Full wwPDB EM Validation Report ⓘ

Dec 17, 2022 – 04:47 pm GMT

PDB ID	:	6YRG
EMDB ID	:	EMD-10889
Title	:	Vip3Bc1 tetramer in processed, activated state
Authors	:	Thompson, R.F.; Byrne, M.J.; Iadanza, M.I.
Deposited on	:	2020-04-20
Resolution	:	7.00 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:

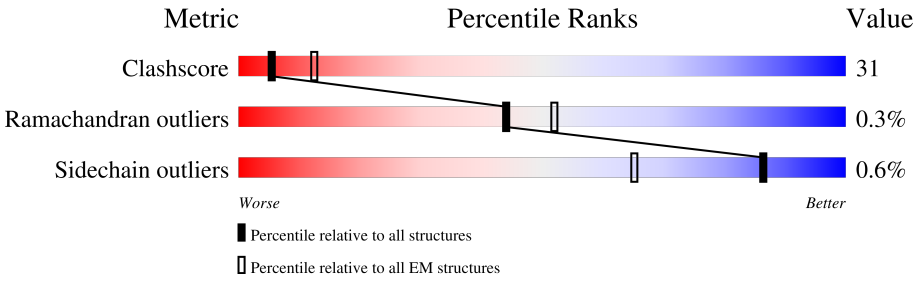
EMDB validation analysis	:	0.0.1.dev43
MolProbity	:	4.02b-467
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	1.9.9
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.31.3

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 7.00 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	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826

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

Mol	Chain	Length	Quality of chain
1	A	803	30% 45% 40% 15%
1	B	803	30% 44% 40% 15%
1	C	803	30% 44% 41% 15%
1	D	803	30% 43% 41% 15%

2 Entry composition (i)

There is only 1 type of molecule in this entry. The entry contains 21992 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 Vegetative insecticidal protein.

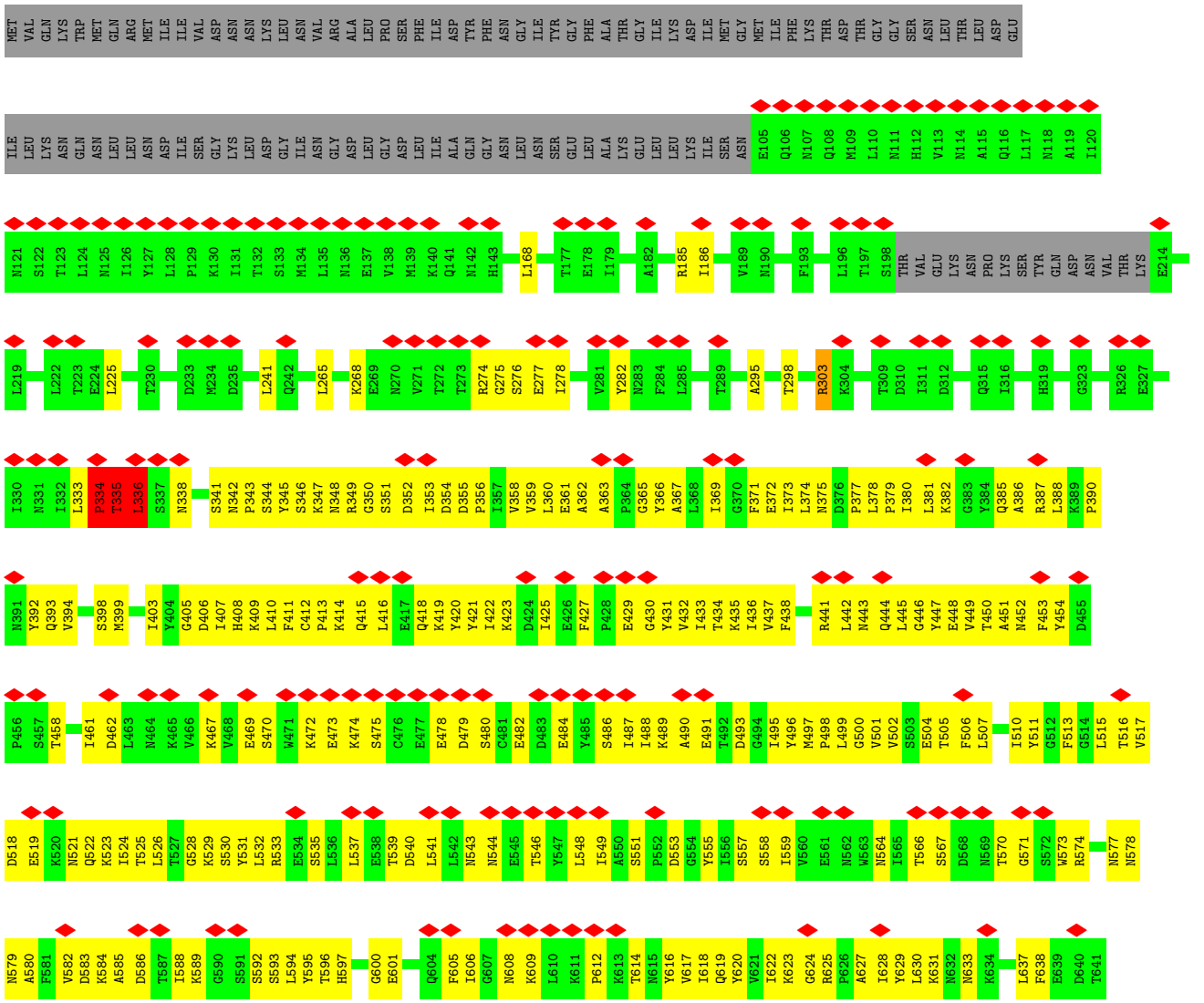
Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	684	Total	C	N	O	S	0	0
			5498	3506	893	1084	15		
1	B	684	Total	C	N	O	S	0	0
			5498	3506	893	1084	15		
1	C	684	Total	C	N	O	S	0	0
			5498	3506	893	1084	15		
1	D	684	Total	C	N	O	S	0	0
			5498	3506	893	1084	15		

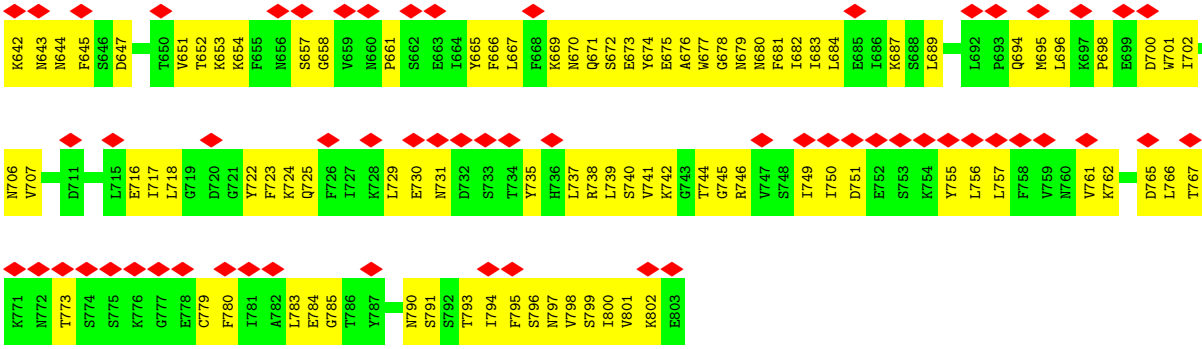
3 Residue-property plots (i)

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

- Molecule 1: Vegetative insecticidal protein

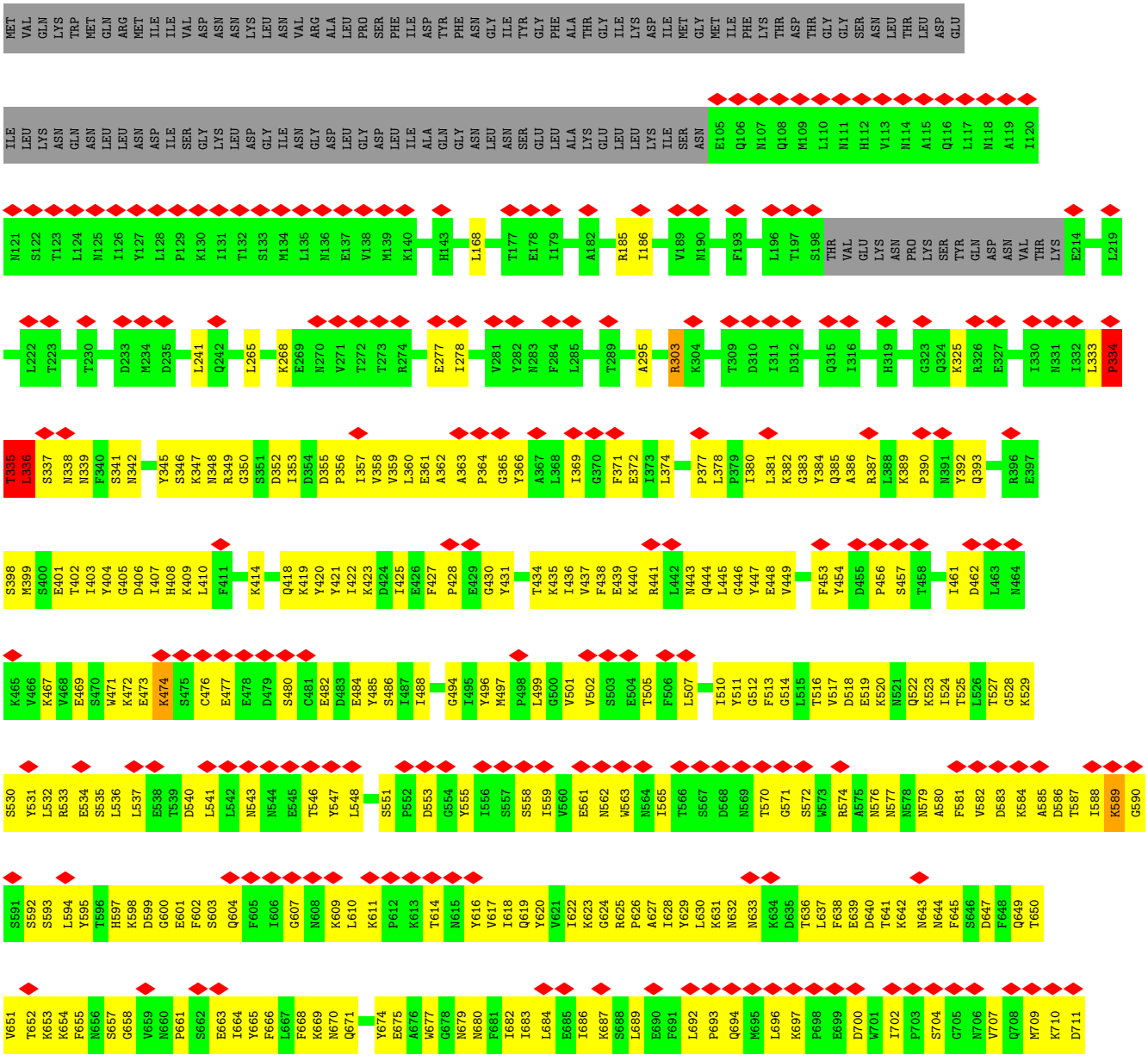
Chain A:

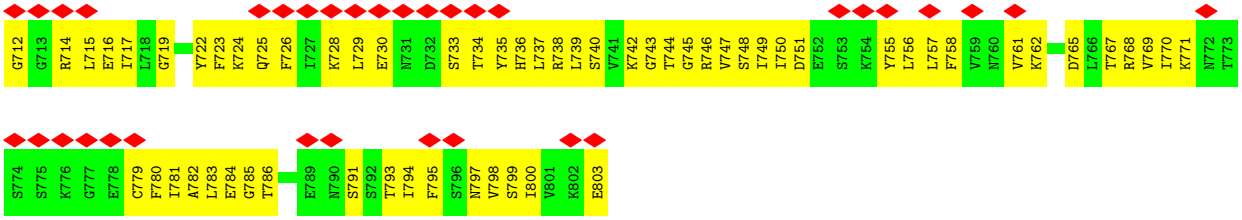




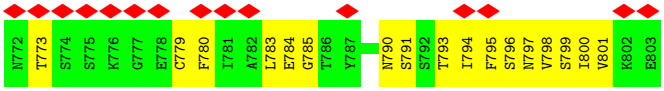
• Molecule 1: Vegetative insecticidal protein

Chain B:

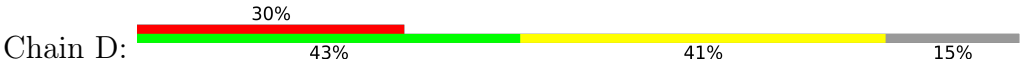


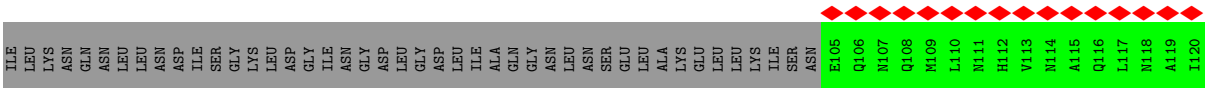


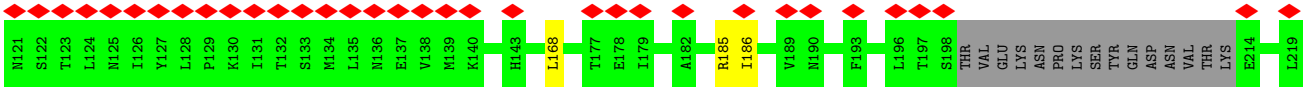
• Molecule 1: Vegetative insecticidal protein

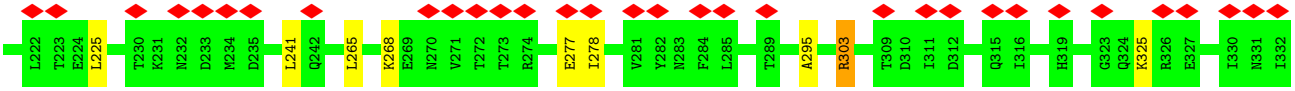


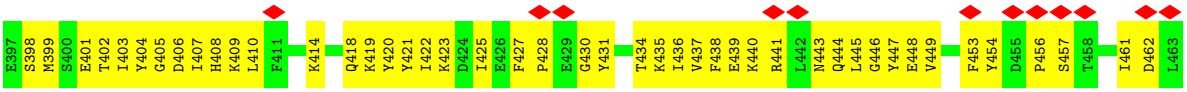
• Molecule 1: Vegetative insecticidal protein

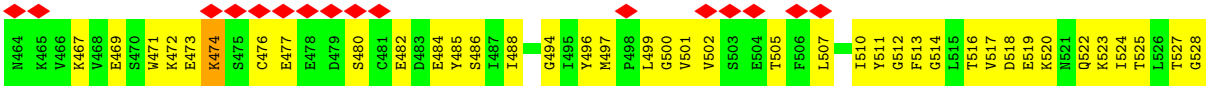


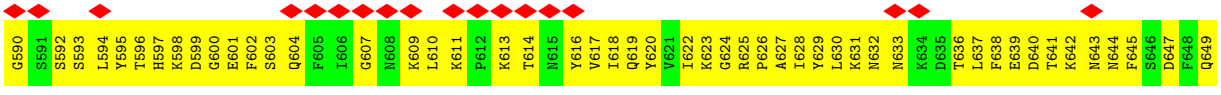


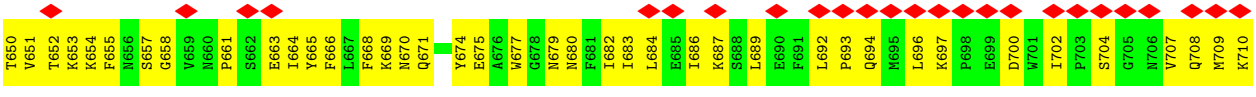


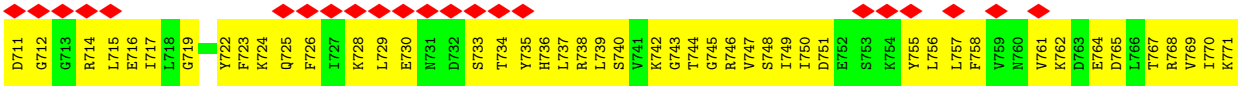


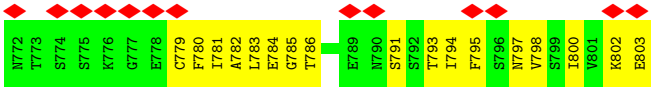












4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C4	Depositor
Number of particles used	191975	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	70.8, 42.51	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	FEI FALCON III (4k x 4k), FEI FALCON III (4k x 4k)	Depositor
Maximum map value	2.779	Depositor
Minimum map value	-0.787	Depositor
Average map value	0.005	Depositor
Map value standard deviation	0.100	Depositor
Recommended contour level	0.55	Depositor
Map size (Å)	319.50003, 319.50003, 319.50003	wwPDB
Map dimensions	300, 300, 300	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.065, 1.065, 1.065	Depositor

5 Model quality

5.1 Standard geometry

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	0.46	1/5600 (0.0%)	0.73	7/7575 (0.1%)
1	B	0.46	0/5600	0.75	12/7575 (0.2%)
1	C	0.46	1/5600 (0.0%)	0.73	7/7575 (0.1%)
1	D	0.46	0/5600	0.75	11/7575 (0.1%)
All	All	0.46	2/22400 (0.0%)	0.74	37/30300 (0.1%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand.A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	2
1	B	0	3
1	C	0	2
1	D	0	3
All	All	0	10

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	336	LEU	N-CA	5.53	1.57	1.46
1	C	336	LEU	N-CA	5.47	1.57	1.46

All (37) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	334	PRO	O-C-N	-10.68	105.61	122.70
1	C	334	PRO	O-C-N	-10.60	105.75	122.70
1	B	335	THR	CB-CA-C	8.61	134.84	111.60
1	D	185	ARG	NE-CZ-NH2	-8.17	116.22	120.30
1	B	336	LEU	CB-CA-C	-8.17	94.69	110.20
1	D	335	THR	CB-CA-C	8.15	133.61	111.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	D	336	LEU	CB-CA-C	-8.05	94.91	110.20
1	C	185	ARG	NE-CZ-NH2	-7.92	116.34	120.30
1	B	185	ARG	NE-CZ-NH2	-7.85	116.38	120.30
1	A	185	ARG	NE-CZ-NH2	-7.77	116.42	120.30
1	D	336	LEU	CB-CG-CD1	-7.71	97.88	111.00
1	D	335	THR	N-CA-CB	-7.71	95.65	110.30
1	B	335	THR	N-CA-CB	-7.56	95.94	110.30
1	A	303	ARG	NE-CZ-NH1	7.47	124.03	120.30
1	B	303	ARG	NE-CZ-NH1	7.40	124.00	120.30
1	B	336	LEU	CB-CG-CD1	-7.15	98.84	111.00
1	D	334	PRO	CA-C-N	-7.09	101.61	117.20
1	B	334	PRO	CA-C-N	-6.81	102.23	117.20
1	C	303	ARG	NE-CZ-NH1	6.68	123.64	120.30
1	B	334	PRO	O-C-N	-6.53	112.25	122.70
1	D	334	PRO	O-C-N	-6.50	112.29	122.70
1	D	303	ARG	NE-CZ-NH1	6.48	123.54	120.30
1	B	336	LEU	N-CA-CB	-5.76	98.88	110.40
1	B	336	LEU	N-CA-C	5.73	126.47	111.00
1	D	336	LEU	N-CA-C	5.69	126.37	111.00
1	D	334	PRO	C-N-CA	5.65	135.83	121.70
1	D	336	LEU	N-CA-CB	-5.53	99.34	110.40
1	A	185	ARG	NE-CZ-NH1	5.25	122.92	120.30
1	A	335	THR	C-N-CA	5.24	134.79	121.70
1	A	336	LEU	CB-CA-C	-5.22	100.28	110.20
1	C	336	LEU	CB-CA-C	-5.22	100.28	110.20
1	C	335	THR	C-N-CA	5.20	134.70	121.70
1	A	335	THR	CA-C-O	-5.11	109.36	120.10
1	B	334	PRO	C-N-CA	5.09	134.42	121.70
1	C	335	THR	CA-C-O	-5.08	109.42	120.10
1	B	185	ARG	NE-CZ-NH1	5.07	122.84	120.30
1	C	185	ARG	NE-CZ-NH1	5.04	122.82	120.30

There are no chirality outliers.

All (10) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	303	ARG	Sidechain
1	A	334	PRO	Mainchain
1	B	303	ARG	Sidechain
1	B	334	PRO	Mainchain
1	B	335	THR	Peptide
1	C	303	ARG	Sidechain

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Mol	Chain	Res	Type	Group
1	C	334	PRO	Mainchain
1	D	303	ARG	Sidechain
1	D	334	PRO	Mainchain
1	D	335	THR	Peptide

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	5498	0	5463	323	0
1	B	5498	0	5463	354	0
1	C	5498	0	5463	334	0
1	D	5498	0	5462	355	0
All	All	21992	0	21851	1366	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 31.

All (1366) 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:A:275:GLY:HA2	1:A:505:THR:CG2	1.16	1.64
1:A:278:ILE:HG13	1:A:336:LEU:CD1	1.27	1.60
1:A:278:ILE:CG1	1:A:336:LEU:HD13	1.32	1.58
1:C:275:GLY:CA	1:C:505:THR:CG2	1.84	1.53
1:C:275:GLY:HA2	1:C:505:THR:CG2	1.17	1.53
1:C:278:ILE:HG13	1:C:336:LEU:CD1	1.29	1.53
1:A:275:GLY:CA	1:A:505:THR:CG2	1.84	1.52
1:C:278:ILE:CG1	1:C:336:LEU:HD13	1.35	1.50
1:B:325:LYS:HZ1	1:B:543:ASN:ND2	1.15	1.39
1:C:275:GLY:CA	1:C:505:THR:HG22	1.43	1.38
1:D:325:LYS:HZ1	1:D:543:ASN:ND2	1.20	1.37
1:B:325:LYS:NZ	1:B:543:ASN:HD21	1.18	1.36
1:A:275:GLY:CA	1:A:505:THR:HG22	1.43	1.31
1:D:325:LYS:NZ	1:D:543:ASN:HD21	1.25	1.30
1:A:333:LEU:CD2	1:A:541:LEU:HD21	1.70	1.19

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:333:LEU:CD2	1:C:541:LEU:HD21	1.71	1.19
1:C:276:SER:N	1:C:505:THR:HG21	1.58	1.19
1:A:276:SER:N	1:A:505:THR:HG21	1.59	1.17
1:B:325:LYS:NZ	1:B:543:ASN:ND2	1.78	1.17
1:D:325:LYS:NZ	1:D:543:ASN:ND2	1.84	1.16
1:C:275:GLY:CA	1:C:505:THR:HG21	1.71	1.10
1:B:333:LEU:O	1:B:335:THR:OG1	1.66	1.10
1:A:275:GLY:CA	1:A:505:THR:HG21	1.69	1.09
1:A:333:LEU:HD21	1:A:541:LEU:CD2	1.91	1.01
1:B:325:LYS:NZ	1:B:543:ASN:CG	2.13	1.00
1:A:278:ILE:N	1:A:336:LEU:HD11	1.77	1.00
1:D:325:LYS:NZ	1:D:543:ASN:CG	2.16	0.98
1:C:278:ILE:N	1:C:336:LEU:HD11	1.79	0.98
1:C:333:LEU:HD21	1:C:541:LEU:CD2	1.92	0.98
1:A:282:TYR:OH	1:A:540:ASP:OD1	1.80	0.98
1:C:282:TYR:OH	1:C:540:ASP:OD1	1.81	0.97
1:A:275:GLY:C	1:A:505:THR:HG21	1.83	0.97
1:C:275:GLY:C	1:C:505:THR:HG21	1.84	0.97
1:B:533:ARG:O	1:B:537:LEU:HB2	1.65	0.97
1:D:325:LYS:NZ	1:D:543:ASN:OD1	1.98	0.96
1:C:333:LEU:HD21	1:C:541:LEU:HD21	0.98	0.96
1:D:533:ARG:O	1:D:537:LEU:HB2	1.65	0.96
1:A:276:SER:H	1:A:505:THR:HG21	1.23	0.95
1:B:325:LYS:NZ	1:B:543:ASN:OD1	1.99	0.95
1:A:333:LEU:HD21	1:A:541:LEU:HD21	0.96	0.94
1:D:333:LEU:C	1:D:335:THR:H	1.64	0.93
1:C:276:SER:H	1:C:505:THR:HG21	1.20	0.91
1:B:333:LEU:C	1:B:335:THR:H	1.66	0.90
1:A:333:LEU:CD2	1:A:541:LEU:CD2	2.50	0.88
1:A:275:GLY:HA3	1:A:505:THR:CG2	2.02	0.88
1:A:275:GLY:HA2	1:A:505:THR:CB	2.04	0.87
1:C:275:GLY:C	1:C:505:THR:CG2	2.42	0.87
1:C:745:GLY:HA2	1:C:785:GLY:HA2	1.57	0.87
1:B:601:GLU:HA	1:B:669:LYS:HA	1.56	0.87
1:A:745:GLY:HA2	1:A:785:GLY:HA2	1.57	0.86
1:D:601:GLU:HA	1:D:669:LYS:HA	1.56	0.85
1:C:275:GLY:HA2	1:C:505:THR:CB	2.04	0.85
1:B:325:LYS:HZ2	1:B:543:ASN:HD21	1.23	0.84
1:C:333:LEU:CD2	1:C:541:LEU:CD2	2.52	0.84
1:C:275:GLY:HA3	1:C:505:THR:CG2	2.03	0.84
1:D:333:LEU:C	1:D:335:THR:HG23	1.97	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:325:LYS:HZ1	1:B:543:ASN:CG	1.75	0.84
1:D:751:ASP:HB2	1:D:756:LEU:HD11	1.61	0.83
1:A:275:GLY:C	1:A:505:THR:CG2	2.43	0.83
1:A:381:LEU:HB2	1:A:407:ILE:HG13	1.61	0.83
1:B:277:GLU:HB2	1:B:336:LEU:HD21	1.59	0.82
1:A:276:SER:OG	1:A:336:LEU:CD2	2.27	0.82
1:C:381:LEU:HB2	1:C:407:ILE:HG13	1.61	0.82
1:D:325:LYS:HZ1	1:D:543:ASN:CG	1.77	0.82
1:B:751:ASP:HB2	1:B:756:LEU:HD11	1.61	0.82
1:A:275:GLY:CA	1:A:505:THR:CB	2.58	0.82
1:D:670:ASN:HD21	1:D:674:TYR:H	1.28	0.81
1:B:670:ASN:HD21	1:B:674:TYR:H	1.28	0.81
1:D:325:LYS:HZ2	1:D:543:ASN:HD21	1.29	0.81
1:C:746:ARG:HB2	1:C:784:GLU:HG3	1.63	0.80
1:A:435:LYS:HD3	1:A:437:VAL:HG23	1.62	0.80
1:C:276:SER:N	1:C:505:THR:CG2	2.42	0.80
1:B:336:LEU:HD23	1:B:337:SER:H	1.45	0.80
1:C:435:LYS:HD3	1:C:437:VAL:HG23	1.62	0.80
1:D:333:LEU:O	1:D:335:THR:N	2.15	0.80
1:A:746:ARG:HB2	1:A:784:GLU:HG3	1.63	0.80
1:C:276:SER:OG	1:C:336:LEU:CD2	2.29	0.80
1:D:624:GLY:N	1:D:645:PHE:O	2.16	0.79
1:D:671:GLN:HG2	1:D:674:TYR:HD2	1.47	0.79
1:A:623:LYS:HG3	1:A:647:ASP:HA	1.65	0.78
1:C:275:GLY:CA	1:C:505:THR:CB	2.58	0.78
1:C:749:ILE:HD12	1:C:757:LEU:HD12	1.65	0.78
1:A:521:ASN:HB2	1:A:523:LYS:HG2	1.65	0.78
1:B:333:LEU:O	1:B:335:THR:N	2.16	0.78
1:D:277:GLU:HB2	1:D:336:LEU:HD21	1.64	0.78
1:B:371:PHE:HB2	1:B:502:VAL:HB	1.66	0.78
1:C:623:LYS:HG3	1:C:647:ASP:HA	1.65	0.78
1:A:360:LEU:N	1:A:436:ILE:O	2.15	0.77
1:B:624:GLY:N	1:B:645:PHE:O	2.15	0.77
1:B:671:GLN:HG2	1:B:674:TYR:HD2	1.47	0.77
1:C:351:SER:HB3	1:C:409:LYS:HD3	1.65	0.77
1:C:521:ASN:HB2	1:C:523:LYS:HG2	1.65	0.77
1:A:351:SER:HB3	1:A:409:LYS:HD3	1.65	0.77
1:A:722:TYR:HB3	1:A:784:GLU:HB3	1.67	0.77
1:D:371:PHE:HB2	1:D:502:VAL:HB	1.66	0.77
1:D:372:GLU:HB2	1:D:384:TYR:HE2	1.49	0.77
1:B:372:GLU:HB2	1:B:384:TYR:HE2	1.49	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:514:GLY:N	1:B:527:THR:O	2.16	0.77
1:A:418:GLN:HA	1:A:443:ASN:HB3	1.67	0.77
1:A:749:ILE:HD12	1:A:757:LEU:HD12	1.65	0.77
1:D:757:LEU:HD12	1:D:770:ILE:HD11	1.68	0.76
1:D:579:ASN:ND2	1:D:599:ASP:OD1	2.19	0.76
1:D:336:LEU:HD23	1:D:337:SER:H	1.49	0.76
1:D:746:ARG:NH2	1:D:785:GLY:O	2.18	0.76
1:C:418:GLN:HA	1:C:443:ASN:HB3	1.67	0.76
1:C:722:TYR:HB3	1:C:784:GLU:HB3	1.67	0.76
1:D:742:LYS:HB2	1:D:794:ILE:HB	1.68	0.76
1:B:710:LYS:HB2	1:B:714:ARG:HB2	1.68	0.76
1:B:579:ASN:ND2	1:B:599:ASP:OD1	2.19	0.76
1:B:742:LYS:HB2	1:B:794:ILE:HB	1.68	0.76
1:B:746:ARG:NH2	1:B:785:GLY:O	2.18	0.76
1:D:514:GLY:N	1:D:527:THR:O	2.16	0.76
1:C:631:LYS:HG3	1:C:633:ASN:H	1.52	0.75
1:C:360:LEU:N	1:C:436:ILE:O	2.15	0.75
1:A:502:VAL:HG21	1:A:526:LEU:HB2	1.68	0.75
1:C:502:VAL:HG21	1:C:526:LEU:HB2	1.68	0.75
1:A:419:LYS:HB3	1:A:444:GLN:HA	1.68	0.75
1:B:757:LEU:HD12	1:B:770:ILE:HD11	1.68	0.75
1:A:278:ILE:H	1:A:336:LEU:HD11	1.52	0.75
1:A:276:SER:N	1:A:505:THR:CG2	2.44	0.74
1:D:419:LYS:HB3	1:D:444:GLN:HA	1.69	0.74
1:D:737:LEU:HA	1:D:800:ILE:HA	1.70	0.74
1:B:737:LEU:HA	1:B:800:ILE:HA	1.70	0.74
1:C:596:THR:HB	1:C:600:GLY:HA3	1.70	0.74
1:D:325:LYS:HZ2	1:D:543:ASN:ND2	1.86	0.74
1:C:419:LYS:HB3	1:C:444:GLN:HA	1.68	0.73
1:D:710:LYS:HB2	1:D:714:ARG:HB2	1.68	0.73
1:B:419:LYS:HB3	1:B:444:GLN:HA	1.69	0.73
1:B:355:ASP:HB3	1:B:692:LEU:HB2	1.71	0.73
1:B:350:GLY:O	1:B:414:LYS:NZ	2.21	0.73
1:D:355:ASP:HB3	1:D:692:LEU:HB2	1.71	0.73
1:C:495:ILE:HG23	1:C:522:GLN:HB3	1.71	0.73
1:A:411:PHE:O	1:A:420:TYR:OH	2.07	0.72
1:A:584:LYS:HE3	1:A:592:SER:HA	1.71	0.72
1:D:350:GLY:O	1:D:414:LYS:NZ	2.21	0.72
1:A:596:THR:HB	1:A:600:GLY:HA3	1.70	0.72
1:A:631:LYS:HG3	1:A:633:ASN:H	1.52	0.72
1:B:747:VAL:HB	1:B:781:ILE:HD11	1.72	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:411:PHE:O	1:C:420:TYR:OH	2.07	0.71
1:A:495:ILE:HG23	1:A:522:GLN:HB3	1.71	0.71
1:A:707:VAL:HG12	1:A:717:ILE:HA	1.72	0.71
1:A:698:PRO:HA	1:A:701:TRP:HD1	1.55	0.71
1:A:361:GLU:HA	1:A:435:LYS:HA	1.73	0.71
1:C:278:ILE:H	1:C:336:LEU:HD11	1.55	0.71
1:D:747:VAL:HB	1:D:781:ILE:HD11	1.72	0.71
1:C:361:GLU:HA	1:C:435:LYS:HA	1.73	0.71
1:A:518:ASP:HB3	1:A:523:LYS:HB2	1.73	0.70
1:B:586:ASP:OD2	1:B:593:SER:N	2.22	0.70
1:C:717:ILE:HB	1:C:793:THR:HB	1.73	0.70
1:D:586:ASP:OD2	1:D:593:SER:N	2.22	0.70
1:B:372:GLU:HB3	1:B:382:LYS:HB3	1.71	0.70
1:D:496:TYR:HB2	1:D:523:LYS:HA	1.73	0.70
1:D:510:ILE:HA	1:D:530:SER:HA	1.73	0.70
1:C:510:ILE:HA	1:C:530:SER:HA	1.73	0.70
1:C:584:LYS:HE3	1:C:592:SER:HA	1.71	0.70
1:D:620:TYR:OH	1:D:653:LYS:NZ	2.20	0.70
1:C:707:VAL:HG12	1:C:717:ILE:HA	1.72	0.70
1:D:372:GLU:HB3	1:D:382:LYS:HB3	1.71	0.70
1:B:734:THR:HB	1:B:803:GLU:HB3	1.73	0.70
1:D:611:LYS:O	1:D:614:THR:OG1	2.10	0.70
1:D:734:THR:HB	1:D:803:GLU:HB3	1.73	0.70
1:A:596:THR:O	1:A:670:ASN:ND2	2.25	0.70
1:B:611:LYS:O	1:B:614:THR:OG1	2.10	0.70
1:D:349:ARG:O	1:D:408:HIS:ND1	2.24	0.70
1:C:698:PRO:HA	1:C:701:TRP:HD1	1.55	0.70
1:B:349:ARG:O	1:B:408:HIS:ND1	2.24	0.69
1:C:738:ARG:O	1:C:799:SER:OG	2.11	0.69
1:C:518:ASP:HB3	1:C:523:LYS:HB2	1.73	0.69
1:A:510:ILE:HA	1:A:530:SER:HA	1.73	0.69
1:A:278:ILE:CD1	1:A:336:LEU:HD13	2.20	0.69
1:B:510:ILE:HA	1:B:530:SER:HA	1.73	0.69
1:A:546:THR:HG22	1:A:548:LEU:HD22	1.75	0.69
1:A:738:ARG:O	1:A:799:SER:OG	2.11	0.69
1:B:496:TYR:HB2	1:B:523:LYS:HA	1.74	0.69
1:B:333:LEU:C	1:B:335:THR:HG23	2.13	0.69
1:B:513:PHE:HA	1:B:528:GLY:HA2	1.74	0.69
1:D:421:TYR:HA	1:D:485:TYR:HA	1.75	0.69
1:D:558:SER:HB2	1:D:682:ILE:HA	1.75	0.69
1:A:360:LEU:HB2	1:A:436:ILE:HB	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:717:ILE:HB	1:A:793:THR:HB	1.73	0.68
1:C:546:THR:HG22	1:C:548:LEU:HD22	1.75	0.68
1:B:278:ILE:HG13	1:B:336:LEU:HD22	1.75	0.68
1:D:361:GLU:HA	1:D:435:LYS:HA	1.75	0.68
1:A:670:ASN:ND2	1:A:674:TYR:O	2.27	0.68
1:B:719:GLY:HA2	1:B:791:SER:HB3	1.76	0.68
1:A:278:ILE:HG13	1:A:336:LEU:HD11	1.63	0.68
1:B:558:SER:HB2	1:B:682:ILE:HA	1.75	0.68
1:C:360:LEU:HB2	1:C:436:ILE:HB	1.75	0.68
1:C:670:ASN:ND2	1:C:674:TYR:O	2.27	0.68
1:A:558:SER:HB2	1:A:682:ILE:HD13	1.76	0.68
1:C:558:SER:HB2	1:C:682:ILE:HD13	1.76	0.68
1:B:325:LYS:HZ2	1:B:543:ASN:ND2	1.79	0.68
1:D:513:PHE:HA	1:D:528:GLY:HA2	1.74	0.68
1:B:559:ILE:HG13	1:B:684:LEU:HD23	1.76	0.67
1:C:596:THR:O	1:C:670:ASN:ND2	2.25	0.67
1:D:719:GLY:HA2	1:D:791:SER:HB3	1.76	0.67
1:B:349:ARG:HH11	1:B:494:GLY:HA2	1.60	0.67
1:B:746:ARG:H	1:B:785:GLY:HA2	1.59	0.67
1:B:437:VAL:HB	1:B:448:GLU:HB3	1.75	0.67
1:D:559:ILE:HG13	1:D:684:LEU:HD23	1.76	0.67
1:D:746:ARG:H	1:D:785:GLY:HA2	1.59	0.67
1:B:421:TYR:HA	1:B:485:TYR:HA	1.75	0.67
1:D:593:SER:HA	1:D:679:ASN:HB3	1.76	0.67
1:D:437:VAL:HB	1:D:448:GLU:HB3	1.75	0.67
1:D:356:PRO:HG2	1:D:440:LYS:HB3	1.77	0.67
1:D:737:LEU:HD23	1:D:757:LEU:HD13	1.77	0.67
1:A:346:SER:HB2	1:A:499:LEU:HD22	1.76	0.67
1:C:564:ASN:HA	1:C:680:ASN:H	1.59	0.67
1:B:737:LEU:HD23	1:B:757:LEU:HD13	1.77	0.67
1:C:342:ASN:ND2	1:C:344:SER:O	2.28	0.66
1:A:352:ASP:H	1:A:414:LYS:HZ3	1.44	0.66
1:C:507:LEU:HD22	1:C:549:ILE:HB	1.77	0.66
1:A:507:LEU:HD22	1:A:549:ILE:HB	1.77	0.66
1:C:278:ILE:CG1	1:C:336:LEU:CD1	2.23	0.66
1:B:333:LEU:C	1:B:335:THR:OG1	2.34	0.66
1:B:361:GLU:HA	1:B:435:LYS:HA	1.75	0.66
1:B:427:PHE:HD2	1:B:467:LYS:HE3	1.60	0.66
1:D:700:ASP:HB3	1:D:725:GLN:HG3	1.77	0.66
1:B:593:SER:HA	1:B:679:ASN:HB3	1.76	0.66
1:D:278:ILE:HG13	1:D:336:LEU:HD22	1.76	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:339:ASN:HB3	1:B:527:THR:HG23	1.77	0.66
1:D:278:ILE:HG13	1:D:336:LEU:HD13	1.76	0.66
1:C:593:SER:HA	1:C:679:ASN:HB3	1.78	0.66
1:D:339:ASN:HB3	1:D:527:THR:HG23	1.77	0.66
1:D:372:GLU:HG2	1:D:501:VAL:HG22	1.77	0.66
1:D:349:ARG:HH11	1:D:494:GLY:HA2	1.60	0.66
1:B:700:ASP:HB3	1:B:725:GLN:HG3	1.77	0.66
1:C:168:LEU:HD21	1:C:265:LEU:HA	1.78	0.65
1:D:427:PHE:HD2	1:D:467:LYS:HE3	1.60	0.65
1:D:597:HIS:HB2	1:D:675:GLU:HG2	1.78	0.65
1:B:356:PRO:HG2	1:B:440:LYS:HB3	1.77	0.65
1:C:278:ILE:HG13	1:C:336:LEU:HD11	1.65	0.65
1:D:641:THR:O	1:D:671:GLN:NE2	2.30	0.65
1:C:346:SER:HB2	1:C:499:LEU:HD22	1.76	0.65
1:D:168:LEU:HD21	1:D:265:LEU:HA	1.78	0.65
1:B:620:TYR:OH	1:B:653:LYS:NZ	2.20	0.65
1:C:352:ASP:H	1:C:414:LYS:HZ3	1.44	0.65
1:A:564:ASN:HA	1:A:680:ASN:H	1.59	0.65
1:B:735:TYR:O	1:B:770:ILE:N	2.30	0.65
1:D:517:VAL:HG23	1:D:524:ILE:HA	1.79	0.65
1:A:342:ASN:ND2	1:A:344:SER:O	2.28	0.65
1:B:278:ILE:HG13	1:B:336:LEU:HD13	1.78	0.65
1:A:275:GLY:HA3	1:A:505:THR:HB	1.79	0.65
1:C:392:TYR:OH	1:C:429:GLU:OE2	2.13	0.65
1:C:275:GLY:HA3	1:C:505:THR:HB	1.78	0.65
1:C:619:GLN:HB3	1:C:682:ILE:HB	1.79	0.65
1:D:386:ALA:HB2	1:D:399:MET:HA	1.78	0.65
1:A:392:TYR:OH	1:A:429:GLU:OE2	2.13	0.64
1:A:593:SER:HA	1:A:679:ASN:HB3	1.78	0.64
1:B:168:LEU:HD21	1:B:265:LEU:HA	1.78	0.64
1:B:597:HIS:HB2	1:B:675:GLU:HG2	1.78	0.64
1:D:359:VAL:HA	1:D:437:VAL:HA	1.79	0.64
1:B:386:ALA:HB2	1:B:399:MET:HA	1.78	0.64
1:A:168:LEU:HD21	1:A:265:LEU:HA	1.78	0.64
1:B:372:GLU:HG2	1:B:501:VAL:HG22	1.77	0.64
1:C:519:GLU:O	1:C:522:GLN:NE2	2.30	0.64
1:A:519:GLU:O	1:A:522:GLN:NE2	2.30	0.64
1:A:619:GLN:HB3	1:A:682:ILE:HB	1.79	0.64
1:B:641:THR:O	1:B:671:GLN:NE2	2.30	0.64
1:C:517:VAL:HG12	1:C:524:ILE:HA	1.79	0.64
1:C:352:ASP:OD1	1:C:443:ASN:ND2	2.28	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:413:PRO:HB3	1:C:418:GLN:HB2	1.80	0.64
1:A:413:PRO:HB3	1:A:418:GLN:HB2	1.80	0.64
1:B:277:GLU:HB2	1:B:336:LEU:CD2	2.27	0.64
1:B:358:VAL:O	1:B:438:PHE:N	2.30	0.64
1:B:359:VAL:HA	1:B:437:VAL:HA	1.79	0.64
1:B:453:PHE:O	1:B:462:ASP:N	2.29	0.64
1:C:390:PRO:O	1:C:393:GLN:HG2	1.98	0.64
1:D:392:TYR:HB2	1:D:535:SER:HB2	1.80	0.64
1:A:275:GLY:HA3	1:A:505:THR:CB	2.26	0.63
1:B:517:VAL:HG23	1:B:524:ILE:HA	1.79	0.63
1:D:358:VAL:O	1:D:438:PHE:N	2.30	0.63
1:B:392:TYR:HB2	1:B:535:SER:HB2	1.80	0.63
1:A:517:VAL:HG12	1:A:524:ILE:HA	1.79	0.63
1:C:622:ILE:HA	1:C:678:GLY:HA2	1.80	0.63
1:B:730:GLU:N	1:B:735:TYR:OH	2.23	0.63
1:D:734:THR:HG23	1:D:771:LYS:HA	1.80	0.63
1:B:631:LYS:HG2	1:B:633:ASN:H	1.63	0.63
1:C:532:LEU:HD12	1:C:535:SER:HB2	1.81	0.63
1:D:474:LYS:HE3	1:D:484:GLU:HG2	1.81	0.63
1:A:390:PRO:O	1:A:393:GLN:HG2	1.98	0.62
1:A:742:LYS:N	1:A:794:ILE:O	2.31	0.62
1:B:533:ARG:O	1:B:537:LEU:CB	2.45	0.62
1:D:631:LYS:HG2	1:D:633:ASN:H	1.63	0.62
1:D:735:TYR:O	1:D:770:ILE:N	2.30	0.62
1:A:352:ASP:OD1	1:A:443:ASN:ND2	2.27	0.62
1:A:717:ILE:N	1:A:793:THR:O	2.32	0.62
1:C:717:ILE:N	1:C:793:THR:O	2.32	0.62
1:D:333:LEU:CA	1:D:335:THR:CG2	2.76	0.62
1:D:453:PHE:O	1:D:462:ASP:N	2.30	0.62
1:A:532:LEU:HD12	1:A:535:SER:HB2	1.81	0.62
1:C:537:LEU:HA	1:C:541:LEU:HD13	1.81	0.62
1:B:707:VAL:HG12	1:B:717:ILE:HA	1.82	0.62
1:A:532:LEU:HA	1:A:535:SER:HB2	1.82	0.62
1:D:421:TYR:HB3	1:D:473:GLU:HB3	1.81	0.62
1:B:734:THR:HG23	1:B:771:LYS:HA	1.80	0.62
1:A:622:ILE:HA	1:A:678:GLY:HA2	1.80	0.61
1:A:741:VAL:HA	1:A:795:PHE:HA	1.82	0.61
1:B:607:GLY:N	1:B:664:ILE:O	2.33	0.61
1:C:349:ARG:HH22	1:C:415:GLN:HB3	1.65	0.61
1:C:761:VAL:HB	1:C:766:LEU:HD21	1.82	0.61
1:D:742:LYS:O	1:D:794:ILE:N	2.28	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:746:ARG:HH12	1:B:786:THR:HA	1.65	0.61
1:D:707:VAL:HG12	1:D:717:ILE:HA	1.82	0.61
1:B:421:TYR:HB3	1:B:473:GLU:HB3	1.81	0.61
1:D:586:ASP:HB3	1:D:677:TRP:HD1	1.66	0.61
1:A:537:LEU:HA	1:A:541:LEU:HD13	1.81	0.61
1:B:430:GLY:O	1:B:454:TYR:N	2.34	0.61
1:B:742:LYS:O	1:B:794:ILE:N	2.28	0.61
1:C:742:LYS:N	1:C:794:ILE:O	2.31	0.61
1:D:746:ARG:HH12	1:D:786:THR:HA	1.65	0.61
1:A:761:VAL:HB	1:A:766:LEU:HD21	1.82	0.61
1:B:559:ILE:HG23	1:B:609:LYS:HD2	1.82	0.61
1:D:333:LEU:C	1:D:335:THR:CG2	2.66	0.61
1:B:352:ASP:OD1	1:B:443:ASN:ND2	2.33	0.61
1:D:430:GLY:O	1:D:454:TYR:N	2.34	0.61
1:D:559:ILE:HG23	1:D:609:LYS:HD2	1.82	0.61
1:B:440:LYS:HA	1:B:445:LEU:HA	1.83	0.60
1:D:352:ASP:OD1	1:D:443:ASN:ND2	2.33	0.60
1:D:421:TYR:HB2	1:D:472:LYS:HB2	1.82	0.60
1:A:349:ARG:HH22	1:A:415:GLN:HB3	1.65	0.60
1:B:474:LYS:HE3	1:B:484:GLU:HG2	1.81	0.60
1:B:421:TYR:HB2	1:B:472:LYS:HB2	1.82	0.60
1:B:586:ASP:HB3	1:B:677:TRP:HD1	1.66	0.60
1:D:352:ASP:HA	1:D:443:ASN:HD21	1.67	0.60
1:D:440:LYS:HB2	1:D:445:LEU:HD13	1.84	0.60
1:B:726:PHE:HD1	1:B:780:PHE:HB3	1.66	0.60
1:C:532:LEU:HA	1:C:535:SER:HB2	1.82	0.60
1:C:741:VAL:HA	1:C:795:PHE:HA	1.82	0.60
1:D:637:LEU:HD13	1:D:655:PHE:HE2	1.67	0.60
1:D:277:GLU:HB2	1:D:336:LEU:CD2	2.31	0.60
1:B:537:LEU:HA	1:B:541:LEU:HD12	1.83	0.60
1:D:670:ASN:ND2	1:D:674:TYR:O	2.35	0.60
1:A:751:ASP:HB2	1:A:756:LEU:HD21	1.84	0.60
1:C:505:THR:O	1:C:551:SER:N	2.35	0.60
1:C:631:LYS:HG2	1:C:667:LEU:HD13	1.84	0.60
1:A:744:THR:HB	1:A:762:LYS:HD2	1.84	0.60
1:B:403:ILE:HG21	1:B:686:ILE:HA	1.84	0.60
1:C:275:GLY:HA3	1:C:505:THR:CB	2.26	0.60
1:C:447:TYR:CE1	1:C:515:LEU:HB2	2.37	0.60
1:D:607:GLY:N	1:D:664:ILE:O	2.34	0.60
1:C:513:PHE:HA	1:C:528:GLY:HA2	1.83	0.59
1:C:744:THR:HB	1:C:762:LYS:HD2	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:440:LYS:HB2	1:B:445:LEU:HD13	1.84	0.59
1:B:670:ASN:ND2	1:B:674:TYR:O	2.35	0.59
1:D:726:PHE:HD1	1:D:780:PHE:HB3	1.66	0.59
1:B:783:LEU:HB3	1:B:795:PHE:HE2	1.67	0.59
1:C:345:TYR:HH	1:C:525:THR:HG1	1.51	0.59
1:D:365:GLY:HA3	1:D:387:ARG:HH21	1.67	0.59
1:D:736:HIS:NE2	1:D:803:GLU:OE2	2.35	0.59
1:D:744:THR:HA	1:D:762:LYS:HA	1.84	0.59
1:A:276:SER:OG	1:A:336:LEU:HD21	2.02	0.59
1:A:419:LYS:N	1:A:443:ASN:O	2.36	0.59
1:B:637:LEU:HD13	1:B:655:PHE:HE2	1.67	0.59
1:D:537:LEU:HA	1:D:541:LEU:HD12	1.84	0.59
1:A:513:PHE:HA	1:A:528:GLY:HA2	1.83	0.59
1:A:631:LYS:HG2	1:A:667:LEU:HD13	1.84	0.59
1:B:365:GLY:HA3	1:B:387:ARG:HH21	1.67	0.59
1:B:510:ILE:HG22	1:B:530:SER:HB2	1.84	0.59
1:C:278:ILE:CD1	1:C:336:LEU:HD13	2.23	0.59
1:A:447:TYR:CE1	1:A:515:LEU:HB2	2.37	0.59
1:A:505:THR:O	1:A:551:SER:N	2.35	0.59
1:B:511:TYR:HB3	1:B:531:TYR:CZ	2.37	0.59
1:B:744:THR:HA	1:B:762:LYS:HA	1.84	0.59
1:C:745:GLY:N	1:C:761:VAL:O	2.24	0.59
1:C:751:ASP:HB2	1:C:756:LEU:HD21	1.84	0.59
1:D:404:TYR:HA	1:D:687:LYS:HD2	1.85	0.59
1:D:510:ILE:HG22	1:D:530:SER:HB2	1.84	0.59
1:A:488:ILE:HG12	1:A:519:GLU:HB3	1.85	0.59
1:C:423:LYS:HE2	1:C:473:GLU:H	1.67	0.59
1:D:440:LYS:HA	1:D:445:LEU:HA	1.83	0.59
1:A:423:LYS:HE2	1:A:473:GLU:H	1.67	0.59
1:C:698:PRO:HA	1:C:701:TRP:CD1	2.38	0.59
1:A:513:PHE:HZ	1:A:526:LEU:HD22	1.67	0.58
1:D:572:SER:O	1:D:574:ARG:NH1	2.36	0.58
1:A:701:TRP:HA	1:A:725:GLN:HB2	1.85	0.58
1:B:710:LYS:NZ	1:B:716:GLU:OE1	2.34	0.58
1:C:441:ARG:HG2	1:C:442:LEU:HD12	1.84	0.58
1:D:511:TYR:HB3	1:D:531:TYR:CZ	2.37	0.58
1:B:627:ALA:HB1	1:B:629:TYR:HE2	1.68	0.58
1:D:783:LEU:HB3	1:D:795:PHE:HE2	1.67	0.58
1:A:278:ILE:CG1	1:A:336:LEU:CD1	2.21	0.58
1:C:701:TRP:HA	1:C:725:GLN:HB2	1.86	0.58
1:D:598:LYS:H	1:D:670:ASN:ND2	2.01	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:584:LYS:HG3	1:A:585:ALA:N	2.18	0.58
1:A:441:ARG:HG2	1:A:442:LEU:HD12	1.84	0.58
1:B:404:TYR:HA	1:B:687:LYS:HD2	1.85	0.58
1:B:598:LYS:H	1:B:670:ASN:ND2	2.01	0.58
1:C:421:TYR:HB2	1:C:446:GLY:HA2	1.86	0.58
1:C:513:PHE:HZ	1:C:526:LEU:HD22	1.67	0.58
1:D:488:ILE:HG12	1:D:519:GLU:HB3	1.84	0.58
1:A:277:GLU:HB2	1:A:336:LEU:HG	1.86	0.58
1:B:742:LYS:N	1:B:794:ILE:O	2.33	0.58
1:B:611:LYS:O	1:B:657:SER:OG	2.16	0.58
1:C:595:TYR:HE2	1:C:675:GLU:HB3	1.69	0.58
1:D:403:ILE:HG21	1:D:686:ILE:HA	1.84	0.58
1:A:275:GLY:CA	1:A:505:THR:HB	2.34	0.58
1:A:275:GLY:HA3	1:A:505:THR:HG21	1.72	0.58
1:B:352:ASP:HA	1:B:443:ASN:HD21	1.67	0.58
1:B:488:ILE:HG12	1:B:519:GLU:HB3	1.84	0.58
1:D:625:ARG:NE	1:D:642:LYS:O	2.32	0.58
1:D:627:ALA:HB1	1:D:629:TYR:HE2	1.68	0.58
1:D:730:GLU:N	1:D:735:TYR:OH	2.23	0.58
1:A:497:MET:HA	1:A:524:ILE:HB	1.85	0.58
1:B:335:THR:HB	1:B:336:LEU:HD12	1.86	0.58
1:C:488:ILE:HG12	1:C:519:GLU:HB3	1.85	0.58
1:D:627:ALA:HA	1:D:641:THR:HG22	1.86	0.58
1:B:625:ARG:NE	1:B:642:LYS:O	2.32	0.57
1:B:767:THR:OG1	1:B:768:ARG:NH2	2.37	0.57
1:C:346:SER:OG	1:C:375:ASN:ND2	2.37	0.57
1:C:497:MET:HA	1:C:524:ILE:HB	1.85	0.57
1:D:767:THR:OG1	1:D:768:ARG:NH2	2.37	0.57
1:A:421:TYR:HB2	1:A:446:GLY:HA2	1.86	0.57
1:A:749:ILE:HG22	1:A:756:LEU:HB2	1.86	0.57
1:B:439:GLU:O	1:B:446:GLY:N	2.35	0.57
1:B:572:SER:O	1:B:574:ARG:NH1	2.36	0.57
1:B:736:HIS:NE2	1:B:803:GLU:OE2	2.35	0.57
1:A:346:SER:OG	1:A:375:ASN:ND2	2.37	0.57
1:A:453:PHE:HB3	1:A:462:ASP:OD1	2.05	0.57
1:A:630:LEU:O	1:A:637:LEU:N	2.33	0.57
1:C:453:PHE:HB3	1:C:462:ASP:OD1	2.05	0.57
1:D:533:ARG:O	1:D:537:LEU:CB	2.45	0.57
1:A:338:ASN:ND2	1:A:530:SER:O	2.38	0.57
1:A:595:TYR:HE2	1:A:675:GLU:HB3	1.69	0.57
1:B:438:PHE:HA	1:B:447:TYR:HA	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:604:GLN:O	1:B:666:PHE:N	2.31	0.57
1:D:333:LEU:CA	1:D:335:THR:HG23	2.32	0.57
1:A:412:CYS:SG	1:A:497:MET:HB3	2.44	0.57
1:B:748:SER:O	1:B:782:ALA:N	2.37	0.57
1:C:338:ASN:ND2	1:C:530:SER:O	2.38	0.57
1:C:412:CYS:SG	1:C:497:MET:HB3	2.43	0.57
1:D:631:LYS:HB2	1:D:636:THR:HG23	1.87	0.57
1:D:632:ASN:HB2	1:D:663:GLU:HB2	1.86	0.57
1:D:742:LYS:N	1:D:794:ILE:O	2.33	0.57
1:C:419:LYS:N	1:C:443:ASN:O	2.36	0.57
1:A:511:TYR:N	1:A:529:LYS:O	2.37	0.57
1:B:632:ASN:HB2	1:B:663:GLU:HB2	1.86	0.57
1:C:282:TYR:HH	1:C:540:ASP:CG	1.99	0.57
1:D:748:SER:O	1:D:782:ALA:N	2.37	0.57
1:C:420:TYR:CE1	1:C:488:ILE:HD12	2.40	0.57
1:C:584:LYS:HG3	1:C:585:ALA:N	2.18	0.57
1:D:418:GLN:NE2	1:D:420:TYR:OH	2.35	0.57
1:A:377:PRO:HG2	1:A:380:ILE:HD12	1.86	0.56
1:A:422:ILE:O	1:A:484:GLU:HG3	2.04	0.56
1:A:745:GLY:N	1:A:761:VAL:O	2.24	0.56
1:B:389:LYS:N	1:B:393:GLN:O	2.37	0.56
1:B:623:LYS:HB3	1:B:677:TRP:HB2	1.86	0.56
1:A:696:LEU:HD13	1:A:798:VAL:HB	1.86	0.56
1:D:346:SER:HB2	1:D:499:LEU:HD22	1.86	0.56
1:D:623:LYS:HB3	1:D:677:TRP:HB2	1.86	0.56
1:A:557:SER:HB2	1:A:684:LEU:HD11	1.88	0.56
1:A:558:SER:HB2	1:A:682:ILE:HA	1.88	0.56
1:B:602:PHE:HB2	1:B:668:PHE:HD1	1.71	0.56
1:C:277:GLU:HB2	1:C:336:LEU:CG	2.36	0.56
1:C:422:ILE:O	1:C:484:GLU:HG3	2.04	0.56
1:C:448:GLU:HA	1:C:470:SER:HA	1.87	0.56
1:C:735:TYR:HB2	1:C:770:ILE:HD11	1.87	0.56
1:D:335:THR:HB	1:D:336:LEU:HD12	1.88	0.56
1:D:438:PHE:HA	1:D:447:TYR:HA	1.87	0.56
1:D:710:LYS:NZ	1:D:716:GLU:OE1	2.34	0.56
1:A:420:TYR:CE1	1:A:488:ILE:HD12	2.40	0.56
1:A:448:GLU:HA	1:A:470:SER:HA	1.86	0.56
1:A:735:TYR:HB2	1:A:770:ILE:HD11	1.86	0.56
1:B:361:GLU:HB2	1:B:435:LYS:HD3	1.87	0.56
1:D:657:SER:HB2	1:D:661:PRO:HG3	1.87	0.56
1:B:627:ALA:HA	1:B:641:THR:HG22	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:631:LYS:HB2	1:B:636:THR:HG23	1.87	0.56
1:C:511:TYR:N	1:C:529:LYS:O	2.37	0.56
1:C:696:LEU:HD13	1:C:798:VAL:HB	1.86	0.56
1:B:631:LYS:O	1:B:665:TYR:N	2.39	0.56
1:C:346:SER:OG	1:C:348:ASN:ND2	2.38	0.56
1:C:377:PRO:HG2	1:C:380:ILE:HD12	1.86	0.56
1:C:434:THR:OG1	1:C:452:ASN:OD1	2.24	0.56
1:C:558:SER:HB2	1:C:682:ILE:HA	1.88	0.56
1:C:744:THR:HA	1:C:762:LYS:HA	1.87	0.56
1:D:369:ILE:HD12	1:D:507:LEU:HD22	1.88	0.56
1:B:369:ILE:HD12	1:B:507:LEU:HD22	1.88	0.56
1:B:733:SER:OG	1:B:735:TYR:OH	2.19	0.56
1:D:709:MET:HA	1:D:715:LEU:HA	1.87	0.56
1:A:577:ASN:HB2	1:A:580:ALA:HB3	1.88	0.56
1:B:600:GLY:O	1:B:670:ASN:N	2.36	0.56
1:D:355:ASP:O	1:D:692:LEU:N	2.33	0.56
1:D:383:GLY:O	1:D:402:THR:N	2.39	0.56
1:A:434:THR:OG1	1:A:452:ASN:OD1	2.24	0.56
1:A:698:PRO:HA	1:A:701:TRP:CD1	2.38	0.56
1:B:447:TYR:O	1:B:472:LYS:HD2	2.06	0.56
1:B:657:SER:HB2	1:B:661:PRO:HG3	1.87	0.56
1:D:602:PHE:HB2	1:D:668:PHE:HD1	1.71	0.56
1:B:696:LEU:HG	1:B:800:ILE:HG22	1.88	0.55
1:B:709:MET:HA	1:B:715:LEU:HA	1.87	0.55
1:C:277:GLU:HB2	1:C:336:LEU:HG	1.87	0.55
1:C:630:LEU:O	1:C:637:LEU:N	2.33	0.55
1:D:447:TYR:O	1:D:472:LYS:HD2	2.06	0.55
1:C:557:SER:HB2	1:C:684:LEU:HD11	1.87	0.55
1:D:696:LEU:HG	1:D:800:ILE:HG22	1.88	0.55
1:A:277:GLU:HB2	1:A:336:LEU:CG	2.36	0.55
1:A:744:THR:HA	1:A:762:LYS:HA	1.87	0.55
1:C:749:ILE:HG22	1:C:756:LEU:HB2	1.87	0.55
1:D:716:GLU:HG3	1:D:794:ILE:HG13	1.88	0.55
1:B:694:GLN:NE2	1:B:798:VAL:O	2.40	0.55
1:C:540:ASP:O	1:C:543:ASN:ND2	2.39	0.55
1:C:584:LYS:HG3	1:C:585:ALA:H	1.71	0.55
1:B:346:SER:HB2	1:B:499:LEU:HD22	1.86	0.55
1:C:577:ASN:HB2	1:C:580:ALA:HB3	1.88	0.55
1:D:631:LYS:O	1:D:665:TYR:N	2.39	0.55
1:C:750:ILE:HG22	1:C:755:TYR:HA	1.89	0.55
1:A:346:SER:OG	1:A:348:ASN:ND2	2.39	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:532:LEU:HD12	1:B:533:ARG:HG3	1.89	0.55
1:D:694:GLN:NE2	1:D:798:VAL:O	2.40	0.55
1:A:790:ASN:OD1	1:A:791:SER:N	2.40	0.55
1:C:496:TYR:HD2	1:C:522:GLN:HB2	1.72	0.55
1:A:559:ILE:HB	1:A:683:ILE:HB	1.89	0.55
1:B:383:GLY:O	1:B:402:THR:N	2.39	0.55
1:B:594:LEU:HB2	1:B:668:PHE:CE1	2.42	0.55
1:B:632:ASN:N	1:B:664:ILE:HD13	2.22	0.55
1:C:276:SER:OG	1:C:336:LEU:HD21	2.05	0.55
1:D:738:ARG:HG2	1:D:767:THR:HA	1.89	0.55
1:B:362:ALA:N	1:B:434:THR:O	2.31	0.55
1:B:716:GLU:HG3	1:B:794:ILE:HG13	1.88	0.55
1:C:559:ILE:HB	1:C:683:ILE:HB	1.89	0.55
1:D:361:GLU:HB2	1:D:435:LYS:HD3	1.87	0.55
1:D:439:GLU:O	1:D:446:GLY:N	2.35	0.55
1:D:702:ILE:HD12	1:D:724:LYS:HG3	1.88	0.55
1:B:418:GLN:NE2	1:B:420:TYR:OH	2.36	0.54
1:A:360:LEU:O	1:A:436:ILE:N	2.35	0.54
1:A:584:LYS:HG3	1:A:585:ALA:H	1.72	0.54
1:A:730:GLU:O	1:A:773:THR:OG1	2.25	0.54
1:B:347:LYS:HE3	1:B:496:TYR:CZ	2.42	0.54
1:B:355:ASP:O	1:B:692:LEU:N	2.33	0.54
1:B:738:ARG:HG2	1:B:767:THR:HA	1.89	0.54
1:C:504:GLU:HG3	1:C:532:LEU:HD22	1.89	0.54
1:C:790:ASN:OD1	1:C:791:SER:N	2.40	0.54
1:A:540:ASP:O	1:A:543:ASN:ND2	2.39	0.54
1:D:347:LYS:HE3	1:D:496:TYR:CZ	2.42	0.54
1:D:616:TYR:HA	1:D:686:ILE:H	1.73	0.54
1:D:636:THR:HG21	1:D:639:GLU:HB2	1.90	0.54
1:A:750:ILE:HG22	1:A:755:TYR:HA	1.89	0.54
1:B:349:ARG:HB3	1:B:414:LYS:HZ2	1.73	0.54
1:B:431:TYR:HA	1:B:453:PHE:HA	1.89	0.54
1:C:406:ASP:OD1	1:C:406:ASP:N	2.40	0.54
1:C:573:TRP:O	1:C:574:ARG:NH1	2.36	0.54
1:B:702:ILE:HD12	1:B:724:LYS:HG3	1.88	0.54
1:A:365:GLY:HA3	1:A:387:ARG:HE	1.73	0.54
1:B:616:TYR:HA	1:B:686:ILE:H	1.73	0.54
1:D:431:TYR:HA	1:D:453:PHE:HA	1.89	0.54
1:A:504:GLU:HG3	1:A:532:LEU:HD22	1.90	0.54
1:B:636:THR:HG21	1:B:639:GLU:HB2	1.90	0.54
1:D:735:TYR:HB2	1:D:770:ILE:HB	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:378:LEU:HD12	1:D:654:LYS:HE2	1.89	0.54
1:D:532:LEU:HD12	1:D:533:ARG:HG3	1.89	0.54
1:D:594:LEU:HB2	1:D:668:PHE:CE1	2.42	0.54
1:D:632:ASN:N	1:D:664:ILE:HD13	2.22	0.54
1:A:496:TYR:HD2	1:A:522:GLN:HB2	1.72	0.53
1:B:745:GLY:N	1:B:761:VAL:O	2.36	0.53
1:C:365:GLY:HA3	1:C:387:ARG:HE	1.73	0.53
1:C:539:THR:HA	1:C:544:ASN:HD21	1.73	0.53
1:B:378:LEU:HD12	1:B:654:LYS:HE2	1.89	0.53
1:B:420:TYR:O	1:B:486:SER:N	2.38	0.53
1:D:454:TYR:HA	1:D:461:ILE:HA	1.89	0.53
1:D:471:TRP:HB2	1:D:476:CYS:SG	2.48	0.53
1:D:611:LYS:O	1:D:657:SER:OG	2.16	0.53
1:D:730:GLU:OE1	1:D:735:TYR:OH	2.20	0.53
1:A:539:THR:HA	1:A:544:ASN:HD21	1.73	0.53
1:C:559:ILE:HD12	1:C:683:ILE:HG22	1.91	0.53
1:D:709:MET:HB3	1:D:715:LEU:HD23	1.91	0.53
1:A:436:ILE:HG12	1:A:449:VAL:HG22	1.90	0.53
1:B:735:TYR:HB2	1:B:770:ILE:HB	1.89	0.53
1:A:701:TRP:HB3	1:A:723:PHE:HD1	1.74	0.53
1:C:366:TYR:CE1	1:C:387:ARG:HG2	2.44	0.53
1:C:518:ASP:O	1:C:523:LYS:N	2.39	0.53
1:C:701:TRP:HB3	1:C:723:PHE:HD1	1.74	0.53
1:D:511:TYR:N	1:D:529:LYS:O	2.42	0.53
1:D:647:ASP:O	1:D:649:GLN:NE2	2.42	0.53
1:D:733:SER:OG	1:D:735:TYR:OH	2.19	0.53
1:A:625:ARG:HE	1:A:674:TYR:HB3	1.74	0.53
1:C:730:GLU:O	1:C:773:THR:OG1	2.25	0.53
1:D:570:THR:HG23	1:D:582:VAL:HG22	1.91	0.53
1:B:423:LYS:HB2	1:B:473:GLU:C	2.30	0.53
1:B:454:TYR:HA	1:B:461:ILE:HA	1.89	0.53
1:C:625:ARG:HE	1:C:674:TYR:HB3	1.74	0.53
1:D:423:LYS:HB2	1:D:473:GLU:C	2.30	0.53
1:D:697:LYS:N	1:D:725:GLN:HE22	2.07	0.53
1:A:341:SER:HA	1:A:502:VAL:HG13	1.91	0.53
1:B:471:TRP:HB2	1:B:476:CYS:SG	2.49	0.53
1:C:275:GLY:HA3	1:C:505:THR:HG21	1.74	0.53
1:A:366:TYR:CE1	1:A:387:ARG:HG2	2.43	0.53
1:B:563:TRP:HE3	1:B:680:ASN:HA	1.74	0.53
1:B:697:LYS:N	1:B:725:GLN:HE22	2.07	0.53
1:D:339:ASN:HD21	1:D:529:LYS:HG2	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:371:PHE:HB2	1:A:502:VAL:HB	1.91	0.52
1:A:386:ALA:HB2	1:A:399:MET:HA	1.91	0.52
1:A:518:ASP:O	1:A:523:LYS:N	2.39	0.52
1:B:647:ASP:O	1:B:649:GLN:NE2	2.42	0.52
1:C:423:LYS:HG3	1:C:425:ILE:HG13	1.91	0.52
1:D:333:LEU:HA	1:D:335:THR:CG2	2.39	0.52
1:B:555:TYR:CG	1:B:682:ILE:HG21	2.44	0.52
1:B:570:THR:HG23	1:B:582:VAL:HG22	1.91	0.52
1:C:430:GLY:O	1:C:454:TYR:N	2.42	0.52
1:C:386:ALA:HB2	1:C:399:MET:HA	1.90	0.52
1:B:363:ALA:HB3	1:B:366:TYR:CG	2.45	0.52
1:B:423:LYS:HD2	1:B:477:GLU:HB2	1.91	0.52
1:A:423:LYS:HG3	1:A:425:ILE:HG13	1.91	0.52
1:A:430:GLY:O	1:A:454:TYR:N	2.42	0.52
1:D:532:LEU:O	1:D:536:LEU:HG	2.09	0.52
1:D:555:TYR:CG	1:D:682:ILE:HG21	2.44	0.52
1:A:406:ASP:HB2	1:A:408:HIS:CD2	2.45	0.52
1:A:559:ILE:HD12	1:A:683:ILE:HG22	1.91	0.52
1:C:436:ILE:HG12	1:C:449:VAL:HG22	1.90	0.52
1:B:730:GLU:OE1	1:B:735:TYR:OH	2.20	0.52
1:C:394:VAL:HB	1:C:507:LEU:HG	1.92	0.52
1:B:377:PRO:HD3	1:B:652:THR:OG1	2.09	0.52
1:B:622:ILE:HB	1:B:626:PRO:HG3	1.92	0.52
1:B:739:LEU:HD12	1:B:798:VAL:HA	1.92	0.52
1:C:360:LEU:O	1:C:436:ILE:N	2.35	0.52
1:B:511:TYR:N	1:B:529:LYS:O	2.42	0.52
1:B:709:MET:HB3	1:B:715:LEU:HD23	1.91	0.52
1:D:423:LYS:O	1:D:514:GLY:HA2	2.10	0.52
1:D:604:GLN:O	1:D:666:PHE:N	2.31	0.52
1:D:745:GLY:N	1:D:761:VAL:O	2.36	0.52
1:C:341:SER:HA	1:C:502:VAL:HG13	1.91	0.52
1:C:488:ILE:HD11	1:C:517:VAL:HB	1.92	0.52
1:C:740:SER:HA	1:C:765:ASP:HA	1.92	0.52
1:D:389:LYS:N	1:D:393:GLN:O	2.37	0.52
1:C:729:LEU:HD13	1:C:779:CYS:HB3	1.92	0.51
1:D:600:GLY:O	1:D:670:ASN:N	2.36	0.51
1:D:751:ASP:HA	1:D:779:CYS:HA	1.92	0.51
1:A:740:SER:HA	1:A:765:ASP:HA	1.92	0.51
1:B:588:ILE:HG12	1:B:590:GLY:H	1.74	0.51
1:B:769:VAL:O	1:B:771:LYS:NZ	2.29	0.51
1:D:277:GLU:HB2	1:D:336:LEU:HD11	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:338:ASN:HB3	1:D:533:ARG:NH2	2.25	0.51
1:D:711:ASP:OD1	1:D:714:ARG:NH2	2.44	0.51
1:A:333:LEU:O	1:A:335:THR:N	2.44	0.51
1:B:338:ASN:HB3	1:B:533:ARG:NH2	2.25	0.51
1:B:532:LEU:O	1:B:536:LEU:HG	2.09	0.51
1:C:434:THR:HG1	1:C:452:ASN:CG	2.14	0.51
1:C:584:LYS:HB2	1:C:588:ILE:HG12	1.92	0.51
1:D:363:ALA:HB3	1:D:366:TYR:CG	2.45	0.51
1:D:377:PRO:HD3	1:D:652:THR:OG1	2.09	0.51
1:D:588:ILE:HG12	1:D:590:GLY:H	1.74	0.51
1:C:275:GLY:CA	1:C:505:THR:HB	2.34	0.51
1:D:739:LEU:HD12	1:D:798:VAL:HA	1.92	0.51
1:A:488:ILE:HD11	1:A:517:VAL:HB	1.92	0.51
1:A:566:THR:OG1	1:A:567:SER:N	2.44	0.51
1:B:423:LYS:O	1:B:514:GLY:HA2	2.10	0.51
1:A:394:VAL:HB	1:A:507:LEU:HG	1.92	0.51
1:A:586:ASP:N	1:A:586:ASP:OD1	2.44	0.51
1:B:711:ASP:OD1	1:B:714:ARG:NH2	2.44	0.51
1:C:586:ASP:N	1:C:586:ASP:OD1	2.44	0.51
1:B:339:ASN:HD21	1:B:529:LYS:HG2	1.74	0.51
1:C:447:TYR:OH	1:C:515:LEU:N	2.44	0.51
1:C:620:TYR:HA	1:C:680:ASN:O	2.11	0.51
1:A:589:LYS:HE2	1:A:677:TRP:CD1	2.46	0.51
1:A:620:TYR:HA	1:A:680:ASN:O	2.11	0.51
1:C:371:PHE:HB2	1:C:502:VAL:HB	1.91	0.51
1:D:341:SER:OG	1:D:342:ASN:N	2.44	0.51
1:D:599:ASP:OD1	1:D:599:ASP:N	2.44	0.51
1:D:622:ILE:HB	1:D:626:PRO:HG3	1.92	0.51
1:A:564:ASN:OD1	1:A:679:ASN:HB2	2.11	0.51
1:B:346:SER:OG	1:B:348:ASN:ND2	2.44	0.51
1:C:564:ASN:OD1	1:C:679:ASN:HB2	2.11	0.51
1:A:278:ILE:H	1:A:336:LEU:CD1	2.22	0.51
1:B:346:SER:O	1:B:497:MET:N	2.44	0.51
1:D:333:LEU:HA	1:D:335:THR:HG21	1.93	0.51
1:D:423:LYS:HD2	1:D:477:GLU:HB2	1.91	0.51
1:D:586:ASP:OD1	1:D:595:TYR:N	2.44	0.51
1:D:769:VAL:O	1:D:771:LYS:NZ	2.29	0.51
1:B:586:ASP:OD1	1:B:595:TYR:N	2.44	0.50
1:C:333:LEU:O	1:C:335:THR:N	2.44	0.50
1:D:563:TRP:HE3	1:D:680:ASN:HA	1.74	0.50
1:B:736:HIS:HD2	1:B:803:GLU:HB2	1.75	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:406:ASP:HB2	1:C:408:HIS:CD2	2.45	0.50
1:C:488:ILE:HG21	1:C:495:ILE:HG21	1.92	0.50
1:C:605:PHE:HA	1:C:665:TYR:HB3	1.94	0.50
1:D:345:TYR:CE2	1:D:523:LYS:HD3	2.47	0.50
1:A:488:ILE:HG21	1:A:495:ILE:HG21	1.92	0.50
1:B:341:SER:OG	1:B:342:ASN:N	2.44	0.50
1:B:751:ASP:HA	1:B:779:CYS:HA	1.92	0.50
1:C:275:GLY:HA2	1:C:505:THR:HG22	0.51	0.50
1:C:372:GLU:HA	1:C:501:VAL:HA	1.94	0.50
1:A:352:ASP:H	1:A:414:LYS:NZ	2.09	0.50
1:A:374:LEU:HB2	1:A:380:ILE:HB	1.94	0.50
1:A:431:TYR:HA	1:A:453:PHE:HA	1.93	0.50
1:A:605:PHE:HA	1:A:665:TYR:HB3	1.94	0.50
1:C:282:TYR:CZ	1:C:540:ASP:OD1	2.65	0.50
1:C:589:LYS:HE2	1:C:677:TRP:CD1	2.46	0.50
1:D:372:GLU:HB2	1:D:384:TYR:CE2	2.39	0.50
1:D:736:HIS:HD2	1:D:803:GLU:HB2	1.75	0.50
1:C:606:ILE:HD11	1:C:630:LEU:HD11	1.94	0.50
1:A:447:TYR:OH	1:A:515:LEU:N	2.44	0.50
1:B:427:PHE:CD2	1:B:467:LYS:HE3	2.45	0.50
1:D:346:SER:OG	1:D:348:ASN:ND2	2.44	0.50
1:D:637:LEU:HD11	1:D:658:GLY:H	1.77	0.50
1:A:729:LEU:HD13	1:A:779:CYS:HB3	1.92	0.50
1:C:374:LEU:HB2	1:C:380:ILE:HB	1.94	0.50
1:C:566:THR:OG1	1:C:567:SER:N	2.44	0.50
1:C:596:THR:OG1	1:C:676:ALA:HB3	2.12	0.50
1:D:346:SER:O	1:D:497:MET:N	2.44	0.50
1:D:594:LEU:HB2	1:D:668:PHE:HE1	1.77	0.50
1:A:358:VAL:HG21	1:A:410:LEU:HD22	1.94	0.50
1:B:277:GLU:HB2	1:B:336:LEU:CG	2.42	0.50
1:B:345:TYR:CE2	1:B:523:LYS:HD3	2.47	0.50
1:B:599:ASP:OD1	1:B:599:ASP:N	2.43	0.50
1:C:413:PRO:HG2	1:C:490:ALA:HB2	1.94	0.50
1:D:519:GLU:O	1:D:522:GLN:NE2	2.36	0.50
1:A:582:VAL:HG13	1:A:585:ALA:HB2	1.94	0.50
1:B:707:VAL:HB	1:B:723:PHE:CZ	2.47	0.50
1:D:420:TYR:O	1:D:486:SER:N	2.38	0.50
1:B:380:ILE:HG21	1:B:403:ILE:HG23	1.93	0.49
1:B:454:TYR:CE2	1:B:456:PRO:HA	2.47	0.49
1:B:625:ARG:HA	1:B:643:ASN:O	2.12	0.49
1:B:640:ASP:HA	1:B:642:LYS:HE2	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:533:ARG:HG2	1:C:537:LEU:HD23	1.94	0.49
1:A:584:LYS:HB2	1:A:588:ILE:HG12	1.92	0.49
1:B:381:LEU:HB2	1:B:407:ILE:HG12	1.94	0.49
1:D:277:GLU:HB2	1:D:336:LEU:CG	2.42	0.49
1:D:353:ILE:HG13	1:D:797:ASN:HD22	1.78	0.49
1:D:380:ILE:HG21	1:D:403:ILE:HG23	1.93	0.49
1:D:381:LEU:HB2	1:D:407:ILE:HG12	1.94	0.49
1:A:606:ILE:HD11	1:A:630:LEU:HD11	1.94	0.49
1:C:356:PRO:HB3	1:C:689:LEU:HD21	1.94	0.49
1:D:357:ILE:HG13	1:D:438:PHE:O	2.13	0.49
1:D:516:THR:HG23	1:D:525:THR:HB	1.94	0.49
1:D:702:ILE:N	1:D:724:LYS:O	2.45	0.49
1:A:573:TRP:O	1:A:574:ARG:NH1	2.36	0.49
1:B:594:LEU:HB3	1:B:602:PHE:CE2	2.48	0.49
1:A:282:TYR:CZ	1:A:540:ASP:OD1	2.64	0.49
1:A:425:ILE:HG23	1:A:469:GLU:HB2	1.95	0.49
1:A:533:ARG:HG2	1:A:537:LEU:HD23	1.94	0.49
1:B:357:ILE:HG13	1:B:438:PHE:O	2.13	0.49
1:A:359:VAL:HA	1:A:437:VAL:HA	1.94	0.49
1:A:422:ILE:HA	1:A:515:LEU:HB3	1.94	0.49
1:C:582:VAL:HG13	1:C:585:ALA:HB2	1.95	0.49
1:D:349:ARG:HB3	1:D:414:LYS:HZ2	1.76	0.49
1:D:562:ASN:OD1	1:D:571:GLY:HA3	2.13	0.49
1:A:372:GLU:HA	1:A:501:VAL:HA	1.93	0.49
1:A:382:LYS:HD2	1:A:555:TYR:CE1	2.48	0.49
1:B:511:TYR:HB3	1:B:531:TYR:CE2	2.48	0.49
1:B:630:LEU:HD12	1:B:638:PHE:HB3	1.94	0.49
1:B:637:LEU:HD11	1:B:658:GLY:H	1.77	0.49
1:B:670:ASN:ND2	1:B:674:TYR:H	2.04	0.49
1:C:362:ALA:HA	1:C:385:GLN:OE1	2.13	0.49
1:C:427:PHE:CE2	1:C:467:LYS:HB2	2.48	0.49
1:C:783:LEU:HB3	1:C:795:PHE:CE2	2.48	0.49
1:D:325:LYS:HZ1	1:D:543:ASN:HD21	0.80	0.49
1:D:359:VAL:HG23	1:D:437:VAL:HG22	1.95	0.49
1:D:594:LEU:HB3	1:D:602:PHE:CE2	2.48	0.49
1:D:745:GLY:HA3	1:D:793:THR:HG21	1.94	0.49
1:A:594:LEU:HD13	1:A:681:PHE:HE2	1.77	0.49
1:B:345:TYR:HB3	1:B:496:TYR:HB3	1.94	0.49
1:B:359:VAL:HG23	1:B:437:VAL:HG22	1.95	0.49
1:C:359:VAL:HA	1:C:437:VAL:HA	1.94	0.49
1:C:382:LYS:HD2	1:C:555:TYR:CE1	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:408:HIS:O	1:C:412:CYS:N	2.46	0.49
1:C:478:GLU:HG3	1:C:480:SER:N	2.28	0.49
1:D:345:TYR:HB3	1:D:496:TYR:HB3	1.94	0.49
1:A:356:PRO:HB3	1:A:689:LEU:HD21	1.94	0.49
1:A:362:ALA:HA	1:A:385:GLN:OE1	2.13	0.49
1:A:427:PHE:CE2	1:A:467:LYS:HB2	2.48	0.49
1:A:548:LEU:O	1:A:549:ILE:HD13	2.13	0.49
1:A:749:ILE:HB	1:A:757:LEU:HB2	1.95	0.49
1:C:373:ILE:HG12	1:C:498:PRO:HG2	1.95	0.49
1:C:431:TYR:HA	1:C:453:PHE:HA	1.93	0.49
1:D:602:PHE:O	1:D:668:PHE:N	2.46	0.49
1:A:373:ILE:HG12	1:A:498:PRO:HG2	1.95	0.49
1:D:454:TYR:CE2	1:D:456:PRO:HA	2.47	0.49
1:A:579:ASN:HB2	1:A:597:HIS:CE1	2.48	0.48
1:A:783:LEU:HB3	1:A:795:PHE:CE2	2.48	0.48
1:B:562:ASN:OD1	1:B:571:GLY:HA3	2.13	0.48
1:B:602:PHE:O	1:B:668:PHE:N	2.46	0.48
1:C:358:VAL:HG21	1:C:410:LEU:HD22	1.94	0.48
1:A:345:TYR:CG	1:A:523:LYS:HD2	2.48	0.48
1:A:408:HIS:O	1:A:412:CYS:N	2.46	0.48
1:C:425:ILE:HG23	1:C:469:GLU:HB2	1.95	0.48
1:A:275:GLY:HA2	1:A:505:THR:HG22	0.50	0.48
1:A:348:ASN:ND2	1:A:379:PRO:HG3	2.28	0.48
1:B:333:LEU:HA	1:B:335:THR:OG1	2.13	0.48
1:B:574:ARG:O	1:B:602:PHE:HA	2.13	0.48
1:B:744:THR:HG23	1:B:762:LYS:HG3	1.96	0.48
1:C:345:TYR:CG	1:C:523:LYS:HD2	2.48	0.48
1:C:348:ASN:ND2	1:C:379:PRO:HG3	2.28	0.48
1:C:548:LEU:O	1:C:549:ILE:HD13	2.13	0.48
1:C:594:LEU:HD13	1:C:681:PHE:HE2	1.77	0.48
1:D:630:LEU:HD12	1:D:638:PHE:HB3	1.94	0.48
1:D:707:VAL:HB	1:D:723:PHE:CZ	2.47	0.48
1:A:427:PHE:HD2	1:A:467:LYS:HD3	1.78	0.48
1:A:489:LYS:NZ	1:A:490:ALA:O	2.47	0.48
1:B:277:GLU:CB	1:B:336:LEU:HD11	2.44	0.48
1:B:580:ALA:HB2	1:B:601:GLU:N	2.29	0.48
1:B:745:GLY:HA3	1:B:793:THR:HG21	1.94	0.48
1:D:625:ARG:HA	1:D:643:ASN:O	2.12	0.48
1:B:353:ILE:HG13	1:B:797:ASN:HD22	1.78	0.48
1:B:401:GLU:OE2	1:B:555:TYR:HA	2.14	0.48
1:B:702:ILE:N	1:B:724:LYS:O	2.45	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:584:LYS:HB3	1:C:589:LYS:HB3	1.95	0.48
1:C:749:ILE:HB	1:C:757:LEU:HB2	1.95	0.48
1:A:413:PRO:HG2	1:A:490:ALA:HB2	1.94	0.48
1:D:277:GLU:CB	1:D:336:LEU:HD11	2.43	0.48
1:D:278:ILE:H	1:D:336:LEU:HD22	1.79	0.48
1:A:407:ILE:HG23	1:A:410:LEU:HD23	1.96	0.48
1:A:687:LYS:HA	1:A:687:LYS:HD3	1.74	0.48
1:C:422:ILE:HA	1:C:515:LEU:HB3	1.94	0.48
1:A:418:GLN:HB3	1:A:420:TYR:CE1	2.49	0.48
1:A:596:THR:OG1	1:A:676:ALA:HB3	2.12	0.48
1:B:516:THR:HG23	1:B:525:THR:HB	1.94	0.48
1:C:407:ILE:HG23	1:C:410:LEU:HD23	1.96	0.48
1:C:418:GLN:HB3	1:C:420:TYR:CE1	2.49	0.48
1:C:629:TYR:HB2	1:C:667:LEU:O	2.14	0.48
1:D:697:LYS:H	1:D:725:GLN:HE22	1.62	0.48
1:A:373:ILE:HG21	1:A:498:PRO:O	2.14	0.48
1:A:478:GLU:HG3	1:A:480:SER:N	2.28	0.48
1:A:629:TYR:HB2	1:A:667:LEU:O	2.14	0.48
1:B:277:GLU:HB2	1:B:336:LEU:HD11	1.95	0.48
1:C:427:PHE:HD2	1:C:467:LYS:HD3	1.78	0.48
1:D:422:ILE:O	1:D:474:LYS:N	2.47	0.48
1:D:744:THR:HG23	1:D:762:LYS:HG3	1.96	0.48
1:B:505:THR:O	1:B:551:SER:N	2.47	0.48
1:C:373:ILE:HG21	1:C:498:PRO:O	2.14	0.48
1:C:387:ARG:N	1:C:398:SER:OG	2.46	0.48
1:C:579:ASN:HB2	1:C:597:HIS:CE1	2.48	0.48
1:D:511:TYR:HB3	1:D:531:TYR:CE2	2.48	0.48
1:D:640:ASP:HA	1:D:642:LYS:HE2	1.94	0.48
1:A:584:LYS:HB3	1:A:589:LYS:HB3	1.96	0.47
1:B:697:LYS:H	1:B:725:GLN:HE22	1.62	0.47
1:D:363:ALA:N	1:D:366:TYR:HB2	2.29	0.47
1:D:505:THR:O	1:D:551:SER:N	2.47	0.47
1:A:511:TYR:HB3	1:A:531:TYR:CE2	2.49	0.47
1:A:739:LEU:HD21	1:A:795:PHE:HB3	1.95	0.47
1:B:783:LEU:HD13	1:B:795:PHE:HD2	1.78	0.47
1:C:479:ASP:OD1	1:C:480:SER:N	2.47	0.47
1:C:489:LYS:NZ	1:C:490:ALA:O	2.47	0.47
1:C:740:SER:O	1:C:796:SER:N	2.47	0.47
1:D:783:LEU:HB3	1:D:795:PHE:CE2	2.49	0.47
1:A:333:LEU:C	1:A:335:THR:H	2.16	0.47
1:A:372:GLU:HB3	1:A:382:LYS:HB2	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:740:SER:O	1:A:796:SER:N	2.47	0.47
1:A:355:ASP:OD1	1:A:738:ARG:NH1	2.46	0.47
1:A:722:TYR:HB3	1:A:784:GLU:CB	2.42	0.47
1:B:631:LYS:HA	1:B:636:THR:HA	1.95	0.47
1:C:372:GLU:HB3	1:C:382:LYS:HB2	1.97	0.47
1:C:436:ILE:HG23	1:C:449:VAL:HG22	1.96	0.47
1:C:511:TYR:HB3	1:C:531:TYR:CE2	2.49	0.47
1:D:401:GLU:OE2	1:D:555:TYR:HA	2.14	0.47
1:D:419:LYS:HE3	1:D:419:LYS:HB2	1.70	0.47
1:D:574:ARG:O	1:D:602:PHE:HA	2.13	0.47
1:B:406:ASP:HB3	1:B:408:HIS:NE2	2.30	0.47
1:B:594:LEU:HB2	1:B:668:PHE:HE1	1.77	0.47
1:B:628:ILE:HB	1:B:640:ASP:HB3	1.96	0.47
1:C:352:ASP:H	1:C:414:LYS:NZ	2.09	0.47
1:D:631:LYS:HA	1:D:636:THR:HA	1.95	0.47
1:A:479:ASP:OD1	1:A:480:SER:N	2.47	0.47
1:B:278:ILE:H	1:B:336:LEU:HD22	1.78	0.47
1:B:333:LEU:O	1:B:335:THR:CB	2.59	0.47
1:B:346:SER:N	1:B:497:MET:O	2.48	0.47
1:B:627:ALA:N	1:B:670:ASN:O	2.48	0.47
1:C:333:LEU:C	1:C:335:THR:H	2.17	0.47
1:C:652:THR:O	1:C:653:LYS:HD2	2.15	0.47
1:D:627:ALA:N	1:D:670:ASN:O	2.48	0.47
1:B:350:GLY:HA2	1:B:408:HIS:HD1	1.79	0.47
1:B:372:GLU:HB2	1:B:384:TYR:CE2	2.39	0.47
1:C:278:ILE:H	1:C:336:LEU:CD1	2.24	0.47
1:C:355:ASP:OD1	1:C:738:ARG:NH1	2.46	0.47
1:C:739:LEU:HD21	1:C:795:PHE:HB3	1.96	0.47
1:D:346:SER:N	1:D:497:MET:O	2.48	0.47
1:D:406:ASP:HB3	1:D:408:HIS:NE2	2.30	0.47
1:D:645:PHE:CD2	1:D:649:GLN:HB2	2.50	0.47
1:D:651:VAL:HG23	1:D:653:LYS:NZ	2.30	0.47
1:D:783:LEU:HD13	1:D:795:PHE:HD2	1.78	0.47
1:A:652:THR:O	1:A:653:LYS:HD2	2.15	0.47
1:A:701:TRP:CE3	1:A:723:PHE:HB3	2.50	0.47
1:B:325:LYS:CE	1:B:543:ASN:HD21	2.17	0.47
1:B:339:ASN:ND2	1:B:528:GLY:O	2.47	0.47
1:B:518:ASP:OD2	1:B:523:LYS:HB2	2.14	0.47
1:D:339:ASN:ND2	1:D:528:GLY:O	2.47	0.47
1:D:518:ASP:OD2	1:D:523:LYS:HB2	2.14	0.47
1:D:697:LYS:HB2	1:D:725:GLN:HE22	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:373:ILE:N	1:A:500:GLY:O	2.32	0.47
1:B:437:VAL:O	1:B:447:TYR:HB2	2.15	0.47
1:B:783:LEU:HB3	1:B:795:PHE:CE2	2.49	0.47
1:C:595:TYR:HH	1:C:597:HIS:CE1	2.30	0.47
1:C:701:TRP:CE3	1:C:723:PHE:HB3	2.50	0.47
1:D:580:ALA:HB2	1:D:601:GLU:N	2.29	0.47
1:D:628:ILE:HB	1:D:640:ASP:HB3	1.96	0.47
1:A:366:TYR:HE1	1:A:387:ARG:HG2	1.80	0.47
1:A:578:ASN:OD1	1:A:579:ASN:N	2.45	0.47
1:B:363:ALA:N	1:B:366:TYR:HB2	2.29	0.47
1:B:697:LYS:HB2	1:B:725:GLN:HE22	1.80	0.47
1:C:274:ARG:NH2	1:C:553:ASP:OD2	2.47	0.47
1:D:427:PHE:CD2	1:D:467:LYS:HE3	2.45	0.47
1:A:516:THR:O	1:A:525:THR:HB	2.15	0.46
1:B:422:ILE:O	1:B:474:LYS:N	2.47	0.46
1:B:724:LYS:HB2	1:B:780:PHE:HB2	1.97	0.46
1:B:737:LEU:HD22	1:B:749:ILE:HD11	1.97	0.46
1:C:347:LYS:HD2	1:C:496:TYR:CZ	2.51	0.46
1:A:595:TYR:HH	1:A:597:HIS:CE1	2.30	0.46
1:B:512:GLY:O	1:B:529:LYS:N	2.40	0.46
1:B:558:SER:HB3	1:B:563:TRP:CG	2.50	0.46
1:B:737:LEU:HB2	1:B:800:ILE:HG13	1.97	0.46
1:C:345:TYR:OH	1:C:525:THR:OG1	2.22	0.46
1:D:362:ALA:N	1:D:434:THR:O	2.31	0.46
1:D:441:ARG:NH1	1:D:693:PRO:O	2.37	0.46
1:D:670:ASN:ND2	1:D:674:TYR:H	2.04	0.46
1:A:353:ILE:HD11	1:A:739:LEU:HA	1.98	0.46
1:A:416:LEU:HD21	1:A:767:THR:HG21	1.98	0.46
1:A:436:ILE:HG23	1:A:449:VAL:HG22	1.96	0.46
1:A:627:ALA:HB3	1:A:669:LYS:HB2	1.98	0.46
1:A:737:LEU:HD22	1:A:749:ILE:HD11	1.97	0.46
1:B:533:ARG:NH1	1:B:534:GLU:OE2	2.48	0.46
1:B:645:PHE:CD2	1:B:649:GLN:HB2	2.50	0.46
1:B:651:VAL:HG23	1:B:653:LYS:NZ	2.30	0.46
1:C:432:VAL:N	1:C:452:ASN:O	2.34	0.46
1:C:517:VAL:HG12	1:C:524:ILE:HG23	1.98	0.46
1:D:533:ARG:NH1	1:D:534:GLU:OE2	2.48	0.46
1:D:574:ARG:NH1	1:D:604:GLN:HA	2.30	0.46
1:D:619:GLN:HB2	1:D:652:THR:HG22	1.97	0.46
1:D:740:SER:HB2	1:D:765:ASP:OD1	2.15	0.46
1:A:623:LYS:CG	1:A:647:ASP:HA	2.42	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:619:GLN:N	1:B:682:ILE:O	2.37	0.46
1:C:601:GLU:OE2	1:C:667:LEU:HD23	2.15	0.46
1:C:694:GLN:HB3	1:C:801:VAL:HG12	1.98	0.46
1:D:350:GLY:HA2	1:D:408:HIS:HD1	1.79	0.46
1:A:372:GLU:HB3	1:A:382:LYS:CB	2.45	0.46
1:C:366:TYR:HE1	1:C:387:ARG:HG2	1.80	0.46
1:C:372:GLU:HB3	1:C:382:LYS:CB	2.46	0.46
1:C:578:ASN:OD1	1:C:579:ASN:N	2.45	0.46
1:D:558:SER:HB3	1:D:563:TRP:CG	2.50	0.46
1:A:387:ARG:N	1:A:398:SER:OG	2.46	0.46
1:A:605:PHE:O	1:A:609:LYS:NZ	2.46	0.46
1:B:349:ARG:NH2	1:B:414:LYS:HA	2.31	0.46
1:C:621:VAL:O	1:C:679:ASN:N	2.38	0.46
1:D:423:LYS:HB2	1:D:474:LYS:N	2.31	0.46
1:D:561:GLU:N	1:D:604:GLN:HE22	2.14	0.46
1:D:737:LEU:HB2	1:D:800:ILE:HG13	1.97	0.46
1:A:586:ASP:O	1:A:588:ILE:HG23	2.16	0.46
1:A:601:GLU:OE2	1:A:667:LEU:HD23	2.14	0.46
1:B:696:LEU:HG	1:B:800:ILE:CG2	2.45	0.46
1:C:623:LYS:HB3	1:C:677:TRP:HB2	1.98	0.46
1:C:737:LEU:HD22	1:C:749:ILE:HD11	1.97	0.46
1:C:737:LEU:HG	1:C:800:ILE:HG13	1.98	0.46
1:D:390:PRO:HB3	1:D:457:SER:O	2.15	0.46
1:A:624:GLY:O	1:A:644:ASN:HA	2.16	0.46
1:B:186:ILE:HG23	1:B:295:ALA:HB2	1.97	0.46
1:B:333:LEU:C	1:B:335:THR:CG2	2.83	0.46
1:B:390:PRO:HB3	1:B:457:SER:O	2.15	0.46
1:C:186:ILE:HG23	1:C:295:ALA:HB2	1.97	0.46
1:C:423:LYS:HG3	1:C:425:ILE:CG1	2.46	0.46
1:C:583:ASP:HB2	1:C:595:TYR:HB2	1.97	0.46
1:D:558:SER:HB3	1:D:563:TRP:CD1	2.51	0.46
1:A:413:PRO:HB2	1:A:416:LEU:O	2.16	0.46
1:A:623:LYS:HB3	1:A:677:TRP:HB2	1.98	0.46
1:C:416:LEU:HD21	1:C:767:THR:HG21	1.98	0.46
1:C:516:THR:O	1:C:525:THR:HB	2.15	0.46
1:C:738:ARG:HA	1:C:766:LEU:O	2.16	0.46
1:C:739:LEU:HD21	1:C:795:PHE:HD1	1.80	0.46
1:A:406:ASP:N	1:A:406:ASP:OD1	2.40	0.46
1:A:511:TYR:CZ	1:A:529:LYS:HB3	2.51	0.46
1:A:517:VAL:HG12	1:A:524:ILE:HG23	1.98	0.46
1:A:695:MET:HE1	1:A:802:LYS:HB2	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:467:LYS:HE3	1:B:467:LYS:HB3	1.86	0.46
1:B:580:ALA:HB2	1:B:601:GLU:H	1.81	0.46
1:B:610:LEU:HA	1:B:616:TYR:CZ	2.51	0.46
1:B:740:SER:HB2	1:B:765:ASP:OD1	2.15	0.46
1:D:349:ARG:HD2	1:D:349:ARG:HA	1.60	0.46
1:D:437:VAL:O	1:D:447:TYR:HB2	2.15	0.46
1:A:347:LYS:HD2	1:A:496:TYR:CZ	2.50	0.45
1:B:353:ILE:HB	1:B:738:ARG:HB3	1.98	0.45
1:B:574:ARG:NH1	1:B:604:GLN:HA	2.30	0.45
1:B:619:GLN:HB2	1:B:652:THR:HG22	1.97	0.45
1:D:186:ILE:HG23	1:D:295:ALA:HB2	1.96	0.45
1:D:724:LYS:HB2	1:D:780:PHE:HB2	1.97	0.45
1:D:734:THR:O	1:D:803:GLU:N	2.49	0.45
1:A:438:PHE:HD1	1:A:445:LEU:HD11	1.81	0.45
1:A:631:LYS:HD2	1:A:633:ASN:HA	1.99	0.45
1:A:738:ARG:HA	1:A:766:LEU:O	2.16	0.45
1:C:374:LEU:O	1:C:379:PRO:HA	2.16	0.45
1:C:413:PRO:HB2	1:C:416:LEU:O	2.15	0.45
1:C:586:ASP:O	1:C:588:ILE:HG23	2.16	0.45
1:D:372:GLU:HB3	1:D:382:LYS:CB	2.44	0.45
1:D:576:ASN:HD21	1:D:603:SER:HB3	1.81	0.45
1:D:580:ALA:HB2	1:D:601:GLU:H	1.81	0.45
1:A:423:LYS:HG3	1:A:425:ILE:CG1	2.46	0.45
1:A:746:ARG:N	1:A:784:GLU:O	2.24	0.45
1:B:619:GLN:HG2	1:B:650:THR:OG1	2.16	0.45
1:B:647:ASP:OD1	1:B:647:ASP:N	2.49	0.45
1:C:438:PHE:HD1	1:C:445:LEU:HD11	1.81	0.45
1:C:627:ALA:HB3	1:C:669:LYS:HB2	1.98	0.45
1:D:349:ARG:NH2	1:D:414:LYS:HA	2.31	0.45
1:D:393:GLN:HE22	1:D:547:TYR:HD1	1.64	0.45
1:D:610:LEU:HD12	1:D:664:ILE:HB	1.98	0.45
1:A:374:LEU:O	1:A:379:PRO:HA	2.16	0.45
1:B:369:ILE:HG13	1:B:384:TYR:HB3	1.98	0.45
1:B:558:SER:HB3	1:B:563:TRP:CD1	2.51	0.45
1:B:561:GLU:N	1:B:604:GLN:HE22	2.14	0.45
1:B:610:LEU:HD12	1:B:664:ILE:HB	1.98	0.45
1:C:353:ILE:HD11	1:C:739:LEU:HA	1.98	0.45
1:C:511:TYR:CZ	1:C:529:LYS:HB3	2.51	0.45
1:A:612:PRO:HA	1:A:658:GLY:O	2.17	0.45
1:B:423:LYS:HB2	1:B:474:LYS:N	2.31	0.45
1:B:748:SER:HB3	1:B:758:PHE:HD1	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:338:ASN:HD22	1:D:533:ARG:CZ	2.29	0.45
1:C:738:ARG:HH21	1:C:799:SER:HB2	1.82	0.45
1:D:353:ILE:HB	1:D:738:ARG:HB3	1.98	0.45
1:A:186:ILE:HG23	1:A:295:ALA:HB2	1.97	0.45
1:A:583:ASP:HB2	1:A:595:TYR:HB2	1.97	0.45
1:A:672:SER:OG	1:A:673:GLU:OE1	2.31	0.45
1:A:739:LEU:HD21	1:A:795:PHE:HD1	1.80	0.45
1:B:734:THR:O	1:B:803:GLU:N	2.49	0.45
1:C:454:TYR:CD1	1:C:461:ILE:HG22	2.52	0.45
1:C:624:GLY:O	1:C:644:ASN:HA	2.16	0.45
1:C:687:LYS:HD3	1:C:687:LYS:HA	1.74	0.45
1:A:694:GLN:HB3	1:A:801:VAL:HG12	1.98	0.45
1:B:471:TRP:C	1:B:472:LYS:HD3	2.38	0.45
1:D:737:LEU:HD22	1:D:749:ILE:HD11	1.98	0.45
1:B:372:GLU:HB3	1:B:382:LYS:CB	2.44	0.45
1:D:610:LEU:HA	1:D:616:TYR:CZ	2.51	0.45
1:D:619:GLN:HG2	1:D:650:THR:OG1	2.16	0.45
1:D:619:GLN:N	1:D:682:ILE:O	2.37	0.45
1:A:625:ARG:HB3	1:A:671:GLN:HB3	1.99	0.45
1:B:576:ASN:HD21	1:B:603:SER:HB3	1.81	0.45
1:C:631:LYS:HD2	1:C:633:ASN:HA	1.99	0.45
1:D:405:GLY:HA2	1:D:687:LYS:O	2.17	0.45
1:D:565:ILE:HG22	1:D:592:SER:HB2	1.99	0.45
1:D:756:LEU:HD12	1:D:756:LEU:H	1.82	0.45
1:B:338:ASN:HD22	1:B:533:ARG:CZ	2.29	0.44
1:B:372:GLU:O	1:B:381:LEU:HD12	2.18	0.44
1:B:393:GLN:HE22	1:B:547:TYR:HD1	1.64	0.44
1:B:405:GLY:HA2	1:B:687:LYS:O	2.16	0.44
1:B:546:THR:HB	1:B:548:LEU:HG	1.99	0.44
1:D:540:ASP:HB2	1:D:548:LEU:HD11	2.00	0.44
1:D:580:ALA:HA	1:D:595:TYR:O	2.17	0.44
1:D:587:THR:HB	1:D:677:TRP:NE1	2.32	0.44
1:D:711:ASP:OD1	1:D:712:GLY:N	2.50	0.44
1:A:343:PRO:HD3	1:A:501:VAL:O	2.18	0.44
1:A:480:SER:OG	1:A:482:GLU:OE1	2.32	0.44
1:A:628:ILE:HD12	1:A:681:PHE:HE1	1.82	0.44
1:B:587:THR:HB	1:B:677:TRP:NE1	2.32	0.44
1:B:625:ARG:CZ	1:B:644:ASN:HB2	2.47	0.44
1:C:623:LYS:CG	1:C:647:ASP:HA	2.42	0.44
1:C:625:ARG:HB3	1:C:671:GLN:HB3	1.99	0.44
1:C:651:VAL:HG13	1:C:653:LYS:HG2	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:476:CYS:SG	1:D:480:SER:HA	2.58	0.44
1:A:423:LYS:O	1:A:447:TYR:OH	2.24	0.44
1:A:651:VAL:HG13	1:A:653:LYS:HG2	1.99	0.44
1:A:737:LEU:HG	1:A:800:ILE:HG13	1.98	0.44
1:D:372:GLU:O	1:D:381:LEU:HD12	2.18	0.44
1:D:647:ASP:OD1	1:D:647:ASP:N	2.49	0.44
1:D:696:LEU:HG	1:D:800:ILE:CG2	2.45	0.44
1:A:454:TYR:CD1	1:A:461:ILE:HG22	2.52	0.44
1:B:756:LEU:H	1:B:756:LEU:HD12	1.82	0.44
1:C:378:LEU:HB3	1:C:654:LYS:HD3	1.99	0.44
1:C:378:LEU:HD22	1:C:654:LYS:HE3	2.00	0.44
1:D:471:TRP:C	1:D:472:LYS:HD3	2.38	0.44
1:D:750:ILE:HG12	1:D:755:TYR:HE1	1.82	0.44
1:B:339:ASN:ND2	1:B:529:LYS:HG2	2.33	0.44
1:B:607:GLY:HA3	1:B:664:ILE:N	2.33	0.44
1:C:390:PRO:HG3	1:C:458:THR:HA	2.00	0.44
1:D:726:PHE:CD1	1:D:780:PHE:HB3	2.50	0.44
1:A:378:LEU:HD22	1:A:654:LYS:HE3	2.00	0.44
1:B:241:LEU:HD21	1:B:295:ALA:HB1	2.00	0.44
1:C:343:PRO:HD3	1:C:501:VAL:O	2.17	0.44
1:C:414:LYS:O	1:C:415:GLN:HG2	2.18	0.44
1:C:480:SER:OG	1:C:482:GLU:OE1	2.32	0.44
1:D:431:TYR:N	1:D:531:TYR:OH	2.50	0.44
1:D:553:ASP:OD1	1:D:553:ASP:N	2.51	0.44
1:D:625:ARG:CZ	1:D:644:ASN:HB2	2.47	0.44
1:D:748:SER:HB3	1:D:758:PHE:HD1	1.81	0.44
1:A:346:SER:O	1:A:497:MET:HG2	2.18	0.44
1:B:611:LYS:N	1:B:616:TYR:OH	2.47	0.44
1:D:369:ILE:HG13	1:D:384:TYR:HB3	1.98	0.44
1:A:414:LYS:O	1:A:415:GLN:HG2	2.18	0.44
1:A:418:GLN:HB3	1:A:420:TYR:HE1	1.83	0.44
1:A:738:ARG:HH21	1:A:799:SER:HB2	1.82	0.44
1:B:350:GLY:CA	1:B:409:LYS:HA	2.48	0.44
1:B:561:GLU:H	1:B:604:GLN:HE22	1.66	0.44
1:D:581:PHE:CD2	1:D:583:ASP:HB2	2.53	0.44
1:D:726:PHE:O	1:D:728:LYS:NZ	2.51	0.44
1:A:241:LEU:HD21	1:A:295:ALA:HB1	2.00	0.44
1:A:378:LEU:HB3	1:A:654:LYS:HD3	1.99	0.44
1:B:540:ASP:HB2	1:B:548:LEU:HD11	1.99	0.44
1:B:584:LYS:HE3	1:B:589:LYS:O	2.18	0.44
1:B:722:TYR:HB3	1:B:784:GLU:HA	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:372:GLU:OE1	1:C:382:LYS:HB2	2.18	0.44
1:D:618:ILE:HG23	1:D:683:ILE:HG12	2.00	0.44
1:B:427:PHE:CE2	1:B:469:GLU:HG2	2.53	0.43
1:B:565:ILE:HG22	1:B:592:SER:HB2	1.99	0.43
1:B:711:ASP:OD1	1:B:712:GLY:N	2.51	0.43
1:B:750:ILE:HG12	1:B:755:TYR:HE1	1.82	0.43
1:D:410:LEU:HA	1:D:440:LYS:HD3	2.00	0.43
1:D:607:GLY:HA3	1:D:664:ILE:N	2.33	0.43
1:A:168:LEU:HD22	1:A:268:LYS:HG3	1.99	0.43
1:B:476:CYS:SG	1:B:480:SER:HA	2.58	0.43
1:B:697:LYS:HA	1:B:697:LYS:HD3	1.87	0.43
1:C:628:ILE:HD12	1:C:681:PHE:HE1	1.82	0.43
1:D:350:GLY:CA	1:D:409:LYS:HA	2.48	0.43
1:D:364:PRO:O	1:D:461:ILE:HD11	2.18	0.43
1:D:561:GLU:H	1:D:604:GLN:HE22	1.66	0.43
1:A:274:ARG:NH2	1:A:553:ASP:OD2	2.51	0.43
1:A:423:LYS:HE2	1:A:473:GLU:N	2.33	0.43
1:A:742:LYS:HB3	1:A:794:ILE:HB	2.00	0.43
1:B:428:PRO:HG2	1:B:431:TYR:CE2	2.54	0.43
1:B:441:ARG:NH1	1:B:693:PRO:O	2.37	0.43
1:C:381:LEU:HD13	1:C:407:ILE:HG21	1.99	0.43
1:C:612:PRO:HA	1:C:658:GLY:O	2.17	0.43
1:C:618:ILE:HG21	1:C:638:PHE:CE1	2.53	0.43
1:A:349:ARG:NH2	1:A:414:LYS:HB2	2.33	0.43
1:A:390:PRO:HG3	1:A:458:THR:HA	2.00	0.43
1:A:392:TYR:O	1:A:535:SER:OG	2.22	0.43
1:A:702:ILE:HD12	1:A:724:LYS:HG3	2.00	0.43
1:B:519:GLU:C	1:B:522:GLN:H	2.22	0.43
1:B:692:LEU:HB3	1:B:693:PRO:HD2	2.00	0.43
1:C:241:LEU:HD21	1:C:295:ALA:HB1	2.00	0.43
1:C:346:SER:O	1:C:497:MET:HG2	2.18	0.43
1:C:349:ARG:NH2	1:C:414:LYS:HB2	2.33	0.43
1:C:405:GLY:O	1:C:407:ILE:HG12	2.19	0.43
1:C:605:PHE:O	1:C:609:LYS:NZ	2.46	0.43
1:C:742:LYS:HB3	1:C:794:ILE:HB	2.01	0.43
1:D:168:LEU:HD22	1:D:268:LYS:HG3	1.99	0.43
1:D:616:TYR:HB2	1:D:655:PHE:CE1	2.53	0.43
1:D:722:TYR:HB3	1:D:784:GLU:HA	2.00	0.43
1:D:783:LEU:HD22	1:D:795:PHE:CE2	2.54	0.43
1:B:168:LEU:HD22	1:B:268:LYS:HG3	1.99	0.43
1:B:553:ASP:OD1	1:B:553:ASP:N	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:580:ALA:HA	1:B:595:TYR:O	2.17	0.43
1:B:726:PHE:O	1:B:728:LYS:NZ	2.51	0.43
1:C:373:ILE:N	1:C:500:GLY:O	2.32	0.43
1:C:570:THR:HB	1:C:573:TRP:HB2	1.99	0.43
1:D:428:PRO:HG2	1:D:431:TYR:CE2	2.54	0.43
1:B:476:CYS:HA	1:B:480:SER:H	1.83	0.43
1:C:168:LEU:HD22	1:C:268:LYS:HG3	1.99	0.43
1:C:363:ALA:HB3	1:C:366:TYR:CD2	2.54	0.43
1:C:433:ILE:HA	1:C:451:ALA:HA	2.01	0.43
1:C:625:ARG:O	1:C:676:ALA:HB2	2.18	0.43
1:D:339:ASN:ND2	1:D:529:LYS:HG2	2.33	0.43
1:D:476:CYS:HA	1:D:480:SER:H	1.83	0.43
1:A:277:GLU:N	1:A:336:LEU:HD21	2.33	0.43
1:A:378:LEU:HD12	1:A:379:PRO:HD2	2.01	0.43
1:A:381:LEU:HD13	1:A:407:ILE:HG21	1.99	0.43
1:A:614:THR:HB	1:A:616:TYR:HE2	1.84	0.43
1:B:431:TYR:N	1:B:531:TYR:OH	2.50	0.43
1:B:519:GLU:O	1:B:522:GLN:NE2	2.36	0.43
1:B:581:PHE:CD2	1:B:583:ASP:HB2	2.53	0.43
1:B:726:PHE:CD1	1:B:780:PHE:HB3	2.50	0.43
1:C:276:SER:H	1:C:505:THR:CG2	2.09	0.43
1:C:702:ILE:HD12	1:C:724:LYS:HG3	2.00	0.43
1:D:425:ILE:HG21	1:D:449:VAL:HB	2.01	0.43
1:D:512:GLY:O	1:D:529:LYS:N	2.40	0.43
1:D:584:LYS:HE3	1:D:589:LYS:O	2.18	0.43
1:D:617:VAL:N	1:D:684:LEU:O	2.48	0.43
1:D:743:GLY:O	1:D:793:THR:HG23	2.19	0.43
1:A:413:PRO:HB2	1:A:490:ALA:HB2	2.01	0.43
1:A:570:THR:HB	1:A:573:TRP:HB2	1.99	0.43
1:A:625:ARG:O	1:A:676:ALA:HB2	2.18	0.43
1:B:616:TYR:HB2	1:B:655:PHE:CE1	2.54	0.43
1:B:618:ILE:HG23	1:B:683:ILE:HG12	2.00	0.43
1:B:743:GLY:O	1:B:793:THR:HG23	2.19	0.43
1:C:378:LEU:HD12	1:C:379:PRO:HD2	2.01	0.43
1:C:418:GLN:HB3	1:C:420:TYR:HE1	1.83	0.43
1:D:692:LEU:HB3	1:D:693:PRO:HD2	2.00	0.43
1:A:333:LEU:HD23	1:A:541:LEU:CD2	2.47	0.43
1:A:608:ASN:OD1	1:A:608:ASN:N	2.51	0.43
1:B:360:LEU:HD22	1:B:371:PHE:CE1	2.54	0.43
1:B:364:PRO:O	1:B:461:ILE:HD11	2.18	0.43
1:B:410:LEU:HA	1:B:440:LYS:HD3	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:403:ILE:HD13	1:C:617:VAL:HG11	2.00	0.43
1:D:427:PHE:CE2	1:D:469:GLU:HG2	2.54	0.43
1:D:707:VAL:HB	1:D:723:PHE:CE1	2.54	0.43
1:A:363:ALA:HB3	1:A:366:TYR:CD2	2.54	0.43
1:A:371:PHE:HE2	1:A:513:PHE:CE2	2.37	0.43
1:A:372:GLU:OE1	1:A:382:LYS:HB2	2.18	0.43
1:B:736:HIS:CD2	1:B:803:GLU:HB2	2.52	0.43
1:C:371:PHE:HE2	1:C:513:PHE:CE2	2.37	0.43
1:C:672:SER:OG	1:C:673:GLU:OE1	2.31	0.43
1:D:241:LEU:HD21	1:D:295:ALA:HB1	2.00	0.43
1:D:519:GLU:C	1:D:522:GLN:H	2.22	0.43
1:D:546:THR:HB	1:D:548:LEU:HG	1.99	0.43
1:A:403:ILE:HD13	1:A:617:VAL:HG11	2.00	0.42
1:A:618:ILE:HG21	1:A:638:PHE:CE1	2.53	0.42
1:B:345:TYR:HE2	1:B:523:LYS:HD3	1.83	0.42
1:B:617:VAL:N	1:B:684:LEU:O	2.48	0.42
1:B:707:VAL:HB	1:B:723:PHE:CE1	2.54	0.42
1:B:729:LEU:HD13	1:B:779:CYS:SG	2.59	0.42
1:C:472:LYS:HB3	1:C:475:SER:OG	2.19	0.42
1:C:764:GLU:OE2	1:C:764:GLU:N	2.52	0.42
1:D:577:ASN:HB3	1:D:600:GLY:HA2	2.01	0.42
1:A:433:ILE:HA	1:A:451:ALA:HA	2.01	0.42
1:B:738:ARG:O	1:B:799:SER:OG	2.32	0.42
1:C:435:LYS:NZ	1:C:448:GLU:HG2	2.34	0.42
1:C:701:TRP:HB3	1:C:723:PHE:CD1	2.54	0.42
1:D:611:LYS:N	1:D:616:TYR:OH	2.47	0.42
1:A:739:LEU:HD21	1:A:795:PHE:CD1	2.54	0.42
1:A:769:VAL:O	1:A:769:VAL:HG13	2.19	0.42
1:B:436:ILE:HA	1:B:448:GLU:O	2.20	0.42
1:C:277:GLU:N	1:C:336:LEU:HD21	2.34	0.42
1:B:576:ASN:HD22	1:B:601:GLU:HG2	1.84	0.42
1:B:577:ASN:HB3	1:B:600:GLY:HA2	2.01	0.42
1:C:344:SER:O	1:C:499:LEU:N	2.51	0.42
1:C:608:ASN:OD1	1:C:608:ASN:N	2.51	0.42
1:C:630:LEU:HD13	1:C:666:PHE:CD1	2.55	0.42
1:D:360:LEU:HD22	1:D:371:PHE:CE1	2.54	0.42
1:A:731:ASN:HA	1:A:773:THR:O	2.19	0.42
1:B:423:LYS:HD3	1:B:473:GLU:O	2.20	0.42
1:B:425:ILE:HG21	1:B:449:VAL:HB	2.01	0.42
1:B:704:SER:N	1:B:722:TYR:O	2.52	0.42
1:C:489:LYS:HA	1:C:489:LYS:HD2	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:423:LYS:HD3	1:D:473:GLU:O	2.20	0.42
1:D:658:GLY:O	1:D:661:PRO:HD3	2.20	0.42
1:D:736:HIS:CD2	1:D:803:GLU:HB2	2.52	0.42
1:D:434:THR:HG21	1:D:461:ILE:HD12	2.02	0.42
1:D:562:ASN:O	1:D:565:ILE:HG13	2.19	0.42
1:D:625:ARG:HE	1:D:642:LYS:C	2.21	0.42
1:D:746:ARG:NE	1:D:784:GLU:OE2	2.45	0.42
1:A:405:GLY:O	1:A:407:ILE:HG12	2.19	0.42
1:A:472:LYS:HB3	1:A:475:SER:OG	2.19	0.42
1:B:427:PHE:CD2	1:B:467:LYS:HB3	2.54	0.42
1:B:585:ALA:HB2	1:B:589:LYS:HB3	2.02	0.42
1:B:658:GLY:O	1:B:661:PRO:HD3	2.20	0.42
1:C:423:LYS:HE2	1:C:473:GLU:N	2.33	0.42
1:D:471:TRP:HA	1:D:472:LYS:HD3	2.01	0.42
1:D:473:GLU:OE2	1:D:482:GLU:HA	2.20	0.42
1:A:282:TYR:OH	1:A:540:ASP:CG	2.54	0.42
1:B:562:ASN:O	1:B:565:ILE:HG13	2.19	0.42
1:B:625:ARG:HE	1:B:642:LYS:C	2.21	0.42
1:B:783:LEU:HD22	1:B:795:PHE:CE2	2.54	0.42
1:C:435:LYS:HE3	1:C:450:THR:HB	2.01	0.42
1:C:571:GLY:O	1:C:574:ARG:NH1	2.53	0.42
1:D:436:ILE:HA	1:D:448:GLU:O	2.20	0.42
1:A:420:TYR:HB3	1:A:515:LEU:HD21	2.02	0.42
1:A:434:THR:HG1	1:A:452:ASN:CG	2.23	0.42
1:A:435:LYS:HE3	1:A:450:THR:HB	2.01	0.42
1:C:625:ARG:HE	1:C:674:TYR:CB	2.33	0.42
1:C:642:LYS:HG3	1:C:643:ASN:OD1	2.20	0.42
1:C:739:LEU:HD21	1:C:795:PHE:CD1	2.54	0.42
1:C:746:ARG:N	1:C:784:GLU:O	2.24	0.42
1:D:704:SER:N	1:D:722:TYR:O	2.52	0.42
1:A:378:LEU:CB	1:A:654:LYS:HD3	2.50	0.42
1:A:555:TYR:CG	1:A:682:ILE:HG21	2.55	0.42
1:A:571:GLY:O	1:A:574:ARG:NH1	2.53	0.42
1:A:706:ASN:O	1:A:718:LEU:HB2	2.20	0.42
1:B:349:ARG:HD2	1:B:349:ARG:HA	1.60	0.42
1:B:446:GLY:CA	1:B:472:LYS:HE3	2.50	0.42
1:B:680:ASN:O	1:B:682:ILE:HD12	2.20	0.42
1:C:744:THR:O	1:C:793:THR:OG1	2.38	0.42
1:D:585:ALA:HB2	1:D:589:LYS:HB3	2.02	0.42
1:A:435:LYS:NZ	1:A:448:GLU:HG2	2.34	0.41
1:B:333:LEU:CA	1:B:335:THR:CG2	2.97	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:423:LYS:HE3	1:B:425:ILE:HG12	2.02	0.41
1:D:427:PHE:CD2	1:D:467:LYS:HB3	2.54	0.41
1:D:783:LEU:HD13	1:D:795:PHE:CD2	2.55	0.41
1:A:630:LEU:HD13	1:A:666:PHE:CD1	2.55	0.41
1:A:642:LYS:HG3	1:A:643:ASN:OD1	2.20	0.41
1:C:413:PRO:HB2	1:C:490:ALA:HB2	2.01	0.41
1:C:425:ILE:N	1:C:513:PHE:O	2.53	0.41
1:C:490:ALA:HA	1:C:495:ILE:HD11	2.02	0.41
1:C:555:TYR:CG	1:C:682:ILE:HG21	2.55	0.41
1:C:757:LEU:HD23	1:C:757:LEU:HA	1.89	0.41
1:C:769:VAL:HG13	1:C:769:VAL:O	2.19	0.41
1:D:356:PRO:HB3	1:D:689:LEU:HD21	2.02	0.41
1:D:369:ILE:HG12	1:D:385:GLN:CA	2.50	0.41
1:D:729:LEU:HD13	1:D:779:CYS:SG	2.60	0.41
1:D:761:VAL:HA	1:D:764:GLU:OE2	2.21	0.41
1:B:715:LEU:HD12	1:B:798:VAL:HG11	2.02	0.41
1:C:731:ASN:HA	1:C:773:THR:O	2.19	0.41
1:D:366:TYR:CZ	1:D:398:SER:HB2	2.56	0.41
1:D:425:ILE:N	1:D:513:PHE:O	2.53	0.41
1:D:563:TRP:CE3	1:D:680:ASN:HA	2.55	0.41
1:D:628:ILE:HG23	1:D:666:PHE:CZ	2.55	0.41
1:D:680:ASN:O	1:D:682:ILE:HD12	2.20	0.41
1:A:701:TRP:HB3	1:A:723:PHE:CD1	2.54	0.41
1:B:356:PRO:HB3	1:B:689:LEU:HD21	2.02	0.41
1:B:425:ILE:N	1:B:513:PHE:O	2.53	0.41
1:B:628:ILE:HG23	1:B:666:PHE:CZ	2.55	0.41
1:B:783:LEU:HD13	1:B:795:PHE:CD2	2.55	0.41
1:C:465:LYS:HA	1:C:465:LYS:HD2	1.84	0.41
1:C:614:THR:HB	1:C:616:TYR:HE2	1.84	0.41
1:D:576:ASN:HD22	1:D:601:GLU:HG2	1.84	0.41
1:D:613:LYS:HD3	1:D:613:LYS:HA	1.82	0.41
1:A:505:THR:OG1	1:A:506:PHE:N	2.53	0.41
1:A:625:ARG:HE	1:A:674:TYR:CB	2.33	0.41
1:B:333:LEU:CA	1:B:335:THR:HG23	2.50	0.41
1:B:372:GLU:OE2	1:B:374:LEU:HG	2.21	0.41
1:B:471:TRP:HA	1:B:472:LYS:HD3	2.01	0.41
1:C:768:ARG:HA	1:C:768:ARG:HD3	1.88	0.41
1:D:423:LYS:CD	1:D:477:GLU:HB2	2.51	0.41
1:D:472:LYS:HD3	1:D:472:LYS:N	2.36	0.41
1:D:587:THR:HG21	1:D:623:LYS:HD2	2.03	0.41
1:A:432:VAL:N	1:A:452:ASN:O	2.34	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:366:TYR:CZ	1:B:398:SER:HB2	2.56	0.41
1:B:472:LYS:HD3	1:B:472:LYS:N	2.36	0.41
1:B:598:LYS:HE2	1:B:675:GLU:HG3	2.03	0.41
1:C:378:LEU:CB	1:C:654:LYS:HD3	2.50	0.41
1:C:486:SER:OG	1:C:487:ILE:N	2.54	0.41
1:C:491:GLU:HG3	1:C:493:ASP:OD1	2.21	0.41
1:D:710:LYS:HA	1:D:710:LYS:HD3	1.92	0.41
1:D:715:LEU:HD12	1:D:798:VAL:HG11	2.02	0.41
1:A:757:LEU:HD23	1:A:757:LEU:HA	1.89	0.41
1:B:369:ILE:HG12	1:B:385:GLN:CA	2.50	0.41
1:B:434:THR:HG21	1:B:461:ILE:HD12	2.02	0.41
1:B:607:GLY:HA3	1:B:664:ILE:H	1.86	0.41
1:C:532:LEU:HD12	1:C:532:LEU:HA	1.74	0.41
1:C:783:LEU:HD23	1:C:783:LEU:HA	1.92	0.41
1:D:736:HIS:HA	1:D:769:VAL:HA	2.02	0.41
1:D:748:SER:HB3	1:D:758:PHE:CD1	2.55	0.41
1:A:350:GLY:HA3	1:A:412:CYS:O	2.21	0.41
1:A:354:ASP:OD1	1:A:797:ASN:ND2	2.53	0.41
1:A:716:GLU:HA	1:A:794:ILE:HG12	2.03	0.41
1:B:654:LYS:HE3	1:B:654:LYS:HB3	1.90	0.41
1:C:367:ALA:HB3	1:C:388:LEU:HD11	2.03	0.41
1:A:344:SER:O	1:A:499:LEU:N	2.52	0.41
1:A:367:ALA:O	1:A:369:ILE:HG23	2.21	0.41
1:A:657:SER:OG	1:A:661:PRO:HG3	2.21	0.41
1:B:278:ILE:HG13	1:B:336:LEU:CD2	2.49	0.41
1:B:473:GLU:OE2	1:B:482:GLU:HA	2.20	0.41
1:B:587:THR:HG21	1:B:623:LYS:HD2	2.03	0.41
1:B:798:VAL:O	1:B:798:VAL:HG23	2.21	0.41
1:C:420:TYR:CD2	1:C:517:VAL:HG11	2.56	0.41
1:C:722:TYR:HB3	1:C:784:GLU:CB	2.42	0.41
1:D:446:GLY:CA	1:D:472:LYS:HE3	2.50	0.41
1:D:619:GLN:O	1:D:682:ILE:N	2.54	0.41
1:D:798:VAL:O	1:D:798:VAL:HG23	2.21	0.41
1:A:425:ILE:N	1:A:513:PHE:O	2.53	0.41
1:A:474:LYS:HG2	1:A:478:GLU:HB3	2.02	0.41
1:A:491:GLU:HG3	1:A:493:ASP:OD1	2.21	0.41
1:A:619:GLN:HA	1:A:651:VAL:O	2.21	0.41
1:B:748:SER:HB3	1:B:758:PHE:CD1	2.55	0.41
1:C:354:ASP:OD1	1:C:797:ASN:ND2	2.53	0.41
1:C:367:ALA:O	1:C:369:ILE:HG23	2.21	0.41
1:C:505:THR:OG1	1:C:506:PHE:N	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:605:PHE:HA	1:C:665:TYR:CB	2.51	0.41
1:D:739:LEU:HD21	1:D:795:PHE:CG	2.56	0.41
1:B:563:TRP:CE3	1:B:680:ASN:HA	2.55	0.40
1:C:350:GLY:HA3	1:C:412:CYS:O	2.21	0.40
1:C:426:GLU:HG2	1:C:512:GLY:HA3	2.03	0.40
1:C:631:LYS:O	1:C:665:TYR:N	2.51	0.40
1:C:657:SER:OG	1:C:661:PRO:HG3	2.21	0.40
1:C:700:ASP:HB2	1:C:725:GLN:NE2	2.36	0.40
1:A:367:ALA:HB3	1:A:388:LEU:HD11	2.03	0.40
1:A:594:LEU:HD12	1:A:594:LEU:H	1.87	0.40
1:C:594:LEU:H	1:C:594:LEU:HD12	1.87	0.40
1:C:706:ASN:O	1:C:718:LEU:HB2	2.20	0.40
1:D:343:PRO:HG2	1:D:500:GLY:HA3	2.04	0.40
1:D:596:THR:HB	1:D:670:ASN:HB2	2.03	0.40
1:A:490:ALA:HA	1:A:495:ILE:HD11	2.02	0.40
1:B:561:GLU:H	1:B:604:GLN:NE2	2.19	0.40
1:C:295:ALA:HA	1:C:298:THR:HG22	2.04	0.40
1:C:427:PHE:CD2	1:C:467:LYS:HB2	2.57	0.40
1:C:474:LYS:HG2	1:C:478:GLU:HB3	2.02	0.40
1:C:725:GLN:O	1:C:780:PHE:HB2	2.21	0.40
1:D:607:GLY:HA3	1:D:664:ILE:H	1.86	0.40
1:A:700:ASP:HB2	1:A:725:GLN:NE2	2.36	0.40
1:B:423:LYS:CD	1:B:477:GLU:HB2	2.51	0.40
1:B:619:GLN:O	1:B:682:ILE:N	2.54	0.40
1:C:333:LEU:HD23	1:C:541:LEU:CD2	2.48	0.40
1:C:643:ASN:HB3	1:C:645:PHE:CE2	2.56	0.40
1:D:708:GLN:O	1:D:716:GLU:N	2.55	0.40
1:D:735:TYR:HA	1:D:802:LYS:HA	2.03	0.40
1:A:276:SER:H	1:A:505:THR:CG2	2.11	0.40
1:A:295:ALA:HA	1:A:298:THR:HG22	2.04	0.40
1:A:486:SER:OG	1:A:487:ILE:N	2.54	0.40
1:A:643:ASN:HB3	1:A:645:PHE:CE2	2.56	0.40
1:A:672:SER:HB3	1:A:674:TYR:HD2	1.87	0.40
1:A:725:GLN:O	1:A:780:PHE:HB2	2.21	0.40
1:C:357:ILE:HD12	1:C:692:LEU:HD21	2.04	0.40
1:C:420:TYR:HB3	1:C:515:LEU:HD21	2.02	0.40
1:C:560:VAL:HG11	1:C:681:PHE:HB2	2.03	0.40
1:D:423:LYS:HE3	1:D:425:ILE:HG12	2.02	0.40
1:D:594:LEU:HD13	1:D:602:PHE:CG	2.57	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	680/803 (85%)	612 (90%)	66 (10%)	2 (0%)	41	77
1	B	680/803 (85%)	616 (91%)	62 (9%)	2 (0%)	41	77
1	C	680/803 (85%)	614 (90%)	64 (9%)	2 (0%)	41	77
1	D	680/803 (85%)	615 (90%)	63 (9%)	2 (0%)	41	77
All	All	2720/3212 (85%)	2457 (90%)	255 (9%)	8 (0%)	44	77

All (8) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	336	LEU
1	B	335	THR
1	C	336	LEU
1	D	335	THR
1	A	334	PRO
1	C	334	PRO
1	B	334	PRO
1	D	334	PRO

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	626/730 (86%)	623 (100%)	3 (0%)	88	93
1	B	626/730 (86%)	622 (99%)	4 (1%)	86	92

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	C	626/730 (86%)	624 (100%)	2 (0%)	92 95
1	D	626/730 (86%)	621 (99%)	5 (1%)	81 89
All	All	2504/2920 (86%)	2490 (99%)	14 (1%)	86 92

All (14) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	225	LEU
1	A	335	THR
1	A	336	LEU
1	B	336	LEU
1	B	474	LYS
1	B	520	LYS
1	B	589	LYS
1	C	335	THR
1	C	336	LEU
1	D	225	LEU
1	D	336	LEU
1	D	474	LYS
1	D	520	LYS
1	D	589	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (33) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	348	ASN
1	A	375	ASN
1	A	543	ASN
1	A	569	ASN
1	A	577	ASN
1	B	339	ASN
1	B	348	ASN
1	B	393	GLN
1	B	418	GLN
1	B	443	ASN
1	B	543	ASN
1	B	604	GLN
1	B	649	GLN
1	B	656	ASN
1	B	670	ASN

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Mol	Chain	Res	Type
1	B	725	GLN
1	C	348	ASN
1	C	375	ASN
1	C	543	ASN
1	C	569	ASN
1	C	577	ASN
1	C	604	GLN
1	D	339	ASN
1	D	348	ASN
1	D	418	GLN
1	D	443	ASN
1	D	543	ASN
1	D	604	GLN
1	D	649	GLN
1	D	656	ASN
1	D	670	ASN
1	D	725	GLN
1	D	797	ASN

5.3.3 RNA

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates

There are no monosaccharides in this entry.

5.6 Ligand geometry

There are no ligands in this entry.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

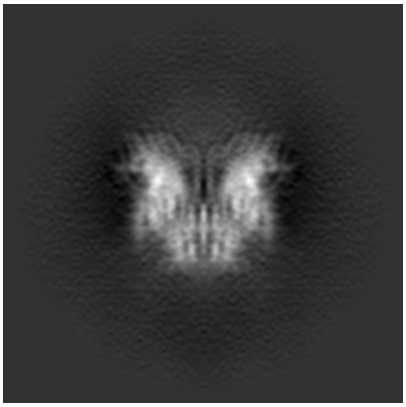
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-10889. These allow visual inspection of the internal detail of the map and identification of artifacts.

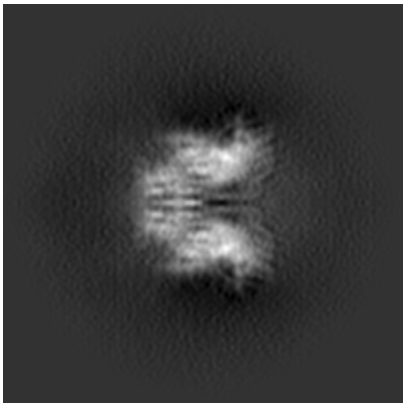
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

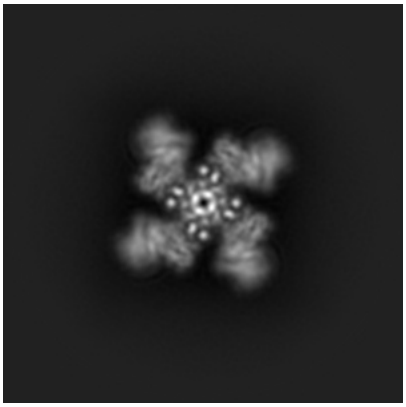
6.1.1 Primary map



X



Y

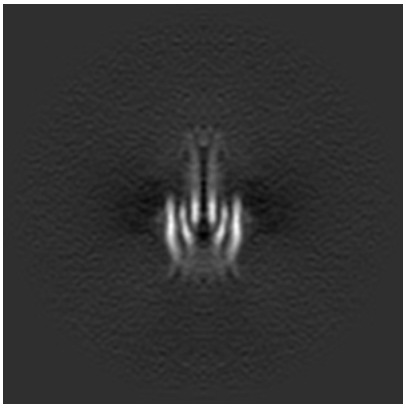


Z

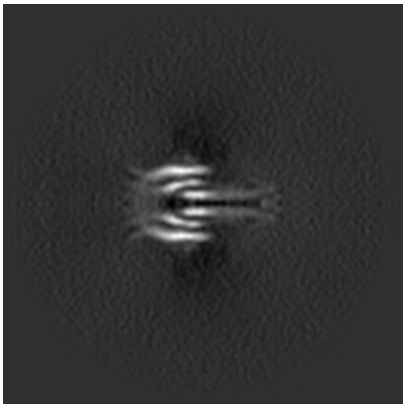
The images above show the map projected in three orthogonal directions.

6.2 Central slices

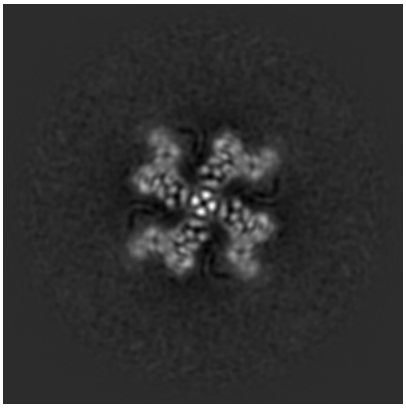
6.2.1 Primary map



X Index: 150



Y Index: 150

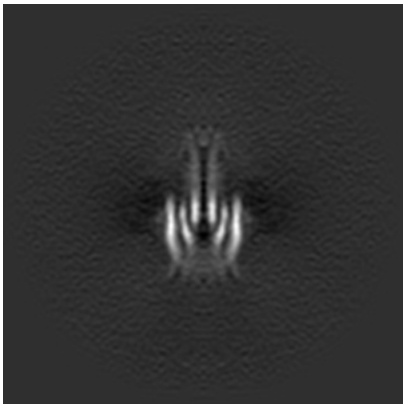


Z Index: 150

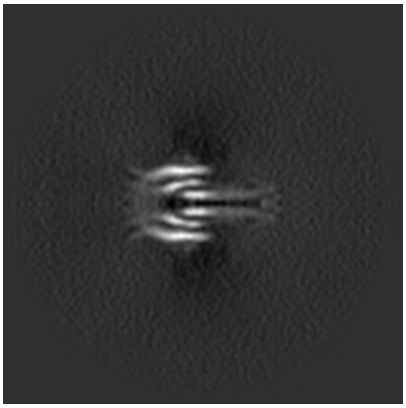
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

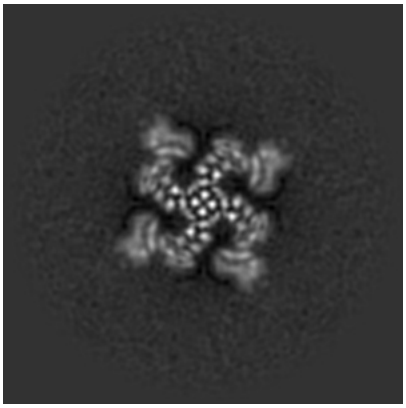
6.3.1 Primary map



X Index: 150



Y Index: 150

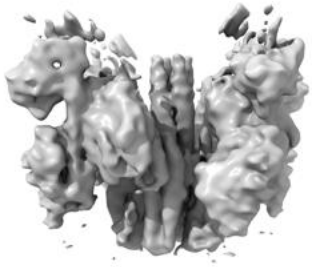


Z Index: 143

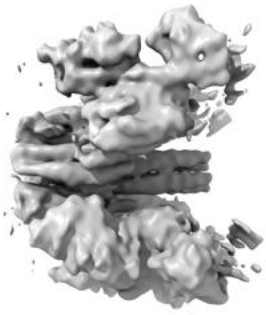
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal surface views (i)

6.4.1 Primary map



X



Y

Z

The images above show the 3D surface view of the map at the recommended contour level 0.55. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

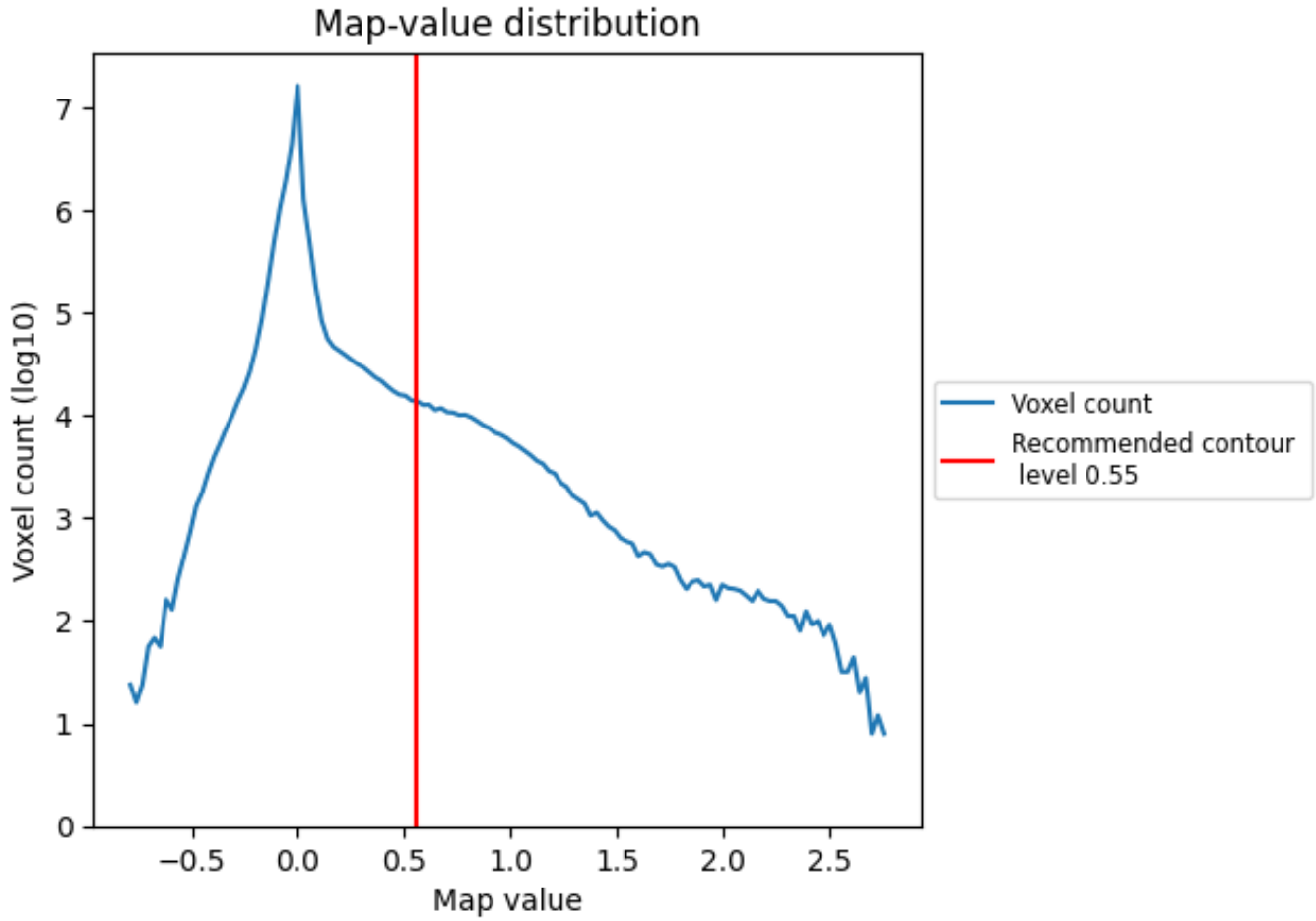
6.5 Mask visualisation (i)

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

7 Map analysis

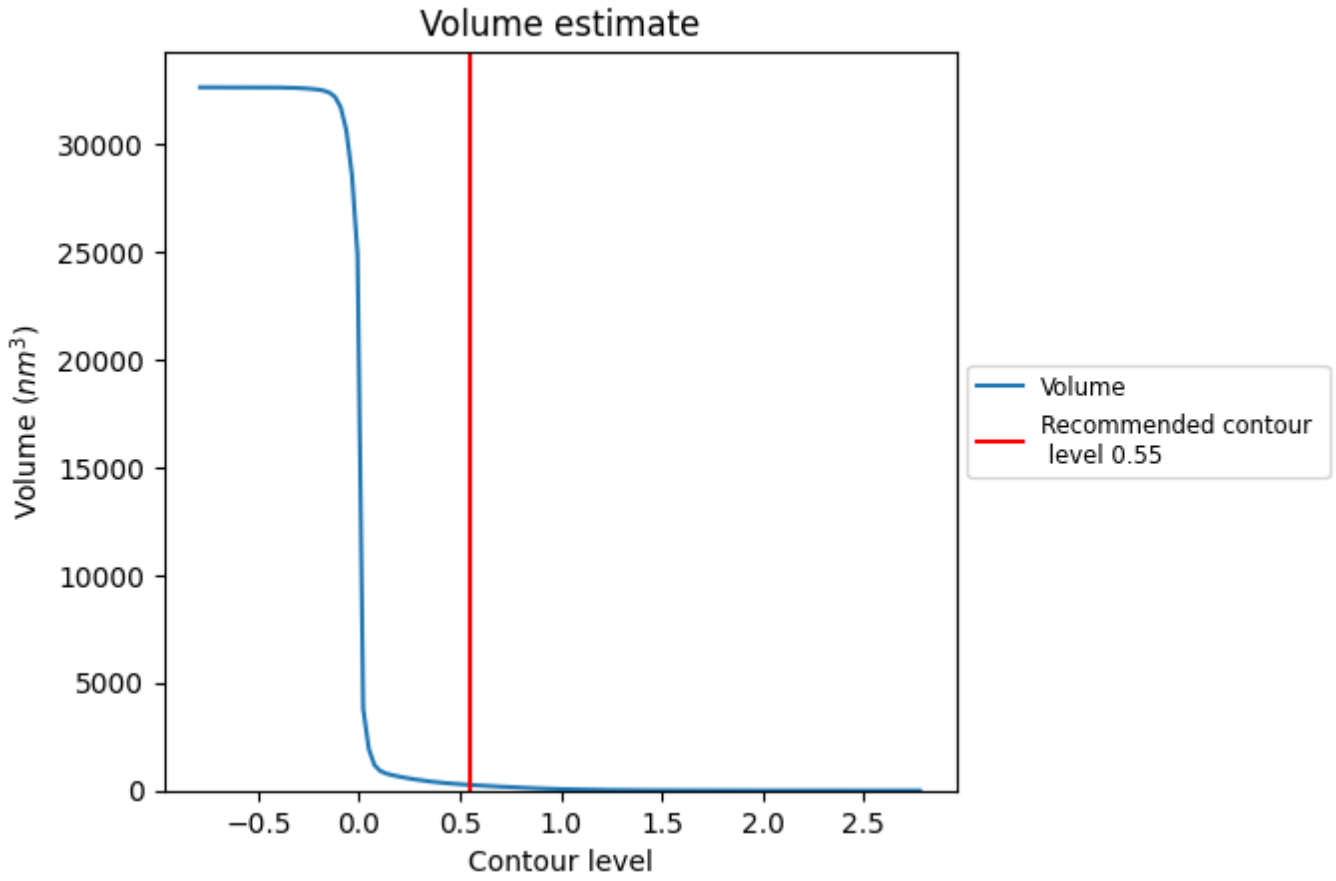
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



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

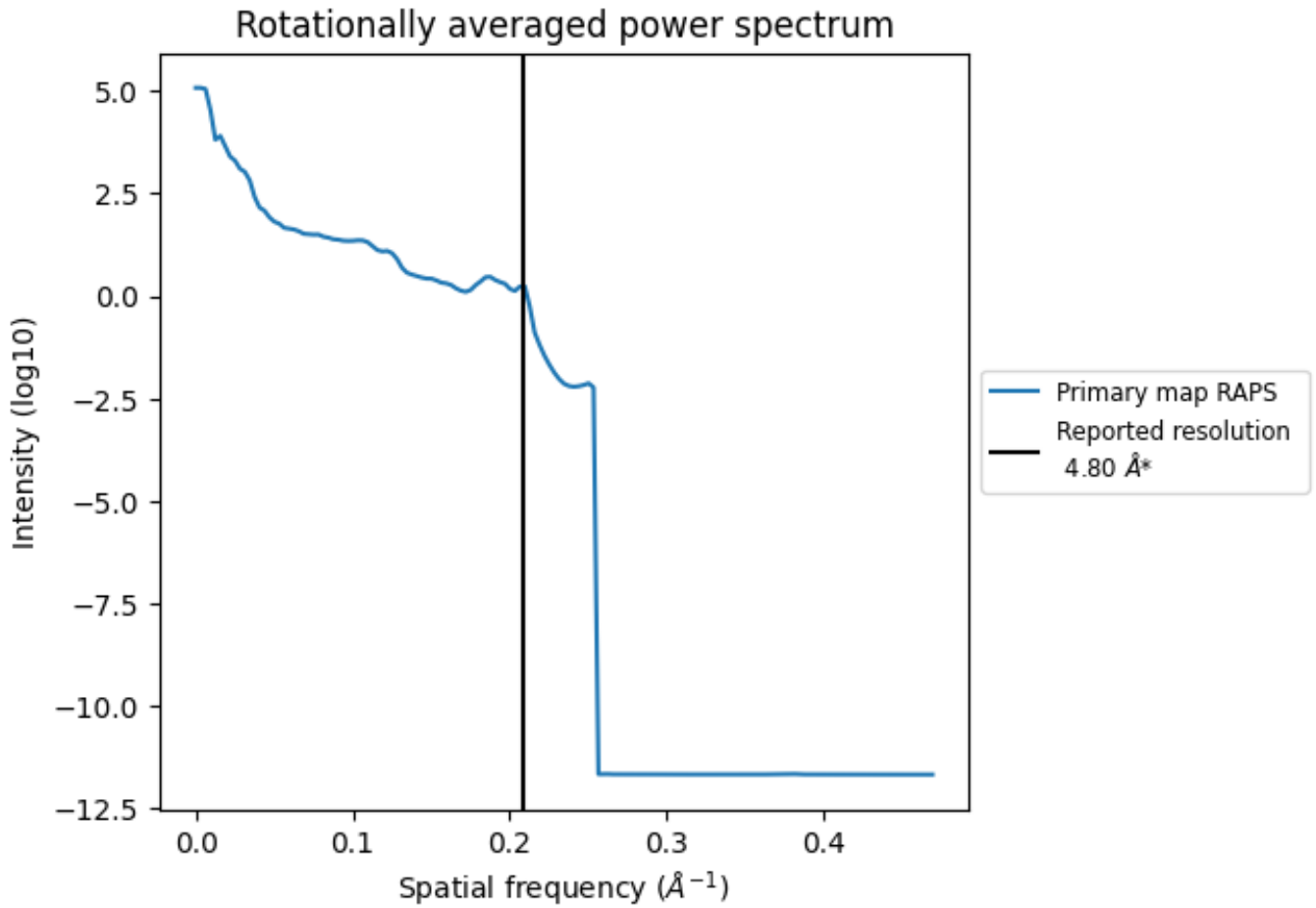
7.2 Volume estimate



The volume at the recommended contour level is 261 nm^3; this corresponds to an approximate mass of 236 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

7.3 Rotationally averaged power spectrum (i)

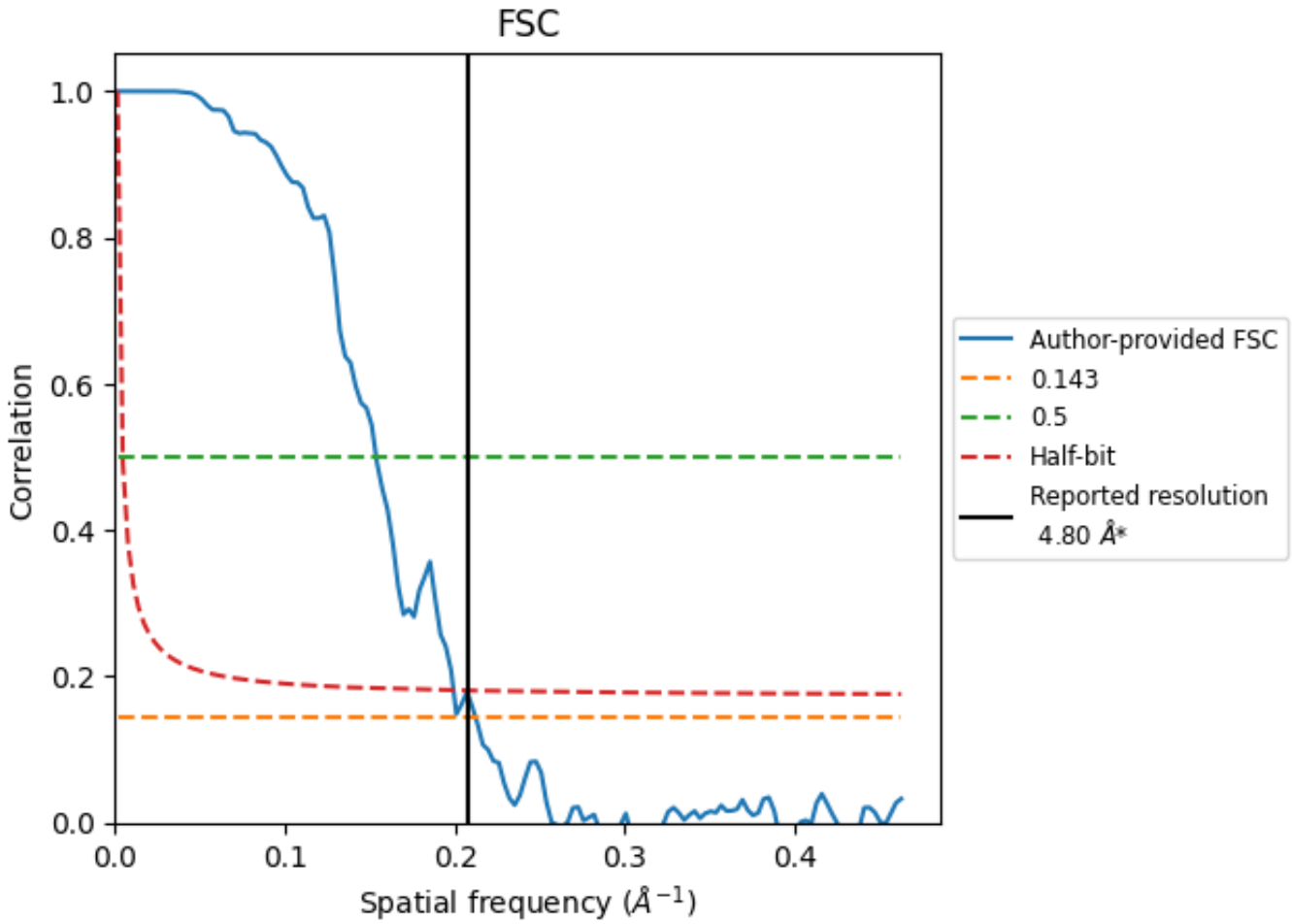


*Reported resolution corresponds to spatial frequency of 0.208 $Å^{-1}$

8 Fourier-Shell correlation

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



*Reported resolution corresponds to spatial frequency of 0.208 Å^{-1}

8.2 Resolution estimates (i)

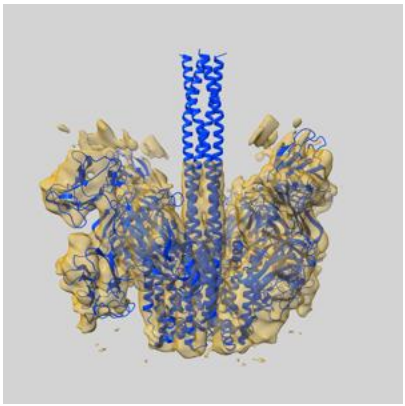
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	4.80	-	-
Author-provided FSC curve	4.71	6.51	5.02
Unmasked-calculated*	-	-	-

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps.

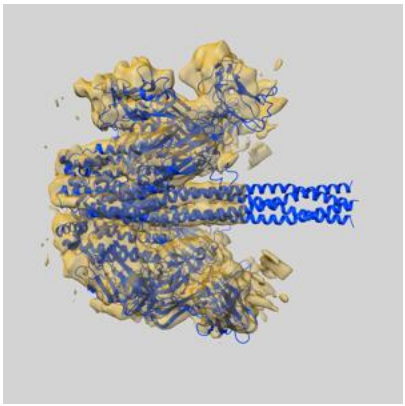
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-10889 and PDB model 6YRG. Per-residue inclusion information can be found in section 3 on page 4.

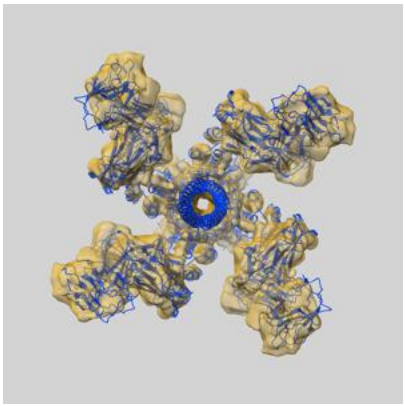
9.1 Map-model overlay



X



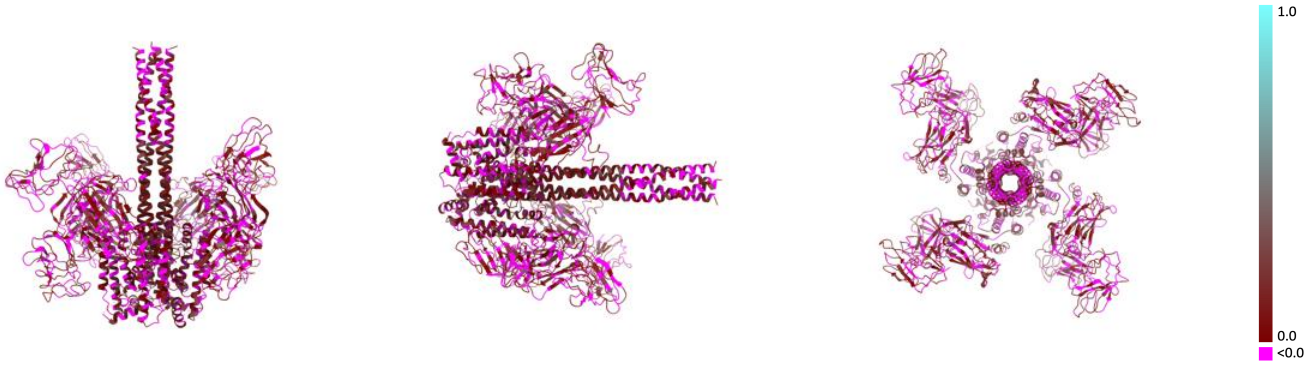
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.55 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

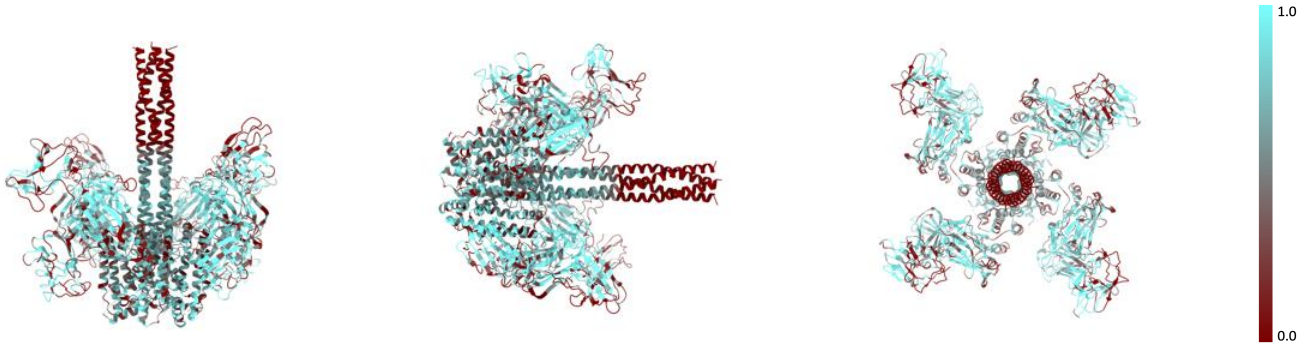
9.2 Q-score mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

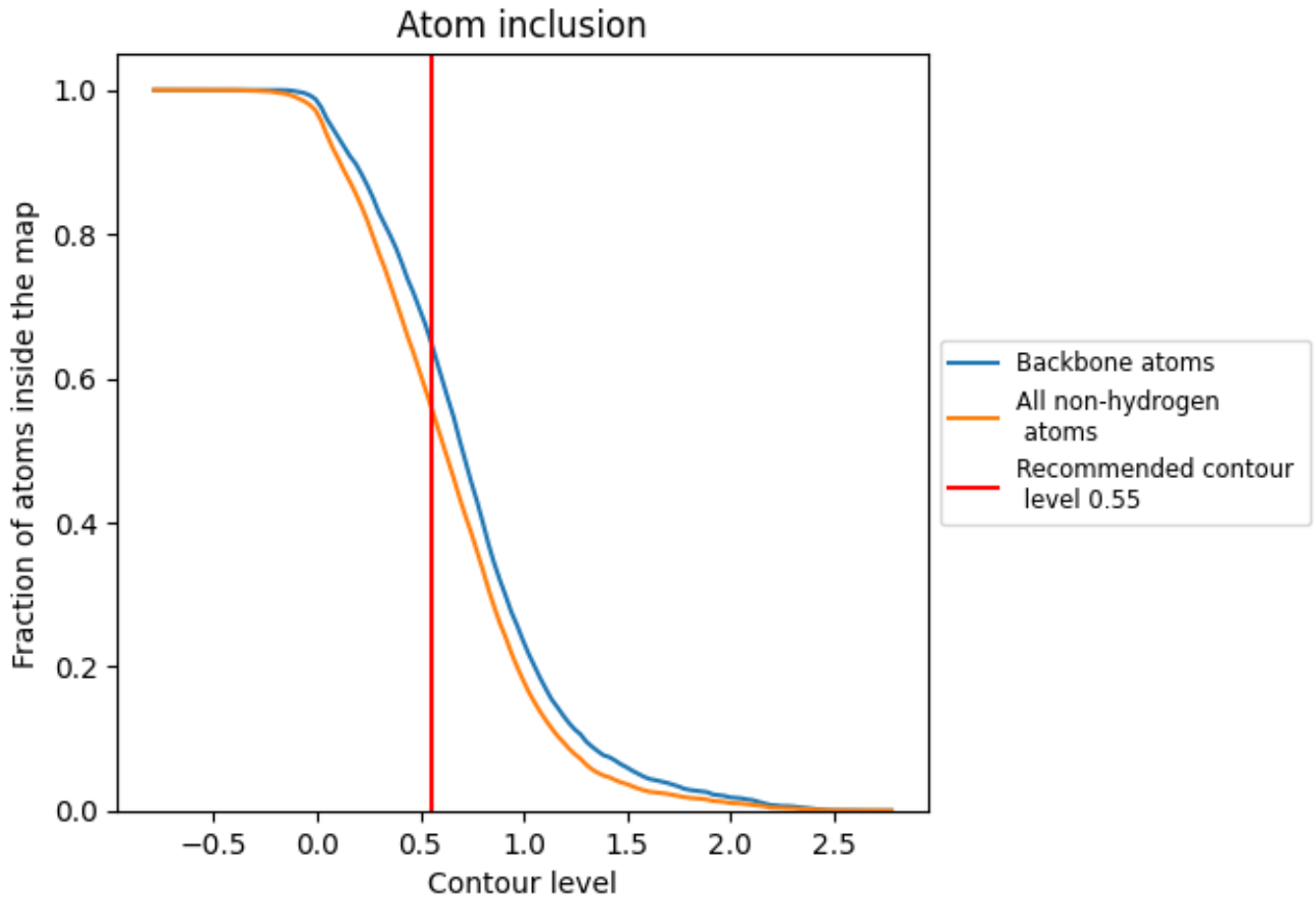
9.3 Atom inclusion mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.55).

9.4 Atom inclusion (i)



At the recommended contour level, 65% of all backbone atoms, 56% 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 (0.55) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.5622	0.0440
A	0.5622	0.0480
B	0.5615	0.0440
C	0.5635	0.0470
D	0.5616	0.0390