Full wwPDB X-ray Structure Validation Report (i)

Jun 18, 2024 – 12:19 AM EDT

PDB ID	:	5X1I
Title	:	Vanillate/3-O-methylgallate O-demethylase, LigM, substrate free form
Authors	:	Harada, A.; Senda, T.
Deposited on	:	2017-01-26
Resolution	:	1.90 Å(reported)

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

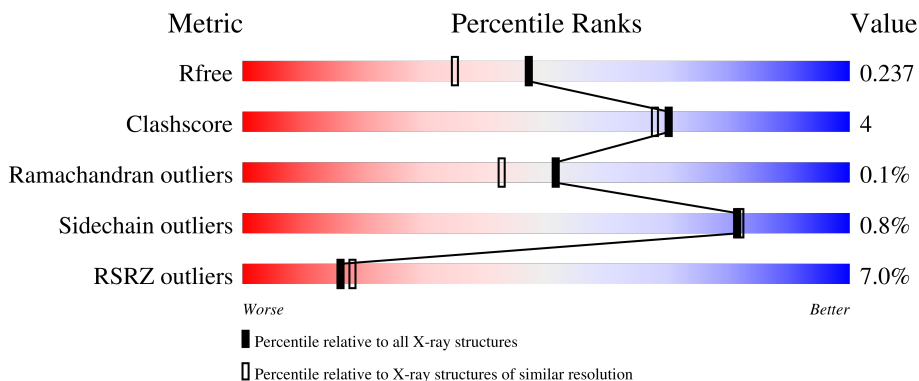|		
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.37.1
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.37.1

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 1.90 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	Percentile Ranks	Value
Rfree		0.237
Clashscore		4
Ramachandran outliers		0.1%
Sidechain outliers		0.8%
RSRZ outliers		7.0%

Worse ... *Better*

▌ Percentile relative to all X-ray structures

▯ Percentile relative to X-ray structures of similar resolution

Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	6207 (1.90-1.90)
Clashscore	141614	6847 (1.90-1.90)
Ramachandran outliers	138981	6760 (1.90-1.90)
Sidechain outliers	138945	6760 (1.90-1.90)
RSRZ outliers	127900	6082 (1.90-1.90)

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	474	2% / 87% / 8% / 5%
1	B	474	% / 90% / · / 5%
1	C	474	17% / 82% / 12% / 5%

2 Entry composition ⓘ

There are 3 unique types of molecules in this entry. The entry contains 10898 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 Vanillate/3-O-methylgallate O-demethylase.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	452	Total	C	N	O	S	0	2	0
			3539	2269	595	661	14			
1	B	450	Total	C	N	O	S	0	1	0
			3512	2255	591	654	12			
1	C	448	Total	C	N	O	S	0	1	0
			3361	2154	572	623	12			

There are 9 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-2	GLY	-	expression tag	UNP G2IQS7
A	-1	SER	-	expression tag	UNP G2IQS7
A	0	SER	-	expression tag	UNP G2IQS7
B	-2	GLY	-	expression tag	UNP G2IQS7
B	-1	SER	-	expression tag	UNP G2IQS7
B	0	SER	-	expression tag	UNP G2IQS7
C	-2	GLY	-	expression tag	UNP G2IQS7
C	-1	SER	-	expression tag	UNP G2IQS7
C	0	SER	-	expression tag	UNP G2IQS7

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

EDO

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	B	1	Total 4	C 2	O 2	0	0

- Molecule 3 is water.

| Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	A	230	Total 230	O 230	0	0
3	B	184	Total 184	O 184	0	0
3	C	56	Total 56	O 56	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.
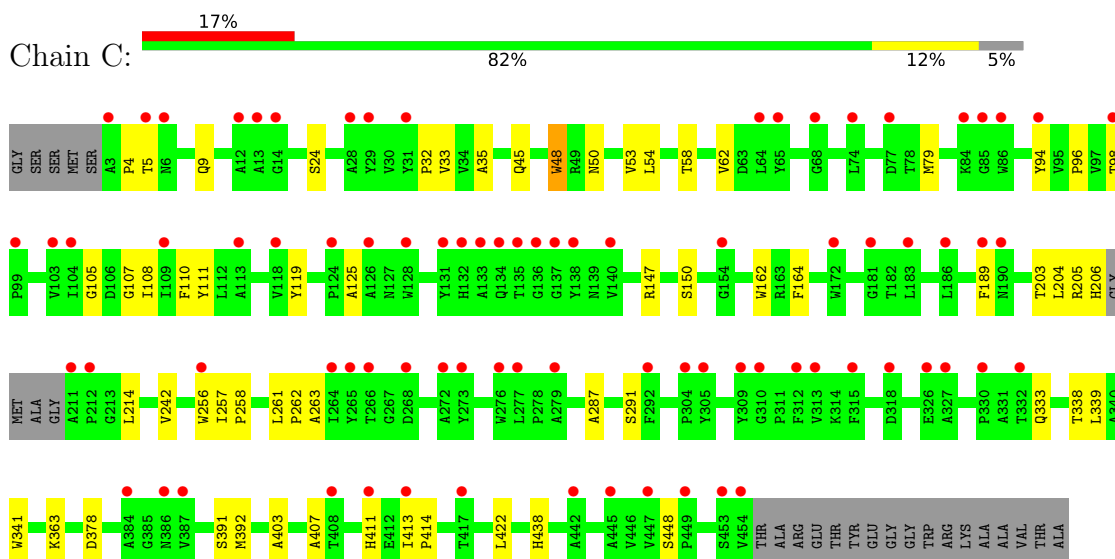
• Molecule 1: Vanillate/3-O-methylgallate O-demethylase
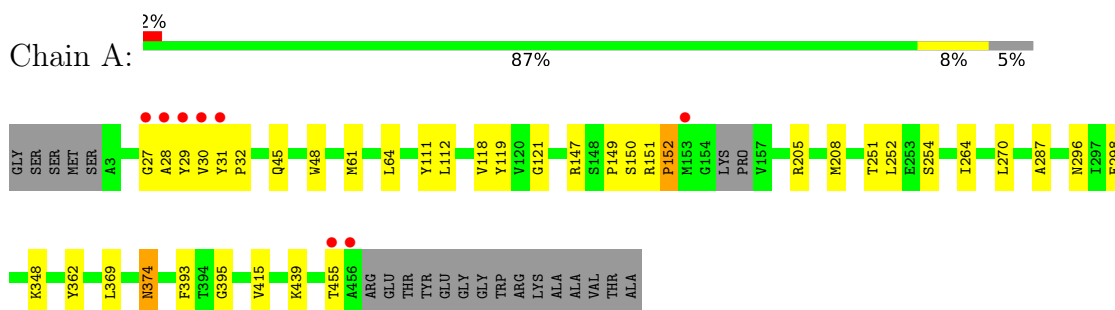
Chain A:

• Molecule 1: Vanillate/3-O-methylgallate O-demethylase

Chain B:

• Molecule 1: Vanillate/3-O-methylgallate O-demethylase

Chain C:
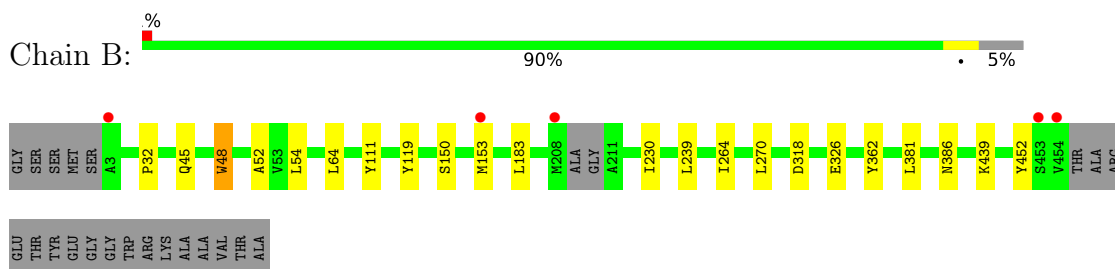
4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 2	Depositor
Cell constants a, b, c, α, β, γ	102.00Å 118.60Å 128.84Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	47.42 – 1.90 49.50 – 1.90	Depositor EDS
% Data completeness (in resolution range)	100.0 (47.42-1.90) 93.8 (49.50-1.90)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.22 (at 1.90Å)	Xtriage
Refinement program	PHENIX (1.11.1_2575: ???)	Depositor
R, R_{free}	0.206 , 0.237 0.207 , 0.237	Depositor DCC
R_{free} test set	6188 reflections (5.02%)	wwPDB-VP
Wilson B-factor (Å^2)	21.2	Xtriage
Anisotropy	0.271	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.33 , 43.5	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	0.94	EDS
Total number of atoms	10898	wwPDB-VP
Average B, all atoms (Å^2)	30.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.54% 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 ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: 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	0.44	0/3639	0.59	0/4959
1	B	0.40	0/3613	0.57	0/4929
1	C	0.33	0/3460	0.50	0/4736
All	All	0.39	0/10712	0.55	0/14624

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	3539	0	3396	27	0
1	B	3512	0	3356	14	0
1	C	3361	0	3045	34	0
2	A	8	0	12	0	0
2	B	8	0	12	0	0
3	A	230	0	0	10	1
3	B	184	0	0	3	0
3	C	56	0	0	1	0
All	All	10898	0	9821	73	1

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 4.

All (73) 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:30:VAL:O	3:A:601:HOH:O	1.93	0.85
1:A:147:ARG:NH1	3:A:601:HOH:O	1.97	0.80
1:A:27:GLY:O	3:A:603:HOH:O	2.03	0.76
1:B:326:GLU:OE2	3:B:601:HOH:O	2.11	0.68
1:A:298:GLU:OE1	3:A:604:HOH:O	2.12	0.68
1:B:452:TYR:O	3:B:602:HOH:O	2.15	0.65
1:A:32:PRO:HB3	1:A:150:SER:HA	1.78	0.65
1:C:58:THR:HG23	1:C:162:TRP:HA	1.79	0.64
1:A:415:VAL:HG12	1:A:455:THR:HG21	1.82	0.61
1:C:203:THR:HB	1:C:214:LEU:HD22	1.82	0.61
1:C:261:LEU:HD12	1:C:262:PRO:HD2	1.81	0.61
1:C:205:ARG:HA	1:C:214:LEU:HD23	1.85	0.59
1:B:32:PRO:HB3	1:B:150:SER:HA	1.84	0.59
1:C:378:ASP:HB2	1:C:391:SER:HB3	1.86	0.58
1:B:45:GLN:HG2	1:B:48:TRP:CH2	2.39	0.56
1:A:254:SER:OG	3:A:602:HOH:O	1.93	0.56
1:C:50:ASN:ND2	3:C:503:HOH:O	2.27	0.56
1:A:64:LEU:HB2	1:A:119:TYR:HB3	1.89	0.55
1:A:29:TYR:HB2	1:A:374:ASN:HD22	1.72	0.54
1:C:4:PRO:HA	1:C:9:GLN:HE21	1.74	0.52
1:C:5:THR:H	1:C:9:GLN:NE2	2.06	0.52
1:C:45:GLN:HG2	1:C:48:TRP:CH2	2.46	0.52
1:C:107:GLY:HA3	1:C:119:TYR:CE1	2.45	0.51
1:A:287:ALA:N	1:A:374:ASN:OD1	2.41	0.50
1:A:147:ARG:NH2	3:A:607:HOH:O	2.34	0.50
1:C:24:SER:HB3	1:C:287:ALA:HB2	1.94	0.50
1:A:30:VAL:HB	1:A:150:SER:HB2	1.94	0.49
1:C:363:LYS:HB2	1:C:438:HIS:CD2	2.48	0.49
1:B:264:ILE:HA	1:B:270:LEU:HD13	1.95	0.48
1:A:251:THR:HA	1:A:254:SER:HB2	1.95	0.48
1:A:31:TYR:HA	3:A:601:HOH:O	2.14	0.48
1:A:112:LEU:HD11	1:A:118:VAL:HG23	1.96	0.47
1:C:98:THR:HG21	1:C:263:ALA:O	2.15	0.47
1:A:348:LYS:NZ	1:A:362:TYR:OH	2.48	0.47
1:C:32:PRO:HB3	1:C:150:SER:HA	1.97	0.47
1:A:369:LEU:HD11	1:A:393:PHE:CE2	2.49	0.46
1:A:296:ASN:HB3	3:A:604:HOH:O	2.15	0.46
1:C:79:MET:HB3	1:C:94:TYR:CE1	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:338:THR:OG1	1:C:448:SER:HB2	2.15	0.46
1:C:257:ILE:HD13	1:C:392:MET:HE3	1.98	0.46
1:A:208:MET:HE3	3:A:602:HOH:O	2.16	0.45
1:B:318:ASP:OD2	3:B:603:HOH:O	2.21	0.45
1:B:362:TYR:CZ	1:B:439:LYS:HE3	2.51	0.45
1:A:28:ALA:O	1:A:30:VAL:HG23	2.17	0.45
1:B:153:MET:CE	1:C:35:ALA:H	2.30	0.45
1:B:153:MET:HE2	1:C:35:ALA:H	1.81	0.45
1:C:333:GLN:O	1:C:411:HIS:HB3	2.17	0.44
1:C:256:TRP:CH2	1:C:258:PRO:HB3	2.53	0.44
1:C:108:ILE:HD12	1:C:189:PHE:CE2	2.52	0.44
1:A:61[B]:MET:HE2	1:A:121:GLY:HA2	2.00	0.44
1:C:110:PHE:CE2	1:C:204:LEU:HD22	2.53	0.43
1:C:108:ILE:HD12	1:C:189:PHE:HE2	1.84	0.43
1:A:151:ARG:NH2	3:A:605:HOH:O	2.15	0.43
1:C:119:TYR:OH	1:C:125:ALA:HB3	2.19	0.42
1:C:53:VAL:HB	1:C:242:VAL:HG23	2.00	0.42
1:C:62:VAL:HG22	1:C:147:ARG:H	1.84	0.42
1:C:291:SER:HB2	1:C:422:LEU:HD23	2.02	0.42
1:C:341:TRP:HB2	1:C:403:ALA:HB3	2.02	0.42
1:A:45:GLN:HG2	1:A:48:TRP:CH2	2.55	0.42
1:B:52:ALA:O	1:B:239:LEU:HA	2.19	0.42
1:B:54:LEU:HD13	1:B:230:ILE:HG21	2.02	0.42
1:A:362:TYR:CE1	1:A:439:LYS:HE3	2.55	0.41
1:B:183:LEU:HD12	1:B:183:LEU:HA	1.92	0.41
1:B:381:LEU:HA	1:B:386:ASN:O	2.21	0.41
1:C:413:ILE:HA	1:C:414:PRO:HD3	1.89	0.41
1:A:149:PRO:HG2	1:A:152:PRO:HB3	2.01	0.41
1:B:64:LEU:HB2	1:B:119:TYR:HB3	2.02	0.41
1:C:96:PRO:HD2	1:C:105:GLY:O	2.20	0.41
1:A:264:ILE:HA	1:A:270:LEU:HD13	2.03	0.41
1:C:54:LEU:HD11	1:C:164:PHE:HB3	2.01	0.41
1:C:339:LEU:CD2	1:C:407:ALA:HB3	2.51	0.40
1:A:252:LEU:HD11	1:A:395:GLY:HA3	2.03	0.40
1:C:32:PRO:HB2	1:C:33:VAL:HG23	2.03	0.40

All (1) 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)
3:A:657:HOH:O	3:A:657:HOH:O[2_555]	2.06	0.14

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

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	450/474 (95%)	439 (98%)	10 (2%)	1 (0%)	47	38
1	B	447/474 (94%)	435 (97%)	12 (3%)	0	100	100
1	C	445/474 (94%)	435 (98%)	10 (2%)	0	100	100
All	All	1342/1422 (94%)	1309 (98%)	32 (2%)	1 (0%)	51	42

All (1) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	152	PRO

5.3.2 Protein sidechains ⓘ

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	361/382 (94%)	358 (99%)	3 (1%)	81	82
1	B	356/382 (93%)	354 (99%)	2 (1%)	86	87
1	C	311/382 (81%)	308 (99%)	3 (1%)	76	76
All	All	1028/1146 (90%)	1020 (99%)	8 (1%)	81	82

All (8) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	111	TYR
1	A	205	ARG

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Mol	Chain	Res	Type
1	A	374	ASN
1	B	48	TRP
1	B	111	TYR
1	C	48	TRP
1	C	111	TYR
1	C	206	HIS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (1) such sidechains are listed below:

Mol	Chain	Res	Type
1	C	9	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 ⓘ

4 ligands are 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	EDO	A	502	-	3,3,3	0.42	0	2,2,2	0.79	0
2	EDO	A	501	-	3,3,3	0.60	0	2,2,2	0.18	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#|Z| > 2$	Counts	RMSZ	$\#|Z| > 2$
2	EDO	B	502	-	3,3,3	0.46	0	2,2,2	0.49	0
2	EDO	B	501	-	3,3,3	0.50	0	2,2,2	0.25	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	EDO	A	502	-	-	0/1/1/1	-
2	EDO	A	501	-	-	0/1/1/1	-
2	EDO	B	502	-	-	0/1/1/1	-
2	EDO	B	501	-	-	0/1/1/1	-

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

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, 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(Å^2)	Q<0.9
1	A	452/474 (95%)	0.09	8 (1%)	68	71	14, 21, 36, 54	0
1	B	450/474 (94%)	0.06	5 (1%)	80	82	14, 26, 41, 60	0
1	C	448/474 (94%)	1.16	82 (18%)	1	1	26, 42, 60, 77	0
All	All	1350/1422 (94%)	0.43	95 (7%)	16	18	14, 28, 55, 77	0

All (95) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	C	85	GLY	7.4
1	C	28	ALA	6.9
1	C	272	ALA	5.5
1	C	12	ALA	5.2
1	C	327	ALA	5.0
1	C	131	TYR	4.9
1	C	3	ALA	4.9
1	C	13	ALA	4.8
1	C	315	PHE	4.8
1	C	279	ALA	4.6
1	C	273	TYR	4.5
1	C	211	ALA	4.4
1	C	276	TRP	4.3
1	C	384	ALA	4.2
1	C	309	TYR	4.1
1	C	330	PRO	4.1
1	C	74	LEU	4.1
1	C	86	TRP	4.0
1	A	455	THR	4.0
1	C	133	ALA	3.9
1	C	312	PHE	3.8
1	C	417	THR	3.8
1	C	113	ALA	3.7

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Mol	Chain	Res	Type	RSRZ
1	C	454	VAL	3.6
1	B	208	MET	3.6
1	C	212	PRO	3.5
1	C	98	THR	3.5
1	A	28	ALA	3.4
1	C	140	VAL	3.4
1	C	77	ASP	3.4
1	C	304	PRO	3.3
1	C	408	THR	3.2
1	C	310	GLY	3.1
1	A	30	VAL	3.1
1	C	99	PRO	3.1
1	B	3	ALA	3.1
1	C	189	PHE	3.0
1	C	68	GLY	3.0
1	C	313	VAL	3.0
1	B	453	SER	3.0
1	C	264	ILE	2.9
1	C	387	VAL	2.8
1	C	445	ALA	2.8
1	C	181	GLY	2.8
1	C	137	GLY	2.8
1	C	104	ILE	2.8
1	C	65	TYR	2.7
1	C	305	TYR	2.7
1	C	135	THR	2.7
1	C	183	LEU	2.7
1	C	29	TYR	2.6
1	C	453	SER	2.6
1	C	447	VAL	2.6
1	C	31	TYR	2.6
1	A	27	GLY	2.6
1	C	128	TRP	2.6
1	C	186	LEU	2.5
1	C	277	LEU	2.5
1	C	332	THR	2.5
1	A	153	MET	2.5
1	C	172	TRP	2.5
1	B	153	MET	2.5
1	A	29	TYR	2.5
1	C	134	GLN	2.5
1	A	31	TYR	2.5

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Mol	Chain	Res	Type	RSRZ
1	C	138	TYR	2.4
1	C	326	GLU	2.4
1	C	265	TYR	2.3
1	C	84	LYS	2.3
1	C	126	ALA	2.3
1	C	386	ASN	2.3
1	B	454	VAL	2.3
1	C	103	VAL	2.3
1	C	256	TRP	2.2
1	C	64	LEU	2.2
1	C	132	HIS	2.2
1	C	411	HIS	2.2
1	C	268	ASP	2.2
1	C	14	GLY	2.2
1	C	442	ALA	2.2
1	C	449	PRO	2.1
1	C	154	GLY	2.1
1	C	118	VAL	2.1
1	C	136	GLY	2.1
1	C	318	ASP	2.1
1	C	109	ILE	2.1
1	C	94	TYR	2.1
1	C	190	ASN	2.1
1	C	124	PRO	2.1
1	C	5	THR	2.0
1	A	456	ALA	2.0
1	C	292	PHE	2.0
1	C	6	ASN	2.0
1	C	413	ILE	2.0
1	C	266	THR	2.0

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

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

6.3 Carbohydrates ⓘ

There are no monosaccharides in this entry.

6.4 Ligands ⓘ

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
2	EDO	A	502	4/4	0.89	0.16	28,31,32,33	0
2	EDO	B	502	4/4	0.96	0.09	24,26,34,39	0
2	EDO	B	501	4/4	0.98	0.10	20,21,22,23	0
2	EDO	A	501	4/4	0.98	0.09	16,18,19,19	0

6.5 Other polymers ⓘ

There are no such residues in this entry.