Full wwPDB X-ray Structure Validation Report ⓘ

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 ⓘ 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 ⓘ) were used in the production of this report:

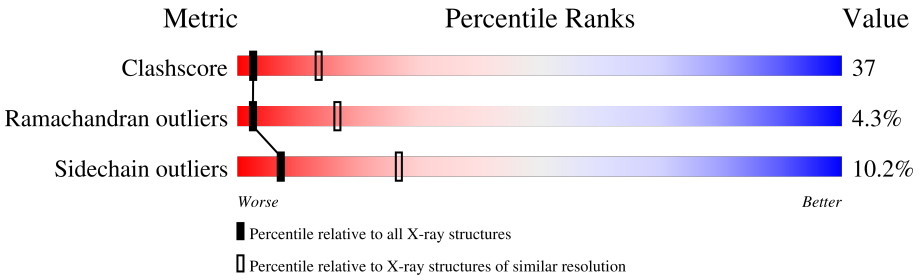
MolProbity	:	4.02b-467
Xtriage (Phenix)	:	NOT EXECUTED
EDS	:	NOT EXECUTED
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36.2

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
1	A	496	Total	C	N	O	S	0	0	0
			3874	2450	679	726	19			
1	B	496	Total	C	N	O	S	0	0	0
			3874	2450	679	726	19			
1	C	496	Total	C	N	O	S	0	0	0
			3874	2450	679	726	19			
1	D	496	Total	C	N	O	S	0	0	0
			3874	2450	679	726	19			
1	E	496	Total	C	N	O	S	0	0	0
			3874	2450	679	726	19			
1	F	496	Total	C	N	O	S	0	0	0
			3874	2450	679	726	19			
1	G	496	Total	C	N	O	S	0	0	0
			3874	2450	679	726	19			
1	H	496	Total	C	N	O	S	0	0	0
			3874	2450	679	726	19			
1	I	496	Total	C	N	O	S	0	0	0
			3874	2450	679	726	19			
1	J	496	Total	C	N	O	S	0	0	0
			3874	2450	679	726	19			
1	K	496	Total	C	N	O	S	0	0	0
			3874	2450	679	726	19			
1	L	496	Total	C	N	O	S	0	0	0
			3874	2450	679	726	19			

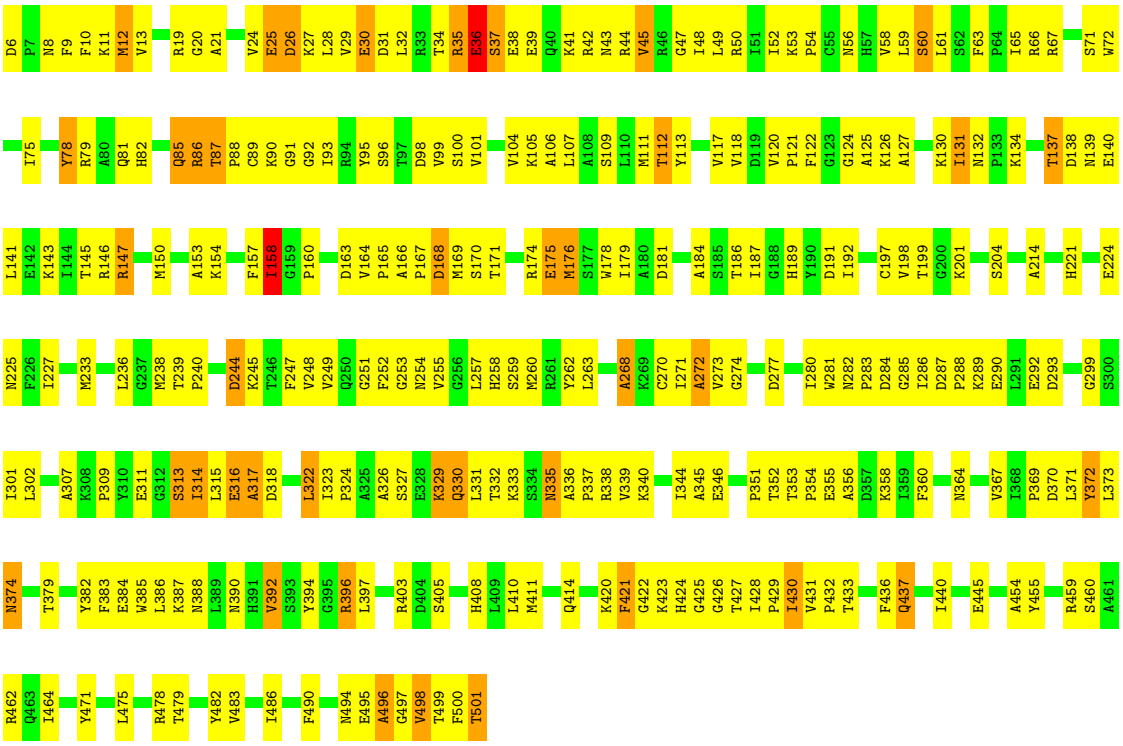
3 Residue-property plots (i)

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.

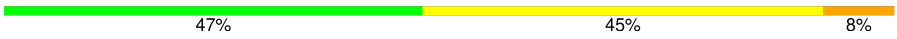
• Molecule 1: Glutamate dehydrogenase 1

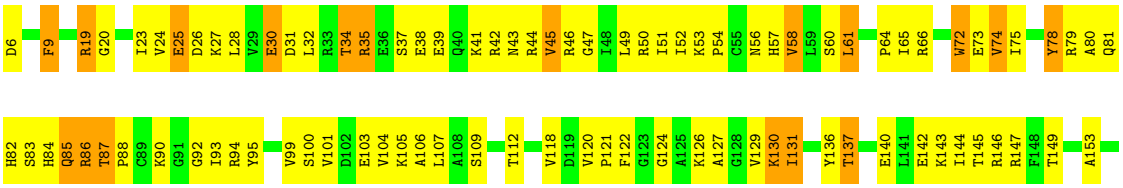
Chain A:

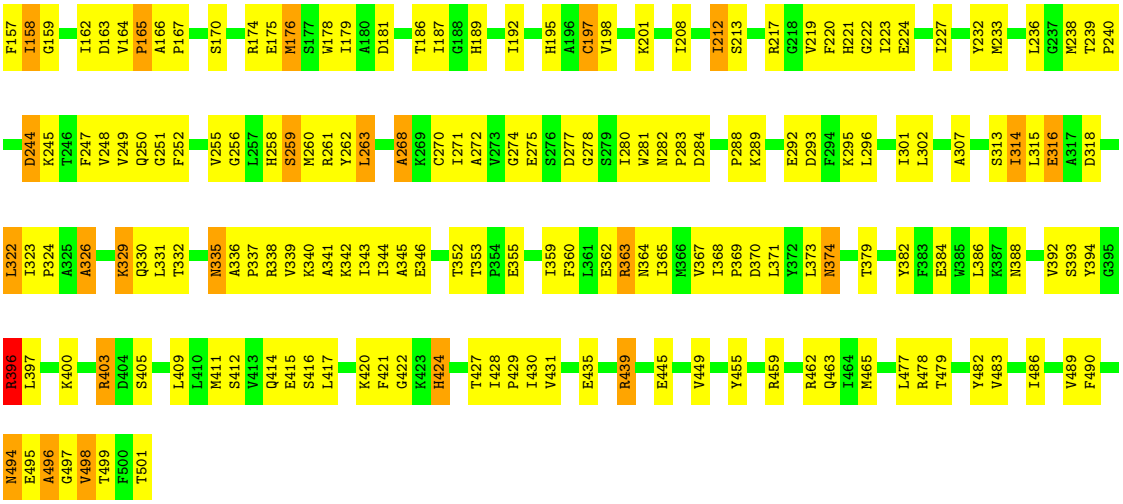


• Molecule 1: Glutamate dehydrogenase 1

Chain B:

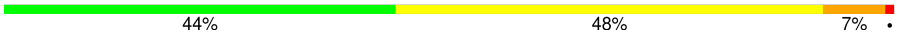


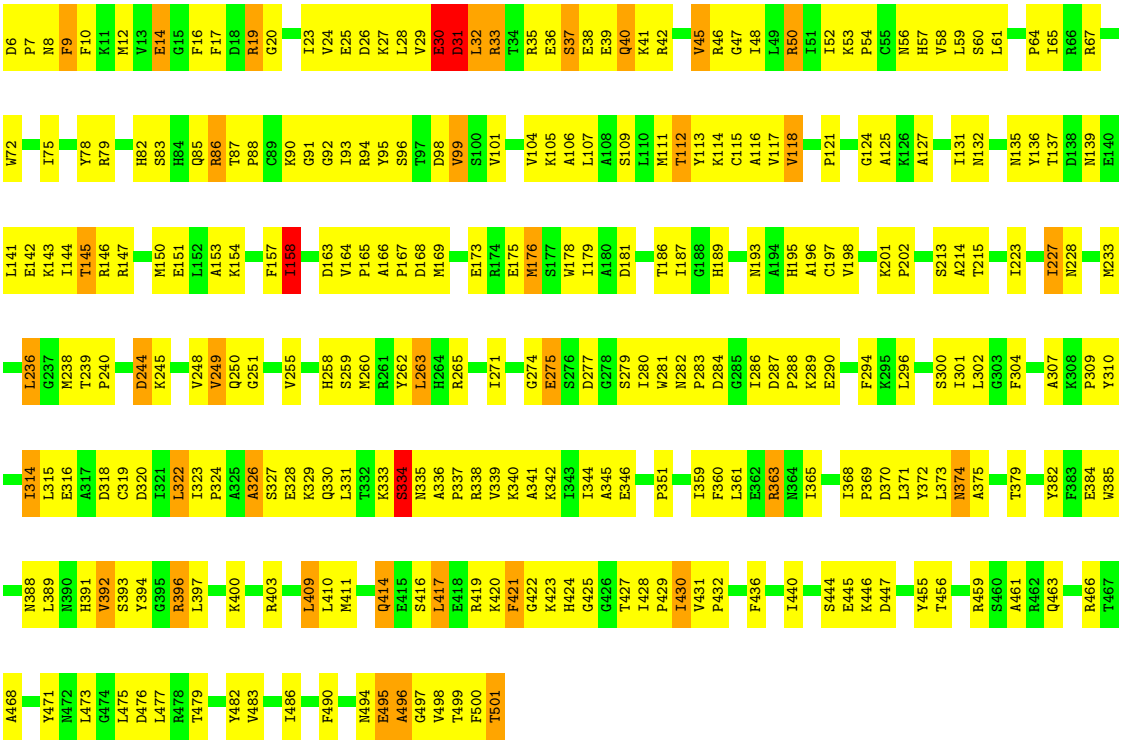




• Molecule 1: Glutamate dehydrogenase 1

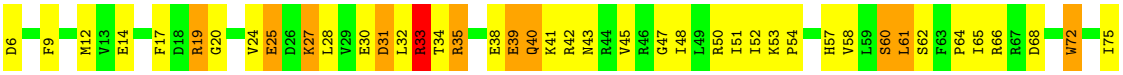
Chain C:

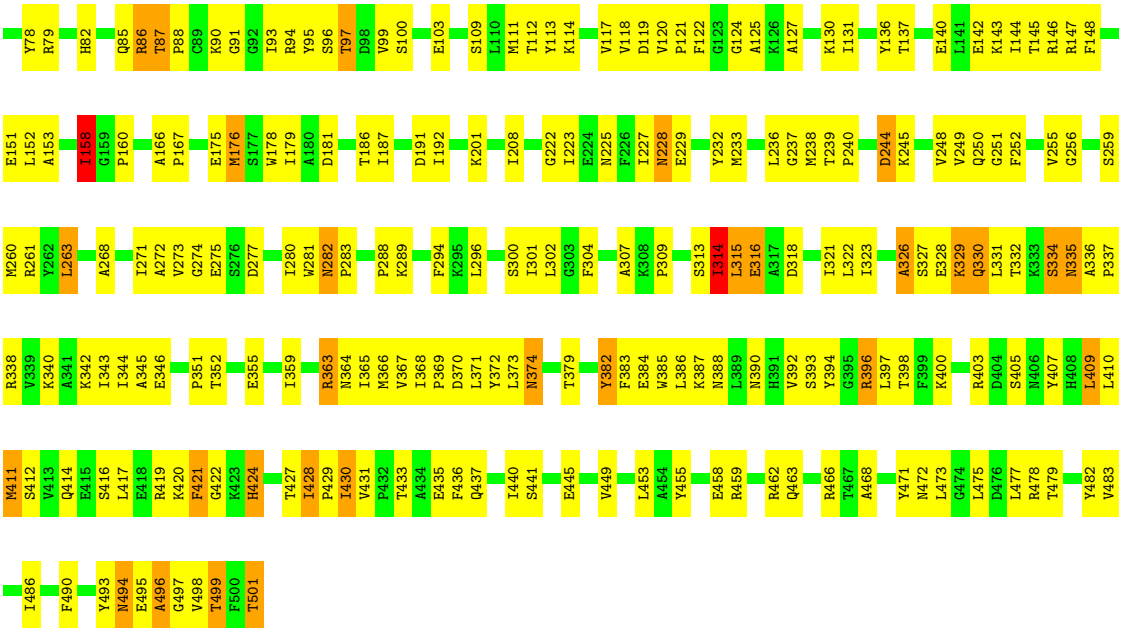




• Molecule 1: Glutamate dehydrogenase 1

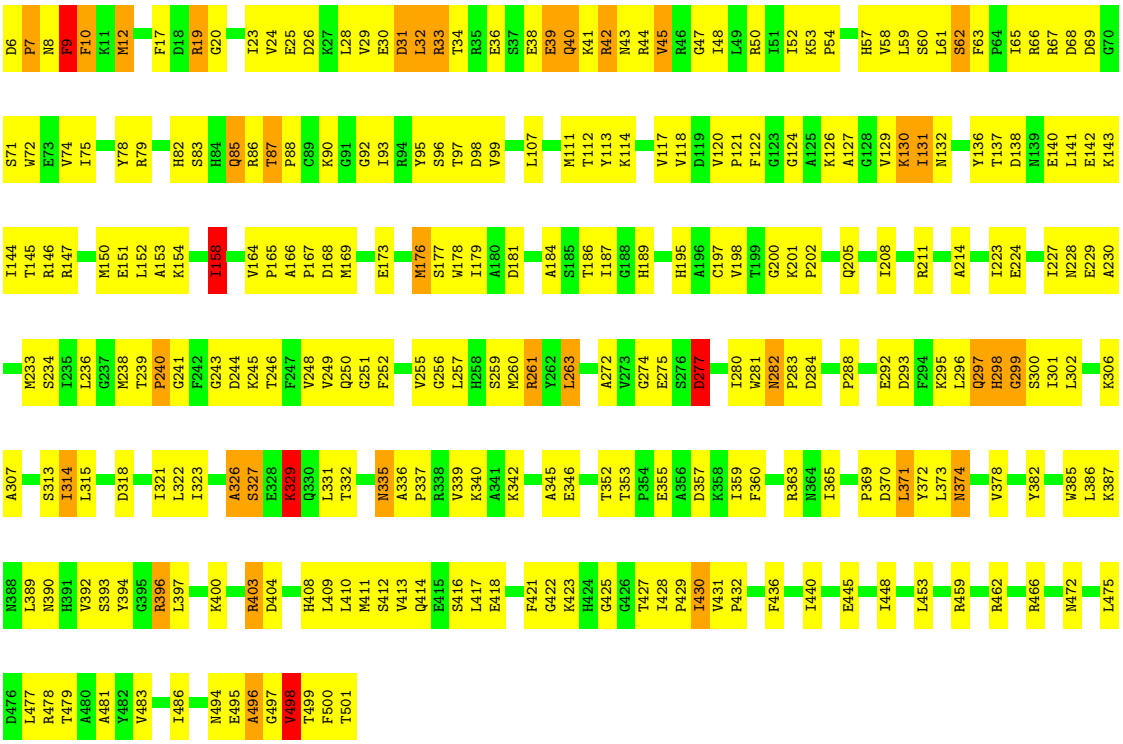
Chain D:





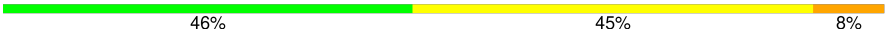
• Molecule 1: Glutamate dehydrogenase 1

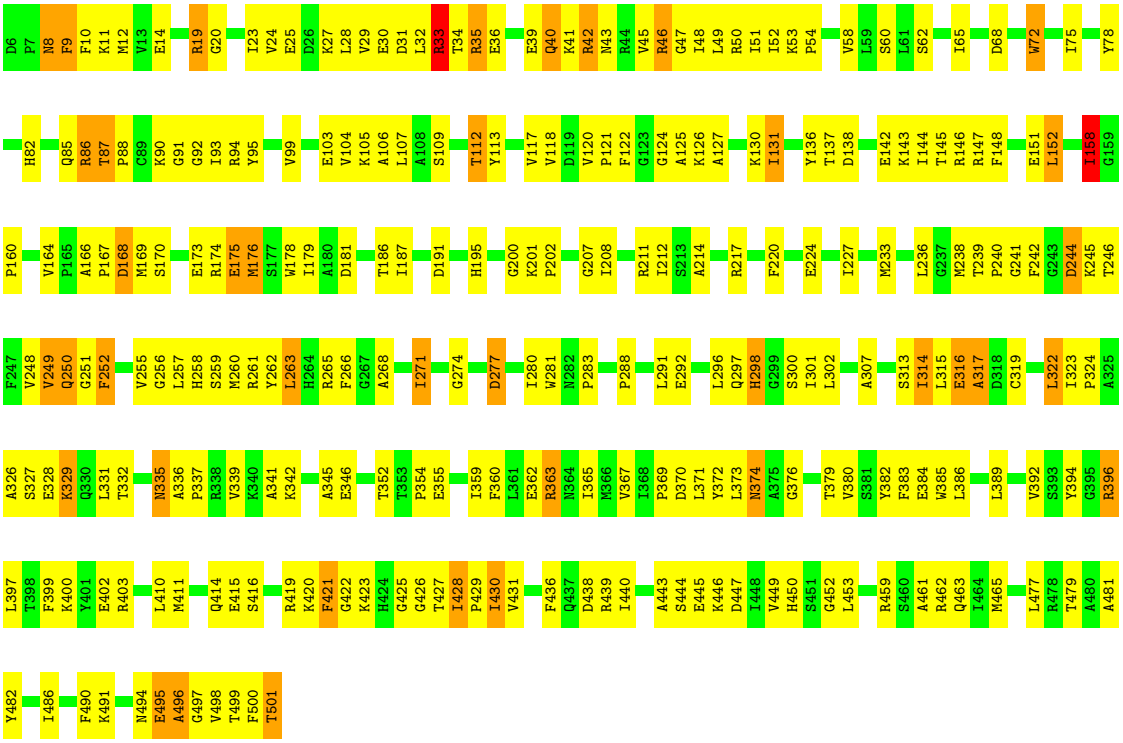
Chain E:



• Molecule 1: Glutamate dehydrogenase 1

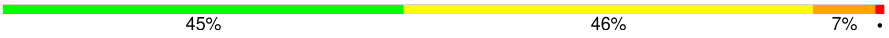
Chain F:

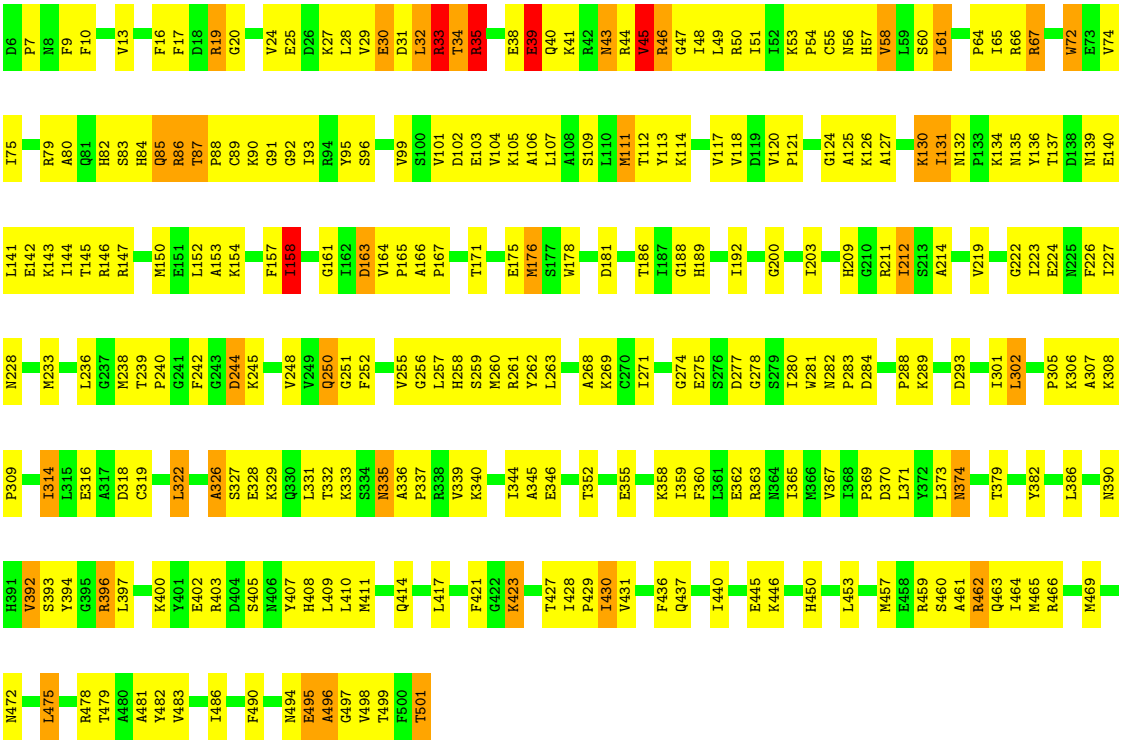




• Molecule 1: Glutamate dehydrogenase 1

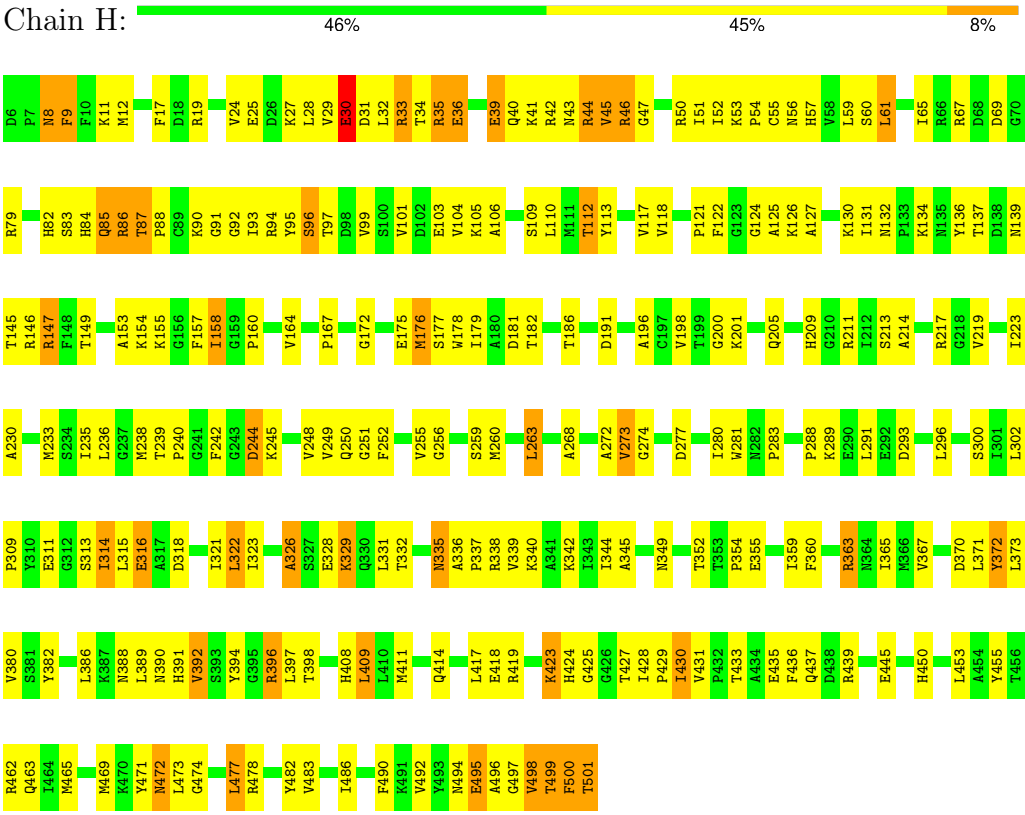
Chain G:





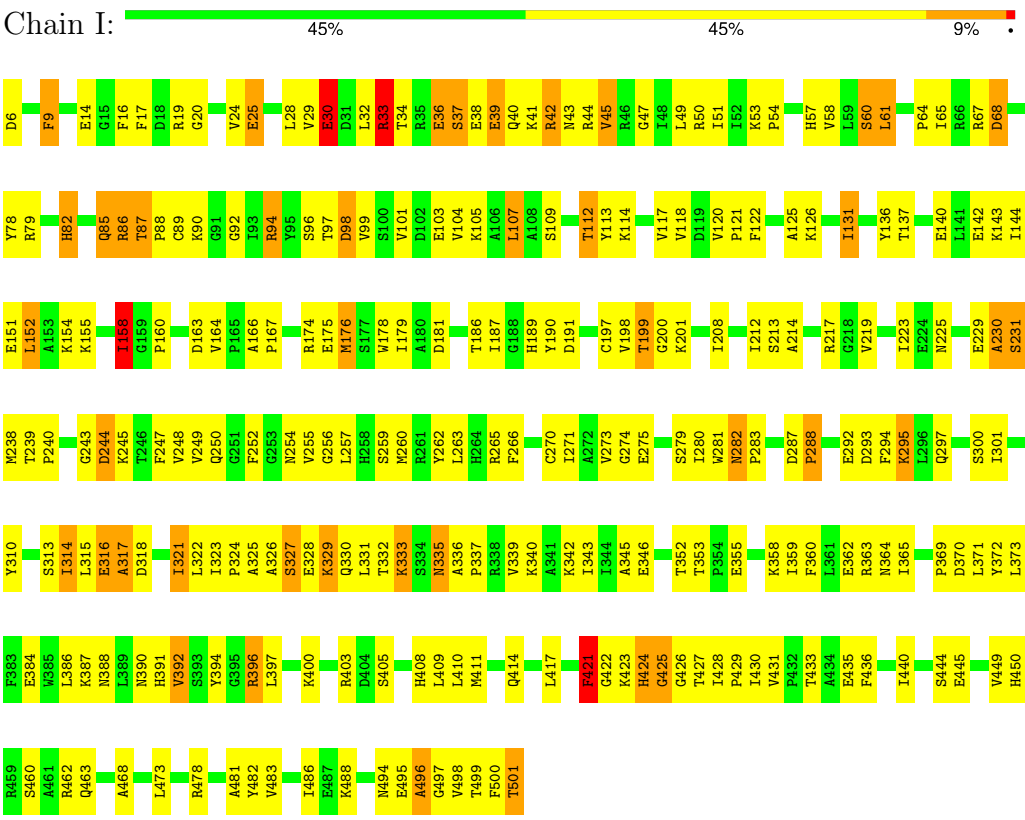
• Molecule 1: Glutamate dehydrogenase 1

Chain H:



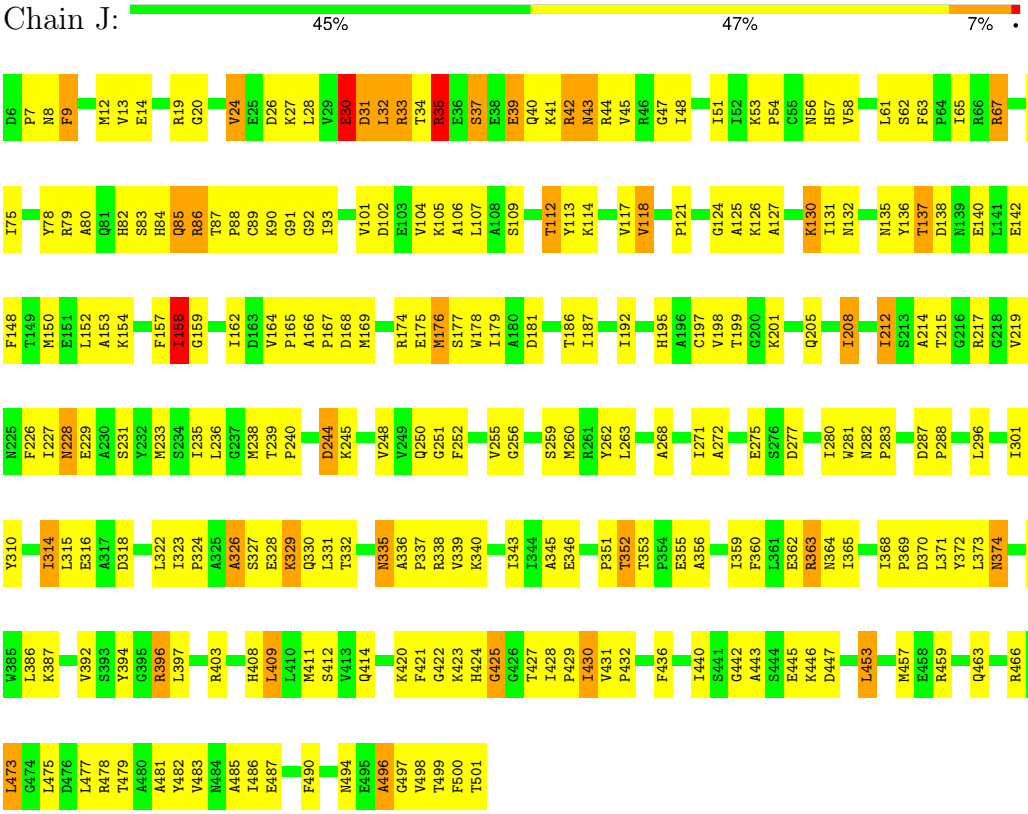
• Molecule 1: Glutamate dehydrogenase 1

Chain I:



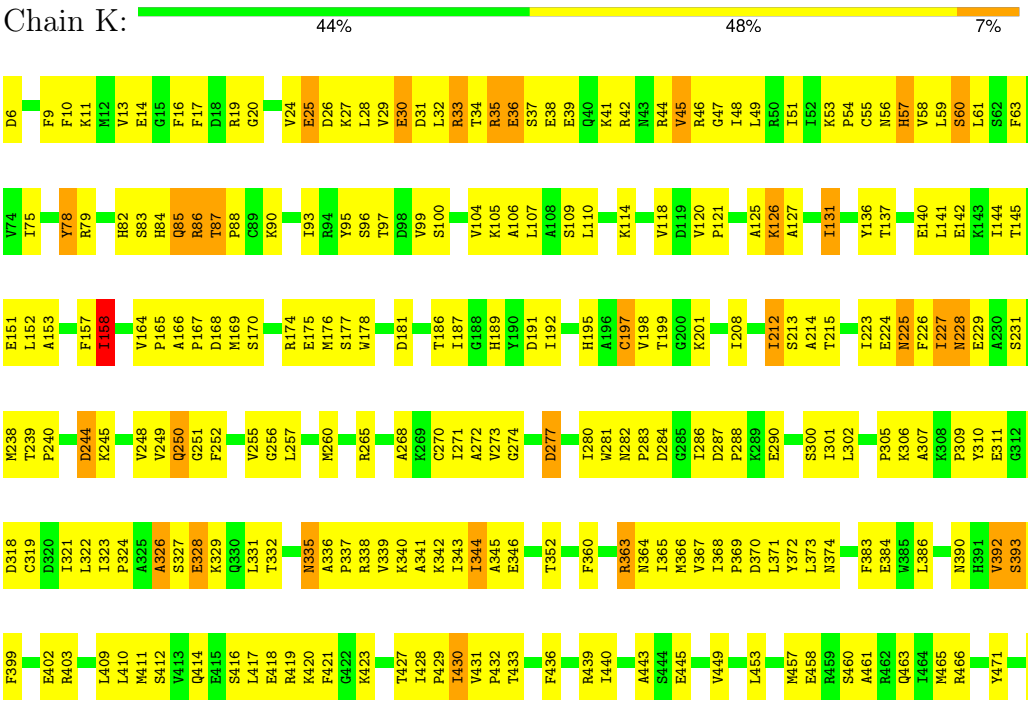
• Molecule 1: Glutamate dehydrogenase 1

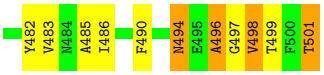
Chain J:



• Molecule 1: Glutamate dehydrogenase 1

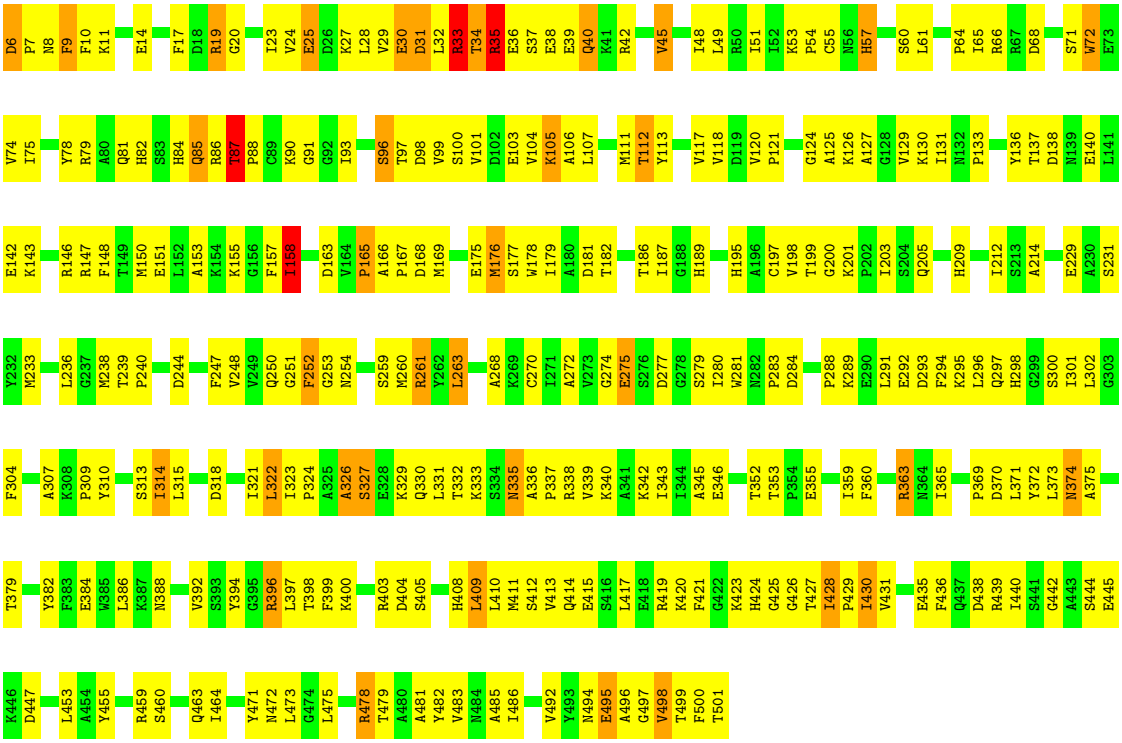
Chain K:





• 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

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates

There are no monosaccharides in this entry.

5.6 Ligand geometry

There are no ligands in this entry.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

EDS was not executed - this section is therefore empty.

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

EDS was not executed - this section is therefore empty.

6.3 Carbohydrates

EDS was not executed - this section is therefore empty.

6.4 Ligands

EDS was not executed - this section is therefore empty.

6.5 Other polymers

EDS was not executed - this section is therefore empty.