



## wwPDB EM Map/Model Validation Report ⓘ

Jul 28, 2016 – 02:48 PM EDT

PDB ID : 5G4G  
EMDB ID: : EMD-3435  
Title : Structure of the ATPgS-bound VAT complex  
Authors : Huang, R.; Ripstein, Z.A.; Augustyniak, R.; Lazniewski, M.; Ginalski, K.;  
Kay, L.E.; Rubinstein, J.L.  
Deposited on : 2016-05-12  
Resolution : 7.80 Å(reported)

This is a wwPDB EM Map/Model Validation Report for a publicly released PDB/EMDB entry.  
For rigid body fitted models, validation errors reported here could stem from errors in the original structure(s) used in the fitting.  
We welcome your comments at [validation@mail.wwpdb.org](mailto:validation@mail.wwpdb.org)  
A user guide is available at  
<http://wwpdb.org/validation/2016/EMValidationReportHelp>

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MolProbity : 4.02b-467  
Mogul : unknown  
Percentile statistics : 20151230.v01 (using entries in the PDB archive December 30th 2015)  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et. al. (1996)  
Validation Pipeline (wwPDB-VP) : rb-20027939

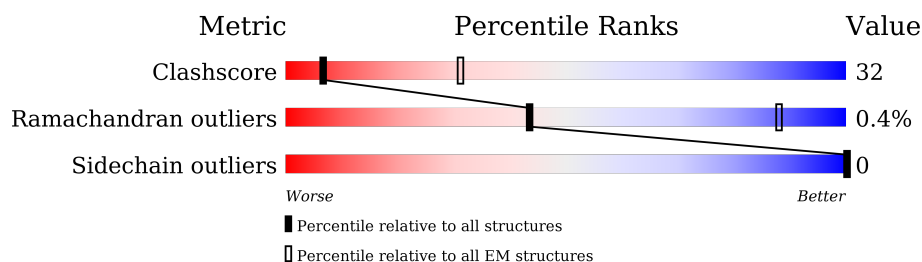
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*ELECTRON MICROSCOPY*

The reported resolution of this entry is 7.80 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	114402	924
Ramachandran outliers	111179	726
Sidechain outliers	111093	686

The table below summarises the geometric issues observed across the polymeric chains. The red, orange, yellow and green segments on the bar indicate the fraction of residues that contain outliers for  $\geq 3$ , 2, 1 and 0 types of geometric quality criteria. 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  $\leq 5\%$ .

Mol	Chain	Length	Quality of chain
1	A	721	63% 37% .
1	B	721	63% 36% .
1	C	721	63% 36% .
1	D	721	63% 37% .
1	E	721	63% 36% .
1	F	721	63% 37% .

## 2 Entry composition

There is only 1 type of molecule in this entry. The entry contains 33462 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.

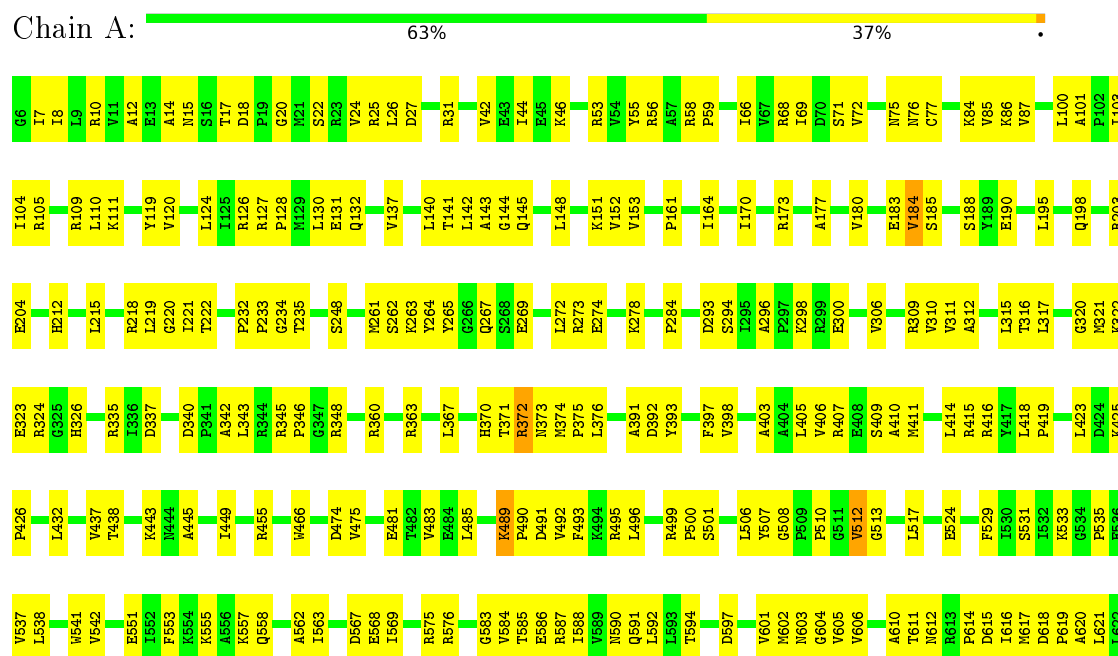
- Molecule 1 is a protein called VCP-LIKE ATPASE.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	721	Total	C	N	O	S	0	0
			5577	3489	990	1078	20		
1	B	721	Total	C	N	O	S	0	0
			5577	3489	990	1078	20		
1	C	721	Total	C	N	O	S	0	0
			5577	3489	990	1078	20		
1	D	721	Total	C	N	O	S	0	0
			5577	3489	990	1078	20		
1	E	721	Total	C	N	O	S	0	0
			5577	3489	990	1078	20		
1	F	721	Total	C	N	O	S	0	0
			5577	3489	990	1078	20		

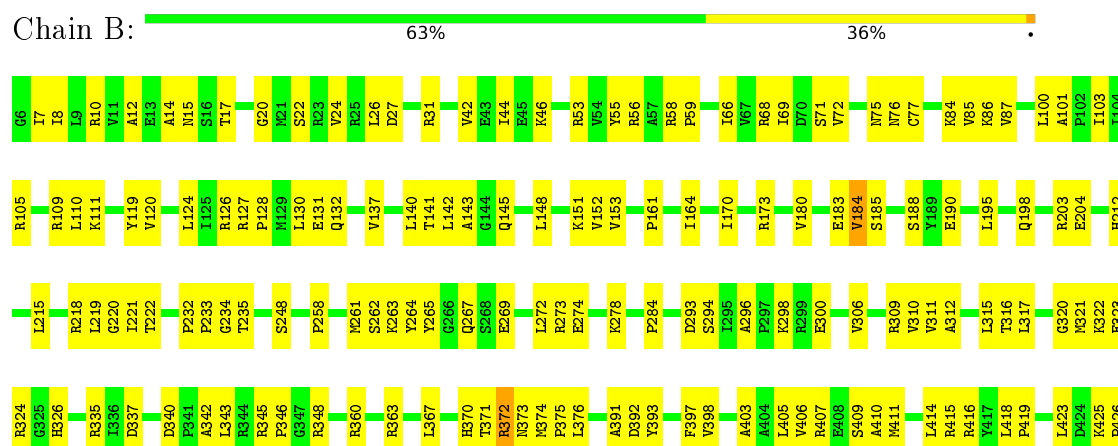
### 3 Residue-property plots

These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of errors displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry. 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. 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: VCP-LIKE ATPASE



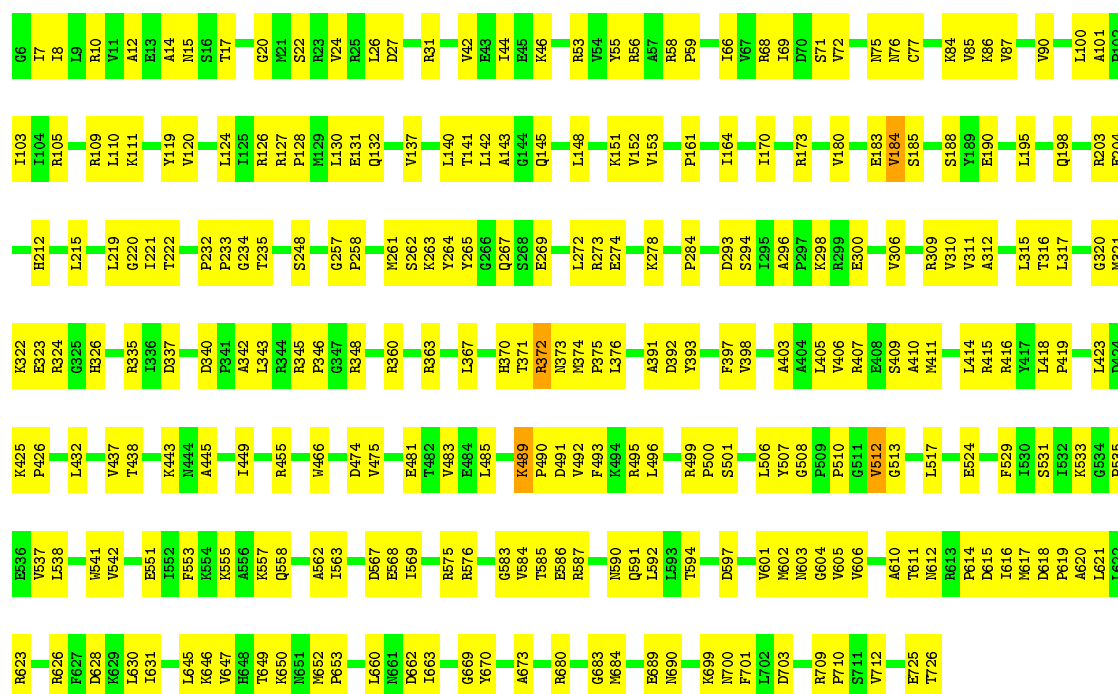
#### • Molecule 1: VCP-LIKE ATPASE





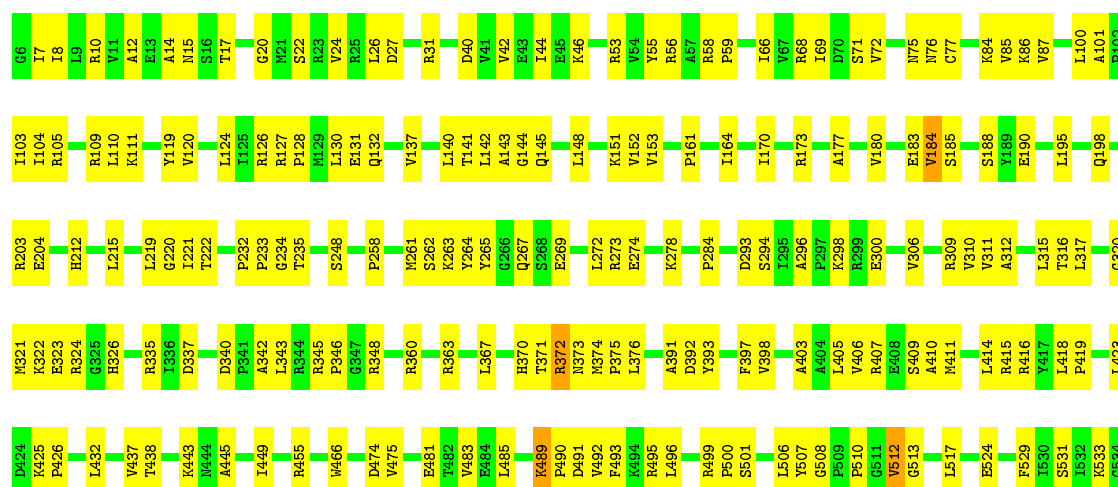
• Molecule 1: VCP-LIKE ATPASE

Chain C: 63% 36%

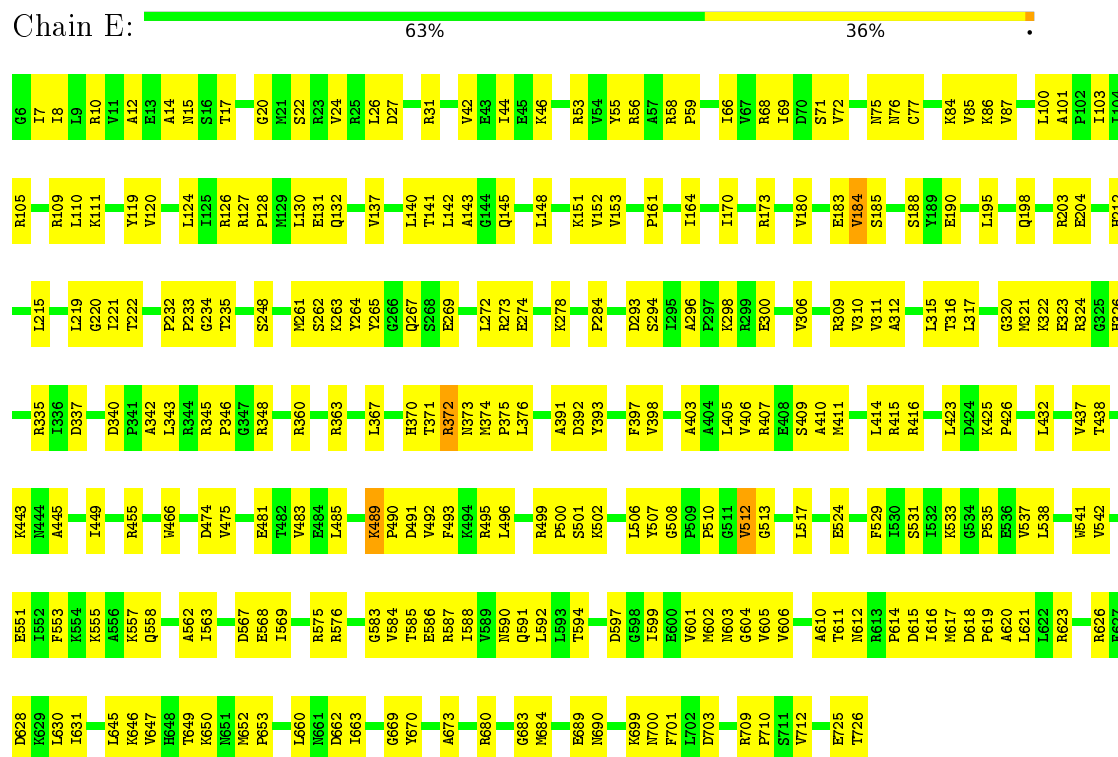


• Molecule 1: VCP-LIKE ATPASE

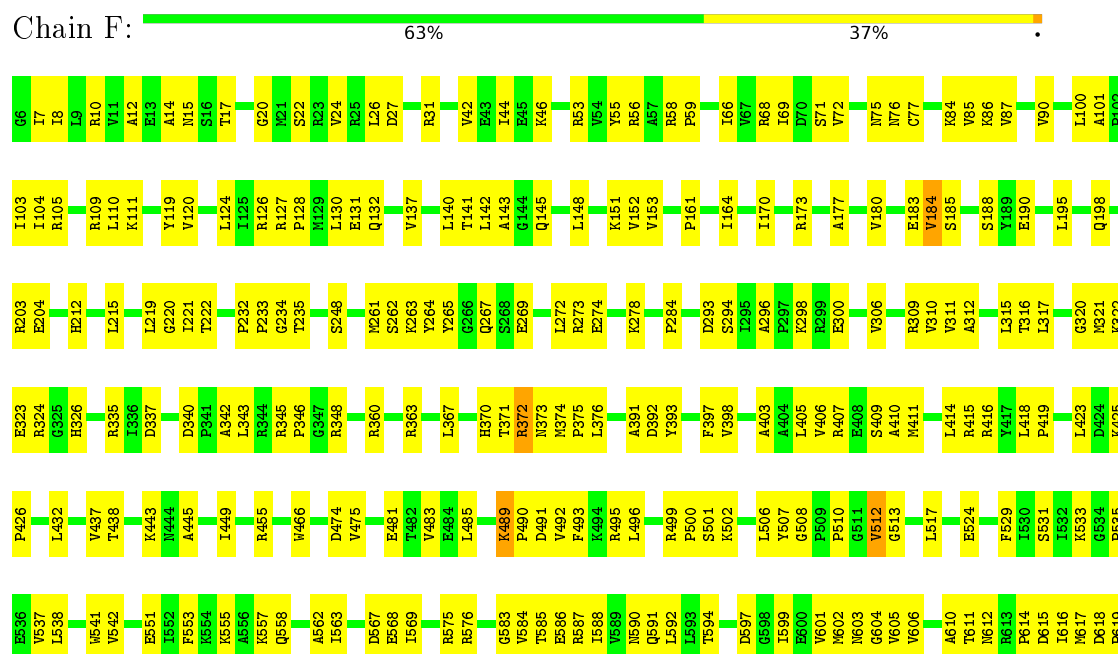
Chain D: 63% 37%



- Molecule 1: VCP-LIKE ATPASE



- Molecule 1: VCP-LIKE ATPASE



L620	L621	L622	L623		R626	R627	D628	R629	L630	L631		L645	R646	R647	R648	R649	R650	R651	R652	R653		L660	R661	D662	L663		G669	Y670		A673		R680		G683	R684		E689	R690		R699	N700	F701	L702	D703		R709	P710	S711	V712		E725	T726
------	------	------	------	--	------	------	------	------	------	------	--	------	------	------	------	------	------	------	------	------	--	------	------	------	------	--	------	------	--	------	--	------	--	------	------	--	------	------	--	------	------	------	------	------	--	------	------	------	------	--	------	------

## 4 Experimental information

Property	Value	Source
Reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	Depositor
Number of particles used	Not provided	Depositor
Resolution determination method	Not provided	Depositor
CTF correction method	EACH MICROGRAPH	Depositor
Microscope	FEI TECNAI F20	Depositor
Voltage (kV)	200	Depositor
Electron dose ( $e^-/\text{\AA}^2$ )	32	Depositor
Minimum defocus (nm)	1800	Depositor
Maximum defocus (nm)	3500	Depositor
Magnification	25000	Depositor
Image detector	GATAN K2 SUMMIT (4K X 4K)	Depositor



## 5 Model quality

### 5.1 Standard geometry

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >2	RMSZ	# Z  >2
1	A	0.25	0/5660	0.48	0/7663
1	B	0.25	0/5660	0.48	0/7663
1	C	0.25	0/5660	0.48	0/7663
1	D	0.25	0/5660	0.48	0/7663
1	E	0.25	0/5660	0.48	0/7663
1	F	0.25	0/5660	0.48	0/7663
All	All	0.25	0/33960	0.48	0/45978

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	3
1	B	0	3
1	C	0	3
1	D	0	3
1	E	0	3
1	F	0	3
All	All	0	18

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (18) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	324	ARG	Peptide
1	A	372	ARG	Peptide
1	A	489	LYS	Peptide

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Mol	Chain	Res	Type	Group
1	B	324	ARG	Peptide
1	B	372	ARG	Peptide
1	B	489	LYS	Peptide
1	C	324	ARG	Peptide
1	C	372	ARG	Peptide
1	C	489	LYS	Peptide
1	D	324	ARG	Peptide
1	D	372	ARG	Peptide
1	D	489	LYS	Peptide
1	E	324	ARG	Peptide
1	E	372	ARG	Peptide
1	E	489	LYS	Peptide
1	F	324	ARG	Peptide
1	F	372	ARG	Peptide
1	F	489	LYS	Peptide

## 5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	5577	0	5500	540	0
1	B	5577	0	5500	535	0
1	C	5577	0	5500	544	0
1	D	5577	0	5500	542	0
1	E	5577	0	5500	531	0
1	F	5577	0	5500	533	0
All	All	33462	0	33000	2129	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 32.

All (2129) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:261:MET:SD	1:E:312:ALA:HA	1.26	1.75
1:A:312:ALA:HA	1:D:261:MET:SD	1.26	1.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:261:MET:SD	1:F:312:ALA:HA	1.26	1.71
1:B:261:MET:SD	1:C:312:ALA:HA	1.26	1.70
1:D:312:ALA:HA	1:F:261:MET:SD	1.26	1.69
1:A:261:MET:SD	1:B:312:ALA:HA	1.26	1.68
1:C:689:GLU:CD	1:E:492:VAL:HG12	1.07	1.45
1:E:689:GLU:CD	1:F:492:VAL:HG12	1.07	1.45
1:A:499:ARG:CB	1:D:680:ARG:NE	1.80	1.45
1:B:680:ARG:NE	1:C:499:ARG:CB	1.80	1.44
1:B:689:GLU:CD	1:C:492:VAL:HG12	1.07	1.44
1:D:492:VAL:HG12	1:F:689:GLU:CD	1.07	1.43
1:D:499:ARG:CB	1:F:680:ARG:NE	1.80	1.43
1:C:680:ARG:NE	1:E:499:ARG:CB	1.80	1.43
1:C:510:PRO:CB	1:E:623:ARG:HH11	1.32	1.42
1:A:680:ARG:NE	1:B:499:ARG:CB	1.80	1.42
1:B:510:PRO:CB	1:C:623:ARG:HH11	1.32	1.42
1:E:680:ARG:NE	1:F:499:ARG:CB	1.80	1.41
1:D:221:ILE:CB	1:F:407:ARG:HG3	1.51	1.40
1:A:510:PRO:CB	1:B:623:ARG:HH11	1.32	1.40
1:E:510:PRO:CB	1:F:623:ARG:HH11	1.32	1.40
1:A:689:GLU:CD	1:B:492:VAL:HG12	1.07	1.40
1:D:623:ARG:HH11	1:F:510:PRO:CB	1.32	1.40
1:A:492:VAL:HG12	1:D:689:GLU:CD	1.07	1.40
1:B:425:LYS:HE3	1:C:212:HIS:ND1	1.37	1.40
1:E:407:ARG:HG3	1:F:221:ILE:CB	1.51	1.40
1:B:407:ARG:HG3	1:C:221:ILE:CB	1.51	1.39
1:A:623:ARG:HH11	1:D:510:PRO:CB	1.32	1.39
1:F:264:TYR:CZ	1:F:267:GLN:NE2	1.90	1.39
1:C:425:LYS:HE3	1:E:212:HIS:ND1	1.37	1.39
1:A:407:ARG:HG3	1:B:221:ILE:CB	1.52	1.39
1:D:264:TYR:CZ	1:D:267:GLN:NE2	1.90	1.39
1:E:264:TYR:CZ	1:E:267:GLN:NE2	1.90	1.38
1:A:499:ARG:HB2	1:D:680:ARG:CZ	1.54	1.38
1:C:407:ARG:HG3	1:E:221:ILE:CB	1.52	1.38
1:A:221:ILE:CB	1:D:407:ARG:HG3	1.52	1.37
1:A:680:ARG:NE	1:B:499:ARG:HB3	1.05	1.37
1:A:264:TYR:CZ	1:A:267:GLN:NE2	1.91	1.37
1:D:489:LYS:NZ	1:F:689:GLU:O	1.57	1.37
1:A:212:HIS:ND1	1:D:425:LYS:HE3	1.37	1.37
1:D:499:ARG:HB2	1:F:680:ARG:CZ	1.54	1.37
1:E:425:LYS:HE3	1:F:212:HIS:ND1	1.37	1.37
1:B:680:ARG:CZ	1:C:499:ARG:HB2	1.54	1.37

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:499:ARG:HB3	1:F:680:ARG:NE	1.05	1.37
1:D:212:HIS:ND1	1:F:425:LYS:HE3	1.37	1.36
1:B:264:TYR:CZ	1:B:267:GLN:NE2	1.90	1.36
1:A:425:LYS:HE3	1:B:212:HIS:ND1	1.37	1.36
1:C:264:TYR:CZ	1:C:267:GLN:NE2	1.91	1.36
1:B:143:ALA:N	1:C:220:GLY:O	1.59	1.36
1:A:680:ARG:CZ	1:B:499:ARG:CB	2.04	1.36
1:A:499:ARG:CB	1:D:680:ARG:CZ	2.04	1.35
1:E:680:ARG:CZ	1:F:499:ARG:HB2	1.54	1.35
1:B:261:MET:SD	1:C:312:ALA:CA	2.07	1.35
1:C:680:ARG:CZ	1:E:499:ARG:HB2	1.54	1.35
1:B:689:GLU:O	1:C:489:LYS:NZ	1.57	1.35
1:D:499:ARG:CB	1:F:680:ARG:CZ	2.04	1.35
1:C:143:ALA:N	1:E:220:GLY:O	1.59	1.35
1:A:680:ARG:CZ	1:B:499:ARG:HB2	1.54	1.35
1:E:143:ALA:N	1:F:220:GLY:O	1.59	1.35
1:C:680:ARG:NE	1:E:499:ARG:HB3	1.05	1.34
1:A:499:ARG:HB3	1:D:680:ARG:NE	1.05	1.34
1:D:312:ALA:CA	1:F:261:MET:SD	2.07	1.34
1:B:680:ARG:NE	1:C:499:ARG:HB3	1.05	1.34
1:A:220:GLY:O	1:D:143:ALA:N	1.59	1.34
1:E:680:ARG:NE	1:F:499:ARG:HB3	1.05	1.34
1:A:689:GLU:O	1:B:489:LYS:NZ	1.57	1.33
1:A:143:ALA:N	1:B:220:GLY:O	1.59	1.33
1:B:680:ARG:CD	1:C:499:ARG:HB3	1.59	1.33
1:D:220:GLY:O	1:F:143:ALA:N	1.59	1.33
1:A:680:ARG:CD	1:B:499:ARG:HB3	1.59	1.33
1:B:680:ARG:CZ	1:C:499:ARG:CB	2.04	1.33
1:E:680:ARG:CZ	1:F:499:ARG:CB	2.04	1.33
1:A:489:LYS:NZ	1:D:689:GLU:O	1.57	1.33
1:A:590:ASN:CB	1:D:538:LEU:HD13	1.59	1.32
1:E:689:GLU:O	1:F:489:LYS:NZ	1.57	1.32
1:A:538:LEU:HD13	1:B:590:ASN:CB	1.59	1.32
1:C:689:GLU:O	1:E:489:LYS:NZ	1.57	1.32
1:C:538:LEU:HD13	1:E:590:ASN:CB	1.59	1.32
1:D:492:VAL:HG12	1:F:689:GLU:OE1	1.16	1.32
1:C:680:ARG:CD	1:E:499:ARG:HB3	1.59	1.32
1:C:680:ARG:CZ	1:E:499:ARG:CB	2.04	1.31
1:A:499:ARG:HB3	1:D:680:ARG:CD	1.59	1.31
1:E:538:LEU:HD13	1:F:590:ASN:CB	1.59	1.31
1:E:680:ARG:CD	1:F:499:ARG:HB3	1.58	1.31

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:499:ARG:HB3	1:F:680:ARG:CD	1.58	1.31
1:A:590:ASN:HB2	1:D:538:LEU:CD1	1.60	1.31
1:E:538:LEU:CD1	1:F:590:ASN:HB2	1.60	1.30
1:C:261:MET:SD	1:E:312:ALA:CA	2.07	1.30
1:B:538:LEU:HD13	1:C:590:ASN:CB	1.59	1.30
1:B:538:LEU:CD1	1:C:590:ASN:HB2	1.60	1.30
1:D:590:ASN:HB2	1:F:538:LEU:CD1	1.60	1.30
1:A:538:LEU:CD1	1:B:590:ASN:HB2	1.60	1.29
1:C:538:LEU:CD1	1:E:590:ASN:HB2	1.60	1.29
1:D:590:ASN:CB	1:F:538:LEU:HD13	1.59	1.29
1:B:689:GLU:OE1	1:C:492:VAL:HG12	1.16	1.28
1:C:689:GLU:OE1	1:E:492:VAL:HG12	1.16	1.27
1:C:689:GLU:CD	1:E:492:VAL:CG1	2.03	1.27
1:B:689:GLU:CD	1:C:492:VAL:CG1	2.02	1.27
1:E:689:GLU:CD	1:F:492:VAL:CG1	2.03	1.27
1:D:492:VAL:CG1	1:F:689:GLU:CD	2.03	1.27
1:A:689:GLU:OE1	1:B:492:VAL:HG12	1.16	1.27
1:E:261:MET:SD	1:F:312:ALA:CA	2.07	1.27
1:A:492:VAL:HG12	1:D:689:GLU:OE1	1.16	1.26
1:D:499:ARG:HD3	1:F:680:ARG:NH2	1.50	1.26
1:B:652:MET:CG	1:C:496:LEU:O	1.84	1.26
1:C:652:MET:CG	1:E:496:LEU:O	1.84	1.26
1:A:312:ALA:CA	1:D:261:MET:SD	2.07	1.25
1:A:499:ARG:HD3	1:D:680:ARG:NH2	1.50	1.25
1:A:689:GLU:CD	1:B:492:VAL:CG1	2.02	1.25
1:E:689:GLU:OE1	1:F:492:VAL:HG12	1.16	1.25
1:A:492:VAL:CG1	1:D:689:GLU:CD	2.03	1.25
1:B:680:ARG:NH2	1:C:499:ARG:HD3	1.50	1.25
1:A:680:ARG:NH2	1:B:499:ARG:HD3	1.50	1.25
1:E:680:ARG:NH2	1:F:499:ARG:HD3	1.50	1.25
1:A:499:ARG:NE	1:D:680:ARG:HE	1.34	1.25
1:D:499:ARG:NE	1:F:680:ARG:HE	1.34	1.24
1:E:652:MET:CG	1:F:496:LEU:O	1.84	1.24
1:A:261:MET:SD	1:B:312:ALA:CA	2.07	1.24
1:A:680:ARG:HE	1:B:499:ARG:NE	1.34	1.24
1:A:652:MET:CG	1:B:496:LEU:O	1.84	1.24
1:B:680:ARG:HE	1:C:499:ARG:NE	1.35	1.23
1:E:680:ARG:HE	1:F:499:ARG:NE	1.34	1.23
1:A:496:LEU:O	1:D:652:MET:CG	1.84	1.23
1:C:680:ARG:NH2	1:E:499:ARG:HD3	1.50	1.23
1:D:496:LEU:O	1:F:652:MET:CG	1.84	1.23

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:680:ARG:HE	1:E:499:ARG:NE	1.34	1.23
1:D:492:VAL:CG1	1:F:689:GLU:OE1	1.90	1.19
1:A:689:GLU:OE1	1:B:492:VAL:CG1	1.90	1.19
1:E:499:ARG:CG	1:E:500:PRO:HD2	1.73	1.18
1:A:492:VAL:CG1	1:D:689:GLU:OE1	1.90	1.18
1:F:499:ARG:CG	1:F:500:PRO:HD2	1.73	1.18
1:B:689:GLU:OE1	1:C:492:VAL:CG1	1.90	1.17
1:C:499:ARG:CG	1:C:500:PRO:HD2	1.73	1.17
1:A:680:ARG:HH21	1:B:499:ARG:CD	1.58	1.17
1:B:680:ARG:HH21	1:C:499:ARG:CD	1.58	1.17
1:D:496:LEU:O	1:F:652:MET:HG2	0.99	1.17
1:D:499:ARG:CG	1:D:500:PRO:HD2	1.73	1.17
1:A:496:LEU:O	1:D:652:MET:HG2	0.99	1.17
1:A:499:ARG:CD	1:D:680:ARG:HH21	1.58	1.17
1:C:652:MET:HG2	1:E:496:LEU:O	0.99	1.17
1:C:689:GLU:OE1	1:E:492:VAL:CG1	1.90	1.16
1:E:652:MET:HG2	1:F:496:LEU:O	0.99	1.16
1:C:680:ARG:HH21	1:E:499:ARG:CD	1.58	1.16
1:B:499:ARG:CG	1:B:500:PRO:HD2	1.73	1.16
1:A:499:ARG:CG	1:A:500:PRO:HD2	1.73	1.16
1:B:652:MET:HG2	1:C:496:LEU:O	0.99	1.16
1:E:689:GLU:OE1	1:F:492:VAL:CG1	1.90	1.15
1:D:499:ARG:CD	1:F:680:ARG:HH21	1.58	1.15
1:A:652:MET:HG2	1:B:496:LEU:O	0.99	1.15
1:E:680:ARG:HH21	1:F:499:ARG:CD	1.58	1.14
1:A:407:ARG:CG	1:B:221:ILE:HB	1.77	1.14
1:D:538:LEU:HD23	1:D:541:TRP:HE1	1.13	1.14
1:B:407:ARG:CG	1:C:221:ILE:HB	1.77	1.13
1:D:594:THR:OG1	1:F:535:PRO:HA	1.49	1.13
1:A:542:VAL:HG11	1:B:591:GLN:HE21	1.14	1.12
1:A:594:THR:OG1	1:D:535:PRO:HA	1.49	1.12
1:A:221:ILE:HB	1:D:407:ARG:CG	1.77	1.12
1:D:315:LEU:HD12	1:F:261:MET:CE	1.80	1.12
1:D:221:ILE:HB	1:F:407:ARG:CG	1.77	1.12
1:E:407:ARG:CG	1:F:221:ILE:HB	1.77	1.12
1:E:535:PRO:HA	1:F:594:THR:OG1	1.49	1.12
1:C:407:ARG:CG	1:E:221:ILE:HB	1.77	1.12
1:D:726:THR:HA	1:F:709:ARG:CZ	1.59	1.12
1:C:535:PRO:HA	1:E:594:THR:OG1	1.49	1.12
1:E:425:LYS:HE2	1:F:212:HIS:HB3	1.31	1.12
1:A:315:LEU:HD12	1:D:261:MET:CE	1.80	1.11

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:425:LYS:HE2	1:E:212:HIS:HB3	1.31	1.11
1:E:425:LYS:CE	1:F:212:HIS:CG	2.33	1.11
1:E:542:VAL:HG11	1:F:591:GLN:HE21	1.14	1.11
1:F:264:TYR:OH	1:F:267:GLN:NE2	1.82	1.11
1:A:623:ARG:NH1	1:D:510:PRO:HB3	1.39	1.11
1:C:542:VAL:HG11	1:E:591:GLN:HE21	1.14	1.11
1:D:212:HIS:CG	1:F:425:LYS:CE	2.33	1.11
1:E:538:LEU:HD23	1:E:541:TRP:HE1	1.13	1.11
1:E:261:MET:CE	1:F:315:LEU:HD12	1.80	1.11
1:D:489:LYS:HE3	1:F:690:ASN:HB3	1.24	1.11
1:B:264:TYR:OH	1:B:267:GLN:NE2	1.82	1.11
1:B:538:LEU:HD23	1:B:541:TRP:HE1	1.13	1.11
1:A:535:PRO:HA	1:B:594:THR:OG1	1.49	1.11
1:B:261:MET:CE	1:C:315:LEU:HD12	1.80	1.11
1:A:726:THR:HA	1:D:709:ARG:CZ	1.58	1.11
1:C:690:ASN:HB3	1:E:489:LYS:HE3	1.24	1.10
1:A:489:LYS:HE3	1:D:690:ASN:HB3	1.24	1.10
1:A:261:MET:CE	1:B:315:LEU:HD12	1.80	1.10
1:A:212:HIS:CG	1:D:425:LYS:CE	2.33	1.10
1:A:709:ARG:CZ	1:B:726:THR:HA	1.58	1.10
1:C:261:MET:CE	1:E:315:LEU:HD12	1.80	1.10
1:E:510:PRO:HB3	1:F:623:ARG:NH1	1.39	1.10
1:A:264:TYR:OH	1:A:267:GLN:NE2	1.82	1.10
1:C:425:LYS:CE	1:E:212:HIS:CG	2.33	1.10
1:B:425:LYS:HE2	1:C:212:HIS:HB3	1.31	1.10
1:D:591:GLN:HE21	1:F:542:VAL:HG11	1.14	1.10
1:A:425:LYS:CE	1:B:212:HIS:CG	2.33	1.10
1:B:425:LYS:CE	1:C:212:HIS:CG	2.33	1.10
1:D:264:TYR:OH	1:D:267:GLN:NE2	1.82	1.10
1:E:264:TYR:OH	1:E:267:GLN:NE2	1.82	1.10
1:C:264:TYR:OH	1:C:267:GLN:NE2	1.82	1.10
1:A:591:GLN:HE21	1:D:542:VAL:HG11	1.14	1.09
1:D:212:HIS:HB3	1:F:425:LYS:HE2	1.32	1.08
1:D:623:ARG:NH1	1:F:510:PRO:HB3	1.39	1.08
1:B:690:ASN:HB3	1:C:489:LYS:HE3	1.24	1.08
1:B:542:VAL:HG11	1:C:591:GLN:HE21	1.14	1.08
1:B:535:PRO:HA	1:C:594:THR:OG1	1.49	1.08
1:B:709:ARG:CZ	1:C:726:THR:HA	1.58	1.08
1:F:538:LEU:HD23	1:F:541:TRP:HE1	1.13	1.08
1:A:538:LEU:HD23	1:A:541:TRP:HE1	1.13	1.08
1:A:407:ARG:HG3	1:B:221:ILE:CG2	1.84	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:221:ILE:CG2	1:F:407:ARG:HG3	1.84	1.07
1:C:510:PRO:HB3	1:E:623:ARG:NH1	1.39	1.07
1:D:499:ARG:HG3	1:D:500:PRO:HD2	1.36	1.07
1:E:407:ARG:HG3	1:F:221:ILE:CG2	1.84	1.07
1:A:212:HIS:ND1	1:D:425:LYS:CE	2.18	1.07
1:A:425:LYS:HE2	1:B:212:HIS:HB3	1.32	1.07
1:A:690:ASN:HB3	1:B:489:LYS:HE3	1.24	1.07
1:D:212:HIS:ND1	1:F:425:LYS:CE	2.18	1.07
1:E:690:ASN:HB3	1:F:489:LYS:HE3	1.24	1.06
1:E:425:LYS:CE	1:F:212:HIS:ND1	2.18	1.06
1:A:212:HIS:HB3	1:D:425:LYS:HE2	1.31	1.06
1:E:499:ARG:HG3	1:E:500:PRO:HD2	1.36	1.06
1:C:709:ARG:CZ	1:E:726:THR:HA	1.58	1.06
1:C:407:ARG:HG3	1:E:221:ILE:CG2	1.84	1.06
1:A:425:LYS:CE	1:B:212:HIS:ND1	2.18	1.06
1:E:709:ARG:CZ	1:F:726:THR:HA	1.59	1.06
1:B:407:ARG:HG3	1:C:221:ILE:CG2	1.84	1.06
1:A:221:ILE:CG2	1:D:407:ARG:HG3	1.84	1.06
1:A:499:ARG:HG3	1:A:500:PRO:HD2	1.36	1.06
1:C:425:LYS:CE	1:E:212:HIS:ND1	2.18	1.05
1:C:499:ARG:HG3	1:C:500:PRO:HD2	1.36	1.05
1:B:425:LYS:CE	1:C:212:HIS:ND1	2.18	1.04
1:F:499:ARG:HG3	1:F:500:PRO:HD2	1.36	1.04
1:B:499:ARG:HG3	1:B:500:PRO:HD2	1.36	1.04
1:C:538:LEU:HD23	1:C:541:TRP:HE1	1.13	1.03
1:B:510:PRO:HB3	1:C:623:ARG:NH1	1.39	1.03
1:C:425:LYS:HE2	1:E:212:HIS:CB	1.89	1.03
1:A:212:HIS:CB	1:D:425:LYS:HE2	1.89	1.03
1:E:510:PRO:HB3	1:F:623:ARG:HH11	0.91	1.03
1:B:425:LYS:HE2	1:C:212:HIS:CB	1.89	1.02
1:E:425:LYS:HE2	1:F:212:HIS:CB	1.89	1.02
1:A:510:PRO:HB3	1:B:623:ARG:NH1	1.39	1.02
1:B:538:LEU:HD22	1:C:590:ASN:ND2	1.75	1.02
1:D:212:HIS:CB	1:F:425:LYS:HE2	1.89	1.02
1:C:538:LEU:HD22	1:E:590:ASN:ND2	1.75	1.01
1:D:623:ARG:HH11	1:F:510:PRO:HB3	0.91	1.01
1:A:425:LYS:HE2	1:B:212:HIS:CB	1.89	1.01
1:C:510:PRO:HB3	1:E:623:ARG:HH11	0.91	1.01
1:E:510:PRO:CB	1:F:623:ARG:NH1	2.05	1.01
1:D:212:HIS:CG	1:F:425:LYS:HE2	1.96	1.01
1:C:425:LYS:HE2	1:E:212:HIS:CG	1.96	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:538:LEU:HD22	1:B:590:ASN:ND2	1.75	1.00
1:D:590:ASN:ND2	1:F:541:TRP:CZ2	2.30	1.00
1:A:590:ASN:ND2	1:D:538:LEU:HD22	1.75	1.00
1:D:590:ASN:ND2	1:F:538:LEU:HD22	1.75	1.00
1:E:425:LYS:HE2	1:F:212:HIS:CG	1.96	1.00
1:F:499:ARG:HG2	1:F:500:PRO:HD2	1.43	1.00
1:A:541:TRP:CZ2	1:B:590:ASN:ND2	2.30	1.00
1:A:425:LYS:HE2	1:B:212:HIS:CG	1.96	1.00
1:B:425:LYS:HE2	1:C:212:HIS:CG	1.96	1.00
1:A:590:ASN:ND2	1:D:541:TRP:CZ2	2.30	1.00
1:A:212:HIS:CG	1:D:425:LYS:HE2	1.96	1.00
1:A:510:PRO:HB3	1:B:623:ARG:HH11	0.91	1.00
1:E:499:ARG:HG2	1:E:500:PRO:HD2	1.43	0.99
1:B:541:TRP:CZ2	1:C:590:ASN:ND2	2.30	0.99
1:C:541:TRP:CZ2	1:E:590:ASN:ND2	2.30	0.99
1:E:541:TRP:CZ2	1:F:590:ASN:ND2	2.30	0.99
1:E:407:ARG:HG3	1:F:221:ILE:HB	1.00	0.99
1:E:538:LEU:HD22	1:F:590:ASN:ND2	1.75	0.99
1:A:623:ARG:HH11	1:D:510:PRO:HB3	0.91	0.98
1:B:542:VAL:HG11	1:C:591:GLN:NE2	1.79	0.98
1:B:407:ARG:HG3	1:C:221:ILE:HB	1.00	0.98
1:B:510:PRO:HB3	1:C:623:ARG:HH11	0.91	0.98
1:D:499:ARG:HG2	1:D:500:PRO:HD2	1.43	0.98
1:E:542:VAL:HG11	1:F:591:GLN:NE2	1.79	0.98
1:D:221:ILE:HB	1:F:407:ARG:HG3	1.00	0.98
1:C:407:ARG:HG3	1:E:221:ILE:HB	1.00	0.97
1:D:623:ARG:NH1	1:F:510:PRO:CB	2.05	0.97
1:A:407:ARG:HG3	1:B:221:ILE:HB	1.00	0.97
1:E:261:MET:SD	1:F:315:LEU:HD12	2.05	0.97
1:D:591:GLN:NE2	1:F:542:VAL:HG11	1.79	0.97
1:D:315:LEU:HD12	1:F:261:MET:SD	2.05	0.97
1:C:499:ARG:HG2	1:C:500:PRO:HD2	1.43	0.97
1:C:542:VAL:HG11	1:E:591:GLN:NE2	1.79	0.97
1:A:221:ILE:CB	1:D:407:ARG:CG	2.40	0.97
1:A:542:VAL:HG11	1:B:591:GLN:NE2	1.79	0.97
1:D:492:VAL:C	1:F:689:GLU:OE2	2.03	0.97
1:E:689:GLU:OE2	1:F:492:VAL:C	2.03	0.97
1:A:261:MET:SD	1:B:315:LEU:HD12	2.05	0.96
1:A:315:LEU:HD12	1:D:261:MET:SD	2.05	0.96
1:B:261:MET:SD	1:C:315:LEU:HD12	2.05	0.96
1:B:407:ARG:CG	1:C:221:ILE:CB	2.40	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:492:VAL:C	1:D:689:GLU:OE2	2.04	0.96
1:A:221:ILE:HB	1:D:407:ARG:HG3	1.00	0.96
1:C:261:MET:SD	1:E:315:LEU:HD12	2.05	0.96
1:C:689:GLU:OE2	1:E:492:VAL:C	2.03	0.96
1:A:591:GLN:NE2	1:D:542:VAL:HG11	1.79	0.96
1:A:407:ARG:CG	1:B:221:ILE:CB	2.40	0.96
1:A:499:ARG:HG2	1:A:500:PRO:HD2	1.43	0.95
1:B:510:PRO:CB	1:C:623:ARG:NH1	2.05	0.95
1:B:425:LYS:HE3	1:C:212:HIS:CE1	2.01	0.95
1:B:499:ARG:HG2	1:B:500:PRO:HD2	1.43	0.95
1:A:535:PRO:CB	1:B:594:THR:HA	1.97	0.95
1:E:535:PRO:CB	1:F:594:THR:HA	1.97	0.95
1:E:680:ARG:NE	1:F:499:ARG:NE	2.15	0.95
1:B:535:PRO:CB	1:C:594:THR:HA	1.97	0.95
1:A:594:THR:HA	1:D:535:PRO:CB	1.97	0.95
1:D:221:ILE:CB	1:F:407:ARG:CG	2.40	0.95
1:C:407:ARG:CG	1:E:221:ILE:CB	2.40	0.95
1:B:689:GLU:OE2	1:C:492:VAL:C	2.04	0.95
1:A:212:HIS:CG	1:D:425:LYS:HE3	2.00	0.95
1:A:689:GLU:OE2	1:B:492:VAL:C	2.04	0.94
1:B:680:ARG:NE	1:C:499:ARG:NE	2.15	0.94
1:A:141:THR:HG21	1:B:219:LEU:O	1.68	0.94
1:E:425:LYS:HE3	1:F:212:HIS:CE1	2.01	0.94
1:A:425:LYS:HE3	1:B:212:HIS:CE1	2.01	0.94
1:C:535:PRO:CB	1:E:594:THR:HA	1.97	0.94
1:C:425:LYS:HE3	1:E:212:HIS:CE1	2.01	0.94
1:D:594:THR:HA	1:F:535:PRO:CB	1.97	0.94
1:C:425:LYS:HE3	1:E:212:HIS:CG	2.00	0.94
1:D:594:THR:HA	1:F:535:PRO:HB3	1.49	0.94
1:C:680:ARG:NE	1:E:499:ARG:NE	2.15	0.94
1:D:212:HIS:CE1	1:F:425:LYS:HE3	2.01	0.94
1:B:141:THR:HG21	1:C:219:LEU:O	1.68	0.94
1:B:425:LYS:HE3	1:C:212:HIS:CG	2.00	0.94
1:A:510:PRO:CB	1:B:623:ARG:NH1	2.05	0.94
1:A:680:ARG:NE	1:B:499:ARG:NE	2.15	0.94
1:A:212:HIS:CE1	1:D:425:LYS:HE3	2.01	0.94
1:D:499:ARG:NE	1:F:680:ARG:NE	2.15	0.94
1:A:590:ASN:ND2	1:D:541:TRP:HZ2	1.66	0.94
1:A:425:LYS:HE3	1:B:212:HIS:CG	2.00	0.93
1:A:219:LEU:O	1:D:141:THR:HG21	1.68	0.93
1:A:499:ARG:NE	1:D:680:ARG:NE	2.15	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:541:TRP:HZ2	1:B:590:ASN:ND2	1.66	0.93
1:D:590:ASN:ND2	1:F:541:TRP:HZ2	1.66	0.93
1:A:594:THR:HA	1:D:535:PRO:HB3	1.49	0.93
1:E:425:LYS:HE3	1:F:212:HIS:CG	2.00	0.92
1:C:141:THR:HG21	1:E:219:LEU:O	1.68	0.92
1:A:499:ARG:HG2	1:A:500:PRO:CD	1.99	0.92
1:D:499:ARG:HG2	1:D:500:PRO:CD	1.99	0.92
1:E:684:MET:HE1	1:F:481:GLU:HG3	1.49	0.92
1:E:499:ARG:HG2	1:E:500:PRO:CD	1.99	0.92
1:B:499:ARG:HG2	1:B:500:PRO:CD	1.99	0.92
1:C:499:ARG:HG2	1:C:500:PRO:CD	1.99	0.92
1:A:535:PRO:HB3	1:B:594:THR:HA	1.49	0.92
1:E:141:THR:HG21	1:F:219:LEU:O	1.68	0.92
1:B:538:LEU:HD23	1:B:541:TRP:NE1	1.86	0.91
1:F:499:ARG:HG2	1:F:500:PRO:CD	1.99	0.91
1:A:220:GLY:O	1:D:143:ALA:CA	2.12	0.91
1:A:620:ALA:HB2	1:A:623:ARG:HH21	1.36	0.91
1:B:680:ARG:HH21	1:C:499:ARG:HD3	0.74	0.91
1:B:684:MET:HE1	1:C:481:GLU:HG3	1.52	0.91
1:D:219:LEU:O	1:F:141:THR:HG21	1.68	0.91
1:F:538:LEU:HD23	1:F:541:TRP:NE1	1.86	0.91
1:A:680:ARG:HH21	1:B:499:ARG:HD3	0.74	0.91
1:B:620:ALA:HB2	1:B:623:ARG:HH21	1.36	0.91
1:B:680:ARG:CZ	1:C:499:ARG:HB3	1.84	0.91
1:E:538:LEU:HD23	1:E:541:TRP:NE1	1.86	0.91
1:C:541:TRP:HZ2	1:E:590:ASN:ND2	1.66	0.91
1:B:541:TRP:HZ2	1:C:590:ASN:ND2	1.66	0.91
1:E:541:TRP:HZ2	1:F:590:ASN:ND2	1.66	0.91
1:E:407:ARG:CG	1:F:221:ILE:CB	2.40	0.91
1:E:535:PRO:HB3	1:F:594:THR:HA	1.49	0.91
1:C:680:ARG:HH21	1:E:499:ARG:HD3	0.74	0.90
1:F:620:ALA:HB2	1:F:623:ARG:HH21	1.36	0.90
1:C:620:ALA:HB2	1:C:623:ARG:HH21	1.36	0.90
1:B:535:PRO:HB3	1:C:594:THR:HA	1.49	0.90
1:C:538:LEU:HD23	1:C:541:TRP:NE1	1.86	0.90
1:E:620:ALA:HB2	1:E:623:ARG:HH21	1.36	0.90
1:C:535:PRO:HG3	1:E:597:ASP:OD2	1.72	0.90
1:A:499:ARG:HD3	1:D:680:ARG:HH21	0.74	0.90
1:C:535:PRO:HB3	1:E:594:THR:HA	1.49	0.90
1:A:538:LEU:HD23	1:A:541:TRP:NE1	1.86	0.90
1:D:481:GLU:HG3	1:F:684:MET:HE1	1.53	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:623:ARG:NH1	1:D:510:PRO:CB	2.05	0.90
1:A:597:ASP:OD2	1:D:535:PRO:HG3	1.72	0.90
1:D:620:ALA:HB2	1:D:623:ARG:HH21	1.36	0.90
1:C:680:ARG:CZ	1:E:499:ARG:HB3	1.84	0.90
1:D:538:LEU:HD23	1:D:541:TRP:NE1	1.86	0.90
1:C:143:ALA:CA	1:E:220:GLY:O	2.12	0.90
1:A:481:GLU:HG3	1:D:684:MET:HE1	1.52	0.89
1:B:499:ARG:CG	1:B:500:PRO:CD	2.51	0.89
1:B:535:PRO:HG3	1:C:597:ASP:OD2	1.72	0.89
1:E:680:ARG:HH21	1:F:499:ARG:HD3	0.74	0.89
1:E:689:GLU:HB2	1:F:496:LEU:HD11	1.55	0.89
1:D:499:ARG:HD3	1:F:680:ARG:HH21	0.74	0.89
1:D:212:HIS:CG	1:F:425:LYS:HE3	2.00	0.89
1:F:499:ARG:CG	1:F:500:PRO:CD	2.51	0.89
1:A:725:GLU:HB3	1:D:709:ARG:HB3	1.55	0.89
1:D:725:GLU:HB3	1:F:709:ARG:HB3	1.55	0.89
1:D:499:ARG:CG	1:D:500:PRO:CD	2.51	0.89
1:E:709:ARG:HB3	1:F:725:GLU:HB3	1.55	0.89
1:A:499:ARG:CG	1:A:500:PRO:CD	2.51	0.89
1:C:689:GLU:HB2	1:E:496:LEU:HD11	1.55	0.89
1:A:496:LEU:HD11	1:D:689:GLU:HB2	1.55	0.89
1:E:449:ILE:CG2	1:F:558:GLN:HB2	2.03	0.89
1:A:535:PRO:HG3	1:B:597:ASP:OD2	1.72	0.88
1:C:499:ARG:CG	1:C:500:PRO:CD	2.51	0.88
1:D:492:VAL:HG12	1:F:689:GLU:OE2	1.73	0.88
1:D:597:ASP:OD2	1:F:535:PRO:HG3	1.72	0.88
1:A:449:ILE:CG2	1:B:558:GLN:HB2	2.04	0.88
1:C:684:MET:HE1	1:E:481:GLU:HG3	1.54	0.88
1:D:220:GLY:O	1:F:143:ALA:CA	2.12	0.88
1:E:499:ARG:CG	1:E:500:PRO:CD	2.51	0.88
1:A:689:GLU:HB2	1:B:496:LEU:HD11	1.55	0.88
1:A:680:ARG:CZ	1:B:499:ARG:HB3	1.84	0.88
1:C:689:GLU:OE2	1:E:492:VAL:HG12	1.74	0.88
1:A:709:ARG:HB3	1:B:725:GLU:HB3	1.55	0.88
1:B:689:GLU:OE2	1:C:492:VAL:HG12	1.74	0.88
1:A:492:VAL:HG12	1:D:689:GLU:OE2	1.73	0.88
1:C:449:ILE:CG2	1:E:558:GLN:HB2	2.03	0.88
1:B:689:GLU:HB2	1:C:496:LEU:HD11	1.55	0.88
1:E:690:ASN:HB3	1:F:489:LYS:CE	2.04	0.88
1:C:709:ARG:HB3	1:E:725:GLU:HB3	1.55	0.88
1:B:690:ASN:HB3	1:C:489:LYS:CE	2.04	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:690:ASN:HB3	1:B:489:LYS:CE	2.04	0.87
1:D:558:GLN:HB2	1:F:449:ILE:CG2	2.03	0.87
1:B:449:ILE:CG2	1:C:558:GLN:HB2	2.03	0.87
1:E:535:PRO:HG3	1:F:597:ASP:OD2	1.72	0.87
1:B:709:ARG:HB3	1:C:725:GLU:HB3	1.55	0.87
1:A:558:GLN:HB2	1:D:449:ILE:CG2	2.03	0.87
1:D:496:LEU:HD11	1:F:689:GLU:HB2	1.55	0.87
1:A:489:LYS:CE	1:D:690:ASN:HB3	2.04	0.87
1:C:690:ASN:HB3	1:E:489:LYS:CE	2.04	0.87
1:E:680:ARG:HE	1:F:499:ARG:HE	1.23	0.87
1:C:510:PRO:CB	1:E:623:ARG:NH1	2.05	0.87
1:C:680:ARG:HE	1:E:499:ARG:HE	1.23	0.86
1:D:499:ARG:HE	1:F:680:ARG:HE	1.23	0.86
1:E:680:ARG:NH2	1:F:499:ARG:CD	2.28	0.86
1:E:143:ALA:CA	1:F:220:GLY:O	2.12	0.86
1:A:689:GLU:OE2	1:B:492:VAL:HG12	1.74	0.86
1:B:680:ARG:HE	1:C:499:ARG:HE	1.23	0.86
1:E:689:GLU:OE2	1:F:492:VAL:HG12	1.74	0.86
1:D:489:LYS:CE	1:F:690:ASN:HB3	2.04	0.86
1:A:684:MET:HE3	1:B:481:GLU:OE2	1.76	0.86
1:F:620:ALA:HA	1:F:623:ARG:HE	1.41	0.85
1:A:680:ARG:HE	1:B:499:ARG:HE	1.23	0.85
1:A:499:ARG:HE	1:D:680:ARG:HE	1.23	0.85
1:B:689:GLU:OE2	1:C:493:PHE:N	2.10	0.85
1:A:493:PHE:N	1:D:689:GLU:OE2	2.10	0.85
1:B:680:ARG:NH2	1:C:499:ARG:CD	2.28	0.85
1:E:680:ARG:CZ	1:F:499:ARG:HB3	1.84	0.85
1:D:493:PHE:N	1:F:689:GLU:OE2	2.10	0.85
1:A:709:ARG:HB3	1:B:725:GLU:CA	2.07	0.85
1:E:689:GLU:OE2	1:F:493:PHE:N	2.10	0.85
1:B:709:ARG:HB3	1:C:725:GLU:CA	2.07	0.84
1:E:620:ALA:HA	1:E:623:ARG:HE	1.41	0.84
1:C:689:GLU:OE2	1:E:493:PHE:N	2.10	0.84
1:D:725:GLU:CA	1:F:709:ARG:HB3	2.07	0.84
1:A:689:GLU:OE2	1:B:493:PHE:N	2.10	0.84
1:A:620:ALA:HA	1:A:623:ARG:HE	1.41	0.84
1:D:184:VAL:HG12	1:D:185:SER:H	1.43	0.84
1:B:510:PRO:HB2	1:C:623:ARG:HH11	1.42	0.84
1:D:620:ALA:HA	1:D:623:ARG:HE	1.41	0.84
1:E:709:ARG:HB3	1:F:725:GLU:CA	2.07	0.84
1:B:683:GLY:O	1:C:496:LEU:HD13	1.78	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:620:ALA:HA	1:C:623:ARG:HE	1.41	0.84
1:F:184:VAL:HG12	1:F:185:SER:H	1.43	0.84
1:A:184:VAL:HG12	1:A:185:SER:H	1.43	0.84
1:A:725:GLU:CA	1:D:709:ARG:HB3	2.07	0.83
1:E:683:GLY:O	1:F:496:LEU:HD13	1.78	0.83
1:D:496:LEU:HD13	1:F:683:GLY:O	1.78	0.83
1:D:489:LYS:CE	1:F:689:GLU:O	2.26	0.83
1:A:510:PRO:HB2	1:B:623:ARG:HH11	1.42	0.83
1:C:683:GLY:O	1:E:496:LEU:HD13	1.78	0.83
1:C:709:ARG:HB3	1:E:725:GLU:CA	2.07	0.83
1:B:620:ALA:HA	1:B:623:ARG:HE	1.41	0.83
1:A:683:GLY:O	1:B:496:LEU:HD13	1.78	0.83
1:C:510:PRO:HB2	1:E:623:ARG:HH11	1.42	0.83
1:B:184:VAL:HG12	1:B:185:SER:H	1.43	0.83
1:B:689:GLU:O	1:C:489:LYS:CE	2.26	0.83
1:A:623:ARG:HH11	1:D:510:PRO:HB2	1.42	0.83
1:D:623:ARG:HH11	1:F:510:PRO:HB2	1.42	0.82
1:E:184:VAL:HG12	1:E:185:SER:H	1.43	0.82
1:A:689:GLU:O	1:B:489:LYS:CE	2.26	0.82
1:C:689:GLU:O	1:E:489:LYS:CE	2.26	0.82
1:E:689:GLU:O	1:F:489:LYS:CE	2.26	0.82
1:D:725:GLU:CB	1:F:709:ARG:HB3	2.10	0.82
1:F:264:TYR:CZ	1:F:267:GLN:CD	2.53	0.82
1:E:510:PRO:HB2	1:F:623:ARG:HH11	1.42	0.82
1:E:262:SER:HA	1:F:309:ARG:NH1	1.95	0.82
1:E:709:ARG:HB3	1:F:725:GLU:CB	2.10	0.82
1:D:264:TYR:CZ	1:D:267:GLN:CD	2.53	0.81
1:A:496:LEU:HD13	1:D:683:GLY:O	1.78	0.81
1:A:725:GLU:CB	1:D:709:ARG:HB3	2.10	0.81
1:A:309:ARG:NH1	1:D:262:SER:HA	1.95	0.81
1:D:309:ARG:NH1	1:F:262:SER:HA	1.95	0.81
1:A:489:LYS:CE	1:D:689:GLU:O	2.26	0.81
1:E:264:TYR:CZ	1:E:267:GLN:CD	2.53	0.81
1:A:143:ALA:CA	1:B:220:GLY:O	2.12	0.81
1:A:495:ARG:O	1:D:653:PRO:HD3	1.81	0.81
1:C:262:SER:HA	1:E:309:ARG:NH1	1.95	0.81
1:B:264:TYR:CZ	1:B:267:GLN:CD	2.53	0.81
1:A:262:SER:HA	1:B:309:ARG:NH1	1.95	0.81
1:C:689:GLU:OE1	1:E:492:VAL:O	1.99	0.81
1:D:499:ARG:CD	1:F:680:ARG:NH2	2.28	0.81
1:A:689:GLU:OE1	1:B:492:VAL:O	1.99	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:653:PRO:HD3	1:B:495:ARG:O	1.81	0.81
1:B:689:GLU:OE1	1:C:492:VAL:O	1.99	0.81
1:D:495:ARG:O	1:F:653:PRO:HD3	1.81	0.81
1:E:689:GLU:OE1	1:F:492:VAL:O	1.99	0.81
1:C:184:VAL:HG12	1:C:185:SER:H	1.43	0.81
1:A:315:LEU:CD1	1:D:261:MET:CE	2.59	0.81
1:A:499:ARG:CD	1:D:680:ARG:NH2	2.28	0.81
1:E:261:MET:CE	1:F:315:LEU:CD1	2.59	0.81
1:B:653:PRO:HD3	1:C:495:ARG:O	1.81	0.80
1:B:709:ARG:HB3	1:C:725:GLU:CB	2.10	0.80
1:B:262:SER:HA	1:C:309:ARG:NH1	1.95	0.80
1:A:141:THR:CG2	1:B:219:LEU:O	2.29	0.80
1:A:264:TYR:CZ	1:A:267:GLN:CD	2.53	0.80
1:A:680:ARG:NH2	1:B:499:ARG:CD	2.28	0.80
1:A:492:VAL:O	1:D:689:GLU:OE1	1.99	0.80
1:E:653:PRO:HD3	1:F:495:ARG:O	1.81	0.80
1:C:264:TYR:CZ	1:C:267:GLN:CD	2.53	0.80
1:C:709:ARG:HB3	1:E:725:GLU:CB	2.10	0.80
1:C:653:PRO:HD3	1:E:495:ARG:O	1.81	0.80
1:D:492:VAL:O	1:F:689:GLU:OE1	1.99	0.80
1:C:449:ILE:HG21	1:E:558:GLN:HB2	1.64	0.80
1:B:141:THR:CG2	1:C:219:LEU:O	2.30	0.80
1:A:709:ARG:HB3	1:B:725:GLU:CB	2.10	0.80
1:D:499:ARG:HB3	1:F:680:ARG:CZ	1.84	0.80
1:E:449:ILE:HG21	1:F:558:GLN:HB2	1.64	0.80
1:A:261:MET:CE	1:B:315:LEU:CD1	2.59	0.80
1:D:315:LEU:CD1	1:F:261:MET:CE	2.59	0.79
1:C:261:MET:CE	1:E:315:LEU:CD1	2.59	0.79
1:E:363:ARG:HH12	1:E:397:PHE:HB2	1.47	0.79
1:F:363:ARG:HH12	1:F:397:PHE:HB2	1.47	0.79
1:C:141:THR:CG2	1:E:219:LEU:O	2.29	0.79
1:C:680:ARG:NE	1:E:499:ARG:HE	1.79	0.79
1:C:575:ARG:HH21	1:E:576:ARG:HB3	1.48	0.79
1:A:449:ILE:HG21	1:B:558:GLN:HB2	1.64	0.79
1:B:261:MET:CE	1:C:315:LEU:CD1	2.59	0.79
1:E:141:THR:CG2	1:F:219:LEU:O	2.30	0.79
1:B:143:ALA:CA	1:C:220:GLY:O	2.12	0.79
1:D:215:LEU:HD13	1:F:423:LEU:O	1.83	0.79
1:D:219:LEU:O	1:F:141:THR:CG2	2.29	0.79
1:B:575:ARG:HH21	1:C:576:ARG:HB3	1.48	0.78
1:E:575:ARG:HH21	1:F:576:ARG:HB3	1.48	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:219:LEU:O	1:D:141:THR:CG2	2.29	0.78
1:B:449:ILE:HG21	1:C:558:GLN:HB2	1.64	0.78
1:D:363:ARG:HH12	1:D:397:PHE:HB2	1.47	0.78
1:A:684:MET:HE1	1:B:481:GLU:HG3	1.63	0.78
1:B:680:ARG:HE	1:C:499:ARG:CD	1.96	0.78
1:A:680:ARG:HE	1:B:499:ARG:CD	1.96	0.78
1:B:423:LEU:O	1:C:215:LEU:HD13	1.83	0.78
1:E:423:LEU:O	1:F:215:LEU:HD13	1.83	0.78
1:E:680:ARG:NE	1:F:499:ARG:HE	1.79	0.78
1:A:575:ARG:HH21	1:B:576:ARG:HB3	1.48	0.78
1:C:680:ARG:HE	1:E:499:ARG:CD	1.96	0.78
1:A:499:ARG:CD	1:D:680:ARG:HE	1.96	0.78
1:A:215:LEU:HD13	1:D:423:LEU:O	1.83	0.78
1:A:499:ARG:HB2	1:D:680:ARG:NH2	1.99	0.78
1:A:499:ARG:HB3	1:D:680:ARG:CZ	1.84	0.78
1:C:363:ARG:HH12	1:C:397:PHE:HB2	1.47	0.78
1:D:576:ARG:HB3	1:F:575:ARG:HH21	1.48	0.78
1:A:558:GLN:HB2	1:D:449:ILE:HG21	1.63	0.77
1:D:499:ARG:CD	1:F:680:ARG:HE	1.96	0.77
1:A:576:ARG:HB3	1:D:575:ARG:HH21	1.48	0.77
1:E:680:ARG:HE	1:F:499:ARG:CD	1.96	0.77
1:A:363:ARG:HH12	1:A:397:PHE:HB2	1.47	0.77
1:B:264:TYR:CE1	1:B:267:GLN:NE2	2.50	0.77
1:B:407:ARG:HH11	1:C:222:THR:HB	1.50	0.77
1:A:423:LEU:O	1:B:215:LEU:HD13	1.83	0.77
1:B:363:ARG:HH12	1:B:397:PHE:HB2	1.47	0.77
1:A:407:ARG:HH11	1:B:222:THR:HB	1.50	0.77
1:C:423:LEU:O	1:E:215:LEU:CD1	2.33	0.77
1:D:499:ARG:HB2	1:F:680:ARG:NH2	1.99	0.77
1:A:315:LEU:HD12	1:D:261:MET:HE1	1.66	0.77
1:A:680:ARG:NE	1:B:499:ARG:HE	1.79	0.77
1:B:689:GLU:HB2	1:C:496:LEU:CD1	2.15	0.77
1:A:215:LEU:CD1	1:D:423:LEU:O	2.33	0.77
1:E:109:ARG:HG3	1:E:110:LEU:H	1.49	0.77
1:D:558:GLN:HB2	1:F:449:ILE:HG21	1.64	0.77
1:C:423:LEU:O	1:E:215:LEU:HD13	1.83	0.77
1:C:261:MET:HE3	1:E:315:LEU:HD12	1.65	0.77
1:E:689:GLU:HA	1:F:492:VAL:CG1	2.15	0.77
1:D:496:LEU:CD1	1:F:689:GLU:HB2	2.15	0.77
1:E:423:LEU:O	1:F:215:LEU:CD1	2.33	0.76
1:A:423:LEU:O	1:B:215:LEU:CD1	2.33	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:680:ARG:NH2	1:C:499:ARG:HB2	1.99	0.76
1:D:109:ARG:HG3	1:D:110:LEU:H	1.49	0.76
1:C:689:GLU:HA	1:E:492:VAL:CG1	2.15	0.76
1:F:109:ARG:HG3	1:F:110:LEU:H	1.49	0.76
1:C:407:ARG:HH11	1:E:222:THR:HB	1.50	0.76
1:D:215:LEU:CD1	1:F:423:LEU:O	2.33	0.76
1:A:689:GLU:HB2	1:B:496:LEU:CD1	2.15	0.76
1:B:652:MET:HG2	1:C:496:LEU:C	2.04	0.76
1:E:407:ARG:HH11	1:F:222:THR:HB	1.50	0.76
1:B:423:LEU:O	1:C:215:LEU:CD1	2.33	0.76
1:C:652:MET:HG2	1:E:496:LEU:C	2.04	0.76
1:E:264:TYR:CE1	1:E:267:GLN:OE1	2.39	0.76
1:C:689:GLU:HB2	1:E:496:LEU:CD1	2.15	0.76
1:A:680:ARG:NH2	1:B:499:ARG:HB2	1.99	0.76
1:A:496:LEU:C	1:D:652:MET:HG2	2.04	0.76
1:C:680:ARG:NH2	1:E:499:ARG:HB2	1.99	0.76
1:D:492:VAL:CG1	1:F:689:GLU:HA	2.15	0.76
1:B:264:TYR:CE1	1:B:267:GLN:OE1	2.39	0.76
1:D:222:THR:HB	1:F:407:ARG:HH11	1.50	0.76
1:A:496:LEU:CD1	1:D:689:GLU:HB2	2.15	0.76
1:C:109:ARG:HG3	1:C:110:LEU:H	1.49	0.76
1:B:261:MET:HE1	1:C:315:LEU:HD12	1.68	0.76
1:A:222:THR:HB	1:D:407:ARG:HH11	1.49	0.76
1:B:689:GLU:HA	1:C:492:VAL:CG1	2.15	0.76
1:D:264:TYR:CE1	1:D:267:GLN:OE1	2.39	0.76
1:C:680:ARG:NH2	1:E:499:ARG:CD	2.28	0.76
1:F:264:TYR:CE1	1:F:267:GLN:OE1	2.39	0.76
1:A:492:VAL:CG1	1:D:689:GLU:HA	2.15	0.75
1:E:652:MET:HG2	1:F:496:LEU:C	2.04	0.75
1:E:689:GLU:HB2	1:F:496:LEU:CD1	2.15	0.75
1:E:680:ARG:NH2	1:F:499:ARG:HB2	1.99	0.75
1:B:262:SER:HA	1:C:309:ARG:CZ	2.17	0.75
1:A:264:TYR:CE1	1:A:267:GLN:OE1	2.39	0.75
1:A:689:GLU:HA	1:B:492:VAL:CG1	2.15	0.75
1:C:264:TYR:CE1	1:C:267:GLN:OE1	2.39	0.75
1:D:309:ARG:CZ	1:F:262:SER:HA	2.17	0.75
1:A:594:THR:HG1	1:D:535:PRO:HA	1.47	0.75
1:A:109:ARG:HG3	1:A:110:LEU:H	1.49	0.75
1:E:262:SER:HA	1:F:309:ARG:CZ	2.17	0.75
1:A:262:SER:HA	1:B:309:ARG:CZ	2.17	0.75
1:B:109:ARG:HG3	1:B:110:LEU:H	1.49	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:234:GLY:C	1:E:346:PRO:HG2	2.08	0.74
1:A:623:ARG:NH1	1:D:510:PRO:HB2	2.01	0.74
1:C:262:SER:HA	1:E:309:ARG:CZ	2.17	0.74
1:A:264:TYR:CE1	1:A:267:GLN:NE2	2.50	0.74
1:E:264:TYR:CE1	1:E:267:GLN:NE2	2.50	0.74
1:A:234:GLY:C	1:B:346:PRO:HG2	2.08	0.74
1:C:684:MET:HE3	1:E:481:GLU:OE2	1.86	0.74
1:A:309:ARG:CZ	1:D:262:SER:HA	2.17	0.74
1:A:499:ARG:HE	1:D:680:ARG:NE	1.79	0.73
1:F:264:TYR:CE1	1:F:267:GLN:NE2	2.50	0.73
1:A:533:LYS:HG3	1:A:535:PRO:HD2	1.70	0.73
1:A:725:GLU:HB3	1:D:709:ARG:CB	2.19	0.73
1:B:234:GLY:C	1:C:346:PRO:HG2	2.08	0.73
1:C:533:LYS:HG3	1:C:535:PRO:HD2	1.70	0.73
1:E:234:GLY:C	1:F:346:PRO:HG2	2.08	0.73
1:B:533:LYS:HG3	1:B:535:PRO:HD2	1.70	0.73
1:D:346:PRO:HG2	1:F:234:GLY:C	2.08	0.73
1:A:346:PRO:HG2	1:D:234:GLY:C	2.08	0.73
1:D:496:LEU:C	1:F:652:MET:HG2	2.04	0.73
1:A:709:ARG:CB	1:B:725:GLU:HB3	2.19	0.73
1:A:261:MET:HE3	1:B:315:LEU:HD12	1.71	0.73
1:A:510:PRO:HB2	1:B:623:ARG:NH1	2.01	0.73
1:B:647:VAL:HA	1:B:650:LYS:HE3	1.71	0.72
1:B:680:ARG:CD	1:C:499:ARG:CB	2.52	0.72
1:A:652:MET:HG2	1:B:496:LEU:C	2.04	0.72
1:F:647:VAL:HA	1:F:650:LYS:HE3	1.70	0.72
1:D:725:GLU:HB3	1:F:709:ARG:CB	2.19	0.72
1:B:538:LEU:HD22	1:C:590:ASN:CG	2.10	0.72
1:C:234:GLY:O	1:E:346:PRO:HG2	1.90	0.72
1:C:709:ARG:CB	1:E:725:GLU:HB3	2.19	0.72
1:B:709:ARG:CB	1:C:725:GLU:HB3	2.19	0.72
1:D:481:GLU:OE2	1:F:684:MET:HE3	1.89	0.72
1:D:533:LYS:HG3	1:D:535:PRO:HD2	1.70	0.72
1:E:647:VAL:HA	1:E:650:LYS:HE3	1.70	0.72
1:D:221:ILE:HG21	1:F:407:ARG:HG3	1.71	0.72
1:B:407:ARG:HG3	1:C:221:ILE:HG21	1.71	0.72
1:A:538:LEU:HD22	1:B:590:ASN:CG	2.10	0.72
1:B:234:GLY:O	1:C:346:PRO:HG2	1.90	0.72
1:A:234:GLY:O	1:B:346:PRO:HG2	1.90	0.72
1:A:481:GLU:OE2	1:D:684:MET:HE3	1.90	0.72
1:A:346:PRO:HG2	1:D:234:GLY:O	1.90	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:533:LYS:HG3	1:E:535:PRO:HD2	1.70	0.72
1:D:590:ASN:CG	1:F:538:LEU:HD22	2.10	0.72
1:E:709:ARG:CB	1:F:725:GLU:HB3	2.19	0.72
1:A:709:ARG:CZ	1:B:726:THR:CA	2.49	0.72
1:C:264:TYR:CE1	1:C:267:GLN:NE2	2.50	0.72
1:E:234:GLY:O	1:F:346:PRO:HG2	1.90	0.72
1:A:407:ARG:HG3	1:B:221:ILE:HG21	1.71	0.71
1:B:620:ALA:CB	1:B:623:ARG:HH21	2.02	0.71
1:C:620:ALA:CB	1:C:623:ARG:HH21	2.02	0.71
1:E:538:LEU:HD22	1:F:590:ASN:CG	2.10	0.71
1:D:647:VAL:HA	1:D:650:LYS:HE3	1.70	0.71
1:C:538:LEU:HD22	1:E:590:ASN:CG	2.10	0.71
1:A:221:ILE:HB	1:D:407:ARG:CD	2.21	0.71
1:C:647:VAL:HA	1:C:650:LYS:HE3	1.71	0.71
1:A:221:ILE:HG21	1:D:407:ARG:HG3	1.71	0.71
1:F:533:LYS:HG3	1:F:535:PRO:HD2	1.70	0.71
1:A:449:ILE:HA	1:B:557:LYS:HE3	1.72	0.71
1:A:647:VAL:HA	1:A:650:LYS:HE3	1.71	0.71
1:A:725:GLU:C	1:D:709:ARG:HB3	2.11	0.71
1:E:620:ALA:CB	1:E:623:ARG:HH21	2.02	0.71
1:D:499:ARG:HE	1:F:680:ARG:NE	1.79	0.71
1:D:221:ILE:HB	1:F:407:ARG:CD	2.21	0.71
1:D:725:GLU:C	1:F:709:ARG:HB3	2.11	0.71
1:A:407:ARG:CD	1:B:221:ILE:HB	2.21	0.71
1:D:499:ARG:HG2	1:D:500:PRO:N	2.06	0.71
1:A:620:ALA:CB	1:A:623:ARG:HH21	2.02	0.71
1:A:594:THR:OG1	1:D:535:PRO:CA	2.36	0.71
1:A:557:LYS:HE3	1:D:449:ILE:HA	1.72	0.71
1:B:407:ARG:CD	1:C:221:ILE:HB	2.21	0.71
1:D:620:ALA:CB	1:D:623:ARG:HH21	2.02	0.71
1:D:499:ARG:CB	1:F:680:ARG:CD	2.52	0.71
1:A:264:TYR:CD1	1:A:267:GLN:OE1	2.44	0.70
1:C:264:TYR:CD1	1:C:267:GLN:OE1	2.44	0.70
1:B:684:MET:HE3	1:C:481:GLU:OE2	1.90	0.70
1:B:449:ILE:HA	1:C:557:LYS:HE3	1.73	0.70
1:D:264:TYR:CD1	1:D:267:GLN:OE1	2.44	0.70
1:D:346:PRO:HG2	1:F:234:GLY:O	1.90	0.70
1:A:499:ARG:CB	1:D:680:ARG:CD	2.52	0.70
1:E:264:TYR:CD1	1:E:267:GLN:OE1	2.44	0.70
1:E:407:ARG:HG3	1:F:221:ILE:HG21	1.71	0.70
1:F:620:ALA:CB	1:F:623:ARG:HH21	2.02	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:590:ASN:CG	1:D:538:LEU:HD22	2.10	0.70
1:B:680:ARG:NE	1:C:499:ARG:HE	1.79	0.70
1:C:407:ARG:HG3	1:E:221:ILE:HG21	1.71	0.70
1:E:407:ARG:CD	1:F:221:ILE:HB	2.21	0.70
1:B:264:TYR:CD1	1:B:267:GLN:OE1	2.44	0.70
1:D:264:TYR:CE1	1:D:267:GLN:NE2	2.50	0.70
1:E:449:ILE:HA	1:F:557:LYS:HE3	1.72	0.70
1:E:512:VAL:HG23	1:E:513:GLY:H	1.57	0.70
1:A:512:VAL:HG23	1:A:513:GLY:H	1.57	0.70
1:D:594:THR:OG1	1:F:535:PRO:CA	2.36	0.70
1:F:264:TYR:CD1	1:F:267:GLN:OE1	2.44	0.70
1:B:407:ARG:CG	1:C:221:ILE:CG2	2.68	0.70
1:C:512:VAL:HG23	1:C:513:GLY:H	1.57	0.70
1:E:709:ARG:HB3	1:F:725:GLU:C	2.11	0.70
1:A:499:ARG:HG2	1:A:500:PRO:N	2.06	0.70
1:D:512:VAL:HG23	1:D:513:GLY:H	1.57	0.70
1:C:407:ARG:CD	1:E:221:ILE:HB	2.21	0.70
1:D:557:LYS:HE3	1:F:449:ILE:HA	1.72	0.69
1:D:221:ILE:CG2	1:F:407:ARG:CG	2.68	0.69
1:E:499:ARG:HG2	1:E:500:PRO:N	2.06	0.69
1:B:512:VAL:HG23	1:B:513:GLY:H	1.57	0.69
1:C:14:ALA:HA	1:C:68:ARG:HG2	1.75	0.69
1:E:510:PRO:HB2	1:F:623:ARG:NH1	2.01	0.69
1:A:14:ALA:HA	1:A:68:ARG:HG2	1.75	0.69
1:C:510:PRO:HB2	1:E:623:ARG:NH1	2.01	0.69
1:C:449:ILE:HA	1:E:557:LYS:HE3	1.72	0.69
1:F:499:ARG:HG2	1:F:500:PRO:N	2.06	0.69
1:E:14:ALA:HA	1:E:68:ARG:HG2	1.75	0.69
1:B:14:ALA:HA	1:B:68:ARG:HG2	1.75	0.69
1:E:407:ARG:CG	1:F:221:ILE:CG2	2.68	0.69
1:A:221:ILE:CG2	1:D:407:ARG:CG	2.68	0.69
1:D:14:ALA:HA	1:D:68:ARG:HG2	1.75	0.69
1:C:689:GLU:HA	1:E:492:VAL:HG11	1.75	0.69
1:E:689:GLU:CG	1:F:492:VAL:HG12	2.19	0.69
1:A:407:ARG:CG	1:B:221:ILE:CG2	2.68	0.68
1:B:689:GLU:HA	1:C:492:VAL:HG11	1.75	0.68
1:C:709:ARG:HB3	1:E:725:GLU:C	2.11	0.68
1:C:535:PRO:CA	1:E:594:THR:OG1	2.36	0.68
1:F:512:VAL:HG23	1:F:513:GLY:H	1.57	0.68
1:C:261:MET:HE3	1:E:315:LEU:CD1	2.21	0.68
1:D:220:GLY:C	1:F:143:ALA:O	2.32	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:143:ALA:O	1:F:220:GLY:C	2.32	0.68
1:A:298:LYS:HG2	1:A:300:GLU:H	1.59	0.68
1:B:535:PRO:CA	1:C:594:THR:OG1	2.36	0.68
1:D:298:LYS:HG2	1:D:300:GLU:H	1.59	0.68
1:C:499:ARG:HG2	1:C:500:PRO:N	2.06	0.68
1:D:335:ARG:HG3	1:D:337:ASP:H	1.59	0.68
1:C:143:ALA:O	1:E:220:GLY:C	2.32	0.68
1:F:335:ARG:HG3	1:F:337:ASP:H	1.59	0.68
1:E:689:GLU:HA	1:F:492:VAL:HG11	1.75	0.68
1:A:220:GLY:C	1:D:143:ALA:O	2.32	0.68
1:B:709:ARG:CZ	1:C:726:THR:CA	2.49	0.68
1:B:262:SER:O	1:C:309:ARG:NH2	2.27	0.68
1:F:298:LYS:HG2	1:F:300:GLU:H	1.59	0.68
1:F:14:ALA:HA	1:F:68:ARG:HG2	1.75	0.68
1:C:680:ARG:CD	1:E:499:ARG:CB	2.52	0.68
1:A:262:SER:O	1:B:309:ARG:NH2	2.27	0.68
1:B:298:LYS:HG2	1:B:300:GLU:H	1.59	0.68
1:A:689:GLU:HA	1:B:492:VAL:HG11	1.75	0.68
1:C:262:SER:O	1:E:309:ARG:NH2	2.27	0.68
1:E:261:MET:HE3	1:F:315:LEU:HD12	1.74	0.68
1:A:335:ARG:HG3	1:A:337:ASP:H	1.59	0.67
1:E:335:ARG:HG3	1:E:337:ASP:H	1.59	0.67
1:A:492:VAL:HG12	1:D:689:GLU:CG	2.19	0.67
1:B:499:ARG:HG2	1:B:500:PRO:N	2.06	0.67
1:C:407:ARG:CG	1:E:221:ILE:CG2	2.68	0.67
1:D:309:ARG:NH2	1:F:262:SER:O	2.27	0.67
1:D:492:VAL:HG11	1:F:689:GLU:HA	1.75	0.67
1:A:689:GLU:HG3	1:B:489:LYS:HD3	1.77	0.67
1:E:321:MET:HG3	1:E:323:GLU:H	1.60	0.67
1:A:309:ARG:NH2	1:D:262:SER:O	2.27	0.67
1:C:298:LYS:HG2	1:C:300:GLU:H	1.59	0.67
1:B:709:ARG:HB3	1:C:725:GLU:C	2.11	0.67
1:A:492:VAL:HG11	1:D:689:GLU:HA	1.75	0.67
1:E:298:LYS:HG2	1:E:300:GLU:H	1.59	0.67
1:E:689:GLU:HG3	1:F:489:LYS:HD3	1.77	0.67
1:A:261:MET:HE1	1:B:315:LEU:HD12	1.77	0.67
1:E:262:SER:O	1:F:309:ARG:NH2	2.27	0.67
1:E:680:ARG:CD	1:F:499:ARG:CB	2.52	0.67
1:C:335:ARG:HG3	1:C:337:ASP:H	1.59	0.67
1:D:499:ARG:CG	1:F:680:ARG:NE	2.58	0.67
1:B:321:MET:HG3	1:B:323:GLU:H	1.60	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:335:ARG:HG3	1:B:337:ASP:H	1.59	0.66
1:A:535:PRO:CA	1:B:594:THR:OG1	2.36	0.66
1:A:143:ALA:O	1:B:220:GLY:C	2.32	0.66
1:A:489:LYS:HD3	1:D:689:GLU:HG3	1.77	0.66
1:B:143:ALA:O	1:C:220:GLY:C	2.32	0.66
1:C:680:ARG:NE	1:E:499:ARG:CG	2.58	0.66
1:B:689:GLU:HG3	1:C:489:LYS:HD3	1.77	0.66
1:A:709:ARG:HB3	1:B:725:GLU:C	2.11	0.66
1:C:689:GLU:CG	1:E:492:VAL:HG12	2.19	0.66
1:F:585:THR:HG23	1:F:586:GLU:H	1.60	0.66
1:A:680:ARG:CD	1:B:499:ARG:CB	2.52	0.66
1:A:689:GLU:CG	1:B:492:VAL:HG12	2.19	0.66
1:D:321:MET:HG3	1:D:323:GLU:H	1.60	0.66
1:D:585:THR:HG23	1:D:586:GLU:H	1.60	0.66
1:D:623:ARG:NH1	1:F:510:PRO:HB2	2.01	0.66
1:A:499:ARG:CG	1:D:680:ARG:NE	2.58	0.66
1:E:614:PRO:O	1:E:616:ILE:N	2.28	0.66
1:A:321:MET:HG3	1:A:323:GLU:H	1.60	0.66
1:B:614:PRO:O	1:B:616:ILE:N	2.28	0.66
1:D:221:ILE:HG21	1:F:407:ARG:HA	1.78	0.66
1:E:535:PRO:CA	1:F:594:THR:OG1	2.36	0.66
1:F:614:PRO:O	1:F:616:ILE:N	2.28	0.66
1:A:614:PRO:O	1:A:616:ILE:N	2.28	0.66
1:E:680:ARG:NE	1:F:499:ARG:CD	2.57	0.66
1:C:321:MET:HG3	1:C:323:GLU:H	1.60	0.66
1:B:510:PRO:HB2	1:C:623:ARG:NH1	2.01	0.66
1:C:689:GLU:HG3	1:E:489:LYS:HD3	1.77	0.66
1:F:321:MET:HG3	1:F:323:GLU:H	1.60	0.66
1:A:512:VAL:HG12	1:A:673:ALA:H	1.61	0.66
1:A:585:THR:HG23	1:A:586:GLU:H	1.60	0.66
1:B:680:ARG:NE	1:C:499:ARG:CD	2.57	0.66
1:B:680:ARG:NE	1:C:499:ARG:CG	2.58	0.66
1:D:512:VAL:HG12	1:D:673:ALA:H	1.61	0.66
1:E:261:MET:HE1	1:F:315:LEU:HD12	1.74	0.66
1:A:680:ARG:NE	1:B:499:ARG:CG	2.58	0.65
1:D:489:LYS:HD3	1:F:689:GLU:HG3	1.77	0.65
1:A:407:ARG:HA	1:B:221:ILE:HG21	1.78	0.65
1:C:680:ARG:HE	1:E:499:ARG:HB3	1.39	0.65
1:D:221:ILE:HG21	1:F:407:ARG:CG	2.27	0.65
1:F:512:VAL:HG12	1:F:673:ALA:H	1.61	0.65
1:C:407:ARG:HA	1:E:221:ILE:HG21	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:614:PRO:O	1:C:616:ILE:N	2.28	0.65
1:A:222:THR:O	1:D:407:ARG:HD2	1.97	0.65
1:B:407:ARG:CG	1:C:221:ILE:HG21	2.27	0.65
1:B:689:GLU:CG	1:C:492:VAL:HG12	2.19	0.65
1:D:315:LEU:HD12	1:F:261:MET:HE1	1.73	0.65
1:B:512:VAL:HG12	1:B:673:ALA:H	1.61	0.65
1:C:407:ARG:CG	1:E:221:ILE:HG21	2.27	0.65
1:B:585:THR:HG23	1:B:586:GLU:H	1.60	0.65
1:B:407:ARG:HD2	1:C:222:THR:O	1.97	0.65
1:C:585:THR:HG23	1:C:586:GLU:H	1.60	0.65
1:D:222:THR:O	1:F:407:ARG:HD2	1.97	0.65
1:E:233:PRO:HG2	1:F:345:ARG:NE	2.12	0.65
1:C:233:PRO:HG2	1:E:345:ARG:NE	2.12	0.65
1:E:575:ARG:NH2	1:F:576:ARG:HE	1.95	0.65
1:B:407:ARG:HA	1:C:221:ILE:HG21	1.78	0.65
1:B:233:PRO:HG2	1:C:345:ARG:NE	2.12	0.65
1:C:407:ARG:HD2	1:E:222:THR:O	1.97	0.65
1:C:575:ARG:NH2	1:E:576:ARG:HE	1.95	0.65
1:B:575:ARG:NH2	1:C:576:ARG:HE	1.95	0.65
1:D:345:ARG:NE	1:F:233:PRO:HG2	2.12	0.65
1:B:669:GLY:HA3	1:B:712:VAL:HG22	1.79	0.65
1:C:669:GLY:HA3	1:C:712:VAL:HG22	1.79	0.65
1:A:221:ILE:HG21	1:D:407:ARG:HA	1.77	0.65
1:D:669:GLY:HA3	1:D:712:VAL:HG22	1.79	0.65
1:C:680:ARG:NE	1:E:499:ARG:CD	2.57	0.65
1:E:585:THR:HG23	1:E:586:GLU:H	1.60	0.65
1:E:407:ARG:CG	1:F:221:ILE:HG21	2.27	0.65
1:E:684:MET:HE3	1:F:481:GLU:OE2	1.96	0.65
1:A:669:GLY:HA3	1:A:712:VAL:HG22	1.79	0.64
1:A:407:ARG:HD2	1:B:222:THR:O	1.97	0.64
1:A:221:ILE:HG21	1:D:407:ARG:CG	2.27	0.64
1:D:492:VAL:CG1	1:F:689:GLU:OE2	2.40	0.64
1:A:345:ARG:NE	1:D:233:PRO:HG2	2.12	0.64
1:E:407:ARG:HA	1:F:221:ILE:HG21	1.77	0.64
1:A:407:ARG:CG	1:B:221:ILE:HG21	2.27	0.64
1:A:575:ARG:NH2	1:B:576:ARG:HE	1.95	0.64
1:A:576:ARG:HE	1:D:575:ARG:NH2	1.95	0.64
1:D:576:ARG:HE	1:F:575:ARG:NH2	1.95	0.64
1:E:512:VAL:HG12	1:E:673:ALA:H	1.61	0.64
1:C:512:VAL:HG12	1:C:673:ALA:H	1.61	0.64
1:D:315:LEU:HD12	1:F:261:MET:HE3	1.75	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:315:LEU:CD1	1:D:261:MET:HE1	2.26	0.64
1:C:652:MET:CB	1:E:496:LEU:O	2.46	0.64
1:A:53:ARG:HE	1:A:130:LEU:HD21	1.63	0.64
1:A:680:ARG:NE	1:B:499:ARG:CD	2.57	0.64
1:B:652:MET:CB	1:C:496:LEU:O	2.46	0.64
1:D:614:PRO:O	1:D:616:ILE:N	2.28	0.64
1:E:407:ARG:HD2	1:F:222:THR:O	1.97	0.64
1:B:689:GLU:OE2	1:C:492:VAL:CG1	2.40	0.64
1:D:492:VAL:CB	1:F:689:GLU:OE2	2.46	0.64
1:D:53:ARG:HE	1:D:130:LEU:HD21	1.63	0.64
1:E:689:GLU:OE2	1:F:492:VAL:CB	2.46	0.63
1:A:689:GLU:OE2	1:B:492:VAL:CB	2.46	0.63
1:C:689:GLU:OE2	1:E:492:VAL:CB	2.46	0.63
1:E:553:PHE:HZ	1:E:592:LEU:HD23	1.64	0.63
1:A:233:PRO:HG2	1:B:345:ARG:NE	2.12	0.63
1:B:53:ARG:HE	1:B:130:LEU:HD21	1.63	0.63
1:B:689:GLU:OE2	1:C:492:VAL:CB	2.46	0.63
1:B:680:ARG:HE	1:C:499:ARG:HB3	1.39	0.63
1:F:53:ARG:HE	1:F:130:LEU:HD21	1.63	0.63
1:A:119:TYR:OH	1:A:137:VAL:O	2.16	0.63
1:D:119:TYR:OH	1:D:137:VAL:O	2.16	0.63
1:E:652:MET:CB	1:F:496:LEU:O	2.46	0.63
1:E:669:GLY:HA3	1:E:712:VAL:HG22	1.79	0.63
1:F:669:GLY:HA3	1:F:712:VAL:HG22	1.79	0.63
1:A:553:PHE:HZ	1:A:592:LEU:HD23	1.64	0.63
1:A:140:LEU:HD13	1:A:432:LEU:HD22	1.81	0.63
1:A:652:MET:CB	1:B:496:LEU:O	2.46	0.63
1:E:53:ARG:HE	1:E:130:LEU:HD21	1.63	0.63
1:E:680:ARG:CZ	1:F:499:ARG:CD	2.77	0.63
1:C:53:ARG:HE	1:C:130:LEU:HD21	1.63	0.63
1:D:140:LEU:HD13	1:D:432:LEU:HD22	1.81	0.63
1:D:24:VAL:HG13	1:D:69:ILE:HA	1.81	0.63
1:A:492:VAL:C	1:D:689:GLU:CD	2.58	0.63
1:A:680:ARG:CZ	1:B:499:ARG:CD	2.77	0.63
1:C:119:TYR:OH	1:C:137:VAL:O	2.16	0.63
1:D:553:PHE:HZ	1:D:592:LEU:HD23	1.64	0.63
1:A:499:ARG:CD	1:D:680:ARG:CZ	2.77	0.63
1:E:689:GLU:CD	1:F:492:VAL:C	2.58	0.63
1:F:553:PHE:HZ	1:F:592:LEU:HD23	1.64	0.63
1:A:46:LYS:HB3	1:A:85:VAL:HG12	1.81	0.62
1:B:553:PHE:HZ	1:B:592:LEU:HD23	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:652:MET:HA	1:F:496:LEU:O	2.00	0.62
1:F:119:TYR:OH	1:F:137:VAL:O	2.16	0.62
1:D:496:LEU:O	1:F:652:MET:CB	2.46	0.62
1:D:492:VAL:C	1:F:689:GLU:CD	2.58	0.62
1:B:269:GLU:OE2	1:B:273:ARG:NH1	2.33	0.62
1:B:24:VAL:HG13	1:B:69:ILE:HA	1.81	0.62
1:B:46:LYS:HB3	1:B:85:VAL:HG12	1.81	0.62
1:C:553:PHE:HZ	1:C:592:LEU:HD23	1.63	0.62
1:C:689:GLU:CD	1:E:492:VAL:C	2.58	0.62
1:D:499:ARG:CB	1:F:680:ARG:NH2	2.61	0.62
1:E:140:LEU:HD13	1:E:432:LEU:HD22	1.81	0.62
1:F:24:VAL:HG13	1:F:69:ILE:HA	1.81	0.62
1:A:492:VAL:CB	1:D:689:GLU:OE2	2.46	0.62
1:A:24:VAL:HG13	1:A:69:ILE:HA	1.81	0.62
1:C:652:MET:HA	1:E:496:LEU:O	1.99	0.62
1:E:119:TYR:OH	1:E:137:VAL:O	2.16	0.62
1:E:680:ARG:NE	1:F:499:ARG:CG	2.58	0.62
1:A:496:LEU:O	1:D:652:MET:CB	2.46	0.62
1:D:360:ARG:NH1	1:D:391:ALA:O	2.33	0.62
1:A:689:GLU:CD	1:B:492:VAL:C	2.58	0.62
1:B:680:ARG:CZ	1:C:499:ARG:CD	2.77	0.62
1:A:709:ARG:NE	1:B:726:THR:HA	2.14	0.62
1:D:46:LYS:HB3	1:D:85:VAL:HG12	1.81	0.62
1:A:360:ARG:NH1	1:A:391:ALA:O	2.33	0.62
1:E:360:ARG:NH1	1:E:391:ALA:O	2.33	0.62
1:B:652:MET:HA	1:C:496:LEU:O	2.00	0.62
1:D:496:LEU:O	1:F:652:MET:HA	2.00	0.62
1:F:140:LEU:HD13	1:F:432:LEU:HD22	1.81	0.62
1:C:269:GLU:OE2	1:C:273:ARG:NH1	2.33	0.62
1:C:360:ARG:NH1	1:C:391:ALA:O	2.33	0.62
1:A:496:LEU:O	1:D:652:MET:HA	1.99	0.62
1:A:652:MET:HA	1:B:496:LEU:O	1.99	0.62
1:C:24:VAL:HG13	1:C:69:ILE:HA	1.81	0.62
1:C:46:LYS:HB3	1:C:85:VAL:HG12	1.81	0.62
1:F:374:MET:HG3	1:F:376:LEU:HD13	1.82	0.62
1:D:492:VAL:HG12	1:F:689:GLU:CG	2.19	0.61
1:A:261:MET:HE3	1:B:315:LEU:CD1	2.29	0.61
1:C:140:LEU:HD13	1:C:432:LEU:HD22	1.81	0.61
1:F:360:ARG:NH1	1:F:391:ALA:O	2.33	0.61
1:E:689:GLU:OE2	1:F:492:VAL:CG1	2.40	0.61
1:B:360:ARG:NH1	1:B:391:ALA:O	2.33	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:558:GLN:HB2	1:F:449:ILE:HG23	1.83	0.61
1:A:611:THR:HG21	1:A:614:PRO:HA	1.82	0.61
1:C:120:VAL:HG11	1:C:170:ILE:HG21	1.82	0.61
1:F:46:LYS:HB3	1:F:85:VAL:HG12	1.81	0.61
1:A:538:LEU:HB2	1:B:594:THR:OG1	2.01	0.61
1:D:499:ARG:CD	1:F:680:ARG:NE	2.57	0.61
1:D:603:ASN:OD1	1:D:604:GLY:N	2.30	0.61
1:B:120:VAL:HG11	1:B:170:ILE:HG21	1.83	0.61
1:B:538:LEU:HB2	1:C:594:THR:OG1	2.01	0.61
1:B:709:ARG:NE	1:C:726:THR:HA	2.14	0.61
1:D:269:GLU:OE2	1:D:273:ARG:NH1	2.33	0.61
1:D:374:MET:HG3	1:D:376:LEU:HD13	1.82	0.61
1:E:46:LYS:HB3	1:E:85:VAL:HG12	1.81	0.61
1:C:689:GLU:OE2	1:E:492:VAL:CG1	2.40	0.61
1:C:680:ARG:CZ	1:E:499:ARG:CD	2.77	0.61
1:E:24:VAL:HG13	1:E:69:ILE:HA	1.81	0.61
1:A:594:THR:OG1	1:D:538:LEU:HB2	2.01	0.61
1:B:119:TYR:OH	1:B:137:VAL:O	2.16	0.61
1:D:499:ARG:CD	1:F:680:ARG:CZ	2.77	0.61
1:E:374:MET:HG3	1:E:376:LEU:HD13	1.82	0.61
1:F:269:GLU:OE2	1:F:273:ARG:NH1	2.33	0.61
1:A:535:PRO:HB2	1:B:594:THR:HA	1.82	0.61
1:E:407:ARG:CG	1:F:221:ILE:CG1	2.79	0.61
1:E:611:THR:HG21	1:E:614:PRO:HA	1.82	0.61
1:B:611:THR:HG21	1:B:614:PRO:HA	1.82	0.60
1:B:689:GLU:CD	1:C:492:VAL:C	2.58	0.60
1:E:538:LEU:HB2	1:F:594:THR:OG1	2.01	0.60
1:B:407:ARG:CG	1:C:221:ILE:CG1	2.79	0.60
1:A:499:ARG:CD	1:D:680:ARG:NE	2.57	0.60
1:F:22:SER:O	1:F:55:TYR:N	2.33	0.60
1:F:603:ASN:OD1	1:F:604:GLY:N	2.30	0.60
1:A:374:MET:HG3	1:A:376:LEU:HD13	1.82	0.60
1:A:499:ARG:CB	1:D:680:ARG:NH2	2.61	0.60
1:B:140:LEU:HD13	1:B:432:LEU:HD22	1.81	0.60
1:D:221:ILE:CG1	1:F:407:ARG:CG	2.79	0.60
1:A:407:ARG:CG	1:B:221:ILE:CG1	2.79	0.60
1:D:611:THR:HG21	1:D:614:PRO:HA	1.82	0.60
1:E:120:VAL:HG11	1:E:170:ILE:HG21	1.82	0.60
1:B:261:MET:HE1	1:C:315:LEU:CD1	2.28	0.60
1:D:346:PRO:CB	1:F:234:GLY:O	2.50	0.60
1:E:22:SER:O	1:E:55:TYR:N	2.33	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:535:PRO:HB2	1:E:594:THR:HA	1.82	0.60
1:A:120:VAL:HG11	1:A:170:ILE:HG21	1.82	0.60
1:A:603:ASN:OD1	1:A:604:GLY:N	2.30	0.60
1:B:603:ASN:OD1	1:B:604:GLY:N	2.30	0.60
1:C:407:ARG:CG	1:E:221:ILE:CG1	2.79	0.60
1:B:535:PRO:HB2	1:C:594:THR:HA	1.82	0.60
1:A:221:ILE:CG1	1:D:407:ARG:CG	2.79	0.60
1:A:558:GLN:HB2	1:D:449:ILE:HG23	1.83	0.60
1:F:611:THR:HG21	1:F:614:PRO:HA	1.82	0.60
1:A:269:GLU:OE2	1:A:273:ARG:NH1	2.33	0.60
1:C:611:THR:HG21	1:C:614:PRO:HA	1.82	0.60
1:A:346:PRO:CB	1:D:234:GLY:O	2.50	0.60
1:A:234:GLY:O	1:B:346:PRO:CB	2.50	0.60
1:D:124:LEU:O	1:D:127:ARG:HG3	2.02	0.60
1:E:263:LYS:HD2	1:E:267:GLN:HB3	1.83	0.60
1:A:124:LEU:O	1:A:127:ARG:HG3	2.02	0.60
1:A:492:VAL:HG13	1:D:689:GLU:OE1	1.98	0.60
1:E:535:PRO:HB2	1:F:594:THR:HA	1.83	0.60
1:C:263:LYS:HD2	1:C:267:GLN:HB3	1.83	0.60
1:D:263:LYS:HD2	1:D:267:GLN:HB3	1.83	0.60
1:E:680:ARG:NH1	1:F:499:ARG:HB2	2.12	0.60
1:B:234:GLY:O	1:C:346:PRO:CB	2.50	0.59
1:B:449:ILE:HG23	1:C:558:GLN:HB2	1.83	0.59
1:C:22:SER:O	1:C:55:TYR:N	2.33	0.59
1:D:499:ARG:HB2	1:F:680:ARG:NH1	2.12	0.59
1:E:124:LEU:O	1:E:127:ARG:HG3	2.02	0.59
1:A:293:ASP:OD1	1:A:294:SER:N	2.36	0.59
1:B:374:MET:HG3	1:B:376:LEU:HD13	1.82	0.59
1:C:538:LEU:HB2	1:E:594:THR:OG1	2.01	0.59
1:E:234:GLY:O	1:F:346:PRO:CB	2.50	0.59
1:D:594:THR:OG1	1:F:538:LEU:HB2	2.01	0.59
1:D:590:ASN:HD22	1:F:538:LEU:HD22	1.66	0.59
1:C:124:LEU:O	1:C:127:ARG:HG3	2.02	0.59
1:C:143:ALA:C	1:E:220:GLY:C	2.58	0.59
1:C:374:MET:HG3	1:C:376:LEU:HD13	1.82	0.59
1:C:407:ARG:HG3	1:E:221:ILE:CG1	2.31	0.59
1:D:120:VAL:HG11	1:D:170:ILE:HG21	1.82	0.59
1:E:269:GLU:OE2	1:E:273:ARG:NH1	2.33	0.59
1:C:234:GLY:O	1:E:346:PRO:CB	2.50	0.59
1:C:449:ILE:HG22	1:E:557:LYS:HG3	1.84	0.59
1:F:120:VAL:HG11	1:F:170:ILE:HG21	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:124:LEU:O	1:F:127:ARG:HG3	2.02	0.59
1:F:263:LYS:HD2	1:F:267:GLN:HB3	1.83	0.59
1:C:680:ARG:NH2	1:E:499:ARG:CB	2.61	0.59
1:B:124:LEU:O	1:B:127:ARG:HG3	2.02	0.59
1:C:293:ASP:OD1	1:C:294:SER:N	2.36	0.59
1:E:541:TRP:HZ2	1:F:590:ASN:HD22	1.50	0.59
1:C:709:ARG:NE	1:E:726:THR:HA	2.14	0.59
1:F:293:ASP:OD1	1:F:294:SER:N	2.36	0.59
1:A:407:ARG:CA	1:B:221:ILE:HG21	2.33	0.59
1:B:263:LYS:HD2	1:B:267:GLN:HB3	1.83	0.59
1:A:680:ARG:NH1	1:B:499:ARG:HB2	2.12	0.59
1:C:690:ASN:HA	1:E:489:LYS:NZ	2.18	0.59
1:D:221:ILE:HG21	1:F:407:ARG:CA	2.33	0.59
1:A:449:ILE:HG22	1:B:557:LYS:HG3	1.84	0.59
1:B:541:TRP:HZ2	1:C:590:ASN:HD22	1.50	0.59
1:C:449:ILE:HG23	1:E:558:GLN:HB2	1.83	0.59
1:A:263:LYS:HD2	1:A:267:GLN:HB3	1.83	0.59
1:A:406:VAL:O	1:A:410:ALA:N	2.36	0.59
1:B:690:ASN:HA	1:C:489:LYS:NZ	2.18	0.59
1:D:22:SER:O	1:D:55:TYR:N	2.33	0.59
1:D:264:TYR:CE2	1:D:267:GLN:NE2	2.67	0.59
1:D:489:LYS:NZ	1:F:690:ASN:HA	2.18	0.59
1:B:449:ILE:HG22	1:C:557:LYS:HG3	1.84	0.58
1:E:690:ASN:HA	1:F:489:LYS:NZ	2.18	0.58
1:B:407:ARG:CA	1:C:221:ILE:HG21	2.33	0.58
1:D:594:THR:HA	1:F:535:PRO:HB2	1.83	0.58
1:E:406:VAL:O	1:E:410:ALA:N	2.36	0.58
1:D:293:ASP:OD1	1:D:294:SER:N	2.36	0.58
1:D:406:VAL:O	1:D:410:ALA:N	2.36	0.58
1:C:407:ARG:CA	1:E:221:ILE:HG21	2.33	0.58
1:E:603:ASN:OD1	1:E:604:GLY:N	2.30	0.58
1:D:726:THR:CA	1:F:709:ARG:CZ	2.49	0.58
1:A:22:SER:O	1:A:55:TYR:N	2.33	0.58
1:A:466:TRP:NE1	1:A:524:GLU:OE1	2.37	0.58
1:A:541:TRP:HZ2	1:B:590:ASN:HD22	1.50	0.58
1:A:449:ILE:HG23	1:B:558:GLN:HB2	1.83	0.58
1:C:466:TRP:NE1	1:C:524:GLU:OE1	2.37	0.58
1:B:680:ARG:HD2	1:C:499:ARG:HB3	1.76	0.58
1:B:293:ASP:OD1	1:B:294:SER:N	2.36	0.58
1:B:466:TRP:NE1	1:B:524:GLU:OE1	2.37	0.58
1:D:485:LEU:CD2	1:F:690:ASN:HD22	2.17	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:489:LYS:NZ	1:D:690:ASN:HA	2.18	0.58
1:E:449:ILE:HG22	1:F:557:LYS:HG3	1.84	0.58
1:F:264:TYR:CE1	1:F:267:GLN:CD	2.77	0.58
1:B:499:ARG:HG3	1:B:500:PRO:CD	2.23	0.58
1:B:680:ARG:NH2	1:C:499:ARG:CB	2.61	0.58
1:D:569:ILE:HG21	1:D:592:LEU:HD11	1.86	0.58
1:F:569:ILE:HG21	1:F:592:LEU:HD11	1.86	0.58
1:A:221:ILE:HG21	1:D:407:ARG:CA	2.33	0.58
1:B:264:TYR:CE2	1:B:267:GLN:NE2	2.67	0.58
1:C:406:VAL:O	1:C:410:ALA:N	2.36	0.58
1:C:689:GLU:OE1	1:E:492:VAL:HG13	1.99	0.58
1:E:407:ARG:CA	1:F:221:ILE:HG21	2.33	0.58
1:A:569:ILE:HG21	1:A:592:LEU:HD11	1.86	0.58
1:B:601:VAL:HG23	1:B:602:MET:HG2	1.86	0.58
1:A:557:LYS:HG3	1:D:449:ILE:HG22	1.84	0.58
1:A:690:ASN:HA	1:B:489:LYS:NZ	2.18	0.58
1:C:264:TYR:CE1	1:C:267:GLN:CD	2.77	0.58
1:E:538:LEU:HD22	1:F:590:ASN:HD22	1.66	0.58
1:E:569:ILE:HG21	1:E:592:LEU:HD11	1.86	0.58
1:D:557:LYS:HG3	1:F:449:ILE:HG22	1.84	0.58
1:A:690:ASN:HD22	1:B:485:LEU:CD2	2.17	0.57
1:B:684:MET:CE	1:C:481:GLU:OE2	2.52	0.57
1:C:601:VAL:HG23	1:C:602:MET:HG2	1.86	0.57
1:C:603:ASN:OD1	1:C:604:GLY:N	2.30	0.57
1:D:601:VAL:HG23	1:D:602:MET:HG2	1.86	0.57
1:E:75:ASN:OD1	1:E:188:SER:OG	2.22	0.57
1:E:264:TYR:CE1	1:E:267:GLN:CD	2.77	0.57
1:E:296:ALA:HB1	1:E:340:ASP:HB2	1.86	0.57
1:B:423:LEU:O	1:C:215:LEU:HD11	2.05	0.57
1:B:690:ASN:HD22	1:C:485:LEU:CD2	2.17	0.57
1:C:75:ASN:OD1	1:C:188:SER:OG	2.23	0.57
1:C:296:ALA:HB1	1:C:340:ASP:HB2	1.86	0.57
1:D:507:TYR:HE2	1:D:630:LEU:HB3	1.70	0.57
1:E:293:ASP:OD1	1:E:294:SER:N	2.36	0.57
1:F:75:ASN:OD1	1:F:188:SER:OG	2.23	0.57
1:F:406:VAL:O	1:F:410:ALA:N	2.36	0.57
1:F:466:TRP:NE1	1:F:524:GLU:OE1	2.37	0.57
1:E:690:ASN:HD22	1:F:485:LEU:CD2	2.17	0.57
1:F:489:LYS:O	1:F:492:VAL:N	2.29	0.57
1:A:601:VAL:HG23	1:A:602:MET:HG2	1.86	0.57
1:B:406:VAL:O	1:B:410:ALA:N	2.36	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:680:ARG:NH1	1:E:499:ARG:HB2	2.12	0.57
1:E:466:TRP:NE1	1:E:524:GLU:OE1	2.37	0.57
1:E:684:MET:CE	1:F:481:GLU:OE2	2.52	0.57
1:E:680:ARG:NH2	1:F:499:ARG:CB	2.61	0.57
1:A:485:LEU:CD2	1:D:690:ASN:HD22	2.17	0.57
1:B:689:GLU:C	1:C:489:LYS:NZ	2.53	0.57
1:C:684:MET:CE	1:E:481:GLU:OE2	2.52	0.57
1:F:110:LEU:HG	1:F:111:LYS:H	1.70	0.57
1:E:709:ARG:NE	1:F:726:THR:HA	2.14	0.57
1:F:8:ILE:HG23	1:F:84:LYS:HG3	1.86	0.57
1:A:499:ARG:HB2	1:D:680:ARG:NH1	2.12	0.57
1:C:423:LEU:O	1:E:215:LEU:HD11	2.05	0.57
1:E:481:GLU:HA	1:E:485:LEU:HD13	1.87	0.57
1:F:601:VAL:HG23	1:F:602:MET:HG2	1.86	0.57
1:A:590:ASN:HD22	1:D:538:LEU:HD22	1.66	0.57
1:F:481:GLU:HA	1:F:485:LEU:HD13	1.87	0.57
1:A:489:LYS:O	1:A:492:VAL:N	2.29	0.57
1:A:594:THR:HA	1:D:535:PRO:HB2	1.82	0.57
1:D:481:GLU:HA	1:D:485:LEU:HD13	1.87	0.57
1:B:264:TYR:CE1	1:B:267:GLN:CD	2.77	0.57
1:C:690:ASN:HD22	1:E:485:LEU:CD2	2.17	0.57
1:E:601:VAL:HG23	1:E:602:MET:HG2	1.86	0.57
1:C:481:GLU:HA	1:C:485:LEU:HD13	1.87	0.57
1:C:569:ILE:HG21	1:C:592:LEU:HD11	1.86	0.57
1:F:507:TYR:HE2	1:F:630:LEU:HB3	1.70	0.57
1:A:481:GLU:HA	1:A:485:LEU:HD13	1.87	0.57
1:B:22:SER:O	1:B:55:TYR:N	2.33	0.57
1:B:296:ALA:HB1	1:B:340:ASP:HB2	1.86	0.57
1:B:569:ILE:HG21	1:B:592:LEU:HD11	1.86	0.57
1:E:8:ILE:HG23	1:E:84:LYS:HG3	1.86	0.57
1:B:75:ASN:OD1	1:B:188:SER:OG	2.22	0.56
1:C:538:LEU:HD22	1:E:590:ASN:HD22	1.66	0.56
1:D:75:ASN:OD1	1:D:188:SER:OG	2.23	0.56
1:A:346:PRO:CG	1:D:234:GLY:O	2.53	0.56
1:D:466:TRP:NE1	1:D:524:GLU:OE1	2.37	0.56
1:E:449:ILE:HG23	1:F:558:GLN:HB2	1.83	0.56
1:A:296:ALA:HB1	1:A:340:ASP:HB2	1.86	0.56
1:A:507:TYR:HE2	1:A:630:LEU:HB3	1.70	0.56
1:A:423:LEU:O	1:B:215:LEU:HD11	2.05	0.56
1:A:680:ARG:HD2	1:B:499:ARG:HB3	1.76	0.56
1:D:110:LEU:HG	1:D:111:LYS:H	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:232:PRO:HG2	1:E:398:VAL:HG21	1.87	0.56
1:D:481:GLU:OE2	1:F:684:MET:CE	2.52	0.56
1:B:143:ALA:HB1	1:C:221:ILE:O	1.57	0.56
1:C:507:TYR:HE2	1:C:630:LEU:HB3	1.70	0.56
1:D:296:ALA:HB1	1:D:340:ASP:HB2	1.87	0.56
1:A:75:ASN:OD1	1:A:188:SER:OG	2.23	0.56
1:B:481:GLU:HA	1:B:485:LEU:HD13	1.87	0.56
1:C:8:ILE:HG23	1:C:84:LYS:HG3	1.86	0.56
1:A:481:GLU:OE2	1:D:684:MET:CE	2.52	0.56
1:D:8:ILE:HG23	1:D:84:LYS:HG3	1.86	0.56
1:B:110:LEU:HG	1:B:111:LYS:H	1.70	0.56
1:B:8:ILE:HG23	1:B:84:LYS:HG3	1.86	0.56
1:D:264:TYR:CE1	1:D:267:GLN:CD	2.77	0.56
1:D:272:LEU:HD11	1:D:310:VAL:HG23	1.88	0.56
1:D:346:PRO:CG	1:F:234:GLY:O	2.53	0.56
1:E:507:TYR:HE2	1:E:630:LEU:HB3	1.70	0.56
1:E:684:MET:HE1	1:F:481:GLU:CG	2.28	0.56
1:F:272:LEU:HD11	1:F:310:VAL:HG23	1.88	0.56
1:D:221:ILE:CG1	1:F:407:ARG:HG3	2.31	0.56
1:C:232:PRO:HG2	1:C:398:VAL:HG21	1.87	0.56
1:C:689:GLU:C	1:E:489:LYS:NZ	2.53	0.56
1:A:234:GLY:O	1:B:346:PRO:CG	2.53	0.56
1:C:110:LEU:HG	1:C:111:LYS:H	1.70	0.56
1:D:489:LYS:O	1:D:492:VAL:N	2.29	0.56
1:E:110:LEU:HG	1:E:111:LYS:H	1.70	0.56
1:E:423:LEU:O	1:F:215:LEU:HD11	2.05	0.56
1:C:367:LEU:O	1:C:371:THR:N	2.39	0.56
1:C:541:TRP:HZ2	1:E:590:ASN:HD22	1.50	0.56
1:E:12:ALA:HB3	1:E:68:ARG:HA	1.88	0.56
1:F:296:ALA:HB1	1:F:340:ASP:HB2	1.86	0.56
1:F:367:LEU:O	1:F:371:THR:N	2.39	0.56
1:A:689:GLU:C	1:B:489:LYS:NZ	2.53	0.56
1:C:12:ALA:HB3	1:C:68:ARG:HA	1.88	0.56
1:D:367:LEU:O	1:D:371:THR:N	2.39	0.56
1:C:234:GLY:O	1:E:346:PRO:CG	2.53	0.56
1:C:680:ARG:HD2	1:E:499:ARG:HB3	1.76	0.56
1:A:272:LEU:HD11	1:A:310:VAL:HG23	1.87	0.56
1:A:684:MET:CE	1:B:481:GLU:OE2	2.52	0.56
1:B:507:TYR:HE2	1:B:630:LEU:HB3	1.70	0.56
1:E:261:MET:HE3	1:F:315:LEU:CD1	2.32	0.56
1:E:234:GLY:O	1:F:346:PRO:CG	2.53	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:232:PRO:HG2	1:A:398:VAL:HG21	1.87	0.56
1:A:576:ARG:HH11	1:A:586:GLU:HG2	1.71	0.56
1:F:232:PRO:HG2	1:F:398:VAL:HG21	1.87	0.56
1:B:12:ALA:HB3	1:B:68:ARG:HA	1.88	0.55
1:B:232:PRO:HG2	1:B:398:VAL:HG21	1.87	0.55
1:B:234:GLY:O	1:C:346:PRO:CG	2.53	0.55
1:B:689:GLU:OE1	1:C:492:VAL:HG13	1.99	0.55
1:D:576:ARG:HH11	1:D:586:GLU:HG2	1.71	0.55
1:F:12:ALA:HB3	1:F:68:ARG:HA	1.88	0.55
1:D:315:LEU:CD1	1:F:261:MET:HE3	2.33	0.55
1:B:367:LEU:O	1:B:371:THR:N	2.39	0.55
1:B:576:ARG:HH11	1:B:586:GLU:HG2	1.71	0.55
1:D:215:LEU:HD11	1:F:423:LEU:O	2.05	0.55
1:D:376:LEU:HD11	1:D:437:VAL:HB	1.89	0.55
1:A:367:LEU:O	1:A:371:THR:N	2.39	0.55
1:A:215:LEU:HD11	1:D:423:LEU:O	2.05	0.55
1:F:264:TYR:CE2	1:F:267:GLN:NE2	2.67	0.55
1:A:110:LEU:HG	1:A:111:LYS:H	1.70	0.55
1:B:538:LEU:HD22	1:C:590:ASN:HD22	1.66	0.55
1:B:680:ARG:NH1	1:C:499:ARG:HB2	2.12	0.55
1:D:232:PRO:HG2	1:D:398:VAL:HG21	1.87	0.55
1:D:726:THR:HA	1:F:709:ARG:NE	2.14	0.55
1:D:221:ILE:O	1:F:143:ALA:HB1	1.57	0.55
1:D:12:ALA:HB3	1:D:68:ARG:HA	1.88	0.55
1:E:272:LEU:HD11	1:E:310:VAL:HG23	1.87	0.55
1:F:376:LEU:HD11	1:F:437:VAL:HB	1.89	0.55
1:A:12:ALA:HB3	1:A:68:ARG:HA	1.88	0.55
1:A:8:ILE:HG23	1:A:84:LYS:HG3	1.86	0.55
1:A:44:ILE:HA	1:A:87:VAL:HG12	1.89	0.55
1:E:183:GLU:CD	1:E:184:VAL:H	2.10	0.55
1:E:261:MET:HE1	1:F:315:LEU:CD1	2.35	0.55
1:D:315:LEU:CD1	1:F:261:MET:HE1	2.34	0.55
1:F:274:GLU:OE2	1:F:278:LYS:NZ	2.40	0.55
1:A:264:TYR:CE1	1:A:267:GLN:CD	2.77	0.55
1:A:492:VAL:CG1	1:D:689:GLU:OE2	2.40	0.55
1:D:274:GLU:OE2	1:D:278:LYS:NZ	2.40	0.55
1:D:416:ARG:NH1	1:D:438:THR:OG1	2.40	0.55
1:B:272:LEU:HD11	1:B:310:VAL:HG23	1.87	0.55
1:B:44:ILE:HA	1:B:87:VAL:HG12	1.89	0.55
1:C:274:GLU:OE2	1:C:278:LYS:NZ	2.40	0.55
1:D:492:VAL:HG13	1:F:689:GLU:OE1	1.99	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:652:MET:CA	1:C:496:LEU:O	2.55	0.55
1:E:652:MET:CA	1:F:496:LEU:O	2.55	0.55
1:B:101:ALA:N	1:B:151:LYS:O	2.39	0.55
1:C:272:LEU:HD11	1:C:310:VAL:HG23	1.87	0.55
1:D:616:ILE:O	1:D:617:MET:HG3	2.07	0.54
1:A:315:LEU:HD12	1:D:261:MET:HE3	1.82	0.54
1:B:489:LYS:O	1:B:492:VAL:N	2.29	0.54
1:C:183:GLU:CD	1:C:184:VAL:H	2.10	0.54
1:C:576:ARG:HH11	1:C:586:GLU:HG2	1.71	0.54
1:E:367:LEU:O	1:E:371:THR:N	2.39	0.54
1:F:284:PRO:HB3	1:F:326:HIS:HD2	1.73	0.54
1:A:563:ILE:HG22	1:A:606:VAL:HB	1.90	0.54
1:B:284:PRO:HB3	1:B:326:HIS:HD2	1.73	0.54
1:C:284:PRO:HB3	1:C:326:HIS:HD2	1.73	0.54
1:D:496:LEU:O	1:F:652:MET:CA	2.55	0.54
1:F:563:ILE:HG22	1:F:606:VAL:HB	1.90	0.54
1:A:183:GLU:CD	1:A:184:VAL:H	2.10	0.54
1:A:652:MET:CA	1:B:496:LEU:O	2.55	0.54
1:C:616:ILE:O	1:C:617:MET:HG3	2.07	0.54
1:C:652:MET:CA	1:E:496:LEU:O	2.55	0.54
1:E:274:GLU:OE2	1:E:278:LYS:NZ	2.40	0.54
1:F:101:ALA:N	1:F:151:LYS:O	2.39	0.54
1:A:293:ASP:OD2	1:B:345:ARG:NH2	2.40	0.54
1:B:183:GLU:CD	1:B:184:VAL:H	2.10	0.54
1:E:616:ILE:O	1:E:617:MET:HG3	2.07	0.54
1:F:340:ASP:HB3	1:F:343:LEU:HG	1.90	0.54
1:B:376:LEU:HD11	1:B:437:VAL:HB	1.89	0.54
1:B:684:MET:HE1	1:C:481:GLU:CG	2.32	0.54
1:C:264:TYR:CE2	1:C:267:GLN:NE2	2.67	0.54
1:C:376:LEU:HD11	1:C:437:VAL:HB	1.89	0.54
1:C:44:ILE:HA	1:C:87:VAL:HG12	1.89	0.54
1:C:489:LYS:O	1:C:492:VAL:N	2.29	0.54
1:D:183:GLU:CD	1:D:184:VAL:H	2.10	0.54
1:D:44:ILE:HA	1:D:87:VAL:HG12	1.89	0.54
1:E:340:ASP:HB3	1:E:343:LEU:HG	1.90	0.54
1:E:576:ARG:HH11	1:E:586:GLU:HG2	1.71	0.54
1:F:499:ARG:HG3	1:F:500:PRO:CD	2.23	0.54
1:F:576:ARG:HH11	1:F:586:GLU:HG2	1.71	0.54
1:A:416:ARG:NH1	1:A:438:THR:OG1	2.40	0.54
1:A:376:LEU:HD11	1:A:437:VAL:HB	1.89	0.54
1:B:563:ILE:HG22	1:B:606:VAL:HB	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:563:ILE:HG22	1:E:606:VAL:HB	1.90	0.54
1:A:590:ASN:HB2	1:D:538:LEU:CG	2.36	0.54
1:B:274:GLU:OE2	1:B:278:LYS:NZ	2.40	0.54
1:E:284:PRO:HB3	1:E:326:HIS:HD2	1.73	0.54
1:A:620:ALA:HB2	1:A:623:ARG:NH2	2.17	0.54
1:A:72:VAL:HA	1:A:75:ASN:HB2	1.90	0.54
1:E:101:ALA:N	1:E:151:LYS:O	2.39	0.54
1:E:680:ARG:HE	1:F:499:ARG:CG	2.20	0.54
1:A:284:PRO:HB3	1:A:326:HIS:HD2	1.73	0.53
1:A:689:GLU:OE1	1:B:492:VAL:HG13	1.99	0.53
1:A:726:THR:HA	1:D:709:ARG:NE	2.14	0.53
1:D:340:ASP:HB3	1:D:343:LEU:HG	1.90	0.53
1:A:538:LEU:HD22	1:B:590:ASN:HD22	1.66	0.53
1:D:72:VAL:HA	1:D:75:ASN:HB2	1.90	0.53
1:E:567:ASP:OD1	1:E:610:ALA:N	2.41	0.53
1:F:183:GLU:CD	1:F:184:VAL:H	2.10	0.53
1:A:616:ILE:O	1:A:617:MET:HG3	2.07	0.53
1:B:110:LEU:HD11	1:B:148:LEU:HD21	1.90	0.53
1:B:616:ILE:O	1:B:617:MET:HG3	2.07	0.53
1:D:284:PRO:HB3	1:D:326:HIS:HD2	1.73	0.53
1:F:46:LYS:HD3	1:F:77:CYS:HB3	1.91	0.53
1:F:616:ILE:O	1:F:617:MET:HG3	2.07	0.53
1:F:72:VAL:HA	1:F:75:ASN:HB2	1.90	0.53
1:A:110:LEU:HD11	1:A:148:LEU:HD21	1.90	0.53
1:A:340:ASP:HB3	1:A:343:LEU:HG	1.90	0.53
1:A:46:LYS:HD3	1:A:77:CYS:HB3	1.91	0.53
1:A:689:GLU:OE2	1:B:492:VAL:CG1	2.40	0.53
1:E:376:LEU:HD11	1:E:437:VAL:HB	1.89	0.53
1:E:689:GLU:C	1:F:489:LYS:NZ	2.53	0.53
1:A:489:LYS:NZ	1:D:689:GLU:C	2.53	0.53
1:B:620:ALA:HB2	1:B:623:ARG:NH2	2.17	0.53
1:B:72:VAL:HA	1:B:75:ASN:HB2	1.90	0.53
1:D:46:LYS:HD3	1:D:77:CYS:HB3	1.91	0.53
1:D:499:ARG:CG	1:F:680:ARG:HE	2.20	0.53
1:A:538:LEU:CG	1:B:590:ASN:HB2	2.36	0.53
1:A:274:GLU:OE2	1:A:278:LYS:NZ	2.40	0.53
1:C:567:ASP:OD1	1:C:610:ALA:N	2.41	0.53
1:E:44:ILE:HA	1:E:87:VAL:HG12	1.89	0.53
1:F:567:ASP:OD1	1:F:610:ALA:N	2.41	0.53
1:F:44:ILE:HA	1:F:87:VAL:HG12	1.89	0.53
1:C:110:LEU:HD11	1:C:148:LEU:HD21	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:340:ASP:HB3	1:C:343:LEU:HG	1.90	0.53
1:D:110:LEU:HD11	1:D:148:LEU:HD21	1.90	0.53
1:A:221:ILE:CG2	1:D:407:ARG:HA	2.39	0.53
1:E:46:LYS:HD3	1:E:77:CYS:HB3	1.91	0.53
1:E:535:PRO:CG	1:F:597:ASP:OD2	2.53	0.53
1:A:567:ASP:OD1	1:A:610:ALA:N	2.41	0.53
1:C:563:ILE:HG22	1:C:606:VAL:HB	1.90	0.53
1:E:416:ARG:NH1	1:E:438:THR:OG1	2.40	0.53
1:A:407:ARG:HA	1:B:221:ILE:CG2	2.39	0.53
1:A:496:LEU:O	1:D:652:MET:CA	2.55	0.53
1:C:680:ARG:HE	1:E:499:ARG:CG	2.20	0.53
1:A:499:ARG:HB3	1:D:680:ARG:HD2	1.76	0.52
1:B:340:ASP:HB3	1:B:343:LEU:HG	1.90	0.52
1:B:46:LYS:HD3	1:B:77:CYS:HB3	1.91	0.52
1:B:567:ASP:OD1	1:B:610:ALA:N	2.41	0.52
1:C:483:VAL:HG22	1:C:606:VAL:HG11	1.91	0.52
1:D:483:VAL:HG22	1:D:606:VAL:HG11	1.91	0.52
1:D:563:ILE:HG22	1:D:606:VAL:HB	1.90	0.52
1:E:72:VAL:HA	1:E:75:ASN:HB2	1.90	0.52
1:C:510:PRO:CA	1:E:623:ARG:HH11	2.15	0.52
1:D:101:ALA:N	1:D:151:LYS:O	2.39	0.52
1:C:261:MET:HE1	1:E:315:LEU:HD12	1.84	0.52
1:E:680:ARG:HD2	1:F:499:ARG:HB3	1.76	0.52
1:E:535:PRO:HB2	1:F:594:THR:HG23	1.91	0.52
1:B:407:ARG:HG3	1:C:221:ILE:CG1	2.31	0.52
1:B:416:ARG:NH1	1:B:438:THR:OG1	2.40	0.52
1:B:483:VAL:HG22	1:B:606:VAL:HG11	1.91	0.52
1:F:416:ARG:NH1	1:F:438:THR:OG1	2.40	0.52
1:F:483:VAL:HG22	1:F:606:VAL:HG11	1.91	0.52
1:A:483:VAL:HG22	1:A:606:VAL:HG11	1.91	0.52
1:D:590:ASN:HB2	1:F:538:LEU:CG	2.36	0.52
1:D:620:ALA:HB2	1:D:623:ARG:NH2	2.17	0.52
1:C:143:ALA:HB1	1:E:221:ILE:O	1.57	0.52
1:C:72:VAL:HA	1:C:75:ASN:HB2	1.90	0.52
1:A:345:ARG:NH2	1:D:293:ASP:OD2	2.40	0.52
1:E:110:LEU:HD11	1:E:148:LEU:HD21	1.90	0.52
1:E:483:VAL:HG22	1:E:606:VAL:HG11	1.91	0.52
1:C:416:ARG:NH1	1:C:438:THR:OG1	2.40	0.52
1:D:20:GLY:HA2	1:D:127:ARG:HH21	1.75	0.52
1:A:499:ARG:CG	1:D:680:ARG:HE	2.20	0.52
1:C:689:GLU:CB	1:E:496:LEU:HD11	2.36	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:20:GLY:HA2	1:B:127:ARG:HH21	1.75	0.52
1:C:234:GLY:O	1:E:346:PRO:HB2	2.10	0.52
1:C:46:LYS:HD3	1:C:77:CYS:HB3	1.91	0.52
1:D:567:ASP:OD1	1:D:610:ALA:N	2.41	0.52
1:E:143:ALA:HB1	1:F:221:ILE:O	1.57	0.52
1:C:535:PRO:HB2	1:E:594:THR:HG23	1.91	0.52
1:E:234:GLY:O	1:F:346:PRO:HB2	2.10	0.52
1:C:20:GLY:HA2	1:C:127:ARG:HH21	1.75	0.52
1:D:221:ILE:CG2	1:F:407:ARG:HA	2.39	0.52
1:D:489:LYS:NZ	1:F:689:GLU:C	2.53	0.52
1:E:20:GLY:HA2	1:E:127:ARG:HH21	1.75	0.52
1:C:538:LEU:CG	1:E:590:ASN:HB2	2.36	0.52
1:F:20:GLY:HA2	1:F:127:ARG:HH21	1.75	0.52
1:D:346:PRO:HB2	1:F:234:GLY:O	2.10	0.52
1:A:264:TYR:CE2	1:A:267:GLN:NE2	2.67	0.51
1:A:346:PRO:HB2	1:D:234:GLY:O	2.10	0.51
1:A:567:ASP:HB3	1:A:568:GLU:OE1	2.10	0.51
1:F:110:LEU:HD11	1:F:148:LEU:HD21	1.90	0.51
1:A:234:GLY:O	1:B:346:PRO:HB2	2.10	0.51
1:B:567:ASP:HB3	1:B:568:GLU:OE1	2.10	0.51
1:B:680:ARG:HE	1:C:499:ARG:CG	2.20	0.51
1:A:535:PRO:HB2	1:B:594:THR:HG23	1.91	0.51
1:A:510:PRO:CA	1:B:623:ARG:HH11	2.15	0.51
1:B:261:MET:HE3	1:C:315:LEU:HD12	1.81	0.51
1:D:594:THR:HG23	1:F:535:PRO:HB2	1.91	0.51
1:C:131:GLU:HG2	1:C:132:GLN:HG2	1.92	0.51
1:B:583:GLY:HA3	1:B:619:PRO:HD2	1.93	0.51
1:D:567:ASP:HB3	1:D:568:GLU:OE1	2.10	0.51
1:A:20:GLY:HA2	1:A:127:ARG:HH21	1.75	0.51
1:A:594:THR:HG23	1:D:535:PRO:HB2	1.91	0.51
1:A:680:ARG:HE	1:B:499:ARG:CG	2.20	0.51
1:B:535:PRO:HB2	1:C:594:THR:HG23	1.91	0.51
1:B:535:PRO:CG	1:C:597:ASP:OD2	2.53	0.51
1:F:131:GLU:HG2	1:F:132:GLN:HG2	1.92	0.51
1:D:481:GLU:CG	1:F:684:MET:HE1	2.33	0.51
1:B:293:ASP:OD2	1:C:345:ARG:NH2	2.40	0.51
1:A:131:GLU:HG2	1:A:132:GLN:HG2	1.92	0.51
1:A:583:GLY:HA3	1:A:619:PRO:HD2	1.93	0.51
1:B:234:GLY:O	1:C:346:PRO:HB2	2.10	0.51
1:E:103:ILE:HG21	1:E:183:GLU:HG3	1.93	0.51
1:E:17:THR:HG21	1:E:372:ARG:CZ	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:17:THR:HG21	1:A:372:ARG:CZ	2.41	0.51
1:E:567:ASP:HB3	1:E:568:GLU:OE1	2.10	0.51
1:E:618:ASP:HB2	1:E:621:LEU:HG	1.93	0.51
1:A:623:ARG:HH11	1:D:510:PRO:CA	2.15	0.51
1:C:567:ASP:HB3	1:C:568:GLU:OE1	2.10	0.51
1:C:684:MET:HE1	1:E:481:GLU:CG	2.36	0.51
1:D:131:GLU:HG2	1:D:132:GLN:HG2	1.92	0.51
1:E:407:ARG:HA	1:F:221:ILE:CG2	2.39	0.51
1:F:567:ASP:HB3	1:F:568:GLU:OE1	2.10	0.51
1:A:499:ARG:HG3	1:A:500:PRO:CD	2.23	0.50
1:B:407:ARG:HA	1:C:221:ILE:CG2	2.39	0.50
1:B:538:LEU:HD13	1:C:590:ASN:HB2	0.68	0.50
1:C:103:ILE:HG21	1:C:183:GLU:HG3	1.93	0.50
1:D:499:ARG:HB3	1:F:680:ARG:HD2	1.76	0.50
1:A:590:ASN:HD22	1:D:541:TRP:HZ2	1.50	0.50
1:C:583:GLY:HA3	1:C:619:PRO:HD2	1.93	0.50
1:E:510:PRO:CA	1:F:623:ARG:HH11	2.15	0.50
1:A:680:ARG:HE	1:B:499:ARG:HB3	1.39	0.50
1:D:490:PRO:HA	1:D:493:PHE:HB3	1.93	0.50
1:C:407:ARG:HA	1:E:221:ILE:CG2	2.39	0.50
1:A:220:GLY:C	1:D:143:ALA:C	2.58	0.50
1:A:490:PRO:HA	1:A:493:PHE:HB3	1.93	0.50
1:B:131:GLU:HG2	1:B:132:GLN:HG2	1.92	0.50
1:C:101:ALA:N	1:C:151:LYS:O	2.39	0.50
1:C:293:ASP:OD2	1:E:345:ARG:NH2	2.40	0.50
1:D:17:THR:HG21	1:D:372:ARG:CZ	2.41	0.50
1:D:597:ASP:OD2	1:F:535:PRO:CG	2.53	0.50
1:A:726:THR:CA	1:D:709:ARG:CZ	2.49	0.50
1:E:490:PRO:HA	1:E:493:PHE:HB3	1.93	0.50
1:E:131:GLU:HG2	1:E:132:GLN:HG2	1.92	0.50
1:F:618:ASP:HB2	1:F:621:LEU:HG	1.93	0.50
1:F:583:GLY:HA3	1:F:619:PRO:HD2	1.93	0.50
1:A:103:ILE:HG21	1:A:183:GLU:HG3	1.93	0.50
1:B:109:ARG:HG3	1:B:110:LEU:N	2.25	0.50
1:C:17:THR:HG21	1:C:372:ARG:CZ	2.41	0.50
1:B:690:ASN:CA	1:C:489:LYS:NZ	2.75	0.50
1:D:103:ILE:HG21	1:D:183:GLU:HG3	1.93	0.50
1:A:594:THR:HG23	1:D:535:PRO:CB	2.42	0.50
1:F:17:THR:HG21	1:F:372:ARG:CZ	2.41	0.50
1:E:690:ASN:HD22	1:F:485:LEU:HD21	1.77	0.50
1:B:17:THR:HG21	1:B:372:ARG:CZ	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:690:ASN:CA	1:B:489:LYS:NZ	2.75	0.50
1:E:293:ASP:OD2	1:F:345:ARG:NH2	2.40	0.50
1:B:489:LYS:O	1:B:491:ASP:N	2.45	0.50
1:C:490:PRO:HA	1:C:493:PHE:HB3	1.93	0.50
1:C:618:ASP:HB2	1:C:621:LEU:HG	1.93	0.50
1:D:315:LEU:HD22	1:D:348:ARG:HE	1.77	0.50
1:E:583:GLY:HA3	1:E:619:PRO:HD2	1.93	0.50
1:F:315:LEU:HD22	1:F:348:ARG:HE	1.77	0.50
1:A:101:ALA:N	1:A:151:LYS:O	2.39	0.49
1:A:538:LEU:HD13	1:B:590:ASN:HB2	0.68	0.49
1:A:618:ASP:HB2	1:A:621:LEU:HG	1.93	0.49
1:B:490:PRO:HA	1:B:493:PHE:HB3	1.93	0.49
1:E:499:ARG:HG3	1:E:500:PRO:CD	2.23	0.49
1:D:594:THR:HG23	1:F:535:PRO:CB	2.42	0.49
1:A:689:GLU:CD	1:B:492:VAL:O	2.51	0.49
1:C:689:GLU:CD	1:E:492:VAL:O	2.51	0.49
1:D:485:LEU:HD21	1:F:690:ASN:HD22	1.77	0.49
1:D:583:GLY:HA3	1:D:619:PRO:HD2	1.93	0.49
1:D:618:ASP:HB2	1:D:621:LEU:HG	1.93	0.49
1:E:689:GLU:CD	1:F:492:VAL:O	2.51	0.49
1:A:272:LEU:HB3	1:A:317:LEU:HD11	1.94	0.49
1:A:684:MET:CE	1:B:481:GLU:HG3	2.40	0.49
1:B:618:ASP:HB2	1:B:621:LEU:HG	1.93	0.49
1:C:489:LYS:O	1:C:491:ASP:N	2.45	0.49
1:D:489:LYS:O	1:D:491:ASP:N	2.45	0.49
1:E:315:LEU:HD22	1:E:348:ARG:HE	1.77	0.49
1:E:392:ASP:OD1	1:E:393:TYR:N	2.46	0.49
1:C:690:ASN:HD22	1:E:485:LEU:HD21	1.77	0.49
1:C:690:ASN:CA	1:E:489:LYS:NZ	2.75	0.49
1:F:316:THR:O	1:F:320:GLY:N	2.43	0.49
1:F:490:PRO:HA	1:F:493:PHE:HB3	1.93	0.49
1:A:489:LYS:O	1:A:491:ASP:N	2.45	0.49
1:B:272:LEU:HB3	1:B:317:LEU:HD11	1.94	0.49
1:B:689:GLU:CB	1:C:496:LEU:HD11	2.36	0.49
1:F:489:LYS:O	1:F:491:ASP:N	2.45	0.49
1:A:363:ARG:NH1	1:A:397:PHE:HB2	2.24	0.49
1:A:489:LYS:NZ	1:D:690:ASN:CA	2.75	0.49
1:B:103:ILE:HG21	1:B:183:GLU:HG3	1.93	0.49
1:C:575:ARG:HB3	1:E:584:VAL:HG11	1.95	0.49
1:C:709:ARG:CZ	1:E:726:THR:CA	2.49	0.49
1:A:492:VAL:O	1:D:689:GLU:CD	2.51	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:485:LEU:HD21	1:D:690:ASN:HD22	1.77	0.49
1:C:535:PRO:CG	1:E:597:ASP:OD2	2.53	0.49
1:A:315:LEU:HD22	1:A:348:ARG:HE	1.78	0.49
1:B:689:GLU:CD	1:C:492:VAL:O	2.51	0.49
1:E:575:ARG:HB3	1:F:584:VAL:HG11	1.95	0.49
1:B:538:LEU:CG	1:C:590:ASN:HB2	2.36	0.49
1:D:496:LEU:HD11	1:F:689:GLU:CB	2.36	0.49
1:F:103:ILE:HG21	1:F:183:GLU:HG3	1.93	0.49
1:B:261:MET:HE3	1:C:315:LEU:CD1	2.39	0.49
1:C:506:LEU:HD23	1:C:631:ILE:HB	1.95	0.49
1:E:264:TYR:CE2	1:E:267:GLN:NE2	2.67	0.49
1:E:272:LEU:HB3	1:E:317:LEU:HD11	1.94	0.49
1:D:590:ASN:HD22	1:F:541:TRP:HZ2	1.50	0.49
1:F:620:ALA:HB2	1:F:623:ARG:NH2	2.17	0.49
1:B:506:LEU:HD23	1:B:631:ILE:HB	1.95	0.49
1:C:272:LEU:HB3	1:C:317:LEU:HD11	1.94	0.49
1:A:481:GLU:CG	1:D:684:MET:HE1	2.32	0.49
1:E:690:ASN:CA	1:F:489:LYS:NZ	2.75	0.49
1:D:345:ARG:NH2	1:F:293:ASP:OD2	2.40	0.49
1:F:392:ASP:OD1	1:F:393:TYR:N	2.46	0.49
1:A:120:VAL:O	1:A:124:LEU:HG	2.13	0.49
1:A:492:VAL:C	1:D:689:GLU:OE1	2.52	0.49
1:B:690:ASN:HD22	1:C:485:LEU:HD21	1.77	0.49
1:C:499:ARG:CG	1:C:500:PRO:N	2.74	0.49
1:D:392:ASP:OD1	1:D:393:TYR:N	2.46	0.49
1:E:489:LYS:O	1:E:492:VAL:N	2.29	0.49
1:D:492:VAL:C	1:F:689:GLU:OE1	2.52	0.49
1:A:690:ASN:HD22	1:B:485:LEU:HD21	1.77	0.48
1:B:575:ARG:HB3	1:C:584:VAL:HG11	1.95	0.48
1:D:315:LEU:HD22	1:D:348:ARG:NE	2.28	0.48
1:D:506:LEU:HD23	1:D:631:ILE:HB	1.95	0.48
1:F:272:LEU:HB3	1:F:317:LEU:HD11	1.94	0.48
1:D:489:LYS:NZ	1:F:690:ASN:CA	2.75	0.48
1:A:535:PRO:CB	1:B:594:THR:HG23	2.42	0.48
1:B:392:ASP:OD1	1:B:393:TYR:N	2.46	0.48
1:B:501:SER:OG	1:B:628:ASP:OD2	2.31	0.48
1:C:120:VAL:O	1:C:124:LEU:HG	2.13	0.48
1:C:370:HIS:CE1	1:C:403:ALA:HB2	2.48	0.48
1:C:501:SER:OG	1:C:628:ASP:OD2	2.31	0.48
1:D:120:VAL:O	1:D:124:LEU:HG	2.13	0.48
1:E:489:LYS:O	1:E:491:ASP:N	2.45	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:506:LEU:HD23	1:E:631:ILE:HB	1.95	0.48
1:E:689:GLU:OE1	1:F:492:VAL:HG13	1.99	0.48
1:A:392:ASP:OD1	1:A:393:TYR:N	2.46	0.48
1:A:501:SER:OG	1:A:628:ASP:OD2	2.31	0.48
1:A:508:GLY:O	1:A:612:ASN:HA	2.13	0.48
1:A:541:TRP:HH2	1:B:587:ARG:HA	1.79	0.48
1:B:316:THR:O	1:B:320:GLY:N	2.43	0.48
1:D:584:VAL:HG11	1:F:575:ARG:HB3	1.95	0.48
1:C:538:LEU:HD13	1:E:590:ASN:HB2	0.68	0.48
1:F:370:HIS:CE1	1:F:403:ALA:HB2	2.48	0.48
1:D:492:VAL:O	1:F:689:GLU:CD	2.51	0.48
1:A:689:GLU:OE1	1:B:492:VAL:C	2.52	0.48
1:B:120:VAL:O	1:B:124:LEU:HG	2.13	0.48
1:C:315:LEU:HD22	1:C:348:ARG:HE	1.77	0.48
1:C:410:ALA:HB3	1:E:221:ILE:CG2	2.44	0.48
1:F:345:ARG:HD2	1:F:348:ARG:HH12	1.79	0.48
1:C:315:LEU:HD22	1:C:348:ARG:NE	2.28	0.48
1:C:392:ASP:OD1	1:C:393:TYR:N	2.46	0.48
1:E:315:LEU:HD22	1:E:348:ARG:NE	2.28	0.48
1:E:689:GLU:OE1	1:F:492:VAL:C	2.52	0.48
1:E:538:LEU:CG	1:F:590:ASN:HB2	2.36	0.48
1:F:506:LEU:HD23	1:F:631:ILE:HB	1.95	0.48
1:B:370:HIS:CE1	1:B:403:ALA:HB2	2.48	0.48
1:C:109:ARG:HG3	1:C:110:LEU:N	2.25	0.48
1:E:363:ARG:NH1	1:E:397:PHE:HB2	2.24	0.48
1:F:533:LYS:O	1:F:537:VAL:N	2.46	0.48
1:A:575:ARG:HB3	1:B:584:VAL:HG11	1.95	0.48
1:B:508:GLY:O	1:B:612:ASN:HA	2.13	0.48
1:C:646:LYS:HA	1:C:649:THR:HG22	1.96	0.48
1:D:272:LEU:HB3	1:D:317:LEU:HD11	1.94	0.48
1:D:623:ARG:HB2	1:D:626:ARG:HH21	1.79	0.48
1:E:410:ALA:HB3	1:F:221:ILE:CG2	2.44	0.48
1:A:538:LEU:HA	1:A:541:TRP:NE1	2.29	0.48
1:B:315:LEU:HD22	1:B:348:ARG:HE	1.77	0.48
1:B:410:ALA:HB3	1:C:221:ILE:CG2	2.44	0.48
1:A:584:VAL:HG11	1:D:575:ARG:HB3	1.95	0.48
1:E:261:MET:O	1:F:309:ARG:HD2	2.14	0.48
1:E:370:HIS:CE1	1:E:403:ALA:HB2	2.48	0.48
1:E:541:TRP:HH2	1:F:587:ARG:HA	1.79	0.48
1:C:541:TRP:HH2	1:E:587:ARG:HA	1.79	0.48
1:A:309:ARG:HD2	1:D:261:MET:O	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:345:ARG:HD2	1:A:348:ARG:HH12	1.79	0.48
1:D:370:HIS:CE1	1:D:403:ALA:HB2	2.48	0.48
1:D:508:GLY:O	1:D:612:ASN:HA	2.13	0.48
1:C:261:MET:O	1:E:309:ARG:HD2	2.14	0.48
1:E:620:ALA:HB2	1:E:623:ARG:NH2	2.17	0.48
1:F:120:VAL:O	1:F:124:LEU:HG	2.13	0.48
1:F:501:SER:OG	1:F:628:ASP:OD2	2.31	0.48
1:A:506:LEU:HD23	1:A:631:ILE:HB	1.95	0.48
1:B:538:LEU:HA	1:B:541:TRP:NE1	2.29	0.48
1:B:614:PRO:C	1:B:616:ILE:H	2.17	0.48
1:B:689:GLU:OE1	1:C:492:VAL:C	2.52	0.48
1:C:689:GLU:OE1	1:E:492:VAL:C	2.52	0.48
1:D:538:LEU:HA	1:D:541:TRP:NE1	2.29	0.48
1:D:618:ASP:H	1:D:621:LEU:HD12	1.79	0.48
1:E:535:PRO:HA	1:F:594:THR:CB	2.43	0.48
1:E:689:GLU:CB	1:F:496:LEU:HD11	2.36	0.48
1:F:623:ARG:HB2	1:F:626:ARG:HH21	1.79	0.48
1:A:315:LEU:HD22	1:A:348:ARG:NE	2.29	0.47
1:E:345:ARG:HD2	1:E:348:ARG:HH12	1.79	0.47
1:D:221:ILE:CG2	1:F:410:ALA:HB3	2.44	0.47
1:F:618:ASP:H	1:F:621:LEU:HD12	1.79	0.47
1:A:143:ALA:HB1	1:B:221:ILE:O	1.57	0.47
1:A:614:PRO:C	1:A:616:ILE:H	2.17	0.47
1:A:623:ARG:HB2	1:A:626:ARG:HH21	1.79	0.47
1:A:689:GLU:CB	1:B:496:LEU:HD11	2.36	0.47
1:D:501:SER:OG	1:D:628:ASP:OD2	2.31	0.47
1:E:501:SER:OG	1:E:628:ASP:OD2	2.31	0.47
1:E:646:LYS:HA	1:E:649:THR:HG22	1.96	0.47
1:D:587:ARG:HA	1:F:541:TRP:HH2	1.79	0.47
1:F:614:PRO:C	1:F:616:ILE:H	2.18	0.47
1:B:345:ARG:HD2	1:B:348:ARG:HH12	1.79	0.47
1:A:535:PRO:CG	1:B:597:ASP:OD2	2.53	0.47
1:E:109:ARG:HG3	1:E:110:LEU:N	2.25	0.47
1:D:309:ARG:HD2	1:F:261:MET:O	2.14	0.47
1:F:315:LEU:HD22	1:F:348:ARG:NE	2.28	0.47
1:F:508:GLY:O	1:F:612:ASN:HA	2.13	0.47
1:A:261:MET:HE1	1:B:315:LEU:CD1	2.38	0.47
1:B:541:TRP:HH2	1:C:587:ARG:HA	1.79	0.47
1:C:508:GLY:O	1:C:612:ASN:HA	2.13	0.47
1:E:689:GLU:OE2	1:F:492:VAL:HB	2.15	0.47
1:A:646:LYS:HA	1:A:649:THR:HG22	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:140:LEU:H	1:B:375:PRO:HD3	1.80	0.47
1:B:315:LEU:HD22	1:B:348:ARG:NE	2.28	0.47
1:C:345:ARG:HD2	1:C:348:ARG:HH12	1.79	0.47
1:A:316:THR:HA	1:D:258:PRO:HB3	1.19	0.47
1:A:587:ARG:HA	1:D:541:TRP:HH2	1.79	0.47
1:A:590:ASN:HB2	1:D:538:LEU:HD13	0.68	0.47
1:A:618:ASP:H	1:A:621:LEU:HD12	1.79	0.47
1:A:143:ALA:C	1:B:220:GLY:C	2.58	0.47
1:B:499:ARG:CG	1:B:500:PRO:N	2.74	0.47
1:B:261:MET:O	1:C:309:ARG:HD2	2.14	0.47
1:B:510:PRO:CA	1:C:623:ARG:HH11	2.15	0.47
1:E:120:VAL:O	1:E:124:LEU:HG	2.13	0.47
1:E:508:GLY:O	1:E:612:ASN:HA	2.13	0.47
1:A:370:HIS:CE1	1:A:403:ALA:HB2	2.48	0.47
1:B:535:PRO:CB	1:C:594:THR:HG23	2.42	0.47
1:C:614:PRO:C	1:C:616:ILE:H	2.17	0.47
1:C:689:GLU:OE2	1:E:492:VAL:HB	2.15	0.47
1:E:618:ASP:H	1:E:621:LEU:HD12	1.79	0.47
1:C:618:ASP:H	1:C:621:LEU:HD12	1.79	0.47
1:E:614:PRO:C	1:E:616:ILE:H	2.18	0.47
1:A:140:LEU:H	1:A:375:PRO:HD3	1.80	0.47
1:C:538:LEU:HA	1:C:541:TRP:NE1	2.29	0.47
1:D:195:LEU:HB3	1:D:198:GLN:OE1	2.15	0.47
1:E:623:ARG:HB2	1:E:626:ARG:HH21	1.79	0.47
1:A:410:ALA:HB3	1:B:221:ILE:CG2	2.44	0.47
1:B:618:ASP:H	1:B:621:LEU:HD12	1.79	0.47
1:B:646:LYS:HA	1:B:649:THR:HG22	1.96	0.47
1:C:140:LEU:H	1:C:375:PRO:HD3	1.79	0.47
1:C:623:ARG:HB2	1:C:626:ARG:HH21	1.79	0.47
1:A:221:ILE:CG2	1:D:410:ALA:HB3	2.44	0.47
1:A:261:MET:O	1:B:309:ARG:HD2	2.14	0.47
1:B:623:ARG:HB2	1:B:626:ARG:HH21	1.79	0.47
1:D:264:TYR:CE2	1:D:267:GLN:CD	2.89	0.47
1:D:646:LYS:HA	1:D:649:THR:HG22	1.96	0.47
1:A:496:LEU:HD11	1:D:689:GLU:CB	2.36	0.46
1:D:140:LEU:H	1:D:375:PRO:HD3	1.79	0.46
1:E:264:TYR:CE2	1:E:267:GLN:CD	2.89	0.46
1:E:538:LEU:HA	1:E:541:TRP:NE1	2.29	0.46
1:F:538:LEU:HA	1:F:541:TRP:NE1	2.29	0.46
1:A:140:LEU:N	1:A:375:PRO:HD3	2.31	0.46
1:C:195:LEU:HB3	1:C:198:GLN:OE1	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:363:ARG:NH1	1:D:397:PHE:HB2	2.24	0.46
1:D:411:MET:HA	1:D:414:LEU:HB2	1.98	0.46
1:D:492:VAL:HB	1:F:689:GLU:OE2	2.15	0.46
1:D:623:ARG:HH11	1:F:510:PRO:CA	2.15	0.46
1:F:100:LEU:HG	1:F:152:VAL:HG22	1.98	0.46
1:F:646:LYS:HA	1:F:649:THR:HG22	1.96	0.46
1:B:140:LEU:N	1:B:375:PRO:HD3	2.31	0.46
1:C:645:LEU:HD13	1:C:660:LEU:HD22	1.97	0.46
1:D:345:ARG:HD2	1:D:348:ARG:HH12	1.79	0.46
1:E:316:THR:O	1:E:320:GLY:N	2.43	0.46
1:F:140:LEU:N	1:F:375:PRO:HD3	2.31	0.46
1:F:10:ARG:HG3	1:F:66:ILE:HG22	1.98	0.46
1:A:153:VAL:HG11	1:A:173:ARG:HH11	1.81	0.46
1:A:557:LYS:HE3	1:D:449:ILE:CA	2.45	0.46
1:B:153:VAL:HG11	1:B:173:ARG:HH11	1.81	0.46
1:C:153:VAL:HG11	1:C:173:ARG:HH11	1.81	0.46
1:E:100:LEU:HG	1:E:152:VAL:HG22	1.98	0.46
1:E:140:LEU:N	1:E:375:PRO:HD3	2.31	0.46
1:E:10:ARG:HG3	1:E:66:ILE:HG22	1.98	0.46
1:F:195:LEU:HB3	1:F:198:GLN:OE1	2.15	0.46
1:A:100:LEU:HG	1:A:152:VAL:HG22	1.98	0.46
1:A:264:TYR:CE2	1:A:267:GLN:CD	2.89	0.46
1:A:26:LEU:HD22	1:A:56:ARG:HG2	1.98	0.46
1:C:264:TYR:CE2	1:C:267:GLN:CD	2.89	0.46
1:C:535:PRO:HA	1:E:594:THR:CB	2.42	0.46
1:D:100:LEU:HG	1:D:152:VAL:HG22	1.98	0.46
1:D:10:ARG:HG3	1:D:66:ILE:HG22	1.98	0.46
1:E:645:LEU:HD13	1:E:660:LEU:HD22	1.97	0.46
1:F:153:VAL:HG11	1:F:173:ARG:HH11	1.81	0.46
1:F:105:ARG:NH2	1:F:183:GLU:OE1	2.49	0.46
1:F:140:LEU:H	1:F:375:PRO:HD3	1.79	0.46
1:B:195:LEU:HB3	1:B:198:GLN:OE1	2.15	0.46
1:B:411:MET:HA	1:B:414:LEU:HB2	1.98	0.46
1:D:153:VAL:HG11	1:D:173:ARG:HH11	1.81	0.46
1:E:195:LEU:HB3	1:E:198:GLN:OE1	2.15	0.46
1:E:529:PHE:CE2	1:E:531:SER:HB2	2.51	0.46
1:E:538:LEU:HD13	1:F:590:ASN:HB2	0.68	0.46
1:C:105:ARG:NH2	1:C:183:GLU:OE1	2.49	0.46
1:C:411:MET:HA	1:C:414:LEU:HB2	1.98	0.46
1:A:594:THR:CB	1:D:535:PRO:HA	2.43	0.46
1:A:590:ASN:CB	1:D:538:LEU:HD22	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:153:VAL:HG11	1:E:173:ARG:HH11	1.81	0.46
1:E:72:VAL:O	1:E:76:ASN:N	2.49	0.46
1:A:316:THR:O	1:A:320:GLY:N	2.43	0.46
1:A:499:ARG:HB3	1:D:680:ARG:HE	1.39	0.46
1:B:105:ARG:NH2	1:B:183:GLU:OE1	2.49	0.46
1:B:689:GLU:OE2	1:C:492:VAL:HB	2.15	0.46
1:C:499:ARG:HG3	1:C:500:PRO:CD	2.23	0.46
1:D:140:LEU:N	1:D:375:PRO:HD3	2.31	0.46
1:D:72:VAL:O	1:D:76:ASN:N	2.49	0.46
1:E:105:ARG:NH2	1:E:183:GLU:OE1	2.49	0.46
1:C:140:LEU:N	1:C:375:PRO:HD3	2.31	0.46
1:D:15:ASN:H	1:D:68:ARG:HD2	1.81	0.46
1:D:645:LEU:HD13	1:D:660:LEU:HD22	1.97	0.46
1:E:140:LEU:H	1:E:375:PRO:HD3	1.79	0.46
1:F:529:PHE:CE2	1:F:531:SER:HB2	2.51	0.46
1:F:645:LEU:HD13	1:F:660:LEU:HD22	1.97	0.46
1:B:529:PHE:CE2	1:B:531:SER:HB2	2.51	0.46
1:D:105:ARG:NH2	1:D:183:GLU:OE1	2.49	0.46
1:D:26:LEU:HD22	1:D:56:ARG:HG2	1.98	0.46
1:E:538:LEU:HD22	1:F:590:ASN:CB	2.46	0.46
1:A:72:VAL:O	1:A:76:ASN:N	2.49	0.45
1:B:100:LEU:HG	1:B:152:VAL:HG22	1.98	0.45
1:B:264:TYR:CE2	1:B:267:GLN:CD	2.89	0.45
1:B:538:LEU:HD22	1:C:590:ASN:CB	2.46	0.45
1:A:449:ILE:CA	1:B:557:LYS:HE3	2.45	0.45
1:C:100:LEU:HG	1:C:152:VAL:HG22	1.98	0.45
1:C:483:VAL:HG13	1:C:606:VAL:HG21	1.98	0.45
1:F:411:MET:HA	1:F:414:LEU:HB2	1.98	0.45
1:A:195:LEU:HB3	1:A:198:GLN:OE1	2.15	0.45
1:C:529:PHE:CE2	1:C:531:SER:HB2	2.51	0.45
1:D:590:ASN:CB	1:F:538:LEU:HD22	2.46	0.45
1:F:483:VAL:HG13	1:F:606:VAL:HG21	1.98	0.45
1:A:109:ARG:HG3	1:A:110:LEU:N	2.25	0.45
1:A:597:ASP:OD2	1:D:535:PRO:CG	2.53	0.45
1:A:689:GLU:OE2	1:B:492:VAL:HB	2.15	0.45
1:A:538:LEU:HD22	1:B:590:ASN:CB	2.46	0.45
1:C:10:ARG:HG3	1:C:66:ILE:HG22	1.98	0.45
1:D:590:ASN:HB2	1:F:538:LEU:HD13	0.68	0.45
1:A:492:VAL:HB	1:D:689:GLU:OE2	2.15	0.45
1:F:264:TYR:CE2	1:F:267:GLN:CD	2.89	0.45
1:A:315:LEU:CD1	1:D:261:MET:HE3	2.41	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:411:MET:HA	1:A:414:LEU:HB2	1.98	0.45
1:A:10:ARG:HG3	1:A:66:ILE:HG22	1.98	0.45
1:A:15:ASN:H	1:A:68:ARG:HD2	1.81	0.45
1:B:535:PRO:CB	1:C:594:THR:CA	2.84	0.45
1:C:258:PRO:HB3	1:E:316:THR:HA	1.19	0.45
1:D:203:ARG:HH22	1:D:248:SER:HB3	1.82	0.45
1:D:614:PRO:C	1:D:616:ILE:H	2.17	0.45
1:E:411:MET:HA	1:E:414:LEU:HB2	1.98	0.45
1:D:273:ARG:HH22	1:F:262:SER:HB2	1.82	0.45
1:A:529:PHE:CE2	1:A:531:SER:HB2	2.51	0.45
1:B:533:LYS:O	1:B:537:VAL:N	2.46	0.45
1:B:10:ARG:HG3	1:B:66:ILE:HG22	1.98	0.45
1:C:26:LEU:HD22	1:C:56:ARG:HG2	1.98	0.45
1:A:221:ILE:O	1:D:143:ALA:HB1	1.57	0.45
1:E:415:ARG:HD3	1:F:204:GLU:OE1	2.17	0.45
1:D:204:GLU:OE1	1:F:415:ARG:HD3	2.17	0.45
1:F:72:VAL:O	1:F:76:ASN:N	2.49	0.45
1:A:670:TYR:HE1	1:A:710:PRO:HA	1.82	0.45
1:B:645:LEU:HD13	1:B:660:LEU:HD22	1.97	0.45
1:B:72:VAL:O	1:B:76:ASN:N	2.49	0.45
1:B:415:ARG:HD3	1:C:204:GLU:OE1	2.17	0.45
1:C:72:VAL:O	1:C:76:ASN:N	2.49	0.45
1:D:405:LEU:HD11	1:D:445:ALA:HB1	1.99	0.45
1:D:499:ARG:H	1:F:680:ARG:HD3	1.82	0.45
1:C:680:ARG:HD3	1:E:499:ARG:H	1.82	0.45
1:F:15:ASN:H	1:F:68:ARG:HD2	1.81	0.45
1:A:105:ARG:NH2	1:A:183:GLU:OE1	2.49	0.45
1:C:513:GLY:O	1:C:517:LEU:N	2.44	0.45
1:C:538:LEU:HD22	1:E:590:ASN:CB	2.46	0.45
1:D:603:ASN:HB3	1:D:605:VAL:HG22	1.99	0.45
1:C:415:ARG:HD3	1:E:204:GLU:OE1	2.17	0.45
1:E:425:LYS:HB2	1:E:426:PRO:HD3	1.99	0.45
1:E:603:ASN:HB3	1:E:605:VAL:HG22	1.99	0.45
1:F:26:LEU:HD22	1:F:56:ARG:HG2	1.98	0.45
1:F:585:THR:HG23	1:F:586:GLU:N	2.31	0.45
1:A:262:SER:HB2	1:B:273:ARG:HH22	1.82	0.45
1:B:141:THR:HG23	1:C:219:LEU:O	2.15	0.45
1:B:449:ILE:CA	1:C:557:LYS:HE3	2.45	0.45
1:D:585:THR:HG23	1:D:586:GLU:N	2.31	0.45
1:E:26:LEU:HD22	1:E:56:ARG:HG2	1.98	0.45
1:E:15:ASN:H	1:E:68:ARG:HD2	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:204:GLU:OE1	1:D:415:ARG:HD3	2.17	0.45
1:A:415:ARG:HD3	1:B:204:GLU:OE1	2.17	0.45
1:C:405:LEU:HD11	1:C:445:ALA:HB1	1.99	0.45
1:D:529:PHE:CE2	1:D:531:SER:HB2	2.51	0.45
1:C:449:ILE:CA	1:E:557:LYS:HE3	2.45	0.45
1:E:483:VAL:HG13	1:E:606:VAL:HG21	1.98	0.45
1:F:109:ARG:HG3	1:F:110:LEU:N	2.25	0.45
1:F:405:LEU:HD11	1:F:445:ALA:HB1	1.99	0.45
1:F:670:TYR:HE1	1:F:710:PRO:HA	1.82	0.45
1:A:645:LEU:HD13	1:A:660:LEU:HD22	1.97	0.44
1:B:26:LEU:HD22	1:B:56:ARG:HG2	1.98	0.44
1:C:184:VAL:CG1	1:C:185:SER:H	2.23	0.44
1:B:262:SER:HB2	1:C:273:ARG:HH22	1.82	0.44
1:D:483:VAL:HG13	1:D:606:VAL:HG21	1.98	0.44
1:E:506:LEU:O	1:E:610:ALA:HA	2.17	0.44
1:E:670:TYR:HE1	1:E:710:PRO:HA	1.82	0.44
1:E:449:ILE:CA	1:F:557:LYS:HE3	2.45	0.44
1:F:603:ASN:HB3	1:F:605:VAL:HG22	1.99	0.44
1:A:203:ARG:HH22	1:A:248:SER:HB3	1.82	0.44
1:A:533:LYS:O	1:A:537:VAL:N	2.46	0.44
1:A:603:ASN:HB3	1:A:605:VAL:HG22	1.99	0.44
1:C:585:THR:HG23	1:C:586:GLU:N	2.31	0.44
1:F:425:LYS:HB2	1:F:426:PRO:HD3	1.99	0.44
1:E:680:ARG:HD3	1:F:499:ARG:H	1.82	0.44
1:F:699:LYS:O	1:F:703:ASP:N	2.44	0.44
1:F:700:ASN:OD1	1:F:701:PHE:N	2.50	0.44
1:A:184:VAL:CG1	1:A:185:SER:H	2.23	0.44
1:C:699:LYS:O	1:C:703:ASP:N	2.44	0.44
1:D:109:ARG:HG3	1:D:110:LEU:N	2.25	0.44
1:F:372:ARG:HG3	1:F:372:ARG:O	2.18	0.44
1:F:363:ARG:NH1	1:F:397:PHE:HB2	2.24	0.44
1:A:483:VAL:HG13	1:A:606:VAL:HG21	1.98	0.44
1:B:535:PRO:HA	1:C:594:THR:CB	2.42	0.44
1:C:15:ASN:H	1:C:68:ARG:HD2	1.81	0.44
1:C:603:ASN:HB3	1:C:605:VAL:HG22	1.99	0.44
1:E:372:ARG:O	1:E:372:ARG:HG3	2.18	0.44
1:E:709:ARG:CZ	1:F:726:THR:CA	2.49	0.44
1:F:203:ARG:HH22	1:F:248:SER:HB3	1.82	0.44
1:A:372:ARG:O	1:A:372:ARG:HG3	2.18	0.44
1:A:425:LYS:HB2	1:A:426:PRO:HD3	1.99	0.44
1:A:506:LEU:O	1:A:610:ALA:HA	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:680:ARG:HD3	1:C:499:ARG:H	1.82	0.44
1:C:262:SER:HB2	1:E:273:ARG:HH22	1.82	0.44
1:C:670:TYR:HE1	1:C:710:PRO:HA	1.82	0.44
1:F:506:LEU:O	1:F:610:ALA:HA	2.17	0.44
1:A:398:VAL:HB	1:A:455:ARG:NH2	2.32	0.44
1:B:15:ASN:H	1:B:68:ARG:HD2	1.81	0.44
1:A:141:THR:HG23	1:B:219:LEU:O	2.15	0.44
1:B:203:ARG:HH22	1:B:248:SER:HB3	1.82	0.44
1:B:406:VAL:HA	1:B:409:SER:HB2	2.00	0.44
1:B:603:ASN:HB3	1:B:605:VAL:HG22	1.99	0.44
1:B:670:TYR:HE1	1:B:710:PRO:HA	1.82	0.44
1:C:425:LYS:HB2	1:C:426:PRO:HD3	1.99	0.44
1:E:203:ARG:HH22	1:E:248:SER:HB3	1.82	0.44
1:E:405:LEU:HD11	1:E:445:ALA:HB1	1.99	0.44
1:F:398:VAL:HB	1:F:455:ARG:NH2	2.33	0.44
1:A:273:ARG:HH22	1:D:262:SER:HB2	1.82	0.44
1:A:680:ARG:HD3	1:B:499:ARG:H	1.82	0.44
1:A:71:SER:HB2	1:A:190:GLU:HB3	2.00	0.44
1:B:483:VAL:HG13	1:B:606:VAL:HG21	1.98	0.44
1:B:71:SER:HB2	1:B:190:GLU:HB3	2.00	0.44
1:E:700:ASN:OD1	1:E:701:PHE:N	2.50	0.44
1:F:119:TYR:HH	1:F:137:VAL:HG22	1.83	0.44
1:A:119:TYR:HH	1:A:137:VAL:HG22	1.82	0.44
1:B:398:VAL:HB	1:B:455:ARG:NH2	2.33	0.44
1:C:203:ARG:HH22	1:C:248:SER:HB3	1.82	0.44
1:D:71:SER:HB2	1:D:190:GLU:HB3	2.00	0.44
1:E:406:VAL:HA	1:E:409:SER:HB2	2.00	0.44
1:A:700:ASN:OD1	1:A:701:PHE:N	2.50	0.44
1:B:405:LEU:HD11	1:B:445:ALA:HB1	1.99	0.44
1:E:398:VAL:HB	1:E:455:ARG:NH2	2.33	0.44
1:F:502:LYS:HZ1	1:F:599:ILE:HG23	1.83	0.44
1:B:372:ARG:O	1:B:372:ARG:HG3	2.18	0.43
1:B:506:LEU:O	1:B:610:ALA:HA	2.17	0.43
1:B:699:LYS:O	1:B:703:ASP:N	2.44	0.43
1:C:535:PRO:CA	1:E:594:THR:CB	2.96	0.43
1:A:499:ARG:H	1:D:680:ARG:HD3	1.82	0.43
1:C:261:MET:HE1	1:E:315:LEU:CD1	2.46	0.43
1:F:71:SER:HB2	1:F:190:GLU:HB3	2.00	0.43
1:B:258:PRO:HB3	1:C:316:THR:HA	1.19	0.43
1:B:700:ASN:OD1	1:B:701:PHE:N	2.51	0.43
1:D:119:TYR:HH	1:D:137:VAL:HG22	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:372:ARG:O	1:D:372:ARG:HG3	2.18	0.43
1:D:506:LEU:O	1:D:610:ALA:HA	2.17	0.43
1:E:513:GLY:O	1:E:517:LEU:N	2.44	0.43
1:A:405:LEU:HD11	1:A:445:ALA:HB1	1.99	0.43
1:A:7:ILE:HG21	1:A:86:LYS:HG3	2.01	0.43
1:B:425:LYS:HB2	1:B:426:PRO:HD3	1.99	0.43
1:A:535:PRO:CA	1:B:594:THR:CB	2.96	0.43
1:C:372:ARG:O	1:C:372:ARG:HG3	2.18	0.43
1:C:398:VAL:HB	1:C:455:ARG:NH2	2.33	0.43
1:C:506:LEU:O	1:C:610:ALA:HA	2.17	0.43
1:C:71:SER:HB2	1:C:190:GLU:HB3	2.00	0.43
1:D:153:VAL:HG21	1:D:173:ARG:HD3	2.01	0.43
1:D:557:LYS:HE3	1:F:449:ILE:CA	2.45	0.43
1:E:14:ALA:HB3	1:E:190:GLU:OE2	2.18	0.43
1:E:585:THR:HG23	1:E:586:GLU:N	2.31	0.43
1:E:71:SER:HB2	1:E:190:GLU:HB3	2.00	0.43
1:F:513:GLY:O	1:F:517:LEU:N	2.44	0.43
1:B:14:ALA:HB3	1:B:190:GLU:OE2	2.18	0.43
1:B:585:THR:HG23	1:B:586:GLU:N	2.31	0.43
1:B:27:ASP:OD1	1:B:59:PRO:HG2	2.19	0.43
1:C:14:ALA:HB3	1:C:190:GLU:OE2	2.18	0.43
1:C:575:ARG:NH2	1:E:576:ARG:NE	2.65	0.43
1:D:670:TYR:HE1	1:D:710:PRO:HA	1.82	0.43
1:E:27:ASP:OD1	1:E:59:PRO:HG2	2.19	0.43
1:F:14:ALA:HB3	1:F:190:GLU:OE2	2.18	0.43
1:A:585:THR:HG23	1:A:586:GLU:N	2.31	0.43
1:B:7:ILE:HG21	1:B:86:LYS:HG3	2.01	0.43
1:C:533:LYS:O	1:C:537:VAL:N	2.46	0.43
1:C:700:ASN:OD1	1:C:701:PHE:N	2.50	0.43
1:C:7:ILE:HG21	1:C:86:LYS:HG3	2.01	0.43
1:F:153:VAL:HG21	1:F:173:ARG:HD3	2.01	0.43
1:E:262:SER:HB2	1:F:273:ARG:HH22	1.82	0.43
1:A:153:VAL:HG21	1:A:173:ARG:HD3	2.01	0.43
1:C:620:ALA:HB2	1:C:623:ARG:NH2	2.17	0.43
1:D:398:VAL:HB	1:D:455:ARG:NH2	2.33	0.43
1:D:425:LYS:HB2	1:D:426:PRO:HD3	1.99	0.43
1:D:700:ASN:OD1	1:D:701:PHE:N	2.50	0.43
1:A:594:THR:CB	1:D:535:PRO:CA	2.96	0.43
1:B:153:VAL:HG21	1:B:173:ARG:HD3	2.01	0.43
1:D:14:ALA:HB3	1:D:190:GLU:OE2	2.18	0.43
1:D:513:GLY:O	1:D:517:LEU:N	2.44	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:153:VAL:HG21	1:E:173:ARG:HD3	2.01	0.43
1:E:7:ILE:HG21	1:E:86:LYS:HG3	2.01	0.43
1:D:594:THR:CB	1:F:535:PRO:CA	2.96	0.43
1:F:7:ILE:HG21	1:F:86:LYS:HG3	2.01	0.43
1:A:27:ASP:OD1	1:A:59:PRO:HG2	2.19	0.43
1:B:142:LEU:HD22	1:B:406:VAL:HG12	2.01	0.43
1:C:406:VAL:HA	1:C:409:SER:HB2	2.00	0.43
1:D:27:ASP:OD1	1:D:59:PRO:HG2	2.18	0.43
1:F:126:ARG:O	1:F:128:PRO:HD3	2.19	0.43
1:F:27:ASP:OD1	1:F:59:PRO:HG2	2.19	0.43
1:A:142:LEU:HD22	1:A:406:VAL:HG12	2.01	0.43
1:A:232:PRO:HB2	1:A:235:THR:CG2	2.49	0.43
1:C:491:ASP:O	1:C:495:ARG:HG3	2.19	0.43
1:C:27:ASP:OD1	1:C:59:PRO:HG2	2.19	0.43
1:D:232:PRO:HB2	1:D:235:THR:CG2	2.49	0.43
1:E:232:PRO:HB2	1:E:235:THR:CG2	2.49	0.43
1:E:491:ASP:O	1:E:495:ARG:HG3	2.19	0.43
1:E:535:PRO:CB	1:F:594:THR:HG23	2.42	0.43
1:A:14:ALA:HB3	1:A:190:GLU:OE2	2.18	0.43
1:B:491:ASP:O	1:B:495:ARG:HG3	2.19	0.43
1:C:153:VAL:HG21	1:C:173:ARG:HD3	2.01	0.43
1:D:142:LEU:HD22	1:D:406:VAL:HG12	2.01	0.43
1:D:406:VAL:HA	1:D:409:SER:HB2	2.00	0.43
1:D:499:ARG:HG3	1:D:500:PRO:CD	2.23	0.43
1:D:7:ILE:HG21	1:D:86:LYS:HG3	2.01	0.43
1:F:142:LEU:HD22	1:F:406:VAL:HG12	2.01	0.43
1:A:406:VAL:HA	1:A:409:SER:HB2	2.00	0.42
1:A:513:GLY:O	1:A:517:LEU:N	2.44	0.42
1:B:232:PRO:HB2	1:B:235:THR:CG2	2.49	0.42
1:E:142:LEU:HD22	1:E:406:VAL:HG12	2.01	0.42
1:F:406:VAL:HA	1:F:409:SER:HB2	2.00	0.42
1:A:499:ARG:NE	1:D:680:ARG:CZ	2.81	0.42
1:C:363:ARG:NH1	1:C:397:PHE:HB2	2.24	0.42
1:C:142:LEU:HD22	1:C:406:VAL:HG12	2.01	0.42
1:B:689:GLU:CA	1:C:492:VAL:HG11	2.48	0.42
1:E:126:ARG:O	1:E:128:PRO:HD3	2.19	0.42
1:A:491:ASP:O	1:A:495:ARG:HG3	2.19	0.42
1:A:689:GLU:CA	1:B:492:VAL:HG11	2.48	0.42
1:F:53:ARG:CZ	1:F:161:PRO:HB3	2.50	0.42
1:F:491:ASP:O	1:F:495:ARG:HG3	2.19	0.42
1:B:261:MET:SD	1:C:312:ALA:C	2.92	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:551:GLU:O	1:C:555:LYS:N	2.52	0.42
1:D:126:ARG:O	1:D:128:PRO:HD3	2.19	0.42
1:D:699:LYS:O	1:D:703:ASP:N	2.44	0.42
1:F:551:GLU:O	1:F:555:LYS:N	2.52	0.42
1:B:53:ARG:CZ	1:B:161:PRO:HB3	2.50	0.42
1:C:119:TYR:HH	1:C:137:VAL:HG22	1.83	0.42
1:C:53:ARG:CZ	1:C:161:PRO:HB3	2.49	0.42
1:D:551:GLU:O	1:D:555:LYS:N	2.52	0.42
1:E:551:GLU:O	1:E:555:LYS:N	2.52	0.42
1:E:562:ALA:O	1:E:605:VAL:HA	2.20	0.42
1:F:104:ILE:N	1:F:177:ALA:O	2.41	0.42
1:F:232:PRO:HB2	1:F:235:THR:CG2	2.49	0.42
1:A:126:ARG:O	1:A:128:PRO:HD3	2.19	0.42
1:B:342:ALA:O	1:B:348:ARG:HD2	2.20	0.42
1:A:215:LEU:HD11	1:D:423:LEU:C	2.40	0.42
1:D:491:ASP:O	1:D:495:ARG:HG3	2.19	0.42
1:E:124:LEU:HD13	1:E:164:ILE:HG22	2.02	0.42
1:E:262:SER:HB2	1:F:273:ARG:NH2	2.35	0.42
1:A:262:SER:HB2	1:B:273:ARG:NH2	2.35	0.42
1:A:562:ALA:O	1:A:605:VAL:HA	2.20	0.42
1:B:110:LEU:HG	1:B:111:LYS:N	2.34	0.42
1:B:126:ARG:O	1:B:128:PRO:HD3	2.19	0.42
1:C:342:ALA:O	1:C:348:ARG:HD2	2.20	0.42
1:A:273:ARG:NH2	1:D:262:SER:HB2	2.35	0.42
1:D:316:THR:O	1:D:320:GLY:N	2.43	0.42
1:E:141:THR:HG23	1:F:219:LEU:O	2.15	0.42
1:F:562:ALA:O	1:F:605:VAL:HA	2.20	0.42
1:C:232:PRO:HB2	1:C:235:THR:CG2	2.49	0.42
1:C:562:ALA:O	1:C:605:VAL:HA	2.20	0.42
1:D:273:ARG:NH2	1:F:262:SER:HB2	2.35	0.42
1:E:575:ARG:NH2	1:F:576:ARG:NE	2.65	0.42
1:F:124:LEU:HD13	1:F:164:ILE:HG22	2.02	0.42
1:A:342:ALA:O	1:A:348:ARG:HD2	2.20	0.42
1:C:126:ARG:O	1:C:128:PRO:HD3	2.19	0.42
1:C:316:THR:O	1:C:320:GLY:N	2.43	0.42
1:A:312:ALA:C	1:D:261:MET:SD	2.92	0.42
1:D:533:LYS:O	1:D:537:VAL:N	2.46	0.42
1:C:262:SER:HB2	1:E:273:ARG:NH2	2.35	0.42
1:C:680:ARG:CZ	1:E:499:ARG:NE	2.81	0.42
1:E:53:ARG:CZ	1:E:161:PRO:HB3	2.50	0.42
1:E:586:GLU:OE1	1:E:588:ILE:N	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:535:PRO:CA	1:F:594:THR:CB	2.96	0.42
1:A:110:LEU:HG	1:A:111:LYS:N	2.35	0.42
1:B:311:VAL:O	1:B:315:LEU:HG	2.20	0.42
1:B:363:ARG:NH1	1:B:397:PHE:HB2	2.24	0.42
1:B:680:ARG:CZ	1:C:499:ARG:CG	2.93	0.42
1:C:151:LYS:HD2	1:C:180:VAL:HG13	2.02	0.42
1:C:311:VAL:O	1:C:315:LEU:HG	2.20	0.42
1:A:594:THR:CA	1:D:535:PRO:CB	2.84	0.42
1:E:265:TYR:CE2	1:E:306:VAL:HB	2.55	0.42
1:E:342:ALA:O	1:E:348:ARG:HD2	2.20	0.42
1:D:725:GLU:HA	1:F:709:ARG:HB3	1.98	0.42
1:A:662:ASP:OD1	1:A:663:ILE:N	2.53	0.41
1:B:262:SER:HB2	1:C:273:ARG:NH2	2.35	0.41
1:B:535:PRO:CA	1:C:594:THR:CB	2.96	0.41
1:C:265:TYR:CE2	1:C:306:VAL:HB	2.55	0.41
1:D:220:GLY:C	1:F:143:ALA:C	2.58	0.41
1:D:562:ALA:O	1:D:605:VAL:HA	2.20	0.41
1:E:119:TYR:HH	1:E:137:VAL:HG22	1.84	0.41
1:E:151:LYS:HD2	1:E:180:VAL:HG13	2.02	0.41
1:E:423:LEU:C	1:F:215:LEU:HD11	2.40	0.41
1:A:261:MET:SD	1:B:312:ALA:C	2.91	0.41
1:A:393:TYR:CE2	1:A:443:LYS:HE3	2.55	0.41
1:A:576:ARG:NH1	1:A:587:ARG:H	2.19	0.41
1:B:562:ALA:O	1:B:605:VAL:HA	2.20	0.41
1:D:124:LEU:HD13	1:D:164:ILE:HG22	2.02	0.41
1:F:265:TYR:CE2	1:F:306:VAL:HB	2.55	0.41
1:F:393:TYR:CE2	1:F:443:LYS:HE3	2.55	0.41
1:F:586:GLU:OE1	1:F:588:ILE:N	2.53	0.41
1:A:474:ASP:OD1	1:A:475:VAL:N	2.54	0.41
1:A:586:GLU:OE1	1:A:588:ILE:N	2.53	0.41
1:B:418:LEU:HB3	1:B:419:PRO:HD3	2.02	0.41
1:B:393:TYR:CE2	1:B:443:LYS:HE3	2.55	0.41
1:B:576:ARG:NH1	1:B:587:ARG:H	2.19	0.41
1:C:110:LEU:HG	1:C:111:LYS:N	2.34	0.41
1:C:322:LYS:O	1:C:323:GLU:HB2	2.20	0.41
1:C:512:VAL:HG23	1:C:513:GLY:N	2.31	0.41
1:C:42:VAL:HG22	1:C:56:ARG:NH1	2.36	0.41
1:C:662:ASP:OD1	1:C:663:ILE:N	2.53	0.41
1:D:145:GLN:O	1:D:373:ASN:HB3	2.20	0.41
1:A:576:ARG:NE	1:D:575:ARG:NH2	2.65	0.41
1:E:322:LYS:O	1:E:323:GLU:HB2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:662:ASP:OD1	1:E:663:ILE:N	2.53	0.41
1:F:311:VAL:O	1:F:315:LEU:HG	2.20	0.41
1:F:474:ASP:OD1	1:F:475:VAL:N	2.54	0.41
1:C:709:ARG:HB3	1:E:725:GLU:HA	1.98	0.41
1:A:218:ARG:HB3	1:D:144:GLY:HA2	1.49	0.41
1:D:311:VAL:O	1:D:315:LEU:HG	2.20	0.41
1:D:474:ASP:OD1	1:D:475:VAL:N	2.54	0.41
1:D:586:GLU:OE1	1:D:588:ILE:N	2.53	0.41
1:E:393:TYR:CE2	1:E:443:LYS:HE3	2.55	0.41
1:E:474:ASP:OD1	1:E:475:VAL:N	2.54	0.41
1:E:502:LYS:HZ1	1:E:599:ILE:HG23	1.85	0.41
1:A:322:LYS:O	1:A:323:GLU:HB2	2.20	0.41
1:B:474:ASP:OD1	1:B:475:VAL:N	2.54	0.41
1:B:31:ARG:NH2	1:B:58:ARG:HH21	2.18	0.41
1:C:423:LEU:C	1:E:215:LEU:HD11	2.40	0.41
1:C:474:ASP:OD1	1:C:475:VAL:N	2.54	0.41
1:C:576:ARG:NH1	1:C:587:ARG:H	2.18	0.41
1:D:215:LEU:HD11	1:F:423:LEU:C	2.40	0.41
1:F:322:LYS:O	1:F:323:GLU:HB2	2.20	0.41
1:A:53:ARG:CZ	1:A:161:PRO:HB3	2.50	0.41
1:B:42:VAL:HG22	1:B:56:ARG:NH1	2.36	0.41
1:B:538:LEU:HB2	1:C:594:THR:HG1	1.84	0.41
1:C:124:LEU:HD13	1:C:164:ILE:HG22	2.02	0.41
1:D:662:ASP:OD1	1:D:663:ILE:N	2.53	0.41
1:D:594:THR:CB	1:F:535:PRO:HA	2.43	0.41
1:A:418:LEU:HB3	1:A:419:PRO:HD3	2.02	0.41
1:B:151:LYS:HD2	1:B:180:VAL:HG13	2.03	0.41
1:B:322:LYS:O	1:B:323:GLU:HB2	2.20	0.41
1:C:31:ARG:NH2	1:C:58:ARG:HH21	2.18	0.41
1:D:53:ARG:CZ	1:D:161:PRO:HB3	2.50	0.41
1:A:725:GLU:HA	1:D:709:ARG:HB3	1.98	0.41
1:F:145:GLN:O	1:F:373:ASN:HB3	2.20	0.41
1:A:42:VAL:HG22	1:A:56:ARG:NH1	2.36	0.41
1:A:423:LEU:C	1:B:215:LEU:HD11	2.40	0.41
1:C:418:LEU:HB3	1:C:419:PRO:HD3	2.02	0.41
1:D:10:ARG:HB2	1:D:66:ILE:HA	2.03	0.41
1:D:265:TYR:CE2	1:D:306:VAL:HB	2.55	0.41
1:D:576:ARG:NH1	1:D:587:ARG:H	2.19	0.41
1:C:141:THR:HG23	1:E:219:LEU:O	2.15	0.41
1:C:689:GLU:CA	1:E:492:VAL:HG11	2.48	0.41
1:E:533:LYS:O	1:E:537:VAL:N	2.46	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:342:ALA:O	1:F:348:ARG:HD2	2.20	0.41
1:F:10:ARG:HB2	1:F:66:ILE:HA	2.03	0.41
1:A:10:ARG:HB2	1:A:66:ILE:HA	2.03	0.41
1:A:124:LEU:HD13	1:A:164:ILE:HG22	2.02	0.41
1:A:311:VAL:O	1:A:315:LEU:HG	2.20	0.41
1:A:492:VAL:HG11	1:D:689:GLU:CA	2.48	0.41
1:B:119:TYR:HH	1:B:137:VAL:HG22	1.86	0.41
1:B:551:GLU:O	1:B:555:LYS:N	2.52	0.41
1:D:393:TYR:CE2	1:D:443:LYS:HE3	2.55	0.41
1:E:140:LEU:O	1:E:141:THR:HB	2.21	0.41
1:E:145:GLN:O	1:E:373:ASN:HB3	2.20	0.41
1:D:576:ARG:NE	1:F:575:ARG:NH2	2.65	0.41
1:A:151:LYS:HD2	1:A:180:VAL:HG13	2.02	0.41
1:A:265:TYR:CE2	1:A:306:VAL:HB	2.55	0.41
1:A:699:LYS:O	1:A:703:ASP:N	2.44	0.41
1:B:662:ASP:OD1	1:B:663:ILE:N	2.53	0.41
1:B:423:LEU:C	1:C:215:LEU:HD11	2.40	0.41
1:C:145:GLN:O	1:C:373:ASN:HB3	2.20	0.41
1:C:393:TYR:CE2	1:C:443:LYS:HE3	2.55	0.41
1:D:322:LYS:O	1:D:323:GLU:HB2	2.20	0.41
1:D:418:LEU:HB3	1:D:419:PRO:HD3	2.02	0.41
1:D:42:VAL:HG22	1:D:56:ARG:NH1	2.36	0.41
1:D:499:ARG:NE	1:F:680:ARG:CZ	2.81	0.41
1:E:10:ARG:HB2	1:E:66:ILE:HA	2.03	0.41
1:E:311:VAL:O	1:E:315:LEU:HG	2.20	0.41
1:D:219:LEU:O	1:F:141:THR:HG23	2.15	0.41
1:E:31:ARG:NH2	1:E:58:ARG:HH21	2.18	0.41
1:E:583:GLY:HA2	1:E:618:ASP:OD1	2.21	0.41
1:F:140:LEU:O	1:F:141:THR:HB	2.21	0.41
1:F:576:ARG:NH1	1:F:587:ARG:H	2.19	0.41
1:F:662:ASP:OD1	1:F:663:ILE:N	2.53	0.41
1:A:31:ARG:NH2	1:A:58:ARG:HH21	2.18	0.40
1:B:10:ARG:HB2	1:B:66:ILE:HA	2.03	0.40
1:B:124:LEU:HD13	1:B:164:ILE:HG22	2.02	0.40
1:B:265:TYR:CE2	1:B:306:VAL:HB	2.55	0.40
1:B:145:GLN:O	1:B:373:ASN:HB3	2.20	0.40
1:B:689:GLU:OE2	1:C:492:VAL:CA	2.69	0.40
1:C:583:GLY:HA2	1:C:618:ASP:OD1	2.21	0.40
1:D:140:LEU:O	1:D:141:THR:HB	2.21	0.40
1:E:576:ARG:NH1	1:E:587:ARG:H	2.18	0.40
1:F:53:ARG:HH12	1:F:90:VAL:HG21	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:583:GLY:HA2	1:F:618:ASP:OD1	2.21	0.40
1:F:31:ARG:NH2	1:F:58:ARG:HH21	2.18	0.40
1:A:551:GLU:O	1:A:555:LYS:N	2.52	0.40
1:A:583:GLY:HA2	1:A:618:ASP:OD1	2.21	0.40
1:C:140:LEU:O	1:C:141:THR:HB	2.21	0.40
1:C:10:ARG:HB2	1:C:66:ILE:HA	2.03	0.40
1:D:110:LEU:HG	1:D:111:LYS:N	2.35	0.40
1:D:104:ILE:N	1:D:177:ALA:O	2.41	0.40
1:D:342:ALA:O	1:D:348:ARG:HD2	2.20	0.40
1:D:583:GLY:HA2	1:D:618:ASP:OD1	2.21	0.40
1:E:42:VAL:HG22	1:E:56:ARG:NH1	2.36	0.40
1:F:151:LYS:HD2	1:F:180:VAL:HG13	2.02	0.40
1:B:586:GLU:OE1	1:B:588:ILE:N	2.53	0.40
1:D:31:ARG:NH2	1:D:58:ARG:HH21	2.18	0.40
1:E:680:ARG:CZ	1:F:499:ARG:CG	2.93	0.40
1:A:140:LEU:O	1:A:141:THR:HB	2.21	0.40
1:A:144:GLY:HA2	1:B:218:ARG:HB3	1.49	0.40
1:A:145:GLN:O	1:A:373:ASN:HB3	2.20	0.40
1:A:18:ASP:OD1	1:A:25:ARG:NH2	2.55	0.40
1:A:689:GLU:OE2	1:B:492:VAL:CA	2.70	0.40
1:C:53:ARG:HH12	1:C:90:VAL:HG21	1.86	0.40
1:D:15:ASN:H	1:D:68:ARG:CD	2.34	0.40
1:D:151:LYS:HD2	1:D:180:VAL:HG13	2.02	0.40
1:D:40:ASP:HB2	1:D:56:ARG:NH2	2.37	0.40
1:A:492:VAL:CA	1:D:689:GLU:OE2	2.69	0.40
1:E:699:LYS:O	1:E:703:ASP:N	2.44	0.40
1:F:109:ARG:CG	1:F:110:LEU:H	2.26	0.40
1:F:418:LEU:HB3	1:F:419:PRO:HD3	2.02	0.40
1:F:42:VAL:HG22	1:F:56:ARG:NH1	2.36	0.40
1:A:104:ILE:N	1:A:177:ALA:O	2.41	0.40
1:B:575:ARG:NH2	1:C:576:ARG:NE	2.65	0.40
1:B:709:ARG:HB3	1:C:725:GLU:HA	1.98	0.40
1:C:257:GLY:N	1:C:258:PRO:HD2	2.37	0.40
1:D:554:LYS:O	1:D:557:LYS:HG2	2.22	0.40
1:E:110:LEU:HG	1:E:111:LYS:N	2.34	0.40
1:F:15:ASN:H	1:F:68:ARG:CD	2.35	0.40

There are no symmetry-related clashes.

## 5.3 Torsion angles

### 5.3.1 Protein backbone

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	719/721 (100%)	646 (90%)	70 (10%)	3 (0%)	39	80
1	B	719/721 (100%)	646 (90%)	70 (10%)	3 (0%)	39	80
1	C	719/721 (100%)	646 (90%)	70 (10%)	3 (0%)	39	80
1	D	719/721 (100%)	646 (90%)	70 (10%)	3 (0%)	39	80
1	E	719/721 (100%)	647 (90%)	69 (10%)	3 (0%)	39	80
1	F	719/721 (100%)	646 (90%)	70 (10%)	3 (0%)	39	80
All	All	4314/4326 (100%)	3877 (90%)	419 (10%)	18 (0%)	43	80

All (18) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	615	ASP
1	B	615	ASP
1	C	615	ASP
1	D	615	ASP
1	E	615	ASP
1	F	615	ASP
1	A	512	VAL
1	B	512	VAL
1	C	512	VAL
1	D	512	VAL
1	E	512	VAL
1	F	512	VAL
1	A	184	VAL
1	B	184	VAL
1	C	184	VAL
1	D	184	VAL
1	E	184	VAL
1	F	184	VAL

### 5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	558/621 (90%)	558 (100%)	0	100	100
1	B	558/621 (90%)	558 (100%)	0	100	100
1	C	558/621 (90%)	558 (100%)	0	100	100
1	D	558/621 (90%)	558 (100%)	0	100	100
1	E	558/621 (90%)	558 (100%)	0	100	100
1	F	558/621 (90%)	558 (100%)	0	100	100
All	All	3348/3726 (90%)	3348 (100%)	0	100	100

There are no protein residues with a non-rotameric sidechain to report.

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (18) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	267	GLN
1	A	591	GLN
1	A	690	ASN
1	B	267	GLN
1	B	591	GLN
1	B	690	ASN
1	C	267	GLN
1	C	591	GLN
1	C	690	ASN
1	D	267	GLN
1	D	591	GLN
1	D	690	ASN
1	E	267	GLN
1	E	591	GLN
1	E	690	ASN
1	F	267	GLN
1	F	591	GLN
1	F	690	ASN



### 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 carbohydrates 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.