Full wwPDB X-ray Structure Validation Report ⓘ

May 19, 2025 – 01:09 PM EDT

PDB ID	:	9CB6 / pdb_00009cb6
Title	:	Crystal Structure of RT-PhyR (ruthe_02744)
Authors	:	Swingle, D.; Isiorho, E.A.; Gardner, K.H.
Deposited on	:	2024-06-18
Resolution	:	2.83 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:

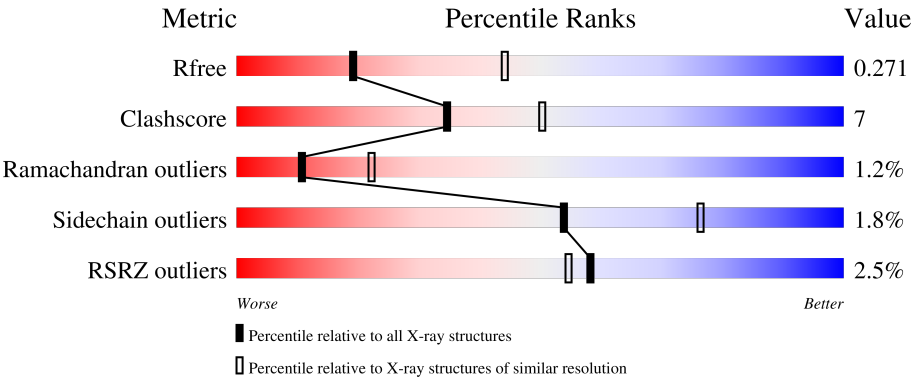
MolProbity	:	4-5-2 with Phenix2.0rc1
Xtriage (Phenix)	:	2.0rc1
EDS	:	3.0
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
CCP4	:	9.0.006 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson 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 2.83 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	1367 (2.86-2.82)
Clashscore	180529	1455 (2.86-2.82)
Ramachandran outliers	177936	1422 (2.86-2.82)
Sidechain outliers	177891	1423 (2.86-2.82)
RSRZ outliers	164620	1368 (2.86-2.82)

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	268	% 72% 17% 10%
1	B	268	% 75% 14% 10%
1	C	268	3% 71% 19% 10%
1	D	268	3% 73% 14% 12%

2 Entry composition (i)

There are 2 unique types of molecules in this entry. The entry contains 7499 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 Response regulator receiver protein.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	240	Total	C	N	O	S	0	0	0
			1871	1177	337	350	7			
1	B	240	Total	C	N	O	S	0	0	0
			1871	1177	337	350	7			
1	C	241	Total	C	N	O	S	0	0	0
			1878	1181	338	351	8			
1	D	236	Total	C	N	O	S	0	0	0
			1834	1155	329	343	7			

There are 12 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-2	GLY	-	expression tag	UNP S9QU65
A	-1	GLU	-	expression tag	UNP S9QU65
A	0	PHE	-	expression tag	UNP S9QU65
B	-2	GLY	-	expression tag	UNP S9QU65
B	-1	GLU	-	expression tag	UNP S9QU65
B	0	PHE	-	expression tag	UNP S9QU65
C	-2	GLY	-	expression tag	UNP S9QU65
C	-1	GLU	-	expression tag	UNP S9QU65
C	0	PHE	-	expression tag	UNP S9QU65
D	-2	GLY	-	expression tag	UNP S9QU65
D	-1	GLU	-	expression tag	UNP S9QU65
D	0	PHE	-	expression tag	UNP S9QU65

- Molecule 2 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
2	A	13	Total	O	0	0
			13	13		
2	B	8	Total	O	0	0
			8	8		

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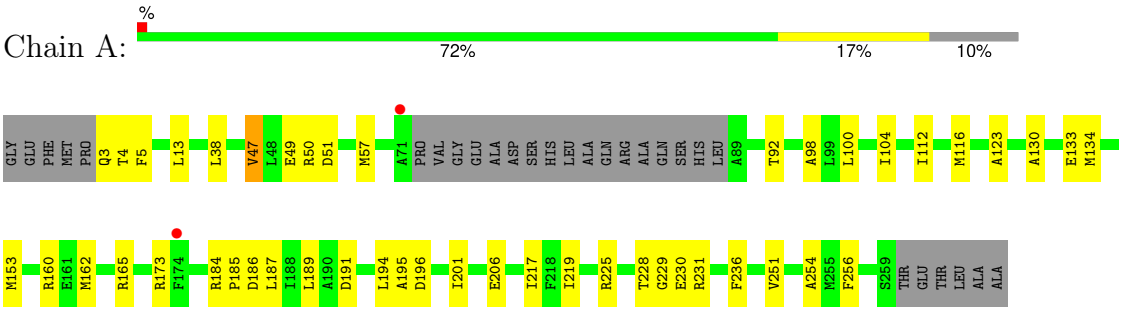
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	C	15	Total O 15 15	0	0
2	D	9	Total O 9 9	0	0

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.

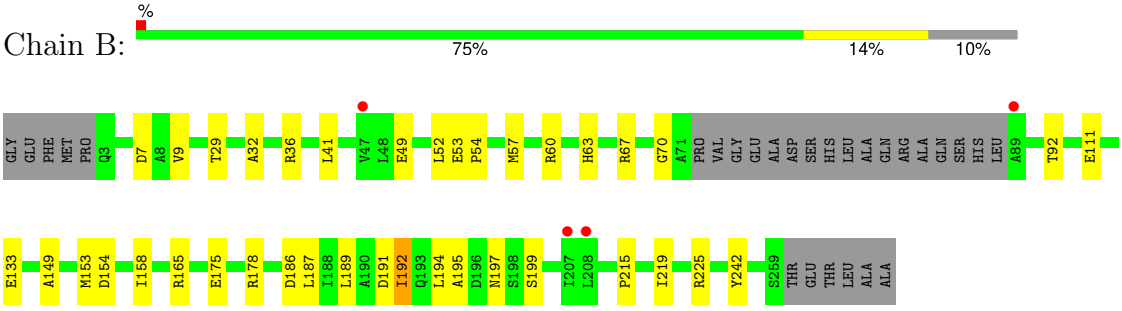
• Molecule 1: Response regulator receiver protein

Chain A:



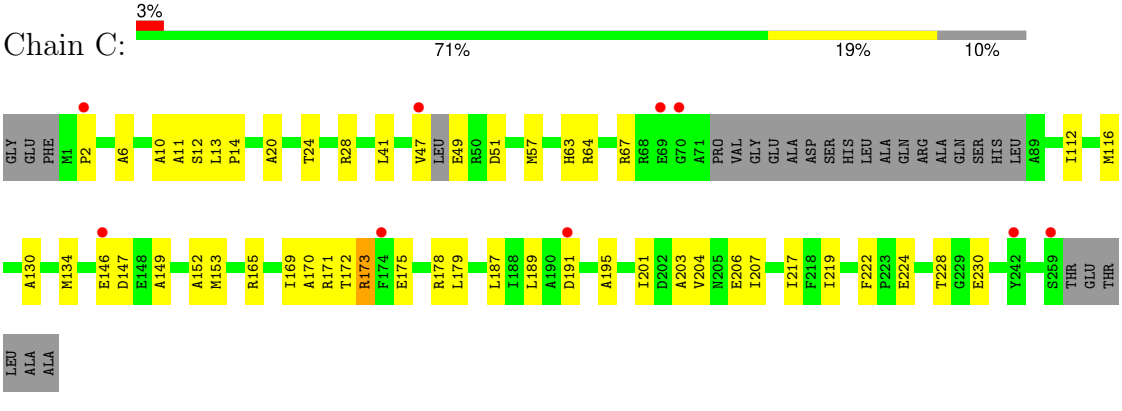
• Molecule 1: Response regulator receiver protein

Chain B:



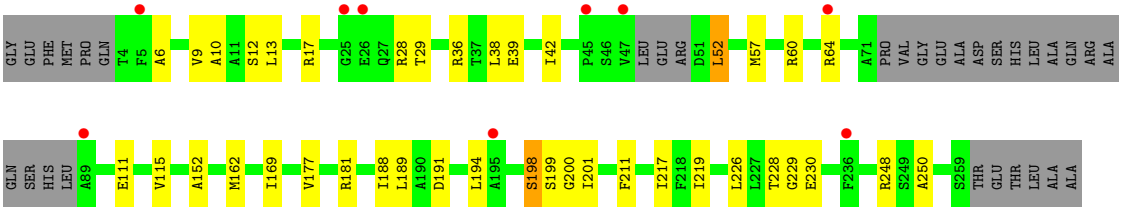
• Molecule 1: Response regulator receiver protein

Chain C:



• Molecule 1: Response regulator receiver protein

Chain D:


GLY GLU PHE MET PRO GLN T4 F5 A6 V9 A10 A11 S12 L13 R17 G25 E26 Q27 R28 T29 R36 T37 L38 E39 I42 P45 S46 V47 LEU GLU ARG D51 L52 M57 R60 R64 A71 PRO VAL GLY GLU ALA ASP SER HIS LEU ALA GLN ARG ALA
GLN SER HIS LEU A89 E111 V115 A152 M162 I169 V177 R181 I188 L189 A190 D191 L194 A195 S198 S199 G200 I201 F211 I217 F218 I219 L226 L227 T228 G229 E230 F236 R248 S249 A250 S259 THR GLU THR LEU ALA ALA

4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α, β, γ	60.10Å 149.54Å 73.56Å 90.00° 101.24° 90.00°	Depositor
Resolution (Å)	33.85 – 2.83 33.85 – 2.83	Depositor EDS
% Data completeness (in resolution range)	99.4 (33.85-2.83) 99.4 (33.85-2.83)	Depositor EDS
R_{merge}	0.23	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.41 (at 2.81Å)	Xtriage
Refinement program	PHENIX 1.20.1_4487	Depositor
R, R_{free}	0.233 , 0.272 0.232 , 0.271	Depositor DCC
R_{free} test set	1395 reflections (4.59%)	wwPDB-VP
Wilson B-factor (Å^2)	57.3	Xtriage
Anisotropy	0.218	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.27 , 26.5	EDS
L-test for twinning[2]	$< \|L\| > = 0.47$, $< L^2 > = 0.30$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.91	EDS
Total number of atoms	7499	wwPDB-VP
Average B, all atoms (Å^2)	59.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 5.21% 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	0.13	0/1901	0.35	0/2576
1	B	0.13	0/1901	0.33	0/2576
1	C	0.12	0/1908	0.33	0/2584
1	D	0.14	0/1863	0.38	0/2524
All	All	0.13	0/7573	0.35	0/10260

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	B	0	1

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	B	225	ARG	Sidechain

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	1871	0	1880	34	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	B	1871	0	1880	20	0
1	C	1878	0	1887	34	0
1	D	1834	0	1841	25	0
2	A	13	0	0	0	0
2	B	8	0	0	0	0
2	C	15	0	0	0	0
2	D	9	0	0	0	0
All	All	7499	0	7488	110	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 7.

All (110) 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:D:198:SER:O	1:D:200:GLY:N	2.24	0.70
1:D:152:ALA:HB1	1:D:169:ILE:HD13	1.75	0.66
1:A:160:ARG:NH2	1:B:111:GLU:OE2	2.29	0.65
1:D:52:LEU:H	1:D:57:MET:HE1	1.62	0.64
1:D:60:ARG:HH12	1:D:64:ARG:HE	1.43	0.64
1:D:162:MET:HE2	1:D:248:ARG:HG2	1.80	0.64
1:A:49:GLU:C	1:A:51:ASP:H	2.09	0.61
1:C:187:LEU:HD11	1:C:217:ILE:HG13	1.84	0.60
1:A:98:ALA:HB2	1:A:116:MET:HE1	1.85	0.59
1:A:201:ILE:HD11	1:A:231:ARG:HD3	1.85	0.58
1:D:60:ARG:HH12	1:D:64:ARG:NE	2.01	0.58
1:D:10:ALA:C	1:D:12:SER:H	2.12	0.58
1:D:194:LEU:HD13	1:D:226:LEU:HD11	1.86	0.58
1:D:228:THR:O	1:D:230:GLU:N	2.35	0.57
1:A:189:LEU:HD23	1:A:217:ILE:HB	1.86	0.56
1:C:10:ALA:C	1:C:12:SER:H	2.14	0.56
1:C:170:ALA:HB2	1:C:179:LEU:HD13	1.88	0.56
1:C:147:ASP:HA	1:C:171:ARG:HG2	1.88	0.56
1:A:100:LEU:O	1:A:104:ILE:HG12	2.06	0.55
1:A:112:ILE:HG22	1:A:123:ALA:HB1	1.89	0.55
1:D:36:ARG:HA	1:D:39:GLU:HG3	1.88	0.54
1:C:189:LEU:HD23	1:C:217:ILE:HB	1.90	0.54
1:A:228:THR:O	1:A:230:GLU:N	2.33	0.54
1:A:173:ARG:NH1	1:A:206:GLU:OE1	2.41	0.54
1:A:5:PHE:HZ	1:A:57:MET:HE3	1.72	0.54
1:C:49:GLU:O	1:C:51:ASP:N	2.33	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:32:ALA:O	1:B:36:ARG:HG3	2.09	0.53
1:B:53:GLU:HG2	1:B:54:PRO:HD2	1.91	0.53
1:A:112:ILE:HG23	1:A:116:MET:HE2	1.92	0.52
1:C:165:ARG:HH11	1:C:165:ARG:HG3	1.74	0.52
1:C:146:GLU:OE1	1:C:147:ASP:N	2.43	0.52
1:D:13:LEU:HD12	1:D:17:ARG:CZ	2.40	0.52
1:D:9:VAL:HG23	1:D:38:LEU:HD11	1.91	0.52
1:C:179:LEU:HD12	1:C:179:LEU:H	1.74	0.52
1:B:195:ALA:HB3	1:B:197:ASN:ND2	2.25	0.51
1:D:111:GLU:O	1:D:115:VAL:HG23	2.10	0.51
1:A:130:ALA:O	1:A:134:MET:HG3	2.12	0.50
1:C:173:ARG:NH1	1:C:206:GLU:OE1	2.43	0.50
1:B:154:ASP:HB3	1:B:242:TYR:OH	2.12	0.49
1:C:224:GLU:OE1	1:C:224:GLU:N	2.24	0.49
1:C:172:THR:HG23	1:C:175:GLU:H	1.77	0.49
1:A:3:GLN:C	1:A:5:PHE:H	2.20	0.49
1:D:191:ASP:HB2	1:D:219:ILE:HB	1.93	0.49
1:A:191:ASP:HB2	1:A:219:ILE:HB	1.93	0.48
1:B:194:LEU:HD12	1:B:195:ALA:H	1.79	0.48
1:C:195:ALA:HA	1:C:222:PHE:CE2	2.49	0.48
1:B:149:ALA:O	1:B:153:MET:HG3	2.14	0.47
1:D:60:ARG:NH1	1:D:64:ARG:HE	2.09	0.47
1:A:13:LEU:HD22	1:A:38:LEU:HD22	1.95	0.47
1:D:6:ALA:O	1:D:9:VAL:HG22	2.15	0.47
1:C:149:ALA:O	1:C:153:MET:HG2	2.14	0.47
1:C:152:ALA:HB1	1:C:169:ILE:HD13	1.97	0.47
1:C:63:HIS:O	1:C:67:ARG:HG3	2.15	0.47
1:A:49:GLU:O	1:A:51:ASP:N	2.43	0.46
1:B:175:GLU:O	1:B:178:ARG:N	2.48	0.46
1:A:49:GLU:C	1:A:51:ASP:N	2.73	0.46
1:D:198:SER:OG	1:D:201:ILE:HD11	2.15	0.46
1:C:57:MET:HE3	1:C:57:MET:HB2	1.75	0.46
1:C:175:GLU:O	1:C:178:ARG:N	2.48	0.46
1:A:194:LEU:HD23	1:A:195:ALA:O	2.16	0.46
1:C:20:ALA:O	1:C:24:THR:HG23	2.15	0.46
1:B:165:ARG:HG3	1:B:165:ARG:HH11	1.81	0.45
1:A:3:GLN:HG2	1:A:5:PHE:HB3	1.98	0.45
1:C:49:GLU:C	1:C:51:ASP:H	2.24	0.45
1:B:191:ASP:HB2	1:B:219:ILE:HB	1.98	0.44
1:A:165:ARG:HH11	1:A:165:ARG:HG3	1.82	0.44
1:A:57:MET:HE2	1:A:57:MET:HB2	1.79	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:92:THR:OG1	1:B:133:GLU:OE2	2.26	0.44
1:C:130:ALA:O	1:C:134:MET:HG3	2.18	0.44
1:A:162:MET:HE1	1:A:251:VAL:HB	1.99	0.44
1:A:184:ARG:HD3	1:A:185:PRO:HD2	1.99	0.43
1:D:57:MET:HE3	1:D:57:MET:HB2	1.82	0.43
1:C:175:GLU:O	1:C:178:ARG:HB2	2.18	0.43
1:A:194:LEU:HD23	1:A:195:ALA:N	2.33	0.43
1:D:28:ARG:HG3	1:D:29:THR:N	2.33	0.43
1:B:7:ASP:OD1	1:B:7:ASP:N	2.52	0.43
1:B:192:ILE:CD1	1:B:194:LEU:HB2	2.47	0.43
1:A:153:MET:HG2	1:B:111:GLU:HG2	2.01	0.43
1:C:10:ALA:C	1:C:12:SER:N	2.77	0.43
1:D:177:VAL:O	1:D:181:ARG:HG3	2.19	0.43
1:A:206:GLU:OE2	1:C:28:ARG:HD2	2.19	0.42
1:B:52:LEU:HD11	1:B:60:ARG:HD3	2.00	0.42
1:A:194:LEU:HD23	1:A:195:ALA:H	1.85	0.42
1:B:194:LEU:HD12	1:B:195:ALA:N	2.35	0.42
1:A:217:ILE:HG12	1:A:236:PHE:HB2	2.00	0.42
1:B:154:ASP:O	1:B:158:ILE:HG13	2.20	0.41
1:C:13:LEU:N	1:C:14:PRO:HD2	2.35	0.41
1:C:191:ASP:HB2	1:C:219:ILE:HB	2.01	0.41
1:C:175:GLU:O	1:C:179:LEU:HD12	2.19	0.41
1:C:228:THR:O	1:C:230:GLU:N	2.49	0.41
1:D:188:ILE:HD13	1:D:211:PHE:CG	2.55	0.41
1:D:189:LEU:HD23	1:D:217:ILE:HB	2.03	0.41
1:D:217:ILE:HD13	1:D:250:ALA:HB1	2.01	0.41
1:A:3:GLN:C	1:A:5:PHE:N	2.79	0.41
1:A:47:VAL:C	1:A:49:GLU:H	2.28	0.41
1:C:47:VAL:O	1:C:49:GLU:N	2.53	0.41
1:C:203:ALA:O	1:C:207:ILE:HD12	2.20	0.41
1:A:92:THR:OG1	1:A:133:GLU:OE2	2.26	0.41
1:C:116:MET:HE2	1:C:116:MET:HB3	1.92	0.41
1:C:228:THR:O	1:C:228:THR:OG1	2.39	0.41
1:D:10:ALA:C	1:D:12:SER:N	2.77	0.41
1:A:254:ALA:C	1:A:256:PHE:H	2.29	0.41
1:B:187:LEU:HD12	1:B:215:PRO:HB2	2.03	0.41
1:A:187:LEU:HD11	1:A:254:ALA:CB	2.51	0.40
1:B:63:HIS:O	1:B:67:ARG:HG3	2.22	0.40
1:A:196:ASP:HA	1:A:225:ARG:HD2	2.03	0.40
1:C:112:ILE:O	1:C:116:MET:HG3	2.22	0.40
1:B:41:LEU:HD12	1:B:41:LEU:HA	1.98	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:41:LEU:HD23	1:C:41:LEU:HA	1.86	0.40
1:D:42:ILE:HD13	1:D:42:ILE:HA	1.91	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	236/268 (88%)	222 (94%)	11 (5%)	3 (1%)	10	20
1	B	236/268 (88%)	227 (96%)	7 (3%)	2 (1%)	16	32
1	C	235/268 (88%)	221 (94%)	11 (5%)	3 (1%)	10	20
1	D	230/268 (86%)	218 (95%)	9 (4%)	3 (1%)	10	20
All	All	937/1072 (87%)	888 (95%)	38 (4%)	11 (1%)	11	22

All (11) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	47	VAL
1	C	2	PRO
1	D	198	SER
1	D	199	SER
1	B	49	GLU
1	C	6	ALA
1	A	50	ARG
1	A	229	GLY
1	D	229	GLY
1	C	11	ALA
1	B	70	GLY

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	190/211 (90%)	188 (99%)	2 (1%)	70 86
1	B	190/211 (90%)	183 (96%)	7 (4%)	29 54
1	C	191/211 (90%)	187 (98%)	4 (2%)	48 72
1	D	186/211 (88%)	185 (100%)	1 (0%)	86 94
All	All	757/844 (90%)	743 (98%)	14 (2%)	54 76

All (14) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	4	THR
1	A	186	ASP
1	B	9	VAL
1	B	29	THR
1	B	57	MET
1	B	186	ASP
1	B	189	LEU
1	B	192	ILE
1	B	199	SER
1	C	64	ARG
1	C	173	ARG
1	C	201	ILE
1	C	204	VAL
1	D	52	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (4) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	205	ASN
1	C	94	ASN
1	C	205	ASN
1	D	63	HIS

5.3.3 RNA

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 oligosaccharides 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, 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	240/268 (89%)	-0.00	2 (0%)	82	81	29, 51, 92, 105	0
1	B	240/268 (89%)	0.04	4 (1%)	69	65	32, 51, 91, 101	0
1	C	241/268 (89%)	0.21	9 (3%)	45	39	32, 56, 92, 103	0
1	D	236/268 (88%)	0.28	9 (3%)	44	38	34, 60, 92, 111	0
All	All	957/1072 (89%)	0.13	24 (2%)	58	55	29, 55, 92, 111	0

All (24) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	C	191	ASP	4.5
1	C	242	TYR	3.5
1	D	64	ARG	3.0
1	B	89	ALA	2.9
1	D	5	PHE	2.8
1	C	146	GLU	2.7
1	D	25	GLY	2.7
1	D	89	ALA	2.6
1	A	71	ALA	2.6
1	C	47	VAL	2.5
1	B	207	ILE	2.4
1	B	208	LEU	2.3
1	C	69	GLU	2.3
1	C	174	PHE	2.3
1	C	70	GLY	2.3
1	D	195	ALA	2.3
1	B	47	VAL	2.3
1	D	47	VAL	2.2
1	D	45	PRO	2.1
1	D	236	PHE	2.1
1	C	2	PRO	2.1

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Mol	Chain	Res	Type	RSRZ
1	C	259	SER	2.1
1	A	174	PHE	2.1
1	D	26	GLU	2.0

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

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

6.3 Carbohydrates (i)

There are no monosaccharides in this entry.

6.4 Ligands (i)

There are no ligands in this entry.

6.5 Other polymers (i)

There are no such residues in this entry.