Full wwPDB X-ray Structure Validation Report (i)

Nov 3, 2024 – 01:21 PM JST

PDB ID	:	5WTJ
Title	:	Crystal structure of an endonuclease
Authors	:	Liu, L.; Wang, Y.
Deposited on	:	2016-12-13
Resolution	:	3.50 Å(reported)

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

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

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

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

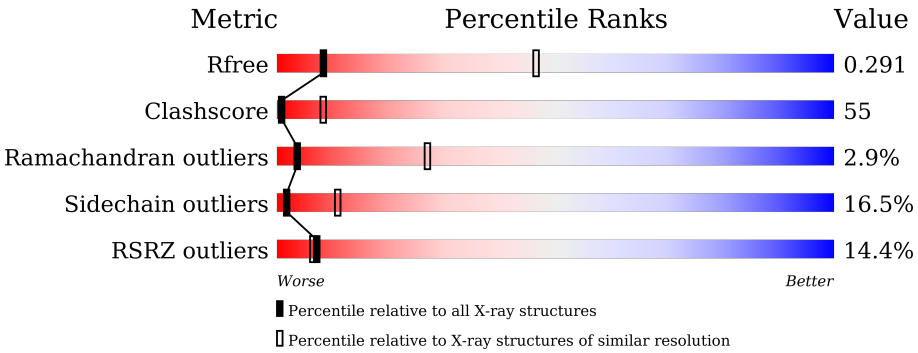
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	3.0
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
CCP4	:	9.0.003 (Gargrove)
Density-Fitness	:	1.0.11
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.39

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 3.50 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}	164625	1094 (3.56-3.44)
Clashscore	180529	1045 (3.54-3.46)
Ramachandran outliers	177936	1032 (3.54-3.46)
Sidechain outliers	177891	1033 (3.54-3.46)
RSRZ outliers	164620	1093 (3.56-3.44)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=5% 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	1397	7% 30% 33% 9% • 27%
1	B	1397	14% 32% 31% 9% • 28%

2 Entry composition (i)

There are 2 unique types of molecules in this entry. The entry contains 15952 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 CRISPR-associated endoribonuclease C2c2.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
1	A	1019	Total	C	N	O	S	Se	0	0	0
			8013	5109	1350	1538	5	11			
1	B	1012	Total	C	N	O	S	Se	0	0	0
			7938	5055	1326	1541	6	10			

There are 16 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	1390	LEU	-	expression tag	UNP P0DOC6
A	1391	GLU	-	expression tag	UNP P0DOC6
A	1392	HIS	-	expression tag	UNP P0DOC6
A	1393	HIS	-	expression tag	UNP P0DOC6
A	1394	HIS	-	expression tag	UNP P0DOC6
A	1395	HIS	-	expression tag	UNP P0DOC6
A	1396	HIS	-	expression tag	UNP P0DOC6
A	1397	HIS	-	expression tag	UNP P0DOC6
B	1390	LEU	-	expression tag	UNP P0DOC6
B	1391	GLU	-	expression tag	UNP P0DOC6
B	1392	HIS	-	expression tag	UNP P0DOC6
B	1393	HIS	-	expression tag	UNP P0DOC6
B	1394	HIS	-	expression tag	UNP P0DOC6
B	1395	HIS	-	expression tag	UNP P0DOC6
B	1396	HIS	-	expression tag	UNP P0DOC6
B	1397	HIS	-	expression tag	UNP P0DOC6

- Molecule 2 is water.

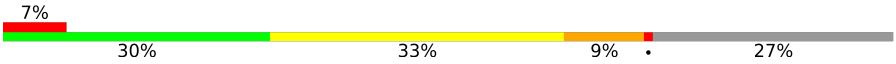
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
2	A	1	Total	O	0	0
			1	1		

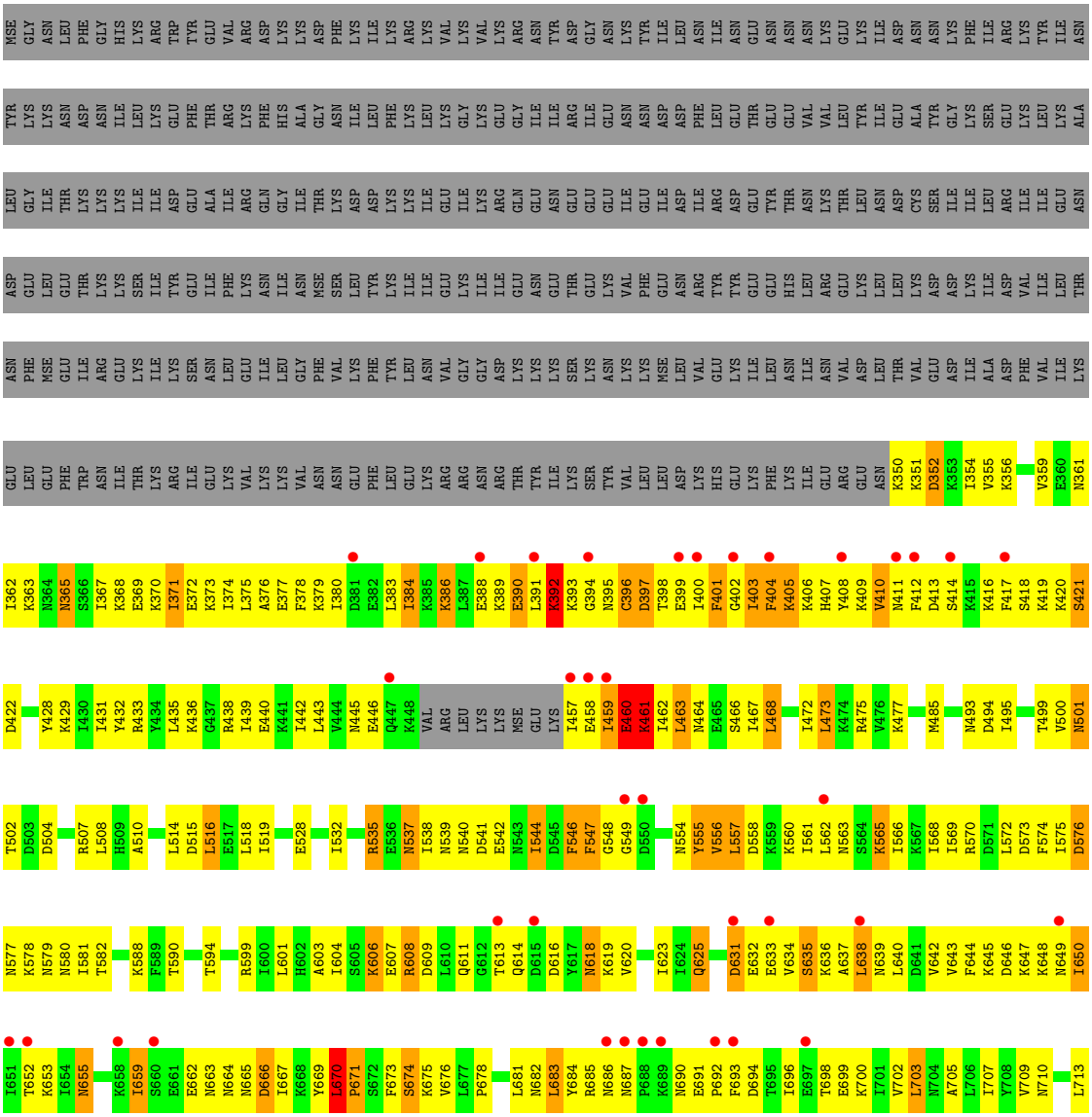
3 Residue-property plots (i)

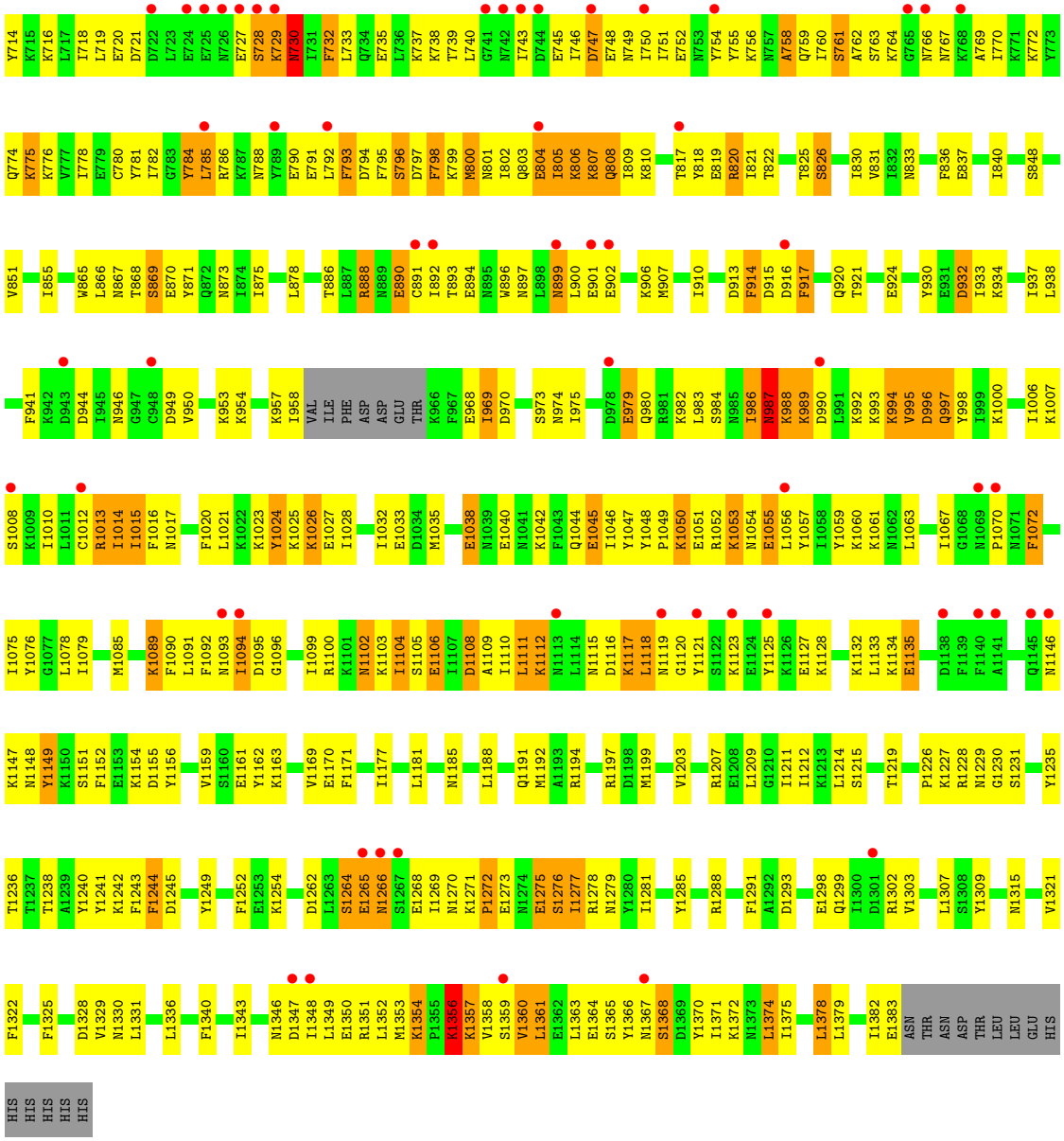
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red dot above a residue indicates a poor fit to the electron density (RSRZ > 2). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

- Molecule 1: CRISPR-associated endoribonuclease C2c2

Chain A:

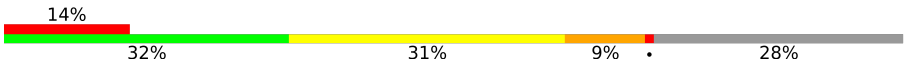


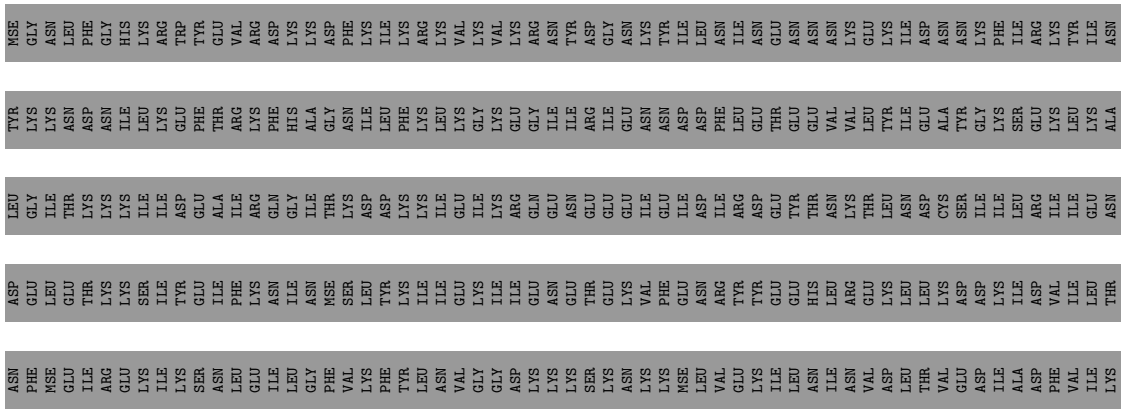


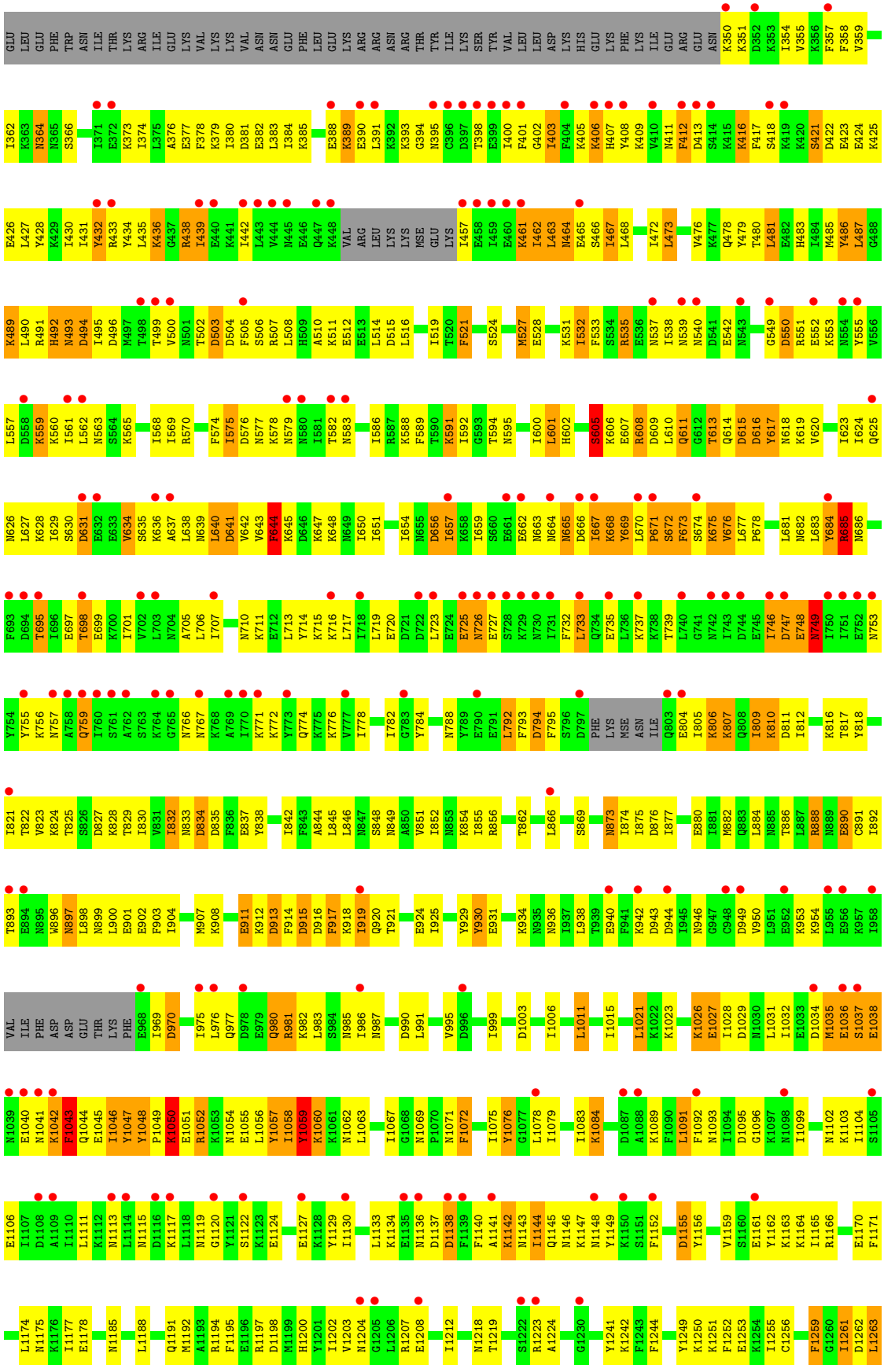


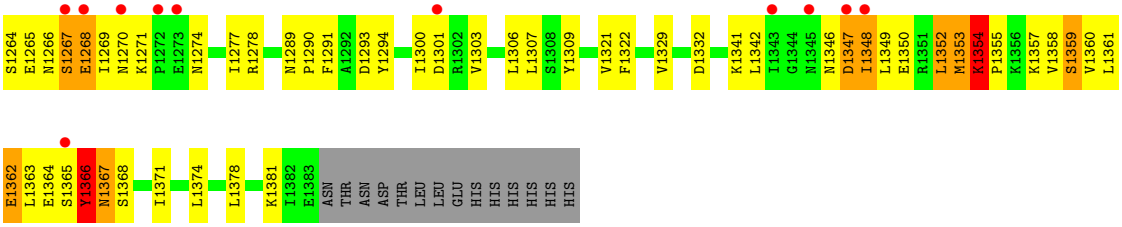
• Molecule 1: CRISPR-associated endoribonuclease C2c2

Chain B:








S1264
E1265
N1266
S1267
E1268
I1269
N1270
K1271
P1272
E1273
N1274
I1277
R1278
N1289
P1290
F1291
A1292
D1293
Y1294
I1300
D1301
R1302
V1303
L1306
L1307
S1308
Y1309
V1321
F1322
V1329
D1332
K1341
L1342
I1343
G1344
N1345
N1346
D1347
I1348
L1349
E1350
R1351
L1352
M1353
K1354
P1355
K1356
K1357
V1358
S1359
V1360
L1361
E1362
L1363
E1364
S1365
Y1366
N1367
S1368
I1371
L1374
L1378
K1381
I1382
E1383
ASN
THR
ASN
ASP
THR
LEU
LEU
GLU
HIS
HIS
HIS
HIS
HIS
HIS

4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	91.66Å 94.23Å 338.22Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	48.38 – 3.50 48.38 – 3.50	Depositor EDS
% Data completeness (in resolution range)	81.0 (48.38-3.50) 81.0 (48.38-3.50)	Depositor EDS
R_{merge}	0.09	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	4.71 (at 3.48Å)	Xtriage
Refinement program	PHENIX (1.10.1_2155: ???)	Depositor
R, R_{free}	0.263 , 0.291 0.263 , 0.291	Depositor DCC
R_{free} test set	1882 reflections (5.05%)	wwPDB-VP
Wilson B-factor (Å^2)	18.6	Xtriage
Anisotropy	0.648	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.25 , 44.8	EDS
L-test for twinning[2]	$< \|L\| > = 0.44$, $< L^2 > = 0.26$	Xtriage
Estimated twinning fraction	0.053 for k,h,-l	Xtriage
F_o,F_c correlation	0.78	EDS
Total number of atoms	15952	wwPDB-VP
Average B, all atoms (Å^2)	57.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.41% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

[2] Theoretical values of $< |L| >$, $< L^2 >$ 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	0.48	2/8117 (0.0%)	0.67	16/10925 (0.1%)
1	B	0.42	2/8038 (0.0%)	0.66	11/10824 (0.1%)
All	All	0.45	4/16155 (0.0%)	0.66	27/21749 (0.1%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	2
1	B	0	7
All	All	0	9

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	671	PRO	N-CD	5.24	1.55	1.47
1	B	1038	GLU	CB-CG	-5.17	1.42	1.52
1	A	1272	PRO	N-CD	5.09	1.54	1.47
1	B	671	PRO	N-CD	5.09	1.54	1.47

All (27) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	B	634	VAL	CB-CA-C	-11.15	90.21	111.40
1	A	997	GLN	CB-CA-C	6.94	124.28	110.40
1	B	1021	LEU	CB-CG-CD1	-6.59	99.80	111.00
1	B	403	ILE	CB-CA-C	-6.57	98.46	111.60
1	A	758	ALA	CB-CA-C	-6.33	100.60	110.10
1	A	687	ASN	C-N-CD	6.25	141.53	128.40
1	B	1289	ASN	C-N-CD	6.16	141.34	128.40
1	A	730	ASN	CB-CA-C	6.03	122.47	110.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	1354	LYS	C-N-CD	5.95	140.90	128.40
1	B	1354	LYS	C-N-CD	5.82	140.63	128.40
1	A	670	LEU	C-N-CD	5.70	140.37	128.40
1	A	1356	LYS	C-N-CA	5.64	135.81	121.70
1	A	576	ASP	N-CA-C	-5.54	96.05	111.00
1	A	501	ASN	N-CA-C	5.46	125.75	111.00
1	A	392	LYS	N-CA-C	5.34	125.43	111.00
1	A	944	ASP	CB-CG-OD2	5.26	123.03	118.30
1	A	573	ASP	CB-CG-OD2	5.25	123.02	118.30
1	B	631	ASP	CB-CG-OD2	5.21	122.99	118.30
1	A	1347	ASP	CB-CG-OD2	5.20	122.98	118.30
1	B	1138	ASP	CB-CG-OD2	5.19	122.97	118.30
1	B	1137	ASP	CB-CG-OD2	5.18	122.96	118.30
1	B	944	ASP	CB-CG-OD2	5.17	122.95	118.30
1	B	1347	ASP	CB-CG-OD2	5.16	122.94	118.30
1	A	995	VAL	CB-CA-C	-5.14	101.64	111.40
1	A	1272	PRO	CA-N-CD	-5.10	104.36	111.50
1	A	732	PHE	O-C-N	-5.03	114.66	122.70
1	B	481	LEU	CA-CB-CG	5.02	126.84	115.30

There are no chirality outliers.

All (9) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	1051	GLU	Peptide
1	A	1356	LYS	Peptide
1	B	1091	LEU	Peptide
1	B	1129	TYR	Peptide
1	B	1268	GLU	Peptide
1	B	412	PHE	Peptide
1	B	605	SER	Peptide
1	B	644	PHE	Peptide
1	B	664	ASN	Mainchain

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	8013	0	7662	834	3
1	B	7938	0	7580	876	1
2	A	1	0	0	0	0
All	All	15952	0	15242	1710	4

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 55.

All (1710) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:976:LEU:HD23	1:B:977:GLN:N	1.22	1.45
1:A:696:ILE:CB	1:A:699:GLU:HB3	1.55	1.35
1:B:817:THR:CG2	1:B:818:TYR:HA	1.54	1.35
1:B:914:PHE:HA	1:B:915:ASP:CB	1.47	1.34
1:B:914:PHE:CA	1:B:915:ASP:HB2	1.54	1.32
1:B:900:LEU:HD13	1:B:1056:LEU:CB	1.59	1.30
1:B:582:THR:CB	1:B:583:ASN:OD1	1.82	1.26
1:B:351:LYS:HE2	1:B:483:HIS:CE1	1.70	1.26
1:B:1049:PRO:HD2	1:B:1055:GLU:CB	1.65	1.26
1:A:1329:VAL:HG21	1:A:1353:MSE:CE	1.63	1.26
1:A:933:ILE:HG12	1:A:998:TYR:CD2	1.73	1.24
1:A:1118:LEU:HB3	1:A:1125:TYR:CZ	1.73	1.23
1:B:900:LEU:CD2	1:B:1056:LEU:HD12	1.68	1.22
1:A:732:PHE:HD1	1:A:784:TYR:CD2	1.55	1.22
1:A:1053:LYS:O	1:A:1055:GLU:HB3	1.37	1.22
1:A:560:LYS:O	1:A:561:ILE:HG12	1.36	1.21
1:B:533:PHE:CE1	1:B:557:LEU:HD11	1.74	1.21
1:B:634:VAL:HG21	1:B:891:CYS:SG	1.78	1.21
1:A:1118:LEU:HB3	1:A:1125:TYR:OH	1.40	1.20
1:A:570:ARG:HD3	1:A:577:ASN:OD1	1.40	1.20
1:B:481:LEU:HD23	1:B:1259:PHE:CE2	1.77	1.20
1:B:531:LYS:CB	1:B:562:LEU:HD11	1.73	1.19
1:B:671:PRO:HG3	1:B:774:GLN:NE2	1.54	1.18
1:A:418:SER:HB2	1:A:419:LYS:HA	1.26	1.18
1:A:762:ALA:HB2	1:A:770:ILE:HG13	1.19	1.17
1:A:501:ASN:O	1:A:502:THR:HG22	1.43	1.17
1:B:976:LEU:CD2	1:B:977:GLN:H	1.57	1.17
1:B:606:LYS:HD3	1:B:1219:THR:CG2	1.76	1.16
1:B:481:LEU:HD23	1:B:1259:PHE:CD2	1.81	1.16
1:A:1366:TYR:CD1	1:A:1367:ASN:HB2	1.81	1.15
1:A:561:ILE:HG22	1:A:562:LEU:HA	1.17	1.14

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:738:LYS:HE3	1:A:746:ILE:HD11	1.29	1.14
1:B:1047:TYR:HA	1:B:1057:TYR:HB3	1.20	1.14
1:A:404:PHE:CZ	1:A:439:ILE:HG21	1.81	1.14
1:A:732:PHE:CD1	1:A:784:TYR:CD2	2.35	1.14
1:B:817:THR:HG22	1:B:818:TYR:HA	1.20	1.13
1:A:404:PHE:HE2	1:A:439:ILE:HG13	1.06	1.12
1:B:557:LEU:HD22	1:B:575:ILE:HD11	1.13	1.11
1:B:583:ASN:ND2	1:B:586:ILE:HG13	1.63	1.11
1:A:797:ASP:O	1:A:798:PHE:HB2	1.46	1.11
1:B:490:LEU:HD22	1:B:495:ILE:HG21	1.27	1.11
1:B:900:LEU:HD13	1:B:1056:LEU:HB3	1.12	1.11
1:B:403:ILE:HA	1:B:406:LYS:HG3	1.19	1.11
1:B:531:LYS:HB3	1:B:562:LEU:HD11	1.19	1.11
1:A:375:LEU:HD22	1:A:380:ILE:HD11	1.32	1.11
1:B:533:PHE:CD1	1:B:557:LEU:HD11	1.86	1.11
1:A:1366:TYR:HD1	1:A:1367:ASN:HB2	1.12	1.10
1:B:634:VAL:CG2	1:B:891:CYS:SG	2.40	1.10
1:B:976:LEU:CD2	1:B:977:GLN:N	2.11	1.09
1:A:1053:LYS:C	1:A:1055:GLU:HB3	1.72	1.09
1:B:723:LEU:HD23	1:B:727:GLU:HG2	1.34	1.09
1:B:582:THR:HB	1:B:583:ASN:CG	1.70	1.09
1:B:897:ASN:HB2	1:B:1058:ILE:HD11	1.34	1.09
1:B:582:THR:CG2	1:B:583:ASN:OD1	2.00	1.09
1:B:1142:LYS:HG3	1:B:1145:GLN:H	1.10	1.08
1:B:1048:TYR:HD1	1:B:1052:ARG:CB	1.66	1.08
1:B:481:LEU:CD2	1:B:1259:PHE:CD2	2.37	1.08
1:B:606:LYS:HD3	1:B:1219:THR:HG23	1.13	1.08
1:B:648:LYS:HD2	1:B:650:ILE:HD12	1.12	1.08
1:B:1031:LEU:HD12	1:B:1043:PHE:CZ	1.88	1.08
1:B:1267:SER:HB2	1:B:1268:GLU:HA	1.25	1.08
1:B:684:TYR:HB3	1:B:685:ARG:HB2	1.33	1.07
1:A:1111:LEU:HD21	1:A:1363:LEU:CD1	1.84	1.07
1:B:1044:GLN:HA	1:B:1048:TYR:CE2	1.90	1.07
1:B:804:GLU:HA	1:B:807:LYS:HD3	1.11	1.07
1:B:919:ILE:H	1:B:919:ILE:HD12	1.18	1.07
1:A:696:ILE:CB	1:A:699:GLU:CB	2.33	1.07
1:B:1145:GLN:HB3	1:B:1146:ASN:HA	1.36	1.07
1:B:634:VAL:CG2	1:B:634:VAL:O	1.93	1.06
1:A:350:LYS:HA	1:A:352:ASP:H	1.19	1.06
1:B:461:LYS:HG3	1:B:462:ILE:HG23	1.31	1.06
1:B:582:THR:HG22	1:B:583:ASN:OD1	1.55	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:582:THR:CA	1:B:583:ASN:OD1	2.03	1.06
1:A:659:ILE:HG22	1:A:720:GLU:HA	1.37	1.06
1:B:1253:GLU:CD	1:B:1264:SER:HA	1.76	1.06
1:B:1366:TYR:O	1:B:1367:ASN:ND2	1.87	1.06
1:B:595:ASN:HD21	1:B:610:LEU:CB	1.67	1.05
1:B:1046:ILE:HD13	1:B:1046:ILE:H	1.18	1.05
1:A:464:ASN:HD21	1:A:467:ILE:HG13	1.21	1.05
1:A:394:GLY:HA2	1:A:395:ASN:HB3	1.29	1.05
1:A:375:LEU:HB3	1:A:380:ILE:HD12	1.36	1.05
1:B:557:LEU:HD22	1:B:575:ILE:CD1	1.87	1.05
1:A:1089:LYS:H	1:A:1089:LYS:HD2	1.22	1.05
1:B:897:ASN:CB	1:B:1058:ILE:HD11	1.85	1.05
1:A:404:PHE:CE2	1:A:439:ILE:HG13	1.91	1.04
1:A:547:PHE:HA	1:A:594:THR:HG22	1.40	1.04
1:A:1118:LEU:CB	1:A:1125:TYR:CZ	2.39	1.04
1:B:897:ASN:HB3	1:B:1058:ILE:HD12	1.37	1.04
1:B:583:ASN:HD22	1:B:586:ILE:HG13	0.88	1.03
1:A:367:ILE:O	1:A:371:ILE:HG22	1.57	1.03
1:B:533:PHE:CE1	1:B:557:LEU:CD1	2.41	1.03
1:B:900:LEU:HD22	1:B:1056:LEU:HD12	1.05	1.03
1:A:671:PRO:HG3	1:A:774:GLN:HG2	1.39	1.03
1:B:1048:TYR:HD1	1:B:1052:ARG:CA	1.71	1.03
1:A:384:ILE:HG22	1:A:388:GLU:CB	1.90	1.02
1:A:439:ILE:HD13	1:A:442:ILE:HD12	1.42	1.02
1:A:351:LYS:H	1:A:354:ILE:HD12	1.25	1.02
1:B:582:THR:HA	1:B:583:ASN:OD1	1.59	1.02
1:B:897:ASN:HB3	1:B:1058:ILE:CD1	1.89	1.02
1:B:351:LYS:CE	1:B:483:HIS:CE1	2.43	1.01
1:A:557:LEU:HD22	1:A:558:ASP:H	1.24	1.01
1:A:738:LYS:HE3	1:A:746:ILE:CD1	1.89	1.01
1:B:557:LEU:CD2	1:B:575:ILE:HD11	1.91	1.01
1:A:732:PHE:HA	1:A:784:TYR:CZ	1.94	1.01
1:A:1367:ASN:ND2	1:A:1371:ILE:HD11	1.76	1.01
1:B:439:ILE:O	1:B:442:ILE:HB	1.58	1.01
1:B:634:VAL:O	1:B:634:VAL:HG23	1.19	1.00
1:A:541:ASP:OD1	1:A:1273:GLU:HB2	1.59	1.00
1:A:1264:SER:O	1:A:1265:GLU:HB2	1.54	1.00
1:B:685:ARG:HG2	1:B:685:ARG:HH11	1.20	1.00
1:B:1048:TYR:CD1	1:B:1052:ARG:CB	2.43	1.00
1:B:1142:LYS:HG2	1:B:1143:ASN:HA	1.39	1.00
1:B:461:LYS:HG3	1:B:462:ILE:CG2	1.89	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:817:THR:HG23	1:B:818:TYR:HA	1.37	1.00
1:A:802:ILE:HA	1:A:805:ILE:CB	1.92	1.00
1:A:670:LEU:HD13	1:A:670:LEU:H	1.25	0.99
1:A:683:LEU:HD22	1:A:793:PHE:CE2	1.97	0.99
1:A:762:ALA:CB	1:A:770:ILE:HG13	1.91	0.99
1:B:1111:LEU:HD22	1:B:1359:SER:OG	1.61	0.99
1:A:561:ILE:CG2	1:A:562:LEU:HA	1.93	0.99
1:B:892:ILE:HD12	1:B:893:THR:N	1.78	0.99
1:A:669:TYR:HD1	1:A:755:TYR:CD2	1.79	0.99
1:B:1060:LYS:N	1:B:1060:LYS:HE2	1.77	0.99
1:A:1356:LYS:HB3	1:A:1368:SER:OG	1.62	0.98
1:A:1277:ILE:CD1	1:A:1281:ILE:HD13	1.92	0.98
1:B:1048:TYR:N	1:B:1057:TYR:HB2	1.79	0.98
1:B:630:SER:HA	1:B:631:ASP:HB2	1.45	0.98
1:B:533:PHE:CD1	1:B:557:LEU:CD1	2.46	0.98
1:B:381:ASP:O	1:B:384:ILE:HG22	1.63	0.98
1:B:532:ILE:HG22	1:B:562:LEU:CD1	1.94	0.98
1:B:900:LEU:HD23	1:B:901:GLU:N	1.76	0.97
1:B:897:ASN:CB	1:B:1058:ILE:CD1	2.41	0.97
1:A:667:ILE:HG13	1:A:718:ILE:HD12	1.45	0.97
1:A:732:PHE:HD1	1:A:784:TYR:CE2	1.81	0.97
1:A:1096:GLY:HA2	1:A:1099:ILE:HG13	1.46	0.97
1:A:1329:VAL:HG21	1:A:1353:MSE:HE3	1.40	0.97
1:B:532:ILE:N	1:B:562:LEU:HD12	1.79	0.97
1:B:900:LEU:CD1	1:B:1056:LEU:HB3	1.95	0.97
1:B:557:LEU:CD2	1:B:575:ILE:CD1	2.42	0.97
1:B:725:GLU:O	1:B:726:ASN:ND2	1.97	0.97
1:B:817:THR:HG22	1:B:818:TYR:CA	1.95	0.97
1:B:616:ASP:O	1:B:620:VAL:HG13	1.64	0.97
1:A:738:LYS:HE2	1:A:746:ILE:CG1	1.95	0.96
1:B:463:LEU:HD22	1:B:464:ASN:N	1.80	0.96
1:A:683:LEU:CD2	1:A:793:PHE:CD2	2.48	0.96
1:A:375:LEU:HB3	1:A:380:ILE:CD1	1.96	0.96
1:B:1047:TYR:CA	1:B:1057:TYR:HB3	1.95	0.95
1:B:606:LYS:HB2	1:B:1219:THR:OG1	1.66	0.95
1:B:1142:LYS:HG2	1:B:1143:ASN:CA	1.96	0.95
1:A:665:ASN:HD22	1:A:669:TYR:HE2	1.07	0.95
1:A:361:ASN:HB3	1:A:367:ILE:HG13	1.47	0.95
1:A:738:LYS:CE	1:A:746:ILE:HD11	1.96	0.95
1:B:1329:VAL:HG21	1:B:1353:MSE:HE3	1.49	0.95
1:A:404:PHE:HZ	1:A:439:ILE:HG21	1.13	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1053:LYS:C	1:A:1055:GLU:CB	2.35	0.94
1:A:1149:TYR:OH	1:A:1361:LEU:HD22	1.67	0.94
1:A:411:ASN:H	1:A:413:ASP:H	1.15	0.94
1:B:583:ASN:HD22	1:B:586:ILE:CG1	1.80	0.94
1:B:1049:PRO:CD	1:B:1055:GLU:CB	2.44	0.94
1:A:669:TYR:CD1	1:A:755:TYR:HD2	1.84	0.94
1:B:682:ASN:O	1:B:685:ARG:HB3	1.68	0.94
1:B:491:ARG:HE	1:B:1207:ARG:HH21	1.14	0.94
1:A:376:ALA:O	1:A:379:LYS:HG2	1.67	0.93
1:A:439:ILE:CD1	1:A:442:ILE:HD12	1.96	0.93
1:A:669:TYR:HD1	1:A:755:TYR:HD2	0.98	0.93
1:B:1047:TYR:C	1:B:1057:TYR:HB2	1.89	0.93
1:B:461:LYS:CB	1:B:462:ILE:HG13	1.98	0.93
1:B:1048:TYR:HD1	1:B:1052:ARG:HA	1.31	0.93
1:B:674:SER:HB3	1:B:876:ASP:OD1	1.69	0.93
1:A:1350:GLU:HA	1:A:1352:LEU:H	1.28	0.93
1:B:1142:LYS:CG	1:B:1145:GLN:H	1.82	0.93
1:B:749:ASN:ND2	1:B:749:ASN:O	2.00	0.93
1:A:1015:ILE:HG22	1:A:1016:PHE:HD1	1.33	0.93
1:B:804:GLU:CA	1:B:807:LYS:HD3	1.99	0.93
1:B:1044:GLN:HA	1:B:1048:TYR:HE2	1.24	0.93
1:A:805:ILE:O	1:A:807:LYS:N	2.01	0.92
1:B:648:LYS:HD2	1:B:650:ILE:CD1	1.98	0.92
1:B:588:LYS:HD3	1:B:618:ASN:HD21	1.33	0.92
1:B:562:LEU:HD13	1:B:565:LYS:HZ1	1.34	0.92
1:A:560:LYS:O	1:A:561:ILE:CG1	2.18	0.91
1:A:792:LEU:HD12	1:A:793:PHE:CD1	2.05	0.91
1:A:613:THR:HG23	1:A:614:GLN:HA	1.50	0.91
1:A:463:LEU:H	1:A:463:LEU:HD12	1.34	0.91
1:A:459:ILE:H	1:A:459:ILE:HD12	1.33	0.91
1:A:638:LEU:HD22	1:A:639:ASN:N	1.85	0.91
1:B:535:ARG:HD3	1:B:540:ASN:O	1.71	0.91
1:B:1348:ILE:O	1:B:1348:ILE:HG22	1.68	0.91
1:B:1141:ALA:HB3	1:B:1142:LYS:C	1.90	0.91
1:A:439:ILE:HD13	1:A:442:ILE:CD1	2.01	0.90
1:B:1048:TYR:H	1:B:1057:TYR:H	1.18	0.90
1:A:792:LEU:HD12	1:A:793:PHE:CE1	2.07	0.90
1:A:801:ASN:HA	1:A:804:GLU:CG	2.01	0.90
1:B:1124:GLU:CB	1:B:1127:GLU:CB	2.49	0.90
1:A:544:ILE:HG21	1:A:555:TYR:CE2	2.06	0.90
1:B:1099:ILE:HA	1:B:1103:LYS:CB	2.02	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:900:LEU:HD23	1:B:901:GLU:H	1.33	0.90
1:A:1015:ILE:HG22	1:A:1016:PHE:CD1	2.07	0.89
1:A:1215:SER:OG	1:A:1242:LYS:HB2	1.71	0.89
1:B:1048:TYR:CD1	1:B:1052:ARG:HA	2.07	0.89
1:A:368:LYS:HG3	1:A:369:GLU:N	1.86	0.89
1:A:1177:ILE:HD11	1:A:1374:LEU:HD11	1.53	0.89
1:A:568:ILE:HD13	1:A:625:GLN:HE22	1.36	0.89
1:A:1055:GLU:N	1:A:1055:GLU:OE2	2.05	0.89
1:B:684:TYR:CB	1:B:685:ARG:HB2	2.01	0.89
1:A:362:ILE:HG12	1:A:367:ILE:HD12	1.52	0.89
1:A:732:PHE:HA	1:A:784:TYR:CE2	2.08	0.89
1:B:434:TYR:CE2	1:B:468:LEU:HD23	2.08	0.89
1:B:616:ASP:O	1:B:620:VAL:HG22	1.71	0.89
1:B:1031:LEU:HD12	1:B:1043:PHE:HZ	1.34	0.89
1:A:519:ILE:HD13	1:A:601:LEU:CD2	2.03	0.88
1:B:434:TYR:CE2	1:B:468:LEU:CD2	2.56	0.88
1:B:1031:LEU:CD1	1:B:1043:PHE:HZ	1.86	0.88
1:B:1357:LYS:HD3	1:B:1362:GLU:OE1	1.73	0.88
1:A:1367:ASN:HD21	1:A:1371:ILE:HD11	1.35	0.88
1:A:638:LEU:HD13	1:A:638:LEU:H	1.37	0.88
1:B:976:LEU:HD23	1:B:977:GLN:CA	2.02	0.88
1:B:897:ASN:HB3	1:B:1059:TYR:CE2	2.08	0.88
1:B:900:LEU:HD13	1:B:1056:LEU:HB2	1.55	0.88
1:A:399:GLU:HG3	1:A:400:ILE:HD13	1.53	0.88
1:A:518:LEU:HD23	1:A:855:ILE:HD11	1.53	0.88
1:A:933:ILE:HG12	1:A:998:TYR:HD2	1.30	0.88
1:B:648:LYS:CD	1:B:650:ILE:HD12	2.01	0.88
1:A:1277:ILE:HD12	1:A:1281:ILE:HD13	1.54	0.88
1:B:1269:ILE:HB	1:B:1270:ASN:HB2	1.55	0.88
1:A:659:ILE:CG2	1:A:720:GLU:HA	2.03	0.87
1:B:1360:VAL:O	1:B:1361:LEU:HD23	1.74	0.87
1:B:1367:ASN:O	1:B:1371:ILE:HG22	1.74	0.87
1:B:647:LYS:CB	1:B:648:LYS:HG3	2.03	0.87
1:B:809:ILE:O	1:B:812:ILE:N	2.07	0.87
1:A:462:ILE:HG22	1:A:463:LEU:N	1.88	0.87
1:A:989:LYS:O	1:A:993:LYS:HG2	1.75	0.87
1:A:738:LYS:HE2	1:A:746:ILE:HG13	1.57	0.87
1:A:417:PHE:O	1:A:418:SER:OG	1.91	0.87
1:A:807:LYS:O	1:A:808:GLN:C	2.11	0.87
1:B:900:LEU:HD22	1:B:1056:LEU:CD1	2.00	0.86
1:A:797:ASP:O	1:A:798:PHE:CB	2.24	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:818:TYR:N	1:A:819:GLU:HA	1.90	0.86
1:A:1096:GLY:HA2	1:A:1099:ILE:CG1	2.05	0.86
1:B:1043:PHE:C	1:B:1046:ILE:HD11	1.96	0.86
1:A:371:ILE:CD1	1:A:431:ILE:HD11	2.04	0.86
1:A:1104:ILE:O	1:A:1108:ASP:HB2	1.76	0.86
1:B:969:ILE:CB	1:B:970:ASP:HB3	2.05	0.86
1:B:1145:GLN:CB	1:B:1146:ASN:HA	2.01	0.86
1:A:637:ALA:HB3	1:A:820:ARG:HH12	1.40	0.85
1:A:1367:ASN:ND2	1:A:1371:ILE:CD1	2.40	0.85
1:B:1329:VAL:HG21	1:B:1353:MSE:CE	2.06	0.85
1:B:434:TYR:HE2	1:B:468:LEU:CD2	1.89	0.85
1:A:547:PHE:CA	1:A:594:THR:HG22	2.06	0.85
1:A:738:LYS:CE	1:A:746:ILE:CG1	2.55	0.85
1:B:804:GLU:HA	1:B:807:LYS:CD	2.04	0.85
1:A:351:LYS:N	1:A:354:ILE:HD12	1.90	0.85
1:A:933:ILE:CG1	1:A:998:TYR:CD2	2.59	0.85
1:B:1142:LYS:HG3	1:B:1145:GLN:N	1.90	0.85
1:B:608:ARG:HA	1:B:609:ASP:C	1.95	0.85
1:B:723:LEU:CD2	1:B:727:GLU:HG2	2.07	0.85
1:A:807:LYS:O	1:A:810:LYS:N	2.09	0.85
1:B:457:ILE:HG22	1:B:457:ILE:O	1.76	0.85
1:A:758:ALA:HA	1:A:761:SER:HB2	1.59	0.85
1:B:684:TYR:HB3	1:B:685:ARG:CB	2.06	0.85
1:B:897:ASN:HB3	1:B:1059:TYR:HE2	1.38	0.85
1:B:1360:VAL:C	1:B:1361:LEU:HD23	1.97	0.85
1:A:738:LYS:HB2	1:A:746:ILE:HG12	1.58	0.85
1:B:461:LYS:HB3	1:B:462:ILE:HG13	1.58	0.85
1:B:1058:ILE:HG13	1:B:1059:TYR:CD2	2.12	0.84
1:B:1266:ASN:O	1:B:1267:SER:OG	1.93	0.84
1:A:457:ILE:O	1:A:457:ILE:HG22	1.77	0.84
1:A:1364:GLU:O	1:A:1365:SER:OG	1.96	0.84
1:A:667:ILE:HA	1:A:670:LEU:HD11	1.57	0.84
1:B:576:ASP:OD1	1:B:577:ASN:N	2.09	0.84
1:B:975:ILE:HG22	1:B:976:LEU:HB2	1.60	0.84
1:B:1358:VAL:HG12	1:B:1365:SER:HB3	1.57	0.84
1:B:914:PHE:HA	1:B:915:ASP:HB2	0.84	0.84
1:B:1329:VAL:HG11	1:B:1353:MSE:HE2	1.60	0.84
1:B:1059:TYR:N	1:B:1060:LYS:HB2	1.92	0.84
1:B:398:THR:HA	1:B:401:PHE:CB	2.08	0.83
1:B:673:PHE:CD1	1:B:714:TYR:CD2	2.66	0.83
1:A:368:LYS:HG3	1:A:369:GLU:H	1.41	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1054:ASN:N	1:A:1055:GLU:HA	1.94	0.83
1:B:1142:LYS:N	1:B:1143:ASN:HA	1.94	0.83
1:A:1348:ILE:HG22	1:A:1348:ILE:O	1.78	0.83
1:A:459:ILE:HD13	1:A:460:GLU:H	1.44	0.83
1:A:946:ASN:HA	1:A:949:ASP:HB3	1.59	0.83
1:B:1364:GLU:O	1:B:1365:SER:OG	1.95	0.83
1:A:350:LYS:HA	1:A:352:ASP:N	1.93	0.83
1:A:696:ILE:CB	1:A:699:GLU:N	2.42	0.83
1:B:532:ILE:HG22	1:B:562:LEU:HD12	1.61	0.83
1:B:1031:LEU:CD1	1:B:1043:PHE:CZ	2.61	0.83
1:A:445:ASN:HD22	1:A:460:GLU:HA	1.42	0.82
1:B:494:ASP:O	1:B:495:ILE:HD13	1.79	0.82
1:B:673:PHE:HD1	1:B:714:TYR:CD2	1.96	0.82
1:A:468:LEU:O	1:A:472:ILE:HG13	1.79	0.82
1:B:1041:ASN:O	1:B:1042:LYS:O	1.97	0.82
1:A:801:ASN:HA	1:A:804:GLU:HG3	1.61	0.82
1:B:378:PHE:CZ	1:B:435:LEU:CD1	2.63	0.82
1:A:420:LYS:O	1:A:421:SER:OG	1.97	0.82
1:A:461:LYS:HA	1:A:461:LYS:NZ	1.94	0.82
1:A:1366:TYR:CD1	1:A:1367:ASN:CB	2.62	0.82
1:A:696:ILE:CB	1:A:699:GLU:H	1.93	0.82
1:B:461:LYS:HZ2	1:B:461:LYS:HB2	1.44	0.82
1:A:737:LYS:HD2	1:A:750:ILE:HG22	1.62	0.82
1:B:1047:TYR:HA	1:B:1057:TYR:CB	2.08	0.82
1:A:892:ILE:O	1:A:896:TRP:HB3	1.79	0.82
1:B:897:ASN:CB	1:B:1059:TYR:HE2	1.93	0.82
1:B:644:PHE:HE2	1:B:651:ILE:HD11	1.44	0.82
1:B:461:LYS:HB2	1:B:461:LYS:NZ	1.95	0.81
1:B:900:LEU:CD2	1:B:1056:LEU:CD1	2.56	0.81
1:A:395:ASN:OD1	1:A:396:CYS:N	2.14	0.81
1:A:968:GLU:HA	1:A:969:ILE:CB	2.10	0.81
1:B:560:LYS:HE2	1:B:563:ASN:CB	2.10	0.81
1:B:1130:ILE:HG12	1:B:1133:LEU:HD12	1.61	0.81
1:B:358:PHE:O	1:B:362:ILE:HG12	1.80	0.81
1:B:1142:LYS:HB3	1:B:1142:LYS:NZ	1.94	0.81
1:A:375:LEU:CD2	1:A:380:ILE:HD11	2.08	0.81
1:A:568:ILE:HD13	1:A:625:GLN:NE2	1.95	0.81
1:B:1091:LEU:HA	1:B:1092:PHE:C	1.99	0.81
1:A:807:LYS:O	1:A:809:ILE:N	2.13	0.81
1:B:595:ASN:ND2	1:B:610:LEU:CB	2.44	0.80
1:B:888:ARG:NH1	1:B:1011:LEU:HD21	1.96	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:393:LYS:H	1:A:395:ASN:HB3	1.45	0.80
1:B:986:ILE:O	1:B:986:ILE:HD12	1.81	0.80
1:A:351:LYS:H	1:A:354:ILE:CD1	1.94	0.80
1:B:504:ASP:HA	1:B:507:ARG:HD3	1.63	0.80
1:A:514:LEU:HD12	1:A:514:LEU:O	1.81	0.80
1:A:933:ILE:CG1	1:A:998:TYR:CE2	2.65	0.80
1:B:914:PHE:CA	1:B:915:ASP:CB	2.34	0.80
1:A:1106:GLU:O	1:A:1110:ILE:HG13	1.82	0.80
1:B:1130:ILE:O	1:B:1134:LYS:HG3	1.82	0.80
1:A:659:ILE:HG22	1:A:720:GLU:CA	2.12	0.79
1:A:683:LEU:HD23	1:A:684:TYR:N	1.97	0.79
1:A:519:ILE:HD13	1:A:601:LEU:HD23	1.64	0.79
1:A:644:PHE:HB3	1:A:647:LYS:O	1.80	0.79
1:A:1215:SER:OG	1:A:1242:LYS:CB	2.30	0.79
1:A:608:ARG:NH2	1:A:836:PHE:HB2	1.97	0.79
1:A:933:ILE:HG12	1:A:998:TYR:CE2	2.18	0.79
1:B:467:ILE:HD12	1:B:467:ILE:O	1.82	0.79
1:B:588:LYS:HD3	1:B:618:ASN:ND2	1.96	0.79
1:A:738:LYS:CE	1:A:746:ILE:CD1	2.58	0.79
1:B:405:LYS:HA	1:B:408:TYR:CB	2.12	0.79
1:A:738:LYS:CE	1:A:746:ILE:HG13	2.12	0.79
1:A:1045:GLU:HB3	1:A:1091:LEU:HD22	1.65	0.79
1:A:1361:LEU:HD12	1:A:1361:LEU:H	1.48	0.79
1:A:685:ARG:HD2	1:A:685:ARG:O	1.83	0.78
1:B:1357:LYS:CD	1:B:1362:GLU:OE1	2.31	0.78
1:A:391:LEU:O	1:A:392:LYS:CB	2.31	0.78
1:B:434:TYR:HE2	1:B:468:LEU:HD23	1.43	0.78
1:B:427:LEU:H	1:B:427:LEU:HD12	1.46	0.78
1:A:399:GLU:CG	1:A:400:ILE:HD13	2.13	0.78
1:A:464:ASN:ND2	1:A:467:ILE:HG13	1.97	0.78
1:A:1040:GLU:HG2	1:A:1042:LYS:HG2	1.66	0.78
1:B:533:PHE:HE1	1:B:557:LEU:CD1	1.96	0.78
1:B:432:TYR:CE1	1:B:436:LYS:NZ	2.51	0.78
1:A:1111:LEU:HD21	1:A:1363:LEU:HD12	1.65	0.78
1:A:683:LEU:HD21	1:A:793:PHE:CD2	2.18	0.78
1:A:404:PHE:HZ	1:A:439:ILE:CG2	1.92	0.78
1:A:683:LEU:CD2	1:A:793:PHE:CE2	2.65	0.77
1:B:465:GLU:O	1:B:466:SER:OG	2.03	0.77
1:B:532:ILE:CG2	1:B:562:LEU:HD12	2.15	0.77
1:B:888:ARG:HH12	1:B:1011:LEU:HD21	1.48	0.77
1:A:557:LEU:CD2	1:A:558:ASP:H	1.97	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1060:LYS:HE2	1:B:1060:LYS:CA	2.14	0.77
1:A:1090:PHE:CB	1:A:1162:TYR:HE1	1.97	0.77
1:B:461:LYS:CG	1:B:462:ILE:HG13	2.15	0.77
1:B:975:ILE:CG2	1:B:976:LEU:HB2	2.15	0.77
1:B:1091:LEU:CB	1:B:1093:ASN:HB2	2.15	0.77
1:A:1112:LYS:HA	1:A:1115:ASN:HB2	1.66	0.77
1:A:1277:ILE:HD11	1:A:1281:ILE:HD13	1.64	0.77
1:B:357:PHE:HE2	1:B:427:LEU:HD21	1.49	0.77
1:A:913:ASP:HA	1:A:1013:ARG:NH2	2.00	0.77
1:A:350:LYS:CA	1:A:352:ASP:H	1.97	0.77
1:B:1253:GLU:OE1	1:B:1264:SER:HA	1.83	0.77
1:B:467:ILE:HG23	1:B:468:LEU:CD1	2.15	0.77
1:B:659:ILE:CB	1:B:719:LEU:O	2.32	0.77
1:B:1256:CYS:HB3	1:B:1261:ILE:HG13	1.67	0.77
1:B:1332:ASP:HB2	1:B:1354:LYS:HE3	1.66	0.77
1:B:685:ARG:HG2	1:B:685:ARG:NH1	1.94	0.76
1:B:412:PHE:CB	1:B:413:ASP:HA	2.15	0.76
1:B:1047:TYR:CA	1:B:1057:TYR:CB	2.63	0.76
1:A:1118:LEU:CB	1:A:1125:TYR:CE2	2.68	0.76
1:B:562:LEU:HD13	1:B:565:LYS:NZ	1.99	0.76
1:B:1355:PRO:HB2	1:B:1368:SER:HB2	1.67	0.76
1:A:544:ILE:CG2	1:A:555:TYR:CE2	2.69	0.76
1:A:1119:ASN:HB3	1:A:1120:GLY:HA2	1.68	0.76
1:A:461:LYS:HA	1:A:461:LYS:HZ2	1.48	0.76
1:B:606:LYS:CB	1:B:1219:THR:OG1	2.34	0.76
1:A:418:SER:CB	1:A:419:LYS:HA	2.06	0.76
1:B:817:THR:CG2	1:B:818:TYR:CA	2.49	0.76
1:A:1366:TYR:HD1	1:A:1367:ASN:CB	1.95	0.75
1:B:552:GLU:HA	1:B:553:LYS:CB	2.15	0.75
1:A:411:ASN:N	1:A:412:PHE:HA	2.01	0.75
1:B:378:PHE:CZ	1:B:435:LEU:HD13	2.22	0.75
1:A:501:ASN:O	1:A:502:THR:CG2	2.28	0.75
1:B:892:ILE:HD12	1:B:893:THR:CA	2.17	0.75
1:A:411:ASN:N	1:A:413:ASP:H	1.85	0.75
1:A:614:GLN:CB	1:A:618:ASN:HB2	2.16	0.75
1:A:643:VAL:O	1:A:645:LYS:CB	2.35	0.75
1:A:703:LEU:O	1:A:707:ILE:HG12	1.87	0.75
1:A:1111:LEU:HD23	1:A:1359:SER:OG	1.86	0.75
1:B:804:GLU:O	1:B:806:LYS:N	2.19	0.75
1:B:464:ASN:O	1:B:467:ILE:HG22	1.86	0.75
1:B:532:ILE:CG2	1:B:562:LEU:CD1	2.64	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:383:LEU:O	1:A:383:LEU:HD23	1.87	0.74
1:A:802:ILE:CA	1:A:805:ILE:CB	2.64	0.74
1:A:806:LYS:O	1:A:809:ILE:HB	1.86	0.74
1:A:398:THR:OG1	1:A:443:LEU:CD1	2.35	0.74
1:A:902:GLU:OE2	1:A:1057:TYR:HD2	1.70	0.74
1:B:374:ILE:HA	1:B:377:GLU:CB	2.17	0.74
1:A:676:VAL:HG12	1:A:778:ILE:HG23	1.70	0.74
1:A:613:THR:CG2	1:A:614:GLN:HA	2.18	0.74
1:A:1358:VAL:CB	1:A:1365:SER:HB3	2.18	0.74
1:B:531:LYS:HB2	1:B:562:LEU:HD11	1.68	0.74
1:B:986:ILE:HD13	1:B:991:LEU:HD12	1.68	0.74
1:B:1141:ALA:N	1:B:1142:LYS:HA	2.02	0.74
1:A:1118:LEU:HB2	1:A:1125:TYR:CE2	2.23	0.74
1:A:1371:ILE:HG22	1:A:1375:ILE:CD1	2.17	0.74
1:B:532:ILE:CA	1:B:562:LEU:HD12	2.17	0.74
1:B:1142:LYS:HG2	1:B:1143:ASN:C	2.08	0.74
1:B:403:ILE:HA	1:B:406:LYS:CG	2.10	0.74
1:B:463:LEU:O	1:B:463:LEU:HD13	1.87	0.74
1:B:582:THR:HB	1:B:583:ASN:ND2	2.01	0.74
1:B:1147:LYS:N	1:B:1148:ASN:HA	2.03	0.74
1:A:462:ILE:CG2	1:A:463:LEU:N	2.51	0.73
1:A:1350:GLU:HA	1:A:1352:LEU:N	2.01	0.73
1:B:376:ALA:HA	1:B:379:LYS:CB	2.19	0.73
1:B:616:ASP:O	1:B:620:VAL:CG1	2.35	0.73
1:A:1010:ILE:HG23	1:A:1014:ILE:HD12	1.68	0.73
1:B:657:ILE:HD13	1:B:657:ILE:N	2.04	0.73
1:B:749:ASN:HD21	1:B:753:ASN:HD22	1.35	0.73
1:B:1047:TYR:C	1:B:1057:TYR:CB	2.57	0.73
1:A:515:ASP:O	1:A:519:ILE:HG13	1.88	0.73
1:A:1092:PHE:CB	1:A:1093:ASN:OD1	2.37	0.73
1:A:547:PHE:HA	1:A:594:THR:CG2	2.17	0.73
1:A:667:ILE:HG13	1:A:718:ILE:CD1	2.19	0.73
1:A:1354:LYS:HB2	1:A:1354:LYS:NZ	2.04	0.73
1:B:532:ILE:N	1:B:562:LEU:CD1	2.51	0.73
1:B:919:ILE:H	1:B:919:ILE:CD1	1.94	0.73
1:B:606:LYS:CD	1:B:1219:THR:CG2	2.62	0.73
1:B:1099:ILE:HG23	1:B:1103:LYS:CB	2.19	0.72
1:B:462:ILE:N	1:B:462:ILE:HD12	2.03	0.72
1:A:638:LEU:H	1:A:638:LEU:CD1	2.03	0.72
1:B:532:ILE:HG22	1:B:562:LEU:HD13	1.69	0.72
1:B:1031:LEU:O	1:B:1043:PHE:CE2	2.42	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1265:GLU:CB	1:B:1266:ASN:HB3	2.20	0.72
1:A:973:SER:HB3	1:A:974:ASN:HA	1.71	0.72
1:B:481:LEU:CD2	1:B:1259:PHE:CE2	2.66	0.72
1:A:1367:ASN:CG	1:A:1371:ILE:CD1	2.57	0.72
1:A:608:ARG:HG2	1:A:608:ARG:HH11	1.55	0.72
1:A:802:ILE:O	1:A:805:ILE:CB	2.37	0.72
1:B:640:LEU:HD13	1:B:701:ILE:HG23	1.70	0.72
1:B:1059:TYR:HA	1:B:1060:LYS:C	2.09	0.72
1:A:1329:VAL:CG2	1:A:1353:MSE:HE3	2.18	0.72
1:B:1079:ILE:HD12	1:B:1079:ILE:N	2.03	0.72
1:A:371:ILE:HD13	1:A:431:ILE:HD11	1.70	0.72
1:B:1048:TYR:N	1:B:1057:TYR:H	1.87	0.72
1:A:557:LEU:HD22	1:A:558:ASP:N	2.02	0.72
1:A:1111:LEU:HD21	1:A:1363:LEU:HD11	1.70	0.72
1:B:720:GLU:OE2	1:B:723:LEU:CD1	2.38	0.72
1:A:1328:ASP:HB3	1:A:1371:ILE:HG21	1.72	0.71
1:B:976:LEU:HD23	1:B:977:GLN:H	0.74	0.71
1:A:666:ASP:O	1:A:667:ILE:HG22	1.91	0.71
1:B:514:LEU:HG	1:B:862:THR:HG21	1.73	0.71
1:B:903:PHE:CE2	1:B:1021:LEU:HD11	2.25	0.71
1:B:1031:LEU:O	1:B:1043:PHE:HE2	1.73	0.71
1:A:1264:SER:O	1:A:1265:GLU:CB	2.33	0.71
1:B:677:LEU:HD11	1:B:707:ILE:HD12	1.73	0.71
1:A:643:VAL:O	1:A:644:PHE:C	2.29	0.71
1:B:481:LEU:HD21	1:B:1259:PHE:CD2	2.22	0.71
1:A:703:LEU:HD12	1:A:707:ILE:HD11	1.71	0.71
1:A:775:LYS:HB2	1:A:775:LYS:NZ	2.06	0.71
1:A:1361:LEU:HD13	1:A:1363:LEU:HD11	1.72	0.71
1:A:400:ILE:HD13	1:A:400:ILE:N	2.05	0.71
1:A:896:TRP:CG	1:A:897:ASN:N	2.55	0.71
1:B:351:LYS:HE2	1:B:483:HIS:HE1	1.50	0.71
1:A:368:LYS:HA	1:A:371:ILE:CG2	2.20	0.71
1:A:1236:THR:HG23	1:A:1242:LYS:HG2	1.72	0.71
1:B:1192:MSE:HE3	1:B:1278:ARG:HG2	1.72	0.71
1:A:638:LEU:HD13	1:A:638:LEU:N	2.05	0.71
1:B:467:ILE:HG23	1:B:468:LEU:HD12	1.72	0.71
1:B:1191:GLN:HE22	1:B:1194:ARG:HH21	1.36	0.70
1:B:1048:TYR:HB2	1:B:1052:ARG:HA	1.72	0.70
1:A:445:ASN:OD1	1:A:446:GLU:N	2.24	0.70
1:B:644:PHE:HE2	1:B:651:ILE:CD1	2.04	0.70
1:A:361:ASN:CB	1:A:367:ILE:HG13	2.21	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1014:ILE:HG22	1:A:1015:ILE:N	2.04	0.70
1:A:1356:LYS:HD2	1:A:1357:LYS:HB3	1.73	0.70
1:B:489:LYS:HG2	1:B:489:LYS:O	1.91	0.70
1:A:519:ILE:CD1	1:A:601:LEU:HD23	2.22	0.70
1:A:1054:ASN:N	1:A:1055:GLU:CA	2.54	0.70
1:B:438:ARG:NE	1:B:438:ARG:HA	2.06	0.70
1:B:904:ILE:HG12	1:B:1021:LEU:HD13	1.73	0.70
1:B:461:LYS:CG	1:B:462:ILE:HG23	2.16	0.70
1:A:1346:ASN:HD22	1:A:1349:LEU:HD22	1.56	0.70
1:A:399:GLU:CD	1:A:400:ILE:HD13	2.12	0.70
1:A:696:ILE:CB	1:A:699:GLU:CA	2.70	0.70
1:B:1263:LEU:HA	1:B:1270:ASN:HD22	1.56	0.70
1:A:801:ASN:HA	1:A:804:GLU:HG2	1.74	0.69
1:A:1276:SER:OG	1:A:1279:ASN:HB2	1.91	0.69
1:A:1118:LEU:HB3	1:A:1125:TYR:CE2	2.28	0.69
1:B:416:LYS:N	1:B:417:PHE:HA	2.07	0.69
1:B:1171:PHE:HB3	1:B:1174:LEU:HD12	1.74	0.69
1:B:1349:LEU:CD2	1:B:1350:GLU:HG2	2.22	0.69
1:A:371:ILE:HD12	1:A:371:ILE:O	1.92	0.69
1:B:426:GLU:O	1:B:430:ILE:HG23	1.93	0.69
1:B:436:LYS:NZ	1:B:436:LYS:HB3	2.07	0.69
1:A:933:ILE:HG13	1:A:998:TYR:CE2	2.26	0.69
1:B:533:PHE:HD1	1:B:557:LEU:CD1	2.06	0.69
1:A:570:ARG:HD3	1:A:577:ASN:CG	2.12	0.69
1:A:683:LEU:HD23	1:A:683:LEU:C	2.13	0.69
1:A:796:SER:N	1:A:797:ASP:HA	2.08	0.69
1:A:1329:VAL:HG21	1:A:1353:MSE:HE2	1.70	0.69
1:B:616:ASP:O	1:B:620:VAL:CG2	2.40	0.69
1:B:634:VAL:O	1:B:638:LEU:CB	2.41	0.69
1:B:897:ASN:CG	1:B:1059:TYR:HE2	1.96	0.69
1:A:670:LEU:H	1:A:670:LEU:CD1	2.02	0.69
1:A:1329:VAL:HG21	1:A:1353:MSE:HE1	1.69	0.69
1:B:914:PHE:CD1	1:B:916:ASP:CB	2.75	0.69
1:B:921:THR:OG1	1:B:924:GLU:CB	2.41	0.69
1:B:1075:ILE:HD11	1:B:1290:PRO:HG2	1.74	0.69
1:B:1267:SER:HA	1:B:1270:ASN:O	1.93	0.68
1:B:1348:ILE:O	1:B:1348:ILE:CG2	2.38	0.68
1:A:1149:TYR:OH	1:A:1361:LEU:CD2	2.41	0.68
1:B:1044:GLN:O	1:B:1046:ILE:HD13	1.93	0.68
1:B:1059:TYR:CA	1:B:1060:LYS:CB	2.72	0.68
1:A:362:ILE:HG12	1:A:367:ILE:CD1	2.23	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:368:LYS:O	1:A:371:ILE:HG23	1.93	0.68
1:A:608:ARG:HG2	1:A:608:ARG:NH1	2.06	0.68
1:B:897:ASN:HB2	1:B:1058:ILE:CD1	2.12	0.68
1:A:516:LEU:HD11	1:A:1197:ARG:HE	1.58	0.68
1:B:1058:ILE:HD12	1:B:1059:TYR:CE2	2.28	0.68
1:A:464:ASN:OD1	1:A:467:ILE:HG12	1.94	0.68
1:A:738:LYS:HB2	1:A:746:ILE:CG1	2.24	0.68
1:A:351:LYS:HA	1:A:354:ILE:HD12	1.76	0.68
1:B:485:MSE:HE2	1:B:1202:ILE:HD11	1.75	0.67
1:B:614:GLN:O	1:B:615:ASP:O	2.12	0.67
1:A:431:ILE:HG12	1:A:472:ILE:HD13	1.75	0.67
1:B:432:TYR:HE1	1:B:436:LYS:NZ	1.91	0.67
1:A:1017:ASN:HB3	1:A:1020:PHE:HB2	1.76	0.67
1:B:1035:MSE:O	1:B:1038:GLU:OE1	2.12	0.67
1:B:1044:GLN:HA	1:B:1048:TYR:CZ	2.29	0.67
1:B:1364:GLU:HG2	1:B:1365:SER:N	2.09	0.67
1:A:519:ILE:HD13	1:A:601:LEU:HD21	1.75	0.67
1:B:358:PHE:CZ	1:B:427:LEU:HG	2.28	0.67
1:B:1269:ILE:CB	1:B:1270:ASN:HB2	2.23	0.67
1:A:495:ILE:HD11	1:A:508:LEU:HD22	1.76	0.67
1:B:510:ALA:HB3	1:B:866:LEU:HD21	1.75	0.67
1:B:1056:LEU:O	1:B:1058:ILE:HG22	1.94	0.67
1:A:404:PHE:HD1	1:A:404:PHE:H	1.40	0.67
1:A:459:ILE:HD12	1:A:459:ILE:N	2.03	0.67
1:B:351:LYS:HE3	1:B:483:HIS:ND1	2.10	0.67
1:B:463:LEU:HD22	1:B:463:LEU:C	2.15	0.67
1:B:424:GLU:HA	1:B:427:LEU:HD13	1.76	0.67
1:B:1291:PHE:HZ	1:B:1378:LEU:HD12	1.59	0.66
1:A:518:LEU:CD2	1:A:855:ILE:HD11	2.22	0.66
1:A:900:LEU:HB3	1:A:1056:LEU:HD22	1.76	0.66
1:A:351:LYS:CA	1:A:354:ILE:HD12	2.25	0.66
1:A:493:ASN:OD1	1:A:603:ALA:CB	2.42	0.66
1:A:1322:PHE:HB3	1:A:1331:LEU:HD21	1.77	0.66
1:A:1366:TYR:CE1	1:A:1367:ASN:HB2	2.29	0.66
1:B:351:LYS:CE	1:B:483:HIS:ND1	2.59	0.66
1:A:794:ASP:O	1:A:795:PHE:HD1	1.78	0.66
1:B:358:PHE:CB	1:B:480:THR:HG21	2.25	0.66
1:B:606:LYS:HB2	1:B:1219:THR:CG2	2.25	0.66
1:B:914:PHE:HA	1:B:915:ASP:HB3	1.72	0.66
1:B:1059:TYR:CA	1:B:1060:LYS:HB2	2.26	0.66
1:B:1144:ILE:C	1:B:1145:GLN:HG3	2.15	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:638:LEU:HG	1:A:891:CYS:CB	2.25	0.66
1:B:550:ASP:OD1	1:B:550:ASP:N	2.28	0.66
1:B:606:LYS:HD3	1:B:1219:THR:HG21	1.76	0.66
1:A:637:ALA:CB	1:A:820:ARG:HH12	2.08	0.66
1:B:644:PHE:CE2	1:B:651:ILE:HD11	2.29	0.66
1:A:394:GLY:HA2	1:A:395:ASN:CB	2.12	0.66
1:A:398:THR:OG1	1:A:443:LEU:HD13	1.95	0.66
1:B:1358:VAL:CG1	1:B:1365:SER:HB3	2.26	0.66
1:A:1008:SER:O	1:A:1012:CYS:SG	2.50	0.66
1:A:1050:LYS:HE2	1:A:1050:LYS:HA	1.76	0.66
1:B:565:LYS:HA	1:B:568:ILE:HD12	1.77	0.66
1:B:1358:VAL:HG22	1:B:1359:SER:H	1.60	0.66
1:B:1355:PRO:CB	1:B:1368:SER:HB2	2.24	0.66
1:A:544:ILE:HD13	1:A:555:TYR:CD2	2.30	0.65
1:A:570:ARG:CD	1:A:577:ASN:OD1	2.33	0.65
1:B:1142:LYS:HG2	1:B:1144:ILE:N	2.11	0.65
1:B:1192:MSE:CE	1:B:1278:ARG:HG2	2.26	0.65
1:B:1357:LYS:HA	1:B:1363:LEU:O	1.96	0.65
1:A:439:ILE:CD1	1:A:442:ILE:CD1	2.66	0.65
1:B:892:ILE:HD12	1:B:892:ILE:C	2.15	0.65
1:A:1371:ILE:CG2	1:A:1375:ILE:HD11	2.25	0.65
1:A:792:LEU:O	1:A:792:LEU:HD13	1.95	0.65
1:A:666:ASP:N	1:A:666:ASP:OD1	2.29	0.65
1:B:503:ASP:N	1:B:503:ASP:OD1	2.29	0.65
1:A:806:LYS:N	1:A:809:ILE:CD1	2.59	0.65
1:A:1102:ASN:O	1:A:1106:GLU:HB2	1.96	0.65
1:B:615:ASP:OD2	1:B:615:ASP:N	2.24	0.65
1:A:738:LYS:HB2	1:A:746:ILE:CD1	2.26	0.65
1:A:792:LEU:HD13	1:A:792:LEU:C	2.17	0.65
1:B:489:LYS:HD3	1:B:508:LEU:HD13	1.79	0.65
1:A:705:ALA:O	1:A:709:VAL:HG23	1.97	0.65
1:B:421:SER:HB3	1:B:424:GLU:OE1	1.97	0.65
1:B:380:ILE:O	1:B:384:ILE:HB	1.97	0.65
1:A:462:ILE:HG22	1:A:464:ASN:N	2.12	0.65
1:B:557:LEU:HD21	1:B:575:ILE:CD1	2.26	0.65
1:B:917:PHE:O	1:B:918:LYS:HG3	1.95	0.65
1:B:1048:TYR:N	1:B:1057:TYR:CB	2.58	0.65
1:B:1329:VAL:HG11	1:B:1353:MSE:CE	2.27	0.65
1:A:463:LEU:O	1:A:463:LEU:HD13	1.97	0.64
1:A:892:ILE:O	1:A:896:TRP:CB	2.44	0.64
1:B:913:ASP:O	1:B:915:ASP:HB2	1.96	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:946:ASN:HA	1:B:949:ASP:HB3	1.79	0.64
1:B:1099:ILE:CA	1:B:1103:LYS:CB	2.75	0.64
1:B:1358:VAL:O	1:B:1359:SER:HB2	1.97	0.64
1:B:492:HIS:CE1	1:B:1200:HIS:CD2	2.84	0.64
1:A:459:ILE:CD1	1:A:460:GLU:H	2.11	0.64
1:A:518:LEU:HD23	1:A:855:ILE:CD1	2.27	0.64
1:B:987:ASN:HB3	1:B:990:ASP:HB2	1.79	0.64
1:B:1045:GLU:O	1:B:1057:TYR:CD2	2.50	0.64
1:A:576:ASP:O	1:A:578:LYS:N	2.31	0.64
1:A:410:VAL:C	1:A:412:PHE:HA	2.18	0.64
1:A:535:ARG:CG	1:A:535:ARG:HH11	2.11	0.64
1:A:732:PHE:CD1	1:A:784:TYR:CE2	2.72	0.64
1:A:806:LYS:N	1:A:809:ILE:HD12	2.12	0.64
1:B:490:LEU:HA	1:B:495:ILE:HG13	1.79	0.64
1:B:842:ILE:O	1:B:846:LEU:CD1	2.46	0.64
1:A:1356:LYS:HB3	1:A:1368:SER:HG	1.61	0.64
1:B:914:PHE:N	1:B:915:ASP:HB2	2.12	0.64
1:A:987:ASN:HD21	1:A:990:ASP:HB2	1.62	0.64
1:A:1298:GLU:HA	1:A:1343:ILE:CB	2.28	0.64
1:B:1277:ILE:HG22	1:B:1294:TYR:HE1	1.62	0.64
1:B:1023:LYS:HA	1:B:1026:LYS:HB3	1.79	0.64
1:B:1071:ASN:HD22	1:B:1075:ILE:HG13	1.63	0.64
1:B:463:LEU:HD23	1:B:468:LEU:HD13	1.79	0.63
1:B:665:ASN:O	1:B:666:ASP:OD1	2.16	0.63
1:B:852:ILE:HG22	1:B:882:MSE:HE2	1.81	0.63
1:B:975:ILE:CG2	1:B:976:LEU:CB	2.76	0.63
1:A:732:PHE:CE1	1:A:784:TYR:CD2	2.86	0.63
1:A:888:ARG:HG2	1:A:888:ARG:O	1.98	0.63
1:B:492:HIS:HE1	1:B:1200:HIS:CD2	2.16	0.63
1:B:1059:TYR:HA	1:B:1060:LYS:CB	2.29	0.63
1:A:821:ILE:HG22	1:A:822:THR:N	2.13	0.63
1:B:900:LEU:CD2	1:B:901:GLU:H	2.09	0.63
1:A:670:LEU:HD13	1:A:670:LEU:N	2.08	0.63
1:A:868:THR:HG23	1:A:869:SER:N	2.13	0.63
1:B:400:ILE:O	1:B:403:ILE:CB	2.46	0.63
1:B:1358:VAL:HG22	1:B:1359:SER:N	2.13	0.63
1:A:473:LEU:HD22	1:A:477:LYS:HE3	1.81	0.63
1:A:738:LYS:HE2	1:A:746:ILE:HG12	1.80	0.63
1:A:1048:TYR:HD1	1:A:1049:PRO:O	1.81	0.63
1:A:1348:ILE:O	1:A:1348:ILE:CG2	2.46	0.63
1:A:399:GLU:HG3	1:A:400:ILE:CD1	2.28	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:913:ASP:HA	1:A:1013:ARG:HH22	1.60	0.63
1:B:490:LEU:HD22	1:B:495:ILE:CG2	2.17	0.63
1:B:684:TYR:N	1:B:685:ARG:HB2	2.13	0.63
1:A:463:LEU:HD12	1:A:463:LEU:N	2.06	0.63
1:A:554:ASN:N	1:A:555:TYR:HA	2.14	0.63
1:A:608:ARG:HH11	1:A:608:ARG:CG	2.12	0.63
1:A:659:ILE:HG22	1:A:719:LEU:O	1.99	0.63
1:A:685:ARG:HG2	1:A:685:ARG:HH11	1.64	0.63
1:A:732:PHE:HA	1:A:784:TYR:OH	1.98	0.63
1:A:735:GLU:O	1:A:739:THR:HG23	1.99	0.63
1:A:439:ILE:HD12	1:A:442:ILE:HD12	1.81	0.62
1:B:1140:PHE:C	1:B:1142:LYS:HA	2.20	0.62
1:A:1026:LYS:HB2	1:A:1026:LYS:NZ	2.13	0.62
1:A:1346:ASN:HB3	1:A:1349:LEU:HB2	1.81	0.62
1:B:1099:ILE:O	1:B:1103:LYS:N	2.32	0.62
1:B:364:ASN:ND2	1:B:364:ASN:H	1.96	0.62
1:A:756:LYS:HA	1:A:759:GLN:HG2	1.82	0.62
1:B:897:ASN:CG	1:B:1059:TYR:CE2	2.73	0.62
1:A:1354:LYS:HB2	1:A:1354:LYS:HZ2	1.63	0.62
1:A:1367:ASN:O	1:A:1371:ILE:HD12	1.98	0.62
1:B:643:VAL:HG12	1:B:643:VAL:O	2.00	0.62
1:B:842:ILE:O	1:B:846:LEU:HD12	2.00	0.62
1:A:350:LYS:HA	1:A:351:LYS:HB3	1.81	0.62
1:A:1371:ILE:HG22	1:A:1375:ILE:HD12	1.80	0.62
1:B:378:PHE:CE2	1:B:435:LEU:HD13	2.34	0.62
1:A:1359:SER:HB3	1:A:1363:LEU:HD12	1.82	0.62
1:A:1371:ILE:CG2	1:A:1375:ILE:CD1	2.76	0.62
1:B:913:ASP:O	1:B:915:ASP:CB	2.47	0.62
1:A:1285:TYR:HA	1:A:1288:ARG:HG2	1.81	0.62
1:B:1191:GLN:NE2	1:B:1194:ARG:HH21	1.98	0.62
1:B:892:ILE:HD12	1:B:893:THR:HA	1.81	0.62
1:B:907:MSE:O	1:B:911:GLU:HG2	1.99	0.62
1:A:623:ILE:HG23	1:A:830:ILE:HB	1.82	0.61
1:B:892:ILE:CD1	1:B:893:THR:N	2.58	0.61
1:A:775:LYS:HB2	1:A:775:LYS:HZ3	1.64	0.61
1:A:599:ARG:NH2	1:A:606:LYS:O	2.34	0.61
1:A:1060:LYS:NZ	1:A:1170:GLU:OE2	2.33	0.61
1:B:684:TYR:CA	1:B:685:ARG:HB2	2.30	0.61
1:B:900:LEU:HD13	1:B:1056:LEU:CD1	2.30	0.61
1:B:1144:ILE:O	1:B:1144:ILE:HG22	2.01	0.61
1:B:936:ASN:O	1:B:940:GLU:HG3	1.99	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1048:TYR:CD1	1:B:1052:ARG:CA	2.63	0.61
1:A:384:ILE:HD11	1:A:463:LEU:CD1	2.31	0.61
1:A:401:PHE:HA	1:A:403:ILE:HD13	1.82	0.61
1:A:632:GLU:O	1:A:634:VAL:N	2.34	0.61
1:A:1090:PHE:CB	1:A:1162:TYR:CE1	2.82	0.61
1:B:1045:GLU:O	1:B:1057:TYR:HD2	1.83	0.61
1:A:638:LEU:HG	1:A:891:CYS:HA	1.82	0.61
1:B:519:ILE:HD11	1:B:600:ILE:HB	1.81	0.61
1:B:900:LEU:CD1	1:B:1056:LEU:CD1	2.78	0.61
1:A:638:LEU:HD22	1:A:638:LEU:C	2.21	0.61
1:A:655:ASN:OD1	1:A:655:ASN:N	2.33	0.61
1:B:748:GLU:O	1:B:749:ASN:HB3	2.01	0.61
1:B:697:GLU:O	1:B:701:ILE:HG12	2.01	0.61
1:A:384:ILE:CD1	1:A:463:LEU:CD1	2.79	0.61
1:A:1148:ASN:ND2	1:A:1151:SER:HB3	2.16	0.61
1:B:582:THR:CB	1:B:583:ASN:CG	2.41	0.61
1:A:1050:LYS:HA	1:A:1050:LYS:CE	2.29	0.61
1:A:1277:ILE:HD12	1:A:1277:ILE:O	2.01	0.61
1:B:439:ILE:C	1:B:442:ILE:HB	2.21	0.61
1:B:1058:ILE:HB	1:B:1059:TYR:CE1	2.35	0.61
1:B:809:ILE:O	1:B:810:LYS:C	2.37	0.60
1:B:1048:TYR:CE1	1:B:1052:ARG:CB	2.84	0.60
1:B:809:ILE:O	1:B:811:ASP:N	2.33	0.60
1:B:1046:ILE:HD13	1:B:1046:ILE:N	2.02	0.60
1:A:1207:ARG:HD3	1:A:1214:LEU:HD22	1.82	0.60
1:A:1349:LEU:O	1:A:1351:ARG:HB3	2.01	0.60
1:B:1360:VAL:O	1:B:1360:VAL:HG12	2.00	0.60
1:B:1358:VAL:CG2	1:B:1359:SER:H	2.14	0.60
1:A:914:PHE:H	1:A:1013:ARG:HH22	1.48	0.60
1:B:667:ILE:HG12	1:B:667:ILE:O	2.00	0.60
1:A:713:LEU:HD21	1:A:785:LEU:HD21	1.83	0.60
1:A:933:ILE:HG13	1:A:998:TYR:HE2	1.66	0.60
1:B:1291:PHE:CD1	1:B:1381:LYS:HB3	2.36	0.60
1:A:957:LYS:O	1:A:958:ILE:HD12	2.01	0.60
1:B:1274:ASN:O	1:B:1277:ILE:HG12	2.02	0.60
1:A:389:LYS:O	1:A:390:GLU:CB	2.50	0.60
1:A:561:ILE:HG22	1:A:562:LEU:CA	2.11	0.60
1:B:723:LEU:HD23	1:B:727:GLU:CG	2.23	0.60
1:B:983:LEU:O	1:B:986:ILE:HG13	2.01	0.60
1:B:1091:LEU:O	1:B:1162:TYR:HE1	1.85	0.60
1:A:920:GLN:NE2	1:A:1006:ILE:CD1	2.65	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1013:ARG:O	1:A:1014:ILE:HB	2.01	0.60
1:A:1063:LEU:HD12	1:A:1171:PHE:CZ	2.37	0.60
1:B:434:TYR:HE2	1:B:468:LEU:CG	2.15	0.60
1:B:467:ILE:HG23	1:B:468:LEU:HD13	1.83	0.60
1:B:533:PHE:HE1	1:B:557:LEU:HD13	1.64	0.60
1:B:917:PHE:HD1	1:B:917:PHE:H	1.50	0.60
1:B:1058:ILE:CD1	1:B:1059:TYR:CE2	2.85	0.60
1:B:1191:GLN:HG3	1:B:1307:LEU:HD21	1.84	0.60
1:B:583:ASN:HB2	1:B:586:ILE:HB	1.82	0.59
1:B:1079:ILE:HD12	1:B:1079:ILE:H	1.67	0.59
1:A:667:ILE:HG23	1:A:667:ILE:O	2.01	0.59
1:A:683:LEU:HD22	1:A:793:PHE:HE2	1.63	0.59
1:A:733:LEU:HD12	1:A:751:ILE:CD1	2.32	0.59
1:A:493:ASN:O	1:A:494:ASP:HB3	2.01	0.59
1:B:975:ILE:HG23	1:B:976:LEU:CB	2.32	0.59
1:A:738:LYS:CB	1:A:746:ILE:HG12	2.29	0.59
1:B:381:ASP:O	1:B:384:ILE:CG2	2.45	0.59
1:B:400:ILE:HD13	1:B:400:ILE:N	2.16	0.59
1:B:1277:ILE:HG22	1:B:1294:TYR:CE1	2.37	0.59
1:B:424:GLU:O	1:B:427:LEU:HD13	2.01	0.59
1:B:1075:ILE:CD1	1:B:1290:PRO:HG2	2.32	0.59
1:B:1141:ALA:HB3	1:B:1142:LYS:O	2.02	0.59
1:A:394:GLY:CA	1:A:395:ASN:HB3	2.18	0.59
1:A:932:ASP:N	1:A:932:ASP:OD1	2.34	0.59
1:B:1060:LYS:HE2	1:B:1060:LYS:H	1.62	0.59
1:B:1212:ILE:HG12	1:B:1252:PHE:HB2	1.84	0.59
1:A:393:LYS:H	1:A:394:GLY:HA2	1.68	0.59
1:A:958:ILE:HG22	1:A:958:ILE:O	2.02	0.59
1:B:405:LYS:O	1:B:409:LYS:N	2.36	0.59
1:B:630:SER:CA	1:B:631:ASP:HB2	2.28	0.59
1:B:666:ASP:C	1:B:667:ILE:HG22	2.23	0.59
1:A:1367:ASN:CG	1:A:1371:ILE:HD12	2.23	0.59
1:B:666:ASP:O	1:B:667:ILE:C	2.39	0.59
1:A:793:PHE:N	1:A:793:PHE:HD1	2.00	0.59
1:B:606:LYS:O	1:B:606:LYS:HG2	2.03	0.59
1:A:404:PHE:O	1:A:408:TYR:N	2.33	0.58
1:A:459:ILE:O	1:A:460:GLU:HB3	2.03	0.58
1:A:683:LEU:HD22	1:A:793:PHE:CD2	2.28	0.58
1:A:1152:PHE:HA	1:A:1155:ASP:HB2	1.85	0.58
1:B:461:LYS:HG3	1:B:462:ILE:CG1	2.32	0.58
1:B:568:ILE:HA	1:B:625:GLN:HE22	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:548:GLY:N	1:A:549:GLY:HA2	2.18	0.58
1:A:696:ILE:HA	1:A:698:THR:N	2.18	0.58
1:A:555:TYR:O	1:A:581:ILE:HD12	2.02	0.58
1:A:727:GLU:CB	1:A:728:SER:HA	2.33	0.58
1:A:1266:ASN:OD1	1:A:1266:ASN:N	2.35	0.58
1:B:1147:LYS:CB	1:B:1148:ASN:HA	2.32	0.58
1:A:368:LYS:O	1:A:371:ILE:CG2	2.52	0.58
1:A:436:LYS:O	1:A:440:GLU:N	2.30	0.58
1:A:457:ILE:O	1:A:457:ILE:CG2	2.51	0.58
1:A:667:ILE:CG1	1:A:718:ILE:HD12	2.24	0.58
1:A:1152:PHE:O	1:A:1156:TYR:N	2.35	0.58
1:A:401:PHE:HB3	1:A:404:PHE:HE1	1.68	0.58
1:B:491:ARG:HE	1:B:1207:ARG:NH2	1.95	0.58
1:A:399:GLU:CD	1:A:400:ILE:CD1	2.72	0.58
1:A:411:ASN:CB	1:A:414:SER:H	2.17	0.58
1:A:535:ARG:HH11	1:A:535:ARG:HB2	1.68	0.58
1:B:524:SER:O	1:B:527:MSE:HG3	2.04	0.58
1:B:897:ASN:CB	1:B:1059:TYR:CE2	2.77	0.58
1:A:659:ILE:CG2	1:A:720:GLU:CA	2.79	0.58
1:B:748:GLU:OE1	1:B:749:ASN:OD1	2.22	0.58
1:A:678:PRO:O	1:A:682:ASN:N	2.35	0.58
1:A:848:SER:HB2	1:A:851:VAL:HG23	1.86	0.58
1:B:432:TYR:HA	1:B:435:LEU:HD12	1.86	0.58
1:B:439:ILE:O	1:B:442:ILE:CB	2.41	0.58
1:B:630:SER:HA	1:B:631:ASP:CB	2.29	0.58
1:A:673:PHE:HD1	1:A:714:TYR:CD2	2.22	0.58
1:B:532:ILE:CG2	1:B:562:LEU:HD13	2.32	0.58
1:B:1271:LYS:O	1:B:1274:ASN:N	2.37	0.58
1:A:560:LYS:C	1:A:561:ILE:CG1	2.65	0.57
1:A:1118:LEU:N	1:A:1125:TYR:CE1	2.72	0.57
1:A:1271:LYS:HB3	1:A:1275:GLU:HB3	1.85	0.57
1:B:373:LYS:O	1:B:377:GLU:N	2.37	0.57
1:B:1058:ILE:HG13	1:B:1059:TYR:CE2	2.38	0.57
1:A:590:THR:O	1:A:594:THR:HG23	2.05	0.57
1:A:649:ASN:O	1:A:652:THR:N	2.37	0.57
1:A:979:GLU:CG	1:A:982:LYS:CB	2.82	0.57
1:A:1015:ILE:CG2	1:A:1016:PHE:CD1	2.86	0.57
1:A:1119:ASN:CB	1:A:1120:GLY:HA2	2.29	0.57
1:A:1383:GLU:OE2	1:A:1383:GLU:HA	2.04	0.57
1:B:562:LEU:CD1	1:B:565:LYS:HZ1	2.13	0.57
1:A:638:LEU:HG	1:A:891:CYS:CA	2.34	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:673:PHE:O	1:A:675:LYS:N	2.37	0.57
1:A:973:SER:HB3	1:A:975:ILE:H	1.68	0.57
1:A:1322:PHE:HE2	1:A:1352:LEU:HD12	1.69	0.57
1:B:1051:GLU:HB3	1:B:1054:ASN:HB2	1.86	0.57
1:B:574:PHE:HB3	1:B:586:ILE:HG12	1.85	0.57
1:B:929:TYR:CE2	1:B:1006:ILE:HD11	2.40	0.57
1:B:1269:ILE:CA	1:B:1270:ASN:HB2	2.34	0.57
1:A:568:ILE:CD1	1:A:625:GLN:NE2	2.67	0.57
1:A:637:ALA:HB3	1:A:820:ARG:NH1	2.16	0.57
1:A:720:GLU:HG2	1:A:721:ASP:O	2.03	0.57
1:A:749:ASN:O	1:A:749:ASN:OD1	2.22	0.57
1:A:461:LYS:HA	1:A:461:LYS:CE	2.32	0.57
1:A:631:ASP:N	1:A:631:ASP:OD1	2.37	0.57
1:B:528:GLU:O	1:B:565:LYS:NZ	2.35	0.57
1:B:671:PRO:CB	1:B:675:LYS:HZ2	2.17	0.57
1:B:886:THR:O	1:B:890:GLU:HB2	2.03	0.57
1:B:975:ILE:HG23	1:B:976:LEU:CA	2.34	0.57
1:B:1079:ILE:O	1:B:1083:ILE:HG13	2.04	0.57
1:A:659:ILE:CG2	1:A:719:LEU:C	2.73	0.57
1:A:804:GLU:O	1:A:805:ILE:O	2.22	0.57
1:A:1102:ASN:N	1:A:1102:ASN:OD1	2.36	0.57
1:B:533:PHE:HD1	1:B:557:LEU:HD12	1.68	0.57
1:B:606:LYS:HB2	1:B:1219:THR:HG21	1.86	0.57
1:B:753:ASN:O	1:B:757:ASN:N	2.36	0.57
1:B:384:ILE:HG23	1:B:385:LYS:N	2.19	0.57
1:B:478:GLN:O	1:B:478:GLN:HG2	2.04	0.57
1:B:588:LYS:HZ2	1:B:614:GLN:CB	2.17	0.57
1:B:774:GLN:O	1:B:778:ILE:HG12	2.05	0.57
1:B:1059:TYR:N	1:B:1059:TYR:CD1	2.73	0.57
1:B:1156:TYR:OH	1:B:1365:SER:HA	2.05	0.57
1:B:1263:LEU:HA	1:B:1270:ASN:ND2	2.19	0.57
1:A:729:LYS:O	1:A:730:ASN:HB2	2.05	0.57
1:A:1315:ASN:ND2	1:A:1336:LEU:O	2.38	0.57
1:B:537:ASN:O	1:B:538:ILE:HG22	2.04	0.57
1:B:606:LYS:HB2	1:B:1219:THR:CB	2.34	0.57
1:A:685:ARG:HG2	1:A:685:ARG:NH1	2.20	0.56
1:A:917:PHE:N	1:A:917:PHE:CD1	2.73	0.56
1:B:605:SER:HB3	1:B:1219:THR:OG1	2.04	0.56
1:A:541:ASP:OD1	1:A:1273:GLU:CB	2.43	0.56
1:A:793:PHE:CD1	1:A:793:PHE:N	2.73	0.56
1:A:921:THR:OG1	1:A:924:GLU:CB	2.53	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1099:ILE:O	1:A:1103:LYS:HB2	2.05	0.56
1:B:1091:LEU:HA	1:B:1093:ASN:N	2.20	0.56
1:A:401:PHE:HB3	1:A:402:GLY:HA2	1.86	0.56
1:A:412:PHE:O	1:A:413:ASP:HB3	2.06	0.56
1:A:640:LEU:N	1:A:640:LEU:HD23	2.20	0.56
1:A:733:LEU:HD12	1:A:751:ILE:HD11	1.88	0.56
1:A:900:LEU:CG	1:A:1056:LEU:HD22	2.35	0.56
1:A:902:GLU:HG3	1:A:1057:TYR:CD2	2.40	0.56
1:A:937:ILE:HG21	1:A:953:LYS:HZ1	1.69	0.56
1:A:946:ASN:O	1:A:950:VAL:N	2.37	0.56
1:A:1105:SER:O	1:A:1109:ALA:N	2.37	0.56
1:B:606:LYS:CD	1:B:1219:THR:HG21	2.34	0.56
1:B:666:ASP:O	1:B:667:ILE:CG2	2.53	0.56
1:B:669:TYR:HB3	1:B:755:TYR:OH	2.06	0.56
1:B:900:LEU:CD2	1:B:901:GLU:N	2.62	0.56
1:B:975:ILE:CG2	1:B:976:LEU:CA	2.83	0.56
1:B:1059:TYR:H	1:B:1060:LYS:HB2	1.67	0.56
1:A:648:LYS:CB	1:A:650:ILE:CD1	2.84	0.56
1:B:560:LYS:CE	1:B:563:ASN:CB	2.84	0.56
1:B:975:ILE:HG23	1:B:976:LEU:HA	1.86	0.56
1:A:632:GLU:C	1:A:634:VAL:N	2.59	0.56
1:A:648:LYS:CB	1:A:650:ILE:HG13	2.35	0.56
1:A:772:LYS:O	1:A:776:LYS:HG3	2.06	0.56
1:B:674:SER:HB3	1:B:876:ASP:CG	2.25	0.56
1:A:1079:ILE:HD11	1:A:1177:ILE:HD12	1.86	0.56
1:B:930:TYR:OH	1:B:953:LYS:HB3	2.06	0.56
1:A:435:LEU:O	1:A:439:ILE:HG12	2.06	0.56
1:A:649:ASN:O	1:A:652:THR:HB	2.06	0.56
1:A:820:ARG:HB3	1:A:820:ARG:CZ	2.35	0.56
1:A:1192:MSE:HE2	1:A:1278:ARG:HB2	1.86	0.56
1:B:609:ASP:O	1:B:611:GLN:N	2.31	0.56
1:A:729:LYS:O	1:A:729:LYS:HD3	2.06	0.56
1:B:358:PHE:HB3	1:B:480:THR:HG21	1.87	0.56
1:B:1259:PHE:N	1:B:1259:PHE:CD1	2.73	0.56
1:A:1049:PRO:HD2	1:A:1056:LEU:O	2.05	0.56
1:B:659:ILE:CB	1:B:719:LEU:HB3	2.36	0.56
1:B:1141:ALA:HB3	1:B:1143:ASN:N	2.20	0.56
1:B:1267:SER:CB	1:B:1268:GLU:HA	2.07	0.56
1:A:404:PHE:CZ	1:A:439:ILE:CG2	2.71	0.55
1:B:823:VAL:HG12	1:B:824:LYS:H	1.71	0.55
1:B:1041:ASN:C	1:B:1042:LYS:O	2.44	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1123:LYS:O	1:A:1127:GLU:CB	2.54	0.55
1:B:481:LEU:HD21	1:B:1259:PHE:HD2	1.69	0.55
1:B:535:ARG:CD	1:B:540:ASN:O	2.50	0.55
1:A:507:ARG:HG2	1:A:866:LEU:HD22	1.88	0.55
1:A:547:PHE:N	1:A:547:PHE:CD1	2.72	0.55
1:A:732:PHE:CD1	1:A:784:TYR:CG	2.93	0.55
1:B:981:ARG:HG3	1:B:982:LYS:N	2.21	0.55
1:A:580:ASN:O	1:A:581:ILE:C	2.44	0.55
1:A:902:GLU:OE2	1:A:1057:TYR:CD2	2.58	0.55
1:B:892:ILE:HD11	1:B:1015:ILE:HD12	1.89	0.55
1:B:1047:TYR:N	1:B:1047:TYR:CD1	2.73	0.55
1:A:729:LYS:HD2	1:A:788:ASN:OD1	2.07	0.55
1:A:1093:ASN:O	1:A:1094:ILE:HB	2.07	0.55
1:B:461:LYS:HG3	1:B:462:ILE:HG13	1.88	0.55
1:B:1350:GLU:HA	1:B:1352:LEU:HD13	1.89	0.55
1:A:798:PHE:CD1	1:A:799:LYS:N	2.73	0.55
1:A:806:LYS:H	1:A:809:ILE:CD1	2.18	0.55
1:A:1228:ARG:HD2	1:A:1265:GLU:HG3	1.89	0.55
1:B:398:THR:O	1:B:402:GLY:N	2.32	0.55
1:B:552:GLU:CA	1:B:553:LYS:CB	2.85	0.55
1:B:657:ILE:HD13	1:B:657:ILE:H	1.72	0.55
1:B:1115:ASN:OD1	1:B:1360:VAL:HG23	2.06	0.55
1:B:1322:PHE:HZ	1:B:1342:LEU:HD21	1.71	0.55
1:A:404:PHE:CD1	1:A:404:PHE:N	2.73	0.55
1:A:673:PHE:HD1	1:A:714:TYR:HD2	1.53	0.55
1:A:738:LYS:HE3	1:A:746:ILE:CG1	2.30	0.55
1:A:1356:LYS:CB	1:A:1368:SER:OG	2.45	0.55
1:A:401:PHE:N	1:A:401:PHE:CD1	2.73	0.55
1:A:735:GLU:HB3	1:A:784:TYR:HE2	1.72	0.55
1:A:1188:LEU:HD22	1:A:1303:VAL:HG21	1.89	0.55
1:A:1277:ILE:CD1	1:A:1281:ILE:CD1	2.77	0.55
1:B:667:ILE:O	1:B:667:ILE:HG23	2.06	0.55
1:B:917:PHE:N	1:B:917:PHE:CD1	2.73	0.55
1:A:464:ASN:HD21	1:A:467:ILE:CG1	2.07	0.54
1:B:493:ASN:N	1:B:493:ASN:OD1	2.40	0.54
1:B:631:ASP:OD2	1:B:888:ARG:HA	2.07	0.54
1:B:986:ILE:HD12	1:B:986:ILE:C	2.27	0.54
1:B:1188:LEU:HD22	1:B:1303:VAL:HG21	1.88	0.54
1:A:738:LYS:NZ	1:A:743:ILE:HA	2.22	0.54
1:A:786:ARG:O	1:A:790:GLU:HB2	2.06	0.54
1:A:792:LEU:CD1	1:A:793:PHE:CD1	2.85	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1044:GLN:HA	1:A:1048:TYR:CE1	2.42	0.54
1:A:1357:LYS:HD2	1:A:1357:LYS:C	2.26	0.54
1:B:659:ILE:CB	1:B:719:LEU:C	2.75	0.54
1:B:1130:ILE:O	1:B:1130:ILE:HG22	2.05	0.54
1:A:461:LYS:CE	1:A:461:LYS:CA	2.85	0.54
1:A:647:LYS:CB	1:A:648:LYS:CB	2.86	0.54
1:A:1096:GLY:HA2	1:A:1099:ILE:HG12	1.88	0.54
1:B:463:LEU:HD13	1:B:463:LEU:C	2.27	0.54
1:B:671:PRO:HB3	1:B:675:LYS:NZ	2.22	0.54
1:A:544:ILE:CG2	1:A:555:TYR:HE2	2.21	0.54
1:A:694:ASP:CB	1:A:800:MSE:HG2	2.38	0.54
1:A:941:PHE:O	1:A:946:ASN:ND2	2.41	0.54
1:B:538:ILE:HG23	1:B:538:ILE:O	2.08	0.54
1:B:608:ARG:HA	1:B:609:ASP:O	2.08	0.54
1:B:1136:ASN:OD1	1:B:1149:TYR:CE1	2.61	0.54
1:A:637:ALA:CB	1:A:820:ARG:NH1	2.69	0.54
1:A:1032:ILE:HD13	1:A:1048:TYR:HD2	1.72	0.54
1:B:427:LEU:O	1:B:431:ILE:HG12	2.07	0.54
1:B:1036:GLU:CB	1:B:1038:GLU:OE1	2.56	0.54
1:B:1256:CYS:O	1:B:1261:ILE:HG13	2.08	0.54
1:A:409:LYS:CA	1:A:410:VAL:CB	2.85	0.54
1:A:632:GLU:C	1:A:634:VAL:H	2.11	0.54
1:A:774:GLN:O	1:A:778:ILE:HG12	2.07	0.54
1:B:835:ASP:O	1:B:838:TYR:HB3	2.08	0.54
1:B:1044:GLN:HA	1:B:1048:TYR:OH	2.08	0.54
1:A:355:VAL:O	1:A:359:VAL:HG23	2.08	0.54
1:A:368:LYS:CA	1:A:371:ILE:HG22	2.38	0.54
1:A:375:LEU:HB3	1:A:380:ILE:HD11	1.86	0.54
1:A:568:ILE:CD1	1:A:625:GLN:HE22	2.16	0.54
1:A:733:LEU:O	1:A:737:LYS:HG3	2.08	0.54
1:A:1128:LYS:O	1:A:1132:LYS:NZ	2.41	0.54
1:A:409:LYS:CB	1:A:410:VAL:CB	2.85	0.53
1:B:913:ASP:C	1:B:915:ASP:HB2	2.28	0.53
1:B:671:PRO:CG	1:B:774:GLN:NE2	2.49	0.53
1:B:830:ILE:HG21	1:B:877:ILE:HG12	1.90	0.53
1:B:980:GLN:O	1:B:980:GLN:HG2	2.06	0.53
1:A:375:LEU:HD22	1:A:380:ILE:CD1	2.22	0.53
1:A:393:LYS:N	1:A:394:GLY:HA2	2.22	0.53
1:A:987:ASN:OD1	1:A:988:LYS:N	2.42	0.53
1:B:710:ASN:HA	1:B:713:LEU:HB3	1.90	0.53
1:B:1265:GLU:CB	1:B:1266:ASN:CB	2.87	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:378:PHE:CE2	1:A:435:LEU:HD12	2.43	0.53
1:A:383:LEU:O	1:A:386:LYS:HB2	2.09	0.53
1:B:1111:LEU:CD2	1:B:1359:SER:OG	2.46	0.53
1:A:461:LYS:NZ	1:A:461:LYS:O	2.35	0.53
1:A:662:GLU:HG3	1:A:663:ASN:N	2.24	0.53
1:A:673:PHE:CD1	1:A:714:TYR:HD2	2.26	0.53
1:A:1089:LYS:HD2	1:A:1089:LYS:N	1.94	0.53
1:B:393:LYS:N	1:B:394:GLY:HA2	2.24	0.53
1:B:609:ASP:C	1:B:611:GLN:H	2.12	0.53
1:B:684:TYR:N	1:B:685:ARG:CB	2.72	0.53
1:A:535:ARG:NH1	1:A:535:ARG:HG2	2.23	0.53
1:A:801:ASN:O	1:A:803:GLN:N	2.38	0.53
1:A:1177:ILE:HG23	1:A:1378:LEU:HD21	1.91	0.53
1:A:1299:GLN:HE22	1:A:1302:ARG:HH11	1.55	0.53
1:B:354:ILE:HG22	1:B:358:PHE:CE2	2.44	0.53
1:B:784:TYR:HE1	1:B:788:ASN:OD1	1.91	0.53
1:A:665:ASN:ND2	1:A:669:TYR:HE2	1.91	0.53
1:A:968:GLU:CA	1:A:969:ILE:CB	2.85	0.53
1:A:1291:PHE:O	1:A:1383:GLU:N	2.40	0.53
1:A:1359:SER:OG	1:A:1360:VAL:N	2.37	0.53
1:B:884:LEU:O	1:B:888:ARG:N	2.41	0.53
1:B:1141:ALA:CB	1:B:1142:LYS:C	2.73	0.53
1:A:613:THR:CG2	1:A:614:GLN:CA	2.85	0.53
1:B:1048:TYR:H	1:B:1057:TYR:N	1.98	0.53
1:A:900:LEU:CB	1:A:1056:LEU:HD22	2.38	0.53
1:A:973:SER:HB3	1:A:974:ASN:CA	2.38	0.53
1:B:654:ILE:O	1:B:657:ILE:HG12	2.09	0.53
1:B:1262:ASP:C	1:B:1263:LEU:HD12	2.30	0.53
1:B:1332:ASP:OD2	1:B:1354:LYS:HE2	2.09	0.53
1:A:636:LYS:HA	1:A:638:LEU:CD1	2.39	0.52
1:A:1192:MSE:HE2	1:A:1278:ARG:CB	2.39	0.52
1:A:738:LYS:HA	1:A:746:ILE:HG12	1.90	0.52
1:A:1032:ILE:HD13	1:A:1048:TYR:CD2	2.45	0.52
1:B:631:ASP:O	1:B:635:SER:HB3	2.09	0.52
1:A:411:ASN:N	1:A:412:PHE:CA	2.72	0.52
1:B:491:ARG:NH1	1:B:1208:GLU:OE1	2.43	0.52
1:B:807:LYS:H	1:B:807:LYS:HD2	1.73	0.52
1:A:371:ILE:HD11	1:A:472:ILE:HG21	1.91	0.52
1:A:631:ASP:HB2	1:A:635:SER:HB3	1.91	0.52
1:A:1049:PRO:CD	1:A:1056:LEU:O	2.57	0.52
1:B:1149:TYR:HA	1:B:1152:PHE:HB3	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:409:LYS:N	1:A:410:VAL:CB	2.73	0.52
1:A:637:ALA:O	1:A:640:LEU:N	2.37	0.52
1:A:663:ASN:OD1	1:A:664:ASN:HB2	2.09	0.52
1:A:1111:LEU:O	1:A:1115:ASN:N	2.40	0.52
1:B:493:ASN:O	1:B:495:ILE:HG12	2.09	0.52
1:B:666:ASP:C	1:B:667:ILE:CG2	2.78	0.52
1:B:668:LYS:O	1:B:670:LEU:N	2.42	0.52
1:A:368:LYS:HA	1:A:371:ILE:HG22	1.92	0.52
1:A:659:ILE:HG22	1:A:719:LEU:C	2.30	0.52
1:A:669:TYR:CD1	1:A:755:TYR:CD2	2.71	0.52
1:A:1052:ARG:HH12	1:A:1054:ASN:CB	2.22	0.52
1:A:1060:LYS:NZ	1:A:1170:GLU:CD	2.63	0.52
1:B:673:PHE:O	1:B:674:SER:C	2.47	0.52
1:B:748:GLU:O	1:B:749:ASN:CB	2.57	0.52
1:B:1062:ASN:ND2	1:B:1175:ASN:OD1	2.42	0.52
1:B:1141:ALA:N	1:B:1142:LYS:CA	2.71	0.52
1:B:1357:LYS:CG	1:B:1362:GLU:OE1	2.57	0.52
1:A:407:HIS:O	1:A:411:ASN:HA	2.10	0.52
1:A:461:LYS:HZ1	1:A:461:LYS:C	2.12	0.52
1:A:664:ASN:HB3	1:A:665:ASN:OD1	2.10	0.52
1:B:388:GLU:CB	1:B:389:LYS:HA	2.38	0.52
1:B:408:TYR:O	1:B:411:ASN:N	2.43	0.52
1:B:436:LYS:NZ	1:B:436:LYS:CB	2.73	0.52
1:B:634:VAL:HG21	1:B:891:CYS:HG	1.69	0.52
1:B:900:LEU:O	1:B:902:GLU:N	2.42	0.52
1:A:439:ILE:HD13	1:A:442:ILE:HD11	1.90	0.52
1:A:1007:LYS:O	1:A:1010:ILE:HB	2.09	0.52
1:A:1052:ARG:NH1	1:A:1054:ASN:CB	2.73	0.52
1:A:1367:ASN:OD1	1:A:1371:ILE:HD12	2.09	0.52
1:B:531:LYS:CB	1:B:562:LEU:CD1	2.67	0.52
1:B:975:ILE:HG22	1:B:976:LEU:CB	2.37	0.52
1:B:1142:LYS:HB3	1:B:1142:LYS:HZ1	1.75	0.52
1:B:1358:VAL:CG2	1:B:1359:SER:N	2.73	0.52
1:A:821:ILE:CG2	1:A:822:THR:N	2.73	0.52
1:B:427:LEU:HD12	1:B:427:LEU:N	2.21	0.52
1:B:807:LYS:HD2	1:B:807:LYS:N	2.24	0.52
1:B:1269:ILE:N	1:B:1270:ASN:CB	2.73	0.52
1:A:418:SER:CB	1:A:419:LYS:CA	2.85	0.52
1:A:546:PHE:CD2	1:A:546:PHE:N	2.73	0.52
1:A:662:GLU:CG	1:A:663:ASN:N	2.73	0.52
1:B:427:LEU:O	1:B:430:ILE:HG13	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:434:TYR:HE2	1:B:468:LEU:HG	1.75	0.52
1:B:683:LEU:O	1:B:684:TYR:C	2.47	0.52
1:B:1051:GLU:HB2	1:B:1055:GLU:H	1.74	0.52
1:B:1069:ASN:HB3	1:B:1071:ASN:OD1	2.10	0.52
1:B:1079:ILE:N	1:B:1079:ILE:CD1	2.73	0.52
1:B:492:HIS:HE1	1:B:1200:HIS:HD2	1.56	0.51
1:B:1357:LYS:NZ	1:B:1362:GLU:OE1	2.33	0.51
1:B:434:TYR:CE2	1:B:468:LEU:HG	2.45	0.51
1:B:746:ILE:HB	1:B:747:ASP:OD1	2.10	0.51
1:B:1044:GLN:C	1:B:1046:ILE:HD13	2.30	0.51
1:A:532:ILE:O	1:A:557:LEU:HD23	2.11	0.51
1:A:888:ARG:HB2	1:A:888:ARG:HH11	1.75	0.51
1:A:994:LYS:O	1:A:994:LYS:HE3	2.11	0.51
1:A:1010:ILE:O	1:A:1014:ILE:HB	2.10	0.51
1:B:378:PHE:N	1:B:379:LYS:HA	2.25	0.51
1:B:1047:TYR:O	1:B:1048:TYR:HD2	1.93	0.51
1:B:1059:TYR:N	1:B:1060:LYS:CB	2.72	0.51
1:B:1142:LYS:N	1:B:1143:ASN:CA	2.72	0.51
1:A:671:PRO:HG3	1:A:774:GLN:CG	2.26	0.51
1:A:1024:TYR:CE1	1:A:1028:ILE:HD12	2.46	0.51
1:A:1329:VAL:CG2	1:A:1353:MSE:CE	2.59	0.51
1:A:1367:ASN:CG	1:A:1371:ILE:HD11	2.24	0.51
1:B:416:LYS:N	1:B:417:PHE:CA	2.74	0.51
1:B:682:ASN:C	1:B:685:ARG:HB3	2.31	0.51
1:B:837:GLU:HG2	1:B:874:ILE:HG12	1.93	0.51
1:B:1142:LYS:HB3	1:B:1142:LYS:HZ2	1.73	0.51
1:A:638:LEU:CD2	1:A:639:ASN:ND2	2.73	0.51
1:B:438:ARG:NE	1:B:438:ARG:CA	2.73	0.51
1:B:640:LEU:HD22	1:B:701:ILE:CG2	2.41	0.51
1:B:1046:ILE:H	1:B:1046:ILE:CD1	1.97	0.51
1:B:1263:LEU:N	1:B:1263:LEU:CD1	2.73	0.51
1:A:399:GLU:OE2	1:A:400:ILE:CD1	2.59	0.51
1:A:548:GLY:N	1:A:549:GLY:CA	2.73	0.51
1:A:807:LYS:C	1:A:809:ILE:N	2.59	0.51
1:B:1078:LEU:HD23	1:B:1374:LEU:HD12	1.93	0.51
1:B:1291:PHE:CZ	1:B:1378:LEU:HD12	2.41	0.51
1:A:350:LYS:CA	1:A:351:LYS:HB3	2.41	0.51
1:A:384:ILE:CD1	1:A:463:LEU:HD11	2.41	0.51
1:A:643:VAL:O	1:A:645:LYS:N	2.44	0.51
1:A:979:GLU:HG2	1:A:982:LYS:CB	2.41	0.51
1:B:489:LYS:HD3	1:B:508:LEU:CD1	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:642:VAL:O	1:B:642:VAL:HG22	2.10	0.51
1:B:1349:LEU:HD21	1:B:1350:GLU:HG2	1.91	0.51
1:A:461:LYS:NZ	1:A:461:LYS:CA	2.73	0.51
1:A:576:ASP:O	1:A:579:ASN:N	2.44	0.51
1:B:439:ILE:N	1:B:439:ILE:CD1	2.73	0.51
1:B:531:LYS:C	1:B:562:LEU:CD1	2.80	0.51
1:B:560:LYS:HD3	1:B:563:ASN:CB	2.41	0.51
1:B:1075:ILE:HG23	1:B:1177:ILE:HG21	1.92	0.51
1:A:375:LEU:CB	1:A:380:ILE:CD1	2.82	0.50
1:A:535:ARG:HG3	1:A:537:ASN:O	2.11	0.50
1:A:638:LEU:HD22	1:A:639:ASN:ND2	2.25	0.50
1:A:662:GLU:CD	1:A:663:ASN:H	2.15	0.50
1:A:871:TYR:O	1:A:875:ILE:HG13	2.11	0.50
1:B:976:LEU:CG	1:B:977:GLN:H	2.20	0.50
1:A:383:LEU:HD23	1:A:383:LEU:C	2.31	0.50
1:B:461:LYS:CG	1:B:462:ILE:CG1	2.86	0.50
1:B:569:ILE:HG22	1:B:575:ILE:HB	1.92	0.50
1:B:832:ILE:HD11	1:B:838:TYR:HA	1.93	0.50
1:B:1042:LYS:O	1:B:1044:GLN:N	2.44	0.50
1:B:1366:TYR:CD1	1:B:1366:TYR:C	2.85	0.50
1:A:393:LYS:H	1:A:395:ASN:CB	2.21	0.50
1:A:403:ILE:N	1:A:403:ILE:CD1	2.73	0.50
1:A:714:TYR:HE1	1:A:718:ILE:HD11	1.75	0.50
1:A:535:ARG:HH11	1:A:535:ARG:HG2	1.76	0.50
1:A:937:ILE:HD11	1:A:995:VAL:HG22	1.91	0.50
1:A:1024:TYR:HB2	1:A:1067:ILE:CD1	2.41	0.50
1:A:1382:ILE:O	1:A:1382:ILE:HG23	2.12	0.50
1:B:767:ASN:OD1	1:B:767:ASN:N	2.44	0.50
1:B:778:ILE:O	1:B:782:ILE:HG12	2.12	0.50
1:B:1291:PHE:CE1	1:B:1381:LYS:HB3	2.47	0.50
1:A:973:SER:HB3	1:A:975:ILE:N	2.26	0.50
1:A:1147:LYS:O	1:A:1148:ASN:C	2.50	0.50
1:B:987:ASN:O	1:B:991:LEU:N	2.31	0.50
1:B:1203:VAL:HG11	1:B:1241:TYR:CD2	2.46	0.50
1:B:616:ASP:HA	1:B:619:LYS:HB2	1.94	0.50
1:B:1027:GLU:HG2	1:B:1076:TYR:HE2	1.76	0.50
1:A:683:LEU:CD2	1:A:793:PHE:HD2	2.21	0.50
1:B:616:ASP:O	1:B:620:VAL:CB	2.60	0.50
1:A:886:THR:O	1:A:890:GLU:HB2	2.10	0.50
1:A:1024:TYR:CD1	1:A:1024:TYR:C	2.85	0.50
1:A:1054:ASN:N	1:A:1055:GLU:CB	2.75	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1058:ILE:CG1	1:B:1059:TYR:CE2	2.94	0.50
1:B:1265:GLU:CA	1:B:1266:ASN:CB	2.90	0.50
1:A:662:GLU:CG	1:A:663:ASN:H	2.25	0.50
1:B:436:LYS:HB3	1:B:436:LYS:HZ3	1.76	0.50
1:B:425:LYS:O	1:B:428:TYR:N	2.45	0.49
1:B:491:ARG:NE	1:B:1207:ARG:HH21	1.96	0.49
1:B:1366:TYR:CE1	1:B:1367:ASN:CG	2.85	0.49
1:A:389:LYS:O	1:A:390:GLU:HB2	2.11	0.49
1:A:493:ASN:OD1	1:A:603:ALA:HB1	2.12	0.49
1:A:535:ARG:HH11	1:A:535:ARG:CB	2.24	0.49
1:B:403:ILE:O	1:B:407:HIS:N	2.41	0.49
1:B:897:ASN:N	1:B:897:ASN:ND2	2.60	0.49
1:A:493:ASN:OD1	1:A:603:ALA:HB2	2.11	0.49
1:A:920:GLN:NE2	1:A:1006:ILE:HD13	2.27	0.49
1:B:431:ILE:HG23	1:B:472:ILE:HD12	1.94	0.49
1:B:505:PHE:O	1:B:508:LEU:N	2.46	0.49
1:B:516:LEU:HD11	1:B:1194:ARG:HD3	1.93	0.49
1:A:369:GLU:HG3	1:A:373:LYS:HE3	1.92	0.49
1:A:714:TYR:CE1	1:A:718:ILE:HD11	2.48	0.49
1:A:760:ILE:O	1:A:764:LYS:HG2	2.12	0.49
1:B:684:TYR:HB3	1:B:685:ARG:CA	2.42	0.49
1:B:1200:HIS:CE1	1:B:1224:ALA:HB2	2.48	0.49
1:A:400:ILE:N	1:A:400:ILE:CD1	2.73	0.49
1:A:1024:TYR:HB2	1:A:1067:ILE:HD11	1.94	0.49
1:A:1105:SER:O	1:A:1109:ALA:HB2	2.12	0.49
1:A:1226:PRO:HD2	1:A:1249:TYR:HE1	1.78	0.49
1:A:1277:ILE:HD11	1:A:1281:ILE:CD1	2.37	0.49
1:B:433:ARG:O	1:B:436:LYS:HG2	2.13	0.49
1:B:616:ASP:HB3	1:B:620:VAL:HG13	1.94	0.49
1:B:666:ASP:O	1:B:667:ILE:HG23	2.13	0.49
1:B:1079:ILE:HG22	1:B:1083:ILE:CD1	2.43	0.49
1:B:1163:LYS:HE2	1:B:1366:TYR:CE2	2.47	0.49
1:B:1208:GLU:OE2	1:B:1208:GLU:HA	2.13	0.49
1:B:439:ILE:HA	1:B:442:ILE:HB	1.93	0.49
1:B:851:VAL:HA	1:B:854:LYS:HG3	1.95	0.49
1:B:1046:ILE:C	1:B:1047:TYR:CD1	2.85	0.49
1:B:1058:ILE:HD12	1:B:1059:TYR:CZ	2.47	0.49
1:A:1177:ILE:HD11	1:A:1374:LEU:CD1	2.35	0.49
1:A:1269:ILE:O	1:A:1278:ARG:NH2	2.46	0.49
1:B:1049:PRO:O	1:B:1050:LYS:HB2	2.13	0.49
1:A:1148:ASN:ND2	1:A:1151:SER:CB	2.75	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:412:PHE:CB	1:B:413:ASP:CA	2.87	0.49
1:B:434:TYR:CE2	1:B:468:LEU:HD21	2.47	0.49
1:B:614:GLN:C	1:B:615:ASP:O	2.49	0.49
1:B:823:VAL:HG12	1:B:824:LYS:N	2.28	0.49
1:B:1251:LYS:O	1:B:1255:ILE:HG12	2.13	0.49
1:A:735:GLU:HB3	1:A:784:TYR:CE2	2.48	0.49
1:B:1249:TYR:CE1	1:B:1253:GLU:HB2	2.48	0.49
1:A:403:ILE:O	1:A:406:LYS:CB	2.61	0.49
1:A:608:ARG:HH21	1:A:836:PHE:HB2	1.75	0.49
1:A:1366:TYR:CD1	1:A:1366:TYR:C	2.85	0.49
1:B:570:ARG:HA	1:B:575:ILE:HG22	1.94	0.49
1:B:900:LEU:HD13	1:B:1056:LEU:CG	2.37	0.49
1:B:1265:GLU:HA	1:B:1266:ASN:HB2	1.94	0.49
1:A:1105:SER:O	1:A:1109:ALA:CB	2.61	0.48
1:B:1099:ILE:HG22	1:B:1104:ILE:HG13	1.94	0.48
1:A:973:SER:N	1:A:974:ASN:HA	2.29	0.48
1:B:431:ILE:HG22	1:B:435:LEU:HD11	1.94	0.48
1:B:669:TYR:CB	1:B:755:TYR:OH	2.62	0.48
1:A:1048:TYR:CD1	1:A:1048:TYR:C	2.86	0.48
1:B:1043:PHE:O	1:B:1046:ILE:HD11	2.13	0.48
1:B:1051:GLU:HB2	1:B:1055:GLU:N	2.28	0.48
1:A:418:SER:HB2	1:A:419:LYS:CA	2.18	0.48
1:A:1055:GLU:HG3	1:A:1057:TYR:CZ	2.49	0.48
1:B:624:ILE:O	1:B:628:LYS:HG2	2.14	0.48
1:B:711:LYS:O	1:B:715:LYS:HG3	2.13	0.48
1:B:1069:ASN:ND2	1:B:1178:GLU:OE2	2.46	0.48
1:B:457:ILE:O	1:B:457:ILE:CG2	2.49	0.48
1:B:1044:GLN:CA	1:B:1048:TYR:HE2	2.11	0.48
1:A:462:ILE:CG2	1:A:463:LEU:H	2.24	0.48
1:A:659:ILE:CG2	1:A:719:LEU:O	2.61	0.48
1:A:899:ASN:OD1	1:A:1059:TYR:HD1	1.95	0.48
1:A:997:GLN:O	1:A:1000:LYS:HB2	2.13	0.48
1:A:1118:LEU:HB2	1:A:1125:TYR:CZ	2.32	0.48
1:B:490:LEU:O	1:B:493:ASN:O	2.32	0.48
1:B:568:ILE:HD13	1:B:845:LEU:O	2.14	0.48
1:B:899:ASN:HA	1:B:900:LEU:HA	1.58	0.48
1:A:758:ALA:O	1:A:762:ALA:N	2.37	0.48
1:A:1349:LEU:O	1:A:1349:LEU:HD12	2.14	0.48
1:B:647:LYS:CB	1:B:648:LYS:CG	2.85	0.48
1:B:792:LEU:O	1:B:792:LEU:HD23	2.13	0.48
1:B:893:THR:O	1:B:897:ASN:ND2	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:356:LYS:HG2	1:A:1211:ILE:HD11	1.96	0.48
1:A:538:ILE:HG13	1:A:538:ILE:O	2.13	0.48
1:A:613:THR:HG23	1:A:614:GLN:CA	2.31	0.48
1:A:614:GLN:CB	1:A:618:ASN:CB	2.90	0.48
1:B:486:TYR:O	1:B:490:LEU:HG	2.14	0.48
1:B:671:PRO:HB2	1:B:675:LYS:HD3	1.96	0.48
1:A:473:LEU:CD2	1:A:477:LYS:HE3	2.44	0.48
1:A:1134:LYS:HG3	1:A:1135:GLU:HG2	1.94	0.48
1:B:746:ILE:O	1:B:747:ASP:HB2	2.14	0.48
1:B:920:GLN:O	1:B:925:ILE:CD1	2.62	0.48
1:B:1262:ASP:O	1:B:1263:LEU:HD12	2.14	0.48
1:A:374:ILE:HG23	1:A:428:TYR:CE2	2.49	0.48
1:A:501:ASN:HB3	1:A:504:ASP:H	1.79	0.48
1:A:738:LYS:CA	1:A:746:ILE:HG12	2.44	0.48
1:A:1227:LYS:HG3	1:A:1270:ASN:ND2	2.29	0.48
1:B:507:ARG:O	1:B:866:LEU:HD21	2.14	0.48
1:B:1164:LYS:HD3	1:B:1367:ASN:H	1.79	0.48
1:A:1026:LYS:HG3	1:A:1027:GLU:N	2.29	0.47
1:A:1330:ASN:HD22	1:A:1357:LYS:HG2	1.79	0.47
1:B:873:ASN:C	1:B:873:ASN:HD22	2.17	0.47
1:B:1366:TYR:CD1	1:B:1367:ASN:CG	2.87	0.47
1:B:1142:LYS:CG	1:B:1144:ILE:N	2.77	0.47
1:A:500:VAL:HG13	1:A:500:VAL:O	2.14	0.47
1:A:673:PHE:O	1:A:674:SER:C	2.53	0.47
1:B:461:LYS:HG3	1:B:462:ILE:CB	2.45	0.47
1:B:1063:LEU:HD12	1:B:1171:PHE:CE1	2.49	0.47
1:B:1072:PHE:HA	1:B:1075:ILE:HB	1.96	0.47
1:B:1084:LYS:NZ	1:B:1084:LYS:HB3	2.30	0.47
1:B:1352:LEU:HD13	1:B:1352:LEU:H	1.78	0.47
1:A:802:ILE:C	1:A:805:ILE:CB	2.82	0.47
1:A:806:LYS:HA	1:A:809:ILE:HD13	1.97	0.47
1:A:1111:LEU:CD2	1:A:1359:SER:OG	2.61	0.47
1:B:907:MSE:O	1:B:911:GLU:CG	2.62	0.47
1:B:1223:ARG:HB3	1:B:1223:ARG:NH1	2.29	0.47
1:A:802:ILE:O	1:A:805:ILE:CA	2.63	0.47
1:B:1130:ILE:O	1:B:1130:ILE:CG2	2.63	0.47
1:A:368:LYS:CA	1:A:371:ILE:CG2	2.90	0.47
1:A:1133:LEU:CD2	1:A:1149:TYR:CE2	2.98	0.47
1:A:1199:MSE:O	1:A:1203:VAL:HG23	2.14	0.47
1:A:1346:ASN:ND2	1:A:1349:LEU:HD22	2.25	0.47
1:B:376:ALA:CA	1:B:379:LYS:CB	2.92	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:385:LYS:O	1:B:388:GLU:N	2.45	0.47
1:B:582:THR:CA	1:B:583:ASN:CG	2.78	0.47
1:B:609:ASP:O	1:B:610:LEU:CB	2.59	0.47
1:B:620:VAL:HA	1:B:623:ILE:HD12	1.96	0.47
1:B:627:LEU:HD21	1:B:829:THR:HA	1.95	0.47
1:B:656:ASP:OD1	1:B:656:ASP:N	2.47	0.47
1:B:807:LYS:HE3	1:B:807:LYS:HB3	1.62	0.47
1:B:842:ILE:O	1:B:846:LEU:HD13	2.14	0.47
1:A:431:ILE:O	1:A:435:LEU:HG	2.15	0.47
1:A:643:VAL:C	1:A:645:LYS:N	2.63	0.47
1:A:684:TYR:OH	1:A:693:PHE:CE2	2.68	0.47
1:A:1215:SER:OG	1:A:1242:LYS:HB3	2.10	0.47
1:B:900:LEU:CD1	1:B:1056:LEU:HD13	2.44	0.47
1:B:1177:ILE:HD11	1:B:1374:LEU:HD21	1.96	0.47
1:A:1047:TYR:HE1	1:A:1171:PHE:HE2	1.61	0.47
1:B:684:TYR:C	1:B:684:TYR:CD1	2.85	0.47
1:B:398:THR:O	1:B:398:THR:HG22	2.15	0.46
1:B:439:ILE:CA	1:B:442:ILE:HB	2.45	0.46
1:B:772:LYS:O	1:B:776:LYS:HG3	2.15	0.46
1:B:920:GLN:O	1:B:925:ILE:HD11	2.16	0.46
1:B:925:ILE:HD13	1:B:1003:ASP:OD1	2.14	0.46
1:A:485:MSE:HE1	1:A:1309:TYR:CE1	2.50	0.46
1:A:578:LYS:O	1:A:579:ASN:HB2	2.15	0.46
1:A:702:VAL:HG11	1:A:795:PHE:HE2	1.81	0.46
1:A:986:ILE:O	1:A:987:ASN:ND2	2.48	0.46
1:A:1096:GLY:O	1:A:1099:ILE:N	2.48	0.46
1:A:1277:ILE:HG23	1:A:1278:ARG:N	2.30	0.46
1:A:1375:ILE:O	1:A:1379:LEU:HG	2.15	0.46
1:B:671:PRO:HG3	1:B:774:GLN:CD	2.27	0.46
1:A:368:LYS:HA	1:A:371:ILE:HG21	1.95	0.46
1:A:802:ILE:C	1:A:805:ILE:H	2.19	0.46
1:A:1046:ILE:HG21	1:A:1169:VAL:HG11	1.97	0.46
1:A:1322:PHE:CE2	1:A:1352:LEU:HD12	2.50	0.46
1:B:665:ASN:HD22	1:B:665:ASN:N	2.13	0.46
1:B:713:LEU:HG	1:B:717:LEU:HD11	1.98	0.46
1:B:930:TYR:CE2	1:B:954:LYS:HG2	2.50	0.46
1:A:464:ASN:ND2	1:A:467:ILE:CG1	2.73	0.46
1:A:566:ILE:HA	1:A:569:ILE:HG22	1.96	0.46
1:B:462:ILE:HD13	1:B:464:ASN:ND2	2.31	0.46
1:B:613:THR:HA	1:B:614:GLN:HA	1.72	0.46
1:B:671:PRO:HG3	1:B:774:GLN:HE21	1.64	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:880:GLU:O	1:B:884:LEU:HG	2.14	0.46
1:A:748:GLU:HG3	1:A:749:ASN:N	2.30	0.46
1:A:756:LYS:O	1:A:759:GLN:HG2	2.16	0.46
1:B:671:PRO:CB	1:B:675:LYS:NZ	2.78	0.46
1:B:1028:ILE:O	1:B:1032:ILE:HG12	2.16	0.46
1:B:1048:TYR:O	1:B:1049:PRO:C	2.53	0.46
1:B:756:LYS:O	1:B:759:GLN:HG2	2.16	0.46
1:B:1367:ASN:C	1:B:1367:ASN:HD22	2.18	0.46
1:A:528:GLU:OE1	1:A:565:LYS:HD3	2.15	0.46
1:A:569:ILE:O	1:A:574:PHE:HB2	2.16	0.46
1:A:901:GLU:H	1:A:1056:LEU:HD23	1.79	0.46
1:A:946:ASN:O	1:A:950:VAL:HG23	2.16	0.46
1:B:350:LYS:O	1:B:351:LYS:HB3	2.16	0.46
1:B:485:MSE:HG3	1:B:1202:ILE:HD11	1.97	0.46
1:B:539:ASN:ND2	1:B:551:ARG:HH12	2.14	0.46
1:B:578:LYS:O	1:B:579:ASN:CB	2.63	0.46
1:A:405:LYS:O	1:A:409:LYS:N	2.40	0.46
1:A:718:ILE:HA	1:A:733:LEU:HD21	1.98	0.46
1:A:825:THR:C	1:A:826:SER:O	2.48	0.46
1:A:994:LYS:HA	1:A:994:LYS:HD2	1.82	0.46
1:B:562:LEU:HD13	1:B:565:LYS:CE	2.45	0.46
1:B:675:LYS:O	1:B:678:PRO:HD2	2.15	0.46
1:A:397:ASP:O	1:A:400:ILE:HG12	2.16	0.46
1:A:547:PHE:N	1:A:547:PHE:HD1	2.14	0.46
1:A:608:ARG:HD3	1:A:608:ARG:HA	1.70	0.46
1:A:900:LEU:HG	1:A:1056:LEU:HD22	1.97	0.46
1:B:685:ARG:HB3	1:B:686:ASN:H	1.59	0.46
1:B:1119:ASN:HA	1:B:1120:GLY:HA2	1.69	0.46
1:A:370:LYS:HE3	1:A:370:LYS:HB2	1.76	0.46
1:A:576:ASP:OD2	1:A:580:ASN:O	2.34	0.46
1:A:759:GLN:O	1:A:763:SER:N	2.46	0.46
1:A:1072:PHE:CD2	1:A:1076:TYR:HB2	2.51	0.46
1:B:439:ILE:HA	1:B:442:ILE:HD12	1.97	0.46
1:B:539:ASN:HD21	1:B:551:ARG:HH12	1.63	0.46
1:B:900:LEU:CD1	1:B:1056:LEU:CB	2.55	0.46
1:A:1096:GLY:O	1:A:1099:ILE:HB	2.16	0.45
1:B:644:PHE:HE2	1:B:651:ILE:CG1	2.29	0.45
1:B:804:GLU:O	1:B:807:LYS:HG2	2.16	0.45
1:B:969:ILE:CB	1:B:970:ASP:CB	2.88	0.45
1:B:1048:TYR:O	1:B:1048:TYR:CD2	2.70	0.45
1:A:696:ILE:CB	1:A:700:LYS:H	2.30	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:806:LYS:N	1:A:809:ILE:HD13	2.32	0.45
1:A:930:TYR:OH	1:A:954:LYS:HG2	2.15	0.45
1:A:1215:SER:HG	1:A:1242:LYS:CB	2.29	0.45
1:B:434:TYR:CE2	1:B:468:LEU:CG	2.96	0.45
1:B:735:GLU:O	1:B:739:THR:HG23	2.17	0.45
1:B:1048:TYR:O	1:B:1048:TYR:CG	2.69	0.45
1:A:399:GLU:CG	1:A:400:ILE:CD1	2.90	0.45
1:A:537:ASN:C	1:A:537:ASN:HD22	2.15	0.45
1:A:762:ALA:CB	1:A:770:ILE:CG1	2.80	0.45
1:A:766:ASN:OD1	1:A:769:ALA:HB2	2.16	0.45
1:B:467:ILE:HD12	1:B:467:ILE:C	2.35	0.45
1:B:559:LYS:HB3	1:B:560:LYS:H	1.47	0.45
1:B:631:ASP:OD2	1:B:888:ARG:HG2	2.16	0.45
1:B:1084:LYS:HB3	1:B:1084:LYS:HZ3	1.80	0.45
1:B:1265:GLU:CB	1:B:1266:ASN:C	2.84	0.45
1:A:670:LEU:HD22	1:A:670:LEU:C	2.37	0.45
1:A:930:TYR:OH	1:A:954:LYS:N	2.49	0.45
1:B:355:VAL:O	1:B:359:VAL:HG23	2.16	0.45
1:B:732:PHE:HB2	1:B:784:TYR:CE2	2.51	0.45
1:B:1269:ILE:CA	1:B:1270:ASN:CB	2.95	0.45
1:A:576:ASP:C	1:A:578:LYS:H	2.15	0.45
1:A:1078:LEU:HD12	1:A:1177:ILE:HD13	1.99	0.45
1:A:1367:ASN:OD1	1:A:1371:ILE:CD1	2.64	0.45
1:B:675:LYS:NZ	1:B:774:GLN:OE1	2.50	0.45
1:B:900:LEU:CG	1:B:1056:LEU:HD12	2.42	0.45
1:B:900:LEU:HD21	1:B:1056:LEU:HD12	1.84	0.45
1:B:1062:ASN:HB2	1:B:1170:GLU:O	2.17	0.45
1:A:554:ASN:H	1:A:555:TYR:HA	1.82	0.45
1:B:515:ASP:O	1:B:519:ILE:HG12	2.17	0.45
1:B:521:PHE:CD2	1:B:855:ILE:HD12	2.52	0.45
1:B:771:LYS:NZ	1:B:869:SER:HB2	2.32	0.45
1:B:833:ASN:OD1	1:B:834:ASP:N	2.46	0.45
1:A:682:ASN:O	1:A:686:ASN:N	2.44	0.45
1:A:1006:ILE:O	1:A:1006:ILE:HG22	2.16	0.45
1:B:531:LYS:HB3	1:B:562:LEU:CD1	2.14	0.45
1:B:626:ASN:O	1:B:629:ILE:HG12	2.17	0.45
1:B:695:THR:OG1	1:B:698:THR:HG23	2.17	0.45
1:A:383:LEU:C	1:A:383:LEU:CD2	2.86	0.45
1:A:934:LYS:O	1:A:938:LEU:HG	2.17	0.45
1:A:1112:LYS:O	1:A:1115:ASN:N	2.49	0.45
1:A:1152:PHE:O	1:A:1155:ASP:N	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:601:LEU:O	1:B:602:HIS:HB2	2.17	0.45
1:B:753:ASN:O	1:B:757:ASN:OD1	2.34	0.45
1:A:411:ASN:CB	1:A:414:SER:N	2.79	0.45
1:A:1229:ASN:HB3	1:A:1238:THR:HG21	1.99	0.45
1:A:1244:PHE:CD2	1:A:1245:ASP:OD2	2.70	0.45
1:B:461:LYS:HA	1:B:462:ILE:HA	1.77	0.45
1:B:464:ASN:H	1:B:467:ILE:HG21	1.82	0.45
1:B:500:VAL:O	1:B:505:PHE:CE1	2.70	0.45
1:B:794:ASP:C	1:B:795:PHE:CD1	2.90	0.45
1:A:868:THR:CG2	1:A:869:SER:N	2.79	0.44
1:A:973:SER:CB	1:A:974:ASN:HA	2.37	0.44
1:A:980:GLN:O	1:A:984:SER:N	2.50	0.44
1:A:1048:TYR:CD1	1:A:1048:TYR:O	2.70	0.44
1:A:1053:LYS:O	1:A:1055:GLU:CB	2.31	0.44
1:A:1094:ILE:O	1:A:1094:ILE:HG22	2.18	0.44
1:B:494:ASP:O	1:B:495:ILE:CD1	2.58	0.44
1:B:575:ILE:HG12	1:B:579:ASN:HA	1.98	0.44
1:B:792:LEU:C	1:B:792:LEU:CD2	2.85	0.44
1:B:917:PHE:O	1:B:917:PHE:CD1	2.70	0.44
1:B:1113:ASN:O	1:B:1117:LYS:N	2.47	0.44
1:A:546:PHE:C	1:A:547:PHE:CD1	2.90	0.44
1:A:755:TYR:O	1:A:755:TYR:CD1	2.70	0.44
1:A:767:ASN:HB2	1:A:867:ASN:CG	2.37	0.44
1:A:1017:ASN:HD22	1:A:1020:PHE:HD1	1.65	0.44
1:A:1027:GLU:HA	1:A:1027:GLU:OE2	2.17	0.44
1:A:1048:TYR:CD1	1:A:1049:PRO:O	2.66	0.44
1:A:1075:ILE:HD11	1:A:1181:LEU:HD11	1.99	0.44
1:B:531:LYS:HB2	1:B:562:LEU:CD1	2.44	0.44
1:B:856:ARG:CD	1:B:875:ILE:HG23	2.48	0.44
1:A:499:THR:O	1:A:499:THR:OG1	2.34	0.44
1:B:793:PHE:O	1:B:795:PHE:CD1	2.70	0.44
1:B:1046:ILE:O	1:B:1047:TYR:HD1	2.00	0.44
1:A:375:LEU:CB	1:A:380:ILE:HD11	2.46	0.44
1:A:557:LEU:HD11	1:A:566:ILE:HD11	2.00	0.44
1:A:738:LYS:CD	1:A:746:ILE:HD11	2.47	0.44
1:A:799:LYS:O	1:A:804:GLU:HB3	2.17	0.44
1:A:899:ASN:HD22	1:A:899:ASN:HA	1.60	0.44
1:A:1148:ASN:HD21	1:A:1151:SER:HB3	1.82	0.44
1:A:1278:ARG:HE	1:A:1278:ARG:HB3	1.63	0.44
1:B:354:ILE:CG2	1:B:358:PHE:HE2	2.30	0.44
1:B:1265:GLU:HA	1:B:1266:ASN:CB	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1365:SER:O	1:B:1366:TYR:CD2	2.70	0.44
1:A:979:GLU:OE2	1:A:982:LYS:CB	2.66	0.44
1:B:1366:TYR:CE1	1:B:1367:ASN:OD1	2.71	0.44
1:A:395:ASN:CG	1:A:396:CYS:H	2.13	0.44
1:A:588:LYS:HZ3	1:A:618:ASN:HD21	1.66	0.44
1:A:638:LEU:C	1:A:638:LEU:CD2	2.85	0.44
1:A:920:GLN:NE2	1:A:1006:ILE:HD12	2.31	0.44
1:A:1209:LEU:HB2	1:A:1211:ILE:HG13	2.00	0.44
1:A:1230:GLY:HA2	1:A:1231:SER:HA	1.52	0.44
1:B:355:VAL:HG21	1:B:483:HIS:CD2	2.51	0.44
1:B:358:PHE:CE1	1:B:427:LEU:HG	2.52	0.44
1:B:605:SER:CB	1:B:1219:THR:OG1	2.65	0.44
1:B:644:PHE:HD1	1:B:644:PHE:HA	1.71	0.44
1:B:1293:ASP:O	1:B:1294:TYR:CD2	2.70	0.44
1:A:384:ILE:HD13	1:A:463:LEU:HD12	2.00	0.44
1:A:665:ASN:ND2	1:A:669:TYR:CE2	2.72	0.44
1:A:740:LEU:HD13	1:A:754:TYR:CD2	2.53	0.44
1:A:378:PHE:N	1:A:379:LYS:HA	2.32	0.44
1:A:1291:PHE:N	1:A:1291:PHE:CD1	2.85	0.44
1:B:424:GLU:CA	1:B:427:LEU:HD13	2.44	0.44
1:B:495:ILE:HG22	1:B:496:ASP:N	2.33	0.44
1:A:416:LYS:O	1:A:417:PHE:C	2.56	0.44
1:B:569:ILE:CG2	1:B:575:ILE:HB	2.47	0.44
1:B:1365:SER:O	1:B:1366:TYR:CG	2.70	0.44
1:A:377:GLU:HG2	1:A:377:GLU:O	2.17	0.43
1:A:462:ILE:HG22	1:A:463:LEU:C	2.37	0.43
1:B:432:TYR:HD1	1:B:432:TYR:O	2.01	0.43
1:B:636:LYS:O	1:B:641:ASP:HB2	2.17	0.43
1:B:681:LEU:O	1:B:685:ARG:NH1	2.50	0.43
1:A:405:LYS:HE3	1:A:405:LYS:HB3	1.66	0.43
1:A:546:PHE:O	1:A:547:PHE:CG	2.72	0.43
1:A:659:ILE:HG21	1:A:719:LEU:C	2.39	0.43
1:A:775:LYS:NZ	1:A:775:LYS:CB	2.73	0.43
1:A:1026:LYS:HB2	1:A:1026:LYS:HZ2	1.81	0.43
1:B:614:GLN:CB	1:B:618:ASN:CB	2.96	0.43
1:B:629:ILE:HB	1:B:888:ARG:HG3	1.99	0.43
1:B:830:ILE:HG21	1:B:877:ILE:CD1	2.49	0.43
1:B:946:ASN:O	1:B:950:VAL:HG23	2.18	0.43
1:B:1147:LYS:N	1:B:1148:ASN:CA	2.76	0.43
1:B:1366:TYR:HE1	1:B:1367:ASN:OD1	2.00	0.43
1:A:599:ARG:HG3	1:A:604:ILE:HB	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:683:LEU:CD2	1:A:683:LEU:C	2.85	0.43
1:A:707:ILE:HG12	1:A:707:ILE:H	1.66	0.43
1:A:979:GLU:CD	1:A:982:LYS:CB	2.87	0.43
1:A:1060:LYS:HZ1	1:A:1170:GLU:CD	2.21	0.43
1:A:1133:LEU:HD22	1:A:1149:TYR:CE2	2.53	0.43
1:B:711:LYS:HB3	1:B:711:LYS:HE3	1.84	0.43
1:A:401:PHE:HB3	1:A:404:PHE:CE1	2.51	0.43
1:A:510:ALA:HB2	1:A:865:TRP:CD2	2.54	0.43
1:A:557:LEU:CD2	1:A:558:ASP:N	2.73	0.43
1:A:684:TYR:HB2	1:A:793:PHE:CD2	2.53	0.43
1:A:738:LYS:CG	1:A:746:ILE:HD11	2.48	0.43
1:A:900:LEU:HD23	1:A:1056:LEU:HD13	2.01	0.43
1:A:1049:PRO:HG2	1:A:1056:LEU:HB2	2.01	0.43
1:A:1262:ASP:OD1	1:A:1262:ASP:N	2.48	0.43
1:A:1325:PHE:HB3	1:A:1375:ILE:HD13	2.00	0.43
1:A:1354:LYS:NZ	1:A:1354:LYS:CB	2.73	0.43
1:B:380:ILE:O	1:B:384:ILE:N	2.51	0.43
1:B:511:LYS:HG2	1:B:866:LEU:HD11	2.00	0.43
1:B:641:ASP:C	1:B:643:VAL:H	2.21	0.43
1:B:1029:ASP:OD1	1:B:1056:LEU:HD21	2.18	0.43
1:A:778:ILE:O	1:A:782:ILE:HG12	2.19	0.43
1:A:1089:LYS:C	1:A:1089:LYS:CD	2.85	0.43
1:A:1156:TYR:O	1:A:1159:VAL:HG12	2.18	0.43
1:B:430:ILE:HD11	1:B:431:ILE:HD13	2.01	0.43
1:B:569:ILE:HG22	1:B:575:ILE:H	1.83	0.43
1:B:1047:TYR:O	1:B:1048:TYR:CD2	2.70	0.43
1:B:1102:ASN:O	1:B:1106:GLU:N	2.49	0.43
1:A:411:ASN:N	1:A:413:ASP:N	2.60	0.43
1:A:920:GLN:HE22	1:A:1006:ILE:CD1	2.30	0.43
1:A:1111:LEU:CD2	1:A:1359:SER:CB	2.97	0.43
1:A:1354:LYS:HB2	1:A:1354:LYS:HZ3	1.82	0.43
1:B:467:ILE:HG13	1:B:468:LEU:HD12	2.00	0.43
1:B:856:ARG:HB3	1:B:882:MSE:HE1	2.01	0.43
1:A:398:THR:O	1:A:399:GLU:C	2.57	0.43
1:A:468:LEU:HD12	1:A:468:LEU:HA	1.80	0.43
1:A:575:ILE:HG22	1:A:577:ASN:OD1	2.18	0.43
1:A:696:ILE:HA	1:A:698:THR:H	1.82	0.43
1:B:394:GLY:HA2	1:B:395:ASN:HB3	2.00	0.43
1:B:533:PHE:CD1	1:B:555:TYR:CB	3.01	0.43
1:B:746:ILE:HG22	1:B:747:ASP:OD1	2.18	0.43
1:B:899:ASN:HD22	1:B:1058:ILE:HG23	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1046:ILE:C	1:B:1047:TYR:HD1	2.21	0.43
1:B:1079:ILE:H	1:B:1079:ILE:CD1	2.28	0.43
1:B:1161:GLU:O	1:B:1165:ILE:HG12	2.19	0.43
1:A:408:TYR:C	1:A:411:ASN:N	2.73	0.43
1:A:549:GLY:HA2	1:A:594:THR:CG2	2.49	0.43
1:A:791:GLU:O	1:A:794:ASP:HB3	2.18	0.43
1:B:1347:ASP:O	1:B:1348:ILE:HB	2.19	0.43
1:B:1367:ASN:ND2	1:B:1367:ASN:C	2.72	0.43
1:A:1111:LEU:CD2	1:A:1363:LEU:HD12	2.43	0.43
1:A:1118:LEU:N	1:A:1125:TYR:CZ	2.87	0.43
1:A:1235:TYR:HD1	1:A:1236:THR:HG1	1.65	0.43
1:B:561:ILE:HG22	1:B:562:LEU:HG	2.01	0.43
1:B:1048:TYR:CB	1:B:1052:ARG:HA	2.43	0.43
1:B:1099:ILE:CG2	1:B:1103:LYS:CB	2.94	0.43
1:B:538:ILE:O	1:B:538:ILE:HG12	2.19	0.42
1:B:578:LYS:O	1:B:579:ASN:HB3	2.19	0.42
1:B:659:ILE:CB	1:B:719:LEU:CB	2.96	0.42
1:A:401:PHE:CB	1:A:402:GLY:HA2	2.47	0.42
1:A:575:ILE:CA	1:A:582:THR:HG23	2.49	0.42
1:A:806:LYS:CA	1:A:809:ILE:HD13	2.49	0.42
1:A:1191:GLN:HB3	1:A:1307:LEU:HD11	2.00	0.42
1:B:427:LEU:H	1:B:427:LEU:CD1	2.23	0.42
1:B:809:ILE:C	1:B:811:ASP:N	2.72	0.42
1:B:930:TYR:OH	1:B:954:LYS:N	2.52	0.42
1:B:930:TYR:CZ	1:B:954:LYS:HG2	2.54	0.42
1:B:934:LYS:O	1:B:938:LEU:HG	2.19	0.42
1:B:1031:LEU:HD13	1:B:1084:LYS:HD3	2.00	0.42
1:B:1049:PRO:O	1:B:1050:LYS:HE2	2.19	0.42
1:B:1050:LYS:HD3	1:B:1050:LYS:HA	1.84	0.42
1:B:1195:PHE:CG	1:B:1306:LEU:HD21	2.53	0.42
1:A:691:GLU:CB	1:A:692:PRO:HD2	2.49	0.42
1:A:780:CYS:O	1:A:784:TYR:N	2.42	0.42
1:A:792:LEU:C	1:A:792:LEU:CD1	2.85	0.42
1:B:557:LEU:CD2	1:B:575:ILE:HD13	2.43	0.42
1:A:404:PHE:O	1:A:407:HIS:N	2.53	0.42
1:A:738:LYS:HZ1	1:A:743:ILE:HA	1.84	0.42
1:A:983:LEU:O	1:A:986:ILE:HD12	2.18	0.42
1:A:1111:LEU:CD2	1:A:1363:LEU:CD1	2.77	0.42
1:B:634:VAL:HG23	1:B:891:CYS:SG	2.49	0.42
1:B:657:ILE:N	1:B:657:ILE:CD1	2.73	0.42
1:B:900:LEU:CD1	1:B:1056:LEU:HD12	2.48	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:942:LYS:HB2	1:B:942:LYS:HE3	1.82	0.42
1:A:463:LEU:N	1:A:463:LEU:CD1	2.76	0.42
1:A:1032:ILE:CD1	1:A:1048:TYR:HD2	2.32	0.42
1:A:1063:LEU:HD12	1:A:1171:PHE:CE2	2.55	0.42
1:B:589:PHE:CE1	1:B:842:ILE:HG21	2.54	0.42
1:B:591:LYS:HA	1:B:591:LYS:HD3	1.76	0.42
1:B:930:TYR:OH	1:B:954:LYS:HG2	2.20	0.42
1:B:1352:LEU:N	1:B:1352:LEU:CD1	2.82	0.42
1:A:461:LYS:NZ	1:A:461:LYS:C	2.73	0.42
1:A:643:VAL:O	1:A:643:VAL:HG12	2.18	0.42
1:A:1063:LEU:O	1:A:1067:ILE:HG13	2.19	0.42
1:B:384:ILE:CG2	1:B:385:LYS:N	2.82	0.42
1:B:568:ILE:HG23	1:B:625:GLN:NE2	2.34	0.42
1:B:614:GLN:O	1:B:615:ASP:C	2.56	0.42
1:A:997:GLN:O	1:A:1000:LYS:N	2.52	0.42
1:A:1240:TYR:HD2	1:A:1241:TYR:CE1	2.38	0.42
1:B:588:LYS:O	1:B:592:ILE:HG13	2.20	0.42
1:B:670:LEU:HD12	1:B:670:LEU:HA	1.76	0.42
1:B:716:LYS:HE2	1:B:716:LYS:HA	2.01	0.42
1:B:733:LEU:O	1:B:737:LYS:HG3	2.19	0.42
1:B:1034:ASP:OD1	1:B:1040:GLU:HB2	2.18	0.42
1:A:384:ILE:CD1	1:A:463:LEU:HD12	2.48	0.42
1:A:995:VAL:O	1:A:996:ASP:C	2.58	0.42
1:A:1046:ILE:CG2	1:A:1169:VAL:HG11	2.49	0.42
1:A:1148:ASN:ND2	1:A:1151:SER:OG	2.53	0.42
1:B:675:LYS:HZ2	1:B:774:GLN:HE22	1.68	0.42
1:B:1043:PHE:CA	1:B:1046:ILE:HD11	2.49	0.42
1:B:1133:LEU:HA	1:B:1136:ASN:HB2	2.02	0.42
1:A:575:ILE:C	1:A:582:THR:HG23	2.40	0.42
1:A:775:LYS:HB2	1:A:775:LYS:HZ2	1.82	0.42
1:A:801:ASN:O	1:A:802:ILE:HB	2.20	0.42
1:A:893:THR:HB	1:A:1059:TYR:OH	2.20	0.42
1:B:616:ASP:O	1:B:620:VAL:N	2.43	0.42
1:B:670:LEU:HG	1:B:671:PRO:HD2	2.02	0.42
1:B:713:LEU:O	1:B:716:LYS:N	2.51	0.42
1:B:1055:GLU:O	1:B:1056:LEU:C	2.58	0.42
1:B:1202:ILE:HG22	1:B:1202:ILE:O	2.19	0.42
1:B:1357:LYS:CB	1:B:1362:GLU:OE1	2.68	0.42
1:A:409:LYS:O	1:A:413:ASP:HB2	2.20	0.42
1:A:710:ASN:HA	1:A:713:LEU:HB3	2.01	0.42
1:A:1117:LYS:HD3	1:A:1117:LYS:HA	1.81	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1340:PHE:CD1	1:A:1349:LEU:HD21	2.55	0.42
1:B:478:GLN:HA	1:B:481:LEU:HB3	2.02	0.42
1:B:639:ASN:HA	1:B:640:LEU:HA	1.71	0.42
1:B:1091:LEU:O	1:B:1162:TYR:CE1	2.69	0.42
1:A:514:LEU:HD12	1:A:514:LEU:C	2.34	0.41
1:A:755:TYR:CD1	1:A:755:TYR:C	2.89	0.41
1:B:354:ILE:HG22	1:B:358:PHE:HE2	1.83	0.41
1:B:378:PHE:CZ	1:B:435:LEU:HD11	2.54	0.41
1:B:533:PHE:CE1	1:B:557:LEU:HD13	2.39	0.41
1:B:1011:LEU:HA	1:B:1011:LEU:HD23	1.66	0.41
1:A:392:LYS:CB	1:A:395:ASN:ND2	2.83	0.41
1:A:659:ILE:CG2	1:A:720:GLU:N	2.83	0.41
1:A:830:ILE:HG22	1:A:831:VAL:N	2.35	0.41
1:A:979:GLU:HG3	1:A:982:LYS:H	1.86	0.41
1:A:1321:VAL:HG12	1:A:1322:PHE:HD1	1.86	0.41
1:B:681:LEU:O	1:B:685:ARG:HG2	2.19	0.41
1:B:793:PHE:O	1:B:795:PHE:HD1	2.03	0.41
1:B:1152:PHE:HA	1:B:1155:ASP:HB2	2.02	0.41
1:B:1277:ILE:CG1	1:B:1278:ARG:N	2.82	0.41
1:B:1300:ILE:HD13	1:B:1321:VAL:HG11	2.02	0.41
1:A:840:ILE:HG22	1:A:878:LEU:HD11	2.01	0.41
1:A:1091:LEU:N	1:A:1091:LEU:HD12	2.34	0.41
1:A:1094:ILE:O	1:A:1094:ILE:CG2	2.69	0.41
1:B:473:LEU:O	1:B:476:VAL:N	2.53	0.41
1:B:485:MSE:HG3	1:B:1202:ILE:CD1	2.50	0.41
1:B:531:LYS:C	1:B:562:LEU:HD11	2.40	0.41
1:B:637:ALA:HB1	1:B:821:ILE:HG21	2.02	0.41
1:B:697:GLU:O	1:B:701:ILE:CG1	2.67	0.41
1:B:844:ALA:O	1:B:852:ILE:HD11	2.19	0.41
1:A:992:LYS:O	1:A:992:LYS:HG2	2.20	0.41
1:A:1059:TYR:HE2	1:A:1061:LYS:HE3	1.85	0.41
1:A:1100:ARG:HA	1:A:1104:ILE:HG23	2.02	0.41
1:A:1118:LEU:HD12	1:A:1121:TYR:CB	2.50	0.41
1:B:821:ILE:HG22	1:B:822:THR:N	2.35	0.41
1:B:1262:ASP:C	1:B:1263:LEU:CD1	2.89	0.41
1:A:1048:TYR:HA	1:A:1049:PRO:HD3	1.86	0.41
1:B:364:ASN:H	1:B:364:ASN:HD22	1.67	0.41
1:B:432:TYR:CD1	1:B:436:LYS:NZ	2.87	0.41
1:B:615:ASP:C	1:B:617:TYR:H	2.23	0.41
1:B:1102:ASN:O	1:B:1106:GLU:HB2	2.21	0.41
1:A:554:ASN:HB3	1:A:555:TYR:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:664:ASN:O	1:A:666:ASP:OD1	2.39	0.41
1:A:733:LEU:O	1:A:737:LYS:CG	2.68	0.41
1:A:906:LYS:O	1:A:910:ILE:HG13	2.21	0.41
1:B:476:VAL:O	1:B:479:TYR:N	2.53	0.41
1:B:665:ASN:N	1:B:665:ASN:ND2	2.67	0.41
1:B:882:MSE:O	1:B:886:THR:HG23	2.21	0.41
1:B:888:ARG:HH11	1:B:1011:LEU:HD11	1.85	0.41
1:B:943:ASP:O	1:B:946:ASN:ND2	2.53	0.41
1:B:1198:ASP:OD2	1:B:1309:TYR:OH	2.30	0.41
1:B:1301:ASP:OD2	1:B:1341:LYS:HB2	2.20	0.41
1:B:1332:ASP:HB2	1:B:1354:LYS:CE	2.42	0.41
1:A:616:ASP:O	1:A:620:VAL:HG23	2.20	0.41
1:A:806:LYS:H	1:A:809:ILE:HD13	1.86	0.41
1:A:1268:GLU:HG2	1:A:1268:GLU:O	2.21	0.41
1:B:491:ARG:HG2	1:B:1204:ASN:HD22	1.84	0.41
1:B:747:ASP:OD1	1:B:747:ASP:N	2.53	0.41
1:B:1067:ILE:HD13	1:B:1072:PHE:CZ	2.55	0.41
1:B:1166:ARG:O	1:B:1170:GLU:HB2	2.21	0.41
1:A:556:VAL:HG22	1:A:557:LEU:H	1.86	0.41
1:A:1055:GLU:N	1:A:1055:GLU:CD	2.73	0.41
1:B:532:ILE:HG22	1:B:562:LEU:CB	2.50	0.41
1:A:379:LYS:O	1:A:407:HIS:NE2	2.53	0.41
1:A:409:LYS:O	1:A:413:ASP:HA	2.21	0.41
1:A:438:ARG:O	1:A:442:ILE:HG13	2.21	0.41
1:A:574:PHE:O	1:A:575:ILE:HG13	2.21	0.41
1:A:607:GLU:O	1:A:609:ASP:N	2.54	0.41
1:A:670:LEU:HD22	1:A:670:LEU:O	2.20	0.41
1:A:747:ASP:O	1:A:748:GLU:HG2	2.21	0.41
1:A:798:PHE:CG	1:A:799:LYS:N	2.89	0.41
1:A:1212:ILE:HD13	1:A:1252:PHE:HB2	2.02	0.41
1:B:595:ASN:OD1	1:B:607:GLU:HG3	2.20	0.41
1:B:673:PHE:O	1:B:676:VAL:N	2.53	0.41
1:B:713:LEU:O	1:B:717:LEU:HD12	2.21	0.41
1:B:720:GLU:OE2	1:B:723:LEU:HD13	2.18	0.41
1:B:812:ILE:O	1:B:816:LYS:N	2.54	0.41
1:B:900:LEU:HD11	1:B:1056:LEU:HD13	2.03	0.41
1:B:995:VAL:O	1:B:999:ILE:HG13	2.21	0.41
1:B:1031:LEU:HD13	1:B:1043:PHE:HZ	1.79	0.41
1:B:1035:MSE:O	1:B:1038:GLU:CD	2.60	0.41
1:B:1043:PHE:O	1:B:1048:TYR:CE2	2.74	0.41
1:A:384:ILE:HD13	1:A:463:LEU:CD1	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:796:SER:OG	1:A:797:ASP:O	2.33	0.41
1:B:483:HIS:O	1:B:487:LEU:HD12	2.21	0.41
1:B:644:PHE:CE2	1:B:651:ILE:HG13	2.56	0.41
1:B:899:ASN:OD1	1:B:899:ASN:N	2.54	0.41
1:A:684:TYR:OH	1:A:693:PHE:CZ	2.74	0.40
1:A:690:ASN:ND2	1:A:693:PHE:CZ	2.89	0.40
1:A:837:GLU:OE1	1:A:873:ASN:ND2	2.54	0.40
1:A:896:TRP:HA	1:A:896:TRP:CE3	2.56	0.40
1:A:1112:LYS:CA	1:A:1115:ASN:HB2	2.43	0.40
1:B:512:GLU:OE1	1:B:1197:ARG:NH2	2.54	0.40
1:B:900:LEU:HD21	1:B:1056:LEU:CD1	2.46	0.40
1:B:1250:LYS:HB2	1:B:1250:LYS:HE3	1.93	0.40
1:A:781:TYR:O	1:A:785:LEU:N	2.54	0.40
1:A:1053:LYS:O	1:A:1053:LYS:CG	2.70	0.40
1:B:383:LEU:O	1:B:383:LEU:HG	2.21	0.40
1:B:421:SER:O	1:B:422:ASP:HB2	2.20	0.40
1:B:623:ILE:H	1:B:623:ILE:HG13	1.62	0.40
1:B:641:ASP:OD1	1:B:705:ALA:HB1	2.21	0.40
1:B:899:ASN:CB	1:B:900:LEU:HB2	2.51	0.40
1:A:365:ASN:O	1:A:368:LYS:HE2	2.20	0.40
1:A:791:GLU:O	1:A:792:LEU:C	2.60	0.40
1:A:1366:TYR:C	1:A:1368:SER:H	2.25	0.40
1:B:614:GLN:CB	1:B:618:ASN:HB2	2.50	0.40
1:A:429:LYS:HE3	1:A:429:LYS:HB2	1.74	0.40
1:B:423:GLU:H	1:B:423:GLU:HG3	1.65	0.40
1:B:640:LEU:HD22	1:B:701:ILE:HG21	2.02	0.40
1:B:908:LYS:HA	1:B:908:LYS:HD2	1.79	0.40
1:B:908:LYS:HA	1:B:911:GLU:HG3	2.04	0.40
1:B:1093:ASN:HB3	1:B:1096:GLY:H	1.86	0.40
1:B:1155:ASP:O	1:B:1159:VAL:HG23	2.21	0.40
1:A:546:PHE:O	1:A:547:PHE:CB	2.69	0.40
1:A:1038:GLU:H	1:A:1038:GLU:HG3	1.56	0.40
1:A:1146:ASN:O	1:A:1147:LYS:CB	2.70	0.40
1:A:1194:ARG:HG3	1:A:1197:ARG:NH2	2.37	0.40
1:A:1299:GLN:O	1:A:1303:VAL:HG23	2.22	0.40
1:B:504:ASP:HA	1:B:507:ARG:CD	2.43	0.40
1:B:549:GLY:HA2	1:B:594:THR:HG21	2.03	0.40
1:B:1036:GLU:O	1:B:1037:SER:CB	2.69	0.40
1:B:1352:LEU:H	1:B:1352:LEU:CD1	2.34	0.40

All (4) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:426:GLU:OE1	1:B:1037:SER:OG[4_446]	1.51	0.69
1:A:776:LYS:CB	1:A:1348:ILE:CD1[3_655]	1.91	0.29
1:A:398:THR:CB	1:A:907:MSE:CE[3_655]	2.08	0.12
1:A:776:LYS:CD	1:A:1348:ILE:CD1[3_655]	2.10	0.10

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	1013/1397 (72%)	908 (90%)	79 (8%)	26 (3%)	4 28
1	B	1004/1397 (72%)	888 (88%)	84 (8%)	32 (3%)	3 25
All	All	2017/2794 (72%)	1796 (89%)	163 (8%)	58 (3%)	3 27

All (58) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	392	LYS
1	A	410	VAL
1	A	458	GLU
1	A	460	GLU
1	A	461	LYS
1	A	798	PHE
1	A	805	ILE
1	A	806	LYS
1	A	894	GLU
1	A	914	PHE
1	A	969	ILE
1	A	1094	ILE
1	A	1272	PRO
1	B	390	GLU
1	B	615	ASP
1	B	645	LYS
1	B	669	TYR

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Mol	Chain	Res	Type
1	B	685	ARG
1	B	706	LEU
1	B	749	ASN
1	B	805	ILE
1	B	806	LYS
1	B	1042	LYS
1	A	633	GLU
1	A	674	SER
1	A	1014	ILE
1	B	416	LYS
1	B	616	ASP
1	B	810	LYS
1	B	1043	PHE
1	A	730	ASN
1	B	672	SER
1	B	1036	GLU
1	B	1037	SER
1	B	1050	LYS
1	B	1052	ARG
1	B	1267	SER
1	A	421	SER
1	A	747	ASP
1	A	915	ASP
1	A	987	ASN
1	A	996	ASP
1	B	391	LEU
1	B	608	ARG
1	B	766	ASN
1	B	1059	TYR
1	A	390	GLU
1	A	807	LYS
1	A	808	GLN
1	B	611	GLN
1	B	668	LYS
1	B	1144	ILE
1	B	1366	TYR
1	B	667	ILE
1	B	1138	ASP
1	B	832	ILE
1	B	1348	ILE
1	A	1070	PRO

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	824/1316 (63%)	681 (83%)	143 (17%)	1 9
1	B	822/1316 (62%)	693 (84%)	129 (16%)	2 13
All	All	1646/2632 (62%)	1374 (84%)	272 (16%)	2 11

All (272) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	352	ASP
1	A	363	LYS
1	A	365	ASN
1	A	371	ILE
1	A	372	GLU
1	A	384	ILE
1	A	386	LYS
1	A	396	CYS
1	A	397	ASP
1	A	401	PHE
1	A	403	ILE
1	A	404	PHE
1	A	405	LYS
1	A	422	ASP
1	A	432	TYR
1	A	433	ARG
1	A	459	ILE
1	A	460	GLU
1	A	461	LYS
1	A	463	LEU
1	A	466	SER
1	A	468	LEU
1	A	473	LEU
1	A	475	ARG
1	A	516	LEU
1	A	535	ARG
1	A	537	ASN

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Mol	Chain	Res	Type
1	A	539	ASN
1	A	540	ASN
1	A	542	GLU
1	A	544	ILE
1	A	546	PHE
1	A	547	PHE
1	A	555	TYR
1	A	556	VAL
1	A	557	LEU
1	A	563	ASN
1	A	565	LYS
1	A	572	LEU
1	A	606	LYS
1	A	608	ARG
1	A	611	GLN
1	A	618	ASN
1	A	619	LYS
1	A	625	GLN
1	A	631	ASP
1	A	635	SER
1	A	638	LEU
1	A	642	VAL
1	A	646	ASP
1	A	650	ILE
1	A	653	LYS
1	A	655	ASN
1	A	659	ILE
1	A	666	ASP
1	A	670	LEU
1	A	681	LEU
1	A	683	LEU
1	A	703	LEU
1	A	716	LYS
1	A	728	SER
1	A	729	LYS
1	A	745	GLU
1	A	752	GLU
1	A	761	SER
1	A	775	LYS
1	A	784	TYR
1	A	785	LEU
1	A	793	PHE

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Mol	Chain	Res	Type
1	A	796	SER
1	A	800	MSE
1	A	804	GLU
1	A	817	THR
1	A	820	ARG
1	A	826	SER
1	A	833	ASN
1	A	869	SER
1	A	870	GLU
1	A	888	ARG
1	A	890	GLU
1	A	899	ASN
1	A	916	ASP
1	A	917	PHE
1	A	932	ASP
1	A	970	ASP
1	A	979	GLU
1	A	986	ILE
1	A	987	ASN
1	A	988	LYS
1	A	989	LYS
1	A	994	LYS
1	A	1013	ARG
1	A	1015	ILE
1	A	1021	LEU
1	A	1023	LYS
1	A	1024	TYR
1	A	1025	LYS
1	A	1026	LYS
1	A	1033	GLU
1	A	1035	MSE
1	A	1038	GLU
1	A	1045	GLU
1	A	1050	LYS
1	A	1053	LYS
1	A	1055	GLU
1	A	1072	PHE
1	A	1085	MSE
1	A	1089	LYS
1	A	1095	ASP
1	A	1102	ASN
1	A	1104	ILE

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Mol	Chain	Res	Type
1	A	1106	GLU
1	A	1108	ASP
1	A	1111	LEU
1	A	1112	LYS
1	A	1116	ASP
1	A	1117	LYS
1	A	1118	LEU
1	A	1135	GLU
1	A	1149	TYR
1	A	1154	LYS
1	A	1161	GLU
1	A	1163	LYS
1	A	1185	ASN
1	A	1219	THR
1	A	1243	PHE
1	A	1244	PHE
1	A	1254	LYS
1	A	1264	SER
1	A	1265	GLU
1	A	1266	ASN
1	A	1275	GLU
1	A	1276	SER
1	A	1277	ILE
1	A	1293	ASP
1	A	1357	LYS
1	A	1360	VAL
1	A	1361	LEU
1	A	1368	SER
1	A	1370	TYR
1	A	1372	LYS
1	A	1374	LEU
1	A	1378	LEU
1	B	364	ASN
1	B	366	SER
1	B	382	GLU
1	B	389	LYS
1	B	406	LYS
1	B	418	SER
1	B	421	SER
1	B	432	TYR
1	B	436	LYS
1	B	438	ARG

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Mol	Chain	Res	Type
1	B	439	ILE
1	B	461	LYS
1	B	462	ILE
1	B	463	LEU
1	B	464	ASN
1	B	467	ILE
1	B	473	LEU
1	B	486	TYR
1	B	487	LEU
1	B	489	LYS
1	B	492	HIS
1	B	493	ASN
1	B	494	ASP
1	B	499	THR
1	B	502	THR
1	B	503	ASP
1	B	506	SER
1	B	521	PHE
1	B	527	MSE
1	B	532	ILE
1	B	535	ARG
1	B	542	GLU
1	B	550	ASP
1	B	559	LYS
1	B	575	ILE
1	B	591	LYS
1	B	601	LEU
1	B	605	SER
1	B	613	THR
1	B	617	TYR
1	B	640	LEU
1	B	641	ASP
1	B	644	PHE
1	B	656	ASP
1	B	657	ILE
1	B	662	GLU
1	B	663	ASN
1	B	665	ASN
1	B	672	SER
1	B	673	PHE
1	B	675	LYS
1	B	676	VAL

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Mol	Chain	Res	Type
1	B	684	TYR
1	B	685	ARG
1	B	695	THR
1	B	698	THR
1	B	699	GLU
1	B	725	GLU
1	B	726	ASN
1	B	733	LEU
1	B	746	ILE
1	B	747	ASP
1	B	748	GLU
1	B	749	ASN
1	B	759	GLN
1	B	792	LEU
1	B	794	ASP
1	B	807	LYS
1	B	809	ILE
1	B	825	THR
1	B	827	ASP
1	B	828	LYS
1	B	834	ASP
1	B	848	SER
1	B	849	ASN
1	B	873	ASN
1	B	888	ARG
1	B	890	GLU
1	B	896	TRP
1	B	897	ASN
1	B	898	LEU
1	B	911	GLU
1	B	912	LYS
1	B	913	ASP
1	B	915	ASP
1	B	917	PHE
1	B	919	ILE
1	B	930	TYR
1	B	931	GLU
1	B	970	ASP
1	B	980	GLN
1	B	981	ARG
1	B	985	ASN
1	B	1011	LEU

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Mol	Chain	Res	Type
1	B	1026	LYS
1	B	1027	GLU
1	B	1035	MSE
1	B	1043	PHE
1	B	1046	ILE
1	B	1047	TYR
1	B	1048	TYR
1	B	1050	LYS
1	B	1057	TYR
1	B	1058	ILE
1	B	1059	TYR
1	B	1060	LYS
1	B	1072	PHE
1	B	1076	TYR
1	B	1084	LYS
1	B	1089	LYS
1	B	1095	ASP
1	B	1122	SER
1	B	1142	LYS
1	B	1155	ASP
1	B	1185	ASN
1	B	1218	ASN
1	B	1242	LYS
1	B	1244	PHE
1	B	1259	PHE
1	B	1261	ILE
1	B	1263	LEU
1	B	1346	ASN
1	B	1352	LEU
1	B	1353	MSE
1	B	1354	LYS
1	B	1359	SER
1	B	1362	GLU
1	B	1366	TYR
1	B	1367	ASN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (30) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	365	ASN
1	A	537	ASN
1	A	618	ASN

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Mol	Chain	Res	Type
1	A	639	ASN
1	A	664	ASN
1	A	899	ASN
1	A	920	GLN
1	A	1066	ASN
1	A	1148	ASN
1	A	1270	ASN
1	A	1346	ASN
1	B	361	ASN
1	B	364	ASN
1	B	464	ASN
1	B	483	HIS
1	B	492	HIS
1	B	501	ASN
1	B	539	ASN
1	B	618	ASN
1	B	625	GLN
1	B	665	ASN
1	B	749	ASN
1	B	788	ASN
1	B	980	GLN
1	B	1062	ASN
1	B	1066	ASN
1	B	1119	ASN
1	B	1175	ASN
1	B	1191	GLN
1	B	1200	HIS

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 oligosaccharides 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, 95^{th} 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	1008/1397 (72%)	0.64	94 (9%) 16 12	2, 42, 106, 153	0
1	B	1002/1397 (71%)	1.18	195 (19%) 4 3	12, 67, 134, 199	0
All	All	2010/2794 (71%)	0.91	289 (14%) 7 6	2, 55, 128, 199	0

All (289) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	500	VAL	6.8
1	B	407	HIS	6.3
1	B	1345	ASN	6.2
1	B	726	ASN	6.0
1	B	396	CYS	5.9
1	A	687	ASN	5.2
1	B	770	ILE	5.2
1	B	404	PHE	5.1
1	B	400	ILE	5.1
1	B	743	ILE	4.7
1	A	1267	SER	4.6
1	A	891	CYS	4.6
1	B	744	ASP	4.5
1	A	743	ILE	4.4
1	B	1273	GLU	4.3
1	B	499	THR	4.3
1	B	1138	ASP	4.2
1	A	458	GLU	4.2
1	B	391	LEU	4.2
1	B	583	ASN	4.1
1	B	670	LEU	4.1
1	B	1136	ASN	4.1
1	A	1012	CYS	4.0
1	A	792	LEU	4.0

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Mol	Chain	Res	Type	RSRZ
1	A	742	ASN	4.0
1	B	694	ASP	3.9
1	B	761	SER	3.9
1	B	447	GLN	3.9
1	B	498	THR	3.8
1	B	728	SER	3.8
1	B	727	GLU	3.8
1	B	956	GLU	3.8
1	A	381	ASP	3.8
1	B	1087	ASP	3.8
1	B	461	LYS	3.7
1	B	552	GLU	3.7
1	A	692	PRO	3.7
1	B	410	VAL	3.7
1	B	797	ASP	3.6
1	A	412	PHE	3.6
1	B	1122	SER	3.6
1	A	744	ASP	3.6
1	B	412	PHE	3.6
1	B	399	GLU	3.6
1	B	948	CYS	3.6
1	A	726	ASN	3.6
1	B	395	ASN	3.6
1	B	457	ILE	3.5
1	A	447	GLN	3.5
1	B	803	GLN	3.5
1	A	1093	ASN	3.5
1	A	1008	SER	3.4
1	B	958	ILE	3.4
1	A	1138	ASP	3.4
1	B	1108	ASP	3.4
1	B	667	ILE	3.4
1	B	459	ILE	3.3
1	B	1204	ASN	3.3
1	B	443	LEU	3.3
1	A	615	ASP	3.3
1	B	505	PHE	3.3
1	B	579	ASN	3.3
1	B	1301	ASP	3.3
1	A	747	ASP	3.3
1	A	411	ASN	3.2
1	B	804	GLU	3.2

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Mol	Chain	Res	Type	RSRZ
1	B	718	ILE	3.2
1	B	671	PRO	3.2
1	B	1105	SER	3.2
1	B	790	GLU	3.2
1	B	1036	GLU	3.2
1	A	750	ILE	3.2
1	B	666	ASP	3.2
1	B	759	GLN	3.2
1	A	457	ILE	3.2
1	B	537	ASN	3.2
1	A	943	ASP	3.2
1	B	944	ASP	3.2
1	B	750	ILE	3.1
1	B	742	ASN	3.1
1	A	722	ASP	3.1
1	B	657	ILE	3.1
1	B	444	VAL	3.1
1	B	1037	SER	3.1
1	B	562	LEU	3.1
1	A	399	GLU	3.1
1	B	458	GLU	3.1
1	B	442	ILE	3.1
1	B	561	ILE	3.1
1	B	372	GLU	3.0
1	A	1121	TYR	3.0
1	B	757	ASN	3.0
1	B	760	ILE	3.0
1	A	417	PHE	3.0
1	B	1148	ASN	3.0
1	B	821	ILE	3.0
1	B	408	TYR	3.0
1	B	388	GLU	2.9
1	B	397	ASP	2.9
1	A	1145	GLN	2.9
1	A	766	ASN	2.9
1	A	1347	ASP	2.9
1	B	1120	GLY	2.9
1	B	1039	ASN	2.9
1	A	1056	LEU	2.9
1	B	661	GLU	2.9
1	B	414	SER	2.9
1	B	465	GLU	2.9

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Mol	Chain	Res	Type	RSRZ
1	B	725	GLU	2.9
1	B	952	GLU	2.9
1	A	1348	ILE	2.9
1	B	350	LYS	2.9
1	A	1301	ASP	2.9
1	B	1205	GLY	2.8
1	B	751	ILE	2.8
1	B	1034	ASP	2.8
1	B	1114	LEU	2.8
1	B	674	SER	2.8
1	B	746	ILE	2.8
1	A	785	LEU	2.8
1	B	1135	GLU	2.8
1	B	1268	GLU	2.8
1	B	636	LYS	2.8
1	B	942	LYS	2.8
1	B	1347	ASP	2.7
1	B	582	THR	2.7
1	B	698	THR	2.7
1	B	440	GLU	2.7
1	B	371	ILE	2.7
1	A	562	LEU	2.7
1	B	955	LEU	2.7
1	B	729	LYS	2.7
1	B	740	LEU	2.7
1	B	1042	LYS	2.7
1	B	762	ALA	2.7
1	B	996	ASP	2.7
1	B	401	PHE	2.7
1	B	1127	GLU	2.7
1	B	1113	ASN	2.7
1	B	1088	ALA	2.6
1	B	919	ILE	2.6
1	B	764	LYS	2.6
1	B	554	ASN	2.6
1	A	1125	TYR	2.6
1	B	735	GLU	2.6
1	B	949	ASP	2.6
1	A	1359	SER	2.6
1	B	986	ILE	2.6
1	A	652	THR	2.6
1	A	899	ASN	2.6

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Mol	Chain	Res	Type	RSRZ
1	B	448	LYS	2.6
1	B	398	THR	2.6
1	A	729	LYS	2.6
1	B	1365	SER	2.6
1	A	1069	ASN	2.6
1	B	767	ASN	2.6
1	B	1150	LYS	2.5
1	A	1146	ASN	2.5
1	B	1041	ASN	2.5
1	B	632	GLU	2.5
1	B	1208	GLU	2.5
1	B	723	LEU	2.5
1	B	413	ASP	2.5
1	B	1116	ASP	2.5
1	A	725	GLU	2.5
1	B	1272	PRO	2.5
1	B	549	GLY	2.5
1	B	637	ALA	2.5
1	A	404	PHE	2.4
1	B	769	ALA	2.4
1	B	771	LYS	2.4
1	A	1266	ASN	2.4
1	B	1139	PHE	2.4
1	B	1117	LYS	2.4
1	A	408	TYR	2.4
1	A	1094	ILE	2.4
1	B	432	TYR	2.4
1	A	902	GLU	2.4
1	B	978	ASP	2.4
1	B	539	ASN	2.4
1	A	1123	LYS	2.4
1	B	765	GLY	2.4
1	B	975	ILE	2.4
1	A	658	LYS	2.4
1	B	460	GLU	2.4
1	B	716	LYS	2.4
1	A	414	SER	2.4
1	A	550	ASP	2.4
1	B	418	SER	2.4
1	A	688	PRO	2.4
1	B	1040	GLU	2.4
1	B	1141	ALA	2.4

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Mol	Chain	Res	Type	RSRZ
1	B	976	LEU	2.4
1	B	1343	ILE	2.3
1	B	543	ASN	2.3
1	A	768	LYS	2.3
1	B	1092	PHE	2.3
1	A	633	GLU	2.3
1	B	1161	GLU	2.3
1	B	1109	ALA	2.3
1	A	388	GLU	2.3
1	B	731	ILE	2.3
1	B	693	PHE	2.3
1	B	773	TYR	2.3
1	A	901	GLU	2.3
1	B	968	GLU	2.3
1	A	689	LYS	2.3
1	A	916	ASP	2.3
1	A	990	ASP	2.3
1	B	445	ASN	2.3
1	B	753	ASN	2.3
1	A	459	ILE	2.3
1	B	439	ILE	2.3
1	B	555	TYR	2.3
1	B	1267	SER	2.3
1	A	1119	ASN	2.3
1	B	1270	ASN	2.3
1	A	1070	PRO	2.2
1	B	406	LYS	2.2
1	A	754	TYR	2.2
1	B	580	ASN	2.2
1	B	664	ASN	2.2
1	B	722	ASP	2.2
1	B	1348	ILE	2.2
1	B	433	ARG	2.2
1	A	394	GLY	2.2
1	B	893	THR	2.2
1	B	352	ASP	2.2
1	B	540	ASN	2.2
1	B	1223	ARG	2.2
1	B	752	GLU	2.2
1	A	402	GLY	2.2
1	B	1230	GLY	2.2
1	A	1141	ALA	2.2

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Mol	Chain	Res	Type	RSRZ
1	B	733	LEU	2.2
1	B	866	LEU	2.2
1	B	707	ILE	2.2
1	B	357	PHE	2.2
1	A	697	GLU	2.2
1	A	765	GLY	2.2
1	B	755	TYR	2.2
1	A	638	LEU	2.2
1	B	695	THR	2.2
1	B	662	GLU	2.1
1	B	684	TYR	2.1
1	A	1140	PHE	2.1
1	B	777	VAL	2.1
1	A	613	THR	2.1
1	B	737	LYS	2.1
1	A	649	ASN	2.1
1	A	686	ASN	2.1
1	A	728	SER	2.1
1	A	1113	ASN	2.1
1	B	1222	SER	2.1
1	B	747	ASP	2.1
1	B	783	GLY	2.1
1	B	625	GLN	2.1
1	A	693	PHE	2.1
1	A	660	SER	2.1
1	A	651	ILE	2.1
1	A	400	ILE	2.1
1	A	724	GLU	2.1
1	A	727	GLU	2.1
1	A	804	GLU	2.1
1	B	940	GLU	2.1
1	B	1098	ASN	2.1
1	A	789	TYR	2.1
1	B	758	ALA	2.1
1	B	702	VAL	2.1
1	B	1078	LEU	2.1
1	A	817	THR	2.1
1	A	1367	ASN	2.1
1	B	703	LEU	2.1
1	A	948	CYS	2.1
1	A	631	ASP	2.0
1	B	390	GLU	2.0

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Mol	Chain	Res	Type	RSRZ
1	B	894	GLU	2.0
1	B	730	ASN	2.0
1	A	978	ASP	2.0
1	B	558	ASP	2.0
1	B	631	ASP	2.0
1	B	1130	ILE	2.0
1	B	1152	PHE	2.0
1	A	549	GLY	2.0
1	A	741	GLY	2.0
1	A	1265	GLU	2.0
1	A	892	ILE	2.0
1	B	419	LYS	2.0
1	A	391	LEU	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.