Full wwPDB X-ray Structure Validation Report ⓘ

Sep 11, 2023 – 03:32 PM EDT

PDB ID	:	4M1H
Title	:	X-ray crystal structure of Chlamydia trachomatis apo NrdB
Authors	:	Boal, A.K.; Rosenzweig, A.C.
Deposited on	:	2013-08-02
Resolution	:	1.70 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:

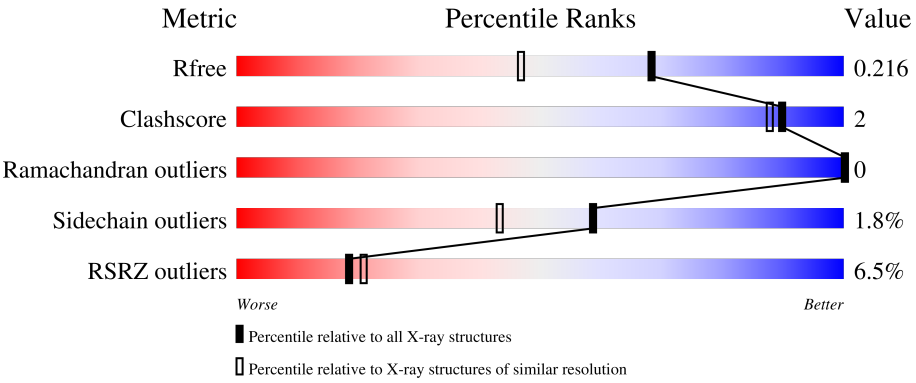
MolProbity	:	4.02b-467
Xtriage (Phenix)	:	1.13
EDS	:	2.35.1
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.35.1

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 1.70 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	4298 (1.70-1.70)
Clashscore	141614	4695 (1.70-1.70)
Ramachandran outliers	138981	4610 (1.70-1.70)
Sidechain outliers	138945	4610 (1.70-1.70)
RSRZ outliers	127900	4222 (1.70-1.70)

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	366	5% 85% 5% • 10%
1	B	366	7% 84% 7% • 8%
1	C	366	5% 86% 5% 10%
1	D	366	6% 86% • • 9%

2 Entry composition (i)

There are 2 unique types of molecules in this entry. The entry contains 11834 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 Ribonucleoside-diphosphate reductase subunit beta.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	331	Total	C	N	O	S	0	0	0
			2714	1743	463	496	12			
1	B	336	Total	C	N	O	S	0	0	0
			2759	1771	471	505	12			
1	C	331	Total	C	N	O	S	0	0	0
			2726	1749	464	501	12			
1	D	334	Total	C	N	O	S	0	0	0
			2747	1763	469	503	12			

There are 80 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-19	MET	-	expression tag	UNP O84835
A	-18	GLY	-	expression tag	UNP O84835
A	-17	SER	-	expression tag	UNP O84835
A	-16	SER	-	expression tag	UNP O84835
A	-15	HIS	-	expression tag	UNP O84835
A	-14	HIS	-	expression tag	UNP O84835
A	-13	HIS	-	expression tag	UNP O84835
A	-12	HIS	-	expression tag	UNP O84835
A	-11	HIS	-	expression tag	UNP O84835
A	-10	HIS	-	expression tag	UNP O84835
A	-9	SER	-	expression tag	UNP O84835
A	-8	SER	-	expression tag	UNP O84835
A	-7	GLY	-	expression tag	UNP O84835
A	-6	LEU	-	expression tag	UNP O84835
A	-5	VAL	-	expression tag	UNP O84835
A	-4	PRO	-	expression tag	UNP O84835
A	-3	ARG	-	expression tag	UNP O84835
A	-2	GLY	-	expression tag	UNP O84835
A	-1	SER	-	expression tag	UNP O84835
A	0	HIS	-	expression tag	UNP O84835
B	-19	MET	-	expression tag	UNP O84835

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Chain	Residue	Modelled	Actual	Comment	Reference
B	-18	GLY	-	expression tag	UNP O84835
B	-17	SER	-	expression tag	UNP O84835
B	-16	SER	-	expression tag	UNP O84835
B	-15	HIS	-	expression tag	UNP O84835
B	-14	HIS	-	expression tag	UNP O84835
B	-13	HIS	-	expression tag	UNP O84835
B	-12	HIS	-	expression tag	UNP O84835
B	-11	HIS	-	expression tag	UNP O84835
B	-10	HIS	-	expression tag	UNP O84835
B	-9	SER	-	expression tag	UNP O84835
B	-8	SER	-	expression tag	UNP O84835
B	-7	GLY	-	expression tag	UNP O84835
B	-6	LEU	-	expression tag	UNP O84835
B	-5	VAL	-	expression tag	UNP O84835
B	-4	PRO	-	expression tag	UNP O84835
B	-3	ARG	-	expression tag	UNP O84835
B	-2	GLY	-	expression tag	UNP O84835
B	-1	SER	-	expression tag	UNP O84835
B	0	HIS	-	expression tag	UNP O84835
C	-19	MET	-	expression tag	UNP O84835
C	-18	GLY	-	expression tag	UNP O84835
C	-17	SER	-	expression tag	UNP O84835
C	-16	SER	-	expression tag	UNP O84835
C	-15	HIS	-	expression tag	UNP O84835
C	-14	HIS	-	expression tag	UNP O84835
C	-13	HIS	-	expression tag	UNP O84835
C	-12	HIS	-	expression tag	UNP O84835
C	-11	HIS	-	expression tag	UNP O84835
C	-10	HIS	-	expression tag	UNP O84835
C	-9	SER	-	expression tag	UNP O84835
C	-8	SER	-	expression tag	UNP O84835
C	-7	GLY	-	expression tag	UNP O84835
C	-6	LEU	-	expression tag	UNP O84835
C	-5	VAL	-	expression tag	UNP O84835
C	-4	PRO	-	expression tag	UNP O84835
C	-3	ARG	-	expression tag	UNP O84835
C	-2	GLY	-	expression tag	UNP O84835
C	-1	SER	-	expression tag	UNP O84835
C	0	HIS	-	expression tag	UNP O84835
D	-19	MET	-	expression tag	UNP O84835
D	-18	GLY	-	expression tag	UNP O84835
D	-17	SER	-	expression tag	UNP O84835

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Chain	Residue	Modelled	Actual	Comment	Reference
D	-16	SER	-	expression tag	UNP O84835
D	-15	HIS	-	expression tag	UNP O84835
D	-14	HIS	-	expression tag	UNP O84835
D	-13	HIS	-	expression tag	UNP O84835
D	-12	HIS	-	expression tag	UNP O84835
D	-11	HIS	-	expression tag	UNP O84835
D	-10	HIS	-	expression tag	UNP O84835
D	-9	SER	-	expression tag	UNP O84835
D	-8	SER	-	expression tag	UNP O84835
D	-7	GLY	-	expression tag	UNP O84835
D	-6	LEU	-	expression tag	UNP O84835
D	-5	VAL	-	expression tag	UNP O84835
D	-4	PRO	-	expression tag	UNP O84835
D	-3	ARG	-	expression tag	UNP O84835
D	-2	GLY	-	expression tag	UNP O84835
D	-1	SER	-	expression tag	UNP O84835
D	0	HIS	-	expression tag	UNP O84835

- Molecule 2 is water.

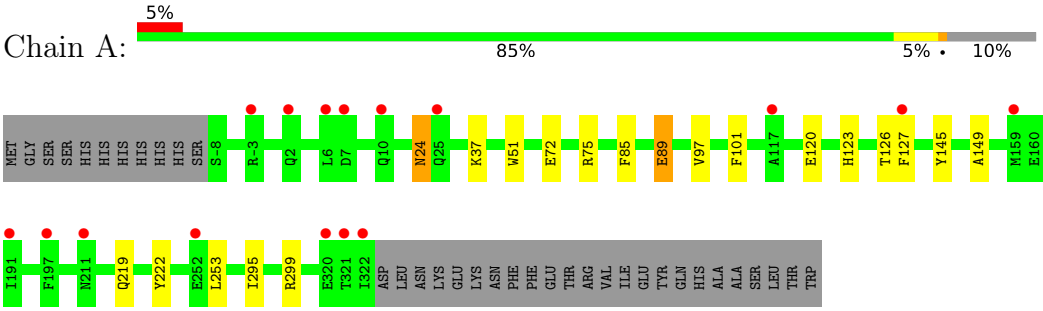
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
2	A	246	Total	O	0	0
			246	246		
2	B	265	Total	O	0	0
			265	265		
2	C	197	Total	O	0	0
			197	197		
2	D	180	Total	O	0	0
			180	180		

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.

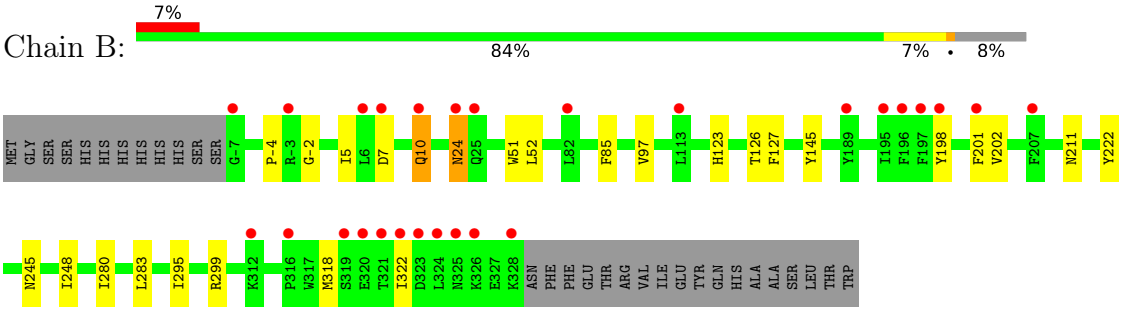
• Molecule 1: Ribonucleoside-diphosphate reductase subunit beta

Chain A:



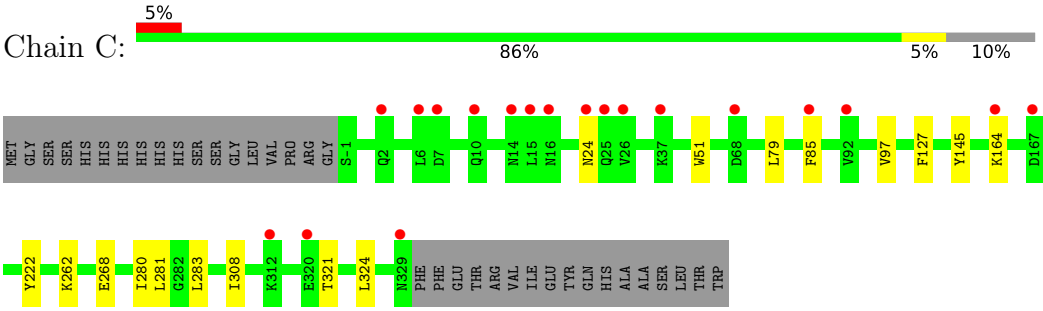
• Molecule 1: Ribonucleoside-diphosphate reductase subunit beta

Chain B:



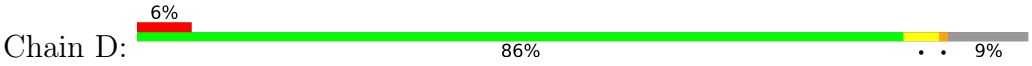
• Molecule 1: Ribonucleoside-diphosphate reductase subunit beta

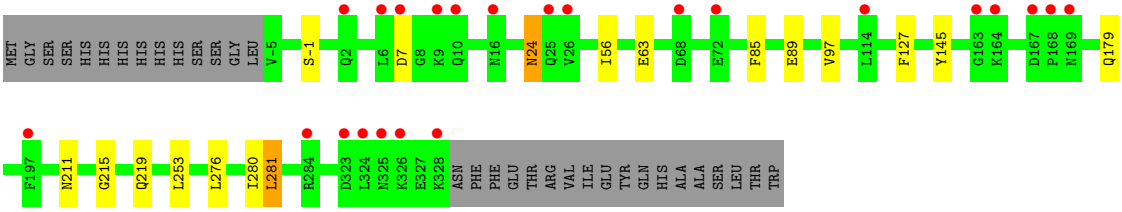
Chain C:



• Molecule 1: Ribonucleoside-diphosphate reductase subunit beta

Chain D:




MET GLY SER SER HIS HIS HIS HIS HIS SER SER GLY LEU V-5 S-1 Q2 L6 D7 G8 K9 Q10 N16 N24 Q25 V26 I56 E63 D68 E72 F85 E89 V97 L114 F127 Y145 G163 K164 D167 P168 N169 Q179
F197 N211 G215 Q219 L253 L276 I280 L281 R284 D323 L324 N325 K326 E327 K328 ASN PHE PHE GLU THR ARG VAL ILE GLU TYR GLN HIS ALA ALA SER LEU THR TRP

4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α, β, γ	74.97Å 97.39Å 99.24Å 90.00° 97.76° 90.00°	Depositor
Resolution (Å)	29.75 – 1.70 29.75 – 1.70	Depositor EDS
% Data completeness (in resolution range)	99.3 (29.75-1.70) 99.4 (29.75-1.70)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	0.06	Depositor
$< I/\sigma(I) >$ [1]	1.89 (at 1.70Å)	Xtriage
Refinement program	REFMAC 5.5.0109	Depositor
R, R_{free}	0.179 , 0.210 0.184 , 0.216	Depositor DCC
R_{free} test set	7791 reflections (5.01%)	wwPDB-VP
Wilson B-factor (Å^2)	25.0	Xtriage
Anisotropy	0.068	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.39 , 46.5	EDS
L-test for twinning[2]	$< \|L\| > = 0.50$, $< L^2 > = 0.33$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.96	EDS
Total number of atoms	11834	wwPDB-VP
Average B, all atoms (Å^2)	27.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.83% 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	0.44	0/2775	0.52	0/3754
1	B	0.43	0/2820	0.52	0/3813
1	C	0.40	0/2786	0.52	0/3767
1	D	0.39	0/2808	0.49	0/3797
All	All	0.42	0/11189	0.51	0/15131

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	2714	0	2697	13	0
1	B	2759	0	2745	18	0
1	C	2726	0	2705	7	0
1	D	2747	0	2731	9	0
2	A	246	0	0	0	0
2	B	265	0	0	1	0
2	C	197	0	0	0	0
2	D	180	0	0	0	0
All	All	11834	0	10878	40	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 2.

All (40) 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:89:GLU:HG2	1:A:123:HIS:HB2	1.62	0.81
1:B:24:ASN:HD22	1:B:24:ASN:H	1.36	0.74
1:B:318:MET:O	1:B:322:ILE:HG12	1.89	0.72
1:D:215:GLY:O	1:D:219:GLN:HG3	1.93	0.68
1:C:97:VAL:HG13	1:D:97:VAL:HG13	1.75	0.68
1:A:97:VAL:HG13	1:B:97:VAL:HG13	1.79	0.64
1:A:89:GLU:HG3	1:A:120:GLU:OE1	1.98	0.62
1:B:52:LEU:HG	2:B:612:HOH:O	2.01	0.60
1:C:199:SER:HB2	1:C:268:GLU:OE2	2.04	0.57
1:B:85:PHE:HB3	1:B:127:PHE:CZ	2.40	0.56
1:A:72:GLU:HG2	1:B:-2:GLY:HA3	1.92	0.51
1:B:202:VAL:HG22	1:B:318:MET:HG3	1.91	0.51
1:B:295:ILE:O	1:B:299:ARG:HG2	2.12	0.50
1:A:85:PHE:HB3	1:A:127:PHE:CZ	2.48	0.48
1:C:79:LEU:HD11	1:D:-1:SER:C	2.34	0.48
1:A:24:ASN:HD22	1:A:24:ASN:C	2.18	0.47
1:B:24:ASN:HD22	1:B:24:ASN:N	2.06	0.47
1:C:85:PHE:HB3	1:C:127:PHE:CZ	2.50	0.46
1:A:295:ILE:O	1:A:299:ARG:HG2	2.16	0.46
1:B:7:ASP:O	1:B:10:GLN:HG2	2.16	0.45
1:C:262:LYS:HE2	1:C:308:ILE:HD12	1.97	0.45
1:D:280:ILE:HD12	1:D:281:LEU:HD22	1.99	0.45
1:A:179:GLN:HG2	1:A:253:LEU:HD22	1.99	0.44
1:B:280:ILE:HD11	1:B:283:LEU:HD12	1.98	0.44
1:A:51:TRP:CE2	1:A:222:TYR:HB3	2.53	0.43
1:C:51:TRP:CE2	1:C:222:TYR:HB3	2.53	0.43
1:D:85:PHE:HB3	1:D:127:PHE:CZ	2.53	0.43
1:B:198:TYR:HA	1:B:201:PHE:CD2	2.53	0.43
1:B:51:TRP:CE2	1:B:222:TYR:HB3	2.54	0.43
1:A:149:ALA:HA	1:B:5:ILE:HD11	2.02	0.42
1:B:245:ASN:O	1:B:248:ILE:HG12	2.19	0.42
1:D:56:ILE:HD13	1:D:219:GLN:HG2	2.01	0.42
1:A:126:THR:HG23	1:A:219:GLN:OE1	2.20	0.42
1:B:123:HIS:O	1:B:126:THR:HB	2.19	0.42
1:C:280:ILE:HD11	1:C:283:LEU:HD12	2.02	0.42
1:A:75:ARG:NH2	1:B:-4:PRO:HG2	2.36	0.41
1:D:89:GLU:HG3	1:D:127:PHE:HE2	1.86	0.41
1:A:101:PHE:CG	1:B:97:VAL:HG11	2.56	0.40
1:D:24:ASN:HD22	1:D:24:ASN:C	2.25	0.40
1:D:179:GLN:HG2	1:D:253:LEU:HD22	2.04	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	329/366 (90%)	327 (99%)	2 (1%)	0	100	100
1	B	334/366 (91%)	332 (99%)	2 (1%)	0	100	100
1	C	329/366 (90%)	324 (98%)	5 (2%)	0	100	100
1	D	332/366 (91%)	330 (99%)	2 (1%)	0	100	100
All	All	1324/1464 (90%)	1313 (99%)	11 (1%)	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	295/327 (90%)	291 (99%)	4 (1%)	67	53
1	B	300/327 (92%)	296 (99%)	4 (1%)	69	56
1	C	297/327 (91%)	291 (98%)	6 (2%)	55	38
1	D	299/327 (91%)	292 (98%)	7 (2%)	50	33
All	All	1191/1308 (91%)	1170 (98%)	21 (2%)	59	43

All (21) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	24	ASN
1	A	37	LYS
1	A	89	GLU
1	A	145	TYR
1	B	10	GLN
1	B	24	ASN
1	B	145	TYR
1	B	211	ASN
1	C	24	ASN
1	C	145	TYR
1	C	164	LYS
1	C	281	LEU
1	C	321	THR
1	C	324	LEU
1	D	7	ASP
1	D	24	ASN
1	D	63	GLU
1	D	145	TYR
1	D	211	ASN
1	D	276	LEU
1	D	281	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (31) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	24	ASN
1	A	29	ASN
1	A	45	ASN
1	A	49	ASN
1	A	94	ASN
1	A	103	HIS
1	A	232	ASN
1	A	294	HIS
1	B	2	GLN
1	B	24	ASN
1	B	25	GLN
1	B	49	ASN
1	B	94	ASN
1	B	158	GLN
1	B	221	GLN
1	B	273	GLN
1	B	293	GLN
1	C	29	ASN

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Mol	Chain	Res	Type
1	C	49	ASN
1	C	103	HIS
1	C	158	GLN
1	C	169	ASN
1	C	221	GLN
1	D	14	ASN
1	D	24	ASN
1	D	49	ASN
1	D	94	ASN
1	D	158	GLN
1	D	179	GLN
1	D	221	GLN
1	D	273	GLN

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 monosaccharides in this entry.

5.6 Ligand geometry

There are no ligands in this entry.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

In the following table, the column labelled '#RSRZ> 2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 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	331/366 (90%)	0.27	17 (5%)	28	31	14, 23, 36, 52	0
1	B	336/366 (91%)	0.38	27 (8%)	12	14	15, 23, 42, 56	0
1	C	331/366 (90%)	0.34	20 (6%)	21	24	18, 27, 43, 60	0
1	D	334/366 (91%)	0.42	23 (6%)	16	19	18, 30, 41, 50	0
All	All	1332/1464 (90%)	0.35	87 (6%)	18	21	14, 26, 41, 60	0

All (87) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	C	6	LEU	10.5
1	B	324	LEU	10.3
1	D	6	LEU	9.2
1	A	6	LEU	7.9
1	B	-7	GLY	6.0
1	B	6	LEU	6.0
1	B	319	SER	5.6
1	B	322	ILE	5.6
1	B	323	ASP	5.5
1	D	328	LYS	5.3
1	B	321	THR	5.2
1	A	322	ILE	5.0
1	A	321	THR	4.9
1	D	324	LEU	4.9
1	C	7	ASP	4.7
1	C	164	LYS	4.6
1	C	329	ASN	4.6
1	B	328	LYS	4.3
1	B	320	GLU	4.2
1	C	25	GLN	4.2
1	B	25	GLN	4.1

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Mol	Chain	Res	Type	RSRZ
1	B	326	LYS	4.0
1	D	7	ASP	3.7
1	D	16	ASN	3.4
1	A	-3	ARG	3.4
1	D	326	LYS	3.4
1	A	7	ASP	3.3
1	A	25	GLN	3.2
1	B	7	ASP	3.2
1	B	10	GLN	3.2
1	B	-3	ARG	3.2
1	D	25	GLN	3.1
1	C	312	LYS	3.1
1	C	15	LEU	3.1
1	C	68	ASP	3.1
1	D	169	ASN	2.9
1	D	284	ARG	2.9
1	D	10	GLN	2.9
1	C	26	VAL	2.9
1	D	323	ASP	2.8
1	B	196	PHE	2.8
1	A	159	MET	2.8
1	D	68	ASP	2.8
1	B	316	PRO	2.8
1	B	189	TYR	2.8
1	D	26	VAL	2.7
1	C	167	ASP	2.7
1	C	16	ASN	2.7
1	A	197	PHE	2.7
1	D	164	LYS	2.6
1	C	171	ARG	2.6
1	A	320	GLU	2.5
1	B	113	LEU	2.5
1	B	82	LEU	2.5
1	C	10	GLN	2.5
1	C	320	GLU	2.4
1	D	168	PRO	2.4
1	A	211	ASN	2.4
1	B	197	PHE	2.3
1	A	10	GLN	2.3
1	D	9	LYS	2.3
1	D	72	GLU	2.3
1	B	325	ASN	2.3

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Mol	Chain	Res	Type	RSRZ
1	A	161	ILE	2.3
1	A	2	GLN	2.3
1	D	167	ASP	2.2
1	C	2	GLN	2.2
1	A	252	GLU	2.2
1	C	85	PHE	2.2
1	B	312	LYS	2.2
1	D	2	GLN	2.2
1	C	14	ASN	2.2
1	D	163	GLY	2.2
1	D	197	PHE	2.2
1	D	114	LEU	2.2
1	C	24	ASN	2.2
1	B	201	PHE	2.1
1	B	195	ILE	2.1
1	C	37	LYS	2.1
1	B	207	PHE	2.1
1	D	325	ASN	2.1
1	A	117	ALA	2.1
1	B	198	TYR	2.1
1	A	127	PHE	2.1
1	C	92	VAL	2.1
1	B	24	ASN	2.1
1	A	191	ILE	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.