Full wwPDB X-ray Structure Validation Report ⓘ

Apr 28, 2025 – 02:21 PM EDT

PDB ID	:	1YI8 / pdb_00001yi8
Title	:	Crystal structure of tryptophanyl trRNA synthetase II from Deinococcus radiodurans in complex with L-Trp
Authors	:	Buddha, M.R.; Crane, B.R.
Deposited on	:	2005-01-11
Resolution	:	2.10 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:

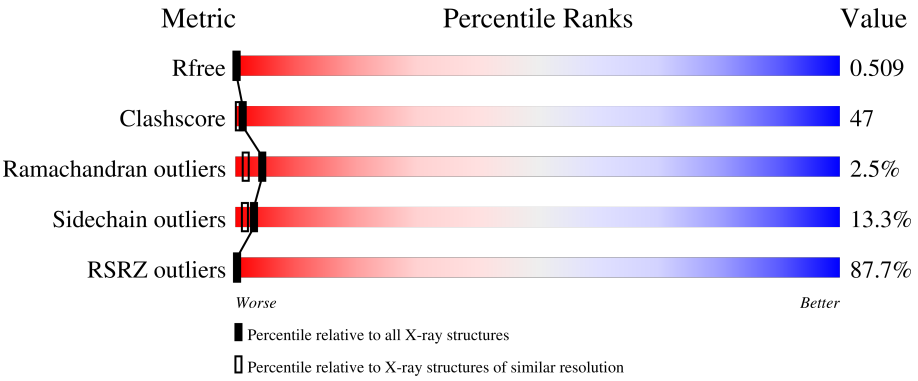
MolProbity	:	4-5-2 with Phenix2.0rc1
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0rc1
EDS	:	3.0
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
CCP4	:	9.0.006 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.43.1

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 2.10 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	164625	6234 (2.10-2.10)
Clashscore	180529	6893 (2.10-2.10)
Ramachandran outliers	177936	6839 (2.10-2.10)
Sidechain outliers	177891	6840 (2.10-2.10)
RSRZ outliers	164620	6234 (2.10-2.10)

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	351	89% 29% 52% 12% • 6%
1	B	351	81% 42% 40% 11% • 6%
1	C	351	77% 45% 40% 7% • 6%

2 Entry composition (i)

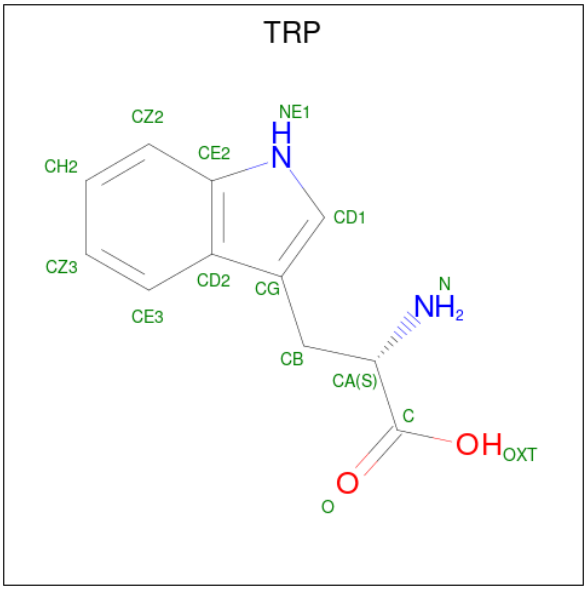
There are 3 unique types of molecules in this entry. The entry contains 8661 atoms, of which 0 are hydrogens and 0 are deuteriums.

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 tryptophanyl-tRNA synthetase.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	B	331	Total	C	N	O	S	2	0	0
			2544	1599	468	471	6			
1	A	331	Total	C	N	O	S	0	0	0
			2511	1581	457	467	6			
1	C	331	Total	C	N	O	S	0	0	0
			2532	1593	462	471	6			

- Molecule 2 is TRYPTOPHAN (CCD ID: TRP) (formula: $C_{11}H_{12}N_2O_2$).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
2	C	1	Total	C	N	O	0	0
			15	11	2	2		

- Molecule 3 is water.

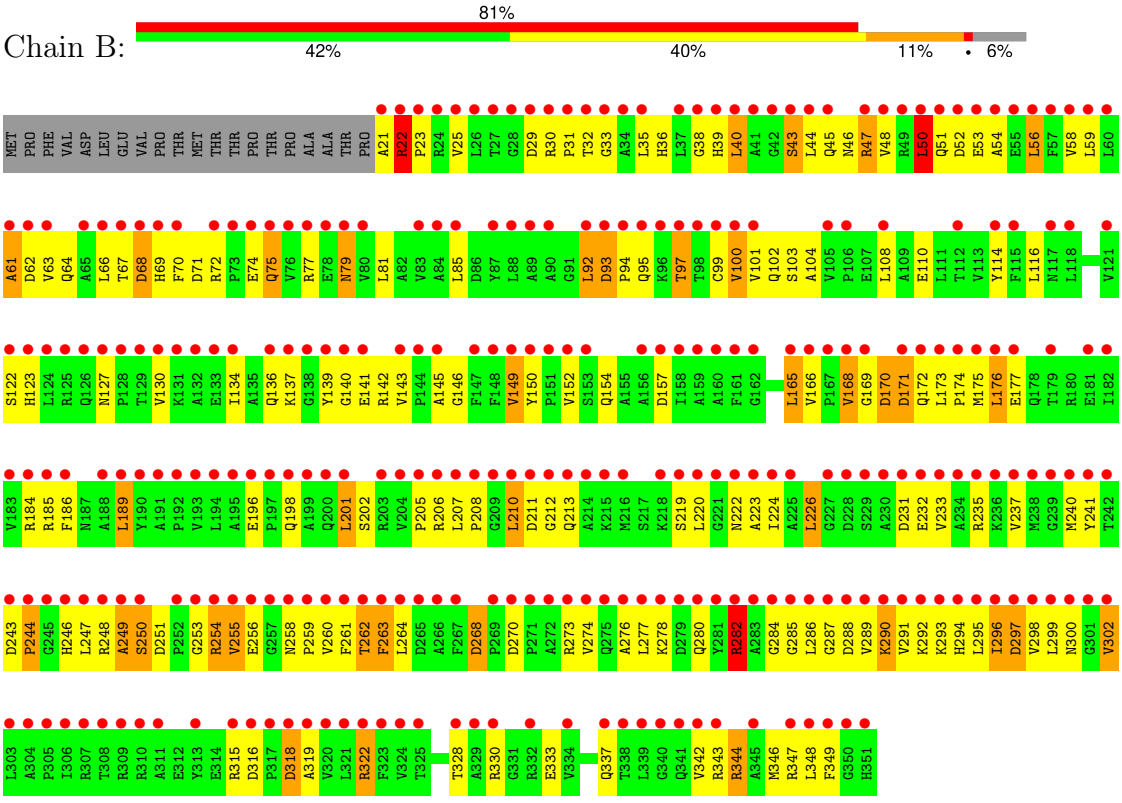
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	B	308	Total O 308 308	0	0
3	A	375	Total O 375 375	0	0
3	C	376	Total O 376 376	0	0

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.

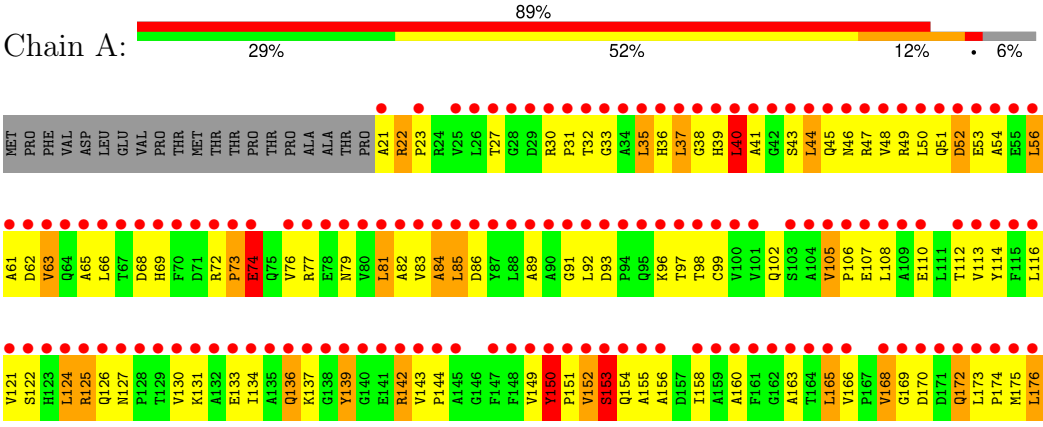
• Molecule 1: tryptophanyl-tRNA synthetase

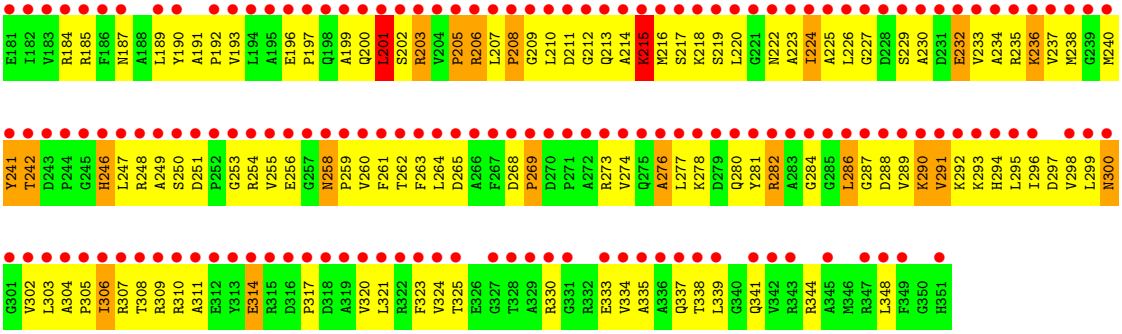
Chain B:



• Molecule 1: tryptophanyl-tRNA synthetase

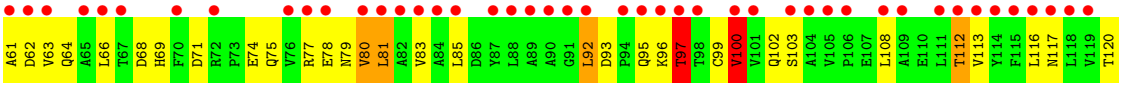
Chain A:

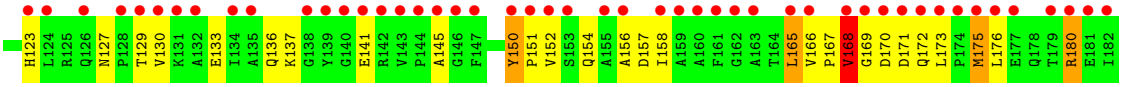


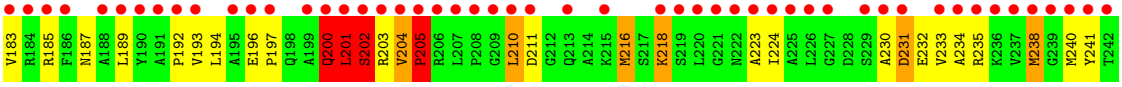


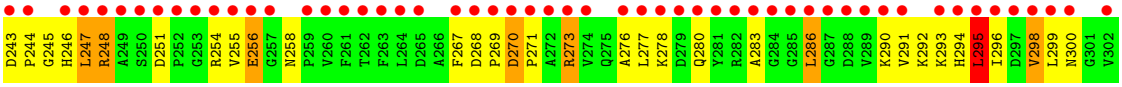
• Molecule 1: tryptophanyl-tRNA synthetase

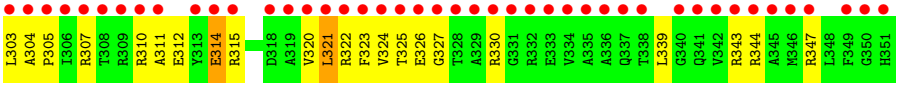
Chain C:











4 Data and refinement statistics (i)

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants a, b, c, α, β, γ	211.80Å 58.50Å 88.90Å 90.00° 100.72° 90.00°	Depositor
Resolution (Å)	50.00 – 2.10 50.00 – 2.12	Depositor EDS
% Data completeness (in resolution range)	88.7 (50.00-2.10) 89.3 (50.00-2.12)	Depositor EDS
R_{merge}	0.08	Depositor
R_{sym}	0.06	Depositor
$< I/\sigma(I) >$ [1]	1.45 (at 2.12Å)	Xtriage
Refinement program	CNS	Depositor
R, R_{free}	0.260 , 0.280 0.496 , 0.509	Depositor DCC
R_{free} test set	5520 reflections (10.14%)	wwPDB-VP
Wilson B-factor (Å^2)	35.9	Xtriage
Anisotropy	0.313	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.30 , 34.8	EDS
L-test for twinning[2]	$< \|L\| > = 0.49$, $< L^2 > = 0.33$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.64	EDS
Total number of atoms	8661	wwPDB-VP
Average B, all atoms (Å^2)	52.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.28% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

[2] Theoretical values of $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality

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	0.47	0/2558	1.11	18/3478 (0.5%)
1	B	0.49	0/2591	1.08	18/3519 (0.5%)
1	C	0.60	1/2579 (0.0%)	1.14	23/3505 (0.7%)
All	All	0.52	1/7728 (0.0%)	1.11	59/10502 (0.6%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	2

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	C	216	MET	SD-CE	-5.28	1.66	1.79

All (59) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	43	SER	N-CA-C	9.11	121.29	111.36
1	B	268	ASP	CA-C-N	8.13	127.86	119.56
1	B	268	ASP	C-N-CA	8.13	127.86	119.56
1	C	169	GLY	N-CA-C	-7.91	100.45	113.02
1	A	105	VAL	CA-C-N	7.71	127.76	119.28
1	A	105	VAL	C-N-CA	7.71	127.76	119.28
1	A	44	LEU	N-CA-C	7.57	120.42	111.71
1	C	327	GLY	N-CA-C	-7.46	103.78	112.73
1	C	270	ASP	CA-C-N	7.40	127.11	119.56
1	C	270	ASP	C-N-CA	7.40	127.11	119.56
1	C	201	LEU	N-CA-C	7.16	120.34	110.24
1	C	100	VAL	N-CA-C	6.93	118.46	108.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	B	212	GLY	N-CA-C	-6.90	105.07	115.00
1	A	215	LYS	N-CA-C	6.87	121.35	108.65
1	A	241	TYR	N-CA-C	6.85	120.86	107.98
1	B	93	ASP	CA-C-N	6.67	127.21	119.47
1	B	93	ASP	C-N-CA	6.67	127.21	119.47
1	C	202	SER	N-CA-C	6.52	124.69	110.80
1	B	244	PRO	N-CA-C	-6.37	102.30	111.22
1	A	155	ALA	N-CA-C	-6.37	104.33	111.28
1	A	236	LYS	N-CA-C	-6.35	103.65	111.40
1	B	263	PHE	N-CA-C	-6.26	105.29	113.12
1	B	100	VAL	N-CA-C	6.17	116.90	107.77
1	A	168	VAL	N-CA-C	6.11	117.16	108.42
1	A	276	ALA	N-CA-C	-6.00	103.50	111.24
1	B	282	ARG	N-CA-C	-5.92	105.15	112.90
1	A	314	GLU	N-CA-C	-5.64	105.13	111.28
1	C	303	LEU	N-CA-C	5.64	119.33	112.23
1	C	295	LEU	N-CA-C	-5.62	105.24	111.36
1	B	157	ASP	N-CA-C	-5.60	104.87	110.97
1	A	84	ALA	N-CA-C	-5.59	104.20	111.02
1	A	153	SER	N-CA-C	-5.58	105.73	112.54
1	B	255	VAL	N-CA-C	5.58	118.06	111.09
1	C	273	ARG	N-CA-C	-5.55	105.15	111.14
1	A	201	LEU	N-CA-C	5.50	117.97	110.55
1	B	291	VAL	N-CA-C	-5.47	105.00	110.30
1	B	171	ASP	N-CA-C	5.46	117.99	111.71
1	C	61	ALA	N-CA-C	5.43	118.03	109.39
1	C	97	THR	N-CA-C	5.37	118.24	109.59
1	A	176	LEU	N-CA-C	-5.37	106.43	112.87
1	B	210	LEU	N-CA-C	-5.36	105.54	111.71
1	C	218	LYS	N-CA-C	-5.35	104.69	111.11
1	B	223	ALA	N-CA-C	5.26	117.82	109.50
1	C	324	VAL	N-CA-C	5.26	116.73	111.00
1	C	200	GLN	N-CA-C	-5.23	96.19	107.49
1	C	168	VAL	N-CA-C	5.22	115.24	108.35
1	C	28	GLY	N-CA-C	5.18	118.14	110.63
1	C	173	LEU	CA-C-N	-5.17	114.34	119.56
1	C	173	LEU	C-N-CA	-5.17	114.34	119.56
1	C	175	MET	N-CA-C	-5.16	105.57	111.14
1	A	91	GLY	N-CA-C	5.13	120.59	114.48
1	B	79	ASN	N-CA-C	5.11	119.39	113.20
1	B	50	LEU	N-CA-C	-5.09	106.84	113.16
1	C	30	ARG	CA-C-N	5.06	126.16	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	C	30	ARG	C-N-CA	5.06	126.16	119.84
1	B	56	LEU	N-CA-C	5.03	116.93	108.73
1	C	30	ARG	N-CA-C	-5.02	101.98	109.42
1	A	219	SER	N-CA-C	5.02	118.66	112.54
1	A	40	LEU	N-CA-C	-5.01	105.46	111.03

There are no chirality outliers.

All (2) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	139	TYR	Sidechain
1	A	150	TYR	Sidechain

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	2511	0	2507	310	15
1	B	2544	0	2568	213	7
1	C	2532	0	2546	205	8
2	C	15	0	9	4	0
3	A	375	0	0	16	6
3	B	308	0	0	7	6
3	C	376	0	0	16	18
All	All	8661	0	7630	713	32

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 47.

All (713) 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:168:VAL:HG23	1:A:172:GLN:HB2	1.20	1.15
1:B:240:MET:HE3	1:B:260:VAL:HG12	1.33	1.09
1:A:226:LEU:HB3	1:A:306:ILE:HD11	1.34	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:180:ARG:HG3	1:C:180:ARG:HH11	1.21	1.03
1:A:207:LEU:HD23	1:A:216:MET:HE1	1.40	1.02
1:B:51:GLN:HE21	1:B:97:THR:HG22	1.18	1.02
1:C:120:THR:HG23	1:C:123:HIS:H	1.22	1.01
1:A:35:LEU:HD11	1:A:86:ASP:HB3	1.39	1.01
1:B:254:ARG:HD3	1:B:256:GLU:HG2	1.46	0.98
1:B:280:GLN:HB2	1:B:286:LEU:HD12	1.45	0.97
1:C:51:GLN:HE22	1:C:93:ASP:H	1.05	0.97
1:C:77:ARG:O	1:C:80:VAL:HG12	1.66	0.96
1:B:50:LEU:HD11	1:B:56:LEU:HD13	1.49	0.92
1:B:168:VAL:HG23	1:B:172:GLN:HB2	1.52	0.92
1:C:204:VAL:HG12	1:C:205:PRO:HD2	1.49	0.92
1:A:73:PRO:O	1:A:76:VAL:HG12	1.70	0.91
1:B:295:LEU:O	1:B:298:VAL:HG12	1.72	0.90
1:B:44:LEU:O	1:B:48:VAL:HG23	1.72	0.90
1:B:47:ARG:HA	1:B:50:LEU:HG	1.54	0.89
1:B:51:GLN:HE22	1:B:93:ASP:N	1.71	0.88
1:B:277:LEU:HD12	1:B:286:LEU:HD11	1.55	0.88
1:C:254:ARG:HD3	1:C:256:GLU:HG2	1.56	0.87
1:A:63:VAL:HG13	1:A:102:GLN:HG2	1.55	0.87
1:A:207:LEU:HD12	1:A:208:PRO:HD2	1.56	0.86
1:C:26:LEU:HD23	1:C:158:ILE:HD13	1.55	0.85
1:B:51:GLN:HE22	1:B:93:ASP:H	0.89	0.85
1:A:35:LEU:CD1	1:A:86:ASP:HB3	2.07	0.84
1:A:193:VAL:HG21	1:A:341:GLN:HB3	1.58	0.84
1:A:226:LEU:HD12	1:A:226:LEU:H	1.43	0.84
1:B:213:GLN:OE1	1:B:220:LEU:HD13	1.79	0.82
1:A:218:LYS:HA	1:A:218:LYS:HE2	1.59	0.82
1:A:127:ASN:HB3	1:A:130:VAL:HG12	1.60	0.82
1:C:180:ARG:HD3	1:C:197:PRO:O	1.80	0.82
1:B:43:SER:O	1:B:47:ARG:HD2	1.79	0.81
1:A:207:LEU:CD1	1:A:208:PRO:HD2	2.10	0.81
1:A:60:LEU:O	1:A:62:ASP:N	2.13	0.81
1:A:139:TYR:O	1:A:142:ARG:HG3	1.81	0.80
1:C:180:ARG:HG3	1:C:180:ARG:NH1	1.97	0.80
1:C:22:ARG:HB2	1:C:23:PRO:CD	2.11	0.79
1:B:68:ASP:HB3	1:B:69:HIS:HD2	1.47	0.79
1:C:211:ASP:HB3	3:C:1003:HOH:O	1.82	0.79
1:A:108:LEU:O	1:A:112:THR:HG23	1.81	0.78
1:B:184:ARG:HG2	1:B:184:ARG:HH21	1.48	0.78
1:C:168:VAL:HG22	1:C:172:GLN:HB2	1.66	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:27:THR:O	1:A:58:VAL:HA	1.84	0.78
1:B:36:HIS:HD2	1:B:38:GLY:H	1.30	0.77
1:A:333:GLU:O	1:A:337:GLN:HG2	1.85	0.77
1:C:216:MET:HE3	1:C:223:ALA:HB1	1.67	0.77
1:A:303:LEU:O	1:A:307:ARG:HB2	1.84	0.77
1:C:93:ASP:HB3	1:C:96:LYS:HB2	1.67	0.77
1:A:184:ARG:HD2	1:A:196:GLU:OE1	1.84	0.77
1:C:36:HIS:ND1	1:C:216:MET:HE2	1.99	0.77
1:A:168:VAL:CG2	1:A:172:GLN:HB2	2.10	0.77
1:A:49:ARG:HA	3:A:1677:HOH:O	1.84	0.76
1:A:201:LEU:HD23	1:A:202:SER:H	1.50	0.76
1:C:154:GLN:NE2	2:C:3000:TRP:OXT	2.18	0.76
1:B:51:GLN:NE2	1:B:93:ASP:H	1.75	0.76
1:A:110:GLU:O	1:A:113:VAL:HG12	1.86	0.76
1:A:85:LEU:HD13	1:A:310:ARG:NH2	2.00	0.75
1:B:268:ASP:OD2	1:B:274:VAL:HG23	1.87	0.75
1:C:92:LEU:HG	1:C:97:THR:HG21	1.69	0.75
1:B:51:GLN:NE2	1:B:97:THR:HG22	1.99	0.75
1:A:255:VAL:HG22	1:A:261:PHE:CE1	2.22	0.74
1:C:233:VAL:HG21	1:C:307:ARG:HH21	1.52	0.74
1:B:349:PHE:CD2	1:C:80:VAL:HG11	2.23	0.74
1:A:202:SER:OG	1:A:205:PRO:HB3	1.87	0.74
1:C:56:LEU:HD11	1:C:58:VAL:HG13	1.70	0.73
1:A:291:VAL:HG13	1:A:292:LYS:N	2.02	0.73
1:A:254:ARG:HB2	1:A:256:GLU:OE1	1.88	0.73
1:B:237:VAL:HG13	1:B:240:MET:HE1	1.71	0.72
1:A:30:ARG:HH22	1:A:68:ASP:HB3	1.53	0.72
1:B:22:ARG:HH21	1:B:53:GLU:HG3	1.53	0.72
1:A:127:ASN:HB3	1:A:130:VAL:CG1	2.19	0.72
1:A:201:LEU:CD2	1:A:202:SER:H	2.02	0.72
1:C:24:ARG:HD3	1:C:55:GLU:OE2	1.90	0.72
1:C:40:LEU:HA	1:C:44:LEU:HD12	1.72	0.72
1:A:44:LEU:O	1:A:48:VAL:HG23	1.90	0.72
1:C:273:ARG:HD2	3:C:1520:HOH:O	1.89	0.72
1:A:49:ARG:HD2	3:A:1677:HOH:O	1.90	0.72
1:C:22:ARG:HB2	1:C:23:PRO:HD3	1.71	0.72
1:C:168:VAL:CG2	1:C:172:GLN:HB2	2.20	0.71
1:B:254:ARG:CD	1:B:256:GLU:HG2	2.18	0.71
1:B:43:SER:C	1:B:47:ARG:HD2	2.15	0.71
1:A:291:VAL:HG13	1:A:292:LYS:H	1.55	0.71
1:B:127:ASN:HB3	1:B:130:VAL:HG12	1.71	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:68:ASP:OD1	1:B:137:LYS:HE2	1.90	0.71
1:A:169:GLY:H	1:A:172:GLN:HG3	1.54	0.71
1:A:180:ARG:HG2	1:A:196:GLU:HG2	1.73	0.71
1:A:254:ARG:HH11	1:A:256:GLU:HB2	1.56	0.71
1:A:229:SER:O	1:A:233:VAL:HG23	1.91	0.71
1:C:211:ASP:OD1	1:C:211:ASP:O	2.09	0.71
1:C:311:ALA:HA	1:C:314:GLU:HG3	1.71	0.71
1:C:290:LYS:HE2	1:C:290:LYS:HA	1.73	0.70
1:A:173:LEU:N	1:A:174:PRO:HD2	2.05	0.70
1:C:51:GLN:HE21	1:C:97:THR:HG22	1.57	0.70
1:B:277:LEU:CD1	1:B:286:LEU:HD11	2.22	0.69
1:A:230:ALA:HB1	1:A:300:ASN:HD21	1.57	0.69
1:C:108:LEU:O	1:C:112:THR:HG23	1.93	0.69
1:A:273:ARG:O	1:A:277:LEU:HD23	1.91	0.69
1:A:291:VAL:CG1	1:A:292:LYS:H	2.05	0.69
1:B:262:THR:HG21	3:B:1431:HOH:O	1.93	0.69
1:A:112:THR:O	1:A:116:LEU:HG	1.93	0.69
1:B:146:GLY:HA3	1:C:117:ASN:ND2	2.08	0.69
1:A:216:MET:HG3	1:A:223:ALA:HA	1.73	0.69
1:A:337:GLN:HB2	3:A:1490:HOH:O	1.92	0.68
1:B:254:ARG:HD3	1:B:256:GLU:CG	2.22	0.68
1:A:63:VAL:HG13	1:A:102:GLN:CG	2.23	0.68
1:A:305:PRO:HG2	1:A:306:ILE:H	1.59	0.68
1:B:51:GLN:HE21	1:B:97:THR:CG2	1.99	0.68
1:A:168:VAL:HG22	1:A:169:GLY:O	1.93	0.68
1:C:36:HIS:CG	1:C:216:MET:HE2	2.29	0.68
1:A:259:PRO:HA	1:A:262:THR:CG2	2.24	0.68
1:A:168:VAL:HG11	1:A:199:ALA:HB1	1.76	0.67
1:B:259:PRO:HA	1:B:262:THR:CG2	2.25	0.67
1:A:241:TYR:O	1:A:259:PRO:HD2	1.94	0.67
1:A:256:GLU:H	1:A:256:GLU:CD	2.02	0.67
1:A:288:ASP:HA	1:A:291:VAL:HG12	1.75	0.67
1:C:171:ASP:HB2	1:C:172:GLN:NE2	2.09	0.67
1:C:166:VAL:HG21	1:C:176:LEU:HD23	1.76	0.67
1:A:85:LEU:HD13	1:A:310:ARG:HH22	1.58	0.66
1:A:215:LYS:NZ	1:A:217:SER:OG	2.29	0.66
1:A:317:PRO:O	1:A:320:VAL:HG12	1.96	0.66
1:C:234:ALA:O	1:C:238:MET:HG2	1.94	0.66
1:B:273:ARG:O	1:B:276:ALA:HB3	1.96	0.66
1:B:127:ASN:HB3	1:B:130:VAL:CG1	2.25	0.66
1:A:63:VAL:CG1	1:A:102:GLN:HG2	2.25	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:175:MET:SD	1:C:175:MET:C	2.79	0.66
1:C:56:LEU:HD12	1:C:97:THR:HB	1.78	0.66
1:B:22:ARG:CB	1:B:23:PRO:HD3	2.26	0.65
1:B:53:GLU:OE1	1:B:53:GLU:HA	1.96	0.65
1:B:122:SER:OG	1:C:141:GLU:HB3	1.97	0.65
1:A:52:ASP:HB3	1:A:96:LYS:NZ	2.12	0.65
1:C:254:ARG:CD	1:C:256:GLU:HG2	2.24	0.65
1:A:254:ARG:HD2	1:A:256:GLU:HB2	1.79	0.65
1:B:322:ARG:HG2	1:B:322:ARG:HH21	1.62	0.65
1:A:190:TYR:O	1:A:191:ALA:C	2.39	0.65
1:A:261:PHE:HA	3:A:1622:HOH:O	1.97	0.65
1:A:41:ALA:CB	1:A:207:LEU:HD22	2.27	0.65
1:C:203:ARG:C	1:C:204:VAL:HG23	2.22	0.65
1:B:35:LEU:HD13	1:B:44:LEU:HD11	1.77	0.64
1:A:130:VAL:O	1:A:134:ILE:HG13	1.97	0.64
1:C:51:GLN:HE22	1:C:93:ASP:N	1.88	0.64
1:B:22:ARG:CG	1:B:23:PRO:HD3	2.28	0.64
1:A:170:ASP:OD1	1:A:203:ARG:NH2	2.31	0.64
1:A:226:LEU:HD23	1:A:306:ILE:CD1	2.27	0.64
1:C:120:THR:CG2	1:C:123:HIS:H	2.04	0.64
1:C:166:VAL:HG23	1:C:166:VAL:O	1.97	0.64
1:B:295:LEU:O	1:B:295:LEU:HD23	1.97	0.64
1:A:99:CYS:SG	1:A:324:VAL:HG12	2.38	0.64
1:A:133:GLU:O	1:A:137:LYS:HG3	1.98	0.63
1:B:40:LEU:HA	1:B:44:LEU:HB2	1.80	0.63
1:A:185:ARG:HD2	1:A:189:LEU:HD22	1.80	0.63
1:B:296:ILE:HG13	1:B:297:ASP:N	2.11	0.63
1:A:139:TYR:CD2	1:A:143:VAL:HG13	2.33	0.63
1:B:233:VAL:O	1:B:237:VAL:HG23	1.98	0.63
1:A:173:LEU:O	1:A:177:GLU:HB2	1.99	0.63
1:B:40:LEU:HD23	1:B:226:LEU:HD21	1.81	0.63
1:A:40:LEU:HA	1:A:44:LEU:HB3	1.79	0.63
1:A:72:ARG:HG2	3:A:1665:HOH:O	1.97	0.63
1:A:130:VAL:HG11	3:A:1543:HOH:O	1.98	0.63
1:C:294:HIS:O	1:C:298:VAL:HG12	1.99	0.63
1:A:30:ARG:HD2	1:A:65:ALA:HA	1.80	0.62
1:A:259:PRO:O	1:A:263:PHE:HB2	1.98	0.62
1:A:160:ALA:HA	1:A:338:THR:HG21	1.82	0.62
1:C:231:ASP:OD1	1:C:235:ARG:NE	2.32	0.62
1:B:101:VAL:HG13	1:B:104:ALA:HB3	1.81	0.62
1:B:255:VAL:HG21	1:B:278:LYS:HG3	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:112:THR:HG22	1:C:156:ALA:CB	2.30	0.62
1:C:254:ARG:HD2	1:C:256:GLU:O	1.99	0.62
1:B:68:ASP:HB3	1:B:69:HIS:CD2	2.31	0.62
1:A:211:ASP:C	1:A:213:GLN:H	2.08	0.62
1:A:269:PRO:HD2	1:A:273:ARG:NH1	2.15	0.62
1:A:253:GLY:O	1:A:282:ARG:HA	1.98	0.62
1:B:289:VAL:O	1:B:293:LYS:HG3	2.00	0.62
1:A:79:ASN:HA	1:A:82:ALA:HB3	1.82	0.62
1:C:56:LEU:CD1	1:C:58:VAL:HG13	2.30	0.61
1:C:64:GLN:H	1:C:102:GLN:HE22	1.47	0.61
1:A:207:LEU:CG	1:A:208:PRO:HD2	2.30	0.61
1:C:295:LEU:HD22	1:C:299:LEU:HG	1.82	0.61
1:C:326:GLU:HG2	3:C:1650:HOH:O	2.00	0.61
1:B:146:GLY:HA3	1:C:117:ASN:HD22	1.64	0.61
1:A:269:PRO:HA	3:A:1293:HOH:O	2.01	0.61
1:C:56:LEU:HD13	1:C:56:LEU:C	2.26	0.61
1:B:248:ARG:HD3	1:B:248:ARG:N	2.15	0.61
1:A:208:PRO:HG2	1:A:263:PHE:CE2	2.35	0.61
1:B:22:ARG:HB2	1:B:23:PRO:HD3	1.81	0.60
1:A:52:ASP:OD2	1:A:52:ASP:N	2.30	0.60
1:A:299:LEU:O	1:A:303:LEU:HD13	2.01	0.60
1:B:173:LEU:N	1:B:174:PRO:HD2	2.16	0.60
1:A:291:VAL:CG1	1:A:292:LYS:N	2.61	0.60
1:B:22:ARG:HH21	1:B:53:GLU:CG	2.15	0.60
1:A:289:VAL:O	1:A:293:LYS:HB2	2.02	0.60
1:B:62:ASP:O	1:B:66:LEU:HD23	2.02	0.60
1:C:201:LEU:HD23	1:C:202:SER:H	1.67	0.60
1:C:256:GLU:H	1:C:256:GLU:CD	2.08	0.60
1:A:232:GLU:O	1:A:236:LYS:HB2	2.02	0.59
1:A:255:VAL:HG22	1:A:261:PHE:CD1	2.36	0.59
1:A:220:LEU:C	1:A:222:ASN:H	2.10	0.59
1:B:40:LEU:O	1:B:45:GLN:HG2	2.03	0.59
1:B:140:GLY:O	1:B:143:VAL:HG23	2.02	0.59
1:B:268:ASP:OD1	1:B:273:ARG:NH2	2.36	0.59
1:A:176:LEU:O	1:A:176:LEU:HD13	2.02	0.59
1:A:294:HIS:HA	1:A:297:ASP:OD2	2.03	0.59
1:A:261:PHE:CE1	1:A:278:LYS:HG2	2.37	0.59
1:A:295:LEU:O	1:A:299:LEU:HG	2.03	0.59
1:B:64:GLN:H	1:B:102:GLN:HE22	1.51	0.59
1:A:210:LEU:HB2	1:A:222:ASN:OD1	2.02	0.59
1:A:229:SER:OG	1:A:232:GLU:HB2	2.01	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:127:ASN:CB	1:B:130:VAL:HG12	2.32	0.59
1:A:21:ALA:HB3	1:A:53:GLU:O	2.03	0.59
1:A:142:ARG:O	1:A:142:ARG:HD3	2.03	0.59
1:A:254:ARG:HH11	1:A:256:GLU:CB	2.16	0.59
1:C:95:GLN:HA	1:C:95:GLN:NE2	2.17	0.59
1:C:310:ARG:O	1:C:314:GLU:HG2	2.03	0.59
1:A:35:LEU:O	1:A:226:LEU:CD1	2.51	0.58
1:A:35:LEU:HD12	1:A:226:LEU:HD13	1.85	0.58
1:A:304:ALA:N	1:A:305:PRO:HD2	2.18	0.58
1:C:79:ASN:O	1:C:83:VAL:HG22	2.02	0.58
1:C:210:LEU:HD12	1:C:240:MET:HG2	1.84	0.58
1:C:254:ARG:CG	1:C:256:GLU:HG2	2.33	0.58
1:C:310:ARG:O	1:C:314:GLU:CG	2.52	0.58
1:B:295:LEU:HD23	1:B:295:LEU:C	2.28	0.58
1:A:273:ARG:O	1:A:276:ALA:HB3	2.04	0.58
2:C:3000:TRP:OXT	2:C:3000:TRP:CG	2.57	0.58
1:A:237:VAL:O	1:A:240:MET:N	2.30	0.58
1:B:66:LEU:C	1:B:68:ASP:H	2.10	0.58
1:A:208:PRO:HG3	1:A:262:THR:HG23	1.85	0.58
1:B:137:LYS:HD3	1:B:139:TYR:CE2	2.39	0.58
1:C:36:HIS:HB2	1:C:216:MET:CE	2.34	0.57
1:C:68:ASP:OD2	1:C:69:HIS:HD2	1.86	0.57
1:C:293:LYS:HG2	3:C:1361:HOH:O	2.04	0.57
1:B:23:PRO:HD2	1:B:54:ALA:HB2	1.85	0.57
1:A:226:LEU:HD12	1:A:226:LEU:N	2.16	0.57
1:A:305:PRO:HG2	1:A:306:ILE:HG22	1.86	0.57
1:C:48:VAL:O	1:C:51:GLN:HG2	2.04	0.57
1:A:22:ARG:N	1:A:23:PRO:CD	2.67	0.57
1:C:180:ARG:HE	1:C:196:GLU:CD	2.12	0.57
1:B:184:ARG:HG2	1:B:184:ARG:NH2	2.17	0.57
1:C:218:LYS:HB2	3:C:1206:HOH:O	2.04	0.57
1:B:114:TYR:CE1	1:B:346:MET:HE1	2.40	0.57
1:A:98:THR:CG2	1:A:330:ARG:HD2	2.34	0.57
1:C:171:ASP:HB2	1:C:172:GLN:HE22	1.69	0.57
1:A:56:LEU:HD22	1:A:57:PHE:N	2.20	0.57
1:B:231:ASP:O	1:B:235:ARG:HG3	2.05	0.57
1:A:259:PRO:HA	1:A:262:THR:HG22	1.86	0.57
1:A:277:LEU:HD12	1:A:286:LEU:HD11	1.87	0.57
1:A:321:LEU:O	1:A:325:THR:HG23	2.04	0.57
1:B:207:LEU:HD12	1:B:208:PRO:HD2	1.87	0.57
1:C:56:LEU:HD11	1:C:58:VAL:CG1	2.35	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:177:GLU:HG3	3:B:1946:HOH:O	2.05	0.56
1:A:98:THR:OG1	1:A:330:ARG:HD2	2.05	0.56
1:A:296:ILE:HG13	1:A:297:ASP:N	2.20	0.56
1:C:40:LEU:HA	1:C:44:LEU:HB2	1.87	0.56
1:C:133:GLU:O	1:C:136:GLN:HG3	2.04	0.56
1:B:263:PHE:HB3	1:B:295:LEU:HD11	1.86	0.56
1:A:136:GLN:O	1:A:136:GLN:HG3	2.03	0.56
1:C:187:ASN:HB3	1:C:192:PRO:HA	1.86	0.56
1:B:36:HIS:CD2	1:B:38:GLY:H	2.19	0.56
1:B:277:LEU:HD22	1:B:277:LEU:H	1.69	0.56
1:A:246:HIS:NE2	1:A:251:ASP:O	2.33	0.56
1:A:36:HIS:H	1:A:39:HIS:HD2	1.52	0.56
1:C:74:GLU:HB2	3:C:1034:HOH:O	2.05	0.56
1:C:180:ARG:HD2	1:C:196:GLU:HG3	1.87	0.56
1:A:277:LEU:HA	1:A:280:GLN:NE2	2.21	0.56
1:A:302:VAL:O	1:A:305:PRO:HD2	2.06	0.56
1:B:75:GLN:O	1:B:79:ASN:ND2	2.38	0.56
1:A:240:MET:CE	1:A:259:PRO:HB2	2.36	0.56
1:B:44:LEU:HA	1:B:47:ARG:CD	2.35	0.56
1:B:189:LEU:HD21	1:C:71:ASP:HA	1.87	0.55
1:C:166:VAL:HG21	1:C:176:LEU:CD2	2.37	0.55
1:B:93:ASP:OD2	1:B:94:PRO:HD2	2.07	0.55
1:A:149:VAL:O	1:A:149:VAL:HG12	2.07	0.55
1:C:51:GLN:NE2	1:C:97:THR:HG22	2.21	0.55
1:C:204:VAL:HG21	3:C:1173:HOH:O	2.05	0.55
1:B:248:ARG:HD3	1:B:248:ARG:H	1.71	0.55
1:A:112:THR:HG22	1:A:156:ALA:CB	2.36	0.55
1:A:216:MET:HA	1:A:222:ASN:O	2.07	0.55
1:C:254:ARG:HG2	1:C:255:VAL:N	2.20	0.55
1:A:63:VAL:HG13	1:A:102:GLN:CD	2.32	0.55
1:A:220:LEU:C	1:A:222:ASN:N	2.60	0.55
1:A:37:LEU:HG	1:A:224:ILE:HG12	1.88	0.55
1:A:201:LEU:CD2	1:A:202:SER:N	2.70	0.55
1:C:233:VAL:HG21	1:C:307:ARG:NH2	2.22	0.55
1:B:349:PHE:CE2	1:C:81:LEU:HD13	2.42	0.55
1:A:58:VAL:HG13	1:A:58:VAL:O	2.05	0.55
1:A:76:VAL:HG13	1:A:77:ARG:N	2.22	0.55
1:A:218:LYS:HA	1:A:218:LYS:CE	2.34	0.55
1:C:40:LEU:HD12	1:C:44:LEU:HB2	1.87	0.55
1:C:183:VAL:HG13	1:C:194:LEU:HB2	1.89	0.55
1:B:64:GLN:HE22	1:B:154:GLN:CG	2.20	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:59:LEU:HD12	1:C:100:VAL:HG22	1.87	0.55
1:B:237:VAL:HG13	1:B:240:MET:CE	2.36	0.55
1:B:134:ILE:HD13	1:B:143:VAL:HG21	1.88	0.54
1:A:35:LEU:O	1:A:226:LEU:HD12	2.07	0.54
1:A:205:PRO:O	1:A:206:ARG:C	2.50	0.54
1:A:260:VAL:O	1:A:264:LEU:HB2	2.07	0.54
1:C:127:ASN:HB3	1:C:130:VAL:HG22	1.89	0.54
1:C:78:GLU:HA	1:C:78:GLU:OE2	2.07	0.54
1:C:175:MET:HB2	3:C:1018:HOH:O	2.07	0.54
1:B:247:LEU:HB2	1:B:248:ARG:HH21	1.72	0.54
1:A:247:LEU:HD22	3:A:1323:HOH:O	2.07	0.54
1:A:288:ASP:O	1:A:292:LYS:HG3	2.07	0.54
1:C:64:GLN:OE1	1:C:154:GLN:HG3	2.08	0.54
1:C:51:GLN:NE2	1:C:93:ASP:H	1.89	0.54
1:A:193:VAL:HG22	1:A:193:VAL:O	2.08	0.54
1:C:339:LEU:O	1:C:343:ARG:HG3	2.08	0.54
1:C:27:THR:HB	3:C:1219:HOH:O	2.07	0.54
1:A:107:GLU:HB3	1:A:339:LEU:HG	1.90	0.54
1:C:187:ASN:CB	1:C:192:PRO:HA	2.37	0.54
1:C:295:LEU:O	1:C:298:VAL:HG13	2.07	0.54
1:B:58:VAL:HG23	1:B:58:VAL:O	2.07	0.54
1:B:168:VAL:HG22	1:B:169:GLY:O	2.07	0.54
1:C:172:GLN:HG2	3:C:1945:HOH:O	2.07	0.54
1:B:296:ILE:HD12	1:B:300:ASN:ND2	2.23	0.54
1:B:22:ARG:NH2	1:B:53:GLU:HG3	2.22	0.53
1:A:248:ARG:HD3	1:A:248:ARG:N	2.23	0.53
1:C:40:LEU:CA	1:C:44:LEU:HD12	2.37	0.53
1:A:249:ALA:HB2	1:A:287:GLY:HA3	1.90	0.53
1:C:216:MET:HE3	1:C:223:ALA:CB	2.37	0.53
1:B:62:ASP:OD1	1:B:103:SER:OG	2.26	0.53
1:B:344:ARG:CG	1:B:344:ARG:HH11	2.21	0.53
1:B:259:PRO:HA	1:B:262:THR:HG23	1.89	0.53
1:A:242:THR:HB	1:A:258:ASN:HD21	1.73	0.53
1:C:243:ASP:OD2	1:C:246:HIS:HB2	2.08	0.53
1:B:237:VAL:O	1:B:240:MET:HE2	2.09	0.53
1:B:23:PRO:O	1:B:54:ALA:HB1	2.09	0.53
1:B:74:GLU:OE1	1:C:347:ARG:NH1	2.42	0.53
1:B:255:VAL:HG13	1:B:261:PHE:CD2	2.43	0.53
1:A:255:VAL:HG13	1:A:261:PHE:CD1	2.44	0.53
1:B:211:ASP:HB3	1:B:213:GLN:HG3	1.90	0.53
1:C:120:THR:HG22	1:C:123:HIS:HB2	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:50:LEU:C	1:B:50:LEU:HD12	2.34	0.52
1:A:175:MET:SD	1:A:175:MET:C	2.92	0.52
1:C:22:ARG:CB	1:C:23:PRO:CD	2.86	0.52
1:A:212:GLY:O	1:A:213:GLN:C	2.53	0.52
1:A:215:LYS:HB3	3:A:2052:HOH:O	2.08	0.52
1:A:237:VAL:HG13	1:A:295:LEU:HD23	1.91	0.52
1:C:286:LEU:HD12	1:C:291:VAL:HG23	1.91	0.52
1:B:127:ASN:CG	1:B:130:VAL:HG12	2.34	0.52
1:A:52:ASP:HB3	1:A:96:LYS:HZ3	1.75	0.52
1:B:299:LEU:HA	1:B:302:VAL:CG1	2.40	0.52
1:A:180:ARG:O	1:A:184:ARG:HD3	2.10	0.52
1:C:180:ARG:NH1	1:C:180:ARG:CG	2.68	0.52
1:B:249:ALA:O	1:B:250:SER:C	2.53	0.52
1:B:202:SER:HB3	3:B:1285:HOH:O	2.09	0.52
1:B:253:GLY:O	1:B:282:ARG:HA	2.09	0.52
1:B:296:ILE:CD1	1:B:300:ASN:ND2	2.73	0.52
1:C:21:ALA:HB2	3:C:1220:HOH:O	2.09	0.52
1:C:154:GLN:CD	2:C:3000:TRP:OXT	2.52	0.52
1:B:102:GLN:HG3	1:B:108:LEU:HD12	1.92	0.52
1:A:180:ARG:HB3	1:A:184:ARG:HH11	1.75	0.52
1:A:207:LEU:HG	1:A:208:PRO:HD2	1.91	0.52
1:A:250:SER:O	1:A:284:GLY:HA2	2.09	0.52
1:C:63:VAL:HB	1:C:102:GLN:NE2	2.25	0.52
1:B:32:THR:O	1:B:75:GLN:NE2	2.43	0.52
1:B:240:MET:CE	1:B:260:VAL:HG12	2.22	0.52
1:A:288:ASP:O	1:A:291:VAL:HG12	2.09	0.52
1:C:216:MET:HE3	1:C:224:ILE:H	1.75	0.52
1:A:116:LEU:HD23	1:A:152:VAL:HG21	1.91	0.52
1:A:261:PHE:CD1	1:A:278:LYS:HG2	2.44	0.52
1:B:299:LEU:HA	1:B:302:VAL:HG12	1.92	0.51
1:A:232:GLU:HB3	3:A:1447:HOH:O	2.10	0.51
1:B:116:LEU:O	1:C:145:ALA:HB3	2.10	0.51
1:B:189:LEU:CD2	1:C:71:ASP:HA	2.40	0.51
1:A:209:GLY:O	1:A:210:LEU:C	2.53	0.51
1:A:255:VAL:HG11	1:A:278:LYS:HE2	1.92	0.51
1:B:211:ASP:OD1	1:B:222:ASN:HB3	2.11	0.51
1:A:23:PRO:O	1:A:54:ALA:HB1	2.09	0.51
1:B:292:LYS:O	1:B:296:ILE:CG2	2.58	0.51
1:A:260:VAL:HG13	1:A:295:LEU:CD2	2.40	0.51
1:B:298:VAL:O	1:B:302:VAL:HG12	2.11	0.51
1:A:234:ALA:HA	1:A:296:ILE:CG2	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:293:LYS:O	1:A:296:ILE:HG12	2.10	0.51
1:C:165:LEU:HD22	1:C:200:GLN:HB2	1.93	0.51
1:C:295:LEU:CD2	1:C:299:LEU:HG	2.40	0.51
1:B:248:ARG:NE	1:B:251:ASP:OD2	2.44	0.51
1:A:41:ALA:HB2	1:A:207:LEU:HD22	1.92	0.51
1:A:66:LEU:HD21	1:A:76:VAL:HG11	1.92	0.51
1:A:208:PRO:HG2	1:A:263:PHE:HE2	1.74	0.51
1:C:258:ASN:C	1:C:258:ASN:HD22	2.18	0.51
1:B:333:GLU:HG3	1:B:337:GLN:HE21	1.74	0.51
1:C:41:ALA:HB2	1:C:267:PHE:CZ	2.46	0.51
1:C:77:ARG:O	1:C:80:VAL:CG1	2.51	0.51
1:C:322:ARG:HD3	3:C:1047:HOH:O	2.10	0.51
1:B:333:GLU:OE2	1:B:333:GLU:HA	2.11	0.50
1:A:215:LYS:O	1:A:222:ASN:ND2	2.44	0.50
1:C:62:ASP:OD2	1:C:103:SER:OG	2.24	0.50
1:A:30:ARG:HH22	1:A:68:ASP:CB	2.21	0.50
1:C:254:ARG:HD3	1:C:256:GLU:CG	2.36	0.50
1:A:150:TYR:CE2	1:A:154:GLN:NE2	2.80	0.50
1:A:256:GLU:CD	1:A:256:GLU:N	2.70	0.50
1:C:120:THR:HG23	1:C:123:HIS:N	2.07	0.50
1:A:193:VAL:HG21	1:A:341:GLN:CB	2.36	0.50
1:C:187:ASN:CG	1:C:192:PRO:HA	2.36	0.50
1:A:74:GLU:HG2	3:A:1380:HOH:O	2.11	0.50
1:A:290:LYS:HE2	1:A:290:LYS:HA	1.93	0.50
1:C:210:LEU:HD12	1:C:240:MET:CG	2.42	0.50
1:B:273:ARG:NH2	1:B:294:HIS:NE2	2.59	0.50
1:A:150:TYR:O	1:A:154:GLN:HG3	2.11	0.50
1:A:276:ALA:O	1:A:280:GLN:HG3	2.12	0.50
1:C:246:HIS:C	1:C:247:LEU:HD12	2.37	0.50
1:C:127:ASN:OD1	1:C:129:THR:HG22	2.12	0.50
1:B:30:ARG:HH22	1:B:68:ASP:HB2	1.76	0.50
1:B:184:ARG:HH21	1:B:184:ARG:CG	2.20	0.50
1:A:110:GLU:O	1:A:113:VAL:CG1	2.58	0.50
1:B:316:ASP:OD2	1:B:319:ALA:HB2	2.11	0.49
1:A:173:LEU:N	1:A:174:PRO:CD	2.75	0.49
1:A:260:VAL:HG13	1:A:295:LEU:HD22	1.92	0.49
1:B:254:ARG:HH11	1:B:256:GLU:CG	2.25	0.49
1:C:256:GLU:HB2	3:C:1723:HOH:O	2.11	0.49
1:B:295:LEU:HA	1:B:298:VAL:HG12	1.94	0.49
1:A:290:LYS:HE2	1:A:290:LYS:CA	2.43	0.49
1:C:133:GLU:O	1:C:137:LYS:HD3	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:145:ALA:HB3	1:C:116:LEU:O	2.13	0.49
1:B:175:MET:SD	1:B:175:MET:C	2.95	0.49
1:C:36:HIS:HB2	1:C:216:MET:HE2	1.94	0.49
1:C:185:ARG:HH11	1:C:189:LEU:HD22	1.77	0.49
1:B:74:GLU:CD	1:C:347:ARG:NH1	2.70	0.49
1:B:169:GLY:O	1:B:170:ASP:C	2.55	0.49
1:B:315:ARG:O	1:B:315:ARG:HG2	2.12	0.49
1:B:349:PHE:CD2	1:C:80:VAL:CG1	2.95	0.49
1:A:237:VAL:O	1:A:240:MET:HB2	2.11	0.49
1:B:25:VAL:HG22	1:B:165:LEU:HB3	1.94	0.49
1:B:292:LYS:O	1:B:296:ILE:HG23	2.12	0.49
1:C:241:TYR:OH	1:C:244:PRO:HD3	2.13	0.49
1:A:134:ILE:HD13	1:A:143:VAL:HG21	1.94	0.49
1:A:218:LYS:NZ	1:A:225:ALA:HB2	2.28	0.49
1:C:23:PRO:HB3	3:C:1304:HOH:O	2.12	0.49
1:A:49:ARG:O	1:A:52:ASP:OD2	2.31	0.49
1:B:23:PRO:HD2	1:B:54:ALA:CB	2.41	0.49
1:B:43:SER:O	1:B:46:ASN:N	2.46	0.49
1:C:60:LEU:HD22	1:C:83:VAL:HG21	1.95	0.49
1:C:254:ARG:CD	1:C:256:GLU:O	2.61	0.49
1:B:66:LEU:C	1:B:68:ASP:N	2.68	0.48
1:A:143:VAL:HG12	1:A:144:PRO:HD2	1.95	0.48
1:A:175:MET:SD	1:A:176:LEU:N	2.86	0.48
1:B:274:VAL:C	1:B:276:ALA:N	2.69	0.48
1:A:211:ASP:O	1:A:213:GLN:N	2.42	0.48
1:A:292:LYS:O	1:A:295:LEU:N	2.47	0.48
1:B:29:ASP:O	1:B:31:PRO:HD3	2.14	0.48
1:C:255:VAL:HG21	1:C:278:LYS:HG2	1.95	0.48
1:A:125:ARG:HG3	1:A:125:ARG:HH21	1.78	0.48
1:C:27:THR:HG22	1:C:167:PRO:HD2	1.94	0.48
1:B:211:ASP:OD1	1:B:213:GLN:NE2	2.47	0.48
1:A:98:THR:OG1	1:A:330:ARG:NH1	2.43	0.48
1:A:112:THR:HG22	1:A:153:SER:HA	1.95	0.48
1:A:158:ILE:HG23	1:A:163:ALA:HB3	1.95	0.48
1:A:105:VAL:HG13	1:A:108:LEU:HG	1.94	0.48
1:A:185:ARG:O	1:A:189:LEU:HB2	2.14	0.48
1:A:308:THR:O	1:A:311:ALA:HB3	2.12	0.48
1:B:270:ASP:O	1:B:273:ARG:HB3	2.14	0.48
1:B:277:LEU:HD13	1:B:280:GLN:NE2	2.29	0.48
1:C:60:LEU:HD22	1:C:83:VAL:CG2	2.43	0.48
1:B:264:LEU:HG	1:B:295:LEU:HD12	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:292:LYS:O	1:C:296:ILE:HG13	2.14	0.48
1:B:68:ASP:OD1	1:B:137:LYS:CE	2.62	0.47
1:B:101:VAL:HG13	1:B:101:VAL:O	2.14	0.47
1:B:255:VAL:HG22	1:B:261:PHE:CE2	2.48	0.47
1:A:253:GLY:HA3	1:A:281:TYR:CE2	2.49	0.47
1:A:291:VAL:O	1:A:292:LYS:C	2.56	0.47
1:B:315:ARG:HG3	3:B:1367:HOH:O	2.13	0.47
1:A:45:GLN:O	1:A:48:VAL:HB	2.14	0.47
1:A:240:MET:HE1	1:A:259:PRO:HB2	1.97	0.47
1:C:276:ALA:O	1:C:280:GLN:HG3	2.13	0.47
1:C:344:ARG:HD3	3:C:1217:HOH:O	2.15	0.47
1:B:36:HIS:CE1	1:B:39:HIS:CE1	3.03	0.47
1:B:77:ARG:NE	1:C:347:ARG:NH2	2.62	0.47
1:C:63:VAL:H	1:C:102:GLN:HE21	1.61	0.47
1:A:32:THR:HG23	1:A:69:HIS:HE1	1.79	0.47
1:A:215:LYS:NZ	1:A:215:LYS:HB2	2.29	0.47
1:A:223:ALA:O	1:A:236:LYS:NZ	2.44	0.47
1:C:201:LEU:HD23	1:C:202:SER:N	2.27	0.47
1:B:92:LEU:HD12	1:B:92:LEU:HA	1.78	0.47
1:B:114:TYR:CD1	1:B:346:MET:HE1	2.49	0.47
1:C:36:HIS:CE1	1:C:216:MET:HG2	2.50	0.47
1:B:22:ARG:HB2	1:B:23:PRO:CD	2.45	0.47
1:B:64:GLN:H	1:B:102:GLN:NE2	2.12	0.47
1:B:149:VAL:O	1:B:149:VAL:CG1	2.63	0.47
1:A:36:HIS:HD2	1:A:38:GLY:H	1.61	0.47
1:A:130:VAL:HG13	1:A:131:LYS:N	2.28	0.47
1:C:171:ASP:CB	1:C:172:GLN:NE2	2.78	0.47
1:C:216:MET:CE	1:C:224:ILE:H	2.27	0.47
1:A:288:ASP:CA	1:A:291:VAL:HG12	2.42	0.47
1:B:316:ASP:OD1	1:B:318:ASP:OD2	2.33	0.47
1:A:241:TYR:O	1:A:259:PRO:CD	2.60	0.47
1:B:71:ASP:OD1	1:B:72:ARG:CD	2.63	0.47
1:A:274:VAL:C	1:A:276:ALA:H	2.22	0.47
1:C:241:TYR:CZ	1:C:244:PRO:HD3	2.50	0.47
1:A:98:THR:HG23	1:A:330:ARG:HD2	1.96	0.46
1:B:241:TYR:O	1:B:259:PRO:HG2	2.14	0.46
1:A:234:ALA:HA	1:A:296:ILE:HG22	1.95	0.46
1:B:110:GLU:OE1	1:B:343:ARG:HD3	2.15	0.46
1:A:214:ALA:C	1:A:215:LYS:HG3	2.40	0.46
1:C:320:VAL:O	1:C:323:PHE:HB3	2.15	0.46
1:B:244:PRO:C	1:B:246:HIS:H	2.24	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:56:LEU:HD13	1:A:97:THR:HG23	1.98	0.46
1:A:288:ASP:HA	1:A:291:VAL:CG1	2.43	0.46
1:A:296:ILE:HG13	1:A:297:ASP:H	1.81	0.46
1:A:32:THR:HG22	1:A:32:THR:O	2.15	0.46
1:A:33:GLY:HA2	1:A:79:ASN:ND2	2.31	0.46
1:A:99:CYS:HB2	1:A:323:PHE:CZ	2.50	0.46
1:A:242:THR:HB	1:A:258:ASN:ND2	2.30	0.46
1:C:310:ARG:O	1:C:314:GLU:HG3	2.15	0.46
1:B:22:ARG:CD	1:B:23:PRO:HD3	2.46	0.46
1:A:32:THR:HG23	1:A:69:HIS:CE1	2.51	0.46
1:A:36:HIS:O	1:A:38:GLY:N	2.49	0.46
1:A:277:LEU:HD13	1:A:280:GLN:NE2	2.31	0.46
1:A:46:ASN:ND2	1:A:50:LEU:HG	2.30	0.46
1:A:255:VAL:HG21	1:A:278:LYS:HD3	1.98	0.46
1:A:290:LYS:HE2	1:A:290:LYS:N	2.30	0.46
1:B:333:GLU:O	1:B:337:GLN:HG3	2.16	0.46
1:A:30:ARG:O	1:A:32:THR:N	2.48	0.46
1:A:335:ALA:O	1:A:339:LEU:HD23	2.16	0.46
1:B:263:PHE:CB	1:B:295:LEU:HD11	2.46	0.46
1:B:344:ARG:HG3	1:B:344:ARG:NH1	2.30	0.46
1:C:311:ALA:CA	1:C:314:GLU:HG3	2.43	0.46
1:C:25:VAL:HG13	1:C:167:PRO:HD3	1.96	0.46
1:B:166:VAL:HB	1:B:176:LEU:HD21	1.98	0.45
1:A:344:ARG:HD3	3:A:1031:HOH:O	2.16	0.45
1:B:22:ARG:CB	1:B:23:PRO:CD	2.94	0.45
1:B:330:ARG:O	1:B:333:GLU:HB3	2.16	0.45
1:B:287:GLY:O	1:B:290:LYS:N	2.49	0.45
1:A:51:GLN:HE22	1:A:92:LEU:HA	1.80	0.45
1:A:180:ARG:HB3	1:A:184:ARG:NH1	2.31	0.45
1:C:270:ASP:OD2	1:C:273:ARG:CZ	2.64	0.45
1:B:51:GLN:NE2	1:B:97:THR:CG2	2.71	0.45
1:B:184:ARG:NH2	1:B:184:ARG:CG	2.76	0.45
1:B:184:ARG:HE	1:B:196:GLU:CD	2.23	0.45
1:A:255:VAL:HG13	1:A:261:PHE:HB3	1.99	0.45
1:C:30:ARG:HD2	1:C:64:GLN:HE21	1.81	0.45
1:C:210:LEU:HD21	1:C:224:ILE:HG13	1.97	0.45
1:C:245:GLY:O	1:C:247:LEU:HD13	2.16	0.45
1:B:219:SER:HA	3:B:1401:HOH:O	2.16	0.45
1:B:264:LEU:O	1:B:268:ASP:HB3	2.17	0.45
1:B:278:LYS:HE3	1:B:278:LYS:HB2	1.76	0.45
1:B:295:LEU:C	1:B:298:VAL:HG12	2.39	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:21:ALA:HB1	1:A:23:PRO:HD2	1.98	0.45
1:A:46:ASN:O	1:A:50:LEU:N	2.33	0.45
1:A:187:ASN:OD1	1:A:192:PRO:HA	2.16	0.45
1:A:294:HIS:O	1:A:298:VAL:HG23	2.16	0.45
1:A:296:ILE:O	1:A:300:ASN:HB2	2.15	0.45
1:A:303:LEU:HB3	1:A:307:ARG:NH2	2.31	0.45
1:A:249:ALA:CB	1:A:287:GLY:HA3	2.47	0.45
1:A:265:ASP:HB3	1:A:274:VAL:HG11	1.97	0.45
1:B:74:GLU:OE2	1:C:347:ARG:NH1	2.50	0.45
1:A:226:LEU:HD23	1:A:306:ILE:HD12	1.98	0.45
1:A:277:LEU:O	1:A:281:TYR:N	2.50	0.45
1:A:302:VAL:HG13	1:A:303:LEU:HD13	1.97	0.45
1:B:270:ASP:HB2	1:B:273:ARG:CZ	2.47	0.45
1:C:112:THR:HG22	1:C:156:ALA:HB3	1.98	0.45
1:A:211:ASP:C	1:A:213:GLN:N	2.70	0.44
1:C:51:GLN:NE2	1:C:97:THR:CG2	2.79	0.44
1:C:271:PRO:HG2	3:C:1373:HOH:O	2.17	0.44
1:A:130:VAL:CG1	1:A:131:LYS:N	2.79	0.44
1:C:231:ASP:CG	1:C:232:GLU:N	2.75	0.44
1:B:140:GLY:O	1:B:143:VAL:CG2	2.66	0.44
1:B:165:LEU:HD23	1:B:198:GLN:O	2.18	0.44
1:A:68:ASP:OD2	1:A:137:LYS:NZ	2.45	0.44
1:A:105:VAL:HA	1:A:106:PRO:HD2	1.80	0.44
1:A:293:LYS:HD2	1:A:296:ILE:HD11	1.99	0.44
1:C:185:ARG:O	1:C:189:LEU:HB2	2.16	0.44
1:A:136:GLN:O	1:A:136:GLN:CG	2.66	0.44
1:C:321:LEU:HD22	1:C:325:THR:HG23	2.00	0.44
1:B:346:MET:HE3	1:B:348:LEU:HD11	1.99	0.44
1:B:240:MET:HE3	1:B:260:VAL:CG1	2.23	0.44
1:C:30:ARG:HA	1:C:31:PRO:HD3	1.79	0.44
1:A:205:PRO:HG2	1:A:206:ARG:H	1.82	0.44
1:C:62:ASP:OD2	1:C:103:SER:CB	2.66	0.44
1:C:201:LEU:HD22	1:C:202:SER:HB3	2.00	0.44
1:C:203:ARG:C	1:C:204:VAL:O	2.57	0.44
1:A:119:VAL:HG22	1:A:120:THR:N	2.32	0.44
1:A:149:VAL:O	1:A:152:VAL:HG13	2.17	0.44
1:C:58:VAL:CG2	1:C:99:CYS:HA	2.47	0.44
1:C:92:LEU:HD12	1:C:92:LEU:HA	1.80	0.44
1:B:123:HIS:HE1	3:B:1334:HOH:O	2.01	0.43
1:A:76:VAL:CG1	1:A:77:ARG:N	2.81	0.43
1:A:222:ASN:O	1:A:222:ASN:CG	2.60	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:143:VAL:HG12	1:A:144:PRO:CD	2.49	0.43
1:A:180:ARG:HG2	1:A:197:PRO:HD2	1.99	0.43
1:C:154:GLN:NE2	2:C:3000:TRP:CD2	2.86	0.43
1:C:154:GLN:O	1:C:158:ILE:HG12	2.18	0.43
1:C:166:VAL:O	1:C:166:VAL:CG2	2.66	0.43
1:C:268:ASP:HA	1:C:269:PRO:HD2	1.87	0.43
1:B:346:MET:CE	1:B:348:LEU:HD11	2.49	0.43
1:A:237:VAL:HA	1:A:240:MET:HG3	2.00	0.43
1:C:68:ASP:OD2	1:C:69:HIS:CD2	2.69	0.43
1:A:225:ALA:C	1:A:227:GLY:H	2.26	0.43
1:A:36:HIS:O	1:A:37:LEU:C	2.61	0.43
1:A:168:VAL:CG1	1:A:199:ALA:HB1	2.46	0.43
1:A:294:HIS:HD2	1:A:297:ASP:OD2	2.02	0.43
1:C:136:GLN:CD	1:C:137:LYS:HD2	2.43	0.43
1:B:255:VAL:HG13	1:B:261:PHE:CB	2.48	0.43
1:A:81:LEU:HD12	1:A:81:LEU:HA	1.77	0.43
1:A:250:SER:O	1:A:284:GLY:CA	2.66	0.43
1:A:293:LYS:O	1:A:296:ILE:CG1	2.66	0.43
1:C:204:VAL:HG12	1:C:205:PRO:CD	2.36	0.43
1:C:238:MET:O	1:C:292:LYS:NZ	2.52	0.43
1:A:210:LEU:HD22	1:A:240:MET:HG2	2.01	0.43
1:A:269:PRO:HD2	1:A:273:ARG:HH12	1.84	0.43
1:C:36:HIS:CB	1:C:216:MET:HE2	2.49	0.43
1:C:62:ASP:O	1:C:66:LEU:HG	2.18	0.43
1:B:93:ASP:HA	1:B:94:PRO:HD3	1.86	0.43
1:B:101:VAL:HG12	1:B:328:THR:OG1	2.18	0.43
1:B:348:LEU:O	1:B:349:PHE:C	2.60	0.43
1:B:274:VAL:C	1:B:276:ALA:H	2.25	0.42
1:A:83:VAL:O	1:A:84:ALA:C	2.61	0.42
1:A:210:LEU:HD22	1:A:240:MET:CG	2.49	0.42
1:A:254:ARG:CD	1:A:256:GLU:HB2	2.47	0.42
1:A:334:VAL:HA	1:A:337:GLN:HG3	2.01	0.42
1:C:189:LEU:HD12	1:C:189:LEU:HA	1.87	0.42
1:A:21:ALA:HB1	1:A:23:PRO:CD	2.48	0.42
1:A:121:VAL:O	1:A:125:ARG:HB2	2.19	0.42
1:A:173:LEU:HD13	3:A:2045:HOH:O	2.18	0.42
1:B:58:VAL:HG23	1:B:99:CYS:HA	2.00	0.42
1:A:208:PRO:HG3	1:A:262:THR:CG2	2.48	0.42
1:B:254:ARG:NH1	1:B:256:GLU:HG3	2.34	0.42
1:A:62:ASP:H	1:A:102:GLN:HB3	1.84	0.42
1:A:105:VAL:HG13	1:A:105:VAL:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:105:VAL:HG13	1:A:108:LEU:CD1	2.49	0.42
1:A:150:TYR:N	1:A:151:PRO:CD	2.83	0.42
1:A:302:VAL:C	1:A:305:PRO:HD2	2.44	0.42
1:C:52:ASP:OD2	1:C:96:LYS:NZ	2.49	0.42
1:B:277:LEU:HA	1:B:286:LEU:HD11	2.01	0.42
1:A:58:VAL:O	1:A:58:VAL:CG1	2.67	0.42
1:A:191:ALA:HA	1:A:192:PRO:HD3	1.80	0.42
1:A:241:TYR:O	1:A:241:TYR:CD1	2.73	0.42
1:B:30:ARG:HH22	1:B:68:ASP:CB	2.33	0.42
1:A:288:ASP:C	1:A:291:VAL:HG12	2.44	0.42
1:C:108:LEU:HD13	1:C:157:ASP:OD1	2.19	0.42
1:C:230:ALA:HB1	1:C:300:ASN:HD21	1.85	0.42
1:B:21:ALA:HA	1:B:54:ALA:HA	2.01	0.42
1:B:232:GLU:O	1:B:233:VAL:C	2.61	0.42
1:B:258:ASN:HA	1:B:259:PRO:HD2	1.97	0.42
1:A:84:ALA:O	1:A:85:LEU:C	2.62	0.42
1:C:231:ASP:OD1	1:C:235:ARG:CZ	2.68	0.42
1:B:211:ASP:CB	1:B:213:GLN:HG3	2.50	0.42
1:C:180:ARG:CD	1:C:197:PRO:O	2.61	0.42
1:B:277:LEU:HA	1:B:286:LEU:CD1	2.50	0.42
1:A:119:VAL:HG21	1:A:124:LEU:HD13	2.02	0.42
1:A:309:ARG:O	1:A:310:ARG:C	2.63	0.42
1:B:59:LEU:HD12	1:B:100:VAL:O	2.19	0.42
1:A:165:LEU:HD22	1:A:166:VAL:N	2.35	0.42
1:C:25:VAL:HG22	1:C:165:LEU:HB3	2.01	0.42
1:C:243:ASP:HA	1:C:244:PRO:HD2	1.87	0.42
1:A:22:ARG:N	1:A:23:PRO:HD2	2.34	0.41
1:A:216:MET:CG	1:A:223:ALA:HA	2.47	0.41
1:A:310:ARG:HG2	1:A:314:GLU:CD	2.45	0.41
1:C:248:ARG:O	1:C:251:ASP:HB2	2.20	0.41
1:B:273:ARG:O	1:B:277:LEU:HD22	2.20	0.41
1:B:278:LYS:HG2	1:B:282:ARG:NH2	2.34	0.41
1:B:344:ARG:CG	1:B:344:ARG:NH1	2.80	0.41
1:A:203:ARG:HD2	3:A:1508:HOH:O	2.20	0.41
1:A:305:PRO:HG2	1:A:306:ILE:N	2.31	0.41
1:C:32:THR:O	1:C:32:THR:HG22	2.19	0.41
1:C:64:GLN:H	1:C:102:GLN:NE2	2.15	0.41
1:C:127:ASN:HB3	1:C:130:VAL:CG2	2.51	0.41
1:B:142:ARG:HA	1:C:120:THR:OG1	2.20	0.41
1:A:47:ARG:O	1:A:51:GLN:N	2.51	0.41
1:A:110:GLU:HG2	1:A:114:TYR:CE1	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:273:ARG:HD3	3:A:1187:HOH:O	2.20	0.41
1:C:129:THR:O	1:C:133:GLU:HG3	2.21	0.41
1:B:66:LEU:HD12	1:B:70:PHE:HA	2.01	0.41
1:B:255:VAL:HG22	1:B:261:PHE:CD2	2.56	0.41
1:C:304:ALA:N	1:C:305:PRO:HD2	2.35	0.41
1:A:201:LEU:HD22	1:A:202:SER:N	2.35	0.41
1:C:255:VAL:O	1:C:258:ASN:HB3	2.20	0.41
1:A:51:GLN:OE1	1:A:93:ASP:N	2.43	0.41
1:A:72:ARG:N	1:A:73:PRO:CD	2.83	0.41
1:C:25:VAL:HG11	1:C:50:LEU:HD13	2.02	0.41
1:C:170:ASP:OD1	1:C:170:ASP:N	2.53	0.41
1:C:293:LYS:HD2	1:C:293:LYS:HA	1.93	0.41
1:B:205:PRO:O	1:B:206:ARG:C	2.62	0.41
1:A:32:THR:CG2	1:A:69:HIS:HE1	2.33	0.41
1:A:33:GLY:HA2	1:A:79:ASN:CG	2.46	0.41
1:A:68:ASP:C	1:A:69:HIS:HD2	2.28	0.41
1:A:125:ARG:HG3	1:A:125:ARG:NH2	2.35	0.41
1:A:89:ALA:O	1:A:306:ILE:HB	2.20	0.41
1:A:175:MET:C	1:A:177:GLU:N	2.79	0.41
1:B:63:VAL:H	1:B:102:GLN:HE21	1.67	0.41
1:B:243:ASP:OD1	1:B:244:PRO:O	2.39	0.41
1:B:246:HIS:CE1	1:B:288:ASP:OD2	2.73	0.41
1:A:105:VAL:O	1:A:108:LEU:HG	2.21	0.41
1:A:230:ALA:CB	1:A:300:ASN:HD21	2.28	0.41
1:B:137:LYS:HE3	3:B:1218:HOH:O	2.19	0.41
1:B:210:LEU:HD21	1:B:224:ILE:HG13	2.03	0.41
1:A:36:HIS:O	1:A:39:HIS:N	2.51	0.41
1:C:58:VAL:HG23	1:C:99:CYS:HA	2.02	0.41
1:C:102:GLN:HG3	1:C:108:LEU:HD12	2.02	0.41
1:B:67:THR:HG22	1:C:117:ASN:HD21	1.85	0.40
1:C:150:TYR:CD2	1:C:150:TYR:C	2.99	0.40
1:B:61:ALA:HB1	1:B:64:GLN:HB3	2.04	0.40
1:B:186:PHE:CD1	1:B:186:PHE:C	2.99	0.40
1:A:36:HIS:CE1	1:A:39:HIS:NE2	2.89	0.40
1:A:122:SER:C	1:A:124:LEU:N	2.78	0.40
1:C:258:ASN:C	1:C:258:ASN:ND2	2.80	0.40
1:B:33:GLY:HA2	1:B:79:ASN:OD1	2.21	0.40
1:B:93:ASP:O	1:B:97:THR:CG2	2.69	0.40
1:B:255:VAL:HG13	1:B:261:PHE:CG	2.57	0.40
1:B:342:VAL:HG12	1:B:346:MET:HE2	2.03	0.40
1:A:277:LEU:HA	1:A:280:GLN:HE21	1.87	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:302:VAL:HG13	1:A:303:LEU:CD1	2.51	0.40
1:C:270:ASP:OD2	1:C:273:ARG:NH1	2.54	0.40
1:A:41:ALA:HB1	1:A:207:LEU:HD13	2.04	0.40
1:A:260:VAL:HA	1:A:295:LEU:HD22	2.02	0.40
1:C:62:ASP:OD2	1:C:103:SER:HB2	2.21	0.40
1:C:150:TYR:N	1:C:151:PRO:CD	2.84	0.40
1:B:47:ARG:O	1:B:51:GLN:HB2	2.20	0.40
1:B:254:ARG:NH1	1:B:256:GLU:CG	2.84	0.40
1:B:322:ARG:HG2	1:B:322:ARG:NH2	2.32	0.40
1:A:261:PHE:HZ	1:A:281:TYR:CG	2.40	0.40
1:A:264:LEU:HD22	3:A:1622:HOH:O	2.22	0.40
1:C:32:THR:HG23	1:C:75:GLN:NE2	2.36	0.40
1:C:43:SER:O	1:C:47:ARG:HD3	2.21	0.40

All (32) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:235:ARG:CA	3:C:2021:HOH:O[1_554]	0.49	1.71
3:C:1200:HOH:O	3:C:1789:HOH:O[4_546]	0.74	1.46
1:C:315:ARG:NH1	3:C:1771:HOH:O[4_556]	0.82	1.38
1:A:235:ARG:CZ	3:B:1589:HOH:O[1_554]	0.84	1.36
1:B:322:ARG:NH1	3:A:1468:HOH:O[1_546]	0.88	1.32
1:A:235:ARG:CB	3:C:2021:HOH:O[1_554]	1.14	1.06
1:A:235:ARG:NH2	3:B:1589:HOH:O[1_554]	1.32	0.88
1:A:235:ARG:NH1	3:B:1589:HOH:O[1_554]	1.34	0.86
1:C:315:ARG:NE	3:C:1613:HOH:O[4_556]	1.36	0.84
1:C:315:ARG:CD	3:C:1613:HOH:O[4_556]	1.59	0.61
1:A:235:ARG:CD	3:C:1529:HOH:O[1_554]	1.60	0.60
1:A:235:ARG:NE	3:C:1529:HOH:O[1_554]	1.62	0.58
1:A:235:ARG:N	3:C:2021:HOH:O[1_554]	1.64	0.56
3:A:1790:HOH:O	3:A:1956:HOH:O[2_655]	1.71	0.49
3:C:1118:HOH:O	3:C:1754:HOH:O[4_546]	1.80	0.40
1:B:201:LEU:N	1:A:341:GLN:NE2[2_655]	1.81	0.39
1:C:322:ARG:NH1	3:C:1537:HOH:O[4_546]	1.81	0.39
1:B:201:LEU:O	1:A:341:GLN:OE1[2_655]	1.86	0.34
1:A:235:ARG:C	3:C:2021:HOH:O[1_554]	1.93	0.27
1:B:235:ARG:NH1	1:C:245:GLY:O[4_535]	1.96	0.24
1:A:235:ARG:NE	3:B:1589:HOH:O[1_554]	1.97	0.23
1:B:177:GLU:OE2	1:A:192:PRO:CG[2_655]	1.98	0.22

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:322:ARG:CZ	3:A:1468:HOH:O[1_546]	1.99	0.21
1:C:315:ARG:CZ	3:C:1613:HOH:O[4_556]	2.00	0.20
1:A:235:ARG:CG	3:C:1529:HOH:O[1_554]	2.02	0.18
3:B:1248:HOH:O	3:A:1154:HOH:O[2_655]	2.05	0.15
3:C:1588:HOH:O	3:C:1691:HOH:O[1_545]	2.11	0.09
1:B:170:ASP:OD1	3:A:1031:HOH:O[2_655]	2.12	0.08
1:A:235:ARG:CG	3:C:2021:HOH:O[1_554]	2.12	0.08
1:C:315:ARG:CZ	3:C:1771:HOH:O[4_556]	2.12	0.08
3:B:1371:HOH:O	3:A:1175:HOH:O[2_655]	2.15	0.05
1:C:315:ARG:CA	3:C:1808:HOH:O[4_556]	2.17	0.03

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	329/351 (94%)	278 (84%)	37 (11%)	14 (4%)	2 0
1	B	329/351 (94%)	294 (89%)	28 (8%)	7 (2%)	5 2
1	C	329/351 (94%)	312 (95%)	13 (4%)	4 (1%)	11 7
All	All	987/1053 (94%)	884 (90%)	78 (8%)	25 (2%)	4 2

All (25) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	B	22	ARG
1	A	61	ALA
1	C	22	ARG
1	C	202	SER
1	C	205	PRO
1	B	61	ALA
1	A	37	LEU
1	B	43	SER
1	B	284	GLY

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Mol	Chain	Res	Type
1	A	31	PRO
1	A	205	PRO
1	A	242	THR
1	A	269	PRO
1	B	250	SER
1	A	73	PRO
1	A	74	GLU
1	A	206	ARG
1	A	208	PRO
1	C	283	ALA
1	B	249	ALA
1	A	238	MET
1	B	285	GLY
1	A	258	ASN
1	A	291	VAL
1	A	22	ARG

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	256/282 (91%)	224 (88%)	32 (12%)	3 2
1	B	264/282 (94%)	227 (86%)	37 (14%)	3 1
1	C	262/282 (93%)	227 (87%)	35 (13%)	3 1
All	All	782/846 (92%)	678 (87%)	104 (13%)	3 1

All (104) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	B	22	ARG
1	B	40	LEU
1	B	47	ARG
1	B	50	LEU
1	B	52	ASP
1	B	68	ASP

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Mol	Chain	Res	Type
1	B	75	GLN
1	B	81	LEU
1	B	85	LEU
1	B	92	LEU
1	B	95	GLN
1	B	97	THR
1	B	136	GLN
1	B	141	GLU
1	B	149	VAL
1	B	150	TYR
1	B	152	VAL
1	B	165	LEU
1	B	168	VAL
1	B	170	ASP
1	B	171	ASP
1	B	176	LEU
1	B	185	ARG
1	B	189	LEU
1	B	201	LEU
1	B	226	LEU
1	B	254	ARG
1	B	262	THR
1	B	282	ARG
1	B	290	LYS
1	B	296	ILE
1	B	297	ASP
1	B	302	VAL
1	B	318	ASP
1	B	322	ARG
1	B	344	ARG
1	B	347	ARG
1	A	35	LEU
1	A	40	LEU
1	A	52	ASP
1	A	56	LEU
1	A	63	VAL
1	A	74	GLU
1	A	81	LEU
1	A	85	LEU
1	A	124	LEU
1	A	125	ARG
1	A	126	GLN

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Mol	Chain	Res	Type
1	A	136	GLN
1	A	142	ARG
1	A	150	TYR
1	A	152	VAL
1	A	153	SER
1	A	165	LEU
1	A	172	GLN
1	A	200	GLN
1	A	201	LEU
1	A	203	ARG
1	A	215	LYS
1	A	224	ILE
1	A	232	GLU
1	A	246	HIS
1	A	268	ASP
1	A	282	ARG
1	A	286	LEU
1	A	290	LYS
1	A	300	ASN
1	A	306	ILE
1	A	348	LEU
1	C	30	ARG
1	C	46	ASN
1	C	80	VAL
1	C	81	LEU
1	C	85	LEU
1	C	92	LEU
1	C	97	THR
1	C	100	VAL
1	C	112	THR
1	C	113	VAL
1	C	150	TYR
1	C	152	VAL
1	C	165	LEU
1	C	168	VAL
1	C	180	ARG
1	C	193	VAL
1	C	200	GLN
1	C	201	LEU
1	C	202	SER
1	C	204	VAL
1	C	205	PRO

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Mol	Chain	Res	Type
1	C	210	LEU
1	C	231	ASP
1	C	238	MET
1	C	247	LEU
1	C	248	ARG
1	C	256	GLU
1	C	277	LEU
1	C	286	LEU
1	C	295	LEU
1	C	298	VAL
1	C	312	GLU
1	C	314	GLU
1	C	321	LEU
1	C	330	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (34) such sidechains are listed below:

Mol	Chain	Res	Type
1	B	36	HIS
1	B	46	ASN
1	B	51	GLN
1	B	64	GLN
1	B	69	HIS
1	B	102	GLN
1	B	117	ASN
1	B	136	GLN
1	B	178	GLN
1	B	200	GLN
1	B	300	ASN
1	B	337	GLN
1	A	36	HIS
1	A	46	ASN
1	A	69	HIS
1	A	154	GLN
1	A	172	GLN
1	A	200	GLN
1	A	258	ASN
1	A	280	GLN
1	A	300	ASN
1	A	341	GLN
1	C	46	ASN
1	C	51	GLN

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Mol	Chain	Res	Type
1	C	69	HIS
1	C	95	GLN
1	C	102	GLN
1	C	117	ASN
1	C	126	GLN
1	C	178	GLN
1	C	200	GLN
1	C	213	GLN
1	C	258	ASN
1	C	300	ASN

5.3.3 RNA (i)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

1 ligand is modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. 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 $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
2	TRP	C	3000	-	14,16,16	1.31	2 (14%)	13,22,22	0.82	0

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral

centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	TRP	C	3000	-	-	2/7/8/8	0/2/2/2

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	C	3000	TRP	OXT-C	-2.94	1.21	1.30
2	C	3000	TRP	CH2-CZ3	2.06	1.42	1.38

There are no bond angle outliers.

There are no chirality outliers.

All (2) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	C	3000	TRP	OXT-C-CA-CB
2	C	3000	TRP	O-C-CA-CB

There are no ring outliers.

1 monomer is involved in 4 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	C	3000	TRP	4	0

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å^2)	Q<0.9
1	A	331/351 (94%)	4.43	313 (94%)	0	0	37, 72, 96, 99	0
1	B	331/351 (94%)	3.44	286 (86%)	0	0	24, 46, 82, 88	1 (0%)
1	C	331/351 (94%)	3.20	272 (82%)	0	0	16, 31, 56, 65	0
All	All	993/1053 (94%)	3.69	871 (87%)	0	0	16, 46, 91, 99	1 (0%)

All (871) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	267	PHE	12.4
1	A	130	VAL	11.5
1	A	155	ALA	11.2
1	A	249	ALA	9.9
1	A	44	LEU	9.8
1	A	289	VAL	9.3
1	A	287	GLY	9.1
1	A	40	LEU	9.1
1	A	311	ALA	9.0
1	A	239	GLY	9.0
1	A	245	GLY	8.9
1	A	219	SER	8.9
1	C	244	PRO	8.8
1	C	271	PRO	8.7
1	A	63	VAL	8.7
1	B	338	THR	8.7
1	A	281	TYR	8.6
1	A	225	ALA	8.5
1	C	34	ALA	8.4
1	A	128	PRO	8.2
1	A	48	VAL	8.2
1	A	220	LEU	8.1
1	A	50	LEU	8.1

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Mol	Chain	Res	Type	RSRZ
1	A	215	LYS	8.1
1	C	299	LEU	7.9
1	A	307	ARG	7.8
1	A	204	VAL	7.7
1	A	205	PRO	7.7
1	A	286	LEU	7.7
1	A	92	LEU	7.6
1	C	253	GLY	7.6
1	B	266	ALA	7.6
1	A	224	ILE	7.5
1	B	173	LEU	7.5
1	A	252	PRO	7.5
1	C	321	LEU	7.5
1	A	263	PHE	7.5
1	A	264	LEU	7.4
1	C	293	LYS	7.4
1	A	88	LEU	7.3
1	A	91	GLY	7.3
1	C	165	LEU	7.2
1	A	89	ALA	7.1
1	B	321	LEU	7.1
1	A	69	HIS	7.0
1	A	254	ARG	7.0
1	A	226	LEU	6.9
1	A	232	GLU	6.9
1	A	97	THR	6.9
1	A	260	VAL	6.9
1	A	35	LEU	6.8
1	A	269	PRO	6.8
1	B	257	GLY	6.8
1	B	322	ARG	6.7
1	B	105	VAL	6.7
1	C	160	ALA	6.6
1	B	264	LEU	6.6
1	B	247	LEU	6.4
1	B	261	PHE	6.4
1	B	279	ASP	6.4
1	B	40	LEU	6.4
1	A	85	LEU	6.4
1	B	204	VAL	6.4
1	A	253	GLY	6.3
1	A	161	PHE	6.3

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Mol	Chain	Res	Type	RSRZ
1	A	234	ALA	6.3
1	B	152	VAL	6.3
1	A	243	ASP	6.3
1	B	182	ILE	6.3
1	B	245	GLY	6.3
1	B	89	ALA	6.2
1	A	256	GLU	6.2
1	A	255	VAL	6.2
1	C	255	VAL	6.2
1	A	222	ASN	6.1
1	A	107	GLU	6.1
1	A	134	ILE	6.1
1	C	286	LEU	6.1
1	C	177	GLU	6.1
1	B	224	ILE	6.1
1	A	36	HIS	6.0
1	B	54	ALA	6.0
1	A	238	MET	6.0
1	B	66	LEU	6.0
1	C	239	GLY	6.0
1	C	273	ARG	6.0
1	A	80	VAL	6.0
1	B	98	THR	6.0
1	B	97	THR	6.0
1	A	37	LEU	6.0
1	C	22	ARG	6.0
1	A	276	ALA	6.0
1	B	189	LEU	5.9
1	A	324	VAL	5.9
1	B	241	TYR	5.9
1	A	57	PHE	5.8
1	A	244	PRO	5.8
1	B	281	TYR	5.8
1	A	313	TYR	5.8
1	B	32	THR	5.8
1	B	263	PHE	5.8
1	B	42	GLY	5.7
1	A	271	PRO	5.7
1	A	207	LEU	5.7
1	A	39	HIS	5.7
1	A	272	ALA	5.7
1	A	310	ARG	5.7

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Mol	Chain	Res	Type	RSRZ
1	A	237	VAL	5.6
1	B	233	VAL	5.6
1	B	277	LEU	5.6
1	A	277	LEU	5.6
1	A	211	ASP	5.6
1	B	150	TYR	5.6
1	A	257	GLY	5.6
1	B	320	VAL	5.6
1	A	261	PHE	5.6
1	B	280	GLN	5.6
1	A	262	THR	5.6
1	A	125	ARG	5.5
1	C	139	TYR	5.5
1	C	281	TYR	5.5
1	C	202	SER	5.5
1	C	175	MET	5.5
1	B	253	GLY	5.5
1	C	143	VAL	5.5
1	A	210	LEU	5.5
1	A	247	LEU	5.5
1	A	230	ALA	5.5
1	B	138	GLY	5.5
1	A	42	GLY	5.5
1	A	115	PHE	5.5
1	B	246	HIS	5.4
1	A	233	VAL	5.4
1	C	324	VAL	5.4
1	A	82	ALA	5.4
1	C	28	GLY	5.4
1	A	67	THR	5.4
1	A	98	THR	5.4
1	B	44	LEU	5.4
1	A	148	PHE	5.4
1	A	295	LEU	5.4
1	A	296	ILE	5.4
1	C	135	ALA	5.3
1	C	80	VAL	5.3
1	B	156	ALA	5.3
1	C	280	GLN	5.3
1	A	135	ALA	5.3
1	A	123	HIS	5.3
1	B	118	LEU	5.3

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Mol	Chain	Res	Type	RSRZ
1	C	105	VAL	5.3
1	B	158	ILE	5.2
1	A	285	GLY	5.2
1	A	290	LYS	5.2
1	A	301	GLY	5.2
1	B	262	THR	5.2
1	A	268	ASP	5.2
1	A	279	ASP	5.2
1	A	320	VAL	5.2
1	A	34	ALA	5.2
1	C	88	LEU	5.2
1	B	298	VAL	5.2
1	C	51	GLN	5.2
1	A	221	GLY	5.2
1	B	220	LEU	5.1
1	A	176	LEU	5.1
1	A	54	ALA	5.1
1	A	145	ALA	5.1
1	A	241	TYR	5.1
1	A	294	HIS	5.1
1	A	283	ALA	5.1
1	A	94	PRO	5.1
1	A	227	GLY	5.1
1	C	300	ASN	5.1
1	B	286	LEU	5.1
1	B	295	LEU	5.1
1	A	242	THR	5.1
1	A	303	LEU	5.0
1	A	250	SER	5.0
1	B	306	ILE	5.0
1	B	267	PHE	5.0
1	A	240	MET	5.0
1	A	160	ALA	5.0
1	B	203	ARG	5.0
1	B	302	VAL	5.0
1	A	138	GLY	5.0
1	A	21	ALA	5.0
1	B	56	LEU	4.9
1	B	201	LEU	4.9
1	C	277	LEU	4.9
1	C	97	THR	4.9
1	A	86	ASP	4.9

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Mol	Chain	Res	Type	RSRZ
1	A	273	ARG	4.9
1	A	81	LEU	4.9
1	B	90	ALA	4.9
1	B	236	LYS	4.9
1	B	278	LYS	4.9
1	C	132	ALA	4.9
1	C	269	PRO	4.9
1	C	272	ALA	4.9
1	C	308	THR	4.9
1	A	90	ALA	4.9
1	C	21	ALA	4.8
1	A	298	VAL	4.8
1	A	202	SER	4.8
1	A	299	LEU	4.8
1	B	41	ALA	4.8
1	A	199	ALA	4.8
1	B	129	THR	4.8
1	B	300	ASN	4.8
1	B	38	GLY	4.8
1	A	156	ALA	4.8
1	A	195	ALA	4.8
1	A	58	VAL	4.8
1	A	175	MET	4.8
1	A	333	GLU	4.8
1	A	293	LYS	4.8
1	A	26	LEU	4.7
1	C	108	LEU	4.7
1	B	276	ALA	4.7
1	B	296	ILE	4.7
1	A	55	GLU	4.7
1	B	209	GLY	4.7
1	B	210	LEU	4.7
1	A	165	LEU	4.7
1	A	201	LEU	4.7
1	A	197	PRO	4.7
1	B	329	ALA	4.7
1	B	219	SER	4.7
1	C	315	ARG	4.7
1	C	138	GLY	4.7
1	B	50	LEU	4.7
1	A	214	ALA	4.7
1	C	230	ALA	4.7

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Mol	Chain	Res	Type	RSRZ
1	A	162	GLY	4.7
1	C	171	ASP	4.7
1	B	85	LEU	4.7
1	A	66	LEU	4.7
1	B	51	GLN	4.6
1	A	212	GLY	4.6
1	B	325	THR	4.6
1	C	307	ARG	4.6
1	A	173	LEU	4.6
1	A	182	ILE	4.6
1	A	64	GLN	4.6
1	B	27	THR	4.6
1	C	49	ARG	4.6
1	A	216	MET	4.6
1	A	306	ILE	4.6
1	B	230	ALA	4.6
1	C	261	PHE	4.6
1	B	239	GLY	4.5
1	B	92	LEU	4.5
1	A	126	GLN	4.5
1	B	265	ASP	4.5
1	A	171	ASP	4.5
1	B	255	VAL	4.5
1	C	101	VAL	4.5
1	B	198	GLN	4.5
1	A	95	GLN	4.5
1	B	37	LEU	4.5
1	A	108	LEU	4.5
1	A	266	ALA	4.5
1	B	254	ARG	4.5
1	C	323	PHE	4.5
1	A	99	CYS	4.5
1	C	270	ASP	4.5
1	B	175	MET	4.5
1	A	169	GLY	4.5
1	B	83	VAL	4.5
1	B	289	VAL	4.5
1	B	134	ILE	4.5
1	C	306	ILE	4.5
1	A	319	ALA	4.5
1	C	203	ARG	4.5
1	B	237	VAL	4.5

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Mol	Chain	Res	Type	RSRZ
1	B	242	THR	4.5
1	A	121	VAL	4.4
1	B	258	ASN	4.4
1	A	208	PRO	4.4
1	B	234	ALA	4.4
1	C	241	TYR	4.4
1	B	342	VAL	4.4
1	A	166	VAL	4.4
1	C	72	ARG	4.4
1	C	59	LEU	4.4
1	A	177	GLU	4.4
1	A	84	ALA	4.4
1	A	270	ASP	4.4
1	C	25	VAL	4.4
1	A	93	ASP	4.4
1	C	335	ALA	4.4
1	C	150	TYR	4.3
1	C	46	ASN	4.3
1	A	113	VAL	4.3
1	A	274	VAL	4.3
1	A	194	LEU	4.3
1	B	87	TYR	4.3
1	B	125	ARG	4.3
1	C	336	ALA	4.3
1	B	256	GLU	4.3
1	C	289	VAL	4.3
1	B	215	LYS	4.3
1	B	303	LEU	4.3
1	A	315	ARG	4.3
1	C	345	ALA	4.3
1	A	158	ILE	4.3
1	A	129	THR	4.3
1	B	136	GLN	4.3
1	A	71	ASP	4.2
1	A	291	VAL	4.2
1	C	48	VAL	4.2
1	A	132	ALA	4.2
1	C	142	ARG	4.2
1	A	68	ASP	4.2
1	B	274	VAL	4.2
1	C	298	VAL	4.2
1	C	56	LEU	4.2

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Mol	Chain	Res	Type	RSRZ
1	C	276	ALA	4.2
1	A	248	ARG	4.2
1	A	316	ASP	4.2
1	B	26	LEU	4.2
1	B	88	LEU	4.2
1	C	303	LEU	4.2
1	C	238	MET	4.2
1	B	132	ALA	4.2
1	B	341	GLN	4.2
1	C	283	ALA	4.2
1	C	134	ILE	4.2
1	A	278	LYS	4.2
1	B	115	PHE	4.2
1	A	305	PRO	4.2
1	B	238	MET	4.2
1	C	184	ARG	4.1
1	A	131	LYS	4.1
1	B	349	PHE	4.1
1	A	51	GLN	4.1
1	B	76	VAL	4.1
1	B	176	LEU	4.1
1	A	309	ARG	4.1
1	A	246	HIS	4.1
1	C	174	PRO	4.1
1	C	259	PRO	4.1
1	A	339	LEU	4.1
1	A	288	ASP	4.1
1	C	103	SER	4.1
1	C	192	PRO	4.1
1	A	200	GLN	4.1
1	C	234	ALA	4.1
1	A	217	SER	4.1
1	A	275	GLN	4.1
1	B	315	ARG	4.0
1	A	27	THR	4.0
1	A	164	THR	4.0
1	C	200	GLN	4.0
1	C	254	ARG	4.0
1	C	285	GLY	4.0
1	B	130	VAL	4.0
1	C	84	ALA	4.0
1	B	67	THR	4.0

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Mol	Chain	Res	Type	RSRZ
1	A	179	THR	4.0
1	C	98	THR	4.0
1	A	23	PRO	4.0
1	A	151	PRO	4.0
1	A	110	GLU	4.0
1	B	260	VAL	4.0
1	C	243	ASP	4.0
1	C	274	VAL	4.0
1	B	214	ALA	4.0
1	A	330	ARG	4.0
1	B	252	PRO	4.0
1	B	58	VAL	3.9
1	B	195	ALA	3.9
1	A	218	LYS	3.9
1	C	328	THR	3.9
1	C	209	GLY	3.9
1	B	309	ARG	3.9
1	A	142	ARG	3.9
1	B	21	ALA	3.9
1	B	293	LYS	3.9
1	A	41	ALA	3.9
1	A	61	ALA	3.9
1	C	129	THR	3.9
1	C	314	GLU	3.9
1	B	244	PRO	3.9
1	C	197	PRO	3.9
1	C	172	GLN	3.9
1	C	309	ARG	3.9
1	A	139	TYR	3.9
1	C	251	ASP	3.9
1	C	268	ASP	3.9
1	B	101	VAL	3.9
1	C	237	VAL	3.9
1	C	249	ALA	3.9
1	C	117	ASN	3.9
1	A	114	TYR	3.9
1	C	313	TYR	3.9
1	B	96	LYS	3.8
1	A	43	SER	3.8
1	A	308	THR	3.8
1	A	282	ARG	3.8
1	B	212	GLY	3.8

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Mol	Chain	Res	Type	RSRZ
1	A	318	ASP	3.8
1	A	76	VAL	3.8
1	C	350	GLY	3.8
1	A	258	ASN	3.8
1	C	262	THR	3.8
1	B	340	GLY	3.8
1	A	140	GLY	3.8
1	C	140	GLY	3.8
1	A	292	LYS	3.8
1	B	259	PRO	3.8
1	C	252	PRO	3.8
1	A	180	ARG	3.7
1	C	318	ASP	3.7
1	A	133	GLU	3.7
1	B	43	SER	3.7
1	B	250	SER	3.7
1	B	124	LEU	3.7
1	C	191	ALA	3.7
1	A	143	VAL	3.7
1	A	302	VAL	3.7
1	A	53	GLU	3.7
1	A	153	SER	3.7
1	C	229	SER	3.7
1	A	284	GLY	3.7
1	C	162	GLY	3.7
1	B	31	PRO	3.7
1	B	94	PRO	3.7
1	A	259	PRO	3.7
1	C	204	VAL	3.7
1	C	334	VAL	3.7
1	C	95	GLN	3.7
1	C	215	LYS	3.7
1	A	321	LEU	3.7
1	B	350	GLY	3.7
1	C	78	GLU	3.7
1	C	159	ALA	3.7
1	C	319	ALA	3.7
1	A	149	VAL	3.6
1	A	65	ALA	3.6
1	C	199	ALA	3.6
1	B	323	PHE	3.6
1	C	57	PHE	3.6

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Mol	Chain	Res	Type	RSRZ
1	A	193	VAL	3.6
1	A	185	ARG	3.6
1	B	73	PRO	3.6
1	C	147	PHE	3.6
1	B	284	GLY	3.6
1	C	257	GLY	3.6
1	B	45	GLN	3.6
1	A	186	PHE	3.6
1	C	186	PHE	3.6
1	A	119	VAL	3.6
1	C	113	VAL	3.6
1	B	318	ASP	3.5
1	C	35	LEU	3.5
1	C	294	HIS	3.5
1	B	141	GLU	3.5
1	A	127	ASN	3.5
1	C	344	ARG	3.5
1	C	287	GLY	3.5
1	B	304	ALA	3.5
1	B	271	PRO	3.5
1	A	103	SER	3.5
1	A	25	VAL	3.5
1	C	123	HIS	3.5
1	B	290	LYS	3.5
1	B	205	PRO	3.5
1	B	272	ALA	3.5
1	A	251	ASP	3.5
1	B	165	LEU	3.5
1	A	124	LEU	3.5
1	C	210	LEU	3.5
1	B	248	ARG	3.5
1	A	159	ALA	3.4
1	A	150	TYR	3.4
1	B	161	PHE	3.4
1	A	312	GLU	3.4
1	B	347	ARG	3.4
1	A	189	LEU	3.4
1	A	46	ASN	3.4
1	A	300	ASN	3.4
1	B	199	ALA	3.4
1	A	73	PRO	3.4
1	A	109	ALA	3.4

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Mol	Chain	Res	Type	RSRZ
1	A	317	PRO	3.4
1	B	172	GLN	3.4
1	B	275	GLN	3.4
1	B	39	HIS	3.4
1	B	57	PHE	3.4
1	A	322	ARG	3.4
1	C	332	ARG	3.4
1	C	66	LEU	3.4
1	C	338	THR	3.4
1	A	104	ALA	3.4
1	A	174	PRO	3.4
1	C	62	ASP	3.4
1	B	100	VAL	3.4
1	B	301	GLY	3.4
1	C	291	VAL	3.4
1	C	248	ARG	3.4
1	A	172	GLN	3.4
1	B	288	ASP	3.4
1	A	181	GLU	3.4
1	B	235	ARG	3.4
1	A	347	ARG	3.4
1	C	302	VAL	3.3
1	C	44	LEU	3.3
1	C	207	LEU	3.3
1	C	224	ILE	3.3
1	B	137	LYS	3.3
1	A	231	ASP	3.3
1	B	33	GLY	3.3
1	C	130	VAL	3.3
1	B	337	GLN	3.3
1	B	294	HIS	3.3
1	B	299	LEU	3.3
1	C	37	LEU	3.3
1	A	78	GLU	3.3
1	C	54	ALA	3.3
1	C	90	ALA	3.3
1	C	211	ASP	3.3
1	B	147	PHE	3.3
1	C	320	VAL	3.3
1	B	151	PRO	3.3
1	C	182	ILE	3.3
1	C	170	ASP	3.3

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Mol	Chain	Res	Type	RSRZ
1	B	70	PHE	3.3
1	B	168	VAL	3.3
1	B	186	PHE	3.3
1	A	147	PHE	3.3
1	C	267	PHE	3.3
1	C	26	LEU	3.3
1	C	158	ILE	3.2
1	A	45	GLN	3.2
1	A	117	ASN	3.2
1	B	218	LYS	3.2
1	A	236	LYS	3.2
1	A	100	VAL	3.2
1	C	351	HIS	3.2
1	B	74	GLU	3.2
1	B	206	ARG	3.2
1	B	282	ARG	3.2
1	C	242	THR	3.2
1	A	56	LEU	3.2
1	A	116	LEU	3.2
1	C	92	LEU	3.2
1	C	173	LEU	3.2
1	B	167	PRO	3.2
1	B	311	ALA	3.2
1	B	319	ALA	3.2
1	C	337	GLN	3.2
1	C	282	ARG	3.2
1	B	192	PRO	3.2
1	A	228	ASP	3.2
1	C	40	LEU	3.2
1	B	75	GLN	3.2
1	B	216	MET	3.2
1	B	48	VAL	3.2
1	C	23	PRO	3.2
1	C	264	LEU	3.2
1	C	58	VAL	3.1
1	C	260	VAL	3.1
1	C	341	GLN	3.1
1	B	49	ARG	3.1
1	B	240	MET	3.1
1	B	273	ARG	3.1
1	A	96	LYS	3.1
1	C	169	GLY	3.1

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Mol	Chain	Res	Type	RSRZ
1	A	213	GLN	3.1
1	A	106	PRO	3.1
1	B	310	ARG	3.1
1	A	79	ASN	3.1
1	B	328	THR	3.1
1	A	29	ASP	3.1
1	A	112	THR	3.1
1	C	27	THR	3.1
1	C	112	THR	3.1
1	A	74	GLU	3.1
1	C	326	GLU	3.1
1	A	59	LEU	3.1
1	A	33	GLY	3.1
1	B	222	ASN	3.1
1	A	190	TYR	3.1
1	B	283	ALA	3.1
1	A	338	THR	3.1
1	B	196	GLU	3.1
1	B	63	VAL	3.1
1	B	183	VAL	3.1
1	A	105	VAL	3.1
1	A	152	VAL	3.1
1	C	305	PRO	3.0
1	A	60	LEU	3.0
1	C	124	LEU	3.0
1	C	176	LEU	3.0
1	A	235	ARG	3.0
1	C	288	ASP	3.0
1	A	229	SER	3.0
1	A	101	VAL	3.0
1	C	83	VAL	3.0
1	B	227	GLY	3.0
1	C	128	PRO	3.0
1	A	323	PHE	3.0
1	C	163	ALA	3.0
1	C	223	ALA	3.0
1	C	30	ARG	3.0
1	C	67	THR	3.0
1	B	166	VAL	3.0
1	B	285	GLY	3.0
1	B	324	VAL	3.0
1	A	83	VAL	3.0

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Mol	Chain	Res	Type	RSRZ
1	A	163	ALA	3.0
1	B	330	ARG	3.0
1	B	287	GLY	3.0
1	B	126	GLN	3.0
1	C	205	PRO	3.0
1	A	334	VAL	3.0
1	C	119	VAL	3.0
1	B	59	LEU	3.0
1	C	347	ARG	3.0
1	B	61	ALA	3.0
1	B	78	GLU	3.0
1	C	141	GLU	3.0
1	B	157	ASP	2.9
1	B	23	PRO	2.9
1	C	94	PRO	2.9
1	C	63	VAL	2.9
1	B	348	LEU	2.9
1	C	349	PHE	2.9
1	B	231	ASP	2.9
1	A	87	TYR	2.9
1	C	32	THR	2.9
1	C	340	GLY	2.9
1	C	50	LEU	2.9
1	B	65	ALA	2.9
1	B	93	ASP	2.9
1	B	249	ALA	2.9
1	A	265	ASP	2.9
1	A	335	ALA	2.9
1	C	250	SER	2.9
1	C	87	TYR	2.9
1	C	226	LEU	2.9
1	B	29	ASP	2.9
1	B	211	ASP	2.9
1	B	188	ALA	2.9
1	C	61	ALA	2.9
1	A	38	GLY	2.9
1	C	333	GLU	2.9
1	C	208	PRO	2.8
1	B	143	VAL	2.8
1	A	168	VAL	2.8
1	A	342	VAL	2.8
1	C	118	LEU	2.8

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Mol	Chain	Res	Type	RSRZ
1	B	270	ASP	2.8
1	B	153	SER	2.8
1	B	179	THR	2.8
1	C	81	LEU	2.8
1	B	53	GLU	2.8
1	B	28	GLY	2.8
1	A	209	GLY	2.8
1	B	35	LEU	2.8
1	C	152	VAL	2.8
1	C	195	ALA	2.8
1	B	232	GLU	2.8
1	A	314	GLU	2.8
1	B	139	TYR	2.8
1	B	313	TYR	2.8
1	A	154	GLN	2.8
1	A	203	ARG	2.8
1	C	193	VAL	2.8
1	A	223	ALA	2.7
1	C	236	LYS	2.7
1	A	28	GLY	2.7
1	C	284	GLY	2.7
1	B	243	ASP	2.7
1	A	170	ASP	2.7
1	A	137	LYS	2.7
1	A	183	VAL	2.7
1	B	345	ALA	2.7
1	A	70	PHE	2.7
1	B	221	GLY	2.7
1	C	331	GLY	2.7
1	A	30	ARG	2.7
1	C	190	TYR	2.7
1	B	60	LEU	2.7
1	B	223	ALA	2.7
1	C	145	ALA	2.7
1	C	311	ALA	2.7
1	B	200	GLN	2.7
1	B	72	ARG	2.7
1	A	47	ARG	2.7
1	C	31	PRO	2.7
1	B	114	TYR	2.7
1	C	60	LEU	2.7
1	C	342	VAL	2.7

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Mol	Chain	Res	Type	RSRZ
1	C	221	GLY	2.7
1	A	280	GLN	2.7
1	B	171	ASP	2.7
1	B	197	PRO	2.6
1	C	290	LYS	2.6
1	C	111	LEU	2.6
1	B	47	ARG	2.6
1	B	77	ARG	2.6
1	B	160	ALA	2.6
1	B	184	ARG	2.6
1	A	343	ARG	2.6
1	C	188	ALA	2.6
1	B	181	GLU	2.6
1	B	228	ASP	2.6
1	B	269	PRO	2.6
1	A	144	PRO	2.6
1	C	151	PRO	2.6
1	C	153	SER	2.6
1	C	201	LEU	2.6
1	C	295	LEU	2.6
1	A	49	ARG	2.6
1	A	184	ARG	2.6
1	B	140	GLY	2.6
1	B	334	VAL	2.6
1	C	89	ALA	2.6
1	C	104	ALA	2.6
1	A	141	GLU	2.6
1	B	297	ASP	2.6
1	A	120	THR	2.6
1	A	349	PHE	2.6
1	C	278	LYS	2.6
1	A	122	SER	2.6
1	A	136	GLN	2.6
1	C	114	TYR	2.6
1	C	183	VAL	2.6
1	C	96	LYS	2.6
1	A	32	THR	2.6
1	A	325	THR	2.6
1	B	317	PRO	2.6
1	C	343	ARG	2.6
1	B	229	SER	2.6
1	B	55	GLU	2.6

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Mol	Chain	Res	Type	RSRZ
1	C	146	GLY	2.5
1	B	62	ASP	2.5
1	B	121	VAL	2.5
1	C	100	VAL	2.5
1	C	233	VAL	2.5
1	C	297	ASP	2.5
1	C	263	PHE	2.5
1	B	144	PRO	2.5
1	C	213	GLN	2.5
1	B	162	GLY	2.5
1	A	52	ASP	2.5
1	A	304	ALA	2.5
1	B	291	VAL	2.5
1	B	112	THR	2.5
1	B	307	ARG	2.5
1	B	52	ASP	2.5
1	B	316	ASP	2.5
1	A	62	ASP	2.5
1	B	225	ALA	2.5
1	A	206	ARG	2.5
1	A	198	GLN	2.5
1	B	177	GLU	2.5
1	C	327	GLY	2.5
1	B	339	LEU	2.5
1	B	30	ARG	2.5
1	C	77	ARG	2.5
1	A	345	ALA	2.5
1	C	41	ALA	2.5
1	A	341	GLN	2.5
1	C	168	VAL	2.5
1	A	331	GLY	2.4
1	C	185	ARG	2.4
1	C	220	LEU	2.4
1	C	247	LEU	2.4
1	C	279	ASP	2.4
1	B	191	ALA	2.4
1	B	127	ASN	2.4
1	C	246	HIS	2.4
1	C	227	GLY	2.4
1	A	118	LEU	2.4
1	C	116	LEU	2.4
1	A	187	ASN	2.4

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Mol	Chain	Res	Type	RSRZ
1	A	328	THR	2.4
1	B	292	LYS	2.4
1	B	174	PRO	2.4
1	B	190	TYR	2.4
1	B	332	ARG	2.4
1	A	72	ARG	2.4
1	C	115	PHE	2.4
1	C	206	ARG	2.4
1	C	346	MET	2.4
1	C	265	ASP	2.4
1	C	329	ALA	2.4
1	B	193	VAL	2.4
1	C	219	SER	2.4
1	B	194	LEU	2.3
1	B	24	ARG	2.3
1	C	76	VAL	2.3
1	C	144	PRO	2.3
1	B	95	GLN	2.3
1	C	126	GLN	2.3
1	B	131	LYS	2.3
1	B	207	LEU	2.3
1	C	189	LEU	2.3
1	B	145	ALA	2.3
1	B	308	THR	2.3
1	C	109	ALA	2.3
1	C	304	ALA	2.3
1	C	240	MET	2.3
1	B	169	GLY	2.3
1	A	196	GLU	2.3
1	C	70	PHE	2.3
1	C	296	ILE	2.3
1	B	69	HIS	2.3
1	B	84	ALA	2.3
1	C	156	ALA	2.3
1	C	53	GLU	2.3
1	C	181	GLU	2.3
1	C	222	ASN	2.3
1	C	310	ARG	2.3
1	C	82	ALA	2.3
1	C	225	ALA	2.3
1	B	122	SER	2.3
1	B	305	PRO	2.2

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Mol	Chain	Res	Type	RSRZ
1	B	149	VAL	2.2
1	C	39	HIS	2.2
1	A	329	ALA	2.2
1	A	336	ALA	2.2
1	B	106	PRO	2.2
1	B	68	ASP	2.2
1	B	80	VAL	2.2
1	B	148	PHE	2.2
1	C	196	GLU	2.2
1	C	65	ALA	2.2
1	C	155	ALA	2.2
1	C	131	LYS	2.2
1	B	123	HIS	2.2
1	C	256	GLU	2.2
1	C	179	THR	2.2
1	B	34	ALA	2.2
1	C	218	LYS	2.2
1	A	327	GLY	2.2
1	B	99	CYS	2.2
1	B	117	ASN	2.2
1	C	166	VAL	2.2
1	B	133	GLU	2.1
1	C	85	LEU	2.1
1	C	43	SER	2.1
1	B	343	ARG	2.1
1	B	128	PRO	2.1
1	A	192	PRO	2.1
1	B	351	HIS	2.1
1	C	91	GLY	2.1
1	B	79	ASN	2.1
1	C	235	ARG	2.1
1	B	213	GLN	2.1
1	A	337	GLN	2.1
1	B	185	ARG	2.1
1	C	325	THR	2.1
1	B	208	PRO	2.1
1	C	106	PRO	2.1
1	B	25	VAL	2.1
1	B	22	ARG	2.1
1	C	330	ARG	2.1
1	C	231	ASP	2.1
1	B	108	LEU	2.1

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Mol	Chain	Res	Type	RSRZ
1	A	348	LEU	2.1
1	C	161	PHE	2.1
1	B	159	ALA	2.0
1	A	31	PRO	2.0
1	A	77	ARG	2.0
1	C	180	ARG	2.0
1	C	322	ARG	2.0
1	A	351	HIS	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)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
2	TRP	C	3000	15/15	0.43	0.29	52,54,57,57	0

6.5 Other polymers (i)

There are no such residues in this entry.