Full wwPDB X-ray Structure Validation Report ⓘ

Oct 28, 2024 – 11:05 am GMT

PDB ID	:	2WXZ
Title	:	Crystal structure of rat angiotensinogen in C2 space group
Authors	:	Zhou, A.; Wei, Z.; Carrell, R.W.; Read, R.J.
Deposited on	:	2009-11-11
Resolution	:	2.80 Å(reported)

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

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

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

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

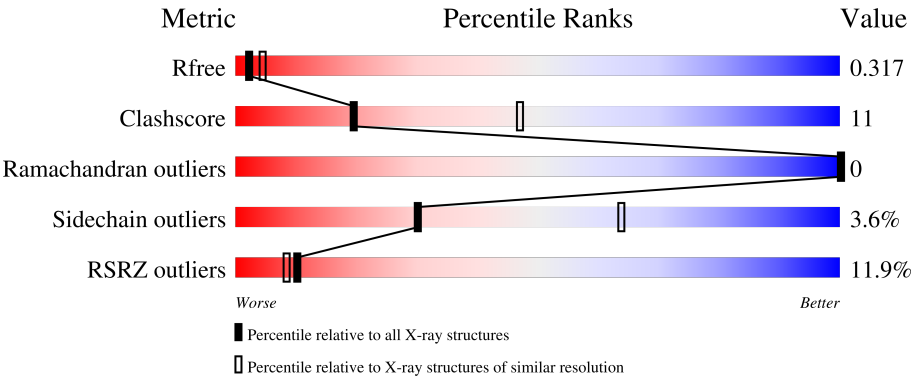
MolProbity	:	4.02b-467
Xtriage (Phenix)	:	1.13
EDS	:	3.0
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
CCP4	:	9.0.003 (Gargrove)
Density-Fitness	:	1.0.11
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation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

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 2.80 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	3657 (2.80-2.80)
Clashscore	180529	4123 (2.80-2.80)
Ramachandran outliers	177936	4071 (2.80-2.80)
Sidechain outliers	177891	4073 (2.80-2.80)
RSRZ outliers	164620	3659 (2.80-2.80)

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	453	10% 70% 22% · 7%
2	C	453	12% 70% 21% 9%

2 Entry composition (i)

There are 2 unique types of molecules in this entry. The entry contains 6473 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 ANGIOTENSINOGEN.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	422	Total	C	N	O	S	0	1	0
			3266	2097	551	608	10			

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	80	VAL	MET	conflict	UNP P01015

- Molecule 2 is a protein called ANGIOTENSINOGEN.

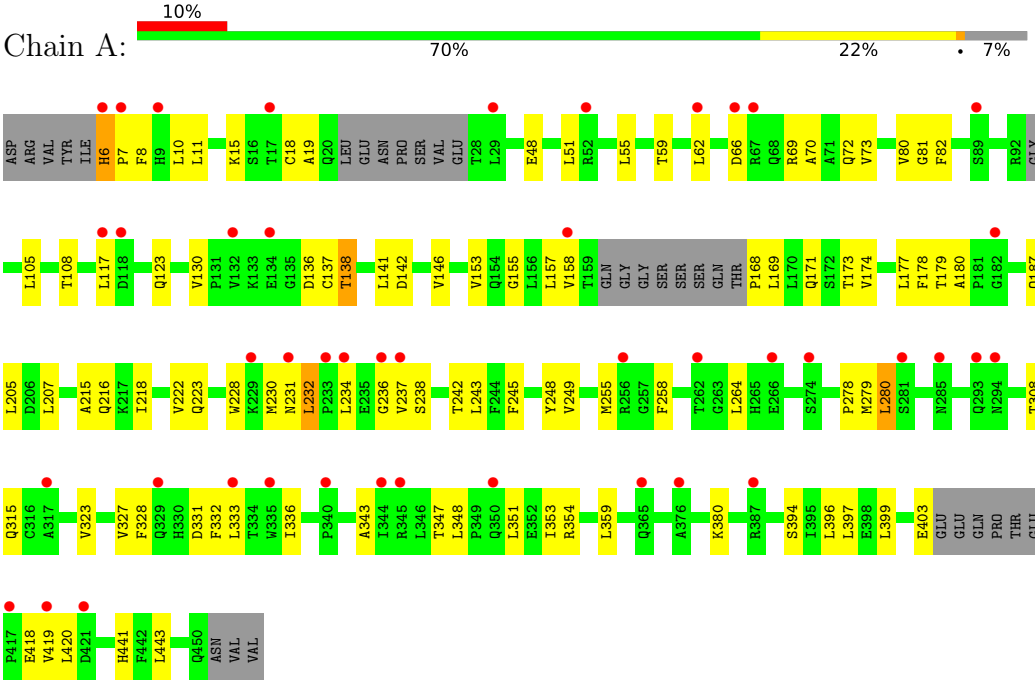
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	C	413	Total	C	N	O	S	0	2	0
			3207	2062	540	594	11			

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.

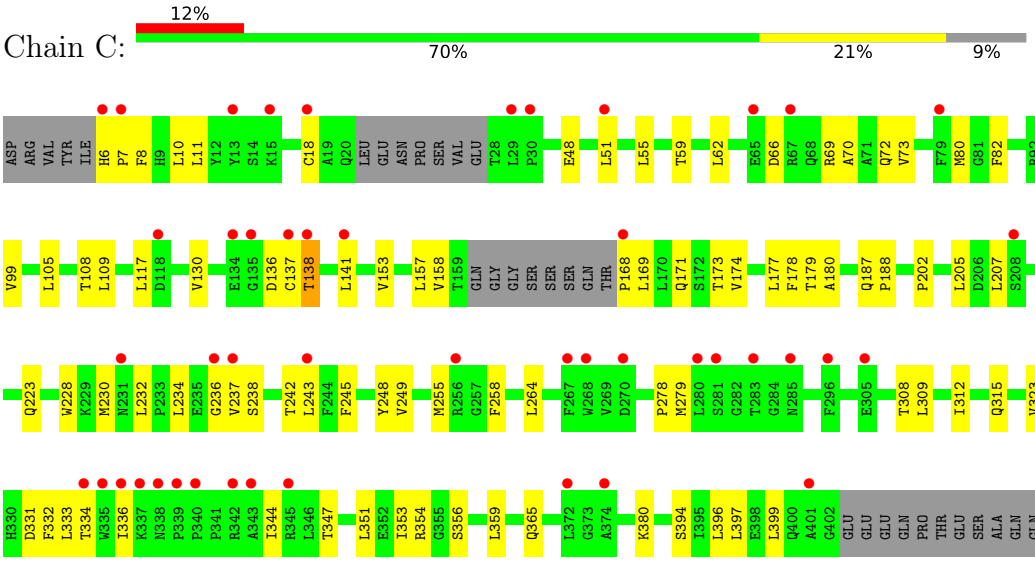
• Molecule 1: ANGIOTENSINOGEN

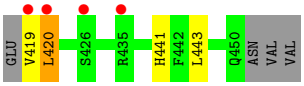
Chain A:



• Molecule 2: ANGIOTENSINOGEN

Chain C:




GLU
V419
L420
S426
R435
H441
F442
L443
Q450
ASN
VAL
VAL

4 Data and refinement statistics (i)

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants a, b, c, α, β, γ	130.50Å 49.54Å 150.28Å 90.00° 90.84° 90.00°	Depositor
Resolution (Å)	50.00 – 2.80 50.00 – 2.80	Depositor EDS
% Data completeness (in resolution range)	98.2 (50.00-2.80) 98.1 (50.00-2.80)	Depositor EDS
R_{merge}	0.22	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.52 (at 2.81Å)	Xtriage
Refinement program	REFMAC 5.5.0099	Depositor
R, R_{free}	0.282 , 0.310 0.284 , 0.317	Depositor DCC
R_{free} test set	1212 reflections (5.11%)	wwPDB-VP
Wilson B-factor (Å^2)	56.2	Xtriage
Anisotropy	0.055	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.34 , 49.2	EDS
L-test for twinning[2]	$< \|L\| > = 0.45$, $< L^2 > = 0.27$	Xtriage
Estimated twinning fraction	0.035 for -h,-k,l	Xtriage
F_o,F_c correlation	0.88	EDS
Total number of atoms	6473	wwPDB-VP
Average B, all atoms (Å^2)	61.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 6.00% 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	0.33	0/3341	0.51	0/4547
2	C	0.31	0/3283	0.50	0/4466
All	All	0.32	0/6624	0.50	0/9013

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts

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	3266	0	3292	78	0
2	C	3207	0	3241	72	0
All	All	6473	0	6533	148	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 11.

All (148) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:234:LEU:HD13	2:C:237:VAL:HG21	1.36	1.08
1:A:416:SER:O	1:A:419:VAL:HG23	1.54	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:215:ALA:HB2	1:A:234:LEU:HD22	1.39	1.04
2:C:99:VAL:HG21	2:C:353:ILE:HG21	1.46	0.94
1:A:99:VAL:HG21	1:A:353:ILE:HG21	1.47	0.94
2:C:99:VAL:HG21	2:C:353:ILE:CG2	1.99	0.92
1:A:99:VAL:CG2	1:A:353:ILE:HG21	2.00	0.91
1:A:99:VAL:HG21	1:A:353:ILE:CG2	2.01	0.91
2:C:99:VAL:CG2	2:C:353:ILE:HG21	2.00	0.89
1:A:215:ALA:HB2	1:A:234:LEU:CD2	2.09	0.82
2:C:234:LEU:HD13	2:C:237:VAL:CG2	2.09	0.81
1:A:130:VAL:HG21	1:A:141:LEU:HD21	1.65	0.79
1:A:215:ALA:CB	1:A:234:LEU:HD22	2.13	0.77
1:A:351:LEU:HD12	1:A:399:LEU:HD13	1.66	0.77
2:C:351:LEU:HD12	2:C:399:LEU:HD13	1.67	0.77
2:C:130:VAL:HG21	2:C:141:LEU:HD21	1.68	0.76
1:A:234:LEU:HD23	1:A:237:VAL:HG21	1.68	0.75
2:C:420:LEU:HD22	2:C:420:LEU:O	1.87	0.74
1:A:416:SER:O	1:A:419:VAL:CG2	2.34	0.74
2:C:234:LEU:CD1	2:C:237:VAL:HG21	2.16	0.73
1:A:123:GLN:HE21	2:C:334:THR:HG21	1.56	0.70
2:C:157:LEU:HD22	2:C:441:HIS:CG	2.29	0.68
1:A:157:LEU:HD22	1:A:441:HIS:CG	2.29	0.67
2:C:99:VAL:CG2	2:C:353:ILE:CG2	2.68	0.64
1:A:99:VAL:CG2	1:A:353:ILE:CG2	2.68	0.63
1:A:123:GLN:NE2	2:C:334:THR:HG21	2.14	0.62
2:C:205:LEU:HD21	2:C:207:LEU:HD21	1.82	0.62
2:C:99:VAL:HG21	2:C:353:ILE:HG22	1.81	0.61
1:A:205:LEU:HD21	1:A:207:LEU:HD21	1.82	0.61
2:C:6:HIS:N	2:C:7:PRO:CD	2.64	0.61
2:C:351:LEU:CD1	2:C:399:LEU:HD13	2.31	0.60
1:A:6:HIS:N	1:A:7:PRO:CD	2.64	0.60
1:A:99:VAL:HG21	1:A:353:ILE:HG22	1.84	0.59
1:A:105:LEU:HD21	1:A:359:LEU:HD13	1.84	0.59
2:C:105:LEU:HD21	2:C:359:LEU:HD13	1.84	0.58
1:A:309:LEU:HD22	1:A:399:LEU:HD21	1.86	0.58
2:C:80:MET:HE3	2:C:109:LEU:CD1	2.33	0.58
1:A:179:THR:HG22	1:A:243:LEU:HD23	1.85	0.58
1:A:351:LEU:CD1	1:A:399:LEU:HD13	2.32	0.57
2:C:105:LEU:HD21	2:C:359:LEU:CD1	2.35	0.57
2:C:179:THR:HG22	2:C:243:LEU:HD23	1.87	0.56
2:C:309:LEU:HD22	2:C:399:LEU:HD21	1.88	0.56
1:A:105:LEU:HD21	1:A:359:LEU:CD1	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:236:GLY:O	2:C:237:VAL:HG23	2.08	0.54
2:C:80:MET:CE	2:C:109:LEU:CD1	2.86	0.54
1:A:10:LEU:HB3	1:A:69:ARG:HG3	1.89	0.54
2:C:80:MET:HE3	2:C:109:LEU:HD11	1.89	0.54
1:A:178:PHE:CZ	1:A:218:ILE:HG23	2.43	0.53
2:C:55:LEU:O	2:C:59:THR:HG23	2.09	0.53
2:C:157:LEU:HD22	2:C:441:HIS:ND1	2.23	0.53
2:C:420:LEU:H	2:C:420:LEU:HD13	1.74	0.53
1:A:157:LEU:HD22	1:A:441:HIS:ND1	2.24	0.53
1:A:230:MET:HE2	1:A:394:SER:HB3	1.91	0.53
2:C:10:LEU:HB3	2:C:69:ARG:HG3	1.90	0.52
1:A:108:THR:HG23	1:A:245:PHE:CE2	2.44	0.52
1:A:280:LEU:CD2	1:A:348:LEU:HD21	2.40	0.52
2:C:158:VAL:O	2:C:158:VAL:HG23	2.09	0.52
1:A:343:ALA:HB3	1:A:418:GLU:O	2.10	0.51
2:C:237:VAL:HG12	2:C:238:SER:O	2.10	0.51
1:A:237:VAL:HG12	1:A:238:SER:O	2.10	0.51
1:A:55:LEU:O	1:A:59:THR:HG23	2.11	0.51
1:A:153:VAL:HG12	1:A:441:HIS:CE1	2.46	0.50
2:C:178:PHE:CZ	2:C:218:ILE:HG23	2.46	0.50
2:C:108:THR:HG23	2:C:245:PHE:CE2	2.46	0.50
1:A:180:ALA:HB2	1:A:242:THR:HA	1.94	0.49
1:A:236:GLY:O	1:A:237:VAL:HG23	2.13	0.49
1:A:215:ALA:CB	1:A:234:LEU:CD2	2.82	0.49
2:C:174:VAL:HG22	2:C:248:TYR:HB2	1.94	0.48
1:A:280:LEU:CD2	1:A:348:LEU:CD2	2.91	0.48
1:A:264:LEU:HD22	1:A:278:PRO:HD3	1.95	0.48
1:A:333:LEU:HB3	1:A:336:ILE:HD12	1.96	0.48
2:C:8:PHE:HB3	2:C:11:LEU:HD12	1.96	0.48
2:C:6:HIS:N	2:C:7:PRO:HD3	2.28	0.48
2:C:230:MET:HE2	2:C:394:SER:HB3	1.95	0.48
1:A:168:PRO:O	1:A:169:LEU:HD12	2.13	0.48
2:C:153:VAL:HG12	2:C:441:HIS:CE1	2.49	0.47
2:C:232:LEU:HD22	2:C:356:SER:HB2	1.96	0.47
2:C:279:MET:HE3	2:C:347:THR:HG22	1.95	0.47
1:A:177:LEU:O	1:A:202:PRO:HA	2.15	0.47
2:C:177:LEU:O	2:C:202:PRO:HA	2.15	0.47
1:A:10:LEU:CB	1:A:69:ARG:HG3	2.44	0.47
1:A:6:HIS:N	1:A:7:PRO:HD3	2.29	0.47
2:C:180:ALA:HB2	2:C:242:THR:HA	1.95	0.47
1:A:158:VAL:HG23	1:A:158:VAL:O	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:62:LEU:HD22	2:C:66:ASP:HB3	1.97	0.46
2:C:323:VAL:O	2:C:327:VAL:HG22	2.16	0.46
1:A:136:ASP:OD1	1:A:138:THR:HG23	2.15	0.46
1:A:231:ASN:C	1:A:232:LEU:HD13	2.36	0.46
1:A:8:PHE:HB3	1:A:11:LEU:HD12	1.98	0.46
1:A:174:VAL:HG22	1:A:248:TYR:HB2	1.97	0.46
1:A:279:MET:HE3	1:A:347:THR:HG22	1.97	0.46
1:A:82:PHE:CD2	1:A:331:ASP:HA	2.52	0.45
2:C:10:LEU:CB	2:C:69:ARG:HG3	2.45	0.45
1:A:173:THR:HG22	1:A:249:VAL:HG22	1.98	0.45
2:C:117:LEU:HD21	2:C:380:LYS:HG3	1.98	0.45
2:C:264:LEU:HD22	2:C:278:PRO:HD3	1.98	0.45
1:A:158:VAL:HG11	1:A:171:GLN:HB3	1.99	0.45
2:C:82:PHE:CD2	2:C:331:ASP:HA	2.51	0.45
1:A:309:LEU:HD22	1:A:399:LEU:CD2	2.47	0.45
1:A:62:LEU:HD22	1:A:66:ASP:HB3	1.99	0.45
1:A:230:MET:CE	1:A:394:SER:HB3	2.47	0.45
2:C:333:LEU:HB3	2:C:336:ILE:HD12	1.99	0.45
2:C:158:VAL:HG11	2:C:171:GLN:HB3	1.99	0.44
2:C:354:ARG:CG	2:C:396:LEU:HD13	2.48	0.44
1:A:48:GLU:HA	1:A:51:LEU:HD12	1.99	0.43
1:A:234:LEU:HD23	1:A:237:VAL:CG2	2.43	0.43
1:A:80:VAL:HG13	1:A:81:GLY:N	2.33	0.43
2:C:168:PRO:O	2:C:169:LEU:HD12	2.18	0.43
2:C:173:THR:HG22	2:C:249:VAL:HG22	2.00	0.43
2:C:309:LEU:HD22	2:C:399:LEU:CD2	2.49	0.42
2:C:230:MET:CE	2:C:394:SER:HB3	2.49	0.42
2:C:10:LEU:HD12	2:C:72:GLN:NE2	2.34	0.42
1:A:327:VAL:HG23	1:A:328:PHE:N	2.34	0.42
1:A:142:ASP:O	1:A:146:VAL:HG23	2.20	0.42
2:C:136:ASP:OD1	2:C:138:THR:HG23	2.19	0.42
1:A:323:VAL:O	1:A:327:VAL:HG22	2.19	0.42
2:C:80:MET:HE2	2:C:109:LEU:HD13	2.01	0.42
2:C:344:ILE:HG12	2:C:420:LEU:CD2	2.49	0.42
1:A:230:MET:HB3	1:A:232:LEU:HD11	2.01	0.42
1:A:354:ARG:CG	1:A:396:LEU:HD13	2.49	0.42
2:C:187:GLN:N	2:C:188:PRO:CD	2.83	0.42
1:A:218:ILE:O	1:A:222:VAL:HG23	2.20	0.41
2:C:178:PHE:O	2:C:243:LEU:HD22	2.21	0.41
1:A:117:LEU:HD21	1:A:380:LYS:HG3	2.02	0.41
1:A:59:THR:HG22	1:A:155:GLY:HA3	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:255:MET:HE2	2:C:258:PHE:CD2	2.55	0.41
2:C:312:ILE:HD12	2:C:312:ILE:N	2.36	0.41
1:A:10:LEU:HD12	1:A:72:GLN:NE2	2.36	0.41
2:C:48:GLU:HA	2:C:51:LEU:HD12	2.02	0.41
1:A:82:PHE:CD1	1:A:328:PHE:O	2.74	0.41
1:A:187:GLN:N	1:A:188:PRO:CD	2.84	0.41
1:A:243:LEU:C	1:A:243:LEU:HD13	2.41	0.41
2:C:70:ALA:HA	2:C:73:VAL:HG12	2.03	0.41
1:A:70:ALA:HA	1:A:73:VAL:HG12	2.03	0.41
1:A:280:LEU:HD21	1:A:348:LEU:HD21	2.03	0.41
1:A:397:LEU:CD2	1:A:399:LEU:HD12	2.51	0.41
1:A:443:LEU:C	1:A:443:LEU:HD12	2.40	0.41
2:C:327:VAL:HG23	2:C:328:PHE:N	2.36	0.41
2:C:443:LEU:HD12	2:C:443:LEU:C	2.41	0.41
1:A:178:PHE:O	1:A:243:LEU:HD22	2.21	0.41
2:C:243:LEU:C	2:C:243:LEU:HD13	2.41	0.41
2:C:397:LEU:CD2	2:C:399:LEU:HD12	2.51	0.40
2:C:215:ALA:HB2	2:C:234:LEU:HD12	2.03	0.40
2:C:397:LEU:CD2	2:C:399:LEU:CD1	2.99	0.40
1:A:15:LYS:O	1:A:19:ALA:HB2	2.21	0.40
1:A:255:MET:HE2	1:A:258:PHE:CD2	2.57	0.40
1:A:312:ILE:HD12	1:A:312:ILE:N	2.35	0.40
2:C:80:MET:CE	2:C:109:LEU:HD13	2.51	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	413/453 (91%)	391 (95%)	22 (5%)	0	100	100
2	C	405/453 (89%)	383 (95%)	22 (5%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
All	All	818/906 (90%)	774 (95%)	44 (5%)	0	100 100

There are no Ramachandran outliers to report.

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	364/391 (93%)	350 (96%)	14 (4%)	28 62
2	C	358/391 (92%)	346 (97%)	12 (3%)	32 66
All	All	722/782 (92%)	696 (96%)	26 (4%)	30 64

All (26) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	6	HIS
1	A	18	CYS
1	A	137	CYS
1	A	138	THR
1	A	216	GLN
1	A	223	GLN
1	A	228	TRP
1	A	232	LEU
1	A	280	LEU
1	A	308	THR
1	A	315	GLN
1	A	332	PHE
1	A	403	GLU
1	A	420	LEU
2	C	18	CYS
2	C	137	CYS
2	C	138	THR
2	C	216	GLN
2	C	223	GLN
2	C	228	TRP

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Mol	Chain	Res	Type
2	C	308	THR
2	C	315	GLN
2	C	332	PHE
2	C	365	GLN
2	C	419	VAL
2	C	420	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. There are no such sidechains identified.

5.3.3 RNA (i)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

There are no ligands in this entry.

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å^2)	Q<0.9
1	A	422/453 (93%)	0.82	46 (10%)	12	9	25, 55, 93, 117	8 (1%)
2	C	413/453 (91%)	0.90	53 (12%)	9	8	36, 62, 93, 117	8 (1%)
All	All	835/906 (92%)	0.86	99 (11%)	10	8	25, 59, 93, 117	16 (1%)

All (99) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	387	ARG	10.0
1	A	67	ARG	4.7
1	A	329	GLN	4.6
2	C	79[A]	PHE	4.6
1	A	17	THR	4.4
1	A	294	ASN	3.7
1	A	134	GLU	3.6
2	C	237	VAL	3.5
2	C	30	PRO	3.5
1	A	419	VAL	3.5
1	A	52	ARG	3.5
2	C	435	ARG	3.4
2	C	339	PRO	3.4
2	C	281	SER	3.3
2	C	335	TRP	3.3
2	C	420	LEU	3.3
2	C	29	LEU	3.3
2	C	168	PRO	3.2
2	C	95	ALA	3.1
2	C	419	VAL	3.1
2	C	94	VAL	3.1
1	A	95	ALA	3.1
1	A	293	GLN	3.1
2	C	283	THR	3.0

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Mol	Chain	Res	Type	RSRZ
1	A	94	VAL	3.0
1	A	7	PRO	3.0
2	C	118	ASP	2.9
1	A	233	PRO	2.9
1	A	317	ALA	2.9
2	C	329	GLN	2.9
2	C	138	THR	2.9
2	C	372	LEU	2.9
1	A	285	ASN	2.9
1	A	262	THR	2.8
1	A	234	LEU	2.8
2	C	270	ASP	2.8
1	A	118	ASP	2.8
2	C	256	ARG	2.7
2	C	268	TRP	2.7
2	C	296	PHE	2.7
2	C	305	GLU	2.7
2	C	334	THR	2.7
2	C	236	GLY	2.7
2	C	345	ARG	2.6
2	C	231	ASN	2.6
2	C	208	SER	2.6
1	A	340	PRO	2.6
1	A	333	LEU	2.6
1	A	344	ILE	2.5
2	C	267	PHE	2.5
1	A	365	GLN	2.5
1	A	66	ASP	2.5
2	C	6	HIS	2.5
2	C	338	ASN	2.5
2	C	337	LYS	2.5
1	A	231	ASN	2.5
1	A	237	VAL	2.5
2	C	401	ALA	2.5
1	A	256	ARG	2.4
2	C	243	LEU	2.4
1	A	345	ARG	2.4
1	A	6	HIS	2.4
1	A	132	VAL	2.4
2	C	7	PRO	2.4
1	A	335	TRP	2.4
1	A	229	LYS	2.3

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Mol	Chain	Res	Type	RSRZ
2	C	18	CYS	2.3
2	C	13	TYR	2.3
2	C	340	PRO	2.3
1	A	89	SER	2.3
1	A	376	ALA	2.3
1	A	421	ASP	2.3
1	A	117	LEU	2.3
1	A	62	LEU	2.2
1	A	274	SER	2.2
1	A	9	HIS	2.2
2	C	134	GLU	2.2
1	A	158	VAL	2.2
1	A	417	PRO	2.2
2	C	342	ARG	2.2
2	C	374	ALA	2.2
2	C	137	CYS	2.2
2	C	65	GLU	2.2
1	A	281	SER	2.2
1	A	236	GLY	2.1
2	C	135	GLY	2.1
2	C	51	LEU	2.1
2	C	280	LEU	2.1
2	C	336	ILE	2.1
1	A	29	LEU	2.1
2	C	343	ALA	2.1
2	C	285	ASN	2.1
2	C	67	ARG	2.1
1	A	266	GLU	2.0
1	A	350	GLN	2.0
2	C	426	SER	2.0
2	C	15	LYS	2.0
1	A	182	GLY	2.0
2	C	141	LEU	2.0

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

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

6.3 Carbohydrates (i)

There are no monosaccharides in this entry.

6.4 Ligands

There are no ligands in this entry.

6.5 Other polymers

There are no such residues in this entry.