Full wwPDB X-ray Structure Validation Report (i)

Nov 5, 2023 – 01:20 PM EST

PDB ID	:	4MYS
Title	:	1.4 Angstrom Crystal Structure of 2-succinyl-6-hydroxy-2,4-cyclohexadiene-1 -carboxylate synthase with SHCHC and Pyruvate
Authors	:	Sun, Y.; Yin, S.; Feng, Y.; Li, J.; Zhou, J.; Liu, C.; Zhu, G.; Guo, Z.
Deposited on	:	2013-09-28
Resolution	:	1.42 Å(reported)

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

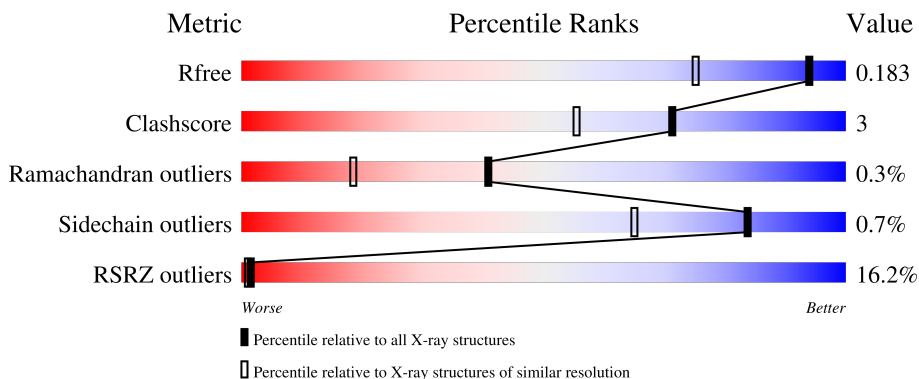|		
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.36
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36

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 1.42 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		0.183
Clashscore		3
Ramachandran outliers		0.3%
Sidechain outliers		0.7%
RSRZ outliers		16.2%

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	2579 (1.44-1.40)
Clashscore	141614	2696 (1.44-1.40)
Ramachandran outliers	138981	2632 (1.44-1.40)
Sidechain outliers	138945	2631 (1.44-1.40)
RSRZ outliers	127900	2528 (1.44-1.40)

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	252	96%
1	B	252	96%
1	C	252	86% 13%

2   Entry composition ⓘ

There are 5 unique types of molecules in this entry. The entry contains 8636 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 2-succinyl-6-hydroxy-2,4-cyclohexadiene-1-carboxylate synthase.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	252	Total	C	N	O	S	0	1	0
			1934	1220	348	357	9			
1	B	252	Total	C	N	O	S	0	7	0
			1983	1252	357	364	10			
1	C	251	Total	C	N	O	S	0	251	0
			3846	2434	700	696	16			

- Molecule 2 is 2-(3-CARBOXYPROPIONYL)-6-HYDROXY-CYCLOHEXA-2,4-DIENE CARBOXYLIC ACID (three-letter code: 164) (formula: $C_{11}H_{12}O_6$).
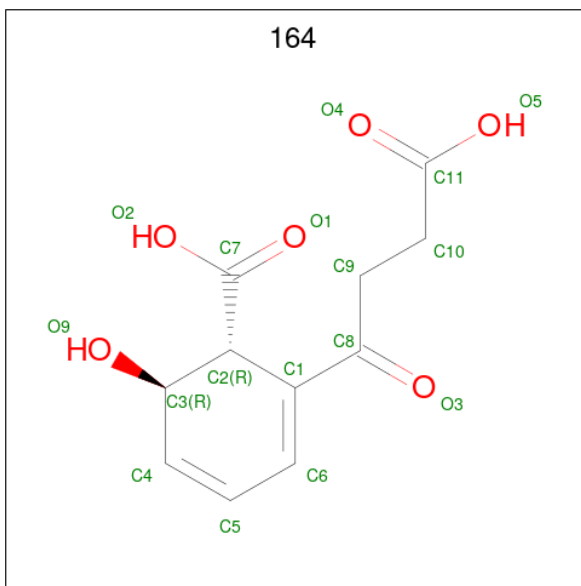
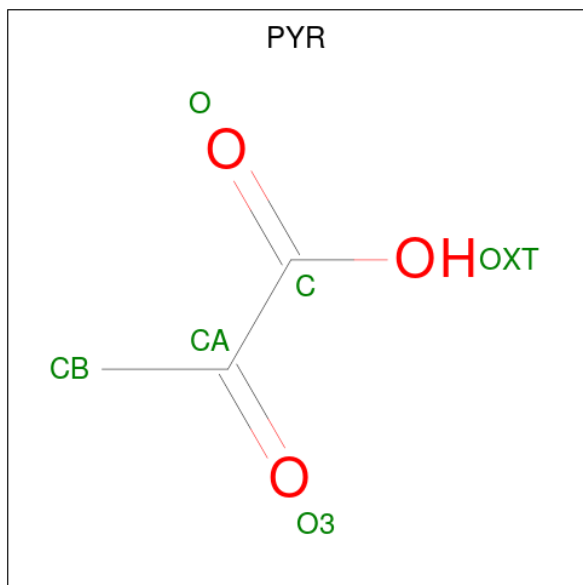| Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
2	A	1	Total	C	O	0	0
			17	11	6		
2	B	1	Total	C	O	0	0
			17	11	6		

- Molecule 3 is GLYCEROL (three-letter code: GOL) (formula: $C_3H_8O_3$).

Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
3	A	1	Total 6	C 3	O 3	0	0

- Molecule 4 is PYRUVIC ACID (three-letter code: PYR) (formula: $C_3H_4O_3$).

Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
4	B	1	Total 6	C 3	O 3	0	0

- Molecule 5 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
5	A	364	Total 364	O 364	0	0
5	B	378	Total 378	O 378	0	0
5	C	85	Total 85	O 85	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.

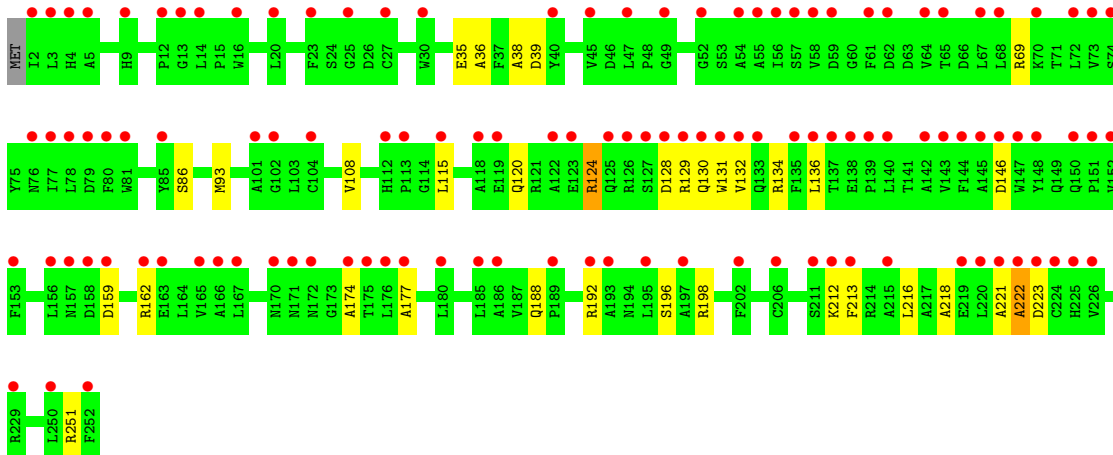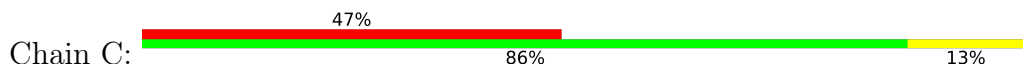• Molecule 1: 2-succinyl-6-hydroxy-2,4-cyclohexadiene-1-carboxylate synthase

Chain A:

• Molecule 1: 2-succinyl-6-hydroxy-2,4-cyclohexadiene-1-carboxylate synthase

Chain B:

• Molecule 1: 2-succinyl-6-hydroxy-2,4-cyclohexadiene-1-carboxylate synthase

Chain C:

4 Data and refinement statistics ⓘ

Property	Value	Source
Space group	P 31	Depositor
Cell constants a, b, c, α, β, γ	122.00Å 122.00Å 46.94Å 90.00° 90.00° 120.00°	Depositor
Resolution (Å)	35.09 – 1.42 37.20 – 1.42	Depositor EDS
% Data completeness (in resolution range)	99.5 (35.09-1.42) 95.9 (37.20-1.42)	Depositor EDS
R_{merge}	0.10	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	2.26 (at 1.42Å)	Xtriage
Refinement program	PHENIX (phenix.refine: 1.8.2_1309)	Depositor
R, R_{free}	0.158 , 0.182 0.159 , 0.183	Depositor DCC
R_{free} test set	7310 reflections (5.01%)	wwPDB-VP
Wilson B-factor (Å^2)	12.5	Xtriage
Anisotropy	0.033	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.29 , 46.5	EDS
L-test for twinning[2]	$< |L| > = 0.50, < L^2 > = 0.33$	Xtriage
Estimated twinning fraction	0.022 for -h,-k,l 0.468 for h,-h-k,-l 0.022 for -k,-h,-l	Xtriage
F_o,F_c correlation	0.97	EDS
Total number of atoms	8636	wwPDB-VP
Average B, all atoms (Å^2)	28.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.03% 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: 164, PYR, GOL

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	0/1982	0.61	0/2693
1	B	0.43	0/2047	0.61	0/2777
1	C	0.24	0/3938	0.42	0/5350
All	All	0.35	0/7967	0.53	0/10820

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	1934	0	1861	8	0
1	B	1983	0	1928	9	1
1	C	3846	0	3710	38	0
2	A	17	0	10	0	0
2	B	17	0	10	0	0
3	A	6	0	8	1	0
4	B	6	0	0	0	0
5	A	364	0	0	7	3
5	B	378	0	0	9	1
5	C	85	0	0	10	0
All	All	8636	0	7527	53	3

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 (53) 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:130:GLN:NE2	5:A:652:HOH:O	2.15	0.78
1:C:128[B]:ASP:HA	1:C:131[B]:TRP:HD1	1.57	0.69
1:C:216[B]:LEU:O	5:C:338:HOH:O	2.13	0.67
1:B:79:ASP:OD2	5:B:467:HOH:O	2.12	0.66
1:C:128[A]:ASP:HA	1:C:131[A]:TRP:HD1	1.61	0.64
1:B:158:ASP:OD1	5:B:775:HOH:O	2.14	0.64
1:A:79:ASP:OD2	5:A:468:HOH:O	2.15	0.63
1:C:128[A]:ASP:O	1:C:130[A]:GLN:N	2.32	0.62
1:C:212[B]:LYS:NZ	5:C:374:HOH:O	2.32	0.62
1:C:128[B]:ASP:O	1:C:130[B]:GLN:N	2.34	0.60
1:C:120[A]:GLN:O	1:C:124[A]:ARG:N	2.33	0.59
1:C:128[A]:ASP:HA	1:C:131[A]:TRP:CD1	2.38	0.59
1:C:216[A]:LEU:O	5:C:331:HOH:O	2.17	0.58
1:C:128[B]:ASP:HA	1:C:131[B]:TRP:CD1	2.37	0.58
1:C:120[B]:GLN:O	1:C:124[B]:ARG:N	2.38	0.57
1:C:188[B]:GLN:O	5:C:315:HOH:O	2.16	0.57
1:C:35[A]:GLU:O	5:C:322:HOH:O	2.18	0.54
1:A:39:ASP:OD2	1:C:251[A]:ARG:HB3	2.08	0.54
1:A:147:TRP:CH2	3:A:302:GOL:H31	2.43	0.54
1:C:38[B]:ALA:HB2	5:C:324:HOH:O	2.07	0.54
1:C:221[A]:ALA:O	1:C:223[A]:ASP:N	2.41	0.53
1:B:229:ARG:NH1	5:B:687:HOH:O	2.41	0.53
5:A:563:HOH:O	1:C:69[B]:ARG:NH1	2.42	0.52
1:B:119:GLU:OE2	5:B:751:HOH:O	2.19	0.51
1:B:39[B]:ASP:OD2	1:C:251[B]:ARG:HB3	2.11	0.51
1:C:38[A]:ALA:HB2	5:C:322:HOH:O	2.10	0.51
1:C:93[B]:MET:HG3	1:C:108[B]:VAL:HG11	1.93	0.51
1:A:229:ARG:NE	5:A:602:HOH:O	2.31	0.50
1:B:35:GLU:OE2	5:B:636:HOH:O	2.19	0.50
1:A:104:CYS:HB3	5:A:522:HOH:O	2.11	0.49
1:B:104:CYS:HB3	5:B:504:HOH:O	2.12	0.49
1:C:132[A]:VAL:HG13	1:C:177[A]:ALA:HB1	1.94	0.49
1:C:134[A]:ARG:NH1	1:C:146[A]:ASP:OD2	2.34	0.48
1:C:132[B]:VAL:HG13	1:C:177[B]:ALA:HB1	1.95	0.48
1:C:134[B]:ARG:NH1	1:C:146[B]:ASP:OD2	2.33	0.47
1:A:219:GLU:O	5:A:698:HOH:O	2.20	0.47
1:C:198[B]:ARG:HH12	1:C:221[B]:ALA:HB3	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:126:ARG:NH2	5:A:471:HOH:O	2.27	0.46
1:C:192[A]:ARG:O	1:C:196[A]:SER:N	2.45	0.45
1:C:115[B]:LEU:HD11	1:C:124[B]:ARG:HB2	1.99	0.45
1:B:126:ARG:NH1	5:B:691:HOH:O	2.49	0.44
1:C:188[A]:GLN:O	5:C:319:HOH:O	2.14	0.44
1:C:212[A]:LYS:HD2	1:C:213[A]:PHE:CE1	2.52	0.44
1:C:212[B]:LYS:HD2	1:C:213[B]:PHE:CE1	2.53	0.44
1:B:162:ARG:NH1	5:B:748:HOH:O	2.34	0.43
1:C:93[A]:MET:HG3	1:C:108[A]:VAL:HG21	1.99	0.43
1:C:218[A]:ALA:HA	1:C:222[A]:ALA:HB2	2.00	0.42
5:B:582:HOH:O	1:C:36[B]:ALA:HB2	2.19	0.42
1:C:216[B]:LEU:HD21	5:C:308:HOH:O	2.19	0.41
1:C:35[B]:GLU:O	5:C:324:HOH:O	2.22	0.41
1:C:39[A]:ASP:OD1	1:C:39[A]:ASP:N	2.51	0.41
1:C:136[B]:LEU:HD23	1:C:174[B]:ALA:HA	2.03	0.40
1:C:159[B]:ASP:OD1	1:C:162[B]:ARG:NH2	2.52	0.40

All (3) 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)
5:A:734:HOH:O	5:B:727:HOH:O[2_554]	2.15	0.05
1:B:130:GLN:NE2	5:A:721:HOH:O[3_555]	2.18	0.02
5:A:497:HOH:O	5:A:660:HOH:O[3_564]	2.19	0.01

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	251/252 (100%)	249 (99%)	2 (1%)	0	100	100
1	B	257/252 (102%)	252 (98%)	5 (2%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	C	498/252 (198%)	476 (96%)	18 (4%)	4 (1%)	19	4
All	All	1006/756 (133%)	977 (97%)	25 (2%)	4 (0%)	41	12

All (4) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	C	129[A]	ARG
1	C	129[B]	ARG
1	C	222[A]	ALA
1	C	222[B]	ALA

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	193/196 (98%)	192 (100%)	1 (0%)	88	73
1	B	202/196 (103%)	201 (100%)	1 (0%)	88	73
1	C	380/196 (194%)	376 (99%)	4 (1%)	73	48
All	All	775/588 (132%)	769 (99%)	6 (1%)	84	61

All (6) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	86	SER
1	B	86	SER
1	C	86[A]	SER
1	C	86[B]	SER
1	C	124[A]	ARG
1	C	124[B]	ARG

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

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	$\#|Z| > 2$
3	GOL	A	302	-	5,5,5	0.53	0	5,5,5	0.85	0
2	164	A	301	-	17,17,17	1.10	1 (5%)	16,23,23	1.92	4 (25%)
2	164	B	301	-	17,17,17	1.01	0	16,23,23	2.40	6 (37%)
4	PYR	B	302	-	5,5,5	1.04	0	3,6,6	1.06	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
3	GOL	A	302	-	-	0/4/4/4	-
2	164	A	301	-	-	0/12/27/27	0/1/1/1
2	164	B	301	-	-	2/12/27/27	0/1/1/1
4	PYR	B	302	-	-	4/4/4/4	-

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	A	301	164	O9-C3	-2.49	1.38	1.43

All (10) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	B	301	164	O1-C7-C2	-4.82	111.57	122.54
2	B	301	164	O4-C11-C10	-4.20	109.58	123.08
2	B	301	164	O5-C11-O4	3.97	133.20	123.30
2	B	301	164	O2-C7-O1	3.94	133.04	124.09
2	A	301	164	O5-C11-O4	3.74	132.62	123.30
2	A	301	164	O2-C7-O1	3.50	132.04	124.09
2	A	301	164	C7-C2-C1	3.35	115.75	110.83
2	A	301	164	O1-C7-C2	-3.21	115.23	122.54
2	B	301	164	C7-C2-C1	2.96	115.18	110.83
2	B	301	164	C9-C10-C11	2.06	118.04	113.60

There are no chirality outliers.

All (6) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
4	B	302	PYR	O-C-CA-O3
4	B	302	PYR	OXT-C-CA-O3
4	B	302	PYR	OXT-C-CA-CB
4	B	302	PYR	O-C-CA-CB
2	B	301	164	C3-C2-C7-O1
2	B	301	164	C1-C2-C7-O2

There are no ring outliers.

1 monomer is involved in 1 short contact:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	A	302	GOL	1	0

5.7 Other polymers ⓘ

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, 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	252/252 (100%)	-0.55	2 (0%)	86	84	8, 15, 42, 86	0
1	B	252/252 (100%)	-0.55	1 (0%)	92	91	8, 15, 41, 68	0
1	C	251/252 (99%)	2.39	119 (47%)	0	0	14, 33, 59, 99	0
All	All	755/756 (99%)	0.43	122 (16%)	1	1	8, 20, 53, 99	0

All (122) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	C	126[A]	ARG	12.5
1	C	127[A]	SER	11.6
1	C	128[A]	ASP	11.3
1	C	115[A]	LEU	11.1
1	C	125[A]	GLN	10.7
1	C	222[A]	ALA	10.5
1	C	220[A]	LEU	10.2
1	C	129[A]	ARG	9.4
1	C	142[A]	ALA	7.3
1	C	223[A]	ASP	7.3
1	C	147[A]	TRP	6.8
1	C	133[A]	GLN	6.6
1	C	221[A]	ALA	6.3
1	C	170[A]	ASN	6.2
1	C	153[A]	PHE	6.0
1	C	136[A]	LEU	5.9
1	C	56[A]	ILE	5.9
1	C	64[A]	VAL	5.4
1	C	226[A]	VAL	5.4
1	C	212[A]	LYS	5.4
1	C	79[A]	ASP	5.4
1	C	224[A]	CYS	5.2
1	C	174[A]	ALA	5.0

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Mol	Chain	Res	Type	RSRZ
1	C	54[A]	ALA	4.8
1	C	158[A]	ASP	4.7
1	C	202[A]	PHE	4.7
1	C	177[A]	ALA	4.6
1	C	13[A]	GLY	4.4
1	C	252[A]	PHE	4.3
1	C	192[A]	ARG	4.3
1	C	162[A]	ARG	4.2
1	A	221	ALA	4.2
1	C	215[A]	ALA	4.2
1	C	2[A]	ILE	4.2
1	C	180[A]	LEU	4.1
1	C	139[A]	PRO	4.1
1	C	58[A]	VAL	4.0
1	C	135[A]	PHE	4.0
1	C	68[A]	LEU	4.0
1	C	73[A]	VAL	4.0
1	C	137[A]	THR	3.9
1	C	130[A]	GLN	3.8
1	C	118[A]	ALA	3.8
1	C	131[A]	TRP	3.8
1	C	80[A]	PHE	3.7
1	C	55[A]	ALA	3.7
1	C	14[A]	LEU	3.7
1	C	59[A]	ASP	3.6
1	C	122[A]	ALA	3.5
1	C	143[A]	VAL	3.5
1	C	213[A]	PHE	3.5
1	C	112[A]	HIS	3.4
1	C	67[A]	LEU	3.4
1	C	144[A]	PHE	3.4
1	C	23[A]	PHE	3.3
1	C	185[A]	LEU	3.2
1	C	148[A]	TYR	3.2
1	C	123[A]	GLU	3.1
1	C	57[A]	SER	3.1
1	C	61[A]	PHE	3.1
1	C	52[A]	GLY	3.0
1	A	252	PHE	3.0
1	C	138[A]	GLU	2.9
1	C	119[A]	GLU	2.9
1	C	3[A]	LEU	2.9

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Mol	Chain	Res	Type	RSRZ
1	C	189[A]	PRO	2.9
1	C	172[A]	ASN	2.8
1	C	145[A]	ALA	2.8
1	C	45[A]	VAL	2.8
1	C	152[A]	VAL	2.8
1	C	219[A]	GLU	2.8
1	C	78[A]	LEU	2.8
1	C	186[A]	ALA	2.8
1	C	195[A]	LEU	2.8
1	C	77[A]	ILE	2.8
1	C	76[A]	ASN	2.8
1	C	171[A]	ASN	2.7
1	C	16[A]	TRP	2.7
1	C	12[A]	PRO	2.7
1	C	5[A]	ALA	2.7
1	C	211[A]	SER	2.7
1	C	157[A]	ASN	2.6
1	C	156[A]	LEU	2.6
1	C	81[A]	TRP	2.6
1	C	159[A]	ASP	2.6
1	C	229[A]	ARG	2.6
1	C	49[A]	GLY	2.5
1	C	74[A]	SER	2.5
1	C	225[A]	HIS	2.5
1	C	140[A]	LEU	2.5
1	C	151[A]	PRO	2.4
1	C	150[A]	GLN	2.4
1	C	175[A]	THR	2.4
1	C	165[A]	VAL	2.4
1	C	146[A]	ASP	2.4
1	C	176[A]	LEU	2.4
1	C	27[A]	CYS	2.4
1	C	47[A]	LEU	2.3
1	C	9[A]	HIS	2.3
1	C	4[A]	HIS	2.3
1	C	65[A]	THR	2.3
1	C	30[A]	TRP	2.3
1	C	40[A]	TYR	2.3
1	C	101[A]	ALA	2.2
1	C	206[A]	CYS	2.2
1	C	20[A]	LEU	2.2
1	C	72[A]	LEU	2.2

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Mol	Chain	Res	Type	RSRZ
1	C	250[A]	LEU	2.2
1	C	132[A]	VAL	2.2
1	C	62[A]	ASP	2.2
1	C	70[A]	LYS	2.2
1	C	197[A]	ALA	2.2
1	C	104[A]	CYS	2.1
1	C	163[A]	GLU	2.1
1	C	85[A]	TYR	2.1
1	B	199	THR	2.1
1	C	166[A]	ALA	2.1
1	C	193[A]	ALA	2.1
1	C	102[A]	GLY	2.1
1	C	167[A]	LEU	2.1
1	C	25[A]	GLY	2.0
1	C	113[A]	PRO	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
4	PYR	B	302	6/6	0.95	0.14	21,30,34,36	0
3	GOL	A	302	6/6	0.96	0.10	16,26,38,49	0
2	164	B	301	17/17	0.98	0.06	8,10,14,16	0
2	164	A	301	17/17	0.99	0.05	8,11,14,16	0

6.5 Other polymers ⓘ

There are no such residues in this entry.