



Full wwPDB EM Validation Report ⓘ

Mar 3, 2025 – 07:31 PM JST

PDB ID : 8X4B
EMDB ID : EMD-38045
Title : Cryo-EM structure of Ryanodine receptor 1 (TM helix S0,100 nM Ca²⁺, open state)
Authors : Chen, Q.; Hu, H.
Deposited on : 2023-11-15
Resolution : 4.20 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.dev117
MolProbity : 4.02b-467
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.41.2

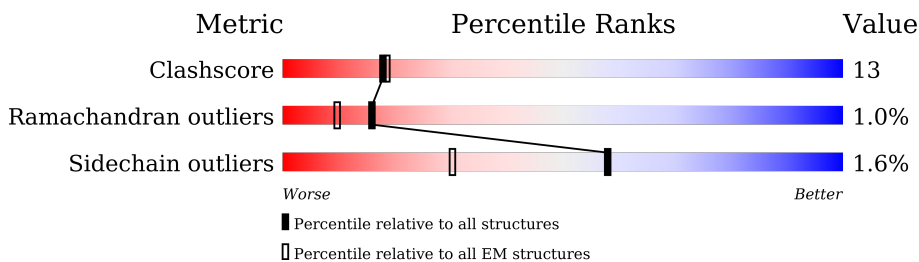
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 4.20 Å.

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



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

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

Mol	Chain	Length	Quality of chain
1	A	5037	 10% 66% 16% • 17%
1	B	5037	 10% 66% 16% • 17%
1	C	5037	 10% 66% 16% • 17%
1	D	5037	 10% 66% 16% • 17%

2 Entry composition

There are 2 unique types of molecules in this entry. The entry contains 110456 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	4173	Total	C	N	O	S	0	0
			27613	17058	5114	5292	149		
1	B	4173	Total	C	N	O	S	0	0
			27613	17058	5114	5292	149		
1	C	4173	Total	C	N	O	S	0	0
			27613	17058	5114	5292	149		
1	D	4173	Total	C	N	O	S	0	0
			27613	17058	5114	5292	149		

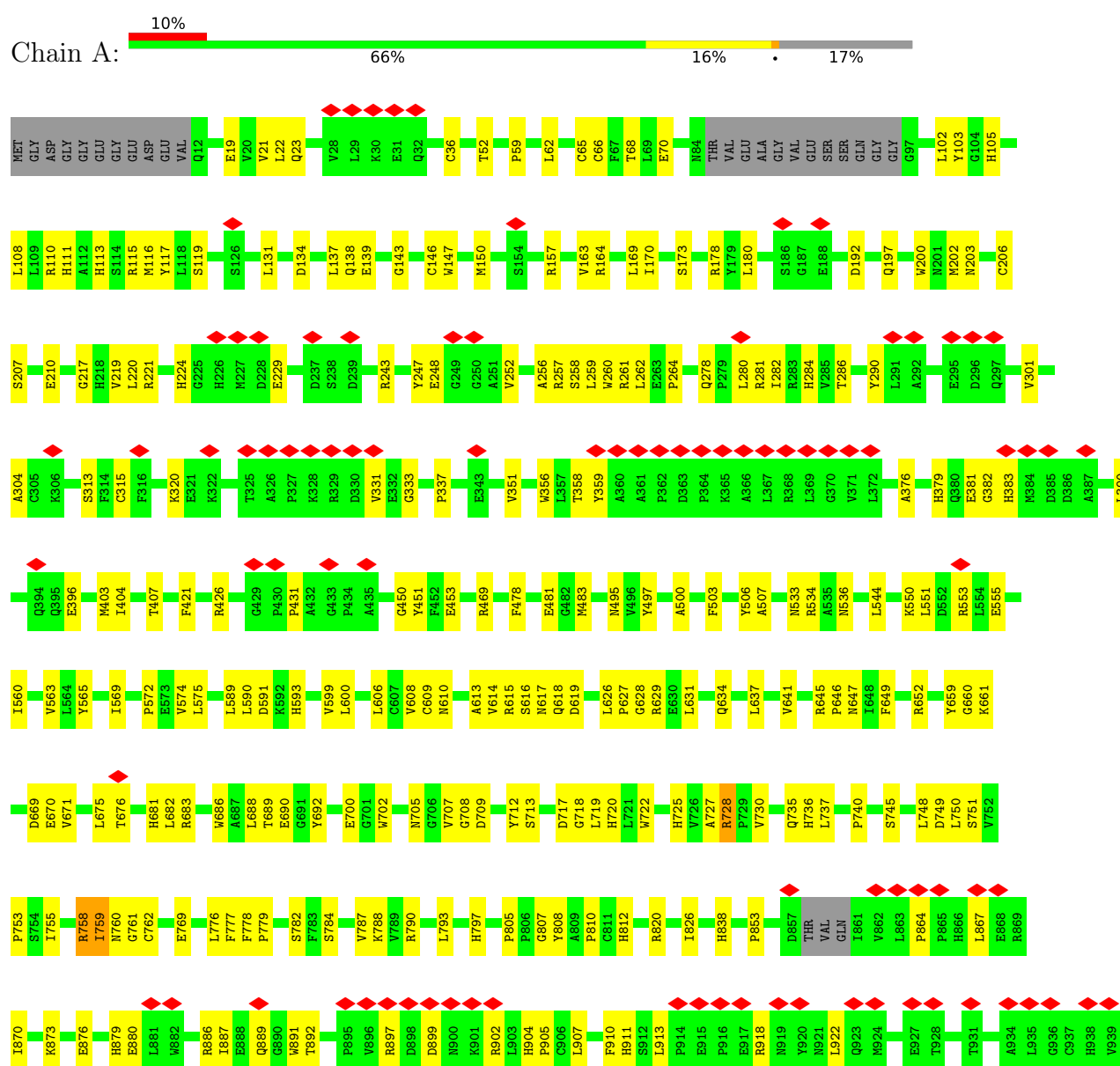
- Molecule 2 is CALCIUM ION (three-letter code: CA) (formula: Ca) (labeled as "Ligand of Interest" by depositor).

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	

3 Residue-property plots

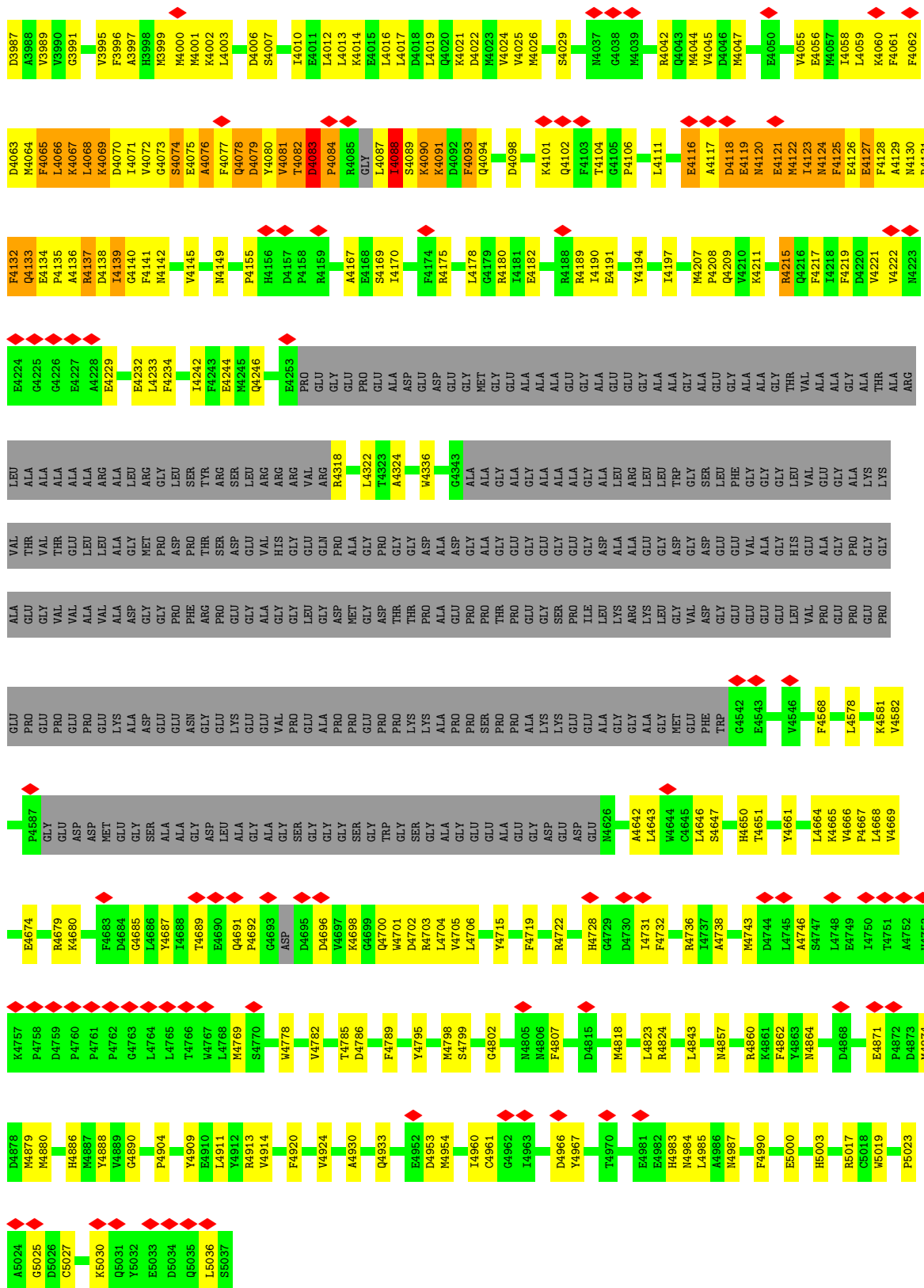
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion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









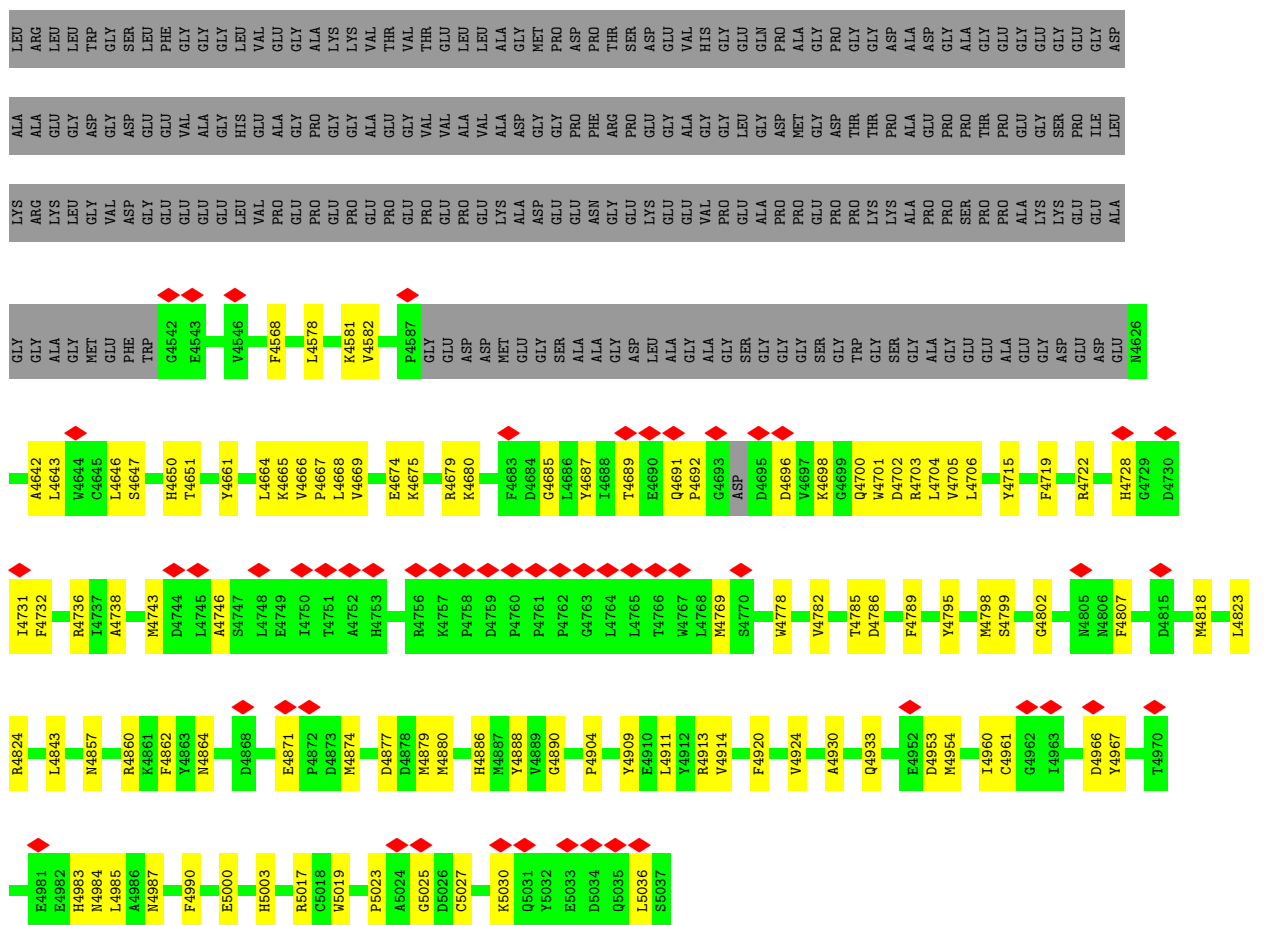
- Molecule 1: Ryanodine receptor 1



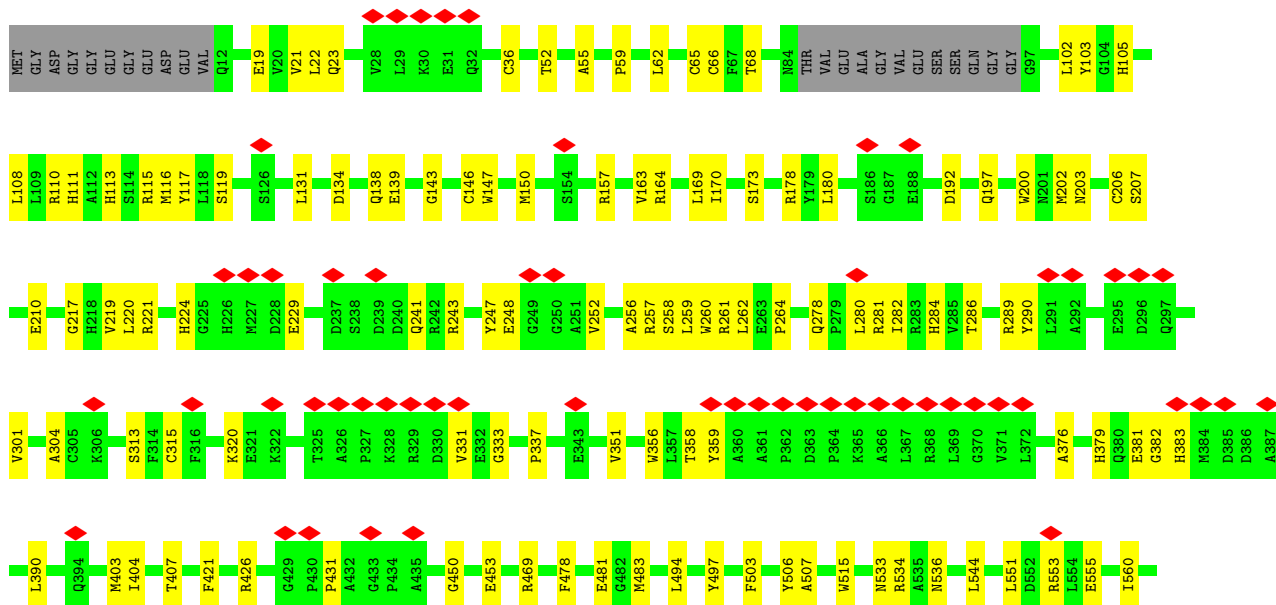


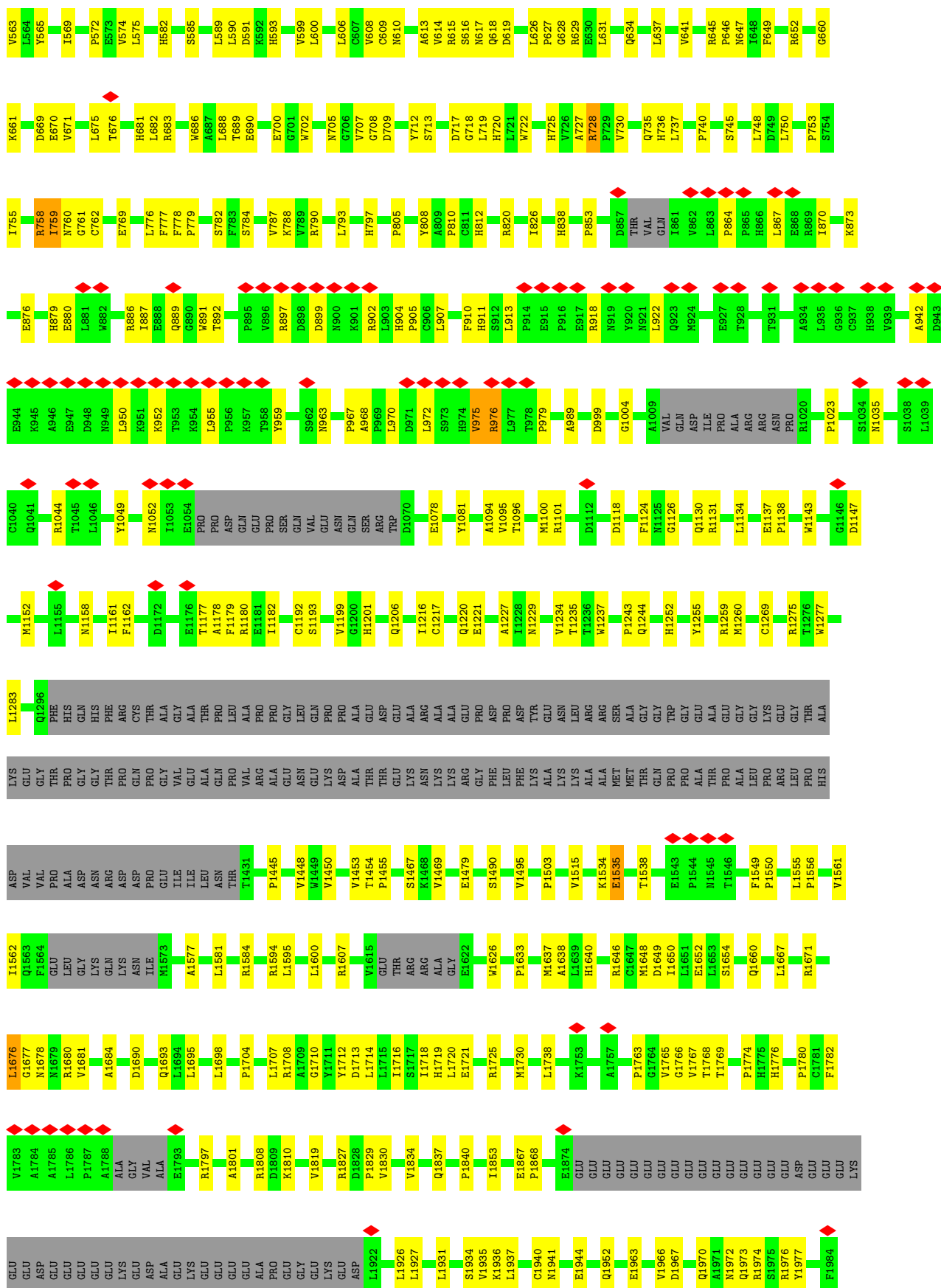
ALA	THR	PRO	ALA	LEU	PRO	ARG	LEU	HIS	ASP	VAL	VAL	PRO	ALA	ASP	ASN	ARG	ASP	PRO	GLU	ILE	ILE	LEU	ASN	THR	T1546	Q1660	L1667	R1671	L1676	G1677	M1678	N1679	M1680	V1681	A1684	D1690	Q1693	L1694	L1695	L1698	P1704	L1707	R1708	A1709	G1710	Y1711	Y1712	D1713	L1714	L1715	I1716	S1717	I1718	H1719	L1720	GLY	E1721	R1725	M1730	L1738	K1753	A1757	P1763	G1764	V1765	G1766	V1767	T1768	T1769																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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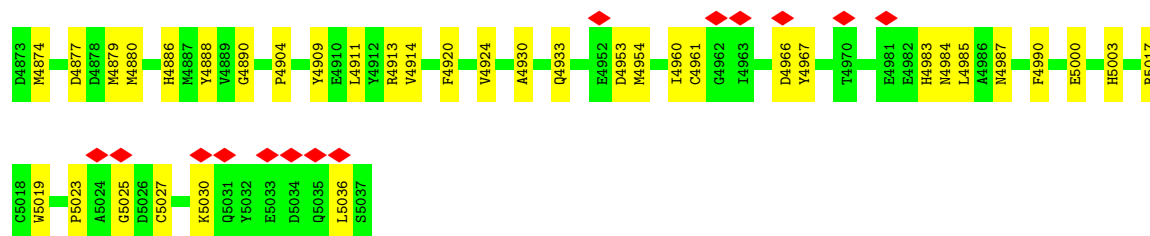
- Molecule 1: Ryanodine receptor 1



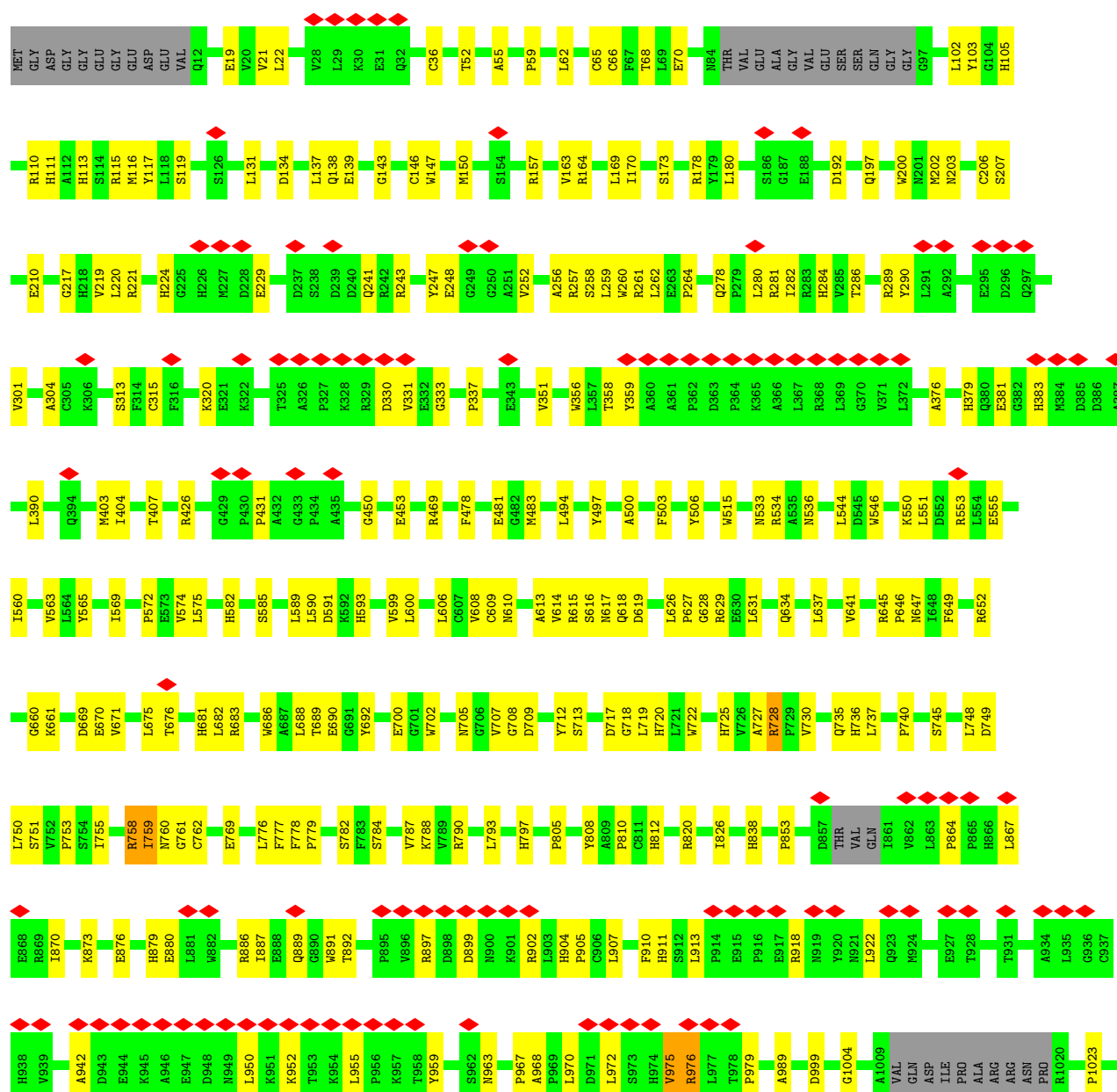








• Molecule 1: Ryanodine receptor 1









4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	52414	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	TFS 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	1.049	Depositor
Minimum map value	-0.431	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.046	Depositor
Recommended contour level	0.237	Depositor
Map size (Å)	523.2, 523.2, 523.2	wwPDB
Map dimensions	480, 480, 480	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.09, 1.09, 1.09	Depositor

5 Model quality [i](#)

5.1 Standard geometry [i](#)

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

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z > 5$	RMSZ	$\# Z > 5$
1	A	0.27	0/28107	0.46	0/37709
1	B	0.27	0/28107	0.46	0/37709
1	C	0.27	0/28107	0.46	0/37709
1	D	0.27	0/28107	0.46	0/37709
All	All	0.27	0/112428	0.46	0/150836

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	27613	0	23271	696	0
1	B	27613	0	23271	710	0
1	C	27613	0	23271	695	0
1	D	27613	0	23271	696	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
All	All	110456	0	93084	2673	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 13.

All (2673) 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:1963:GLU:HA	1:C:3650:CYS:SG	1.69	1.32
1:B:1963:GLU:HA	1:B:3650:CYS:SG	1.69	1.31
1:D:1963:GLU:HA	1:D:3650:CYS:SG	1.69	1.30
1:A:1963:GLU:HA	1:A:3650:CYS:SG	1.69	1.29
1:B:4888:TYR:OH	1:C:4904:PRO:HG3	1.29	1.26
1:A:4888:TYR:OH	1:B:4904:PRO:HG3	1.29	1.26
1:C:4888:TYR:OH	1:D:4904:PRO:HG3	1.29	1.25
1:C:4089:SER:CA	1:C:4120:ASN:HA	1.67	1.25
1:A:4089:SER:HA	1:A:4120:ASN:CA	1.68	1.24
1:D:4089:SER:CA	1:D:4120:ASN:HA	1.67	1.24
1:B:4089:SER:CA	1:B:4120:ASN:HA	1.67	1.24
1:D:4089:SER:HA	1:D:4120:ASN:CA	1.68	1.24
1:B:4089:SER:HA	1:B:4120:ASN:CA	1.68	1.23
1:A:4089:SER:CA	1:A:4120:ASN:HA	1.67	1.23
1:A:4904:PRO:HG3	1:D:4888:TYR:OH	1.29	1.23
1:C:4089:SER:HA	1:C:4120:ASN:CA	1.68	1.22
1:C:4823:LEU:HD11	1:D:4843:LEU:CD1	1.71	1.20
1:A:4888:TYR:CD1	1:B:4914:VAL:HG12	1.77	1.19
1:A:4843:LEU:CD1	1:D:4823:LEU:HD11	1.71	1.19
1:B:4823:LEU:HD11	1:C:4843:LEU:CD1	1.71	1.19
1:B:4888:TYR:CD1	1:C:4914:VAL:HG12	1.77	1.19
1:A:4823:LEU:HD11	1:B:4843:LEU:CD1	1.71	1.18
1:A:4914:VAL:HG12	1:D:4888:TYR:CD1	1.77	1.18
1:C:4888:TYR:CD1	1:D:4914:VAL:HG12	1.77	1.17
1:C:1974:ARG:HD2	1:C:3643:ASN:HB3	1.28	1.15
1:A:1974:ARG:HD2	1:A:3643:ASN:HB3	1.28	1.15
1:D:1974:ARG:HD2	1:D:3643:ASN:HB3	1.28	1.14
1:B:1974:ARG:HD2	1:B:3643:ASN:HB3	1.28	1.13
1:A:4324:ALA:HB1	1:B:4880:MET:CE	1.80	1.12
1:C:4324:ALA:CB	1:D:4880:MET:HE3	1.79	1.12
1:A:4880:MET:CE	1:D:4324:ALA:HB1	1.80	1.11
1:B:4324:ALA:HB1	1:C:4880:MET:CE	1.80	1.11
1:C:4324:ALA:HB1	1:D:4880:MET:CE	1.80	1.11
1:B:4324:ALA:CB	1:C:4880:MET:CE	2.29	1.10
1:A:4324:ALA:CB	1:B:4880:MET:CE	2.29	1.10
1:C:2478:THR:C	1:C:2485:LEU:CA	2.20	1.10
1:A:4880:MET:HE3	1:D:4324:ALA:CB	1.82	1.10

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2478:THR:C	1:D:2485:LEU:CA	2.20	1.10
1:B:2478:THR:C	1:B:2485:LEU:CA	2.20	1.09
1:B:4324:ALA:CB	1:C:4880:MET:HE3	1.82	1.09
1:A:4843:LEU:HD13	1:D:4823:LEU:HD11	1.32	1.09
1:A:4880:MET:CE	1:D:4324:ALA:CB	2.29	1.09
1:A:2478:THR:C	1:A:2485:LEU:CA	2.20	1.08
1:C:4324:ALA:CB	1:D:4880:MET:CE	2.29	1.08
1:A:4324:ALA:HB2	1:B:4880:MET:HE1	1.33	1.08
1:A:4880:MET:HE1	1:D:4324:ALA:HB2	1.36	1.07
1:A:4324:ALA:CB	1:B:4880:MET:HE3	1.85	1.06
1:B:4324:ALA:HB2	1:C:4880:MET:HE1	1.36	1.05
1:C:4324:ALA:HB2	1:D:4880:MET:HE1	1.39	1.05
1:B:4823:LEU:HD11	1:C:4843:LEU:HD13	1.32	1.03
1:C:4823:LEU:HD11	1:D:4843:LEU:HD13	1.32	1.03
1:A:4880:MET:HE3	1:D:4324:ALA:HB1	1.03	1.03
1:B:4087:LEU:HD23	1:B:4121:GLU:HB3	1.40	1.03
1:C:2178:MET:SD	1:C:2228:MET:SD	2.57	1.03
1:A:2178:MET:SD	1:A:2228:MET:SD	2.57	1.02
1:A:1966:VAL:CB	1:A:3650:CYS:SG	2.48	1.02
1:C:1966:VAL:CB	1:C:3650:CYS:SG	2.48	1.02
1:A:4823:LEU:HD11	1:B:4843:LEU:HD13	1.32	1.02
1:B:1966:VAL:CB	1:B:3650:CYS:SG	2.48	1.02
1:B:2178:MET:SD	1:B:2228:MET:SD	2.57	1.02
1:D:4136:ALA:HA	1:D:4139:ILE:HD11	1.42	1.02
1:D:2178:MET:SD	1:D:2228:MET:SD	2.57	1.02
1:D:4087:LEU:HD23	1:D:4121:GLU:HB3	1.40	1.02
1:B:4324:ALA:HB1	1:C:4880:MET:HE3	1.03	1.01
1:D:1966:VAL:CB	1:D:3650:CYS:SG	2.48	1.01
1:A:4324:ALA:HB1	1:B:4880:MET:HE3	1.05	1.01
1:C:4324:ALA:HB1	1:D:4880:MET:HE3	1.01	1.01
1:C:4136:ALA:HA	1:C:4139:ILE:HD11	1.42	1.00
1:A:4087:LEU:HD23	1:A:4121:GLU:HB3	1.40	1.00
1:C:4087:LEU:HD23	1:C:4121:GLU:HB3	1.40	1.00
1:D:2186:MET:CE	1:D:2235:PHE:HD1	1.74	0.99
1:A:4136:ALA:HA	1:A:4139:ILE:HD11	1.42	0.99
1:B:2186:MET:CE	1:B:2235:PHE:HD1	1.74	0.98
1:C:2186:MET:CE	1:C:2235:PHE:HD1	1.74	0.98
1:D:2478:THR:C	1:D:2485:LEU:C	2.22	0.98
1:A:2478:THR:C	1:A:2485:LEU:C	2.22	0.98
1:A:2186:MET:CE	1:A:2235:PHE:HD1	1.74	0.98
1:B:2478:THR:C	1:B:2485:LEU:C	2.22	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4136:ALA:HA	1:B:4139:ILE:HD11	1.42	0.98
1:C:2478:THR:C	1:C:2485:LEU:C	2.22	0.98
1:B:2186:MET:CE	1:B:2235:PHE:CD1	2.51	0.94
1:B:2186:MET:HE2	1:B:2235:PHE:HD1	1.28	0.94
1:C:4823:LEU:HD11	1:D:4843:LEU:HD12	1.48	0.94
1:B:4823:LEU:HD11	1:C:4843:LEU:HD12	1.48	0.93
1:A:2186:MET:CE	1:A:2235:PHE:CD1	2.51	0.93
1:A:4843:LEU:HD12	1:D:4823:LEU:HD11	1.48	0.93
1:C:2186:MET:CE	1:C:2235:PHE:CD1	2.51	0.93
1:D:2186:MET:CE	1:D:2235:PHE:CD1	2.51	0.93
1:D:2186:MET:HE2	1:D:2235:PHE:HD1	1.30	0.92
1:B:4888:TYR:HH	1:C:4904:PRO:HG3	1.32	0.92
1:A:4823:LEU:HD11	1:B:4843:LEU:HD12	1.48	0.92
1:C:4089:SER:HA	1:C:4120:ASN:HA	0.93	0.91
1:A:4089:SER:HA	1:A:4120:ASN:HA	0.93	0.91
1:A:4324:ALA:CB	1:B:4880:MET:HE1	1.97	0.91
1:B:2186:MET:HE2	1:B:2235:PHE:CD1	2.04	0.91
1:D:2186:MET:HE2	1:D:2235:PHE:CD1	2.05	0.91
1:B:4089:SER:HA	1:B:4120:ASN:HA	0.93	0.91
1:D:4089:SER:HA	1:D:4120:ASN:HA	0.93	0.91
1:A:2186:MET:HE2	1:A:2235:PHE:HD1	1.32	0.90
1:A:1963:GLU:CA	1:A:3650:CYS:SG	2.59	0.89
1:A:2186:MET:HE2	1:A:2235:PHE:CD1	2.08	0.89
1:C:1963:GLU:CA	1:C:3650:CYS:SG	2.59	0.89
1:D:1963:GLU:CA	1:D:3650:CYS:SG	2.59	0.88
1:C:2186:MET:HE1	1:C:2235:PHE:HB2	1.54	0.88
1:C:4087:LEU:HD13	1:C:4123:ILE:HA	1.56	0.88
1:C:2186:MET:HE2	1:C:2235:PHE:HD1	1.38	0.88
1:A:4904:PRO:HG3	1:D:4888:TYR:CZ	2.09	0.88
1:A:2186:MET:HE1	1:A:2235:PHE:HB2	1.56	0.88
1:A:4904:PRO:HG3	1:D:4888:TYR:HH	1.36	0.87
1:D:4087:LEU:HD13	1:D:4123:ILE:HA	1.56	0.87
1:C:4091:LYS:HE3	1:C:4119:GLU:HA	1.56	0.87
1:C:4888:TYR:CZ	1:D:4904:PRO:HG3	2.09	0.87
1:C:4888:TYR:HH	1:D:4904:PRO:HG3	1.30	0.87
1:A:4888:TYR:CZ	1:B:4904:PRO:HG3	2.09	0.87
1:B:4888:TYR:CZ	1:C:4904:PRO:HG3	2.09	0.87
1:B:4091:LYS:HE3	1:B:4119:GLU:HA	1.56	0.86
1:C:4135:PRO:O	1:C:4139:ILE:HG12	1.76	0.86
1:B:1963:GLU:CA	1:B:3650:CYS:SG	2.59	0.86
1:B:4135:PRO:O	1:B:4139:ILE:HG12	1.76	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4087:LEU:HD13	1:B:4123:ILE:HA	1.56	0.86
1:A:4087:LEU:HD13	1:A:4123:ILE:HA	1.56	0.86
1:A:4135:PRO:O	1:A:4139:ILE:HG12	1.76	0.86
1:B:2186:MET:HE1	1:B:2235:PHE:HB2	1.58	0.86
1:D:2186:MET:CE	1:D:2235:PHE:HB2	2.06	0.85
1:A:2186:MET:CE	1:A:2235:PHE:HB2	2.06	0.85
1:A:4091:LYS:HE3	1:A:4119:GLU:HA	1.56	0.85
1:D:4091:LYS:HE3	1:D:4119:GLU:HA	1.56	0.85
1:C:2186:MET:HE2	1:C:2235:PHE:CD1	2.12	0.85
1:D:2186:MET:HE1	1:D:2235:PHE:HB2	1.57	0.85
1:D:2186:MET:CE	1:D:2235:PHE:CB	2.55	0.85
1:C:2186:MET:HE3	1:C:2235:PHE:CD1	2.11	0.85
1:D:4135:PRO:O	1:D:4139:ILE:HG12	1.76	0.84
1:B:2186:MET:CE	1:B:2235:PHE:HB2	2.06	0.84
1:A:2186:MET:CE	1:A:2235:PHE:CB	2.55	0.84
1:B:2186:MET:CE	1:B:2235:PHE:CB	2.55	0.84
1:C:2186:MET:CE	1:C:2235:PHE:CB	2.55	0.84
1:A:2186:MET:CE	1:A:2235:PHE:HA	2.07	0.84
1:D:2186:MET:CE	1:D:2235:PHE:HA	2.07	0.84
1:B:2186:MET:CE	1:B:2235:PHE:HA	2.07	0.83
1:C:2186:MET:CE	1:C:2235:PHE:HB2	2.06	0.83
1:B:720:HIS:HD2	1:B:727:ALA:HA	1.43	0.83
1:C:2186:MET:CE	1:C:2235:PHE:HA	2.07	0.83
1:A:720:HIS:HD2	1:A:727:ALA:HA	1.43	0.83
1:C:4324:ALA:HB2	1:D:4880:MET:CE	2.02	0.82
1:C:720:HIS:HD2	1:C:727:ALA:HA	1.43	0.82
1:D:720:HIS:HD2	1:D:727:ALA:HA	1.43	0.82
1:C:4807:PHE:HE2	1:D:4857:ASN:ND2	1.79	0.81
1:A:4857:ASN:ND2	1:D:4807:PHE:HE2	1.79	0.80
1:B:4807:PHE:HE2	1:C:4857:ASN:ND2	1.79	0.80
1:D:4061:PHE:HA	1:D:4064:MET:CB	2.12	0.80
1:B:2186:MET:HE1	1:B:2235:PHE:CB	2.13	0.79
1:B:4061:PHE:HA	1:B:4064:MET:CB	2.12	0.79
1:B:4324:ALA:HB2	1:C:4880:MET:CE	2.02	0.79
1:D:4132:PHE:O	1:D:4134:GLU:N	2.16	0.79
1:A:2186:MET:HE1	1:A:2235:PHE:CB	2.13	0.79
1:C:4061:PHE:HA	1:C:4064:MET:CB	2.12	0.79
1:A:2186:MET:HE3	1:A:2235:PHE:CD1	2.16	0.79
1:A:4061:PHE:HA	1:A:4064:MET:CB	2.12	0.79
1:A:4807:PHE:HE2	1:B:4857:ASN:ND2	1.79	0.79
1:A:4132:PHE:O	1:A:4134:GLU:N	2.16	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4132:PHE:O	1:C:4134:GLU:N	2.16	0.78
1:C:4137:ARG:HH11	1:C:4138:ASP:HA	1.48	0.78
1:C:2186:MET:HE2	1:C:2235:PHE:HA	1.65	0.78
1:D:2291:GLN:C	1:D:2293:GLN:H	1.87	0.78
1:C:2291:GLN:C	1:C:2293:GLN:H	1.87	0.78
1:B:4888:TYR:CE1	1:C:4914:VAL:HG12	2.19	0.78
1:A:4807:PHE:CE2	1:B:4857:ASN:ND2	2.52	0.78
1:B:4807:PHE:CE2	1:C:4857:ASN:ND2	2.52	0.78
1:D:2186:MET:HE1	1:D:2235:PHE:CB	2.13	0.78
1:A:4137:ARG:HH11	1:A:4138:ASP:HA	1.48	0.78
1:A:4888:TYR:CE1	1:B:4914:VAL:HG12	2.19	0.78
1:A:4914:VAL:HG12	1:D:4888:TYR:CE1	2.19	0.78
1:B:2291:GLN:C	1:B:2293:GLN:H	1.87	0.78
1:A:4324:ALA:HB2	1:B:4880:MET:CE	2.02	0.78
1:C:4888:TYR:CE1	1:D:4914:VAL:HG12	2.19	0.77
1:A:645:ARG:HD3	1:A:826:ILE:HG22	1.66	0.77
1:C:2186:MET:HE1	1:C:2235:PHE:CB	2.13	0.77
1:D:4137:ARG:HH11	1:D:4138:ASP:HA	1.48	0.77
1:B:2186:MET:HE3	1:B:2235:PHE:CD1	2.19	0.77
1:D:2186:MET:HE3	1:D:2235:PHE:CD1	2.18	0.77
1:D:260:TRP:HB3	1:D:282:ILE:HD11	1.67	0.77
1:A:4087:LEU:HG	1:A:4088:ILE:HG22	1.67	0.77
1:D:645:ARG:HD3	1:D:826:ILE:HG22	1.66	0.77
1:D:2186:MET:HE1	1:D:2235:PHE:CA	2.14	0.77
1:D:4087:LEU:HG	1:D:4088:ILE:HG22	1.67	0.77
1:B:2186:MET:HE1	1:B:2235:PHE:CA	2.13	0.77
1:A:260:TRP:HB3	1:A:282:ILE:HD11	1.67	0.76
1:B:1974:ARG:CD	1:B:3643:ASN:HB3	2.14	0.76
1:B:4087:LEU:HG	1:B:4088:ILE:HG22	1.67	0.76
1:B:4132:PHE:O	1:B:4134:GLU:N	2.16	0.76
1:D:2288:LEU:O	1:D:3849:ARG:NH1	2.18	0.76
1:B:637:LEU:HD23	1:B:1637:MET:HB3	1.67	0.76
1:B:4137:ARG:HH11	1:B:4138:ASP:HA	1.48	0.76
1:C:2288:LEU:O	1:C:3849:ARG:NH1	2.18	0.76
1:C:4807:PHE:CE2	1:D:4857:ASN:ND2	2.52	0.76
1:A:4857:ASN:ND2	1:D:4807:PHE:CE2	2.52	0.76
1:A:4888:TYR:HH	1:B:4904:PRO:HG3	1.47	0.76
1:B:358:THR:HG1	1:B:383:HIS:HD1	1.34	0.76
1:A:2288:LEU:O	1:A:3849:ARG:NH1	2.18	0.76
1:C:4072:VAL:HG22	1:C:4126:GLU:HB3	1.68	0.76
1:C:645:ARG:HD3	1:C:826:ILE:HG22	1.66	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4072:VAL:HG22	1:A:4126:GLU:HB3	1.68	0.76
1:B:260:TRP:HB3	1:B:282:ILE:HD11	1.67	0.76
1:B:645:ARG:HD3	1:B:826:ILE:HG22	1.66	0.76
1:B:2288:LEU:O	1:B:3849:ARG:NH1	2.18	0.76
1:C:260:TRP:HB3	1:C:282:ILE:HD11	1.67	0.76
1:C:4087:LEU:HG	1:C:4088:ILE:HG22	1.67	0.76
1:A:2291:GLN:C	1:A:2293:GLN:H	1.87	0.75
1:B:4072:VAL:HG22	1:B:4126:GLU:HB3	1.68	0.75
1:D:4072:VAL:HG22	1:D:4126:GLU:HB3	1.68	0.75
1:C:637:LEU:HD23	1:C:1637:MET:HB3	1.67	0.75
1:A:1738:LEU:HB3	1:A:2146:PRO:HD3	1.68	0.75
1:A:1974:ARG:CD	1:A:3643:ASN:HB3	2.14	0.75
1:D:637:LEU:HD23	1:D:1637:MET:HB3	1.67	0.75
1:D:2103:VAL:CG1	1:D:3680:ALA:HB1	2.17	0.75
1:A:637:LEU:HD23	1:A:1637:MET:HB3	1.67	0.75
1:A:4880:MET:HE1	1:D:4324:ALA:CB	2.00	0.75
1:C:2103:VAL:CG1	1:C:3680:ALA:HB1	2.17	0.75
1:C:1738:LEU:HB3	1:C:2146:PRO:HD3	1.68	0.74
1:A:2186:MET:HE1	1:A:2235:PHE:CA	2.16	0.74
1:B:2103:VAL:CG1	1:B:3680:ALA:HB1	2.17	0.74
1:D:1738:LEU:HB3	1:D:2146:PRO:HD3	1.68	0.74
1:D:4087:LEU:CD2	1:D:4121:GLU:HB3	2.18	0.74
1:B:2186:MET:HE1	1:B:2235:PHE:HA	1.66	0.73
1:D:2186:MET:HE1	1:D:2235:PHE:HA	1.68	0.73
1:D:4081:VAL:HG23	1:D:4082:THR:H	1.53	0.73
1:A:4081:VAL:HG23	1:A:4082:THR:H	1.53	0.73
1:B:1738:LEU:HB3	1:B:2146:PRO:HD3	1.68	0.73
1:A:2103:VAL:CG1	1:A:3680:ALA:HB1	2.17	0.73
1:C:1974:ARG:CD	1:C:3643:ASN:HB3	2.14	0.73
1:A:2186:MET:HE1	1:A:2235:PHE:HA	1.71	0.73
1:A:358:THR:HG1	1:A:383:HIS:HD1	1.35	0.72
1:D:4124:ASN:HA	1:D:4127:GLU:HB3	1.71	0.72
1:B:4324:ALA:CB	1:C:4880:MET:HE1	2.00	0.72
1:C:4081:VAL:HG23	1:C:4082:THR:H	1.53	0.72
1:D:1974:ARG:CD	1:D:3643:ASN:HB3	2.14	0.72
1:A:4087:LEU:CD2	1:A:4121:GLU:HB3	2.18	0.72
1:B:4087:LEU:CD2	1:B:4121:GLU:HB3	2.18	0.72
1:C:2478:THR:C	1:C:2486:VAL:N	2.43	0.72
1:B:2478:THR:C	1:B:2486:VAL:N	2.43	0.72
1:B:4081:VAL:HG23	1:B:4082:THR:H	1.53	0.72
1:C:4087:LEU:CD2	1:C:4121:GLU:HB3	2.18	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4124:ASN:HA	1:B:4127:GLU:HB3	1.71	0.72
1:C:907:LEU:O	1:C:963:ASN:ND2	2.23	0.72
1:B:907:LEU:O	1:B:963:ASN:ND2	2.23	0.71
1:D:4651:THR:HG22	1:D:4799:SER:HB3	1.71	0.71
1:A:4060:LYS:O	1:A:4064:MET:N	2.24	0.71
1:D:2478:THR:C	1:D:2486:VAL:N	2.43	0.71
1:A:2186:MET:HE2	1:A:2235:PHE:HA	1.71	0.71
1:C:4124:ASN:HA	1:C:4127:GLU:HB3	1.71	0.71
1:A:907:LEU:O	1:A:963:ASN:ND2	2.23	0.71
1:A:1974:ARG:HG3	1:A:3642:TYR:CB	2.21	0.71
1:B:4651:THR:HG22	1:B:4799:SER:HB3	1.71	0.71
1:C:1260:MET:HB2	1:C:1269:CYS:H	1.56	0.71
1:C:4651:THR:HG22	1:C:4799:SER:HB3	1.71	0.71
1:D:1974:ARG:HG3	1:D:3642:TYR:CB	2.21	0.71
1:A:4124:ASN:HA	1:A:4127:GLU:HB3	1.71	0.71
1:B:1974:ARG:HG3	1:B:3642:TYR:CB	2.21	0.71
1:C:1974:ARG:HG3	1:C:3642:TYR:CB	2.21	0.71
1:D:4060:LYS:O	1:D:4064:MET:N	2.24	0.71
1:D:4125:PHE:C	1:D:4127:GLU:N	2.42	0.71
1:A:2478:THR:C	1:A:2486:VAL:N	2.43	0.71
1:C:2186:MET:HE1	1:C:2235:PHE:CA	2.21	0.71
1:D:358:THR:HG1	1:D:383:HIS:HD1	1.37	0.71
1:D:4069:LYS:HB2	1:D:4130:ASN:ND2	2.06	0.71
1:A:4069:LYS:HB2	1:A:4130:ASN:ND2	2.06	0.70
1:C:4060:LYS:O	1:C:4064:MET:N	2.24	0.70
1:B:4060:LYS:O	1:B:4064:MET:N	2.24	0.70
1:D:1260:MET:HB2	1:D:1269:CYS:H	1.56	0.70
1:C:358:THR:HG1	1:C:383:HIS:HD1	1.38	0.70
1:C:4324:ALA:CB	1:D:4880:MET:HE1	2.03	0.70
1:B:2186:MET:CE	1:B:2235:PHE:CA	2.69	0.70
1:B:4125:PHE:C	1:B:4127:GLU:H	1.95	0.70
1:D:4087:LEU:HB2	1:D:4122:MET:CA	2.21	0.70
1:A:1660:GLN:HG3	1:A:1707:LEU:HB2	1.74	0.70
1:A:4651:THR:HG22	1:A:4799:SER:HB3	1.71	0.70
1:C:4087:LEU:HB2	1:C:4122:MET:CA	2.21	0.70
1:B:4069:LYS:HB2	1:B:4130:ASN:ND2	2.06	0.70
1:A:1260:MET:HB2	1:A:1269:CYS:H	1.56	0.70
1:C:4069:LYS:HB2	1:C:4130:ASN:ND2	2.06	0.70
1:C:4125:PHE:C	1:C:4127:GLU:N	2.42	0.70
1:A:551:LEU:O	1:A:553:ARG:NH2	2.25	0.70
1:A:4087:LEU:HB2	1:A:4122:MET:CA	2.21	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4087:LEU:HB2	1:B:4122:MET:CA	2.21	0.69
1:C:551:LEU:O	1:C:553:ARG:NH2	2.25	0.69
1:C:4091:LYS:CE	1:C:4119:GLU:HA	2.22	0.69
1:B:1260:MET:HB2	1:B:1269:CYS:H	1.56	0.69
1:B:4091:LYS:CE	1:B:4119:GLU:HA	2.22	0.69
1:C:2186:MET:CE	1:C:2235:PHE:CA	2.69	0.69
1:B:1660:GLN:HG3	1:B:1707:LEU:HB2	1.74	0.69
1:D:2155:LEU:HG	1:D:2185:ILE:HD11	1.73	0.69
1:C:2155:LEU:HG	1:C:2185:ILE:HD11	1.73	0.69
1:D:2186:MET:CE	1:D:2235:PHE:CA	2.69	0.69
1:A:2155:LEU:HG	1:A:2185:ILE:HD11	1.73	0.69
1:B:551:LEU:O	1:B:553:ARG:NH2	2.25	0.69
1:C:2186:MET:HE3	1:C:2235:PHE:HD1	1.47	0.69
1:C:1660:GLN:HG3	1:C:1707:LEU:HB2	1.74	0.69
1:A:2186:MET:CE	1:A:2235:PHE:CA	2.69	0.69
1:D:2186:MET:HE2	1:D:2235:PHE:HA	1.74	0.69
1:D:551:LEU:O	1:D:553:ARG:NH2	2.25	0.69
1:B:4135:PRO:HA	1:B:4138:ASP:OD2	1.93	0.69
1:C:4732:PHE:HB3	1:C:4736:ARG:HH11	1.58	0.69
1:D:907:LEU:O	1:D:963:ASN:ND2	2.23	0.69
1:B:2003:GLN:O	1:B:2007:ASN:ND2	2.26	0.68
1:B:4732:PHE:HB3	1:B:4736:ARG:HH11	1.58	0.68
1:D:4091:LYS:CE	1:D:4119:GLU:HA	2.22	0.68
1:A:4125:PHE:C	1:A:4127:GLU:N	2.42	0.68
1:D:4125:PHE:C	1:D:4127:GLU:H	1.95	0.68
1:C:4078:GLN:HG3	1:C:4081:VAL:HG21	1.76	0.68
1:A:2003:GLN:O	1:A:2007:ASN:ND2	2.26	0.68
1:A:4135:PRO:HA	1:A:4138:ASP:OD2	1.93	0.68
1:D:4732:PHE:HB3	1:D:4736:ARG:HH11	1.58	0.68
1:A:4125:PHE:C	1:A:4127:GLU:H	1.95	0.68
1:A:4732:PHE:HB3	1:A:4736:ARG:HH11	1.58	0.68
1:B:4182:GLU:HB3	1:B:4190:ILE:HD11	1.76	0.68
1:D:4078:GLN:HG3	1:D:4081:VAL:HG21	1.76	0.68
1:B:2155:LEU:HG	1:B:2185:ILE:HD11	1.73	0.68
1:C:4135:PRO:HA	1:C:4138:ASP:OD2	1.93	0.68
1:D:4135:PRO:HA	1:D:4138:ASP:OD2	1.93	0.68
1:B:1259:ARG:NH2	1:B:1595:LEU:O	2.27	0.68
1:B:5027:CYS:SG	1:B:5030:LYS:NZ	2.67	0.68
1:A:4078:GLN:HG3	1:A:4081:VAL:HG21	1.76	0.68
1:B:4130:ASN:OD1	1:B:4133:GLN:HB2	1.94	0.68
1:C:1259:ARG:NH2	1:C:1595:LEU:O	2.27	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2186:MET:HE2	1:B:2235:PHE:HA	1.75	0.67
1:C:2003:GLN:O	1:C:2007:ASN:ND2	2.26	0.67
1:A:5027:CYS:SG	1:A:5030:LYS:NZ	2.67	0.67
1:B:4124:ASN:C	1:B:4127:GLU:HB3	2.15	0.67
1:A:4091:LYS:CE	1:A:4119:GLU:HA	2.22	0.67
1:C:110:ARG:HH21	1:C:115:ARG:HB3	1.59	0.67
1:C:5027:CYS:SG	1:C:5030:LYS:NZ	2.67	0.67
1:D:1259:ARG:NH2	1:D:1595:LEU:O	2.27	0.67
1:D:4124:ASN:C	1:D:4127:GLU:HB3	2.15	0.67
1:A:626:LEU:HG	1:A:628:GLY:H	1.60	0.67
1:A:4124:ASN:C	1:A:4127:GLU:HB3	2.15	0.67
1:C:4130:ASN:OD1	1:C:4133:GLN:HB2	1.94	0.67
1:D:1660:GLN:HG3	1:D:1707:LEU:HB2	1.74	0.67
1:D:2003:GLN:O	1:D:2007:ASN:ND2	2.26	0.67
1:D:4182:GLU:HB3	1:D:4190:ILE:HD11	1.76	0.67
1:D:626:LEU:HG	1:D:628:GLY:H	1.60	0.67
1:A:1259:ARG:NH2	1:A:1595:LEU:O	2.27	0.67
1:B:4078:GLN:HG3	1:B:4081:VAL:HG21	1.76	0.67
1:C:4182:GLU:HB3	1:C:4190:ILE:HD11	1.76	0.67
1:D:4130:ASN:OD1	1:D:4133:GLN:HB2	1.94	0.67
1:C:4125:PHE:C	1:C:4127:GLU:H	1.95	0.67
1:D:5027:CYS:SG	1:D:5030:LYS:NZ	2.67	0.67
1:C:4068:LEU:O	1:C:4072:VAL:HG23	1.95	0.67
1:A:4068:LEU:O	1:A:4072:VAL:HG23	1.95	0.66
1:D:110:ARG:HH21	1:D:115:ARG:HB3	1.59	0.66
1:B:4125:PHE:C	1:B:4127:GLU:N	2.42	0.66
1:C:626:LEU:HG	1:C:628:GLY:H	1.60	0.66
1:A:4182:GLU:HB3	1:A:4190:ILE:HD11	1.76	0.66
1:B:626:LEU:HG	1:B:628:GLY:H	1.60	0.66
1:C:4087:LEU:HB2	1:C:4122:MET:HA	1.77	0.66
1:D:4068:LEU:O	1:D:4072:VAL:HG23	1.95	0.66
1:A:4130:ASN:OD1	1:A:4133:GLN:HB2	1.94	0.66
1:B:4087:LEU:HB2	1:B:4122:MET:HA	1.77	0.66
1:C:2186:MET:HE1	1:C:2235:PHE:HA	1.76	0.66
1:A:110:ARG:HH21	1:A:115:ARG:HB3	1.59	0.66
1:C:4124:ASN:C	1:C:4127:GLU:HB3	2.15	0.66
1:A:4087:LEU:HB2	1:A:4122:MET:HA	1.77	0.66
1:B:110:ARG:HH21	1:B:115:ARG:HB3	1.59	0.66
1:C:3770:LEU:HD23	1:C:3804:ILE:HD11	1.78	0.66
1:B:4087:LEU:HD13	1:B:4123:ILE:CA	2.26	0.65
1:C:4087:LEU:HD13	1:C:4123:ILE:CA	2.26	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3770:LEU:HD23	1:D:3804:ILE:HD11	1.78	0.65
1:B:3770:LEU:HD23	1:B:3804:ILE:HD11	1.78	0.65
1:B:4068:LEU:O	1:B:4072:VAL:HG23	1.95	0.65
1:D:4087:LEU:HB2	1:D:4122:MET:HA	1.77	0.65
1:A:2002:PRO:HA	1:A:2005:GLN:HB3	1.78	0.65
1:A:3770:LEU:HD23	1:A:3804:ILE:HD11	1.78	0.65
1:B:4217:PHE:HZ	1:B:4234:PHE:HA	1.61	0.65
1:D:4217:PHE:HZ	1:D:4234:PHE:HA	1.61	0.65
1:A:3923:LEU:HD12	1:A:3926:LEU:HD11	1.79	0.65
1:D:2002:PRO:HA	1:D:2005:GLN:HB3	1.78	0.65
1:A:4217:PHE:HZ	1:A:4234:PHE:HA	1.61	0.65
1:C:111:HIS:CE1	1:C:113:HIS:HB3	2.32	0.65
1:C:3923:LEU:HD12	1:C:3926:LEU:HD11	1.79	0.65
1:B:21:VAL:HG12	1:B:66:CYS:HA	1.79	0.65
1:C:21:VAL:HG12	1:C:66:CYS:HA	1.79	0.65
1:C:2002:PRO:HA	1:C:2005:GLN:HB3	1.78	0.65
1:D:111:HIS:CE1	1:D:113:HIS:HB3	2.32	0.65
1:C:4217:PHE:HZ	1:C:4234:PHE:HA	1.61	0.64
1:B:3923:LEU:HD12	1:B:3926:LEU:HD11	1.79	0.64
1:B:111:HIS:CE1	1:B:113:HIS:HB3	2.32	0.64
1:D:614:VAL:HG22	1:D:616:SER:H	1.63	0.64
1:A:111:HIS:CE1	1:A:113:HIS:HB3	2.32	0.64
1:A:4087:LEU:HD13	1:A:4123:ILE:CA	2.26	0.64
1:D:4208:PRO:HA	1:D:4211:LYS:HG2	1.79	0.64
1:D:3923:LEU:HD12	1:D:3926:LEU:HD11	1.79	0.64
1:A:614:VAL:HG22	1:A:616:SER:H	1.63	0.64
1:D:170:ILE:HD12	1:D:197:GLN:HB3	1.80	0.64
1:D:1684:ALA:HA	1:D:1782:PHE:HZ	1.63	0.64
1:B:170:ILE:HD12	1:B:197:GLN:HB3	1.80	0.64
1:B:2191:PHE:HZ	1:B:2239:PHE:HB2	1.63	0.64
1:C:614:VAL:HG22	1:C:616:SER:H	1.63	0.64
1:C:3900:GLN:NE2	1:C:3967:GLU:O	2.31	0.64
1:A:21:VAL:HG12	1:A:66:CYS:HA	1.79	0.63
1:A:1671:ARG:NH2	1:A:1713:ASP:HB3	2.13	0.63
1:A:4078:GLN:OE1	1:A:4081:VAL:HG11	1.99	0.63
1:B:1671:ARG:NH2	1:B:1713:ASP:HB3	2.13	0.63
1:C:2191:PHE:HZ	1:C:2239:PHE:HB2	1.63	0.63
1:D:3900:GLN:NE2	1:D:3967:GLU:O	2.31	0.63
1:B:2002:PRO:HA	1:B:2005:GLN:HB3	1.78	0.63
1:C:1684:ALA:HA	1:C:1782:PHE:HZ	1.63	0.63
1:C:4208:PRO:HA	1:C:4211:LYS:HG2	1.79	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:21:VAL:HG12	1:D:66:CYS:HA	1.79	0.63
1:A:3900:GLN:NE2	1:A:3967:GLU:O	2.31	0.63
1:B:4089:SER:HA	1:B:4120:ASN:C	2.19	0.63
1:B:4132:PHE:CE1	1:B:4135:PRO:HG2	2.34	0.63
1:D:4087:LEU:HD22	1:D:4122:MET:O	1.99	0.63
1:A:4208:PRO:HA	1:A:4211:LYS:HG2	1.79	0.63
1:B:3900:GLN:NE2	1:B:3967:GLU:O	2.31	0.63
1:D:4078:GLN:OE1	1:D:4081:VAL:HG11	1.99	0.63
1:A:4843:LEU:HD13	1:D:4823:LEU:CD1	2.20	0.63
1:B:614:VAL:HG22	1:B:616:SER:H	1.63	0.63
1:C:4680:LYS:HZ1	1:C:4687:TYR:H	1.46	0.63
1:A:170:ILE:HD12	1:A:197:GLN:HB3	1.80	0.63
1:A:4089:SER:HA	1:A:4120:ASN:C	2.19	0.63
1:C:170:ILE:HD12	1:C:197:GLN:HB3	1.80	0.63
1:C:4087:LEU:HD22	1:C:4122:MET:O	1.99	0.63
1:A:4880:MET:CE	1:D:4324:ALA:HB2	2.02	0.63
1:C:2022:PRO:O	1:C:2028:ARG:NH2	2.32	0.63
1:D:2191:PHE:HZ	1:D:2239:PHE:HB2	1.63	0.63
1:D:4089:SER:HA	1:D:4120:ASN:C	2.19	0.63
1:A:2191:PHE:HZ	1:A:2239:PHE:HB2	1.63	0.62
1:A:4132:PHE:CE1	1:A:4135:PRO:HG2	2.34	0.62
1:B:217:GLY:O	1:B:261:ARG:NH1	2.32	0.62
1:B:608:VAL:HG22	1:B:613:ALA:HB2	1.81	0.62
1:B:1684:ALA:HA	1:B:1782:PHE:HZ	1.63	0.62
1:B:1698:LEU:HD13	1:B:1810:LYS:HG2	1.82	0.62
1:B:4078:GLN:OE1	1:B:4081:VAL:HG11	1.99	0.62
1:B:4208:PRO:HA	1:B:4211:LYS:HG2	1.79	0.62
1:C:4089:SER:HA	1:C:4120:ASN:C	2.19	0.62
1:D:1671:ARG:NH2	1:D:1713:ASP:HB3	2.13	0.62
1:D:4132:PHE:CE1	1:D:4135:PRO:HG2	2.34	0.62
1:D:404:ILE:HG21	1:D:481:GLU:HG3	1.81	0.62
1:D:608:VAL:HG22	1:D:613:ALA:HB2	1.81	0.62
1:A:1684:ALA:HA	1:A:1782:PHE:HZ	1.63	0.62
1:A:1808:ARG:HD3	1:A:1853:ILE:HG22	1.81	0.62
1:A:4087:LEU:HD22	1:A:4122:MET:O	1.99	0.62
1:A:4232:GLU:OE1	1:A:5019:TRP:NE1	2.30	0.62
1:C:608:VAL:HG22	1:C:613:ALA:HB2	1.81	0.62
1:C:720:HIS:HD2	1:C:727:ALA:CA	2.12	0.62
1:C:1698:LEU:HD13	1:C:1810:LYS:HG2	1.82	0.62
1:C:4232:GLU:OE1	1:C:5019:TRP:NE1	2.30	0.62
1:D:2022:PRO:O	1:D:2028:ARG:NH2	2.32	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:404:ILE:HG21	1:A:481:GLU:HG3	1.81	0.62
1:A:608:VAL:HG22	1:A:613:ALA:HB2	1.81	0.62
1:A:3888:LEU:HD13	1:A:3891:LEU:HD12	1.81	0.62
1:C:641:VAL:HG21	1:C:705:ASN:HA	1.82	0.62
1:C:989:ALA:O	1:C:1035:ASN:ND2	2.33	0.62
1:C:1808:ARG:HD3	1:C:1853:ILE:HG22	1.81	0.62
1:C:4132:PHE:CE1	1:C:4135:PRO:HG2	2.34	0.62
1:B:3888:LEU:HD13	1:B:3891:LEU:HD12	1.81	0.62
1:B:4063:ASP:HA	1:B:4066:LEU:HG	1.82	0.62
1:C:1671:ARG:NH2	1:C:1713:ASP:HB3	2.13	0.62
1:C:4823:LEU:CD1	1:D:4843:LEU:HD13	2.20	0.62
1:D:217:GLY:O	1:D:261:ARG:NH1	2.32	0.62
1:D:3888:LEU:HD13	1:D:3891:LEU:HD12	1.81	0.62
1:D:4087:LEU:HD13	1:D:4123:ILE:CA	2.26	0.62
1:A:2128:TYR:CE2	1:A:3673:MET:CB	2.83	0.62
1:D:989:ALA:O	1:D:1035:ASN:ND2	2.33	0.62
1:D:2128:TYR:CE2	1:D:3673:MET:CB	2.83	0.62
1:A:1698:LEU:HD13	1:A:1810:LYS:HG2	1.82	0.62
1:B:404:ILE:HG21	1:B:481:GLU:HG3	1.81	0.62
1:B:4087:LEU:HD22	1:B:4122:MET:O	1.99	0.62
1:C:4078:GLN:OE1	1:C:4081:VAL:HG11	1.99	0.62
1:B:590:LEU:HD22	1:B:631:LEU:HD12	1.82	0.62
1:B:989:ALA:O	1:B:1035:ASN:ND2	2.33	0.62
1:D:4904:PRO:HB3	1:D:4913:ARG:HE	1.65	0.62
1:A:217:GLY:O	1:A:261:ARG:NH1	2.32	0.62
1:A:989:ALA:O	1:A:1035:ASN:ND2	2.33	0.62
1:A:1152:MET:HB2	1:A:1161:ILE:HB	1.82	0.62
1:B:1152:MET:HB2	1:B:1161:ILE:HB	1.82	0.62
1:C:404:ILE:HG21	1:C:481:GLU:HG3	1.81	0.62
1:C:590:LEU:HD22	1:C:631:LEU:HD12	1.82	0.62
1:C:4904:PRO:HB3	1:C:4913:ARG:HE	1.65	0.62
1:B:2128:TYR:CE2	1:B:3673:MET:CB	2.83	0.62
1:B:4232:GLU:OE1	1:B:5019:TRP:NE1	2.30	0.62
1:C:217:GLY:O	1:C:261:ARG:NH1	2.32	0.62
1:D:320:LYS:NZ	1:D:381:GLU:O	2.32	0.62
1:D:641:VAL:HG21	1:D:705:ASN:HA	1.82	0.62
1:A:627:PRO:O	1:A:629:ARG:NH1	2.33	0.61
1:A:2022:PRO:O	1:A:2028:ARG:NH2	2.32	0.61
1:B:641:VAL:HG21	1:B:705:ASN:HA	1.82	0.61
1:C:3997:ALA:HA	1:C:4058:ILE:HD11	1.82	0.61
1:B:2022:PRO:O	1:B:2028:ARG:NH2	2.32	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2128:TYR:CE2	1:C:3673:MET:CB	2.83	0.61
1:B:4904:PRO:HB3	1:B:4913:ARG:HE	1.65	0.61
1:D:627:PRO:O	1:D:629:ARG:NH1	2.33	0.61
1:A:720:HIS:HD2	1:A:727:ALA:CA	2.12	0.61
1:A:2291:GLN:C	1:A:2293:GLN:N	2.54	0.61
1:A:3997:ALA:HA	1:A:4058:ILE:HD11	1.82	0.61
1:A:4063:ASP:HA	1:A:4066:LEU:HG	1.82	0.61
1:B:1967:ASP:N	1:B:3646:THR:HG23	2.16	0.61
1:C:627:PRO:O	1:C:629:ARG:NH1	2.33	0.61
1:C:2015:GLU:C	1:C:2017:ASP:H	2.04	0.61
1:D:720:HIS:HD2	1:D:727:ALA:CA	2.12	0.61
1:D:1698:LEU:HD13	1:D:1810:LYS:HG2	1.82	0.61
1:D:1974:ARG:HB2	1:D:3643:ASN:CB	2.30	0.61
1:D:3997:ALA:HA	1:D:4058:ILE:HD11	1.82	0.61
1:A:1967:ASP:N	1:A:3646:THR:HG23	2.16	0.61
1:A:4719:PHE:HD1	1:A:4722:ARG:HH11	1.48	0.61
1:B:627:PRO:O	1:B:629:ARG:NH1	2.33	0.61
1:B:2103:VAL:CG1	1:B:3680:ALA:CB	2.79	0.61
1:D:590:LEU:HD22	1:D:631:LEU:HD12	1.82	0.61
1:D:2015:GLU:C	1:D:2017:ASP:H	2.04	0.61
1:A:641:VAL:HG21	1:A:705:ASN:HA	1.82	0.61
1:B:1095:VAL:HB	1:B:1199:VAL:HG23	1.83	0.61
1:A:590:LEU:HD22	1:A:631:LEU:HD12	1.82	0.61
1:A:2347:GLU:O	1:A:2351:ASN:N	2.31	0.61
1:B:1808:ARG:HD3	1:B:1853:ILE:HG22	1.81	0.61
1:B:3997:ALA:HA	1:B:4058:ILE:HD11	1.82	0.61
1:D:1808:ARG:HD3	1:D:1853:ILE:HG22	1.81	0.61
1:D:1967:ASP:N	1:D:3646:THR:HG23	2.16	0.61
1:B:1178:ALA:HA	1:B:1180:ARG:HE	1.66	0.61
1:B:1974:ARG:HB2	1:B:3643:ASN:CB	2.30	0.61
1:B:4087:LEU:HB3	1:B:4121:GLU:C	2.22	0.61
1:B:4888:TYR:HD1	1:C:4914:VAL:HG12	1.60	0.61
1:C:1152:MET:HB2	1:C:1161:ILE:HB	1.82	0.61
1:C:1178:ALA:HA	1:C:1180:ARG:HE	1.66	0.61
1:C:1974:ARG:HB2	1:C:3643:ASN:CB	2.30	0.61
1:C:4063:ASP:HA	1:C:4066:LEU:HG	1.82	0.61
1:D:4063:ASP:HA	1:D:4066:LEU:HG	1.82	0.61
1:A:1974:ARG:HB2	1:A:3643:ASN:CB	2.30	0.61
1:A:2014:ASP:CB	1:A:3660:ALA:HB2	2.31	0.61
1:B:649:PHE:HB3	1:B:776:LEU:HD13	1.83	0.61
1:C:359:TYR:HA	1:C:376:ALA:HA	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3888:LEU:HD13	1:C:3891:LEU:HD12	1.81	0.61
1:C:3889:GLN:HB2	1:C:3964:SER:HA	1.82	0.61
1:D:138:GLN:HG2	1:D:139:GLU:H	1.66	0.61
1:D:1152:MET:HB2	1:D:1161:ILE:HB	1.82	0.61
1:D:2103:VAL:CG1	1:D:3680:ALA:CB	2.79	0.61
1:D:4864:ASN:ND2	1:D:4871:GLU:OE1	2.33	0.61
1:B:864:PRO:HD2	1:B:867:LEU:HD12	1.83	0.60
1:C:544:LEU:HD12	1:C:574:VAL:HG13	1.83	0.60
1:C:1827:ARG:C	1:C:1829:PRO:HD3	2.21	0.60
1:C:4078:GLN:OE1	1:C:4081:VAL:HG21	2.01	0.60
1:D:1827:ARG:C	1:D:1829:PRO:HD3	2.21	0.60
1:A:544:LEU:HD12	1:A:574:VAL:HG13	1.83	0.60
1:A:864:PRO:HD2	1:A:867:LEU:HD12	1.83	0.60
1:A:2103:VAL:CG1	1:A:3680:ALA:CB	2.79	0.60
1:B:544:LEU:HD12	1:B:574:VAL:HG13	1.83	0.60
1:B:4081:VAL:O	1:B:4082:THR:C	2.40	0.60
1:B:4719:PHE:HD1	1:B:4722:ARG:HH11	1.48	0.60
1:C:1967:ASP:N	1:C:3646:THR:HG23	2.16	0.60
1:A:143:GLY:HA3	1:A:147:TRP:HE1	1.66	0.60
1:A:1974:ARG:HB2	1:A:3643:ASN:HB2	1.83	0.60
1:A:3889:GLN:HB2	1:A:3964:SER:HA	1.82	0.60
1:B:2015:GLU:C	1:B:2017:ASP:H	2.04	0.60
1:B:4078:GLN:OE1	1:B:4081:VAL:HG21	2.01	0.60
1:D:143:GLY:HA3	1:D:147:TRP:HE1	1.66	0.60
1:A:1178:ALA:HA	1:A:1180:ARG:HE	1.66	0.60
1:A:3948:LYS:HG2	1:A:4012:LEU:HD22	1.84	0.60
1:A:4904:PRO:HB3	1:A:4913:ARG:HE	1.65	0.60
1:B:426:ARG:HE	1:B:431:PRO:HB3	1.67	0.60
1:C:138:GLN:HG2	1:C:139:GLU:H	1.66	0.60
1:C:3948:LYS:HG2	1:C:4012:LEU:HD22	1.84	0.60
1:C:4679:ARG:NH1	1:C:4715:TYR:OH	2.34	0.60
1:D:3948:LYS:HG2	1:D:4012:LEU:HD22	1.84	0.60
1:D:4078:GLN:OE1	1:D:4081:VAL:HG21	2.01	0.60
1:A:138:GLN:HG2	1:A:139:GLU:H	1.66	0.60
1:A:4124:ASN:HA	1:A:4127:GLU:CD	2.22	0.60
1:B:2014:ASP:CB	1:B:3660:ALA:HB2	2.31	0.60
1:C:426:ARG:HE	1:C:431:PRO:HB3	1.67	0.60
1:B:1827:ARG:C	1:B:1829:PRO:HD3	2.21	0.60
1:B:4124:ASN:CA	1:B:4127:GLU:HB3	2.32	0.60
1:C:4087:LEU:HB3	1:C:4121:GLU:C	2.22	0.60
1:D:544:LEU:HD12	1:D:574:VAL:HG13	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:4680:LYS:HZ1	1:D:4687:TYR:H	1.47	0.60
1:A:4081:VAL:O	1:A:4082:THR:C	2.40	0.60
1:B:1974:ARG:HB2	1:B:3643:ASN:HB2	1.83	0.60
1:B:3889:GLN:HB2	1:B:3964:SER:HA	1.82	0.60
1:B:3948:LYS:HG2	1:B:4012:LEU:HD22	1.84	0.60
1:C:1100:MET:HB2	1:C:1143:TRP:HZ3	1.67	0.60
1:D:131:LEU:HG	1:D:178:ARG:HH12	1.66	0.60
1:D:1178:ALA:HA	1:D:1180:ARG:HE	1.66	0.60
1:D:2014:ASP:CB	1:D:3660:ALA:HB2	2.31	0.60
1:D:4124:ASN:HA	1:D:4127:GLU:CD	2.22	0.60
1:D:4232:GLU:OE1	1:D:5019:TRP:NE1	2.30	0.60
1:D:4719:PHE:HD1	1:D:4722:ARG:HH11	1.48	0.60
1:A:131:LEU:HG	1:A:178:ARG:HH12	1.66	0.60
1:A:426:ARG:HE	1:A:431:PRO:HB3	1.67	0.60
1:A:4680:LYS:HZ1	1:A:4687:TYR:H	1.50	0.60
1:B:320:LYS:NZ	1:B:381:GLU:O	2.32	0.60
1:C:649:PHE:HB3	1:C:776:LEU:HD13	1.83	0.60
1:C:1095:VAL:HB	1:C:1199:VAL:HG23	1.83	0.60
1:C:4082:THR:O	1:C:4083:ASP:C	2.40	0.60
1:C:4124:ASN:HA	1:C:4127:GLU:CD	2.22	0.60
1:C:4124:ASN:CA	1:C:4127:GLU:HB3	2.32	0.60
1:D:359:TYR:HA	1:D:376:ALA:HA	1.83	0.60
1:A:469:ARG:NH2	1:A:3712:GLU:CB	2.65	0.60
1:A:4082:THR:O	1:A:4083:ASP:C	2.40	0.60
1:A:4864:ASN:ND2	1:A:4871:GLU:OE1	2.33	0.60
1:D:2022:PRO:HB2	1:D:2024:PRO:HD2	1.84	0.60
1:D:3889:GLN:HB2	1:D:3964:SER:HA	1.82	0.60
1:A:649:PHE:HB3	1:A:776:LEU:HD13	1.83	0.60
1:A:671:VAL:HG22	1:A:740:PRO:HG3	1.84	0.60
1:A:1095:VAL:HB	1:A:1199:VAL:HG23	1.83	0.60
1:A:2015:GLU:C	1:A:2017:ASP:H	2.04	0.60
1:A:2022:PRO:HB2	1:A:2024:PRO:HD2	1.84	0.60
1:A:4071:ILE:O	1:A:4075:GLU:N	2.35	0.60
1:A:4087:LEU:HB3	1:A:4121:GLU:C	2.22	0.60
1:B:720:HIS:HD2	1:B:727:ALA:CA	2.12	0.60
1:C:313:SER:HB3	1:C:351:VAL:HB	1.84	0.60
1:C:4864:ASN:ND2	1:C:4871:GLU:OE1	2.33	0.60
1:D:4087:LEU:CD1	1:D:4123:ILE:HA	2.29	0.60
1:D:4679:ARG:NH1	1:D:4715:TYR:OH	2.34	0.60
1:A:1827:ARG:C	1:A:1829:PRO:HD3	2.21	0.59
1:A:4087:LEU:CD1	1:A:4123:ILE:HA	2.29	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4680:LYS:HZ1	1:B:4687:TYR:H	1.49	0.59
1:C:131:LEU:HG	1:C:178:ARG:HH12	1.66	0.59
1:C:2103:VAL:CG1	1:C:3680:ALA:CB	2.79	0.59
1:D:649:PHE:HB3	1:D:776:LEU:HD13	1.83	0.59
1:D:4136:ALA:HA	1:D:4139:ILE:CD1	2.27	0.59
1:A:1100:MET:HB2	1:A:1143:TRP:HZ3	1.67	0.59
1:B:4679:ARG:NH1	1:B:4715:TYR:OH	2.34	0.59
1:C:671:VAL:HG22	1:C:740:PRO:HG3	1.84	0.59
1:D:469:ARG:NH2	1:D:3712:GLU:CB	2.65	0.59
1:A:4679:ARG:NH1	1:A:4715:TYR:OH	2.34	0.59
1:B:1100:MET:HB2	1:B:1143:TRP:HZ3	1.67	0.59
1:B:4071:ILE:O	1:B:4075:GLU:N	2.35	0.59
1:D:1974:ARG:HB2	1:D:3643:ASN:HB2	1.83	0.59
1:B:1721:GLU:OE2	1:B:1725:ARG:NH2	2.36	0.59
1:B:4124:ASN:HA	1:B:4127:GLU:CD	2.22	0.59
1:C:469:ARG:NH2	1:C:3712:GLU:CB	2.65	0.59
1:C:4719:PHE:HD1	1:C:4722:ARG:HH11	1.48	0.59
1:D:4087:LEU:HB3	1:D:4121:GLU:C	2.22	0.59
1:A:359:TYR:HA	1:A:376:ALA:HA	1.83	0.59
1:A:4090:LYS:HA	1:A:4093:PHE:HB2	1.85	0.59
1:B:469:ARG:NH2	1:B:3712:GLU:CB	2.65	0.59
1:B:2022:PRO:HB2	1:B:2024:PRO:HD2	1.84	0.59
1:B:4961:CYS:HB3	1:B:5023:PRO:HB2	1.84	0.59
1:C:4961:CYS:HB3	1:C:5023:PRO:HB2	1.84	0.59
1:D:864:PRO:HD2	1:D:867:LEU:HD12	1.83	0.59
1:D:4090:LYS:HA	1:D:4093:PHE:HB2	1.85	0.59
1:A:4180:ARG:NH1	1:A:4194:TYR:OH	2.36	0.59
1:B:131:LEU:HG	1:B:178:ARG:HH12	1.66	0.59
1:C:864:PRO:HD2	1:C:867:LEU:HD12	1.83	0.59
1:C:4021:LYS:HA	1:C:4024:VAL:HG22	1.85	0.59
1:D:4698:LYS:NZ	1:D:4785:THR:OG1	2.33	0.59
1:A:1243:PRO:HB2	1:A:1600:LEU:HD12	1.84	0.59
1:A:4021:LYS:HA	1:A:4024:VAL:HG22	1.85	0.59
1:B:138:GLN:HG2	1:B:139:GLU:H	1.66	0.59
1:B:359:TYR:HA	1:B:376:ALA:HA	1.83	0.59
1:B:671:VAL:HG22	1:B:740:PRO:HG3	1.84	0.59
1:D:426:ARG:HE	1:D:431:PRO:HB3	1.67	0.59
1:B:911:HIS:O	1:B:918:ARG:NH2	2.36	0.59
1:B:2347:GLU:O	1:B:2351:ASN:N	2.31	0.59
1:B:4021:LYS:HA	1:B:4024:VAL:HG22	1.85	0.59
1:B:4864:ASN:ND2	1:B:4871:GLU:OE1	2.33	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4136:ALA:HA	1:C:4139:ILE:CD1	2.27	0.59
1:C:143:GLY:HA3	1:C:147:TRP:HE1	1.66	0.59
1:C:2022:PRO:HB2	1:C:2024:PRO:HD2	1.84	0.59
1:C:2291:GLN:C	1:C:2293:GLN:N	2.54	0.59
1:C:4180:ARG:NH1	1:C:4194:TYR:OH	2.36	0.59
1:D:4082:THR:O	1:D:4083:ASP:C	2.40	0.59
1:D:4124:ASN:CA	1:D:4127:GLU:HB3	2.32	0.59
1:D:4961:CYS:HB3	1:D:5023:PRO:HB2	1.84	0.59
1:B:143:GLY:HA3	1:B:147:TRP:HE1	1.66	0.59
1:B:313:SER:HB3	1:B:351:VAL:HB	1.84	0.59
1:B:4087:LEU:CD1	1:B:4123:ILE:HA	2.29	0.59
1:B:4180:ARG:NH1	1:B:4194:TYR:OH	2.36	0.59
1:C:1243:PRO:HB2	1:C:1600:LEU:HD12	1.84	0.59
1:C:2014:ASP:CB	1:C:3660:ALA:HB2	2.31	0.59
1:A:911:HIS:O	1:A:918:ARG:NH2	2.36	0.58
1:A:1721:GLU:OE2	1:A:1725:ARG:NH2	2.36	0.58
1:A:4124:ASN:CA	1:A:4127:GLU:HB3	2.32	0.58
1:D:534:ARG:HH21	1:D:572:PRO:HD2	1.67	0.58
1:D:4021:LYS:HA	1:D:4024:VAL:HG22	1.85	0.58
1:A:257:ARG:O	1:A:284:HIS:NE2	2.22	0.58
1:A:4078:GLN:OE1	1:A:4081:VAL:HG21	2.01	0.58
1:A:4823:LEU:CD1	1:B:4843:LEU:HD13	2.20	0.58
1:B:1243:PRO:HB2	1:B:1600:LEU:HD12	1.84	0.58
1:B:4082:THR:O	1:B:4083:ASP:C	2.40	0.58
1:C:1721:GLU:OE2	1:C:1725:ARG:NH2	2.36	0.58
1:C:1974:ARG:HB2	1:C:3643:ASN:HB2	1.83	0.58
1:C:4090:LYS:HA	1:C:4093:PHE:HB2	1.85	0.58
1:D:313:SER:HB3	1:D:351:VAL:HB	1.84	0.58
1:D:1095:VAL:HB	1:D:1199:VAL:HG23	1.83	0.58
1:A:313:SER:HB3	1:A:351:VAL:HB	1.84	0.58
1:A:4961:CYS:HB3	1:A:5023:PRO:HB2	1.84	0.58
1:C:534:ARG:HH21	1:C:572:PRO:HD2	1.67	0.58
1:D:911:HIS:O	1:D:918:ARG:NH2	2.36	0.58
1:B:534:ARG:HH21	1:B:572:PRO:HD2	1.67	0.58
1:C:320:LYS:NZ	1:C:381:GLU:O	2.32	0.58
1:C:4087:LEU:CD1	1:C:4123:ILE:HA	2.29	0.58
1:C:4888:TYR:HD1	1:D:4914:VAL:HG12	1.60	0.58
1:D:1100:MET:HB2	1:D:1143:TRP:HZ3	1.67	0.58
1:D:1721:GLU:OE2	1:D:1725:ARG:NH2	2.36	0.58
1:D:671:VAL:HG22	1:D:740:PRO:HG3	1.84	0.58
1:D:2347:GLU:O	1:D:2351:ASN:N	2.31	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:670:GLU:HG3	1:B:788:LYS:H	1.69	0.58
1:D:219:VAL:HG22	1:D:259:LEU:HD12	1.86	0.58
1:D:4180:ARG:NH1	1:D:4194:TYR:OH	2.36	0.58
1:C:911:HIS:O	1:C:918:ARG:NH2	2.36	0.58
1:D:1243:PRO:HB2	1:D:1600:LEU:HD12	1.84	0.58
1:B:2287:ALA:HA	1:B:2290:LEU:HD22	1.86	0.58
1:C:219:VAL:HG22	1:C:259:LEU:HD12	1.86	0.58
1:C:1126:GLY:HA3	1:C:1143:TRP:CE2	2.39	0.58
1:D:4071:ILE:O	1:D:4075:GLU:N	2.35	0.58
1:A:534:ARG:HH21	1:A:572:PRO:HD2	1.67	0.58
1:A:1126:GLY:HA3	1:A:1143:TRP:CE2	2.39	0.58
1:B:257:ARG:O	1:B:284:HIS:NE2	2.22	0.58
1:B:591:ASP:O	1:B:1594:ARG:NH2	2.37	0.58
1:B:4823:LEU:CD1	1:C:4843:LEU:HD13	2.20	0.58
1:C:670:GLU:HG3	1:C:788:LYS:H	1.69	0.58
1:A:2173:GLN:O	1:A:2177:LEU:HD23	2.04	0.58
1:A:4242:ILE:O	1:A:4246:GLN:N	2.36	0.58
1:B:1126:GLY:HA3	1:B:1143:TRP:CE2	2.39	0.58
1:B:4664:LEU:HD23	1:B:4665:LYS:HZ2	1.69	0.58
1:C:4091:LYS:H	1:C:4091:LYS:HZ3	1.52	0.58
1:D:1126:GLY:HA3	1:D:1143:TRP:CE2	2.39	0.58
1:D:2173:GLN:O	1:D:2177:LEU:HD23	2.04	0.58
1:D:4081:VAL:O	1:D:4082:THR:C	2.40	0.58
1:A:219:VAL:HG22	1:A:259:LEU:HD12	1.86	0.57
1:A:670:GLU:HG3	1:A:788:LYS:H	1.69	0.57
1:B:4090:LYS:HA	1:B:4093:PHE:HB2	1.85	0.57
1:C:591:ASP:O	1:C:1594:ARG:NH2	2.37	0.57
1:A:591:ASP:O	1:A:1594:ARG:NH2	2.37	0.57
1:B:4966:ASP:OD1	1:B:4967:TYR:N	2.37	0.57
1:C:1718:ILE:HG13	1:C:1719:HIS:CD2	2.39	0.57
1:C:2173:GLN:O	1:C:2177:LEU:HD23	2.04	0.57
1:D:670:GLU:HG3	1:D:788:LYS:H	1.69	0.57
1:A:1718:ILE:HG13	1:A:1719:HIS:CD2	2.39	0.57
1:A:4843:LEU:HD12	1:D:4823:LEU:HD21	1.86	0.57
1:B:2186:MET:HE3	1:B:2235:PHE:HD1	1.57	0.57
1:C:256:ALA:HB1	1:C:286:THR:HG21	1.87	0.57
1:C:4081:VAL:O	1:C:4082:THR:C	2.40	0.57
1:D:257:ARG:O	1:D:284:HIS:NE2	2.22	0.57
1:D:1765:VAL:HG22	1:D:1766:GLY:H	1.70	0.57
1:D:4078:GLN:O	1:D:4081:VAL:N	2.36	0.57
1:A:256:ALA:HB1	1:A:286:THR:HG21	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:689:THR:H	1:A:778:PHE:HE2	1.53	0.57
1:B:661:LYS:HB3	1:B:808:TYR:CD2	2.40	0.57
1:B:1765:VAL:HG22	1:B:1766:GLY:H	1.70	0.57
1:D:4087:LEU:HD23	1:D:4121:GLU:CB	2.26	0.57
1:A:4966:ASP:OD1	1:A:4967:TYR:N	2.37	0.57
1:D:689:THR:H	1:D:778:PHE:HE2	1.53	0.57
1:A:2287:ALA:HA	1:A:2290:LEU:HD22	1.86	0.57
1:D:591:ASP:O	1:D:1594:ARG:NH2	2.37	0.57
1:B:219:VAL:HG22	1:B:259:LEU:HD12	1.86	0.57
1:D:1718:ILE:HG13	1:D:1719:HIS:CD2	2.39	0.57
1:B:2173:GLN:O	1:B:2177:LEU:HD23	2.04	0.57
1:C:1765:VAL:HG22	1:C:1766:GLY:H	1.70	0.57
1:C:4786:ASP:OD2	1:C:4789:PHE:N	2.34	0.57
1:D:256:ALA:HB1	1:D:286:THR:HG21	1.87	0.57
1:A:708:GLY:HA3	1:A:722:TRP:HB3	1.87	0.57
1:A:942:ALA:HB2	1:A:1052:ASN:HB2	1.86	0.57
1:A:1765:VAL:HG22	1:A:1766:GLY:H	1.70	0.57
1:A:4138:ASP:O	1:A:4141:PHE:N	2.38	0.57
1:B:4242:ILE:O	1:B:4246:GLN:N	2.36	0.57
1:D:4138:ASP:O	1:D:4141:PHE:N	2.38	0.57
1:A:661:LYS:HB3	1:A:808:TYR:CD2	2.40	0.57
1:C:257:ARG:O	1:C:284:HIS:NE2	2.22	0.57
1:C:4071:ILE:O	1:C:4075:GLU:N	2.35	0.57
1:B:689:THR:H	1:B:778:PHE:HE2	1.53	0.56
1:B:942:ALA:HB2	1:B:1052:ASN:HB2	1.86	0.56
1:C:4664:LEU:HD23	1:C:4665:LYS:HZ2	1.68	0.56
1:C:4823:LEU:HD21	1:D:4843:LEU:HD12	1.86	0.56
1:D:2287:ALA:HA	1:D:2290:LEU:HD22	1.86	0.56
1:B:221:ARG:NE	1:B:258:SER:OG	2.36	0.56
1:B:1216:ILE:O	1:B:1220:GLN:NE2	2.39	0.56
1:C:629:ARG:HD3	1:C:634:GLN:HG2	1.87	0.56
1:C:1931:LEU:HB3	1:C:1935:VAL:HB	1.87	0.56
1:C:2287:ALA:HA	1:C:2290:LEU:HD22	1.86	0.56
1:C:4698:LYS:NZ	1:C:4785:THR:OG1	2.33	0.56
1:D:1931:LEU:HB3	1:D:1935:VAL:HB	1.87	0.56
1:D:4081:VAL:O	1:D:4083:ASP:N	2.38	0.56
1:A:4322:LEU:O	1:C:4911:LEU:HD12	2.06	0.56
1:A:4911:LEU:HD12	1:C:4322:LEU:O	2.06	0.56
1:B:256:ALA:HB1	1:B:286:THR:HG21	1.87	0.56
1:B:708:GLY:HA3	1:B:722:TRP:HB3	1.87	0.56
1:B:4823:LEU:HD21	1:C:4843:LEU:HD12	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:661:LYS:HB3	1:C:808:TYR:CD2	2.40	0.56
1:C:2292:GLU:O	1:C:2293:GLN:C	2.44	0.56
1:C:2347:GLU:O	1:C:2351:ASN:N	2.31	0.56
1:C:4138:ASP:O	1:C:4141:PHE:N	2.38	0.56
1:D:4063:ASP:HA	1:D:4066:LEU:CD2	2.35	0.56
1:B:4081:VAL:O	1:B:4083:ASP:N	2.38	0.56
1:C:4063:ASP:HA	1:C:4066:LEU:CD2	2.35	0.56
1:C:4081:VAL:O	1:C:4083:ASP:N	2.38	0.56
1:C:4966:ASP:OD1	1:C:4967:TYR:N	2.37	0.56
1:D:661:LYS:HB3	1:D:808:TYR:CD2	2.40	0.56
1:A:629:ARG:HD3	1:A:634:GLN:HG2	1.87	0.56
1:A:2186:MET:HE3	1:A:2235:PHE:HD1	1.53	0.56
1:A:4094:GLN:NE2	1:A:4098:ASP:OD2	2.35	0.56
1:B:4138:ASP:O	1:B:4141:PHE:N	2.38	0.56
1:C:4987:ASN:HA	1:C:4990:PHE:HD2	1.71	0.56
1:D:1216:ILE:O	1:D:1220:GLN:NE2	2.39	0.56
1:D:4242:ILE:O	1:D:4246:GLN:N	2.36	0.56
1:D:4966:ASP:OD1	1:D:4967:TYR:N	2.37	0.56
1:A:4136:ALA:HA	1:A:4139:ILE:CD1	2.27	0.56
1:B:4136:ALA:HA	1:B:4139:ILE:CD1	2.27	0.56
1:B:4987:ASN:HA	1:B:4990:PHE:HD2	1.71	0.56
1:C:243:ARG:NH1	1:C:301:VAL:O	2.34	0.56
1:D:4130:ASN:O	1:D:4133:GLN:N	2.39	0.56
1:A:2326:CYS:SG	1:A:2327:GLY:N	2.79	0.56
1:A:4081:VAL:O	1:A:4083:ASP:N	2.38	0.56
1:A:4130:ASN:O	1:A:4133:GLN:N	2.39	0.56
1:B:629:ARG:HD3	1:B:634:GLN:HG2	1.87	0.56
1:B:2326:CYS:SG	1:B:2327:GLY:N	2.79	0.56
1:D:942:ALA:HB2	1:D:1052:ASN:HB2	1.86	0.56
1:D:1763:PRO:HG3	1:D:2094:LEU:HD21	1.88	0.56
1:D:4094:GLN:NE2	1:D:4098:ASP:OD2	2.35	0.56
1:D:4664:LEU:HD23	1:D:4665:LYS:HZ2	1.71	0.56
1:A:1654:SER:HB3	1:A:1704:PRO:HG3	1.88	0.56
1:A:4823:LEU:HD21	1:B:4843:LEU:HD12	1.86	0.56
1:B:1718:ILE:HG13	1:B:1719:HIS:CD2	2.39	0.56
1:B:2292:GLU:O	1:B:2293:GLN:C	2.44	0.56
1:C:708:GLY:HA3	1:C:722:TRP:HB3	1.87	0.56
1:A:4063:ASP:HA	1:A:4066:LEU:CD2	2.35	0.56
1:A:4244:GLU:HB2	1:A:4668:LEU:HD21	1.88	0.56
1:A:4664:LEU:HD23	1:A:4665:LYS:HZ2	1.71	0.56
1:A:4698:LYS:NZ	1:A:4785:THR:OG1	2.33	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4650:HIS:HE2	1:B:4795:TYR:HH	1.54	0.56
1:C:1763:PRO:HG3	1:C:2094:LEU:HD21	1.88	0.56
1:D:708:GLY:HA3	1:D:722:TRP:HB3	1.87	0.56
1:D:2326:CYS:SG	1:D:2327:GLY:N	2.79	0.56
1:A:1216:ILE:O	1:A:1220:GLN:NE2	2.39	0.56
1:A:4914:VAL:HG12	1:D:4888:TYR:HD1	1.60	0.56
1:B:1654:SER:HB3	1:B:1704:PRO:HG3	1.88	0.56
1:B:4888:TYR:CZ	1:C:4904:PRO:CG	2.87	0.56
1:C:403:MET:O	1:C:407:THR:N	2.39	0.56
1:D:3937:TYR:O	1:D:4002:LYS:NZ	2.37	0.56
1:A:3937:TYR:O	1:A:4002:LYS:NZ	2.37	0.55
1:B:4130:ASN:O	1:B:4133:GLN:N	2.39	0.55
1:B:4823:LEU:CD1	1:C:4843:LEU:HD12	2.30	0.55
1:C:4071:ILE:O	1:C:4072:VAL:C	2.45	0.55
1:C:4798:MET:O	1:C:4802:GLY:N	2.39	0.55
1:D:629:ARG:HD3	1:D:634:GLN:HG2	1.87	0.55
1:D:1654:SER:HB3	1:D:1704:PRO:HG3	1.88	0.55
1:D:4091:LYS:NZ	1:D:4091:LYS:H	2.04	0.55
1:C:689:THR:H	1:C:778:PHE:HE2	1.53	0.55
1:C:942:ALA:HB2	1:C:1052:ASN:HB2	1.86	0.55
1:C:4661:TYR:HA	1:C:4665:LYS:HE2	1.89	0.55
1:D:2292:GLU:O	1:D:2293:GLN:C	2.44	0.55
1:D:4786:ASP:OD2	1:D:4789:PHE:N	2.34	0.55
1:A:1763:PRO:HG3	1:A:2094:LEU:HD21	1.88	0.55
1:B:4661:TYR:HA	1:B:4665:LYS:HE2	1.89	0.55
1:C:4130:ASN:O	1:C:4133:GLN:N	2.39	0.55
1:D:111:HIS:N	1:D:116:MET:O	2.36	0.55
1:A:221:ARG:NE	1:A:258:SER:OG	2.36	0.55
1:A:1780:PRO:HD3	1:A:1801:ALA:H	1.72	0.55
1:A:4087:LEU:HD13	1:A:4123:ILE:N	2.21	0.55
1:B:4087:LEU:HD23	1:B:4121:GLU:CB	2.26	0.55
1:B:4087:LEU:HD13	1:B:4123:ILE:N	2.21	0.55
1:C:111:HIS:N	1:C:116:MET:O	2.36	0.55
1:D:2291:GLN:C	1:D:2293:GLN:N	2.54	0.55
1:A:403:MET:O	1:A:407:THR:N	2.39	0.55
1:A:4987:ASN:HA	1:A:4990:PHE:HD2	1.71	0.55
1:B:4798:MET:O	1:B:4802:GLY:N	2.39	0.55
1:B:4911:LEU:HD12	1:D:4322:LEU:O	2.06	0.55
1:C:2326:CYS:SG	1:C:2327:GLY:N	2.79	0.55
1:C:4078:GLN:C	1:C:4081:VAL:HG22	2.27	0.55
1:C:4087:LEU:HD13	1:C:4123:ILE:N	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:889:GLN:O	1:D:902:ARG:NH1	2.40	0.55
1:D:4124:ASN:O	1:D:4125:PHE:O	2.25	0.55
1:A:4091:LYS:NZ	1:A:4091:LYS:H	2.04	0.55
1:B:1763:PRO:HG3	1:B:2094:LEU:HD21	1.88	0.55
1:C:1216:ILE:O	1:C:1220:GLN:NE2	2.39	0.55
1:C:1993:ARG:O	1:C:1996:ARG:NH2	2.40	0.55
1:C:4650:HIS:HE2	1:C:4795:TYR:HH	1.54	0.55
1:D:403:MET:O	1:D:407:THR:N	2.39	0.55
1:D:3647:HIS:CD2	1:D:3648:ARG:HD2	2.42	0.55
1:D:4071:ILE:O	1:D:4072:VAL:C	2.45	0.55
1:A:3647:HIS:CD2	1:A:3648:ARG:HD2	2.42	0.55
1:A:4124:ASN:O	1:A:4125:PHE:O	2.25	0.55
1:B:4063:ASP:HA	1:B:4066:LEU:CD2	2.35	0.55
1:B:4067:LYS:O	1:B:4071:ILE:HD12	2.07	0.55
1:B:4091:LYS:H	1:B:4091:LYS:NZ	2.04	0.55
1:C:331:VAL:HG12	1:C:333:GLY:H	1.72	0.55
1:C:1654:SER:HB3	1:C:1704:PRO:HG3	1.88	0.55
1:A:1931:LEU:HB3	1:A:1935:VAL:HB	1.87	0.55
1:B:1931:LEU:HB3	1:B:1935:VAL:HB	1.87	0.55
1:B:4017:LEU:HD12	1:B:4132:PHE:CZ	2.42	0.55
1:B:4078:GLN:C	1:B:4081:VAL:HG22	2.27	0.55
1:C:4078:GLN:O	1:C:4081:VAL:N	2.36	0.55
1:D:3668:SER:O	1:D:3672:ARG:NE	2.40	0.55
1:D:4087:LEU:HD13	1:D:4123:ILE:N	2.21	0.55
1:B:331:VAL:HG12	1:B:333:GLY:H	1.72	0.55
1:B:2291:GLN:C	1:B:2293:GLN:N	2.54	0.55
1:B:4078:GLN:O	1:B:4081:VAL:N	2.36	0.55
1:B:4130:ASN:O	1:B:4131:ARG:C	2.45	0.55
1:B:4322:LEU:O	1:D:4911:LEU:HD12	2.06	0.55
1:C:1577:ALA:HB1	1:C:1584:ARG:HA	1.89	0.55
1:D:4017:LEU:HD12	1:D:4132:PHE:CZ	2.42	0.55
1:D:4987:ASN:HA	1:D:4990:PHE:HD2	1.71	0.55
1:A:2292:GLU:O	1:A:2293:GLN:C	2.44	0.55
1:A:4067:LYS:O	1:A:4071:ILE:HD12	2.07	0.55
1:A:4888:TYR:CZ	1:B:4904:PRO:CG	2.87	0.55
1:C:4244:GLU:HB2	1:C:4668:LEU:HD21	1.88	0.55
1:D:331:VAL:HG12	1:D:333:GLY:H	1.72	0.55
1:D:4067:LYS:O	1:D:4071:ILE:HD12	2.07	0.55
1:A:1096:THR:HG23	1:A:1199:VAL:HG22	1.89	0.54
1:A:4017:LEU:HD12	1:A:4132:PHE:CZ	2.42	0.54
1:A:4078:GLN:O	1:A:4081:VAL:N	2.36	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:889:GLN:O	1:B:902:ARG:NH1	2.40	0.54
1:B:4071:ILE:O	1:B:4072:VAL:C	2.45	0.54
1:B:4089:SER:N	1:B:4120:ASN:HA	2.21	0.54
1:B:4244:GLU:HB2	1:B:4668:LEU:HD21	1.88	0.54
1:C:2186:MET:CE	1:C:2235:PHE:CG	2.90	0.54
1:C:4017:LEU:HD12	1:C:4132:PHE:CZ	2.42	0.54
1:C:4091:LYS:H	1:C:4091:LYS:NZ	2.04	0.54
1:D:1780:PRO:HD3	1:D:1801:ALA:H	1.72	0.54
1:A:4078:GLN:C	1:A:4081:VAL:HG22	2.27	0.54
1:A:4650:HIS:HE2	1:A:4795:TYR:HH	1.54	0.54
1:B:3668:SER:O	1:B:3672:ARG:NE	2.40	0.54
1:B:4189:ARG:NH1	1:B:4191:GLU:HB3	2.23	0.54
1:D:4244:GLU:HB2	1:D:4668:LEU:HD21	1.88	0.54
1:A:720:HIS:CD2	1:A:727:ALA:HA	2.34	0.54
1:A:4189:ARG:NH1	1:A:4191:GLU:HB3	2.23	0.54
1:B:1096:THR:HG23	1:B:1199:VAL:HG22	1.89	0.54
1:B:1780:PRO:HD3	1:B:1801:ALA:H	1.72	0.54
1:B:2015:GLU:O	1:B:2017:ASP:N	2.37	0.54
1:C:1244:GLN:OE1	1:C:1646:ARG:NH1	2.40	0.54
1:C:4189:ARG:NH1	1:C:4191:GLU:HB3	2.23	0.54
1:D:1577:ALA:HB1	1:D:1584:ARG:HA	1.89	0.54
1:D:4189:ARG:NH1	1:D:4191:GLU:HB3	2.23	0.54
1:A:331:VAL:HG12	1:A:333:GLY:H	1.72	0.54
1:A:4888:TYR:HD1	1:B:4914:VAL:HG12	1.60	0.54
1:B:1244:GLN:OE1	1:B:1646:ARG:NH1	2.40	0.54
1:B:3647:HIS:CD2	1:B:3648:ARG:HD2	2.42	0.54
1:D:4661:TYR:HA	1:D:4665:LYS:HE2	1.89	0.54
1:A:1244:GLN:OE1	1:A:1646:ARG:NH1	2.40	0.54
1:A:2291:GLN:O	1:A:2293:GLN:N	2.41	0.54
1:B:243:ARG:NH1	1:B:301:VAL:O	2.34	0.54
1:B:2186:MET:CE	1:B:2235:PHE:CG	2.90	0.54
1:C:4124:ASN:O	1:C:4125:PHE:O	2.25	0.54
1:D:4069:LYS:HB2	1:D:4130:ASN:HD21	1.73	0.54
1:D:4078:GLN:C	1:D:4081:VAL:HG22	2.27	0.54
1:A:1993:ARG:O	1:A:1996:ARG:NH2	2.40	0.54
1:A:2186:MET:CE	1:A:2235:PHE:CG	2.90	0.54
1:A:4130:ASN:O	1:A:4131:ARG:C	2.45	0.54
1:A:4661:TYR:HA	1:A:4665:LYS:HE2	1.89	0.54
1:C:889:GLN:O	1:C:902:ARG:NH1	2.40	0.54
1:C:2013:LYS:CB	1:C:2031:LEU:HD22	2.38	0.54
1:C:3668:SER:O	1:C:3672:ARG:NE	2.40	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4087:LEU:HD23	1:C:4121:GLU:CB	2.26	0.54
1:C:4094:GLN:NE2	1:C:4098:ASP:OD2	2.35	0.54
1:C:4696:ASP:HB3	1:C:4700:GLN:HB2	1.89	0.54
1:D:2143:THR:HB	1:D:3651:ASN:HD21	1.73	0.54
1:A:4578:LEU:C	1:B:4879:MET:CB	2.76	0.54
1:B:1993:ARG:O	1:B:1996:ARG:NH2	2.40	0.54
1:B:3830:GLN:HA	1:B:3833:GLN:HG2	1.90	0.54
1:C:1780:PRO:HD3	1:C:1801:ALA:H	1.72	0.54
1:C:2143:THR:HB	1:C:3651:ASN:HD21	1.73	0.54
1:D:1680:ARG:HA	1:D:1797:ARG:HD3	1.90	0.54
1:D:4104:THR:HG22	1:D:4106:PRO:HD2	1.90	0.54
1:A:1081:TYR:HE2	1:A:1234:VAL:HG22	1.73	0.54
1:A:4091:LYS:H	1:A:4091:LYS:HZ3	1.55	0.54
1:A:4798:MET:O	1:A:4802:GLY:N	2.39	0.54
1:B:4703:ARG:HA	1:B:4706:LEU:HD13	1.90	0.54
1:C:4104:THR:HG22	1:C:4106:PRO:HD2	1.90	0.54
1:D:4130:ASN:O	1:D:4131:ARG:C	2.45	0.54
1:A:889:GLN:O	1:A:902:ARG:NH1	2.40	0.54
1:A:3830:GLN:HA	1:A:3833:GLN:HG2	1.90	0.54
1:A:4879:MET:CB	1:D:4578:LEU:C	2.76	0.54
1:A:4904:PRO:CG	1:D:4888:TYR:CZ	2.87	0.54
1:B:111:HIS:N	1:B:116:MET:O	2.36	0.54
1:B:2013:LYS:CB	1:B:2031:LEU:HD22	2.38	0.54
1:C:3647:HIS:CD2	1:C:3648:ARG:HD2	2.42	0.54
1:C:4067:LYS:O	1:C:4071:ILE:HD12	2.07	0.54
1:D:221:ARG:NE	1:D:258:SER:OG	2.36	0.54
1:D:1081:TYR:HE2	1:D:1234:VAL:HG22	1.73	0.54
1:D:3987:ASP:OD1	1:D:3987:ASP:N	2.41	0.54
1:D:4091:LYS:H	1:D:4091:LYS:HZ3	1.55	0.54
1:D:4798:MET:O	1:D:4802:GLY:N	2.39	0.54
1:A:3668:SER:O	1:A:3672:ARG:NE	2.40	0.54
1:B:1577:ALA:HB1	1:B:1584:ARG:HA	1.89	0.54
1:B:4124:ASN:O	1:B:4125:PHE:O	2.25	0.54
1:B:4578:LEU:C	1:C:4879:MET:CB	2.76	0.54
1:B:4786:ASP:OD2	1:B:4789:PHE:N	2.34	0.54
1:C:3772:THR:OG1	1:C:3815:LYS:NZ	2.41	0.54
1:D:2291:GLN:O	1:D:2293:GLN:N	2.41	0.54
1:D:3830:GLN:HA	1:D:3833:GLN:HG2	1.90	0.54
1:A:2013:LYS:CB	1:A:2031:LEU:HD22	2.38	0.53
1:A:3987:ASP:OD1	1:A:3987:ASP:N	2.41	0.53
1:C:1695:LEU:HB3	1:C:1810:LYS:HZ3	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3830:GLN:HA	1:C:3833:GLN:HG2	1.90	0.53
1:A:4104:THR:HG22	1:A:4106:PRO:HD2	1.90	0.53
1:B:2143:THR:HB	1:B:3651:ASN:HD21	1.73	0.53
1:B:4074:SER:O	1:B:4075:GLU:C	2.47	0.53
1:D:683:ARG:HG2	1:D:717:ASP:HB3	1.90	0.53
1:D:1993:ARG:O	1:D:1996:ARG:NH2	2.40	0.53
1:D:2013:LYS:CB	1:D:2031:LEU:HD22	2.38	0.53
1:D:2186:MET:CE	1:D:2235:PHE:CG	2.90	0.53
1:D:4696:ASP:HB3	1:D:4700:GLN:HB2	1.89	0.53
1:A:1680:ARG:HA	1:A:1797:ARG:HD3	1.90	0.53
1:A:4703:ARG:HA	1:A:4706:LEU:HD13	1.90	0.53
1:B:403:MET:O	1:B:407:THR:N	2.39	0.53
1:B:4698:LYS:NZ	1:B:4785:THR:OG1	2.33	0.53
1:C:221:ARG:NE	1:C:258:SER:OG	2.36	0.53
1:C:793:LEU:HB2	1:C:797:HIS:H	1.74	0.53
1:C:2291:GLN:O	1:C:2293:GLN:N	2.41	0.53
1:C:4691:GLN:NE2	1:C:4692:PRO:HD2	2.24	0.53
1:A:243:ARG:NH1	1:A:301:VAL:O	2.34	0.53
1:A:1577:ALA:HB1	1:A:1584:ARG:HA	1.89	0.53
1:A:4087:LEU:HD23	1:A:4121:GLU:CB	2.26	0.53
1:A:4696:ASP:HB3	1:A:4700:GLN:HB2	1.89	0.53
1:B:682:LEU:HD13	1:B:787:VAL:HG11	1.90	0.53
1:B:4696:ASP:HB3	1:B:4700:GLN:HB2	1.89	0.53
1:C:4078:GLN:HA	1:C:4081:VAL:CG1	2.39	0.53
1:C:4823:LEU:CD1	1:D:4843:LEU:HD12	2.30	0.53
1:D:4073:GLY:O	1:D:4077:PHE:N	2.42	0.53
1:A:4074:SER:O	1:A:4075:GLU:C	2.47	0.53
1:B:793:LEU:HB2	1:B:797:HIS:H	1.74	0.53
1:B:4104:THR:HG22	1:B:4106:PRO:HD2	1.90	0.53
1:C:1680:ARG:HA	1:C:1797:ARG:HD3	1.90	0.53
1:C:4069:LYS:HB2	1:C:4130:ASN:HD21	1.73	0.53
1:C:4578:LEU:C	1:D:4879:MET:CB	2.76	0.53
1:D:1096:THR:HG23	1:D:1199:VAL:HG22	1.89	0.53
1:C:683:ARG:HG2	1:C:717:ASP:HB3	1.90	0.53
1:A:4071:ILE:O	1:A:4072:VAL:C	2.45	0.53
1:A:4073:GLY:O	1:A:4077:PHE:N	2.42	0.53
1:A:4078:GLN:HA	1:A:4081:VAL:CG1	2.39	0.53
1:B:3987:ASP:OD1	1:B:3987:ASP:N	2.41	0.53
1:B:4078:GLN:HA	1:B:4081:VAL:CG1	2.39	0.53
1:C:264:PRO:HA	1:C:280:LEU:HD22	1.91	0.53
1:D:4650:HIS:NE2	1:D:4795:TYR:OH	2.40	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4069:LYS:HB2	1:A:4130:ASN:HD21	1.73	0.53
1:B:615:ARG:NH1	1:B:1678:ASN:HB2	2.24	0.53
1:B:2291:GLN:O	1:B:2293:GLN:N	2.41	0.53
1:B:4073:GLY:O	1:B:4077:PHE:N	2.42	0.53
1:B:4685:GLY:O	1:B:4689:THR:N	2.24	0.53
1:C:4074:SER:O	1:C:4075:GLU:C	2.47	0.53
1:D:4078:GLN:HA	1:D:4081:VAL:CG1	2.39	0.53
1:A:4823:LEU:CD1	1:B:4843:LEU:HD12	2.30	0.53
1:C:1081:TYR:HE2	1:C:1234:VAL:HG22	1.73	0.53
1:D:615:ARG:NH1	1:D:1678:ASN:HB2	2.24	0.53
1:D:675:LEU:HG	1:D:676:THR:H	1.74	0.53
1:A:659:TYR:OH	1:A:807:GLY:O	2.21	0.53
1:A:2292:GLU:CD	1:A:2296:GLU:HB2	2.29	0.53
1:B:1081:TYR:HE2	1:B:1234:VAL:HG22	1.73	0.53
1:B:2292:GLU:O	1:B:2294:ASP:N	2.42	0.53
1:B:4691:GLN:NE2	1:B:4692:PRO:HD2	2.24	0.53
1:C:1096:THR:HG23	1:C:1199:VAL:HG22	1.89	0.53
1:D:682:LEU:HD13	1:D:787:VAL:HG11	1.90	0.53
1:D:4078:GLN:O	1:D:4081:VAL:HG22	2.09	0.53
1:A:262:LEU:HD21	1:A:280:LEU:HD13	1.91	0.52
1:A:4088:ILE:HG23	1:A:4093:PHE:CE2	2.44	0.52
1:C:615:ARG:NH1	1:C:1678:ASN:HB2	2.24	0.52
1:D:4128:PHE:O	1:D:4129:ALA:C	2.47	0.52
1:D:4961:CYS:SG	1:D:4983:HIS:NE2	2.82	0.52
1:A:2143:THR:HB	1:A:3651:ASN:HD21	1.73	0.52
1:B:675:LEU:HG	1:B:676:THR:H	1.74	0.52
1:B:2292:GLU:CD	1:B:2296:GLU:HB2	2.29	0.52
1:B:4078:GLN:O	1:B:4081:VAL:HG22	2.09	0.52
1:C:838:HIS:HA	1:C:1201:HIS:HB3	1.91	0.52
1:C:4073:GLY:O	1:C:4077:PHE:N	2.42	0.52
1:C:4078:GLN:O	1:C:4081:VAL:HG22	2.09	0.52
1:D:793:LEU:HB2	1:D:797:HIS:H	1.74	0.52
1:D:838:HIS:HA	1:D:1201:HIS:HB3	1.91	0.52
1:D:1244:GLN:OE1	1:D:1646:ARG:NH1	2.40	0.52
1:D:1677:GLY:H	1:D:1721:GLU:CD	2.12	0.52
1:D:4074:SER:O	1:D:4075:GLU:C	2.47	0.52
1:A:675:LEU:HG	1:A:676:THR:H	1.74	0.52
1:A:4078:GLN:O	1:A:4081:VAL:HG22	2.09	0.52
1:B:264:PRO:HA	1:B:280:LEU:HD22	1.91	0.52
1:B:4071:ILE:C	1:B:4073:GLY:N	2.60	0.52
1:C:2292:GLU:O	1:C:2294:ASP:N	2.42	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4703:ARG:HA	1:C:4706:LEU:HD13	1.90	0.52
1:C:4888:TYR:CZ	1:D:4904:PRO:CG	2.87	0.52
1:D:192:ASP:OD1	1:D:192:ASP:N	2.43	0.52
1:A:1970:GLN:CB	1:A:3643:ASN:HA	2.40	0.52
1:B:1677:GLY:H	1:B:1721:GLU:CD	2.12	0.52
1:C:682:LEU:HD13	1:C:787:VAL:HG11	1.90	0.52
1:C:4090:LYS:O	1:C:4091:LYS:C	2.48	0.52
1:D:243:ARG:NH1	1:D:301:VAL:O	2.34	0.52
1:A:793:LEU:HB2	1:A:797:HIS:H	1.74	0.52
1:A:4336:TRP:CZ2	1:A:4568:PHE:HD1	2.28	0.52
1:A:4691:GLN:NE2	1:A:4692:PRO:HD2	2.24	0.52
1:B:262:LEU:HD21	1:B:280:LEU:HD13	1.91	0.52
1:B:793:LEU:HD12	1:B:797:HIS:HB2	1.91	0.52
1:B:1680:ARG:HA	1:B:1797:ARG:HD3	1.90	0.52
1:B:1970:GLN:CB	1:B:3643:ASN:HA	2.40	0.52
1:B:4088:ILE:HG23	1:B:4093:PHE:CE2	2.44	0.52
1:B:4336:TRP:CZ2	1:B:4568:PHE:HD1	2.28	0.52
1:C:426:ARG:HB2	1:C:506:TYR:HA	1.92	0.52
1:C:892:THR:O	1:C:904:HIS:N	2.37	0.52
1:D:793:LEU:HD12	1:D:797:HIS:HB2	1.91	0.52
1:D:4088:ILE:HG23	1:D:4093:PHE:CE2	2.44	0.52
1:D:4691:GLN:NE2	1:D:4692:PRO:HD2	2.24	0.52
1:D:4703:ARG:HA	1:D:4706:LEU:HD13	1.90	0.52
1:A:320:LYS:NZ	1:A:381:GLU:O	2.32	0.52
1:A:615:ARG:NH1	1:A:1678:ASN:HB2	2.24	0.52
1:A:838:HIS:HA	1:A:1201:HIS:HB3	1.91	0.52
1:B:192:ASP:N	1:B:192:ASP:OD1	2.43	0.52
1:C:2015:GLU:C	1:C:2017:ASP:N	2.63	0.52
1:C:4088:ILE:HG23	1:C:4093:PHE:CE2	2.44	0.52
1:C:4704:LEU:HB3	1:C:4778:TRP:HD1	1.74	0.52
1:C:4719:PHE:HA	1:C:4722:ARG:NH1	2.25	0.52
1:A:192:ASP:OD1	1:A:192:ASP:N	2.43	0.52
1:A:683:ARG:HG2	1:A:717:ASP:HB3	1.90	0.52
1:A:4719:PHE:HA	1:A:4722:ARG:NH1	2.25	0.52
1:C:262:LEU:HD21	1:C:280:LEU:HD13	1.91	0.52
1:C:688:LEU:HD12	1:C:777:PHE:HE1	1.75	0.52
1:D:1695:LEU:HB3	1:D:1810:LYS:HZ3	1.75	0.52
1:D:3948:LYS:HE3	1:D:4012:LEU:HB2	1.92	0.52
1:A:682:LEU:HD13	1:A:787:VAL:HG11	1.90	0.52
1:A:688:LEU:HD12	1:A:777:PHE:HE1	1.75	0.52
1:B:426:ARG:HB2	1:B:506:TYR:HA	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:646:PRO:HD2	1:B:779:PRO:HB2	1.92	0.52
1:B:688:LEU:HD12	1:B:777:PHE:HE1	1.75	0.52
1:B:1730:MET:SD	1:B:2156:LEU:HD21	2.50	0.52
1:C:675:LEU:HG	1:C:676:THR:H	1.74	0.52
1:C:1970:GLN:CB	1:C:3643:ASN:HA	2.40	0.52
1:D:264:PRO:HA	1:D:280:LEU:HD22	1.91	0.52
1:D:1131:ARG:N	1:D:1137:GLU:O	2.41	0.52
1:D:2292:GLU:O	1:D:2294:ASP:N	2.42	0.52
1:D:3772:THR:OG1	1:D:3815:LYS:NZ	2.41	0.52
1:D:4336:TRP:CZ2	1:D:4568:PHE:HD1	2.28	0.52
1:A:1677:GLY:H	1:A:1721:GLU:CD	2.12	0.52
1:A:4081:VAL:HG23	1:A:4082:THR:N	2.25	0.52
1:C:157:ARG:HH21	1:C:164:ARG:HD2	1.75	0.52
1:C:793:LEU:HD12	1:C:797:HIS:HB2	1.91	0.52
1:D:262:LEU:HD21	1:D:280:LEU:HD13	1.91	0.52
1:A:4704:LEU:HB3	1:A:4778:TRP:HD1	1.74	0.52
1:B:683:ARG:HG2	1:B:717:ASP:HB3	1.90	0.52
1:B:2015:GLU:C	1:B:2017:ASP:N	2.63	0.52
1:B:2095:GLN:NE2	1:B:2127:GLN:O	2.25	0.52
1:B:4719:PHE:HA	1:B:4722:ARG:NH1	2.25	0.52
1:C:1131:ARG:N	1:C:1137:GLU:O	2.41	0.52
1:C:3987:ASP:N	1:C:3987:ASP:OD1	2.41	0.52
1:C:4207:MET:HG3	1:C:4209:GLN:H	1.75	0.52
1:D:681:HIS:HE1	1:D:705:ASN:HB3	1.75	0.52
1:D:688:LEU:HD12	1:D:777:PHE:HE1	1.75	0.52
1:D:1730:MET:SD	1:D:2156:LEU:HD21	2.50	0.52
1:D:4089:SER:N	1:D:4120:ASN:HA	2.21	0.52
1:D:4685:GLY:O	1:D:4689:THR:N	2.24	0.52
1:A:955:LEU:HD13	1:A:959:TYR:CG	2.45	0.51
1:A:1094:ALA:HB3	1:A:1147:ASP:HB3	1.93	0.51
1:A:4089:SER:N	1:A:4120:ASN:HA	2.21	0.51
1:A:4786:ASP:OD2	1:A:4789:PHE:N	2.34	0.51
1:B:4207:MET:HG3	1:B:4209:GLN:H	1.75	0.51
1:D:2015:GLU:C	1:D:2017:ASP:N	2.63	0.51
1:A:4063:ASP:HA	1:A:4066:LEU:CG	2.40	0.51
1:B:3641:LEU:O	1:B:3642:TYR:C	2.48	0.51
1:C:192:ASP:N	1:C:192:ASP:OD1	2.43	0.51
1:C:700:GLU:HB2	1:C:725:HIS:NE2	2.26	0.51
1:C:2292:GLU:CD	1:C:2296:GLU:HB2	2.29	0.51
1:D:157:ARG:HH21	1:D:164:ARG:HD2	1.75	0.51
1:D:1970:GLN:CB	1:D:3643:ASN:HA	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:4063:ASP:HA	1:D:4066:LEU:CG	2.40	0.51
1:A:111:HIS:N	1:A:116:MET:O	2.36	0.51
1:A:647:ASN:ND2	1:A:820:ARG:O	2.43	0.51
1:A:652:ARG:HD2	1:A:750:LEU:HB3	1.92	0.51
1:A:793:LEU:HD12	1:A:797:HIS:HB2	1.91	0.51
1:A:2015:GLU:C	1:A:2017:ASP:N	2.63	0.51
1:A:4221:VAL:HG23	1:A:4222:VAL:HG13	1.93	0.51
1:B:278:GLN:N	1:B:315:CYS:SG	2.83	0.51
1:C:220:LEU:HD12	1:C:390:LEU:HB3	1.92	0.51
1:C:3641:LEU:O	1:C:3642:TYR:C	2.48	0.51
1:D:700:GLU:HB2	1:D:725:HIS:NE2	2.26	0.51
1:A:700:GLU:HB2	1:A:725:HIS:NE2	2.26	0.51
1:A:2292:GLU:O	1:A:2294:ASP:N	2.42	0.51
1:A:4207:MET:HG3	1:A:4209:GLN:H	1.75	0.51
1:B:652:ARG:HD2	1:B:750:LEU:HB3	1.92	0.51
1:B:955:LEU:HD13	1:B:959:TYR:CG	2.45	0.51
1:B:1094:ALA:HB3	1:B:1147:ASP:HB3	1.93	0.51
1:D:913:LEU:O	1:D:918:ARG:NH2	2.44	0.51
1:D:955:LEU:HD13	1:D:959:TYR:CG	2.45	0.51
1:D:3641:LEU:O	1:D:3642:TYR:C	2.48	0.51
1:D:4090:LYS:O	1:D:4091:LYS:C	2.48	0.51
1:D:4221:VAL:HG23	1:D:4222:VAL:HG13	1.93	0.51
1:D:4667:PRO:HG2	1:D:4668:LEU:HD12	1.93	0.51
1:B:157:ARG:HH21	1:B:164:ARG:HD2	1.75	0.51
1:B:805:PRO:HB2	1:B:808:TYR:CD1	2.46	0.51
1:B:952:LYS:HB3	1:B:968:ALA:HB1	1.93	0.51
1:B:2226:PRO:HA	1:B:2229:VAL:HG12	1.93	0.51
1:B:4961:CYS:SG	1:B:4983:HIS:NE2	2.82	0.51
1:C:2226:PRO:HA	1:C:2229:VAL:HG12	1.93	0.51
1:C:4087:LEU:HD13	1:C:4122:MET:C	2.31	0.51
1:C:4336:TRP:CZ2	1:C:4568:PHE:HD1	2.28	0.51
1:C:4685:GLY:O	1:C:4689:THR:N	2.24	0.51
1:D:4719:PHE:HA	1:D:4722:ARG:NH1	2.25	0.51
1:A:278:GLN:N	1:A:315:CYS:SG	2.83	0.51
1:A:646:PRO:HD2	1:A:779:PRO:HB2	1.92	0.51
1:A:1730:MET:SD	1:A:2156:LEU:HD21	2.50	0.51
1:A:3948:LYS:HE3	1:A:4012:LEU:HB2	1.92	0.51
1:A:4025:VAL:O	1:A:4029:SER:OG	2.17	0.51
1:B:838:HIS:HA	1:B:1201:HIS:HB3	1.91	0.51
1:C:646:PRO:HD2	1:C:779:PRO:HB2	1.92	0.51
1:C:681:HIS:HE1	1:C:705:ASN:HB3	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4130:ASN:O	1:C:4131:ARG:C	2.45	0.51
1:D:1094:ALA:HB3	1:D:1147:ASP:HB3	1.93	0.51
1:D:2292:GLU:CD	1:D:2296:GLU:HB2	2.29	0.51
1:D:4704:LEU:HB3	1:D:4778:TRP:HD1	1.74	0.51
1:A:264:PRO:HA	1:A:280:LEU:HD22	1.91	0.51
1:A:4063:ASP:O	1:A:4066:LEU:HG	2.11	0.51
1:A:4128:PHE:O	1:A:4129:ALA:C	2.47	0.51
1:B:619:ASP:OD1	1:B:1680:ARG:NH1	2.43	0.51
1:B:4063:ASP:HA	1:B:4066:LEU:CG	2.40	0.51
1:C:652:ARG:HD2	1:C:750:LEU:HB3	1.92	0.51
1:C:1677:GLY:H	1:C:1721:GLU:CD	2.12	0.51
1:C:3948:LYS:HE3	1:C:4012:LEU:HB2	1.92	0.51
1:C:4063:ASP:O	1:C:4066:LEU:HG	2.11	0.51
1:C:4961:CYS:SG	1:C:4983:HIS:NE2	2.82	0.51
1:D:646:PRO:HD2	1:D:779:PRO:HB2	1.92	0.51
1:D:3910:THR:HG23	1:D:3911:THR:HG23	1.93	0.51
1:D:4056:GLU:HA	1:D:4059:LEU:HG	1.93	0.51
1:A:681:HIS:HE1	1:A:705:ASN:HB3	1.75	0.51
1:A:805:PRO:HB2	1:A:808:TYR:CD1	2.46	0.51
1:A:1808:ARG:NH1	1:A:1853:ILE:O	2.40	0.51
1:A:2015:GLU:O	1:A:2017:ASP:N	2.37	0.51
1:A:2192:TYR:OH	1:A:2238:TYR:CD1	2.61	0.51
1:B:110:ARG:NH2	1:B:115:ARG:HB3	2.26	0.51
1:B:3910:THR:HG23	1:B:3911:THR:HG23	1.93	0.51
1:C:913:LEU:O	1:C:918:ARG:NH2	2.44	0.51
1:A:952:LYS:HB3	1:A:968:ALA:HB1	1.93	0.51
1:A:1100:MET:HB2	1:A:1143:TRP:CZ3	2.46	0.51
1:A:1678:ASN:HD21	1:A:1681:VAL:HG21	1.76	0.51
1:A:4090:LYS:O	1:A:4091:LYS:C	2.48	0.51
1:B:647:ASN:ND2	1:B:820:ARG:O	2.43	0.51
1:B:913:LEU:O	1:B:918:ARG:NH2	2.44	0.51
1:B:4087:LEU:HD13	1:B:4122:MET:C	2.31	0.51
1:C:1678:ASN:HD21	1:C:1681:VAL:HG21	1.76	0.51
1:C:4667:PRO:HG2	1:C:4668:LEU:HD12	1.93	0.51
1:D:110:ARG:NH2	1:D:115:ARG:HB3	2.26	0.51
1:D:652:ARG:HD2	1:D:750:LEU:HB3	1.92	0.51
1:A:110:ARG:NH2	1:A:115:ARG:HB3	2.26	0.51
1:A:913:LEU:O	1:A:918:ARG:NH2	2.44	0.51
1:A:4667:PRO:HG2	1:A:4668:LEU:HD12	1.93	0.51
1:B:720:HIS:CD2	1:B:727:ALA:HA	2.34	0.51
1:B:879:HIS:CE1	1:B:913:LEU:HD21	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4063:ASP:O	1:B:4066:LEU:HG	2.11	0.51
1:C:805:PRO:HB2	1:C:808:TYR:CD1	2.46	0.51
1:C:3910:THR:HG23	1:C:3911:THR:HG23	1.93	0.51
1:D:426:ARG:HB2	1:D:506:TYR:HA	1.92	0.51
1:D:2339:VAL:HG12	1:D:2344:GLU:HA	1.93	0.51
1:D:2471:SER:O	1:D:2473:PRO:HD3	2.11	0.51
1:A:4843:LEU:HD12	1:D:4823:LEU:CD1	2.30	0.50
1:B:220:LEU:HD12	1:B:390:LEU:HB3	1.92	0.50
1:B:3937:TYR:O	1:B:4002:LYS:NZ	2.37	0.50
1:B:4704:LEU:HB3	1:B:4778:TRP:HD1	1.74	0.50
1:C:1094:ALA:HB3	1:C:1147:ASP:HB3	1.93	0.50
1:C:2339:VAL:HG12	1:C:2344:GLU:HA	1.93	0.50
1:C:4014:LYS:HA	1:C:4132:PHE:CZ	2.47	0.50
1:C:4063:ASP:HA	1:C:4066:LEU:CG	2.40	0.50
1:C:4650:HIS:NE2	1:C:4795:TYR:OH	2.40	0.50
1:D:805:PRO:HB2	1:D:808:TYR:CD1	2.46	0.50
1:D:2226:PRO:HA	1:D:2229:VAL:HG12	1.93	0.50
1:A:426:ARG:HB2	1:A:506:TYR:HA	1.92	0.50
1:A:3910:THR:HG23	1:A:3911:THR:HG23	1.93	0.50
1:B:134:ASP:N	1:B:134:ASP:OD1	2.43	0.50
1:B:169:LEU:HD11	1:B:202:MET:HG2	1.93	0.50
1:B:1970:GLN:CB	1:B:3644:LEU:H	2.25	0.50
1:C:1131:ARG:HD2	1:C:1179:PHE:CZ	2.47	0.50
1:D:647:ASN:ND2	1:D:820:ARG:O	2.43	0.50
1:D:879:HIS:CE1	1:D:913:LEU:HD21	2.46	0.50
1:D:4087:LEU:HD13	1:D:4122:MET:C	2.31	0.50
1:A:3641:LEU:O	1:A:3642:TYR:C	2.48	0.50
1:B:2203:MET:O	1:B:2206:THR:OG1	2.24	0.50
1:B:2339:VAL:HG12	1:B:2344:GLU:HA	1.93	0.50
1:B:4122:MET:SD	1:B:4123:ILE:N	2.83	0.50
1:C:134:ASP:OD1	1:C:134:ASP:N	2.43	0.50
1:C:955:LEU:HD13	1:C:959:TYR:CG	2.45	0.50
1:C:4089:SER:N	1:C:4120:ASN:HA	2.21	0.50
1:D:4089:SER:OG	1:D:4091:LYS:HB2	2.12	0.50
1:A:134:ASP:OD1	1:A:134:ASP:N	2.43	0.50
1:A:681:HIS:HB3	1:A:784:SER:HB3	1.94	0.50
1:A:892:THR:O	1:A:904:HIS:N	2.37	0.50
1:A:1970:GLN:CB	1:A:3644:LEU:H	2.25	0.50
1:A:2339:VAL:HG12	1:A:2344:GLU:HA	1.93	0.50
1:A:4685:GLY:O	1:A:4689:THR:N	2.24	0.50
1:B:3948:LYS:HE3	1:B:4012:LEU:HB2	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4013:LEU:O	1:B:4017:LEU:HG	2.11	0.50
1:B:4089:SER:OG	1:B:4091:LYS:HB2	2.12	0.50
1:C:647:ASN:ND2	1:C:820:ARG:O	2.43	0.50
1:C:1730:MET:SD	1:C:2156:LEU:HD21	2.50	0.50
1:C:4888:TYR:CD1	1:D:4914:VAL:CG1	2.72	0.50
1:A:619:ASP:OD1	1:A:1680:ARG:NH1	2.43	0.50
1:A:879:HIS:CE1	1:A:913:LEU:HD21	2.46	0.50
1:A:2226:PRO:HA	1:A:2229:VAL:HG12	1.93	0.50
1:A:2471:SER:O	1:A:2473:PRO:HD3	2.11	0.50
1:A:4013:LEU:O	1:A:4017:LEU:HG	2.11	0.50
1:A:4071:ILE:C	1:A:4073:GLY:N	2.60	0.50
1:B:681:HIS:HB3	1:B:784:SER:HB3	1.94	0.50
1:B:700:GLU:HB2	1:B:725:HIS:NE2	2.26	0.50
1:B:4091:LYS:H	1:B:4091:LYS:HZ3	1.60	0.50
1:C:4132:PHE:HE1	1:C:4135:PRO:HG2	1.77	0.50
1:D:220:LEU:HD12	1:D:390:LEU:HB3	1.92	0.50
1:D:1131:ARG:HD2	1:D:1179:PHE:CZ	2.47	0.50
1:D:4063:ASP:O	1:D:4066:LEU:HG	2.11	0.50
1:D:4207:MET:HG3	1:D:4209:GLN:H	1.75	0.50
1:A:4197:ILE:HG23	1:A:4990:PHE:HB3	1.94	0.50
1:B:1131:ARG:HD2	1:B:1179:PHE:CZ	2.47	0.50
1:B:4078:GLN:O	1:B:4079:ASP:C	2.50	0.50
1:B:4078:GLN:HA	1:B:4081:VAL:HG13	1.94	0.50
1:A:157:ARG:HH21	1:A:164:ARG:HD2	1.75	0.50
1:A:169:LEU:HD11	1:A:202:MET:HG2	1.93	0.50
1:A:220:LEU:HD12	1:A:390:LEU:HB3	1.92	0.50
1:A:2095:GLN:NE2	1:A:2127:GLN:O	2.25	0.50
1:A:4078:GLN:HA	1:A:4081:VAL:HG13	1.94	0.50
1:A:4132:PHE:HE1	1:A:4135:PRO:HG2	1.77	0.50
1:A:4961:CYS:SG	1:A:4983:HIS:NE2	2.82	0.50
1:B:1100:MET:HB2	1:B:1143:TRP:CZ3	2.46	0.50
1:B:1808:ARG:NH1	1:B:1853:ILE:O	2.40	0.50
1:B:3772:THR:OG1	1:B:3815:LYS:NZ	2.41	0.50
1:C:879:HIS:CE1	1:C:913:LEU:HD21	2.46	0.50
1:C:1100:MET:HB2	1:C:1143:TRP:CZ3	2.46	0.50
1:C:1970:GLN:CB	1:C:3644:LEU:H	2.25	0.50
1:C:4125:PHE:O	1:C:4127:GLU:N	2.45	0.50
1:D:4124:ASN:HA	1:D:4127:GLU:CB	2.40	0.50
1:D:4650:HIS:HE2	1:D:4795:TYR:HH	1.58	0.50
1:A:2012:PHE:CD1	1:A:2022:PRO:HD3	2.47	0.50
1:A:4056:GLU:HA	1:A:4059:LEU:HG	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:551:LEU:O	1:B:553:ARG:HD3	2.12	0.50
1:B:1678:ASN:HD21	1:B:1681:VAL:HG21	1.76	0.50
1:B:4014:LYS:HA	1:B:4132:PHE:CZ	2.47	0.50
1:B:4069:LYS:HB2	1:B:4130:ASN:HD21	1.73	0.50
1:B:4197:ILE:HG23	1:B:4990:PHE:HB3	1.94	0.50
1:B:4667:PRO:HG2	1:B:4668:LEU:HD12	1.93	0.50
1:C:952:LYS:HB3	1:C:968:ALA:HB1	1.93	0.50
1:C:4013:LEU:O	1:C:4017:LEU:HG	2.11	0.50
1:C:4056:GLU:HA	1:C:4059:LEU:HG	1.93	0.50
1:C:4089:SER:OG	1:C:4091:LYS:HB2	2.12	0.50
1:D:553:ARG:HG3	1:D:593:HIS:HE1	1.77	0.50
1:D:952:LYS:HB3	1:D:968:ALA:HB1	1.93	0.50
1:D:1808:ARG:NH1	1:D:1853:ILE:O	2.40	0.50
1:D:2203:MET:O	1:D:2206:THR:OG1	2.24	0.50
1:D:4132:PHE:HE1	1:D:4135:PRO:HG2	1.77	0.50
1:A:1131:ARG:HD2	1:A:1179:PHE:CZ	2.47	0.50
1:A:4089:SER:OG	1:A:4091:LYS:HB2	2.12	0.50
1:A:4125:PHE:O	1:A:4127:GLU:N	2.45	0.50
1:B:759:ILE:HG22	1:B:760:ASN:HD22	1.77	0.50
1:B:4090:LYS:O	1:B:4091:LYS:C	2.48	0.50
1:C:4221:VAL:HG23	1:C:4222:VAL:HG13	1.93	0.50
1:D:759:ILE:HG22	1:D:760:ASN:HD22	1.77	0.50
1:A:1131:ARG:N	1:A:1137:GLU:O	2.41	0.49
1:A:3772:THR:OG1	1:A:3815:LYS:NZ	2.41	0.49
1:A:4078:GLN:O	1:A:4079:ASP:C	2.50	0.49
1:B:1937:LEU:HB3	1:B:2116:LEU:HD13	1.94	0.49
1:B:4125:PHE:O	1:B:4127:GLU:N	2.45	0.49
1:B:4132:PHE:HE1	1:B:4135:PRO:HG2	1.77	0.49
1:C:619:ASP:OD1	1:C:1680:ARG:NH1	2.43	0.49
1:C:1937:LEU:HB3	1:C:2116:LEU:HD13	1.94	0.49
1:C:2012:PHE:CD1	1:C:2022:PRO:HD3	2.47	0.49
1:C:4242:ILE:O	1:C:4246:GLN:N	2.36	0.49
1:D:1970:GLN:CB	1:D:3644:LEU:H	2.25	0.49
1:D:2015:GLU:O	1:D:2017:ASP:N	2.37	0.49
1:A:131:LEU:HB3	1:A:178:ARG:HH22	1.77	0.49
1:A:1937:LEU:HB3	1:A:2116:LEU:HD13	1.94	0.49
1:B:2012:PHE:CD1	1:B:2022:PRO:HD3	2.47	0.49
1:B:4056:GLU:HA	1:B:4059:LEU:HG	1.93	0.49
1:B:4128:PHE:O	1:B:4129:ALA:C	2.47	0.49
1:C:138:GLN:N	1:C:138:GLN:OE1	2.45	0.49
1:C:2015:GLU:O	1:C:2017:ASP:N	2.37	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:551:LEU:O	1:D:553:ARG:HD3	2.12	0.49
1:D:1937:LEU:HB3	1:D:2116:LEU:HD13	1.94	0.49
1:D:2012:PHE:CD1	1:D:2022:PRO:HD3	2.47	0.49
1:D:2203:MET:O	1:D:2207:VAL:HG23	2.13	0.49
1:D:4013:LEU:O	1:D:4017:LEU:HG	2.11	0.49
1:D:4014:LYS:HA	1:D:4132:PHE:CZ	2.47	0.49
1:A:759:ILE:HG22	1:A:760:ASN:HD22	1.77	0.49
1:A:1124:PHE:HB2	1:A:1162:PHE:CE2	2.48	0.49
1:A:2203:MET:O	1:A:2207:VAL:HG23	2.13	0.49
1:A:4888:TYR:CD1	1:B:4914:VAL:CG1	2.72	0.49
1:C:887:ILE:HD12	1:C:967:PRO:HG3	1.95	0.49
1:C:2471:SER:O	1:C:2473:PRO:HD3	2.11	0.49
1:C:4122:MET:SD	1:C:4123:ILE:N	2.83	0.49
1:C:4961:CYS:HB2	1:C:5025:GLY:H	1.78	0.49
1:D:278:GLN:N	1:D:315:CYS:SG	2.83	0.49
1:A:652:ARG:HB2	1:A:750:LEU:HD13	1.95	0.49
1:A:887:ILE:HD12	1:A:967:PRO:HG3	1.95	0.49
1:A:4087:LEU:HD13	1:A:4122:MET:C	2.31	0.49
1:B:138:GLN:OE1	1:B:138:GLN:N	2.45	0.49
1:B:683:ARG:HB2	1:B:782:SER:HB3	1.95	0.49
1:B:892:THR:O	1:B:904:HIS:N	2.37	0.49
1:B:1994:ARG:HA	1:B:1996:ARG:NH2	2.27	0.49
1:B:2203:MET:O	1:B:2207:VAL:HG23	2.13	0.49
1:B:2337:PHE:HA	1:B:2340:PHE:HB2	1.95	0.49
1:B:4094:GLN:NE2	1:B:4098:ASP:OD2	2.35	0.49
1:B:4221:VAL:HG23	1:B:4222:VAL:HG13	1.93	0.49
1:D:134:ASP:N	1:D:134:ASP:OD1	2.43	0.49
1:D:169:LEU:HD11	1:D:202:MET:HG2	1.93	0.49
1:D:1100:MET:HB2	1:D:1143:TRP:CZ3	2.46	0.49
1:D:4078:GLN:O	1:D:4079:ASP:C	2.50	0.49
1:D:4961:CYS:HB2	1:D:5025:GLY:H	1.78	0.49
1:A:248:GLU:HB3	1:A:252:VAL:HG12	1.95	0.49
1:A:2337:PHE:HA	1:A:2340:PHE:HB2	1.95	0.49
1:A:3644:LEU:HB3	1:A:3645:PRO:HD2	1.95	0.49
1:A:4014:LYS:HA	1:A:4132:PHE:CZ	2.47	0.49
1:B:652:ARG:HB2	1:B:750:LEU:HD13	1.95	0.49
1:B:887:ILE:HD12	1:B:967:PRO:HG3	1.95	0.49
1:B:1124:PHE:HB2	1:B:1162:PHE:CE2	2.48	0.49
1:B:2192:TYR:OH	1:B:2238:TYR:CD1	2.61	0.49
1:B:2471:SER:O	1:B:2473:PRO:HD3	2.11	0.49
1:B:4025:VAL:O	1:B:4029:SER:OG	2.17	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:553:ARG:HG3	1:C:593:HIS:HE1	1.77	0.49
1:C:681:HIS:HB3	1:C:784:SER:HB3	1.94	0.49
1:C:793:LEU:HD21	1:C:1626:TRP:CD1	2.48	0.49
1:C:1994:ARG:HA	1:C:1996:ARG:NH2	2.27	0.49
1:C:4197:ILE:HG23	1:C:4990:PHE:HB3	1.94	0.49
1:D:138:GLN:OE1	1:D:138:GLN:N	2.45	0.49
1:D:3644:LEU:HB3	1:D:3645:PRO:HD2	1.95	0.49
1:D:4125:PHE:O	1:D:4127:GLU:N	2.45	0.49
1:A:138:GLN:OE1	1:A:138:GLN:N	2.45	0.49
1:A:683:ARG:HB2	1:A:782:SER:HB3	1.95	0.49
1:A:1998:PHE:CD1	1:A:3639:THR:HG21	2.48	0.49
1:B:681:HIS:HE1	1:B:705:ASN:HB3	1.75	0.49
1:B:2012:PHE:CD1	1:B:2021:CYS:HA	2.47	0.49
1:C:169:LEU:HD11	1:C:202:MET:HG2	1.93	0.49
1:C:551:LEU:O	1:C:553:ARG:HD3	2.12	0.49
1:C:1124:PHE:HB2	1:C:1162:PHE:CE2	2.48	0.49
1:C:2203:MET:O	1:C:2207:VAL:HG23	2.13	0.49
1:D:793:LEU:HD21	1:D:1626:TRP:CD1	2.48	0.49
1:D:4071:ILE:C	1:D:4073:GLY:N	2.60	0.49
1:A:1994:ARG:HA	1:A:1996:ARG:NH2	2.27	0.49
1:A:2012:PHE:CD1	1:A:2021:CYS:HA	2.47	0.49
1:A:4961:CYS:HB2	1:A:5025:GLY:H	1.78	0.49
1:B:793:LEU:HD21	1:B:1626:TRP:CD1	2.48	0.49
1:C:278:GLN:N	1:C:315:CYS:SG	2.83	0.49
1:C:2012:PHE:CD1	1:C:2021:CYS:HA	2.47	0.49
1:C:4079:ASP:OD1	1:C:4079:ASP:N	2.46	0.49
1:D:1124:PHE:HB2	1:D:1162:PHE:CE2	2.48	0.49
1:D:1678:ASN:HD21	1:D:1681:VAL:HG21	1.76	0.49
1:D:1994:ARG:HA	1:D:1996:ARG:NH2	2.27	0.49
1:D:4025:VAL:O	1:D:4029:SER:OG	2.17	0.49
1:D:4132:PHE:O	1:D:4135:PRO:HD2	2.13	0.49
1:A:551:LEU:O	1:A:553:ARG:HD3	2.12	0.49
1:B:4961:CYS:HB2	1:B:5025:GLY:H	1.78	0.49
1:C:356:TRP:O	1:C:379:HIS:N	2.45	0.49
1:A:769:GLU:O	1:A:1515:VAL:N	2.46	0.49
1:A:4122:MET:SD	1:A:4123:ILE:N	2.83	0.49
1:B:248:GLU:HB3	1:B:252:VAL:HG12	1.95	0.49
1:C:224:HIS:HE2	1:C:359:TYR:HE2	1.61	0.49
1:C:652:ARG:HB2	1:C:750:LEU:HD13	1.95	0.49
1:C:1667:LEU:HD21	1:C:1671:ARG:HH22	1.78	0.49
1:C:1973:GLN:O	1:C:1977:TYR:N	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4078:GLN:HA	1:C:4081:VAL:HG13	1.94	0.49
1:D:224:HIS:HE2	1:D:359:TYR:HE2	1.61	0.49
1:D:450:GLY:HA2	1:D:453:GLU:HG3	1.95	0.49
1:D:4138:ASP:O	1:D:4139:ILE:C	2.51	0.49
1:C:3937:TYR:O	1:C:4002:LYS:NZ	2.37	0.49
1:C:4128:PHE:O	1:C:4129:ALA:C	2.47	0.49
1:D:652:ARG:HB2	1:D:750:LEU:HD13	1.95	0.49
1:D:1667:LEU:HD21	1:D:1671:ARG:HH22	1.78	0.49
1:D:1927:LEU:HD13	1:D:2101:MET:HG3	1.95	0.49
1:D:2337:PHE:HA	1:D:2340:PHE:HB2	1.95	0.49
1:A:553:ARG:HG3	1:A:593:HIS:HE1	1.77	0.48
1:A:4079:ASP:OD1	1:A:4079:ASP:N	2.46	0.48
1:A:4080:TYR:O	1:A:4081:VAL:C	2.52	0.48
1:B:1131:ARG:N	1:B:1137:GLU:O	2.41	0.48
1:B:4132:PHE:O	1:B:4135:PRO:HD2	2.13	0.48
1:B:4874:MET:HB2	1:B:4877:ASP:OD2	2.13	0.48
1:C:131:LEU:HB3	1:C:178:ARG:HH22	1.77	0.48
1:C:2231:SER:HA	1:C:2234:ARG:HG2	1.94	0.48
1:C:4666:VAL:HG23	1:C:4669:VAL:HB	1.95	0.48
1:D:1118:ASP:HA	1:D:1134:LEU:HD23	1.95	0.48
1:D:4874:MET:HB2	1:D:4877:ASP:OD2	2.13	0.48
1:B:553:ARG:HG3	1:B:593:HIS:HE1	1.77	0.48
1:D:887:ILE:HD12	1:D:967:PRO:HG3	1.95	0.48
1:D:1827:ARG:O	1:D:1829:PRO:HD3	2.13	0.48
1:D:4197:ILE:HG23	1:D:4990:PHE:HB3	1.94	0.48
1:A:853:PRO:HB3	1:A:1023:PRO:HA	1.96	0.48
1:A:1927:LEU:HD13	1:A:2101:MET:HG3	1.95	0.48
1:A:4132:PHE:O	1:A:4135:PRO:HD2	2.13	0.48
1:A:4666:VAL:HG23	1:A:4669:VAL:HB	1.95	0.48
1:B:1667:LEU:HD21	1:B:1671:ARG:HH22	1.78	0.48
1:B:2231:SER:HA	1:B:2234:ARG:HG2	1.94	0.48
1:B:4666:VAL:HG23	1:B:4669:VAL:HB	1.95	0.48
1:C:119:SER:HA	1:C:146:CYS:HA	1.95	0.48
1:C:759:ILE:HG22	1:C:760:ASN:HD22	1.77	0.48
1:C:4680:LYS:NZ	1:C:4687:TYR:H	2.12	0.48
1:C:4874:MET:HB2	1:C:4877:ASP:OD2	2.13	0.48
1:D:131:LEU:HB3	1:D:178:ARG:HH22	1.77	0.48
1:D:4079:ASP:N	1:D:4079:ASP:OD1	2.46	0.48
1:A:565:TYR:CZ	1:A:569:ILE:HD11	2.48	0.48
1:B:173:SER:HB3	1:B:178:ARG:H	1.79	0.48
1:B:1676:LEU:H	1:B:1676:LEU:HG	1.30	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4920:PHE:O	1:B:4924:VAL:HG22	2.14	0.48
1:C:1118:ASP:HA	1:C:1134:LEU:HD23	1.95	0.48
1:C:1827:ARG:O	1:C:1829:PRO:HD3	2.13	0.48
1:C:3644:LEU:HB3	1:C:3645:PRO:HD2	1.95	0.48
1:C:4132:PHE:O	1:C:4135:PRO:HD2	2.13	0.48
1:C:4138:ASP:O	1:C:4139:ILE:C	2.51	0.48
1:A:1827:ARG:O	1:A:1829:PRO:HD3	2.13	0.48
1:B:4680:LYS:NZ	1:B:4687:TYR:H	2.12	0.48
1:C:853:PRO:HB3	1:C:1023:PRO:HA	1.96	0.48
1:C:1998:PHE:CD1	1:C:3639:THR:HG21	2.48	0.48
1:C:4071:ILE:C	1:C:4073:GLY:N	2.60	0.48
1:C:4089:SER:HB2	1:C:4091:LYS:HE2	1.96	0.48
1:C:4124:ASN:HA	1:C:4127:GLU:CB	2.40	0.48
1:D:4078:GLN:HA	1:D:4081:VAL:HG13	1.94	0.48
1:D:4089:SER:HB2	1:D:4091:LYS:HE2	1.96	0.48
1:D:4680:LYS:NZ	1:D:4687:TYR:H	2.12	0.48
1:A:1118:ASP:HA	1:A:1134:LEU:HD23	1.95	0.48
1:B:131:LEU:HB3	1:B:178:ARG:HH22	1.77	0.48
1:D:248:GLU:HB3	1:D:252:VAL:HG12	1.95	0.48
1:D:681:HIS:HB3	1:D:784:SER:HB3	1.94	0.48
1:B:450:GLY:HA2	1:B:453:GLU:HG3	1.95	0.48
1:B:582:HIS:O	1:B:585:SER:OG	2.24	0.48
1:B:4138:ASP:O	1:B:4139:ILE:C	2.51	0.48
1:B:4581:LYS:NZ	1:B:4582:VAL:O	2.33	0.48
1:C:450:GLY:HA2	1:C:453:GLU:HG3	1.95	0.48
1:C:2337:PHE:HA	1:C:2340:PHE:HB2	1.95	0.48
1:D:683:ARG:HB2	1:D:782:SER:HB3	1.95	0.48
1:D:2012:PHE:CD1	1:D:2021:CYS:HA	2.47	0.48
1:D:2231:SER:HA	1:D:2234:ARG:HG2	1.94	0.48
1:A:450:GLY:HA2	1:A:453:GLU:HG3	1.95	0.48
1:C:247:TYR:HE2	1:C:376:ALA:HB2	1.79	0.48
1:D:4081:VAL:HG23	1:D:4082:THR:N	2.25	0.48
1:A:1667:LEU:HD21	1:A:1671:ARG:HH22	1.78	0.48
1:A:2231:SER:HA	1:A:2234:ARG:HG2	1.94	0.48
1:A:3670:GLU:HG2	1:A:3731:LYS:HE3	1.96	0.48
1:A:4124:ASN:HA	1:A:4127:GLU:CB	2.40	0.48
1:B:565:TYR:CZ	1:B:569:ILE:HD11	2.48	0.48
1:B:3644:LEU:HB3	1:B:3645:PRO:HD2	1.95	0.48
1:C:769:GLU:O	1:C:1515:VAL:N	2.46	0.48
1:C:2007:ASN:HA	1:C:3656:SER:CB	2.44	0.48
1:D:356:TRP:O	1:D:379:HIS:N	2.45	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:619:ASP:OD1	1:D:1680:ARG:NH1	2.43	0.48
1:D:1998:PHE:CD1	1:D:3639:THR:HG21	2.48	0.48
1:D:4642:ALA:O	1:D:4646:LEU:N	2.41	0.48
1:D:4666:VAL:HG23	1:D:4669:VAL:HB	1.95	0.48
1:A:36:CYS:SG	1:A:65:CYS:HB3	2.54	0.48
1:A:173:SER:HB3	1:A:178:ARG:H	1.79	0.48
1:A:793:LEU:HD21	1:A:1626:TRP:CD1	2.48	0.48
1:A:4680:LYS:NZ	1:A:4687:TYR:H	2.12	0.48
1:A:4874:MET:HB2	1:A:4877:ASP:OD2	2.13	0.48
1:A:4920:PHE:O	1:A:4924:VAL:HG22	2.14	0.48
1:B:356:TRP:O	1:B:379:HIS:N	2.45	0.48
1:B:626:LEU:HG	1:B:628:GLY:N	2.28	0.48
1:C:173:SER:HB3	1:C:178:ARG:H	1.79	0.48
1:C:248:GLU:HB3	1:C:252:VAL:HG12	1.95	0.48
1:C:565:TYR:CZ	1:C:569:ILE:HD11	2.48	0.48
1:C:683:ARG:HB2	1:C:782:SER:HB3	1.95	0.48
1:C:1936:LYS:O	1:C:1940:CYS:N	2.35	0.48
1:C:4025:VAL:O	1:C:4029:SER:OG	2.17	0.48
1:D:119:SER:HA	1:D:146:CYS:HA	1.95	0.48
1:A:4010:ILE:HG21	1:A:4128:PHE:CE1	2.49	0.47
1:B:1827:ARG:O	1:B:1829:PRO:HD3	2.13	0.47
1:B:2142:TYR:CD2	1:B:2197:LEU:HD13	2.49	0.47
1:C:36:CYS:SG	1:C:65:CYS:HB3	2.54	0.47
1:C:1808:ARG:NH1	1:C:1853:ILE:O	2.40	0.47
1:C:2101:MET:O	1:C:2104:ARG:HG2	2.14	0.47
1:D:565:TYR:CZ	1:D:569:ILE:HD11	2.48	0.47
1:D:4215:ARG:HH12	1:D:4219:PHE:HB2	1.79	0.47
1:A:2101:MET:O	1:A:2104:ARG:HG2	2.14	0.47
1:B:36:CYS:SG	1:B:65:CYS:HB3	2.54	0.47
1:B:150:MET:HE1	1:B:169:LEU:HD22	1.96	0.47
1:B:1118:ASP:HA	1:B:1134:LEU:HD23	1.95	0.47
1:C:210:GLU:HG3	1:C:337:PRO:HG3	1.95	0.47
1:D:173:SER:HB3	1:D:178:ARG:H	1.79	0.47
1:D:769:GLU:O	1:D:1515:VAL:N	2.46	0.47
1:D:1101:ARG:N	1:D:1193:SER:OG	2.47	0.47
1:A:2007:ASN:HA	1:A:3656:SER:CB	2.44	0.47
1:A:2128:TYR:HB3	1:A:3669:PHE:CB	2.44	0.47
1:A:3643:ASN:O	1:A:3644:LEU:HD13	2.15	0.47
1:B:224:HIS:HE2	1:B:359:TYR:HE2	1.61	0.47
1:B:769:GLU:O	1:B:1515:VAL:N	2.46	0.47
1:B:3670:GLU:HG2	1:B:3731:LYS:HE3	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1101:ARG:N	1:C:1193:SER:OG	2.47	0.47
1:C:4823:LEU:CD1	1:D:4843:LEU:CD1	2.66	0.47
1:D:247:TYR:HE2	1:D:376:ALA:HB2	1.79	0.47
1:D:2101:MET:O	1:D:2104:ARG:HG2	2.14	0.47
1:A:224:HIS:HE2	1:A:359:TYR:HE2	1.61	0.47
1:B:247:TYR:HE2	1:B:376:ALA:HB2	1.79	0.47
1:B:853:PRO:HB3	1:B:1023:PRO:HA	1.96	0.47
1:B:1774:PRO:HG2	1:B:1776:HIS:NE2	2.30	0.47
1:B:1998:PHE:CD1	1:B:3639:THR:HG21	2.48	0.47
1:C:4078:GLN:O	1:C:4079:ASP:C	2.50	0.47
1:C:4081:VAL:HG23	1:C:4082:THR:N	2.25	0.47
1:D:892:THR:O	1:D:904:HIS:N	2.37	0.47
1:D:3670:GLU:HG2	1:D:3731:LYS:HE3	1.96	0.47
1:D:4743:MET:HB3	1:D:4746:ALA:HB3	1.97	0.47
1:A:2142:TYR:CD2	1:A:2197:LEU:HD13	2.49	0.47
1:B:119:SER:HA	1:B:146:CYS:HA	1.95	0.47
1:C:2095:GLN:NE2	1:C:2127:GLN:O	2.25	0.47
1:C:4920:PHE:O	1:C:4924:VAL:HG22	2.14	0.47
1:D:36:CYS:SG	1:D:65:CYS:HB3	2.54	0.47
1:D:2142:TYR:CD2	1:D:2197:LEU:HD13	2.49	0.47
1:D:3643:ASN:O	1:D:3644:LEU:HD13	2.15	0.47
1:A:247:TYR:HE2	1:A:376:ALA:HB2	1.79	0.47
1:A:4823:LEU:CD1	1:B:4843:LEU:CD1	2.66	0.47
1:B:1927:LEU:HD13	1:B:2101:MET:HG3	1.95	0.47
1:B:2007:ASN:HA	1:B:3656:SER:CB	2.44	0.47
1:B:3999:MET:SD	1:B:3999:MET:N	2.86	0.47
1:C:1927:LEU:HD13	1:C:2101:MET:HG3	1.95	0.47
1:C:4010:ILE:HG21	1:C:4128:PHE:CE1	2.49	0.47
1:D:210:GLU:HG3	1:D:337:PRO:HG3	1.95	0.47
1:D:853:PRO:HB3	1:D:1023:PRO:HA	1.96	0.47
1:D:1774:PRO:HG2	1:D:1776:HIS:NE2	2.30	0.47
1:D:2007:ASN:HA	1:D:3656:SER:CB	2.44	0.47
1:D:4920:PHE:O	1:D:4924:VAL:HG22	2.14	0.47
1:A:4101:LYS:O	1:A:4102:GLN:HG2	2.15	0.47
1:A:4126:GLU:HA	1:A:4129:ALA:HB3	1.97	0.47
1:A:4215:ARG:HH12	1:A:4219:PHE:HB2	1.79	0.47
1:B:210:GLU:HG3	1:B:337:PRO:HG3	1.95	0.47
1:B:4010:ILE:HG21	1:B:4128:PHE:CE1	2.49	0.47
1:B:4079:ASP:N	1:B:4079:ASP:OD1	2.46	0.47
1:B:4080:TYR:O	1:B:4081:VAL:C	2.52	0.47
1:B:4215:ARG:HH12	1:B:4219:PHE:HB2	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4679:ARG:HE	1:B:5017:ARG:CZ	2.28	0.47
1:C:575:LEU:HD13	1:C:609:CYS:HB3	1.97	0.47
1:C:4080:TYR:O	1:C:4081:VAL:C	2.52	0.47
1:C:4215:ARG:HH12	1:C:4219:PHE:HB2	1.79	0.47
1:C:4743:MET:HB3	1:C:4746:ALA:HB3	1.97	0.47
1:D:720:HIS:CD2	1:D:727:ALA:HA	2.34	0.47
1:D:2095:GLN:NE2	1:D:2127:GLN:O	2.25	0.47
1:D:4581:LYS:NZ	1:D:4582:VAL:O	2.33	0.47
1:B:180:LEU:HD22	1:B:200:TRP:NE1	2.30	0.47
1:B:290:TYR:HD2	1:B:304:ALA:HA	1.80	0.47
1:B:4089:SER:HB2	1:B:4091:LYS:HE2	1.96	0.47
1:C:180:LEU:HD22	1:C:200:TRP:NE1	2.30	0.47
1:C:2128:TYR:HB3	1:C:3669:PHE:CB	2.44	0.47
1:C:2142:TYR:CD2	1:C:2197:LEU:HD13	2.49	0.47
1:C:3670:GLU:HG2	1:C:3731:LYS:HE3	1.96	0.47
1:D:180:LEU:HD22	1:D:200:TRP:NE1	2.30	0.47
1:D:4010:ILE:HG21	1:D:4128:PHE:CE1	2.49	0.47
1:D:4016:LEU:HA	1:D:4019:LEU:HD13	1.96	0.47
1:D:4072:VAL:HG22	1:D:4126:GLU:CB	2.43	0.47
1:D:4122:MET:SD	1:D:4123:ILE:N	2.83	0.47
1:A:19:GLU:OE1	1:A:68:THR:OG1	2.27	0.47
1:A:356:TRP:O	1:A:379:HIS:N	2.45	0.47
1:A:972:LEU:HB3	1:A:975:VAL:HG12	1.97	0.47
1:A:2474:LEU:HB2	1:A:2475:GLN:H	1.54	0.47
1:A:4138:ASP:O	1:A:4139:ILE:C	2.51	0.47
1:B:2101:MET:O	1:B:2104:ARG:HG2	2.14	0.47
1:D:1649:ASP:OD1	1:D:1650:ILE:N	2.48	0.47
1:A:102:LEU:HB2	1:A:105:HIS:NE2	2.30	0.47
1:A:150:MET:HE1	1:A:169:LEU:HD22	1.97	0.47
1:A:1774:PRO:HG2	1:A:1776:HIS:NE2	2.30	0.47
1:B:138:GLN:HG2	1:B:139:GLU:N	2.30	0.47
1:C:21:VAL:HG22	1:C:203:ASN:HB2	1.97	0.47
1:D:102:LEU:HB2	1:D:105:HIS:NE2	2.30	0.47
1:A:119:SER:HA	1:A:146:CYS:HA	1.95	0.46
1:A:748:LEU:HD12	1:A:755:ILE:HG12	1.97	0.46
1:A:4089:SER:HB2	1:A:4091:LYS:HE2	1.96	0.46
1:B:21:VAL:HG22	1:B:203:ASN:HB2	1.97	0.46
1:B:609:CYS:SG	1:B:610:ASN:N	2.89	0.46
1:B:2295:LEU:HA	1:B:2298:VAL:HG22	1.97	0.46
1:B:4078:GLN:CG	1:B:4081:VAL:HG21	2.43	0.46
1:B:4126:GLU:HA	1:B:4129:ALA:HB3	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1774:PRO:HG2	1:C:1776:HIS:NE2	2.30	0.46
1:A:4679:ARG:HE	1:A:5017:ARG:CZ	2.28	0.46
1:B:2128:TYR:HB3	1:B:3669:PHE:CB	2.44	0.46
1:B:4983:HIS:ND1	1:B:4983:HIS:O	2.49	0.46
1:C:553:ARG:HG3	1:C:593:HIS:CE1	2.51	0.46
1:C:2295:LEU:HA	1:C:2298:VAL:HG22	1.97	0.46
1:C:3845:ASN:O	1:C:3849:ARG:HG2	2.16	0.46
1:C:3878:ASP:HA	1:C:3881:THR:HG22	1.98	0.46
1:D:290:TYR:HD2	1:D:304:ALA:HA	1.80	0.46
1:D:4101:LYS:O	1:D:4102:GLN:HG2	2.15	0.46
1:A:180:LEU:HD22	1:A:200:TRP:NE1	2.30	0.46
1:A:210:GLU:HG3	1:A:337:PRO:HG3	1.95	0.46
1:B:553:ARG:HG3	1:B:593:HIS:CE1	2.51	0.46
1:B:4101:LYS:O	1:B:4102:GLN:HG2	2.15	0.46
1:C:102:LEU:HB2	1:C:105:HIS:NE2	2.30	0.46
1:C:4016:LEU:HA	1:C:4019:LEU:HD13	1.96	0.46
1:C:4091:LYS:HZ3	1:C:4091:LYS:N	2.13	0.46
1:D:138:GLN:HG2	1:D:139:GLU:N	2.30	0.46
1:D:748:LEU:HD12	1:D:755:ILE:HG12	1.97	0.46
1:D:1973:GLN:O	1:D:1977:TYR:N	2.45	0.46
1:D:3878:ASP:HA	1:D:3881:THR:HG22	1.98	0.46
1:D:4087:LEU:HB3	1:D:4121:GLU:HB3	1.97	0.46
1:A:609:CYS:SG	1:A:610:ASN:N	2.89	0.46
1:A:999:ASP:O	1:A:1004:GLY:N	2.49	0.46
1:A:4743:MET:HB3	1:A:4746:ALA:HB3	1.97	0.46
1:B:102:LEU:HB2	1:B:105:HIS:NE2	2.30	0.46
1:B:748:LEU:HD12	1:B:755:ILE:HG12	1.97	0.46
1:B:999:ASP:O	1:B:1004:GLY:N	2.49	0.46
1:B:2186:MET:HE3	1:B:2235:PHE:HB2	1.94	0.46
1:B:3789:GLU:HG2	1:B:3791:GLY:H	1.81	0.46
1:B:4130:ASN:HA	1:B:4133:GLN:CD	2.36	0.46
1:C:110:ARG:NH2	1:C:115:ARG:HB3	2.26	0.46
1:C:720:HIS:CD2	1:C:727:ALA:HA	2.34	0.46
1:C:1638:ALA:HB1	1:C:1648:MET:O	2.16	0.46
1:C:3643:ASN:O	1:C:3644:LEU:HD13	2.15	0.46
1:C:4581:LYS:NZ	1:C:4582:VAL:O	2.33	0.46
1:D:1638:ALA:HB1	1:D:1648:MET:O	2.16	0.46
1:D:2128:TYR:HB3	1:D:3669:PHE:CB	2.44	0.46
1:A:1638:ALA:HB1	1:A:1648:MET:O	2.16	0.46
1:A:4087:LEU:HB3	1:A:4121:GLU:HB3	1.97	0.46
1:A:4642:ALA:O	1:A:4646:LEU:N	2.41	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:719:LEU:HD23	1:B:736:HIS:C	2.36	0.46
1:B:1649:ASP:OD1	1:B:1650:ILE:N	2.48	0.46
1:B:3643:ASN:O	1:B:3644:LEU:HD13	2.15	0.46
1:B:4318:ARG:CB	1:D:4909:TYR:OH	2.64	0.46
1:C:1649:ASP:OD1	1:C:1650:ILE:N	2.48	0.46
1:D:21:VAL:HG22	1:D:203:ASN:HB2	1.97	0.46
1:D:575:LEU:HD13	1:D:609:CYS:HB3	1.97	0.46
1:D:3845:ASN:O	1:D:3849:ARG:HG2	2.16	0.46
1:D:4679:ARG:HE	1:D:5017:ARG:CZ	2.28	0.46
1:A:553:ARG:HG3	1:A:593:HIS:CE1	2.51	0.46
1:A:719:LEU:HD23	1:A:736:HIS:C	2.36	0.46
1:C:290:TYR:HD2	1:C:304:ALA:HA	1.80	0.46
1:C:976:ARG:HH12	1:C:979:PRO:HD3	1.81	0.46
1:C:2299:VAL:O	1:C:2303:ALA:N	2.49	0.46
1:C:4101:LYS:O	1:C:4102:GLN:HG2	2.15	0.46
1:D:582:HIS:O	1:D:585:SER:OG	2.24	0.46
1:D:719:LEU:HD23	1:D:736:HIS:C	2.36	0.46
1:D:972:LEU:HB3	1:D:975:VAL:HG12	1.97	0.46
1:D:999:ASP:O	1:D:1004:GLY:N	2.49	0.46
1:D:4130:ASN:HA	1:D:4133:GLN:CD	2.36	0.46
1:D:4983:HIS:ND1	1:D:4983:HIS:O	2.49	0.46
1:A:3845:ASN:O	1:A:3849:ARG:HG2	2.16	0.46
1:A:3878:ASP:HA	1:A:3881:THR:HG22	1.98	0.46
1:B:810:PRO:O	1:B:812:HIS:ND1	2.49	0.46
1:C:810:PRO:O	1:C:812:HIS:ND1	2.49	0.46
1:C:999:ASP:O	1:C:1004:GLY:N	2.49	0.46
1:C:1994:ARG:HA	1:C:1996:ARG:HH21	1.81	0.46
1:C:3901:ASN:OD1	1:C:3904:ARG:NH2	2.48	0.46
1:C:4704:LEU:HD23	1:C:4778:TRP:HB2	1.98	0.46
1:D:4643:LEU:O	1:D:4647:SER:N	2.47	0.46
1:D:4704:LEU:HD23	1:D:4778:TRP:HB2	1.98	0.46
1:B:4743:MET:HB3	1:B:4746:ALA:HB3	1.97	0.46
1:C:719:LEU:HD23	1:C:736:HIS:C	2.36	0.46
1:C:4089:SER:CB	1:C:4120:ASN:HA	2.42	0.46
1:C:4130:ASN:HA	1:C:4133:GLN:CD	2.36	0.46
1:D:810:PRO:O	1:D:812:HIS:ND1	2.49	0.46
1:D:870:ILE:HD11	1:D:1049:TYR:CG	2.51	0.46
1:A:876:GLU:O	1:A:880:GLU:HG2	2.16	0.46
1:A:1101:ARG:N	1:A:1193:SER:OG	2.47	0.46
1:A:4016:LEU:HA	1:A:4019:LEU:HD13	1.96	0.46
1:B:4136:ALA:O	1:B:4139:ILE:HG13	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4909:TYR:OH	1:D:4318:ARG:CB	2.64	0.46
1:C:870:ILE:HD11	1:C:1049:TYR:CG	2.51	0.46
1:C:1972:ASN:O	1:C:1976:ARG:N	2.40	0.46
1:C:4679:ARG:HE	1:C:5017:ARG:CZ	2.28	0.46
1:D:4080:TYR:O	1:D:4081:VAL:C	2.52	0.46
1:A:21:VAL:HG22	1:A:203:ASN:HB2	1.97	0.46
1:A:870:ILE:HD11	1:A:1049:TYR:CG	2.51	0.46
1:A:1649:ASP:OD1	1:A:1650:ILE:N	2.48	0.46
1:A:4078:GLN:CG	1:A:4081:VAL:HG21	2.43	0.46
1:A:4318:ARG:CB	1:C:4909:TYR:OH	2.64	0.46
1:A:4983:HIS:ND1	1:A:4983:HIS:O	2.49	0.46
1:B:686:TRP:CH2	1:B:748:LEU:HD22	2.51	0.46
1:B:1638:ALA:HB1	1:B:1648:MET:O	2.16	0.46
1:B:4642:ALA:O	1:B:4646:LEU:N	2.41	0.46
1:C:972:LEU:HB3	1:C:975:VAL:HG12	1.97	0.46
1:D:3789:GLU:HG2	1:D:3791:GLY:H	1.81	0.46
1:D:3999:MET:SD	1:D:3999:MET:N	2.86	0.46
1:D:4126:GLU:HA	1:D:4129:ALA:HB3	1.97	0.46
1:A:3773:ARG:N	1:A:3815:LYS:HZ3	2.14	0.45
1:A:4079:ASP:C	1:A:4081:VAL:H	2.20	0.45
1:B:575:LEU:HD13	1:B:609:CYS:HB3	1.97	0.45
1:B:870:ILE:HD11	1:B:1049:TYR:CG	2.51	0.45
1:B:1994:ARG:HA	1:B:1996:ARG:HH21	1.81	0.45
1:B:4124:ASN:HA	1:B:4127:GLU:CB	2.40	0.45
1:B:4128:PHE:CG	1:B:4129:ALA:N	2.84	0.45
1:C:626:LEU:HG	1:C:628:GLY:N	2.28	0.45
1:D:609:CYS:SG	1:D:610:ASN:N	2.89	0.45
1:D:976:ARG:HH12	1:D:979:PRO:HD3	1.81	0.45
1:D:2192:TYR:OH	1:D:2238:TYR:CD1	2.61	0.45
1:D:4010:ILE:HG21	1:D:4128:PHE:HE1	1.81	0.45
1:D:4079:ASP:C	1:D:4081:VAL:H	2.20	0.45
1:A:575:LEU:HD13	1:A:609:CYS:HB3	1.97	0.45
1:A:2295:LEU:HA	1:A:2298:VAL:HG22	1.97	0.45
1:A:4078:GLN:O	1:A:4081:VAL:HG13	2.17	0.45
1:A:4128:PHE:CG	1:A:4129:ALA:N	2.84	0.45
1:A:4130:ASN:HA	1:A:4133:GLN:CD	2.36	0.45
1:B:1936:LYS:O	1:B:1940:CYS:N	2.35	0.45
1:B:2299:VAL:O	1:B:2303:ALA:N	2.49	0.45
1:B:4010:ILE:HG21	1:B:4128:PHE:HE1	1.81	0.45
1:B:4087:LEU:CB	1:B:4121:GLU:C	2.85	0.45
1:C:609:CYS:SG	1:C:610:ASN:N	2.89	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:748:LEU:HD12	1:C:755:ILE:HG12	1.97	0.45
1:D:2295:LEU:HA	1:D:2298:VAL:HG22	1.97	0.45
1:D:4136:ALA:O	1:D:4139:ILE:HG13	2.16	0.45
1:C:551:LEU:HD21	1:C:589:LEU:HD13	1.98	0.45
1:C:892:THR:N	1:C:902:ARG:O	2.48	0.45
1:C:4079:ASP:C	1:C:4081:VAL:H	2.20	0.45
1:C:4087:LEU:HB3	1:C:4121:GLU:HB3	1.97	0.45
1:C:4126:GLU:HA	1:C:4129:ALA:HB3	1.97	0.45
1:C:4136:ALA:O	1:C:4139:ILE:HG13	2.16	0.45
1:A:707:VAL:HG23	1:A:713:SER:HB2	1.98	0.45
1:A:1716:ILE:HG23	1:A:1720:LEU:HD13	1.98	0.45
1:A:4136:ALA:O	1:A:4139:ILE:HG13	2.16	0.45
1:A:4738:ALA:HA	1:A:4743:MET:HE3	1.98	0.45
1:A:4909:TYR:OH	1:C:4318:ARG:CB	2.64	0.45
1:B:976:ARG:HH12	1:B:979:PRO:HD3	1.81	0.45
1:B:1649:ASP:HB3	1:B:1652:GLU:HG3	1.99	0.45
1:B:3878:ASP:HA	1:B:3881:THR:HG22	1.98	0.45
1:B:4016:LEU:HA	1:B:4019:LEU:HD13	1.96	0.45
1:B:4079:ASP:C	1:B:4081:VAL:H	2.20	0.45
1:B:4087:LEU:HD11	1:B:4125:PHE:HE2	1.82	0.45
1:B:4155:PRO:HD2	1:B:5036:LEU:HD23	1.99	0.45
1:C:2024:PRO:HB2	1:C:2027:ILE:HG12	1.98	0.45
1:C:4010:ILE:HG21	1:C:4128:PHE:HE1	1.81	0.45
1:D:553:ARG:HG3	1:D:593:HIS:CE1	2.51	0.45
1:D:876:GLU:O	1:D:880:GLU:HG2	2.16	0.45
1:D:2191:PHE:CZ	1:D:2239:PHE:HB2	2.49	0.45
1:A:138:GLN:HG2	1:A:139:GLU:N	2.30	0.45
1:A:2000:SER:O	1:A:2005:GLN:HB2	2.17	0.45
1:A:3789:GLU:HG2	1:A:3791:GLY:H	1.81	0.45
1:B:707:VAL:HG23	1:B:713:SER:HB2	1.98	0.45
1:B:975:VAL:O	1:B:1044:ARG:NH2	2.49	0.45
1:B:3773:ARG:N	1:B:3815:LYS:HZ3	2.14	0.45
1:B:3845:ASN:O	1:B:3849:ARG:HG2	2.16	0.45
1:B:4704:LEU:HD23	1:B:4778:TRP:HB2	1.98	0.45
1:C:2186:MET:HE2	1:C:2235:PHE:CA	2.38	0.45
1:D:224:HIS:HB3	1:D:229:GLU:HG2	1.98	0.45
1:D:1994:ARG:HA	1:D:1996:ARG:HH21	1.81	0.45
1:D:4128:PHE:CG	1:D:4129:ALA:N	2.84	0.45
1:A:290:TYR:HD2	1:A:304:ALA:HA	1.80	0.45
1:A:4125:PHE:O	1:A:4126:GLU:C	2.54	0.45
1:A:4843:LEU:CD1	1:D:4823:LEU:CD1	2.66	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4081:VAL:HG23	1:B:4082:THR:N	2.25	0.45
1:C:669:ASP:OD2	1:C:790:ARG:NH2	2.50	0.45
1:C:891:TRP:HZ3	1:C:899:ASP:HA	1.82	0.45
1:C:4063:ASP:HA	1:C:4066:LEU:HD21	1.99	0.45
1:C:4983:HIS:ND1	1:C:4983:HIS:O	2.49	0.45
1:D:206:CYS:SG	1:D:207:SER:N	2.90	0.45
1:D:891:TRP:HZ3	1:D:899:ASP:HA	1.82	0.45
1:A:224:HIS:HB3	1:A:229:GLU:HG2	1.98	0.45
1:A:551:LEU:HD21	1:A:589:LEU:HD13	1.98	0.45
1:A:686:TRP:CH2	1:A:748:LEU:HD22	2.51	0.45
1:A:2012:PHE:CG	1:A:2022:PRO:HD3	2.52	0.45
1:A:3965:LEU:HA	1:A:3968:TYR:CE2	2.52	0.45
1:A:4010:ILE:HG21	1:A:4128:PHE:HE1	1.81	0.45
1:A:4063:ASP:HA	1:A:4066:LEU:HD21	1.99	0.45
1:B:972:LEU:HB3	1:B:975:VAL:HG12	1.97	0.45
1:B:1130:GLN:HG2	1:B:1138:PRO:HA	1.99	0.45
1:C:206:CYS:SG	1:C:207:SER:N	2.90	0.45
1:C:1649:ASP:HB3	1:C:1652:GLU:HG3	1.99	0.45
1:C:3789:GLU:HG2	1:C:3791:GLY:H	1.81	0.45
1:D:686:TRP:CH2	1:D:748:LEU:HD22	2.51	0.45
1:D:1130:GLN:HG2	1:D:1138:PRO:HA	1.99	0.45
1:D:2012:PHE:CG	1:D:2022:PRO:HD3	2.52	0.45
1:A:810:PRO:O	1:A:812:HIS:ND1	2.49	0.45
1:A:891:TRP:HZ3	1:A:899:ASP:HA	1.82	0.45
1:A:976:ARG:HH12	1:A:979:PRO:HD3	1.81	0.45
1:B:2447:LYS:HG3	1:B:2449:GLU:H	1.82	0.45
1:B:3901:ASN:OD1	1:B:3904:ARG:NH2	2.48	0.45
1:C:686:TRP:CH2	1:C:748:LEU:HD22	2.51	0.45
1:D:702:TRP:HE1	1:D:1640:HIS:CG	2.34	0.45
1:D:4022:ASP:O	1:D:4026:MET:HG2	2.17	0.45
1:D:4578:LEU:HD12	1:D:4578:LEU:HA	1.76	0.45
1:A:1649:ASP:HB3	1:A:1652:GLU:HG3	1.99	0.45
1:B:206:CYS:SG	1:B:207:SER:N	2.90	0.45
1:B:4072:VAL:HG22	1:B:4126:GLU:CB	2.43	0.45
1:C:702:TRP:HE1	1:C:1640:HIS:CG	2.34	0.45
1:C:750:LEU:HA	1:C:753:PRO:HB3	1.99	0.45
1:C:1970:GLN:O	1:C:3643:ASN:HB2	2.17	0.45
1:C:4087:LEU:HD11	1:C:4125:PHE:HE2	1.82	0.45
1:D:497:TYR:HA	1:D:503:PHE:CE2	2.52	0.45
1:D:2000:SER:O	1:D:2005:GLN:HB2	2.17	0.45
1:B:891:TRP:HZ3	1:B:899:ASP:HA	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:707:VAL:HG23	1:C:713:SER:HB2	1.98	0.45
1:C:728:ARG:HA	1:C:728:ARG:HD3	1.75	0.45
1:C:876:GLU:O	1:C:880:GLU:HG2	2.16	0.45
1:C:2012:PHE:CG	1:C:2022:PRO:HD3	2.52	0.45
1:C:2447:LYS:HG3	1:C:2449:GLU:H	1.82	0.45
1:C:3773:ARG:N	1:C:3815:LYS:HZ3	2.15	0.45
1:D:2006:ILE:HG13	1:D:3652:MET:CB	2.47	0.45
1:D:3901:ASN:OD1	1:D:3904:ARG:NH2	2.48	0.45
1:A:206:CYS:SG	1:A:207:SER:N	2.90	0.44
1:A:497:TYR:HA	1:A:503:PHE:CE2	2.52	0.44
1:A:702:TRP:HE1	1:A:1640:HIS:CG	2.34	0.44
1:A:1237:TRP:CH2	1:A:1607:ARG:HB2	2.52	0.44
1:A:1973:GLN:O	1:A:1977:TYR:N	2.45	0.44
1:A:1994:ARG:HA	1:A:1996:ARG:HH21	1.81	0.44
1:A:2024:PRO:HB2	1:A:2027:ILE:HG12	1.98	0.44
1:A:4022:ASP:O	1:A:4026:MET:HG2	2.17	0.44
1:A:4072:VAL:HG22	1:A:4126:GLU:CB	2.43	0.44
1:B:551:LEU:HD21	1:B:589:LEU:HD13	1.98	0.44
1:B:718:GLY:HA3	1:B:737:LEU:HA	2.00	0.44
1:B:750:LEU:HA	1:B:753:PRO:HB3	1.99	0.44
1:B:1078:GLU:OE2	1:B:1235:THR:HG22	2.17	0.44
1:B:1101:ARG:N	1:B:1193:SER:OG	2.47	0.44
1:B:2472:LEU:HD23	1:B:2472:LEU:HA	1.80	0.44
1:B:4137:ARG:C	1:B:4137:ARG:HE	2.21	0.44
1:B:4823:LEU:CD1	1:C:4843:LEU:CD1	2.66	0.44
1:C:19:GLU:OE1	1:C:68:THR:OG1	2.27	0.44
1:C:143:GLY:HA2	1:C:146:CYS:SG	2.57	0.44
1:C:224:HIS:HB3	1:C:229:GLU:HG2	1.98	0.44
1:C:2006:ILE:HG13	1:C:3652:MET:CB	2.47	0.44
1:C:2243:SER:HB3	1:C:2246:ASN:H	1.82	0.44
1:C:4078:GLN:CG	1:C:4081:VAL:HG21	2.43	0.44
1:C:4137:ARG:C	1:C:4137:ARG:HE	2.21	0.44
1:D:707:VAL:HG23	1:D:713:SER:HB2	1.98	0.44
1:A:718:GLY:HA3	1:A:737:LEU:HA	2.00	0.44
1:A:1130:GLN:HG2	1:A:1138:PRO:HA	1.99	0.44
1:A:1941:ASN:HA	1:A:1944:GLU:OE1	2.17	0.44
1:A:4155:PRO:HD2	1:A:5036:LEU:HD23	1.99	0.44
1:B:143:GLY:HA2	1:B:146:CYS:SG	2.57	0.44
1:B:224:HIS:HB3	1:B:229:GLU:HG2	1.98	0.44
1:B:876:GLU:O	1:B:880:GLU:HG2	2.16	0.44
1:B:2012:PHE:CG	1:B:2022:PRO:HD3	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4022:ASP:O	1:B:4026:MET:HG2	2.17	0.44
1:B:4078:GLN:O	1:B:4081:VAL:HG13	2.17	0.44
1:C:150:MET:HE1	1:C:169:LEU:HD22	1.99	0.44
1:C:675:LEU:HD21	1:C:1633:PRO:HB3	2.00	0.44
1:C:2000:SER:O	1:C:2005:GLN:HB2	2.17	0.44
1:D:1936:LYS:O	1:D:1940:CYS:N	2.35	0.44
1:D:2024:PRO:HB2	1:D:2027:ILE:HG12	1.98	0.44
1:D:4087:LEU:HD11	1:D:4125:PHE:HE2	1.82	0.44
1:A:1229:ASN:HB2	1:A:1827:ARG:HE	1.83	0.44
1:A:2243:SER:HB3	1:A:2246:ASN:H	1.82	0.44
1:A:4137:ARG:HE	1:A:4137:ARG:C	2.21	0.44
1:A:4807:PHE:CD2	1:B:4857:ASN:ND2	2.84	0.44
1:B:681:HIS:CE1	1:B:705:ASN:HB3	2.52	0.44
1:B:2006:ILE:HG13	1:B:3652:MET:CB	2.47	0.44
1:B:2243:SER:HB3	1:B:2246:ASN:H	1.82	0.44
1:B:3991:GLY:O	1:B:3995:VAL:HG23	2.18	0.44
1:B:3996:PHE:HA	1:B:3999:MET:SD	2.58	0.44
1:B:4087:LEU:HB3	1:B:4121:GLU:HB3	1.97	0.44
1:C:3716:LEU:HD12	1:C:3716:LEU:HA	1.85	0.44
1:C:4022:ASP:O	1:C:4026:MET:HG2	2.17	0.44
1:D:1237:TRP:CH2	1:D:1607:ARG:HB2	2.52	0.44
1:D:1716:ILE:HG23	1:D:1720:LEU:HD13	1.98	0.44
1:D:1941:ASN:HA	1:D:1944:GLU:OE1	2.17	0.44
1:D:1972:ASN:O	1:D:1976:ARG:N	2.40	0.44
1:D:3716:LEU:HD12	1:D:3716:LEU:HA	1.85	0.44
1:A:669:ASP:OD2	1:A:790:ARG:NH2	2.50	0.44
1:A:4091:LYS:HZ3	1:A:4091:LYS:N	2.15	0.44
1:A:4704:LEU:HD23	1:A:4778:TRP:HB2	1.98	0.44
1:B:1934:SER:O	1:B:1937:LEU:HG	2.18	0.44
1:B:2000:SER:O	1:B:2005:GLN:HB2	2.17	0.44
1:C:497:TYR:HA	1:C:503:PHE:CE2	2.52	0.44
1:C:1078:GLU:OE2	1:C:1235:THR:HG22	2.17	0.44
1:C:1716:ILE:HG23	1:C:1720:LEU:HD13	1.98	0.44
1:C:3996:PHE:HA	1:C:3999:MET:SD	2.58	0.44
1:C:4138:ASP:O	1:C:4140:GLY:N	2.51	0.44
1:C:4155:PRO:HD2	1:C:5036:LEU:HD23	1.99	0.44
1:D:143:GLY:HA2	1:D:146:CYS:SG	2.57	0.44
1:D:2103:VAL:HG13	1:D:3680:ALA:CB	2.48	0.44
1:D:4063:ASP:HA	1:D:4066:LEU:HD21	1.99	0.44
1:A:1970:GLN:O	1:A:3643:ASN:HB2	2.17	0.44
1:A:3991:GLY:O	1:A:3995:VAL:HG23	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4138:ASP:O	1:A:4140:GLY:N	2.51	0.44
1:B:1217:CYS:SG	1:B:1221:GLU:HG3	2.58	0.44
1:B:1970:GLN:O	1:B:3643:ASN:HB2	2.17	0.44
1:B:2024:PRO:HB2	1:B:2027:ILE:HG12	1.98	0.44
1:C:950:LEU:HB3	1:C:970:LEU:HD22	1.99	0.44
1:C:1217:CYS:SG	1:C:1221:GLU:HG3	2.58	0.44
1:C:4078:GLN:O	1:C:4081:VAL:HG13	2.17	0.44
1:C:4087:LEU:CB	1:C:4121:GLU:C	2.85	0.44
1:C:4128:PHE:CG	1:C:4129:ALA:N	2.84	0.44
1:C:4738:ALA:HA	1:C:4743:MET:HE3	1.99	0.44
1:D:150:MET:HE1	1:D:169:LEU:HD22	1.98	0.44
1:D:718:GLY:HA3	1:D:737:LEU:HA	2.00	0.44
1:D:1690:ASP:CB	1:D:1693:GLN:HG2	2.48	0.44
1:D:3662:ILE:O	1:D:3664:THR:N	2.50	0.44
1:D:4078:GLN:O	1:D:4081:VAL:HG13	2.17	0.44
1:D:4091:LYS:HZ3	1:D:4091:LYS:N	2.15	0.44
1:D:4125:PHE:O	1:D:4126:GLU:C	2.54	0.44
1:A:660:GLY:HA2	1:A:750:LEU:HD12	1.99	0.44
1:A:2103:VAL:HG13	1:A:3680:ALA:CB	2.48	0.44
1:B:4643:LEU:O	1:B:4647:SER:N	2.47	0.44
1:B:4807:PHE:CD2	1:C:4857:ASN:ND2	2.84	0.44
1:C:1941:ASN:HA	1:C:1944:GLU:OE1	2.17	0.44
1:D:749:ASP:OD2	1:D:751:SER:OG	2.25	0.44
1:D:1229:ASN:HB2	1:D:1827:ARG:HE	1.83	0.44
1:A:4044:MET:HA	1:A:4047:MET:HG3	2.00	0.44
1:B:1695:LEU:HB3	1:B:1810:LYS:HZ3	1.83	0.44
1:B:4044:MET:HA	1:B:4047:MET:HG3	2.00	0.44
1:B:4063:ASP:HA	1:B:4066:LEU:HD21	1.99	0.44
1:C:1934:SER:O	1:C:1937:LEU:HG	2.18	0.44
1:C:3662:ILE:O	1:C:3664:THR:N	2.50	0.44
1:C:4886:HIS:O	1:C:4890:GLY:N	2.51	0.44
1:D:599:VAL:HG23	1:D:600:LEU:HD12	2.00	0.44
1:D:4137:ARG:HE	1:D:4137:ARG:C	2.21	0.44
1:A:2432:LEU:O	1:A:2436:CYS:N	2.49	0.44
1:A:2447:LYS:HG3	1:A:2449:GLU:H	1.82	0.44
1:A:4087:LEU:CB	1:A:4121:GLU:C	2.85	0.44
1:B:702:TRP:HE1	1:B:1640:HIS:CG	2.34	0.44
1:C:660:GLY:HA2	1:C:750:LEU:HD12	1.99	0.44
1:C:1130:GLN:HG2	1:C:1138:PRO:HA	1.99	0.44
1:C:2042:CYS:SG	1:C:2043:GLY:N	2.90	0.44
1:C:3965:LEU:HA	1:C:3968:TYR:CE2	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:551:LEU:HD21	1:D:589:LEU:HD13	1.98	0.44
1:D:950:LEU:HB3	1:D:970:LEU:HD22	1.99	0.44
1:D:1078:GLU:OE2	1:D:1235:THR:HG22	2.17	0.44
1:D:1649:ASP:HB3	1:D:1652:GLU:HG3	1.99	0.44
1:D:2299:VAL:O	1:D:2303:ALA:N	2.49	0.44
1:D:4138:ASP:O	1:D:4140:GLY:N	2.51	0.44
1:A:110:ARG:HA	1:A:117:TYR:HA	2.00	0.44
1:A:1078:GLU:OE2	1:A:1235:THR:HG22	2.17	0.44
1:A:1217:CYS:SG	1:A:1221:GLU:HG3	2.58	0.44
1:A:3996:PHE:HA	1:A:3999:MET:SD	2.58	0.44
1:B:1600:LEU:HD23	1:B:1600:LEU:H	1.83	0.44
1:C:718:GLY:HA3	1:C:737:LEU:HA	2.00	0.44
1:C:761:GLY:O	1:C:762:CYS:C	2.56	0.44
1:C:2188:ASN:O	1:C:2189:LYS:HG2	2.18	0.44
1:C:4642:ALA:O	1:C:4646:LEU:N	2.41	0.44
1:D:626:LEU:HG	1:D:628:GLY:N	2.28	0.44
1:D:660:GLY:HA2	1:D:750:LEU:HD12	1.99	0.44
1:D:2243:SER:HB3	1:D:2246:ASN:H	1.82	0.44
1:D:2447:LYS:HG3	1:D:2449:GLU:H	1.82	0.44
1:A:749:ASP:OD2	1:A:751:SER:OG	2.25	0.43
1:A:892:THR:N	1:A:902:ARG:O	2.48	0.43
1:A:1972:ASN:O	1:A:1976:ARG:N	2.40	0.43
1:B:1237:TRP:CH2	1:B:1607:ARG:HB2	2.52	0.43
1:B:1716:ILE:HG23	1:B:1720:LEU:HD13	1.98	0.43
1:B:4125:PHE:O	1:B:4126:GLU:C	2.54	0.43
1:C:110:ARG:HA	1:C:117:TYR:HA	2.00	0.43
1:C:1237:TRP:CH2	1:C:1607:ARG:HB2	2.52	0.43
1:C:4017:LEU:HD12	1:C:4132:PHE:HZ	1.83	0.43
1:C:4068:LEU:HD22	1:C:4071:ILE:HD13	2.00	0.43
1:C:4698:LYS:HZ1	1:C:4782:VAL:HA	1.83	0.43
1:D:110:ARG:HA	1:D:117:TYR:HA	2.00	0.43
1:D:892:THR:N	1:D:902:ARG:O	2.48	0.43
1:D:1970:GLN:O	1:D:3643:ASN:HB2	2.17	0.43
1:A:1690:ASP:CB	1:A:1693:GLN:HG2	2.48	0.43
1:A:1695:LEU:HB3	1:A:1810:LYS:HZ3	1.83	0.43
1:A:2006:ILE:HG13	1:A:3652:MET:CB	2.47	0.43
1:B:2188:ASN:O	1:B:2189:LYS:HG2	2.18	0.43
1:B:3965:LEU:HA	1:B:3968:TYR:CE2	2.52	0.43
1:C:681:HIS:CE1	1:C:705:ASN:HB3	2.52	0.43
1:C:1600:LEU:HD23	1:C:1600:LEU:H	1.83	0.43
1:C:3999:MET:SD	1:C:3999:MET:N	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4643:LEU:HA	1:C:4646:LEU:HB2	2.00	0.43
1:D:1217:CYS:SG	1:D:1221:GLU:HG3	2.58	0.43
1:D:4078:GLN:CG	1:D:4081:VAL:HG21	2.43	0.43
1:D:4087:LEU:CB	1:D:4121:GLU:C	2.85	0.43
1:D:4155:PRO:HD2	1:D:5036:LEU:HD23	1.99	0.43
1:A:4221:VAL:HG12	1:A:4233:LEU:HD11	2.01	0.43
1:B:110:ARG:HA	1:B:117:TYR:HA	2.00	0.43
1:B:497:TYR:HA	1:B:503:PHE:CE2	2.52	0.43
1:B:660:GLY:HA2	1:B:750:LEU:HD12	1.99	0.43
1:B:1690:ASP:CB	1:B:1693:GLN:HG2	2.48	0.43
1:C:138:GLN:HG2	1:C:139:GLU:N	2.30	0.43
1:C:599:VAL:HG23	1:C:600:LEU:HD12	2.00	0.43
1:C:1229:ASN:HB2	1:C:1827:ARG:HE	1.83	0.43
1:C:3829:PHE:HA	1:C:3832:ILE:HG12	2.00	0.43
1:C:4042:ARG:HH22	1:C:4045:VAL:HG21	1.84	0.43
1:C:4079:ASP:HB2	1:C:4080:TYR:H	1.63	0.43
1:C:4124:ASN:O	1:C:4128:PHE:HD2	2.01	0.43
1:C:4704:LEU:HB3	1:C:4778:TRP:CD1	2.53	0.43
1:D:533:ASN:ND2	1:D:536:ASN:OD1	2.51	0.43
1:D:675:LEU:HD21	1:D:1633:PRO:HB3	2.00	0.43
1:D:4042:ARG:HH22	1:D:4045:VAL:HG21	1.84	0.43
1:D:4067:LYS:HD3	1:D:4067:LYS:HA	1.31	0.43
1:D:4068:LEU:HD22	1:D:4071:ILE:HD13	2.00	0.43
1:D:4089:SER:CB	1:D:4120:ASN:HA	2.42	0.43
1:D:4229:GLU:HA	1:D:4232:GLU:HB3	2.00	0.43
1:A:681:HIS:CE1	1:A:705:ASN:HB3	2.52	0.43
1:A:750:LEU:HA	1:A:753:PRO:HB3	1.99	0.43
1:A:4042:ARG:HH22	1:A:4045:VAL:HG21	1.84	0.43
1:A:4087:LEU:HD11	1:A:4125:PHE:HE2	1.82	0.43
1:A:4643:LEU:HA	1:A:4646:LEU:HB2	2.00	0.43
1:A:4702:ASP:O	1:A:4705:VAL:HG12	2.18	0.43
1:B:533:ASN:ND2	1:B:536:ASN:OD1	2.51	0.43
1:B:761:GLY:O	1:B:762:CYS:C	2.56	0.43
1:B:1973:GLN:O	1:B:1977:TYR:N	2.45	0.43
1:B:2005:GLN:NE2	1:B:3640:PRO:HG3	2.33	0.43
1:B:3829:PHE:HA	1:B:3832:ILE:HG12	2.00	0.43
1:B:4147:LEU:O	1:B:4151:SER:OG	2.31	0.43
1:C:2271:THR:HG22	1:C:2273:LEU:H	1.84	0.43
1:C:4141:PHE:HE1	1:C:4178:LEU:HD13	1.84	0.43
1:D:681:HIS:CE1	1:D:705:ASN:HB3	2.52	0.43
1:D:4738:ALA:HA	1:D:4743:MET:HE3	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:143:GLY:HA2	1:A:146:CYS:SG	2.57	0.43
1:A:533:ASN:ND2	1:A:536:ASN:OD1	2.51	0.43
1:A:761:GLY:O	1:A:762:CYS:C	2.56	0.43
1:A:1708:ARG:C	1:A:1710:GLY:N	2.72	0.43
1:A:1934:SER:O	1:A:1937:LEU:HG	2.18	0.43
1:A:2203:MET:O	1:A:2206:THR:OG1	2.24	0.43
1:A:3662:ILE:O	1:A:3664:THR:N	2.50	0.43
1:B:1229:ASN:HB2	1:B:1827:ARG:HE	1.83	0.43
1:C:975:VAL:O	1:C:1044:ARG:NH2	2.49	0.43
1:C:2432:LEU:O	1:C:2436:CYS:N	2.49	0.43
1:C:4078:GLN:HG3	1:C:4081:VAL:CG2	2.46	0.43
1:D:750:LEU:HA	1:D:753:PRO:HB3	1.99	0.43
1:D:1934:SER:O	1:D:1937:LEU:HG	2.18	0.43
1:D:4044:MET:HA	1:D:4047:MET:HG3	2.00	0.43
1:D:4065:PHE:HA	1:D:4068:LEU:HB2	2.00	0.43
1:D:4953:ASP:OD1	1:D:4954:MET:N	2.52	0.43
1:A:2005:GLN:NE2	1:A:3640:PRO:HG3	2.33	0.43
1:A:3829:PHE:HA	1:A:3832:ILE:HG12	2.00	0.43
1:B:1941:ASN:HA	1:B:1944:GLU:OE1	2.17	0.43
1:B:2103:VAL:HG13	1:B:3680:ALA:CB	2.48	0.43
1:B:4042:ARG:HH22	1:B:4045:VAL:HG21	1.84	0.43
1:B:4124:ASN:O	1:B:4128:PHE:HD2	2.01	0.43
1:B:4138:ASP:O	1:B:4140:GLY:N	2.51	0.43
1:B:4953:ASP:OD1	1:B:4954:MET:N	2.52	0.43
1:C:1690:ASP:CB	1:C:1693:GLN:HG2	2.48	0.43
1:C:3887:PHE:O	1:C:3891:LEU:HG	2.18	0.43
1:D:1708:ARG:C	1:D:1710:GLY:N	2.72	0.43
1:D:3763:LEU:HG	1:D:3767:GLN:HE22	1.84	0.43
1:D:3965:LEU:HA	1:D:3968:TYR:CE2	2.52	0.43
1:D:3996:PHE:HA	1:D:3999:MET:SD	2.58	0.43
1:A:626:LEU:HG	1:A:628:GLY:N	2.28	0.43
1:A:2188:ASN:O	1:A:2189:LYS:HG2	2.18	0.43
1:B:4065:PHE:HA	1:B:4068:LEU:HB2	2.00	0.43
1:B:4643:LEU:HA	1:B:4646:LEU:HB2	2.00	0.43
1:B:4698:LYS:HZ1	1:B:4782:VAL:HA	1.84	0.43
1:B:4702:ASP:O	1:B:4705:VAL:HG12	2.18	0.43
1:C:2423:MET:O	1:C:2427:ALA:N	2.48	0.43
1:C:3991:GLY:O	1:C:3995:VAL:HG23	2.18	0.43
1:C:4044:MET:HA	1:C:4047:MET:HG3	2.00	0.43
1:D:4124:ASN:O	1:D:4128:PHE:HD2	2.01	0.43
1:D:4221:VAL:HG12	1:D:4233:LEU:HD11	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:22:LEU:HD12	1:A:200:TRP:CE3	2.54	0.43
1:A:3763:LEU:HG	1:A:3767:GLN:HE22	1.84	0.43
1:B:950:LEU:HB3	1:B:970:LEU:HD22	1.99	0.43
1:B:1220:GLN:HG2	1:B:1221:GLU:HG2	2.00	0.43
1:B:4704:LEU:HB3	1:B:4778:TRP:CD1	2.53	0.43
1:C:730:VAL:O	1:C:735:GLN:NE2	2.52	0.43
1:C:2203:MET:O	1:C:2206:THR:OG1	2.24	0.43
1:C:4229:GLU:HA	1:C:4232:GLU:HB3	2.00	0.43
1:D:2188:ASN:O	1:D:2189:LYS:HG2	2.18	0.43
1:D:3756:LYS:O	1:D:3759:GLU:HG2	2.19	0.43
1:D:4141:PHE:HE1	1:D:4178:LEU:HD13	1.84	0.43
1:A:599:VAL:HG23	1:A:600:LEU:HD12	2.00	0.43
1:A:675:LEU:HD21	1:A:1633:PRO:HB3	2.00	0.43
1:A:975:VAL:O	1:A:1044:ARG:NH2	2.49	0.43
1:A:3770:LEU:HD12	1:A:3770:LEU:HA	1.84	0.43
1:A:3833:GLN:HA	1:A:3836:MET:HG3	2.01	0.43
1:A:4055:VAL:HG12	1:A:4059:LEU:HD23	2.01	0.43
1:B:22:LEU:HD12	1:B:200:TRP:CE3	2.54	0.43
1:B:892:THR:N	1:B:902:ARG:O	2.48	0.43
1:B:972:LEU:HB3	1:B:975:VAL:CG1	2.49	0.43
1:B:3832:ILE:O	1:B:3836:MET:HG3	2.19	0.43
1:B:4886:HIS:O	1:B:4890:GLY:N	2.51	0.43
1:C:972:LEU:HB3	1:C:975:VAL:CG1	2.49	0.43
1:C:2005:GLN:NE2	1:C:3640:PRO:HG3	2.33	0.43
1:C:3833:GLN:HA	1:C:3836:MET:HG3	2.01	0.43
1:D:330:ASP:OD1	1:D:330:ASP:N	2.52	0.43
1:D:3829:PHE:HA	1:D:3832:ILE:HG12	2.00	0.43
1:D:3832:ILE:O	1:D:3836:MET:HG3	2.19	0.43
1:D:3991:GLY:O	1:D:3995:VAL:HG23	2.18	0.43
1:D:4702:ASP:O	1:D:4705:VAL:HG12	2.18	0.43
1:D:4886:HIS:O	1:D:4890:GLY:N	2.51	0.43
1:D:5000:GLU:HA	1:D:5003:HIS:ND1	2.34	0.43
1:A:950:LEU:HB3	1:A:970:LEU:HD22	1.99	0.43
1:A:2299:VAL:O	1:A:2303:ALA:N	2.49	0.43
1:A:3832:ILE:O	1:A:3836:MET:HG3	2.19	0.43
1:A:4067:LYS:HA	1:A:4067:LYS:HD3	1.31	0.43
1:A:4229:GLU:HA	1:A:4232:GLU:HB3	2.00	0.43
1:A:5000:GLU:HA	1:A:5003:HIS:ND1	2.34	0.43
1:B:618:GLN:OE1	1:B:1678:ASN:ND2	2.52	0.43
1:B:1768:THR:HB	1:B:1952:GLN:HE22	1.84	0.43
1:B:3833:GLN:HA	1:B:3836:MET:HG3	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4017:LEU:HD12	1:B:4132:PHE:CE2	2.54	0.43
1:B:4125:PHE:CD1	1:B:4126:GLU:N	2.87	0.43
1:C:618:GLN:OE1	1:C:1678:ASN:ND2	2.52	0.43
1:C:2103:VAL:HG13	1:C:3680:ALA:CB	2.48	0.43
1:C:4643:LEU:O	1:C:4647:SER:N	2.47	0.43
1:D:730:VAL:O	1:D:735:GLN:NE2	2.52	0.43
1:D:1600:LEU:HD23	1:D:1600:LEU:H	1.83	0.43
1:D:3887:PHE:O	1:D:3891:LEU:HG	2.18	0.43
1:A:1671:ARG:HH21	1:A:1714:LEU:N	2.17	0.42
1:A:2186:MET:HE2	1:A:2235:PHE:CA	2.42	0.42
1:A:4643:LEU:O	1:A:4647:SER:N	2.47	0.42
1:B:4221:VAL:HG12	1:B:4233:LEU:HD11	2.01	0.42
1:C:22:LEU:HD12	1:C:200:TRP:CE3	2.54	0.42
1:C:533:ASN:ND2	1:C:536:ASN:OD1	2.51	0.42
1:C:4125:PHE:CD1	1:C:4126:GLU:N	2.87	0.42
1:C:4701:TRP:CZ2	1:C:4778:TRP:HA	2.54	0.42
1:D:2220:THR:O	1:D:2222:GLU:N	2.52	0.42
1:D:4079:ASP:HB2	1:D:4080:TYR:H	1.63	0.42
1:D:4643:LEU:HA	1:D:4646:LEU:HB2	2.00	0.42
1:A:1698:LEU:HA	1:A:1712:TYR:OH	2.19	0.42
1:A:2257:LEU:HD11	1:A:2276:ALA:HB2	2.02	0.42
1:A:2271:THR:HG22	1:A:2273:LEU:H	1.84	0.42
1:A:3887:PHE:O	1:A:3891:LEU:HG	2.18	0.42
1:A:4141:PHE:HE1	1:A:4178:LEU:HD13	1.84	0.42
1:A:4702:ASP:HA	1:A:4778:TRP:HE1	1.85	0.42
1:A:4930:ALA:CB	1:D:4933:GLN:HE21	2.32	0.42
1:B:599:VAL:HG23	1:B:600:LEU:HD12	2.00	0.42
1:B:897:ARG:HB2	1:B:905:PRO:HG3	2.01	0.42
1:B:2271:THR:HG22	1:B:2273:LEU:H	1.84	0.42
1:B:3763:LEU:HG	1:B:3767:GLN:HE22	1.84	0.42
1:B:4701:TRP:CZ2	1:B:4778:TRP:HA	2.54	0.42
1:B:4738:ALA:HA	1:B:4743:MET:HE3	2.00	0.42
1:C:1830:VAL:N	1:C:1837:GLN:OE1	2.53	0.42
1:C:4702:ASP:O	1:C:4705:VAL:HG12	2.18	0.42
1:D:606:LEU:O	1:D:617:ASN:ND2	2.52	0.42
1:D:669:ASP:OD2	1:D:790:ARG:NH2	2.50	0.42
1:D:4063:ASP:CA	1:D:4066:LEU:HG	2.49	0.42
1:A:897:ARG:HB2	1:A:905:PRO:HG3	2.01	0.42
1:A:1600:LEU:HD23	1:A:1600:LEU:H	1.83	0.42
1:A:4017:LEU:HD12	1:A:4132:PHE:CE2	2.54	0.42
1:A:4065:PHE:HA	1:A:4068:LEU:HB2	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4124:ASN:O	1:A:4128:PHE:HD2	2.01	0.42
1:A:4674:GLU:HB3	1:A:4715:TYR:HB2	2.01	0.42
1:A:4701:TRP:CZ2	1:A:4778:TRP:HA	2.54	0.42
1:B:219:VAL:HG13	1:B:219:VAL:O	2.20	0.42
1:B:4090:LYS:HG2	1:B:4091:LYS:N	2.32	0.42
1:B:4933:GLN:HE21	1:C:4930:ALA:CB	2.32	0.42
1:C:55:ALA:O	1:C:281:ARG:NH2	2.48	0.42
1:C:478:PHE:CD2	1:C:483:MET:HG3	2.54	0.42
1:C:1220:GLN:HG2	1:C:1221:GLU:HG2	2.00	0.42
1:C:4674:GLU:HB3	1:C:4715:TYR:HB2	2.01	0.42
1:D:22:LEU:HD12	1:D:200:TRP:CE3	2.54	0.42
1:D:241:GLN:O	1:D:289:ARG:NH1	2.47	0.42
1:D:972:LEU:HB3	1:D:975:VAL:CG1	2.49	0.42
1:D:2271:THR:HG22	1:D:2273:LEU:H	1.84	0.42
1:D:2332:LEU:HD13	1:D:2335:LEU:HD12	2.01	0.42
1:A:730:VAL:O	1:A:735:GLN:NE2	2.52	0.42
1:A:972:LEU:HB3	1:A:975:VAL:CG1	2.49	0.42
1:A:1767:VAL:HG12	1:A:1769:THR:H	1.84	0.42
1:A:3901:ASN:OD1	1:A:3904:ARG:NH2	2.48	0.42
1:A:4904:PRO:CG	1:D:4888:TYR:HH	2.19	0.42
1:B:1671:ARG:HH21	1:B:1714:LEU:N	2.17	0.42
1:B:1819:VAL:HG22	1:B:1926:LEU:HD13	2.01	0.42
1:C:1708:ARG:C	1:C:1710:GLY:N	2.72	0.42
1:C:4065:PHE:HA	1:C:4068:LEU:HB2	2.00	0.42
1:C:4933:GLN:HE21	1:D:4930:ALA:CB	2.32	0.42
1:C:4953:ASP:OD1	1:C:4954:MET:N	2.52	0.42
1:D:546:TRP:O	1:D:550:LYS:NZ	2.40	0.42
1:D:810:PRO:HG2	1:D:812:HIS:ND1	2.35	0.42
1:D:1767:VAL:HG12	1:D:1769:THR:H	1.84	0.42
1:D:2432:LEU:O	1:D:2436:CYS:N	2.49	0.42
1:D:4674:GLU:HB3	1:D:4715:TYR:HB2	2.01	0.42
1:A:219:VAL:O	1:A:219:VAL:HG13	2.20	0.42
1:A:606:LEU:O	1:A:617:ASN:ND2	2.52	0.42
1:A:1220:GLN:HG2	1:A:1221:GLU:HG2	2.00	0.42
1:A:3756:LYS:O	1:A:3759:GLU:HG2	2.19	0.42
1:A:4125:PHE:CD1	1:A:4126:GLU:N	2.87	0.42
1:A:4217:PHE:CZ	1:A:4234:PHE:HA	2.49	0.42
1:A:4769:MET:N	1:A:4769:MET:SD	2.93	0.42
1:A:4930:ALA:HB1	1:D:4933:GLN:HE21	1.84	0.42
1:A:4953:ASP:OD1	1:A:4954:MET:N	2.52	0.42
1:A:4960:ILE:HD11	1:A:4985:LEU:HB3	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:330:ASP:OD1	1:B:330:ASP:N	2.52	0.42
1:B:606:LEU:O	1:B:617:ASN:ND2	2.52	0.42
1:B:688:LEU:HD12	1:B:777:PHE:CE1	2.55	0.42
1:B:3887:PHE:O	1:B:3891:LEU:HG	2.18	0.42
1:B:4116:GLU:HB2	1:B:4117:ALA:H	1.46	0.42
1:C:582:HIS:O	1:C:585:SER:OG	2.24	0.42
1:C:4960:ILE:HD11	1:C:4985:LEU:HB3	2.02	0.42
1:D:1698:LEU:HA	1:D:1712:TYR:OH	2.19	0.42
1:D:1998:PHE:HD1	1:D:3639:THR:HG21	1.85	0.42
1:D:2290:LEU:HD12	1:D:2290:LEU:HA	1.74	0.42
1:D:3833:GLN:HA	1:D:3836:MET:HG3	2.01	0.42
1:D:4769:MET:N	1:D:4769:MET:SD	2.93	0.42
1:A:910:PHE:HZ	1:A:922:LEU:HD21	1.84	0.42
1:A:1275:ARG:O	1:A:1277:TRP:N	2.53	0.42
1:A:1830:VAL:N	1:A:1837:GLN:OE1	2.53	0.42
1:A:4581:LYS:NZ	1:A:4582:VAL:O	2.33	0.42
1:A:4933:GLN:HE21	1:B:4930:ALA:CB	2.32	0.42
1:B:1708:ARG:C	1:B:1710:GLY:H	2.22	0.42
1:B:2220:THR:O	1:B:2222:GLU:N	2.52	0.42
1:B:2290:LEU:HD12	1:B:2290:LEU:HA	1.74	0.42
1:B:4068:LEU:HD22	1:B:4071:ILE:HD13	2.00	0.42
1:C:1177:THR:HG22	1:C:1179:PHE:HD2	1.84	0.42
1:C:1671:ARG:HH21	1:C:1714:LEU:N	2.17	0.42
1:C:3756:LYS:O	1:C:3759:GLU:HG2	2.19	0.42
1:C:4067:LYS:HA	1:C:4067:LYS:HD3	1.31	0.42
1:C:4117:ALA:O	1:C:4118:ASP:HB3	2.20	0.42
1:C:4933:GLN:HE21	1:D:4930:ALA:HB1	1.84	0.42
1:D:870:ILE:HD12	1:D:873:LYS:HB2	2.02	0.42
1:D:2005:GLN:NE2	1:D:3640:PRO:HG3	2.33	0.42
1:D:2178:MET:SD	1:D:2179:ILE:HG13	2.60	0.42
1:D:2438:PRO:HB3	1:D:2453:ILE:HB	2.02	0.42
1:D:4698:LYS:HZ1	1:D:4782:VAL:HA	1.84	0.42
1:D:4701:TRP:CZ2	1:D:4778:TRP:HA	2.54	0.42
1:A:320:LYS:HG2	1:A:356:TRP:NE1	2.35	0.42
1:A:421:PHE:CZ	1:A:507:ALA:HB2	2.55	0.42
1:A:870:ILE:HD12	1:A:873:LYS:HB2	2.02	0.42
1:A:1252:HIS:HB3	1:A:1255:TYR:O	2.20	0.42
1:A:1998:PHE:HD1	1:A:3639:THR:HG21	1.85	0.42
1:A:4063:ASP:CA	1:A:4066:LEU:HG	2.49	0.42
1:B:810:PRO:HG2	1:B:812:HIS:ND1	2.35	0.42
1:B:1275:ARG:O	1:B:1277:TRP:N	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1998:PHE:HD1	1:B:3639:THR:HG21	1.85	0.42
1:B:2257:LEU:HD11	1:B:2276:ALA:HB2	2.02	0.42
1:B:4000:MET:SD	1:B:4001:MET:HG2	2.60	0.42
1:B:4055:VAL:HG12	1:B:4059:LEU:HD23	2.01	0.42
1:B:4141:PHE:HE1	1:B:4178:LEU:HD13	1.84	0.42
1:B:4674:GLU:HB3	1:B:4715:TYR:HB2	2.01	0.42
1:B:4960:ILE:HD11	1:B:4985:LEU:HB3	2.02	0.42
1:C:606:LEU:O	1:C:617:ASN:ND2	2.52	0.42
1:C:1698:LEU:HA	1:C:1712:TYR:OH	2.19	0.42
1:D:55:ALA:O	1:D:281:ARG:NH2	2.48	0.42
1:D:320:LYS:HG2	1:D:356:TRP:NE1	2.35	0.42
1:D:1708:ARG:C	1:D:1710:GLY:H	2.22	0.42
1:D:3986:TRP:HA	1:D:3989:VAL:HG22	2.01	0.42
1:D:4960:ILE:HD11	1:D:4985:LEU:HB3	2.02	0.42
1:A:618:GLN:OE1	1:A:1678:ASN:ND2	2.52	0.42
1:A:688:LEU:HD12	1:A:777:PHE:CE1	2.55	0.42
1:A:2123:LEU:O	1:A:2127:GLN:HG2	2.20	0.42
1:A:2423:MET:O	1:A:2427:ALA:N	2.48	0.42
1:A:4068:LEU:HD22	1:A:4071:ILE:HD13	2.00	0.42
1:A:4142:ASN:HA	1:A:4145:VAL:HG12	2.02	0.42
1:A:4862:PHE:CD2	1:A:4913:ARG:HD2	2.55	0.42
1:B:52:THR:HG21	1:B:62:LEU:HD21	2.02	0.42
1:B:320:LYS:HG2	1:B:356:TRP:NE1	2.35	0.42
1:B:705:ASN:HB2	1:B:709:ASP:OD2	2.20	0.42
1:B:1708:ARG:C	1:B:1710:GLY:N	2.72	0.42
1:B:4017:LEU:HD12	1:B:4132:PHE:HZ	1.83	0.42
1:B:4078:GLN:HG3	1:B:4081:VAL:CG2	2.46	0.42
1:B:4217:PHE:CZ	1:B:4234:PHE:HA	2.49	0.42
1:B:4240:ASP:CG	1:B:4675:LYS:HZ3	2.23	0.42
1:C:870:ILE:HD12	1:C:873:LYS:HB2	2.02	0.42
1:C:1708:ARG:C	1:C:1710:GLY:H	2.22	0.42
1:C:2191:PHE:CZ	1:C:2239:PHE:HB2	2.49	0.42
1:C:4116:GLU:CD	1:C:4116:GLU:N	2.73	0.42
1:C:4125:PHE:O	1:C:4126:GLU:C	2.54	0.42
1:D:618:GLN:OE1	1:D:1678:ASN:ND2	2.52	0.42
1:D:1220:GLN:HG2	1:D:1221:GLU:HG2	2.00	0.42
1:D:1671:ARG:HH21	1:D:1714:LEU:N	2.17	0.42
1:D:4125:PHE:CD1	1:D:4126:GLU:N	2.87	0.42
1:D:4702:ASP:HA	1:D:4778:TRP:HE1	1.85	0.42
1:A:1936:LYS:O	1:A:1940:CYS:N	2.35	0.42
1:A:2178:MET:SD	1:A:2179:ILE:HG13	2.60	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2472:LEU:HD23	1:A:2472:LEU:HA	1.80	0.42
1:A:4582:VAL:HG11	1:B:4860:ARG:CD	2.50	0.42
1:B:675:LEU:HD21	1:B:1633:PRO:HB3	2.00	0.42
1:B:749:ASP:OD2	1:B:751:SER:OG	2.25	0.42
1:B:1252:HIS:HB3	1:B:1255:TYR:O	2.20	0.42
1:B:1767:VAL:HG12	1:B:1769:THR:H	1.84	0.42
1:B:1830:VAL:N	1:B:1837:GLN:OE1	2.53	0.42
1:B:4116:GLU:CD	1:B:4116:GLU:N	2.73	0.42
1:B:4818:MET:O	1:B:4824:ARG:HG3	2.20	0.42
1:B:5000:GLU:HA	1:B:5003:HIS:ND1	2.34	0.42
1:C:745:SER:HB2	1:C:758:ARG:HB3	2.02	0.42
1:C:886:ARG:HB3	1:C:891:TRP:HB2	2.02	0.42
1:C:1819:VAL:HG22	1:C:1926:LEU:HD13	2.01	0.42
1:C:1998:PHE:HD1	1:C:3639:THR:HG21	1.85	0.42
1:C:3670:GLU:N	1:C:3670:GLU:OE1	2.53	0.42
1:C:3832:ILE:O	1:C:3836:MET:HG3	2.19	0.42
1:C:4000:MET:SD	1:C:4001:MET:HG2	2.60	0.42
1:C:4147:LEU:O	1:C:4151:SER:OG	2.31	0.42
1:C:4221:VAL:HG12	1:C:4233:LEU:HD11	2.01	0.42
1:C:4702:ASP:HA	1:C:4778:TRP:HE1	1.85	0.42
1:D:761:GLY:O	1:D:762:CYS:C	2.56	0.42
1:D:1676:LEU:HA	1:D:1721:GLU:CD	2.41	0.42
1:D:2474:LEU:HB2	1:D:2475:GLN:H	1.54	0.42
1:D:4017:LEU:HD12	1:D:4132:PHE:CE2	2.54	0.42
1:D:4142:ASN:HA	1:D:4145:VAL:HG12	2.02	0.42
1:D:4704:LEU:HB3	1:D:4778:TRP:CD1	2.53	0.42
1:D:4862:PHE:CD2	1:D:4913:ARG:HD2	2.55	0.42
1:A:705:ASN:HB2	1:A:709:ASP:OD2	2.20	0.42
1:A:727:ALA:O	1:A:728:ARG:C	2.58	0.42
1:A:810:PRO:HG2	1:A:812:HIS:ND1	2.35	0.42
1:B:421:PHE:CZ	1:B:507:ALA:HB2	2.55	0.42
1:B:727:ALA:O	1:B:728:ARG:C	2.58	0.42
1:B:2332:LEU:HD13	1:B:2335:LEU:HD12	2.01	0.42
1:B:4702:ASP:HA	1:B:4778:TRP:HE1	1.85	0.42
1:B:4862:PHE:CD2	1:B:4913:ARG:HD2	2.55	0.42
1:C:897:ARG:HB2	1:C:905:PRO:HG3	2.01	0.42
1:C:1676:LEU:HA	1:C:1721:GLU:CD	2.41	0.42
1:C:1676:LEU:H	1:C:1676:LEU:HG	1.30	0.42
1:C:2438:PRO:HB3	1:C:2453:ILE:HB	2.02	0.42
1:C:3986:TRP:HA	1:C:3989:VAL:HG22	2.01	0.42
1:C:4017:LEU:HD12	1:C:4132:PHE:CE2	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4055:VAL:HG12	1:C:4059:LEU:HD23	2.01	0.42
1:C:4071:ILE:HD13	1:C:4111:LEU:HD11	2.02	0.42
1:C:4125:PHE:HB2	1:C:4126:GLU:H	1.39	0.42
1:C:4240:ASP:CG	1:C:4675:LYS:HZ3	2.23	0.42
1:D:219:VAL:O	1:D:219:VAL:HG13	2.20	0.42
1:D:745:SER:HB2	1:D:758:ARG:HB3	2.02	0.42
1:D:897:ARG:HB2	1:D:905:PRO:HG3	2.01	0.42
1:D:910:PHE:HZ	1:D:922:LEU:HD21	1.84	0.42
1:D:1252:HIS:HB3	1:D:1255:TYR:O	2.20	0.42
1:D:2176:ASN:N	1:D:2176:ASN:OD1	2.53	0.42
1:D:4071:ILE:HD13	1:D:4111:LEU:HD11	2.02	0.42
1:A:396:GLU:OE2	1:A:451:TYR:OH	2.34	0.41
1:A:886:ARG:HB3	1:A:891:TRP:HB2	2.02	0.41
1:A:1768:THR:HB	1:A:1952:GLN:HE22	1.84	0.41
1:A:4000:MET:SD	1:A:4001:MET:HG2	2.60	0.41
1:A:4698:LYS:HZ1	1:A:4782:VAL:HA	1.84	0.41
1:A:4933:GLN:HE21	1:B:4930:ALA:HB1	1.84	0.41
1:B:103:TYR:CZ	1:B:163:VAL:HG22	2.55	0.41
1:B:1676:LEU:HA	1:B:1721:GLU:CD	2.41	0.41
1:B:2178:MET:SD	1:B:2179:ILE:HG13	2.60	0.41
1:B:4090:LYS:HB3	1:B:4090:LYS:HE2	1.79	0.41
1:B:4229:GLU:HA	1:B:4232:GLU:HB3	2.00	0.41
1:B:4582:VAL:HG11	1:C:4860:ARG:CD	2.50	0.41
1:C:219:VAL:O	1:C:219:VAL:HG13	2.20	0.41
1:C:320:LYS:HG2	1:C:356:TRP:NE1	2.35	0.41
1:C:705:ASN:HB2	1:C:709:ASP:OD2	2.20	0.41
1:C:1767:VAL:HG12	1:C:1769:THR:H	1.84	0.41
1:C:2178:MET:SD	1:C:2179:ILE:HG13	2.60	0.41
1:C:4072:VAL:HG22	1:C:4126:GLU:CB	2.43	0.41
1:C:4082:THR:OG1	1:C:4083:ASP:N	2.53	0.41
1:C:4142:ASN:HA	1:C:4145:VAL:HG12	2.02	0.41
1:C:4818:MET:O	1:C:4824:ARG:HG3	2.20	0.41
1:C:5000:GLU:HA	1:C:5003:HIS:ND1	2.34	0.41
1:D:478:PHE:CD2	1:D:483:MET:HG3	2.54	0.41
1:D:705:ASN:HB2	1:D:709:ASP:OD2	2.20	0.41
1:D:1768:THR:HB	1:D:1952:GLN:HE22	1.84	0.41
1:D:2257:LEU:HD11	1:D:2276:ALA:HB2	2.02	0.41
1:D:4000:MET:SD	1:D:4001:MET:HG2	2.60	0.41
1:A:690:GLU:HB3	1:A:712:TYR:CD2	2.56	0.41
1:A:1708:ARG:C	1:A:1710:GLY:H	2.22	0.41
1:A:1819:VAL:HG22	1:A:1926:LEU:HD13	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1834:VAL:HA	1:A:1837:GLN:HB3	2.02	0.41
1:A:2220:THR:O	1:A:2222:GLU:N	2.52	0.41
1:B:669:ASP:OD2	1:B:790:ARG:NH2	2.50	0.41
1:B:690:GLU:HB3	1:B:712:TYR:CD2	2.56	0.41
1:B:730:VAL:O	1:B:735:GLN:NE2	2.52	0.41
1:B:3756:LYS:O	1:B:3759:GLU:HG2	2.19	0.41
1:C:421:PHE:CZ	1:C:507:ALA:HB2	2.55	0.41
1:C:810:PRO:HG2	1:C:812:HIS:ND1	2.35	0.41
1:C:1252:HIS:HB3	1:C:1255:TYR:O	2.20	0.41
1:C:1768:THR:HB	1:C:1952:GLN:HE22	1.84	0.41
1:C:1834:VAL:HA	1:C:1837:GLN:HB3	2.02	0.41
1:C:2332:LEU:HD13	1:C:2335:LEU:HD12	2.01	0.41
1:C:4862:PHE:CD2	1:C:4913:ARG:HD2	2.55	0.41
1:D:3670:GLU:OE1	1:D:3670:GLU:N	2.53	0.41
1:A:52:THR:HG21	1:A:62:LEU:HD21	2.02	0.41
1:A:2176:ASN:OD1	1:A:2176:ASN:N	2.53	0.41
1:A:2332:LEU:HD13	1:A:2335:LEU:HD12	2.01	0.41
1:A:4116:GLU:CD	1:A:4116:GLU:N	2.73	0.41
1:A:4914:VAL:CG1	1:D:4888:TYR:CD1	2.72	0.41
1:B:2123:LEU:O	1:B:2127:GLN:HG2	2.20	0.41
1:B:2438:PRO:HB3	1:B:2453:ILE:HB	2.02	0.41
1:B:3770:LEU:HD12	1:B:3770:LEU:HA	1.84	0.41
1:B:4006:ASP:OD1	1:B:4007:SER:N	2.53	0.41
1:B:4128:PHE:CD1	1:B:4128:PHE:C	2.92	0.41
1:C:52:THR:HG21	1:C:62:LEU:HD21	2.02	0.41
1:C:910:PHE:HZ	1:C:922:LEU:HD21	1.84	0.41
1:C:4090:LYS:HB3	1:C:4090:LYS:HE2	1.79	0.41
1:C:4984:ASN:O	1:C:4985:LEU:HG	2.21	0.41
1:D:103:TYR:CZ	1:D:163:VAL:HG22	2.55	0.41
1:D:886:ARG:HB3	1:D:891:TRP:HB2	2.02	0.41
1:D:2472:LEU:HD23	1:D:2472:LEU:HA	1.80	0.41
1:D:4055:VAL:HG12	1:D:4059:LEU:HD23	2.01	0.41
1:D:4116:GLU:CD	1:D:4116:GLU:N	2.73	0.41
1:A:70:GLU:HG3	1:A:117:TYR:HE1	1.86	0.41
1:A:478:PHE:CD2	1:A:483:MET:HG3	2.54	0.41
1:A:1676:LEU:HA	1:A:1721:GLU:CD	2.41	0.41
1:A:3986:TRP:HA	1:A:3989:VAL:HG22	2.01	0.41
1:A:4076:ALA:O	1:A:4077:PHE:C	2.59	0.41
1:A:4578:LEU:HA	1:A:4578:LEU:HD12	1.76	0.41
1:A:4650:HIS:NE2	1:A:4795:TYR:OH	2.40	0.41
1:A:4857:ASN:ND2	1:D:4807:PHE:CD2	2.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1118:ASP:N	1:B:1118:ASP:OD1	2.53	0.41
1:B:4071:ILE:HD13	1:B:4111:LEU:HD11	2.02	0.41
1:B:4141:PHE:CE1	1:B:4178:LEU:HD13	2.55	0.41
1:B:4175:ARG:HH21	1:B:4178:LEU:HD23	1.86	0.41
1:C:4063:ASP:CA	1:C:4066:LEU:HG	2.49	0.41
1:D:690:GLU:HB3	1:D:712:TYR:CD2	2.56	0.41
1:D:727:ALA:O	1:D:728:ARG:C	2.58	0.41
1:D:1177:THR:HG22	1:D:1179:PHE:HD2	1.84	0.41
1:D:1819:VAL:HG22	1:D:1926:LEU:HD13	2.01	0.41
1:D:4117:ALA:O	1:D:4118:ASP:HB3	2.20	0.41
1:A:4071:ILE:HD13	1:A:4111:LEU:HD11	2.02	0.41
1:A:4818:MET:O	1:A:4824:ARG:HG3	2.20	0.41
1:B:157:ARG:NH2	1:B:164:ARG:HD2	2.36	0.41
1:B:1698:LEU:HA	1:B:1712:TYR:OH	2.19	0.41
1:B:1834:VAL:HA	1:B:1837:GLN:HB3	2.02	0.41
1:B:2423:MET:O	1:B:2427:ALA:N	2.48	0.41
1:B:4067:LYS:HA	1:B:4067:LYS:HD3	1.31	0.41
1:B:4082:THR:OG1	1:B:4083:ASP:N	2.53	0.41
1:C:241:GLN:O	1:C:289:ARG:NH1	2.47	0.41
1:C:2220:THR:O	1:C:2222:GLU:N	2.52	0.41
1:D:3773:ARG:N	1:D:3815:LYS:HZ3	2.19	0.41
1:D:4076:ALA:O	1:D:4077:PHE:C	2.59	0.41
1:D:4128:PHE:CD1	1:D:4128:PHE:C	2.92	0.41
1:D:4145:VAL:HG22	1:D:4149:ASN:OD1	2.21	0.41
1:A:103:TYR:CZ	1:A:163:VAL:HG22	2.55	0.41
1:A:2122:SER:HB3	1:A:3721:LEU:CD1	2.51	0.41
1:A:3670:GLU:OE1	1:A:3670:GLU:N	2.53	0.41
1:A:4145:VAL:HG22	1:A:4149:ASN:OD1	2.21	0.41
1:A:4175:ARG:HH21	1:A:4178:LEU:HD23	1.86	0.41
1:A:4704:LEU:HB3	1:A:4778:TRP:CD1	2.53	0.41
1:B:358:THR:HG21	1:B:382:GLY:HA2	2.03	0.41
1:B:870:ILE:HD12	1:B:873:LYS:HB2	2.02	0.41
1:B:886:ARG:HB3	1:B:891:TRP:HB2	2.02	0.41
1:B:910:PHE:HZ	1:B:922:LEU:HD21	1.84	0.41
1:B:1158:ASN:HB3	1:B:1182:ILE:H	1.85	0.41
1:B:1695:LEU:HD23	1:B:1810:LYS:HZ2	1.86	0.41
1:B:2432:LEU:O	1:B:2436:CYS:N	2.49	0.41
1:B:3986:TRP:HA	1:B:3989:VAL:HG22	2.01	0.41
1:B:4076:ALA:O	1:B:4077:PHE:C	2.59	0.41
1:B:4142:ASN:HA	1:B:4145:VAL:HG12	2.02	0.41
1:C:2257:LEU:HD11	1:C:2276:ALA:HB2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4145:VAL:HG22	1:C:4149:ASN:OD1	2.21	0.41
1:D:1192:CYS:SG	1:D:1193:SER:N	2.94	0.41
1:D:1275:ARG:O	1:D:1277:TRP:N	2.53	0.41
1:D:1676:LEU:H	1:D:1676:LEU:HG	1.30	0.41
1:D:1830:VAL:N	1:D:1837:GLN:OE1	2.53	0.41
1:D:1834:VAL:HA	1:D:1837:GLN:HB3	2.02	0.41
1:D:4141:PHE:CE1	1:D:4178:LEU:HD13	2.55	0.41
1:D:4818:MET:O	1:D:4824:ARG:HG3	2.20	0.41
1:A:1206:GLN:HA	1:A:1227:ALA:O	2.20	0.41
1:A:2438:PRO:HB3	1:A:2453:ILE:HB	2.02	0.41
1:A:4984:ASN:O	1:A:4985:LEU:HG	2.21	0.41
1:B:2176:ASN:N	1:B:2176:ASN:OD1	2.53	0.41
1:B:4123:ILE:HA	1:B:4123:ILE:HD12	1.85	0.41
1:B:4145:VAL:HG22	1:B:4149:ASN:OD1	2.21	0.41
1:C:169:LEU:CD1	1:C:202:MET:HG2	2.50	0.41
1:C:688:LEU:HD12	1:C:777:PHE:CE1	2.55	0.41
1:C:727:ALA:O	1:C:728:ARG:C	2.58	0.41
1:C:1867:GLU:N	1:C:1868:PRO:HD2	2.36	0.41
1:C:3763:LEU:HG	1:C:3767:GLN:HE22	1.84	0.41
1:C:4020:GLN:O	1:C:4024:VAL:HG13	2.21	0.41
1:C:4125:PHE:HD1	1:C:4126:GLU:N	2.18	0.41
1:C:4728:HIS:HA	1:C:4731:ILE:HG12	2.02	0.41
1:D:1171:SER:OG	1:D:1175:SER:N	2.53	0.41
1:D:1206:GLN:HA	1:D:1227:ALA:O	2.20	0.41
1:D:2122:SER:HB3	1:D:3721:LEU:CD1	2.51	0.41
1:D:4240:ASP:CG	1:D:4675:LYS:HZ3	2.24	0.41
1:A:137:LEU:H	1:A:137:LEU:HD23	1.86	0.41
1:A:891:TRP:CZ3	1:A:899:ASP:HA	2.56	0.41
1:A:4078:GLN:HG3	1:A:4081:VAL:CG2	2.46	0.41
1:A:4082:THR:OG1	1:A:4083:ASP:N	2.53	0.41
1:A:4090:LYS:HG2	1:A:4091:LYS:N	2.32	0.41
1:A:4886:HIS:O	1:A:4890:GLY:N	2.51	0.41
1:B:70:GLU:HG3	1:B:117:TYR:HE1	1.86	0.41
1:B:720:HIS:CD2	1:B:727:ALA:CA	3.00	0.41
1:B:1177:THR:HG22	1:B:1179:PHE:HD2	1.84	0.41
1:B:1192:CYS:SG	1:B:1193:SER:N	2.94	0.41
1:B:3670:GLU:OE1	1:B:3670:GLU:N	2.53	0.41
1:B:4020:GLN:O	1:B:4024:VAL:HG13	2.21	0.41
1:B:4144:ALA:O	1:B:4148:THR:OG1	2.29	0.41
1:D:70:GLU:HG3	1:D:117:TYR:HE1	1.86	0.41
1:D:688:LEU:HD12	1:D:777:PHE:CE1	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1867:GLU:N	1:D:1868:PRO:HD2	2.36	0.41
1:D:2123:LEU:O	1:D:2127:GLN:HG2	2.20	0.41
1:D:2186:MET:HE2	1:D:2235:PHE:CA	2.45	0.41
1:D:4125:PHE:HD1	1:D:4126:GLU:N	2.18	0.41
1:D:4728:HIS:HA	1:D:4731:ILE:HG12	2.02	0.41
1:A:23:GLN:H	1:A:200:TRP:HE3	1.68	0.41
1:A:555:GLU:OE1	1:A:555:GLU:N	2.54	0.41
1:A:891:TRP:CE3	1:A:902:ARG:HA	2.56	0.41
1:A:1676:LEU:HA	1:A:1721:GLU:OE2	2.21	0.41
1:A:1695:LEU:HD23	1:A:1810:LYS:HZ2	1.86	0.41
1:A:2025:GLU:HA	1:A:2028:ARG:NE	2.36	0.41
1:A:4082:THR:O	1:A:4084:PRO:N	2.54	0.41
1:A:4117:ALA:O	1:A:4118:ASP:HB3	2.20	0.41
1:A:4125:PHE:HD1	1:A:4126:GLU:N	2.18	0.41
1:A:4728:HIS:HA	1:A:4731:ILE:HG12	2.02	0.41
1:B:478:PHE:CD2	1:B:483:MET:HG3	2.54	0.41
1:B:745:SER:HB2	1:B:758:ARG:HB3	2.02	0.41
1:B:889:GLN:HB2	1:B:891:TRP:HD1	1.86	0.41
1:B:891:TRP:CE3	1:B:902:ARG:HA	2.56	0.41
1:B:891:TRP:CZ3	1:B:899:ASP:HA	2.56	0.41
1:B:2042:CYS:SG	1:B:2043:GLY:N	2.90	0.41
1:B:2232:CYS:SG	1:B:2233:CYS:N	2.94	0.41
1:B:3716:LEU:HD12	1:B:3716:LEU:HA	1.85	0.41
1:B:4082:THR:O	1:B:4084:PRO:N	2.54	0.41
1:B:4134:GLU:N	1:B:4135:PRO:CD	2.84	0.41
1:B:4769:MET:SD	1:B:4769:MET:N	2.93	0.41
1:B:4888:TYR:CD1	1:C:4914:VAL:CG1	2.72	0.41
1:B:4933:GLN:HE21	1:C:4930:ALA:HB1	1.84	0.41
1:B:4984:ASN:O	1:B:4985:LEU:HG	2.21	0.41
1:C:23:GLN:H	1:C:200:TRP:HE3	1.68	0.41
1:C:157:ARG:NH2	1:C:164:ARG:HD2	2.36	0.41
1:C:358:THR:HG21	1:C:382:GLY:HA2	2.03	0.41
1:C:494:LEU:HD12	1:C:494:LEU:HA	1.94	0.41
1:C:494:LEU:HG	1:C:515:TRP:HE1	1.86	0.41
1:C:891:TRP:CZ3	1:C:899:ASP:HA	2.56	0.41
1:C:1158:ASN:HB3	1:C:1182:ILE:H	1.85	0.41
1:C:1206:GLN:HA	1:C:1227:ALA:O	2.20	0.41
1:C:1676:LEU:HA	1:C:1721:GLU:OE2	2.21	0.41
1:C:2025:GLU:HA	1:C:2028:ARG:NE	2.36	0.41
1:C:2123:LEU:O	1:C:2127:GLN:HG2	2.20	0.41
1:C:2176:ASN:OD1	1:C:2176:ASN:N	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2232:CYS:SG	1:C:2233:CYS:N	2.94	0.41
1:C:4082:THR:O	1:C:4084:PRO:N	2.54	0.41
1:C:4141:PHE:CE1	1:C:4178:LEU:HD13	2.55	0.41
1:C:4769:MET:SD	1:C:4769:MET:N	2.93	0.41
1:D:52:THR:HG21	1:D:62:LEU:HD21	2.02	0.41
1:D:59:PRO:HB3	1:D:281:ARG:NH1	2.36	0.41
1:D:137:LEU:H	1:D:137:LEU:HD23	1.86	0.41
1:D:555:GLU:OE1	1:D:555:GLU:N	2.54	0.41
1:D:889:GLN:HB2	1:D:891:TRP:HD1	1.86	0.41
1:D:891:TRP:CE3	1:D:902:ARG:HA	2.56	0.41
1:D:1236:THR:OG1	1:D:1608:MET:SD	2.79	0.41
1:D:2025:GLU:HA	1:D:2028:ARG:NE	2.36	0.41
1:D:2042:CYS:SG	1:D:2043:GLY:N	2.90	0.41
1:D:2232:CYS:SG	1:D:2233:CYS:N	2.94	0.41
1:D:4217:PHE:CZ	1:D:4234:PHE:HA	2.49	0.41
1:A:59:PRO:HB3	1:A:281:ARG:NH1	2.36	0.41
1:A:169:LEU:CD1	1:A:202:MET:HG2	2.50	0.41
1:A:745:SER:HB2	1:A:758:ARG:HB3	2.02	0.41
1:A:1177:THR:HG22	1:A:1179:PHE:HD2	1.84	0.41
1:A:1192:CYS:SG	1:A:1193:SER:N	2.94	0.41
1:A:2042:CYS:SG	1:A:2043:GLY:N	2.90	0.41
1:A:2202:GLY:HA2	1:A:2204:HIS:CE1	2.56	0.41
1:A:2232:CYS:SG	1:A:2233:CYS:N	2.94	0.41
1:A:4090:LYS:HE2	1:A:4090:LYS:HB3	1.79	0.41
1:B:495:ASN:HD21	1:B:550:LYS:HD2	1.86	0.41
1:B:560:ILE:HA	1:B:563:VAL:HG12	2.03	0.41
1:B:2346:VAL:HG13	1:B:2349:ASN:H	1.86	0.41
1:B:4066:LEU:HD21	1:B:4169:SER:OG	2.21	0.41
1:B:4117:ALA:O	1:B:4118:ASP:HB3	2.20	0.41
1:B:4650:HIS:NE2	1:B:4795:TYR:OH	2.40	0.41
1:C:555:GLU:OE1	1:C:555:GLU:N	2.54	0.41
1:C:690:GLU:HB3	1:C:712:TYR:CD2	2.56	0.41
1:C:889:GLN:HB2	1:C:891:TRP:HD1	1.86	0.41
1:C:4006:ASP:OD1	1:C:4007:SER:N	2.53	0.41
1:C:4066:LEU:HD21	1:C:4169:SER:OG	2.21	0.41
1:D:19:GLU:OE1	1:D:68:THR:OG1	2.27	0.41
1:D:157:ARG:NH2	1:D:164:ARG:HD2	2.36	0.41
1:D:500:ALA:H	1:D:503:PHE:HB3	1.86	0.41
1:D:4082:THR:O	1:D:4084:PRO:N	2.54	0.41
1:D:4134:GLU:N	1:D:4135:PRO:CD	2.84	0.41
1:D:4175:ARG:HH21	1:D:4178:LEU:HD23	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:889:GLN:HB2	1:A:891:TRP:HD1	1.86	0.40
1:A:4141:PHE:CE1	1:A:4178:LEU:HD13	2.55	0.40
1:B:137:LEU:HD23	1:B:137:LEU:H	1.86	0.40
1:B:692:TYR:H	1:B:826:ILE:HD12	1.85	0.40
1:B:728:ARG:HA	1:B:728:ARG:HD3	1.75	0.40
1:B:1972:ASN:O	1:B:1976:ARG:N	2.40	0.40
1:B:4125:PHE:HD1	1:B:4126:GLU:N	2.18	0.40
1:B:4125:PHE:HB2	1:B:4126:GLU:H	1.39	0.40
1:C:59:PRO:HB3	1:C:281:ARG:NH1	2.36	0.40
1:C:1534:LYS:O	1:C:1535:GLU:C	2.60	0.40
1:D:494:LEU:HG	1:D:515:TRP:HE1	1.86	0.40
1:D:692:TYR:H	1:D:826:ILE:HD12	1.85	0.40
1:D:4003:LEU:HB3	1:D:4013:LEU:HD21	2.03	0.40
1:D:4006:ASP:OD1	1:D:4007:SER:N	2.53	0.40
1:D:4066:LEU:HD21	1:D:4169:SER:OG	2.21	0.40
1:D:4984:ASN:O	1:D:4985:LEU:HG	2.21	0.40
1:A:1118:ASP:OD1	1:A:1118:ASP:N	2.53	0.40
1:A:1581:LEU:O	1:A:1581:LEU:HD23	2.21	0.40
1:A:4003:LEU:HB3	1:A:4013:LEU:HD21	2.03	0.40
1:A:4006:ASP:OD1	1:A:4007:SER:N	2.53	0.40
1:B:108:LEU:HB2	1:B:147:TRP:CZ3	2.57	0.40
1:B:169:LEU:CD1	1:B:202:MET:HG2	2.50	0.40
1:B:546:TRP:O	1:B:550:LYS:NZ	2.40	0.40
1:B:3662:ILE:O	1:B:3664:THR:N	2.50	0.40
1:B:4167:ALA:HB1	1:B:4170:ILE:HD13	2.03	0.40
1:B:4728:HIS:HA	1:B:4731:ILE:HG12	2.02	0.40
1:C:108:LEU:HB2	1:C:147:TRP:CZ3	2.57	0.40
1:C:572:PRO:HB3	1:C:609:CYS:HB2	2.04	0.40
1:C:3714:SER:O	1:C:3715:LYS:HD2	2.21	0.40
1:C:3770:LEU:HA	1:C:3770:LEU:HD12	1.84	0.40
1:D:169:LEU:CD1	1:D:202:MET:HG2	2.50	0.40
1:D:560:ILE:HA	1:D:563:VAL:HG12	2.03	0.40
1:D:1457:TYR:N	1:D:1497:GLY:O	2.32	0.40
1:D:1796:ALA:HB1	1:D:1797:ARG:HH21	1.86	0.40
1:A:108:LEU:HB2	1:A:147:TRP:CZ3	2.57	0.40
1:A:358:THR:HG21	1:A:382:GLY:HA2	2.03	0.40
1:A:692:TYR:H	1:A:826:ILE:HD12	1.85	0.40
1:A:4089:SER:CB	1:A:4120:ASN:HA	2.42	0.40
1:A:4167:ALA:HB1	1:A:4170:ILE:HD13	2.03	0.40
1:A:4860:ARG:CD	1:D:4582:VAL:HG11	2.50	0.40
1:B:500:ALA:H	1:B:503:PHE:HB3	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:572:PRO:HB3	1:B:609:CYS:HB2	2.04	0.40
1:B:664:PHE:HB2	1:B:746:CYS:HB2	2.04	0.40
1:B:1867:GLU:N	1:B:1868:PRO:HD2	2.36	0.40
1:B:2025:GLU:HA	1:B:2028:ARG:NE	2.36	0.40
1:B:4091:LYS:HZ3	1:B:4091:LYS:N	2.20	0.40
1:B:4578:LEU:HD12	1:B:4578:LEU:HA	1.76	0.40
1:C:103:TYR:CZ	1:C:163:VAL:HG22	2.55	0.40
1:C:891:TRP:CE3	1:C:902:ARG:HA	2.56	0.40
1:C:1192:CYS:SG	1:C:1193:SER:N	2.94	0.40
1:C:1275:ARG:O	1:C:1277:TRP:N	2.53	0.40
1:C:4134:GLU:N	1:C:4135:PRO:CD	2.84	0.40
1:C:4175:ARG:HH21	1:C:4178:LEU:HD23	1.86	0.40
1:C:4582:VAL:HG11	1:D:4860:ARG:CD	2.50	0.40
1:D:720:HIS:CD2	1:D:727:ALA:CA	3.00	0.40
1:D:975:VAL:O	1:D:1044:ARG:NH2	2.49	0.40
1:D:1581:LEU:O	1:D:1581:LEU:HD23	2.21	0.40
1:D:4017:LEU:HD12	1:D:4132:PHE:HZ	1.83	0.40
1:A:157:ARG:NH2	1:A:164:ARG:HD2	2.36	0.40
1:A:495:ASN:HD21	1:A:550:LYS:HD2	1.86	0.40
1:A:500:ALA:H	1:A:503:PHE:HB3	1.86	0.40
1:A:560:ILE:HA	1:A:563:VAL:HG12	2.03	0.40
1:A:1534:LYS:O	1:A:1535:GLU:C	2.60	0.40
1:A:1796:ALA:HB1	1:A:1797:ARG:HH21	1.86	0.40
1:A:4066:LEU:HD21	1:A:4169:SER:OG	2.21	0.40
1:A:4074:SER:HA	1:A:4077:PHE:CB	2.52	0.40
1:B:38:ALA:HB1	1:B:64:ILE:HG22	2.03	0.40
1:B:59:PRO:HB3	1:B:281:ARG:NH1	2.36	0.40
1:B:1171:SER:OG	1:B:1175:SER:N	2.53	0.40
1:B:2327:GLY:HA2	1:B:2330:ARG:HD3	2.03	0.40
1:B:2474:LEU:HB2	1:B:2475:GLN:H	1.54	0.40
1:C:2202:GLY:HA2	1:C:2204:HIS:CE1	2.56	0.40
1:C:4076:ALA:O	1:C:4077:PHE:C	2.59	0.40
1:D:2468:GLY:O	1:D:2472:LEU:HG	2.21	0.40
1:D:3652:MET:O	1:D:3656:SER:N	2.41	0.40
1:A:1171:SER:OG	1:A:1175:SER:N	2.53	0.40
1:A:4078:GLN:HB3	1:A:4079:ASP:H	1.71	0.40
1:A:4134:GLU:N	1:A:4135:PRO:CD	2.84	0.40
1:B:494:LEU:HG	1:B:515:TRP:HE1	1.86	0.40
1:B:555:GLU:OE1	1:B:555:GLU:N	2.54	0.40
1:B:709:ASP:HA	1:B:725:HIS:H	1.87	0.40
1:B:1206:GLN:HA	1:B:1227:ALA:O	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1796:ALA:HB1	1:B:1797:ARG:HH21	1.86	0.40
1:B:2202:GLY:HA2	1:B:2204:HIS:CE1	2.56	0.40
1:B:4189:ARG:HH11	1:B:4191:GLU:HB3	1.87	0.40
1:C:560:ILE:HA	1:C:563:VAL:HG12	2.03	0.40
1:C:720:HIS:CD2	1:C:727:ALA:CA	3.00	0.40
1:C:1581:LEU:O	1:C:1581:LEU:HD23	2.21	0.40
1:C:2192:TYR:OH	1:C:2238:TYR:CD1	2.61	0.40
1:C:4123:ILE:HA	1:C:4123:ILE:HD12	1.85	0.40
1:C:4217:PHE:CZ	1:C:4234:PHE:HA	2.49	0.40
1:D:1676:LEU:HA	1:D:1721:GLU:OE2	2.21	0.40
1:D:3847:PHE:O	1:D:3850:GLN:HG3	2.22	0.40
1:D:4322:LEU:HD23	1:D:4322:LEU:HA	1.84	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

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	4107/5037 (82%)	3689 (90%)	378 (9%)	40 (1%)	13	48
1	B	4107/5037 (82%)	3689 (90%)	378 (9%)	40 (1%)	13	48
1	C	4107/5037 (82%)	3689 (90%)	378 (9%)	40 (1%)	13	48
1	D	4107/5037 (82%)	3689 (90%)	378 (9%)	40 (1%)	13	48
All	All	16428/20148 (82%)	14756 (90%)	1512 (9%)	160 (1%)	16	48

All (160) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	1455	PRO
1	A	1490	SER
1	A	1495	VAL

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Mol	Chain	Res	Type
1	A	1503	PRO
1	A	1549	PHE
1	A	1556	PRO
1	A	2341	VAL
1	A	4078	GLN
1	A	4084	PRO
1	A	4125	PHE
1	A	4133	GLN
1	B	1455	PRO
1	B	1490	SER
1	B	1495	VAL
1	B	1503	PRO
1	B	1549	PHE
1	B	1556	PRO
1	B	2341	VAL
1	B	4078	GLN
1	B	4084	PRO
1	B	4125	PHE
1	B	4133	GLN
1	C	1455	PRO
1	C	1490	SER
1	C	1495	VAL
1	C	1503	PRO
1	C	1549	PHE
1	C	1556	PRO
1	C	2341	VAL
1	C	4078	GLN
1	C	4084	PRO
1	C	4125	PHE
1	C	4133	GLN
1	D	1455	PRO
1	D	1490	SER
1	D	1495	VAL
1	D	1503	PRO
1	D	1549	PHE
1	D	1556	PRO
1	D	2341	VAL
1	D	4078	GLN
1	D	4084	PRO
1	D	4125	PHE
1	D	4133	GLN
1	A	1283	LEU

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Mol	Chain	Res	Type
1	A	1445	PRO
1	A	1448	VAL
1	A	1469	VAL
1	A	1550	PRO
1	A	1561	VAL
1	A	1562	ILE
1	A	2293	GLN
1	A	4088	ILE
1	A	4118	ASP
1	A	4139	ILE
1	B	1283	LEU
1	B	1445	PRO
1	B	1448	VAL
1	B	1469	VAL
1	B	1550	PRO
1	B	1561	VAL
1	B	1562	ILE
1	B	2293	GLN
1	B	4088	ILE
1	B	4118	ASP
1	B	4139	ILE
1	C	1283	LEU
1	C	1445	PRO
1	C	1448	VAL
1	C	1469	VAL
1	C	1550	PRO
1	C	1561	VAL
1	C	1562	ILE
1	C	2293	GLN
1	C	4088	ILE
1	C	4118	ASP
1	C	4139	ILE
1	D	1283	LEU
1	D	1445	PRO
1	D	1448	VAL
1	D	1469	VAL
1	D	1550	PRO
1	D	1561	VAL
1	D	1562	ILE
1	D	2293	GLN
1	D	4088	ILE
1	D	4118	ASP

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Mol	Chain	Res	Type
1	D	4139	ILE
1	A	2013	LYS
1	A	3643	ASN
1	A	4082	THR
1	A	4120	ASN
1	A	4127	GLU
1	B	2013	LYS
1	B	3643	ASN
1	B	4082	THR
1	B	4120	ASN
1	B	4127	GLU
1	C	2013	LYS
1	C	3643	ASN
1	C	4082	THR
1	C	4120	ASN
1	C	4127	GLU
1	D	2013	LYS
1	D	3643	ASN
1	D	4082	THR
1	D	4120	ASN
1	D	4127	GLU
1	A	1450	VAL
1	A	1454	THR
1	A	1467	SER
1	A	1479	GLU
1	A	1538	THR
1	A	2016	ALA
1	A	4076	ALA
1	B	1450	VAL
1	B	1454	THR
1	B	1467	SER
1	B	1479	GLU
1	B	1538	THR
1	B	2016	ALA
1	B	4076	ALA
1	C	1450	VAL
1	C	1454	THR
1	C	1467	SER
1	C	1479	GLU
1	C	1538	THR
1	C	2016	ALA
1	C	4076	ALA

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Mol	Chain	Res	Type
1	D	1450	VAL
1	D	1454	THR
1	D	1467	SER
1	D	1479	GLU
1	D	1538	THR
1	D	2016	ALA
1	D	4076	ALA
1	A	1535	GLU
1	A	1555	LEU
1	B	1535	GLU
1	B	1555	LEU
1	C	1535	GLU
1	C	1555	LEU
1	D	1535	GLU
1	D	1555	LEU
1	A	1453	VAL
1	A	3645	PRO
1	B	1453	VAL
1	B	3645	PRO
1	C	1453	VAL
1	C	3645	PRO
1	D	1453	VAL
1	D	3645	PRO
1	A	1840	PRO
1	A	4083	ASP
1	B	1840	PRO
1	B	4083	ASP
1	C	1840	PRO
1	C	4083	ASP
1	D	1840	PRO
1	D	4083	ASP

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.

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	2310/4276 (54%)	2273 (98%)	37 (2%)	58	73
1	B	2310/4276 (54%)	2273 (98%)	37 (2%)	58	73
1	C	2310/4276 (54%)	2273 (98%)	37 (2%)	58	73
1	D	2310/4276 (54%)	2273 (98%)	37 (2%)	58	73
All	All	9240/17104 (54%)	9092 (98%)	148 (2%)	58	73

All (148) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	728	ARG
1	A	758	ARG
1	A	759	ILE
1	A	975	VAL
1	A	976	ARG
1	A	1676	LEU
1	A	1996	ARG
1	A	2290	LEU
1	A	2291	GLN
1	A	2292	GLU
1	A	2342	ASN
1	A	2474	LEU
1	A	3641	LEU
1	A	4062	PHE
1	A	4065	PHE
1	A	4066	LEU
1	A	4067	LYS
1	A	4068	LEU
1	A	4069	LYS
1	A	4070	ASP
1	A	4074	SER
1	A	4079	ASP
1	A	4081	VAL
1	A	4083	ASP
1	A	4088	ILE
1	A	4090	LYS
1	A	4091	LYS
1	A	4093	PHE
1	A	4116	GLU
1	A	4119	GLU

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Mol	Chain	Res	Type
1	A	4121	GLU
1	A	4122	MET
1	A	4123	ILE
1	A	4124	ASN
1	A	4132	PHE
1	A	4137	ARG
1	A	4215	ARG
1	B	728	ARG
1	B	758	ARG
1	B	759	ILE
1	B	975	VAL
1	B	976	ARG
1	B	1676	LEU
1	B	1996	ARG
1	B	2290	LEU
1	B	2291	GLN
1	B	2292	GLU
1	B	2342	ASN
1	B	2474	LEU
1	B	3641	LEU
1	B	4062	PHE
1	B	4065	PHE
1	B	4066	LEU
1	B	4067	LYS
1	B	4068	LEU
1	B	4069	LYS
1	B	4070	ASP
1	B	4074	SER
1	B	4079	ASP
1	B	4081	VAL
1	B	4083	ASP
1	B	4088	ILE
1	B	4090	LYS
1	B	4091	LYS
1	B	4093	PHE
1	B	4116	GLU
1	B	4119	GLU
1	B	4121	GLU
1	B	4122	MET
1	B	4123	ILE
1	B	4124	ASN
1	B	4132	PHE

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Mol	Chain	Res	Type
1	B	4137	ARG
1	B	4215	ARG
1	C	728	ARG
1	C	758	ARG
1	C	759	ILE
1	C	975	VAL
1	C	976	ARG
1	C	1676	LEU
1	C	1996	ARG
1	C	2290	LEU
1	C	2291	GLN
1	C	2292	GLU
1	C	2342	ASN
1	C	2474	LEU
1	C	3641	LEU
1	C	4062	PHE
1	C	4065	PHE
1	C	4066	LEU
1	C	4067	LYS
1	C	4068	LEU
1	C	4069	LYS
1	C	4070	ASP
1	C	4074	SER
1	C	4079	ASP
1	C	4081	VAL
1	C	4083	ASP
1	C	4088	ILE
1	C	4090	LYS
1	C	4091	LYS
1	C	4093	PHE
1	C	4116	GLU
1	C	4119	GLU
1	C	4121	GLU
1	C	4122	MET
1	C	4123	ILE
1	C	4124	ASN
1	C	4132	PHE
1	C	4137	ARG
1	C	4215	ARG
1	D	728	ARG
1	D	758	ARG
1	D	759	ILE

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Mol	Chain	Res	Type
1	D	975	VAL
1	D	976	ARG
1	D	1676	LEU
1	D	1996	ARG
1	D	2290	LEU
1	D	2291	GLN
1	D	2292	GLU
1	D	2342	ASN
1	D	2474	LEU
1	D	3641	LEU
1	D	4062	PHE
1	D	4065	PHE
1	D	4066	LEU
1	D	4067	LYS
1	D	4068	LEU
1	D	4069	LYS
1	D	4070	ASP
1	D	4074	SER
1	D	4079	ASP
1	D	4081	VAL
1	D	4083	ASP
1	D	4088	ILE
1	D	4090	LYS
1	D	4091	LYS
1	D	4093	PHE
1	D	4116	GLU
1	D	4119	GLU
1	D	4121	GLU
1	D	4122	MET
1	D	4123	ILE
1	D	4124	ASN
1	D	4132	PHE
1	D	4137	ARG
1	D	4215	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (40) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	113	HIS
1	A	593	HIS
1	A	720	HIS
1	A	1254	HIS

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Mol	Chain	Res	Type
1	A	1678	ASN
1	A	2005	GLN
1	A	3651	ASN
1	A	4124	ASN
1	A	4133	GLN
1	A	4691	GLN
1	A	4933	GLN
1	B	113	HIS
1	B	593	HIS
1	B	720	HIS
1	B	1254	HIS
1	B	1678	ASN
1	B	2005	GLN
1	B	3651	ASN
1	B	4133	GLN
1	B	4691	GLN
1	B	4933	GLN
1	C	113	HIS
1	C	593	HIS
1	C	720	HIS
1	C	1254	HIS
1	C	1678	ASN
1	C	2005	GLN
1	C	3651	ASN
1	C	4124	ASN
1	C	4691	GLN
1	C	4933	GLN
1	D	593	HIS
1	D	720	HIS
1	D	1254	HIS
1	D	1678	ASN
1	D	2005	GLN
1	D	3651	ASN
1	D	4124	ASN
1	D	4691	GLN
1	D	4933	GLN

5.3.3 RNA ⓘ

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 4 ligands modelled in this entry, 4 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.

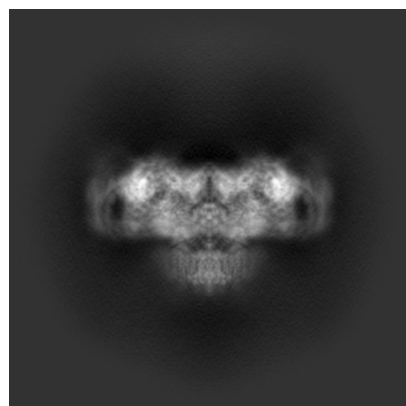
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-38045. These allow visual inspection of the internal detail of the map and identification of artifacts.

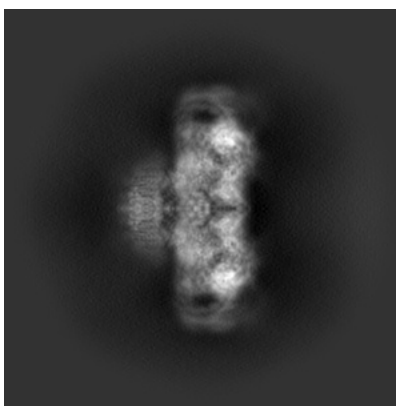
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

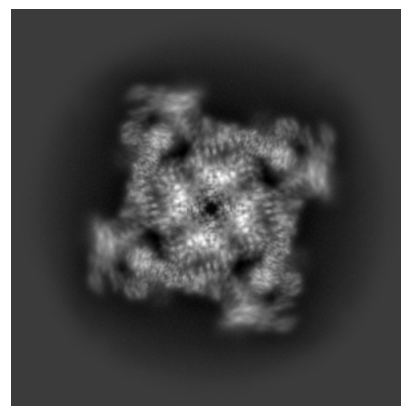
6.1.1 Primary map



X

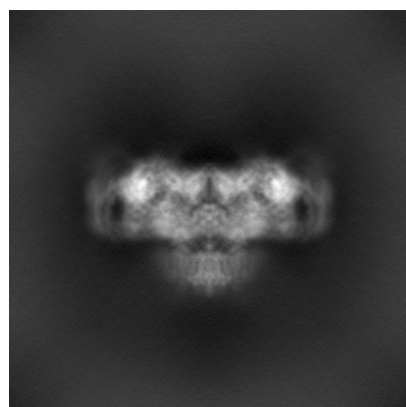


Y

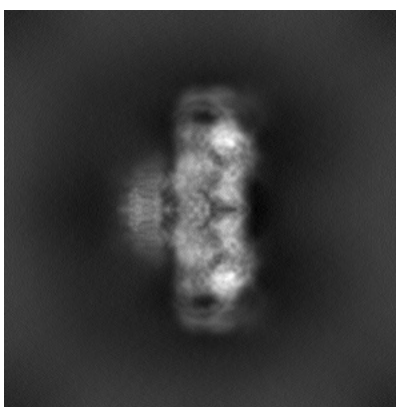


Z

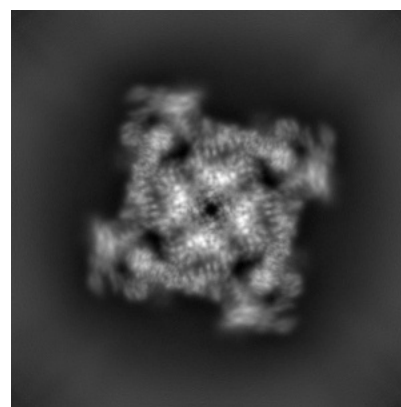
6.1.2 Raw map



X



Y

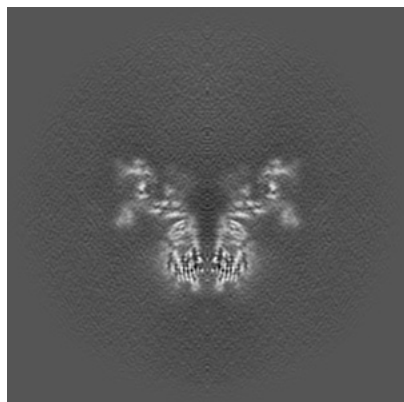


Z

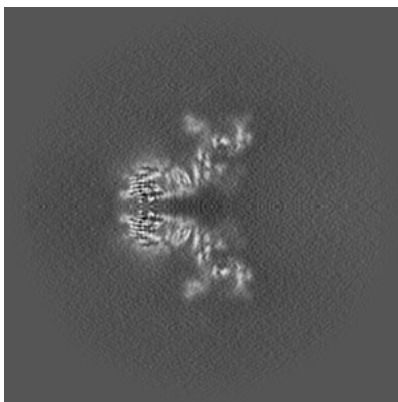
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

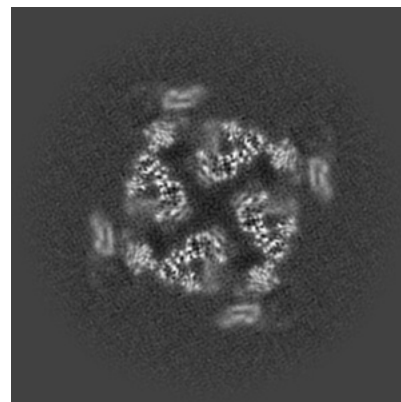
6.2.1 Primary map



X Index: 240

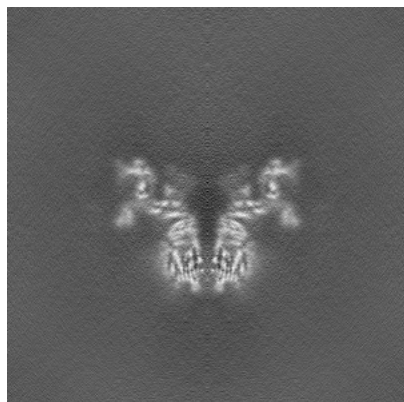


Y Index: 240

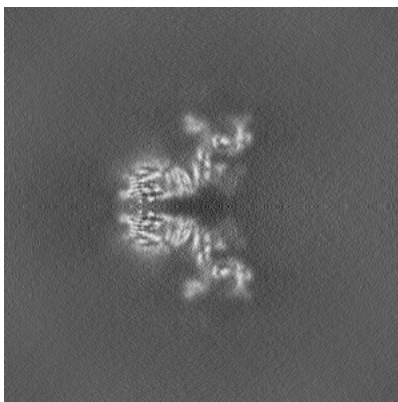


Z Index: 240

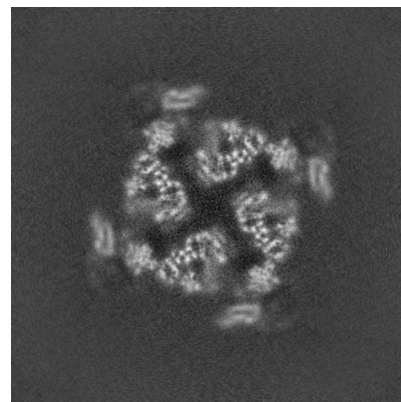
6.2.2 Raw map



X Index: 240



Y Index: 240

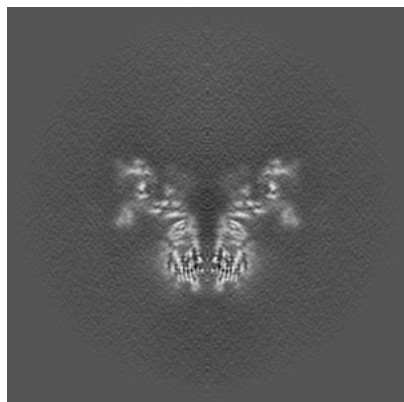


Z Index: 240

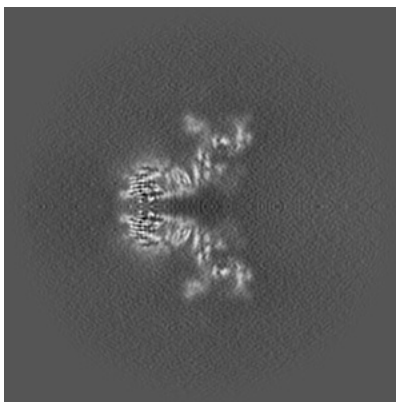
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

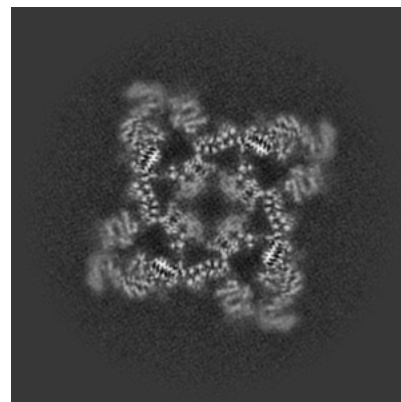
6.3.1 Primary map



X Index: 240

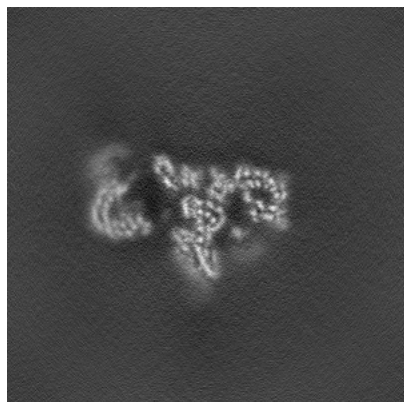


Y Index: 240

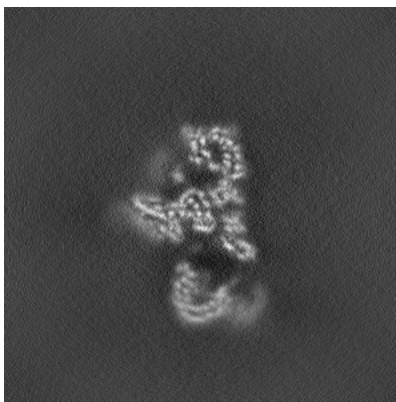


Z Index: 262

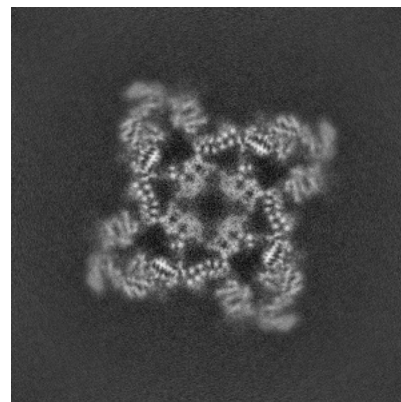
6.3.2 Raw map



X Index: 281



Y Index: 199

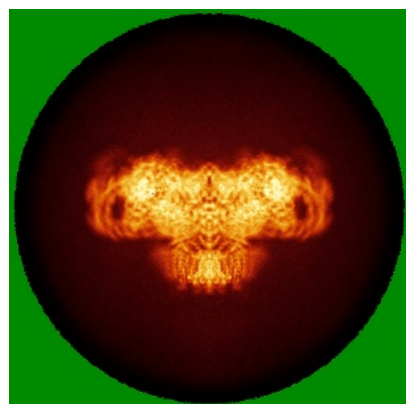


Z Index: 262

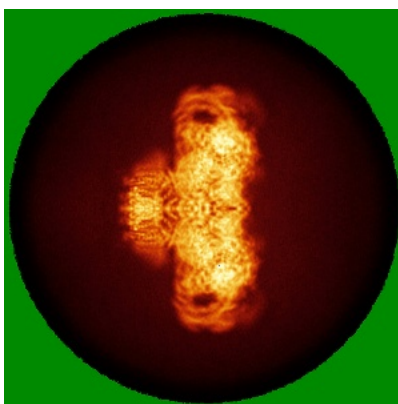
The images above show the largest variance slices of the map in three orthogonal directions.

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

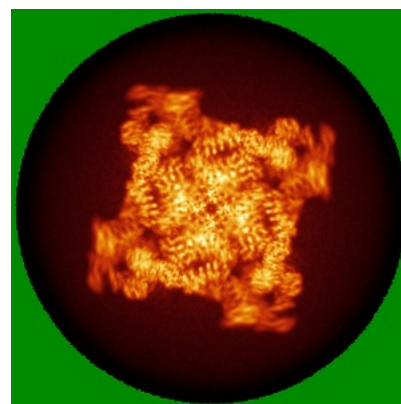
6.4.1 Primary map



X

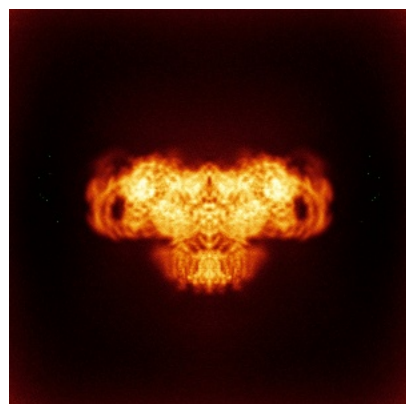


Y

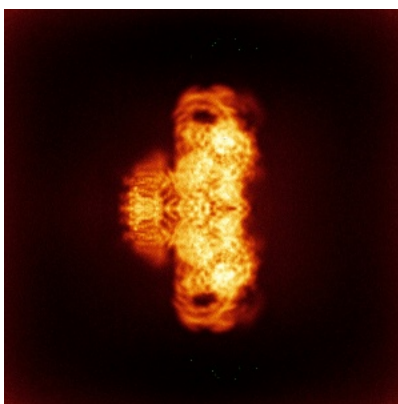


Z

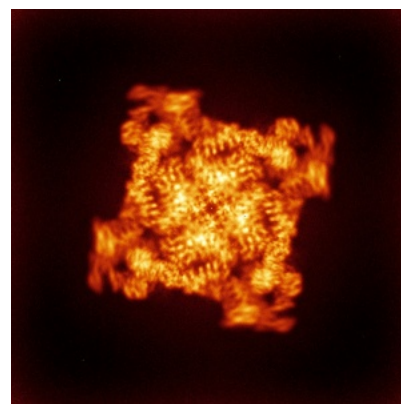
6.4.2 Raw map



X



Y

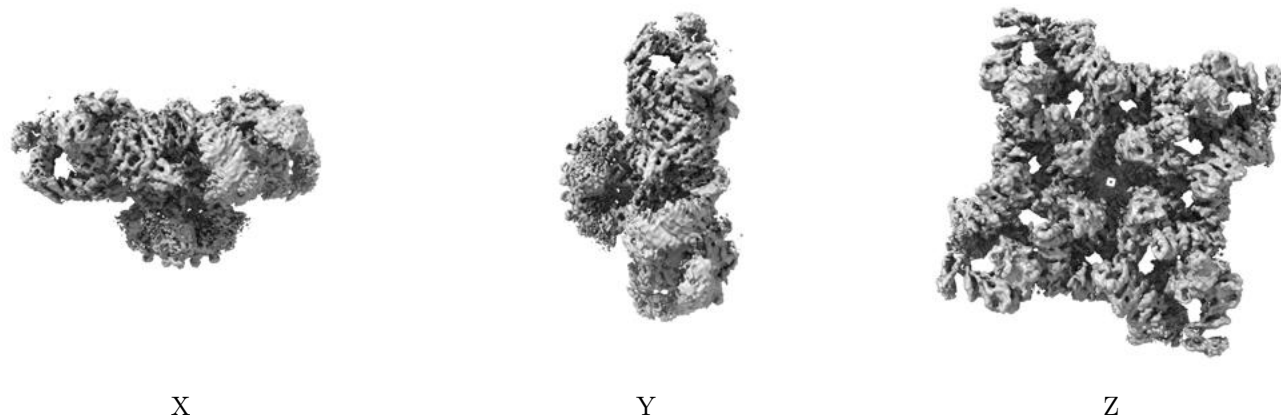


Z

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

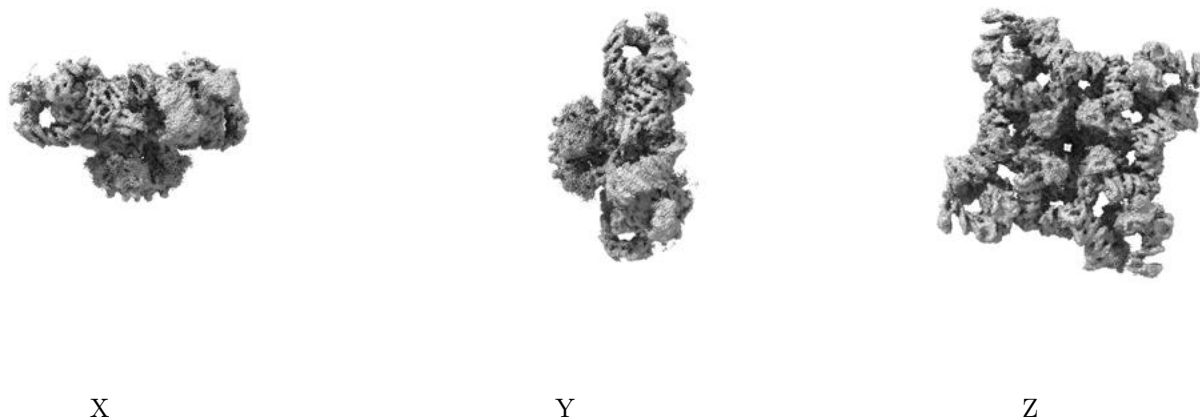
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.237. 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.

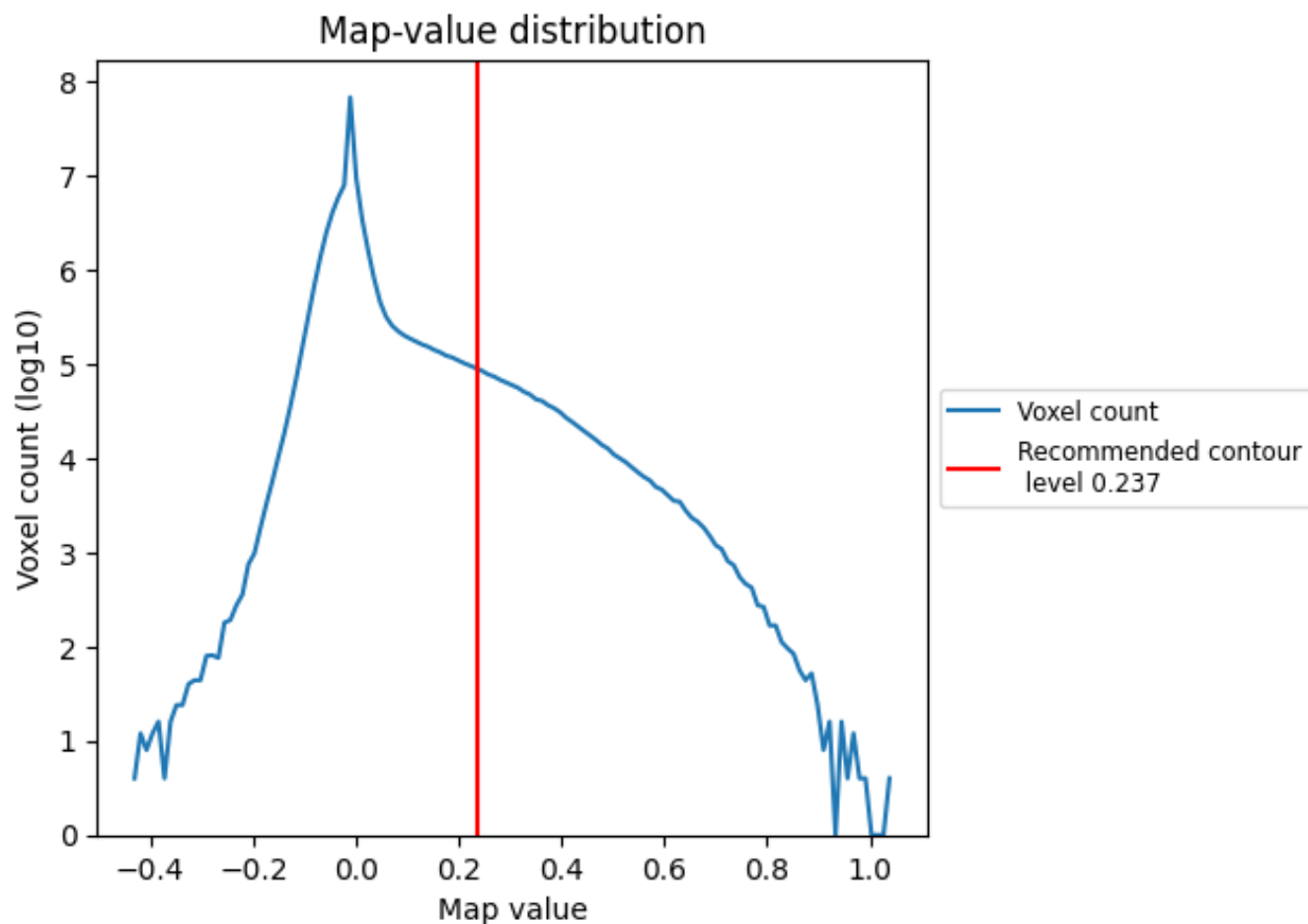
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

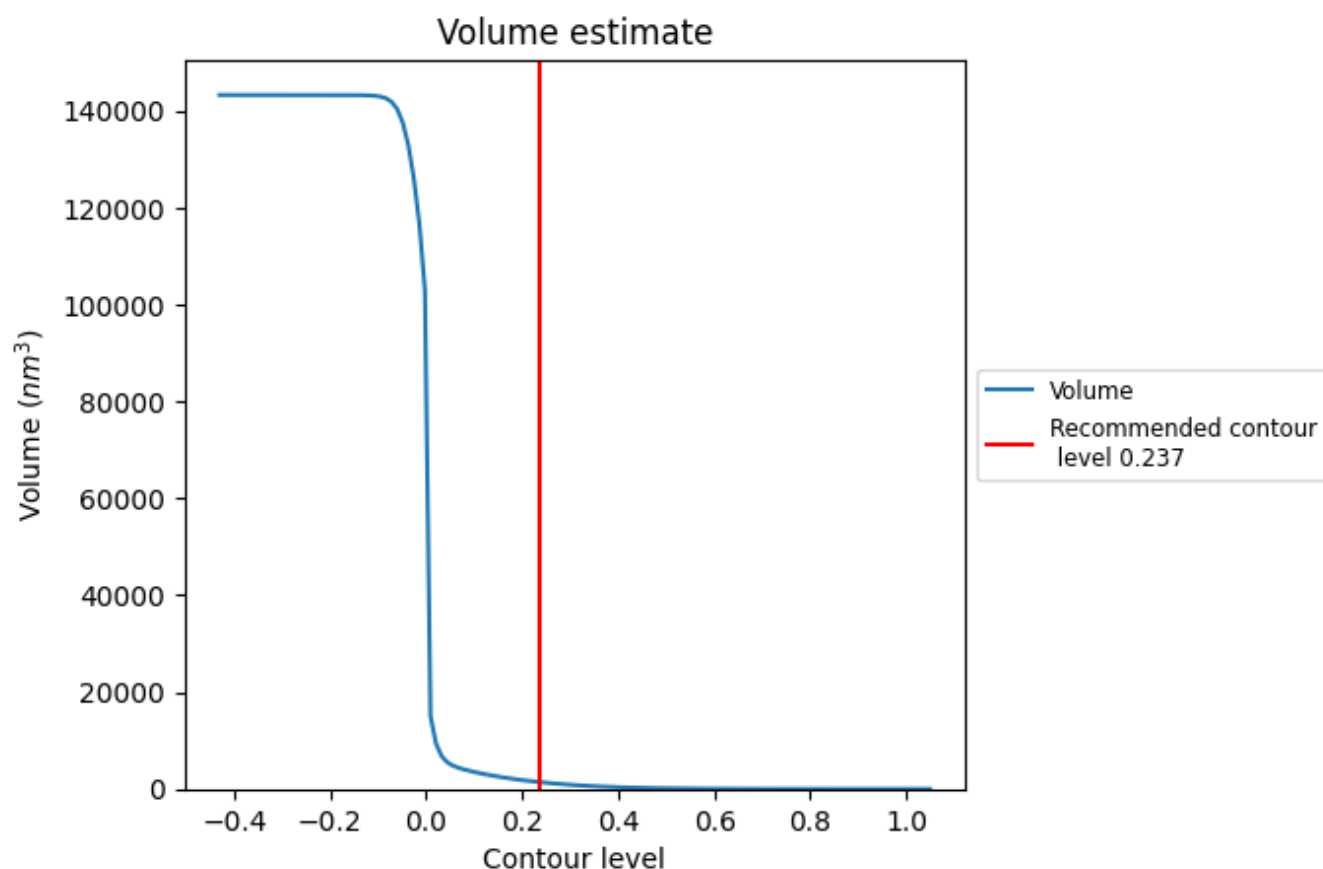
This section contains the results of statistical analysis of the map.

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.

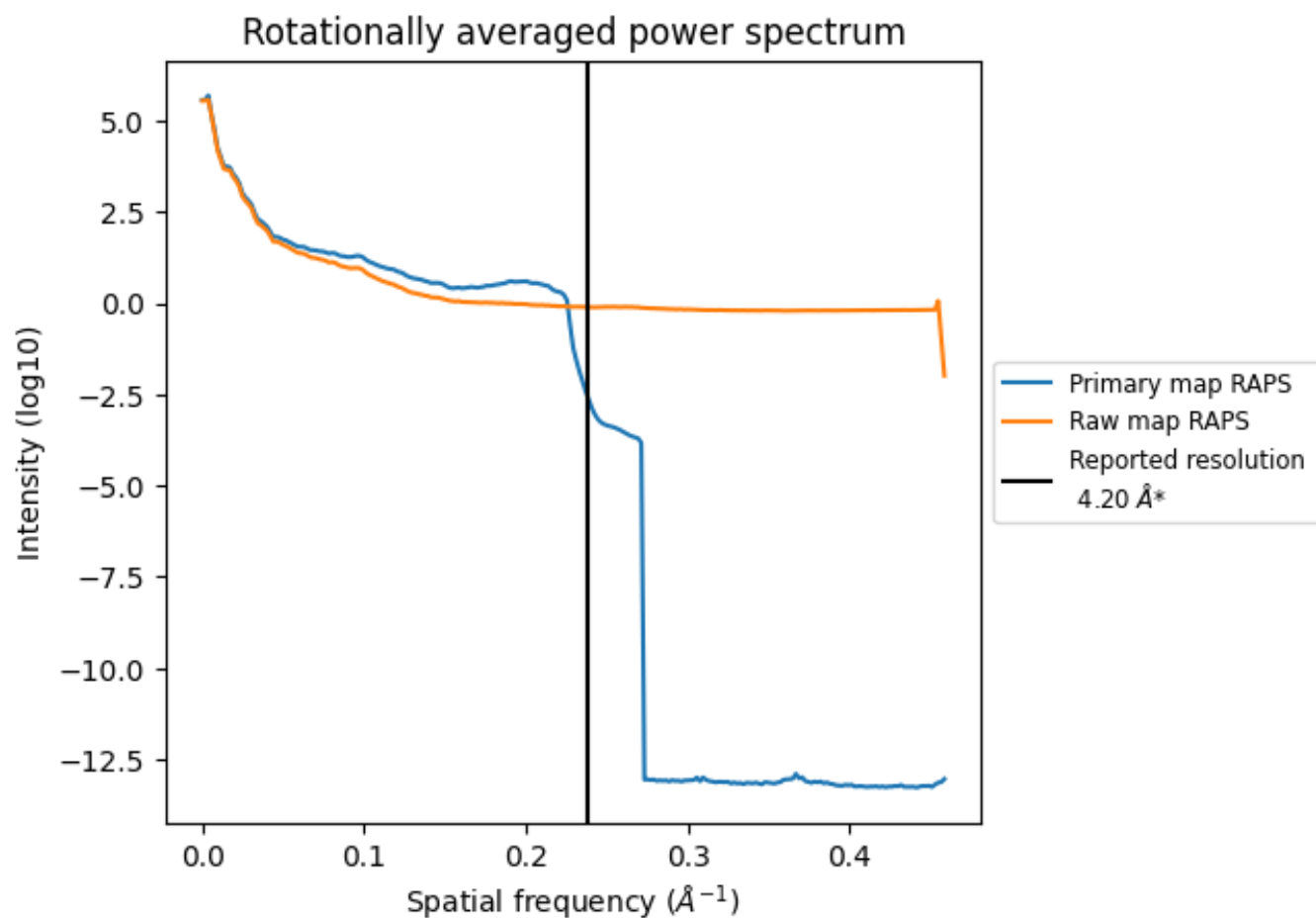
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 1401 nm³; this corresponds to an approximate mass of 1265 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 ⓘ

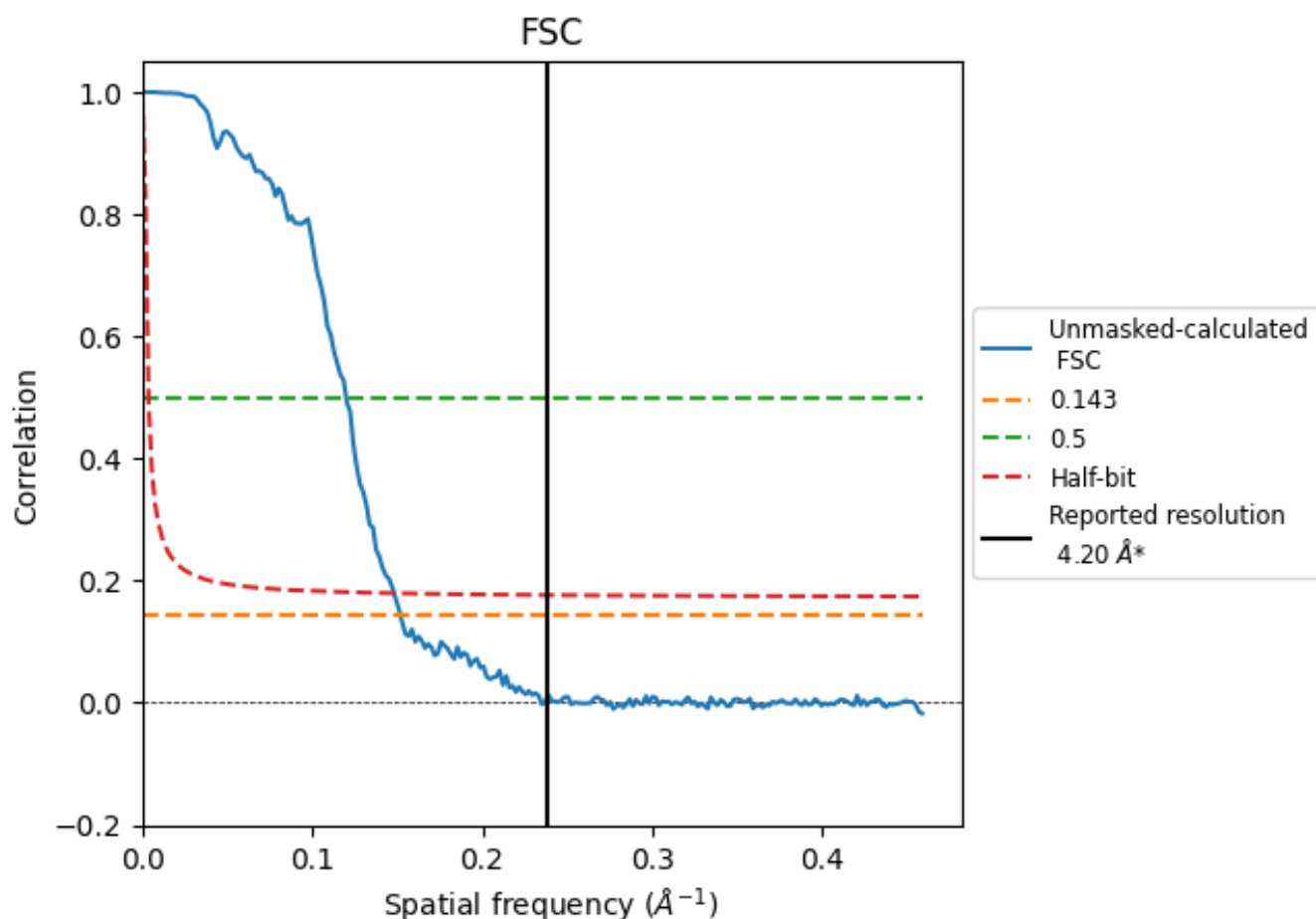


*Reported resolution corresponds to spatial frequency of 0.238 Å⁻¹

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 0.238 \AA^{-1}

8.2 Resolution estimates [i](#)

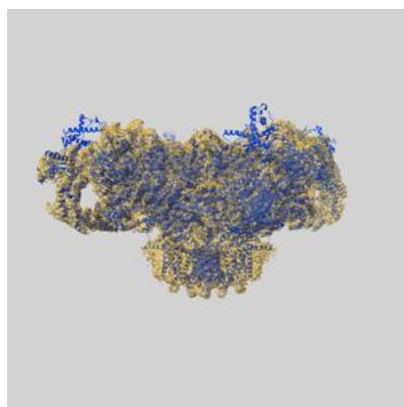
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	4.20	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	6.58	8.33	6.75

*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 6.58 differs from the reported value 4.2 by more than 10 %

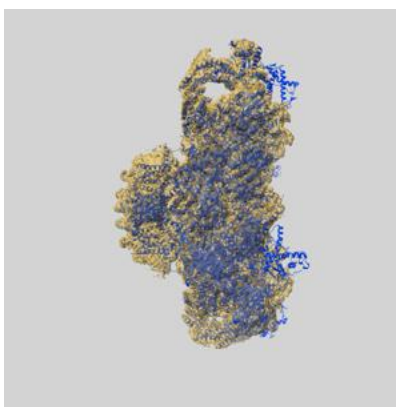
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-38045 and PDB model 8X4B. Per-residue inclusion information can be found in section [3](#) on page [4](#).

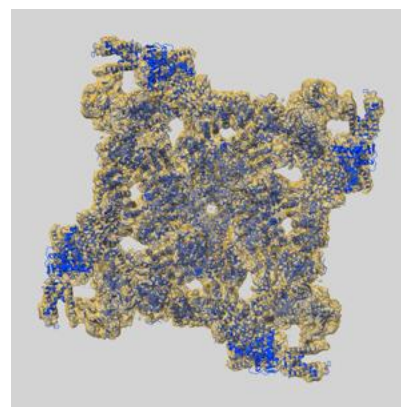
9.1 Map-model overlay [i](#)



X



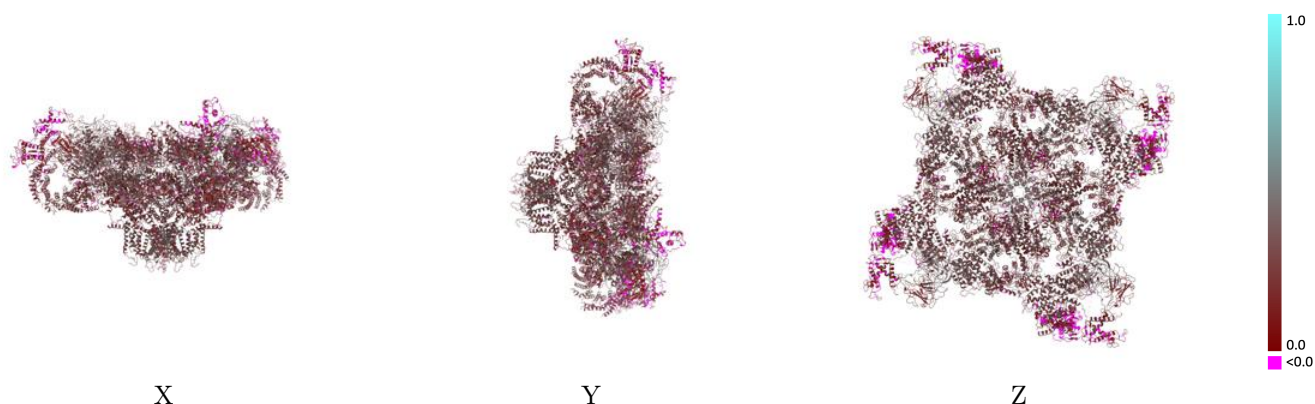
Y



Z

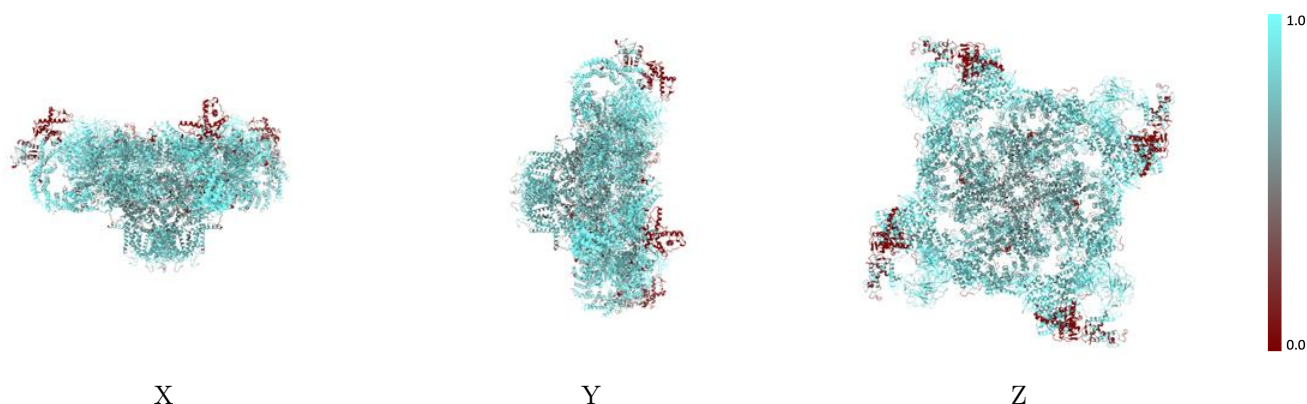
The images above show the 3D surface view of the map at the recommended contour level 0.237 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



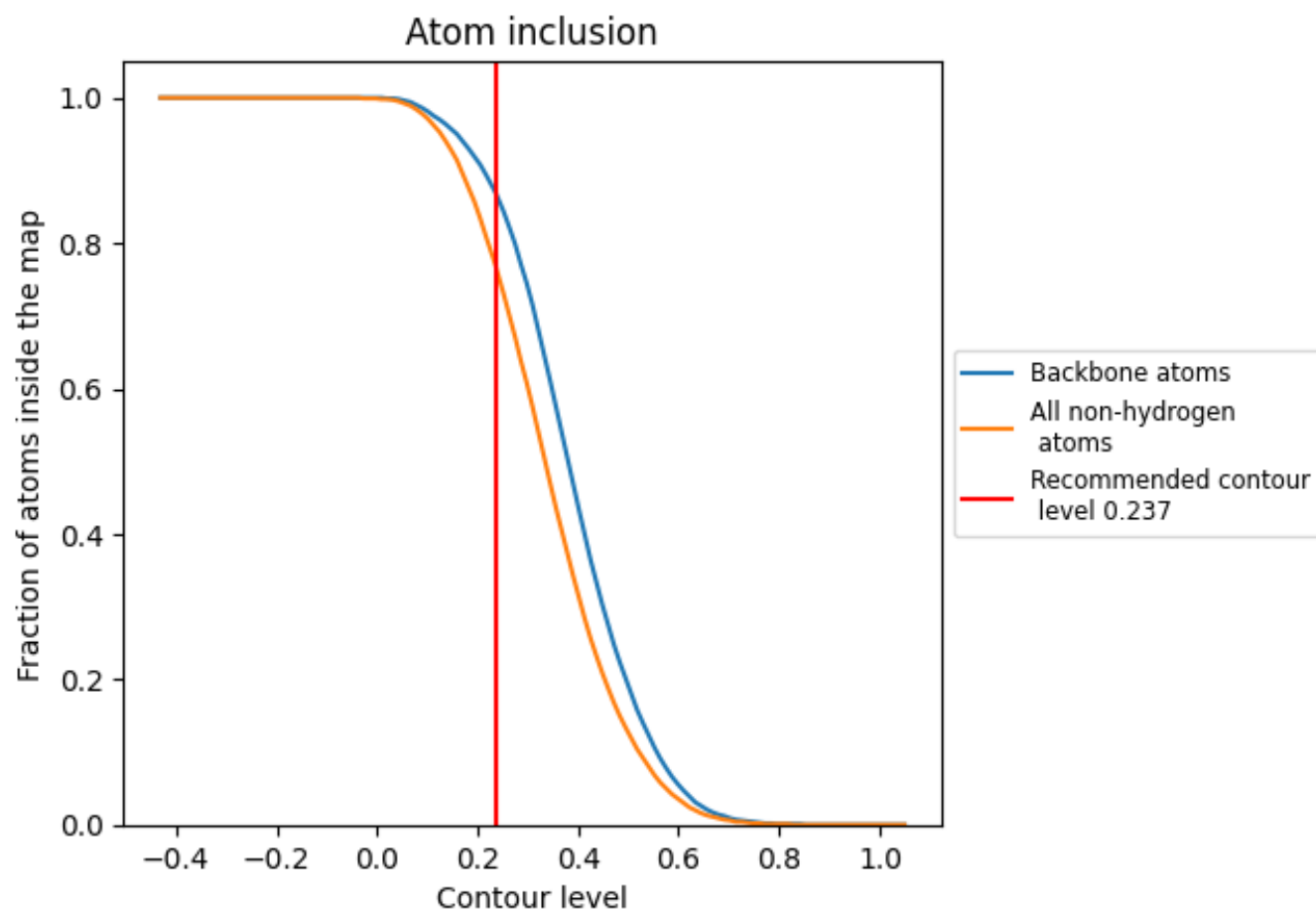
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.237).

9.4 Atom inclusion [i](#)



At the recommended contour level, 87% of all backbone atoms, 77% 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 (0.237) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	<div></div> 0.7670	<div></div> 0.2600
A	<div></div> 0.7670	<div></div> 0.2600
B	<div></div> 0.7670	<div></div> 0.2600
C	<div></div> 0.7670	<div></div> 0.2600
D	<div></div> 0.7670	<div></div> 0.2600

