wwPDB EM Map/Model Validation Report (i)

Apr 10, 2016 – 02:02 PM BST

PDB ID	:	3JA7
EMDB ID:	:	EMD-6324
Title	:	Cryo-EM structure of the bacteriophage T4 portal protein assembly at near-atomic resolution
Authors	:	Sun, L.; Zhang, X.; Gao, S.; Rao, P.A.; Padilla-Sanchez, V.; Chen, Z.; Sun, S.; Xiang, Y.; Subramaniam, S.; Rao, V.B.; Rossmann, M.G.
Deposited on	:	2015-04-21
Resolution	:	3.63 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

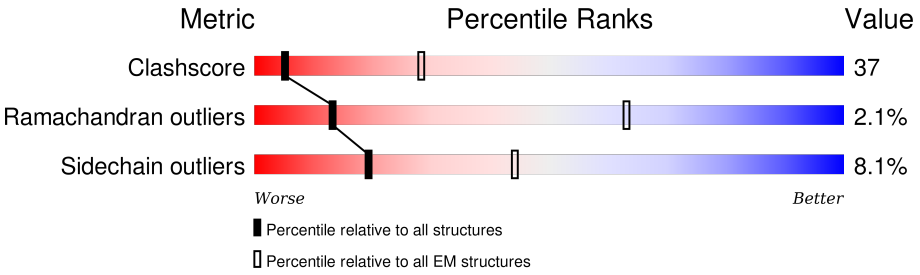
MolProbity	:	4.02b-467
Mogul	:	unknown
Percentile statistics	:	20151230.v01 (using entries in the PDB archive December 30th 2015)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et. al. (1996)
Validation Pipeline (wwPDB-VP)	:	trunk27241

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 3.63 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	455	46% 42% 6% 6%
1	B	455	46% 42% 6% 6%
1	C	455	47% 41% 6% 6%
1	D	455	46% 42% 6% 6%
1	E	455	46% 42% 6% 6%
1	F	455	46% 42% 6% 6%
1	G	455	46% 42% 6% 6%
1	H	455	45% 43% 6% 6%
1	I	455	46% 42% 6% 6%

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Mol	Chain	Length	Quality of chain
1	J	455	46% 42% 6% 6%
1	K	455	47% 41% 6% 6%
1	L	455	46% 42% 6% 6%

2 Entry composition

There is only 1 type of molecule in this entry. The entry contains 41280 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 Portal protein gp20.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	428	Total	C	N	O	S	0	0
			3440	2164	608	649	19		
1	B	428	Total	C	N	O	S	0	0
			3440	2164	608	649	19		
1	C	428	Total	C	N	O	S	0	0
			3440	2164	608	649	19		
1	D	428	Total	C	N	O	S	0	0
			3440	2164	608	649	19		
1	E	428	Total	C	N	O	S	0	0
			3440	2164	608	649	19		
1	F	428	Total	C	N	O	S	0	0
			3440	2164	608	649	19		
1	G	428	Total	C	N	O	S	0	0
			3440	2164	608	649	19		
1	H	428	Total	C	N	O	S	0	0
			3440	2164	608	649	19		
1	I	428	Total	C	N	O	S	0	0
			3440	2164	608	649	19		
1	J	428	Total	C	N	O	S	0	0
			3440	2164	608	649	19		
1	K	428	Total	C	N	O	S	0	0
			3440	2164	608	649	19		
1	L	428	Total	C	N	O	S	0	0
			3440	2164	608	649	19		

There are 48 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	70	ASN	-	EXPRESSION TAG	UNP P13334
A	71	TRP	-	EXPRESSION TAG	UNP P13334
A	72	ILE	-	EXPRESSION TAG	UNP P13334
A	73	SER	-	EXPRESSION TAG	UNP P13334
B	70	ASN	-	EXPRESSION TAG	UNP P13334
B	71	TRP	-	EXPRESSION TAG	UNP P13334

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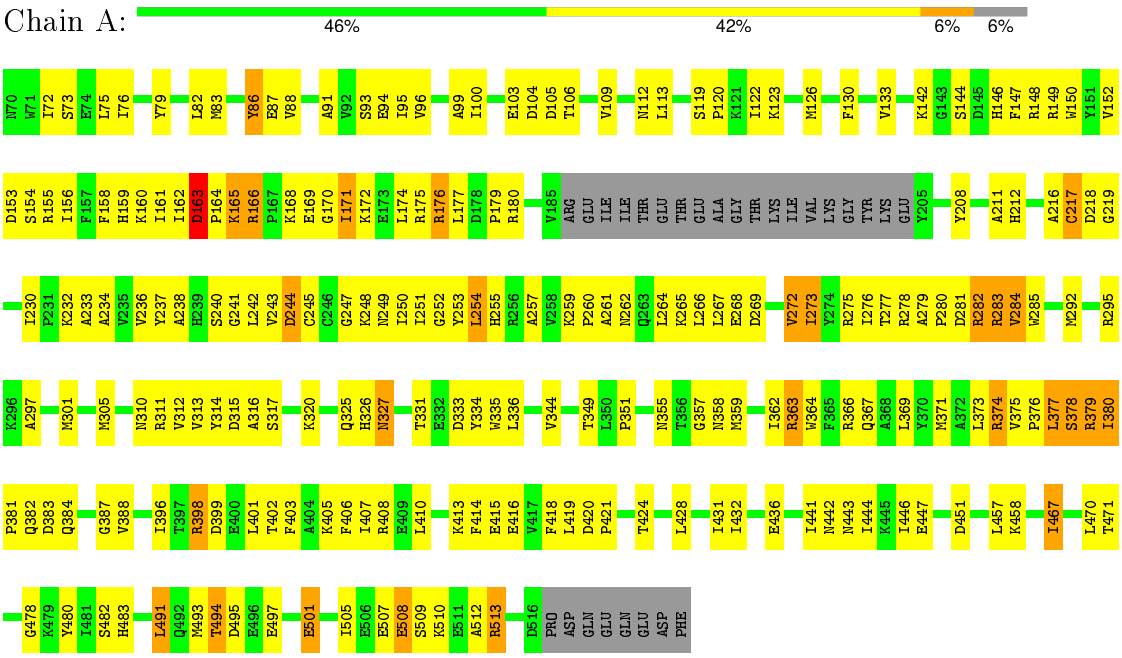
Chain	Residue	Modelled	Actual	Comment	Reference
B	72	ILE	-	EXPRESSION TAG	UNP P13334
B	73	SER	-	EXPRESSION TAG	UNP P13334
C	70	ASN	-	EXPRESSION TAG	UNP P13334
C	71	TRP	-	EXPRESSION TAG	UNP P13334
C	72	ILE	-	EXPRESSION TAG	UNP P13334
C	73	SER	-	EXPRESSION TAG	UNP P13334
D	70	ASN	-	EXPRESSION TAG	UNP P13334
D	71	TRP	-	EXPRESSION TAG	UNP P13334
D	72	ILE	-	EXPRESSION TAG	UNP P13334
D	73	SER	-	EXPRESSION TAG	UNP P13334
E	70	ASN	-	EXPRESSION TAG	UNP P13334
E	71	TRP	-	EXPRESSION TAG	UNP P13334
E	72	ILE	-	EXPRESSION TAG	UNP P13334
E	73	SER	-	EXPRESSION TAG	UNP P13334
F	70	ASN	-	EXPRESSION TAG	UNP P13334
F	71	TRP	-	EXPRESSION TAG	UNP P13334
F	72	ILE	-	EXPRESSION TAG	UNP P13334
F	73	SER	-	EXPRESSION TAG	UNP P13334
G	70	ASN	-	EXPRESSION TAG	UNP P13334
G	71	TRP	-	EXPRESSION TAG	UNP P13334
G	72	ILE	-	EXPRESSION TAG	UNP P13334
G	73	SER	-	EXPRESSION TAG	UNP P13334
H	70	ASN	-	EXPRESSION TAG	UNP P13334
H	71	TRP	-	EXPRESSION TAG	UNP P13334
H	72	ILE	-	EXPRESSION TAG	UNP P13334
H	73	SER	-	EXPRESSION TAG	UNP P13334
I	70	ASN	-	EXPRESSION TAG	UNP P13334
I	71	TRP	-	EXPRESSION TAG	UNP P13334
I	72	ILE	-	EXPRESSION TAG	UNP P13334
I	73	SER	-	EXPRESSION TAG	UNP P13334
J	70	ASN	-	EXPRESSION TAG	UNP P13334
J	71	TRP	-	EXPRESSION TAG	UNP P13334
J	72	ILE	-	EXPRESSION TAG	UNP P13334
J	73	SER	-	EXPRESSION TAG	UNP P13334
K	70	ASN	-	EXPRESSION TAG	UNP P13334
K	71	TRP	-	EXPRESSION TAG	UNP P13334
K	72	ILE	-	EXPRESSION TAG	UNP P13334
K	73	SER	-	EXPRESSION TAG	UNP P13334
L	70	ASN	-	EXPRESSION TAG	UNP P13334
L	71	TRP	-	EXPRESSION TAG	UNP P13334
L	72	ILE	-	EXPRESSION TAG	UNP P13334
L	73	SER	-	EXPRESSION TAG	UNP P13334

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.

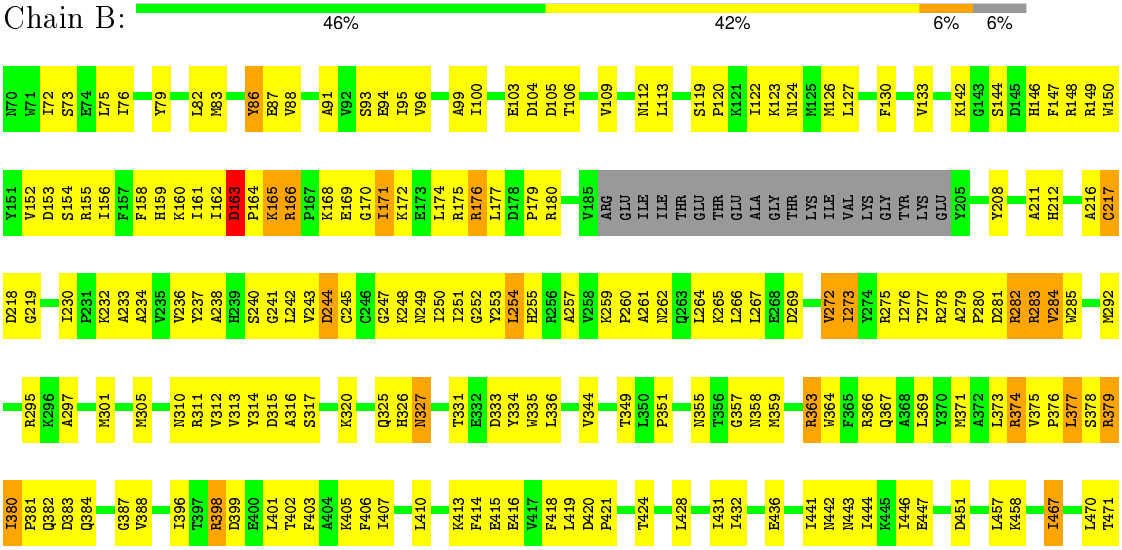
- Molecule 1: Portal protein gp20

Chain A:



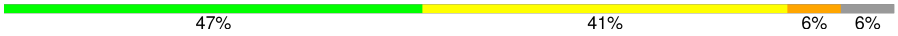
- Molecule 1: Portal protein gp20

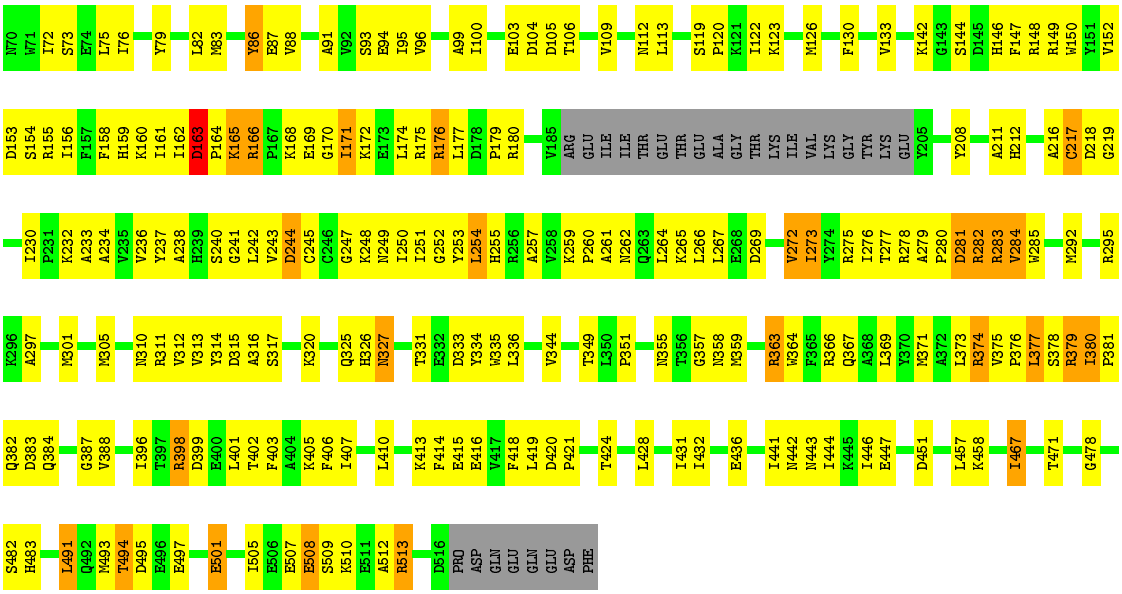
Chain B:



• Molecule 1: Portal protein gp20

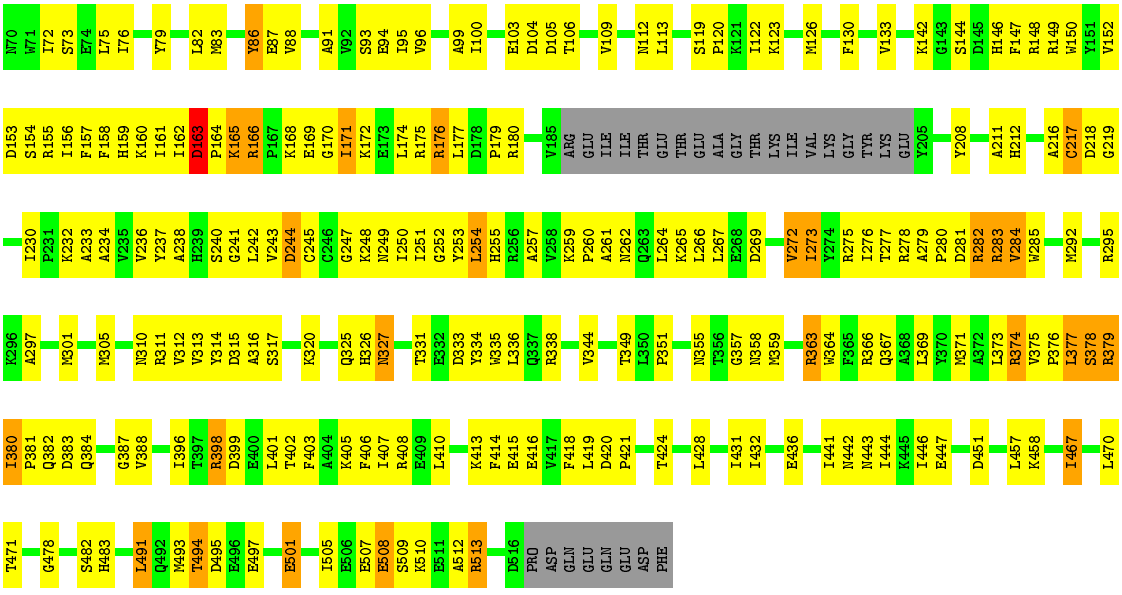
Chain C:





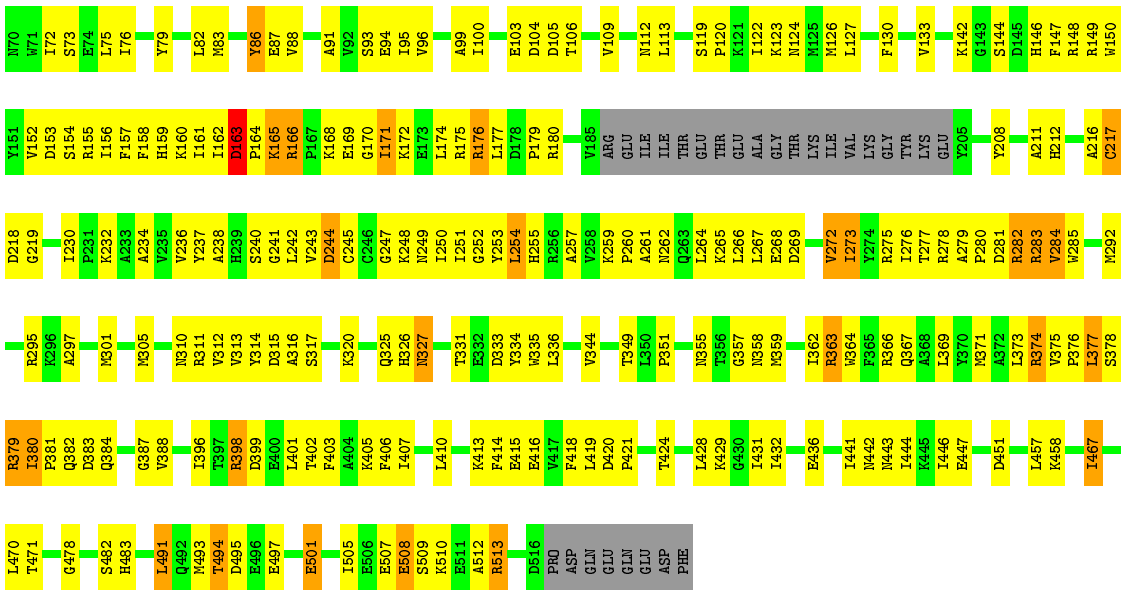
• Molecule 1: Portal protein gp20

Chain D:



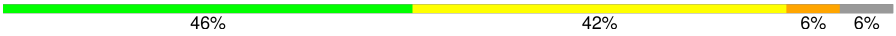
• Molecule 1: Portal protein gp20

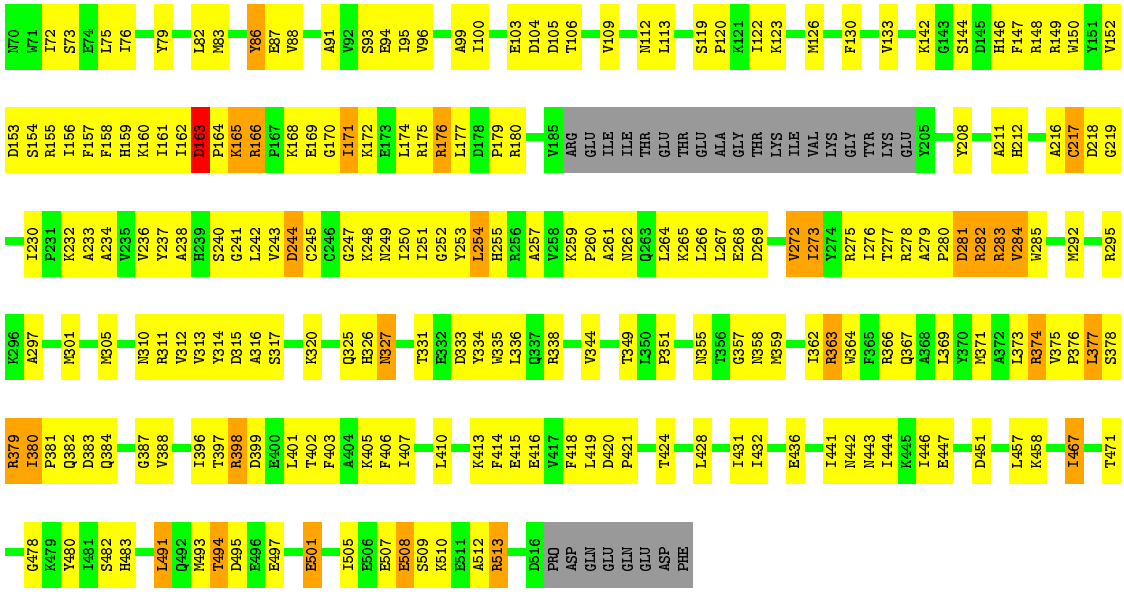
Chain E:



• Molecule 1: Portal protein gp20

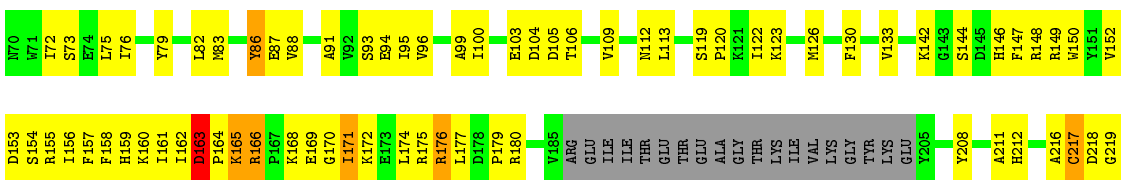
Chain F:

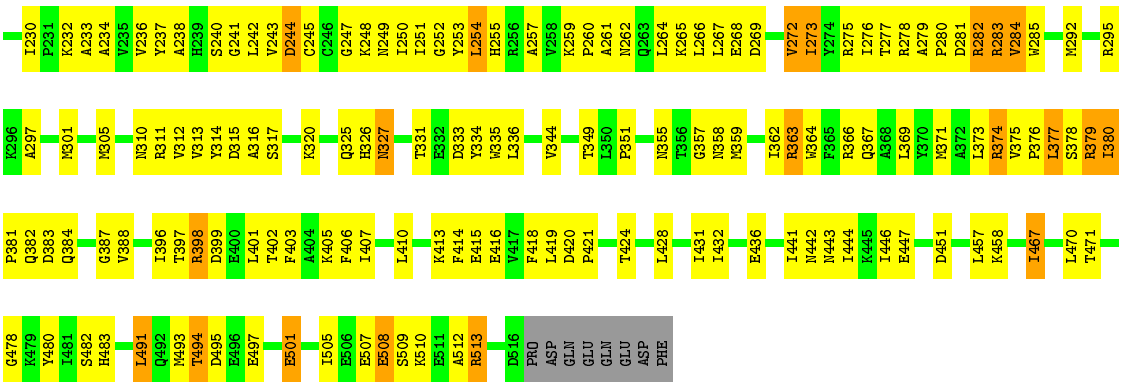




• Molecule 1: Portal protein gp20

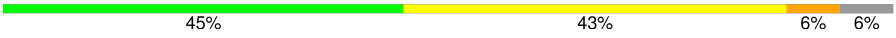
Chain G:

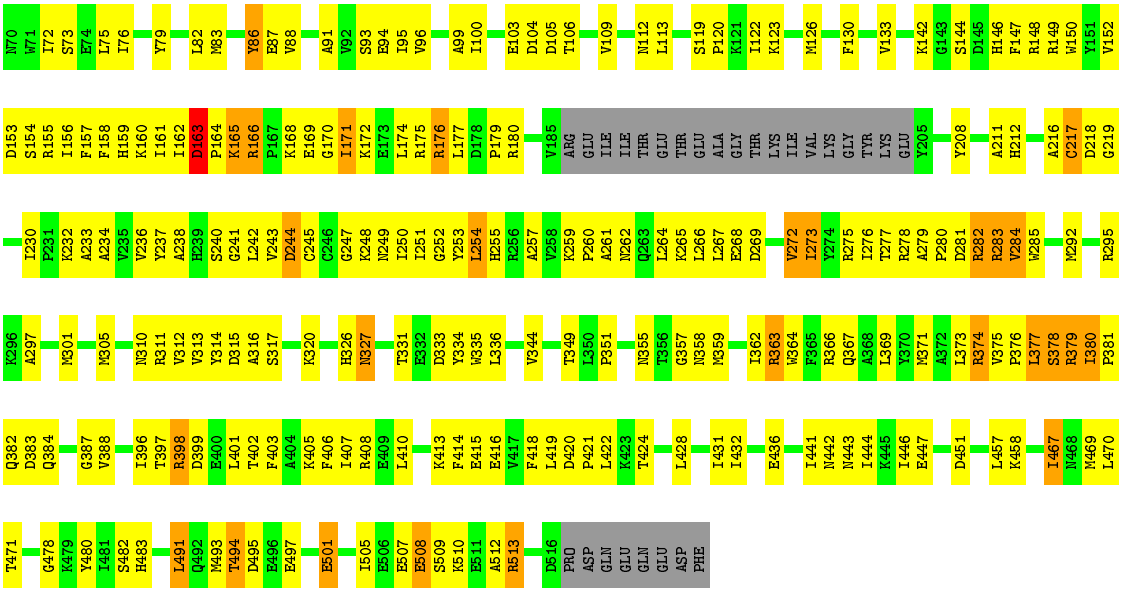




• Molecule 1: Portal protein gp20

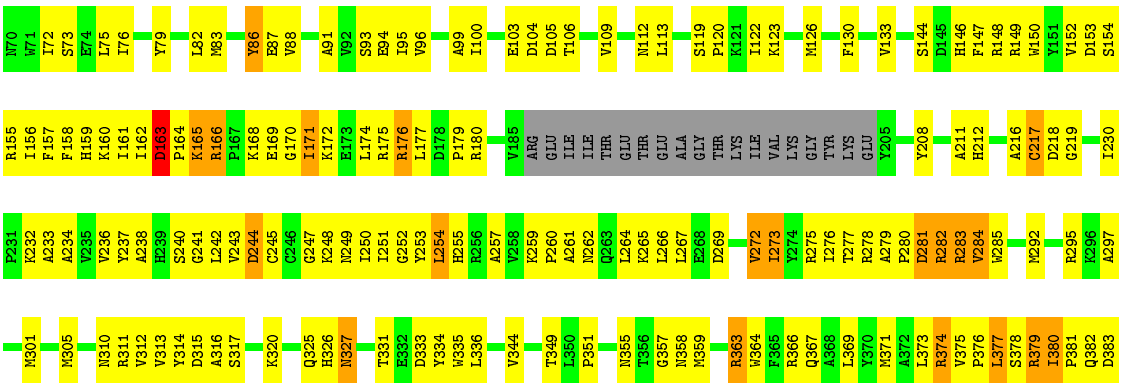
Chain H:

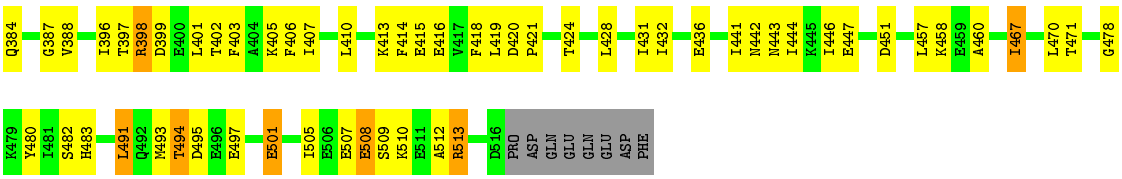




• Molecule 1: Portal protein gp20

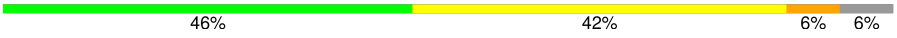
Chain I:

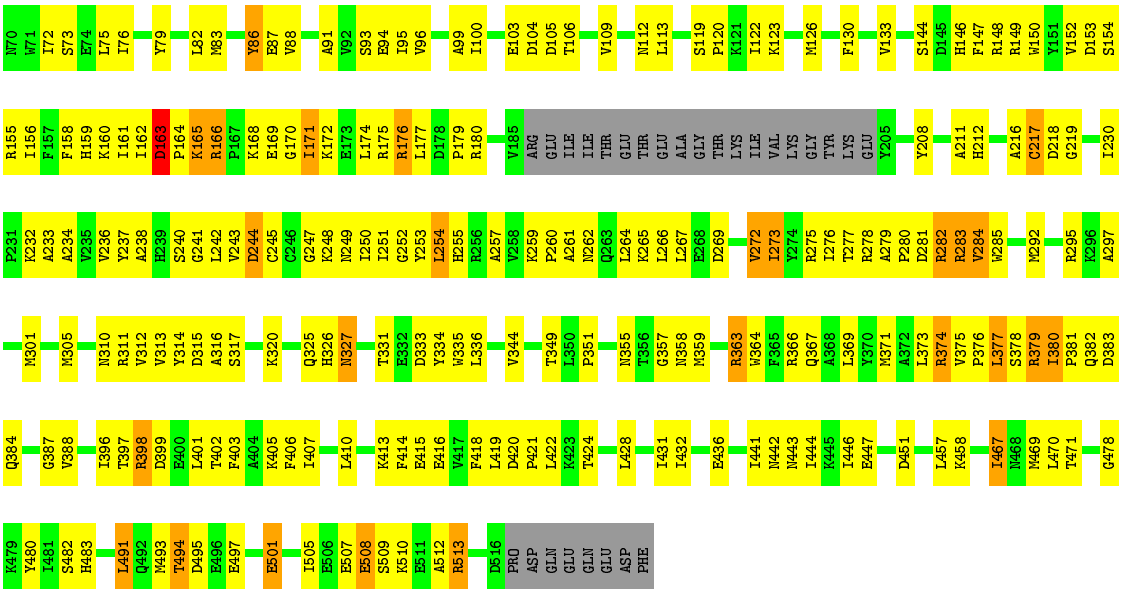




• Molecule 1: Portal protein gp20

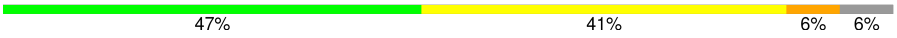
Chain J:

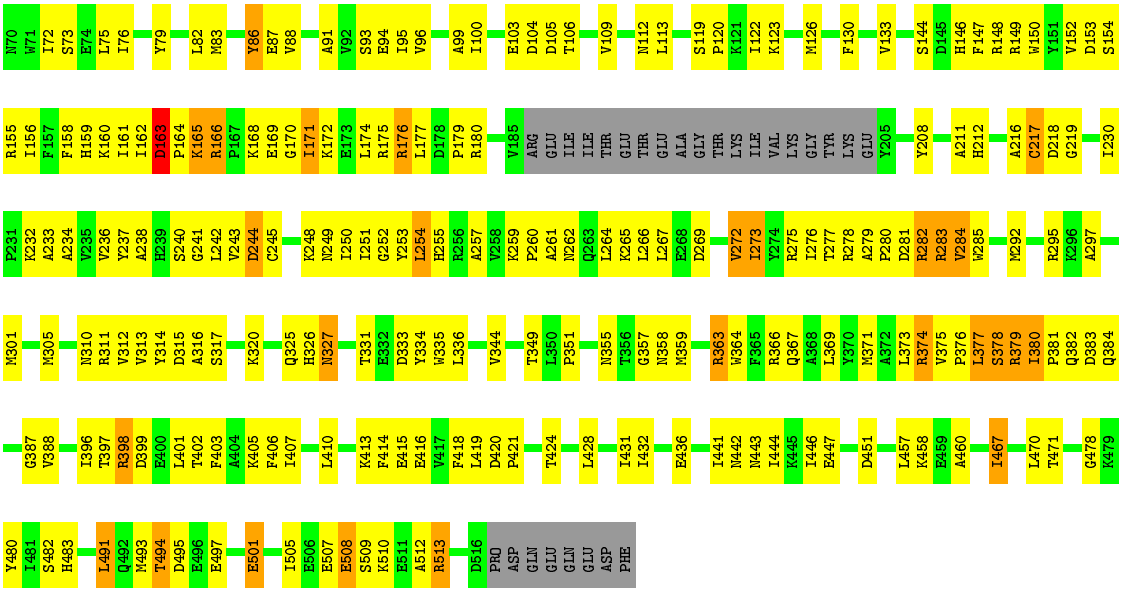




• Molecule 1: Portal protein gp20

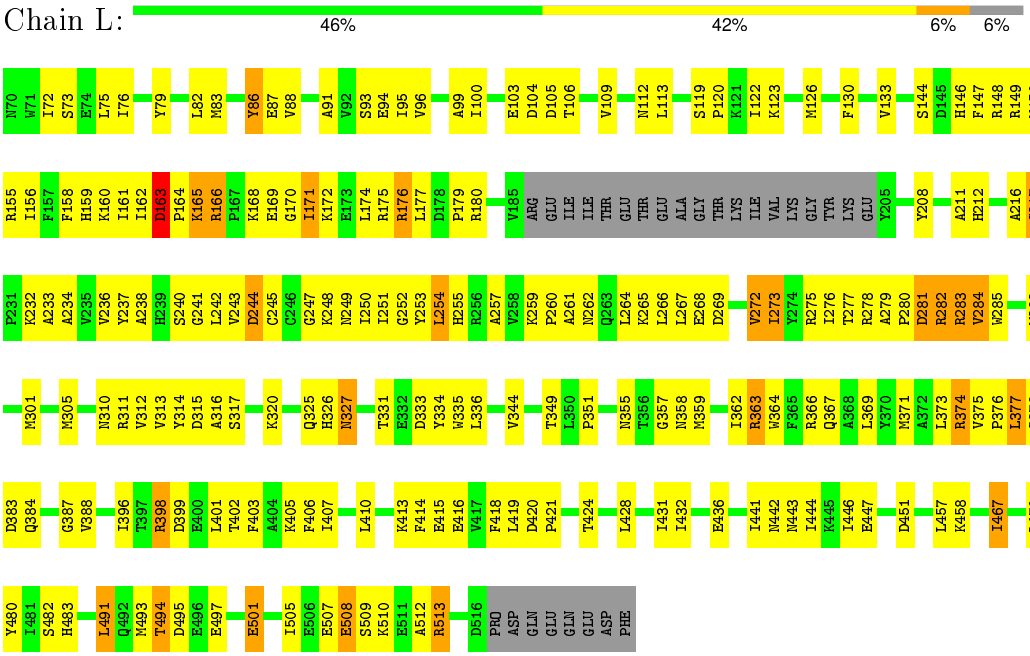
Chain K:





• Molecule 1: Portal protein gp20

Chain L:


46%
42%
6%
6%
N70 W71 I72 S73 E74 L75 I76 Y79 L82 M83 Y86 E87 V88 A91 V92 S93 E94 I95 V96 A99 I100 E103 D104 D105 T106 V109 N112 L113 S119 P120 K121 I122 K123 M126 F130 V133 S144 D145 H146 F147 R148 R149 W150 Y151 V152 D153 S154
R155 I156 F157 F158 H159 K160 I161 I162 D163 P164 K165 R166 P167 K168 E169 G170 I171 K172 E173 L174 R175 R176 L177 D178 P179 R180 V185 ARG GLU ILE ILE THR GLU THR GLU ALA GLY THR LYS ILE VAL LYS GLY TYR LYS GLU Y205 Y208 A211 H212 A216 C217 D218 G219 I230
P231 K232 A233 A234 V235 V236 Y237 A238 H239 S240 G241 L242 V243 D244 C245 C246 G247 K248 N249 I250 I251 G252 Y253 I254 H255 R256 A257 V258 K259 P260 A261 N262 Q263 I264 K265 I266 I267 E268 D269 V272 I273 Y274 R275 I276 T277 R278 A279 P280 D281 R282 R283 V284 W285 M292 R295 K296 A297
M301 M305 N310 R311 V312 V313 Y314 D315 A316 S317 K320 Q325 H326 N327 T331 E332 D333 Y334 W335 L336 V344 T349 L350 P351 N355 T356 G357 N358 M359 I362 R363 W364 F365 R366 Q367 A368 L369 Y370 M371 A372 L373 R374 V375 P376 L377 S378 R379 I380 P381 Q382
D383 Q384 G387 V388 I396 T397 R398 D399 E400 I401 T402 F403 A404 K405 F406 I407 I410 K413 F414 E415 E416 V417 F418 I419 D420 P421 T424 I428 I431 I432 E436 I441 N442 N443 I444 K445 I446 E447 D451 L457 K458 I467 L470 T471 G478 K479
Y480 I481 S482 H483 L491 Q492 M493 T494 D495 E496 E497 E501 I505 E506 E507 E508 S509 K510 E511 A512 R513 D516 PRO ASP GLN GLU GLN GLU ASP PHE

4 Experimental information (i)

Property	Value	Source
Reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	Depositor
Number of images	98000	Depositor
Resolution determination method	FSC 0.143	Depositor
CTF correction method	each particle	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	2	Depositor
Minimum defocus (nm)	1500	Depositor
Maximum defocus (nm)	2500	Depositor
Magnification	29000	Depositor
Image detector	GATAN K2 (4k x 4 k)	Depositor

5 Model quality

5.1 Standard geometry

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|>2$	RMSZ	#$\|Z\|>2$
1	A	0.46	0/3504	0.64	2/4730 (0.0%)
1	B	0.46	0/3504	0.64	2/4730 (0.0%)
1	C	0.46	0/3504	0.64	2/4730 (0.0%)
1	D	0.46	0/3504	0.64	2/4730 (0.0%)
1	E	0.46	0/3504	0.64	2/4730 (0.0%)
1	F	0.46	0/3504	0.64	2/4730 (0.0%)
1	G	0.46	0/3504	0.64	2/4730 (0.0%)
1	H	0.46	0/3504	0.64	2/4730 (0.0%)
1	I	0.46	0/3504	0.64	2/4730 (0.0%)
1	J	0.46	0/3504	0.64	2/4730 (0.0%)
1	K	0.46	0/3504	0.64	2/4730 (0.0%)
1	L	0.46	0/3504	0.64	2/4730 (0.0%)
All	All	0.46	0/42048	0.64	24/56760 (0.0%)

There are no bond length outliers.

All (24) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	379	ARG	N-CA-C	-7.33	91.21	111.00
1	D	379	ARG	N-CA-C	-7.33	91.21	111.00
1	G	379	ARG	N-CA-C	-7.33	91.21	111.00
1	J	379	ARG	N-CA-C	-7.33	91.21	111.00
1	C	379	ARG	N-CA-C	-7.33	91.21	111.00
1	F	379	ARG	N-CA-C	-7.33	91.21	111.00
1	L	379	ARG	N-CA-C	-7.33	91.21	111.00
1	B	379	ARG	N-CA-C	-7.32	91.23	111.00
1	H	379	ARG	N-CA-C	-7.32	91.23	111.00
1	K	379	ARG	N-CA-C	-7.32	91.23	111.00
1	E	379	ARG	N-CA-C	-7.32	91.23	111.00
1	I	379	ARG	N-CA-C	-7.31	91.26	111.00
1	B	163	ASP	CB-CG-OD2	5.22	123.00	118.30
1	A	163	ASP	CB-CG-OD2	5.20	122.98	118.30
1	D	163	ASP	CB-CG-OD2	5.20	122.98	118.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	G	163	ASP	CB-CG-OD2	5.20	122.98	118.30
1	J	163	ASP	CB-CG-OD2	5.20	122.98	118.30
1	E	163	ASP	CB-CG-OD2	5.15	122.94	118.30
1	H	163	ASP	CB-CG-OD2	5.15	122.94	118.30
1	K	163	ASP	CB-CG-OD2	5.15	122.94	118.30
1	C	163	ASP	CB-CG-OD2	5.14	122.93	118.30
1	F	163	ASP	CB-CG-OD2	5.14	122.93	118.30
1	I	163	ASP	CB-CG-OD2	5.14	122.93	118.30
1	L	163	ASP	CB-CG-OD2	5.14	122.93	118.30

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	3440	0	3344	285	0
1	B	3440	0	3344	282	0
1	C	3440	0	3344	272	0
1	D	3440	0	3344	280	0
1	E	3440	0	3344	278	0
1	F	3440	0	3344	281	0
1	G	3440	0	3344	276	0
1	H	3440	0	3344	285	0
1	I	3440	0	3344	285	0
1	J	3440	0	3344	278	0
1	K	3440	0	3344	285	0
1	L	3440	0	3344	278	0
All	All	41280	0	40128	3003	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 37.

All (3003) 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:G:162:ILE:CG2	1:G:171:ILE:HG13	1.39	1.52
1:F:162:ILE:CG2	1:F:171:ILE:HG13	1.39	1.52
1:A:162:ILE:CG2	1:A:171:ILE:HG13	1.39	1.51
1:H:162:ILE:CG2	1:H:171:ILE:HG13	1.39	1.51
1:E:162:ILE:CG2	1:E:171:ILE:HG13	1.39	1.51
1:B:162:ILE:CG2	1:B:171:ILE:HG13	1.39	1.50
1:L:162:ILE:CG2	1:L:171:ILE:HG13	1.39	1.49
1:D:162:ILE:CG2	1:D:171:ILE:HG13	1.39	1.49
1:C:162:ILE:CG2	1:C:171:ILE:HG13	1.39	1.49
1:I:162:ILE:CG2	1:I:171:ILE:HG13	1.39	1.48
1:J:162:ILE:CG2	1:J:171:ILE:HG13	1.39	1.48
1:K:162:ILE:CG2	1:K:171:ILE:HG13	1.39	1.47
1:A:162:ILE:HB	1:A:163:ASP:OD1	1.29	1.33
1:L:162:ILE:HB	1:L:163:ASP:OD1	1.29	1.32
1:B:316:ALA:C	1:L:259:LYS:HZ3	1.32	1.32
1:A:259:LYS:HZ3	1:C:316:ALA:C	1.32	1.32
1:K:162:ILE:HB	1:K:163:ASP:OD1	1.29	1.31
1:G:86:TYR:O	1:G:87:GLU:CG	1.79	1.31
1:H:86:TYR:O	1:H:87:GLU:CG	1.79	1.31
1:C:86:TYR:O	1:C:87:GLU:CG	1.79	1.31
1:D:86:TYR:O	1:D:87:GLU:CG	1.79	1.30
1:F:86:TYR:O	1:F:87:GLU:CG	1.79	1.30
1:C:259:LYS:HZ3	1:E:316:ALA:C	1.33	1.30
1:J:162:ILE:HB	1:J:163:ASP:OD1	1.29	1.30
1:D:259:LYS:HZ3	1:F:316:ALA:C	1.35	1.30
1:B:86:TYR:O	1:B:87:GLU:CG	1.79	1.30
1:K:86:TYR:O	1:K:87:GLU:CG	1.79	1.29
1:A:316:ALA:C	1:K:259:LYS:HZ3	1.33	1.29
1:J:86:TYR:O	1:J:87:GLU:CG	1.79	1.29
1:I:86:TYR:O	1:I:87:GLU:CG	1.79	1.29
1:L:86:TYR:O	1:L:87:GLU:CG	1.79	1.29
1:E:86:TYR:O	1:E:87:GLU:CG	1.79	1.29
1:E:259:LYS:HZ3	1:G:316:ALA:C	1.34	1.28
1:F:162:ILE:HB	1:F:163:ASP:OD1	1.29	1.28
1:G:162:ILE:HB	1:G:163:ASP:OD1	1.29	1.27
1:A:86:TYR:O	1:A:87:GLU:CG	1.79	1.27
1:D:162:ILE:CG2	1:D:171:ILE:CG1	2.13	1.27
1:I:162:ILE:HB	1:I:163:ASP:OD1	1.29	1.27
1:C:162:ILE:CG2	1:C:171:ILE:CG1	2.13	1.26
1:E:162:ILE:HB	1:E:163:ASP:OD1	1.29	1.26
1:G:162:ILE:CG2	1:G:171:ILE:CG1	2.13	1.26
1:A:162:ILE:CG2	1:A:171:ILE:CG1	2.14	1.26

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:162:ILE:CG2	1:E:171:ILE:CG1	2.13	1.26
1:C:162:ILE:HB	1:C:163:ASP:OD1	1.29	1.26
1:L:162:ILE:CG2	1:L:171:ILE:CG1	2.13	1.25
1:F:162:ILE:CG2	1:F:171:ILE:CG1	2.13	1.25
1:H:162:ILE:HB	1:H:163:ASP:OD1	1.29	1.25
1:B:162:ILE:HB	1:B:163:ASP:OD1	1.32	1.25
1:B:162:ILE:CG2	1:B:171:ILE:CG1	2.13	1.25
1:I:162:ILE:CG2	1:I:171:ILE:CG1	2.13	1.25
1:J:162:ILE:CG2	1:J:171:ILE:CG1	2.13	1.25
1:K:162:ILE:CG2	1:K:171:ILE:CG1	2.13	1.24
1:H:162:ILE:CG2	1:H:171:ILE:CG1	2.13	1.24
1:D:162:ILE:HB	1:D:163:ASP:OD1	1.29	1.23
1:J:259:LYS:HZ3	1:L:316:ALA:C	1.48	1.17
1:G:259:LYS:HZ3	1:I:316:ALA:C	1.49	1.15
1:L:162:ILE:HG22	1:L:171:ILE:HA	1.18	1.14
1:A:162:ILE:HG22	1:A:171:ILE:HA	1.21	1.14
1:K:162:ILE:HG22	1:K:171:ILE:HA	1.18	1.14
1:B:149:ARG:HD2	1:B:153:ASP:OD2	1.48	1.14
1:A:149:ARG:HD2	1:A:153:ASP:OD2	1.48	1.13
1:C:149:ARG:HD2	1:C:153:ASP:OD2	1.48	1.13
1:E:162:ILE:HG22	1:E:171:ILE:HA	1.18	1.13
1:D:149:ARG:HD2	1:D:153:ASP:OD2	1.48	1.12
1:F:149:ARG:HD2	1:F:153:ASP:OD2	1.48	1.12
1:J:162:ILE:HG22	1:J:171:ILE:HA	1.18	1.12
1:K:149:ARG:HD2	1:K:153:ASP:OD2	1.48	1.12
1:E:149:ARG:HD2	1:E:153:ASP:OD2	1.48	1.12
1:F:162:ILE:HG22	1:F:171:ILE:HA	1.18	1.11
1:B:162:ILE:HG22	1:B:171:ILE:HA	1.18	1.11
1:D:162:ILE:HG22	1:D:171:ILE:HA	1.18	1.10
1:H:149:ARG:HD2	1:H:153:ASP:OD2	1.48	1.10
1:L:149:ARG:HD2	1:L:153:ASP:OD2	1.48	1.10
1:J:149:ARG:HD2	1:J:153:ASP:OD2	1.48	1.10
1:I:162:ILE:HG22	1:I:171:ILE:HA	1.18	1.09
1:H:162:ILE:HG22	1:H:171:ILE:HA	1.18	1.09
1:I:149:ARG:HD2	1:I:153:ASP:OD2	1.48	1.09
1:F:259:LYS:HZ3	1:H:316:ALA:C	1.57	1.08
1:G:149:ARG:HD2	1:G:153:ASP:OD2	1.48	1.08
1:C:162:ILE:HG22	1:C:171:ILE:HA	1.18	1.08
1:I:259:LYS:HZ3	1:K:316:ALA:C	1.57	1.08
1:G:162:ILE:HG22	1:G:171:ILE:HA	1.18	1.07
1:J:86:TYR:O	1:J:87:GLU:HG2	0.89	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:86:TYR:O	1:L:87:GLU:HG2	0.89	1.07
1:A:86:TYR:O	1:A:87:GLU:HG2	0.89	1.07
1:H:259:LYS:HZ3	1:J:316:ALA:C	1.57	1.06
1:B:259:LYS:HZ3	1:D:316:ALA:C	1.58	1.06
1:C:86:TYR:O	1:C:87:GLU:HG2	0.89	1.06
1:K:86:TYR:O	1:K:87:GLU:HG2	0.89	1.06
1:H:86:TYR:O	1:H:87:GLU:HG2	0.89	1.06
1:B:86:TYR:O	1:B:87:GLU:HG2	0.89	1.06
1:E:86:TYR:O	1:E:87:GLU:HG2	0.89	1.06
1:F:86:TYR:O	1:F:87:GLU:HG2	0.89	1.05
1:B:374:ARG:HD3	1:B:406:PHE:CZ	1.92	1.05
1:G:86:TYR:O	1:G:87:GLU:HG2	0.89	1.05
1:I:86:TYR:O	1:I:87:GLU:HG2	0.89	1.05
1:D:374:ARG:HD3	1:D:406:PHE:CZ	1.92	1.05
1:E:374:ARG:HD3	1:E:406:PHE:CZ	1.92	1.05
1:B:278:ARG:HG2	1:B:282:ARG:NH2	1.72	1.04
1:I:278:ARG:HG2	1:I:282:ARG:NH2	1.72	1.04
1:J:374:ARG:HD3	1:J:406:PHE:CZ	1.92	1.04
1:H:374:ARG:HD3	1:H:406:PHE:CZ	1.92	1.04
1:J:259:LYS:CE	1:L:316:ALA:O	2.05	1.04
1:F:259:LYS:CE	1:H:316:ALA:O	2.05	1.04
1:H:259:LYS:CE	1:J:316:ALA:O	2.06	1.04
1:F:374:ARG:HD3	1:F:406:PHE:CZ	1.92	1.04
1:D:86:TYR:O	1:D:87:GLU:HG2	0.89	1.04
1:A:316:ALA:O	1:K:259:LYS:CE	2.06	1.04
1:K:374:ARG:HD3	1:K:406:PHE:CZ	1.92	1.04
1:C:374:ARG:HD3	1:C:406:PHE:CZ	1.92	1.04
1:L:278:ARG:HG2	1:L:282:ARG:NH2	1.72	1.04
1:K:278:ARG:HG2	1:K:282:ARG:NH2	1.72	1.04
1:L:374:ARG:HD3	1:L:406:PHE:CZ	1.92	1.04
1:I:374:ARG:HD3	1:I:406:PHE:CZ	1.92	1.04
1:I:259:LYS:CE	1:K:316:ALA:O	2.05	1.04
1:A:278:ARG:HG2	1:A:282:ARG:NH2	1.72	1.04
1:E:259:LYS:CE	1:G:316:ALA:O	2.06	1.03
1:G:259:LYS:CE	1:I:316:ALA:O	2.05	1.03
1:G:278:ARG:HG2	1:G:282:ARG:NH2	1.72	1.03
1:A:374:ARG:HD3	1:A:406:PHE:CZ	1.92	1.03
1:E:278:ARG:HG2	1:E:282:ARG:NH2	1.72	1.03
1:J:278:ARG:HG2	1:J:282:ARG:NH2	1.72	1.03
1:C:259:LYS:CE	1:E:316:ALA:O	2.05	1.03
1:B:259:LYS:CE	1:D:316:ALA:O	2.06	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:374:ARG:HD3	1:G:406:PHE:CZ	1.92	1.03
1:A:259:LYS:CE	1:C:316:ALA:O	2.05	1.03
1:D:259:LYS:CE	1:F:316:ALA:O	2.05	1.03
1:D:278:ARG:HG2	1:D:282:ARG:NH2	1.72	1.03
1:B:316:ALA:O	1:L:259:LYS:CE	2.05	1.02
1:A:259:LYS:HE2	1:C:316:ALA:O	1.60	1.02
1:C:259:LYS:HE2	1:E:316:ALA:O	1.60	1.02
1:E:259:LYS:HE2	1:G:316:ALA:O	1.60	1.02
1:E:149:ARG:HD2	1:E:153:ASP:CG	1.80	1.02
1:H:149:ARG:HD2	1:H:153:ASP:CG	1.80	1.02
1:I:149:ARG:HD2	1:I:153:ASP:CG	1.80	1.02
1:C:278:ARG:HG2	1:C:282:ARG:NH2	1.72	1.02
1:G:259:LYS:HE2	1:I:316:ALA:O	1.60	1.02
1:F:149:ARG:HD2	1:F:153:ASP:CG	1.80	1.02
1:F:278:ARG:HG2	1:F:282:ARG:NH2	1.72	1.02
1:H:278:ARG:HG2	1:H:282:ARG:NH2	1.72	1.02
1:C:259:LYS:NZ	1:E:316:ALA:O	1.92	1.02
1:J:259:LYS:HE2	1:L:316:ALA:O	1.60	1.02
1:G:259:LYS:NZ	1:I:316:ALA:O	1.92	1.02
1:D:259:LYS:NZ	1:F:316:ALA:O	1.92	1.01
1:K:149:ARG:HD2	1:K:153:ASP:CG	1.80	1.01
1:H:259:LYS:NZ	1:J:316:ALA:O	1.92	1.01
1:B:259:LYS:NZ	1:D:316:ALA:O	1.92	1.01
1:B:316:ALA:O	1:L:259:LYS:NZ	1.92	1.01
1:L:149:ARG:HD2	1:L:153:ASP:CG	1.80	1.01
1:F:259:LYS:NZ	1:H:316:ALA:O	1.92	1.01
1:I:259:LYS:NZ	1:K:316:ALA:O	1.92	1.01
1:A:316:ALA:O	1:K:259:LYS:NZ	1.92	1.01
1:J:259:LYS:NZ	1:L:316:ALA:O	1.92	1.01
1:B:149:ARG:HD2	1:B:153:ASP:CG	1.80	1.01
1:C:149:ARG:HD2	1:C:153:ASP:CG	1.80	1.01
1:B:259:LYS:HE2	1:D:316:ALA:O	1.60	1.01
1:A:259:LYS:NZ	1:C:316:ALA:O	1.92	1.01
1:D:259:LYS:HE2	1:F:316:ALA:O	1.60	1.01
1:D:149:ARG:HD2	1:D:153:ASP:CG	1.80	1.01
1:G:149:ARG:HD2	1:G:153:ASP:CG	1.80	1.01
1:B:316:ALA:O	1:L:259:LYS:HE2	1.60	1.00
1:E:259:LYS:NZ	1:G:316:ALA:O	1.92	1.00
1:J:149:ARG:HD2	1:J:153:ASP:CG	1.80	1.00
1:A:316:ALA:O	1:K:259:LYS:HE2	1.60	1.00
1:I:259:LYS:HE2	1:K:316:ALA:O	1.60	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:149:ARG:HD2	1:A:153:ASP:CG	1.80	0.99
1:C:162:ILE:HG21	1:C:171:ILE:CG1	1.88	0.99
1:F:259:LYS:HE2	1:H:316:ALA:O	1.60	0.99
1:E:357:GLY:HA2	1:E:358:ASN:HB2	1.46	0.97
1:F:357:GLY:HA2	1:F:358:ASN:HB2	1.46	0.97
1:D:162:ILE:HG21	1:D:171:ILE:CG1	1.88	0.97
1:H:162:ILE:HG22	1:H:171:ILE:CA	1.95	0.96
1:H:259:LYS:HE2	1:J:316:ALA:O	1.60	0.96
1:K:357:GLY:HA2	1:K:358:ASN:HB2	1.46	0.96
1:E:162:ILE:HG22	1:E:171:ILE:CA	1.95	0.96
1:G:357:GLY:HA2	1:G:358:ASN:HB2	1.46	0.96
1:G:162:ILE:HG22	1:G:171:ILE:CA	1.95	0.96
1:L:162:ILE:HG22	1:L:171:ILE:CA	1.95	0.96
1:B:162:ILE:HG22	1:B:171:ILE:CA	1.95	0.96
1:D:357:GLY:HA2	1:D:358:ASN:HB2	1.46	0.96
1:F:162:ILE:HG22	1:F:171:ILE:CA	1.95	0.95
1:K:162:ILE:HG22	1:K:171:ILE:CA	1.95	0.95
1:C:162:ILE:HG22	1:C:171:ILE:CA	1.95	0.95
1:J:162:ILE:HG22	1:J:171:ILE:CA	1.95	0.95
1:I:162:ILE:HG22	1:I:171:ILE:CA	1.95	0.95
1:H:357:GLY:HA2	1:H:358:ASN:HB2	1.46	0.95
1:E:162:ILE:HG21	1:E:171:ILE:CG1	1.88	0.95
1:B:357:GLY:HA2	1:B:358:ASN:HB2	1.46	0.95
1:D:162:ILE:HG22	1:D:171:ILE:CA	1.95	0.95
1:L:357:GLY:HA2	1:L:358:ASN:HB2	1.46	0.95
1:J:357:GLY:HA2	1:J:358:ASN:HB2	1.46	0.95
1:B:259:LYS:NZ	1:D:316:ALA:C	2.21	0.94
1:J:162:ILE:CB	1:J:163:ASP:OD1	2.16	0.94
1:K:162:ILE:CB	1:K:163:ASP:OD1	2.16	0.94
1:C:357:GLY:HA2	1:C:358:ASN:HB2	1.46	0.94
1:I:357:GLY:HA2	1:I:358:ASN:HB2	1.46	0.94
1:A:162:ILE:CB	1:A:163:ASP:OD1	2.16	0.94
1:A:357:GLY:HA2	1:A:358:ASN:HB2	1.46	0.94
1:L:162:ILE:CB	1:L:163:ASP:OD1	2.16	0.94
1:I:162:ILE:CB	1:I:163:ASP:OD1	2.16	0.94
1:C:259:LYS:NZ	1:E:316:ALA:C	2.21	0.94
1:H:162:ILE:CB	1:H:163:ASP:OD1	2.16	0.94
1:A:259:LYS:NZ	1:C:316:ALA:C	2.21	0.94
1:A:162:ILE:HG22	1:A:171:ILE:CA	1.97	0.94
1:A:316:ALA:C	1:K:259:LYS:NZ	2.21	0.94
1:A:162:ILE:HG22	1:A:171:ILE:CG1	1.98	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:162:ILE:CB	1:G:163:ASP:OD1	2.16	0.93
1:H:162:ILE:HG21	1:H:171:ILE:CG1	1.88	0.93
1:C:162:ILE:CB	1:C:163:ASP:OD1	2.16	0.93
1:B:316:ALA:C	1:L:259:LYS:NZ	2.21	0.93
1:K:75:LEU:HD21	1:K:251:ILE:HD13	1.50	0.93
1:B:75:LEU:HD21	1:B:251:ILE:HD13	1.50	0.93
1:L:75:LEU:HD21	1:L:251:ILE:HD13	1.50	0.93
1:F:162:ILE:HG21	1:F:171:ILE:CG1	1.88	0.93
1:I:259:LYS:NZ	1:K:316:ALA:C	2.21	0.93
1:C:75:LEU:HD21	1:C:251:ILE:HD13	1.50	0.93
1:B:162:ILE:CB	1:B:163:ASP:OD1	2.17	0.93
1:D:162:ILE:CB	1:D:163:ASP:OD1	2.16	0.93
1:D:259:LYS:NZ	1:F:316:ALA:C	2.21	0.93
1:B:162:ILE:HG22	1:B:171:ILE:CG1	2.00	0.93
1:H:259:LYS:NZ	1:J:316:ALA:C	2.21	0.93
1:F:279:ALA:HB3	1:F:280:PRO:HD3	1.51	0.92
1:G:279:ALA:HB3	1:G:280:PRO:HD3	1.51	0.92
1:J:259:LYS:NZ	1:L:316:ALA:C	2.21	0.92
1:E:162:ILE:CB	1:E:163:ASP:OD1	2.16	0.92
1:F:162:ILE:HG22	1:F:171:ILE:CG1	1.99	0.92
1:F:162:ILE:CB	1:F:163:ASP:OD1	2.16	0.92
1:I:162:ILE:HG21	1:I:171:ILE:HG13	0.92	0.92
1:E:279:ALA:HB3	1:E:280:PRO:HD3	1.51	0.92
1:E:162:ILE:HG22	1:E:171:ILE:CG1	2.00	0.92
1:F:162:ILE:HG21	1:F:171:ILE:HG13	0.92	0.92
1:L:162:ILE:HG21	1:L:171:ILE:HG13	0.92	0.92
1:C:162:ILE:HG22	1:C:171:ILE:CG1	1.99	0.92
1:G:259:LYS:NZ	1:I:316:ALA:C	2.21	0.92
1:H:279:ALA:HB3	1:H:280:PRO:HD3	1.51	0.92
1:I:162:ILE:HG22	1:I:171:ILE:CG1	1.99	0.91
1:F:259:LYS:NZ	1:H:316:ALA:C	2.21	0.91
1:H:162:ILE:HG21	1:H:171:ILE:HG13	0.92	0.91
1:A:279:ALA:HB3	1:A:280:PRO:HD3	1.51	0.91
1:J:162:ILE:HG21	1:J:171:ILE:HG13	0.92	0.91
1:J:162:ILE:HG22	1:J:171:ILE:CG1	1.99	0.91
1:D:279:ALA:HB3	1:D:280:PRO:HD3	1.51	0.91
1:H:162:ILE:HG22	1:H:171:ILE:CG1	2.00	0.91
1:F:75:LEU:HD21	1:F:251:ILE:HD13	1.50	0.91
1:L:279:ALA:HB3	1:L:280:PRO:HD3	1.51	0.91
1:G:162:ILE:HG21	1:G:171:ILE:CG1	1.88	0.91
1:K:162:ILE:HG21	1:K:171:ILE:HG13	0.92	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:259:LYS:NZ	1:G:316:ALA:C	2.21	0.91
1:E:162:ILE:HG21	1:E:171:ILE:HG13	0.92	0.91
1:C:162:ILE:HG21	1:C:171:ILE:HG13	0.92	0.91
1:I:75:LEU:HD21	1:I:251:ILE:HD13	1.50	0.91
1:I:279:ALA:HB3	1:I:280:PRO:HD3	1.51	0.91
1:G:162:ILE:HG22	1:G:171:ILE:CG1	1.99	0.90
1:A:75:LEU:HD21	1:A:251:ILE:HD13	1.50	0.90
1:G:162:ILE:HG21	1:G:171:ILE:HG13	0.92	0.90
1:J:75:LEU:HD21	1:J:251:ILE:HD13	1.50	0.90
1:E:75:LEU:HD21	1:E:251:ILE:HD13	1.50	0.90
1:H:75:LEU:HD21	1:H:251:ILE:HD13	1.50	0.90
1:G:75:LEU:HD21	1:G:251:ILE:HD13	1.50	0.90
1:B:279:ALA:HB3	1:B:280:PRO:HD3	1.51	0.90
1:B:162:ILE:HG21	1:B:171:ILE:CG1	1.88	0.90
1:K:162:ILE:HG22	1:K:171:ILE:CG1	2.00	0.90
1:K:279:ALA:HB3	1:K:280:PRO:HD3	1.51	0.90
1:C:279:ALA:HB3	1:C:280:PRO:HD3	1.51	0.90
1:B:162:ILE:HG21	1:B:171:ILE:HG13	0.92	0.90
1:A:162:ILE:HG21	1:A:171:ILE:HG13	0.92	0.90
1:D:162:ILE:HG22	1:D:171:ILE:CG1	1.99	0.90
1:D:162:ILE:HG21	1:D:171:ILE:HG13	0.92	0.89
1:D:75:LEU:HD21	1:D:251:ILE:HD13	1.50	0.89
1:J:279:ALA:HB3	1:J:280:PRO:HD3	1.51	0.89
1:A:162:ILE:HG21	1:A:171:ILE:CG1	1.88	0.89
1:L:162:ILE:HG21	1:L:171:ILE:CG1	1.88	0.89
1:L:162:ILE:HG22	1:L:171:ILE:CG1	1.99	0.89
1:L:326:HIS:ND1	1:L:327:ASN:OD1	2.06	0.89
1:J:326:HIS:ND1	1:J:327:ASN:OD1	2.06	0.88
1:I:162:ILE:HG21	1:I:171:ILE:CG1	1.88	0.88
1:I:326:HIS:ND1	1:I:327:ASN:OD1	2.06	0.88
1:H:154:SER:O	1:H:155:ARG:HG3	1.74	0.88
1:G:154:SER:O	1:G:155:ARG:HG3	1.74	0.88
1:L:154:SER:O	1:L:155:ARG:HG3	1.74	0.88
1:A:154:SER:O	1:A:155:ARG:HG3	1.74	0.88
1:F:154:SER:O	1:F:155:ARG:HG3	1.74	0.88
1:J:162:ILE:HG21	1:J:171:ILE:CG1	1.88	0.88
1:K:162:ILE:HG21	1:K:171:ILE:CG1	1.88	0.88
1:G:326:HIS:ND1	1:G:327:ASN:OD1	2.06	0.88
1:A:326:HIS:ND1	1:A:327:ASN:OD1	2.06	0.88
1:B:326:HIS:ND1	1:B:327:ASN:OD1	2.06	0.88
1:K:154:SER:O	1:K:155:ARG:HG3	1.74	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:326:HIS:ND1	1:K:327:ASN:OD1	2.06	0.87
1:E:154:SER:O	1:E:155:ARG:HG3	1.74	0.87
1:I:154:SER:O	1:I:155:ARG:HG3	1.74	0.87
1:C:326:HIS:ND1	1:C:327:ASN:OD1	2.06	0.87
1:B:154:SER:O	1:B:155:ARG:HG3	1.74	0.87
1:H:326:HIS:ND1	1:H:327:ASN:OD1	2.06	0.87
1:D:154:SER:O	1:D:155:ARG:HG3	1.74	0.87
1:E:326:HIS:ND1	1:E:327:ASN:OD1	2.06	0.87
1:C:153:ASP:O	1:C:154:SER:OG	1.93	0.86
1:F:326:HIS:ND1	1:F:327:ASN:OD1	2.06	0.86
1:C:154:SER:O	1:C:155:ARG:HG3	1.74	0.86
1:D:326:HIS:ND1	1:D:327:ASN:OD1	2.06	0.86
1:B:153:ASP:O	1:B:154:SER:OG	1.93	0.86
1:K:153:ASP:O	1:K:154:SER:OG	1.93	0.86
1:L:153:ASP:O	1:L:154:SER:OG	1.93	0.86
1:J:154:SER:O	1:J:155:ARG:HG3	1.74	0.86
1:A:396:ILE:HD11	1:A:458:LYS:HA	1.58	0.86
1:B:396:ILE:HD11	1:B:458:LYS:HA	1.58	0.85
1:J:153:ASP:O	1:J:154:SER:OG	1.93	0.85
1:G:396:ILE:HD11	1:G:458:LYS:HA	1.58	0.85
1:H:153:ASP:O	1:H:154:SER:OG	1.93	0.85
1:G:153:ASP:O	1:G:154:SER:OG	1.93	0.85
1:D:153:ASP:O	1:D:154:SER:OG	1.93	0.85
1:A:153:ASP:O	1:A:154:SER:OG	1.93	0.85
1:L:396:ILE:HD11	1:L:458:LYS:HA	1.58	0.85
1:F:396:ILE:HD11	1:F:458:LYS:HA	1.58	0.85
1:H:396:ILE:HD11	1:H:458:LYS:HA	1.58	0.85
1:H:405:LYS:NZ	1:I:451:ASP:OD2	2.10	0.85
1:C:405:LYS:NZ	1:D:451:ASP:OD2	2.10	0.84
1:C:396:ILE:HD11	1:C:458:LYS:HA	1.58	0.84
1:E:405:LYS:NZ	1:F:451:ASP:OD2	2.10	0.84
1:I:153:ASP:O	1:I:154:SER:OG	1.93	0.84
1:K:396:ILE:HD11	1:K:458:LYS:HA	1.58	0.84
1:F:153:ASP:O	1:F:154:SER:OG	1.93	0.84
1:F:405:LYS:NZ	1:G:451:ASP:OD2	2.10	0.84
1:G:149:ARG:HD2	1:G:153:ASP:OD1	1.78	0.84
1:J:405:LYS:NZ	1:K:451:ASP:OD2	2.10	0.84
1:F:149:ARG:HD2	1:F:153:ASP:OD1	1.78	0.84
1:H:149:ARG:HD2	1:H:153:ASP:OD1	1.78	0.84
1:I:396:ILE:HD11	1:I:458:LYS:HA	1.58	0.84
1:E:149:ARG:HD2	1:E:153:ASP:OD1	1.78	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:244:ASP:OD1	1:I:245:CYS:N	2.11	0.84
1:H:244:ASP:OD1	1:H:245:CYS:N	2.11	0.84
1:I:149:ARG:HD2	1:I:153:ASP:OD1	1.78	0.84
1:D:149:ARG:HD2	1:D:153:ASP:OD1	1.78	0.84
1:E:244:ASP:OD1	1:E:245:CYS:N	2.11	0.84
1:A:405:LYS:NZ	1:B:451:ASP:OD2	2.10	0.84
1:E:396:ILE:HD11	1:E:458:LYS:HA	1.58	0.84
1:G:405:LYS:NZ	1:H:451:ASP:OD2	2.10	0.84
1:L:86:TYR:C	1:L:87:GLU:HG2	1.98	0.83
1:D:405:LYS:NZ	1:E:451:ASP:OD2	2.10	0.83
1:J:396:ILE:HD11	1:J:458:LYS:HA	1.58	0.83
1:A:86:TYR:C	1:A:87:GLU:HG2	1.98	0.83
1:K:86:TYR:C	1:K:87:GLU:HG2	1.98	0.83
1:D:244:ASP:OD1	1:D:245:CYS:N	2.11	0.83
1:B:155:ARG:NH1	1:B:250:ILE:HB	1.94	0.83
1:K:155:ARG:NH1	1:K:250:ILE:HB	1.94	0.83
1:L:155:ARG:NH1	1:L:250:ILE:HB	1.94	0.83
1:J:149:ARG:HD2	1:J:153:ASP:OD1	1.78	0.83
1:A:451:ASP:OD2	1:L:405:LYS:NZ	2.10	0.83
1:C:149:ARG:HD2	1:C:153:ASP:OD1	1.78	0.83
1:I:155:ARG:NH1	1:I:250:ILE:HB	1.94	0.83
1:I:405:LYS:NZ	1:J:451:ASP:OD2	2.10	0.83
1:B:405:LYS:NZ	1:C:451:ASP:OD2	2.10	0.83
1:E:153:ASP:O	1:E:154:SER:OG	1.93	0.83
1:G:244:ASP:OD1	1:G:245:CYS:N	2.11	0.83
1:K:405:LYS:NZ	1:L:451:ASP:OD2	2.10	0.83
1:B:86:TYR:C	1:B:87:GLU:HG2	1.98	0.83
1:A:155:ARG:NH1	1:A:250:ILE:HB	1.94	0.83
1:C:155:ARG:NH1	1:C:250:ILE:HB	1.94	0.83
1:F:244:ASP:OD1	1:F:245:CYS:N	2.11	0.83
1:J:244:ASP:OD1	1:J:245:CYS:N	2.11	0.83
1:G:155:ARG:NH1	1:G:250:ILE:HB	1.94	0.83
1:J:86:TYR:C	1:J:87:GLU:HG2	1.98	0.82
1:K:149:ARG:HD2	1:K:153:ASP:OD1	1.78	0.82
1:C:237:TYR:OH	1:C:250:ILE:HD11	1.80	0.82
1:E:75:LEU:HD21	1:E:251:ILE:CD1	2.09	0.82
1:L:75:LEU:HD21	1:L:251:ILE:CD1	2.09	0.82
1:D:396:ILE:HD11	1:D:458:LYS:HA	1.58	0.82
1:A:237:TYR:OH	1:A:250:ILE:HD11	1.80	0.82
1:E:155:ARG:NH1	1:E:250:ILE:HB	1.94	0.82
1:B:149:ARG:HD2	1:B:153:ASP:OD1	1.78	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:237:TYR:OH	1:B:250:ILE:HD11	1.80	0.82
1:E:237:TYR:OH	1:E:250:ILE:HD11	1.80	0.82
1:G:75:LEU:HD21	1:G:251:ILE:CD1	2.09	0.82
1:L:244:ASP:OD1	1:L:245:CYS:N	2.11	0.82
1:C:244:ASP:OD1	1:C:245:CYS:N	2.11	0.82
1:D:155:ARG:NH1	1:D:250:ILE:HB	1.94	0.82
1:L:237:TYR:OH	1:L:250:ILE:HD11	1.80	0.82
1:A:244:ASP:OD1	1:A:245:CYS:N	2.11	0.82
1:H:155:ARG:NH1	1:H:250:ILE:HB	1.94	0.82
1:H:75:LEU:HD21	1:H:251:ILE:CD1	2.09	0.82
1:G:237:TYR:OH	1:G:250:ILE:HD11	1.80	0.82
1:C:86:TYR:C	1:C:87:GLU:HG2	1.98	0.82
1:L:149:ARG:HD2	1:L:153:ASP:OD1	1.78	0.82
1:J:155:ARG:NH1	1:J:250:ILE:HB	1.94	0.82
1:B:75:LEU:HD21	1:B:251:ILE:CD1	2.09	0.82
1:F:75:LEU:HD21	1:F:251:ILE:CD1	2.09	0.82
1:J:75:LEU:HD21	1:J:251:ILE:CD1	2.09	0.82
1:A:75:LEU:HD21	1:A:251:ILE:CD1	2.09	0.81
1:K:237:TYR:OH	1:K:250:ILE:HD11	1.80	0.81
1:K:244:ASP:OD1	1:K:245:CYS:N	2.11	0.81
1:I:86:TYR:C	1:I:87:GLU:HG2	1.98	0.81
1:C:75:LEU:HD21	1:C:251:ILE:CD1	2.09	0.81
1:H:237:TYR:OH	1:H:250:ILE:HD11	1.80	0.81
1:B:244:ASP:OD1	1:B:245:CYS:N	2.11	0.81
1:F:155:ARG:NH1	1:F:250:ILE:HB	1.94	0.81
1:A:149:ARG:HD2	1:A:153:ASP:OD1	1.78	0.81
1:D:237:TYR:OH	1:D:250:ILE:HD11	1.80	0.81
1:F:237:TYR:OH	1:F:250:ILE:HD11	1.80	0.81
1:J:237:TYR:OH	1:J:250:ILE:HD11	1.80	0.81
1:I:75:LEU:HD21	1:I:251:ILE:CD1	2.09	0.81
1:K:75:LEU:HD21	1:K:251:ILE:CD1	2.09	0.81
1:I:237:TYR:OH	1:I:250:ILE:HD11	1.80	0.81
1:D:86:TYR:C	1:D:87:GLU:HG2	1.98	0.81
1:D:75:LEU:HD21	1:D:251:ILE:CD1	2.09	0.80
1:H:86:TYR:C	1:H:87:GLU:HG2	1.98	0.80
1:D:259:LYS:HD2	1:F:317:SER:O	1.82	0.80
1:E:86:TYR:C	1:E:87:GLU:HG2	1.98	0.80
1:F:278:ARG:HG2	1:F:282:ARG:CZ	2.12	0.80
1:B:317:SER:O	1:L:259:LYS:HD2	1.82	0.79
1:A:259:LYS:HD2	1:C:317:SER:O	1.82	0.79
1:G:86:TYR:C	1:G:87:GLU:HG2	1.98	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:317:SER:O	1:K:259:LYS:HD2	1.82	0.79
1:G:259:LYS:HD2	1:I:317:SER:O	1.82	0.79
1:A:278:ARG:HG2	1:A:282:ARG:CZ	2.13	0.79
1:D:278:ARG:HG2	1:D:282:ARG:CZ	2.13	0.79
1:C:278:ARG:HG2	1:C:282:ARG:CZ	2.12	0.79
1:C:259:LYS:HD2	1:E:317:SER:O	1.82	0.79
1:L:278:ARG:HG2	1:L:282:ARG:CZ	2.12	0.79
1:E:259:LYS:HD2	1:G:317:SER:O	1.82	0.79
1:J:259:LYS:HD2	1:L:317:SER:O	1.82	0.79
1:B:259:LYS:HD2	1:D:317:SER:O	1.82	0.79
1:J:278:ARG:HG2	1:J:282:ARG:CZ	2.13	0.79
1:H:278:ARG:HG2	1:H:282:ARG:CZ	2.12	0.79
1:I:259:LYS:HD2	1:K:317:SER:O	1.82	0.79
1:F:86:TYR:C	1:F:87:GLU:HG2	1.98	0.79
1:F:259:LYS:HD2	1:H:317:SER:O	1.82	0.79
1:K:278:ARG:HG2	1:K:282:ARG:CZ	2.12	0.79
1:H:259:LYS:HD2	1:J:317:SER:O	1.82	0.78
1:L:369:LEU:O	1:L:373:LEU:HG	1.84	0.78
1:A:369:LEU:O	1:A:373:LEU:HG	1.83	0.78
1:A:376:PRO:HD3	1:A:403:PHE:CD1	2.19	0.78
1:C:376:PRO:HD3	1:C:403:PHE:CD2	2.19	0.78
1:E:376:PRO:HD3	1:E:403:PHE:CD2	2.19	0.78
1:F:243:VAL:HG21	1:G:149:ARG:NH2	1.99	0.78
1:K:369:LEU:O	1:K:373:LEU:HG	1.84	0.78
1:G:278:ARG:HG2	1:G:282:ARG:CZ	2.13	0.78
1:I:278:ARG:HG2	1:I:282:ARG:CZ	2.12	0.78
1:J:369:LEU:O	1:J:373:LEU:HG	1.83	0.78
1:F:91:ALA:CB	1:F:373:LEU:HD13	2.14	0.78
1:E:278:ARG:HG2	1:E:282:ARG:CZ	2.12	0.78
1:B:149:ARG:CD	1:B:153:ASP:OD1	2.32	0.78
1:K:149:ARG:CD	1:K:153:ASP:OD1	2.32	0.78
1:F:369:LEU:O	1:F:373:LEU:HG	1.84	0.78
1:A:91:ALA:CB	1:A:373:LEU:HD13	2.14	0.78
1:G:149:ARG:CD	1:G:153:ASP:OD1	2.32	0.78
1:B:369:LEU:O	1:B:373:LEU:HG	1.84	0.78
1:E:369:LEU:O	1:E:373:LEU:HG	1.84	0.78
1:K:91:ALA:CB	1:K:373:LEU:HD13	2.14	0.78
1:B:376:PRO:HD3	1:B:403:PHE:CD2	2.19	0.78
1:A:316:ALA:CA	1:K:259:LYS:HZ3	1.97	0.78
1:A:149:ARG:CD	1:A:153:ASP:OD1	2.32	0.78
1:E:243:VAL:HG21	1:F:149:ARG:NH2	1.99	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:149:ARG:CD	1:L:153:ASP:OD1	2.32	0.78
1:B:278:ARG:HG2	1:B:282:ARG:CZ	2.12	0.78
1:G:91:ALA:CB	1:G:373:LEU:HD13	2.14	0.78
1:D:376:PRO:HD3	1:D:403:PHE:CD1	2.19	0.78
1:F:376:PRO:HD3	1:F:403:PHE:CD2	2.19	0.78
1:C:149:ARG:CD	1:C:153:ASP:OD1	2.32	0.78
1:H:149:ARG:CD	1:H:153:ASP:OD1	2.32	0.78
1:I:369:LEU:O	1:I:373:LEU:HG	1.84	0.78
1:G:243:VAL:HG21	1:H:149:ARG:NH2	1.99	0.78
1:C:91:ALA:CB	1:C:373:LEU:HD13	2.14	0.78
1:K:243:VAL:HG21	1:L:149:ARG:NH2	1.99	0.78
1:G:369:LEU:O	1:G:373:LEU:HG	1.83	0.78
1:L:376:PRO:HD3	1:L:403:PHE:CD2	2.19	0.78
1:J:243:VAL:HG21	1:K:149:ARG:NH2	1.99	0.77
1:H:376:PRO:HD3	1:H:403:PHE:CD2	2.19	0.77
1:G:376:PRO:HD3	1:G:403:PHE:CD1	2.19	0.77
1:I:243:VAL:HG21	1:J:149:ARG:NH2	1.99	0.77
1:D:369:LEU:O	1:D:373:LEU:HG	1.83	0.77
1:E:91:ALA:CB	1:E:373:LEU:HD13	2.14	0.77
1:J:149:ARG:CD	1:J:153:ASP:OD1	2.32	0.77
1:I:149:ARG:CD	1:I:153:ASP:OD1	2.32	0.77
1:K:376:PRO:HD3	1:K:403:PHE:CD2	2.19	0.77
1:I:91:ALA:CB	1:I:373:LEU:HD13	2.14	0.77
1:D:257:ALA:C	1:D:260:PRO:HD2	2.05	0.77
1:A:149:ARG:NH2	1:L:243:VAL:HG21	1.99	0.77
1:C:257:ALA:C	1:C:260:PRO:HD2	2.05	0.77
1:C:243:VAL:HG21	1:D:149:ARG:NH2	1.99	0.77
1:J:376:PRO:HD3	1:J:403:PHE:CD1	2.19	0.77
1:I:376:PRO:HD3	1:I:403:PHE:CD2	2.19	0.77
1:H:257:ALA:C	1:H:260:PRO:HD2	2.05	0.77
1:B:257:ALA:C	1:B:260:PRO:HD2	2.05	0.77
1:B:243:VAL:HG21	1:C:149:ARG:NH2	1.99	0.77
1:H:369:LEU:O	1:H:373:LEU:HG	1.84	0.77
1:C:369:LEU:O	1:C:373:LEU:HG	1.84	0.77
1:G:257:ALA:C	1:G:260:PRO:HD2	2.05	0.77
1:H:243:VAL:HG21	1:I:149:ARG:NH2	1.99	0.77
1:J:91:ALA:CB	1:J:373:LEU:HD13	2.14	0.77
1:H:91:ALA:CB	1:H:373:LEU:HD13	2.14	0.77
1:G:441:ILE:HD12	1:G:442:ASN:O	1.85	0.77
1:I:257:ALA:C	1:I:260:PRO:HD2	2.05	0.77
1:C:259:LYS:HZ3	1:E:316:ALA:CA	1.98	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:149:ARG:CD	1:D:153:ASP:OD1	2.32	0.77
1:E:257:ALA:C	1:E:260:PRO:HD2	2.05	0.77
1:A:257:ALA:C	1:A:260:PRO:HD2	2.05	0.77
1:F:149:ARG:CD	1:F:153:ASP:OD1	2.32	0.76
1:D:243:VAL:HG21	1:E:149:ARG:NH2	1.99	0.76
1:F:441:ILE:HD12	1:F:442:ASN:O	1.85	0.76
1:F:257:ALA:C	1:F:260:PRO:HD2	2.05	0.76
1:B:91:ALA:CB	1:B:373:LEU:HD13	2.14	0.76
1:D:91:ALA:CB	1:D:373:LEU:HD13	2.14	0.76
1:L:91:ALA:CB	1:L:373:LEU:HD13	2.14	0.76
1:J:257:ALA:C	1:J:260:PRO:HD2	2.05	0.76
1:E:149:ARG:CD	1:E:153:ASP:OD1	2.32	0.76
1:A:243:VAL:HG21	1:B:149:ARG:NH2	1.99	0.76
1:E:441:ILE:HD12	1:E:442:ASN:O	1.85	0.76
1:L:441:ILE:HD12	1:L:442:ASN:O	1.85	0.76
1:L:257:ALA:C	1:L:260:PRO:HD2	2.05	0.76
1:K:257:ALA:C	1:K:260:PRO:HD2	2.05	0.76
1:B:441:ILE:HD12	1:B:442:ASN:O	1.85	0.76
1:B:316:ALA:CA	1:L:259:LYS:HZ3	1.99	0.76
1:K:441:ILE:HD12	1:K:442:ASN:O	1.85	0.76
1:H:441:ILE:HD12	1:H:442:ASN:O	1.85	0.76
1:A:259:LYS:HZ3	1:C:316:ALA:CA	1.99	0.75
1:K:154:SER:O	1:K:155:ARG:CG	2.34	0.75
1:D:441:ILE:HD12	1:D:442:ASN:O	1.85	0.75
1:E:154:SER:O	1:E:155:ARG:CG	2.34	0.75
1:C:441:ILE:HD12	1:C:442:ASN:O	1.85	0.75
1:H:154:SER:O	1:H:155:ARG:CG	2.34	0.75
1:L:154:SER:O	1:L:155:ARG:CG	2.34	0.75
1:B:259:LYS:HZ1	1:D:316:ALA:HA	1.51	0.75
1:A:441:ILE:HD12	1:A:442:ASN:O	1.85	0.75
1:J:441:ILE:HD12	1:J:442:ASN:O	1.85	0.75
1:C:154:SER:O	1:C:155:ARG:CG	2.34	0.74
1:J:154:SER:O	1:J:155:ARG:CG	2.34	0.74
1:I:441:ILE:HD12	1:I:442:ASN:O	1.85	0.74
1:F:162:ILE:CG2	1:F:171:ILE:HA	2.11	0.74
1:B:154:SER:O	1:B:155:ARG:CG	2.34	0.74
1:D:154:SER:O	1:D:155:ARG:CG	2.34	0.74
1:I:154:SER:O	1:I:155:ARG:CG	2.34	0.74
1:F:374:ARG:HD3	1:F:406:PHE:CE1	2.23	0.74
1:H:374:ARG:HD3	1:H:406:PHE:CE1	2.23	0.74
1:J:374:ARG:HD3	1:J:406:PHE:CE1	2.23	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:279:ALA:HB3	1:K:280:PRO:CD	2.18	0.74
1:G:162:ILE:CG2	1:G:171:ILE:HA	2.11	0.74
1:G:154:SER:O	1:G:155:ARG:CG	2.34	0.74
1:I:259:LYS:HZ1	1:K:316:ALA:HA	1.52	0.74
1:F:279:ALA:HB3	1:F:280:PRO:CD	2.18	0.74
1:A:279:ALA:HB3	1:A:280:PRO:CD	2.18	0.74
1:E:162:ILE:CG2	1:E:171:ILE:HA	2.11	0.74
1:F:154:SER:O	1:F:155:ARG:CG	2.34	0.74
1:K:374:ARG:HD3	1:K:406:PHE:CE1	2.23	0.74
1:D:374:ARG:HD3	1:D:406:PHE:CE1	2.23	0.74
1:I:374:ARG:HD3	1:I:406:PHE:CE1	2.23	0.74
1:I:279:ALA:HB3	1:I:280:PRO:CD	2.18	0.74
1:A:374:ARG:HD3	1:A:406:PHE:CE1	2.23	0.74
1:G:374:ARG:HD3	1:G:406:PHE:CE1	2.23	0.74
1:D:279:ALA:HB3	1:D:280:PRO:CD	2.18	0.74
1:C:279:ALA:HB3	1:C:280:PRO:CD	2.18	0.74
1:I:311:ARG:O	1:I:313:VAL:HG23	1.88	0.74
1:C:311:ARG:O	1:C:313:VAL:HG23	1.88	0.74
1:F:311:ARG:O	1:F:313:VAL:HG23	1.88	0.74
1:H:259:LYS:HZ1	1:J:316:ALA:HA	1.52	0.73
1:H:162:ILE:CG2	1:H:171:ILE:HA	2.11	0.73
1:H:279:ALA:HB3	1:H:280:PRO:CD	2.18	0.73
1:G:236:VAL:HG11	1:G:421:PRO:HG3	1.71	0.73
1:H:236:VAL:HG11	1:H:421:PRO:HG3	1.71	0.73
1:E:279:ALA:HB3	1:E:280:PRO:CD	2.18	0.73
1:E:236:VAL:HG11	1:E:421:PRO:HG3	1.71	0.73
1:L:374:ARG:HD3	1:L:406:PHE:CE1	2.23	0.73
1:G:279:ALA:HB3	1:G:280:PRO:CD	2.18	0.73
1:H:311:ARG:O	1:H:313:VAL:HG23	1.88	0.73
1:K:311:ARG:O	1:K:313:VAL:HG23	1.88	0.73
1:L:311:ARG:O	1:L:313:VAL:HG23	1.88	0.73
1:D:162:ILE:CG2	1:D:171:ILE:HA	2.11	0.73
1:D:236:VAL:HG11	1:D:421:PRO:HG3	1.71	0.73
1:J:236:VAL:HG11	1:J:421:PRO:HG3	1.71	0.73
1:A:154:SER:O	1:A:155:ARG:CG	2.34	0.73
1:B:279:ALA:HB3	1:B:280:PRO:CD	2.18	0.73
1:G:311:ARG:O	1:G:313:VAL:HG23	1.88	0.73
1:I:236:VAL:HG11	1:I:421:PRO:HG3	1.71	0.73
1:C:374:ARG:HD3	1:C:406:PHE:CE1	2.23	0.73
1:B:311:ARG:O	1:B:313:VAL:HG23	1.88	0.73
1:E:311:ARG:O	1:E:313:VAL:HG23	1.88	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:236:VAL:HG11	1:F:421:PRO:HG3	1.71	0.73
1:K:236:VAL:HG11	1:K:421:PRO:HG3	1.71	0.73
1:A:311:ARG:O	1:A:313:VAL:HG23	1.88	0.73
1:F:259:LYS:HZ1	1:H:316:ALA:HA	1.52	0.73
1:E:374:ARG:HD3	1:E:406:PHE:CE1	2.23	0.73
1:J:311:ARG:O	1:J:313:VAL:HG23	1.88	0.73
1:L:236:VAL:HG11	1:L:421:PRO:HG3	1.71	0.73
1:C:170:GLY:O	1:C:171:ILE:HG22	1.89	0.73
1:C:236:VAL:HG11	1:C:421:PRO:HG3	1.71	0.73
1:I:170:GLY:O	1:I:171:ILE:HG22	1.89	0.73
1:E:170:GLY:O	1:E:171:ILE:HG22	1.89	0.73
1:B:374:ARG:HD3	1:B:406:PHE:CE1	2.23	0.73
1:L:279:ALA:HB3	1:L:280:PRO:CD	2.18	0.73
1:J:279:ALA:HB3	1:J:280:PRO:CD	2.18	0.73
1:C:162:ILE:CG2	1:C:171:ILE:HA	2.11	0.72
1:J:170:GLY:O	1:J:171:ILE:HG22	1.89	0.72
1:H:170:GLY:O	1:H:171:ILE:HG22	1.89	0.72
1:K:170:GLY:O	1:K:171:ILE:HG22	1.89	0.72
1:D:311:ARG:O	1:D:313:VAL:HG23	1.88	0.72
1:A:170:GLY:O	1:A:171:ILE:HG22	1.89	0.72
1:A:236:VAL:HG11	1:A:421:PRO:HG3	1.71	0.72
1:B:236:VAL:HG11	1:B:421:PRO:HG3	1.71	0.72
1:G:170:GLY:O	1:G:171:ILE:HG22	1.89	0.72
1:I:162:ILE:CG2	1:I:171:ILE:HG12	2.19	0.72
1:I:162:ILE:CG2	1:I:171:ILE:HA	2.11	0.72
1:L:170:GLY:O	1:L:171:ILE:HG22	1.89	0.72
1:B:162:ILE:CG2	1:B:171:ILE:HA	2.11	0.72
1:C:237:TYR:OH	1:C:250:ILE:CD1	2.38	0.71
1:I:126:MET:O	1:I:130:PHE:N	2.21	0.71
1:F:126:MET:O	1:F:130:PHE:N	2.21	0.71
1:E:237:TYR:OH	1:E:250:ILE:CD1	2.38	0.71
1:H:126:MET:O	1:H:130:PHE:N	2.21	0.71
1:H:383:ASP:OD1	1:H:384:GLN:N	2.24	0.71
1:F:170:GLY:O	1:F:171:ILE:HG22	1.89	0.71
1:A:383:ASP:OD1	1:A:384:GLN:N	2.24	0.71
1:F:237:TYR:OH	1:F:250:ILE:CD1	2.38	0.71
1:J:383:ASP:OD1	1:J:384:GLN:N	2.24	0.71
1:E:126:MET:O	1:E:130:PHE:N	2.21	0.71
1:A:237:TYR:OH	1:A:250:ILE:CD1	2.38	0.71
1:G:237:TYR:OH	1:G:250:ILE:CD1	2.38	0.71
1:B:374:ARG:CD	1:B:406:PHE:CZ	2.73	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:383:ASP:OD1	1:K:384:GLN:N	2.24	0.71
1:J:126:MET:O	1:J:130:PHE:N	2.21	0.71
1:F:162:ILE:CG2	1:F:171:ILE:HG12	2.19	0.71
1:H:162:ILE:CG2	1:H:171:ILE:HG12	2.19	0.71
1:B:170:GLY:O	1:B:171:ILE:HG22	1.89	0.71
1:D:237:TYR:OH	1:D:250:ILE:CD1	2.38	0.71
1:H:237:TYR:OH	1:H:250:ILE:CD1	2.38	0.71
1:F:283:ARG:HH12	1:F:310:ASN:ND2	1.89	0.71
1:F:383:ASP:OD1	1:F:384:GLN:N	2.24	0.71
1:J:374:ARG:CD	1:J:406:PHE:CZ	2.73	0.71
1:E:283:ARG:HH12	1:E:310:ASN:ND2	1.89	0.71
1:E:383:ASP:OD1	1:E:384:GLN:N	2.24	0.71
1:G:126:MET:O	1:G:130:PHE:N	2.21	0.71
1:L:162:ILE:CG2	1:L:171:ILE:HG12	2.19	0.71
1:L:383:ASP:OD1	1:L:384:GLN:N	2.24	0.71
1:D:170:GLY:O	1:D:171:ILE:HG22	1.89	0.70
1:C:374:ARG:CD	1:C:406:PHE:CZ	2.73	0.70
1:B:237:TYR:OH	1:B:250:ILE:CD1	2.38	0.70
1:C:383:ASP:OD1	1:C:384:GLN:N	2.24	0.70
1:D:383:ASP:OD1	1:D:384:GLN:N	2.24	0.70
1:J:237:TYR:OH	1:J:250:ILE:CD1	2.38	0.70
1:B:383:ASP:OD1	1:B:384:GLN:N	2.24	0.70
1:I:383:ASP:OD1	1:I:384:GLN:N	2.24	0.70
1:D:126:MET:O	1:D:130:PHE:N	2.21	0.70
1:I:248:LYS:O	1:I:249:ASN:ND2	2.25	0.70
1:G:283:ARG:HH12	1:G:310:ASN:ND2	1.89	0.70
1:K:126:MET:O	1:K:130:PHE:N	2.21	0.70
1:H:283:ARG:HH12	1:H:310:ASN:ND2	1.89	0.70
1:K:248:LYS:O	1:K:249:ASN:ND2	2.25	0.70
1:J:162:ILE:CG2	1:J:171:ILE:HA	2.11	0.70
1:K:237:TYR:OH	1:K:250:ILE:CD1	2.38	0.70
1:L:374:ARG:CD	1:L:406:PHE:CZ	2.73	0.70
1:L:237:TYR:OH	1:L:250:ILE:CD1	2.38	0.70
1:I:237:TYR:OH	1:I:250:ILE:CD1	2.38	0.70
1:H:248:LYS:O	1:H:249:ASN:ND2	2.25	0.70
1:G:383:ASP:OD1	1:G:384:GLN:N	2.24	0.70
1:D:374:ARG:CD	1:D:406:PHE:CZ	2.73	0.70
1:K:162:ILE:CG2	1:K:171:ILE:HG12	2.19	0.70
1:F:248:LYS:O	1:F:249:ASN:ND2	2.25	0.70
1:I:283:ARG:HH12	1:I:310:ASN:ND2	1.89	0.70
1:D:283:ARG:HH12	1:D:310:ASN:ND2	1.89	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:248:LYS:O	1:G:249:ASN:ND2	2.25	0.69
1:H:374:ARG:CD	1:H:406:PHE:CZ	2.73	0.69
1:F:387:GLY:N	1:F:388:VAL:HA	2.08	0.69
1:L:253:TYR:OH	1:L:413:LYS:NZ	2.24	0.69
1:G:374:ARG:CD	1:G:406:PHE:CZ	2.73	0.69
1:D:387:GLY:N	1:D:388:VAL:HA	2.08	0.69
1:C:283:ARG:HH12	1:C:310:ASN:ND2	1.89	0.69
1:J:283:ARG:HH12	1:J:310:ASN:ND2	1.89	0.69
1:I:162:ILE:HG23	1:I:171:ILE:HG13	1.67	0.69
1:K:283:ARG:HH12	1:K:310:ASN:ND2	1.89	0.69
1:A:248:LYS:O	1:A:249:ASN:ND2	2.25	0.69
1:F:253:TYR:OH	1:F:413:LYS:NZ	2.24	0.69
1:B:283:ARG:HH12	1:B:310:ASN:ND2	1.89	0.69
1:I:387:GLY:N	1:I:388:VAL:HA	2.08	0.69
1:A:162:ILE:CG2	1:A:171:ILE:HG12	2.19	0.69
1:C:126:MET:O	1:C:130:PHE:N	2.21	0.69
1:J:248:LYS:O	1:J:249:ASN:ND2	2.25	0.69
1:H:162:ILE:HG23	1:H:171:ILE:CG1	2.22	0.69
1:E:374:ARG:CD	1:E:406:PHE:CZ	2.73	0.69
1:A:283:ARG:HH12	1:A:310:ASN:ND2	1.89	0.69
1:L:126:MET:O	1:L:130:PHE:N	2.21	0.69
1:H:387:GLY:N	1:H:388:VAL:HA	2.08	0.69
1:C:248:LYS:O	1:C:249:ASN:ND2	2.25	0.69
1:B:162:ILE:CG2	1:B:171:ILE:HG12	2.19	0.69
1:K:374:ARG:CD	1:K:406:PHE:CZ	2.73	0.69
1:E:248:LYS:O	1:E:249:ASN:ND2	2.25	0.69
1:E:162:ILE:CG2	1:E:171:ILE:HG12	2.19	0.69
1:D:248:LYS:O	1:D:249:ASN:ND2	2.25	0.69
1:B:387:GLY:N	1:B:388:VAL:HA	2.08	0.68
1:G:387:GLY:N	1:G:388:VAL:HA	2.08	0.68
1:L:283:ARG:HH12	1:L:310:ASN:ND2	1.89	0.68
1:A:387:GLY:N	1:A:388:VAL:HA	2.08	0.68
1:D:162:ILE:CG2	1:D:171:ILE:HG12	2.19	0.68
1:K:162:ILE:HG23	1:K:171:ILE:CG1	2.22	0.68
1:F:374:ARG:CD	1:F:406:PHE:CZ	2.73	0.68
1:J:387:GLY:N	1:J:388:VAL:HA	2.08	0.68
1:B:248:LYS:O	1:B:249:ASN:ND2	2.25	0.68
1:L:248:LYS:O	1:L:249:ASN:ND2	2.25	0.68
1:K:387:GLY:N	1:K:388:VAL:HA	2.08	0.68
1:E:387:GLY:N	1:E:388:VAL:HA	2.08	0.68
1:C:162:ILE:CG2	1:C:171:ILE:HG12	2.19	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:374:ARG:CD	1:I:406:PHE:CZ	2.73	0.68
1:K:162:ILE:CG2	1:K:171:ILE:HA	2.11	0.68
1:B:126:MET:O	1:B:130:PHE:N	2.21	0.68
1:L:387:GLY:N	1:L:388:VAL:HA	2.08	0.68
1:D:162:ILE:HG23	1:D:171:ILE:HG13	1.68	0.68
1:J:259:LYS:HZ1	1:L:316:ALA:HA	1.59	0.68
1:H:441:ILE:HA	1:H:442:ASN:C	2.15	0.68
1:A:126:MET:O	1:A:130:PHE:N	2.21	0.68
1:J:162:ILE:HG23	1:J:171:ILE:CG1	2.22	0.68
1:H:253:TYR:OH	1:H:413:LYS:NZ	2.24	0.68
1:L:441:ILE:HA	1:L:442:ASN:C	2.15	0.68
1:G:162:ILE:CG2	1:G:171:ILE:HG12	2.19	0.67
1:A:441:ILE:HA	1:A:442:ASN:C	2.15	0.67
1:C:387:GLY:N	1:C:388:VAL:HA	2.08	0.67
1:G:259:LYS:HZ1	1:I:316:ALA:HA	1.58	0.67
1:A:250:ILE:O	1:A:251:ILE:HD13	1.95	0.67
1:G:250:ILE:O	1:G:251:ILE:HD13	1.95	0.67
1:F:250:ILE:O	1:F:251:ILE:HD13	1.95	0.67
1:J:250:ILE:O	1:J:251:ILE:HD13	1.95	0.67
1:K:441:ILE:HA	1:K:442:ASN:C	2.15	0.67
1:F:162:ILE:HG23	1:F:171:ILE:HG13	1.67	0.67
1:B:162:ILE:HG23	1:B:171:ILE:CG1	2.22	0.67
1:A:374:ARG:CD	1:A:406:PHE:CZ	2.73	0.67
1:I:441:ILE:HA	1:I:442:ASN:C	2.15	0.67
1:G:441:ILE:HA	1:G:442:ASN:C	2.15	0.67
1:B:250:ILE:O	1:B:251:ILE:HD13	1.95	0.67
1:G:162:ILE:HG23	1:G:171:ILE:CG1	2.22	0.67
1:D:441:ILE:HA	1:D:442:ASN:C	2.15	0.67
1:D:103:GLU:HB2	1:D:106:THR:OG1	1.95	0.67
1:A:103:GLU:HB2	1:A:106:THR:OG1	1.95	0.67
1:K:250:ILE:O	1:K:251:ILE:HD13	1.95	0.67
1:L:103:GLU:HB2	1:L:106:THR:OG1	1.95	0.67
1:G:103:GLU:HB2	1:G:106:THR:OG1	1.95	0.67
1:I:162:ILE:HG23	1:I:171:ILE:CG1	2.21	0.67
1:B:155:ARG:HH11	1:B:250:ILE:HB	1.60	0.67
1:I:250:ILE:O	1:I:251:ILE:HD13	1.95	0.67
1:C:441:ILE:HA	1:C:442:ASN:C	2.15	0.67
1:I:103:GLU:HB2	1:I:106:THR:OG1	1.95	0.67
1:J:103:GLU:HB2	1:J:106:THR:OG1	1.95	0.67
1:J:162:ILE:CG2	1:J:171:ILE:HG12	2.19	0.67
1:L:250:ILE:O	1:L:251:ILE:HD13	1.95	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:155:ARG:HH11	1:F:250:ILE:HB	1.60	0.66
1:K:93:SER:HA	1:K:96:VAL:HG22	1.77	0.66
1:I:253:TYR:OH	1:I:413:LYS:NZ	2.24	0.66
1:L:93:SER:HA	1:L:96:VAL:HG22	1.77	0.66
1:B:103:GLU:HB2	1:B:106:THR:OG1	1.95	0.66
1:K:103:GLU:HB2	1:K:106:THR:OG1	1.95	0.66
1:D:155:ARG:HH11	1:D:250:ILE:HB	1.60	0.66
1:H:155:ARG:HH11	1:H:250:ILE:HB	1.60	0.66
1:E:441:ILE:HA	1:E:442:ASN:C	2.15	0.66
1:F:103:GLU:HB2	1:F:106:THR:OG1	1.95	0.66
1:C:253:TYR:OH	1:C:413:LYS:NZ	2.24	0.66
1:E:250:ILE:O	1:E:251:ILE:HD13	1.95	0.66
1:B:441:ILE:HA	1:B:442:ASN:C	2.15	0.66
1:E:103:GLU:HB2	1:E:106:THR:OG1	1.95	0.66
1:J:93:SER:HA	1:J:96:VAL:HG22	1.77	0.66
1:K:155:ARG:HH11	1:K:250:ILE:HB	1.60	0.66
1:H:250:ILE:O	1:H:251:ILE:HD13	1.95	0.66
1:C:103:GLU:HB2	1:C:106:THR:OG1	1.95	0.66
1:L:162:ILE:HG23	1:L:171:ILE:CG1	2.21	0.66
1:L:162:ILE:CG2	1:L:171:ILE:HA	2.11	0.66
1:C:250:ILE:O	1:C:251:ILE:HD13	1.95	0.66
1:J:441:ILE:HA	1:J:442:ASN:C	2.15	0.66
1:I:155:ARG:HH11	1:I:250:ILE:HB	1.60	0.66
1:A:93:SER:HA	1:A:96:VAL:HG22	1.77	0.66
1:J:72:ILE:HG23	1:J:155:ARG:NH2	2.11	0.66
1:H:103:GLU:HB2	1:H:106:THR:OG1	1.95	0.66
1:L:155:ARG:HH11	1:L:250:ILE:HB	1.60	0.66
1:D:250:ILE:O	1:D:251:ILE:HD13	1.95	0.65
1:F:441:ILE:HA	1:F:442:ASN:C	2.15	0.65
1:I:93:SER:HA	1:I:96:VAL:HG22	1.77	0.65
1:K:72:ILE:HG23	1:K:155:ARG:NH2	2.11	0.65
1:I:72:ILE:HG23	1:I:155:ARG:NH2	2.11	0.65
1:B:100:ILE:HD11	1:B:144:SER:HA	1.78	0.65
1:D:93:SER:HA	1:D:96:VAL:HG22	1.77	0.65
1:E:93:SER:HA	1:E:96:VAL:HG22	1.77	0.65
1:B:158:PHE:HB2	1:B:236:VAL:HG22	1.79	0.65
1:J:91:ALA:HB3	1:J:373:LEU:HD13	1.79	0.65
1:I:100:ILE:HD11	1:I:144:SER:HA	1.78	0.65
1:C:93:SER:HA	1:C:96:VAL:HG22	1.77	0.65
1:A:158:PHE:HB2	1:A:236:VAL:HG22	1.79	0.65
1:A:100:ILE:HD11	1:A:144:SER:HA	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:100:ILE:HD11	1:C:144:SER:HA	1.78	0.65
1:D:72:ILE:HG23	1:D:155:ARG:NH2	2.11	0.65
1:I:91:ALA:HB3	1:I:373:LEU:HD13	1.79	0.65
1:C:158:PHE:HB2	1:C:236:VAL:HG22	1.79	0.65
1:H:72:ILE:HG23	1:H:155:ARG:NH2	2.11	0.65
1:K:91:ALA:HB3	1:K:373:LEU:HD13	1.79	0.65
1:G:93:SER:HA	1:G:96:VAL:HG22	1.77	0.65
1:H:100:ILE:HD11	1:H:144:SER:HA	1.78	0.65
1:D:100:ILE:HD11	1:D:144:SER:HA	1.78	0.65
1:F:93:SER:HA	1:F:96:VAL:HG22	1.77	0.65
1:A:155:ARG:HH11	1:A:250:ILE:HB	1.60	0.65
1:G:155:ARG:HH11	1:G:250:ILE:HB	1.60	0.65
1:J:100:ILE:HD11	1:J:144:SER:HA	1.78	0.65
1:B:162:ILE:HG23	1:B:171:ILE:HG13	1.68	0.65
1:L:158:PHE:HB2	1:L:236:VAL:HG22	1.79	0.64
1:K:158:PHE:HB2	1:K:236:VAL:HG22	1.79	0.64
1:E:72:ILE:HG23	1:E:155:ARG:NH2	2.11	0.64
1:B:93:SER:HA	1:B:96:VAL:HG22	1.77	0.64
1:L:100:ILE:HD11	1:L:144:SER:HA	1.78	0.64
1:D:158:PHE:HB2	1:D:236:VAL:HG22	1.79	0.64
1:B:72:ILE:HG23	1:B:155:ARG:NH2	2.11	0.64
1:A:72:ILE:HG23	1:A:155:ARG:NH2	2.11	0.64
1:H:91:ALA:HB3	1:H:373:LEU:HD13	1.79	0.64
1:G:100:ILE:HD11	1:G:144:SER:HA	1.78	0.64
1:H:93:SER:HA	1:H:96:VAL:HG22	1.77	0.64
1:E:100:ILE:HD11	1:E:144:SER:HA	1.78	0.64
1:G:171:ILE:HG12	1:G:172:LYS:H	1.62	0.64
1:J:158:PHE:HB2	1:J:236:VAL:HG22	1.79	0.64
1:F:72:ILE:HG23	1:F:155:ARG:NH2	2.11	0.64
1:L:72:ILE:HG23	1:L:155:ARG:NH2	2.11	0.64
1:G:72:ILE:HG23	1:G:155:ARG:NH2	2.11	0.64
1:C:91:ALA:HB3	1:C:373:LEU:HD13	1.79	0.64
1:I:171:ILE:HG12	1:I:172:LYS:H	1.62	0.64
1:C:155:ARG:HH11	1:C:250:ILE:HB	1.60	0.64
1:C:72:ILE:HG23	1:C:155:ARG:NH2	2.11	0.64
1:B:91:ALA:HB3	1:B:373:LEU:HD13	1.79	0.64
1:G:253:TYR:OH	1:G:413:LYS:NZ	2.24	0.64
1:E:155:ARG:HH11	1:E:250:ILE:HB	1.60	0.64
1:L:91:ALA:HB3	1:L:373:LEU:HD13	1.79	0.64
1:K:100:ILE:HD11	1:K:144:SER:HA	1.78	0.64
1:D:91:ALA:HB3	1:D:373:LEU:HD13	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:91:ALA:HB3	1:G:373:LEU:HD13	1.79	0.64
1:F:171:ILE:HG12	1:F:172:LYS:H	1.62	0.64
1:D:171:ILE:HG12	1:D:172:LYS:H	1.62	0.64
1:I:158:PHE:HB2	1:I:236:VAL:HG22	1.79	0.64
1:J:155:ARG:HH11	1:J:250:ILE:HB	1.60	0.64
1:H:171:ILE:HG12	1:H:172:LYS:H	1.62	0.63
1:H:162:ILE:HG23	1:H:171:ILE:HG13	1.68	0.63
1:E:91:ALA:HB3	1:E:373:LEU:HD13	1.79	0.63
1:F:91:ALA:HB3	1:F:373:LEU:HD13	1.79	0.63
1:A:91:ALA:HB3	1:A:373:LEU:HD13	1.79	0.63
1:F:100:ILE:HD11	1:F:144:SER:HA	1.78	0.63
1:E:158:PHE:HB2	1:E:236:VAL:HG22	1.79	0.63
1:J:171:ILE:HG12	1:J:172:LYS:H	1.62	0.63
1:E:279:ALA:N	1:E:280:PRO:HD2	2.14	0.63
1:K:279:ALA:N	1:K:280:PRO:HD2	2.14	0.63
1:J:279:ALA:N	1:J:280:PRO:HD2	2.14	0.63
1:I:359:MET:O	1:I:363:ARG:NH2	2.32	0.63
1:F:279:ALA:N	1:F:280:PRO:HD2	2.14	0.63
1:K:359:MET:O	1:K:363:ARG:NH2	2.32	0.63
1:F:359:MET:O	1:F:363:ARG:NH2	2.32	0.63
1:B:359:MET:O	1:B:363:ARG:NH2	2.32	0.63
1:D:359:MET:O	1:D:363:ARG:NH2	2.32	0.63
1:F:158:PHE:HB2	1:F:236:VAL:HG22	1.79	0.63
1:A:169:GLU:HB3	1:A:170:GLY:HA2	1.81	0.63
1:H:158:PHE:HB2	1:H:236:VAL:HG22	1.79	0.63
1:E:171:ILE:HG12	1:E:172:LYS:H	1.62	0.63
1:D:279:ALA:N	1:D:280:PRO:HD2	2.14	0.63
1:L:169:GLU:HB3	1:L:170:GLY:HA2	1.81	0.63
1:J:169:GLU:HB3	1:J:170:GLY:HA2	1.81	0.63
1:K:171:ILE:HG12	1:K:172:LYS:H	1.62	0.63
1:G:279:ALA:N	1:G:280:PRO:HD2	2.14	0.63
1:G:158:PHE:HB2	1:G:236:VAL:HG22	1.79	0.63
1:A:171:ILE:HG12	1:A:172:LYS:H	1.62	0.63
1:B:169:GLU:HB3	1:B:170:GLY:HA2	1.81	0.63
1:D:162:ILE:HG23	1:D:171:ILE:CG1	2.22	0.63
1:C:162:ILE:HG23	1:C:171:ILE:CG1	2.21	0.63
1:G:82:LEU:HG	1:G:88:VAL:HG11	1.81	0.63
1:G:359:MET:O	1:G:363:ARG:NH2	2.32	0.63
1:A:359:MET:O	1:A:363:ARG:NH2	2.32	0.63
1:L:171:ILE:HG12	1:L:172:LYS:H	1.62	0.63
1:K:169:GLU:HB3	1:K:170:GLY:HA2	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:279:ALA:N	1:B:280:PRO:HD2	2.14	0.63
1:H:82:LEU:HG	1:H:88:VAL:HG11	1.81	0.62
1:C:279:ALA:N	1:C:280:PRO:HD2	2.14	0.62
1:L:359:MET:O	1:L:363:ARG:NH2	2.32	0.62
1:H:359:MET:O	1:H:363:ARG:NH2	2.32	0.62
1:B:171:ILE:HG12	1:B:172:LYS:H	1.62	0.62
1:J:82:LEU:HG	1:J:88:VAL:HG11	1.81	0.62
1:C:171:ILE:HG12	1:C:172:LYS:H	1.62	0.62
1:I:169:GLU:HB3	1:I:170:GLY:HA2	1.81	0.62
1:F:82:LEU:HG	1:F:88:VAL:HG11	1.81	0.62
1:I:82:LEU:HG	1:I:88:VAL:HG11	1.81	0.62
1:L:279:ALA:N	1:L:280:PRO:HD2	2.14	0.62
1:I:279:ALA:N	1:I:280:PRO:HD2	2.14	0.62
1:E:82:LEU:HG	1:E:88:VAL:HG11	1.81	0.62
1:H:279:ALA:N	1:H:280:PRO:HD2	2.14	0.62
1:E:359:MET:O	1:E:363:ARG:NH2	2.32	0.62
1:C:169:GLU:HB3	1:C:170:GLY:HA2	1.81	0.62
1:K:82:LEU:HG	1:K:88:VAL:HG11	1.81	0.62
1:F:441:ILE:HG23	1:F:441:ILE:O	2.00	0.62
1:J:359:MET:O	1:J:363:ARG:NH2	2.32	0.62
1:E:169:GLU:HB3	1:E:170:GLY:HA2	1.81	0.62
1:D:82:LEU:HG	1:D:88:VAL:HG11	1.81	0.62
1:L:119:SER:HB3	1:L:122:ILE:HG12	1.82	0.62
1:A:279:ALA:N	1:A:280:PRO:HD2	2.14	0.62
1:G:441:ILE:HG23	1:G:441:ILE:O	2.00	0.62
1:J:119:SER:HB3	1:J:122:ILE:HG12	1.82	0.62
1:K:119:SER:HB3	1:K:122:ILE:HG12	1.82	0.62
1:C:359:MET:O	1:C:363:ARG:NH2	2.32	0.62
1:H:169:GLU:HB3	1:H:170:GLY:HA2	1.81	0.62
1:I:119:SER:HB3	1:I:122:ILE:HG12	1.82	0.62
1:C:82:LEU:HG	1:C:88:VAL:HG11	1.81	0.61
1:A:119:SER:HB3	1:A:122:ILE:HG12	1.82	0.61
1:G:169:GLU:HB3	1:G:170:GLY:HA2	1.81	0.61
1:A:162:ILE:CG2	1:A:171:ILE:HA	2.13	0.61
1:E:162:ILE:HG23	1:E:171:ILE:CG1	2.22	0.61
1:E:441:ILE:O	1:E:441:ILE:HG23	2.00	0.61
1:H:217:CYS:SG	1:H:218:ASP:N	2.74	0.61
1:L:82:LEU:HG	1:L:88:VAL:HG11	1.81	0.61
1:L:441:ILE:O	1:L:441:ILE:HG23	2.00	0.61
1:H:441:ILE:HG23	1:H:441:ILE:O	2.00	0.61
1:L:162:ILE:HG23	1:L:171:ILE:HG13	1.67	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:169:GLU:HB3	1:D:170:GLY:HA2	1.81	0.61
1:B:82:LEU:HG	1:B:88:VAL:HG11	1.81	0.61
1:A:82:LEU:HG	1:A:88:VAL:HG11	1.81	0.61
1:H:119:SER:HB3	1:H:122:ILE:HG12	1.82	0.61
1:E:217:CYS:SG	1:E:218:ASP:N	2.74	0.61
1:C:217:CYS:SG	1:C:218:ASP:N	2.74	0.61
1:B:441:ILE:HG23	1:B:441:ILE:O	2.00	0.61
1:J:162:ILE:HG23	1:J:171:ILE:HG13	1.68	0.61
1:B:119:SER:HB3	1:B:122:ILE:HG12	1.82	0.61
1:G:217:CYS:SG	1:G:218:ASP:N	2.74	0.61
1:F:169:GLU:HB3	1:F:170:GLY:HA2	1.81	0.61
1:J:217:CYS:SG	1:J:218:ASP:N	2.74	0.61
1:A:315:ASP:HA	1:B:327:ASN:HB3	1.83	0.61
1:J:441:ILE:HG23	1:J:441:ILE:O	2.00	0.61
1:D:109:VAL:O	1:D:109:VAL:HG12	2.01	0.61
1:E:109:VAL:HG12	1:E:109:VAL:O	2.01	0.61
1:J:253:TYR:OH	1:J:413:LYS:NZ	2.24	0.61
1:K:441:ILE:HG23	1:K:441:ILE:O	2.00	0.61
1:C:441:ILE:HG23	1:C:441:ILE:O	2.00	0.61
1:F:109:VAL:HG12	1:F:109:VAL:O	2.01	0.61
1:K:253:TYR:OH	1:K:413:LYS:NZ	2.24	0.60
1:F:315:ASP:HA	1:G:327:ASN:HB3	1.83	0.60
1:A:327:ASN:HB3	1:L:315:ASP:HA	1.83	0.60
1:G:315:ASP:HA	1:H:327:ASN:HB3	1.83	0.60
1:D:315:ASP:HA	1:E:327:ASN:HB3	1.83	0.60
1:E:315:ASP:HA	1:F:327:ASN:HB3	1.83	0.60
1:C:315:ASP:HA	1:D:327:ASN:HB3	1.83	0.60
1:C:109:VAL:HG12	1:C:109:VAL:O	2.01	0.60
1:I:441:ILE:O	1:I:441:ILE:HG23	2.00	0.60
1:G:109:VAL:HG12	1:G:109:VAL:O	2.01	0.60
1:E:119:SER:HB3	1:E:122:ILE:HG12	1.82	0.60
1:K:315:ASP:HA	1:L:327:ASN:HB3	1.83	0.60
1:B:315:ASP:HA	1:C:327:ASN:HB3	1.83	0.60
1:D:119:SER:HB3	1:D:122:ILE:HG12	1.82	0.60
1:A:217:CYS:SG	1:A:218:ASP:N	2.74	0.60
1:C:82:LEU:HD23	1:C:254:LEU:HG	1.84	0.60
1:D:82:LEU:HD23	1:D:254:LEU:HG	1.84	0.60
1:J:315:ASP:HA	1:K:327:ASN:HB3	1.83	0.60
1:C:119:SER:HB3	1:C:122:ILE:HG12	1.82	0.60
1:I:217:CYS:SG	1:I:218:ASP:N	2.74	0.60
1:B:82:LEU:HD23	1:B:254:LEU:HG	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:82:LEU:HD23	1:E:254:LEU:HG	1.84	0.60
1:H:109:VAL:O	1:H:109:VAL:HG12	2.01	0.60
1:H:315:ASP:HA	1:I:327:ASN:HB3	1.83	0.60
1:G:119:SER:HB3	1:G:122:ILE:HG12	1.82	0.60
1:B:109:VAL:O	1:B:109:VAL:HG12	2.01	0.60
1:F:119:SER:HB3	1:F:122:ILE:HG12	1.82	0.60
1:G:160:LYS:NZ	1:G:424:THR:HG21	2.17	0.60
1:H:218:ASP:OD1	1:H:219:GLY:N	2.35	0.60
1:B:160:LYS:NZ	1:B:424:THR:HG21	2.17	0.60
1:I:160:LYS:NZ	1:I:424:THR:HG21	2.17	0.60
1:K:160:LYS:NZ	1:K:424:THR:HG21	2.17	0.60
1:A:82:LEU:HD23	1:A:254:LEU:HG	1.84	0.60
1:D:441:ILE:O	1:D:441:ILE:HG23	2.00	0.60
1:B:217:CYS:SG	1:B:218:ASP:N	2.74	0.60
1:L:218:ASP:OD1	1:L:219:GLY:N	2.35	0.60
1:C:160:LYS:NZ	1:C:424:THR:HG21	2.17	0.60
1:K:217:CYS:SG	1:K:218:ASP:N	2.74	0.60
1:F:82:LEU:HD23	1:F:254:LEU:HG	1.84	0.60
1:A:160:LYS:NZ	1:A:424:THR:HG21	2.17	0.60
1:E:218:ASP:OD1	1:E:219:GLY:N	2.35	0.60
1:K:218:ASP:OD1	1:K:219:GLY:N	2.35	0.60
1:A:441:ILE:HG23	1:A:441:ILE:O	2.00	0.60
1:D:218:ASP:OD1	1:D:219:GLY:N	2.35	0.59
1:L:82:LEU:HD23	1:L:254:LEU:HG	1.84	0.59
1:I:109:VAL:HG12	1:I:109:VAL:O	2.01	0.59
1:F:218:ASP:OD1	1:F:219:GLY:N	2.35	0.59
1:H:160:LYS:NZ	1:H:424:THR:HG21	2.17	0.59
1:L:217:CYS:SG	1:L:218:ASP:N	2.74	0.59
1:C:218:ASP:OD1	1:C:219:GLY:N	2.35	0.59
1:G:82:LEU:HD23	1:G:254:LEU:HG	1.84	0.59
1:A:109:VAL:HG12	1:A:109:VAL:O	2.01	0.59
1:D:160:LYS:NZ	1:D:424:THR:HG21	2.17	0.59
1:K:82:LEU:HD23	1:K:254:LEU:HG	1.84	0.59
1:F:162:ILE:HG23	1:F:171:ILE:CG1	2.21	0.59
1:E:160:LYS:HZ3	1:E:424:THR:HG21	1.66	0.59
1:J:218:ASP:OD1	1:J:219:GLY:N	2.35	0.59
1:I:315:ASP:HA	1:J:327:ASN:HB3	1.83	0.59
1:L:160:LYS:NZ	1:L:424:THR:HG21	2.17	0.59
1:H:82:LEU:HD23	1:H:254:LEU:HG	1.84	0.59
1:A:218:ASP:OD1	1:A:219:GLY:N	2.35	0.59
1:E:160:LYS:NZ	1:E:424:THR:HG21	2.17	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:160:LYS:NZ	1:J:424:THR:HG21	2.17	0.59
1:J:82:LEU:HD23	1:J:254:LEU:HG	1.84	0.59
1:J:109:VAL:O	1:J:109:VAL:HG12	2.01	0.59
1:G:218:ASP:OD1	1:G:219:GLY:N	2.35	0.59
1:I:218:ASP:OD1	1:I:219:GLY:N	2.35	0.59
1:I:82:LEU:HD23	1:I:254:LEU:HG	1.84	0.59
1:L:109:VAL:HG12	1:L:109:VAL:O	2.01	0.59
1:K:109:VAL:HG12	1:K:109:VAL:O	2.01	0.59
1:D:217:CYS:SG	1:D:218:ASP:N	2.74	0.59
1:F:160:LYS:NZ	1:F:424:THR:HG21	2.17	0.58
1:D:373:LEU:O	1:D:374:ARG:HB2	2.03	0.58
1:E:373:LEU:O	1:E:374:ARG:HB2	2.03	0.58
1:A:420:ASP:OD1	1:A:421:PRO:HD3	2.03	0.58
1:B:420:ASP:OD1	1:B:421:PRO:HD3	2.03	0.58
1:I:278:ARG:CG	1:I:282:ARG:NH2	2.59	0.58
1:F:373:LEU:O	1:F:374:ARG:HB2	2.03	0.58
1:K:295:ARG:NH1	1:K:295:ARG:O	2.36	0.58
1:E:162:ILE:HG23	1:E:171:ILE:HG13	1.68	0.58
1:C:373:LEU:O	1:C:374:ARG:HB2	2.03	0.58
1:B:253:TYR:OH	1:B:413:LYS:NZ	2.24	0.58
1:J:295:ARG:O	1:J:295:ARG:NH1	2.36	0.58
1:B:218:ASP:OD1	1:B:219:GLY:N	2.35	0.58
1:G:373:LEU:O	1:G:374:ARG:HB2	2.03	0.58
1:F:279:ALA:N	1:F:280:PRO:CD	2.66	0.58
1:A:160:LYS:HZ3	1:A:424:THR:HG21	1.67	0.58
1:L:295:ARG:NH1	1:L:295:ARG:O	2.37	0.58
1:K:420:ASP:OD1	1:K:421:PRO:HD3	2.03	0.58
1:I:295:ARG:O	1:I:295:ARG:NH1	2.37	0.58
1:J:420:ASP:OD1	1:J:421:PRO:HD3	2.03	0.58
1:B:373:LEU:O	1:B:374:ARG:HB2	2.03	0.58
1:I:398:ARG:HD2	1:J:379:ARG:HH11	1.69	0.58
1:K:398:ARG:HD2	1:L:379:ARG:HH11	1.69	0.58
1:A:379:ARG:HH11	1:L:398:ARG:HD2	1.69	0.58
1:F:217:CYS:SG	1:F:218:ASP:N	2.74	0.58
1:F:420:ASP:OD1	1:F:421:PRO:HD3	2.03	0.58
1:A:162:ILE:HG23	1:A:171:ILE:CG1	2.24	0.58
1:E:420:ASP:OD1	1:E:421:PRO:HD3	2.03	0.58
1:J:162:ILE:HG22	1:J:171:ILE:CB	2.34	0.58
1:D:251:ILE:HG22	1:D:252:GLY:N	2.19	0.58
1:F:357:GLY:HA2	1:G:355:ASN:HB2	1.86	0.58
1:J:357:GLY:HA2	1:K:355:ASN:HB2	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:279:ALA:N	1:G:280:PRO:CD	2.66	0.58
1:I:165:LYS:HG2	1:I:166:ARG:HA	1.86	0.58
1:G:398:ARG:HD2	1:H:379:ARG:HH11	1.69	0.58
1:E:295:ARG:O	1:E:295:ARG:NH1	2.36	0.58
1:G:420:ASP:OD1	1:G:421:PRO:HD3	2.03	0.58
1:D:420:ASP:OD1	1:D:421:PRO:HD3	2.03	0.58
1:H:251:ILE:HG22	1:H:252:GLY:N	2.19	0.58
1:H:373:LEU:O	1:H:374:ARG:HB2	2.03	0.58
1:B:398:ARG:HD2	1:C:379:ARG:HH11	1.69	0.58
1:A:398:ARG:HD2	1:B:379:ARG:HH11	1.69	0.58
1:B:72:ILE:HD12	1:B:155:ARG:NH1	2.19	0.58
1:A:253:TYR:OH	1:A:413:LYS:NZ	2.24	0.58
1:G:251:ILE:HG22	1:G:252:GLY:N	2.19	0.58
1:G:72:ILE:HD12	1:G:155:ARG:NH1	2.19	0.58
1:A:373:LEU:O	1:A:374:ARG:HB2	2.03	0.58
1:E:357:GLY:HA2	1:F:355:ASN:HB2	1.86	0.58
1:K:357:GLY:HA2	1:L:355:ASN:HB2	1.86	0.58
1:J:398:ARG:HD2	1:K:379:ARG:HH11	1.69	0.58
1:D:398:ARG:HD2	1:E:379:ARG:HH11	1.69	0.58
1:E:398:ARG:HD2	1:F:379:ARG:HH11	1.69	0.58
1:J:512:ALA:HB1	1:J:513:ARG:HA	1.86	0.58
1:J:165:LYS:HG2	1:J:166:ARG:HA	1.86	0.58
1:K:512:ALA:HB1	1:K:513:ARG:HA	1.86	0.58
1:L:512:ALA:HB1	1:L:513:ARG:HA	1.86	0.58
1:H:420:ASP:OD1	1:H:421:PRO:HD3	2.03	0.57
1:C:420:ASP:OD1	1:C:421:PRO:HD3	2.03	0.57
1:B:251:ILE:HG22	1:B:252:GLY:N	2.19	0.57
1:C:251:ILE:HG22	1:C:252:GLY:N	2.19	0.57
1:C:398:ARG:HD2	1:D:379:ARG:HH11	1.69	0.57
1:E:253:TYR:HH	1:E:413:LYS:HZ3	1.46	0.57
1:D:295:ARG:NH1	1:D:295:ARG:O	2.36	0.57
1:H:295:ARG:O	1:H:295:ARG:NH1	2.36	0.57
1:K:162:ILE:HG22	1:K:171:ILE:CB	2.34	0.57
1:C:75:LEU:HG	1:C:79:TYR:CE2	2.39	0.57
1:E:75:LEU:HG	1:E:79:TYR:CE2	2.39	0.57
1:I:357:GLY:HA2	1:J:355:ASN:HB2	1.86	0.57
1:A:512:ALA:HB1	1:A:513:ARG:HA	1.86	0.57
1:A:262:ASN:HD22	1:C:320:LYS:HG3	1.69	0.57
1:F:295:ARG:NH1	1:F:295:ARG:O	2.37	0.57
1:A:295:ARG:NH1	1:A:295:ARG:O	2.36	0.57
1:A:75:LEU:HG	1:A:79:TYR:CE2	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:251:ILE:HG22	1:F:252:GLY:N	2.19	0.57
1:E:72:ILE:HD12	1:E:155:ARG:NH1	2.19	0.57
1:H:75:LEU:HG	1:H:79:TYR:CE2	2.39	0.57
1:I:75:LEU:HG	1:I:79:TYR:CE2	2.39	0.57
1:K:373:LEU:O	1:K:374:ARG:CB	2.53	0.57
1:G:162:ILE:HG22	1:G:171:ILE:CB	2.34	0.57
1:H:162:ILE:HG22	1:H:171:ILE:CB	2.34	0.57
1:I:420:ASP:OD1	1:I:421:PRO:HD3	2.03	0.57
1:D:72:ILE:HD12	1:D:155:ARG:NH1	2.19	0.57
1:L:72:ILE:HD12	1:L:155:ARG:NH1	2.19	0.57
1:J:373:LEU:O	1:J:374:ARG:CB	2.53	0.57
1:G:357:GLY:HA2	1:H:355:ASN:HB2	1.86	0.57
1:C:402:THR:O	1:C:405:LYS:HB2	2.05	0.57
1:B:320:LYS:HG3	1:L:262:ASN:HD22	1.69	0.57
1:A:281:ASP:O	1:B:331:THR:OG1	2.23	0.57
1:C:165:LYS:HG2	1:C:166:ARG:HA	1.86	0.57
1:K:251:ILE:HG22	1:K:252:GLY:N	2.19	0.57
1:D:373:LEU:O	1:D:374:ARG:CB	2.53	0.57
1:C:373:LEU:O	1:C:374:ARG:CB	2.53	0.57
1:I:373:LEU:O	1:I:374:ARG:HB2	2.03	0.57
1:I:402:THR:O	1:I:405:LYS:HB2	2.05	0.57
1:E:262:ASN:HD22	1:G:320:LYS:HG3	1.69	0.57
1:B:165:LYS:HG2	1:B:166:ARG:HA	1.86	0.57
1:I:512:ALA:HB1	1:I:513:ARG:HA	1.86	0.57
1:D:165:LYS:HG2	1:D:166:ARG:HA	1.86	0.57
1:C:162:ILE:HG22	1:C:171:ILE:CB	2.34	0.57
1:F:72:ILE:HD12	1:F:155:ARG:NH1	2.19	0.57
1:L:278:ARG:CG	1:L:282:ARG:NH2	2.59	0.57
1:H:279:ALA:N	1:H:280:PRO:CD	2.66	0.57
1:D:262:ASN:HD22	1:F:320:LYS:HG3	1.69	0.57
1:C:262:ASN:HD22	1:E:320:LYS:HG3	1.69	0.57
1:G:295:ARG:NH1	1:G:295:ARG:O	2.36	0.57
1:D:162:ILE:HG22	1:D:171:ILE:CB	2.34	0.57
1:I:162:ILE:HG22	1:I:171:ILE:CB	2.34	0.57
1:B:75:LEU:HG	1:B:79:TYR:CE2	2.39	0.57
1:D:75:LEU:HG	1:D:79:TYR:CE2	2.39	0.57
1:G:75:LEU:HG	1:G:79:TYR:CE2	2.39	0.57
1:E:373:LEU:O	1:E:374:ARG:CB	2.53	0.57
1:L:373:LEU:O	1:L:374:ARG:CB	2.53	0.57
1:I:373:LEU:O	1:I:374:ARG:CB	2.53	0.57
1:A:278:ARG:CG	1:A:282:ARG:NH2	2.59	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:357:GLY:HA2	1:E:355:ASN:HB2	1.86	0.57
1:H:165:LYS:HG2	1:H:166:ARG:HA	1.86	0.57
1:L:420:ASP:OD1	1:L:421:PRO:HD3	2.03	0.57
1:K:75:LEU:HG	1:K:79:TYR:CE2	2.39	0.57
1:L:75:LEU:HG	1:L:79:TYR:CE2	2.39	0.57
1:I:72:ILE:HD12	1:I:155:ARG:NH1	2.19	0.57
1:A:355:ASN:HB2	1:L:357:GLY:HA2	1.86	0.57
1:J:262:ASN:HD22	1:L:320:LYS:HG3	1.69	0.57
1:H:398:ARG:HD2	1:I:379:ARG:HH11	1.69	0.57
1:L:162:ILE:HG22	1:L:171:ILE:CB	2.34	0.57
1:C:162:ILE:HG23	1:C:171:ILE:HG13	1.67	0.57
1:C:72:ILE:HD12	1:C:155:ARG:NH1	2.19	0.57
1:E:251:ILE:HG22	1:E:252:GLY:N	2.19	0.57
1:J:251:ILE:HG22	1:J:252:GLY:N	2.19	0.57
1:B:373:LEU:O	1:B:374:ARG:CB	2.53	0.57
1:F:262:ASN:HD22	1:H:320:LYS:HG3	1.69	0.57
1:K:72:ILE:HD12	1:K:155:ARG:NH1	2.19	0.57
1:J:75:LEU:HG	1:J:79:TYR:CE2	2.39	0.57
1:I:251:ILE:HG22	1:I:252:GLY:N	2.19	0.57
1:H:373:LEU:O	1:H:374:ARG:CB	2.53	0.57
1:H:402:THR:O	1:H:405:LYS:HB2	2.05	0.57
1:F:402:THR:O	1:F:405:LYS:HB2	2.05	0.57
1:D:402:THR:O	1:D:405:LYS:HB2	2.05	0.57
1:L:402:THR:O	1:L:405:LYS:HB2	2.05	0.57
1:F:398:ARG:HD2	1:G:379:ARG:HH11	1.69	0.57
1:E:165:LYS:HG2	1:E:166:ARG:HA	1.86	0.57
1:C:295:ARG:NH1	1:C:295:ARG:O	2.37	0.57
1:F:164:PRO:HB3	1:F:218:ASP:HB2	1.87	0.56
1:H:164:PRO:HB3	1:H:218:ASP:HB2	1.87	0.56
1:E:162:ILE:HG22	1:E:171:ILE:CB	2.34	0.56
1:B:162:ILE:HG22	1:B:171:ILE:CB	2.34	0.56
1:G:240:SER:O	1:G:242:LEU:N	2.37	0.56
1:J:373:LEU:O	1:J:374:ARG:HB2	2.03	0.56
1:F:373:LEU:O	1:F:374:ARG:CB	2.53	0.56
1:A:165:LYS:HG2	1:A:166:ARG:HA	1.86	0.56
1:B:512:ALA:HB1	1:B:513:ARG:HA	1.86	0.56
1:H:262:ASN:HD22	1:J:320:LYS:HG3	1.69	0.56
1:K:165:LYS:HG2	1:K:166:ARG:HA	1.86	0.56
1:I:262:ASN:HD22	1:K:320:LYS:HG3	1.69	0.56
1:E:512:ALA:HB1	1:E:513:ARG:HA	1.86	0.56
1:B:295:ARG:NH1	1:B:295:ARG:O	2.36	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:164:PRO:HB3	1:G:218:ASP:HB2	1.88	0.56
1:I:164:PRO:HB3	1:I:218:ASP:HB2	1.87	0.56
1:J:164:PRO:HB3	1:J:218:ASP:HB2	1.88	0.56
1:A:251:ILE:HG22	1:A:252:GLY:N	2.19	0.56
1:F:240:SER:O	1:F:242:LEU:N	2.37	0.56
1:K:373:LEU:O	1:K:374:ARG:HB2	2.03	0.56
1:G:373:LEU:O	1:G:374:ARG:CB	2.53	0.56
1:K:402:THR:O	1:K:405:LYS:HB2	2.05	0.56
1:A:320:LYS:HG3	1:K:262:ASN:HD22	1.69	0.56
1:G:94:GLU:HG2	1:G:375:VAL:HG23	1.87	0.56
1:A:162:ILE:HG22	1:A:171:ILE:CB	2.35	0.56
1:E:164:PRO:HB3	1:E:218:ASP:HB2	1.87	0.56
1:D:161:ILE:O	1:D:162:ILE:HG23	2.06	0.56
1:I:156:ILE:HD11	1:I:158:PHE:CZ	2.41	0.56
1:K:164:PRO:HB3	1:K:218:ASP:HB2	1.87	0.56
1:E:259:LYS:HZ3	1:G:316:ALA:CA	2.15	0.56
1:F:75:LEU:HG	1:F:79:TYR:CE2	2.39	0.56
1:L:251:ILE:HG22	1:L:252:GLY:N	2.19	0.56
1:J:72:ILE:HD12	1:J:155:ARG:NH1	2.19	0.56
1:F:259:LYS:HZ1	1:H:316:ALA:CA	2.19	0.56
1:I:259:LYS:HZ1	1:K:316:ALA:CA	2.19	0.56
1:B:259:LYS:HZ1	1:D:316:ALA:CA	2.17	0.56
1:K:278:ARG:CG	1:K:282:ARG:NH2	2.59	0.56
1:A:373:LEU:O	1:A:374:ARG:CB	2.53	0.56
1:F:278:ARG:CG	1:F:282:ARG:NH2	2.59	0.56
1:L:279:ALA:N	1:L:280:PRO:CD	2.66	0.56
1:B:402:THR:O	1:B:405:LYS:HB2	2.05	0.56
1:F:512:ALA:HB1	1:F:513:ARG:HA	1.86	0.56
1:D:512:ALA:HB1	1:D:513:ARG:HA	1.86	0.56
1:F:165:LYS:HG2	1:F:166:ARG:HA	1.86	0.56
1:G:161:ILE:O	1:G:162:ILE:HG23	2.06	0.56
1:E:156:ILE:HD11	1:E:158:PHE:CZ	2.41	0.56
1:B:156:ILE:HD11	1:B:158:PHE:CZ	2.41	0.56
1:L:161:ILE:O	1:L:162:ILE:HG23	2.06	0.56
1:C:156:ILE:HD11	1:C:158:PHE:CZ	2.41	0.56
1:I:161:ILE:O	1:I:162:ILE:HG23	2.06	0.56
1:J:161:ILE:O	1:J:162:ILE:HG23	2.06	0.56
1:H:72:ILE:HD12	1:H:155:ARG:NH1	2.19	0.56
1:F:94:GLU:HG2	1:F:375:VAL:HG23	1.87	0.56
1:C:357:GLY:HA2	1:D:355:ASN:HB2	1.86	0.56
1:A:402:THR:O	1:A:405:LYS:HB2	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:402:THR:O	1:G:405:LYS:HB2	2.05	0.56
1:H:512:ALA:HB1	1:H:513:ARG:HA	1.86	0.56
1:F:156:ILE:HD11	1:F:158:PHE:CZ	2.41	0.56
1:D:156:ILE:HD11	1:D:158:PHE:CZ	2.41	0.56
1:J:240:SER:O	1:J:242:LEU:N	2.37	0.56
1:H:357:GLY:HA2	1:I:355:ASN:HB2	1.86	0.56
1:G:262:ASN:HD22	1:I:320:LYS:HG3	1.69	0.56
1:B:262:ASN:HD22	1:D:320:LYS:HG3	1.69	0.56
1:F:162:ILE:HG22	1:F:171:ILE:CB	2.34	0.56
1:E:158:PHE:HD1	1:E:176:ARG:HA	1.71	0.56
1:L:164:PRO:HB3	1:L:218:ASP:HB2	1.87	0.56
1:I:158:PHE:HD1	1:I:176:ARG:HA	1.71	0.56
1:G:86:TYR:CD1	1:G:87:GLU:N	2.74	0.56
1:K:86:TYR:CD1	1:K:87:GLU:N	2.74	0.56
1:J:86:TYR:CD1	1:J:87:GLU:N	2.74	0.56
1:L:373:LEU:O	1:L:374:ARG:HB2	2.03	0.56
1:A:357:GLY:HA2	1:B:355:ASN:HB2	1.86	0.56
1:L:165:LYS:HG2	1:L:166:ARG:HA	1.86	0.56
1:G:165:LYS:HG2	1:G:166:ARG:HA	1.86	0.56
1:G:156:ILE:HD11	1:G:158:PHE:CZ	2.41	0.56
1:F:161:ILE:O	1:F:162:ILE:HG23	2.06	0.56
1:H:156:ILE:HD11	1:H:158:PHE:CZ	2.41	0.56
1:E:161:ILE:O	1:E:162:ILE:HG23	2.06	0.56
1:B:164:PRO:HB3	1:B:218:ASP:HB2	1.87	0.56
1:L:158:PHE:HD1	1:L:176:ARG:HA	1.71	0.56
1:H:86:TYR:CD1	1:H:87:GLU:N	2.74	0.56
1:I:86:TYR:CD1	1:I:87:GLU:N	2.74	0.56
1:E:86:TYR:CD1	1:E:87:GLU:N	2.74	0.56
1:A:72:ILE:HD12	1:A:155:ARG:NH1	2.19	0.56
1:H:240:SER:O	1:H:242:LEU:N	2.37	0.56
1:B:278:ARG:CG	1:B:282:ARG:NH2	2.59	0.56
1:K:374:ARG:NH1	1:K:406:PHE:HE1	2.04	0.56
1:A:94:GLU:HG2	1:A:375:VAL:HG23	1.87	0.56
1:K:94:GLU:HG2	1:K:375:VAL:HG23	1.87	0.56
1:I:120:PRO:HA	1:I:123:LYS:HE2	1.88	0.56
1:J:120:PRO:HA	1:J:123:LYS:HE2	1.88	0.56
1:L:94:GLU:HG2	1:L:375:VAL:HG23	1.87	0.56
1:G:158:PHE:HD1	1:G:176:ARG:HA	1.71	0.56
1:A:164:PRO:HB3	1:A:218:ASP:HB2	1.88	0.56
1:B:158:PHE:HD1	1:B:176:ARG:HA	1.71	0.56
1:D:160:LYS:HZ3	1:D:424:THR:HG21	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:158:PHE:HD1	1:C:176:ARG:HA	1.71	0.56
1:A:374:ARG:NH1	1:A:406:PHE:HE1	2.04	0.56
1:I:279:ALA:N	1:I:280:PRO:CD	2.66	0.56
1:G:512:ALA:HB1	1:G:513:ARG:HA	1.86	0.56
1:K:281:ASP:O	1:L:331:THR:OG1	2.23	0.56
1:B:94:GLU:HG2	1:B:375:VAL:HG23	1.87	0.56
1:K:120:PRO:HA	1:K:123:LYS:HE2	1.88	0.56
1:G:160:LYS:HZ3	1:G:424:THR:HG21	1.70	0.56
1:D:164:PRO:HB3	1:D:218:ASP:HB2	1.88	0.56
1:C:161:ILE:O	1:C:162:ILE:HG23	2.06	0.56
1:C:164:PRO:HB3	1:C:218:ASP:HB2	1.87	0.56
1:K:158:PHE:HD1	1:K:176:ARG:HA	1.71	0.56
1:F:86:TYR:CD1	1:F:87:GLU:N	2.74	0.56
1:A:86:TYR:CD1	1:A:87:GLU:N	2.74	0.56
1:E:240:SER:O	1:E:242:LEU:N	2.37	0.56
1:C:279:ALA:N	1:C:280:PRO:CD	2.66	0.56
1:J:402:THR:O	1:J:405:LYS:HB2	2.05	0.56
1:I:113:LEU:CD1	1:I:123:LYS:O	2.54	0.56
1:D:113:LEU:CD1	1:D:123:LYS:O	2.54	0.56
1:L:120:PRO:HA	1:L:123:LYS:HE2	1.88	0.56
1:F:158:PHE:HD1	1:F:176:ARG:HA	1.71	0.56
1:H:161:ILE:O	1:H:162:ILE:HG23	2.06	0.56
1:H:154:SER:C	1:H:155:ARG:HG3	2.26	0.56
1:I:154:SER:C	1:I:155:ARG:HG3	2.26	0.56
1:A:279:ALA:N	1:A:280:PRO:CD	2.66	0.56
1:A:109:VAL:HG11	1:A:418:PHE:CE2	2.41	0.56
1:H:120:PRO:HA	1:H:123:LYS:HE2	1.88	0.56
1:G:113:LEU:CD1	1:G:123:LYS:O	2.54	0.56
1:F:113:LEU:CD1	1:F:123:LYS:O	2.54	0.56
1:H:158:PHE:HD1	1:H:176:ARG:HA	1.71	0.55
1:L:156:ILE:HD11	1:L:158:PHE:CZ	2.41	0.55
1:L:86:TYR:CD1	1:L:87:GLU:N	2.74	0.55
1:J:154:SER:C	1:J:155:ARG:HG3	2.26	0.55
1:G:154:SER:C	1:G:155:ARG:HG3	2.26	0.55
1:B:357:GLY:HA2	1:C:355:ASN:HB2	1.86	0.55
1:E:402:THR:O	1:E:405:LYS:HB2	2.05	0.55
1:B:109:VAL:HG11	1:B:418:PHE:CE2	2.41	0.55
1:B:113:LEU:CD1	1:B:123:LYS:O	2.54	0.55
1:C:512:ALA:HB1	1:C:513:ARG:HA	1.86	0.55
1:D:94:GLU:HG2	1:D:375:VAL:HG23	1.87	0.55
1:B:374:ARG:NH1	1:B:406:PHE:HE1	2.04	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:374:ARG:NH1	1:L:406:PHE:HE1	2.04	0.55
1:C:278:ARG:CG	1:C:282:ARG:NH2	2.59	0.55
1:A:357:GLY:HA2	1:A:358:ASN:CB	2.29	0.55
1:C:109:VAL:HG11	1:C:418:PHE:CE2	2.41	0.55
1:K:109:VAL:HG11	1:K:418:PHE:CE2	2.41	0.55
1:H:113:LEU:CD1	1:H:123:LYS:O	2.54	0.55
1:E:113:LEU:CD1	1:E:123:LYS:O	2.54	0.55
1:C:86:TYR:CD1	1:C:87:GLU:N	2.74	0.55
1:F:154:SER:C	1:F:155:ARG:HG3	2.26	0.55
1:I:374:ARG:NH1	1:I:406:PHE:HE1	2.04	0.55
1:G:120:PRO:HA	1:G:123:LYS:HE2	1.88	0.55
1:J:147:PHE:HD2	1:J:414:PHE:CD2	2.24	0.55
1:A:156:ILE:HD11	1:A:158:PHE:CZ	2.41	0.55
1:B:161:ILE:O	1:B:162:ILE:HG23	2.06	0.55
1:K:161:ILE:O	1:K:162:ILE:HG23	2.06	0.55
1:K:154:SER:C	1:K:155:ARG:HG3	2.26	0.55
1:G:278:ARG:CG	1:G:282:ARG:NH2	2.59	0.55
1:C:94:GLU:HG2	1:C:375:VAL:HG23	1.87	0.55
1:J:94:GLU:HG2	1:J:375:VAL:HG23	1.87	0.55
1:A:113:LEU:CD1	1:A:123:LYS:O	2.54	0.55
1:A:120:PRO:HA	1:A:123:LYS:HE2	1.88	0.55
1:J:156:ILE:HD11	1:J:158:PHE:CZ	2.41	0.55
1:K:156:ILE:HD11	1:K:158:PHE:CZ	2.41	0.55
1:C:374:ARG:NH1	1:C:406:PHE:HE1	2.04	0.55
1:I:94:GLU:HG2	1:I:375:VAL:HG23	1.87	0.55
1:K:113:LEU:CD1	1:K:123:LYS:O	2.54	0.55
1:F:120:PRO:HA	1:F:123:LYS:HE2	1.88	0.55
1:H:94:GLU:HG2	1:H:375:VAL:HG23	1.87	0.55
1:E:281:ASP:O	1:F:331:THR:OG1	2.23	0.55
1:C:113:LEU:CD1	1:C:123:LYS:O	2.54	0.55
1:H:160:LYS:HZ3	1:H:424:THR:HG21	1.71	0.55
1:J:158:PHE:HD1	1:J:176:ARG:HA	1.71	0.55
1:J:374:ARG:NH1	1:J:406:PHE:HE1	2.04	0.55
1:K:279:ALA:N	1:K:280:PRO:CD	2.66	0.55
1:D:109:VAL:HG11	1:D:418:PHE:CE2	2.41	0.55
1:G:109:VAL:HG11	1:G:418:PHE:CE2	2.41	0.55
1:B:120:PRO:HA	1:B:123:LYS:HE2	1.88	0.55
1:C:147:PHE:HD2	1:C:414:PHE:CD2	2.24	0.55
1:D:158:PHE:HD1	1:D:176:ARG:HA	1.71	0.55
1:I:160:LYS:HZ3	1:I:424:THR:HG21	1.71	0.55
1:C:154:SER:C	1:C:155:ARG:HG3	2.26	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:240:SER:O	1:K:242:LEU:N	2.37	0.55
1:B:279:ALA:N	1:B:280:PRO:CD	2.66	0.55
1:L:109:VAL:HG11	1:L:418:PHE:CE2	2.41	0.55
1:L:113:LEU:CD1	1:L:123:LYS:O	2.54	0.55
1:E:120:PRO:HA	1:E:123:LYS:HE2	1.88	0.55
1:L:147:PHE:HD2	1:L:414:PHE:CD2	2.24	0.55
1:A:161:ILE:O	1:A:162:ILE:HG23	2.07	0.55
1:D:86:TYR:CD1	1:D:87:GLU:N	2.74	0.55
1:E:154:SER:C	1:E:155:ARG:HG3	2.26	0.55
1:J:279:ALA:N	1:J:280:PRO:CD	2.66	0.55
1:D:120:PRO:HA	1:D:123:LYS:HE2	1.88	0.55
1:C:120:PRO:HA	1:C:123:LYS:HE2	1.88	0.55
1:E:264:LEU:HD23	1:E:265:LYS:HE2	1.89	0.55
1:E:364:TRP:HH2	1:F:366:ARG:HE	1.55	0.55
1:G:281:ASP:O	1:H:331:THR:OG1	2.23	0.55
1:K:147:PHE:HD2	1:K:414:PHE:CD2	2.24	0.55
1:D:154:SER:C	1:D:155:ARG:HG3	2.26	0.55
1:L:154:SER:C	1:L:155:ARG:HG3	2.26	0.55
1:D:374:ARG:NH1	1:D:406:PHE:HE1	2.04	0.55
1:J:278:ARG:CG	1:J:282:ARG:NH2	2.59	0.55
1:I:376:PRO:HG3	1:I:403:PHE:HB2	1.89	0.55
1:F:264:LEU:HD23	1:F:265:LYS:HE2	1.89	0.55
1:A:366:ARG:HE	1:L:364:TRP:HH2	1.55	0.55
1:I:147:PHE:HD2	1:I:414:PHE:CD2	2.24	0.55
1:C:364:TRP:HH2	1:D:366:ARG:HE	1.55	0.55
1:H:374:ARG:NH1	1:H:406:PHE:HE1	2.04	0.55
1:H:278:ARG:CG	1:H:282:ARG:NH2	2.59	0.55
1:J:113:LEU:CD1	1:J:123:LYS:O	2.54	0.55
1:A:147:PHE:HD2	1:A:414:PHE:CD2	2.24	0.55
1:D:264:LEU:HD23	1:D:265:LYS:HE2	1.89	0.55
1:A:331:THR:OG1	1:L:281:ASP:O	2.23	0.55
1:G:364:TRP:HH2	1:H:366:ARG:HE	1.55	0.55
1:A:364:TRP:HH2	1:B:366:ARG:HE	1.55	0.55
1:E:94:GLU:HG2	1:E:375:VAL:HG23	1.87	0.55
1:A:158:PHE:HD1	1:A:176:ARG:HA	1.71	0.54
1:I:240:SER:O	1:I:242:LEU:N	2.37	0.54
1:J:376:PRO:HG3	1:J:403:PHE:HB2	1.89	0.54
1:E:109:VAL:HG11	1:E:418:PHE:CE2	2.41	0.54
1:K:364:TRP:HH2	1:L:366:ARG:HE	1.55	0.54
1:H:147:PHE:HD2	1:H:414:PHE:CD2	2.24	0.54
1:G:264:LEU:HD23	1:G:265:LYS:HE2	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:364:TRP:HH2	1:K:366:ARG:HE	1.55	0.54
1:B:86:TYR:CD1	1:B:87:GLU:N	2.74	0.54
1:B:154:SER:C	1:B:155:ARG:HG3	2.26	0.54
1:G:374:ARG:NH1	1:G:406:PHE:HE1	2.04	0.54
1:H:109:VAL:HG11	1:H:418:PHE:CE2	2.41	0.54
1:I:211:ALA:O	1:I:212:HIS:HB2	2.08	0.54
1:F:364:TRP:HH2	1:G:366:ARG:HE	1.55	0.54
1:B:364:TRP:HH2	1:C:366:ARG:HE	1.55	0.54
1:C:264:LEU:HD23	1:C:265:LYS:HE2	1.89	0.54
1:D:240:SER:O	1:D:242:LEU:N	2.37	0.54
1:H:376:PRO:HG3	1:H:403:PHE:HB2	1.89	0.54
1:F:109:VAL:HG11	1:F:418:PHE:CE2	2.41	0.54
1:K:264:LEU:HD23	1:K:265:LYS:HE2	1.89	0.54
1:E:351:PRO:HD2	1:F:349:THR:HG21	1.90	0.54
1:G:211:ALA:O	1:G:212:HIS:HB2	2.08	0.54
1:J:211:ALA:O	1:J:212:HIS:HB2	2.08	0.54
1:A:351:PRO:HD2	1:B:349:THR:HG21	1.90	0.54
1:I:364:TRP:HH2	1:J:366:ARG:HE	1.55	0.54
1:E:374:ARG:NH1	1:E:406:PHE:HE1	2.04	0.54
1:G:147:PHE:HD2	1:G:414:PHE:CD2	2.24	0.54
1:A:349:THR:HG21	1:L:351:PRO:HD2	1.90	0.54
1:F:351:PRO:HD2	1:G:349:THR:HG21	1.90	0.54
1:B:147:PHE:HD2	1:B:414:PHE:CD2	2.24	0.54
1:D:211:ALA:O	1:D:212:HIS:HB2	2.08	0.54
1:B:351:PRO:HD2	1:C:349:THR:HG21	1.90	0.54
1:I:357:GLY:HA2	1:I:358:ASN:CB	2.29	0.54
1:H:211:ALA:O	1:H:212:HIS:HB2	2.08	0.54
1:D:364:TRP:HH2	1:E:366:ARG:HE	1.55	0.54
1:L:264:LEU:HD23	1:L:265:LYS:HE2	1.89	0.54
1:C:211:ALA:O	1:C:212:HIS:HB2	2.08	0.54
1:H:264:LEU:HD23	1:H:265:LYS:HE2	1.89	0.54
1:D:253:TYR:OH	1:D:413:LYS:NZ	2.24	0.54
1:D:351:PRO:HD2	1:E:349:THR:HG21	1.90	0.54
1:F:147:PHE:HD2	1:F:414:PHE:CD2	2.24	0.54
1:I:109:VAL:HG11	1:I:418:PHE:CE2	2.41	0.54
1:J:109:VAL:HG11	1:J:418:PHE:CE2	2.41	0.54
1:D:281:ASP:O	1:E:331:THR:OG1	2.23	0.54
1:E:211:ALA:O	1:E:212:HIS:HB2	2.08	0.54
1:D:147:PHE:HD2	1:D:414:PHE:CD2	2.24	0.54
1:E:147:PHE:HD2	1:E:414:PHE:CD2	2.24	0.54
1:F:374:ARG:NH1	1:F:406:PHE:HE1	2.04	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:277:THR:O	1:E:278:ARG:HB2	2.08	0.54
1:K:376:PRO:HG3	1:K:403:PHE:HB2	1.89	0.54
1:B:253:TYR:HH	1:B:413:LYS:HZ3	1.54	0.54
1:J:281:ASP:O	1:K:331:THR:OG1	2.23	0.54
1:B:211:ALA:O	1:B:212:HIS:HB2	2.08	0.54
1:K:211:ALA:O	1:K:212:HIS:HB2	2.08	0.54
1:C:86:TYR:O	1:C:87:GLU:CB	2.54	0.54
1:D:86:TYR:O	1:D:87:GLU:CB	2.54	0.54
1:F:86:TYR:O	1:F:87:GLU:CB	2.54	0.54
1:E:86:TYR:O	1:E:87:GLU:CB	2.54	0.54
1:A:154:SER:C	1:A:155:ARG:HG3	2.26	0.54
1:L:277:THR:O	1:L:278:ARG:HB2	2.08	0.54
1:J:277:THR:O	1:J:278:ARG:HB2	2.08	0.54
1:D:277:THR:O	1:D:278:ARG:HB2	2.08	0.54
1:K:351:PRO:HD2	1:L:349:THR:HG21	1.90	0.54
1:G:351:PRO:HD2	1:H:349:THR:HG21	1.90	0.54
1:C:351:PRO:HD2	1:D:349:THR:HG21	1.90	0.54
1:F:211:ALA:O	1:F:212:HIS:HB2	2.08	0.54
1:H:364:TRP:HH2	1:I:366:ARG:HE	1.55	0.54
1:K:160:LYS:HZ3	1:K:424:THR:HG21	1.71	0.54
1:L:376:PRO:HG3	1:L:403:PHE:HB2	1.89	0.54
1:G:376:PRO:HG3	1:G:403:PHE:HB2	1.89	0.54
1:E:478:GLY:O	1:F:505:ILE:HD11	2.08	0.54
1:B:478:GLY:O	1:C:505:ILE:HD11	2.08	0.54
1:B:264:LEU:HD23	1:B:265:LYS:HE2	1.89	0.54
1:J:264:LEU:HD23	1:J:265:LYS:HE2	1.89	0.54
1:C:240:SER:O	1:C:242:LEU:N	2.37	0.54
1:D:478:GLY:O	1:E:505:ILE:HD11	2.08	0.54
1:G:86:TYR:O	1:G:87:GLU:CB	2.54	0.53
1:L:240:SER:O	1:L:242:LEU:N	2.37	0.53
1:I:277:THR:O	1:I:278:ARG:HB2	2.08	0.53
1:F:478:GLY:O	1:G:505:ILE:HD11	2.08	0.53
1:G:478:GLY:O	1:H:505:ILE:HD11	2.08	0.53
1:L:211:ALA:O	1:L:212:HIS:HB2	2.08	0.53
1:J:351:PRO:HD2	1:K:349:THR:HG21	1.90	0.53
1:D:376:PRO:HG3	1:D:403:PHE:HB2	1.89	0.53
1:F:376:PRO:HG3	1:F:403:PHE:HB2	1.89	0.53
1:H:351:PRO:HD2	1:I:349:THR:HG21	1.90	0.53
1:I:351:PRO:HD2	1:J:349:THR:HG21	1.90	0.53
1:B:277:THR:O	1:B:278:ARG:HB2	2.08	0.53
1:A:264:LEU:HD23	1:A:265:LYS:HE2	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:278:ARG:CG	1:E:282:ARG:NH2	2.59	0.53
1:A:376:PRO:HG3	1:A:403:PHE:HB2	1.89	0.53
1:H:441:ILE:HB	1:H:444:ILE:HG12	1.91	0.53
1:A:478:GLY:O	1:B:505:ILE:HD11	2.08	0.53
1:E:104:ASP:O	1:E:105:ASP:HB3	2.09	0.53
1:F:104:ASP:O	1:F:105:ASP:HB3	2.09	0.53
1:B:240:SER:O	1:B:242:LEU:N	2.37	0.53
1:B:357:GLY:HA2	1:B:358:ASN:CB	2.29	0.53
1:C:376:PRO:HG3	1:C:403:PHE:HB2	1.89	0.53
1:A:505:ILE:HD11	1:L:478:GLY:O	2.08	0.53
1:I:478:GLY:O	1:J:505:ILE:HD11	2.08	0.53
1:H:104:ASP:O	1:H:105:ASP:HB3	2.09	0.53
1:L:87:GLU:HG3	1:L:88:VAL:N	2.24	0.53
1:G:277:THR:O	1:G:278:ARG:HB2	2.08	0.53
1:G:441:ILE:HB	1:G:444:ILE:HG12	1.91	0.53
1:I:104:ASP:O	1:I:105:ASP:HB3	2.09	0.53
1:K:478:GLY:O	1:L:505:ILE:HD11	2.08	0.53
1:D:104:ASP:O	1:D:105:ASP:HB3	2.09	0.53
1:F:281:ASP:O	1:G:331:THR:OG1	2.23	0.53
1:G:104:ASP:O	1:G:105:ASP:HB3	2.09	0.53
1:A:161:ILE:O	1:A:162:ILE:CG2	2.57	0.53
1:K:87:GLU:HG3	1:K:88:VAL:N	2.24	0.53
1:A:277:THR:O	1:A:278:ARG:HB2	2.08	0.53
1:F:277:THR:O	1:F:278:ARG:HB2	2.08	0.53
1:E:376:PRO:HG3	1:E:403:PHE:HB2	1.89	0.53
1:J:104:ASP:O	1:J:105:ASP:HB3	2.09	0.53
1:A:87:GLU:HG3	1:A:88:VAL:N	2.24	0.53
1:J:149:ARG:O	1:J:153:ASP:CG	2.48	0.53
1:K:441:ILE:HB	1:K:444:ILE:HG12	1.91	0.53
1:C:104:ASP:O	1:C:105:ASP:HB3	2.09	0.53
1:K:104:ASP:O	1:K:105:ASP:HB3	2.09	0.53
1:A:211:ALA:O	1:A:212:HIS:HB2	2.08	0.53
1:I:264:LEU:HD23	1:I:265:LYS:HE2	1.89	0.53
1:J:87:GLU:HG3	1:J:88:VAL:N	2.24	0.53
1:A:240:SER:O	1:A:242:LEU:N	2.37	0.53
1:F:149:ARG:O	1:F:153:ASP:CG	2.48	0.53
1:K:149:ARG:O	1:K:153:ASP:CG	2.48	0.53
1:H:149:ARG:O	1:H:153:ASP:CG	2.48	0.53
1:E:279:ALA:N	1:E:280:PRO:CD	2.66	0.53
1:D:315:ASP:HA	1:E:327:ASN:CB	2.39	0.53
1:E:441:ILE:HB	1:E:444:ILE:HG12	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:149:ARG:O	1:I:153:ASP:CG	2.48	0.53
1:K:277:THR:O	1:K:278:ARG:HB2	2.08	0.53
1:C:277:THR:O	1:C:278:ARG:HB2	2.08	0.53
1:B:376:PRO:HG3	1:B:403:PHE:HB2	1.89	0.53
1:L:104:ASP:O	1:L:105:ASP:HB3	2.09	0.53
1:D:87:GLU:HG3	1:D:88:VAL:N	2.24	0.52
1:C:242:LEU:HB2	1:C:251:ILE:O	2.10	0.52
1:E:149:ARG:O	1:E:153:ASP:CG	2.48	0.52
1:I:242:LEU:HB2	1:I:251:ILE:O	2.10	0.52
1:J:261:ALA:HA	1:J:369:LEU:HD12	1.91	0.52
1:J:441:ILE:HB	1:J:444:ILE:HG12	1.91	0.52
1:A:501:GLU:OE1	1:L:482:SER:HB2	2.10	0.52
1:J:482:SER:HB2	1:K:501:GLU:OE1	2.09	0.52
1:B:104:ASP:O	1:B:105:ASP:HB3	2.09	0.52
1:B:482:SER:HB2	1:C:501:GLU:OE1	2.10	0.52
1:A:104:ASP:O	1:A:105:ASP:HB3	2.09	0.52
1:C:161:ILE:O	1:C:162:ILE:CG2	2.58	0.52
1:C:149:ARG:O	1:C:153:ASP:CG	2.48	0.52
1:L:75:LEU:CD2	1:L:251:ILE:CD1	2.86	0.52
1:D:279:ALA:N	1:D:280:PRO:CD	2.66	0.52
1:C:478:GLY:O	1:D:505:ILE:HD11	2.08	0.52
1:C:482:SER:HB2	1:D:501:GLU:OE1	2.10	0.52
1:B:149:ARG:O	1:B:153:ASP:CG	2.48	0.52
1:A:242:LEU:HB2	1:A:251:ILE:O	2.10	0.52
1:D:149:ARG:O	1:D:153:ASP:CG	2.48	0.52
1:K:242:LEU:HB2	1:K:251:ILE:O	2.10	0.52
1:J:242:LEU:HB2	1:J:251:ILE:O	2.10	0.52
1:H:261:ALA:HA	1:H:369:LEU:HD12	1.91	0.52
1:G:261:ALA:HA	1:G:369:LEU:HD12	1.91	0.52
1:D:278:ARG:CG	1:D:282:ARG:NH2	2.59	0.52
1:H:277:THR:O	1:H:278:ARG:HB2	2.08	0.52
1:D:441:ILE:HB	1:D:444:ILE:HG12	1.91	0.52
1:D:482:SER:HB2	1:E:501:GLU:OE1	2.09	0.52
1:L:380:ILE:HG22	1:L:380:ILE:O	2.09	0.52
1:I:380:ILE:HG22	1:I:380:ILE:O	2.09	0.52
1:A:162:ILE:HG23	1:A:171:ILE:HG13	1.70	0.52
1:F:87:GLU:HG3	1:F:88:VAL:N	2.24	0.52
1:H:259:LYS:NZ	1:J:316:ALA:CA	2.73	0.52
1:I:441:ILE:HB	1:I:444:ILE:HG12	1.91	0.52
1:J:380:ILE:HG22	1:J:380:ILE:O	2.09	0.52
1:E:161:ILE:O	1:E:162:ILE:CG2	2.57	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:161:ILE:O	1:K:162:ILE:CG2	2.57	0.52
1:B:87:GLU:HG3	1:B:88:VAL:N	2.24	0.52
1:I:87:GLU:HG3	1:I:88:VAL:N	2.24	0.52
1:E:242:LEU:HB2	1:E:251:ILE:O	2.10	0.52
1:H:242:LEU:HB2	1:H:251:ILE:O	2.10	0.52
1:H:242:LEU:HD12	1:H:251:ILE:O	2.10	0.52
1:I:259:LYS:NZ	1:K:316:ALA:CA	2.73	0.52
1:H:259:LYS:HZ1	1:J:316:ALA:CA	2.19	0.52
1:I:482:SER:HB2	1:J:501:GLU:OE1	2.10	0.52
1:G:269:ASP:O	1:G:273:ILE:HB	2.10	0.52
1:K:380:ILE:O	1:K:380:ILE:HG22	2.09	0.52
1:K:482:SER:HB2	1:L:501:GLU:OE1	2.10	0.52
1:D:161:ILE:O	1:D:162:ILE:CG2	2.58	0.52
1:A:242:LEU:HD12	1:A:251:ILE:O	2.10	0.52
1:L:149:ARG:O	1:L:153:ASP:CG	2.48	0.52
1:L:261:ALA:HA	1:L:369:LEU:HD12	1.91	0.52
1:A:279:ALA:CB	1:A:280:PRO:CD	2.85	0.52
1:C:100:ILE:HD11	1:C:144:SER:CA	2.40	0.52
1:E:253:TYR:OH	1:E:413:LYS:NZ	2.24	0.52
1:F:269:ASP:O	1:F:273:ILE:HB	2.10	0.52
1:C:281:ASP:O	1:D:331:THR:OG1	2.23	0.52
1:I:269:ASP:O	1:I:273:ILE:HB	2.10	0.52
1:H:269:ASP:O	1:H:273:ILE:HB	2.10	0.52
1:J:478:GLY:O	1:K:505:ILE:HD11	2.08	0.52
1:H:87:GLU:HG3	1:H:88:VAL:N	2.24	0.52
1:G:259:LYS:NZ	1:I:316:ALA:CA	2.73	0.52
1:G:315:ASP:HA	1:H:327:ASN:CB	2.39	0.52
1:D:100:ILE:HD11	1:D:144:SER:CA	2.40	0.52
1:J:100:ILE:HD11	1:J:144:SER:CA	2.40	0.52
1:K:100:ILE:HD11	1:K:144:SER:CA	2.40	0.52
1:H:478:GLY:O	1:I:505:ILE:HD11	2.08	0.52
1:G:380:ILE:O	1:G:380:ILE:HG22	2.09	0.52
1:B:168:LYS:HG2	1:B:428:LEU:O	2.10	0.52
1:L:242:LEU:HD12	1:L:251:ILE:O	2.10	0.52
1:G:242:LEU:HD12	1:G:251:ILE:O	2.10	0.52
1:E:261:ALA:HA	1:E:369:LEU:HD12	1.91	0.52
1:B:441:ILE:HB	1:B:444:ILE:HG12	1.91	0.52
1:E:269:ASP:O	1:E:273:ILE:HB	2.10	0.52
1:D:380:ILE:HG22	1:D:380:ILE:O	2.09	0.52
1:F:161:ILE:O	1:F:162:ILE:CG2	2.58	0.52
1:D:168:LYS:HG2	1:D:428:LEU:O	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:87:GLU:HG3	1:G:88:VAL:N	2.24	0.52
1:D:259:LYS:NZ	1:F:316:ALA:CA	2.73	0.52
1:F:242:LEU:HB2	1:F:251:ILE:O	2.10	0.52
1:I:261:ALA:HA	1:I:369:LEU:HD12	1.91	0.52
1:A:315:ASP:HA	1:B:327:ASN:CB	2.39	0.52
1:E:315:ASP:HA	1:F:327:ASN:CB	2.39	0.52
1:H:380:ILE:HG22	1:H:380:ILE:O	2.09	0.52
1:J:269:ASP:O	1:J:273:ILE:HB	2.10	0.52
1:H:168:LYS:HG2	1:H:428:LEU:O	2.10	0.52
1:L:161:ILE:O	1:L:162:ILE:CG2	2.58	0.52
1:I:160:LYS:HG2	1:I:174:LEU:HD22	1.92	0.52
1:I:168:LYS:HG2	1:I:428:LEU:O	2.10	0.52
1:J:169:GLU:N	1:J:170:GLY:CA	2.73	0.52
1:K:168:LYS:HG2	1:K:428:LEU:O	2.10	0.52
1:E:87:GLU:HG3	1:E:88:VAL:N	2.24	0.52
1:J:259:LYS:NZ	1:L:316:ALA:CA	2.73	0.52
1:A:149:ARG:O	1:A:153:ASP:CG	2.48	0.52
1:I:242:LEU:HD12	1:I:251:ILE:O	2.10	0.52
1:G:149:ARG:O	1:G:153:ASP:CG	2.48	0.52
1:G:242:LEU:HB2	1:G:251:ILE:O	2.10	0.52
1:F:441:ILE:HB	1:F:444:ILE:HG12	1.91	0.52
1:L:441:ILE:HB	1:L:444:ILE:HG12	1.91	0.52
1:L:100:ILE:HD11	1:L:144:SER:CA	2.40	0.52
1:B:380:ILE:O	1:B:380:ILE:HG22	2.09	0.52
1:H:161:ILE:O	1:H:162:ILE:CG2	2.57	0.51
1:E:168:LYS:HG2	1:E:428:LEU:O	2.10	0.51
1:B:161:ILE:O	1:B:162:ILE:CG2	2.57	0.51
1:I:169:GLU:N	1:I:170:GLY:CA	2.74	0.51
1:J:160:LYS:HG2	1:J:174:LEU:HD22	1.92	0.51
1:J:161:ILE:O	1:J:162:ILE:CG2	2.58	0.51
1:E:259:LYS:NZ	1:G:316:ALA:CA	2.73	0.51
1:B:242:LEU:HD12	1:B:251:ILE:O	2.10	0.51
1:L:242:LEU:HB2	1:L:251:ILE:O	2.10	0.51
1:F:261:ALA:HA	1:F:369:LEU:HD12	1.91	0.51
1:F:315:ASP:HA	1:G:327:ASN:CB	2.39	0.51
1:A:327:ASN:CB	1:L:315:ASP:HA	2.39	0.51
1:A:441:ILE:HB	1:A:444:ILE:HG12	1.91	0.51
1:I:100:ILE:HD11	1:I:144:SER:CA	2.40	0.51
1:E:482:SER:HB2	1:F:501:GLU:OE1	2.10	0.51
1:G:482:SER:HB2	1:H:501:GLU:OE1	2.09	0.51
1:B:281:ASP:O	1:C:331:THR:OG1	2.23	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:269:ASP:O	1:D:273:ILE:HB	2.10	0.51
1:G:160:LYS:HG2	1:G:174:LEU:HD22	1.92	0.51
1:F:168:LYS:HG2	1:F:428:LEU:O	2.10	0.51
1:H:160:LYS:HG2	1:H:174:LEU:HD22	1.92	0.51
1:J:242:LEU:HD12	1:J:251:ILE:O	2.10	0.51
1:B:100:ILE:HD11	1:B:144:SER:CA	2.40	0.51
1:G:168:LYS:HG2	1:G:428:LEU:O	2.10	0.51
1:F:160:LYS:HG2	1:F:174:LEU:HD22	1.92	0.51
1:H:169:GLU:N	1:H:170:GLY:CA	2.73	0.51
1:E:160:LYS:HG2	1:E:174:LEU:HD22	1.92	0.51
1:L:168:LYS:HG2	1:L:428:LEU:O	2.10	0.51
1:K:169:GLU:N	1:K:170:GLY:CA	2.73	0.51
1:A:155:ARG:HE	1:A:250:ILE:HD12	1.76	0.51
1:K:261:ALA:HA	1:K:369:LEU:HD12	1.91	0.51
1:E:100:ILE:HD11	1:E:144:SER:CA	2.40	0.51
1:K:269:ASP:O	1:K:273:ILE:HB	2.10	0.51
1:A:482:SER:HB2	1:B:501:GLU:OE1	2.09	0.51
1:A:380:ILE:O	1:A:380:ILE:HG22	2.09	0.51
1:A:168:LYS:HG2	1:A:428:LEU:O	2.10	0.51
1:C:168:LYS:HG2	1:C:428:LEU:O	2.10	0.51
1:I:161:ILE:O	1:I:162:ILE:CG2	2.58	0.51
1:B:155:ARG:HE	1:B:250:ILE:HD12	1.76	0.51
1:D:242:LEU:HB2	1:D:251:ILE:O	2.10	0.51
1:F:242:LEU:HD12	1:F:251:ILE:O	2.10	0.51
1:F:155:ARG:HE	1:F:250:ILE:HD12	1.76	0.51
1:K:242:LEU:HD12	1:K:251:ILE:O	2.10	0.51
1:F:259:LYS:NZ	1:H:316:ALA:CA	2.73	0.51
1:C:269:ASP:O	1:C:273:ILE:HB	2.10	0.51
1:G:161:ILE:O	1:G:162:ILE:CG2	2.58	0.51
1:D:242:LEU:HD12	1:D:251:ILE:O	2.10	0.51
1:F:75:LEU:CD2	1:F:251:ILE:CD1	2.86	0.51
1:G:75:LEU:CD2	1:G:251:ILE:CD1	2.86	0.51
1:L:269:ASP:O	1:L:273:ILE:HB	2.10	0.51
1:H:482:SER:HB2	1:I:501:GLU:OE1	2.10	0.51
1:E:380:ILE:O	1:E:380:ILE:HG22	2.09	0.51
1:B:269:ASP:O	1:B:273:ILE:HB	2.10	0.51
1:D:160:LYS:HG2	1:D:174:LEU:HD22	1.92	0.51
1:I:146:HIS:HD2	1:I:176:ARG:NH2	2.09	0.51
1:C:251:ILE:CG2	1:C:255:HIS:CG	2.94	0.51
1:D:251:ILE:CG2	1:D:255:HIS:CG	2.94	0.51
1:E:155:ARG:HE	1:E:250:ILE:HD12	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:242:LEU:HD12	1:E:251:ILE:O	2.10	0.51
1:H:251:ILE:CG2	1:H:255:HIS:CG	2.94	0.51
1:J:153:ASP:C	1:J:154:SER:HG	2.04	0.51
1:I:251:ILE:CG2	1:I:255:HIS:CG	2.94	0.51
1:B:259:LYS:NZ	1:D:316:ALA:CA	2.73	0.51
1:B:261:ALA:HA	1:B:369:LEU:HD12	1.91	0.51
1:L:279:ALA:CB	1:L:280:PRO:CD	2.85	0.51
1:L:326:HIS:O	1:L:327:ASN:HB2	2.11	0.51
1:A:269:ASP:O	1:A:273:ILE:HB	2.10	0.51
1:J:146:HIS:HD2	1:J:176:ARG:NH2	2.09	0.51
1:C:87:GLU:HG3	1:C:88:VAL:N	2.24	0.51
1:B:242:LEU:HB2	1:B:251:ILE:O	2.10	0.51
1:K:251:ILE:CG2	1:K:255:HIS:CG	2.94	0.51
1:G:155:ARG:HE	1:G:250:ILE:HD12	1.76	0.51
1:C:357:GLY:HA2	1:C:358:ASN:CB	2.29	0.51
1:H:100:ILE:HD11	1:H:144:SER:CA	2.40	0.51
1:H:146:HIS:HD2	1:H:176:ARG:NH2	2.09	0.51
1:K:160:LYS:HG2	1:K:174:LEU:HD22	1.92	0.51
1:C:242:LEU:HD12	1:C:251:ILE:O	2.10	0.51
1:K:75:LEU:CD2	1:K:251:ILE:CD1	2.86	0.51
1:L:251:ILE:CG2	1:L:255:HIS:CG	2.94	0.51
1:J:155:ARG:HE	1:J:250:ILE:HD12	1.76	0.51
1:J:251:ILE:CG2	1:J:255:HIS:CG	2.94	0.51
1:A:261:ALA:HA	1:A:369:LEU:HD12	1.91	0.51
1:B:238:ALA:HA	1:B:416:GLU:OE1	2.11	0.51
1:G:169:GLU:N	1:G:170:GLY:CA	2.73	0.51
1:L:169:GLU:N	1:L:170:GLY:CA	2.74	0.51
1:K:146:HIS:HD2	1:K:176:ARG:NH2	2.09	0.51
1:B:251:ILE:CG2	1:B:255:HIS:CG	2.94	0.51
1:G:251:ILE:CG2	1:G:255:HIS:CG	2.94	0.51
1:D:261:ALA:HA	1:D:369:LEU:HD12	1.91	0.51
1:C:261:ALA:HA	1:C:369:LEU:HD12	1.91	0.51
1:I:326:HIS:O	1:I:327:ASN:HB2	2.11	0.51
1:K:326:HIS:O	1:K:327:ASN:HB2	2.11	0.51
1:C:441:ILE:HB	1:C:444:ILE:HG12	1.91	0.51
1:F:100:ILE:HD11	1:F:144:SER:CA	2.40	0.51
1:C:380:ILE:O	1:C:380:ILE:HG22	2.09	0.51
1:F:482:SER:HB2	1:G:501:GLU:OE1	2.10	0.51
1:C:238:ALA:HA	1:C:416:GLU:OE1	2.11	0.51
1:K:160:LYS:NZ	1:K:234:ALA:HB1	2.26	0.51
1:D:259:LYS:HZ3	1:F:316:ALA:CA	2.18	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:155:ARG:HE	1:D:250:ILE:HD12	1.76	0.51
1:K:155:ARG:HE	1:K:250:ILE:HD12	1.76	0.51
1:A:100:ILE:HD11	1:A:144:SER:CA	2.40	0.51
1:G:100:ILE:HD11	1:G:144:SER:CA	2.40	0.51
1:A:238:ALA:HA	1:A:416:GLU:OE1	2.11	0.51
1:L:95:ILE:HG23	1:L:407:ILE:HD11	1.93	0.51
1:B:160:LYS:HZ3	1:B:424:THR:HG21	1.75	0.50
1:I:160:LYS:NZ	1:I:234:ALA:HB1	2.26	0.50
1:E:251:ILE:CG2	1:E:255:HIS:CG	2.94	0.50
1:J:326:HIS:O	1:J:327:ASN:HB2	2.11	0.50
1:D:326:HIS:O	1:D:327:ASN:HB2	2.11	0.50
1:G:238:ALA:HA	1:G:416:GLU:OE1	2.11	0.50
1:D:238:ALA:HA	1:D:416:GLU:OE1	2.11	0.50
1:G:146:HIS:HD2	1:G:176:ARG:NH2	2.09	0.50
1:B:146:HIS:HD2	1:B:176:ARG:NH2	2.09	0.50
1:C:160:LYS:HG2	1:C:174:LEU:HD22	1.92	0.50
1:B:75:LEU:CD2	1:B:251:ILE:CD1	2.86	0.50
1:H:155:ARG:HE	1:H:250:ILE:HD12	1.76	0.50
1:B:326:HIS:O	1:B:327:ASN:HB2	2.11	0.50
1:I:238:ALA:HA	1:I:416:GLU:OE1	2.11	0.50
1:F:380:ILE:HG22	1:F:380:ILE:O	2.09	0.50
1:L:160:LYS:HG2	1:L:174:LEU:HD22	1.92	0.50
1:L:146:HIS:HD2	1:L:176:ARG:NH2	2.09	0.50
1:A:251:ILE:CG2	1:A:255:HIS:CG	2.94	0.50
1:F:251:ILE:CG2	1:F:255:HIS:CG	2.94	0.50
1:G:326:HIS:O	1:G:327:ASN:HB2	2.11	0.50
1:D:292:MET:HG3	1:D:297:ALA:HB2	1.94	0.50
1:E:292:MET:HG3	1:E:297:ALA:HB2	1.94	0.50
1:F:146:HIS:HD2	1:F:176:ARG:NH2	2.09	0.50
1:C:146:HIS:HD2	1:C:176:ARG:NH2	2.09	0.50
1:J:168:LYS:HG2	1:J:428:LEU:O	2.10	0.50
1:I:155:ARG:HE	1:I:250:ILE:HD12	1.76	0.50
1:K:279:ALA:CB	1:K:280:PRO:CD	2.85	0.50
1:J:315:ASP:HA	1:K:327:ASN:CB	2.39	0.50
1:C:326:HIS:O	1:C:327:ASN:HB2	2.11	0.50
1:B:100:ILE:HG13	1:B:100:ILE:O	2.12	0.50
1:A:95:ILE:HG23	1:A:407:ILE:HD11	1.93	0.50
1:K:95:ILE:HG23	1:K:407:ILE:HD11	1.93	0.50
1:E:160:LYS:NZ	1:E:234:ALA:HB1	2.26	0.50
1:B:169:GLU:N	1:B:170:GLY:CA	2.73	0.50
1:D:259:LYS:HZ1	1:F:316:ALA:HA	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:259:LYS:NZ	1:G:316:ALA:HA	2.27	0.50
1:H:315:ASP:HA	1:I:327:ASN:CB	2.39	0.50
1:B:315:ASP:HA	1:C:327:ASN:CB	2.39	0.50
1:F:326:HIS:O	1:F:327:ASN:HB2	2.11	0.50
1:D:100:ILE:HG13	1:D:100:ILE:O	2.12	0.50
1:F:100:ILE:O	1:F:100:ILE:HG13	2.12	0.50
1:C:292:MET:HG3	1:C:297:ALA:HB2	1.94	0.50
1:L:238:ALA:HA	1:L:416:GLU:OE1	2.11	0.50
1:F:292:MET:HG3	1:F:297:ALA:HB2	1.94	0.50
1:A:160:LYS:NZ	1:A:234:ALA:HB1	2.26	0.50
1:E:169:GLU:N	1:E:170:GLY:CA	2.73	0.50
1:E:146:HIS:HD2	1:E:176:ARG:NH2	2.09	0.50
1:B:160:LYS:HG2	1:B:174:LEU:HD22	1.92	0.50
1:D:169:GLU:N	1:D:170:GLY:CA	2.73	0.50
1:C:169:GLU:N	1:C:170:GLY:CA	2.74	0.50
1:A:259:LYS:NZ	1:C:316:ALA:HA	2.27	0.50
1:L:155:ARG:HE	1:L:250:ILE:HD12	1.76	0.50
1:I:315:ASP:HA	1:J:327:ASN:CB	2.39	0.50
1:G:292:MET:HG3	1:G:297:ALA:HB2	1.94	0.50
1:E:238:ALA:HA	1:E:416:GLU:OE1	2.11	0.50
1:F:160:LYS:NZ	1:F:234:ALA:HB1	2.26	0.50
1:A:160:LYS:HG2	1:A:174:LEU:HD22	1.92	0.50
1:G:243:VAL:O	1:G:244:ASP:HB3	2.12	0.50
1:I:243:VAL:O	1:I:244:ASP:HB3	2.12	0.50
1:I:279:ALA:CB	1:I:280:PRO:CD	2.85	0.50
1:E:326:HIS:O	1:E:327:ASN:HB2	2.11	0.50
1:L:100:ILE:O	1:L:100:ILE:HG13	2.12	0.50
1:B:292:MET:HG3	1:B:297:ALA:HB2	1.94	0.50
1:A:169:GLU:N	1:A:170:GLY:CA	2.73	0.50
1:A:146:HIS:HD2	1:A:176:ARG:NH2	2.09	0.50
1:D:160:LYS:NZ	1:D:234:ALA:HB1	2.26	0.50
1:D:75:LEU:CD2	1:D:251:ILE:CD1	2.86	0.50
1:E:75:LEU:CD2	1:E:251:ILE:CD1	2.86	0.50
1:H:75:LEU:CD2	1:H:251:ILE:CD1	2.86	0.50
1:J:279:ALA:CB	1:J:280:PRO:CD	2.85	0.50
1:H:326:HIS:O	1:H:327:ASN:HB2	2.11	0.50
1:E:243:VAL:O	1:E:244:ASP:HB3	2.12	0.50
1:K:243:VAL:O	1:K:244:ASP:HB3	2.12	0.50
1:H:100:ILE:HG13	1:H:100:ILE:O	2.12	0.50
1:G:160:LYS:NZ	1:G:234:ALA:HB1	2.26	0.49
1:H:160:LYS:NZ	1:H:234:ALA:HB1	2.26	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:160:LYS:NZ	1:J:234:ALA:HB1	2.26	0.49
1:B:316:ALA:HA	1:L:259:LYS:NZ	2.27	0.49
1:D:259:LYS:NZ	1:F:316:ALA:HA	2.27	0.49
1:G:259:LYS:NZ	1:I:316:ALA:HA	2.27	0.49
1:C:155:ARG:HE	1:C:250:ILE:HD12	1.76	0.49
1:I:100:ILE:O	1:I:100:ILE:HG13	2.12	0.49
1:I:281:ASP:O	1:J:331:THR:OG1	2.23	0.49
1:J:238:ALA:HA	1:J:416:GLU:OE1	2.11	0.49
1:F:238:ALA:HA	1:F:416:GLU:OE1	2.11	0.49
1:A:177:LEU:HB3	1:A:208:TYR:HE2	1.78	0.49
1:F:169:GLU:N	1:F:170:GLY:CA	2.74	0.49
1:J:160:LYS:HZ3	1:J:234:ALA:HB1	1.77	0.49
1:K:162:ILE:HG23	1:K:171:ILE:HG13	1.68	0.49
1:A:243:VAL:O	1:A:244:ASP:HB3	2.12	0.49
1:A:292:MET:HG3	1:A:297:ALA:HB2	1.94	0.49
1:I:177:LEU:HB3	1:I:208:TYR:HE2	1.78	0.49
1:K:238:ALA:HA	1:K:416:GLU:OE1	2.11	0.49
1:A:316:ALA:HA	1:K:259:LYS:NZ	2.27	0.49
1:E:149:ARG:O	1:E:153:ASP:CB	2.61	0.49
1:L:149:ARG:O	1:L:153:ASP:CB	2.61	0.49
1:G:149:ARG:O	1:G:153:ASP:CB	2.61	0.49
1:K:315:ASP:HA	1:L:327:ASN:CB	2.39	0.49
1:A:326:HIS:O	1:A:327:ASN:HB2	2.11	0.49
1:F:95:ILE:HG23	1:F:407:ILE:HD11	1.93	0.49
1:I:95:ILE:HG23	1:I:407:ILE:HD11	1.93	0.49
1:C:333:ASP:OD2	1:C:335:TRP:NE1	2.46	0.49
1:H:177:LEU:HB3	1:H:208:TYR:HE2	1.77	0.49
1:E:95:ILE:HG23	1:E:407:ILE:HD11	1.93	0.49
1:H:292:MET:HG3	1:H:297:ALA:HB2	1.94	0.49
1:L:160:LYS:NZ	1:L:234:ALA:HB1	2.26	0.49
1:C:160:LYS:NZ	1:C:234:ALA:HB1	2.26	0.49
1:B:243:VAL:O	1:B:244:ASP:HB3	2.12	0.49
1:K:100:ILE:HG13	1:K:100:ILE:O	2.12	0.49
1:K:113:LEU:HD12	1:K:123:LYS:O	2.13	0.49
1:H:95:ILE:HG23	1:H:407:ILE:HD11	1.93	0.49
1:H:238:ALA:HA	1:H:416:GLU:OE1	2.11	0.49
1:D:333:ASP:OD2	1:D:335:TRP:NE1	2.46	0.49
1:D:146:HIS:HD2	1:D:176:ARG:NH2	2.09	0.49
1:C:259:LYS:NZ	1:E:316:ALA:HA	2.27	0.49
1:B:149:ARG:O	1:B:153:ASP:CB	2.61	0.49
1:L:243:VAL:O	1:L:244:ASP:HB3	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:251:ILE:HG21	1:I:255:HIS:CG	2.48	0.49
1:D:357:GLY:HA2	1:D:358:ASN:CB	2.29	0.49
1:G:100:ILE:HG13	1:G:100:ILE:O	2.12	0.49
1:E:113:LEU:HD12	1:E:123:LYS:O	2.13	0.49
1:B:333:ASP:OD2	1:B:335:TRP:NE1	2.46	0.49
1:L:292:MET:HG3	1:L:297:ALA:HB2	1.94	0.49
1:B:177:LEU:HB3	1:B:208:TYR:HE2	1.77	0.49
1:G:95:ILE:HG23	1:G:407:ILE:HD11	1.93	0.49
1:D:251:ILE:HG21	1:D:255:HIS:CG	2.48	0.49
1:J:243:VAL:O	1:J:244:ASP:HB3	2.12	0.49
1:L:251:ILE:HG21	1:L:255:HIS:CG	2.48	0.49
1:H:243:VAL:O	1:H:244:ASP:HB3	2.12	0.49
1:E:100:ILE:O	1:E:100:ILE:HG13	2.12	0.49
1:J:113:LEU:HD12	1:J:123:LYS:O	2.13	0.49
1:E:177:LEU:HB3	1:E:208:TYR:HE2	1.77	0.49
1:F:432:ILE:HG23	1:F:436:GLU:HB2	1.95	0.49
1:L:177:LEU:HB3	1:L:208:TYR:HE2	1.78	0.49
1:J:259:LYS:NZ	1:L:316:ALA:HA	2.27	0.49
1:C:149:ARG:O	1:C:153:ASP:CB	2.61	0.49
1:F:251:ILE:HG21	1:F:255:HIS:CG	2.48	0.49
1:I:149:ARG:O	1:I:153:ASP:CB	2.61	0.49
1:G:251:ILE:HG21	1:G:255:HIS:CG	2.48	0.49
1:D:441:ILE:HD12	1:D:442:ASN:C	2.32	0.49
1:G:432:ILE:HG23	1:G:436:GLU:HB2	1.95	0.49
1:K:292:MET:HG3	1:K:297:ALA:HB2	1.94	0.49
1:E:333:ASP:OD2	1:E:335:TRP:NE1	2.46	0.49
1:F:160:LYS:HZ3	1:F:424:THR:HG21	1.77	0.49
1:A:316:ALA:HA	1:K:259:LYS:HZ3	1.77	0.49
1:D:243:VAL:O	1:D:244:ASP:HB3	2.12	0.49
1:B:441:ILE:HD12	1:B:442:ASN:C	2.32	0.49
1:C:441:ILE:HD12	1:C:442:ASN:C	2.32	0.49
1:A:441:ILE:HD12	1:A:442:ASN:C	2.32	0.49
1:J:100:ILE:O	1:J:100:ILE:HG13	2.12	0.49
1:H:262:ASN:HD22	1:J:320:LYS:CG	2.26	0.49
1:B:95:ILE:HG23	1:B:407:ILE:HD11	1.93	0.49
1:G:177:LEU:HB3	1:G:208:TYR:HE2	1.78	0.49
1:A:149:ARG:O	1:A:153:ASP:CB	2.61	0.49
1:F:149:ARG:O	1:F:153:ASP:CB	2.61	0.49
1:J:251:ILE:HG21	1:J:255:HIS:CG	2.48	0.49
1:C:100:ILE:HG13	1:C:100:ILE:O	2.12	0.49
1:G:262:ASN:HD22	1:I:320:LYS:CG	2.26	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:292:MET:HG3	1:J:297:ALA:HB2	1.94	0.49
1:A:333:ASP:OD2	1:A:335:TRP:NE1	2.46	0.49
1:F:179:PRO:O	1:F:180:ARG:HB2	2.13	0.49
1:J:177:LEU:HB3	1:J:208:TYR:HE2	1.78	0.49
1:J:95:ILE:HG23	1:J:407:ILE:HD11	1.93	0.49
1:A:251:ILE:HG21	1:A:255:HIS:CG	2.48	0.49
1:C:75:LEU:CD2	1:C:251:ILE:CD1	2.86	0.49
1:K:149:ARG:O	1:K:153:ASP:CB	2.61	0.49
1:E:441:ILE:HD12	1:E:442:ASN:C	2.32	0.49
1:I:262:ASN:HD22	1:K:320:LYS:CG	2.26	0.49
1:D:177:LEU:HB3	1:D:208:TYR:HE2	1.78	0.49
1:C:95:ILE:HG23	1:C:407:ILE:HD11	1.93	0.49
1:H:432:ILE:HG23	1:H:436:GLU:HB2	1.95	0.49
1:G:377:LEU:HD13	1:G:377:LEU:HA	1.62	0.49
1:D:95:ILE:HG23	1:D:407:ILE:HD11	1.93	0.49
1:I:432:ILE:HG23	1:I:436:GLU:HB2	1.95	0.49
1:D:179:PRO:O	1:D:180:ARG:HB2	2.13	0.49
1:B:251:ILE:HG21	1:B:255:HIS:CG	2.48	0.48
1:C:251:ILE:HG21	1:C:255:HIS:CG	2.48	0.48
1:K:251:ILE:HG21	1:K:255:HIS:CG	2.48	0.48
1:F:243:VAL:O	1:F:244:ASP:HB3	2.12	0.48
1:L:441:ILE:HD12	1:L:442:ASN:C	2.32	0.48
1:A:100:ILE:O	1:A:100:ILE:HG13	2.12	0.48
1:F:262:ASN:HD22	1:H:320:LYS:CG	2.26	0.48
1:L:113:LEU:HD12	1:L:123:LYS:O	2.12	0.48
1:H:179:PRO:O	1:H:180:ARG:HB2	2.13	0.48
1:E:432:ILE:HG23	1:E:436:GLU:HB2	1.95	0.48
1:J:432:ILE:HG23	1:J:436:GLU:HB2	1.95	0.48
1:I:292:MET:HG3	1:I:297:ALA:HB2	1.94	0.48
1:D:149:ARG:O	1:D:153:ASP:CB	2.61	0.48
1:J:149:ARG:O	1:J:153:ASP:CB	2.61	0.48
1:F:441:ILE:HD12	1:F:442:ASN:C	2.32	0.48
1:J:262:ASN:HD22	1:L:320:LYS:CG	2.26	0.48
1:A:113:LEU:HD12	1:A:123:LYS:O	2.13	0.48
1:C:113:LEU:HD12	1:C:123:LYS:O	2.12	0.48
1:F:177:LEU:HB3	1:F:208:TYR:HE2	1.78	0.48
1:F:333:ASP:OD2	1:F:335:TRP:NE1	2.46	0.48
1:K:333:ASP:OD2	1:K:335:TRP:NE1	2.46	0.48
1:C:76:ILE:HG23	1:C:153:ASP:O	2.14	0.48
1:J:75:LEU:CD2	1:J:251:ILE:CD1	2.86	0.48
1:J:76:ILE:HG23	1:J:153:ASP:O	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:441:ILE:HD12	1:G:442:ASN:C	2.32	0.48
1:C:177:LEU:HB3	1:C:208:TYR:HE2	1.78	0.48
1:B:160:LYS:NZ	1:B:234:ALA:HB1	2.26	0.48
1:B:76:ILE:HG23	1:B:153:ASP:O	2.14	0.48
1:C:243:VAL:O	1:C:244:ASP:HB3	2.12	0.48
1:H:251:ILE:HG21	1:H:255:HIS:CG	2.48	0.48
1:I:75:LEU:CD2	1:I:251:ILE:CD1	2.86	0.48
1:J:441:ILE:HD12	1:J:442:ASN:C	2.32	0.48
1:E:262:ASN:HD22	1:G:320:LYS:CG	2.26	0.48
1:D:113:LEU:HD12	1:D:123:LYS:O	2.13	0.48
1:H:113:LEU:HD12	1:H:123:LYS:O	2.13	0.48
1:A:508:GLU:CD	1:L:483:HIS:HD2	2.17	0.48
1:C:483:HIS:HD2	1:D:508:GLU:CD	2.17	0.48
1:K:483:HIS:HD2	1:L:508:GLU:CD	2.17	0.48
1:H:333:ASP:OD2	1:H:335:TRP:NE1	2.46	0.48
1:K:432:ILE:HG23	1:K:436:GLU:HB2	1.95	0.48
1:A:179:PRO:O	1:A:180:ARG:HB2	2.13	0.48
1:J:333:ASP:OD2	1:J:335:TRP:NE1	2.46	0.48
1:C:179:PRO:O	1:C:180:ARG:HB2	2.13	0.48
1:A:163:ASP:H	1:A:164:PRO:HA	1.78	0.48
1:K:86:TYR:O	1:K:87:GLU:CB	2.54	0.48
1:H:79:TYR:OH	1:H:251:ILE:HG23	2.13	0.48
1:G:79:TYR:OH	1:G:251:ILE:HG23	2.13	0.48
1:K:441:ILE:HD12	1:K:442:ASN:C	2.32	0.48
1:H:441:ILE:HD12	1:H:442:ASN:C	2.32	0.48
1:I:441:ILE:HD12	1:I:442:ASN:C	2.32	0.48
1:A:320:LYS:CG	1:K:262:ASN:HD22	2.26	0.48
1:F:113:LEU:HD12	1:F:123:LYS:O	2.12	0.48
1:B:113:LEU:HD12	1:B:123:LYS:O	2.13	0.48
1:D:483:HIS:HD2	1:E:508:GLU:CD	2.17	0.48
1:B:179:PRO:O	1:B:180:ARG:HB2	2.13	0.48
1:L:333:ASP:OD2	1:L:335:TRP:NE1	2.46	0.48
1:L:163:ASP:H	1:L:164:PRO:HA	1.78	0.48
1:E:79:TYR:OH	1:E:251:ILE:HG23	2.13	0.48
1:G:179:PRO:O	1:G:180:ARG:HB2	2.13	0.48
1:D:432:ILE:HG23	1:D:436:GLU:HB2	1.95	0.48
1:B:163:ASP:H	1:B:164:PRO:HA	1.78	0.48
1:H:149:ARG:O	1:H:153:ASP:CB	2.61	0.48
1:A:374:ARG:NH1	1:A:406:PHE:CE1	2.82	0.48
1:J:325:GLN:HA	1:J:326:HIS:HA	1.52	0.48
1:A:325:GLN:HA	1:A:326:HIS:HA	1.52	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:262:ASN:HD22	1:F:320:LYS:CG	2.26	0.48
1:G:113:LEU:HD12	1:G:123:LYS:O	2.13	0.48
1:L:432:ILE:HG23	1:L:436:GLU:HB2	1.95	0.48
1:G:333:ASP:OD2	1:G:335:TRP:NE1	2.46	0.48
1:J:179:PRO:O	1:J:180:ARG:HB2	2.13	0.48
1:C:160:LYS:HZ3	1:C:424:THR:HG21	1.78	0.48
1:K:163:ASP:H	1:K:164:PRO:HA	1.78	0.48
1:D:76:ILE:HG23	1:D:153:ASP:O	2.14	0.48
1:F:79:TYR:OH	1:F:251:ILE:HG23	2.13	0.48
1:K:76:ILE:HG23	1:K:153:ASP:O	2.14	0.48
1:E:251:ILE:HG21	1:E:255:HIS:CG	2.48	0.48
1:I:76:ILE:HG23	1:I:153:ASP:O	2.14	0.48
1:I:79:TYR:OH	1:I:251:ILE:HG23	2.13	0.48
1:I:259:LYS:NZ	1:K:316:ALA:HA	2.27	0.48
1:F:374:ARG:NH1	1:F:406:PHE:CE1	2.82	0.48
1:I:113:LEU:HD12	1:I:123:LYS:O	2.12	0.48
1:G:265:LYS:C	1:G:267:LEU:H	2.17	0.48
1:J:382:GLN:HA	1:J:382:GLN:NE2	2.29	0.48
1:K:382:GLN:HA	1:K:382:GLN:NE2	2.29	0.48
1:E:483:HIS:HD2	1:F:508:GLU:CD	2.17	0.48
1:G:483:HIS:HD2	1:H:508:GLU:CD	2.17	0.48
1:H:483:HIS:HD2	1:I:508:GLU:CD	2.17	0.48
1:G:374:ARG:NH1	1:G:406:PHE:CE1	2.82	0.48
1:C:315:ASP:HA	1:D:327:ASN:CB	2.39	0.48
1:E:247:GLY:HA2	1:E:248:LYS:HA	1.65	0.48
1:B:320:LYS:CG	1:L:262:ASN:HD22	2.26	0.48
1:C:262:ASN:HD22	1:E:320:LYS:CG	2.26	0.48
1:B:265:LYS:C	1:B:267:LEU:H	2.17	0.48
1:L:382:GLN:NE2	1:L:382:GLN:HA	2.29	0.48
1:L:179:PRO:O	1:L:180:ARG:HB2	2.13	0.48
1:K:177:LEU:HB3	1:K:208:TYR:HE2	1.77	0.48
1:I:179:PRO:O	1:I:180:ARG:HB2	2.13	0.48
1:G:163:ASP:H	1:G:164:PRO:HA	1.78	0.48
1:J:163:ASP:H	1:J:164:PRO:HA	1.78	0.48
1:A:76:ILE:HG23	1:A:153:ASP:O	2.14	0.48
1:C:149:ARG:HD3	1:C:149:ARG:HA	1.54	0.48
1:F:76:ILE:HG23	1:F:153:ASP:O	2.14	0.48
1:H:76:ILE:HG23	1:H:153:ASP:O	2.14	0.48
1:J:79:TYR:OH	1:J:251:ILE:HG23	2.13	0.48
1:B:96:VAL:HG11	1:B:148:ARG:HB2	1.96	0.48
1:A:262:ASN:HD22	1:C:320:LYS:CG	2.26	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:262:ASN:HD22	1:D:320:LYS:CG	2.26	0.48
1:D:265:LYS:C	1:D:267:LEU:H	2.17	0.48
1:C:265:LYS:C	1:C:267:LEU:H	2.18	0.48
1:B:491:LEU:HD12	1:B:491:LEU:HA	1.68	0.48
1:L:160:LYS:HZ3	1:L:424:THR:HG21	1.77	0.47
1:C:163:ASP:H	1:C:164:PRO:HA	1.78	0.47
1:D:79:TYR:OH	1:D:251:ILE:HG23	2.13	0.47
1:L:79:TYR:OH	1:L:251:ILE:HG23	2.13	0.47
1:G:76:ILE:HG23	1:G:153:ASP:O	2.14	0.47
1:E:265:LYS:C	1:E:267:LEU:H	2.17	0.47
1:B:483:HIS:HD2	1:C:508:GLU:CD	2.17	0.47
1:A:483:HIS:HD2	1:B:508:GLU:CD	2.17	0.47
1:L:273:ILE:HA	1:L:273:ILE:HD12	1.57	0.47
1:F:483:HIS:HD2	1:G:508:GLU:CD	2.17	0.47
1:C:432:ILE:HG23	1:C:436:GLU:HB2	1.95	0.47
1:F:301:MET:O	1:F:305:MET:HG2	2.14	0.47
1:A:491:LEU:HA	1:A:491:LEU:HD12	1.68	0.47
1:F:160:LYS:HZ3	1:F:234:ALA:HB1	1.79	0.47
1:C:160:LYS:HZ3	1:C:234:ALA:HB1	1.78	0.47
1:A:251:ILE:CG2	1:A:252:GLY:N	2.77	0.47
1:A:79:TYR:OH	1:A:251:ILE:HG23	2.13	0.47
1:L:149:ARG:HD3	1:L:149:ARG:HA	1.54	0.47
1:E:357:GLY:HA2	1:E:358:ASN:CB	2.29	0.47
1:K:96:VAL:HG11	1:K:148:ARG:HB2	1.96	0.47
1:H:96:VAL:HG11	1:H:148:ARG:HB2	1.96	0.47
1:H:265:LYS:C	1:H:267:LEU:H	2.17	0.47
1:I:382:GLN:HA	1:I:382:GLN:NE2	2.29	0.47
1:I:483:HIS:HD2	1:J:508:GLU:CD	2.17	0.47
1:A:382:GLN:HA	1:A:382:GLN:NE2	2.29	0.47
1:G:301:MET:O	1:G:305:MET:HG2	2.14	0.47
1:E:284:VAL:HG13	1:F:334:TYR:HB2	1.96	0.47
1:A:432:ILE:HG23	1:A:436:GLU:HB2	1.95	0.47
1:G:284:VAL:HG13	1:H:334:TYR:HB2	1.96	0.47
1:E:301:MET:O	1:E:305:MET:HG2	2.15	0.47
1:F:163:ASP:H	1:F:164:PRO:HA	1.78	0.47
1:H:163:ASP:H	1:H:164:PRO:HA	1.78	0.47
1:I:163:ASP:H	1:I:164:PRO:HA	1.78	0.47
1:E:76:ILE:HG23	1:E:153:ASP:O	2.14	0.47
1:H:374:ARG:NH1	1:H:406:PHE:CE1	2.82	0.47
1:K:357:GLY:CA	1:K:358:ASN:HB2	2.33	0.47
1:E:96:VAL:HG11	1:E:148:ARG:HB2	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:382:GLN:HA	1:B:382:GLN:NE2	2.29	0.47
1:D:284:VAL:HG13	1:E:334:TYR:HB2	1.96	0.47
1:A:159:HIS:CE1	1:A:230:ILE:HD13	2.49	0.47
1:E:179:PRO:O	1:E:180:ARG:HB2	2.13	0.47
1:L:160:LYS:HZ3	1:L:234:ALA:HB1	1.79	0.47
1:A:75:LEU:CD2	1:A:251:ILE:CD1	2.86	0.47
1:C:79:TYR:OH	1:C:251:ILE:HG23	2.13	0.47
1:K:251:ILE:CG2	1:K:252:GLY:N	2.77	0.47
1:E:251:ILE:CG2	1:E:252:GLY:N	2.77	0.47
1:H:251:ILE:CG2	1:H:252:GLY:N	2.77	0.47
1:C:279:ALA:H	1:C:280:PRO:HD2	1.80	0.47
1:D:247:GLY:HA2	1:D:248:LYS:HA	1.65	0.47
1:A:273:ILE:HA	1:A:273:ILE:HD12	1.57	0.47
1:H:301:MET:O	1:H:305:MET:HG2	2.15	0.47
1:B:432:ILE:HG23	1:B:436:GLU:HB2	1.95	0.47
1:I:333:ASP:OD2	1:I:335:TRP:NE1	2.46	0.47
1:E:491:LEU:HD12	1:E:491:LEU:HA	1.68	0.47
1:K:284:VAL:HG13	1:L:334:TYR:HB2	1.96	0.47
1:B:149:ARG:CD	1:B:153:ASP:CG	2.68	0.47
1:I:251:ILE:CG2	1:I:252:GLY:N	2.77	0.47
1:B:279:ALA:H	1:B:280:PRO:HD2	1.80	0.47
1:J:96:VAL:HG11	1:J:148:ARG:HB2	1.96	0.47
1:F:265:LYS:C	1:F:267:LEU:H	2.18	0.47
1:K:265:LYS:C	1:K:267:LEU:H	2.17	0.47
1:K:482:SER:OG	1:K:483:HIS:N	2.48	0.47
1:G:482:SER:OG	1:G:483:HIS:N	2.48	0.47
1:F:159:HIS:CE1	1:F:230:ILE:HD13	2.49	0.47
1:K:179:PRO:O	1:K:180:ARG:HB2	2.13	0.47
1:L:159:HIS:CE1	1:L:230:ILE:HD13	2.49	0.47
1:I:83:MET:HG3	1:I:152:VAL:HG11	1.97	0.47
1:D:301:MET:O	1:D:305:MET:HG2	2.14	0.47
1:E:159:HIS:CE1	1:E:230:ILE:HD13	2.49	0.47
1:H:284:VAL:HG13	1:I:334:TYR:HB2	1.96	0.47
1:J:83:MET:HG3	1:J:152:VAL:HG11	1.97	0.47
1:H:281:ASP:O	1:I:331:THR:OG1	2.23	0.47
1:D:163:ASP:H	1:D:164:PRO:HA	1.78	0.47
1:D:254:LEU:HA	1:D:254:LEU:HD12	1.81	0.47
1:I:374:ARG:NH1	1:I:406:PHE:CE1	2.82	0.47
1:D:279:ALA:H	1:D:280:PRO:HD2	1.80	0.47
1:J:94:GLU:HG2	1:J:375:VAL:CG2	2.45	0.47
1:J:483:HIS:HD2	1:K:508:GLU:CD	2.17	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:382:GLN:NE2	1:E:382:GLN:HA	2.29	0.47
1:C:382:GLN:HA	1:C:382:GLN:NE2	2.29	0.47
1:G:159:HIS:CE1	1:G:230:ILE:HD13	2.49	0.47
1:H:83:MET:HG3	1:H:152:VAL:HG11	1.97	0.47
1:K:159:HIS:CE1	1:K:230:ILE:HD13	2.49	0.47
1:F:254:LEU:HA	1:F:254:LEU:HD12	1.80	0.47
1:B:251:ILE:CG2	1:B:252:GLY:N	2.77	0.47
1:B:79:TYR:OH	1:B:251:ILE:HG23	2.13	0.47
1:D:251:ILE:CG2	1:D:252:GLY:N	2.77	0.47
1:F:251:ILE:CG2	1:F:252:GLY:N	2.77	0.47
1:K:79:TYR:OH	1:K:251:ILE:HG23	2.13	0.47
1:H:149:ARG:O	1:H:153:ASP:HB2	2.15	0.47
1:G:149:ARG:O	1:G:153:ASP:HB2	2.15	0.47
1:A:279:ALA:H	1:A:280:PRO:HD2	1.80	0.47
1:L:279:ALA:H	1:L:280:PRO:HD2	1.80	0.47
1:G:325:GLN:HA	1:G:326:HIS:HA	1.52	0.47
1:C:96:VAL:HG11	1:C:148:ARG:HB2	1.96	0.47
1:G:96:VAL:HG11	1:G:148:ARG:HB2	1.96	0.47
1:K:94:GLU:HG2	1:K:375:VAL:CG2	2.45	0.47
1:L:482:SER:OG	1:L:483:HIS:N	2.48	0.47
1:E:273:ILE:HA	1:E:273:ILE:HD12	1.57	0.47
1:D:382:GLN:NE2	1:D:382:GLN:HA	2.29	0.47
1:C:73:SER:HA	1:C:180:ARG:HG2	1.97	0.47
1:J:284:VAL:HG13	1:K:334:TYR:HB2	1.96	0.47
1:D:377:LEU:HD13	1:D:377:LEU:HA	1.62	0.47
1:A:284:VAL:HG13	1:B:334:TYR:HB2	1.96	0.47
1:G:83:MET:HG3	1:G:152:VAL:HG11	1.97	0.47
1:A:334:TYR:HB2	1:L:284:VAL:HG13	1.96	0.47
1:I:301:MET:O	1:I:305:MET:HG2	2.14	0.47
1:B:159:HIS:CE1	1:B:230:ILE:HD13	2.49	0.47
1:D:216:ALA:O	1:D:217:CYS:O	2.33	0.47
1:G:251:ILE:CG2	1:G:252:GLY:N	2.77	0.47
1:J:374:ARG:NH1	1:J:406:PHE:CE1	2.82	0.47
1:A:96:VAL:HG11	1:A:148:ARG:HB2	1.96	0.47
1:H:382:GLN:HA	1:H:382:GLN:NE2	2.29	0.47
1:F:382:GLN:NE2	1:F:382:GLN:HA	2.29	0.47
1:C:301:MET:O	1:C:305:MET:HG2	2.14	0.47
1:B:285:TRP:CZ3	1:B:336:LEU:HD21	2.50	0.47
1:B:284:VAL:HG13	1:C:334:TYR:HB2	1.96	0.47
1:C:285:TRP:CZ3	1:C:336:LEU:HD21	2.50	0.47
1:D:159:HIS:CE1	1:D:230:ILE:HD13	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:377:LEU:HA	1:H:377:LEU:HD13	1.62	0.47
1:F:216:ALA:O	1:F:217:CYS:O	2.33	0.47
1:E:163:ASP:H	1:E:164:PRO:HA	1.78	0.47
1:K:216:ALA:O	1:K:217:CYS:O	2.33	0.47
1:K:149:ARG:O	1:K:153:ASP:HB2	2.15	0.47
1:L:149:ARG:O	1:L:153:ASP:HB2	2.15	0.47
1:D:357:GLY:CA	1:D:358:ASN:HB2	2.33	0.47
1:E:279:ALA:H	1:E:280:PRO:HD2	1.80	0.47
1:D:96:VAL:HG11	1:D:148:ARG:HB2	1.96	0.47
1:L:94:GLU:HG2	1:L:375:VAL:CG2	2.45	0.47
1:J:265:LYS:C	1:J:267:LEU:H	2.17	0.47
1:J:73:SER:HA	1:J:180:ARG:HG2	1.97	0.47
1:L:73:SER:HA	1:L:180:ARG:HG2	1.97	0.47
1:J:285:TRP:CZ3	1:J:336:LEU:HD21	2.50	0.47
1:D:285:TRP:CZ3	1:D:336:LEU:HD21	2.50	0.47
1:A:301:MET:O	1:A:305:MET:HG2	2.14	0.47
1:I:285:TRP:CZ3	1:I:336:LEU:HD21	2.50	0.47
1:K:301:MET:O	1:K:305:MET:HG2	2.15	0.47
1:J:159:HIS:CE1	1:J:230:ILE:HD13	2.49	0.47
1:B:216:ALA:O	1:B:217:CYS:O	2.33	0.47
1:C:251:ILE:CG2	1:C:252:GLY:N	2.77	0.47
1:L:76:ILE:HG23	1:L:153:ASP:O	2.14	0.47
1:J:251:ILE:CG2	1:J:252:GLY:N	2.77	0.47
1:I:94:GLU:HG2	1:I:375:VAL:CG2	2.45	0.47
1:L:265:LYS:C	1:L:267:LEU:H	2.18	0.47
1:E:482:SER:OG	1:E:483:HIS:N	2.48	0.47
1:A:482:SER:OG	1:A:483:HIS:N	2.48	0.47
1:A:73:SER:HA	1:A:180:ARG:HG2	1.97	0.47
1:A:285:TRP:CZ3	1:A:336:LEU:HD21	2.50	0.47
1:K:83:MET:HG3	1:K:152:VAL:HG11	1.97	0.47
1:I:216:ALA:O	1:I:217:CYS:O	2.33	0.46
1:L:96:VAL:HG11	1:L:148:ARG:HB2	1.96	0.46
1:F:73:SER:HA	1:F:180:ARG:HG2	1.97	0.46
1:J:301:MET:O	1:J:305:MET:HG2	2.14	0.46
1:H:216:ALA:O	1:H:217:CYS:O	2.33	0.46
1:J:160:LYS:HZ3	1:J:424:THR:HG21	1.79	0.46
1:L:251:ILE:CG2	1:L:252:GLY:N	2.77	0.46
1:D:482:SER:OG	1:D:483:HIS:N	2.48	0.46
1:H:482:SER:OG	1:H:483:HIS:N	2.48	0.46
1:D:73:SER:HA	1:D:180:ARG:HG2	1.97	0.46
1:I:73:SER:HA	1:I:180:ARG:HG2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:301:MET:O	1:B:305:MET:HG2	2.15	0.46
1:E:285:TRP:CZ3	1:E:336:LEU:HD21	2.50	0.46
1:H:159:HIS:CE1	1:H:230:ILE:HD13	2.49	0.46
1:F:284:VAL:HG13	1:G:334:TYR:HB2	1.96	0.46
1:F:83:MET:HG3	1:F:152:VAL:HG11	1.97	0.46
1:K:285:TRP:CZ3	1:K:336:LEU:HD21	2.50	0.46
1:H:162:ILE:HA	1:H:163:ASP:HA	1.41	0.46
1:B:160:LYS:HZ3	1:B:234:ALA:HB1	1.81	0.46
1:L:216:ALA:O	1:L:217:CYS:O	2.33	0.46
1:A:94:GLU:HG2	1:A:375:VAL:CG2	2.45	0.46
1:F:325:GLN:HA	1:F:326:HIS:HA	1.52	0.46
1:I:96:VAL:HG11	1:I:148:ARG:HB2	1.96	0.46
1:F:96:VAL:HG11	1:F:148:ARG:HB2	1.96	0.46
1:A:265:LYS:C	1:A:267:LEU:H	2.17	0.46
1:C:491:LEU:HD12	1:C:491:LEU:HA	1.68	0.46
1:I:284:VAL:HG13	1:J:334:TYR:HB2	1.96	0.46
1:L:285:TRP:CZ3	1:L:336:LEU:HD21	2.50	0.46
1:C:159:HIS:CE1	1:C:230:ILE:HD13	2.49	0.46
1:L:491:LEU:HD12	1:L:491:LEU:HA	1.68	0.46
1:H:285:TRP:CZ3	1:H:336:LEU:HD21	2.50	0.46
1:J:216:ALA:O	1:J:217:CYS:O	2.33	0.46
1:A:149:ARG:O	1:A:153:ASP:HB2	2.15	0.46
1:F:149:ARG:O	1:F:153:ASP:HB2	2.15	0.46
1:I:149:ARG:O	1:I:153:ASP:HB2	2.15	0.46
1:K:374:ARG:NH1	1:K:406:PHE:CE1	2.82	0.46
1:C:247:GLY:HA2	1:C:248:LYS:HA	1.65	0.46
1:B:482:SER:OG	1:B:483:HIS:N	2.48	0.46
1:G:382:GLN:NE2	1:G:382:GLN:HA	2.29	0.46
1:G:161:ILE:HD11	1:G:175:ARG:HH12	1.80	0.46
1:K:233:ALA:HA	1:K:234:ALA:HA	1.65	0.46
1:K:254:LEU:HA	1:K:254:LEU:HD12	1.80	0.46
1:J:86:TYR:O	1:J:87:GLU:CB	2.54	0.46
1:C:149:ARG:O	1:C:153:ASP:HB2	2.15	0.46
1:C:374:ARG:NH1	1:C:406:PHE:CE1	2.82	0.46
1:C:482:SER:OG	1:C:483:HIS:N	2.48	0.46
1:G:73:SER:HA	1:G:180:ARG:HG2	1.97	0.46
1:F:285:TRP:CZ3	1:F:336:LEU:HD21	2.50	0.46
1:C:284:VAL:HG13	1:D:334:TYR:HB2	1.96	0.46
1:I:159:HIS:CE1	1:I:230:ILE:HD13	2.49	0.46
1:L:83:MET:HG3	1:L:152:VAL:HG11	1.97	0.46
1:F:161:ILE:HD11	1:F:175:ARG:HH12	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:216:ALA:O	1:A:217:CYS:O	2.33	0.46
1:H:161:ILE:HD11	1:H:175:ARG:HH12	1.80	0.46
1:I:169:GLU:N	1:I:170:GLY:HA2	2.31	0.46
1:E:259:LYS:HZ1	1:G:316:ALA:HA	1.81	0.46
1:B:149:ARG:O	1:B:153:ASP:HB2	2.15	0.46
1:D:149:ARG:O	1:D:153:ASP:HB2	2.15	0.46
1:E:149:ARG:O	1:E:153:ASP:HB2	2.15	0.46
1:J:149:ARG:O	1:J:153:ASP:HB2	2.15	0.46
1:A:357:GLY:CA	1:A:358:ASN:HB2	2.33	0.46
1:F:279:ALA:H	1:F:280:PRO:HD2	1.80	0.46
1:D:94:GLU:HG2	1:D:375:VAL:CG2	2.45	0.46
1:C:94:GLU:HG2	1:C:375:VAL:CG2	2.45	0.46
1:E:83:MET:HG3	1:E:152:VAL:HG11	1.97	0.46
1:L:301:MET:O	1:L:305:MET:HG2	2.14	0.46
1:C:216:ALA:O	1:C:217:CYS:O	2.33	0.46
1:C:259:LYS:NZ	1:E:316:ALA:CA	2.73	0.46
1:A:149:ARG:HD3	1:A:149:ARG:HA	1.54	0.46
1:I:325:GLN:HA	1:I:326:HIS:HA	1.52	0.46
1:F:130:PHE:O	1:F:133:VAL:HG12	2.16	0.46
1:H:247:GLY:HA2	1:H:248:LYS:HA	1.65	0.46
1:B:112:ASN:ND2	1:B:447:GLU:OE2	2.49	0.46
1:B:160:LYS:HD2	1:B:236:VAL:HG13	1.98	0.46
1:D:160:LYS:HD2	1:D:236:VAL:HG13	1.98	0.46
1:C:160:LYS:HD2	1:C:236:VAL:HG13	1.98	0.46
1:F:357:GLY:HA2	1:F:358:ASN:CB	2.29	0.46
1:G:130:PHE:O	1:G:133:VAL:HG12	2.16	0.46
1:E:73:SER:HA	1:E:180:ARG:HG2	1.97	0.46
1:C:112:ASN:ND2	1:C:447:GLU:OE2	2.49	0.46
1:G:285:TRP:CZ3	1:G:336:LEU:HD21	2.50	0.46
1:A:83:MET:HG3	1:A:152:VAL:HG11	1.97	0.46
1:E:112:ASN:ND2	1:E:447:GLU:OE2	2.49	0.46
1:H:233:ALA:HA	1:H:234:ALA:HA	1.65	0.46
1:E:160:LYS:HD2	1:E:236:VAL:HG13	1.98	0.46
1:B:161:ILE:HD11	1:B:175:ARG:HH12	1.80	0.46
1:E:75:LEU:CD2	1:E:251:ILE:HD13	2.36	0.46
1:B:94:GLU:HG2	1:B:375:VAL:CG2	2.45	0.46
1:H:94:GLU:HG2	1:H:375:VAL:CG2	2.45	0.46
1:I:265:LYS:C	1:I:267:LEU:H	2.18	0.46
1:B:73:SER:HA	1:B:180:ARG:HG2	1.97	0.46
1:D:266:LEU:HD12	1:D:266:LEU:HA	1.80	0.46
1:D:83:MET:HG3	1:D:152:VAL:HG11	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:160:LYS:HD2	1:G:236:VAL:HG13	1.98	0.46
1:A:161:ILE:HD11	1:A:175:ARG:HH12	1.80	0.46
1:H:160:LYS:HD2	1:H:236:VAL:HG13	1.98	0.46
1:E:216:ALA:O	1:E:217:CYS:O	2.33	0.46
1:B:233:ALA:HA	1:B:234:ALA:HA	1.65	0.46
1:I:160:LYS:HD2	1:I:236:VAL:HG13	1.98	0.46
1:E:130:PHE:O	1:E:133:VAL:HG12	2.16	0.46
1:F:112:ASN:ND2	1:F:447:GLU:OE2	2.49	0.46
1:C:83:MET:HG3	1:C:152:VAL:HG11	1.97	0.46
1:A:112:ASN:ND2	1:A:447:GLU:OE2	2.49	0.46
1:D:112:ASN:ND2	1:D:447:GLU:OE2	2.49	0.46
1:G:216:ALA:O	1:G:217:CYS:O	2.33	0.45
1:F:160:LYS:HD2	1:F:236:VAL:HG13	1.98	0.45
1:A:233:ALA:HA	1:A:234:ALA:HA	1.65	0.45
1:A:160:LYS:HD2	1:A:236:VAL:HG13	1.98	0.45
1:B:163:ASP:OD2	1:B:428:LEU:HD21	2.16	0.45
1:L:161:ILE:HD11	1:L:175:ARG:HH12	1.80	0.45
1:C:161:ILE:HD11	1:C:175:ARG:HH12	1.80	0.45
1:J:169:GLU:N	1:J:170:GLY:HA2	2.31	0.45
1:J:160:LYS:HD2	1:J:236:VAL:HG13	1.98	0.45
1:B:75:LEU:CD2	1:B:251:ILE:HD13	2.36	0.45
1:B:374:ARG:NH1	1:B:406:PHE:CE1	2.82	0.45
1:B:130:PHE:O	1:B:133:VAL:HG12	2.16	0.45
1:E:94:GLU:HG2	1:E:375:VAL:CG2	2.45	0.45
1:K:73:SER:HA	1:K:180:ARG:HG2	1.97	0.45
1:J:285:TRP:HZ3	1:J:336:LEU:HD21	1.81	0.45
1:B:83:MET:HG3	1:B:152:VAL:HG11	1.97	0.45
1:H:142:LYS:HE3	1:H:142:LYS:HB3	1.80	0.45
1:L:169:GLU:N	1:L:170:GLY:HA2	2.31	0.45
1:B:316:ALA:CA	1:L:259:LYS:NZ	2.73	0.45
1:K:149:ARG:HD3	1:K:149:ARG:HA	1.54	0.45
1:G:94:GLU:HG2	1:G:375:VAL:CG2	2.45	0.45
1:B:95:ILE:O	1:B:99:ALA:N	2.50	0.45
1:D:95:ILE:O	1:D:99:ALA:N	2.50	0.45
1:K:285:TRP:HZ3	1:K:336:LEU:HD21	1.81	0.45
1:A:142:LYS:HE3	1:A:142:LYS:HB3	1.80	0.45
1:E:161:ILE:HD11	1:E:175:ARG:HH12	1.80	0.45
1:L:160:LYS:HD2	1:L:236:VAL:HG13	1.98	0.45
1:K:160:LYS:HD2	1:K:236:VAL:HG13	1.98	0.45
1:F:94:GLU:HG2	1:F:375:VAL:CG2	2.45	0.45
1:H:130:PHE:O	1:H:133:VAL:HG12	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:130:PHE:O	1:D:133:VAL:HG12	2.16	0.45
1:K:130:PHE:O	1:K:133:VAL:HG12	2.16	0.45
1:G:272:VAL:HG11	1:H:314:TYR:CE2	2.52	0.45
1:I:285:TRP:HZ3	1:I:336:LEU:HD21	1.81	0.45
1:I:161:ILE:HD11	1:I:175:ARG:HH12	1.80	0.45
1:B:357:GLY:CA	1:B:358:ASN:HB2	2.33	0.45
1:G:279:ALA:H	1:G:280:PRO:HD2	1.80	0.45
1:A:103:GLU:HB2	1:A:106:THR:HG1	1.80	0.45
1:D:272:VAL:HG11	1:E:314:TYR:CE2	2.52	0.45
1:A:272:VAL:HG11	1:B:314:TYR:CE2	2.52	0.45
1:J:150:TRP:HZ3	1:J:410:LEU:HD13	1.81	0.45
1:L:285:TRP:HZ3	1:L:336:LEU:HD21	1.81	0.45
1:D:161:ILE:HD11	1:D:175:ARG:HH12	1.80	0.45
1:K:161:ILE:HD11	1:K:175:ARG:HH12	1.80	0.45
1:I:253:TYR:HH	1:I:413:LYS:HZ3	1.55	0.45
1:L:130:PHE:O	1:L:133:VAL:HG12	2.16	0.45
1:B:247:GLY:HA2	1:B:248:LYS:HA	1.65	0.45
1:A:130:PHE:O	1:A:133:VAL:HG12	2.16	0.45
1:I:482:SER:OG	1:I:483:HIS:N	2.48	0.45
1:J:272:VAL:HG11	1:K:314:TYR:CE2	2.52	0.45
1:F:95:ILE:O	1:F:99:ALA:N	2.50	0.45
1:I:150:TRP:HZ3	1:I:410:LEU:HD13	1.81	0.45
1:L:112:ASN:ND2	1:L:447:GLU:OE2	2.49	0.45
1:F:162:ILE:HD12	1:F:428:LEU:HD12	1.99	0.45
1:F:233:ALA:HA	1:F:234:ALA:HA	1.65	0.45
1:H:162:ILE:HD12	1:H:428:LEU:HD12	1.99	0.45
1:D:169:GLU:N	1:D:170:GLY:HA2	2.31	0.45
1:G:357:GLY:CA	1:G:358:ASN:HB2	2.33	0.45
1:J:130:PHE:O	1:J:133:VAL:HG12	2.16	0.45
1:C:130:PHE:O	1:C:133:VAL:HG12	2.16	0.45
1:B:272:VAL:HG11	1:C:314:TYR:CE2	2.52	0.45
1:H:73:SER:HA	1:H:180:ARG:HG2	1.97	0.45
1:J:112:ASN:ND2	1:J:447:GLU:OE2	2.49	0.45
1:H:169:GLU:N	1:H:170:GLY:HA2	2.31	0.45
1:E:162:ILE:HA	1:E:163:ASP:HA	1.41	0.45
1:D:233:ALA:HA	1:D:234:ALA:HA	1.65	0.45
1:F:272:VAL:HG11	1:G:314:TYR:CE2	2.52	0.45
1:L:95:ILE:O	1:L:99:ALA:N	2.50	0.45
1:K:150:TRP:HZ3	1:K:410:LEU:HD13	1.81	0.45
1:E:95:ILE:O	1:E:99:ALA:N	2.50	0.45
1:H:285:TRP:HZ3	1:H:336:LEU:HD21	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:112:ASN:ND2	1:K:447:GLU:OE2	2.49	0.45
1:A:169:GLU:N	1:A:170:GLY:HA2	2.31	0.45
1:K:169:GLU:N	1:K:170:GLY:HA2	2.31	0.45
1:B:149:ARG:HA	1:B:149:ARG:HD3	1.54	0.45
1:B:244:ASP:CG	1:B:245:CYS:H	2.15	0.45
1:F:482:SER:OG	1:F:483:HIS:N	2.48	0.45
1:A:95:ILE:O	1:A:99:ALA:N	2.50	0.45
1:H:150:TRP:HZ3	1:H:410:LEU:HD13	1.81	0.45
1:I:112:ASN:ND2	1:I:447:GLU:OE2	2.49	0.45
1:G:169:GLU:N	1:G:170:GLY:HA2	2.31	0.45
1:F:169:GLU:N	1:F:170:GLY:HA2	2.31	0.45
1:D:162:ILE:HD12	1:D:428:LEU:HD12	1.99	0.45
1:A:75:LEU:CD2	1:A:251:ILE:HD13	2.36	0.45
1:F:357:GLY:CA	1:F:358:ASN:HB2	2.33	0.45
1:J:357:GLY:CA	1:J:358:ASN:HB2	2.33	0.45
1:L:325:GLN:HA	1:L:326:HIS:HA	1.52	0.45
1:I:272:VAL:HG11	1:J:314:TYR:CE2	2.52	0.45
1:F:150:TRP:HZ3	1:F:410:LEU:HD13	1.81	0.45
1:B:169:GLU:N	1:B:170:GLY:HA2	2.31	0.45
1:J:161:ILE:HD11	1:J:175:ARG:HH12	1.80	0.45
1:F:75:LEU:CD2	1:F:251:ILE:HD13	2.36	0.45
1:A:512:ALA:CB	1:A:513:ARG:HA	2.47	0.45
1:G:273:ILE:HA	1:G:273:ILE:HD12	1.57	0.45
1:E:272:VAL:HG11	1:F:314:TYR:CE2	2.52	0.45
1:L:150:TRP:HZ3	1:L:410:LEU:HD13	1.81	0.45
1:H:95:ILE:O	1:H:99:ALA:N	2.50	0.45
1:D:150:TRP:HZ3	1:D:410:LEU:HD13	1.81	0.45
1:B:162:ILE:HD12	1:B:428:LEU:HD12	1.99	0.44
1:C:169:GLU:N	1:C:170:GLY:HA2	2.31	0.44
1:H:254:LEU:HD12	1:H:254:LEU:HA	1.80	0.44
1:H:252:GLY:HA3	1:H:253:TYR:HA	1.85	0.44
1:L:374:ARG:NH1	1:L:406:PHE:CE1	2.82	0.44
1:A:357:GLY:CA	1:B:355:ASN:HB2	2.48	0.44
1:H:279:ALA:H	1:H:280:PRO:HD2	1.80	0.44
1:H:272:VAL:HG11	1:I:314:TYR:CE2	2.52	0.44
1:K:272:VAL:HG11	1:L:314:TYR:CE2	2.52	0.44
1:I:95:ILE:O	1:I:99:ALA:N	2.50	0.44
1:J:95:ILE:O	1:J:99:ALA:N	2.50	0.44
1:G:285:TRP:HZ3	1:G:336:LEU:HD21	1.81	0.44
1:C:377:LEU:HD13	1:C:377:LEU:HA	1.62	0.44
1:E:266:LEU:HA	1:E:266:LEU:HD12	1.80	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:112:ASN:ND2	1:G:447:GLU:OE2	2.49	0.44
1:F:491:LEU:HD12	1:F:491:LEU:HA	1.68	0.44
1:C:162:ILE:HD12	1:C:428:LEU:HD12	1.99	0.44
1:C:272:VAL:HG11	1:D:314:TYR:CE2	2.52	0.44
1:D:491:LEU:HD12	1:D:491:LEU:HA	1.68	0.44
1:H:112:ASN:ND2	1:H:447:GLU:OE2	2.49	0.44
1:E:169:GLU:N	1:E:170:GLY:HA2	2.31	0.44
1:I:252:GLY:HA3	1:I:253:TYR:HA	1.85	0.44
1:B:357:GLY:CA	1:C:355:ASN:HB2	2.48	0.44
1:A:355:ASN:HB2	1:L:357:GLY:CA	2.48	0.44
1:E:326:HIS:CE1	1:E:327:ASN:OD1	2.70	0.44
1:I:130:PHE:O	1:I:133:VAL:HG12	2.16	0.44
1:A:314:TYR:CE2	1:L:272:VAL:HG11	2.52	0.44
1:G:150:TRP:HZ3	1:G:410:LEU:HD13	1.81	0.44
1:C:150:TRP:HZ3	1:C:410:LEU:HD13	1.81	0.44
1:A:285:TRP:HZ3	1:A:336:LEU:HD21	1.81	0.44
1:K:491:LEU:HA	1:K:491:LEU:HD12	1.68	0.44
1:G:494:THR:OG1	1:G:495:ASP:N	2.51	0.44
1:J:419:LEU:HD21	1:J:446:ILE:HD11	1.99	0.44
1:E:162:ILE:HD12	1:E:428:LEU:HD12	1.99	0.44
1:F:326:HIS:CE1	1:F:327:ASN:OD1	2.70	0.44
1:C:95:ILE:O	1:C:99:ALA:N	2.50	0.44
1:C:285:TRP:HZ3	1:C:336:LEU:HD21	1.81	0.44
1:B:494:THR:OG1	1:B:495:ASP:N	2.51	0.44
1:G:419:LEU:HD21	1:G:446:ILE:HD11	1.99	0.44
1:I:377:LEU:HD13	1:I:377:LEU:HA	1.62	0.44
1:D:162:ILE:HA	1:D:163:ASP:HA	1.41	0.44
1:A:86:TYR:O	1:A:87:GLU:CB	2.54	0.44
1:L:75:LEU:CD2	1:L:251:ILE:HD13	2.36	0.44
1:E:325:GLN:HA	1:E:326:HIS:HA	1.52	0.44
1:D:325:GLN:HA	1:D:326:HIS:HA	1.52	0.44
1:J:482:SER:OG	1:J:483:HIS:N	2.48	0.44
1:D:407:ILE:HD13	1:D:407:ILE:HA	1.84	0.44
1:F:285:TRP:HZ3	1:F:336:LEU:HD21	1.81	0.44
1:I:494:THR:OG1	1:I:495:ASP:N	2.51	0.44
1:C:419:LEU:HD21	1:C:446:ILE:HD11	1.99	0.44
1:E:494:THR:OG1	1:E:495:ASP:N	2.51	0.44
1:B:419:LEU:HD21	1:B:446:ILE:HD11	1.99	0.44
1:J:162:ILE:HD12	1:J:428:LEU:HD12	1.99	0.44
1:J:233:ALA:HA	1:J:234:ALA:HA	1.65	0.44
1:G:326:HIS:CE1	1:G:327:ASN:OD1	2.70	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:253:TYR:HH	1:D:413:LYS:HZ3	1.52	0.44
1:A:150:TRP:HZ3	1:A:410:LEU:HD13	1.81	0.44
1:K:95:ILE:O	1:K:99:ALA:N	2.50	0.44
1:H:419:LEU:HD21	1:H:446:ILE:HD11	1.99	0.44
1:D:509:SER:O	1:D:510:LYS:HD3	2.18	0.44
1:L:162:ILE:HD12	1:L:428:LEU:HD12	1.99	0.44
1:K:162:ILE:HA	1:K:163:ASP:HA	1.41	0.44
1:A:244:ASP:CG	1:A:245:CYS:H	2.15	0.44
1:L:279:ALA:CB	1:L:280:PRO:HD3	2.35	0.44
1:G:441:ILE:HD13	1:G:444:ILE:H	1.83	0.44
1:E:285:TRP:HZ3	1:E:336:LEU:HD21	1.81	0.44
1:C:509:SER:O	1:C:510:LYS:HD3	2.18	0.44
1:A:252:GLY:HA3	1:A:253:TYR:HA	1.85	0.44
1:J:252:GLY:HA3	1:J:253:TYR:HA	1.85	0.44
1:K:357:GLY:CA	1:L:355:ASN:HB2	2.48	0.44
1:G:357:GLY:HA2	1:G:358:ASN:CB	2.29	0.44
1:H:326:HIS:CE1	1:H:327:ASN:OD1	2.70	0.44
1:F:441:ILE:HD13	1:F:444:ILE:H	1.83	0.44
1:A:177:LEU:HD13	1:A:208:TYR:CD2	2.53	0.44
1:E:177:LEU:HD13	1:E:208:TYR:CD2	2.53	0.44
1:L:177:LEU:HD13	1:L:208:TYR:CD2	2.53	0.44
1:D:177:LEU:HD13	1:D:208:TYR:CD2	2.53	0.44
1:I:491:LEU:HB3	1:I:493:MET:HG3	2.00	0.44
1:D:494:THR:OG1	1:D:495:ASP:N	2.51	0.44
1:J:509:SER:O	1:J:510:LYS:HD3	2.18	0.44
1:I:279:ALA:H	1:I:280:PRO:HD2	1.80	0.44
1:H:441:ILE:HD13	1:H:444:ILE:H	1.83	0.44
1:A:247:GLY:HA2	1:A:248:LYS:HA	1.65	0.44
1:E:512:ALA:CB	1:E:513:ARG:HA	2.47	0.44
1:B:177:LEU:HD13	1:B:208:TYR:CD2	2.53	0.44
1:D:285:TRP:HZ3	1:D:336:LEU:HD21	1.81	0.44
1:L:491:LEU:HB3	1:L:493:MET:HG3	2.00	0.44
1:A:419:LEU:HD21	1:A:446:ILE:HD11	1.99	0.44
1:I:509:SER:O	1:I:510:LYS:HD3	2.18	0.44
1:K:494:THR:OG1	1:K:495:ASP:N	2.51	0.44
1:L:494:THR:OG1	1:L:495:ASP:N	2.51	0.44
1:K:509:SER:O	1:K:510:LYS:HD3	2.18	0.44
1:G:142:LYS:HB3	1:G:142:LYS:HE3	1.80	0.44
1:L:509:SER:O	1:L:510:LYS:HD3	2.18	0.44
1:G:162:ILE:HD12	1:G:428:LEU:HD12	1.99	0.43
1:A:149:ARG:CD	1:A:153:ASP:CG	2.68	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:75:LEU:CD2	1:K:251:ILE:HD13	2.36	0.43
1:L:326:HIS:CE1	1:L:327:ASN:OD1	2.70	0.43
1:C:441:ILE:HD13	1:C:444:ILE:H	1.83	0.43
1:B:285:TRP:HZ3	1:B:336:LEU:HD21	1.81	0.43
1:A:509:SER:O	1:A:510:LYS:HD3	2.18	0.43
1:H:509:SER:O	1:H:510:LYS:HD3	2.18	0.43
1:L:377:LEU:HA	1:L:377:LEU:HD13	1.62	0.43
1:I:419:LEU:HD21	1:I:446:ILE:HD11	1.99	0.43
1:D:419:LEU:HD21	1:D:446:ILE:HD11	1.99	0.43
1:L:233:ALA:HA	1:L:234:ALA:HA	1.65	0.43
1:E:149:ARG:HA	1:E:149:ARG:HD3	1.54	0.43
1:K:325:GLN:HA	1:K:326:HIS:HA	1.52	0.43
1:C:311:ARG:O	1:C:313:VAL:CG2	2.64	0.43
1:J:273:ILE:HA	1:J:273:ILE:HD12	1.57	0.43
1:B:150:TRP:HZ3	1:B:410:LEU:HD13	1.81	0.43
1:C:494:THR:OG1	1:C:495:ASP:N	2.51	0.43
1:I:86:TYR:O	1:I:87:GLU:CB	2.54	0.43
1:E:82:LEU:HD12	1:E:82:LEU:HA	1.86	0.43
1:F:149:ARG:HD3	1:F:149:ARG:HA	1.54	0.43
1:J:149:ARG:HA	1:J:149:ARG:HD3	1.54	0.43
1:G:149:ARG:HA	1:G:149:ARG:HD3	1.54	0.43
1:G:279:ALA:CB	1:G:280:PRO:CD	2.85	0.43
1:A:326:HIS:CE1	1:A:327:ASN:OD1	2.70	0.43
1:C:325:GLN:HA	1:C:326:HIS:HA	1.52	0.43
1:E:441:ILE:HD13	1:E:444:ILE:H	1.83	0.43
1:L:311:ARG:O	1:L:313:VAL:CG2	2.64	0.43
1:F:95:ILE:HG23	1:F:407:ILE:CD1	2.49	0.43
1:H:95:ILE:HG23	1:H:407:ILE:CD1	2.49	0.43
1:F:177:LEU:HD13	1:F:208:TYR:CD2	2.53	0.43
1:J:95:ILE:HG23	1:J:407:ILE:CD1	2.49	0.43
1:C:177:LEU:HD13	1:C:208:TYR:CD2	2.53	0.43
1:K:177:LEU:HD13	1:K:208:TYR:CD2	2.53	0.43
1:H:357:GLY:CA	1:I:355:ASN:HB2	2.48	0.43
1:J:357:GLY:CA	1:K:355:ASN:HB2	2.48	0.43
1:D:95:ILE:HG23	1:D:407:ILE:CD1	2.49	0.43
1:J:491:LEU:HB3	1:J:493:MET:HG3	2.00	0.43
1:E:509:SER:O	1:E:510:LYS:HD3	2.18	0.43
1:E:171:ILE:O	1:E:172:LYS:HG3	2.19	0.43
1:K:378:SER:C	1:K:379:ARG:O	2.53	0.43
1:K:512:ALA:CB	1:K:513:ARG:HA	2.47	0.43
1:G:509:SER:O	1:G:510:LYS:HD3	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:509:SER:O	1:B:510:LYS:HD3	2.18	0.43
1:K:419:LEU:HD21	1:K:446:ILE:HD11	1.99	0.43
1:E:419:LEU:HD21	1:E:446:ILE:HD11	1.99	0.43
1:B:86:TYR:O	1:B:87:GLU:CB	2.54	0.43
1:K:252:GLY:HA3	1:K:253:TYR:HA	1.85	0.43
1:I:441:ILE:HD13	1:I:444:ILE:H	1.83	0.43
1:L:380:ILE:HG22	1:L:382:GLN:O	2.19	0.43
1:I:380:ILE:HG22	1:I:382:GLN:O	2.19	0.43
1:K:380:ILE:HG22	1:K:382:GLN:O	2.19	0.43
1:A:380:ILE:HG22	1:A:382:GLN:O	2.19	0.43
1:E:150:TRP:HZ3	1:E:410:LEU:HD13	1.81	0.43
1:F:494:THR:OG1	1:F:495:ASP:N	2.51	0.43
1:A:494:THR:OG1	1:A:495:ASP:N	2.51	0.43
1:A:171:ILE:O	1:A:172:LYS:HG3	2.19	0.43
1:H:171:ILE:O	1:H:172:LYS:HG3	2.19	0.43
1:L:171:ILE:O	1:L:172:LYS:HG3	2.19	0.43
1:C:171:ILE:O	1:C:172:LYS:HG3	2.19	0.43
1:I:233:ALA:HA	1:I:234:ALA:HA	1.65	0.43
1:J:171:ILE:O	1:J:172:LYS:HG3	2.19	0.43
1:J:75:LEU:CD2	1:J:251:ILE:HD13	2.36	0.43
1:I:357:GLY:CA	1:I:358:ASN:HB2	2.33	0.43
1:A:441:ILE:HD13	1:A:444:ILE:H	1.83	0.43
1:E:93:SER:HB2	1:E:148:ARG:NH1	2.34	0.43
1:J:380:ILE:HG22	1:J:382:GLN:O	2.19	0.43
1:D:380:ILE:HG22	1:D:382:GLN:O	2.19	0.43
1:H:380:ILE:HG22	1:H:382:GLN:O	2.19	0.43
1:G:95:ILE:HG23	1:G:407:ILE:CD1	2.49	0.43
1:J:177:LEU:HD13	1:J:208:TYR:CD2	2.53	0.43
1:K:491:LEU:HB3	1:K:493:MET:HG3	2.00	0.43
1:L:419:LEU:HD21	1:L:446:ILE:HD11	1.99	0.43
1:J:494:THR:OG1	1:J:495:ASP:N	2.51	0.43
1:G:491:LEU:HB3	1:G:493:MET:HG3	2.00	0.43
1:B:142:LYS:HB3	1:B:142:LYS:HE3	1.80	0.43
1:G:171:ILE:O	1:G:172:LYS:HG3	2.19	0.43
1:B:424:THR:O	1:B:428:LEU:HB2	2.19	0.43
1:J:279:ALA:H	1:J:280:PRO:HD2	1.80	0.43
1:J:93:SER:HB2	1:J:148:ARG:NH1	2.34	0.43
1:D:93:SER:HB2	1:D:148:ARG:NH1	2.34	0.43
1:F:93:SER:HB2	1:F:148:ARG:NH1	2.34	0.43
1:A:398:ARG:CD	1:B:379:ARG:HH11	2.32	0.43
1:B:380:ILE:HG22	1:B:382:GLN:O	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:273:ILE:HA	1:D:273:ILE:HD12	1.57	0.43
1:A:95:ILE:HG23	1:A:407:ILE:CD1	2.49	0.43
1:C:95:ILE:HG23	1:C:407:ILE:CD1	2.49	0.43
1:C:419:LEU:HD23	1:C:419:LEU:HA	1.82	0.43
1:K:467:ILE:O	1:K:471:THR:HG23	2.19	0.43
1:L:467:ILE:O	1:L:471:THR:HG23	2.19	0.43
1:G:467:ILE:O	1:G:471:THR:HG23	2.19	0.43
1:G:424:THR:O	1:G:428:LEU:HB2	2.19	0.43
1:H:424:THR:O	1:H:428:LEU:HB2	2.19	0.43
1:G:75:LEU:CD2	1:G:251:ILE:HD13	2.36	0.43
1:G:357:GLY:CA	1:H:355:ASN:HB2	2.48	0.43
1:L:357:GLY:HA2	1:L:358:ASN:CB	2.29	0.43
1:B:279:ALA:CB	1:B:280:PRO:CD	2.85	0.43
1:B:441:ILE:HD13	1:B:444:ILE:H	1.83	0.43
1:D:441:ILE:HD13	1:D:444:ILE:H	1.83	0.43
1:F:247:GLY:HA2	1:F:248:LYS:HA	1.65	0.43
1:J:247:GLY:HA2	1:J:248:LYS:HA	1.65	0.43
1:A:93:SER:HB2	1:A:148:ARG:NH1	2.34	0.43
1:A:379:ARG:HH11	1:L:398:ARG:CD	2.32	0.43
1:C:380:ILE:HG22	1:C:382:GLN:O	2.19	0.43
1:A:491:LEU:HB3	1:A:493:MET:HG3	2.00	0.43
1:F:491:LEU:HB3	1:F:493:MET:HG3	2.00	0.43
1:F:266:LEU:HD12	1:F:266:LEU:HA	1.80	0.43
1:F:467:ILE:O	1:F:471:THR:HG23	2.19	0.43
1:B:266:LEU:HD23	1:C:276:ILE:HD11	2.01	0.43
1:H:160:LYS:HZ3	1:H:234:ALA:HB1	1.84	0.43
1:I:162:ILE:HD12	1:I:428:LEU:HD12	1.99	0.43
1:J:216:ALA:O	1:J:217:CYS:C	2.58	0.43
1:K:162:ILE:HD12	1:K:428:LEU:HD12	1.99	0.43
1:K:216:ALA:O	1:K:217:CYS:C	2.58	0.43
1:L:244:ASP:CG	1:L:245:CYS:H	2.15	0.43
1:D:357:GLY:CA	1:E:355:ASN:HB2	2.48	0.43
1:I:357:GLY:CA	1:J:355:ASN:HB2	2.48	0.43
1:B:326:HIS:CE1	1:B:327:ASN:OD1	2.70	0.43
1:I:93:SER:HB2	1:I:148:ARG:NH1	2.34	0.43
1:I:177:LEU:HD13	1:I:208:TYR:CD2	2.53	0.43
1:E:95:ILE:HG23	1:E:407:ILE:CD1	2.49	0.43
1:G:177:LEU:HD13	1:G:208:TYR:CD2	2.53	0.43
1:C:491:LEU:HB3	1:C:493:MET:HG3	2.00	0.43
1:G:266:LEU:HD23	1:H:276:ILE:HD11	2.01	0.43
1:J:266:LEU:HA	1:J:266:LEU:HD12	1.80	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:509:SER:O	1:F:510:LYS:HD3	2.18	0.43
1:A:424:THR:O	1:A:428:LEU:HB2	2.19	0.42
1:L:216:ALA:O	1:L:217:CYS:C	2.58	0.42
1:L:424:THR:O	1:L:428:LEU:HB2	2.19	0.42
1:I:171:ILE:O	1:I:172:LYS:HG3	2.19	0.42
1:I:424:THR:O	1:I:428:LEU:HB2	2.19	0.42
1:E:374:ARG:NH1	1:E:406:PHE:CE1	2.82	0.42
1:L:357:GLY:CA	1:L:358:ASN:HB2	2.33	0.42
1:C:93:SER:HB2	1:C:148:ARG:NH1	2.34	0.42
1:B:398:ARG:CD	1:C:379:ARG:HH11	2.32	0.42
1:G:380:ILE:HG22	1:G:382:GLN:O	2.19	0.42
1:F:266:LEU:HD23	1:G:276:ILE:HD11	2.01	0.42
1:H:494:THR:OG1	1:H:495:ASP:N	2.51	0.42
1:F:419:LEU:HD21	1:F:446:ILE:HD11	1.99	0.42
1:A:266:LEU:HA	1:A:266:LEU:HD12	1.80	0.42
1:C:424:THR:O	1:C:428:LEU:HB2	2.19	0.42
1:I:216:ALA:O	1:I:217:CYS:C	2.58	0.42
1:K:253:TYR:HH	1:K:413:LYS:HZ3	1.55	0.42
1:L:441:ILE:HD13	1:L:444:ILE:H	1.83	0.42
1:J:441:ILE:HD13	1:J:444:ILE:H	1.83	0.42
1:L:93:SER:HB2	1:L:148:ARG:NH1	2.34	0.42
1:A:378:SER:C	1:A:379:ARG:O	2.53	0.42
1:E:380:ILE:HG22	1:E:382:GLN:O	2.19	0.42
1:I:95:ILE:HG23	1:I:407:ILE:CD1	2.49	0.42
1:A:266:LEU:HD23	1:B:276:ILE:HD11	2.01	0.42
1:H:467:ILE:O	1:H:471:THR:HG23	2.19	0.42
1:C:266:LEU:HD23	1:D:276:ILE:HD11	2.01	0.42
1:F:424:THR:O	1:F:428:LEU:HB2	2.19	0.42
1:A:216:ALA:O	1:A:217:CYS:C	2.58	0.42
1:E:424:THR:O	1:E:428:LEU:HB2	2.19	0.42
1:E:357:GLY:CA	1:F:355:ASN:HB2	2.48	0.42
1:J:248:LYS:C	1:J:249:ASN:ND2	2.73	0.42
1:B:248:LYS:C	1:B:249:ASN:HD22	2.22	0.42
1:L:95:ILE:HG23	1:L:407:ILE:CD1	2.49	0.42
1:B:491:LEU:HB3	1:B:493:MET:HG3	2.00	0.42
1:C:467:ILE:O	1:C:471:THR:HG23	2.19	0.42
1:A:467:ILE:O	1:A:471:THR:HG23	2.19	0.42
1:I:266:LEU:HA	1:I:266:LEU:HD12	1.80	0.42
1:F:142:LYS:HB3	1:F:142:LYS:HE3	1.80	0.42
1:H:491:LEU:HB3	1:H:493:MET:HG3	2.00	0.42
1:F:171:ILE:O	1:F:172:LYS:HG3	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:424:THR:O	1:D:428:LEU:HB2	2.19	0.42
1:J:424:THR:O	1:J:428:LEU:HB2	2.19	0.42
1:K:160:LYS:HZ3	1:K:234:ALA:HB1	1.84	0.42
1:I:82:LEU:HD12	1:I:82:LEU:HA	1.86	0.42
1:D:149:ARG:HD3	1:D:149:ARG:HA	1.54	0.42
1:C:441:ILE:HA	1:C:443:ASN:N	2.35	0.42
1:C:248:LYS:C	1:C:249:ASN:ND2	2.73	0.42
1:E:248:LYS:C	1:E:249:ASN:ND2	2.73	0.42
1:G:93:SER:HB2	1:G:148:ARG:NH1	2.34	0.42
1:A:407:ILE:HD13	1:A:407:ILE:HA	1.84	0.42
1:K:95:ILE:HG23	1:K:407:ILE:CD1	2.49	0.42
1:H:177:LEU:HD13	1:H:208:TYR:CD2	2.53	0.42
1:G:95:ILE:O	1:G:99:ALA:N	2.50	0.42
1:B:95:ILE:HG23	1:B:407:ILE:CD1	2.49	0.42
1:J:491:LEU:HA	1:J:491:LEU:HD12	1.68	0.42
1:J:467:ILE:O	1:J:471:THR:HG23	2.19	0.42
1:D:467:ILE:O	1:D:471:THR:HG23	2.19	0.42
1:K:470:LEU:HA	1:K:470:LEU:HD12	1.88	0.42
1:K:266:LEU:HA	1:K:266:LEU:HD12	1.80	0.42
1:B:467:ILE:O	1:B:471:THR:HG23	2.19	0.42
1:H:216:ALA:O	1:H:217:CYS:C	2.58	0.42
1:A:242:LEU:HD12	1:A:252:GLY:HA3	2.02	0.42
1:C:242:LEU:HD12	1:C:252:GLY:HA3	2.02	0.42
1:J:244:ASP:CG	1:J:245:CYS:N	2.73	0.42
1:K:244:ASP:CG	1:K:245:CYS:N	2.73	0.42
1:D:374:ARG:NH1	1:D:406:PHE:CE1	2.82	0.42
1:F:357:GLY:CA	1:G:355:ASN:HB2	2.48	0.42
1:K:279:ALA:H	1:K:280:PRO:HD2	1.80	0.42
1:B:441:ILE:HA	1:B:443:ASN:N	2.35	0.42
1:K:441:ILE:HD13	1:K:444:ILE:H	1.83	0.42
1:B:311:ARG:O	1:B:313:VAL:CG2	2.64	0.42
1:G:247:GLY:HA2	1:G:248:LYS:HA	1.65	0.42
1:L:248:LYS:C	1:L:249:ASN:ND2	2.73	0.42
1:K:93:SER:HB2	1:K:148:ARG:NH1	2.34	0.42
1:C:273:ILE:HA	1:C:273:ILE:HD12	1.57	0.42
1:E:467:ILE:O	1:E:471:THR:HG23	2.19	0.42
1:H:266:LEU:HD23	1:I:276:ILE:HD11	2.01	0.42
1:I:470:LEU:HD12	1:I:470:LEU:HA	1.88	0.42
1:B:216:ALA:O	1:B:217:CYS:C	2.58	0.42
1:K:171:ILE:O	1:K:172:LYS:HG3	2.19	0.42
1:B:242:LEU:HD12	1:B:252:GLY:HA3	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:242:LEU:HD12	1:D:252:GLY:HA3	2.02	0.42
1:L:242:LEU:HD12	1:L:252:GLY:HA3	2.02	0.42
1:I:244:ASP:CG	1:I:245:CYS:N	2.73	0.42
1:H:248:LYS:C	1:H:249:ASN:ND2	2.73	0.42
1:B:93:SER:HB2	1:B:148:ARG:NH1	2.34	0.42
1:I:371:MET:HG3	1:I:377:LEU:CD2	2.50	0.42
1:L:371:MET:HG3	1:L:377:LEU:CD2	2.50	0.42
1:J:371:MET:HG3	1:J:377:LEU:CD2	2.50	0.42
1:B:371:MET:HG3	1:B:377:LEU:CD2	2.50	0.42
1:B:377:LEU:HA	1:B:377:LEU:HD13	1.62	0.42
1:A:161:ILE:C	1:A:162:ILE:HG23	2.40	0.42
1:D:161:ILE:C	1:D:162:ILE:HG23	2.40	0.42
1:I:160:LYS:HD3	1:I:234:ALA:C	2.40	0.42
1:I:160:LYS:HZ3	1:I:234:ALA:HB1	1.84	0.42
1:K:162:ILE:HG23	1:K:171:ILE:HG12	1.96	0.42
1:K:424:THR:O	1:K:428:LEU:HB2	2.19	0.42
1:E:149:ARG:CD	1:E:153:ASP:CG	2.68	0.42
1:I:75:LEU:CD2	1:I:251:ILE:HD13	2.36	0.42
1:D:441:ILE:HA	1:D:443:ASN:N	2.35	0.42
1:I:311:ARG:O	1:I:313:VAL:CG2	2.64	0.42
1:J:311:ARG:O	1:J:313:VAL:CG2	2.64	0.42
1:K:248:LYS:C	1:K:249:ASN:HD22	2.22	0.42
1:E:266:LEU:HD23	1:F:276:ILE:HD11	2.01	0.42
1:A:276:ILE:HD11	1:L:266:LEU:HD23	2.01	0.42
1:E:371:MET:HG3	1:E:377:LEU:CD2	2.50	0.42
1:F:371:MET:HG3	1:F:377:LEU:CD2	2.50	0.42
1:A:408:ARG:HB3	1:A:408:ARG:HE	1.71	0.42
1:H:408:ARG:HB3	1:H:408:ARG:HE	1.71	0.42
1:H:160:LYS:HD3	1:H:234:ALA:C	2.40	0.42
1:E:163:ASP:OD2	1:E:428:LEU:HD21	2.20	0.42
1:B:161:ILE:C	1:B:162:ILE:HG23	2.40	0.42
1:D:171:ILE:O	1:D:172:LYS:HG3	2.19	0.42
1:C:233:ALA:HA	1:C:234:ALA:HA	1.65	0.42
1:I:161:ILE:C	1:I:162:ILE:HG23	2.40	0.42
1:I:163:ASP:OD2	1:I:428:LEU:HD21	2.20	0.42
1:K:161:ILE:C	1:K:162:ILE:HG23	2.40	0.42
1:B:254:LEU:HD12	1:B:254:LEU:HA	1.80	0.42
1:A:441:ILE:HA	1:A:443:ASN:N	2.35	0.42
1:L:247:GLY:HA2	1:L:248:LYS:HA	1.65	0.42
1:H:378:SER:C	1:H:379:ARG:O	2.53	0.42
1:E:398:ARG:CD	1:F:379:ARG:HH11	2.32	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:491:LEU:HB3	1:D:493:MET:HG3	2.00	0.42
1:D:142:LYS:HB3	1:D:142:LYS:HE3	1.80	0.42
1:H:163:ASP:OD2	1:H:428:LEU:HD21	2.20	0.42
1:J:161:ILE:C	1:J:162:ILE:HG23	2.40	0.42
1:J:163:ASP:OD2	1:J:428:LEU:HD21	2.20	0.42
1:L:82:LEU:HA	1:L:82:LEU:HD12	1.86	0.42
1:I:441:ILE:HA	1:I:443:ASN:N	2.35	0.42
1:K:311:ARG:O	1:K:313:VAL:CG2	2.64	0.42
1:F:248:LYS:C	1:F:249:ASN:ND2	2.73	0.42
1:B:248:LYS:C	1:B:249:ASN:ND2	2.73	0.42
1:G:93:SER:HB2	1:G:148:ARG:HH12	1.85	0.42
1:K:119:SER:HB3	1:K:122:ILE:HG23	2.02	0.42
1:K:398:ARG:CD	1:L:379:ARG:HH11	2.32	0.42
1:D:398:ARG:CD	1:E:379:ARG:HH11	2.32	0.42
1:D:378:SER:C	1:D:379:ARG:O	2.53	0.42
1:F:380:ILE:HG22	1:F:382:GLN:O	2.19	0.42
1:I:467:ILE:O	1:I:471:THR:HG23	2.19	0.42
1:E:142:LYS:HE3	1:E:142:LYS:HB3	1.80	0.42
1:G:162:ILE:HA	1:G:163:ASP:HA	1.41	0.42
1:G:163:ASP:OD2	1:G:428:LEU:HD21	2.20	0.42
1:B:171:ILE:O	1:B:172:LYS:HG3	2.19	0.42
1:D:216:ALA:O	1:D:217:CYS:C	2.58	0.42
1:C:161:ILE:C	1:C:162:ILE:HG23	2.40	0.42
1:H:244:ASP:CG	1:H:245:CYS:N	2.73	0.42
1:E:441:ILE:HA	1:E:443:ASN:N	2.35	0.42
1:H:93:SER:HB2	1:H:148:ARG:HH12	1.85	0.42
1:I:398:ARG:CD	1:J:379:ARG:HH11	2.32	0.42
1:K:273:ILE:HD11	1:L:314:TYR:HB3	2.02	0.42
1:B:273:ILE:HA	1:B:273:ILE:HD12	1.57	0.42
1:E:491:LEU:HB3	1:E:493:MET:HG3	2.00	0.42
1:C:371:MET:HG3	1:C:377:LEU:CD2	2.50	0.42
1:K:266:LEU:HD23	1:L:276:ILE:HD11	2.01	0.42
1:J:377:LEU:HD13	1:J:377:LEU:HA	1.62	0.42
1:K:371:MET:HG3	1:K:377:LEU:CD2	2.50	0.42
1:H:469:MET:HE1	1:I:460:ALA:HA	2.02	0.42
1:G:233:ALA:HA	1:G:234:ALA:HA	1.65	0.41
1:C:163:ASP:OD2	1:C:428:LEU:HD21	2.20	0.41
1:J:162:ILE:HA	1:J:163:ASP:HA	1.41	0.41
1:J:160:LYS:HD3	1:J:234:ALA:C	2.40	0.41
1:K:242:LEU:HD12	1:K:252:GLY:HA3	2.02	0.41
1:E:242:LEU:HD12	1:E:252:GLY:HA3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:441:ILE:HA	1:H:443:ASN:N	2.35	0.41
1:H:311:ARG:O	1:H:313:VAL:CG2	2.64	0.41
1:G:248:LYS:C	1:G:249:ASN:ND2	2.73	0.41
1:D:248:LYS:C	1:D:249:ASN:ND2	2.73	0.41
1:F:93:SER:HB2	1:F:148:ARG:HH12	1.85	0.41
1:H:93:SER:HB2	1:H:148:ARG:NH1	2.34	0.41
1:L:119:SER:HB3	1:L:122:ILE:HG23	2.02	0.41
1:F:273:ILE:HA	1:F:273:ILE:HD12	1.57	0.41
1:I:407:ILE:HD13	1:I:407:ILE:HA	1.84	0.41
1:C:494:THR:HG23	1:C:497:GLU:HG3	2.03	0.41
1:A:162:ILE:HA	1:A:163:ASP:HA	1.41	0.41
1:E:160:LYS:HD3	1:E:234:ALA:C	2.40	0.41
1:B:162:ILE:HG23	1:B:171:ILE:HG12	1.96	0.41
1:L:160:LYS:HD3	1:L:234:ALA:C	2.40	0.41
1:D:162:ILE:HG23	1:D:171:ILE:HG12	1.96	0.41
1:C:216:ALA:O	1:C:217:CYS:C	2.58	0.41
1:A:149:ARG:HD3	1:A:153:ASP:OD1	2.19	0.41
1:L:252:GLY:HA3	1:L:253:TYR:HA	1.85	0.41
1:A:248:LYS:C	1:A:249:ASN:ND2	2.73	0.41
1:F:512:ALA:CB	1:F:513:ARG:HA	2.47	0.41
1:G:371:MET:HG3	1:G:377:LEU:CD2	2.50	0.41
1:D:371:MET:HG3	1:D:377:LEU:CD2	2.50	0.41
1:H:371:MET:HG3	1:H:377:LEU:CD2	2.50	0.41
1:D:266:LEU:HD23	1:E:276:ILE:HD11	2.01	0.41
1:G:491:LEU:HD12	1:G:491:LEU:HA	1.68	0.41
1:L:266:LEU:HD12	1:L:266:LEU:HA	1.80	0.41
1:E:429:LYS:HB2	1:E:429:LYS:HE3	1.87	0.41
1:G:160:LYS:HD3	1:G:234:ALA:C	2.40	0.41
1:A:163:ASP:OD2	1:A:428:LEU:HD21	2.20	0.41
1:B:149:ARG:HD3	1:B:153:ASP:OD1	2.19	0.41
1:A:253:TYR:HH	1:A:413:LYS:HZ3	1.57	0.41
1:C:252:GLY:HA3	1:C:253:TYR:HA	1.85	0.41
1:D:149:ARG:HD3	1:D:153:ASP:OD1	2.19	0.41
1:F:149:ARG:HD3	1:F:153:ASP:OD1	2.19	0.41
1:E:149:ARG:HD3	1:E:153:ASP:OD1	2.19	0.41
1:K:244:ASP:CG	1:K:245:CYS:H	2.15	0.41
1:C:326:HIS:CE1	1:C:327:ASN:OD1	2.70	0.41
1:D:248:LYS:C	1:D:249:ASN:HD22	2.22	0.41
1:I:93:SER:HB2	1:I:148:ARG:HH12	1.85	0.41
1:C:398:ARG:CD	1:D:379:ARG:HH11	2.32	0.41
1:B:273:ILE:HD11	1:C:314:TYR:HB3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:494:THR:HG23	1:B:497:GLU:HG3	2.03	0.41
1:L:494:THR:HG23	1:L:497:GLU:HG3	2.03	0.41
1:A:494:THR:HG23	1:A:497:GLU:HG3	2.03	0.41
1:F:160:LYS:HD3	1:F:234:ALA:C	2.40	0.41
1:B:160:LYS:HD3	1:B:234:ALA:C	2.40	0.41
1:A:254:LEU:HD12	1:A:254:LEU:HA	1.81	0.41
1:C:149:ARG:HD3	1:C:153:ASP:OD1	2.19	0.41
1:C:357:GLY:CA	1:D:355:ASN:HB2	2.48	0.41
1:K:326:HIS:CE1	1:K:327:ASN:OD1	2.70	0.41
1:G:441:ILE:HA	1:G:443:ASN:N	2.35	0.41
1:J:441:ILE:HA	1:J:443:ASN:N	2.35	0.41
1:I:248:LYS:C	1:I:249:ASN:ND2	2.73	0.41
1:K:248:LYS:C	1:K:249:ASN:ND2	2.73	0.41
1:H:273:ILE:HD11	1:I:314:TYR:HB3	2.02	0.41
1:J:273:ILE:HD11	1:K:314:TYR:HB3	2.02	0.41
1:H:407:ILE:HD13	1:H:407:ILE:HA	1.84	0.41
1:D:491:LEU:HD23	1:D:493:MET:CE	2.51	0.41
1:D:494:THR:HG23	1:D:497:GLU:HG3	2.03	0.41
1:J:494:THR:HG23	1:J:497:GLU:HG3	2.03	0.41
1:J:266:LEU:HD23	1:K:276:ILE:HD11	2.01	0.41
1:F:377:LEU:HD13	1:F:377:LEU:HA	1.62	0.41
1:D:470:LEU:HD12	1:D:470:LEU:HA	1.88	0.41
1:F:161:ILE:C	1:F:162:ILE:HG23	2.40	0.41
1:F:162:ILE:HG23	1:F:171:ILE:HG12	1.96	0.41
1:H:161:ILE:C	1:H:162:ILE:HG23	2.40	0.41
1:L:161:ILE:C	1:L:162:ILE:HG23	2.40	0.41
1:K:160:LYS:HD3	1:K:234:ALA:C	2.40	0.41
1:L:149:ARG:HD3	1:L:153:ASP:OD1	2.19	0.41
1:H:259:LYS:NZ	1:J:316:ALA:HA	2.27	0.41
1:F:441:ILE:HA	1:F:443:ASN:N	2.35	0.41
1:J:119:SER:HB3	1:J:122:ILE:HG23	2.02	0.41
1:J:398:ARG:CD	1:K:379:ARG:HH11	2.32	0.41
1:H:398:ARG:CD	1:I:379:ARG:HH11	2.32	0.41
1:I:367:GLN:NE2	1:I:382:GLN:OE1	2.54	0.41
1:K:367:GLN:NE2	1:K:382:GLN:OE1	2.54	0.41
1:G:367:GLN:NE2	1:G:382:GLN:OE1	2.54	0.41
1:K:491:LEU:HD23	1:K:493:MET:CE	2.51	0.41
1:I:266:LEU:HD23	1:J:276:ILE:HD11	2.01	0.41
1:H:266:LEU:HD12	1:H:266:LEU:HA	1.80	0.41
1:D:160:LYS:HZ3	1:D:234:ALA:HB1	1.86	0.41
1:K:163:ASP:OD2	1:K:428:LEU:HD21	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:244:ASP:CG	1:G:245:CYS:N	2.73	0.41
1:L:441:ILE:HA	1:L:443:ASN:N	2.35	0.41
1:E:93:SER:HB2	1:E:148:ARG:HH12	1.85	0.41
1:C:119:SER:HB3	1:C:122:ILE:HG23	2.02	0.41
1:I:494:THR:HG23	1:I:497:GLU:HG3	2.03	0.41
1:A:371:MET:HG3	1:A:377:LEU:CD2	2.50	0.41
1:G:161:ILE:C	1:G:162:ILE:HG23	2.40	0.41
1:A:169:GLU:CB	1:A:170:GLY:HA2	2.46	0.41
1:E:158:PHE:HE1	1:E:176:ARG:HG3	1.85	0.41
1:D:160:LYS:HD3	1:D:234:ALA:C	2.40	0.41
1:C:162:ILE:HA	1:C:163:ASP:HA	1.41	0.41
1:H:82:LEU:HD12	1:H:82:LEU:HA	1.86	0.41
1:F:242:LEU:HD12	1:F:252:GLY:HA3	2.02	0.41
1:H:149:ARG:HD3	1:H:149:ARG:HA	1.54	0.41
1:J:242:LEU:HD12	1:J:252:GLY:HA3	2.02	0.41
1:J:326:HIS:CE1	1:J:327:ASN:OD1	2.70	0.41
1:G:253:TYR:HH	1:G:413:LYS:HZ3	1.58	0.41
1:F:398:ARG:CD	1:G:379:ARG:HH11	2.32	0.41
1:F:491:LEU:HD23	1:F:493:MET:CE	2.51	0.41
1:I:491:LEU:HD23	1:I:493:MET:CE	2.51	0.41
1:K:494:THR:HG23	1:K:497:GLU:HG3	2.03	0.41
1:G:216:ALA:O	1:G:217:CYS:C	2.58	0.41
1:D:158:PHE:HE1	1:D:176:ARG:HG3	1.85	0.41
1:B:237:TYR:HH	1:B:250:ILE:HD11	1.83	0.41
1:I:242:LEU:HD12	1:I:252:GLY:HA3	2.02	0.41
1:F:279:ALA:CB	1:F:280:PRO:HD3	2.35	0.41
1:D:279:ALA:CB	1:D:280:PRO:HD3	2.35	0.41
1:C:379:ARG:O	1:C:381:PRO:CD	2.69	0.41
1:D:379:ARG:O	1:D:381:PRO:CD	2.69	0.41
1:A:367:GLN:NE2	1:A:382:GLN:OE1	2.54	0.41
1:A:314:TYR:HB3	1:L:273:ILE:HD11	2.02	0.41
1:A:273:ILE:HD11	1:B:314:TYR:HB3	2.02	0.41
1:E:150:TRP:HH2	1:E:410:LEU:HD22	1.86	0.41
1:L:491:LEU:HD23	1:L:493:MET:CE	2.51	0.41
1:E:494:THR:HG23	1:E:497:GLU:HG3	2.03	0.41
1:D:419:LEU:HD23	1:D:419:LEU:HA	1.82	0.41
1:G:491:LEU:HD23	1:G:493:MET:CE	2.51	0.41
1:H:158:PHE:HE1	1:H:176:ARG:HG3	1.85	0.41
1:H:162:ILE:O	1:H:162:ILE:HG13	2.21	0.41
1:E:161:ILE:C	1:E:162:ILE:HG23	2.40	0.41
1:L:158:PHE:HE1	1:L:176:ARG:HG3	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:163:ASP:OD2	1:D:428:LEU:HD21	2.20	0.41
1:H:242:LEU:HD12	1:H:252:GLY:HA3	2.02	0.41
1:G:242:LEU:HD12	1:G:252:GLY:HA3	2.02	0.41
1:E:357:GLY:CA	1:E:358:ASN:HB2	2.33	0.41
1:H:357:GLY:HA2	1:H:358:ASN:CB	2.29	0.41
1:I:326:HIS:CE1	1:I:327:ASN:OD1	2.70	0.41
1:K:441:ILE:HA	1:K:443:ASN:N	2.35	0.41
1:G:311:ARG:O	1:G:313:VAL:CG2	2.64	0.41
1:F:248:LYS:C	1:F:249:ASN:HD22	2.22	0.41
1:K:93:SER:HB2	1:K:148:ARG:HH12	1.85	0.41
1:L:93:SER:HB2	1:L:148:ARG:HH12	1.85	0.41
1:J:93:SER:HB2	1:J:148:ARG:HH12	1.85	0.41
1:B:119:SER:HB3	1:B:122:ILE:HG23	2.02	0.41
1:D:119:SER:HB3	1:D:122:ILE:HG23	2.02	0.41
1:H:379:ARG:O	1:H:381:PRO:CD	2.69	0.41
1:B:379:ARG:O	1:B:381:PRO:CD	2.69	0.41
1:E:379:ARG:O	1:E:381:PRO:CD	2.69	0.41
1:I:379:ARG:O	1:I:381:PRO:CD	2.69	0.41
1:G:379:ARG:O	1:G:381:PRO:CD	2.69	0.41
1:C:512:ALA:CB	1:C:513:ARG:HA	2.47	0.41
1:G:273:ILE:HD11	1:H:314:TYR:HB3	2.02	0.41
1:H:367:GLN:NE2	1:H:382:GLN:OE1	2.54	0.41
1:C:367:GLN:NE2	1:C:382:GLN:OE1	2.54	0.41
1:A:407:ILE:O	1:A:410:LEU:N	2.54	0.41
1:I:407:ILE:O	1:I:410:LEU:N	2.54	0.41
1:E:407:ILE:O	1:E:410:LEU:N	2.54	0.41
1:H:407:ILE:O	1:H:410:LEU:N	2.54	0.41
1:J:407:ILE:O	1:J:410:LEU:N	2.54	0.41
1:D:407:ILE:O	1:D:410:LEU:N	2.54	0.41
1:B:491:LEU:HD23	1:B:493:MET:CE	2.51	0.41
1:G:494:THR:HG23	1:G:497:GLU:HG3	2.03	0.41
1:I:491:LEU:HD12	1:I:491:LEU:HA	1.68	0.41
1:F:494:THR:HG23	1:F:497:GLU:HG3	2.03	0.41
1:H:494:THR:HG23	1:H:497:GLU:HG3	2.03	0.41
1:C:266:LEU:HD12	1:C:266:LEU:HA	1.80	0.41
1:A:377:LEU:HD13	1:A:377:LEU:HA	1.62	0.41
1:K:480:TYR:CE2	1:L:470:LEU:HD21	2.56	0.41
1:A:470:LEU:HD21	1:L:480:TYR:CE2	2.56	0.41
1:F:158:PHE:HE1	1:F:176:ARG:HG3	1.85	0.41
1:F:163:ASP:OD2	1:F:428:LEU:HD21	2.20	0.41
1:A:158:PHE:HE1	1:A:176:ARG:HG3	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:163:ASP:OD2	1:L:428:LEU:HD21	2.20	0.41
1:C:162:ILE:HG13	1:C:162:ILE:O	2.21	0.41
1:I:158:PHE:HE1	1:I:176:ARG:HG3	1.85	0.41
1:I:162:ILE:O	1:I:162:ILE:HG13	2.21	0.41
1:J:162:ILE:HG13	1:J:162:ILE:O	2.21	0.41
1:G:157:PHE:CE2	1:G:237:TYR:HD1	2.39	0.41
1:H:248:LYS:C	1:H:249:ASN:HD22	2.22	0.41
1:A:119:SER:HB3	1:A:122:ILE:HG23	2.02	0.41
1:J:379:ARG:O	1:J:381:PRO:CD	2.69	0.41
1:A:379:ARG:O	1:A:381:PRO:CD	2.69	0.41
1:F:379:ARG:O	1:F:381:PRO:CD	2.69	0.41
1:J:512:ALA:CB	1:J:513:ARG:HA	2.47	0.41
1:G:513:ARG:HG3	1:G:513:ARG:H	1.75	0.41
1:D:367:GLN:NE2	1:D:382:GLN:OE1	2.54	0.41
1:F:367:GLN:NE2	1:F:382:GLN:OE1	2.54	0.41
1:G:150:TRP:HH2	1:G:410:LEU:HD22	1.86	0.41
1:I:480:TYR:CE2	1:J:470:LEU:HD21	2.56	0.41
1:E:268:GLU:OE2	1:E:362:ILE:HG12	2.21	0.41
1:J:469:MET:HE1	1:K:460:ALA:HA	2.03	0.41
1:D:408:ARG:HE	1:D:408:ARG:HB3	1.71	0.41
1:G:162:ILE:HG13	1:G:162:ILE:O	2.21	0.40
1:A:160:LYS:HD3	1:A:234:ALA:C	2.40	0.40
1:L:162:ILE:HG23	1:L:171:ILE:HG12	1.96	0.40
1:K:162:ILE:HG13	1:K:162:ILE:O	2.21	0.40
1:F:157:PHE:CE2	1:F:237:TYR:HD1	2.39	0.40
1:K:149:ARG:HD3	1:K:153:ASP:OD1	2.19	0.40
1:E:157:PHE:CE2	1:E:237:TYR:HD1	2.39	0.40
1:B:325:GLN:HA	1:B:326:HIS:HA	1.52	0.40
1:A:93:SER:HB2	1:A:148:ARG:HH12	1.85	0.40
1:C:93:SER:HB2	1:C:148:ARG:HH12	1.85	0.40
1:G:397:THR:HG22	1:G:398:ARG:H	1.86	0.40
1:H:397:THR:HG22	1:H:398:ARG:H	1.86	0.40
1:E:273:ILE:HD11	1:F:314:TYR:HB3	2.02	0.40
1:B:367:GLN:NE2	1:B:382:GLN:OE1	2.54	0.40
1:I:419:LEU:HA	1:I:419:LEU:HD23	1.82	0.40
1:H:491:LEU:HD23	1:H:493:MET:CE	2.51	0.40
1:J:480:TYR:CE2	1:K:470:LEU:HD21	2.56	0.40
1:A:480:TYR:CE2	1:B:470:LEU:HD21	2.56	0.40
1:E:216:ALA:O	1:E:217:CYS:C	2.58	0.40
1:B:162:ILE:O	1:B:162:ILE:HG13	2.21	0.40
1:C:158:PHE:HE1	1:C:176:ARG:HG3	1.85	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:160:LYS:HD3	1:C:234:ALA:C	2.40	0.40
1:E:119:SER:HB3	1:E:122:ILE:HG23	2.02	0.40
1:K:397:THR:HG22	1:K:398:ARG:H	1.86	0.40
1:K:379:ARG:O	1:K:381:PRO:CD	2.69	0.40
1:L:367:GLN:NE2	1:L:382:GLN:OE1	2.54	0.40
1:C:273:ILE:HD11	1:D:314:TYR:HB3	2.02	0.40
1:E:367:GLN:NE2	1:E:382:GLN:OE1	2.54	0.40
1:B:407:ILE:O	1:B:410:LEU:N	2.54	0.40
1:C:407:ILE:O	1:C:410:LEU:N	2.54	0.40
1:E:491:LEU:HD23	1:E:493:MET:CE	2.51	0.40
1:B:266:LEU:HD12	1:B:266:LEU:HA	1.80	0.40
1:G:268:GLU:OE2	1:G:362:ILE:HG12	2.21	0.40
1:B:162:ILE:HA	1:B:163:ASP:HA	1.41	0.40
1:L:162:ILE:HG13	1:L:162:ILE:O	2.21	0.40
1:K:158:PHE:HE1	1:K:176:ARG:HG3	1.85	0.40
1:H:86:TYR:O	1:H:87:GLU:CB	2.54	0.40
1:H:157:PHE:CE2	1:H:237:TYR:HD1	2.39	0.40
1:H:75:LEU:CD2	1:H:251:ILE:HD13	2.36	0.40
1:I:149:ARG:HD3	1:I:149:ARG:HA	1.54	0.40
1:F:91:ALA:O	1:F:94:GLU:HB3	2.22	0.40
1:A:311:ARG:O	1:A:313:VAL:CG2	2.64	0.40
1:D:93:SER:HB2	1:D:148:ARG:HH12	1.85	0.40
1:I:397:THR:HG22	1:I:398:ARG:H	1.86	0.40
1:L:379:ARG:O	1:L:381:PRO:CD	2.69	0.40
1:I:273:ILE:HD11	1:J:314:TYR:HB3	2.02	0.40
1:B:382:GLN:HE21	1:B:382:GLN:HA	1.86	0.40
1:L:407:ILE:O	1:L:410:LEU:N	2.54	0.40
1:F:407:ILE:O	1:F:410:LEU:N	2.54	0.40
1:K:491:LEU:HD23	1:K:493:MET:HE3	2.03	0.40
1:K:419:LEU:HA	1:K:419:LEU:HD23	1.82	0.40
1:L:268:GLU:OE2	1:L:362:ILE:HG12	2.21	0.40
1:G:470:LEU:HA	1:G:470:LEU:HD12	1.88	0.40
1:E:470:LEU:HA	1:E:470:LEU:HD12	1.88	0.40
1:C:142:LYS:HE3	1:C:142:LYS:HB3	1.80	0.40
1:D:338:ARG:HG3	1:D:338:ARG:H	1.65	0.40
1:D:157:PHE:CE2	1:D:237:TYR:HD1	2.39	0.40
1:E:153:ASP:O	1:E:154:SER:CB	2.70	0.40
1:A:91:ALA:O	1:A:94:GLU:HB3	2.22	0.40
1:A:279:ALA:CB	1:A:280:PRO:HD3	2.35	0.40
1:J:130:PHE:HD1	1:J:422:LEU:HD12	1.87	0.40
1:I:247:GLY:HA2	1:I:248:LYS:HA	1.65	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:93:SER:HB2	1:B:148:ARG:HH12	1.85	0.40
1:H:119:SER:HB3	1:H:122:ILE:HG23	2.02	0.40
1:G:119:SER:HB3	1:G:122:ILE:HG23	2.02	0.40
1:J:397:THR:HG22	1:J:398:ARG:H	1.86	0.40
1:F:397:THR:HG22	1:F:398:ARG:H	1.86	0.40
1:F:513:ARG:HG3	1:F:513:ARG:H	1.75	0.40
1:H:513:ARG:H	1:H:513:ARG:HG3	1.75	0.40
1:F:273:ILE:HD11	1:G:314:TYR:CB	2.52	0.40
1:I:273:ILE:HD12	1:I:273:ILE:HA	1.57	0.40
1:H:273:ILE:HD11	1:I:314:TYR:CB	2.52	0.40
1:H:382:GLN:HA	1:H:382:GLN:HE21	1.86	0.40
1:A:382:GLN:HA	1:A:382:GLN:HE21	1.86	0.40
1:A:273:ILE:HD11	1:B:314:TYR:CB	2.52	0.40
1:F:177:LEU:O	1:F:179:PRO:HD3	2.22	0.40
1:J:407:ILE:HA	1:J:407:ILE:HD13	1.84	0.40
1:C:150:TRP:HH2	1:C:410:LEU:HD22	1.86	0.40
1:D:150:TRP:HH2	1:D:410:LEU:HD22	1.86	0.40
1:A:491:LEU:HD23	1:A:493:MET:CE	2.51	0.40
1:K:377:LEU:HA	1:K:377:LEU:HD13	1.62	0.40
1:F:268:GLU:OE2	1:F:362:ILE:HG12	2.21	0.40
1:E:124:ASN:O	1:E:127:LEU:HG	2.22	0.40
1:F:338:ARG:HG3	1:F:338:ARG:H	1.65	0.40
1:L:162:ILE:CG2	1:L:171:ILE:CB	2.92	0.40
1:L:162:ILE:HA	1:L:163:ASP:HA	1.41	0.40
1:F:153:ASP:O	1:F:154:SER:CB	2.70	0.40
1:J:244:ASP:CG	1:J:245:CYS:H	2.15	0.40
1:H:149:ARG:CD	1:H:153:ASP:CG	2.68	0.40
1:I:243:VAL:O	1:I:244:ASP:CB	2.70	0.40
1:I:157:PHE:CE2	1:I:237:TYR:HD1	2.39	0.40
1:I:91:ALA:O	1:I:94:GLU:HB3	2.22	0.40
1:H:279:ALA:CB	1:H:280:PRO:HD3	2.35	0.40
1:I:326:HIS:O	1:I:327:ASN:CB	2.70	0.40
1:H:130:PHE:HD1	1:H:422:LEU:HD12	1.87	0.40
1:F:119:SER:HB3	1:F:122:ILE:HG23	2.02	0.40
1:I:382:GLN:HA	1:I:382:GLN:HE21	1.86	0.40
1:J:367:GLN:NE2	1:J:382:GLN:OE1	2.54	0.40
1:K:382:GLN:HA	1:K:382:GLN:HE21	1.86	0.40
1:D:273:ILE:HD11	1:E:314:TYR:HB3	2.02	0.40
1:C:382:GLN:HA	1:C:382:GLN:HE21	1.86	0.40
1:K:407:ILE:O	1:K:410:LEU:N	2.54	0.40
1:G:407:ILE:O	1:G:410:LEU:N	2.54	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:150:TRP:HH2	1:B:410:LEU:HD22	1.86	0.40
1:C:491:LEU:HD23	1:C:493:MET:CE	2.51	0.40
1:H:480:TYR:CE2	1:I:470:LEU:HD21	2.56	0.40
1:E:377:LEU:HD13	1:E:377:LEU:HA	1.62	0.40
1:F:480:TYR:CE2	1:G:470:LEU:HD21	2.56	0.40
1:B:124:ASN:O	1:B:127:LEU:HG	2.22	0.40
1:A:268:GLU:OE2	1:A:362:ILE:HG12	2.21	0.40
1:H:268:GLU:OE2	1:H:362:ILE:HG12	2.21	0.40
1:G:480:TYR:CE2	1:H:470:LEU:HD21	2.56	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	424/455 (93%)	368 (87%)	47 (11%)	9 (2%)	9	53
1	B	424/455 (93%)	369 (87%)	46 (11%)	9 (2%)	9	53
1	C	424/455 (93%)	368 (87%)	47 (11%)	9 (2%)	9	53
1	D	424/455 (93%)	368 (87%)	47 (11%)	9 (2%)	9	53
1	E	424/455 (93%)	368 (87%)	47 (11%)	9 (2%)	9	53
1	F	424/455 (93%)	368 (87%)	47 (11%)	9 (2%)	9	53
1	G	424/455 (93%)	368 (87%)	47 (11%)	9 (2%)	9	53
1	H	424/455 (93%)	369 (87%)	46 (11%)	9 (2%)	9	53
1	I	424/455 (93%)	368 (87%)	47 (11%)	9 (2%)	9	53
1	J	424/455 (93%)	368 (87%)	47 (11%)	9 (2%)	9	53
1	K	424/455 (93%)	368 (87%)	47 (11%)	9 (2%)	9	53
1	L	424/455 (93%)	368 (87%)	47 (11%)	9 (2%)	9	53
All	All	5088/5460 (93%)	4418 (87%)	562 (11%)	108 (2%)	13	53

All (108) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	171	ILE
1	A	380	ILE
1	B	171	ILE
1	B	380	ILE
1	C	171	ILE
1	C	380	ILE
1	D	171	ILE
1	D	380	ILE
1	E	171	ILE
1	E	380	ILE
1	F	171	ILE
1	F	380	ILE
1	G	171	ILE
1	G	380	ILE
1	H	171	ILE
1	H	380	ILE
1	I	171	ILE
1	I	380	ILE
1	J	171	ILE
1	J	380	ILE
1	K	171	ILE
1	K	380	ILE
1	L	171	ILE
1	L	380	ILE
1	A	217	CYS
1	A	241	GLY
1	B	217	CYS
1	B	241	GLY
1	C	217	CYS
1	C	241	GLY
1	D	217	CYS
1	D	241	GLY
1	E	217	CYS
1	E	241	GLY
1	F	217	CYS
1	F	241	GLY
1	G	217	CYS
1	G	241	GLY
1	H	217	CYS
1	H	241	GLY
1	I	217	CYS
1	I	241	GLY

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Mol	Chain	Res	Type
1	J	217	CYS
1	J	241	GLY
1	K	217	CYS
1	K	241	GLY
1	L	217	CYS
1	L	241	GLY
1	A	244	ASP
1	A	374	ARG
1	B	244	ASP
1	B	374	ARG
1	C	244	ASP
1	C	374	ARG
1	D	244	ASP
1	D	374	ARG
1	E	244	ASP
1	E	374	ARG
1	F	244	ASP
1	F	374	ARG
1	G	244	ASP
1	G	374	ARG
1	H	244	ASP
1	H	374	ARG
1	I	244	ASP
1	I	374	ARG
1	J	244	ASP
1	J	374	ARG
1	K	244	ASP
1	K	374	ARG
1	L	244	ASP
1	L	374	ARG
1	A	327	ASN
1	A	431	ILE
1	B	327	ASN
1	B	431	ILE
1	C	327	ASN
1	C	431	ILE
1	D	327	ASN
1	D	431	ILE
1	E	327	ASN
1	E	431	ILE
1	F	327	ASN
1	F	431	ILE

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Mol	Chain	Res	Type
1	G	327	ASN
1	G	431	ILE
1	H	327	ASN
1	H	431	ILE
1	I	327	ASN
1	I	431	ILE
1	J	327	ASN
1	J	431	ILE
1	K	327	ASN
1	K	431	ILE
1	L	327	ASN
1	L	431	ILE
1	A	163	ASP
1	B	163	ASP
1	C	163	ASP
1	D	163	ASP
1	E	163	ASP
1	F	163	ASP
1	G	163	ASP
1	H	163	ASP
1	I	163	ASP
1	J	163	ASP
1	K	163	ASP
1	L	163	ASP

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	364/407 (89%)	335 (92%)	29 (8%)	15	55
1	B	364/407 (89%)	335 (92%)	29 (8%)	15	55
1	C	364/407 (89%)	334 (92%)	30 (8%)	14	53
1	D	364/407 (89%)	335 (92%)	29 (8%)	15	55
1	E	364/407 (89%)	335 (92%)	29 (8%)	15	55

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	F	364/407 (89%)	334 (92%)	30 (8%)	14 53
1	G	364/407 (89%)	335 (92%)	29 (8%)	15 55
1	H	364/407 (89%)	335 (92%)	29 (8%)	15 55
1	I	364/407 (89%)	334 (92%)	30 (8%)	14 53
1	J	364/407 (89%)	335 (92%)	29 (8%)	15 55
1	K	364/407 (89%)	335 (92%)	29 (8%)	15 55
1	L	364/407 (89%)	334 (92%)	30 (8%)	14 53
All	All	4368/4884 (89%)	4016 (92%)	352 (8%)	19 54

All (352) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	86	TYR
1	A	165	LYS
1	A	166	ARG
1	A	176	ARG
1	A	232	LYS
1	A	254	LEU
1	A	272	VAL
1	A	273	ILE
1	A	275	ARG
1	A	282	ARG
1	A	283	ARG
1	A	284	VAL
1	A	312	VAL
1	A	344	VAL
1	A	363	ARG
1	A	377	LEU
1	A	378	SER
1	A	398	ARG
1	A	399	ASP
1	A	401	LEU
1	A	415	GLU
1	A	457	LEU
1	A	467	ILE
1	A	491	LEU
1	A	494	THR
1	A	501	GLU
1	A	507	GLU
1	A	508	GLU

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Mol	Chain	Res	Type
1	A	513	ARG
1	B	86	TYR
1	B	165	LYS
1	B	166	ARG
1	B	176	ARG
1	B	232	LYS
1	B	254	LEU
1	B	272	VAL
1	B	273	ILE
1	B	275	ARG
1	B	282	ARG
1	B	283	ARG
1	B	284	VAL
1	B	312	VAL
1	B	344	VAL
1	B	363	ARG
1	B	377	LEU
1	B	378	SER
1	B	398	ARG
1	B	399	ASP
1	B	401	LEU
1	B	415	GLU
1	B	457	LEU
1	B	467	ILE
1	B	491	LEU
1	B	494	THR
1	B	501	GLU
1	B	507	GLU
1	B	508	GLU
1	B	513	ARG
1	C	86	TYR
1	C	165	LYS
1	C	166	ARG
1	C	176	ARG
1	C	232	LYS
1	C	254	LEU
1	C	272	VAL
1	C	273	ILE
1	C	275	ARG
1	C	281	ASP
1	C	282	ARG
1	C	283	ARG

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Mol	Chain	Res	Type
1	C	284	VAL
1	C	312	VAL
1	C	344	VAL
1	C	363	ARG
1	C	377	LEU
1	C	378	SER
1	C	398	ARG
1	C	399	ASP
1	C	401	LEU
1	C	415	GLU
1	C	457	LEU
1	C	467	ILE
1	C	491	LEU
1	C	494	THR
1	C	501	GLU
1	C	507	GLU
1	C	508	GLU
1	C	513	ARG
1	D	86	TYR
1	D	165	LYS
1	D	166	ARG
1	D	176	ARG
1	D	232	LYS
1	D	254	LEU
1	D	272	VAL
1	D	273	ILE
1	D	275	ARG
1	D	282	ARG
1	D	283	ARG
1	D	284	VAL
1	D	312	VAL
1	D	344	VAL
1	D	363	ARG
1	D	377	LEU
1	D	378	SER
1	D	398	ARG
1	D	399	ASP
1	D	401	LEU
1	D	415	GLU
1	D	457	LEU
1	D	467	ILE
1	D	491	LEU

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Mol	Chain	Res	Type
1	D	494	THR
1	D	501	GLU
1	D	507	GLU
1	D	508	GLU
1	D	513	ARG
1	E	86	TYR
1	E	165	LYS
1	E	166	ARG
1	E	176	ARG
1	E	232	LYS
1	E	254	LEU
1	E	272	VAL
1	E	273	ILE
1	E	275	ARG
1	E	282	ARG
1	E	283	ARG
1	E	284	VAL
1	E	312	VAL
1	E	344	VAL
1	E	363	ARG
1	E	377	LEU
1	E	378	SER
1	E	398	ARG
1	E	399	ASP
1	E	401	LEU
1	E	415	GLU
1	E	457	LEU
1	E	467	ILE
1	E	491	LEU
1	E	494	THR
1	E	501	GLU
1	E	507	GLU
1	E	508	GLU
1	E	513	ARG
1	F	86	TYR
1	F	165	LYS
1	F	166	ARG
1	F	176	ARG
1	F	232	LYS
1	F	254	LEU
1	F	272	VAL
1	F	273	ILE

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Mol	Chain	Res	Type
1	F	275	ARG
1	F	281	ASP
1	F	282	ARG
1	F	283	ARG
1	F	284	VAL
1	F	312	VAL
1	F	344	VAL
1	F	363	ARG
1	F	377	LEU
1	F	378	SER
1	F	398	ARG
1	F	399	ASP
1	F	401	LEU
1	F	415	GLU
1	F	457	LEU
1	F	467	ILE
1	F	491	LEU
1	F	494	THR
1	F	501	GLU
1	F	507	GLU
1	F	508	GLU
1	F	513	ARG
1	G	86	TYR
1	G	165	LYS
1	G	166	ARG
1	G	176	ARG
1	G	232	LYS
1	G	254	LEU
1	G	272	VAL
1	G	273	ILE
1	G	275	ARG
1	G	282	ARG
1	G	283	ARG
1	G	284	VAL
1	G	312	VAL
1	G	344	VAL
1	G	363	ARG
1	G	377	LEU
1	G	378	SER
1	G	398	ARG
1	G	399	ASP
1	G	401	LEU

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Mol	Chain	Res	Type
1	G	415	GLU
1	G	457	LEU
1	G	467	ILE
1	G	491	LEU
1	G	494	THR
1	G	501	GLU
1	G	507	GLU
1	G	508	GLU
1	G	513	ARG
1	H	86	TYR
1	H	165	LYS
1	H	166	ARG
1	H	176	ARG
1	H	232	LYS
1	H	254	LEU
1	H	272	VAL
1	H	273	ILE
1	H	275	ARG
1	H	282	ARG
1	H	283	ARG
1	H	284	VAL
1	H	312	VAL
1	H	344	VAL
1	H	363	ARG
1	H	377	LEU
1	H	378	SER
1	H	398	ARG
1	H	399	ASP
1	H	401	LEU
1	H	415	GLU
1	H	457	LEU
1	H	467	ILE
1	H	491	LEU
1	H	494	THR
1	H	501	GLU
1	H	507	GLU
1	H	508	GLU
1	H	513	ARG
1	I	86	TYR
1	I	165	LYS
1	I	166	ARG
1	I	176	ARG

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Mol	Chain	Res	Type
1	I	232	LYS
1	I	254	LEU
1	I	272	VAL
1	I	273	ILE
1	I	275	ARG
1	I	281	ASP
1	I	282	ARG
1	I	283	ARG
1	I	284	VAL
1	I	312	VAL
1	I	344	VAL
1	I	363	ARG
1	I	377	LEU
1	I	378	SER
1	I	398	ARG
1	I	399	ASP
1	I	401	LEU
1	I	415	GLU
1	I	457	LEU
1	I	467	ILE
1	I	491	LEU
1	I	494	THR
1	I	501	GLU
1	I	507	GLU
1	I	508	GLU
1	I	513	ARG
1	J	86	TYR
1	J	165	LYS
1	J	166	ARG
1	J	176	ARG
1	J	232	LYS
1	J	254	LEU
1	J	272	VAL
1	J	273	ILE
1	J	275	ARG
1	J	282	ARG
1	J	283	ARG
1	J	284	VAL
1	J	312	VAL
1	J	344	VAL
1	J	363	ARG
1	J	377	LEU

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Mol	Chain	Res	Type
1	J	378	SER
1	J	398	ARG
1	J	399	ASP
1	J	401	LEU
1	J	415	GLU
1	J	457	LEU
1	J	467	ILE
1	J	491	LEU
1	J	494	THR
1	J	501	GLU
1	J	507	GLU
1	J	508	GLU
1	J	513	ARG
1	K	86	TYR
1	K	165	LYS
1	K	166	ARG
1	K	176	ARG
1	K	232	LYS
1	K	254	LEU
1	K	272	VAL
1	K	273	ILE
1	K	275	ARG
1	K	282	ARG
1	K	283	ARG
1	K	284	VAL
1	K	312	VAL
1	K	344	VAL
1	K	363	ARG
1	K	377	LEU
1	K	378	SER
1	K	398	ARG
1	K	399	ASP
1	K	401	LEU
1	K	415	GLU
1	K	457	LEU
1	K	467	ILE
1	K	491	LEU
1	K	494	THR
1	K	501	GLU
1	K	507	GLU
1	K	508	GLU
1	K	513	ARG

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Mol	Chain	Res	Type
1	L	86	TYR
1	L	165	LYS
1	L	166	ARG
1	L	176	ARG
1	L	232	LYS
1	L	254	LEU
1	L	272	VAL
1	L	273	ILE
1	L	275	ARG
1	L	281	ASP
1	L	282	ARG
1	L	283	ARG
1	L	284	VAL
1	L	312	VAL
1	L	344	VAL
1	L	363	ARG
1	L	377	LEU
1	L	378	SER
1	L	398	ARG
1	L	399	ASP
1	L	401	LEU
1	L	415	GLU
1	L	457	LEU
1	L	467	ILE
1	L	491	LEU
1	L	494	THR
1	L	501	GLU
1	L	507	GLU
1	L	508	GLU
1	L	513	ARG

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (132) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	90	ASN
1	A	146	HIS
1	A	183	GLN
1	A	249	ASN
1	A	262	ASN
1	A	310	ASN
1	A	355	ASN
1	A	358	ASN

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Mol	Chain	Res	Type
1	A	367	GLN
1	A	382	GLN
1	A	412	HIS
1	B	90	ASN
1	B	146	HIS
1	B	183	GLN
1	B	249	ASN
1	B	262	ASN
1	B	310	ASN
1	B	355	ASN
1	B	358	ASN
1	B	367	GLN
1	B	382	GLN
1	B	412	HIS
1	C	90	ASN
1	C	146	HIS
1	C	183	GLN
1	C	249	ASN
1	C	262	ASN
1	C	310	ASN
1	C	355	ASN
1	C	358	ASN
1	C	367	GLN
1	C	382	GLN
1	C	412	HIS
1	D	90	ASN
1	D	146	HIS
1	D	183	GLN
1	D	249	ASN
1	D	262	ASN
1	D	310	ASN
1	D	355	ASN
1	D	358	ASN
1	D	367	GLN
1	D	382	GLN
1	D	412	HIS
1	E	90	ASN
1	E	146	HIS
1	E	183	GLN
1	E	249	ASN
1	E	262	ASN
1	E	310	ASN

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Mol	Chain	Res	Type
1	E	355	ASN
1	E	358	ASN
1	E	367	GLN
1	E	382	GLN
1	E	412	HIS
1	F	90	ASN
1	F	146	HIS
1	F	183	GLN
1	F	249	ASN
1	F	262	ASN
1	F	310	ASN
1	F	355	ASN
1	F	358	ASN
1	F	367	GLN
1	F	382	GLN
1	F	412	HIS
1	G	90	ASN
1	G	146	HIS
1	G	183	GLN
1	G	249	ASN
1	G	262	ASN
1	G	310	ASN
1	G	355	ASN
1	G	358	ASN
1	G	367	GLN
1	G	382	GLN
1	G	412	HIS
1	H	90	ASN
1	H	146	HIS
1	H	183	GLN
1	H	249	ASN
1	H	262	ASN
1	H	310	ASN
1	H	355	ASN
1	H	358	ASN
1	H	367	GLN
1	H	382	GLN
1	H	412	HIS
1	I	90	ASN
1	I	146	HIS
1	I	183	GLN
1	I	249	ASN

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Mol	Chain	Res	Type
1	I	262	ASN
1	I	310	ASN
1	I	355	ASN
1	I	358	ASN
1	I	367	GLN
1	I	382	GLN
1	I	412	HIS
1	J	90	ASN
1	J	146	HIS
1	J	183	GLN
1	J	249	ASN
1	J	262	ASN
1	J	310	ASN
1	J	355	ASN
1	J	358	ASN
1	J	367	GLN
1	J	382	GLN
1	J	412	HIS
1	K	90	ASN
1	K	146	HIS
1	K	183	GLN
1	K	249	ASN
1	K	262	ASN
1	K	310	ASN
1	K	355	ASN
1	K	358	ASN
1	K	367	GLN
1	K	382	GLN
1	K	412	HIS
1	L	90	ASN
1	L	146	HIS
1	L	183	GLN
1	L	249	ASN
1	L	262	ASN
1	L	310	ASN
1	L	355	ASN
1	L	358	ASN
1	L	367	GLN
1	L	382	GLN
1	L	412	HIS

5.3.3 RNA

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates

There are no carbohydrates in this entry.

5.6 Ligand geometry

There are no ligands in this entry.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.