Full wwPDB X-ray Structure Validation Report (i)

May 16, 2020 – 09:56 am BST

PDB ID	:	5WHM
Title	:	Crystal Structure of IclR Family Transcriptional Regulator from Brucella abortus
Authors	:	Kim, Y.; Wu, R.; Tesar, C.; Endres, M.; Babnigg, G.; Crosson, S.; Joachimiak, A.; Midwest Center for Structural Genomics (MCSG)
Deposited on	:	2017-07-17
Resolution	:	1.95 Å(reported)

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

|		
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.11
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)	:	2.11

1 Overall quality at a glance ⓘ

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

The reported resolution of this entry is 1.95 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.
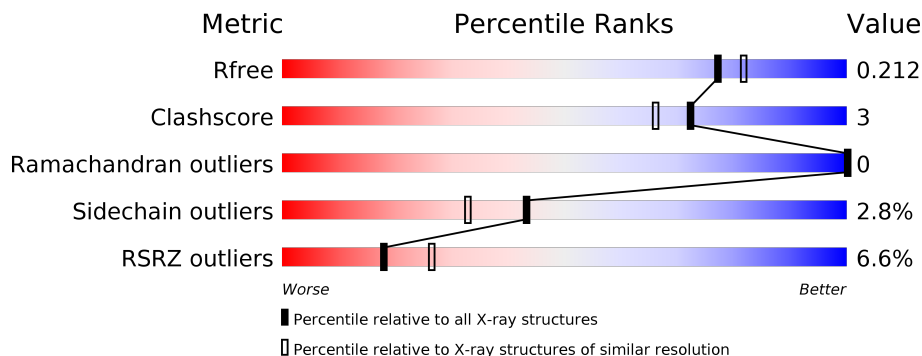
Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	2580 (1.96-1.96)
Clashscore	141614	2705 (1.96-1.96)
Ramachandran outliers	138981	2678 (1.96-1.96)
Sidechain outliers	138945	2678 (1.96-1.96)
RSRZ outliers	127900	2539 (1.96-1.96)

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 on 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	267	2% 94% ··
1	B	267	7% 86% 10% ··
1	C	267	9% 91% 7% ·
1	D	267	7% 87% 10% ··

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit crite-

ria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
2	ACY	D	301[B]	-	-	X	-

2 Entry composition (i)

There are 5 unique types of molecules in this entry. The entry contains 8715 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.
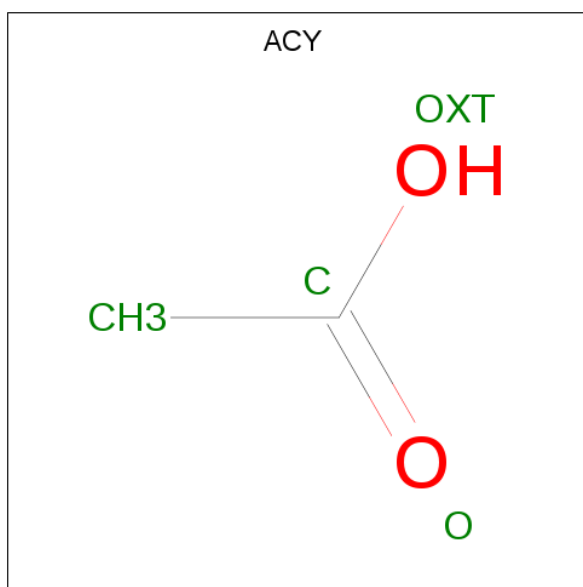
- Molecule 1 is a protein called IclR family transcriptional regulator.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
1	A	263	Total	C	N	O	S	Se	0	3	0
			2076	1305	373	385	4	9			
1	B	260	Total	C	N	O	S	Se	0	1	0
			2042	1286	366	377	4	9			
1	C	264	Total	C	N	O	S	Se	0	5	0
			2101	1320	381	385	4	11			
1	D	260	Total	C	N	O	S	Se	0	15	0
			2144	1354	381	394	4	11			

There are 12 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	18	SER	-	expression tag	UNP A0A1S1ZDZ5
A	19	ASN	-	expression tag	UNP A0A1S1ZDZ5
A	20	ALA	-	expression tag	UNP A0A1S1ZDZ5
B	18	SER	-	expression tag	UNP A0A1S1ZDZ5
B	19	ASN	-	expression tag	UNP A0A1S1ZDZ5
B	20	ALA	-	expression tag	UNP A0A1S1ZDZ5
C	18	SER	-	expression tag	UNP A0A1S1ZDZ5
C	19	ASN	-	expression tag	UNP A0A1S1ZDZ5
C	20	ALA	-	expression tag	UNP A0A1S1ZDZ5
D	18	SER	-	expression tag	UNP A0A1S1ZDZ5
D	19	ASN	-	expression tag	UNP A0A1S1ZDZ5
D	20	ALA	-	expression tag	UNP A0A1S1ZDZ5

- Molecule 2 is ACETIC ACID (three-letter code: ACY) (formula: $C_2H_4O_2$).

Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
2	A	1	Total 4	C 2	O 2	0	0
2	A	1	Total 4	C 2	O 2	0	0
2	B	1	Total 4	C 2	O 2	0	0
2	C	1	Total 4	C 2	O 2	0	0
2	C	1	Total 4	C 2	O 2	0	0
2	D	1	Total 8	C 4	O 4	0	1
2	D	1	Total 4	C 2	O 2	0	0

- Molecule 3 is CALCIUM ION (three-letter code: CA) (formula: Ca).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	A	1	Total 1	Ca 1	0	0

- Molecule 4 is 1,2-ETHANEDIOL (three-letter code: EDO) (formula: $C_2H_6O_2$).

EDO

O2

OH

C1

C2

HO

O1

Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
4	C	1	Total 4	C 2	O 2	0	0

- Molecule 5 is water.

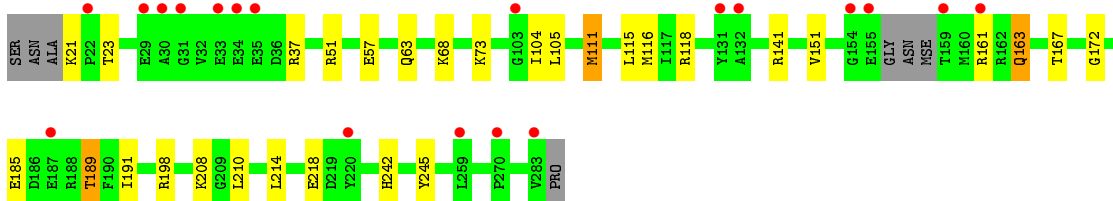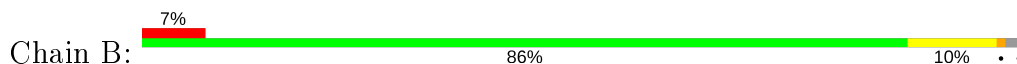| Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
5	A	123	Total 123	O 123	0	0
5	B	50	Total 50	O 50	0	0
5	C	91	Total 91	O 91	0	0
5	D	51	Total 51	O 51	0	0

3 Residue-property plots ⓘ

These plots are drawn for all protein, RNA and DNA 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: IclR family transcriptional regulator

Chain A:

2%

94%

SER ASN ALA K21 A30 G31 V32 E35 D36 R37 R90 Q99 I102 M111 I112 S113 T119 E155 G156 N157 MSE T159 T189 E193 H194 P284

- Molecule 1: IclR family transcriptional regulator

Chain B:

7%

86%

10%

SER ASN ALA K21 P22 T23 E29 A30 G31 V32 E33 E34 E35 D36 R37 R51 E57 Q63 K68 K73 G103 I104 L105 M111 L115 M116 I117 R118 Y131 A132 R141 V151 G154 E155 GLY ASN MSE T159 M160 R161 R162 Q163 T167 G172

E185 D186 E187 R188 T189 F190 I191 R198 K208 G209 L210 L214 E218 D219 Y220 H242 Y245 L259 P270 V283 PRO

- Molecule 1: IclR family transcriptional regulator

Chain C:

9%

91%

7%

SER ASN ALA K21 T26 E29 A30 G31 V32 E33 E34 E35 P55 L79 L94 I102 L105 L115 R141 M146 Q153 G154 E155 G156 T159 T167 M183 P184 E185 T189 F190 I191 R196 E197 R198 E199 P200 E201 N202 W203 P204 D232

H242 Y245 D267 R271 I279 V283 P284

- Molecule 1: IclR family transcriptional regulator

Chain D:

7%

87%

10%

SER ASN ALA LYS P22 T23 M24 L28 V32 E48 L94 I102 L105 R106 L107 G108 Y109 A110 M111 L112 S113 N114 L115 M116 I117 R118 V147 E155 GLY ASN MSE T159 M160 R161 R162 T167 V175 E187 R188 R196 E197 R198 E199 P200 E201 N202 W203 P204

4   Data and refinement statistics (i)

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α, β, γ	74.15Å 112.46Å 83.65Å 90.00° 115.86° 90.00°	Depositor
Resolution (Å)	33.56 – 1.95 43.00 – 1.95	Depositor EDS
% Data completeness (in resolution range)	99.1 (33.56-1.95) 99.0 (43.00-1.95)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	0.10	Depositor
$<I/\sigma(I)>$ [1]	1.89 (at 1.95Å)	Xtriage
Refinement program	PHENIX (1.11.1_2575: ???)	Depositor
R, R_{free}	0.177 , 0.212 0.177 , 0.212	Depositor DCC
R_{free} test set	4434 reflections (4.98%)	wwPDB-VP
Wilson B-factor (Å^2)	33.0	Xtriage
Anisotropy	0.518	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.35 , 48.7	EDS
L-test for twinning[2]	$<|L|> = 0.49$, $<L^2> = 0.32$	Xtriage
Estimated twinning fraction	0.022 for h,-k,-h-l	Xtriage
F_o,F_c correlation	0.96	EDS
Total number of atoms	8715	wwPDB-VP
Average B, all atoms (Å^2)	49.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.31% of the height of the origin peak. No significant pseudotranslation is detected.*

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[1]Intensities estimated from amplitudes.

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

5 Model quality (i)

5.1 Standard geometry (i)

Bond lengths and bond angles in the following residue types are not validated in this section: CA, ACY, EDO

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	0.56	0/2105	0.67	0/2837
1	B	0.44	0/2070	0.63	0/2789
1	C	0.50	0/2130	0.62	0/2868
1	D	0.44	0/2171	0.61	0/2922
All	All	0.49	0/8476	0.63	0/11416

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 (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	2076	0	2091	11	0
1	B	2042	0	2064	23	0
1	C	2101	0	2123	13	0
1	D	2144	0	2180	25	0
2	A	8	0	6	0	0
2	B	4	0	3	0	0
2	C	8	0	6	1	0
2	D	12	0	9	3	0
3	A	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	C	4	0	6	1	0
5	A	123	0	0	0	0
5	B	50	0	0	1	0
5	C	91	0	0	0	0
5	D	51	0	0	4	0
All	All	8715	0	8488	58	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 3.

All (58) 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:C:79:LEU:HD21	2:C:303:ACY:H2	1.74	0.68
2:D:301[B]:ACY:OXT	5:D:401:HOH:O	2.10	0.68
1:C:242:HIS:CD2	1:C:245:TYR:HD2	2.18	0.61
1:B:104:ILE:HG22	1:D:108[A]:GLY:HA2	1.83	0.60
1:B:105:LEU:HD21	1:D:112[A]:LEU:HG	1.84	0.59
1:A:119:THR:CG2	1:D:277:HIS:HE1	2.18	0.56
1:B:115:LEU:HB2	1:B:118:ARG:HD2	1.90	0.54
1:D:214:LEU:O	1:D:218:GLU:HG3	2.08	0.53
1:D:115[B]:LEU:O	1:D:118:ARG:HB3	2.10	0.52
1:B:151:VAL:HG21	1:B:163:GLN:HB2	1.91	0.52
1:C:102:ILE:HB	4:C:301:EDO:H12	1.93	0.50
2:D:301[A]:ACY:O	5:D:402:HOH:O	2.19	0.49
1:B:111:MSE:SE	1:D:105[A]:LEU:HD21	2.63	0.48
1:B:210:LEU:O	1:B:214:LEU:HG	2.12	0.48
1:B:23:THR:OG1	2:D:301[B]:ACY:H1	2.13	0.48
1:D:161:ARG:NH2	5:D:408:HOH:O	2.48	0.47
1:B:116:MSE:HA	1:B:116:MSE:HE2	1.97	0.47
1:B:63:GLN:NE2	1:B:73:LYS:HD2	2.29	0.46
1:D:161:ARG:HG2	1:D:162:ARG:O	2.15	0.46
1:B:105:LEU:HD23	1:B:105:LEU:HA	1.70	0.46
1:B:214:LEU:O	1:B:218:GLU:HG2	2.15	0.46
1:C:232:ASP:OD2	1:D:116[B]:MSE:HE1	2.15	0.46
1:B:104:ILE:HG23	1:D:107[A]:LEU:HB2	1.98	0.45
1:B:105:LEU:HD11	1:D:112[A]:LEU:CD2	2.47	0.45
1:A:90:ARG:NH1	1:A:99:GLN:OE1	2.48	0.45
1:D:116[B]:MSE:HB3	1:D:116[B]:MSE:HE3	1.64	0.45
1:A:119:THR:HG21	1:D:277:HIS:HE1	1.81	0.45
1:D:198:ARG:HG2	1:D:199:GLU:N	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:24:MSE:HE1	1:D:32:VAL:HG11	1.99	0.44
1:A:119:THR:HG23	1:D:277:HIS:HE1	1.82	0.44
1:C:183:MSE:SE	1:C:191:ILE:HD12	2.68	0.43
1:A:189:THR:O	1:A:193:GLU:HG2	2.19	0.43
1:D:28:LEU:HG	1:D:48:GLU:HG3	2.00	0.43
1:D:147:VAL:HG22	1:D:167:THR:HG22	2.00	0.43
1:C:279:ILE:O	1:C:283:VAL:HG12	2.18	0.43
1:B:141:ARG:O	1:D:102[A]:ILE:HD11	2.19	0.42
1:D:116[B]:MSE:H	1:D:116[B]:MSE:HG2	1.52	0.42
1:B:185:GLU:O	1:B:189:THR:OG1	2.38	0.42
1:B:111:MSE:SE	1:D:105[A]:LEU:CD2	3.18	0.42
1:A:21:LYS:HD2	1:A:21:LYS:HA	1.86	0.42
1:B:172:GLY:N	5:B:403:HOH:O	2.51	0.42
1:C:267:ASP:OD1	1:C:271:ARG:HD2	2.20	0.42
1:B:167:THR:HG21	1:D:106[A]:ARG:HD3	2.02	0.42
1:B:57:GLU:OE1	1:B:68:LYS:NZ	2.35	0.41
1:C:94:LEU:HD13	1:C:94:LEU:HA	1.90	0.41
1:D:242:HIS:HE2	1:D:283:VAL:CG1	2.33	0.41
1:A:35:GLU:OE1	1:A:37:ARG:NH2	2.48	0.41
1:A:113[B]:SER:OG	1:C:55:PRO:HA	2.21	0.41
1:A:102:ILE:H	1:A:102:ILE:HG13	1.69	0.41
1:A:119:THR:HG21	1:D:277:HIS:CE1	2.55	0.41
1:B:242:HIS:CG	1:B:245:TYR:HD2	2.39	0.41
1:B:51:ARG:HD3	5:D:444:HOH:O	2.20	0.41
1:C:283:VAL:HG13	1:C:283:VAL:O	2.21	0.41
1:B:105:LEU:HD21	1:D:112[A]:LEU:CG	2.48	0.41
1:B:141:ARG:CZ	1:B:191:ILE:HD11	2.51	0.41
1:C:115:LEU:HD22	1:C:245:TYR:HE1	1.85	0.41
1:A:102:ILE:HD11	1:C:141:ARG:O	2.22	0.40
1:C:146:MSE:O	1:C:167:THR:HA	2.21	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	262/267 (98%)	256 (98%)	6 (2%)	0	100	100
1	B	257/267 (96%)	253 (98%)	4 (2%)	0	100	100
1	C	267/267 (100%)	261 (98%)	6 (2%)	0	100	100
1	D	271/267 (102%)	262 (97%)	9 (3%)	0	100	100
All	All	1057/1068 (99%)	1032 (98%)	25 (2%)	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	225/215 (105%)	221 (98%)	4 (2%)	59	53
1	B	221/215 (103%)	213 (96%)	8 (4%)	35	23
1	C	227/215 (106%)	222 (98%)	5 (2%)	52	44
1	D	232/215 (108%)	221 (95%)	11 (5%)	26	13
All	All	905/860 (105%)	877 (97%)	28 (3%)	43	28

All (28) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	21	LYS
1	A	111	MSE
1	A	157	ASN
1	A	194	HIS
1	B	21	LYS
1	B	37	ARG
1	B	111	MSE
1	B	161	ARG
1	B	163	GLN
1	B	189	THR

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Mol	Chain	Res	Type
1	B	198	ARG
1	B	208	LYS
1	C	21	LYS
1	C	153	GLN
1	C	189	THR
1	C	202	ASN
1	C	242	HIS
1	D	94	LEU
1	D	105[A]	LEU
1	D	105[B]	LEU
1	D	106[A]	ARG
1	D	106[B]	ARG
1	D	111[A]	MSE
1	D	111[B]	MSE
1	D	175	VAL
1	D	188	ARG
1	D	198	ARG
1	D	257	PHE

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

Mol	Chain	Res	Type
1	A	153	GLN
1	B	63	GLN
1	B	153	GLN
1	B	163	GLN
1	C	58	ASN
1	D	62	ASN
1	D	277	HIS
1	D	278	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 carbohydrates in this entry.

5.6 Ligand geometry (i)

Of 10 ligands modelled in this entry, 1 is monoatomic - leaving 9 for Mogul analysis.

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	#$|Z| > 2$
4	EDO	C	301	-	3,3,3	0.47	0	2,2,2	0.31	0
2	ACY	D	302	-	1,3,3	1.54	0	0,3,3	0.00	-
2	ACY	C	303	-	1,3,3	2.10	1 (100%)	0,3,3	0.00	-
2	ACY	D	301[B]	-	1,3,3	1.56	0	0,3,3	0.00	-
2	ACY	D	301[A]	-	1,3,3	1.79	0	0,3,3	0.00	-
2	ACY	A	302	-	1,3,3	2.16	1 (100%)	0,3,3	0.00	-
2	ACY	C	302	-	1,3,3	1.64	0	0,3,3	0.00	-
2	ACY	A	301	-	1,3,3	2.14	1 (100%)	0,3,3	0.00	-
2	ACY	B	301	-	1,3,3	2.36	1 (100%)	0,3,3	0.00	-

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
4	EDO	C	301	-	-	0/1/1/1	-

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	301	ACY	CH3-C	2.36	1.51	1.48
2	A	302	ACY	CH3-C	2.16	1.51	1.48
2	A	301	ACY	CH3-C	2.14	1.51	1.48
2	C	303	ACY	CH3-C	-2.10	1.46	1.48

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

4 monomers are involved in 5 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
4	C	301	EDO	1	0
2	C	303	ACY	1	0
2	D	301[B]	ACY	2	0
2	D	301[A]	ACY	1	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 (i)

6.1 Protein, DNA and RNA chains (i)

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å²)	Q<0.9
1	A	254/267 (95%)	0.03	5 (1%)	65	73	20, 35, 77, 121	0
1	B	251/267 (94%)	0.21	19 (7%)	13	21	28, 49, 90, 117	0
1	C	254/267 (95%)	0.41	23 (9%)	9	15	21, 42, 100, 133	0
1	D	251/267 (94%)	0.35	20 (7%)	12	19	23, 43, 97, 134	0
All	All	1010/1068 (94%)	0.25	67 (6%)	18	26	20, 43, 93, 134	0

All (67) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	32	VAL	8.1
1	B	283	VAL	6.8
1	C	201	GLU	5.5
1	D	257	PHE	5.2
1	D	159	THR	5.1
1	B	34	GLU	4.8
1	C	200	PRO	4.5
1	C	34	GLU	4.4
1	B	161	ARG	4.4
1	B	154	GLY	4.1
1	A	156	GLY	4.0
1	C	199	GLU	3.9
1	B	31	GLY	3.9
1	A	30	ALA	3.8
1	C	156	GLY	3.8
1	D	203	TRP	3.7
1	B	155	GLU	3.7
1	C	190	PHE	3.7
1	C	159	THR	3.6
1	C	31	GLY	3.6
1	B	159	THR	3.6

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Mol	Chain	Res	Type	RSRZ
1	D	22	PRO	3.6
1	B	132	ALA	3.4
1	D	259	LEU	3.4
1	C	35	GLU	3.1
1	D	114[A]	ASN	3.1
1	D	206	ILE	3.0
1	D	231	ARG	3.0
1	D	243	LYS	3.0
1	A	155	GLU	2.9
1	B	33	GLU	2.9
1	D	109[A]	TYR	2.9
1	D	199	GLU	2.8
1	D	230	HIS	2.8
1	C	29	GLU	2.7
1	C	33	GLU	2.7
1	C	26	THR	2.7
1	C	196	ARG	2.6
1	B	22	PRO	2.6
1	A	157	ASN	2.5
1	C	189	THR	2.5
1	D	161	ARG	2.5
1	C	94	LEU	2.5
1	B	35	GLU	2.4
1	D	201	GLU	2.4
1	C	154	GLY	2.4
1	D	196	ARG	2.4
1	C	204	PRO	2.4
1	B	30	ALA	2.3
1	D	23	THR	2.3
1	B	29	GLU	2.3
1	C	105	LEU	2.3
1	D	204	PRO	2.2
1	C	155	GLU	2.2
1	D	258	GLN	2.2
1	D	155	GLU	2.2
1	C	102	ILE	2.2
1	C	203	TRP	2.2
1	B	131	TYR	2.2
1	C	197	GLU	2.1
1	D	187	GLU	2.1
1	B	270	PRO	2.1
1	C	185	GLU	2.1

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Mol	Chain	Res	Type	RSRZ
1	B	220	TYR	2.1
1	B	187	GLU	2.1
1	B	259	LEU	2.1
1	B	103	GLY	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 carbohydrates 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, 95th 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
3	CA	A	303	1/1	0.79	0.11	104,104,104,104	0
4	EDO	C	301	4/4	0.89	0.24	57,61,65,67	0
2	ACY	A	302	4/4	0.89	0.21	45,55,57,60	0
2	ACY	C	303	4/4	0.90	0.31	49,57,62,62	0
2	ACY	D	301[A]	4/4	0.92	0.16	45,45,47,48	4
2	ACY	D	301[B]	4/4	0.92	0.16	46,47,47,48	4
2	ACY	B	301	4/4	0.94	0.08	36,41,42,43	0
2	ACY	D	302	4/4	0.97	0.20	53,55,55,56	0
2	ACY	C	302	4/4	0.98	0.06	35,36,38,40	0
2	ACY	A	301	4/4	0.99	0.07	21,23,25,26	0

6.5 Other polymers (i)

There are no such residues in this entry.