wwPDB EM Map/Model Validation Report (i)

Apr 10, 2016 – 02:04 PM BST

PDB ID	:	2C7E
EMDB ID:	:	EMD-1047
Title	:	REVISED ATOMIC STRUCTURE FITTING INTO A GROEL(D398A)-ATP7 CRYO-EM MAP (EMD 1047)
Authors	:	Ranson, N.A.; Farr, G.W.; Roseman, A.M.; Gowen, B.; Fenton, W.A.; Horwich, A.L.; Saibil, H.R.
Deposited on	:	2005-11-22
Resolution	:	9.70 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
A user guide is available at
http://wwpdb.org/validation/2016/EMValidationReportHelp

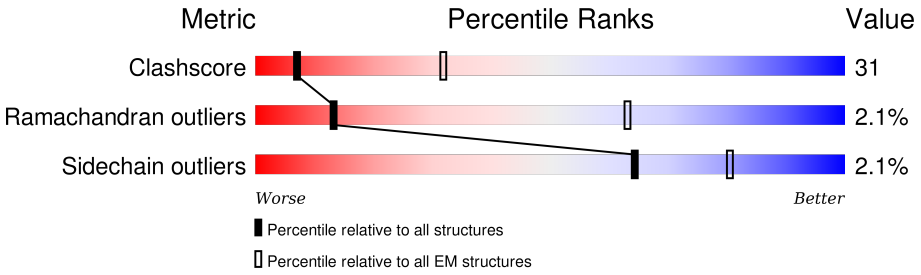
MolProbity	:	4.02b-467
Mogul	:	1.7.1 (RC1), CSD as537be (2016)
Percentile statistics	:	20151230.v01 (using entries in the PDB archive December 30th 2015)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et. al. (1996)
Validation Pipeline (wwPDB-VP)	:	trunk27241

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 9.70 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	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 >=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 <=5%

Mol	Chain	Length	Quality of chain
1	A	547	59% 35%
1	B	547	60% 34%
1	C	547	59% 34%
1	D	547	59% 34%
1	E	547	60% 34%
1	F	547	60% 33%
1	G	547	60% 34%
1	H	547	63% 30%
1	I	547	64% 29%

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Mol	Chain	Length	Quality of chain
1	J	547	63% 30%
1	K	547	63% 31%
1	L	547	63% 30%
1	M	547	63% 30%
1	N	547	63% 30%

2 Entry composition

There are 5 unique types of molecules in this entry. The entry contains 54243 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 60 KDA CHAPERONIN.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	525	Total	C	N	O	S	0	0
			3855	2399	664	772	20		
1	B	525	Total	C	N	O	S	0	0
			3855	2399	664	772	20		
1	C	525	Total	C	N	O	S	0	0
			3855	2399	664	772	20		
1	D	525	Total	C	N	O	S	0	0
			3855	2399	664	772	20		
1	E	525	Total	C	N	O	S	0	0
			3855	2399	664	772	20		
1	F	525	Total	C	N	O	S	0	0
			3855	2399	664	772	20		
1	G	525	Total	C	N	O	S	0	0
			3855	2399	664	772	20		
1	H	525	Total	C	N	O	S	0	0
			3855	2399	664	772	20		
1	I	525	Total	C	N	O	S	0	0
			3855	2399	664	772	20		
1	J	525	Total	C	N	O	S	0	0
			3855	2399	664	772	20		
1	K	525	Total	C	N	O	S	0	0
			3855	2399	664	772	20		
1	L	525	Total	C	N	O	S	0	0
			3855	2399	664	772	20		
1	M	525	Total	C	N	O	S	0	0
			3855	2399	664	772	20		
1	N	525	Total	C	N	O	S	0	0
			3855	2399	664	772	20		

There are 28 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	13	GLY	ARG	ENGINEERED MUTATION	UNP P06139
A	126	VAL	ALA	ENGINEERED MUTATION	UNP P06139

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Chain	Residue	Modelled	Actual	Comment	Reference
B	13	GLY	ARG	ENGINEERED MUTATION	UNP P06139
B	126	VAL	ALA	ENGINEERED MUTATION	UNP P06139
C	13	GLY	ARG	ENGINEERED MUTATION	UNP P06139
C	126	VAL	ALA	ENGINEERED MUTATION	UNP P06139
D	13	GLY	ARG	ENGINEERED MUTATION	UNP P06139
D	126	VAL	ALA	ENGINEERED MUTATION	UNP P06139
E	13	GLY	ARG	ENGINEERED MUTATION	UNP P06139
E	126	VAL	ALA	ENGINEERED MUTATION	UNP P06139
F	13	GLY	ARG	ENGINEERED MUTATION	UNP P06139
F	126	VAL	ALA	ENGINEERED MUTATION	UNP P06139
G	13	GLY	ARG	ENGINEERED MUTATION	UNP P06139
G	126	VAL	ALA	ENGINEERED MUTATION	UNP P06139
H	13	GLY	ARG	ENGINEERED MUTATION	UNP P06139
H	126	VAL	ALA	ENGINEERED MUTATION	UNP P06139
I	13	GLY	ARG	ENGINEERED MUTATION	UNP P06139
I	126	VAL	ALA	ENGINEERED MUTATION	UNP P06139
J	13	GLY	ARG	ENGINEERED MUTATION	UNP P06139
J	126	VAL	ALA	ENGINEERED MUTATION	UNP P06139
K	13	GLY	ARG	ENGINEERED MUTATION	UNP P06139
K	126	VAL	ALA	ENGINEERED MUTATION	UNP P06139
L	13	GLY	ARG	ENGINEERED MUTATION	UNP P06139
L	126	VAL	ALA	ENGINEERED MUTATION	UNP P06139
M	13	GLY	ARG	ENGINEERED MUTATION	UNP P06139
M	126	VAL	ALA	ENGINEERED MUTATION	UNP P06139
N	13	GLY	ARG	ENGINEERED MUTATION	UNP P06139
N	126	VAL	ALA	ENGINEERED MUTATION	UNP P06139

- Molecule 2 is POTASSIUM ION (three-letter code: K) (formula: K).

Mol	Chain	Residues	Atoms	AltConf
2	G	1	Total K 1 1	0
2	D	1	Total K 1 1	0
2	E	1	Total K 1 1	0
2	B	1	Total K 1 1	0
2	C	1	Total K 1 1	0
2	A	1	Total K 1 1	0

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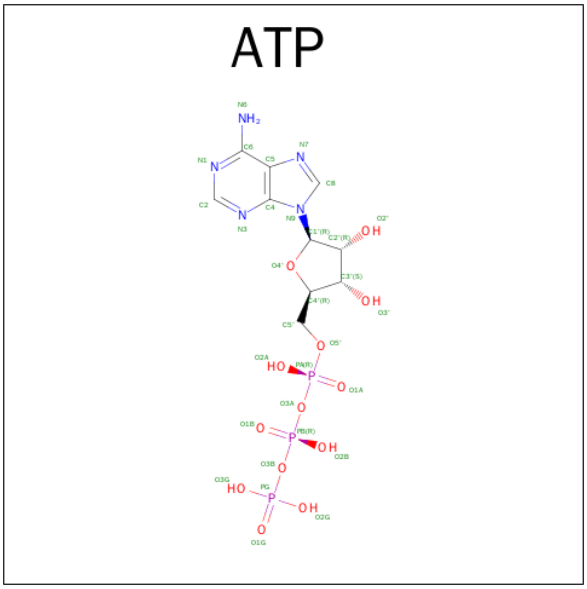
Mol	Chain	Residues	Atoms	AltConf
2	F	1	Total K 1 1	0

- Molecule 3 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms	AltConf
3	G	1	Total Mg 1 1	0
3	D	1	Total Mg 1 1	0
3	E	1	Total Mg 1 1	0
3	B	1	Total Mg 1 1	0
3	C	1	Total Mg 1 1	0
3	A	1	Total Mg 1 1	0
3	F	1	Total Mg 1 1	0

- Molecule 4 is ADENOSINE-5'-TRIPHOSPHATE (three-letter code: ATP) (formula: $C_{10}H_{16}N_5O_{13}P_3$).



Mol	Chain	Residues	Atoms	AltConf
4	A	1	Total C N O P 31 10 5 13 3	0

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Mol	Chain	Residues	Atoms					AltConf
4	B	1	Total	C	N	O	P	0
			31	10	5	13	3	
4	C	1	Total	C	N	O	P	0
			31	10	5	13	3	
4	D	1	Total	C	N	O	P	0
			31	10	5	13	3	
4	E	1	Total	C	N	O	P	0
			31	10	5	13	3	
4	F	1	Total	C	N	O	P	0
			31	10	5	13	3	
4	G	1	Total	C	N	O	P	0
			31	10	5	13	3	

- Molecule 5 is water.

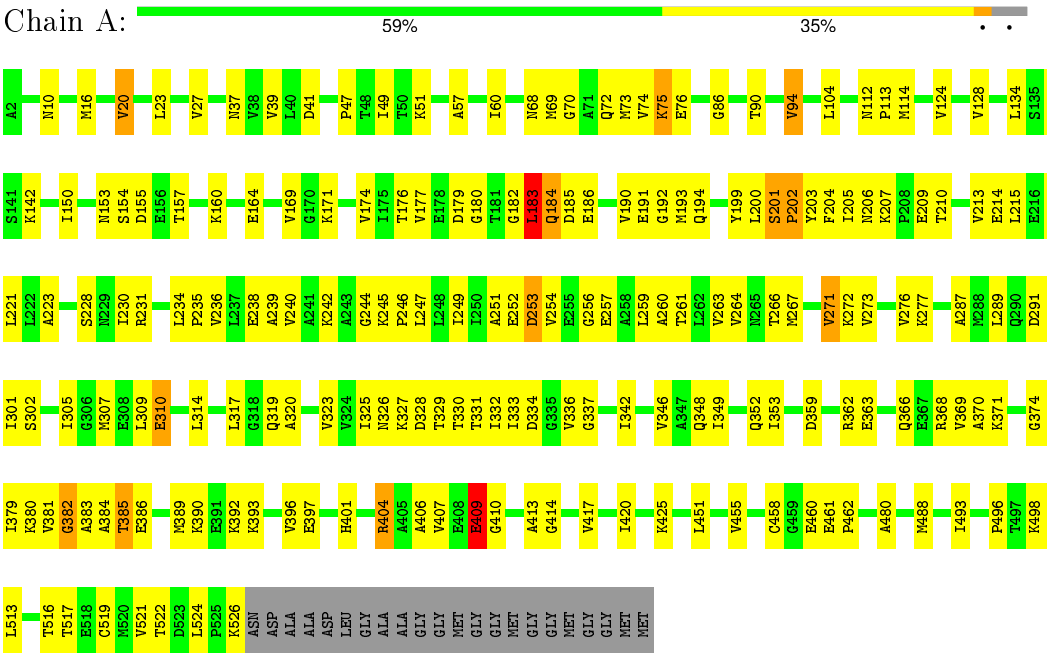
Mol	Chain	Residues	Atoms		AltConf
5	A	42	Total	O	0
			42	42	

3 Residue-property plots (i)

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.

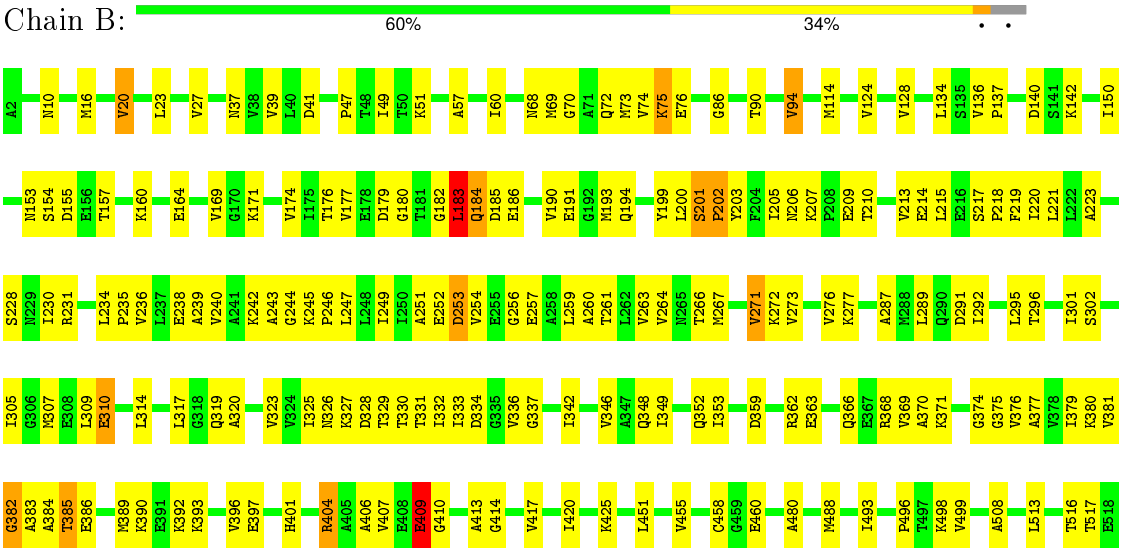
- Molecule 1: 60 KDA CHAPERONIN

Chain A:



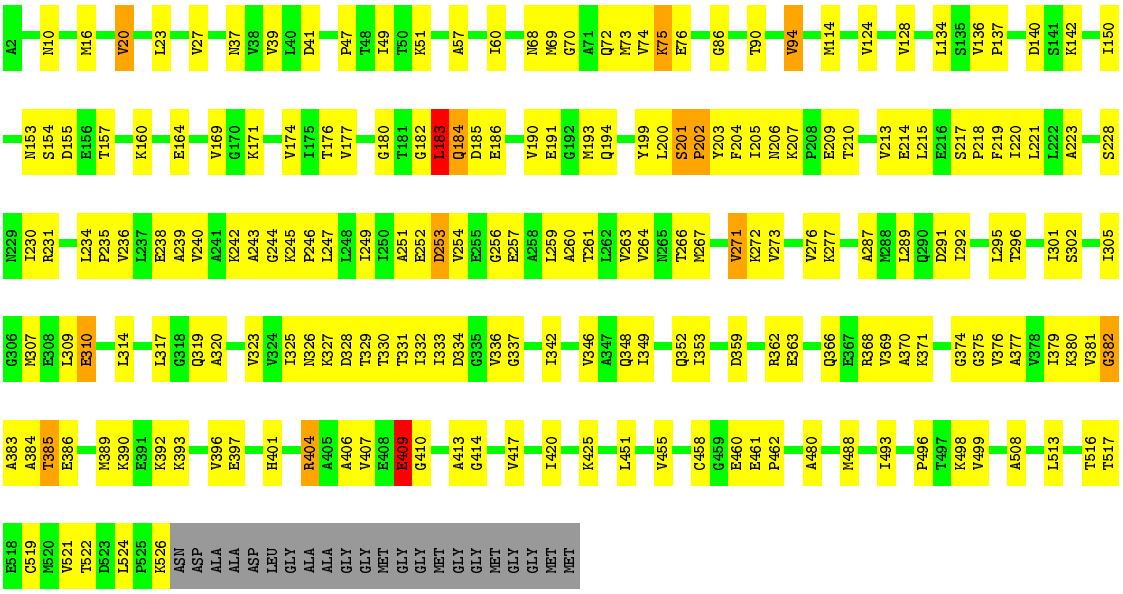
- Molecule 1: 60 KDA CHAPERONIN

Chain B:



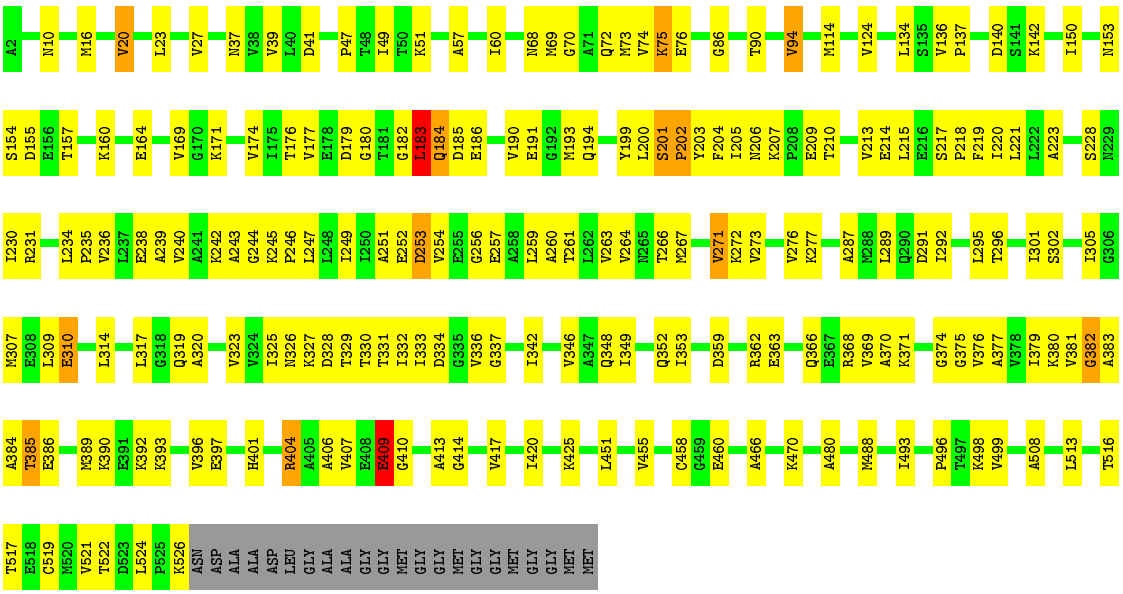
- Molecule 1: 60 KDA CHAPERONIN

Chain C:



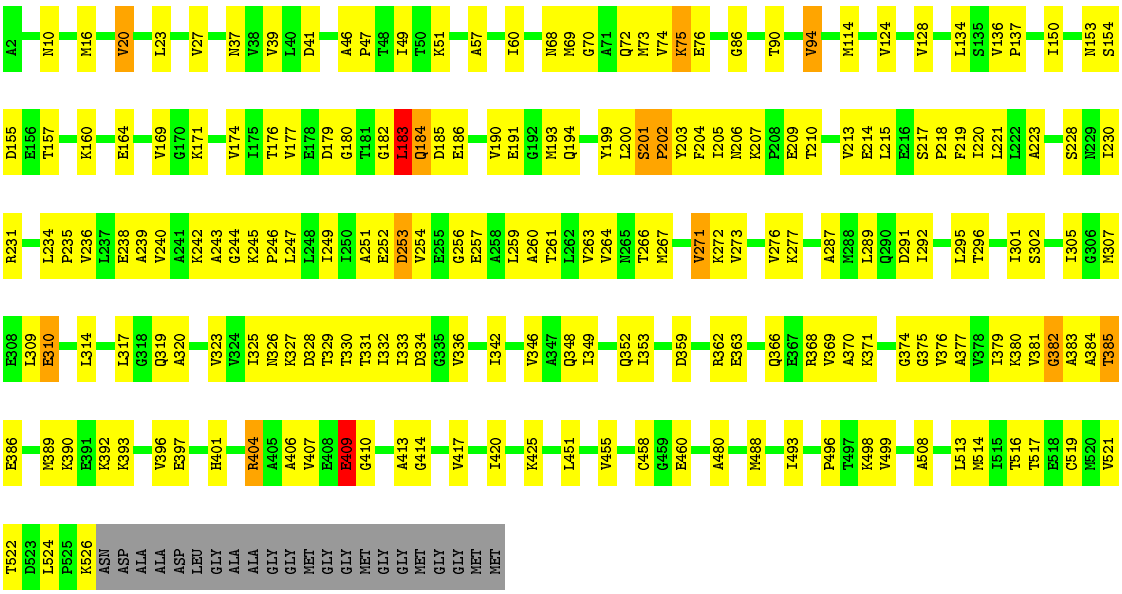
- Molecule 1: 60 KDA CHAPERONIN

Chain D:



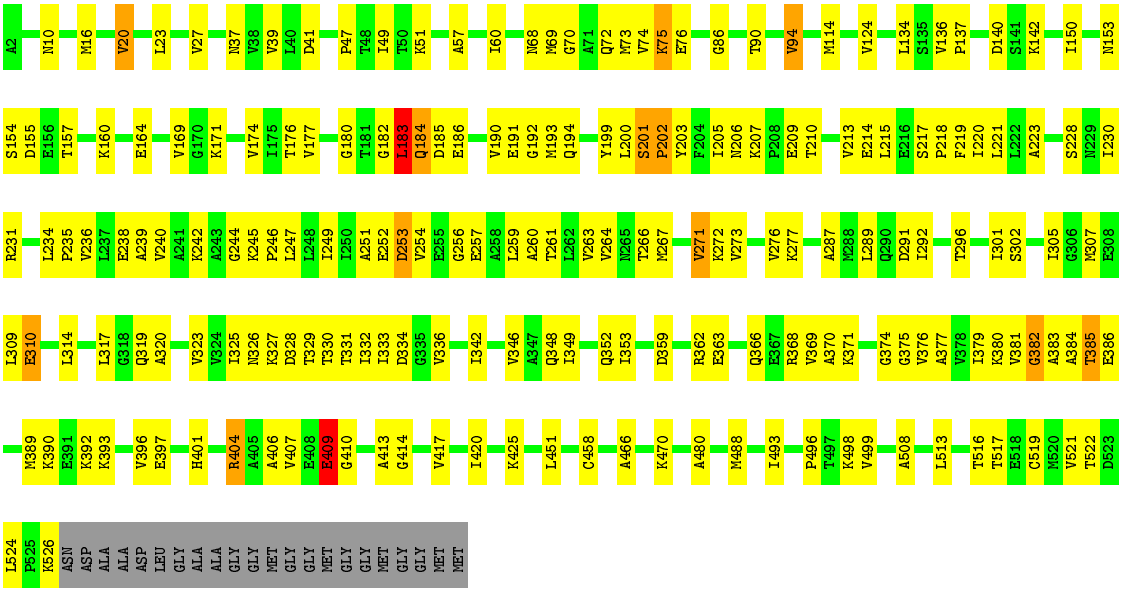
- Molecule 1: 60 KDA CHAPERONIN

Chain E:



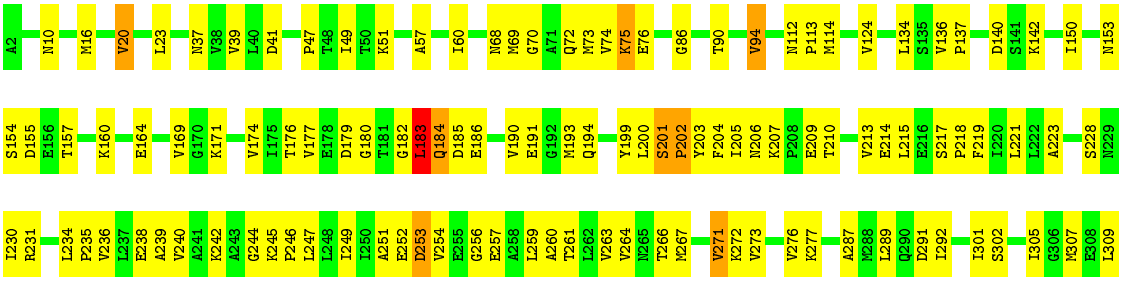
- Molecule 1: 60 KDA CHAPERONIN

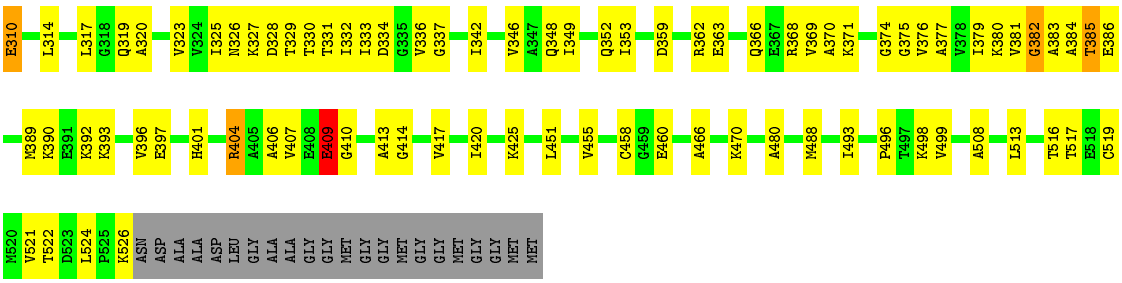
Chain F:



- Molecule 1: 60 KDA CHAPERONIN

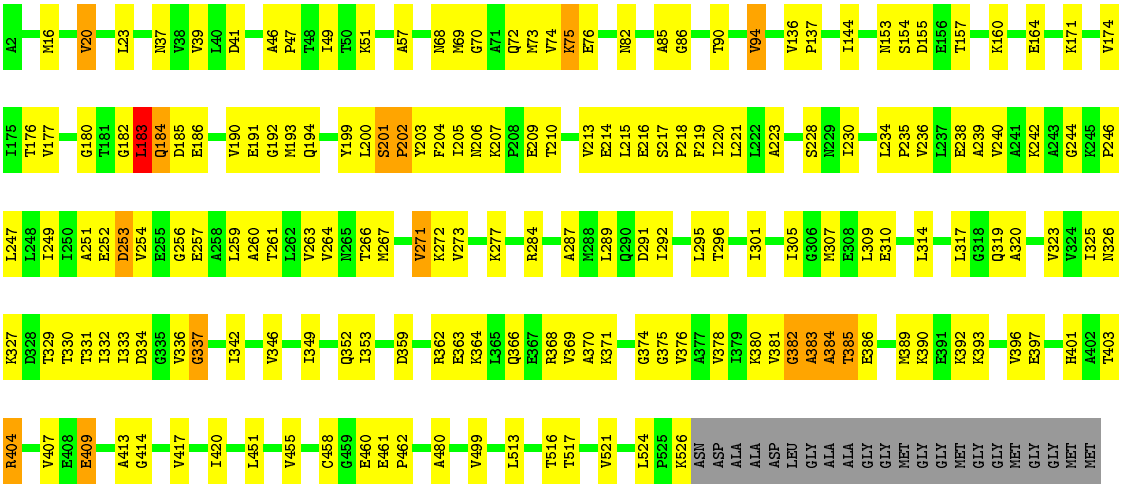
Chain G:





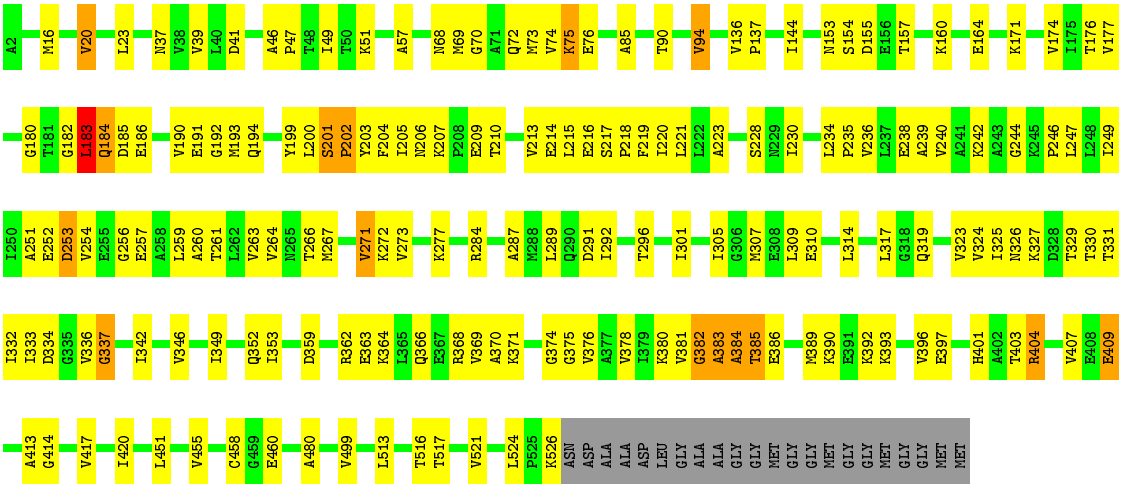
• Molecule 1: 60 KDA CHAPERONIN

Chain H:



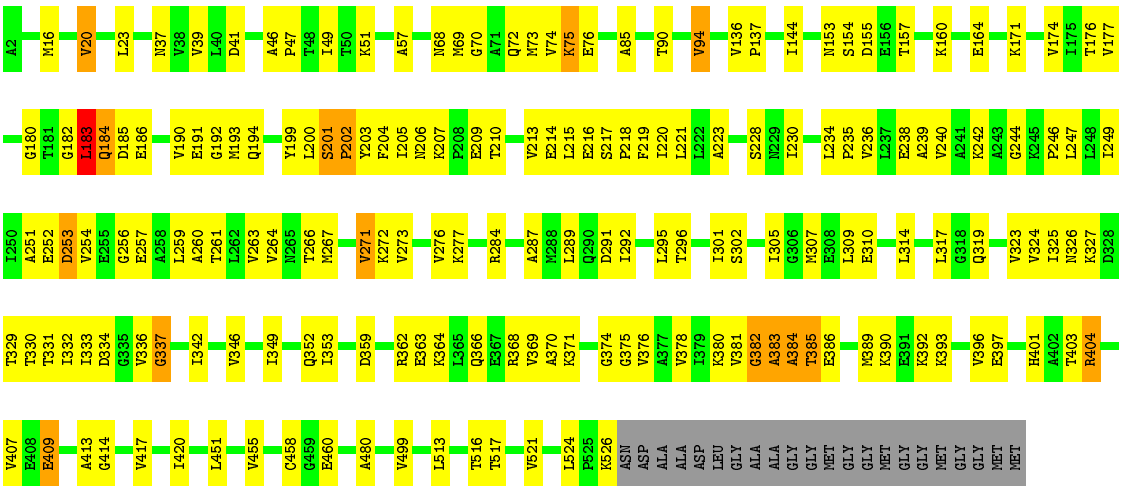
• Molecule 1: 60 KDA CHAPERONIN

Chain I:



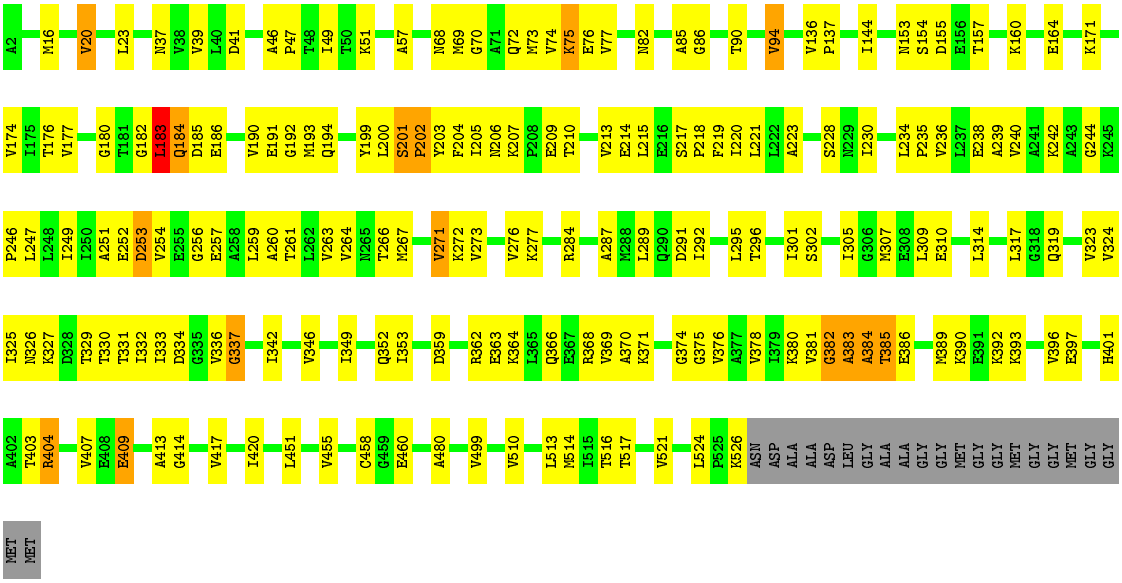
• Molecule 1: 60 KDA CHAPERONIN

Chain J:



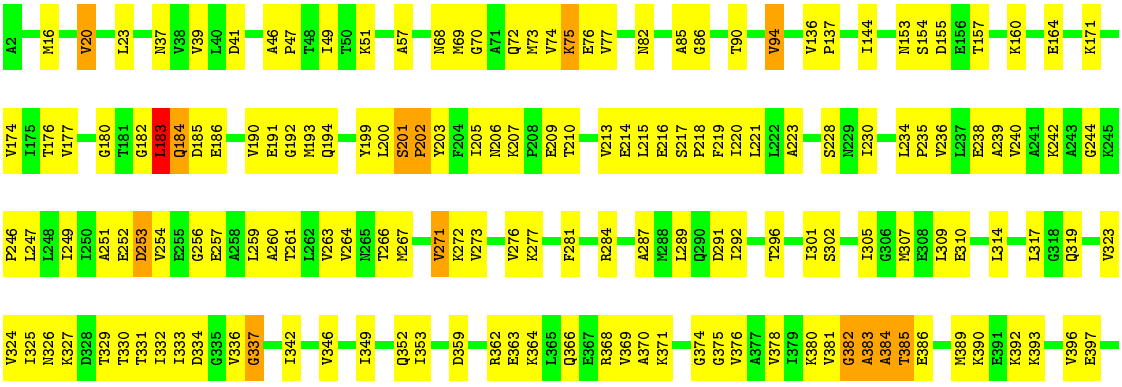
• Molecule 1: 60 KDA CHAPERONIN

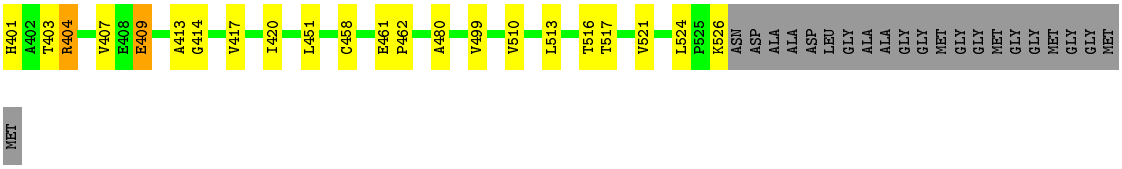
Chain K:



• Molecule 1: 60 KDA CHAPERONIN

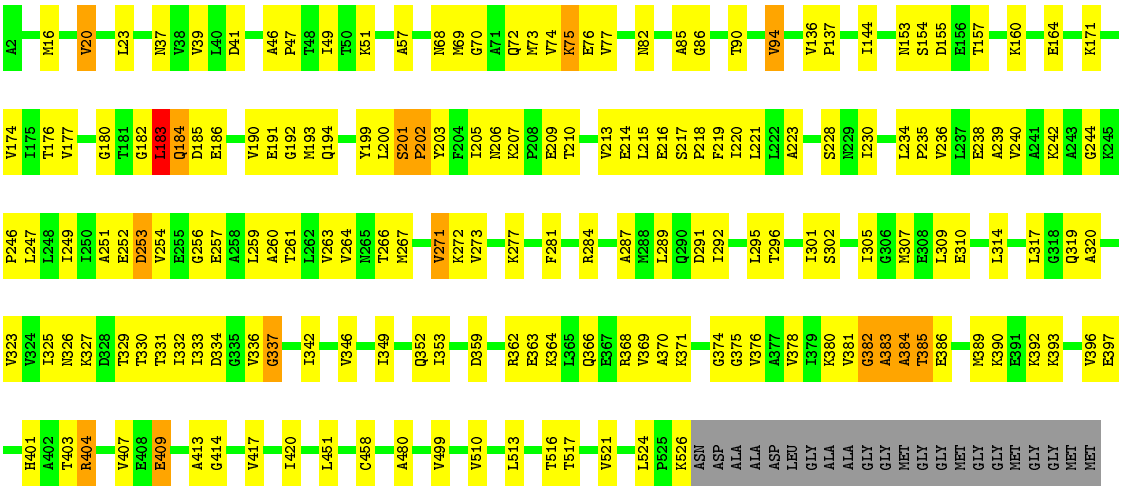
Chain L:





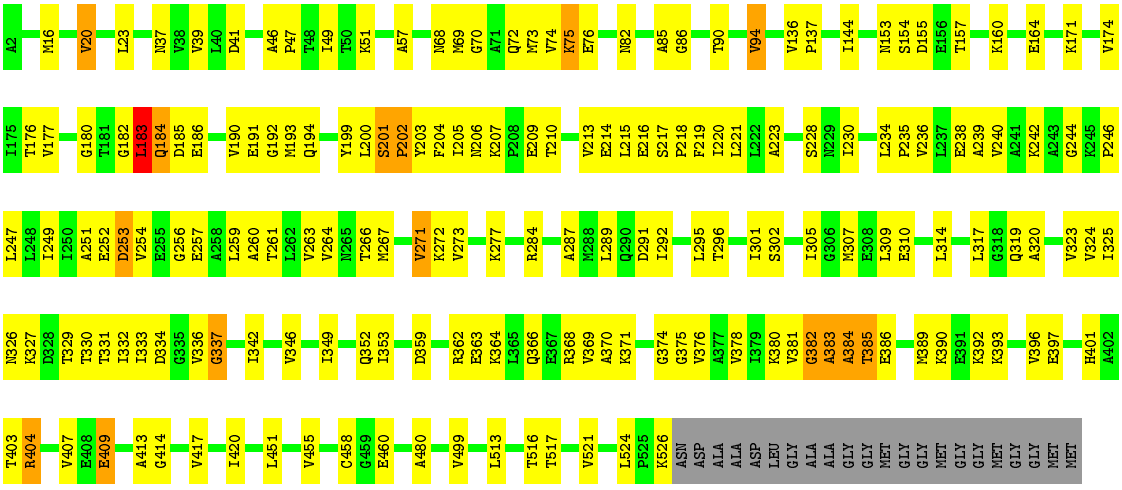
• Molecule 1: 60 KDA CHAPERONIN

Chain M:



• Molecule 1: 60 KDA CHAPERONIN

Chain N:



4 Experimental information (i)

Property	Value	Source
Reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	Depositor
Number of images	Not provided	Depositor
Resolution determination method	Not provided	Depositor
CTF correction method	FULL CORRECTION ON 2D CLASS AVERAGES	Depositor
Microscope	FEI CM200 FEG	Depositor
Voltage (kV)	200	Depositor
Electron dose ($e^-/Å^2$)	Not provided	Depositor
Minimum defocus (nm)	1200	Depositor
Maximum defocus (nm)	5000	Depositor
Magnification	38000	Depositor
Image detector	KODAK SO163 FILM	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: MG, K, ATP

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	0.34	1/3880 (0.0%)	0.85	2/5233 (0.0%)
1	B	0.34	1/3880 (0.0%)	0.85	2/5233 (0.0%)
1	C	0.34	1/3880 (0.0%)	0.85	2/5233 (0.0%)
1	D	0.34	1/3880 (0.0%)	0.85	2/5233 (0.0%)
1	E	0.34	1/3880 (0.0%)	0.85	2/5233 (0.0%)
1	F	0.34	1/3880 (0.0%)	0.85	2/5233 (0.0%)
1	G	0.34	1/3880 (0.0%)	0.85	2/5233 (0.0%)
1	H	0.77	1/3880 (0.0%)	0.81	3/5233 (0.1%)
1	I	0.77	1/3880 (0.0%)	0.81	3/5233 (0.1%)
1	J	0.77	1/3880 (0.0%)	0.81	3/5233 (0.1%)
1	K	0.77	1/3880 (0.0%)	0.81	3/5233 (0.1%)
1	L	0.77	1/3880 (0.0%)	0.81	3/5233 (0.1%)
1	M	0.77	1/3880 (0.0%)	0.81	3/5233 (0.1%)
1	N	0.77	1/3880 (0.0%)	0.81	3/5233 (0.1%)
All	All	0.60	14/54320 (0.0%)	0.83	35/73262 (0.0%)

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	1
1	B	0	1
1	C	0	1
1	D	0	1
1	E	0	1
1	F	0	1
1	G	0	1
1	H	0	1
1	I	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
1	J	0	1
1	K	0	1
1	L	0	1
1	M	0	1
1	N	0	1
All	All	0	14

All (14) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	J	409	GLU	C-N	-43.70	0.54	1.33
1	K	409	GLU	C-N	-43.68	0.54	1.33
1	M	409	GLU	C-N	-43.66	0.54	1.33
1	H	409	GLU	C-N	-43.65	0.54	1.33
1	N	409	GLU	C-N	-43.65	0.54	1.33
1	I	409	GLU	C-N	-43.65	0.54	1.33
1	L	409	GLU	C-N	-43.65	0.54	1.33
1	E	409	GLU	C-N	7.60	1.46	1.33
1	G	409	GLU	C-N	7.58	1.46	1.33
1	A	409	GLU	C-N	7.57	1.46	1.33
1	C	409	GLU	C-N	7.57	1.46	1.33
1	F	409	GLU	C-N	7.57	1.46	1.33
1	D	409	GLU	C-N	7.55	1.46	1.33
1	B	409	GLU	C-N	7.55	1.46	1.33

All (35) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	F	409	GLU	O-C-N	-45.43	45.96	123.20
1	A	409	GLU	O-C-N	-45.43	45.97	123.20
1	C	409	GLU	O-C-N	-45.43	45.97	123.20
1	E	409	GLU	O-C-N	-45.43	45.98	123.20
1	D	409	GLU	O-C-N	-45.42	45.99	123.20
1	B	409	GLU	O-C-N	-45.41	45.99	123.20
1	G	409	GLU	O-C-N	-45.41	46.00	123.20
1	M	409	GLU	O-C-N	-30.45	71.44	123.20
1	J	409	GLU	O-C-N	-30.44	71.45	123.20
1	I	409	GLU	O-C-N	-30.44	71.46	123.20
1	K	409	GLU	O-C-N	-30.42	71.48	123.20
1	H	409	GLU	O-C-N	-30.42	71.49	123.20
1	N	409	GLU	O-C-N	-30.41	71.51	123.20
1	L	409	GLU	O-C-N	-30.39	71.53	123.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	I	409	GLU	C-N-CA	-22.33	75.40	122.30
1	L	409	GLU	C-N-CA	-22.33	75.40	122.30
1	H	409	GLU	C-N-CA	-22.33	75.41	122.30
1	M	409	GLU	C-N-CA	-22.33	75.41	122.30
1	N	409	GLU	C-N-CA	-22.31	75.44	122.30
1	K	409	GLU	C-N-CA	-22.29	75.48	122.30
1	J	409	GLU	C-N-CA	-22.29	75.49	122.30
1	I	409	GLU	CA-C-N	-19.00	78.19	116.20
1	M	409	GLU	CA-C-N	-19.00	78.19	116.20
1	H	409	GLU	CA-C-N	-18.99	78.21	116.20
1	L	409	GLU	CA-C-N	-18.99	78.22	116.20
1	N	409	GLU	CA-C-N	-18.98	78.23	116.20
1	J	409	GLU	CA-C-N	-18.96	78.28	116.20
1	K	409	GLU	CA-C-N	-18.95	78.29	116.20
1	C	409	GLU	CA-C-N	7.47	131.14	116.20
1	G	409	GLU	CA-C-N	7.47	131.14	116.20
1	D	409	GLU	CA-C-N	7.47	131.14	116.20
1	B	409	GLU	CA-C-N	7.47	131.13	116.20
1	A	409	GLU	CA-C-N	7.46	131.13	116.20
1	F	409	GLU	CA-C-N	7.46	131.12	116.20
1	E	409	GLU	CA-C-N	7.45	131.10	116.20

There are no chirality outliers.

All (14) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	409	GLU	Mainchain
1	B	409	GLU	Mainchain
1	C	409	GLU	Mainchain
1	D	409	GLU	Mainchain
1	E	409	GLU	Mainchain
1	F	409	GLU	Mainchain
1	G	409	GLU	Mainchain
1	H	409	GLU	Mainchain
1	I	409	GLU	Mainchain
1	J	409	GLU	Mainchain
1	K	409	GLU	Mainchain
1	L	409	GLU	Mainchain
1	M	409	GLU	Mainchain
1	N	409	GLU	Mainchain

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	3855	0	3976	329	0
1	B	3855	0	3976	331	0
1	C	3855	0	3976	334	0
1	D	3855	0	3976	331	0
1	E	3855	0	3976	324	0
1	F	3855	0	3976	318	0
1	G	3855	0	3976	325	0
1	H	3855	0	3970	243	0
1	I	3855	0	3970	238	0
1	J	3855	0	3970	241	0
1	K	3855	0	3970	248	0
1	L	3855	0	3970	240	0
1	M	3855	0	3970	239	0
1	N	3855	0	3970	242	0
2	A	1	0	0	0	0
2	B	1	0	0	0	0
2	C	1	0	0	0	0
2	D	1	0	0	0	0
2	E	1	0	0	0	0
2	F	1	0	0	0	0
2	G	1	0	0	0	0
3	A	1	0	0	0	0
3	B	1	0	0	0	0
3	C	1	0	0	0	0
3	D	1	0	0	0	0
3	E	1	0	0	0	0
3	F	1	0	0	0	0
3	G	1	0	0	0	0
4	A	31	0	12	0	0
4	B	31	0	12	0	0
4	C	31	0	12	0	0
4	D	31	0	12	0	0
4	E	31	0	12	0	0
4	F	31	0	12	0	0
4	G	31	0	12	0	0
5	A	42	0	0	0	0
All	All	54243	0	55706	3419	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 31.

All (3419) 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:J:190:VAL:HG11	1:J:333:ILE:CG2	1.30	1.61
1:J:190:VAL:CG1	1:J:333:ILE:HG22	1.20	1.60
1:N:190:VAL:HG11	1:N:333:ILE:CG2	1.30	1.60
1:K:190:VAL:HG11	1:K:333:ILE:CG2	1.30	1.59
1:M:190:VAL:CG1	1:M:333:ILE:HG22	1.20	1.59
1:N:190:VAL:CG1	1:N:333:ILE:HG22	1.20	1.58
1:I:190:VAL:HG11	1:I:333:ILE:CG2	1.30	1.57
1:M:190:VAL:CG1	1:M:333:ILE:CG2	1.82	1.56
1:L:190:VAL:HG11	1:L:333:ILE:CG2	1.30	1.56
1:N:190:VAL:CG1	1:N:333:ILE:CG2	1.82	1.56
1:L:190:VAL:CG1	1:L:333:ILE:HG22	1.20	1.56
1:H:190:VAL:CG1	1:H:333:ILE:HG22	1.20	1.56
1:H:190:VAL:HG11	1:H:333:ILE:CG2	1.30	1.55
1:K:190:VAL:CG1	1:K:333:ILE:HG22	1.20	1.55
1:F:136:VAL:C	1:F:137:PRO:HD3	1.21	1.55
1:I:190:VAL:CG1	1:I:333:ILE:HG22	1.20	1.54
1:G:136:VAL:C	1:G:137:PRO:HD3	1.21	1.54
1:M:190:VAL:HG11	1:M:333:ILE:CG2	1.30	1.52
1:A:86:GLY:HA3	1:A:401:HIS:CE1	1.46	1.50
1:C:86:GLY:HA3	1:C:401:HIS:CE1	1.46	1.50
1:E:86:GLY:HA3	1:E:401:HIS:CE1	1.46	1.50
1:E:136:VAL:C	1:E:137:PRO:HD3	1.21	1.49
1:D:86:GLY:HA3	1:D:401:HIS:CE1	1.46	1.49
1:G:86:GLY:HA3	1:G:401:HIS:CE1	1.46	1.49
1:B:86:GLY:HA3	1:B:401:HIS:CE1	1.46	1.49
1:K:190:VAL:CG1	1:K:333:ILE:CG2	1.82	1.48
1:D:136:VAL:C	1:D:137:PRO:HD3	1.21	1.47
1:C:136:VAL:C	1:C:137:PRO:HD3	1.21	1.47
1:A:136:VAL:C	1:A:137:PRO:HD3	1.21	1.47
1:F:86:GLY:HA3	1:F:401:HIS:CE1	1.46	1.46
1:J:190:VAL:CG1	1:J:333:ILE:CG2	1.82	1.45
1:I:190:VAL:CG1	1:I:333:ILE:CG2	1.82	1.45
1:B:136:VAL:C	1:B:137:PRO:HD3	1.21	1.45
1:F:194:GLN:N	1:F:375:GLY:H	1.15	1.43
1:H:190:VAL:CG1	1:H:333:ILE:CG2	1.82	1.42
1:C:245:LYS:HZ1	1:D:231:ARG:NH2	1.15	1.42
1:B:245:LYS:HZ1	1:C:231:ARG:NH2	1.14	1.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:190:VAL:CG1	1:L:333:ILE:CG2	1.82	1.41
1:D:136:VAL:C	1:D:137:PRO:CD	1.89	1.40
1:B:194:GLN:N	1:B:375:GLY:H	1.15	1.40
1:A:136:VAL:C	1:A:137:PRO:CD	1.89	1.39
1:E:136:VAL:C	1:E:137:PRO:CD	1.89	1.39
1:F:245:LYS:HZ1	1:G:231:ARG:NH2	1.14	1.39
1:C:136:VAL:C	1:C:137:PRO:CD	1.89	1.39
1:E:245:LYS:HZ1	1:F:231:ARG:NH2	1.15	1.39
1:A:194:GLN:N	1:A:375:GLY:H	1.15	1.39
1:C:39:VAL:CG2	1:D:517:THR:HG23	1.53	1.39
1:B:136:VAL:C	1:B:137:PRO:CD	1.89	1.38
1:D:194:GLN:N	1:D:375:GLY:H	1.15	1.38
1:G:136:VAL:C	1:G:137:PRO:CD	1.89	1.38
1:B:39:VAL:CG2	1:C:517:THR:HG23	1.53	1.38
1:K:192:GLY:O	1:K:375:GLY:HA2	1.24	1.38
1:D:39:VAL:CG2	1:E:517:THR:HG23	1.53	1.38
1:F:39:VAL:CG2	1:G:517:THR:HG23	1.53	1.38
1:G:194:GLN:N	1:G:375:GLY:H	1.15	1.37
1:A:517:THR:HG23	1:G:39:VAL:CG2	1.53	1.37
1:E:174:VAL:CG2	1:E:329:THR:HG21	1.54	1.37
1:F:136:VAL:C	1:F:137:PRO:CD	1.89	1.37
1:D:174:VAL:CG2	1:D:329:THR:HG21	1.54	1.37
1:F:174:VAL:CG2	1:F:329:THR:HG21	1.54	1.36
1:E:194:GLN:N	1:E:375:GLY:H	1.15	1.36
1:E:39:VAL:CG2	1:F:517:THR:HG23	1.53	1.36
1:A:231:ARG:NH2	1:G:245:LYS:HZ1	1.21	1.36
1:A:174:VAL:CG2	1:A:329:THR:HG21	1.54	1.36
1:G:174:VAL:CG2	1:G:329:THR:HG21	1.54	1.36
1:C:174:VAL:CG2	1:C:329:THR:HG21	1.54	1.36
1:C:194:GLN:N	1:C:375:GLY:H	1.15	1.36
1:J:192:GLY:O	1:J:375:GLY:HA2	1.24	1.35
1:B:174:VAL:CG2	1:B:329:THR:HG21	1.54	1.35
1:A:39:VAL:CG2	1:B:517:THR:HG23	1.53	1.35
1:D:245:LYS:HZ1	1:E:231:ARG:NH2	1.21	1.34
1:L:192:GLY:O	1:L:375:GLY:HA2	1.24	1.34
1:N:371:LYS:C	1:N:374:GLY:N	1.82	1.33
1:L:371:LYS:C	1:L:374:GLY:N	1.82	1.33
1:I:371:LYS:C	1:I:374:GLY:N	1.82	1.33
1:G:136:VAL:O	1:G:137:PRO:N	1.62	1.32
1:J:371:LYS:C	1:J:374:GLY:N	1.82	1.32
1:M:371:LYS:C	1:M:374:GLY:N	1.82	1.32

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:136:VAL:O	1:E:137:PRO:N	1.62	1.32
1:C:136:VAL:O	1:C:137:PRO:N	1.62	1.32
1:I:192:GLY:O	1:I:375:GLY:HA2	1.24	1.32
1:K:371:LYS:C	1:K:374:GLY:N	1.82	1.31
1:F:136:VAL:O	1:F:137:PRO:N	1.62	1.31
1:H:371:LYS:C	1:H:374:GLY:N	1.82	1.31
1:B:136:VAL:O	1:B:137:PRO:N	1.62	1.31
1:A:517:THR:CG2	1:G:39:VAL:CG2	2.09	1.31
1:A:136:VAL:O	1:A:137:PRO:N	1.62	1.31
1:A:245:LYS:HZ1	1:B:231:ARG:NH2	1.22	1.31
1:M:192:GLY:O	1:M:375:GLY:HA2	1.24	1.30
1:E:39:VAL:CG2	1:F:517:THR:CG2	2.09	1.30
1:D:136:VAL:O	1:D:137:PRO:N	1.62	1.30
1:D:194:GLN:HB2	1:D:375:GLY:O	1.31	1.30
1:C:39:VAL:CG2	1:D:517:THR:CG2	2.09	1.29
1:F:39:VAL:CG2	1:G:517:THR:CG2	2.09	1.29
1:H:192:GLY:O	1:H:375:GLY:HA2	1.24	1.29
1:N:192:GLY:O	1:N:375:GLY:HA2	1.24	1.29
1:B:39:VAL:CG2	1:C:517:THR:CG2	2.09	1.29
1:C:194:GLN:HB2	1:C:375:GLY:O	1.31	1.29
1:E:194:GLN:HB2	1:E:375:GLY:O	1.31	1.28
1:A:39:VAL:CG2	1:B:517:THR:CG2	2.09	1.28
1:D:39:VAL:CG2	1:E:517:THR:CG2	2.09	1.28
1:J:370:ALA:O	1:J:374:GLY:N	1.67	1.28
1:F:194:GLN:HB2	1:F:375:GLY:O	1.31	1.27
1:G:194:GLN:HB2	1:G:375:GLY:O	1.31	1.27
1:N:370:ALA:O	1:N:374:GLY:N	1.67	1.27
1:H:370:ALA:O	1:H:374:GLY:N	1.67	1.26
1:B:191:GLU:HB2	1:B:334:ASP:N	1.50	1.26
1:G:191:GLU:HB2	1:G:334:ASP:N	1.50	1.26
1:A:191:GLU:HB2	1:A:334:ASP:N	1.50	1.26
1:F:191:GLU:HB2	1:F:334:ASP:N	1.50	1.26
1:M:370:ALA:O	1:M:374:GLY:N	1.67	1.26
1:K:370:ALA:O	1:K:374:GLY:N	1.67	1.26
1:A:194:GLN:HB2	1:A:375:GLY:O	1.31	1.26
1:I:370:ALA:O	1:I:374:GLY:N	1.67	1.25
1:C:245:LYS:NZ	1:D:231:ARG:HH22	1.33	1.25
1:B:194:GLN:HB2	1:B:375:GLY:O	1.31	1.25
1:C:191:GLU:HB2	1:C:334:ASP:N	1.50	1.25
1:E:191:GLU:HB2	1:E:334:ASP:N	1.50	1.25
1:D:245:LYS:NZ	1:E:231:ARG:HH22	1.33	1.25

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:41:ASP:HB2	1:D:521:VAL:O	1.37	1.25
1:B:245:LYS:NZ	1:C:231:ARG:HH22	1.33	1.25
1:E:245:LYS:NZ	1:F:231:ARG:NH2	1.85	1.25
1:B:194:GLN:CB	1:B:375:GLY:O	1.85	1.24
1:D:41:ASP:HB2	1:E:521:VAL:O	1.37	1.24
1:L:370:ALA:O	1:L:374:GLY:N	1.67	1.24
1:F:245:LYS:NZ	1:G:231:ARG:NH2	1.85	1.24
1:A:231:ARG:HH22	1:G:245:LYS:NZ	1.33	1.24
1:B:41:ASP:HB2	1:C:521:VAL:O	1.37	1.24
1:F:245:LYS:NZ	1:G:231:ARG:HH22	1.33	1.24
1:A:41:ASP:HB2	1:B:521:VAL:O	1.37	1.24
1:A:521:VAL:O	1:G:41:ASP:HB2	1.37	1.24
1:F:194:GLN:CB	1:F:375:GLY:O	1.85	1.24
1:E:194:GLN:CB	1:E:375:GLY:O	1.85	1.24
1:A:245:LYS:NZ	1:B:231:ARG:HH22	1.33	1.24
1:E:245:LYS:NZ	1:F:231:ARG:HH22	1.33	1.23
1:D:245:LYS:NZ	1:E:231:ARG:NH2	1.85	1.23
1:H:333:ILE:HD13	1:H:378:VAL:CG2	1.68	1.23
1:E:41:ASP:HB2	1:F:521:VAL:O	1.37	1.23
1:F:41:ASP:HB2	1:G:521:VAL:O	1.37	1.23
1:I:333:ILE:HD13	1:I:378:VAL:CG2	1.68	1.23
1:N:333:ILE:HD13	1:N:378:VAL:CG2	1.68	1.23
1:G:194:GLN:CB	1:G:375:GLY:O	1.85	1.23
1:C:194:GLN:CB	1:C:375:GLY:O	1.85	1.23
1:A:194:GLN:CB	1:A:375:GLY:O	1.85	1.23
1:D:194:GLN:CB	1:D:375:GLY:O	1.85	1.23
1:D:331:THR:OG1	1:D:376:VAL:HG23	1.38	1.23
1:M:333:ILE:HD13	1:M:378:VAL:CG2	1.68	1.22
1:D:191:GLU:HB2	1:D:334:ASP:N	1.50	1.22
1:J:333:ILE:HD13	1:J:378:VAL:CG2	1.68	1.22
1:L:333:ILE:HD13	1:L:378:VAL:CG2	1.68	1.22
1:A:231:ARG:NH2	1:G:245:LYS:NZ	1.85	1.22
1:K:333:ILE:HD13	1:K:378:VAL:CG2	1.68	1.21
1:C:39:VAL:HG21	1:D:517:THR:CG2	1.70	1.21
1:B:331:THR:OG1	1:B:376:VAL:HG23	1.38	1.21
1:D:39:VAL:HG21	1:E:517:THR:CG2	1.70	1.21
1:C:245:LYS:NZ	1:D:231:ARG:NH2	1.85	1.21
1:B:39:VAL:HG21	1:C:517:THR:CG2	1.70	1.20
1:F:39:VAL:HG21	1:G:517:THR:CG2	1.69	1.20
1:F:174:VAL:HG21	1:F:329:THR:CG2	1.71	1.20
1:A:517:THR:CG2	1:G:39:VAL:HG21	1.70	1.19

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:39:VAL:HG21	1:F:517:THR:CG2	1.69	1.19
1:C:174:VAL:HG21	1:C:329:THR:CG2	1.71	1.19
1:G:174:VAL:HG21	1:G:329:THR:CG2	1.71	1.19
1:E:174:VAL:HG21	1:E:329:THR:CG2	1.71	1.19
1:A:245:LYS:NZ	1:B:231:ARG:NH2	1.85	1.19
1:B:174:VAL:HG21	1:B:329:THR:CG2	1.71	1.19
1:E:47:PRO:HD2	1:F:73:MET:CG	1.72	1.19
1:F:47:PRO:HD2	1:G:73:MET:CG	1.73	1.19
1:B:245:LYS:NZ	1:C:231:ARG:NH2	1.85	1.19
1:D:47:PRO:HD2	1:E:73:MET:CG	1.72	1.19
1:H:371:LYS:CA	1:H:374:GLY:N	2.07	1.18
1:D:174:VAL:HG21	1:D:329:THR:CG2	1.71	1.18
1:A:73:MET:CG	1:G:47:PRO:HD2	1.73	1.18
1:F:331:THR:OG1	1:F:376:VAL:HG23	1.38	1.18
1:A:174:VAL:HG21	1:A:329:THR:CG2	1.71	1.18
1:C:331:THR:OG1	1:C:376:VAL:HG23	1.38	1.18
1:I:371:LYS:CA	1:I:374:GLY:N	2.07	1.18
1:N:371:LYS:CA	1:N:374:GLY:N	2.06	1.17
1:C:47:PRO:HD2	1:D:73:MET:CG	1.72	1.17
1:G:331:THR:OG1	1:G:376:VAL:HG23	1.38	1.17
1:E:331:THR:OG1	1:E:376:VAL:HG23	1.38	1.17
1:F:174:VAL:CG2	1:F:329:THR:CG2	2.23	1.17
1:A:47:PRO:HD2	1:B:73:MET:CG	1.73	1.17
1:J:371:LYS:CA	1:J:374:GLY:N	2.07	1.17
1:A:39:VAL:HG21	1:B:517:THR:CG2	1.70	1.17
1:G:191:GLU:CB	1:G:333:ILE:HA	1.74	1.17
1:K:371:LYS:CA	1:K:374:GLY:N	2.07	1.16
1:A:331:THR:OG1	1:A:376:VAL:HG23	1.38	1.16
1:E:174:VAL:CG2	1:E:329:THR:CG2	2.22	1.16
1:B:47:PRO:HD2	1:C:73:MET:CG	1.73	1.16
1:J:192:GLY:C	1:J:375:GLY:HA2	1.65	1.16
1:I:192:GLY:C	1:I:375:GLY:HA2	1.65	1.16
1:L:371:LYS:CA	1:L:374:GLY:N	2.07	1.16
1:H:192:GLY:C	1:H:375:GLY:HA2	1.65	1.16
1:K:192:GLY:C	1:K:375:GLY:HA2	1.65	1.16
1:G:174:VAL:CG2	1:G:329:THR:CG2	2.23	1.16
1:B:174:VAL:CG2	1:B:329:THR:CG2	2.23	1.16
1:N:192:GLY:C	1:N:375:GLY:HA2	1.65	1.16
1:M:371:LYS:CA	1:M:374:GLY:N	2.07	1.15
1:L:192:GLY:C	1:L:375:GLY:HA2	1.65	1.15
1:C:174:VAL:CG2	1:C:329:THR:CG2	2.23	1.15

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:192:GLY:C	1:M:375:GLY:HA2	1.65	1.15
1:I:191:GLU:C	1:I:193:MET:N	1.99	1.15
1:A:174:VAL:CG2	1:A:329:THR:CG2	2.23	1.15
1:D:174:VAL:CG2	1:D:329:THR:CG2	2.23	1.14
1:A:517:THR:CG2	1:G:39:VAL:HG23	1.75	1.14
1:I:192:GLY:O	1:I:375:GLY:CA	1.97	1.13
1:D:39:VAL:HG21	1:E:517:THR:HG21	1.28	1.13
1:H:192:GLY:O	1:H:375:GLY:CA	1.97	1.13
1:J:190:VAL:CG1	1:J:333:ILE:HG23	1.78	1.13
1:N:192:GLY:O	1:N:375:GLY:CA	1.97	1.13
1:K:192:GLY:O	1:K:375:GLY:CA	1.97	1.13
1:E:39:VAL:HG23	1:F:517:THR:CG2	1.75	1.13
1:M:192:GLY:O	1:M:375:GLY:CA	1.97	1.13
1:H:191:GLU:C	1:H:193:MET:N	1.99	1.13
1:H:190:VAL:CG1	1:H:333:ILE:HG23	1.78	1.13
1:C:39:VAL:HG21	1:D:517:THR:HG21	1.28	1.12
1:L:192:GLY:O	1:L:375:GLY:CA	1.97	1.12
1:L:191:GLU:C	1:L:193:MET:N	1.99	1.11
1:N:191:GLU:C	1:N:193:MET:N	1.99	1.11
1:M:190:VAL:CG1	1:M:333:ILE:HG23	1.78	1.11
1:D:39:VAL:HG23	1:E:517:THR:CG2	1.75	1.11
1:J:192:GLY:O	1:J:375:GLY:CA	1.97	1.11
1:M:191:GLU:C	1:M:193:MET:N	1.99	1.11
1:J:230:ILE:HD12	1:J:261:THR:HG21	1.33	1.11
1:F:86:GLY:CA	1:F:401:HIS:CE1	2.34	1.11
1:F:371:LYS:HG2	1:F:374:GLY:N	1.66	1.11
1:G:371:LYS:HG2	1:G:374:GLY:N	1.66	1.11
1:G:86:GLY:CA	1:G:401:HIS:CE1	2.34	1.10
1:E:371:LYS:HG2	1:E:374:GLY:N	1.66	1.10
1:J:191:GLU:C	1:J:193:MET:N	1.99	1.10
1:D:371:LYS:HG2	1:D:374:GLY:N	1.66	1.10
1:A:517:THR:HG21	1:G:39:VAL:HG21	1.28	1.10
1:N:190:VAL:CG1	1:N:333:ILE:HG23	1.78	1.10
1:C:371:LYS:HG2	1:C:374:GLY:N	1.66	1.10
1:B:371:LYS:HG2	1:B:374:GLY:N	1.66	1.10
1:A:371:LYS:HG2	1:A:374:GLY:N	1.66	1.10
1:F:191:GLU:CB	1:F:333:ILE:HA	1.74	1.10
1:I:230:ILE:HD12	1:I:261:THR:HG21	1.33	1.10
1:A:191:GLU:HB2	1:A:334:ASP:H	0.94	1.10
1:C:191:GLU:HB2	1:C:334:ASP:H	0.94	1.10
1:H:230:ILE:HD12	1:H:261:THR:HG21	1.33	1.10

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:230:ILE:HD12	1:M:261:THR:HG21	1.33	1.10
1:B:86:GLY:CA	1:B:401:HIS:CE1	2.34	1.09
1:C:174:VAL:HG22	1:C:329:THR:HG21	1.26	1.09
1:G:191:GLU:HB2	1:G:334:ASP:H	0.94	1.09
1:K:191:GLU:C	1:K:193:MET:N	1.99	1.09
1:E:86:GLY:CA	1:E:401:HIS:CE1	2.34	1.09
1:D:191:GLU:HB2	1:D:334:ASP:H	0.94	1.09
1:C:86:GLY:CA	1:C:401:HIS:CE1	2.34	1.09
1:F:194:GLN:N	1:F:375:GLY:N	2.00	1.09
1:C:39:VAL:HG23	1:D:517:THR:CG2	1.75	1.09
1:F:39:VAL:HG23	1:G:517:THR:CG2	1.75	1.09
1:G:194:GLN:N	1:G:375:GLY:N	2.00	1.09
1:M:183:LEU:H	1:M:383:ALA:HB3	1.13	1.09
1:A:86:GLY:CA	1:A:401:HIS:CE1	2.34	1.09
1:B:194:GLN:N	1:B:375:GLY:N	2.00	1.09
1:A:174:VAL:HG22	1:A:329:THR:HG21	1.26	1.09
1:D:191:GLU:CB	1:D:333:ILE:HA	1.74	1.09
1:I:371:LYS:O	1:I:374:GLY:N	1.86	1.08
1:L:371:LYS:O	1:L:374:GLY:N	1.86	1.08
1:C:194:GLN:N	1:C:375:GLY:N	2.00	1.08
1:E:191:GLU:HB2	1:E:334:ASP:H	0.94	1.08
1:F:191:GLU:HB2	1:F:334:ASP:H	0.94	1.08
1:K:230:ILE:HD12	1:K:261:THR:HG21	1.33	1.08
1:D:86:GLY:CA	1:D:401:HIS:CE1	2.34	1.08
1:F:39:VAL:HG21	1:G:517:THR:HG21	1.28	1.08
1:C:191:GLU:CB	1:C:333:ILE:HA	1.74	1.08
1:A:371:LYS:HG2	1:A:374:GLY:CA	1.84	1.08
1:A:194:GLN:N	1:A:375:GLY:N	2.00	1.08
1:B:39:VAL:HG21	1:C:517:THR:HG21	1.28	1.08
1:G:174:VAL:HG22	1:G:329:THR:HG21	1.26	1.08
1:E:194:GLN:N	1:E:375:GLY:N	2.00	1.08
1:L:230:ILE:HD12	1:L:261:THR:HG21	1.33	1.08
1:M:521:VAL:O	1:N:41:ASP:HB2	1.54	1.08
1:N:371:LYS:O	1:N:374:GLY:N	1.86	1.08
1:I:190:VAL:CG1	1:I:333:ILE:HG23	1.78	1.08
1:F:174:VAL:HG22	1:F:329:THR:HG21	1.26	1.08
1:H:183:LEU:H	1:H:383:ALA:HB3	1.13	1.08
1:H:521:VAL:O	1:I:41:ASP:HB2	1.54	1.08
1:N:183:LEU:H	1:N:383:ALA:HB3	1.13	1.08
1:E:39:VAL:HG21	1:F:517:THR:HG21	1.28	1.07
1:A:39:VAL:HG21	1:B:517:THR:HG21	1.28	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:521:VAL:O	1:K:41:ASP:HB2	1.54	1.07
1:L:333:ILE:HD13	1:L:378:VAL:HG21	1.11	1.07
1:B:371:LYS:HG2	1:B:374:GLY:CA	1.84	1.07
1:K:333:ILE:HD13	1:K:378:VAL:HG21	1.11	1.07
1:B:191:GLU:CB	1:B:333:ILE:HA	1.74	1.07
1:H:41:ASP:HB2	1:N:521:VAL:O	1.54	1.07
1:D:183:LEU:H	1:D:383:ALA:HB3	1.20	1.07
1:F:371:LYS:HG2	1:F:374:GLY:CA	1.84	1.07
1:B:174:VAL:HG22	1:B:329:THR:HG21	1.26	1.07
1:A:174:VAL:HG21	1:A:329:THR:HG21	1.30	1.07
1:B:39:VAL:HG23	1:C:517:THR:CG2	1.75	1.07
1:D:47:PRO:CD	1:E:73:MET:HG2	1.85	1.07
1:D:194:GLN:N	1:D:375:GLY:N	2.00	1.07
1:E:47:PRO:CD	1:F:73:MET:HG2	1.85	1.07
1:I:183:LEU:H	1:I:383:ALA:HB3	1.13	1.07
1:J:371:LYS:O	1:J:374:GLY:N	1.86	1.06
1:D:371:LYS:HG2	1:D:374:GLY:CA	1.84	1.06
1:C:47:PRO:CD	1:D:73:MET:HG2	1.85	1.06
1:K:183:LEU:H	1:K:383:ALA:HB3	1.13	1.06
1:E:174:VAL:HG22	1:E:329:THR:HG21	1.26	1.06
1:E:371:LYS:HG2	1:E:374:GLY:CA	1.84	1.06
1:B:47:PRO:CD	1:C:73:MET:HG2	1.85	1.06
1:A:47:PRO:CD	1:B:73:MET:HG2	1.85	1.06
1:F:47:PRO:CD	1:G:73:MET:HG2	1.85	1.06
1:K:371:LYS:O	1:K:374:GLY:N	1.86	1.06
1:A:73:MET:HG2	1:G:47:PRO:CD	1.85	1.06
1:L:521:VAL:O	1:M:41:ASP:HB2	1.54	1.06
1:J:333:ILE:HD13	1:J:378:VAL:HG21	1.11	1.06
1:M:333:ILE:HD13	1:M:378:VAL:HG21	1.11	1.06
1:M:371:LYS:O	1:M:374:GLY:N	1.86	1.06
1:G:371:LYS:HG2	1:G:374:GLY:CA	1.84	1.06
1:C:371:LYS:HG2	1:C:374:GLY:CA	1.84	1.06
1:H:333:ILE:HD13	1:H:378:VAL:HG21	1.11	1.06
1:F:174:VAL:HG21	1:F:329:THR:HG21	1.30	1.06
1:G:191:GLU:CB	1:G:334:ASP:H	1.68	1.06
1:A:191:GLU:CB	1:A:334:ASP:H	1.68	1.06
1:E:191:GLU:CB	1:E:333:ILE:HA	1.74	1.06
1:E:191:GLU:CB	1:E:334:ASP:H	1.68	1.06
1:N:230:ILE:HD12	1:N:261:THR:HG21	1.33	1.06
1:K:190:VAL:CG1	1:K:333:ILE:HG23	1.78	1.05
1:H:371:LYS:O	1:H:374:GLY:N	1.87	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:331:THR:OG1	1:F:376:VAL:CG2	2.04	1.05
1:G:331:THR:OG1	1:G:376:VAL:CG2	2.04	1.05
1:G:191:GLU:HB2	1:G:333:ILE:HA	1.36	1.05
1:E:191:GLU:HB2	1:E:333:ILE:HA	1.36	1.05
1:D:191:GLU:CB	1:D:334:ASP:H	1.68	1.05
1:I:521:VAL:O	1:J:41:ASP:HB2	1.54	1.05
1:K:521:VAL:O	1:L:41:ASP:HB2	1.54	1.05
1:L:183:LEU:H	1:L:383:ALA:HB3	1.13	1.05
1:B:183:LEU:H	1:B:383:ALA:HB3	1.20	1.05
1:D:174:VAL:HG22	1:D:329:THR:HG21	1.26	1.05
1:A:230:ILE:HD12	1:A:261:THR:HG21	1.36	1.05
1:E:230:ILE:HD12	1:E:261:THR:HG21	1.36	1.05
1:B:331:THR:OG1	1:B:376:VAL:CG2	2.04	1.05
1:D:331:THR:OG1	1:D:376:VAL:CG2	2.04	1.05
1:C:191:GLU:CB	1:C:334:ASP:H	1.68	1.05
1:B:230:ILE:HD12	1:B:261:THR:HG21	1.36	1.05
1:N:333:ILE:HD13	1:N:378:VAL:HG21	1.11	1.05
1:A:331:THR:OG1	1:A:376:VAL:CG2	2.04	1.05
1:E:331:THR:OG1	1:E:376:VAL:CG2	2.04	1.05
1:B:191:GLU:CB	1:B:334:ASP:H	1.68	1.05
1:J:183:LEU:H	1:J:383:ALA:HB3	1.13	1.05
1:C:331:THR:OG1	1:C:376:VAL:CG2	2.04	1.05
1:F:191:GLU:CB	1:F:334:ASP:H	1.68	1.05
1:A:39:VAL:HG23	1:B:517:THR:CG2	1.75	1.04
1:F:183:LEU:H	1:F:383:ALA:HB3	1.20	1.04
1:A:183:LEU:H	1:A:383:ALA:HB3	1.20	1.04
1:B:191:GLU:HB2	1:B:334:ASP:H	0.94	1.04
1:I:333:ILE:HD13	1:I:378:VAL:HG21	1.11	1.04
1:C:183:LEU:H	1:C:383:ALA:HB3	1.20	1.04
1:E:183:LEU:H	1:E:383:ALA:HB3	1.20	1.04
1:C:191:GLU:HB3	1:C:332:ILE:O	1.58	1.03
1:F:230:ILE:HD12	1:F:261:THR:HG21	1.36	1.03
1:D:230:ILE:HD12	1:D:261:THR:HG21	1.36	1.03
1:E:245:LYS:CE	1:F:231:ARG:NH2	2.22	1.03
1:G:191:GLU:HB3	1:G:332:ILE:O	1.58	1.03
1:B:136:VAL:HG12	1:B:137:PRO:CD	1.89	1.03
1:F:136:VAL:HG12	1:F:137:PRO:CD	1.89	1.03
1:A:231:ARG:NH2	1:G:245:LYS:CE	2.22	1.03
1:C:230:ILE:HD12	1:C:261:THR:HG21	1.36	1.03
1:J:191:GLU:C	1:J:193:MET:H	1.61	1.02
1:C:136:VAL:HG12	1:C:137:PRO:CD	1.89	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:191:GLU:HB3	1:D:332:ILE:O	1.58	1.02
1:G:183:LEU:H	1:G:383:ALA:HB3	1.20	1.02
1:M:191:GLU:C	1:M:193:MET:H	1.61	1.02
1:G:136:VAL:HG12	1:G:137:PRO:CD	1.89	1.02
1:D:136:VAL:HG12	1:D:137:PRO:CD	1.89	1.02
1:B:245:LYS:CE	1:C:231:ARG:NH2	2.22	1.02
1:F:191:GLU:HB3	1:F:332:ILE:O	1.58	1.02
1:G:230:ILE:HD12	1:G:261:THR:HG21	1.36	1.02
1:A:136:VAL:HG12	1:A:137:PRO:CD	1.89	1.02
1:D:245:LYS:CE	1:E:231:ARG:NH2	2.22	1.02
1:B:191:GLU:HB3	1:B:332:ILE:O	1.58	1.02
1:A:191:GLU:CB	1:A:333:ILE:HA	1.74	1.02
1:A:41:ASP:CB	1:B:521:VAL:O	2.08	1.02
1:L:191:GLU:C	1:L:193:MET:H	1.61	1.02
1:L:190:VAL:CG1	1:L:333:ILE:HG23	1.78	1.02
1:I:370:ALA:O	1:I:374:GLY:CA	2.08	1.02
1:E:136:VAL:HG12	1:E:137:PRO:CD	1.89	1.02
1:C:245:LYS:CE	1:D:231:ARG:HH21	1.72	1.02
1:B:245:LYS:CE	1:C:231:ARG:HH21	1.72	1.02
1:F:245:LYS:CE	1:G:231:ARG:NH2	2.22	1.02
1:A:245:LYS:CE	1:B:231:ARG:HH21	1.72	1.02
1:A:191:GLU:HB3	1:A:332:ILE:O	1.58	1.02
1:B:41:ASP:CB	1:C:521:VAL:O	2.08	1.02
1:A:521:VAL:O	1:G:41:ASP:CB	2.08	1.02
1:K:190:VAL:HG13	1:K:333:ILE:CG2	1.89	1.01
1:A:245:LYS:CE	1:B:231:ARG:NH2	2.22	1.01
1:C:245:LYS:CE	1:D:231:ARG:NH2	2.22	1.01
1:J:190:VAL:HG13	1:J:333:ILE:CG2	1.89	1.01
1:J:370:ALA:O	1:J:374:GLY:CA	2.08	1.01
1:N:190:VAL:HG13	1:N:333:ILE:CG2	1.89	1.01
1:F:245:LYS:CE	1:G:231:ARG:HH21	1.72	1.01
1:E:245:LYS:CE	1:F:231:ARG:HH21	1.72	1.01
1:C:191:GLU:HB2	1:C:333:ILE:HA	1.36	1.01
1:E:191:GLU:HB3	1:E:332:ILE:O	1.58	1.01
1:H:190:VAL:HG13	1:H:333:ILE:CG2	1.89	1.01
1:H:370:ALA:O	1:H:374:GLY:CA	2.08	1.01
1:F:86:GLY:CA	1:F:401:HIS:HE1	1.73	1.01
1:G:174:VAL:HG21	1:G:329:THR:HG21	1.30	1.01
1:A:231:ARG:HH21	1:G:245:LYS:CE	1.72	1.01
1:F:41:ASP:CB	1:G:521:VAL:O	2.08	1.01
1:N:331:THR:OG1	1:N:376:VAL:HG21	1.61	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:86:GLY:CA	1:A:401:HIS:HE1	1.73	1.00
1:D:136:VAL:HG12	1:D:137:PRO:HD2	1.43	1.00
1:C:41:ASP:CB	1:D:521:VAL:O	2.08	1.00
1:D:41:ASP:CB	1:E:521:VAL:O	2.08	1.00
1:K:331:THR:OG1	1:K:376:VAL:HG21	1.61	1.00
1:L:331:THR:OG1	1:L:376:VAL:HG21	1.61	1.00
1:L:370:ALA:O	1:L:374:GLY:CA	2.08	1.00
1:G:136:VAL:HG12	1:G:137:PRO:HD2	1.43	1.00
1:E:41:ASP:CB	1:F:521:VAL:O	2.08	1.00
1:K:191:GLU:C	1:K:193:MET:H	1.61	1.00
1:K:370:ALA:O	1:K:374:GLY:CA	2.08	1.00
1:M:370:ALA:O	1:M:374:GLY:CA	2.08	1.00
1:D:245:LYS:CE	1:E:231:ARG:HH21	1.72	1.00
1:M:331:THR:OG1	1:M:376:VAL:HG21	1.61	1.00
1:B:191:GLU:HB2	1:B:333:ILE:HA	1.36	1.00
1:F:136:VAL:HG12	1:F:137:PRO:HD2	1.43	1.00
1:H:331:THR:OG1	1:H:376:VAL:HG21	1.61	1.00
1:J:331:THR:OG1	1:J:376:VAL:HG21	1.61	0.99
1:N:370:ALA:O	1:N:374:GLY:CA	2.08	0.99
1:D:86:GLY:CA	1:D:401:HIS:HE1	1.73	0.99
1:D:191:GLU:HB2	1:D:333:ILE:HA	1.36	0.99
1:I:331:THR:OG1	1:I:376:VAL:HG21	1.61	0.99
1:B:331:THR:CB	1:B:376:VAL:CG2	2.40	0.99
1:A:136:VAL:HG12	1:A:137:PRO:HD2	1.43	0.99
1:B:86:GLY:CA	1:B:401:HIS:HE1	1.73	0.99
1:B:136:VAL:HG12	1:B:137:PRO:HD2	1.43	0.99
1:F:331:THR:CB	1:F:376:VAL:CG2	2.40	0.99
1:D:331:THR:CB	1:D:376:VAL:CG2	2.40	0.99
1:C:86:GLY:CA	1:C:401:HIS:HE1	1.73	0.99
1:A:331:THR:CB	1:A:376:VAL:CG2	2.40	0.98
1:G:331:THR:CB	1:G:376:VAL:CG2	2.40	0.98
1:F:194:GLN:NE2	1:F:375:GLY:O	1.96	0.98
1:E:194:GLN:NE2	1:E:375:GLY:O	1.97	0.98
1:E:136:VAL:HG12	1:E:137:PRO:HD2	1.43	0.98
1:C:331:THR:CB	1:C:376:VAL:CG2	2.40	0.98
1:I:331:THR:OG1	1:I:376:VAL:HG11	1.63	0.98
1:E:331:THR:CB	1:E:376:VAL:CG2	2.40	0.98
1:B:194:GLN:NE2	1:B:375:GLY:O	1.97	0.98
1:I:191:GLU:C	1:I:193:MET:H	1.61	0.98
1:N:331:THR:OG1	1:N:376:VAL:HG11	1.63	0.98
1:L:190:VAL:HG13	1:L:333:ILE:CG2	1.89	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:191:GLU:C	1:H:193:MET:H	1.61	0.98
1:D:194:GLN:NE2	1:D:375:GLY:O	1.97	0.98
1:M:190:VAL:HG13	1:M:333:ILE:CG2	1.89	0.97
1:B:47:PRO:CD	1:C:73:MET:CG	2.42	0.97
1:H:331:THR:OG1	1:H:376:VAL:HG11	1.63	0.97
1:G:194:GLN:NE2	1:G:375:GLY:O	1.96	0.97
1:F:47:PRO:HD2	1:G:73:MET:HG2	0.97	0.97
1:A:73:MET:HG2	1:G:47:PRO:HD2	0.98	0.97
1:C:136:VAL:HG12	1:C:137:PRO:HD2	1.43	0.97
1:F:191:GLU:HB2	1:F:333:ILE:HA	1.36	0.97
1:E:47:PRO:HD2	1:F:73:MET:HG2	0.97	0.97
1:K:513:LEU:HD13	1:L:49:ILE:HD12	1.46	0.97
1:H:49:ILE:HD12	1:N:513:LEU:HD13	1.45	0.97
1:I:194:GLN:HB2	1:I:376:VAL:HG22	1.47	0.97
1:G:86:GLY:CA	1:G:401:HIS:HE1	1.73	0.97
1:H:194:GLN:HB2	1:H:376:VAL:HG22	1.47	0.96
1:C:194:GLN:NE2	1:C:375:GLY:O	1.96	0.96
1:H:513:LEU:HD13	1:I:49:ILE:HD12	1.45	0.96
1:K:331:THR:OG1	1:K:376:VAL:HG11	1.63	0.96
1:B:194:GLN:H	1:B:375:GLY:H	1.07	0.96
1:L:513:LEU:HD13	1:M:49:ILE:HD12	1.46	0.96
1:D:47:PRO:HD2	1:E:73:MET:HG2	0.97	0.96
1:A:47:PRO:HD2	1:B:73:MET:HG2	0.98	0.96
1:E:86:GLY:CA	1:E:401:HIS:HE1	1.73	0.96
1:A:191:GLU:HB2	1:A:333:ILE:HA	1.36	0.96
1:J:513:LEU:HD13	1:K:49:ILE:HD12	1.45	0.96
1:A:194:GLN:H	1:A:375:GLY:H	1.07	0.96
1:A:194:GLN:NE2	1:A:375:GLY:O	1.97	0.96
1:K:174:VAL:HG21	1:K:194:GLN:HB3	1.47	0.96
1:L:331:THR:OG1	1:L:376:VAL:HG11	1.63	0.96
1:J:331:THR:OG1	1:J:376:VAL:HG11	1.63	0.96
1:I:190:VAL:HG13	1:I:333:ILE:CG2	1.89	0.96
1:M:331:THR:OG1	1:M:376:VAL:HG11	1.63	0.96
1:A:37:ASN:HB2	1:B:516:THR:O	1.66	0.95
1:M:513:LEU:HD13	1:N:49:ILE:HD12	1.45	0.95
1:D:37:ASN:HB2	1:E:516:THR:O	1.66	0.95
1:J:194:GLN:HB2	1:J:376:VAL:HG22	1.47	0.95
1:C:47:PRO:HD2	1:D:73:MET:HG2	0.98	0.95
1:D:47:PRO:CD	1:E:73:MET:CG	2.42	0.95
1:B:37:ASN:HB2	1:C:516:THR:O	1.66	0.95
1:N:194:GLN:HB2	1:N:376:VAL:HG22	1.47	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:47:PRO:HD2	1:C:73:MET:HG2	0.98	0.95
1:H:174:VAL:HG21	1:H:194:GLN:HB3	1.47	0.95
1:F:47:PRO:CD	1:G:73:MET:CG	2.42	0.95
1:A:516:THR:O	1:G:37:ASN:HB2	1.66	0.95
1:N:174:VAL:HG21	1:N:194:GLN:HB3	1.47	0.95
1:N:191:GLU:C	1:N:193:MET:H	1.61	0.95
1:I:513:LEU:HD13	1:J:49:ILE:HD12	1.45	0.95
1:E:37:ASN:HB2	1:F:516:THR:O	1.66	0.95
1:C:37:ASN:HB2	1:D:516:THR:O	1.66	0.95
1:E:47:PRO:CD	1:F:73:MET:CG	2.42	0.95
1:K:517:THR:HG23	1:L:39:VAL:HG23	1.49	0.94
1:G:191:GLU:HB2	1:G:333:ILE:CA	1.98	0.94
1:A:73:MET:CG	1:G:47:PRO:CD	2.42	0.94
1:H:39:VAL:HG23	1:N:517:THR:HG23	1.49	0.94
1:M:194:GLN:HB2	1:M:376:VAL:HG22	1.47	0.94
1:C:331:THR:HG1	1:C:376:VAL:HG23	1.19	0.94
1:F:37:ASN:HB2	1:G:516:THR:O	1.66	0.94
1:I:218:PRO:HB3	1:I:246:PRO:HG2	1.50	0.94
1:K:218:PRO:HB3	1:K:246:PRO:HG2	1.50	0.94
1:E:191:GLU:HB2	1:E:333:ILE:CA	1.98	0.94
1:A:191:GLU:HB2	1:A:333:ILE:CA	1.98	0.94
1:M:517:THR:HG23	1:N:39:VAL:HG23	1.49	0.94
1:E:235:PRO:HG3	1:E:310:GLU:HA	1.48	0.94
1:D:235:PRO:HG3	1:D:310:GLU:HA	1.48	0.94
1:H:218:PRO:HB3	1:H:246:PRO:HG2	1.50	0.94
1:J:218:PRO:HB3	1:J:246:PRO:HG2	1.50	0.94
1:L:517:THR:HG23	1:M:39:VAL:HG23	1.49	0.94
1:J:174:VAL:HG21	1:J:194:GLN:HB3	1.47	0.93
1:B:191:GLU:HB2	1:B:333:ILE:CA	1.98	0.93
1:M:174:VAL:HG21	1:M:194:GLN:HB3	1.47	0.93
1:I:174:VAL:HG21	1:I:194:GLN:HB3	1.47	0.93
1:D:331:THR:HG1	1:D:376:VAL:HG23	1.25	0.93
1:L:218:PRO:HB3	1:L:246:PRO:HG2	1.50	0.93
1:C:191:GLU:HB2	1:C:333:ILE:CA	1.98	0.93
1:E:191:GLU:C	1:E:332:ILE:O	2.07	0.93
1:D:191:GLU:C	1:D:332:ILE:O	2.07	0.93
1:A:194:GLN:HB2	1:A:375:GLY:C	1.89	0.93
1:C:194:GLN:H	1:C:375:GLY:H	1.07	0.93
1:F:191:GLU:HB2	1:F:333:ILE:CA	1.98	0.93
1:D:191:GLU:HB2	1:D:333:ILE:CA	1.98	0.93
1:L:194:GLN:HB2	1:L:376:VAL:HG22	1.47	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:174:VAL:HG21	1:L:194:GLN:HB3	1.47	0.93
1:C:136:VAL:C	1:C:137:PRO:N	2.15	0.93
1:F:191:GLU:C	1:F:332:ILE:O	2.07	0.93
1:K:194:GLN:HB2	1:K:376:VAL:HG22	1.47	0.93
1:G:194:GLN:HB2	1:G:375:GLY:C	1.89	0.93
1:A:235:PRO:HG3	1:A:310:GLU:HA	1.48	0.93
1:C:235:PRO:HG3	1:C:310:GLU:HA	1.48	0.93
1:B:194:GLN:HB2	1:B:375:GLY:C	1.89	0.93
1:J:517:THR:HG23	1:K:39:VAL:HG23	1.49	0.93
1:E:331:THR:HG1	1:E:376:VAL:HG23	1.23	0.93
1:H:521:VAL:O	1:I:41:ASP:CB	2.17	0.93
1:F:235:PRO:HG3	1:F:310:GLU:HA	1.48	0.93
1:B:191:GLU:C	1:B:332:ILE:O	2.07	0.92
1:A:47:PRO:CD	1:B:73:MET:CG	2.42	0.92
1:I:521:VAL:O	1:J:41:ASP:CB	2.17	0.92
1:E:218:PRO:HB3	1:E:246:PRO:HG2	1.52	0.92
1:G:235:PRO:HG3	1:G:310:GLU:HA	1.48	0.92
1:E:136:VAL:C	1:E:137:PRO:N	2.15	0.92
1:C:191:GLU:C	1:C:332:ILE:O	2.07	0.92
1:N:235:PRO:HG3	1:N:310:GLU:HA	1.52	0.92
1:M:235:PRO:HG3	1:M:310:GLU:HA	1.52	0.92
1:C:47:PRO:CD	1:D:73:MET:CG	2.42	0.92
1:L:235:PRO:HG3	1:L:310:GLU:HA	1.52	0.92
1:A:191:GLU:C	1:A:332:ILE:O	2.07	0.92
1:H:41:ASP:CB	1:N:521:VAL:O	2.17	0.92
1:M:517:THR:HG23	1:N:39:VAL:CG2	2.00	0.92
1:J:517:THR:HG23	1:K:39:VAL:CG2	2.00	0.92
1:B:218:PRO:HB3	1:B:246:PRO:HG2	1.52	0.92
1:F:194:GLN:HB2	1:F:375:GLY:C	1.89	0.92
1:D:194:GLN:H	1:D:375:GLY:H	1.07	0.92
1:G:194:GLN:H	1:G:375:GLY:H	1.07	0.92
1:N:218:PRO:HB3	1:N:246:PRO:HG2	1.50	0.92
1:D:218:PRO:HB3	1:D:246:PRO:HG2	1.52	0.92
1:C:194:GLN:HB2	1:C:375:GLY:C	1.89	0.92
1:E:194:GLN:H	1:E:375:GLY:H	1.07	0.92
1:K:517:THR:HG23	1:L:39:VAL:CG2	2.00	0.92
1:H:39:VAL:CG2	1:N:517:THR:HG23	2.00	0.92
1:L:517:THR:HG23	1:M:39:VAL:CG2	2.00	0.92
1:M:218:PRO:HB3	1:M:246:PRO:HG2	1.50	0.92
1:H:235:PRO:HG3	1:H:310:GLU:HA	1.52	0.92
1:I:517:THR:HG23	1:J:39:VAL:HG23	1.49	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:218:PRO:HB3	1:F:246:PRO:HG2	1.52	0.92
1:B:136:VAL:C	1:B:137:PRO:N	2.15	0.92
1:G:191:GLU:C	1:G:332:ILE:O	2.07	0.92
1:E:194:GLN:HB2	1:E:375:GLY:C	1.89	0.92
1:C:218:PRO:HB3	1:C:246:PRO:HG2	1.52	0.92
1:F:194:GLN:H	1:F:375:GLY:H	1.07	0.91
1:E:174:VAL:HG21	1:E:329:THR:HG21	1.30	0.91
1:A:218:PRO:HB3	1:A:246:PRO:HG2	1.52	0.91
1:B:235:PRO:HG3	1:B:310:GLU:HA	1.48	0.91
1:I:517:THR:HG23	1:J:39:VAL:CG2	2.00	0.91
1:K:235:PRO:HG3	1:K:310:GLU:HA	1.52	0.91
1:H:517:THR:HG23	1:I:39:VAL:HG23	1.49	0.91
1:J:521:VAL:O	1:K:41:ASP:CB	2.17	0.91
1:D:194:GLN:HB2	1:D:375:GLY:C	1.89	0.91
1:G:218:PRO:HB3	1:G:246:PRO:HG2	1.52	0.91
1:B:331:THR:HG21	1:B:376:VAL:HG21	1.53	0.91
1:E:331:THR:HG21	1:E:376:VAL:HG21	1.53	0.91
1:L:521:VAL:O	1:M:41:ASP:CB	2.17	0.91
1:J:333:ILE:CD1	1:J:378:VAL:HG21	2.01	0.91
1:D:331:THR:HG21	1:D:376:VAL:HG21	1.53	0.91
1:I:235:PRO:HG3	1:I:310:GLU:HA	1.52	0.91
1:A:49:ILE:CD1	1:B:513:LEU:HB3	2.01	0.91
1:G:136:VAL:C	1:G:137:PRO:N	2.15	0.91
1:D:136:VAL:C	1:D:137:PRO:N	2.15	0.91
1:M:521:VAL:O	1:N:41:ASP:CB	2.17	0.91
1:E:49:ILE:CD1	1:F:513:LEU:HB3	2.01	0.91
1:K:521:VAL:O	1:L:41:ASP:CB	2.17	0.90
1:I:190:VAL:HG13	1:I:333:ILE:HG23	1.52	0.90
1:A:331:THR:HG21	1:A:376:VAL:HG21	1.53	0.90
1:H:517:THR:HG23	1:I:39:VAL:CG2	2.00	0.90
1:J:235:PRO:HG3	1:J:310:GLU:HA	1.52	0.90
1:C:49:ILE:CD1	1:D:513:LEU:HB3	2.01	0.90
1:C:331:THR:HG21	1:C:376:VAL:HG21	1.53	0.90
1:B:49:ILE:CD1	1:C:513:LEU:HB3	2.01	0.90
1:F:331:THR:HG21	1:F:376:VAL:HG21	1.53	0.90
1:K:333:ILE:CD1	1:K:378:VAL:HG21	2.01	0.90
1:F:136:VAL:C	1:F:137:PRO:N	2.15	0.90
1:D:49:ILE:CD1	1:E:513:LEU:HB3	2.01	0.90
1:M:371:LYS:HA	1:M:374:GLY:N	1.88	0.89
1:I:194:GLN:HB2	1:I:376:VAL:CG2	2.03	0.89
1:N:194:GLN:HB2	1:N:376:VAL:CG2	2.03	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:174:VAL:HG21	1:D:329:THR:HG21	1.30	0.89
1:G:331:THR:HG21	1:G:376:VAL:HG21	1.53	0.89
1:K:194:GLN:HB2	1:K:376:VAL:CG2	2.03	0.89
1:I:371:LYS:HA	1:I:374:GLY:N	1.88	0.89
1:F:49:ILE:CD1	1:G:513:LEU:HB3	2.01	0.89
1:H:333:ILE:CD1	1:H:378:VAL:HG21	2.01	0.89
1:K:371:LYS:HA	1:K:374:GLY:N	1.88	0.89
1:L:333:ILE:CD1	1:L:378:VAL:HG21	2.01	0.89
1:M:194:GLN:HB2	1:M:376:VAL:CG2	2.03	0.88
1:C:174:VAL:HG21	1:C:329:THR:HG21	1.30	0.88
1:A:513:LEU:HB3	1:G:49:ILE:CD1	2.01	0.88
1:J:194:GLN:HB2	1:J:376:VAL:CG2	2.03	0.88
1:N:333:ILE:CD1	1:N:378:VAL:HG21	2.01	0.88
1:I:333:ILE:HG21	1:I:378:VAL:HG21	1.55	0.88
1:H:194:GLN:HB2	1:H:376:VAL:CG2	2.03	0.88
1:B:174:VAL:HG21	1:B:329:THR:HG21	1.30	0.88
1:E:191:GLU:CB	1:E:334:ASP:N	2.33	0.88
1:L:194:GLN:HB2	1:L:376:VAL:CG2	2.03	0.88
1:I:333:ILE:CD1	1:I:378:VAL:HG21	2.01	0.88
1:H:333:ILE:HG21	1:H:378:VAL:HG21	1.55	0.88
1:H:371:LYS:HA	1:H:374:GLY:N	1.88	0.88
1:H:190:VAL:CB	1:H:333:ILE:CG2	2.42	0.88
1:H:404:ARG:HG2	1:H:404:ARG:HH11	1.39	0.87
1:J:333:ILE:CD1	1:J:378:VAL:CG2	2.53	0.87
1:M:333:ILE:CD1	1:M:378:VAL:CG2	2.53	0.87
1:I:333:ILE:CD1	1:I:378:VAL:CG2	2.53	0.87
1:L:333:ILE:CD1	1:L:378:VAL:CG2	2.53	0.87
1:L:333:ILE:HG21	1:L:378:VAL:HG21	1.55	0.87
1:N:371:LYS:HA	1:N:374:GLY:N	1.88	0.87
1:I:404:ARG:HH11	1:I:404:ARG:HG2	1.39	0.87
1:M:333:ILE:CD1	1:M:378:VAL:HG21	2.01	0.87
1:C:39:VAL:HG23	1:D:517:THR:HG23	0.87	0.87
1:A:517:THR:HG23	1:G:39:VAL:HG23	0.87	0.87
1:J:371:LYS:HA	1:J:374:GLY:N	1.88	0.87
1:D:39:VAL:HG23	1:E:517:THR:HG23	0.87	0.87
1:N:333:ILE:HG21	1:N:378:VAL:HG21	1.55	0.87
1:L:190:VAL:HG13	1:L:333:ILE:HG23	1.52	0.87
1:A:39:VAL:HG23	1:B:517:THR:HG23	0.87	0.86
1:B:39:VAL:HG23	1:C:517:THR:HG23	0.87	0.86
1:C:191:GLU:CB	1:C:334:ASP:N	2.33	0.86
1:J:333:ILE:HG21	1:J:378:VAL:HG21	1.55	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:333:ILE:HG21	1:K:378:VAL:HG21	1.55	0.86
1:A:193:MET:C	1:A:375:GLY:H	1.78	0.86
1:M:190:VAL:HG12	1:M:334:ASP:HB2	1.58	0.86
1:M:333:ILE:HG21	1:M:378:VAL:HG21	1.55	0.86
1:F:174:VAL:HG22	1:F:329:THR:CG2	1.98	0.86
1:G:193:MET:C	1:G:375:GLY:H	1.78	0.86
1:L:371:LYS:HA	1:L:374:GLY:N	1.88	0.86
1:H:333:ILE:CD1	1:H:378:VAL:CG2	2.53	0.86
1:B:191:GLU:CB	1:B:334:ASP:N	2.33	0.86
1:D:191:GLU:CB	1:D:334:ASP:N	2.33	0.86
1:L:404:ARG:HG2	1:L:404:ARG:HH11	1.39	0.86
1:N:190:VAL:HG12	1:N:334:ASP:HB2	1.58	0.86
1:G:371:LYS:CG	1:G:374:GLY:N	2.39	0.86
1:C:331:THR:CB	1:C:376:VAL:HG21	2.05	0.86
1:N:404:ARG:HH11	1:N:404:ARG:HG2	1.40	0.86
1:D:371:LYS:CG	1:D:374:GLY:N	2.39	0.86
1:D:193:MET:C	1:D:375:GLY:H	1.78	0.86
1:B:191:GLU:CB	1:B:333:ILE:CA	2.54	0.86
1:K:333:ILE:CD1	1:K:378:VAL:CG2	2.53	0.86
1:L:190:VAL:HG12	1:L:334:ASP:HB2	1.58	0.86
1:F:331:THR:CB	1:F:376:VAL:HG21	2.05	0.86
1:G:174:VAL:HG22	1:G:329:THR:CG2	1.98	0.86
1:A:136:VAL:C	1:A:137:PRO:N	2.15	0.85
1:B:193:MET:C	1:B:375:GLY:H	1.78	0.85
1:G:191:GLU:CB	1:G:333:ILE:CA	2.54	0.85
1:J:404:ARG:HH11	1:J:404:ARG:HG2	1.39	0.85
1:E:331:THR:CB	1:E:376:VAL:HG21	2.05	0.85
1:M:69:MET:HE1	1:N:41:ASP:HB2	1.56	0.85
1:A:371:LYS:CG	1:A:374:GLY:N	2.39	0.85
1:E:39:VAL:HG23	1:F:517:THR:HG23	0.87	0.85
1:C:371:LYS:CG	1:C:374:GLY:N	2.39	0.85
1:I:190:VAL:CB	1:I:333:ILE:CG2	2.42	0.85
1:F:193:MET:C	1:F:375:GLY:H	1.78	0.85
1:A:49:ILE:HD13	1:B:513:LEU:HB3	1.58	0.85
1:G:331:THR:CB	1:G:376:VAL:HG21	2.05	0.85
1:D:49:ILE:HD13	1:E:513:LEU:HB3	1.59	0.85
1:K:404:ARG:HG2	1:K:404:ARG:HH11	1.40	0.85
1:D:331:THR:CB	1:D:376:VAL:HG21	2.05	0.85
1:J:190:VAL:HG12	1:J:334:ASP:HB2	1.58	0.85
1:C:193:MET:C	1:C:375:GLY:H	1.78	0.85
1:B:49:ILE:HD13	1:C:513:LEU:HB3	1.59	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:190:VAL:HG12	1:H:334:ASP:HB2	1.58	0.85
1:N:333:ILE:CD1	1:N:378:VAL:CG2	2.53	0.85
1:E:191:GLU:CB	1:E:333:ILE:CA	2.54	0.85
1:E:174:VAL:HG22	1:E:329:THR:CG2	1.98	0.84
1:E:371:LYS:CG	1:E:374:GLY:N	2.39	0.84
1:E:193:MET:C	1:E:375:GLY:H	1.78	0.84
1:L:349:ILE:HA	1:L:352:GLN:HG3	1.60	0.84
1:F:371:LYS:CG	1:F:374:GLY:N	2.39	0.84
1:K:349:ILE:HA	1:K:352:GLN:HG3	1.59	0.84
1:B:371:LYS:CG	1:B:374:GLY:N	2.39	0.84
1:A:331:THR:CB	1:A:376:VAL:HG21	2.05	0.84
1:A:191:GLU:CB	1:A:333:ILE:CA	2.54	0.84
1:A:513:LEU:HB3	1:G:49:ILE:HD13	1.59	0.84
1:K:190:VAL:CB	1:K:333:ILE:CG2	2.42	0.84
1:K:183:LEU:N	1:K:383:ALA:HB3	1.93	0.84
1:M:349:ILE:HA	1:M:352:GLN:HG3	1.60	0.84
1:B:331:THR:CB	1:B:376:VAL:HG21	2.05	0.84
1:C:49:ILE:HD13	1:D:513:LEU:HB3	1.59	0.84
1:I:190:VAL:HG12	1:I:334:ASP:HB2	1.58	0.84
1:E:49:ILE:HD13	1:F:513:LEU:HB3	1.59	0.84
1:E:349:ILE:HA	1:E:352:GLN:HG3	1.60	0.84
1:B:174:VAL:HG22	1:B:329:THR:CG2	1.98	0.84
1:D:349:ILE:HA	1:D:352:GLN:HG3	1.60	0.84
1:K:190:VAL:HG13	1:K:333:ILE:HG23	1.51	0.84
1:H:190:VAL:HG13	1:H:333:ILE:HG23	1.51	0.84
1:L:183:LEU:N	1:L:383:ALA:HB3	1.93	0.84
1:J:183:LEU:N	1:J:383:ALA:HB3	1.93	0.84
1:M:404:ARG:HG2	1:M:404:ARG:HH11	1.39	0.84
1:A:174:VAL:HG22	1:A:329:THR:CG2	1.98	0.83
1:J:190:VAL:HG13	1:J:333:ILE:HG23	1.51	0.83
1:A:191:GLU:CB	1:A:334:ASP:N	2.33	0.83
1:F:39:VAL:HG23	1:G:517:THR:HG23	0.87	0.83
1:F:49:ILE:HD13	1:G:513:LEU:HB3	1.58	0.83
1:F:349:ILE:HA	1:F:352:GLN:HG3	1.60	0.83
1:N:349:ILE:HA	1:N:352:GLN:HG3	1.59	0.83
1:J:349:ILE:HA	1:J:352:GLN:HG3	1.59	0.83
1:G:349:ILE:HA	1:G:352:GLN:HG3	1.60	0.83
1:H:349:ILE:HA	1:H:352:GLN:HG3	1.60	0.83
1:I:349:ILE:HA	1:I:352:GLN:HG3	1.59	0.83
1:K:190:VAL:HG12	1:K:334:ASP:HB2	1.58	0.83
1:M:190:VAL:HG13	1:M:333:ILE:HG23	1.51	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:349:ILE:HA	1:C:352:GLN:HG3	1.60	0.82
1:D:174:VAL:HG22	1:D:329:THR:CG2	1.98	0.82
1:G:371:LYS:HG2	1:G:374:GLY:HA2	1.62	0.82
1:C:191:GLU:CB	1:C:332:ILE:O	2.28	0.82
1:F:331:THR:CG2	1:F:376:VAL:HG21	2.10	0.82
1:G:331:THR:CG2	1:G:376:VAL:HG21	2.09	0.82
1:I:183:LEU:N	1:I:383:ALA:HB3	1.93	0.82
1:E:371:LYS:HG2	1:E:374:GLY:HA2	1.62	0.82
1:F:191:GLU:CB	1:F:333:ILE:CA	2.54	0.82
1:A:41:ASP:CG	1:B:69:MET:SD	2.58	0.82
1:M:183:LEU:N	1:M:383:ALA:HB3	1.93	0.82
1:C:174:VAL:HG22	1:C:329:THR:CG2	1.98	0.82
1:G:191:GLU:CB	1:G:332:ILE:O	2.28	0.82
1:B:41:ASP:CG	1:C:69:MET:SD	2.58	0.82
1:A:349:ILE:HA	1:A:352:GLN:HG3	1.60	0.82
1:C:371:LYS:HG2	1:C:374:GLY:HA2	1.62	0.82
1:B:191:GLU:CB	1:B:332:ILE:O	2.28	0.82
1:C:191:GLU:HB2	1:C:333:ILE:C	1.99	0.82
1:D:191:GLU:HB2	1:D:333:ILE:C	1.99	0.82
1:N:370:ALA:C	1:N:374:GLY:N	2.34	0.82
1:D:41:ASP:CG	1:E:69:MET:SD	2.58	0.82
1:E:41:ASP:CG	1:F:69:MET:SD	2.58	0.82
1:A:331:THR:CG2	1:A:376:VAL:HG21	2.09	0.81
1:E:331:THR:CG2	1:E:376:VAL:HG21	2.10	0.81
1:H:370:ALA:C	1:H:374:GLY:N	2.34	0.81
1:A:191:GLU:CB	1:A:332:ILE:O	2.28	0.81
1:F:191:GLU:CB	1:F:334:ASP:N	2.33	0.81
1:A:191:GLU:HB2	1:A:333:ILE:C	1.99	0.81
1:C:41:ASP:CG	1:D:69:MET:SD	2.58	0.81
1:A:41:ASP:HB2	1:B:69:MET:HE1	1.62	0.81
1:A:69:MET:SD	1:G:41:ASP:CG	2.58	0.81
1:D:191:GLU:CB	1:D:332:ILE:O	2.28	0.81
1:B:331:THR:CG2	1:B:376:VAL:HG21	2.10	0.81
1:F:41:ASP:CG	1:G:69:MET:SD	2.58	0.81
1:B:349:ILE:HA	1:B:352:GLN:HG3	1.60	0.81
1:M:370:ALA:C	1:M:374:GLY:N	2.34	0.81
1:B:371:LYS:HG2	1:B:374:GLY:HA2	1.62	0.81
1:C:331:THR:CG2	1:C:376:VAL:HG21	2.10	0.81
1:F:191:GLU:CB	1:F:332:ILE:O	2.28	0.81
1:E:191:GLU:HB2	1:E:333:ILE:C	1.99	0.81
1:B:191:GLU:HB2	1:B:333:ILE:C	1.99	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:191:GLU:HB2	1:G:333:ILE:C	1.99	0.81
1:N:183:LEU:N	1:N:383:ALA:HB3	1.93	0.81
1:K:370:ALA:C	1:K:374:GLY:N	2.34	0.81
1:I:370:ALA:C	1:I:374:GLY:N	2.34	0.81
1:D:331:THR:CG2	1:D:376:VAL:HG21	2.09	0.81
1:F:191:GLU:HB2	1:F:333:ILE:C	1.99	0.81
1:H:183:LEU:N	1:H:383:ALA:HB3	1.93	0.81
1:D:331:THR:CB	1:D:376:VAL:HG23	2.09	0.81
1:E:191:GLU:CB	1:E:332:ILE:O	2.28	0.81
1:A:69:MET:HE1	1:G:41:ASP:HB2	1.62	0.81
1:F:41:ASP:HB2	1:G:69:MET:HE1	1.61	0.81
1:J:370:ALA:C	1:J:374:GLY:N	2.33	0.80
1:F:371:LYS:HG2	1:F:374:GLY:HA2	1.62	0.80
1:D:371:LYS:HG2	1:D:374:GLY:HA2	1.62	0.80
1:C:191:GLU:CB	1:C:333:ILE:CA	2.54	0.80
1:L:370:ALA:C	1:L:374:GLY:N	2.34	0.80
1:D:191:GLU:CB	1:D:333:ILE:CA	2.54	0.80
1:B:331:THR:CB	1:B:376:VAL:HG23	2.09	0.80
1:G:174:VAL:HG21	1:G:329:THR:HG23	1.62	0.80
1:G:191:GLU:CB	1:G:334:ASP:N	2.33	0.80
1:J:333:ILE:HD13	1:J:378:VAL:HG22	1.64	0.80
1:E:331:THR:CB	1:E:376:VAL:HG23	2.09	0.80
1:K:333:ILE:HD13	1:K:378:VAL:HG22	1.64	0.80
1:C:194:GLN:HB3	1:C:375:GLY:O	1.82	0.80
1:A:174:VAL:HG21	1:A:329:THR:HG23	1.62	0.80
1:A:371:LYS:HG2	1:A:374:GLY:HA2	1.62	0.80
1:D:191:GLU:C	1:D:332:ILE:C	2.40	0.79
1:A:331:THR:CB	1:A:376:VAL:HG23	2.09	0.79
1:A:191:GLU:C	1:A:332:ILE:C	2.40	0.79
1:N:190:VAL:CB	1:N:333:ILE:CG2	2.42	0.79
1:F:174:VAL:HG21	1:F:329:THR:HG23	1.62	0.79
1:G:194:GLN:HB3	1:G:375:GLY:O	1.82	0.79
1:G:136:VAL:CG1	1:G:137:PRO:HD2	2.13	0.79
1:F:331:THR:CB	1:F:376:VAL:HG23	2.09	0.79
1:F:191:GLU:C	1:F:332:ILE:C	2.40	0.79
1:H:41:ASP:HB2	1:N:69:MET:HE1	1.63	0.79
1:E:136:VAL:CG1	1:E:137:PRO:HD2	2.13	0.79
1:D:136:VAL:CG1	1:D:137:PRO:HD2	2.13	0.79
1:A:136:VAL:CG1	1:A:137:PRO:HD2	2.13	0.79
1:F:200:LEU:HD21	1:F:277:LYS:HG3	1.65	0.79
1:B:200:LEU:HD21	1:B:277:LYS:HG3	1.65	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:331:THR:CB	1:G:376:VAL:HG23	2.09	0.79
1:E:41:ASP:HB2	1:F:69:MET:HE1	1.64	0.79
1:H:69:MET:HE1	1:I:41:ASP:HB2	1.64	0.79
1:G:200:LEU:HD21	1:G:277:LYS:HG3	1.65	0.79
1:F:194:GLN:HB3	1:F:375:GLY:O	1.82	0.79
1:C:200:LEU:HD21	1:C:277:LYS:HG3	1.65	0.79
1:B:174:VAL:HG21	1:B:329:THR:HG23	1.63	0.78
1:J:57:ALA:O	1:J:75:LYS:HE2	1.83	0.78
1:C:136:VAL:CG1	1:C:137:PRO:HD2	2.13	0.78
1:B:136:VAL:CG1	1:B:137:PRO:HD2	2.13	0.78
1:K:69:MET:HE1	1:L:41:ASP:HB2	1.63	0.78
1:A:200:LEU:HD21	1:A:277:LYS:HG3	1.65	0.78
1:G:193:MET:HG3	1:G:374:GLY:N	1.99	0.78
1:A:41:ASP:CB	1:B:69:MET:HE1	2.14	0.78
1:F:41:ASP:CB	1:G:69:MET:HE1	2.12	0.78
1:C:174:VAL:HG21	1:C:329:THR:HG23	1.62	0.78
1:C:41:ASP:HB2	1:D:69:MET:HE1	1.65	0.78
1:J:85:ALA:O	1:J:401:HIS:HE1	1.67	0.78
1:E:200:LEU:HD21	1:E:277:LYS:HG3	1.65	0.78
1:E:174:VAL:HG21	1:E:329:THR:HG23	1.62	0.78
1:I:69:MET:HE1	1:J:41:ASP:HB2	1.65	0.78
1:N:57:ALA:O	1:N:75:LYS:HE2	1.83	0.78
1:I:57:ALA:O	1:I:75:LYS:HE2	1.83	0.78
1:I:85:ALA:O	1:I:401:HIS:HE1	1.67	0.78
1:D:200:LEU:HD21	1:D:277:LYS:HG3	1.65	0.78
1:F:136:VAL:CG1	1:F:137:PRO:HD2	2.13	0.78
1:D:193:MET:HG3	1:D:374:GLY:N	1.99	0.78
1:C:193:MET:HG3	1:C:374:GLY:N	1.99	0.78
1:L:57:ALA:O	1:L:75:LYS:HE2	1.83	0.78
1:A:194:GLN:HB3	1:A:375:GLY:O	1.82	0.78
1:K:85:ALA:O	1:K:401:HIS:HE1	1.67	0.78
1:D:194:GLN:HB3	1:D:375:GLY:O	1.82	0.78
1:H:57:ALA:O	1:H:75:LYS:HE2	1.83	0.78
1:H:85:ALA:O	1:H:401:HIS:HE1	1.67	0.78
1:J:191:GLU:O	1:J:332:ILE:HG22	1.85	0.77
1:M:190:VAL:CB	1:M:333:ILE:CG2	2.42	0.77
1:E:193:MET:HG3	1:E:374:GLY:N	1.99	0.77
1:L:85:ALA:O	1:L:401:HIS:HE1	1.67	0.77
1:N:333:ILE:HD13	1:N:378:VAL:HG22	1.63	0.77
1:N:85:ALA:O	1:N:401:HIS:HE1	1.67	0.77
1:M:85:ALA:O	1:M:401:HIS:HE1	1.67	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:57:ALA:O	1:M:75:LYS:HE2	1.83	0.77
1:K:57:ALA:O	1:K:75:LYS:HE2	1.83	0.77
1:M:333:ILE:HD13	1:M:378:VAL:HG22	1.64	0.77
1:B:193:MET:HG3	1:B:374:GLY:N	1.99	0.77
1:C:331:THR:HB	1:C:376:VAL:CG2	2.15	0.77
1:C:183:LEU:N	1:C:383:ALA:HB3	1.99	0.77
1:L:191:GLU:O	1:L:332:ILE:HG22	1.85	0.77
1:E:183:LEU:N	1:E:383:ALA:HB3	1.99	0.77
1:A:69:MET:HE1	1:G:41:ASP:CB	2.14	0.77
1:A:331:THR:HB	1:A:376:VAL:CG2	2.15	0.77
1:N:191:GLU:O	1:N:332:ILE:HG22	1.85	0.76
1:H:191:GLU:O	1:H:332:ILE:HG22	1.85	0.76
1:A:193:MET:HG3	1:A:374:GLY:N	1.99	0.76
1:L:69:MET:HE1	1:M:41:ASP:HB2	1.66	0.76
1:B:191:GLU:C	1:B:332:ILE:C	2.40	0.76
1:B:41:ASP:HB2	1:C:69:MET:HE1	1.67	0.76
1:N:190:VAL:HG13	1:N:333:ILE:HG23	1.52	0.76
1:M:191:GLU:O	1:M:332:ILE:HG22	1.85	0.76
1:L:333:ILE:HD13	1:L:378:VAL:HG22	1.64	0.76
1:F:331:THR:HB	1:F:376:VAL:CG2	2.15	0.76
1:A:183:LEU:N	1:A:383:ALA:HB3	1.99	0.76
1:A:406:ALA:HB2	1:A:496:PRO:HG3	1.68	0.76
1:F:193:MET:HG3	1:F:374:GLY:N	1.99	0.76
1:G:406:ALA:HB2	1:G:496:PRO:HG3	1.68	0.76
1:I:191:GLU:O	1:I:332:ILE:HG22	1.85	0.76
1:E:194:GLN:HB3	1:E:375:GLY:O	1.82	0.76
1:D:41:ASP:HB2	1:E:69:MET:HE1	1.67	0.76
1:D:136:VAL:CG1	1:D:137:PRO:CD	2.64	0.76
1:D:174:VAL:HG21	1:D:329:THR:HG23	1.63	0.76
1:B:406:ALA:HB2	1:B:496:PRO:HG3	1.68	0.76
1:C:136:VAL:CG1	1:C:137:PRO:CD	2.64	0.76
1:D:331:THR:HB	1:D:376:VAL:CG2	2.15	0.76
1:C:406:ALA:HB2	1:C:496:PRO:HG3	1.68	0.76
1:E:191:GLU:C	1:E:332:ILE:C	2.40	0.75
1:M:517:THR:CG2	1:N:39:VAL:CG2	2.64	0.75
1:A:69:MET:CE	1:G:41:ASP:CB	2.65	0.75
1:E:41:ASP:CB	1:F:69:MET:CE	2.65	0.75
1:F:41:ASP:CB	1:G:69:MET:CE	2.65	0.75
1:J:517:THR:CG2	1:K:39:VAL:CG2	2.64	0.75
1:K:191:GLU:O	1:K:332:ILE:HG22	1.85	0.75
1:B:331:THR:HB	1:B:376:VAL:CG2	2.15	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:183:LEU:N	1:F:383:ALA:HB3	1.99	0.75
1:D:406:ALA:HB2	1:D:496:PRO:HG3	1.68	0.75
1:H:359:ASP:O	1:H:363:GLU:HG2	1.86	0.75
1:J:359:ASP:O	1:J:363:GLU:HG2	1.86	0.75
1:A:136:VAL:CG1	1:A:137:PRO:CD	2.64	0.75
1:G:331:THR:HG1	1:G:376:VAL:HG23	1.47	0.75
1:C:191:GLU:C	1:C:332:ILE:C	2.40	0.75
1:C:331:THR:CB	1:C:376:VAL:HG23	2.09	0.75
1:H:183:LEU:H	1:H:383:ALA:CB	1.98	0.75
1:K:517:THR:CG2	1:L:39:VAL:HG21	2.17	0.75
1:H:39:VAL:CG2	1:N:517:THR:CG2	2.64	0.75
1:M:517:THR:CG2	1:N:39:VAL:HG21	2.17	0.75
1:L:517:THR:CG2	1:M:39:VAL:HG21	2.17	0.75
1:J:517:THR:CG2	1:K:39:VAL:HG21	2.17	0.75
1:K:359:ASP:O	1:K:363:GLU:HG2	1.86	0.75
1:F:406:ALA:HB2	1:F:496:PRO:HG3	1.68	0.75
1:B:194:GLN:HB3	1:B:375:GLY:O	1.82	0.75
1:H:517:THR:CG2	1:I:39:VAL:HG21	2.17	0.75
1:J:200:LEU:HD21	1:J:277:LYS:HG3	1.69	0.75
1:N:359:ASP:O	1:N:363:GLU:HG2	1.86	0.75
1:A:41:ASP:CB	1:B:69:MET:CE	2.65	0.75
1:K:517:THR:CG2	1:L:39:VAL:CG2	2.64	0.75
1:D:41:ASP:CB	1:E:69:MET:CE	2.65	0.75
1:E:41:ASP:CB	1:F:69:MET:HE1	2.17	0.75
1:B:136:VAL:CG1	1:B:137:PRO:CD	2.64	0.75
1:L:517:THR:CG2	1:M:39:VAL:CG2	2.64	0.75
1:I:517:THR:CG2	1:J:39:VAL:CG2	2.64	0.75
1:G:183:LEU:N	1:G:383:ALA:HB3	1.99	0.74
1:I:200:LEU:HD21	1:I:277:LYS:HG3	1.69	0.74
1:I:359:ASP:O	1:I:363:GLU:HG2	1.86	0.74
1:G:331:THR:HB	1:G:376:VAL:CG2	2.15	0.74
1:N:183:LEU:H	1:N:383:ALA:CB	1.98	0.74
1:H:517:THR:CG2	1:I:39:VAL:CG2	2.64	0.74
1:K:200:LEU:HD21	1:K:277:LYS:HG3	1.69	0.74
1:I:333:ILE:HD13	1:I:378:VAL:HG22	1.64	0.74
1:I:517:THR:CG2	1:J:39:VAL:HG21	2.17	0.74
1:G:191:GLU:C	1:G:332:ILE:C	2.40	0.74
1:H:513:LEU:HB3	1:I:49:ILE:HD13	1.69	0.74
1:H:39:VAL:HG21	1:N:517:THR:CG2	2.17	0.74
1:L:359:ASP:O	1:L:363:GLU:HG2	1.86	0.74
1:H:49:ILE:HD13	1:N:513:LEU:HB3	1.68	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:359:ASP:O	1:A:363:GLU:HG2	1.88	0.74
1:M:381:VAL:HG21	1:M:393:LYS:HA	1.70	0.74
1:M:359:ASP:O	1:M:363:GLU:HG2	1.86	0.74
1:G:359:ASP:O	1:G:363:GLU:HG2	1.88	0.74
1:H:381:VAL:HG21	1:H:393:LYS:HA	1.70	0.74
1:C:359:ASP:O	1:C:363:GLU:HG2	1.88	0.74
1:F:136:VAL:CG1	1:F:137:PRO:CD	2.64	0.74
1:F:359:ASP:O	1:F:363:GLU:HG2	1.88	0.74
1:F:331:THR:HG1	1:F:376:VAL:HG23	1.51	0.74
1:E:331:THR:HB	1:E:376:VAL:CG2	2.15	0.74
1:M:183:LEU:H	1:M:383:ALA:CB	1.98	0.74
1:L:183:LEU:H	1:L:383:ALA:CB	1.98	0.74
1:E:359:ASP:O	1:E:363:GLU:HG2	1.88	0.74
1:E:406:ALA:HB2	1:E:496:PRO:HG3	1.68	0.74
1:E:86:GLY:HA3	1:E:401:HIS:HE1	0.94	0.74
1:J:183:LEU:H	1:J:383:ALA:CB	1.98	0.74
1:H:200:LEU:HD21	1:H:277:LYS:HG3	1.69	0.74
1:H:333:ILE:HD13	1:H:378:VAL:HG22	1.64	0.73
1:C:41:ASP:CB	1:D:69:MET:CE	2.65	0.73
1:B:41:ASP:CB	1:C:69:MET:CE	2.65	0.73
1:L:200:LEU:HD21	1:L:277:LYS:HG3	1.69	0.73
1:G:136:VAL:CG1	1:G:137:PRO:CD	2.64	0.73
1:E:136:VAL:CG1	1:E:137:PRO:CD	2.64	0.73
1:L:513:LEU:HB3	1:M:49:ILE:HD13	1.69	0.73
1:D:359:ASP:O	1:D:363:GLU:HG2	1.88	0.73
1:D:86:GLY:HA3	1:D:401:HIS:HE1	0.94	0.73
1:F:86:GLY:HA3	1:F:401:HIS:HE1	0.94	0.73
1:B:359:ASP:O	1:B:363:GLU:HG2	1.88	0.73
1:L:381:VAL:HG21	1:L:393:LYS:HA	1.70	0.73
1:I:381:VAL:HG21	1:I:393:LYS:HA	1.70	0.73
1:K:331:THR:OG1	1:K:376:VAL:CG2	2.36	0.73
1:K:513:LEU:HB3	1:L:49:ILE:HD13	1.68	0.73
1:N:200:LEU:HD21	1:N:277:LYS:HG3	1.69	0.73
1:C:41:ASP:CB	1:D:69:MET:HE1	2.18	0.73
1:N:192:GLY:C	1:N:375:GLY:CA	2.52	0.73
1:I:513:LEU:HB3	1:J:49:ILE:HD13	1.69	0.73
1:M:200:LEU:HD21	1:M:277:LYS:HG3	1.69	0.73
1:B:57:ALA:O	1:B:75:LYS:HE2	1.89	0.73
1:C:57:ALA:O	1:C:75:LYS:HE2	1.89	0.73
1:C:86:GLY:HA3	1:C:401:HIS:HE1	0.94	0.72
1:D:41:ASP:CG	1:E:69:MET:CE	2.58	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:513:LEU:HB3	1:N:49:ILE:HD13	1.68	0.72
1:A:57:ALA:O	1:A:75:LYS:HE2	1.89	0.72
1:G:86:GLY:HA3	1:G:401:HIS:HE1	0.94	0.72
1:B:86:GLY:HA3	1:B:401:HIS:HE1	0.94	0.72
1:J:69:MET:HE1	1:K:41:ASP:HB2	1.70	0.72
1:B:183:LEU:N	1:B:383:ALA:HB3	1.99	0.72
1:N:331:THR:OG1	1:N:376:VAL:CG2	2.36	0.72
1:A:86:GLY:HA3	1:A:401:HIS:HE1	0.94	0.72
1:E:41:ASP:CG	1:F:69:MET:CE	2.58	0.72
1:J:513:LEU:HB3	1:K:49:ILE:HD13	1.69	0.72
1:J:331:THR:OG1	1:J:376:VAL:CG2	2.36	0.72
1:N:331:THR:OG1	1:N:376:VAL:CG1	2.38	0.72
1:K:331:THR:OG1	1:K:376:VAL:CG1	2.38	0.72
1:F:191:GLU:CA	1:F:332:ILE:O	2.38	0.72
1:A:41:ASP:CG	1:B:69:MET:CE	2.58	0.72
1:D:57:ALA:O	1:D:75:LYS:HE2	1.89	0.72
1:K:174:VAL:HG21	1:K:194:GLN:CB	2.12	0.72
1:D:183:LEU:N	1:D:383:ALA:HB3	1.99	0.72
1:K:381:VAL:HG21	1:K:393:LYS:HA	1.70	0.72
1:H:174:VAL:HG21	1:H:194:GLN:CB	2.12	0.72
1:H:331:THR:OG1	1:H:376:VAL:CG1	2.38	0.72
1:B:41:ASP:CG	1:C:69:MET:CE	2.58	0.72
1:C:414:GLY:O	1:C:417:VAL:HG13	1.90	0.72
1:D:174:VAL:CG2	1:D:329:THR:HG23	2.17	0.72
1:B:191:GLU:CA	1:B:332:ILE:O	2.38	0.72
1:A:69:MET:CE	1:G:41:ASP:CG	2.58	0.72
1:E:245:LYS:HE2	1:F:231:ARG:HH21	1.55	0.72
1:G:191:GLU:CA	1:G:332:ILE:O	2.38	0.72
1:A:191:GLU:CA	1:A:332:ILE:O	2.38	0.72
1:C:41:ASP:CG	1:D:69:MET:CE	2.58	0.72
1:D:191:GLU:CA	1:D:332:ILE:O	2.38	0.72
1:F:414:GLY:O	1:F:417:VAL:HG13	1.90	0.72
1:J:381:VAL:HG21	1:J:393:LYS:HA	1.70	0.72
1:N:381:VAL:HG21	1:N:393:LYS:HA	1.70	0.72
1:M:331:THR:OG1	1:M:376:VAL:CG2	2.36	0.72
1:H:331:THR:OG1	1:H:376:VAL:CG2	2.36	0.72
1:L:331:THR:OG1	1:L:376:VAL:CG1	2.38	0.71
1:A:231:ARG:HH21	1:G:245:LYS:HE2	1.55	0.71
1:F:41:ASP:CG	1:G:69:MET:CE	2.58	0.71
1:I:331:THR:OG1	1:I:376:VAL:CG1	2.38	0.71
1:E:191:GLU:CA	1:E:332:ILE:O	2.38	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:57:ALA:O	1:G:75:LYS:HE2	1.89	0.71
1:K:183:LEU:H	1:K:383:ALA:CB	1.98	0.71
1:E:414:GLY:O	1:E:417:VAL:HG13	1.90	0.71
1:F:245:LYS:HE2	1:G:231:ARG:HH21	1.55	0.71
1:F:174:VAL:CG2	1:F:329:THR:HG23	2.17	0.71
1:B:245:LYS:HE2	1:C:231:ARG:HH21	1.55	0.71
1:E:57:ALA:O	1:E:75:LYS:HE2	1.89	0.71
1:D:414:GLY:O	1:D:417:VAL:HG13	1.90	0.71
1:C:191:GLU:CA	1:C:332:ILE:O	2.38	0.71
1:D:263:VAL:O	1:D:267:MET:HB2	1.91	0.71
1:C:263:VAL:O	1:C:267:MET:HB2	1.91	0.71
1:J:194:GLN:O	1:J:371:LYS:HE3	1.91	0.71
1:I:194:GLN:O	1:I:371:LYS:HE3	1.91	0.71
1:D:245:LYS:HE2	1:E:231:ARG:HH21	1.55	0.71
1:C:245:LYS:HE2	1:D:231:ARG:HH21	1.55	0.71
1:E:263:VAL:O	1:E:267:MET:HB2	1.91	0.71
1:C:174:VAL:CG2	1:C:329:THR:HG23	2.17	0.71
1:F:263:VAL:O	1:F:267:MET:HB2	1.91	0.71
1:A:414:GLY:O	1:A:417:VAL:HG13	1.90	0.71
1:B:263:VAL:O	1:B:267:MET:HB2	1.91	0.71
1:M:174:VAL:HG21	1:M:194:GLN:CB	2.12	0.70
1:D:41:ASP:CB	1:E:69:MET:HE1	2.21	0.70
1:G:414:GLY:O	1:G:417:VAL:HG13	1.90	0.70
1:B:414:GLY:O	1:B:417:VAL:HG13	1.90	0.70
1:C:381:VAL:HG21	1:C:393:LYS:HA	1.73	0.70
1:I:331:THR:OG1	1:I:376:VAL:CG2	2.36	0.70
1:G:263:VAL:O	1:G:267:MET:HB2	1.91	0.70
1:B:381:VAL:HG21	1:B:393:LYS:HA	1.73	0.70
1:F:57:ALA:O	1:F:75:LYS:HE2	1.89	0.70
1:B:41:ASP:CB	1:C:69:MET:HE1	2.21	0.70
1:M:85:ALA:O	1:M:401:HIS:CE1	2.45	0.70
1:A:263:VAL:O	1:A:267:MET:HB2	1.91	0.70
1:L:85:ALA:O	1:L:401:HIS:CE1	2.45	0.70
1:M:331:THR:OG1	1:M:376:VAL:CG1	2.38	0.70
1:K:85:ALA:O	1:K:401:HIS:CE1	2.45	0.70
1:N:85:ALA:O	1:N:401:HIS:CE1	2.45	0.70
1:A:245:LYS:HE2	1:B:231:ARG:HH21	1.55	0.70
1:I:263:VAL:O	1:I:267:MET:HB2	1.92	0.70
1:J:331:THR:OG1	1:J:376:VAL:CG1	2.38	0.70
1:L:331:THR:OG1	1:L:376:VAL:CG2	2.36	0.70
1:H:263:VAL:O	1:H:267:MET:HB2	1.92	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:177:VAL:HG21	1:I:397:GLU:HG3	1.74	0.69
1:D:41:ASP:OD1	1:E:69:MET:HE3	1.92	0.69
1:D:381:VAL:HG21	1:D:393:LYS:HA	1.73	0.69
1:J:177:VAL:HG21	1:J:397:GLU:HG3	1.74	0.69
1:K:194:GLN:O	1:K:371:LYS:HE3	1.91	0.69
1:H:194:GLN:O	1:H:371:LYS:HE3	1.91	0.69
1:A:381:VAL:HG21	1:A:393:LYS:HA	1.73	0.69
1:N:194:GLN:O	1:N:371:LYS:HE3	1.91	0.69
1:N:331:THR:HG1	1:N:376:VAL:HG11	1.57	0.69
1:B:41:ASP:OD1	1:C:69:MET:HE3	1.92	0.69
1:K:219:PHE:HB3	1:K:317:LEU:HD23	1.74	0.69
1:K:192:GLY:C	1:K:375:GLY:CA	2.52	0.69
1:J:85:ALA:O	1:J:401:HIS:CE1	2.45	0.69
1:L:219:PHE:HB3	1:L:317:LEU:HD23	1.74	0.69
1:M:194:GLN:O	1:M:371:LYS:HE3	1.91	0.69
1:L:194:GLN:O	1:L:371:LYS:HE3	1.91	0.69
1:E:213:VAL:HB	1:E:325:ILE:CG1	2.23	0.69
1:H:85:ALA:O	1:H:401:HIS:CE1	2.45	0.69
1:K:177:VAL:HG21	1:K:397:GLU:HG3	1.74	0.69
1:H:177:VAL:HG21	1:H:397:GLU:HG3	1.74	0.69
1:F:213:VAL:HB	1:F:325:ILE:CG1	2.23	0.69
1:A:174:VAL:CG2	1:A:329:THR:HG23	2.17	0.69
1:D:213:VAL:HB	1:D:325:ILE:CG1	2.23	0.69
1:E:381:VAL:HG21	1:E:393:LYS:HA	1.73	0.69
1:L:263:VAL:O	1:L:267:MET:HB2	1.92	0.69
1:M:263:VAL:O	1:M:267:MET:HB2	1.92	0.69
1:J:263:VAL:O	1:J:267:MET:HB2	1.92	0.69
1:K:263:VAL:O	1:K:267:MET:HB2	1.92	0.69
1:I:183:LEU:H	1:I:383:ALA:CB	1.98	0.68
1:I:85:ALA:O	1:I:401:HIS:CE1	2.45	0.68
1:C:194:GLN:H	1:C:375:GLY:N	1.79	0.68
1:N:183:LEU:HD23	1:N:384:ALA:HB2	1.75	0.68
1:M:219:PHE:HB3	1:M:317:LEU:HD23	1.74	0.68
1:F:381:VAL:HG21	1:F:393:LYS:HA	1.73	0.68
1:J:219:PHE:HB3	1:J:317:LEU:HD23	1.74	0.68
1:C:213:VAL:HB	1:C:325:ILE:CG1	2.23	0.68
1:M:177:VAL:HG21	1:M:397:GLU:HG3	1.74	0.68
1:N:174:VAL:HG21	1:N:194:GLN:CB	2.12	0.68
1:A:213:VAL:HB	1:A:325:ILE:CG1	2.23	0.68
1:M:183:LEU:HD23	1:M:384:ALA:HB2	1.75	0.68
1:G:228:SER:O	1:G:257:GLU:HB3	1.94	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:219:PHE:HB3	1:I:317:LEU:HD23	1.74	0.68
1:K:305:ILE:HD12	1:K:307:MET:HE2	1.75	0.68
1:G:381:VAL:HG21	1:G:393:LYS:HA	1.73	0.68
1:A:194:GLN:H	1:A:375:GLY:N	1.79	0.68
1:H:183:LEU:HD23	1:H:384:ALA:HB2	1.75	0.68
1:D:183:LEU:H	1:D:383:ALA:CB	2.03	0.68
1:L:76:GLU:HG3	1:M:46:ALA:HB2	1.76	0.68
1:N:263:VAL:O	1:N:267:MET:HB2	1.92	0.68
1:E:228:SER:O	1:E:257:GLU:HB3	1.94	0.68
1:G:213:VAL:HB	1:G:325:ILE:CG1	2.23	0.68
1:A:228:SER:O	1:A:257:GLU:HB3	1.94	0.68
1:H:192:GLY:C	1:H:375:GLY:CA	2.52	0.68
1:G:194:GLN:O	1:G:371:LYS:HE3	1.94	0.68
1:H:76:GLU:HG3	1:I:46:ALA:HB2	1.76	0.68
1:I:76:GLU:HG3	1:J:46:ALA:HB2	1.76	0.68
1:K:76:GLU:HG3	1:L:46:ALA:HB2	1.76	0.68
1:H:219:PHE:HB3	1:H:317:LEU:HD23	1.74	0.68
1:J:174:VAL:HG21	1:J:194:GLN:CB	2.12	0.68
1:B:213:VAL:HB	1:B:325:ILE:CG1	2.23	0.68
1:M:76:GLU:HG3	1:N:46:ALA:HB2	1.76	0.68
1:J:76:GLU:HG3	1:K:46:ALA:HB2	1.76	0.68
1:H:46:ALA:HB2	1:N:76:GLU:HG3	1.76	0.68
1:B:228:SER:O	1:B:257:GLU:HB3	1.94	0.68
1:N:177:VAL:HG21	1:N:397:GLU:CG	2.24	0.68
1:J:192:GLY:C	1:J:375:GLY:CA	2.52	0.67
1:D:47:PRO:CD	1:E:73:MET:HG3	2.24	0.67
1:B:174:VAL:CG2	1:B:329:THR:HG23	2.17	0.67
1:E:41:ASP:OD1	1:F:69:MET:HE3	1.94	0.67
1:I:177:VAL:HG21	1:I:397:GLU:CG	2.24	0.67
1:A:194:GLN:O	1:A:371:LYS:HE3	1.94	0.67
1:C:47:PRO:CD	1:D:73:MET:HG3	2.24	0.67
1:I:183:LEU:HD23	1:I:384:ALA:HB2	1.75	0.67
1:F:228:SER:O	1:F:257:GLU:HB3	1.94	0.67
1:L:192:GLY:C	1:L:375:GLY:CA	2.52	0.67
1:F:193:MET:CG	1:F:374:GLY:N	2.58	0.67
1:N:177:VAL:HG21	1:N:397:GLU:HG3	1.74	0.67
1:B:193:MET:CG	1:B:374:GLY:N	2.58	0.67
1:E:193:MET:CG	1:E:374:GLY:N	2.58	0.67
1:L:183:LEU:HD23	1:L:384:ALA:HB2	1.75	0.67
1:L:177:VAL:HG21	1:L:397:GLU:HG3	1.74	0.67
1:J:305:ILE:HD12	1:J:307:MET:HE2	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:228:SER:O	1:D:257:GLU:HB3	1.94	0.67
1:F:194:GLN:O	1:F:371:LYS:HE3	1.94	0.67
1:D:39:VAL:CG2	1:E:517:THR:HG21	2.01	0.67
1:G:193:MET:CG	1:G:374:GLY:N	2.58	0.67
1:J:177:VAL:HG21	1:J:397:GLU:CG	2.25	0.67
1:C:228:SER:O	1:C:257:GLU:HB3	1.94	0.67
1:L:305:ILE:HD12	1:L:307:MET:HE2	1.75	0.67
1:B:194:GLN:O	1:B:371:LYS:HE3	1.94	0.67
1:C:41:ASP:OD1	1:D:69:MET:HE3	1.94	0.67
1:H:513:LEU:HB3	1:I:49:ILE:CD1	2.25	0.67
1:K:177:VAL:HG21	1:K:397:GLU:CG	2.25	0.67
1:N:219:PHE:HB3	1:N:317:LEU:HD23	1.74	0.67
1:E:47:PRO:CD	1:F:73:MET:HG3	2.24	0.67
1:K:183:LEU:HD23	1:K:384:ALA:HB2	1.76	0.67
1:I:513:LEU:HB3	1:J:49:ILE:CD1	2.25	0.67
1:A:193:MET:CG	1:A:374:GLY:N	2.58	0.66
1:C:194:GLN:O	1:C:371:LYS:HE3	1.94	0.66
1:M:177:VAL:HG21	1:M:397:GLU:CG	2.25	0.66
1:D:41:ASP:HA	1:E:69:MET:HE3	1.78	0.66
1:J:183:LEU:HD23	1:J:384:ALA:HB2	1.76	0.66
1:M:513:LEU:HB3	1:N:49:ILE:CD1	2.25	0.66
1:H:177:VAL:HG21	1:H:397:GLU:CG	2.25	0.66
1:N:305:ILE:HD12	1:N:307:MET:HE2	1.76	0.66
1:M:305:ILE:HD12	1:M:307:MET:HE2	1.76	0.66
1:D:194:GLN:O	1:D:371:LYS:HE3	1.94	0.66
1:C:193:MET:CG	1:C:374:GLY:N	2.58	0.66
1:B:47:PRO:CD	1:C:73:MET:HG3	2.25	0.66
1:H:49:ILE:CD1	1:N:513:LEU:HB3	2.25	0.66
1:J:190:VAL:CB	1:J:333:ILE:CG2	2.42	0.66
1:L:177:VAL:HG21	1:L:397:GLU:CG	2.25	0.66
1:I:192:GLY:C	1:I:375:GLY:CA	2.52	0.66
1:C:41:ASP:OD1	1:D:69:MET:HG2	1.96	0.66
1:B:41:ASP:OD1	1:C:69:MET:HG2	1.96	0.66
1:A:41:ASP:OD1	1:B:69:MET:HE3	1.96	0.66
1:A:69:MET:HE3	1:G:41:ASP:OD1	1.96	0.66
1:M:192:GLY:C	1:M:375:GLY:CA	2.52	0.66
1:H:370:ALA:O	1:H:374:GLY:HA2	1.96	0.66
1:F:47:PRO:CD	1:G:73:MET:HG3	2.25	0.66
1:A:183:LEU:H	1:A:383:ALA:CB	2.03	0.66
1:A:47:PRO:CD	1:B:73:MET:HG3	2.24	0.66
1:E:41:ASP:OD1	1:F:69:MET:HG2	1.96	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:513:LEU:HB3	1:K:49:ILE:CD1	2.25	0.66
1:K:370:ALA:O	1:K:374:GLY:HA2	1.96	0.66
1:A:73:MET:HG3	1:G:47:PRO:CD	2.24	0.66
1:L:513:LEU:HB3	1:M:49:ILE:CD1	2.25	0.66
1:N:370:ALA:O	1:N:374:GLY:HA2	1.96	0.65
1:D:41:ASP:OD1	1:E:69:MET:HG2	1.96	0.65
1:B:41:ASP:HA	1:C:69:MET:HE3	1.78	0.65
1:E:194:GLN:O	1:E:371:LYS:HE3	1.94	0.65
1:K:513:LEU:HB3	1:L:49:ILE:CD1	2.25	0.65
1:M:228:SER:O	1:M:257:GLU:HB3	1.97	0.65
1:D:193:MET:CG	1:D:374:GLY:N	2.58	0.65
1:A:41:ASP:OD2	1:B:69:MET:SD	2.55	0.65
1:M:69:MET:O	1:M:73:MET:HG3	1.96	0.65
1:J:69:MET:O	1:J:73:MET:HG3	1.96	0.65
1:I:305:ILE:HD12	1:I:307:MET:HE2	1.77	0.65
1:L:331:THR:HG1	1:L:376:VAL:HG11	1.58	0.65
1:J:69:MET:HE3	1:K:41:ASP:CG	2.17	0.65
1:L:404:ARG:CG	1:L:404:ARG:HH11	2.08	0.65
1:J:404:ARG:CG	1:J:404:ARG:HH11	2.08	0.65
1:M:404:ARG:HH11	1:M:404:ARG:CG	2.08	0.65
1:N:191:GLU:O	1:N:332:ILE:CB	2.44	0.65
1:M:191:GLU:O	1:M:332:ILE:CB	2.45	0.65
1:A:41:ASP:OD1	1:B:69:MET:HG2	1.96	0.65
1:A:69:MET:SD	1:G:41:ASP:OD2	2.55	0.65
1:F:183:LEU:H	1:F:383:ALA:CB	2.03	0.65
1:K:404:ARG:CG	1:K:404:ARG:HH11	2.08	0.65
1:C:349:ILE:HA	1:C:352:GLN:CG	2.27	0.65
1:N:228:SER:O	1:N:257:GLU:HB3	1.97	0.65
1:C:136:VAL:CA	1:C:137:PRO:HD3	2.25	0.65
1:B:41:ASP:OD2	1:C:69:MET:SD	2.55	0.65
1:H:305:ILE:HD12	1:H:307:MET:HE2	1.77	0.65
1:K:228:SER:O	1:K:257:GLU:HB3	1.97	0.65
1:E:221:LEU:HD23	1:E:249:ILE:HD12	1.79	0.65
1:H:191:GLU:O	1:H:332:ILE:CB	2.44	0.65
1:D:41:ASP:OD2	1:E:69:MET:SD	2.55	0.65
1:N:69:MET:O	1:N:73:MET:HG3	1.97	0.65
1:L:69:MET:O	1:L:73:MET:HG3	1.96	0.65
1:G:349:ILE:HA	1:G:352:GLN:CG	2.27	0.65
1:A:349:ILE:HA	1:A:352:GLN:CG	2.27	0.65
1:B:349:ILE:HA	1:B:352:GLN:CG	2.27	0.65
1:E:174:VAL:CG2	1:E:329:THR:HG23	2.17	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:41:ASP:OD2	1:D:69:MET:SD	2.55	0.65
1:N:404:ARG:CG	1:N:404:ARG:HH11	2.08	0.65
1:C:247:LEU:HB3	1:C:273:VAL:HG22	1.79	0.65
1:J:191:GLU:O	1:J:332:ILE:CB	2.44	0.65
1:A:69:MET:HG2	1:G:41:ASP:OD1	1.96	0.65
1:H:69:MET:O	1:H:73:MET:HG3	1.96	0.65
1:I:69:MET:O	1:I:73:MET:HG3	1.96	0.65
1:E:349:ILE:HA	1:E:352:GLN:CG	2.27	0.65
1:D:349:ILE:HA	1:D:352:GLN:CG	2.27	0.65
1:F:349:ILE:HA	1:F:352:GLN:CG	2.27	0.65
1:L:228:SER:O	1:L:257:GLU:HB3	1.97	0.65
1:J:228:SER:O	1:J:257:GLU:HB3	1.97	0.65
1:I:191:GLU:O	1:I:332:ILE:CB	2.44	0.65
1:I:370:ALA:O	1:I:374:GLY:HA2	1.96	0.65
1:F:194:GLN:H	1:F:375:GLY:N	1.79	0.65
1:F:41:ASP:OD1	1:G:69:MET:HG2	1.96	0.65
1:C:221:LEU:HD23	1:C:249:ILE:HD12	1.79	0.65
1:H:228:SER:O	1:H:257:GLU:HB3	1.97	0.65
1:D:221:LEU:HD23	1:D:249:ILE:HD12	1.79	0.65
1:E:41:ASP:OD2	1:F:69:MET:SD	2.55	0.64
1:H:404:ARG:CG	1:H:404:ARG:HH11	2.08	0.64
1:D:247:LEU:HB3	1:D:273:VAL:HG22	1.79	0.64
1:F:39:VAL:CG2	1:G:517:THR:HG21	2.01	0.64
1:F:41:ASP:OD2	1:G:69:MET:SD	2.55	0.64
1:J:331:THR:HG1	1:J:376:VAL:HG11	1.59	0.64
1:L:191:GLU:O	1:L:332:ILE:CB	2.45	0.64
1:C:41:ASP:HA	1:D:69:MET:HE3	1.80	0.64
1:F:221:LEU:HD23	1:F:249:ILE:HD12	1.79	0.64
1:M:414:GLY:O	1:M:417:VAL:HG13	1.98	0.64
1:B:247:LEU:HB3	1:B:273:VAL:HG22	1.79	0.64
1:K:414:GLY:O	1:K:417:VAL:HG13	1.98	0.64
1:M:333:ILE:CG2	1:M:378:VAL:HG21	2.26	0.64
1:F:136:VAL:CA	1:F:137:PRO:HD3	2.25	0.64
1:D:136:VAL:CA	1:D:137:PRO:HD3	2.25	0.64
1:B:191:GLU:CG	1:B:334:ASP:H	2.11	0.64
1:F:191:GLU:CG	1:F:334:ASP:H	2.11	0.64
1:C:183:LEU:H	1:C:383:ALA:CB	2.03	0.64
1:J:213:VAL:HB	1:J:325:ILE:CG1	2.28	0.64
1:K:191:GLU:O	1:K:332:ILE:CB	2.44	0.64
1:L:370:ALA:O	1:L:374:GLY:HA2	1.96	0.64
1:I:228:SER:O	1:I:257:GLU:HB3	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:136:VAL:CA	1:E:137:PRO:HD3	2.25	0.64
1:K:69:MET:O	1:K:73:MET:HG3	1.96	0.64
1:N:414:GLY:O	1:N:417:VAL:HG13	1.98	0.64
1:H:414:GLY:O	1:H:417:VAL:HG13	1.98	0.64
1:M:206:ASN:HD21	1:M:214:GLU:H	1.46	0.64
1:G:174:VAL:CG2	1:G:329:THR:HG23	2.17	0.64
1:D:186:GLU:HB2	1:D:380:LYS:HB2	1.80	0.64
1:I:213:VAL:HB	1:I:325:ILE:CG1	2.28	0.64
1:F:177:VAL:HG21	1:F:397:GLU:HG3	1.80	0.64
1:I:420:ILE:HD12	1:I:451:LEU:HD13	1.80	0.64
1:N:206:ASN:HD21	1:N:214:GLU:H	1.46	0.64
1:L:206:ASN:HD21	1:L:214:GLU:H	1.46	0.64
1:K:213:VAL:HB	1:K:325:ILE:CG1	2.28	0.64
1:C:186:GLU:HB2	1:C:380:LYS:HB2	1.80	0.64
1:B:186:GLU:HB2	1:B:380:LYS:HB2	1.80	0.64
1:I:331:THR:HG1	1:I:376:VAL:HG11	1.63	0.64
1:G:136:VAL:CA	1:G:137:PRO:HD3	2.25	0.64
1:A:191:GLU:CG	1:A:334:ASP:H	2.11	0.64
1:G:177:VAL:HG21	1:G:397:GLU:HG3	1.80	0.64
1:H:333:ILE:CD1	1:H:378:VAL:HG22	2.26	0.64
1:F:41:ASP:OD1	1:G:69:MET:HE3	1.97	0.64
1:D:191:GLU:CG	1:D:334:ASP:H	2.11	0.64
1:H:349:ILE:HA	1:H:352:GLN:CG	2.28	0.64
1:E:247:LEU:HB3	1:E:273:VAL:HG22	1.79	0.64
1:H:420:ILE:HD12	1:H:451:LEU:HD13	1.80	0.64
1:B:221:LEU:HD23	1:B:249:ILE:HD12	1.79	0.64
1:A:177:VAL:HG21	1:A:397:GLU:HG3	1.80	0.64
1:E:177:VAL:HG21	1:E:397:GLU:HG3	1.80	0.64
1:D:194:GLN:H	1:D:375:GLY:N	1.79	0.64
1:G:191:GLU:CG	1:G:334:ASP:H	2.11	0.64
1:I:349:ILE:HA	1:I:352:GLN:CG	2.28	0.64
1:E:186:GLU:HB2	1:E:380:LYS:HB2	1.80	0.64
1:K:206:ASN:HD21	1:K:214:GLU:H	1.46	0.64
1:H:206:ASN:HD21	1:H:214:GLU:H	1.46	0.64
1:I:206:ASN:HD21	1:I:214:GLU:H	1.46	0.63
1:J:414:GLY:O	1:J:417:VAL:HG13	1.98	0.63
1:I:404:ARG:HH11	1:I:404:ARG:CG	2.08	0.63
1:J:349:ILE:HA	1:J:352:GLN:CG	2.28	0.63
1:I:414:GLY:O	1:I:417:VAL:HG13	1.98	0.63
1:J:420:ILE:HD12	1:J:451:LEU:HD13	1.80	0.63
1:J:193:MET:N	1:J:375:GLY:HA2	2.12	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:333:ILE:CG2	1:L:378:VAL:HG21	2.26	0.63
1:D:183:LEU:HD23	1:D:384:ALA:HB2	1.81	0.63
1:B:183:LEU:HD23	1:B:384:ALA:HB2	1.81	0.63
1:N:349:ILE:HA	1:N:352:GLN:CG	2.28	0.63
1:J:206:ASN:HD21	1:J:214:GLU:H	1.46	0.63
1:A:247:LEU:HB3	1:A:273:VAL:HG22	1.79	0.63
1:A:186:GLU:HB2	1:A:380:LYS:HB2	1.80	0.63
1:N:333:ILE:CG2	1:N:378:VAL:HG21	2.26	0.63
1:F:247:LEU:HB3	1:F:273:VAL:HG22	1.79	0.63
1:L:414:GLY:O	1:L:417:VAL:HG13	1.98	0.63
1:A:183:LEU:HD23	1:A:384:ALA:HB2	1.81	0.63
1:E:183:LEU:HD23	1:E:384:ALA:HB2	1.81	0.63
1:G:221:LEU:HD23	1:G:249:ILE:HD12	1.79	0.63
1:G:186:GLU:HB2	1:G:380:LYS:HB2	1.80	0.63
1:F:186:GLU:HB2	1:F:380:LYS:HB2	1.80	0.63
1:K:193:MET:N	1:K:375:GLY:HA2	2.12	0.63
1:M:331:THR:HG1	1:M:376:VAL:HG11	1.61	0.63
1:K:349:ILE:HA	1:K:352:GLN:CG	2.28	0.63
1:A:221:LEU:HD23	1:A:249:ILE:HD12	1.79	0.63
1:H:213:VAL:HB	1:H:325:ILE:CG1	2.28	0.63
1:N:191:GLU:O	1:N:332:ILE:CG2	2.47	0.63
1:F:406:ALA:HA	1:F:496:PRO:HB3	1.81	0.63
1:N:420:ILE:HD12	1:N:451:LEU:HD13	1.80	0.63
1:M:370:ALA:O	1:M:374:GLY:HA2	1.96	0.63
1:H:191:GLU:O	1:H:332:ILE:CG2	2.47	0.63
1:D:174:VAL:H	1:D:194:GLN:NE2	1.97	0.63
1:C:191:GLU:CG	1:C:334:ASP:H	2.11	0.63
1:L:213:VAL:HB	1:L:325:ILE:CG1	2.28	0.63
1:I:193:MET:N	1:I:375:GLY:HA2	2.12	0.63
1:E:213:VAL:HB	1:E:325:ILE:HG12	1.81	0.63
1:E:41:ASP:HA	1:F:69:MET:HE3	1.81	0.63
1:C:183:LEU:HD23	1:C:384:ALA:HB2	1.81	0.63
1:L:362:ARG:O	1:L:366:GLN:HG3	1.99	0.63
1:K:333:ILE:CG2	1:K:378:VAL:HG21	2.26	0.62
1:M:191:GLU:O	1:M:332:ILE:CG2	2.47	0.62
1:E:174:VAL:H	1:E:194:GLN:NE2	1.97	0.62
1:E:191:GLU:CG	1:E:334:ASP:H	2.11	0.62
1:J:213:VAL:HB	1:J:325:ILE:HG12	1.81	0.62
1:D:177:VAL:HG21	1:D:397:GLU:HG3	1.80	0.62
1:J:370:ALA:O	1:J:374:GLY:HA2	1.96	0.62
1:I:174:VAL:HG21	1:I:194:GLN:CB	2.12	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:183:LEU:HD23	1:F:384:ALA:HB2	1.81	0.62
1:G:183:LEU:HD23	1:G:384:ALA:HB2	1.81	0.62
1:M:349:ILE:HA	1:M:352:GLN:CG	2.28	0.62
1:G:406:ALA:HA	1:G:496:PRO:HB3	1.81	0.62
1:K:362:ARG:O	1:K:366:GLN:HG3	1.99	0.62
1:K:420:ILE:HD12	1:K:451:LEU:HD13	1.80	0.62
1:N:193:MET:N	1:N:375:GLY:HA2	2.12	0.62
1:M:193:MET:N	1:M:375:GLY:HA2	2.12	0.62
1:B:194:GLN:H	1:B:375:GLY:N	1.79	0.62
1:F:69:MET:O	1:F:73:MET:HG3	2.00	0.62
1:L:349:ILE:HA	1:L:352:GLN:CG	2.28	0.62
1:B:177:VAL:HG21	1:B:397:GLU:HG3	1.80	0.62
1:F:305:ILE:HD12	1:F:307:MET:HE2	1.81	0.62
1:K:191:GLU:O	1:K:332:ILE:CG2	2.47	0.62
1:L:174:VAL:HG21	1:L:194:GLN:CB	2.12	0.62
1:D:213:VAL:HB	1:D:325:ILE:HG12	1.81	0.62
1:M:69:MET:HE1	1:N:41:ASP:CB	2.28	0.62
1:I:213:VAL:HB	1:I:325:ILE:HG12	1.81	0.62
1:G:247:LEU:HB3	1:G:273:VAL:HG22	1.79	0.62
1:M:333:ILE:CD1	1:M:378:VAL:HG22	2.26	0.62
1:I:191:GLU:O	1:I:332:ILE:CG2	2.47	0.62
1:H:333:ILE:CG2	1:H:378:VAL:HG21	2.26	0.62
1:C:174:VAL:H	1:C:194:GLN:NE2	1.97	0.62
1:C:69:MET:O	1:C:73:MET:HG3	2.00	0.62
1:B:69:MET:O	1:B:73:MET:HG3	2.00	0.62
1:M:213:VAL:HB	1:M:325:ILE:CG1	2.28	0.62
1:I:333:ILE:CD1	1:I:378:VAL:HG22	2.26	0.62
1:F:213:VAL:HB	1:F:325:ILE:HG12	1.81	0.62
1:K:213:VAL:HB	1:K:325:ILE:HG12	1.81	0.62
1:M:420:ILE:HD12	1:M:451:LEU:HD13	1.80	0.62
1:L:191:GLU:O	1:L:332:ILE:CG2	2.47	0.62
1:C:213:VAL:HB	1:C:325:ILE:HG12	1.81	0.62
1:A:69:MET:O	1:A:73:MET:HG3	2.00	0.62
1:G:305:ILE:HD12	1:G:307:MET:HE2	1.82	0.62
1:M:362:ARG:O	1:M:366:GLN:HG3	1.99	0.62
1:L:420:ILE:HD12	1:L:451:LEU:HD13	1.80	0.62
1:H:193:MET:N	1:H:375:GLY:HA2	2.12	0.62
1:A:231:ARG:NH2	1:G:245:LYS:HE3	2.15	0.62
1:D:219:PHE:HB3	1:D:317:LEU:HD23	1.82	0.62
1:E:219:PHE:HB3	1:E:317:LEU:HD23	1.82	0.62
1:G:219:PHE:HB3	1:G:317:LEU:HD23	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:213:VAL:HB	1:B:325:ILE:HG12	1.81	0.62
1:E:406:ALA:HA	1:E:496:PRO:HB3	1.81	0.62
1:F:219:PHE:HB3	1:F:317:LEU:HD23	1.82	0.62
1:J:191:GLU:O	1:J:332:ILE:CG2	2.47	0.62
1:N:333:ILE:CD1	1:N:378:VAL:HG22	2.26	0.62
1:A:174:VAL:H	1:A:194:GLN:NE2	1.97	0.62
1:D:69:MET:O	1:D:73:MET:HG3	2.00	0.62
1:E:69:MET:O	1:E:73:MET:HG3	2.00	0.62
1:L:193:MET:N	1:L:375:GLY:HA2	2.12	0.61
1:N:213:VAL:HB	1:N:325:ILE:CG1	2.28	0.61
1:E:305:ILE:HD12	1:E:307:MET:HE2	1.82	0.61
1:C:39:VAL:CG2	1:D:517:THR:HG21	2.01	0.61
1:J:186:GLU:HB2	1:J:380:LYS:HB2	1.82	0.61
1:A:136:VAL:CA	1:A:137:PRO:HD3	2.25	0.61
1:A:213:VAL:HB	1:A:325:ILE:HG12	1.81	0.61
1:G:213:VAL:HB	1:G:325:ILE:HG12	1.81	0.61
1:A:69:MET:HE3	1:G:41:ASP:HA	1.83	0.61
1:L:213:VAL:HB	1:L:325:ILE:HG12	1.81	0.61
1:F:174:VAL:H	1:F:194:GLN:NE2	1.97	0.61
1:A:406:ALA:HA	1:A:496:PRO:HB3	1.81	0.61
1:C:219:PHE:HB3	1:C:317:LEU:HD23	1.82	0.61
1:A:219:PHE:HB3	1:A:317:LEU:HD23	1.82	0.61
1:H:213:VAL:HB	1:H:325:ILE:HG12	1.81	0.61
1:N:362:ARG:O	1:N:366:GLN:HG3	1.99	0.61
1:G:174:VAL:H	1:G:194:GLN:NE2	1.97	0.61
1:G:69:MET:O	1:G:73:MET:HG3	2.00	0.61
1:A:177:VAL:HG21	1:A:397:GLU:CG	2.31	0.61
1:D:177:VAL:HG21	1:D:397:GLU:CG	2.31	0.61
1:H:362:ARG:O	1:H:366:GLN:HG3	1.99	0.61
1:J:333:ILE:CG2	1:J:378:VAL:HG21	2.26	0.61
1:A:41:ASP:HA	1:B:69:MET:HE3	1.83	0.61
1:F:177:VAL:HG21	1:F:397:GLU:CG	2.31	0.61
1:J:362:ARG:O	1:J:366:GLN:HG3	1.99	0.61
1:B:219:PHE:HB3	1:B:317:LEU:HD23	1.82	0.61
1:M:213:VAL:HB	1:M:325:ILE:HG12	1.81	0.61
1:C:177:VAL:HG21	1:C:397:GLU:HG3	1.80	0.61
1:I:362:ARG:O	1:I:366:GLN:HG3	1.99	0.61
1:I:333:ILE:CG2	1:I:378:VAL:HG21	2.26	0.61
1:G:183:LEU:H	1:G:383:ALA:CB	2.03	0.61
1:B:174:VAL:H	1:B:194:GLN:NE2	1.97	0.61
1:L:69:MET:HE3	1:M:41:ASP:CG	2.21	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:406:ALA:HA	1:B:496:PRO:HB3	1.81	0.61
1:C:406:ALA:HA	1:C:496:PRO:HB3	1.81	0.61
1:N:213:VAL:HB	1:N:325:ILE:HG12	1.81	0.61
1:I:186:GLU:HB2	1:I:380:LYS:HB2	1.82	0.61
1:H:247:LEU:HB3	1:H:273:VAL:HG22	1.83	0.60
1:K:186:GLU:HB2	1:K:380:LYS:HB2	1.82	0.60
1:D:41:ASP:CG	1:E:69:MET:HE3	2.22	0.60
1:M:247:LEU:HB3	1:M:273:VAL:HG22	1.83	0.60
1:M:186:GLU:HB2	1:M:380:LYS:HB2	1.82	0.60
1:L:186:GLU:HB2	1:L:380:LYS:HB2	1.82	0.60
1:D:245:LYS:HE3	1:E:231:ARG:NH2	2.15	0.60
1:L:247:LEU:HB3	1:L:273:VAL:HG22	1.83	0.60
1:N:247:LEU:HB3	1:N:273:VAL:HG22	1.83	0.60
1:C:177:VAL:HG21	1:C:397:GLU:CG	2.31	0.60
1:C:305:ILE:HD12	1:C:307:MET:HE2	1.83	0.60
1:A:305:ILE:HD12	1:A:307:MET:HE2	1.83	0.60
1:F:41:ASP:HA	1:G:69:MET:HE3	1.84	0.60
1:E:183:LEU:H	1:E:383:ALA:CB	2.03	0.60
1:M:193:MET:HA	1:M:375:GLY:HA2	1.83	0.60
1:B:86:GLY:HA3	1:B:401:HIS:NE2	2.10	0.60
1:D:406:ALA:HA	1:D:496:PRO:HB3	1.81	0.60
1:I:247:LEU:HB3	1:I:273:VAL:HG22	1.83	0.60
1:I:69:MET:HE3	1:J:41:ASP:CG	2.22	0.60
1:G:177:VAL:HG21	1:G:397:GLU:CG	2.31	0.60
1:E:177:VAL:HG21	1:E:397:GLU:CG	2.31	0.60
1:B:177:VAL:HG21	1:B:397:GLU:CG	2.31	0.60
1:J:193:MET:HA	1:J:375:GLY:HA2	1.83	0.60
1:K:247:LEU:HB3	1:K:273:VAL:HG22	1.83	0.60
1:N:193:MET:HA	1:N:375:GLY:HA2	1.83	0.60
1:N:186:GLU:HB2	1:N:380:LYS:HB2	1.82	0.60
1:H:186:GLU:HB2	1:H:380:LYS:HB2	1.82	0.60
1:J:247:LEU:HB3	1:J:273:VAL:HG22	1.83	0.60
1:K:193:MET:HA	1:K:375:GLY:HA2	1.83	0.59
1:G:23:LEU:HD22	1:G:74:VAL:HG13	1.85	0.59
1:L:193:MET:HA	1:L:375:GLY:HA2	1.83	0.59
1:C:23:LEU:HD22	1:C:74:VAL:HG13	1.85	0.59
1:I:193:MET:HA	1:I:375:GLY:HA2	1.83	0.59
1:B:183:LEU:H	1:B:383:ALA:CB	2.03	0.59
1:D:23:LEU:HD22	1:D:74:VAL:HG13	1.85	0.59
1:F:86:GLY:HA3	1:F:401:HIS:NE2	2.10	0.59
1:B:150:ILE:HD13	1:B:493:ILE:HA	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:23:LEU:HD22	1:F:74:VAL:HG13	1.84	0.59
1:H:193:MET:HA	1:H:375:GLY:HA2	1.83	0.59
1:K:333:ILE:CD1	1:K:378:VAL:HG22	2.26	0.59
1:B:39:VAL:CG2	1:C:517:THR:HG21	2.01	0.59
1:B:23:LEU:HD22	1:B:74:VAL:HG13	1.84	0.59
1:A:23:LEU:HD22	1:A:74:VAL:HG13	1.85	0.59
1:E:150:ILE:HD13	1:E:493:ILE:HA	1.84	0.59
1:J:218:PRO:CB	1:J:246:PRO:HG2	2.30	0.59
1:D:49:ILE:HD12	1:E:513:LEU:HB3	1.85	0.59
1:B:305:ILE:HD12	1:B:307:MET:HE2	1.84	0.59
1:J:371:LYS:N	1:J:374:GLY:N	2.51	0.59
1:E:245:LYS:HE3	1:F:231:ARG:NH2	2.15	0.59
1:A:150:ILE:HD13	1:A:493:ILE:HA	1.84	0.59
1:D:194:GLN:H	1:D:374:GLY:N	2.01	0.59
1:H:521:VAL:O	1:I:41:ASP:HB3	2.03	0.59
1:E:23:LEU:HD22	1:E:74:VAL:HG13	1.85	0.59
1:G:291:ASP:OD2	1:G:368:ARG:HD2	2.03	0.59
1:F:205:ILE:HA	1:F:213:VAL:HG22	1.85	0.59
1:B:205:ILE:HA	1:B:213:VAL:HG22	1.85	0.59
1:A:205:ILE:HA	1:A:213:VAL:HG22	1.85	0.59
1:G:205:ILE:HA	1:G:213:VAL:HG22	1.85	0.59
1:G:194:GLN:H	1:G:374:GLY:N	2.01	0.59
1:K:69:MET:HE3	1:L:41:ASP:CG	2.24	0.59
1:G:150:ILE:HD13	1:G:493:ILE:HA	1.84	0.59
1:F:291:ASP:OD2	1:F:368:ARG:HD2	2.03	0.59
1:J:193:MET:CA	1:J:375:GLY:HA2	2.33	0.58
1:M:193:MET:CA	1:M:375:GLY:HA2	2.33	0.58
1:L:193:MET:CA	1:L:375:GLY:HA2	2.33	0.58
1:C:194:GLN:H	1:C:374:GLY:N	2.01	0.58
1:J:183:LEU:O	1:J:184:GLN:HB2	2.03	0.58
1:B:235:PRO:CG	1:B:310:GLU:HA	2.29	0.58
1:A:291:ASP:OD2	1:A:368:ARG:HD2	2.03	0.58
1:F:150:ILE:HD13	1:F:493:ILE:HA	1.84	0.58
1:C:291:ASP:OD2	1:C:368:ARG:HD2	2.03	0.58
1:D:272:LYS:N	1:D:272:LYS:HD2	2.18	0.58
1:M:371:LYS:N	1:M:374:GLY:N	2.51	0.58
1:C:205:ILE:HA	1:C:213:VAL:HG22	1.85	0.58
1:F:200:LEU:O	1:F:201:SER:HB3	2.04	0.58
1:D:291:ASP:OD2	1:D:368:ARG:HD2	2.03	0.58
1:E:272:LYS:HD2	1:E:272:LYS:N	2.18	0.58
1:C:272:LYS:HD2	1:C:272:LYS:N	2.18	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:371:LYS:N	1:H:374:GLY:N	2.51	0.58
1:E:194:GLN:H	1:E:374:GLY:N	2.01	0.58
1:M:183:LEU:O	1:M:184:GLN:HB2	2.03	0.58
1:I:218:PRO:CB	1:I:246:PRO:HG2	2.30	0.58
1:K:218:PRO:CB	1:K:246:PRO:HG2	2.30	0.58
1:C:150:ILE:HD13	1:C:493:ILE:HA	1.84	0.58
1:H:41:ASP:CG	1:N:69:MET:HE3	2.24	0.58
1:A:155:ASP:OD1	1:A:157:THR:HB	2.04	0.58
1:F:362:ARG:O	1:F:366:GLN:HG3	2.04	0.58
1:F:272:LYS:N	1:F:272:LYS:HD2	2.18	0.58
1:N:371:LYS:N	1:N:374:GLY:N	2.51	0.58
1:K:193:MET:CA	1:K:375:GLY:HA2	2.33	0.58
1:F:86:GLY:C	1:F:401:HIS:CE1	2.77	0.58
1:B:194:GLN:H	1:B:374:GLY:N	2.01	0.58
1:E:205:ILE:HA	1:E:213:VAL:HG22	1.85	0.58
1:N:183:LEU:O	1:N:184:GLN:HB2	2.03	0.58
1:J:521:VAL:O	1:K:41:ASP:HB3	2.03	0.58
1:D:150:ILE:HD13	1:D:493:ILE:HA	1.84	0.58
1:L:371:LYS:N	1:L:374:GLY:N	2.51	0.58
1:B:86:GLY:C	1:B:401:HIS:CE1	2.77	0.58
1:C:245:LYS:HE3	1:D:231:ARG:NH2	2.15	0.58
1:B:245:LYS:HE3	1:C:231:ARG:NH2	2.15	0.58
1:G:331:THR:OG1	1:G:376:VAL:HG21	2.00	0.58
1:E:362:ARG:O	1:E:366:GLN:HG3	2.04	0.58
1:E:291:ASP:OD2	1:E:368:ARG:HD2	2.03	0.58
1:C:155:ASP:OD1	1:C:157:THR:HB	2.04	0.58
1:D:404:ARG:HH11	1:D:404:ARG:HG2	1.69	0.58
1:B:272:LYS:N	1:B:272:LYS:HD2	2.18	0.58
1:K:371:LYS:N	1:K:374:GLY:N	2.51	0.58
1:C:86:GLY:C	1:C:401:HIS:CE1	2.77	0.58
1:G:86:GLY:C	1:G:401:HIS:CE1	2.77	0.58
1:E:194:GLN:CG	1:E:375:GLY:O	2.52	0.58
1:E:49:ILE:HD12	1:F:513:LEU:HB3	1.85	0.58
1:B:291:ASP:OD2	1:B:368:ARG:HD2	2.03	0.58
1:G:404:ARG:HG2	1:G:404:ARG:HH11	1.69	0.58
1:N:193:MET:CA	1:N:375:GLY:HA2	2.33	0.58
1:B:41:ASP:CG	1:C:69:MET:HE3	2.22	0.58
1:H:69:MET:HE3	1:I:41:ASP:CG	2.24	0.58
1:K:183:LEU:O	1:K:184:GLN:HB2	2.03	0.58
1:L:183:LEU:O	1:L:184:GLN:HB2	2.03	0.58
1:G:200:LEU:O	1:G:201:SER:HB3	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:200:LEU:O	1:C:201:SER:HB3	2.04	0.58
1:A:16:MET:O	1:A:20:VAL:HG13	2.04	0.58
1:G:272:LYS:N	1:G:272:LYS:HD2	2.18	0.58
1:D:86:GLY:C	1:D:401:HIS:CE1	2.77	0.58
1:B:200:LEU:O	1:B:201:SER:HB3	2.04	0.58
1:F:16:MET:O	1:F:20:VAL:HG13	2.04	0.58
1:F:194:GLN:CG	1:F:375:GLY:O	2.52	0.58
1:D:205:ILE:HA	1:D:213:VAL:HG22	1.85	0.58
1:H:68:ASN:O	1:H:72:GLN:HG2	2.04	0.58
1:D:305:ILE:HD12	1:D:307:MET:HE2	1.84	0.58
1:D:155:ASP:OD1	1:D:157:THR:HB	2.04	0.58
1:D:16:MET:O	1:D:20:VAL:HG13	2.04	0.58
1:A:272:LYS:HD2	1:A:272:LYS:N	2.18	0.58
1:F:404:ARG:HH11	1:F:404:ARG:HG2	1.69	0.58
1:D:86:GLY:HA3	1:D:401:HIS:NE2	2.09	0.57
1:I:183:LEU:O	1:I:184:GLN:HB2	2.03	0.57
1:G:155:ASP:OD1	1:G:157:THR:HB	2.04	0.57
1:B:16:MET:O	1:B:20:VAL:HG13	2.04	0.57
1:B:362:ARG:O	1:B:366:GLN:HG3	2.03	0.57
1:D:362:ARG:O	1:D:366:GLN:HG3	2.03	0.57
1:B:245:LYS:HZ1	1:C:231:ARG:HH22	0.59	0.57
1:A:39:VAL:CG2	1:B:517:THR:HG21	2.01	0.57
1:C:41:ASP:CG	1:D:69:MET:HE3	2.24	0.57
1:E:200:LEU:O	1:E:201:SER:HB3	2.04	0.57
1:F:420:ILE:HD12	1:F:451:LEU:HD13	1.87	0.57
1:G:362:ARG:O	1:G:366:GLN:HG3	2.03	0.57
1:G:16:MET:O	1:G:20:VAL:HG13	2.04	0.57
1:H:272:LYS:N	1:H:272:LYS:HD2	2.19	0.57
1:H:193:MET:CA	1:H:375:GLY:HA2	2.33	0.57
1:E:86:GLY:C	1:E:401:HIS:CE1	2.77	0.57
1:A:194:GLN:H	1:A:374:GLY:N	2.01	0.57
1:I:205:ILE:HA	1:I:213:VAL:HG22	1.86	0.57
1:B:382:GLY:O	1:B:389:MET:HG2	2.04	0.57
1:N:272:LYS:HD2	1:N:272:LYS:N	2.19	0.57
1:E:404:ARG:HG2	1:E:404:ARG:HH11	1.69	0.57
1:L:333:ILE:CD1	1:L:378:VAL:HG22	2.26	0.57
1:B:136:VAL:CA	1:B:137:PRO:HD3	2.25	0.57
1:F:193:MET:C	1:F:375:GLY:N	2.50	0.57
1:F:245:LYS:HZ1	1:G:231:ARG:HH22	0.59	0.57
1:J:69:MET:HE3	1:K:41:ASP:OD1	2.03	0.57
1:E:406:ALA:CB	1:E:496:PRO:HG3	2.35	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:16:MET:O	1:E:20:VAL:HG13	2.04	0.57
1:D:382:GLY:O	1:D:389:MET:HG2	2.04	0.57
1:G:420:ILE:HD12	1:G:451:LEU:HD13	1.87	0.57
1:D:420:ILE:HD12	1:D:451:LEU:HD13	1.87	0.57
1:C:362:ARG:O	1:C:366:GLN:HG3	2.03	0.57
1:A:404:ARG:HH11	1:A:404:ARG:HG2	1.69	0.57
1:I:371:LYS:N	1:I:374:GLY:N	2.51	0.57
1:I:193:MET:CA	1:I:375:GLY:HA2	2.33	0.57
1:A:331:THR:OG1	1:A:376:VAL:HG21	2.00	0.57
1:H:183:LEU:O	1:H:184:GLN:HB2	2.03	0.57
1:F:49:ILE:HD12	1:G:513:LEU:HB3	1.85	0.57
1:J:205:ILE:HA	1:J:213:VAL:HG22	1.86	0.57
1:C:382:GLY:O	1:C:389:MET:HG2	2.04	0.57
1:E:420:ILE:HD12	1:E:451:LEU:HD13	1.87	0.57
1:I:68:ASN:O	1:I:72:GLN:HG2	2.04	0.57
1:A:382:GLY:O	1:A:389:MET:HG2	2.04	0.57
1:C:420:ILE:HD12	1:C:451:LEU:HD13	1.87	0.57
1:B:404:ARG:HH11	1:B:404:ARG:HG2	1.69	0.57
1:A:86:GLY:C	1:A:401:HIS:CE1	2.77	0.57
1:E:193:MET:C	1:E:375:GLY:N	2.50	0.57
1:G:406:ALA:CB	1:G:496:PRO:HG3	2.35	0.57
1:E:382:GLY:O	1:E:389:MET:HG2	2.04	0.57
1:B:155:ASP:OD1	1:B:157:THR:HB	2.04	0.57
1:K:68:ASN:O	1:K:72:GLN:HG2	2.04	0.57
1:I:272:LYS:N	1:I:272:LYS:HD2	2.19	0.57
1:H:218:PRO:CB	1:H:246:PRO:HG2	2.30	0.57
1:F:235:PRO:CG	1:F:310:GLU:HA	2.29	0.57
1:A:513:LEU:HB3	1:G:49:ILE:HD12	1.85	0.57
1:B:406:ALA:CB	1:B:496:PRO:HG3	2.35	0.57
1:N:68:ASN:O	1:N:72:GLN:HG2	2.04	0.57
1:J:272:LYS:N	1:J:272:LYS:HD2	2.19	0.57
1:M:272:LYS:N	1:M:272:LYS:HD2	2.19	0.57
1:J:333:ILE:CD1	1:J:378:VAL:HG22	2.26	0.57
1:N:190:VAL:HG23	1:N:332:ILE:O	2.04	0.57
1:F:194:GLN:H	1:F:374:GLY:N	2.01	0.57
1:D:194:GLN:CG	1:D:375:GLY:O	2.52	0.57
1:L:69:MET:HE3	1:M:41:ASP:OD1	2.05	0.57
1:E:218:PRO:CB	1:E:246:PRO:HG2	2.32	0.57
1:C:218:PRO:CB	1:C:246:PRO:HG2	2.32	0.57
1:K:272:LYS:HD2	1:K:272:LYS:N	2.19	0.57
1:H:190:VAL:HG23	1:H:332:ILE:O	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:194:GLN:CG	1:A:375:GLY:O	2.52	0.57
1:G:326:ASN:HD22	1:G:329:THR:HB	1.70	0.57
1:A:49:ILE:HD12	1:B:513:LEU:HB3	1.85	0.57
1:A:200:LEU:O	1:A:201:SER:HB3	2.04	0.57
1:H:205:ILE:HA	1:H:213:VAL:HG22	1.86	0.57
1:C:16:MET:O	1:C:20:VAL:HG13	2.04	0.57
1:G:194:GLN:H	1:G:375:GLY:N	1.79	0.57
1:G:194:GLN:CG	1:G:375:GLY:O	2.52	0.57
1:K:513:LEU:HD13	1:L:49:ILE:CD1	2.29	0.57
1:L:218:PRO:CB	1:L:246:PRO:HG2	2.30	0.57
1:L:68:ASN:O	1:L:72:GLN:HG2	2.04	0.57
1:L:272:LYS:HD2	1:L:272:LYS:N	2.19	0.57
1:D:200:LEU:O	1:D:201:SER:HB3	2.04	0.56
1:K:205:ILE:HA	1:K:213:VAL:HG22	1.86	0.56
1:F:155:ASP:OD1	1:F:157:THR:HB	2.04	0.56
1:N:242:LYS:C	1:N:244:GLY:H	2.09	0.56
1:B:420:ILE:HD12	1:B:451:LEU:HD13	1.87	0.56
1:A:420:ILE:HD12	1:A:451:LEU:HD13	1.87	0.56
1:A:362:ARG:O	1:A:366:GLN:HG3	2.03	0.56
1:J:190:VAL:HG23	1:J:332:ILE:O	2.04	0.56
1:M:190:VAL:HG23	1:M:332:ILE:O	2.04	0.56
1:I:190:VAL:HG23	1:I:332:ILE:O	2.04	0.56
1:E:326:ASN:HD22	1:E:329:THR:HB	1.70	0.56
1:H:73:MET:HG2	1:I:47:PRO:HD2	1.87	0.56
1:D:235:PRO:CG	1:D:310:GLU:HA	2.29	0.56
1:F:382:GLY:O	1:F:389:MET:HG2	2.04	0.56
1:M:68:ASN:O	1:M:72:GLN:HG2	2.04	0.56
1:B:193:MET:C	1:B:375:GLY:N	2.50	0.56
1:F:245:LYS:HE3	1:G:231:ARG:NH2	2.15	0.56
1:G:193:MET:C	1:G:375:GLY:N	2.50	0.56
1:H:47:PRO:HD2	1:N:73:MET:HG2	1.87	0.56
1:I:73:MET:HG2	1:J:47:PRO:HD2	1.87	0.56
1:E:49:ILE:HD12	1:F:513:LEU:HD13	1.88	0.56
1:G:382:GLY:O	1:G:389:MET:HG2	2.04	0.56
1:D:326:ASN:HD22	1:D:329:THR:HB	1.70	0.56
1:C:326:ASN:HD22	1:C:329:THR:HB	1.70	0.56
1:I:69:MET:HE3	1:J:41:ASP:OD1	2.06	0.56
1:D:218:PRO:CB	1:D:246:PRO:HG2	2.32	0.56
1:J:68:ASN:O	1:J:72:GLN:HG2	2.04	0.56
1:E:155:ASP:OD1	1:E:157:THR:HB	2.04	0.56
1:B:326:ASN:HD22	1:B:329:THR:HB	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:41:ASP:HB3	1:N:521:VAL:O	2.03	0.56
1:I:242:LYS:C	1:I:244:GLY:H	2.09	0.56
1:C:404:ARG:HH11	1:C:404:ARG:HG2	1.69	0.56
1:D:245:LYS:HZ2	1:D:319:GLN:HE22	1.54	0.56
1:G:183:LEU:O	1:G:184:GLN:HB2	2.06	0.56
1:F:49:ILE:HD12	1:G:513:LEU:HD13	1.88	0.56
1:M:205:ILE:HA	1:M:213:VAL:HG22	1.86	0.56
1:A:86:GLY:HA3	1:A:401:HIS:NE2	2.10	0.56
1:B:194:GLN:CG	1:B:375:GLY:O	2.52	0.56
1:A:326:ASN:HD22	1:A:329:THR:HB	1.70	0.56
1:L:69:MET:CE	1:M:41:ASP:CG	2.74	0.56
1:F:183:LEU:O	1:F:184:GLN:HB2	2.06	0.56
1:I:513:LEU:HD13	1:J:49:ILE:CD1	2.28	0.56
1:E:235:PRO:CG	1:E:310:GLU:HA	2.29	0.56
1:D:49:ILE:HD12	1:E:513:LEU:HD13	1.88	0.56
1:L:242:LYS:C	1:L:244:GLY:H	2.09	0.56
1:K:69:MET:CE	1:L:41:ASP:CG	2.74	0.56
1:C:406:ALA:CB	1:C:496:PRO:HG3	2.35	0.56
1:C:206:ASN:HD21	1:C:214:GLU:H	1.54	0.56
1:D:206:ASN:HD21	1:D:214:GLU:H	1.54	0.56
1:M:242:LYS:C	1:M:244:GLY:H	2.09	0.56
1:H:242:LYS:C	1:H:244:GLY:H	2.09	0.56
1:A:245:LYS:HZ2	1:A:319:GLN:HE22	1.52	0.56
1:M:69:MET:CE	1:N:41:ASP:CG	2.74	0.56
1:L:513:LEU:HD13	1:M:49:ILE:CD1	2.29	0.56
1:A:235:PRO:CG	1:A:310:GLU:HA	2.29	0.56
1:L:205:ILE:HA	1:L:213:VAL:HG22	1.86	0.56
1:N:205:ILE:HA	1:N:213:VAL:HG22	1.86	0.56
1:L:160:LYS:O	1:L:164:GLU:HG3	2.06	0.56
1:N:160:LYS:O	1:N:164:GLU:HG3	2.06	0.56
1:I:160:LYS:O	1:I:164:GLU:HG3	2.06	0.56
1:K:190:VAL:HG23	1:K:332:ILE:O	2.03	0.55
1:G:86:GLY:HA3	1:G:401:HIS:NE2	2.10	0.55
1:J:73:MET:HG2	1:K:47:PRO:HD2	1.87	0.55
1:N:218:PRO:CB	1:N:246:PRO:HG2	2.30	0.55
1:M:23:LEU:CD2	1:M:74:VAL:HG13	2.37	0.55
1:N:386:GLU:O	1:N:390:LYS:HG2	2.07	0.55
1:E:41:ASP:CG	1:F:69:MET:HE3	2.25	0.55
1:M:218:PRO:CB	1:M:246:PRO:HG2	2.30	0.55
1:H:160:LYS:O	1:H:164:GLU:HG3	2.06	0.55
1:N:190:VAL:CG1	1:N:334:ASP:HB2	2.35	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:190:VAL:CG1	1:M:334:ASP:HB2	2.35	0.55
1:L:190:VAL:HG23	1:L:332:ILE:O	2.04	0.55
1:A:245:LYS:HE3	1:B:231:ARG:NH2	2.15	0.55
1:H:41:ASP:OD1	1:N:69:MET:HE3	2.06	0.55
1:L:73:MET:HG2	1:M:47:PRO:HD2	1.87	0.55
1:A:49:ILE:HD12	1:B:513:LEU:HD13	1.88	0.55
1:K:23:LEU:CD2	1:K:74:VAL:HG13	2.37	0.55
1:L:23:LEU:CD2	1:L:74:VAL:HG13	2.37	0.55
1:H:386:GLU:O	1:H:390:LYS:HG2	2.07	0.55
1:E:39:VAL:HB	1:F:519:CYS:O	2.07	0.55
1:J:69:MET:CE	1:K:41:ASP:CG	2.74	0.55
1:K:73:MET:HG2	1:L:47:PRO:HD2	1.87	0.55
1:J:513:LEU:HD13	1:K:49:ILE:CD1	2.29	0.55
1:B:206:ASN:HD21	1:B:214:GLU:H	1.54	0.55
1:J:386:GLU:O	1:J:390:LYS:HG2	2.07	0.55
1:C:194:GLN:CG	1:C:375:GLY:O	2.52	0.55
1:A:39:VAL:HB	1:B:519:CYS:O	2.07	0.55
1:A:183:LEU:O	1:A:184:GLN:HB2	2.06	0.55
1:C:49:ILE:HD12	1:D:513:LEU:HD13	1.88	0.55
1:B:49:ILE:HD12	1:C:513:LEU:HD13	1.88	0.55
1:F:406:ALA:CB	1:F:496:PRO:HG3	2.35	0.55
1:F:39:VAL:HB	1:G:519:CYS:O	2.07	0.55
1:I:521:VAL:O	1:J:41:ASP:HB3	2.03	0.55
1:B:49:ILE:HD12	1:C:513:LEU:HB3	1.85	0.55
1:E:206:ASN:HD21	1:E:214:GLU:H	1.54	0.55
1:H:69:MET:CE	1:I:41:ASP:CG	2.74	0.55
1:H:41:ASP:CG	1:N:69:MET:CE	2.74	0.55
1:D:183:LEU:O	1:D:184:GLN:HB2	2.06	0.55
1:I:69:MET:CE	1:J:41:ASP:CG	2.74	0.55
1:K:69:MET:HE1	1:L:41:ASP:CB	2.36	0.55
1:K:386:GLU:O	1:K:390:LYS:HG2	2.07	0.55
1:N:23:LEU:CD2	1:N:74:VAL:HG13	2.37	0.55
1:C:39:VAL:HB	1:D:519:CYS:O	2.07	0.55
1:D:39:VAL:HB	1:E:519:CYS:O	2.07	0.55
1:M:73:MET:HG2	1:N:47:PRO:HD2	1.87	0.55
1:L:521:VAL:O	1:M:41:ASP:HB3	2.03	0.55
1:B:183:LEU:O	1:B:184:GLN:HB2	2.06	0.55
1:K:176:THR:HG22	1:K:177:VAL:N	2.22	0.55
1:M:386:GLU:O	1:M:390:LYS:HG2	2.07	0.55
1:I:23:LEU:HD22	1:I:74:VAL:HG13	1.89	0.55
1:J:160:LYS:O	1:J:164:GLU:HG3	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:386:GLU:O	1:I:390:LYS:HG2	2.07	0.55
1:F:194:GLN:CD	1:F:375:GLY:O	2.46	0.55
1:K:69:MET:CE	1:L:41:ASP:HB2	2.36	0.55
1:C:183:LEU:O	1:C:184:GLN:HB2	2.06	0.55
1:H:49:ILE:CD1	1:N:513:LEU:HD13	2.28	0.55
1:L:176:THR:HG22	1:L:177:VAL:N	2.22	0.55
1:K:16:MET:O	1:K:20:VAL:HG13	2.07	0.55
1:J:242:LYS:C	1:J:244:GLY:H	2.09	0.55
1:A:114:MET:HE1	1:G:51:LYS:HZ3	1.72	0.55
1:B:39:VAL:HB	1:C:519:CYS:O	2.07	0.55
1:H:69:MET:HE3	1:I:41:ASP:OD1	2.07	0.55
1:L:69:MET:CE	1:M:41:ASP:HB2	2.36	0.55
1:A:513:LEU:HD13	1:G:49:ILE:HD12	1.88	0.55
1:I:176:THR:HG22	1:I:177:VAL:N	2.22	0.55
1:K:242:LYS:C	1:K:244:GLY:H	2.09	0.55
1:F:326:ASN:HD22	1:F:329:THR:HB	1.70	0.54
1:L:70:GLY:HA2	1:L:73:MET:HE3	1.89	0.54
1:M:160:LYS:O	1:M:164:GLU:HG3	2.06	0.54
1:L:386:GLU:O	1:L:390:LYS:HG2	2.07	0.54
1:J:23:LEU:HD22	1:J:74:VAL:HG13	1.89	0.54
1:J:190:VAL:CG1	1:J:334:ASP:HB2	2.35	0.54
1:A:194:GLN:CD	1:A:375:GLY:O	2.46	0.54
1:A:41:ASP:CG	1:B:69:MET:HE3	2.28	0.54
1:K:69:MET:HE3	1:L:41:ASP:OD1	2.07	0.54
1:A:406:ALA:CB	1:A:496:PRO:HG3	2.35	0.54
1:M:176:THR:HG22	1:M:177:VAL:N	2.22	0.54
1:J:23:LEU:CD2	1:J:74:VAL:HG13	2.37	0.54
1:A:160:LYS:O	1:A:164:GLU:HG3	2.08	0.54
1:K:160:LYS:O	1:K:164:GLU:HG3	2.06	0.54
1:B:194:GLN:CD	1:B:375:GLY:O	2.46	0.54
1:A:519:CYS:O	1:G:39:VAL:HB	2.07	0.54
1:C:194:GLN:CD	1:C:375:GLY:O	2.46	0.54
1:M:521:VAL:O	1:N:41:ASP:HB3	2.03	0.54
1:D:183:LEU:HD12	1:D:184:GLN:HG3	1.89	0.54
1:E:183:LEU:O	1:E:184:GLN:HB2	2.06	0.54
1:M:200:LEU:O	1:M:201:SER:HB3	2.07	0.54
1:N:176:THR:HG22	1:N:177:VAL:N	2.22	0.54
1:N:16:MET:O	1:N:20:VAL:HG13	2.07	0.54
1:I:16:MET:O	1:I:20:VAL:HG13	2.07	0.54
1:D:160:LYS:O	1:D:164:GLU:HG3	2.08	0.54
1:K:193:MET:CE	1:K:292:ILE:HG12	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:194:GLN:CD	1:D:375:GLY:O	2.46	0.54
1:G:245:LYS:HZ2	1:G:319:GLN:HE22	1.54	0.54
1:A:183:LEU:HD12	1:A:184:GLN:HG3	1.89	0.54
1:L:200:LEU:O	1:L:201:SER:HB3	2.07	0.54
1:F:160:LYS:O	1:F:164:GLU:HG3	2.08	0.54
1:H:23:LEU:HD22	1:H:74:VAL:HG13	1.89	0.54
1:A:206:ASN:HD21	1:A:214:GLU:H	1.54	0.54
1:N:193:MET:CE	1:N:292:ILE:HG12	2.38	0.54
1:I:193:MET:CE	1:I:292:ILE:HG12	2.38	0.54
1:E:194:GLN:CD	1:E:375:GLY:O	2.46	0.54
1:I:69:MET:CE	1:J:41:ASP:HB2	2.36	0.54
1:E:183:LEU:HD12	1:E:184:GLN:HG3	1.89	0.54
1:K:200:LEU:O	1:K:201:SER:HB3	2.07	0.54
1:J:176:THR:HG22	1:J:177:VAL:N	2.22	0.54
1:I:160:LYS:HB2	1:I:160:LYS:NZ	2.23	0.54
1:J:16:MET:O	1:J:20:VAL:HG13	2.07	0.54
1:H:16:MET:O	1:H:20:VAL:HG13	2.07	0.54
1:F:386:GLU:O	1:F:390:LYS:HG2	2.08	0.54
1:L:193:MET:CE	1:L:292:ILE:HG12	2.38	0.54
1:N:160:LYS:HB2	1:N:160:LYS:NZ	2.23	0.54
1:J:160:LYS:NZ	1:J:160:LYS:HB2	2.23	0.54
1:G:386:GLU:O	1:G:390:LYS:HG2	2.08	0.54
1:J:69:MET:CE	1:K:41:ASP:HB2	2.36	0.54
1:C:235:PRO:CG	1:C:310:GLU:HA	2.29	0.54
1:D:406:ALA:CB	1:D:496:PRO:HG3	2.35	0.54
1:L:23:LEU:HD22	1:L:74:VAL:HG13	1.89	0.54
1:E:386:GLU:O	1:E:390:LYS:HG2	2.08	0.54
1:F:206:ASN:HD21	1:F:214:GLU:H	1.54	0.54
1:L:191:GLU:O	1:L:332:ILE:HB	2.08	0.54
1:C:49:ILE:HD12	1:D:513:LEU:HB3	1.84	0.54
1:H:305:ILE:O	1:H:305:ILE:HG22	2.08	0.54
1:C:305:ILE:HG22	1:C:305:ILE:O	2.08	0.54
1:M:23:LEU:HD22	1:M:74:VAL:HG13	1.89	0.54
1:H:160:LYS:HB2	1:H:160:LYS:NZ	2.23	0.54
1:I:23:LEU:CD2	1:I:74:VAL:HG13	2.37	0.54
1:N:136:VAL:HG12	1:N:137:PRO:N	2.23	0.54
1:G:160:LYS:O	1:G:164:GLU:HG3	2.08	0.54
1:M:16:MET:O	1:M:20:VAL:HG13	2.07	0.54
1:I:191:GLU:O	1:I:332:ILE:HB	2.08	0.54
1:C:86:GLY:HA3	1:C:401:HIS:NE2	2.10	0.54
1:B:183:LEU:HD12	1:B:184:GLN:HG3	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:235:PRO:CG	1:G:310:GLU:HA	2.29	0.54
1:C:386:GLU:O	1:C:390:LYS:HG2	2.08	0.54
1:N:319:GLN:O	1:N:336:VAL:HG23	2.08	0.54
1:A:193:MET:C	1:A:375:GLY:N	2.50	0.54
1:E:194:GLN:H	1:E:375:GLY:N	1.79	0.54
1:C:183:LEU:HD12	1:C:184:GLN:HG3	1.89	0.54
1:N:305:ILE:O	1:N:305:ILE:HG22	2.08	0.54
1:L:16:MET:O	1:L:20:VAL:HG13	2.07	0.54
1:J:193:MET:CE	1:J:292:ILE:HG12	2.38	0.53
1:H:190:VAL:CG1	1:H:334:ASP:HB2	2.35	0.53
1:G:194:GLN:CD	1:G:375:GLY:O	2.46	0.53
1:I:73:MET:O	1:I:76:GLU:HB2	2.09	0.53
1:K:69:MET:CE	1:L:41:ASP:CB	2.86	0.53
1:G:183:LEU:HD12	1:G:184:GLN:HG3	1.89	0.53
1:M:305:ILE:O	1:M:305:ILE:HG22	2.08	0.53
1:H:23:LEU:CD2	1:H:74:VAL:HG13	2.37	0.53
1:D:202:PRO:O	1:D:203:TYR:HB2	2.08	0.53
1:D:301:ILE:HG21	1:D:309:LEU:HD23	1.90	0.53
1:E:160:LYS:O	1:E:164:GLU:HG3	2.08	0.53
1:A:386:GLU:O	1:A:390:LYS:HG2	2.08	0.53
1:G:206:ASN:HD21	1:G:214:GLU:H	1.54	0.53
1:M:193:MET:C	1:M:376:VAL:HG23	2.29	0.53
1:A:69:MET:HE3	1:G:41:ASP:CG	2.28	0.53
1:J:73:MET:O	1:J:76:GLU:HB2	2.09	0.53
1:K:73:MET:O	1:K:76:GLU:HB2	2.09	0.53
1:J:200:LEU:O	1:J:201:SER:HB3	2.07	0.53
1:H:200:LEU:O	1:H:201:SER:HB3	2.07	0.53
1:N:382:GLY:O	1:N:389:MET:HG2	2.08	0.53
1:H:176:THR:HG22	1:H:177:VAL:N	2.22	0.53
1:B:305:ILE:O	1:B:305:ILE:HG22	2.08	0.53
1:K:160:LYS:HB2	1:K:160:LYS:NZ	2.23	0.53
1:C:301:ILE:HG21	1:C:309:LEU:HD23	1.90	0.53
1:B:160:LYS:O	1:B:164:GLU:HG3	2.08	0.53
1:M:136:VAL:HG12	1:M:137:PRO:N	2.23	0.53
1:K:191:GLU:O	1:K:332:ILE:HB	2.08	0.53
1:K:193:MET:C	1:K:376:VAL:HG23	2.29	0.53
1:H:191:GLU:O	1:H:332:ILE:HB	2.08	0.53
1:H:193:MET:CE	1:H:292:ILE:HG12	2.38	0.53
1:M:73:MET:O	1:M:76:GLU:HB2	2.09	0.53
1:H:69:MET:CE	1:I:41:ASP:CB	2.86	0.53
1:H:41:ASP:CB	1:N:69:MET:CE	2.86	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:521:VAL:O	1:L:41:ASP:HB3	2.03	0.53
1:D:305:ILE:O	1:D:305:ILE:HG22	2.08	0.53
1:L:319:GLN:O	1:L:336:VAL:HG23	2.08	0.53
1:G:301:ILE:HG21	1:G:309:LEU:HD23	1.90	0.53
1:C:202:PRO:O	1:C:203:TYR:HB2	2.08	0.53
1:H:136:VAL:HG12	1:H:137:PRO:N	2.23	0.53
1:C:160:LYS:O	1:C:164:GLU:HG3	2.08	0.53
1:M:319:GLN:O	1:M:336:VAL:HG23	2.08	0.53
1:K:319:GLN:O	1:K:336:VAL:HG23	2.08	0.53
1:J:193:MET:C	1:J:376:VAL:HG23	2.29	0.53
1:L:193:MET:C	1:L:376:VAL:HG23	2.29	0.53
1:H:383:ALA:O	1:H:384:ALA:HB3	2.09	0.53
1:H:382:GLY:O	1:H:389:MET:HG2	2.08	0.53
1:I:382:GLY:O	1:I:389:MET:HG2	2.08	0.53
1:J:382:GLY:O	1:J:389:MET:HG2	2.08	0.53
1:F:305:ILE:HG22	1:F:305:ILE:O	2.08	0.53
1:E:305:ILE:HG22	1:E:305:ILE:O	2.08	0.53
1:K:23:LEU:HD22	1:K:74:VAL:HG13	1.89	0.53
1:D:386:GLU:O	1:D:390:LYS:HG2	2.08	0.53
1:H:319:GLN:O	1:H:336:VAL:HG23	2.08	0.53
1:F:51:LYS:NZ	1:G:114:MET:HE1	2.23	0.53
1:J:191:GLU:O	1:J:332:ILE:HB	2.08	0.53
1:N:193:MET:C	1:N:376:VAL:HG23	2.29	0.53
1:F:183:LEU:HD12	1:F:184:GLN:HG3	1.89	0.53
1:M:513:LEU:HD13	1:N:49:ILE:CD1	2.28	0.53
1:E:252:GLU:O	1:E:253:ASP:HB2	2.09	0.53
1:N:200:LEU:O	1:N:201:SER:HB3	2.07	0.53
1:B:386:GLU:O	1:B:390:LYS:HG2	2.08	0.53
1:M:193:MET:CE	1:M:292:ILE:HG12	2.38	0.53
1:I:193:MET:C	1:I:376:VAL:HG23	2.29	0.53
1:A:194:GLN:HB2	1:A:375:GLY:CA	2.39	0.53
1:C:194:GLN:HB2	1:C:375:GLY:CA	2.39	0.53
1:N:183:LEU:HD12	1:N:184:GLN:HG3	1.91	0.53
1:N:73:MET:O	1:N:76:GLU:HB2	2.09	0.53
1:I:383:ALA:O	1:I:384:ALA:HB3	2.09	0.53
1:C:252:GLU:O	1:C:253:ASP:HB2	2.09	0.53
1:K:382:GLY:O	1:K:389:MET:HG2	2.08	0.53
1:I:305:ILE:HG22	1:I:305:ILE:O	2.08	0.53
1:A:242:LYS:C	1:A:244:GLY:H	2.12	0.53
1:E:301:ILE:HG21	1:E:309:LEU:HD23	1.90	0.53
1:E:242:LYS:C	1:E:244:GLY:H	2.12	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:86:GLY:O	1:C:401:HIS:CE1	2.62	0.53
1:E:86:GLY:O	1:E:401:HIS:CE1	2.62	0.53
1:F:41:ASP:CG	1:G:69:MET:HE3	2.29	0.53
1:M:183:LEU:HD12	1:M:184:GLN:HG3	1.91	0.53
1:I:70:GLY:HA2	1:I:73:MET:HE3	1.89	0.53
1:G:252:GLU:O	1:G:253:ASP:HB2	2.09	0.53
1:L:305:ILE:O	1:L:305:ILE:HG22	2.08	0.53
1:L:160:LYS:NZ	1:L:160:LYS:HB2	2.23	0.53
1:N:23:LEU:HD22	1:N:74:VAL:HG13	1.89	0.53
1:C:242:LYS:C	1:C:244:GLY:H	2.12	0.53
1:K:136:VAL:HG12	1:K:137:PRO:N	2.23	0.53
1:D:242:LYS:C	1:D:244:GLY:H	2.12	0.53
1:F:301:ILE:HG21	1:F:309:LEU:HD23	1.90	0.53
1:D:193:MET:C	1:D:375:GLY:N	2.50	0.53
1:H:73:MET:O	1:H:76:GLU:HB2	2.09	0.53
1:M:160:LYS:NZ	1:M:160:LYS:HB2	2.23	0.53
1:H:193:MET:C	1:H:376:VAL:HG23	2.29	0.53
1:B:86:GLY:O	1:B:401:HIS:CE1	2.62	0.53
1:M:70:GLY:HA2	1:M:73:MET:HE3	1.91	0.53
1:H:70:GLY:HA2	1:H:73:MET:HE3	1.89	0.53
1:N:383:ALA:O	1:N:384:ALA:HB3	2.09	0.53
1:L:69:MET:CE	1:M:41:ASP:CB	2.86	0.53
1:I:200:LEU:O	1:I:201:SER:HB3	2.07	0.53
1:N:266:THR:CG2	1:N:273:VAL:H	2.22	0.53
1:G:305:ILE:O	1:G:305:ILE:HG22	2.08	0.53
1:B:301:ILE:HG21	1:B:309:LEU:HD23	1.90	0.53
1:I:136:VAL:HG12	1:I:137:PRO:N	2.23	0.53
1:A:301:ILE:HG21	1:A:309:LEU:HD23	1.90	0.53
1:L:136:VAL:HG12	1:L:137:PRO:N	2.23	0.53
1:M:191:GLU:O	1:M:332:ILE:HB	2.08	0.53
1:A:86:GLY:O	1:A:401:HIS:CE1	2.62	0.53
1:F:86:GLY:O	1:F:401:HIS:CE1	2.62	0.53
1:F:245:LYS:HE3	1:G:231:ARG:HH21	1.70	0.53
1:E:194:GLN:HB2	1:E:375:GLY:CA	2.39	0.53
1:J:70:GLY:HA2	1:J:73:MET:HE3	1.90	0.53
1:I:69:MET:CE	1:J:41:ASP:CB	2.86	0.53
1:J:383:ALA:O	1:J:384:ALA:HB3	2.09	0.53
1:A:252:GLU:O	1:A:253:ASP:HB2	2.09	0.53
1:L:382:GLY:O	1:L:389:MET:HG2	2.08	0.53
1:J:136:VAL:HG12	1:J:137:PRO:N	2.23	0.53
1:J:319:GLN:O	1:J:336:VAL:HG23	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:69:MET:CE	1:N:41:ASP:CB	2.86	0.52
1:L:183:LEU:HD12	1:L:184:GLN:HG3	1.91	0.52
1:M:382:GLY:O	1:M:389:MET:HG2	2.08	0.52
1:K:266:THR:CG2	1:K:273:VAL:H	2.22	0.52
1:L:291:ASP:OD2	1:L:368:ARG:HD2	2.10	0.52
1:N:191:GLU:O	1:N:332:ILE:HB	2.08	0.52
1:F:39:VAL:CG2	1:G:517:THR:CB	2.86	0.52
1:M:383:ALA:O	1:M:384:ALA:HB3	2.09	0.52
1:B:252:GLU:O	1:B:253:ASP:HB2	2.09	0.52
1:K:305:ILE:O	1:K:305:ILE:HG22	2.08	0.52
1:G:242:LYS:C	1:G:244:GLY:H	2.12	0.52
1:D:86:GLY:O	1:D:401:HIS:CE1	2.62	0.52
1:A:69:MET:CE	1:G:41:ASP:CA	2.88	0.52
1:E:41:ASP:CA	1:F:69:MET:CE	2.88	0.52
1:F:41:ASP:CA	1:G:69:MET:CE	2.88	0.52
1:N:183:LEU:CD1	1:N:184:GLN:HG3	2.40	0.52
1:J:69:MET:CE	1:K:41:ASP:CB	2.86	0.52
1:N:70:GLY:HA2	1:N:73:MET:HE3	1.91	0.52
1:L:73:MET:O	1:L:76:GLU:HB2	2.09	0.52
1:A:305:ILE:HG22	1:A:305:ILE:O	2.08	0.52
1:D:41:ASP:CA	1:E:69:MET:CE	2.88	0.52
1:H:41:ASP:HB2	1:N:69:MET:CE	2.36	0.52
1:K:383:ALA:O	1:K:384:ALA:HB3	2.09	0.52
1:K:70:GLY:HA2	1:K:73:MET:HE3	1.91	0.52
1:L:183:LEU:CD1	1:L:184:GLN:HG3	2.40	0.52
1:D:252:GLU:O	1:D:253:ASP:HB2	2.09	0.52
1:J:305:ILE:O	1:J:305:ILE:HG22	2.08	0.52
1:E:202:PRO:O	1:E:203:TYR:HB2	2.08	0.52
1:M:291:ASP:OD2	1:M:368:ARG:HD2	2.10	0.52
1:N:333:ILE:HG21	1:N:378:VAL:CG2	2.36	0.52
1:M:333:ILE:HG21	1:M:378:VAL:CG2	2.36	0.52
1:G:86:GLY:O	1:G:401:HIS:CE1	2.62	0.52
1:G:194:GLN:HB2	1:G:375:GLY:CA	2.39	0.52
1:C:41:ASP:CA	1:D:69:MET:CE	2.88	0.52
1:A:41:ASP:HB3	1:B:521:VAL:O	2.07	0.52
1:A:41:ASP:CA	1:B:69:MET:CE	2.88	0.52
1:M:183:LEU:CD1	1:M:184:GLN:HG3	2.40	0.52
1:H:41:ASP:CB	1:N:69:MET:HE1	2.36	0.52
1:A:183:LEU:CD1	1:A:184:GLN:HG3	2.39	0.52
1:G:183:LEU:CD1	1:G:184:GLN:HG3	2.39	0.52
1:I:266:THR:CG2	1:I:273:VAL:H	2.22	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:202:PRO:O	1:G:203:TYR:HB2	2.08	0.52
1:B:194:GLN:HB2	1:B:375:GLY:CA	2.39	0.52
1:D:194:GLN:HB2	1:D:375:GLY:CA	2.39	0.52
1:C:193:MET:C	1:C:375:GLY:N	2.50	0.52
1:H:183:LEU:HD12	1:H:184:GLN:HG3	1.91	0.52
1:L:383:ALA:O	1:L:384:ALA:HB3	2.09	0.52
1:E:183:LEU:CD1	1:E:184:GLN:HG3	2.39	0.52
1:M:266:THR:CG2	1:M:273:VAL:H	2.22	0.52
1:I:319:GLN:O	1:I:336:VAL:HG23	2.08	0.52
1:A:202:PRO:O	1:A:203:TYR:HB2	2.08	0.52
1:B:183:LEU:CD1	1:B:184:GLN:HG3	2.39	0.52
1:F:252:GLU:O	1:F:253:ASP:HB2	2.09	0.52
1:N:136:VAL:CG1	1:N:137:PRO:HD3	2.40	0.52
1:F:242:LYS:C	1:F:244:GLY:H	2.12	0.52
1:J:291:ASP:OD2	1:J:368:ARG:HD2	2.10	0.52
1:K:291:ASP:OD2	1:K:368:ARG:HD2	2.10	0.52
1:F:194:GLN:HB2	1:F:375:GLY:CA	2.39	0.52
1:F:183:LEU:CD1	1:F:184:GLN:HG3	2.39	0.52
1:L:266:THR:CG2	1:L:273:VAL:H	2.22	0.52
1:C:176:THR:HG22	1:C:177:VAL:N	2.25	0.52
1:H:301:ILE:HG21	1:H:309:LEU:HD23	1.92	0.52
1:B:242:LYS:C	1:B:244:GLY:H	2.12	0.52
1:I:90:THR:O	1:I:94:VAL:HG13	2.10	0.52
1:B:41:ASP:CA	1:C:69:MET:CE	2.88	0.52
1:K:183:LEU:HD12	1:K:184:GLN:HG3	1.91	0.52
1:A:114:MET:CE	1:G:51:LYS:NZ	2.73	0.52
1:M:90:THR:O	1:M:94:VAL:HG13	2.10	0.52
1:N:301:ILE:HG21	1:N:309:LEU:HD23	1.92	0.52
1:N:90:THR:O	1:N:94:VAL:HG13	2.10	0.52
1:H:90:THR:O	1:H:94:VAL:HG13	2.10	0.52
1:E:51:LYS:NZ	1:F:114:MET:CE	2.73	0.52
1:D:51:LYS:NZ	1:E:114:MET:CE	2.73	0.52
1:A:245:LYS:HE3	1:B:231:ARG:HH21	1.70	0.52
1:H:183:LEU:CD1	1:H:184:GLN:HG3	2.40	0.52
1:B:176:THR:HG22	1:B:177:VAL:N	2.25	0.52
1:M:301:ILE:HG21	1:M:309:LEU:HD23	1.92	0.52
1:A:517:THR:CB	1:G:39:VAL:CG2	2.86	0.51
1:I:183:LEU:CD1	1:I:184:GLN:HG3	2.40	0.51
1:C:183:LEU:CD1	1:C:184:GLN:HG3	2.39	0.51
1:E:180:GLY:HA3	1:E:381:VAL:O	2.11	0.51
1:J:266:THR:CG2	1:J:273:VAL:H	2.22	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:136:VAL:CG1	1:M:137:PRO:HD3	2.40	0.51
1:B:202:PRO:O	1:B:203:TYR:HB2	2.08	0.51
1:F:202:PRO:O	1:F:203:TYR:HB2	2.08	0.51
1:H:69:MET:CE	1:I:41:ASP:HB2	2.36	0.51
1:B:180:GLY:HA3	1:B:381:VAL:O	2.10	0.51
1:H:266:THR:CG2	1:H:273:VAL:H	2.22	0.51
1:J:136:VAL:CG1	1:J:137:PRO:HD3	2.40	0.51
1:C:51:LYS:NZ	1:D:114:MET:CE	2.73	0.51
1:I:301:ILE:HG21	1:I:309:LEU:HD23	1.92	0.51
1:I:291:ASP:OD2	1:I:368:ARG:HD2	2.10	0.51
1:D:183:LEU:CD1	1:D:184:GLN:HG3	2.39	0.51
1:D:180:GLY:HA3	1:D:381:VAL:O	2.10	0.51
1:F:180:GLY:HA3	1:F:381:VAL:O	2.10	0.51
1:H:291:ASP:OD2	1:H:368:ARG:HD2	2.10	0.51
1:B:51:LYS:NZ	1:C:114:MET:CE	2.73	0.51
1:H:39:VAL:HG21	1:N:517:THR:OG1	2.11	0.51
1:E:310:GLU:N	1:E:310:GLU:OE1	2.44	0.51
1:G:310:GLU:OE1	1:G:310:GLU:N	2.44	0.51
1:D:160:LYS:NZ	1:D:160:LYS:HB2	2.26	0.51
1:C:160:LYS:HB2	1:C:160:LYS:NZ	2.26	0.51
1:J:90:THR:O	1:J:94:VAL:HG13	2.10	0.51
1:N:291:ASP:OD2	1:N:368:ARG:HD2	2.10	0.51
1:K:190:VAL:CG1	1:K:334:ASP:HB2	2.35	0.51
1:B:193:MET:CE	1:B:292:ILE:HG12	2.41	0.51
1:A:371:LYS:CB	1:A:374:GLY:N	2.74	0.51
1:G:371:LYS:CB	1:G:374:GLY:N	2.74	0.51
1:K:183:LEU:CD1	1:K:184:GLN:HG3	2.40	0.51
1:E:383:ALA:O	1:E:384:ALA:HB3	2.11	0.51
1:L:517:THR:OG1	1:M:39:VAL:HG21	2.11	0.51
1:F:310:GLU:OE1	1:F:310:GLU:N	2.44	0.51
1:I:517:THR:OG1	1:J:39:VAL:HG21	2.11	0.51
1:F:193:MET:CE	1:F:292:ILE:HG12	2.41	0.51
1:J:73:MET:HG2	1:K:47:PRO:CD	2.41	0.51
1:K:73:MET:HG2	1:L:47:PRO:CD	2.41	0.51
1:J:183:LEU:CD1	1:J:184:GLN:HG3	2.40	0.51
1:J:183:LEU:HD12	1:J:184:GLN:HG3	1.91	0.51
1:D:176:THR:HG22	1:D:177:VAL:N	2.25	0.51
1:L:301:ILE:HG21	1:L:309:LEU:HD23	1.92	0.51
1:L:90:THR:O	1:L:94:VAL:HG13	2.10	0.51
1:B:371:LYS:CB	1:B:374:GLY:N	2.74	0.51
1:D:193:MET:CE	1:D:292:ILE:HG12	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:39:VAL:CG2	1:F:517:THR:HG21	2.01	0.51
1:D:383:ALA:O	1:D:384:ALA:HB3	2.11	0.51
1:F:383:ALA:O	1:F:384:ALA:HB3	2.11	0.51
1:A:218:PRO:CB	1:A:246:PRO:HG2	2.32	0.51
1:G:180:GLY:HA3	1:G:381:VAL:O	2.10	0.51
1:F:176:THR:HG22	1:F:177:VAL:N	2.25	0.51
1:B:160:LYS:NZ	1:B:160:LYS:HB2	2.26	0.51
1:K:136:VAL:CG1	1:K:137:PRO:HD3	2.40	0.51
1:B:458:CYS:SG	1:B:480:ALA:HB1	2.51	0.51
1:A:51:LYS:NZ	1:B:114:MET:CE	2.73	0.51
1:F:371:LYS:CB	1:F:374:GLY:N	2.74	0.51
1:B:41:ASP:CA	1:C:69:MET:HE3	2.41	0.51
1:L:73:MET:HG2	1:M:47:PRO:CD	2.41	0.51
1:H:513:LEU:HD13	1:I:49:ILE:CD1	2.28	0.51
1:D:310:GLU:OE1	1:D:310:GLU:N	2.44	0.51
1:B:310:GLU:OE1	1:B:310:GLU:N	2.44	0.51
1:A:114:MET:CE	1:G:51:LYS:HZ3	2.24	0.51
1:H:136:VAL:CG1	1:H:137:PRO:HD3	2.40	0.51
1:N:193:MET:HA	1:N:375:GLY:CA	2.41	0.51
1:H:193:MET:HA	1:H:375:GLY:CA	2.41	0.51
1:H:333:ILE:HG21	1:H:378:VAL:CG2	2.36	0.51
1:B:193:MET:HA	1:B:375:GLY:N	2.26	0.51
1:E:39:VAL:CG2	1:F:517:THR:CB	2.86	0.51
1:A:521:VAL:O	1:G:41:ASP:HB3	2.07	0.51
1:H:69:MET:HE1	1:I:41:ASP:CB	2.36	0.51
1:I:183:LEU:HD12	1:I:184:GLN:HG3	1.91	0.51
1:I:73:MET:HG2	1:J:47:PRO:CD	2.41	0.51
1:A:176:THR:HG22	1:A:177:VAL:N	2.25	0.51
1:C:287:ALA:HB1	1:C:368:ARG:NH1	2.26	0.51
1:A:160:LYS:HB2	1:A:160:LYS:NZ	2.26	0.51
1:J:301:ILE:HG21	1:J:309:LEU:HD23	1.92	0.51
1:E:458:CYS:SG	1:E:480:ALA:HB1	2.51	0.51
1:G:193:MET:HA	1:G:375:GLY:N	2.26	0.51
1:C:193:MET:CE	1:C:292:ILE:HG12	2.41	0.51
1:K:517:THR:OG1	1:L:39:VAL:HG21	2.11	0.51
1:C:310:GLU:OE1	1:C:310:GLU:N	2.44	0.51
1:G:287:ALA:HB1	1:G:368:ARG:NH1	2.26	0.51
1:A:287:ALA:HB1	1:A:368:ARG:NH1	2.26	0.51
1:B:287:ALA:HB1	1:B:368:ARG:NH1	2.26	0.51
1:I:136:VAL:CG1	1:I:137:PRO:HD3	2.40	0.51
1:L:136:VAL:CG1	1:L:137:PRO:HD3	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:458:CYS:SG	1:C:480:ALA:HB1	2.51	0.51
1:F:209:GLU:OE1	1:F:209:GLU:N	2.44	0.51
1:E:86:GLY:HA3	1:E:401:HIS:NE2	2.10	0.50
1:D:193:MET:HA	1:D:375:GLY:N	2.26	0.50
1:G:193:MET:CE	1:G:292:ILE:HG12	2.41	0.50
1:E:193:MET:CE	1:E:292:ILE:HG12	2.41	0.50
1:E:193:MET:HA	1:E:375:GLY:N	2.26	0.50
1:A:39:VAL:CG2	1:B:517:THR:CB	2.86	0.50
1:F:41:ASP:CA	1:G:69:MET:HE1	2.40	0.50
1:M:69:MET:HE3	1:N:41:ASP:CG	2.32	0.50
1:A:383:ALA:O	1:A:384:ALA:HB3	2.11	0.50
1:C:383:ALA:O	1:C:384:ALA:HB3	2.11	0.50
1:G:383:ALA:O	1:G:384:ALA:HB3	2.11	0.50
1:A:310:GLU:N	1:A:310:GLU:OE1	2.44	0.50
1:A:180:GLY:HA3	1:A:381:VAL:O	2.11	0.50
1:D:287:ALA:HB1	1:D:368:ARG:NH1	2.26	0.50
1:J:202:PRO:O	1:J:203:TYR:HB2	2.11	0.50
1:N:202:PRO:O	1:N:203:TYR:HB2	2.11	0.50
1:M:202:PRO:O	1:M:203:TYR:HB2	2.11	0.50
1:N:371:LYS:O	1:N:375:GLY:N	2.44	0.50
1:A:174:VAL:H	1:A:194:GLN:HE22	1.60	0.50
1:E:41:ASP:HB3	1:F:521:VAL:O	2.07	0.50
1:M:517:THR:OG1	1:N:39:VAL:HG21	2.11	0.50
1:H:517:THR:OG1	1:I:39:VAL:HG21	2.11	0.50
1:M:404:ARG:NH1	1:M:404:ARG:CG	2.71	0.50
1:N:413:ALA:HB3	1:N:417:VAL:HG22	1.93	0.50
1:L:413:ALA:HB3	1:L:417:VAL:HG22	1.93	0.50
1:F:51:LYS:NZ	1:G:114:MET:CE	2.73	0.50
1:F:458:CYS:SG	1:F:480:ALA:HB1	2.51	0.50
1:G:458:CYS:SG	1:G:480:ALA:HB1	2.51	0.50
1:B:209:GLU:OE1	1:B:209:GLU:N	2.44	0.50
1:A:194:GLN:CB	1:A:375:GLY:N	2.75	0.50
1:G:174:VAL:H	1:G:194:GLN:HE22	1.60	0.50
1:E:371:LYS:CB	1:E:374:GLY:N	2.74	0.50
1:M:73:MET:HG2	1:N:47:PRO:CD	2.41	0.50
1:H:404:ARG:CG	1:H:404:ARG:NH1	2.71	0.50
1:H:413:ALA:HB3	1:H:417:VAL:HG22	1.93	0.50
1:E:51:LYS:NZ	1:F:114:MET:HE1	2.26	0.50
1:I:193:MET:HA	1:I:375:GLY:CA	2.41	0.50
1:B:174:VAL:H	1:B:194:GLN:HE22	1.60	0.50
1:D:194:GLN:CB	1:D:375:GLY:N	2.75	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:371:LYS:CB	1:D:374:GLY:N	2.74	0.50
1:J:517:THR:OG1	1:K:39:VAL:HG21	2.11	0.50
1:C:180:GLY:HA3	1:C:381:VAL:O	2.10	0.50
1:G:176:THR:HG22	1:G:177:VAL:N	2.25	0.50
1:E:287:ALA:HB1	1:E:368:ARG:NH1	2.26	0.50
1:K:301:ILE:HG21	1:K:309:LEU:HD23	1.92	0.50
1:C:209:GLU:N	1:C:209:GLU:OE1	2.44	0.50
1:E:209:GLU:OE1	1:E:209:GLU:N	2.44	0.50
1:K:371:LYS:O	1:K:375:GLY:N	2.44	0.50
1:M:371:LYS:O	1:M:375:GLY:N	2.44	0.50
1:E:194:GLN:CB	1:E:375:GLY:N	2.75	0.50
1:B:271:VAL:HG12	1:B:273:VAL:HG23	1.94	0.50
1:A:271:VAL:HG12	1:A:273:VAL:HG23	1.94	0.50
1:F:287:ALA:HB1	1:F:368:ARG:NH1	2.27	0.50
1:A:114:MET:HE1	1:G:51:LYS:NZ	2.27	0.50
1:G:194:GLN:CB	1:G:375:GLY:N	2.75	0.50
1:C:371:LYS:CB	1:C:374:GLY:N	2.74	0.50
1:A:319:GLN:O	1:A:336:VAL:HG23	2.12	0.50
1:H:73:MET:HG2	1:I:47:PRO:CD	2.41	0.50
1:E:176:THR:HG22	1:E:177:VAL:N	2.25	0.50
1:G:271:VAL:HG12	1:G:273:VAL:HG23	1.94	0.50
1:E:160:LYS:HB2	1:E:160:LYS:NZ	2.26	0.50
1:K:202:PRO:O	1:K:203:TYR:HB2	2.11	0.50
1:L:202:PRO:O	1:L:203:TYR:HB2	2.11	0.50
1:L:193:MET:HA	1:L:375:GLY:CA	2.41	0.50
1:F:193:MET:HA	1:F:375:GLY:N	2.26	0.50
1:B:194:GLN:CB	1:B:375:GLY:N	2.75	0.50
1:C:193:MET:HA	1:C:375:GLY:N	2.26	0.50
1:C:194:GLN:CB	1:C:375:GLY:N	2.75	0.50
1:G:218:PRO:CB	1:G:246:PRO:HG2	2.32	0.50
1:L:221:LEU:HD23	1:L:249:ILE:HD12	1.94	0.50
1:C:319:GLN:O	1:C:336:VAL:HG23	2.12	0.50
1:H:202:PRO:O	1:H:203:TYR:HB2	2.11	0.50
1:E:319:GLN:O	1:E:336:VAL:HG23	2.12	0.50
1:M:193:MET:HA	1:M:375:GLY:CA	2.41	0.50
1:I:371:LYS:O	1:I:375:GLY:N	2.44	0.50
1:F:174:VAL:H	1:F:194:GLN:HE22	1.60	0.50
1:C:174:VAL:H	1:C:194:GLN:HE22	1.60	0.50
1:N:404:ARG:CG	1:N:404:ARG:NH1	2.71	0.50
1:M:413:ALA:HB3	1:M:417:VAL:HG22	1.93	0.50
1:F:271:VAL:HG12	1:F:273:VAL:HG23	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:160:LYS:HB2	1:G:160:LYS:NZ	2.26	0.50
1:H:287:ALA:HB1	1:H:368:ARG:NH1	2.27	0.50
1:I:202:PRO:O	1:I:203:TYR:HB2	2.11	0.50
1:J:371:LYS:O	1:J:375:GLY:N	2.44	0.50
1:K:193:MET:HA	1:K:375:GLY:CA	2.41	0.50
1:H:371:LYS:O	1:H:375:GLY:N	2.44	0.50
1:A:136:VAL:HG12	1:A:137:PRO:N	2.27	0.50
1:B:136:VAL:HG12	1:B:137:PRO:N	2.27	0.50
1:A:193:MET:CE	1:A:292:ILE:HG12	2.41	0.50
1:D:39:VAL:CG2	1:E:517:THR:CB	2.86	0.50
1:F:39:VAL:CG2	1:G:517:THR:OG1	2.60	0.50
1:B:41:ASP:OD2	1:C:522:THR:HB	2.12	0.50
1:M:310:GLU:N	1:M:310:GLU:OE1	2.45	0.50
1:E:200:LEU:HG	1:E:276:VAL:HA	1.93	0.50
1:L:223:ALA:O	1:L:251:ALA:HA	2.12	0.50
1:H:221:LEU:HD23	1:H:249:ILE:HD12	1.94	0.50
1:K:252:GLU:O	1:K:253:ASP:HB2	2.12	0.50
1:H:223:ALA:O	1:H:251:ALA:HA	2.12	0.50
1:M:221:LEU:HD23	1:M:249:ILE:HD12	1.94	0.50
1:F:319:GLN:O	1:F:336:VAL:HG23	2.12	0.50
1:L:371:LYS:O	1:L:375:GLY:N	2.44	0.49
1:A:41:ASP:OD2	1:B:522:THR:HB	2.12	0.49
1:E:41:ASP:OD2	1:F:522:THR:HB	2.12	0.49
1:B:383:ALA:O	1:B:384:ALA:HB3	2.11	0.49
1:C:234:LEU:O	1:C:238:GLU:HG3	2.12	0.49
1:J:310:GLU:N	1:J:310:GLU:OE1	2.45	0.49
1:I:287:ALA:HB1	1:I:368:ARG:NH1	2.27	0.49
1:N:287:ALA:HB1	1:N:368:ARG:NH1	2.27	0.49
1:N:221:LEU:HD23	1:N:249:ILE:HD12	1.94	0.49
1:K:90:THR:O	1:K:94:VAL:HG13	2.10	0.49
1:D:458:CYS:SG	1:D:480:ALA:HB1	2.51	0.49
1:G:209:GLU:N	1:G:209:GLU:OE1	2.44	0.49
1:F:194:GLN:CB	1:F:375:GLY:N	2.75	0.49
1:A:193:MET:HA	1:A:375:GLY:N	2.26	0.49
1:D:319:GLN:O	1:D:336:VAL:HG23	2.12	0.49
1:H:47:PRO:CD	1:N:73:MET:HG2	2.41	0.49
1:K:384:ALA:O	1:K:385:THR:HG23	2.13	0.49
1:E:234:LEU:O	1:E:238:GLU:HG3	2.13	0.49
1:N:310:GLU:OE1	1:N:310:GLU:N	2.45	0.49
1:B:234:LEU:O	1:B:238:GLU:HG3	2.12	0.49
1:I:310:GLU:OE1	1:I:310:GLU:N	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:200:LEU:HG	1:F:276:VAL:HA	1.93	0.49
1:K:413:ALA:HB3	1:K:417:VAL:HG22	1.93	0.49
1:K:221:LEU:HD23	1:K:249:ILE:HD12	1.94	0.49
1:A:458:CYS:SG	1:A:480:ALA:HB1	2.51	0.49
1:B:39:VAL:CG2	1:C:517:THR:OG1	2.60	0.49
1:E:174:VAL:H	1:E:194:GLN:HE22	1.60	0.49
1:M:69:MET:HE3	1:N:41:ASP:OD1	2.12	0.49
1:F:234:LEU:O	1:F:238:GLU:HG3	2.13	0.49
1:K:310:GLU:OE1	1:K:310:GLU:N	2.45	0.49
1:C:271:VAL:HG12	1:C:273:VAL:HG23	1.94	0.49
1:J:252:GLU:O	1:J:253:ASP:HB2	2.12	0.49
1:D:174:VAL:H	1:D:194:GLN:HE22	1.60	0.49
1:E:39:VAL:CG2	1:F:517:THR:OG1	2.60	0.49
1:C:41:ASP:OD2	1:D:522:THR:HB	2.12	0.49
1:A:41:ASP:CA	1:B:69:MET:HE1	2.42	0.49
1:D:234:LEU:O	1:D:238:GLU:HG3	2.12	0.49
1:H:310:GLU:N	1:H:310:GLU:OE1	2.45	0.49
1:F:218:PRO:CB	1:F:246:PRO:HG2	2.32	0.49
1:G:200:LEU:HG	1:G:276:VAL:HA	1.93	0.49
1:M:219:PHE:O	1:M:247:LEU:HD12	2.13	0.49
1:J:219:PHE:O	1:J:247:LEU:HD12	2.13	0.49
1:B:206:ASN:OD1	1:B:207:LYS:HG3	2.13	0.49
1:J:287:ALA:HB1	1:J:368:ARG:NH1	2.27	0.49
1:D:51:LYS:NZ	1:E:114:MET:HE1	2.27	0.49
1:L:252:GLU:O	1:L:253:ASP:HB2	2.12	0.49
1:H:171:LYS:HB2	1:H:407:VAL:HG11	1.95	0.49
1:M:223:ALA:O	1:M:251:ALA:HA	2.12	0.49
1:J:221:LEU:HD23	1:J:249:ILE:HD12	1.94	0.49
1:B:260:ALA:O	1:B:264:VAL:HG23	2.13	0.49
1:I:223:ALA:O	1:I:251:ALA:HA	2.12	0.49
1:K:223:ALA:O	1:K:251:ALA:HA	2.12	0.49
1:C:39:VAL:CG2	1:D:517:THR:OG1	2.60	0.49
1:A:517:THR:OG1	1:G:39:VAL:CG2	2.60	0.49
1:L:384:ALA:O	1:L:385:THR:HG23	2.13	0.49
1:L:310:GLU:OE1	1:L:310:GLU:N	2.45	0.49
1:J:404:ARG:CG	1:J:404:ARG:NH1	2.71	0.49
1:N:219:PHE:O	1:N:247:LEU:HD12	2.13	0.49
1:E:206:ASN:OD1	1:E:207:LYS:HG3	2.13	0.49
1:I:221:LEU:HD23	1:I:249:ILE:HD12	1.94	0.49
1:I:252:GLU:O	1:I:253:ASP:HB2	2.12	0.49
1:K:193:MET:HE2	1:K:292:ILE:HG12	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:245:LYS:HE3	1:D:231:ARG:HH21	1.70	0.49
1:A:39:VAL:CG2	1:B:517:THR:OG1	2.60	0.49
1:D:41:ASP:HB3	1:E:521:VAL:O	2.07	0.49
1:I:219:PHE:O	1:I:247:LEU:HD12	2.13	0.49
1:H:219:PHE:O	1:H:247:LEU:HD12	2.13	0.49
1:E:271:VAL:HG12	1:E:273:VAL:HG23	1.94	0.49
1:J:413:ALA:HB3	1:J:417:VAL:HG22	1.93	0.49
1:M:287:ALA:HB1	1:M:368:ARG:NH1	2.27	0.49
1:G:260:ALA:O	1:G:264:VAL:HG23	2.13	0.49
1:B:319:GLN:O	1:B:336:VAL:HG23	2.12	0.49
1:A:260:ALA:O	1:A:264:VAL:HG23	2.13	0.49
1:M:193:MET:HE2	1:M:292:ILE:HG12	1.93	0.49
1:L:190:VAL:CG1	1:L:334:ASP:HB2	2.35	0.49
1:D:39:VAL:CG2	1:E:517:THR:OG1	2.60	0.49
1:A:522:THR:HB	1:G:41:ASP:OD2	2.12	0.49
1:J:384:ALA:O	1:J:385:THR:HG23	2.13	0.49
1:D:200:LEU:HG	1:D:276:VAL:HA	1.93	0.49
1:C:266:THR:CG2	1:C:273:VAL:H	2.26	0.49
1:K:325:ILE:HG22	1:K:330:THR:HA	1.95	0.49
1:H:136:VAL:HG12	1:H:137:PRO:CD	2.43	0.49
1:E:260:ALA:O	1:E:264:VAL:HG23	2.13	0.49
1:J:193:MET:HA	1:J:375:GLY:CA	2.41	0.49
1:I:190:VAL:CG1	1:I:334:ASP:HB2	2.35	0.49
1:C:136:VAL:HG12	1:C:137:PRO:N	2.27	0.49
1:G:319:GLN:O	1:G:336:VAL:HG23	2.12	0.49
1:C:193:MET:HE3	1:C:292:ILE:HG12	1.94	0.49
1:F:41:ASP:OD2	1:G:522:THR:HB	2.12	0.49
1:H:384:ALA:O	1:H:385:THR:HG23	2.13	0.49
1:N:384:ALA:O	1:N:385:THR:HG23	2.13	0.49
1:I:384:ALA:O	1:I:385:THR:HG23	2.13	0.49
1:A:200:LEU:HG	1:A:276:VAL:HA	1.93	0.49
1:C:60:ILE:O	1:C:75:LYS:HE3	2.13	0.49
1:I:413:ALA:HB3	1:I:417:VAL:HG22	1.93	0.49
1:G:266:THR:HG22	1:G:271:VAL:O	2.13	0.49
1:C:206:ASN:OD1	1:C:207:LYS:HG3	2.13	0.49
1:D:206:ASN:OD1	1:D:207:LYS:HG3	2.13	0.49
1:A:209:GLU:OE1	1:A:209:GLU:N	2.44	0.49
1:K:331:THR:OG1	1:K:376:VAL:CB	2.61	0.49
1:E:331:THR:OG1	1:E:376:VAL:HG21	2.00	0.49
1:A:69:MET:HE1	1:G:41:ASP:CA	2.42	0.49
1:M:384:ALA:O	1:M:385:THR:HG23	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:404:ARG:CG	1:L:404:ARG:NH1	2.71	0.49
1:D:60:ILE:O	1:D:75:LYS:HE3	2.13	0.49
1:E:60:ILE:O	1:E:75:LYS:HE3	2.13	0.49
1:D:266:THR:HG22	1:D:271:VAL:O	2.13	0.49
1:B:266:THR:HG22	1:B:271:VAL:O	2.13	0.49
1:L:325:ILE:HG22	1:L:330:THR:HA	1.95	0.49
1:F:160:LYS:NZ	1:F:160:LYS:HB2	2.26	0.49
1:A:206:ASN:OD1	1:A:207:LYS:HG3	2.13	0.49
1:N:136:VAL:HG12	1:N:137:PRO:CD	2.43	0.49
1:K:287:ALA:HB1	1:K:368:ARG:NH1	2.27	0.49
1:M:252:GLU:O	1:M:253:ASP:HB2	2.12	0.49
1:C:239:ALA:O	1:C:314:LEU:HD11	2.13	0.49
1:D:41:ASP:CA	1:E:69:MET:HE3	2.41	0.49
1:A:234:LEU:O	1:A:238:GLU:HG3	2.12	0.49
1:G:234:LEU:O	1:G:238:GLU:HG3	2.12	0.49
1:K:234:LEU:O	1:K:238:GLU:HG3	2.13	0.49
1:C:413:ALA:HB3	1:C:417:VAL:HG22	1.95	0.49
1:L:219:PHE:O	1:L:247:LEU:HD12	2.13	0.49
1:D:271:VAL:HG12	1:D:273:VAL:HG23	1.94	0.49
1:E:266:THR:HG22	1:E:271:VAL:O	2.13	0.49
1:G:266:THR:CG2	1:G:273:VAL:H	2.26	0.49
1:M:136:VAL:HG12	1:M:137:PRO:CD	2.43	0.49
1:L:136:VAL:HG12	1:L:137:PRO:CD	2.43	0.49
1:L:287:ALA:HB1	1:L:368:ARG:NH1	2.27	0.49
1:F:254:VAL:HG12	1:F:259:LEU:HB2	1.95	0.49
1:G:254:VAL:HG12	1:G:259:LEU:HB2	1.95	0.49
1:I:171:LYS:HB2	1:I:407:VAL:HG11	1.94	0.49
1:J:171:LYS:HB2	1:J:407:VAL:HG11	1.94	0.49
1:J:223:ALA:O	1:J:251:ALA:HA	2.12	0.49
1:G:413:ALA:HB3	1:G:417:VAL:HG22	1.95	0.48
1:B:413:ALA:HB3	1:B:417:VAL:HG22	1.95	0.48
1:K:219:PHE:O	1:K:247:LEU:HD12	2.13	0.48
1:J:325:ILE:HG22	1:J:330:THR:HA	1.95	0.48
1:E:266:THR:CG2	1:E:273:VAL:H	2.26	0.48
1:F:206:ASN:OD1	1:F:207:LYS:HG3	2.13	0.48
1:J:331:THR:OG1	1:J:376:VAL:CB	2.61	0.48
1:B:183:LEU:CD2	1:B:384:ALA:HB2	2.44	0.48
1:A:60:ILE:O	1:A:75:LYS:HE3	2.13	0.48
1:G:60:ILE:O	1:G:75:LYS:HE3	2.13	0.48
1:F:60:ILE:O	1:F:75:LYS:HE3	2.13	0.48
1:D:183:LEU:CD2	1:D:384:ALA:HB2	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:183:LEU:CD2	1:C:384:ALA:HB2	2.44	0.48
1:L:234:LEU:O	1:L:238:GLU:HG3	2.13	0.48
1:C:200:LEU:HG	1:C:276:VAL:HA	1.93	0.48
1:B:60:ILE:O	1:B:75:LYS:HE3	2.13	0.48
1:F:413:ALA:HB3	1:F:417:VAL:HG22	1.95	0.48
1:A:413:ALA:HB3	1:A:417:VAL:HG22	1.95	0.48
1:A:239:ALA:O	1:A:314:LEU:HD11	2.13	0.48
1:N:223:ALA:O	1:N:251:ALA:HA	2.12	0.48
1:N:252:GLU:O	1:N:253:ASP:HB2	2.12	0.48
1:F:239:ALA:O	1:F:314:LEU:HD11	2.13	0.48
1:D:41:ASP:OD2	1:E:522:THR:HB	2.12	0.48
1:E:183:LEU:CD2	1:E:384:ALA:HB2	2.44	0.48
1:N:234:LEU:O	1:N:238:GLU:HG3	2.13	0.48
1:N:235:PRO:CG	1:N:310:GLU:HA	2.35	0.48
1:K:404:ARG:CG	1:K:404:ARG:NH1	2.71	0.48
1:B:200:LEU:HG	1:B:276:VAL:HA	1.93	0.48
1:D:413:ALA:HB3	1:D:417:VAL:HG22	1.95	0.48
1:I:325:ILE:HG22	1:I:330:THR:HA	1.95	0.48
1:G:409:GLU:HB2	1:G:498:LYS:HB2	1.96	0.48
1:G:239:ALA:O	1:G:314:LEU:HD11	2.13	0.48
1:A:183:LEU:CD2	1:A:384:ALA:HB2	2.44	0.48
1:M:234:LEU:O	1:M:238:GLU:HG3	2.13	0.48
1:J:234:LEU:O	1:J:238:GLU:HG3	2.13	0.48
1:D:260:ALA:O	1:D:264:VAL:HG23	2.13	0.48
1:F:260:ALA:O	1:F:264:VAL:HG23	2.13	0.48
1:E:254:VAL:HG12	1:E:259:LEU:HB2	1.95	0.48
1:F:409:GLU:HB2	1:F:498:LYS:HB2	1.96	0.48
1:E:239:ALA:O	1:E:314:LEU:HD11	2.13	0.48
1:D:331:THR:OG1	1:D:376:VAL:HG21	2.00	0.48
1:G:70:GLY:HA2	1:G:73:MET:HE3	1.96	0.48
1:C:266:THR:HG22	1:C:271:VAL:O	2.13	0.48
1:F:266:THR:HG22	1:F:271:VAL:O	2.13	0.48
1:I:136:VAL:HG12	1:I:137:PRO:CD	2.43	0.48
1:B:239:ALA:O	1:B:314:LEU:HD11	2.13	0.48
1:H:252:GLU:O	1:H:253:ASP:HB2	2.12	0.48
1:E:39:VAL:HG21	1:F:517:THR:CB	2.41	0.48
1:F:190:VAL:HB	1:F:333:ILE:HG23	1.96	0.48
1:D:70:GLY:HA2	1:D:73:MET:HE3	1.96	0.48
1:F:41:ASP:HB3	1:G:521:VAL:O	2.07	0.48
1:H:234:LEU:O	1:H:238:GLU:HG3	2.13	0.48
1:N:271:VAL:HG12	1:N:273:VAL:HG23	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:136:VAL:HG12	1:K:137:PRO:CD	2.43	0.48
1:A:51:LYS:NZ	1:B:114:MET:HE1	2.28	0.48
1:K:171:LYS:HB2	1:K:407:VAL:HG11	1.94	0.48
1:N:331:THR:OG1	1:N:376:VAL:CB	2.61	0.48
1:K:331:THR:HG1	1:K:376:VAL:HG11	1.73	0.48
1:I:193:MET:HE1	1:I:292:ILE:HG12	1.96	0.48
1:L:331:THR:OG1	1:L:376:VAL:CB	2.61	0.48
1:B:331:THR:HG1	1:B:376:VAL:HG23	1.65	0.48
1:G:190:VAL:HB	1:G:333:ILE:HG23	1.96	0.48
1:B:41:ASP:HB3	1:C:521:VAL:O	2.07	0.48
1:F:183:LEU:CD2	1:F:384:ALA:HB2	2.44	0.48
1:L:266:THR:HG22	1:L:271:VAL:O	2.14	0.48
1:M:271:VAL:HG12	1:M:273:VAL:HG23	1.96	0.48
1:D:266:THR:CG2	1:D:273:VAL:H	2.26	0.48
1:C:51:LYS:NZ	1:D:114:MET:HE1	2.29	0.48
1:A:409:GLU:HB2	1:A:498:LYS:HB2	1.96	0.48
1:C:260:ALA:O	1:C:264:VAL:HG23	2.13	0.48
1:E:190:VAL:HB	1:E:333:ILE:HG23	1.96	0.48
1:A:41:ASP:HB2	1:B:69:MET:CE	2.35	0.48
1:L:235:PRO:CG	1:L:310:GLU:HA	2.35	0.48
1:B:218:PRO:CB	1:B:246:PRO:HG2	2.32	0.48
1:H:266:THR:HG22	1:H:271:VAL:O	2.14	0.48
1:B:266:THR:CG2	1:B:273:VAL:H	2.26	0.48
1:A:266:THR:HG22	1:A:271:VAL:O	2.13	0.48
1:C:51:LYS:HZ1	1:D:114:MET:HE3	1.78	0.48
1:B:90:THR:O	1:B:94:VAL:HG13	2.14	0.48
1:A:254:VAL:HG12	1:A:259:LEU:HB2	1.95	0.48
1:D:239:ALA:O	1:D:314:LEU:HD11	2.13	0.48
1:C:39:VAL:CG2	1:D:517:THR:CB	2.86	0.48
1:B:39:VAL:CG2	1:C:517:THR:CB	2.86	0.48
1:A:190:VAL:HB	1:A:333:ILE:HG23	1.96	0.48
1:J:235:PRO:CG	1:J:310:GLU:HA	2.35	0.48
1:L:185:ASP:OD1	1:L:382:GLY:N	2.46	0.48
1:N:325:ILE:HG22	1:N:330:THR:HA	1.95	0.48
1:G:206:ASN:OD1	1:G:207:LYS:HG3	2.13	0.48
1:D:190:VAL:HB	1:D:333:ILE:HG23	1.96	0.47
1:I:185:ASP:OD1	1:I:382:GLY:N	2.46	0.47
1:A:266:THR:CG2	1:A:273:VAL:H	2.26	0.47
1:M:325:ILE:HG22	1:M:330:THR:HA	1.95	0.47
1:D:305:ILE:HB	1:D:307:MET:HE2	1.96	0.47
1:J:136:VAL:HG12	1:J:137:PRO:CD	2.43	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:51:LYS:HZ1	1:E:114:MET:HE3	1.79	0.47
1:B:409:GLU:HB2	1:B:498:LYS:HB2	1.96	0.47
1:G:90:THR:O	1:G:94:VAL:HG13	2.14	0.47
1:N:171:LYS:HB2	1:N:407:VAL:HG11	1.94	0.47
1:E:409:GLU:HB2	1:E:498:LYS:HB2	1.96	0.47
1:M:171:LYS:HB2	1:M:407:VAL:HG11	1.94	0.47
1:M:331:THR:OG1	1:M:376:VAL:CB	2.61	0.47
1:G:136:VAL:HG12	1:G:137:PRO:N	2.27	0.47
1:I:234:LEU:O	1:I:238:GLU:HG3	2.13	0.47
1:K:185:ASP:OD1	1:K:382:GLY:N	2.46	0.47
1:H:325:ILE:HG22	1:H:330:THR:HA	1.95	0.47
1:B:51:LYS:HZ1	1:C:114:MET:HE3	1.79	0.47
1:A:51:LYS:HZ3	1:B:114:MET:HE1	1.79	0.47
1:F:90:THR:O	1:F:94:VAL:HG13	2.14	0.47
1:C:254:VAL:HG12	1:C:259:LEU:HB2	1.95	0.47
1:M:266:THR:HG22	1:M:271:VAL:O	2.14	0.47
1:I:266:THR:HG22	1:I:271:VAL:O	2.14	0.47
1:F:266:THR:CG2	1:F:273:VAL:H	2.26	0.47
1:E:223:ALA:O	1:E:251:ALA:HA	2.15	0.47
1:M:209:GLU:N	1:M:209:GLU:OE1	2.46	0.47
1:H:331:THR:OG1	1:H:376:VAL:CB	2.61	0.47
1:D:136:VAL:HG12	1:D:137:PRO:N	2.27	0.47
1:C:41:ASP:CA	1:D:69:MET:HE3	2.44	0.47
1:H:234:LEU:N	1:H:235:PRO:HD2	2.30	0.47
1:M:180:GLY:HA3	1:M:381:VAL:O	2.14	0.47
1:J:180:GLY:HA3	1:J:381:VAL:O	2.14	0.47
1:F:236:VAL:O	1:F:240:VAL:HG23	2.15	0.47
1:F:51:LYS:HZ3	1:G:114:MET:HE1	1.79	0.47
1:N:239:ALA:O	1:N:314:LEU:HD11	2.14	0.47
1:J:193:MET:HE3	1:J:292:ILE:HG12	1.95	0.47
1:B:39:VAL:HG21	1:C:517:THR:CB	2.41	0.47
1:A:41:ASP:HA	1:B:69:MET:CE	2.45	0.47
1:A:182:GLY:HA2	1:A:383:ALA:HB3	1.97	0.47
1:G:183:LEU:CD2	1:G:384:ALA:HB2	2.44	0.47
1:K:234:LEU:N	1:K:235:PRO:HD2	2.30	0.47
1:K:180:GLY:HA3	1:K:381:VAL:O	2.14	0.47
1:E:413:ALA:HB3	1:E:417:VAL:HG22	1.95	0.47
1:K:266:THR:HG22	1:K:271:VAL:O	2.14	0.47
1:I:271:VAL:HG12	1:I:273:VAL:HG23	1.96	0.47
1:A:236:VAL:O	1:A:240:VAL:HG23	2.15	0.47
1:L:136:VAL:HG13	1:L:137:PRO:HD3	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:134:LEU:HD21	1:A:425:LYS:NZ	2.30	0.47
1:L:171:LYS:HB2	1:L:407:VAL:HG11	1.94	0.47
1:C:223:ALA:O	1:C:251:ALA:HA	2.15	0.47
1:B:41:ASP:HA	1:C:69:MET:CE	2.45	0.47
1:J:185:ASP:OD1	1:J:382:GLY:N	2.46	0.47
1:N:266:THR:HG22	1:N:271:VAL:O	2.14	0.47
1:M:206:ASN:OD1	1:M:207:LYS:HG3	2.15	0.47
1:G:236:VAL:O	1:G:240:VAL:HG23	2.15	0.47
1:G:134:LEU:HD21	1:G:425:LYS:NZ	2.30	0.47
1:A:90:THR:O	1:A:94:VAL:HG13	2.14	0.47
1:N:209:GLU:N	1:N:209:GLU:OE1	2.46	0.47
1:I:331:THR:OG1	1:I:376:VAL:CB	2.61	0.47
1:B:190:VAL:HB	1:B:333:ILE:HG23	1.96	0.47
1:C:190:VAL:HB	1:C:333:ILE:HG23	1.96	0.47
1:A:69:MET:CE	1:G:41:ASP:HA	2.45	0.47
1:F:182:GLY:HA2	1:F:383:ALA:HB3	1.97	0.47
1:M:185:ASP:OD1	1:M:382:GLY:N	2.46	0.47
1:N:180:GLY:HA3	1:N:381:VAL:O	2.14	0.47
1:J:271:VAL:HG12	1:J:273:VAL:HG23	1.96	0.47
1:C:236:VAL:O	1:C:240:VAL:HG23	2.15	0.47
1:D:236:VAL:O	1:D:240:VAL:HG23	2.15	0.47
1:B:236:VAL:O	1:B:240:VAL:HG23	2.15	0.47
1:N:206:ASN:OD1	1:N:207:LYS:HG3	2.15	0.47
1:K:206:ASN:ND2	1:K:214:GLU:H	2.11	0.47
1:B:305:ILE:HB	1:B:307:MET:HE2	1.96	0.47
1:C:353:ILE:HD13	1:C:366:GLN:HG2	1.97	0.47
1:M:136:VAL:HG13	1:M:137:PRO:HD3	1.97	0.47
1:G:223:ALA:O	1:G:251:ALA:HA	2.14	0.47
1:D:209:GLU:N	1:D:209:GLU:OE1	2.44	0.47
1:C:90:THR:O	1:C:94:VAL:HG13	2.14	0.47
1:B:254:VAL:HG12	1:B:259:LEU:HB2	1.95	0.47
1:F:39:VAL:HG21	1:G:517:THR:CB	2.41	0.47
1:C:41:ASP:HA	1:D:69:MET:CE	2.45	0.47
1:H:271:VAL:HG12	1:H:273:VAL:HG23	1.96	0.47
1:E:236:VAL:O	1:E:240:VAL:HG23	2.15	0.47
1:B:353:ILE:HD13	1:B:366:GLN:HG2	1.97	0.47
1:G:185:ASP:OD1	1:G:382:GLY:N	2.48	0.47
1:B:51:LYS:HZ3	1:C:114:MET:HE1	1.80	0.47
1:A:223:ALA:O	1:A:251:ALA:HA	2.15	0.47
1:M:239:ALA:O	1:M:314:LEU:HD11	2.15	0.47
1:H:239:ALA:O	1:H:314:LEU:HD11	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:239:ALA:O	1:I:314:LEU:HD11	2.15	0.47
1:D:409:GLU:HB2	1:D:498:LYS:HB2	1.96	0.47
1:D:90:THR:O	1:D:94:VAL:HG13	2.14	0.47
1:E:245:LYS:HE3	1:F:231:ARG:HH21	1.70	0.47
1:I:69:MET:HE1	1:J:41:ASP:CB	2.38	0.47
1:L:180:GLY:HA3	1:L:381:VAL:O	2.14	0.47
1:L:206:ASN:OD1	1:L:207:LYS:HG3	2.15	0.47
1:F:185:ASP:OD1	1:F:382:GLY:N	2.48	0.47
1:D:169:VAL:HG13	1:D:377:ALA:HB2	1.97	0.47
1:C:409:GLU:HB2	1:C:498:LYS:HB2	1.96	0.47
1:C:134:LEU:HD21	1:C:425:LYS:NZ	2.30	0.47
1:D:223:ALA:O	1:D:251:ALA:HA	2.14	0.47
1:L:239:ALA:O	1:L:314:LEU:HD11	2.15	0.47
1:D:73:MET:O	1:D:76:GLU:HB2	2.15	0.47
1:M:234:LEU:N	1:M:235:PRO:HD2	2.30	0.47
1:I:234:LEU:N	1:I:235:PRO:HD2	2.30	0.47
1:I:180:GLY:HA3	1:I:381:VAL:O	2.14	0.47
1:I:206:ASN:ND2	1:I:214:GLU:H	2.11	0.47
1:E:169:VAL:HG13	1:E:377:ALA:HB2	1.97	0.47
1:L:209:GLU:OE1	1:L:209:GLU:N	2.46	0.47
1:E:325:ILE:HG22	1:E:330:THR:HA	1.98	0.46
1:C:331:THR:OG1	1:C:376:VAL:HG21	2.00	0.46
1:H:517:THR:HG21	1:I:39:VAL:HG21	1.97	0.46
1:L:271:VAL:HG12	1:L:273:VAL:HG23	1.96	0.46
1:N:206:ASN:ND2	1:N:214:GLU:H	2.11	0.46
1:H:206:ASN:OD1	1:H:207:LYS:HG3	2.15	0.46
1:C:366:GLN:O	1:C:369:VAL:HG22	2.15	0.46
1:E:90:THR:O	1:E:94:VAL:HG13	2.14	0.46
1:B:223:ALA:O	1:B:251:ALA:HA	2.14	0.46
1:C:169:VAL:HG13	1:C:377:ALA:HB2	1.97	0.46
1:F:169:VAL:HG13	1:F:377:ALA:HB2	1.97	0.46
1:K:254:VAL:HG12	1:K:259:LEU:HB2	1.98	0.46
1:F:223:ALA:O	1:F:251:ALA:HA	2.15	0.46
1:B:41:ASP:HB2	1:C:69:MET:CE	2.35	0.46
1:C:73:MET:O	1:C:76:GLU:HB2	2.15	0.46
1:F:73:MET:O	1:F:76:GLU:HB2	2.15	0.46
1:L:234:LEU:N	1:L:235:PRO:HD2	2.30	0.46
1:G:366:GLN:O	1:G:369:VAL:HG22	2.15	0.46
1:L:199:TYR:CZ	1:L:327:LYS:HA	2.50	0.46
1:J:254:VAL:HG12	1:J:259:LEU:HB2	1.98	0.46
1:L:193:MET:HE1	1:L:292:ILE:HG12	1.95	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:136:VAL:HG12	1:F:137:PRO:N	2.27	0.46
1:F:325:ILE:HG22	1:F:330:THR:HA	1.98	0.46
1:A:325:ILE:HG22	1:A:330:THR:HA	1.98	0.46
1:B:182:GLY:HA2	1:B:383:ALA:HB3	1.97	0.46
1:E:182:GLY:HA2	1:E:383:ALA:HB3	1.97	0.46
1:J:266:THR:HG22	1:J:271:VAL:O	2.14	0.46
1:F:366:GLN:O	1:F:369:VAL:HG22	2.15	0.46
1:C:215:LEU:HB2	1:C:323:VAL:HG22	1.98	0.46
1:A:524:LEU:O	1:A:526:LYS:N	2.48	0.46
1:B:524:LEU:O	1:B:526:LYS:N	2.49	0.46
1:E:524:LEU:O	1:E:526:LYS:N	2.48	0.46
1:J:239:ALA:O	1:J:314:LEU:HD11	2.15	0.46
1:C:524:LEU:O	1:C:526:LYS:N	2.48	0.46
1:J:524:LEU:O	1:J:526:LYS:N	2.49	0.46
1:D:524:LEU:O	1:D:526:LYS:N	2.48	0.46
1:D:254:VAL:HG12	1:D:259:LEU:HB2	1.95	0.46
1:F:331:THR:OG1	1:F:376:VAL:HG21	2.00	0.46
1:G:325:ILE:HG22	1:G:330:THR:HA	1.98	0.46
1:E:73:MET:O	1:E:76:GLU:HB2	2.15	0.46
1:E:41:ASP:CA	1:F:69:MET:HE1	2.44	0.46
1:L:76:GLU:CG	1:M:46:ALA:HB2	2.45	0.46
1:K:271:VAL:HG12	1:K:273:VAL:HG23	1.96	0.46
1:J:206:ASN:ND2	1:J:214:GLU:H	2.11	0.46
1:J:206:ASN:OD1	1:J:207:LYS:HG3	2.15	0.46
1:F:134:LEU:HD21	1:F:425:LYS:NZ	2.30	0.46
1:B:215:LEU:HB2	1:B:323:VAL:HG22	1.98	0.46
1:D:134:LEU:HD21	1:D:425:LYS:NZ	2.30	0.46
1:J:199:TYR:CZ	1:J:327:LYS:HA	2.51	0.46
1:E:171:LYS:HB2	1:E:407:VAL:HG11	1.98	0.46
1:E:134:LEU:HD21	1:E:425:LYS:NZ	2.30	0.46
1:B:68:ASN:O	1:B:72:GLN:HG2	2.15	0.46
1:I:333:ILE:HG21	1:I:378:VAL:CG2	2.36	0.46
1:B:325:ILE:HG22	1:B:330:THR:HA	1.98	0.46
1:D:325:ILE:HG22	1:D:330:THR:HA	1.98	0.46
1:B:41:ASP:CB	1:C:69:MET:HE3	2.46	0.46
1:A:70:GLY:HA2	1:A:73:MET:HE3	1.97	0.46
1:N:234:LEU:N	1:N:235:PRO:HD2	2.30	0.46
1:M:217:SER:N	1:M:218:PRO:CD	2.79	0.46
1:J:234:LEU:N	1:J:235:PRO:HD2	2.30	0.46
1:M:199:TYR:CZ	1:M:327:LYS:HA	2.51	0.46
1:N:199:TYR:CZ	1:N:327:LYS:HA	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:199:TYR:CZ	1:K:327:LYS:HA	2.51	0.46
1:C:199:TYR:CZ	1:C:327:LYS:HA	2.51	0.46
1:A:73:MET:O	1:A:76:GLU:HB2	2.15	0.46
1:F:41:ASP:HA	1:G:69:MET:CE	2.45	0.46
1:H:180:GLY:HA3	1:H:381:VAL:O	2.14	0.46
1:K:236:VAL:O	1:K:240:VAL:HG23	2.16	0.46
1:H:353:ILE:HD13	1:H:366:GLN:HG2	1.98	0.46
1:F:353:ILE:HD13	1:F:366:GLN:HG2	1.97	0.46
1:E:185:ASP:OD1	1:E:382:GLY:N	2.48	0.46
1:K:136:VAL:HG13	1:K:137:PRO:HD3	1.97	0.46
1:E:51:LYS:HZ3	1:F:114:MET:HE1	1.81	0.46
1:C:68:ASN:O	1:C:72:GLN:HG2	2.15	0.46
1:H:199:TYR:CZ	1:H:327:LYS:HA	2.50	0.46
1:G:524:LEU:O	1:G:526:LYS:N	2.48	0.46
1:F:215:LEU:HB2	1:F:323:VAL:HG22	1.98	0.46
1:I:199:TYR:CZ	1:I:327:LYS:HA	2.50	0.46
1:D:215:LEU:HB2	1:D:323:VAL:HG22	1.98	0.46
1:D:199:TYR:CZ	1:D:327:LYS:HA	2.51	0.46
1:F:171:LYS:HB2	1:F:407:VAL:HG11	1.98	0.46
1:H:209:GLU:OE1	1:H:209:GLU:N	2.46	0.46
1:A:39:VAL:HG21	1:B:517:THR:CB	2.41	0.46
1:G:73:MET:O	1:G:76:GLU:HB2	2.15	0.46
1:J:236:VAL:O	1:J:240:VAL:HG23	2.16	0.46
1:H:136:VAL:HG13	1:H:137:PRO:HD3	1.97	0.46
1:K:524:LEU:O	1:K:526:LYS:N	2.49	0.46
1:B:134:LEU:HD21	1:B:425:LYS:NZ	2.30	0.46
1:E:68:ASN:O	1:E:72:GLN:HG2	2.15	0.46
1:I:524:LEU:O	1:I:526:LYS:N	2.49	0.46
1:C:325:ILE:HG22	1:C:330:THR:HA	1.98	0.46
1:C:41:ASP:CA	1:D:69:MET:HE1	2.46	0.46
1:L:217:SER:N	1:L:218:PRO:CD	2.79	0.46
1:L:236:VAL:O	1:L:240:VAL:HG23	2.16	0.46
1:M:236:VAL:O	1:M:240:VAL:HG23	2.16	0.46
1:I:236:VAL:O	1:I:240:VAL:HG23	2.16	0.46
1:K:206:ASN:OD1	1:K:207:LYS:HG3	2.15	0.46
1:N:353:ILE:HD13	1:N:366:GLN:HG2	1.98	0.46
1:L:254:VAL:HG12	1:L:259:LEU:HB2	1.98	0.46
1:F:524:LEU:O	1:F:526:LYS:N	2.49	0.46
1:D:68:ASN:O	1:D:72:GLN:HG2	2.15	0.46
1:F:68:ASN:O	1:F:72:GLN:HG2	2.15	0.46
1:K:239:ALA:O	1:K:314:LEU:HD11	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:215:LEU:HB2	1:E:323:VAL:HG22	1.98	0.46
1:A:68:ASN:O	1:A:72:GLN:HG2	2.15	0.46
1:E:136:VAL:HG12	1:E:137:PRO:N	2.27	0.46
1:I:206:ASN:OD1	1:I:207:LYS:HG3	2.15	0.46
1:E:366:GLN:O	1:E:369:VAL:HG22	2.15	0.46
1:D:353:ILE:HD13	1:D:366:GLN:HG2	1.97	0.46
1:A:366:GLN:O	1:A:369:VAL:HG22	2.15	0.46
1:N:136:VAL:HG13	1:N:137:PRO:HD3	1.97	0.46
1:A:215:LEU:HB2	1:A:323:VAL:HG22	1.98	0.46
1:D:171:LYS:HB2	1:D:407:VAL:HG11	1.98	0.46
1:I:254:VAL:HG12	1:I:259:LEU:HB2	1.98	0.46
1:B:199:TYR:CZ	1:B:327:LYS:HA	2.51	0.46
1:E:384:ALA:O	1:E:385:THR:HG23	2.16	0.46
1:G:182:GLY:HA2	1:G:383:ALA:HB3	1.97	0.46
1:N:85:ALA:C	1:N:401:HIS:HE1	2.19	0.46
1:D:366:GLN:O	1:D:369:VAL:HG22	2.15	0.46
1:A:353:ILE:HD13	1:A:366:GLN:HG2	1.97	0.46
1:G:215:LEU:HB2	1:G:323:VAL:HG22	1.98	0.46
1:B:169:VAL:HG13	1:B:377:ALA:HB2	1.97	0.46
1:G:171:LYS:HB2	1:G:407:VAL:HG11	1.98	0.46
1:D:193:MET:HE1	1:D:292:ILE:HG12	1.97	0.45
1:D:41:ASP:HB2	1:E:69:MET:CE	2.35	0.45
1:L:69:MET:HE1	1:M:41:ASP:CB	2.39	0.45
1:A:182:GLY:HA2	1:A:383:ALA:CB	2.46	0.45
1:E:182:GLY:HA2	1:E:383:ALA:CB	2.46	0.45
1:I:85:ALA:C	1:I:401:HIS:HE1	2.19	0.45
1:N:236:VAL:O	1:N:240:VAL:HG23	2.16	0.45
1:L:206:ASN:ND2	1:L:214:GLU:H	2.12	0.45
1:B:366:GLN:O	1:B:369:VAL:HG22	2.15	0.45
1:G:353:ILE:HD13	1:G:366:GLN:HG2	1.97	0.45
1:J:136:VAL:HG13	1:J:137:PRO:HD3	1.97	0.45
1:B:51:LYS:NZ	1:C:114:MET:HE1	2.31	0.45
1:E:199:TYR:CZ	1:E:327:LYS:HA	2.51	0.45
1:G:169:VAL:HG13	1:G:377:ALA:HB2	1.97	0.45
1:J:284:ARG:HH12	1:J:364:LYS:NZ	2.14	0.45
1:N:183:LEU:CD2	1:N:384:ALA:HB2	2.45	0.45
1:D:182:GLY:HA2	1:D:383:ALA:HB3	1.97	0.45
1:I:217:SER:N	1:I:218:PRO:CD	2.79	0.45
1:H:236:VAL:O	1:H:240:VAL:HG23	2.16	0.45
1:D:404:ARG:HH11	1:D:404:ARG:CG	2.30	0.45
1:N:524:LEU:O	1:N:526:LYS:N	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:516:THR:O	1:N:37:ASN:HB2	2.17	0.45
1:L:190:VAL:HG22	1:L:333:ILE:HG23	1.51	0.45
1:H:193:MET:HE3	1:H:292:ILE:HG12	1.98	0.45
1:D:182:GLY:HA2	1:D:383:ALA:CB	2.46	0.45
1:D:384:ALA:O	1:D:385:THR:HG23	2.16	0.45
1:B:182:GLY:HA2	1:B:383:ALA:CB	2.46	0.45
1:C:182:GLY:HA2	1:C:383:ALA:HB3	1.97	0.45
1:E:353:ILE:HD13	1:E:366:GLN:HG2	1.97	0.45
1:I:136:VAL:HG13	1:I:137:PRO:HD3	1.97	0.45
1:M:76:GLU:CG	1:N:46:ALA:HB2	2.45	0.45
1:H:46:ALA:HB2	1:N:76:GLU:CG	2.45	0.45
1:J:217:SER:N	1:J:218:PRO:CD	2.79	0.45
1:N:217:SER:N	1:N:218:PRO:CD	2.79	0.45
1:I:517:THR:HG21	1:J:39:VAL:HG21	1.97	0.45
1:N:185:ASP:OD1	1:N:382:GLY:N	2.46	0.45
1:C:404:ARG:CG	1:C:404:ARG:HH11	2.29	0.45
1:J:242:LYS:C	1:J:244:GLY:N	2.70	0.45
1:J:516:THR:O	1:K:37:ASN:HB2	2.17	0.45
1:A:169:VAL:HG13	1:A:377:ALA:HB2	1.97	0.45
1:K:516:THR:O	1:L:37:ASN:HB2	2.17	0.45
1:K:209:GLU:OE1	1:K:209:GLU:N	2.46	0.45
1:A:193:MET:HE2	1:A:292:ILE:HG12	1.98	0.45
1:C:39:VAL:HG21	1:D:517:THR:CB	2.41	0.45
1:B:73:MET:O	1:B:76:GLU:HB2	2.15	0.45
1:C:182:GLY:HA2	1:C:383:ALA:CB	2.46	0.45
1:K:242:LYS:C	1:K:244:GLY:N	2.70	0.45
1:N:254:VAL:HG12	1:N:259:LEU:HB2	1.98	0.45
1:K:190:VAL:HG22	1:K:333:ILE:HG23	1.51	0.45
1:E:245:LYS:HZ1	1:F:231:ARG:HH22	0.52	0.45
1:M:183:LEU:CD2	1:M:384:ALA:HB2	2.45	0.45
1:F:182:GLY:HA2	1:F:383:ALA:CB	2.46	0.45
1:K:217:SER:N	1:K:218:PRO:CD	2.79	0.45
1:D:185:ASP:OD1	1:D:382:GLY:N	2.48	0.45
1:B:51:LYS:HZ3	1:C:114:MET:CE	2.29	0.45
1:D:392:LYS:O	1:D:396:VAL:HG23	2.17	0.45
1:H:524:LEU:O	1:H:526:LYS:N	2.49	0.45
1:A:199:TYR:CZ	1:A:327:LYS:HA	2.51	0.45
1:C:41:ASP:HB3	1:D:521:VAL:O	2.07	0.45
1:M:85:ALA:C	1:M:401:HIS:HE1	2.19	0.45
1:I:353:ILE:HD13	1:I:366:GLN:HG2	1.98	0.45
1:F:369:VAL:HG23	1:F:370:ALA:N	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:369:VAL:HG23	1:G:370:ALA:N	2.32	0.45
1:A:404:ARG:HH11	1:A:404:ARG:CG	2.29	0.45
1:A:369:VAL:HG23	1:A:370:ALA:N	2.32	0.45
1:B:392:LYS:O	1:B:396:VAL:HG23	2.17	0.45
1:F:392:LYS:O	1:F:396:VAL:HG23	2.17	0.45
1:G:68:ASN:O	1:G:72:GLN:HG2	2.15	0.45
1:B:384:ALA:O	1:B:385:THR:HG23	2.16	0.45
1:F:384:ALA:O	1:F:385:THR:HG23	2.16	0.45
1:C:384:ALA:O	1:C:385:THR:HG23	2.16	0.45
1:H:217:SER:N	1:H:218:PRO:CD	2.79	0.45
1:B:217:SER:N	1:B:218:PRO:HD3	2.32	0.45
1:A:217:SER:N	1:A:218:PRO:HD3	2.32	0.45
1:H:85:ALA:C	1:H:401:HIS:HE1	2.19	0.45
1:B:404:ARG:HH11	1:B:404:ARG:CG	2.29	0.45
1:I:209:GLU:OE1	1:I:209:GLU:N	2.46	0.45
1:A:231:ARG:HH21	1:G:245:LYS:HE3	1.70	0.45
1:G:234:LEU:N	1:G:235:PRO:HD2	2.32	0.45
1:A:217:SER:N	1:A:218:PRO:CD	2.80	0.45
1:J:176:THR:HG22	1:J:177:VAL:H	1.82	0.45
1:L:353:ILE:HD13	1:L:366:GLN:HG2	1.98	0.45
1:F:404:ARG:CG	1:F:404:ARG:HH11	2.30	0.45
1:I:284:ARG:HH12	1:I:364:LYS:NZ	2.14	0.45
1:K:284:ARG:HH12	1:K:364:LYS:NZ	2.14	0.45
1:M:524:LEU:O	1:M:526:LYS:N	2.49	0.45
1:F:70:GLY:HA2	1:F:73:MET:HE3	1.99	0.45
1:G:182:GLY:HA2	1:G:383:ALA:CB	2.46	0.45
1:A:234:LEU:N	1:A:235:PRO:HD2	2.32	0.45
1:B:217:SER:N	1:B:218:PRO:CD	2.80	0.45
1:C:217:SER:N	1:C:218:PRO:CD	2.80	0.45
1:G:217:SER:N	1:G:218:PRO:CD	2.80	0.45
1:E:348:GLN:O	1:E:352:GLN:HG2	2.17	0.45
1:J:85:ALA:C	1:J:401:HIS:HE1	2.19	0.45
1:K:302:SER:H	1:K:307:MET:HE1	1.82	0.45
1:M:206:ASN:ND2	1:M:214:GLU:H	2.11	0.45
1:A:305:ILE:HB	1:A:307:MET:HE2	1.99	0.45
1:E:369:VAL:HG23	1:E:370:ALA:N	2.32	0.45
1:G:404:ARG:HH11	1:G:404:ARG:CG	2.30	0.45
1:B:369:VAL:HG23	1:B:370:ALA:N	2.32	0.45
1:I:242:LYS:C	1:I:244:GLY:N	2.70	0.45
1:L:242:LYS:C	1:L:244:GLY:N	2.70	0.45
1:A:171:LYS:HB2	1:A:407:VAL:HG11	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:392:LYS:O	1:C:396:VAL:HG23	2.17	0.45
1:C:171:LYS:HB2	1:C:407:VAL:HG11	1.98	0.45
1:L:284:ARG:HH12	1:L:364:LYS:NZ	2.14	0.45
1:J:144:ILE:HG23	1:J:403:THR:HG21	1.99	0.45
1:H:37:ASN:HB2	1:N:516:THR:O	2.17	0.45
1:A:392:LYS:O	1:A:396:VAL:HG23	2.17	0.45
1:H:183:LEU:CD2	1:H:384:ALA:HB2	2.45	0.44
1:H:76:GLU:CG	1:I:46:ALA:HB2	2.45	0.44
1:A:384:ALA:O	1:A:385:THR:HG23	2.16	0.44
1:C:234:LEU:N	1:C:235:PRO:HD2	2.32	0.44
1:J:517:THR:HG21	1:K:39:VAL:HG21	1.97	0.44
1:F:234:LEU:N	1:F:235:PRO:HD2	2.32	0.44
1:C:218:PRO:HD2	1:C:320:ALA:O	2.17	0.44
1:A:218:PRO:HD2	1:A:320:ALA:O	2.17	0.44
1:G:217:SER:N	1:G:218:PRO:HD3	2.32	0.44
1:G:348:GLN:O	1:G:352:GLN:HG2	2.17	0.44
1:M:176:THR:HG22	1:M:177:VAL:H	1.82	0.44
1:M:353:ILE:HD13	1:M:366:GLN:HG2	1.98	0.44
1:C:185:ASP:OD1	1:C:382:GLY:N	2.48	0.44
1:F:199:TYR:CZ	1:F:327:LYS:HA	2.51	0.44
1:L:516:THR:O	1:M:37:ASN:HB2	2.17	0.44
1:G:392:LYS:O	1:G:396:VAL:HG23	2.17	0.44
1:J:209:GLU:N	1:J:209:GLU:OE1	2.46	0.44
1:J:333:ILE:HG21	1:J:378:VAL:CG2	2.36	0.44
1:E:70:GLY:HA2	1:E:73:MET:HE3	1.99	0.44
1:E:41:ASP:HA	1:F:69:MET:CE	2.45	0.44
1:G:384:ALA:O	1:G:385:THR:HG23	2.16	0.44
1:L:302:SER:H	1:L:307:MET:HE1	1.82	0.44
1:K:353:ILE:HD13	1:K:366:GLN:HG2	1.98	0.44
1:H:155:ASP:OD1	1:H:157:THR:HB	2.18	0.44
1:K:155:ASP:OD1	1:K:157:THR:HB	2.18	0.44
1:I:371:LYS:HA	1:I:374:GLY:CA	2.47	0.44
1:D:234:LEU:N	1:D:235:PRO:HD2	2.32	0.44
1:N:217:SER:N	1:N:218:PRO:HD3	2.33	0.44
1:C:217:SER:N	1:C:218:PRO:HD3	2.32	0.44
1:K:176:THR:HG22	1:K:177:VAL:H	1.82	0.44
1:C:369:VAL:HG23	1:C:370:ALA:N	2.32	0.44
1:G:199:TYR:CZ	1:G:327:LYS:HA	2.51	0.44
1:N:144:ILE:HG23	1:N:403:THR:HG21	1.99	0.44
1:H:254:VAL:HG12	1:H:259:LEU:HB2	1.98	0.44
1:K:144:ILE:HG23	1:K:403:THR:HG21	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:234:LEU:N	1:E:235:PRO:HD2	2.32	0.44
1:E:218:PRO:HD2	1:E:320:ALA:O	2.17	0.44
1:F:217:SER:N	1:F:218:PRO:HD3	2.32	0.44
1:B:234:LEU:N	1:B:235:PRO:HD2	2.32	0.44
1:F:348:GLN:O	1:F:352:GLN:HG2	2.17	0.44
1:J:353:ILE:HD13	1:J:366:GLN:HG2	1.98	0.44
1:D:369:VAL:HG23	1:D:370:ALA:N	2.32	0.44
1:M:242:LYS:C	1:M:244:GLY:N	2.70	0.44
1:L:336:VAL:O	1:L:337:GLY:C	2.56	0.44
1:M:254:VAL:HG12	1:M:259:LEU:HB2	1.98	0.44
1:N:155:ASP:OD1	1:N:157:THR:HB	2.18	0.44
1:I:217:SER:N	1:I:218:PRO:HD3	2.33	0.44
1:H:217:SER:N	1:H:218:PRO:HD3	2.33	0.44
1:E:217:SER:N	1:E:218:PRO:HD3	2.32	0.44
1:B:218:PRO:HD2	1:B:320:ALA:O	2.17	0.44
1:C:348:GLN:O	1:C:352:GLN:HG2	2.17	0.44
1:K:336:VAL:O	1:K:337:GLY:C	2.56	0.44
1:N:392:LYS:O	1:N:396:VAL:HG23	2.18	0.44
1:L:524:LEU:O	1:L:526:LYS:N	2.49	0.44
1:H:392:LYS:O	1:H:396:VAL:HG23	2.18	0.44
1:I:155:ASP:OD1	1:I:157:THR:HB	2.18	0.44
1:J:155:ASP:OD1	1:J:157:THR:HB	2.18	0.44
1:N:284:ARG:HH12	1:N:364:LYS:NZ	2.14	0.44
1:M:392:LYS:O	1:M:396:VAL:HG23	2.18	0.44
1:A:210:THR:HG22	1:A:210:THR:O	2.18	0.44
1:I:516:THR:O	1:J:37:ASN:HB2	2.17	0.44
1:N:193:MET:HE1	1:N:292:ILE:HG12	2.00	0.44
1:H:371:LYS:HA	1:H:374:GLY:CA	2.47	0.44
1:C:245:LYS:HZ1	1:D:231:ARG:HH22	0.52	0.44
1:D:193:MET:CA	1:D:375:GLY:N	2.81	0.44
1:J:217:SER:N	1:J:218:PRO:HD3	2.33	0.44
1:H:176:THR:HG22	1:H:177:VAL:H	1.82	0.44
1:L:176:THR:HG22	1:L:177:VAL:H	1.82	0.44
1:H:242:LYS:C	1:H:244:GLY:N	2.70	0.44
1:L:260:ALA:O	1:L:264:VAL:HG23	2.18	0.44
1:H:144:ILE:HG23	1:H:403:THR:HG21	1.99	0.44
1:I:144:ILE:HG23	1:I:403:THR:HG21	1.99	0.44
1:M:284:ARG:HH12	1:M:364:LYS:NZ	2.14	0.44
1:H:284:ARG:HH12	1:H:364:LYS:NZ	2.14	0.44
1:D:210:THR:HG22	1:D:210:THR:O	2.18	0.44
1:F:210:THR:HG22	1:F:210:THR:O	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:193:MET:CA	1:E:375:GLY:N	2.81	0.44
1:C:193:MET:CA	1:C:375:GLY:N	2.81	0.44
1:K:183:LEU:HD13	1:K:184:GLN:N	2.33	0.44
1:L:183:LEU:HD13	1:L:184:GLN:N	2.33	0.44
1:D:217:SER:N	1:D:218:PRO:HD3	2.32	0.44
1:M:217:SER:N	1:M:218:PRO:HD3	2.33	0.44
1:F:218:PRO:HD2	1:F:320:ALA:O	2.17	0.44
1:D:348:GLN:O	1:D:352:GLN:HG2	2.17	0.44
1:B:240:VAL:HG11	1:B:247:LEU:HB2	2.00	0.44
1:H:206:ASN:ND2	1:H:214:GLU:H	2.11	0.44
1:N:242:LYS:C	1:N:244:GLY:N	2.70	0.44
1:H:524:LEU:HA	1:H:524:LEU:HD12	1.87	0.44
1:H:516:THR:O	1:I:37:ASN:HB2	2.17	0.44
1:L:155:ASP:OD1	1:L:157:THR:HB	2.18	0.44
1:L:215:LEU:HB2	1:L:323:VAL:HG22	2.00	0.44
1:C:461:GLU:HA	1:C:462:PRO:HD3	1.89	0.44
1:M:260:ALA:O	1:M:264:VAL:HG23	2.18	0.44
1:I:215:LEU:HB2	1:I:323:VAL:HG22	2.00	0.44
1:E:392:LYS:O	1:E:396:VAL:HG23	2.17	0.44
1:L:392:LYS:O	1:L:396:VAL:HG23	2.18	0.44
1:L:333:ILE:CG2	1:L:378:VAL:CG2	2.96	0.44
1:K:517:THR:HG21	1:L:39:VAL:HG21	1.97	0.44
1:L:217:SER:N	1:L:218:PRO:HD3	2.33	0.44
1:E:217:SER:N	1:E:218:PRO:CD	2.80	0.44
1:D:217:SER:N	1:D:218:PRO:CD	2.80	0.44
1:A:240:VAL:HG11	1:A:247:LEU:HB2	2.00	0.44
1:F:240:VAL:HG11	1:F:247:LEU:HB2	2.00	0.44
1:G:240:VAL:HG11	1:G:247:LEU:HB2	2.00	0.44
1:B:185:ASP:OD1	1:B:382:GLY:N	2.48	0.44
1:L:144:ILE:HG23	1:L:403:THR:HG21	1.99	0.44
1:N:260:ALA:O	1:N:264:VAL:HG23	2.18	0.44
1:K:215:LEU:HB2	1:K:323:VAL:HG22	2.00	0.44
1:J:371:LYS:HA	1:J:374:GLY:CA	2.47	0.44
1:I:333:ILE:CG2	1:I:378:VAL:CG2	2.96	0.44
1:M:183:LEU:HD13	1:M:184:GLN:N	2.33	0.44
1:L:183:LEU:CD2	1:L:384:ALA:HB2	2.45	0.44
1:D:218:PRO:HD2	1:D:320:ALA:O	2.17	0.44
1:B:348:GLN:O	1:B:352:GLN:HG2	2.17	0.44
1:N:176:THR:HG22	1:N:177:VAL:H	1.82	0.44
1:C:240:VAL:HG11	1:C:247:LEU:HB2	2.00	0.44
1:M:336:VAL:O	1:M:337:GLY:C	2.56	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:51:LYS:HZ1	1:B:114:MET:HE3	1.82	0.44
1:A:51:LYS:HZ3	1:B:114:MET:CE	2.31	0.44
1:M:144:ILE:HG23	1:M:403:THR:HG21	1.99	0.44
1:I:392:LYS:O	1:I:396:VAL:HG23	2.18	0.44
1:B:171:LYS:HB2	1:B:407:VAL:HG11	1.98	0.44
1:H:215:LEU:HB2	1:H:323:VAL:HG22	2.00	0.44
1:J:215:LEU:HB2	1:J:323:VAL:HG22	2.00	0.44
1:J:260:ALA:O	1:J:264:VAL:HG23	2.18	0.44
1:C:210:THR:HG22	1:C:210:THR:O	2.18	0.44
1:D:39:VAL:HG21	1:E:517:THR:CB	2.41	0.43
1:A:517:THR:HG21	1:G:39:VAL:CG2	2.01	0.43
1:K:217:SER:N	1:K:218:PRO:HD3	2.33	0.43
1:A:348:GLN:O	1:A:352:GLN:HG2	2.17	0.43
1:K:85:ALA:C	1:K:401:HIS:HE1	2.19	0.43
1:L:85:ALA:C	1:L:401:HIS:HE1	2.19	0.43
1:J:336:VAL:O	1:J:337:GLY:C	2.56	0.43
1:G:210:THR:HG22	1:G:210:THR:O	2.18	0.43
1:B:193:MET:HG2	1:B:374:GLY:N	2.33	0.43
1:B:366:GLN:HA	1:B:369:VAL:HG22	2.00	0.43
1:B:193:MET:CA	1:B:375:GLY:N	2.81	0.43
1:D:193:MET:HG2	1:D:374:GLY:N	2.34	0.43
1:J:183:LEU:HD13	1:J:184:GLN:N	2.33	0.43
1:B:51:LYS:NZ	1:C:114:MET:HE3	2.32	0.43
1:I:524:LEU:HD12	1:I:524:LEU:HA	1.87	0.43
1:K:260:ALA:O	1:K:264:VAL:HG23	2.18	0.43
1:H:260:ALA:O	1:H:264:VAL:HG23	2.18	0.43
1:H:333:ILE:CG2	1:H:378:VAL:CG2	2.96	0.43
1:E:193:MET:HE1	1:E:292:ILE:HG12	2.00	0.43
1:A:191:GLU:HA	1:A:192:GLY:HA3	1.25	0.43
1:I:183:LEU:CD2	1:I:384:ALA:HB2	2.45	0.43
1:J:384:ALA:C	1:J:385:THR:HG23	2.39	0.43
1:G:218:PRO:HD2	1:G:320:ALA:O	2.17	0.43
1:M:325:ILE:HA	1:M:329:THR:O	2.19	0.43
1:A:366:GLN:HA	1:A:369:VAL:HG22	2.00	0.43
1:H:336:VAL:O	1:H:337:GLY:C	2.56	0.43
1:I:336:VAL:O	1:I:337:GLY:C	2.56	0.43
1:K:392:LYS:O	1:K:396:VAL:HG23	2.18	0.43
1:N:371:LYS:HA	1:N:374:GLY:CA	2.47	0.43
1:M:333:ILE:CG2	1:M:378:VAL:CG2	2.96	0.43
1:M:384:ALA:C	1:M:385:THR:HG23	2.39	0.43
1:I:76:GLU:CG	1:J:46:ALA:HB2	2.45	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:217:SER:N	1:F:218:PRO:CD	2.80	0.43
1:I:404:ARG:NH1	1:I:404:ARG:CG	2.71	0.43
1:C:366:GLN:HA	1:C:369:VAL:HG22	2.00	0.43
1:E:51:LYS:HZ1	1:F:114:MET:HE3	1.82	0.43
1:K:333:ILE:HG21	1:K:378:VAL:CG2	2.36	0.43
1:F:41:ASP:HB2	1:G:69:MET:CE	2.35	0.43
1:N:183:LEU:HD13	1:N:184:GLN:N	2.33	0.43
1:H:235:PRO:CG	1:H:310:GLU:HA	2.35	0.43
1:C:305:ILE:HB	1:C:307:MET:HE2	2.01	0.43
1:C:51:LYS:HZ3	1:D:114:MET:HE1	1.83	0.43
1:M:215:LEU:HB2	1:M:323:VAL:HG22	2.00	0.43
1:J:392:LYS:O	1:J:396:VAL:HG23	2.18	0.43
1:J:369:VAL:HG23	1:J:370:ALA:N	2.34	0.43
1:I:369:VAL:HG23	1:I:370:ALA:N	2.34	0.43
1:G:193:MET:CA	1:G:375:GLY:N	2.81	0.43
1:B:190:VAL:HG23	1:B:333:ILE:HG12	2.01	0.43
1:D:41:ASP:HA	1:E:69:MET:CE	2.45	0.43
1:K:384:ALA:C	1:K:385:THR:HG23	2.39	0.43
1:F:183:LEU:HD13	1:F:184:GLN:N	2.34	0.43
1:G:183:LEU:HD13	1:G:184:GLN:N	2.34	0.43
1:D:253:ASP:OD1	1:D:277:LYS:HE2	2.19	0.43
1:I:176:THR:HG22	1:I:177:VAL:H	1.82	0.43
1:J:325:ILE:HA	1:J:329:THR:O	2.19	0.43
1:G:366:GLN:HA	1:G:369:VAL:HG22	2.00	0.43
1:L:319:GLN:HB3	1:L:336:VAL:HG21	2.01	0.43
1:K:319:GLN:HB3	1:K:336:VAL:HG21	2.01	0.43
1:B:124:VAL:HG21	1:B:508:ALA:CB	2.49	0.43
1:C:124:VAL:HG21	1:C:508:ALA:CB	2.49	0.43
1:B:210:THR:HG22	1:B:210:THR:O	2.18	0.43
1:N:333:ILE:CG2	1:N:378:VAL:CG2	2.96	0.43
1:C:70:GLY:HA2	1:C:73:MET:HE3	2.01	0.43
1:L:384:ALA:C	1:L:385:THR:HG23	2.39	0.43
1:C:183:LEU:HD13	1:C:184:GLN:N	2.34	0.43
1:C:253:ASP:OD1	1:C:277:LYS:HE2	2.19	0.43
1:F:417:VAL:HG11	1:F:488:MET:HG3	2.01	0.43
1:G:524:LEU:HA	1:G:524:LEU:HD12	1.89	0.43
1:I:37:ASN:ND2	1:I:51:LYS:HE3	2.34	0.43
1:A:124:VAL:HG21	1:A:508:ALA:CB	2.49	0.43
1:N:215:LEU:HB2	1:N:323:VAL:HG22	2.00	0.43
1:H:342:ILE:O	1:H:346:VAL:HG23	2.19	0.43
1:K:369:VAL:HG23	1:K:370:ALA:N	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:193:MET:CA	1:A:375:GLY:N	2.81	0.43
1:C:190:VAL:HG23	1:C:333:ILE:HG12	2.01	0.43
1:N:46:ALA:HA	1:N:47:PRO:HD3	1.91	0.43
1:N:384:ALA:C	1:N:385:THR:HG23	2.39	0.43
1:B:183:LEU:HD13	1:B:184:GLN:N	2.34	0.43
1:B:253:ASP:OD1	1:B:277:LYS:HE2	2.19	0.43
1:G:417:VAL:HG11	1:G:488:MET:HG3	2.01	0.43
1:I:240:VAL:HG11	1:I:247:LEU:HB2	2.01	0.43
1:E:177:VAL:HA	1:E:379:ILE:O	2.19	0.43
1:F:366:GLN:HA	1:F:369:VAL:HG22	2.00	0.43
1:K:37:ASN:ND2	1:K:51:LYS:HE3	2.34	0.43
1:J:37:ASN:ND2	1:J:51:LYS:HE3	2.34	0.43
1:J:342:ILE:O	1:J:346:VAL:HG23	2.19	0.43
1:E:210:THR:HG22	1:E:210:THR:O	2.18	0.43
1:J:333:ILE:CG2	1:J:378:VAL:CG2	2.96	0.43
1:H:331:THR:HG1	1:H:376:VAL:HG11	1.73	0.43
1:B:41:ASP:CA	1:C:69:MET:HE1	2.49	0.43
1:I:384:ALA:C	1:I:385:THR:HG23	2.39	0.43
1:E:253:ASP:OD1	1:E:277:LYS:HE2	2.19	0.43
1:H:240:VAL:HG11	1:H:247:LEU:HB2	2.01	0.43
1:D:240:VAL:HG11	1:D:247:LEU:HB2	2.00	0.43
1:I:325:ILE:HA	1:I:329:THR:O	2.19	0.43
1:N:336:VAL:O	1:N:337:GLY:C	2.56	0.43
1:M:319:GLN:HB3	1:M:336:VAL:HG21	2.01	0.43
1:L:342:ILE:O	1:L:346:VAL:HG23	2.19	0.43
1:M:155:ASP:OD1	1:M:157:THR:HB	2.18	0.43
1:G:153:ASN:O	1:G:154:SER:HB2	2.19	0.43
1:I:260:ALA:O	1:I:264:VAL:HG23	2.18	0.43
1:K:514:MET:HE3	1:K:514:MET:HB3	1.93	0.43
1:K:371:LYS:HA	1:K:374:GLY:CA	2.47	0.42
1:C:41:ASP:CB	1:D:69:MET:HE3	2.49	0.42
1:I:183:LEU:HD13	1:I:184:GLN:N	2.33	0.42
1:D:366:GLN:HA	1:D:369:VAL:HG22	2.00	0.42
1:J:319:GLN:HB3	1:J:336:VAL:HG21	2.01	0.42
1:H:37:ASN:ND2	1:H:51:LYS:HE3	2.34	0.42
1:N:342:ILE:O	1:N:346:VAL:HG23	2.19	0.42
1:D:124:VAL:HG21	1:D:508:ALA:CB	2.49	0.42
1:I:342:ILE:O	1:I:346:VAL:HG23	2.19	0.42
1:A:190:VAL:HG23	1:A:333:ILE:HG12	2.01	0.42
1:F:253:ASP:OD1	1:F:277:LYS:HE2	2.19	0.42
1:H:185:ASP:OD1	1:H:382:GLY:N	2.46	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:417:VAL:HG11	1:E:488:MET:HG3	2.01	0.42
1:J:240:VAL:HG11	1:J:247:LEU:HB2	2.01	0.42
1:H:305:ILE:HB	1:H:307:MET:HE2	2.02	0.42
1:F:176:THR:HG22	1:F:177:VAL:H	1.84	0.42
1:K:325:ILE:HA	1:K:329:THR:O	2.19	0.42
1:E:240:VAL:HG11	1:E:247:LEU:HB2	2.00	0.42
1:A:153:ASN:O	1:A:154:SER:HB2	2.19	0.42
1:H:369:VAL:HG23	1:H:370:ALA:N	2.34	0.42
1:A:253:ASP:OD1	1:A:277:LYS:HE2	2.19	0.42
1:F:177:VAL:HA	1:F:379:ILE:O	2.19	0.42
1:A:185:ASP:OD1	1:A:382:GLY:N	2.48	0.42
1:L:37:ASN:ND2	1:L:51:LYS:HE3	2.34	0.42
1:L:461:GLU:HA	1:L:462:PRO:HD3	1.88	0.42
1:E:124:VAL:HG21	1:E:508:ALA:CB	2.49	0.42
1:N:193:MET:HE2	1:N:292:ILE:HG12	2.00	0.42
1:F:193:MET:HE2	1:F:292:ILE:HG12	2.00	0.42
1:D:190:VAL:HG23	1:D:333:ILE:HG12	2.01	0.42
1:H:384:ALA:C	1:H:385:THR:HG23	2.39	0.42
1:D:406:ALA:HA	1:D:496:PRO:CB	2.50	0.42
1:N:240:VAL:HG11	1:N:247:LEU:HB2	2.01	0.42
1:I:305:ILE:HB	1:I:307:MET:HE2	2.02	0.42
1:E:366:GLN:HA	1:E:369:VAL:HG22	2.00	0.42
1:G:124:VAL:HG21	1:G:508:ALA:CB	2.49	0.42
1:B:153:ASN:O	1:B:154:SER:HB2	2.19	0.42
1:F:193:MET:CA	1:F:375:GLY:N	2.81	0.42
1:B:325:ILE:HA	1:B:329:THR:O	2.20	0.42
1:C:193:MET:HG2	1:C:374:GLY:N	2.34	0.42
1:E:190:VAL:HG23	1:E:333:ILE:HG12	2.01	0.42
1:J:183:LEU:CD2	1:J:384:ALA:HB2	2.45	0.42
1:H:39:VAL:HG21	1:N:517:THR:HG21	1.97	0.42
1:K:381:VAL:O	1:K:382:GLY:O	2.38	0.42
1:H:325:ILE:HA	1:H:329:THR:O	2.19	0.42
1:H:220:ILE:HD12	1:H:296:THR:HG21	2.02	0.42
1:L:210:THR:HG22	1:L:210:THR:O	2.20	0.42
1:M:371:LYS:HA	1:M:374:GLY:CA	2.47	0.42
1:B:245:LYS:HE3	1:C:231:ARG:HH21	1.70	0.42
1:A:325:ILE:HA	1:A:329:THR:O	2.20	0.42
1:F:191:GLU:HA	1:F:192:GLY:HA3	1.25	0.42
1:A:183:LEU:HD13	1:A:184:GLN:N	2.34	0.42
1:M:381:VAL:O	1:M:382:GLY:O	2.38	0.42
1:G:176:THR:HG22	1:G:177:VAL:H	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:177:VAL:HA	1:C:379:ILE:O	2.19	0.42
1:C:51:LYS:NZ	1:D:114:MET:HE3	2.35	0.42
1:N:37:ASN:ND2	1:N:51:LYS:HE3	2.34	0.42
1:F:153:ASN:O	1:F:154:SER:HB2	2.19	0.42
1:L:220:ILE:HD12	1:L:296:THR:HG21	2.02	0.42
1:L:369:VAL:HG23	1:L:370:ALA:N	2.34	0.42
1:L:371:LYS:HA	1:L:374:GLY:CA	2.47	0.42
1:B:193:MET:HE3	1:B:292:ILE:HG12	2.01	0.42
1:G:325:ILE:HA	1:G:329:THR:O	2.20	0.42
1:C:325:ILE:HA	1:C:329:THR:O	2.20	0.42
1:J:76:GLU:CG	1:K:46:ALA:HB2	2.45	0.42
1:E:183:LEU:HD13	1:E:184:GLN:N	2.34	0.42
1:I:235:PRO:CG	1:I:310:GLU:HA	2.35	0.42
1:H:381:VAL:O	1:H:382:GLY:O	2.38	0.42
1:K:240:VAL:HG11	1:K:247:LEU:HB2	2.01	0.42
1:D:219:PHE:O	1:D:247:LEU:HD12	2.20	0.42
1:H:319:GLN:HB3	1:H:336:VAL:HG21	2.01	0.42
1:N:524:LEU:HA	1:N:524:LEU:HD12	1.87	0.42
1:K:342:ILE:O	1:K:346:VAL:HG23	2.19	0.42
1:F:124:VAL:HG21	1:F:508:ALA:CB	2.49	0.42
1:N:220:ILE:HD12	1:N:296:THR:HG21	2.02	0.42
1:H:210:THR:HG22	1:H:210:THR:O	2.20	0.42
1:M:210:THR:O	1:M:210:THR:HG22	2.20	0.42
1:K:192:GLY:O	1:K:375:GLY:HA3	2.07	0.42
1:B:194:GLN:HG3	1:B:331:THR:HB	2.02	0.42
1:G:190:VAL:HG23	1:G:333:ILE:HG12	2.01	0.42
1:M:182:GLY:HA2	1:M:383:ALA:HB3	2.02	0.42
1:H:183:LEU:HD13	1:H:184:GLN:N	2.33	0.42
1:J:381:VAL:O	1:J:382:GLY:O	2.38	0.42
1:N:381:VAL:O	1:N:382:GLY:O	2.38	0.42
1:F:219:PHE:O	1:F:247:LEU:HD12	2.20	0.42
1:L:325:ILE:HA	1:L:329:THR:O	2.19	0.42
1:F:242:LYS:C	1:F:244:GLY:N	2.73	0.42
1:I:153:ASN:O	1:I:154:SER:HB2	2.20	0.42
1:M:220:ILE:HD12	1:M:296:THR:HG21	2.02	0.42
1:K:220:ILE:HD12	1:K:296:THR:HG21	2.02	0.42
1:E:153:ASN:O	1:E:154:SER:HB2	2.19	0.42
1:F:325:ILE:HA	1:F:329:THR:O	2.20	0.42
1:A:194:GLN:HG3	1:A:331:THR:HB	2.02	0.42
1:A:517:THR:CB	1:G:39:VAL:HG21	2.41	0.42
1:D:183:LEU:HD13	1:D:184:GLN:N	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:182:GLY:HA2	1:J:383:ALA:HB3	2.02	0.42
1:C:417:VAL:HG11	1:C:488:MET:HG3	2.01	0.42
1:A:417:VAL:HG11	1:A:488:MET:HG3	2.00	0.42
1:K:177:VAL:HG21	1:K:397:GLU:HG2	2.00	0.42
1:M:240:VAL:HG11	1:M:247:LEU:HB2	2.01	0.42
1:C:219:PHE:O	1:C:247:LEU:HD12	2.20	0.42
1:E:219:PHE:O	1:E:247:LEU:HD12	2.20	0.42
1:A:177:VAL:HA	1:A:379:ILE:O	2.19	0.42
1:G:305:ILE:HB	1:G:307:MET:HE2	2.02	0.42
1:N:325:ILE:HA	1:N:329:THR:O	2.19	0.42
1:B:302:SER:O	1:B:307:MET:HE3	2.20	0.42
1:M:37:ASN:ND2	1:M:51:LYS:HE3	2.34	0.42
1:M:153:ASN:O	1:M:154:SER:HB2	2.20	0.42
1:N:153:ASN:O	1:N:154:SER:HB2	2.20	0.42
1:C:153:ASN:O	1:C:154:SER:HB2	2.19	0.42
1:I:210:THR:HG22	1:I:210:THR:O	2.20	0.42
1:G:194:GLN:HG3	1:G:331:THR:HB	2.02	0.42
1:F:190:VAL:HG23	1:F:333:ILE:HG12	2.01	0.42
1:K:46:ALA:HA	1:K:47:PRO:HD3	1.91	0.42
1:K:183:LEU:CD2	1:K:384:ALA:HB2	2.45	0.42
1:E:384:ALA:O	1:E:385:THR:OG1	2.33	0.42
1:L:381:VAL:O	1:L:382:GLY:O	2.38	0.42
1:I:381:VAL:O	1:I:382:GLY:O	2.38	0.42
1:B:417:VAL:HG11	1:B:488:MET:HG3	2.01	0.42
1:M:302:SER:H	1:M:307:MET:HE1	1.85	0.42
1:B:219:PHE:O	1:B:247:LEU:HD12	2.20	0.42
1:A:219:PHE:O	1:A:247:LEU:HD12	2.20	0.42
1:D:177:VAL:HA	1:D:379:ILE:O	2.19	0.42
1:B:177:VAL:HA	1:B:379:ILE:O	2.19	0.42
1:G:242:LYS:C	1:G:244:GLY:N	2.73	0.42
1:I:319:GLN:HB3	1:I:336:VAL:HG21	2.01	0.42
1:D:51:LYS:HZ3	1:E:114:MET:HE1	1.84	0.42
1:L:153:ASN:O	1:L:154:SER:HB2	2.20	0.42
1:M:342:ILE:O	1:M:346:VAL:HG23	2.19	0.42
1:J:210:THR:HG22	1:J:210:THR:O	2.20	0.42
1:F:194:GLN:HG3	1:F:331:THR:HB	2.02	0.41
1:B:331:THR:OG1	1:B:376:VAL:HG21	2.00	0.41
1:D:41:ASP:CA	1:E:69:MET:HE1	2.49	0.41
1:B:70:GLY:HA2	1:B:73:MET:HE3	2.02	0.41
1:N:182:GLY:HA2	1:N:383:ALA:HB3	2.02	0.41
1:J:302:SER:H	1:J:307:MET:HE1	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:319:GLN:HB3	1:N:336:VAL:HG21	2.01	0.41
1:E:242:LYS:C	1:E:244:GLY:N	2.73	0.41
1:J:524:LEU:HD12	1:J:524:LEU:HA	1.87	0.41
1:I:220:ILE:HD12	1:I:296:THR:HG21	2.02	0.41
1:I:458:CYS:SG	1:I:480:ALA:HB1	2.60	0.41
1:C:220:ILE:HD12	1:C:296:THR:HG21	2.02	0.41
1:H:153:ASN:O	1:H:154:SER:HB2	2.20	0.41
1:D:153:ASN:O	1:D:154:SER:HB2	2.19	0.41
1:K:210:THR:HG22	1:K:210:THR:O	2.20	0.41
1:E:514:MET:HB3	1:E:514:MET:HE3	1.93	0.41
1:N:369:VAL:HG23	1:N:370:ALA:N	2.34	0.41
1:A:193:MET:HG2	1:A:374:GLY:N	2.34	0.41
1:E:325:ILE:HA	1:E:329:THR:O	2.20	0.41
1:E:193:MET:HG2	1:E:374:GLY:N	2.34	0.41
1:C:41:ASP:HB2	1:D:69:MET:CE	2.35	0.41
1:D:417:VAL:HG11	1:D:488:MET:HG3	2.00	0.41
1:G:219:PHE:O	1:G:247:LEU:HD12	2.20	0.41
1:B:409:GLU:OE2	1:B:498:LYS:HD2	2.21	0.41
1:I:455:VAL:HG13	1:I:460:GLU:HB2	2.03	0.41
1:J:458:CYS:SG	1:J:480:ALA:HB1	2.60	0.41
1:K:458:CYS:SG	1:K:480:ALA:HB1	2.60	0.41
1:M:458:CYS:SG	1:M:480:ALA:HB1	2.60	0.41
1:D:325:ILE:HA	1:D:329:THR:O	2.20	0.41
1:C:194:GLN:HG3	1:C:331:THR:HB	2.02	0.41
1:G:253:ASP:OD1	1:G:277:LYS:HE2	2.19	0.41
1:H:266:THR:HG21	1:H:273:VAL:H	1.85	0.41
1:F:51:LYS:HZ1	1:G:114:MET:HE3	1.85	0.41
1:J:220:ILE:HD12	1:J:296:THR:HG21	2.02	0.41
1:E:220:ILE:HD12	1:E:296:THR:HG21	2.02	0.41
1:D:182:GLY:O	1:D:183:LEU:O	2.38	0.41
1:E:406:ALA:HA	1:E:496:PRO:CB	2.50	0.41
1:C:409:GLU:OE2	1:C:498:LYS:HD2	2.21	0.41
1:D:220:ILE:HD12	1:D:296:THR:HG21	2.02	0.41
1:J:153:ASN:O	1:J:154:SER:HB2	2.20	0.41
1:M:369:VAL:HG23	1:M:370:ALA:N	2.34	0.41
1:D:41:ASP:CB	1:E:69:MET:HE3	2.46	0.41
1:C:266:THR:HG21	1:C:273:VAL:H	1.86	0.41
1:G:177:VAL:HA	1:G:379:ILE:O	2.19	0.41
1:A:266:THR:HG21	1:A:273:VAL:H	1.86	0.41
1:A:23:LEU:CD2	1:A:74:VAL:HG13	2.50	0.41
1:E:51:LYS:HZ3	1:F:114:MET:CE	2.33	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:202:PRO:C	1:I:204:PHE:H	2.24	0.41
1:A:409:GLU:OE2	1:A:498:LYS:HD2	2.21	0.41
1:J:455:VAL:HG13	1:J:460:GLU:HB2	2.03	0.41
1:B:140:ASP:OD2	1:B:142:LYS:HB3	2.21	0.41
1:N:458:CYS:SG	1:N:480:ALA:HB1	2.60	0.41
1:H:455:VAL:HG13	1:H:460:GLU:HB2	2.02	0.41
1:J:324:VAL:O	1:J:331:THR:HG22	2.21	0.41
1:H:193:MET:HE1	1:H:292:ILE:HG12	2.02	0.41
1:G:193:MET:HE1	1:G:292:ILE:HG12	2.01	0.41
1:E:194:GLN:HG3	1:E:331:THR:HB	2.02	0.41
1:I:182:GLY:HA2	1:I:383:ALA:HB3	2.02	0.41
1:K:76:GLU:CG	1:L:46:ALA:HB2	2.45	0.41
1:B:384:ALA:C	1:B:385:THR:HG23	2.41	0.41
1:A:384:ALA:C	1:A:385:THR:HG23	2.41	0.41
1:E:182:GLY:O	1:E:183:LEU:O	2.38	0.41
1:C:176:THR:HG22	1:C:177:VAL:H	1.84	0.41
1:B:23:LEU:CD2	1:B:74:VAL:HG13	2.50	0.41
1:B:242:LYS:C	1:B:244:GLY:N	2.73	0.41
1:N:202:PRO:C	1:N:204:PHE:H	2.24	0.41
1:F:342:ILE:O	1:F:346:VAL:HG23	2.21	0.41
1:B:220:ILE:HD12	1:B:296:THR:HG21	2.02	0.41
1:B:342:ILE:O	1:B:346:VAL:HG23	2.21	0.41
1:A:455:VAL:HG13	1:A:460:GLU:HB2	2.03	0.41
1:B:455:VAL:HG13	1:B:460:GLU:HB2	2.03	0.41
1:D:342:ILE:O	1:D:346:VAL:HG23	2.21	0.41
1:J:190:VAL:HG22	1:J:333:ILE:HG23	1.51	0.41
1:K:324:VAL:O	1:K:331:THR:HG22	2.21	0.41
1:G:191:GLU:HB3	1:G:332:ILE:C	2.37	0.41
1:L:182:GLY:HA2	1:L:383:ALA:HB3	2.02	0.41
1:N:216:GLU:C	1:N:218:PRO:HD3	2.41	0.41
1:B:406:ALA:HA	1:B:496:PRO:CB	2.50	0.41
1:I:177:VAL:HG21	1:I:397:GLU:HG2	2.00	0.41
1:L:240:VAL:HG11	1:L:247:LEU:HB2	2.01	0.41
1:H:177:VAL:HG21	1:H:397:GLU:HG2	2.00	0.41
1:M:177:VAL:HG21	1:M:397:GLU:HG2	2.00	0.41
1:D:176:THR:HG22	1:D:177:VAL:H	1.84	0.41
1:G:302:SER:O	1:G:307:MET:HE3	2.21	0.41
1:D:302:SER:O	1:D:307:MET:HE3	2.20	0.41
1:D:202:PRO:C	1:D:204:PHE:H	2.24	0.41
1:C:202:PRO:C	1:C:204:PHE:H	2.24	0.41
1:A:51:LYS:NZ	1:B:114:MET:HE3	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:140:ASP:OD2	1:A:142:LYS:HB3	2.21	0.41
1:L:458:CYS:SG	1:L:480:ALA:HB1	2.60	0.41
1:L:82:ASN:O	1:L:86:GLY:N	2.52	0.41
1:N:210:THR:O	1:N:210:THR:HG22	2.20	0.41
1:D:295:LEU:O	1:D:295:LEU:HD13	2.21	0.41
1:K:333:ILE:CG2	1:K:378:VAL:CG2	2.96	0.41
1:A:41:ASP:OD2	1:B:522:THR:CB	2.69	0.41
1:E:46:ALA:HA	1:E:47:PRO:HD3	1.93	0.41
1:H:182:GLY:HA2	1:H:383:ALA:HB3	2.02	0.41
1:H:46:ALA:HA	1:H:47:PRO:HD3	1.91	0.41
1:C:182:GLY:O	1:C:183:LEU:O	2.38	0.41
1:J:216:GLU:C	1:J:218:PRO:HD3	2.41	0.41
1:M:216:GLU:C	1:M:218:PRO:HD3	2.41	0.41
1:F:51:LYS:HZ3	1:G:114:MET:CE	2.33	0.41
1:D:242:LYS:C	1:D:244:GLY:N	2.73	0.41
1:A:202:PRO:C	1:A:204:PHE:H	2.24	0.41
1:C:140:ASP:OD2	1:C:142:LYS:HB3	2.21	0.41
1:M:82:ASN:O	1:M:86:GLY:N	2.52	0.41
1:K:153:ASN:O	1:K:154:SER:HB2	2.20	0.41
1:L:192:GLY:O	1:L:375:GLY:HA3	2.07	0.41
1:L:333:ILE:HG21	1:L:378:VAL:CG2	2.36	0.41
1:D:194:GLN:HG3	1:D:331:THR:HB	2.02	0.41
1:G:193:MET:HG2	1:G:374:GLY:N	2.33	0.41
1:G:336:VAL:O	1:G:337:GLY:C	2.59	0.41
1:D:41:ASP:OD2	1:E:522:THR:CB	2.69	0.41
1:D:47:PRO:HD3	1:E:73:MET:HG3	2.02	0.41
1:B:47:PRO:HD3	1:C:73:MET:HG3	2.03	0.41
1:B:41:ASP:OD2	1:C:522:THR:CB	2.69	0.41
1:A:69:MET:CE	1:G:41:ASP:HB2	2.35	0.41
1:A:522:THR:CB	1:G:41:ASP:OD2	2.69	0.41
1:E:41:ASP:OD1	1:F:69:MET:CG	2.68	0.41
1:D:384:ALA:C	1:D:385:THR:HG23	2.41	0.41
1:K:182:GLY:HA2	1:K:383:ALA:HB3	2.02	0.41
1:J:182:GLY:O	1:J:183:LEU:O	2.39	0.41
1:A:182:GLY:O	1:A:183:LEU:O	2.38	0.41
1:G:384:ALA:C	1:G:385:THR:HG23	2.41	0.41
1:L:517:THR:HG21	1:M:39:VAL:HG21	1.97	0.41
1:K:235:PRO:CG	1:K:310:GLU:HA	2.35	0.41
1:G:406:ALA:HA	1:G:496:PRO:CB	2.50	0.41
1:K:200:LEU:HG	1:K:276:VAL:HA	2.02	0.41
1:I:266:THR:HG21	1:I:273:VAL:H	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:266:THR:HG21	1:D:273:VAL:H	1.85	0.41
1:K:326:ASN:HD22	1:K:329:THR:HB	1.86	0.41
1:E:176:THR:HG22	1:E:177:VAL:H	1.84	0.41
1:E:302:SER:O	1:E:307:MET:HE3	2.21	0.41
1:A:302:SER:O	1:A:307:MET:HE3	2.20	0.41
1:C:302:SER:O	1:C:307:MET:HE3	2.21	0.41
1:G:23:LEU:CD2	1:G:74:VAL:HG13	2.50	0.41
1:A:242:LYS:C	1:A:244:GLY:N	2.73	0.41
1:G:202:PRO:C	1:G:204:PHE:H	2.24	0.41
1:B:27:VAL:HG12	1:B:90:THR:HG23	2.03	0.41
1:C:27:VAL:HG12	1:C:90:THR:HG23	2.03	0.41
1:J:144:ILE:HG23	1:J:403:THR:CG2	2.51	0.41
1:L:524:LEU:HD12	1:L:524:LEU:HA	1.87	0.41
1:H:458:CYS:SG	1:H:480:ALA:HB1	2.60	0.41
1:L:77:VAL:HG23	1:L:510:VAL:HG21	2.03	0.41
1:C:455:VAL:HG13	1:C:460:GLU:HB2	2.03	0.41
1:C:295:LEU:HD13	1:C:295:LEU:O	2.21	0.41
1:D:466:ALA:O	1:D:470:LYS:HG3	2.21	0.41
1:H:82:ASN:O	1:H:86:GLY:N	2.52	0.41
1:A:342:ILE:O	1:A:346:VAL:HG23	2.21	0.41
1:G:455:VAL:HG13	1:G:460:GLU:HB2	2.03	0.41
1:F:220:ILE:HD12	1:F:296:THR:HG21	2.02	0.41
1:E:342:ILE:O	1:E:346:VAL:HG23	2.21	0.41
1:C:342:ILE:O	1:C:346:VAL:HG23	2.21	0.41
1:H:461:GLU:HA	1:H:462:PRO:HD3	1.88	0.41
1:H:295:LEU:C	1:H:295:LEU:HD13	2.41	0.41
1:L:324:VAL:O	1:L:331:THR:HG22	2.21	0.41
1:A:193:MET:C	1:A:375:GLY:HA2	2.42	0.41
1:D:193:MET:C	1:D:375:GLY:HA2	2.42	0.41
1:A:336:VAL:O	1:A:337:GLY:C	2.59	0.41
1:C:41:ASP:OD2	1:D:522:THR:CB	2.69	0.41
1:I:182:GLY:O	1:I:183:LEU:O	2.39	0.41
1:K:182:GLY:O	1:K:183:LEU:O	2.39	0.41
1:J:200:LEU:HG	1:J:276:VAL:HA	2.02	0.41
1:I:326:ASN:HD22	1:I:329:THR:HB	1.86	0.41
1:L:326:ASN:HD22	1:L:329:THR:HB	1.86	0.41
1:B:176:THR:HG22	1:B:177:VAL:H	1.84	0.41
1:M:326:ASN:HD22	1:M:329:THR:HB	1.86	0.41
1:N:326:ASN:HD22	1:N:329:THR:HB	1.86	0.41
1:D:242:LYS:O	1:D:243:ALA:HB3	2.21	0.41
1:C:336:VAL:O	1:C:337:GLY:C	2.59	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:409:GLU:OE2	1:G:498:LYS:HD2	2.21	0.41
1:E:27:VAL:HG12	1:E:90:THR:HG23	2.03	0.41
1:K:37:ASN:HD21	1:K:51:LYS:HE3	1.86	0.41
1:H:37:ASN:HD21	1:H:51:LYS:HE3	1.86	0.41
1:M:37:ASN:HD21	1:M:51:LYS:HE3	1.86	0.41
1:G:140:ASP:OD2	1:G:142:LYS:HB3	2.20	0.41
1:K:455:VAL:HG13	1:K:460:GLU:HB2	2.02	0.41
1:G:466:ALA:O	1:G:470:LYS:HG3	2.21	0.41
1:D:140:ASP:OD2	1:D:142:LYS:HB3	2.21	0.41
1:E:295:LEU:O	1:E:295:LEU:HD13	2.21	0.41
1:L:281:PHE:CE2	1:M:183:LEU:HB3	2.56	0.40
1:K:182:GLY:HA2	1:K:383:ALA:CB	2.52	0.40
1:C:384:ALA:C	1:C:385:THR:HG23	2.41	0.40
1:M:517:THR:HG21	1:N:39:VAL:HG21	1.97	0.40
1:L:216:GLU:C	1:L:218:PRO:HD3	2.41	0.40
1:M:266:THR:HG21	1:M:273:VAL:H	1.85	0.40
1:N:302:SER:H	1:N:307:MET:HE1	1.86	0.40
1:C:242:LYS:O	1:C:243:ALA:HB3	2.21	0.40
1:J:202:PRO:C	1:J:204:PHE:H	2.24	0.40
1:D:27:VAL:HG12	1:D:90:THR:HG23	2.03	0.40
1:F:466:ALA:O	1:F:470:LYS:HG3	2.21	0.40
1:A:461:GLU:HA	1:A:462:PRO:HD3	1.89	0.40
1:M:77:VAL:HG23	1:M:510:VAL:HG21	2.03	0.40
1:K:295:LEU:C	1:K:295:LEU:HD13	2.41	0.40
1:M:295:LEU:C	1:M:295:LEU:HD13	2.41	0.40
1:A:104:LEU:HD23	1:A:104:LEU:HA	1.94	0.40
1:F:193:MET:C	1:F:375:GLY:HA2	2.42	0.40
1:A:73:MET:HG3	1:G:47:PRO:HD3	2.03	0.40
1:E:41:ASP:OD2	1:F:522:THR:CB	2.69	0.40
1:M:69:MET:CE	1:N:41:ASP:HB2	2.36	0.40
1:I:216:GLU:C	1:I:218:PRO:HD3	2.41	0.40
1:H:218:PRO:HD2	1:H:320:ALA:O	2.21	0.40
1:H:266:THR:HG22	1:H:273:VAL:H	1.87	0.40
1:N:302:SER:H	1:N:307:MET:CE	2.35	0.40
1:J:326:ASN:HD22	1:J:329:THR:HB	1.86	0.40
1:F:302:SER:O	1:F:307:MET:HE3	2.21	0.40
1:B:179:ASP:HB3	1:B:389:MET:CE	2.52	0.40
1:K:160:LYS:HB2	1:K:160:LYS:HZ2	1.85	0.40
1:E:202:PRO:C	1:E:204:PHE:H	2.24	0.40
1:D:409:GLU:OE2	1:D:498:LYS:HD2	2.21	0.40
1:K:524:LEU:HD12	1:K:524:LEU:HA	1.87	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:144:ILE:HG23	1:K:403:THR:CG2	2.51	0.40
1:N:82:ASN:O	1:N:86:GLY:N	2.52	0.40
1:I:324:VAL:O	1:I:331:THR:HG22	2.21	0.40
1:M:281:PHE:CE2	1:N:183:LEU:HB3	2.56	0.40
1:B:182:GLY:O	1:B:183:LEU:O	2.38	0.40
1:F:182:GLY:O	1:F:183:LEU:O	2.39	0.40
1:F:384:ALA:C	1:F:385:THR:HG23	2.41	0.40
1:K:517:THR:OG1	1:L:39:VAL:CG2	2.69	0.40
1:H:216:GLU:C	1:H:218:PRO:HD3	2.41	0.40
1:N:218:PRO:HD2	1:N:320:ALA:O	2.21	0.40
1:M:218:PRO:HD2	1:M:320:ALA:O	2.21	0.40
1:M:266:THR:HG22	1:M:273:VAL:H	1.87	0.40
1:G:179:ASP:HB3	1:G:389:MET:CE	2.52	0.40
1:E:242:LYS:O	1:E:243:ALA:HB3	2.21	0.40
1:B:242:LYS:O	1:B:243:ALA:HB3	2.21	0.40
1:K:202:PRO:C	1:K:204:PHE:H	2.24	0.40
1:B:336:VAL:O	1:B:337:GLY:C	2.59	0.40
1:N:295:LEU:C	1:N:295:LEU:HD13	2.41	0.40
1:N:324:VAL:O	1:N:331:THR:HG22	2.21	0.40
1:E:193:MET:C	1:E:375:GLY:HA2	2.42	0.40
1:A:41:ASP:CA	1:B:69:MET:HE3	2.48	0.40
1:F:41:ASP:OD2	1:G:522:THR:CB	2.69	0.40
1:L:182:GLY:O	1:L:183:LEU:O	2.39	0.40
1:L:200:LEU:HG	1:L:276:VAL:HA	2.02	0.40
1:K:266:THR:HG21	1:K:273:VAL:H	1.85	0.40
1:E:179:ASP:HB3	1:E:389:MET:CE	2.52	0.40
1:C:242:LYS:C	1:C:244:GLY:N	2.73	0.40
1:J:136:VAL:HG12	1:J:137:PRO:HD3	2.03	0.40
1:H:202:PRO:C	1:H:204:PHE:H	2.24	0.40
1:F:27:VAL:HG12	1:F:90:THR:HG23	2.03	0.40
1:A:27:VAL:HG12	1:A:90:THR:HG23	2.03	0.40
1:B:124:VAL:O	1:B:128:VAL:HG23	2.22	0.40
1:D:455:VAL:HG13	1:D:460:GLU:HB2	2.03	0.40
1:F:140:ASP:OD2	1:F:142:LYS:HB3	2.21	0.40
1:N:455:VAL:HG13	1:N:460:GLU:HB2	2.03	0.40
1:A:112:ASN:HA	1:A:113:PRO:HD3	1.98	0.40
1:J:295:LEU:HD13	1:J:295:LEU:C	2.41	0.40
1:B:295:LEU:O	1:B:295:LEU:HD13	2.21	0.40
1:D:336:VAL:O	1:D:337:GLY:C	2.59	0.40
1:J:517:THR:OG1	1:K:39:VAL:CG2	2.69	0.40
1:M:235:PRO:CG	1:M:310:GLU:HA	2.35	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:517:THR:OG1	1:J:39:VAL:CG2	2.69	0.40
1:H:517:THR:OG1	1:I:39:VAL:CG2	2.69	0.40
1:L:266:THR:HG21	1:L:273:VAL:H	1.85	0.40
1:J:266:THR:HG21	1:J:273:VAL:H	1.85	0.40
1:N:177:VAL:HG21	1:N:397:GLU:HG2	2.00	0.40
1:H:326:ASN:HD22	1:H:329:THR:HB	1.86	0.40
1:C:23:LEU:CD2	1:C:74:VAL:HG13	2.50	0.40
1:D:179:ASP:HB3	1:D:389:MET:CE	2.52	0.40
1:A:179:ASP:HB3	1:A:389:MET:CE	2.52	0.40
1:N:144:ILE:HG23	1:N:403:THR:CG2	2.51	0.40
1:C:124:VAL:O	1:C:128:VAL:HG23	2.22	0.40
1:A:124:VAL:O	1:A:128:VAL:HG23	2.22	0.40
1:E:124:VAL:O	1:E:128:VAL:HG23	2.22	0.40
1:C:295:LEU:C	1:C:295:LEU:HD13	2.42	0.40
1:A:220:ILE:HD12	1:A:296:THR:HG21	2.02	0.40
1:E:455:VAL:HG13	1:E:460:GLU:HB2	2.03	0.40
1:G:342:ILE:O	1:G:346:VAL:HG23	2.21	0.40
1:K:82:ASN:O	1:K:86:GLY:N	2.52	0.40
1:G:112:ASN:HA	1:G:113:PRO:HD3	1.98	0.40
1:K:77:VAL:HG23	1:K:510:VAL:HG21	2.03	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	517/547 (94%)	480 (93%)	27 (5%)	10 (2%)	10	52
1	B	517/547 (94%)	480 (93%)	27 (5%)	10 (2%)	10	52
1	C	517/547 (94%)	480 (93%)	27 (5%)	10 (2%)	10	52
1	D	517/547 (94%)	480 (93%)	27 (5%)	10 (2%)	10	52

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	E	517/547 (94%)	480 (93%)	27 (5%)	10 (2%)	10	52
1	F	517/547 (94%)	480 (93%)	27 (5%)	10 (2%)	10	52
1	G	517/547 (94%)	480 (93%)	27 (5%)	10 (2%)	10	52
1	H	517/547 (94%)	480 (93%)	25 (5%)	12 (2%)	8	48
1	I	517/547 (94%)	480 (93%)	25 (5%)	12 (2%)	8	48
1	J	517/547 (94%)	480 (93%)	25 (5%)	12 (2%)	8	48
1	K	517/547 (94%)	480 (93%)	25 (5%)	12 (2%)	8	48
1	L	517/547 (94%)	480 (93%)	25 (5%)	12 (2%)	8	48
1	M	517/547 (94%)	480 (93%)	25 (5%)	12 (2%)	8	48
1	N	517/547 (94%)	480 (93%)	25 (5%)	12 (2%)	8	48
All	All	7238/7658 (94%)	6720 (93%)	364 (5%)	154 (2%)	13	50

All (154) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	410	GLY
1	B	410	GLY
1	C	410	GLY
1	D	410	GLY
1	E	410	GLY
1	F	410	GLY
1	G	410	GLY
1	A	183	LEU
1	A	256	GLY
1	A	271	VAL
1	B	183	LEU
1	B	256	GLY
1	B	271	VAL
1	C	183	LEU
1	C	256	GLY
1	C	271	VAL
1	D	183	LEU
1	D	256	GLY
1	D	271	VAL
1	E	183	LEU
1	E	256	GLY
1	E	271	VAL
1	F	183	LEU

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Mol	Chain	Res	Type
1	F	256	GLY
1	F	271	VAL
1	G	183	LEU
1	G	256	GLY
1	G	271	VAL
1	H	183	LEU
1	H	256	GLY
1	H	382	GLY
1	I	183	LEU
1	I	256	GLY
1	I	382	GLY
1	J	183	LEU
1	J	256	GLY
1	J	382	GLY
1	K	183	LEU
1	K	256	GLY
1	K	382	GLY
1	L	183	LEU
1	L	256	GLY
1	L	382	GLY
1	M	183	LEU
1	M	256	GLY
1	M	382	GLY
1	N	183	LEU
1	N	256	GLY
1	N	382	GLY
1	A	202	PRO
1	A	385	THR
1	B	202	PRO
1	B	385	THR
1	C	202	PRO
1	C	385	THR
1	D	202	PRO
1	D	385	THR
1	E	202	PRO
1	E	385	THR
1	F	202	PRO
1	F	385	THR
1	G	202	PRO
1	G	385	THR
1	H	202	PRO
1	H	271	VAL

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Mol	Chain	Res	Type
1	H	385	THR
1	I	202	PRO
1	I	271	VAL
1	I	385	THR
1	J	202	PRO
1	J	271	VAL
1	J	385	THR
1	K	202	PRO
1	K	271	VAL
1	K	385	THR
1	L	202	PRO
1	L	271	VAL
1	L	385	THR
1	M	202	PRO
1	M	271	VAL
1	M	385	THR
1	N	202	PRO
1	N	271	VAL
1	N	385	THR
1	A	253	ASP
1	B	253	ASP
1	C	253	ASP
1	D	253	ASP
1	E	253	ASP
1	F	253	ASP
1	G	253	ASP
1	H	337	GLY
1	H	383	ALA
1	I	337	GLY
1	I	383	ALA
1	J	337	GLY
1	J	383	ALA
1	K	337	GLY
1	K	383	ALA
1	L	337	GLY
1	L	383	ALA
1	M	337	GLY
1	M	383	ALA
1	N	337	GLY
1	N	383	ALA
1	A	184	GLN
1	A	201	SER

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Mol	Chain	Res	Type
1	B	184	GLN
1	B	201	SER
1	C	184	GLN
1	C	201	SER
1	D	184	GLN
1	D	201	SER
1	E	184	GLN
1	E	201	SER
1	F	184	GLN
1	F	201	SER
1	G	184	GLN
1	G	201	SER
1	H	184	GLN
1	H	253	ASP
1	H	384	ALA
1	I	184	GLN
1	I	253	ASP
1	I	384	ALA
1	J	184	GLN
1	J	253	ASP
1	J	384	ALA
1	K	184	GLN
1	K	253	ASP
1	K	384	ALA
1	L	184	GLN
1	L	253	ASP
1	L	384	ALA
1	M	184	GLN
1	M	253	ASP
1	M	384	ALA
1	N	184	GLN
1	N	253	ASP
1	N	384	ALA
1	A	382	GLY
1	B	382	GLY
1	C	382	GLY
1	D	382	GLY
1	E	382	GLY
1	F	382	GLY
1	G	382	GLY
1	N	201	SER
1	H	201	SER

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Mol	Chain	Res	Type
1	I	201	SER
1	J	201	SER
1	K	201	SER
1	L	201	SER
1	M	201	SER

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	404/414 (98%)	394 (98%)	10 (2%)	55	81
1	B	404/414 (98%)	394 (98%)	10 (2%)	55	81
1	C	404/414 (98%)	394 (98%)	10 (2%)	55	81
1	D	404/414 (98%)	394 (98%)	10 (2%)	55	81
1	E	404/414 (98%)	394 (98%)	10 (2%)	55	81
1	F	404/414 (98%)	394 (98%)	10 (2%)	55	81
1	G	404/414 (98%)	394 (98%)	10 (2%)	55	81
1	H	404/414 (98%)	397 (98%)	7 (2%)	68	87
1	I	404/414 (98%)	397 (98%)	7 (2%)	68	87
1	J	404/414 (98%)	397 (98%)	7 (2%)	68	87
1	K	404/414 (98%)	397 (98%)	7 (2%)	68	87
1	L	404/414 (98%)	397 (98%)	7 (2%)	68	87
1	M	404/414 (98%)	397 (98%)	7 (2%)	68	87
1	N	404/414 (98%)	397 (98%)	7 (2%)	68	87
All	All	5656/5796 (98%)	5537 (98%)	119 (2%)	64	84

All (119) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	10	ASN
1	A	20	VAL

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Mol	Chain	Res	Type
1	A	75	LYS
1	A	94	VAL
1	A	183	LEU
1	A	289	LEU
1	A	310	GLU
1	A	328	ASP
1	A	404	ARG
1	A	499	VAL
1	B	10	ASN
1	B	20	VAL
1	B	75	LYS
1	B	94	VAL
1	B	183	LEU
1	B	289	LEU
1	B	310	GLU
1	B	328	ASP
1	B	404	ARG
1	B	499	VAL
1	C	10	ASN
1	C	20	VAL
1	C	75	LYS
1	C	94	VAL
1	C	183	LEU
1	C	289	LEU
1	C	310	GLU
1	C	328	ASP
1	C	404	ARG
1	C	499	VAL
1	D	10	ASN
1	D	20	VAL
1	D	75	LYS
1	D	94	VAL
1	D	183	LEU
1	D	289	LEU
1	D	310	GLU
1	D	328	ASP
1	D	404	ARG
1	D	499	VAL
1	E	10	ASN
1	E	20	VAL
1	E	75	LYS
1	E	94	VAL

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Mol	Chain	Res	Type
1	E	183	LEU
1	E	289	LEU
1	E	310	GLU
1	E	328	ASP
1	E	404	ARG
1	E	499	VAL
1	F	10	ASN
1	F	20	VAL
1	F	75	LYS
1	F	94	VAL
1	F	183	LEU
1	F	289	LEU
1	F	310	GLU
1	F	328	ASP
1	F	404	ARG
1	F	499	VAL
1	G	10	ASN
1	G	20	VAL
1	G	75	LYS
1	G	94	VAL
1	G	183	LEU
1	G	289	LEU
1	G	310	GLU
1	G	328	ASP
1	G	404	ARG
1	G	499	VAL
1	H	20	VAL
1	H	75	LYS
1	H	94	VAL
1	H	183	LEU
1	H	289	LEU
1	H	404	ARG
1	H	499	VAL
1	I	20	VAL
1	I	75	LYS
1	I	94	VAL
1	I	183	LEU
1	I	289	LEU
1	I	404	ARG
1	I	499	VAL
1	J	20	VAL
1	J	75	LYS

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Mol	Chain	Res	Type
1	J	94	VAL
1	J	183	LEU
1	J	289	LEU
1	J	404	ARG
1	J	499	VAL
1	K	20	VAL
1	K	75	LYS
1	K	94	VAL
1	K	183	LEU
1	K	289	LEU
1	K	404	ARG
1	K	499	VAL
1	L	20	VAL
1	L	75	LYS
1	L	94	VAL
1	L	183	LEU
1	L	289	LEU
1	L	404	ARG
1	L	499	VAL
1	M	20	VAL
1	M	75	LYS
1	M	94	VAL
1	M	183	LEU
1	M	289	LEU
1	M	404	ARG
1	M	499	VAL
1	N	20	VAL
1	N	75	LYS
1	N	94	VAL
1	N	183	LEU
1	N	289	LEU
1	N	404	ARG
1	N	499	VAL

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (119) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	146	GLN
1	A	265	ASN
1	A	319	GLN
1	A	326	ASN
1	A	348	GLN

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Mol	Chain	Res	Type
1	A	351	GLN
1	A	401	HIS
1	A	453	GLN
1	B	146	GLN
1	B	265	ASN
1	B	319	GLN
1	B	326	ASN
1	B	348	GLN
1	B	351	GLN
1	B	401	HIS
1	B	453	GLN
1	C	146	GLN
1	C	265	ASN
1	C	319	GLN
1	C	326	ASN
1	C	348	GLN
1	C	351	GLN
1	C	401	HIS
1	C	453	GLN
1	D	146	GLN
1	D	265	ASN
1	D	319	GLN
1	D	326	ASN
1	D	348	GLN
1	D	351	GLN
1	D	401	HIS
1	D	453	GLN
1	E	146	GLN
1	E	265	ASN
1	E	319	GLN
1	E	326	ASN
1	E	348	GLN
1	E	351	GLN
1	E	401	HIS
1	E	453	GLN
1	F	146	GLN
1	F	265	ASN
1	F	319	GLN
1	F	326	ASN
1	F	348	GLN
1	F	351	GLN
1	F	401	HIS

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Mol	Chain	Res	Type
1	F	453	GLN
1	G	146	GLN
1	G	265	ASN
1	G	319	GLN
1	G	326	ASN
1	G	348	GLN
1	G	351	GLN
1	G	401	HIS
1	G	453	GLN
1	H	37	ASN
1	H	146	GLN
1	H	265	ASN
1	H	319	GLN
1	H	326	ASN
1	H	348	GLN
1	H	351	GLN
1	H	401	HIS
1	H	453	GLN
1	I	37	ASN
1	I	146	GLN
1	I	265	ASN
1	I	319	GLN
1	I	326	ASN
1	I	348	GLN
1	I	351	GLN
1	I	401	HIS
1	I	453	GLN
1	J	37	ASN
1	J	146	GLN
1	J	265	ASN
1	J	319	GLN
1	J	326	ASN
1	J	348	GLN
1	J	351	GLN
1	J	401	HIS
1	J	453	GLN
1	K	37	ASN
1	K	146	GLN
1	K	265	ASN
1	K	319	GLN
1	K	326	ASN
1	K	348	GLN

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Mol	Chain	Res	Type
1	K	351	GLN
1	K	401	HIS
1	K	453	GLN
1	L	37	ASN
1	L	146	GLN
1	L	265	ASN
1	L	319	GLN
1	L	326	ASN
1	L	348	GLN
1	L	351	GLN
1	L	401	HIS
1	L	453	GLN
1	M	37	ASN
1	M	146	GLN
1	M	265	ASN
1	M	319	GLN
1	M	326	ASN
1	M	348	GLN
1	M	351	GLN
1	M	401	HIS
1	M	453	GLN
1	N	37	ASN
1	N	146	GLN
1	N	265	ASN
1	N	319	GLN
1	N	326	ASN
1	N	348	GLN
1	N	351	GLN
1	N	401	HIS
1	N	453	GLN

5.3.3 RNA (i)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates (i)

There are no carbohydrates in this entry.

5.6 Ligand geometry (i)

Of 21 ligands modelled in this entry, 14 are monoatomic - leaving 7 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the chemical component dictionary. The Link column lists molecule types, if any, to which the group is linked. 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 $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
4	ATP	A	551	3,2	26,33,33	0.92	0	26,52,52	1.34	4 (15%)
4	ATP	B	551	3,2	26,33,33	0.92	0	26,52,52	1.34	4 (15%)
4	ATP	C	551	3,2	26,33,33	0.92	0	26,52,52	1.34	4 (15%)
4	ATP	D	551	3,2	26,33,33	0.92	0	26,52,52	1.34	4 (15%)
4	ATP	E	551	3,2	26,33,33	0.92	0	26,52,52	1.34	4 (15%)
4	ATP	F	551	3,2	26,33,33	0.92	0	26,52,52	1.34	4 (15%)
4	ATP	G	551	3,2	26,33,33	0.92	0	26,52,52	1.34	4 (15%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the chemical component dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
4	ATP	A	551	3,2	-	0/18/38/38	0/3/3/3
4	ATP	B	551	3,2	-	0/18/38/38	0/3/3/3
4	ATP	C	551	3,2	-	0/18/38/38	0/3/3/3
4	ATP	D	551	3,2	-	0/18/38/38	0/3/3/3
4	ATP	E	551	3,2	-	0/18/38/38	0/3/3/3
4	ATP	F	551	3,2	-	0/18/38/38	0/3/3/3
4	ATP	G	551	3,2	-	0/18/38/38	0/3/3/3

There are no bond length outliers.

All (28) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	C	551	ATP	C1'-N9-C4	-2.88	123.59	126.81
4	A	551	ATP	C1'-N9-C4	-2.86	123.61	126.81
4	G	551	ATP	C1'-N9-C4	-2.86	123.61	126.81
4	B	551	ATP	C1'-N9-C4	-2.86	123.61	126.81
4	E	551	ATP	C1'-N9-C4	-2.86	123.62	126.81
4	D	551	ATP	C1'-N9-C4	-2.85	123.62	126.81
4	F	551	ATP	C1'-N9-C4	-2.83	123.64	126.81
4	E	551	ATP	N3-C2-N1	-2.34	127.04	128.87
4	G	551	ATP	N3-C2-N1	-2.33	127.04	128.87
4	C	551	ATP	N3-C2-N1	-2.32	127.05	128.87
4	F	551	ATP	N3-C2-N1	-2.32	127.05	128.87
4	A	551	ATP	N3-C2-N1	-2.32	127.05	128.87
4	D	551	ATP	N3-C2-N1	-2.31	127.06	128.87
4	B	551	ATP	N3-C2-N1	-2.30	127.06	128.87
4	C	551	ATP	O2G-PG-O1G	2.14	117.61	110.63
4	G	551	ATP	O2G-PG-O1G	2.15	117.63	110.63
4	A	551	ATP	O2G-PG-O1G	2.15	117.64	110.63
4	F	551	ATP	O2G-PG-O1G	2.15	117.64	110.63
4	D	551	ATP	O2G-PG-O1G	2.15	117.66	110.63
4	B	551	ATP	O2G-PG-O1G	2.16	117.66	110.63
4	E	551	ATP	O2G-PG-O1G	2.16	117.66	110.63
4	C	551	ATP	O4'-C1'-N9	2.70	113.20	108.11
4	B	551	ATP	O4'-C1'-N9	2.71	113.23	108.11
4	A	551	ATP	O4'-C1'-N9	2.71	113.23	108.11
4	G	551	ATP	O4'-C1'-N9	2.72	113.25	108.11
4	D	551	ATP	O4'-C1'-N9	2.73	113.26	108.11
4	E	551	ATP	O4'-C1'-N9	2.73	113.26	108.11
4	F	551	ATP	O4'-C1'-N9	2.74	113.28	108.11

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.