



## Full wwPDB EM Validation Report ⓘ

Jul 19, 2023 – 08:07 pm BST

PDB ID : 8BDA  
EMDB ID : EMD-15980  
Title : IFTA complex in anterograde intraflagellar transport trains (*Chlamydomonas reinhardtii*)  
Authors : Lacey, S.E.; Foster, H.E.; Pigino, G.  
Deposited on : 2022-10-18  
Resolution : 20.70 Å(reported)

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

We welcome your comments at [validation@mail.wwpdb.org](mailto: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>.

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

EMDB validation analysis : 0.0.1.dev50  
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) : 2.34

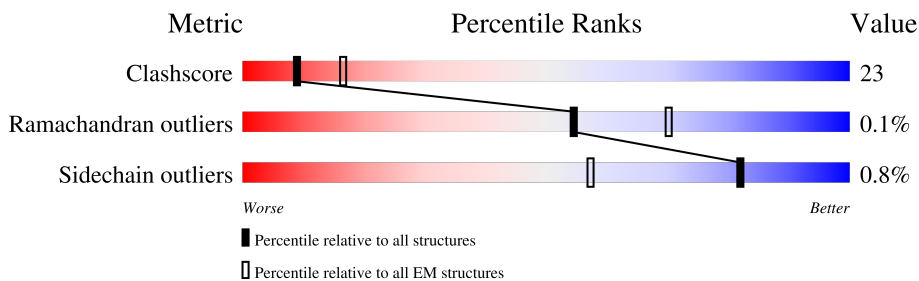
# 1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

*ELECTRON MICROSCOPY*

The reported resolution of this entry is 20.70 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)
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  $\geq 3$ , 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	C	1224	
2	E	1355	
3	G	1409	
4	I	1367	
5	L	1239	

## 2 Entry composition i

There are 5 unique types of molecules in this entry. The entry contains 48086 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 Intraflagellar transport protein 121.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	C	1074	8511	5406	1464	1579	62	0	0

- Molecule 2 is a protein called Intraflagellar transport protein 139.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	E	1325	10464	6587	1860	1956	61	0	0

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
E	188	GLN	GLU	variant	UNP A9XPA6

- Molecule 3 is a protein called Intraflagellar transport particle protein 140.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	G	1354	10600	6657	1867	1998	78	0	0

- Molecule 4 is a protein called Intraflagellar transport protein 144.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	I	1367	10579	6654	1857	1998	70	0	0

- Molecule 5 is a protein called Intraflagellar transport protein 122 homolog.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	L	997	7932	5064	1373	1455	40	0	0

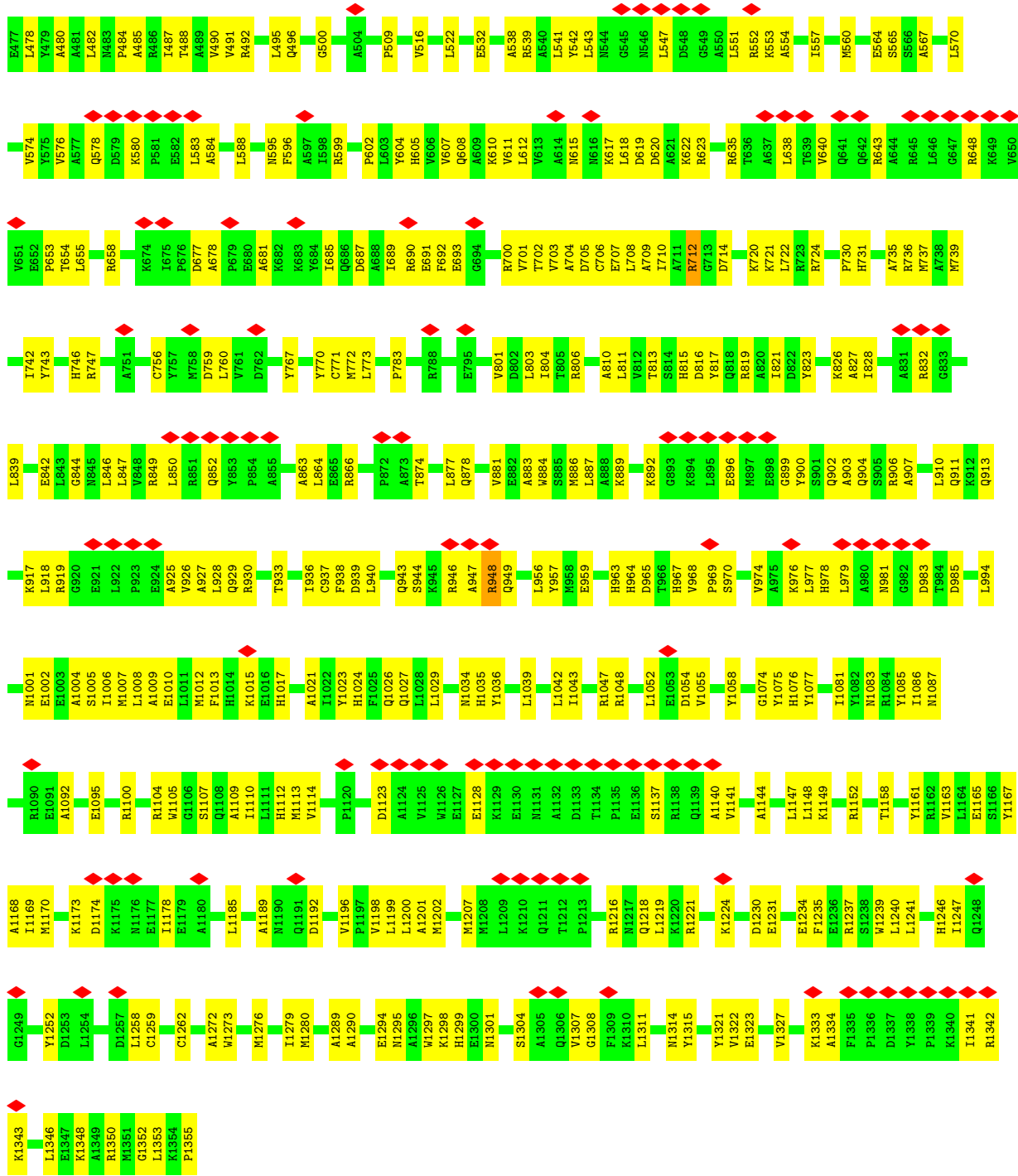
### 3 Residue-property plots i

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.

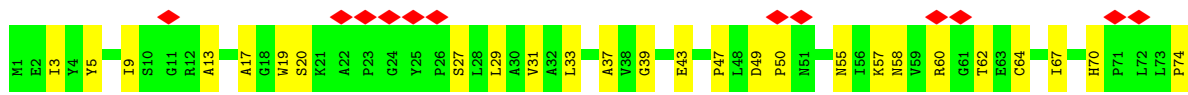
#### • Molecule 1: Intraflagellar transport protein 121

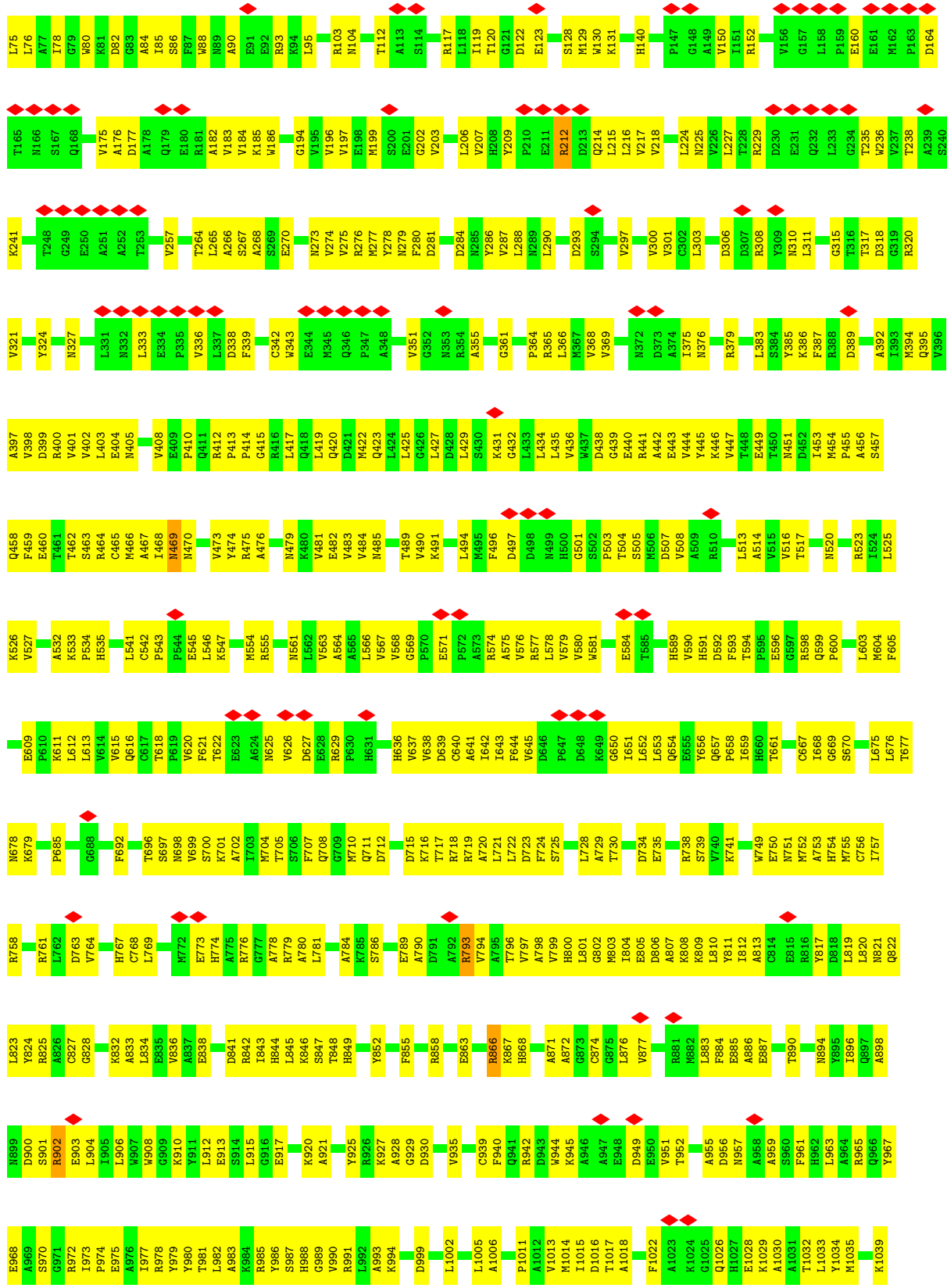






• Molecule 3: Intraflagellar transport particle protein 140













THR  
ALA  
PRO  
PHE  
SER  
ARG  
THR  
THR  
VAL  
ARG  
GLY  
GLU  
GLY  
LEU  
ALA  
PRO  
GLY  
GLU  
ASP  
ALA  
GLU  
ASP  
GLY  
GLY  
ALA  
GLY  
GLY  
ASN  
LYS  
LEU  
GLY  
GLY  
PRO  
LEU  
GLY  
SER  
ALA  
ARG  
GLY  
PRO  
ILE  
GLY  
GLY  
ALA  
SER  
LYS  
ALA  
ARG  
MET  
SER  
SER  
VAL  
PRO  
PHE  
GLN  
GLN  
GLY  
GLY  
ARG  
PRO  
LEU  
VAL

## 4 Experimental information

Property	Value	Source
EM reconstruction method	SUBTOMOGRAM AVERAGING	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of subtomograms used	3897	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION; Warp/Relion/M - CTF Refinement in M	Depositor
Microscope	TFS KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ( $e^-/\text{\AA}^2$ )	104	Depositor
Minimum defocus (nm)	2500	Depositor
Maximum defocus (nm)	5000	Depositor
Magnification	Not provided	
Image detector	FEI FALCON IV (4k x 4k)	Depositor
Maximum map value	2.122	Depositor
Minimum map value	-1.291	Depositor
Average map value	-0.000	Depositor
Map value standard deviation	0.098	Depositor
Recommended contour level	0.5	Depositor
Map size ( $\text{\AA}$ )	727.2, 727.2, 727.2	wwPDB
Map dimensions	120, 120, 120	wwPDB
Map angles ( $^\circ$ )	90.0, 90.0, 90.0	wwPDB
Pixel spacing ( $\text{\AA}$ )	6.06, 6.06, 6.06	Depositor

## 5 Model quality [i](#)

### 5.1 Standard geometry [i](#)

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	C	0.30	0/8701	0.57	0/11769
2	E	0.31	0/10649	0.61	0/14397
3	G	0.33	0/10815	0.63	0/14651
4	I	0.32	0/10781	0.61	0/14601
5	L	0.33	0/8108	0.61	0/10978
All	All	0.32	0/49054	0.61	0/66396

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	C	8511	0	8356	348	0
2	E	10464	0	10515	374	0
3	G	10600	0	10441	569	0
4	I	10579	0	10549	516	0
5	L	7932	0	7900	470	0
All	All	48086	0	47761	2227	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 23.

All (2227) 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)
5:L:796:ALA:HB1	5:L:800:LEU:HG	1.44	0.98
3:G:1028:GLU:HA	3:G:1052:LEU:HD11	1.45	0.98
2:E:1144:ALA:O	2:E:1148:LEU:HB2	1.65	0.96
5:L:907:GLU:O	5:L:911:LYS:HB2	1.70	0.91
1:C:445:GLN:HE22	1:C:524:PRO:HB3	1.38	0.89
3:G:1006:ALA:HB1	3:G:1033:LEU:HD11	1.52	0.89
5:L:815:ALA:O	5:L:819:SER:HB3	1.74	0.85
5:L:799:LEU:HD12	5:L:802:ALA:HB2	1.62	0.81
1:C:879:ASP:O	1:C:883:LEU:HB2	1.81	0.80
1:C:902:ILE:O	1:C:906:LEU:HB2	1.81	0.79
5:L:808:GLN:HA	5:L:834:GLY:HA2	1.65	0.79
4:I:748:GLN:HB2	4:I:760:ALA:HB1	1.63	0.79
5:L:640:MET:HG3	5:L:649:ALA:HB2	1.66	0.78
3:G:1022:PHE:HZ	3:G:1034:TYR:HE2	1.30	0.78
5:L:471:ALA:H	5:L:501:TRP:HE1	1.30	0.78
4:I:302:VAL:HB	4:I:313:LEU:HB2	1.65	0.78
3:G:638:VAL:HG12	3:G:659:ILE:HD13	1.66	0.78
3:G:1043:ALA:HA	3:G:1046:MET:HG2	1.66	0.77
2:E:1350:ARG:HH12	5:L:183:TRP:H	1.31	0.77
1:C:697:ALA:HA	1:C:700:GLN:HG2	1.67	0.76
3:G:520:ASN:HB3	3:G:541:LEU:HB3	1.68	0.76
3:G:1030:ALA:HB3	3:G:1046:MET:HE1	1.68	0.75
4:I:695:ALA:HB1	4:I:700:ASP:HB2	1.69	0.75
1:C:17:LEU:HA	1:C:33:GLY:HA2	1.67	0.75
3:G:838:GLU:HB2	3:G:845:LEU:HD12	1.68	0.75
2:E:677:ASP:HB2	2:E:712:ARG:HD2	1.68	0.75
2:E:554:ALA:HA	2:E:557:ILE:HD12	1.69	0.74
5:L:155:LEU:HD12	5:L:165:ARG:HD2	1.69	0.74
3:G:1115:GLU:O	3:G:1119:ASP:HB2	1.87	0.74
5:L:942:VAL:HG12	5:L:944:LEU:H	1.50	0.74
5:L:534:PHE:HB2	5:L:546:LEU:HB3	1.70	0.74
2:E:1043:ILE:HD12	2:E:1055:VAL:HG13	1.69	0.73
2:E:1002:GLU:O	2:E:1006:ILE:HB	1.89	0.73
2:E:1280:MET:HG3	2:E:1289:ALA:HB2	1.69	0.73
5:L:587:TRP:HA	5:L:590:LEU:HD12	1.70	0.73
4:I:1048:SER:HA	4:I:1056:ALA:HB1	1.70	0.73
4:I:1073:VAL:HG11	4:I:1107:LYS:HG3	1.70	0.73
3:G:577:ARG:HD3	3:G:590:VAL:HG13	1.70	0.72
2:E:1083:ASN:HB2	2:E:1092:ALA:HB2	1.72	0.72
3:G:546:LEU:HB3	3:G:567:VAL:HG21	1.72	0.72
2:E:278:GLN:O	2:E:282:LEU:HB2	1.89	0.72
1:C:215:TYR:HB3	1:C:228:VAL:HB	1.72	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:979:TYR:HA	3:G:982:LEU:HB2	1.72	0.71
5:L:124:LEU:HB2	5:L:133:ALA:HB3	1.72	0.71
3:G:1127:ALA:H	3:G:1157:LYS:HZ1	1.37	0.71
4:I:856:ASN:HB3	4:I:860:LEU:HB3	1.72	0.71
3:G:786:SER:HB3	3:G:806:ASP:HB2	1.72	0.71
4:I:481:ILE:HG21	4:I:502:THR:HG21	1.72	0.71
2:E:340:ALA:HB2	2:E:355:ARG:HB2	1.71	0.71
5:L:154:ALA:HA	5:L:164:ILE:HA	1.72	0.71
2:E:1199:LEU:HD13	2:E:1221:ARG:HG3	1.72	0.70
4:I:655:ALA:HB1	4:I:662:ARG:HB2	1.72	0.70
2:E:702:THR:HB	2:E:721:LYS:HG3	1.73	0.70
3:G:473:VAL:N	3:G:484:VAL:O	2.23	0.70
3:G:721:LEU:HD22	3:G:755:MET:HG2	1.73	0.70
4:I:461:VAL:HB	4:I:481:ILE:HB	1.74	0.70
3:G:718:ARG:O	3:G:722:LEU:HB2	1.90	0.70
3:G:741:LYS:HB2	4:I:798:MET:HG2	1.72	0.70
3:G:808:LYS:NZ	3:G:827:CYS:SG	2.65	0.70
5:L:787:TYR:CE2	5:L:799:LEU:HD23	2.27	0.70
1:C:448:THR:HG23	1:C:467:ARG:HH11	1.56	0.70
3:G:508:VAL:HA	3:G:513:LEU:HA	1.74	0.70
5:L:682:PHE:O	5:L:690:GLN:NE2	2.23	0.70
1:C:788:LEU:O	1:C:792:HIS:ND1	2.23	0.70
1:C:822:VAL:HG13	1:C:834:LEU:HG	1.74	0.69
1:C:234:ASP:HA	1:C:258:PRO:HD2	1.75	0.69
3:G:481:VAL:HB	3:G:494:LEU:HB2	1.75	0.69
5:L:471:ALA:HA	5:L:481:VAL:HA	1.73	0.69
5:L:748:LYS:NZ	5:L:777:MET:SD	2.65	0.69
4:I:764:ARG:HB3	4:I:773:ALA:HB2	1.74	0.69
4:I:1308:PRO:HG3	4:I:1341:VAL:HA	1.74	0.69
5:L:63:TYR:H	5:L:78:GLY:HA2	1.58	0.69
5:L:345:GLN:HE21	5:L:376:ASP:HA	1.56	0.69
5:L:395:LEU:HB2	5:L:408:TRP:HB2	1.75	0.69
5:L:787:TYR:HE2	5:L:799:LEU:HD23	1.57	0.69
4:I:153:ILE:HA	4:I:168:GLY:HA2	1.75	0.69
4:I:490:ILE:HA	4:I:504:SER:HA	1.75	0.69
5:L:417:ILE:HD11	5:L:429:LEU:HB3	1.74	0.69
5:L:586:ASP:O	5:L:590:LEU:HG	1.92	0.69
5:L:679:ALA:HB1	5:L:696:LEU:HB3	1.75	0.69
3:G:843:ILE:HG13	5:L:824:PHE:HD2	1.58	0.68
4:I:571:GLU:H	4:I:587:ASP:HA	1.57	0.68
2:E:22:GLN:HA	2:E:42:ARG:HH12	1.56	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:693:GLU:HG2	2:E:701:VAL:HG13	1.75	0.68
3:G:564:ALA:HA	3:G:580:VAL:HA	1.75	0.68
4:I:949:CYS:SG	4:I:958:ARG:NE	2.66	0.68
1:C:213:GLU:HG2	1:C:262:LYS:HA	1.73	0.68
3:G:427:LEU:HB2	3:G:434:LEU:HD11	1.76	0.68
5:L:936:LEU:HD22	5:L:955:LEU:HD13	1.76	0.68
3:G:410:PRO:HB3	3:G:696:THR:HG22	1.75	0.68
5:L:264:TRP:HB2	5:L:282:GLU:HB2	1.76	0.68
5:L:460:CYS:HB2	5:L:473:VAL:HB	1.75	0.68
2:E:964:HIS:HB3	2:E:967:HIS:HB2	1.76	0.67
4:I:1058:GLN:NE2	4:I:1087:LEU:O	2.27	0.67
5:L:571:PHE:HA	5:L:574:ALA:HB3	1.75	0.67
2:E:736:ARG:HH12	2:E:759:ASP:HB3	1.59	0.67
3:G:615:VAL:HB	3:G:641:ALA:HB3	1.77	0.67
4:I:376:TYR:HE1	4:I:386:LEU:HB3	1.59	0.67
4:I:779:GLN:HG3	4:I:780:LEU:HG	1.75	0.67
5:L:780:THR:HG1	5:L:803:HIS:HE2	1.40	0.67
1:C:384:GLN:HG3	1:C:428:ILE:HG22	1.76	0.67
2:E:821:ILE:HB	2:E:846:LEU:HD13	1.76	0.67
4:I:374:VAL:HG21	4:I:621:LEU:HB3	1.76	0.67
4:I:385:LEU:HB3	4:I:395:ALA:HB3	1.75	0.67
5:L:742:VAL:HA	5:L:745:GLN:HB2	1.75	0.67
2:E:874:THR:OG1	2:E:917:LYS:NZ	2.26	0.67
4:I:852:ALA:O	4:I:856:ASN:ND2	2.26	0.67
5:L:458:VAL:HG11	5:L:461:LEU:HD23	1.76	0.67
3:G:975:GLU:HA	3:G:978:ARG:HE	1.60	0.67
2:E:911:GLN:HE22	2:E:936:ILE:HG13	1.60	0.67
3:G:738:ARG:HE	4:I:866:LEU:HD22	1.60	0.67
2:E:1352:GLY:HA2	2:E:1355:PRO:HB3	1.78	0.66
3:G:1022:PHE:CZ	3:G:1034:TYR:HE2	2.12	0.66
3:G:710:MET:HE1	3:G:721:LEU:HB2	1.78	0.66
4:I:1196:ILE:HD11	4:I:1199:PHE:HB2	1.77	0.66
1:C:176:ALA:HA	1:C:182:CYS:HA	1.77	0.66
3:G:644:PHE:HB2	3:G:729:ALA:HB3	1.77	0.66
3:G:799:VAL:HG11	4:I:718:LEU:HD22	1.76	0.66
3:G:858:ARG:HE	4:I:705:ILE:HG21	1.59	0.66
5:L:218:ARG:HG3	5:L:252:GLY:HA3	1.78	0.66
1:C:691:ARG:NH1	1:C:713:CYS:SG	2.69	0.66
2:E:1163:VAL:HG21	2:E:1198:VAL:HG12	1.78	0.66
3:G:555:ARG:HB3	3:G:564:ALA:HB3	1.77	0.66
3:G:616:GLN:HB2	3:G:667:CYS:HB3	1.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:604:TYR:HA	2:E:607:VAL:HG22	1.76	0.66
2:E:902:GLN:OE1	2:E:906:ARG:NH2	2.29	0.66
1:C:469:LYS:HA	1:C:485:PRO:HA	1.78	0.66
3:G:49:ASP:O	3:G:55:ASN:ND2	2.28	0.66
4:I:400:GLU:HB2	4:I:436:ARG:HH22	1.60	0.66
3:G:1106:CYS:SG	3:G:1107:VAL:N	2.69	0.66
5:L:824:PHE:HA	5:L:827:ALA:HB3	1.77	0.66
3:G:215:LEU:HB3	3:G:227:LEU:HB2	1.78	0.66
3:G:468:ILE:HA	3:G:473:VAL:HA	1.76	0.66
4:I:1098:GLY:HA2	4:I:1101:ARG:HE	1.61	0.65
1:C:762:ILE:O	1:C:766:MET:HB3	1.96	0.65
1:C:843:ASP:HA	1:C:848:LEU:HD11	1.78	0.65
5:L:753:CYS:O	5:L:757:CYS:HB2	1.96	0.65
5:L:345:GLN:HE22	5:L:350:VAL:HG22	1.61	0.65
3:G:446:LYS:HB2	3:G:456:ALA:HB2	1.79	0.65
4:I:48:ASP:OD2	4:I:92:TRP:NE1	2.29	0.65
4:I:1166:LEU:HD11	4:I:1197:SER:H	1.62	0.65
1:C:510:MET:HG3	1:C:518:VAL:HG11	1.79	0.65
2:E:881:VAL:HG22	2:E:910:LEU:HB3	1.76	0.65
1:C:1110:MET:SD	2:E:849:ARG:NH2	2.70	0.65
4:I:215:SER:HB2	4:I:223:LEU:HD11	1.79	0.65
1:C:762:ILE:O	1:C:766:MET:CB	2.44	0.65
3:G:432:GLY:HA2	3:G:447:VAL:HB	1.78	0.65
2:E:231:LEU:O	2:E:239:GLN:NE2	2.29	0.65
2:E:1196:VAL:O	2:E:1200:LEU:HB2	1.96	0.65
3:G:721:LEU:HD11	3:G:754:HIS:H	1.61	0.65
3:G:847:SER:HA	5:L:842:ARG:HH21	1.61	0.65
3:G:439:GLY:HA2	3:G:464:ARG:HA	1.79	0.64
3:G:942:ARG:NH1	3:G:975:GLU:OE1	2.30	0.64
4:I:585:ILE:HB	4:I:592:HIS:HB2	1.79	0.64
5:L:304:TYR:HD2	5:L:316:GLN:HE21	1.45	0.64
5:L:870:GLU:O	5:L:874:SER:N	2.28	0.64
4:I:1058:GLN:HG2	4:I:1087:LEU:HD12	1.79	0.64
4:I:1065:THR:H	4:I:1068:ALA:HB3	1.60	0.64
1:C:239:GLN:HB2	1:C:249:ALA:HB1	1.78	0.64
5:L:736:TRP:HB3	5:L:761:PHE:HE1	1.61	0.64
2:E:1231:GLU:HB3	2:E:1234:GLU:HB2	1.78	0.64
5:L:14:LYS:HG2	5:L:40:ARG:HH11	1.61	0.64
5:L:854:GLU:HG3	5:L:856:ARG:HB2	1.79	0.64
4:I:509:LEU:HB3	4:I:523:PHE:HB3	1.78	0.64
4:I:1009:ASN:O	4:I:1011:MET:HE3	1.96	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:L:114:LEU:HB3	5:L:125:TRP:HB3	1.78	0.64
5:L:298:GLY:HA3	5:L:336:ALA:HA	1.79	0.64
1:C:54:LYS:HB3	1:C:58:GLY:HA3	1.78	0.64
2:E:877:LEU:HD23	2:E:917:LYS:HE3	1.78	0.64
3:G:970:SER:OG	3:G:972:ARG:NH2	2.31	0.64
4:I:782:PRO:HB2	4:I:819:SER:HA	1.79	0.64
5:L:908:VAL:HG22	5:L:918:ARG:HA	1.80	0.64
3:G:1035:MET:HG2	3:G:1059:ILE:HG13	1.79	0.64
4:I:1231:MET:SD	4:I:1236:ARG:NH2	2.70	0.64
5:L:757:CYS:HA	5:L:760:HIS:HB2	1.78	0.64
1:C:518:VAL:HB	1:C:532:HIS:HB2	1.80	0.64
1:C:697:ALA:HB1	1:C:702:ASP:HB2	1.78	0.64
3:G:863:GLU:OE1	3:G:866:ARG:NH2	2.31	0.64
4:I:731:LEU:HB2	4:I:754:SER:HB2	1.79	0.64
4:I:748:GLN:HG2	4:I:764:ARG:HH21	1.62	0.64
4:I:1293:LEU:HD21	4:I:1330:PRO:HD2	1.80	0.64
3:G:1128:ALA:HB2	3:G:1138:ILE:HG21	1.80	0.64
3:G:443:GLU:HA	3:G:458:GLN:HA	1.79	0.63
1:C:765:ARG:O	1:C:773:LYS:NZ	2.31	0.63
4:I:504:SER:OG	4:I:508:THR:N	2.31	0.63
5:L:588:LYS:NZ	5:L:612:ASP:OD2	2.31	0.63
1:C:463:ARG:HB3	1:C:466:VAL:HB	1.80	0.63
5:L:101:ALA:O	5:L:103:GLN:NE2	2.31	0.63
5:L:676:LYS:HG2	5:L:700:GLN:HG2	1.80	0.63
2:E:612:LEU:HD13	2:E:620:ASP:HB3	1.80	0.63
1:C:305:VAL:HG12	1:C:307:GLY:H	1.64	0.63
1:C:366:ASP:HB2	1:C:371:ASP:HB2	1.80	0.63
3:G:496:PHE:HB2	3:G:503:PRO:HG3	1.79	0.63
3:G:1200:LEU:HD12	3:G:1215:ILE:HD11	1.81	0.63
5:L:197:ALA:HB3	5:L:205:LYS:HB2	1.81	0.63
5:L:762:ARG:NH1	5:L:789:GLU:O	2.29	0.63
1:C:725:LEU:O	1:C:734:GLN:NE2	2.31	0.63
2:E:371:ALA:HA	2:E:439:LEU:HD22	1.80	0.63
4:I:437:ARG:NH2	4:I:475:ASP:OD1	2.31	0.63
4:I:853:MET:SD	4:I:883:ARG:NH2	2.72	0.63
5:L:13:GLU:HB2	5:L:19:ASN:HD21	1.63	0.63
2:E:132:ARG:HA	2:E:135:ARG:HG2	1.81	0.63
2:E:1196:VAL:HG11	2:E:1234:GLU:HB3	1.81	0.63
5:L:498:SER:OG	5:L:535:VAL:N	2.32	0.63
4:I:217:ASN:ND2	4:I:247:ILE:O	2.28	0.62
4:I:748:GLN:NE2	4:I:749:GLU:OE2	2.31	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:946:ARG:O	2:E:948:ARG:NH1	2.32	0.62
4:I:1265:LEU:HD22	4:I:1276:PRO:HA	1.80	0.62
5:L:334:LYS:H	5:L:345:GLN:HB2	1.64	0.62
1:C:367:THR:HB	1:C:654:MET:HG3	1.79	0.62
2:E:702:THR:HG21	2:E:724:ARG:HB3	1.79	0.62
2:E:1185:LEU:O	2:E:1189:ALA:N	2.29	0.62
5:L:41:VAL:HB	5:L:55:LEU:HB2	1.81	0.62
2:E:509:PRO:HG3	2:E:806:ARG:HH22	1.64	0.62
1:C:878:ILE:HD12	1:C:899:PHE:HD2	1.64	0.62
4:I:387:ASP:HB3	4:I:390:ARG:HG2	1.80	0.62
1:C:264:ASN:ND2	1:C:268:THR:OG1	2.32	0.62
1:C:610:ILE:HD13	1:C:659:THR:HG22	1.81	0.62
3:G:321:VAL:HG21	3:G:369:VAL:HG11	1.82	0.62
5:L:650:ALA:HB1	5:L:659:VAL:HG13	1.80	0.62
5:L:807:ARG:HA	5:L:810:VAL:HG22	1.80	0.62
3:G:906:LEU:HD21	3:G:930:ASP:HB3	1.82	0.62
1:C:545:CYS:HB3	1:C:594:ASP:HA	1.81	0.62
1:C:865:VAL:HG13	1:C:877:ALA:HB1	1.81	0.62
2:E:19:ARG:HH21	2:E:253:GLN:HB2	1.64	0.62
2:E:538:ALA:HB2	2:E:553:LYS:HB3	1.82	0.62
5:L:122:VAL:HG21	5:L:155:LEU:HD22	1.82	0.62
5:L:517:LEU:HG	5:L:519:ILE:HD11	1.81	0.62
1:C:207:SER:HB3	1:C:233:LEU:HD13	1.82	0.62
4:I:659:PRO:HB3	4:I:662:ARG:HH21	1.65	0.62
4:I:944:ALA:HB1	4:I:947:ARG:HH21	1.63	0.62
4:I:1060:TYR:HE2	4:I:1071:LYS:HB3	1.65	0.62
3:G:525:LEU:HA	3:G:534:PRO:HA	1.82	0.61
3:G:780:ALA:O	3:G:784:ALA:HB2	2.00	0.61
1:C:687:PRO:HB3	1:C:690:TRP:HD1	1.66	0.61
1:C:713:CYS:SG	1:C:714:ALA:N	2.70	0.61
2:E:382:GLU:HB3	2:E:385:GLU:HB2	1.82	0.61
4:I:390:ARG:HG3	4:I:392:GLN:H	1.64	0.61
4:I:1222:THR:HA	4:I:1225:GLU:HG3	1.82	0.61
5:L:314:ILE:HG12	5:L:325:ARG:HB3	1.81	0.61
1:C:89:LEU:HB3	1:C:101:TRP:HB2	1.81	0.61
5:L:787:TYR:CD2	5:L:799:LEU:HB2	2.36	0.61
1:C:764:MET:SD	1:C:767:ARG:NH2	2.69	0.61
3:G:866:ARG:NH1	3:G:884:PHE:O	2.28	0.61
3:G:1011:PRO:HA	3:G:1014:MET:HB3	1.81	0.61
4:I:672:LEU:O	4:I:676:VAL:N	2.33	0.61
4:I:679:ALA:HA	4:I:682:LEU:HG	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:22:GLN:OE1	2:E:42:ARG:NH2	2.34	0.61
2:E:978:HIS:HB3	2:E:983:ASP:HB2	1.82	0.61
2:E:1350:ARG:NH1	5:L:181:PRO:O	2.33	0.61
5:L:614:ARG:NH2	5:L:642:PHE:O	2.32	0.61
4:I:759:ALA:O	4:I:763:MET:HG3	2.00	0.61
1:C:463:ARG:HH11	1:C:466:VAL:HG21	1.65	0.61
1:C:891:VAL:O	1:C:895:GLN:NE2	2.34	0.61
2:E:301:ALA:O	2:E:305:GLY:N	2.31	0.61
3:G:793:ARG:NH1	3:G:796:THR:OG1	2.33	0.61
4:I:424:TYR:HB3	4:I:431:GLY:HA2	1.81	0.61
4:I:508:THR:OG1	4:I:524:ARG:NH2	2.34	0.61
5:L:342:LEU:HB3	5:L:353:TYR:HB2	1.83	0.61
5:L:774:LEU:HB2	5:L:786:LEU:HD22	1.81	0.61
5:L:783:LEU:O	5:L:786:LEU:N	2.34	0.61
2:E:244:LEU:HD22	2:E:257:ALA:HA	1.80	0.61
2:E:1297:TRP:HB2	2:E:1304:SER:HB3	1.83	0.61
4:I:662:ARG:NE	4:I:678:CYS:SG	2.74	0.61
5:L:459:ARG:NH1	5:L:497:ASN:O	2.33	0.61
1:C:454:LEU:HB3	1:C:456:THR:HG23	1.83	0.61
1:C:650:ASP:HB3	1:C:652:GLU:HG2	1.81	0.61
3:G:264:THR:HA	3:G:279:ASN:HA	1.83	0.61
3:G:351:VAL:O	3:G:376:ASN:ND2	2.34	0.61
1:C:340:LYS:HB2	1:C:351:ALA:HB3	1.82	0.61
1:C:422:GLU:HG2	1:C:424:LYS:HG3	1.82	0.61
2:E:1240:LEU:HD11	2:E:1262:CYS:HB2	1.82	0.61
3:G:78:ILE:HB	3:G:86:SER:HB2	1.81	0.61
5:L:408:TRP:HE1	5:L:446:PRO:HA	1.64	0.61
3:G:494:LEU:HD13	3:G:525:LEU:HD22	1.83	0.60
4:I:494:ALA:HB3	4:I:501:ILE:HB	1.83	0.60
1:C:604:GLU:HG2	1:C:605:LYS:H	1.66	0.60
3:G:778:ALA:HA	3:G:781:LEU:HB3	1.82	0.60
1:C:771:TRP:HA	1:C:774:VAL:HB	1.82	0.60
3:G:542:CYS:HA	3:G:579:VAL:HG11	1.82	0.60
3:G:961:PHE:HB2	3:G:985:ARG:HD2	1.83	0.60
4:I:311:ARG:HE	4:I:326:ALA:HB1	1.67	0.60
4:I:1076:VAL:HG21	4:I:1108:LEU:HD11	1.82	0.60
5:L:124:LEU:O	5:L:129:GLN:NE2	2.33	0.60
1:C:80:VAL:HA	1:C:91:THR:HG22	1.82	0.60
1:C:530:ALA:HB1	1:C:576:MET:HG2	1.83	0.60
2:E:15:GLU:OE2	2:E:299:ARG:NH1	2.34	0.60
2:E:584:ALA:HB1	2:E:611:VAL:HG22	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:I:810:GLN:HA	4:I:813:LEU:HD12	1.81	0.60
5:L:394:LYS:HG2	5:L:409:VAL:HG22	1.84	0.60
5:L:991:ALA:HA	5:L:994:VAL:HB	1.82	0.60
1:C:73:HIS:NE2	1:C:91:THR:OG1	2.30	0.60
3:G:275:VAL:HB	3:G:288:LEU:HB2	1.83	0.60
3:G:794:VAL:O	3:G:798:ALA:HB2	2.00	0.60
4:I:813:LEU:HD22	4:I:832:LYS:HG3	1.84	0.60
1:C:512:GLY:HA2	1:C:518:VAL:HG22	1.82	0.60
1:C:854:LYS:NZ	5:L:466:SER:OG	2.34	0.60
2:E:693:GLU:HA	2:E:701:VAL:HG22	1.82	0.60
2:E:828:ILE:HD12	2:E:839:LEU:HD21	1.83	0.60
5:L:682:PHE:HA	5:L:686:GLY:HA2	1.84	0.60
2:E:703:VAL:HG13	2:E:735:ALA:HB2	1.84	0.60
3:G:640:CYS:N	3:G:657:GLN:O	2.29	0.60
4:I:630:CYS:N	4:I:638:ASP:O	2.34	0.60
1:C:927:ARG:HH11	1:C:938:LEU:HD22	1.67	0.60
2:E:235:GLY:HA2	2:E:474:PRO:HD2	1.84	0.60
2:E:1341:ILE:HG23	2:E:1342:ARG:HD2	1.83	0.60
5:L:33:VAL:HB	5:L:46:ALA:HB2	1.83	0.60
5:L:415:ARG:HH12	5:L:475:GLU:HB3	1.67	0.60
5:L:679:ALA:HA	5:L:696:LEU:HD13	1.83	0.60
2:E:886:MET:HA	2:E:889:LYS:HB2	1.84	0.60
2:E:1048:ARG:NH1	2:E:1230:ASP:O	2.35	0.60
3:G:621:PHE:HE2	3:G:629:ARG:HB3	1.66	0.60
4:I:67:ALA:HA	4:I:83:PRO:HA	1.84	0.60
4:I:536:GLN:NE2	4:I:580:THR:OG1	2.35	0.60
5:L:818:LEU:HG	5:L:823:ARG:HD2	1.82	0.60
2:E:1036:TYR:HB3	2:E:1074:GLY:HA3	1.83	0.60
3:G:39:GLY:HA2	3:G:55:ASN:HB3	1.82	0.60
3:G:883:LEU:HD21	3:G:886:ALA:HB2	1.84	0.60
5:L:659:VAL:HB	5:L:682:PHE:HZ	1.67	0.60
1:C:855:PHE:HB3	1:C:860:LEU:HB2	1.83	0.59
2:E:804:ILE:HD11	2:E:826:LYS:HB3	1.83	0.59
2:E:1158:THR:H	2:E:1161:TYR:HB3	1.66	0.59
2:E:478:LEU:O	2:E:482:LEU:N	2.31	0.59
2:E:878:GLN:OE1	2:E:917:LYS:NZ	2.35	0.59
4:I:159:ASN:HD21	4:I:163:ILE:HB	1.67	0.59
4:I:423:PHE:HD2	4:I:435:GLN:HB2	1.68	0.59
4:I:738:VAL:HG21	4:I:763:MET:HG2	1.84	0.59
2:E:1170:MET:CE	2:E:1185:LEU:HD11	2.32	0.59
4:I:1:MET:HG3	4:I:325:ASP:HA	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:I:1105:ARG:NH2	4:I:1124:GLU:OE2	2.35	0.59
5:L:842:ARG:NH1	5:L:846:GLN:OE1	2.36	0.59
1:C:151:ARG:HE	1:C:154:GLY:HA3	1.66	0.59
2:E:307:LEU:HA	2:E:485:ALA:HB2	1.83	0.59
5:L:108:ASN:HB2	5:L:113:GLN:HB3	1.84	0.59
5:L:730:LEU:HD22	5:L:738:LYS:HB3	1.83	0.59
5:L:773:THR:HA	5:L:776:LYS:HD2	1.84	0.59
3:G:74:PRO:HB2	3:G:90:ALA:HB3	1.84	0.59
3:G:215:LEU:HD23	3:G:227:LEU:HD12	1.83	0.59
3:G:769:LEU:O	3:G:773:GLU:N	2.35	0.59
3:G:1032:THR:O	3:G:1035:MET:HE2	2.02	0.59
3:G:1133:GLU:HG2	3:G:1138:ILE:HG12	1.84	0.59
2:E:1100:ARG:NH2	2:E:1113:MET:SD	2.76	0.59
3:G:738:ARG:HH12	4:I:863:GLU:HA	1.67	0.59
3:G:1155:ALA:HA	3:G:1158:TYR:HB2	1.84	0.59
4:I:1105:ARG:O	4:I:1109:ASN:ND2	2.36	0.59
5:L:578:ALA:HA	5:L:582:VAL:HG22	1.84	0.59
5:L:723:TYR:HE2	5:L:745:GLN:HB3	1.68	0.59
5:L:723:TYR:O	5:L:727:ILE:HB	2.03	0.59
3:G:1044:VAL:HG11	3:G:1069:ASP:HB2	1.85	0.59
4:I:758:ARG:HH12	4:I:781:ASP:HB2	1.68	0.59
4:I:916:GLN:NE2	4:I:931:GLU:OE2	2.36	0.59
5:L:761:PHE:HA	5:L:764:ALA:HB3	1.84	0.59
4:I:802:TYR:HA	4:I:805:ALA:HB3	1.85	0.59
5:L:109:PRO:HD2	5:L:150:GLY:HA2	1.85	0.59
1:C:1099:ASN:HA	1:C:1102:ARG:HB3	1.84	0.59
3:G:1183:PHE:HA	3:G:1186:VAL:HG12	1.85	0.59
3:G:82:ASP:N	3:G:82:ASP:OD1	2.33	0.59
4:I:86:ASN:ND2	4:I:88:HIS:O	2.36	0.59
4:I:1354:GLN:OE1	4:I:1358:GLN:NE2	2.35	0.59
5:L:14:LYS:HD2	5:L:56:LYS:HD2	1.85	0.59
1:C:83:ASN:ND2	1:C:130:GLY:O	2.36	0.58
2:E:238:GLU:OE2	2:E:268:ARG:NH2	2.36	0.58
3:G:387:PHE:HA	3:G:392:ALA:HA	1.84	0.58
4:I:837:ARG:NH1	4:I:863:GLU:OE2	2.36	0.58
1:C:300:LEU:O	1:C:301:ARG:NE	2.32	0.58
3:G:643:ILE:HG21	3:G:651:ILE:HG23	1.85	0.58
3:G:705:THR:O	3:G:708:GLN:NE2	2.28	0.58
3:G:804:ILE:HB	4:I:715:SER:HB3	1.84	0.58
4:I:220:ARG:NH1	4:I:248:MET:O	2.37	0.58
4:I:1009:ASN:O	4:I:1011:MET:N	2.37	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:L:261:ARG:NH1	5:L:279:VAL:O	2.36	0.58
1:C:660:ARG:HA	1:C:663:ARG:HB2	1.85	0.58
2:E:658:ARG:NH2	2:E:691:GLU:OE1	2.36	0.58
3:G:613:LEU:N	3:G:643:ILE:O	2.36	0.58
3:G:900:ASP:HA	5:L:914:HIS:HA	1.85	0.58
4:I:946:VAL:HG13	4:I:959:ALA:HB1	1.84	0.58
4:I:947:ARG:O	4:I:951:GLU:HB2	2.03	0.58
5:L:351:VAL:HA	5:L:370:LYS:HG2	1.85	0.58
5:L:980:LEU:H	5:L:988:VAL:HG11	1.69	0.58
2:E:255:ILE:HG23	2:E:282:LEU:HD11	1.86	0.58
3:G:1026:GLN:HB3	3:G:1029:LYS:HB2	1.84	0.58
4:I:1139:HIS:CD2	4:I:1167:LEU:HD22	2.38	0.58
5:L:156:GLY:HA2	5:L:162:ILE:HA	1.85	0.58
2:E:1029:LEU:HD11	2:E:1039:LEU:HA	1.84	0.58
4:I:866:LEU:HD21	4:I:889:ARG:HH12	1.68	0.58
5:L:783:LEU:O	5:L:784:ILE:C	2.42	0.58
5:L:854:GLU:HB2	5:L:856:ARG:HH11	1.68	0.58
5:L:867:LEU:HB3	5:L:896:LEU:HD13	1.86	0.58
1:C:310:ILE:HG12	1:C:326:VAL:HG22	1.84	0.58
2:E:303:PRO:HB2	2:E:476:LEU:HG	1.85	0.58
3:G:1134:ARG:HB3	3:G:1161:ALA:HB3	1.85	0.58
4:I:1129:GLU:HG3	4:I:1138:ALA:HB2	1.85	0.58
5:L:600:LEU:HD12	5:L:626:ARG:HD2	1.84	0.58
5:L:928:ALA:HB1	5:L:932:LEU:HD22	1.86	0.58
4:I:1199:PHE:HB3	4:I:1202:HIS:HB2	1.86	0.58
5:L:303:ARG:HB2	5:L:337:VAL:HG11	1.84	0.58
5:L:775:LEU:HG	5:L:783:LEU:HD11	1.85	0.58
1:C:79:CYS:HB3	1:C:124:MET:HB3	1.86	0.58
2:E:1104:ARG:NH1	2:E:1104:ARG:O	2.36	0.58
3:G:175:VAL:HA	3:G:184:VAL:HA	1.85	0.58
3:G:734:ASP:HA	3:G:738:ARG:HB3	1.86	0.58
5:L:20:VAL:HG13	5:L:282:GLU:HA	1.85	0.58
5:L:27:LYS:HE2	5:L:32:GLN:HB2	1.85	0.58
5:L:737:ASP:OD1	5:L:738:LYS:N	2.37	0.58
5:L:960:VAL:HA	5:L:968:ALA:HA	1.85	0.58
1:C:446:PHE:O	1:C:467:ARG:NH2	2.37	0.58
1:C:695:GLU:HA	1:C:698:LEU:HB3	1.85	0.58
3:G:385:TYR:HB3	3:G:668:ILE:HG22	1.86	0.58
3:G:420:GLN:O	3:G:441:ARG:NH2	2.37	0.58
3:G:1339:ASN:ND2	3:G:1342:GLU:OE1	2.37	0.58
4:I:412:HIS:HD2	4:I:434:VAL:HG21	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:L:780:THR:OG1	5:L:803:HIS:NE2	2.26	0.58
1:C:801:ASP:O	1:C:802:ARG:NH1	2.37	0.58
1:C:878:ILE:HD11	1:C:897:HIS:HB2	1.86	0.58
2:E:736:ARG:NH2	2:E:759:ASP:OD1	2.36	0.58
5:L:73:ARG:HD3	5:L:112:GLN:HG2	1.86	0.58
1:C:730:ASP:O	1:C:734:GLN:N	2.37	0.57
2:E:74:ALA:HB1	2:E:117:TYR:HE2	1.69	0.57
3:G:397:ALA:HB3	3:G:400:ARG:HB3	1.85	0.57
3:G:435:LEU:HD11	3:G:442:ALA:HB1	1.86	0.57
3:G:563:VAL:O	3:G:581:TRP:N	2.35	0.57
3:G:752:MET:CG	3:G:768:CYS:HB2	2.34	0.57
3:G:1241:ASP:O	3:G:1244:ARG:NH1	2.37	0.57
1:C:902:ILE:HG13	1:C:903:GLU:HG2	1.86	0.57
1:C:1080:PHE:O	1:C:1084:CYS:N	2.30	0.57
2:E:1174:ASP:O	2:E:1178:ILE:N	2.31	0.57
1:C:594:ASP:HB2	1:C:630:HIS:HB2	1.85	0.57
2:E:88:HIS:HA	2:E:91:ILE:HD12	1.87	0.57
2:E:272:ASN:O	2:E:276:ALA:N	2.35	0.57
2:E:1167:TYR:HE1	2:E:1201:ALA:HB2	1.68	0.57
4:I:300:GLY:O	4:I:315:ALA:N	2.36	0.57
1:C:275:PHE:HA	1:C:288:TRP:HA	1.87	0.57
1:C:365:TRP:NE1	1:C:370:ASN:OD1	2.38	0.57
1:C:1033:TRP:HB2	1:C:1055:LEU:HD21	1.86	0.57
2:E:864:LEU:HB3	2:E:883:ALA:HB3	1.87	0.57
4:I:1211:VAL:HG11	4:I:1230:LEU:HD11	1.86	0.57
3:G:215:LEU:N	3:G:227:LEU:O	2.32	0.57
3:G:467:ALA:O	3:G:474:TYR:N	2.38	0.57
3:G:555:ARG:NE	3:G:604:MET:HA	2.19	0.57
4:I:19:PHE:H	4:I:337:LYS:HD3	1.69	0.57
4:I:802:TYR:HD2	4:I:838:THR:HA	1.68	0.57
5:L:949:VAL:HG12	5:L:996:ARG:HD2	1.85	0.57
1:C:772:PHE:HB3	1:C:776:ARG:HH12	1.69	0.57
1:C:789:LEU:HD22	1:C:815:ALA:HA	1.87	0.57
2:E:94:LEU:HD13	2:E:97:LYS:HD3	1.85	0.57
3:G:17:ALA:HB1	3:G:29:LEU:HD11	1.86	0.57
4:I:111:PHE:HA	4:I:127:THR:HA	1.85	0.57
4:I:888:GLU:OE2	4:I:909:ARG:NH1	2.38	0.57
1:C:136:VAL:HG21	1:C:164:VAL:HG11	1.85	0.57
2:E:801:VAL:HG13	2:E:827:ALA:HB1	1.86	0.57
2:E:1342:ARG:HA	2:E:1346:LEU:HD23	1.85	0.57
3:G:67:ILE:HB	3:G:76:LEU:HD11	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:297:VAL:O	3:G:317:THR:OG1	2.22	0.57
4:I:204:ASP:H	4:I:275:ARG:HH12	1.51	0.57
4:I:543:VAL:HG21	4:I:583:MET:HG3	1.86	0.57
3:G:442:ALA:N	3:G:459:PHE:O	2.37	0.57
3:G:979:TYR:O	3:G:983:ALA:N	2.37	0.57
3:G:1044:VAL:HG22	3:G:1056:LEU:HD11	1.86	0.57
5:L:565:TYR:HB3	5:L:574:ALA:HB2	1.87	0.57
3:G:445:TYR:HA	3:G:455:PRO:HA	1.87	0.57
3:G:981:THR:HA	3:G:1005:LEU:HD11	1.87	0.57
4:I:747:ALA:HB3	4:I:763:MET:HE1	1.87	0.57
4:I:793:GLY:HA2	4:I:805:ALA:HA	1.87	0.57
4:I:816:LEU:HD22	4:I:824:GLN:HB3	1.86	0.57
4:I:1108:LEU:O	4:I:1112:MET:N	2.33	0.57
4:I:1268:CYS:SG	4:I:1284:SER:OG	2.62	0.57
5:L:474:ASP:OD2	5:L:478:LYS:NZ	2.35	0.57
5:L:730:LEU:HD23	5:L:735:TRP:HE3	1.70	0.57
1:C:861:CYS:HA	1:C:884:LEU:HD12	1.86	0.57
3:G:70:HIS:HB2	3:G:75:LEU:HB3	1.86	0.57
3:G:1301:ARG:NH1	3:G:1304:ASP:OD2	2.38	0.57
4:I:738:VAL:CG2	4:I:763:MET:HG2	2.35	0.57
4:I:884:ALA:O	4:I:886:GLN:NE2	2.37	0.57
4:I:1011:MET:SD	4:I:1012:ASP:N	2.78	0.57
5:L:985:GLN:NE2	5:L:989:ASP:OD1	2.38	0.57
5:L:663:MET:O	5:L:699:ARG:NH1	2.38	0.56
1:C:701:LEU:HD21	1:C:735:ARG:HH12	1.69	0.56
2:E:286:MET:SD	2:E:289:GLN:NE2	2.78	0.56
2:E:1308:GLY:HA2	2:E:1311:LEU:HD12	1.87	0.56
3:G:1014:MET:HG3	3:G:1033:LEU:O	2.04	0.56
4:I:429:LYS:HB3	4:I:432:LYS:HB3	1.87	0.56
4:I:538:THR:HG23	4:I:540:ALA:H	1.70	0.56
4:I:1105:ARG:HA	4:I:1108:LEU:HB3	1.87	0.56
5:L:909:VAL:HB	5:L:951:VAL:HG22	1.88	0.56
1:C:234:ASP:HB2	1:C:257:LYS:HD2	1.88	0.56
2:E:10:HIS:HA	2:E:118:LEU:HD21	1.86	0.56
2:E:29:LEU:HA	2:E:38:LEU:HD13	1.87	0.56
3:G:123:GLU:HA	3:G:150:VAL:HG13	1.87	0.56
4:I:844:ASP:HB3	4:I:847:GLN:HB3	1.87	0.56
4:I:1170:TYR:HB2	4:I:1192:VAL:HG21	1.87	0.56
5:L:96:TYR:HD2	5:L:132:VAL:HG22	1.70	0.56
5:L:692:SER:HB2	5:L:695:GLU:HB3	1.88	0.56
5:L:739:LEU:HD21	5:L:760:HIS:HB3	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:L:774:LEU:HD22	5:L:786:LEU:HB2	1.88	0.56
1:C:64:LEU:HD11	1:C:67:ASN:HB2	1.88	0.56
2:E:333:ALA:O	2:E:337:VAL:HB	2.05	0.56
2:E:687:ASP:OD1	2:E:690:ARG:NH2	2.39	0.56
3:G:639:ASP:HA	3:G:658:PRO:HA	1.86	0.56
3:G:906:LEU:HG	3:G:928:ALA:HB1	1.87	0.56
4:I:1053:ALA:HB1	4:I:1084:LEU:HD22	1.87	0.56
1:C:632:LEU:HB2	1:C:662:LEU:HD13	1.88	0.56
2:E:522:LEU:HD22	2:E:832:ARG:HH21	1.70	0.56
3:G:185:LYS:HA	3:G:196:VAL:H	1.71	0.56
3:G:404:GLU:OE2	3:G:698:ASN:ND2	2.38	0.56
3:G:1235:CYS:O	3:G:1239:GLU:HB2	2.05	0.56
4:I:895:ILE:HG21	4:I:915:LEU:HD22	1.87	0.56
4:I:1196:ILE:HG12	4:I:1203:ILE:HD13	1.86	0.56
5:L:68:ALA:HB3	5:L:72:LYS:H	1.70	0.56
5:L:966:LYS:HA	5:L:969:ARG:HE	1.69	0.56
2:E:554:ALA:HB2	2:E:570:LEU:HD23	1.87	0.56
3:G:440:GLU:OE2	3:G:441:ARG:NH1	2.39	0.56
3:G:670:SER:HA	3:G:675:LEU:HA	1.87	0.56
3:G:944:TRP:HB3	3:G:982:LEU:HD23	1.88	0.56
4:I:509:LEU:HD11	4:I:533:LEU:HD21	1.88	0.56
4:I:1294:ALA:HB1	4:I:1318:GLN:HB2	1.88	0.56
1:C:612:ARG:NH2	1:C:661:SER:OG	2.28	0.56
2:E:1029:LEU:HD12	2:E:1042:LEU:HD23	1.88	0.56
2:E:1148:LEU:HB3	2:E:1149:LYS:NZ	2.20	0.56
3:G:591:HIS:HB2	3:G:651:ILE:HB	1.86	0.56
1:C:1024:TRP:HD1	1:C:1027:ALA:HB3	1.70	0.56
2:E:677:ASP:OD2	2:E:712:ARG:NH1	2.39	0.56
3:G:88:TRP:HB2	3:G:95:LEU:HD12	1.87	0.56
3:G:576:VAL:N	3:G:594:THR:OG1	2.36	0.56
3:G:1018:ALA:HB2	3:G:1033:LEU:HB3	1.88	0.56
3:G:1043:ALA:HB1	3:G:1059:ILE:HD13	1.87	0.56
3:G:1306:LEU:HD13	3:G:1326:VAL:HG22	1.86	0.56
4:I:435:GLN:NE2	4:I:466:ILE:O	2.38	0.56
4:I:758:ARG:O	4:I:762:GLU:HG3	2.06	0.56
4:I:1269:PRO:HA	4:I:1301:LEU:HD21	1.87	0.56
5:L:673:ASP:OD1	5:L:674:GLU:N	2.39	0.56
1:C:146:SER:OG	1:C:148:ASP:OD1	2.23	0.56
1:C:711:VAL:HG22	5:L:668:ASP:HB2	1.87	0.56
2:E:736:ARG:HG3	2:E:760:LEU:HD13	1.87	0.56
3:G:446:LYS:N	3:G:454:MET:O	2.39	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:749:TRP:HE3	3:G:752:MET:HA	1.71	0.56
3:G:804:ILE:HG22	4:I:714:ALA:HB1	1.87	0.56
3:G:811:TYR:HE2	3:G:823:LEU:HD12	1.70	0.56
4:I:760:ALA:HA	4:I:763:MET:SD	2.46	0.56
4:I:1008:HIS:CE1	4:I:1010:GLU:HG3	2.40	0.56
1:C:262:LYS:HG2	1:C:314:SER:HA	1.88	0.56
3:G:1114:THR:H	3:G:1117:MET:HB3	1.70	0.56
4:I:225:ILE:HD12	4:I:277:ILE:HD11	1.88	0.56
4:I:1202:HIS:O	4:I:1206:ILE:N	2.36	0.56
1:C:891:VAL:HG22	1:C:902:ILE:HD12	1.87	0.55
2:E:292:LYS:HB3	2:E:328:LEU:HD22	1.87	0.55
4:I:407:GLY:HA3	4:I:448:LEU:HD13	1.88	0.55
4:I:950:LEU:HD13	4:I:978:PHE:HB2	1.89	0.55
4:I:1307:CYS:O	4:I:1311:LYS:N	2.36	0.55
3:G:293:ASP:OD2	3:G:320:ARG:NH2	2.40	0.55
4:I:1091:TYR:O	4:I:1095:GLU:HB2	2.06	0.55
5:L:255:LEU:HD22	5:L:310:MET:HG3	1.87	0.55
2:E:331:GLU:HG3	2:E:362:LEU:HD11	1.88	0.55
3:G:399:ASP:HB3	3:G:419:LEU:H	1.71	0.55
3:G:800:HIS:ND1	4:I:741:GLU:OE2	2.38	0.55
3:G:1151:PHE:HD2	3:G:1179:LYS:HG2	1.69	0.55
4:I:189:LEU:HD11	4:I:216:LEU:HD22	1.89	0.55
4:I:532:ARG:NE	4:I:545:GLU:OE1	2.34	0.55
4:I:591:LEU:HD22	4:I:628:VAL:HG21	1.87	0.55
4:I:813:LEU:HD23	4:I:831:CYS:HB2	1.87	0.55
5:L:573:SER:OG	5:L:576:ARG:NH2	2.39	0.55
5:L:675:ALA:O	5:L:679:ALA:CB	2.53	0.55
1:C:638:PHE:HB2	1:C:653:PHE:HB3	1.88	0.55
2:E:289:GLN:NE2	2:E:290:GLU:O	2.39	0.55
4:I:532:ARG:NH1	4:I:570:ALA:O	2.40	0.55
4:I:1283:ILE:HG12	4:I:1298:ARG:HH22	1.71	0.55
1:C:608:MET:H	1:C:621:THR:HA	1.71	0.55
2:E:337:VAL:HG11	2:E:368:GLU:HB3	1.88	0.55
2:E:1077:TYR:HB2	2:E:1109:ALA:HB2	1.89	0.55
2:E:1311:LEU:HB3	2:E:1327:VAL:HG21	1.89	0.55
3:G:327:ASN:ND2	3:G:342:CYS:O	2.39	0.55
3:G:1226:GLU:HG3	3:G:1263:SER:HB3	1.87	0.55
4:I:1035:GLU:HG2	4:I:1040:TYR:HD1	1.72	0.55
5:L:225:LEU:H	5:L:240:GLY:HA2	1.72	0.55
1:C:98:ILE:HB	1:C:114:ASN:HB3	1.88	0.55
1:C:878:ILE:HG21	1:C:899:PHE:HB2	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:819:LEU:HA	3:G:822:GLN:HG3	1.88	0.55
3:G:935:VAL:HA	3:G:939:CYS:HB2	1.88	0.55
4:I:439:TYR:OH	4:I:464:HIS:NE2	2.40	0.55
4:I:678:CYS:HA	4:I:681:GLN:HG3	1.88	0.55
4:I:749:GLU:OE1	4:I:753:ARG:NH1	2.33	0.55
4:I:1096:LYS:HB2	4:I:1101:ARG:HB3	1.89	0.55
4:I:1328:ARG:HH12	4:I:1330:PRO:HB3	1.71	0.55
1:C:533:VAL:O	1:C:535:ARG:NH1	2.40	0.55
2:E:944:SER:HB2	2:E:949:GLN:HG3	1.89	0.55
4:I:977:ARG:O	4:I:981:GLN:HG3	2.07	0.55
5:L:13:GLU:OE1	5:L:19:ASN:ND2	2.39	0.55
5:L:230:PHE:HB3	5:L:235:TYR:HB2	1.89	0.55
5:L:303:ARG:HA	5:L:317:HIS:HA	1.89	0.55
1:C:445:GLN:HG2	1:C:467:ARG:HD2	1.88	0.55
1:C:910:ALA:HB2	1:C:925:LEU:HD11	1.89	0.55
2:E:71:ALA:HA	2:E:113:LEU:HD13	1.89	0.55
2:E:349:THR:HA	2:E:352:ALA:HB3	1.89	0.55
2:E:771:CYS:SG	2:E:806:ARG:NH1	2.80	0.55
3:G:308:ARG:NH2	3:G:361:GLY:O	2.37	0.55
3:G:707:PHE:O	3:G:711:GLN:NE2	2.40	0.55
4:I:849:ARG:HG3	4:I:876:GLU:HB3	1.88	0.55
4:I:864:CYS:HA	4:I:867:ILE:HB	1.88	0.55
4:I:1084:LEU:O	4:I:1088:VAL:N	2.39	0.55
4:I:1102:ASP:OD1	4:I:1105:ARG:NH1	2.40	0.55
5:L:731:ALA:O	5:L:763:ARG:NH2	2.40	0.55
1:C:378:ARG:HG3	1:C:379:LYS:HG3	1.89	0.55
1:C:752:TYR:HB2	1:C:761:ALA:HB2	1.89	0.55
2:E:190:LEU:HB3	2:E:213:ILE:HG21	1.89	0.55
3:G:845:LEU:HG	3:G:849:HIS:CE1	2.42	0.55
4:I:15:GLY:HA2	4:I:63:ARG:HA	1.87	0.55
1:C:1055:LEU:HA	1:C:1058:TYR:HB2	1.89	0.55
3:G:513:LEU:N	3:G:525:LEU:O	2.37	0.55
4:I:1044:ALA:HB1	4:I:1059:LEU:HB3	1.89	0.55
5:L:412:SER:HB3	5:L:433:LEU:HD13	1.88	0.55
1:C:59:ALA:HA	1:C:606:THR:HG21	1.88	0.54
3:G:175:VAL:HG22	3:G:184:VAL:HG22	1.88	0.54
3:G:311:LEU:HD12	3:G:364:PRO:HB2	1.90	0.54
3:G:704:MET:HE1	3:G:718:ARG:HH12	1.72	0.54
5:L:659:VAL:H	5:L:691:ARG:HH12	1.55	0.54
1:C:270:LEU:HD23	1:C:293:TYR:HB2	1.90	0.54
3:G:507:ASP:O	3:G:514:ALA:N	2.40	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:566:LEU:HG	3:G:603:LEU:HD11	1.87	0.54
3:G:755:MET:HA	3:G:780:ALA:HB1	1.89	0.54
3:G:1035:MET:SD	3:G:1058:HIS:HB2	2.47	0.54
4:I:796:LEU:CB	4:I:805:ALA:HB2	2.37	0.54
5:L:379:LEU:HB2	5:L:390:CYS:HB3	1.88	0.54
1:C:20:ILE:HB	1:C:325:SER:HB2	1.89	0.54
2:E:173:LEU:HG	2:E:196:ILE:HD13	1.89	0.54
2:E:1005:SER:HB3	2:E:1024:HIS:CD2	2.42	0.54
3:G:752:MET:HG2	3:G:768:CYS:SG	2.47	0.54
4:I:309:CYS:SG	4:I:311:ARG:NH1	2.80	0.54
4:I:420:GLN:HA	4:I:438:GLU:HA	1.89	0.54
4:I:957:GLN:OE1	4:I:964:ARG:NH2	2.40	0.54
1:C:669:LEU:HD22	1:C:693:LEU:HB2	1.88	0.54
3:G:718:ARG:HH21	3:G:722:LEU:HD11	1.72	0.54
3:G:741:LYS:O	4:I:802:TYR:OH	2.21	0.54
4:I:335:ILE:HA	4:I:351:THR:HA	1.89	0.54
4:I:600:SER:OG	4:I:601:LEU:N	2.40	0.54
4:I:653:ALA:HA	4:I:656:ARG:HB2	1.89	0.54
5:L:481:VAL:HB	5:L:491:PHE:HB3	1.89	0.54
5:L:847:LEU:HB2	5:L:863:TYR:HE2	1.72	0.54
1:C:568:ALA:HA	1:C:575:THR:HB	1.90	0.54
1:C:771:TRP:HB3	1:C:792:HIS:CE1	2.43	0.54
1:C:1074:ALA:O	1:C:1078:ASN:ND2	2.41	0.54
2:E:59:LEU:HD11	2:E:68:LEU:HD22	1.89	0.54
3:G:402:VAL:HG12	3:G:404:GLU:HG3	1.88	0.54
3:G:473:VAL:O	3:G:484:VAL:N	2.40	0.54
4:I:1059:LEU:HD23	4:I:1062:LYS:HD2	1.90	0.54
5:L:351:VAL:HG22	5:L:370:LYS:HE3	1.89	0.54
5:L:502:ASN:HB2	5:L:508:MET:HB3	1.90	0.54
5:L:651:ARG:HA	5:L:654:THR:HG23	1.89	0.54
2:E:538:ALA:HB1	2:E:570:LEU:HD21	1.88	0.54
3:G:968:GLU:OE1	3:G:980:TYR:OH	2.24	0.54
4:I:153:ILE:HD13	4:I:166:LEU:HD22	1.90	0.54
4:I:399:LEU:HD22	4:I:415:VAL:HG21	1.88	0.54
5:L:112:GLN:H	5:L:127:PRO:HG3	1.71	0.54
5:L:857:TYR:HB3	5:L:903:TYR:HD1	1.72	0.54
2:E:9:VAL:HA	2:E:20:HIS:HE1	1.72	0.54
2:E:707:GLU:HA	2:E:710:ILE:HD12	1.89	0.54
4:I:663:PHE:HA	4:I:675:ALA:HA	1.88	0.54
1:C:533:VAL:HB	1:C:575:THR:HG23	1.90	0.54
3:G:594:THR:HG21	3:G:622:THR:HG23	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:I:304:MET:HB2	4:I:311:ARG:H	1.72	0.54
4:I:813:LEU:CD2	4:I:832:LYS:HG3	2.38	0.54
4:I:1011:MET:HE2	4:I:1039:GLU:OE2	2.08	0.54
2:E:293:ASN:HB3	2:E:296:LEU:HB3	1.90	0.54
2:E:736:ARG:NH1	2:E:756:CYS:O	2.41	0.54
3:G:543:PRO:O	3:G:547:LYS:N	2.41	0.54
3:G:834:LEU:HD23	3:G:848:THR:HG22	1.89	0.54
4:I:840:LEU:HD21	4:I:868:LEU:HG	1.89	0.54
1:C:222:ALA:HB2	1:C:268:THR:HG22	1.90	0.54
1:C:275:PHE:HB3	1:C:288:TRP:CE2	2.42	0.54
2:E:65:ASN:O	2:E:69:GLU:N	2.31	0.54
3:G:616:GLN:OE1	3:G:667:CYS:N	2.41	0.54
3:G:804:ILE:HD11	3:G:823:LEU:HB3	1.90	0.54
3:G:834:LEU:HB3	3:G:849:HIS:NE2	2.23	0.54
3:G:1296:PRO:HG3	3:G:1337:ALA:HB1	1.90	0.54
4:I:512:TYR:HA	4:I:519:PRO:HA	1.89	0.54
4:I:959:ALA:HA	4:I:962:ILE:HG22	1.90	0.54
4:I:1105:ARG:HA	4:I:1108:LEU:CB	2.38	0.54
4:I:1124:GLU:HA	4:I:1127:ARG:HG2	1.90	0.54
5:L:318:LEU:HD11	5:L:551:MET:HG3	1.89	0.54
5:L:771:LYS:NZ	5:L:772:GLU:OE2	2.39	0.54
1:C:518:VAL:N	1:C:532:HIS:O	2.41	0.53
2:E:1010:GLU:HA	2:E:1013:PHE:HB3	1.90	0.53
3:G:160:GLU:OE2	3:G:229:ARG:NH2	2.41	0.53
3:G:555:ARG:HE	3:G:604:MET:HA	1.72	0.53
1:C:464:LYS:O	1:C:467:ARG:NE	2.41	0.53
1:C:591:ARG:NH1	1:C:592:TRP:O	2.41	0.53
2:E:1189:ALA:HA	2:E:1198:VAL:HB	1.91	0.53
3:G:841:ASP:HB2	3:G:844:HIS:H	1.73	0.53
3:G:1109:HIS:HB3	3:G:1111:VAL:HG22	1.90	0.53
5:L:194:VAL:HA	5:L:208:MET:HE2	1.90	0.53
5:L:350:VAL:HB	5:L:371:ILE:HB	1.89	0.53
1:C:137:TYR:HB2	1:C:141:ALA:HB3	1.90	0.53
1:C:763:ASP:HA	1:C:766:MET:HB3	1.90	0.53
2:E:347:ASP:HB3	2:E:643:ARG:HB3	1.90	0.53
3:G:447:VAL:HG13	3:G:453:ILE:HG13	1.90	0.53
4:I:768:LYS:HE2	4:I:791:GLU:HG3	1.91	0.53
4:I:1034:TYR:HB2	4:I:1043:ALA:HB2	1.88	0.53
4:I:1080:ARG:NH1	4:I:1110:ILE:O	2.40	0.53
4:I:1183:THR:OG1	4:I:1261:LEU:O	2.24	0.53
4:I:1263:GLU:HG3	4:I:1277:GLU:HB2	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:L:247:LEU:HD13	5:L:258:ILE:HD11	1.88	0.53
5:L:577:VAL:HA	5:L:580:LEU:HD12	1.90	0.53
1:C:51:VAL:HA	1:C:54:LYS:HB2	1.91	0.53
1:C:902:ILE:O	1:C:906:LEU:CB	2.54	0.53
3:G:794:VAL:O	3:G:798:ALA:CB	2.56	0.53
3:G:821:ASN:O	3:G:825:ARG:NH1	2.42	0.53
3:G:886:ALA:O	3:G:890:THR:N	2.30	0.53
4:I:1073:VAL:HG13	4:I:1108:LEU:HD13	1.91	0.53
5:L:230:PHE:HB2	5:L:237:THR:HG23	1.90	0.53
5:L:350:VAL:HG21	5:L:371:ILE:HD12	1.91	0.53
5:L:793:TRP:HB2	5:L:814:TYR:HE1	1.74	0.53
1:C:966:GLU:HA	1:C:969:LYS:HE2	1.91	0.53
2:E:743:TYR:HA	2:E:747:ARG:HB2	1.91	0.53
2:E:811:LEU:HD13	2:E:819:ARG:HB3	1.90	0.53
3:G:465:CYS:SG	3:G:466:MET:N	2.81	0.53
3:G:805:GLU:OE1	3:G:808:LYS:NZ	2.40	0.53
4:I:1161:LEU:HD13	4:I:1291:PHE:HE2	1.73	0.53
4:I:1316:ALA:HA	4:I:1319:PHE:HB3	1.91	0.53
5:L:73:ARG:HG3	5:L:87:THR:HA	1.90	0.53
5:L:295:THR:O	5:L:297:HIS:ND1	2.37	0.53
5:L:342:LEU:N	5:L:353:TYR:O	2.41	0.53
5:L:787:TYR:CE2	5:L:798:LEU:HB3	2.42	0.53
5:L:832:GLN:HA	5:L:837:PRO:HD3	1.91	0.53
1:C:568:ALA:HB2	1:C:575:THR:H	1.73	0.53
1:C:774:VAL:HA	1:C:777:LEU:HD12	1.90	0.53
1:C:856:GLN:OE1	1:C:876:ARG:NH2	2.41	0.53
3:G:808:LYS:HG2	3:G:820:LEU:HA	1.88	0.53
3:G:1281:VAL:HG11	3:G:1306:LEU:HD11	1.90	0.53
4:I:238:LEU:HD21	4:I:277:ILE:HG13	1.89	0.53
4:I:1182:HIS:ND1	4:I:1213:GLU:OE1	2.42	0.53
5:L:394:LYS:HA	5:L:409:VAL:HA	1.89	0.53
3:G:19:TRP:HE1	3:G:368:VAL:N	2.07	0.53
3:G:568:VAL:HA	3:G:576:VAL:HA	1.89	0.53
3:G:598:ARG:NH2	3:G:639:ASP:OD2	2.42	0.53
3:G:667:CYS:HA	3:G:677:THR:HA	1.90	0.53
4:I:294:THR:HG21	4:I:339:GLY:HA2	1.89	0.53
4:I:684:GLN:HG3	4:I:686:GLU:HG3	1.90	0.53
4:I:796:LEU:HB3	4:I:805:ALA:HB2	1.91	0.53
5:L:40:ARG:HG3	5:L:56:LYS:HG3	1.90	0.53
5:L:779:ASP:O	5:L:783:LEU:N	2.42	0.53
1:C:17:LEU:O	1:C:311:SER:OG	2.26	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:83:ASN:HB3	1:C:88:LYS:H	1.74	0.53
3:G:286:TYR:CZ	3:G:339:PHE:HB2	2.44	0.53
3:G:799:VAL:HG22	3:G:804:ILE:HG13	1.89	0.53
3:G:820:LEU:O	3:G:824:TYR:HB2	2.08	0.53
4:I:840:LEU:HD12	4:I:845:LEU:HA	1.91	0.53
2:E:1076:HIS:ND1	2:E:1095:GLU:OE1	2.41	0.53
3:G:394:MET:O	3:G:402:VAL:N	2.40	0.53
4:I:816:LEU:HD21	4:I:827:LEU:HD23	1.91	0.53
1:C:262:LYS:HB3	1:C:313:ILE:HG13	1.91	0.53
2:E:883:ALA:O	2:E:887:LEU:HB2	2.08	0.53
3:G:182:ALA:HB2	3:G:202:GLY:HA2	1.91	0.53
3:G:265:LEU:HB3	3:G:278:TYR:HB3	1.91	0.53
3:G:669:GLY:N	3:G:676:LEU:O	2.41	0.53
3:G:927:LYS:NZ	5:L:915:SER:O	2.42	0.53
1:C:352:PHE:HE2	1:C:354:ARG:HG2	1.74	0.52
1:C:784:ASP:HB3	1:C:788:LEU:HD23	1.90	0.52
2:E:918:LEU:HB3	2:E:929:GLN:HG3	1.89	0.52
3:G:756:CYS:HB3	3:G:761:ARG:HG3	1.92	0.52
4:I:299:LEU:O	4:I:316:ASN:ND2	2.42	0.52
1:C:382:ALA:H	1:C:393:ALA:HB3	1.74	0.52
1:C:822:VAL:O	1:C:826:TYR:HB2	2.09	0.52
2:E:303:PRO:HA	2:E:480:ALA:HB2	1.91	0.52
2:E:1239:TRP:HB3	2:E:1258:LEU:HD22	1.91	0.52
3:G:654:GLN:HB2	3:G:729:ALA:HB2	1.90	0.52
3:G:789:GLU:HB3	3:G:810:LEU:HB2	1.90	0.52
4:I:1097:ASP:OD1	4:I:1097:ASP:N	2.42	0.52
4:I:1108:LEU:HD12	4:I:1111:ALA:HB3	1.91	0.52
5:L:345:GLN:HG2	5:L:380:LEU:HD22	1.90	0.52
5:L:505:PHE:HB3	5:L:508:MET:HB2	1.91	0.52
1:C:116:ARG:NH2	1:C:156:GLU:OE2	2.43	0.52
2:E:619:ASP:OD1	2:E:619:ASP:N	2.42	0.52
2:E:1315:TYR:O	2:E:1348:LYS:NZ	2.39	0.52
3:G:496:PHE:CE2	3:G:523:ARG:HB3	2.44	0.52
3:G:580:VAL:HG11	3:G:645:VAL:HG11	1.91	0.52
3:G:1017:THR:HB	3:G:1033:LEU:HG	1.92	0.52
3:G:1176:ASP:HA	3:G:1203:LEU:HD22	1.91	0.52
5:L:55:LEU:HD11	5:L:90:ALA:HB1	1.90	0.52
5:L:171:GLU:OE2	5:L:174:ARG:NH1	2.42	0.52
5:L:483:ASN:O	5:L:487:LYS:N	2.41	0.52
1:C:42:ARG:HH21	1:C:65:SER:HB2	1.75	0.52
2:E:896:GLU:O	2:E:900:TYR:N	2.35	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:1026:GLN:NE2	2:E:1027:GLN:OE1	2.43	0.52
3:G:612:LEU:HD11	3:G:642:ILE:HG23	1.91	0.52
4:I:1130:GLN:HE21	4:I:1167:LEU:HD12	1.74	0.52
5:L:110:VAL:HG12	5:L:111:THR:HG23	1.91	0.52
2:E:551:LEU:HG	2:E:574:VAL:HG11	1.90	0.52
2:E:1167:TYR:HA	2:E:1170:MET:SD	2.49	0.52
3:G:182:ALA:HB3	3:G:199:MET:HG3	1.91	0.52
3:G:569:GLY:N	3:G:575:ALA:O	2.43	0.52
3:G:825:ARG:HD3	3:G:833:ALA:HA	1.91	0.52
5:L:302:ASP:O	5:L:318:LEU:N	2.37	0.52
5:L:618:LEU:HD13	5:L:642:PHE:HB2	1.91	0.52
5:L:721:LYS:HD3	5:L:723:TYR:HE1	1.73	0.52
1:C:697:ALA:O	1:C:702:ASP:N	2.42	0.52
1:C:728:LEU:HD23	1:C:734:GLN:HA	1.91	0.52
1:C:1030:TYR:HD1	1:C:1062:LEU:HD11	1.74	0.52
2:E:285:SER:O	2:E:288:ARG:NH1	2.42	0.52
3:G:821:ASN:O	3:G:825:ARG:HG2	2.08	0.52
5:L:801:HIS:HB2	5:L:811:TYR:OH	2.10	0.52
2:E:959:GLU:HG2	2:E:963:HIS:CE1	2.44	0.52
3:G:599:GLN:HB2	3:G:620:VAL:HB	1.90	0.52
3:G:898:ALA:HB2	5:L:855:THR:HG21	1.91	0.52
3:G:1237:GLN:NE2	3:G:1322:ARG:O	2.43	0.52
4:I:1002:PHE:HZ	4:I:1037:ARG:HH22	1.58	0.52
5:L:18:ARG:NH2	5:L:282:GLU:OE2	2.41	0.52
5:L:906:TYR:O	5:L:910:HIS:HB3	2.10	0.52
1:C:212:VAL:HG13	1:C:231:ILE:HG12	1.92	0.52
3:G:642:ILE:HD11	3:G:675:LEU:HD11	1.92	0.52
5:L:388:ILE:HD11	5:L:443:VAL:HG22	1.92	0.52
5:L:775:LEU:CG	5:L:783:LEU:HD11	2.40	0.52
1:C:1089:ILE:HD12	2:E:783:PRO:HG3	1.92	0.52
3:G:58:ASN:HD22	3:G:62:THR:H	1.57	0.52
3:G:405:ASN:HB3	3:G:408:VAL:HG23	1.92	0.52
3:G:842:ARG:NH1	5:L:822:ASP:OD2	2.42	0.52
5:L:317:HIS:O	5:L:321:GLU:N	2.33	0.52
5:L:980:LEU:HD21	5:L:996:ARG:HH22	1.75	0.52
1:C:762:ILE:HG13	1:C:765:ARG:HH21	1.74	0.52
2:E:850:LEU:HB3	2:E:852:GLN:HE22	1.74	0.52
2:E:985:ASP:N	2:E:985:ASP:OD1	2.43	0.52
3:G:720:ALA:CB	3:G:752:MET:O	2.58	0.52
4:I:1146:VAL:HA	4:I:1156:PRO:HD2	1.91	0.52
5:L:96:TYR:CZ	5:L:125:TRP:HB2	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:L:343:ALA:HA	5:L:352:ILE:HA	1.92	0.52
5:L:725:ARG:HH22	5:L:732:LYS:HZ2	1.57	0.52
5:L:793:TRP:HB3	5:L:817:TRP:HB3	1.91	0.52
1:C:610:ILE:HB	1:C:617:GLU:HB2	1.91	0.51
2:E:1294:GLU:HB3	2:E:1311:LEU:HD21	1.92	0.51
3:G:526:LYS:N	3:G:533:LYS:O	2.42	0.51
4:I:1143:PHE:HE2	4:I:1310:CYS:HB2	1.74	0.51
2:E:927:ALA:HA	2:E:930:ARG:HE	1.74	0.51
2:E:1221:ARG:HA	2:E:1224:LYS:HB2	1.92	0.51
3:G:707:PHE:HA	3:G:755:MET:SD	2.51	0.51
4:I:437:ARG:NH1	4:I:439:TYR:OH	2.43	0.51
4:I:590:ALA:HA	4:I:613:ALA:HA	1.92	0.51
4:I:803:SER:HA	4:I:842:LEU:HD11	1.93	0.51
4:I:854:GLN:HG3	4:I:855:LEU:HG	1.91	0.51
5:L:228:SER:OG	5:L:237:THR:OG1	2.27	0.51
5:L:637:ALA:HB2	5:L:652:LEU:HB2	1.92	0.51
3:G:913:GLU:HA	3:G:921:ALA:HB2	1.92	0.51
3:G:1028:GLU:HA	3:G:1052:LEU:CD1	2.29	0.51
4:I:138:ARG:HG3	4:I:139:GLU:HG3	1.92	0.51
4:I:920:ALA:HB1	4:I:932:ALA:HA	1.92	0.51
4:I:1227:ALA:HB1	4:I:1247:ILE:HG23	1.91	0.51
4:I:1337:ASP:N	4:I:1337:ASP:OD1	2.44	0.51
5:L:24:LEU:HD22	5:L:278:ALA:HB1	1.92	0.51
5:L:188:ASN:HB3	5:L:191:GLU:HB2	1.91	0.51
5:L:412:SER:OG	5:L:413:VAL:N	2.42	0.51
2:E:134:LEU:HD13	2:E:140:MET:HB3	1.92	0.51
3:G:469:ASN:HB2	3:G:474:TYR:CE2	2.45	0.51
3:G:1237:GLN:HE22	3:G:1325:ASP:H	1.59	0.51
4:I:1139:HIS:HD2	4:I:1167:LEU:HD22	1.74	0.51
5:L:512:SER:HB2	5:L:531:LEU:HB3	1.92	0.51
5:L:525:PRO:HG2	5:L:564:ARG:HG3	1.92	0.51
5:L:780:THR:HB	5:L:799:LEU:CD1	2.40	0.51
2:E:319:TYR:HE1	2:E:355:ARG:HD2	1.75	0.51
2:E:337:VAL:HG13	2:E:356:PHE:HE1	1.75	0.51
3:G:874:CYS:HB3	5:L:842:ARG:NH1	2.26	0.51
3:G:1296:PRO:HG2	3:G:1338:ARG:HE	1.76	0.51
4:I:400:GLU:OE1	4:I:436:ARG:NH2	2.44	0.51
4:I:622:THR:O	4:I:629:GLY:N	2.44	0.51
4:I:795:MET:SD	4:I:796:LEU:HG	2.50	0.51
4:I:1112:MET:O	4:I:1114:GLN:NE2	2.43	0.51
4:I:1123:LEU:HB2	4:I:1160:LEU:HD12	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:L:964:ALA:O	5:L:967:LEU:N	2.42	0.51
1:C:288:TRP:CD1	1:C:309:GLY:HA2	2.45	0.51
1:C:608:MET:HB3	1:C:620:VAL:O	2.11	0.51
1:C:971:LYS:O	1:C:975:LEU:N	2.37	0.51
2:E:1173:LYS:HD3	2:E:1178:ILE:HD11	1.93	0.51
4:I:248:MET:SD	4:I:249:LYS:N	2.84	0.51
4:I:452:GLN:HB2	4:I:495:LEU:HD21	1.92	0.51
5:L:535:VAL:HG13	5:L:543:ILE:HG23	1.93	0.51
2:E:844:GLY:HA2	2:E:847:LEU:HD12	1.92	0.51
4:I:15:GLY:HA3	4:I:33:SER:HB3	1.91	0.51
4:I:576:ASP:HA	4:I:623:VAL:HG13	1.93	0.51
4:I:1108:LEU:O	4:I:1111:ALA:HB3	2.10	0.51
5:L:309:GLN:OE1	5:L:325:ARG:NH1	2.42	0.51
5:L:454:HIS:CE1	5:L:474:ASP:HB3	2.45	0.51
1:C:70:LEU:HD11	1:C:108:TRP:HB2	1.91	0.51
1:C:841:LEU:HD22	1:C:847:LEU:HD13	1.92	0.51
2:E:1252:TYR:HB3	2:E:1279:ILE:HG23	1.92	0.51
3:G:621:PHE:HB3	3:G:625:ASN:HB2	1.93	0.51
3:G:1274:VAL:HG22	3:G:1317:LEU:HB3	1.92	0.51
4:I:415:VAL:O	4:I:422:ALA:N	2.33	0.51
5:L:682:PHE:CD1	5:L:691:ARG:HB2	2.45	0.51
5:L:799:LEU:HD12	5:L:802:ALA:CB	2.38	0.51
1:C:198:TYR:HA	1:C:201:GLU:HB2	1.93	0.51
2:E:904:GLN:HG3	2:E:936:ILE:HG23	1.93	0.51
3:G:216:LEU:HB3	3:G:224:LEU:HD11	1.93	0.51
3:G:265:LEU:O	3:G:278:TYR:N	2.42	0.51
3:G:724:PHE:HZ	3:G:758:ARG:HB2	1.76	0.51
3:G:925:TYR:O	3:G:929:GLY:N	2.44	0.51
3:G:1237:GLN:HG2	3:G:1322:ARG:HB2	1.93	0.51
4:I:1044:ALA:HA	4:I:1047:TRP:HB2	1.93	0.51
5:L:247:LEU:HG	5:L:255:LEU:HD12	1.93	0.51
1:C:825:PHE:HB3	1:C:830:ASP:HB2	1.92	0.51
1:C:1100:ASP:OD1	1:C:1100:ASP:N	2.44	0.51
2:E:192:GLY:HA2	2:E:195:LYS:HE3	1.93	0.51
2:E:709:ALA:O	2:E:714:ASP:N	2.44	0.51
3:G:751:ASN:HD21	3:G:774:HIS:CE1	2.29	0.51
3:G:1281:VAL:O	3:G:1285:PHE:N	2.41	0.51
4:I:573:VAL:HG22	4:I:585:ILE:HG12	1.93	0.51
4:I:773:ALA:O	4:I:777:ALA:HB2	2.11	0.51
4:I:833:ALA:HB1	4:I:860:LEU:HD13	1.93	0.51
5:L:675:ALA:O	5:L:679:ALA:HB2	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:395:LYS:HA	1:C:402:HIS:HA	1.92	0.50
1:C:507:SER:HA	1:C:523:LEU:HB2	1.93	0.50
2:E:458:GLU:HA	2:E:461:ILE:HG12	1.92	0.50
2:E:1035:HIS:O	2:E:1039:LEU:N	2.36	0.50
3:G:104:ASN:HB3	3:G:122:ASP:HB2	1.92	0.50
3:G:484:VAL:HA	3:G:490:VAL:HA	1.93	0.50
3:G:1052:LEU:HB3	3:G:1055:VAL:HB	1.94	0.50
4:I:265:GLY:HA2	4:I:290:LEU:HB2	1.92	0.50
4:I:374:VAL:HG11	4:I:621:LEU:HD13	1.93	0.50
4:I:455:VAL:N	4:I:462:VAL:O	2.43	0.50
5:L:665:MET:SD	5:L:669:LEU:HD12	2.51	0.50
5:L:933:LEU:HA	5:L:955:LEU:HD21	1.94	0.50
1:C:596:ASN:HB3	1:C:599:LEU:HD12	1.93	0.50
2:E:596:PHE:HZ	2:E:623:ARG:HH12	1.59	0.50
3:G:577:ARG:HA	3:G:592:ASP:HA	1.93	0.50
3:G:659:ILE:O	3:G:661:THR:N	2.44	0.50
4:I:87:THR:HG21	4:I:108:THR:HA	1.93	0.50
4:I:164:MET:N	4:I:176:THR:O	2.44	0.50
4:I:259:LEU:HD21	4:I:302:VAL:HG13	1.93	0.50
5:L:871:ALA:HA	5:L:892:ARG:HH21	1.75	0.50
1:C:115:ASN:OD1	1:C:117:ASN:ND2	2.39	0.50
1:C:801:ASP:HB3	5:L:580:LEU:HD23	1.93	0.50
1:C:906:LEU:HG	1:C:925:LEU:HD13	1.93	0.50
2:E:113:LEU:O	2:E:117:TYR:N	2.33	0.50
2:E:655:LEU:HB3	2:E:692:PHE:HD1	1.75	0.50
2:E:874:THR:HG23	2:E:878:GLN:HE22	1.76	0.50
2:E:1009:ALA:HB1	2:E:1021:ALA:HA	1.94	0.50
3:G:176:ALA:HB3	3:G:183:VAL:HB	1.93	0.50
3:G:643:ILE:HG12	3:G:653:LEU:HA	1.93	0.50
3:G:805:GLU:HA	3:G:808:LYS:HE3	1.92	0.50
3:G:1039:LYS:HG3	3:G:1042:LYS:HB2	1.94	0.50
3:G:1200:LEU:HA	3:G:1203:LEU:HG	1.91	0.50
3:G:1296:PRO:HB2	3:G:1338:ARG:HH21	1.77	0.50
4:I:338:VAL:HG23	4:I:349:VAL:HG22	1.93	0.50
4:I:623:VAL:HA	4:I:628:VAL:HA	1.91	0.50
4:I:663:PHE:HE1	4:I:691:LEU:HD23	1.76	0.50
1:C:207:SER:OG	1:C:234:ASP:OD1	2.29	0.50
3:G:710:MET:HA	3:G:717:THR:HG21	1.93	0.50
3:G:1330:MET:HA	3:G:1333:TYR:CZ	2.46	0.50
4:I:510:SER:HA	4:I:522:GLU:HG2	1.93	0.50
5:L:558:GLN:O	5:L:562:MET:N	2.43	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:L:772:GLU:O	5:L:776:LYS:N	2.44	0.50
3:G:286:TYR:OH	3:G:343:TRP:NE1	2.45	0.50
3:G:306:ASP:O	3:G:310:ASN:N	2.42	0.50
3:G:434:LEU:O	3:G:445:TYR:N	2.38	0.50
4:I:198:VAL:HG12	4:I:211:GLU:HB3	1.93	0.50
4:I:978:PHE:O	4:I:982:SER:N	2.43	0.50
5:L:632:GLU:HG2	5:L:635:LEU:HD12	1.93	0.50
5:L:637:ALA:O	5:L:641:ALA:HB2	2.12	0.50
5:L:748:LYS:HG2	5:L:754:LEU:HD11	1.93	0.50
5:L:828:ARG:HE	5:L:840:ALA:HB1	1.75	0.50
1:C:347:THR:HA	1:C:366:ASP:HA	1.94	0.50
1:C:543:LEU:HB3	1:C:547:LEU:HG	1.93	0.50
1:C:774:VAL:HG12	1:C:792:HIS:HE1	1.76	0.50
2:E:40:PHE:CE2	2:E:71:ALA:HB1	2.47	0.50
2:E:339:ALA:HA	2:E:342:GLN:HG3	1.94	0.50
2:E:580:LYS:HD2	2:E:583:LEU:HD12	1.94	0.50
2:E:965:ASP:OD1	2:E:965:ASP:N	2.42	0.50
3:G:88:TRP:HZ2	3:G:93:ARG:HD3	1.76	0.50
3:G:184:VAL:HB	3:G:197:VAL:HG12	1.93	0.50
1:C:598:GLU:HB3	1:C:613:GLY:HA2	1.92	0.50
2:E:310:SER:HA	2:E:532:GLU:HB3	1.94	0.50
3:G:206:LEU:HD12	3:G:217:VAL:HG22	1.94	0.50
3:G:834:LEU:HB3	3:G:849:HIS:CE1	2.46	0.50
3:G:1234:ALA:HA	3:G:1278:ARG:HH12	1.75	0.50
4:I:295:TYR:HD1	4:I:302:VAL:HG22	1.77	0.50
5:L:784:ILE:HG12	5:L:810:VAL:HA	1.94	0.50
5:L:883:ALA:O	5:L:887:ARG:N	2.27	0.50
5:L:949:VAL:HG22	5:L:978:LEU:HB3	1.94	0.50
1:C:258:PRO:HA	1:C:274:GLY:HA3	1.92	0.50
1:C:687:PRO:HB3	1:C:690:TRP:CD1	2.47	0.50
2:E:266:LEU:HD13	2:E:314:LEU:HA	1.93	0.50
4:I:936:TYR:O	4:I:941:ASP:N	2.43	0.50
5:L:480:LEU:HG	5:L:492:GLU:HG3	1.92	0.50
1:C:739:ALA:HA	1:C:744:ARG:HE	1.77	0.50
1:C:837:LEU:HD23	1:C:840:ALA:HB3	1.93	0.50
2:E:1148:LEU:HB3	2:E:1149:LYS:HZ2	1.77	0.50
3:G:589:HIS:HB3	3:G:651:ILE:HD12	1.94	0.50
4:I:375:LEU:HD13	4:I:408:LEU:HD13	1.93	0.50
1:C:685:SER:OG	1:C:686:HIS:N	2.44	0.49
2:E:925:ALA:HA	2:E:928:LEU:HB3	1.94	0.49
3:G:379:ARG:HH22	3:G:423:GLN:HG3	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:842:ARG:HD3	5:L:822:ASP:HB2	1.93	0.49
3:G:980:TYR:HB3	3:G:985:ARG:HB2	1.93	0.49
3:G:1011:PRO:HA	3:G:1014:MET:CB	2.41	0.49
3:G:1017:THR:HB	3:G:1033:LEU:CD1	2.42	0.49
4:I:525:HIS:CE1	4:I:527:ASP:HB2	2.47	0.49
4:I:547:ASP:OD1	4:I:547:ASP:N	2.45	0.49
4:I:790:LYS:HD3	4:I:831:CYS:SG	2.52	0.49
5:L:436:GLY:HA2	5:L:458:VAL:HG23	1.93	0.49
5:L:507:ASP:HB3	5:L:522:GLY:HA2	1.94	0.49
1:C:432:HIS:HB3	1:C:443:VAL:HG13	1.93	0.49
1:C:795:ILE:HA	1:C:798:TYR:HB3	1.93	0.49
2:E:387:ALA:HB2	2:E:443:LEU:HD11	1.93	0.49
2:E:938:PHE:HZ	2:E:970:SER:HA	1.77	0.49
2:E:1295:ASN:HA	2:E:1298:LYS:HD2	1.94	0.49
5:L:3:THR:HG21	5:L:258:ILE:HA	1.94	0.49
1:C:313:ILE:HB	1:C:322:LEU:HD11	1.93	0.49
1:C:592:TRP:CE3	1:C:600:PHE:HB3	2.47	0.49
2:E:19:ARG:HH12	2:E:289:GLN:HB3	1.77	0.49
2:E:703:VAL:HA	2:E:706:CYS:HB2	1.93	0.49
2:E:1086:ILE:HG22	2:E:1086:ILE:O	2.12	0.49
3:G:935:VAL:O	3:G:940:PHE:N	2.46	0.49
3:G:1053:PHE:HA	3:G:1056:LEU:HB3	1.94	0.49
4:I:772:ASP:HA	4:I:775:LYS:HB2	1.94	0.49
4:I:845:LEU:O	4:I:849:ARG:HB2	2.12	0.49
4:I:1125:MET:SD	4:I:1141:LYS:NZ	2.77	0.49
1:C:421:VAL:HA	1:C:437:ASN:HD21	1.78	0.49
1:C:882:VAL:HG11	1:C:901:GLN:HG2	1.94	0.49
2:E:557:ILE:HA	2:E:560:MET:HG3	1.94	0.49
2:E:564:GLU:HG3	2:E:567:ALA:H	1.78	0.49
3:G:543:PRO:HD2	3:G:546:LEU:HB2	1.94	0.49
3:G:712:ASP:O	3:G:776:ARG:NE	2.38	0.49
3:G:811:TYR:CE2	3:G:823:LEU:HD12	2.47	0.49
3:G:927:LYS:HE2	5:L:856:ARG:HG2	1.94	0.49
3:G:1225:TRP:HD1	3:G:1263:SER:HA	1.77	0.49
4:I:413:ALA:O	4:I:424:TYR:N	2.42	0.49
4:I:879:GLU:OE1	4:I:883:ARG:NH1	2.45	0.49
5:L:23:ASP:HB3	5:L:65:VAL:HG22	1.93	0.49
1:C:182:CYS:HB3	1:C:195:VAL:HB	1.94	0.49
1:C:402:HIS:N	1:C:419:ILE:O	2.41	0.49
1:C:441:VAL:HG21	1:C:511:ILE:HD13	1.93	0.49
1:C:724:HIS:O	1:C:728:LEU:N	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:349:THR:O	2:E:350:THR:C	2.51	0.49
2:E:1012:MET:O	2:E:1017:HIS:ND1	2.45	0.49
3:G:270:GLU:HG2	3:G:301:VAL:HA	1.93	0.49
3:G:483:VAL:O	3:G:491:LYS:N	2.45	0.49
3:G:842:ARG:HB3	5:L:822:ASP:HB2	1.94	0.49
4:I:7:VAL:H	4:I:356:MET:HB3	1.76	0.49
4:I:170:ASP:OD1	4:I:170:ASP:N	2.43	0.49
5:L:114:LEU:O	5:L:125:TRP:N	2.38	0.49
5:L:270:PRO:HA	5:L:277:VAL:HA	1.93	0.49
1:C:604:GLU:HG2	1:C:605:LYS:HD3	1.95	0.49
1:C:843:ASP:N	1:C:843:ASP:OD1	2.42	0.49
3:G:429:LEU:HA	3:G:434:LEU:HA	1.94	0.49
3:G:675:LEU:O	3:G:702:ALA:N	2.36	0.49
3:G:1056:LEU:HD12	3:G:1059:ILE:HB	1.93	0.49
4:I:880:MET:HA	4:I:883:ARG:HG2	1.93	0.49
5:L:126:SER:H	5:L:129:GLN:NE2	2.11	0.49
5:L:389:LEU:HB2	5:L:396:GLN:HB2	1.94	0.49
1:C:352:PHE:HE1	1:C:363:MET:HB2	1.77	0.49
1:C:518:VAL:O	1:C:532:HIS:N	2.46	0.49
1:C:548:SER:OG	1:C:549:LYS:N	2.45	0.49
1:C:668:LEU:HD11	1:C:680:PHE:HB3	1.95	0.49
2:E:47:LEU:HG	2:E:52:THR:HA	1.95	0.49
2:E:1087:ASN:O	2:E:1301:ASN:ND2	2.42	0.49
3:G:117:ARG:HA	3:G:131:LYS:HA	1.95	0.49
3:G:277:MET:HB2	3:G:286:TYR:CZ	2.48	0.49
3:G:279:ASN:HB3	3:G:284:ASP:HB2	1.94	0.49
3:G:403:LEU:HD13	3:G:453:ILE:HG12	1.94	0.49
3:G:516:VAL:HG13	3:G:520:ASN:HA	1.94	0.49
4:I:754:SER:OG	4:I:756:VAL:O	2.31	0.49
5:L:845:GLU:HA	5:L:848:CYS:HB2	1.94	0.49
1:C:292:PHE:HE2	1:C:303:LEU:HB2	1.78	0.49
1:C:654:MET:N	1:C:654:MET:SD	2.85	0.49
1:C:1033:TRP:HZ2	1:C:1066:GLU:HG3	1.77	0.49
2:E:491:VAL:HG22	2:E:516:VAL:HG13	1.95	0.49
2:E:538:ALA:CB	2:E:570:LEU:HD21	2.43	0.49
3:G:119:ILE:HG13	3:G:129:MET:HG3	1.95	0.49
3:G:425:LEU:HD12	3:G:464:ARG:HB3	1.94	0.49
3:G:513:LEU:HB3	3:G:525:LEU:HB2	1.93	0.49
3:G:523:ARG:HE	3:G:525:LEU:HD11	1.76	0.49
3:G:1191:ASP:N	3:G:1191:ASP:OD1	2.45	0.49
4:I:676:VAL:HG22	4:I:691:LEU:HD13	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:I:874:LEU:HD11	4:I:893:ILE:HG21	1.93	0.49
4:I:933:ALA:HB2	4:I:948:LEU:HD12	1.94	0.49
5:L:37:ILE:HB	5:L:42:LEU:HD12	1.95	0.49
5:L:50:ASP:OD1	5:L:50:ASP:N	2.46	0.49
5:L:338:TYR:OH	5:L:427:GLU:OE2	2.29	0.49
5:L:980:LEU:HG	5:L:996:ARG:HH12	1.77	0.49
2:E:19:ARG:HE	2:E:253:GLN:HB2	1.77	0.49
2:E:65:ASN:HB3	2:E:68:LEU:HG	1.95	0.49
2:E:1202:MET:HB3	2:E:1218:GLN:HG3	1.93	0.49
5:L:800:LEU:HB3	5:L:814:TYR:HB2	1.95	0.49
1:C:2:PHE:HA	1:C:301:ARG:HD2	1.94	0.49
1:C:1093:SER:C	1:C:1094:MET:HG3	2.33	0.49
3:G:318:ASP:OD2	3:G:320:ARG:NH2	2.45	0.49
4:I:678:CYS:O	4:I:681:GLN:NE2	2.45	0.49
5:L:328:CYS:HB3	5:L:346:LEU:HD11	1.93	0.49
5:L:375:LEU:HD11	5:L:389:LEU:HD11	1.95	0.49
5:L:796:ALA:O	5:L:800:LEU:HD23	2.13	0.49
2:E:538:ALA:HA	2:E:541:LEU:HD12	1.94	0.48
2:E:599:ARG:HA	2:E:604:TYR:HD2	1.78	0.48
2:E:810:ALA:HA	2:E:813:THR:HG22	1.95	0.48
2:E:878:GLN:HG2	2:E:918:LEU:HD22	1.96	0.48
3:G:1142:ALA:HB2	3:G:1157:LYS:HB2	1.95	0.48
4:I:229:THR:OG1	4:I:230:ALA:N	2.46	0.48
4:I:452:GLN:HA	4:I:465:PRO:HA	1.95	0.48
4:I:546:ASP:HB3	4:I:552:HIS:CD2	2.48	0.48
4:I:986:GLY:HA2	4:I:989:VAL:HG12	1.95	0.48
4:I:1279:GLU:OE2	4:I:1298:ARG:NH2	2.43	0.48
5:L:987:GLU:HG2	5:L:988:VAL:HG23	1.94	0.48
2:E:943:GLN:O	2:E:947:ALA:N	2.45	0.48
3:G:20:SER:HB2	3:G:27:SER:HA	1.93	0.48
3:G:37:ALA:HB2	3:G:57:LYS:HG3	1.94	0.48
3:G:324:TYR:HB3	3:G:343:TRP:CE3	2.49	0.48
3:G:1289:ARG:NH2	3:G:1332:GLU:OE2	2.36	0.48
4:I:924:GLU:HG3	4:I:929:TRP:CD2	2.48	0.48
4:I:1023:LYS:HG3	4:I:1026:ASP:H	1.78	0.48
4:I:1268:CYS:HB3	4:I:1273:MET:H	1.78	0.48
5:L:473:VAL:HG23	5:L:499:VAL:HG12	1.95	0.48
5:L:980:LEU:HB2	5:L:988:VAL:HG21	1.95	0.48
1:C:88:LYS:HG2	1:C:102:MET:HE1	1.95	0.48
2:E:1290:ALA:HB2	2:E:1314:ASN:HB2	1.95	0.48
3:G:217:VAL:O	3:G:225:ASN:N	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:1068:SER:OG	3:G:1069:ASP:N	2.46	0.48
4:I:393:THR:OG1	4:I:396:ARG:NH2	2.46	0.48
4:I:646:LYS:HA	4:I:649:GLN:HG2	1.95	0.48
1:C:432:HIS:CE1	1:C:523:LEU:HD13	2.48	0.48
1:C:538:PRO:HB3	1:C:552:ILE:HG23	1.95	0.48
2:E:17:TYR:HH	2:E:256:MET:H	1.62	0.48
2:E:1219:LEU:HD21	2:E:1241:LEU:HD23	1.96	0.48
3:G:33:LEU:HD12	3:G:37:ALA:HB3	1.96	0.48
3:G:415:GLY:HA2	3:G:451:ASN:HB3	1.96	0.48
3:G:752:MET:HG3	3:G:768:CYS:HB2	1.95	0.48
4:I:730:ASN:ND2	4:I:750:LEU:O	2.40	0.48
4:I:764:ARG:NE	4:I:772:ASP:HB2	2.28	0.48
4:I:813:LEU:CD2	4:I:831:CYS:HB2	2.43	0.48
5:L:744:ARG:HE	5:L:776:LYS:NZ	2.11	0.48
5:L:910:HIS:HA	5:L:950:ASN:HB2	1.95	0.48
1:C:391:VAL:HG21	1:C:433:VAL:HG11	1.95	0.48
2:E:736:ARG:NH1	2:E:759:ASP:HB3	2.27	0.48
2:E:737:MET:HB3	2:E:772:MET:SD	2.53	0.48
3:G:896:ILE:HG13	3:G:904:LEU:HB2	1.95	0.48
4:I:159:ASN:HB3	4:I:198:VAL:HG11	1.95	0.48
4:I:292:ASP:OD2	4:I:337:LYS:HG3	2.14	0.48
4:I:364:PRO:HG2	4:I:377:LEU:HD22	1.96	0.48
5:L:662:ALA:HB1	5:L:666:PHE:CE2	2.49	0.48
5:L:725:ARG:NH1	5:L:729:ILE:HG13	2.29	0.48
1:C:544:ASN:ND2	1:C:597:PRO:O	2.38	0.48
1:C:939:LEU:HD13	1:C:962:LEU:HB3	1.95	0.48
1:C:947:ALA:HB1	1:C:1062:LEU:HD23	1.94	0.48
2:E:823:TYR:O	2:E:827:ALA:N	2.42	0.48
3:G:908:TRP:O	3:G:920:LYS:HE2	2.13	0.48
3:G:990:VAL:HG21	3:G:1013:VAL:HB	1.96	0.48
3:G:1125:LYS:O	3:G:1157:LYS:NZ	2.46	0.48
4:I:267:VAL:HG21	4:I:313:LEU:HD11	1.95	0.48
4:I:794:ALA:C	4:I:796:LEU:H	2.17	0.48
4:I:923:LYS:O	4:I:928:ARG:N	2.46	0.48
5:L:518:SER:HB3	5:L:526:LEU:HD21	1.95	0.48
5:L:908:VAL:HG22	5:L:919:THR:H	1.78	0.48
1:C:442:TYR:HB2	1:C:470:MET:HG2	1.95	0.48
2:E:236:ASP:N	2:E:236:ASP:OD1	2.46	0.48
3:G:31:VAL:O	3:G:39:GLY:N	2.33	0.48
3:G:70:HIS:N	3:G:75:LEU:O	2.45	0.48
3:G:120:THR:OG1	3:G:128:SER:O	2.21	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:324:TYR:HB3	3:G:343:TRP:HE3	1.77	0.48
3:G:336:VAL:HG22	3:G:338:ASP:H	1.78	0.48
3:G:591:HIS:NE2	3:G:596:GLU:OE1	2.47	0.48
3:G:769:LEU:HD22	3:G:774:HIS:HB3	1.95	0.48
3:G:939:CYS:HB3	3:G:963:LEU:HD13	1.95	0.48
5:L:388:ILE:HG21	5:L:429:LEU:HD11	1.96	0.48
1:C:104:HIS:N	1:C:107:MET:O	2.47	0.48
3:G:80:TRP:HB2	3:G:84:ALA:HB3	1.95	0.48
3:G:598:ARG:HH21	3:G:637:VAL:HG13	1.79	0.48
3:G:942:ARG:NH2	3:G:967:TYR:OH	2.46	0.48
4:I:582:VAL:HA	4:I:595:LEU:HA	1.96	0.48
4:I:860:LEU:HA	4:I:863:GLU:HB3	1.96	0.48
5:L:110:VAL:HG23	5:L:150:GLY:HA3	1.96	0.48
5:L:672:PHE:HA	5:L:675:ALA:HB3	1.95	0.48
1:C:310:ILE:HD13	1:C:324:LEU:HD23	1.95	0.48
2:E:12:TYR:OH	2:E:254:ASN:ND2	2.46	0.48
2:E:884:TRP:HD1	2:E:907:ALA:HB2	1.78	0.48
3:G:828:GLY:HA3	4:I:711:ILE:HD12	1.94	0.48
4:I:1109:ASN:ND2	4:I:1121:ASP:OD2	2.47	0.48
5:L:304:TYR:HB2	5:L:318:LEU:HD11	1.96	0.48
1:C:731:LYS:HD3	1:C:731:LYS:HA	1.72	0.48
1:C:778:ILE:HG12	1:C:785:ASP:HA	1.96	0.48
2:E:251:ASP:OD1	2:E:251:ASP:N	2.46	0.48
2:E:1004:ALA:O	2:E:1008:LEU:HB2	2.14	0.48
3:G:31:VAL:HG22	3:G:375:ILE:HG21	1.96	0.48
3:G:60:ARG:HD3	3:G:84:ALA:HB2	1.96	0.48
3:G:545:GLU:HG2	3:G:546:LEU:HG	1.95	0.48
3:G:1138:ILE:HG22	3:G:1157:LYS:HB3	1.96	0.48
4:I:157:ALA:H	4:I:196:LEU:HD23	1.79	0.48
4:I:373:ARG:HB3	4:I:385:LEU:HD11	1.96	0.48
4:I:412:HIS:CD2	4:I:434:VAL:HG21	2.48	0.48
4:I:764:ARG:HE	4:I:772:ASP:HB2	1.78	0.48
4:I:1142:LEU:HD22	4:I:1160:LEU:HG	1.95	0.48
5:L:600:LEU:HB3	5:L:619:VAL:HG13	1.96	0.48
1:C:639:LEU:O	1:C:643:MET:N	2.45	0.47
1:C:1071:LEU:O	1:C:1075:ALA:HB3	2.14	0.47
2:E:547:LEU:HB3	2:E:574:VAL:HG13	1.96	0.47
2:E:635:ARG:O	2:E:658:ARG:NH2	2.46	0.47
2:E:919:ARG:HH21	2:E:929:GLN:HB2	1.79	0.47
2:E:1006:ILE:HD13	2:E:1024:HIS:HB3	1.96	0.47
3:G:578:LEU:HD23	3:G:651:ILE:HG12	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:790:ALA:H	3:G:794:VAL:HG23	1.78	0.47
3:G:1053:PHE:O	3:G:1057:GLN:N	2.46	0.47
3:G:1072:LEU:HA	3:G:1075:LYS:HE3	1.96	0.47
4:I:437:ARG:NH1	4:I:478:ASP:OD1	2.35	0.47
4:I:450:GLU:HG2	4:I:451:THR:HG23	1.95	0.47
4:I:846:ARG:NH1	4:I:876:GLU:OE2	2.47	0.47
5:L:85:ILE:HG21	5:L:125:TRP:CH2	2.49	0.47
5:L:236:ILE:N	5:L:248:TYR:O	2.45	0.47
5:L:724:ASP:N	5:L:724:ASP:OD1	2.45	0.47
1:C:143:ILE:HG23	1:C:151:ARG:HG3	1.96	0.47
1:C:805:TRP:CE3	1:C:824:CYS:HA	2.49	0.47
1:C:1021:ASP:N	1:C:1021:ASP:OD1	2.47	0.47
2:E:842:GLU:O	2:E:846:LEU:HG	2.14	0.47
3:G:431:LYS:HA	3:G:431:LYS:HD2	1.66	0.47
3:G:621:PHE:HB2	3:G:629:ARG:HH21	1.78	0.47
3:G:751:ASN:HD22	3:G:769:LEU:HD21	1.79	0.47
4:I:175:LEU:HD12	4:I:185:LYS:HB2	1.95	0.47
5:L:523:ASP:N	5:L:523:ASP:OD1	2.46	0.47
1:C:30:ALA:HA	1:C:40:VAL:HA	1.96	0.47
2:E:565:SER:OG	2:E:595:ASN:OD1	2.25	0.47
2:E:968:VAL:HG22	2:E:994:LEU:HD11	1.94	0.47
3:G:403:LEU:HD22	3:G:447:VAL:HG11	1.96	0.47
4:I:494:ALA:HB2	4:I:533:LEU:HB3	1.97	0.47
4:I:648:LEU:HD21	4:I:665:ALA:HB3	1.96	0.47
4:I:676:VAL:O	4:I:680:LYS:HG2	2.13	0.47
5:L:587:TRP:HA	5:L:590:LEU:CD1	2.40	0.47
1:C:254:THR:HB	1:C:291:GLN:HE22	1.80	0.47
2:E:44:TYR:HB2	2:E:116:PHE:HD1	1.79	0.47
4:I:208:ARG:H	4:I:229:THR:HB	1.79	0.47
4:I:290:LEU:HD21	4:I:293:VAL:HB	1.95	0.47
4:I:1189:LEU:HD13	4:I:1210:THR:HA	1.97	0.47
5:L:328:CYS:SG	5:L:353:TYR:OH	2.66	0.47
5:L:383:THR:OG1	5:L:386:HIS:N	2.44	0.47
5:L:429:LEU:N	5:L:441:ILE:O	2.42	0.47
1:C:148:ASP:OD1	1:C:148:ASP:N	2.45	0.47
1:C:532:HIS:HA	1:C:576:MET:H	1.80	0.47
1:C:651:LEU:HA	1:C:654:MET:HG2	1.94	0.47
1:C:691:ARG:HH21	1:C:710:PHE:HA	1.79	0.47
1:C:691:ARG:HH12	1:C:714:ALA:N	2.12	0.47
2:E:1259:CYS:HB3	2:E:1276:MET:HE2	1.96	0.47
2:E:1273:TRP:HZ3	2:E:1299:HIS:HD1	1.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:275:VAL:H	3:G:288:LEU:H	1.61	0.47
3:G:484:VAL:HG12	3:G:490:VAL:HG22	1.96	0.47
3:G:949:ASP:HB2	3:G:957:ASN:HA	1.97	0.47
3:G:1232:TYR:HD2	3:G:1256:ALA:HA	1.79	0.47
4:I:913:SER:O	4:I:917:LEU:HB3	2.15	0.47
5:L:647:GLN:HE22	5:L:678:TRP:HD1	1.60	0.47
1:C:432:HIS:CD2	1:C:523:LEU:HD22	2.49	0.47
1:C:681:VAL:HG11	1:C:690:TRP:CG	2.50	0.47
1:C:804:LYS:HD3	1:C:804:LYS:HA	1.71	0.47
2:E:263:MET:HB3	2:E:476:LEU:HD11	1.96	0.47
2:E:638:LEU:HG	2:E:653:PRO:HD3	1.95	0.47
2:E:685:ILE:HG13	2:E:708:LEU:HD22	1.96	0.47
2:E:994:LEU:HD21	2:E:1001:ASN:HD22	1.79	0.47
3:G:1128:ALA:HB1	3:G:1134:ARG:HG2	1.96	0.47
3:G:1200:LEU:HD22	3:G:1203:LEU:HD11	1.97	0.47
4:I:203:GLU:OE2	4:I:227:GLN:NE2	2.48	0.47
4:I:792:HIS:HA	4:I:795:MET:HG3	1.96	0.47
4:I:881:TYR:O	4:I:886:GLN:N	2.44	0.47
5:L:807:ARG:HH22	5:L:876:LYS:HE2	1.80	0.47
1:C:37:LEU:HD21	1:C:39:LYS:HE2	1.96	0.47
1:C:56:GLU:HA	1:C:621:THR:H	1.79	0.47
1:C:716:TYR:HE2	5:L:665:MET:HG3	1.80	0.47
1:C:1097:ILE:HG23	1:C:1101:LYS:HE2	1.96	0.47
2:E:495:LEU:HG	2:E:543:LEU:HD12	1.96	0.47
2:E:974:VAL:O	2:E:978:HIS:ND1	2.48	0.47
2:E:1110:ILE:O	2:E:1114:VAL:HG22	2.14	0.47
2:E:1128:GLU:HB2	2:E:1247:ILE:HG22	1.97	0.47
2:E:1247:ILE:HD13	2:E:1252:TYR:HA	1.96	0.47
2:E:1322:VAL:HG22	2:E:1353:LEU:H	1.79	0.47
3:G:19:TRP:CZ3	3:G:29:LEU:HB2	2.50	0.47
3:G:526:LYS:HB2	3:G:535:HIS:HB2	1.96	0.47
3:G:902:ARG:HH11	5:L:916:PRO:HD3	1.78	0.47
3:G:974:PRO:HA	3:G:977:ILE:HG12	1.97	0.47
3:G:1164:LYS:O	3:G:1166:LYS:N	2.48	0.47
4:I:513:LEU:HB2	4:I:520:VAL:HG22	1.96	0.47
4:I:851:LEU:HA	4:I:854:GLN:HG2	1.96	0.47
4:I:1127:ARG:HA	4:I:1130:GLN:HB2	1.95	0.47
4:I:1306:GLU:OE2	4:I:1311:LYS:NZ	2.44	0.47
5:L:21:CYS:HA	5:L:37:ILE:HG12	1.97	0.47
5:L:230:PHE:N	5:L:235:TYR:O	2.47	0.47
5:L:793:TRP:HB2	5:L:814:TYR:CE1	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:L:933:LEU:HB3	5:L:967:LEU:HD11	1.96	0.47
1:C:688:ARG:NH1	1:C:692:ASN:OD1	2.47	0.47
3:G:218:VAL:HG21	3:G:257:VAL:HG21	1.97	0.47
3:G:315:GLY:HA2	3:G:321:VAL:HG22	1.97	0.47
3:G:720:ALA:HB1	3:G:752:MET:O	2.14	0.47
3:G:977:ILE:HA	3:G:980:TYR:CD2	2.49	0.47
3:G:988:HIS:O	3:G:993:ALA:N	2.48	0.47
4:I:28:LEU:O	4:I:40:PHE:N	2.43	0.47
4:I:500:VAL:HB	4:I:512:TYR:HD2	1.79	0.47
4:I:761:LEU:HB2	4:I:776:LEU:HD22	1.97	0.47
4:I:786:ALA:HB1	4:I:816:LEU:HG	1.96	0.47
4:I:1282:CYS:O	4:I:1286:GLN:N	2.48	0.47
5:L:350:VAL:HG11	5:L:387:VAL:HG11	1.97	0.47
5:L:622:THR:HG21	5:L:639:ILE:HG13	1.97	0.47
5:L:659:VAL:HG21	5:L:687:ARG:HG3	1.96	0.47
5:L:862:PHE:HA	5:L:865:TYR:HB3	1.97	0.47
5:L:934:MET:O	5:L:940:ARG:NH1	2.48	0.47
1:C:240:LEU:HD21	1:C:270:LEU:HD22	1.97	0.47
1:C:384:GLN:HG2	1:C:427:ALA:HA	1.97	0.47
1:C:941:ASP:HA	1:C:944:LYS:HE2	1.97	0.47
2:E:588:LEU:HD21	2:E:608:GLN:HG3	1.97	0.47
2:E:1023:TYR:O	2:E:1026:GLN:HG3	2.14	0.47
3:G:520:ASN:O	3:G:541:LEU:N	2.40	0.47
3:G:808:LYS:HA	3:G:811:TYR:CD2	2.50	0.47
4:I:731:LEU:HD12	4:I:751:PHE:CE1	2.50	0.47
4:I:797:GLU:OE2	4:I:834:GLY:HA2	2.15	0.47
1:C:18:ARG:N	1:C:32:GLY:O	2.48	0.47
1:C:263:TRP:HZ3	1:C:295:HIS:HA	1.79	0.47
3:G:968:GLU:HG3	3:G:973:ILE:HG12	1.97	0.47
3:G:1146:LYS:HG3	3:G:1171:LEU:HG	1.96	0.47
3:G:1158:TYR:HA	3:G:1162:GLY:HA3	1.97	0.47
3:G:1289:ARG:NH2	3:G:1292:ILE:HG21	2.30	0.47
4:I:248:MET:HE1	4:I:292:ASP:HA	1.95	0.47
4:I:437:ARG:HH11	4:I:464:HIS:CE1	2.32	0.47
5:L:875:ILE:HD12	5:L:889:ALA:HB1	1.96	0.47
2:E:18:PHE:O	2:E:22:GLN:NE2	2.48	0.46
2:E:500:GLY:O	2:E:542:TYR:OH	2.31	0.46
2:E:588:LEU:HD11	2:E:608:GLN:HG3	1.97	0.46
2:E:1123:ASP:H	2:E:1237:ARG:HD2	1.80	0.46
3:G:275:VAL:HG22	3:G:300:VAL:HG21	1.97	0.46
3:G:520:ASN:OD1	3:G:547:LYS:NZ	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:863:GLU:HA	3:G:866:ARG:HE	1.80	0.46
3:G:1272:VAL:HA	3:G:1275:ILE:HB	1.96	0.46
4:I:23:PRO:HG3	4:I:74:PRO:HA	1.97	0.46
4:I:413:ALA:N	4:I:424:TYR:O	2.49	0.46
4:I:465:PRO:HD2	4:I:477:LEU:HG	1.96	0.46
4:I:802:TYR:O	4:I:806:LYS:HB2	2.15	0.46
5:L:349:LYS:HD2	5:L:370:LYS:HE2	1.96	0.46
5:L:654:THR:HG22	5:L:687:ARG:HB2	1.97	0.46
1:C:234:ASP:OD1	1:C:234:ASP:N	2.42	0.46
1:C:591:ARG:HA	1:C:591:ARG:HD2	1.71	0.46
1:C:762:ILE:O	1:C:766:MET:HB2	2.14	0.46
1:C:968:GLU:HB2	1:C:1024:TRP:HB3	1.98	0.46
2:E:1034:ASN:HD21	2:E:1075:TYR:HB2	1.79	0.46
3:G:738:ARG:HH22	4:I:863:GLU:HA	1.79	0.46
3:G:819:LEU:HD22	3:G:822:GLN:HE21	1.80	0.46
3:G:1310:ILE:HD13	3:G:1323:ILE:HD11	1.97	0.46
4:I:436:ARG:HD3	4:I:436:ARG:HA	1.72	0.46
4:I:482:PRO:HG3	4:I:490:ILE:HD12	1.97	0.46
4:I:595:LEU:N	4:I:607:GLN:O	2.47	0.46
4:I:760:ALA:O	4:I:764:ARG:HG2	2.14	0.46
4:I:840:LEU:HD23	4:I:867:ILE:HG22	1.97	0.46
4:I:868:LEU:HD13	4:I:876:GLU:HB2	1.98	0.46
4:I:1173:VAL:HG21	4:I:1189:LEU:HG	1.95	0.46
4:I:1211:VAL:HG12	4:I:1226:TYR:HB3	1.98	0.46
4:I:1273:MET:HG3	4:I:1284:SER:HB3	1.96	0.46
5:L:307:ARG:HD3	5:L:332:VAL:HB	1.96	0.46
5:L:957:LYS:HZ3	5:L:975:LEU:HD11	1.80	0.46
1:C:32:GLY:HA3	1:C:80:VAL:HG21	1.97	0.46
1:C:364:PHE:N	1:C:373:TYR:O	2.48	0.46
2:E:111:LEU:HD12	2:E:130:VAL:HG12	1.97	0.46
2:E:229:ARG:HD3	2:E:229:ARG:H	1.80	0.46
2:E:346:MET:HB2	2:E:648:ARG:HB2	1.97	0.46
3:G:209:TYR:HB3	3:G:214:GLN:HB2	1.95	0.46
3:G:503:PRO:HA	3:G:517:THR:HA	1.97	0.46
3:G:927:LYS:HZ3	5:L:917:PHE:HB2	1.80	0.46
3:G:1034:TYR:CG	3:G:1039:LYS:HB3	2.50	0.46
4:I:224:TYR:HB3	4:I:235:PRO:HB3	1.98	0.46
5:L:501:TRP:HZ3	5:L:507:ASP:HA	1.80	0.46
5:L:844:LEU:HG	5:L:863:TYR:HB3	1.97	0.46
1:C:56:GLU:HG3	1:C:620:VAL:HA	1.96	0.46
1:C:123:ASP:HB3	1:C:164:VAL:H	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:878:ILE:HG12	1:C:893:LEU:HD23	1.97	0.46
1:C:914:LEU:HD23	1:C:919:VAL:HG22	1.96	0.46
2:E:203:LEU:HD21	2:E:234:LEU:HA	1.98	0.46
3:G:229:ARG:HG3	3:G:236:TRP:CE2	2.50	0.46
3:G:712:ASP:OD1	3:G:779:ARG:NH2	2.49	0.46
3:G:738:ARG:HH21	4:I:866:LEU:HD13	1.79	0.46
3:G:749:TRP:CE3	3:G:752:MET:SD	3.09	0.46
4:I:203:GLU:HG2	4:I:273:HIS:HA	1.97	0.46
5:L:104:CYS:SG	5:L:144:ILE:HG12	2.56	0.46
5:L:378:ASN:ND2	5:L:392:GLU:OE2	2.48	0.46
5:L:410:LEU:HD12	5:L:414:ILE:HD11	1.98	0.46
1:C:20:ILE:HG13	1:C:31:CYS:HA	1.96	0.46
1:C:586:ASP:HB2	1:C:605:LYS:HD2	1.97	0.46
2:E:238:GLU:O	2:E:241:THR:OG1	2.25	0.46
2:E:492:ARG:HD3	2:E:648:ARG:HH22	1.81	0.46
2:E:1198:VAL:HG23	2:E:1199:LEU:HG	1.98	0.46
3:G:164:ASP:N	3:G:164:ASP:OD1	2.49	0.46
3:G:274:VAL:HB	3:G:287:VAL:HB	1.98	0.46
3:G:516:VAL:HG21	3:G:541:LEU:HD22	1.96	0.46
3:G:1134:ARG:HH21	3:G:1160:GLN:HG2	1.81	0.46
4:I:12:LEU:HB3	4:I:32:GLY:HA3	1.97	0.46
4:I:31:ALA:HB2	4:I:37:VAL:HG22	1.97	0.46
4:I:114:MET:HB3	4:I:125:VAL:HG13	1.97	0.46
4:I:449:ASN:ND2	4:I:450:GLU:OE1	2.48	0.46
4:I:460:HIS:HB3	4:I:480:VAL:HG13	1.98	0.46
4:I:836:ALA:O	4:I:840:LEU:HB2	2.16	0.46
4:I:1080:ARG:HA	4:I:1080:ARG:HD3	1.82	0.46
5:L:235:TYR:HB3	5:L:247:LEU:HD11	1.97	0.46
5:L:241:THR:HA	5:L:264:TRP:CD1	2.51	0.46
5:L:414:ILE:HG23	5:L:431:VAL:HG13	1.97	0.46
5:L:930:ARG:HG3	5:L:964:ALA:HB2	1.98	0.46
1:C:420:GLU:HB2	1:C:489:ARG:HH21	1.79	0.46
1:C:749:GLU:HG3	1:C:761:ALA:HB1	1.97	0.46
2:E:904:GLN:HB3	2:E:940:LEU:HD21	1.97	0.46
2:E:937:CYS:HB2	2:E:956:LEU:HD23	1.98	0.46
3:G:757:ILE:HG21	3:G:784:ALA:HA	1.97	0.46
3:G:951:VAL:HA	3:G:955:ALA:HA	1.98	0.46
3:G:1093:LEU:O	3:G:1098:GLN:N	2.39	0.46
3:G:1235:CYS:O	3:G:1239:GLU:CB	2.63	0.46
4:I:1101:ARG:HA	4:I:1104:PHE:HB2	1.96	0.46
4:I:1120:ARG:NH1	4:I:1124:GLU:OE1	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:I:1270:PHE:HE1	4:I:1351:ILE:HA	1.79	0.46
5:L:121:ASP:HB2	5:L:134:LYS:HB3	1.97	0.46
5:L:342:LEU:O	5:L:353:TYR:N	2.40	0.46
5:L:566:LEU:HD22	5:L:589:GLN:HB3	1.98	0.46
5:L:752:ARG:O	5:L:756:MET:HG3	2.16	0.46
3:G:468:ILE:HG12	3:G:470:ASN:H	1.80	0.46
3:G:612:LEU:HB2	3:G:644:PHE:CE1	2.51	0.46
3:G:613:LEU:HG	3:G:615:VAL:HG22	1.96	0.46
3:G:717:THR:HG23	3:G:721:LEU:HD12	1.97	0.46
3:G:763:ASP:O	3:G:767:HIS:ND1	2.47	0.46
3:G:801:LEU:H	3:G:803:MET:HG3	1.81	0.46
4:I:72:TRP:CE2	4:I:79:LEU:HD13	2.51	0.46
4:I:398:GLU:OE2	4:I:429:LYS:NZ	2.48	0.46
5:L:799:LEU:CD1	5:L:802:ALA:HB2	2.41	0.46
2:E:345:MET:HG3	2:E:485:ALA:HB1	1.97	0.46
3:G:735:GLU:O	3:G:739:SER:OG	2.31	0.46
3:G:883:LEU:HG	3:G:885:GLU:H	1.80	0.46
3:G:887:GLU:CD	3:G:887:GLU:H	2.19	0.46
5:L:27:LYS:HG3	5:L:67:TYR:CZ	2.50	0.46
5:L:94:LEU:HG	5:L:125:TRP:HE1	1.81	0.46
5:L:143:SER:HB2	5:L:185:ILE:HG12	1.97	0.46
5:L:294:SER:O	5:L:307:ARG:NH2	2.48	0.46
5:L:663:MET:HE3	5:L:678:TRP:HB3	1.98	0.46
5:L:724:ASP:H	5:L:752:ARG:HH21	1.62	0.46
5:L:787:TYR:CD2	5:L:798:LEU:HB3	2.50	0.46
1:C:425:TYR:HB2	1:C:436:ALA:HB3	1.98	0.46
2:E:1047:ARG:HH11	2:E:1052:LEU:HD21	1.81	0.46
3:G:152:ARG:NH2	3:G:177:ASP:O	2.49	0.46
3:G:212:ARG:HH21	3:G:280:PHE:HB3	1.81	0.46
3:G:279:ASN:HD21	3:G:281:ASP:HB3	1.80	0.46
3:G:555:ARG:CZ	3:G:605:PHE:H	2.29	0.46
3:G:605:PHE:HA	3:G:613:LEU:HA	1.97	0.46
3:G:724:PHE:CD2	3:G:755:MET:HG3	2.51	0.46
3:G:749:TRP:H	3:G:752:MET:HE1	1.81	0.46
3:G:1113:ILE:HB	3:G:1118:ALA:HB2	1.96	0.46
4:I:1077:GLU:O	4:I:1080:ARG:NE	2.48	0.46
5:L:387:VAL:HG23	5:L:400:PHE:HD1	1.80	0.46
5:L:910:HIS:NE2	5:L:947:SER:OG	2.46	0.46
1:C:534:LEU:HB3	1:C:552:ILE:HD13	1.98	0.46
2:E:1086:ILE:HD12	2:E:1086:ILE:N	2.30	0.46
3:G:704:MET:HG3	3:G:707:PHE:CD1	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:1043:ALA:HA	3:G:1046:MET:CG	2.41	0.46
4:I:105:GLU:HB2	4:I:144:PRO:HB3	1.98	0.46
4:I:654:VAL:HG12	4:I:661:LYS:HD2	1.98	0.46
5:L:250:ARG:NH1	5:L:251:ASP:OD1	2.49	0.46
5:L:428:GLY:HA2	5:L:442:PHE:HA	1.98	0.46
5:L:430:LEU:HD12	5:L:430:LEU:HA	1.81	0.46
5:L:902:VAL:HG11	5:L:942:VAL:HG22	1.98	0.46
1:C:197:LEU:HB3	1:C:200:ASN:HB2	1.99	0.45
1:C:214:TRP:HE1	1:C:228:VAL:HG23	1.81	0.45
1:C:891:VAL:HA	1:C:902:ILE:HG21	1.98	0.45
2:E:1231:GLU:O	2:E:1235:PHE:N	2.40	0.45
3:G:412:ARG:NH1	3:G:449:GLU:O	2.49	0.45
4:I:745:GLY:O	4:I:748:GLN:HG3	2.16	0.45
4:I:1113:GLY:HA3	4:I:1367:SER:HB3	1.98	0.45
5:L:229:TYR:HB3	5:L:233:GLY:HA2	1.97	0.45
5:L:633:GLN:HB2	5:L:652:LEU:HD22	1.97	0.45
5:L:669:LEU:HD23	5:L:669:LEU:HA	1.82	0.45
5:L:856:ARG:O	5:L:858:ALA:N	2.47	0.45
5:L:909:VAL:HG12	5:L:950:ASN:HB3	1.98	0.45
1:C:509:LEU:HB3	1:C:521:TYR:HB2	1.97	0.45
1:C:1076:PHE:O	1:C:1079:GLN:NE2	2.49	0.45
2:E:10:HIS:HE1	2:E:150:ILE:HD11	1.81	0.45
2:E:461:ILE:HG22	2:E:487:ILE:HA	1.98	0.45
2:E:653:PRO:HB2	2:E:658:ARG:HD2	1.98	0.45
2:E:767:TYR:HD2	2:E:803:LEU:HD22	1.81	0.45
3:G:627:ASP:OD1	3:G:627:ASP:N	2.48	0.45
3:G:1071:ASN:OD1	3:G:1072:LEU:N	2.50	0.45
3:G:1345:LYS:O	3:G:1349:ALA:N	2.41	0.45
4:I:291:THR:OG1	4:I:336:GLU:HA	2.16	0.45
4:I:738:VAL:HA	4:I:744:TYR:CE1	2.52	0.45
4:I:924:GLU:HB2	4:I:932:ALA:HB2	1.98	0.45
1:C:136:VAL:HG22	1:C:142:VAL:HA	1.98	0.45
1:C:417:LYS:NZ	1:C:465:ASP:OD2	2.46	0.45
2:E:151:ILE:HG13	2:E:172:ALA:HB2	1.98	0.45
2:E:689:ILE:HG13	2:E:704:ALA:HB3	1.97	0.45
2:E:1170:MET:HE3	2:E:1185:LEU:HD11	1.98	0.45
3:G:58:ASN:ND2	3:G:62:THR:H	2.13	0.45
3:G:527:VAL:HG12	3:G:532:ALA:HA	1.98	0.45
3:G:609:GLU:OE1	3:G:722:LEU:HB3	2.16	0.45
3:G:989:GLY:O	3:G:1002:LEU:HA	2.16	0.45
3:G:1259:TYR:HA	3:G:1262:LYS:HB2	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:L:390:CYS:HA	5:L:395:LEU:HD23	1.98	0.45
5:L:393:LYS:NZ	5:L:411:ASP:O	2.48	0.45
5:L:397:LEU:HD23	5:L:405:GLU:HB2	1.97	0.45
5:L:418:LYS:HZ2	5:L:420:VAL:HA	1.80	0.45
1:C:445:GLN:NE2	1:C:524:PRO:HB3	2.19	0.45
2:E:336:VAL:HA	2:E:355:ARG:HH21	1.79	0.45
2:E:709:ALA:HB1	2:E:714:ASP:HB3	1.98	0.45
3:G:463:SER:H	3:G:475:ARG:HD3	1.81	0.45
3:G:894:ASN:HB3	5:L:854:GLU:HA	1.98	0.45
4:I:296:CYS:SG	4:I:298:SER:OG	2.74	0.45
4:I:329:LEU:HD21	4:I:359:PHE:HZ	1.82	0.45
4:I:489:ASN:O	4:I:505:ARG:N	2.42	0.45
4:I:1103:GLU:O	4:I:1107:LYS:HG2	2.17	0.45
4:I:1189:LEU:HA	4:I:1192:VAL:HG12	1.98	0.45
5:L:135:HIS:CD2	5:L:155:LEU:HD11	2.50	0.45
5:L:155:LEU:O	5:L:163:SER:OG	2.35	0.45
1:C:968:GLU:HA	1:C:1023:ALA:HB1	1.99	0.45
4:I:921:LYS:HA	4:I:921:LYS:HD2	1.78	0.45
4:I:944:ALA:HA	4:I:947:ARG:HB3	1.98	0.45
4:I:1241:VAL:HG23	4:I:1244:LYS:HD3	1.98	0.45
5:L:929:SER:HA	5:L:958:GLN:HG3	1.97	0.45
1:C:270:LEU:N	1:C:293:TYR:O	2.49	0.45
1:C:362:VAL:HG22	1:C:380:LEU:HD22	1.99	0.45
3:G:750:GLU:OE2	3:G:774:HIS:NE2	2.49	0.45
3:G:802:GLY:HA2	4:I:714:ALA:HB3	1.98	0.45
3:G:825:ARG:NH1	3:G:836:VAL:HG11	2.32	0.45
3:G:872:ALA:O	3:G:876:LEU:N	2.47	0.45
3:G:874:CYS:HB3	5:L:842:ARG:HH12	1.82	0.45
3:G:1030:ALA:CB	3:G:1046:MET:HE1	2.43	0.45
4:I:909:ARG:HG3	4:I:910:ILE:HD12	1.97	0.45
4:I:956:PRO:HG3	4:I:978:PHE:CZ	2.51	0.45
4:I:1168:HIS:CE1	4:I:1172:LEU:HD22	2.51	0.45
4:I:1220:LYS:HA	4:I:1223:ALA:HB3	1.98	0.45
1:C:445:GLN:NE2	1:C:448:THR:HA	2.32	0.45
1:C:775:GLU:OE2	1:C:779:ARG:NE	2.50	0.45
2:E:27:GLU:O	2:E:31:LYS:HG2	2.16	0.45
2:E:279:LEU:HD11	2:E:317:ILE:HB	1.99	0.45
3:G:967:TYR:O	3:G:972:ARG:N	2.50	0.45
3:G:1192:ILE:HA	3:G:1195:MET:HG3	1.99	0.45
4:I:114:MET:HA	4:I:125:VAL:HA	1.99	0.45
4:I:468:VAL:HG13	4:I:472:HIS:HB2	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:I:601:LEU:HD22	4:I:699:LEU:HG	1.99	0.45
4:I:809:TYR:O	4:I:813:LEU:HG	2.17	0.45
4:I:842:LEU:HA	4:I:842:LEU:HD23	1.76	0.45
4:I:858:GLN:NE2	4:I:884:ALA:O	2.44	0.45
5:L:783:LEU:HD12	5:L:799:LEU:HG	1.99	0.45
5:L:912:SER:HB3	5:L:918:ARG:HH21	1.80	0.45
1:C:17:LEU:O	1:C:325:SER:OG	2.35	0.45
2:E:37:VAL:HG23	2:E:112:HIS:ND1	2.32	0.45
2:E:359:ALA:O	2:E:363:ASP:N	2.48	0.45
2:E:1107:SER:OG	2:E:1152:ARG:O	2.35	0.45
3:G:273:ASN:HB2	3:G:290:LEU:HB2	1.98	0.45
3:G:611:LYS:HB2	3:G:611:LYS:HE3	1.67	0.45
3:G:810:LEU:HA	3:G:813:ALA:HB3	1.98	0.45
4:I:421:ALA:HB3	4:I:437:ARG:HB2	1.99	0.45
4:I:709:ARG:NE	4:I:717:VAL:HG12	2.31	0.45
5:L:501:TRP:CE3	5:L:509:PHE:HB3	2.52	0.45
5:L:749:THR:OG1	5:L:750:ASP:N	2.50	0.45
1:C:595:ASP:OD2	1:C:632:LEU:N	2.47	0.45
1:C:739:ALA:HB1	1:C:744:ARG:HB2	1.99	0.45
2:E:378:ILE:HB	2:E:446:LYS:HG3	1.99	0.45
2:E:929:GLN:O	2:E:933:THR:HG22	2.17	0.45
2:E:1322:VAL:HG22	2:E:1353:LEU:N	2.32	0.45
3:G:182:ALA:HB1	3:G:203:VAL:HG23	1.98	0.45
3:G:186:TRP:N	3:G:194:GLY:O	2.39	0.45
3:G:578:LEU:HB2	3:G:593:PHE:HE2	1.82	0.45
3:G:652:LEU:HD22	3:G:730:THR:HA	1.98	0.45
3:G:973:ILE:O	3:G:977:ILE:HG12	2.17	0.45
4:I:373:ARG:HH11	4:I:385:LEU:HD21	1.82	0.45
4:I:541:ARG:HG3	4:I:555:ASN:HA	1.97	0.45
5:L:345:GLN:NE2	5:L:350:VAL:HG22	2.30	0.45
5:L:458:VAL:HG13	5:L:472:VAL:HG13	1.99	0.45
5:L:772:GLU:HA	5:L:775:LEU:HB2	1.99	0.45
1:C:199:CYS:HB3	1:C:239:GLN:HG2	1.98	0.45
2:E:282:LEU:O	2:E:286:MET:HG2	2.17	0.45
2:E:913:GLN:O	2:E:917:LYS:N	2.37	0.45
3:G:513:LEU:O	3:G:525:LEU:N	2.37	0.45
3:G:797:VAL:HA	3:G:800:HIS:CE1	2.51	0.45
4:I:412:HIS:HA	4:I:425:SER:HA	1.98	0.45
5:L:134:LYS:HB2	5:L:136:LYS:HZ2	1.82	0.45
5:L:243:LYS:HD3	5:L:263:SER:HA	1.99	0.45
5:L:271:ARG:HB3	5:L:274:HIS:HB2	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:665:THR:HG21	1:C:689:LEU:HD13	1.98	0.44
2:E:491:VAL:O	2:E:495:LEU:HD13	2.17	0.44
2:E:705:ASP:OD1	2:E:705:ASP:N	2.50	0.44
2:E:1350:ARG:HH21	2:E:1353:LEU:HD13	1.82	0.44
3:G:571:GLU:OE2	3:G:574:ARG:NH2	2.48	0.44
3:G:945:LYS:HZ3	3:G:982:LEU:HG	1.81	0.44
4:I:1:MET:HE3	4:I:312:VAL:HG21	1.99	0.44
4:I:1027:TYR:O	4:I:1031:ALA:CB	2.65	0.44
4:I:1267:ASP:HA	4:I:1274:PRO:HA	1.99	0.44
5:L:184:SER:OG	5:L:198:GLY:O	2.35	0.44
5:L:725:ARG:NH1	5:L:725:ARG:O	2.50	0.44
5:L:783:LEU:O	5:L:787:TYR:N	2.48	0.44
1:C:6:SER:OG	1:C:332:PHE:O	2.29	0.44
1:C:589:ASP:H	1:C:603:MET:HB2	1.83	0.44
1:C:594:ASP:N	1:C:629:PHE:O	2.36	0.44
1:C:728:LEU:HB3	1:C:734:GLN:HG2	1.99	0.44
2:E:103:ARG:HH22	2:E:125:ARG:HH12	1.65	0.44
2:E:234:LEU:HD22	2:E:239:GLN:HE22	1.83	0.44
2:E:722:LEU:HD22	2:E:739:MET:HE2	2.00	0.44
2:E:1043:ILE:HG23	2:E:1055:VAL:HG13	1.98	0.44
3:G:817:TYR:O	3:G:820:LEU:HB3	2.18	0.44
3:G:901:SER:HB2	3:G:903:GLU:OE1	2.17	0.44
4:I:39:ILE:HG22	4:I:47:TYR:HB3	1.98	0.44
5:L:175:ILE:HG23	5:L:211:GLY:HA2	1.99	0.44
1:C:104:HIS:HB3	1:C:109:PHE:HD2	1.82	0.44
1:C:181:GLU:HG2	1:C:197:LEU:HD11	1.99	0.44
1:C:437:ASN:HB2	1:C:440:VAL:HB	1.99	0.44
1:C:589:ASP:HB3	1:C:603:MET:HG3	1.98	0.44
3:G:618:THR:HB	3:G:636:HIS:HD2	1.82	0.44
3:G:679:LYS:HE2	3:G:700:SER:HB3	1.99	0.44
4:I:495:LEU:HD13	4:I:500:VAL:HG13	2.00	0.44
4:I:861:PHE:HB3	4:I:884:ALA:HB2	1.98	0.44
4:I:960:TYR:HD1	4:I:991:PHE:HE2	1.63	0.44
4:I:1224:PHE:HE1	4:I:1251:VAL:HA	1.82	0.44
5:L:23:ASP:HB2	5:L:64:CYS:HA	1.98	0.44
5:L:77:GLY:HA2	5:L:83:VAL:HG22	2.00	0.44
5:L:117:ALA:HA	5:L:122:VAL:HA	2.00	0.44
5:L:638:GLU:HA	5:L:641:ALA:HB3	1.99	0.44
5:L:988:VAL:HA	5:L:991:ALA:HB3	1.99	0.44
1:C:293:TYR:HB3	1:C:297:GLY:HA2	2.00	0.44
1:C:931:HIS:O	1:C:935:ALA:N	2.43	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:258:GLN:HB2	2:E:282:LEU:HD22	1.99	0.44
2:E:1192:ASP:OD1	2:E:1192:ASP:N	2.51	0.44
2:E:1199:LEU:HD22	2:E:1218:GLN:HE21	1.81	0.44
3:G:267:SER:OG	3:G:276:ARG:O	2.28	0.44
3:G:286:TYR:HH	3:G:343:TRP:HE1	1.61	0.44
3:G:721:LEU:HA	3:G:724:PHE:HB3	1.98	0.44
3:G:874:CYS:O	3:G:877:VAL:HG22	2.17	0.44
3:G:1015:ILE:HA	3:G:1018:ALA:HB3	1.99	0.44
4:I:383:MET:HB3	4:I:399:LEU:HD11	2.00	0.44
4:I:1183:THR:HB	4:I:1261:LEU:HD23	2.00	0.44
5:L:653:PHE:CD1	5:L:657:GLY:HA3	2.52	0.44
1:C:349:VAL:HG12	1:C:383:ILE:HD13	1.98	0.44
2:E:343:LYS:HE2	2:E:351:ASN:HB2	1.99	0.44
2:E:457:LEU:HD13	2:E:490:VAL:HG22	1.99	0.44
2:E:1007:MET:HA	2:E:1010:GLU:HG3	1.99	0.44
2:E:1009:ALA:HA	2:E:1012:MET:SD	2.57	0.44
2:E:1216:ARG:HH21	2:E:1246:HIS:HA	1.82	0.44
3:G:13:ALA:HB1	3:G:375:ILE:HG12	1.98	0.44
3:G:843:ILE:HG12	5:L:822:ASP:HA	2.00	0.44
3:G:1188:ARG:NH1	3:G:1193:TYR:OH	2.51	0.44
4:I:73:ASP:HB3	4:I:116:TRP:CD2	2.52	0.44
4:I:269:VAL:HG21	4:I:319:TYR:CZ	2.53	0.44
4:I:1307:CYS:N	4:I:1312:PHE:O	2.49	0.44
5:L:107:TYR:CZ	5:L:114:LEU:HB2	2.53	0.44
5:L:511:TYR:CE2	5:L:518:SER:HB2	2.53	0.44
5:L:559:SER:HA	5:L:562:MET:HB2	1.98	0.44
5:L:995:ILE:HG23	5:L:996:ARG:HG3	1.99	0.44
1:C:177:THR:N	1:C:181:GLU:O	2.49	0.44
1:C:1071:LEU:O	1:C:1075:ALA:CB	2.66	0.44
2:E:700:ARG:HG2	2:E:704:ALA:N	2.32	0.44
2:E:877:LEU:O	2:E:881:VAL:HG23	2.17	0.44
3:G:883:LEU:HD12	3:G:912:LEU:HD12	1.99	0.44
3:G:1093:LEU:HB3	3:G:1098:GLN:HB2	2.00	0.44
3:G:1267:ASP:OD2	3:G:1271:ARG:NH2	2.50	0.44
4:I:648:LEU:O	4:I:656:ARG:NH2	2.37	0.44
4:I:980:LEU:HD21	4:I:1000:GLN:CG	2.48	0.44
1:C:729:ASP:N	1:C:729:ASP:OD1	2.51	0.44
1:C:775:GLU:HG2	1:C:814:GLN:HG2	2.00	0.44
2:E:197:MET:HG3	2:E:206:CYS:HB2	2.00	0.44
3:G:413:PRO:HA	3:G:414:PRO:HD3	1.92	0.44
3:G:653:LEU:HD11	3:G:656:TYR:CE1	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:725:SER:HA	3:G:728:LEU:HB2	2.00	0.44
3:G:952:THR:OG1	3:G:956:ASP:OD2	2.29	0.44
4:I:816:LEU:HD11	4:I:827:LEU:HG	1.99	0.44
4:I:1213:GLU:OE2	4:I:1216:ARG:NH2	2.50	0.44
5:L:143:SER:O	5:L:156:GLY:N	2.50	0.44
5:L:304:TYR:CZ	5:L:306:TYR:HB3	2.52	0.44
5:L:386:HIS:CD2	5:L:425:ARG:HD3	2.52	0.44
5:L:717:TYR:HA	5:L:720:ALA:HB3	1.99	0.44
1:C:445:GLN:HE21	1:C:448:THR:HA	1.83	0.44
3:G:589:HIS:CG	3:G:650:GLY:HA2	2.53	0.44
3:G:716:LYS:HD2	3:G:719:ARG:HH21	1.83	0.44
4:I:793:GLY:O	4:I:797:GLU:N	2.51	0.44
4:I:871:LEU:HD23	4:I:871:LEU:HA	1.81	0.44
4:I:1076:VAL:HG22	4:I:1084:LEU:HG	1.99	0.44
4:I:1156:PRO:HB3	4:I:1160:LEU:HD13	2.00	0.44
5:L:334:LYS:HD2	5:L:334:LYS:HA	1.81	0.44
5:L:468:ASN:HA	5:L:484:LEU:HD12	2.00	0.44
5:L:518:SER:HB3	5:L:526:LEU:HD11	1.99	0.44
5:L:966:LYS:HA	5:L:969:ARG:HH21	1.82	0.44
1:C:944:LYS:HG2	1:C:1061:LEU:HA	1.99	0.44
2:E:896:GLU:HB3	2:E:899:GLY:HA3	2.00	0.44
3:G:267:SER:H	3:G:277:MET:HE2	1.83	0.44
3:G:403:LEU:HD11	3:G:429:LEU:HD13	2.00	0.44
3:G:1080:PHE:HB3	3:G:1089:ALA:HB2	2.00	0.44
4:I:787:THR:O	4:I:790:LYS:N	2.50	0.44
4:I:950:LEU:HD22	4:I:978:PHE:CG	2.53	0.44
5:L:632:GLU:HA	5:L:635:LEU:HD12	2.00	0.44
1:C:240:LEU:HD11	1:C:270:LEU:HD22	2.00	0.43
1:C:599:LEU:HA	1:C:611:PHE:O	2.18	0.43
1:C:822:VAL:HG11	1:C:851:ILE:HG12	2.00	0.43
2:E:121:LYS:HA	2:E:121:LYS:HD2	1.73	0.43
2:E:811:LEU:HB3	2:E:816:ASP:O	2.18	0.43
3:G:417:LEU:HB2	3:G:453:ILE:HB	1.99	0.43
3:G:603:LEU:HD23	3:G:615:VAL:HG13	2.00	0.43
3:G:723:ASP:HB3	3:G:735:GLU:HB3	2.00	0.43
3:G:1060:THR:HG22	3:G:1063:MET:HE3	1.99	0.43
3:G:1205:TRP:CZ3	3:G:1238:ILE:HG13	2.53	0.43
3:G:1267:ASP:O	3:G:1271:ARG:HG2	2.17	0.43
3:G:1297:GLN:HG2	3:G:1338:ARG:HH22	1.83	0.43
4:I:853:MET:HG3	4:I:861:PHE:HE1	1.81	0.43
4:I:1072:ALA:O	4:I:1076:VAL:HG23	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:L:162:ILE:HG21	5:L:195:LEU:HD21	2.00	0.43
5:L:370:LYS:O	5:L:372:GLN:NE2	2.50	0.43
5:L:386:HIS:HA	5:L:399:ASN:HA	2.00	0.43
5:L:452:ILE:HD13	5:L:452:ILE:HA	1.91	0.43
5:L:600:LEU:HD22	5:L:619:VAL:HA	1.99	0.43
5:L:847:LEU:HA	5:L:850:ASN:HB2	2.00	0.43
5:L:888:SER:HA	5:L:891:GLU:HB2	1.99	0.43
1:C:40:VAL:HG11	1:C:108:TRP:NE1	2.33	0.43
1:C:88:LYS:HE3	1:C:147:VAL:HG22	1.99	0.43
1:C:116:ARG:HD2	1:C:143:ILE:HD11	2.00	0.43
1:C:768:LEU:HB2	5:L:611:ARG:NE	2.33	0.43
2:E:1026:GLN:HB2	2:E:1058:TYR:CZ	2.54	0.43
3:G:1013:VAL:HA	3:G:1016:ASP:HB3	1.99	0.43
4:I:176:THR:HA	4:I:183:THR:HA	2.00	0.43
4:I:259:LEU:HD22	4:I:295:TYR:HB2	2.00	0.43
4:I:730:ASN:HB2	4:I:750:LEU:HB3	2.00	0.43
5:L:793:TRP:HE3	5:L:817:TRP:HB3	1.83	0.43
5:L:814:TYR:HE2	5:L:830:ALA:HB2	1.83	0.43
1:C:737:GLU:HA	1:C:740:VAL:HG12	2.00	0.43
2:E:213:ILE:HA	2:E:216:ARG:HD2	1.99	0.43
2:E:881:VAL:HG22	2:E:910:LEU:HD23	2.00	0.43
2:E:892:LYS:HB2	2:E:900:TYR:CD1	2.52	0.43
3:G:505:SER:HB3	3:G:516:VAL:HB	2.01	0.43
3:G:945:LYS:HZ2	3:G:982:LEU:HA	1.83	0.43
3:G:987:SER:HA	3:G:1013:VAL:HG11	1.99	0.43
3:G:1144:VAL:O	3:G:1148:GLN:N	2.51	0.43
3:G:1158:TYR:CD2	3:G:1168:MET:HE1	2.54	0.43
4:I:42:ARG:HH21	4:I:402:GLU:HG2	1.83	0.43
4:I:923:LYS:HE3	4:I:928:ARG:HH21	1.83	0.43
4:I:1109:ASN:HB3	4:I:1114:GLN:O	2.18	0.43
4:I:1318:GLN:HA	4:I:1321:ARG:HG3	1.99	0.43
5:L:5:VAL:HG22	5:L:289:PHE:CE1	2.53	0.43
5:L:112:GLN:N	5:L:127:PRO:HG3	2.33	0.43
5:L:224:PRO:HA	5:L:240:GLY:HA3	2.00	0.43
5:L:247:LEU:HD22	5:L:291:LEU:HD23	2.00	0.43
5:L:454:HIS:ND1	5:L:456:ALA:O	2.52	0.43
5:L:646:TYR:HB3	5:L:661:ARG:HH12	1.83	0.43
5:L:743:VAL:HG22	5:L:753:CYS:HB3	2.00	0.43
1:C:606:THR:HG23	1:C:623:SER:HB2	1.99	0.43
2:E:343:LYS:HA	2:E:343:LYS:HD2	1.86	0.43
2:E:884:TRP:NE1	2:E:903:ALA:O	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:497:ASP:O	3:G:501:GLY:N	2.45	0.43
3:G:1033:LEU:HD13	3:G:1033:LEU:HA	1.81	0.43
3:G:1237:GLN:NE2	3:G:1325:ASP:H	2.17	0.43
4:I:454:ALA:HB2	4:I:495:LEU:HB2	1.99	0.43
4:I:837:ARG:HB3	4:I:867:ILE:HD13	2.01	0.43
4:I:923:LYS:HD3	4:I:923:LYS:HA	1.83	0.43
3:G:387:PHE:N	3:G:668:ILE:O	2.51	0.43
3:G:474:TYR:HD1	3:G:483:VAL:HG22	1.83	0.43
3:G:685:PRO:HA	3:G:692:PHE:HA	1.99	0.43
3:G:1064:THR:HA	3:G:1065:PRO:HD3	1.86	0.43
3:G:1292:ILE:HG12	3:G:1329:LEU:HD11	2.00	0.43
4:I:946:VAL:HA	4:I:949:CYS:HB2	2.01	0.43
4:I:970:GLU:HA	4:I:973:ASN:HB3	2.00	0.43
4:I:985:PHE:O	4:I:988:ALA:N	2.52	0.43
5:L:122:VAL:H	5:L:135:HIS:H	1.65	0.43
5:L:421:GLY:O	5:L:467:ARG:NH1	2.52	0.43
5:L:729:ILE:HA	5:L:732:LYS:NZ	2.34	0.43
1:C:389:PHE:HB2	1:C:428:ILE:HD11	2.00	0.43
1:C:444:TRP:CE2	1:C:446:PHE:HB3	2.53	0.43
2:E:576:VAL:HG13	2:E:610:LYS:HE2	2.00	0.43
2:E:1148:LEU:HG	2:E:1161:TYR:CZ	2.53	0.43
3:G:441:ARG:HA	3:G:460:GLU:HA	2.00	0.43
3:G:561:ASN:ND2	3:G:584:GLU:HG3	2.33	0.43
4:I:269:VAL:HB	4:I:282:HIS:HB3	2.00	0.43
4:I:717:VAL:HG23	4:I:718:LEU:HD12	2.01	0.43
4:I:1048:SER:HB3	4:I:1057:VAL:HG12	2.00	0.43
4:I:1246:LYS:HA	4:I:1246:LYS:HD3	1.65	0.43
5:L:334:LYS:NZ	5:L:335:ILE:O	2.51	0.43
5:L:625:GLY:HA3	5:L:635:LEU:HD22	2.00	0.43
1:C:146:SER:HB3	1:C:152:LEU:HD11	2.00	0.43
1:C:423:PRO:HB2	1:C:426:LEU:HD22	2.01	0.43
1:C:447:ARG:HE	1:C:452:LYS:HD3	1.84	0.43
1:C:500:ALA:H	1:C:513:ARG:HA	1.83	0.43
2:E:40:PHE:HE1	2:E:55:ALA:HB1	1.84	0.43
2:E:321:MET:HA	2:E:324:ARG:HB2	2.00	0.43
2:E:1039:LEU:O	2:E:1043:ILE:HG12	2.18	0.43
3:G:621:PHE:CE2	3:G:629:ARG:HB3	2.51	0.43
3:G:808:LYS:HB3	3:G:820:LEU:HD12	2.00	0.43
3:G:842:ARG:HB3	5:L:822:ASP:N	2.34	0.43
3:G:991:ARG:NH1	3:G:994:LYS:HZ2	2.17	0.43
3:G:1259:TYR:O	3:G:1263:SER:N	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:I:1047:TRP:HZ3	4:I:1055:ARG:HH12	1.65	0.43
4:I:1314:ALA:HB1	4:I:1319:PHE:CG	2.53	0.43
5:L:258:ILE:HG23	5:L:291:LEU:HD11	2.01	0.43
5:L:676:LYS:NZ	5:L:700:GLN:HB3	2.33	0.43
1:C:169:ASP:N	1:C:169:ASP:OD1	2.45	0.43
1:C:522:SER:HB3	1:C:529:ASP:OD2	2.18	0.43
2:E:228:THR:HA	2:E:240:VAL:HG13	2.01	0.43
2:E:457:LEU:HD22	2:E:490:VAL:HG22	2.01	0.43
2:E:484:PRO:O	2:E:488:THR:OG1	2.27	0.43
3:G:446:LYS:NZ	3:G:447:VAL:O	2.50	0.43
3:G:715:ASP:HA	3:G:718:ARG:HG2	2.01	0.43
3:G:721:LEU:HB3	3:G:755:MET:SD	2.59	0.43
3:G:1345:LYS:HD2	3:G:1345:LYS:HA	1.82	0.43
4:I:311:ARG:HB3	4:I:321:GLU:HG2	2.00	0.43
4:I:802:TYR:CD2	4:I:838:THR:HA	2.51	0.43
4:I:1350:LYS:HD2	4:I:1353:GLN:HB3	2.00	0.43
5:L:347:GLN:HA	5:L:374:LYS:HE2	2.01	0.43
5:L:546:LEU:HB2	5:L:551:MET:HE1	2.01	0.43
5:L:679:ALA:HB2	5:L:699:ARG:HH21	1.83	0.43
5:L:746:LEU:HD12	5:L:746:LEU:HA	1.89	0.43
5:L:796:ALA:C	5:L:800:LEU:HB2	2.39	0.43
1:C:771:TRP:CD1	1:C:792:HIS:HA	2.54	0.43
1:C:794:LYS:HE2	5:L:609:ARG:HD2	2.01	0.43
2:E:957:TYR:HB3	2:E:974:VAL:HG12	1.99	0.43
3:G:386:LYS:HA	3:G:386:LYS:HD2	1.79	0.43
3:G:447:VAL:HG22	3:G:453:ILE:HG23	2.00	0.43
3:G:1214:HIS:O	3:G:1217:SER:OG	2.23	0.43
3:G:1281:VAL:HG21	3:G:1306:LEU:HD21	2.00	0.43
4:I:914:LYS:HG3	4:I:915:LEU:HD23	2.00	0.43
4:I:1048:SER:OG	4:I:1060:TYR:HB2	2.19	0.43
4:I:1063:VAL:HG23	4:I:1064:GLY:H	1.84	0.43
1:C:120:VAL:HB	1:C:138:GLU:HB2	2.01	0.43
1:C:771:TRP:O	1:C:792:HIS:NE2	2.51	0.43
1:C:878:ILE:HD13	1:C:894:ALA:HA	2.01	0.43
1:C:1068:TYR:HB3	1:C:1090:LYS:HZ3	1.83	0.43
2:E:9:VAL:HA	2:E:20:HIS:CE1	2.52	0.43
2:E:158:ASP:HB3	2:E:302:ARG:HE	1.84	0.43
2:E:301:ALA:HB1	2:E:318:THR:HG22	2.01	0.43
2:E:1043:ILE:HG22	2:E:1085:TYR:HE2	1.84	0.43
3:G:43:GLU:HB2	3:G:366:LEU:HD11	1.99	0.43
3:G:462:THR:H	3:G:475:ARG:NH1	2.16	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:I:960:TYR:HD1	4:I:991:PHE:CE2	2.37	0.43
4:I:1065:THR:HB	4:I:1067:PRO:HD2	1.99	0.43
5:L:682:PHE:CE1	5:L:687:ARG:HD2	2.54	0.43
1:C:522:SER:HB3	1:C:529:ASP:OD1	2.19	0.42
1:C:665:THR:O	1:C:669:LEU:HG	2.19	0.42
2:E:263:MET:SD	2:E:301:ALA:HA	2.59	0.42
2:E:365:LEU:HB3	2:E:396:MET:SD	2.59	0.42
2:E:703:VAL:HG21	2:E:731:HIS:HB2	2.00	0.42
2:E:1304:SER:H	2:E:1334:ALA:HB1	1.83	0.42
3:G:764:VAL:HG23	4:I:798:MET:HE2	2.00	0.42
3:G:809:LYS:HA	3:G:812:ILE:HD12	1.99	0.42
3:G:867:LYS:O	3:G:871:ALA:N	2.49	0.42
3:G:1106:CYS:SG	3:G:1122:THR:OG1	2.52	0.42
4:I:173:VAL:HB	4:I:187:PHE:HB2	1.99	0.42
4:I:673:ARG:HA	4:I:673:ARG:HD3	1.68	0.42
4:I:841:GLN:NE2	4:I:867:ILE:O	2.52	0.42
5:L:27:LYS:NZ	5:L:67:TYR:OH	2.33	0.42
5:L:117:ALA:HA	5:L:122:VAL:HG22	2.00	0.42
5:L:705:GLU:HG3	5:L:717:TYR:OH	2.19	0.42
5:L:793:TRP:HB3	5:L:817:TRP:CB	2.49	0.42
2:E:863:ALA:HB1	2:E:866:ARG:NH2	2.33	0.42
2:E:933:THR:HG23	2:E:963:HIS:CG	2.54	0.42
3:G:279:ASN:HB2	3:G:286:TYR:HE2	1.84	0.42
3:G:975:GLU:HA	3:G:978:ARG:NE	2.30	0.42
3:G:1330:MET:HA	3:G:1333:TYR:CE2	2.54	0.42
5:L:70:ASN:ND2	5:L:112:GLN:OE1	2.52	0.42
5:L:350:VAL:HG11	5:L:387:VAL:HG21	2.01	0.42
5:L:619:VAL:O	5:L:623:GLU:HB2	2.19	0.42
5:L:659:VAL:HB	5:L:682:PHE:CZ	2.52	0.42
5:L:724:ASP:N	5:L:752:ARG:HH21	2.17	0.42
1:C:288:TRP:CG	1:C:309:GLY:HA2	2.54	0.42
2:E:41:TRP:CH2	2:E:115:SER:HB2	2.53	0.42
2:E:237:TRP:HZ2	2:E:268:ARG:HB3	1.83	0.42
3:G:912:LEU:HD22	3:G:915:LEU:HD22	1.99	0.42
3:G:1014:MET:O	3:G:1033:LEU:HD12	2.20	0.42
4:I:160:LYS:HD2	4:I:211:GLU:HG3	2.01	0.42
4:I:339:GLY:N	4:I:348:THR:O	2.41	0.42
4:I:774:LEU:HG	4:I:788:ILE:HD13	2.01	0.42
4:I:906:LEU:HD23	4:I:906:LEU:HA	1.85	0.42
4:I:921:LYS:NZ	4:I:936:TYR:OH	2.33	0.42
4:I:1028:GLN:HG3	4:I:1050:CYS:SG	2.59	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:I:1076:VAL:HA	4:I:1084:LEU:HD23	2.00	0.42
4:I:1155:LYS:NZ	4:I:1156:PRO:O	2.49	0.42
5:L:51:LEU:HD21	5:L:54:ALA:HB2	2.02	0.42
1:C:174:LEU:HD11	1:C:214:TRP:CE3	2.54	0.42
1:C:429:THR:HB	1:C:506:ASP:HA	2.01	0.42
1:C:887:TRP:HZ2	1:C:909:TYR:HB2	1.83	0.42
2:E:742:ILE:O	2:E:746:HIS:HB3	2.20	0.42
2:E:1015:LYS:HB2	2:E:1017:HIS:CE1	2.55	0.42
2:E:1026:GLN:HB2	2:E:1058:TYR:CE2	2.55	0.42
3:G:207:VAL:O	3:G:216:LEU:N	2.52	0.42
3:G:485:ASN:N	3:G:489:THR:O	2.51	0.42
3:G:1039:LYS:HE3	3:G:1039:LYS:HB2	1.73	0.42
4:I:401:ASN:OD1	4:I:436:ARG:NH1	2.51	0.42
4:I:920:ALA:HA	4:I:931:GLU:HG3	2.01	0.42
5:L:255:LEU:HD21	5:L:311:THR:HG23	2.01	0.42
5:L:472:VAL:O	5:L:480:LEU:N	2.45	0.42
1:C:29:ILE:HG23	1:C:41:LEU:HB2	2.00	0.42
1:C:126:TRP:CE2	1:C:133:ILE:HD12	2.54	0.42
1:C:856:GLN:HE21	1:C:880:CYS:HB2	1.84	0.42
1:C:887:TRP:HA	1:C:890:ALA:HB3	2.02	0.42
2:E:689:ILE:O	2:E:693:GLU:HG3	2.19	0.42
2:E:1100:ARG:HH22	2:E:1147:LEU:HD11	1.84	0.42
2:E:1353:LEU:HG	5:L:225:LEU:HA	2.01	0.42
3:G:47:PRO:HG2	3:G:50:PRO:HG3	2.02	0.42
3:G:238:THR:HG21	3:G:241:LYS:HE3	2.02	0.42
3:G:401:VAL:HB	3:G:417:LEU:HD23	2.02	0.42
3:G:403:LEU:HD12	3:G:434:LEU:HD22	2.01	0.42
3:G:752:MET:HG2	3:G:768:CYS:HB2	2.02	0.42
3:G:843:ILE:HG13	5:L:824:PHE:CD2	2.47	0.42
3:G:1230:SER:HB3	3:G:1271:ARG:NE	2.33	0.42
4:I:225:ILE:HD11	4:I:258:ILE:HD11	2.01	0.42
4:I:226:MET:SD	4:I:226:MET:N	2.87	0.42
4:I:790:LYS:HD2	4:I:809:TYR:HE1	1.83	0.42
4:I:824:GLN:HA	4:I:825:PRO:HD3	1.88	0.42
4:I:1176:LEU:HB3	4:I:1181:ASP:HB3	2.02	0.42
5:L:202:GLY:HA2	5:L:224:PRO:HD3	2.00	0.42
5:L:517:LEU:HB3	5:L:529:GLN:HB3	2.00	0.42
1:C:442:TYR:OH	1:C:468:GLU:OE1	2.28	0.42
1:C:502:VAL:HG22	1:C:511:ILE:HA	2.01	0.42
2:E:12:TYR:HB2	2:E:20:HIS:CE1	2.55	0.42
2:E:176:PHE:CD1	2:E:189:ALA:HA	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:342:GLN:HA	2:E:345:MET:HG2	2.02	0.42
2:E:509:PRO:HG2	2:E:767:TYR:HE2	1.85	0.42
2:E:722:LEU:HD12	2:E:722:LEU:HA	1.84	0.42
2:E:1110:ILE:HA	2:E:1113:MET:HG2	2.02	0.42
3:G:383:LEU:HB3	3:G:395:GLN:HB3	2.00	0.42
3:G:716:LYS:HG2	3:G:749:TRP:HB3	2.01	0.42
3:G:1146:LYS:HA	3:G:1171:LEU:HD21	2.00	0.42
5:L:218:ARG:NH1	5:L:252:GLY:O	2.53	0.42
5:L:276:PHE:HA	5:L:289:PHE:O	2.19	0.42
5:L:426:ARG:HH11	5:L:444:ASP:HB2	1.85	0.42
5:L:683:ALA:HA	5:L:693:VAL:HA	2.02	0.42
1:C:341:TRP:HZ3	1:C:343:TYR:HB2	1.84	0.42
1:C:468:GLU:HG3	1:C:485:PRO:HB3	2.02	0.42
1:C:912:HIS:CE1	5:L:448:PRO:HD2	2.55	0.42
1:C:940:GLN:HG2	1:C:1025:ARG:HH22	1.84	0.42
3:G:122:ASP:N	3:G:122:ASP:OD1	2.52	0.42
3:G:268:ALA:HB2	3:G:275:VAL:HG13	2.02	0.42
3:G:333:LEU:HB3	3:G:626:VAL:HG11	2.00	0.42
3:G:423:GLN:HB2	3:G:438:ASP:HB2	2.01	0.42
3:G:429:LEU:HB2	3:G:434:LEU:HD13	2.01	0.42
3:G:468:ILE:HG12	3:G:470:ASN:N	2.34	0.42
3:G:786:SER:OG	3:G:807:ALA:N	2.53	0.42
3:G:801:LEU:HD13	4:I:740:LEU:HD23	2.02	0.42
3:G:1153:LEU:HD11	3:G:1157:LYS:HE2	2.01	0.42
4:I:86:ASN:HD22	4:I:88:HIS:CE1	2.37	0.42
4:I:543:VAL:HA	4:I:553:LEU:HA	2.02	0.42
4:I:574:MET:HG2	4:I:623:VAL:HG12	2.01	0.42
5:L:58:HIS:NE2	5:L:76:SER:O	2.34	0.42
5:L:578:ALA:HB1	5:L:587:TRP:NE1	2.35	0.42
1:C:499:ILE:HA	1:C:513:ARG:HA	2.01	0.42
1:C:1091:LEU:O	1:C:1102:ARG:HG2	2.19	0.42
2:E:222:PRO:HA	2:E:225:VAL:HG12	2.01	0.42
2:E:282:LEU:HA	2:E:282:LEU:HD12	1.74	0.42
3:G:19:TRP:CD2	3:G:29:LEU:HD13	2.54	0.42
4:I:363:LEU:HB2	4:I:631:ARG:NH2	2.35	0.42
4:I:424:TYR:OH	4:I:436:ARG:NH2	2.53	0.42
4:I:534:PHE:CG	4:I:573:VAL:HB	2.54	0.42
4:I:832:LYS:O	4:I:835:ILE:HG22	2.19	0.42
5:L:31:SER:OG	5:L:32:GLN:N	2.51	0.42
5:L:62:ILE:HD13	5:L:76:SER:HB2	2.00	0.42
5:L:819:SER:HA	5:L:827:ALA:HB2	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:281:VAL:HG23	1:C:284:GLY:H	1.84	0.42
1:C:350:TYR:CZ	1:C:363:MET:HG2	2.54	0.42
1:C:895:GLN:HE22	1:C:902:ILE:HD13	1.85	0.42
2:E:977:LEU:O	2:E:981:ASN:ND2	2.53	0.42
3:G:883:LEU:HB2	3:G:917:GLU:OE1	2.20	0.42
3:G:961:PHE:CZ	3:G:965:ARG:HB3	2.55	0.42
4:I:705:ILE:HA	4:I:709:ARG:HD3	2.02	0.42
4:I:803:SER:HB3	4:I:842:LEU:HD21	2.02	0.42
4:I:960:TYR:CE1	4:I:984:ASP:HB2	2.55	0.42
5:L:39:ASN:HA	5:L:62:ILE:H	1.85	0.42
5:L:277:VAL:O	5:L:288:MET:HA	2.20	0.42
5:L:760:HIS:ND1	5:L:763:ARG:HD3	2.35	0.42
5:L:787:TYR:HD2	5:L:799:LEU:H	1.68	0.42
5:L:837:PRO:HD2	5:L:874:SER:HB2	2.01	0.42
1:C:271:ALA:HB2	1:C:315:TRP:HZ2	1.84	0.42
2:E:345:MET:HA	2:E:492:ARG:HH22	1.85	0.42
2:E:438:TYR:O	2:E:442:LEU:HB2	2.20	0.42
2:E:911:GLN:NE2	2:E:936:ILE:HG13	2.32	0.42
3:G:112:THR:HG21	3:G:117:ARG:HB2	2.02	0.42
4:I:204:ASP:H	4:I:275:ARG:NH1	2.16	0.42
4:I:375:LEU:HB2	4:I:408:LEU:HD22	2.02	0.42
4:I:759:ALA:HA	4:I:762:GLU:CD	2.40	0.42
4:I:1085:GLY:O	4:I:1089:LEU:HB3	2.20	0.42
4:I:1167:LEU:HD23	4:I:1171:THR:OG1	2.19	0.42
5:L:12:PRO:HG2	5:L:51:LEU:HD22	2.01	0.42
5:L:157:CYS:SG	5:L:163:SER:OG	2.60	0.42
5:L:330:ASP:OD1	5:L:331:TYR:N	2.53	0.42
5:L:598:LEU:O	5:L:626:ARG:NE	2.53	0.42
5:L:831:TYR:HA	5:L:834:GLY:O	2.20	0.42
5:L:906:TYR:HA	5:L:951:VAL:HG21	2.01	0.42
5:L:931:PHE:HA	5:L:967:LEU:HD22	2.02	0.42
2:E:539:ARG:HA	2:E:539:ARG:HD2	1.82	0.41
3:G:185:LYS:HE2	3:G:185:LYS:HB3	1.82	0.41
3:G:417:LEU:HD22	3:G:453:ILE:HG21	2.02	0.41
3:G:476:ALA:HB1	3:G:504:THR:HA	2.02	0.41
3:G:576:VAL:HG11	3:G:600:PRO:HD2	2.02	0.41
3:G:1301:ARG:HA	3:G:1301:ARG:HD3	1.71	0.41
4:I:292:ASP:HB2	4:I:336:GLU:O	2.20	0.41
4:I:664:ALA:O	4:I:668:LYS:HG2	2.19	0.41
4:I:797:GLU:OE2	4:I:837:ARG:HB2	2.20	0.41
5:L:79:ALA:HA	5:L:101:ALA:HB1	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:L:587:TRP:HB3	5:L:610:ILE:HD11	2.02	0.41
5:L:637:ALA:O	5:L:641:ALA:CB	2.68	0.41
5:L:723:TYR:CE2	5:L:745:GLN:HB3	2.52	0.41
1:C:719:ILE:HD12	1:C:722:VAL:HB	2.02	0.41
1:C:766:MET:HG3	1:C:788:LEU:HG	2.01	0.41
1:C:855:PHE:HD2	1:C:864:GLY:HA2	1.85	0.41
2:E:40:PHE:CD1	2:E:59:LEU:HB2	2.55	0.41
2:E:1054:ASP:OD1	2:E:1054:ASP:N	2.44	0.41
3:G:724:PHE:CE1	3:G:756:CYS:HA	2.55	0.41
4:I:266:TYR:HD1	4:I:285:LYS:HD2	1.84	0.41
4:I:535:PRO:HA	4:I:542:LEU:HB3	2.01	0.41
5:L:158:PHE:HA	5:L:181:PRO:HB3	2.01	0.41
5:L:495:ASN:HB3	5:L:516:MET:HB3	2.02	0.41
5:L:508:MET:SD	5:L:521:THR:HG23	2.60	0.41
5:L:725:ARG:HH22	5:L:732:LYS:NZ	2.18	0.41
5:L:857:TYR:N	5:L:907:GLU:OE1	2.52	0.41
1:C:199:CYS:HB2	1:C:233:LEU:HG	2.02	0.41
1:C:1109:ALA:HB1	2:E:815:HIS:CD2	2.54	0.41
2:E:154:GLN:NE2	2:E:168:GLU:OE1	2.53	0.41
2:E:1207:MET:HE1	2:E:1241:LEU:HD11	2.01	0.41
2:E:1273:TRP:O	2:E:1276:MET:HG2	2.21	0.41
3:G:387:PHE:HD1	3:G:392:ALA:HB2	1.85	0.41
3:G:828:GLY:HA3	4:I:712:GLY:H	1.85	0.41
3:G:980:TYR:HA	3:G:985:ARG:HG3	2.02	0.41
4:I:79:LEU:HB3	4:I:92:TRP:HE3	1.86	0.41
4:I:609:LEU:HD22	4:I:669:LEU:HA	2.02	0.41
4:I:949:CYS:SG	4:I:958:ARG:NH2	2.89	0.41
5:L:627:LYS:HB2	5:L:627:LYS:HE2	1.86	0.41
1:C:30:ALA:HB1	1:C:38:LEU:HG	2.02	0.41
1:C:33:GLY:HA3	1:C:37:LEU:HB3	2.03	0.41
2:E:107:ASP:HB3	2:E:133:VAL:HG13	2.01	0.41
2:E:944:SER:HA	2:E:947:ALA:HB3	2.02	0.41
2:E:1036:TYR:HB2	2:E:1105:TRP:CE2	2.55	0.41
2:E:1104:ARG:HD2	2:E:1104:ARG:HA	1.82	0.41
2:E:1321:TYR:HA	2:E:1348:LYS:HD2	2.01	0.41
3:G:266:ALA:HB1	3:G:303:LEU:HD13	2.02	0.41
3:G:389:ASP:HB3	3:G:431:LYS:HG2	2.02	0.41
3:G:494:LEU:HB3	3:G:523:ARG:HH22	1.85	0.41
4:I:266:TYR:HE2	4:I:268:ALA:HB2	1.86	0.41
4:I:376:TYR:CE1	4:I:386:LEU:HB3	2.48	0.41
4:I:960:TYR:HA	4:I:991:PHE:CE2	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:I:1018:VAL:HG13	4:I:1019:ALA:H	1.85	0.41
4:I:1115:PHE:CD2	4:I:1365:GLY:HA3	2.54	0.41
5:L:89:LYS:HB2	5:L:89:LYS:HE2	1.84	0.41
5:L:324:VAL:HG11	5:L:364:HIS:CD2	2.54	0.41
5:L:724:ASP:O	5:L:727:ILE:HG22	2.19	0.41
1:C:517:VAL:HG22	1:C:533:VAL:HG22	2.02	0.41
1:C:707:ASP:O	1:C:711:VAL:HG23	2.20	0.41
1:C:923:ILE:HD13	1:C:923:ILE:HA	1.93	0.41
2:E:304:PHE:HB2	2:E:476:LEU:HD11	2.02	0.41
2:E:306:ARG:NH1	2:E:338:GLU:HG2	2.35	0.41
2:E:315:LEU:HD21	2:E:343:LYS:HZ2	1.85	0.41
3:G:717:THR:OG1	3:G:751:ASN:OD1	2.37	0.41
3:G:1081:MET:HG3	3:G:1101:ARG:HH21	1.85	0.41
4:I:481:ILE:HD12	4:I:512:TYR:CE2	2.55	0.41
4:I:509:LEU:HD12	4:I:509:LEU:HA	1.97	0.41
4:I:617:THR:HG22	4:I:633:LYS:HE3	2.03	0.41
4:I:656:ARG:CZ	4:I:662:ARG:HD3	2.50	0.41
4:I:950:LEU:HD22	4:I:978:PHE:CD1	2.54	0.41
5:L:245:VAL:H	5:L:259:ALA:HB3	1.85	0.41
5:L:872:LEU:HB2	5:L:893:PHE:CG	2.54	0.41
1:C:970:PHE:O	1:C:973:ARG:HG2	2.21	0.41
1:C:1040:LEU:HD12	1:C:1040:LEU:HA	1.92	0.41
2:E:195:LYS:HB3	2:E:230:MET:SD	2.60	0.41
2:E:259:ALA:O	2:E:263:MET:HG2	2.20	0.41
3:G:5:TYR:CZ	3:G:398:VAL:HG13	2.56	0.41
3:G:385:TYR:HE2	3:G:678:ASN:HD22	1.69	0.41
3:G:1056:LEU:HD12	3:G:1056:LEU:HA	1.77	0.41
3:G:1310:ILE:HG13	3:G:1319:ALA:HB3	2.02	0.41
4:I:782:PRO:HD2	4:I:820:VAL:HG22	2.03	0.41
4:I:789:CYS:O	4:I:808:HIS:HB3	2.19	0.41
4:I:868:LEU:HA	4:I:868:LEU:HD23	1.75	0.41
4:I:1069:LEU:HD21	4:I:1091:TYR:HD1	1.85	0.41
4:I:1143:PHE:CE2	4:I:1310:CYS:HB2	2.56	0.41
4:I:1219:LEU:HA	4:I:1260:GLU:HA	2.02	0.41
5:L:75:ALA:HA	5:L:85:ILE:HA	2.02	0.41
5:L:278:ALA:HA	5:L:288:MET:HE1	2.02	0.41
1:C:171:ARG:HH21	1:C:186:ASP:HB2	1.84	0.41
1:C:600:PHE:CZ	1:C:611:PHE:HB2	2.55	0.41
1:C:868:PHE:HB3	1:C:873:ASP:HB3	2.03	0.41
2:E:552:ARG:HA	2:E:552:ARG:HD2	1.87	0.41
2:E:611:VAL:O	2:E:615:ASN:N	2.39	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:678:ALA:H	2:E:681:ALA:HB3	1.85	0.41
2:E:1258:LEU:HD23	2:E:1258:LEU:HA	1.93	0.41
3:G:9:ILE:HB	3:G:375:ILE:HB	2.03	0.41
3:G:841:ASP:O	3:G:845:LEU:N	2.47	0.41
3:G:1337:ALA:O	3:G:1338:ARG:HG2	2.20	0.41
4:I:673:ARG:HH22	4:I:702:ASP:HB3	1.86	0.41
4:I:737:MET:SD	4:I:743:ASP:HB3	2.61	0.41
4:I:987:GLY:O	4:I:990:GLU:HB2	2.20	0.41
4:I:1057:VAL:O	4:I:1061:LEU:HG	2.21	0.41
4:I:1167:LEU:HA	4:I:1199:PHE:CE2	2.56	0.41
5:L:2:ARG:NH1	5:L:294:SER:HB3	2.36	0.41
5:L:65:VAL:HG12	5:L:76:SER:HA	2.03	0.41
5:L:72:LYS:HB3	5:L:73:ARG:HD2	2.02	0.41
5:L:125:TRP:HA	5:L:129:GLN:HE21	1.85	0.41
5:L:618:LEU:HD11	5:L:639:ILE:HA	2.03	0.41
5:L:705:GLU:HG2	5:L:713:ALA:HB1	2.02	0.41
1:C:242:ARG:HH22	1:C:248:ASN:HB3	1.86	0.41
1:C:347:THR:OG1	1:C:366:ASP:OD1	2.22	0.41
2:E:173:LEU:HG	2:E:196:ILE:HG21	2.03	0.41
2:E:383:LEU:HD11	2:E:640:VAL:HG21	2.02	0.41
2:E:618:LEU:O	2:E:622:LYS:HB2	2.21	0.41
2:E:979:LEU:HD12	2:E:979:LEU:HA	1.95	0.41
3:G:9:ILE:HD12	3:G:29:LEU:HD23	2.03	0.41
3:G:422:MET:HE2	3:G:436:VAL:HG23	2.02	0.41
3:G:780:ALA:O	3:G:784:ALA:CB	2.68	0.41
4:I:770:TRP:HH2	4:I:795:MET:HG2	1.85	0.41
4:I:924:GLU:O	4:I:929:TRP:NE1	2.53	0.41
4:I:1060:TYR:CE2	4:I:1068:ALA:HA	2.55	0.41
5:L:295:THR:HB	5:L:306:TYR:HB2	2.02	0.41
5:L:723:TYR:CG	5:L:746:LEU:HD13	2.55	0.41
1:C:214:TRP:CE2	1:C:229:LEU:HB2	2.55	0.41
1:C:272:VAL:O	1:C:291:GLN:N	2.46	0.41
1:C:535:ARG:HB2	1:C:579:HIS:CE1	2.56	0.41
1:C:868:PHE:HB3	1:C:873:ASP:O	2.21	0.41
1:C:882:VAL:HG22	1:C:890:ALA:HB1	2.03	0.41
1:C:940:GLN:O	1:C:944:LYS:HG3	2.21	0.41
1:C:1110:MET:HG2	2:E:817:TYR:CE1	2.55	0.41
2:E:12:TYR:O	2:E:16:GLY:N	2.54	0.41
2:E:156:GLN:HG3	2:E:229:ARG:HG2	2.02	0.41
2:E:298:PHE:CE1	2:E:325:ALA:HB1	2.56	0.41
2:E:310:SER:OG	2:E:311:ASP:N	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:811:LEU:HA	2:E:811:LEU:HD23	1.93	0.41
2:E:1165:GLU:O	2:E:1169:ILE:HG13	2.20	0.41
2:E:1272:ALA:O	2:E:1276:MET:HE2	2.21	0.41
3:G:130:TRP:CE2	3:G:140:HIS:HB2	2.56	0.41
3:G:315:GLY:HA3	3:G:355:ALA:HB3	2.03	0.41
3:G:392:ALA:HB3	3:G:699:VAL:HG21	2.02	0.41
3:G:668:ILE:HD11	3:G:699:VAL:HG13	2.03	0.41
3:G:676:LEU:HD23	3:G:701:LYS:HG2	2.03	0.41
3:G:677:THR:OG1	3:G:700:SER:OG	2.30	0.41
3:G:959:ALA:HB1	3:G:983:ALA:HB1	2.03	0.41
3:G:1035:MET:HG2	3:G:1059:ILE:CG1	2.47	0.41
3:G:1325:ASP:HA	3:G:1328:ALA:HB3	2.02	0.41
4:I:12:LEU:HD11	4:I:356:MET:HB2	2.03	0.41
4:I:252:TRP:NE1	4:I:258:ILE:HG12	2.35	0.41
4:I:531:VAL:HG23	4:I:547:ASP:HA	2.03	0.41
4:I:598:PRO:HA	4:I:604:PRO:HA	2.02	0.41
4:I:744:TYR:CE2	4:I:767:LEU:HD12	2.56	0.41
4:I:993:LEU:HD11	4:I:1014:PHE:HA	2.03	0.41
4:I:1015:ALA:HA	4:I:1018:VAL:HG12	2.02	0.41
4:I:1155:LYS:HE2	4:I:1155:LYS:HB2	1.92	0.41
4:I:1187:ARG:NH1	4:I:1278:THR:OG1	2.54	0.41
5:L:247:LEU:HD12	5:L:247:LEU:HA	1.89	0.41
5:L:303:ARG:HH21	5:L:360:ASP:HA	1.85	0.41
5:L:371:ILE:HD13	5:L:375:LEU:HD23	2.02	0.41
5:L:469:LYS:O	5:L:501:TRP:NE1	2.53	0.41
5:L:739:LEU:O	5:L:743:VAL:HG23	2.20	0.41
5:L:799:LEU:C	5:L:801:HIS:H	2.23	0.41
2:E:874:THR:O	2:E:878:GLN:NE2	2.54	0.41
2:E:967:HIS:CE1	2:E:969:PRO:HG2	2.56	0.41
2:E:1029:LEU:HD13	2:E:1039:LEU:HD12	2.02	0.41
2:E:1304:SER:HA	2:E:1307:VAL:HB	2.03	0.41
2:E:1333:LYS:HD3	2:E:1333:LYS:HA	1.77	0.41
3:G:85:ILE:HD13	3:G:120:THR:HG21	2.02	0.41
3:G:479:ASN:OD1	3:G:479:ASN:N	2.53	0.41
3:G:721:LEU:HA	3:G:721:LEU:HD23	1.81	0.41
3:G:1127:ALA:H	3:G:1157:LYS:NZ	2.13	0.41
5:L:748:LYS:HZ3	5:L:776:LYS:HB3	1.85	0.41
5:L:812:LEU:HB3	5:L:816:LYS:NZ	2.36	0.41
1:C:5:LEU:HD11	1:C:305:VAL:HG22	2.03	0.40
1:C:82:TRP:CZ3	1:C:89:LEU:HB2	2.55	0.40
1:C:522:SER:O	1:C:526:LEU:HA	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:263:MET:SD	2:E:304:PHE:HB3	2.61	0.40
2:E:496:GLN:HB2	2:E:654:THR:HB	2.03	0.40
3:G:846:LYS:HE3	5:L:842:ARG:HD2	2.02	0.40
3:G:967:TYR:CE2	3:G:979:TYR:HE2	2.39	0.40
3:G:986:TYR:O	3:G:1013:VAL:HG21	2.21	0.40
3:G:999:ASP:HA	3:G:1002:LEU:HB3	2.03	0.40
3:G:1329:LEU:HA	3:G:1329:LEU:HD12	1.83	0.40
4:I:543:VAL:HG23	4:I:575:TRP:CH2	2.56	0.40
4:I:545:GLU:OE1	4:I:569:ARG:NH1	2.54	0.40
4:I:764:ARG:HA	4:I:764:ARG:HD3	1.91	0.40
4:I:975:LEU:HD13	4:I:991:PHE:CD2	2.55	0.40
4:I:1013:THR:HA	4:I:1016:ARG:HB3	2.03	0.40
5:L:197:ALA:N	5:L:205:LYS:O	2.49	0.40
5:L:305:ALA:HA	5:L:315:ILE:HA	2.03	0.40
5:L:474:ASP:OD1	5:L:474:ASP:N	2.51	0.40
5:L:847:LEU:HB2	5:L:863:TYR:CE2	2.55	0.40
5:L:911:LYS:HB3	5:L:915:SER:O	2.20	0.40
1:C:30:ALA:HB2	1:C:40:VAL:HG22	2.03	0.40
1:C:551:SER:CB	1:C:590:MET:HG3	2.51	0.40
1:C:711:VAL:HG13	5:L:668:ASP:HA	2.03	0.40
1:C:846:PRO:HA	1:C:871:ALA:HB1	2.04	0.40
2:E:539:ARG:NH1	2:E:570:LEU:HA	2.36	0.40
2:E:602:PRO:HA	2:E:605:HIS:HB2	2.03	0.40
2:E:900:TYR:OH	2:E:939:ASP:OD2	2.37	0.40
2:E:1141:VAL:HG23	2:E:1168:ALA:HB1	2.02	0.40
2:E:1323:GLU:HA	5:L:264:TRP:CZ3	2.56	0.40
3:G:70:HIS:CD2	3:G:75:LEU:HD23	2.56	0.40
3:G:435:LEU:HD21	3:G:466:MET:SD	2.62	0.40
3:G:462:THR:OG1	3:G:482:GLU:OE1	2.34	0.40
3:G:696:THR:OG1	3:G:697:SER:N	2.54	0.40
4:I:201:LYS:HB2	4:I:213:THR:HG21	2.04	0.40
4:I:357:HIS:HB3	4:I:359:PHE:CE2	2.56	0.40
4:I:560:HIS:CG	4:I:604:PRO:HG2	2.56	0.40
4:I:856:ASN:HD22	4:I:861:PHE:N	2.19	0.40
4:I:1304:TRP:CZ3	4:I:1313:PRO:HA	2.56	0.40
5:L:39:ASN:HA	5:L:62:ILE:HG13	2.02	0.40
5:L:276:PHE:HB3	5:L:288:MET:HB3	2.04	0.40
5:L:762:ARG:NH2	5:L:767:PHE:HA	2.36	0.40
1:C:20:ILE:HG12	1:C:29:ILE:HD11	2.03	0.40
1:C:346:ASN:O	1:C:367:THR:N	2.42	0.40
2:E:32:ARG:HD3	2:E:32:ARG:HA	1.90	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:290:GLU:OE2	2:E:293:ASN:ND2	2.54	0.40
2:E:617:LYS:HB3	2:E:620:ASP:HB2	2.02	0.40
2:E:770:TYR:HA	2:E:773:LEU:HG	2.02	0.40
3:G:64:CYS:SG	3:G:67:ILE:HG23	2.62	0.40
3:G:229:ARG:HG2	3:G:235:THR:HA	2.04	0.40
3:G:753:ALA:HB3	3:G:764:VAL:HG21	2.03	0.40
3:G:849:HIS:HB3	3:G:868:HIS:O	2.21	0.40
3:G:910:LYS:NZ	3:G:913:GLU:OE1	2.42	0.40
3:G:1090:VAL:HG22	3:G:1102:ALA:HB1	2.04	0.40
4:I:461:VAL:HG12	4:I:463:VAL:HG23	2.04	0.40
4:I:776:LEU:O	4:I:780:LEU:HB2	2.21	0.40
4:I:887:PHE:HD2	4:I:906:LEU:HD21	1.86	0.40
4:I:929:TRP:CE3	4:I:952:ARG:HG2	2.57	0.40
4:I:949:CYS:SG	4:I:959:ALA:HB2	2.61	0.40
4:I:1002:PHE:O	4:I:1006:MET:HG2	2.21	0.40
4:I:1098:GLY:HA2	4:I:1101:ARG:NE	2.34	0.40
4:I:1293:LEU:HD23	4:I:1319:PHE:HE1	1.86	0.40
5:L:17:VAL:HG11	5:L:39:ASN:H	1.86	0.40
5:L:565:TYR:CE2	5:L:577:VAL:HG21	2.57	0.40
5:L:855:THR:HA	5:L:857:TYR:CE1	2.57	0.40
5:L:951:VAL:O	5:L:955:LEU:HB3	2.21	0.40
1:C:435:ALA:N	1:C:442:TYR:O	2.55	0.40
2:E:919:ARG:NH1	2:E:926:VAL:O	2.55	0.40
2:E:979:LEU:HA	2:E:983:ASP:H	1.86	0.40
2:E:1081:ILE:HG22	2:E:1112:HIS:CE1	2.56	0.40
2:E:1137:SER:HB2	2:E:1140:ALA:HB3	2.02	0.40
3:G:1047:CYS:SG	3:G:1056:LEU:HD13	2.62	0.40
4:I:481:ILE:HD13	4:I:481:ILE:HA	1.94	0.40
4:I:1084:LEU:HA	4:I:1084:LEU:HD12	1.79	0.40
4:I:1295:THR:HG22	4:I:1297:LYS:HD2	2.02	0.40
4:I:1334:ASP:OD1	4:I:1334:ASP:N	2.47	0.40
5:L:386:HIS:HD2	5:L:425:ARG:HD3	1.86	0.40
5:L:454:HIS:CD2	5:L:480:LEU:HD22	2.56	0.40
5:L:960:VAL:HG23	5:L:971:ALA:HB3	2.04	0.40
1:C:633:GLU:HG3	1:C:658:GLU:HG2	2.04	0.40
1:C:759:ASP:HA	1:C:762:ILE:HB	2.03	0.40
2:E:315:LEU:HD21	2:E:343:LYS:NZ	2.37	0.40
2:E:574:VAL:O	2:E:578:GLN:N	2.46	0.40
2:E:815:HIS:HA	2:E:817:TYR:CZ	2.57	0.40
3:G:3:ILE:HB	3:G:383:LEU:HD11	2.04	0.40
3:G:443:GLU:HG3	3:G:445:TYR:CZ	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:444:VAL:N	3:G:457:SER:O	2.44	0.40
3:G:593:PHE:CZ	3:G:615:VAL:HG11	2.56	0.40
3:G:774:HIS:CE1	3:G:776:ARG:HB2	2.56	0.40
3:G:852:TYR:HA	3:G:855:PHE:HB3	2.03	0.40
3:G:1289:ARG:HH21	3:G:1292:ILE:HG21	1.87	0.40
3:G:1331:VAL:HG12	3:G:1335:TYR:HE2	1.86	0.40
4:I:201:LYS:NZ	4:I:227:GLN:HE21	2.19	0.40
4:I:329:LEU:HD11	4:I:349:VAL:HG11	2.04	0.40
4:I:501:ILE:HG21	4:I:542:LEU:HD21	2.02	0.40
4:I:1350:LYS:HD2	4:I:1350:LYS:HA	1.83	0.40
5:L:723:TYR:HB2	5:L:746:LEU:HD22	2.02	0.40
5:L:773:THR:HG22	5:L:776:LYS:HZ2	1.87	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	C	1070/1224 (87%)	974 (91%)	96 (9%)	0	100	100
2	E	1321/1355 (98%)	1229 (93%)	91 (7%)	1 (0%)	51	86
3	G	1352/1409 (96%)	1191 (88%)	160 (12%)	1 (0%)	51	86
4	I	1365/1367 (100%)	1245 (91%)	116 (8%)	4 (0%)	41	77
5	L	995/1239 (80%)	872 (88%)	121 (12%)	2 (0%)	47	81
All	All	6103/6594 (93%)	5511 (90%)	584 (10%)	8 (0%)	54	86

All (8) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	E	730	PRO
3	G	1165	VAL

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Mol	Chain	Res	Type
4	I	1053	ALA
5	L	778	ASP
4	I	1008	HIS
4	I	1010	GLU
5	L	784	ILE
4	I	985	PHE

### 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	C	904/1005 (90%)	897 (99%)	7 (1%)	81	89
2	E	1092/1114 (98%)	1082 (99%)	10 (1%)	78	87
3	G	1117/1162 (96%)	1107 (99%)	10 (1%)	78	87
4	I	1119/1119 (100%)	1112 (99%)	7 (1%)	86	92
5	L	840/1035 (81%)	834 (99%)	6 (1%)	84	90
All	All	5072/5435 (93%)	5032 (99%)	40 (1%)	82	89

All (40) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	C	242	ARG
1	C	660	ARG
1	C	688	ARG
1	C	773	LYS
1	C	1025	ARG
1	C	1094	MET
1	C	1102	ARG
2	E	127	ARG
2	E	229	ARG
2	E	277	LYS
2	E	288	ARG
2	E	459	ARG
2	E	712	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
2	E	720	LYS
2	E	948	ARG
2	E	976	LYS
2	E	1343	LYS
3	G	103	ARG
3	G	212	ARG
3	G	365	ARG
3	G	469	ASN
3	G	554	MET
3	G	793	ARG
3	G	832	LYS
3	G	866	ARG
3	G	902	ARG
3	G	1264	LYS
4	I	275	ARG
4	I	763	MET
4	I	1011	MET
4	I	1037	ARG
4	I	1105	ARG
4	I	1221	LYS
4	I	1328	ARG
5	L	2	ARG
5	L	40	ARG
5	L	250	ARG
5	L	418	LYS
5	L	467	ARG
5	L	687	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (24) such sidechains are listed below:

<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	C	445	GLN
1	C	814	GLN
1	C	895	GLN
2	E	20	HIS
2	E	239	GLN
2	E	254	ASN
2	E	289	GLN
3	G	58	ASN
3	G	376	ASN
3	G	698	ASN
3	G	751	ASN

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Mol	Chain	Res	Type
3	G	822	GLN
3	G	1284	GLN
4	I	88	HIS
4	I	227	GLN
4	I	536	GLN
4	I	792	HIS
4	I	811	GLN
4	I	1052	GLN
4	I	1058	GLN
5	L	19	ASN
5	L	129	GLN
5	L	345	GLN
5	L	733	HIS

### 5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

### 5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

### 5.6 Ligand geometry [i](#)

There are no ligands in this entry.

### 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-15980. 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

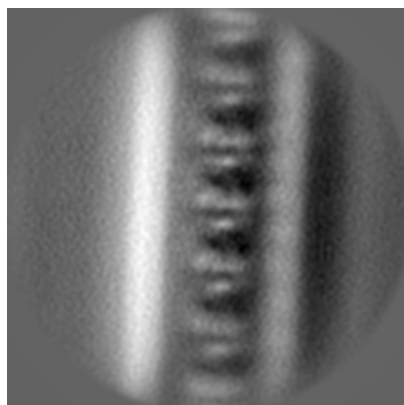


Y

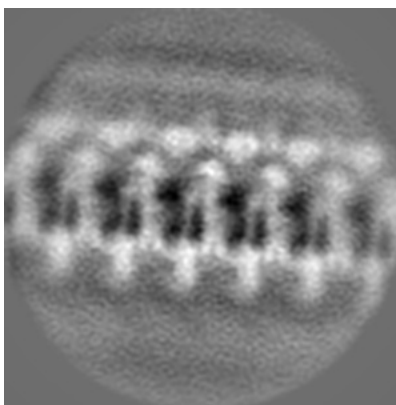


Z

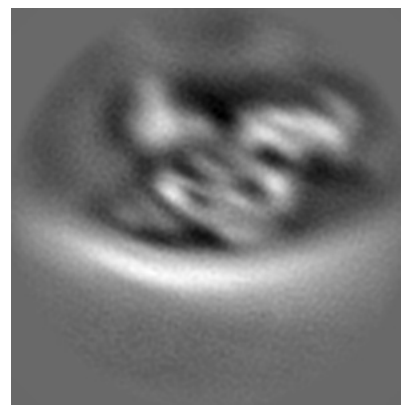
#### 6.1.2 Raw map



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: 60



Y Index: 60

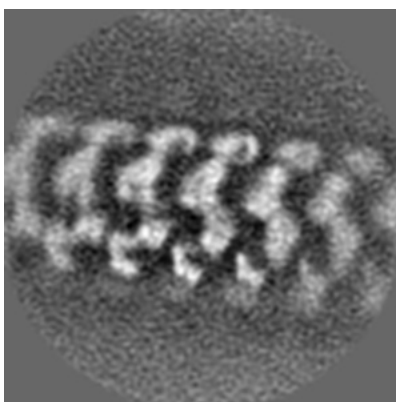


Z Index: 60

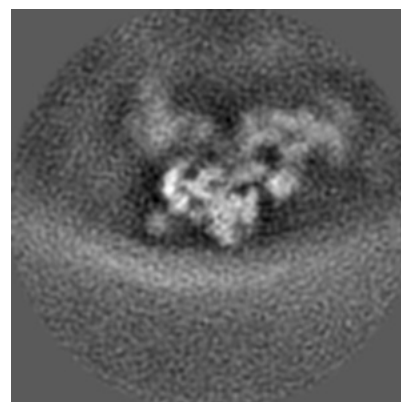
### 6.2.2 Raw map



X Index: 60



Y Index: 60



Z Index: 60

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: 48



Y Index: 63

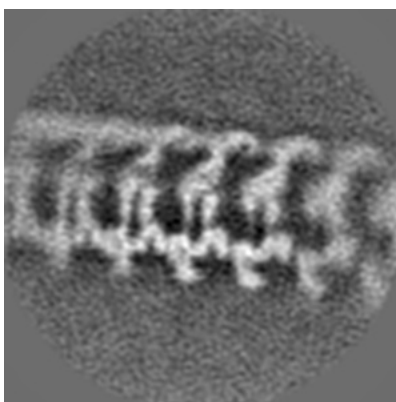


Z Index: 61

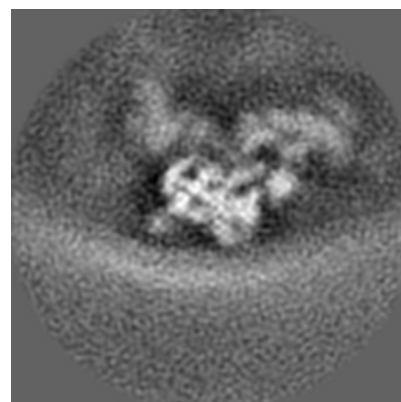
### 6.3.2 Raw map



X Index: 49



Y Index: 63



Z Index: 61

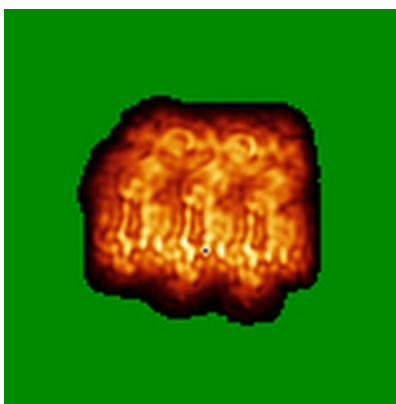
The images above show the largest variance slices of the map in three orthogonal directions.

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

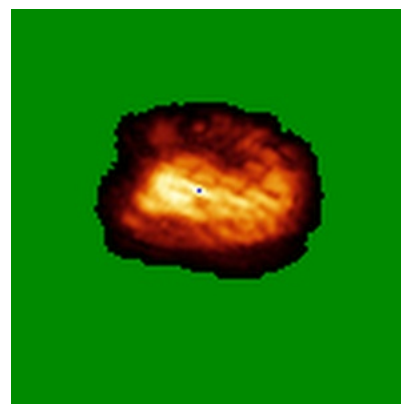
### 6.4.1 Primary map



X

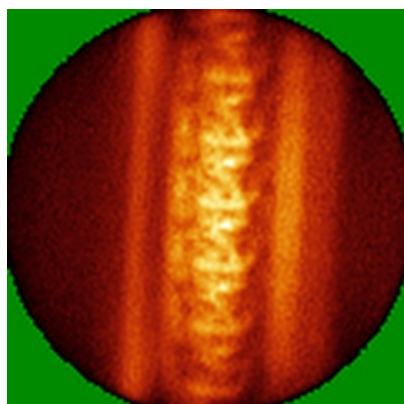


Y

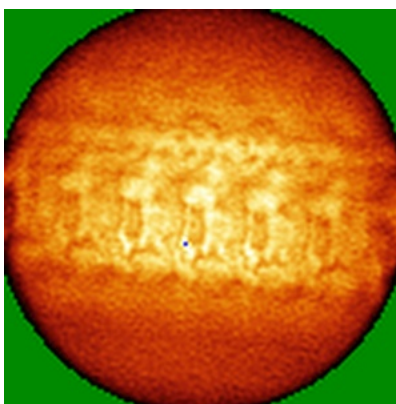


Z

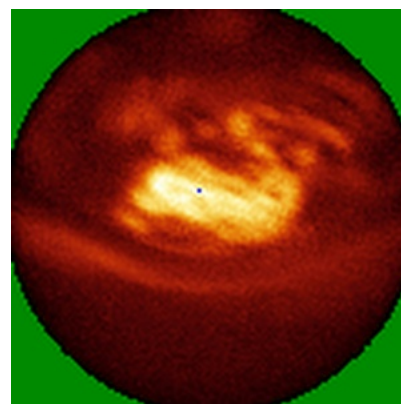
### 6.4.2 Raw map



X



Y

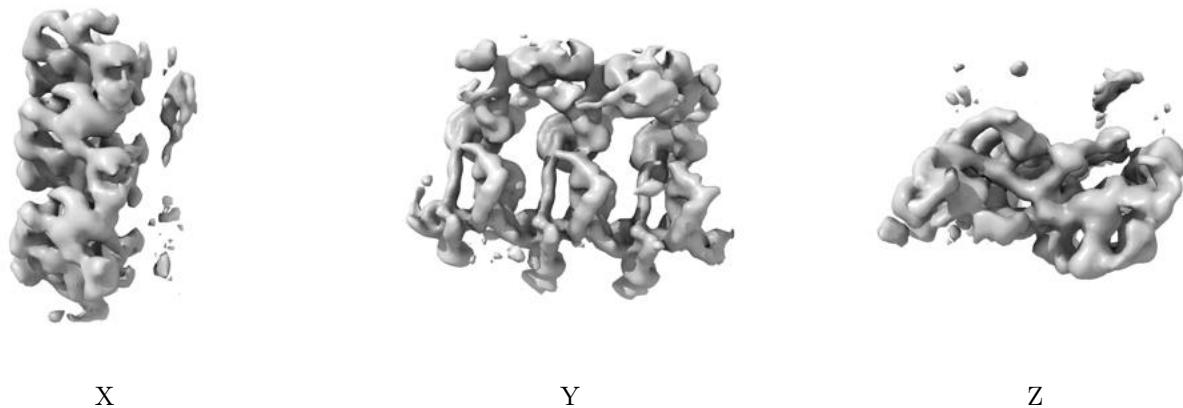


Z

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.

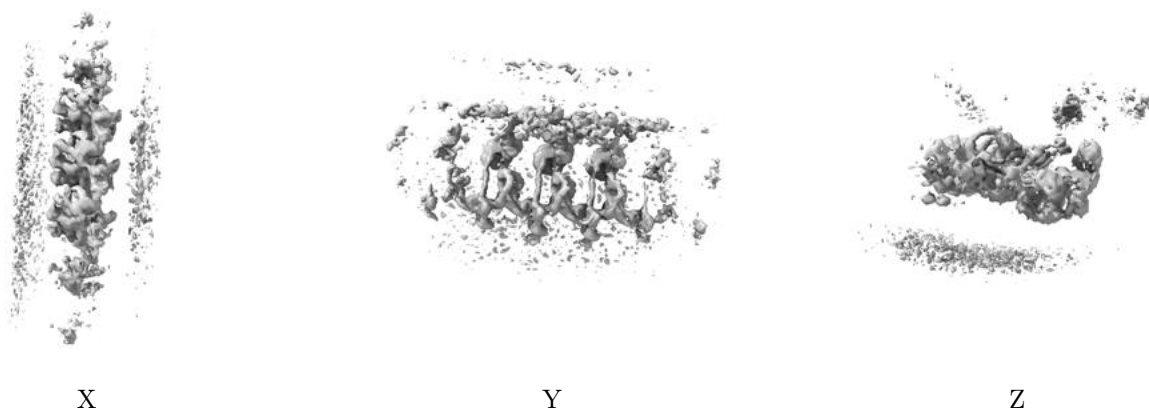
## 6.5 Orthogonal surface views [i](#)

### 6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.5. 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.

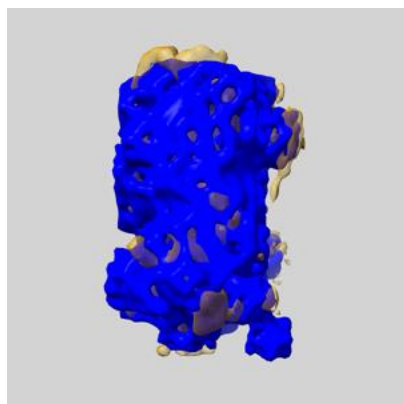
## 6.6 Mask visualisation [i](#)

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

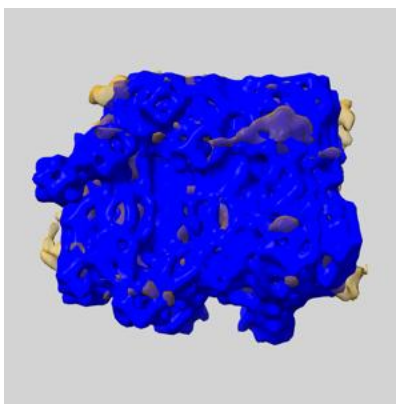
A mask typically either:

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

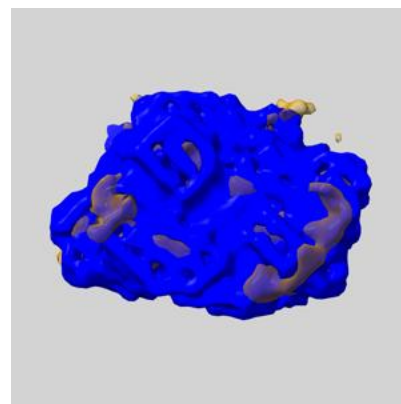
### 6.6.1 emd\_15980\_msk\_1.map [i](#)



X



Y

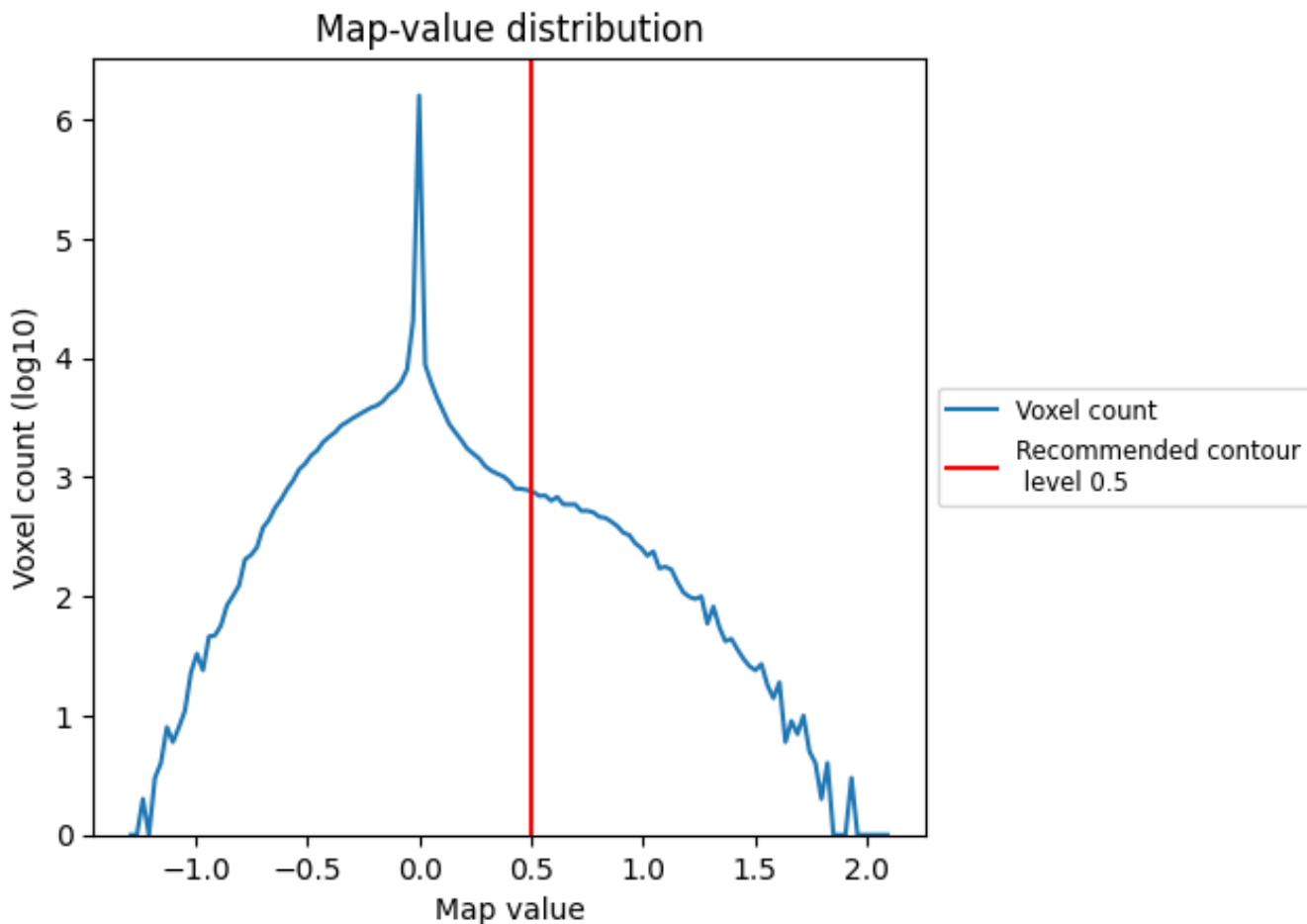


Z

## 7 Map analysis [i](#)

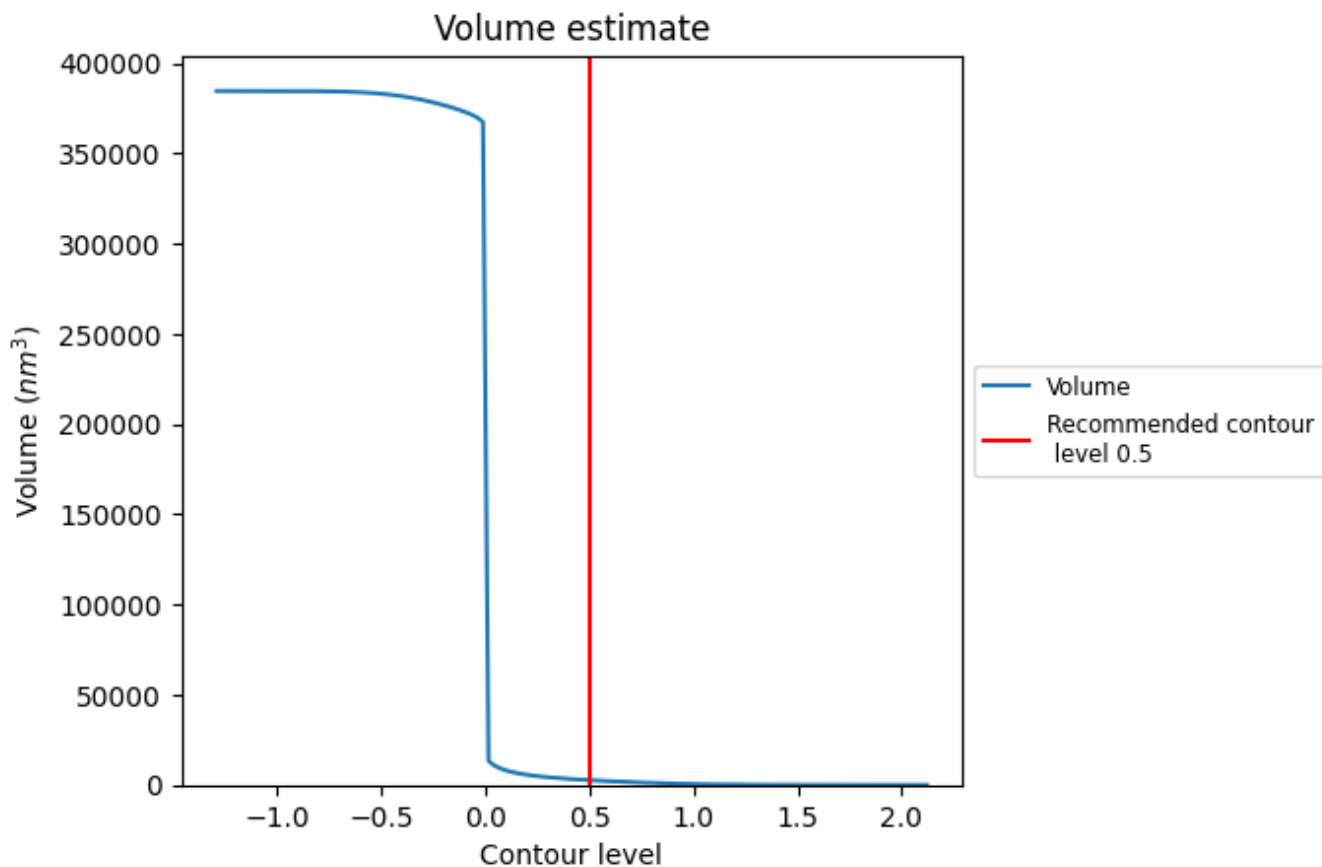
This section contains the results of statistical analysis of the map.

### 7.1 Map-value distribution [i](#)



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

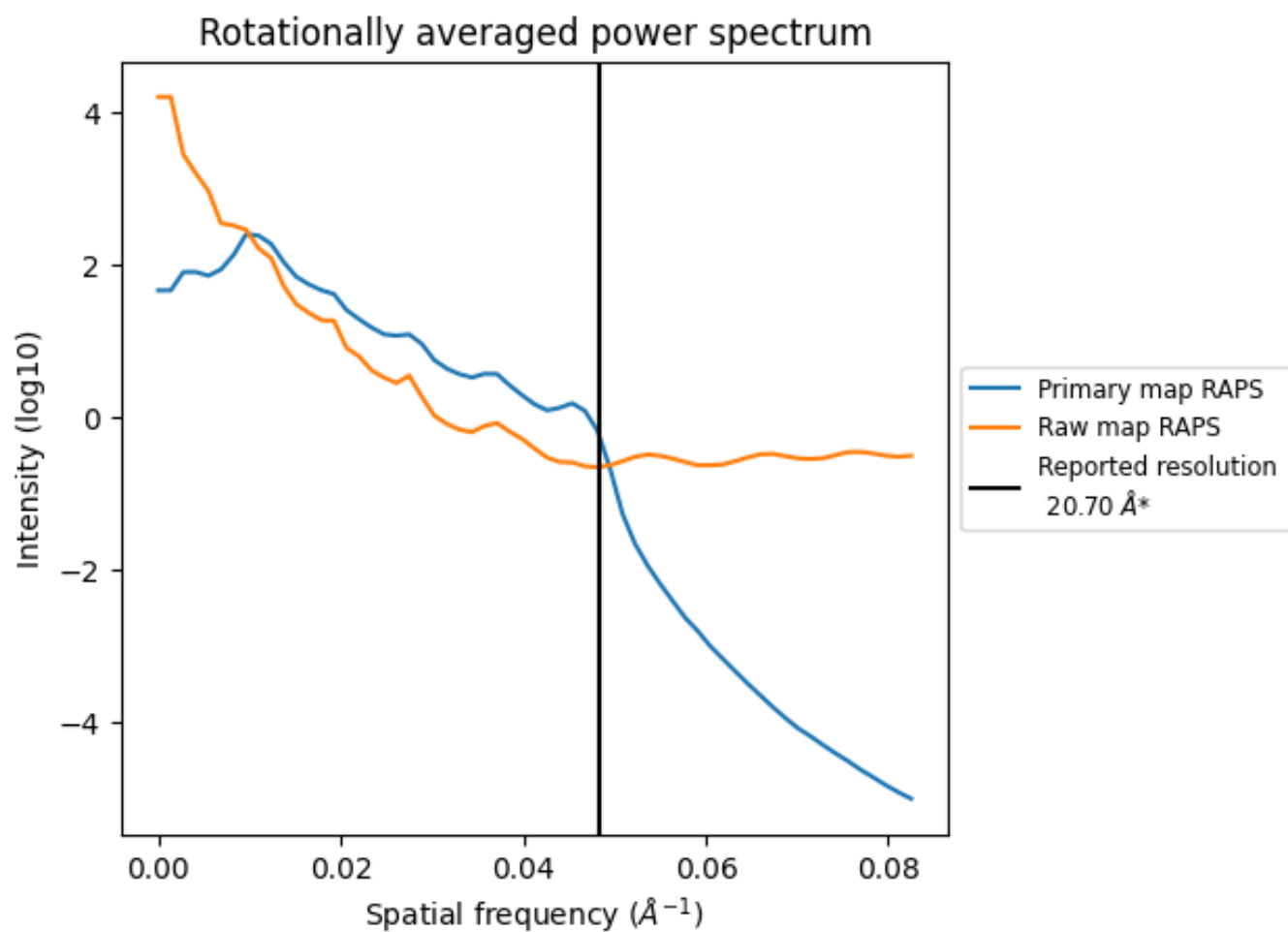
## 7.2 Volume estimate [i](#)



The volume at the recommended contour level is 2681 nm<sup>3</sup>; this corresponds to an approximate mass of 2422 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



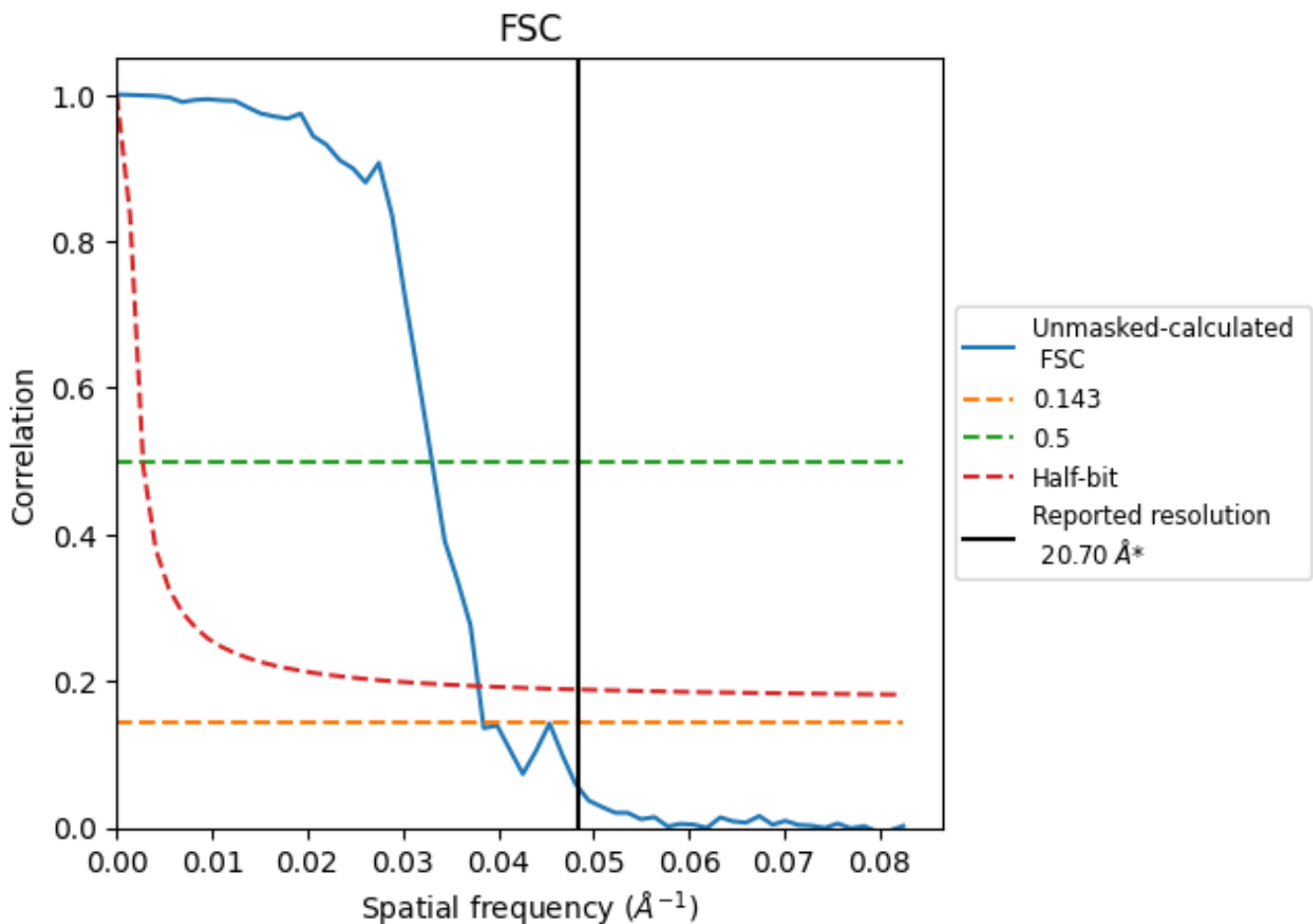
\*Reported resolution corresponds to spatial frequency of 0.048 Å<sup>-1</sup>



## 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 0.048 Å<sup>-1</sup>

## 8.2 Resolution estimates [i](#)

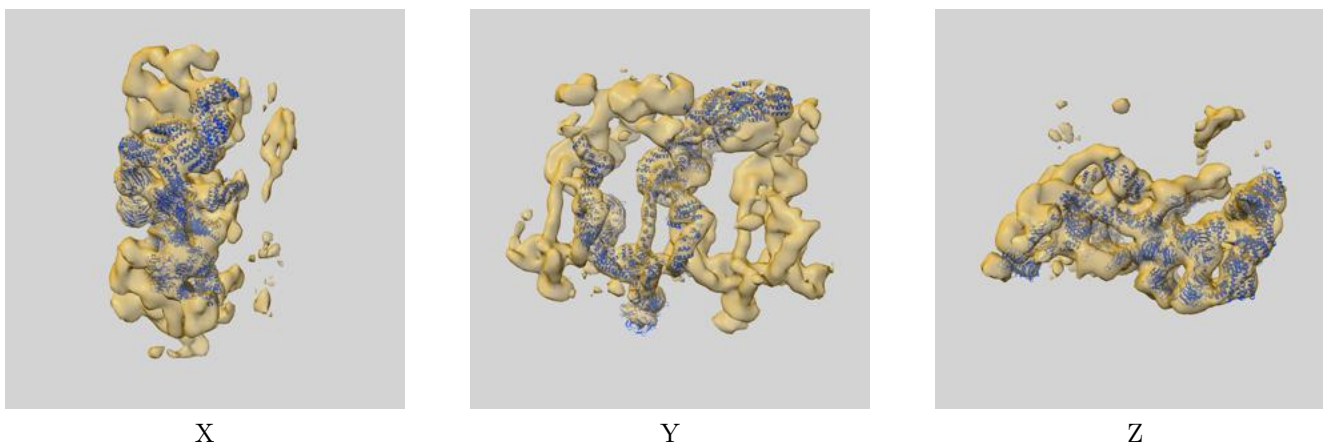
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	20.70	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	26.04	30.21	26.39

\*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 26.04 differs from the reported value 20.7 by more than 10 %

## 9 Map-model fit [i](#)

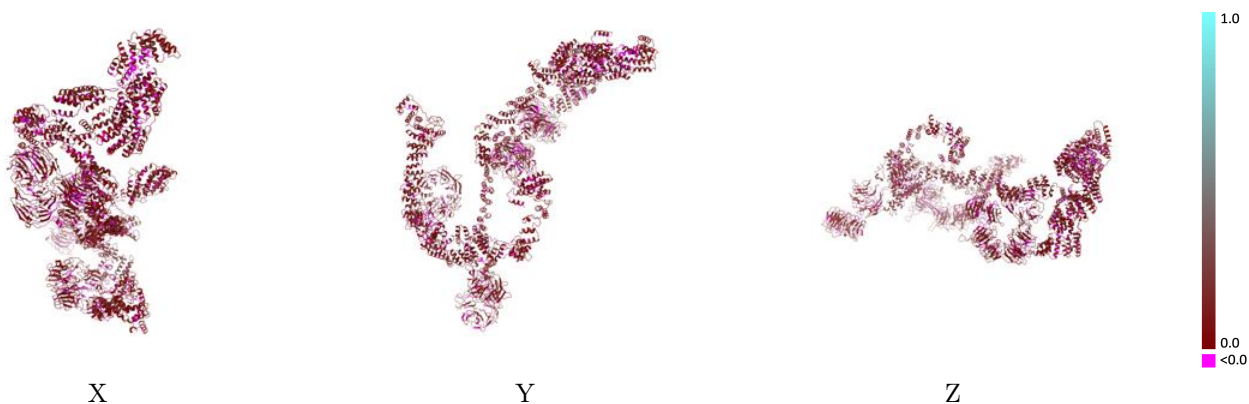
This section contains information regarding the fit between EMDB map EMD-15980 and PDB model 8BDA. Per-residue inclusion information can be found in section 3 on page 4.

### 9.1 Map-model overlay [i](#)



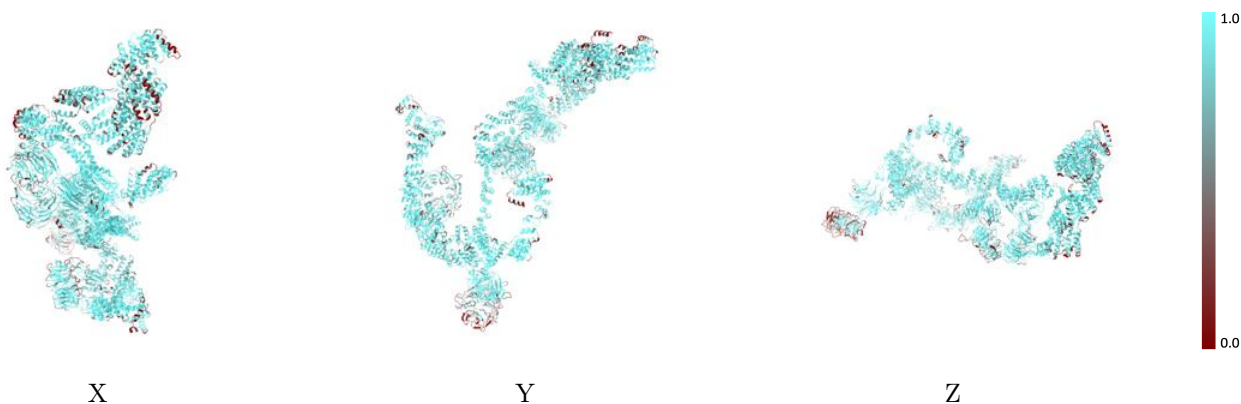
The images above show the 3D surface view of the map at the recommended contour level 0.5 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



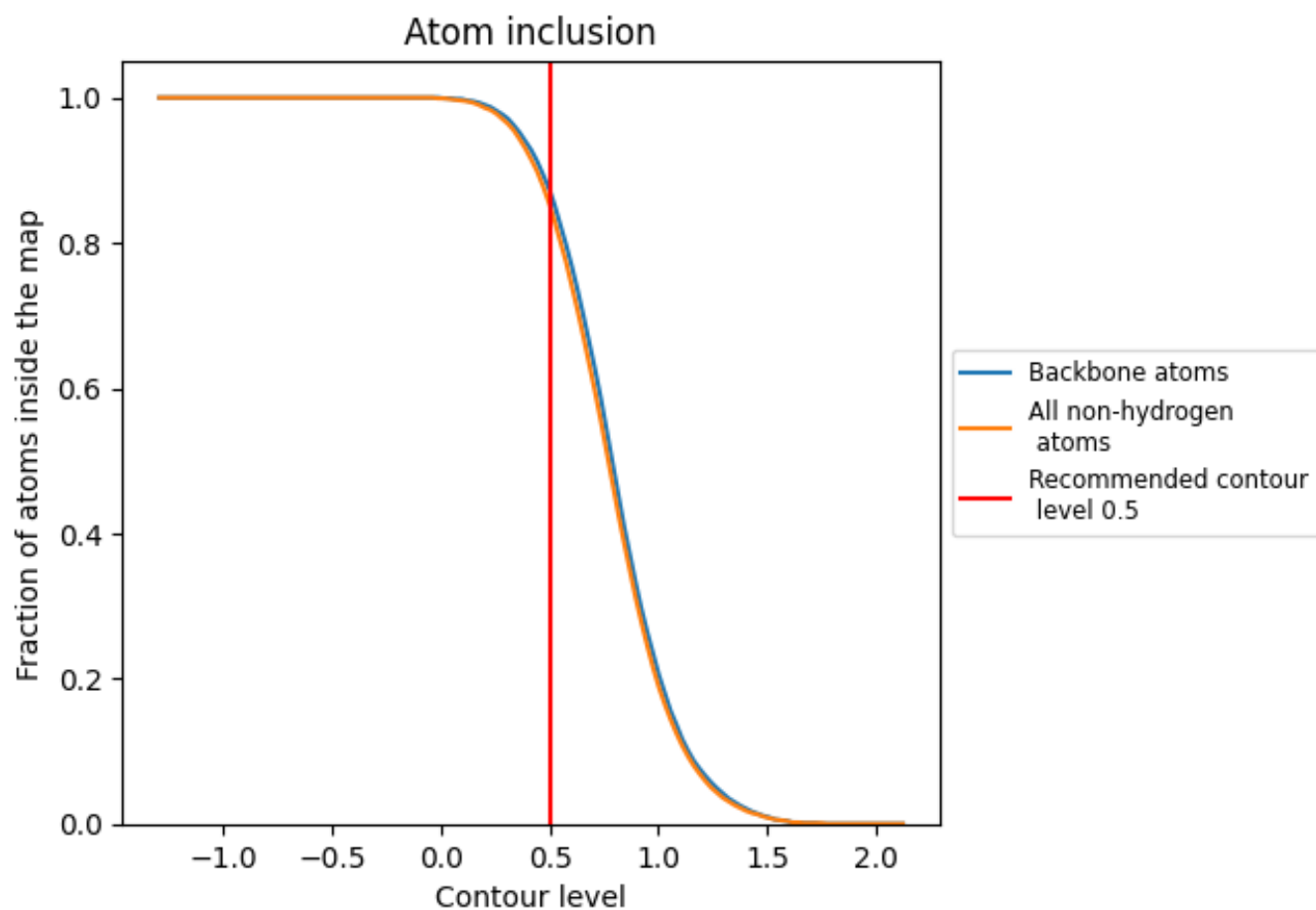
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.5).













## 9.4 Atom inclusion [i](#)



At the recommended contour level, 87% of all backbone atoms, 85% 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 (0.5) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.8530	 0.0800
C	 0.8840	 0.0780
E	 0.8250	 0.0740
G	 0.8790	 0.0840
I	 0.7550	 0.0810
L	 0.9510	 0.0840

