Full wwPDB X-ray Structure Validation Report (i)

Jun 11, 2024 – 08:41 PM EDT

PDB ID	:	2GFP
Title	:	Structure of the Multidrug Transporter EmrD from Escherichia coli
Authors	:	Yin, Y.; He, X.; Szewczyk, P.; Nguyen, T.; Chang, G.
Deposited on	:	2006-03-22
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
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
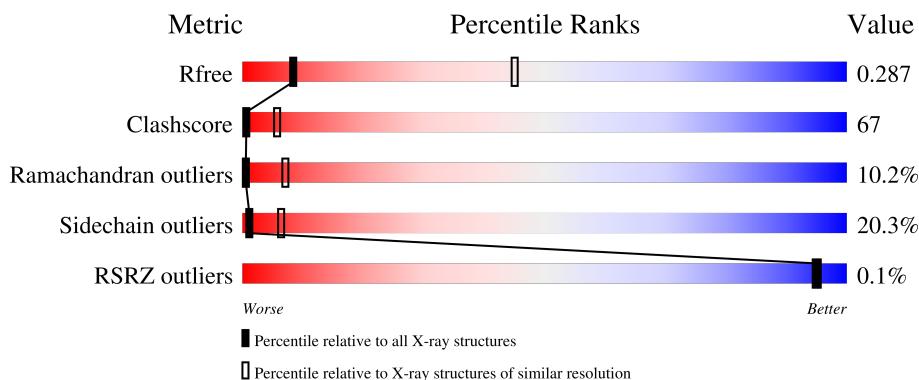
1 Overall quality at a glance ⓘ

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION
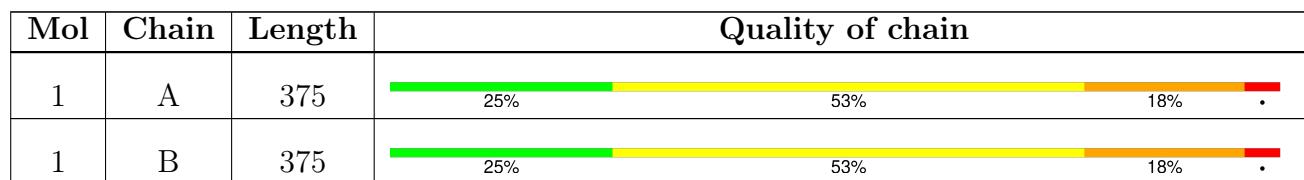
The reported resolution of this entry is 3.50 Å.

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	Percentile Ranks	Value
Rfree		0.287
Clashscore		67
Ramachandran outliers		10.2%
Sidechain outliers		20.3%
RSRZ outliers		0.1%

Worse   *Better*

▮ Percentile relative to all X-ray structures

▯ Percentile relative to X-ray structures of similar resolution

Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	1659 (3.60-3.40)
Clashscore	141614	1036 (3.58-3.42)
Ramachandran outliers	138981	1005 (3.58-3.42)
Sidechain outliers	138945	1006 (3.58-3.42)
RSRZ outliers	127900	1559 (3.60-3.40)

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	375	25% 53% 18% •
1	B	375	25% 53% 18% •

2 Entry composition ⓘ

There is only 1 type of molecule in this entry. The entry contains 5600 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 Multidrug resistance protein D.
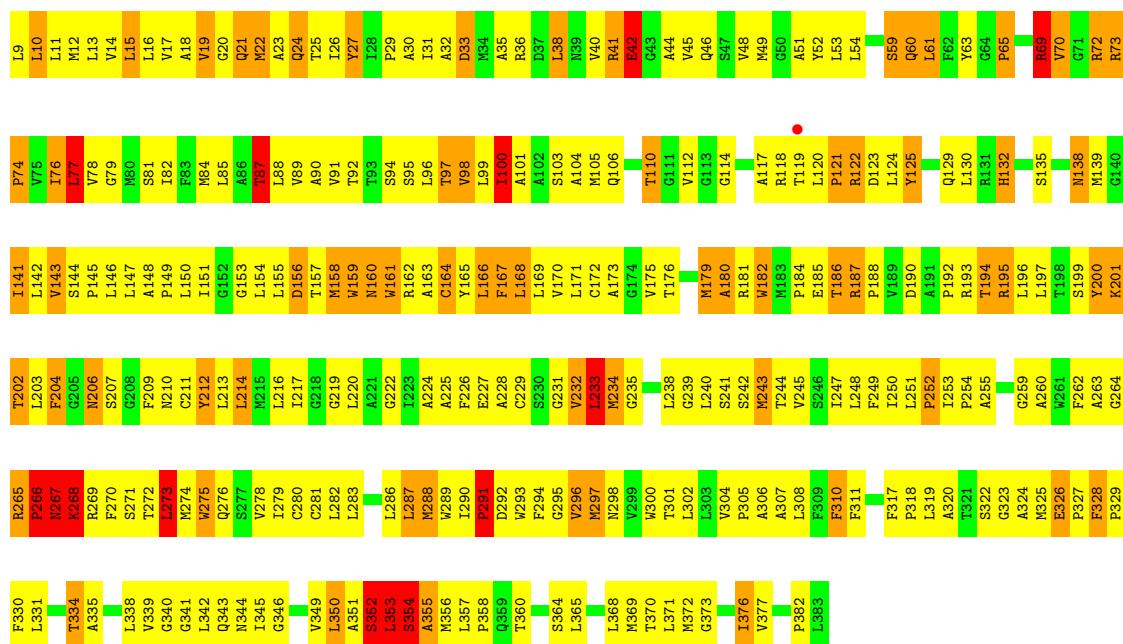
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	375	Total	C	N	O	S	0	0	0
			2800	1842	455	472	31			
1	B	375	Total	C	N	O	S	0	0	0
			2800	1842	455	472	31			

3 Residue-property plots ⓘ

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.
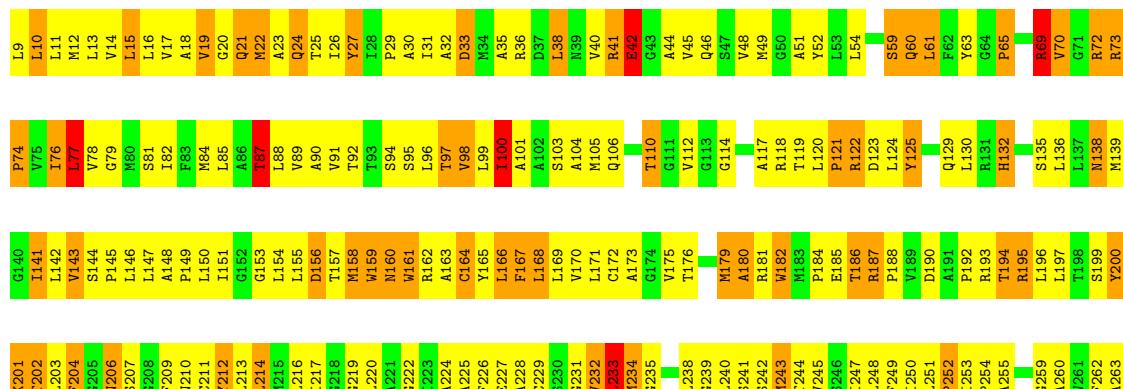
• Molecule 1: Multidrug resistance protein D
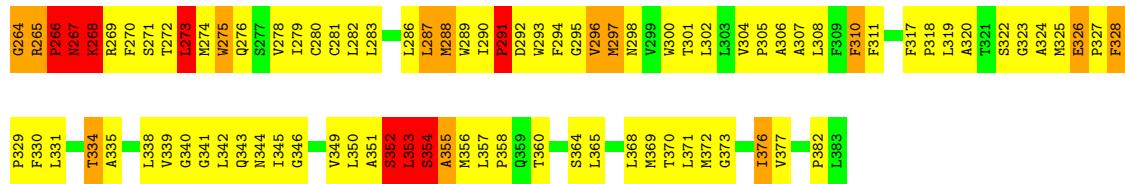
Chain A:

• Molecule 1: Multidrug resistance protein D

Chain B:

4 Data and refinement statistics (i)

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants a, b, c, α, β, γ	137.50Å 124.50Å 109.40Å 90.00° 110.20° 90.00°	Depositor
Resolution (Å)	50.00 – 3.50 50.01 – 3.51	Depositor EDS
% Data completeness (in resolution range)	(Not available) (50.00-3.50) 61.7 (50.01-3.51)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	0.39 (at 3.48Å)	Xtriage
Refinement program	X-PLOR 3.851	Depositor
R, R_{free}	0.270 , 0.350 0.229 , 0.287	Depositor DCC
R_{free} test set	1321 reflections (9.84%)	wwPDB-VP
Wilson B-factor (Å^2)	87.1	Xtriage
Anisotropy	0.527	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.03 , 5.7	EDS
L-test for twinning[2]	$< |L| > = 0.40, < L^2 > = 0.23$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.91	EDS
Total number of atoms	5600	wwPDB-VP
Average B, all atoms (Å^2)	80.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 5.61% of the height of the origin peak. No significant pseudotranslation is detected.*

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[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 ⓘ

5.1   Standard geometry ⓘ

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	0.38	0/2864	0.84	15/3900 (0.4%)
1	B	0.38	0/2864	0.84	15/3900 (0.4%)
All	All	0.38	0/5728	0.84	30/7800 (0.4%)

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	1	2
1	B	1	2
All	All	2	4

There are no bond length outliers.

All (30) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	B	353	LEU	C-N-CA	8.44	142.81	121.70
1	A	353	LEU	C-N-CA	8.40	142.70	121.70
1	B	77	LEU	CA-CB-CG	6.87	131.11	115.30
1	A	77	LEU	CA-CB-CG	6.84	131.04	115.30
1	A	352	SER	N-CA-C	6.49	128.53	111.00
1	B	352	SER	N-CA-C	6.47	128.47	111.00
1	A	353	LEU	CA-C-N	-6.30	103.33	117.20
1	B	353	LEU	CA-C-N	-6.27	103.40	117.20
1	B	354	SER	N-CA-C	6.16	127.63	111.00
1	A	354	SER	N-CA-C	6.15	127.62	111.00
1	B	233	LEU	N-CA-C	5.95	127.07	111.00
1	A	233	LEU	N-CA-C	5.93	127.01	111.00
1	B	273	LEU	CA-CB-CG	5.87	128.81	115.30
1	A	264	GLY	N-CA-C	-5.87	98.43	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	B	264	GLY	N-CA-C	-5.87	98.43	113.10
1	A	273	LEU	CA-CB-CG	5.87	128.79	115.30
1	A	233	LEU	CB-CA-C	5.80	121.22	110.20
1	B	233	LEU	CB-CA-C	5.78	121.17	110.20
1	A	232	VAL	N-CA-C	-5.69	95.65	111.00
1	B	232	VAL	N-CA-C	-5.67	95.69	111.00
1	A	353	LEU	O-C-N	5.27	131.13	122.70
1	B	353	LEU	O-C-N	5.24	131.09	122.70
1	A	100	ILE	N-CA-C	-5.24	96.85	111.00
1	A	214	LEU	CA-CB-CG	5.24	127.35	115.30
1	B	214	LEU	CA-CB-CG	5.24	127.34	115.30
1	B	100	ILE	N-CA-C	-5.22	96.90	111.00
1	B	186	THR	N-CA-C	5.10	124.77	111.00
1	A	186	THR	N-CA-C	5.10	124.76	111.00
1	A	355	ALA	N-CA-C	5.04	124.60	111.00
1	B	355	ALA	N-CA-C	5.03	124.58	111.00

All (2) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
1	A	233	LEU	CA
1	B	233	LEU	CA

All (4) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	353	LEU	Mainchain
1	A	354	SER	Mainchain
1	B	353	LEU	Mainchain
1	B	354	SER	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	2800	0	2932	392	0
1	B	2800	0	2932	389	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
All	All	5600	0	5864	767	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 67.

All (767) 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:200:TYR:HE1	1:B:204:PHE:CE1	1.38	1.40
1:A:200:TYR:CE1	1:B:204:PHE:CE1	2.29	1.21
1:A:263:ALA:HA	1:A:268:LYS:HB2	1.15	1.10
1:B:20:GLY:HA2	1:B:110:THR:HB	1.32	1.09
1:A:20:GLY:HA2	1:A:110:THR:HB	1.32	1.08
1:B:263:ALA:HA	1:B:268:LYS:HB2	1.15	1.07
1:A:204:PHE:CE1	1:B:200:TYR:HE1	1.73	1.06
1:B:273:LEU:HG	1:B:370:THR:HA	1.40	1.02
1:A:273:LEU:HG	1:A:370:THR:HA	1.39	1.01
1:B:248:LEU:O	1:B:252:PRO:HD2	1.65	0.97
1:A:248:LEU:O	1:A:252:PRO:HD2	1.65	0.95
1:B:91:VAL:HG12	1:B:99:LEU:HD12	1.50	0.92
1:B:73:ARG:HG3	1:B:74:PRO:HD3	1.52	0.91
1:A:91:VAL:HG12	1:A:99:LEU:HD12	1.50	0.90
1:B:117:ALA:O	1:B:121:PRO:HD2	1.72	0.90
1:A:73:ARG:HG3	1:A:74:PRO:HD3	1.52	0.89
1:B:301:THR:O	1:B:305:PRO:HD2	1.73	0.89
1:A:204:PHE:CE1	1:B:200:TYR:CE1	2.61	0.89
1:A:117:ALA:O	1:A:121:PRO:HD2	1.72	0.89
1:A:357:LEU:HB2	1:A:358:PRO:HD3	1.56	0.88
1:A:279:ILE:HD12	1:A:295:GLY:HA2	1.56	0.88
1:A:301:THR:O	1:A:305:PRO:HD2	1.73	0.87
1:A:141:ILE:O	1:A:145:PRO:HD2	1.75	0.87
1:B:262:PHE:HA	1:B:265:ARG:HB2	1.54	0.87
1:B:357:LEU:HB2	1:B:358:PRO:HD3	1.56	0.87
1:B:141:ILE:O	1:B:145:PRO:HD2	1.75	0.87
1:A:25:THR:O	1:A:29:PRO:HD2	1.75	0.87
1:A:262:PHE:HA	1:A:265:ARG:HB2	1.54	0.87
1:B:25:THR:O	1:B:29:PRO:HD2	1.75	0.86
1:A:84:MET:O	1:A:87:THR:HB	1.75	0.86
1:B:279:ILE:HD12	1:B:295:GLY:HA2	1.56	0.86
1:A:200:TYR:HE1	1:B:204:PHE:CD1	1.94	0.86
1:A:148:ALA:HB3	1:A:149:PRO:HD3	1.59	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:31:ILE:HG13	1:B:48:VAL:HG11	1.58	0.85
1:B:32:ALA:HB1	1:B:233:LEU:HB3	1.58	0.85
1:A:32:ALA:HB1	1:A:233:LEU:HB3	1.58	0.85
1:B:148:ALA:HB3	1:B:149:PRO:HD3	1.59	0.84
1:B:84:MET:O	1:B:87:THR:HB	1.75	0.84
1:B:319:LEU:HA	1:B:322:SER:HB2	1.60	0.84
1:B:84:MET:HG3	1:B:162:ARG:HH12	1.43	0.84
1:A:319:LEU:HA	1:A:322:SER:HB2	1.60	0.84
1:A:84:MET:HG3	1:A:162:ARG:HH12	1.43	0.83
1:A:201:LYS:HE3	1:B:200:TYR:OH	1.78	0.83
1:B:263:ALA:HA	1:B:268:LYS:CB	2.06	0.83
1:B:157:THR:HB	1:B:160:ASN:HB2	1.61	0.82
1:A:31:ILE:HG13	1:A:48:VAL:HG11	1.58	0.82
1:B:290:ILE:HG13	1:B:291:PRO:HD3	1.60	0.82
1:A:290:ILE:HG13	1:A:291:PRO:HD3	1.59	0.82
1:A:157:THR:HB	1:A:160:ASN:HB2	1.60	0.82
1:A:42:GLU:OE1	1:A:45:VAL:HB	1.80	0.81
1:B:328:PHE:HB2	1:B:329:PRO:HD3	1.62	0.81
1:B:42:GLU:OE1	1:B:45:VAL:HB	1.80	0.81
1:B:272:THR:HG22	1:B:302:LEU:HD22	1.62	0.81
1:A:272:THR:HG22	1:A:302:LEU:HD22	1.62	0.81
1:A:32:ALA:HA	1:A:233:LEU:HD13	1.64	0.80
1:A:200:TYR:CE1	1:B:204:PHE:CD1	2.68	0.80
1:A:328:PHE:HB2	1:A:329:PRO:HD3	1.62	0.80
1:B:32:ALA:HA	1:B:233:LEU:HD13	1.64	0.80
1:B:95:SER:O	1:B:100:ILE:HG23	1.82	0.80
1:A:88:LEU:HA	1:A:91:VAL:HG22	1.64	0.79
1:A:95:SER:O	1:A:100:ILE:HG23	1.82	0.79
1:A:262:PHE:CE1	1:A:271:SER:HB2	2.18	0.79
1:A:250:ILE:O	1:A:254:PRO:HD2	1.83	0.78
1:A:326:GLU:HG3	1:A:327:PRO:HD2	1.65	0.78
1:B:262:PHE:CE1	1:B:271:SER:HB2	2.18	0.78
1:A:203:LEU:O	1:A:207:SER:HB2	1.84	0.78
1:B:250:ILE:O	1:B:254:PRO:HD2	1.83	0.78
1:A:22:MET:HG2	1:A:164:CYS:SG	2.24	0.78
1:A:31:ILE:HD11	1:A:104:ALA:HB2	1.65	0.78
1:B:31:ILE:HD11	1:B:104:ALA:HB2	1.65	0.78
1:B:207:SER:HA	1:B:210:ASN:HB3	1.65	0.78
1:B:88:LEU:HA	1:B:91:VAL:HG22	1.63	0.77
1:B:203:LEU:O	1:B:207:SER:HB2	1.83	0.77
1:B:326:GLU:HG3	1:B:327:PRO:HD2	1.65	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:22:MET:HG2	1:B:164:CYS:SG	2.24	0.76
1:B:19:VAL:HG23	1:B:165:TYR:HA	1.68	0.76
1:A:19:VAL:HG23	1:A:165:TYR:HA	1.68	0.76
1:A:207:SER:HA	1:A:210:ASN:HB3	1.65	0.75
1:A:352:SER:O	1:A:353:LEU:HD12	1.86	0.75
1:A:46:GLN:HG3	1:A:225:ALA:HB1	1.69	0.75
1:A:263:ALA:HA	1:A:268:LYS:CB	2.06	0.75
1:B:352:SER:O	1:B:353:LEU:HD12	1.86	0.75
1:B:46:GLN:HG3	1:B:225:ALA:HB1	1.69	0.75
1:A:269:ARG:HH11	1:A:372:MET:HB3	1.52	0.74
1:B:269:ARG:HH11	1:B:372:MET:HB3	1.52	0.74
1:A:16:LEU:HB2	1:A:172:CYS:SG	2.28	0.73
1:B:21:GLN:HB2	1:B:143:VAL:HG13	1.70	0.73
1:B:97:THR:O	1:B:99:LEU:N	2.22	0.73
1:A:97:THR:O	1:A:99:LEU:N	2.22	0.73
1:B:16:LEU:HB2	1:B:172:CYS:SG	2.28	0.73
1:A:202:THR:HG22	1:A:206:ASN:HB3	1.70	0.73
1:B:145:PRO:O	1:B:149:PRO:HD2	1.89	0.73
1:B:217:ILE:HD11	1:B:331:LEU:O	1.89	0.73
1:B:267:ASN:O	1:B:269:ARG:N	2.22	0.73
1:A:32:ALA:HB1	1:A:233:LEU:CB	2.19	0.72
1:A:145:PRO:O	1:A:149:PRO:HD2	1.89	0.72
1:A:267:ASN:O	1:A:269:ARG:N	2.22	0.72
1:B:32:ALA:HB1	1:B:233:LEU:CB	2.19	0.72
1:A:326:GLU:O	1:A:330:PHE:HB2	1.89	0.72
1:A:251:LEU:HB3	1:A:252:PRO:HD3	1.71	0.72
1:A:323:GLY:O	1:A:327:PRO:HD2	1.89	0.72
1:B:202:THR:HG22	1:B:206:ASN:HB3	1.70	0.72
1:A:21:GLN:HB2	1:A:143:VAL:HG13	1.69	0.71
1:A:94:SER:O	1:A:99:LEU:HB2	1.89	0.71
1:A:217:ILE:HD11	1:A:331:LEU:O	1.89	0.71
1:B:326:GLU:O	1:B:330:PHE:HB2	1.89	0.71
1:A:240:LEU:HA	1:A:243:MET:HB3	1.72	0.71
1:B:94:SER:O	1:B:99:LEU:HB2	1.89	0.71
1:B:72:ARG:O	1:B:76:ILE:HB	1.91	0.71
1:B:323:GLY:O	1:B:327:PRO:HD2	1.89	0.71
1:A:72:ARG:O	1:A:76:ILE:HB	1.91	0.71
1:A:32:ALA:C	1:A:233:LEU:HB3	2.12	0.70
1:A:87:THR:HG21	1:A:161:TRP:HE1	1.56	0.70
1:B:59:SER:O	1:B:63:TYR:HB3	1.92	0.70
1:B:265:ARG:HG2	1:B:266:PRO:HD2	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:196:LEU:HA	1:B:199:SER:HB2	1.73	0.70
1:B:32:ALA:C	1:B:233:LEU:HB3	2.12	0.70
1:A:196:LEU:HA	1:A:199:SER:HB2	1.74	0.70
1:B:251:LEU:HB3	1:B:252:PRO:HD3	1.71	0.70
1:B:294:PHE:HD2	1:B:297:MET:SD	2.15	0.70
1:A:200:TYR:OH	1:B:201:LYS:HE3	1.91	0.70
1:A:59:SER:O	1:A:63:TYR:HB3	1.91	0.70
1:A:212:TYR:HB2	1:A:269:ARG:NH2	2.07	0.70
1:A:288:MET:O	1:A:291:PRO:HD2	1.93	0.69
1:A:294:PHE:HD2	1:A:297:MET:SD	2.15	0.69
1:B:212:TYR:HB2	1:B:269:ARG:NH2	2.07	0.69
1:A:159:TRP:HA	1:A:162:ARG:CG	2.22	0.69
1:B:35:ALA:HA	1:B:38:LEU:HG	1.73	0.69
1:B:159:TRP:HA	1:B:162:ARG:CG	2.22	0.69
1:B:240:LEU:HA	1:B:243:MET:HB3	1.73	0.69
1:B:288:MET:O	1:B:291:PRO:HD2	1.92	0.69
1:B:87:THR:HG21	1:B:161:TRP:HE1	1.56	0.69
1:A:91:VAL:O	1:A:95:SER:HB2	1.93	0.69
1:A:262:PHE:HE1	1:A:271:SER:HB2	1.56	0.68
1:A:327:PRO:O	1:A:331:LEU:HB2	1.92	0.68
1:B:69:ARG:HG2	1:B:186:THR:H	1.57	0.68
1:B:262:PHE:HE1	1:B:271:SER:HB2	1.56	0.68
1:B:327:PRO:O	1:B:331:LEU:HB2	1.92	0.68
1:A:69:ARG:HG2	1:A:186:THR:H	1.57	0.68
1:A:265:ARG:HG2	1:A:266:PRO:HD2	1.73	0.68
1:A:35:ALA:HA	1:A:38:LEU:HG	1.73	0.68
1:B:32:ALA:CB	1:B:233:LEU:HB3	2.24	0.68
1:B:91:VAL:O	1:B:95:SER:HB2	1.94	0.67
1:B:327:PRO:HA	1:B:331:LEU:HD13	1.75	0.67
1:A:36:ARG:HD2	1:A:233:LEU:HB2	1.75	0.67
1:A:294:PHE:CD2	1:A:297:MET:SD	2.88	0.67
1:A:25:THR:HB	1:A:242:SER:OG	1.95	0.67
1:A:234:MET:O	1:A:238:LEU:HB2	1.95	0.67
1:A:148:ALA:HB2	1:A:243:MET:HB2	1.77	0.67
1:A:195:ARG:HG3	1:A:197:LEU:H	1.59	0.67
1:B:252:PRO:HB3	1:B:301:THR:HG23	1.75	0.67
1:A:327:PRO:HA	1:A:331:LEU:HD13	1.75	0.67
1:A:368:LEU:HG	1:A:372:MET:HE2	1.77	0.67
1:B:98:VAL:O	1:B:101:ALA:HB3	1.94	0.67
1:A:245:VAL:HG22	1:A:249:PHE:CE2	2.30	0.67
1:B:148:ALA:HB2	1:B:243:MET:HB2	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:32:ALA:CB	1:A:233:LEU:HB3	2.24	0.67
1:B:275:TRP:HA	1:B:275:TRP:CE3	2.29	0.67
1:B:294:PHE:CD2	1:B:297:MET:SD	2.88	0.67
1:A:275:TRP:CE3	1:A:275:TRP:HA	2.29	0.67
1:B:227:GLU:HB2	1:B:296:VAL:HG22	1.77	0.67
1:A:227:GLU:HB2	1:A:296:VAL:HG22	1.78	0.66
1:B:19:VAL:HG22	1:B:110:THR:HG21	1.77	0.66
1:B:195:ARG:HG3	1:B:197:LEU:H	1.59	0.66
1:A:356:MET:O	1:A:360:THR:HB	1.96	0.66
1:B:36:ARG:HD2	1:B:233:LEU:HB2	1.75	0.66
1:A:252:PRO:HB3	1:A:301:THR:HG23	1.75	0.66
1:A:98:VAL:O	1:A:101:ALA:HB3	1.95	0.66
1:B:234:MET:O	1:B:238:LEU:HB2	1.95	0.66
1:B:143:VAL:O	1:B:147:LEU:HD23	1.96	0.66
1:B:245:VAL:HG22	1:B:249:PHE:CE2	2.30	0.66
1:B:273:LEU:CG	1:B:370:THR:HA	2.23	0.66
1:B:32:ALA:HB1	1:B:233:LEU:HD22	1.76	0.66
1:B:209:PHE:O	1:B:212:TYR:HB3	1.96	0.66
1:A:32:ALA:HB1	1:A:233:LEU:HD22	1.76	0.65
1:A:345:ILE:O	1:A:349:VAL:HB	1.97	0.65
1:A:65:PRO:HB3	1:A:190:ASP:HB3	1.78	0.65
1:B:77:LEU:HB2	1:B:169:LEU:HD21	1.79	0.65
1:A:87:THR:O	1:A:91:VAL:HG13	1.97	0.65
1:A:201:LYS:CE	1:B:200:TYR:OH	2.44	0.65
1:B:49:MET:SD	1:B:228:ALA:HB3	2.37	0.65
1:B:307:ALA:O	1:B:311:PHE:HB2	1.97	0.65
1:B:356:MET:O	1:B:360:THR:HB	1.95	0.65
1:A:209:PHE:O	1:A:212:TYR:HB3	1.96	0.65
1:A:211:CYS:SG	1:A:372:MET:SD	2.93	0.65
1:A:212:TYR:HB2	1:A:269:ARG:CZ	2.27	0.65
1:B:212:TYR:HB2	1:B:269:ARG:CZ	2.27	0.65
1:A:19:VAL:HG22	1:A:110:THR:HG21	1.77	0.64
1:B:345:ILE:O	1:B:349:VAL:HB	1.97	0.64
1:A:307:ALA:O	1:A:311:PHE:HB2	1.97	0.64
1:A:49:MET:SD	1:A:228:ALA:HB3	2.37	0.64
1:A:143:VAL:O	1:A:147:LEU:HD23	1.96	0.64
1:B:65:PRO:HB3	1:B:190:ASP:HB3	1.78	0.64
1:B:216:LEU:O	1:B:220:LEU:HB2	1.97	0.64
1:A:77:LEU:HB2	1:A:169:LEU:HD21	1.79	0.64
1:B:87:THR:O	1:B:91:VAL:HG13	1.97	0.64
1:A:216:LEU:O	1:A:220:LEU:HB2	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:25:THR:HB	1:B:242:SER:OG	1.98	0.64
1:A:269:ARG:NE	1:A:376:ILE:HG21	2.13	0.64
1:B:269:ARG:NE	1:B:376:ILE:HG21	2.13	0.63
1:B:368:LEU:HG	1:B:372:MET:HE2	1.80	0.63
1:B:286:LEU:HD22	1:B:287:LEU:HD22	1.79	0.63
1:A:46:GLN:CG	1:A:225:ALA:HB1	2.28	0.63
1:A:286:LEU:HD22	1:A:287:LEU:HD22	1.79	0.63
1:B:46:GLN:CG	1:B:225:ALA:HB1	2.28	0.63
1:B:243:MET:SD	1:B:244:THR:N	2.72	0.63
1:B:211:CYS:SG	1:B:372:MET:SD	2.93	0.62
1:B:267:ASN:C	1:B:269:ARG:H	2.02	0.62
1:A:243:MET:SD	1:A:244:THR:N	2.72	0.62
1:A:192:PRO:O	1:A:193:ARG:HG3	2.00	0.62
1:B:192:PRO:O	1:B:193:ARG:HG3	2.00	0.62
1:B:213:LEU:HD21	1:B:306:ALA:HB1	1.81	0.62
1:B:269:ARG:NH2	1:B:376:ILE:HG13	2.14	0.62
1:B:185:GLU:O	1:B:186:THR:HG22	2.00	0.62
1:A:267:ASN:C	1:A:269:ARG:H	2.02	0.62
1:A:12:MET:HB3	1:A:176:THR:HG22	1.82	0.61
1:A:32:ALA:O	1:A:36:ARG:HB2	1.99	0.61
1:A:269:ARG:NH2	1:A:376:ILE:HG13	2.14	0.61
1:B:32:ALA:O	1:B:36:ARG:HB2	1.99	0.61
1:B:139:MET:O	1:B:143:VAL:HG23	2.01	0.61
1:B:269:ARG:HB3	1:B:373:GLY:HA2	1.81	0.61
1:A:38:LEU:HD23	1:A:100:ILE:HG21	1.82	0.61
1:A:81:SER:O	1:A:84:MET:HG2	2.00	0.61
1:A:213:LEU:HD21	1:A:306:ALA:HB1	1.81	0.61
1:A:269:ARG:HB3	1:A:373:GLY:HA2	1.81	0.61
1:A:139:MET:O	1:A:143:VAL:HG23	2.01	0.61
1:B:212:TYR:OH	1:B:268:LYS:HE2	2.01	0.61
1:B:342:LEU:O	1:B:345:ILE:HG22	2.01	0.61
1:B:12:MET:HB3	1:B:176:THR:HG22	1.82	0.61
1:B:38:LEU:HD23	1:B:100:ILE:HG21	1.82	0.61
1:B:81:SER:O	1:B:84:MET:HG2	2.01	0.61
1:A:73:ARG:HA	1:A:77:LEU:CD1	2.31	0.61
1:A:300:TRP:CH2	1:A:304:VAL:HG21	2.36	0.61
1:A:342:LEU:O	1:A:345:ILE:HG22	2.01	0.61
1:B:73:ARG:HA	1:B:77:LEU:CD1	2.31	0.61
1:B:300:TRP:CH2	1:B:304:VAL:HG21	2.36	0.60
1:A:159:TRP:HA	1:A:162:ARG:HG3	1.83	0.60
1:B:373:GLY:O	1:B:377:VAL:HG23	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:212:TYR:OH	1:A:268:LYS:HE2	2.01	0.60
1:A:185:GLU:O	1:A:186:THR:HG22	2.00	0.60
1:A:273:LEU:CG	1:A:370:THR:HA	2.23	0.60
1:B:73:ARG:O	1:B:77:LEU:HD22	2.01	0.60
1:A:357:LEU:O	1:A:360:THR:HG22	2.01	0.60
1:A:373:GLY:O	1:A:377:VAL:HG23	2.02	0.60
1:B:159:TRP:HA	1:B:162:ARG:HG3	1.82	0.60
1:B:357:LEU:O	1:B:360:THR:HG22	2.01	0.60
1:A:11:LEU:O	1:A:14:VAL:HG22	2.01	0.60
1:B:262:PHE:HZ	1:B:270:PHE:HD2	1.50	0.60
1:A:17:VAL:HB	1:A:139:MET:HG2	1.84	0.60
1:B:324:ALA:O	1:B:329:PRO:HD2	2.02	0.60
1:A:282:LEU:HB3	1:A:291:PRO:HA	1.83	0.60
1:B:17:VAL:HB	1:B:139:MET:HG2	1.84	0.60
1:B:17:VAL:HG21	1:B:138:ASN:HD21	1.67	0.60
1:B:11:LEU:O	1:B:14:VAL:HG22	2.01	0.59
1:A:231:GLY:HA3	1:A:238:LEU:HD21	1.83	0.59
1:A:262:PHE:HZ	1:A:270:PHE:HD2	1.50	0.59
1:A:280:CYS:O	1:A:283:LEU:HB3	2.03	0.59
1:B:24:GLN:HA	1:B:27:TYR:CE2	2.37	0.59
1:B:298:ASN:HD21	1:B:302:LEU:HD21	1.67	0.59
1:A:24:GLN:HA	1:A:27:TYR:CE2	2.37	0.59
1:A:163:ALA:O	1:A:167:PHE:HB3	2.03	0.59
1:A:200:TYR:HE1	1:B:204:PHE:CZ	2.12	0.59
1:A:216:LEU:HD23	1:A:369:MET:HE3	1.85	0.59
1:A:298:ASN:HD21	1:A:302:LEU:HD21	1.67	0.59
1:A:324:ALA:O	1:A:329:PRO:HD2	2.02	0.59
1:B:231:GLY:HA3	1:B:238:LEU:HD21	1.84	0.59
1:A:73:ARG:O	1:A:77:LEU:HD22	2.01	0.59
1:B:49:MET:SD	1:B:225:ALA:HA	2.43	0.59
1:B:280:CYS:O	1:B:283:LEU:HB3	2.03	0.59
1:B:282:LEU:HB3	1:B:291:PRO:HA	1.83	0.59
1:A:186:THR:O	1:A:190:ASP:HB2	2.02	0.58
1:A:276:GLN:NE2	1:A:365:LEU:HD13	2.19	0.58
1:B:269:ARG:NH1	1:B:372:MET:HB3	2.17	0.58
1:B:186:THR:O	1:B:190:ASP:HB2	2.02	0.58
1:A:17:VAL:HG21	1:A:138:ASN:HD21	1.67	0.58
1:A:32:ALA:CB	1:A:233:LEU:HD22	2.33	0.58
1:A:40:VAL:HG23	1:A:44:ALA:HB2	1.86	0.58
1:A:204:PHE:CD1	1:B:200:TYR:HE1	2.18	0.58
1:A:266:PRO:O	1:A:267:ASN:O	2.22	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:269:ARG:NH1	1:A:372:MET:HB3	2.17	0.58
1:A:319:LEU:O	1:A:323:GLY:HA3	2.04	0.58
1:B:194:THR:HG22	1:B:195:ARG:H	1.69	0.58
1:B:216:LEU:HD23	1:B:369:MET:HE3	1.86	0.58
1:A:49:MET:SD	1:A:225:ALA:HA	2.43	0.58
1:B:40:VAL:HG23	1:B:44:ALA:HB2	1.86	0.58
1:B:276:GLN:NE2	1:B:365:LEU:HD13	2.19	0.58
1:B:41:ARG:HH21	1:B:42:GLU:HB2	1.69	0.58
1:B:267:ASN:C	1:B:269:ARG:N	2.57	0.58
1:B:32:ALA:CB	1:B:233:LEU:HD22	2.34	0.57
1:B:163:ALA:O	1:B:167:PHE:HB3	2.03	0.57
1:B:293:TRP:N	1:B:293:TRP:CD1	2.72	0.57
1:A:268:LYS:HZ2	1:A:306:ALA:N	2.01	0.57
1:A:41:ARG:HH21	1:A:42:GLU:HB2	1.69	0.57
1:A:194:THR:HG22	1:A:195:ARG:H	1.69	0.57
1:B:266:PRO:O	1:B:267:ASN:O	2.22	0.57
1:A:267:ASN:C	1:A:269:ARG:N	2.57	0.57
1:A:260:ALA:HB2	1:A:308:LEU:HD23	1.85	0.57
1:B:32:ALA:CA	1:B:233:LEU:HB3	2.35	0.57
1:B:214:LEU:HD22	1:B:334:THR:OG1	2.03	0.57
1:A:293:TRP:N	1:A:293:TRP:CD1	2.72	0.57
1:A:214:LEU:HD22	1:A:334:THR:OG1	2.03	0.57
1:B:319:LEU:O	1:B:323:GLY:HA3	2.04	0.57
1:B:260:ALA:HB2	1:B:308:LEU:HD23	1.85	0.57
1:B:268:LYS:HZ2	1:B:306:ALA:N	2.03	0.57
1:B:251:LEU:HB3	1:B:252:PRO:CD	2.35	0.56
1:B:87:THR:CG2	1:B:88:LEU:N	2.68	0.56
1:B:269:ARG:HD2	1:B:373:GLY:HA2	1.88	0.56
1:A:351:ALA:HB3	1:A:354:SER:OG	2.06	0.56
1:A:32:ALA:CA	1:A:233:LEU:HB3	2.35	0.56
1:A:207:SER:HA	1:A:210:ASN:CB	2.34	0.56
1:B:85:LEU:HA	1:B:162:ARG:NH2	2.20	0.56
1:B:233:LEU:HD23	1:B:238:LEU:HD21	1.88	0.56
1:A:96:LEU:O	1:A:100:ILE:HD12	2.06	0.56
1:B:27:TYR:HA	1:B:30:ALA:HB3	1.88	0.56
1:A:49:MET:O	1:A:52:TYR:HB3	2.06	0.56
1:A:269:ARG:HD2	1:A:373:GLY:HA2	1.88	0.56
1:B:357:LEU:HB2	1:B:358:PRO:CD	2.32	0.56
1:B:84:MET:SD	1:B:165:TYR:CD1	2.99	0.56
1:B:207:SER:HA	1:B:210:ASN:CB	2.34	0.56
1:A:85:LEU:HA	1:A:162:ARG:NH2	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:232:VAL:HG13	1:A:232:VAL:O	2.06	0.56
1:A:91:VAL:HG11	1:A:103:SER:OG	2.06	0.55
1:B:98:VAL:HG22	1:B:101:ALA:HB3	1.88	0.55
1:B:242:SER:O	1:B:245:VAL:HG12	2.06	0.55
1:A:181:ARG:O	1:A:182:TRP:HB2	2.05	0.55
1:A:242:SER:O	1:A:245:VAL:HG12	2.06	0.55
1:B:290:ILE:O	1:B:294:PHE:HB3	2.06	0.55
1:B:328:PHE:HB2	1:B:329:PRO:CD	2.35	0.55
1:B:351:ALA:HB3	1:B:354:SER:OG	2.06	0.55
1:A:84:MET:SD	1:A:165:TYR:CD1	2.99	0.55
1:A:87:THR:CG2	1:A:88:LEU:N	2.68	0.55
1:A:357:LEU:HB2	1:A:358:PRO:CD	2.32	0.55
1:A:27:TYR:HA	1:A:30:ALA:HB3	1.88	0.55
1:A:204:PHE:CD1	1:B:200:TYR:CE1	2.95	0.55
1:A:335:ALA:O	1:A:339:VAL:HG23	2.07	0.55
1:B:91:VAL:HG11	1:B:103:SER:OG	2.06	0.55
1:B:94:SER:HB3	1:B:99:LEU:HD23	1.89	0.55
1:B:148:ALA:HB3	1:B:149:PRO:CD	2.35	0.55
1:B:181:ARG:O	1:B:182:TRP:HB2	2.06	0.55
1:A:10:LEU:H	1:A:10:LEU:HD23	1.72	0.55
1:A:233:LEU:HD23	1:A:238:LEU:HD21	1.88	0.55
1:B:96:LEU:O	1:B:100:ILE:HD12	2.06	0.55
1:A:42:GLU:OE2	1:A:233:LEU:HD11	2.07	0.55
1:A:290:ILE:O	1:A:294:PHE:HB3	2.06	0.55
1:B:114:GLY:O	1:B:117:ALA:HB3	2.07	0.55
1:B:232:VAL:HG13	1:B:232:VAL:O	2.06	0.55
1:A:98:VAL:HG22	1:A:101:ALA:HB3	1.88	0.54
1:A:251:LEU:HB3	1:A:252:PRO:CD	2.35	0.54
1:A:119:THR:O	1:A:122:ARG:HB2	2.07	0.54
1:B:49:MET:O	1:B:52:TYR:HB3	2.06	0.54
1:A:148:ALA:HB3	1:A:149:PRO:CD	2.35	0.54
1:B:335:ALA:O	1:B:339:VAL:HG23	2.06	0.54
1:B:32:ALA:HB1	1:B:233:LEU:CD2	2.37	0.54
1:B:119:THR:O	1:B:122:ARG:HB2	2.07	0.54
1:B:42:GLU:OE2	1:B:233:LEU:HD11	2.07	0.54
1:A:298:ASN:O	1:A:302:LEU:HG	2.08	0.54
1:B:195:ARG:NH1	1:B:196:LEU:HB2	2.23	0.54
1:A:94:SER:HB3	1:A:99:LEU:HD23	1.89	0.54
1:B:10:LEU:HD23	1:B:10:LEU:H	1.72	0.54
1:B:239:GLY:O	1:B:242:SER:HB3	2.08	0.54
1:A:32:ALA:HB1	1:A:233:LEU:CD2	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:195:ARG:NH1	1:A:196:LEU:HB2	2.23	0.54
1:B:298:ASN:O	1:B:302:LEU:HG	2.08	0.54
1:A:339:VAL:O	1:A:342:LEU:HB2	2.08	0.54
1:B:94:SER:HA	1:B:97:THR:HB	1.90	0.54
1:A:94:SER:C	1:A:99:LEU:HB2	2.29	0.54
1:A:148:ALA:CB	1:A:149:PRO:HD3	2.35	0.54
1:A:239:GLY:O	1:A:242:SER:HB3	2.08	0.54
1:B:94:SER:C	1:B:99:LEU:HB2	2.29	0.54
1:B:148:ALA:CB	1:B:149:PRO:HD3	2.35	0.53
1:B:267:ASN:OD1	1:B:376:ILE:HG23	2.07	0.53
1:A:267:ASN:OD1	1:A:376:ILE:HG23	2.07	0.53
1:B:22:MET:O	1:B:26:ILE:HB	2.09	0.53
1:B:87:THR:HG22	1:B:88:LEU:H	1.73	0.53
1:B:275:TRP:HA	1:B:275:TRP:HE3	1.71	0.53
1:A:114:GLY:O	1:A:117:ALA:HB3	2.07	0.53
1:B:339:VAL:O	1:B:342:LEU:HB2	2.08	0.53
1:A:225:ALA:O	1:A:229:CYS:HB2	2.09	0.53
1:B:82:ILE:HA	1:B:85:LEU:HD13	1.91	0.53
1:B:279:ILE:HD13	1:B:294:PHE:CE1	2.44	0.53
1:A:87:THR:HG22	1:A:88:LEU:H	1.73	0.53
1:B:149:PRO:O	1:B:153:GLY:HA3	2.09	0.53
1:A:149:PRO:O	1:A:153:GLY:HA3	2.09	0.53
1:A:247:ILE:O	1:A:250:ILE:HG22	2.08	0.53
1:B:247:ILE:O	1:B:250:ILE:HG22	2.08	0.53
1:A:279:ILE:HD13	1:A:294:PHE:CE1	2.44	0.53
1:A:274:MET:O	1:A:278:VAL:HG23	2.09	0.53
1:A:129:GLN:O	1:A:129:GLN:HG2	2.09	0.52
1:B:49:MET:SD	1:B:224:ALA:O	2.68	0.52
1:A:16:LEU:O	1:A:19:VAL:HG13	2.09	0.52
1:A:187:ARG:CZ	1:A:188:PRO:HA	2.39	0.52
1:A:94:SER:HA	1:A:97:THR:HB	1.90	0.52
1:B:185:GLU:HG2	1:B:186:THR:N	2.25	0.52
1:B:225:ALA:O	1:B:229:CYS:HB2	2.09	0.52
1:A:122:ARG:O	1:A:125:TYR:HB3	2.10	0.52
1:A:222:GLY:O	1:A:225:ALA:HB3	2.10	0.52
1:B:274:MET:O	1:B:278:VAL:HG23	2.09	0.52
1:A:49:MET:SD	1:A:224:ALA:O	2.68	0.52
1:B:129:GLN:O	1:B:129:GLN:HG2	2.09	0.52
1:B:150:LEU:HD23	1:B:157:THR:HG21	1.91	0.52
1:A:22:MET:O	1:A:26:ILE:HB	2.09	0.52
1:A:171:LEU:O	1:A:175:VAL:HG23	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:268:LYS:O	1:A:271:SER:HB3	2.10	0.52
1:B:222:GLY:O	1:B:225:ALA:HB3	2.10	0.52
1:B:187:ARG:CZ	1:B:188:PRO:HA	2.39	0.52
1:A:185:GLU:HG2	1:A:186:THR:N	2.25	0.52
1:A:265:ARG:CG	1:A:266:PRO:HD2	2.40	0.52
1:B:122:ARG:O	1:B:125:TYR:HB3	2.10	0.52
1:A:82:ILE:HA	1:A:85:LEU:HD13	1.91	0.51
1:A:250:ILE:O	1:A:253:ILE:HG22	2.10	0.51
1:B:16:LEU:O	1:B:19:VAL:HG13	2.09	0.51
1:A:275:TRP:HA	1:A:275:TRP:HE3	1.71	0.51
1:B:171:LEU:O	1:B:175:VAL:HG23	2.09	0.51
1:B:278:VAL:O	1:B:281:CYS:SG	2.67	0.51
1:A:328:PHE:HB2	1:A:329:PRO:CD	2.35	0.51
1:B:306:ALA:O	1:B:310:PHE:HB2	2.11	0.51
1:A:179:MET:O	1:A:180:ALA:HB2	2.11	0.51
1:A:248:LEU:HG	1:A:297:MET:HB2	1.93	0.51
1:B:172:CYS:O	1:B:176:THR:HG23	2.11	0.51
1:A:187:ARG:HB3	1:A:188:PRO:HD3	1.93	0.51
1:B:29:PRO:O	1:B:32:ALA:HB3	2.11	0.51
1:B:250:ILE:O	1:B:253:ILE:HG22	2.10	0.51
1:B:279:ILE:HD11	1:B:298:ASN:HB3	1.92	0.51
1:A:279:ILE:HD11	1:A:298:ASN:HB3	1.92	0.51
1:B:179:MET:O	1:B:180:ALA:HB2	2.11	0.51
1:B:202:THR:O	1:B:206:ASN:N	2.44	0.51
1:A:59:SER:HA	1:A:63:TYR:HB3	1.93	0.51
1:B:268:LYS:O	1:B:271:SER:HB3	2.10	0.51
1:A:18:ALA:HB3	1:A:168:LEU:HG	1.93	0.50
1:A:125:TYR:HA	1:A:130:LEU:HB2	1.92	0.50
1:B:18:ALA:HB3	1:B:168:LEU:HG	1.93	0.50
1:A:172:CYS:O	1:A:176:THR:HG23	2.11	0.50
1:B:59:SER:HA	1:B:63:TYR:HB3	1.93	0.50
1:A:29:PRO:O	1:A:32:ALA:HB3	2.11	0.50
1:A:150:LEU:HD23	1:A:157:THR:HG21	1.91	0.50
1:B:125:TYR:HA	1:B:130:LEU:HB2	1.92	0.50
1:B:326:GLU:HG3	1:B:327:PRO:CD	2.40	0.50
1:A:306:ALA:O	1:A:310:PHE:HB2	2.11	0.50
1:B:20:GLY:CA	1:B:110:THR:HB	2.23	0.50
1:A:61:LEU:HD13	1:A:329:PRO:HD3	1.93	0.50
1:A:179:MET:HG2	1:A:180:ALA:N	2.27	0.50
1:B:87:THR:O	1:B:91:VAL:HG22	2.11	0.50
1:B:248:LEU:HG	1:B:297:MET:HB2	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:135:SER:O	1:A:138:ASN:HB3	2.12	0.50
1:B:61:LEU:HD13	1:B:329:PRO:HD3	1.93	0.50
1:B:187:ARG:HB3	1:B:188:PRO:HD3	1.93	0.50
1:B:29:PRO:HB3	1:B:238:LEU:O	2.11	0.50
1:A:279:ILE:HD11	1:A:298:ASN:CB	2.42	0.50
1:A:202:THR:O	1:A:206:ASN:N	2.44	0.50
1:B:345:ILE:O	1:B:349:VAL:N	2.45	0.50
1:B:346:GLY:O	1:B:349:VAL:HG12	2.11	0.50
1:A:74:PRO:O	1:A:78:VAL:HB	2.11	0.49
1:A:84:MET:C	1:A:87:THR:HB	2.32	0.49
1:A:345:ILE:O	1:A:349:VAL:N	2.45	0.49
1:B:179:MET:HG2	1:B:180:ALA:N	2.27	0.49
1:A:27:TYR:O	1:A:31:ILE:HG12	2.12	0.49
1:A:172:CYS:SG	1:A:176:THR:CG2	3.00	0.49
1:A:346:GLY:O	1:A:349:VAL:HG12	2.11	0.49
1:B:74:PRO:O	1:B:78:VAL:HB	2.11	0.49
1:B:172:CYS:SG	1:B:176:THR:CG2	3.00	0.49
1:B:253:ILE:HG23	1:B:254:PRO:HD3	1.94	0.49
1:A:32:ALA:CA	1:A:233:LEU:HD13	2.40	0.49
1:B:84:MET:C	1:B:87:THR:HB	2.32	0.49
1:B:368:LEU:O	1:B:371:LEU:HG	2.11	0.49
1:B:91:VAL:CG1	1:B:99:LEU:HD12	2.34	0.49
1:B:96:LEU:HG	1:B:97:THR:H	1.78	0.49
1:A:19:VAL:HG11	1:A:169:LEU:HB2	1.94	0.49
1:A:29:PRO:HB3	1:A:238:LEU:O	2.11	0.49
1:A:87:THR:O	1:A:91:VAL:HG22	2.11	0.49
1:B:265:ARG:CG	1:B:266:PRO:HD2	2.40	0.49
1:B:279:ILE:HD11	1:B:298:ASN:CB	2.42	0.49
1:B:317:PHE:C	1:B:319:LEU:N	2.66	0.49
1:A:96:LEU:HG	1:A:97:THR:H	1.78	0.49
1:A:317:PHE:C	1:A:319:LEU:N	2.66	0.49
1:B:135:SER:O	1:B:138:ASN:HB3	2.12	0.49
1:A:59:SER:HB3	1:A:112:VAL:HG13	1.95	0.49
1:A:94:SER:O	1:A:95:SER:C	2.51	0.49
1:A:368:LEU:O	1:A:371:LEU:HG	2.12	0.49
1:B:360:THR:O	1:B:364:SER:HB2	2.12	0.49
1:A:26:ILE:HD11	1:A:151:ILE:HG13	1.95	0.49
1:B:19:VAL:HG11	1:B:169:LEU:HB2	1.94	0.49
1:B:27:TYR:O	1:B:31:ILE:HG12	2.12	0.49
1:A:253:ILE:HG23	1:A:254:PRO:HD3	1.94	0.49
1:A:360:THR:O	1:A:364:SER:HB2	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:90:ALA:O	1:A:94:SER:HB2	2.13	0.48
1:A:153:GLY:O	1:A:154:LEU:HD22	2.13	0.48
1:B:59:SER:C	1:B:63:TYR:HB3	2.32	0.48
1:A:84:MET:O	1:A:87:THR:CB	2.56	0.48
1:B:339:VAL:HA	1:B:342:LEU:HD12	1.95	0.48
1:A:21:GLN:CB	1:A:143:VAL:HG22	2.43	0.48
1:B:19:VAL:CG2	1:B:165:TYR:HA	2.42	0.48
1:B:94:SER:O	1:B:95:SER:C	2.51	0.48
1:A:212:TYR:CE1	1:A:269:ARG:HG2	2.48	0.48
1:A:260:ALA:O	1:A:263:ALA:HB3	2.14	0.48
1:B:260:ALA:HB2	1:B:308:LEU:CD2	2.43	0.48
1:B:293:TRP:N	1:B:293:TRP:HD1	2.11	0.48
1:A:59:SER:C	1:A:63:TYR:HB3	2.32	0.48
1:A:260:ALA:HB2	1:A:308:LEU:CD2	2.43	0.48
1:B:286:LEU:HB2	1:B:290:ILE:HD11	1.96	0.48
1:B:212:TYR:CE1	1:B:269:ARG:HG2	2.48	0.48
1:A:79:GLY:O	1:A:82:ILE:HG22	2.13	0.48
1:A:91:VAL:CG1	1:A:99:LEU:HD12	2.34	0.48
1:A:286:LEU:HB2	1:A:290:ILE:HD11	1.96	0.48
1:B:79:GLY:O	1:B:82:ILE:HG22	2.13	0.48
1:B:146:LEU:O	1:B:150:LEU:HB2	2.14	0.48
1:B:153:GLY:O	1:B:154:LEU:HD22	2.13	0.48
1:A:73:ARG:CG	1:A:74:PRO:HD3	2.36	0.48
1:A:87:THR:CG2	1:A:161:TRP:HE1	2.25	0.48
1:B:44:ALA:O	1:B:48:VAL:HG23	2.13	0.48
1:B:90:ALA:O	1:B:94:SER:HB2	2.13	0.48
1:B:21:GLN:CB	1:B:143:VAL:HG22	2.43	0.48
1:B:59:SER:HB3	1:B:112:VAL:HG13	1.95	0.48
1:B:73:ARG:HA	1:B:77:LEU:HD11	1.96	0.48
1:A:36:ARG:HD2	1:A:233:LEU:CB	2.44	0.47
1:A:227:GLU:HA	1:A:292:ASP:HB2	1.96	0.47
1:A:318:PRO:C	1:A:320:ALA:H	2.18	0.47
1:B:164:CYS:O	1:B:168:LEU:HB2	2.15	0.47
1:A:44:ALA:O	1:A:48:VAL:HG23	2.13	0.47
1:B:84:MET:O	1:B:87:THR:CB	2.56	0.47
1:B:245:VAL:HG22	1:B:249:PHE:CZ	2.49	0.47
1:A:217:ILE:HD11	1:A:331:LEU:C	2.34	0.47
1:A:322:SER:O	1:A:326:GLU:HG2	2.14	0.47
1:B:322:SER:O	1:B:326:GLU:HG2	2.14	0.47
1:A:293:TRP:N	1:A:293:TRP:HD1	2.11	0.47
1:A:146:LEU:O	1:A:150:LEU:HB2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:166:LEU:O	1:A:170:VAL:HG22	2.15	0.47
1:A:339:VAL:HA	1:A:342:LEU:HD12	1.95	0.47
1:B:15:LEU:HB3	1:B:172:CYS:HB2	1.97	0.47
1:B:26:ILE:HD11	1:B:151:ILE:HG13	1.95	0.47
1:B:186:THR:O	1:B:186:THR:HG23	2.14	0.47
1:B:217:ILE:HD11	1:B:331:LEU:C	2.34	0.47
1:B:260:ALA:O	1:B:263:ALA:HB3	2.14	0.47
1:A:32:ALA:O	1:A:233:LEU:HB3	2.15	0.47
1:A:186:THR:O	1:A:186:THR:HG23	2.14	0.47
1:A:278:VAL:O	1:A:281:CYS:SG	2.67	0.47
1:B:61:LEU:O	1:B:65:PRO:HD2	2.15	0.47
1:A:53:LEU:HA	1:A:53:LEU:HD23	1.78	0.47
1:A:77:LEU:HB2	1:A:169:LEU:CD2	2.45	0.46
1:A:95:SER:C	1:A:100:ILE:HG23	2.34	0.46
1:B:282:LEU:O	1:B:291:PRO:HG3	2.15	0.46
1:A:29:PRO:HB3	1:A:238:LEU:C	2.36	0.46
1:B:32:ALA:O	1:B:233:LEU:HB3	2.15	0.46
1:A:15:LEU:HB3	1:A:172:CYS:HB2	1.97	0.46
1:A:164:CYS:O	1:A:168:LEU:HB2	2.15	0.46
1:A:272:THR:HA	1:A:302:LEU:HD22	1.96	0.46
1:B:227:GLU:HA	1:B:292:ASP:HB2	1.96	0.46
1:B:318:PRO:C	1:B:320:ALA:H	2.18	0.46
1:A:9:LEU:HB2	1:A:10:LEU:HD23	1.98	0.46
1:A:173:ALA:HA	1:A:176:THR:OG1	2.15	0.46
1:B:278:VAL:HG13	1:B:281:CYS:SG	2.56	0.46
1:A:19:VAL:CG2	1:A:165:TYR:HA	2.42	0.46
1:A:158:MET:O	1:A:162:ARG:HG2	2.15	0.46
1:A:200:TYR:CE1	1:B:204:PHE:CZ	2.96	0.46
1:A:245:VAL:HG22	1:A:249:PHE:CZ	2.49	0.46
1:A:282:LEU:O	1:A:291:PRO:HG3	2.16	0.46
1:B:95:SER:C	1:B:100:ILE:HG23	2.34	0.46
1:B:269:ARG:HA	1:B:272:THR:OG1	2.16	0.46
1:B:272:THR:HA	1:B:302:LEU:HD22	1.96	0.46
1:A:32:ALA:HB1	1:A:233:LEU:CG	2.45	0.46
1:A:61:LEU:HD22	1:A:329:PRO:HG3	1.98	0.46
1:A:159:TRP:HA	1:A:162:ARG:HG2	1.97	0.46
1:A:281:CYS:SG	1:A:282:LEU:HD22	2.56	0.46
1:B:18:ALA:HA	1:B:21:GLN:OE1	2.16	0.46
1:B:173:ALA:HA	1:B:176:THR:OG1	2.15	0.46
1:B:281:CYS:SG	1:B:282:LEU:HD22	2.56	0.46
1:A:294:PHE:O	1:A:297:MET:HB3	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:24:GLN:HA	1:B:27:TYR:CD2	2.51	0.46
1:B:158:MET:O	1:B:162:ARG:HG2	2.15	0.46
1:B:340:GLY:O	1:B:343:GLN:HB3	2.16	0.46
1:A:22:MET:HA	1:A:147:LEU:HD21	1.97	0.46
1:B:29:PRO:HB3	1:B:238:LEU:C	2.36	0.46
1:B:294:PHE:O	1:B:297:MET:HB3	2.16	0.46
1:A:24:GLN:HA	1:A:27:TYR:CD2	2.51	0.46
1:B:77:LEU:HB2	1:B:169:LEU:CD2	2.45	0.46
1:A:269:ARG:HA	1:A:272:THR:OG1	2.16	0.46
1:A:340:GLY:O	1:A:343:GLN:HB3	2.16	0.46
1:A:18:ALA:HA	1:A:21:GLN:OE1	2.16	0.45
1:A:61:LEU:O	1:A:65:PRO:HD2	2.15	0.45
1:A:73:ARG:HA	1:A:77:LEU:HD11	1.96	0.45
1:A:326:GLU:HG3	1:A:327:PRO:CD	2.40	0.45
1:B:26:ILE:HD12	1:B:26:ILE:HA	1.89	0.45
1:A:91:VAL:HA	1:A:99:LEU:HB3	1.98	0.45
1:B:166:LEU:O	1:B:170:VAL:HG22	2.15	0.45
1:A:243:MET:O	1:A:247:ILE:HG13	2.16	0.45
1:B:226:PHE:O	1:B:229:CYS:HB3	2.17	0.45
1:A:69:ARG:HG2	1:A:186:THR:HA	1.99	0.45
1:B:22:MET:HA	1:B:147:LEU:HD21	1.97	0.45
1:B:317:PHE:HB3	1:B:318:PRO:CD	2.46	0.45
1:B:238:LEU:O	1:B:241:SER:HB3	2.17	0.45
1:A:21:GLN:CG	1:A:143:VAL:HG22	2.47	0.45
1:A:125:TYR:CD1	1:A:130:LEU:O	2.70	0.45
1:A:278:VAL:HG13	1:A:281:CYS:SG	2.56	0.45
1:B:21:GLN:CG	1:B:143:VAL:HG22	2.47	0.45
1:B:69:ARG:HG2	1:B:186:THR:HA	1.99	0.45
1:B:91:VAL:HA	1:B:99:LEU:HB3	1.98	0.45
1:B:159:TRP:HA	1:B:162:ARG:HG2	1.97	0.45
1:B:201:LYS:C	1:B:203:LEU:N	2.70	0.45
1:B:354:SER:O	1:B:358:PRO:HD2	2.17	0.45
1:A:161:TRP:CD1	1:A:161:TRP:C	2.90	0.45
1:A:219:GLY:HA3	1:A:365:LEU:HG	1.99	0.45
1:B:32:ALA:HB1	1:B:233:LEU:CG	2.46	0.45
1:B:36:ARG:HD2	1:B:233:LEU:CB	2.44	0.45
1:B:87:THR:CG2	1:B:161:TRP:HE1	2.25	0.45
1:B:169:LEU:O	1:B:172:CYS:HB3	2.17	0.45
1:A:106:GLN:HA	1:A:106:GLN:NE2	2.32	0.45
1:B:9:LEU:HB2	1:B:10:LEU:HD23	1.98	0.45
1:B:61:LEU:HD22	1:B:329:PRO:HG3	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:317:PHE:HB3	1:A:318:PRO:CD	2.46	0.44
1:B:267:ASN:OD1	1:B:376:ILE:HD12	2.17	0.44
1:A:13:LEU:O	1:A:17:VAL:HG22	2.18	0.44
1:A:226:PHE:O	1:A:229:CYS:HB3	2.17	0.44
1:A:263:ALA:CA	1:A:268:LYS:HB2	2.11	0.44
1:A:354:SER:O	1:A:358:PRO:HD2	2.17	0.44
1:B:165:TYR:CE1	1:B:169:LEU:HD13	2.53	0.44
1:B:263:ALA:CA	1:B:268:LYS:HB2	2.11	0.44
1:A:22:MET:O	1:A:147:LEU:HD11	2.17	0.44
1:A:238:LEU:O	1:A:241:SER:HB3	2.17	0.44
1:B:18:ALA:HB2	1:B:142:LEU:HD13	2.00	0.44
1:B:106:GLN:NE2	1:B:106:GLN:HA	2.32	0.44
1:A:165:TYR:CE1	1:A:169:LEU:HD13	2.53	0.44
1:A:169:LEU:O	1:A:172:CYS:HB3	2.17	0.44
1:A:262:PHE:HZ	1:A:270:PHE:CD2	2.31	0.44
1:B:32:ALA:CA	1:B:233:LEU:HD13	2.40	0.44
1:B:243:MET:O	1:B:247:ILE:HG13	2.16	0.44
1:A:18:ALA:HB2	1:A:142:LEU:HD13	2.00	0.44
1:A:210:ASN:O	1:A:214:LEU:HB2	2.18	0.44
1:B:125:TYR:CD1	1:B:130:LEU:O	2.70	0.44
1:B:161:TRP:CD1	1:B:161:TRP:C	2.90	0.44
1:A:298:ASN:ND2	1:A:302:LEU:HD21	2.33	0.44
1:B:310:PHE:HD2	1:B:310:PHE:HA	1.72	0.44
1:A:31:ILE:HD13	1:A:31:ILE:HA	1.84	0.44
1:A:48:VAL:O	1:A:51:ALA:HB3	2.18	0.44
1:A:267:ASN:OD1	1:A:376:ILE:HD12	2.17	0.44
1:A:373:GLY:O	1:A:376:ILE:HG22	2.18	0.44
1:B:94:SER:HB2	1:B:99:LEU:HG	2.00	0.44
1:B:155:LEU:HB3	1:B:156:ASP:H	1.67	0.44
1:A:42:GLU:OE1	1:A:42:GLU:O	2.36	0.43
1:B:373:GLY:O	1:B:376:ILE:HG22	2.18	0.43
1:B:13:LEU:O	1:B:17:VAL:HG22	2.18	0.43
1:B:73:ARG:HA	1:B:77:LEU:HD13	1.99	0.43
1:B:210:ASN:O	1:B:214:LEU:HB2	2.18	0.43
1:A:20:GLY:CA	1:A:110:THR:HB	2.23	0.43
1:A:59:SER:CA	1:A:63:TYR:HB3	2.48	0.43
1:A:250:ILE:O	1:A:254:PRO:CD	2.62	0.43
1:B:18:ALA:O	1:B:21:GLN:HG2	2.17	0.43
1:B:33:ASP:OD2	1:B:234:MET:HA	2.18	0.43
1:B:59:SER:CA	1:B:63:TYR:HB3	2.48	0.43
1:B:276:GLN:O	1:B:279:ILE:HB	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:18:ALA:O	1:A:21:GLN:HG2	2.17	0.43
1:A:94:SER:HB2	1:A:99:LEU:HG	2.00	0.43
1:A:276:GLN:O	1:A:279:ILE:HB	2.19	0.43
1:B:120:LEU:O	1:B:123:ASP:HB2	2.19	0.43
1:B:262:PHE:HZ	1:B:270:PHE:CD2	2.31	0.43
1:A:26:ILE:O	1:A:29:PRO:HG2	2.19	0.43
1:B:22:MET:O	1:B:147:LEU:HD11	2.17	0.43
1:B:26:ILE:O	1:B:29:PRO:HG2	2.19	0.43
1:B:219:GLY:HA3	1:B:365:LEU:HG	1.99	0.43
1:A:33:ASP:OD2	1:A:234:MET:HA	2.18	0.43
1:A:155:LEU:HB3	1:A:156:ASP:H	1.67	0.43
1:B:265:ARG:C	1:B:267:ASN:N	2.72	0.43
1:B:48:VAL:O	1:B:51:ALA:HB3	2.18	0.43
1:B:61:LEU:O	1:B:65:PRO:CD	2.67	0.43
1:B:253:ILE:HG23	1:B:254:PRO:CD	2.49	0.43
1:B:268:LYS:HZ2	1:B:305:PRO:C	2.22	0.43
1:B:317:PHE:HB3	1:B:318:PRO:HD2	2.01	0.43
1:A:212:TYR:O	1:A:216:LEU:HB2	2.19	0.43
1:A:253:ILE:HG23	1:A:254:PRO:CD	2.49	0.43
1:B:23:ALA:HB2	1:B:165:TYR:HD2	1.84	0.43
1:B:159:TRP:CD1	1:B:159:TRP:C	2.92	0.43
1:A:265:ARG:C	1:A:267:ASN:N	2.72	0.43
1:A:273:LEU:HD23	1:A:274:MET:N	2.34	0.43
1:B:42:GLU:OE1	1:B:42:GLU:O	2.36	0.43
1:B:273:LEU:HD23	1:B:274:MET:N	2.34	0.43
1:A:92:THR:O	1:A:95:SER:CB	2.67	0.42
1:A:171:LEU:HD23	1:A:171:LEU:HA	1.91	0.42
1:B:121:PRO:O	1:B:124:LEU:HB3	2.19	0.42
1:A:268:LYS:HZ2	1:A:305:PRO:C	2.21	0.42
1:A:317:PHE:HB3	1:A:318:PRO:HD2	2.01	0.42
1:A:172:CYS:SG	1:A:176:THR:HG21	2.59	0.42
1:A:201:LYS:C	1:A:203:LEU:N	2.70	0.42
1:B:21:GLN:OE1	1:B:142:LEU:HB2	2.19	0.42
1:A:159:TRP:CD1	1:A:159:TRP:C	2.92	0.42
1:B:141:ILE:HD13	1:B:141:ILE:HA	1.91	0.42
1:B:212:TYR:O	1:B:216:LEU:HB2	2.19	0.42
1:A:91:VAL:O	1:A:95:SER:CB	2.64	0.42
1:A:120:LEU:O	1:A:123:ASP:HB2	2.19	0.42
1:B:36:ARG:HD2	1:B:233:LEU:CG	2.50	0.42
1:B:91:VAL:O	1:B:95:SER:CB	2.64	0.42
1:B:341:GLY:O	1:B:345:ILE:HB	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:253:ILE:HD13	1:A:304:VAL:HG11	2.01	0.42
1:A:341:GLY:O	1:A:345:ILE:HB	2.20	0.42
1:B:94:SER:O	1:B:97:THR:O	2.38	0.42
1:B:252:PRO:HA	1:B:255:ALA:HB3	2.01	0.42
1:B:253:ILE:HD13	1:B:304:VAL:HG11	2.01	0.42
1:B:298:ASN:ND2	1:B:302:LEU:HD21	2.33	0.42
1:A:23:ALA:HB2	1:A:165:TYR:HD2	1.84	0.42
1:A:94:SER:O	1:A:97:THR:O	2.38	0.42
1:B:59:SER:O	1:B:60:GLN:C	2.58	0.42
1:B:89:VAL:HG23	1:B:90:ALA:H	1.84	0.42
1:B:136:LEU:HD23	1:B:136:LEU:HA	1.93	0.42
1:B:259:GLY:HA2	1:B:262:PHE:HB3	2.02	0.42
1:B:266:PRO:C	1:B:267:ASN:O	2.57	0.42
1:A:187:ARG:N	1:A:188:PRO:CD	2.83	0.42
1:A:201:LYS:HD2	1:B:200:TYR:HE2	1.85	0.42
1:A:349:VAL:O	1:A:351:ALA:N	2.53	0.42
1:B:21:GLN:HE21	1:B:21:GLN:HB3	1.55	0.42
1:B:187:ARG:N	1:B:188:PRO:CD	2.83	0.42
1:B:325:MET:HA	1:B:329:PRO:HD2	2.02	0.42
1:A:252:PRO:HA	1:A:255:ALA:HB3	2.01	0.42
1:B:25:THR:OG1	1:B:147:LEU:HG	2.20	0.42
1:B:172:CYS:SG	1:B:176:THR:HG21	2.59	0.42
1:A:59:SER:O	1:A:60:GLN:C	2.58	0.42
1:A:61:LEU:O	1:A:65:PRO:CD	2.67	0.42
1:B:84:MET:SD	1:B:165:TYR:HB3	2.60	0.42
1:A:25:THR:OG1	1:A:147:LEU:HG	2.19	0.41
1:A:21:GLN:OE1	1:A:142:LEU:HB2	2.19	0.41
1:A:262:PHE:CZ	1:A:270:PHE:HD2	2.33	0.41
1:A:121:PRO:O	1:A:124:LEU:HB3	2.19	0.41
1:A:266:PRO:C	1:A:267:ASN:O	2.57	0.41
1:B:323:GLY:HA2	1:B:326:GLU:CG	2.51	0.41
1:B:217:ILE:HG12	1:B:331:LEU:HB3	2.02	0.41
1:A:36:ARG:HD2	1:A:233:LEU:CG	2.50	0.41
1:A:89:VAL:HG23	1:A:90:ALA:H	1.84	0.41
1:A:172:CYS:O	1:A:176:THR:N	2.54	0.41
1:A:179:MET:O	1:A:180:ALA:CB	2.69	0.41
1:A:376:ILE:HD13	1:A:376:ILE:O	2.21	0.41
1:B:349:VAL:O	1:B:351:ALA:N	2.53	0.41
1:A:9:LEU:HB2	1:A:10:LEU:H	1.65	0.41
1:A:323:GLY:HA2	1:A:326:GLU:CG	2.50	0.41
1:B:92:THR:O	1:B:95:SER:CB	2.67	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:264:GLY:O	1:B:265:ARG:C	2.59	0.41
1:B:265:ARG:O	1:B:267:ASN:N	2.54	0.41
1:A:259:GLY:HA2	1:A:262:PHE:HB3	2.02	0.41
1:A:281:CYS:SG	1:A:282:LEU:N	2.94	0.41
1:A:364:SER:O	1:A:368:LEU:HB2	2.20	0.41
1:B:248:LEU:HD13	1:B:248:LEU:HA	1.78	0.41
1:B:364:SER:O	1:B:368:LEU:HB2	2.20	0.41
1:A:14:VAL:HG23	1:A:15:LEU:HD13	2.03	0.41
1:A:141:ILE:HD13	1:A:141:ILE:HA	1.91	0.41
1:A:217:ILE:HG12	1:A:331:LEU:HB3	2.02	0.41
1:A:233:LEU:HD23	1:A:238:LEU:CD2	2.51	0.41
1:B:14:VAL:HG23	1:B:15:LEU:HD13	2.03	0.41
1:B:21:GLN:HA	1:B:24:GLN:HB3	2.03	0.41
1:B:272:THR:HB	1:B:369:MET:HG2	2.03	0.41
1:B:281:CYS:SG	1:B:282:LEU:N	2.94	0.41
1:A:27:TYR:CD1	1:A:27:TYR:C	2.94	0.41
1:A:325:MET:HA	1:A:329:PRO:HD2	2.02	0.41
1:A:342:LEU:HA	1:A:345:ILE:CG2	2.51	0.41
1:A:345:ILE:CG2	1:A:346:GLY:N	2.84	0.41
1:B:172:CYS:O	1:B:176:THR:N	2.54	0.41
1:A:350:LEU:O	1:A:350:LEU:HG	2.21	0.40
1:B:69:ARG:O	1:B:70:VAL:HB	2.21	0.40
1:A:84:MET:SD	1:A:165:TYR:HB3	2.60	0.40
1:A:99:LEU:C	1:A:101:ALA:N	2.70	0.40
1:B:15:LEU:O	1:B:19:VAL:HG12	2.21	0.40
1:B:117:ALA:O	1:B:121:PRO:CD	2.58	0.40
1:A:69:ARG:O	1:A:70:VAL:HB	2.21	0.40
1:A:286:LEU:HB3	1:A:287:LEU:H	1.71	0.40
1:B:262:PHE:CZ	1:B:270:PHE:HD2	2.33	0.40
1:A:233:LEU:HA	1:A:238:LEU:HG	2.02	0.40
1:B:294:PHE:CE2	1:B:297:MET:SD	3.14	0.40
1:B:342:LEU:HA	1:B:345:ILE:CG2	2.52	0.40
1:A:15:LEU:O	1:A:19:VAL:HG12	2.21	0.40
1:A:238:LEU:HD13	1:A:238:LEU:HA	1.95	0.40
1:A:265:ARG:O	1:A:267:ASN:N	2.54	0.40
1:B:84:MET:CG	1:B:162:ARG:HH12	2.23	0.40
1:B:376:ILE:O	1:B:376:ILE:HD13	2.21	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	373/375 (100%)	268 (72%)	67 (18%)	38 (10%)	0	7
1	B	373/375 (100%)	268 (72%)	67 (18%)	38 (10%)	0	7
All	All	746/750 (100%)	536 (72%)	134 (18%)	76 (10%)	0	7

All (76) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	42	GLU
1	A	69	ARG
1	A	87	THR
1	A	97	THR
1	A	180	ALA
1	A	212	TYR
1	A	233	LEU
1	A	235	GLY
1	A	266	PRO
1	A	267	ASN
1	A	268	LYS
1	A	288	MET
1	A	289	TRP
1	A	291	PRO
1	A	352	SER
1	A	355	ALA
1	B	42	GLU
1	B	69	ARG
1	B	87	THR
1	B	97	THR
1	B	180	ALA
1	B	212	TYR
1	B	233	LEU
1	B	235	GLY
1	B	266	PRO

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Mol	Chain	Res	Type
1	B	267	ASN
1	B	268	LYS
1	B	288	MET
1	B	289	TRP
1	B	291	PRO
1	B	352	SER
1	B	355	ALA
1	A	61	LEU
1	A	70	VAL
1	A	74	PRO
1	A	76	ILE
1	A	98	VAL
1	A	156	ASP
1	A	184	PRO
1	A	200	TYR
1	A	350	LEU
1	A	353	LEU
1	A	382	PRO
1	B	61	LEU
1	B	70	VAL
1	B	74	PRO
1	B	76	ILE
1	B	98	VAL
1	B	156	ASP
1	B	184	PRO
1	B	200	TYR
1	B	350	LEU
1	B	353	LEU
1	B	382	PRO
1	A	24	GLN
1	A	132	HIS
1	A	158	MET
1	A	234	MET
1	B	24	GLN
1	B	132	HIS
1	B	158	MET
1	B	234	MET
1	A	33	ASP
1	A	273	LEU
1	B	33	ASP
1	B	273	LEU
1	A	59	SER

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Mol	Chain	Res	Type
1	A	72	ARG
1	B	72	ARG
1	B	59	SER
1	A	326	GLU
1	B	326	GLU
1	A	143	VAL
1	A	328	PHE
1	B	143	VAL
1	B	328	PHE

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	295/295 (100%)	235 (80%)	60 (20%)	1	6
1	B	295/295 (100%)	235 (80%)	60 (20%)	1	6
All	All	590/590 (100%)	470 (80%)	120 (20%)	1	6

All (120) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	10	LEU
1	A	15	LEU
1	A	19	VAL
1	A	21	GLN
1	A	22	MET
1	A	27	TYR
1	A	38	LEU
1	A	41	ARG
1	A	42	GLU
1	A	54	LEU
1	A	60	GLN
1	A	65	PRO
1	A	69	ARG
1	A	73	ARG

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Mol	Chain	Res	Type
1	A	77	LEU
1	A	87	THR
1	A	100	ILE
1	A	105	MET
1	A	110	THR
1	A	118	ARG
1	A	121	PRO
1	A	122	ARG
1	A	125	TYR
1	A	132	HIS
1	A	138	ASN
1	A	141	ILE
1	A	144	SER
1	A	159	TRP
1	A	160	ASN
1	A	161	TRP
1	A	164	CYS
1	A	166	LEU
1	A	167	PHE
1	A	168	LEU
1	A	179	MET
1	A	182	TRP
1	A	187	ARG
1	A	194	THR
1	A	195	ARG
1	A	201	LYS
1	A	202	THR
1	A	204	PHE
1	A	206	ASN
1	A	243	MET
1	A	252	PRO
1	A	265	ARG
1	A	266	PRO
1	A	267	ASN
1	A	268	LYS
1	A	275	TRP
1	A	287	LEU
1	A	291	PRO
1	A	296	VAL
1	A	297	MET
1	A	310	PHE
1	A	334	THR

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Mol	Chain	Res	Type
1	A	338	LEU
1	A	344	ASN
1	A	353	LEU
1	A	376	ILE
1	B	10	LEU
1	B	15	LEU
1	B	19	VAL
1	B	21	GLN
1	B	22	MET
1	B	27	TYR
1	B	38	LEU
1	B	41	ARG
1	B	42	GLU
1	B	54	LEU
1	B	60	GLN
1	B	65	PRO
1	B	69	ARG
1	B	73	ARG
1	B	77	LEU
1	B	87	THR
1	B	100	ILE
1	B	105	MET
1	B	110	THR
1	B	118	ARG
1	B	121	PRO
1	B	122	ARG
1	B	125	TYR
1	B	132	HIS
1	B	138	ASN
1	B	141	ILE
1	B	144	SER
1	B	159	TRP
1	B	160	ASN
1	B	161	TRP
1	B	164	CYS
1	B	166	LEU
1	B	167	PHE
1	B	168	LEU
1	B	179	MET
1	B	182	TRP
1	B	187	ARG
1	B	194	THR

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Mol	Chain	Res	Type
1	B	195	ARG
1	B	201	LYS
1	B	202	THR
1	B	204	PHE
1	B	206	ASN
1	B	243	MET
1	B	252	PRO
1	B	265	ARG
1	B	266	PRO
1	B	267	ASN
1	B	268	LYS
1	B	275	TRP
1	B	287	LEU
1	B	291	PRO
1	B	296	VAL
1	B	297	MET
1	B	310	PHE
1	B	334	THR
1	B	338	LEU
1	B	344	ASN
1	B	353	LEU
1	B	376	ILE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (8) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	60	GLN
1	A	106	GLN
1	A	206	ASN
1	A	298	ASN
1	B	60	GLN
1	B	106	GLN
1	B	206	ASN
1	B	298	ASN

5.3.3　RNA (i)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates ⓘ

There are no monosaccharides in this entry.

5.6 Ligand geometry ⓘ

There are no ligands in this entry.

5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

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	375/375 (100%)	-0.85	1 (0%)	94	91	80, 80, 80, 80	0
1	B	375/375 (100%)	-0.82	0	100	100	80, 80, 80, 80	0
All	All	750/750 (100%)	-0.84	1 (0%)	95	95	80, 80, 80, 80	0

All (1) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	119	THR	2.3

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

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

6.3 Carbohydrates ⓘ

There are no monosaccharides in this entry.

6.4 Ligands ⓘ

There are no ligands in this entry.

6.5 Other polymers ⓘ

There are no such residues in this entry.