Full wwPDB X-ray Structure Validation Report (i)

Jun 12, 2024 – 02:56 AM EDT

PDB ID	:	1NR7
Title	:	Crystal structure of apo bovine glutamate dehydrogenase
Authors	:	Banerjee, S.; Schmidt, T.; Fang, J.; Stanley, C.A.; Smith, T.J.
Deposited on	:	2003-01-23
Resolution	:	3.30 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/XrayValidationReportHelp
with specific help available everywhere you see the (i) symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

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

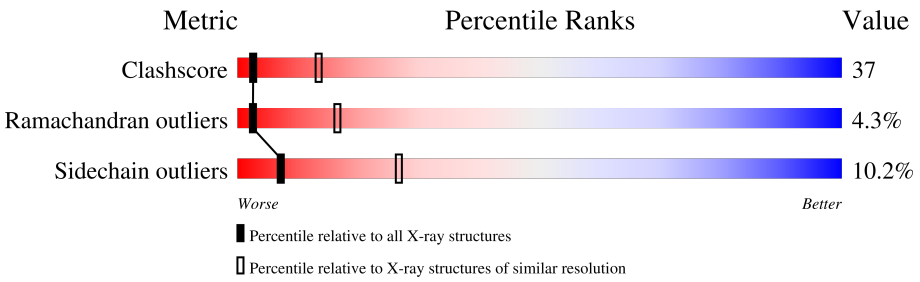
MolProbity	:	4.02b-467
Xtriage (Phenix)	:	NOT EXECUTED
EDS	:	NOT EXECUTED
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36.2

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

The reported resolution of this entry is 3.30 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)	Similar resolution (#Entries, resolution range(Å))
Clashscore	141614	1205 (3.34-3.26)
Ramachandran outliers	138981	1183 (3.34-3.26)
Sidechain outliers	138945	1182 (3.34-3.26)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=5%

Note EDS was not executed.

Mol	Chain	Length	Quality of chain
1	A	496	43% 48% 8%
1	B	496	47% 45% 8%
1	C	496	44% 48% 7% •
1	D	496	47% 45% 8% •
1	E	496	45% 47% 7% •
1	F	496	46% 45% 8%
1	G	496	45% 46% 7% •
1	H	496	46% 45% 8%

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Mol	Chain	Length	Quality of chain
1	I	496	45% 45% 9%
1	J	496	45% 47% 7%
1	K	496	44% 48% 7%
1	L	496	43% 49% 7%

2 Entry composition (i)

There is only 1 type of molecule in this entry. The entry contains 46488 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, 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 Glutamate dehydrogenase 1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	496	3874	2450	679	726	19	0	0	0
1	B	496	3874	2450	679	726	19	0	0	0
1	C	496	3874	2450	679	726	19	0	0	0
1	D	496	3874	2450	679	726	19	0	0	0
1	E	496	3874	2450	679	726	19	0	0	0
1	F	496	3874	2450	679	726	19	0	0	0
1	G	496	3874	2450	679	726	19	0	0	0
1	H	496	3874	2450	679	726	19	0	0	0
1	I	496	3874	2450	679	726	19	0	0	0
1	J	496	3874	2450	679	726	19	0	0	0
1	K	496	3874	2450	679	726	19	0	0	0
1	L	496	3874	2450	679	726	19	0	0	0

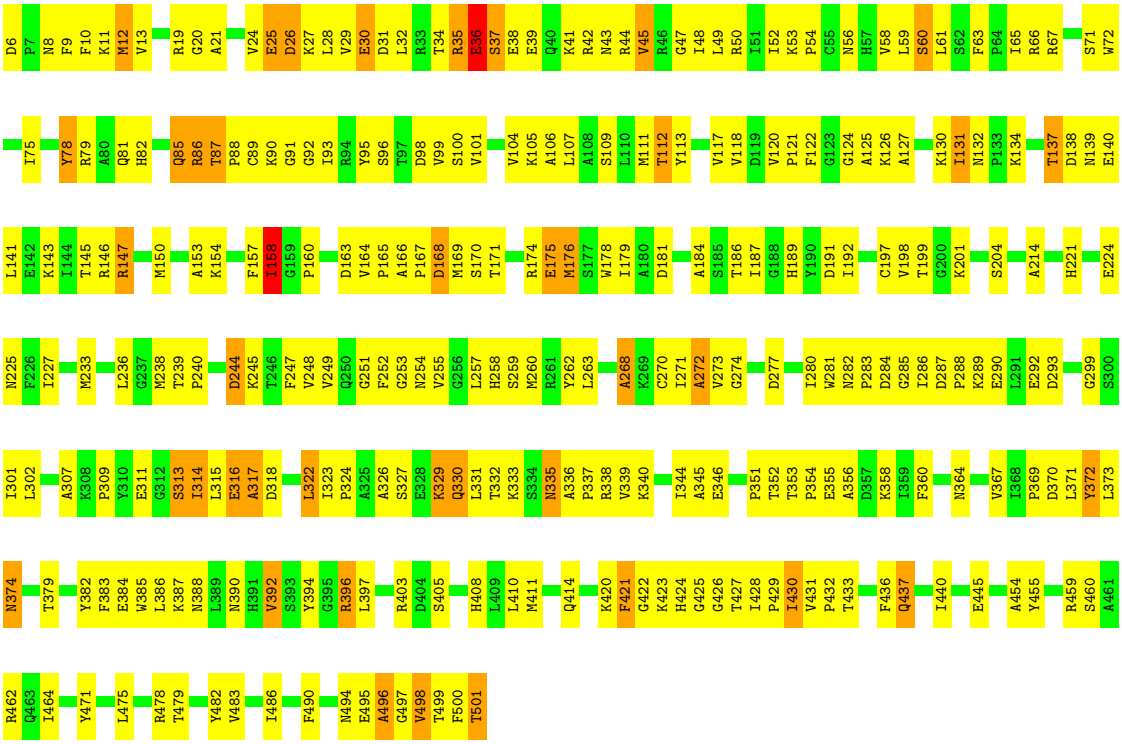
3 Residue-property plots (i)

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry. 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.

Note EDS was not executed.

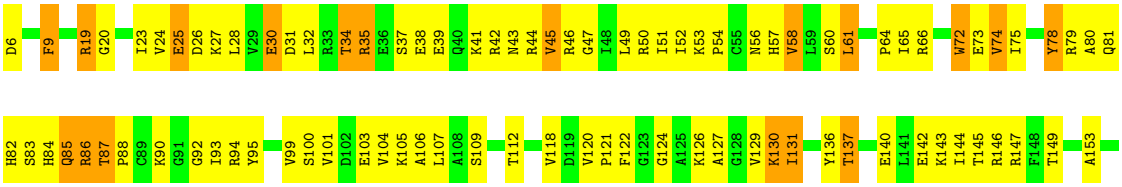
• Molecule 1: Glutamate dehydrogenase 1

Chain A: 43% 48% 8%



• Molecule 1: Glutamate dehydrogenase 1

Chain B: 47% 45% 8%



F157 I158 G159 I162 D163 V164 P165 A166 P167 S170 R174 E175 M176 S177 W178 I179 A180 D181 T186 I187 G188 H189 I192 H195 A196 C197 V198 K201 I208 I212 S213 R217 G218 V219 F220 H221 G222 I223 E224 I227 Y232 M233 L236 G237 M238 T239 P240

D244 K245 T246 F247 V248 V249 Q250 G251 F252 V255 G256 L257 H258 S259 M260 R261 Y262 L263 A268 K269 C270 I271 A272 V273 G274 E275 S276 D277 G278 S279 I280 W281 N282 P283 D284 P288 K289 E292 D293 F294 K295 L296 I301 L302 A307 S313 I314 L315 E316 A317 D318

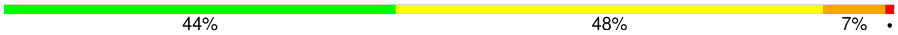
L322 I323 P324 A325 A326 K329 Q330 L331 T332 N335 A336 P337 R338 V339 K340 A341 K342 I343 I344 A345 E346 T352 T353 P354 E355 I359 F360 L361 E362 R363 N364 I365 M366 V367 I368 P369 D370 L371 Y372 L373 N374 T379 Y382 F383 E384 W385 L386 K387 N388 V392 S393 Y394 G395

R396 L397 K400 R403 D404 S405 L409 L410 M411 S412 V413 Q414 E415 S416 L417 K420 F421 G422 K423 H424 T427 I428 P429 I430 V431 E435 R439 E445 V449 Y455 R459 R462 Q463 I464 M465 L477 R478 T479 Y482 V483 I486 V489 F490

N494 E495 A496 G497 V498 T499 F500 T501

- Molecule 1: Glutamate dehydrogenase 1

Chain C:



D6 P7 N8 F9 F10 K11 M12 V13 E14 G15 F16 F17 D18 R19 G20 I23 V24 E25 D26 K27 L28 V29 E30 D31 L32 R33 T34 R35 E36 S37 E38 E39 Q40 K41 R42 V45 R46 G47 I48 L49 R50 I51 I52 K53 P54 C55 N56 H57 V58 L59 S60 L61 P64 I65 R66 R67

W72 I75 Y78 R79 H82 S83 H84 Q85 R86 T87 P88 G89 K90 G91 G92 I93 R94 Y95 S96 T97 D98 V99 S100 V101 V104 K105 A106 L107 A108 S109 L110 M111 T112 Y113 K114 C115 A116 V117 V118 P121 G124 A125 K126 A127 I131 N132 N135 Y136 T137 D138 N139 E140

L141 E142 K143 I144 T145 R146 R147 M150 E151 L152 A153 K154 F157 I158 D163 V164 P165 A166 P167 D168 M169 E173 R174 E175 M176 S177 W178 I179 A180 D181 T186 I187 G188 H189 N193 A194 H195 A196 C197 V198 K201 P202 S213 A214 T215 I223 I227 N228 M233

L236 G237 M238 T239 P240 D244 K245 V248 V249 Q250 G251 V255 H258 S259 M260 R261 Y262 L263 H264 R265 I271 G274 E275 S276 D277 G278 S279 I280 W281 N282 P283 D284 G285 I286 D287 P288 K289 E290 F294 K295 L296 S300 I301 L302 G303 F304 A307 K308 P309 Y310

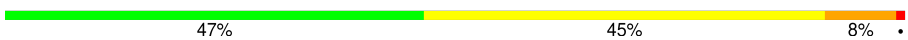
I314 L315 E316 A317 D318 C319 D320 I321 L322 I323 P324 A325 A326 S327 E328 K329 Q330 L331 T332 K333 S334 N335 A336 P337 R338 V339 K340 A341 K342 I343 I344 A345 E346 P351 I359 F360 L361 E362 R363 N364 I365 I368 P369 D370 L371 Y372 L373 N374 A375 T379 Y382 F383 E384 W385

N388 L389 N390 H391 V392 S393 Y394 G395 R396 L397 K400 R403 L409 L410 M411 Q414 E415 S416 L417 E418 R419 K420 F421 G422 K423 H424 G425 G426 T427 I428 P429 I430 V431 P432 F436 I440 S444 E445 K446 D447 Y455 T456 R459 S460 A461 R462 Q463 R466 T467

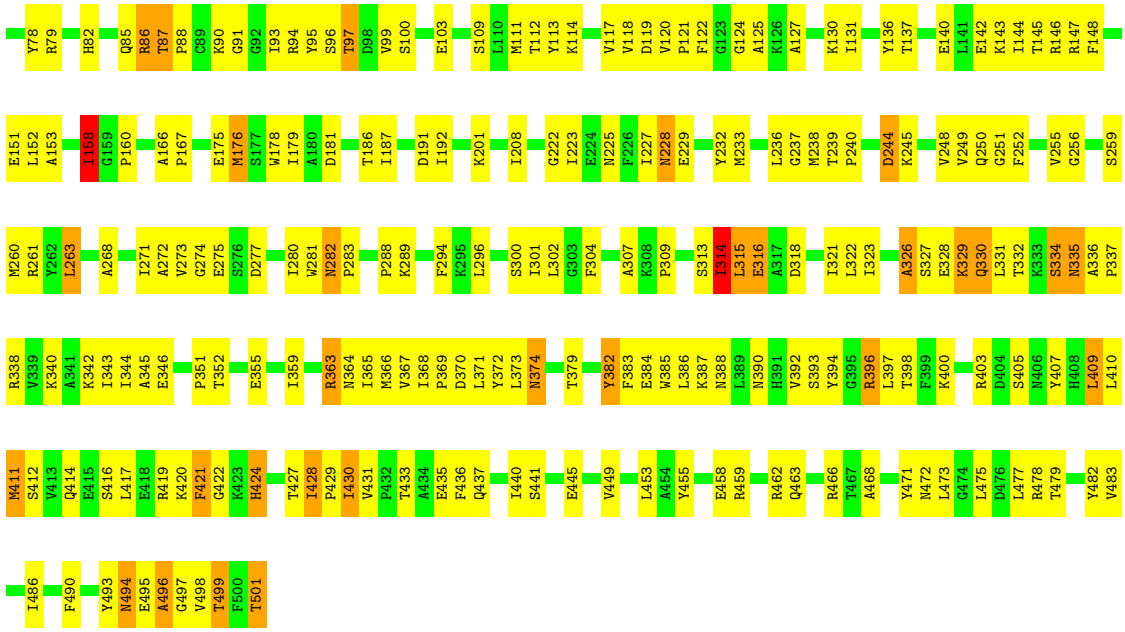
A468 Y471 N472 L473 G474 L475 D476 L477 R478 T479 Y482 V483 I486 F490 N494 E495 A496 G497 V498 T499 F500 T501

- Molecule 1: Glutamate dehydrogenase 1

Chain D:

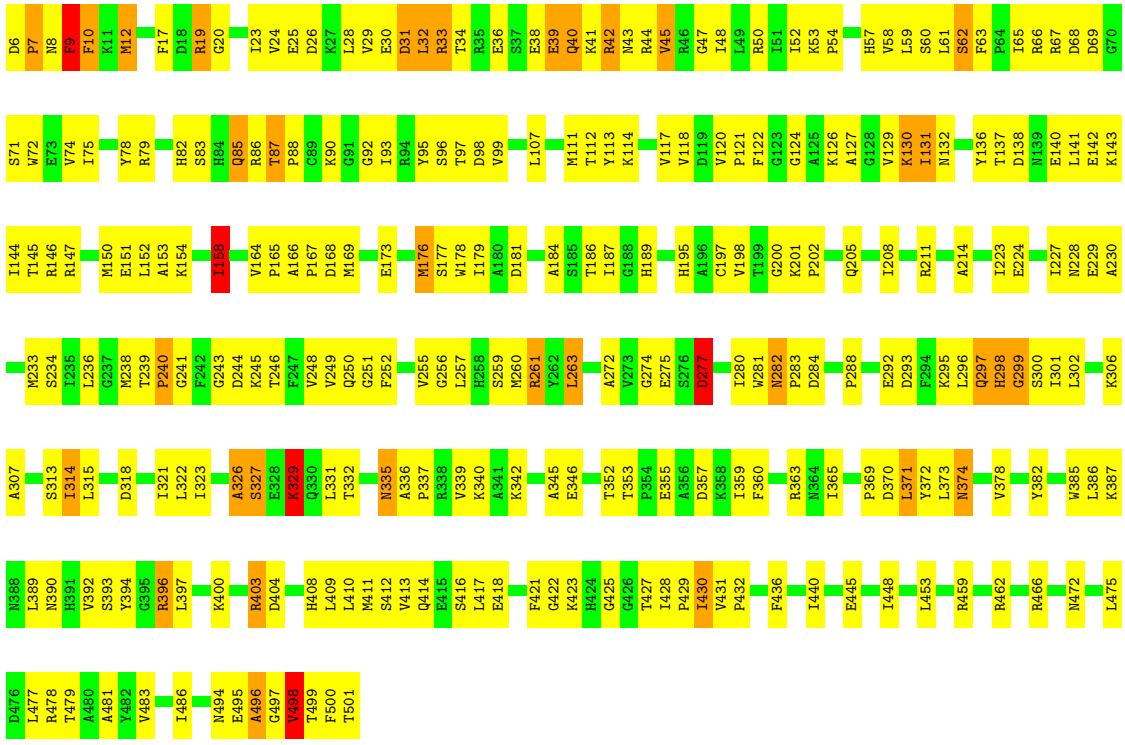


D6 F9 M12 V13 E14 F17 D18 R19 G20 V24 E25 D26 K27 L28 V29 E30 D31 L32 R33 T34 R35 E38 E39 Q40 K41 R42 N43 R44 V45 R46 G47 I48 L49 R50 I51 I52 K53 P54 H57 V58 L59 S60 L61 S62 F63 P64 I65 R66 R67 D68 W72 I75



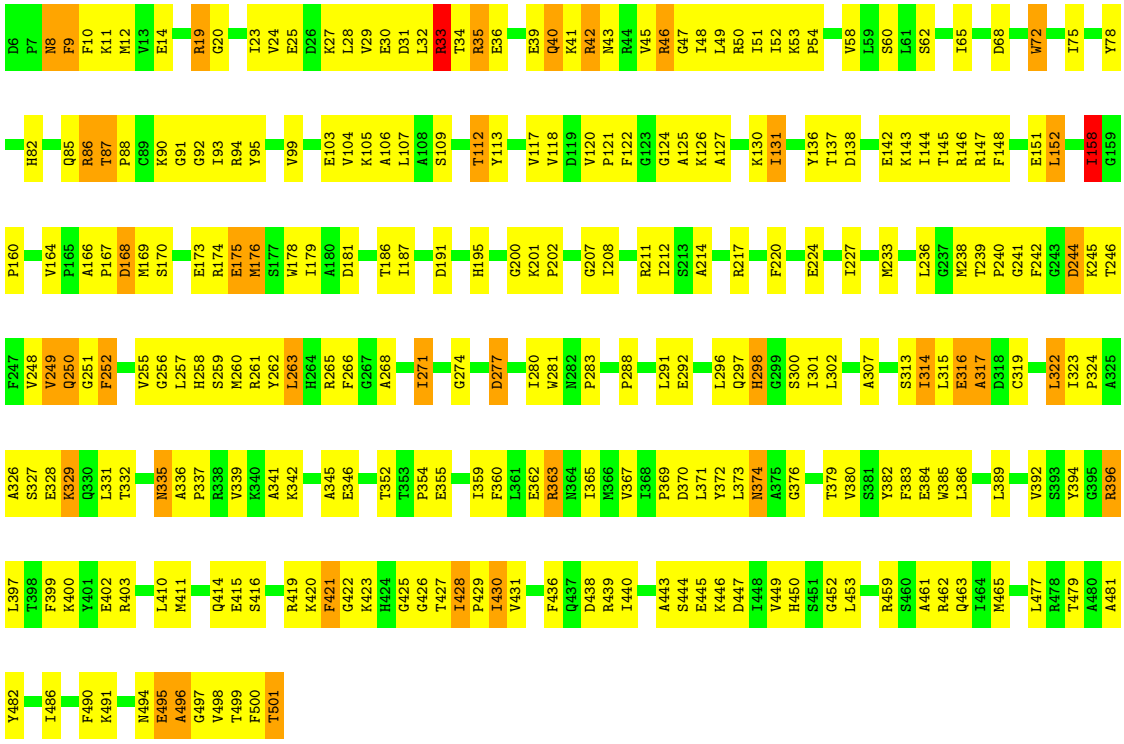
• Molecule 1: Glutamate dehydrogenase 1

Chain E:



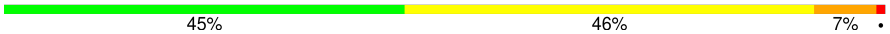
• Molecule 1: Glutamate dehydrogenase 1

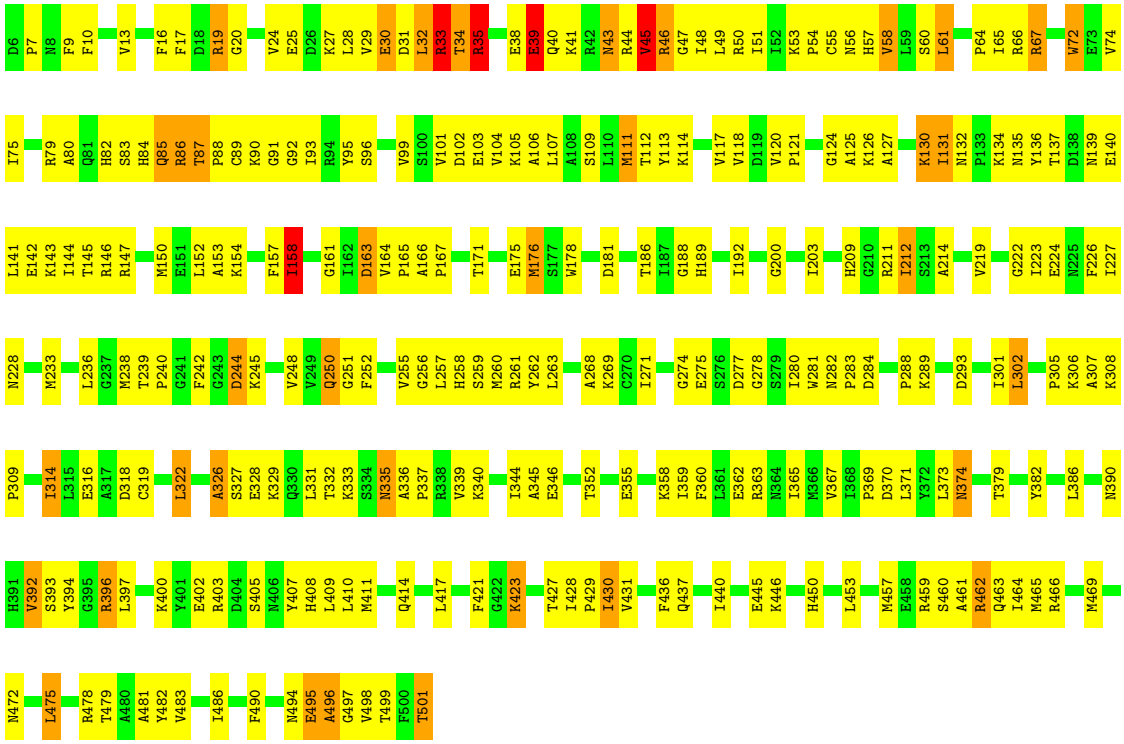
Chain F:



- Molecule 1: Glutamate dehydrogenase 1

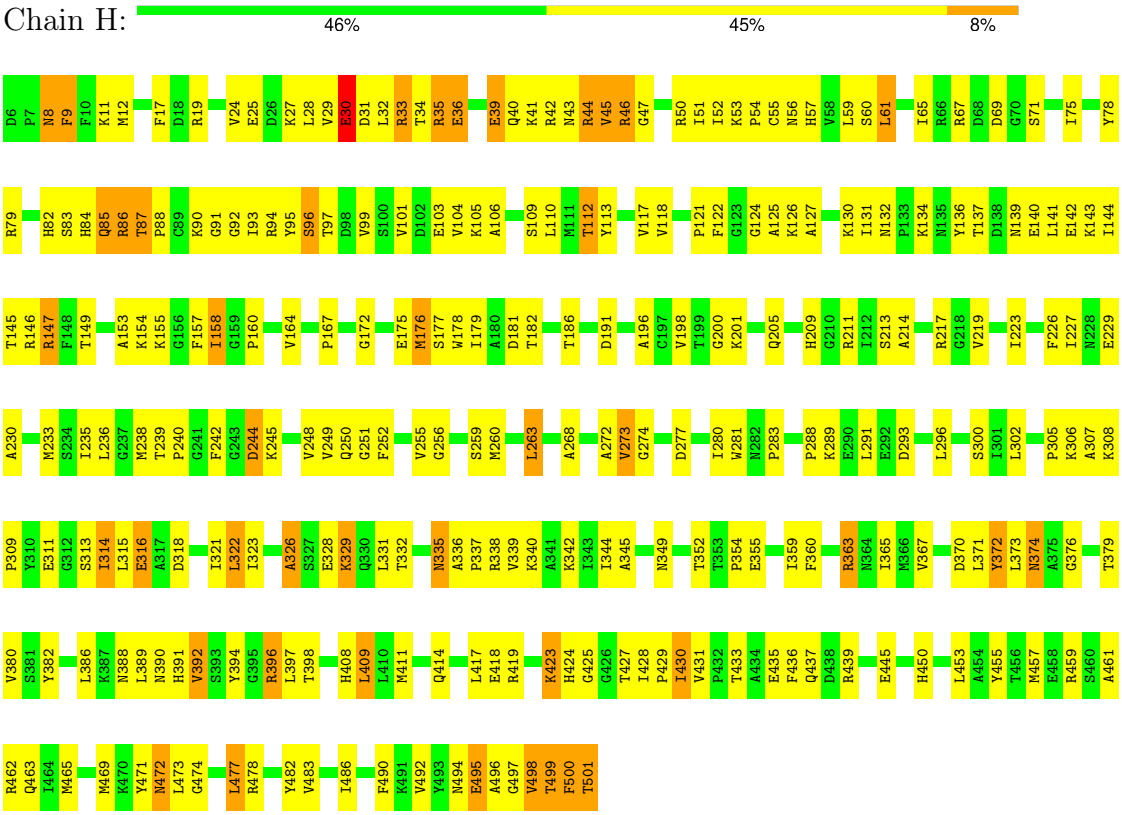
Chain G:





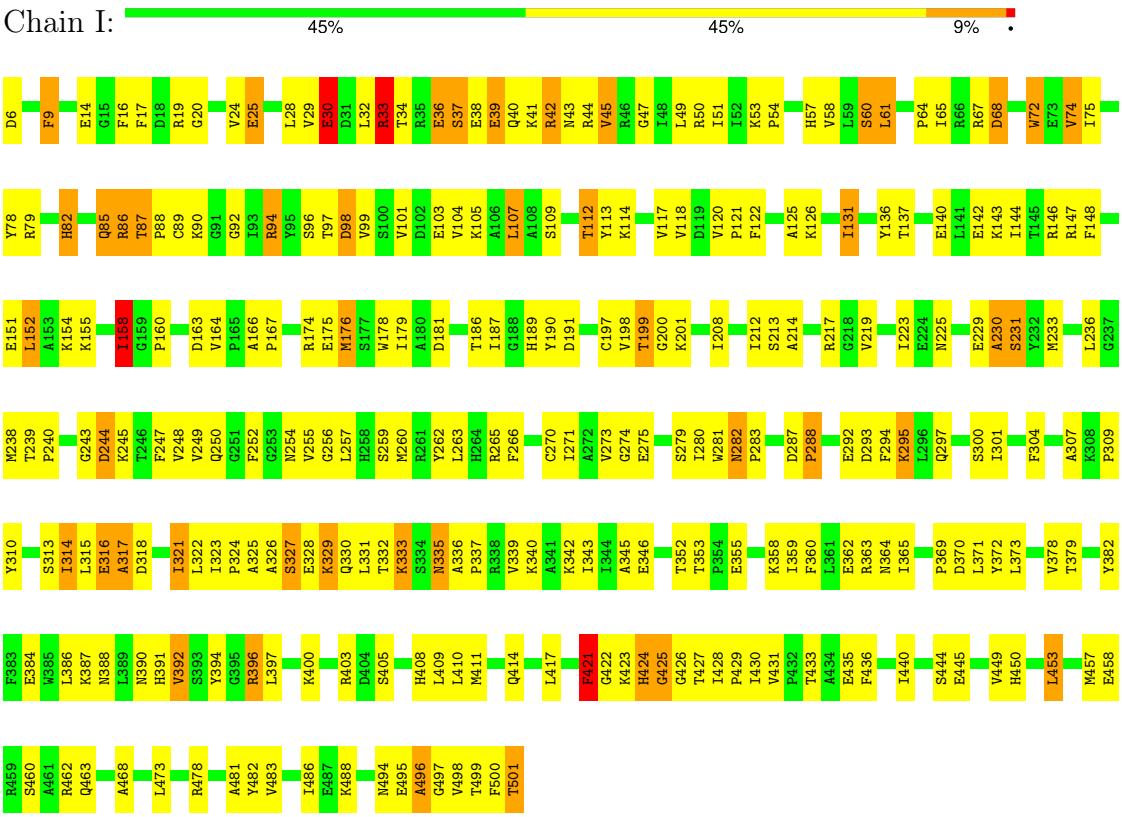
- Molecule 1: Glutamate dehydrogenase 1

Chain H:



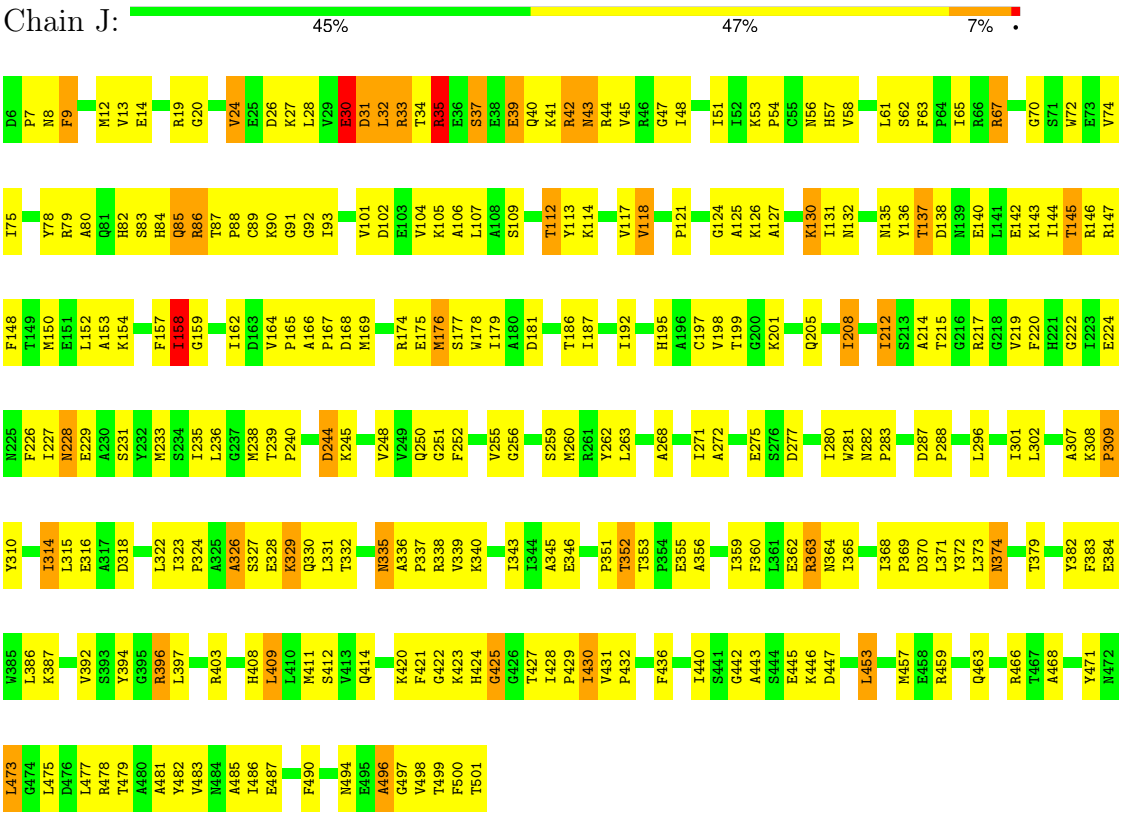
• Molecule 1: Glutamate dehydrogenase 1

Chain I:



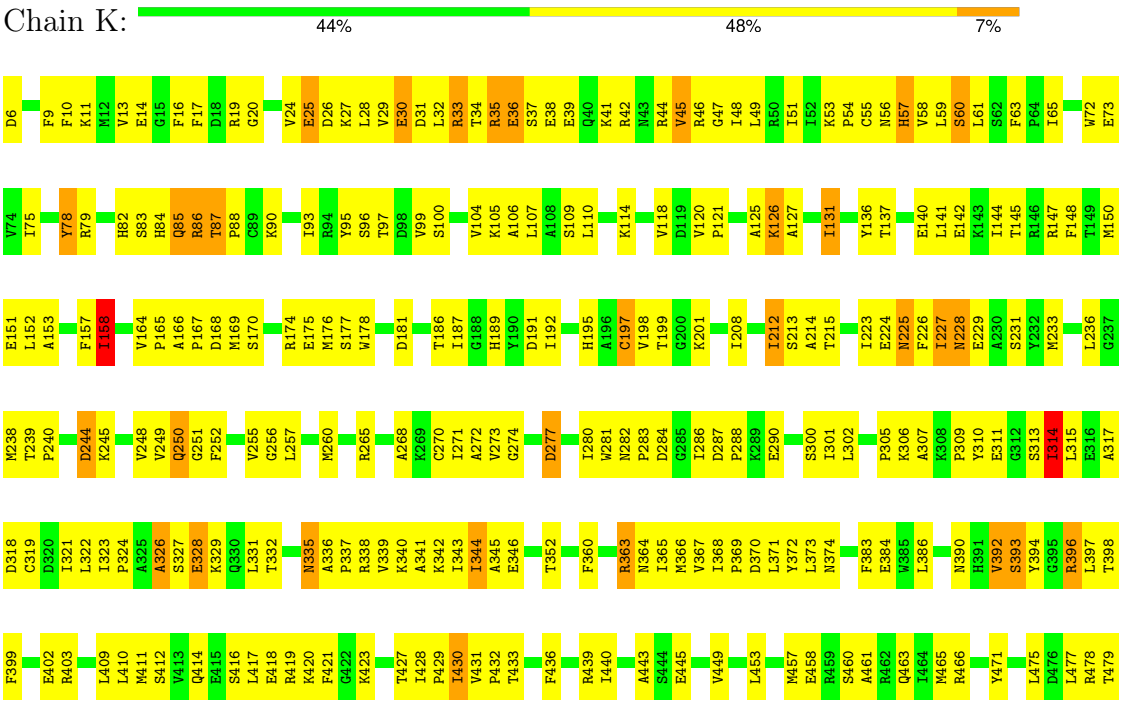
• Molecule 1: Glutamate dehydrogenase 1

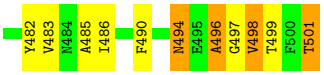
Chain J:



• Molecule 1: Glutamate dehydrogenase 1

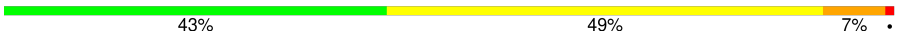
Chain K:

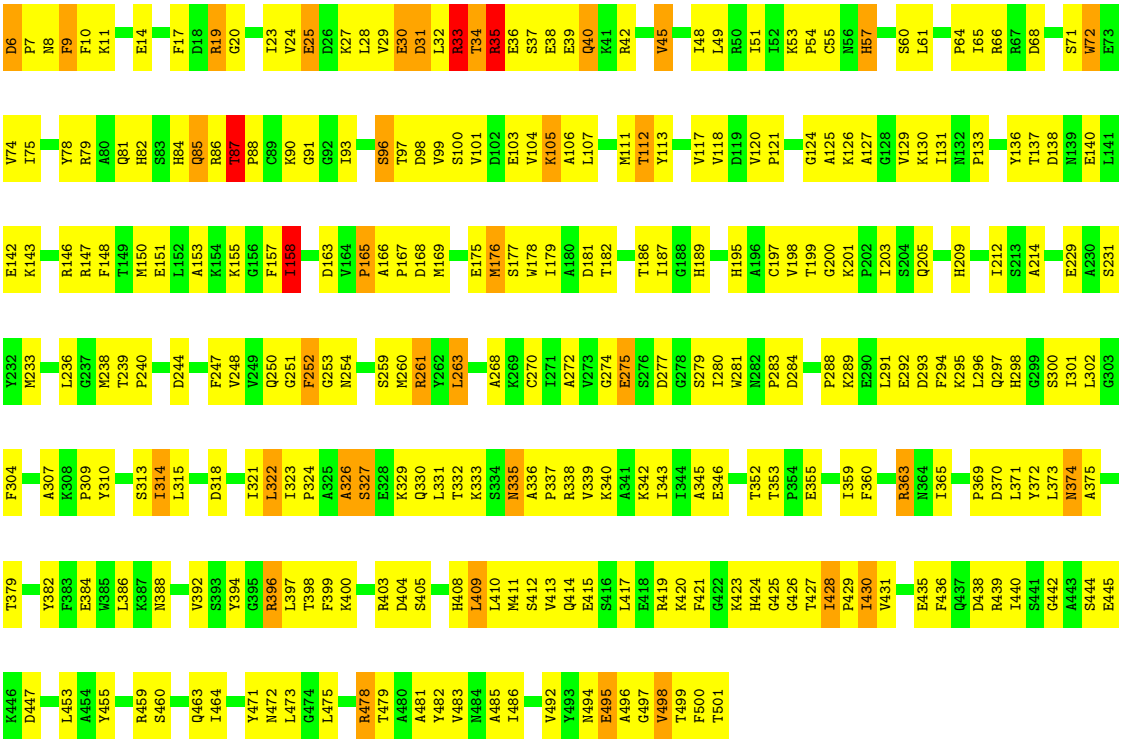




• Molecule 1: Glutamate dehydrogenase 1

Chain L:





4 Data and refinement statistics (i)

Xtriage (Phenix) and EDS were not executed - this section is therefore incomplete.

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	96.46Å 172.06Å 440.75Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	19.99 – 3.30	Depositor
% Data completeness (in resolution range)	94.0 (19.99-3.30)	Depositor
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
Refinement program	CNS	Depositor
R, R_{free}	0.218 , 0.301	Depositor
Estimated twinning fraction	No twinning to report.	Xtriage
Total number of atoms	46488	wwPDB-VP
Average B, all atoms (Å^2)	53.0	wwPDB-VP

5 Model quality (i)

5.1 Standard geometry (i)

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\#\|Z\|>5$	RMSZ	$\#\|Z\|>5$
1	A	0.43	1/3958 (0.0%)	0.62	0/5340
1	B	0.48	1/3958 (0.0%)	0.64	0/5340
1	C	0.46	0/3958	0.65	0/5340
1	D	0.45	0/3958	0.63	1/5340 (0.0%)
1	E	0.48	0/3958	0.66	0/5340
1	F	0.48	0/3958	0.65	1/5340 (0.0%)
1	G	0.53	2/3958 (0.1%)	0.67	2/5340 (0.0%)
1	H	0.48	0/3958	0.66	1/5340 (0.0%)
1	I	0.43	0/3958	0.63	2/5340 (0.0%)
1	J	0.46	1/3958 (0.0%)	0.64	1/5340 (0.0%)
1	K	0.47	1/3958 (0.0%)	0.64	0/5340
1	L	0.46	0/3958	0.65	1/5340 (0.0%)
All	All	0.47	6/47496 (0.0%)	0.64	9/64080 (0.0%)

All (6) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B	197	CYS	CB-SG	-7.83	1.69	1.82
1	G	45	VAL	CB-CG1	6.31	1.66	1.52
1	J	89	CYS	CB-SG	-6.18	1.71	1.82
1	K	197	CYS	CB-SG	-5.46	1.73	1.81
1	A	89	CYS	CB-SG	-5.35	1.73	1.81
1	G	55	CYS	CB-SG	-5.02	1.73	1.81

All (9) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	H	30	GLU	N-CA-C	7.50	131.25	111.00
1	I	30	GLU	N-CA-C	7.01	129.92	111.00
1	G	34	THR	N-CA-C	-6.43	93.65	111.00
1	L	34	THR	N-CA-C	-5.64	95.78	111.00
1	I	36	GLU	N-CA-C	-5.35	96.55	111.00
1	J	37	SER	N-CA-C	5.33	125.38	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	G	43	ASN	N-CA-C	-5.32	96.63	111.00
1	F	35	ARG	N-CA-C	-5.32	96.64	111.00
1	D	158	ILE	N-CA-C	-5.22	96.90	111.00

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	3874	0	3841	295	0
1	B	3874	0	3841	317	0
1	C	3874	0	3841	323	0
1	D	3874	0	3841	299	0
1	E	3874	0	3841	300	0
1	F	3874	0	3841	310	0
1	G	3874	0	3841	305	0
1	H	3874	0	3841	272	0
1	I	3874	0	3841	304	0
1	J	3874	0	3841	277	0
1	K	3874	0	3841	309	0
1	L	3874	0	3841	312	0
All	All	46488	0	46092	3398	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 (3398) 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:33:ARG:HH11	1:G:33:ARG:HB2	1.04	1.14
1:L:33:ARG:HH11	1:L:33:ARG:HB2	1.06	1.11
1:C:28:LEU:HA	1:C:32:LEU:HD22	1.33	1.10
1:C:47:GLY:HA2	1:C:50:ARG:HD3	1.28	1.10
1:A:323:ILE:HG22	1:A:345:ALA:HB3	1.32	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:414:GLN:HG3	1:F:429:PRO:HD2	1.36	1.07
1:L:323:ILE:HG22	1:L:345:ALA:HB3	1.29	1.07
1:I:323:ILE:HG22	1:I:345:ALA:HB3	1.36	1.06
1:K:323:ILE:HG22	1:K:345:ALA:HB3	1.34	1.04
1:E:314:ILE:H	1:E:314:ILE:HD13	1.21	1.04
1:D:87:THR:HB	1:D:88:PRO:HD3	1.34	1.03
1:A:423:LYS:HD3	1:A:426:GLY:HA3	1.40	1.02
1:D:112:THR:HG22	1:D:124:GLY:H	1.23	1.02
1:G:212:ILE:H	1:G:212:ILE:HD12	1.24	1.02
1:D:186:THR:HG23	1:F:186:THR:HG23	1.40	1.02
1:I:427:THR:HG22	1:I:429:PRO:HD3	1.39	1.01
1:G:112:THR:HG22	1:G:124:GLY:H	1.26	1.01
1:C:314:ILE:HD13	1:C:314:ILE:H	1.27	1.00
1:I:37:SER:HA	1:I:42:ARG:CZ	1.92	1.00
1:D:323:ILE:HG22	1:D:345:ALA:HB3	1.42	0.99
1:F:43:ASN:O	1:F:46:ARG:HG3	1.61	0.99
1:C:27:LYS:O	1:C:32:LEU:HD13	1.60	0.99
1:B:186:THR:HG23	1:E:186:THR:HG23	1.45	0.99
1:E:112:THR:HG22	1:E:124:GLY:H	1.28	0.98
1:B:313:SER:HB2	1:B:315:LEU:HD13	1.45	0.97
1:F:33:ARG:HB2	1:F:33:ARG:CZ	1.94	0.97
1:F:498:VAL:HG23	1:F:499:THR:H	1.29	0.97
1:K:87:THR:OG1	1:K:88:PRO:HD3	1.65	0.96
1:G:87:THR:HB	1:G:88:PRO:HD3	1.47	0.96
1:B:212:ILE:H	1:B:212:ILE:HD12	1.29	0.96
1:L:33:ARG:HB2	1:L:33:ARG:NH1	1.80	0.96
1:H:313:SER:HB3	1:H:315:LEU:HD13	1.46	0.95
1:I:498:VAL:HG23	1:I:499:THR:H	1.31	0.95
1:L:498:VAL:HG23	1:L:499:THR:H	1.28	0.95
1:G:39:GLU:O	1:G:41:LYS:HG3	1.66	0.95
1:G:314:ILE:HD13	1:G:314:ILE:H	1.31	0.95
1:H:87:THR:HB	1:H:88:PRO:HD3	1.47	0.95
1:F:20:GLY:O	1:F:24:VAL:HG23	1.68	0.94
1:D:236:LEU:HB2	1:D:238:MET:HG2	1.49	0.94
1:F:323:ILE:HG22	1:F:345:ALA:HB3	1.46	0.94
1:L:338:ARG:HB3	1:L:338:ARG:HH11	1.31	0.93
1:L:9:PHE:HD1	1:L:10:PHE:H	1.10	0.93
1:K:107:LEU:HD13	1:K:126:LYS:HE2	1.48	0.93
1:K:498:VAL:HG23	1:K:499:THR:H	1.31	0.93
1:F:9:PHE:HD1	1:F:10:PHE:H	1.16	0.93
1:J:186:THR:HG23	1:L:186:THR:HG23	1.50	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:498:VAL:HG23	1:H:499:THR:H	1.30	0.92
1:F:314:ILE:HD13	1:F:314:ILE:H	1.33	0.92
1:B:87:THR:OG1	1:B:88:PRO:HD2	1.69	0.92
1:H:28:LEU:HA	1:H:32:LEU:HD12	1.52	0.92
1:L:212:ILE:H	1:L:212:ILE:HD12	1.32	0.92
1:C:396:ARG:O	1:C:396:ARG:HD3	1.68	0.91
1:G:33:ARG:HB2	1:G:33:ARG:NH1	1.84	0.91
1:A:428:ILE:HG21	1:H:428:ILE:HG21	1.50	0.91
1:F:33:ARG:HB2	1:F:33:ARG:NH1	1.86	0.90
1:C:38:GLU:HB2	1:C:42:ARG:NH2	1.86	0.90
1:L:38:GLU:HB2	1:L:42:ARG:NH2	1.86	0.90
1:L:112:THR:HG22	1:L:124:GLY:HA3	1.50	0.90
1:J:33:ARG:NH2	1:J:494:ASN:HD21	1.68	0.90
1:G:67:ARG:HB3	1:G:67:ARG:HH11	1.35	0.90
1:F:8:ASN:HD21	1:F:11:LYS:HG2	1.37	0.90
1:K:463:GLN:HG2	1:K:466:ARG:HH22	1.34	0.90
1:B:137:THR:HG23	1:B:140:GLU:HG3	1.52	0.90
1:A:498:VAL:HG23	1:A:499:THR:H	1.37	0.90
1:I:82:HIS:CD2	1:I:112:THR:HG21	2.07	0.90
1:K:250:GLN:HG2	1:K:314:ILE:HD11	1.52	0.89
1:J:24:VAL:O	1:J:28:LEU:HB2	1.72	0.89
1:F:65:ILE:HA	1:F:147:ARG:NH1	1.88	0.89
1:D:428:ILE:HD13	1:D:428:ILE:H	1.35	0.89
1:G:95:TYR:OH	1:G:145:THR:HG22	1.72	0.89
1:I:65:ILE:HA	1:I:147:ARG:NH1	1.88	0.88
1:A:87:THR:HB	1:A:88:PRO:HD3	1.52	0.88
1:C:82:HIS:CD2	1:C:112:THR:HG21	2.09	0.88
1:J:212:ILE:H	1:J:212:ILE:HD12	1.35	0.88
1:L:332:THR:H	1:L:335:ASN:HD21	1.17	0.88
1:J:432:PRO:HA	1:K:412:SER:OG	1.73	0.88
1:B:323:ILE:HG22	1:B:345:ALA:HB3	1.55	0.88
1:G:186:THR:HG23	1:I:186:THR:HG23	1.53	0.88
1:L:38:GLU:HB2	1:L:42:ARG:HH21	1.35	0.88
1:J:498:VAL:HG23	1:J:499:THR:H	1.38	0.87
1:I:94:ARG:HB2	1:I:94:ARG:HH11	1.38	0.87
1:F:427:THR:HG22	1:F:429:PRO:HD3	1.56	0.87
1:C:65:ILE:HG12	1:C:75:ILE:HD11	1.56	0.87
1:D:331:LEU:HD12	1:D:352:THR:HG22	1.54	0.87
1:D:38:GLU:O	1:D:40:GLN:N	2.08	0.86
1:G:423:LYS:HA	1:G:423:LYS:HE2	1.57	0.86
1:G:82:HIS:CD2	1:G:112:THR:HG21	2.10	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:82:HIS:HD2	1:G:112:THR:HG21	1.40	0.86
1:C:87:THR:HB	1:C:88:PRO:HD3	1.54	0.86
1:C:498:VAL:HG23	1:C:499:THR:H	1.40	0.86
1:B:314:ILE:H	1:B:314:ILE:HD13	1.39	0.86
1:G:250:GLN:HG2	1:G:314:ILE:HD11	1.56	0.86
1:J:87:THR:HB	1:J:88:PRO:HD3	1.57	0.85
1:E:82:HIS:HD2	1:E:112:THR:HG21	1.41	0.85
1:D:498:VAL:HG23	1:D:499:THR:H	1.39	0.85
1:G:112:THR:HG22	1:G:124:GLY:N	1.90	0.85
1:I:33:ARG:NH1	1:I:33:ARG:HB2	1.92	0.85
1:D:314:ILE:HD13	1:D:314:ILE:H	1.40	0.85
1:G:280:ILE:HG23	1:G:307:ALA:HB1	1.57	0.85
1:H:250:GLN:HG3	1:H:315:LEU:HD11	1.58	0.85
1:H:427:THR:HG22	1:H:429:PRO:HD3	1.56	0.85
1:C:280:ILE:HG23	1:C:307:ALA:HB1	1.59	0.85
1:F:112:THR:HG22	1:F:124:GLY:HA3	1.58	0.85
1:I:38:GLU:O	1:I:39:GLU:HB2	1.74	0.85
1:B:35:ARG:N	1:B:35:ARG:HH11	1.75	0.85
1:C:24:VAL:HG22	1:C:483:VAL:HG13	1.59	0.85
1:F:82:HIS:CD2	1:F:112:THR:HG21	2.11	0.85
1:L:250:GLN:HE22	1:L:326:ALA:HB3	1.42	0.85
1:L:9:PHE:HD1	1:L:10:PHE:N	1.74	0.84
1:F:313:SER:HB2	1:F:315:LEU:HD13	1.59	0.84
1:I:280:ILE:HG23	1:I:307:ALA:HB1	1.59	0.84
1:J:459:ARG:O	1:J:463:GLN:HG3	1.77	0.84
1:B:280:ILE:HG23	1:B:307:ALA:HB1	1.58	0.84
1:A:280:ILE:HG23	1:A:307:ALA:HB1	1.59	0.84
1:K:239:THR:N	1:K:240:PRO:HD3	1.92	0.84
1:E:65:ILE:HG22	1:E:147:ARG:HD2	1.60	0.84
1:J:280:ILE:HG23	1:J:307:ALA:HB1	1.60	0.84
1:K:301:ILE:HD12	1:K:302:LEU:HD12	1.59	0.84
1:K:280:ILE:HG23	1:K:307:ALA:HB1	1.57	0.84
1:A:336:ALA:HB3	1:A:337:PRO:HD3	1.60	0.84
1:C:239:THR:N	1:C:240:PRO:HD3	1.93	0.84
1:L:338:ARG:HB3	1:L:338:ARG:NH1	1.92	0.84
1:G:339:VAL:HG21	1:G:360:PHE:HE1	1.41	0.83
1:L:79:ARG:HD2	1:L:127:ALA:HB2	1.60	0.83
1:F:167:PRO:HG3	1:F:176:MET:SD	2.19	0.83
1:G:39:GLU:OE1	1:G:39:GLU:HA	1.78	0.83
1:F:403:ARG:HH11	1:F:440:ILE:HG22	1.44	0.83
1:F:246:THR:HB	1:F:271:ILE:HD11	1.59	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:34:THR:O	1:L:35:ARG:HG2	1.78	0.83
1:K:274:GLY:HA3	1:K:314:ILE:HD12	1.61	0.83
1:E:24:VAL:HG22	1:E:483:VAL:HG13	1.60	0.82
1:H:30:GLU:HA	1:H:34:THR:OG1	1.77	0.82
1:E:65:ILE:HA	1:E:147:ARG:NH1	1.93	0.82
1:G:137:THR:HG22	1:G:139:ASN:H	1.44	0.82
1:B:332:THR:H	1:B:335:ASN:HD21	1.28	0.82
1:G:39:GLU:O	1:G:41:LYS:N	2.13	0.82
1:L:247:PHE:HB3	1:L:321:ILE:HG13	1.61	0.82
1:G:65:ILE:HA	1:G:147:ARG:NH1	1.94	0.82
1:F:95:TYR:OH	1:F:145:THR:HG22	1.80	0.82
1:I:313:SER:HB2	1:I:315:LEU:HD13	1.59	0.82
1:C:32:LEU:N	1:C:32:LEU:HD12	1.93	0.82
1:H:280:ILE:HG23	1:H:307:ALA:HB1	1.59	0.82
1:A:482:TYR:O	1:A:486:ILE:HG12	1.80	0.82
1:B:95:TYR:OH	1:B:145:THR:HG22	1.79	0.82
1:H:239:THR:N	1:H:240:PRO:HD3	1.94	0.81
1:K:107:LEU:HA	1:K:110:LEU:HD13	1.62	0.81
1:A:186:THR:HG23	1:C:186:THR:HG23	1.61	0.81
1:C:361:LEU:HD11	1:C:476:ASP:HB2	1.62	0.81
1:L:9:PHE:CD1	1:L:10:PHE:N	2.46	0.81
1:L:239:THR:N	1:L:240:PRO:HD3	1.94	0.81
1:I:37:SER:O	1:I:38:GLU:HG3	1.79	0.81
1:I:314:ILE:HD13	1:I:314:ILE:H	1.44	0.81
1:B:250:GLN:HG2	1:B:314:ILE:HD11	1.60	0.81
1:F:274:GLY:HA3	1:F:314:ILE:HD12	1.61	0.80
1:G:101:VAL:HG12	1:G:105:LYS:HD2	1.63	0.80
1:L:112:THR:HG22	1:L:124:GLY:CA	2.12	0.80
1:C:112:THR:HG22	1:C:124:GLY:HA3	1.61	0.80
1:K:332:THR:H	1:K:335:ASN:HD21	1.27	0.80
1:L:313:SER:HB2	1:L:315:LEU:HD13	1.63	0.80
1:J:82:HIS:CD2	1:J:112:THR:HG21	2.16	0.80
1:D:280:ILE:HG23	1:D:307:ALA:HB1	1.64	0.80
1:G:274:GLY:HA3	1:G:314:ILE:HD12	1.63	0.80
1:L:29:VAL:O	1:L:33:ARG:HG3	1.80	0.80
1:F:19:ARG:HH11	1:F:19:ARG:HG3	1.47	0.79
1:A:58:VAL:HG13	1:E:60:SER:HB2	1.63	0.79
1:E:280:ILE:HG23	1:E:307:ALA:HB1	1.62	0.79
1:F:280:ILE:HG23	1:F:307:ALA:HB1	1.62	0.79
1:D:39:GLU:O	1:D:41:LYS:HG2	1.82	0.79
1:F:345:ALA:HB1	1:F:373:LEU:HD21	1.64	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:38:GLU:H	1:L:42:ARG:HE	1.29	0.79
1:L:57:HIS:CD2	1:L:84:HIS:HE1	2.00	0.79
1:K:38:GLU:HB2	1:K:42:ARG:HH21	1.48	0.79
1:K:277:ASP:HB3	1:K:302:LEU:HD11	1.64	0.79
1:G:482:TYR:O	1:G:486:ILE:HG12	1.83	0.79
1:L:314:ILE:HD13	1:L:314:ILE:H	1.46	0.79
1:A:28:LEU:HD12	1:A:32:LEU:HD22	1.62	0.79
1:K:313:SER:HB2	1:K:315:LEU:HD13	1.65	0.79
1:I:36:GLU:O	1:I:37:SER:O	2.01	0.78
1:B:339:VAL:HG21	1:B:360:PHE:HE1	1.47	0.78
1:H:314:ILE:H	1:H:314:ILE:HD13	1.45	0.78
1:J:345:ALA:HB1	1:J:373:LEU:HD21	1.64	0.78
1:D:239:THR:N	1:D:240:PRO:HD3	1.99	0.78
1:C:459:ARG:O	1:C:463:GLN:HG3	1.83	0.78
1:D:227:ILE:HD12	1:D:321:ILE:HD11	1.65	0.78
1:E:82:HIS:CD2	1:E:112:THR:HG21	2.18	0.78
1:I:239:THR:N	1:I:240:PRO:HD3	1.98	0.78
1:L:482:TYR:O	1:L:486:ILE:HG12	1.83	0.78
1:D:87:THR:HB	1:D:88:PRO:CD	2.12	0.78
1:D:112:THR:HG22	1:D:124:GLY:N	1.98	0.78
1:C:65:ILE:HA	1:C:147:ARG:NH1	1.99	0.78
1:D:250:GLN:HG2	1:D:314:ILE:HD11	1.64	0.78
1:F:239:THR:N	1:F:240:PRO:HD3	1.99	0.78
1:H:308:LYS:HD2	1:H:309:PRO:HD2	1.65	0.78
1:L:24:VAL:HG22	1:L:483:VAL:HG13	1.65	0.78
1:G:65:ILE:HG22	1:G:147:ARG:HD2	1.63	0.78
1:B:239:THR:N	1:B:240:PRO:HD3	1.98	0.77
1:B:345:ALA:HB1	1:B:373:LEU:HD21	1.65	0.77
1:D:95:TYR:OH	1:D:145:THR:HG22	1.84	0.77
1:E:79:ARG:HH11	1:E:127:ALA:HB2	1.49	0.77
1:K:314:ILE:HD13	1:K:314:ILE:H	1.50	0.77
1:F:29:VAL:O	1:F:29:VAL:HG12	1.85	0.77
1:H:82:HIS:ND1	1:H:112:THR:HG21	1.99	0.77
1:I:30:GLU:HA	1:I:34:THR:OG1	1.85	0.77
1:K:158:ILE:HG23	1:K:158:ILE:O	1.83	0.77
1:B:176:MET:HE3	1:B:179:ILE:HD12	1.65	0.77
1:C:38:GLU:O	1:C:39:GLU:HB3	1.85	0.77
1:A:239:THR:N	1:A:240:PRO:HD3	2.00	0.77
1:C:499:THR:HG21	1:F:147:ARG:CD	2.14	0.77
1:E:274:GLY:HA3	1:E:314:ILE:HD12	1.66	0.77
1:F:47:GLY:HA2	1:F:50:ARG:HG2	1.64	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:42:ARG:O	1:J:45:VAL:HG12	1.84	0.77
1:J:67:ARG:HB3	1:J:67:ARG:HH11	1.49	0.77
1:L:336:ALA:HB3	1:L:337:PRO:HD3	1.65	0.77
1:E:331:LEU:HD12	1:E:352:THR:HG22	1.67	0.77
1:L:82:HIS:CD2	1:L:112:THR:HG21	2.20	0.76
1:L:427:THR:HG22	1:L:429:PRO:HD3	1.66	0.76
1:F:277:ASP:HB2	1:F:302:LEU:HD11	1.67	0.76
1:B:227:ILE:HD12	1:B:233:MET:SD	2.26	0.76
1:D:86:ARG:HG2	1:D:121:PRO:HA	1.67	0.76
1:E:323:ILE:HG22	1:E:345:ALA:HB3	1.67	0.76
1:L:118:VAL:HG23	1:L:120:VAL:HG23	1.67	0.76
1:E:329:LYS:HB3	1:E:329:LYS:NZ	2.01	0.76
1:C:339:VAL:HG21	1:C:360:PHE:HE1	1.51	0.75
1:L:247:PHE:CB	1:L:321:ILE:HG13	2.16	0.75
1:L:248:VAL:HB	1:L:322:LEU:HD22	1.68	0.75
1:E:112:THR:HG22	1:E:124:GLY:N	1.99	0.75
1:F:250:GLN:HG2	1:F:314:ILE:HD11	1.68	0.75
1:H:91:GLY:HA3	1:H:125:ALA:O	1.86	0.75
1:L:65:ILE:HA	1:L:147:ARG:NH1	2.01	0.75
1:H:274:GLY:HA3	1:H:314:ILE:HD12	1.67	0.75
1:K:20:GLY:O	1:K:24:VAL:HG23	1.85	0.75
1:J:20:GLY:O	1:J:24:VAL:HG22	1.86	0.75
1:D:65:ILE:HD13	1:D:144:ILE:HG12	1.69	0.75
1:D:482:TYR:O	1:D:486:ILE:HG12	1.86	0.75
1:L:498:VAL:HG23	1:L:499:THR:N	2.02	0.75
1:B:274:GLY:HA3	1:B:314:ILE:HD12	1.69	0.75
1:E:394:TYR:HB2	1:E:445:GLU:HG3	1.68	0.75
1:D:275:GLU:OE1	1:D:301:ILE:HG13	1.87	0.74
1:E:396:ARG:O	1:E:396:ARG:HD3	1.86	0.74
1:I:274:GLY:HA3	1:I:314:ILE:HD12	1.67	0.74
1:B:201:LYS:NZ	1:B:388:ASN:HD21	1.84	0.74
1:G:143:LYS:O	1:G:147:ARG:HG3	1.87	0.74
1:C:482:TYR:O	1:C:486:ILE:HG12	1.86	0.74
1:F:414:GLN:CG	1:F:429:PRO:HD2	2.17	0.74
1:G:498:VAL:HG23	1:G:499:THR:H	1.52	0.74
1:I:181:ASP:OD1	1:K:501:THR:HG23	1.88	0.74
1:I:167:PRO:HG3	1:I:176:MET:SD	2.27	0.74
1:G:167:PRO:HG3	1:G:176:MET:SD	2.28	0.74
1:A:314:ILE:HD13	1:A:314:ILE:H	1.53	0.74
1:J:396:ARG:HH11	1:J:396:ARG:HG3	1.53	0.74
1:K:339:VAL:HG21	1:K:360:PHE:HE1	1.53	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:118:VAL:HG23	1:A:120:VAL:HG23	1.68	0.74
1:H:482:TYR:O	1:H:486:ILE:HG12	1.88	0.74
1:I:39:GLU:O	1:I:40:GLN:HB3	1.88	0.74
1:J:239:THR:N	1:J:240:PRO:HD3	2.02	0.74
1:J:482:TYR:O	1:J:486:ILE:HG12	1.87	0.74
1:B:28:LEU:HD12	1:B:32:LEU:HD12	1.70	0.74
1:D:47:GLY:HA2	1:D:50:ARG:HG2	1.69	0.74
1:G:332:THR:H	1:G:335:ASN:HD21	1.36	0.74
1:C:499:THR:HG21	1:F:147:ARG:HD3	1.67	0.73
1:E:142:GLU:O	1:E:146:ARG:HG3	1.88	0.73
1:I:212:ILE:HG23	1:I:254:ASN:HD21	1.53	0.73
1:B:167:PRO:HG3	1:B:176:MET:SD	2.27	0.73
1:J:220:PHE:HD2	1:J:263:LEU:HD12	1.53	0.73
1:D:6:ASP:O	1:D:6:ASP:OD2	2.05	0.73
1:D:332:THR:H	1:D:335:ASN:HD21	1.35	0.73
1:E:176:MET:HE3	1:E:179:ILE:HD12	1.70	0.73
1:G:67:ARG:HB3	1:G:67:ARG:NH1	2.04	0.73
1:G:459:ARG:O	1:G:463:GLN:HG3	1.87	0.73
1:K:95:TYR:OH	1:K:145:THR:HG22	1.88	0.73
1:C:31:ASP:HB2	1:C:32:LEU:HD12	1.71	0.73
1:C:346:GLU:OE1	1:C:369:PRO:HA	1.88	0.73
1:I:24:VAL:HG22	1:I:483:VAL:HG13	1.70	0.73
1:F:158:ILE:O	1:F:158:ILE:HD13	1.89	0.73
1:F:239:THR:HG23	1:F:239:THR:O	1.89	0.73
1:J:371:LEU:HD23	1:J:481:ALA:HB1	1.70	0.73
1:K:45:VAL:O	1:K:48:ILE:HG12	1.89	0.73
1:L:280:ILE:HG23	1:L:307:ALA:HB1	1.69	0.73
1:A:24:VAL:HG22	1:A:483:VAL:HG13	1.70	0.73
1:E:339:VAL:HG21	1:E:360:PHE:HE1	1.54	0.73
1:E:421:PHE:CE1	1:E:423:LYS:HB2	2.24	0.73
1:A:158:ILE:O	1:A:158:ILE:HD13	1.89	0.73
1:B:35:ARG:HH11	1:B:35:ARG:H	1.36	0.73
1:B:498:VAL:HG23	1:B:499:THR:H	1.53	0.73
1:C:274:GLY:HA3	1:C:314:ILE:HD12	1.69	0.73
1:H:8:ASN:HD22	1:H:8:ASN:N	1.87	0.73
1:C:118:VAL:HG21	1:C:375:ALA:HB1	1.71	0.72
1:G:239:THR:HG23	1:G:239:THR:O	1.89	0.72
1:I:394:TYR:HB2	1:I:445:GLU:HG3	1.70	0.72
1:C:65:ILE:HG22	1:C:147:ARG:HD2	1.71	0.72
1:K:24:VAL:HG12	1:K:28:LEU:HB2	1.71	0.72
1:D:336:ALA:HB3	1:D:337:PRO:HD3	1.71	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:87:THR:OG1	1:B:88:PRO:CD	2.38	0.72
1:C:79:ARG:HD3	1:C:127:ALA:HB2	1.70	0.72
1:A:79:ARG:HH11	1:A:127:ALA:HB2	1.54	0.72
1:F:175:GLU:HA	1:F:178:TRP:CE3	2.25	0.72
1:I:250:GLN:HG2	1:I:314:ILE:HD11	1.72	0.72
1:C:112:THR:HG22	1:C:124:GLY:CA	2.20	0.72
1:G:56:ASN:HB2	1:G:84:HIS:HE1	1.53	0.72
1:G:239:THR:N	1:G:240:PRO:HD3	2.03	0.72
1:I:339:VAL:HG21	1:I:360:PHE:HE1	1.54	0.72
1:B:137:THR:HG23	1:B:140:GLU:CG	2.20	0.72
1:K:96:SER:O	1:K:99:VAL:HG22	1.90	0.72
1:D:501:THR:HG23	1:E:181:ASP:OD1	1.90	0.72
1:F:8:ASN:ND2	1:F:11:LYS:HG2	2.03	0.72
1:J:142:GLU:O	1:J:146:ARG:HG3	1.90	0.72
1:L:459:ARG:O	1:L:463:GLN:HG3	1.89	0.72
1:A:130:LYS:O	1:A:131:ILE:HD12	1.88	0.72
1:H:153:ALA:HA	1:H:158:ILE:HG22	1.70	0.72
1:J:336:ALA:HB3	1:J:337:PRO:HD3	1.69	0.72
1:B:335:ASN:HD22	1:B:335:ASN:H	1.34	0.71
1:G:130:LYS:O	1:G:131:ILE:HD12	1.90	0.71
1:K:131:ILE:HG12	1:K:136:TYR:CE2	2.25	0.71
1:E:33:ARG:NH1	1:E:33:ARG:HB2	2.04	0.71
1:E:277:ASP:HB2	1:E:302:LEU:HD11	1.72	0.71
1:G:411:MET:SD	1:G:430:ILE:HG21	2.30	0.71
1:H:8:ASN:ND2	1:H:8:ASN:H	1.87	0.71
1:K:360:PHE:HB3	1:K:365:ILE:HB	1.71	0.71
1:H:87:THR:CB	1:H:88:PRO:HD3	2.21	0.71
1:H:344:ILE:HB	1:H:367:VAL:HG12	1.73	0.71
1:D:345:ALA:HB1	1:D:373:LEU:HD21	1.73	0.71
1:I:34:THR:O	1:I:34:THR:HG22	1.91	0.71
1:K:482:TYR:O	1:K:486:ILE:HG12	1.91	0.71
1:C:143:LYS:O	1:C:147:ARG:HG3	1.91	0.71
1:C:339:VAL:HG21	1:C:360:PHE:CE1	2.25	0.71
1:F:65:ILE:HG22	1:F:147:ARG:HD2	1.71	0.71
1:G:113:TYR:O	1:G:117:VAL:HG23	1.90	0.71
1:I:339:VAL:HG22	1:I:363:ARG:HH21	1.55	0.71
1:A:500:PHE:HB3	1:B:142:GLU:OE1	1.91	0.71
1:D:274:GLY:HA3	1:D:314:ILE:HD12	1.73	0.71
1:D:301:ILE:HD12	1:D:302:LEU:HD12	1.73	0.71
1:F:9:PHE:HD1	1:F:10:PHE:N	1.88	0.71
1:G:50:ARG:HH12	1:K:73:GLU:HA	1.56	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:50:ARG:NH1	1:K:73:GLU:HA	2.06	0.71
1:K:167:PRO:HG3	1:K:176:MET:HG3	1.73	0.70
1:L:423:LYS:HG2	1:L:426:GLY:HA3	1.72	0.70
1:F:498:VAL:HG23	1:F:499:THR:N	2.06	0.70
1:I:101:VAL:HG12	1:I:105:LYS:HE3	1.73	0.70
1:K:394:TYR:HB2	1:K:445:GLU:HG3	1.72	0.70
1:L:321:ILE:HG22	1:L:343:ILE:HB	1.73	0.70
1:G:427:THR:HG22	1:G:429:PRO:HD3	1.73	0.70
1:J:498:VAL:HG23	1:J:499:THR:N	2.06	0.70
1:B:42:ARG:O	1:B:45:VAL:HG12	1.90	0.70
1:A:82:HIS:ND1	1:A:109:SER:HA	2.07	0.70
1:C:117:VAL:HG21	1:C:371:LEU:HG	1.73	0.70
1:C:258:HIS:HB3	1:C:262:TYR:HE2	1.56	0.70
1:E:421:PHE:CD1	1:E:423:LYS:HB2	2.26	0.70
1:H:158:ILE:HG12	1:H:158:ILE:O	1.90	0.70
1:B:335:ASN:H	1:B:335:ASN:ND2	1.86	0.70
1:G:250:GLN:HG2	1:G:314:ILE:CD1	2.20	0.70
1:B:335:ASN:HD22	1:B:335:ASN:N	1.85	0.70
1:E:314:ILE:H	1:E:314:ILE:CD1	1.99	0.70
1:F:142:GLU:O	1:F:146:ARG:HG3	1.92	0.70
1:A:75:ILE:HG23	1:A:131:ILE:HD13	1.72	0.70
1:D:82:HIS:CD2	1:D:112:THR:HG21	2.26	0.70
1:I:396:ARG:O	1:I:396:ARG:HD3	1.92	0.70
1:D:39:GLU:O	1:D:41:LYS:N	2.24	0.70
1:J:132:ASN:HB3	1:J:135:ASN:ND2	2.07	0.70
1:A:271:ILE:O	1:A:271:ILE:HG12	1.92	0.69
1:I:24:VAL:HG12	1:I:28:LEU:HB2	1.74	0.69
1:D:409:LEU:HG	1:E:409:LEU:HD21	1.74	0.69
1:F:482:TYR:O	1:F:486:ILE:HG12	1.91	0.69
1:G:358:LYS:O	1:G:362:GLU:HG3	1.92	0.69
1:J:248:VAL:HG22	1:J:271:ILE:HG23	1.74	0.69
1:A:332:THR:HA	1:A:353:THR:CG2	2.22	0.69
1:C:32:LEU:CD1	1:C:32:LEU:H	2.05	0.69
1:C:47:GLY:HA2	1:C:50:ARG:CD	2.17	0.69
1:A:274:GLY:HA3	1:A:314:ILE:HD12	1.74	0.69
1:K:13:VAL:HG21	1:K:110:LEU:HD11	1.73	0.69
1:C:142:GLU:O	1:C:146:ARG:HG3	1.92	0.69
1:G:400:LYS:HE2	1:G:403:ARG:HH21	1.58	0.69
1:H:277:ASP:HB2	1:H:302:LEU:HD11	1.74	0.69
1:C:420:LYS:O	1:C:420:LYS:HG2	1.92	0.69
1:F:396:ARG:HH11	1:F:396:ARG:HG3	1.56	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:331:LEU:HD12	1:G:352:THR:HG22	1.73	0.69
1:D:118:VAL:HG23	1:D:120:VAL:HG23	1.72	0.69
1:E:498:VAL:N	1:E:501:THR:HB	2.07	0.69
1:K:212:ILE:HD12	1:K:213:SER:H	1.58	0.69
1:A:496:ALA:HB1	1:A:501:THR:OG1	1.93	0.69
1:B:277:ASP:HB2	1:B:302:LEU:HD11	1.74	0.69
1:C:501:THR:HG23	1:D:181:ASP:OD1	1.92	0.69
1:D:314:ILE:H	1:D:314:ILE:CD1	2.05	0.69
1:H:396:ARG:HG3	1:H:396:ARG:HH11	1.57	0.69
1:H:501:THR:C	1:L:146:ARG:HH12	1.96	0.69
1:I:53:LYS:HB3	1:I:54:PRO:HD3	1.75	0.69
1:J:250:GLN:NE2	1:J:326:ALA:HB3	2.08	0.69
1:E:6:ASP:N	1:E:7:PRO:HD3	2.07	0.69
1:E:414:GLN:HB2	1:E:429:PRO:HD2	1.73	0.69
1:H:95:TYR:OH	1:H:145:THR:HG22	1.93	0.69
1:I:331:LEU:HD12	1:I:352:THR:HG22	1.73	0.69
1:K:30:GLU:HA	1:K:34:THR:OG1	1.93	0.69
1:L:260:MET:HG2	1:L:288:PRO:HG3	1.75	0.69
1:B:186:THR:HG22	1:B:187:ILE:N	2.08	0.68
1:B:439:ARG:HG3	1:B:439:ARG:HH11	1.57	0.68
1:C:158:ILE:O	1:C:158:ILE:HD13	1.92	0.68
1:H:336:ALA:HB3	1:H:337:PRO:HD3	1.74	0.68
1:I:229:GLU:O	1:I:231:SER:N	2.26	0.68
1:J:496:ALA:HB1	1:J:501:THR:OG1	1.93	0.68
1:A:167:PRO:HG3	1:A:176:MET:SD	2.33	0.68
1:B:149:THR:HG23	1:B:158:ILE:HD13	1.74	0.68
1:B:355:GLU:O	1:B:359:ILE:HD13	1.93	0.68
1:D:153:ALA:HA	1:D:158:ILE:HG22	1.74	0.68
1:E:250:GLN:NE2	1:E:326:ALA:HB3	2.08	0.68
1:J:421:PHE:CD1	1:J:423:LYS:HB2	2.29	0.68
1:B:217:ARG:HG2	1:B:221:HIS:HE1	1.56	0.68
1:E:323:ILE:O	1:E:323:ILE:HG13	1.92	0.68
1:F:250:GLN:HG2	1:F:314:ILE:CD1	2.24	0.68
1:J:501:THR:HG23	1:K:181:ASP:OD1	1.93	0.68
1:L:57:HIS:CD2	1:L:84:HIS:CE1	2.81	0.68
1:C:466:ARG:NH1	1:C:466:ARG:HB2	2.08	0.68
1:G:436:PHE:O	1:G:440:ILE:HG13	1.94	0.68
1:J:143:LYS:O	1:J:147:ARG:HG3	1.93	0.68
1:A:331:LEU:HB2	1:A:352:THR:HG22	1.73	0.68
1:D:459:ARG:O	1:D:463:GLN:HG3	1.93	0.68
1:E:143:LYS:O	1:E:147:ARG:HG3	1.94	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:411:MET:SD	1:E:430:ILE:HG21	2.34	0.68
1:H:345:ALA:HB1	1:H:373:LEU:HD21	1.76	0.68
1:A:396:ARG:HH11	1:A:396:ARG:HG3	1.58	0.68
1:F:11:LYS:HA	1:F:11:LYS:HE2	1.76	0.68
1:F:259:SER:O	1:F:263:LEU:HB2	1.93	0.68
1:L:281:TRP:NE1	1:L:283:PRO:HD3	2.09	0.68
1:B:60:SER:HB2	1:D:58:VAL:CG1	2.24	0.68
1:C:9:PHE:HD1	1:C:10:PHE:N	1.91	0.68
1:C:397:LEU:HD22	1:E:448:ILE:HG22	1.74	0.68
1:D:314:ILE:HD13	1:D:314:ILE:N	2.09	0.68
1:F:88:PRO:HG2	1:F:122:PHE:CD2	2.29	0.68
1:J:158:ILE:HG23	1:J:158:ILE:O	1.93	0.68
1:A:345:ALA:HB1	1:A:373:LEU:HD21	1.75	0.68
1:G:227:ILE:HD12	1:G:233:MET:SD	2.34	0.68
1:L:331:LEU:HD12	1:L:352:THR:HG22	1.74	0.68
1:K:30:GLU:HG3	1:K:31:ASP:H	1.58	0.67
1:L:34:THR:O	1:L:35:ARG:CG	2.41	0.67
1:I:33:ARG:HB2	1:I:33:ARG:HH11	1.58	0.67
1:J:82:HIS:ND1	1:J:109:SER:HA	2.09	0.67
1:L:57:HIS:HD2	1:L:84:HIS:HE1	1.42	0.67
1:B:439:ARG:HG3	1:B:439:ARG:NH1	2.10	0.67
1:G:111:MET:HB3	1:G:124:GLY:HA2	1.77	0.67
1:J:145:THR:HG21	1:J:178:TRP:CE3	2.28	0.67
1:G:142:GLU:HG2	1:G:146:ARG:HD2	1.75	0.67
1:L:339:VAL:HG21	1:L:360:PHE:HE1	1.59	0.67
1:L:498:VAL:N	1:L:501:THR:HB	2.08	0.67
1:B:65:ILE:HA	1:B:147:ARG:NH1	2.09	0.67
1:C:153:ALA:HA	1:C:158:ILE:HG22	1.76	0.67
1:H:60:SER:OG	1:J:58:VAL:HG13	1.95	0.67
1:J:468:ALA:HA	1:J:473:LEU:HD12	1.76	0.67
1:K:167:PRO:HG3	1:K:176:MET:CG	2.25	0.67
1:A:427:THR:O	1:A:428:ILE:HD13	1.95	0.67
1:C:32:LEU:N	1:C:32:LEU:CD1	2.58	0.67
1:C:118:VAL:HG12	1:C:456:THR:HG22	1.77	0.67
1:C:322:LEU:HD22	1:C:323:ILE:H	1.59	0.67
1:C:335:ASN:HB2	1:C:338:ARG:NH2	2.09	0.67
1:A:175:GLU:HA	1:A:178:TRP:CE3	2.30	0.67
1:A:501:THR:HG23	1:B:181:ASP:OD1	1.95	0.67
1:G:107:LEU:HD12	1:G:126:LYS:HE2	1.76	0.67
1:C:427:THR:HG22	1:C:429:PRO:HD3	1.77	0.67
1:J:34:THR:HG22	1:J:34:THR:O	1.95	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:114:LYS:HA	1:K:371:LEU:HD12	1.76	0.67
1:C:314:ILE:HD13	1:C:314:ILE:N	2.05	0.67
1:A:95:TYR:OH	1:A:145:THR:HG22	1.95	0.67
1:C:392:VAL:HG22	1:E:386:LEU:HD22	1.77	0.67
1:J:33:ARG:NH2	1:J:494:ASN:ND2	2.42	0.67
1:K:328:GLU:HG3	1:K:329:LYS:N	2.09	0.67
1:B:159:GLY:HA3	1:B:162:ILE:HD13	1.77	0.66
1:D:186:THR:HG22	1:D:187:ILE:N	2.10	0.66
1:B:250:GLN:HG2	1:B:314:ILE:CD1	2.24	0.66
1:H:339:VAL:HG21	1:H:360:PHE:HE1	1.60	0.66
1:B:82:HIS:HD2	1:B:112:THR:HG21	1.60	0.66
1:B:396:ARG:HH11	1:B:396:ARG:HG2	1.60	0.66
1:F:107:LEU:HD13	1:F:126:LYS:HE2	1.77	0.66
1:F:319:CYS:O	1:F:341:ALA:HA	1.95	0.66
1:L:112:THR:HG22	1:L:124:GLY:N	2.11	0.66
1:A:12:MET:SD	1:A:354:PRO:HD3	2.35	0.66
1:F:30:GLU:HG3	1:F:31:ASP:OD2	1.96	0.66
1:H:39:GLU:OE1	1:H:41:LYS:HD2	1.95	0.66
1:H:117:VAL:HG11	1:H:372:TYR:HB2	1.78	0.66
1:K:414:GLN:HB2	1:K:429:PRO:HD2	1.77	0.66
1:A:56:ASN:HA	1:E:62:SER:OG	1.95	0.66
1:A:146:ARG:HH12	1:F:501:THR:C	1.99	0.66
1:C:9:PHE:CD1	1:C:10:PHE:N	2.63	0.66
1:F:336:ALA:HB3	1:F:337:PRO:HD3	1.78	0.66
1:G:336:ALA:HB3	1:G:337:PRO:HD3	1.77	0.66
1:K:250:GLN:HG2	1:K:314:ILE:CD1	2.24	0.66
1:E:239:THR:N	1:E:240:PRO:HD3	2.10	0.66
1:F:8:ASN:C	1:F:8:ASN:HD22	1.98	0.66
1:A:34:THR:HG22	1:A:34:THR:O	1.94	0.66
1:C:444:SER:HB3	1:C:446:LYS:HZ2	1.60	0.66
1:D:396:ARG:HB3	1:D:397:LEU:HD12	1.77	0.66
1:I:85:GLN:H	1:I:85:GLN:HE21	1.44	0.66
1:K:314:ILE:HD13	1:K:314:ILE:N	2.10	0.66
1:L:87:THR:CB	1:L:88:PRO:HD3	2.25	0.66
1:B:498:VAL:N	1:B:501:THR:HB	2.11	0.66
1:C:414:GLN:HE22	1:C:430:ILE:HD13	1.60	0.66
1:L:250:GLN:NE2	1:L:326:ALA:HB3	2.10	0.66
1:D:323:ILE:O	1:D:323:ILE:HG13	1.96	0.66
1:K:286:ILE:H	1:K:286:ILE:HD12	1.61	0.66
1:B:112:THR:HG23	1:B:124:GLY:HA3	1.76	0.65
1:B:482:TYR:O	1:B:486:ILE:HG12	1.95	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:24:VAL:HG12	1:D:28:LEU:HB2	1.77	0.65
1:H:314:ILE:HD13	1:H:314:ILE:N	2.12	0.65
1:L:411:MET:SD	1:L:430:ILE:HG21	2.36	0.65
1:D:61:LEU:HD11	1:D:148:PHE:HE1	1.59	0.65
1:G:345:ALA:HB1	1:G:373:LEU:HD21	1.76	0.65
1:G:41:LYS:O	1:G:44:ARG:HG3	1.96	0.65
1:G:101:VAL:O	1:G:105:LYS:HG3	1.96	0.65
1:G:153:ALA:HA	1:G:158:ILE:HG22	1.77	0.65
1:G:411:MET:HA	1:G:430:ILE:HG22	1.77	0.65
1:I:198:VAL:HG22	1:I:199:THR:H	1.61	0.65
1:K:396:ARG:O	1:K:396:ARG:HD3	1.95	0.65
1:I:87:THR:OG1	1:I:88:PRO:HD3	1.96	0.65
1:E:240:PRO:HB2	1:E:244:ASP:H	1.61	0.65
1:F:403:ARG:NH1	1:F:440:ILE:HG22	2.10	0.65
1:G:47:GLY:HA2	1:G:50:ARG:HG2	1.77	0.65
1:G:396:ARG:HH11	1:G:396:ARG:HG3	1.62	0.65
1:I:99:VAL:HA	1:I:103:GLU:OE2	1.97	0.65
1:I:392:VAL:HG22	1:K:386:LEU:HD22	1.78	0.65
1:J:420:LYS:HG2	1:J:420:LYS:O	1.95	0.65
1:L:113:TYR:O	1:L:117:VAL:HG23	1.96	0.65
1:E:118:VAL:HG23	1:E:120:VAL:HG23	1.79	0.65
1:G:314:ILE:H	1:G:314:ILE:CD1	2.09	0.65
1:I:281:TRP:CD1	1:I:283:PRO:HD3	2.31	0.65
1:L:420:LYS:NZ	1:L:421:PHE:HB2	2.10	0.65
1:A:259:SER:O	1:A:263:LEU:HB2	1.97	0.65
1:B:217:ARG:HG2	1:B:221:HIS:CE1	2.32	0.65
1:E:167:PRO:HG3	1:E:176:MET:SD	2.36	0.65
1:F:27:LYS:O	1:F:32:LEU:HD12	1.97	0.65
1:I:37:SER:CA	1:I:42:ARG:CZ	2.72	0.65
1:I:339:VAL:HG22	1:I:363:ARG:NH2	2.11	0.65
1:L:143:LYS:O	1:L:147:ARG:HG3	1.96	0.65
1:A:475:LEU:HD12	1:A:475:LEU:N	2.11	0.65
1:C:201:LYS:NZ	1:C:388:ASN:HD21	1.95	0.65
1:C:421:PHE:HD1	1:C:422:GLY:N	1.94	0.65
1:E:107:LEU:HD12	1:E:126:LYS:HE2	1.78	0.65
1:F:19:ARG:HG3	1:F:19:ARG:NH1	2.11	0.65
1:H:24:VAL:HG22	1:H:483:VAL:HG13	1.77	0.65
1:L:394:TYR:HB2	1:L:445:GLU:HG3	1.79	0.65
1:C:248:VAL:HB	1:C:322:LEU:HD23	1.77	0.65
1:D:33:ARG:HG3	1:D:33:ARG:O	1.95	0.65
1:D:414:GLN:HB2	1:D:429:PRO:HD2	1.77	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:200:GLY:HA2	1:F:211:ARG:HD2	1.79	0.65
1:B:162:ILE:N	1:B:162:ILE:HD12	2.12	0.65
1:C:277:ASP:HB2	1:C:302:LEU:HD11	1.78	0.65
1:E:345:ALA:HB1	1:E:373:LEU:HD21	1.79	0.65
1:H:34:THR:O	1:H:34:THR:HG22	1.97	0.65
1:D:19:ARG:HH11	1:D:19:ARG:HG3	1.61	0.64
1:D:233:MET:HE1	1:D:236:LEU:HD12	1.79	0.64
1:G:47:GLY:O	1:G:51:ILE:HG13	1.97	0.64
1:H:314:ILE:H	1:H:314:ILE:CD1	2.10	0.64
1:I:137:THR:HG23	1:I:140:GLU:H	1.61	0.64
1:J:109:SER:O	1:J:112:THR:HG23	1.96	0.64
1:B:65:ILE:HA	1:B:147:ARG:CZ	2.26	0.64
1:C:466:ARG:HB2	1:C:466:ARG:HH11	1.62	0.64
1:I:433:THR:HG23	1:J:412:SER:HA	1.78	0.64
1:L:131:ILE:HG13	1:L:136:TYR:CE2	2.33	0.64
1:E:300:SER:HB3	1:E:302:LEU:HD13	1.78	0.64
1:G:19:ARG:NH1	1:G:479:THR:HG21	2.12	0.64
1:J:394:TYR:HB2	1:J:445:GLU:HG3	1.79	0.64
1:A:31:ASP:O	1:A:35:ARG:NH2	2.30	0.64
1:C:112:THR:HG22	1:C:124:GLY:N	2.13	0.64
1:C:498:VAL:HG21	1:F:72:TRP:HE1	1.60	0.64
1:D:250:GLN:HG2	1:D:314:ILE:CD1	2.27	0.64
1:D:462:ARG:HE	1:D:466:ARG:NH2	1.94	0.64
1:H:55:CYS:SG	1:H:105:LYS:HG3	2.36	0.64
1:I:58:VAL:CG1	1:L:60:SER:HB2	2.27	0.64
1:L:34:THR:HA	1:L:37:SER:OG	1.96	0.64
1:A:277:ASP:HB3	1:A:302:LEU:HD11	1.79	0.64
1:B:239:THR:HG23	1:B:239:THR:O	1.96	0.64
1:C:258:HIS:HB3	1:C:262:TYR:CE2	2.32	0.64
1:F:255:VAL:HG13	1:F:256:GLY:H	1.62	0.64
1:I:65:ILE:HG12	1:I:75:ILE:HD11	1.80	0.64
1:K:421:PHE:HE1	1:K:423:LYS:HE2	1.63	0.64
1:A:41:LYS:HD3	1:A:44:ARG:HD2	1.79	0.64
1:C:112:THR:HG22	1:C:124:GLY:H	1.61	0.64
1:C:421:PHE:CE1	1:C:423:LYS:HB2	2.33	0.64
1:H:8:ASN:N	1:H:8:ASN:ND2	2.43	0.64
1:I:86:ARG:HG2	1:I:121:PRO:HA	1.80	0.64
1:E:200:GLY:HA2	1:E:211:ARG:HD3	1.79	0.64
1:F:32:LEU:O	1:F:33:ARG:HB3	1.97	0.64
1:G:7:PRO:O	1:G:329:LYS:NZ	2.30	0.64
1:H:201:LYS:NZ	1:H:388:ASN:HD21	1.95	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:141:LEU:O	1:C:145:THR:HG23	1.98	0.64
1:D:114:LYS:NZ	1:D:374:ASN:HD21	1.96	0.64
1:H:355:GLU:O	1:H:359:ILE:HD13	1.97	0.64
1:I:379:THR:O	1:I:382:TYR:HB3	1.97	0.64
1:J:176:MET:HE3	1:J:179:ILE:HD12	1.80	0.64
1:B:250:GLN:HG3	1:B:315:LEU:HD11	1.79	0.64
1:D:30:GLU:HA	1:D:34:THR:OG1	1.97	0.64
1:E:53:LYS:O	1:E:82:HIS:HE1	1.81	0.64
1:E:250:GLN:HE22	1:E:326:ALA:HB3	1.63	0.64
1:F:339:VAL:HG21	1:F:360:PHE:HE1	1.61	0.64
1:I:332:THR:H	1:I:335:ASN:HD21	1.46	0.64
1:J:14:GLU:HG3	1:J:53:LYS:HE2	1.79	0.64
1:D:66:ARG:HD3	1:D:72:TRP:CH2	2.33	0.64
1:G:24:VAL:HG12	1:G:28:LEU:HB2	1.80	0.64
1:I:176:MET:HE3	1:I:179:ILE:HD12	1.79	0.64
1:J:175:GLU:O	1:J:179:ILE:HG13	1.97	0.64
1:C:30:GLU:O	1:C:32:LEU:N	2.30	0.63
1:E:65:ILE:O	1:E:65:ILE:HG13	1.98	0.63
1:H:289:LYS:HG2	1:H:293:ASP:OD2	1.98	0.63
1:J:250:GLN:OE1	1:J:330:GLN:HG2	1.98	0.63
1:J:335:ASN:HD22	1:J:335:ASN:H	1.46	0.63
1:L:45:VAL:O	1:L:48:ILE:HG12	1.98	0.63
1:A:58:VAL:CG1	1:E:60:SER:HB2	2.27	0.63
1:A:90:LYS:HD2	1:A:164:VAL:O	1.98	0.63
1:B:201:LYS:HZ3	1:B:388:ASN:HD21	1.46	0.63
1:C:167:PRO:HG3	1:C:176:MET:SD	2.37	0.63
1:D:112:THR:HG23	1:D:124:GLY:HA3	1.80	0.63
1:E:390:ASN:O	1:E:392:VAL:HG23	1.97	0.63
1:G:72:TRP:HE1	1:K:498:VAL:HG11	1.63	0.63
1:A:24:VAL:CG2	1:A:483:VAL:HG13	2.28	0.63
1:F:118:VAL:HG23	1:F:120:VAL:HG23	1.80	0.63
1:F:420:LYS:O	1:F:421:PHE:HB2	1.98	0.63
1:L:396:ARG:HH11	1:L:396:ARG:HG3	1.62	0.63
1:A:314:ILE:HD13	1:A:314:ILE:N	2.12	0.63
1:K:79:ARG:HH11	1:K:127:ALA:HB2	1.62	0.63
1:A:332:THR:HA	1:A:353:THR:HG22	1.79	0.63
1:A:386:LEU:HD13	1:B:392:VAL:HG21	1.81	0.63
1:C:213:SER:HA	1:C:258:HIS:CD2	2.33	0.63
1:C:322:LEU:HD22	1:C:323:ILE:N	2.13	0.63
1:E:141:LEU:HA	1:E:144:ILE:HD12	1.79	0.63
1:F:34:THR:O	1:F:34:THR:HG22	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:148:PHE:CE2	1:F:152:LEU:HD21	2.33	0.63
1:H:79:ARG:HH11	1:H:127:ALA:HB2	1.62	0.63
1:J:250:GLN:HB2	1:J:314:ILE:HD11	1.80	0.63
1:A:287:ASP:OD2	1:A:290:GLU:HG3	1.98	0.63
1:C:86:ARG:HG2	1:C:121:PRO:HA	1.81	0.63
1:E:42:ARG:HE	1:E:42:ARG:N	1.97	0.63
1:J:479:THR:O	1:J:483:VAL:HG23	1.97	0.63
1:K:34:THR:O	1:K:34:THR:HG22	1.99	0.63
1:L:314:ILE:HD13	1:L:314:ILE:N	2.13	0.63
1:A:147:ARG:CZ	1:A:147:ARG:HB2	2.29	0.63
1:E:131:ILE:HG13	1:E:136:TYR:CE2	2.33	0.63
1:I:396:ARG:HH11	1:I:396:ARG:HG3	1.64	0.63
1:K:195:HIS:O	1:K:201:LYS:HE2	1.99	0.63
1:E:427:THR:O	1:E:428:ILE:HD13	1.99	0.63
1:B:153:ALA:HA	1:B:158:ILE:HG22	1.79	0.63
1:G:19:ARG:HH11	1:G:479:THR:HG21	1.64	0.63
1:I:382:TYR:OH	1:J:392:VAL:HG22	1.99	0.63
1:L:498:VAL:CG2	1:L:499:THR:H	2.08	0.63
1:H:316:GLU:HG3	1:H:338:ARG:O	1.99	0.62
1:I:260:MET:HE3	1:I:288:PRO:HA	1.80	0.62
1:C:45:VAL:O	1:C:45:VAL:HG13	1.99	0.62
1:C:409:LEU:HG	1:E:409:LEU:HD23	1.81	0.62
1:D:33:ARG:NH2	1:D:494:ASN:HD21	1.97	0.62
1:J:239:THR:HG23	1:J:239:THR:O	1.98	0.62
1:A:355:GLU:HA	1:A:358:LYS:HD3	1.81	0.62
1:C:427:THR:O	1:C:428:ILE:HD13	1.99	0.62
1:E:65:ILE:HA	1:E:147:ARG:CZ	2.28	0.62
1:H:501:THR:OXT	1:L:146:ARG:NH2	2.30	0.62
1:I:118:VAL:HG23	1:I:120:VAL:HG23	1.81	0.62
1:J:45:VAL:O	1:J:48:ILE:HG12	1.98	0.62
1:B:107:LEU:HD13	1:B:126:LYS:HE3	1.81	0.62
1:B:208:ILE:HD11	1:B:449:VAL:HG22	1.81	0.62
1:C:96:SER:O	1:C:99:VAL:HG23	1.99	0.62
1:E:9:PHE:HD1	1:E:10:PHE:H	1.44	0.62
1:E:19:ARG:HH11	1:E:19:ARG:HG3	1.64	0.62
1:A:236:LEU:HB2	1:A:238:MET:HG2	1.80	0.62
1:H:239:THR:O	1:H:239:THR:HG23	1.99	0.62
1:C:32:LEU:HD12	1:C:32:LEU:H	1.58	0.62
1:F:45:VAL:O	1:F:48:ILE:HG13	1.98	0.62
1:F:331:LEU:HB2	1:F:352:THR:HG22	1.82	0.62
1:G:33:ARG:HH11	1:G:33:ARG:CB	1.96	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:142:GLU:HG3	1:G:178:TRP:CD2	2.35	0.62
1:G:280:ILE:CG2	1:G:307:ALA:HB1	2.30	0.62
1:H:260:MET:CE	1:H:288:PRO:HA	2.30	0.62
1:I:500:PHE:HB2	1:L:66:ARG:HH22	1.64	0.62
1:J:281:TRP:HD1	1:J:282:ASN:N	1.97	0.62
1:K:65:ILE:HD13	1:K:144:ILE:HG12	1.82	0.62
1:L:153:ALA:HA	1:L:158:ILE:HG22	1.82	0.62
1:B:24:VAL:HG22	1:B:483:VAL:HG13	1.81	0.62
1:D:501:THR:C	1:E:146:ARG:HH12	2.02	0.62
1:E:339:VAL:O	1:E:363:ARG:NH2	2.32	0.62
1:F:274:GLY:CA	1:F:314:ILE:HD12	2.29	0.62
1:F:496:ALA:HB1	1:F:501:THR:OG1	2.00	0.62
1:J:498:VAL:N	1:J:501:THR:HB	2.14	0.62
1:K:90:LYS:HD2	1:K:164:VAL:O	2.00	0.62
1:H:501:THR:HG23	1:L:181:ASP:OD1	1.99	0.62
1:J:82:HIS:CG	1:J:112:THR:HG21	2.34	0.62
1:B:386:LEU:HD13	1:F:392:VAL:HG21	1.80	0.62
1:C:60:SER:HB2	1:F:58:VAL:CG1	2.30	0.62
1:C:436:PHE:O	1:C:440:ILE:HG13	2.00	0.62
1:G:93:ILE:HA	1:G:127:ALA:HB3	1.82	0.62
1:K:59:LEU:HB2	1:K:157:PHE:CE2	2.35	0.62
1:L:411:MET:HA	1:L:430:ILE:HG22	1.80	0.62
1:C:90:LYS:HD2	1:C:164:VAL:O	1.99	0.62
1:C:446:LYS:HD2	1:C:447:ASP:N	2.15	0.62
1:K:59:LEU:HD22	1:K:157:PHE:CD2	2.34	0.62
1:K:396:ARG:HH11	1:K:396:ARG:HG3	1.63	0.62
1:L:79:ARG:CD	1:L:127:ALA:HB2	2.30	0.62
1:C:233:MET:HE1	1:C:236:LEU:HD11	1.82	0.61
1:C:316:GLU:HG3	1:C:338:ARG:NE	2.13	0.61
1:D:147:ARG:CZ	1:D:147:ARG:HB2	2.29	0.61
1:E:19:ARG:HG3	1:E:19:ARG:NH1	2.15	0.61
1:E:42:ARG:HE	1:E:42:ARG:CA	2.13	0.61
1:G:250:GLN:CG	1:G:314:ILE:HD11	2.28	0.61
1:H:45:VAL:HG13	1:H:45:VAL:O	1.99	0.61
1:H:335:ASN:HD22	1:H:336:ALA:N	1.97	0.61
1:J:368:ILE:HG21	1:J:373:LEU:HD13	1.82	0.61
1:K:260:MET:HE3	1:K:288:PRO:HA	1.82	0.61
1:A:8:ASN:OD1	1:A:11:LYS:HG2	1.99	0.61
1:I:496:ALA:HB1	1:I:501:THR:OG1	2.00	0.61
1:I:498:VAL:HG11	1:L:72:TRP:HE1	1.65	0.61
1:A:137:THR:HG23	1:A:140:GLU:HG3	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:186:THR:HG22	1:C:187:ILE:N	2.15	0.61
1:D:34:THR:HG22	1:D:34:THR:O	1.98	0.61
1:D:250:GLN:HG3	1:D:315:LEU:HD13	1.82	0.61
1:E:251:GLY:HA3	1:E:326:ALA:HB2	1.82	0.61
1:E:329:LYS:HB3	1:E:329:LYS:HZ3	1.62	0.61
1:I:500:PHE:HB3	1:J:142:GLU:OE1	2.00	0.61
1:L:314:ILE:H	1:L:314:ILE:CD1	2.11	0.61
1:A:248:VAL:HG22	1:A:272:ALA:HB3	1.82	0.61
1:A:390:ASN:O	1:A:392:VAL:HG23	2.00	0.61
1:C:131:ILE:HG13	1:C:136:TYR:CE2	2.36	0.61
1:C:316:GLU:HG3	1:C:338:ARG:CZ	2.30	0.61
1:D:396:ARG:HG2	1:D:396:ARG:HH11	1.65	0.61
1:F:9:PHE:CD1	1:F:10:PHE:N	2.65	0.61
1:F:42:ARG:O	1:F:45:VAL:HG12	2.00	0.61
1:H:499:THR:HG22	1:H:500:PHE:CD1	2.36	0.61
1:I:233:MET:HE1	1:I:343:ILE:HD11	1.83	0.61
1:I:314:ILE:HD13	1:I:314:ILE:N	2.12	0.61
1:I:463:GLN:HE22	1:I:488:LYS:HE2	1.64	0.61
1:J:280:ILE:CG2	1:J:307:ALA:HB1	2.30	0.61
1:C:201:LYS:HZ3	1:C:388:ASN:HD21	1.47	0.61
1:E:33:ARG:O	1:E:33:ARG:HG3	2.00	0.61
1:F:414:GLN:HG3	1:F:429:PRO:CD	2.22	0.61
1:I:498:VAL:HG23	1:I:499:THR:N	2.11	0.61
1:J:500:PHE:HB3	1:K:142:GLU:OE1	2.01	0.61
1:K:496:ALA:HB1	1:K:501:THR:OG1	1.99	0.61
1:B:396:ARG:HB3	1:B:397:LEU:HD12	1.83	0.61
1:C:336:ALA:HB3	1:C:337:PRO:HD3	1.83	0.61
1:J:131:ILE:HG13	1:J:136:TYR:CE2	2.35	0.61
1:C:345:ALA:HB1	1:C:373:LEU:HD21	1.83	0.61
1:H:24:VAL:CG2	1:H:483:VAL:HG13	2.31	0.61
1:J:260:MET:HE3	1:J:288:PRO:HA	1.82	0.61
1:A:28:LEU:CD1	1:A:32:LEU:HD22	2.31	0.61
1:B:129:VAL:HG12	1:B:131:ILE:HG22	1.81	0.61
1:C:90:LYS:O	1:C:111:MET:HG2	1.99	0.61
1:C:498:VAL:HG23	1:C:499:THR:N	2.12	0.61
1:D:390:ASN:O	1:D:392:VAL:HG23	2.00	0.61
1:E:96:SER:HB3	1:E:99:VAL:HG13	1.83	0.61
1:K:118:VAL:HG23	1:K:120:VAL:HG23	1.83	0.61
1:K:319:CYS:O	1:K:341:ALA:HA	2.00	0.61
1:C:20:GLY:O	1:C:24:VAL:HG23	2.01	0.61
1:D:47:GLY:O	1:D:50:ARG:HG2	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:24:VAL:HG12	1:F:28:LEU:HB2	1.83	0.61
1:H:43:ASN:O	1:H:46:ARG:HG3	1.99	0.61
1:I:96:SER:O	1:I:99:VAL:HG13	2.01	0.61
1:I:314:ILE:H	1:I:314:ILE:CD1	2.13	0.61
1:J:101:VAL:O	1:J:105:LYS:HG3	2.01	0.61
1:J:322:LEU:O	1:J:324:PRO:HD3	2.01	0.61
1:B:35:ARG:H	1:B:35:ARG:NH1	1.98	0.61
1:C:260:MET:HG2	1:C:288:PRO:HG3	1.82	0.61
1:E:17:PHE:CE2	1:E:53:LYS:HB2	2.36	0.61
1:G:258:HIS:HB3	1:G:262:TYR:HE2	1.65	0.61
1:I:249:VAL:HB	1:I:323:ILE:HD11	1.82	0.61
1:J:47:GLY:O	1:J:51:ILE:HG13	2.01	0.61
1:K:32:LEU:HD23	1:K:33:ARG:HB3	1.82	0.61
1:K:255:VAL:HG13	1:K:256:GLY:H	1.65	0.61
1:A:65:ILE:HD13	1:A:75:ILE:HD11	1.82	0.60
1:D:113:TYR:O	1:D:117:VAL:HG23	2.01	0.60
1:E:86:ARG:HG2	1:E:121:PRO:HA	1.82	0.60
1:G:65:ILE:HD13	1:G:144:ILE:HG12	1.83	0.60
1:J:92:GLY:HA2	1:J:166:ALA:O	2.01	0.60
1:A:394:TYR:HB2	1:A:445:GLU:HG3	1.83	0.60
1:C:496:ALA:HB1	1:C:501:THR:OG1	2.01	0.60
1:J:167:PRO:HG3	1:J:176:MET:HG2	1.84	0.60
1:B:323:ILE:O	1:B:323:ILE:HG13	2.00	0.60
1:B:411:MET:O	1:B:415:GLU:HG3	2.02	0.60
1:L:61:LEU:HD11	1:L:148:PHE:HE1	1.66	0.60
1:L:167:PRO:HG3	1:L:176:MET:SD	2.42	0.60
1:D:435:GLU:CD	1:D:435:GLU:H	2.05	0.60
1:E:374:ASN:H	1:E:374:ASN:HD22	1.49	0.60
1:F:271:ILE:HD12	1:F:319:CYS:HB3	1.84	0.60
1:H:394:TYR:CE2	1:L:397:LEU:HD22	2.36	0.60
1:I:414:GLN:HB2	1:I:429:PRO:HG2	1.83	0.60
1:I:414:GLN:OE1	1:I:428:ILE:HA	2.01	0.60
1:K:106:ALA:O	1:K:110:LEU:HD12	2.02	0.60
1:E:280:ILE:CG2	1:E:307:ALA:HB1	2.31	0.60
1:F:335:ASN:HD22	1:F:336:ALA:N	1.99	0.60
1:I:499:THR:HG21	1:L:147:ARG:NE	2.16	0.60
1:J:33:ARG:HH22	1:J:494:ASN:HD21	1.47	0.60
1:D:160:PRO:HG3	1:D:191:ASP:OD1	2.01	0.60
1:E:259:SER:O	1:E:263:LEU:HB2	2.01	0.60
1:E:369:PRO:CG	1:E:478:ARG:HA	2.32	0.60
1:G:260:MET:HG2	1:G:288:PRO:HG3	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:208:ILE:HD11	1:I:449:VAL:HG22	1.83	0.60
1:C:67:ARG:HB3	1:C:67:ARG:HH11	1.67	0.60
1:G:53:LYS:HB3	1:G:54:PRO:HD3	1.82	0.60
1:G:112:THR:HG22	1:G:124:GLY:CA	2.31	0.60
1:I:33:ARG:O	1:I:42:ARG:NH1	2.35	0.60
1:L:61:LEU:HD11	1:L:148:PHE:CE1	2.36	0.60
1:L:496:ALA:C	1:L:501:THR:HA	2.21	0.60
1:A:460:SER:O	1:A:464:ILE:HG13	2.02	0.60
1:H:155:LYS:HD2	1:J:157:PHE:CE2	2.36	0.60
1:H:167:PRO:HG3	1:H:176:MET:SD	2.41	0.60
1:I:250:GLN:HG3	1:I:315:LEU:HD11	1.84	0.60
1:J:332:THR:HG22	1:J:353:THR:HG21	1.84	0.60
1:K:224:GLU:O	1:K:228:ASN:HB2	2.02	0.60
1:L:33:ARG:NH1	1:L:33:ARG:CB	2.61	0.60
1:L:329:LYS:HB2	1:L:329:LYS:NZ	2.17	0.60
1:A:455:TYR:HB2	1:B:400:LYS:HB2	1.82	0.60
1:B:6:ASP:HB2	1:B:329:LYS:HD2	1.82	0.60
1:C:363:ARG:NH1	1:C:363:ARG:HB2	2.17	0.60
1:K:168:ASP:O	1:K:170:SER:N	2.34	0.60
1:K:414:GLN:CB	1:K:429:PRO:HD2	2.31	0.60
1:L:19:ARG:O	1:L:23:ILE:HG13	2.02	0.60
1:L:175:GLU:HA	1:L:178:TRP:CE3	2.37	0.60
1:L:259:SER:O	1:L:263:LEU:HB2	2.02	0.60
1:A:101:VAL:O	1:A:104:VAL:HG22	2.01	0.60
1:A:106:ALA:O	1:A:109:SER:HB3	2.01	0.60
1:B:27:LYS:HD3	1:B:30:GLU:OE2	2.02	0.60
1:C:372:TYR:OH	1:C:461:ALA:HB2	2.02	0.60
1:G:498:VAL:HG23	1:G:499:THR:N	2.17	0.60
1:A:41:LYS:HB3	1:A:44:ARG:HD2	1.84	0.59
1:B:339:VAL:HG21	1:B:360:PHE:CE1	2.35	0.59
1:C:29:VAL:O	1:C:30:GLU:O	2.19	0.59
1:D:427:THR:HG22	1:D:429:PRO:HD3	1.84	0.59
1:H:59:LEU:HD21	1:H:61:LEU:HD21	1.84	0.59
1:H:201:LYS:HZ1	1:H:388:ASN:HD21	1.49	0.59
1:H:498:VAL:HG23	1:H:499:THR:N	2.09	0.59
1:K:16:PHE:CE2	1:K:478:ARG:HD3	2.37	0.59
1:C:414:GLN:HB2	1:C:429:PRO:HD2	1.84	0.59
1:D:66:ARG:HD3	1:D:72:TRP:CZ2	2.37	0.59
1:D:275:GLU:OE1	1:D:300:SER:HB2	2.02	0.59
1:E:153:ALA:HA	1:E:158:ILE:HG22	1.85	0.59
1:E:414:GLN:CB	1:E:429:PRO:HD2	2.31	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:111:MET:HE1	1:G:114:LYS:HD2	1.83	0.59
1:H:44:ARG:HB2	1:H:44:ARG:HH11	1.67	0.59
1:H:305:PRO:O	1:H:306:LYS:HB2	2.02	0.59
1:H:331:LEU:HD12	1:H:352:THR:HG22	1.85	0.59
1:I:107:LEU:HD13	1:I:126:LYS:HE3	1.84	0.59
1:J:145:THR:HG21	1:J:178:TRP:HE3	1.65	0.59
1:E:87:THR:HB	1:E:88:PRO:CD	2.32	0.59
1:E:295:LYS:HG3	1:E:295:LYS:O	2.02	0.59
1:G:57:HIS:HD2	1:G:84:HIS:CE1	2.21	0.59
1:G:501:THR:HG23	1:H:181:ASP:OD1	2.01	0.59
1:H:501:THR:N	1:L:146:ARG:HH12	2.00	0.59
1:K:368:ILE:HG21	1:K:373:LEU:HD13	1.84	0.59
1:L:24:VAL:HG12	1:L:28:LEU:HB2	1.84	0.59
1:J:355:GLU:O	1:J:359:ILE:HD13	2.02	0.59
1:K:414:GLN:OE1	1:K:428:ILE:HA	2.02	0.59
1:L:239:THR:HG23	1:L:239:THR:O	2.00	0.59
1:C:359:ILE:HD12	1:C:359:ILE:H	1.68	0.59
1:J:79:ARG:HH11	1:J:127:ALA:HB2	1.66	0.59
1:B:258:HIS:HB3	1:B:262:TYR:HE2	1.68	0.59
1:B:314:ILE:H	1:B:314:ILE:CD1	2.13	0.59
1:C:139:ASN:OD1	1:C:143:LYS:HE3	2.02	0.59
1:D:335:ASN:HD22	1:D:335:ASN:N	1.99	0.59
1:E:336:ALA:HB3	1:E:337:PRO:HD3	1.83	0.59
1:K:336:ALA:HB3	1:K:337:PRO:HD3	1.84	0.59
1:A:427:THR:HG22	1:A:429:PRO:HD3	1.84	0.59
1:C:248:VAL:HG12	1:C:249:VAL:N	2.17	0.59
1:L:363:ARG:NH1	1:L:363:ARG:HB2	2.18	0.59
1:A:153:ALA:HA	1:A:158:ILE:HG22	1.85	0.59
1:A:396:ARG:O	1:A:396:ARG:HD3	2.03	0.59
1:B:73:GLU:HG2	1:B:74:VAL:N	2.17	0.59
1:C:238:MET:O	1:C:239:THR:HG22	2.03	0.59
1:E:87:THR:HB	1:E:88:PRO:HD3	1.85	0.59
1:F:160:PRO:HG3	1:F:191:ASP:OD1	2.03	0.59
1:J:421:PHE:CD1	1:J:422:GLY:N	2.71	0.59
1:D:82:HIS:HD2	1:D:112:THR:HG21	1.67	0.59
1:F:250:GLN:CG	1:F:314:ILE:HD11	2.33	0.59
1:G:61:LEU:N	1:G:61:LEU:HD12	2.18	0.59
1:J:65:ILE:HG13	1:J:65:ILE:O	2.03	0.59
1:K:239:THR:N	1:K:240:PRO:CD	2.66	0.59
1:A:145:THR:HG21	1:A:175:GLU:HG2	1.84	0.59
1:A:475:LEU:HD12	1:A:475:LEU:H	1.68	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:30:GLU:O	1:B:34:THR:HB	2.03	0.59
1:B:363:ARG:O	1:B:365:ILE:HG12	2.02	0.59
1:E:244:ASP:OD1	1:E:245:LYS:HG3	2.03	0.59
1:G:25:GLU:O	1:G:29:VAL:HG23	2.02	0.59
1:G:141:LEU:O	1:G:145:THR:HG23	2.03	0.59
1:G:269:LYS:HE2	1:G:284:ASP:O	2.02	0.59
1:I:17:PHE:CE2	1:I:53:LYS:HB2	2.38	0.59
1:I:236:LEU:O	1:I:238:MET:HE3	2.02	0.59
1:J:421:PHE:CE1	1:J:423:LYS:HB2	2.37	0.59
1:L:10:PHE:HD1	1:L:106:ALA:HB2	1.67	0.59
1:B:143:LYS:O	1:B:147:ARG:HG3	2.03	0.58
1:B:258:HIS:HB3	1:B:262:TYR:CE2	2.38	0.58
1:C:421:PHE:CD1	1:C:422:GLY:N	2.71	0.58
1:H:214:ALA:HB1	1:H:380:VAL:HG21	1.84	0.58
1:H:259:SER:O	1:H:263:LEU:HB2	2.03	0.58
1:H:496:ALA:HB1	1:H:501:THR:OG1	2.03	0.58
1:I:175:GLU:HA	1:I:178:TRP:CE3	2.38	0.58
1:J:86:ARG:HG2	1:J:121:PRO:HA	1.85	0.58
1:J:281:TRP:CD1	1:J:282:ASN:N	2.71	0.58
1:L:20:GLY:O	1:L:24:VAL:HG23	2.03	0.58
1:L:30:GLU:O	1:L:34:THR:HB	2.02	0.58
1:A:79:ARG:HH11	1:A:127:ALA:CB	2.16	0.58
1:A:421:PHE:CD1	1:A:423:LYS:HD2	2.38	0.58
1:A:498:VAL:HG23	1:A:499:THR:N	2.15	0.58
1:B:316:GLU:HG3	1:B:338:ARG:O	2.04	0.58
1:D:131:ILE:HG13	1:D:136:TYR:CE2	2.38	0.58
1:D:251:GLY:HA3	1:D:326:ALA:HB2	1.85	0.58
1:E:39:GLU:O	1:E:41:LYS:N	2.37	0.58
1:F:109:SER:O	1:F:112:THR:HG23	2.03	0.58
1:F:131:ILE:HG13	1:F:136:TYR:CE2	2.38	0.58
1:F:252:PHE:HE2	1:F:257:LEU:HA	1.67	0.58
1:G:137:THR:HB	1:G:140:GLU:HG3	1.83	0.58
1:I:345:ALA:HB1	1:I:373:LEU:HD21	1.84	0.58
1:I:462:ARG:HH11	1:I:462:ARG:HG3	1.68	0.58
1:J:137:THR:HG23	1:J:140:GLU:H	1.68	0.58
1:J:219:VAL:HG11	1:J:323:ILE:HD12	1.84	0.58
1:K:251:GLY:HA3	1:K:326:ALA:HB2	1.85	0.58
1:A:30:GLU:O	1:A:34:THR:HB	2.04	0.58
1:D:455:TYR:HB2	1:E:400:LYS:HB2	1.85	0.58
1:G:496:ALA:HB1	1:G:501:THR:OG1	2.03	0.58
1:H:86:ARG:HG2	1:H:121:PRO:HA	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:51:ILE:HD11	1:L:72:TRP:CD1	2.38	0.58
1:J:104:VAL:HG23	1:J:105:LYS:N	2.18	0.58
1:K:331:LEU:HD12	1:K:352:THR:HG22	1.85	0.58
1:C:499:THR:HG21	1:F:147:ARG:NE	2.18	0.58
1:F:48:ILE:O	1:F:52:ILE:HG13	2.03	0.58
1:F:297:GLN:O	1:F:298:HIS:HB3	2.02	0.58
1:F:322:LEU:HD13	1:F:324:PRO:HD3	1.84	0.58
1:H:57:HIS:ND1	1:J:61:LEU:HD22	2.18	0.58
1:I:92:GLY:HA2	1:I:166:ALA:O	2.03	0.58
1:K:244:ASP:OD1	1:K:245:LYS:HG3	2.03	0.58
1:K:360:PHE:HD1	1:K:365:ILE:HG13	1.67	0.58
1:A:251:GLY:HA3	1:A:326:ALA:HB2	1.84	0.58
1:C:58:VAL:CG1	1:F:60:SER:HB2	2.34	0.58
1:F:258:HIS:HB3	1:F:262:TYR:CE2	2.38	0.58
1:G:56:ASN:HB2	1:G:84:HIS:CE1	2.37	0.58
1:H:248:VAL:HG13	1:H:272:ALA:HB3	1.84	0.58
1:A:281:TRP:CD1	1:A:283:PRO:HD3	2.38	0.58
1:B:131:ILE:HG13	1:B:136:TYR:CE2	2.39	0.58
1:B:186:THR:HG22	1:B:187:ILE:H	1.66	0.58
1:D:496:ALA:HB1	1:D:501:THR:OG1	2.02	0.58
1:H:308:LYS:HD2	1:H:309:PRO:CD	2.33	0.58
1:L:229:GLU:HG3	1:L:231:SER:OG	2.02	0.58
1:L:494:ASN:C	1:L:496:ALA:H	2.06	0.58
1:A:499:THR:HG21	1:E:147:ARG:CD	2.33	0.58
1:C:496:ALA:C	1:C:501:THR:HA	2.24	0.58
1:D:252:PHE:HD2	1:D:273:VAL:HG11	1.67	0.58
1:F:88:PRO:HG2	1:F:122:PHE:HD2	1.67	0.58
1:H:281:TRP:NE1	1:H:283:PRO:HD3	2.17	0.58
1:J:7:PRO:O	1:J:329:LYS:HE2	2.03	0.58
1:J:75:ILE:HG23	1:J:131:ILE:HD13	1.85	0.58
1:J:314:ILE:HD13	1:J:314:ILE:N	2.19	0.58
1:K:249:VAL:HA	1:K:323:ILE:HG13	1.84	0.58
1:K:332:THR:O	1:K:336:ALA:HB2	2.04	0.58
1:A:420:LYS:O	1:A:421:PHE:HB2	2.03	0.58
1:A:462:ARG:HH11	1:A:462:ARG:HG3	1.68	0.58
1:C:94:ARG:HD3	1:C:168:ASP:OD2	2.04	0.58
1:G:462:ARG:HB3	1:G:466:ARG:HH12	1.67	0.58
1:J:386:LEU:HD13	1:K:392:VAL:HG11	1.84	0.58
1:J:396:ARG:HB3	1:J:397:LEU:HD12	1.84	0.58
1:J:496:ALA:C	1:J:501:THR:HA	2.24	0.58
1:K:314:ILE:H	1:K:314:ILE:CD1	2.15	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:25:GLU:O	1:L:29:VAL:HG23	2.04	0.58
1:L:239:THR:N	1:L:240:PRO:CD	2.67	0.58
1:L:414:GLN:OE1	1:L:428:ILE:HA	2.04	0.58
1:B:81:GLN:HE22	1:B:163:ASP:HB2	1.68	0.58
1:C:56:ASN:ND2	1:C:83:SER:HA	2.19	0.58
1:D:47:GLY:HA2	1:D:50:ARG:CG	2.33	0.58
1:D:87:THR:CB	1:D:88:PRO:HD3	2.22	0.58
1:G:112:THR:CG2	1:G:124:GLY:HA3	2.34	0.58
1:G:461:ALA:O	1:G:465:MET:HG3	2.04	0.58
1:H:109:SER:O	1:H:112:THR:HG23	2.03	0.58
1:H:427:THR:O	1:H:428:ILE:HD13	2.04	0.58
1:I:217:ARG:HG3	1:I:262:TYR:CE2	2.39	0.58
1:K:24:VAL:HG22	1:K:483:VAL:HG13	1.86	0.58
1:K:479:THR:O	1:K:483:VAL:HG23	2.03	0.58
1:B:53:LYS:HB3	1:B:54:PRO:HD3	1.86	0.58
1:B:164:VAL:HA	1:B:197:CYS:O	2.04	0.58
1:H:251:GLY:HA3	1:H:326:ALA:HB2	1.86	0.58
1:H:379:THR:O	1:H:382:TYR:HB3	2.03	0.58
1:I:65:ILE:HG22	1:I:147:ARG:HD2	1.85	0.58
1:J:114:LYS:NZ	1:J:374:ASN:HD21	2.01	0.58
1:L:247:PHE:CZ	1:L:270:CYS:HB2	2.39	0.58
1:A:271:ILE:HG13	1:A:283:PRO:HA	1.86	0.57
1:B:101:VAL:O	1:B:105:LYS:HG3	2.04	0.57
1:D:431:VAL:HG13	1:E:416:SER:OG	2.03	0.57
1:E:195:HIS:O	1:E:201:LYS:HE2	2.04	0.57
1:G:114:LYS:HG3	1:G:371:LEU:O	2.04	0.57
1:I:9:PHE:CZ	1:I:103:GLU:HG3	2.39	0.57
1:I:72:TRP:HE1	1:L:498:VAL:HG21	1.69	0.57
1:I:259:SER:O	1:I:263:LEU:HB2	2.04	0.57
1:J:220:PHE:CD2	1:J:263:LEU:HD12	2.38	0.57
1:J:250:GLN:CB	1:J:314:ILE:HD11	2.34	0.57
1:J:251:GLY:HA3	1:J:326:ALA:HB2	1.86	0.57
1:L:87:THR:OG1	1:L:88:PRO:HD3	2.04	0.57
1:A:154:LYS:HD3	1:C:189:HIS:CE1	2.39	0.57
1:C:67:ARG:HB3	1:C:67:ARG:NH1	2.19	0.57
1:E:40:GLN:OE1	1:E:40:GLN:HA	2.04	0.57
1:K:27:LYS:HD2	1:K:471:TYR:CE1	2.37	0.57
1:K:321:ILE:HD13	1:K:343:ILE:HB	1.86	0.57
1:K:363:ARG:NH1	1:K:363:ARG:HB2	2.19	0.57
1:L:93:ILE:HD11	1:L:165:PRO:HB3	1.86	0.57
1:L:396:ARG:O	1:L:396:ARG:HD3	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:75:ILE:HD12	1:C:75:ILE:N	2.19	0.57
1:C:431:VAL:HG11	1:D:419:ARG:HH21	1.70	0.57
1:G:158:ILE:HG23	1:G:158:ILE:O	2.04	0.57
1:H:92:GLY:O	1:H:126:LYS:HD2	2.04	0.57
1:I:392:VAL:HG22	1:K:386:LEU:CD2	2.34	0.57
1:C:359:ILE:HD12	1:C:359:ILE:N	2.20	0.57
1:D:328:GLU:C	1:D:329:LYS:HG2	2.24	0.57
1:E:331:LEU:HD12	1:E:352:THR:CG2	2.34	0.57
1:G:238:MET:O	1:G:239:THR:HG22	2.04	0.57
1:H:376:GLY:O	1:H:380:VAL:HG23	2.04	0.57
1:I:143:LYS:O	1:I:147:ARG:HG3	2.05	0.57
1:B:259:SER:O	1:B:263:LEU:HB2	2.04	0.57
1:D:176:MET:HE3	1:D:179:ILE:HD12	1.87	0.57
1:G:41:LYS:HB3	1:G:44:ARG:HG3	1.85	0.57
1:H:281:TRP:CD1	1:H:283:PRO:HD3	2.38	0.57
1:I:199:THR:HG22	1:I:384:GLU:HG2	1.87	0.57
1:J:168:ASP:OD1	1:J:169:MET:N	2.37	0.57
1:K:199:THR:HA	1:K:384:GLU:OE1	2.04	0.57
1:K:233:MET:HE1	1:K:236:LEU:HD12	1.86	0.57
1:A:21:ALA:HB1	1:A:49:LEU:HD23	1.86	0.57
1:A:167:PRO:HG3	1:A:176:MET:HG2	1.86	0.57
1:A:253:GLY:O	1:A:255:VAL:N	2.37	0.57
1:D:345:ALA:HB1	1:D:373:LEU:CD2	2.34	0.57
1:E:42:ARG:NE	1:E:42:ARG:HA	2.19	0.57
1:E:227:ILE:HD12	1:E:233:MET:SD	2.45	0.57
1:F:19:ARG:O	1:F:23:ILE:HG13	2.03	0.57
1:G:65:ILE:HA	1:G:147:ARG:CZ	2.34	0.57
1:G:132:ASN:HB3	1:G:135:ASN:ND2	2.20	0.57
1:H:394:TYR:HB2	1:H:445:GLU:HG3	1.86	0.57
1:I:411:MET:SD	1:I:430:ILE:HG21	2.45	0.57
1:K:498:VAL:HG23	1:K:499:THR:N	2.11	0.57
1:A:147:ARG:NE	1:A:147:ARG:HA	2.19	0.57
1:B:31:ASP:OD2	1:B:32:LEU:N	2.38	0.57
1:B:292:GLU:O	1:B:296:LEU:HG	2.04	0.57
1:E:411:MET:HA	1:E:430:ILE:HG22	1.85	0.57
1:F:436:PHE:O	1:F:440:ILE:HG13	2.04	0.57
1:G:45:VAL:O	1:G:47:GLY:N	2.37	0.57
1:G:333:LYS:HG3	1:G:359:ILE:HD11	1.87	0.57
1:K:239:THR:O	1:K:239:THR:HG23	2.05	0.57
1:L:112:THR:HG22	1:L:124:GLY:H	1.68	0.57
1:A:339:VAL:HG21	1:A:360:PHE:HE1	1.70	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:424:HIS:CD2	1:B:424:HIS:H	2.21	0.57
1:E:33:ARG:CZ	1:E:33:ARG:CB	2.83	0.57
1:F:65:ILE:HG13	1:F:65:ILE:O	2.05	0.57
1:F:423:LYS:HG2	1:F:426:GLY:HA3	1.84	0.57
1:G:496:ALA:C	1:G:501:THR:HA	2.23	0.57
1:H:260:MET:HE3	1:H:288:PRO:HA	1.87	0.57
1:K:260:MET:CE	1:K:288:PRO:HA	2.35	0.57
1:A:314:ILE:H	1:A:314:ILE:CD1	2.18	0.57
1:B:158:ILE:O	1:B:158:ILE:HG12	2.04	0.57
1:C:227:ILE:HA	1:C:233:MET:SD	2.44	0.57
1:E:113:TYR:O	1:E:117:VAL:HG23	2.03	0.57
1:F:281:TRP:CZ2	1:F:283:PRO:HG3	2.40	0.57
1:I:45:VAL:O	1:I:45:VAL:HG13	2.04	0.57
1:I:293:ASP:O	1:I:297:GLN:HB2	2.05	0.57
1:I:400:LYS:HE2	1:I:403:ARG:HH21	1.68	0.57
1:J:24:VAL:HG13	1:J:483:VAL:HG13	1.86	0.57
1:B:167:PRO:HG3	1:B:176:MET:HG2	1.87	0.57
1:C:82:HIS:HD2	1:C:112:THR:HG21	1.63	0.57
1:D:142:GLU:HG2	1:D:146:ARG:HD2	1.87	0.57
1:D:296:LEU:O	1:D:296:LEU:HD13	2.04	0.57
1:E:74:VAL:HG23	1:E:74:VAL:O	2.05	0.57
1:I:387:LYS:HA	1:I:390:ASN:HD22	1.70	0.57
1:J:414:GLN:CB	1:J:429:PRO:HD2	2.35	0.57
1:K:125:ALA:O	1:K:126:LYS:HB2	2.04	0.57
1:C:394:TYR:HB2	1:C:445:GLU:HG3	1.86	0.56
1:E:315:LEU:HD23	1:E:331:LEU:HD23	1.87	0.56
1:F:238:MET:O	1:F:239:THR:HG22	2.05	0.56
1:I:158:ILE:HG23	1:I:158:ILE:O	2.05	0.56
1:J:498:VAL:CG2	1:J:499:THR:H	2.15	0.56
1:L:293:ASP:HB3	1:L:297:GLN:HE21	1.70	0.56
1:B:332:THR:N	1:B:335:ASN:HD21	1.99	0.56
1:B:332:THR:HG22	1:B:353:THR:HG21	1.87	0.56
1:C:286:ILE:HD12	1:C:286:ILE:N	2.20	0.56
1:F:19:ARG:CZ	1:F:479:THR:HG21	2.35	0.56
1:F:224:GLU:O	1:F:227:ILE:HG22	2.05	0.56
1:G:45:VAL:C	1:G:47:GLY:H	2.07	0.56
1:G:314:ILE:HD13	1:G:314:ILE:N	2.12	0.56
1:I:53:LYS:HB3	1:I:54:PRO:CD	2.35	0.56
1:K:255:VAL:HG13	1:K:256:GLY:N	2.20	0.56
1:A:24:VAL:HG12	1:A:28:LEU:HB2	1.87	0.56
1:B:245:LYS:HB2	1:B:268:ALA:HA	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:260:MET:HG2	1:B:288:PRO:HG3	1.87	0.56
1:C:346:GLU:C	1:C:373:LEU:HD23	2.25	0.56
1:C:414:GLN:CB	1:C:429:PRO:HD2	2.34	0.56
1:C:429:PRO:O	1:C:431:VAL:N	2.38	0.56
1:D:229:GLU:HA	1:D:229:GLU:OE2	2.05	0.56
1:F:411:MET:SD	1:F:430:ILE:HG21	2.45	0.56
1:G:75:ILE:HG23	1:G:131:ILE:HD13	1.86	0.56
1:H:44:ARG:NH1	1:H:44:ARG:CB	2.69	0.56
1:H:494:ASN:C	1:H:496:ALA:H	2.08	0.56
1:I:51:ILE:HD13	1:L:64:PRO:HG3	1.88	0.56
1:I:94:ARG:HH11	1:I:94:ARG:CB	2.16	0.56
1:I:332:THR:HG22	1:I:353:THR:HG21	1.86	0.56
1:K:300:SER:HB3	1:K:302:LEU:HD13	1.86	0.56
1:B:251:GLY:HA3	1:B:326:ALA:HB2	1.88	0.56
1:C:239:THR:O	1:C:239:THR:HG23	2.06	0.56
1:F:94:ARG:HH21	1:F:103:GLU:CD	2.09	0.56
1:F:252:PHE:CE2	1:F:257:LEU:HA	2.41	0.56
1:G:99:VAL:HA	1:G:103:GLU:OE1	2.05	0.56
1:J:198:VAL:O	1:J:201:LYS:HE3	2.05	0.56
1:J:360:PHE:HB3	1:J:365:ILE:HB	1.87	0.56
1:L:252:PHE:CE1	1:L:291:LEU:HG	2.41	0.56
1:E:131:ILE:HG23	1:E:132:ASN:N	2.21	0.56
1:E:496:ALA:C	1:E:501:THR:HA	2.25	0.56
1:F:379:THR:O	1:F:382:TYR:HB3	2.05	0.56
1:G:87:THR:HB	1:G:88:PRO:CD	2.29	0.56
1:G:90:LYS:HD2	1:G:164:VAL:O	2.05	0.56
1:G:251:GLY:HA3	1:G:326:ALA:HB2	1.86	0.56
1:I:65:ILE:HD13	1:I:144:ILE:HG12	1.86	0.56
1:I:414:GLN:HG3	1:I:429:PRO:HD2	1.88	0.56
1:B:30:GLU:HG3	1:B:31:ASP:H	1.70	0.56
1:B:65:ILE:HG12	1:B:75:ILE:CD1	2.36	0.56
1:B:314:ILE:HD13	1:B:314:ILE:N	2.16	0.56
1:B:427:THR:HG22	1:B:429:PRO:HD3	1.87	0.56
1:D:19:ARG:HG3	1:D:19:ARG:NH1	2.20	0.56
1:G:280:ILE:HD11	1:G:301:ILE:O	2.05	0.56
1:I:117:VAL:HG21	1:I:371:LEU:HG	1.87	0.56
1:J:260:MET:CE	1:J:288:PRO:HA	2.36	0.56
1:B:106:ALA:O	1:B:109:SER:HB3	2.06	0.56
1:B:224:GLU:HA	1:B:227:ILE:HG22	1.88	0.56
1:C:248:VAL:HG12	1:C:249:VAL:H	1.70	0.56
1:C:411:MET:HA	1:C:430:ILE:HG22	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:176:MET:HA	1:H:176:MET:HE3	1.88	0.56
1:I:131:ILE:HG23	1:I:136:TYR:CE2	2.40	0.56
1:I:332:THR:O	1:I:336:ALA:HB2	2.05	0.56
1:J:346:GLU:OE2	1:J:352:THR:HG23	2.06	0.56
1:K:463:GLN:CG	1:K:466:ARG:HH22	2.12	0.56
1:A:42:ARG:O	1:A:45:VAL:HG12	2.04	0.56
1:C:19:ARG:CZ	1:C:479:THR:HG21	2.36	0.56
1:C:271:ILE:HG13	1:C:283:PRO:HA	1.87	0.56
1:C:444:SER:HB3	1:C:446:LYS:NZ	2.20	0.56
1:E:111:MET:HE1	1:E:378:VAL:HG21	1.87	0.56
1:G:258:HIS:HB3	1:G:262:TYR:CE2	2.41	0.56
1:H:33:ARG:O	1:H:42:ARG:NH1	2.38	0.56
1:J:316:GLU:HG3	1:J:338:ARG:O	2.06	0.56
1:K:286:ILE:HD12	1:K:286:ILE:N	2.20	0.56
1:K:461:ALA:O	1:K:465:MET:HG3	2.06	0.56
1:A:499:THR:HG21	1:E:147:ARG:NE	2.21	0.56
1:C:411:MET:SD	1:C:430:ILE:HG21	2.46	0.56
1:D:300:SER:OG	1:D:302:LEU:HD13	2.06	0.56
1:D:496:ALA:C	1:D:501:THR:HA	2.27	0.56
1:E:198:VAL:O	1:E:201:LYS:HE3	2.05	0.56
1:E:301:ILE:HD12	1:E:302:LEU:N	2.21	0.56
1:E:374:ASN:HD22	1:E:374:ASN:N	2.01	0.56
1:F:90:LYS:HD2	1:F:164:VAL:O	2.05	0.56
1:F:251:GLY:HA3	1:F:326:ALA:HB2	1.88	0.56
1:H:260:MET:HG2	1:H:288:PRO:HG3	1.86	0.56
1:I:37:SER:HA	1:I:42:ARG:NH1	2.21	0.56
1:I:113:TYR:O	1:I:117:VAL:HG23	2.06	0.56
1:K:282:ASN:OD1	1:K:284:ASP:HB2	2.06	0.56
1:A:147:ARG:HB2	1:A:147:ARG:NH1	2.21	0.56
1:B:186:THR:HG23	1:E:186:THR:CG2	2.27	0.56
1:B:459:ARG:HG2	1:B:463:GLN:HE21	1.71	0.56
1:D:225:ASN:HD21	1:D:458:GLU:HA	1.71	0.56
1:E:75:ILE:HG23	1:E:131:ILE:HD13	1.88	0.56
1:F:332:THR:H	1:F:335:ASN:HD21	1.54	0.56
1:G:43:ASN:O	1:G:46:ARG:HG2	2.05	0.56
1:H:300:SER:HB3	1:H:302:LEU:HD13	1.87	0.56
1:J:308:LYS:HD2	1:J:309:PRO:HD2	1.87	0.56
1:L:335:ASN:HB2	1:L:338:ARG:HH12	1.71	0.56
1:A:247:PHE:CZ	1:A:270:CYS:HB2	2.41	0.55
1:A:423:LYS:HE2	1:H:437:GLN:HG2	1.88	0.55
1:B:414:GLN:HE22	1:B:430:ILE:HD13	1.70	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:24:VAL:HG22	1:D:483:VAL:HG13	1.86	0.55
1:E:117:VAL:HG11	1:E:372:TYR:HB2	1.88	0.55
1:E:336:ALA:O	1:E:339:VAL:HG22	2.06	0.55
1:F:40:GLN:O	1:F:40:GLN:HG3	2.05	0.55
1:F:255:VAL:HG13	1:F:256:GLY:N	2.20	0.55
1:I:58:VAL:HG13	1:L:60:SER:HB2	1.88	0.55
1:I:87:THR:CB	1:I:88:PRO:HD3	2.36	0.55
1:L:107:LEU:HD13	1:L:126:LYS:HE3	1.88	0.55
1:L:332:THR:N	1:L:335:ASN:HD21	1.98	0.55
1:L:355:GLU:O	1:L:359:ILE:HD13	2.05	0.55
1:A:247:PHE:CG	1:A:263:LEU:HD23	2.42	0.55
1:B:318:ASP:HA	1:B:340:LYS:HB2	1.89	0.55
1:D:192:ILE:O	1:D:192:ILE:HG12	2.05	0.55
1:E:414:GLN:O	1:E:418:GLU:HG3	2.06	0.55
1:F:91:GLY:HA3	1:F:125:ALA:O	2.06	0.55
1:G:192:ILE:O	1:G:192:ILE:HG12	2.06	0.55
1:J:142:GLU:HG2	1:J:146:ARG:HD2	1.88	0.55
1:L:251:GLY:HA3	1:L:326:ALA:HB2	1.87	0.55
1:E:111:MET:HB3	1:E:124:GLY:HA2	1.88	0.55
1:H:244:ASP:OD2	1:H:245:LYS:HG3	2.05	0.55
1:I:75:ILE:N	1:I:75:ILE:HD12	2.21	0.55
1:J:219:VAL:HG11	1:J:323:ILE:CD1	2.36	0.55
1:K:229:GLU:HG3	1:K:231:SER:OG	2.06	0.55
1:A:192:ILE:O	1:A:192:ILE:HG12	2.06	0.55
1:A:271:ILE:O	1:A:272:ALA:HB2	2.06	0.55
1:D:68:ASP:OD1	1:D:140:GLU:HG3	2.07	0.55
1:E:90:LYS:NZ	1:E:166:ALA:HB2	2.21	0.55
1:E:382:TYR:O	1:E:386:LEU:HG	2.07	0.55
1:F:47:GLY:CA	1:F:50:ARG:HG2	2.36	0.55
1:F:242:PHE:HA	1:G:437:GLN:HE22	1.70	0.55
1:G:497:GLY:C	1:G:501:THR:HB	2.26	0.55
1:H:44:ARG:HH11	1:H:44:ARG:CB	2.18	0.55
1:H:71:SER:HB3	1:J:44:ARG:HD3	1.87	0.55
1:K:49:LEU:HD12	1:K:49:LEU:H	1.70	0.55
1:B:394:TYR:HB2	1:B:445:GLU:HG3	1.87	0.55
1:C:53:LYS:HB3	1:C:54:PRO:HD3	1.89	0.55
1:C:147:ARG:HD3	1:F:499:THR:HG21	1.88	0.55
1:D:175:GLU:HA	1:D:178:TRP:CE3	2.42	0.55
1:D:428:ILE:HD13	1:D:428:ILE:N	2.12	0.55
1:G:41:LYS:C	1:G:43:ASN:H	2.10	0.55
1:G:335:ASN:HD22	1:G:336:ALA:N	2.05	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:360:PHE:HB3	1:H:365:ILE:HB	1.87	0.55
1:I:142:GLU:O	1:I:146:ARG:HG3	2.06	0.55
1:I:201:LYS:HZ3	1:I:388:ASN:HD21	1.54	0.55
1:A:35:ARG:C	1:A:36:GLU:HG3	2.26	0.55
1:A:353:THR:HG23	1:A:356:ALA:H	1.71	0.55
1:A:423:LYS:CD	1:A:426:GLY:HA3	2.25	0.55
1:B:393:SER:O	1:B:396:ARG:HB2	2.07	0.55
1:E:346:GLU:CD	1:E:478:ARG:HH22	2.09	0.55
1:F:48:ILE:HD12	1:F:490:PHE:CE1	2.42	0.55
1:F:370:ASP:OD2	1:F:371:LEU:N	2.38	0.55
1:G:27:LYS:O	1:G:32:LEU:HD12	2.05	0.55
1:I:174:ARG:HG3	1:I:175:GLU:H	1.72	0.55
1:I:501:THR:C	1:J:146:ARG:HH12	2.09	0.55
1:K:186:THR:HG22	1:K:187:ILE:N	2.21	0.55
1:L:335:ASN:CB	1:L:338:ARG:HH12	2.19	0.55
1:B:31:ASP:O	1:B:35:ARG:NH2	2.39	0.55
1:B:496:ALA:C	1:B:501:THR:HA	2.27	0.55
1:C:112:THR:CG2	1:C:124:GLY:HA3	2.34	0.55
1:D:366:MET:HB2	1:D:475:LEU:HD23	1.88	0.55
1:F:82:HIS:CG	1:F:112:THR:HG21	2.41	0.55
1:F:314:ILE:HD13	1:F:314:ILE:N	2.12	0.55
1:H:186:THR:HG22	1:K:186:THR:HG23	1.88	0.55
1:I:36:GLU:C	1:I:37:SER:O	2.45	0.55
1:L:158:ILE:HG12	1:L:165:PRO:HG2	1.89	0.55
1:L:423:LYS:HG2	1:L:426:GLY:CA	2.37	0.55
1:A:252:PHE:HD2	1:A:273:VAL:HG11	1.71	0.55
1:B:87:THR:CB	1:B:88:PRO:CD	2.85	0.55
1:B:158:ILE:HD11	1:B:179:ILE:CG2	2.37	0.55
1:E:281:TRP:O	1:E:282:ASN:HB2	2.07	0.55
1:E:360:PHE:HB3	1:E:365:ILE:HB	1.88	0.55
1:F:414:GLN:NE2	1:F:430:ILE:HG23	2.22	0.55
1:H:428:ILE:O	1:H:431:VAL:HG12	2.07	0.55
1:K:131:ILE:CD1	1:K:144:ILE:HD13	2.36	0.55
1:L:168:ASP:CG	1:L:169:MET:H	2.10	0.55
1:A:30:GLU:HG3	1:A:31:ASP:H	1.71	0.55
1:B:238:MET:O	1:B:239:THR:HG22	2.07	0.55
1:E:48:ILE:O	1:E:52:ILE:HG13	2.07	0.55
1:F:113:TYR:O	1:F:117:VAL:HG23	2.06	0.55
1:H:411:MET:HA	1:H:430:ILE:HG22	1.88	0.55
1:J:497:GLY:C	1:J:501:THR:HB	2.28	0.55
1:C:227:ILE:HG22	1:C:228:ASN:ND2	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:47:GLY:CA	1:D:50:ARG:HG2	2.35	0.55
1:F:28:LEU:HD21	1:F:490:PHE:CD2	2.42	0.55
1:G:181:ASP:OD1	1:L:501:THR:HG23	2.07	0.55
1:I:164:VAL:HA	1:I:197:CYS:O	2.06	0.55
1:K:176:MET:HE3	1:K:198:VAL:CG2	2.37	0.55
1:C:193:ASN:HB3	1:C:389:LEU:HD23	1.89	0.54
1:C:336:ALA:O	1:C:339:VAL:HG22	2.08	0.54
1:D:225:ASN:ND2	1:D:458:GLU:HA	2.22	0.54
1:E:281:TRP:CZ2	1:E:283:PRO:HG3	2.42	0.54
1:H:436:PHE:CG	1:L:408:HIS:HB3	2.41	0.54
1:J:34:THR:O	1:J:34:THR:CG2	2.55	0.54
1:J:158:ILE:O	1:J:158:ILE:CG2	2.55	0.54
1:J:414:GLN:OE1	1:J:430:ILE:HG23	2.07	0.54
1:K:86:ARG:HG2	1:K:121:PRO:HA	1.89	0.54
1:L:65:ILE:HG22	1:L:147:ARG:HD2	1.89	0.54
1:A:164:VAL:HA	1:A:197:CYS:O	2.07	0.54
1:C:319:CYS:SG	1:C:341:ALA:HB2	2.47	0.54
1:E:293:ASP:O	1:E:297:GLN:HB2	2.07	0.54
1:E:302:LEU:N	1:E:302:LEU:HD12	2.22	0.54
1:G:248:VAL:HG22	1:G:271:ILE:HG22	1.88	0.54
1:I:38:GLU:O	1:I:39:GLU:CB	2.51	0.54
1:K:35:ARG:O	1:K:36:GLU:HB3	2.07	0.54
1:L:31:ASP:CG	1:L:31:ASP:O	2.45	0.54
1:L:300:SER:HB3	1:L:302:LEU:HD13	1.87	0.54
1:C:279:SER:HB2	1:C:310:TYR:O	2.08	0.54
1:D:34:THR:O	1:D:34:THR:CG2	2.56	0.54
1:E:224:GLU:O	1:E:227:ILE:HG22	2.07	0.54
1:E:414:GLN:OE1	1:E:428:ILE:HA	2.08	0.54
1:F:104:VAL:HG23	1:F:105:LYS:N	2.23	0.54
1:H:462:ARG:HG3	1:H:462:ARG:HH11	1.72	0.54
1:K:152:LEU:HD23	1:K:158:ILE:HB	1.89	0.54
1:L:335:ASN:ND2	1:L:335:ASN:H	2.04	0.54
1:B:86:ARG:HG2	1:B:121:PRO:HA	1.90	0.54
1:C:14:GLU:HB2	1:C:53:LYS:NZ	2.22	0.54
1:D:414:GLN:CB	1:D:429:PRO:HD2	2.37	0.54
1:E:53:LYS:HB3	1:E:54:PRO:HD3	1.89	0.54
1:E:302:LEU:HD12	1:E:302:LEU:H	1.72	0.54
1:F:29:VAL:O	1:F:34:THR:OG1	2.20	0.54
1:H:302:LEU:HD12	1:H:302:LEU:N	2.22	0.54
1:H:414:GLN:OE1	1:H:430:ILE:HG12	2.08	0.54
1:I:244:ASP:C	1:I:245:LYS:HG3	2.27	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:371:LEU:HD23	1:J:481:ALA:CB	2.37	0.54
1:L:335:ASN:ND2	1:L:335:ASN:N	2.54	0.54
1:C:48:ILE:O	1:C:52:ILE:HG13	2.08	0.54
1:D:335:ASN:N	1:D:335:ASN:ND2	2.55	0.54
1:E:42:ARG:CA	1:E:42:ARG:NE	2.70	0.54
1:H:149:THR:HG23	1:H:158:ILE:CD1	2.38	0.54
1:H:200:GLY:HA2	1:H:211:ARG:HD2	1.88	0.54
1:I:61:LEU:HD11	1:I:148:PHE:HE1	1.72	0.54
1:L:379:THR:O	1:L:382:TYR:HB3	2.07	0.54
1:A:53:LYS:HB3	1:A:54:PRO:HD3	1.88	0.54
1:B:275:GLU:HG3	1:B:301:ILE:HD13	1.89	0.54
1:E:494:ASN:C	1:E:496:ALA:H	2.09	0.54
1:G:403:ARG:HG3	1:G:440:ILE:CG2	2.38	0.54
1:H:82:HIS:CD2	1:H:109:SER:HA	2.43	0.54
1:K:53:LYS:O	1:K:82:HIS:HE1	1.90	0.54
1:K:131:ILE:HD13	1:K:144:ILE:HD13	1.89	0.54
1:K:271:ILE:HG13	1:K:283:PRO:HA	1.89	0.54
1:K:496:ALA:C	1:K:501:THR:HA	2.27	0.54
1:A:41:LYS:HB3	1:A:44:ARG:CD	2.38	0.54
1:A:132:ASN:OD1	1:A:134:LYS:HB2	2.08	0.54
1:A:335:ASN:HD22	1:A:335:ASN:N	2.05	0.54
1:D:315:LEU:HG	1:D:331:LEU:HD21	1.89	0.54
1:D:318:ASP:HA	1:D:340:LYS:HB2	1.90	0.54
1:H:465:MET:O	1:H:469:MET:HG3	2.08	0.54
1:J:233:MET:HE1	1:J:236:LEU:HD12	1.90	0.54
1:K:10:PHE:O	1:K:14:GLU:HG3	2.08	0.54
1:C:363:ARG:HG3	1:C:365:ILE:HG12	1.90	0.54
1:D:99:VAL:HG22	1:D:130:LYS:HD3	1.88	0.54
1:D:335:ASN:ND2	1:D:335:ASN:H	2.04	0.54
1:D:394:TYR:HB2	1:D:445:GLU:HG3	1.89	0.54
1:E:33:ARG:HB2	1:E:33:ARG:CZ	2.38	0.54
1:G:238:MET:HA	1:G:238:MET:CE	2.38	0.54
1:A:65:ILE:CD1	1:A:75:ILE:HD11	2.37	0.54
1:A:496:ALA:C	1:A:501:THR:HA	2.29	0.54
1:C:239:THR:N	1:C:240:PRO:CD	2.67	0.54
1:D:86:ARG:HG2	1:D:121:PRO:CA	2.37	0.54
1:I:50:ARG:NH2	1:L:72:TRP:O	2.40	0.54
1:I:482:TYR:O	1:I:486:ILE:HG13	2.07	0.54
1:K:137:THR:OG1	1:K:140:GLU:HG3	2.08	0.54
1:K:331:LEU:HB2	1:K:352:THR:HG22	1.89	0.54
1:K:344:ILE:HD12	1:K:367:VAL:HG22	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:163:ASP:O	1:L:165:PRO:HD3	2.07	0.54
1:A:92:GLY:HA2	1:A:166:ALA:O	2.08	0.53
1:A:315:LEU:CD1	1:A:315:LEU:H	2.20	0.53
1:C:94:ARG:HH22	1:C:107:LEU:HD11	1.72	0.53
1:D:65:ILE:CD1	1:D:75:ILE:HD11	2.38	0.53
1:D:112:THR:CG2	1:D:124:GLY:H	2.10	0.53
1:D:468:ALA:HA	1:D:473:LEU:HD12	1.88	0.53
1:F:249:VAL:HB	1:F:323:ILE:HD11	1.90	0.53
1:G:360:PHE:HB3	1:G:365:ILE:HB	1.90	0.53
1:H:25:GLU:O	1:H:29:VAL:HG23	2.07	0.53
1:H:42:ARG:O	1:H:45:VAL:HG12	2.07	0.53
1:I:346:GLU:CD	1:I:478:ARG:HH22	2.11	0.53
1:J:427:THR:O	1:J:428:ILE:HD13	2.07	0.53
1:K:420:LYS:HG2	1:K:420:LYS:O	2.08	0.53
1:D:20:GLY:O	1:D:24:VAL:HG23	2.08	0.53
1:E:257:LEU:HD11	1:E:292:GLU:OE1	2.07	0.53
1:H:200:GLY:HA2	1:H:211:ARG:CD	2.38	0.53
1:J:150:MET:SD	1:J:186:THR:HG21	2.48	0.53
1:J:162:ILE:N	1:J:162:ILE:HD12	2.22	0.53
1:J:370:ASP:OD2	1:J:371:LEU:N	2.41	0.53
1:L:233:MET:HE1	1:L:236:LEU:HD12	1.91	0.53
1:B:428:ILE:N	1:B:429:PRO:HD3	2.24	0.53
1:C:91:GLY:HA3	1:C:125:ALA:O	2.08	0.53
1:D:65:ILE:HD13	1:D:75:ILE:HD11	1.90	0.53
1:D:142:GLU:O	1:D:146:ARG:HG3	2.08	0.53
1:H:213:SER:O	1:H:217:ARG:HG3	2.08	0.53
1:I:68:ASP:OD2	1:I:137:THR:HG21	2.08	0.53
1:I:97:THR:O	1:I:97:THR:HG22	2.07	0.53
1:I:117:VAL:HG11	1:I:372:TYR:HB2	1.89	0.53
1:K:445:GLU:O	1:K:449:VAL:HG23	2.08	0.53
1:L:91:GLY:HA3	1:L:125:ALA:O	2.09	0.53
1:L:238:MET:O	1:L:239:THR:HG22	2.08	0.53
1:L:414:GLN:CB	1:L:429:PRO:HD2	2.38	0.53
1:A:414:GLN:CD	1:A:430:ILE:HG23	2.29	0.53
1:C:31:ASP:OD2	1:C:31:ASP:N	2.40	0.53
1:C:94:ARG:NH2	1:C:107:LEU:HD11	2.24	0.53
1:D:30:GLU:O	1:D:32:LEU:N	2.39	0.53
1:F:498:VAL:CG2	1:F:499:THR:H	2.11	0.53
1:G:10:PHE:HD1	1:G:106:ALA:HB2	1.74	0.53
1:H:431:VAL:HG11	1:L:419:ARG:NH2	2.24	0.53
1:B:58:VAL:HG13	1:B:58:VAL:O	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:176:MET:HE3	1:B:179:ILE:CD1	2.35	0.53
1:E:236:LEU:HB2	1:E:238:MET:HG2	1.90	0.53
1:G:248:VAL:HG11	1:G:314:ILE:HB	1.90	0.53
1:G:360:PHE:HD1	1:G:365:ILE:HG13	1.74	0.53
1:G:400:LYS:HB2	1:L:455:TYR:HB2	1.91	0.53
1:H:255:VAL:HG13	1:H:256:GLY:H	1.73	0.53
1:H:328:GLU:HG2	1:H:329:LYS:HG3	1.90	0.53
1:I:421:PHE:CD1	1:I:423:LYS:HB2	2.42	0.53
1:J:158:ILE:HG12	1:J:165:PRO:HG2	1.89	0.53
1:J:192:ILE:O	1:J:192:ILE:HG12	2.07	0.53
1:K:145:THR:HG21	1:K:175:GLU:HG3	1.90	0.53
1:K:176:MET:HE3	1:K:198:VAL:HG22	1.90	0.53
1:K:421:PHE:CE1	1:K:423:LYS:HB2	2.43	0.53
1:L:53:LYS:HB3	1:L:54:PRO:HD3	1.90	0.53
1:L:428:ILE:O	1:L:431:VAL:HG12	2.09	0.53
1:A:397:LEU:HD23	1:F:452:GLY:HA3	1.89	0.53
1:D:368:ILE:HG21	1:D:373:LEU:HD13	1.90	0.53
1:G:132:ASN:OD1	1:G:134:LYS:HB2	2.09	0.53
1:H:141:LEU:O	1:H:145:THR:HG23	2.08	0.53
1:H:236:LEU:HD22	1:H:342:LYS:HE3	1.91	0.53
1:H:318:ASP:HA	1:H:340:LYS:HB2	1.90	0.53
1:I:247:PHE:CZ	1:I:270:CYS:HB2	2.44	0.53
1:I:279:SER:HB2	1:I:310:TYR:O	2.08	0.53
1:I:386:LEU:HD13	1:J:392:VAL:HG21	1.89	0.53
1:A:189:HIS:CE1	1:C:154:LYS:HD3	2.44	0.53
1:B:43:ASN:O	1:B:46:ARG:HG2	2.09	0.53
1:E:223:ILE:HD12	1:E:263:LEU:HD21	1.90	0.53
1:E:370:ASP:O	1:E:374:ASN:ND2	2.41	0.53
1:F:332:THR:N	1:F:335:ASN:HD21	2.07	0.53
1:G:462:ARG:HB3	1:G:466:ARG:NH1	2.23	0.53
1:I:333:LYS:HD2	1:I:333:LYS:O	2.07	0.53
1:I:436:PHE:CZ	1:J:409:LEU:HD22	2.43	0.53
1:L:112:THR:CG2	1:L:124:GLY:HA3	2.31	0.53
1:A:10:PHE:HD1	1:A:106:ALA:HB2	1.74	0.53
1:A:30:GLU:HA	1:A:34:THR:OG1	2.09	0.53
1:A:158:ILE:O	1:A:158:ILE:HG23	2.09	0.53
1:B:24:VAL:HG12	1:B:28:LEU:HB2	1.91	0.53
1:C:50:ARG:CB	1:C:50:ARG:HH11	2.22	0.53
1:D:369:PRO:CG	1:D:478:ARG:HA	2.39	0.53
1:E:95:TYR:OH	1:E:145:THR:HG22	2.08	0.53
1:E:345:ALA:HB1	1:E:373:LEU:CD2	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:29:VAL:HA	1:F:33:ARG:HG2	1.90	0.53
1:F:250:GLN:HG3	1:F:315:LEU:HD11	1.91	0.53
1:G:142:GLU:O	1:G:146:ARG:HG3	2.08	0.53
1:G:274:GLY:CA	1:G:314:ILE:HD12	2.36	0.53
1:H:332:THR:H	1:H:335:ASN:HD21	1.57	0.53
1:H:363:ARG:HB2	1:H:363:ARG:HH11	1.74	0.53
1:I:39:GLU:OE1	1:I:41:LYS:HD2	2.08	0.53
1:I:114:LYS:HD3	1:I:378:VAL:HG21	1.89	0.53
1:B:52:ILE:HD13	1:B:489:VAL:HG12	1.90	0.53
1:B:65:ILE:HG21	1:B:144:ILE:HG12	1.90	0.53
1:B:496:ALA:HB1	1:B:501:THR:OG1	2.08	0.53
1:C:164:VAL:HG13	1:C:198:VAL:HA	1.90	0.53
1:C:339:VAL:HG23	1:C:339:VAL:O	2.07	0.53
1:G:250:GLN:HE21	1:G:314:ILE:CD1	2.22	0.53
1:H:196:ALA:HA	1:H:388:ASN:HD22	1.74	0.53
1:I:213:SER:HB2	1:I:217:ARG:HD2	1.90	0.53
1:I:238:MET:HE1	1:I:342:LYS:HG3	1.89	0.53
1:K:38:GLU:H	1:K:42:ARG:HE	1.55	0.53
1:L:142:GLU:HG2	1:L:146:ARG:HD2	1.91	0.53
1:L:177:SER:OG	1:L:205:GLN:HG3	2.09	0.53
1:A:249:VAL:HB	1:A:323:ILE:HD11	1.90	0.53
1:A:263:LEU:O	1:A:268:ALA:HB3	2.08	0.53
1:B:501:THR:HG23	1:F:181:ASP:OD1	2.09	0.53
1:F:323:ILE:HG13	1:F:323:ILE:O	2.08	0.53
1:F:328:GLU:C	1:F:329:LYS:HG2	2.29	0.53
1:G:112:THR:HG22	1:G:124:GLY:HA3	1.90	0.53
1:G:212:ILE:H	1:G:212:ILE:CD1	2.00	0.53
1:I:33:ARG:HB2	1:I:33:ARG:CZ	2.38	0.53
1:K:65:ILE:HD13	1:K:75:ILE:HD11	1.91	0.53
1:K:158:ILE:O	1:K:158:ILE:CG2	2.55	0.53
1:L:335:ASN:N	1:L:335:ASN:HD22	2.05	0.53
1:C:118:VAL:HG12	1:C:456:THR:CG2	2.39	0.52
1:C:335:ASN:HB2	1:C:338:ARG:CZ	2.39	0.52
1:E:130:LYS:O	1:E:131:ILE:HD12	2.09	0.52
1:G:328:GLU:O	1:G:329:LYS:HB2	2.09	0.52
1:H:9:PHE:CE1	1:H:103:GLU:HA	2.44	0.52
1:H:374:ASN:C	1:H:374:ASN:HD22	2.12	0.52
1:I:198:VAL:HG22	1:I:199:THR:N	2.24	0.52
1:K:106:ALA:O	1:K:109:SER:HB3	2.09	0.52
1:A:59:LEU:CD2	1:A:61:LEU:HD21	2.39	0.52
1:B:104:VAL:HG23	1:B:105:LYS:N	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:112:THR:HG23	1:B:124:GLY:CA	2.39	0.52
1:B:233:MET:HE3	1:B:343:ILE:HD11	1.91	0.52
1:C:12:MET:HB3	1:C:16:PHE:HE1	1.73	0.52
1:C:494:ASN:C	1:C:496:ALA:H	2.11	0.52
1:E:429:PRO:O	1:E:431:VAL:N	2.42	0.52
1:F:497:GLY:CA	1:F:501:THR:HA	2.39	0.52
1:G:222:GLY:HA3	1:G:373:LEU:CD1	2.38	0.52
1:H:414:GLN:OE1	1:H:428:ILE:HA	2.09	0.52
1:I:414:GLN:CG	1:I:429:PRO:HD2	2.39	0.52
1:J:91:GLY:HA3	1:J:125:ALA:O	2.08	0.52
1:K:13:VAL:HG21	1:K:110:LEU:CD1	2.39	0.52
1:K:141:LEU:O	1:K:145:THR:HG23	2.08	0.52
1:L:199:THR:HG22	1:L:384:GLU:HG2	1.92	0.52
1:L:315:LEU:HD23	1:L:331:LEU:HD23	1.90	0.52
1:B:219:VAL:O	1:B:223:ILE:HG13	2.10	0.52
1:F:173:GLU:HB2	1:F:202:PRO:HD3	1.91	0.52
1:F:496:ALA:C	1:F:501:THR:HA	2.30	0.52
1:H:57:HIS:CE1	1:J:61:LEU:HD22	2.44	0.52
1:H:363:ARG:HH11	1:H:363:ARG:CB	2.22	0.52
1:L:494:ASN:O	1:L:496:ALA:N	2.42	0.52
1:A:367:VAL:O	1:A:369:PRO:HD3	2.09	0.52
1:B:107:LEU:HB2	1:B:126:LYS:HG2	1.91	0.52
1:B:164:VAL:HG13	1:B:198:VAL:HA	1.91	0.52
1:C:25:GLU:OE2	1:C:46:ARG:HD2	2.09	0.52
1:D:148:PHE:O	1:D:152:LEU:HB2	2.09	0.52
1:D:355:GLU:O	1:D:359:ILE:HD13	2.09	0.52
1:E:387:LYS:HG2	1:E:387:LYS:O	2.08	0.52
1:H:87:THR:HB	1:H:88:PRO:CD	2.32	0.52
1:I:339:VAL:H	1:I:363:ARG:NH2	2.07	0.52
1:I:363:ARG:O	1:I:365:ILE:HG12	2.09	0.52
1:J:175:GLU:HA	1:J:178:TRP:CE3	2.44	0.52
1:J:186:THR:HG22	1:J:187:ILE:N	2.24	0.52
1:J:332:THR:H	1:J:335:ASN:HD21	1.57	0.52
1:K:17:PHE:CE2	1:K:53:LYS:HB2	2.45	0.52
1:L:471:TYR:O	1:L:473:LEU:HD12	2.09	0.52
1:B:82:HIS:CD2	1:B:112:THR:HG21	2.44	0.52
1:B:501:THR:C	1:F:146:ARG:HH12	2.13	0.52
1:D:386:LEU:HD13	1:E:392:VAL:HG21	1.90	0.52
1:E:177:SER:OG	1:E:205:GLN:HG3	2.10	0.52
1:F:11:LYS:HE2	1:F:11:LYS:CA	2.38	0.52
1:F:93:ILE:O	1:F:168:ASP:HB3	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:497:GLY:HA3	1:K:501:THR:HA	1.92	0.52
1:L:346:GLU:C	1:L:373:LEU:HD23	2.29	0.52
1:B:249:VAL:HB	1:B:323:ILE:HD11	1.91	0.52
1:B:346:GLU:OE1	1:B:370:ASP:N	2.43	0.52
1:C:17:PHE:CE1	1:C:486:ILE:HD12	2.44	0.52
1:F:117:VAL:HG11	1:F:372:TYR:HB2	1.91	0.52
1:F:239:THR:N	1:F:240:PRO:CD	2.72	0.52
1:F:414:GLN:NE2	1:F:430:ILE:CG2	2.73	0.52
1:H:12:MET:SD	1:H:354:PRO:HD3	2.50	0.52
1:I:323:ILE:HG13	1:I:323:ILE:O	2.09	0.52
1:I:497:GLY:C	1:I:501:THR:HB	2.30	0.52
1:J:65:ILE:HG22	1:J:147:ARG:HD2	1.91	0.52
1:J:244:ASP:OD2	1:J:245:LYS:HG3	2.10	0.52
1:J:314:ILE:HD13	1:J:314:ILE:H	1.75	0.52
1:B:28:LEU:HD12	1:B:32:LEU:CD1	2.37	0.52
1:B:118:VAL:HG23	1:B:120:VAL:HG23	1.92	0.52
1:B:331:LEU:HD12	1:B:352:THR:HG22	1.92	0.52
1:C:417:LEU:HD23	1:D:417:LEU:HD11	1.90	0.52
1:F:280:ILE:CG2	1:F:307:ALA:HB1	2.39	0.52
1:G:66:ARG:HH21	1:G:72:TRP:HH2	1.56	0.52
1:J:227:ILE:HD12	1:J:233:MET:SD	2.50	0.52
1:K:453:LEU:HD23	1:K:457:MET:HG2	1.91	0.52
1:L:38:GLU:CB	1:L:42:ARG:HH21	2.15	0.52
1:A:82:HIS:CD2	1:A:112:THR:HG21	2.44	0.52
1:A:318:ASP:HA	1:A:340:LYS:HB2	1.92	0.52
1:B:252:PHE:HD1	1:B:295:LYS:HD2	1.75	0.52
1:E:88:PRO:HG2	1:E:122:PHE:CD2	2.45	0.52
1:E:382:TYR:CE2	1:E:386:LEU:HD21	2.45	0.52
1:F:342:LYS:HD3	1:F:365:ILE:HD13	1.92	0.52
1:H:455:TYR:HB2	1:L:400:LYS:HB2	1.91	0.52
1:J:238:MET:O	1:J:239:THR:HG22	2.10	0.52
1:J:432:PRO:HB3	1:J:436:PHE:CD1	2.44	0.52
1:K:35:ARG:O	1:K:36:GLU:CB	2.58	0.52
1:K:59:LEU:HD21	1:K:61:LEU:HD21	1.92	0.52
1:A:141:LEU:O	1:A:145:THR:HG23	2.10	0.52
1:A:146:ARG:HH22	1:F:501:THR:HG23	1.74	0.52
1:C:114:LYS:NZ	1:C:374:ASN:HD21	2.07	0.52
1:D:79:ARG:HD3	1:D:127:ALA:HB2	1.92	0.52
1:D:239:THR:N	1:D:240:PRO:CD	2.72	0.52
1:E:30:GLU:O	1:E:32:LEU:N	2.42	0.52
1:E:429:PRO:C	1:E:431:VAL:H	2.13	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:429:PRO:O	1:G:431:VAL:N	2.43	0.52
1:J:335:ASN:HD22	1:J:335:ASN:N	2.03	0.52
1:J:335:ASN:H	1:J:335:ASN:ND2	2.07	0.52
1:K:78:TYR:N	1:K:78:TYR:CD1	2.78	0.52
1:K:250:GLN:HG3	1:K:315:LEU:HD11	1.92	0.52
1:L:150:MET:CE	1:L:186:THR:HG21	2.39	0.52
1:B:19:ARG:O	1:B:23:ILE:HG13	2.10	0.52
1:B:65:ILE:O	1:B:65:ILE:HG13	2.09	0.52
1:B:239:THR:N	1:B:240:PRO:CD	2.71	0.52
1:C:24:VAL:HG12	1:C:28:LEU:HB2	1.92	0.52
1:D:249:VAL:HG23	1:D:323:ILE:HG13	1.90	0.52
1:D:497:GLY:C	1:D:501:THR:HB	2.30	0.52
1:F:175:GLU:HG3	1:F:178:TRP:CZ3	2.44	0.52
1:I:32:LEU:O	1:I:32:LEU:HD23	2.09	0.52
1:I:201:LYS:NZ	1:I:388:ASN:HD21	2.07	0.52
1:I:300:SER:OG	1:I:301:ILE:N	2.42	0.52
1:I:355:GLU:O	1:I:359:ILE:HD13	2.10	0.52
1:J:316:GLU:O	1:J:340:LYS:HG2	2.10	0.52
1:J:414:GLN:CG	1:J:429:PRO:HD2	2.40	0.52
1:L:195:HIS:O	1:L:201:LYS:HE3	2.10	0.52
1:L:398:THR:O	1:L:399:PHE:C	2.49	0.52
1:A:281:TRP:NE1	1:A:283:PRO:HD3	2.25	0.51
1:E:147:ARG:O	1:E:151:GLU:HG2	2.11	0.51
1:F:314:ILE:H	1:F:314:ILE:CD1	2.11	0.51
1:F:414:GLN:OE1	1:F:428:ILE:HA	2.10	0.51
1:I:68:ASP:OD1	1:I:140:GLU:HG3	2.09	0.51
1:J:414:GLN:HB2	1:J:429:PRO:HD2	1.92	0.51
1:K:390:ASN:O	1:K:392:VAL:HG22	2.10	0.51
1:A:86:ARG:HG2	1:A:121:PRO:HA	1.90	0.51
1:A:109:SER:O	1:A:112:THR:HG23	2.10	0.51
1:B:275:GLU:OE1	1:B:301:ILE:HG12	2.09	0.51
1:C:59:LEU:HB2	1:C:157:PHE:CE2	2.46	0.51
1:C:146:ARG:HH22	1:E:501:THR:C	2.13	0.51
1:F:10:PHE:HD1	1:F:106:ALA:HB2	1.74	0.51
1:G:153:ALA:CA	1:G:158:ILE:HG22	2.40	0.51
1:I:423:LYS:HG2	1:I:426:GLY:CA	2.39	0.51
1:K:38:GLU:HB2	1:K:42:ARG:NH2	2.21	0.51
1:B:35:ARG:NH1	1:B:35:ARG:HB2	2.25	0.51
1:B:322:LEU:O	1:B:324:PRO:HD3	2.10	0.51
1:C:410:LEU:HB3	1:C:430:ILE:HA	1.93	0.51
1:D:53:LYS:HB3	1:D:54:PRO:HD3	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:38:GLU:OE2	1:E:42:ARG:HD2	2.10	0.51
1:E:281:TRP:NE1	1:E:283:PRO:HD3	2.26	0.51
1:E:302:LEU:H	1:E:302:LEU:CD1	2.24	0.51
1:F:39:GLU:C	1:F:41:LYS:H	2.13	0.51
1:G:17:PHE:CE2	1:G:53:LYS:HB2	2.45	0.51
1:G:390:ASN:O	1:G:392:VAL:HG23	2.10	0.51
1:G:429:PRO:C	1:G:431:VAL:H	2.13	0.51
1:L:87:THR:HB	1:L:88:PRO:HD3	1.92	0.51
1:E:239:THR:HG23	1:E:239:THR:O	2.09	0.51
1:H:176:MET:CE	1:H:179:ILE:HD12	2.40	0.51
1:H:396:ARG:O	1:H:396:ARG:HD3	2.10	0.51
1:J:56:ASN:HD22	1:J:84:HIS:CD2	2.29	0.51
1:J:215:THR:O	1:J:219:VAL:HG23	2.10	0.51
1:K:150:MET:CE	1:K:186:THR:HG21	2.41	0.51
1:L:360:PHE:HB3	1:L:365:ILE:HB	1.92	0.51
1:L:369:PRO:HG3	1:L:478:ARG:N	2.26	0.51
1:B:455:TYR:HB2	1:F:400:LYS:HB2	1.93	0.51
1:D:52:ILE:HG12	1:D:493:TYR:CE2	2.45	0.51
1:D:192:ILE:O	1:D:192:ILE:CG1	2.59	0.51
1:E:20:GLY:O	1:E:486:ILE:HD12	2.10	0.51
1:E:66:ARG:HG3	1:E:72:TRP:CE2	2.46	0.51
1:F:339:VAL:HG21	1:F:360:PHE:CE1	2.44	0.51
1:F:355:GLU:O	1:F:359:ILE:HD13	2.11	0.51
1:H:370:ASP:OD2	1:H:371:LEU:N	2.42	0.51
1:J:113:TYR:O	1:J:117:VAL:HG23	2.11	0.51
1:K:131:ILE:HG12	1:K:136:TYR:HE2	1.69	0.51
1:K:345:ALA:HB1	1:K:373:LEU:HD21	1.91	0.51
1:L:496:ALA:HB1	1:L:501:THR:OG1	2.10	0.51
1:A:344:ILE:HD12	1:A:367:VAL:HG22	1.92	0.51
1:A:414:GLN:CB	1:A:429:PRO:HD2	2.39	0.51
1:B:201:LYS:HZ1	1:B:388:ASN:HD21	1.58	0.51
1:B:336:ALA:HB3	1:B:337:PRO:HD3	1.92	0.51
1:E:496:ALA:HB1	1:E:501:THR:OG1	2.10	0.51
1:F:19:ARG:NE	1:F:479:THR:HG21	2.26	0.51
1:G:224:GLU:HA	1:G:227:ILE:HG22	1.92	0.51
1:H:44:ARG:NH1	1:H:44:ARG:HB3	2.26	0.51
1:H:496:ALA:C	1:H:501:THR:HA	2.29	0.51
1:I:257:LEU:HD21	1:I:292:GLU:OE2	2.11	0.51
1:K:11:LYS:HD3	1:K:14:GLU:OE1	2.11	0.51
1:E:387:LYS:HE3	1:E:393:SER:HA	1.93	0.51
1:F:371:LEU:HD23	1:F:481:ALA:HB1	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:423:LYS:HG2	1:F:426:GLY:CA	2.41	0.51
1:H:137:THR:HG23	1:H:140:GLU:H	1.75	0.51
1:I:411:MET:HA	1:I:430:ILE:HG22	1.93	0.51
1:I:414:GLN:CD	1:I:430:ILE:HG23	2.31	0.51
1:I:417:LEU:HD11	1:K:417:LEU:HD23	1.93	0.51
1:J:235:ILE:HG21	1:J:475:LEU:HD21	1.92	0.51
1:K:212:ILE:CD1	1:K:213:SER:H	2.22	0.51
1:A:382:TYR:CE2	1:A:386:LEU:HD21	2.46	0.51
1:B:51:ILE:HG12	1:D:64:PRO:HB3	1.92	0.51
1:E:332:THR:O	1:E:336:ALA:HB2	2.11	0.51
1:E:479:THR:O	1:E:483:VAL:HG23	2.11	0.51
1:E:494:ASN:O	1:E:496:ALA:N	2.40	0.51
1:H:396:ARG:HG3	1:H:396:ARG:NH1	2.25	0.51
1:I:360:PHE:HB3	1:I:365:ILE:HB	1.93	0.51
1:K:248:VAL:HG11	1:K:314:ILE:HB	1.92	0.51
1:L:212:ILE:HD12	1:L:212:ILE:N	2.14	0.51
1:A:34:THR:O	1:A:34:THR:CG2	2.59	0.51
1:A:113:TYR:O	1:A:117:VAL:HG23	2.11	0.51
1:A:387:LYS:HE3	1:A:445:GLU:OE2	2.11	0.51
1:C:163:ASP:O	1:C:165:PRO:HD3	2.11	0.51
1:D:97:THR:HA	1:D:130:LYS:HD2	1.93	0.51
1:D:118:VAL:HG23	1:D:120:VAL:CG2	2.40	0.51
1:D:237:GLY:C	1:D:238:MET:HE2	2.32	0.51
1:E:332:THR:HG22	1:E:353:THR:HG21	1.92	0.51
1:F:130:LYS:O	1:F:131:ILE:HD12	2.11	0.51
1:G:371:LEU:HD23	1:G:481:ALA:CB	2.40	0.51
1:G:431:VAL:HG11	1:H:419:ARG:HH21	1.75	0.51
1:H:56:ASN:ND2	1:H:83:SER:HA	2.26	0.51
1:H:498:VAL:CG2	1:H:499:THR:H	2.13	0.51
1:J:87:THR:CB	1:J:88:PRO:HD3	2.38	0.51
1:J:244:ASP:C	1:J:245:LYS:HG3	2.31	0.51
1:A:104:VAL:HG23	1:A:105:LYS:N	2.26	0.51
1:A:282:ASN:OD1	1:A:284:ASP:HB3	2.11	0.51
1:A:414:GLN:OE1	1:A:430:ILE:HG12	2.11	0.51
1:B:100:SER:O	1:B:103:GLU:HB3	2.11	0.51
1:D:321:ILE:HG12	1:D:343:ILE:HB	1.93	0.51
1:E:8:ASN:O	1:E:9:PHE:C	2.49	0.51
1:F:143:LYS:O	1:F:147:ARG:HG3	2.11	0.51
1:F:236:LEU:HD22	1:F:342:LYS:HD2	1.92	0.51
1:G:332:THR:N	1:G:335:ASN:HD21	2.06	0.51
1:I:208:ILE:CG2	1:I:384:GLU:HB2	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:321:ILE:H	1:I:321:ILE:HD12	1.76	0.51
1:J:153:ALA:HA	1:J:158:ILE:HG22	1.93	0.51
1:K:6:ASP:CG	1:K:6:ASP:O	2.49	0.51
1:L:294:PHE:CE2	1:L:304:PHE:HB2	2.46	0.51
1:A:87:THR:CB	1:A:88:PRO:HD3	2.33	0.50
1:C:33:ARG:HH11	1:C:45:VAL:HG11	1.75	0.50
1:C:65:ILE:HG23	1:C:75:ILE:HD13	1.93	0.50
1:C:346:GLU:O	1:C:373:LEU:HD23	2.11	0.50
1:E:68:ASP:OD2	1:E:140:GLU:HG3	2.11	0.50
1:H:90:LYS:HD2	1:H:164:VAL:O	2.11	0.50
1:I:60:SER:HB3	1:I:78:TYR:HD2	1.75	0.50
1:I:501:THR:HG23	1:J:181:ASP:OD1	2.10	0.50
1:K:313:SER:CB	1:K:315:LEU:HD13	2.36	0.50
1:A:244:ASP:OD1	1:A:245:LYS:HG3	2.11	0.50
1:A:396:ARG:HG3	1:A:396:ARG:NH1	2.24	0.50
1:B:24:VAL:CG2	1:B:483:VAL:HG13	2.41	0.50
1:B:92:GLY:HA2	1:B:166:ALA:O	2.11	0.50
1:B:175:GLU:O	1:B:179:ILE:HG13	2.11	0.50
1:B:233:MET:HE1	1:B:236:LEU:HD12	1.92	0.50
1:D:318:ASP:OD1	1:D:340:LYS:HB3	2.11	0.50
1:F:274:GLY:HA3	1:F:314:ILE:CD1	2.36	0.50
1:F:360:PHE:HB3	1:F:365:ILE:HB	1.93	0.50
1:F:429:PRO:O	1:F:431:VAL:N	2.43	0.50
1:G:101:VAL:O	1:G:104:VAL:HG22	2.12	0.50
1:G:414:GLN:OE1	1:G:430:ILE:HG12	2.11	0.50
1:H:142:GLU:O	1:H:146:ARG:HG3	2.11	0.50
1:H:227:ILE:HA	1:H:233:MET:SD	2.52	0.50
1:K:41:LYS:O	1:K:44:ARG:HB2	2.11	0.50
1:A:239:THR:N	1:A:240:PRO:CD	2.73	0.50
1:C:36:GLU:O	1:C:37:SER:C	2.49	0.50
1:G:87:THR:CB	1:G:88:PRO:HD3	2.29	0.50
1:G:158:ILE:O	1:G:158:ILE:CG2	2.58	0.50
1:G:414:GLN:HG3	1:G:429:PRO:HD2	1.93	0.50
1:H:339:VAL:HG21	1:H:360:PHE:CE1	2.44	0.50
1:I:65:ILE:HA	1:I:147:ARG:HH11	1.74	0.50
1:I:137:THR:HG22	1:I:140:GLU:CD	2.32	0.50
1:I:275:GLU:OE2	1:I:301:ILE:HG23	2.11	0.50
1:I:322:LEU:HD13	1:I:324:PRO:HD3	1.93	0.50
1:J:315:LEU:HD23	1:J:331:LEU:CD2	2.41	0.50
1:K:302:LEU:HD12	1:K:302:LEU:N	2.27	0.50
1:A:81:GLN:HG3	1:A:157:PHE:CE1	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:332:THR:H	1:A:335:ASN:HD21	1.59	0.50
1:B:174:ARG:HG3	1:B:175:GLU:OE1	2.11	0.50
1:E:252:PHE:CZ	1:E:257:LEU:HD13	2.47	0.50
1:E:355:GLU:O	1:E:359:ILE:HD13	2.11	0.50
1:E:410:LEU:HB3	1:E:430:ILE:HA	1.94	0.50
1:H:69:ASP:OD1	1:H:71:SER:N	2.43	0.50
1:H:131:ILE:HG13	1:H:136:TYR:CE2	2.46	0.50
1:I:42:ARG:O	1:I:45:VAL:HG12	2.12	0.50
1:I:229:GLU:O	1:I:230:ALA:C	2.50	0.50
1:J:436:PHE:CZ	1:J:440:ILE:HD11	2.47	0.50
1:K:497:GLY:CA	1:K:501:THR:HA	2.40	0.50
1:K:498:VAL:CG2	1:K:499:THR:H	2.12	0.50
1:A:82:HIS:CG	1:A:112:THR:HG21	2.46	0.50
1:E:428:ILE:N	1:E:429:PRO:HD3	2.27	0.50
1:F:145:THR:HG21	1:F:175:GLU:CG	2.42	0.50
1:J:339:VAL:HG22	1:J:363:ARG:HH21	1.75	0.50
1:K:150:MET:SD	1:K:186:THR:HG21	2.51	0.50
1:L:322:LEU:O	1:L:324:PRO:HD3	2.11	0.50
1:L:497:GLY:C	1:L:501:THR:HB	2.32	0.50
1:A:112:THR:HB	1:A:124:GLY:H	1.76	0.50
1:C:181:ASP:CG	1:E:501:THR:HG23	2.32	0.50
1:D:94:ARG:HG3	1:D:95:TYR:N	2.25	0.50
1:D:114:LYS:HZ1	1:D:374:ASN:HD21	1.59	0.50
1:E:335:ASN:HD22	1:E:335:ASN:C	2.14	0.50
1:H:75:ILE:HD12	1:H:75:ILE:N	2.27	0.50
1:I:189:HIS:HD2	1:I:190:TYR:CE1	2.30	0.50
1:I:370:ASP:OD2	1:I:371:LEU:N	2.44	0.50
1:I:436:PHE:CG	1:J:408:HIS:HB3	2.47	0.50
1:K:32:LEU:HD23	1:K:33:ARG:N	2.26	0.50
1:K:60:SER:HB3	1:K:78:TYR:HD2	1.75	0.50
1:B:73:GLU:HA	1:D:50:ARG:HH12	1.77	0.50
1:B:244:ASP:OD2	1:B:245:LYS:HG3	2.12	0.50
1:D:186:THR:HG22	1:D:187:ILE:H	1.74	0.50
1:E:92:GLY:HA2	1:E:166:ALA:O	2.11	0.50
1:E:374:ASN:H	1:E:374:ASN:ND2	2.10	0.50
1:F:148:PHE:CZ	1:F:152:LEU:HD21	2.46	0.50
1:F:446:LYS:HG3	1:F:447:ASP:N	2.26	0.50
1:H:176:MET:HE1	1:H:179:ILE:HD12	1.93	0.50
1:H:332:THR:N	1:H:335:ASN:HD21	2.10	0.50
1:H:436:PHE:CE1	1:L:409:LEU:HD22	2.47	0.50
1:I:498:VAL:CG2	1:I:499:THR:H	2.14	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:93:ILE:HD11	1:K:165:PRO:HB3	1.94	0.50
1:K:142:GLU:HG3	1:K:178:TRP:CD2	2.46	0.50
1:L:8:ASN:OD1	1:L:11:LYS:HB2	2.12	0.50
1:L:101:VAL:O	1:L:105:LYS:HB2	2.11	0.50
1:B:90:LYS:HB2	1:B:122:PHE:HB3	1.94	0.50
1:B:192:ILE:O	1:B:192:ILE:HG12	2.10	0.50
1:B:250:GLN:CG	1:B:314:ILE:HD11	2.38	0.50
1:B:501:THR:O	1:F:178:TRP:HD1	1.94	0.50
1:C:146:ARG:HH12	1:E:501:THR:N	2.10	0.50
1:I:345:ALA:HB1	1:I:373:LEU:CD2	2.41	0.50
1:K:226:PHE:C	1:K:228:ASN:H	2.15	0.50
1:K:498:VAL:N	1:K:501:THR:HB	2.26	0.50
1:L:75:ILE:N	1:L:75:ILE:HD12	2.27	0.50
1:C:53:LYS:O	1:C:82:HIS:HE1	1.94	0.50
1:D:281:TRP:NE1	1:D:283:PRO:HD3	2.27	0.50
1:E:93:ILE:HG12	1:E:127:ALA:HB3	1.92	0.50
1:F:220:PHE:CD2	1:F:263:LEU:HD13	2.46	0.50
1:H:41:LYS:HB3	1:H:44:ARG:HH12	1.77	0.50
1:H:238:MET:O	1:H:239:THR:HG22	2.11	0.50
1:I:37:SER:C	1:I:38:GLU:HG3	2.32	0.50
1:I:68:ASP:CG	1:I:137:THR:HG21	2.32	0.50
1:I:225:ASN:OD1	1:I:458:GLU:HA	2.11	0.50
1:L:29:VAL:O	1:L:30:GLU:O	2.29	0.50
1:L:96:SER:O	1:L:99:VAL:HG22	2.11	0.50
1:L:147:ARG:O	1:L:151:GLU:HG2	2.11	0.50
1:L:176:MET:CE	1:L:179:ILE:HD12	2.41	0.50
1:B:396:ARG:HH11	1:B:396:ARG:CG	2.24	0.49
1:D:48:ILE:O	1:D:52:ILE:HG13	2.12	0.49
1:D:479:THR:O	1:D:483:VAL:HG23	2.12	0.49
1:G:29:VAL:HG13	1:G:33:ARG:HD2	1.94	0.49
1:G:91:GLY:HA3	1:G:125:ALA:O	2.13	0.49
1:G:96:SER:HB3	1:G:99:VAL:HG13	1.92	0.49
1:G:369:PRO:CG	1:G:478:ARG:HA	2.41	0.49
1:H:28:LEU:HD11	1:H:490:PHE:CE2	2.47	0.49
1:H:499:THR:HG22	1:H:500:PHE:CE1	2.47	0.49
1:I:397:LEU:HD21	1:K:383:PHE:CE2	2.46	0.49
1:J:39:GLU:O	1:J:40:GLN:HB2	2.11	0.49
1:J:132:ASN:HB3	1:J:135:ASN:HD22	1.77	0.49
1:K:250:GLN:CG	1:K:314:ILE:HD11	2.35	0.49
1:K:252:PHE:CD2	1:K:273:VAL:HG11	2.47	0.49
1:K:315:LEU:CD1	1:K:315:LEU:H	2.25	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:201:LYS:HG2	1:L:384:GLU:OE1	2.12	0.49
1:A:167:PRO:HD3	1:A:199:THR:O	2.12	0.49
1:C:165:PRO:O	1:C:198:VAL:HG23	2.12	0.49
1:C:429:PRO:C	1:C:431:VAL:H	2.14	0.49
1:C:475:LEU:N	1:C:475:LEU:HD12	2.27	0.49
1:D:244:ASP:OD1	1:D:245:LYS:N	2.45	0.49
1:D:410:LEU:HB3	1:D:430:ILE:HA	1.94	0.49
1:G:396:ARG:O	1:G:396:ARG:HD3	2.12	0.49
1:G:428:ILE:O	1:G:431:VAL:HG12	2.11	0.49
1:H:17:PHE:CE2	1:H:53:LYS:HB2	2.47	0.49
1:H:41:LYS:HB3	1:H:44:ARG:NH1	2.27	0.49
1:H:47:GLY:O	1:H:50:ARG:HG2	2.12	0.49
1:I:239:THR:HG23	1:I:239:THR:O	2.12	0.49
1:I:325:ALA:O	1:I:326:ALA:HB2	2.12	0.49
1:I:392:VAL:CG2	1:K:386:LEU:HD22	2.42	0.49
1:J:114:LYS:HZ1	1:J:374:ASN:HD21	1.59	0.49
1:K:224:GLU:HA	1:K:227:ILE:HG22	1.93	0.49
1:K:328:GLU:HG3	1:K:329:LYS:H	1.77	0.49
1:L:247:PHE:HB3	1:L:321:ILE:CG1	2.35	0.49
1:L:414:GLN:CG	1:L:429:PRO:HD2	2.42	0.49
1:A:403:ARG:HG3	1:A:440:ILE:CG2	2.43	0.49
1:A:497:GLY:CA	1:A:501:THR:HA	2.42	0.49
1:B:47:GLY:HA2	1:B:50:ARG:HE	1.77	0.49
1:C:19:ARG:HH11	1:C:19:ARG:HG3	1.77	0.49
1:D:176:MET:CE	1:D:179:ILE:HD12	2.43	0.49
1:E:111:MET:HE1	1:E:114:LYS:HD2	1.93	0.49
1:F:87:THR:OG1	1:F:88:PRO:CD	2.60	0.49
1:I:330:GLN:OE1	1:I:330:GLN:HA	2.11	0.49
1:K:107:LEU:O	1:K:110:LEU:HB2	2.12	0.49
1:K:344:ILE:HD11	1:K:365:ILE:HG21	1.94	0.49
1:L:86:ARG:HG2	1:L:121:PRO:HA	1.93	0.49
1:L:93:ILE:HD12	1:L:176:MET:HE1	1.94	0.49
1:L:281:TRP:CD1	1:L:283:PRO:HD3	2.46	0.49
1:L:329:LYS:HB2	1:L:329:LYS:HZ2	1.77	0.49
1:B:28:LEU:HD21	1:B:490:PHE:CG	2.47	0.49
1:C:33:ARG:NH1	1:C:45:VAL:HG11	2.27	0.49
1:C:281:TRP:CZ2	1:C:283:PRO:HG3	2.48	0.49
1:C:497:GLY:C	1:C:501:THR:HB	2.32	0.49
1:E:314:ILE:HD13	1:E:314:ILE:N	2.05	0.49
1:F:43:ASN:O	1:F:46:ARG:CG	2.48	0.49
1:F:176:MET:CE	1:F:179:ILE:HD12	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:494:ASN:C	1:F:496:ALA:H	2.15	0.49
1:G:238:MET:HA	1:G:238:MET:HE3	1.93	0.49
1:G:335:ASN:HD22	1:G:335:ASN:N	2.10	0.49
1:H:331:LEU:HB2	1:H:352:THR:HG22	1.93	0.49
1:I:423:LYS:HG2	1:I:426:GLY:HA3	1.95	0.49
1:L:117:VAL:HG11	1:L:372:TYR:HB2	1.95	0.49
1:C:17:PHE:HE1	1:C:486:ILE:HD12	1.77	0.49
1:D:239:THR:HG23	1:D:239:THR:O	2.11	0.49
1:E:47:GLY:HA2	1:E:50:ARG:HE	1.76	0.49
1:F:239:THR:O	1:F:239:THR:CG2	2.60	0.49
1:G:38:GLU:O	1:G:39:GLU:C	2.50	0.49
1:G:58:VAL:HG13	1:K:60:SER:OG	2.12	0.49
1:G:60:SER:HB2	1:K:58:VAL:CG1	2.42	0.49
1:G:102:ASP:HA	1:G:105:LYS:HD3	1.94	0.49
1:H:315:LEU:N	1:H:315:LEU:HD12	2.28	0.49
1:H:439:ARG:HH12	1:L:404:ASP:HB2	1.77	0.49
1:I:114:LYS:CD	1:I:378:VAL:HG21	2.43	0.49
1:I:260:MET:CE	1:I:288:PRO:HA	2.42	0.49
1:I:400:LYS:CE	1:I:403:ARG:HH21	2.25	0.49
1:L:186:THR:HG22	1:L:187:ILE:N	2.27	0.49
1:A:370:ASP:OD2	1:A:371:LEU:N	2.44	0.49
1:B:167:PRO:HG3	1:B:176:MET:CG	2.41	0.49
1:C:414:GLN:OE1	1:C:428:ILE:HA	2.13	0.49
1:C:446:LYS:NZ	1:C:447:ASP:OD2	2.46	0.49
1:D:61:LEU:HD11	1:D:148:PHE:CE1	2.45	0.49
1:D:368:ILE:HG22	1:D:373:LEU:HB2	1.95	0.49
1:E:421:PHE:HD1	1:E:423:LYS:N	2.11	0.49
1:F:29:VAL:O	1:F:29:VAL:CG1	2.54	0.49
1:F:47:GLY:O	1:F:51:ILE:HG13	2.11	0.49
1:H:239:THR:N	1:H:240:PRO:CD	2.67	0.49
1:H:390:ASN:O	1:H:391:HIS:HB2	2.13	0.49
1:I:397:LEU:HD21	1:K:383:PHE:CZ	2.48	0.49
1:J:281:TRP:HB2	1:J:310:TYR:HB2	1.95	0.49
1:K:140:GLU:O	1:K:144:ILE:HG13	2.13	0.49
1:K:410:LEU:HB3	1:K:430:ILE:HA	1.94	0.49
1:L:68:ASP:OD1	1:L:140:GLU:HG3	2.12	0.49
1:L:99:VAL:HA	1:L:103:GLU:OE1	2.13	0.49
1:L:250:GLN:CB	1:L:314:ILE:HD11	2.42	0.49
1:A:147:ARG:CZ	1:A:147:ARG:CB	2.91	0.49
1:A:428:ILE:N	1:A:429:PRO:HD3	2.27	0.49
1:B:232:TYR:HE1	1:B:465:MET:HG2	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:260:MET:CE	1:B:288:PRO:HA	2.43	0.49
1:C:95:TYR:OH	1:C:145:THR:HG22	2.12	0.49
1:C:250:GLN:CG	1:C:314:ILE:HD11	2.43	0.49
1:E:173:GLU:HG3	1:E:202:PRO:HG3	1.94	0.49
1:F:92:GLY:HA2	1:F:166:ALA:O	2.13	0.49
1:F:260:MET:HG2	1:F:288:PRO:HG3	1.94	0.49
1:J:259:SER:O	1:J:263:LEU:HB2	2.12	0.49
1:J:411:MET:SD	1:J:430:ILE:HG21	2.53	0.49
1:K:416:SER:HA	1:K:419:ARG:NH2	2.27	0.49
1:L:158:ILE:O	1:L:158:ILE:CG2	2.60	0.49
1:B:250:GLN:HA	1:B:314:ILE:HD11	1.95	0.49
1:C:289:LYS:HA	1:C:289:LYS:HE3	1.94	0.49
1:F:217:ARG:HE	1:F:450:HIS:CE1	2.31	0.49
1:G:45:VAL:C	1:G:47:GLY:N	2.66	0.49
1:I:497:GLY:CA	1:I:501:THR:HA	2.42	0.49
1:K:192:ILE:O	1:K:192:ILE:HG12	2.13	0.49
1:L:150:MET:HE1	1:L:186:THR:HG21	1.93	0.49
1:L:327:SER:HB2	1:L:330:GLN:OE1	2.13	0.49
1:A:20:GLY:O	1:A:24:VAL:HG23	2.13	0.49
1:A:186:THR:HG22	1:A:187:ILE:N	2.27	0.49
1:A:420:LYS:NZ	1:A:420:LYS:HB3	2.28	0.49
1:B:28:LEU:HD21	1:B:490:PHE:CD2	2.48	0.49
1:B:57:HIS:HD2	1:B:84:HIS:CE1	2.30	0.49
1:C:223:ILE:HD11	1:C:345:ALA:CB	2.43	0.49
1:D:497:GLY:CA	1:D:501:THR:HA	2.43	0.49
1:G:53:LYS:HB3	1:G:54:PRO:CD	2.42	0.49
1:G:414:GLN:CG	1:G:429:PRO:HD2	2.42	0.49
1:H:414:GLN:CG	1:H:429:PRO:HD2	2.43	0.49
1:H:471:TYR:O	1:H:472:ASN:C	2.51	0.49
1:J:239:THR:N	1:J:240:PRO:CD	2.74	0.49
1:K:47:GLY:O	1:K:51:ILE:HG13	2.12	0.49
1:K:236:LEU:HB3	1:K:342:LYS:HE3	1.95	0.49
1:L:315:LEU:HD23	1:L:331:LEU:CD2	2.42	0.49
1:B:45:VAL:HG13	1:B:45:VAL:O	2.11	0.49
1:C:142:GLU:HG3	1:C:178:TRP:CD2	2.48	0.49
1:C:251:GLY:HA3	1:C:326:ALA:HB2	1.94	0.49
1:C:318:ASP:HA	1:C:340:LYS:HB2	1.95	0.49
1:D:370:ASP:OD2	1:D:371:LEU:N	2.46	0.49
1:E:7:PRO:O	1:E:329:LYS:HE3	2.12	0.49
1:E:112:THR:CG2	1:E:124:GLY:HA3	2.43	0.49
1:F:345:ALA:HB1	1:F:373:LEU:CD2	2.40	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:428:ILE:O	1:F:431:VAL:HG12	2.13	0.49
1:G:53:LYS:O	1:G:82:HIS:HE1	1.95	0.49
1:H:43:ASN:O	1:H:46:ARG:CG	2.60	0.49
1:H:296:LEU:C	1:H:296:LEU:HD13	2.33	0.49
1:J:93:ILE:HD11	1:J:165:PRO:HB3	1.94	0.49
1:L:24:VAL:HG12	1:L:28:LEU:HD22	1.93	0.49
1:A:24:VAL:O	1:A:25:GLU:C	2.52	0.48
1:A:52:ILE:O	1:A:82:HIS:NE2	2.43	0.48
1:C:164:VAL:HA	1:C:197:CYS:O	2.12	0.48
1:C:195:HIS:O	1:C:201:LYS:HE3	2.13	0.48
1:E:112:THR:OG1	1:E:113:TYR:N	2.45	0.48
1:E:369:PRO:HG3	1:E:478:ARG:HA	1.94	0.48
1:E:400:LYS:HE3	1:E:404:ASP:OD1	2.13	0.48
1:F:332:THR:O	1:F:336:ALA:HB2	2.13	0.48
1:H:53:LYS:HB3	1:H:54:PRO:HD3	1.94	0.48
1:I:64:PRO:HG3	1:L:51:ILE:HD13	1.95	0.48
1:I:217:ARG:HD3	1:I:450:HIS:CD2	2.48	0.48
1:J:498:VAL:CG2	1:J:499:THR:N	2.76	0.48
1:K:198:VAL:O	1:K:201:LYS:HE3	2.13	0.48
1:L:104:VAL:HG23	1:L:105:LYS:N	2.28	0.48
1:L:201:LYS:NZ	1:L:388:ASN:HD21	2.11	0.48
1:B:431:VAL:HG13	1:B:431:VAL:O	2.12	0.48
1:C:259:SER:O	1:C:263:LEU:HB2	2.14	0.48
1:D:274:GLY:CA	1:D:314:ILE:HD12	2.43	0.48
1:F:252:PHE:CE1	1:F:291:LEU:HG	2.49	0.48
1:G:189:HIS:CE1	1:I:154:LYS:HD3	2.48	0.48
1:G:414:GLN:CB	1:G:429:PRO:HD2	2.42	0.48
1:G:453:LEU:HD23	1:G:457:MET:HG2	1.95	0.48
1:H:65:ILE:O	1:H:65:ILE:HG13	2.12	0.48
1:H:436:PHE:HE1	1:L:409:LEU:HD22	1.77	0.48
1:J:466:ARG:NH1	1:J:466:ARG:HB2	2.28	0.48
1:L:329:LYS:HG2	1:L:353:THR:HG22	1.96	0.48
1:L:460:SER:O	1:L:464:ILE:HG13	2.14	0.48
1:A:437:GLN:CG	1:H:423:LYS:HD3	2.43	0.48
1:B:247:PHE:CZ	1:B:270:CYS:HB2	2.49	0.48
1:B:274:GLY:CA	1:B:314:ILE:HD12	2.42	0.48
1:D:280:ILE:HG13	1:D:301:ILE:HD13	1.95	0.48
1:F:68:ASP:OD2	1:F:137:THR:HG21	2.14	0.48
1:F:477:LEU:H	1:F:477:LEU:HD22	1.78	0.48
1:G:17:PHE:CE1	1:G:486:ILE:HD12	2.48	0.48
1:H:263:LEU:O	1:H:268:ALA:HB3	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:363:ARG:HB2	1:H:363:ARG:NH1	2.28	0.48
1:H:428:ILE:N	1:H:429:PRO:HD3	2.28	0.48
1:I:414:GLN:HA	1:I:429:PRO:CG	2.43	0.48
1:J:318:ASP:HA	1:J:340:LYS:HB2	1.96	0.48
1:J:414:GLN:CD	1:J:430:ILE:HG23	2.33	0.48
1:K:164:VAL:HA	1:K:197:CYS:O	2.14	0.48
1:K:344:ILE:HD12	1:K:367:VAL:HG13	1.94	0.48
1:A:428:ILE:CG2	1:H:428:ILE:HG21	2.32	0.48
1:B:129:VAL:O	1:B:131:ILE:HG22	2.14	0.48
1:B:344:ILE:HB	1:B:367:VAL:HG22	1.96	0.48
1:C:25:GLU:O	1:C:29:VAL:HG23	2.13	0.48
1:C:414:GLN:OE1	1:C:430:ILE:HG12	2.13	0.48
1:E:9:PHE:O	1:E:12:MET:HB3	2.14	0.48
1:F:208:ILE:HD11	1:F:449:VAL:HG22	1.94	0.48
1:F:374:ASN:ND2	1:F:374:ASN:C	2.66	0.48
1:F:394:TYR:HB2	1:F:445:GLU:HG3	1.95	0.48
1:H:374:ASN:C	1:H:374:ASN:ND2	2.66	0.48
1:I:405:SER:O	1:I:409:LEU:HD23	2.13	0.48
1:I:494:ASN:O	1:I:496:ALA:N	2.35	0.48
1:J:41:LYS:C	1:J:43:ASN:H	2.16	0.48
1:J:85:GLN:HE21	1:J:85:GLN:HB3	1.46	0.48
1:A:147:ARG:NH2	1:E:499:THR:CG2	2.77	0.48
1:A:167:PRO:HG3	1:A:176:MET:CG	2.43	0.48
1:A:411:MET:HA	1:A:430:ILE:HG22	1.95	0.48
1:A:432:PRO:HB3	1:A:436:PHE:CD1	2.48	0.48
1:B:189:HIS:CE1	1:E:154:LYS:HZ3	2.32	0.48
1:C:28:LEU:HD11	1:C:490:PHE:CE2	2.47	0.48
1:D:41:LYS:C	1:D:43:ASN:H	2.16	0.48
1:E:150:MET:SD	1:E:186:THR:HG21	2.52	0.48
1:E:421:PHE:CD1	1:E:422:GLY:N	2.82	0.48
1:F:195:HIS:O	1:F:201:LYS:HE3	2.13	0.48
1:G:16:PHE:CE2	1:G:478:ARG:HD3	2.49	0.48
1:G:41:LYS:O	1:G:44:ARG:CG	2.61	0.48
1:G:79:ARG:HD3	1:G:127:ALA:HB2	1.93	0.48
1:G:403:ARG:HG2	1:G:403:ARG:HH11	1.78	0.48
1:J:314:ILE:H	1:J:314:ILE:CD1	2.26	0.48
1:K:32:LEU:HD23	1:K:32:LEU:C	2.33	0.48
1:B:233:MET:HA	1:B:233:MET:CE	2.43	0.48
1:B:369:PRO:CG	1:B:478:ARG:HA	2.43	0.48
1:E:371:LEU:HD23	1:E:481:ALA:HB3	1.95	0.48
1:E:432:PRO:HB3	1:E:436:PHE:CD1	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:248:VAL:HG11	1:F:314:ILE:HB	1.95	0.48
1:F:436:PHE:CE2	1:F:440:ILE:HD11	2.48	0.48
1:G:175:GLU:HA	1:G:178:TRP:CE3	2.48	0.48
1:G:328:GLU:HG2	1:G:329:LYS:HG3	1.95	0.48
1:G:371:LEU:HD23	1:G:481:ALA:HB1	1.94	0.48
1:H:106:ALA:O	1:H:109:SER:HB3	2.12	0.48
1:H:214:ALA:CB	1:H:380:VAL:HG21	2.44	0.48
1:H:414:GLN:CB	1:H:429:PRO:HD2	2.43	0.48
1:I:85:GLN:HE21	1:I:85:GLN:N	2.08	0.48
1:I:109:SER:O	1:I:112:THR:HG23	2.14	0.48
1:I:436:PHE:CE2	1:I:440:ILE:HD11	2.49	0.48
1:J:281:TRP:HE1	1:J:283:PRO:HG3	1.79	0.48
1:J:396:ARG:HH11	1:J:396:ARG:CG	2.25	0.48
1:K:233:MET:HE1	1:K:343:ILE:HD11	1.94	0.48
1:A:428:ILE:O	1:A:431:VAL:HG12	2.13	0.48
1:B:60:SER:HB2	1:D:58:VAL:HG13	1.93	0.48
1:C:342:LYS:HA	1:C:365:ILE:HD12	1.96	0.48
1:G:171:THR:HG22	1:G:175:GLU:OE1	2.14	0.48
1:J:222:GLY:HA3	1:J:373:LEU:CD1	2.43	0.48
1:J:356:ALA:HB1	1:J:360:PHE:CE2	2.48	0.48
1:J:478:ARG:HH11	1:J:478:ARG:HG3	1.77	0.48
1:L:233:MET:HE1	1:L:236:LEU:CD1	2.44	0.48
1:L:321:ILE:HG22	1:L:343:ILE:CB	2.42	0.48
1:C:96:SER:HB3	1:C:99:VAL:HG22	1.95	0.48
1:C:322:LEU:CD1	1:C:324:PRO:HG3	2.44	0.48
1:C:328:GLU:O	1:C:329:LYS:HG2	2.14	0.48
1:D:411:MET:HA	1:D:430:ILE:HG22	1.94	0.48
1:E:497:GLY:C	1:E:501:THR:HB	2.33	0.48
1:F:250:GLN:HG3	1:F:315:LEU:CD1	2.44	0.48
1:I:160:PRO:HG3	1:I:191:ASP:OD1	2.14	0.48
1:B:90:LYS:NZ	1:B:166:ALA:HB2	2.29	0.48
1:B:386:LEU:CD1	1:F:392:VAL:HG21	2.43	0.48
1:C:498:VAL:CG2	1:C:499:THR:H	2.19	0.48
1:G:104:VAL:HG23	1:G:105:LYS:N	2.28	0.48
1:G:501:THR:C	1:H:146:ARG:HH12	2.17	0.48
1:H:427:THR:HG22	1:H:429:PRO:CD	2.38	0.48
1:J:177:SER:OG	1:J:205:GLN:HG3	2.13	0.48
1:J:263:LEU:O	1:J:268:ALA:HB3	2.14	0.48
1:K:167:PRO:HG3	1:K:176:MET:SD	2.54	0.48
1:L:302:LEU:HD12	1:L:302:LEU:H	1.79	0.48
1:L:313:SER:HB2	1:L:315:LEU:CD1	2.40	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:396:ARG:HG3	1:L:396:ARG:NH1	2.29	0.48
1:B:20:GLY:O	1:B:24:VAL:HG23	2.14	0.48
1:B:56:ASN:ND2	1:B:83:SER:HA	2.29	0.48
1:B:142:GLU:O	1:B:146:ARG:HG3	2.13	0.48
1:C:147:ARG:CD	1:F:499:THR:HG21	2.44	0.48
1:C:244:ASP:OD2	1:C:245:LYS:HG3	2.13	0.48
1:D:96:SER:O	1:D:99:VAL:HG13	2.14	0.48
1:D:498:VAL:HG23	1:D:499:THR:N	2.18	0.48
1:E:301:ILE:HD12	1:E:302:LEU:HD12	1.96	0.48
1:G:86:ARG:HG2	1:G:121:PRO:HA	1.95	0.48
1:G:392:VAL:HG21	1:L:386:LEU:HD13	1.96	0.48
1:H:44:ARG:HH21	1:J:70:GLY:C	2.17	0.48
1:H:233:MET:HE1	1:H:236:LEU:HD12	1.94	0.48
1:K:339:VAL:HG21	1:K:360:PHE:CE1	2.42	0.48
1:A:497:GLY:HA3	1:A:501:THR:HA	1.95	0.47
1:B:79:ARG:HG2	1:B:157:PHE:HD1	1.79	0.47
1:B:429:PRO:HA	1:F:416:SER:OG	2.13	0.47
1:C:147:ARG:HD3	1:F:499:THR:CG2	2.43	0.47
1:D:39:GLU:C	1:D:41:LYS:H	2.17	0.47
1:D:435:GLU:CD	1:D:435:GLU:N	2.67	0.47
1:D:501:THR:OXT	1:E:146:ARG:NH2	2.44	0.47
1:F:244:ASP:C	1:F:245:LYS:HG3	2.33	0.47
1:F:335:ASN:HD22	1:F:336:ALA:H	1.61	0.47
1:F:421:PHE:O	1:F:423:LYS:N	2.47	0.47
1:G:370:ASP:OD1	1:G:371:LEU:N	2.47	0.47
1:H:424:HIS:ND1	1:H:424:HIS:N	2.62	0.47
1:J:296:LEU:C	1:J:296:LEU:HD13	2.33	0.47
1:J:379:THR:O	1:J:382:TYR:HB3	2.14	0.47
1:K:28:LEU:HD12	1:K:32:LEU:HD13	1.96	0.47
1:K:46:ARG:HA	1:K:49:LEU:HD13	1.96	0.47
1:K:335:ASN:HD22	1:K:335:ASN:N	2.11	0.47
1:L:146:ARG:HE	1:L:182:THR:HG1	1.61	0.47
1:A:147:ARG:CZ	1:E:499:THR:OG1	2.62	0.47
1:A:437:GLN:HG3	1:H:423:LYS:HZ2	1.78	0.47
1:B:61:LEU:HD23	1:D:57:HIS:CE1	2.49	0.47
1:B:341:ALA:O	1:B:365:ILE:HD12	2.14	0.47
1:D:260:MET:HE2	1:D:288:PRO:HG3	1.96	0.47
1:E:137:THR:OG1	1:E:140:GLU:HG3	2.14	0.47
1:G:48:ILE:HA	1:G:51:ILE:HD12	1.95	0.47
1:G:252:PHE:CZ	1:G:257:LEU:HD13	2.48	0.47
1:H:47:GLY:HA2	1:H:50:ARG:HG2	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:327:SER:OG	1:I:330:GLN:NE2	2.46	0.47
1:J:174:ARG:HG3	1:J:175:GLU:N	2.29	0.47
1:J:428:ILE:N	1:J:429:PRO:HD3	2.29	0.47
1:J:485:ALA:O	1:J:486:ILE:C	2.50	0.47
1:L:274:GLY:HA3	1:L:314:ILE:HD12	1.95	0.47
1:A:53:LYS:HB3	1:A:54:PRO:CD	2.43	0.47
1:A:382:TYR:O	1:A:386:LEU:HG	2.14	0.47
1:B:65:ILE:HG22	1:B:147:ARG:HD2	1.95	0.47
1:B:386:LEU:CD2	1:F:392:VAL:HG23	2.44	0.47
1:E:45:VAL:HG13	1:E:45:VAL:O	2.13	0.47
1:H:36:GLU:OE1	1:H:42:ARG:NH2	2.38	0.47
1:I:65:ILE:HG12	1:I:75:ILE:CD1	2.44	0.47
1:I:315:LEU:HD23	1:I:331:LEU:HD23	1.96	0.47
1:J:9:PHE:O	1:J:13:VAL:HG23	2.13	0.47
1:J:154:LYS:HD3	1:L:189:HIS:CE1	2.49	0.47
1:B:24:VAL:O	1:B:25:GLU:C	2.52	0.47
1:C:328:GLU:C	1:C:329:LYS:HG2	2.34	0.47
1:C:363:ARG:HB2	1:C:363:ARG:HH11	1.76	0.47
1:D:260:MET:HE2	1:D:288:PRO:HA	1.97	0.47
1:D:301:ILE:HD12	1:D:301:ILE:C	2.34	0.47
1:E:20:GLY:O	1:E:24:VAL:HG23	2.15	0.47
1:F:53:LYS:HB3	1:F:54:PRO:HD3	1.96	0.47
1:F:65:ILE:HG12	1:F:75:ILE:HD13	1.96	0.47
1:F:88:PRO:HG2	1:F:122:PHE:CE2	2.49	0.47
1:F:302:LEU:HD12	1:F:302:LEU:N	2.29	0.47
1:G:72:TRP:NE1	1:K:498:VAL:HG11	2.30	0.47
1:I:382:TYR:O	1:I:386:LEU:HG	2.15	0.47
1:J:248:VAL:HG11	1:J:314:ILE:HB	1.96	0.47
1:L:17:PHE:CE2	1:L:53:LYS:HB2	2.50	0.47
1:L:142:GLU:O	1:L:146:ARG:HG3	2.15	0.47
1:L:479:THR:O	1:L:483:VAL:HG23	2.14	0.47
1:A:45:VAL:O	1:A:48:ILE:HG12	2.14	0.47
1:A:163:ASP:O	1:A:165:PRO:HD3	2.15	0.47
1:A:184:ALA:O	1:A:189:HIS:HA	2.15	0.47
1:B:79:ARG:HD3	1:B:127:ALA:HB2	1.96	0.47
1:B:195:HIS:O	1:B:201:LYS:HE3	2.13	0.47
1:C:181:ASP:OD1	1:E:501:THR:HG23	2.14	0.47
1:D:65:ILE:HG13	1:D:65:ILE:O	2.13	0.47
1:E:164:VAL:HG13	1:E:197:CYS:C	2.35	0.47
1:E:248:VAL:HG13	1:E:272:ALA:O	2.14	0.47
1:E:428:ILE:O	1:E:431:VAL:HG12	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:244:ASP:OD2	1:F:245:LYS:HG3	2.15	0.47
1:G:13:VAL:HA	1:G:16:PHE:HD1	1.78	0.47
1:G:131:ILE:HG13	1:G:136:TYR:CE2	2.49	0.47
1:H:494:ASN:O	1:H:496:ALA:N	2.45	0.47
1:K:245:LYS:HB2	1:K:268:ALA:HA	1.95	0.47
1:A:227:ILE:O	1:A:233:MET:HG3	2.14	0.47
1:B:75:ILE:HD12	1:B:75:ILE:N	2.28	0.47
1:B:81:GLN:NE2	1:B:163:ASP:HB2	2.29	0.47
1:B:271:ILE:HG13	1:B:283:PRO:HA	1.96	0.47
1:D:24:VAL:CG1	1:D:28:LEU:HD22	2.45	0.47
1:D:261:ARG:HH11	1:D:261:ARG:HG3	1.79	0.47
1:E:24:VAL:CG2	1:E:483:VAL:HG13	2.40	0.47
1:G:19:ARG:HH11	1:G:19:ARG:HG3	1.79	0.47
1:G:239:THR:O	1:G:239:THR:CG2	2.60	0.47
1:K:33:ARG:NH2	1:K:494:ASN:HD21	2.13	0.47
1:K:75:ILE:CD1	1:K:144:ILE:HG12	2.44	0.47
1:L:321:ILE:HG22	1:L:343:ILE:CG2	2.45	0.47
1:A:47:GLY:HA2	1:A:50:ARG:HE	1.78	0.47
1:A:397:LEU:HD21	1:F:383:PHE:CE1	2.49	0.47
1:A:411:MET:SD	1:A:430:ILE:HG21	2.55	0.47
1:A:431:VAL:HG13	1:B:416:SER:OG	2.15	0.47
1:B:84:HIS:C	1:B:86:ARG:N	2.67	0.47
1:C:28:LEU:CA	1:C:32:LEU:HD22	2.24	0.47
1:C:87:THR:HB	1:C:88:PRO:CD	2.35	0.47
1:C:92:GLY:HA2	1:C:166:ALA:O	2.15	0.47
1:C:363:ARG:HH11	1:C:363:ARG:CB	2.28	0.47
1:D:316:GLU:HG3	1:D:338:ARG:O	2.15	0.47
1:D:494:ASN:O	1:D:496:ALA:N	2.41	0.47
1:E:431:VAL:HG13	1:E:431:VAL:O	2.15	0.47
1:F:497:GLY:HA3	1:F:501:THR:HA	1.97	0.47
1:G:322:LEU:HB3	1:G:344:ILE:HD13	1.96	0.47
1:G:346:GLU:OE1	1:G:370:ASP:N	2.48	0.47
1:G:494:ASN:C	1:G:496:ALA:H	2.18	0.47
1:H:99:VAL:HA	1:H:103:GLU:OE2	2.15	0.47
1:H:110:LEU:HD21	1:H:349:ASN:OD1	2.14	0.47
1:I:79:ARG:NH2	1:I:163:ASP:OD1	2.47	0.47
1:I:213:SER:HB2	1:I:217:ARG:HE	1.79	0.47
1:I:453:LEU:HD22	1:I:457:MET:HG2	1.96	0.47
1:I:497:GLY:N	1:I:501:THR:HA	2.30	0.47
1:J:374:ASN:C	1:J:374:ASN:ND2	2.66	0.47
1:K:25:GLU:O	1:K:29:VAL:HG23	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:38:GLU:O	1:K:39:GLU:HB2	2.13	0.47
1:K:286:ILE:HG22	1:K:287:ASP:N	2.30	0.47
1:K:427:THR:C	1:K:429:PRO:HD3	2.35	0.47
1:L:74:VAL:HG23	1:L:74:VAL:O	2.15	0.47
1:L:176:MET:HE3	1:L:179:ILE:HD12	1.95	0.47
1:A:35:ARG:O	1:A:36:GLU:HG3	2.15	0.47
1:C:236:LEU:HD12	1:C:238:MET:HB2	1.96	0.47
1:C:238:MET:SD	1:C:320:ASP:OD2	2.72	0.47
1:E:107:LEU:CD1	1:E:126:LYS:HE2	2.43	0.47
1:E:158:ILE:HG23	1:E:158:ILE:O	2.14	0.47
1:E:331:LEU:HB2	1:E:352:THR:HG22	1.97	0.47
1:G:72:TRP:CD1	1:K:51:ILE:HD11	2.49	0.47
1:H:67:ARG:NH1	1:H:140:GLU:OE1	2.48	0.47
1:J:248:VAL:HB	1:J:322:LEU:HD23	1.97	0.47
1:K:436:PHE:CE2	1:K:440:ILE:HD11	2.50	0.47
1:A:45:VAL:O	1:A:45:VAL:HG13	2.15	0.47
1:B:79:ARG:CD	1:B:127:ALA:HB2	2.45	0.47
1:B:112:THR:CG2	1:B:124:GLY:N	2.78	0.47
1:B:344:ILE:HD12	1:B:367:VAL:HG22	1.97	0.47
1:B:403:ARG:C	1:B:403:ARG:HE	2.18	0.47
1:B:435:GLU:H	1:B:435:GLU:CD	2.18	0.47
1:C:431:VAL:HG13	1:C:431:VAL:O	2.15	0.47
1:G:146:ARG:O	1:G:150:MET:HG2	2.15	0.47
1:G:277:ASP:OD2	1:G:302:LEU:HD22	2.14	0.47
1:H:429:PRO:C	1:H:431:VAL:H	2.18	0.47
1:H:500:PHE:HB3	1:L:142:GLU:OE1	2.15	0.47
1:I:82:HIS:CG	1:I:112:THR:HG21	2.49	0.47
1:J:28:LEU:HA	1:J:32:LEU:HD12	1.97	0.47
1:K:34:THR:O	1:K:34:THR:CG2	2.63	0.47
1:K:53:LYS:HB3	1:K:54:PRO:HD3	1.97	0.47
1:K:497:GLY:N	1:K:501:THR:HA	2.30	0.47
1:A:257:LEU:HD21	1:A:292:GLU:OE2	2.15	0.47
1:A:408:HIS:HB3	1:F:436:PHE:CG	2.50	0.47
1:C:334:SER:O	1:C:337:PRO:HD2	2.15	0.47
1:C:374:ASN:ND2	1:C:374:ASN:C	2.68	0.47
1:C:455:TYR:HB2	1:D:400:LYS:HB2	1.97	0.47
1:D:396:ARG:HH11	1:D:396:ARG:CG	2.25	0.47
1:D:421:PHE:CD2	1:D:422:GLY:N	2.83	0.47
1:D:436:PHE:CG	1:E:408:HIS:HB3	2.50	0.47
1:E:24:VAL:O	1:E:28:LEU:HB2	2.15	0.47
1:F:39:GLU:O	1:F:41:LYS:N	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:145:THR:HG21	1:F:175:GLU:HG3	1.96	0.47
1:G:411:MET:HA	1:G:430:ILE:CG2	2.45	0.47
1:H:248:VAL:CG1	1:H:272:ALA:HB3	2.45	0.47
1:J:107:LEU:CD1	1:J:126:LYS:HE2	2.44	0.47
1:L:363:ARG:CB	1:L:363:ARG:HH11	2.28	0.47
1:L:371:LEU:HD22	1:L:482:TYR:CD2	2.50	0.47
1:L:496:ALA:O	1:L:501:THR:HA	2.15	0.47
1:A:249:VAL:HA	1:A:323:ILE:HG13	1.97	0.46
1:B:201:LYS:HZ1	1:B:388:ASN:ND2	2.13	0.46
1:B:201:LYS:HG2	1:B:384:GLU:OE1	2.15	0.46
1:C:432:PRO:HB3	1:C:436:PHE:CD1	2.50	0.46
1:C:498:VAL:N	1:C:501:THR:HB	2.30	0.46
1:D:166:ALA:HB1	1:D:167:PRO:HD2	1.97	0.46
1:D:294:PHE:CZ	1:D:304:PHE:HA	2.50	0.46
1:D:374:ASN:C	1:D:374:ASN:ND2	2.68	0.46
1:E:6:ASP:N	1:E:7:PRO:CD	2.77	0.46
1:E:164:VAL:HA	1:E:197:CYS:O	2.15	0.46
1:E:335:ASN:HD22	1:E:336:ALA:N	2.13	0.46
1:F:431:VAL:O	1:F:431:VAL:HG13	2.15	0.46
1:G:431:VAL:O	1:G:431:VAL:HG13	2.15	0.46
1:H:47:GLY:O	1:H:51:ILE:HG13	2.16	0.46
1:I:500:PHE:HE2	1:J:143:LYS:HG2	1.80	0.46
1:K:114:LYS:HA	1:K:371:LEU:CD1	2.45	0.46
1:K:396:ARG:HG3	1:K:396:ARG:NH1	2.30	0.46
1:L:153:ALA:CA	1:L:158:ILE:HG22	2.45	0.46
1:L:436:PHE:CE2	1:L:440:ILE:HD11	2.51	0.46
1:A:332:THR:O	1:A:336:ALA:HB2	2.15	0.46
1:A:335:ASN:ND2	1:A:335:ASN:H	2.13	0.46
1:A:397:LEU:HD13	1:F:394:TYR:CE2	2.50	0.46
1:A:420:LYS:HD2	1:F:427:THR:HA	1.97	0.46
1:D:39:GLU:C	1:D:41:LYS:N	2.68	0.46
1:D:232:TYR:O	1:D:236:LEU:HG	2.15	0.46
1:D:428:ILE:H	1:D:428:ILE:CD1	2.16	0.46
1:E:117:VAL:HG21	1:E:371:LEU:HG	1.98	0.46
1:F:399:PHE:CE2	1:F:443:ALA:HB1	2.51	0.46
1:G:64:PRO:HG3	1:K:51:ILE:HD13	1.97	0.46
1:G:142:GLU:OE1	1:L:500:PHE:HB3	2.15	0.46
1:H:302:LEU:CD1	1:H:302:LEU:H	2.28	0.46
1:H:497:GLY:CA	1:H:501:THR:HA	2.45	0.46
1:I:200:GLY:H	1:I:384:GLU:CD	2.18	0.46
1:J:9:PHE:HD2	1:J:328:GLU:OE1	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:90:LYS:NZ	1:J:166:ALA:HB2	2.30	0.46
1:J:176:MET:HE3	1:J:179:ILE:CD1	2.46	0.46
1:L:253:GLY:O	1:L:254:ASN:C	2.54	0.46
1:A:316:GLU:O	1:A:317:ALA:C	2.53	0.46
1:A:322:LEU:HD13	1:A:324:PRO:HD3	1.97	0.46
1:A:346:GLU:OE2	1:A:351:PRO:HD2	2.15	0.46
1:B:93:ILE:HA	1:B:127:ALA:HB3	1.97	0.46
1:C:19:ARG:O	1:C:23:ILE:HG13	2.15	0.46
1:D:420:LYS:O	1:D:421:PHE:HB2	2.16	0.46
1:F:65:ILE:HG21	1:F:144:ILE:HG12	1.97	0.46
1:H:82:HIS:CG	1:H:112:THR:HG21	2.51	0.46
1:J:31:ASP:OD2	1:J:32:LEU:N	2.48	0.46
1:J:101:VAL:O	1:J:104:VAL:HG22	2.15	0.46
1:J:453:LEU:HD22	1:J:457:MET:HG2	1.95	0.46
1:K:28:LEU:HD11	1:K:490:PHE:CD2	2.49	0.46
1:K:153:ALA:HA	1:K:158:ILE:HG22	1.96	0.46
1:K:344:ILE:HB	1:K:367:VAL:HG13	1.97	0.46
1:L:167:PRO:HG3	1:L:176:MET:HG2	1.97	0.46
1:A:204:SER:HB3	1:F:491:LYS:NZ	2.30	0.46
1:A:346:GLU:HG2	1:A:351:PRO:HG2	1.97	0.46
1:A:370:ASP:O	1:A:374:ASN:ND2	2.48	0.46
1:B:255:VAL:O	1:B:259:SER:HB2	2.15	0.46
1:C:468:ALA:HA	1:C:473:LEU:HD12	1.98	0.46
1:D:277:ASP:HB2	1:D:302:LEU:HD11	1.97	0.46
1:E:236:LEU:HB2	1:E:238:MET:CG	2.46	0.46
1:E:335:ASN:C	1:E:335:ASN:ND2	2.69	0.46
1:F:41:LYS:C	1:F:43:ASN:H	2.18	0.46
1:F:87:THR:OG1	1:F:88:PRO:HD3	2.16	0.46
1:G:33:ARG:NH1	1:G:33:ARG:CB	2.67	0.46
1:H:423:LYS:HE2	1:H:423:LYS:HA	1.96	0.46
1:I:47:GLY:O	1:I:51:ILE:HG13	2.15	0.46
1:I:104:VAL:HG23	1:I:105:LYS:N	2.30	0.46
1:K:65:ILE:O	1:K:65:ILE:HG13	2.15	0.46
1:L:339:VAL:HG23	1:L:339:VAL:O	2.15	0.46
1:A:248:VAL:HG13	1:A:272:ALA:HB3	1.96	0.46
1:A:335:ASN:HD22	1:A:335:ASN:H	1.61	0.46
1:B:101:VAL:O	1:B:104:VAL:HG22	2.16	0.46
1:B:201:LYS:NZ	1:B:388:ASN:ND2	2.58	0.46
1:B:282:ASN:OD1	1:B:284:ASP:HB2	2.14	0.46
1:B:411:MET:HA	1:B:430:ILE:HG22	1.98	0.46
1:C:280:ILE:HD11	1:C:301:ILE:HB	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:359:ILE:H	1:C:359:ILE:CD1	2.28	0.46
1:D:47:GLY:O	1:D:51:ILE:HG13	2.14	0.46
1:D:100:SER:O	1:D:103:GLU:N	2.49	0.46
1:D:394:TYR:CE2	1:E:397:LEU:HD13	2.50	0.46
1:F:39:GLU:HB3	1:F:41:LYS:HG3	1.98	0.46
1:G:49:LEU:HD11	1:G:486:ILE:CG2	2.45	0.46
1:G:57:HIS:HD2	1:G:84:HIS:NE2	2.12	0.46
1:G:57:HIS:CD2	1:G:84:HIS:CE1	3.00	0.46
1:I:427:THR:O	1:I:428:ILE:HD13	2.16	0.46
1:K:248:VAL:HG13	1:K:272:ALA:O	2.15	0.46
1:K:270:CYS:SG	1:K:286:ILE:HD13	2.56	0.46
1:L:346:GLU:O	1:L:373:LEU:HD23	2.15	0.46
1:A:96:SER:O	1:A:99:VAL:HG13	2.16	0.46
1:A:137:THR:HG23	1:A:140:GLU:CG	2.44	0.46
1:A:239:THR:HG23	1:A:239:THR:O	2.15	0.46
1:A:331:LEU:HD12	1:A:352:THR:HG22	1.98	0.46
1:A:345:ALA:HB1	1:A:373:LEU:CD2	2.46	0.46
1:A:414:GLN:OE1	1:A:428:ILE:HA	2.14	0.46
1:B:24:VAL:HG12	1:B:28:LEU:HD22	1.96	0.46
1:D:50:ARG:HG3	1:D:50:ARG:HH11	1.80	0.46
1:D:334:SER:O	1:D:337:PRO:HD2	2.16	0.46
1:E:25:GLU:O	1:E:29:VAL:HG23	2.16	0.46
1:E:318:ASP:HA	1:E:340:LYS:CB	2.46	0.46
1:F:12:MET:CE	1:F:354:PRO:HD3	2.46	0.46
1:F:292:GLU:O	1:F:296:LEU:HD23	2.15	0.46
1:G:339:VAL:HG21	1:G:360:PHE:CE1	2.33	0.46
1:G:367:VAL:O	1:G:369:PRO:HD3	2.16	0.46
1:H:11:LYS:HD3	1:H:11:LYS:HA	1.82	0.46
1:H:250:GLN:HG3	1:H:315:LEU:CD1	2.38	0.46
1:H:411:MET:SD	1:H:430:ILE:HG21	2.55	0.46
1:H:453:LEU:CD2	1:H:457:MET:HG2	2.46	0.46
1:H:497:GLY:HA3	1:H:501:THR:HA	1.97	0.46
1:K:416:SER:HA	1:K:419:ARG:CZ	2.46	0.46
1:L:39:GLU:O	1:L:40:GLN:HB2	2.15	0.46
1:A:87:THR:HB	1:A:88:PRO:CD	2.36	0.46
1:A:109:SER:HG	1:A:113:TYR:HE2	1.64	0.46
1:A:289:LYS:HE2	1:A:293:ASP:OD2	2.15	0.46
1:A:405:SER:OG	1:F:439:ARG:NH2	2.49	0.46
1:B:9:PHE:CE1	1:B:103:GLU:HA	2.51	0.46
1:B:411:MET:SD	1:B:430:ILE:HG21	2.56	0.46
1:C:6:ASP:HA	1:C:7:PRO:HD3	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:462:ARG:HA	1:F:465:MET:CE	2.46	0.46
1:G:146:ARG:HH12	1:L:501:THR:C	2.18	0.46
1:H:149:THR:OG1	1:H:179:ILE:HG23	2.14	0.46
1:J:84:HIS:O	1:J:85:GLN:C	2.54	0.46
1:L:82:HIS:CG	1:L:112:THR:HG21	2.49	0.46
1:L:176:MET:HE3	1:L:198:VAL:HG21	1.98	0.46
1:L:260:MET:O	1:L:261:ARG:C	2.54	0.46
1:A:59:LEU:HD21	1:A:61:LEU:HD21	1.97	0.46
1:A:60:SER:OG	1:E:58:VAL:HG13	2.15	0.46
1:A:79:ARG:HG3	1:A:127:ALA:HB2	1.98	0.46
1:B:65:ILE:HG12	1:B:75:ILE:HD11	1.96	0.46
1:B:260:MET:HE3	1:B:288:PRO:HA	1.96	0.46
1:C:58:VAL:HG13	1:F:60:SER:HB2	1.97	0.46
1:D:208:ILE:HD11	1:D:449:VAL:HG22	1.96	0.46
1:D:252:PHE:CD2	1:D:273:VAL:HG11	2.48	0.46
1:D:281:TRP:O	1:D:282:ASN:HB2	2.16	0.46
1:E:88:PRO:HG2	1:E:122:PHE:HD2	1.79	0.46
1:E:186:THR:HG22	1:E:187:ILE:HD13	1.97	0.46
1:E:250:GLN:HG3	1:E:315:LEU:HD11	1.96	0.46
1:G:28:LEU:HD21	1:G:490:PHE:CD2	2.51	0.46
1:G:47:GLY:O	1:G:50:ARG:HG2	2.16	0.46
1:I:101:VAL:O	1:I:105:LYS:HG3	2.15	0.46
1:A:29:VAL:O	1:A:34:THR:OG1	2.23	0.46
1:A:117:VAL:HG21	1:A:371:LEU:HG	1.98	0.46
1:A:379:THR:O	1:A:382:TYR:HB3	2.16	0.46
1:A:392:VAL:HG21	1:F:386:LEU:HD13	1.98	0.46
1:B:374:ASN:H	1:B:374:ASN:HD22	1.64	0.46
1:C:271:ILE:CD1	1:C:283:PRO:HA	2.46	0.46
1:C:322:LEU:HD13	1:C:324:PRO:HD3	1.96	0.46
1:C:396:ARG:HH11	1:C:396:ARG:HG3	1.81	0.46
1:D:433:THR:HG23	1:E:412:SER:HA	1.97	0.46
1:E:158:ILE:O	1:E:158:ILE:CG2	2.63	0.46
1:E:301:ILE:HD12	1:E:301:ILE:C	2.35	0.46
1:F:186:THR:HG22	1:F:187:ILE:N	2.31	0.46
1:G:203:ILE:HD12	1:G:209:HIS:HD2	1.81	0.46
1:G:252:PHE:CE2	1:G:257:LEU:HA	2.50	0.46
1:H:272:ALA:O	1:H:273:VAL:HG23	2.15	0.46
1:I:339:VAL:HG21	1:I:360:PHE:CE1	2.43	0.46
1:A:91:GLY:HA3	1:A:125:ALA:O	2.16	0.46
1:A:171:THR:HG22	1:A:175:GLU:OE2	2.16	0.46
1:A:429:PRO:O	1:A:431:VAL:N	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:374:ASN:HD22	1:B:374:ASN:N	2.14	0.46
1:C:499:THR:HG21	1:F:147:ARG:CZ	2.46	0.46
1:E:158:ILE:HG12	1:E:165:PRO:HG2	1.98	0.46
1:E:315:LEU:HD23	1:E:331:LEU:CD2	2.46	0.46
1:G:140:GLU:O	1:G:144:ILE:HG13	2.16	0.46
1:H:461:ALA:O	1:H:465:MET:HG3	2.15	0.46
1:I:20:GLY:O	1:I:24:VAL:HG23	2.15	0.46
1:J:158:ILE:HG12	1:J:165:PRO:CG	2.46	0.46
1:J:208:ILE:HD12	1:J:387:LYS:HD2	1.98	0.46
1:J:332:THR:O	1:J:336:ALA:HB2	2.16	0.46
1:K:24:VAL:O	1:K:25:GLU:C	2.54	0.46
1:K:55:CYS:SG	1:K:105:LYS:HG2	2.55	0.46
1:K:370:ASP:OD2	1:K:371:LEU:N	2.47	0.46
1:K:399:PHE:CE2	1:K:443:ALA:HB1	2.51	0.46
1:K:494:ASN:C	1:K:496:ALA:H	2.19	0.46
1:L:250:GLN:HB2	1:L:314:ILE:HD11	1.96	0.46
1:B:72:TRP:HE1	1:D:498:VAL:HG21	1.81	0.45
1:C:82:HIS:CG	1:C:112:THR:HG21	2.48	0.45
1:D:47:GLY:HA2	1:D:50:ARG:CD	2.46	0.45
1:D:91:GLY:HA3	1:D:125:ALA:O	2.16	0.45
1:E:369:PRO:HG3	1:E:478:ARG:CA	2.46	0.45
1:F:45:VAL:C	1:F:47:GLY:N	2.69	0.45
1:G:374:ASN:C	1:G:374:ASN:ND2	2.69	0.45
1:I:240:PRO:HB2	1:I:244:ASP:H	1.82	0.45
1:I:315:LEU:HD23	1:I:331:LEU:CD2	2.46	0.45
1:I:322:LEU:O	1:I:324:PRO:HD3	2.16	0.45
1:I:425:GLY:O	1:I:428:ILE:HD11	2.15	0.45
1:K:238:MET:C	1:K:240:PRO:HD3	2.37	0.45
1:L:261:ARG:HH11	1:L:261:ARG:HG3	1.80	0.45
1:L:318:ASP:HA	1:L:340:LYS:HB2	1.98	0.45
1:A:423:LYS:HZ2	1:A:426:GLY:HA2	1.81	0.45
1:A:497:GLY:N	1:A:501:THR:HA	2.31	0.45
1:B:414:GLN:CB	1:B:429:PRO:HD2	2.46	0.45
1:D:33:ARG:O	1:D:33:ARG:CG	2.63	0.45
1:D:436:PHE:O	1:D:440:ILE:HG13	2.15	0.45
1:E:260:MET:HG2	1:E:288:PRO:HG3	1.98	0.45
1:G:74:VAL:O	1:G:74:VAL:HG23	2.16	0.45
1:G:85:GLN:HE21	1:G:85:GLN:H	1.64	0.45
1:G:436:PHE:CG	1:H:408:HIS:HB3	2.51	0.45
1:K:39:GLU:O	1:K:41:LYS:HG3	2.16	0.45
1:K:57:HIS:NE2	1:K:84:HIS:CE1	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:252:PHE:CZ	1:K:257:LEU:HD13	2.51	0.45
1:L:27:LYS:O	1:L:32:LEU:HD12	2.15	0.45
1:L:79:ARG:NH2	1:L:163:ASP:OD1	2.49	0.45
1:L:374:ASN:C	1:L:374:ASN:ND2	2.69	0.45
1:L:431:VAL:O	1:L:431:VAL:HG13	2.16	0.45
1:A:67:ARG:HG2	1:A:140:GLU:OE2	2.16	0.45
1:A:164:VAL:HG13	1:A:198:VAL:HA	1.97	0.45
1:B:497:GLY:HA3	1:B:501:THR:HA	1.98	0.45
1:C:346:GLU:OE2	1:C:351:PRO:HD2	2.17	0.45
1:C:497:GLY:CA	1:C:501:THR:HA	2.47	0.45
1:D:424:HIS:ND1	1:D:424:HIS:N	2.64	0.45
1:D:427:THR:C	1:D:429:PRO:HD3	2.36	0.45
1:D:428:ILE:O	1:D:428:ILE:HG12	2.15	0.45
1:E:318:ASP:HA	1:E:340:LYS:HG3	1.98	0.45
1:F:39:GLU:C	1:F:41:LYS:N	2.70	0.45
1:G:39:GLU:HB3	1:G:41:LYS:HE3	1.99	0.45
1:G:271:ILE:HG13	1:G:283:PRO:HA	1.99	0.45
1:H:335:ASN:HD22	1:H:336:ALA:H	1.64	0.45
1:I:496:ALA:C	1:I:501:THR:HA	2.36	0.45
1:J:39:GLU:C	1:J:41:LYS:H	2.19	0.45
1:J:106:ALA:O	1:J:109:SER:HB3	2.15	0.45
1:J:148:PHE:O	1:J:152:LEU:HB2	2.16	0.45
1:K:104:VAL:HG23	1:K:105:LYS:N	2.31	0.45
1:A:459:ARG:HH11	1:A:459:ARG:HG2	1.81	0.45
1:E:39:GLU:O	1:E:41:LYS:HG3	2.16	0.45
1:F:403:ARG:HG3	1:F:440:ILE:CG2	2.46	0.45
1:G:374:ASN:C	1:G:374:ASN:HD22	2.18	0.45
1:H:24:VAL:HG12	1:H:28:LEU:HB2	1.97	0.45
1:H:56:ASN:HB2	1:H:84:HIS:HE1	1.81	0.45
1:I:250:GLN:CG	1:I:314:ILE:HD11	2.45	0.45
1:J:248:VAL:HG13	1:J:272:ALA:HB3	1.98	0.45
1:J:281:TRP:CD1	1:J:283:PRO:HD3	2.51	0.45
1:K:57:HIS:CD2	1:K:84:HIS:CE1	3.04	0.45
1:K:335:ASN:HD22	1:K:336:ALA:N	2.15	0.45
1:A:28:LEU:HD21	1:A:490:PHE:CD2	2.52	0.45
1:A:176:MET:HE3	1:A:179:ILE:HD12	1.97	0.45
1:C:416:SER:HA	1:C:419:ARG:NH2	2.32	0.45
1:C:432:PRO:HA	1:D:412:SER:OG	2.16	0.45
1:D:17:PHE:CE2	1:D:53:LYS:HB2	2.52	0.45
1:D:24:VAL:O	1:D:25:GLU:C	2.55	0.45
1:E:173:GLU:CG	1:E:202:PRO:HG3	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:497:GLY:HA3	1:E:501:THR:HA	1.97	0.45
1:F:8:ASN:ND2	1:F:11:LYS:H	2.13	0.45
1:H:87:THR:CB	1:H:88:PRO:CD	2.89	0.45
1:J:159:GLY:HA3	1:J:162:ILE:HD13	1.99	0.45
1:A:66:ARG:O	1:A:143:LYS:NZ	2.49	0.45
1:A:175:GLU:HG3	1:A:178:TRP:CZ3	2.52	0.45
1:B:316:GLU:CD	1:B:338:ARG:HB3	2.37	0.45
1:C:65:ILE:HG12	1:C:75:ILE:CD1	2.39	0.45
1:C:176:MET:CE	1:C:179:ILE:HD12	2.46	0.45
1:D:393:SER:O	1:D:396:ARG:HB2	2.17	0.45
1:E:67:ARG:HG2	1:E:140:GLU:OE2	2.15	0.45
1:E:129:VAL:O	1:E:131:ILE:N	2.50	0.45
1:F:403:ARG:NH2	1:G:242:PHE:HD1	2.14	0.45
1:F:497:GLY:N	1:F:501:THR:HA	2.31	0.45
1:G:306:LYS:HG2	1:G:306:LYS:O	2.17	0.45
1:G:462:ARG:O	1:G:466:ARG:HG3	2.17	0.45
1:H:117:VAL:HG21	1:H:371:LEU:HG	1.99	0.45
1:I:158:ILE:C	1:I:158:ILE:HD13	2.37	0.45
1:J:336:ALA:O	1:J:339:VAL:HG22	2.17	0.45
1:J:432:PRO:HB3	1:J:436:PHE:HD1	1.81	0.45
1:J:436:PHE:O	1:J:440:ILE:HG13	2.16	0.45
1:K:176:MET:O	1:K:177:SER:C	2.54	0.45
1:A:315:LEU:CD1	1:A:315:LEU:N	2.80	0.45
1:A:414:GLN:HB2	1:A:429:PRO:HD2	1.97	0.45
1:B:64:PRO:HG3	1:D:51:ILE:HD13	1.98	0.45
1:B:79:ARG:HA	1:B:127:ALA:HA	1.99	0.45
1:C:17:PHE:CE2	1:C:53:LYS:HB2	2.51	0.45
1:C:118:VAL:CG2	1:C:375:ALA:HB1	2.45	0.45
1:C:369:PRO:CD	1:C:477:LEU:HB3	2.47	0.45
1:D:32:LEU:HA	1:D:32:LEU:HD23	1.66	0.45
1:D:39:GLU:HG2	1:D:41:LYS:HE2	1.99	0.45
1:D:385:TRP:HA	1:D:388:ASN:HD22	1.82	0.45
1:E:42:ARG:O	1:E:45:VAL:HG12	2.17	0.45
1:F:39:GLU:OE1	1:F:41:LYS:HE3	2.16	0.45
1:G:39:GLU:C	1:G:41:LYS:N	2.70	0.45
1:G:80:ALA:O	1:G:125:ALA:HA	2.17	0.45
1:H:431:VAL:HG13	1:H:431:VAL:O	2.17	0.45
1:I:462:ARG:HG3	1:I:462:ARG:NH1	2.30	0.45
1:K:158:ILE:HG12	1:K:165:PRO:HG2	1.99	0.45
1:L:335:ASN:HD22	1:L:336:ALA:N	2.15	0.45
1:L:339:VAL:HG21	1:L:360:PHE:CE1	2.44	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:410:LEU:HB3	1:L:430:ILE:HA	1.98	0.45
1:A:117:VAL:HG11	1:A:372:TYR:HB2	1.99	0.45
1:B:27:LYS:HA	1:B:30:GLU:CG	2.47	0.45
1:B:414:GLN:OE1	1:B:428:ILE:HA	2.17	0.45
1:B:414:GLN:CD	1:B:430:ILE:HG23	2.37	0.45
1:C:56:ASN:HD21	1:C:83:SER:HA	1.82	0.45
1:D:417:LEU:CD2	1:E:417:LEU:HD11	2.47	0.45
1:E:39:GLU:C	1:E:41:LYS:N	2.70	0.45
1:E:79:ARG:HH11	1:E:79:ARG:HG3	1.82	0.45
1:E:339:VAL:HG21	1:E:360:PHE:CE1	2.43	0.45
1:G:34:THR:O	1:G:35:ARG:HB2	2.17	0.45
1:G:90:LYS:HD2	1:G:164:VAL:HB	1.98	0.45
1:G:147:ARG:HG2	1:K:499:THR:HG21	1.99	0.45
1:H:59:LEU:HD22	1:H:157:PHE:CD2	2.52	0.45
1:H:226:PHE:CE2	1:H:477:LEU:HD21	2.52	0.45
1:H:255:VAL:HG13	1:H:256:GLY:N	2.32	0.45
1:I:336:ALA:HB3	1:I:337:PRO:HD3	1.99	0.45
1:J:374:ASN:O	1:J:374:ASN:CG	2.56	0.45
1:L:414:GLN:HB2	1:L:429:PRO:HD2	1.98	0.45
1:B:147:ARG:NE	1:D:499:THR:HG21	2.32	0.45
1:C:50:ARG:HH11	1:C:50:ARG:HB2	1.82	0.45
1:C:101:VAL:O	1:C:105:LYS:HG3	2.16	0.45
1:C:466:ARG:HH11	1:C:466:ARG:CB	2.27	0.45
1:D:99:VAL:HG22	1:D:130:LYS:CD	2.46	0.45
1:D:142:GLU:O	1:D:143:LYS:C	2.53	0.45
1:D:369:PRO:HG3	1:D:478:ARG:HA	1.99	0.45
1:J:345:ALA:HB1	1:J:373:LEU:CD2	2.42	0.45
1:J:446:LYS:HG3	1:J:447:ASP:N	2.31	0.45
1:L:81:GLN:HG3	1:L:157:PHE:CE1	2.52	0.45
1:A:32:LEU:O	1:A:35:ARG:NH2	2.50	0.45
1:A:201:LYS:HG2	1:A:384:GLU:OE1	2.16	0.45
1:A:252:PHE:CD2	1:A:273:VAL:HG11	2.51	0.45
1:B:85:GLN:HE21	1:B:85:GLN:HB3	1.53	0.45
1:B:158:ILE:HG13	1:B:165:PRO:HG2	1.98	0.45
1:B:420:LYS:HG2	1:B:420:LYS:O	2.16	0.45
1:C:244:ASP:C	1:C:245:LYS:HG3	2.38	0.45
1:D:369:PRO:HG3	1:D:478:ARG:CA	2.47	0.45
1:E:396:ARG:HD3	1:E:396:ARG:C	2.35	0.45
1:F:499:THR:HG1	1:F:500:PHE:HD1	1.62	0.45
1:G:152:LEU:HG	1:G:157:PHE:O	2.16	0.45
1:G:405:SER:HB2	1:L:439:ARG:NH2	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:410:LEU:HB3	1:G:430:ILE:HA	1.99	0.45
1:I:60:SER:HB3	1:I:78:TYR:CD2	2.52	0.45
1:I:386:LEU:CD1	1:J:392:VAL:HG21	2.47	0.45
1:J:53:LYS:HB3	1:J:54:PRO:HD3	1.98	0.45
1:B:142:GLU:HA	1:B:178:TRP:CE3	2.52	0.44
1:B:189:HIS:CG	1:E:154:LYS:HZ3	2.34	0.44
1:C:39:GLU:C	1:C:41:LYS:H	2.19	0.44
1:C:59:LEU:HD22	1:C:157:PHE:CD2	2.51	0.44
1:D:66:ARG:HG2	1:D:72:TRP:CE2	2.52	0.44
1:D:227:ILE:HA	1:D:233:MET:SD	2.57	0.44
1:D:497:GLY:HA3	1:D:501:THR:HA	1.99	0.44
1:F:8:ASN:ND2	1:F:8:ASN:C	2.67	0.44
1:G:24:VAL:HG12	1:G:28:LEU:HD22	1.98	0.44
1:G:65:ILE:HD13	1:G:144:ILE:CG1	2.46	0.44
1:G:281:TRP:O	1:G:282:ASN:HB2	2.17	0.44
1:G:379:THR:O	1:G:382:TYR:HB3	2.17	0.44
1:G:403:ARG:HG3	1:G:440:ILE:HG21	1.98	0.44
1:H:244:ASP:C	1:H:245:LYS:HG3	2.37	0.44
1:H:273:VAL:HG11	1:H:291:LEU:HD21	1.99	0.44
1:I:147:ARG:HD3	1:L:499:THR:OG1	2.17	0.44
1:J:346:GLU:OE2	1:J:351:PRO:HD2	2.18	0.44
1:K:322:LEU:O	1:K:324:PRO:HD3	2.18	0.44
1:K:363:ARG:CB	1:K:363:ARG:HH11	2.29	0.44
1:K:369:PRO:CG	1:K:478:ARG:HA	2.47	0.44
1:L:200:GLY:H	1:L:384:GLU:CD	2.21	0.44
1:A:37:SER:O	1:A:37:SER:OG	2.33	0.44
1:A:63:PHE:CE1	1:A:75:ILE:HB	2.52	0.44
1:B:41:LYS:O	1:B:44:ARG:HB2	2.17	0.44
1:B:53:LYS:O	1:B:82:HIS:HE1	2.00	0.44
1:B:261:ARG:HH11	1:B:261:ARG:HG3	1.81	0.44
1:B:332:THR:HG22	1:B:353:THR:CG2	2.47	0.44
1:C:496:ALA:O	1:C:501:THR:HA	2.17	0.44
1:D:328:GLU:O	1:D:330:GLN:NE2	2.50	0.44
1:D:475:LEU:HD12	1:D:475:LEU:N	2.32	0.44
1:E:8:ASN:O	1:E:10:PHE:N	2.50	0.44
1:E:346:GLU:OE1	1:E:478:ARG:NH2	2.50	0.44
1:H:229:GLU:O	1:H:230:ALA:C	2.55	0.44
1:H:471:TYR:O	1:H:473:LEU:HG	2.16	0.44
1:I:186:THR:HG22	1:I:187:ILE:N	2.32	0.44
1:J:346:GLU:HG2	1:J:351:PRO:HG2	1.99	0.44
1:J:445:GLU:O	1:J:446:LYS:C	2.54	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:427:THR:HG22	1:L:429:PRO:CD	2.43	0.44
1:A:498:VAL:HG11	1:E:72:TRP:HE1	1.81	0.44
1:B:175:GLU:HA	1:B:178:TRP:CE3	2.52	0.44
1:D:39:GLU:O	1:D:41:LYS:CG	2.61	0.44
1:D:428:ILE:N	1:D:428:ILE:CD1	2.78	0.44
1:E:261:ARG:HG3	1:E:261:ARG:HH11	1.82	0.44
1:E:300:SER:OG	1:E:301:ILE:N	2.49	0.44
1:F:300:SER:HB3	1:F:302:LEU:HD13	1.99	0.44
1:F:436:PHE:O	1:F:439:ARG:HB3	2.17	0.44
1:H:131:ILE:HG23	1:H:132:ASN:N	2.32	0.44
1:I:414:GLN:OE1	1:I:430:ILE:HG23	2.17	0.44
1:J:75:ILE:CD1	1:J:144:ILE:HG12	2.48	0.44
1:K:31:ASP:O	1:K:35:ARG:NH1	2.50	0.44
1:L:82:HIS:HB3	1:L:112:THR:CG2	2.48	0.44
1:L:429:PRO:C	1:L:431:VAL:H	2.21	0.44
1:A:146:ARG:NH2	1:F:501:THR:HG23	2.32	0.44
1:A:315:LEU:N	1:A:315:LEU:HD12	2.32	0.44
1:B:142:GLU:HG3	1:B:178:TRP:CD2	2.52	0.44
1:B:248:VAL:HG13	1:B:272:ALA:O	2.17	0.44
1:B:252:PHE:HE2	1:B:260:MET:HE2	1.82	0.44
1:C:142:GLU:HA	1:C:178:TRP:CE3	2.52	0.44
1:D:363:ARG:O	1:D:365:ILE:HG12	2.16	0.44
1:E:42:ARG:HE	1:E:42:ARG:HA	1.79	0.44
1:E:112:THR:HG22	1:E:124:GLY:CA	2.46	0.44
1:F:19:ARG:HD2	1:F:479:THR:CG2	2.48	0.44
1:I:181:ASP:CG	1:K:501:THR:HG23	2.37	0.44
1:I:219:VAL:O	1:I:223:ILE:HG13	2.18	0.44
1:I:252:PHE:CZ	1:I:257:LEU:HD13	2.53	0.44
1:J:30:GLU:HB2	1:J:31:ASP:H	1.43	0.44
1:J:275:GLU:HG3	1:J:301:ILE:HD13	1.99	0.44
1:K:30:GLU:CG	1:K:31:ASP:H	2.26	0.44
1:K:225:ASN:ND2	1:K:458:GLU:HA	2.32	0.44
1:K:346:GLU:C	1:K:373:LEU:HD23	2.38	0.44
1:L:175:GLU:HG3	1:L:178:TRP:CZ3	2.52	0.44
1:L:300:SER:OG	1:L:301:ILE:N	2.47	0.44
1:A:271:ILE:CD1	1:A:283:PRO:HA	2.48	0.44
1:A:332:THR:HA	1:A:353:THR:HG21	1.96	0.44
1:B:57:HIS:HE1	1:D:151:GLU:HB3	1.82	0.44
1:B:149:THR:HG23	1:B:158:ILE:CD1	2.44	0.44
1:B:162:ILE:N	1:B:162:ILE:CD1	2.81	0.44
1:B:439:ARG:HH11	1:B:439:ARG:CG	2.25	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:497:GLY:CA	1:B:501:THR:HA	2.47	0.44
1:C:57:HIS:HE1	1:F:151:GLU:OE1	2.00	0.44
1:C:65:ILE:HD13	1:C:144:ILE:HG12	1.98	0.44
1:C:147:ARG:O	1:C:151:GLU:HG2	2.18	0.44
1:D:28:LEU:HD21	1:D:490:PHE:CG	2.52	0.44
1:D:383:PHE:HD1	1:D:449:VAL:HG13	1.82	0.44
1:E:167:PRO:HG3	1:E:176:MET:HG2	1.99	0.44
1:E:496:ALA:O	1:E:501:THR:HA	2.17	0.44
1:F:158:ILE:O	1:F:158:ILE:CD1	2.64	0.44
1:F:168:ASP:O	1:F:170:SER:N	2.51	0.44
1:F:291:LEU:HD11	1:F:301:ILE:HB	1.98	0.44
1:F:429:PRO:C	1:F:431:VAL:H	2.20	0.44
1:G:397:LEU:HD22	1:L:394:TYR:CE2	2.53	0.44
1:I:243:GLY:O	1:I:244:ASP:HB3	2.18	0.44
1:J:233:MET:CE	1:J:343:ILE:HD11	2.47	0.44
1:K:19:ARG:HD3	1:K:479:THR:HG22	1.98	0.44
1:K:65:ILE:HD13	1:K:144:ILE:CG1	2.46	0.44
1:L:497:GLY:HA3	1:L:501:THR:HA	2.00	0.44
1:A:479:THR:O	1:A:483:VAL:HG23	2.17	0.44
1:B:32:LEU:HD23	1:B:32:LEU:C	2.38	0.44
1:B:497:GLY:C	1:B:501:THR:HB	2.38	0.44
1:C:60:SER:HB2	1:F:58:VAL:HG13	1.98	0.44
1:C:287:ASP:HB3	1:C:290:GLU:HG3	1.99	0.44
1:D:19:ARG:NH1	1:D:479:THR:HG21	2.32	0.44
1:E:208:ILE:O	1:E:208:ILE:HG23	2.16	0.44
1:F:410:LEU:HB3	1:F:430:ILE:HA	1.98	0.44
1:F:411:MET:HA	1:F:430:ILE:CG2	2.47	0.44
1:G:403:ARG:HG2	1:G:403:ARG:NH1	2.32	0.44
1:I:109:SER:O	1:I:113:TYR:CD2	2.71	0.44
1:I:392:VAL:HG21	1:K:386:LEU:HD13	2.00	0.44
1:J:483:VAL:O	1:J:487:GLU:HG3	2.17	0.44
1:K:274:GLY:CA	1:K:314:ILE:HD12	2.41	0.44
1:L:55:CYS:SG	1:L:105:LYS:HG2	2.58	0.44
1:A:329:LYS:HB2	1:A:329:LYS:HE3	1.81	0.44
1:A:331:LEU:HD12	1:A:352:THR:CG2	2.47	0.44
1:A:410:LEU:HB3	1:A:430:ILE:HA	1.99	0.44
1:A:462:ARG:HG3	1:A:462:ARG:NH1	2.33	0.44
1:D:403:ARG:HG3	1:D:440:ILE:CG2	2.48	0.44
1:D:477:LEU:H	1:D:477:LEU:HD12	1.83	0.44
1:E:168:ASP:OD2	1:E:169:MET:N	2.47	0.44
1:F:300:SER:OG	1:F:301:ILE:N	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:367:VAL:O	1:F:369:PRO:HD3	2.17	0.44
1:G:27:LYS:HA	1:G:30:GLU:HG2	1.99	0.44
1:G:147:ARG:CD	1:K:499:THR:HG21	2.48	0.44
1:G:305:PRO:O	1:G:306:LYS:HB3	2.18	0.44
1:G:318:ASP:HA	1:G:340:LYS:HB2	1.98	0.44
1:H:147:ARG:HA	1:H:147:ARG:HD3	1.85	0.44
1:H:154:LYS:HD3	1:K:189:HIS:CE1	2.53	0.44
1:I:339:VAL:HG23	1:I:339:VAL:O	2.16	0.44
1:I:431:VAL:O	1:I:431:VAL:HG13	2.17	0.44
1:J:104:VAL:CG2	1:J:105:LYS:N	2.80	0.44
1:J:198:VAL:HG22	1:J:199:THR:N	2.33	0.44
1:L:292:GLU:O	1:L:296:LEU:HD23	2.18	0.44
1:L:369:PRO:HG3	1:L:478:ARG:CA	2.48	0.44
1:A:433:THR:HG23	1:B:412:SER:OG	2.17	0.44
1:B:277:ASP:HB2	1:B:302:LEU:CD1	2.42	0.44
1:C:113:TYR:O	1:C:117:VAL:HG23	2.18	0.44
1:C:300:SER:OG	1:C:301:ILE:N	2.50	0.44
1:C:322:LEU:HD13	1:C:324:PRO:HG3	2.00	0.44
1:E:497:GLY:CA	1:E:501:THR:HA	2.47	0.44
1:G:75:ILE:N	1:G:75:ILE:HD12	2.32	0.44
1:G:79:ARG:HA	1:G:127:ALA:HA	2.00	0.44
1:H:85:GLN:HE21	1:H:85:GLN:HB3	1.52	0.44
1:H:396:ARG:HB3	1:H:397:LEU:HD12	2.00	0.44
1:I:249:VAL:HG13	1:I:273:VAL:HG13	1.99	0.44
1:I:396:ARG:HD3	1:I:396:ARG:C	2.38	0.44
1:K:17:PHE:CE1	1:K:486:ILE:HD12	2.53	0.44
1:B:186:THR:CG2	1:B:187:ILE:H	2.24	0.44
1:B:315:LEU:HD23	1:B:331:LEU:HD23	2.00	0.44
1:B:370:ASP:OD2	1:B:371:LEU:N	2.49	0.44
1:B:414:GLN:HB2	1:B:429:PRO:HD2	2.00	0.44
1:C:19:ARG:NE	1:C:479:THR:HG21	2.33	0.44
1:C:142:GLU:O	1:C:143:LYS:C	2.57	0.44
1:C:346:GLU:HG2	1:C:351:PRO:HG3	2.00	0.44
1:D:346:GLU:OE2	1:D:351:PRO:HD2	2.18	0.44
1:E:85:GLN:HE21	1:E:85:GLN:HB3	1.39	0.44
1:F:246:THR:HB	1:F:271:ILE:CD1	2.41	0.44
1:G:248:VAL:HG23	1:G:319:CYS:SG	2.58	0.44
1:G:421:PHE:CD1	1:G:423:LYS:HB2	2.53	0.44
1:H:252:PHE:O	1:H:252:PHE:HD1	2.01	0.44
1:I:409:LEU:HD22	1:K:436:PHE:CZ	2.53	0.44
1:I:501:THR:O	1:J:178:TRP:HD1	2.01	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:383:PHE:CD2	1:J:383:PHE:N	2.83	0.44
1:L:294:PHE:CE1	1:L:298:HIS:HE1	2.36	0.44
1:L:363:ARG:NH1	1:L:363:ARG:CB	2.81	0.44
1:L:415:GLU:O	1:L:419:ARG:HG3	2.18	0.44
1:A:414:GLN:CG	1:A:429:PRO:HD2	2.48	0.43
1:B:248:VAL:HG11	1:B:314:ILE:HB	1.99	0.43
1:D:42:ARG:O	1:D:45:VAL:HG12	2.18	0.43
1:D:419:ARG:HH11	1:D:419:ARG:HG3	1.82	0.43
1:F:99:VAL:HA	1:F:103:GLU:OE1	2.18	0.43
1:F:200:GLY:H	1:F:384:GLU:CD	2.20	0.43
1:F:335:ASN:HD22	1:F:335:ASN:N	2.14	0.43
1:F:371:LEU:HD23	1:F:481:ALA:CB	2.47	0.43
1:F:396:ARG:HB3	1:F:397:LEU:HD12	2.00	0.43
1:I:75:ILE:HG13	1:I:131:ILE:HD11	1.99	0.43
1:I:281:TRP:HB2	1:I:310:TYR:HB2	2.00	0.43
1:I:281:TRP:O	1:I:282:ASN:HB2	2.17	0.43
1:J:226:PHE:CE2	1:J:477:LEU:HD21	2.53	0.43
1:K:315:LEU:CD1	1:K:315:LEU:N	2.81	0.43
1:K:315:LEU:HD12	1:K:315:LEU:N	2.33	0.43
1:L:45:VAL:O	1:L:45:VAL:HG13	2.18	0.43
1:L:87:THR:CB	1:L:88:PRO:CD	2.92	0.43
1:L:100:SER:O	1:L:103:GLU:HB3	2.18	0.43
1:L:158:ILE:O	1:L:158:ILE:HG23	2.17	0.43
1:L:435:GLU:CD	1:L:435:GLU:H	2.21	0.43
1:A:93:ILE:O	1:A:168:ASP:HB3	2.18	0.43
1:A:221:HIS:CE1	1:A:454:ALA:HB2	2.53	0.43
1:A:236:LEU:O	1:A:238:MET:HE3	2.18	0.43
1:C:178:TRP:CD1	1:E:501:THR:O	2.71	0.43
1:E:150:MET:CE	1:E:186:THR:HG21	2.48	0.43
1:E:153:ALA:CA	1:E:158:ILE:HG22	2.47	0.43
1:G:112:THR:HG23	1:G:124:GLY:HA3	2.00	0.43
1:G:252:PHE:CE2	1:G:260:MET:HE1	2.53	0.43
1:G:394:TYR:HB2	1:G:445:GLU:HG3	1.99	0.43
1:G:497:GLY:CA	1:G:501:THR:HA	2.48	0.43
1:H:31:ASP:O	1:H:35:ARG:NH2	2.51	0.43
1:H:328:GLU:HG2	1:H:329:LYS:H	1.83	0.43
1:H:439:ARG:HH12	1:L:404:ASP:CB	2.32	0.43
1:I:39:GLU:O	1:I:40:GLN:CB	2.62	0.43
1:I:316:GLU:O	1:I:317:ALA:C	2.56	0.43
1:J:174:ARG:HG3	1:J:175:GLU:H	1.82	0.43
1:K:485:ALA:O	1:K:486:ILE:C	2.56	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:97:THR:O	1:L:97:THR:HG22	2.17	0.43
1:A:160:PRO:HG3	1:A:191:ASP:OD1	2.19	0.43
1:C:104:VAL:HG23	1:C:105:LYS:N	2.34	0.43
1:C:423:LYS:HG3	1:C:424:HIS:N	2.32	0.43
1:D:222:GLY:HA3	1:D:373:LEU:CD1	2.49	0.43
1:E:112:THR:HG23	1:E:124:GLY:HA3	2.00	0.43
1:E:260:MET:HE3	1:E:288:PRO:HA	1.99	0.43
1:F:491:LYS:O	1:F:495:GLU:HB2	2.18	0.43
1:G:118:VAL:O	1:G:120:VAL:HG23	2.18	0.43
1:G:281:TRP:CZ2	1:G:283:PRO:HG3	2.53	0.43
1:G:496:ALA:O	1:G:501:THR:HA	2.17	0.43
1:H:65:ILE:HD13	1:H:144:ILE:HG12	1.99	0.43
1:H:302:LEU:N	1:H:302:LEU:CD1	2.81	0.43
1:I:24:VAL:HG12	1:I:28:LEU:HD22	2.00	0.43
1:I:167:PRO:HD3	1:I:199:THR:O	2.18	0.43
1:I:294:PHE:CG	1:I:304:PHE:HD1	2.36	0.43
1:I:390:ASN:O	1:I:391:HIS:HB2	2.19	0.43
1:J:497:GLY:HA3	1:J:501:THR:HA	2.00	0.43
1:K:107:LEU:HB2	1:K:126:LYS:HG2	2.00	0.43
1:K:147:ARG:NH1	1:K:151:GLU:OE2	2.51	0.43
1:K:287:ASP:OD2	1:K:290:GLU:HG3	2.19	0.43
1:K:393:SER:O	1:K:396:ARG:HB2	2.18	0.43
1:K:460:SER:O	1:K:463:GLN:HB2	2.18	0.43
1:K:463:GLN:HA	1:K:466:ARG:NH1	2.33	0.43
1:L:86:ARG:NH1	1:L:492:VAL:HG22	2.34	0.43
1:L:263:LEU:O	1:L:268:ALA:HB3	2.17	0.43
1:L:369:PRO:CG	1:L:478:ARG:HA	2.48	0.43
1:A:27:LYS:HB2	1:A:471:TYR:HE1	1.82	0.43
1:A:61:LEU:HD22	1:E:57:HIS:CD2	2.54	0.43
1:A:147:ARG:HH22	1:E:499:THR:HG21	1.83	0.43
1:B:9:PHE:CZ	1:B:103:GLU:HB2	2.53	0.43
1:B:379:THR:O	1:B:382:TYR:HB3	2.18	0.43
1:B:414:GLN:OE1	1:B:430:ILE:HG12	2.18	0.43
1:B:501:THR:OXT	1:F:146:ARG:NH2	2.42	0.43
1:E:67:ARG:NH2	1:E:136:TYR:CE1	2.86	0.43
1:F:335:ASN:ND2	1:F:336:ALA:N	2.65	0.43
1:G:104:VAL:CG2	1:G:105:LYS:N	2.81	0.43
1:H:322:LEU:HD22	1:H:323:ILE:N	2.34	0.43
1:L:82:HIS:HB3	1:L:112:THR:HG21	1.99	0.43
1:L:371:LEU:HD23	1:L:481:ALA:CB	2.48	0.43
1:L:372:TYR:CD1	1:L:373:LEU:N	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:112:THR:HG22	1:A:124:GLY:HA3	2.00	0.43
1:B:331:LEU:HB2	1:B:352:THR:HG22	2.00	0.43
1:C:196:ALA:HB2	1:C:388:ASN:HB3	2.00	0.43
1:D:397:LEU:HD12	1:D:397:LEU:N	2.33	0.43
1:F:245:LYS:HB2	1:F:268:ALA:HA	2.00	0.43
1:F:246:THR:CB	1:F:271:ILE:HD11	2.38	0.43
1:G:386:LEU:HD22	1:H:392:VAL:HG22	2.01	0.43
1:H:139:ASN:OD1	1:H:143:LYS:HE3	2.18	0.43
1:I:423:LYS:HG2	1:I:426:GLY:N	2.33	0.43
1:J:369:PRO:CG	1:J:478:ARG:HA	2.48	0.43
1:K:431:VAL:HA	1:K:432:PRO:HD3	1.89	0.43
1:L:85:GLN:HG2	1:L:86:ARG:N	2.31	0.43
1:C:271:ILE:CG1	1:C:283:PRO:HA	2.48	0.43
1:C:379:THR:O	1:C:382:TYR:HB3	2.19	0.43
1:C:391:HIS:O	1:C:392:VAL:HG22	2.18	0.43
1:D:118:VAL:O	1:D:120:VAL:HG23	2.19	0.43
1:D:437:GLN:NE2	1:D:441:SER:OG	2.51	0.43
1:D:462:ARG:HE	1:D:466:ARG:HH22	1.65	0.43
1:E:186:THR:HG22	1:E:187:ILE:CD1	2.48	0.43
1:E:413:VAL:O	1:E:417:LEU:HB2	2.18	0.43
1:F:90:LYS:NZ	1:F:166:ALA:HB2	2.34	0.43
1:G:308:LYS:HE2	1:G:309:PRO:HD2	2.01	0.43
1:H:71:SER:CA	1:J:44:ARG:HD3	2.49	0.43
1:I:25:GLU:O	1:I:29:VAL:HG23	2.18	0.43
1:I:208:ILE:HG13	1:I:445:GLU:OE1	2.18	0.43
1:I:318:ASP:HA	1:I:340:LYS:HB2	2.01	0.43
1:J:497:GLY:CA	1:J:501:THR:HA	2.49	0.43
1:K:142:GLU:HA	1:K:178:TRP:CE3	2.53	0.43
1:K:208:ILE:HB	1:K:384:GLU:HG3	1.99	0.43
1:L:396:ARG:HB3	1:L:397:LEU:HD12	2.01	0.43
1:L:497:GLY:CA	1:L:501:THR:HA	2.49	0.43
1:A:72:TRP:HE1	1:E:498:VAL:HG21	1.83	0.43
1:A:178:TRP:HD1	1:F:501:THR:O	2.01	0.43
1:B:112:THR:CG2	1:B:124:GLY:H	2.32	0.43
1:C:260:MET:CE	1:C:288:PRO:HA	2.49	0.43
1:C:497:GLY:HA3	1:C:501:THR:HA	2.01	0.43
1:D:79:ARG:HH11	1:D:127:ALA:HB2	1.83	0.43
1:F:31:ASP:O	1:F:32:LEU:HD23	2.19	0.43
1:F:376:GLY:O	1:F:380:VAL:HG23	2.19	0.43
1:G:278:GLY:HA3	1:G:302:LEU:HD11	2.01	0.43
1:G:460:SER:O	1:G:464:ILE:HG13	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:248:VAL:HG11	1:H:314:ILE:HB	1.99	0.43
1:I:147:ARG:O	1:I:151:GLU:HG2	2.18	0.43
1:I:252:PHE:HD1	1:I:295:LYS:NZ	2.17	0.43
1:I:281:TRP:CD1	1:I:282:ASN:N	2.86	0.43
1:J:65:ILE:HA	1:J:147:ARG:NH1	2.34	0.43
1:K:238:MET:O	1:K:239:THR:HG22	2.18	0.43
1:K:249:VAL:HB	1:K:323:ILE:HD11	2.00	0.43
1:L:28:LEU:HA	1:L:32:LEU:HD12	2.01	0.43
1:L:38:GLU:H	1:L:42:ARG:NE	2.07	0.43
1:L:57:HIS:NE2	1:L:84:HIS:CE1	2.87	0.43
1:L:201:LYS:HZ1	1:L:388:ASN:HD21	1.67	0.43
1:B:53:LYS:HB3	1:B:54:PRO:CD	2.48	0.43
1:B:66:ARG:HD2	1:B:72:TRP:CZ2	2.53	0.43
1:B:277:ASP:HB2	1:B:278:GLY:H	1.74	0.43
1:B:479:THR:O	1:B:483:VAL:HG23	2.19	0.43
1:C:40:GLN:HE21	1:C:40:GLN:HB3	1.56	0.43
1:C:42:ARG:O	1:C:45:VAL:HG12	2.19	0.43
1:D:223:ILE:HD12	1:D:263:LEU:HD21	2.00	0.43
1:F:444:SER:OG	1:F:446:LYS:HG2	2.19	0.43
1:G:219:VAL:O	1:G:223:ILE:HG13	2.18	0.43
1:H:172:GLY:N	1:H:175:GLU:OE1	2.49	0.43
1:I:16:PHE:O	1:I:19:ARG:HB2	2.18	0.43
1:J:140:GLU:O	1:J:144:ILE:HG13	2.19	0.43
1:J:314:ILE:N	1:J:314:ILE:CD1	2.81	0.43
1:J:478:ARG:HG2	1:J:482:TYR:CE2	2.54	0.43
1:K:287:ASP:HB3	1:K:290:GLU:HG3	2.00	0.43
1:K:418:GLU:O	1:K:421:PHE:O	2.37	0.43
1:L:279:SER:O	1:L:280:ILE:HG13	2.18	0.43
1:A:71:SER:HA	1:E:44:ARG:HD3	2.00	0.43
1:A:93:ILE:HG12	1:A:127:ALA:HB3	2.01	0.43
1:A:247:PHE:CZ	1:A:260:MET:HG3	2.53	0.43
1:B:19:ARG:HG3	1:B:19:ARG:HH11	1.84	0.43
1:B:428:ILE:O	1:B:431:VAL:HG12	2.19	0.43
1:B:494:ASN:C	1:B:496:ALA:H	2.22	0.43
1:C:360:PHE:CD1	1:C:365:ILE:HG21	2.54	0.43
1:D:112:THR:CG2	1:D:124:GLY:HA3	2.47	0.43
1:D:238:MET:CE	1:D:342:LYS:HG3	2.48	0.43
1:D:471:TYR:O	1:D:473:LEU:HG	2.18	0.43
1:G:400:LYS:HE2	1:G:403:ARG:NH2	2.30	0.43
1:G:446:LYS:HG3	1:G:450:HIS:CE1	2.53	0.43
1:H:217:ARG:HD2	1:H:450:HIS:CE1	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:49:LEU:HD11	1:I:486:ILE:HG21	2.00	0.43
1:I:49:LEU:HD11	1:I:486:ILE:CG2	2.49	0.43
1:J:27:LYS:HG3	1:J:471:TYR:HE1	1.84	0.43
1:J:167:PRO:HG3	1:J:176:MET:SD	2.59	0.43
1:J:255:VAL:HG13	1:J:256:GLY:N	2.33	0.43
1:K:371:LEU:HD12	1:K:371:LEU:O	2.18	0.43
1:K:428:ILE:HG22	1:K:428:ILE:O	2.18	0.43
1:L:82:HIS:HD2	1:L:112:THR:HG21	1.80	0.43
1:L:137:THR:O	1:L:138:ASP:C	2.57	0.43
1:A:147:ARG:O	1:A:150:MET:HB2	2.19	0.43
1:A:260:MET:HE2	1:A:288:PRO:HG3	2.01	0.43
1:E:143:LYS:NZ	1:E:147:ARG:HH21	2.17	0.43
1:E:370:ASP:CG	1:E:371:LEU:N	2.72	0.43
1:F:370:ASP:OD2	1:F:370:ASP:N	2.52	0.43
1:G:141:LEU:HD23	1:G:141:LEU:HA	1.86	0.43
1:G:386:LEU:O	1:G:390:ASN:OD1	2.36	0.43
1:G:494:ASN:O	1:G:496:ALA:N	2.43	0.43
1:I:14:GLU:HG3	1:I:53:LYS:HZ2	1.84	0.43
1:I:42:ARG:H	1:I:42:ARG:HG2	1.58	0.43
1:I:89:CYS:HB3	1:I:125:ALA:HB2	2.01	0.43
1:K:79:ARG:HA	1:K:127:ALA:HA	2.01	0.43
1:L:250:GLN:HE22	1:L:326:ALA:CB	2.22	0.43
1:L:252:PHE:CD1	1:L:295:LYS:HD3	2.54	0.43
1:A:25:GLU:O	1:A:26:ASP:C	2.57	0.42
1:B:87:THR:HG1	1:B:88:PRO:HD2	1.78	0.42
1:B:289:LYS:HE2	1:B:293:ASP:OD1	2.19	0.42
1:C:176:MET:HE2	1:C:179:ILE:HD12	2.01	0.42
1:C:294:PHE:CG	1:C:304:PHE:HD1	2.36	0.42
1:C:314:ILE:N	1:C:314:ILE:CD1	2.75	0.42
1:C:500:PHE:O	1:D:142:GLU:OE1	2.37	0.42
1:D:140:GLU:O	1:D:144:ILE:HG13	2.18	0.42
1:D:153:ALA:CA	1:D:158:ILE:HG22	2.47	0.42
1:D:236:LEU:HD12	1:D:238:MET:HG3	2.01	0.42
1:D:245:LYS:HB2	1:D:268:ALA:HA	2.00	0.42
1:E:19:ARG:O	1:E:23:ILE:HG13	2.19	0.42
1:E:165:PRO:HB2	1:E:198:VAL:HG23	2.00	0.42
1:F:75:ILE:HG13	1:F:131:ILE:HD13	2.01	0.42
1:F:271:ILE:CG2	1:F:283:PRO:HA	2.48	0.42
1:F:415:GLU:O	1:F:419:ARG:HG3	2.19	0.42
1:G:106:ALA:O	1:G:109:SER:HB3	2.18	0.42
1:G:181:ASP:CG	1:L:501:THR:HG23	2.40	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:52:ILE:O	1:H:82:HIS:CE1	2.72	0.42
1:H:113:TYR:O	1:H:117:VAL:HG23	2.19	0.42
1:H:177:SER:OG	1:H:205:GLN:HG3	2.19	0.42
1:I:371:LEU:HD23	1:I:481:ALA:HB1	2.01	0.42
1:J:397:LEU:HD12	1:J:397:LEU:N	2.34	0.42
1:K:305:PRO:O	1:K:306:LYS:HB2	2.19	0.42
1:B:38:GLU:O	1:B:39:GLU:HB2	2.18	0.42
1:B:163:ASP:O	1:B:165:PRO:HD3	2.20	0.42
1:C:26:ASP:O	1:C:30:GLU:HG2	2.19	0.42
1:D:90:LYS:HB2	1:D:122:PHE:HB3	2.01	0.42
1:D:497:GLY:N	1:D:501:THR:HA	2.34	0.42
1:E:229:GLU:O	1:E:230:ALA:C	2.57	0.42
1:E:249:VAL:HG23	1:E:323:ILE:HG13	2.00	0.42
1:F:138:ASP:OD2	1:F:174:ARG:NH1	2.53	0.42
1:G:142:GLU:HG3	1:G:178:TRP:CE2	2.54	0.42
1:G:226:PHE:C	1:G:228:ASN:H	2.22	0.42
1:H:219:VAL:O	1:H:223:ILE:HG13	2.19	0.42
1:H:429:PRO:O	1:H:431:VAL:N	2.51	0.42
1:I:248:VAL:O	1:I:323:ILE:HG12	2.19	0.42
1:I:436:PHE:CE1	1:J:409:LEU:HD22	2.54	0.42
1:K:281:TRP:HB2	1:K:310:TYR:HB2	2.00	0.42
1:L:338:ARG:HH11	1:L:338:ARG:CB	2.17	0.42
1:A:138:ASP:OD2	1:A:174:ARG:NH1	2.52	0.42
1:A:323:ILE:HG13	1:A:323:ILE:O	2.19	0.42
1:B:81:GLN:HG3	1:B:157:PHE:CE1	2.54	0.42
1:B:280:ILE:CG2	1:B:307:ALA:HB1	2.37	0.42
1:C:186:THR:HG22	1:C:187:ILE:HD13	2.01	0.42
1:C:338:ARG:O	1:C:338:ARG:HG2	2.18	0.42
1:D:79:ARG:CD	1:D:127:ALA:HB2	2.49	0.42
1:D:249:VAL:HB	1:D:323:ILE:HD11	2.02	0.42
1:D:255:VAL:HG13	1:D:256:GLY:N	2.34	0.42
1:D:344:ILE:HB	1:D:367:VAL:HG22	2.01	0.42
1:E:59:LEU:CD2	1:E:61:LEU:HD21	2.50	0.42
1:E:385:TRP:O	1:E:389:LEU:HG	2.19	0.42
1:F:42:ARG:O	1:F:45:VAL:CG1	2.66	0.42
1:G:24:VAL:CG1	1:G:28:LEU:HD22	2.49	0.42
1:G:65:ILE:O	1:G:65:ILE:HG13	2.19	0.42
1:G:335:ASN:N	1:G:335:ASN:ND2	2.66	0.42
1:I:33:ARG:NH1	1:I:36:GLU:CD	2.72	0.42
1:I:167:PRO:HG3	1:I:176:MET:HG2	2.01	0.42
1:I:408:HIS:HB3	1:K:436:PHE:CG	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:112:THR:HG22	1:J:124:GLY:HA3	2.01	0.42
1:J:255:VAL:HG13	1:J:256:GLY:H	1.84	0.42
1:K:227:ILE:HG23	1:K:227:ILE:O	2.20	0.42
1:K:227:ILE:O	1:K:227:ILE:HG12	2.18	0.42
1:A:315:LEU:HD23	1:A:331:LEU:HD23	2.01	0.42
1:B:60:SER:HA	1:B:78:TYR:HB3	2.02	0.42
1:B:345:ALA:HB1	1:B:373:LEU:CD2	2.43	0.42
1:C:93:ILE:HA	1:C:127:ALA:HB3	2.01	0.42
1:C:282:ASN:OD1	1:C:284:ASP:HB2	2.19	0.42
1:C:370:ASP:OD2	1:C:371:LEU:N	2.51	0.42
1:E:298:HIS:HB2	1:E:299:GLY:H	1.60	0.42
1:G:87:THR:HG22	1:G:161:GLY:O	2.19	0.42
1:H:149:THR:HG23	1:H:158:ILE:HD12	2.00	0.42
1:H:305:PRO:O	1:H:306:LYS:CB	2.66	0.42
1:I:382:TYR:CE2	1:I:386:LEU:HD21	2.54	0.42
1:J:84:HIS:C	1:J:86:ARG:N	2.72	0.42
1:L:6:ASP:HB2	1:L:329:LYS:HD2	2.00	0.42
1:L:118:VAL:HG11	1:L:375:ALA:CB	2.50	0.42
1:A:322:LEU:O	1:A:324:PRO:HD3	2.19	0.42
1:B:51:ILE:HD13	1:D:64:PRO:HG3	2.01	0.42
1:B:396:ARG:CG	1:B:396:ARG:NH1	2.81	0.42
1:C:28:LEU:HD21	1:C:490:PHE:CE1	2.54	0.42
1:C:361:LEU:HD21	1:C:475:LEU:H	1.84	0.42
1:D:227:ILE:HD12	1:D:321:ILE:CD1	2.43	0.42
1:D:259:SER:O	1:D:263:LEU:HB2	2.19	0.42
1:D:477:LEU:H	1:D:477:LEU:CD1	2.32	0.42
1:E:243:GLY:O	1:E:244:ASP:HB3	2.20	0.42
1:G:24:VAL:HG22	1:G:483:VAL:HG13	2.02	0.42
1:G:79:ARG:NH2	1:G:163:ASP:OD1	2.51	0.42
1:H:90:LYS:HB2	1:H:122:PHE:HB3	2.01	0.42
1:H:260:MET:HE1	1:H:288:PRO:HA	2.00	0.42
1:I:74:VAL:C	1:I:75:ILE:HD12	2.40	0.42
1:I:252:PHE:O	1:I:252:PHE:CD1	2.73	0.42
1:I:358:LYS:O	1:I:362:GLU:HG3	2.19	0.42
1:K:30:GLU:HG3	1:K:31:ASP:N	2.31	0.42
1:K:63:PHE:CE2	1:K:148:PHE:HD1	2.37	0.42
1:K:302:LEU:HD12	1:K:302:LEU:H	1.85	0.42
1:K:321:ILE:CD1	1:K:343:ILE:HB	2.49	0.42
1:L:293:ASP:HB3	1:L:297:GLN:NE2	2.33	0.42
1:L:497:GLY:N	1:L:501:THR:HA	2.35	0.42
1:A:313:SER:CB	1:A:315:LEU:HD13	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:331:LEU:O	1:A:353:THR:HG22	2.20	0.42
1:C:93:ILE:HD11	1:C:165:PRO:HB3	2.02	0.42
1:E:36:GLU:O	1:E:38:GLU:OE1	2.38	0.42
1:F:316:GLU:O	1:F:317:ALA:C	2.58	0.42
1:F:461:ALA:O	1:F:465:MET:HG3	2.19	0.42
1:G:223:ILE:HD12	1:G:263:LEU:HD21	2.00	0.42
1:H:414:GLN:O	1:H:418:GLU:HG3	2.20	0.42
1:H:435:GLU:H	1:H:435:GLU:CD	2.22	0.42
1:H:459:ARG:O	1:H:463:GLN:HG3	2.19	0.42
1:I:90:LYS:HB2	1:I:122:PHE:HB3	2.00	0.42
1:I:118:VAL:HA	1:I:460:SER:OG	2.20	0.42
1:J:217:ARG:HG3	1:J:262:TYR:CE2	2.53	0.42
1:J:478:ARG:HG3	1:J:478:ARG:NH1	2.35	0.42
1:K:33:ARG:NH2	1:K:494:ASN:ND2	2.68	0.42
1:K:63:PHE:CE1	1:K:75:ILE:HB	2.54	0.42
1:L:24:VAL:CG2	1:L:483:VAL:HG13	2.42	0.42
1:L:363:ARG:HG3	1:L:365:ILE:HG12	2.02	0.42
1:L:370:ASP:OD2	1:L:371:LEU:N	2.52	0.42
1:A:336:ALA:O	1:A:339:VAL:HG22	2.20	0.42
1:A:383:PHE:N	1:A:383:PHE:CD2	2.87	0.42
1:A:385:TRP:HA	1:A:388:ASN:HD22	1.84	0.42
1:C:419:ARG:HH21	1:E:431:VAL:CG1	2.33	0.42
1:D:33:ARG:HH22	1:D:494:ASN:HD21	1.64	0.42
1:F:45:VAL:O	1:F:47:GLY:N	2.53	0.42
1:F:93:ILE:HG12	1:F:127:ALA:HB3	2.01	0.42
1:F:201:LYS:O	1:F:207:GLY:HA3	2.20	0.42
1:G:360:PHE:CD1	1:G:365:ILE:HG21	2.54	0.42
1:G:408:HIS:HB3	1:L:436:PHE:CG	2.55	0.42
1:H:43:ASN:O	1:H:46:ARG:CD	2.67	0.42
1:H:280:ILE:CG2	1:H:307:ALA:HB1	2.40	0.42
1:H:498:VAL:N	1:H:501:THR:HB	2.35	0.42
1:I:327:SER:CB	1:I:330:GLN:NE2	2.83	0.42
1:K:301:ILE:HD12	1:K:302:LEU:N	2.35	0.42
1:K:346:GLU:OE2	1:K:478:ARG:NH2	2.52	0.42
1:L:475:LEU:HD12	1:L:475:LEU:N	2.35	0.42
1:A:150:MET:CE	1:A:186:THR:HG21	2.50	0.42
1:B:142:GLU:HA	1:B:178:TRP:CZ3	2.55	0.42
1:C:30:GLU:HB2	1:C:31:ASP:OD2	2.19	0.42
1:C:132:ASN:HB3	1:C:135:ASN:HD22	1.84	0.42
1:C:143:LYS:HD3	1:C:147:ARG:HH21	1.85	0.42
1:C:275:GLU:HB2	1:C:301:ILE:HD11	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:222:GLY:HA3	1:D:373:LEU:HD12	2.00	0.42
1:D:301:ILE:CD1	1:D:302:LEU:HD12	2.47	0.42
1:F:14:GLU:OE2	1:F:53:LYS:HE2	2.20	0.42
1:F:58:VAL:HG13	1:F:58:VAL:O	2.19	0.42
1:G:211:ARG:NH1	1:G:211:ARG:HB3	2.34	0.42
1:H:99:VAL:HG23	1:H:99:VAL:O	2.19	0.42
1:H:181:ASP:O	1:H:182:THR:C	2.57	0.42
1:H:386:LEU:O	1:H:389:LEU:N	2.52	0.42
1:I:265:ARG:C	1:I:266:PHE:HD2	2.23	0.42
1:I:423:LYS:HG3	1:I:424:HIS:H	1.85	0.42
1:J:63:PHE:CE2	1:J:148:PHE:HD1	2.38	0.42
1:J:82:HIS:HD2	1:J:83:SER:HB2	1.84	0.42
1:J:414:GLN:HA	1:J:429:PRO:HG2	2.02	0.42
1:K:271:ILE:CD1	1:K:283:PRO:HA	2.50	0.42
1:L:369:PRO:HG3	1:L:478:ARG:HA	2.00	0.42
1:A:322:LEU:HD13	1:A:322:LEU:O	2.20	0.42
1:D:35:ARG:H	1:D:35:ARG:HG3	1.47	0.42
1:D:248:VAL:HG13	1:D:272:ALA:O	2.20	0.42
1:F:10:PHE:CD1	1:F:106:ALA:HB2	2.55	0.42
1:F:346:GLU:OE1	1:F:370:ASP:N	2.53	0.42
1:G:20:GLY:O	1:G:24:VAL:HG23	2.20	0.42
1:G:117:VAL:HG21	1:G:371:LEU:HG	2.02	0.42
1:G:498:VAL:N	1:G:501:THR:HB	2.35	0.42
1:I:148:PHE:CZ	1:I:152:LEU:HD21	2.55	0.42
1:I:392:VAL:CG2	1:K:386:LEU:HD13	2.49	0.42
1:L:107:LEU:HB2	1:L:126:LYS:HG2	2.01	0.42
1:L:279:SER:HB2	1:L:310:TYR:O	2.20	0.42
1:B:82:HIS:CG	1:B:109:SER:HA	2.55	0.42
1:B:497:GLY:N	1:B:501:THR:HA	2.35	0.42
1:C:53:LYS:HB3	1:C:54:PRO:CD	2.49	0.42
1:C:150:MET:O	1:C:154:LYS:HG3	2.20	0.42
1:C:368:ILE:HG21	1:C:373:LEU:HD13	2.02	0.42
1:C:400:LYS:NZ	1:C:403:ARG:HH21	2.18	0.42
1:C:414:GLN:NE2	1:C:430:ILE:HD13	2.30	0.42
1:D:201:LYS:HG2	1:D:384:GLU:OE1	2.20	0.42
1:E:373:LEU:HD12	1:E:373:LEU:HA	1.88	0.42
1:F:359:ILE:O	1:F:363:ARG:HG2	2.20	0.42
1:G:335:ASN:ND2	1:G:335:ASN:H	2.18	0.42
1:H:176:MET:HE3	1:H:198:VAL:HG21	2.02	0.42
1:H:409:LEU:HB3	1:L:409:LEU:HD11	2.01	0.42
1:I:28:LEU:HA	1:I:32:LEU:HD13	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:248:VAL:HG11	1:I:314:ILE:HB	2.00	0.42
1:J:41:LYS:C	1:J:43:ASN:N	2.73	0.42
1:J:164:VAL:HG13	1:J:198:VAL:HA	2.02	0.42
1:K:28:LEU:HD12	1:K:32:LEU:CD1	2.50	0.42
1:K:56:ASN:ND2	1:K:83:SER:HA	2.34	0.42
1:K:318:ASP:HA	1:K:340:LYS:CB	2.50	0.42
1:A:12:MET:O	1:A:13:VAL:C	2.59	0.41
1:B:189:HIS:ND1	1:E:154:LYS:NZ	2.63	0.41
1:B:315:LEU:N	1:B:315:LEU:HD12	2.35	0.41
1:B:498:VAL:HG21	1:D:72:TRP:HE1	1.85	0.41
1:C:19:ARG:HG3	1:C:19:ARG:NH1	2.34	0.41
1:C:52:ILE:O	1:C:82:HIS:NE2	2.53	0.41
1:C:196:ALA:HB2	1:C:388:ASN:CB	2.50	0.41
1:C:238:MET:O	1:C:239:THR:CG2	2.68	0.41
1:F:176:MET:HE3	1:F:179:ILE:HD12	2.02	0.41
1:F:277:ASP:CB	1:F:302:LEU:HD11	2.44	0.41
1:H:56:ASN:HB2	1:H:84:HIS:CE1	2.54	0.41
1:I:90:LYS:HD2	1:I:164:VAL:O	2.20	0.41
1:I:249:VAL:HA	1:I:323:ILE:HG13	2.03	0.41
1:I:271:ILE:HG13	1:I:283:PRO:HA	2.01	0.41
1:I:436:PHE:CZ	1:I:440:ILE:HD11	2.55	0.41
1:J:222:GLY:HA3	1:J:373:LEU:HD12	2.01	0.41
1:K:300:SER:OG	1:K:301:ILE:N	2.53	0.41
1:K:477:LEU:H	1:K:477:LEU:CD1	2.32	0.41
1:L:14:GLU:HG3	1:L:53:LYS:HE3	2.02	0.41
1:A:78:TYR:CD1	1:A:78:TYR:N	2.87	0.41
1:A:121:PRO:O	1:A:122:PHE:HD2	2.03	0.41
1:A:258:HIS:HB3	1:A:262:TYR:CE2	2.55	0.41
1:B:142:GLU:HG3	1:B:178:TRP:CE2	2.55	0.41
1:C:57:HIS:CE1	1:F:151:GLU:OE1	2.73	0.41
1:C:153:ALA:CA	1:C:158:ILE:HG22	2.46	0.41
1:C:414:GLN:HA	1:C:429:PRO:HG2	2.01	0.41
1:D:27:LYS:HG3	1:D:471:TYR:HE1	1.83	0.41
1:D:111:MET:HB3	1:D:124:GLY:HA2	2.01	0.41
1:D:228:ASN:HD22	1:D:228:ASN:HA	1.63	0.41
1:E:90:LYS:HZ1	1:E:166:ALA:HB2	1.84	0.41
1:E:260:MET:CE	1:E:288:PRO:HA	2.50	0.41
1:E:280:ILE:HG13	1:E:301:ILE:HD13	2.01	0.41
1:F:445:GLU:O	1:F:449:VAL:HG23	2.20	0.41
1:F:459:ARG:HG2	1:F:463:GLN:HE21	1.84	0.41
1:G:92:GLY:HA2	1:G:166:ALA:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:188:GLY:O	1:G:189:HIS:C	2.57	0.41
1:G:255:VAL:HG13	1:G:256:GLY:N	2.35	0.41
1:G:369:PRO:HG3	1:G:478:ARG:HA	2.02	0.41
1:H:160:PRO:HG3	1:H:191:ASP:OD1	2.20	0.41
1:H:209:HIS:HB2	1:H:445:GLU:OE1	2.19	0.41
1:H:414:GLN:HE22	1:H:430:ILE:HD13	1.84	0.41
1:J:8:ASN:O	1:J:12:MET:HG3	2.20	0.41
1:J:335:ASN:N	1:J:335:ASN:ND2	2.67	0.41
1:J:436:PHE:CZ	1:K:409:LEU:HD22	2.55	0.41
1:L:203:ILE:HD12	1:L:209:HIS:CE1	2.55	0.41
1:L:302:LEU:HD12	1:L:302:LEU:N	2.35	0.41
1:A:100:SER:O	1:A:101:VAL:C	2.59	0.41
1:B:57:HIS:HD2	1:B:84:HIS:HE1	1.69	0.41
1:B:84:HIS:O	1:B:86:ARG:N	2.52	0.41
1:B:112:THR:HG22	1:B:124:GLY:N	2.35	0.41
1:B:281:TRP:NE1	1:B:283:PRO:HD3	2.35	0.41
1:C:27:LYS:HG3	1:C:471:TYR:CE1	2.55	0.41
1:C:61:LEU:HD12	1:C:61:LEU:N	2.34	0.41
1:C:385:TRP:CZ2	1:C:389:LEU:HD11	2.56	0.41
1:D:24:VAL:HG12	1:D:28:LEU:HD22	2.02	0.41
1:D:82:HIS:ND1	1:D:109:SER:HA	2.35	0.41
1:D:93:ILE:HA	1:D:127:ALA:HB3	2.01	0.41
1:D:335:ASN:HA	1:D:338:ARG:HD3	2.00	0.41
1:E:79:ARG:HG3	1:E:79:ARG:NH1	2.35	0.41
1:E:403:ARG:HG3	1:E:440:ILE:CG2	2.50	0.41
1:G:497:GLY:HA3	1:G:501:THR:HA	2.02	0.41
1:H:501:THR:N	1:L:146:ARG:NH1	2.67	0.41
1:I:90:LYS:NZ	1:I:166:ALA:HB2	2.35	0.41
1:I:155:LYS:O	1:L:155:LYS:HA	2.20	0.41
1:J:233:MET:HE3	1:J:343:ILE:HD11	2.00	0.41
1:K:175:GLU:O	1:K:176:MET:C	2.58	0.41
1:K:360:PHE:CD1	1:K:365:ILE:HG21	2.55	0.41
1:L:494:ASN:C	1:L:496:ALA:N	2.73	0.41
1:A:252:PHE:HD2	1:A:273:VAL:CG1	2.32	0.41
1:B:41:LYS:O	1:B:44:ARG:N	2.47	0.41
1:B:100:SER:O	1:B:101:VAL:C	2.59	0.41
1:B:104:VAL:O	1:B:105:LYS:C	2.58	0.41
1:B:271:ILE:O	1:B:271:ILE:HG12	2.20	0.41
1:B:360:PHE:HB3	1:B:365:ILE:HB	2.01	0.41
1:C:392:VAL:HG22	1:E:386:LEU:CD2	2.48	0.41
1:D:232:TYR:N	1:D:232:TYR:CD1	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:342:LYS:HA	1:D:365:ILE:HD12	2.01	0.41
1:D:386:LEU:CD1	1:E:392:VAL:HG21	2.50	0.41
1:F:86:ARG:HG2	1:F:121:PRO:HA	2.01	0.41
1:F:104:VAL:HG23	1:F:105:LYS:H	1.85	0.41
1:G:414:GLN:HB2	1:G:429:PRO:HD2	2.03	0.41
1:I:213:SER:HB2	1:I:217:ARG:NE	2.36	0.41
1:I:333:LYS:HB3	1:I:333:LYS:NZ	2.35	0.41
1:J:74:VAL:HG23	1:J:74:VAL:O	2.21	0.41
1:J:164:VAL:HA	1:J:197:CYS:O	2.20	0.41
1:J:494:ASN:O	1:J:496:ALA:N	2.45	0.41
1:K:318:ASP:HA	1:K:340:LYS:HB2	2.02	0.41
1:K:421:PHE:CE1	1:K:423:LYS:HE2	2.49	0.41
1:L:212:ILE:H	1:L:212:ILE:CD1	2.09	0.41
1:L:236:LEU:O	1:L:342:LYS:HE2	2.21	0.41
1:L:277:ASP:CB	1:L:302:LEU:HD11	2.50	0.41
1:L:323:ILE:O	1:L:323:ILE:HG13	2.20	0.41
1:L:475:LEU:N	1:L:475:LEU:CD1	2.84	0.41
1:B:352:THR:OG1	1:B:478:ARG:NH2	2.52	0.41
1:C:409:LEU:HD22	1:E:436:PHE:CZ	2.55	0.41
1:D:27:LYS:HE3	1:D:31:ASP:OD2	2.21	0.41
1:D:47:GLY:C	1:D:50:ARG:HG2	2.40	0.41
1:D:403:ARG:NH1	1:D:407:TYR:CE2	2.88	0.41
1:E:140:GLU:O	1:E:141:LEU:C	2.58	0.41
1:E:306:LYS:O	1:E:307:ALA:HB2	2.21	0.41
1:F:95:TYR:HH	1:F:145:THR:HG22	1.83	0.41
1:F:313:SER:HB2	1:F:315:LEU:CD1	2.41	0.41
1:F:385:TRP:CZ2	1:F:389:LEU:HD11	2.56	0.41
1:F:396:ARG:HG3	1:F:396:ARG:NH1	2.28	0.41
1:G:83:SER:OG	1:G:85:GLN:NE2	2.54	0.41
1:G:236:LEU:HD21	1:G:475:LEU:HD21	2.03	0.41
1:G:428:ILE:N	1:G:429:PRO:HD3	2.36	0.41
1:H:296:LEU:HD13	1:H:296:LEU:O	2.20	0.41
1:H:433:THR:HG23	1:L:412:SER:HA	2.02	0.41
1:H:494:ASN:C	1:H:496:ALA:N	2.74	0.41
1:I:6:ASP:O	1:I:6:ASP:OD2	2.39	0.41
1:I:263:LEU:HD12	1:I:263:LEU:HA	1.81	0.41
1:I:315:LEU:H	1:I:315:LEU:HD12	1.86	0.41
1:I:369:PRO:CG	1:I:478:ARG:HA	2.51	0.41
1:J:195:HIS:O	1:J:201:LYS:HE2	2.21	0.41
1:J:224:GLU:O	1:J:227:ILE:HG22	2.20	0.41
1:K:277:ASP:OD1	1:K:302:LEU:HD21	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:335:ASN:N	1:K:335:ASN:ND2	2.68	0.41
1:K:366:MET:HB2	1:K:475:LEU:HD23	2.02	0.41
1:L:413:VAL:O	1:L:417:LEU:HD13	2.20	0.41
1:L:427:THR:C	1:L:429:PRO:HD3	2.40	0.41
1:A:167:PRO:CG	1:A:176:MET:HG2	2.50	0.41
1:C:39:GLU:C	1:C:41:LYS:N	2.74	0.41
1:C:64:PRO:HG3	1:F:51:ILE:HD13	2.03	0.41
1:E:238:MET:O	1:E:239:THR:C	2.58	0.41
1:E:462:ARG:HB3	1:E:466:ARG:CZ	2.51	0.41
1:G:91:GLY:O	1:G:165:PRO:HA	2.21	0.41
1:H:9:PHE:CZ	1:H:103:GLU:HB2	2.55	0.41
1:H:370:ASP:O	1:H:374:ASN:ND2	2.53	0.41
1:J:35:ARG:H	1:J:35:ARG:HD2	1.85	0.41
1:K:223:ILE:O	1:K:227:ILE:HG22	2.21	0.41
1:K:346:GLU:OE1	1:K:369:PRO:HA	2.20	0.41
1:L:289:LYS:HG3	1:L:293:ASP:OD2	2.21	0.41
1:A:333:LYS:NZ	1:A:355:GLU:HG3	2.35	0.41
1:B:501:THR:C	1:F:146:ARG:HH22	2.22	0.41
1:C:175:GLU:HA	1:C:178:TRP:CE3	2.55	0.41
1:C:250:GLN:OE1	1:C:330:GLN:HG2	2.21	0.41
1:C:497:GLY:N	1:C:501:THR:HA	2.35	0.41
1:E:30:GLU:HA	1:E:34:THR:HB	2.03	0.41
1:E:131:ILE:CG2	1:E:132:ASN:N	2.82	0.41
1:E:244:ASP:C	1:E:245:LYS:HG3	2.40	0.41
1:H:112:THR:HG22	1:H:124:GLY:HA3	2.02	0.41
1:H:462:ARG:HG3	1:H:462:ARG:NH1	2.34	0.41
1:K:32:LEU:HD23	1:K:33:ARG:CB	2.48	0.41
1:K:57:HIS:CD2	1:K:84:HIS:HE1	2.38	0.41
1:K:281:TRP:HD1	1:K:282:ASN:N	2.19	0.41
1:B:370:ASP:O	1:B:374:ASN:ND2	2.54	0.41
1:C:391:HIS:C	1:C:392:VAL:CG2	2.89	0.41
1:C:494:ASN:O	1:C:496:ALA:N	2.46	0.41
1:D:45:VAL:C	1:D:47:GLY:H	2.24	0.41
1:D:45:VAL:C	1:D:47:GLY:N	2.74	0.41
1:D:236:LEU:CD2	1:D:475:LEU:HD21	2.51	0.41
1:D:237:GLY:O	1:D:238:MET:HE2	2.21	0.41
1:E:83:SER:OG	1:E:85:GLN:NE2	2.54	0.41
1:F:396:ARG:HH11	1:F:396:ARG:CG	2.27	0.41
1:G:222:GLY:HA3	1:G:373:LEU:HD12	2.03	0.41
1:G:427:THR:C	1:G:429:PRO:HD3	2.41	0.41
1:H:497:GLY:N	1:H:501:THR:HA	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:410:LEU:HB3	1:I:430:ILE:HA	2.02	0.41
1:I:497:GLY:HA3	1:I:501:THR:HA	2.03	0.41
1:J:114:LYS:O	1:J:118:VAL:HG22	2.20	0.41
1:J:228:ASN:HD22	1:J:228:ASN:HA	1.55	0.41
1:J:236:LEU:HB2	1:J:238:MET:CG	2.50	0.41
1:J:244:ASP:OD2	1:J:245:LYS:HE2	2.21	0.41
1:J:497:GLY:N	1:J:501:THR:HA	2.35	0.41
1:K:85:GLN:HE21	1:K:85:GLN:HB3	1.55	0.41
1:K:166:ALA:HA	1:K:176:MET:HE2	2.03	0.41
1:K:271:ILE:CG1	1:K:283:PRO:HA	2.50	0.41
1:K:372:TYR:CD1	1:K:372:TYR:C	2.94	0.41
1:K:423:LYS:HE2	1:K:423:LYS:HB2	1.96	0.41
1:L:428:ILE:N	1:L:429:PRO:HD3	2.36	0.41
1:A:28:LEU:HD21	1:A:490:PHE:CG	2.55	0.41
1:A:107:LEU:HD13	1:A:126:LYS:HE2	2.02	0.41
1:A:316:GLU:HG3	1:A:338:ARG:O	2.21	0.41
1:A:346:GLU:CD	1:A:478:ARG:NH2	2.75	0.41
1:A:392:VAL:CG2	1:F:386:LEU:HD22	2.51	0.41
1:A:423:LYS:HZ1	1:H:437:GLN:HG2	1.85	0.41
1:B:57:HIS:CD2	1:B:84:HIS:CE1	3.09	0.41
1:B:72:TRP:O	1:D:50:ARG:NH1	2.54	0.41
1:B:94:ARG:HG3	1:B:170:SER:OG	2.21	0.41
1:B:213:SER:O	1:B:217:ARG:HB2	2.20	0.41
1:B:499:THR:OG1	1:D:147:ARG:CZ	2.69	0.41
1:C:106:ALA:O	1:C:109:SER:HB3	2.21	0.41
1:C:238:MET:HB3	1:C:239:THR:H	1.62	0.41
1:C:280:ILE:CG2	1:C:307:ALA:HB1	2.38	0.41
1:C:479:THR:O	1:C:483:VAL:HG23	2.21	0.41
1:D:38:GLU:O	1:D:39:GLU:C	2.59	0.41
1:D:65:ILE:HD13	1:D:144:ILE:CG1	2.43	0.41
1:D:118:VAL:O	1:D:119:ASP:C	2.59	0.41
1:D:313:SER:C	1:D:315:LEU:H	2.23	0.41
1:D:374:ASN:O	1:D:374:ASN:CG	2.59	0.41
1:E:63:PHE:O	1:E:75:ILE:N	2.54	0.41
1:E:184:ALA:O	1:E:189:HIS:HA	2.21	0.41
1:E:236:LEU:O	1:E:342:LYS:HE2	2.21	0.41
1:E:255:VAL:HG13	1:E:256:GLY:N	2.36	0.41
1:E:277:ASP:CB	1:E:302:LEU:HD11	2.48	0.41
1:E:313:SER:HB2	1:E:315:LEU:HD13	2.03	0.41
1:E:403:ARG:HG3	1:E:440:ILE:HG23	2.01	0.41
1:F:48:ILE:HD12	1:F:490:PHE:HE1	1.83	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:118:VAL:O	1:F:120:VAL:HG23	2.20	0.41
1:F:217:ARG:NE	1:F:450:HIS:CE1	2.89	0.41
1:F:241:GLY:O	1:G:437:GLN:OE1	2.38	0.41
1:F:242:PHE:HD1	1:G:407:TYR:OH	2.04	0.41
1:G:67:ARG:NH1	1:G:140:GLU:OE2	2.54	0.41
1:G:244:ASP:C	1:G:245:LYS:HG3	2.41	0.41
1:G:245:LYS:HB2	1:G:268:ALA:HA	2.02	0.41
1:G:259:SER:O	1:G:263:LEU:HB2	2.21	0.41
1:H:211:ARG:HB3	1:H:211:ARG:NH1	2.36	0.41
1:I:32:LEU:O	1:I:33:ARG:HB3	2.21	0.41
1:I:414:GLN:CA	1:I:429:PRO:HG2	2.51	0.41
1:I:460:SER:O	1:I:463:GLN:HB2	2.21	0.41
1:I:468:ALA:HA	1:I:473:LEU:HD12	2.03	0.41
1:J:86:ARG:CG	1:J:121:PRO:HA	2.51	0.41
1:J:396:ARG:CG	1:J:396:ARG:NH1	2.81	0.41
1:J:409:LEU:HD13	1:J:409:LEU:HA	1.93	0.41
1:J:425:GLY:O	1:J:428:ILE:HD11	2.20	0.41
1:J:427:THR:HG22	1:J:429:PRO:HD3	2.03	0.41
1:J:428:ILE:O	1:J:431:VAL:HG12	2.21	0.41
1:J:431:VAL:HG13	1:J:431:VAL:O	2.20	0.41
1:K:45:VAL:C	1:K:47:GLY:H	2.24	0.41
1:K:363:ARG:O	1:K:365:ILE:HG12	2.20	0.41
1:K:403:ARG:HH11	1:K:440:ILE:HG21	1.85	0.41
1:K:414:GLN:OE1	1:K:430:ILE:HG12	2.20	0.41
1:L:90:LYS:NZ	1:L:166:ALA:HB2	2.35	0.41
1:L:129:VAL:O	1:L:131:ILE:N	2.54	0.41
1:L:372:TYR:CD1	1:L:372:TYR:C	2.94	0.41
1:L:397:LEU:HD12	1:L:397:LEU:N	2.36	0.41
1:L:403:ARG:HH11	1:L:440:ILE:HG22	1.84	0.41
1:B:222:GLY:HA3	1:B:373:LEU:CD1	2.51	0.41
1:B:424:HIS:CD2	1:B:424:HIS:N	2.89	0.41
1:C:143:LYS:HD3	1:C:147:ARG:NH2	2.36	0.41
1:C:173:GLU:HG3	1:C:202:PRO:HG3	2.03	0.41
1:C:201:LYS:HG2	1:C:384:GLU:OE1	2.21	0.41
1:C:331:LEU:CD1	1:C:344:ILE:HD13	2.51	0.41
1:D:233:MET:HE1	1:D:236:LEU:CD1	2.48	0.41
1:D:416:SER:HA	1:D:419:ARG:NH2	2.35	0.41
1:E:131:ILE:HG13	1:E:136:TYR:CZ	2.55	0.41
1:F:27:LYS:HA	1:F:30:GLU:HG2	2.02	0.41
1:I:274:GLY:CA	1:I:314:ILE:HD12	2.44	0.41
1:I:287:ASP:HA	1:I:288:PRO:HD3	1.94	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:326:ALA:O	1:I:327:SER:O	2.38	0.41
1:J:45:VAL:O	1:J:45:VAL:HG13	2.21	0.41
1:K:252:PHE:CE1	1:K:257:LEU:HD13	2.55	0.41
1:A:39:GLU:C	1:A:41:LYS:H	2.25	0.40
1:A:85:GLN:HE21	1:A:85:GLN:HB3	1.51	0.40
1:A:281:TRP:O	1:A:282:ASN:HB2	2.21	0.40
1:A:315:LEU:HD21	1:A:330:GLN:HG3	2.02	0.40
1:B:342:LYS:HA	1:B:365:ILE:CD1	2.51	0.40
1:B:386:LEU:HD21	1:F:392:VAL:HG23	2.02	0.40
1:B:394:TYR:CE2	1:F:397:LEU:HD22	2.56	0.40
1:D:379:THR:O	1:D:382:TYR:HB3	2.21	0.40
1:F:212:ILE:H	1:F:212:ILE:HG13	1.74	0.40
1:F:265:ARG:HD2	1:F:266:PHE:HE2	1.86	0.40
1:F:428:ILE:N	1:F:429:PRO:HD3	2.36	0.40
1:I:359:ILE:N	1:I:359:ILE:HD12	2.36	0.40
1:J:442:GLY:O	1:J:443:ALA:C	2.60	0.40
1:K:331:LEU:HD12	1:K:352:THR:CG2	2.49	0.40
1:K:398:THR:O	1:K:399:PHE:C	2.60	0.40
1:L:485:ALA:O	1:L:486:ILE:C	2.60	0.40
1:A:280:ILE:HD11	1:A:301:ILE:O	2.21	0.40
1:A:285:GLY:C	1:A:286:ILE:HG13	2.40	0.40
1:A:313:SER:HB3	1:A:315:LEU:HD13	2.02	0.40
1:B:112:THR:HG23	1:B:124:GLY:N	2.36	0.40
1:B:167:PRO:CG	1:B:176:MET:HG2	2.49	0.40
1:B:220:PHE:HD2	1:B:263:LEU:HD22	1.86	0.40
1:B:368:ILE:HA	1:B:369:PRO:HD3	1.79	0.40
1:C:115:CYS:O	1:C:116:ALA:C	2.58	0.40
1:C:146:ARG:NH1	1:E:501:THR:N	2.69	0.40
1:C:431:VAL:CG1	1:D:419:ARG:HH21	2.31	0.40
1:D:28:LEU:HA	1:D:28:LEU:HD12	1.88	0.40
1:D:117:VAL:HG21	1:D:371:LEU:HG	2.03	0.40
1:F:244:ASP:OD2	1:F:245:LYS:HE2	2.20	0.40
1:F:403:ARG:HG3	1:F:440:ILE:HG21	2.03	0.40
1:G:82:HIS:CD2	1:G:112:THR:CG2	2.93	0.40
1:G:427:THR:C	1:G:428:ILE:HD13	2.41	0.40
1:G:497:GLY:N	1:G:501:THR:HA	2.35	0.40
1:H:75:ILE:N	1:H:75:ILE:CD1	2.84	0.40
1:I:208:ILE:HG22	1:I:384:GLU:HB2	2.03	0.40
1:I:328:GLU:O	1:I:329:LYS:C	2.59	0.40
1:I:336:ALA:N	1:I:337:PRO:CD	2.84	0.40
1:J:208:ILE:CG2	1:J:384:GLU:HB2	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:363:ARG:O	1:J:365:ILE:HG12	2.21	0.40
1:K:302:LEU:H	1:K:302:LEU:CD1	2.34	0.40
1:L:248:VAL:HG13	1:L:272:ALA:HB3	2.03	0.40
1:A:39:GLU:C	1:A:41:LYS:N	2.74	0.40
1:A:181:ASP:OD1	1:F:501:THR:HG23	2.22	0.40
1:A:386:LEU:HD13	1:B:392:VAL:CG2	2.49	0.40
1:B:58:VAL:CG1	1:D:60:SER:HB2	2.50	0.40
1:B:73:GLU:HA	1:D:50:ARG:NH1	2.35	0.40
1:B:255:VAL:HG13	1:B:256:GLY:N	2.37	0.40
1:C:167:PRO:HG3	1:C:176:MET:HG2	2.02	0.40
1:C:431:VAL:HG11	1:D:419:ARG:NH2	2.34	0.40
1:D:263:LEU:HD13	1:D:263:LEU:HA	1.87	0.40
1:D:501:THR:O	1:E:178:TRP:HD1	2.05	0.40
1:E:69:ASP:OD1	1:E:71:SER:N	2.52	0.40
1:F:227:ILE:O	1:F:233:MET:HG3	2.20	0.40
1:G:89:CYS:HB3	1:G:125:ALA:HB2	2.02	0.40
1:G:200:GLY:HA2	1:G:211:ARG:HD2	2.02	0.40
1:G:289:LYS:HE2	1:G:293:ASP:OD1	2.21	0.40
1:G:318:ASP:HA	1:G:340:LYS:CB	2.50	0.40
1:I:255:VAL:HG13	1:I:256:GLY:N	2.36	0.40
1:I:313:SER:HB2	1:I:315:LEU:CD1	2.41	0.40
1:J:28:LEU:HD21	1:J:490:PHE:CG	2.57	0.40
1:J:57:HIS:CE1	1:J:84:HIS:HE2	2.40	0.40
1:J:130:LYS:O	1:J:131:ILE:HD12	2.21	0.40
1:K:313:SER:C	1:K:315:LEU:H	2.25	0.40
1:K:363:ARG:HB2	1:K:363:ARG:HH11	1.86	0.40
1:K:421:PHE:HE1	1:K:423:LYS:HB2	1.84	0.40
1:L:165:PRO:HD2	1:L:197:CYS:O	2.21	0.40
1:A:111:MET:HB3	1:A:124:GLY:HA2	2.03	0.40
1:B:58:VAL:HG23	1:B:80:ALA:HB2	2.03	0.40
1:B:99:VAL:HG23	1:B:130:LYS:HG2	2.04	0.40
1:B:248:VAL:HG13	1:B:272:ALA:HB3	2.02	0.40
1:B:344:ILE:HD11	1:B:360:PHE:CE1	2.56	0.40
1:C:28:LEU:HD21	1:C:490:PHE:CD1	2.56	0.40
1:C:29:VAL:C	1:C:30:GLU:O	2.60	0.40
1:D:342:LYS:HA	1:D:365:ILE:CD1	2.52	0.40
1:D:384:GLU:O	1:D:387:LYS:HB3	2.22	0.40
1:D:396:ARG:CG	1:D:396:ARG:NH1	2.82	0.40
1:E:158:ILE:CD1	1:E:197:CYS:HB2	2.51	0.40
1:F:238:MET:HB3	1:F:239:THR:H	1.69	0.40
1:G:240:PRO:HD2	1:G:244:ASP:O	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:355:GLU:O	1:G:359:ILE:HG13	2.21	0.40
1:H:93:ILE:HG12	1:H:127:ALA:HB3	2.04	0.40
1:H:101:VAL:O	1:H:104:VAL:HG22	2.21	0.40
1:H:142:GLU:HA	1:H:178:TRP:CE3	2.56	0.40
1:J:56:ASN:ND2	1:J:83:SER:HA	2.36	0.40
1:J:431:VAL:HA	1:J:432:PRO:HD3	1.92	0.40
1:K:248:VAL:HG22	1:K:272:ALA:HB3	2.04	0.40
1:L:84:HIS:O	1:L:85:GLN:C	2.60	0.40
1:A:158:ILE:O	1:A:158:ILE:CD1	2.66	0.40
1:A:168:ASP:O	1:A:170:SER:N	2.55	0.40
1:A:420:LYS:HD3	1:F:427:THR:HG23	2.04	0.40
1:B:49:LEU:H	1:B:49:LEU:HD12	1.87	0.40
1:C:428:ILE:N	1:C:429:PRO:HD3	2.37	0.40
1:D:32:LEU:O	1:D:33:ARG:CB	2.70	0.40
1:D:271:ILE:HG13	1:D:283:PRO:HA	2.04	0.40
1:E:248:VAL:HG22	1:E:272:ALA:HB3	2.03	0.40
1:F:240:PRO:HD2	1:F:244:ASP:O	2.21	0.40
1:F:250:GLN:HA	1:F:314:ILE:HD11	2.03	0.40
1:F:252:PHE:CE2	1:F:260:MET:HE2	2.57	0.40
1:F:369:PRO:HD3	1:F:477:LEU:HB2	2.03	0.40
1:G:28:LEU:HD21	1:G:490:PHE:CG	2.57	0.40
1:H:71:SER:CB	1:J:44:ARG:HD3	2.50	0.40
1:H:96:SER:O	1:H:99:VAL:HG22	2.21	0.40
1:I:57:HIS:CD2	1:L:155:LYS:HE3	2.57	0.40
1:I:213:SER:HB2	1:I:217:ARG:CD	2.50	0.40
1:I:331:LEU:HD12	1:I:352:THR:CG2	2.46	0.40
1:J:80:ALA:O	1:J:125:ALA:HA	2.21	0.40
1:J:229:GLU:OE1	1:J:229:GLU:HA	2.21	0.40
1:K:332:THR:H	1:K:335:ASN:ND2	2.06	0.40
1:K:414:GLN:HE22	1:K:430:ILE:HD13	1.86	0.40
1:K:478:ARG:O	1:K:482:TYR:HD2	2.04	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 X-ray entries followed by that with respect to entries of similar resolution.

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	494/496 (100%)	399 (81%)	70 (14%)	25 (5%)	2	13
1	B	494/496 (100%)	405 (82%)	71 (14%)	18 (4%)	3	20
1	C	494/496 (100%)	394 (80%)	80 (16%)	20 (4%)	3	18
1	D	494/496 (100%)	397 (80%)	75 (15%)	22 (4%)	2	15
1	E	494/496 (100%)	408 (83%)	61 (12%)	25 (5%)	2	13
1	F	494/496 (100%)	420 (85%)	56 (11%)	18 (4%)	3	20
1	G	494/496 (100%)	404 (82%)	69 (14%)	21 (4%)	2	16
1	H	494/496 (100%)	416 (84%)	63 (13%)	15 (3%)	4	24
1	I	494/496 (100%)	413 (84%)	57 (12%)	24 (5%)	2	14
1	J	494/496 (100%)	402 (81%)	73 (15%)	19 (4%)	3	19
1	K	494/496 (100%)	390 (79%)	82 (17%)	22 (4%)	2	15
1	L	494/496 (100%)	398 (81%)	73 (15%)	23 (5%)	2	14
All	All	5928/5952 (100%)	4846 (82%)	830 (14%)	252 (4%)	2	16

All (252) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	30	GLU
1	A	36	GLU
1	A	254	ASN
1	A	496	ALA
1	B	30	GLU
1	B	87	THR
1	B	496	ALA
1	C	30	GLU
1	C	31	ASP
1	C	35	ARG
1	C	214	ALA
1	C	327	SER
1	C	430	ILE
1	D	25	GLU
1	D	33	ARG
1	D	39	GLU
1	D	40	GLN
1	D	87	THR
1	D	496	ALA

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Mol	Chain	Res	Type
1	E	9	PHE
1	E	40	GLN
1	E	240	PRO
1	E	327	SER
1	E	430	ILE
1	F	33	ARG
1	F	87	THR
1	F	430	ILE
1	G	30	GLU
1	G	35	ARG
1	G	40	GLN
1	G	46	ARG
1	G	158	ILE
1	G	327	SER
1	G	430	ILE
1	H	329	LYS
1	I	37	SER
1	I	230	ALA
1	I	327	SER
1	I	496	ALA
1	J	30	GLU
1	J	37	SER
1	J	158	ILE
1	J	214	ALA
1	J	496	ALA
1	K	30	GLU
1	K	36	GLU
1	K	87	THR
1	K	158	ILE
1	K	169	MET
1	L	30	GLU
1	L	35	ARG
1	L	36	GLU
1	L	87	THR
1	L	327	SER
1	A	26	ASP
1	A	158	ILE
1	A	214	ALA
1	A	244	ASP
1	A	268	ALA
1	A	327	SER
1	A	421	PHE

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Mol	Chain	Res	Type
1	A	430	ILE
1	B	37	SER
1	B	364	ASN
1	C	37	SER
1	C	249	VAL
1	C	326	ALA
1	D	31	ASP
1	D	327	SER
1	D	421	PHE
1	D	430	ILE
1	E	31	ASP
1	E	62	SER
1	E	130	LYS
1	E	214	ALA
1	E	299	GLY
1	F	25	GLU
1	F	214	ALA
1	F	277	ASP
1	F	317	ALA
1	F	327	SER
1	F	421	PHE
1	F	422	GLY
1	G	31	ASP
1	G	33	ARG
1	G	45	VAL
1	G	130	LYS
1	G	496	ALA
1	H	87	THR
1	H	242	PHE
1	H	430	ILE
1	H	472	ASN
1	H	495	GLU
1	I	33	ARG
1	I	82	HIS
1	I	214	ALA
1	I	317	ALA
1	I	329	LYS
1	I	421	PHE
1	K	25	GLU
1	K	214	ALA
1	K	244	ASP
1	K	338	ARG

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Mol	Chain	Res	Type
1	K	364	ASN
1	K	496	ALA
1	K	498	VAL
1	L	33	ARG
1	L	130	LYS
1	L	158	ILE
1	L	244	ASP
1	L	495	GLU
1	A	25	GLU
1	A	169	MET
1	A	272	ALA
1	A	329	LYS
1	A	425	GLY
1	B	130	LYS
1	B	244	ASP
1	B	326	ALA
1	B	329	LYS
1	B	421	PHE
1	B	422	GLY
1	C	9	PHE
1	C	244	ASP
1	C	265	ARG
1	C	334	SER
1	C	495	GLU
1	C	496	ALA
1	D	244	ASP
1	D	314	ILE
1	D	334	SER
1	D	364	ASN
1	E	7	PRO
1	E	12	MET
1	E	26	ASP
1	E	329	LYS
1	E	371	LEU
1	E	495	GLU
1	E	496	ALA
1	F	62	SER
1	F	169	MET
1	G	39	GLU
1	G	154	LYS
1	G	214	ALA
1	H	130	LYS

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Mol	Chain	Res	Type
1	H	326	ALA
1	H	474	GLY
1	I	67	ARG
1	I	158	ILE
1	I	364	ASN
1	J	26	ASP
1	J	244	ASP
1	J	326	ALA
1	J	329	LYS
1	J	364	ASN
1	K	126	LYS
1	K	227	ILE
1	K	309	PRO
1	K	317	ALA
1	L	214	ALA
1	L	261	ARG
1	L	430	ILE
1	L	442	GLY
1	A	309	PRO
1	A	317	ALA
1	A	364	ASN
1	A	422	GLY
1	B	25	GLU
1	B	268	ALA
1	B	396	ARG
1	C	414	GLN
1	D	309	PRO
1	D	326	ALA
1	D	472	ASN
1	D	495	GLU
1	E	277	ASP
1	E	326	ALA
1	E	425	GLY
1	F	158	ILE
1	F	298	HIS
1	G	87	THR
1	G	326	ALA
1	I	25	GLU
1	I	98	ASP
1	I	244	ASP
1	I	424	HIS
1	I	425	GLY

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Mol	Chain	Res	Type
1	I	495	GLU
1	J	130	LYS
1	J	430	ILE
1	K	26	ASP
1	K	265	ARG
1	K	326	ALA
1	K	327	SER
1	L	25	GLU
1	L	275	GLU
1	A	87	THR
1	B	165	PRO
1	C	169	MET
1	C	425	GLY
1	D	12	MET
1	E	87	THR
1	F	40	GLN
1	F	244	ASP
1	F	425	GLY
1	G	244	ASP
1	G	495	GLU
1	H	244	ASP
1	H	425	GLY
1	I	309	PRO
1	I	422	GLY
1	J	35	ARG
1	J	62	SER
1	J	277	ASP
1	J	327	SER
1	L	133	PRO
1	L	326	ALA
1	L	425	GLY
1	A	12	MET
1	C	309	PRO
1	D	329	LYS
1	F	496	ALA
1	G	58	VAL
1	H	478	ARG
1	I	231	SER
1	I	282	ASN
1	J	212	ILE
1	D	158	ILE
1	I	288	PRO

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Mol	Chain	Res	Type
1	K	314	ILE
1	L	309	PRO
1	A	498	VAL
1	B	158	ILE
1	B	498	VAL
1	C	158	ILE
1	E	241	GLY
1	E	498	VAL
1	J	425	GLY
1	A	299	GLY
1	B	58	VAL
1	D	282	ASN
1	E	282	ASN
1	H	273	VAL
1	L	498	VAL
1	E	158	ILE
1	G	212	ILE
1	H	498	VAL
1	J	309	PRO
1	L	7	PRO
1	L	165	PRO
1	H	158	ILE
1	K	430	ILE

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 X-ray entries followed by that with respect to entries of similar resolution.

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	413/413 (100%)	372 (90%)	41 (10%)	8	28
1	B	413/413 (100%)	376 (91%)	37 (9%)	9	32
1	C	413/413 (100%)	369 (89%)	44 (11%)	6	25
1	D	413/413 (100%)	372 (90%)	41 (10%)	8	28
1	E	413/413 (100%)	366 (89%)	47 (11%)	5	22
1	F	413/413 (100%)	372 (90%)	41 (10%)	8	28

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	G	413/413 (100%)	374 (91%)	39 (9%)	8	30
1	H	413/413 (100%)	364 (88%)	49 (12%)	5	21
1	I	413/413 (100%)	375 (91%)	38 (9%)	9	31
1	J	413/413 (100%)	370 (90%)	43 (10%)	7	25
1	K	413/413 (100%)	373 (90%)	40 (10%)	8	29
1	L	413/413 (100%)	368 (89%)	45 (11%)	6	24
All	All	4956/4956 (100%)	4451 (90%)	505 (10%)	7	27

All (505) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	6	ASP
1	A	9	PHE
1	A	19	ARG
1	A	35	ARG
1	A	36	GLU
1	A	37	SER
1	A	38	GLU
1	A	43	ASN
1	A	45	VAL
1	A	60	SER
1	A	78	TYR
1	A	85	GLN
1	A	86	ARG
1	A	98	ASP
1	A	112	THR
1	A	131	ILE
1	A	137	THR
1	A	139	ASN
1	A	147	ARG
1	A	158	ILE
1	A	168	ASP
1	A	175	GLU
1	A	176	MET
1	A	224	GLU
1	A	225	ASN
1	A	311	GLU
1	A	313	SER
1	A	314	ILE
1	A	316	GLU

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Mol	Chain	Res	Type
1	A	322	LEU
1	A	330	GLN
1	A	335	ASN
1	A	372	TYR
1	A	374	ASN
1	A	392	VAL
1	A	396	ARG
1	A	424	HIS
1	A	437	GLN
1	A	494	ASN
1	A	495	GLU
1	A	501	THR
1	B	9	PHE
1	B	19	ARG
1	B	26	ASP
1	B	34	THR
1	B	35	ARG
1	B	45	VAL
1	B	61	LEU
1	B	72	TRP
1	B	74	VAL
1	B	78	TYR
1	B	85	GLN
1	B	86	ARG
1	B	131	ILE
1	B	137	THR
1	B	176	MET
1	B	212	ILE
1	B	259	SER
1	B	263	LEU
1	B	314	ILE
1	B	316	GLU
1	B	322	LEU
1	B	330	GLN
1	B	335	ASN
1	B	362	GLU
1	B	363	ARG
1	B	374	ASN
1	B	396	ARG
1	B	403	ARG
1	B	405	SER
1	B	409	LEU

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Mol	Chain	Res	Type
1	B	417	LEU
1	B	424	HIS
1	B	439	ARG
1	B	462	ARG
1	B	477	LEU
1	B	494	ASN
1	B	495	GLU
1	C	8	ASN
1	C	14	GLU
1	C	19	ARG
1	C	30	GLU
1	C	31	ASP
1	C	32	LEU
1	C	33	ARG
1	C	40	GLN
1	C	45	VAL
1	C	50	ARG
1	C	72	TRP
1	C	78	TYR
1	C	85	GLN
1	C	86	ARG
1	C	98	ASP
1	C	99	VAL
1	C	112	THR
1	C	118	VAL
1	C	137	THR
1	C	145	THR
1	C	158	ILE
1	C	176	MET
1	C	215	THR
1	C	227	ILE
1	C	236	LEU
1	C	255	VAL
1	C	263	LEU
1	C	275	GLU
1	C	296	LEU
1	C	314	ILE
1	C	315	LEU
1	C	322	LEU
1	C	333	LYS
1	C	334	SER
1	C	363	ARG

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Mol	Chain	Res	Type
1	C	374	ASN
1	C	392	VAL
1	C	393	SER
1	C	396	ARG
1	C	409	LEU
1	C	417	LEU
1	C	421	PHE
1	C	495	GLU
1	C	501	THR
1	D	9	PHE
1	D	14	GLU
1	D	19	ARG
1	D	27	LYS
1	D	33	ARG
1	D	35	ARG
1	D	60	SER
1	D	61	LEU
1	D	62	SER
1	D	72	TRP
1	D	78	TYR
1	D	85	GLN
1	D	86	ARG
1	D	97	THR
1	D	137	THR
1	D	158	ILE
1	D	176	MET
1	D	228	ASN
1	D	263	LEU
1	D	289	LYS
1	D	314	ILE
1	D	315	LEU
1	D	316	GLU
1	D	322	LEU
1	D	330	GLN
1	D	335	ASN
1	D	363	ARG
1	D	372	TYR
1	D	374	ASN
1	D	382	TYR
1	D	396	ARG
1	D	398	THR
1	D	405	SER

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Mol	Chain	Res	Type
1	D	409	LEU
1	D	411	MET
1	D	424	HIS
1	D	428	ILE
1	D	453	LEU
1	D	494	ASN
1	D	499	THR
1	D	501	THR
1	E	9	PHE
1	E	10	PHE
1	E	19	ARG
1	E	31	ASP
1	E	32	LEU
1	E	33	ARG
1	E	39	GLU
1	E	42	ARG
1	E	43	ASN
1	E	45	VAL
1	E	78	TYR
1	E	85	GLN
1	E	97	THR
1	E	98	ASP
1	E	131	ILE
1	E	138	ASP
1	E	152	LEU
1	E	158	ILE
1	E	176	MET
1	E	228	ASN
1	E	234	SER
1	E	246	THR
1	E	261	ARG
1	E	263	LEU
1	E	275	GLU
1	E	277	ASP
1	E	284	ASP
1	E	296	LEU
1	E	297	GLN
1	E	298	HIS
1	E	314	ILE
1	E	321	ILE
1	E	322	LEU
1	E	327	SER

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Mol	Chain	Res	Type
1	E	329	LYS
1	E	335	ASN
1	E	357	ASP
1	E	374	ASN
1	E	396	ARG
1	E	403	ARG
1	E	453	LEU
1	E	459	ARG
1	E	472	ASN
1	E	475	LEU
1	E	477	LEU
1	E	498	VAL
1	E	500	PHE
1	F	8	ASN
1	F	9	PHE
1	F	19	ARG
1	F	33	ARG
1	F	35	ARG
1	F	36	GLU
1	F	42	ARG
1	F	46	ARG
1	F	49	LEU
1	F	72	TRP
1	F	78	TYR
1	F	85	GLN
1	F	86	ARG
1	F	112	THR
1	F	131	ILE
1	F	152	LEU
1	F	158	ILE
1	F	168	ASP
1	F	175	GLU
1	F	176	MET
1	F	249	VAL
1	F	250	GLN
1	F	252	PHE
1	F	261	ARG
1	F	263	LEU
1	F	271	ILE
1	F	314	ILE
1	F	316	GLU
1	F	322	LEU

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Mol	Chain	Res	Type
1	F	329	LYS
1	F	335	ASN
1	F	362	GLU
1	F	363	ARG
1	F	374	ASN
1	F	396	ARG
1	F	402	GLU
1	F	428	ILE
1	F	438	ASP
1	F	453	LEU
1	F	495	GLU
1	F	501	THR
1	G	9	PHE
1	G	19	ARG
1	G	32	LEU
1	G	33	ARG
1	G	35	ARG
1	G	39	GLU
1	G	61	LEU
1	G	67	ARG
1	G	72	TRP
1	G	85	GLN
1	G	86	ARG
1	G	111	MET
1	G	131	ILE
1	G	158	ILE
1	G	163	ASP
1	G	176	MET
1	G	250	GLN
1	G	261	ARG
1	G	275	GLU
1	G	302	LEU
1	G	314	ILE
1	G	316	GLU
1	G	322	LEU
1	G	335	ASN
1	G	363	ARG
1	G	374	ASN
1	G	392	VAL
1	G	393	SER
1	G	396	ARG
1	G	402	GLU

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Mol	Chain	Res	Type
1	G	409	LEU
1	G	417	LEU
1	G	423	LYS
1	G	462	ARG
1	G	469	MET
1	G	472	ASN
1	G	475	LEU
1	G	495	GLU
1	G	501	THR
1	H	8	ASN
1	H	9	PHE
1	H	19	ARG
1	H	27	LYS
1	H	30	GLU
1	H	33	ARG
1	H	35	ARG
1	H	36	GLU
1	H	39	GLU
1	H	40	GLN
1	H	44	ARG
1	H	45	VAL
1	H	46	ARG
1	H	61	LEU
1	H	78	TYR
1	H	85	GLN
1	H	86	ARG
1	H	94	ARG
1	H	96	SER
1	H	97	THR
1	H	112	THR
1	H	118	VAL
1	H	134	LYS
1	H	147	ARG
1	H	176	MET
1	H	235	ILE
1	H	249	VAL
1	H	263	LEU
1	H	311	GLU
1	H	314	ILE
1	H	316	GLU
1	H	321	ILE
1	H	322	LEU

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Mol	Chain	Res	Type
1	H	335	ASN
1	H	363	ARG
1	H	372	TYR
1	H	374	ASN
1	H	392	VAL
1	H	396	ARG
1	H	398	THR
1	H	409	LEU
1	H	417	LEU
1	H	423	LYS
1	H	477	LEU
1	H	492	VAL
1	H	495	GLU
1	H	499	THR
1	H	500	PHE
1	H	501	THR
1	I	9	PHE
1	I	30	GLU
1	I	33	ARG
1	I	39	GLU
1	I	42	ARG
1	I	43	ASN
1	I	44	ARG
1	I	45	VAL
1	I	60	SER
1	I	61	LEU
1	I	68	ASP
1	I	72	TRP
1	I	74	VAL
1	I	85	GLN
1	I	86	ARG
1	I	87	THR
1	I	94	ARG
1	I	98	ASP
1	I	107	LEU
1	I	112	THR
1	I	131	ILE
1	I	152	LEU
1	I	158	ILE
1	I	176	MET
1	I	199	THR
1	I	295	LYS

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Mol	Chain	Res	Type
1	I	314	ILE
1	I	316	GLU
1	I	321	ILE
1	I	333	LYS
1	I	335	ASN
1	I	392	VAL
1	I	396	ARG
1	I	421	PHE
1	I	435	GLU
1	I	444	SER
1	I	453	LEU
1	I	501	THR
1	J	9	PHE
1	J	19	ARG
1	J	24	VAL
1	J	30	GLU
1	J	31	ASP
1	J	32	LEU
1	J	33	ARG
1	J	35	ARG
1	J	39	GLU
1	J	42	ARG
1	J	43	ASN
1	J	67	ARG
1	J	72	TRP
1	J	78	TYR
1	J	85	GLN
1	J	86	ARG
1	J	102	ASP
1	J	112	THR
1	J	118	VAL
1	J	137	THR
1	J	138	ASP
1	J	145	THR
1	J	158	ILE
1	J	176	MET
1	J	208	ILE
1	J	228	ASN
1	J	231	SER
1	J	252	PHE
1	J	287	ASP
1	J	302	LEU

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Mol	Chain	Res	Type
1	J	314	ILE
1	J	335	ASN
1	J	352	THR
1	J	362	GLU
1	J	363	ARG
1	J	372	TYR
1	J	374	ASN
1	J	396	ARG
1	J	403	ARG
1	J	409	LEU
1	J	424	HIS
1	J	453	LEU
1	J	473	LEU
1	K	9	PHE
1	K	33	ARG
1	K	35	ARG
1	K	37	SER
1	K	45	VAL
1	K	57	HIS
1	K	60	SER
1	K	72	TRP
1	K	78	TYR
1	K	85	GLN
1	K	86	ARG
1	K	97	THR
1	K	100	SER
1	K	131	ILE
1	K	158	ILE
1	K	174	ARG
1	K	191	ASP
1	K	212	ILE
1	K	215	THR
1	K	225	ASN
1	K	228	ASN
1	K	250	GLN
1	K	277	ASP
1	K	311	GLU
1	K	314	ILE
1	K	328	GLU
1	K	335	ASN
1	K	344	ILE
1	K	363	ARG

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Mol	Chain	Res	Type
1	K	374	ASN
1	K	392	VAL
1	K	393	SER
1	K	396	ARG
1	K	397	LEU
1	K	402	GLU
1	K	411	MET
1	K	433	THR
1	K	439	ARG
1	K	494	ASN
1	K	501	THR
1	L	6	ASP
1	L	9	PHE
1	L	19	ARG
1	L	31	ASP
1	L	33	ARG
1	L	35	ARG
1	L	40	GLN
1	L	45	VAL
1	L	49	LEU
1	L	57	HIS
1	L	71	SER
1	L	72	TRP
1	L	78	TYR
1	L	85	GLN
1	L	87	THR
1	L	96	SER
1	L	98	ASP
1	L	105	LYS
1	L	111	MET
1	L	112	THR
1	L	158	ILE
1	L	176	MET
1	L	252	PHE
1	L	263	LEU
1	L	275	GLU
1	L	284	ASP
1	L	314	ILE
1	L	322	LEU
1	L	333	LYS
1	L	335	ASN
1	L	363	ARG

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Mol	Chain	Res	Type
1	L	374	ASN
1	L	392	VAL
1	L	396	ARG
1	L	405	SER
1	L	409	LEU
1	L	424	HIS
1	L	428	ILE
1	L	438	ASP
1	L	444	SER
1	L	447	ASP
1	L	453	LEU
1	L	472	ASN
1	L	478	ARG
1	L	495	GLU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (169) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	84	HIS
1	A	85	GLN
1	A	139	ASN
1	A	189	HIS
1	A	225	ASN
1	A	330	GLN
1	A	335	ASN
1	A	374	ASN
1	A	388	ASN
1	A	406	ASN
1	A	437	GLN
1	A	494	ASN
1	B	56	ASN
1	B	57	HIS
1	B	82	HIS
1	B	85	GLN
1	B	228	ASN
1	B	335	ASN
1	B	374	ASN
1	B	388	ASN
1	B	406	ASN
1	B	424	HIS
1	B	437	GLN
1	B	463	GLN

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Mol	Chain	Res	Type
1	B	484	ASN
1	C	40	GLN
1	C	56	ASN
1	C	57	HIS
1	C	82	HIS
1	C	85	GLN
1	C	135	ASN
1	C	228	ASN
1	C	374	ASN
1	C	388	ASN
1	C	406	ASN
1	C	484	ASN
1	C	494	ASN
1	D	56	ASN
1	D	57	HIS
1	D	82	HIS
1	D	84	HIS
1	D	85	GLN
1	D	135	ASN
1	D	139	ASN
1	D	225	ASN
1	D	228	ASN
1	D	254	ASN
1	D	330	GLN
1	D	335	ASN
1	D	349	ASN
1	D	374	ASN
1	D	388	ASN
1	D	390	ASN
1	D	406	ASN
1	D	437	GLN
1	D	494	ASN
1	E	43	ASN
1	E	56	ASN
1	E	82	HIS
1	E	84	HIS
1	E	85	GLN
1	E	189	HIS
1	E	221	HIS
1	E	225	ASN
1	E	250	GLN
1	E	258	HIS

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Mol	Chain	Res	Type
1	E	335	ASN
1	E	374	ASN
1	E	388	ASN
1	E	391	HIS
1	E	406	ASN
1	E	472	ASN
1	F	8	ASN
1	F	85	GLN
1	F	139	ASN
1	F	225	ASN
1	F	228	ASN
1	F	250	GLN
1	F	258	HIS
1	F	297	GLN
1	F	335	ASN
1	F	374	ASN
1	F	388	ASN
1	F	406	ASN
1	F	408	HIS
1	G	57	HIS
1	G	82	HIS
1	G	85	GLN
1	G	135	ASN
1	G	139	ASN
1	G	189	HIS
1	G	250	GLN
1	G	335	ASN
1	G	374	ASN
1	G	388	ASN
1	G	406	ASN
1	G	437	GLN
1	G	450	HIS
1	G	494	ASN
1	H	8	ASN
1	H	56	ASN
1	H	57	HIS
1	H	84	HIS
1	H	85	GLN
1	H	135	ASN
1	H	189	HIS
1	H	228	ASN
1	H	298	HIS

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Mol	Chain	Res	Type
1	H	335	ASN
1	H	374	ASN
1	H	388	ASN
1	H	390	ASN
1	H	406	ASN
1	H	484	ASN
1	H	494	ASN
1	I	82	HIS
1	I	85	GLN
1	I	189	HIS
1	I	228	ASN
1	I	254	ASN
1	I	330	GLN
1	I	335	ASN
1	I	364	ASN
1	I	388	ASN
1	I	390	ASN
1	I	406	ASN
1	I	484	ASN
1	I	494	ASN
1	J	40	GLN
1	J	56	ASN
1	J	85	GLN
1	J	135	ASN
1	J	139	ASN
1	J	189	HIS
1	J	228	ASN
1	J	335	ASN
1	J	374	ASN
1	J	388	ASN
1	J	390	ASN
1	J	406	ASN
1	J	494	ASN
1	K	40	GLN
1	K	85	GLN
1	K	189	HIS
1	K	225	ASN
1	K	297	GLN
1	K	335	ASN
1	K	364	ASN
1	K	374	ASN
1	K	388	ASN

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Mol	Chain	Res	Type
1	K	406	ASN
1	K	494	ASN
1	L	57	HIS
1	L	84	HIS
1	L	135	ASN
1	L	189	HIS
1	L	250	GLN
1	L	297	GLN
1	L	298	HIS
1	L	335	ASN
1	L	364	ASN
1	L	374	ASN
1	L	388	ASN
1	L	390	ASN
1	L	406	ASN
1	L	424	HIS
1	L	472	ASN
1	L	484	ASN
1	L	494	ASN

5.3.3 RNA (i)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

There are no ligands in this entry.

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

6 Fit of model and data (i)

6.1 Protein, DNA and RNA chains (i)

EDS was not executed - this section is therefore empty.

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

EDS was not executed - this section is therefore empty.

6.3 Carbohydrates (i)

EDS was not executed - this section is therefore empty.

6.4 Ligands (i)

EDS was not executed - this section is therefore empty.

6.5 Other polymers (i)

EDS was not executed - this section is therefore empty.