



Full wwPDB X-ray Structure Validation Report ⓘ

Apr 30, 2024 – 04:32 pm BST

PDB ID : 4ANI
Title : Structural basis for the intermolecular communication between DnaK and GrpE in the DnaK chaperone system from *Geobacillus kaustophilus* HTA426
Authors : Wu, C.-C.; Naveen, V.; Chien, C.-H.; Chang, Y.-W.; Hsiao, C.-D.
Deposited on : 2012-03-19
Resolution : 4.09 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) : 1.13
EDS : 2.36.2
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac : 5.8.0158
CCP4 : 7.0.044 (Gargrove)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.36.2

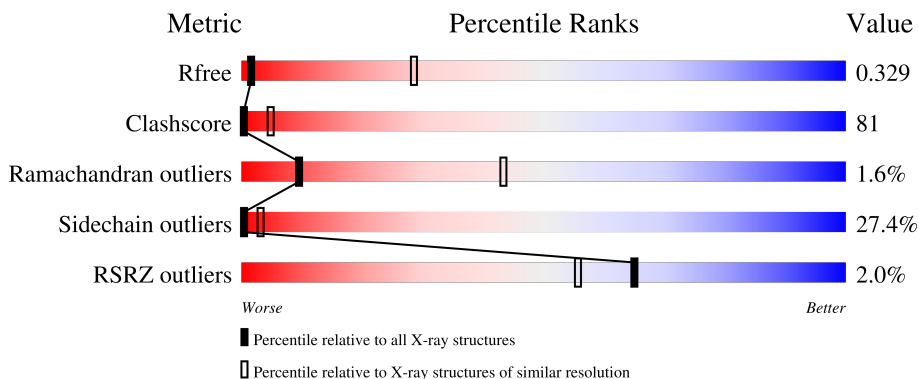
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 4.09 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.



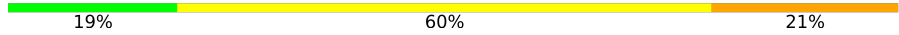


Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	1193 (4.50-3.70)
Clashscore	141614	1003 (4.44-3.76)
Ramachandran outliers	138981	1005 (4.48-3.72)
Sidechain outliers	138945	1199 (4.50-3.70)
RSRZ outliers	127900	1034 (4.50-3.70)

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 $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	213	
1	B	213	
1	E	213	
1	F	213	
2	C	509	

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Mol	Chain	Length	Quality of chain
2	D	509	 19% 60% 21%
2	G	509	 7% 34% 54% 11%
2	H	509	 2% 34% 47% 17%

2 Entry composition

There are 2 unique types of molecules in this entry. The entry contains 18889 atoms, of which 0 are hydrogens and 0 are deuteriums.

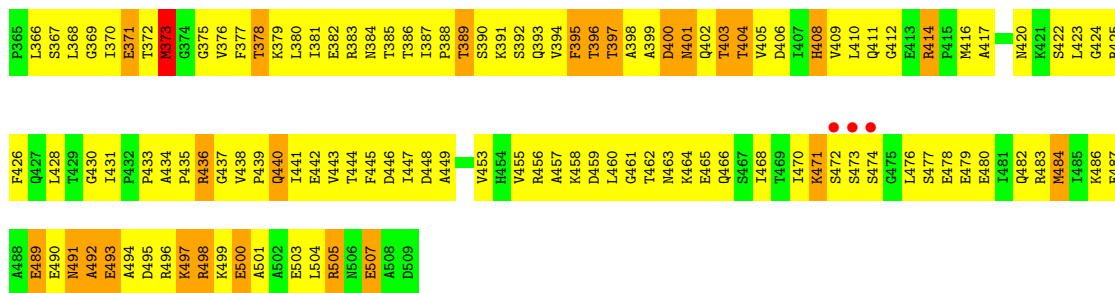
In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a protein called PROTEIN GRPE.

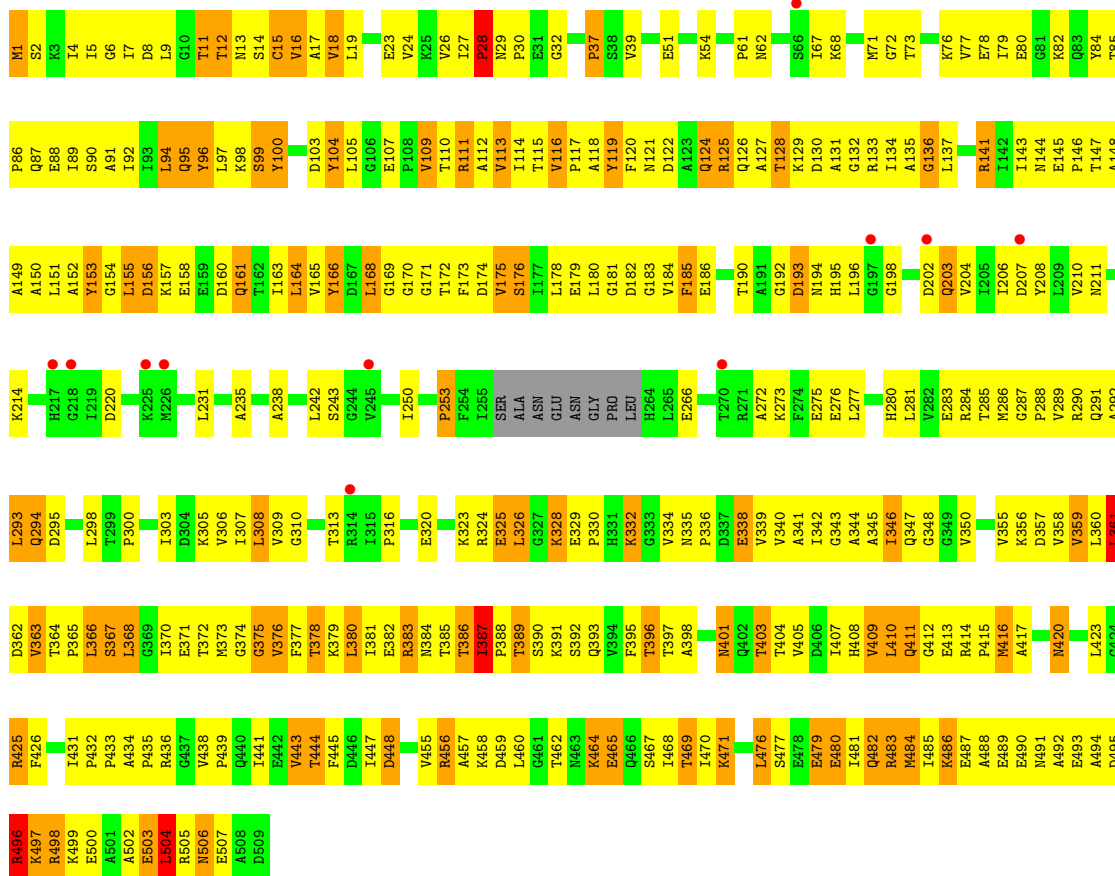
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	156	1242	778	215	243	6	0	0	0
1	B	154	1240	779	216	239	6	0	0	0
1	E	135	820	498	160	160	2	0	0	0
1	F	130	815	496	159	158	2	0	0	0

- Molecule 2 is a protein called CHAPERONE PROTEIN DNAK.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
2	C	509	3862	2410	670	773	9	0	0	0
2	D	509	3864	2413	671	771	9	0	0	0
2	G	502	3527	2178	627	716	6	0	0	0
2	H	501	3519	2176	624	712	7	0	0	0



● Molecule 2: CHAPERONE PROTEIN DNAK



4 Data and refinement statistics i

Property	Value	Source
Space group	I 41 2 2	Depositor
Cell constants a, b, c, α , β , γ	279.98Å 279.98Å 278.82Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	26.22 – 4.09 26.22 – 4.09	Depositor EDS
% Data completeness (in resolution range)	94.8 (26.22-4.09) 94.8 (26.22-4.09)	Depositor EDS
R_{merge}	0.09	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	4.25 (at 4.10Å)	Xtriage
Refinement program	PHENIX (PHENIX.REFINE: 1.7_650)	Depositor
R, R_{free}	0.274 , 0.347 0.253 , 0.329	Depositor DCC
R_{free} test set	2083 reflections (5.05%)	wwPDB-VP
Wilson B-factor (Å ²)	143.4	Xtriage
Anisotropy	0.406	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.26 , 133.5	EDS
L-test for twinning ²	$\langle L \rangle = 0.46$, $\langle L^2 \rangle = 0.29$	Xtriage
Estimated twinning fraction	0.027 for l,-k,h 0.016 for -h,-l,-k	Xtriage
F_o, F_c correlation	0.91	EDS
Total number of atoms	18889	wwPDB-VP
Average B, all atoms (Å ²)	207.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.31% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

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	0.75	0/1258	0.90	1/1691 (0.1%)
1	B	0.74	0/1257	0.93	2/1688 (0.1%)
1	E	0.64	0/821	0.84	5/1117 (0.4%)
1	F	0.64	0/818	0.84	5/1110 (0.5%)
2	C	0.70	1/3912 (0.0%)	0.86	3/5296 (0.1%)
2	D	0.72	0/3914	0.87	0/5299
2	G	0.67	0/3564	0.85	8/4834 (0.2%)
2	H	0.70	1/3556 (0.0%)	0.92	15/4832 (0.3%)
All	All	0.70	2/19100 (0.0%)	0.88	39/25867 (0.2%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	B	0	1
2	D	0	2
2	H	0	2
All	All	0	5

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	H	141	ARG	CZ-NH1	-6.64	1.24	1.33
2	C	64	ILE	CB-CG2	-5.03	1.37	1.52

All (39) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	H	141	ARG	NE-CZ-NH2	10.76	125.68	120.30
2	H	361	LEU	CB-CG-CD1	-7.35	98.50	111.00
2	H	387	ILE	CG1-CB-CG2	-7.13	95.71	111.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	G	117	PRO	N-CA-CB	7.10	111.82	103.30
2	G	108	PRO	N-CA-CB	6.86	111.53	103.30
2	H	30	PRO	N-CA-CB	6.64	111.27	103.30
2	H	300	PRO	N-CA-CB	6.55	111.17	103.30
1	E	167	PRO	N-CA-CB	6.55	111.16	103.30
2	G	61	PRO	N-CA-CB	6.42	111.01	103.30
1	F	206	PRO	N-CA-CB	6.40	110.98	103.30
1	E	206	PRO	N-CA-CB	6.32	110.88	103.30
1	E	186	PRO	N-CA-CB	6.31	110.87	103.30
2	H	61	PRO	N-CA-CB	6.28	110.84	103.30
1	F	186	PRO	N-CA-CB	6.14	110.67	103.30
1	E	117	PRO	N-CA-CB	6.10	110.62	103.30
2	H	28	PRO	N-CA-CB	6.09	110.61	103.30
1	E	170	PRO	N-CA-CB	5.97	110.47	103.30
1	F	117	PRO	N-CA-CB	5.88	110.35	103.30
1	F	167	PRO	N-CA-CB	5.87	110.34	103.30
2	G	253	PRO	N-CA-CB	5.87	110.34	103.30
2	G	30	PRO	N-CA-CB	5.78	110.24	103.30
2	H	164	LEU	CA-CB-CG	5.68	128.37	115.30
2	C	353	GLY	N-CA-C	5.62	127.14	113.10
1	B	119	LEU	CA-CB-CG	-5.61	102.40	115.30
2	G	28	PRO	N-CA-CB	5.60	110.02	103.30
1	B	61	LEU	CA-CB-CG	5.58	128.14	115.30
1	F	170	PRO	N-CA-CB	5.52	109.93	103.30
2	H	375	GLY	N-CA-C	-5.39	99.62	113.10
2	H	253	PRO	N-CA-CB	5.36	109.73	103.30
2	H	37	PRO	N-CA-CB	5.32	109.68	103.30
2	H	136	GLY	N-CA-C	-5.31	99.82	113.10
2	G	37	PRO	N-CA-CB	5.26	109.61	103.30
2	H	141	ARG	NH1-CZ-NH2	-5.19	113.69	119.40
2	C	263	LEU	CA-CB-CG	5.16	127.16	115.30
2	G	228	LEU	CA-CB-CG	5.15	127.15	115.30
2	C	175	VAL	CB-CA-C	-5.14	101.63	111.40
1	A	116	LEU	CA-CB-CG	-5.13	103.50	115.30
2	H	308	LEU	CA-CB-CG	5.03	126.88	115.30
2	H	504	LEU	CA-CB-CG	5.03	126.86	115.30

There are no chirality outliers.

All (5) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	B	167	PRO	Peptide

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Mol	Chain	Res	Type	Group
2	D	394	VAL	Peptide
2	D	436	ARG	Peptide
2	H	477	SER	Peptide
2	H	496	ARG	Peptide

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	1242	0	1239	264	0
1	B	1240	0	1246	243	0
1	E	820	0	567	85	0
1	F	815	0	588	79	0
2	C	3862	0	3901	638	0
2	D	3864	0	3909	766	0
2	G	3527	0	3217	518	0
2	H	3519	0	3231	544	0
All	All	18889	0	17898	2971	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 81.

All (2971) 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)
2:C:67:ILE:CD1	2:C:89:ILE:HG21	1.51	1.40
2:G:152:ALA:HA	2:G:346:ILE:CD1	1.51	1.39
2:H:141:ARG:NH1	2:H:143:ILE:HD11	1.40	1.36
2:H:67:ILE:CD1	2:H:89:ILE:HG21	1.57	1.31
2:D:426:PHE:HB3	2:D:468:ILE:CD1	1.61	1.30
2:C:129:LYS:HG3	2:C:142:ILE:CD1	1.60	1.30
2:H:387:ILE:HG22	2:H:388:PRO:CD	1.60	1.30
2:D:67:ILE:CD1	2:D:89:ILE:HG21	1.62	1.30
2:D:252:LEU:CD1	2:D:255:ILE:HG12	1.63	1.29
2:D:252:LEU:O	2:D:255:ILE:HG13	1.28	1.27
2:G:442:GLU:O	2:G:457:ALA:HA	1.35	1.26

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:141:ARG:NH1	2:H:143:ILE:CD1	1.99	1.24
2:C:255:ILE:CD1	2:C:265:LEU:HB2	1.68	1.23
2:H:339:VAL:HG23	2:H:342:ILE:CD1	1.70	1.22
2:H:339:VAL:CG2	2:H:342:ILE:HD12	1.71	1.20
1:B:84:ARG:HD3	2:C:388:PRO:O	1.42	1.20
2:H:141:ARG:HH11	2:H:143:ILE:CD1	1.54	1.19
2:D:426:PHE:CB	2:D:468:ILE:HD11	1.70	1.19
2:C:4:ILE:HD12	2:C:352:ALA:HB2	1.20	1.19
2:G:319:GLN:NE2	2:G:330:PRO:HG3	1.58	1.18
2:C:67:ILE:HD13	2:C:89:ILE:HG21	1.25	1.17
1:B:91:ASN:ND2	2:C:386:THR:HB	1.57	1.17
2:C:64:ILE:CG2	2:C:67:ILE:HD11	1.73	1.17
2:G:243:SER:OG	2:G:315:ILE:HG12	1.46	1.16
2:D:98:LYS:HD2	2:D:137:LEU:HD21	1.21	1.15
2:C:13:ASN:HB3	2:C:37:PRO:HA	1.17	1.15
2:H:483:ARG:HG2	2:H:483:ARG:HH11	1.12	1.15
2:G:443:VAL:HA	2:G:456:ARG:O	1.42	1.14
2:C:255:ILE:HD11	2:C:265:LEU:CB	1.78	1.14
1:B:122:PHE:HA	1:B:146:TYR:CE2	1.83	1.14
1:A:106:TYR:CD2	1:A:202:ARG:HD2	1.83	1.13
2:D:252:LEU:HD12	2:D:255:ILE:CG1	1.78	1.12
2:D:361:LEU:CD2	2:D:387:ILE:HD11	1.79	1.12
2:D:387:ILE:CG2	2:D:388:PRO:HD2	1.80	1.12
2:D:387:ILE:HG23	2:D:388:PRO:HD2	1.29	1.12
2:G:166:TYR:O	2:G:309:VAL:HB	1.49	1.12
2:G:371:GLU:HG3	2:G:408:HIS:HB3	1.30	1.12
2:G:426:PHE:HE2	2:G:466:GLN:HB3	1.15	1.12
2:G:372:THR:HB	2:G:376:VAL:HG13	1.32	1.11
2:D:255:ILE:HD12	2:D:265:LEU:CB	1.78	1.11
2:D:255:ILE:HD12	2:D:265:LEU:HB2	1.22	1.11
2:C:129:LYS:HG3	2:C:142:ILE:HD11	1.12	1.10
1:B:123:GLU:O	1:B:127:LYS:HB2	1.52	1.09
2:H:67:ILE:CD1	2:H:89:ILE:HD13	1.81	1.09
1:E:96:THR:HA	1:E:99:GLU:HG3	1.29	1.09
2:G:370:ILE:HG22	2:G:371:GLU:H	1.17	1.09
2:D:19:LEU:HB2	2:D:24:VAL:HG22	1.25	1.09
2:D:359:VAL:HG22	2:D:360:LEU:H	1.08	1.09
2:D:361:LEU:HD21	2:D:387:ILE:HD11	1.14	1.09
1:F:91:ASN:HD21	2:G:385:THR:HG23	1.12	1.09
2:G:319:GLN:HE22	2:G:330:PRO:CG	1.66	1.09
2:D:366:LEU:HD13	2:D:481:ILE:HG23	1.22	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:122:PHE:CE1	1:B:146:TYR:HB3	1.89	1.08
2:D:5:ILE:HD12	2:D:109:VAL:HG21	1.13	1.08
2:G:334:VAL:HG21	2:G:339:VAL:HG23	1.30	1.08
2:H:361:LEU:HD13	2:H:387:ILE:HG13	1.31	1.08
1:B:91:ASN:HD21	2:C:386:THR:HB	0.93	1.08
2:C:64:ILE:HG21	2:C:67:ILE:HD11	1.11	1.08
2:D:5:ILE:CD1	2:D:109:VAL:HG21	1.82	1.08
2:D:173:PHE:HD1	2:D:174:ASP:N	1.51	1.08
2:D:121:ASN:OD1	2:D:124:GLN:HG3	1.52	1.07
2:D:65:ILE:HG22	2:D:66:SER:H	1.11	1.07
2:D:173:PHE:HD2	2:D:196:LEU:HD23	1.15	1.07
2:D:37:PRO:HG3	2:D:51:GLU:HG2	1.35	1.07
2:G:152:ALA:HA	2:G:346:ILE:HD11	1.07	1.07
2:H:339:VAL:HG23	2:H:342:ILE:HD12	1.08	1.07
2:G:381:ILE:HD13	2:G:447:ILE:HD11	1.34	1.06
2:C:98:LYS:HD2	2:C:137:LEU:HD21	1.33	1.06
2:D:372:THR:HG23	2:D:376:VAL:HG13	1.34	1.05
2:D:13:ASN:HB3	2:D:37:PRO:HA	1.07	1.05
2:H:387:ILE:HG22	2:H:388:PRO:HD3	1.07	1.05
1:A:199:LEU:HB2	1:A:204:LEU:HD11	1.38	1.05
2:C:409:VAL:HG11	2:C:470:ILE:CD1	1.87	1.05
2:D:273:LYS:O	2:D:277:LEU:HB2	1.56	1.05
2:D:64:ILE:HG21	2:D:67:ILE:HD11	1.07	1.05
2:C:370:ILE:HG21	2:C:407:ILE:HG23	1.35	1.05
2:D:1:MET:HA	2:D:111:ARG:HH21	1.15	1.05
2:D:251:SER:OG	2:D:253:PRO:HD3	1.56	1.04
2:D:252:LEU:O	2:D:255:ILE:CG1	2.05	1.04
2:D:252:LEU:HB3	2:D:255:ILE:HD11	1.07	1.04
2:H:361:LEU:CD1	2:H:387:ILE:HG13	1.87	1.04
2:C:110:THR:HG23	2:C:111:ARG:HG3	1.34	1.04
2:H:377:PHE:N	2:H:417:ALA:HB2	1.72	1.04
2:C:409:VAL:HG11	2:C:470:ILE:HD11	1.09	1.03
1:B:121:ASN:HA	1:B:124:ARG:HB2	1.41	1.02
2:C:396:THR:OG1	2:C:437:GLY:HA2	1.59	1.02
1:A:138:ILE:HG21	1:B:139:LEU:HD21	1.40	1.02
2:G:383:ARG:HD2	2:G:384:ASN:N	1.75	1.02
1:A:58:ALA:HA	1:A:61:LEU:HB2	1.38	1.02
2:D:173:PHE:HE2	2:D:285:THR:HG23	1.20	1.02
2:H:98:LYS:HD2	2:H:137:LEU:HD21	1.40	1.02
1:B:165:GLY:H	1:B:189:VAL:HG12	1.24	1.01
2:D:366:LEU:CD1	2:D:481:ILE:HG23	1.90	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:416:MET:HE3	2:G:417:ALA:H	1.26	1.01
1:A:126:LEU:HD13	1:A:127:LYS:HG3	1.42	1.01
2:D:67:ILE:HD11	2:D:89:ILE:HG21	1.42	1.01
2:C:4:ILE:CD1	2:C:352:ALA:HB2	1.91	1.01
2:C:64:ILE:HD13	2:C:89:ILE:CD1	1.90	1.01
2:D:319:GLN:HE21	2:D:330:PRO:HG2	1.18	1.01
2:C:255:ILE:HD11	2:C:265:LEU:HB2	1.31	1.00
2:H:67:ILE:HD12	2:H:89:ILE:HG21	1.37	1.00
2:D:252:LEU:HB3	2:D:255:ILE:CD1	1.91	1.00
2:D:386:THR:HG23	2:D:387:ILE:O	1.59	1.00
1:A:89:PHE:HD2	1:B:89:PHE:HD1	1.05	1.00
1:A:89:PHE:CD2	1:B:89:PHE:HD1	1.77	1.00
2:C:64:ILE:HG21	2:C:67:ILE:CD1	1.90	1.00
2:G:380:LEU:HD12	2:G:445:PHE:CE2	1.98	0.99
1:A:119:LEU:HD11	1:A:197:TYR:OH	1.63	0.99
2:D:12:THR:HG21	2:D:171:GLY:H	1.25	0.99
1:A:89:PHE:HD2	1:B:89:PHE:CD1	1.80	0.99
2:G:390:SER:HB3	2:G:446:ASP:HA	1.42	0.99
2:D:426:PHE:HB3	2:D:468:ILE:HD11	1.03	0.98
2:D:64:ILE:CG2	2:D:67:ILE:HD11	1.92	0.98
2:H:334:VAL:C	2:H:336:PRO:HD3	1.83	0.98
2:C:73:THR:HG23	2:C:75:TYR:H	1.28	0.98
2:H:376:VAL:C	2:H:417:ALA:HB2	1.84	0.98
2:H:127:ALA:O	2:H:130:ASP:HB2	1.62	0.98
2:H:202:ASP:O	2:H:206:ILE:HG13	1.60	0.98
2:C:180:LEU:HB2	2:C:185:PHE:HE1	1.29	0.98
2:G:152:ALA:CA	2:G:346:ILE:CD1	2.42	0.97
2:H:9:LEU:HD11	2:H:94:LEU:HD21	1.45	0.97
1:B:116:LEU:HD13	1:B:197:TYR:HD2	1.30	0.97
2:C:426:PHE:HD2	2:C:468:ILE:HD12	1.30	0.97
2:D:117:PRO:HG2	2:D:120:PHE:CD1	1.99	0.97
1:B:126:LEU:HD23	1:B:126:LEU:H	1.29	0.97
1:B:177:MET:HB3	1:B:210:LYS:HG3	1.44	0.96
2:C:166:TYR:CE1	2:C:173:PHE:HE1	1.81	0.96
2:G:381:ILE:CD1	2:G:447:ILE:HD11	1.95	0.96
2:D:64:ILE:HG21	2:D:67:ILE:CD1	1.94	0.96
2:D:141:ARG:CZ	2:D:143:ILE:HD11	1.94	0.96
2:H:166:TYR:HA	2:H:175:VAL:HG12	1.48	0.96
2:C:395:PHE:HA	2:H:360:LEU:HA	1.44	0.96
2:D:157:LYS:HA	2:D:157:LYS:HE3	1.44	0.96
2:G:249:GLN:HA	2:G:269:LEU:H	1.30	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:396:THR:OG1	2:G:437:GLY:HA2	1.65	0.96
2:D:209:LEU:HD11	2:D:265:LEU:HD11	1.45	0.96
2:C:62:ASN:HB3	2:C:79:ILE:HD13	1.49	0.95
2:D:252:LEU:CB	2:D:255:ILE:HD11	1.96	0.95
2:D:307:ILE:HG22	2:D:308:LEU:H	1.28	0.95
2:C:387:ILE:HG23	2:C:447:ILE:CG2	1.97	0.95
1:F:65:LYS:HA	1:F:68:ILE:HD12	1.48	0.95
2:C:196:LEU:HD12	2:C:197:GLY:N	1.82	0.95
2:D:323:LYS:HD2	2:D:329:GLU:HA	1.48	0.95
2:G:145:GLU:HB2	2:G:146:PRO:HD3	1.46	0.95
1:A:78:MET:HB3	1:A:82:TYR:CZ	2.01	0.95
1:E:84:ARG:HH21	2:G:354:GLU:H	1.09	0.94
1:B:128:ILE:HD13	2:D:262:PRO:HG3	1.49	0.94
2:G:165:VAL:HG22	2:G:176:SER:H	1.32	0.94
2:D:67:ILE:CD1	2:D:89:ILE:CG2	2.45	0.94
2:C:67:ILE:CD1	2:C:89:ILE:CG2	2.44	0.94
2:G:498:ARG:NH1	2:G:498:ARG:HB2	1.82	0.94
2:G:370:ILE:CG2	2:G:371:GLU:H	1.79	0.94
2:D:153:TYR:HB3	2:D:155:LEU:HD11	1.48	0.93
1:A:75:LEU:HD13	1:A:79:GLU:OE2	1.66	0.93
2:D:255:ILE:CD1	2:D:265:LEU:CB	2.46	0.93
2:G:73:THR:HG22	2:G:75:TYR:H	1.32	0.93
2:D:173:PHE:CD2	2:D:196:LEU:HD23	2.03	0.93
2:D:309:VAL:HG12	2:D:310:GLY:H	1.34	0.93
1:A:95:ARG:HD3	2:C:104:TYR:CE1	2.04	0.93
2:H:148:ALA:HB1	2:H:340:VAL:HG13	1.51	0.93
2:H:387:ILE:CG2	2:H:388:PRO:HD3	1.99	0.93
2:C:462:THR:HG21	2:C:464:LYS:HB2	1.49	0.92
2:D:257:ALA:HB2	2:D:262:PRO:HA	1.50	0.92
2:G:361:LEU:HB3	2:G:387:ILE:HD12	1.51	0.92
1:A:106:TYR:HD2	1:A:202:ARG:HD2	1.29	0.92
2:D:1:MET:HA	2:D:111:ARG:NH2	1.84	0.92
1:A:71:LEU:HB3	1:B:71:LEU:HD12	1.49	0.92
1:A:89:PHE:CD2	1:B:89:PHE:CD1	2.57	0.92
2:H:483:ARG:HG2	2:H:483:ARG:NH1	1.73	0.92
2:H:372:THR:HG23	2:H:376:VAL:HG13	1.49	0.92
2:H:386:THR:HG23	2:H:387:ILE:O	1.68	0.92
2:D:64:ILE:HD13	2:D:89:ILE:CD1	2.00	0.92
2:D:323:LYS:HB2	2:D:330:PRO:HD3	1.52	0.92
1:B:122:PHE:HE1	1:B:146:TYR:HB3	1.34	0.92
2:G:308:LEU:HD11	2:G:319:GLN:NE2	1.85	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:122:PHE:HD1	1:B:146:TYR:CG	1.88	0.91
2:D:307:ILE:HG22	2:D:308:LEU:N	1.84	0.91
2:C:129:LYS:CG	2:C:142:ILE:HD11	1.99	0.91
2:G:426:PHE:CE2	2:G:466:GLN:HB3	2.04	0.91
2:C:4:ILE:HA	2:C:111:ARG:O	1.70	0.91
2:D:65:ILE:HG22	2:D:66:SER:N	1.85	0.91
2:G:280:HIS:CE1	2:G:281:LEU:HG	2.05	0.91
2:H:67:ILE:HD13	2:H:89:ILE:HD13	1.53	0.91
1:B:91:ASN:HD21	2:C:386:THR:CB	1.81	0.90
2:C:97:LEU:HD12	2:C:100:TYR:HE1	1.37	0.90
2:D:468:ILE:HG22	2:D:469:THR:N	1.83	0.90
2:H:27:ILE:HG22	2:H:28:PRO:N	1.86	0.90
2:D:257:ALA:HB1	2:D:261:GLY:O	1.72	0.90
2:D:322:ILE:HG22	2:D:326:LEU:HD22	1.51	0.90
1:A:106:TYR:HD2	1:A:202:ARG:HH11	1.10	0.90
2:G:370:ILE:HG22	2:G:371:GLU:N	1.85	0.90
2:G:381:ILE:HD13	2:G:447:ILE:CD1	2.00	0.90
2:H:67:ILE:HD13	2:H:89:ILE:HG21	1.51	0.90
2:G:205:ILE:HG21	2:G:235:ALA:HB1	1.52	0.90
2:C:18:VAL:HG11	2:C:27:ILE:HD11	1.54	0.90
2:G:334:VAL:HG21	2:G:339:VAL:CG2	2.01	0.90
2:D:126:GLN:O	2:D:130:ASP:HB2	1.73	0.89
2:C:423:LEU:HD13	2:C:470:ILE:HG21	1.54	0.89
2:H:381:ILE:HD13	2:H:447:ILE:HD12	1.55	0.89
2:C:34:ARG:HH11	2:C:34:ARG:H	1.17	0.89
2:C:26:VAL:O	2:C:28:PRO:HD3	1.71	0.89
1:B:125:ALA:HA	2:D:254:PHE:CE2	2.07	0.89
2:H:366:LEU:HD22	2:H:481:ILE:HG12	1.52	0.89
2:H:308:LEU:HD13	2:H:330:PRO:HG3	1.54	0.89
2:G:414:ARG:NH2	2:G:494:ALA:H	1.69	0.89
2:C:462:THR:HB	2:C:464:LYS:H	1.36	0.89
2:G:281:LEU:HA	2:G:284:ARG:HG3	1.52	0.89
2:C:85:THR:OG1	2:C:88:GLU:HG3	1.71	0.88
2:D:407:ILE:HD12	2:D:426:PHE:CE2	2.08	0.88
2:H:141:ARG:HH11	2:H:143:ILE:HD12	1.38	0.88
2:H:468:ILE:HG22	2:H:469:THR:N	1.88	0.88
2:G:151:LEU:HD12	2:G:154:GLY:HA2	1.55	0.88
2:C:129:LYS:HG3	2:C:142:ILE:HD12	1.55	0.88
2:H:67:ILE:CD1	2:H:89:ILE:CG2	2.50	0.88
2:H:153:TYR:HB3	2:H:155:LEU:HD11	1.55	0.88
2:D:155:LEU:H	2:D:155:LEU:HD22	1.36	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:205:ILE:O	2:G:209:LEU:HG	1.73	0.88
2:H:76:LYS:HB3	2:H:84:TYR:O	1.72	0.88
2:H:152:ALA:HB2	2:H:342:ILE:HG21	1.54	0.88
2:D:255:ILE:CD1	2:D:265:LEU:HB3	2.04	0.88
2:D:370:ILE:HG13	2:D:445:PHE:HZ	1.39	0.88
2:C:67:ILE:HD13	2:C:89:ILE:CG2	2.02	0.87
2:H:387:ILE:CG2	2:H:388:PRO:CD	2.51	0.87
1:A:92:PHE:O	1:A:92:PHE:HD1	1.57	0.87
1:A:116:LEU:HD13	1:A:197:TYR:HD2	1.37	0.87
2:G:152:ALA:CA	2:G:346:ILE:HD11	1.99	0.87
2:H:334:VAL:O	2:H:336:PRO:HD3	1.74	0.87
2:D:359:VAL:HG22	2:D:360:LEU:N	1.89	0.87
2:H:15:CYS:O	2:H:341:ALA:HB2	1.74	0.87
1:B:122:PHE:HD1	1:B:146:TYR:CD2	1.93	0.87
2:D:173:PHE:CE2	2:D:285:THR:HG23	2.09	0.87
2:H:67:ILE:HD13	2:H:89:ILE:CD1	2.04	0.87
2:C:65:ILE:HG22	2:C:66:SER:OG	1.73	0.87
2:C:152:ALA:HA	2:C:346:ILE:HD12	1.56	0.87
1:F:158:VAL:HA	1:F:198:LYS:O	1.72	0.87
2:C:255:ILE:HD12	2:C:265:LEU:HB2	1.55	0.87
1:F:91:ASN:ND2	2:G:385:THR:HG23	1.88	0.87
2:G:426:PHE:CG	2:G:468:ILE:HD11	2.10	0.87
2:C:255:ILE:HD11	2:C:265:LEU:HB3	1.56	0.87
1:B:65:LYS:HA	1:B:68:ILE:HD12	1.57	0.86
1:F:86:TYR:HE2	2:G:359:VAL:HG22	1.40	0.86
2:D:255:ILE:CD1	2:D:265:LEU:HB2	2.03	0.86
2:D:173:PHE:CD1	2:D:174:ASP:N	2.41	0.86
2:H:141:ARG:NH1	2:H:143:ILE:HD12	1.88	0.86
2:H:414:ARG:HG2	2:H:488:ALA:HB2	1.57	0.86
2:C:129:LYS:CG	2:C:142:ILE:CD1	2.52	0.86
2:D:298:LEU:HD12	2:D:302:ASP:HB3	1.57	0.86
2:H:132:GLY:O	2:H:135:ALA:HB3	1.74	0.86
2:G:361:LEU:HD22	2:G:387:ILE:CD1	2.05	0.86
2:H:119:TYR:HB3	2:H:190:THR:HG21	1.55	0.86
2:C:366:LEU:HD23	2:C:383:ARG:HG3	1.55	0.86
2:D:322:ILE:CG2	2:D:326:LEU:HD22	2.06	0.86
2:G:162:THR:OG1	2:G:303:ILE:HA	1.76	0.86
2:G:281:LEU:HB3	2:G:284:ARG:HD3	1.56	0.86
2:C:180:LEU:HB2	2:C:185:PHE:CE1	2.10	0.86
2:D:257:ALA:HA	2:D:263:LEU:HB2	1.55	0.86
2:H:210:VAL:O	2:H:214:LYS:HG3	1.76	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:119:LEU:HD12	1:B:197:TYR:OH	1.76	0.86
1:B:161:ILE:HD11	1:B:198:LYS:HB3	1.58	0.86
2:H:496:ARG:C	2:H:496:ARG:HE	1.79	0.86
2:D:98:LYS:HB2	2:D:137:LEU:HD11	1.58	0.85
2:H:306:VAL:HG21	2:H:326:LEU:HD23	1.59	0.85
2:C:64:ILE:CG2	2:C:67:ILE:CD1	2.53	0.85
1:A:177:MET:HG2	2:C:225:LYS:HZ3	1.39	0.85
1:B:189:VAL:HA	1:B:211:VAL:HG23	1.58	0.85
2:H:381:ILE:HD13	2:H:447:ILE:CD1	2.06	0.85
1:A:70:GLU:HB3	1:A:74:LYS:HE3	1.57	0.85
2:C:62:ASN:HB3	2:C:79:ILE:CD1	2.07	0.85
2:G:210:VAL:HG12	2:G:221:LEU:HD12	1.59	0.85
2:G:409:VAL:HG22	2:G:423:LEU:HD12	1.55	0.85
2:H:426:PHE:HB3	2:H:468:ILE:CD1	2.06	0.85
2:G:152:ALA:HA	2:G:346:ILE:HD12	1.55	0.85
2:D:102:GLU:HG2	2:D:108:PRO:HA	1.59	0.85
2:D:67:ILE:HD12	2:D:89:ILE:HG21	1.57	0.85
2:C:77:VAL:O	2:C:83:GLN:HA	1.75	0.84
2:C:366:LEU:HD13	2:C:412:GLY:HA2	1.58	0.84
2:D:98:LYS:CD	2:D:137:LEU:HD21	2.07	0.84
2:D:208:TYR:CE1	2:D:212:GLN:HG3	2.12	0.84
1:A:78:MET:O	1:A:82:TYR:CG	2.29	0.84
2:C:13:ASN:HB3	2:C:37:PRO:CA	2.05	0.84
2:C:426:PHE:HB3	2:C:468:ILE:HD11	1.57	0.84
2:D:65:ILE:CG2	2:D:66:SER:H	1.90	0.84
2:H:496:ARG:HA	2:H:498:ARG:HG2	1.57	0.84
2:D:200:ASP:O	2:D:281:LEU:HD21	1.78	0.84
2:G:205:ILE:CG2	2:G:235:ALA:HB1	2.08	0.84
2:D:79:ILE:HD12	2:D:84:TYR:CD2	2.13	0.84
2:C:150:ALA:HA	2:C:307:ILE:HD13	1.56	0.84
2:G:366:LEU:HB2	2:G:411:GLN:HE21	1.42	0.84
1:B:204:LEU:H	1:B:204:LEU:HD12	1.41	0.83
2:C:47:ARG:HH11	2:C:92:ILE:HG12	1.42	0.83
2:D:117:PRO:HG2	2:D:120:PHE:HD1	1.41	0.83
2:D:307:ILE:CG2	2:D:308:LEU:H	1.91	0.83
1:B:144:MET:SD	2:C:266:GLU:OE2	2.36	0.83
1:E:62:ALA:HA	1:E:65:LYS:HE3	1.61	0.83
1:F:91:ASN:HD21	2:G:385:THR:CG2	1.90	0.83
2:D:319:GLN:NE2	2:D:330:PRO:HG2	1.93	0.83
2:G:426:PHE:CD1	2:G:468:ILE:HD11	2.13	0.83
2:H:361:LEU:CD1	2:H:387:ILE:CG1	2.57	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:5:ILE:HD12	2:D:109:VAL:CG2	2.05	0.83
2:D:370:ILE:CG1	2:D:445:PHE:HZ	1.91	0.83
2:G:177:ILE:HD12	2:G:292:ALA:HB1	1.60	0.83
2:H:67:ILE:HD11	2:H:89:ILE:HD13	1.59	0.83
2:H:493:GLU:O	2:H:496:ARG:HD3	1.79	0.83
2:C:496:ARG:O	2:C:499:LYS:HB3	1.79	0.83
2:D:13:ASN:CB	2:D:37:PRO:HA	2.02	0.83
2:D:64:ILE:HD13	2:D:89:ILE:HD13	1.59	0.83
1:A:89:PHE:HB2	1:B:89:PHE:CD1	2.13	0.83
2:D:335:ASN:HB3	2:D:338:GLU:OE2	1.77	0.83
2:D:416:MET:HE3	2:D:417:ALA:H	1.44	0.83
2:G:166:TYR:HA	2:G:175:VAL:HG12	1.61	0.83
2:D:208:TYR:O	2:D:212:GLN:HG2	1.78	0.82
2:C:387:ILE:HG23	2:C:447:ILE:HG21	1.59	0.82
1:E:89:PHE:HD1	1:E:89:PHE:C	1.81	0.82
2:G:377:PHE:HB2	2:G:410:LEU:HD12	1.62	0.82
2:H:377:PHE:HB2	2:H:417:ALA:HA	1.60	0.82
2:C:198:GLY:O	2:C:201:PHE:HB2	1.79	0.82
2:D:161:GLN:HE21	2:D:163:ILE:HD11	1.43	0.82
2:H:135:ALA:HB3	2:H:137:LEU:HB2	1.61	0.82
2:H:165:VAL:HG13	2:H:176:SER:O	1.79	0.82
1:A:58:ALA:N	1:A:61:LEU:HD12	1.93	0.82
2:G:462:THR:CG2	2:G:464:LYS:HB2	2.08	0.82
2:H:476:LEU:HD23	2:H:476:LEU:H	1.43	0.82
2:H:496:ARG:HE	2:H:496:ARG:CA	1.90	0.82
2:C:29:ASN:ND2	2:C:36:THR:HG23	1.94	0.82
2:D:361:LEU:CD2	2:D:387:ILE:CD1	2.57	0.82
2:D:482:GLN:OE1	2:G:391:LYS:HA	1.79	0.82
2:C:205:ILE:HD11	2:C:274:PHE:CE2	2.15	0.82
1:F:62:ALA:HB1	1:F:65:LYS:HD2	1.62	0.82
2:C:13:ASN:CB	2:C:37:PRO:HA	2.06	0.82
2:G:164:LEU:O	2:G:306:VAL:HG13	1.79	0.82
2:G:173:PHE:CZ	2:G:175:VAL:HG13	2.15	0.82
2:G:300:PRO:HB3	2:G:326:LEU:HD12	1.62	0.82
2:G:390:SER:CB	2:G:446:ASP:HA	2.09	0.82
1:A:191:GLU:HG2	1:A:210:LYS:HD2	1.59	0.82
2:H:135:ALA:HB1	2:H:137:LEU:HD12	1.62	0.81
1:A:140:GLN:HA	1:A:143:GLU:OE2	1.80	0.81
1:B:198:LYS:HB2	1:B:203:VAL:HG22	1.60	0.81
2:D:164:LEU:HD22	2:D:176:SER:O	1.79	0.81
2:H:116:VAL:HG12	2:H:117:PRO:CD	2.11	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:4:ILE:HD12	2:C:352:ALA:CB	2.07	0.81
2:D:13:ASN:HB3	2:D:37:PRO:CA	2.02	0.81
2:G:370:ILE:HG23	2:G:408:HIS:O	1.79	0.81
2:H:97:LEU:HG	2:H:100:TYR:HE1	1.46	0.81
2:D:62:ASN:HD21	2:D:80:GLU:CD	1.82	0.81
2:D:309:VAL:HG12	2:D:310:GLY:N	1.94	0.81
2:D:121:ASN:HD21	2:D:123:ALA:H	1.28	0.81
2:G:131:ALA:HA	2:G:134:ILE:CG1	2.11	0.81
2:G:293:LEU:HD13	2:G:300:PRO:HG3	1.61	0.81
2:H:12:THR:HG23	2:H:13:ASN:H	1.45	0.81
2:G:319:GLN:HE22	2:G:330:PRO:HG3	0.72	0.81
2:D:291:GLN:O	2:D:295:ASP:HB2	1.79	0.81
2:D:387:ILE:CG2	2:D:388:PRO:CD	2.59	0.81
2:D:426:PHE:HB3	2:D:468:ILE:HD12	1.63	0.81
2:G:165:VAL:HG13	2:G:176:SER:O	1.80	0.81
2:G:445:PHE:HA	2:G:455:VAL:HG22	1.63	0.81
2:H:483:ARG:HH11	2:H:483:ARG:CG	1.92	0.81
1:E:75:LEU:HA	1:E:78:MET:HG3	1.63	0.80
2:C:462:THR:CG2	2:C:464:LYS:HB2	2.11	0.80
2:H:202:ASP:O	2:H:206:ILE:CG1	2.27	0.80
2:C:66:SER:O	2:C:69:ARG:HG3	1.82	0.80
2:C:145:GLU:HB2	2:C:146:PRO:HD3	1.62	0.80
2:D:397:THR:HG21	2:D:436:ARG:HA	1.63	0.80
2:C:229:GLN:HA	2:C:229:GLN:HE21	1.45	0.80
1:A:116:LEU:HD22	1:A:197:TYR:CE2	2.16	0.80
2:C:447:ILE:HG12	2:C:453:VAL:HB	1.62	0.80
2:H:2:SER:HA	2:H:107:GLU:OE2	1.79	0.80
2:H:84:TYR:HD1	2:H:88:GLU:OE2	1.65	0.80
1:A:138:ILE:CG2	1:B:139:LEU:HD21	2.11	0.80
2:C:326:LEU:HD13	2:C:326:LEU:N	1.97	0.80
1:F:72:GLU:O	1:F:75:LEU:HB3	1.83	0.80
1:B:149:LEU:HD23	1:B:149:LEU:C	2.03	0.79
1:B:165:GLY:H	1:B:189:VAL:CG1	1.95	0.79
2:C:387:ILE:CG2	2:C:447:ILE:HG22	2.11	0.79
2:G:470:ILE:HG22	2:G:471:LYS:N	1.97	0.79
2:H:280:HIS:O	2:H:284:ARG:HG3	1.80	0.79
2:H:426:PHE:HB3	2:H:468:ILE:HD11	1.61	0.79
2:C:426:PHE:CD2	2:C:468:ILE:HD12	2.15	0.79
2:D:266:GLU:O	2:D:267:MET:HB3	1.81	0.79
2:G:177:ILE:CD1	2:G:292:ALA:HB1	2.11	0.79
2:H:435:PRO:O	2:H:438:VAL:HG22	1.81	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:17:ALA:HB3	2:H:341:ALA:O	1.82	0.79
2:C:68:LYS:NZ	2:C:117:PRO:HG3	1.97	0.79
2:D:370:ILE:HG13	2:D:445:PHE:CZ	2.17	0.79
2:D:370:ILE:HG22	2:D:371:GLU:O	1.82	0.79
2:D:388:PRO:HB3	2:D:448:ASP:HA	1.65	0.79
2:D:480:GLU:OE1	1:E:93:ARG:HD2	1.82	0.79
1:F:143:GLU:O	1:F:147:ARG:CB	2.30	0.79
1:B:125:ALA:HA	2:D:254:PHE:HE2	1.47	0.79
2:D:121:ASN:ND2	2:D:123:ALA:H	1.81	0.79
2:D:464:LYS:HE3	2:D:466:GLN:HE21	1.48	0.79
2:D:503:GLU:HA	2:D:505:ARG:HG2	1.65	0.79
2:C:67:ILE:HD11	2:C:89:ILE:HG21	1.62	0.79
2:D:361:LEU:HD22	2:D:387:ILE:CG1	2.13	0.79
2:G:370:ILE:HD11	2:G:445:PHE:CE1	2.17	0.79
1:A:171:TYR:CD1	2:C:52:VAL:HG21	2.18	0.79
2:G:500:GLU:HA	2:G:503:GLU:HG3	1.65	0.79
1:A:193:LEU:HG	1:A:209:VAL:HA	1.65	0.79
2:D:70:HIS:CE1	2:D:75:TYR:CE2	2.70	0.79
2:C:150:ALA:HA	2:C:307:ILE:CD1	2.13	0.78
2:D:152:ALA:HB1	2:D:334:VAL:HG11	1.62	0.78
1:A:135:ALA:HB1	1:B:135:ALA:HB3	1.65	0.78
2:C:387:ILE:HG23	2:C:447:ILE:HG22	1.65	0.78
2:G:383:ARG:HD2	2:G:384:ASN:H	1.48	0.78
2:H:370:ILE:HD13	2:H:407:ILE:HG23	1.66	0.78
1:B:153:LEU:HD12	1:B:158:VAL:HG11	1.64	0.78
1:B:122:PHE:CD1	1:B:146:TYR:HB3	2.19	0.78
2:C:164:LEU:HB3	2:C:306:VAL:HG22	1.66	0.78
2:C:296:ALA:HB1	2:C:298:LEU:HD22	1.65	0.78
1:F:98:GLN:O	1:F:101:GLU:HB2	1.83	0.78
2:H:67:ILE:CG2	2:H:86:PRO:HB3	2.14	0.78
2:C:414:ARG:HD3	2:C:419:ASP:HB3	1.65	0.78
1:E:89:PHE:C	1:E:89:PHE:CD1	2.53	0.78
2:H:376:VAL:HA	2:H:416:MET:O	1.83	0.78
2:H:496:ARG:CD	2:H:496:ARG:H	1.96	0.78
2:D:468:ILE:CG2	2:D:469:THR:N	2.46	0.78
2:H:494:ALA:HA	2:H:496:ARG:NH1	1.99	0.78
2:H:409:VAL:HG21	2:H:470:ILE:HD11	1.65	0.78
1:B:143:GLU:HG3	1:B:143:GLU:O	1.82	0.77
1:B:177:MET:O	1:B:210:LYS:HA	1.84	0.77
2:C:168:LEU:HB2	2:C:173:PHE:HD1	1.48	0.77
2:C:226:MET:O	2:C:229:GLN:HB3	1.83	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:204:VAL:HG22	2:D:277:LEU:HD13	1.64	0.77
2:C:64:ILE:HD13	2:C:89:ILE:HD13	1.65	0.77
2:C:477:SER:O	2:C:480:GLU:HG3	1.83	0.77
2:G:206:ILE:HG23	2:G:231:LEU:HD23	1.65	0.77
2:G:462:THR:HG21	2:G:464:LYS:HB2	1.65	0.77
2:D:208:TYR:HB2	2:D:277:LEU:HD11	1.64	0.77
2:H:5:ILE:HG12	2:H:18:VAL:HB	1.66	0.77
1:B:199:LEU:HB2	1:B:204:LEU:HD11	1.65	0.77
2:C:396:THR:HB	2:C:439:PRO:O	1.83	0.77
2:D:388:PRO:HG3	2:D:449:ALA:HA	1.66	0.77
1:E:83:LEU:HA	1:E:86:TYR:CD1	2.19	0.77
1:F:62:ALA:CB	1:F:65:LYS:HD2	2.13	0.77
2:G:76:LYS:HD2	2:G:83:GLN:HE22	1.48	0.77
2:D:290:ARG:HA	2:D:293:LEU:HG	1.67	0.77
2:D:421:LYS:HG3	2:D:422:SER:N	2.00	0.77
2:D:483:ARG:HG2	2:D:483:ARG:HH11	1.48	0.77
1:B:124:ARG:HH12	2:D:230:ARG:CZ	1.98	0.77
2:C:147:THR:HG23	2:C:185:PHE:HD2	1.49	0.77
1:F:67:GLN:O	1:F:71:LEU:HG	1.84	0.77
1:B:128:ILE:CD1	2:D:262:PRO:HG3	2.15	0.77
2:D:504:LEU:HD13	2:D:507:GLU:HB3	1.66	0.77
2:C:132:GLY:O	2:C:135:ALA:HB3	1.84	0.77
2:D:372:THR:CG2	2:D:376:VAL:HG13	2.12	0.77
1:A:116:LEU:HD13	1:A:197:TYR:CD2	2.20	0.77
2:G:243:SER:OG	2:G:315:ILE:CG1	2.29	0.77
2:G:389:THR:O	2:G:447:ILE:HB	1.85	0.77
2:D:79:ILE:HD12	2:D:84:TYR:HD2	1.47	0.76
2:D:88:GLU:O	2:D:91:ALA:HB3	1.85	0.76
2:H:27:ILE:CG2	2:H:28:PRO:N	2.49	0.76
2:H:86:PRO:HA	2:H:89:ILE:HD12	1.67	0.76
2:H:502:ALA:C	2:H:504:LEU:H	1.88	0.76
2:D:205:ILE:HD11	2:D:274:PHE:CE2	2.20	0.76
2:G:416:MET:CE	2:G:417:ALA:H	1.98	0.76
2:H:387:ILE:HG22	2:H:388:PRO:N	1.99	0.76
1:B:158:VAL:O	1:B:158:VAL:HG12	1.85	0.76
1:B:160:ALA:HA	1:B:197:TYR:HD1	1.50	0.76
2:C:471:LYS:HD3	2:C:471:LYS:H	1.49	0.76
2:C:102:GLU:HG3	2:C:109:VAL:HG12	1.67	0.76
2:D:285:THR:O	2:D:288:PRO:HD2	1.86	0.76
2:C:105:LEU:HD13	2:C:105:LEU:N	2.00	0.76
2:C:366:LEU:HD22	2:C:367:SER:H	1.51	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:97:LEU:HD12	2:C:100:TYR:CE1	2.20	0.76
1:A:128:ILE:O	1:A:128:ILE:HG22	1.86	0.75
2:D:206:ILE:O	2:D:210:VAL:HG12	1.85	0.75
2:D:252:LEU:HD12	2:D:255:ILE:HG12	0.82	0.75
2:C:242:LEU:HD21	2:C:269:LEU:HG	1.67	0.75
2:G:397:THR:CB	2:G:437:GLY:H	1.99	0.75
1:A:135:ALA:HB1	1:B:135:ALA:CB	2.16	0.75
2:C:152:ALA:HA	2:C:346:ILE:CD1	2.17	0.75
2:D:42:PHE:CE1	2:D:79:ILE:HD13	2.21	0.75
1:B:84:ARG:CZ	2:C:389:THR:HA	2.17	0.75
2:C:16:VAL:O	2:C:16:VAL:HG22	1.85	0.75
2:C:414:ARG:HH21	2:C:494:ALA:HB2	1.52	0.75
2:C:151:LEU:CD2	2:C:347:GLN:HG2	2.16	0.75
2:G:151:LEU:O	2:G:346:ILE:HD13	1.86	0.75
2:G:462:THR:HB	2:G:464:LYS:H	1.52	0.75
2:H:147:THR:HG22	2:H:185:PHE:CD2	2.21	0.75
2:D:205:ILE:HD11	2:D:274:PHE:HE2	1.50	0.75
2:H:503:GLU:C	2:H:505:ARG:N	2.34	0.75
1:A:145:VAL:HG13	1:B:118:VAL:HG22	1.69	0.75
1:E:82:TYR:O	1:E:86:TYR:CE1	2.40	0.75
1:B:172:LEU:N	1:B:172:LEU:HD23	2.02	0.74
1:E:92:PHE:HA	1:E:95:ARG:HB2	1.68	0.74
2:H:7:ILE:HG12	2:H:16:VAL:HB	1.69	0.74
2:H:67:ILE:HG23	2:H:86:PRO:HB3	1.68	0.74
1:A:160:ALA:HA	1:A:197:TYR:HD1	1.53	0.74
2:C:410:LEU:HD23	2:C:422:SER:HA	1.69	0.74
1:F:86:TYR:CE2	2:G:359:VAL:HG22	2.22	0.74
2:C:42:PHE:N	2:C:42:PHE:CD1	2.54	0.74
2:C:370:ILE:CG2	2:C:407:ILE:HG23	2.16	0.74
2:D:164:LEU:HB3	2:D:306:VAL:HG22	1.67	0.74
2:C:362:ASP:O	2:C:363:VAL:HG13	1.86	0.74
2:G:243:SER:HA	2:G:316:PRO:HD2	1.68	0.74
2:H:148:ALA:CB	2:H:340:VAL:HG13	2.17	0.74
2:H:455:VAL:O	2:H:467:SER:HB2	1.86	0.74
2:C:80:GLU:OE1	2:C:80:GLU:HA	1.87	0.74
1:B:132:ASN:O	1:B:133:GLU:HG3	1.87	0.74
2:C:246:THR:O	2:C:247:GLN:HG3	1.88	0.74
2:C:440:GLN:HB2	2:C:460:LEU:HB2	1.69	0.74
2:D:19:LEU:HD23	2:D:19:LEU:O	1.87	0.74
2:G:426:PHE:HB3	2:G:468:ILE:HD11	1.68	0.74
2:C:168:LEU:HD12	2:C:169:GLY:O	1.87	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:390:SER:HB3	2:C:446:ASP:OD1	1.88	0.74
2:C:426:PHE:HB3	2:C:468:ILE:CD1	2.16	0.74
2:D:359:VAL:CG2	2:D:360:LEU:H	1.93	0.74
2:H:339:VAL:O	2:H:342:ILE:HB	1.86	0.74
1:A:95:ARG:HD3	2:C:104:TYR:HE1	1.52	0.74
2:C:325:GLU:C	2:C:326:LEU:HD13	2.07	0.74
2:D:269:LEU:HD12	2:D:270:THR:N	2.02	0.74
2:H:151:LEU:O	2:H:346:ILE:HD13	1.86	0.74
2:C:403:THR:HG23	2:C:404:THR:HG22	1.68	0.74
2:G:377:PHE:CE1	2:G:410:LEU:HB2	2.22	0.74
2:H:334:VAL:HG23	2:H:336:PRO:HG3	1.69	0.74
1:B:122:PHE:CD1	1:B:146:TYR:CD2	2.76	0.74
2:G:426:PHE:CD1	2:G:468:ILE:CD1	2.70	0.74
2:H:323:LYS:HB2	2:H:329:GLU:HB2	1.69	0.74
2:H:361:LEU:HD13	2:H:387:ILE:CG1	2.14	0.74
2:D:484:MET:HE2	2:D:484:MET:O	1.86	0.73
2:D:210:VAL:HG23	2:D:221:LEU:CD1	2.19	0.73
2:D:325:GLU:C	2:D:326:LEU:HD12	2.09	0.73
2:D:178:LEU:N	2:D:178:LEU:HD12	2.03	0.73
1:B:84:ARG:NH1	2:C:389:THR:HA	2.04	0.73
1:B:126:LEU:HD13	1:B:143:GLU:OE1	1.87	0.73
2:G:281:LEU:HA	2:G:284:ARG:CG	2.18	0.73
2:C:38:SER:HB3	2:C:93:ILE:HD13	1.69	0.73
2:C:487:GLU:HA	2:C:490:GLU:HB2	1.70	0.73
2:C:173:PHE:CZ	2:C:285:THR:HG23	2.24	0.73
2:C:269:LEU:HD12	2:C:270:THR:N	2.03	0.73
2:D:370:ILE:HD11	2:D:445:PHE:CE1	2.23	0.73
2:H:116:VAL:HG12	2:H:117:PRO:HD2	1.70	0.73
2:H:286:MET:HB3	2:H:290:ARG:CZ	2.19	0.73
1:A:78:MET:O	1:A:82:TYR:CD2	2.42	0.73
2:G:409:VAL:HG13	2:G:424:GLY:H	1.54	0.73
2:D:116:VAL:HG11	2:D:128:THR:HG21	1.70	0.73
1:E:84:ARG:NH2	2:G:354:GLU:H	1.87	0.73
2:C:196:LEU:HD21	2:C:285:THR:OG1	1.89	0.73
2:D:213:PHE:HD2	2:D:221:LEU:HD21	1.54	0.73
2:G:505:ARG:O	2:G:505:ARG:HG2	1.87	0.73
2:H:67:ILE:HD13	2:H:89:ILE:CG2	2.18	0.73
2:G:286:MET:SD	2:G:325:GLU:HG3	2.28	0.73
2:H:292:ALA:HA	2:H:295:ASP:OD2	1.87	0.73
1:A:177:MET:HG2	2:C:225:LYS:NZ	2.04	0.72
2:C:153:TYR:HE1	2:C:334:VAL:CG1	2.02	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:166:TYR:HA	2:H:175:VAL:CG1	2.19	0.72
2:H:468:ILE:CG2	2:H:469:THR:N	2.52	0.72
2:H:155:LEU:HD22	2:H:155:LEU:H	1.54	0.72
2:H:468:ILE:HG22	2:H:469:THR:H	1.50	0.72
1:A:131:ASP:HB3	1:A:136:LYS:HE3	1.70	0.72
2:D:500:GLU:HA	2:D:503:GLU:HB2	1.69	0.72
2:G:381:ILE:CD1	2:G:447:ILE:CD1	2.63	0.72
2:H:281:LEU:HA	2:H:284:ARG:HD3	1.70	0.72
2:H:361:LEU:HD11	2:H:387:ILE:CG1	2.17	0.72
2:C:67:ILE:HD12	2:C:89:ILE:HG21	1.62	0.72
2:C:70:HIS:CD2	2:C:75:TYR:CE2	2.78	0.72
2:D:325:GLU:O	2:D:326:LEU:HD12	1.89	0.72
2:G:77:VAL:HG11	2:G:79:ILE:HD12	1.70	0.72
2:G:239:LYS:CG	2:G:315:ILE:HD11	2.18	0.72
2:H:114:ILE:HG22	2:H:115:THR:N	2.04	0.72
1:A:172:LEU:N	1:A:172:LEU:HD23	2.04	0.72
2:D:366:LEU:HD13	2:D:481:ILE:CG2	2.13	0.72
2:D:498:ARG:O	2:D:501:ALA:HB3	1.89	0.72
2:H:468:ILE:CG2	2:H:469:THR:H	2.02	0.72
2:H:364:THR:O	2:H:366:LEU:N	2.23	0.72
1:E:77:GLU:OE2	1:E:81:ARG:HD2	1.89	0.72
2:G:77:VAL:HG11	2:G:79:ILE:CD1	2.20	0.72
1:A:79:GLU:HA	1:A:82:TYR:CD2	2.24	0.72
1:A:126:LEU:CD1	1:A:127:LYS:HG3	2.19	0.72
2:C:254:PHE:CE1	2:C:264:HIS:HE1	2.08	0.72
2:D:117:PRO:CG	2:D:120:PHE:CD1	2.73	0.72
2:H:309:VAL:HA	2:H:336:PRO:HB3	1.70	0.72
2:H:146:PRO:HB3	2:H:165:VAL:HG11	1.71	0.72
2:D:322:ILE:O	2:D:326:LEU:HD13	1.89	0.72
2:H:13:ASN:OD1	2:H:37:PRO:HA	1.90	0.72
2:D:305:LYS:HD3	2:D:331:HIS:NE2	2.04	0.71
2:G:121:ASN:HA	2:G:125:ARG:HH21	1.53	0.71
2:D:102:GLU:HG3	2:D:109:VAL:HG13	1.72	0.71
2:C:257:ALA:CA	2:C:263:LEU:HD12	2.20	0.71
1:E:85:LEU:HG	1:F:82:TYR:CZ	2.26	0.71
2:G:169:GLY:HA3	2:G:172:THR:HG23	1.72	0.71
2:H:365:PRO:HB2	2:H:481:ILE:CD1	2.20	0.71
2:G:161:GLN:HB2	2:G:304:ASP:HB2	1.73	0.71
2:H:339:VAL:CB	2:H:342:ILE:HD12	2.19	0.71
2:D:319:GLN:HE21	2:D:330:PRO:CG	1.98	0.71
2:D:328:LYS:HG2	2:D:329:GLU:H	1.55	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:409:VAL:HG21	2:D:470:ILE:HD11	1.71	0.71
2:C:87:GLN:O	2:C:91:ALA:HB2	1.91	0.71
2:G:293:LEU:CD1	2:G:300:PRO:HG3	2.20	0.71
2:G:442:GLU:O	2:G:457:ALA:CA	2.29	0.71
2:H:151:LEU:O	2:H:346:ILE:CD1	2.39	0.71
2:D:173:PHE:HD1	2:D:174:ASP:H	1.37	0.71
2:G:459:ASP:OD1	2:G:460:LEU:N	2.24	0.71
2:C:18:VAL:CG1	2:C:27:ILE:HD11	2.21	0.71
1:F:82:TYR:O	1:F:85:LEU:HB2	1.91	0.71
2:H:84:TYR:CD1	2:H:88:GLU:OE2	2.44	0.71
2:H:141:ARG:HH12	2:H:143:ILE:CD1	2.03	0.71
2:C:115:THR:HA	2:C:143:ILE:O	1.90	0.71
2:C:151:LEU:HD21	2:C:347:GLN:HG2	1.72	0.71
1:F:84:ARG:HD2	2:G:388:PRO:O	1.91	0.71
2:G:238:ALA:O	2:G:242:LEU:HD22	1.91	0.71
2:G:470:ILE:HG22	2:G:471:LYS:H	1.53	0.71
2:C:475:GLY:O	2:C:476:LEU:HD22	1.91	0.71
1:A:89:PHE:CD1	1:A:89:PHE:C	2.64	0.70
2:C:27:ILE:HG12	2:C:104:TYR:HD2	1.55	0.70
2:G:397:THR:OG1	2:G:437:GLY:N	2.24	0.70
2:H:464:LYS:HB2	2:H:464:LYS:NZ	2.06	0.70
1:B:67:GLN:CA	1:B:67:GLN:HE21	2.04	0.70
2:C:280:HIS:NE2	2:C:281:LEU:HD13	2.06	0.70
2:D:58:ILE:HG22	2:D:58:ILE:O	1.90	0.70
2:D:166:TYR:HD1	2:D:166:TYR:C	1.94	0.70
1:A:115:LEU:HD23	1:A:153:LEU:HD21	1.74	0.70
1:B:116:LEU:CD1	1:B:197:TYR:HD2	2.03	0.70
1:B:144:MET:HA	1:B:144:MET:CE	2.21	0.70
2:D:208:TYR:HE1	2:D:212:GLN:HG3	1.54	0.70
2:D:225:LYS:H	2:D:225:LYS:CD	2.03	0.70
2:D:225:LYS:H	2:D:225:LYS:HD2	1.56	0.70
1:E:82:TYR:O	1:E:86:TYR:HE1	1.73	0.70
2:H:153:TYR:O	2:H:155:LEU:HD13	1.90	0.70
1:A:144:MET:SD	2:D:253:PRO:HB3	2.32	0.70
2:C:10:GLY:HA3	2:C:13:ASN:O	1.91	0.70
2:C:377:PHE:O	2:C:377:PHE:CD1	2.45	0.70
1:E:78:MET:O	1:E:82:TYR:CG	2.44	0.70
2:C:396:THR:OG1	2:C:437:GLY:CA	2.39	0.70
2:D:47:ARG:O	2:D:48:LEU:HD23	1.92	0.70
2:D:414:ARG:CZ	2:D:491:ASN:HD21	2.03	0.70
2:G:377:PHE:CD1	2:G:410:LEU:HB2	2.25	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:500:GLU:HA	2:G:503:GLU:CG	2.21	0.70
1:A:78:MET:HB3	1:A:82:TYR:CE2	2.25	0.70
2:C:100:TYR:O	2:C:103:ASP:HB2	1.91	0.70
2:D:87:GLN:CD	2:D:87:GLN:H	1.92	0.70
2:D:388:PRO:HB3	2:D:448:ASP:CA	2.20	0.70
1:F:74:LYS:O	1:F:78:MET:HB2	1.89	0.70
2:G:443:VAL:CA	2:G:456:ARG:O	2.33	0.70
2:D:409:VAL:CG2	2:D:470:ILE:HD11	2.20	0.70
2:D:426:PHE:HB2	2:D:468:ILE:HD11	1.72	0.70
2:C:8:ASP:HA	2:C:115:THR:HG22	1.73	0.70
2:C:225:LYS:O	2:C:228:LEU:HB3	1.91	0.70
2:D:409:VAL:HG23	2:D:409:VAL:O	1.92	0.70
2:H:115:THR:HG21	2:H:340:VAL:HG11	1.73	0.70
2:H:149:ALA:CB	2:H:339:VAL:HG13	2.22	0.70
1:B:190:VAL:HG12	1:B:191:GLU:N	2.06	0.70
2:D:387:ILE:HG22	2:D:388:PRO:CD	2.22	0.70
1:A:139:LEU:HD21	1:B:138:ILE:HG21	1.71	0.69
2:C:153:TYR:CE1	2:C:334:VAL:CG1	2.75	0.69
2:C:394:VAL:HG21	2:H:363:VAL:HG11	1.74	0.69
1:E:65:LYS:HA	1:E:68:ILE:HB	1.74	0.69
1:A:192:GLU:HA	1:A:209:VAL:HG12	1.72	0.69
2:C:224:ASP:OD2	2:C:227:ALA:HB2	1.92	0.69
1:A:171:TYR:CE1	2:C:52:VAL:HG21	2.27	0.69
2:D:497:LYS:O	2:D:499:LYS:N	2.25	0.69
1:A:58:ALA:CA	1:A:61:LEU:HB2	2.20	0.69
1:A:168:PHE:CB	1:A:189:VAL:HG22	2.22	0.69
2:C:166:TYR:OH	2:C:285:THR:HG21	1.93	0.69
2:C:266:GLU:O	2:C:267:MET:HB3	1.90	0.69
2:C:408:HIS:CE1	2:C:425:ARG:NH2	2.60	0.69
2:D:414:ARG:HB3	2:D:415:PRO:HD2	1.74	0.69
2:H:12:THR:HB	2:H:171:GLY:H	1.58	0.69
1:A:106:TYR:HD2	1:A:202:ARG:NH1	1.86	0.69
2:C:34:ARG:H	2:C:34:ARG:NH1	1.90	0.69
2:C:64:ILE:CG2	2:C:67:ILE:CG1	2.70	0.69
2:D:480:GLU:O	2:D:484:MET:HG3	1.92	0.69
2:G:387:ILE:HG22	2:G:448:ASP:O	1.93	0.69
2:G:462:THR:O	2:G:463:ASN:HB2	1.91	0.69
2:H:149:ALA:HB1	2:H:339:VAL:HG13	1.73	0.69
2:H:496:ARG:HA	2:H:498:ARG:CG	2.22	0.69
2:D:251:SER:HB2	2:D:266:GLU:OE2	1.91	0.69
2:H:367:SER:C	2:H:368:LEU:HD23	2.13	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:496:ARG:CA	2:H:496:ARG:NE	2.54	0.69
1:B:122:PHE:CD1	1:B:146:TYR:CG	2.76	0.69
2:C:64:ILE:HG21	2:C:89:ILE:HD13	1.74	0.69
2:D:161:GLN:NE2	2:D:163:ILE:HD11	2.07	0.69
2:H:109:VAL:HG23	2:H:111:ARG:O	1.91	0.69
2:C:392:SER:OG	2:C:444:THR:HB	1.93	0.69
2:C:484:MET:HA	2:C:484:MET:HE2	1.75	0.69
2:D:408:HIS:CD2	2:D:425:ARG:HH11	2.11	0.69
1:E:84:ARG:HH21	2:G:354:GLU:N	1.86	0.69
2:G:164:LEU:H	2:G:306:VAL:HG22	1.57	0.69
2:G:283:GLU:OE1	2:G:286:MET:HG3	1.93	0.69
2:H:100:TYR:HA	2:H:103:ASP:OD2	1.93	0.69
2:C:166:TYR:CE1	2:C:173:PHE:CE1	2.74	0.69
2:D:116:VAL:HB	2:D:117:PRO:HD2	1.74	0.69
2:D:242:LEU:HD12	2:D:271:ARG:HD3	1.74	0.69
2:D:279:ALA:O	2:D:282:VAL:HB	1.92	0.69
2:D:483:ARG:HG2	2:D:483:ARG:NH1	2.05	0.69
2:D:269:LEU:HD12	2:D:270:THR:H	1.58	0.69
2:G:398:ALA:CB	2:G:402:GLN:HE22	2.06	0.69
2:H:87:GLN:CG	2:H:127:ALA:HB1	2.23	0.69
2:C:273:LYS:O	2:C:276:GLU:HB2	1.92	0.68
2:H:281:LEU:O	2:H:284:ARG:HB2	1.93	0.68
1:A:135:ALA:CB	1:B:135:ALA:HB3	2.23	0.68
1:B:179:ALA:HB2	1:B:210:LYS:HG2	1.75	0.68
2:C:159:GLU:H	2:C:159:GLU:CD	1.97	0.68
2:D:175:VAL:HG11	2:D:289:VAL:HG22	1.75	0.68
2:H:92:ILE:HG23	2:H:95:GLN:HE22	1.59	0.68
1:A:160:ALA:HB2	1:A:197:TYR:HE1	1.58	0.68
2:D:87:GLN:O	2:D:91:ALA:HB2	1.93	0.68
2:D:414:ARG:NE	2:D:491:ASN:HD21	1.91	0.68
1:E:194:GLN:H	1:E:208:MET:CB	2.06	0.68
1:B:119:LEU:O	1:B:122:PHE:HB3	1.93	0.68
2:D:379:LYS:H	2:D:379:LYS:HD3	1.57	0.68
1:E:78:MET:O	1:E:82:TYR:HB2	1.92	0.68
1:A:141:GLY:HA2	2:D:264:HIS:CE1	2.28	0.68
2:G:157:LYS:HD2	2:G:158:GLU:HG2	1.73	0.68
2:G:370:ILE:HG12	2:G:409:VAL:HB	1.75	0.68
2:H:377:PHE:HB2	2:H:417:ALA:CA	2.24	0.68
1:B:160:ALA:HB2	1:B:197:TYR:HE1	1.59	0.68
2:D:503:GLU:C	2:D:505:ARG:N	2.44	0.68
2:G:76:LYS:HD2	2:G:83:GLN:NE2	2.07	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:300:PRO:HB3	2:G:326:LEU:CD1	2.23	0.68
1:A:142:MET:N	1:A:142:MET:SD	2.67	0.68
2:C:387:ILE:O	2:C:389:THR:N	2.27	0.68
2:D:151:LEU:HA	2:D:154:GLY:HA2	1.75	0.68
1:A:109:GLN:HG3	1:A:199:LEU:CD1	2.24	0.68
2:G:334:VAL:HG22	2:G:335:ASN:H	1.59	0.68
2:G:483:ARG:NH1	2:G:486:LYS:NZ	2.42	0.68
2:C:398:ALA:HB2	2:H:357:ASP:O	1.93	0.67
2:G:315:ILE:HG22	2:G:317:ALA:H	1.58	0.67
2:H:51:GLU:HA	2:H:54:LYS:CB	2.23	0.67
2:D:257:ALA:CB	2:D:262:PRO:HA	2.21	0.67
2:G:364:THR:HB	2:G:385:THR:H	1.59	0.67
2:H:306:VAL:HG12	2:H:307:ILE:N	2.08	0.67
1:A:166:LYS:O	1:A:189:VAL:HG23	1.94	0.67
1:A:168:PHE:HB2	1:A:189:VAL:HG22	1.76	0.67
1:A:170:PRO:HA	1:A:173:HIS:O	1.94	0.67
2:D:116:VAL:O	2:D:144:ASN:HA	1.94	0.67
2:D:277:LEU:O	2:D:277:LEU:HD22	1.95	0.67
1:E:82:TYR:CE2	1:F:78:MET:HB3	2.30	0.67
2:C:159:GLU:O	2:C:161:GLN:HG2	1.95	0.67
2:C:359:VAL:HG12	2:C:362:ASP:OD2	1.94	0.67
2:G:382:GLU:CD	2:G:383:ARG:H	1.97	0.67
1:A:115:LEU:CD2	1:A:153:LEU:HD21	2.25	0.67
1:A:122:PHE:CB	1:A:146:TYR:CD2	2.78	0.67
2:D:426:PHE:CB	2:D:468:ILE:CD1	2.45	0.67
2:H:460:LEU:HD22	2:H:460:LEU:N	2.09	0.67
2:H:329:GLU:OE2	2:H:330:PRO:HG2	1.94	0.67
2:D:213:PHE:CD2	2:D:221:LEU:HD21	2.29	0.67
1:F:68:ILE:O	1:F:72:GLU:HG3	1.94	0.67
2:G:255:ILE:CB	2:G:264:HIS:HA	2.24	0.67
1:E:75:LEU:O	1:E:78:MET:HB2	1.94	0.67
2:G:73:THR:HG22	2:G:75:TYR:N	2.08	0.67
2:G:273:LYS:HD2	2:G:276:GLU:OE2	1.95	0.67
2:G:426:PHE:CB	2:G:468:ILE:HD11	2.24	0.67
2:H:204:VAL:O	2:H:208:TYR:HB2	1.95	0.67
2:D:359:VAL:O	2:G:395:PHE:HB3	1.95	0.67
1:F:61:LEU:N	1:F:61:LEU:HD23	2.08	0.67
2:G:369:GLY:HA3	2:G:378:THR:O	1.95	0.67
2:G:369:GLY:O	2:G:409:VAL:HG23	1.93	0.67
2:H:88:GLU:HA	2:H:91:ALA:HB3	1.76	0.67
1:A:87:ALA:O	1:A:91:ASN:HB2	1.95	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:16:VAL:O	2:D:16:VAL:HG22	1.92	0.67
2:D:315:ILE:HG23	2:D:316:PRO:HD2	1.76	0.67
2:D:387:ILE:HG22	2:D:388:PRO:HD2	1.74	0.67
2:D:426:PHE:CD1	2:D:427:GLN:N	2.63	0.67
2:D:507:GLU:OE1	2:D:507:GLU:HA	1.93	0.67
2:G:206:ILE:O	2:G:210:VAL:HG13	1.94	0.67
2:G:210:VAL:HB	2:G:214:LYS:NZ	2.09	0.67
2:G:414:ARG:CZ	2:G:494:ALA:HB3	2.24	0.67
1:A:116:LEU:HD22	1:A:197:TYR:CD2	2.31	0.66
2:G:497:LYS:O	2:G:500:GLU:HG2	1.95	0.66
2:H:334:VAL:HG23	2:H:336:PRO:CG	2.24	0.66
2:H:387:ILE:O	2:H:388:PRO:C	2.30	0.66
1:B:193:LEU:HD21	2:D:226:MET:HG2	1.77	0.66
2:C:153:TYR:OH	2:C:334:VAL:HG12	1.95	0.66
2:C:205:ILE:HD11	2:C:274:PHE:HE2	1.58	0.66
2:D:12:THR:HG21	2:D:171:GLY:N	2.05	0.66
2:D:105:LEU:C	2:D:107:GLU:H	1.96	0.66
2:G:162:THR:O	2:G:303:ILE:HG23	1.95	0.66
2:C:265:LEU:HD23	2:C:266:GLU:N	2.09	0.66
2:C:368:LEU:HD21	2:C:411:GLN:HB2	1.78	0.66
2:D:129:LYS:HB2	2:D:142:ILE:CD1	2.26	0.66
2:H:4:ILE:HG22	2:H:348:GLY:O	1.95	0.66
2:H:116:VAL:HG12	2:H:117:PRO:HD3	1.76	0.66
2:D:173:PHE:CD1	2:D:173:PHE:C	2.68	0.66
2:G:205:ILE:HG21	2:G:235:ALA:CB	2.25	0.66
2:H:365:PRO:HB2	2:H:481:ILE:HD13	1.75	0.66
1:A:192:GLU:OE2	1:A:195:LYS:HA	1.95	0.66
2:D:252:LEU:O	2:D:255:ILE:CD1	2.44	0.66
2:G:153:TYR:CZ	2:G:334:VAL:HB	2.30	0.66
2:G:400:ASP:C	2:G:401:ASN:HD22	1.99	0.66
2:G:462:THR:HG22	2:G:464:LYS:HB2	1.78	0.66
2:H:156:ASP:HA	2:H:180:LEU:HD11	1.77	0.66
2:C:364:THR:HG23	2:C:385:THR:O	1.95	0.66
2:D:166:TYR:C	2:D:166:TYR:CD1	2.68	0.66
2:H:115:THR:HG21	2:H:340:VAL:CG1	2.26	0.66
2:C:101:ALA:O	2:C:105:LEU:HD22	1.96	0.66
2:H:503:GLU:C	2:H:505:ARG:H	1.97	0.66
1:B:86:TYR:HE2	2:C:359:VAL:HG21	1.61	0.66
2:C:133:ARG:HB3	2:C:133:ARG:NH1	2.10	0.66
2:D:280:HIS:NE2	2:D:281:LEU:HD13	2.10	0.66
2:D:493:GLU:HA	2:D:495:ASP:OD1	1.96	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:361:LEU:HD22	2:H:387:ILE:HD11	1.77	0.66
2:C:254:PHE:N	2:C:254:PHE:CD1	2.63	0.66
2:C:396:THR:HG1	2:C:437:GLY:HA2	1.57	0.66
2:G:166:TYR:OH	2:G:318:VAL:HG21	1.96	0.66
2:G:498:ARG:HB2	2:G:498:ARG:HH11	1.58	0.66
1:A:121:ASN:HD22	1:B:145:VAL:HG23	1.61	0.65
2:C:471:LYS:H	2:C:471:LYS:HZ2	1.44	0.65
2:D:162:THR:OG1	2:D:179:GLU:HG2	1.95	0.65
2:D:444:THR:O	2:D:445:PHE:HD1	1.78	0.65
2:H:29:ASN:HA	2:H:100:TYR:CD2	2.31	0.65
1:B:100:MET:O	1:B:101:GLU:C	2.35	0.65
2:D:355:VAL:HG21	2:G:399:ALA:HB3	1.79	0.65
1:B:112:ALA:O	1:B:115:LEU:N	2.28	0.65
2:C:216:GLU:HB3	2:C:217:HIS:ND1	2.10	0.65
2:C:367:SER:HB2	2:C:412:GLY:O	1.96	0.65
2:C:471:LYS:HZ3	2:C:471:LYS:HB2	1.60	0.65
2:D:193:ASP:OD1	2:D:194:ASN:N	2.29	0.65
2:D:453:VAL:HG22	2:D:453:VAL:O	1.96	0.65
2:G:145:GLU:O	2:G:148:ALA:HB3	1.96	0.65
2:G:164:LEU:HD21	2:G:175:VAL:HB	1.78	0.65
2:H:2:SER:OG	2:H:110:THR:HB	1.96	0.65
1:B:121:ASN:CA	1:B:124:ARG:HB2	2.23	0.65
2:D:153:TYR:O	2:D:155:LEU:HD13	1.95	0.65
2:D:218:GLY:O	2:D:219:ILE:HG13	1.96	0.65
2:D:366:LEU:O	2:D:368:LEU:HD23	1.96	0.65
2:H:364:THR:HG22	2:H:366:LEU:O	1.96	0.65
2:H:414:ARG:HG2	2:H:488:ALA:CB	2.27	0.65
2:D:64:ILE:CG2	2:D:67:ILE:CG1	2.74	0.65
2:D:210:VAL:HG23	2:D:221:LEU:HD12	1.77	0.65
2:D:437:GLY:C	2:D:439:PRO:HD3	2.17	0.65
2:H:339:VAL:CA	2:H:342:ILE:HD12	2.26	0.65
2:C:140:GLU:O	2:C:141:ARG:HB2	1.97	0.65
2:D:323:LYS:HG3	2:D:328:LYS:O	1.96	0.65
2:G:281:LEU:HA	2:G:284:ARG:CD	2.26	0.65
2:H:96:TYR:HA	2:H:99:SER:HB2	1.79	0.65
1:B:185:GLU:O	1:B:188:THR:HB	1.97	0.65
2:C:85:THR:HG1	2:C:88:GLU:HG3	1.60	0.65
2:C:431:ILE:HG23	2:C:432:PRO:HD2	1.78	0.65
2:D:26:VAL:HG23	2:D:26:VAL:O	1.97	0.65
2:G:225:LYS:HB3	2:G:225:LYS:NZ	2.12	0.65
2:C:64:ILE:HG22	2:C:67:ILE:HD11	1.75	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:267:MET:SD	2:D:268:THR:C	2.74	0.65
2:G:408:HIS:CE1	2:G:425:ARG:HB2	2.31	0.65
2:G:462:THR:HG21	2:G:464:LYS:CB	2.26	0.65
2:C:63:THR:HG22	2:C:63:THR:O	1.95	0.65
2:C:145:GLU:O	2:C:148:ALA:HB3	1.97	0.65
2:G:507:GLU:O	2:G:507:GLU:HG3	1.95	0.65
2:H:147:THR:CG2	2:H:185:PHE:HD2	2.09	0.65
2:C:164:LEU:HD22	2:C:165:VAL:N	2.11	0.65
2:C:357:ASP:HB3	2:C:359:VAL:HG23	1.78	0.65
2:D:508:ALA:O	2:D:509:ASP:HB2	1.97	0.65
1:B:189:VAL:CA	1:B:211:VAL:HG23	2.26	0.64
2:D:4:ILE:HG12	2:D:111:ARG:HB3	1.79	0.64
1:F:82:TYR:O	1:F:85:LEU:N	2.30	0.64
2:G:116:VAL:O	2:G:145:GLU:N	2.22	0.64
2:H:235:ALA:O	2:H:238:ALA:HB3	1.96	0.64
2:H:361:LEU:CD2	2:H:387:ILE:CD1	2.74	0.64
2:C:152:ALA:HB2	2:C:343:GLY:CA	2.26	0.64
2:D:55:ARG:HH11	2:D:55:ARG:HG3	1.61	0.64
2:D:214:LYS:HG3	2:D:215:GLN:N	2.12	0.64
2:D:231:LEU:O	2:D:232:LYS:C	2.35	0.64
1:E:58:ALA:O	1:E:61:LEU:HG	1.98	0.64
2:G:366:LEU:HD13	2:G:412:GLY:HA2	1.78	0.64
2:D:173:PHE:HD2	2:D:196:LEU:CD2	2.02	0.64
2:D:339:VAL:O	2:D:342:ILE:HB	1.97	0.64
2:D:483:ARG:O	2:D:486:LYS:HG3	1.96	0.64
2:G:272:ALA:HA	2:G:275:GLU:HB2	1.79	0.64
2:G:308:LEU:CD1	2:G:319:GLN:NE2	2.59	0.64
2:D:388:PRO:CB	2:D:448:ASP:HA	2.28	0.64
1:E:91:ASN:O	1:E:94:ARG:HB3	1.97	0.64
2:G:144:ASN:ND2	2:G:147:THR:H	1.95	0.64
2:H:72:GLY:HA3	2:H:124:GLN:HA	1.78	0.64
1:A:89:PHE:HB2	1:B:89:PHE:HD1	1.60	0.64
2:C:5:ILE:HG12	2:C:18:VAL:HB	1.79	0.64
2:G:144:ASN:OD1	2:G:147:THR:HB	1.97	0.64
2:G:146:PRO:HB3	2:G:165:VAL:HG11	1.79	0.64
2:H:401:ASN:HA	2:H:434:ALA:O	1.98	0.64
1:A:82:TYR:O	1:B:82:TYR:CE2	2.51	0.64
1:B:165:GLY:N	1:B:189:VAL:HG12	2.05	0.64
2:D:444:THR:HG23	2:D:456:ARG:HB3	1.79	0.64
1:E:96:THR:CA	1:E:99:GLU:HG3	2.16	0.64
2:G:396:THR:OG1	2:G:437:GLY:CA	2.43	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:87:GLN:HG2	2:H:127:ALA:HB1	1.79	0.64
2:H:374:GLY:N	2:H:375:GLY:HA2	2.13	0.64
2:H:416:MET:O	2:H:417:ALA:HB3	1.97	0.64
2:C:68:LYS:O	2:C:68:LYS:HG2	1.97	0.64
2:D:249:GLN:HG2	2:D:267:MET:O	1.98	0.64
2:H:420:ASN:ND2	2:H:420:ASN:H	1.96	0.64
2:D:361:LEU:HD13	2:D:387:ILE:HG13	1.78	0.64
2:H:8:ASP:HB3	2:H:340:VAL:CG1	2.28	0.64
1:A:107:ARG:CB	1:B:107:ARG:HG2	2.28	0.64
2:G:166:TYR:O	2:G:309:VAL:CB	2.38	0.64
1:A:89:PHE:HD1	1:A:90:GLU:N	1.95	0.64
2:C:47:ARG:NH1	2:C:92:ILE:HG12	2.13	0.64
2:C:64:ILE:HD13	2:C:89:ILE:HD11	1.78	0.64
2:C:144:ASN:O	2:C:145:GLU:C	2.34	0.64
2:C:158:GLU:HG2	2:C:159:GLU:OE1	1.99	0.64
2:D:166:TYR:CE2	2:D:322:ILE:HD11	2.33	0.64
2:G:67:ILE:O	2:G:67:ILE:HG22	1.97	0.64
2:C:17:ALA:HB3	2:C:341:ALA:O	1.98	0.63
2:D:198:GLY:O	2:D:201:PHE:N	2.22	0.63
2:D:203:GLN:O	2:D:206:ILE:N	2.31	0.63
2:D:503:GLU:C	2:D:505:ARG:H	1.98	0.63
2:G:325:GLU:HB3	2:G:326:LEU:HD22	1.79	0.63
2:H:409:VAL:O	2:H:409:VAL:CG2	2.46	0.63
1:B:65:LYS:O	1:B:68:ILE:HB	1.99	0.63
1:B:84:ARG:CD	2:C:388:PRO:O	2.34	0.63
2:C:180:LEU:HD13	2:C:185:PHE:CE1	2.34	0.63
2:D:370:ILE:CG1	2:D:445:PHE:CZ	2.79	0.63
2:H:9:LEU:CD1	2:H:94:LEU:HD21	2.25	0.63
2:C:238:ALA:O	2:C:242:LEU:HB2	1.98	0.63
2:C:416:MET:HE2	2:C:497:LYS:HB3	1.81	0.63
2:C:502:ALA:O	2:C:505:ARG:HB3	1.98	0.63
2:D:322:ILE:CG2	2:D:326:LEU:CD2	2.77	0.63
2:H:100:TYR:HA	2:H:103:ASP:CG	2.19	0.63
2:H:377:PHE:CA	2:H:417:ALA:HB2	2.28	0.63
2:H:502:ALA:C	2:H:504:LEU:N	2.50	0.63
1:B:123:GLU:O	1:B:127:LYS:CB	2.39	0.63
2:D:369:GLY:HA3	2:D:377:PHE:HE1	1.64	0.63
2:D:385:THR:HG22	2:D:386:THR:HG22	1.80	0.63
2:D:388:PRO:CG	2:D:449:ALA:HA	2.28	0.63
2:D:454:HIS:O	2:D:455:VAL:HG23	1.98	0.63
2:G:162:THR:HG22	2:G:179:GLU:HG2	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:398:ALA:HB3	2:G:402:GLN:NE2	2.12	0.63
2:H:243:SER:CB	2:H:316:PRO:HD3	2.28	0.63
1:A:122:PHE:CB	1:A:146:TYR:CG	2.82	0.63
1:A:162:GLU:OE1	1:A:162:GLU:N	2.31	0.63
2:C:257:ALA:N	2:C:263:LEU:HD12	2.13	0.63
2:G:498:ARG:HB2	2:G:498:ARG:CZ	2.28	0.63
2:H:67:ILE:HD13	2:H:89:ILE:CB	2.27	0.63
2:H:346:ILE:O	2:H:350:VAL:HG23	1.97	0.63
1:A:105:LYS:HD3	1:A:200:LYS:NZ	2.13	0.63
2:C:1:MET:HG3	2:C:2:SER:H	1.63	0.63
2:D:3:LYS:HD2	2:D:107:GLU:OE2	1.98	0.63
2:G:309:VAL:HG12	2:G:310:GLY:N	2.12	0.63
2:G:372:THR:HG22	2:G:373:MET:N	2.14	0.63
2:H:448:ASP:OD1	2:H:448:ASP:C	2.37	0.63
2:C:73:THR:HG23	2:C:75:TYR:N	2.09	0.63
2:C:97:LEU:CD1	2:C:100:TYR:HE1	2.09	0.63
2:C:164:LEU:O	2:C:164:LEU:HD13	1.98	0.63
2:C:180:LEU:CB	2:C:185:PHE:HE1	2.07	0.63
2:C:414:ARG:NH2	2:C:494:ALA:HB2	2.12	0.63
2:D:224:ASP:OD2	2:D:226:MET:HB2	1.99	0.63
2:G:164:LEU:HB2	2:G:177:ILE:HG12	1.81	0.63
2:G:363:VAL:HG12	2:G:384:ASN:O	1.99	0.63
2:H:8:ASP:HB3	2:H:340:VAL:HG12	1.81	0.63
2:C:18:VAL:CG2	2:C:19:LEU:N	2.62	0.63
2:G:361:LEU:HD22	2:G:387:ILE:HD11	1.80	0.63
2:G:465:GLU:HG3	2:G:465:GLU:O	1.97	0.63
2:H:24:VAL:HG11	2:H:345:ALA:CB	2.29	0.63
1:A:92:PHE:HD1	1:A:92:PHE:C	2.01	0.63
1:A:109:GLN:HG3	1:A:199:LEU:HD13	1.80	0.63
1:A:112:ALA:O	1:A:116:LEU:HG	1.99	0.63
1:A:119:LEU:HD11	1:A:197:TYR:CZ	2.33	0.63
2:D:119:TYR:HB3	2:D:190:THR:HG21	1.80	0.63
2:D:414:ARG:CZ	2:D:491:ASN:ND2	2.61	0.63
2:G:470:ILE:CG2	2:G:471:LYS:H	2.11	0.63
2:H:392:SER:HB2	2:H:444:THR:HB	1.79	0.63
2:H:408:HIS:CE1	2:H:425:ARG:NH2	2.66	0.63
2:H:426:PHE:HB3	2:H:468:ILE:HD12	1.81	0.63
2:H:426:PHE:CB	2:H:468:ILE:HD11	2.28	0.63
1:A:84:ARG:NH2	2:C:354:GLU:HB2	2.13	0.62
1:B:178:GLN:HG3	1:B:213:GLN:HB3	1.80	0.62
1:B:198:LYS:CB	1:B:203:VAL:HG22	2.28	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:164:LEU:HD13	2:D:164:LEU:C	2.18	0.62
2:D:391:LYS:HG3	2:D:392:SER:N	2.14	0.62
2:D:444:THR:C	2:D:445:PHE:HD1	2.01	0.62
2:G:458:LYS:HB2	2:G:465:GLU:CB	2.29	0.62
2:H:151:LEU:HB3	2:H:343:GLY:HA2	1.81	0.62
2:D:11:THR:N	2:D:68:LYS:HZ2	1.96	0.62
2:D:155:LEU:HD22	2:D:155:LEU:N	2.13	0.62
2:D:307:ILE:CG2	2:D:308:LEU:N	2.51	0.62
2:G:280:HIS:CE1	2:G:281:LEU:CG	2.82	0.62
2:G:397:THR:OG1	2:G:439:PRO:HD2	1.98	0.62
2:H:308:LEU:HB2	2:H:330:PRO:HB2	1.81	0.62
2:H:361:LEU:CD1	2:H:387:ILE:CD1	2.77	0.62
1:A:99:GLU:O	1:A:102:ALA:HB3	1.99	0.62
1:A:141:GLY:CA	2:D:264:HIS:CE1	2.82	0.62
2:C:370:ILE:HG23	2:C:408:HIS:O	1.99	0.62
2:D:230:ARG:NH2	2:D:252:LEU:HD13	2.14	0.62
2:H:308:LEU:HD22	2:H:330:PRO:HG2	1.80	0.62
2:H:361:LEU:HD21	2:H:387:ILE:HD12	1.80	0.62
2:H:383:ARG:HG2	2:H:384:ASN:ND2	2.14	0.62
2:C:129:LYS:CG	2:C:142:ILE:HD12	2.27	0.62
2:D:388:PRO:CD	2:D:449:ALA:HA	2.29	0.62
1:F:87:ALA:HA	2:G:386:THR:HB	1.81	0.62
2:G:29:ASN:HA	2:G:100:TYR:CD2	2.35	0.62
2:G:151:LEU:HD12	2:G:154:GLY:CA	2.27	0.62
2:G:157:LYS:CD	2:G:158:GLU:HG2	2.29	0.62
2:C:153:TYR:HE1	2:C:334:VAL:HG11	1.64	0.62
2:C:313:THR:O	2:C:319:GLN:NE2	2.32	0.62
2:C:334:VAL:HG11	2:C:339:VAL:HG23	1.81	0.62
2:D:468:ILE:CG2	2:D:469:THR:H	2.12	0.62
2:H:385:THR:HG21	2:H:389:THR:HG21	1.81	0.62
2:D:152:ALA:CB	2:D:334:VAL:HG11	2.28	0.62
1:E:74:LYS:O	1:E:78:MET:HG2	1.99	0.62
2:G:470:ILE:CG2	2:G:471:LYS:N	2.62	0.62
2:H:71:MET:CE	2:H:128:THR:HG23	2.30	0.62
2:H:92:ILE:HG23	2:H:95:GLN:NE2	2.15	0.62
2:H:308:LEU:HD13	2:H:330:PRO:CG	2.28	0.62
2:C:251:SER:O	2:C:252:LEU:HD13	1.99	0.62
2:C:270:THR:HB	2:C:273:LYS:H	1.64	0.62
2:D:140:GLU:HB3	2:D:351:ILE:HG21	1.82	0.62
2:C:459:ASP:OD1	2:C:460:LEU:N	2.33	0.62
2:D:63:THR:O	2:D:63:THR:HG22	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:89:PHE:HD1	1:E:89:PHE:O	1.83	0.62
1:F:61:LEU:HD23	1:F:61:LEU:H	1.65	0.62
2:G:409:VAL:HG13	2:G:423:LEU:HB2	1.81	0.62
2:H:207:ASP:HA	2:H:210:VAL:HG22	1.82	0.62
2:H:281:LEU:HD12	2:H:284:ARG:NH1	2.14	0.62
1:A:92:PHE:O	1:A:92:PHE:CD1	2.46	0.62
2:C:43:LYS:HZ3	2:C:60:ASN:HA	1.64	0.62
2:C:154:GLY:O	2:C:156:ASP:N	2.33	0.62
2:C:355:VAL:HG23	2:C:356:LYS:N	2.14	0.62
2:C:500:GLU:HA	2:C:503:GLU:HG2	1.80	0.62
2:D:131:ALA:HA	2:D:134:ILE:HD12	1.82	0.62
2:D:337:ASP:OD1	2:D:337:ASP:N	2.31	0.62
2:C:499:LYS:HG2	2:C:500:GLU:OE1	2.00	0.62
1:B:86:TYR:CE2	2:C:359:VAL:HG21	2.35	0.61
2:C:172:THR:O	2:C:172:THR:OG1	2.16	0.61
2:G:145:GLU:CB	2:G:146:PRO:HD3	2.25	0.61
2:G:192:GLY:N	2:G:288:PRO:HB3	2.16	0.61
2:H:114:ILE:CG2	2:H:115:THR:N	2.62	0.61
2:D:193:ASP:OD1	2:D:193:ASP:C	2.38	0.61
2:D:257:ALA:HB1	2:D:261:GLY:C	2.20	0.61
1:E:78:MET:O	1:E:82:TYR:CB	2.48	0.61
2:H:98:LYS:CD	2:H:137:LEU:HD21	2.25	0.61
1:A:62:ALA:HA	1:A:65:LYS:HE2	1.81	0.61
1:A:88:ASP:OD2	2:C:20:GLU:HA	1.99	0.61
2:C:246:THR:C	2:C:247:GLN:HG3	2.18	0.61
2:D:64:ILE:HG21	2:D:67:ILE:CG1	2.30	0.61
2:C:68:LYS:HZ3	2:C:117:PRO:HG3	1.66	0.61
2:C:426:PHE:HD2	2:C:468:ILE:CD1	2.09	0.61
2:C:471:LYS:HZ2	2:C:471:LYS:N	1.98	0.61
2:C:497:LYS:C	2:C:499:LYS:N	2.53	0.61
2:D:298:LEU:HD12	2:D:302:ASP:CB	2.30	0.61
2:H:376:VAL:C	2:H:417:ALA:CB	2.65	0.61
1:A:160:ALA:HB2	1:A:197:TYR:CE1	2.36	0.61
2:D:199:ASP:OD1	2:D:199:ASP:N	2.27	0.61
2:D:252:LEU:CD1	2:D:255:ILE:CG1	2.56	0.61
1:E:96:THR:HA	1:E:99:GLU:CG	2.19	0.61
2:G:372:THR:CB	2:G:376:VAL:HG13	2.21	0.61
2:G:461:GLY:O	2:H:391:LYS:HD3	1.99	0.61
1:A:89:PHE:O	1:A:92:PHE:N	2.33	0.61
2:C:151:LEU:O	2:C:154:GLY:N	2.33	0.61
1:A:168:PHE:HD2	1:A:173:HIS:HB2	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:67:GLN:HE21	1:B:67:GLN:HA	1.65	0.61
2:D:230:ARG:NE	2:D:252:LEU:HD11	2.16	0.61
2:G:239:LYS:HA	2:G:242:LEU:HD22	1.82	0.61
2:H:100:TYR:O	2:H:103:ASP:HB2	2.00	0.61
1:F:73:ALA:O	1:F:77:GLU:HB2	2.00	0.61
2:G:243:SER:HA	2:G:316:PRO:CD	2.30	0.61
2:G:371:GLU:HB2	2:G:408:HIS:O	2.00	0.61
2:H:208:TYR:OH	2:H:273:LYS:HD2	2.01	0.61
2:C:64:ILE:HD13	2:C:89:ILE:CG1	2.31	0.61
2:C:372:THR:CG2	2:C:378:THR:OG1	2.48	0.61
2:D:7:ILE:O	2:D:115:THR:HG22	2.00	0.61
2:D:102:GLU:HG3	2:D:109:VAL:CG1	2.30	0.61
2:D:105:LEU:HB3	2:D:107:GLU:HB3	1.83	0.61
2:D:364:THR:HG22	2:D:364:THR:O	2.01	0.61
2:G:205:ILE:O	2:G:209:LEU:CG	2.47	0.61
1:A:168:PHE:CZ	1:A:175:ALA:HB2	2.35	0.60
2:D:370:ILE:HD11	2:D:445:PHE:HE1	1.64	0.60
1:E:75:LEU:HA	1:E:78:MET:CG	2.31	0.60
2:G:307:ILE:HG22	2:G:308:LEU:N	2.16	0.60
2:H:4:ILE:HD11	2:H:111:ARG:HH11	1.66	0.60
2:H:72:GLY:H	2:H:87:GLN:NE2	1.98	0.60
2:H:306:VAL:HG12	2:H:307:ILE:H	1.63	0.60
2:D:224:ASP:OD1	2:D:226:MET:HB2	2.00	0.60
1:E:81:ARG:HG3	1:E:82:TYR:N	2.15	0.60
2:H:125:ARG:HA	2:H:128:THR:OG1	2.00	0.60
1:A:119:LEU:HD13	1:A:119:LEU:C	2.21	0.60
1:B:126:LEU:H	1:B:126:LEU:CD2	2.06	0.60
2:G:477:SER:O	2:G:480:GLU:HG3	2.01	0.60
2:G:163:ILE:HG12	2:G:305:LYS:O	2.02	0.60
2:G:458:LYS:HG2	2:G:459:ASP:O	2.00	0.60
2:H:184:VAL:HG12	2:H:185:PHE:N	2.16	0.60
1:A:71:LEU:CB	1:B:71:LEU:HD12	2.29	0.60
2:C:321:ALA:O	2:C:325:GLU:HB2	2.01	0.60
2:D:483:ARG:NH1	2:D:486:LYS:HD3	2.17	0.60
1:E:190:VAL:CB	1:E:210:LYS:O	2.49	0.60
2:G:162:THR:O	2:G:163:ILE:HG13	2.00	0.60
2:D:391:LYS:HG3	2:D:392:SER:H	1.66	0.60
2:D:497:LYS:HD3	2:D:498:ARG:N	2.16	0.60
2:D:67:ILE:O	2:D:69:ARG:N	2.34	0.60
2:D:208:TYR:CD1	2:D:208:TYR:C	2.74	0.60
2:D:255:ILE:HD11	2:D:265:LEU:HB3	1.81	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:455:VAL:CG1	2:D:456:ARG:N	2.65	0.60
2:G:210:VAL:HB	2:G:214:LYS:HZ1	1.67	0.60
2:H:505:ARG:O	2:H:507:GLU:N	2.34	0.60
2:C:64:ILE:HG22	2:C:67:ILE:CG1	2.32	0.60
2:H:335:ASN:O	2:H:339:VAL:HB	2.01	0.60
2:C:199:ASP:O	2:C:202:ASP:HB2	2.02	0.60
2:H:128:THR:O	2:H:129:LYS:C	2.39	0.60
2:H:367:SER:HB3	2:H:383:ARG:HA	1.83	0.60
2:C:334:VAL:HG11	2:C:339:VAL:CG2	2.32	0.60
2:D:70:HIS:ND1	2:D:75:TYR:CE2	2.70	0.60
1:A:177:MET:SD	1:A:210:LYS:HE3	2.41	0.59
2:D:193:ASP:OD1	2:D:195:HIS:N	2.32	0.59
2:D:361:LEU:CD2	2:D:387:ILE:CG1	2.80	0.59
2:D:476:LEU:HB2	2:D:480:GLU:CD	2.23	0.59
2:G:370:ILE:HD11	2:G:445:PHE:HE1	1.63	0.59
1:B:122:PHE:CD1	1:B:146:TYR:CB	2.84	0.59
1:B:199:LEU:N	1:B:204:LEU:HD11	2.17	0.59
2:C:380:LEU:HD12	2:C:445:PHE:CE1	2.36	0.59
2:D:280:HIS:CD2	2:D:281:LEU:HD13	2.37	0.59
2:D:471:LYS:H	2:D:471:LYS:HD2	1.66	0.59
1:F:89:PHE:O	1:F:92:PHE:HD1	1.85	0.59
2:H:16:VAL:CG2	2:H:27:ILE:HD12	2.32	0.59
2:H:376:VAL:CG2	2:H:377:PHE:N	2.65	0.59
2:H:496:ARG:NE	2:H:496:ARG:N	2.49	0.59
2:C:497:LYS:HA	2:C:500:GLU:OE2	2.02	0.59
2:G:205:ILE:HG22	2:G:209:LEU:HD11	1.84	0.59
2:C:254:PHE:N	2:C:254:PHE:HD1	1.99	0.59
2:C:255:ILE:CD1	2:C:265:LEU:CB	2.47	0.59
1:E:63:ALA:HA	1:E:66:ALA:HB3	1.84	0.59
2:H:141:ARG:NH1	2:H:347:GLN:HE21	1.99	0.59
2:H:143:ILE:HG22	2:H:144:ASN:N	2.17	0.59
2:H:339:VAL:HA	2:H:342:ILE:HD12	1.83	0.59
1:A:153:LEU:HB3	1:A:158:VAL:HB	1.85	0.59
2:C:397:THR:CG2	2:C:436:ARG:HA	2.32	0.59
2:C:471:LYS:H	2:C:471:LYS:CD	2.15	0.59
1:A:92:PHE:CZ	1:B:92:PHE:CE1	2.90	0.59
1:A:128:ILE:O	1:A:128:ILE:CG2	2.49	0.59
2:D:153:TYR:HB3	2:D:155:LEU:CD1	2.27	0.59
2:D:299:THR:HG23	2:D:302:ASP:OD2	2.02	0.59
2:D:494:ALA:C	2:D:496:ARG:HG2	2.23	0.59
2:G:112:ALA:O	2:G:139:VAL:HA	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:239:LYS:NZ	2:G:312:SER:OG	2.35	0.59
2:G:249:GLN:HA	2:G:269:LEU:N	2.11	0.59
2:G:392:SER:OG	2:G:444:THR:HG22	2.01	0.59
2:H:152:ALA:CB	2:H:342:ILE:HG21	2.31	0.59
2:H:202:ASP:O	2:H:206:ILE:CD1	2.51	0.59
2:H:324:ARG:HG3	2:H:325:GLU:H	1.68	0.59
2:H:361:LEU:CD2	2:H:387:ILE:HD12	2.32	0.59
2:C:357:ASP:HB3	2:C:359:VAL:CG2	2.33	0.59
2:C:462:THR:O	2:C:463:ASN:HB2	2.02	0.59
2:D:67:ILE:HD12	2:D:89:ILE:CG2	2.24	0.59
2:D:387:ILE:O	2:D:389:THR:HG22	2.02	0.59
2:G:211:ASN:HA	2:G:214:LYS:HD2	1.83	0.59
2:H:250:ILE:O	2:H:266:GLU:HA	2.02	0.59
2:H:370:ILE:HG22	2:H:371:GLU:N	2.17	0.59
2:H:486:LYS:HZ2	2:H:486:LYS:C	2.06	0.59
2:H:494:ALA:O	2:H:496:ARG:CZ	2.51	0.59
1:B:110:SER:OG	1:B:111:LEU:N	2.35	0.59
2:C:27:ILE:HD13	2:C:101:ALA:HA	1.85	0.59
2:D:209:LEU:CD1	2:D:265:LEU:HD11	2.27	0.59
2:G:239:LYS:HG2	2:G:315:ILE:HD11	1.83	0.59
2:G:434:ALA:HB1	2:G:435:PRO:HD2	1.85	0.59
2:H:180:LEU:HB2	2:H:185:PHE:HE1	1.68	0.59
2:H:443:VAL:HA	2:H:456:ARG:O	2.03	0.59
1:A:114:ASP:OD2	1:B:155:LYS:CE	2.50	0.59
2:C:414:ARG:CZ	2:C:419:ASP:OD2	2.51	0.59
2:H:479:GLU:HG3	2:H:480:GLU:N	2.18	0.59
1:A:199:LEU:HB2	1:A:204:LEU:CD1	2.23	0.59
2:D:312:SER:O	2:D:315:ILE:CD1	2.51	0.59
2:G:307:ILE:CG2	2:G:308:LEU:N	2.65	0.59
2:H:243:SER:O	2:H:316:PRO:HG3	2.02	0.59
1:A:134:GLN:HG2	2:D:260:ASN:O	2.03	0.58
1:A:199:LEU:O	1:A:200:LYS:C	2.42	0.58
2:D:312:SER:O	2:D:315:ILE:HG13	2.02	0.58
2:G:377:PHE:CD1	2:G:410:LEU:HD12	2.38	0.58
2:H:373:MET:HG2	2:H:398:ALA:HB2	1.85	0.58
2:D:497:LYS:HD3	2:D:498:ARG:CA	2.33	0.58
2:G:151:LEU:O	2:G:346:ILE:CD1	2.49	0.58
2:G:151:LEU:HA	2:G:154:GLY:HA2	1.84	0.58
2:H:16:VAL:HG22	2:H:27:ILE:HD12	1.83	0.58
2:H:147:THR:HG22	2:H:185:PHE:HD2	1.66	0.58
2:C:359:VAL:CG1	2:C:362:ASP:OD2	2.51	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:455:VAL:HG12	2:D:456:ARG:N	2.17	0.58
1:E:67:GLN:OE1	1:F:68:ILE:HD13	2.03	0.58
2:G:77:VAL:CG1	2:G:79:ILE:HD12	2.32	0.58
2:H:126:GLN:O	2:H:127:ALA:C	2.42	0.58
2:H:156:ASP:HA	2:H:180:LEU:HD21	1.84	0.58
1:A:89:PHE:HA	1:B:89:PHE:HE1	1.69	0.58
1:A:92:PHE:HE1	1:A:96:THR:OG1	1.86	0.58
2:C:229:GLN:HE21	2:C:229:GLN:CA	2.15	0.58
2:C:322:ILE:O	2:C:326:LEU:HD22	2.02	0.58
2:C:347:GLN:O	2:C:351:ILE:HG13	2.03	0.58
2:C:372:THR:HG21	2:C:378:THR:OG1	2.03	0.58
2:D:98:LYS:HD2	2:D:137:LEU:CD2	2.14	0.58
1:E:95:ARG:HD2	2:G:104:TYR:CE1	2.38	0.58
2:H:361:LEU:CD2	2:H:387:ILE:HD11	2.32	0.58
2:C:191:ALA:HB1	2:C:288:PRO:HB3	1.84	0.58
2:G:491:ASN:ND2	2:G:494:ALA:HB2	2.19	0.58
2:H:119:TYR:CB	2:H:190:THR:HG21	2.31	0.58
2:H:339:VAL:HA	2:H:342:ILE:CD1	2.32	0.58
2:H:361:LEU:HD11	2:H:387:ILE:CD1	2.33	0.58
1:A:196:GLY:HA3	1:A:207:ALA:HB2	1.86	0.58
2:C:18:VAL:HG23	2:C:19:LEU:N	2.19	0.58
2:C:152:ALA:HB2	2:C:343:GLY:N	2.18	0.58
2:C:159:GLU:CD	2:C:159:GLU:N	2.56	0.58
2:D:29:ASN:HD22	2:D:29:ASN:H	1.50	0.58
2:D:208:TYR:C	2:D:208:TYR:HD1	2.05	0.58
2:D:359:VAL:H	2:G:395:PHE:HB3	1.69	0.58
1:A:89:PHE:HB2	1:B:89:PHE:CE1	2.39	0.58
1:B:123:GLU:OE2	1:B:195:LYS:HD2	2.03	0.58
2:C:205:ILE:CD1	2:C:274:PHE:HE2	2.17	0.58
2:D:385:THR:O	2:D:386:THR:HB	2.02	0.58
2:G:212:GLN:O	2:G:215:GLN:HB3	2.04	0.58
2:H:67:ILE:CD1	2:H:89:ILE:CD1	2.62	0.58
1:A:158:VAL:HG22	1:A:199:LEU:HG	1.84	0.58
1:B:86:TYR:CE2	2:C:359:VAL:HG11	2.38	0.58
2:D:139:VAL:HG12	2:D:141:ARG:N	2.19	0.58
2:G:303:ILE:HG21	2:G:306:VAL:HG23	1.86	0.58
2:H:286:MET:O	2:H:290:ARG:HD2	2.02	0.58
1:A:198:LYS:O	1:A:198:LYS:HG2	2.02	0.58
2:C:462:THR:HG21	2:C:464:LYS:CB	2.31	0.58
2:D:11:THR:HG23	2:D:68:LYS:HZ2	1.69	0.58
2:D:389:THR:OG1	2:D:390:SER:N	2.34	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:394:VAL:HG13	2:G:441:ILE:O	2.03	0.58
2:G:414:ARG:O	2:G:420:ASN:ND2	2.37	0.58
2:H:144:ASN:HB3	2:H:146:PRO:HD2	1.86	0.58
2:H:396:THR:OG1	2:H:397:THR:N	2.30	0.58
2:D:105:LEU:HD13	2:D:105:LEU:N	2.19	0.58
2:H:16:VAL:HG22	2:H:16:VAL:O	2.03	0.58
2:H:153:TYR:HB3	2:H:155:LEU:CD1	2.31	0.58
2:H:361:LEU:HD11	2:H:387:ILE:HD12	1.85	0.58
1:A:131:ASP:CB	1:A:136:LYS:HE3	2.32	0.57
1:A:178:GLN:NE2	1:A:213:GLN:HA	2.18	0.57
2:C:73:THR:CG2	2:C:75:TYR:HB3	2.34	0.57
2:C:198:GLY:O	2:C:201:PHE:N	2.37	0.57
2:C:396:THR:CG2	2:H:361:LEU:HB2	2.34	0.57
2:C:499:LYS:O	2:C:502:ALA:HB3	2.03	0.57
2:D:65:ILE:O	2:D:66:SER:C	2.42	0.57
2:D:148:ALA:O	2:D:343:GLY:HA3	2.03	0.57
2:D:206:ILE:HD11	2:D:232:LYS:HA	1.85	0.57
2:D:361:LEU:O	2:D:362:ASP:CG	2.41	0.57
1:E:81:ARG:NH1	2:G:355:VAL:HG23	2.19	0.57
2:G:370:ILE:CD1	2:G:445:PHE:CZ	2.86	0.57
2:H:496:ARG:C	2:H:498:ARG:N	2.54	0.57
2:D:73:THR:HG22	2:D:74:ASP:N	2.19	0.57
2:G:29:ASN:HA	2:G:100:TYR:CE2	2.39	0.57
1:A:149:LEU:O	1:A:152:ALA:HB3	2.04	0.57
1:B:116:LEU:HD13	1:B:197:TYR:CD2	2.23	0.57
2:C:29:ASN:HB2	2:C:30:PRO:CD	2.35	0.57
2:C:414:ARG:HH21	2:C:494:ALA:CB	2.17	0.57
2:D:422:SER:O	2:D:423:LEU:HG	2.05	0.57
2:G:322:ILE:HA	2:G:325:GLU:HB2	1.85	0.57
2:H:124:GLN:O	2:H:127:ALA:HB3	2.05	0.57
1:A:185:GLU:HB3	1:A:186:PRO:HD2	1.86	0.57
2:C:193:ASP:OD2	2:C:196:LEU:N	2.36	0.57
2:C:269:LEU:HD11	2:C:274:PHE:HB2	1.86	0.57
2:D:495:ASP:C	2:D:497:LYS:N	2.56	0.57
2:G:177:ILE:HB	2:G:189:ALA:HB3	1.86	0.57
2:H:147:THR:CG2	2:H:185:PHE:CD2	2.86	0.57
2:H:289:VAL:O	2:H:293:LEU:HG	2.04	0.57
2:C:43:LYS:NZ	2:C:61:PRO:HD2	2.20	0.57
1:F:84:ARG:O	1:F:87:ALA:HB3	2.05	0.57
1:A:120:ASP:O	1:A:123:GLU:N	2.37	0.57
2:C:70:HIS:O	2:C:73:THR:HG22	2.03	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:38:SER:O	2:D:39:VAL:CG1	2.53	0.57
2:D:372:THR:OG1	2:D:373:MET:N	2.36	0.57
2:G:242:LEU:HD23	2:G:274:PHE:CD2	2.40	0.57
2:C:426:PHE:CD2	2:C:468:ILE:CD1	2.87	0.57
2:C:505:ARG:HG2	2:C:505:ARG:NH1	2.19	0.57
2:D:256:SER:O	2:D:263:LEU:HB2	2.04	0.57
2:G:124:GLN:O	2:G:127:ALA:HB3	2.05	0.57
2:G:151:LEU:O	2:G:151:LEU:HG	2.03	0.57
2:H:71:MET:O	2:H:124:GLN:HB2	2.05	0.57
2:H:397:THR:HG22	2:H:439:PRO:HD2	1.87	0.57
1:A:109:GLN:O	1:A:110:SER:C	2.43	0.57
1:A:114:ASP:OD2	1:B:155:LYS:HE3	2.04	0.57
2:D:230:ARG:CZ	2:D:252:LEU:CD1	2.83	0.57
2:D:388:PRO:HG3	2:D:449:ALA:CA	2.34	0.57
2:D:504:LEU:HD13	2:D:507:GLU:CB	2.33	0.57
2:G:398:ALA:HB2	2:G:402:GLN:HE22	1.69	0.57
2:H:166:TYR:CE1	2:H:168:LEU:HD23	2.40	0.57
1:A:125:ALA:O	1:A:128:ILE:HG13	2.04	0.57
1:A:174:GLN:HB2	2:C:55:ARG:HD2	1.85	0.57
2:C:18:VAL:CG1	2:C:27:ILE:CD1	2.83	0.57
2:C:175:VAL:HG12	2:C:176:SER:N	2.19	0.57
2:C:241:GLU:O	2:C:245:VAL:HG13	2.05	0.57
2:C:370:ILE:HD13	2:C:407:ILE:CG2	2.34	0.57
2:D:151:LEU:N	2:D:151:LEU:CD1	2.66	0.57
2:D:210:VAL:HG23	2:D:221:LEU:HD13	1.85	0.57
2:G:241:GLU:O	2:G:245:VAL:N	2.37	0.57
2:H:495:ASP:C	2:H:497:LYS:H	2.06	0.57
1:A:78:MET:SD	1:A:82:TYR:OH	2.62	0.57
1:B:92:PHE:CG	1:B:93:ARG:N	2.73	0.57
2:C:243:SER:O	2:C:271:ARG:NH1	2.38	0.57
1:F:120:ASP:O	1:F:124:ARG:CB	2.53	0.57
2:G:400:ASP:N	2:G:436:ARG:HB3	2.19	0.57
2:H:96:TYR:O	2:H:99:SER:N	2.38	0.57
1:A:68:ILE:O	1:A:72:GLU:HG3	2.05	0.56
1:B:132:ASN:C	1:B:133:GLU:HG3	2.25	0.56
1:B:169:ASP:C	1:B:171:TYR:N	2.55	0.56
2:C:8:ASP:O	2:C:14:SER:HB3	2.04	0.56
2:C:87:GLN:HB3	2:C:134:ILE:HD12	1.87	0.56
2:C:116:VAL:O	2:C:144:ASN:HA	2.04	0.56
2:C:405:VAL:HG11	2:C:441:ILE:HD13	1.86	0.56
2:D:13:ASN:HA	2:D:38:SER:H	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:64:ILE:CG2	2:D:67:ILE:CD1	2.69	0.56
2:D:137:LEU:N	2:D:137:LEU:HD23	2.19	0.56
2:D:166:TYR:CE2	2:D:322:ILE:CD1	2.88	0.56
2:D:379:LYS:O	2:D:380:LEU:HD23	2.05	0.56
2:G:387:ILE:HG21	2:G:449:ALA:O	2.05	0.56
1:A:133:GLU:CD	1:B:133:GLU:OE1	2.44	0.56
2:C:29:ASN:HA	2:C:100:TYR:CD2	2.39	0.56
2:D:58:ILE:O	2:D:58:ILE:CG2	2.53	0.56
2:D:285:THR:HB	2:D:286:MET:SD	2.44	0.56
2:G:164:LEU:HD22	2:G:165:VAL:N	2.21	0.56
2:H:8:ASP:O	2:H:14:SER:HB3	2.04	0.56
2:H:420:ASN:H	2:H:420:ASN:HD22	1.52	0.56
1:A:106:TYR:N	1:A:106:TYR:CD1	2.71	0.56
2:C:133:ARG:HB3	2:C:133:ARG:HH11	1.68	0.56
2:C:152:ALA:HB2	2:C:343:GLY:HA2	1.86	0.56
2:C:370:ILE:HD13	2:C:407:ILE:HG21	1.87	0.56
2:D:38:SER:O	2:D:39:VAL:HG12	2.05	0.56
2:D:67:ILE:HD13	2:D:89:ILE:CB	2.35	0.56
2:D:70:HIS:O	2:D:86:PRO:HG2	2.05	0.56
2:D:318:VAL:HG12	2:D:322:ILE:HD11	1.87	0.56
2:D:421:LYS:HZ1	2:D:480:GLU:CD	2.08	0.56
2:G:91:ALA:O	2:G:135:ALA:HB2	2.05	0.56
2:G:125:ARG:HA	2:G:128:THR:HG23	1.86	0.56
2:H:71:MET:HE2	2:H:128:THR:HG23	1.87	0.56
2:C:497:LYS:C	2:C:499:LYS:H	2.07	0.56
2:D:42:PHE:CE1	2:D:79:ILE:CD1	2.89	0.56
2:G:492:ALA:O	2:G:493:GLU:HG2	2.06	0.56
2:H:114:ILE:CG2	2:H:115:THR:H	2.19	0.56
2:H:368:LEU:HD23	2:H:368:LEU:N	2.20	0.56
1:A:203:VAL:O	1:A:203:VAL:HG12	2.05	0.56
1:B:94:ARG:NH1	1:B:98:GLN:NE2	2.54	0.56
2:C:366:LEU:HA	2:C:383:ARG:CG	2.35	0.56
2:D:339:VAL:HG12	2:D:340:VAL:N	2.19	0.56
2:G:120:PHE:HA	2:G:124:GLN:NE2	2.20	0.56
2:G:279:ALA:O	2:G:282:VAL:HG12	2.05	0.56
2:G:371:GLU:CG	2:G:408:HIS:HB3	2.20	0.56
2:H:367:SER:HB3	2:H:383:ARG:CA	2.35	0.56
2:C:154:GLY:C	2:C:156:ASP:H	2.08	0.56
2:C:471:LYS:HB2	2:C:471:LYS:NZ	2.20	0.56
2:C:505:ARG:HG2	2:C:505:ARG:HH11	1.71	0.56
2:D:161:GLN:N	2:D:180:LEU:HD23	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:462:THR:CB	2:G:464:LYS:H	2.17	0.56
1:A:71:LEU:HG	1:A:74:LYS:HD2	1.87	0.56
2:C:79:ILE:HG22	2:C:80:GLU:HG2	1.87	0.56
2:C:397:THR:HG22	2:C:437:GLY:H	1.71	0.56
2:C:408:HIS:NE2	2:C:422:SER:OG	2.33	0.56
2:D:121:ASN:N	2:D:124:GLN:OE1	2.39	0.56
2:D:143:ILE:HG22	2:D:144:ASN:N	2.20	0.56
2:D:201:PHE:CE1	2:D:281:LEU:HD23	2.40	0.56
2:G:501:ALA:O	2:G:504:LEU:HD23	2.04	0.56
2:H:147:THR:HA	2:H:150:ALA:HB3	1.87	0.56
2:H:273:LYS:HD3	2:H:276:GLU:CD	2.26	0.56
2:D:14:SER:O	2:D:36:THR:CG2	2.53	0.56
2:D:21:GLY:C	2:D:23:GLU:H	2.09	0.56
2:D:105:LEU:C	2:D:107:GLU:N	2.59	0.56
2:D:256:SER:O	2:D:263:LEU:CB	2.54	0.56
1:E:66:ALA:O	1:E:69:ALA:HB3	2.06	0.56
1:F:98:GLN:HA	1:F:101:GLU:CD	2.25	0.56
2:G:308:LEU:HD13	2:G:330:PRO:CG	2.35	0.56
1:A:88:ASP:OD1	2:C:3:LYS:HE2	2.06	0.56
2:D:220:ASP:O	2:D:223:LYS:HG2	2.06	0.56
2:D:338:GLU:O	2:D:339:VAL:C	2.44	0.56
1:F:86:TYR:CE2	2:G:359:VAL:HG13	2.40	0.56
2:H:67:ILE:CG1	2:H:89:ILE:HD13	2.35	0.56
1:A:121:ASN:HD22	1:B:145:VAL:CG2	2.19	0.56
2:C:72:GLY:HA3	2:C:124:GLN:HG2	1.88	0.56
2:D:65:ILE:CG2	2:D:66:SER:N	2.54	0.56
2:D:224:ASP:CG	2:D:226:MET:HB2	2.26	0.56
2:D:334:VAL:HB	2:D:339:VAL:CG2	2.36	0.56
2:D:499:LYS:HG2	2:D:500:GLU:N	2.21	0.56
2:G:10:GLY:N	2:G:13:ASN:O	2.37	0.56
2:H:1:MET:O	2:H:1:MET:HG2	2.05	0.56
1:A:138:ILE:HD13	1:B:139:LEU:HD11	1.87	0.55
1:B:165:GLY:O	1:B:188:THR:HG23	2.06	0.55
2:C:5:ILE:HD12	2:C:109:VAL:HG21	1.87	0.55
2:D:416:MET:CE	2:D:417:ALA:H	2.17	0.55
2:D:504:LEU:CD1	2:D:504:LEU:O	2.54	0.55
2:H:166:TYR:HE1	2:H:168:LEU:HD23	1.71	0.55
2:D:146:PRO:HB3	2:D:165:VAL:HG21	1.87	0.55
1:E:97:ARG:HD2	1:E:97:ARG:O	2.05	0.55
2:G:489:GLU:OE1	2:G:489:GLU:HA	2.06	0.55
2:H:435:PRO:O	2:H:439:PRO:HD3	2.05	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:502:ALA:O	2:C:505:ARG:HD3	2.05	0.55
2:D:130:ASP:O	2:D:134:ILE:HG13	2.05	0.55
2:D:154:GLY:O	2:D:156:ASP:OD1	2.23	0.55
2:D:408:HIS:HB3	2:D:410:LEU:HD21	1.87	0.55
1:F:60:GLU:N	1:F:63:ALA:HB3	2.21	0.55
2:G:347:GLN:HA	2:G:350:VAL:HB	1.87	0.55
2:H:203:GLN:HE22	2:H:206:ILE:HG21	1.72	0.55
2:C:155:LEU:HD13	2:C:155:LEU:N	2.21	0.55
2:D:120:PHE:CE2	2:D:124:GLN:HB3	2.42	0.55
2:D:164:LEU:HD13	2:D:165:VAL:C	2.27	0.55
2:D:208:TYR:CE1	2:D:212:GLN:CG	2.88	0.55
2:D:483:ARG:HH21	1:F:85:LEU:CD2	2.19	0.55
2:G:164:LEU:CD2	2:G:175:VAL:HB	2.36	0.55
2:G:165:VAL:HG22	2:G:176:SER:N	2.13	0.55
2:H:94:LEU:HD12	2:H:97:LEU:HB2	1.88	0.55
2:H:146:PRO:CB	2:H:178:LEU:HD11	2.36	0.55
2:H:149:ALA:HA	2:H:339:VAL:O	2.07	0.55
2:H:339:VAL:HG23	2:H:342:ILE:HD13	1.75	0.55
2:H:361:LEU:HD11	2:H:387:ILE:HG13	1.77	0.55
1:A:134:GLN:O	1:A:137:SER:HB3	2.06	0.55
2:C:468:ILE:HG22	2:C:469:THR:N	2.21	0.55
2:D:42:PHE:N	2:D:42:PHE:CD1	2.73	0.55
2:D:405:VAL:HG23	2:D:405:VAL:O	2.05	0.55
1:A:113:SER:OG	1:A:114:ASP:N	2.37	0.55
2:C:102:GLU:O	2:C:106:GLY:N	2.39	0.55
2:D:10:GLY:HA2	2:D:68:LYS:HZ1	1.71	0.55
2:D:235:ALA:O	2:D:238:ALA:HB3	2.07	0.55
2:D:315:ILE:HD12	2:D:318:VAL:HG21	1.88	0.55
2:D:332:LYS:CD	2:D:332:LYS:H	2.20	0.55
2:D:420:ASN:N	2:D:420:ASN:ND2	2.54	0.55
2:D:500:GLU:CA	2:D:503:GLU:HB2	2.37	0.55
1:E:72:GLU:HA	1:E:75:LEU:HB2	1.89	0.55
1:E:81:ARG:HG3	1:E:82:TYR:CD1	2.41	0.55
2:H:7:ILE:HD13	2:H:97:LEU:HD23	1.89	0.55
2:H:15:CYS:SG	2:H:338:GLU:CB	2.95	0.55
1:A:89:PHE:C	1:A:89:PHE:HD1	2.10	0.55
1:A:119:LEU:HD13	1:A:119:LEU:O	2.07	0.55
2:C:17:ALA:O	2:C:345:ALA:HB2	2.07	0.55
2:C:282:VAL:CG1	2:C:283:GLU:N	2.70	0.55
2:D:322:ILE:HG23	2:D:326:LEU:CD2	2.37	0.55
2:D:421:LYS:HE3	2:D:480:GLU:OE2	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:366:LEU:HB2	2:G:411:GLN:NE2	2.18	0.55
2:G:411:GLN:HB2	2:G:423:LEU:HD11	1.89	0.55
2:H:192:GLY:O	2:H:288:PRO:HG3	2.07	0.55
2:H:381:ILE:CD1	2:H:447:ILE:CD1	2.82	0.55
1:A:134:GLN:CG	2:D:260:ASN:O	2.54	0.55
1:B:177:MET:HB3	1:B:210:LYS:CG	2.28	0.55
2:C:303:ILE:O	2:C:328:LYS:HE3	2.07	0.55
2:C:368:LEU:CD2	2:C:411:GLN:HB2	2.37	0.55
2:D:25:LYS:HG3	2:D:26:VAL:H	1.71	0.55
2:D:67:ILE:HD13	2:D:89:ILE:CG2	2.34	0.55
1:F:64:ALA:O	1:F:68:ILE:HG13	2.07	0.55
2:G:298:LEU:HB3	2:G:302:ASP:CB	2.37	0.55
2:G:398:ALA:N	2:G:402:GLN:OE1	2.39	0.55
2:H:153:TYR:O	2:H:154:GLY:C	2.44	0.55
2:H:397:THR:CG2	2:H:439:PRO:HG2	2.37	0.55
2:H:484:MET:O	2:H:487:GLU:HB3	2.07	0.55
1:A:160:ALA:HA	1:A:197:TYR:CD1	2.40	0.55
1:B:161:ILE:CD1	1:B:198:LYS:HB3	2.35	0.55
2:C:168:LEU:HD13	2:C:197:GLY:HA2	1.87	0.55
2:C:370:ILE:HG12	2:C:409:VAL:HA	1.88	0.55
2:D:167:ASP:C	2:D:167:ASP:OD1	2.44	0.55
2:D:236:GLU:O	2:D:239:LYS:N	2.40	0.55
2:D:370:ILE:HD11	2:D:445:PHE:CZ	2.41	0.55
2:D:495:ASP:C	2:D:497:LYS:H	2.09	0.55
2:G:370:ILE:HD11	2:G:445:PHE:CZ	2.41	0.55
2:G:440:GLN:HB2	2:G:460:LEU:HG	1.88	0.55
1:A:119:LEU:O	1:A:119:LEU:HD22	2.07	0.55
2:C:19:LEU:O	2:C:19:LEU:HD23	2.06	0.55
2:C:151:LEU:C	2:C:154:GLY:H	2.10	0.55
2:D:230:ARG:CZ	2:D:252:LEU:HD13	2.37	0.55
1:E:92:PHE:CE1	1:F:92:PHE:CE2	2.95	0.55
2:G:205:ILE:HG22	2:G:209:LEU:CD1	2.37	0.55
2:G:370:ILE:HG13	2:G:445:PHE:HZ	1.71	0.55
2:G:472:SER:O	2:G:473:SER:HB3	2.07	0.55
2:H:387:ILE:CG2	2:H:388:PRO:N	2.69	0.55
2:H:496:ARG:C	2:H:496:ARG:NE	2.58	0.55
1:A:75:LEU:HG	1:B:75:LEU:CD2	2.37	0.54
1:A:91:ASN:O	1:A:94:ARG:N	2.40	0.54
2:C:27:ILE:HD13	2:C:101:ALA:CB	2.37	0.54
2:C:164:LEU:HD22	2:C:164:LEU:C	2.26	0.54
2:D:241:GLU:O	2:D:245:VAL:HG13	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:168:PHE:HB3	1:A:189:VAL:HG22	1.89	0.54
2:C:29:ASN:HD21	2:C:36:THR:HG23	1.70	0.54
2:C:203:GLN:OE1	2:C:203:GLN:HA	2.06	0.54
2:C:257:ALA:HB2	2:C:262:PRO:HA	1.90	0.54
2:D:73:THR:HG22	2:D:74:ASP:H	1.71	0.54
2:D:104:TYR:C	2:D:105:LEU:HD13	2.28	0.54
2:D:477:SER:HB3	2:D:481:ILE:CD1	2.37	0.54
2:D:505:ARG:HG3	2:D:506:ASN:H	1.71	0.54
2:G:91:ALA:HB2	2:G:134:ILE:CG2	2.37	0.54
2:G:162:THR:C	2:G:163:ILE:HG13	2.28	0.54
2:G:405:VAL:HG21	2:G:441:ILE:HD13	1.90	0.54
2:G:458:LYS:NZ	2:G:465:GLU:HB3	2.22	0.54
1:A:105:LYS:HB3	1:A:106:TYR:CD1	2.43	0.54
1:A:168:PHE:CD2	1:A:173:HIS:HB2	2.42	0.54
1:B:77:GLU:OE1	1:B:81:ARG:HD3	2.08	0.54
1:B:160:ALA:HB2	1:B:197:TYR:CE1	2.40	0.54
2:C:80:GLU:OE1	2:C:80:GLU:CA	2.53	0.54
2:C:245:VAL:HG22	2:C:247:GLN:H	1.72	0.54
2:D:8:ASP:O	2:D:14:SER:HB3	2.08	0.54
2:D:141:ARG:NH2	2:D:143:ILE:HD11	2.22	0.54
2:D:180:LEU:HA	2:D:184:VAL:O	2.06	0.54
2:D:196:LEU:HD12	2:D:197:GLY:H	1.71	0.54
2:D:322:ILE:HG23	2:D:326:LEU:HD22	1.89	0.54
2:D:492:ALA:C	2:D:494:ALA:H	2.08	0.54
1:E:71:LEU:HB3	1:F:71:LEU:HD12	1.88	0.54
2:G:77:VAL:CG1	2:G:79:ILE:CD1	2.84	0.54
2:G:249:GLN:CA	2:G:269:LEU:H	2.14	0.54
2:G:414:ARG:NE	2:G:494:ALA:HB3	2.23	0.54
2:G:434:ALA:HB1	2:G:435:PRO:CD	2.37	0.54
2:C:20:GLU:O	2:C:21:GLY:C	2.43	0.54
2:C:357:ASP:CB	2:C:359:VAL:HG23	2.37	0.54
2:D:289:VAL:O	2:D:293:LEU:HG	2.07	0.54
2:G:428:LEU:HD13	2:G:466:GLN:HB2	1.88	0.54
1:B:94:ARG:O	1:B:98:GLN:HB2	2.07	0.54
2:C:194:ASN:C	2:C:194:ASN:OD1	2.45	0.54
1:E:71:LEU:HD23	1:F:71:LEU:HB2	1.87	0.54
2:G:396:THR:HG1	2:G:437:GLY:HA2	1.70	0.54
2:H:29:ASN:HA	2:H:100:TYR:HD2	1.73	0.54
1:B:123:GLU:HB3	1:B:127:LYS:CE	2.38	0.54
1:B:126:LEU:HD23	1:B:126:LEU:N	2.11	0.54
1:B:166:LYS:HG2	1:B:167:PRO:HD3	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:178:LEU:HD12	2:C:178:LEU:N	2.23	0.54
2:C:493:GLU:OE1	2:C:493:GLU:HA	2.07	0.54
2:D:29:ASN:HD22	2:D:29:ASN:N	2.04	0.54
2:H:141:ARG:NH1	2:H:347:GLN:NE2	2.55	0.54
1:A:126:LEU:O	1:A:129:GLU:OE2	2.25	0.54
2:C:90:SER:O	2:C:94:LEU:HD13	2.07	0.54
2:C:270:THR:HG22	2:C:271:ARG:N	2.23	0.54
2:D:86:PRO:HD2	2:D:87:GLN:OE1	2.08	0.54
2:D:173:PHE:CE1	2:D:175:VAL:HG13	2.43	0.54
2:D:175:VAL:CG2	2:D:191:ALA:HB3	2.38	0.54
2:D:323:LYS:HG3	2:D:328:LYS:C	2.27	0.54
2:G:64:ILE:CB	2:G:67:ILE:HD11	2.37	0.54
2:G:156:ASP:OD1	2:G:156:ASP:N	2.34	0.54
2:G:308:LEU:HD13	2:G:330:PRO:CB	2.38	0.54
2:G:357:ASP:OD2	2:G:359:VAL:CG2	2.56	0.54
2:H:481:ILE:C	2:H:483:ARG:N	2.60	0.54
1:A:79:GLU:HA	1:A:82:TYR:HD2	1.71	0.54
1:A:111:LEU:CD1	1:B:111:LEU:HD12	2.37	0.54
2:D:52:VAL:HA	2:D:55:ARG:NH2	2.23	0.54
2:D:477:SER:HB3	2:D:481:ILE:HD12	1.90	0.54
2:G:400:ASP:CB	2:G:401:ASN:HD22	2.19	0.54
2:H:471:LYS:H	2:H:471:LYS:HD2	1.71	0.54
2:H:504:LEU:O	2:H:507:GLU:HB3	2.08	0.54
1:A:111:LEU:HD12	1:B:111:LEU:HD12	1.89	0.54
1:A:178:GLN:HE21	1:A:213:GLN:HA	1.73	0.54
2:C:252:LEU:O	2:C:255:ILE:HG13	2.07	0.54
2:C:414:ARG:NH1	2:C:419:ASP:CG	2.61	0.54
2:C:484:MET:HE2	2:C:487:GLU:HB2	1.90	0.54
2:D:436:ARG:CZ	2:D:436:ARG:HB3	2.38	0.54
2:D:468:ILE:HG22	2:D:469:THR:H	1.67	0.54
2:D:504:LEU:O	2:D:507:GLU:HB3	2.07	0.54
2:G:155:LEU:HB2	2:G:185:PHE:HZ	1.71	0.54
2:G:397:THR:HB	2:G:437:GLY:H	1.72	0.54
2:H:464:LYS:HB2	2:H:464:LYS:HZ2	1.72	0.54
1:A:106:TYR:N	1:A:106:TYR:HD1	2.06	0.54
2:D:141:ARG:NE	2:D:143:ILE:HD11	2.23	0.54
2:D:209:LEU:HD12	2:D:231:LEU:HD21	1.89	0.54
2:D:381:ILE:HD13	2:D:447:ILE:HD11	1.89	0.54
2:G:163:ILE:HG22	2:G:164:LEU:N	2.23	0.54
2:G:308:LEU:HD13	2:G:330:PRO:HG3	1.89	0.54
2:H:334:VAL:CG2	2:H:336:PRO:HG3	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:84:ARG:NH2	2:C:354:GLU:CB	2.71	0.53
2:C:243:SER:O	2:C:316:PRO:HG3	2.08	0.53
2:D:82:LYS:HD2	2:D:83:GLN:H	1.73	0.53
2:D:483:ARG:HH11	2:D:483:ARG:CG	2.20	0.53
2:G:498:ARG:O	2:G:501:ALA:HB3	2.07	0.53
2:H:409:VAL:O	2:H:409:VAL:HG23	2.07	0.53
2:H:496:ARG:H	2:H:496:ARG:NE	2.05	0.53
1:A:164:VAL:O	1:A:164:VAL:HG12	2.07	0.53
2:C:64:ILE:HG22	2:C:67:ILE:HG13	1.90	0.53
2:D:161:GLN:H	2:D:180:LEU:HD23	1.72	0.53
2:G:306:VAL:HG12	2:G:307:ILE:N	2.23	0.53
2:C:128:THR:O	2:C:131:ALA:HB3	2.08	0.53
2:D:40:VAL:CG2	2:D:41:ALA:N	2.71	0.53
2:D:67:ILE:CD1	2:D:89:ILE:HD13	2.38	0.53
2:D:192:GLY:HA2	2:D:288:PRO:HB3	1.90	0.53
2:G:153:TYR:OH	2:G:334:VAL:HB	2.08	0.53
2:G:321:ALA:O	2:G:325:GLU:HB2	2.09	0.53
2:G:499:LYS:HG2	2:G:500:GLU:OE1	2.08	0.53
2:H:173:PHE:CZ	2:H:175:VAL:HG22	2.43	0.53
2:H:381:ILE:CD1	2:H:447:ILE:HD11	2.39	0.53
1:B:77:GLU:O	1:B:81:ARG:HB2	2.09	0.53
2:C:153:TYR:HB3	2:C:155:LEU:HD11	1.91	0.53
2:C:221:LEU:HD21	2:C:255:ILE:HG22	1.90	0.53
1:E:96:THR:HG23	1:F:100:MET:HE3	1.91	0.53
2:G:70:HIS:CG	2:G:75:TYR:CG	2.97	0.53
2:G:91:ALA:HB2	2:G:134:ILE:HG22	1.90	0.53
2:G:483:ARG:NH1	2:G:486:LYS:HZ3	2.05	0.53
2:H:396:THR:OG1	2:H:439:PRO:HD2	2.08	0.53
1:A:86:TYR:CE2	1:A:90:GLU:OE2	2.61	0.53
1:B:169:ASP:O	1:B:171:TYR:N	2.42	0.53
2:C:84:TYR:HA	2:C:88:GLU:OE1	2.07	0.53
2:C:478:GLU:HA	2:C:481:ILE:HD12	1.90	0.53
2:C:493:GLU:C	2:C:495:ASP:H	2.10	0.53
2:D:71:MET:SD	2:D:86:PRO:HB2	2.49	0.53
2:D:164:LEU:HD12	2:D:306:VAL:HG13	1.89	0.53
2:G:239:LYS:HG3	2:G:315:ILE:HD11	1.88	0.53
2:G:433:PRO:O	2:G:434:ALA:HB2	2.09	0.53
2:H:438:VAL:HG22	2:H:439:PRO:HD3	1.89	0.53
1:A:83:LEU:O	1:A:83:LEU:HG	2.08	0.53
2:C:154:GLY:C	2:C:156:ASP:N	2.61	0.53
2:C:458:LYS:HE2	2:C:463:ASN:HD22	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:172:THR:OG1	2:D:173:PHE:N	2.39	0.53
2:D:201:PHE:O	2:D:202:ASP:C	2.46	0.53
2:D:483:ARG:NH2	1:F:85:LEU:HD22	2.23	0.53
2:G:236:GLU:O	2:G:239:LYS:HB3	2.08	0.53
2:G:243:SER:HB3	2:G:315:ILE:HA	1.90	0.53
2:H:204:VAL:HB	2:H:277:LEU:HD22	1.91	0.53
2:H:389:THR:OG1	2:H:390:SER:N	2.39	0.53
2:H:438:VAL:N	2:H:439:PRO:CD	2.71	0.53
1:A:75:LEU:CD1	1:A:79:GLU:OE2	2.49	0.53
2:C:387:ILE:CG2	2:C:447:ILE:CG2	2.72	0.53
2:D:29:ASN:O	2:D:31:GLU:O	2.26	0.53
2:D:323:LYS:HD2	2:D:329:GLU:CA	2.29	0.53
1:E:94:ARG:HH12	2:G:106:GLY:HA3	1.74	0.53
2:G:281:LEU:CB	2:G:284:ARG:HD3	2.33	0.53
2:G:298:LEU:HB3	2:G:302:ASP:OD2	2.07	0.53
2:G:309:VAL:CG1	2:G:310:GLY:N	2.71	0.53
2:G:377:PHE:CB	2:G:410:LEU:HD12	2.36	0.53
2:H:85:THR:OG1	2:H:88:GLU:HG3	2.08	0.53
1:A:196:GLY:O	1:A:197:TYR:CD1	2.61	0.53
1:B:190:VAL:CG1	1:B:191:GLU:N	2.72	0.53
2:C:374:GLY:O	2:C:376:VAL:N	2.42	0.53
2:C:396:THR:OG1	2:C:397:THR:N	2.42	0.53
2:D:25:LYS:HG3	2:D:26:VAL:N	2.24	0.53
2:D:500:GLU:O	2:D:503:GLU:HB2	2.09	0.53
2:G:28:PRO:O	2:G:100:TYR:HE2	1.92	0.53
2:G:227:ALA:O	2:G:230:ARG:HB3	2.09	0.53
2:H:416:MET:O	2:H:417:ALA:CB	2.56	0.53
2:C:282:VAL:O	2:C:286:MET:HE3	2.09	0.53
2:C:428:LEU:HG	2:C:429:THR:N	2.24	0.53
2:D:325:GLU:HB3	2:D:326:LEU:CD1	2.38	0.53
2:G:212:GLN:HA	2:G:215:GLN:HB3	1.90	0.53
2:G:242:LEU:HD13	2:G:242:LEU:N	2.24	0.53
2:H:148:ALA:O	2:H:343:GLY:HA3	2.08	0.53
2:H:155:LEU:HD22	2:H:155:LEU:N	2.21	0.53
1:A:171:TYR:HD1	2:C:52:VAL:HG21	1.70	0.53
1:A:192:GLU:OE2	1:A:195:LYS:CA	2.57	0.53
1:B:81:ARG:C	1:B:82:TYR:HD1	2.12	0.53
1:B:96:THR:O	1:B:97:ARG:C	2.47	0.53
1:B:160:ALA:HA	1:B:197:TYR:CD1	2.39	0.53
1:E:81:ARG:HD3	1:E:82:TYR:CE1	2.44	0.53
2:G:214:LYS:NZ	2:G:221:LEU:H	2.07	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:275:GLU:O	2:G:279:ALA:N	2.43	0.53
2:G:370:ILE:HG12	2:G:409:VAL:CB	2.39	0.53
2:H:365:PRO:O	2:H:366:LEU:HD13	2.09	0.53
1:B:139:LEU:HD23	1:B:139:LEU:N	2.24	0.52
2:C:153:TYR:CE1	2:C:334:VAL:HG12	2.43	0.52
2:C:339:VAL:HG13	2:C:340:VAL:N	2.24	0.52
2:C:471:LYS:HD3	2:C:471:LYS:N	2.21	0.52
2:C:493:GLU:C	2:C:495:ASP:N	2.61	0.52
2:D:155:LEU:H	2:D:155:LEU:CD2	2.13	0.52
2:D:210:VAL:HA	2:D:221:LEU:HD13	1.91	0.52
1:E:193:LEU:N	1:E:208:MET:O	2.42	0.52
2:H:132:GLY:O	2:H:135:ALA:CB	2.51	0.52
2:C:153:TYR:CE1	2:C:334:VAL:HB	2.44	0.52
2:D:164:LEU:HD11	2:D:166:TYR:HB2	1.91	0.52
2:D:211:ASN:O	2:D:215:GLN:HB2	2.08	0.52
2:D:377:PHE:HD1	2:D:378:THR:N	2.06	0.52
1:F:60:GLU:N	1:F:63:ALA:CB	2.73	0.52
2:H:128:THR:C	2:H:130:ASP:N	2.60	0.52
1:A:85:LEU:HB3	1:B:85:LEU:HD12	1.92	0.52
1:A:86:TYR:O	1:A:87:ALA:C	2.48	0.52
1:A:105:LYS:C	1:A:106:TYR:HD1	2.11	0.52
1:A:177:MET:HB2	1:A:210:LYS:HA	1.91	0.52
1:A:186:PRO:O	1:A:188:THR:N	2.42	0.52
1:B:144:MET:SD	2:C:266:GLU:CD	2.86	0.52
2:D:286:MET:SD	2:D:286:MET:N	2.77	0.52
2:D:485:ILE:O	2:D:488:ALA:N	2.43	0.52
2:G:90:SER:HA	2:G:93:ILE:HD12	1.91	0.52
2:H:362:ASP:HB2	2:H:387:ILE:HG12	1.90	0.52
2:H:370:ILE:HG22	2:H:371:GLU:O	2.10	0.52
2:H:495:ASP:C	2:H:497:LYS:N	2.61	0.52
1:A:178:GLN:HA	1:A:211:VAL:O	2.09	0.52
2:C:64:ILE:HG21	2:C:67:ILE:CG1	2.38	0.52
2:D:43:LYS:NZ	2:D:59:THR:HG21	2.24	0.52
2:D:121:ASN:ND2	2:D:123:ALA:N	2.55	0.52
2:D:213:PHE:O	2:D:214:LYS:C	2.45	0.52
2:D:397:THR:HB	2:D:439:PRO:HG2	1.90	0.52
2:H:298:LEU:HD21	2:H:303:ILE:CB	2.40	0.52
2:H:309:VAL:HG22	2:H:339:VAL:HG11	1.92	0.52
2:H:445:PHE:CE1	2:H:455:VAL:HG22	2.44	0.52
1:A:92:PHE:C	1:A:92:PHE:CD1	2.74	0.52
2:D:251:SER:CB	2:D:266:GLU:OE2	2.58	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:312:SER:O	2:D:315:ILE:HD11	2.10	0.52
2:G:161:GLN:HA	2:G:304:ASP:OD2	2.10	0.52
2:H:448:ASP:OD1	2:H:448:ASP:O	2.26	0.52
1:A:82:TYR:O	1:B:82:TYR:CD2	2.62	0.52
2:C:220:ASP:OD2	2:C:223:LYS:HG3	2.10	0.52
2:D:27:ILE:HG12	2:D:104:TYR:CD2	2.45	0.52
2:D:120:PHE:CD2	2:D:124:GLN:HB2	2.44	0.52
2:D:147:THR:O	2:D:150:ALA:HB3	2.09	0.52
2:D:377:PHE:CD1	2:D:378:THR:N	2.78	0.52
1:E:111:LEU:O	1:E:115:LEU:CB	2.58	0.52
2:G:398:ALA:HB3	2:G:402:GLN:HE22	1.71	0.52
2:G:430:GLY:O	2:G:431:ILE:C	2.48	0.52
2:H:376:VAL:HG23	2:H:377:PHE:N	2.25	0.52
1:A:194:GLN:HG2	1:A:205:ARG:HH22	1.75	0.52
1:B:198:LYS:HA	1:B:204:LEU:HD12	1.91	0.52
2:C:308:LEU:HD11	2:C:330:PRO:CB	2.40	0.52
2:D:206:ILE:CD1	2:D:232:LYS:HA	2.39	0.52
2:D:213:PHE:HB3	2:D:221:LEU:HD11	1.92	0.52
2:D:229:GLN:O	2:D:230:ARG:C	2.46	0.52
2:D:416:MET:O	2:D:417:ALA:C	2.46	0.52
1:E:71:LEU:HD22	1:F:68:ILE:HA	1.91	0.52
2:G:193:ASP:OD2	2:G:284:ARG:NH2	2.43	0.52
2:H:4:ILE:HG12	2:H:111:ARG:HD3	1.90	0.52
1:B:122:PHE:CE1	1:B:146:TYR:CB	2.78	0.52
2:C:416:MET:CE	2:C:497:LYS:HB3	2.40	0.52
2:D:164:LEU:HD13	2:D:165:VAL:N	2.24	0.52
2:D:225:LYS:HD2	2:D:225:LYS:N	2.24	0.52
2:D:282:VAL:O	2:D:286:MET:SD	2.68	0.52
1:E:75:LEU:O	1:E:78:MET:N	2.42	0.52
1:A:120:ASP:O	1:A:121:ASN:C	2.46	0.52
1:B:153:LEU:C	1:B:155:LYS:N	2.61	0.52
1:B:203:VAL:O	1:B:203:VAL:HG12	2.07	0.52
2:C:203:GLN:O	2:C:204:VAL:C	2.45	0.52
2:C:253:PRO:C	2:C:254:PHE:HD1	2.12	0.52
2:C:279:ALA:O	2:C:282:VAL:HG12	2.10	0.52
2:D:11:THR:HG23	2:D:68:LYS:NZ	2.23	0.52
2:D:162:THR:HA	2:D:179:GLU:HA	1.92	0.52
2:D:299:THR:O	2:D:302:ASP:HB2	2.10	0.52
2:D:426:PHE:HZ	2:D:457:ALA:HB3	1.75	0.52
2:G:176:SER:O	2:G:178:LEU:HD13	2.10	0.52
2:H:4:ILE:CG1	2:H:111:ARG:HD3	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:169:ASP:O	1:A:171:TYR:N	2.43	0.52
2:C:64:ILE:HD13	2:C:89:ILE:HG12	1.92	0.52
2:C:270:THR:HG22	2:C:271:ARG:H	1.75	0.52
2:C:308:LEU:CD1	2:C:330:PRO:HB2	2.40	0.52
2:C:362:ASP:C	2:C:363:VAL:HG22	2.30	0.52
2:D:150:ALA:O	2:D:154:GLY:N	2.43	0.52
2:D:201:PHE:CD1	2:D:281:LEU:HD23	2.45	0.52
2:G:396:THR:OG1	2:G:397:THR:N	2.41	0.52
2:H:409:VAL:HG21	2:H:470:ILE:CD1	2.40	0.52
2:H:438:VAL:N	2:H:439:PRO:HD3	2.23	0.52
2:H:479:GLU:HA	2:H:482:GLN:HG3	1.91	0.52
2:C:307:ILE:C	2:C:308:LEU:HD12	2.30	0.51
2:C:401:ASN:ND2	2:H:1:MET:HG3	2.25	0.51
2:D:498:ARG:HB3	2:D:498:ARG:CZ	2.40	0.51
1:E:75:LEU:O	1:E:79:GLU:HG3	2.10	0.51
2:H:79:ILE:HG22	2:H:80:GLU:CG	2.40	0.51
2:H:143:ILE:CG2	2:H:144:ASN:N	2.73	0.51
2:H:494:ALA:HA	2:H:496:ARG:HH11	1.76	0.51
1:A:75:LEU:HG	1:B:75:LEU:HD21	1.92	0.51
2:C:129:LYS:CD	2:C:142:ILE:HD12	2.39	0.51
2:C:282:VAL:O	2:C:285:THR:HB	2.09	0.51
2:D:192:GLY:HA2	2:D:288:PRO:CB	2.40	0.51
2:D:323:LYS:HE3	2:D:329:GLU:N	2.25	0.51
2:G:152:ALA:HB2	2:G:343:GLY:CA	2.41	0.51
2:G:155:LEU:HD22	2:G:155:LEU:N	2.25	0.51
2:G:274:PHE:HA	2:G:277:LEU:HB2	1.92	0.51
2:H:12:THR:CB	2:H:170:GLY:H	2.23	0.51
2:H:193:ASP:OD2	2:H:196:LEU:HD22	2.11	0.51
1:A:163:ALA:O	1:A:166:LYS:HD2	2.09	0.51
2:C:1:MET:HG3	2:C:2:SER:N	2.24	0.51
2:C:232:LYS:O	2:C:233:ASP:C	2.48	0.51
2:D:116:VAL:CG1	2:D:128:THR:HG21	2.39	0.51
2:D:173:PHE:C	2:D:174:ASP:OD1	2.48	0.51
1:E:67:GLN:OE1	1:F:68:ILE:CD1	2.58	0.51
1:E:94:ARG:HA	1:E:97:ARG:HB3	1.92	0.51
2:G:118:ALA:HB1	2:G:187:VAL:HG21	1.92	0.51
2:G:205:ILE:CG2	2:G:235:ALA:CB	2.85	0.51
2:G:306:VAL:CG1	2:G:307:ILE:N	2.72	0.51
2:H:290:ARG:O	2:H:294:GLN:HB2	2.11	0.51
2:H:420:ASN:ND2	2:H:420:ASN:N	2.59	0.51
1:B:178:GLN:CG	1:B:213:GLN:HB3	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:29:ASN:HB3	2:C:100:TYR:CE2	2.45	0.51
2:C:119:TYR:HD2	2:C:190:THR:HG21	1.74	0.51
2:C:390:SER:HB3	2:C:446:ASP:CG	2.30	0.51
2:C:396:THR:N	2:H:359:VAL:O	2.42	0.51
2:D:441:ILE:HG23	2:D:458:LYS:O	2.10	0.51
1:E:81:ARG:O	1:E:84:ARG:HB3	2.09	0.51
1:F:147:ARG:O	1:F:151:ASP:CB	2.58	0.51
2:G:458:LYS:HZ3	2:G:465:GLU:HB3	1.75	0.51
2:G:483:ARG:NH1	2:G:486:LYS:HZ2	2.08	0.51
2:H:135:ALA:CB	2:H:137:LEU:HD12	2.37	0.51
2:H:156:ASP:HA	2:H:180:LEU:CD1	2.41	0.51
2:H:431:ILE:HG23	2:H:432:PRO:HD2	1.92	0.51
1:B:171:TYR:CE1	2:D:52:VAL:HG21	2.46	0.51
2:C:273:LYS:HE3	2:C:277:LEU:HD21	1.92	0.51
2:D:44:ASN:C	2:D:46:GLU:H	2.11	0.51
2:D:82:LYS:HD2	2:D:83:GLN:N	2.26	0.51
2:D:366:LEU:HD21	2:D:484:MET:SD	2.51	0.51
2:G:162:THR:HG22	2:G:179:GLU:CG	2.39	0.51
2:G:367:SER:HB3	2:G:379:LYS:HG2	1.92	0.51
2:G:470:ILE:C	2:G:471:LYS:HD3	2.30	0.51
2:H:373:MET:HG2	2:H:398:ALA:CB	2.41	0.51
2:H:412:GLY:HA3	2:H:420:ASN:HB3	1.92	0.51
1:A:89:PHE:CB	1:B:89:PHE:CD1	2.91	0.51
1:A:117:PRO:O	1:A:120:ASP:HB2	2.11	0.51
2:C:166:TYR:CZ	2:C:173:PHE:HE1	2.27	0.51
2:C:431:ILE:HD13	2:C:441:ILE:HD11	1.92	0.51
2:D:50:GLY:O	2:D:53:ALA:HB3	2.10	0.51
2:D:230:ARG:HD2	2:D:252:LEU:HD21	1.91	0.51
2:G:285:THR:O	2:G:288:PRO:HD2	2.11	0.51
2:G:383:ARG:HD2	2:G:384:ASN:CA	2.38	0.51
2:H:104:TYR:O	2:H:104:TYR:HD1	1.94	0.51
1:A:133:GLU:OE2	1:B:133:GLU:OE1	2.29	0.51
1:B:84:ARG:O	1:B:85:LEU:C	2.48	0.51
1:B:112:ALA:O	1:B:113:SER:C	2.49	0.51
2:C:124:GLN:O	2:C:125:ARG:C	2.48	0.51
2:D:143:ILE:CG2	2:D:144:ASN:N	2.73	0.51
2:D:492:ALA:C	2:D:494:ALA:N	2.62	0.51
2:G:492:ALA:C	2:G:493:GLU:HG2	2.31	0.51
2:H:79:ILE:HG22	2:H:80:GLU:HG3	1.92	0.51
1:A:138:ILE:HD13	1:B:139:LEU:CD1	2.41	0.51
2:C:258:ASN:CG	2:C:260:ASN:HB3	2.30	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:4:ILE:HD13	2:D:351:ILE:HB	1.93	0.51
2:D:214:LYS:HE2	2:D:220:ASP:OD1	2.11	0.51
2:D:376:VAL:CG2	2:D:377:PHE:N	2.74	0.51
2:D:497:LYS:HD3	2:D:498:ARG:HA	1.92	0.51
2:G:381:ILE:HG22	2:G:382:GLU:O	2.10	0.51
1:A:85:LEU:N	1:A:85:LEU:HD23	2.25	0.51
1:A:92:PHE:CE1	1:A:96:THR:OG1	2.63	0.51
2:C:27:ILE:CD1	2:C:101:ALA:HB1	2.40	0.51
2:D:168:LEU:HD11	2:D:197:GLY:HA2	1.93	0.51
2:D:168:LEU:O	2:D:310:GLY:HA3	2.10	0.51
2:D:436:ARG:HB3	2:D:436:ARG:NH1	2.26	0.51
1:E:96:THR:HG23	1:F:100:MET:CE	2.41	0.51
1:E:196:GLY:HA3	1:E:207:ALA:HB2	1.93	0.51
2:G:67:ILE:O	2:G:67:ILE:CG2	2.59	0.51
1:A:75:LEU:HD21	1:B:75:LEU:HD22	1.93	0.51
1:A:123:GLU:HG2	1:A:195:LYS:HE2	1.94	0.51
1:B:190:VAL:HG12	1:B:191:GLU:HG2	1.92	0.51
2:D:55:ARG:HG3	2:D:55:ARG:NH1	2.26	0.51
2:D:99:SER:O	2:D:102:GLU:HB2	2.11	0.51
2:D:274:PHE:O	2:D:278:SER:N	2.43	0.51
2:D:494:ALA:HA	2:D:496:ARG:CD	2.41	0.51
2:D:504:LEU:HD13	2:D:504:LEU:O	2.11	0.51
2:G:280:HIS:CE1	2:G:281:LEU:CD1	2.94	0.51
1:A:89:PHE:CD1	1:A:90:GLU:N	2.78	0.50
2:C:162:THR:HB	2:C:304:ASP:OD1	2.10	0.50
2:C:366:LEU:HD23	2:C:383:ARG:CG	2.35	0.50
1:F:98:GLN:HA	1:F:101:GLU:CG	2.42	0.50
2:G:92:ILE:HA	2:G:95:GLN:HB2	1.93	0.50
2:G:126:GLN:HG3	2:G:130:ASP:OD2	2.10	0.50
2:H:202:ASP:OD1	2:H:235:ALA:HB1	2.11	0.50
2:H:381:ILE:HD13	2:H:447:ILE:HD11	1.90	0.50
1:A:149:LEU:HG	1:B:118:VAL:HG21	1.93	0.50
1:B:142:MET:HE1	2:C:254:PHE:CZ	2.46	0.50
1:B:163:ALA:O	1:B:164:VAL:C	2.48	0.50
2:C:257:ALA:HA	2:C:263:LEU:HD12	1.90	0.50
2:C:258:ASN:ND2	2:C:260:ASN:HB3	2.27	0.50
2:C:497:LYS:CA	2:C:500:GLU:OE2	2.59	0.50
2:D:49:VAL:CG2	2:D:50:GLY:N	2.74	0.50
2:G:403:THR:HG23	2:G:404:THR:HG22	1.94	0.50
2:G:414:ARG:HH21	2:G:491:ASN:HB3	1.76	0.50
2:H:97:LEU:O	2:H:100:TYR:CD1	2.65	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:163:ILE:HG22	2:H:164:LEU:O	2.11	0.50
2:H:166:TYR:HB3	2:H:307:ILE:O	2.11	0.50
1:A:162:GLU:HG2	1:A:166:LYS:HZ2	1.76	0.50
2:C:409:VAL:CG1	2:C:470:ILE:CD1	2.77	0.50
2:C:431:ILE:CG2	2:C:432:PRO:HD2	2.40	0.50
2:D:27:ILE:HG23	2:D:28:PRO:HD2	1.93	0.50
2:D:52:VAL:O	2:D:52:VAL:HG22	2.11	0.50
2:D:70:HIS:CE1	2:D:75:TYR:HE2	2.28	0.50
2:D:90:SER:HA	2:D:93:ILE:HD12	1.92	0.50
2:D:459:ASP:OD1	2:D:463:ASN:N	2.44	0.50
2:G:28:PRO:O	2:G:100:TYR:CE2	2.65	0.50
2:G:94:LEU:HD13	2:G:97:LEU:HD22	1.92	0.50
2:H:310:GLY:O	2:H:313:THR:HG22	2.11	0.50
2:C:29:ASN:HB2	2:C:30:PRO:HD2	1.93	0.50
2:C:59:THR:O	2:C:59:THR:HG22	2.11	0.50
2:C:372:THR:HB	2:H:358:VAL:O	2.10	0.50
2:C:484:MET:HA	2:C:487:GLU:HB2	1.93	0.50
2:D:120:PHE:CD2	2:D:124:GLN:CB	2.95	0.50
2:D:409:VAL:CG2	2:D:409:VAL:O	2.58	0.50
1:E:64:ALA:O	1:E:68:ILE:HG13	2.11	0.50
2:G:387:ILE:O	2:G:447:ILE:HG22	2.11	0.50
2:C:37:PRO:O	2:C:50:GLY:HA2	2.10	0.50
2:C:43:LYS:NZ	2:C:60:ASN:HA	2.25	0.50
2:C:288:PRO:HA	2:C:291:GLN:HB2	1.94	0.50
2:C:387:ILE:HB	2:C:388:PRO:HD3	1.94	0.50
2:D:367:SER:OG	2:D:413:GLU:OE1	2.27	0.50
2:D:497:LYS:C	2:D:499:LYS:N	2.64	0.50
2:G:118:ALA:HB1	2:G:187:VAL:HG11	1.91	0.50
2:H:405:VAL:HG11	2:H:441:ILE:CD1	2.42	0.50
2:H:496:ARG:HD3	2:H:496:ARG:H	1.71	0.50
1:A:78:MET:O	1:A:82:TYR:CD1	2.65	0.50
1:A:82:TYR:HA	1:B:82:TYR:HD2	1.76	0.50
1:A:111:LEU:O	1:A:112:ALA:C	2.48	0.50
2:C:130:ASP:O	2:C:131:ALA:C	2.49	0.50
2:C:196:LEU:HD12	2:C:197:GLY:H	1.68	0.50
2:D:67:ILE:HD13	2:D:89:ILE:HB	1.93	0.50
2:D:109:VAL:HG23	2:D:110:THR:N	2.25	0.50
2:D:458:LYS:HG2	2:D:465:GLU:HA	1.93	0.50
2:D:494:ALA:O	2:D:496:ARG:HG2	2.11	0.50
1:E:85:LEU:HG	1:F:82:TYR:OH	2.11	0.50
2:H:180:LEU:HB2	2:H:185:PHE:CE1	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:75:LEU:O	1:A:78:MET:N	2.45	0.50
1:B:174:GLN:HA	2:D:55:ARG:HG2	1.94	0.50
2:C:205:ILE:HD11	2:C:274:PHE:CD2	2.47	0.50
2:D:14:SER:O	2:D:36:THR:HG23	2.12	0.50
2:D:180:LEU:O	2:D:180:LEU:HG	2.08	0.50
2:D:361:LEU:O	2:D:362:ASP:OD1	2.29	0.50
2:H:203:GLN:OE1	2:H:206:ILE:HD12	2.12	0.50
2:H:502:ALA:O	2:H:504:LEU:N	2.44	0.50
2:C:100:TYR:O	2:C:103:ASP:N	2.45	0.50
2:C:395:PHE:CE2	2:C:443:VAL:HG11	2.47	0.50
2:C:416:MET:HE2	2:C:496:ARG:NH2	2.27	0.50
2:D:8:ASP:HA	2:D:115:THR:CG2	2.42	0.50
2:D:67:ILE:HD11	2:D:89:ILE:HD13	1.94	0.50
2:D:335:ASN:O	2:D:338:GLU:HG2	2.11	0.50
2:D:347:GLN:O	2:D:351:ILE:HG13	2.11	0.50
2:D:426:PHE:CE1	2:D:427:GLN:O	2.63	0.50
1:E:194:GLN:O	1:E:208:MET:N	2.44	0.50
1:F:81:ARG:O	1:F:85:LEU:HD23	2.11	0.50
2:H:17:ALA:N	2:H:341:ALA:HB1	2.27	0.50
2:H:361:LEU:HD21	2:H:387:ILE:CD1	2.40	0.50
2:H:481:ILE:O	2:H:483:ARG:N	2.45	0.50
1:A:201:ASP:C	1:A:201:ASP:OD1	2.50	0.50
2:C:155:LEU:HD13	2:C:155:LEU:H	1.75	0.50
2:D:372:THR:HG21	2:D:378:THR:HG23	1.94	0.50
2:G:153:TYR:CE1	2:G:334:VAL:HB	2.47	0.50
2:H:370:ILE:CG2	2:H:371:GLU:N	2.74	0.50
1:A:198:LYS:HB2	1:A:203:VAL:HG22	1.94	0.49
1:B:94:ARG:CZ	1:B:98:GLN:NE2	2.75	0.49
2:D:16:VAL:CG1	2:D:100:TYR:OH	2.60	0.49
2:D:192:GLY:N	2:D:288:PRO:HB3	2.26	0.49
2:D:309:VAL:O	2:D:313:THR:HG21	2.12	0.49
2:D:370:ILE:CD1	2:D:445:PHE:CZ	2.95	0.49
1:E:92:PHE:HE1	1:F:92:PHE:CE2	2.30	0.49
2:G:334:VAL:HG22	2:G:335:ASN:N	2.27	0.49
2:G:414:ARG:HE	2:G:491:ASN:HB3	1.78	0.49
2:H:414:ARG:CZ	2:H:491:ASN:HD21	2.25	0.49
1:B:186:PRO:O	1:B:187:ASN:C	2.50	0.49
2:C:258:ASN:OD1	2:C:260:ASN:HB3	2.12	0.49
2:C:269:LEU:HD12	2:C:269:LEU:C	2.33	0.49
2:C:426:PHE:CD1	2:C:426:PHE:C	2.85	0.49
2:D:145:GLU:HB2	2:D:146:PRO:HD3	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:61:LEU:H	1:F:61:LEU:CD2	2.24	0.49
2:G:11:THR:O	2:G:12:THR:CB	2.59	0.49
2:G:308:LEU:CD1	2:G:330:PRO:HG3	2.41	0.49
1:B:93:ARG:O	1:B:96:THR:OG1	2.22	0.49
2:C:366:LEU:HA	2:C:383:ARG:HG2	1.95	0.49
2:C:468:ILE:CG2	2:C:469:THR:N	2.75	0.49
2:G:472:SER:C	2:G:474:SER:H	2.16	0.49
1:B:133:GLU:O	1:B:136:LYS:HD3	2.12	0.49
2:C:29:ASN:C	2:C:29:ASN:OD1	2.50	0.49
2:D:270:THR:OG1	2:D:271:ARG:C	2.51	0.49
2:D:294:GLN:O	2:D:297:GLY:N	2.43	0.49
2:D:484:MET:HA	2:D:487:GLU:HB2	1.95	0.49
1:E:113:SER:CB	1:E:204:LEU:CB	2.91	0.49
1:F:66:ALA:O	1:F:69:ALA:HB3	2.11	0.49
2:G:495:ASP:OD2	2:G:498:ARG:NH2	2.41	0.49
2:H:164:LEU:HB3	2:H:306:VAL:HG13	1.94	0.49
2:H:487:GLU:O	2:H:490:GLU:HG2	2.12	0.49
1:A:69:ALA:HA	1:A:72:GLU:OE2	2.12	0.49
1:B:121:ASN:OD1	1:B:121:ASN:N	2.45	0.49
2:D:43:LYS:NZ	2:D:59:THR:CG2	2.76	0.49
2:D:51:GLU:C	2:D:53:ALA:N	2.64	0.49
2:D:251:SER:OG	2:D:253:PRO:CD	2.45	0.49
2:D:407:ILE:HD12	2:D:426:PHE:HE2	1.70	0.49
2:G:394:VAL:HG13	2:G:441:ILE:C	2.32	0.49
1:A:103:ALA:O	1:A:107:ARG:CB	2.61	0.49
2:C:208:TYR:CE2	2:C:273:LYS:CE	2.96	0.49
2:C:238:ALA:O	2:C:242:LEU:HD22	2.12	0.49
2:C:277:LEU:N	2:C:277:LEU:HD23	2.27	0.49
2:G:227:ALA:O	2:G:231:LEU:CD1	2.60	0.49
2:G:347:GLN:NE2	2:G:350:VAL:HG11	2.27	0.49
2:G:476:LEU:HB3	2:G:480:GLU:OE2	2.12	0.49
2:H:67:ILE:HG22	2:H:67:ILE:O	2.12	0.49
1:A:64:ALA:HB2	1:B:64:ALA:HB1	1.95	0.49
2:C:13:ASN:HA	2:C:38:SER:H	1.76	0.49
2:D:140:GLU:CB	2:D:351:ILE:HG21	2.41	0.49
1:E:65:LYS:O	1:E:69:ALA:HB2	2.11	0.49
2:G:70:HIS:CE1	2:G:75:TYR:CE1	3.01	0.49
2:G:347:GLN:HE22	2:G:350:VAL:HG11	1.77	0.49
2:H:385:THR:HG22	2:H:386:THR:HG22	1.95	0.49
1:A:185:GLU:O	1:A:212:SER:HB2	2.12	0.49
2:C:18:VAL:HG23	2:C:19:LEU:H	1.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:390:SER:O	2:H:482:GLN:OE1	2.31	0.49
2:D:339:VAL:HA	2:D:342:ILE:HD12	1.93	0.49
1:F:67:GLN:HA	1:F:70:GLU:HB2	1.93	0.49
2:H:133:ARG:HA	2:H:137:LEU:O	2.13	0.49
1:B:116:LEU:CD1	1:B:197:TYR:CD2	2.92	0.49
2:C:116:VAL:HB	2:C:117:PRO:HD2	1.95	0.49
2:C:167:ASP:HA	2:C:309:VAL:HB	1.94	0.49
2:C:265:LEU:C	2:C:265:LEU:CD2	2.82	0.49
2:C:403:THR:CG2	2:C:404:THR:HG22	2.38	0.49
2:D:110:THR:HG22	2:D:111:ARG:N	2.27	0.49
2:G:120:PHE:HB3	2:G:124:GLN:HG3	1.95	0.49
2:G:164:LEU:HD23	2:G:177:ILE:N	2.27	0.49
2:H:207:ASP:O	2:H:211:ASN:HB2	2.12	0.49
2:H:365:PRO:CB	2:H:481:ILE:HD13	2.43	0.49
1:A:70:GLU:HB3	1:A:74:LYS:CE	2.35	0.49
1:B:92:PHE:O	1:B:93:ARG:C	2.49	0.49
1:B:149:LEU:C	1:B:149:LEU:CD2	2.77	0.49
2:C:315:ILE:O	2:C:318:VAL:HB	2.12	0.49
2:C:325:GLU:OE1	2:C:325:GLU:CA	2.60	0.49
2:D:190:THR:HG22	2:D:191:ALA:N	2.28	0.49
2:D:355:VAL:HG23	2:D:355:VAL:O	2.12	0.49
2:D:366:LEU:HD21	2:D:412:GLY:HA2	1.94	0.49
2:G:206:ILE:HG23	2:G:231:LEU:CD2	2.38	0.49
2:H:12:THR:O	2:H:13:ASN:CG	2.52	0.49
2:H:347:GLN:O	2:H:350:VAL:N	2.45	0.49
2:H:385:THR:O	2:H:386:THR:HB	2.12	0.49
1:A:84:ARG:O	1:A:85:LEU:C	2.50	0.48
1:B:67:GLN:CA	1:B:67:GLN:NE2	2.76	0.48
2:C:1:MET:HE3	2:C:111:ARG:HD2	1.95	0.48
2:C:44:ASN:C	2:C:46:GLU:H	2.16	0.48
2:C:380:LEU:O	2:C:391:LYS:HD3	2.13	0.48
2:D:19:LEU:HA	2:D:24:VAL:HA	1.95	0.48
2:D:483:ARG:O	2:D:486:LYS:CG	2.61	0.48
1:E:70:GLU:O	1:E:73:ALA:HB3	2.13	0.48
2:G:91:ALA:O	2:G:95:GLN:HG3	2.13	0.48
2:G:308:LEU:HD11	2:G:319:GLN:CD	2.34	0.48
2:G:369:GLY:C	2:G:377:PHE:CE1	2.86	0.48
2:G:498:ARG:CZ	2:G:498:ARG:CB	2.91	0.48
2:H:4:ILE:CG2	2:H:348:GLY:O	2.61	0.48
2:D:11:THR:H	2:D:68:LYS:HZ2	1.61	0.48
2:D:443:VAL:O	2:D:443:VAL:HG22	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:361:LEU:CB	2:G:387:ILE:HD12	2.34	0.48
2:H:409:VAL:CG2	2:H:470:ILE:HD11	2.40	0.48
1:B:165:GLY:HA2	1:B:189:VAL:O	2.13	0.48
2:C:143:ILE:HG22	2:C:144:ASN:N	2.28	0.48
2:C:438:VAL:N	2:C:439:PRO:CD	2.76	0.48
2:D:6:GLY:HA2	2:D:113:VAL:CG1	2.44	0.48
2:D:141:ARG:HG3	2:D:142:ILE:H	1.78	0.48
2:D:178:LEU:N	2:D:178:LEU:CD1	2.73	0.48
2:D:325:GLU:C	2:D:326:LEU:CD1	2.80	0.48
2:G:372:THR:O	2:G:373:MET:C	2.52	0.48
2:G:409:VAL:CG1	2:G:424:GLY:H	2.23	0.48
2:G:484:MET:O	2:G:487:GLU:N	2.46	0.48
2:G:495:ASP:CG	2:G:498:ARG:HH12	2.16	0.48
2:D:18:VAL:CG2	2:D:19:LEU:N	2.75	0.48
2:D:504:LEU:CD1	2:D:507:GLU:HB3	2.40	0.48
2:G:164:LEU:HA	2:G:177:ILE:HA	1.94	0.48
2:G:210:VAL:HB	2:G:221:LEU:HB2	1.95	0.48
2:G:380:LEU:HD12	2:G:445:PHE:HE2	1.67	0.48
2:G:462:THR:CG2	2:G:464:LYS:CB	2.85	0.48
1:B:124:ARG:HB3	2:D:254:PHE:CD2	2.48	0.48
2:C:25:LYS:HD2	2:C:25:LYS:HA	1.63	0.48
2:C:191:ALA:HB2	2:C:292:ALA:HB2	1.95	0.48
2:C:397:THR:HG23	2:C:436:ARG:HA	1.94	0.48
2:D:381:ILE:HD13	2:D:447:ILE:CD1	2.44	0.48
1:F:93:ARG:O	1:F:94:ARG:C	2.52	0.48
2:G:227:ALA:O	2:G:231:LEU:HD13	2.14	0.48
2:G:299:THR:HB	2:G:300:PRO:HD2	1.95	0.48
2:H:214:LYS:CE	2:H:220:ASP:HA	2.43	0.48
2:C:131:ALA:O	2:C:134:ILE:HB	2.14	0.48
2:C:366:LEU:CD2	2:C:367:SER:H	2.21	0.48
2:D:50:GLY:O	2:D:53:ALA:N	2.37	0.48
2:D:136:GLY:C	2:D:137:LEU:HD23	2.34	0.48
2:D:221:LEU:HD12	2:D:221:LEU:H	1.78	0.48
2:D:224:ASP:OD2	2:D:226:MET:CB	2.61	0.48
2:D:272:ALA:O	2:D:275:GLU:N	2.47	0.48
2:D:493:GLU:C	2:D:495:ASP:N	2.66	0.48
1:F:87:ALA:HA	2:G:386:THR:CB	2.43	0.48
2:G:162:THR:HG22	2:G:179:GLU:CD	2.34	0.48
2:G:412:GLY:HA3	2:G:420:ASN:OD1	2.13	0.48
2:H:292:ALA:O	2:H:295:ASP:HB2	2.14	0.48
1:A:85:LEU:CB	1:B:85:LEU:HD12	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:142:MET:N	1:B:142:MET:HE3	2.29	0.48
2:D:107:GLU:O	2:D:107:GLU:HG2	2.13	0.48
2:H:492:ALA:C	2:H:494:ALA:N	2.67	0.48
1:B:71:LEU:HD22	1:B:74:LYS:HZ1	1.79	0.48
2:C:27:ILE:HD13	2:C:101:ALA:CA	2.44	0.48
2:C:89:ILE:O	2:C:92:ILE:N	2.47	0.48
2:C:309:VAL:HG12	2:C:310:GLY:N	2.29	0.48
2:C:423:LEU:HB3	2:C:470:ILE:HG21	1.95	0.48
1:E:198:LYS:C	1:E:200:LYS:H	2.16	0.48
2:G:370:ILE:CG2	2:G:371:GLU:N	2.49	0.48
2:H:119:TYR:CD2	2:H:190:THR:HG21	2.48	0.48
2:H:143:ILE:CG2	2:H:144:ASN:H	2.26	0.48
1:B:123:GLU:HB3	1:B:127:LYS:HD2	1.95	0.48
1:B:169:ASP:C	1:B:171:TYR:H	2.16	0.48
2:D:124:GLN:O	2:D:127:ALA:HB3	2.14	0.48
2:D:502:ALA:C	2:D:504:LEU:H	2.17	0.48
2:G:225:LYS:NZ	2:G:225:LYS:CB	2.77	0.48
2:H:401:ASN:CA	2:H:434:ALA:O	2.62	0.48
1:A:71:LEU:HA	1:A:74:LYS:HD2	1.96	0.48
1:B:87:ALA:HB2	2:C:388:PRO:HB2	1.96	0.48
2:C:380:LEU:HA	2:C:380:LEU:HD23	1.69	0.48
2:D:64:ILE:CG2	2:D:67:ILE:HG13	2.44	0.48
2:D:334:VAL:HB	2:D:339:VAL:HG22	1.96	0.48
2:H:407:ILE:HB	2:H:426:PHE:CE1	2.48	0.48
2:H:503:GLU:O	2:H:506:ASN:ND2	2.47	0.48
2:C:198:GLY:HA2	2:C:201:PHE:HD2	1.79	0.47
2:C:207:ASP:O	2:C:208:TYR:C	2.53	0.47
2:D:75:TYR:CD1	2:D:75:TYR:C	2.88	0.47
2:D:98:LYS:O	2:D:99:SER:C	2.52	0.47
2:D:497:LYS:C	2:D:499:LYS:H	2.17	0.47
2:G:155:LEU:HB2	2:G:185:PHE:CZ	2.48	0.47
2:G:370:ILE:HA	2:G:409:VAL:HA	1.95	0.47
2:H:95:GLN:HG2	2:H:96:TYR:N	2.25	0.47
2:H:154:GLY:HA2	2:H:156:ASP:OD2	2.14	0.47
2:H:414:ARG:HA	2:H:415:PRO:HD3	1.60	0.47
2:C:143:ILE:CG2	2:C:144:ASN:N	2.76	0.47
2:C:269:LEU:HD12	2:C:270:THR:O	2.14	0.47
2:C:430:GLY:O	2:C:431:ILE:C	2.51	0.47
2:D:242:LEU:O	2:D:271:ARG:NH1	2.48	0.47
2:D:309:VAL:O	2:D:313:THR:CG2	2.61	0.47
2:D:422:SER:OG	2:D:423:LEU:N	2.46	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:82:TYR:O	1:F:85:LEU:CB	2.60	0.47
2:G:225:LYS:HB3	2:G:225:LYS:HZ3	1.79	0.47
2:G:483:ARG:HH12	2:G:486:LYS:NZ	2.12	0.47
2:H:161:GLN:O	2:H:179:GLU:HG2	2.13	0.47
2:H:383:ARG:O	2:H:385:THR:N	2.46	0.47
1:B:169:ASP:O	1:B:170:PRO:C	2.50	0.47
1:B:178:GLN:HG3	1:B:213:GLN:CB	2.44	0.47
2:C:75:TYR:CD1	2:C:75:TYR:C	2.86	0.47
2:C:280:HIS:CD2	2:C:281:LEU:HD13	2.49	0.47
2:D:14:SER:O	2:D:36:THR:HG22	2.14	0.47
2:D:139:VAL:HG11	2:D:142:ILE:HG13	1.96	0.47
2:D:141:ARG:HG2	2:D:143:ILE:HG13	1.95	0.47
2:D:483:ARG:HH21	1:F:85:LEU:HD22	1.79	0.47
1:E:160:ALA:HA	1:E:197:TYR:CB	2.44	0.47
2:G:285:THR:C	2:G:288:PRO:HD2	2.34	0.47
2:G:364:THR:HB	2:G:385:THR:N	2.28	0.47
2:H:368:LEU:HB2	2:H:445:PHE:HE2	1.77	0.47
2:C:27:ILE:HG21	2:C:101:ALA:HA	1.96	0.47
2:C:274:PHE:C	2:C:274:PHE:CD1	2.87	0.47
2:C:423:LEU:HB3	2:C:470:ILE:HD13	1.95	0.47
2:C:498:ARG:C	2:C:500:GLU:H	2.17	0.47
2:D:85:THR:O	2:D:86:PRO:C	2.51	0.47
2:D:270:THR:OG1	2:D:273:LYS:N	2.47	0.47
2:D:308:LEU:HD12	2:D:308:LEU:HA	1.64	0.47
2:H:335:ASN:ND2	2:H:338:GLU:HG3	2.29	0.47
2:H:426:PHE:CB	2:H:468:ILE:CD1	2.85	0.47
1:A:115:LEU:C	1:A:117:PRO:HD2	2.35	0.47
2:C:58:ILE:O	2:C:58:ILE:HG22	2.14	0.47
2:C:64:ILE:HG22	2:C:67:ILE:CD1	2.35	0.47
2:C:177:ILE:C	2:C:178:LEU:HD12	2.34	0.47
2:D:303:ILE:HG22	2:D:304:ASP:N	2.29	0.47
2:G:105:LEU:HD23	2:G:107:GLU:HB3	1.95	0.47
2:G:403:THR:HG23	2:G:404:THR:CG2	2.45	0.47
2:H:204:VAL:HG23	2:H:277:LEU:HD13	1.96	0.47
1:B:167:PRO:O	1:B:168:PHE:HB3	2.13	0.47
2:D:64:ILE:HG22	2:D:67:ILE:HG13	1.96	0.47
2:D:98:LYS:CB	2:D:137:LEU:HD11	2.38	0.47
1:E:77:GLU:O	1:E:78:MET:C	2.50	0.47
1:F:68:ILE:HG22	1:F:72:GLU:OE2	2.15	0.47
2:G:390:SER:HB2	2:G:445:PHE:O	2.15	0.47
2:H:486:LYS:NZ	2:H:486:LYS:O	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:105:LYS:HB3	1:A:106:TYR:CE1	2.50	0.47
1:A:134:GLN:HG2	1:A:134:GLN:O	2.15	0.47
1:A:191:GLU:CG	1:A:210:LYS:HD2	2.38	0.47
1:B:108:ALA:O	1:B:109:GLN:C	2.53	0.47
1:B:144:MET:HA	1:B:144:MET:HE3	1.94	0.47
1:B:144:MET:HG2	2:C:253:PRO:HB3	1.97	0.47
1:B:153:LEU:HB3	1:B:158:VAL:CG1	2.44	0.47
2:C:70:HIS:CD2	2:C:75:TYR:CD2	3.03	0.47
2:C:294:GLN:O	2:C:294:GLN:HG2	2.14	0.47
2:C:416:MET:CE	2:C:497:LYS:CB	2.93	0.47
2:C:462:THR:CB	2:C:464:LYS:H	2.18	0.47
2:D:64:ILE:HG21	2:D:89:ILE:HD13	1.97	0.47
2:D:104:TYR:CD2	2:D:105:LEU:CD1	2.97	0.47
2:D:104:TYR:CD2	2:D:105:LEU:HD13	2.49	0.47
2:D:156:ASP:OD1	2:D:156:ASP:N	2.47	0.47
2:D:209:LEU:HD13	2:D:209:LEU:C	2.34	0.47
2:D:212:GLN:O	2:D:215:GLN:HB3	2.14	0.47
2:D:236:GLU:O	2:D:239:LYS:HB3	2.15	0.47
2:D:312:SER:O	2:D:315:ILE:CG1	2.63	0.47
2:D:315:ILE:CG2	2:D:316:PRO:HD2	2.44	0.47
2:D:388:PRO:HG3	2:D:449:ALA:N	2.30	0.47
1:E:134:GLN:C	1:E:136:LYS:H	2.18	0.47
1:F:158:VAL:CA	1:F:198:LYS:O	2.55	0.47
2:G:17:ALA:HB1	2:G:25:LYS:O	2.15	0.47
2:G:57:ALA:HB1	2:G:63:THR:CB	2.45	0.47
2:G:372:THR:CG2	2:G:373:MET:N	2.78	0.47
2:G:497:LYS:C	2:G:499:LYS:N	2.68	0.47
2:H:152:ALA:HB2	2:H:342:ILE:CG2	2.38	0.47
2:H:387:ILE:O	2:H:388:PRO:O	2.32	0.47
2:H:391:LYS:HG3	2:H:392:SER:N	2.30	0.47
2:H:397:THR:HG21	2:H:439:PRO:HG2	1.96	0.47
2:H:460:LEU:HD13	2:H:460:LEU:HA	1.60	0.47
1:A:135:ALA:CB	1:B:135:ALA:CB	2.87	0.47
2:C:9:LEU:HA	2:C:14:SER:OG	2.15	0.47
2:C:27:ILE:HG12	2:C:104:TYR:CD2	2.44	0.47
2:C:29:ASN:ND2	2:C:36:THR:CG2	2.73	0.47
2:C:97:LEU:O	2:C:98:LYS:C	2.53	0.47
2:C:166:TYR:C	2:C:166:TYR:HD1	2.19	0.47
2:C:285:THR:O	2:C:285:THR:HG22	2.15	0.47
2:C:296:ALA:CB	2:C:298:LEU:HD22	2.41	0.47
2:C:308:LEU:HD11	2:C:330:PRO:HB2	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:390:SER:HB2	2:C:445:PHE:O	2.15	0.47
2:D:204:VAL:HG22	2:D:277:LEU:CD1	2.40	0.47
2:D:408:HIS:CE1	2:D:425:ARG:HH11	2.32	0.47
2:G:381:ILE:HD11	2:G:447:ILE:CD1	2.43	0.47
2:H:2:SER:OG	2:H:110:THR:CB	2.61	0.47
2:H:12:THR:HG23	2:H:13:ASN:N	2.22	0.47
2:H:17:ALA:H	2:H:341:ALA:HB1	1.79	0.47
2:H:401:ASN:OD1	2:H:401:ASN:N	2.48	0.47
2:H:445:PHE:CD1	2:H:455:VAL:HG22	2.50	0.47
1:A:142:MET:O	1:A:144:MET:N	2.47	0.47
1:B:153:LEU:O	1:B:154:LYS:C	2.52	0.47
2:C:198:GLY:O	2:C:201:PHE:CB	2.59	0.47
2:C:248:THR:OG1	2:C:249:GLN:N	2.48	0.47
2:C:249:GLN:HA	2:C:267:MET:O	2.14	0.47
2:D:129:LYS:HB2	2:D:142:ILE:HD12	1.94	0.47
2:D:476:LEU:HB2	2:D:480:GLU:OE2	2.15	0.47
1:F:84:ARG:HA	2:G:388:PRO:HB2	1.97	0.47
2:G:163:ILE:O	2:G:177:ILE:HG23	2.15	0.47
2:G:240:LYS:O	2:G:243:SER:HB2	2.15	0.47
2:G:483:ARG:HH11	2:G:486:LYS:NZ	2.12	0.47
2:H:456:ARG:HA	2:H:467:SER:HB2	1.95	0.47
1:B:97:ARG:CG	1:B:98:GLN:N	2.78	0.47
1:B:122:PHE:HA	1:B:146:TYR:CD2	2.42	0.47
2:C:164:LEU:HD13	2:C:164:LEU:C	2.35	0.47
2:C:166:TYR:C	2:C:166:TYR:CD1	2.89	0.47
2:C:347:GLN:CA	2:C:347:GLN:HE21	2.27	0.47
2:C:366:LEU:HD23	2:C:366:LEU:HA	1.36	0.47
2:C:459:ASP:OD1	2:C:461:GLY:N	2.39	0.47
2:D:131:ALA:O	2:D:134:ILE:HB	2.15	0.47
1:F:87:ALA:HB2	2:G:388:PRO:HD2	1.97	0.47
2:G:164:LEU:HG	2:G:177:ILE:CG1	2.45	0.47
2:H:364:THR:O	2:H:365:PRO:C	2.50	0.47
2:H:407:ILE:HD12	2:H:426:PHE:CZ	2.50	0.47
1:A:114:ASP:OD2	1:B:155:LYS:HE2	2.13	0.46
1:B:93:ARG:O	1:B:94:ARG:C	2.54	0.46
1:B:142:MET:N	1:B:142:MET:CE	2.78	0.46
2:C:164:LEU:HD21	2:C:175:VAL:HG13	1.97	0.46
2:C:266:GLU:O	2:C:267:MET:CB	2.58	0.46
2:C:438:VAL:N	2:C:439:PRO:HD2	2.31	0.46
2:C:478:GLU:O	2:C:481:ILE:HB	2.15	0.46
2:D:111:ARG:HD3	2:D:140:GLU:OE2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:366:LEU:O	2:D:368:LEU:CD2	2.63	0.46
2:H:4:ILE:HD11	2:H:111:ARG:NH1	2.30	0.46
2:H:192:GLY:N	2:H:288:PRO:HB3	2.30	0.46
2:H:505:ARG:C	2:H:507:GLU:N	2.68	0.46
1:A:95:ARG:CD	2:C:104:TYR:CE1	2.87	0.46
1:B:117:PRO:O	1:B:120:ASP:HB2	2.15	0.46
1:B:204:LEU:HD12	1:B:204:LEU:N	2.20	0.46
2:C:121:ASN:O	2:C:125:ARG:HG2	2.15	0.46
2:C:254:PHE:CE1	2:C:264:HIS:CE1	2.96	0.46
2:D:396:THR:OG1	2:D:439:PRO:HD2	2.15	0.46
2:G:177:ILE:CD1	2:G:292:ALA:CB	2.91	0.46
2:G:289:VAL:O	2:G:292:ALA:HB3	2.15	0.46
2:G:304:ASP:O	2:G:305:LYS:HG2	2.16	0.46
2:H:15:CYS:SG	2:H:338:GLU:HB3	2.56	0.46
2:H:335:ASN:ND2	2:H:338:GLU:CG	2.78	0.46
2:H:366:LEU:HD12	2:H:366:LEU:HA	1.43	0.46
2:H:492:ALA:C	2:H:494:ALA:H	2.18	0.46
1:A:89:PHE:CG	1:B:89:PHE:HD1	2.29	0.46
1:B:168:PHE:HD2	1:B:173:HIS:HB2	1.80	0.46
2:C:116:VAL:O	2:C:145:GLU:N	2.37	0.46
2:D:3:LYS:HD2	2:D:3:LYS:H	1.80	0.46
2:D:41:ALA:HB1	2:D:62:ASN:O	2.15	0.46
2:D:97:LEU:N	2:D:97:LEU:CD1	2.78	0.46
2:G:163:ILE:CG2	2:G:164:LEU:N	2.78	0.46
2:G:210:VAL:HG12	2:G:221:LEU:CD1	2.39	0.46
2:G:273:LYS:O	2:G:277:LEU:HB2	2.15	0.46
1:A:89:PHE:CE2	1:B:89:PHE:HA	2.51	0.46
1:B:173:HIS:HB3	1:B:209:VAL:HG21	1.97	0.46
2:C:2:SER:HB3	2:C:110:THR:HG22	1.98	0.46
2:C:372:THR:OG1	2:C:373:MET:N	2.48	0.46
2:C:373:MET:SD	2:C:373:MET:C	2.93	0.46
2:C:399:ALA:HB3	2:H:355:VAL:HG11	1.97	0.46
2:D:164:LEU:HD13	2:D:165:VAL:CA	2.46	0.46
2:D:380:LEU:O	2:D:381:ILE:HG13	2.15	0.46
1:E:140:GLN:C	1:E:142:MET:H	2.18	0.46
2:H:27:ILE:HG12	2:H:104:TYR:HD2	1.81	0.46
2:H:141:ARG:HH12	2:H:143:ILE:HD11	1.59	0.46
2:H:387:ILE:HG21	2:H:387:ILE:HD13	1.67	0.46
1:A:172:LEU:N	1:A:172:LEU:CD2	2.75	0.46
1:B:116:LEU:HA	1:B:116:LEU:HD23	1.57	0.46
2:C:380:LEU:HD12	2:C:445:PHE:HE1	1.79	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:386:THR:CG2	2:D:389:THR:HG22	2.45	0.46
2:D:421:LYS:CE	2:D:480:GLU:OE2	2.63	0.46
2:G:459:ASP:HB3	2:G:462:THR:HB	1.97	0.46
2:H:5:ILE:HD12	2:H:109:VAL:HG11	1.97	0.46
2:H:67:ILE:HD13	2:H:89:ILE:CG1	2.45	0.46
2:H:117:PRO:HD2	2:H:120:PHE:CE1	2.51	0.46
2:H:134:ILE:C	2:H:136:GLY:H	2.19	0.46
1:A:131:ASP:OD1	1:B:134:GLN:NE2	2.48	0.46
2:C:166:TYR:CE2	2:C:322:ILE:HD11	2.50	0.46
2:D:29:ASN:O	2:D:31:GLU:N	2.49	0.46
2:D:493:GLU:C	2:D:495:ASP:H	2.18	0.46
2:D:503:GLU:O	2:D:505:ARG:N	2.48	0.46
1:F:65:LYS:CA	1:F:68:ILE:HD12	2.34	0.46
2:G:91:ALA:O	2:G:135:ALA:CB	2.64	0.46
2:G:166:TYR:CE1	2:G:318:VAL:HG11	2.50	0.46
2:G:277:LEU:O	2:G:280:HIS:CD2	2.69	0.46
2:G:400:ASP:N	2:G:400:ASP:OD1	2.49	0.46
1:B:179:ALA:HB2	1:B:210:LYS:HE2	1.97	0.46
2:C:409:VAL:CG1	2:C:409:VAL:O	2.63	0.46
2:D:248:THR:OG1	2:D:249:GLN:N	2.47	0.46
2:D:361:LEU:HD23	2:D:361:LEU:HA	1.33	0.46
2:G:496:ARG:HD2	2:G:497:LYS:N	2.30	0.46
2:H:118:ALA:HB2	2:H:144:ASN:HB3	1.96	0.46
2:H:118:ALA:CB	2:H:144:ASN:HD22	2.29	0.46
2:H:339:VAL:HA	2:H:342:ILE:HG13	1.98	0.46
2:H:383:ARG:HG2	2:H:384:ASN:HD22	1.78	0.46
2:H:397:THR:HB	2:H:439:PRO:HG2	1.96	0.46
1:A:95:ARG:HA	1:A:98:GLN:HE21	1.81	0.46
1:B:111:LEU:O	1:B:114:ASP:N	2.48	0.46
1:B:153:LEU:HD12	1:B:158:VAL:HG21	1.98	0.46
1:B:190:VAL:N	1:B:210:LYS:O	2.45	0.46
2:C:27:ILE:HD13	2:C:101:ALA:HB1	1.97	0.46
2:C:87:GLN:HE21	2:C:87:GLN:HB2	1.59	0.46
2:C:493:GLU:O	2:C:496:ARG:HG3	2.14	0.46
2:D:64:ILE:HD13	2:D:89:ILE:CG1	2.45	0.46
2:D:280:HIS:NE2	2:D:281:LEU:CD1	2.78	0.46
2:D:359:VAL:CG2	2:D:360:LEU:N	2.61	0.46
2:D:502:ALA:C	2:D:504:LEU:N	2.69	0.46
2:G:372:THR:HG22	2:G:373:MET:HB2	1.96	0.46
2:H:7:ILE:HD13	2:H:97:LEU:CD2	2.46	0.46
2:C:60:ASN:OD1	2:C:62:ASN:N	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:221:LEU:O	2:C:224:ASP:N	2.48	0.46
2:C:293:LEU:HD23	2:C:293:LEU:HA	1.51	0.46
2:D:329:GLU:OE1	2:D:330:PRO:HD2	2.16	0.46
1:A:83:LEU:O	1:A:86:TYR:HB2	2.16	0.46
1:A:162:GLU:H	1:A:162:GLU:CD	2.18	0.46
1:B:111:LEU:O	1:B:112:ALA:C	2.51	0.46
2:C:283:GLU:OE1	2:C:283:GLU:O	2.34	0.46
2:D:38:SER:C	2:D:39:VAL:CG1	2.85	0.46
2:D:173:PHE:CE1	2:D:175:VAL:CG1	2.99	0.46
2:D:201:PHE:O	2:D:204:VAL:HG12	2.16	0.46
2:D:230:ARG:HB3	2:D:252:LEU:HD21	1.96	0.46
2:D:290:ARG:O	2:D:293:LEU:N	2.49	0.46
2:G:91:ALA:CB	2:G:134:ILE:HG22	2.45	0.46
2:H:72:GLY:HA2	2:H:127:ALA:HB2	1.98	0.46
2:H:283:GLU:OE1	2:H:283:GLU:HA	2.15	0.46
2:H:388:PRO:O	2:H:388:PRO:HG2	2.15	0.46
1:A:86:TYR:HE2	1:A:90:GLU:OE2	1.98	0.45
1:B:82:TYR:N	1:B:82:TYR:CD1	2.83	0.45
1:B:105:LYS:O	1:B:107:ARG:N	2.49	0.45
2:C:205:ILE:CD1	2:C:274:PHE:CE2	2.92	0.45
2:C:216:GLU:OE1	2:C:216:GLU:HA	2.16	0.45
2:C:240:LYS:O	2:C:241:GLU:C	2.54	0.45
2:C:395:PHE:CE2	2:C:443:VAL:CG1	2.99	0.45
2:C:505:ARG:HH11	2:C:505:ARG:CG	2.28	0.45
2:D:251:SER:OG	2:D:252:LEU:N	2.47	0.45
2:D:490:GLU:HG2	1:F:81:ARG:NH2	2.31	0.45
2:G:459:ASP:HB3	2:G:462:THR:CB	2.46	0.45
2:H:16:VAL:CG1	2:H:100:TYR:OH	2.64	0.45
2:H:118:ALA:HB2	2:H:144:ASN:HD22	1.80	0.45
2:H:170:GLY:O	2:H:198:GLY:N	2.43	0.45
2:H:292:ALA:HA	2:H:295:ASP:CG	2.36	0.45
2:H:432:PRO:HA	2:H:433:PRO:HD3	1.82	0.45
2:H:464:LYS:NZ	2:H:464:LYS:CB	2.76	0.45
1:A:75:LEU:HA	1:A:75:LEU:HD23	1.17	0.45
1:A:193:LEU:HB3	2:C:226:MET:SD	2.56	0.45
2:C:60:ASN:ND2	2:C:62:ASN:O	2.50	0.45
2:C:67:ILE:CD1	2:C:89:ILE:HD13	2.47	0.45
2:D:113:VAL:HG13	2:D:113:VAL:O	2.14	0.45
2:G:94:LEU:HD22	2:G:94:LEU:N	2.31	0.45
2:G:94:LEU:HA	2:G:97:LEU:HB2	1.97	0.45
2:G:414:ARG:HE	2:G:491:ASN:CB	2.29	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:62:ASN:CB	2:H:79:ILE:CG2	2.94	0.45
2:H:109:VAL:CG2	2:H:111:ARG:O	2.62	0.45
2:H:156:ASP:HA	2:H:180:LEU:CD2	2.46	0.45
2:H:181:GLY:O	2:H:183:GLY:N	2.49	0.45
1:A:152:ALA:O	1:A:153:LEU:C	2.51	0.45
1:B:85:LEU:HD22	1:B:85:LEU:HA	1.73	0.45
2:C:73:THR:HG23	2:C:75:TYR:HB3	1.98	0.45
2:C:416:MET:HE2	2:C:497:LYS:CB	2.46	0.45
2:C:482:GLN:HA	2:C:485:ILE:HD12	1.98	0.45
2:D:85:THR:OG1	2:D:87:GLN:NE2	2.49	0.45
2:D:499:LYS:O	2:D:502:ALA:HB3	2.16	0.45
2:H:192:GLY:O	2:H:288:PRO:CG	2.65	0.45
2:C:20:GLU:O	2:C:21:GLY:O	2.35	0.45
2:C:52:VAL:HG22	2:C:52:VAL:O	2.17	0.45
2:D:60:ASN:C	2:D:62:ASN:N	2.70	0.45
2:D:269:LEU:CD1	2:D:270:THR:O	2.65	0.45
2:G:82:LYS:HE2	2:G:82:LYS:HB2	1.83	0.45
2:G:214:LYS:HZ2	2:G:221:LEU:H	1.62	0.45
2:G:291:GLN:O	2:G:295:ASP:CG	2.55	0.45
2:H:71:MET:O	2:H:124:GLN:CB	2.64	0.45
2:H:109:VAL:O	2:H:109:VAL:HG22	2.17	0.45
2:H:181:GLY:C	2:H:183:GLY:H	2.20	0.45
1:A:143:GLU:O	1:A:147:ARG:HB2	2.16	0.45
1:B:67:GLN:HE21	1:B:67:GLN:N	2.14	0.45
1:B:75:LEU:O	1:B:76:SER:C	2.52	0.45
1:B:119:LEU:HA	1:B:119:LEU:HD22	1.06	0.45
2:C:227:ALA:O	2:C:231:LEU:HD12	2.17	0.45
2:C:276:GLU:O	2:C:278:SER:N	2.50	0.45
2:D:67:ILE:HD13	2:D:89:ILE:CD1	2.47	0.45
1:E:97:ARG:HG3	1:E:98:GLN:OE1	2.15	0.45
2:H:147:THR:O	2:H:151:LEU:N	2.50	0.45
2:H:168:LEU:HD13	2:H:172:THR:O	2.17	0.45
1:A:81:ARG:NH2	2:C:355:VAL:HG22	2.31	0.45
1:B:165:GLY:O	1:B:166:LYS:C	2.55	0.45
1:B:193:LEU:HD21	2:D:226:MET:CG	2.43	0.45
2:C:64:ILE:CD1	2:C:89:ILE:HG12	2.47	0.45
2:C:67:ILE:HD13	2:C:89:ILE:CB	2.44	0.45
2:C:221:LEU:HD21	2:C:255:ILE:CG2	2.46	0.45
2:C:405:VAL:HA	2:H:356:LYS:O	2.17	0.45
2:D:104:TYR:CE2	2:D:105:LEU:HD11	2.51	0.45
2:D:245:VAL:HG23	2:D:246:THR:N	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:332:LYS:O	2:D:334:VAL:HG23	2.16	0.45
2:D:486:LYS:HE3	2:D:486:LYS:HB2	1.80	0.45
2:G:443:VAL:O	2:G:443:VAL:HG13	2.17	0.45
2:H:71:MET:HE2	2:H:128:THR:CG2	2.45	0.45
2:D:231:LEU:O	2:D:232:LYS:O	2.35	0.45
2:D:386:THR:HG22	2:D:389:THR:CG2	2.47	0.45
2:D:388:PRO:HD3	2:D:449:ALA:HA	1.98	0.45
2:G:121:ASN:OD1	2:G:121:ASN:N	2.50	0.45
2:G:145:GLU:HB2	2:G:146:PRO:CD	2.34	0.45
2:G:438:VAL:N	2:G:439:PRO:HD2	2.32	0.45
2:H:27:ILE:HG23	2:H:104:TYR:CD2	2.52	0.45
2:H:94:LEU:HD12	2:H:97:LEU:CB	2.47	0.45
2:H:208:TYR:CZ	2:H:273:LYS:HD2	2.51	0.45
2:H:365:PRO:O	2:H:366:LEU:CD1	2.65	0.45
1:B:86:TYR:O	1:B:87:ALA:C	2.52	0.45
1:B:111:LEU:HD13	1:B:111:LEU:C	2.37	0.45
2:C:8:ASP:HA	2:C:115:THR:CG2	2.44	0.45
2:C:36:THR:HG22	2:C:37:PRO:HD2	1.99	0.45
2:C:395:PHE:HE2	2:C:443:VAL:HG11	1.82	0.45
2:D:160:ASP:HA	2:D:180:LEU:CD2	2.47	0.45
2:D:184:VAL:HG12	2:D:185:PHE:H	1.81	0.45
2:D:377:PHE:HB3	2:D:415:PRO:O	2.17	0.45
1:E:176:VAL:CB	2:G:225:LYS:HD3	2.47	0.45
2:G:290:ARG:HA	2:G:293:LEU:HB2	1.99	0.45
2:G:347:GLN:OE1	2:G:350:VAL:HB	2.17	0.45
2:H:149:ALA:HB2	2:H:339:VAL:HG13	1.97	0.45
1:A:105:LYS:HD3	1:A:200:LYS:HZ3	1.78	0.45
1:A:174:GLN:OE1	1:A:208:MET:HB3	2.16	0.45
2:C:16:VAL:CG1	2:C:100:TYR:OH	2.65	0.45
2:C:363:VAL:HA	2:C:386:THR:HA	1.99	0.45
2:C:496:ARG:O	2:C:499:LYS:CB	2.59	0.45
2:G:214:LYS:HG2	2:G:220:ASP:HA	1.99	0.45
2:G:377:PHE:CG	2:G:410:LEU:HD12	2.52	0.45
2:G:445:PHE:HD1	2:G:455:VAL:CG2	2.30	0.45
2:H:141:ARG:CZ	2:H:347:GLN:HE21	2.29	0.45
2:H:371:GLU:N	2:H:410:LEU:HD11	2.32	0.45
2:H:405:VAL:HG11	2:H:441:ILE:HD11	1.99	0.45
2:H:484:MET:HE2	2:H:484:MET:HB2	1.69	0.45
1:A:78:MET:SD	1:A:82:TYR:CE1	3.10	0.45
1:A:127:LYS:HA	1:A:129:GLU:OE1	2.17	0.45
1:B:78:MET:O	1:B:81:ARG:N	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:89:PHE:O	1:B:92:PHE:N	2.32	0.45
1:B:120:ASP:OD2	1:B:194:GLN:NE2	2.49	0.45
2:C:116:VAL:HB	2:C:117:PRO:CD	2.47	0.45
2:C:408:HIS:NE2	2:C:410:LEU:HD21	2.32	0.45
2:D:164:LEU:C	2:D:164:LEU:CD1	2.84	0.45
2:D:221:LEU:C	2:D:223:LYS:H	2.19	0.45
2:D:274:PHE:CD1	2:D:274:PHE:C	2.90	0.45
2:D:476:LEU:CB	2:D:480:GLU:CD	2.84	0.45
1:F:94:ARG:NH2	1:F:97:ARG:NH1	2.65	0.45
2:G:164:LEU:CB	2:G:177:ILE:HG12	2.47	0.45
2:G:239:LYS:CA	2:G:242:LEU:HD22	2.46	0.45
2:G:360:LEU:HD22	2:G:360:LEU:HA	1.86	0.45
2:G:361:LEU:CD2	2:G:387:ILE:CD1	2.87	0.45
2:G:503:GLU:C	2:G:505:ARG:N	2.70	0.45
2:H:468:ILE:HG22	2:H:469:THR:O	2.17	0.45
1:A:89:PHE:CB	1:B:89:PHE:HD1	2.27	0.44
1:A:150:VAL:O	1:A:154:LYS:HB2	2.17	0.44
1:A:201:ASP:OD1	1:A:202:ARG:N	2.50	0.44
1:B:86:TYR:HD1	1:B:86:TYR:HA	1.55	0.44
1:B:94:ARG:O	1:B:98:GLN:HG3	2.16	0.44
1:B:152:ALA:HA	1:B:155:LYS:HB2	1.98	0.44
1:B:189:VAL:N	1:B:211:VAL:HG23	2.31	0.44
1:B:189:VAL:HG22	1:B:209:VAL:HG11	1.98	0.44
2:C:157:LYS:HE3	2:C:356:LYS:HZ3	1.82	0.44
2:D:71:MET:SD	2:D:86:PRO:CB	3.06	0.44
2:D:239:LYS:O	2:D:240:LYS:C	2.55	0.44
2:G:77:VAL:HG13	2:G:79:ILE:HG13	1.99	0.44
2:H:7:ILE:CD1	2:H:97:LEU:HD23	2.46	0.44
2:H:374:GLY:N	2:H:375:GLY:CA	2.79	0.44
1:A:138:ILE:HG21	1:B:139:LEU:CD2	2.29	0.44
2:C:10:GLY:N	2:C:14:SER:OG	2.47	0.44
2:C:39:VAL:O	2:C:39:VAL:HG22	2.17	0.44
2:C:153:TYR:CZ	2:C:334:VAL:HG12	2.52	0.44
2:C:217:HIS:ND1	2:C:217:HIS:N	2.65	0.44
2:C:443:VAL:HA	2:C:456:ARG:O	2.17	0.44
2:D:361:LEU:HD22	2:D:387:ILE:HG12	1.94	0.44
2:D:476:LEU:HD13	2:D:476:LEU:HA	1.73	0.44
2:G:372:THR:O	2:G:375:GLY:N	2.49	0.44
2:G:383:ARG:CD	2:G:384:ASN:H	2.25	0.44
2:G:470:ILE:HA	2:G:471:LYS:NZ	2.32	0.44
2:H:151:LEU:HD12	2:H:151:LEU:HA	1.63	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:370:ILE:HD13	2:H:407:ILE:CG2	2.43	0.44
1:B:75:LEU:HD22	1:B:75:LEU:HA	1.69	0.44
2:C:483:ARG:HD2	2:C:483:ARG:HA	1.68	0.44
2:D:146:PRO:O	2:D:147:THR:C	2.56	0.44
2:D:465:GLU:O	2:D:467:SER:OG	2.35	0.44
1:F:148:SER:HA	1:F:151:ASP:CB	2.47	0.44
2:G:238:ALA:O	2:G:242:LEU:HD13	2.17	0.44
2:G:370:ILE:CD1	2:G:445:PHE:HZ	2.29	0.44
2:H:155:LEU:HB3	2:H:158:GLU:OE1	2.17	0.44
2:H:306:VAL:CG1	2:H:307:ILE:N	2.78	0.44
2:C:265:LEU:HD23	2:C:265:LEU:C	2.38	0.44
2:C:362:ASP:O	2:C:363:VAL:HG22	2.17	0.44
2:C:414:ARG:HB2	2:C:420:ASN:HD21	1.83	0.44
2:D:29:ASN:HB2	2:D:30:PRO:CD	2.47	0.44
2:D:77:VAL:O	2:D:77:VAL:HG13	2.18	0.44
2:D:381:ILE:CD1	2:D:447:ILE:HD11	2.48	0.44
2:H:180:LEU:HD11	2:H:183:GLY:O	2.17	0.44
2:H:316:PRO:O	2:H:320:GLU:HB2	2.17	0.44
2:H:481:ILE:C	2:H:483:ARG:H	2.20	0.44
2:D:18:VAL:HG11	2:D:27:ILE:HD11	1.99	0.44
2:D:168:LEU:CD1	2:D:197:GLY:HA2	2.46	0.44
2:D:426:PHE:HZ	2:D:457:ALA:CB	2.31	0.44
2:D:505:ARG:HG3	2:D:506:ASN:N	2.33	0.44
2:G:368:LEU:HB2	2:G:381:ILE:HB	1.99	0.44
2:H:11:THR:N	2:H:68:LYS:HD3	2.33	0.44
2:H:361:LEU:CD1	2:H:387:ILE:HD12	2.43	0.44
2:H:499:LYS:HG2	2:H:500:GLU:N	2.32	0.44
1:B:169:ASP:H	1:B:173:HIS:CD2	2.34	0.44
2:C:41:ALA:HB1	2:C:60:ASN:HD22	1.81	0.44
2:C:124:GLN:O	2:C:127:ALA:N	2.51	0.44
2:C:250:ILE:HG22	2:C:252:LEU:HD22	2.00	0.44
2:C:288:PRO:O	2:C:289:VAL:C	2.56	0.44
2:D:38:SER:C	2:D:39:VAL:HG13	2.37	0.44
2:D:496:ARG:O	2:D:497:LYS:C	2.54	0.44
1:F:91:ASN:CG	2:G:386:THR:OG1	2.56	0.44
2:G:97:LEU:O	2:G:100:TYR:HD1	2.00	0.44
2:G:214:LYS:HE3	2:G:220:ASP:OD1	2.17	0.44
2:H:425:ARG:O	2:H:426:PHE:HB3	2.17	0.44
1:A:188:THR:O	1:A:211:VAL:HG23	2.17	0.44
1:A:204:LEU:H	1:A:204:LEU:HD12	1.82	0.44
1:B:85:LEU:HD23	2:H:483:ARG:HH21	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:167:ASP:OD1	2:D:168:LEU:N	2.50	0.44
2:G:234:ALA:O	2:G:237:LYS:HB3	2.17	0.44
2:G:399:ALA:O	2:G:400:ASP:C	2.56	0.44
2:H:379:LYS:O	2:H:380:LEU:HD23	2.18	0.44
1:B:81:ARG:O	1:B:82:TYR:HD1	2.01	0.44
2:C:157:LYS:HE3	2:C:356:LYS:NZ	2.32	0.44
2:C:194:ASN:O	2:C:195:HIS:CD2	2.70	0.44
2:D:9:LEU:HA	2:D:9:LEU:HD12	1.77	0.44
2:D:29:ASN:HA	2:D:100:TYR:CD1	2.53	0.44
2:D:192:GLY:CA	2:D:288:PRO:HB3	2.47	0.44
2:D:361:LEU:CD1	2:D:387:ILE:CD1	2.95	0.44
2:H:127:ALA:C	2:H:130:ASP:HB2	2.35	0.44
2:H:379:LYS:HE2	2:H:379:LYS:HB2	1.72	0.44
2:H:458:LYS:HA	2:H:465:GLU:HB3	2.00	0.44
1:A:119:LEU:CD1	1:A:197:TYR:CE2	3.01	0.44
2:C:119:TYR:O	2:C:120:PHE:C	2.56	0.44
2:C:395:PHE:HB3	2:H:358:VAL:HG23	2.00	0.44
1:E:104:GLU:HA	1:F:107:ARG:HH12	1.83	0.44
1:A:108:ALA:HB2	1:A:156:GLU:OE1	2.17	0.43
2:C:88:GLU:O	2:C:91:ALA:HB3	2.18	0.43
2:C:270:THR:HG22	2:C:272:ALA:H	1.83	0.43
2:C:284:ARG:HE	2:C:284:ARG:HB3	1.32	0.43
2:D:196:LEU:HD12	2:D:196:LEU:HA	1.64	0.43
2:D:217:HIS:CD2	2:D:263:LEU:HD21	2.53	0.43
2:D:387:ILE:HG21	2:D:387:ILE:HD13	1.58	0.43
2:D:479:GLU:O	2:D:482:GLN:N	2.51	0.43
2:G:179:GLU:HB2	2:G:188:LYS:NZ	2.33	0.43
2:G:214:LYS:HZ2	2:G:221:LEU:N	2.16	0.43
2:G:334:VAL:HG13	2:G:336:PRO:N	2.32	0.43
2:H:115:THR:OG1	2:H:145:GLU:HG2	2.16	0.43
1:A:196:GLY:CA	1:A:207:ALA:HB2	2.48	0.43
2:C:44:ASN:C	2:C:46:GLU:N	2.71	0.43
2:C:118:ALA:HB2	2:C:146:PRO:HG2	2.00	0.43
2:C:368:LEU:HA	2:C:368:LEU:HD23	1.46	0.43
2:C:400:ASP:O	2:C:401:ASN:HB2	2.18	0.43
2:D:4:ILE:HD13	2:D:351:ILE:CG2	2.48	0.43
2:D:160:ASP:HA	2:D:180:LEU:HD23	1.99	0.43
1:E:193:LEU:H	1:E:209:VAL:HA	1.83	0.43
2:H:127:ALA:O	2:H:130:ASP:CB	2.50	0.43
2:H:368:LEU:HD22	2:H:411:GLN:HB2	1.98	0.43
1:A:144:MET:HE2	2:D:266:GLU:CD	2.39	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:177:MET:HE2	2:C:225:LYS:HZ3	1.82	0.43
1:B:94:ARG:HD2	1:B:98:GLN:HG3	2.00	0.43
2:C:102:GLU:O	2:C:103:ASP:C	2.56	0.43
2:C:182:ASP:O	2:C:183:GLY:C	2.57	0.43
2:C:339:VAL:CG1	2:C:340:VAL:N	2.80	0.43
2:D:371:GLU:O	2:D:371:GLU:HG3	2.18	0.43
2:G:41:ALA:HB2	2:G:62:ASN:O	2.18	0.43
2:G:416:MET:HE3	2:G:417:ALA:N	2.10	0.43
2:H:184:VAL:CG1	2:H:185:PHE:N	2.79	0.43
1:A:75:LEU:CD2	1:B:75:LEU:CD2	2.96	0.43
1:B:67:GLN:HA	1:B:67:GLN:NE2	2.31	0.43
1:B:142:MET:CE	2:C:254:PHE:CZ	3.01	0.43
1:B:166:LYS:HG2	1:B:167:PRO:CD	2.48	0.43
2:C:39:VAL:O	2:C:39:VAL:CG2	2.62	0.43
2:C:43:LYS:HA	2:C:43:LYS:HD2	1.55	0.43
2:C:47:ARG:HD3	2:C:92:ILE:HD13	2.00	0.43
2:C:253:PRO:HB2	2:C:254:PHE:CD1	2.53	0.43
2:C:291:GLN:HA	2:C:291:GLN:OE1	2.19	0.43
2:C:396:THR:HG23	2:H:361:LEU:HB2	2.00	0.43
2:D:83:GLN:O	2:D:83:GLN:HG3	2.17	0.43
2:D:204:VAL:HG21	2:D:277:LEU:O	2.18	0.43
2:D:232:LYS:O	2:D:233:ASP:C	2.56	0.43
2:D:507:GLU:OE1	2:D:507:GLU:CA	2.62	0.43
1:E:77:GLU:O	1:E:81:ARG:HG2	2.18	0.43
2:G:205:ILE:HD13	2:G:235:ALA:O	2.18	0.43
2:G:484:MET:N	2:G:484:MET:SD	2.91	0.43
2:H:12:THR:HB	2:H:170:GLY:H	1.84	0.43
2:H:287:GLY:O	2:H:291:GLN:HB2	2.18	0.43
2:H:324:ARG:HG3	2:H:325:GLU:N	2.32	0.43
1:A:75:LEU:CD2	1:B:75:LEU:HD22	2.48	0.43
1:A:171:TYR:HB3	1:A:172:LEU:HD23	2.00	0.43
2:C:164:LEU:HD21	2:C:175:VAL:CG1	2.49	0.43
2:C:207:ASP:O	2:C:210:VAL:N	2.52	0.43
2:C:300:PRO:O	2:C:301:ALA:C	2.55	0.43
2:D:89:ILE:O	2:D:92:ILE:N	2.51	0.43
1:E:63:ALA:HA	1:E:66:ALA:CB	2.48	0.43
1:E:75:LEU:O	1:E:78:MET:CB	2.63	0.43
1:F:69:ALA:HA	1:F:72:GLU:OE1	2.19	0.43
2:G:144:ASN:HD21	2:G:147:THR:H	1.62	0.43
2:G:162:THR:C	2:G:303:ILE:HG23	2.38	0.43
2:H:86:PRO:O	2:H:89:ILE:HB	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:489:GLU:O	2:H:490:GLU:C	2.56	0.43
1:A:78:MET:SD	1:A:82:TYR:CZ	3.11	0.43
1:A:168:PHE:CE2	1:A:175:ALA:HB2	2.53	0.43
2:C:1:MET:CG	2:C:2:SER:H	2.30	0.43
2:C:157:LYS:CE	2:C:356:LYS:HZ3	2.31	0.43
2:C:241:GLU:O	2:C:245:VAL:CG1	2.66	0.43
2:C:317:ALA:O	2:C:318:VAL:C	2.56	0.43
2:C:495:ASP:CG	2:C:498:ARG:CZ	2.87	0.43
2:D:80:GLU:OE1	2:D:80:GLU:N	2.51	0.43
2:D:204:VAL:CG2	2:D:277:LEU:HD13	2.42	0.43
2:D:208:TYR:HE2	2:D:273:LYS:HD3	1.83	0.43
2:D:225:LYS:O	2:D:228:LEU:HB3	2.18	0.43
2:D:290:ARG:CA	2:D:293:LEU:HG	2.45	0.43
2:D:318:VAL:O	2:D:319:GLN:C	2.57	0.43
1:E:144:MET:O	1:E:148:SER:CB	2.66	0.43
2:G:161:GLN:HG2	2:G:180:LEU:HB2	2.00	0.43
2:G:387:ILE:HG22	2:G:449:ALA:HA	2.00	0.43
2:G:484:MET:CE	2:G:487:GLU:HB2	2.48	0.43
2:H:273:LYS:HD3	2:H:276:GLU:OE1	2.19	0.43
2:H:347:GLN:HA	2:H:350:VAL:HG23	2.01	0.43
1:A:84:ARG:HH22	2:C:354:GLU:N	2.16	0.43
1:A:106:TYR:CD2	1:A:202:ARG:NH1	2.71	0.43
2:C:97:LEU:HD12	2:C:97:LEU:HA	1.39	0.43
2:C:298:LEU:HD12	2:C:298:LEU:HA	1.78	0.43
2:C:361:LEU:O	2:C:387:ILE:HD12	2.19	0.43
2:C:434:ALA:HB1	2:C:435:PRO:HD2	2.00	0.43
1:E:72:GLU:O	1:E:75:LEU:HB2	2.18	0.43
2:G:293:LEU:HD22	2:G:300:PRO:N	2.34	0.43
2:H:88:GLU:HA	2:H:91:ALA:CB	2.45	0.43
2:H:90:SER:O	2:H:94:LEU:HD22	2.19	0.43
2:H:113:VAL:CG2	2:H:141:ARG:HB3	2.49	0.43
2:C:153:TYR:CE1	2:C:334:VAL:CB	3.02	0.43
2:C:245:VAL:CG2	2:C:246:THR:N	2.79	0.43
2:C:369:GLY:HA3	2:C:378:THR:O	2.17	0.43
2:C:497:LYS:O	2:C:500:GLU:OE2	2.37	0.43
2:D:280:HIS:CD2	2:D:281:LEU:H	2.37	0.43
2:D:388:PRO:HB3	2:D:448:ASP:C	2.38	0.43
2:D:395:PHE:HD1	2:D:395:PHE:HA	1.64	0.43
1:E:75:LEU:O	1:E:76:SER:C	2.57	0.43
1:F:74:LYS:O	1:F:78:MET:CB	2.62	0.43
2:G:152:ALA:CA	2:G:346:ILE:HD12	2.32	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:155:LEU:HD13	2:G:155:LEU:HA	1.79	0.43
2:G:346:ILE:O	2:G:350:VAL:HG23	2.19	0.43
2:H:24:VAL:CG1	2:H:345:ALA:HB1	2.49	0.43
2:H:143:ILE:HG22	2:H:144:ASN:H	1.82	0.43
2:H:202:ASP:O	2:H:206:ILE:HD12	2.19	0.43
1:A:84:ARG:NH2	2:C:354:GLU:N	2.67	0.43
2:C:128:THR:OG1	2:C:129:LYS:N	2.52	0.43
2:C:483:ARG:O	2:C:487:GLU:OE1	2.36	0.43
2:D:5:ILE:HD11	2:D:109:VAL:HG11	2.00	0.43
2:D:73:THR:C	2:D:75:TYR:H	2.20	0.43
2:D:203:GLN:O	2:D:204:VAL:C	2.57	0.43
2:G:206:ILE:HG12	2:G:231:LEU:HB3	2.01	0.43
2:G:274:PHE:CA	2:G:277:LEU:HB2	2.48	0.43
2:G:366:LEU:HD13	2:G:412:GLY:CA	2.48	0.43
2:G:370:ILE:CG2	2:G:408:HIS:O	2.60	0.43
2:C:92:ILE:O	2:C:95:GLN:HB2	2.19	0.43
2:C:500:GLU:HA	2:C:503:GLU:CG	2.49	0.43
2:D:51:GLU:O	2:D:53:ALA:N	2.51	0.43
2:D:267:MET:SD	2:D:268:THR:N	2.92	0.43
2:D:361:LEU:CD1	2:D:387:ILE:HG13	2.48	0.43
2:D:438:VAL:N	2:D:439:PRO:HD3	2.33	0.43
1:E:94:ARG:CA	1:E:97:ARG:HB3	2.49	0.43
2:G:107:GLU:O	2:G:107:GLU:HG2	2.19	0.43
2:G:173:PHE:CZ	2:G:175:VAL:CG1	2.97	0.43
2:G:372:THR:HB	2:G:376:VAL:CG1	2.24	0.43
2:H:4:ILE:HG12	2:H:111:ARG:HB2	2.01	0.43
2:H:88:GLU:O	2:H:91:ALA:HB3	2.19	0.43
2:H:272:ALA:HA	2:H:275:GLU:OE1	2.19	0.43
2:C:18:VAL:HG12	2:C:27:ILE:CD1	2.49	0.42
2:D:53:ALA:O	2:D:54:LYS:C	2.56	0.42
2:D:79:ILE:HD12	2:D:84:TYR:CE2	2.51	0.42
2:D:107:GLU:O	2:D:108:PRO:C	2.57	0.42
2:D:147:THR:O	2:D:151:LEU:HD13	2.19	0.42
2:G:153:TYR:OH	2:G:334:VAL:HG12	2.19	0.42
2:H:386:THR:CG2	2:H:387:ILE:O	2.55	0.42
2:H:403:THR:OG1	2:H:404:THR:N	2.52	0.42
1:A:171:TYR:CB	1:A:172:LEU:HD23	2.50	0.42
1:B:193:LEU:HD23	1:B:193:LEU:O	2.18	0.42
2:C:68:LYS:HZ1	2:C:117:PRO:HG3	1.82	0.42
2:C:71:MET:SD	2:C:86:PRO:HB2	2.58	0.42
2:C:138:GLU:OE2	2:C:140:GLU:OE1	2.37	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:162:THR:N	2:C:304:ASP:OD1	2.52	0.42
2:D:328:LYS:HG2	2:D:329:GLU:N	2.28	0.42
2:D:495:ASP:O	2:D:497:LYS:N	2.52	0.42
1:F:82:TYR:HD1	1:F:82:TYR:HA	1.78	0.42
2:G:54:LYS:O	2:G:57:ALA:HB3	2.19	0.42
2:G:486:LYS:HE3	2:G:490:GLU:OE2	2.19	0.42
2:H:71:MET:HE3	2:H:128:THR:HG23	2.00	0.42
2:H:119:TYR:HD2	2:H:190:THR:HG21	1.84	0.42
1:A:185:GLU:HB3	1:A:186:PRO:CD	2.50	0.42
1:A:198:LYS:O	1:A:198:LYS:CG	2.66	0.42
1:A:208:MET:H	1:A:208:MET:HG2	1.60	0.42
2:C:307:ILE:O	2:C:308:LEU:HD12	2.20	0.42
2:D:16:VAL:HG11	2:D:100:TYR:OH	2.18	0.42
2:D:221:LEU:C	2:D:223:LYS:N	2.72	0.42
2:D:246:THR:O	2:D:246:THR:OG1	2.36	0.42
2:D:375:GLY:O	2:D:416:MET:HE3	2.18	0.42
1:F:75:LEU:HD13	1:F:76:SER:N	2.35	0.42
1:F:165:GLY:HA2	1:F:189:VAL:H	1.84	0.42
2:G:144:ASN:OD1	2:G:147:THR:CG2	2.68	0.42
2:G:308:LEU:CD1	2:G:330:PRO:CB	2.96	0.42
2:H:67:ILE:HD11	2:H:89:ILE:HG21	1.78	0.42
2:H:332:LYS:HD2	2:H:332:LYS:C	2.39	0.42
2:H:358:VAL:HG23	2:H:359:VAL:N	2.34	0.42
2:H:367:SER:OG	2:H:413:GLU:OE1	2.37	0.42
2:H:392:SER:CB	2:H:444:THR:HB	2.48	0.42
1:B:71:LEU:O	1:B:72:GLU:C	2.57	0.42
2:C:42:PHE:HD1	2:C:42:PHE:H	1.67	0.42
2:C:466:GLN:HA	2:C:466:GLN:NE2	2.34	0.42
2:D:270:THR:OG1	2:D:272:ALA:N	2.52	0.42
2:D:408:HIS:CD2	2:D:425:ARG:HD2	2.53	0.42
2:G:243:SER:CB	2:G:315:ILE:HA	2.50	0.42
2:G:255:ILE:H	2:G:264:HIS:CB	2.33	0.42
2:G:477:SER:OG	2:G:478:GLU:N	2.51	0.42
2:H:12:THR:C	2:H:13:ASN:ND2	2.73	0.42
2:H:370:ILE:CD1	2:H:407:ILE:HG23	2.43	0.42
2:H:460:LEU:N	2:H:460:LEU:CD2	2.79	0.42
1:A:120:ASP:OD2	1:A:205:ARG:NH2	2.51	0.42
1:A:160:ALA:CB	1:A:197:TYR:CE1	3.02	0.42
1:B:119:LEU:HD22	1:B:122:PHE:HB2	2.01	0.42
1:B:153:LEU:HA	1:B:153:LEU:HD22	1.60	0.42
2:C:68:LYS:CE	2:C:117:PRO:HG3	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:175:VAL:CG1	2:C:176:SER:N	2.82	0.42
2:C:330:PRO:HG2	2:C:330:PRO:O	2.19	0.42
2:C:380:LEU:O	2:C:391:LYS:CD	2.67	0.42
2:D:7:ILE:HG22	2:D:8:ASP:N	2.35	0.42
2:D:97:LEU:HA	2:D:97:LEU:HD12	1.67	0.42
2:D:208:TYR:CE2	2:D:273:LYS:HD3	2.54	0.42
1:E:70:GLU:H	1:E:70:GLU:HG3	1.67	0.42
2:G:369:GLY:CA	2:G:377:PHE:CE1	3.02	0.42
2:G:397:THR:CB	2:G:436:ARG:HA	2.49	0.42
1:A:169:ASP:C	1:A:171:TYR:N	2.71	0.42
1:A:174:GLN:O	1:A:208:MET:HA	2.19	0.42
1:B:116:LEU:HD22	1:B:197:TYR:CE2	2.54	0.42
2:C:110:THR:HG23	2:C:111:ARG:CG	2.26	0.42
2:G:210:VAL:HB	2:G:214:LYS:HZ3	1.83	0.42
2:H:18:VAL:O	2:H:24:VAL:HG13	2.19	0.42
1:A:92:PHE:HZ	1:B:92:PHE:CE1	2.36	0.42
1:A:118:VAL:HG12	1:A:119:LEU:N	2.34	0.42
1:A:123:GLU:OE1	1:A:195:LYS:HB2	2.19	0.42
1:B:114:ASP:O	1:B:117:PRO:HD2	2.20	0.42
1:B:128:ILE:O	1:B:128:ILE:HG22	2.20	0.42
2:C:38:SER:C	2:C:39:VAL:CG1	2.86	0.42
2:C:221:LEU:O	2:C:222:SER:C	2.58	0.42
2:C:440:GLN:O	2:C:441:ILE:HG13	2.19	0.42
2:D:39:VAL:CG2	2:D:53:ALA:HB3	2.50	0.42
2:D:89:ILE:C	2:D:91:ALA:N	2.71	0.42
2:D:101:ALA:O	2:D:105:LEU:HD22	2.20	0.42
2:D:213:PHE:HZ	2:D:263:LEU:HD13	1.83	0.42
1:E:76:SER:HA	1:E:79:GLU:CD	2.39	0.42
2:H:71:MET:SD	2:H:87:GLN:HG3	2.60	0.42
2:H:401:ASN:ND2	2:H:433:PRO:O	2.53	0.42
1:A:120:ASP:HA	1:A:123:GLU:OE2	2.20	0.42
1:A:124:ARG:NH2	2:C:230:ARG:HD2	2.34	0.42
1:B:169:ASP:O	1:B:173:HIS:HD2	2.03	0.42
2:C:273:LYS:CE	2:C:277:LEU:HD21	2.50	0.42
2:D:3:LYS:HD2	2:D:3:LYS:N	2.35	0.42
2:D:18:VAL:HG22	2:D:19:LEU:N	2.34	0.42
2:D:73:THR:O	2:D:75:TYR:N	2.53	0.42
2:D:141:ARG:HG3	2:D:142:ILE:N	2.34	0.42
2:D:150:ALA:O	2:D:155:LEU:HD22	2.20	0.42
2:D:356:LYS:HD3	2:G:406:ASP:HB2	2.02	0.42
2:D:377:PHE:CD1	2:D:377:PHE:C	2.91	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:408:HIS:CE1	2:D:425:ARG:NH1	2.88	0.42
2:D:421:LYS:HE2	2:D:421:LYS:HB2	1.41	0.42
1:F:85:LEU:HD13	1:F:85:LEU:HA	1.83	0.42
2:G:173:PHE:HZ	2:G:175:VAL:HG13	1.78	0.42
2:G:395:PHE:CD1	2:G:395:PHE:N	2.87	0.42
2:G:400:ASP:CB	2:G:401:ASN:ND2	2.83	0.42
1:A:111:LEU:HD23	1:A:111:LEU:HA	1.56	0.42
1:A:200:LYS:O	1:A:201:ASP:OD1	2.37	0.42
2:C:145:GLU:HB2	2:C:146:PRO:CD	2.41	0.42
2:C:394:VAL:CG2	2:H:363:VAL:HG11	2.46	0.42
2:C:471:LYS:H	2:C:471:LYS:NZ	2.15	0.42
2:D:77:VAL:O	2:D:77:VAL:CG1	2.66	0.42
2:D:334:VAL:O	2:D:336:PRO:HD3	2.19	0.42
2:G:164:LEU:HD23	2:G:177:ILE:HG13	2.02	0.42
2:G:226:MET:O	2:G:226:MET:HG2	2.19	0.42
2:G:293:LEU:HD13	2:G:300:PRO:CG	2.41	0.42
2:H:339:VAL:HA	2:H:342:ILE:CG1	2.50	0.42
2:H:380:LEU:HD23	2:H:380:LEU:HA	1.26	0.42
2:H:414:ARG:CZ	2:H:491:ASN:ND2	2.83	0.42
2:H:505:ARG:O	2:H:507:GLU:C	2.57	0.42
2:C:205:ILE:O	2:C:206:ILE:C	2.54	0.42
2:D:10:GLY:HA2	2:D:68:LYS:NZ	2.34	0.42
2:D:209:LEU:HA	2:D:209:LEU:HD22	1.72	0.42
2:D:233:ASP:O	2:D:234:ALA:C	2.58	0.42
2:G:370:ILE:CG1	2:G:445:PHE:HZ	2.33	0.42
2:G:402:GLN:HG2	2:G:404:THR:O	2.20	0.42
2:H:12:THR:HB	2:H:170:GLY:N	2.35	0.42
2:H:305:LYS:HE2	2:H:328:LYS:HD3	2.02	0.42
2:H:377:PHE:CE1	2:H:378:THR:O	2.73	0.42
1:A:92:PHE:CE2	1:B:92:PHE:CZ	3.08	0.41
1:A:200:LYS:O	1:A:202:ARG:N	2.47	0.41
1:B:78:MET:O	1:B:79:GLU:C	2.59	0.41
1:B:85:LEU:O	1:B:86:TYR:C	2.58	0.41
2:C:64:ILE:HG22	2:C:65:ILE:N	2.34	0.41
2:C:204:VAL:HG21	2:C:277:LEU:O	2.20	0.41
2:C:281:LEU:O	2:C:282:VAL:C	2.58	0.41
2:C:498:ARG:C	2:C:500:GLU:N	2.73	0.41
2:D:4:ILE:CD1	2:D:351:ILE:HB	2.50	0.41
2:D:6:GLY:CA	2:D:344:ALA:HB1	2.50	0.41
2:D:121:ASN:CG	2:D:122:ASP:N	2.73	0.41
2:D:210:VAL:CA	2:D:221:LEU:HD13	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:317:ALA:O	2:D:318:VAL:C	2.58	0.41
2:G:171:GLY:O	2:G:195:HIS:HA	2.19	0.41
2:G:242:LEU:HD13	2:G:242:LEU:H	1.84	0.41
2:G:308:LEU:HD21	2:G:319:GLN:CD	2.40	0.41
2:H:8:ASP:O	2:H:14:SER:CB	2.67	0.41
2:H:15:CYS:SG	2:H:341:ALA:HB3	2.60	0.41
2:H:132:GLY:O	2:H:137:LEU:HB2	2.19	0.41
2:H:281:LEU:CD1	2:H:284:ARG:NH1	2.81	0.41
2:H:397:THR:O	2:H:397:THR:HG23	2.20	0.41
1:B:119:LEU:HD21	1:B:149:LEU:HD22	2.02	0.41
1:B:135:ALA:O	1:B:138:ILE:HB	2.20	0.41
2:C:151:LEU:HD22	2:C:347:GLN:HG2	1.99	0.41
2:C:366:LEU:HA	2:C:383:ARG:HG3	2.02	0.41
2:D:303:ILE:HG22	2:D:305:LYS:N	2.35	0.41
2:D:319:GLN:O	2:D:320:GLU:C	2.59	0.41
2:D:423:LEU:HD13	2:D:470:ILE:HD13	2.01	0.41
1:F:98:GLN:HA	1:F:101:GLU:HG3	2.02	0.41
2:G:163:ILE:HA	2:G:303:ILE:CG2	2.50	0.41
2:G:163:ILE:HA	2:G:303:ILE:HG23	2.01	0.41
2:H:24:VAL:HG11	2:H:345:ALA:HB1	2.01	0.41
2:H:116:VAL:CG1	2:H:117:PRO:CD	2.92	0.41
2:H:479:GLU:CD	2:H:479:GLU:C	2.78	0.41
1:A:192:GLU:CG	1:A:195:LYS:HA	2.50	0.41
1:B:133:GLU:HB2	1:B:134:GLN:H	1.69	0.41
2:C:164:LEU:O	2:C:306:VAL:HG13	2.20	0.41
2:C:399:ALA:CB	2:H:355:VAL:HG11	2.50	0.41
2:D:214:LYS:O	2:D:218:GLY:N	2.52	0.41
2:D:230:ARG:CZ	2:D:252:LEU:HD11	2.48	0.41
2:D:242:LEU:HD21	2:D:248:THR:HG22	2.02	0.41
1:E:81:ARG:O	1:E:84:ARG:N	2.53	0.41
1:F:194:GLN:O	1:F:207:ALA:HB2	2.21	0.41
2:G:167:ASP:HB3	2:G:174:ASP:HB3	2.02	0.41
2:G:358:VAL:HG23	2:G:359:VAL:N	2.35	0.41
2:H:160:ASP:OD1	2:H:182:ASP:N	2.53	0.41
2:H:168:LEU:HD12	2:H:169:GLY:O	2.20	0.41
2:H:172:THR:C	2:H:196:LEU:O	2.58	0.41
2:H:231:LEU:O	2:H:235:ALA:CB	2.68	0.41
2:C:87:GLN:O	2:C:91:ALA:CB	2.66	0.41
2:D:348:GLY:O	2:D:349:GLY:C	2.58	0.41
1:E:80:HIS:O	1:E:81:ARG:C	2.58	0.41
2:G:499:LYS:HE2	2:G:500:GLU:OE1	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:186:GLU:O	2:H:186:GLU:HG3	2.20	0.41
2:C:42:PHE:N	2:C:42:PHE:HD1	2.14	0.41
2:D:420:ASN:N	2:D:420:ASN:HD22	2.17	0.41
2:D:476:LEU:HB3	2:D:480:GLU:HB3	2.02	0.41
2:D:476:LEU:O	2:D:480:GLU:HB3	2.21	0.41
2:H:457:ALA:O	2:H:465:GLU:HB2	2.20	0.41
1:A:84:ARG:HH21	2:C:354:GLU:HB2	1.82	0.41
1:A:145:VAL:O	1:A:148:SER:HB3	2.21	0.41
1:A:190:VAL:N	1:A:210:LYS:O	2.47	0.41
2:C:326:LEU:HD22	2:C:326:LEU:H	1.86	0.41
2:C:484:MET:HE2	2:C:484:MET:CA	2.46	0.41
2:C:500:GLU:N	2:C:500:GLU:CD	2.73	0.41
2:D:37:PRO:HG2	2:D:51:GLU:N	2.35	0.41
2:D:315:ILE:HG21	2:D:318:VAL:HG23	2.02	0.41
2:D:444:THR:O	2:D:445:PHE:CD1	2.66	0.41
2:G:10:GLY:CA	2:G:13:ASN:O	2.68	0.41
2:G:180:LEU:HG	2:G:182:ASP:H	1.86	0.41
2:G:358:VAL:HG23	2:G:359:VAL:H	1.85	0.41
2:H:381:ILE:HD11	2:H:445:PHE:CB	2.50	0.41
1:A:192:GLU:C	1:A:193:LEU:HD23	2.40	0.41
1:A:192:GLU:CD	1:A:195:LYS:HG2	2.41	0.41
1:B:119:LEU:O	1:B:123:GLU:OE1	2.38	0.41
2:C:234:ALA:HA	2:C:237:LYS:HD3	2.02	0.41
2:C:366:LEU:HD22	2:C:367:SER:N	2.28	0.41
2:D:329:GLU:HA	2:D:330:PRO:HD2	1.96	0.41
2:D:358:VAL:HG22	2:G:372:THR:HA	2.02	0.41
2:D:397:THR:HG23	2:D:436:ARG:CG	2.50	0.41
1:F:63:ALA:HA	1:F:66:ALA:CB	2.51	0.41
1:F:83:LEU:O	2:G:388:PRO:HG2	2.21	0.41
2:G:6:GLY:O	2:G:16:VAL:HA	2.21	0.41
2:G:70:HIS:CD2	2:G:75:TYR:CD1	3.09	0.41
2:G:225:LYS:O	2:G:229:GLN:HB2	2.21	0.41
2:G:400:ASP:HB3	2:G:401:ASN:ND2	2.35	0.41
2:G:426:PHE:CD1	2:G:468:ILE:HD12	2.53	0.41
2:H:210:VAL:O	2:H:214:LYS:CG	2.56	0.41
2:H:290:ARG:HA	2:H:293:LEU:HD11	2.02	0.41
2:H:498:ARG:O	2:H:499:LYS:C	2.59	0.41
1:A:135:ALA:O	1:A:138:ILE:HB	2.21	0.41
1:B:83:LEU:HD22	1:B:83:LEU:HA	1.75	0.41
1:B:125:ALA:HA	2:D:254:PHE:CZ	2.54	0.41
2:C:1:MET:CE	2:C:110:THR:HG21	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:27:ILE:CD1	2:C:101:ALA:CB	2.98	0.41
2:C:97:LEU:HA	2:C:100:TYR:CE1	2.55	0.41
2:D:50:GLY:O	2:D:53:ALA:CB	2.69	0.41
2:D:366:LEU:CD2	2:D:412:GLY:HA2	2.51	0.41
1:F:60:GLU:CA	1:F:63:ALA:HB3	2.50	0.41
1:F:95:ARG:HG3	1:F:99:GLU:OE2	2.21	0.41
2:G:381:ILE:HD11	2:G:447:ILE:HD11	1.94	0.41
2:G:385:THR:O	2:G:386:THR:C	2.59	0.41
2:H:6:GLY:CA	2:H:344:ALA:HB1	2.50	0.41
2:H:409:VAL:O	2:H:423:LEU:HB2	2.21	0.41
1:A:126:LEU:O	1:A:126:LEU:HD22	2.21	0.41
1:A:143:GLU:HB2	1:A:147:ARG:HH12	1.86	0.41
1:A:192:GLU:OE2	1:A:195:LYS:CB	2.69	0.41
1:A:205:ARG:O	1:A:205:ARG:HD3	2.21	0.41
1:B:149:LEU:HD23	1:B:150:VAL:N	2.35	0.41
1:B:153:LEU:CD1	1:B:158:VAL:HG21	2.51	0.41
1:B:190:VAL:CG1	1:B:191:GLU:HG2	2.50	0.41
2:C:9:LEU:HD13	2:C:94:LEU:HD11	2.03	0.41
2:C:75:TYR:HE1	2:C:77:VAL:HB	1.86	0.41
2:C:75:TYR:CE1	2:C:77:VAL:HB	2.56	0.41
2:C:144:ASN:O	2:C:146:PRO:N	2.54	0.41
2:C:151:LEU:O	2:C:154:GLY:CA	2.69	0.41
2:C:203:GLN:O	2:C:206:ILE:N	2.54	0.41
2:C:208:TYR:O	2:C:212:GLN:HG2	2.21	0.41
2:C:225:LYS:HE3	2:C:225:LYS:HB3	1.75	0.41
2:C:347:GLN:HE21	2:C:347:GLN:C	2.24	0.41
2:C:431:ILE:CD1	2:C:441:ILE:HD11	2.50	0.41
2:C:488:ALA:O	2:C:491:ASN:O	2.39	0.41
2:C:500:GLU:OE1	2:C:503:GLU:HG3	2.21	0.41
2:D:8:ASP:OD1	2:D:340:VAL:HG11	2.21	0.41
2:D:60:ASN:OD1	2:D:62:ASN:HB2	2.21	0.41
2:D:67:ILE:C	2:D:69:ARG:N	2.73	0.41
2:D:109:VAL:CG2	2:D:110:THR:N	2.77	0.41
2:D:164:LEU:HD23	2:D:177:ILE:CG1	2.51	0.41
2:D:258:ASN:OD1	2:D:260:ASN:ND2	2.53	0.41
2:D:310:GLY:O	2:D:311:GLY:C	2.58	0.41
2:D:361:LEU:C	2:D:362:ASP:CG	2.79	0.41
2:D:380:LEU:C	2:D:381:ILE:HG13	2.41	0.41
2:D:445:PHE:CD1	2:D:445:PHE:N	2.88	0.41
1:F:80:HIS:HA	1:F:83:LEU:HG	2.03	0.41
1:F:91:ASN:OD1	2:G:386:THR:OG1	2.39	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:48:LEU:O	2:G:53:ALA:HB2	2.21	0.41
2:G:72:GLY:HA3	2:G:124:GLN:HB3	2.03	0.41
2:G:154:GLY:O	2:G:157:LYS:HE2	2.21	0.41
2:G:169:GLY:N	2:G:172:THR:O	2.50	0.41
2:G:228:LEU:HA	2:G:231:LEU:HD13	2.03	0.41
2:G:479:GLU:HA	2:G:482:GLN:NE2	2.35	0.41
2:H:5:ILE:O	2:H:112:ALA:HB1	2.21	0.41
2:H:130:ASP:O	2:H:131:ALA:C	2.58	0.41
2:H:214:LYS:HE3	2:H:220:ASP:HA	2.03	0.41
1:A:204:LEU:O	1:A:205:ARG:C	2.60	0.41
1:B:169:ASP:HB2	1:B:172:LEU:HG	2.02	0.41
2:C:395:PHE:HE2	2:C:443:VAL:CG1	2.34	0.41
2:C:472:SER:O	2:C:473:SER:HB3	2.21	0.41
2:D:120:PHE:CD2	2:D:124:GLN:HB3	2.56	0.41
2:D:267:MET:SD	2:D:267:MET:C	2.99	0.41
2:D:303:ILE:CG2	2:D:304:ASP:N	2.84	0.41
2:D:361:LEU:HD11	2:D:387:ILE:HD12	2.03	0.41
2:G:459:ASP:HB3	2:G:462:THR:OG1	2.21	0.41
2:H:202:ASP:OD2	2:H:235:ALA:HB3	2.21	0.41
2:H:203:GLN:NE2	2:H:206:ILE:HB	2.36	0.41
2:H:238:ALA:O	2:H:242:LEU:N	2.54	0.41
2:H:377:PHE:CD1	2:H:378:THR:N	2.89	0.41
2:C:47:ARG:HD3	2:C:92:ILE:CD1	2.51	0.40
2:D:31:GLU:C	2:D:32:GLY:O	2.59	0.40
2:D:153:TYR:HD2	2:D:331:HIS:CD2	2.40	0.40
2:D:361:LEU:HD22	2:D:387:ILE:HG13	1.99	0.40
2:D:372:THR:HB	2:D:378:THR:OG1	2.21	0.40
1:F:74:LYS:HG3	1:F:78:MET:HG2	2.03	0.40
2:H:15:CYS:SG	2:H:338:GLU:HB2	2.61	0.40
2:H:361:LEU:HD13	2:H:362:ASP:N	2.36	0.40
1:A:143:GLU:HB2	1:A:147:ARG:NH1	2.35	0.40
1:A:162:GLU:HG2	1:A:166:LYS:NZ	2.36	0.40
1:A:187:ASN:O	1:A:187:ASN:ND2	2.54	0.40
1:B:125:ALA:HB3	1:B:126:LEU:HD23	2.03	0.40
2:C:104:TYR:C	2:C:104:TYR:CD1	2.94	0.40
2:C:116:VAL:O	2:C:145:GLU:HG3	2.22	0.40
2:C:335:ASN:OD1	2:C:337:ASP:N	2.54	0.40
2:C:459:ASP:C	2:C:460:LEU:HD23	2.41	0.40
2:D:121:ASN:OD1	2:D:124:GLN:N	2.41	0.40
2:D:252:LEU:O	2:D:255:ILE:HD11	2.19	0.40
2:D:270:THR:H	2:D:270:THR:HG23	1.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:357:ASP:O	2:G:398:ALA:HB2	2.22	0.40
2:D:407:ILE:HG22	2:D:409:VAL:CG1	2.51	0.40
2:D:476:LEU:HB3	2:D:480:GLU:CB	2.51	0.40
2:G:90:SER:O	2:G:94:LEU:HD23	2.21	0.40
2:G:273:LYS:HA	2:G:276:GLU:HG2	2.03	0.40
2:G:303:ILE:HG21	2:G:306:VAL:CG2	2.51	0.40
2:H:16:VAL:HG13	2:H:100:TYR:OH	2.22	0.40
2:H:355:VAL:O	2:H:355:VAL:HG12	2.21	0.40
2:H:363:VAL:O	2:H:364:THR:CB	2.69	0.40
2:C:362:ASP:O	2:C:363:VAL:CG1	2.63	0.40
2:C:483:ARG:O	2:C:487:GLU:HB2	2.21	0.40
2:D:51:GLU:O	2:D:52:VAL:C	2.60	0.40
2:D:75:TYR:CD1	2:D:76:LYS:N	2.89	0.40
1:E:84:ARG:HG2	1:E:88:ASP:OD2	2.22	0.40
2:G:332:LYS:C	2:G:334:VAL:H	2.25	0.40
2:G:438:VAL:N	2:G:439:PRO:CD	2.84	0.40
2:H:146:PRO:HB2	2:H:178:LEU:HD11	2.03	0.40
2:H:332:LYS:C	2:H:334:VAL:H	2.25	0.40
2:H:383:ARG:O	2:H:384:ASN:C	2.58	0.40
1:B:121:ASN:HA	1:B:124:ARG:CB	2.31	0.40
2:C:182:ASP:C	2:C:184:VAL:N	2.75	0.40
2:C:414:ARG:HB2	2:C:420:ASN:ND2	2.36	0.40
2:D:21:GLY:C	2:D:23:GLU:N	2.75	0.40
2:D:80:GLU:OE1	2:D:80:GLU:CA	2.69	0.40
2:D:198:GLY:O	2:D:200:ASP:N	2.54	0.40
2:G:213:PHE:CE1	2:G:217:HIS:HD2	2.39	0.40
2:G:310:GLY:O	2:G:313:THR:HG22	2.20	0.40
2:H:5:ILE:CG2	2:H:16:VAL:HG23	2.52	0.40
1:A:119:LEU:HD11	1:A:197:TYR:CE2	2.57	0.40
1:A:199:LEU:O	1:A:200:LYS:O	2.39	0.40
1:A:200:LYS:C	1:A:202:ARG:H	2.23	0.40
1:B:173:HIS:CD2	1:B:173:HIS:N	2.88	0.40
2:C:334:VAL:HG22	2:C:335:ASN:N	2.37	0.40
2:C:460:LEU:N	2:C:460:LEU:HD23	2.37	0.40
2:D:37:PRO:CG	2:D:51:GLU:HG2	2.25	0.40
2:D:43:LYS:HZ3	2:D:59:THR:HG21	1.86	0.40
2:D:151:LEU:N	2:D:151:LEU:HD12	2.37	0.40
2:D:207:ASP:O	2:D:208:TYR:C	2.59	0.40
2:D:208:TYR:HD2	2:D:277:LEU:CD1	2.35	0.40
2:D:286:MET:O	2:D:289:VAL:N	2.54	0.40
1:E:69:ALA:O	1:E:72:GLU:OE1	2.39	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:72:GLU:CA	1:E:75:LEU:HB2	2.51	0.40
2:G:198:GLY:HA3	2:G:312:SER:OG	2.21	0.40
2:G:204:VAL:HG13	2:G:277:LEU:HD22	2.04	0.40
2:G:281:LEU:CA	2:G:284:ARG:HG3	2.38	0.40
2:G:306:VAL:CG1	2:G:307:ILE:H	2.34	0.40
2:G:369:GLY:C	2:G:370:ILE:HG13	2.41	0.40
2:G:390:SER:HB3	2:G:447:ILE:H	1.85	0.40
2:H:149:ALA:HB1	2:H:339:VAL:CG1	2.46	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	154/213 (72%)	125 (81%)	26 (17%)	3 (2%)	8	39
1	B	152/213 (71%)	119 (78%)	27 (18%)	6 (4%)	3	26
1	E	127/213 (60%)	103 (81%)	22 (17%)	2 (2%)	9	43
1	F	124/213 (58%)	100 (81%)	22 (18%)	2 (2%)	9	43
2	C	507/509 (100%)	458 (90%)	47 (9%)	2 (0%)	34	71
2	D	507/509 (100%)	426 (84%)	72 (14%)	9 (2%)	8	40
2	G	498/509 (98%)	430 (86%)	62 (12%)	6 (1%)	13	48
2	H	497/509 (98%)	423 (85%)	63 (13%)	11 (2%)	6	37
All	All	2566/2888 (89%)	2184 (85%)	341 (13%)	41 (2%)	9	43

All (41) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	D	359	VAL
1	E	170	PRO

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Mol	Chain	Res	Type
2	H	253	PRO
1	B	168	PHE
2	D	361	LEU
2	D	383	ARG
2	G	39	VAL
2	G	40	VAL
2	H	28	PRO
2	H	39	VAL
2	H	387	ILE
2	C	363	VAL
1	F	89	PHE
2	H	504	LEU
2	D	504	LEU
2	H	12	THR
1	B	64	ALA
2	D	226	MET
2	D	309	VAL
1	E	80	HIS
2	G	373	MET
2	H	383	ARG
1	A	75	LEU
1	A	187	ASN
1	B	93	ARG
1	B	106	TYR
1	B	122	PHE
2	D	307	ILE
2	G	492	ALA
1	A	164	VAL
2	D	439	PRO
2	H	346	ILE
2	H	485	ILE
1	B	158	VAL
1	F	164	VAL
2	G	37	PRO
2	G	252	LEU
2	D	318	VAL
2	H	26	VAL
2	C	359	VAL
2	H	32	GLY

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	128/174 (74%)	89 (70%)	39 (30%)	0	2
1	B	129/174 (74%)	88 (68%)	41 (32%)	0	2
1	E	35/174 (20%)	24 (69%)	11 (31%)	0	2
1	F	39/174 (22%)	26 (67%)	13 (33%)	0	2
2	C	416/418 (100%)	302 (73%)	114 (27%)	0	3
2	D	416/418 (100%)	305 (73%)	111 (27%)	0	3
2	G	316/418 (76%)	251 (79%)	65 (21%)	1	7
2	H	319/418 (76%)	221 (69%)	98 (31%)	0	2
All	All	1798/2368 (76%)	1306 (73%)	492 (27%)	0	3

All (492) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	59	GLU
1	A	60	GLU
1	A	72	GLU
1	A	75	LEU
1	A	78	MET
1	A	83	LEU
1	A	84	ARG
1	A	86	TYR
1	A	89	PHE
1	A	91	ASN
1	A	92	PHE
1	A	95	ARG
1	A	109	GLN
1	A	113	SER
1	A	114	ASP
1	A	119	LEU
1	A	126	LEU
1	A	131	ASP
1	A	132	ASN

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Mol	Chain	Res	Type
1	A	133	GLU
1	A	134	GLN
1	A	140	GLN
1	A	142	MET
1	A	143	GLU
1	A	144	MET
1	A	147	ARG
1	A	153	LEU
1	A	159	GLU
1	A	166	LYS
1	A	168	PHE
1	A	172	LEU
1	A	176	VAL
1	A	182	GLU
1	A	187	ASN
1	A	191	GLU
1	A	198	LYS
1	A	205	ARG
1	A	208	MET
1	A	213	GLN
1	B	60	GLU
1	B	61	LEU
1	B	67	GLN
1	B	71	LEU
1	B	72	GLU
1	B	75	LEU
1	B	80	HIS
1	B	83	LEU
1	B	84	ARG
1	B	86	TYR
1	B	93	ARG
1	B	96	THR
1	B	97	ARG
1	B	101	GLU
1	B	109	GLN
1	B	115	LEU
1	B	119	LEU
1	B	121	ASN
1	B	124	ARG
1	B	126	LEU
1	B	129	GLU
1	B	133	GLU

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Mol	Chain	Res	Type
1	B	136	LYS
1	B	144	MET
1	B	145	VAL
1	B	148	SER
1	B	150	VAL
1	B	153	LEU
1	B	159	GLU
1	B	168	PHE
1	B	169	ASP
1	B	172	LEU
1	B	176	VAL
1	B	187	ASN
1	B	189	VAL
1	B	190	VAL
1	B	199	LEU
1	B	201	ASP
1	B	202	ARG
1	B	204	LEU
1	B	209	VAL
2	C	3	LYS
2	C	11	THR
2	C	12	THR
2	C	13	ASN
2	C	16	VAL
2	C	18	VAL
2	C	19	LEU
2	C	23	GLU
2	C	34	ARG
2	C	36	THR
2	C	38	SER
2	C	39	VAL
2	C	42	PHE
2	C	49	VAL
2	C	62	ASN
2	C	66	SER
2	C	75	TYR
2	C	77	VAL
2	C	87	GLN
2	C	97	LEU
2	C	98	LYS
2	C	102	GLU
2	C	103	ASP

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Mol	Chain	Res	Type
2	C	104	TYR
2	C	105	LEU
2	C	119	TYR
2	C	120	PHE
2	C	121	ASN
2	C	125	ARG
2	C	128	THR
2	C	133	ARG
2	C	141	ARG
2	C	144	ASN
2	C	155	LEU
2	C	156	ASP
2	C	164	LEU
2	C	165	VAL
2	C	166	TYR
2	C	168	LEU
2	C	172	THR
2	C	179	GLU
2	C	182	ASP
2	C	194	ASN
2	C	196	LEU
2	C	203	GLN
2	C	204	VAL
2	C	210	VAL
2	C	214	LYS
2	C	216	GLU
2	C	217	HIS
2	C	225	LYS
2	C	226	MET
2	C	229	GLN
2	C	231	LEU
2	C	237	LYS
2	C	242	LEU
2	C	245	VAL
2	C	252	LEU
2	C	254	PHE
2	C	259	GLU
2	C	269	LEU
2	C	271	ARG
2	C	281	LEU
2	C	282	VAL
2	C	283	GLU

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Mol	Chain	Res	Type
2	C	291	GLN
2	C	293	LEU
2	C	298	LEU
2	C	323	LYS
2	C	324	ARG
2	C	325	GLU
2	C	326	LEU
2	C	334	VAL
2	C	338	GLU
2	C	347	GLN
2	C	355	VAL
2	C	361	LEU
2	C	362	ASP
2	C	363	VAL
2	C	366	LEU
2	C	372	THR
2	C	376	VAL
2	C	377	PHE
2	C	396	THR
2	C	400	ASP
2	C	403	THR
2	C	404	THR
2	C	405	VAL
2	C	409	VAL
2	C	416	MET
2	C	428	LEU
2	C	436	ARG
2	C	440	GLN
2	C	443	VAL
2	C	444	THR
2	C	446	ASP
2	C	453	VAL
2	C	455	VAL
2	C	456	ARG
2	C	460	LEU
2	C	466	GLN
2	C	467	SER
2	C	469	THR
2	C	471	LYS
2	C	480	GLU
2	C	483	ARG
2	C	484	MET

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Mol	Chain	Res	Type
2	C	487	GLU
2	C	490	GLU
2	C	496	ARG
2	C	497	LYS
2	C	500	GLU
2	C	504	LEU
2	C	505	ARG
2	D	1	MET
2	D	3	LYS
2	D	13	ASN
2	D	18	VAL
2	D	19	LEU
2	D	20	GLU
2	D	23	GLU
2	D	29	ASN
2	D	35	THR
2	D	40	VAL
2	D	42	PHE
2	D	44	ASN
2	D	46	GLU
2	D	49	VAL
2	D	56	GLN
2	D	63	THR
2	D	69	ARG
2	D	74	ASP
2	D	77	VAL
2	D	80	GLU
2	D	85	THR
2	D	87	GLN
2	D	94	LEU
2	D	105	LEU
2	D	109	VAL
2	D	120	PHE
2	D	121	ASN
2	D	130	ASP
2	D	144	ASN
2	D	151	LEU
2	D	153	TYR
2	D	155	LEU
2	D	157	LYS
2	D	160	ASP
2	D	164	LEU

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Mol	Chain	Res	Type
2	D	165	VAL
2	D	166	TYR
2	D	168	LEU
2	D	172	THR
2	D	173	PHE
2	D	174	ASP
2	D	178	LEU
2	D	180	LEU
2	D	184	VAL
2	D	193	ASP
2	D	194	ASN
2	D	199	ASP
2	D	208	TYR
2	D	210	VAL
2	D	215	GLN
2	D	222	SER
2	D	225	LYS
2	D	231	LEU
2	D	245	VAL
2	D	246	THR
2	D	260	ASN
2	D	263	LEU
2	D	269	LEU
2	D	270	THR
2	D	274	PHE
2	D	277	LEU
2	D	280	HIS
2	D	286	MET
2	D	294	GLN
2	D	304	ASP
2	D	319	GLN
2	D	320	GLU
2	D	324	ARG
2	D	332	LYS
2	D	334	VAL
2	D	337	ASP
2	D	338	GLU
2	D	339	VAL
2	D	360	LEU
2	D	371	GLU
2	D	372	THR
2	D	376	VAL

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Mol	Chain	Res	Type
2	D	380	LEU
2	D	389	THR
2	D	390	SER
2	D	395	PHE
2	D	410	LEU
2	D	416	MET
2	D	420	ASN
2	D	421	LYS
2	D	426	PHE
2	D	436	ARG
2	D	438	VAL
2	D	440	GLN
2	D	443	VAL
2	D	444	THR
2	D	446	ASP
2	D	450	ASN
2	D	453	VAL
2	D	456	ARG
2	D	459	ASP
2	D	464	LYS
2	D	465	GLU
2	D	467	SER
2	D	469	THR
2	D	472	SER
2	D	476	LEU
2	D	482	GLN
2	D	483	ARG
2	D	484	MET
2	D	487	GLU
2	D	489	GLU
2	D	491	ASN
2	D	495	ASP
2	D	497	LYS
2	D	504	LEU
1	E	61	LEU
1	E	65	LYS
1	E	70	GLU
1	E	72	GLU
1	E	75	LEU
1	E	79	GLU
1	E	83	LEU
1	E	84	ARG

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Mol	Chain	Res	Type
1	E	89	PHE
1	E	92	PHE
1	E	97	ARG
1	F	61	LEU
1	F	67	GLN
1	F	70	GLU
1	F	74	LYS
1	F	75	LEU
1	F	81	ARG
1	F	82	TYR
1	F	83	LEU
1	F	85	LEU
1	F	86	TYR
1	F	90	GLU
1	F	94	ARG
1	F	96	THR
2	G	66	SER
2	G	77	VAL
2	G	82	LYS
2	G	87	GLN
2	G	100	TYR
2	G	105	LEU
2	G	121	ASN
2	G	147	THR
2	G	156	ASP
2	G	157	LYS
2	G	158	GLU
2	G	159	GLU
2	G	161	GLN
2	G	164	LEU
2	G	165	VAL
2	G	174	ASP
2	G	194	ASN
2	G	201	PHE
2	G	204	VAL
2	G	220	ASP
2	G	225	LYS
2	G	226	MET
2	G	242	LEU
2	G	246	THR
2	G	277	LEU
2	G	281	LEU

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Mol	Chain	Res	Type
2	G	308	LEU
2	G	319	GLN
2	G	320	GLU
2	G	325	GLU
2	G	326	LEU
2	G	331	HIS
2	G	355	VAL
2	G	356	LYS
2	G	357	ASP
2	G	360	LEU
2	G	363	VAL
2	G	371	GLU
2	G	373	MET
2	G	378	THR
2	G	389	THR
2	G	393	GLN
2	G	395	PHE
2	G	396	THR
2	G	397	THR
2	G	400	ASP
2	G	401	ASN
2	G	403	THR
2	G	404	THR
2	G	408	HIS
2	G	414	ARG
2	G	422	SER
2	G	436	ARG
2	G	440	GLN
2	G	453	VAL
2	G	471	LYS
2	G	484	MET
2	G	489	GLU
2	G	491	ASN
2	G	493	GLU
2	G	497	LYS
2	G	498	ARG
2	G	500	GLU
2	G	505	ARG
2	G	507	GLU
2	H	1	MET
2	H	11	THR
2	H	15	CYS

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Mol	Chain	Res	Type
2	H	16	VAL
2	H	18	VAL
2	H	19	LEU
2	H	23	GLU
2	H	73	THR
2	H	77	VAL
2	H	78	GLU
2	H	82	LYS
2	H	94	LEU
2	H	95	GLN
2	H	96	TYR
2	H	99	SER
2	H	100	TYR
2	H	104	TYR
2	H	105	LEU
2	H	109	VAL
2	H	111	ARG
2	H	113	VAL
2	H	116	VAL
2	H	119	TYR
2	H	121	ASN
2	H	122	ASP
2	H	124	GLN
2	H	125	ARG
2	H	128	THR
2	H	153	TYR
2	H	155	LEU
2	H	156	ASP
2	H	157	LYS
2	H	161	GLN
2	H	166	TYR
2	H	168	LEU
2	H	174	ASP
2	H	175	VAL
2	H	176	SER
2	H	185	PHE
2	H	193	ASP
2	H	194	ASN
2	H	195	HIS
2	H	203	GLN
2	H	285	THR
2	H	293	LEU

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Mol	Chain	Res	Type
2	H	294	GLN
2	H	325	GLU
2	H	326	LEU
2	H	328	LYS
2	H	332	LYS
2	H	338	GLU
2	H	359	VAL
2	H	361	LEU
2	H	363	VAL
2	H	366	LEU
2	H	367	SER
2	H	368	LEU
2	H	376	VAL
2	H	378	THR
2	H	380	LEU
2	H	382	GLU
2	H	386	THR
2	H	389	THR
2	H	393	GLN
2	H	395	PHE
2	H	396	THR
2	H	401	ASN
2	H	403	THR
2	H	409	VAL
2	H	410	LEU
2	H	411	GLN
2	H	416	MET
2	H	420	ASN
2	H	425	ARG
2	H	436	ARG
2	H	443	VAL
2	H	444	THR
2	H	448	ASP
2	H	456	ARG
2	H	459	ASP
2	H	462	THR
2	H	464	LYS
2	H	465	GLU
2	H	469	THR
2	H	471	LYS
2	H	476	LEU
2	H	479	GLU

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Mol	Chain	Res	Type
2	H	480	GLU
2	H	482	GLN
2	H	483	ARG
2	H	484	MET
2	H	486	LYS
2	H	496	ARG
2	H	497	LYS
2	H	498	ARG
2	H	503	GLU
2	H	504	LEU
2	H	506	ASN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (55) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	91	ASN
1	A	98	GLN
1	A	109	GLN
1	A	121	ASN
1	A	178	GLN
1	A	213	GLN
1	B	67	GLN
1	B	98	GLN
1	B	173	HIS
1	B	178	GLN
1	B	187	ASN
2	C	13	ASN
2	C	70	HIS
2	C	87	GLN
2	C	161	GLN
2	C	195	HIS
2	C	212	GLN
2	C	249	GLN
2	C	264	HIS
2	C	347	GLN
2	C	401	ASN
2	C	466	GLN
2	D	29	ASN
2	D	62	ASN
2	D	161	GLN
2	D	260	ASN
2	D	280	HIS

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Mol	Chain	Res	Type
2	D	319	GLN
2	D	408	HIS
2	D	420	ASN
2	D	466	GLN
2	D	491	ASN
1	E	80	HIS
2	G	70	HIS
2	G	124	GLN
2	G	203	GLN
2	G	215	GLN
2	G	217	HIS
2	G	280	HIS
2	G	319	GLN
2	G	384	ASN
2	G	393	GLN
2	G	401	ASN
2	G	411	GLN
2	G	491	ASN
2	H	87	GLN
2	H	95	GLN
2	H	144	ASN
2	H	195	HIS
2	H	203	GLN
2	H	212	GLN
2	H	347	GLN
2	H	384	ASN
2	H	420	ASN
2	H	450	ASN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

In the following table, the column labelled ‘#RSRZ > 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95th percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q < 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	A	156/213 (73%)	-0.68	0 100 100	108, 165, 240, 281	0
1	B	154/213 (72%)	-0.64	0 100 100	108, 151, 213, 293	0
1	E	135/213 (63%)	0.22	6 (4%) 34 28	193, 261, 363, 476	0
1	F	130/213 (61%)	-0.05	0 100 100	185, 244, 324, 370	0
2	C	509/509 (100%)	-0.62	0 100 100	109, 152, 216, 283	0
2	D	509/509 (100%)	-0.62	0 100 100	109, 163, 217, 333	0
2	G	502/509 (98%)	-0.03	34 (6%) 17 14	141, 283, 373, 481	0
2	H	501/509 (98%)	-0.25	11 (2%) 62 52	115, 237, 370, 516	0
All	All	2596/2888 (89%)	-0.37	51 (1%) 65 56	108, 193, 341, 516	0

All (51) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	E	205	ARG	10.2
1	E	206	PRO	10.1
2	H	225	LYS	6.1
2	G	320	GLU	5.8
2	H	245	VAL	5.2
2	H	207	ASP	4.1
1	E	207	ALA	4.1
2	H	202	ASP	4.0
2	G	55	ARG	3.9
1	E	175	ALA	3.9
2	G	50	GLY	3.8
2	G	54	LYS	3.5
2	G	192	GLY	3.4
2	G	72	GLY	3.1
2	G	14	SER	3.1
2	H	217	HIS	2.9

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Mol	Chain	Res	Type	RSRZ
2	G	74	ASP	2.9
2	G	272	ALA	2.9
2	G	8	ASP	2.9
2	G	321	ALA	2.8
2	H	66	SER	2.8
2	G	197	GLY	2.7
2	G	474	SER	2.7
2	G	190	THR	2.7
2	G	319	GLN	2.6
2	H	314	ARG	2.6
2	G	51	GLU	2.6
2	G	216	GLU	2.6
1	E	137	SER	2.6
2	G	73	THR	2.5
2	G	6	GLY	2.5
1	E	138	ILE	2.4
2	G	53	ALA	2.4
2	H	226	MET	2.4
2	H	218	GLY	2.3
2	G	224	ASP	2.3
2	G	332	LYS	2.3
2	G	322	ILE	2.3
2	H	197	GLY	2.3
2	G	303	ILE	2.3
2	G	189	ALA	2.3
2	G	191	ALA	2.2
2	G	17	ALA	2.2
2	G	473	SER	2.2
2	G	63	THR	2.2
2	H	270	THR	2.1
2	G	331	HIS	2.1
2	G	57	ALA	2.1
2	G	329	GLU	2.1
2	G	324	ARG	2.0
2	G	472	SER	2.0

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

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

6.3 Carbohydrates [i](#)

There are no monosaccharides in this entry.

6.4 Ligands [i](#)

There are no ligands in this entry.

6.5 Other polymers [i](#)

There are no such residues in this entry.