B:1469:VAL:O	2.31	0.64
1:B:1842:LEU:O	1:B:1843:LYS:C	2.40	0.64
1:C:908:VAL:HG22	1:C:909:ASN:H	1.63	0.64
1:C:2340:PHE:HA	1:C:2435:ARG:HE	1.62	0.64
1:C:2495:VAL:HG12	1:C:2497:ASP:H	1.62	0.63
1:A:1271:ARG:NH2	1:A:1469:VAL:O	2.31	0.63
1:A:3901:ASN:OD1	1:A:3904:ARG:NH2	2.29	0.63
1:C:1271:ARG:NH2	1:C:1469:VAL:O	2.31	0.63
1:C:4808:PHE:C	1:C:4810:ALA:H	2.05	0.63
1:D:1271:ARG:NH2	1:D:1469:VAL:O	2.31	0.63
1:D:1453:VAL:HG23	1:D:1454:THR:H	1.63	0.63
1:D:1835:GLU:C	1:D:1837:GLN:H	2.06	0.63
1:D:2500:ALA:O	1:D:2551:ASN:ND2	2.30	0.63
1:B:794:GLY:H	1:B:798:GLY:HA3	1.62	0.63
1:A:2340:PHE:HA	1:A:2435:ARG:HE	1.62	0.63
1:C:1289:LEU:HD12	1:C:1595:LEU:HD12	1.80	0.63
1:C:1728:ARG:HA	1:C:1731:LEU:HD12	1.80	0.63
1:D:2340:PHE:HA	1:D:2435:ARG:HE	1.62	0.63
1:B:1453:VAL:HG23	1:B:1454:THR:H	1.63	0.63
1:A:355:LEU:HB2	1:A:378:LEU:HG	1.79	0.63
1:B:908:VAL:HG22	1:B:909:ASN:H	1.63	0.63
1:C:635:THR:CG2	1:C:1637:MET:CG	2.77	0.63
1:C:1228:ILE:HG13	1:D:3572:GLN:HE21	1.63	0.63
1:A:3572:GLN:HE21	1:D:1228:ILE:HG13	1.63	0.63
1:A:1289:LEU:HD12	1:A:1595:LEU:HD12	1.80	0.63
1:A:2044:ILE:HG22	1:A:2046:LEU:H	1.64	0.63
1:A:3430:ASN:ND2	1:A:3525:CYS:SG	2.72	0.63
1:B:1289:LEU:HD12	1:B:1595:LEU:HD12	1.80	0.63
1:B:2340:PHE:HA	1:B:2435:ARG:HE	1.62	0.63
1:C:1835:GLU:C	1:C:1837:GLN:H	2.06	0.63
1:C:2044:ILE:HG22	1:C:2046:LEU:H	1.64	0.63
1:D:635:THR:CG2	1:D:1637:MET:CG	2.77	0.63
1:D:908:VAL:HG22	1:D:909:ASN:H	1.63	0.63
1:D:2044:ILE:HG22	1:D:2046:LEU:H	1.64	0.63
1:A:1453:VAL:HG23	1:A:1454:THR:H	1.63	0.63
1:A:1835:GLU:C	1:A:1837:GLN:H	2.06	0.63
1:B:635:THR:CG2	1:B:1637:MET:CG	2.77	0.62
1:B:224:HIS:N	1:B:229:GLU:O	2.27	0.62
1:D:1728:ARG:HA	1:D:1731:LEU:HD12	1.80	0.62
1:A:1231:GLN:HE22	1:A:1826:ALA:HB2	1.65	0.62
1:B:35:LEU:HB3	1:B:49:LEU:HD23	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3901:ASN:OD1	1:D:3904:ARG:NH2	2.29	0.62
1:D:4814:LEU:O	1:D:4816:ILE:N	2.33	0.62
1:A:35:LEU:HB3	1:A:49:LEU:HD23	1.82	0.62
1:A:1228:ILE:HG13	1:B:3572:GLN:HE21	1.63	0.62
1:D:1289:LEU:HD12	1:D:1595:LEU:HD12	1.80	0.62
1:D:3430:ASN:ND2	1:D:3525:CYS:SG	2.72	0.62
1:D:35:LEU:HB3	1:D:49:LEU:HD23	1.82	0.62
1:A:635:THR:CG2	1:A:1637:MET:CG	2.77	0.62
1:A:2003:GLN:O	1:A:2007:ASN:ND2	2.33	0.62
1:A:3577:ARG:HH22	1:D:1209:SER:HA	1.65	0.62
1:B:1835:GLU:C	1:B:1837:GLN:H	2.06	0.62
1:B:3234:ASN:ND2	1:B:3310:ASP:OD2	2.33	0.62
1:B:3430:ASN:ND2	1:B:3525:CYS:SG	2.72	0.62
1:C:3430:ASN:ND2	1:C:3525:CYS:SG	2.72	0.62
1:B:1228:ILE:HG13	1:C:3572:GLN:HE21	1.63	0.62
1:B:2003:GLN:O	1:B:2007:ASN:ND2	2.33	0.62
1:C:2003:GLN:O	1:C:2007:ASN:ND2	2.33	0.62
1:C:4810:ALA:O	1:C:4811:ALA:C	2.42	0.62
1:A:4814:LEU:O	1:A:4816:ILE:N	2.33	0.62
1:A:4835:LYS:O	1:A:4839:MET:HG2	2.00	0.62
1:A:908:VAL:HG22	1:A:909:ASN:H	1.63	0.62
1:B:2044:ILE:HG22	1:B:2046:LEU:H	1.64	0.62
1:C:3234:ASN:ND2	1:C:3310:ASP:OD2	2.33	0.62
1:A:1842:LEU:O	1:A:1843:LYS:C	2.40	0.61
1:C:35:LEU:HB3	1:C:49:LEU:HD23	1.82	0.61
1:D:665:GLU:HG2	1:D:792:LEU:HD12	1.82	0.61
1:A:1209:SER:HA	1:B:3577:ARG:HH22	1.65	0.61
1:C:4814:LEU:O	1:C:4816:ILE:N	2.33	0.61
1:C:4835:LYS:O	1:C:4839:MET:HG2	2.00	0.61
1:C:1231:GLN:HE22	1:C:1826:ALA:HB2	1.65	0.61
1:C:1209:SER:HA	1:D:3577:ARG:HH22	1.65	0.61
1:A:3234:ASN:ND2	1:A:3310:ASP:OD2	2.33	0.61
1:C:578:ILE:HG23	1:C:582:HIS:HD2	1.65	0.61
1:D:578:ILE:HG23	1:D:582:HIS:HD2	1.65	0.61
1:D:2003:GLN:O	1:D:2007:ASN:ND2	2.33	0.61
1:D:4835:LYS:O	1:D:4839:MET:HG2	2.00	0.61
1:A:2208:MET:HE1	1:A:2253:HIS:CG	2.35	0.61
1:B:1209:SER:HA	1:C:3577:ARG:HH22	1.65	0.61
1:C:645:ARG:HB2	1:C:780:VAL:HG12	1.83	0.61
1:D:2208:MET:HE1	1:D:2253:HIS:CG	2.35	0.61
1:B:4814:LEU:O	1:B:4816:ILE:N	2.33	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:645:ARG:HB2	1:D:780:VAL:HG12	1.83	0.61
1:A:4810:ALA:O	1:A:4811:ALA:C	2.42	0.61
1:B:1231:GLN:HE22	1:B:1826:ALA:HB2	1.65	0.61
1:D:580:GLU:OE1	1:D:584:LYS:NZ	2.33	0.61
1:D:590:LEU:HD22	1:D:631:LEU:HD21	1.82	0.61
1:A:665:GLU:HG2	1:A:792:LEU:HD12	1.82	0.61
1:B:4810:ALA:O	1:B:4811:ALA:C	2.42	0.61
1:B:590:LEU:HD22	1:B:631:LEU:HD21	1.82	0.61
1:B:645:ARG:HB2	1:B:780:VAL:HG12	1.83	0.61
1:A:5029:ARG:O	1:A:5033:GLU:HB2	2.01	0.60
1:B:2185:ILE:O	1:B:2188:ASN:ND2	2.34	0.60
1:B:4835:LYS:O	1:B:4839:MET:HG2	2.00	0.60
1:C:1842:LEU:O	1:C:1843:LYS:C	2.40	0.60
1:C:2208:MET:HE1	1:C:2253:HIS:CG	2.35	0.60
1:D:267:ILE:O	1:D:270:SER:OG	2.19	0.60
1:D:2185:ILE:O	1:D:2188:ASN:ND2	2.34	0.60
1:A:590:LEU:HD22	1:A:631:LEU:HD21	1.82	0.60
1:A:645:ARG:HB2	1:A:780:VAL:HG12	1.83	0.60
1:A:1540:PHE:HE1	1:A:1552:VAL:HG11	1.66	0.60
1:A:4983:HIS:ND1	1:A:4983:HIS:O	2.34	0.60
1:C:590:LEU:HD22	1:C:631:LEU:HD21	1.82	0.60
1:C:5029:ARG:O	1:C:5033:GLU:HB2	2.01	0.60
1:D:3234:ASN:ND2	1:D:3310:ASP:OD2	2.33	0.60
1:D:5029:ARG:O	1:D:5033:GLU:HB2	2.01	0.60
1:A:3786:CYS:SG	1:A:3794:VAL:HG22	2.41	0.60
1:A:3903:LEU:HD13	1:A:3915:ILE:HD11	1.84	0.60
1:B:2208:MET:HE1	1:B:2253:HIS:CG	2.35	0.60
1:B:3901:ASN:OD1	1:B:3904:ARG:NH2	2.29	0.60
1:D:1540:PHE:HE1	1:D:1552:VAL:HG11	1.66	0.60
1:A:2185:ILE:O	1:A:2188:ASN:ND2	2.34	0.60
1:D:3786:CYS:SG	1:D:3794:VAL:HG22	2.41	0.60
1:A:1270:LEU:O	1:A:1471:ALA:HA	2.01	0.60
1:A:2010:LEU:HG	1:A:3659:ALA:HB3	1.84	0.60
1:A:2452:ARG:NH2	1:D:175:SER:O	2.35	0.60
1:B:578:ILE:HG23	1:B:582:HIS:HD2	1.65	0.60
1:B:2010:LEU:HG	1:B:3659:ALA:HB3	1.84	0.60
1:B:4983:HIS:ND1	1:B:4983:HIS:O	2.34	0.60
1:C:1286:MET:HE2	1:C:1600:LEU:HD21	1.84	0.60
1:D:1231:GLN:HE22	1:D:1826:ALA:HB2	1.65	0.60
1:D:3903:LEU:HD13	1:D:3915:ILE:HD11	1.84	0.60
1:A:175:SER:O	1:B:2452:ARG:NH2	2.35	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:224:HIS:N	1:A:229:GLU:O	2.27	0.60
1:A:4000:MET:HE1	1:A:4058:ILE:HG12	1.83	0.60
1:B:3199:ALA:HB2	1:B:3236:VAL:HG11	1.84	0.60
1:C:2185:ILE:O	1:C:2188:ASN:ND2	2.34	0.60
1:D:1270:LEU:O	1:D:1471:ALA:HA	2.01	0.60
1:A:3199:ALA:HB2	1:A:3236:VAL:HG11	1.84	0.60
1:B:1270:LEU:O	1:B:1471:ALA:HA	2.01	0.60
1:C:175:SER:O	1:D:2452:ARG:NH2	2.35	0.60
1:C:1270:LEU:O	1:C:1471:ALA:HA	2.01	0.60
1:C:4983:HIS:ND1	1:C:4983:HIS:O	2.34	0.60
1:A:1653:LEU:HB3	1:A:1660:GLN:HB2	1.84	0.60
1:B:3903:LEU:HD13	1:B:3915:ILE:HD11	1.84	0.60
1:B:4817:ALA:O	1:B:4819:GLY:N	2.34	0.60
1:C:2010:LEU:HG	1:C:3659:ALA:HB3	1.84	0.60
1:A:578:ILE:HG23	1:A:582:HIS:HD2	1.65	0.60
1:C:3903:LEU:HD13	1:C:3915:ILE:HD11	1.84	0.60
1:D:1468:LYS:C	1:D:1469:VAL:HG22	2.27	0.60
1:D:4983:HIS:ND1	1:D:4983:HIS:O	2.34	0.60
1:C:267:ILE:O	1:C:270:SER:OG	2.19	0.60
1:C:4817:ALA:O	1:C:4819:GLY:N	2.34	0.60
1:D:2010:LEU:HG	1:D:3659:ALA:HB3	1.84	0.60
1:D:4817:ALA:O	1:D:4819:GLY:N	2.34	0.60
1:A:645:ARG:HD2	1:A:778:PHE:CD2	2.37	0.59
1:A:1468:LYS:C	1:A:1469:VAL:HG22	2.27	0.59
1:C:206:CYS:SG	1:C:207:SER:N	2.75	0.59
1:D:645:ARG:HD2	1:D:778:PHE:CD2	2.37	0.59
1:D:4810:ALA:O	1:D:4811:ALA:C	2.42	0.59
1:A:267:ILE:O	1:A:270:SER:OG	2.19	0.59
1:A:4815:ASP:O	1:A:4816:ILE:C	2.44	0.59
1:B:645:ARG:HD2	1:B:778:PHE:CD2	2.37	0.59
1:B:665:GLU:HG2	1:B:792:LEU:HD12	1.82	0.59
1:B:1653:LEU:HB3	1:B:1660:GLN:HB2	1.84	0.59
1:C:3199:ALA:HB2	1:C:3236:VAL:HG11	1.84	0.59
1:C:4000:MET:HE1	1:C:4058:ILE:HG12	1.83	0.59
1:A:961:MET:HE3	1:A:963:ASN:HD22	1.67	0.59
1:A:4751:THR:O	1:A:4754:ASN:ND2	2.36	0.59
1:B:267:ILE:O	1:B:270:SER:OG	2.19	0.59
1:C:961:MET:HE3	1:C:963:ASN:HD22	1.67	0.59
1:D:1286:MET:HE2	1:D:1600:LEU:HD21	1.84	0.59
1:D:3199:ALA:HB2	1:D:3236:VAL:HG11	1.84	0.59
1:A:2347:GLU:OE2	1:A:3852:LYS:NZ	2.36	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1272:LEU:HD21	1:B:1287:LEU:HD21	1.85	0.59
1:B:3786:CYS:SG	1:B:3794:VAL:HG22	2.41	0.59
1:B:4000:MET:HE1	1:B:4058:ILE:HG12	1.83	0.59
1:B:4814:LEU:O	1:B:4815:ASP:C	2.45	0.59
1:C:684:VAL:HG21	1:C:744:VAL:HG11	1.85	0.59
1:D:2347:GLU:OE2	1:D:3852:LYS:NZ	2.36	0.59
1:B:4751:THR:O	1:B:4754:ASN:ND2	2.36	0.59
1:B:5029:ARG:O	1:B:5033:GLU:HB2	2.01	0.59
1:C:1272:LEU:HD21	1:C:1287:LEU:HD21	1.85	0.59
1:D:961:MET:HE3	1:D:963:ASN:HD22	1.67	0.59
1:D:2644:LEU:HG	1:D:2645:THR:HG23	1.83	0.59
1:A:1272:LEU:HD21	1:A:1287:LEU:HD21	1.85	0.59
1:B:961:MET:HE3	1:B:963:ASN:HD22	1.67	0.59
1:C:580:GLU:OE1	1:C:584:LYS:NZ	2.33	0.59
1:C:645:ARG:HD2	1:C:778:PHE:CD2	2.37	0.59
1:C:4815:ASP:O	1:C:4816:ILE:C	2.44	0.59
1:D:684:VAL:HG21	1:D:744:VAL:HG11	1.85	0.59
1:D:1272:LEU:HD21	1:D:1287:LEU:HD21	1.85	0.59
1:D:4000:MET:HE1	1:D:4058:ILE:HG12	1.83	0.59
1:A:659:TYR:OH	1:A:1020:ARG:NH2	2.35	0.59
1:B:1540:PHE:HE1	1:B:1552:VAL:HG11	1.66	0.59
1:B:2644:LEU:HG	1:B:2645:THR:HG23	1.83	0.59
1:C:224:HIS:N	1:C:229:GLU:O	2.27	0.59
1:C:1468:LYS:C	1:C:1469:VAL:HG22	2.27	0.59
1:A:2023:LEU:O	1:A:2028:ARG:NH1	2.36	0.59
1:B:2347:GLU:OE2	1:B:3852:LYS:NZ	2.36	0.59
1:C:2347:GLU:OE2	1:C:3852:LYS:NZ	2.36	0.59
1:A:1286:MET:HE2	1:A:1600:LEU:HD21	1.84	0.59
1:B:1468:LYS:C	1:B:1469:VAL:HG22	2.27	0.59
1:C:1540:PHE:HE1	1:C:1552:VAL:HG11	1.66	0.59
1:C:1972:ASN:OD1	1:C:1976:ARG:NH1	2.36	0.59
1:C:3786:CYS:SG	1:C:3794:VAL:HG22	2.41	0.59
1:A:2644:LEU:HG	1:A:2645:THR:HG23	1.83	0.59
1:B:206:CYS:SG	1:B:207:SER:N	2.75	0.59
1:D:1540:PHE:HZ	1:D:1552:VAL:HG21	1.68	0.59
1:D:2023:LEU:O	1:D:2028:ARG:NH1	2.36	0.59
1:A:206:CYS:SG	1:A:207:SER:N	2.75	0.58
1:C:665:GLU:HG2	1:C:792:LEU:HD12	1.82	0.58
1:C:4751:THR:O	1:C:4754:ASN:ND2	2.36	0.58
1:D:4751:THR:O	1:D:4754:ASN:ND2	2.36	0.58
1:A:913:LEU:HD13	1:A:917:GLU:HG3	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1972:ASN:OD1	1:B:1976:ARG:NH1	2.36	0.58
1:C:759:ILE:HD11	1:C:762:CYS:HB2	1.85	0.58
1:D:1972:ASN:OD1	1:D:1976:ARG:NH1	2.36	0.58
1:B:1286:MET:HE2	1:B:1600:LEU:HD21	1.84	0.58
1:B:4815:ASP:O	1:B:4816:ILE:C	2.44	0.58
1:C:2644:LEU:HG	1:C:2645:THR:HG23	1.83	0.58
1:D:206:CYS:SG	1:D:207:SER:N	2.75	0.58
1:D:1653:LEU:HB3	1:D:1660:GLN:HB2	1.84	0.58
1:A:4814:LEU:O	1:A:4815:ASP:C	2.45	0.58
1:B:175:SER:O	1:C:2452:ARG:NH2	2.35	0.58
1:D:759:ILE:HD11	1:D:762:CYS:HB2	1.85	0.58
1:D:913:LEU:HD13	1:D:917:GLU:HG3	1.86	0.58
1:A:1972:ASN:OD1	1:A:1976:ARG:NH1	2.36	0.58
1:B:887:ILE:HG13	1:B:961:MET:HE1	1.86	0.58
1:B:3187:ARG:NH2	1:B:3190:LEU:O	2.36	0.58
1:C:998:ARG:HA	1:C:1003:GLN:HB3	1.86	0.58
1:C:3187:ARG:NH2	1:C:3190:LEU:O	2.36	0.58
1:C:4075:GLU:HA	1:C:4078:GLN:HB3	1.86	0.58
1:A:220:LEU:HB2	1:A:392:ARG:HA	1.86	0.58
1:A:350:HIS:HD2	1:A:352:ALA:H	1.52	0.58
1:B:580:GLU:OE1	1:B:584:LYS:NZ	2.33	0.58
1:C:1653:LEU:HB3	1:C:1660:GLN:HB2	1.84	0.58
1:A:4075:GLU:HA	1:A:4078:GLN:HB3	1.86	0.58
1:A:4814:LEU:C	1:A:4816:ILE:N	2.62	0.58
1:B:220:LEU:HB2	1:B:392:ARG:HA	1.86	0.58
1:B:684:VAL:HG21	1:B:744:VAL:HG11	1.85	0.58
1:B:759:ILE:HD11	1:B:762:CYS:HB2	1.85	0.58
1:C:1540:PHE:HZ	1:C:1552:VAL:HG21	1.68	0.58
1:C:4897:ILE:HD11	1:C:4916:PHE:CE2	2.39	0.58
1:D:4075:GLU:HA	1:D:4078:GLN:HB3	1.86	0.58
1:D:4815:ASP:O	1:D:4816:ILE:C	2.44	0.58
1:A:1540:PHE:HZ	1:A:1552:VAL:HG21	1.68	0.58
1:D:659:TYR:OH	1:D:1020:ARG:NH2	2.35	0.58
1:B:1540:PHE:HZ	1:B:1552:VAL:HG21	1.68	0.58
1:B:1842:LEU:HA	1:B:1845:VAL:HG12	1.86	0.58
1:B:4075:GLU:HA	1:B:4078:GLN:HB3	1.86	0.58
1:D:1969:LEU:HD22	1:D:2009:LEU:HD21	1.86	0.58
1:D:3232:LEU:HD11	1:D:3236:VAL:HG13	1.86	0.58
1:A:419:ASP:OD2	1:A:493:ARG:NH1	2.37	0.58
1:A:1842:LEU:HA	1:A:1845:VAL:HG12	1.86	0.58
1:C:1842:LEU:HA	1:C:1845:VAL:HG12	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:684:VAL:HG21	1:A:744:VAL:HG11	1.85	0.57
1:B:350:HIS:HD2	1:B:352:ALA:H	1.52	0.57
1:C:887:ILE:HG13	1:C:961:MET:HE1	1.86	0.57
1:D:3187:ARG:NH2	1:D:3190:LEU:O	2.36	0.57
1:D:4897:ILE:HD11	1:D:4916:PHE:CE2	2.39	0.57
1:A:1969:LEU:HD22	1:A:2009:LEU:HD21	1.86	0.57
1:A:3187:ARG:NH2	1:A:3190:LEU:O	2.36	0.57
1:A:3232:LEU:HD11	1:A:3236:VAL:HG13	1.86	0.57
1:A:3802:ILE:HD12	1:A:3886:ARG:HG2	1.85	0.57
1:B:913:LEU:HD13	1:B:917:GLU:HG3	1.86	0.57
1:B:998:ARG:HA	1:B:1003:GLN:HB3	1.86	0.57
1:B:1969:LEU:HD22	1:B:2009:LEU:HD21	1.86	0.57
1:C:213:TYR:HB3	1:C:273:HIS:CE1	2.38	0.57
1:C:791:PHE:HE2	1:C:823:LEU:HD11	1.70	0.57
1:D:4814:LEU:O	1:D:4815:ASP:C	2.45	0.57
1:B:3232:LEU:HD11	1:B:3236:VAL:HG13	1.86	0.57
1:B:4897:ILE:HD11	1:B:4916:PHE:CE2	2.39	0.57
1:C:913:LEU:HD13	1:C:917:GLU:HG3	1.86	0.57
1:C:3232:LEU:HD11	1:C:3236:VAL:HG13	1.86	0.57
1:B:419:ASP:OD2	1:B:493:ARG:NH1	2.37	0.57
1:B:961:MET:SD	1:B:962:SER:N	2.78	0.57
1:C:961:MET:SD	1:C:962:SER:N	2.78	0.57
1:D:213:TYR:HB3	1:D:273:HIS:CE1	2.38	0.57
1:D:1842:LEU:HA	1:D:1845:VAL:HG12	1.86	0.57
1:C:1969:LEU:HD22	1:C:2009:LEU:HD21	1.86	0.57
1:C:2023:LEU:O	1:C:2028:ARG:NH1	2.36	0.57
1:A:961:MET:SD	1:A:962:SER:N	2.78	0.57
1:A:4039:MET:SD	1:A:4042:ARG:NH1	2.78	0.57
1:B:4039:MET:SD	1:B:4042:ARG:NH1	2.78	0.57
1:D:220:LEU:HB2	1:D:392:ARG:HA	1.86	0.57
1:D:961:MET:SD	1:D:962:SER:N	2.78	0.57
1:A:998:ARG:HA	1:A:1003:GLN:HB3	1.86	0.57
1:A:2158:CYS:SG	1:A:2184:ASN:ND2	2.78	0.57
1:D:241:GLN:HB3	1:D:243:ARG:HE	1.69	0.57
1:D:3802:ILE:HD12	1:D:3886:ARG:HG2	1.85	0.57
1:A:4897:ILE:HD11	1:A:4916:PHE:CE2	2.39	0.57
1:B:791:PHE:HE2	1:B:823:LEU:HD11	1.70	0.57
1:C:241:GLN:HB3	1:C:243:ARG:HE	1.69	0.57
1:C:350:HIS:HD2	1:C:352:ALA:H	1.52	0.57
1:D:350:HIS:HD2	1:D:352:ALA:H	1.52	0.57
1:A:2466:LEU:O	1:A:2470:ILE:HD12	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4814:LEU:O	1:C:4815:ASP:C	2.45	0.57
1:A:791:PHE:HE2	1:A:823:LEU:HD11	1.70	0.56
1:B:1465:ASP:OD2	1:B:1490:SER:OG	2.23	0.56
1:C:220:LEU:HB2	1:C:392:ARG:HA	1.86	0.56
1:C:2158:CYS:SG	1:C:2184:ASN:ND2	2.78	0.56
1:C:3802:ILE:HD12	1:C:3886:ARG:HG2	1.85	0.56
1:C:4816:ILE:O	1:C:4820:VAL:HG23	2.05	0.56
1:D:683:ARG:HG2	1:D:717:ASP:HB3	1.87	0.56
1:A:4817:ALA:O	1:A:4819:GLY:N	2.34	0.56
1:B:1850:VAL:HG12	1:B:1851:MET:N	2.21	0.56
1:B:4816:ILE:O	1:B:4820:VAL:HG23	2.05	0.56
1:D:419:ASP:OD2	1:D:493:ARG:NH1	2.37	0.56
1:D:887:ILE:HG13	1:D:961:MET:HE1	1.86	0.56
1:D:4039:MET:SD	1:D:4042:ARG:NH1	2.78	0.56
1:A:683:ARG:HG2	1:A:717:ASP:HB3	1.87	0.56
1:A:759:ILE:HD11	1:A:762:CYS:HB2	1.85	0.56
1:A:887:ILE:HG13	1:A:961:MET:HE1	1.86	0.56
1:A:1639:LEU:HD11	1:A:1653:LEU:HD11	1.87	0.56
1:A:3642:TYR:O	1:A:3643:ASN:ND2	2.38	0.56
1:B:821:LEU:HD23	1:B:1626:TRP:HE1	1.70	0.56
1:B:932:LEU:HD12	1:B:935:LEU:HD12	1.86	0.56
1:B:2158:CYS:SG	1:B:2184:ASN:ND2	2.78	0.56
1:B:2339:VAL:HG23	1:B:2435:ARG:HG3	1.87	0.56
1:B:3802:ILE:HD12	1:B:3886:ARG:HG2	1.85	0.56
1:C:1158:ASN:HB3	1:C:1182:ILE:H	1.71	0.56
1:C:1465:ASP:OD2	1:C:1490:SER:OG	2.23	0.56
1:C:2423:MET:HE1	1:C:2498:HIS:HB2	1.88	0.56
1:C:2466:LEU:O	1:C:2470:ILE:HD12	2.05	0.56
1:D:1158:ASN:HB3	1:D:1182:ILE:H	1.71	0.56
1:D:2158:CYS:SG	1:D:2184:ASN:ND2	2.78	0.56
1:D:2466:LEU:O	1:D:2470:ILE:HD12	2.05	0.56
1:D:3642:TYR:O	1:D:3643:ASN:ND2	2.38	0.56
1:D:4811:ALA:O	1:D:4813:LEU:N	2.38	0.56
1:A:932:LEU:HD12	1:A:935:LEU:HD12	1.86	0.56
1:C:683:ARG:HG2	1:C:717:ASP:HB3	1.87	0.56
1:C:3062:PRO:HA	1:C:3187:ARG:HH22	1.70	0.56
1:C:3817:LEU:HD11	1:C:3821:LYS:HE3	1.88	0.56
1:D:224:HIS:N	1:D:229:GLU:O	2.27	0.56
1:D:3817:LEU:HD11	1:D:3821:LYS:HE3	1.88	0.56
1:B:213:TYR:HB3	1:B:273:HIS:CE1	2.38	0.56
1:B:2466:LEU:O	1:B:2470:ILE:HD12	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:932:LEU:HD12	1:C:935:LEU:HD12	1.86	0.56
1:C:4039:MET:SD	1:C:4042:ARG:NH1	2.78	0.56
1:D:791:PHE:HE2	1:D:823:LEU:HD11	1.70	0.56
1:D:998:ARG:HA	1:D:1003:GLN:HB3	1.86	0.56
1:D:3062:PRO:HA	1:D:3187:ARG:HH22	1.70	0.56
1:A:3062:PRO:HA	1:A:3187:ARG:HH22	1.70	0.56
1:A:3817:LEU:HD11	1:A:3821:LYS:HE3	1.88	0.56
1:B:1158:ASN:HB3	1:B:1182:ILE:H	1.71	0.56
1:B:3062:PRO:HA	1:B:3187:ARG:HH22	1.70	0.56
1:C:419:ASP:OD2	1:C:493:ARG:NH1	2.37	0.56
1:D:1850:VAL:HG12	1:D:1851:MET:N	2.21	0.56
1:D:4816:ILE:O	1:D:4820:VAL:HG23	2.05	0.56
1:A:1158:ASN:HB3	1:A:1182:ILE:H	1.71	0.56
1:B:1639:LEU:HD11	1:B:1653:LEU:HD11	1.87	0.56
1:B:2023:LEU:O	1:B:2028:ARG:NH1	2.36	0.56
1:B:3657:TYR:HE2	1:B:3662:ILE:HG23	1.71	0.56
1:B:4811:ALA:O	1:B:4813:LEU:N	2.38	0.56
1:B:4814:LEU:C	1:B:4816:ILE:N	2.62	0.56
1:D:793:LEU:HG	1:D:795:GLY:H	1.71	0.56
1:D:932:LEU:HD12	1:D:935:LEU:HD12	1.86	0.56
1:C:1828:ASP:O	1:C:1829:PRO:C	2.48	0.56
1:A:213:TYR:HB3	1:A:273:HIS:CE1	2.38	0.56
1:A:4811:ALA:O	1:A:4813:LEU:N	2.38	0.56
1:B:3817:LEU:HD11	1:B:3821:LYS:HE3	1.88	0.56
1:C:821:LEU:HD23	1:C:1626:TRP:HE1	1.70	0.56
1:D:2423:MET:HE1	1:D:2498:HIS:HB2	1.88	0.56
1:A:4816:ILE:O	1:A:4820:VAL:HG23	2.05	0.56
1:C:2339:VAL:HG23	1:C:2435:ARG:HG3	1.87	0.56
1:C:3642:TYR:O	1:C:3643:ASN:ND2	2.38	0.56
1:C:3657:TYR:HE2	1:C:3662:ILE:HG23	1.71	0.56
1:C:4811:ALA:O	1:C:4813:LEU:N	2.38	0.56
1:D:1159:THR:CG2	1:D:1180:ARG:HH21	2.19	0.56
1:D:3754:GLU:OE1	1:D:3754:GLU:N	2.37	0.56
1:A:2339:VAL:HG23	1:A:2435:ARG:HG3	1.87	0.55
1:B:1465:ASP:O	1:B:1466:LEU:HB2	2.06	0.55
1:C:3533:ILE:H	1:C:3533:ILE:HD12	1.71	0.55
1:A:793:LEU:HG	1:A:795:GLY:H	1.71	0.55
1:A:821:LEU:HD23	1:A:1626:TRP:HE1	1.70	0.55
1:A:3533:ILE:H	1:A:3533:ILE:HD12	1.71	0.55
1:A:3657:TYR:HE2	1:A:3662:ILE:HG23	1.71	0.55
1:B:241:GLN:HB3	1:B:243:ARG:HE	1.69	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:683:ARG:HG2	1:B:717:ASP:HB3	1.87	0.55
1:D:1207:ASP:OD2	1:D:1209:SER:OG	2.19	0.55
1:A:241:GLN:HB3	1:A:243:ARG:HE	1.69	0.55
1:B:3937:TYR:O	1:B:4002:LYS:NZ	2.40	0.55
1:C:793:LEU:HG	1:C:795:GLY:H	1.71	0.55
1:C:1159:THR:CG2	1:C:1180:ARG:HH21	2.19	0.55
1:C:1850:VAL:HG12	1:C:1851:MET:N	2.21	0.55
1:D:3937:TYR:O	1:D:4002:LYS:NZ	2.40	0.55
1:A:1465:ASP:OD2	1:A:1490:SER:OG	2.23	0.55
1:A:1850:VAL:HG12	1:A:1851:MET:N	2.21	0.55
1:B:3642:TYR:O	1:B:3643:ASN:ND2	2.38	0.55
1:C:1639:LEU:HD11	1:C:1653:LEU:HD11	1.87	0.55
1:C:3937:TYR:O	1:C:4002:LYS:NZ	2.40	0.55
1:D:1465:ASP:OD2	1:D:1490:SER:OG	2.23	0.55
1:A:3937:TYR:O	1:A:4002:LYS:NZ	2.40	0.55
1:B:3533:ILE:HD12	1:B:3533:ILE:H	1.71	0.55
1:D:652:ARG:HB2	1:D:750:LEU:HD11	1.89	0.55
1:D:2339:VAL:HG23	1:D:2435:ARG:HG3	1.87	0.55
1:A:177:GLU:HG2	1:B:2452:ARG:NH1	2.22	0.55
1:A:1828:ASP:O	1:A:1829:PRO:C	2.48	0.55
1:B:2423:MET:HE1	1:B:2498:HIS:HB2	1.88	0.55
1:C:1515:VAL:HG23	1:C:1530:THR:HA	1.89	0.55
1:D:101:LEU:HD12	1:D:150:MET:HE1	1.89	0.55
1:A:3842:LEU:HB3	1:A:3933:PHE:CE2	2.42	0.55
1:B:177:GLU:HG2	1:C:2452:ARG:NH1	2.22	0.55
1:B:1583:GLU:OE1	1:B:1583:GLU:N	2.40	0.55
1:B:2532:ALA:HB2	1:B:2578:MET:HG2	1.88	0.55
1:C:4886:HIS:HD2	1:C:4897:ILE:HG21	1.72	0.55
1:D:3533:ILE:H	1:D:3533:ILE:HD12	1.71	0.55
1:A:2423:MET:HE1	1:A:2498:HIS:HB2	1.88	0.55
1:C:1465:ASP:O	1:C:1466:LEU:HB2	2.06	0.55
1:A:652:ARG:HB3	1:A:773:LEU:HD13	1.88	0.55
1:A:1159:THR:CG2	1:A:1180:ARG:HH21	2.19	0.55
1:B:3842:LEU:HB3	1:B:3933:PHE:CE2	2.42	0.55
1:D:1583:GLU:OE1	1:D:1583:GLU:N	2.40	0.55
1:D:1639:LEU:HD11	1:D:1653:LEU:HD11	1.87	0.55
1:D:1828:ASP:O	1:D:1829:PRO:C	2.48	0.55
1:D:3842:LEU:HB3	1:D:3933:PHE:CE2	2.42	0.55
1:D:4093:PHE:CE2	1:D:4097:MET:HE1	2.42	0.55
1:A:176:SER:N	1:B:2452:ARG:HH12	2.05	0.55
1:B:176:SER:N	1:C:2452:ARG:HH12	2.05	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4814:LEU:C	1:C:4816:ILE:N	2.62	0.55
1:D:652:ARG:HB3	1:D:773:LEU:HD13	1.88	0.55
1:D:4206:GLU:HA	1:D:4211:LYS:HZ2	1.72	0.55
1:A:101:LEU:HD12	1:A:150:MET:HE1	1.89	0.54
1:B:2267:MET:HE3	1:B:2268:GLN:HG3	1.89	0.54
1:B:4886:HIS:HD2	1:B:4897:ILE:HG21	1.72	0.54
1:C:3842:LEU:HB3	1:C:3933:PHE:CE2	2.42	0.54
1:D:1104:TRP:NE1	1:D:1151:CYS:SG	2.80	0.54
1:D:1515:VAL:HG23	1:D:1530:THR:HA	1.89	0.54
1:D:2532:ALA:HB2	1:D:2578:MET:HG2	1.88	0.54
1:A:652:ARG:HB2	1:A:750:LEU:HD11	1.89	0.54
1:B:793:LEU:HG	1:B:795:GLY:H	1.71	0.54
1:B:1159:THR:CG2	1:B:1180:ARG:HH21	2.19	0.54
1:C:176:SER:N	1:D:2452:ARG:HH12	2.05	0.54
1:C:177:GLU:HG2	1:D:2452:ARG:NH1	2.22	0.54
1:C:884:LEU:HD13	1:C:967:PRO:HA	1.89	0.54
1:D:821:LEU:HD23	1:D:1626:TRP:HE1	1.70	0.54
1:D:1479:GLU:O	1:D:1563:GLN:NE2	2.40	0.54
1:D:3657:TYR:HE2	1:D:3662:ILE:HG23	1.71	0.54
1:A:1104:TRP:NE1	1:A:1151:CYS:SG	2.80	0.54
1:A:1515:VAL:HG23	1:A:1530:THR:HA	1.89	0.54
1:A:2532:ALA:HB2	1:A:2578:MET:HG2	1.88	0.54
1:B:1104:TRP:NE1	1:B:1151:CYS:SG	2.80	0.54
1:B:1515:VAL:HG23	1:B:1530:THR:HA	1.89	0.54
1:C:101:LEU:HD12	1:C:150:MET:HE1	1.89	0.54
1:A:1465:ASP:O	1:A:1466:LEU:HB2	2.06	0.54
1:A:2267:MET:HE3	1:A:2268:GLN:HG3	1.89	0.54
1:A:4093:PHE:CE2	1:A:4097:MET:HE1	2.42	0.54
1:B:3758:MET:HE3	1:B:3758:MET:HA	1.90	0.54
1:C:2272:PRO:HA	1:C:2275:VAL:HG12	1.90	0.54
1:D:884:LEU:HD13	1:D:967:PRO:HA	1.89	0.54
1:D:3758:MET:HA	1:D:3758:MET:HE3	1.90	0.54
1:A:4886:HIS:HD2	1:A:4897:ILE:HG21	1.72	0.54
1:B:652:ARG:HB3	1:B:773:LEU:HD13	1.88	0.54
1:B:1479:GLU:O	1:B:1563:GLN:NE2	2.40	0.54
1:B:1844:LEU:O	1:B:1845:VAL:C	2.48	0.54
1:B:4093:PHE:CE2	1:B:4097:MET:HE1	2.42	0.54
1:C:652:ARG:HB2	1:C:750:LEU:HD11	1.89	0.54
1:D:1465:ASP:O	1:D:1466:LEU:HB2	2.06	0.54
1:A:580:GLU:OE1	1:A:584:LYS:NZ	2.33	0.54
1:A:2452:ARG:NH1	1:D:177:GLU:HG2	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:884:LEU:HD13	1:B:967:PRO:HA	1.89	0.54
1:B:4077:PHE:CE1	1:B:4097:MET:HE2	2.43	0.54
1:C:1479:GLU:O	1:C:1563:GLN:NE2	2.40	0.54
1:C:2532:ALA:HB2	1:C:2578:MET:HG2	1.88	0.54
1:D:2267:MET:HE3	1:D:2268:GLN:HG3	1.89	0.54
1:A:1479:GLU:O	1:A:1563:GLN:NE2	2.40	0.54
1:A:1583:GLU:OE1	1:A:1583:GLU:N	2.40	0.54
1:A:2272:PRO:HA	1:A:2275:VAL:HG12	1.90	0.54
1:A:4077:PHE:CE1	1:A:4097:MET:HE2	2.43	0.54
1:B:652:ARG:HB2	1:B:750:LEU:HD11	1.89	0.54
1:C:1104:TRP:NE1	1:C:1151:CYS:SG	2.80	0.54
1:C:3758:MET:HA	1:C:3758:MET:HE3	1.90	0.54
1:A:472:ARG:HH21	1:A:472:ARG:HG3	1.73	0.54
1:A:884:LEU:HD13	1:A:967:PRO:HA	1.89	0.54
1:A:4817:ALA:C	1:A:4819:GLY:N	2.65	0.54
1:B:774:ASP:OD1	1:B:774:ASP:N	2.41	0.54
1:B:2272:PRO:HA	1:B:2275:VAL:HG12	1.90	0.54
1:C:1495:VAL:HG21	1:C:1538:THR:HG23	1.90	0.54
1:C:4093:PHE:CE2	1:C:4097:MET:HE1	2.42	0.54
1:D:774:ASP:OD1	1:D:774:ASP:N	2.41	0.54
1:D:1844:LEU:O	1:D:1845:VAL:C	2.48	0.54
1:A:3758:MET:HA	1:A:3758:MET:HE3	1.90	0.54
1:C:2267:MET:HE3	1:C:2268:GLN:HG3	1.89	0.54
1:D:1495:VAL:HG21	1:D:1538:THR:HG23	1.90	0.54
1:D:2272:PRO:HA	1:D:2275:VAL:HG12	1.90	0.54
1:D:4886:HIS:HD2	1:D:4897:ILE:HG21	1.72	0.54
1:A:1732:SER:O	1:A:2140:ARG:HD2	2.09	0.54
1:A:2452:ARG:HH12	1:D:176:SER:N	2.05	0.54
1:B:1495:VAL:HG21	1:B:1538:THR:HG23	1.90	0.54
1:C:1207:ASP:OD2	1:C:1209:SER:OG	2.19	0.54
1:C:1583:GLU:N	1:C:1583:GLU:OE1	2.40	0.54
1:D:4077:PHE:CE1	1:D:4097:MET:HE2	2.43	0.54
1:A:551:LEU:HB3	1:A:553:ARG:NH2	2.24	0.53
1:A:1468:LYS:O	1:A:1469:VAL:HG13	2.08	0.53
1:C:652:ARG:HB3	1:C:773:LEU:HD13	1.88	0.53
1:C:719:LEU:O	1:C:720:HIS:ND1	2.42	0.53
1:A:222:LEU:HG	1:A:390:LEU:HG	1.91	0.53
1:A:1527:MET:N	1:A:1527:MET:SD	2.82	0.53
1:B:1468:LYS:O	1:B:1469:VAL:HG13	2.08	0.53
1:A:719:LEU:O	1:A:720:HIS:ND1	2.42	0.53
1:D:719:LEU:O	1:D:720:HIS:ND1	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:222:LEU:HG	1:B:390:LEU:HG	1.91	0.53
1:B:3755:GLU:O	1:B:3759:GLU:HG2	2.08	0.53
1:C:3755:GLU:O	1:C:3759:GLU:HG2	2.08	0.53
1:D:1732:SER:O	1:D:2140:ARG:HD2	2.09	0.53
1:D:2368:LEU:HD21	1:D:2376:LEU:HD12	1.90	0.53
1:D:2688:HIS:ND1	1:D:2688:HIS:O	2.42	0.53
1:A:1495:VAL:HG21	1:A:1538:THR:HG23	1.90	0.53
1:B:551:LEU:HB3	1:B:553:ARG:NH2	2.24	0.53
1:D:1468:LYS:O	1:D:1469:VAL:HG13	2.08	0.53
1:B:719:LEU:O	1:B:720:HIS:ND1	2.42	0.53
1:B:1527:MET:SD	1:B:1527:MET:N	2.82	0.53
1:B:1834:VAL:O	1:B:1834:VAL:HG22	2.09	0.53
1:C:659:TYR:OH	1:C:1020:ARG:NH2	2.35	0.53
1:D:3755:GLU:O	1:D:3759:GLU:HG2	2.08	0.53
1:A:2688:HIS:ND1	1:A:2688:HIS:O	2.42	0.53
1:B:977:LEU:HD13	1:B:1047:LEU:HD22	1.91	0.53
1:B:2171:GLY:H	1:B:2174:GLU:HB2	1.74	0.53
1:B:2368:LEU:HD21	1:B:2376:LEU:HD12	1.90	0.53
1:C:1527:MET:N	1:C:1527:MET:SD	2.82	0.53
1:D:472:ARG:HH21	1:D:472:ARG:HG3	1.73	0.53
1:D:649:PHE:HA	1:D:778:PHE:HE1	1.74	0.53
1:B:4895:GLY:O	1:C:4892:ARG:NH2	2.41	0.53
1:C:1468:LYS:O	1:C:1469:VAL:HG13	2.08	0.53
1:C:2688:HIS:ND1	1:C:2688:HIS:O	2.42	0.53
1:D:222:LEU:HG	1:D:390:LEU:HG	1.91	0.53
1:A:1844:LEU:O	1:A:1845:VAL:C	2.48	0.53
1:A:2368:LEU:HD21	1:A:2376:LEU:HD12	1.90	0.53
1:B:101:LEU:HD12	1:B:150:MET:HE1	1.89	0.53
1:B:1092:PHE:HD1	1:B:1202:LEU:HB3	1.74	0.53
1:B:4866:SER:N	1:B:4873:ASP:OD2	2.42	0.53
1:C:551:LEU:HB3	1:C:553:ARG:NH2	2.24	0.53
1:C:2171:GLY:H	1:C:2174:GLU:HB2	1.74	0.53
1:A:1636:MET:HE3	1:A:1638:ALA:HB2	1.91	0.52
1:B:472:ARG:HH21	1:B:472:ARG:HG3	1.73	0.52
1:C:2437:ALA:HB3	1:C:2508:ARG:HH11	1.74	0.52
1:D:1144:GLN:HG2	1:D:1147:ASP:HB2	1.92	0.52
1:D:1527:MET:N	1:D:1527:MET:SD	2.82	0.52
1:D:4866:SER:N	1:D:4873:ASP:OD2	2.42	0.52
1:A:1092:PHE:HD1	1:A:1202:LEU:HB3	1.74	0.52
1:A:1144:GLN:HG2	1:A:1147:ASP:HB2	1.92	0.52
1:A:2171:GLY:H	1:A:2174:GLU:HB2	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1828:ASP:O	1:B:1829:PRO:C	2.48	0.52
1:C:222:LEU:HG	1:C:390:LEU:HG	1.91	0.52
1:C:2368:LEU:HD21	1:C:2376:LEU:HD12	1.90	0.52
1:C:4077:PHE:CE1	1:C:4097:MET:HE2	2.43	0.52
1:D:2437:ALA:HB3	1:D:2508:ARG:HH11	1.74	0.52
1:D:4873:ASP:OD1	1:D:4873:ASP:N	2.40	0.52
1:A:1130:GLN:OE1	1:A:1136:SER:OG	2.28	0.52
1:A:1834:VAL:HG22	1:A:1834:VAL:O	2.09	0.52
1:A:3754:GLU:OE1	1:A:3754:GLU:N	2.37	0.52
1:A:3755:GLU:O	1:A:3759:GLU:HG2	2.08	0.52
1:B:649:PHE:HA	1:B:778:PHE:HE1	1.74	0.52
1:C:544:LEU:HD22	1:C:574:VAL:HG22	1.92	0.52
1:C:649:PHE:HA	1:C:778:PHE:HE1	1.74	0.52
1:C:1554:VAL:HG12	1:C:1556:PRO:HD3	1.90	0.52
1:C:4942:GLU:OE1	1:D:4944:ARG:HD3	2.10	0.52
1:D:1636:MET:HE3	1:D:1638:ALA:HB2	1.91	0.52
1:B:1144:GLN:HG2	1:B:1147:ASP:HB2	1.92	0.52
1:B:1636:MET:HE3	1:B:1638:ALA:HB2	1.91	0.52
1:B:2688:HIS:ND1	1:B:2688:HIS:O	2.42	0.52
1:C:1834:VAL:HG22	1:C:1834:VAL:O	2.09	0.52
1:D:1834:VAL:O	1:D:1834:VAL:HG22	2.09	0.52
1:D:4191:GLU:OE2	1:D:5006:GLN:NE2	2.41	0.52
1:A:1260:MET:HE1	1:A:1271:ARG:HB2	1.92	0.52
1:A:3519:PRO:O	1:A:3523:ASN:N	2.43	0.52
1:B:544:LEU:HD22	1:B:574:VAL:HG22	1.92	0.52
1:B:4191:GLU:OE2	1:B:5006:GLN:NE2	2.41	0.52
1:B:4942:GLU:OE1	1:C:4944:ARG:HD3	2.10	0.52
1:C:1493:TYR:OH	1:C:1508:ARG:NE	2.43	0.52
1:C:1732:SER:O	1:C:2140:ARG:HD2	2.09	0.52
1:C:1844:LEU:O	1:C:1845:VAL:C	2.48	0.52
1:D:977:LEU:HD13	1:D:1047:LEU:HD22	1.91	0.52
1:A:4892:ARG:NH2	1:D:4895:GLY:O	2.41	0.52
1:A:4895:GLY:O	1:B:4892:ARG:NH2	2.41	0.52
1:B:1493:TYR:OH	1:B:1508:ARG:NE	2.43	0.52
1:C:472:ARG:HH21	1:C:472:ARG:HG3	1.73	0.52
1:D:233:ILE:O	1:D:257:ARG:NH1	2.43	0.52
1:D:544:LEU:HD22	1:D:574:VAL:HG22	1.92	0.52
1:D:3680:ALA:HB3	1:D:3697:PRO:HG2	1.92	0.52
1:A:4807:PHE:C	1:A:4809:PHE:N	2.68	0.52
1:A:4942:GLU:OE1	1:B:4944:ARG:HD3	2.10	0.52
1:B:659:TYR:OH	1:B:1020:ARG:NH2	2.35	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:233:ILE:O	1:C:257:ARG:NH1	2.43	0.52
1:C:1144:GLN:HG2	1:C:1147:ASP:HB2	1.92	0.52
1:C:4895:GLY:O	1:D:4892:ARG:NH2	2.41	0.52
1:D:2171:GLY:H	1:D:2174:GLU:HB2	1.74	0.52
1:D:4814:LEU:C	1:D:4816:ILE:N	2.62	0.52
1:A:1839:VAL:O	1:A:1841:VAL:N	2.43	0.52
1:B:1130:GLN:OE1	1:B:1136:SER:OG	2.28	0.52
1:B:1226:PHE:O	1:B:1827:ARG:NH1	2.39	0.52
1:B:1554:VAL:HG12	1:B:1556:PRO:HD3	1.90	0.52
1:B:1732:SER:O	1:B:2140:ARG:HD2	2.09	0.52
1:C:1092:PHE:HD1	1:C:1202:LEU:HB3	1.74	0.52
1:C:1636:MET:HE3	1:C:1638:ALA:HB2	1.91	0.52
1:D:3519:PRO:O	1:D:3523:ASN:N	2.43	0.52
1:D:4763:GLY:O	1:D:4766:THR:OG1	2.26	0.52
1:A:4634:GLU:HG2	1:A:4635:SER:H	1.75	0.52
1:C:4104:THR:HG22	1:C:4106:PRO:HD2	1.92	0.52
1:D:1493:TYR:OH	1:D:1508:ARG:NE	2.43	0.52
1:A:649:PHE:HA	1:A:778:PHE:HE1	1.74	0.52
1:B:233:ILE:O	1:B:257:ARG:NH1	2.43	0.52
1:B:3519:PRO:O	1:B:3523:ASN:N	2.43	0.52
1:C:629:ARG:HB3	1:C:634:GLN:CD	2.35	0.52
1:C:1260:MET:HE1	1:C:1271:ARG:HB2	1.92	0.52
1:A:233:ILE:O	1:A:257:ARG:NH1	2.43	0.51
1:A:544:LEU:HD22	1:A:574:VAL:HG22	1.92	0.51
1:A:1207:ASP:OD2	1:A:1209:SER:OG	2.19	0.51
1:C:977:LEU:HD13	1:C:1047:LEU:HD22	1.91	0.51
1:D:629:ARG:HB3	1:D:634:GLN:CD	2.35	0.51
1:D:4104:THR:HG22	1:D:4106:PRO:HD2	1.92	0.51
1:A:4944:ARG:HD3	1:D:4942:GLU:OE1	2.10	0.51
1:B:102:LEU:HB2	1:B:105:HIS:CD2	2.46	0.51
1:B:1839:VAL:O	1:B:1841:VAL:N	2.43	0.51
1:B:4863:TYR:HD2	1:B:4876:CYS:HB3	1.75	0.51
1:C:774:ASP:OD1	1:C:774:ASP:N	2.41	0.51
1:C:4863:TYR:HD2	1:C:4876:CYS:HB3	1.75	0.51
1:D:4634:GLU:HG2	1:D:4635:SER:H	1.75	0.51
1:D:4863:TYR:HD2	1:D:4876:CYS:HB3	1.75	0.51
1:A:873:LYS:NZ	1:A:947:GLU:OE1	2.34	0.51
1:A:977:LEU:HD13	1:A:1047:LEU:HD22	1.91	0.51
1:C:3147:ILE:HD13	1:C:3197:LEU:HD11	1.92	0.51
1:C:4634:GLU:HG2	1:C:4635:SER:H	1.75	0.51
1:D:1092:PHE:HD1	1:D:1202:LEU:HB3	1.74	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1839:VAL:O	1:D:1841:VAL:N	2.43	0.51
1:A:4804:TYR:CG	1:A:4804:TYR:O	2.63	0.51
1:B:2437:ALA:HB3	1:B:2508:ARG:HH11	1.74	0.51
1:B:4171:LEU:O	1:B:4175:ARG:HG3	2.10	0.51
1:C:3519:PRO:O	1:C:3523:ASN:N	2.43	0.51
1:D:1554:VAL:HG12	1:D:1556:PRO:HD3	1.90	0.51
1:A:629:ARG:HB3	1:A:634:GLN:CD	2.35	0.51
1:A:4901:ILE:HD12	1:A:4913:ARG:NH2	2.23	0.51
1:B:4104:THR:HG22	1:B:4106:PRO:HD2	1.92	0.51
1:C:492:ASP:HA	1:C:495:ASN:ND2	2.26	0.51
1:C:971:ASP:OD1	1:C:971:ASP:N	2.44	0.51
1:D:102:LEU:HB2	1:D:105:HIS:CD2	2.46	0.51
1:A:102:LEU:HB2	1:A:105:HIS:CD2	2.46	0.51
1:A:4104:THR:HG22	1:A:4106:PRO:HD2	1.92	0.51
1:B:2613:TYR:C	1:B:2616:PRO:HD2	2.36	0.51
1:B:3754:GLU:OE1	1:B:3754:GLU:N	2.37	0.51
1:B:4579:PHE:HB2	1:B:4631:PHE:HE1	1.76	0.51
1:C:1226:PHE:O	1:C:1827:ARG:NH1	2.39	0.51
1:C:1276:THR:CB	1:C:1466:LEU:HD22	2.41	0.51
1:C:1450:VAL:HG21	1:C:1454:THR:HG21	1.92	0.51
1:A:1554:VAL:HG12	1:A:1556:PRO:HD3	1.90	0.51
1:A:4763:GLY:O	1:A:4766:THR:OG1	2.26	0.51
1:B:4634:GLU:HG2	1:B:4635:SER:H	1.75	0.51
1:B:4807:PHE:O	1:B:4808:PHE:C	2.54	0.51
1:C:736:HIS:ND1	1:C:737:LEU:O	2.43	0.51
1:C:2613:TYR:C	1:C:2616:PRO:HD2	2.36	0.51
1:D:4804:TYR:CG	1:D:4804:TYR:O	2.63	0.51
1:D:4817:ALA:C	1:D:4819:GLY:N	2.65	0.51
1:A:1835:GLU:C	1:A:1837:GLN:N	2.68	0.51
1:A:3680:ALA:HB3	1:A:3697:PRO:HG2	1.92	0.51
1:B:1260:MET:HE1	1:B:1271:ARG:HB2	1.92	0.51
1:B:1486:SER:HB2	1:B:1553:PHE:CE1	2.46	0.51
1:B:2587:TYR:O	1:B:2590:SER:N	2.44	0.51
1:C:3680:ALA:HB3	1:C:3697:PRO:HG2	1.92	0.51
1:C:4579:PHE:HB2	1:C:4631:PHE:HE1	1.76	0.51
1:C:4866:SER:N	1:C:4873:ASP:OD2	2.42	0.51
1:A:55:ALA:O	1:A:281:ARG:NH2	2.39	0.51
1:B:629:ARG:HB3	1:B:634:GLN:CD	2.35	0.51
1:D:4579:PHE:HB2	1:D:4631:PHE:HE1	1.76	0.51
1:A:1486:SER:HB2	1:A:1553:PHE:CE1	2.46	0.51
1:A:2170:MET:HE2	1:A:2228:MET:HE3	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2437:ALA:HB3	1:A:2508:ARG:HH11	1.74	0.51
1:A:4171:LEU:O	1:A:4175:ARG:HG3	2.10	0.51
1:A:4579:PHE:HB2	1:A:4631:PHE:HE1	1.76	0.51
1:C:102:LEU:HB2	1:C:105:HIS:CD2	2.46	0.51
1:C:4171:LEU:O	1:C:4175:ARG:HG3	2.10	0.51
1:D:492:ASP:HA	1:D:495:ASN:ND2	2.26	0.51
1:D:2112:GLN:O	1:D:2113:SER:OG	2.29	0.51
1:D:2170:MET:HE2	1:D:2228:MET:HE3	1.93	0.51
1:A:1493:TYR:OH	1:A:1508:ARG:NE	2.43	0.50
1:A:2310:CYS:HB2	1:A:2324:ASN:ND2	2.26	0.50
1:B:736:HIS:ND1	1:B:737:LEU:O	2.43	0.50
1:B:1276:THR:CB	1:B:1466:LEU:HD22	2.41	0.50
1:B:3147:ILE:HD13	1:B:3197:LEU:HD11	1.92	0.50
1:C:1130:GLN:OE1	1:C:1136:SER:OG	2.28	0.50
1:C:1839:VAL:O	1:C:1841:VAL:N	2.43	0.50
1:C:4804:TYR:CG	1:C:4804:TYR:O	2.63	0.50
1:D:1260:MET:HE1	1:D:1271:ARG:HB2	1.92	0.50
1:D:1486:SER:HB2	1:D:1553:PHE:CE1	2.46	0.50
1:A:1276:THR:CB	1:A:1466:LEU:HD22	2.41	0.50
1:A:1450:VAL:HG21	1:A:1454:THR:HG21	1.92	0.50
1:A:2587:TYR:O	1:A:2590:SER:N	2.44	0.50
1:A:3147:ILE:HD13	1:A:3197:LEU:HD11	1.92	0.50
1:A:4863:TYR:HD2	1:A:4876:CYS:HB3	1.75	0.50
1:A:4944:ARG:O	1:A:4948:GLU:HG2	2.12	0.50
1:B:492:ASP:HA	1:B:495:ASN:ND2	2.26	0.50
1:B:1450:VAL:HG21	1:B:1454:THR:HG21	1.92	0.50
1:B:4804:TYR:O	1:B:4804:TYR:CG	2.63	0.50
1:C:721:LEU:HB2	1:C:728:ARG:HB2	1.93	0.50
1:C:1486:SER:HB2	1:C:1553:PHE:CE1	2.46	0.50
1:C:2310:CYS:HB2	1:C:2324:ASN:ND2	2.26	0.50
1:D:1450:VAL:HG21	1:D:1454:THR:HG21	1.92	0.50
1:D:3147:ILE:HD13	1:D:3197:LEU:HD11	1.92	0.50
1:D:4807:PHE:O	1:D:4808:PHE:C	2.54	0.50
1:B:55:ALA:O	1:B:281:ARG:NH2	2.39	0.50
1:B:1830:VAL:C	1:B:1832:GLY:H	2.15	0.50
1:C:1839:VAL:N	1:C:1840:PRO:HD2	2.27	0.50
1:D:1276:THR:CB	1:D:1466:LEU:HD22	2.41	0.50
1:D:2587:TYR:O	1:D:2590:SER:N	2.44	0.50
1:A:1839:VAL:N	1:A:1840:PRO:HD2	2.27	0.50
1:A:2613:TYR:C	1:A:2616:PRO:HD2	2.36	0.50
1:A:4866:SER:N	1:A:4873:ASP:OD2	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1257:VAL:HG12	1:B:1272:LEU:HG	1.93	0.50
1:B:4209:GLN:CD	1:B:4209:GLN:H	2.19	0.50
1:C:1257:VAL:HG12	1:C:1272:LEU:HG	1.93	0.50
1:C:2170:MET:HE2	1:C:2228:MET:HE3	1.93	0.50
1:D:4152:GLU:OE1	1:D:4194:TYR:OH	2.26	0.50
1:D:4171:LEU:O	1:D:4175:ARG:HG3	2.10	0.50
1:B:3680:ALA:HB3	1:B:3697:PRO:HG2	1.92	0.50
1:B:4832:HIS:CD2	1:B:4942:GLU:HG3	2.47	0.50
1:C:758:ARG:HG3	1:C:763:PRO:HA	1.93	0.50
1:C:4209:GLN:H	1:C:4209:GLN:CD	2.19	0.50
1:D:2030:ASP:OD1	1:D:2031:LEU:N	2.45	0.50
1:D:2613:TYR:C	1:D:2616:PRO:HD2	2.36	0.50
1:D:4209:GLN:H	1:D:4209:GLN:CD	2.19	0.50
1:D:4983:HIS:NE2	1:D:5027:CYS:SG	2.82	0.50
1:A:4209:GLN:H	1:A:4209:GLN:CD	2.19	0.50
1:B:2103:VAL:O	1:B:2107:GLN:HG3	2.12	0.50
1:D:1839:VAL:N	1:D:1840:PRO:HD2	2.27	0.50
1:D:2103:VAL:O	1:D:2107:GLN:HG3	2.12	0.50
1:A:2503:VAL:HB	1:A:2551:ASN:ND2	2.27	0.50
1:B:2170:MET:HE2	1:B:2228:MET:HE3	1.93	0.50
1:B:4944:ARG:O	1:B:4948:GLU:HG2	2.12	0.50
1:C:2579:VAL:O	1:C:2591:ARG:NH1	2.39	0.50
1:D:758:ARG:HG3	1:D:763:PRO:HA	1.93	0.50
1:D:3717:ASP:OD1	1:D:3717:ASP:N	2.45	0.50
1:D:4944:ARG:O	1:D:4948:GLU:HG2	2.12	0.50
1:A:662:TRP:HZ3	1:A:811:CYS:HA	1.77	0.50
1:A:758:ARG:HG3	1:A:763:PRO:HA	1.93	0.50
1:A:963:ASN:OD1	1:A:965:TYR:N	2.45	0.50
1:A:1115:LEU:HB3	1:A:1123:VAL:HG11	1.94	0.50
1:C:2030:ASP:OD1	1:C:2031:LEU:N	2.45	0.50
1:C:2587:TYR:O	1:C:2590:SER:N	2.44	0.50
1:D:662:TRP:HZ3	1:D:811:CYS:HA	1.77	0.50
1:D:721:LEU:HB2	1:D:728:ARG:HB2	1.93	0.50
1:D:2394:GLY:H	1:D:2418:LEU:HG	1.77	0.50
1:A:158:SER:N	1:A:161:GLU:OE2	2.43	0.50
1:A:721:LEU:HB2	1:A:728:ARG:HB2	1.93	0.50
1:B:662:TRP:HZ3	1:B:811:CYS:HA	1.77	0.50
1:B:758:ARG:HG3	1:B:763:PRO:HA	1.93	0.50
1:C:4944:ARG:O	1:C:4948:GLU:HG2	2.12	0.50
1:D:1115:LEU:HB3	1:D:1123:VAL:HG11	1.94	0.50
1:D:2310:CYS:HB2	1:D:2324:ASN:ND2	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2339:VAL:O	1:D:2345:SER:OG	2.20	0.50
1:A:492:ASP:HA	1:A:495:ASN:ND2	2.26	0.49
1:A:736:HIS:ND1	1:A:737:LEU:O	2.43	0.49
1:A:4807:PHE:O	1:A:4808:PHE:C	2.54	0.49
1:B:971:ASP:N	1:B:971:ASP:OD1	2.44	0.49
1:B:2030:ASP:OD1	1:B:2031:LEU:N	2.45	0.49
1:B:2310:CYS:HB2	1:B:2324:ASN:ND2	2.26	0.49
1:B:2503:VAL:HB	1:B:2551:ASN:ND2	2.27	0.49
1:C:662:TRP:HZ3	1:C:811:CYS:HA	1.77	0.49
1:C:963:ASN:OD1	1:C:965:TYR:N	2.45	0.49
1:C:2103:VAL:O	1:C:2107:GLN:HG3	2.12	0.49
1:C:2394:GLY:H	1:C:2418:LEU:HG	1.77	0.49
1:C:4807:PHE:C	1:C:4809:PHE:N	2.68	0.49
1:D:4808:PHE:C	1:D:4810:ALA:N	2.68	0.49
1:A:2394:GLY:H	1:A:2418:LEU:HG	1.77	0.49
1:A:3717:ASP:OD1	1:A:3717:ASP:N	2.45	0.49
1:B:1115:LEU:HB3	1:B:1123:VAL:HG11	1.94	0.49
1:B:1653:LEU:HA	1:B:1656:ARG:HB2	1.94	0.49
1:C:560:ILE:HA	1:C:563:VAL:HG12	1.95	0.49
1:C:4239:GLU:OE1	1:C:4679:ARG:NH2	2.45	0.49
1:D:1257:VAL:HG12	1:D:1272:LEU:HG	1.93	0.49
1:D:1653:LEU:HA	1:D:1656:ARG:HB2	1.94	0.49
1:D:1830:VAL:C	1:D:1832:GLY:H	2.15	0.49
1:A:2030:ASP:OD1	1:A:2031:LEU:N	2.45	0.49
1:A:2495:VAL:HB	1:A:2498:HIS:ND1	2.27	0.49
1:A:4832:HIS:CD2	1:A:4942:GLU:HG3	2.47	0.49
1:B:4805:ASN:O	1:B:4807:PHE:N	2.46	0.49
1:C:4832:HIS:CD2	1:C:4942:GLU:HG3	2.47	0.49
1:D:412:ASN:O	1:D:416:LYS:HG2	2.13	0.49
1:D:3890:LEU:HA	1:D:3893:GLU:HB2	1.95	0.49
1:A:1257:VAL:HG12	1:A:1272:LEU:HG	1.93	0.49
1:B:721:LEU:HB2	1:B:728:ARG:HB2	1.93	0.49
1:B:2495:VAL:HB	1:B:2498:HIS:ND1	2.27	0.49
1:C:3890:LEU:HA	1:C:3893:GLU:HB2	1.95	0.49
1:D:2503:VAL:HB	1:D:2551:ASN:ND2	2.27	0.49
1:D:4832:HIS:CD2	1:D:4942:GLU:HG3	2.47	0.49
1:A:1226:PHE:O	1:A:1827:ARG:NH1	2.39	0.49
1:A:2103:VAL:O	1:A:2107:GLN:HG3	2.12	0.49
1:B:2579:VAL:O	1:B:2591:ARG:NH1	2.39	0.49
1:B:3777:GLU:N	1:B:3777:GLU:OE1	2.45	0.49
1:C:1653:LEU:HA	1:C:1656:ARG:HB2	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2495:VAL:HB	1:C:2498:HIS:ND1	2.27	0.49
1:D:2495:VAL:HB	1:D:2498:HIS:ND1	2.27	0.49
1:B:1839:VAL:N	1:B:1840:PRO:HD2	2.27	0.49
1:C:2302:LEU:HD23	1:C:2363:CYS:HB3	1.95	0.49
1:C:3754:GLU:OE1	1:C:3754:GLU:N	2.37	0.49
1:C:4191:GLU:OE2	1:C:5006:GLN:NE2	2.41	0.49
1:D:69:LEU:HD22	1:D:107:ILE:HD11	1.95	0.49
1:B:685:GLY:HA3	1:B:714:TYR:O	2.13	0.49
1:C:685:GLY:HA3	1:C:714:TYR:O	2.13	0.49
1:C:2503:VAL:HB	1:C:2551:ASN:ND2	2.27	0.49
1:A:1704:PRO:HG2	1:A:1707:LEU:HD12	1.95	0.49
1:A:3890:LEU:HA	1:A:3893:GLU:HB2	1.95	0.49
1:B:963:ASN:OD1	1:B:965:TYR:N	2.45	0.49
1:B:4798:MET:HB3	1:B:4812:HIS:NE2	2.28	0.49
1:C:55:ALA:O	1:C:281:ARG:NH2	2.39	0.49
1:C:1704:PRO:HG2	1:C:1707:LEU:HD12	1.95	0.49
1:C:3777:GLU:OE1	1:C:3777:GLU:N	2.45	0.49
1:C:4736:ARG:HH22	1:D:4076:ALA:HA	1.77	0.49
1:D:963:ASN:OD1	1:D:965:TYR:N	2.45	0.49
1:D:4805:ASN:O	1:D:4807:PHE:N	2.46	0.49
1:A:1096:THR:OG1	1:A:1198:GLN:OE1	2.25	0.49
1:A:1830:VAL:C	1:A:1832:GLY:N	2.71	0.49
1:A:3924:LEU:O	1:A:3927:GLN:HG3	2.13	0.49
1:A:4076:ALA:HA	1:D:4736:ARG:HH22	1.77	0.49
1:B:1830:VAL:C	1:B:1832:GLY:N	2.71	0.49
1:C:1099:GLU:OE2	1:C:1128:ARG:NH2	2.46	0.49
1:D:1099:GLU:OE1	1:D:1125:ASN:ND2	2.46	0.49
1:A:560:ILE:HA	1:A:563:VAL:HG12	1.95	0.49
1:A:4239:GLU:OE1	1:A:4679:ARG:NH2	2.45	0.49
1:B:560:ILE:HA	1:B:563:VAL:HG12	1.95	0.49
1:B:3842:LEU:HD21	1:B:3954:ALA:HB2	1.95	0.49
1:B:4808:PHE:C	1:B:4810:ALA:N	2.68	0.49
1:C:412:ASN:O	1:C:416:LYS:HG2	2.13	0.49
1:C:1107:PRO:HA	1:C:1189:LEU:HD12	1.95	0.49
1:C:1115:LEU:HB3	1:C:1123:VAL:HG11	1.94	0.49
1:D:685:GLY:HA3	1:D:714:TYR:O	2.13	0.49
1:D:1107:PRO:HA	1:D:1189:LEU:HD12	1.95	0.49
1:D:1157:GLU:HG2	1:D:1159:THR:HG23	1.95	0.49
1:D:2302:LEU:HD23	1:D:2363:CYS:HB3	1.95	0.49
1:D:4798:MET:HB3	1:D:4812:HIS:NE2	2.28	0.49
1:A:412:ASN:O	1:A:416:LYS:HG2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3842:LEU:HD21	1:A:3954:ALA:HB2	1.95	0.48
1:A:4798:MET:HB3	1:A:4812:HIS:NE2	2.28	0.48
1:A:4805:ASN:O	1:A:4807:PHE:N	2.46	0.48
1:B:1091:GLU:HG3	1:B:1203:ASN:HB2	1.95	0.48
1:B:1099:GLU:OE1	1:B:1125:ASN:ND2	2.46	0.48
1:B:3890:LEU:HA	1:B:3893:GLU:HB2	1.95	0.48
1:D:736:HIS:ND1	1:D:737:LEU:O	2.43	0.48
1:D:1130:GLN:OE1	1:D:1136:SER:OG	2.28	0.48
1:D:3182:TYR:HA	1:D:3229:ILE:HG21	1.95	0.48
1:D:3415:TYR:CD2	1:D:3518:LEU:HD22	2.48	0.48
1:D:4897:ILE:HD11	1:D:4916:PHE:HE2	1.78	0.48
1:A:861:ILE:HG23	1:A:862:VAL:HG23	1.95	0.48
1:A:1157:GLU:HG2	1:A:1159:THR:HG23	1.95	0.48
1:A:1653:LEU:HA	1:A:1656:ARG:HB2	1.94	0.48
1:A:3182:TYR:HA	1:A:3229:ILE:HG21	1.95	0.48
1:A:4736:ARG:HH22	1:B:4076:ALA:HA	1.77	0.48
1:B:861:ILE:HG23	1:B:862:VAL:HG23	1.95	0.48
1:B:2310:CYS:HB2	1:B:2324:ASN:HD22	1.79	0.48
1:B:4736:ARG:HH22	1:C:4076:ALA:HA	1.77	0.48
1:C:659:TYR:HB3	1:C:661:LYS:HE2	1.96	0.48
1:C:3415:TYR:CD2	1:C:3518:LEU:HD22	2.48	0.48
1:D:551:LEU:HB3	1:D:553:ARG:NH2	2.24	0.48
1:D:1839:VAL:HG12	1:D:1840:PRO:N	2.28	0.48
1:A:1091:GLU:HG3	1:A:1203:ASN:HB2	1.95	0.48
1:A:1099:GLU:OE1	1:A:1125:ASN:ND2	2.46	0.48
1:B:412:ASN:O	1:B:416:LYS:HG2	2.13	0.48
1:B:1157:GLU:HG2	1:B:1159:THR:HG23	1.95	0.48
1:C:1091:GLU:HG3	1:C:1203:ASN:HB2	1.95	0.48
1:C:1295:VAL:O	1:C:1453:VAL:HA	2.14	0.48
1:C:1846:SER:O	1:C:1847:THR:C	2.54	0.48
1:C:4798:MET:HB3	1:C:4812:HIS:NE2	2.28	0.48
1:D:1830:VAL:HG12	1:D:1831:GLY:H	1.78	0.48
1:D:3777:GLU:OE1	1:D:3777:GLU:N	2.45	0.48
1:A:3372:VAL:O	1:A:3376:GLU:HG2	2.13	0.48
1:B:659:TYR:HB3	1:B:661:LYS:HE2	1.96	0.48
1:B:1099:GLU:OE2	1:B:1128:ARG:NH2	2.46	0.48
1:B:1704:PRO:HG2	1:B:1707:LEU:HD12	1.95	0.48
1:B:3372:VAL:O	1:B:3376:GLU:HG2	2.13	0.48
1:C:1099:GLU:OE1	1:C:1125:ASN:ND2	2.46	0.48
1:C:4114:CYS:SG	1:C:4131:ARG:NH2	2.86	0.48
1:C:4807:PHE:O	1:C:4808:PHE:C	2.54	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1704:PRO:HG2	1:D:1707:LEU:HD12	1.95	0.48
1:D:3372:VAL:O	1:D:3376:GLU:HG2	2.13	0.48
1:D:4901:ILE:CD1	1:D:4913:ARG:HH22	2.24	0.48
1:A:591:ASP:O	1:A:1594:ARG:NH2	2.47	0.48
1:A:659:TYR:HB3	1:A:661:LYS:HE2	1.96	0.48
1:A:1469:VAL:HB	1:A:1470:ARG:H	1.50	0.48
1:A:1839:VAL:H	1:A:1840:PRO:HD2	1.78	0.48
1:A:2463:LEU:HG	1:A:2464:ASP:H	1.78	0.48
1:A:3777:GLU:OE1	1:A:3777:GLU:N	2.45	0.48
1:A:4064:MET:HE1	1:A:4110:PHE:CD2	2.49	0.48
1:B:1450:VAL:HG22	1:B:1452:TRP:HE3	1.79	0.48
1:B:1839:VAL:H	1:B:1840:PRO:HD2	1.78	0.48
1:B:2302:LEU:HD23	1:B:2363:CYS:HB3	1.95	0.48
1:B:2394:GLY:H	1:B:2418:LEU:HG	1.77	0.48
1:B:3415:TYR:CD2	1:B:3518:LEU:HD22	2.48	0.48
1:B:3924:LEU:O	1:B:3927:GLN:HG3	2.13	0.48
1:B:4583:SER:HB3	1:B:4630:TYR:HE1	1.78	0.48
1:C:345:LEU:HD23	1:C:389:PHE:HB3	1.96	0.48
1:C:1830:VAL:HG12	1:C:1831:GLY:H	1.78	0.48
1:C:2257:LEU:HD23	1:C:2275:VAL:HG13	1.96	0.48
1:C:3962:PHE:O	1:C:3966:THR:HG23	2.14	0.48
1:D:1091:GLU:HG3	1:D:1203:ASN:HB2	1.95	0.48
1:D:1099:GLU:OE2	1:D:1128:ARG:NH2	2.46	0.48
1:D:4807:PHE:C	1:D:4809:PHE:N	2.68	0.48
1:D:4865:LYS:N	1:D:4873:ASP:OD2	2.47	0.48
1:A:3415:TYR:CD2	1:A:3518:LEU:HD22	2.48	0.48
1:A:4191:GLU:OE2	1:A:5006:GLN:NE2	2.41	0.48
1:B:1148:VAL:HG21	1:B:1212:ARG:HG3	1.96	0.48
1:B:1295:VAL:O	1:B:1453:VAL:HA	2.14	0.48
1:B:1839:VAL:HG12	1:B:1840:PRO:N	2.28	0.48
1:B:3722:TYR:OH	1:B:3797:THR:HG22	2.14	0.48
1:B:3962:PHE:O	1:B:3966:THR:HG23	2.14	0.48
1:B:4064:MET:HE1	1:B:4110:PHE:CD2	2.49	0.48
1:C:1157:GLU:HG2	1:C:1159:THR:HG23	1.95	0.48
1:C:2424:SER:HA	1:C:2498:HIS:CD2	2.49	0.48
1:C:3722:TYR:OH	1:C:3797:THR:HG22	2.14	0.48
1:D:659:TYR:HB3	1:D:661:LYS:HE2	1.96	0.48
1:D:861:ILE:HG23	1:D:862:VAL:HG23	1.95	0.48
1:D:1295:VAL:O	1:D:1453:VAL:HA	2.14	0.48
1:D:2424:SER:HA	1:D:2498:HIS:CD2	2.49	0.48
1:D:2463:LEU:HG	1:D:2464:ASP:H	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2257:LEU:HD23	1:A:2275:VAL:HG13	1.96	0.48
1:A:2310:CYS:HB2	1:A:2324:ASN:HD22	1.79	0.48
1:A:2424:SER:HA	1:A:2498:HIS:CD2	2.49	0.48
1:A:4114:CYS:SG	1:A:4131:ARG:NH2	2.86	0.48
1:A:4583:SER:HB3	1:A:4630:TYR:HE1	1.78	0.48
1:B:345:LEU:HD23	1:B:389:PHE:HB3	1.96	0.48
1:B:635:THR:HG21	1:B:1637:MET:HG2	1.95	0.48
1:C:861:ILE:HG23	1:C:862:VAL:HG23	1.95	0.48
1:C:2310:CYS:HB2	1:C:2324:ASN:HD22	1.79	0.48
1:C:4805:ASN:O	1:C:4807:PHE:N	2.46	0.48
1:C:4983:HIS:CD2	1:C:5027:CYS:HG	2.31	0.48
1:D:635:THR:HG22	1:D:636:ASN:N	2.29	0.48
1:D:2257:LEU:HD23	1:D:2275:VAL:HG13	1.96	0.48
1:A:1839:VAL:HG12	1:A:1840:PRO:N	2.28	0.48
1:A:2112:GLN:O	1:A:2113:SER:OG	2.29	0.48
1:A:3962:PHE:O	1:A:3966:THR:HG23	2.14	0.48
1:B:2292:GLU:O	1:B:2295:LEU:N	2.47	0.48
1:B:2463:LEU:HG	1:B:2464:ASP:H	1.78	0.48
1:C:635:THR:HG22	1:C:636:ASN:N	2.29	0.48
1:C:710:ASP:OD1	1:C:710:ASP:N	2.47	0.48
1:C:1148:VAL:HG21	1:C:1212:ARG:HG3	1.96	0.48
1:C:4064:MET:HE1	1:C:4110:PHE:CD2	2.49	0.48
1:D:55:ALA:O	1:D:281:ARG:NH2	2.39	0.48
1:D:4114:CYS:SG	1:D:4131:ARG:NH2	2.86	0.48
1:D:4545:GLU:OE1	1:D:4548:ARG:NH1	2.47	0.48
1:A:293:LEU:HD23	1:A:311:ALA:HB1	1.96	0.48
1:A:635:THR:HG21	1:A:1637:MET:HG2	1.95	0.48
1:A:1450:VAL:HG22	1:A:1452:TRP:HE3	1.79	0.48
1:A:4545:GLU:OE1	1:A:4548:ARG:NH1	2.47	0.48
1:A:4983:HIS:CD2	1:A:5027:CYS:HG	2.31	0.48
1:B:591:ASP:O	1:B:1594:ARG:NH2	2.47	0.48
1:B:1830:VAL:HG12	1:B:1831:GLY:H	1.78	0.48
1:B:4114:CYS:SG	1:B:4131:ARG:NH2	2.86	0.48
1:B:4545:GLU:OE1	1:B:4548:ARG:NH1	2.47	0.48
1:B:4763:GLY:O	1:B:4766:THR:OG1	2.26	0.48
1:B:4865:LYS:N	1:B:4873:ASP:OD2	2.47	0.48
1:C:1830:VAL:C	1:C:1832:GLY:H	2.15	0.48
1:C:1839:VAL:HG12	1:C:1840:PRO:N	2.28	0.48
1:D:635:THR:HG21	1:D:1637:MET:HG2	1.95	0.48
1:A:69:LEU:HD22	1:A:107:ILE:HD11	1.95	0.48
1:A:685:GLY:HA3	1:A:714:TYR:O	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1148:VAL:HG21	1:A:1212:ARG:HG3	1.96	0.48
1:A:2302:LEU:HD23	1:A:2363:CYS:HB3	1.95	0.48
1:A:3722:TYR:OH	1:A:3797:THR:HG22	2.14	0.48
1:B:69:LEU:HD22	1:B:107:ILE:HD11	1.95	0.48
1:B:103:TYR:CE1	1:B:163:VAL:HG22	2.49	0.48
1:B:131:LEU:CD2	1:B:178:ARG:HG3	2.44	0.48
1:B:635:THR:HG22	1:B:636:ASN:N	2.29	0.48
1:B:1252:HIS:ND1	1:B:1255:TYR:HB2	2.29	0.48
1:B:2424:SER:HA	1:B:2498:HIS:CD2	2.49	0.48
1:B:4807:PHE:C	1:B:4809:PHE:N	2.68	0.48
1:C:69:LEU:HD22	1:C:107:ILE:HD11	1.95	0.48
1:C:3372:VAL:O	1:C:3376:GLU:HG2	2.13	0.48
1:C:4897:ILE:HD11	1:C:4916:PHE:HE2	1.78	0.48
1:D:3722:TYR:OH	1:D:3797:THR:HG22	2.14	0.48
1:D:3924:LEU:O	1:D:3927:GLN:HG3	2.13	0.48
1:A:131:LEU:CD2	1:A:178:ARG:HG3	2.44	0.47
1:A:2292:GLU:O	1:A:2295:LEU:N	2.47	0.47
1:A:3830:GLN:HA	1:A:3833:GLN:HG2	1.97	0.47
1:B:3396:ASP:O	1:B:3400:VAL:HG23	2.14	0.47
1:C:635:THR:HG21	1:C:1637:MET:HG2	1.95	0.47
1:D:2310:CYS:HB2	1:D:2324:ASN:HD22	1.79	0.47
1:A:289:ARG:HB2	1:A:301:VAL:HG12	1.96	0.47
1:A:4865:LYS:N	1:A:4873:ASP:OD2	2.47	0.47
1:B:317:ARG:NH2	1:B:321:GLU:O	2.47	0.47
1:B:1283:LEU:HD23	1:B:1284:VAL:N	2.30	0.47
1:B:1592:PRO:HD2	1:B:1595:LEU:HD23	1.97	0.47
1:B:3569:LEU:HD11	1:B:3573:MET:HE2	1.97	0.47
1:B:4239:GLU:OE1	1:B:4679:ARG:NH2	2.45	0.47
1:C:4545:GLU:OE1	1:C:4548:ARG:NH1	2.47	0.47
1:C:4583:SER:HB3	1:C:4630:TYR:HE1	1.78	0.47
1:D:560:ILE:HA	1:D:563:VAL:HG12	1.95	0.47
1:D:711:LEU:HA	1:D:1532:ASN:HD21	1.80	0.47
1:D:4064:MET:HE1	1:D:4110:PHE:CD2	2.49	0.47
1:D:4983:HIS:CD2	1:D:5027:CYS:HG	2.32	0.47
1:A:1295:VAL:O	1:A:1453:VAL:HA	2.14	0.47
1:A:1830:VAL:HG12	1:A:1831:GLY:H	1.78	0.47
1:A:3396:ASP:O	1:A:3400:VAL:HG23	2.14	0.47
1:A:4799:SER:CA	1:A:4812:HIS:HE1	2.27	0.47
1:B:1228:ILE:O	1:C:3572:GLN:NE2	2.48	0.47
1:B:2257:LEU:HD23	1:B:2275:VAL:HG13	1.96	0.47
1:B:4901:ILE:HD12	1:B:4913:ARG:NH2	2.23	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:293:LEU:HD23	1:C:311:ALA:HB1	1.96	0.47
1:D:1243:PRO:HB2	1:D:1600:LEU:HD12	1.96	0.47
1:D:1271:ARG:NH2	1:D:1470:ARG:O	2.45	0.47
1:A:1099:GLU:OE2	1:A:1128:ARG:NH2	2.46	0.47
1:C:317:ARG:NH2	1:C:321:GLU:O	2.47	0.47
1:C:3842:LEU:HD21	1:C:3954:ALA:HB2	1.95	0.47
1:C:3924:LEU:O	1:C:3927:GLN:HG3	2.13	0.47
1:D:244:LEU:HB3	1:D:246:TYR:CE1	2.50	0.47
1:D:289:ARG:HB2	1:D:301:VAL:HG12	1.96	0.47
1:D:293:LEU:HD23	1:D:311:ALA:HB1	1.96	0.47
1:D:468:LEU:O	1:D:472:ARG:HG2	2.15	0.47
1:D:591:ASP:O	1:D:1594:ARG:NH2	2.47	0.47
1:A:489:ASN:O	1:A:493:ARG:HG2	2.14	0.47
1:B:3182:TYR:HA	1:B:3229:ILE:HG21	1.95	0.47
1:C:489:ASN:O	1:C:493:ARG:HG2	2.14	0.47
1:C:1592:PRO:HD2	1:C:1595:LEU:HD23	1.97	0.47
1:C:1839:VAL:H	1:C:1840:PRO:HD2	1.78	0.47
1:C:3182:TYR:HA	1:C:3229:ILE:HG21	1.95	0.47
1:C:3830:GLN:HA	1:C:3833:GLN:HG2	1.97	0.47
1:C:4865:LYS:N	1:C:4873:ASP:OD2	2.47	0.47
1:D:110:ARG:NH1	1:D:117:TYR:OH	2.48	0.47
1:D:1839:VAL:H	1:D:1840:PRO:HD2	1.78	0.47
1:D:2340:PHE:HD1	1:D:2435:ARG:HG2	1.80	0.47
1:D:3830:GLN:HA	1:D:3833:GLN:HG2	1.97	0.47
1:D:4583:SER:HB3	1:D:4630:TYR:HE1	1.78	0.47
1:A:1252:HIS:ND1	1:A:1255:TYR:HB2	2.29	0.47
1:B:46:LEU:HD11	1:B:134:ASP:OD2	2.15	0.47
1:C:103:TYR:CE1	1:C:163:VAL:HG22	2.49	0.47
1:C:649:PHE:HA	1:C:778:PHE:CE1	2.50	0.47
1:C:663:TYR:CE1	1:C:745:SER:HB2	2.50	0.47
1:C:1450:VAL:HG22	1:C:1452:TRP:HE3	1.79	0.47
1:C:2292:GLU:O	1:C:2295:LEU:N	2.47	0.47
1:C:4206:GLU:HA	1:C:4211:LYS:NZ	2.30	0.47
1:D:103:TYR:CE1	1:D:163:VAL:HG22	2.49	0.47
1:D:971:ASP:OD1	1:D:971:ASP:N	2.44	0.47
1:D:1592:PRO:HD2	1:D:1595:LEU:HD23	1.97	0.47
1:D:3184:GLU:OE1	1:D:3184:GLU:N	2.45	0.47
1:D:4805:ASN:O	1:D:4807:PHE:HB2	2.15	0.47
1:A:215:THR:OG1	1:A:271:GLY:O	2.30	0.47
1:A:345:LEU:HD23	1:A:389:PHE:HB3	1.96	0.47
1:A:1107:PRO:HA	1:A:1189:LEU:HD12	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1830:VAL:C	1:A:1832:GLY:H	2.15	0.47
1:A:3569:LEU:HD11	1:A:3573:MET:HE2	1.97	0.47
1:A:3927:GLN:HB3	1:A:3992:PHE:CE2	2.50	0.47
1:A:3989:VAL:CG2	1:A:4023:MET:HE3	2.45	0.47
1:A:4897:ILE:HD11	1:A:4916:PHE:HE2	1.78	0.47
1:B:489:ASN:O	1:B:493:ARG:HG2	2.14	0.47
1:B:711:LEU:HA	1:B:1532:ASN:HD21	1.80	0.47
1:B:1243:PRO:HB2	1:B:1600:LEU:HD12	1.96	0.47
1:B:4799:SER:CA	1:B:4812:HIS:HE1	2.27	0.47
1:C:46:LEU:HD11	1:C:134:ASP:OD2	2.15	0.47
1:C:244:LEU:HB3	1:C:246:TYR:CE1	2.50	0.47
1:C:2463:LEU:HG	1:C:2464:ASP:H	1.78	0.47
1:C:3396:ASP:O	1:C:3400:VAL:HG23	2.14	0.47
1:C:4901:ILE:CD1	1:C:4913:ARG:HH22	2.24	0.47
1:D:131:LEU:CD2	1:D:178:ARG:HG3	2.44	0.47
1:D:158:SER:N	1:D:161:GLU:OE2	2.43	0.47
1:D:1148:VAL:HG21	1:D:1212:ARG:HG3	1.96	0.47
1:D:1226:PHE:O	1:D:1827:ARG:NH1	2.39	0.47
1:D:1491:ASN:HA	1:D:1540:PHE:CD2	2.50	0.47
1:D:2292:GLU:O	1:D:2295:LEU:N	2.47	0.47
1:D:3962:PHE:O	1:D:3966:THR:HG23	2.14	0.47
1:A:1283:LEU:HD23	1:A:1284:VAL:N	2.30	0.47
1:A:3572:GLN:NE2	1:D:1228:ILE:O	2.48	0.47
1:B:3927:GLN:HB3	1:B:3992:PHE:CE2	2.50	0.47
1:C:923:GLN:O	1:C:927:GLU:HG2	2.15	0.47
1:C:1228:ILE:O	1:D:3572:GLN:NE2	2.48	0.47
1:C:1243:PRO:HB2	1:C:1600:LEU:HD12	1.96	0.47
1:C:1830:VAL:C	1:C:1832:GLY:N	2.71	0.47
1:C:3667:HIS:ND1	1:C:3667:HIS:O	2.48	0.47
1:C:4799:SER:CA	1:C:4812:HIS:HE1	2.27	0.47
1:D:1283:LEU:HD23	1:D:1284:VAL:N	2.30	0.47
1:D:3396:ASP:O	1:D:3400:VAL:HG23	2.14	0.47
1:D:3842:LEU:HD21	1:D:3954:ALA:HB2	1.95	0.47
1:A:244:LEU:HB3	1:A:246:TYR:CE1	2.50	0.47
1:A:711:LEU:HA	1:A:1532:ASN:HD21	1.80	0.47
1:B:293:LEU:HD23	1:B:311:ALA:HB1	1.96	0.47
1:B:663:TYR:CE1	1:B:745:SER:HB2	2.50	0.47
1:B:1107:PRO:HA	1:B:1189:LEU:HD12	1.95	0.47
1:B:3184:GLU:OE1	1:B:3184:GLU:N	2.45	0.47
1:B:3830:GLN:HA	1:B:3833:GLN:HG2	1.97	0.47
1:C:131:LEU:CD2	1:C:178:ARG:HG3	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1252:HIS:ND1	1:C:1255:TYR:HB2	2.29	0.47
1:D:345:LEU:HD23	1:D:389:PHE:HB3	1.96	0.47
1:D:489:ASN:O	1:D:493:ARG:HG2	2.14	0.47
1:D:2158:CYS:O	1:D:2162:ILE:HG12	2.15	0.47
1:D:2191:PHE:CD1	1:D:2198:MET:HG3	2.50	0.47
1:A:468:LEU:O	1:A:472:ARG:HG2	2.15	0.47
1:A:1243:PRO:HB2	1:A:1600:LEU:HD12	1.96	0.47
1:A:1592:PRO:HD2	1:A:1595:LEU:HD23	1.97	0.47
1:A:2191:PHE:CD1	1:A:2198:MET:HG3	2.50	0.47
1:A:2340:PHE:HD1	1:A:2435:ARG:HG2	1.80	0.47
1:A:4206:GLU:HA	1:A:4211:LYS:NZ	2.30	0.47
1:B:175:SER:C	1:C:2452:ARG:HH22	2.23	0.47
1:B:244:LEU:HB3	1:B:246:TYR:CE1	2.50	0.47
1:B:2339:VAL:O	1:B:2345:SER:OG	2.20	0.47
1:C:591:ASP:O	1:C:1594:ARG:NH2	2.47	0.47
1:C:1087:ARG:NH1	1:C:1154:ASP:OD2	2.48	0.47
1:C:1283:LEU:HD23	1:C:1284:VAL:N	2.30	0.47
1:C:2158:CYS:O	1:C:2162:ILE:HG12	2.15	0.47
1:C:2245:GLN:O	1:C:2248:ARG:HG2	2.15	0.47
1:C:3927:GLN:HB3	1:C:3992:PHE:CE2	2.50	0.47
1:C:4886:HIS:CD2	1:C:4897:ILE:HG21	2.50	0.47
1:D:1846:SER:O	1:D:1847:THR:C	2.54	0.47
1:D:2245:GLN:O	1:D:2248:ARG:HG2	2.15	0.47
1:D:3927:GLN:HB3	1:D:3992:PHE:CE2	2.50	0.47
1:D:4799:SER:CA	1:D:4812:HIS:HE1	2.27	0.47
1:A:103:TYR:CE1	1:A:163:VAL:HG22	2.49	0.46
1:A:663:TYR:CE1	1:A:745:SER:HB2	2.50	0.46
1:A:1819:VAL:HG22	1:A:1926:LEU:HD13	1.98	0.46
1:A:4152:GLU:OE1	1:A:4194:TYR:OH	2.26	0.46
1:B:923:GLN:O	1:B:927:GLU:HG2	2.15	0.46
1:B:3989:VAL:CG2	1:B:4023:MET:HE3	2.45	0.46
1:B:4206:GLU:HA	1:B:4211:LYS:NZ	2.30	0.46
1:C:131:LEU:HD21	1:C:178:ARG:HG3	1.98	0.46
1:C:468:LEU:O	1:C:472:ARG:HG2	2.15	0.46
1:C:4044:MET:HE3	1:C:4044:MET:HB2	1.77	0.46
1:C:4805:ASN:O	1:C:4807:PHE:HB2	2.15	0.46
1:D:710:ASP:N	1:D:710:ASP:OD1	2.47	0.46
1:D:4206:GLU:HA	1:D:4211:LYS:NZ	2.30	0.46
1:A:110:ARG:NH1	1:A:117:TYR:OH	2.48	0.46
1:A:317:ARG:NH2	1:A:321:GLU:O	2.47	0.46
1:A:1087:ARG:NH1	1:A:1154:ASP:OD2	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1127:HIS:HB3	1:A:1128:ARG:NH2	2.31	0.46
1:B:158:SER:N	1:B:161:GLU:OE2	2.43	0.46
1:B:1846:SER:O	1:B:1847:THR:C	2.54	0.46
1:B:2158:CYS:O	1:B:2162:ILE:HG12	2.15	0.46
1:B:4805:ASN:O	1:B:4807:PHE:HB2	2.15	0.46
1:C:289:ARG:HB2	1:C:301:VAL:HG12	1.96	0.46
1:C:1829:PRO:C	1:C:1830:VAL:O	2.56	0.46
1:C:3989:VAL:CG2	1:C:4023:MET:HE3	2.45	0.46
1:C:4181:ILE:HG12	1:C:4193:ILE:HB	1.97	0.46
1:D:131:LEU:HD21	1:D:178:ARG:HG3	1.98	0.46
1:D:649:PHE:HA	1:D:778:PHE:CE1	2.50	0.46
1:D:1965:TYR:CE2	1:D:1969:LEU:HD12	2.49	0.46
1:D:3569:LEU:O	1:D:3569:LEU:HD12	2.15	0.46
1:D:3667:HIS:ND1	1:D:3667:HIS:O	2.48	0.46
1:D:4239:GLU:OE1	1:D:4679:ARG:NH2	2.45	0.46
1:D:4811:ALA:C	1:D:4813:LEU:H	2.23	0.46
1:A:971:ASP:OD1	1:A:971:ASP:N	2.44	0.46
1:B:110:ARG:NH1	1:B:117:TYR:OH	2.48	0.46
1:B:468:LEU:O	1:B:472:ARG:HG2	2.15	0.46
1:B:649:PHE:HA	1:B:778:PHE:CE1	2.50	0.46
1:C:3213:TYR:O	1:C:3294:PRO:HG2	2.16	0.46
1:C:3569:LEU:HD12	1:C:3569:LEU:O	2.15	0.46
1:C:4242:ILE:HG13	1:C:4989:MET:HE1	1.98	0.46
1:C:4811:ALA:C	1:C:4813:LEU:H	2.23	0.46
1:C:4901:ILE:HD12	1:C:4913:ARG:NH2	2.23	0.46
1:D:3989:VAL:CG2	1:D:4023:MET:HE3	2.45	0.46
1:A:774:ASP:OD1	1:A:774:ASP:N	2.41	0.46
1:A:3525:CYS:O	1:A:3528:THR:HG22	2.16	0.46
1:A:3667:HIS:ND1	1:A:3667:HIS:O	2.48	0.46
1:B:289:ARG:HB2	1:B:301:VAL:HG12	1.96	0.46
1:B:1207:ASP:OD2	1:B:1209:SER:OG	2.19	0.46
1:B:1430:THR:N	1:B:1451:GLY:O	2.49	0.46
1:B:4811:ALA:C	1:B:4813:LEU:H	2.23	0.46
1:C:2191:PHE:CD1	1:C:2198:MET:HG3	2.50	0.46
1:C:3525:CYS:O	1:C:3528:THR:HG22	2.16	0.46
1:D:1127:HIS:HB3	1:D:1128:ARG:NH2	2.31	0.46
1:A:131:LEU:HD21	1:A:178:ARG:HG3	1.98	0.46
1:A:710:ASP:N	1:A:710:ASP:OD1	2.47	0.46
1:A:4901:ILE:CD1	1:A:4913:ARG:HH22	2.24	0.46
1:B:1819:VAL:HG22	1:B:1926:LEU:HD13	1.98	0.46
1:B:2191:PHE:CD1	1:B:2198:MET:HG3	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2340:PHE:HD1	1:B:2435:ARG:HG2	1.80	0.46
1:B:3525:CYS:O	1:B:3528:THR:HG22	2.16	0.46
1:C:2340:PHE:HD1	1:C:2435:ARG:HG2	1.80	0.46
1:C:3569:LEU:HD11	1:C:3573:MET:HE2	1.97	0.46
1:D:663:TYR:CE1	1:D:745:SER:HB2	2.50	0.46
1:D:923:GLN:O	1:D:927:GLU:HG2	2.15	0.46
1:D:1252:HIS:ND1	1:D:1255:TYR:HB2	2.29	0.46
1:D:3213:TYR:O	1:D:3294:PRO:HG2	2.16	0.46
1:D:5035:GLN:O	1:D:5036:LEU:HD22	2.16	0.46
1:A:4811:ALA:C	1:A:4813:LEU:H	2.23	0.46
1:B:1851:MET:HE2	1:B:1851:MET:HB2	1.67	0.46
1:B:2245:GLN:O	1:B:2248:ARG:HG2	2.15	0.46
1:B:3667:HIS:ND1	1:B:3667:HIS:O	2.48	0.46
1:D:1087:ARG:NH1	1:D:1154:ASP:OD2	2.48	0.46
1:D:3525:CYS:O	1:D:3528:THR:HG22	2.16	0.46
1:D:3569:LEU:HD11	1:D:3573:MET:HE2	1.97	0.46
1:A:635:THR:HG22	1:A:636:ASN:N	2.29	0.46
1:A:1805:GLU:OE1	1:A:1808:ARG:NH2	2.49	0.46
1:A:1851:MET:HE2	1:A:1851:MET:HB2	1.67	0.46
1:A:1965:TYR:CE2	1:A:1969:LEU:HD12	2.49	0.46
1:B:131:LEU:HD21	1:B:178:ARG:HG3	1.98	0.46
1:D:1819:VAL:HG22	1:D:1926:LEU:HD13	1.98	0.46
1:D:4242:ILE:HG13	1:D:4989:MET:HE1	1.98	0.46
1:A:4805:ASN:O	1:A:4807:PHE:HB2	2.15	0.46
1:B:649:PHE:HB2	1:B:776:LEU:HD23	1.97	0.46
1:B:664:PHE:HZ	1:B:791:PHE:CD1	2.34	0.46
1:B:748:LEU:HD13	1:B:755:ILE:HG13	1.98	0.46
1:C:1430:THR:N	1:C:1451:GLY:O	2.49	0.46
1:C:1491:ASN:HA	1:C:1540:PHE:CD2	2.50	0.46
1:C:3717:ASP:OD1	1:C:3717:ASP:N	2.45	0.46
1:D:317:ARG:NH2	1:D:321:GLU:O	2.47	0.46
1:D:1430:THR:N	1:D:1451:GLY:O	2.49	0.46
1:D:1450:VAL:HG22	1:D:1452:TRP:HE3	1.79	0.46
1:D:1457:TYR:O	1:D:1496:TRP:HB2	2.16	0.46
1:D:2311:PRO:HA	1:D:2314:LEU:HB3	1.98	0.46
1:A:1716:ILE:CD1	1:A:1843:LYS:HG2	2.46	0.46
1:A:2996:LYS:HE3	1:A:2996:LYS:HB2	1.79	0.46
1:B:1096:THR:OG1	1:B:1198:GLN:OE1	2.25	0.46
1:B:1829:PRO:C	1:B:1830:VAL:O	2.56	0.46
1:B:4817:ALA:C	1:B:4819:GLY:N	2.65	0.46
1:B:4983:HIS:CD2	1:B:5027:CYS:HG	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:175:SER:C	1:D:2452:ARG:HH22	2.23	0.46
1:C:711:LEU:HA	1:C:1532:ASN:HD21	1.80	0.46
1:C:748:LEU:HD13	1:C:755:ILE:HG13	1.98	0.46
1:C:1459:GLN:H	1:C:1496:TRP:HA	1.81	0.46
1:C:3184:GLU:OE1	1:C:3184:GLU:N	2.45	0.46
1:D:649:PHE:HB2	1:D:776:LEU:HD23	1.97	0.46
1:A:664:PHE:HZ	1:A:791:PHE:CD1	2.34	0.46
1:A:1580:PHE:CE2	1:A:1592:PRO:HG2	2.51	0.46
1:A:2245:GLN:O	1:A:2248:ARG:HG2	2.15	0.46
1:B:1716:ILE:CD1	1:B:1843:LYS:HG2	2.46	0.46
1:B:3213:TYR:O	1:B:3294:PRO:HG2	2.16	0.46
1:B:3569:LEU:HD12	1:B:3569:LEU:O	2.15	0.46
1:B:4181:ILE:HG12	1:B:4193:ILE:HB	1.97	0.46
1:B:4886:HIS:CD2	1:B:4897:ILE:HG21	2.50	0.46
1:B:4897:ILE:HD11	1:B:4916:PHE:HE2	1.78	0.46
1:C:4991:PHE:HE2	1:C:5010:VAL:HG11	1.81	0.46
1:C:5035:GLN:O	1:C:5036:LEU:HD22	2.16	0.46
1:D:1096:THR:OG1	1:D:1198:GLN:OE1	2.25	0.46
1:D:3986:TRP:HA	1:D:3989:VAL:HG12	1.98	0.46
1:D:4679:ARG:HH21	1:D:5017:ARG:NH2	2.14	0.46
1:D:4898:GLY:HA2	1:D:4901:ILE:HD13	1.98	0.46
1:A:46:LEU:HD11	1:A:134:ASP:OD2	2.15	0.45
1:A:793:LEU:HD23	1:A:793:LEU:H	1.81	0.45
1:A:1228:ILE:O	1:B:3572:GLN:NE2	2.48	0.45
1:A:1491:ASN:HA	1:A:1540:PHE:CD2	2.50	0.45
1:A:2311:PRO:HA	1:A:2314:LEU:HB3	1.98	0.45
1:A:3213:TYR:O	1:A:3294:PRO:HG2	2.16	0.45
1:B:1087:ARG:NH1	1:B:1154:ASP:OD2	2.48	0.45
1:B:1127:HIS:HB3	1:B:1128:ARG:NH2	2.31	0.45
1:B:1471:ALA:O	1:B:1472:VAL:C	2.60	0.45
1:B:1727:ARG:O	1:B:1731:LEU:HG	2.16	0.45
1:B:1965:TYR:CE2	1:B:1969:LEU:HD12	2.49	0.45
1:B:2112:GLN:O	1:B:2113:SER:OG	2.29	0.45
1:B:4242:ILE:HG13	1:B:4989:MET:HE1	1.98	0.45
1:B:4807:PHE:O	1:B:4809:PHE:N	2.50	0.45
1:C:649:PHE:HB2	1:C:776:LEU:HD23	1.97	0.45
1:C:4873:ASP:OD1	1:C:4873:ASP:N	2.40	0.45
1:D:963:ASN:OD1	1:D:964:GLY:N	2.50	0.45
1:A:1229:ASN:OD1	1:B:3572:GLN:NE2	2.49	0.45
1:A:1430:THR:N	1:A:1451:GLY:O	2.49	0.45
1:A:2158:CYS:O	1:A:2162:ILE:HG12	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1580:PHE:CE2	1:B:1592:PRO:HG2	2.51	0.45
1:B:2311:PRO:HA	1:B:2314:LEU:HB3	1.98	0.45
1:B:4152:GLU:OE1	1:B:4194:TYR:OH	2.26	0.45
1:C:793:LEU:HD23	1:C:793:LEU:H	1.81	0.45
1:C:1819:VAL:HG22	1:C:1926:LEU:HD13	1.98	0.45
1:C:4152:GLU:OE1	1:C:4194:TYR:OH	2.26	0.45
1:C:4679:ARG:HH21	1:C:5017:ARG:NH2	2.14	0.45
1:C:4898:GLY:HA2	1:C:4901:ILE:HD13	1.98	0.45
1:D:1580:PHE:CE2	1:D:1592:PRO:HG2	2.51	0.45
1:D:1805:GLU:OE1	1:D:1808:ARG:NH2	2.49	0.45
1:A:175:SER:C	1:B:2452:ARG:HH22	2.23	0.45
1:A:4898:GLY:HA2	1:A:4901:ILE:HD13	1.98	0.45
1:B:1491:ASN:HA	1:B:1540:PHE:CD2	2.50	0.45
1:B:4799:SER:HB2	1:B:4812:HIS:HE1	1.82	0.45
1:C:110:ARG:NH1	1:C:117:TYR:OH	2.48	0.45
1:C:158:SER:N	1:C:161:GLU:OE2	2.43	0.45
1:C:1127:HIS:HB3	1:C:1128:ARG:NH2	2.31	0.45
1:C:1229:ASN:OD1	1:D:3572:GLN:NE2	2.49	0.45
1:D:46:LEU:HD11	1:D:134:ASP:OD2	2.15	0.45
1:D:3779:VAL:O	1:D:3783:ILE:HG12	2.17	0.45
1:D:4901:ILE:HD12	1:D:4913:ARG:NH2	2.23	0.45
1:A:649:PHE:HA	1:A:778:PHE:CE1	2.50	0.45
1:A:923:GLN:O	1:A:927:GLU:HG2	2.15	0.45
1:A:1089:TYR:CD1	1:A:1152:MET:HG2	2.51	0.45
1:A:1471:ALA:O	1:A:1472:VAL:C	2.60	0.45
1:A:2584:HIS:CG	1:A:2585:THR:H	2.34	0.45
1:A:3569:LEU:O	1:A:3569:LEU:HD12	2.15	0.45
1:A:4057:MET:HE3	1:A:4057:MET:HB2	1.85	0.45
1:A:4799:SER:HB2	1:A:4812:HIS:HE1	1.82	0.45
1:B:919:ASN:OD1	1:B:920:TYR:N	2.50	0.45
1:B:2584:HIS:CG	1:B:2585:THR:H	2.34	0.45
1:C:3779:VAL:O	1:C:3783:ILE:HG12	2.17	0.45
1:C:4807:PHE:O	1:C:4809:PHE:N	2.50	0.45
1:D:919:ASN:OD1	1:D:920:TYR:N	2.50	0.45
1:D:1459:GLN:H	1:D:1496:TRP:HA	1.81	0.45
1:D:4181:ILE:HG12	1:D:4193:ILE:HB	1.97	0.45
1:D:4807:PHE:O	1:D:4809:PHE:N	2.50	0.45
1:D:4886:HIS:CD2	1:D:4897:ILE:HG21	2.50	0.45
1:A:649:PHE:HB2	1:A:776:LEU:HD23	1.97	0.45
1:A:1457:TYR:O	1:A:1496:TRP:HB2	2.16	0.45
1:A:3793:MET:O	1:A:3797:THR:HG23	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4679:ARG:HH21	1:A:5017:ARG:NH2	2.14	0.45
1:A:4886:HIS:CD2	1:A:4897:ILE:HG21	2.50	0.45
1:B:1089:TYR:CD1	1:B:1152:MET:HG2	2.51	0.45
1:B:1478:ASP:OD1	1:B:1479:GLU:N	2.49	0.45
1:B:1805:GLU:OE1	1:B:1808:ARG:NH2	2.49	0.45
1:B:3986:TRP:HA	1:B:3989:VAL:HG12	1.98	0.45
1:C:664:PHE:HZ	1:C:791:PHE:CD1	2.34	0.45
1:C:1805:GLU:OE1	1:C:1808:ARG:NH2	2.49	0.45
1:C:3986:TRP:HA	1:C:3989:VAL:HG12	1.98	0.45
1:D:915:GLU:O	1:D:918:ARG:HG2	2.17	0.45
1:D:3793:MET:O	1:D:3797:THR:HG23	2.17	0.45
1:D:3878:ASP:OD1	1:D:3878:ASP:N	2.49	0.45
1:A:2579:VAL:O	1:A:2591:ARG:NH1	2.39	0.45
1:A:4799:SER:HA	1:A:4812:HIS:HE1	1.82	0.45
1:A:4807:PHE:O	1:A:4809:PHE:N	2.50	0.45
1:A:5035:GLN:O	1:A:5036:LEU:HD22	2.16	0.45
1:B:2094:LEU:O	1:B:2098:VAL:HG12	2.17	0.45
1:B:4991:PHE:HE2	1:B:5010:VAL:HG11	1.81	0.45
1:C:1478:ASP:OD1	1:C:1479:GLU:N	2.49	0.45
1:C:1965:TYR:CE2	1:C:1969:LEU:HD12	2.49	0.45
1:C:2584:HIS:CG	1:C:2585:THR:H	2.34	0.45
1:C:2995:ILE:HD12	1:C:2997:PHE:HB2	1.99	0.45
1:D:1478:ASP:OD1	1:D:1479:GLU:N	2.49	0.45
1:D:1716:ILE:CD1	1:D:1843:LYS:HG2	2.46	0.45
1:D:2149:VAL:O	1:D:2153:MET:HG2	2.17	0.45
1:D:2584:HIS:CG	1:D:2585:THR:H	2.34	0.45
1:D:2995:ILE:HD12	1:D:2997:PHE:HB2	1.99	0.45
1:A:915:GLU:O	1:A:918:ARG:HG2	2.17	0.45
1:A:963:ASN:OD1	1:A:964:GLY:N	2.50	0.45
1:A:1727:ARG:O	1:A:1731:LEU:HG	2.16	0.45
1:A:3805:LEU:HB3	1:A:3812:VAL:HG21	1.98	0.45
1:A:3986:TRP:HA	1:A:3989:VAL:HG12	1.98	0.45
1:B:793:LEU:H	1:B:793:LEU:HD23	1.81	0.45
1:B:963:ASN:OD1	1:B:964:GLY:N	2.50	0.45
1:B:4898:GLY:HA2	1:B:4901:ILE:HD13	1.98	0.45
1:C:963:ASN:OD1	1:C:964:GLY:N	2.50	0.45
1:C:1457:TYR:O	1:C:1496:TRP:HB2	2.16	0.45
1:C:4779:LYS:O	1:C:4783:ILE:HG12	2.17	0.45
1:D:1089:TYR:HD1	1:D:1152:MET:HG2	1.82	0.45
1:D:2579:VAL:O	1:D:2591:ARG:NH1	2.39	0.45
1:D:3805:LEU:HB3	1:D:3812:VAL:HG21	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3572:GLN:NE2	1:D:1229:ASN:OD1	2.49	0.45
1:B:1229:ASN:OD1	1:C:3572:GLN:NE2	2.49	0.45
1:B:1453:VAL:HG23	1:B:1454:THR:N	2.32	0.45
1:B:2995:ILE:HD12	1:B:2997:PHE:HB2	1.99	0.45
1:B:4206:GLU:HA	1:B:4211:LYS:HZ2	1.81	0.45
1:C:1276:THR:OG1	1:C:1466:LEU:HD13	2.17	0.45
1:C:2094:LEU:O	1:C:2098:VAL:HG12	2.17	0.45
1:D:2138:LEU:HD23	1:D:2138:LEU:HA	1.82	0.45
1:D:4939:ALA:O	1:D:4942:GLU:HB2	2.17	0.45
1:A:873:LYS:O	1:A:877:ASN:ND2	2.44	0.45
1:A:919:ASN:OD1	1:A:920:TYR:N	2.50	0.45
1:A:3773:ARG:HD3	1:A:3815:LYS:HZ3	1.82	0.45
1:A:4242:ILE:HG13	1:A:4989:MET:HE1	1.98	0.45
1:B:915:GLU:O	1:B:918:ARG:HG2	2.17	0.45
1:B:1862:ILE:HA	1:B:1865:MET:HG3	1.99	0.45
1:B:3779:VAL:O	1:B:3783:ILE:HG12	2.17	0.45
1:B:3989:VAL:HG23	1:B:4023:MET:HE3	1.99	0.45
1:C:2331:TYR:C	1:C:2333:ASP:H	2.25	0.45
1:C:3793:MET:O	1:C:3797:THR:HG23	2.17	0.45
1:D:413:GLN:OE1	1:D:437:PRO:HG2	2.17	0.45
1:A:551:LEU:HG	1:A:553:ARG:HH12	1.82	0.45
1:A:4658:ILE:HD13	1:A:4792:LEU:HB3	2.00	0.45
1:B:1859:VAL:HA	1:B:1862:ILE:HG12	1.99	0.45
1:C:49:LEU:HD11	1:C:191:VAL:HB	1.99	0.45
1:C:919:ASN:OD1	1:C:920:TYR:N	2.50	0.45
1:C:2308:GLN:O	1:C:2323:TRP:HA	2.17	0.45
1:C:4865:LYS:H	1:C:4873:ASP:HB2	1.82	0.45
1:D:1089:TYR:CD1	1:D:1152:MET:HG2	2.51	0.45
1:D:2167:ILE:HG13	1:D:2168:VAL:N	2.32	0.45
1:D:2331:TYR:C	1:D:2333:ASP:H	2.25	0.45
1:D:4991:PHE:HE2	1:D:5010:VAL:HG11	1.81	0.45
1:A:748:LEU:HD13	1:A:755:ILE:HG13	1.98	0.44
1:A:1843:LYS:HE2	1:A:1843:LYS:HB2	1.74	0.44
1:A:2149:VAL:O	1:A:2153:MET:HG2	2.17	0.44
1:A:2995:ILE:HD12	1:A:2997:PHE:HB2	1.99	0.44
1:B:632:LEU:HD23	1:B:1666:THR:HG23	1.99	0.44
1:B:710:ASP:OD1	1:B:710:ASP:N	2.47	0.44
1:B:2331:TYR:C	1:B:2333:ASP:H	2.25	0.44
1:B:3805:LEU:HB3	1:B:3812:VAL:HG21	1.98	0.44
1:B:4939:ALA:O	1:B:4942:GLU:HB2	2.17	0.44
1:C:915:GLU:O	1:C:918:ARG:HG2	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1089:TYR:HD1	1:C:1152:MET:HG2	1.82	0.44
1:C:1471:ALA:O	1:C:1472:VAL:C	2.60	0.44
1:C:1580:PHE:CE2	1:C:1592:PRO:HG2	2.51	0.44
1:C:2167:ILE:HG13	1:C:2168:VAL:N	2.32	0.44
1:C:3805:LEU:HB3	1:C:3812:VAL:HG21	1.98	0.44
1:C:3878:ASP:N	1:C:3878:ASP:OD1	2.49	0.44
1:C:4696:ASP:OD1	1:C:4696:ASP:N	2.46	0.44
1:C:4939:ALA:O	1:C:4942:GLU:HB2	2.17	0.44
1:C:5027:CYS:O	1:C:5029:ARG:N	2.50	0.44
1:D:664:PHE:HZ	1:D:791:PHE:CD1	2.34	0.44
1:D:1269:CYS:HG	1:D:1471:ALA:HB1	1.80	0.44
1:D:2142:TYR:CG	1:D:2197:LEU:HD13	2.52	0.44
1:D:4799:SER:HB2	1:D:4812:HIS:HE1	1.82	0.44
1:A:2142:TYR:CG	1:A:2197:LEU:HD13	2.52	0.44
1:A:4181:ILE:HG12	1:A:4193:ILE:HB	1.97	0.44
1:B:551:LEU:HG	1:B:553:ARG:HH12	1.82	0.44
1:B:1459:GLN:H	1:B:1496:TRP:HA	1.81	0.44
1:B:1849:LEU:HD12	1:B:1849:LEU:HA	1.82	0.44
1:B:2242:ILE:HG23	1:B:2242:ILE:O	2.18	0.44
1:B:4679:ARG:HH21	1:B:5017:ARG:NH2	2.14	0.44
1:B:4901:ILE:CD1	1:B:4913:ARG:HH22	2.24	0.44
1:C:1206:GLN:HA	1:C:1227:ALA:O	2.18	0.44
1:C:1727:ARG:O	1:C:1731:LEU:HG	2.16	0.44
1:D:134:ASP:OD1	1:D:134:ASP:N	2.50	0.44
1:D:632:LEU:HD23	1:D:1666:THR:HG23	1.99	0.44
1:D:793:LEU:HD23	1:D:793:LEU:H	1.81	0.44
1:D:1206:GLN:HA	1:D:1227:ALA:O	2.18	0.44
1:D:1466:LEU:HD23	1:D:1466:LEU:HA	1.74	0.44
1:D:1862:ILE:HA	1:D:1865:MET:HG3	1.99	0.44
1:D:2242:ILE:HG23	1:D:2242:ILE:O	2.18	0.44
1:A:2094:LEU:O	1:A:2098:VAL:HG12	2.17	0.44
1:A:2452:ARG:HH22	1:D:175:SER:C	2.23	0.44
1:A:3779:VAL:O	1:A:3783:ILE:HG12	2.17	0.44
1:B:49:LEU:HD11	1:B:191:VAL:HB	1.99	0.44
1:B:520:ASN:O	1:B:524:GLU:HG3	2.18	0.44
1:B:1206:GLN:HA	1:B:1227:ALA:O	2.18	0.44
1:B:2101:MET:HE3	1:B:2101:MET:HB3	1.92	0.44
1:B:2167:ILE:HG13	1:B:2168:VAL:N	2.32	0.44
1:B:2667:THR:HA	1:B:2671:GLU:HB2	2.00	0.44
1:C:794:GLY:N	1:C:798:GLY:HA3	2.32	0.44
1:C:1862:ILE:HA	1:C:1865:MET:HG3	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2149:VAL:O	1:C:2153:MET:HG2	2.17	0.44
1:C:2311:PRO:HA	1:C:2314:LEU:HB3	1.98	0.44
1:C:4799:SER:HA	1:C:4812:HIS:HE1	1.82	0.44
1:C:4799:SER:HB2	1:C:4812:HIS:HE1	1.82	0.44
1:C:4816:ILE:HG22	1:C:4817:ALA:N	2.32	0.44
1:D:748:LEU:HD13	1:D:755:ILE:HG13	1.98	0.44
1:D:1727:ARG:O	1:D:1731:LEU:HG	2.16	0.44
1:D:2667:THR:HA	1:D:2671:GLU:HB2	2.00	0.44
1:D:4807:PHE:O	1:D:4810:ALA:N	2.51	0.44
1:A:1276:THR:CA	1:A:1466:LEU:HD22	2.45	0.44
1:A:1283:LEU:HD13	1:A:1506:GLN:OE1	2.18	0.44
1:A:2667:THR:HA	1:A:2671:GLU:HB2	2.00	0.44
1:A:4093:PHE:CZ	1:A:4097:MET:HE1	2.53	0.44
1:B:101:LEU:HD11	1:B:107:ILE:HD12	1.99	0.44
1:B:273:HIS:NE2	1:B:337:PRO:HA	2.33	0.44
1:B:3793:MET:O	1:B:3797:THR:HG23	2.17	0.44
1:B:4658:ILE:HD13	1:B:4792:LEU:HB3	2.00	0.44
1:B:4983:HIS:NE2	1:B:5027:CYS:SG	2.82	0.44
1:C:101:LEU:HD11	1:C:107:ILE:HD12	1.99	0.44
1:C:1283:LEU:HD13	1:C:1506:GLN:OE1	2.18	0.44
1:C:2112:GLN:O	1:C:2113:SER:OG	2.29	0.44
1:C:4808:PHE:O	1:C:4810:ALA:N	2.51	0.44
1:D:101:LEU:HD11	1:D:107:ILE:HD12	1.99	0.44
1:D:5027:CYS:O	1:D:5029:ARG:N	2.50	0.44
1:A:413:GLN:OE1	1:A:437:PRO:HG2	2.17	0.44
1:A:1276:THR:OG1	1:A:1466:LEU:HD13	2.17	0.44
1:A:2331:TYR:C	1:A:2333:ASP:H	2.25	0.44
1:A:4991:PHE:HE2	1:A:5010:VAL:HG11	1.81	0.44
1:B:2440:MET:N	1:B:2440:MET:SD	2.91	0.44
1:B:4093:PHE:CZ	1:B:4097:MET:HE1	2.53	0.44
1:B:4865:LYS:H	1:B:4873:ASP:HB2	1.82	0.44
1:B:5035:GLN:O	1:B:5036:LEU:HD22	2.16	0.44
1:C:413:GLN:OE1	1:C:437:PRO:HG2	2.17	0.44
1:C:1540:PHE:CE1	1:C:1552:VAL:HG11	2.51	0.44
1:C:4206:GLU:HA	1:C:4211:LYS:HZ2	1.82	0.44
1:C:4763:GLY:O	1:C:4766:THR:OG1	2.26	0.44
1:D:551:LEU:HG	1:D:553:ARG:HH12	1.82	0.44
1:D:650:VAL:O	1:D:777:PHE:N	2.46	0.44
1:D:1078:GLU:HB3	1:D:1237:TRP:CD1	2.53	0.44
1:D:3292:PRO:O	1:D:3294:PRO:HD3	2.18	0.44
1:D:3773:ARG:HD3	1:D:3815:LYS:HZ3	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:4799:SER:HA	1:D:4812:HIS:HE1	1.82	0.44
1:D:4865:LYS:H	1:D:4873:ASP:HB2	1.82	0.44
1:A:2308:GLN:O	1:A:2323:TRP:HA	2.17	0.44
1:A:3827:GLY:HA2	1:A:3830:GLN:HG2	2.00	0.44
1:B:413:GLN:OE1	1:B:437:PRO:HG2	2.17	0.44
1:B:1283:LEU:HD13	1:B:1506:GLN:OE1	2.18	0.44
1:B:3773:ARG:HD3	1:B:3815:LYS:HZ3	1.83	0.44
1:B:3835:LEU:HD22	1:B:3880:PHE:HZ	1.83	0.44
1:C:632:LEU:HD23	1:C:1666:THR:HG23	1.99	0.44
1:C:3292:PRO:O	1:C:3294:PRO:HD3	2.18	0.44
1:D:1859:VAL:HA	1:D:1862:ILE:HG12	1.99	0.44
1:A:1089:TYR:HD1	1:A:1152:MET:HG2	1.82	0.44
1:A:1459:GLN:H	1:A:1496:TRP:HA	1.81	0.44
1:A:3966:THR:HG22	1:A:4026:MET:HA	2.00	0.44
1:A:4206:GLU:HA	1:A:4211:LYS:HZ2	1.82	0.44
1:A:4808:PHE:O	1:A:4810:ALA:N	2.51	0.44
1:B:1457:TYR:O	1:B:1496:TRP:HB2	2.16	0.44
1:B:2186:MET:HE1	1:B:2235:PHE:HA	1.99	0.44
1:B:2308:GLN:O	1:B:2323:TRP:HA	2.17	0.44
1:B:4779:LYS:O	1:B:4783:ILE:HG12	2.17	0.44
1:B:4807:PHE:O	1:B:4810:ALA:N	2.51	0.44
1:C:1716:ILE:CD1	1:C:1843:LYS:HG2	2.46	0.44
1:C:2242:ILE:HG23	1:C:2242:ILE:O	2.18	0.44
1:C:2667:THR:HA	1:C:2671:GLU:HB2	2.00	0.44
1:C:4658:ILE:HD13	1:C:4792:LEU:HB3	2.00	0.44
1:D:273:HIS:NE2	1:D:337:PRO:HA	2.33	0.44
1:D:1172:ASP:OD1	1:D:1172:ASP:N	2.51	0.44
1:D:1453:VAL:HG23	1:D:1454:THR:N	2.32	0.44
1:D:2094:LEU:O	1:D:2098:VAL:HG12	2.17	0.44
1:D:2308:GLN:O	1:D:2323:TRP:HA	2.17	0.44
1:D:2380:ILE:O	1:D:2384:ILE:HG12	2.18	0.44
1:D:3827:GLY:HA2	1:D:3830:GLN:HG2	2.00	0.44
1:A:134:ASP:OD1	1:A:134:ASP:N	2.50	0.44
1:A:1466:LEU:HD23	1:A:1466:LEU:HA	1.74	0.44
1:A:3989:VAL:HG23	1:A:4023:MET:HE3	1.99	0.44
1:B:714:TYR:HB3	1:B:768:PHE:CE2	2.53	0.44
1:C:1089:TYR:CD1	1:C:1152:MET:HG2	2.51	0.44
1:C:2440:MET:SD	1:C:2440:MET:N	2.91	0.44
1:C:4093:PHE:CZ	1:C:4097:MET:HE1	2.53	0.44
1:D:215:THR:OG1	1:D:271:GLY:O	2.30	0.44
1:D:1225:PRO:HG2	1:D:1228:ILE:HD13	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1283:LEU:HD13	1:D:1506:GLN:OE1	2.18	0.44
1:D:3835:LEU:HD22	1:D:3880:PHE:HZ	1.83	0.44
1:D:3989:VAL:HG23	1:D:4023:MET:HE3	1.99	0.44
1:D:4779:LYS:O	1:D:4783:ILE:HG12	2.17	0.44
1:A:520:ASN:O	1:A:524:GLU:HG3	2.18	0.44
1:A:714:TYR:HB3	1:A:768:PHE:CE2	2.53	0.44
1:A:2186:MET:HE1	1:A:2235:PHE:HA	1.99	0.44
1:A:2357:LEU:HB3	1:A:2364:PHE:CZ	2.53	0.44
1:B:721:LEU:HD22	1:B:768:PHE:CZ	2.53	0.44
1:B:1078:GLU:HB3	1:B:1237:TRP:CD1	2.53	0.44
1:B:1246:GLU:OE2	1:B:1601:MET:HG3	2.18	0.44
1:B:1276:THR:OG1	1:B:1466:LEU:HD13	2.17	0.44
1:B:1276:THR:CA	1:B:1466:LEU:HD22	2.45	0.44
1:B:4808:PHE:O	1:B:4810:ALA:N	2.51	0.44
1:C:273:HIS:NE2	1:C:337:PRO:HA	2.33	0.44
1:D:1246:GLU:OE2	1:D:1601:MET:HG3	2.18	0.44
1:D:2186:MET:HE1	1:D:2235:PHE:HA	1.99	0.44
1:D:3215:ALA:O	1:D:3218:VAL:HG12	2.18	0.44
1:D:3966:THR:HG22	1:D:4026:MET:HA	2.00	0.44
1:D:4047:MET:HE3	1:D:4047:MET:HB3	1.92	0.44
1:A:1862:ILE:HA	1:A:1865:MET:HG3	1.99	0.43
1:A:3835:LEU:HD22	1:A:3880:PHE:HZ	1.83	0.43
1:A:4779:LYS:O	1:A:4783:ILE:HG12	2.17	0.43
1:A:4816:ILE:HG22	1:A:4817:ALA:N	2.32	0.43
1:A:4939:ALA:O	1:A:4942:GLU:HB2	2.17	0.43
1:B:3966:THR:HG22	1:B:4026:MET:HA	2.00	0.43
1:B:5027:CYS:O	1:B:5029:ARG:N	2.50	0.43
1:C:134:ASP:OD1	1:C:134:ASP:N	2.50	0.43
1:C:551:LEU:HG	1:C:553:ARG:HH12	1.82	0.43
1:D:2202:GLY:HA2	1:D:2204:HIS:CE1	2.53	0.43
1:D:4658:ILE:HD13	1:D:4792:LEU:HB3	2.00	0.43
1:A:49:LEU:HD11	1:A:191:VAL:HB	1.99	0.43
1:A:3292:PRO:O	1:A:3294:PRO:HD3	2.18	0.43
1:B:134:ASP:N	1:B:134:ASP:OD1	2.50	0.43
1:B:1540:PHE:CE1	1:B:1552:VAL:HG11	2.51	0.43
1:B:2142:TYR:CG	1:B:2197:LEU:HD13	2.52	0.43
1:B:2159:LEU:HD22	1:B:2201:LEU:HD23	2.00	0.43
1:B:4799:SER:HA	1:B:4812:HIS:HE1	1.82	0.43
1:C:2142:TYR:CG	1:C:2197:LEU:HD13	2.52	0.43
1:C:4807:PHE:O	1:C:4810:ALA:N	2.51	0.43
1:C:4808:PHE:C	1:C:4810:ALA:N	2.68	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:520:ASN:O	1:D:524:GLU:HG3	2.18	0.43
1:D:2357:LEU:HB3	1:D:2364:PHE:CZ	2.53	0.43
1:D:3725:TYR:HA	1:D:3728:ILE:HG12	2.00	0.43
1:A:1859:VAL:HA	1:A:1862:ILE:HG12	1.99	0.43
1:A:2202:GLY:HA2	1:A:2204:HIS:CE1	2.53	0.43
1:A:2242:ILE:HG23	1:A:2242:ILE:O	2.18	0.43
1:B:3292:PRO:O	1:B:3294:PRO:HD3	2.18	0.43
1:B:4816:ILE:HG22	1:B:4817:ALA:N	2.32	0.43
1:C:1271:ARG:NH2	1:C:1470:ARG:O	2.45	0.43
1:C:2186:MET:HE1	1:C:2235:PHE:HA	1.99	0.43
1:C:4772:ASP:N	1:C:4772:ASP:OD1	2.51	0.43
1:D:721:LEU:HD22	1:D:768:PHE:CZ	2.53	0.43
1:D:1276:THR:OG1	1:D:1466:LEU:HD13	2.17	0.43
1:D:1471:ALA:O	1:D:1472:VAL:C	2.60	0.43
1:A:1078:GLU:HB3	1:A:1237:TRP:CD1	2.53	0.43
1:A:1221:GLU:OE2	1:A:1221:GLU:N	2.52	0.43
1:A:2159:LEU:HD22	1:A:2201:LEU:HD23	2.00	0.43
1:A:2380:ILE:O	1:A:2384:ILE:HG12	2.18	0.43
1:A:2440:MET:N	1:A:2440:MET:SD	2.91	0.43
1:A:3215:ALA:O	1:A:3218:VAL:HG12	2.18	0.43
1:A:3878:ASP:N	1:A:3878:ASP:OD1	2.49	0.43
1:B:1089:TYR:HD1	1:B:1152:MET:HG2	1.82	0.43
1:B:1225:PRO:HG2	1:B:1228:ILE:HD13	2.00	0.43
1:B:2149:VAL:O	1:B:2153:MET:HG2	2.17	0.43
1:B:4989:MET:O	1:B:4993:MET:HG3	2.19	0.43
1:C:3966:THR:HG22	1:C:4026:MET:HA	2.00	0.43
1:D:223:PHE:HD1	1:D:230:CYS:HB3	1.84	0.43
1:D:2438:PRO:HB3	1:D:2453:ILE:HB	2.00	0.43
1:D:4089:SER:OG	1:D:4090:LYS:N	2.52	0.43
1:D:4808:PHE:O	1:D:4810:ALA:N	2.51	0.43
1:A:721:LEU:HD22	1:A:768:PHE:CZ	2.53	0.43
1:A:794:GLY:N	1:A:798:GLY:HA3	2.32	0.43
1:A:2204:HIS:O	1:A:2208:MET:HG3	2.19	0.43
1:A:3725:TYR:HA	1:A:3728:ILE:HG12	2.00	0.43
1:B:3827:GLY:HA2	1:B:3830:GLN:HG2	2.00	0.43
1:B:3934:TYR:CE2	1:B:3994:HIS:HE1	2.36	0.43
1:B:4819:GLY:O	1:B:4820:VAL:C	2.61	0.43
1:C:1859:VAL:HA	1:C:1862:ILE:HG12	1.99	0.43
1:C:2101:MET:HE3	1:C:2101:MET:HB3	1.92	0.43
1:C:2159:LEU:HD22	1:C:2201:LEU:HD23	2.00	0.43
1:C:3934:TYR:CE2	1:C:3994:HIS:HE1	2.36	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3989:VAL:HG23	1:C:4023:MET:HE3	1.99	0.43
1:C:4717:ASP:OD2	1:C:4723:LYS:NZ	2.50	0.43
1:D:714:TYR:HB3	1:D:768:PHE:CE2	2.53	0.43
1:D:2204:HIS:O	1:D:2208:MET:HG3	2.19	0.43
1:D:2440:MET:N	1:D:2440:MET:SD	2.91	0.43
1:D:4093:PHE:CZ	1:D:4097:MET:HE1	2.53	0.43
1:A:273:HIS:NE2	1:A:337:PRO:HA	2.33	0.43
1:A:1206:GLN:HA	1:A:1227:ALA:O	2.18	0.43
1:A:2271:THR:CG2	1:A:2272:PRO:HD2	2.49	0.43
1:A:4865:LYS:H	1:A:4873:ASP:HB2	1.82	0.43
1:A:5027:CYS:O	1:A:5029:ARG:N	2.50	0.43
1:B:2204:HIS:O	1:B:2208:MET:HG3	2.19	0.43
1:B:2357:LEU:HB3	1:B:2364:PHE:CZ	2.53	0.43
1:B:2380:ILE:O	1:B:2384:ILE:HG12	2.18	0.43
1:C:4983:HIS:NE2	1:C:5027:CYS:SG	2.82	0.43
1:C:4989:MET:O	1:C:4993:MET:HG3	2.19	0.43
1:D:49:LEU:HD11	1:D:191:VAL:HB	1.99	0.43
1:D:1483:VAL:HB	1:D:1575:LEU:HD22	2.00	0.43
1:D:4816:ILE:HG22	1:D:4817:ALA:N	2.32	0.43
1:D:4989:MET:O	1:D:4993:MET:HG3	2.19	0.43
1:A:632:LEU:HD23	1:A:1666:THR:HG23	1.99	0.43
1:A:1246:GLU:OE2	1:A:1601:MET:HG3	2.18	0.43
1:A:1607:ARG:NH1	1:A:1610:ASN:OD1	2.52	0.43
1:A:1846:SER:O	1:A:1847:THR:C	2.54	0.43
1:A:2255:SER:HB2	1:A:2297:LYS:HZ3	1.84	0.43
1:A:4807:PHE:O	1:A:4810:ALA:N	2.51	0.43
1:B:1607:ARG:NH1	1:B:1610:ASN:OD1	2.52	0.43
1:B:3891:LEU:HD23	1:B:3891:LEU:HA	1.89	0.43
1:C:1225:PRO:HG2	1:C:1228:ILE:HD13	2.00	0.43
1:C:1607:ARG:NH1	1:C:1610:ASN:OD1	2.52	0.43
1:C:1653:LEU:HD13	1:C:1660:GLN:HA	2.00	0.43
1:C:3215:ALA:O	1:C:3218:VAL:HG12	2.18	0.43
1:C:3603:LEU:HA	1:C:3607:GLU:OE2	2.19	0.43
1:C:3835:LEU:HD22	1:C:3880:PHE:HZ	1.83	0.43
1:A:223:PHE:HD1	1:A:230:CYS:HB3	1.84	0.43
1:A:1225:PRO:HG2	1:A:1228:ILE:HD13	2.00	0.43
1:A:3603:LEU:HA	1:A:3607:GLU:OE2	2.19	0.43
1:A:4075:GLU:OE1	1:D:4736:ARG:NH2	2.52	0.43
1:A:4736:ARG:NH2	1:B:4075:GLU:OE1	2.52	0.43
1:B:921:ASN:C	1:B:921:ASN:HD22	2.27	0.43
1:B:2271:THR:CG2	1:B:2272:PRO:HD2	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:714:TYR:HB3	1:C:768:PHE:CE2	2.53	0.43
1:C:4736:ARG:NH2	1:D:4075:GLU:OE1	2.52	0.43
1:D:2271:THR:CG2	1:D:2272:PRO:HD2	2.49	0.43
1:D:4772:ASP:OD1	1:D:4772:ASP:N	2.51	0.43
1:A:101:LEU:HD11	1:A:107:ILE:HD12	1.99	0.43
1:A:645:ARG:HD2	1:A:778:PHE:HD2	1.83	0.43
1:B:635:THR:HG21	1:B:1637:MET:CG	2.49	0.43
1:B:1087:ARG:HG3	1:B:1223:PHE:HA	2.01	0.43
1:B:2202:GLY:HA2	1:B:2204:HIS:CE1	2.53	0.43
1:B:3215:ALA:O	1:B:3218:VAL:HG12	2.18	0.43
1:B:3878:ASP:OD1	1:B:3878:ASP:N	2.49	0.43
1:C:520:ASN:O	1:C:524:GLU:HG3	2.18	0.43
1:C:1246:GLU:OE2	1:C:1601:MET:HG3	2.18	0.43
1:C:2204:HIS:O	1:C:2208:MET:HG3	2.19	0.43
1:C:2210:VAL:O	1:C:2214:VAL:HG13	2.19	0.43
1:C:3827:GLY:HA2	1:C:3830:GLN:HG2	2.00	0.43
1:D:3205:PHE:C	1:D:3208:PRO:HD2	2.44	0.43
1:D:3934:TYR:CE2	1:D:3994:HIS:HE1	2.36	0.43
1:A:921:ASN:C	1:A:921:ASN:HD22	2.27	0.43
1:A:1286:MET:N	1:A:1286:MET:SD	2.92	0.43
1:A:3577:ARG:NH2	1:D:1208:VAL:HG23	2.34	0.43
1:C:874:LEU:O	1:C:878:ILE:HG12	2.19	0.43
1:C:1078:GLU:HB3	1:C:1237:TRP:CD1	2.53	0.43
1:C:1096:THR:OG1	1:C:1198:GLN:OE1	2.25	0.43
1:C:1172:ASP:OD1	1:C:1172:ASP:N	2.51	0.43
1:C:1468:LYS:HE2	1:C:1468:LYS:HB3	1.90	0.43
1:C:2357:LEU:HB3	1:C:2364:PHE:CZ	2.53	0.43
1:D:1115:LEU:HD23	1:D:1123:VAL:HG21	2.01	0.43
1:D:3049:LEU:HD12	1:D:3051:ARG:NE	2.34	0.43
1:A:1087:ARG:HG3	1:A:1223:PHE:HA	2.01	0.42
1:A:2296:GLU:HA	1:A:2299:VAL:HG22	2.01	0.42
1:A:2438:PRO:HD3	1:A:2457:LEU:HD22	2.01	0.42
1:A:3934:TYR:CE2	1:A:3994:HIS:HE1	2.36	0.42
1:B:102:LEU:HB2	1:B:105:HIS:HD2	1.83	0.42
1:B:210:GLU:HG3	1:B:337:PRO:HB3	2.01	0.42
1:B:494:LEU:HD23	1:B:494:LEU:O	2.19	0.42
1:B:2296:GLU:HA	1:B:2299:VAL:HG22	2.01	0.42
1:B:3049:LEU:HD12	1:B:3051:ARG:NE	2.34	0.42
1:B:3603:LEU:HA	1:B:3607:GLU:OE2	2.19	0.42
1:B:4687:TYR:OH	1:B:4699:GLY:O	2.36	0.42
1:C:223:PHE:HD1	1:C:230:CYS:HB3	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2271:THR:CG2	1:C:2272:PRO:HD2	2.49	0.42
1:C:2296:GLU:HA	1:C:2299:VAL:HG22	2.01	0.42
1:C:2342:ASN:OD1	1:C:2342:ASN:N	2.51	0.42
1:C:3205:PHE:C	1:C:3208:PRO:HD2	2.44	0.42
1:D:794:GLY:N	1:D:798:GLY:HA3	2.32	0.42
1:D:873:LYS:O	1:D:877:ASN:ND2	2.44	0.42
1:D:1087:ARG:HG3	1:D:1223:PHE:HA	2.01	0.42
1:A:148:TRP:CZ3	1:A:173:SER:HB2	2.54	0.42
1:A:650:VAL:O	1:A:777:PHE:N	2.46	0.42
1:A:688:LEU:H	1:A:688:LEU:HD23	1.85	0.42
1:A:1653:LEU:HD13	1:A:1660:GLN:HA	2.00	0.42
1:A:2238:TYR:O	1:A:2242:ILE:HG22	2.20	0.42
1:A:4799:SER:HB2	1:A:4812:HIS:CE1	2.54	0.42
1:B:874:LEU:O	1:B:878:ILE:HG12	2.19	0.42
1:B:4799:SER:HB2	1:B:4812:HIS:CE1	2.54	0.42
1:C:350:HIS:CD2	1:C:352:ALA:H	2.34	0.42
1:C:721:LEU:HD22	1:C:768:PHE:CZ	2.53	0.42
1:C:2438:PRO:HB3	1:C:2453:ILE:HB	2.00	0.42
1:C:4185:GLY:HA3	1:C:5009:TYR:CE2	2.54	0.42
1:D:210:GLU:HG3	1:D:337:PRO:HB3	2.01	0.42
1:D:2159:LEU:HD22	1:D:2201:LEU:HD23	2.00	0.42
1:D:2296:GLU:HA	1:D:2299:VAL:HG22	2.01	0.42
1:D:2438:PRO:HD3	1:D:2457:LEU:HD22	2.01	0.42
1:D:4799:SER:HB2	1:D:4812:HIS:CE1	2.54	0.42
1:D:4819:GLY:O	1:D:4820:VAL:C	2.61	0.42
1:A:2167:ILE:HG13	1:A:2168:VAL:N	2.32	0.42
1:A:2438:PRO:HB3	1:A:2453:ILE:HB	2.00	0.42
1:B:551:LEU:O	1:B:553:ARG:NH2	2.52	0.42
1:B:1286:MET:N	1:B:1286:MET:SD	2.92	0.42
1:B:2210:VAL:O	1:B:2214:VAL:HG13	2.19	0.42
1:B:2342:ASN:OD1	1:B:2342:ASN:N	2.51	0.42
1:C:210:GLU:HG3	1:C:337:PRO:HB3	2.01	0.42
1:C:926:GLY:O	1:C:929:LEU:HG	2.19	0.42
1:C:1286:MET:SD	1:C:1286:MET:N	2.92	0.42
1:C:1601:MET:HE3	1:C:1602:PRO:HD2	2.01	0.42
1:C:2202:GLY:HA2	1:C:2204:HIS:CE1	2.53	0.42
1:C:2380:ILE:O	1:C:2384:ILE:HG12	2.18	0.42
1:C:2438:PRO:HD3	1:C:2457:LEU:HD22	2.01	0.42
1:D:1653:LEU:HD13	1:D:1660:GLN:HA	2.00	0.42
1:D:1829:PRO:C	1:D:1830:VAL:O	2.56	0.42
1:D:2646:ASN:O	1:D:2688:HIS:NE2	2.47	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:210:GLU:HG3	1:A:337:PRO:HB3	2.01	0.42
1:A:551:LEU:O	1:A:553:ARG:NH2	2.52	0.42
1:A:874:LEU:O	1:A:878:ILE:HG12	2.19	0.42
1:A:1154:ASP:OD1	1:A:1156:THR:OG1	2.37	0.42
1:A:3205:PHE:C	1:A:3208:PRO:HD2	2.44	0.42
1:A:3572:GLN:NE2	1:D:1228:ILE:HG13	2.33	0.42
1:A:4089:SER:OG	1:A:4090:LYS:N	2.52	0.42
1:B:1208:VAL:HG23	1:C:3577:ARG:NH2	2.34	0.42
1:B:1221:GLU:OE2	1:B:1221:GLU:N	2.52	0.42
1:C:293:LEU:H	1:C:311:ALA:HB1	1.85	0.42
1:C:494:LEU:O	1:C:494:LEU:HD23	2.19	0.42
1:C:1453:VAL:HG23	1:C:1454:THR:N	2.32	0.42
1:C:1815:LEU:HD23	1:C:1815:LEU:HA	1.86	0.42
1:D:350:HIS:CD2	1:D:352:ALA:H	2.34	0.42
1:D:2210:VAL:O	1:D:2214:VAL:HG13	2.19	0.42
1:A:340:LYS:HB2	1:A:343:GLU:HB3	2.02	0.42
1:A:635:THR:HG21	1:A:1637:MET:CG	2.49	0.42
1:A:3049:LEU:HD12	1:A:3051:ARG:NE	2.34	0.42
1:A:4047:MET:HE3	1:A:4047:MET:HB3	1.92	0.42
1:A:4811:ALA:C	1:A:4813:LEU:N	2.78	0.42
1:A:4989:MET:O	1:A:4993:MET:HG3	2.19	0.42
1:B:223:PHE:HD1	1:B:230:CYS:HB3	1.84	0.42
1:B:293:LEU:H	1:B:311:ALA:HB1	1.85	0.42
1:B:643:SER:OG	1:B:782:SER:OG	2.37	0.42
1:B:650:VAL:O	1:B:777:PHE:N	2.46	0.42
1:B:794:GLY:N	1:B:798:GLY:HA3	2.32	0.42
1:B:3946:GLN:OE1	1:B:3949:ARG:NH1	2.53	0.42
1:B:4772:ASP:OD1	1:B:4772:ASP:N	2.51	0.42
1:B:4923:PHE:O	1:B:4928:LEU:HD23	2.20	0.42
1:C:615:ARG:NE	1:C:2168:VAL:HG21	2.35	0.42
1:C:4687:TYR:OH	1:C:4699:GLY:O	2.36	0.42
1:D:874:LEU:O	1:D:878:ILE:HG12	2.19	0.42
1:D:1601:MET:HE3	1:D:1602:PRO:HD2	2.01	0.42
1:D:1607:ARG:NH1	1:D:1610:ASN:OD1	2.52	0.42
1:D:3946:GLN:OE1	1:D:3949:ARG:NH1	2.53	0.42
1:A:615:ARG:NE	1:A:2168:VAL:HG21	2.35	0.42
1:A:1208:VAL:HG23	1:B:3577:ARG:NH2	2.34	0.42
1:A:1269:CYS:HG	1:A:1471:ALA:HB1	1.83	0.42
1:A:1483:VAL:HB	1:A:1575:LEU:HD22	2.00	0.42
1:A:1815:LEU:HD23	1:A:1815:LEU:HA	1.86	0.42
1:A:1829:PRO:C	1:A:1830:VAL:O	2.56	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4819:GLY:O	1:A:4820:VAL:C	2.61	0.42
1:A:4923:PHE:O	1:A:4928:LEU:HD23	2.20	0.42
1:B:1269:CYS:HG	1:B:1471:ALA:HB1	1.83	0.42
1:B:1483:VAL:HB	1:B:1575:LEU:HD22	2.00	0.42
1:B:2438:PRO:HD3	1:B:2457:LEU:HD22	2.01	0.42
1:B:3205:PHE:C	1:B:3208:PRO:HD2	2.44	0.42
1:B:4717:ASP:OD2	1:B:4723:LYS:NZ	2.50	0.42
1:C:1208:VAL:HG23	1:D:3577:ARG:NH2	2.34	0.42
1:C:1221:GLU:OE2	1:C:1221:GLU:N	2.52	0.42
1:C:1483:VAL:HB	1:C:1575:LEU:HD22	2.00	0.42
1:C:2238:TYR:O	1:C:2242:ILE:HG22	2.20	0.42
1:C:3725:TYR:HA	1:C:3728:ILE:HG12	2.00	0.42
1:C:4089:SER:OG	1:C:4090:LYS:N	2.52	0.42
1:C:4650:HIS:HE2	1:C:4812:HIS:CE1	2.38	0.42
1:D:340:LYS:HB2	1:D:343:GLU:HB3	2.02	0.42
1:D:721:LEU:N	1:D:728:ARG:O	2.53	0.42
1:D:926:GLY:O	1:D:929:LEU:HG	2.19	0.42
1:D:1286:MET:N	1:D:1286:MET:SD	2.92	0.42
1:D:2248:ARG:HA	1:D:2251:PHE:HB3	2.01	0.42
1:D:4911:LEU:HA	1:D:4914:VAL:HG12	2.02	0.42
1:A:721:LEU:N	1:A:728:ARG:O	2.53	0.42
1:A:926:GLY:O	1:A:929:LEU:HG	2.19	0.42
1:A:1674:CYS:SG	1:A:1718:ILE:HD13	2.60	0.42
1:B:615:ARG:NE	1:B:2168:VAL:HG21	2.35	0.42
1:B:636:ASN:N	1:B:636:ASN:OD1	2.53	0.42
1:B:1053:ILE:HD12	1:B:1053:ILE:HA	1.92	0.42
1:B:1601:MET:HE3	1:B:1602:PRO:HD2	2.01	0.42
1:B:1653:LEU:HD13	1:B:1660:GLN:HA	2.00	0.42
1:B:2438:PRO:HB3	1:B:2453:ILE:HB	2.00	0.42
1:B:4185:GLY:HA3	1:B:5009:TYR:CE2	2.54	0.42
1:C:102:LEU:HB2	1:C:105:HIS:HD2	1.83	0.42
1:C:921:ASN:C	1:C:921:ASN:HD22	2.27	0.42
1:C:3049:LEU:HD12	1:C:3051:ARG:NE	2.34	0.42
1:C:3761:GLN:C	1:C:3763:LEU:H	2.27	0.42
1:D:921:ASN:C	1:D:921:ASN:HD22	2.27	0.42
1:D:3603:LEU:HA	1:D:3607:GLU:OE2	2.19	0.42
1:A:1115:LEU:HD23	1:A:1123:VAL:HG21	2.01	0.42
1:B:1271:ARG:NH2	1:B:1470:ARG:O	2.45	0.42
1:B:2198:MET:HE2	1:B:2198:MET:N	2.35	0.42
1:C:1269:CYS:SG	1:C:1270:LEU:N	2.93	0.42
1:C:1457:TYR:OH	1:C:1643:GLU:O	2.32	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3773:ARG:HD3	1:C:3815:LYS:HZ3	1.85	0.42
1:C:4242:ILE:HG13	1:C:4989:MET:CE	2.50	0.42
1:D:1269:CYS:SG	1:D:1270:LEU:N	2.93	0.42
1:D:1276:THR:CA	1:D:1466:LEU:HD22	2.45	0.42
1:D:2342:ASN:OD1	1:D:2342:ASN:N	2.51	0.42
1:A:293:LEU:H	1:A:311:ALA:HB1	1.85	0.42
1:A:1119:GLU:H	1:A:1119:GLU:CD	2.28	0.42
1:A:2210:VAL:O	1:A:2214:VAL:HG13	2.19	0.42
1:A:4650:HIS:HE2	1:A:4812:HIS:CE1	2.38	0.42
1:A:4888:TYR:CD1	1:D:4914:VAL:HG23	2.55	0.42
1:A:4914:VAL:HG23	1:B:4888:TYR:CD1	2.55	0.42
1:B:148:TRP:CZ3	1:B:173:SER:HB2	2.54	0.42
1:B:571:SER:O	1:B:574:VAL:HG12	2.20	0.42
1:B:2331:TYR:O	1:B:2332:LEU:HB2	2.20	0.42
1:B:3725:TYR:HA	1:B:3728:ILE:HG12	2.00	0.42
1:B:3761:GLN:C	1:B:3763:LEU:H	2.27	0.42
1:C:340:LYS:HB2	1:C:343:GLU:HB3	2.02	0.42
1:C:1154:ASP:OD1	1:C:1156:THR:OG1	2.37	0.42
1:C:1674:CYS:SG	1:C:1718:ILE:HD13	2.60	0.42
1:C:2138:LEU:HD23	1:C:2138:LEU:HA	1.82	0.42
1:C:2198:MET:N	1:C:2198:MET:HE2	2.35	0.42
1:C:2248:ARG:HA	1:C:2251:PHE:HB3	2.01	0.42
1:C:3218:VAL:HG22	1:C:3219:TYR:H	1.85	0.42
1:C:3927:GLN:NE2	1:C:3928:GLU:HG3	2.35	0.42
1:D:102:LEU:HB2	1:D:105:HIS:HD2	1.83	0.42
1:D:2238:TYR:O	1:D:2242:ILE:HG22	2.20	0.42
1:D:3144:PHE:O	1:D:3147:ILE:HG22	2.20	0.42
1:D:3927:GLN:NE2	1:D:3928:GLU:HG3	2.35	0.42
1:D:4185:GLY:HA3	1:D:5009:TYR:CE2	2.54	0.42
1:D:4923:PHE:O	1:D:4928:LEU:HD23	2.20	0.42
1:A:2418:LEU:O	1:A:2422:ILE:HG12	2.20	0.42
1:A:4242:ILE:HG13	1:A:4989:MET:CE	2.50	0.42
1:B:3218:VAL:HG22	1:B:3219:TYR:H	1.85	0.42
1:B:4736:ARG:NH2	1:C:4075:GLU:OE1	2.52	0.42
1:C:721:LEU:N	1:C:728:ARG:O	2.53	0.42
1:C:3946:GLN:OE1	1:C:3949:ARG:NH1	2.53	0.42
1:D:215:THR:OG1	1:D:272:SER:O	2.38	0.42
1:D:545:ASP:HA	1:D:548:VAL:HG12	2.02	0.42
1:D:636:ASN:N	1:D:636:ASN:OD1	2.53	0.42
1:D:1843:LYS:HE2	1:D:1843:LYS:HB2	1.74	0.42
1:A:545:ASP:HA	1:A:548:VAL:HG12	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2198:MET:HE2	1:A:2198:MET:N	2.35	0.41
1:A:3218:VAL:HG22	1:A:3219:TYR:H	1.85	0.41
1:A:4185:GLY:HA3	1:A:5009:TYR:CE2	2.54	0.41
1:B:215:THR:OG1	1:B:272:SER:O	2.38	0.41
1:B:688:LEU:HD23	1:B:688:LEU:H	1.85	0.41
1:B:721:LEU:N	1:B:728:ARG:O	2.53	0.41
1:B:926:GLY:O	1:B:929:LEU:HG	2.19	0.41
1:B:1728:ARG:HA	1:B:1731:LEU:CD1	2.50	0.41
1:B:2248:ARG:HA	1:B:2251:PHE:HB3	2.01	0.41
1:B:2255:SER:HB2	1:B:2297:LYS:HZ1	1.85	0.41
1:B:4860:ARG:CZ	1:C:4582:VAL:HG11	2.50	0.41
1:B:4914:VAL:HG23	1:C:4888:TYR:CD1	2.55	0.41
1:C:636:ASN:N	1:C:636:ASN:OD1	2.53	0.41
1:C:1851:MET:HE2	1:C:1851:MET:HB2	1.67	0.41
1:C:4799:SER:HB2	1:C:4812:HIS:CE1	2.54	0.41
1:C:4860:ARG:CZ	1:D:4582:VAL:HG11	2.50	0.41
1:D:29:LEU:H	1:D:29:LEU:HD23	1.85	0.41
1:D:494:LEU:O	1:D:494:LEU:HD23	2.19	0.41
1:D:645:ARG:HD2	1:D:778:PHE:HD2	1.83	0.41
1:D:719:LEU:O	1:D:720:HIS:CG	2.73	0.41
1:D:1835:GLU:C	1:D:1837:GLN:N	2.68	0.41
1:D:2331:TYR:O	1:D:2332:LEU:HB2	2.20	0.41
1:D:2953:LYS:HZ1	1:D:3026:GLY:H	1.68	0.41
1:D:3752:SER:HB3	1:D:3755:GLU:HB2	2.02	0.41
1:D:4650:HIS:HE2	1:D:4812:HIS:CE1	2.38	0.41
1:D:4824:ARG:HA	1:D:4824:ARG:HD2	1.88	0.41
1:A:1634:LEU:HD12	1:A:1634:LEU:HA	1.93	0.41
1:A:3144:PHE:O	1:A:3147:ILE:HG22	2.20	0.41
1:A:4241:THR:HG22	1:A:4245:MET:HE3	2.03	0.41
1:A:4911:LEU:HA	1:A:4914:VAL:HG12	2.02	0.41
1:B:340:LYS:HB2	1:B:343:GLU:HB3	2.02	0.41
1:B:579:GLN:H	1:B:582:HIS:CD2	2.38	0.41
1:B:1119:GLU:H	1:B:1119:GLU:CD	2.28	0.41
1:B:1726:SER:O	1:B:1730:MET:HG2	2.20	0.41
1:B:1829:PRO:O	1:B:1830:VAL:C	2.63	0.41
1:B:2418:LEU:O	1:B:2422:ILE:HG12	2.20	0.41
1:B:2583:LEU:H	1:B:2583:LEU:HD23	1.85	0.41
1:B:3752:SER:HB3	1:B:3755:GLU:HB2	2.02	0.41
1:B:4242:ILE:HG13	1:B:4989:MET:CE	2.50	0.41
1:C:215:THR:OG1	1:C:272:SER:O	2.38	0.41
1:C:1087:ARG:HG3	1:C:1223:PHE:HA	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3844:LEU:HD22	1:C:3933:PHE:CZ	2.56	0.41
1:C:4911:LEU:HA	1:C:4914:VAL:HG12	2.02	0.41
1:D:148:TRP:CZ3	1:D:173:SER:HB2	2.54	0.41
1:D:551:LEU:O	1:D:553:ARG:NH2	2.52	0.41
1:D:1116:GLY:HA3	1:D:1132:TRP:HB3	2.03	0.41
1:D:1839:VAL:C	1:D:1841:VAL:H	2.28	0.41
1:D:3218:VAL:HG22	1:D:3219:TYR:H	1.85	0.41
1:D:3761:GLN:C	1:D:3763:LEU:H	2.27	0.41
1:A:1053:ILE:HD12	1:A:1053:ILE:HA	1.92	0.41
1:A:1478:ASP:OD1	1:A:1479:GLU:N	2.49	0.41
1:A:1599:MET:HE1	1:A:1601:MET:SD	2.61	0.41
1:A:3946:GLN:OE1	1:A:3949:ARG:NH1	2.53	0.41
1:A:4052:SER:O	1:A:4056:GLU:HG3	2.21	0.41
1:B:1269:CYS:SG	1:B:1270:LEU:N	2.93	0.41
1:B:4052:SER:O	1:B:4056:GLU:HG3	2.21	0.41
1:B:4078:GLN:O	1:B:4081:VAL:HG22	2.21	0.41
1:C:148:TRP:CZ3	1:C:173:SER:HB2	2.54	0.41
1:C:719:LEU:O	1:C:720:HIS:CG	2.73	0.41
1:C:2155:LEU:HD21	1:C:2198:MET:SD	2.60	0.41
1:D:310:LYS:O	1:D:350:HIS:NE2	2.47	0.41
1:D:579:GLN:H	1:D:582:HIS:CD2	2.38	0.41
1:D:1674:CYS:SG	1:D:1718:ILE:HD13	2.60	0.41
1:D:2155:LEU:HD21	1:D:2198:MET:SD	2.60	0.41
1:D:3844:LEU:HD22	1:D:3933:PHE:CZ	2.56	0.41
1:D:4242:ILE:HG13	1:D:4989:MET:CE	2.50	0.41
1:D:5035:GLN:HG3	1:D:5036:LEU:HD23	2.02	0.41
1:A:1116:GLY:HA3	1:A:1132:TRP:HB3	2.03	0.41
1:A:1540:PHE:CE1	1:A:1552:VAL:HG11	2.51	0.41
1:A:1601:MET:HE3	1:A:1602:PRO:HD2	2.01	0.41
1:A:2552:ARG:NH1	1:A:2556:LEU:HD23	2.36	0.41
1:A:2583:LEU:H	1:A:2583:LEU:HD23	1.85	0.41
1:A:3752:SER:HB3	1:A:3755:GLU:HB2	2.02	0.41
1:A:4582:VAL:HG11	1:D:4860:ARG:CZ	2.50	0.41
1:B:645:ARG:HD2	1:B:778:PHE:HD2	1.83	0.41
1:B:1468:LYS:C	1:B:1469:VAL:CG2	2.93	0.41
1:B:1489:CYS:SG	1:B:1490:SER:N	2.94	0.41
1:B:2238:TYR:O	1:B:2242:ILE:HG22	2.20	0.41
1:B:3717:ASP:OD1	1:B:3717:ASP:N	2.45	0.41
1:B:4650:HIS:HE2	1:B:4812:HIS:CE1	2.38	0.41
1:C:1726:SER:O	1:C:1730:MET:HG2	2.20	0.41
1:C:5035:GLN:HG3	1:C:5036:LEU:HD23	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:102:LEU:HB2	1:A:105:HIS:HD2	1.83	0.41
1:A:215:THR:OG1	1:A:272:SER:O	2.38	0.41
1:A:494:LEU:O	1:A:494:LEU:HD23	2.19	0.41
1:A:579:GLN:H	1:A:582:HIS:CD2	2.38	0.41
1:A:636:ASN:N	1:A:636:ASN:OD1	2.53	0.41
1:A:1457:TYR:OH	1:A:1643:GLU:O	2.32	0.41
1:A:4078:GLN:O	1:A:4081:VAL:HG22	2.21	0.41
1:B:29:LEU:H	1:B:29:LEU:HD23	1.85	0.41
1:B:1115:LEU:HD23	1:B:1123:VAL:HG21	2.01	0.41
1:B:1116:GLY:HA3	1:B:1132:TRP:HB3	2.03	0.41
1:B:1773:PRO:HA	1:B:1774:PRO:HD3	1.97	0.41
1:B:2155:LEU:HD21	1:B:2198:MET:SD	2.60	0.41
1:C:1276:THR:CA	1:C:1466:LEU:HD22	2.45	0.41
1:C:2583:LEU:HD23	1:C:2583:LEU:H	1.85	0.41
1:C:3317:GLY:O	1:C:3320:LEU:HG	2.21	0.41
1:D:571:SER:O	1:D:574:VAL:HG12	2.20	0.41
1:D:1154:ASP:OD1	1:D:1156:THR:OG1	2.37	0.41
1:D:1489:CYS:SG	1:D:1490:SER:N	2.94	0.41
1:D:1815:LEU:HD23	1:D:1815:LEU:HA	1.86	0.41
1:A:516:LYS:O	1:A:520:ASN:ND2	2.34	0.41
1:A:1839:VAL:C	1:A:1841:VAL:H	2.28	0.41
1:A:3927:GLN:NE2	1:A:3928:GLU:HG3	2.35	0.41
1:A:4650:HIS:NE2	1:A:4812:HIS:ND1	2.68	0.41
1:B:565:TYR:CE1	1:B:569:ILE:HD11	2.56	0.41
1:B:1100:MET:O	1:B:1125:ASN:ND2	2.47	0.41
1:B:1172:ASP:OD1	1:B:1172:ASP:N	2.51	0.41
1:B:2996:LYS:HE3	1:B:2996:LYS:HB2	1.79	0.41
1:B:3144:PHE:O	1:B:3147:ILE:HG22	2.20	0.41
1:B:3186:LEU:HG	1:B:3188:PRO:HD3	2.03	0.41
1:B:3844:LEU:HD22	1:B:3933:PHE:CZ	2.56	0.41
1:C:103:TYR:CD1	1:C:163:VAL:HG22	2.56	0.41
1:C:551:LEU:O	1:C:553:ARG:NH2	2.52	0.41
1:C:720:HIS:HB3	1:C:722:TRP:CD1	2.56	0.41
1:C:3186:LEU:HG	1:C:3188:PRO:HD3	2.03	0.41
1:C:4241:THR:HG22	1:C:4245:MET:HE3	2.03	0.41
1:C:4914:VAL:HG23	1:D:4888:TYR:CD1	2.55	0.41
1:C:4923:PHE:O	1:C:4928:LEU:HD23	2.20	0.41
1:D:615:ARG:NE	1:D:2168:VAL:HG21	2.35	0.41
1:D:720:HIS:HB3	1:D:722:TRP:CD1	2.56	0.41
1:D:1599:MET:HE1	1:D:1601:MET:SD	2.61	0.41
1:D:2198:MET:HE2	1:D:2198:MET:N	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2583:LEU:HD23	1:D:2583:LEU:H	1.85	0.41
1:D:3317:GLY:O	1:D:3320:LEU:HG	2.21	0.41
1:A:103:TYR:CD1	1:A:163:VAL:HG22	2.56	0.41
1:A:565:TYR:CE1	1:A:569:ILE:HD11	2.56	0.41
1:A:719:LEU:O	1:A:720:HIS:CG	2.73	0.41
1:A:978:THR:HG23	1:A:981:GLN:H	1.86	0.41
1:A:1489:CYS:SG	1:A:1490:SER:N	2.94	0.41
1:A:3761:GLN:C	1:A:3763:LEU:H	2.27	0.41
1:B:103:TYR:CD1	1:B:163:VAL:HG22	2.56	0.41
1:B:215:THR:OG1	1:B:271:GLY:O	2.30	0.41
1:B:668:VAL:HG11	1:B:682:LEU:HD21	2.03	0.41
1:B:1495:VAL:HB	1:B:1537:ASN:HA	2.03	0.41
1:B:1674:CYS:SG	1:B:1718:ILE:HD13	2.60	0.41
1:B:4089:SER:OG	1:B:4090:LYS:N	2.52	0.41
1:B:4792:LEU:HD23	1:B:4792:LEU:HA	1.92	0.41
1:C:29:LEU:HD23	1:C:29:LEU:H	1.85	0.41
1:C:668:VAL:HG11	1:C:682:LEU:HD21	2.03	0.41
1:C:2418:LEU:O	1:C:2422:ILE:HG12	2.20	0.41
1:C:3658:LYS:HD2	1:C:3661:TRP:CZ2	2.56	0.41
1:C:4918:ILE:HD11	1:D:4888:TYR:HA	2.03	0.41
1:D:668:VAL:HG11	1:D:682:LEU:HD21	2.03	0.41
1:A:720:HIS:HB3	1:A:722:TRP:CD1	2.56	0.41
1:A:998:ARG:NH1	1:A:1003:GLN:HG2	2.36	0.41
1:A:2155:LEU:HD21	1:A:2198:MET:SD	2.60	0.41
1:A:4772:ASP:OD1	1:A:4772:ASP:N	2.51	0.41
1:A:5035:GLN:HG3	1:A:5036:LEU:HD23	2.02	0.41
1:B:998:ARG:NH1	1:B:1003:GLN:HG2	2.36	0.41
1:B:1599:MET:HE1	1:B:1601:MET:SD	2.61	0.41
1:B:3658:LYS:HD2	1:B:3661:TRP:CZ2	2.56	0.41
1:B:4006:ASP:OD1	1:B:4008:SER:OG	2.39	0.41
1:B:4811:ALA:C	1:B:4813:LEU:N	2.78	0.41
1:C:223:PHE:CD1	1:C:230:CYS:HB3	2.56	0.41
1:C:688:LEU:HD23	1:C:688:LEU:H	1.85	0.41
1:C:873:LYS:O	1:C:877:ASN:ND2	2.44	0.41
1:C:1839:VAL:C	1:C:1841:VAL:N	2.79	0.41
1:C:2331:TYR:O	1:C:2332:LEU:HB2	2.20	0.41
1:C:2552:ARG:HB3	1:C:2552:ARG:CZ	2.51	0.41
1:C:2552:ARG:NH1	1:C:2556:LEU:HD23	2.36	0.41
1:C:3752:SER:HB3	1:C:3755:GLU:HB2	2.02	0.41
1:D:223:PHE:CD1	1:D:230:CYS:HB3	2.56	0.41
1:D:688:LEU:H	1:D:688:LEU:HD23	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1053:ILE:HD12	1:D:1053:ILE:HA	1.92	0.41
1:D:1119:GLU:H	1:D:1119:GLU:CD	2.28	0.41
1:D:3658:LYS:HD2	1:D:3661:TRP:CZ2	2.56	0.41
1:D:4968:PHE:O	1:D:4974:GLY:HA3	2.21	0.41
1:A:1000:ARG:O	1:A:1006:SER:OG	2.35	0.41
1:A:1271:ARG:NH2	1:A:1470:ARG:O	2.45	0.41
1:A:1495:VAL:HB	1:A:1537:ASN:HA	2.03	0.41
1:A:1726:SER:O	1:A:1730:MET:HG2	2.20	0.41
1:A:1829:PRO:O	1:A:1830:VAL:C	2.63	0.41
1:A:2646:ASN:O	1:A:2688:HIS:NE2	2.47	0.41
1:A:3658:LYS:HD2	1:A:3661:TRP:CZ2	2.56	0.41
1:A:4650:HIS:CD2	1:A:4809:PHE:HE1	2.39	0.41
1:A:4873:ASP:O	1:A:4874:MET:HE2	2.21	0.41
1:A:4973:HIS:CE1	1:D:4227:GLU:HB2	2.56	0.41
1:B:2128:TYR:CE2	1:B:3673:MET:HG3	2.56	0.41
1:B:2956:ALA:HB3	1:B:3030:HIS:ND1	2.36	0.41
1:B:3049:LEU:HD12	1:B:3051:ARG:HE	1.86	0.41
1:B:3771:HIS:HA	1:B:3773:ARG:NH2	2.36	0.41
1:B:4832:HIS:NE2	1:B:4942:GLU:HG3	2.36	0.41
1:B:4968:PHE:O	1:B:4974:GLY:HA3	2.21	0.41
1:C:175:SER:C	1:D:2452:ARG:HH12	2.29	0.41
1:C:571:SER:O	1:C:574:VAL:HG12	2.20	0.41
1:C:579:GLN:H	1:C:582:HIS:CD2	2.38	0.41
1:C:1228:ILE:HG13	1:D:3572:GLN:NE2	2.33	0.41
1:C:1489:CYS:SG	1:C:1490:SER:N	2.94	0.41
1:C:1687:SER:HB3	1:C:1782:PHE:CZ	2.56	0.41
1:C:1694:LEU:HD23	1:C:1715:LEU:HB2	2.03	0.41
1:C:1839:VAL:C	1:C:1841:VAL:H	2.28	0.41
1:C:3049:LEU:HD12	1:C:3051:ARG:HE	1.86	0.41
1:C:3426:GLU:N	1:C:3427:PRO:HD2	2.36	0.41
1:C:3771:HIS:HA	1:C:3773:ARG:NH2	2.36	0.41
1:C:4052:SER:O	1:C:4056:GLU:HG3	2.21	0.41
1:C:4650:HIS:CD2	1:C:4809:PHE:HE1	2.39	0.41
1:C:4650:HIS:NE2	1:C:4812:HIS:ND1	2.68	0.41
1:C:4666:VAL:HA	1:C:4669:VAL:HG22	2.03	0.41
1:C:4792:LEU:HD23	1:C:4792:LEU:HA	1.92	0.41
1:C:4819:GLY:O	1:C:4820:VAL:C	2.61	0.41
1:C:4873:ASP:O	1:C:4874:MET:HE2	2.21	0.41
1:D:293:LEU:H	1:D:311:ALA:HB1	1.85	0.41
1:D:1830:VAL:C	1:D:1832:GLY:N	2.71	0.41
1:D:2418:LEU:O	1:D:2422:ILE:HG12	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2552:ARG:CZ	1:D:2552:ARG:HB3	2.51	0.41
1:D:4078:GLN:O	1:D:4081:VAL:HG22	2.21	0.41
1:D:4717:ASP:OD2	1:D:4723:LYS:NZ	2.50	0.41
1:D:4873:ASP:O	1:D:4874:MET:HE2	2.21	0.41
1:A:571:SER:O	1:A:574:VAL:HG12	2.20	0.41
1:A:635:THR:HG22	1:A:1637:MET:HG3	2.03	0.41
1:A:1476:MET:HE3	1:A:1476:MET:HB3	1.88	0.41
1:A:1830:VAL:HB	1:A:1837:GLN:HG3	2.03	0.41
1:A:2128:TYR:CE2	1:A:3673:MET:HG3	2.56	0.41
1:A:2276:ALA:O	1:A:2279:SER:OG	2.30	0.41
1:A:2342:ASN:OD1	1:A:2342:ASN:N	2.51	0.41
1:A:2452:ARG:HH12	1:D:175:SER:C	2.29	0.41
1:A:2956:ALA:HB3	1:A:3030:HIS:ND1	2.36	0.41
1:A:3426:GLU:N	1:A:3427:PRO:HD2	2.36	0.41
1:B:516:LYS:O	1:B:520:ASN:ND2	2.34	0.41
1:B:719:LEU:O	1:B:720:HIS:CG	2.73	0.41
1:B:873:LYS:O	1:B:877:ASN:ND2	2.44	0.41
1:C:1116:GLY:HA3	1:C:1132:TRP:HB3	2.03	0.41
1:C:1467:SER:HB2	1:C:1468:LYS:H	1.50	0.41
1:C:4227:GLU:HB2	1:D:4973:HIS:CE1	2.56	0.41
1:D:697:GLY:O	1:D:704:GLY:N	2.54	0.41
1:D:878:ILE:O	1:D:881:LEU:HB2	2.21	0.41
1:A:223:PHE:CD1	1:A:230:CYS:HB3	2.56	0.40
1:A:4666:VAL:HA	1:A:4669:VAL:HG22	2.03	0.40
1:B:1457:TYR:OH	1:B:1643:GLU:O	2.32	0.40
1:B:1634:LEU:HD12	1:B:1634:LEU:HA	1.93	0.40
1:B:1687:SER:HB3	1:B:1782:PHE:CZ	2.56	0.40
1:B:1839:VAL:C	1:B:1841:VAL:H	2.28	0.40
1:B:1839:VAL:C	1:B:1841:VAL:N	2.79	0.40
1:B:4666:VAL:HA	1:B:4669:VAL:HG22	2.03	0.40
1:B:5035:GLN:HG3	1:B:5036:LEU:HD23	2.02	0.40
1:C:1599:MET:HE1	1:C:1601:MET:SD	2.61	0.40
1:C:2277:ALA:HA	1:C:2280:VAL:HG12	2.03	0.40
1:C:3144:PHE:O	1:C:3147:ILE:HG22	2.20	0.40
1:C:4832:HIS:NE2	1:C:4942:GLU:HG3	2.36	0.40
1:D:565:TYR:CE1	1:D:569:ILE:HD11	2.56	0.40
1:D:992:GLY:HA2	1:D:995:VAL:HG22	2.03	0.40
1:D:998:ARG:NH1	1:D:1003:GLN:HG2	2.36	0.40
1:D:1009:ALA:HA	1:D:1020:ARG:HD3	2.03	0.40
1:D:1694:LEU:HD23	1:D:1715:LEU:HB2	2.03	0.40
1:D:1726:SER:O	1:D:1730:MET:HG2	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1830:VAL:HB	1:D:1837:GLN:HG3	2.03	0.40
1:D:2552:ARG:NH1	1:D:2556:LEU:HD23	2.36	0.40
1:D:3771:HIS:HA	1:D:3773:ARG:NH2	2.36	0.40
1:D:4057:MET:HE3	1:D:4057:MET:HB2	1.85	0.40
1:A:175:SER:C	1:B:2452:ARG:HH12	2.29	0.40
1:A:881:LEU:HD23	1:A:881:LEU:HA	1.92	0.40
1:A:1009:ALA:HA	1:A:1020:ARG:HD3	2.03	0.40
1:A:1269:CYS:SG	1:A:1270:LEU:N	2.93	0.40
1:A:4832:HIS:NE2	1:A:4942:GLU:HG3	2.36	0.40
1:A:4860:ARG:CZ	1:B:4582:VAL:HG11	2.50	0.40
1:A:4888:TYR:HA	1:D:4918:ILE:HD11	2.03	0.40
1:A:4983:HIS:NE2	1:A:5027:CYS:SG	2.82	0.40
1:B:545:ASP:HA	1:B:548:VAL:HG12	2.02	0.40
1:B:575:LEU:HD22	1:B:606:LEU:HD12	2.04	0.40
1:B:720:HIS:HB3	1:B:722:TRP:CD1	2.56	0.40
1:B:1286:MET:HB2	1:B:1600:LEU:HD22	2.03	0.40
1:B:1762:LEU:O	1:B:1765:VAL:HG22	2.22	0.40
1:B:2575:ARG:HA	1:B:2578:MET:HE3	2.03	0.40
1:B:3927:GLN:NE2	1:B:3928:GLU:HG3	2.35	0.40
1:B:4075:GLU:HA	1:B:4078:GLN:CB	2.51	0.40
1:B:4241:THR:HG22	1:B:4245:MET:HE3	2.03	0.40
1:B:4650:HIS:NE2	1:B:4812:HIS:ND1	2.68	0.40
1:C:635:THR:HG21	1:C:1637:MET:CG	2.49	0.40
1:C:650:VAL:O	1:C:777:PHE:N	2.46	0.40
1:C:1115:LEU:HD23	1:C:1123:VAL:HG21	2.01	0.40
1:C:1286:MET:HB2	1:C:1600:LEU:HD22	2.03	0.40
1:C:2956:ALA:HB3	1:C:3030:HIS:ND1	2.36	0.40
1:C:4811:ALA:C	1:C:4813:LEU:N	2.78	0.40
1:D:1687:SER:HB3	1:D:1782:PHE:CZ	2.56	0.40
1:D:2277:ALA:HA	1:D:2280:VAL:HG12	2.03	0.40
1:D:3426:GLU:N	1:D:3427:PRO:HD2	2.36	0.40
1:D:4052:SER:O	1:D:4056:GLU:HG3	2.21	0.40
1:D:4650:HIS:CD2	1:D:4809:PHE:HE1	2.39	0.40
1:D:4687:TYR:OH	1:D:4699:GLY:O	2.36	0.40
1:A:29:LEU:HD23	1:A:29:LEU:H	1.85	0.40
1:A:1172:ASP:OD1	1:A:1172:ASP:N	2.51	0.40
1:A:1687:SER:HB3	1:A:1782:PHE:CZ	2.56	0.40
1:A:2211:MET:O	1:A:2214:VAL:HG22	2.22	0.40
1:A:3049:LEU:HD12	1:A:3051:ARG:HE	1.86	0.40
1:A:3157:ILE:HA	1:A:3160:ASP:OD1	2.22	0.40
1:A:3771:HIS:HA	1:A:3773:ARG:NH2	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:350:HIS:CD2	1:B:352:ALA:H	2.34	0.40
1:B:697:GLY:O	1:B:704:GLY:N	2.54	0.40
1:B:998:ARG:NH2	1:B:1004:GLY:HA2	2.37	0.40
1:B:2552:ARG:NH1	1:B:2556:LEU:HD23	2.36	0.40
1:B:4057:MET:HE3	1:B:4057:MET:HB2	1.85	0.40
1:B:4911:LEU:HA	1:B:4914:VAL:HG12	2.02	0.40
1:C:565:TYR:CE1	1:C:569:ILE:HD11	2.56	0.40
1:C:1119:GLU:H	1:C:1119:GLU:CD	2.28	0.40
1:C:2155:LEU:HD12	1:C:2185:ILE:HG22	2.03	0.40
1:C:3941:ASP:OD1	1:C:3941:ASP:N	2.45	0.40
1:C:4817:ALA:C	1:C:4819:GLY:N	2.65	0.40
1:D:978:THR:HG23	1:D:981:GLN:H	1.86	0.40
1:D:1221:GLU:OE2	1:D:1221:GLU:N	2.52	0.40
1:D:3891:LEU:HD22	1:D:3899:PHE:CE2	2.57	0.40
1:A:1728:ARG:HA	1:A:1731:LEU:CD1	2.50	0.40
1:A:1762:LEU:O	1:A:1765:VAL:HG22	2.22	0.40
1:A:2248:ARG:HA	1:A:2251:PHE:HB3	2.01	0.40
1:A:2331:TYR:O	1:A:2332:LEU:HB2	2.20	0.40
1:A:3518:LEU:HB2	1:A:3519:PRO:HD3	2.04	0.40
1:A:3844:LEU:HD22	1:A:3933:PHE:CZ	2.56	0.40
1:B:1009:ALA:HA	1:B:1020:ARG:HD3	2.03	0.40
1:B:1845:VAL:HG13	1:B:1846:SER:N	2.37	0.40
1:B:2211:MET:O	1:B:2214:VAL:HG22	2.22	0.40
1:B:3574:ALA:C	1:B:3576:TYR:H	2.30	0.40
1:B:4044:MET:HE3	1:B:4044:MET:HB2	1.77	0.40
1:B:4873:ASP:O	1:B:4874:MET:HE2	2.21	0.40
1:C:873:LYS:NZ	1:C:947:GLU:OE1	2.34	0.40
1:C:878:ILE:O	1:C:881:LEU:HB2	2.21	0.40
1:C:4078:GLN:O	1:C:4081:VAL:HG22	2.21	0.40
1:D:575:LEU:HD22	1:D:606:LEU:HD12	2.04	0.40
1:D:4787:ASN:OD1	1:D:4787:ASN:N	2.55	0.40
1:D:4832:HIS:NE2	1:D:4942:GLU:HG3	2.36	0.40
1:A:4000:MET:CE	1:A:4058:ILE:HG12	2.51	0.40
1:A:4696:ASP:OD1	1:A:4696:ASP:N	2.46	0.40
1:B:292:ALA:HA	1:B:311:ALA:O	2.22	0.40
1:B:2336:ARG:O	1:B:2340:PHE:CB	2.66	0.40
1:B:3518:LEU:HB2	1:B:3519:PRO:HD3	2.04	0.40
1:B:4650:HIS:CD2	1:B:4809:PHE:HE1	2.39	0.40
1:C:415:ILE:HG13	1:C:416:LYS:N	2.37	0.40
1:C:575:LEU:HD22	1:C:606:LEU:HD12	2.04	0.40
1:C:2211:MET:O	1:C:2214:VAL:HG22	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2128:TYR:CE2	1:D:3673:MET:HG3	2.56	0.40
1:D:2155:LEU:HD12	1:D:2185:ILE:HG22	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	3906/5037 (78%)	3513 (90%)	376 (10%)	17 (0%)	30	59
1	B	3906/5037 (78%)	3513 (90%)	376 (10%)	17 (0%)	30	59
1	C	3906/5037 (78%)	3513 (90%)	376 (10%)	17 (0%)	30	59
1	D	3906/5037 (78%)	3513 (90%)	376 (10%)	17 (0%)	30	59
All	All	15624/20148 (78%)	14052 (90%)	1504 (10%)	68 (0%)	31	59

All (68) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	1469	VAL
1	A	1470	ARG
1	A	1472	VAL
1	A	1836	PHE
1	B	1469	VAL
1	B	1470	ARG
1	B	1472	VAL
1	B	1836	PHE
1	C	1469	VAL
1	C	1470	ARG
1	C	1472	VAL
1	C	1836	PHE
1	D	1469	VAL

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Mol	Chain	Res	Type
1	D	1470	ARG
1	D	1472	VAL
1	D	1836	PHE
1	A	1467	SER
1	A	1471	ALA
1	A	1831	GLY
1	A	4806	ASN
1	A	4807	PHE
1	A	4812	HIS
1	A	4815	ASP
1	A	4818	MET
1	B	1467	SER
1	B	1471	ALA
1	B	1831	GLY
1	B	4806	ASN
1	B	4807	PHE
1	B	4812	HIS
1	B	4815	ASP
1	B	4818	MET
1	C	1467	SER
1	C	1471	ALA
1	C	1831	GLY
1	C	4806	ASN
1	C	4807	PHE
1	C	4812	HIS
1	C	4815	ASP
1	C	4818	MET
1	D	1467	SER
1	D	1471	ALA
1	D	1831	GLY
1	D	4806	ASN
1	D	4807	PHE
1	D	4812	HIS
1	D	4815	ASP
1	D	4818	MET
1	A	4805	ASN
1	A	4809	PHE
1	B	4805	ASN
1	B	4809	PHE
1	C	4805	ASN
1	C	4809	PHE
1	D	4805	ASN

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Mol	Chain	Res	Type
1	D	4809	PHE
1	A	4819	GLY
1	B	4819	GLY
1	C	4819	GLY
1	D	4819	GLY
1	A	1466	LEU
1	B	1466	LEU
1	C	1466	LEU
1	D	1466	LEU
1	A	1830	VAL
1	B	1830	VAL
1	C	1830	VAL
1	D	1830	VAL

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	2885/4276 (68%)	2870 (100%)	15 (0%)	81	81
1	B	2885/4276 (68%)	2870 (100%)	15 (0%)	81	81
1	C	2885/4276 (68%)	2870 (100%)	15 (0%)	81	81
1	D	2885/4276 (68%)	2870 (100%)	15 (0%)	81	81
All	All	11540/17104 (68%)	11480 (100%)	60 (0%)	78	81

All (60) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	338	GLU
1	A	1467	SER
1	A	1468	LYS
1	A	1469	VAL
1	A	1473	THR
1	A	1841	VAL
1	A	1843	LYS
1	A	1846	SER

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Mol	Chain	Res	Type
1	A	1847	THR
1	A	1850	VAL
1	A	4806	ASN
1	A	4807	PHE
1	A	4813	LEU
1	A	4816	ILE
1	A	4818	MET
1	B	338	GLU
1	B	1467	SER
1	B	1468	LYS
1	B	1469	VAL
1	B	1473	THR
1	B	1841	VAL
1	B	1843	LYS
1	B	1846	SER
1	B	1847	THR
1	B	1850	VAL
1	B	4806	ASN
1	B	4807	PHE
1	B	4813	LEU
1	B	4816	ILE
1	B	4818	MET
1	C	338	GLU
1	C	1467	SER
1	C	1468	LYS
1	C	1469	VAL
1	C	1473	THR
1	C	1841	VAL
1	C	1843	LYS
1	C	1846	SER
1	C	1847	THR
1	C	1850	VAL
1	C	4806	ASN
1	C	4807	PHE
1	C	4813	LEU
1	C	4816	ILE
1	C	4818	MET
1	D	338	GLU
1	D	1467	SER
1	D	1468	LYS
1	D	1469	VAL
1	D	1473	THR

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Mol	Chain	Res	Type
1	D	1841	VAL
1	D	1843	LYS
1	D	1846	SER
1	D	1847	THR
1	D	1850	VAL
1	D	4806	ASN
1	D	4807	PHE
1	D	4813	LEU
1	D	4816	ILE
1	D	4818	MET

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (113) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	44	ASN
1	A	479	GLN
1	A	681	HIS
1	A	772	ASN
1	A	974	HIS
1	A	1201	HIS
1	A	1203	ASN
1	A	1463	ASN
1	A	1491	ASN
1	A	1505	GLN
1	A	1506	GLN
1	A	1679	ASN
1	A	1776	HIS
1	A	2032	GLN
1	A	2095	GLN
1	A	2127	GLN
1	A	2184	ASN
1	A	2194	HIS
1	A	2204	HIS
1	A	2444	GLN
1	A	3457	ASN
1	A	3462	ASN
1	A	3572	GLN
1	A	3809	ASN
1	A	3814	GLN
1	A	3994	HIS
1	A	3998	HIS
1	A	4707	ASN

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Mol	Chain	Res	Type
1	A	4728	HIS
1	A	4836	GLN
1	B	44	ASN
1	B	273	HIS
1	B	475	GLN
1	B	479	GLN
1	B	681	HIS
1	B	772	ASN
1	B	974	HIS
1	B	1463	ASN
1	B	1491	ASN
1	B	1505	GLN
1	B	1506	GLN
1	B	1679	ASN
1	B	1776	HIS
1	B	2032	GLN
1	B	2095	GLN
1	B	2127	GLN
1	B	2184	ASN
1	B	2194	HIS
1	B	2444	GLN
1	B	3457	ASN
1	B	3572	GLN
1	B	3809	ASN
1	B	3814	GLN
1	B	3994	HIS
1	B	3998	HIS
1	B	4728	HIS
1	B	4836	GLN
1	C	44	ASN
1	C	475	GLN
1	C	479	GLN
1	C	489	ASN
1	C	582	HIS
1	C	681	HIS
1	C	772	ASN
1	C	974	HIS
1	C	1201	HIS
1	C	1463	ASN
1	C	1491	ASN
1	C	1505	GLN
1	C	1679	ASN

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Mol	Chain	Res	Type
1	C	2032	GLN
1	C	2095	GLN
1	C	2127	GLN
1	C	2180	GLN
1	C	2184	ASN
1	C	2194	HIS
1	C	2204	HIS
1	C	2444	GLN
1	C	2551	ASN
1	C	3457	ASN
1	C	3572	GLN
1	C	3809	ASN
1	C	3814	GLN
1	C	3994	HIS
1	C	3998	HIS
1	C	4707	ASN
1	C	4728	HIS
1	C	4836	GLN
1	D	44	ASN
1	D	479	GLN
1	D	489	ASN
1	D	681	HIS
1	D	772	ASN
1	D	974	HIS
1	D	1463	ASN
1	D	1491	ASN
1	D	1505	GLN
1	D	1776	HIS
1	D	2032	GLN
1	D	2095	GLN
1	D	2127	GLN
1	D	2184	ASN
1	D	2444	GLN
1	D	2551	ASN
1	D	3457	ASN
1	D	3572	GLN
1	D	3809	ASN
1	D	3814	GLN
1	D	3994	HIS
1	D	3998	HIS
1	D	4707	ASN
1	D	4728	HIS

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Mol	Chain	Res	Type
1	D	4836	GLN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

5.4 Non-standard residues in protein, DNA, RNA chains [i](#)

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 8 ligands modelled in this entry, 8 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

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.

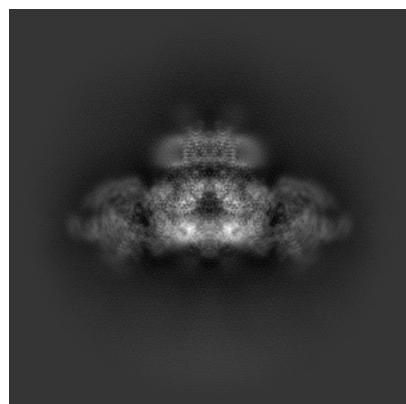
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-38043. These allow visual inspection of the internal detail of the map and identification of artifacts.

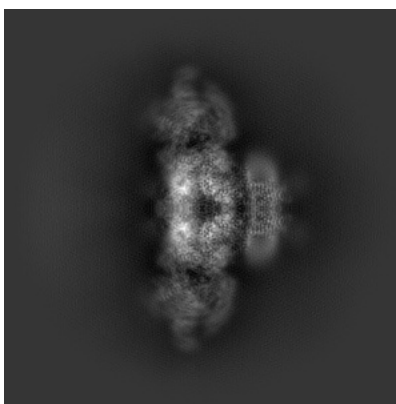
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

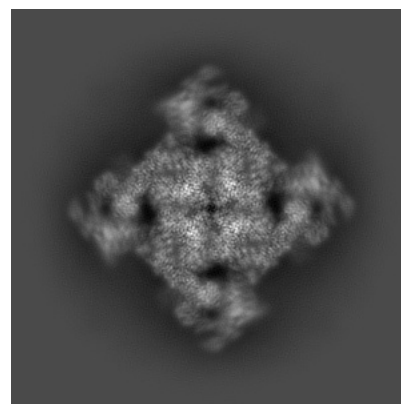
6.1.1 Primary map



X

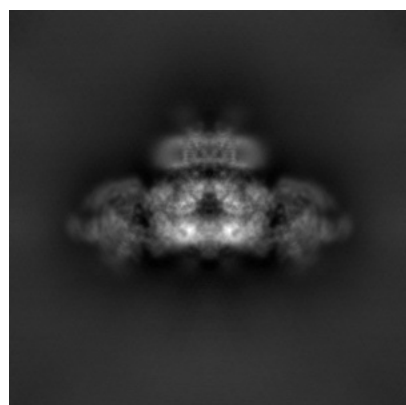


Y

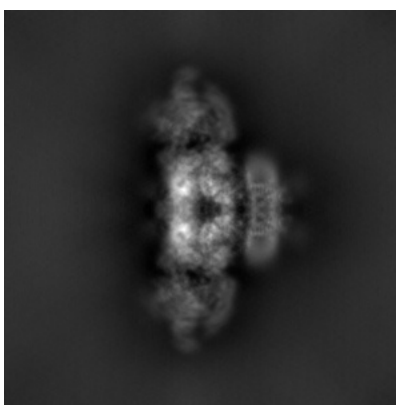


Z

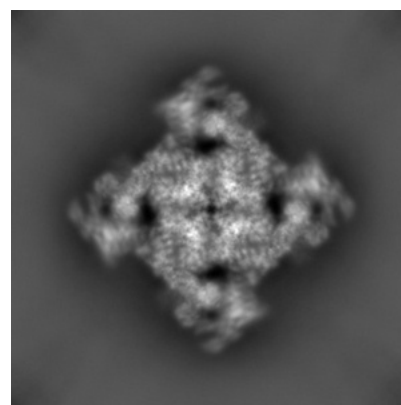
6.1.2 Raw map



X



Y

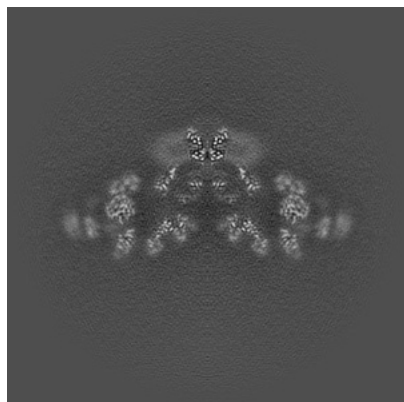


Z

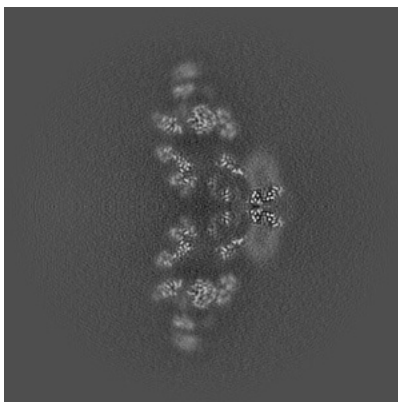
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

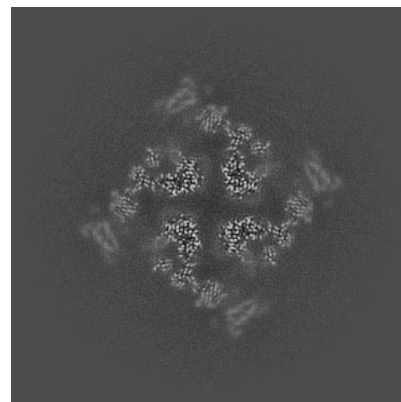
6.2.1 Primary map



X Index: 240

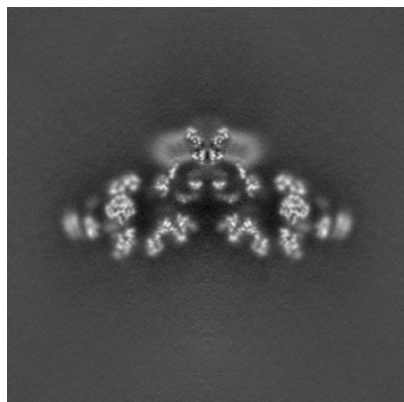


Y Index: 240

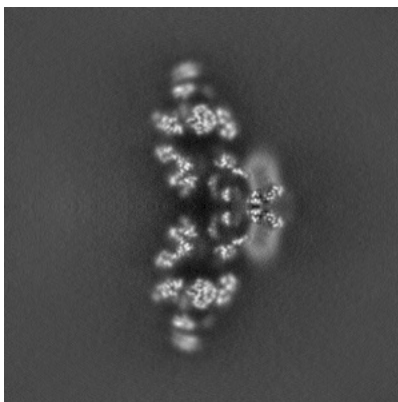


Z Index: 240

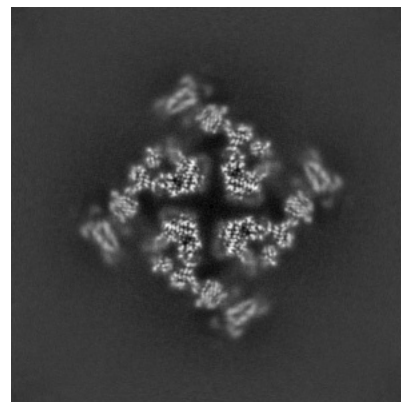
6.2.2 Raw map



X Index: 240



Y Index: 240

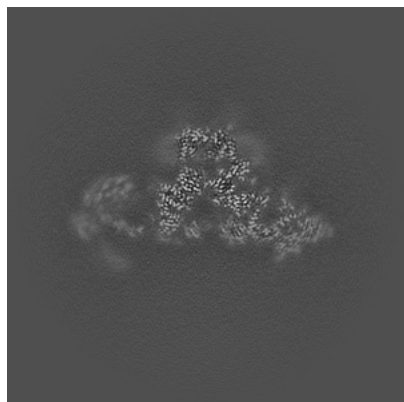


Z Index: 240

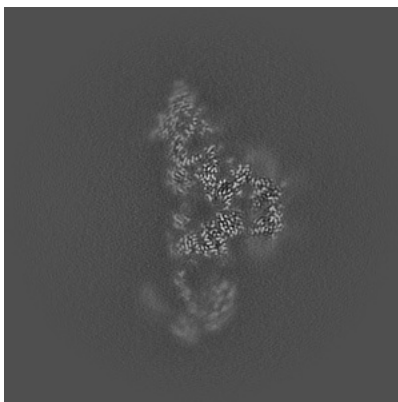
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

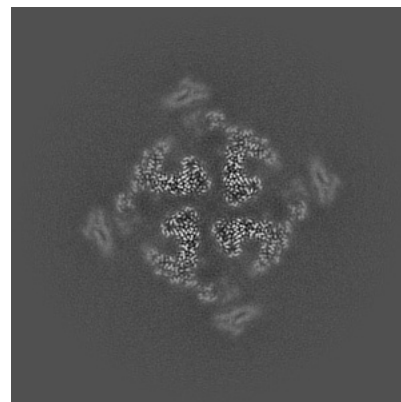
6.3.1 Primary map



X Index: 259

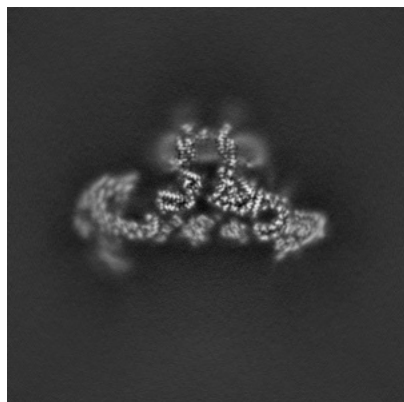


Y Index: 221

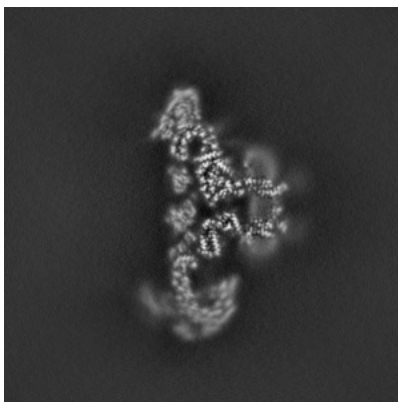


Z Index: 248

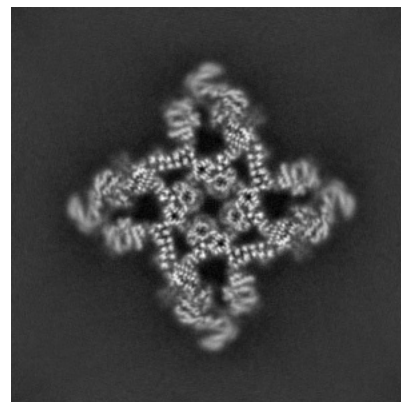
6.3.2 Raw map



X Index: 265



Y Index: 215

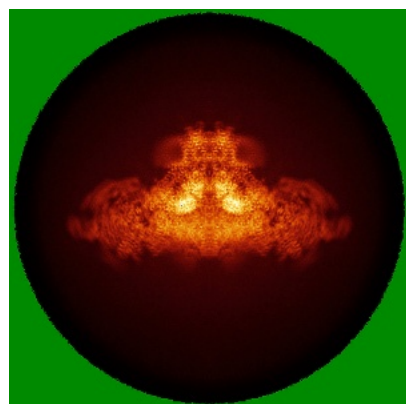


Z Index: 218

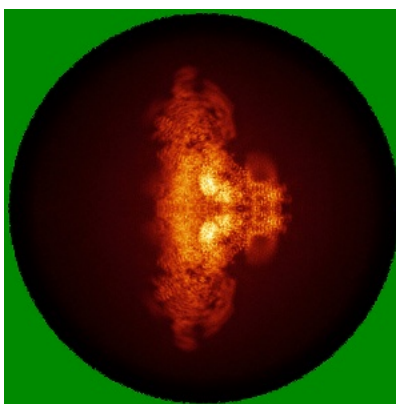
The images above show the largest variance slices of the map in three orthogonal directions.

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

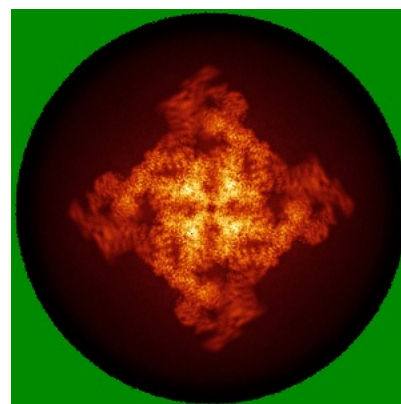
6.4.1 Primary map



X

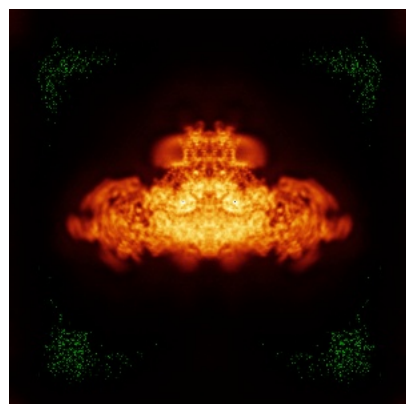


Y

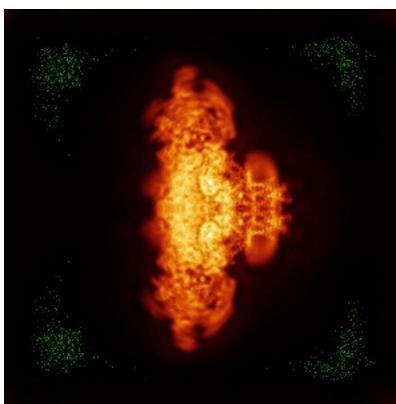


Z

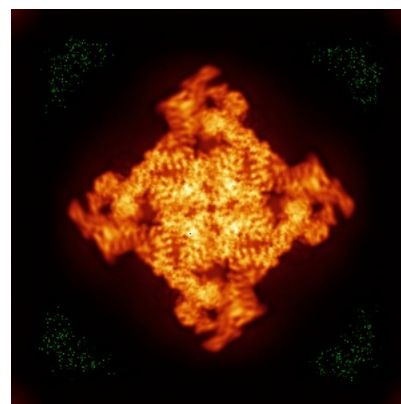
6.4.2 Raw map



X



Y

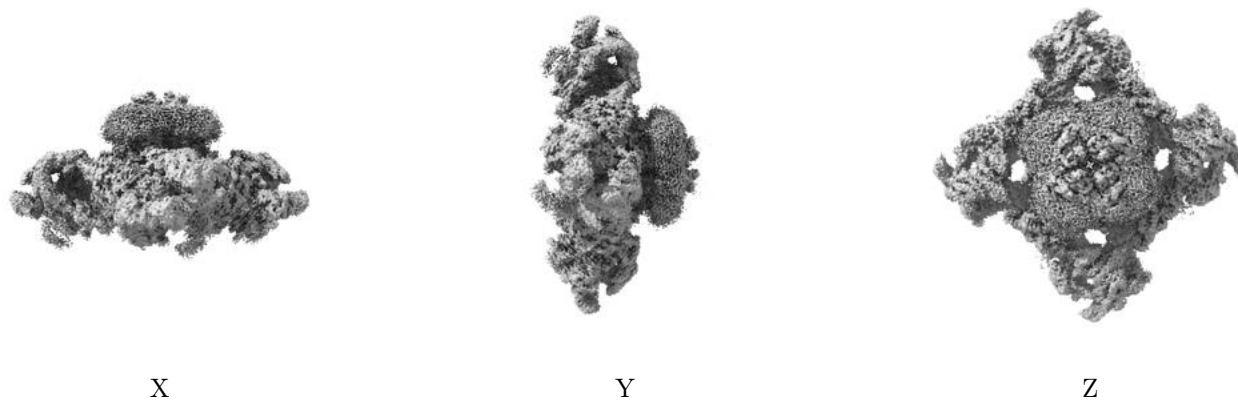


Z

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.

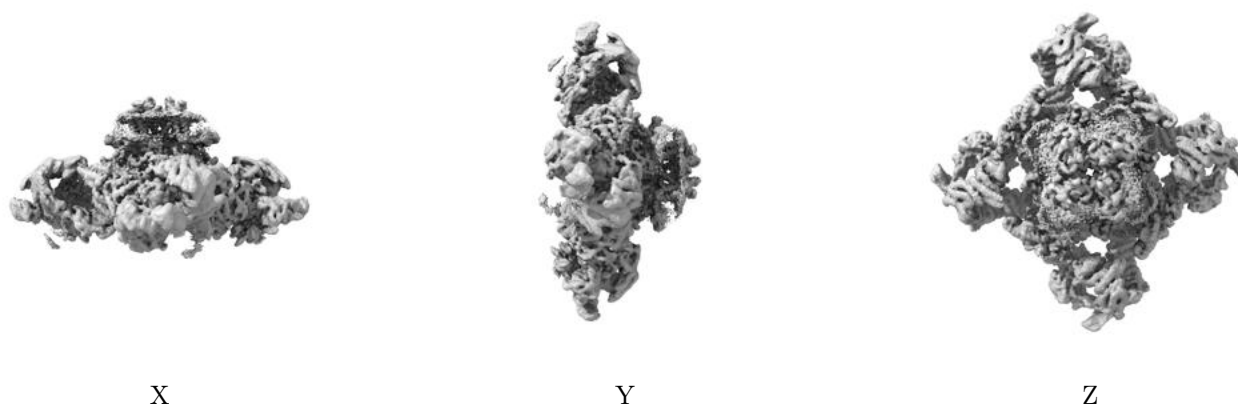
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.466. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map



These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

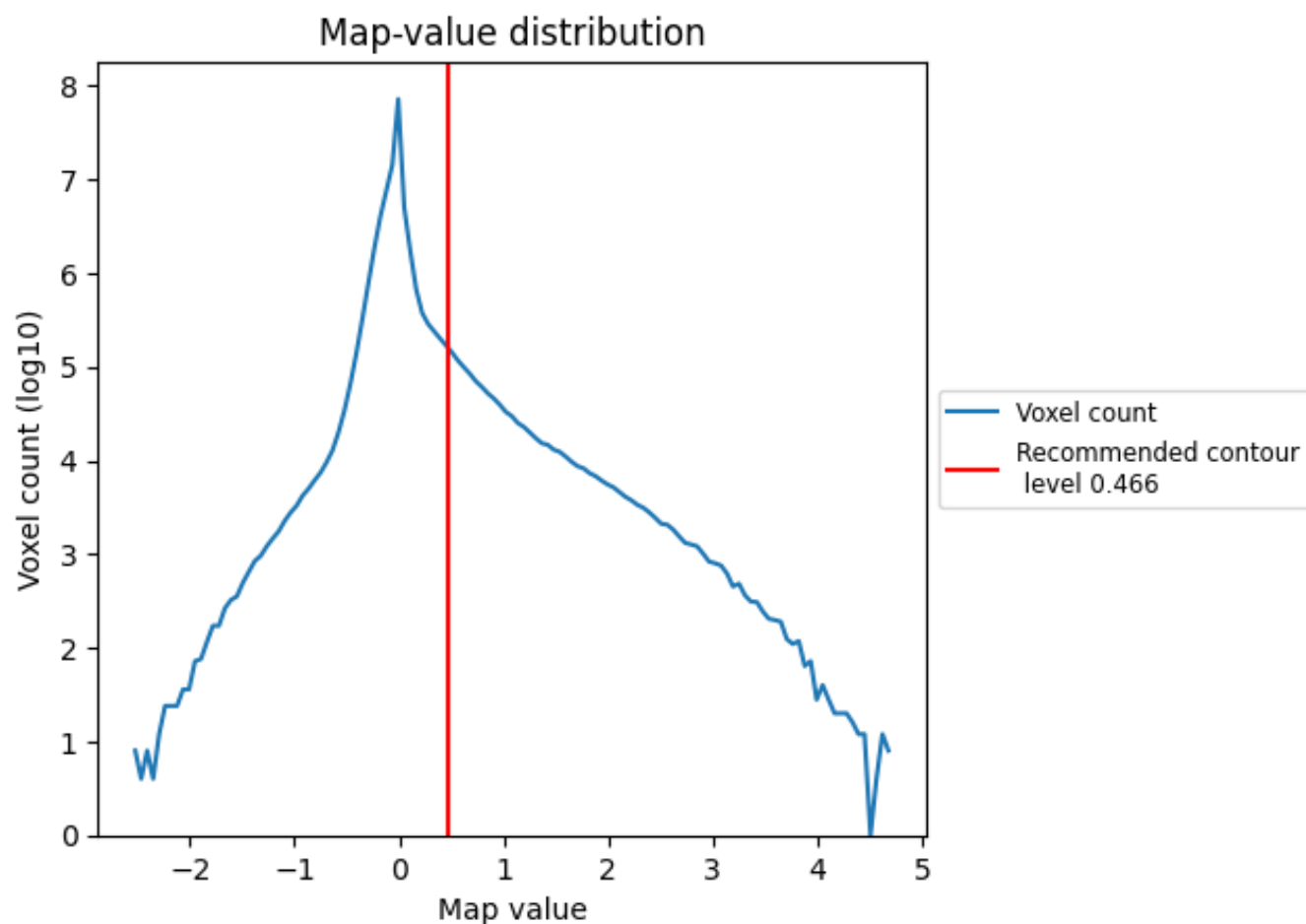
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

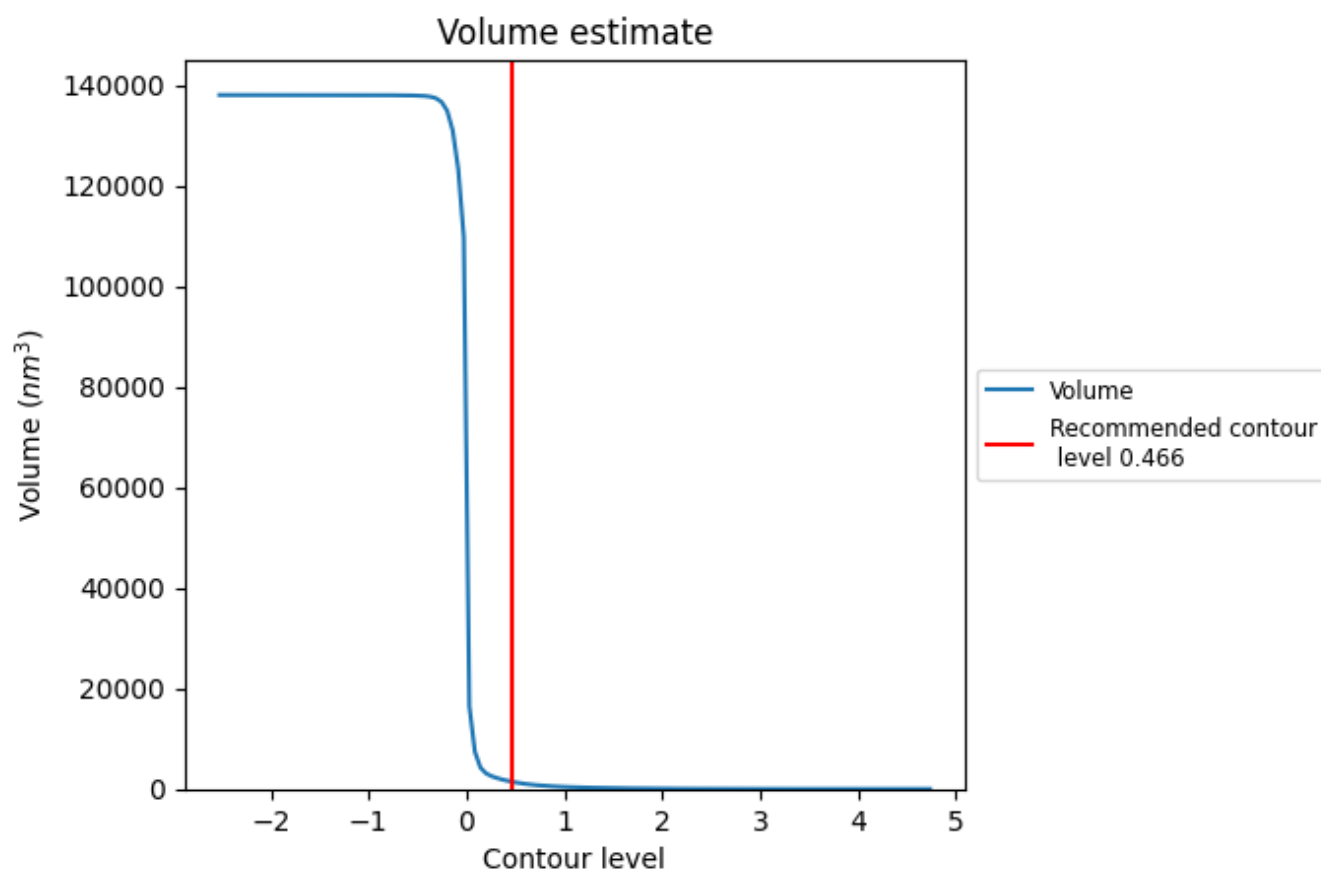
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

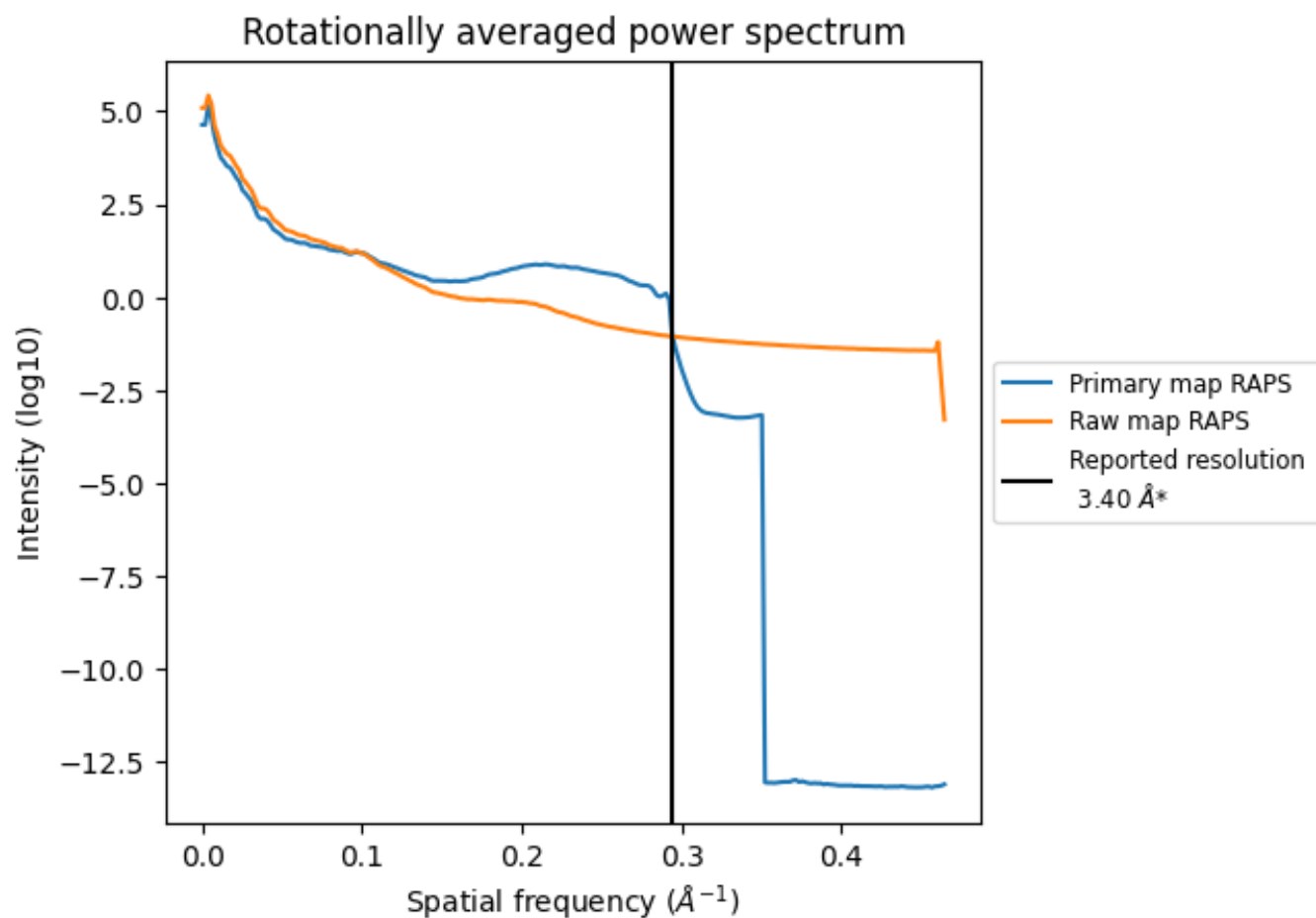
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 1425 nm³; this corresponds to an approximate mass of 1287 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 ⓘ

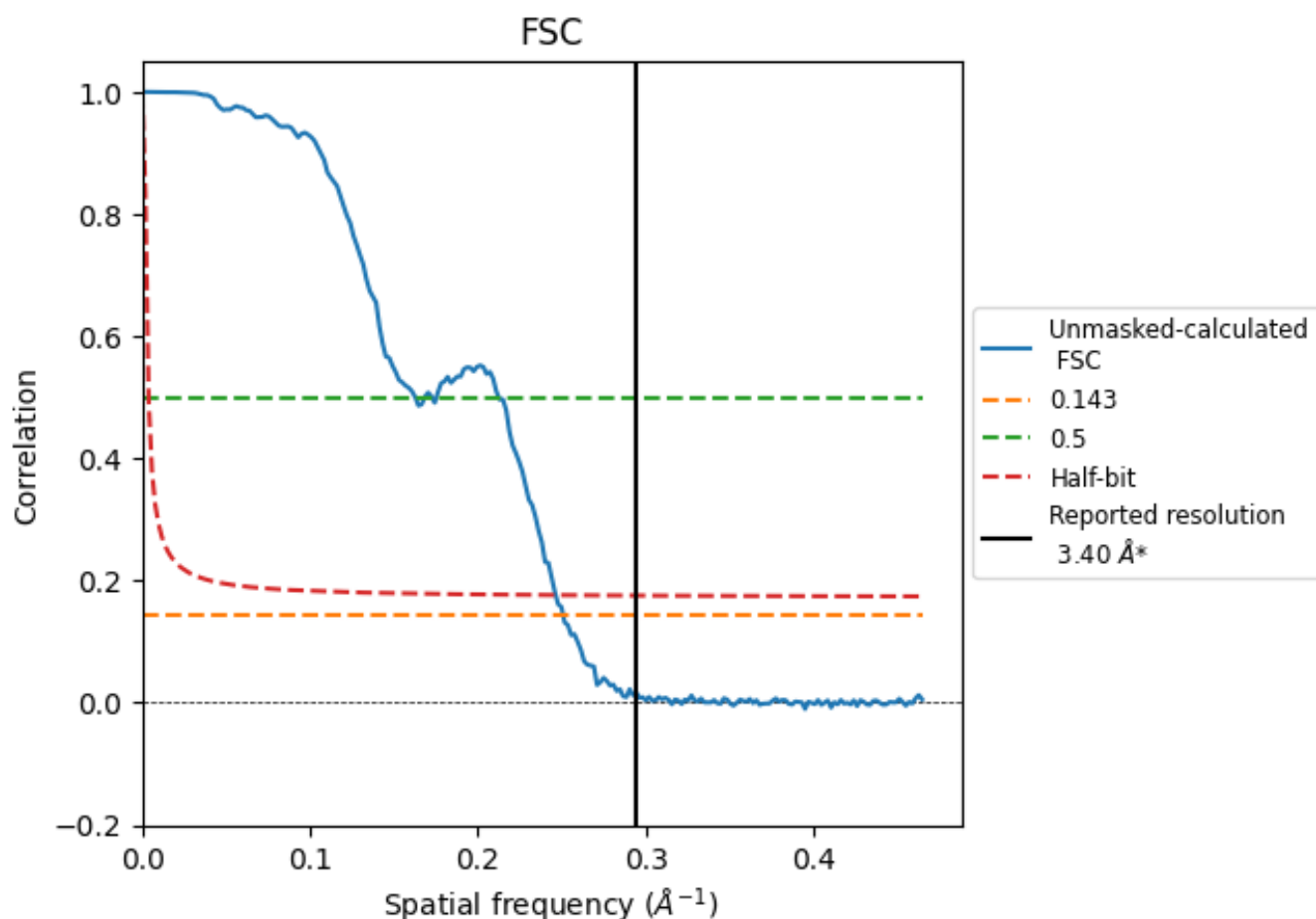


*Reported resolution corresponds to spatial frequency of 0.294 Å⁻¹

8 Fourier-Shell correlation [i](#)

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of $0.294 \text{ \AA}^{-1}$

8.2 Resolution estimates [i](#)

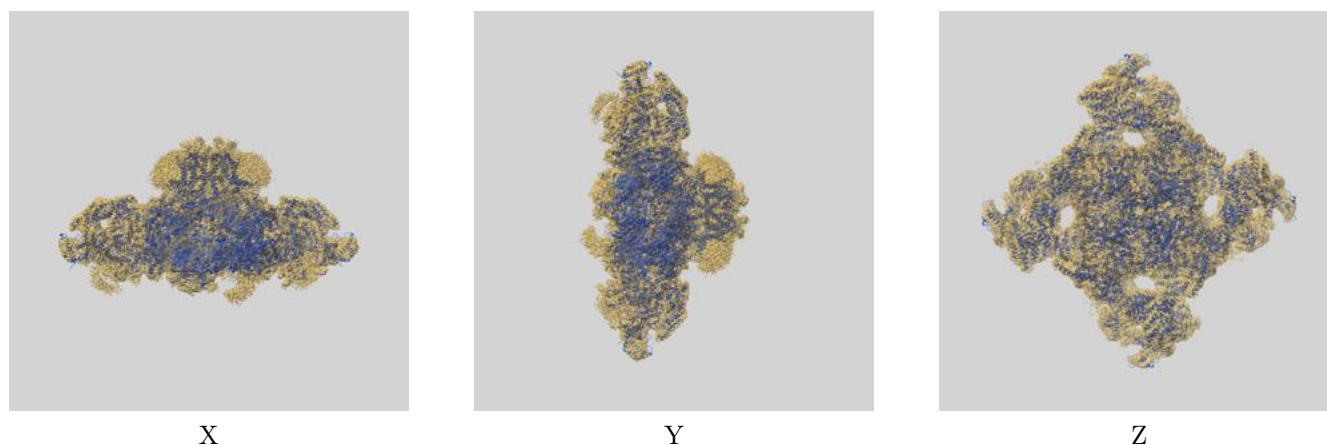
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.40	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	3.99	6.15	4.06

*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 3.99 differs from the reported value 3.4 by more than 10 %

9 Map-model fit [i](#)

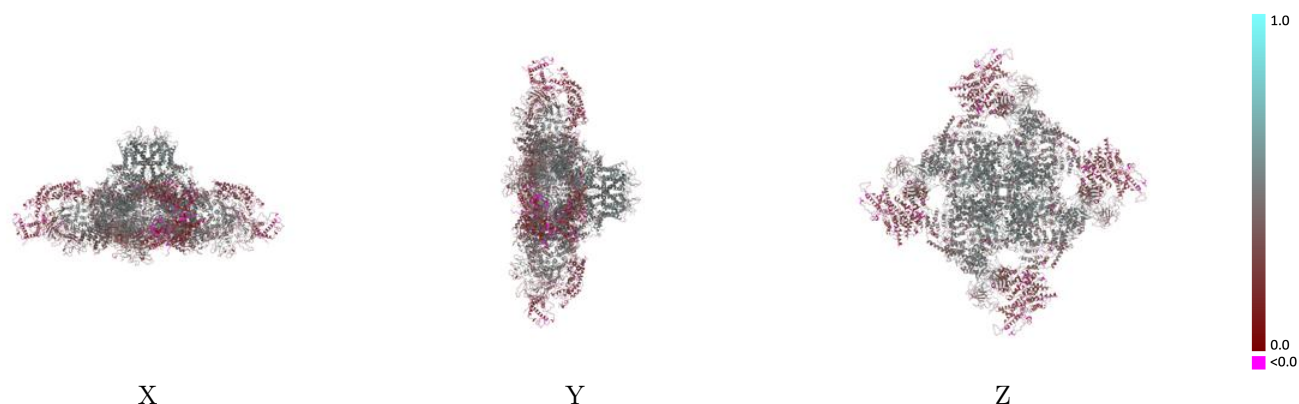
This section contains information regarding the fit between EMDB map EMD-38043 and PDB model 8X49. Per-residue inclusion information can be found in [section 3](#) on [page 4](#).

9.1 Map-model overlay [i](#)



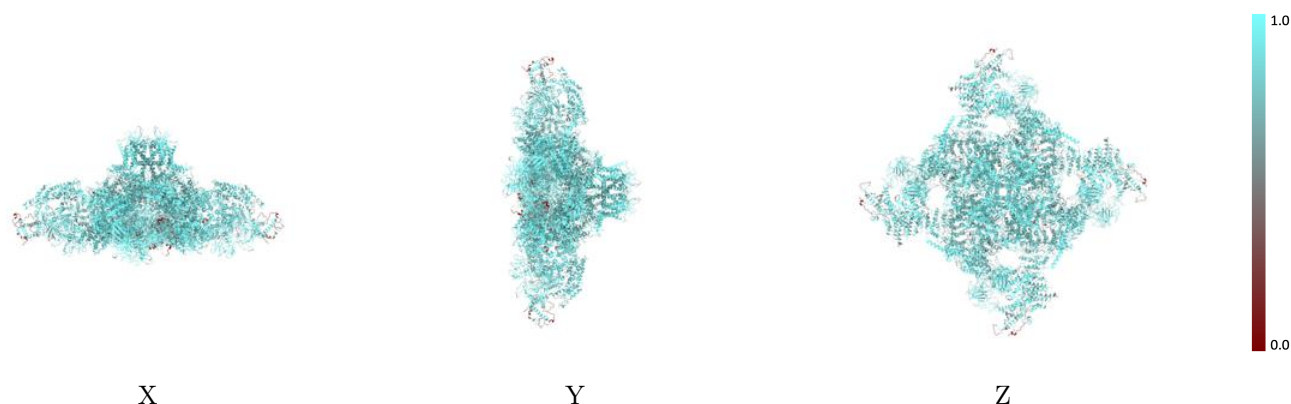
The images above show the 3D surface view of the map at the recommended contour level 0.466 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



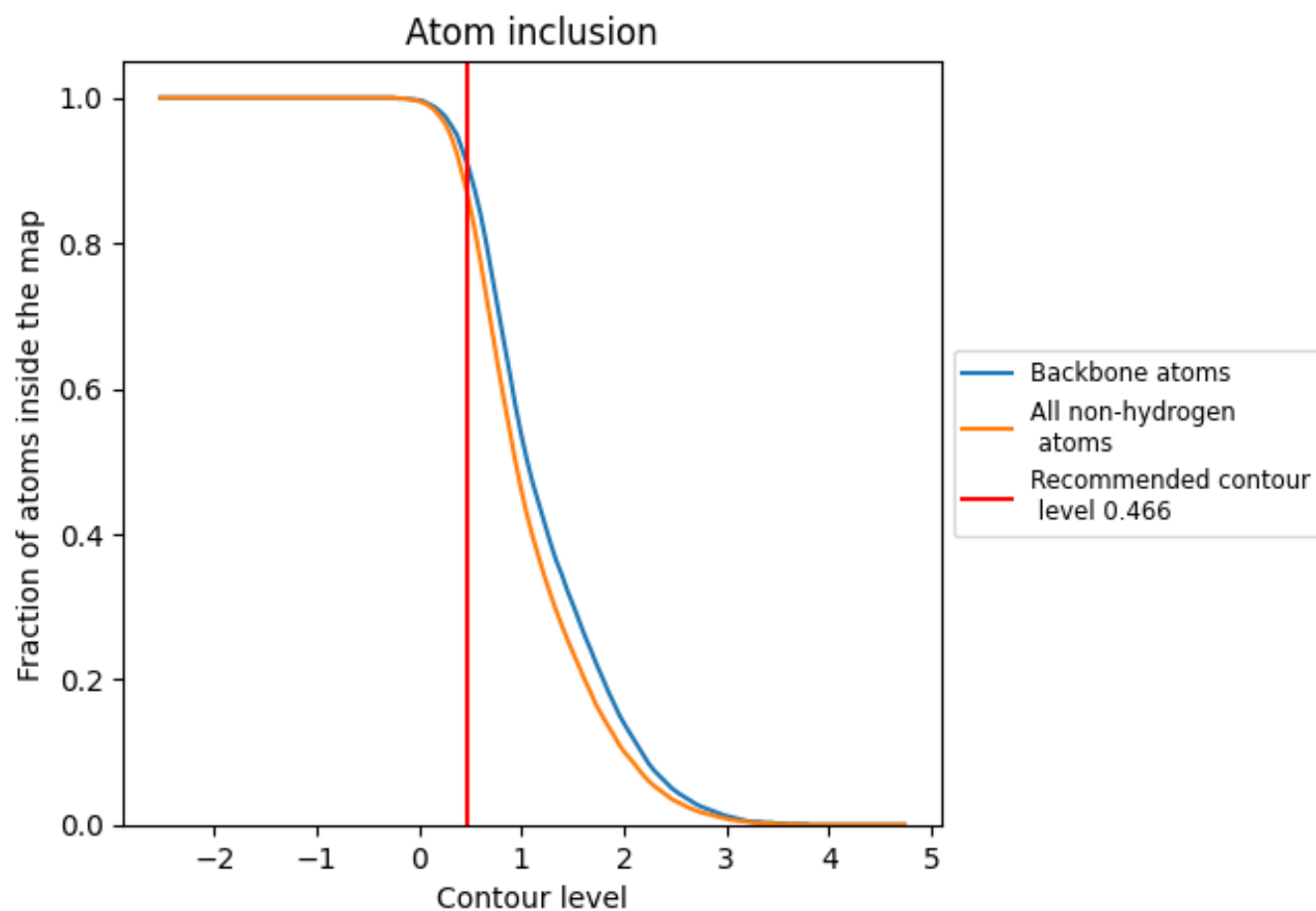
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.466).

9.4 Atom inclusion [i](#)



At the recommended contour level, 91% of all backbone atoms, 87% 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 (0.466) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.8710	0.3900
A	0.8710	0.3900
B	0.8710	0.3900
C	0.8710	0.3900
D	0.8710	0.3900

