



Full wwPDB X-ray Structure Validation Report ⓘ

Jun 12, 2024 – 08:18 PM EDT

PDB ID : 3LRB
Title : Structure of E. coli AdiC
Authors : Gao, X.; Lu, F.; Zhou, L.; Shi, Y.
Deposited on : 2010-02-10
Resolution : 3.61 Å(reported)

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

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

<https://www.wwpdb.org/validation/2017/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

MolProbity : 4.02b-467
Xtriage (Phenix) : 1.20.1
EDS : 2.36.2
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac : 5.8.0158
CCP4 : 7.0.044 (Gargrove)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.36.2

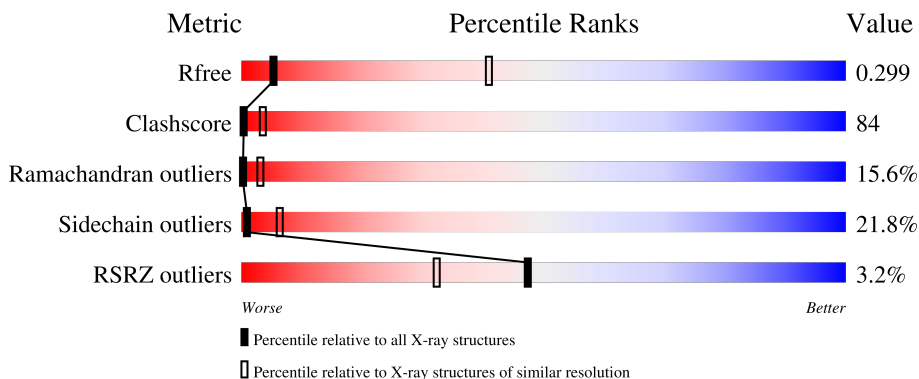
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.61 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	1290 (3.74-3.50)
Clashscore	141614	1387 (3.74-3.50)
Ramachandran outliers	138981	1339 (3.74-3.50)
Sidechain outliers	138945	1339 (3.74-3.50)
RSRZ outliers	127900	1191 (3.74-3.50)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	445	
1	B	445	

2 Entry composition

There is only 1 type of molecule in this entry. The entry contains 6072 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.

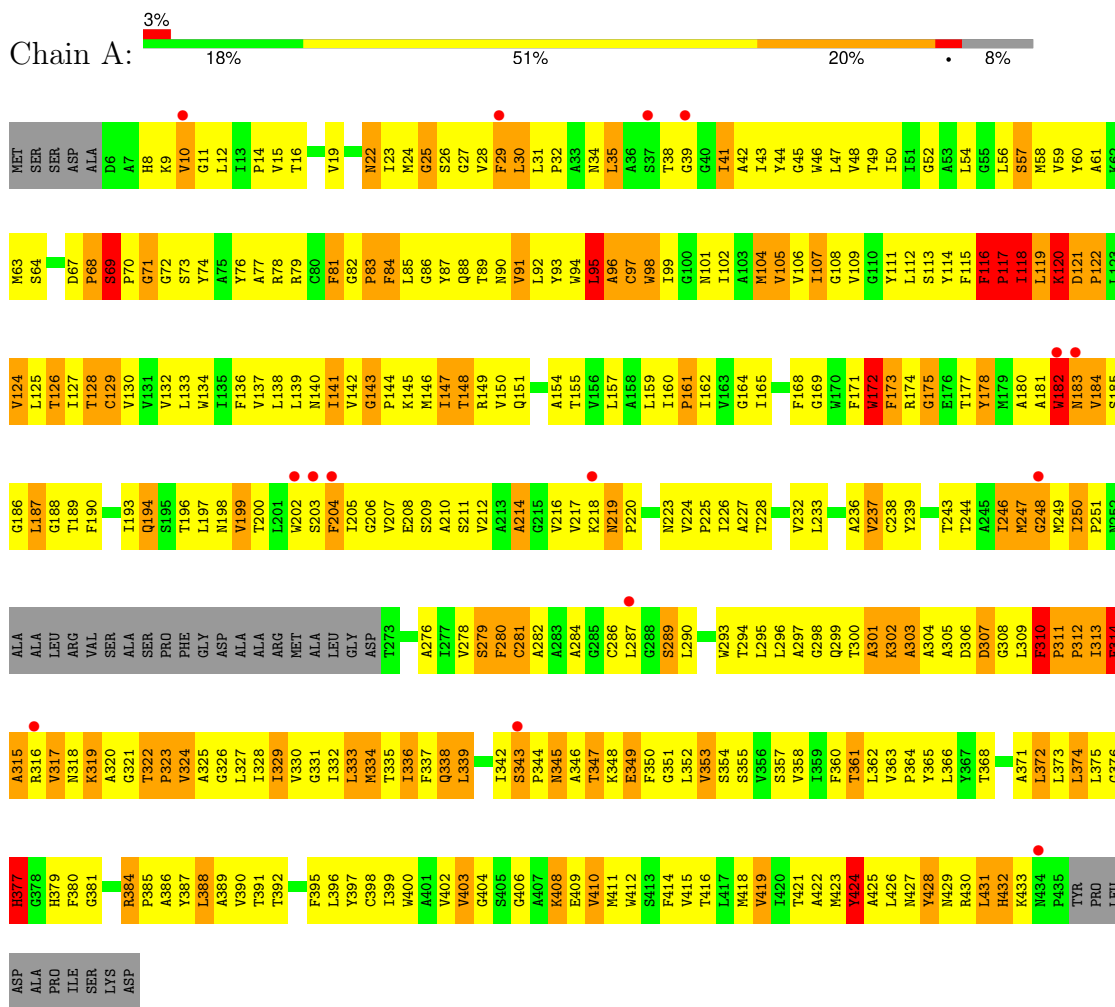
- Molecule 1 is a protein called Arginine/agmatine antiporter.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	410	Total 3036	C 2020	N 481	O 514	S 21	0	0	0
1	B	410	Total 3036	C 2020	N 481	O 514	S 21	0	0	0

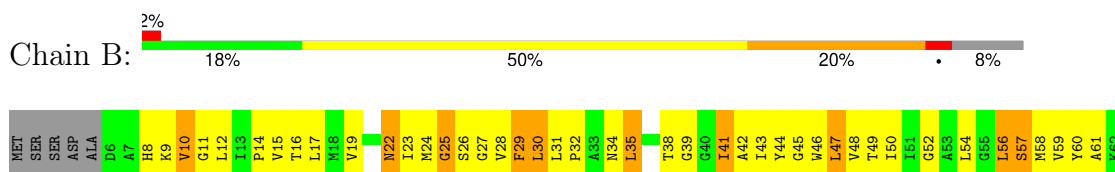
3 Residue-property plots [i](#)

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



- Molecule 1: Arginine/agmatine antiporter



PRO	L375	L313	W252	S185	V124	M63
LEU	G376	F314	ALA	G186	L125	S64
ASP	H377	A315	ALA	L187	L126	D67
ALA	G378	R316	LEU	G188	I127	P68
PRO	H379	V317	ARG	F189	T128	S69
ILE	F380	N318	VAL	F190	C129	P70
SER	G381	K319	SER		V130	G71
LYS		A320	ALA	I193	V131	
ASP	R384	G321	SER	Q194	V132	G72
	P385	T322	PRO	S195	L133	S73
	A386	P323	PHE	T196	W134	Y74
	Y387	V324	GLY	L197	I135	A75
	L388	A325	ASP	N198	F136	Y76
	A389	G326	ALA	V199	V137	A77
	V390	L327	ALA	T200	L138	R78
	T391	I328	ARG	L201	L139	R79
	T392	I329	MET	W202	N140	C80
	F395	V330	ALA	S203	I141	F81
	L396	G331	LEU	F204	V142	G82
	Y397	I332	GLY	L205	G143	P83
	C398	L333	ASP	G206	P144	F84
	I399	M334	V207	E208	K145	L85
	W400	T335	E208	E209	M146	G86
	V401	I336	S209	A210	I147	Y87
	V402	F337	A210	S211	T148	Q88
	V403	Q388	S211	S211	R149	T89
	G404	L339	V212	V212	V150	N90
	S405	I342	A213	A213	Q151	V91
	G406	S343	C281	A214		L92
	A407	S344	A282	G215	A154	Y93
	K408	P344	A283	V216	T155	W94
	E409	M345	A284	V217	V156	L95
	M410	A346	G285	K218	L157	A96
	M411	T347	C286	N219	A158	C97
	M412	E349	L287	P220	L159	W98
	F413	F350	G288	N223	I160	I99
	F414	G351	S289	W224	P161	G100
	V415	L352	L290	P225	I162	N101
	L416	V353	G291	P226	V163	I102
	M417	S354	W293	I226	G164	A103
	M418	S355	T294	A227	I165	M104
	V419	V356	T295	T228	A166	V105
	T420	S357	L295	V232	V167	V106
	T421	V358	L296	L233	F168	I107
	A422	I359	A297	L233	G169	G108
	M423	F360	G298	A236	W170	V109
	L426	T361	Q299	V237	F171	G110
	N427	L362	T300	C238	W172	Y111
	Y428	P364	A301	Y239	F173	L112
	Y429	P365	K302	T243	R174	S113
	N429	Y366	A303	T244	G175	Y114
	R430	L367	A304	T245	E176	F115
	L431	T368	D306	I246	T177	F116
	H432	A371	G307	W247	Y178	P117
	K433	L372	L309	G248	M179	I118
	W434	L373	F310	R249	A180	L119
	P435	L374	L311	I250	A181	K120
	TYR	L374	P312	P251	W182	D121
					P183	P122
					V184	L123

4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	92.81Å 108.30Å 138.11Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	49.32 – 3.61 49.32 – 3.61	Depositor EDS
% Data completeness (in resolution range)	99.6 (49.32-3.61) 99.8 (49.32-3.61)	Depositor EDS
R_{merge}	0.08	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.50 (at 3.57Å)	Xtrriage
Refinement program	PHENIX (phenix.refine)	Depositor
R, R_{free}	0.295 , 0.318 0.278 , 0.299	Depositor DCC
R_{free} test set	876 reflections (5.29%)	wwPDB-VP
Wilson B-factor (Å ²)	152.4	Xtrriage
Anisotropy	0.452	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.25 , 132.2	EDS
L-test for twinning ²	$\langle L \rangle = 0.48$, $\langle L^2 \rangle = 0.31$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
F_o, F_c correlation	0.92	EDS
Total number of atoms	6072	wwPDB-VP
Average B, all atoms (Å ²)	188.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.85% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

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

5 Model quality [i](#)

5.1 Standard geometry [i](#)

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	A	0.48	0/3115	0.74	2/4264 (0.0%)
1	B	0.48	0/3115	0.74	2/4264 (0.0%)
All	All	0.48	0/6230	0.74	4/8528 (0.0%)

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	3
1	B	0	3
All	All	0	6

There are no bond length outliers.

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	311	PRO	C-N-CD	-6.25	106.85	120.60
1	B	311	PRO	C-N-CD	-5.78	107.89	120.60
1	A	432	HIS	N-CA-C	5.72	126.45	111.00
1	B	432	HIS	N-CA-C	5.38	125.52	111.00

There are no chirality outliers.

All (6) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	116	PHE	Peptide
1	A	377	HIS	Peptide
1	A	424	TYR	Peptide
1	B	116	PHE	Peptide
1	B	377	HIS	Peptide

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Mol	Chain	Res	Type	Group
1	B	424	TYR	Peptide

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	3036	0	3141	537	0
1	B	3036	0	3141	538	0
All	All	6072	0	6282	1040	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 84.

All (1040) 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:A:315:ALA:HB1	1:A:316:ARG:HA	1.19	1.16
1:A:430:ARG:HG2	1:B:374:LEU:HD23	1.28	1.15
1:B:38:THR:HB	1:B:39:GLY:HA3	1.18	1.14
1:B:315:ALA:HB1	1:B:316:ARG:HA	1.15	1.14
1:A:38:THR:HB	1:A:39:GLY:HA3	1.19	1.12
1:B:342:ILE:HB	1:B:343:SER:HB2	1.37	1.06
1:B:425:ALA:HA	1:B:428:TYR:CZ	1.90	1.05
1:A:105:VAL:HB	1:A:129:CYS:SG	1.97	1.03
1:A:425:ALA:HA	1:A:428:TYR:CZ	1.91	1.03
1:A:374:LEU:HD23	1:B:430:ARG:HG2	1.36	1.02
1:A:342:ILE:HB	1:A:343:SER:HB2	1.38	1.02
1:B:105:VAL:HB	1:B:129:CYS:SG	2.00	1.00
1:B:327:LEU:H	1:B:327:LEU:HD12	1.27	0.99
1:A:327:LEU:HD12	1:A:327:LEU:H	1.27	0.99
1:A:173:PHE:HA	1:A:174:ARG:HB2	1.44	0.98
1:B:173:PHE:HA	1:B:174:ARG:HB2	1.44	0.98
1:A:164:GLY:O	1:A:168:PHE:HB2	1.62	0.98
1:B:38:THR:CB	1:B:39:GLY:HA3	1.93	0.97
1:B:164:GLY:O	1:B:168:PHE:HB2	1.64	0.96
1:A:116:PHE:O	1:A:118:ILE:HG22	1.67	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:38:THR:CB	1:A:39:GLY:HA3	1.94	0.94
1:B:91:VAL:O	1:B:95:LEU:HB2	1.67	0.93
1:A:424:TYR:HD1	1:A:430:ARG:NH2	1.66	0.93
1:A:107:ILE:HG23	1:A:111:TYR:HE1	1.34	0.92
1:B:210:ALA:HB3	1:B:228:THR:HG22	1.49	0.92
1:A:422:ALA:HA	1:B:395:PHE:CE1	2.04	0.92
1:B:79:ARG:HB2	1:B:375:LEU:HD11	1.51	0.92
1:A:24:MET:HB3	1:A:25:GLY:HA2	1.52	0.91
1:A:91:VAL:O	1:A:95:LEU:HB2	1.69	0.91
1:A:210:ALA:HB3	1:A:228:THR:HG22	1.49	0.91
1:B:116:PHE:O	1:B:118:ILE:HG22	1.70	0.91
1:B:424:TYR:HD1	1:B:430:ARG:NH2	1.67	0.91
1:A:93:TYR:HD2	1:A:300:THR:HG21	1.33	0.91
1:A:428:TYR:OH	1:B:373:LEU:HD13	1.71	0.90
1:B:302:LYS:HG3	1:B:314:PHE:HB2	1.50	0.90
1:B:346:ALA:HB3	1:B:351:GLY:HA2	1.51	0.90
1:B:102:ILE:HD13	1:B:337:PHE:HD2	1.37	0.90
1:B:24:MET:HB3	1:B:25:GLY:HA2	1.54	0.90
1:B:107:ILE:HG23	1:B:111:TYR:HE1	1.36	0.89
1:B:10:VAL:HG12	1:B:11:GLY:H	1.36	0.89
1:A:10:VAL:HG12	1:A:11:GLY:H	1.37	0.88
1:A:302:LYS:HG3	1:A:314:PHE:HB2	1.54	0.88
1:B:342:ILE:CB	1:B:343:SER:HB2	2.03	0.88
1:A:16:THR:HG22	1:A:227:ALA:HA	1.53	0.88
1:A:342:ILE:CB	1:A:343:SER:HB2	2.04	0.87
1:B:93:TYR:HD2	1:B:300:THR:HG21	1.37	0.87
1:A:384:ARG:HE	1:A:388:LEU:HD12	1.39	0.87
1:B:16:THR:HG22	1:B:227:ALA:HA	1.55	0.87
1:A:374:LEU:O	1:A:375:LEU:HD23	1.74	0.87
1:A:346:ALA:HB3	1:A:351:GLY:HA2	1.53	0.86
1:A:315:ALA:CB	1:A:316:ARG:HA	2.05	0.86
1:A:102:ILE:HD13	1:A:337:PHE:HD2	1.38	0.86
1:A:57:SER:HB2	1:A:232:VAL:HG21	1.58	0.85
1:B:374:LEU:O	1:B:375:LEU:HD23	1.76	0.85
1:B:315:ALA:CB	1:B:316:ARG:HA	2.01	0.85
1:A:425:ALA:HA	1:A:428:TYR:CE1	2.11	0.85
1:A:424:TYR:CD1	1:A:430:ARG:NH2	2.45	0.85
1:B:384:ARG:HE	1:B:388:LEU:HD12	1.41	0.85
1:A:28:VAL:HG11	1:A:162:ILE:HD11	1.56	0.85
1:B:315:ALA:HB1	1:B:316:ARG:CA	2.03	0.85
1:B:425:ALA:HA	1:B:428:TYR:CE1	2.12	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:428:TYR:O	1:A:429:ASN:ND2	2.10	0.85
1:A:313:ILE:HG22	1:A:314:PHE:H	1.40	0.84
1:A:79:ARG:HB2	1:A:375:LEU:HD11	1.57	0.84
1:B:330:VAL:O	1:B:334:MET:HB2	1.77	0.84
1:A:118:ILE:HA	1:A:119:LEU:O	1.78	0.84
1:A:228:THR:O	1:A:232:VAL:HG23	1.78	0.84
1:B:22:ASN:HB3	1:B:293:TRP:NE1	1.93	0.83
1:A:139:LEU:HD13	1:A:150:VAL:HG21	1.59	0.83
1:B:139:LEU:HD13	1:B:150:VAL:HG21	1.59	0.83
1:B:290:LEU:O	1:B:294:THR:HG23	1.79	0.83
1:A:315:ALA:HB1	1:A:316:ARG:CA	2.07	0.83
1:B:228:THR:O	1:B:232:VAL:HG23	1.79	0.83
1:A:160:ILE:HB	1:A:161:PRO:HD3	1.61	0.82
1:B:342:ILE:HB	1:B:343:SER:CB	2.09	0.82
1:A:330:VAL:O	1:A:334:MET:HB2	1.79	0.82
1:A:138:LEU:HA	1:A:141:ILE:HG13	1.59	0.82
1:B:160:ILE:HB	1:B:161:PRO:HD3	1.62	0.82
1:A:342:ILE:HB	1:A:343:SER:CB	2.09	0.82
1:B:424:TYR:CD1	1:B:430:ARG:NH2	2.48	0.82
1:A:290:LEU:O	1:A:294:THR:HG23	1.79	0.82
1:B:138:LEU:HA	1:B:141:ILE:HG13	1.60	0.82
1:B:28:VAL:HG11	1:B:162:ILE:HD11	1.62	0.81
1:B:104:MET:HE3	1:B:286:CYS:SG	2.21	0.81
1:A:19:VAL:O	1:A:23:ILE:HD13	1.81	0.81
1:A:102:ILE:HD13	1:A:337:PHE:CD2	2.16	0.81
1:A:118:ILE:HA	1:A:119:LEU:C	2.01	0.81
1:A:130:VAL:HG21	1:A:339:LEU:HD23	1.61	0.81
1:B:57:SER:HB2	1:B:232:VAL:HG21	1.62	0.81
1:B:44:TYR:HD2	1:B:193:ILE:HD11	1.46	0.81
1:B:130:VAL:HG21	1:B:339:LEU:HD23	1.62	0.80
1:A:41:ILE:HG13	1:A:43:ILE:HG13	1.64	0.80
1:B:102:ILE:HD13	1:B:337:PHE:CD2	2.17	0.79
1:B:41:ILE:HG13	1:B:43:ILE:HG13	1.65	0.79
1:B:311:PRO:HD3	1:B:426:LEU:HD21	1.64	0.79
1:A:104:MET:HE3	1:A:286:CYS:SG	2.22	0.79
1:B:67:ASP:CG	1:B:79:ARG:HH12	1.86	0.79
1:A:22:ASN:HB3	1:A:293:TRP:NE1	1.98	0.79
1:A:219:ASN:H	1:A:223:ASN:HD22	1.31	0.79
1:B:313:ILE:HG22	1:B:314:PHE:H	1.46	0.79
1:A:327:LEU:HD12	1:A:327:LEU:N	1.98	0.79
1:B:118:ILE:HA	1:B:119:LEU:C	2.03	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:118:ILE:HA	1:B:119:LEU:O	1.81	0.79
1:B:10:VAL:HG12	1:B:11:GLY:N	1.97	0.78
1:B:428:TYR:O	1:B:429:ASN:ND2	2.16	0.78
1:B:327:LEU:HD12	1:B:327:LEU:N	1.98	0.78
1:B:219:ASN:H	1:B:223:ASN:HD22	1.30	0.78
1:B:323:PRO:HD2	1:B:327:LEU:HD11	1.64	0.78
1:B:372:LEU:O	1:B:372:LEU:HG	1.83	0.78
1:A:207:VAL:HG12	1:A:232:VAL:HG22	1.65	0.77
1:B:312:PRO:HA	1:B:313:ILE:HB	1.64	0.77
1:A:312:PRO:HA	1:A:313:ILE:HB	1.66	0.77
1:B:121:ASP:HB2	1:B:122:PRO:HD3	1.67	0.77
1:A:86:GLY:O	1:A:89:THR:HG22	1.84	0.77
1:A:313:ILE:O	1:A:315:ALA:HB3	1.85	0.76
1:A:107:ILE:HG23	1:A:111:TYR:CE1	2.20	0.76
1:A:126:THR:HG21	1:A:342:ILE:HG23	1.66	0.76
1:A:323:PRO:HD2	1:A:327:LEU:HD11	1.66	0.76
1:A:311:PRO:HD3	1:A:426:LEU:HD21	1.65	0.76
1:A:374:LEU:HD12	1:A:374:LEU:H	1.51	0.76
1:B:126:THR:HG21	1:B:342:ILE:HG23	1.65	0.76
1:A:430:ARG:HG2	1:B:374:LEU:CD2	2.14	0.76
1:A:32:PRO:HG3	1:A:243:THR:HG22	1.68	0.76
1:B:72:GLY:H	1:B:212:VAL:HA	1.50	0.76
1:A:10:VAL:HG12	1:A:11:GLY:N	2.00	0.75
1:A:44:TYR:HD2	1:A:193:ILE:HD11	1.50	0.75
1:A:140:ASN:HB3	1:A:327:LEU:CD2	2.16	0.75
1:A:67:ASP:CG	1:A:79:ARG:HH12	1.89	0.75
1:B:19:VAL:O	1:B:23:ILE:HD13	1.87	0.75
1:A:395:PHE:CE1	1:B:422:ALA:HA	2.21	0.75
1:A:314:PHE:HA	1:A:315:ALA:C	2.07	0.75
1:A:302:LYS:HD3	1:A:302:LYS:N	2.01	0.75
1:A:219:ASN:HD22	1:A:223:ASN:ND2	1.85	0.74
1:B:44:TYR:CD2	1:B:193:ILE:HD11	2.22	0.74
1:B:64:SER:O	1:B:68:PRO:HG3	1.88	0.74
1:B:140:ASN:HB3	1:B:327:LEU:CD2	2.17	0.74
1:B:376:GLY:HA3	1:B:379:HIS:CD2	2.22	0.74
1:B:374:LEU:HD12	1:B:374:LEU:H	1.52	0.74
1:B:313:ILE:O	1:B:315:ALA:HB3	1.87	0.74
1:B:207:VAL:HG12	1:B:232:VAL:HG22	1.68	0.74
1:B:219:ASN:HD22	1:B:223:ASN:ND2	1.85	0.73
1:B:379:HIS:C	1:B:381:GLY:H	1.91	0.73
1:A:376:GLY:HA3	1:A:379:HIS:CD2	2.23	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:342:ILE:CA	1:B:343:SER:HB2	2.18	0.73
1:B:22:ASN:HB3	1:B:293:TRP:HE1	1.53	0.73
1:B:32:PRO:HG3	1:B:243:THR:HG22	1.70	0.73
1:A:72:GLY:H	1:A:212:VAL:HA	1.53	0.73
1:A:372:LEU:HG	1:A:372:LEU:O	1.88	0.73
1:B:107:ILE:HG23	1:B:111:TYR:CE1	2.22	0.72
1:A:302:LYS:HD3	1:A:302:LYS:H	1.54	0.72
1:A:50:ILE:HD13	1:A:236:ALA:HB1	1.71	0.72
1:A:209:SER:HB3	1:A:296:LEU:HD11	1.71	0.72
1:A:342:ILE:CA	1:A:343:SER:HB2	2.18	0.72
1:A:102:ILE:HD13	1:A:337:PHE:HB3	1.72	0.72
1:A:121:ASP:HB2	1:A:122:PRO:HD3	1.71	0.72
1:A:184:VAL:HG12	1:A:185:SER:H	1.54	0.72
1:A:379:HIS:C	1:A:381:GLY:H	1.93	0.72
1:A:44:TYR:CD2	1:A:193:ILE:HD11	2.24	0.72
1:B:302:LYS:HD3	1:B:302:LYS:N	2.03	0.72
1:B:72:GLY:N	1:B:212:VAL:HA	2.05	0.71
1:B:184:VAL:HG12	1:B:185:SER:H	1.56	0.71
1:B:302:LYS:HD3	1:B:302:LYS:H	1.56	0.71
1:A:105:VAL:HG13	1:A:290:LEU:HD11	1.72	0.71
1:A:64:SER:O	1:A:68:PRO:HG3	1.90	0.70
1:B:23:ILE:HD11	1:B:206:GLY:C	2.12	0.70
1:A:424:TYR:HD1	1:A:430:ARG:HH21	1.39	0.70
1:B:38:THR:HB	1:B:39:GLY:CA	2.11	0.70
1:B:90:ASN:OD1	1:B:300:THR:O	2.08	0.70
1:A:428:TYR:HE2	1:B:388:LEU:HD21	1.56	0.70
1:B:209:SER:HB3	1:B:296:LEU:HD11	1.74	0.70
1:A:310:PHE:HB3	1:A:311:PRO:O	1.92	0.70
1:B:335:THR:O	1:B:338:GLN:N	2.25	0.70
1:B:424:TYR:HD1	1:B:430:ARG:HH21	1.38	0.69
1:B:104:MET:HE2	1:B:104:MET:O	1.93	0.69
1:B:86:GLY:O	1:B:89:THR:HG22	1.92	0.69
1:B:38:THR:CB	1:B:39:GLY:CA	2.70	0.69
1:B:305:ALA:HB1	1:B:312:PRO:HB3	1.74	0.69
1:B:327:LEU:H	1:B:327:LEU:CD1	2.04	0.69
1:A:388:LEU:HD21	1:B:428:TYR:HE2	1.58	0.69
1:A:22:ASN:HB3	1:A:293:TRP:HE1	1.57	0.69
1:A:101:ASN:O	1:A:104:MET:N	2.26	0.69
1:B:34:ASN:HB3	1:B:199:VAL:HG11	1.75	0.69
1:A:72:GLY:N	1:A:212:VAL:HA	2.08	0.69
1:A:250:ILE:H	1:A:251:PRO:HD2	1.58	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:327:LEU:H	1:A:327:LEU:CD1	2.04	0.68
1:A:344:PRO:HA	1:A:347:THR:HG22	1.75	0.68
1:B:138:LEU:O	1:B:142:VAL:HG23	1.94	0.68
1:B:314:PHE:HA	1:B:315:ALA:C	2.11	0.68
1:B:347:THR:O	1:B:348:LYS:HG3	1.94	0.68
1:A:428:TYR:CZ	1:B:373:LEU:HD13	2.28	0.68
1:B:102:ILE:HD13	1:B:337:PHE:HB3	1.76	0.68
1:B:139:LEU:HD22	1:B:146:MET:HE1	1.75	0.68
1:B:323:PRO:HD2	1:B:327:LEU:CD1	2.23	0.68
1:A:34:ASN:HB3	1:A:199:VAL:HG11	1.74	0.68
1:A:250:ILE:H	1:A:251:PRO:CD	2.07	0.68
1:A:374:LEU:CD2	1:B:430:ARG:HG2	2.19	0.68
1:B:379:HIS:HD1	1:B:387:TYR:HD2	1.41	0.68
1:A:143:GLY:HA2	1:A:146:MET:H	1.57	0.68
1:B:81:PHE:HB3	1:B:82:GLY:HA2	1.74	0.68
1:B:93:TYR:CD2	1:B:300:THR:HG21	2.26	0.68
1:B:72:GLY:C	1:B:74:TYR:H	1.97	0.68
1:B:205:ILE:HD11	1:B:358:VAL:HG13	1.75	0.68
1:A:300:THR:HG22	1:A:300:THR:O	1.93	0.67
1:B:250:ILE:H	1:B:251:PRO:HD2	1.59	0.67
1:A:44:TYR:HB2	1:A:193:ILE:HD11	1.77	0.67
1:B:250:ILE:H	1:B:251:PRO:CD	2.08	0.67
1:B:379:HIS:ND1	1:B:387:TYR:HD2	1.93	0.67
1:B:120:LYS:HA	1:B:120:LYS:HE3	1.76	0.67
1:B:144:PRO:HB2	1:B:216:VAL:HG11	1.77	0.67
1:A:95:LEU:HD23	1:A:95:LEU:O	1.95	0.67
1:A:178:TYR:HD2	1:A:247:MET:HA	1.59	0.67
1:B:50:ILE:HD13	1:B:236:ALA:HB1	1.76	0.67
1:B:424:TYR:N	1:B:424:TYR:HD2	1.93	0.67
1:A:90:ASN:OD1	1:A:300:THR:O	2.12	0.66
1:A:424:TYR:N	1:A:424:TYR:CD2	2.63	0.66
1:B:105:VAL:HG13	1:B:290:LEU:HD11	1.76	0.66
1:A:93:TYR:CD2	1:A:300:THR:HG21	2.23	0.66
1:A:104:MET:HE2	1:A:104:MET:O	1.95	0.66
1:B:41:ILE:O	1:B:183:ASN:HA	1.96	0.66
1:B:424:TYR:N	1:B:424:TYR:CD2	2.64	0.66
1:A:347:THR:O	1:A:348:LYS:HG3	1.94	0.66
1:A:78:ARG:HA	1:A:82:GLY:HA3	1.77	0.66
1:B:69:SER:OG	1:B:70:PRO:HA	1.95	0.66
1:A:84:PHE:HZ	1:A:421:THR:HG1	1.41	0.66
1:A:342:ILE:N	1:A:343:SER:HB2	2.10	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:83:PRO:HB3	1:B:430:ARG:NH1	2.11	0.66
1:A:72:GLY:C	1:A:74:TYR:H	1.98	0.66
1:B:126:THR:CG2	1:B:342:ILE:HG23	2.25	0.66
1:B:81:PHE:HB3	1:B:82:GLY:CA	2.26	0.66
1:B:300:THR:O	1:B:300:THR:HG22	1.95	0.66
1:A:23:ILE:HD11	1:A:206:GLY:C	2.16	0.66
1:B:325:ALA:O	1:B:329:ILE:HG13	1.95	0.66
1:A:379:HIS:ND1	1:A:387:TYR:HD2	1.94	0.66
1:A:81:PHE:HB3	1:A:82:GLY:HA2	1.77	0.65
1:B:105:VAL:HG21	1:B:133:LEU:HD21	1.78	0.65
1:A:98:TRP:CD1	1:A:98:TRP:C	2.69	0.65
1:A:126:THR:CG2	1:A:342:ILE:HG23	2.25	0.65
1:A:128:THR:O	1:A:132:VAL:HG23	1.96	0.65
1:A:311:PRO:CD	1:A:426:LEU:HD21	2.26	0.65
1:B:178:TYR:HD2	1:B:247:MET:HA	1.58	0.65
1:A:8:HIS:HA	1:A:145:LYS:HD2	1.78	0.65
1:A:120:LYS:HE3	1:A:120:LYS:HA	1.78	0.65
1:A:305:ALA:HB1	1:A:312:PRO:HB3	1.77	0.65
1:A:373:LEU:HD13	1:B:428:TYR:OH	1.95	0.65
1:B:312:PRO:HA	1:B:313:ILE:CB	2.27	0.65
1:B:128:THR:O	1:B:132:VAL:HG23	1.96	0.65
1:B:143:GLY:HA2	1:B:146:MET:H	1.61	0.65
1:B:342:ILE:N	1:B:343:SER:HB2	2.10	0.65
1:A:38:THR:CB	1:A:39:GLY:CA	2.71	0.65
1:A:144:PRO:HB2	1:A:216:VAL:HG11	1.78	0.65
1:B:344:PRO:HA	1:B:347:THR:HG22	1.78	0.65
1:A:41:ILE:O	1:A:183:ASN:HA	1.97	0.65
1:B:72:GLY:O	1:B:74:TYR:N	2.30	0.65
1:B:95:LEU:O	1:B:95:LEU:HD23	1.97	0.65
1:A:19:VAL:HG11	1:A:228:THR:HA	1.77	0.65
1:A:105:VAL:HG21	1:A:133:LEU:HD21	1.78	0.65
1:A:69:SER:OG	1:A:70:PRO:HA	1.97	0.64
1:A:97:CYS:HB2	1:A:297:ALA:HB2	1.79	0.64
1:A:249:MET:SD	1:A:251:PRO:HD2	2.37	0.64
1:A:59:VAL:HG22	1:A:391:THR:HG22	1.79	0.64
1:A:323:PRO:HD2	1:A:327:LEU:CD1	2.27	0.64
1:A:424:TYR:N	1:A:424:TYR:HD2	1.95	0.64
1:A:325:ALA:O	1:A:329:ILE:HG13	1.98	0.64
1:A:312:PRO:HA	1:A:313:ILE:CB	2.27	0.63
1:B:19:VAL:HG11	1:B:228:THR:HA	1.79	0.63
1:B:140:ASN:ND2	1:B:147:ILE:HG12	2.12	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:207:VAL:HG12	1:A:232:VAL:CG2	2.27	0.63
1:A:430:ARG:HG3	1:A:431:LEU:H	1.63	0.63
1:B:311:PRO:CD	1:B:426:LEU:HD21	2.26	0.63
1:A:298:GLY:HA2	1:A:302:LYS:HE2	1.79	0.63
1:B:78:ARG:HA	1:B:82:GLY:HA3	1.78	0.63
1:B:97:CYS:HB2	1:B:297:ALA:HB2	1.81	0.63
1:B:207:VAL:HG12	1:B:232:VAL:CG2	2.29	0.63
1:B:302:LYS:CG	1:B:314:PHE:HB2	2.27	0.63
1:A:371:ALA:C	1:A:373:LEU:H	2.02	0.63
1:B:101:ASN:O	1:B:104:MET:N	2.30	0.63
1:A:84:PHE:CD1	1:B:85:LEU:HD11	2.34	0.63
1:B:133:LEU:HD11	1:B:338:GLN:HG3	1.81	0.63
1:B:376:GLY:HA3	1:B:379:HIS:HD2	1.62	0.63
1:A:81:PHE:HB3	1:A:82:GLY:CA	2.29	0.62
1:B:372:LEU:O	1:B:372:LEU:CG	2.47	0.62
1:B:59:VAL:HG22	1:B:391:THR:HG22	1.82	0.62
1:B:120:LYS:HE3	1:B:120:LYS:CA	2.29	0.62
1:A:310:PHE:HB3	1:A:311:PRO:C	2.20	0.62
1:A:376:GLY:HA3	1:A:379:HIS:HD2	1.62	0.62
1:B:173:PHE:CA	1:B:174:ARG:HB2	2.25	0.62
1:B:301:ALA:HB1	1:B:310:PHE:HE1	1.65	0.62
1:A:306:ASP:O	1:A:308:GLY:N	2.33	0.62
1:B:98:TRP:CD1	1:B:98:TRP:C	2.72	0.62
1:B:249:MET:SD	1:B:251:PRO:HD2	2.38	0.62
1:A:173:PHE:CA	1:A:174:ARG:HB2	2.25	0.62
1:B:44:TYR:HB2	1:B:193:ILE:HD11	1.81	0.62
1:B:306:ASP:O	1:B:308:GLY:N	2.33	0.62
1:B:50:ILE:O	1:B:54:LEU:HB2	2.00	0.61
1:B:379:HIS:CE1	1:B:387:TYR:CD2	2.88	0.61
1:B:8:HIS:HA	1:B:145:LYS:HD2	1.81	0.61
1:A:24:MET:HB3	1:A:25:GLY:CA	2.29	0.61
1:A:379:HIS:CE1	1:A:387:TYR:CD2	2.88	0.61
1:A:114:TYR:CD1	1:A:118:ILE:HG12	2.35	0.61
1:A:173:PHE:HA	1:A:174:ARG:CB	2.18	0.61
1:B:430:ARG:HG3	1:B:431:LEU:H	1.64	0.61
1:A:50:ILE:O	1:A:54:LEU:HB2	2.01	0.61
1:A:205:ILE:HD11	1:A:358:VAL:HG13	1.83	0.61
1:A:72:GLY:O	1:A:74:TYR:N	2.34	0.61
1:A:139:LEU:HD22	1:A:146:MET:HE1	1.83	0.60
1:B:298:GLY:HA2	1:B:302:LYS:HE2	1.81	0.60
1:B:24:MET:HB3	1:B:25:GLY:CA	2.30	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:371:ALA:C	1:B:373:LEU:H	2.03	0.60
1:A:140:ASN:ND2	1:A:147:ILE:HG12	2.16	0.60
1:B:71:GLY:O	1:B:212:VAL:HG13	2.01	0.60
1:B:142:VAL:CG1	1:B:146:MET:HG3	2.31	0.60
1:B:280:PHE:C	1:B:282:ALA:H	2.04	0.60
1:A:301:ALA:HB1	1:A:310:PHE:HE1	1.66	0.60
1:A:422:ALA:HA	1:B:395:PHE:CD1	2.37	0.60
1:B:310:PHE:HB3	1:B:311:PRO:O	2.01	0.60
1:A:406:GLY:HA3	1:A:409:GLU:OE1	2.02	0.60
1:B:19:VAL:HG21	1:B:210:ALA:HB2	1.84	0.60
1:B:427:ASN:O	1:B:429:ASN:N	2.30	0.60
1:B:314:PHE:N	1:B:314:PHE:CD2	2.67	0.60
1:B:406:GLY:HA3	1:B:409:GLU:OE1	2.00	0.60
1:B:173:PHE:HA	1:B:174:ARG:CB	2.18	0.60
1:B:94:TRP:CZ3	1:B:98:TRP:HZ3	2.18	0.59
1:B:99:ILE:HG21	1:B:357:SER:HB3	1.82	0.59
1:B:376:GLY:O	1:B:377:HIS:C	2.40	0.59
1:A:142:VAL:CG1	1:A:146:MET:HG3	2.31	0.59
1:A:376:GLY:O	1:A:377:HIS:C	2.39	0.59
1:A:138:LEU:O	1:A:142:VAL:HG23	2.02	0.59
1:A:78:ARG:HA	1:A:82:GLY:CA	2.32	0.59
1:B:310:PHE:HB3	1:B:311:PRO:C	2.22	0.59
1:A:120:LYS:HE3	1:A:120:LYS:CA	2.32	0.59
1:B:139:LEU:HD22	1:B:146:MET:CE	2.32	0.59
1:A:19:VAL:HG21	1:A:210:ALA:HB2	1.85	0.59
1:B:204:PHE:HE1	1:B:232:VAL:HG13	1.67	0.59
1:B:114:TYR:CD1	1:B:118:ILE:HG12	2.37	0.59
1:A:94:TRP:CZ3	1:A:98:TRP:HZ3	2.21	0.59
1:A:105:VAL:HG13	1:A:290:LEU:CD1	2.33	0.59
1:A:335:THR:O	1:A:338:GLN:N	2.35	0.59
1:B:15:VAL:HG21	1:B:217:VAL:HG13	1.85	0.59
1:B:118:ILE:HG13	1:B:118:ILE:O	2.03	0.59
1:A:280:PHE:C	1:A:282:ALA:H	2.06	0.59
1:A:72:GLY:C	1:A:74:TYR:N	2.57	0.58
1:A:83:PRO:HB3	1:A:430:ARG:NH1	2.17	0.58
1:A:355:SER:O	1:A:358:VAL:HB	2.03	0.58
1:B:286:CYS:HA	1:B:289:SER:HB3	1.85	0.58
1:A:133:LEU:HD11	1:A:338:GLN:HG3	1.85	0.58
1:A:139:LEU:CD1	1:A:150:VAL:HG21	2.31	0.58
1:B:79:ARG:CB	1:B:375:LEU:HD11	2.29	0.58
1:B:113:SER:O	1:B:118:ILE:HB	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:15:VAL:HG21	1:A:217:VAL:HG13	1.85	0.58
1:B:78:ARG:HA	1:B:82:GLY:CA	2.32	0.58
1:B:96:ALA:HB1	1:B:357:SER:O	2.04	0.58
1:A:314:PHE:HA	1:A:315:ALA:O	2.03	0.58
1:B:379:HIS:CE1	1:B:387:TYR:HD2	2.21	0.58
1:B:81:PHE:HB2	1:B:85:LEU:HB2	1.85	0.58
1:B:360:PHE:CE1	1:B:416:THR:HG21	2.39	0.58
1:B:411:MET:HG3	1:B:412:TRP:N	2.19	0.58
1:A:125:LEU:O	1:A:125:LEU:HD23	2.03	0.58
1:A:85:LEU:HD11	1:B:84:PHE:CD1	2.39	0.58
1:A:96:ALA:HB1	1:A:357:SER:O	2.04	0.58
1:A:302:LYS:CG	1:A:314:PHE:HB2	2.33	0.57
1:A:38:THR:HB	1:A:39:GLY:CA	2.12	0.57
1:B:139:LEU:CD1	1:B:150:VAL:HG21	2.32	0.57
1:A:286:CYS:HA	1:A:289:SER:HB3	1.87	0.57
1:B:105:VAL:HG13	1:B:290:LEU:CD1	2.35	0.57
1:B:116:PHE:O	1:B:117:PRO:C	2.42	0.57
1:B:137:VAL:O	1:B:141:ILE:HG12	2.03	0.57
1:A:411:MET:HA	1:B:410:VAL:HG12	1.87	0.57
1:B:379:HIS:C	1:B:381:GLY:N	2.58	0.57
1:B:72:GLY:C	1:B:74:TYR:N	2.57	0.57
1:B:120:LYS:HA	1:B:120:LYS:CE	2.34	0.57
1:A:133:LEU:HD13	1:A:334:MET:HG2	1.87	0.57
1:B:384:ARG:O	1:B:386:ALA:N	2.38	0.57
1:A:379:HIS:CE1	1:A:387:TYR:HD2	2.22	0.57
1:A:165:ILE:HA	1:A:169:GLY:H	1.70	0.56
1:A:212:VAL:HG11	1:A:296:LEU:HB3	1.87	0.56
1:A:113:SER:O	1:A:118:ILE:HB	2.05	0.56
1:A:384:ARG:O	1:A:386:ALA:N	2.38	0.56
1:A:48:VAL:HG11	1:A:197:LEU:HD11	1.87	0.56
1:A:102:ILE:CD1	1:A:337:PHE:HD2	2.13	0.56
1:A:414:PHE:HD1	1:B:414:PHE:HD1	1.53	0.56
1:B:48:VAL:HG11	1:B:197:LEU:HD11	1.86	0.56
1:A:386:ALA:O	1:A:389:ALA:HB3	2.06	0.56
1:B:342:ILE:CB	1:B:343:SER:CB	2.78	0.56
1:B:22:ASN:HB3	1:B:293:TRP:CD1	2.39	0.56
1:A:114:TYR:O	1:A:115:PHE:HB2	2.06	0.56
1:A:118:ILE:HD12	1:A:119:LEU:N	2.20	0.56
1:A:372:LEU:O	1:A:372:LEU:CG	2.53	0.56
1:A:99:ILE:HG21	1:A:357:SER:HB3	1.87	0.56
1:A:118:ILE:HG13	1:A:118:ILE:O	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:12:LEU:O	1:B:16:THR:HG23	2.06	0.56
1:B:94:TRP:CZ3	1:B:98:TRP:CZ3	2.92	0.56
1:B:373:LEU:HD11	1:B:391:THR:OG1	2.05	0.56
1:A:44:TYR:O	1:A:47:LEU:N	2.39	0.56
1:A:78:ARG:CA	1:A:82:GLY:HA3	2.36	0.56
1:B:165:ILE:HA	1:B:169:GLY:H	1.71	0.56
1:A:120:LYS:HA	1:A:120:LYS:CE	2.35	0.55
1:B:216:VAL:HG23	1:B:299:GLN:NE2	2.22	0.55
1:A:54:LEU:HD11	1:A:233:LEU:HD23	1.88	0.55
1:A:105:VAL:CG2	1:A:133:LEU:HD21	2.37	0.55
1:A:216:VAL:O	1:A:216:VAL:HG12	2.06	0.55
1:A:351:GLY:C	1:A:353:VAL:H	2.10	0.55
1:B:44:TYR:O	1:B:47:LEU:N	2.39	0.55
1:B:102:ILE:CD1	1:B:337:PHE:HD2	2.14	0.55
1:A:216:VAL:HG23	1:A:299:GLN:NE2	2.22	0.55
1:A:302:LYS:HA	1:A:314:PHE:O	2.06	0.55
1:A:306:ASP:O	1:A:307:ASP:C	2.45	0.55
1:A:316:ARG:C	1:A:317:VAL:HG23	2.27	0.55
1:A:116:PHE:O	1:A:117:PRO:C	2.42	0.55
1:A:379:HIS:C	1:A:381:GLY:N	2.59	0.55
1:B:83:PRO:HB3	1:B:430:ARG:HH11	1.71	0.55
1:A:81:PHE:CZ	1:B:81:PHE:HA	2.42	0.55
1:B:82:GLY:N	1:B:83:PRO:HD2	2.22	0.55
1:B:181:ALA:O	1:B:182:TRP:O	2.25	0.55
1:B:317:VAL:HG13	1:B:322:THR:O	2.07	0.55
1:A:137:VAL:O	1:A:141:ILE:HG12	2.06	0.55
1:A:181:ALA:O	1:A:182:TRP:O	2.24	0.55
1:A:280:PHE:CD2	1:A:281:CYS:N	2.75	0.55
1:B:45:GLY:HA3	1:B:196:THR:OG1	2.06	0.55
1:B:97:CYS:HB3	1:B:293:TRP:HE3	1.71	0.55
1:B:205:ILE:CD1	1:B:358:VAL:HG13	2.36	0.55
1:B:355:SER:O	1:B:358:VAL:HB	2.06	0.55
1:B:386:ALA:O	1:B:389:ALA:HB3	2.06	0.55
1:A:78:ARG:O	1:A:82:GLY:HA3	2.07	0.55
1:A:119:LEU:HD13	1:A:124:VAL:HG21	1.88	0.55
1:B:302:LYS:HA	1:B:314:PHE:O	2.07	0.55
1:B:408:LYS:H	1:B:408:LYS:HD2	1.72	0.55
1:B:78:ARG:CA	1:B:82:GLY:HA3	2.36	0.55
1:B:81:PHE:C	1:B:81:PHE:CD2	2.80	0.55
1:B:140:ASN:OD1	1:B:147:ILE:HG21	2.07	0.55
1:B:236:ALA:O	1:B:239:TYR:HB2	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:81:PHE:HB2	1:A:85:LEU:HB2	1.87	0.55
1:A:129:CYS:SG	1:A:338:GLN:NE2	2.80	0.55
1:A:314:PHE:N	1:A:314:PHE:CD2	2.74	0.55
1:A:410:VAL:HG12	1:B:411:MET:HA	1.89	0.55
1:B:54:LEU:HD11	1:B:233:LEU:HD23	1.89	0.54
1:B:306:ASP:O	1:B:307:ASP:C	2.44	0.54
1:A:11:GLY:O	1:A:15:VAL:HG23	2.07	0.54
1:A:76:TYR:HH	1:A:211:SER:HG	1.53	0.54
1:A:360:PHE:CE1	1:A:416:THR:HG21	2.42	0.54
1:B:177:THR:O	1:B:180:ALA:HB3	2.08	0.54
1:A:204:PHE:HE1	1:A:232:VAL:HG13	1.71	0.54
1:A:82:GLY:N	1:A:83:PRO:HD2	2.23	0.54
1:A:114:TYR:C	1:A:115:PHE:HD2	2.11	0.54
1:B:280:PHE:CD2	1:B:281:CYS:N	2.75	0.54
1:A:318:ASN:O	1:A:319:LYS:O	2.26	0.54
1:A:408:LYS:H	1:A:408:LYS:HD2	1.73	0.54
1:B:314:PHE:HA	1:B:315:ALA:O	2.06	0.54
1:A:9:LYS:C	1:A:10:VAL:HG23	2.28	0.54
1:A:97:CYS:HB3	1:A:293:TRP:HE3	1.73	0.54
1:B:102:ILE:HG21	1:B:337:PHE:CD2	2.43	0.54
1:B:114:TYR:C	1:B:115:PHE:HD2	2.11	0.54
1:A:15:VAL:O	1:A:19:VAL:HG23	2.08	0.54
1:B:114:TYR:O	1:B:115:PHE:HB2	2.08	0.54
1:A:31:LEU:HD21	1:A:203:SER:OG	2.08	0.54
1:B:79:ARG:HB3	1:B:375:LEU:HD21	1.88	0.54
1:B:338:GLN:OE1	1:B:338:GLN:O	2.26	0.54
1:A:177:THR:O	1:A:180:ALA:HB3	2.08	0.53
1:A:337:PHE:HZ	1:A:345:ASN:ND2	2.05	0.53
1:B:77:ALA:HB3	1:B:89:THR:HG21	1.90	0.53
1:B:118:ILE:HD12	1:B:119:LEU:N	2.22	0.53
1:B:144:PRO:HD3	1:B:322:THR:HG23	1.90	0.53
1:A:94:TRP:CZ3	1:A:98:TRP:CZ3	2.95	0.53
1:A:139:LEU:HD22	1:A:146:MET:CE	2.38	0.53
1:A:338:GLN:O	1:A:338:GLN:OE1	2.26	0.53
1:A:41:ILE:HG13	1:A:43:ILE:CG1	2.36	0.53
1:A:41:ILE:HA	1:A:42:ALA:C	2.28	0.53
1:A:45:GLY:HA3	1:A:196:THR:OG1	2.08	0.53
1:A:79:ARG:HB3	1:A:375:LEU:HD21	1.90	0.53
1:B:86:GLY:HA2	1:B:89:THR:HG22	1.91	0.53
1:B:329:ILE:O	1:B:333:LEU:HB2	2.08	0.53
1:B:376:GLY:O	1:B:379:HIS:N	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:102:ILE:HG21	1:A:337:PHE:CD2	2.44	0.53
1:B:11:GLY:O	1:B:15:VAL:HG23	2.07	0.53
1:A:8:HIS:O	1:A:9:LYS:HD3	2.09	0.53
1:A:225:PRO:O	1:A:226:ILE:C	2.46	0.53
1:B:316:ARG:C	1:B:317:VAL:HG23	2.28	0.53
1:A:408:LYS:H	1:A:408:LYS:CD	2.22	0.53
1:A:411:MET:HG3	1:A:412:TRP:N	2.24	0.53
1:A:428:TYR:CE1	1:B:373:LEU:HB3	2.44	0.53
1:B:9:LYS:C	1:B:10:VAL:HG23	2.29	0.53
1:B:52:GLY:HA3	1:B:397:TYR:HD2	1.74	0.53
1:B:82:GLY:H	1:B:83:PRO:HD2	1.74	0.53
1:B:161:PRO:HB3	1:B:278:VAL:HG22	1.90	0.53
1:A:12:LEU:O	1:A:16:THR:HG23	2.09	0.53
1:A:101:ASN:CG	1:A:290:LEU:HD22	2.29	0.53
1:A:427:ASN:O	1:A:429:ASN:N	2.34	0.53
1:B:172:TRP:HE3	1:B:173:PHE:N	2.06	0.53
1:A:143:GLY:HA2	1:A:146:MET:HB2	1.90	0.53
1:A:154:ALA:HB1	1:A:284:ALA:O	2.09	0.53
1:A:323:PRO:O	1:A:324:VAL:C	2.47	0.52
1:B:11:GLY:O	1:B:14:PRO:HD2	2.09	0.52
1:B:154:ALA:HB1	1:B:284:ALA:O	2.09	0.52
1:A:107:ILE:O	1:A:111:TYR:HD1	1.92	0.52
1:B:31:LEU:HD21	1:B:203:SER:OG	2.09	0.52
1:B:105:VAL:O	1:B:107:ILE:N	2.42	0.52
1:A:118:ILE:HD12	1:A:118:ILE:C	2.29	0.52
1:A:124:VAL:O	1:A:128:THR:HB	2.09	0.52
1:A:373:LEU:HD11	1:A:391:THR:OG1	2.09	0.52
1:A:22:ASN:HB3	1:A:293:TRP:CD1	2.43	0.52
1:B:143:GLY:HA2	1:B:146:MET:HB2	1.91	0.52
1:B:351:GLY:C	1:B:353:VAL:H	2.13	0.52
1:A:105:VAL:O	1:A:107:ILE:N	2.42	0.52
1:A:172:TRP:HE3	1:A:173:PHE:N	2.08	0.52
1:A:209:SER:CB	1:A:296:LEU:HD11	2.40	0.52
1:A:302:LYS:N	1:A:302:LYS:CD	2.72	0.52
1:A:303:ALA:O	1:A:306:ASP:N	2.26	0.52
1:A:337:PHE:HZ	1:A:345:ASN:HD21	1.58	0.52
1:B:125:LEU:HD23	1:B:125:LEU:O	2.08	0.52
1:B:337:PHE:HZ	1:B:345:ASN:ND2	2.07	0.52
1:A:71:GLY:O	1:A:212:VAL:HG13	2.10	0.52
1:A:78:ARG:C	1:A:82:GLY:HA3	2.30	0.52
1:B:92:LEU:HD21	1:B:363:VAL:HB	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:116:PHE:HB3	1:B:117:PRO:HD2	1.90	0.52
1:B:216:VAL:HG12	1:B:216:VAL:O	2.09	0.52
1:B:408:LYS:H	1:B:408:LYS:CD	2.21	0.52
1:A:144:PRO:HD3	1:A:322:THR:HG23	1.92	0.52
1:A:205:ILE:CD1	1:A:358:VAL:HG13	2.39	0.52
1:B:173:PHE:CE1	1:B:247:MET:HB3	2.44	0.52
1:B:318:ASN:O	1:B:319:LYS:O	2.28	0.52
1:A:373:LEU:O	1:A:375:LEU:N	2.43	0.52
1:A:411:MET:HA	1:B:410:VAL:CG1	2.40	0.52
1:B:69:SER:OG	1:B:214:ALA:HB2	2.10	0.52
1:B:78:ARG:O	1:B:82:GLY:HA3	2.10	0.52
1:B:41:ILE:HA	1:B:42:ALA:C	2.30	0.52
1:A:8:HIS:HB3	1:A:9:LYS:HE2	1.92	0.51
1:A:317:VAL:HG13	1:A:322:THR:O	2.10	0.51
1:B:225:PRO:O	1:B:226:ILE:C	2.48	0.51
1:B:301:ALA:HB1	1:B:310:PHE:CE1	2.44	0.51
1:A:79:ARG:CB	1:A:375:LEU:HD11	2.37	0.51
1:A:81:PHE:C	1:A:81:PHE:CD2	2.82	0.51
1:B:28:VAL:O	1:B:30:LEU:N	2.40	0.51
1:B:371:ALA:O	1:B:373:LEU:N	2.43	0.51
1:B:384:ARG:NE	1:B:388:LEU:HD12	2.20	0.51
1:A:136:PHE:CZ	1:A:287:LEU:O	2.63	0.51
1:A:236:ALA:O	1:A:239:TYR:HB2	2.09	0.51
1:A:430:ARG:CG	1:B:374:LEU:HD23	2.20	0.51
1:B:237:VAL:HG12	1:B:238:CYS:N	2.25	0.51
1:A:46:TRP:HA	1:A:49:THR:HG22	1.93	0.51
1:A:344:PRO:O	1:A:345:ASN:HB2	2.11	0.51
1:A:391:THR:O	1:A:395:PHE:HD2	1.93	0.51
1:B:22:ASN:N	1:B:22:ASN:HD22	2.06	0.51
1:B:136:PHE:CZ	1:B:287:LEU:O	2.64	0.51
1:B:305:ALA:HB1	1:B:312:PRO:CB	2.40	0.51
1:A:173:PHE:CE1	1:A:247:MET:HB3	2.45	0.51
1:A:416:THR:O	1:A:419:VAL:HG12	2.10	0.51
1:A:418:MET:SD	1:B:402:VAL:HG21	2.50	0.51
1:B:173:PHE:CG	1:B:174:ARG:O	2.64	0.51
1:A:173:PHE:CG	1:A:174:ARG:O	2.63	0.51
1:A:376:GLY:O	1:A:379:HIS:N	2.44	0.51
1:A:342:ILE:CB	1:A:343:SER:CB	2.78	0.51
1:A:371:ALA:O	1:A:373:LEU:N	2.43	0.51
1:B:118:ILE:HD12	1:B:118:ILE:C	2.32	0.51
1:A:165:ILE:HG23	1:A:169:GLY:HA3	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:67:ASP:OD2	1:B:79:ARG:NH1	2.36	0.51
1:B:107:ILE:O	1:B:111:TYR:HD1	1.94	0.51
1:B:178:TYR:CD2	1:B:247:MET:HA	2.44	0.51
1:B:280:PHE:C	1:B:282:ALA:N	2.64	0.51
1:A:52:GLY:HA3	1:A:397:TYR:HD2	1.75	0.51
1:A:92:LEU:HD21	1:A:363:VAL:HB	1.93	0.51
1:B:247:MET:HG2	1:B:248:GLY:N	2.26	0.51
1:B:344:PRO:O	1:B:345:ASN:HB2	2.11	0.51
1:B:371:ALA:C	1:B:373:LEU:N	2.65	0.51
1:A:94:TRP:C	1:A:96:ALA:H	2.15	0.50
1:B:24:MET:HE3	1:B:238:CYS:HB3	1.93	0.50
1:B:78:ARG:C	1:B:82:GLY:HA3	2.31	0.50
1:B:112:LEU:O	1:B:113:SER:C	2.50	0.50
1:A:280:PHE:C	1:A:282:ALA:N	2.65	0.50
1:B:8:HIS:O	1:B:9:LYS:HD3	2.10	0.50
1:B:119:LEU:HD13	1:B:124:VAL:HG21	1.92	0.50
1:B:363:VAL:HB	1:B:364:PRO:HD3	1.93	0.50
1:B:365:TYR:HB3	1:B:398:CYS:SG	2.51	0.50
1:B:313:ILE:HG22	1:B:314:PHE:N	2.23	0.50
1:B:96:ALA:HA	1:B:357:SER:HB2	1.92	0.50
1:B:416:THR:O	1:B:419:VAL:HG12	2.12	0.50
1:A:94:TRP:O	1:A:96:ALA:N	2.40	0.50
1:A:116:PHE:HB3	1:A:117:PRO:HD2	1.91	0.50
1:A:161:PRO:HB3	1:A:278:VAL:HG22	1.92	0.50
1:A:216:VAL:CG2	1:A:299:GLN:NE2	2.74	0.50
1:A:22:ASN:N	1:A:22:ASN:HD22	2.08	0.50
1:B:57:SER:CB	1:B:232:VAL:HG21	2.39	0.50
1:B:101:ASN:CG	1:B:290:LEU:HD22	2.31	0.50
1:B:165:ILE:HG23	1:B:169:GLY:HA3	1.92	0.50
1:B:8:HIS:HB3	1:B:9:LYS:HE2	1.93	0.50
1:B:187:LEU:N	1:B:187:LEU:HD23	2.27	0.50
1:B:219:ASN:H	1:B:223:ASN:ND2	2.04	0.50
1:A:371:ALA:C	1:A:373:LEU:N	2.65	0.50
1:B:133:LEU:HD13	1:B:334:MET:HG2	1.94	0.50
1:A:102:ILE:CD1	1:A:337:PHE:HB3	2.42	0.50
1:B:27:GLY:O	1:B:30:LEU:HB2	2.12	0.50
1:A:178:TYR:CD2	1:A:247:MET:HA	2.46	0.49
1:B:71:GLY:C	1:B:212:VAL:HA	2.33	0.49
1:B:105:VAL:CG2	1:B:133:LEU:HD21	2.40	0.49
1:A:44:TYR:CB	1:A:193:ILE:HD11	2.42	0.49
1:A:81:PHE:CE2	1:A:83:PRO:HB2	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:83:PRO:O	1:A:84:PHE:C	2.49	0.49
1:B:22:ASN:N	1:B:22:ASN:ND2	2.60	0.49
1:B:125:LEU:O	1:B:128:THR:HG22	2.11	0.49
1:A:71:GLY:O	1:A:212:VAL:HA	2.12	0.49
1:B:403:VAL:CG1	1:B:404:GLY:N	2.75	0.49
1:A:403:VAL:CG1	1:A:404:GLY:N	2.75	0.49
1:B:302:LYS:N	1:B:302:LYS:CD	2.73	0.49
1:A:27:GLY:O	1:A:30:LEU:HB2	2.12	0.49
1:A:101:ASN:ND2	1:A:290:LEU:HD22	2.27	0.49
1:B:81:PHE:C	1:B:81:PHE:HD2	2.16	0.49
1:B:122:PRO:C	1:B:124:VAL:H	2.15	0.49
1:B:212:VAL:HG13	1:B:300:THR:OG1	2.13	0.49
1:A:82:GLY:H	1:A:83:PRO:HD2	1.78	0.49
1:B:151:GLN:HE21	1:B:155:THR:CG2	2.26	0.49
1:A:54:LEU:O	1:A:58:MET:HE2	2.13	0.49
1:B:67:ASP:CG	1:B:79:ARG:NH1	2.61	0.49
1:B:384:ARG:C	1:B:386:ALA:N	2.66	0.49
1:A:58:MET:HA	1:A:61:ALA:HB3	1.94	0.49
1:A:104:MET:CE	1:A:286:CYS:HB3	2.42	0.49
1:B:74:TYR:OH	1:B:87:TYR:CE1	2.66	0.49
1:B:140:ASN:HB3	1:B:327:LEU:HD22	1.94	0.49
1:B:302:LYS:HE3	1:B:326:GLY:HA3	1.94	0.49
1:A:247:MET:HG2	1:A:248:GLY:N	2.28	0.48
1:B:323:PRO:O	1:B:324:VAL:C	2.51	0.48
1:A:302:LYS:HE3	1:A:326:GLY:HA3	1.95	0.48
1:B:10:VAL:CG1	1:B:11:GLY:H	2.06	0.48
1:B:104:MET:CE	1:B:286:CYS:HB3	2.43	0.48
1:A:305:ALA:HB1	1:A:312:PRO:CB	2.42	0.48
1:B:101:ASN:ND2	1:B:294:THR:HG22	2.28	0.48
1:A:373:LEU:HD13	1:B:428:TYR:CZ	2.48	0.48
1:A:373:LEU:C	1:A:375:LEU:H	2.16	0.48
1:B:209:SER:CB	1:B:296:LEU:HD11	2.44	0.48
1:B:323:PRO:CD	1:B:327:LEU:HD11	2.40	0.48
1:B:384:ARG:HH21	1:B:388:LEU:HD11	1.78	0.48
1:A:83:PRO:HB3	1:A:430:ARG:HH11	1.79	0.48
1:A:112:LEU:O	1:A:113:SER:C	2.51	0.48
1:A:140:ASN:OD1	1:A:147:ILE:HG21	2.14	0.48
1:A:196:THR:O	1:A:200:THR:HG23	2.13	0.48
1:A:301:ALA:HB1	1:A:310:PHE:CE1	2.46	0.48
1:B:142:VAL:HG11	1:B:146:MET:HG3	1.96	0.48
1:A:11:GLY:O	1:A:14:PRO:HD2	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:42:ALA:O	1:A:196:THR:HG21	2.14	0.48
1:A:154:ALA:HA	1:A:157:LEU:HD12	1.94	0.48
1:A:410:VAL:CG1	1:B:411:MET:HA	2.43	0.48
1:B:41:ILE:HG13	1:B:43:ILE:CG1	2.37	0.48
1:A:71:GLY:C	1:A:212:VAL:HA	2.34	0.48
1:A:151:GLN:HE21	1:A:155:THR:CG2	2.26	0.48
1:B:19:VAL:CG2	1:B:210:ALA:HB2	2.44	0.48
1:B:46:TRP:HA	1:B:49:THR:HG22	1.96	0.48
1:B:216:VAL:CG2	1:B:299:GLN:NE2	2.76	0.48
1:A:28:VAL:HG11	1:A:162:ILE:CD1	2.36	0.48
1:A:98:TRP:CD1	1:A:99:ILE:N	2.82	0.48
1:A:187:LEU:N	1:A:187:LEU:HD23	2.29	0.48
1:A:365:TYR:HB3	1:A:398:CYS:SG	2.53	0.48
1:B:93:TYR:HD2	1:B:300:THR:CG2	2.18	0.48
1:B:124:VAL:O	1:B:128:THR:HB	2.13	0.48
1:B:129:CYS:SG	1:B:338:GLN:NE2	2.87	0.48
1:B:280:PHE:O	1:B:282:ALA:N	2.47	0.48
1:B:324:VAL:HG12	1:B:325:ALA:N	2.28	0.48
1:A:44:TYR:O	1:A:45:GLY:C	2.50	0.48
1:A:83:PRO:O	1:A:86:GLY:N	2.44	0.48
1:B:92:LEU:CD2	1:B:364:PRO:HD3	2.44	0.48
1:B:126:THR:HG21	1:B:342:ILE:CG2	2.40	0.48
1:B:333:LEU:HA	1:B:336:ILE:HD12	1.96	0.48
1:B:408:LYS:O	1:B:411:MET:HG2	2.14	0.48
1:A:93:TYR:HD2	1:A:300:THR:CG2	2.17	0.47
1:A:375:LEU:C	1:A:377:HIS:H	2.17	0.47
1:A:402:VAL:HG21	1:B:418:MET:SD	2.54	0.47
1:A:57:SER:CB	1:A:232:VAL:HG21	2.36	0.47
1:A:96:ALA:HA	1:A:357:SER:HB2	1.96	0.47
1:A:219:ASN:H	1:A:223:ASN:ND2	2.06	0.47
1:B:71:GLY:O	1:B:212:VAL:HA	2.14	0.47
1:B:120:LYS:O	1:B:121:ASP:OD1	2.32	0.47
1:B:337:PHE:HZ	1:B:345:ASN:HD21	1.61	0.47
1:A:384:ARG:C	1:A:386:ALA:N	2.67	0.47
1:A:74:TYR:OH	1:A:87:TYR:CE1	2.67	0.47
1:A:81:PHE:C	1:A:81:PHE:HD2	2.18	0.47
1:A:92:LEU:CD2	1:A:364:PRO:HD3	2.44	0.47
1:B:15:VAL:O	1:B:19:VAL:HG23	2.14	0.47
1:B:99:ILE:CG2	1:B:357:SER:HB3	2.45	0.47
1:B:328:ILE:O	1:B:332:ILE:HG13	2.15	0.47
1:A:24:MET:HE3	1:A:238:CYS:HB3	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:41:ILE:N	1:A:42:ALA:HB3	2.29	0.47
1:A:206:GLY:C	1:A:208:GLU:N	2.68	0.47
1:B:83:PRO:O	1:B:84:PHE:C	2.52	0.47
1:B:101:ASN:ND2	1:B:290:LEU:HD22	2.29	0.47
1:A:120:LYS:O	1:A:121:ASP:OD1	2.33	0.47
1:A:126:THR:HG21	1:A:342:ILE:CG2	2.40	0.47
1:B:41:ILE:N	1:B:42:ALA:HB3	2.29	0.47
1:A:54:LEU:HD11	1:A:233:LEU:CD2	2.45	0.47
1:A:71:GLY:O	1:A:212:VAL:O	2.33	0.47
1:A:86:GLY:HA2	1:A:89:THR:HG22	1.97	0.47
1:A:105:VAL:CB	1:A:129:CYS:SG	2.86	0.47
1:A:212:VAL:HG13	1:A:300:THR:OG1	2.15	0.47
1:A:384:ARG:HH21	1:A:388:LEU:HD11	1.79	0.47
1:B:16:THR:HG22	1:B:227:ALA:CA	2.37	0.47
1:B:391:THR:O	1:B:395:PHE:HD2	1.97	0.47
1:B:412:TRP:CE3	1:B:412:TRP:HA	2.49	0.47
1:A:114:TYR:CE1	1:A:118:ILE:HG12	2.49	0.47
1:A:142:VAL:HG11	1:A:146:MET:HG3	1.96	0.47
1:A:351:GLY:C	1:A:353:VAL:N	2.68	0.47
1:B:115:PHE:O	1:B:116:PHE:O	2.33	0.47
1:B:208:GLU:O	1:B:212:VAL:HG23	2.15	0.47
1:A:19:VAL:CG2	1:A:210:ALA:HB2	2.44	0.47
1:A:74:TYR:HE1	1:A:86:GLY:C	2.18	0.47
1:B:421:THR:O	1:B:422:ALA:C	2.53	0.47
1:A:63:MET:CE	1:A:375:LEU:HD12	2.45	0.47
1:A:361:THR:C	1:A:364:PRO:HD2	2.35	0.47
1:A:421:THR:O	1:A:422:ALA:C	2.54	0.47
1:B:94:TRP:C	1:B:96:ALA:H	2.18	0.47
1:B:116:PHE:HB3	1:B:117:PRO:CD	2.45	0.47
1:A:428:TYR:CD1	1:B:373:LEU:HB3	2.50	0.46
1:B:42:ALA:O	1:B:196:THR:HG21	2.15	0.46
1:B:58:MET:HA	1:B:61:ALA:HB3	1.97	0.46
1:A:329:ILE:O	1:A:333:LEU:HB2	2.15	0.46
1:B:93:TYR:OH	1:B:208:GLU:CD	2.53	0.46
1:A:69:SER:OG	1:A:214:ALA:HB2	2.15	0.46
1:A:160:ILE:CB	1:A:161:PRO:HD3	2.41	0.46
1:A:173:PHE:HB3	1:A:178:TYR:OH	2.16	0.46
1:A:342:ILE:H	1:A:343:SER:HB2	1.78	0.46
1:B:85:LEU:HD23	1:B:85:LEU:HA	1.70	0.46
1:B:116:PHE:O	1:B:118:ILE:CG2	2.55	0.46
1:B:323:PRO:O	1:B:326:GLY:N	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:119:LEU:HB3	1:A:120:LYS:H	1.51	0.46
1:A:147:ILE:HD12	1:A:147:ILE:O	2.15	0.46
1:B:31:LEU:HB2	1:B:32:PRO:HD3	1.98	0.46
1:A:317:VAL:O	1:A:318:ASN:C	2.52	0.46
1:B:72:GLY:N	1:B:211:SER:O	2.49	0.46
1:A:22:ASN:N	1:A:22:ASN:ND2	2.62	0.46
1:A:92:LEU:CD2	1:A:363:VAL:HB	2.46	0.46
1:A:412:TRP:HA	1:A:412:TRP:CE3	2.51	0.46
1:B:196:THR:O	1:B:200:THR:HG23	2.16	0.46
1:B:305:ALA:HA	1:B:312:PRO:HG3	1.97	0.46
1:B:310:PHE:H	1:B:312:PRO:HD3	1.80	0.46
1:A:77:ALA:HB3	1:A:89:THR:HG21	1.96	0.46
1:A:116:PHE:HB3	1:A:117:PRO:CD	2.46	0.46
1:A:237:VAL:HG12	1:A:238:CYS:N	2.31	0.46
1:A:332:ILE:HG22	1:A:336:ILE:HD11	1.97	0.46
1:A:408:LYS:O	1:A:411:MET:HG2	2.16	0.46
1:A:428:TYR:CE1	1:B:373:LEU:CB	2.99	0.46
1:B:102:ILE:CD1	1:B:337:PHE:HB3	2.46	0.46
1:B:173:PHE:HB3	1:B:178:TYR:OH	2.16	0.46
1:B:302:LYS:HE3	1:B:326:GLY:CA	2.46	0.46
1:B:357:SER:HA	1:B:360:PHE:HD2	1.80	0.46
1:B:425:ALA:CA	1:B:428:TYR:CZ	2.82	0.46
1:A:177:THR:CG2	1:A:247:MET:HB2	2.46	0.46
1:B:177:THR:CG2	1:B:247:MET:HB2	2.44	0.46
1:A:92:LEU:HD21	1:A:360:PHE:O	2.15	0.46
1:B:54:LEU:HD11	1:B:233:LEU:CD2	2.46	0.46
1:B:342:ILE:H	1:B:343:SER:HB2	1.79	0.46
1:B:389:ALA:O	1:B:392:THR:N	2.49	0.46
1:A:206:GLY:O	1:A:208:GLU:N	2.50	0.45
1:A:102:ILE:O	1:A:106:VAL:HG23	2.16	0.45
1:A:305:ALA:HA	1:A:312:PRO:HG3	1.97	0.45
1:B:81:PHE:HD2	1:B:82:GLY:N	2.14	0.45
1:B:376:GLY:CA	1:B:379:HIS:HA	2.46	0.45
1:B:126:THR:O	1:B:130:VAL:HG23	2.16	0.45
1:B:140:ASN:HD21	1:B:147:ILE:HG12	1.78	0.45
1:A:28:VAL:O	1:A:30:LEU:N	2.42	0.45
1:A:31:LEU:HB2	1:A:32:PRO:HD3	1.98	0.45
1:B:305:ALA:HA	1:B:312:PRO:CG	2.46	0.45
1:B:345:ASN:O	1:B:346:ALA:HB3	2.17	0.45
1:A:84:PHE:CZ	1:A:421:THR:OG1	2.65	0.45
1:A:324:VAL:HG12	1:A:325:ALA:N	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:349:GLU:O	1:A:350:PHE:HB2	2.17	0.45
1:A:376:GLY:CA	1:A:379:HIS:HA	2.47	0.45
1:B:101:ASN:HD21	1:B:294:THR:HG22	1.81	0.45
1:B:142:VAL:O	1:B:143:GLY:O	2.35	0.45
1:B:209:SER:HB3	1:B:296:LEU:CD1	2.46	0.45
1:A:68:PRO:HA	1:A:69:SER:CB	2.46	0.45
1:A:305:ALA:HA	1:A:312:PRO:CG	2.47	0.45
1:B:296:LEU:N	1:B:296:LEU:HD23	2.31	0.45
1:A:10:VAL:CG1	1:A:11:GLY:H	2.07	0.45
1:A:314:PHE:CA	1:A:315:ALA:O	2.65	0.45
1:A:339:LEU:HA	1:A:342:ILE:HG13	1.98	0.45
1:B:8:HIS:HA	1:B:145:LYS:CD	2.46	0.45
1:B:84:PHE:CZ	1:B:421:THR:OG1	2.68	0.45
1:B:247:MET:CE	1:B:249:MET:HB2	2.47	0.45
1:A:81:PHE:HA	1:B:81:PHE:CZ	2.52	0.45
1:A:122:PRO:C	1:A:124:VAL:H	2.19	0.45
1:B:81:PHE:CE1	1:B:84:PHE:HB3	2.52	0.45
1:B:29:PHE:CD2	1:B:111:TYR:HE2	2.35	0.45
1:B:114:TYR:CE1	1:B:118:ILE:HG12	2.52	0.45
1:B:147:ILE:HD12	1:B:147:ILE:O	2.17	0.45
1:B:310:PHE:HB2	1:B:312:PRO:HG3	1.98	0.45
1:B:311:PRO:HG2	1:B:426:LEU:HD11	1.97	0.45
1:A:60:TYR:CE2	1:A:368:THR:HG21	2.52	0.45
1:A:184:VAL:C	1:A:186:GLY:H	2.20	0.45
1:A:337:PHE:CZ	1:A:345:ASN:ND2	2.85	0.45
1:B:104:MET:HE2	1:B:104:MET:C	2.36	0.45
1:B:120:LYS:CA	1:B:120:LYS:CE	2.95	0.45
1:B:194:GLN:O	1:B:198:ASN:HB2	2.17	0.45
1:B:44:TYR:O	1:B:45:GLY:C	2.54	0.44
1:B:44:TYR:CB	1:B:193:ILE:HD11	2.45	0.44
1:B:56:LEU:HD23	1:B:56:LEU:HA	1.71	0.44
1:B:105:VAL:C	1:B:107:ILE:N	2.69	0.44
1:B:311:PRO:HA	1:B:312:PRO:HD3	1.36	0.44
1:A:93:TYR:O	1:A:94:TRP:C	2.56	0.44
1:A:139:LEU:HD23	1:A:139:LEU:HA	1.71	0.44
1:A:173:PHE:HE1	1:A:247:MET:HB3	1.82	0.44
1:A:247:MET:CE	1:A:249:MET:HB2	2.47	0.44
1:A:323:PRO:CD	1:A:327:LEU:HD11	2.43	0.44
1:A:333:LEU:HA	1:A:336:ILE:HD12	1.99	0.44
1:B:60:TYR:HD1	1:B:211:SER:CB	2.30	0.44
1:B:114:TYR:C	1:B:115:PHE:CD2	2.91	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:154:ALA:HA	1:B:157:LEU:HD12	1.98	0.44
1:B:361:THR:C	1:B:364:PRO:HD2	2.37	0.44
1:A:384:ARG:N	1:A:385:PRO:CD	2.81	0.44
1:A:422:ALA:CB	1:B:395:PHE:CD1	3.00	0.44
1:B:374:LEU:HD12	1:B:374:LEU:N	2.26	0.44
1:B:219:ASN:O	1:B:223:ASN:HB2	2.18	0.44
1:A:72:GLY:N	1:A:211:SER:O	2.50	0.44
1:A:125:LEU:O	1:A:128:THR:HG22	2.17	0.44
1:A:310:PHE:HB2	1:A:312:PRO:HG3	1.99	0.44
1:A:346:ALA:O	1:A:348:LYS:N	2.45	0.44
1:B:102:ILE:O	1:B:106:VAL:HG23	2.17	0.44
1:B:133:LEU:HD11	1:B:338:GLN:CG	2.47	0.44
1:B:212:VAL:HG11	1:B:296:LEU:HB3	1.98	0.44
1:B:317:VAL:O	1:B:318:ASN:C	2.55	0.44
1:A:114:TYR:C	1:A:115:PHE:CD2	2.91	0.44
1:A:345:ASN:O	1:A:346:ALA:HB3	2.16	0.44
1:A:428:TYR:HH	1:B:373:LEU:HD13	1.76	0.44
1:A:84:PHE:HZ	1:A:421:THR:OG1	1.98	0.44
1:A:119:LEU:HD22	1:A:124:VAL:HG11	1.99	0.44
1:A:290:LEU:HD23	1:A:290:LEU:HA	1.77	0.44
1:B:74:TYR:HE1	1:B:86:GLY:C	2.21	0.44
1:B:98:TRP:CD1	1:B:99:ILE:N	2.85	0.44
1:B:322:THR:HA	1:B:323:PRO:HD3	1.83	0.44
1:B:360:PHE:CZ	1:B:416:THR:HG21	2.52	0.44
1:A:81:PHE:CB	1:A:85:LEU:HB2	2.48	0.44
1:A:114:TYR:O	1:A:115:PHE:CB	2.65	0.44
1:A:374:LEU:HD23	1:B:430:ARG:CG	2.27	0.44
1:A:399:ILE:HG12	1:B:418:MET:HE2	1.99	0.44
1:B:54:LEU:O	1:B:58:MET:HE2	2.17	0.44
1:B:107:ILE:HG22	1:B:108:GLY:N	2.33	0.44
1:B:133:LEU:CD1	1:B:338:GLN:HG3	2.46	0.44
1:B:350:PHE:C	1:B:352:LEU:H	2.22	0.44
1:A:193:ILE:HG23	1:A:197:LEU:HG	1.99	0.44
1:A:280:PHE:C	1:A:280:PHE:CD2	2.92	0.44
1:A:299:GLN:C	1:A:301:ALA:H	2.21	0.44
1:A:363:VAL:HB	1:A:364:PRO:HD3	2.00	0.44
1:A:384:ARG:NE	1:A:388:LEU:HD12	2.20	0.44
1:B:60:TYR:CE2	1:B:368:THR:HG21	2.53	0.44
1:B:69:SER:CB	1:B:70:PRO:HA	2.48	0.44
1:B:97:CYS:HB3	1:B:293:TRP:CE3	2.52	0.44
1:B:142:VAL:HG12	1:B:146:MET:HG3	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:188:GLY:O	1:A:189:THR:C	2.56	0.43
1:A:194:GLN:O	1:A:198:ASN:HB2	2.18	0.43
1:B:71:GLY:O	1:B:212:VAL:O	2.36	0.43
1:A:303:ALA:O	1:A:305:ALA:N	2.51	0.43
1:B:59:VAL:HG13	1:B:372:LEU:CD2	2.47	0.43
1:B:68:PRO:HG2	1:B:220:PRO:HB2	2.01	0.43
1:B:92:LEU:CD2	1:B:363:VAL:HB	2.47	0.43
1:A:16:THR:HG22	1:A:227:ALA:CA	2.35	0.43
1:A:76:TYR:CD2	1:A:76:TYR:N	2.86	0.43
1:A:101:ASN:ND2	1:A:294:THR:HG22	2.33	0.43
1:A:276:ALA:HA	1:A:279:SER:OG	2.18	0.43
1:A:319:LYS:H	1:A:319:LYS:HG3	1.65	0.43
1:A:395:PHE:CD1	1:B:422:ALA:HA	2.53	0.43
1:B:17:LEU:HD23	1:B:17:LEU:HA	1.76	0.43
1:B:98:TRP:HB2	1:B:330:VAL:HG13	2.00	0.43
1:B:375:LEU:C	1:B:377:HIS:H	2.21	0.43
1:A:59:VAL:HG13	1:A:372:LEU:CD2	2.49	0.43
1:A:350:PHE:C	1:A:352:LEU:H	2.22	0.43
1:A:360:PHE:CZ	1:A:416:THR:HG21	2.54	0.43
1:A:389:ALA:O	1:A:392:THR:N	2.51	0.43
1:A:421:THR:C	1:A:423:MET:N	2.71	0.43
1:B:63:MET:CE	1:B:375:LEU:HD12	2.48	0.43
1:B:250:ILE:N	1:B:251:PRO:CD	2.75	0.43
1:B:349:GLU:O	1:B:350:PHE:HB2	2.18	0.43
1:A:143:GLY:HA2	1:A:146:MET:CB	2.49	0.43
1:A:302:LYS:HE3	1:A:326:GLY:CA	2.49	0.43
1:B:74:TYR:OH	1:B:87:TYR:HE1	2.02	0.43
1:B:83:PRO:O	1:B:86:GLY:N	2.52	0.43
1:B:114:TYR:O	1:B:115:PHE:CB	2.67	0.43
1:A:8:HIS:HA	1:A:145:LYS:CD	2.45	0.43
1:A:74:TYR:OH	1:A:87:TYR:HE1	2.02	0.43
1:A:115:PHE:O	1:A:116:PHE:O	2.37	0.43
1:A:142:VAL:O	1:A:143:GLY:O	2.36	0.43
1:A:280:PHE:O	1:A:282:ALA:N	2.51	0.43
1:B:105:VAL:CB	1:B:129:CYS:SG	2.91	0.43
1:B:430:ARG:HG3	1:B:431:LEU:N	2.32	0.43
1:A:102:ILE:HG23	1:A:338:GLN:HA	1.99	0.43
1:A:357:SER:HA	1:A:360:PHE:HD2	1.82	0.43
1:B:174:ARG:HA	1:B:175:GLY:HA3	1.83	0.43
1:B:193:ILE:HG23	1:B:197:LEU:HG	2.00	0.43
1:B:219:ASN:HD22	1:B:223:ASN:HD21	1.65	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:219:ASN:N	1:B:219:ASN:ND2	2.66	0.43
1:B:276:ALA:HA	1:B:279:SER:OG	2.18	0.43
1:B:319:LYS:O	1:B:320:ALA:HB3	2.18	0.43
1:B:339:LEU:HA	1:B:342:ILE:HG13	2.01	0.43
1:B:357:SER:HA	1:B:360:PHE:CD2	2.53	0.43
1:A:219:ASN:HD22	1:A:223:ASN:HD21	1.64	0.43
1:A:357:SER:HA	1:A:360:PHE:CD2	2.53	0.43
1:B:173:PHE:HE1	1:B:247:MET:HB3	1.82	0.43
1:A:322:THR:HA	1:A:323:PRO:HD3	1.82	0.43
1:A:323:PRO:O	1:A:326:GLY:N	2.51	0.43
1:B:76:TYR:CD2	1:B:76:TYR:N	2.86	0.43
1:B:303:ALA:O	1:B:306:ASP:N	2.28	0.43
1:B:303:ALA:O	1:B:305:ALA:N	2.52	0.43
1:A:140:ASN:CB	1:A:327:LEU:CD2	2.94	0.43
1:B:332:ILE:HG22	1:B:336:ILE:HD11	2.01	0.43
1:B:373:LEU:C	1:B:375:LEU:H	2.22	0.43
1:A:29:PHE:CD2	1:A:111:TYR:HE2	2.37	0.42
1:A:219:ASN:O	1:A:223:ASN:HB2	2.19	0.42
1:A:250:ILE:N	1:A:251:PRO:CD	2.74	0.42
1:B:81:PHE:CE2	1:B:83:PRO:HB2	2.53	0.42
1:B:87:TYR:HE2	1:B:430:ARG:HH12	1.66	0.42
1:B:102:ILE:HG23	1:B:338:GLN:HA	2.00	0.42
1:A:35:LEU:HA	1:A:38:THR:OG1	2.19	0.42
1:A:311:PRO:HG2	1:A:426:LEU:HD11	2.00	0.42
1:A:311:PRO:HA	1:A:312:PRO:HD3	1.35	0.42
1:A:105:VAL:C	1:A:107:ILE:N	2.70	0.42
1:A:142:VAL:HG12	1:A:146:MET:HG3	2.00	0.42
1:A:147:ILE:HG23	1:A:148:THR:N	2.34	0.42
1:A:250:ILE:HB	1:A:251:PRO:HD3	2.01	0.42
1:A:319:LYS:O	1:A:320:ALA:HB3	2.18	0.42
1:B:10:VAL:O	1:B:218:LYS:HG3	2.18	0.42
1:B:119:LEU:HD22	1:B:124:VAL:HG11	1.99	0.42
1:B:180:ALA:C	1:B:182:TRP:H	2.21	0.42
1:B:295:LEU:HD22	1:B:295:LEU:O	2.18	0.42
1:B:314:PHE:CA	1:B:315:ALA:O	2.67	0.42
1:B:346:ALA:O	1:B:348:LYS:N	2.45	0.42
1:A:89:THR:HG23	1:A:90:ASN:N	2.34	0.42
1:A:99:ILE:CG2	1:A:357:SER:HB3	2.49	0.42
1:A:313:ILE:HG22	1:A:314:PHE:N	2.19	0.42
1:B:104:MET:HE1	1:B:286:CYS:HB3	2.00	0.42
1:B:147:ILE:HD11	1:B:291:GLY:HA3	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:351:GLY:C	1:B:353:VAL:N	2.70	0.42
1:A:67:ASP:OD2	1:A:79:ARG:NH1	2.44	0.42
1:A:81:PHE:CE1	1:A:84:PHE:HB3	2.54	0.42
1:B:87:TYR:CB	1:B:424:TYR:OH	2.68	0.42
1:B:144:PRO:CB	1:B:216:VAL:HG11	2.49	0.42
1:B:332:ILE:HG13	1:B:332:ILE:H	1.61	0.42
1:A:174:ARG:HA	1:A:175:GLY:HA3	1.85	0.42
1:A:310:PHE:H	1:A:312:PRO:HD3	1.83	0.42
1:A:379:HIS:ND1	1:A:387:TYR:CD2	2.82	0.42
1:B:84:PHE:HZ	1:B:421:THR:OG1	2.01	0.42
1:B:93:TYR:O	1:B:96:ALA:HB3	2.20	0.42
1:A:60:TYR:HD1	1:A:211:SER:CB	2.33	0.42
1:A:126:THR:O	1:A:130:VAL:HG23	2.19	0.42
1:A:140:ASN:HB3	1:A:327:LEU:HD22	1.96	0.42
1:B:119:LEU:HB3	1:B:120:LYS:H	1.50	0.42
1:B:177:THR:HB	1:B:247:MET:HB2	2.00	0.42
1:B:299:GLN:C	1:B:301:ALA:H	2.21	0.42
1:A:84:PHE:HD1	1:B:85:LEU:HD11	1.82	0.42
1:A:87:TYR:CB	1:A:424:TYR:OH	2.68	0.42
1:A:98:TRP:CG	1:A:99:ILE:N	2.87	0.42
1:A:180:ALA:C	1:A:182:TRP:H	2.22	0.42
1:A:208:GLU:O	1:A:212:VAL:HG23	2.20	0.42
1:B:34:ASN:CB	1:B:199:VAL:HG11	2.48	0.42
1:B:101:ASN:O	1:B:102:ILE:C	2.58	0.42
1:B:188:GLY:O	1:B:189:THR:C	2.57	0.42
1:A:63:MET:HE1	1:A:375:LEU:HD12	2.02	0.42
1:A:105:VAL:O	1:A:106:VAL:C	2.57	0.42
1:A:134:TRP:CH2	1:A:331:GLY:HA3	2.55	0.42
1:A:296:LEU:N	1:A:296:LEU:HD23	2.34	0.42
1:A:400:TRP:O	1:A:403:VAL:HG12	2.20	0.42
1:B:183:ASN:O	1:B:184:VAL:O	2.37	0.42
1:B:184:VAL:C	1:B:186:GLY:H	2.22	0.42
1:A:81:PHE:HD2	1:A:82:GLY:N	2.17	0.42
1:A:93:TYR:O	1:A:96:ALA:HB3	2.19	0.42
1:A:104:MET:HE2	1:A:104:MET:C	2.39	0.42
1:A:411:MET:O	1:A:415:VAL:HG23	2.20	0.42
1:B:280:PHE:C	1:B:280:PHE:CD2	2.94	0.42
1:A:31:LEU:CB	1:A:32:PRO:HD3	2.50	0.41
1:B:98:TRP:CG	1:B:99:ILE:N	2.88	0.41
1:B:173:PHE:HE1	1:B:247:MET:CG	2.33	0.41
1:A:97:CYS:HB3	1:A:293:TRP:CE3	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:428:TYR:CE2	1:B:373:LEU:HD22	2.55	0.41
1:B:35:LEU:HA	1:B:38:THR:OG1	2.20	0.41
1:B:225:PRO:O	1:B:228:THR:N	2.54	0.41
1:A:172:TRP:HB3	1:A:173:PHE:H	1.64	0.41
1:A:209:SER:HB3	1:A:296:LEU:CD1	2.43	0.41
1:A:430:ARG:HG3	1:A:431:LEU:N	2.32	0.41
1:B:105:VAL:O	1:B:106:VAL:C	2.58	0.41
1:B:206:GLY:O	1:B:208:GLU:N	2.54	0.41
1:B:244:THR:C	1:B:246:ILE:HG22	2.40	0.41
1:B:24:MET:HE3	1:B:238:CYS:CB	2.49	0.41
1:B:81:PHE:CB	1:B:85:LEU:HB2	2.48	0.41
1:B:104:MET:O	1:B:104:MET:CE	2.65	0.41
1:A:133:LEU:CD1	1:A:338:GLN:HG3	2.48	0.41
1:A:183:ASN:O	1:A:184:VAL:O	2.38	0.41
1:B:93:TYR:O	1:B:94:TRP:C	2.57	0.41
1:B:143:GLY:HA2	1:B:146:MET:CB	2.50	0.41
1:B:384:ARG:N	1:B:385:PRO:CD	2.83	0.41
1:A:44:TYR:HB2	1:A:193:ILE:CD1	2.49	0.41
1:A:105:VAL:O	1:A:108:GLY:N	2.54	0.41
1:A:374:LEU:HD12	1:A:374:LEU:N	2.26	0.41
1:B:411:MET:O	1:B:415:VAL:HG23	2.20	0.41
1:A:10:VAL:CG1	1:A:11:GLY:N	2.69	0.41
1:A:129:CYS:HB3	1:A:338:GLN:NE2	2.36	0.41
1:B:172:TRP:CE3	1:B:173:PHE:N	2.88	0.41
1:B:206:GLY:C	1:B:208:GLU:N	2.73	0.41
1:B:335:THR:O	1:B:336:ILE:C	2.59	0.41
1:A:68:PRO:HA	1:A:69:SER:HB3	2.03	0.41
1:A:68:PRO:HG2	1:A:220:PRO:HB2	2.03	0.41
1:A:107:ILE:O	1:A:111:TYR:CD1	2.74	0.41
1:A:119:LEU:HB3	1:A:124:VAL:HG11	2.02	0.41
1:A:120:LYS:CA	1:A:120:LYS:CE	2.97	0.41
1:A:132:VAL:O	1:A:133:LEU:C	2.59	0.41
1:A:219:ASN:ND2	1:A:219:ASN:N	2.68	0.41
1:A:328:ILE:O	1:A:332:ILE:HG13	2.20	0.41
1:B:28:VAL:HG11	1:B:162:ILE:CD1	2.40	0.41
1:B:60:TYR:CD2	1:B:368:THR:HG21	2.56	0.41
1:B:90:ASN:O	1:B:93:TYR:N	2.53	0.41
1:B:109:VAL:HB	1:B:125:LEU:HD21	2.02	0.41
1:B:122:PRO:C	1:B:124:VAL:N	2.74	0.41
1:B:134:TRP:CH2	1:B:331:GLY:HA3	2.55	0.41
1:B:172:TRP:HB3	1:B:173:PHE:H	1.65	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:250:ILE:HB	1:B:251:PRO:HD3	2.02	0.41
1:B:301:ALA:C	1:B:303:ALA:N	2.74	0.41
1:B:310:PHE:CB	1:B:312:PRO:HG3	2.51	0.41
1:B:362:LEU:O	1:B:365:TYR:N	2.54	0.41
1:B:423:MET:C	1:B:424:TYR:HD2	2.24	0.41
1:A:87:TYR:HE2	1:A:430:ARG:HH12	1.69	0.41
1:A:109:VAL:HB	1:A:125:LEU:HD21	2.03	0.41
1:A:173:PHE:HE1	1:A:247:MET:CG	2.34	0.41
1:A:244:THR:C	1:A:246:ILE:HG22	2.42	0.41
1:A:301:ALA:C	1:A:303:ALA:N	2.73	0.41
1:B:160:ILE:CB	1:B:161:PRO:HD3	2.42	0.41
1:B:321:GLY:O	1:B:322:THR:O	2.39	0.41
1:A:29:PHE:O	1:A:30:LEU:HG	2.21	0.40
1:A:299:GLN:HA	1:A:299:GLN:OE1	2.21	0.40
1:A:374:LEU:H	1:A:374:LEU:CD1	2.27	0.40
1:B:400:TRP:O	1:B:403:VAL:HG12	2.21	0.40
1:A:47:LEU:HD22	1:A:47:LEU:HA	1.90	0.40
1:A:177:THR:HB	1:A:247:MET:HB2	2.03	0.40
1:A:224:VAL:HB	1:A:225:PRO:HD3	2.02	0.40
1:A:224:VAL:O	1:A:227:ALA:HB3	2.21	0.40
1:B:423:MET:C	1:B:424:TYR:CD2	2.95	0.40
1:A:144:PRO:C	1:A:146:MET:N	2.75	0.40
1:A:289:SER:O	1:A:290:LEU:C	2.59	0.40
1:A:391:THR:O	1:A:395:PHE:CD2	2.74	0.40
1:B:10:VAL:CG1	1:B:11:GLY:N	2.66	0.40
1:B:154:ALA:O	1:B:157:LEU:HB2	2.22	0.40
1:B:384:ARG:O	1:B:385:PRO:C	2.59	0.40
1:A:81:PHE:CB	1:A:82:GLY:CA	2.95	0.40
1:A:321:GLY:O	1:A:322:THR:O	2.39	0.40
1:B:337:PHE:CZ	1:B:345:ASN:ND2	2.88	0.40
1:B:374:LEU:H	1:B:374:LEU:CD1	2.30	0.40
1:A:85:LEU:HD23	1:A:85:LEU:HA	1.70	0.40
1:A:101:ASN:HD21	1:A:294:THR:HG22	1.87	0.40
1:A:104:MET:HE1	1:A:286:CYS:HB3	2.02	0.40
1:A:141:ILE:CG2	1:A:324:VAL:HG22	2.50	0.40
1:B:379:HIS:ND1	1:B:387:TYR:CD2	2.81	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [\(i\)](#)

5.3.1 Protein backbone [\(i\)](#)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	406/445 (91%)	261 (64%)	82 (20%)	63 (16%)	0	3
1	B	406/445 (91%)	262 (64%)	80 (20%)	64 (16%)	0	3
All	All	812/890 (91%)	523 (64%)	162 (20%)	127 (16%)	0	3

All (127) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	10	VAL
1	A	68	PRO
1	A	83	PRO
1	A	116	PHE
1	A	117	PRO
1	A	118	ILE
1	A	182	TRP
1	A	183	ASN
1	A	184	VAL
1	A	218	LYS
1	A	312	PRO
1	A	313	ILE
1	A	319	LYS
1	A	323	PRO
1	A	345	ASN
1	A	377	HIS
1	A	428	TYR
1	A	431	LEU
1	A	432	HIS
1	B	10	VAL
1	B	68	PRO
1	B	83	PRO
1	B	116	PHE
1	B	117	PRO
1	B	118	ILE

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Mol	Chain	Res	Type
1	B	182	TRP
1	B	184	VAL
1	B	218	LYS
1	B	312	PRO
1	B	313	ILE
1	B	319	LYS
1	B	345	ASN
1	B	377	HIS
1	B	428	TYR
1	B	431	LEU
1	B	432	HIS
1	A	30	LEU
1	A	95	LEU
1	A	119	LEU
1	A	122	PRO
1	A	143	GLY
1	A	172	TRP
1	A	250	ILE
1	A	304	ALA
1	A	307	ASP
1	A	315	ALA
1	A	374	LEU
1	B	30	LEU
1	B	95	LEU
1	B	119	LEU
1	B	122	PRO
1	B	143	GLY
1	B	172	TRP
1	B	183	ASN
1	B	250	ILE
1	B	304	ALA
1	B	307	ASP
1	B	315	ALA
1	B	323	PRO
1	B	336	ILE
1	B	374	LEU
1	A	41	ILE
1	A	69	SER
1	A	121	ASP
1	A	303	ALA
1	A	310	PHE
1	A	314	PHE

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Mol	Chain	Res	Type
1	A	349	GLU
1	A	380	PHE
1	A	433	LYS
1	B	69	SER
1	B	121	ASP
1	B	310	PHE
1	B	347	THR
1	B	349	GLU
1	B	372	LEU
1	B	380	PHE
1	A	84	PHE
1	A	96	ALA
1	A	120	LYS
1	A	190	PHE
1	A	214	ALA
1	A	248	GLY
1	A	289	SER
1	A	343	SER
1	A	347	THR
1	A	372	LEU
1	B	41	ILE
1	B	73	SER
1	B	96	ALA
1	B	120	LYS
1	B	214	ALA
1	B	248	GLY
1	B	281	CYS
1	B	289	SER
1	B	303	ALA
1	B	314	PHE
1	B	335	THR
1	B	343	SER
1	B	433	LYS
1	A	322	THR
1	B	84	PHE
1	B	190	PHE
1	B	301	ALA
1	B	322	THR
1	A	73	SER
1	A	281	CYS
1	A	301	ALA
1	B	91	VAL

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Mol	Chain	Res	Type
1	B	246	ILE
1	A	25	GLY
1	A	246	ILE
1	A	336	ILE
1	A	317	VAL
1	B	25	GLY
1	B	161	PRO
1	B	317	VAL
1	A	161	PRO
1	A	324	VAL
1	A	353	VAL
1	B	353	VAL
1	A	71	GLY
1	A	91	VAL
1	A	175	GLY
1	B	175	GLY
1	B	71	GLY
1	B	106	VAL

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	314/343 (92%)	246 (78%)	68 (22%)	1	6
1	B	314/343 (92%)	245 (78%)	69 (22%)	1	6
All	All	628/686 (92%)	491 (78%)	137 (22%)	1	6

All (137) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	22	ASN
1	A	26	SER
1	A	29	PHE
1	A	35	LEU
1	A	56	LEU

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Mol	Chain	Res	Type
1	A	57	SER
1	A	69	SER
1	A	81	PHE
1	A	88	GLN
1	A	95	LEU
1	A	97	CYS
1	A	98	TRP
1	A	104	MET
1	A	105	VAL
1	A	107	ILE
1	A	116	PHE
1	A	117	PRO
1	A	118	ILE
1	A	120	LYS
1	A	124	VAL
1	A	126	THR
1	A	127	ILE
1	A	128	THR
1	A	129	CYS
1	A	141	ILE
1	A	147	ILE
1	A	148	THR
1	A	149	ARG
1	A	159	LEU
1	A	171	PHE
1	A	172	TRP
1	A	173	PHE
1	A	178	TYR
1	A	182	TRP
1	A	187	LEU
1	A	194	GLN
1	A	199	VAL
1	A	202	TRP
1	A	204	PHE
1	A	219	ASN
1	A	237	VAL
1	A	247	MET
1	A	279	SER
1	A	280	PHE
1	A	295	LEU
1	A	302	LYS
1	A	309	LEU

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Mol	Chain	Res	Type
1	A	310	PHE
1	A	314	PHE
1	A	329	ILE
1	A	333	LEU
1	A	334	MET
1	A	338	GLN
1	A	339	LEU
1	A	354	SER
1	A	361	THR
1	A	362	LEU
1	A	366	LEU
1	A	377	HIS
1	A	384	ARG
1	A	388	LEU
1	A	390	VAL
1	A	396	LEU
1	A	403	VAL
1	A	408	LYS
1	A	410	VAL
1	A	419	VAL
1	A	424	TYR
1	B	22	ASN
1	B	26	SER
1	B	29	PHE
1	B	35	LEU
1	B	47	LEU
1	B	56	LEU
1	B	57	SER
1	B	69	SER
1	B	81	PHE
1	B	88	GLN
1	B	95	LEU
1	B	97	CYS
1	B	98	TRP
1	B	104	MET
1	B	105	VAL
1	B	107	ILE
1	B	116	PHE
1	B	117	PRO
1	B	118	ILE
1	B	120	LYS
1	B	124	VAL

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Mol	Chain	Res	Type
1	B	126	THR
1	B	127	ILE
1	B	128	THR
1	B	129	CYS
1	B	141	ILE
1	B	147	ILE
1	B	148	THR
1	B	149	ARG
1	B	159	LEU
1	B	171	PHE
1	B	172	TRP
1	B	173	PHE
1	B	178	TYR
1	B	182	TRP
1	B	185	SER
1	B	187	LEU
1	B	194	GLN
1	B	199	VAL
1	B	202	TRP
1	B	204	PHE
1	B	219	ASN
1	B	237	VAL
1	B	247	MET
1	B	279	SER
1	B	280	PHE
1	B	295	LEU
1	B	302	LYS
1	B	309	LEU
1	B	310	PHE
1	B	314	PHE
1	B	329	ILE
1	B	333	LEU
1	B	334	MET
1	B	338	GLN
1	B	339	LEU
1	B	347	THR
1	B	354	SER
1	B	362	LEU
1	B	366	LEU
1	B	377	HIS
1	B	384	ARG
1	B	388	LEU

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Mol	Chain	Res	Type
1	B	390	VAL
1	B	396	LEU
1	B	403	VAL
1	B	408	LYS
1	B	419	VAL
1	B	424	TYR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (9) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	22	ASN
1	A	151	GLN
1	A	223	ASN
1	A	338	GLN
1	A	379	HIS
1	B	22	ASN
1	B	151	GLN
1	B	223	ASN
1	B	379	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 monosaccharides in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	A	410/445 (92%)	-0.08	15 (3%) 41 27	109, 173, 311, 406	0
1	B	410/445 (92%)	-0.20	11 (2%) 54 39	108, 172, 311, 406	0
All	All	820/890 (92%)	-0.14	26 (3%) 47 32	108, 172, 313, 406	0

All (26) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	166	ALA	7.2
1	A	248	GLY	4.1
1	A	37	SER	4.0
1	B	170	TRP	3.8
1	A	287	LEU	3.4
1	B	167	VAL	3.4
1	A	343	SER	3.3
1	B	287	LEU	3.1
1	A	204	PHE	3.1
1	B	168	PHE	3.0
1	A	182	TRP	2.8
1	B	288	GLY	2.8
1	B	171	PHE	2.6
1	B	190	PHE	2.5
1	A	218	LYS	2.5
1	B	202	TRP	2.5
1	A	183	ASN	2.4
1	A	39	GLY	2.4
1	B	349	GLU	2.3
1	A	10	VAL	2.3
1	A	434	ASN	2.2
1	B	204	PHE	2.1
1	A	29	PHE	2.1
1	A	203	SER	2.0

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Mol	Chain	Res	Type	RSRZ
1	A	202	TRP	2.0
1	A	316	ARG	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.