Full wwPDB X-ray Structure Validation Report (i)

May 15, 2020 – 11:37 am BST

PDB ID	:	5MZX
Title	:	Crystal structure of the decarboxylase AibA/AibB in complex with 4'-diphospho pantetheine
Authors	:	Bock, T.; Luxenburger, E.; Hoffmann, J.; Schuetza, V.; Feiler, C.; Mueller, R.; Blankenfeldt, W.
Deposited on	:	2017-02-02
Resolution	:	2.00 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 (i) symbol.

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

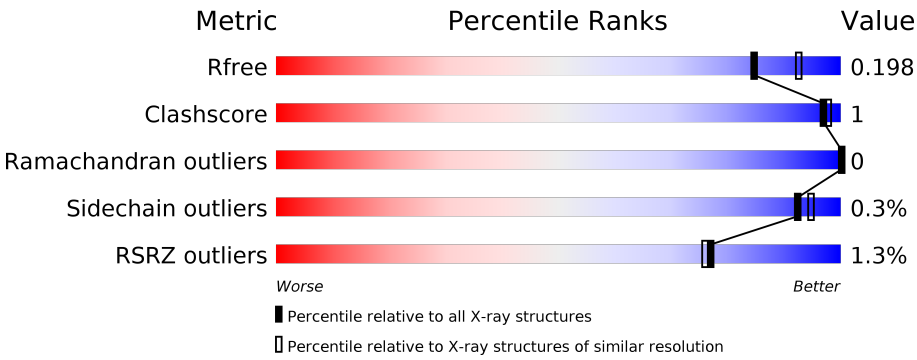
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.11
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.11

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 2.00 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	8085 (2.00-2.00)
Clashscore	141614	9178 (2.00-2.00)
Ramachandran outliers	138981	9054 (2.00-2.00)
Sidechain outliers	138945	9053 (2.00-2.00)
RSRZ outliers	127900	7900 (2.00-2.00)

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	265	2% 97%
1	C	265	97%
2	B	248	2% 93%
2	D	248	% 95%

2 Entry composition (i)

There are 6 unique types of molecules in this entry. The entry contains 15714 atoms, of which 7599 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 Glutaconate CoA-transferase family, subunit A.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
			Total	C	H	N	O	S			
1	A	262	3926	1243	1969	338	362	14	0	5	0
1	C	263	4031	1274	2021	353	370	13	0	10	0

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	191	ALA	LYS	engineered mutation	UNP Q1D4I4
C	191	ALA	LYS	engineered mutation	UNP Q1D4I4

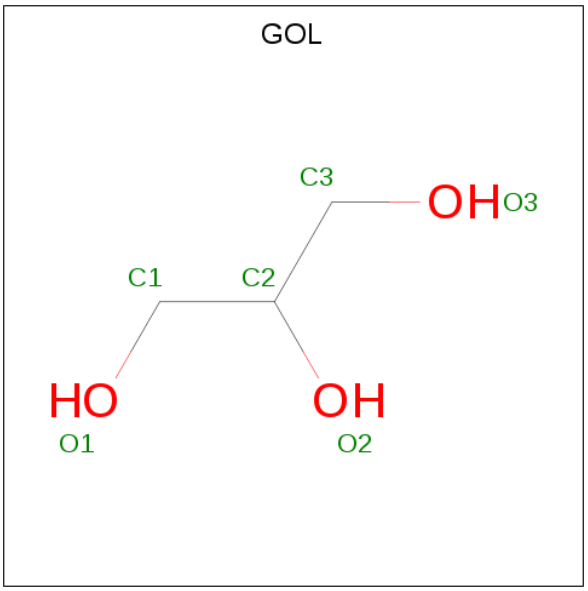
- Molecule 2 is a protein called Glutaconate CoA-transferase family, subunit B.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
			Total	C	H	N	O	S			
2	D	241	3584	1123	1796	329	334	2	0	2	0
2	B	241	3597	1134	1798	328	335	2	0	6	0

There are 8 discrepancies between the modelled and reference sequences:

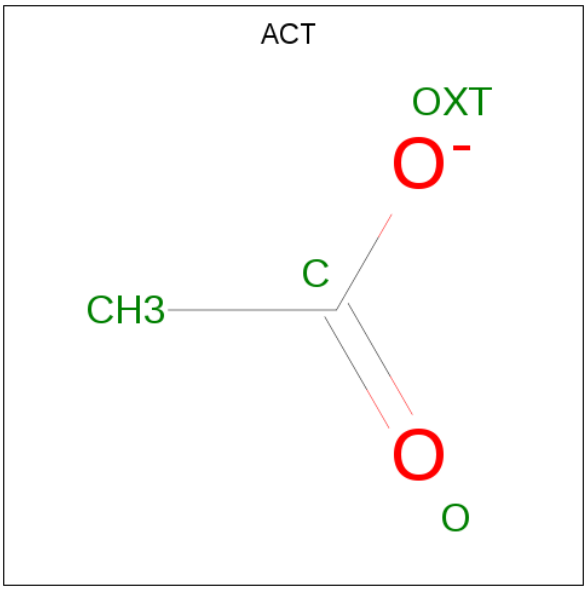
Chain	Residue	Modelled	Actual	Comment	Reference
D	-1	PRO	-	expression tag	UNP Q1D4I3
D	0	HIS	-	expression tag	UNP Q1D4I3
D	200	ALA	GLU	engineered mutation	UNP Q1D4I3
D	201	ALA	GLU	engineered mutation	UNP Q1D4I3
B	-1	PRO	-	expression tag	UNP Q1D4I3
B	0	HIS	-	expression tag	UNP Q1D4I3
B	200	ALA	GLU	engineered mutation	UNP Q1D4I3
B	201	ALA	GLU	engineered mutation	UNP Q1D4I3

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



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

- Molecule 4 is ACETATE ION (three-letter code: ACT) (formula: $C_2H_3O_2$).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
			Total	C	H	O		
4	C	1	7	2	3	2	0	0

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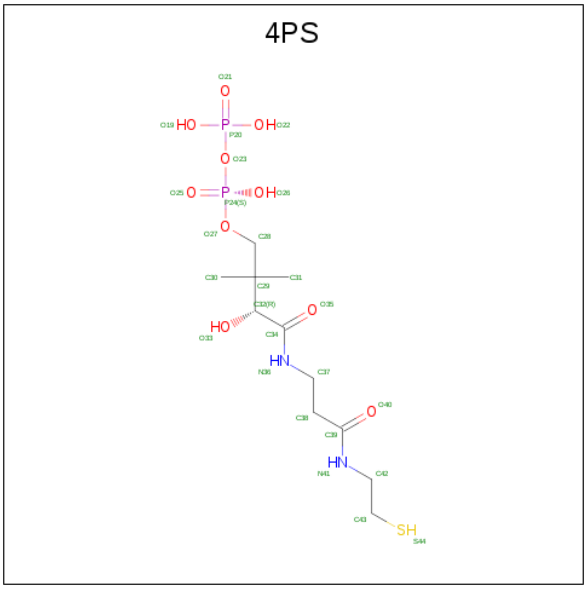
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	C	1	Total C H O 7 2 3 2	0	0
4	C	1	Total C O 4 2 2	0	0
4	C	1	Total C H O 7 2 3 2	0	0
4	D	1	Total C H O 7 2 3 2	0	0
4	B	1	Total C H O 7 2 3 2	0	0

- Molecule 5 is 4'-diphospho pantetheine (three-letter code: 4PS) (formula: $C_{11}H_{24}N_2O_{10}P_2S$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	D	1	Total C N O P S 52 22 4 20 4 2	0	1
5	B	1	Total C N O P S 26 11 2 10 2 1	0	0

- Molecule 6 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
6	A	92	Total O 92 92	0	0
6	C	131	Total O 131 131	0	0

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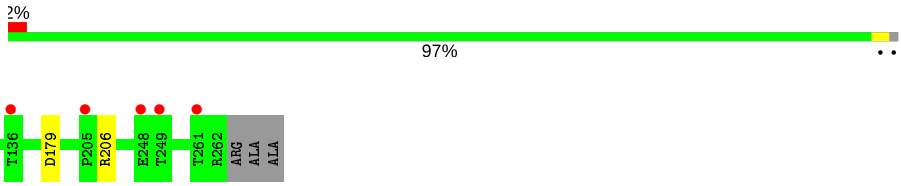
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
			Total	O		
6	D	122	122	122	0	0
			Total	O		
6	B	96	96	96	0	0

3 Residue-property plots (i)

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.

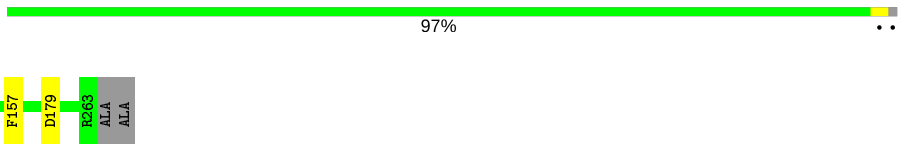
- Molecule 1: Glutaconate CoA-transferase family, subunit A

Chain A:



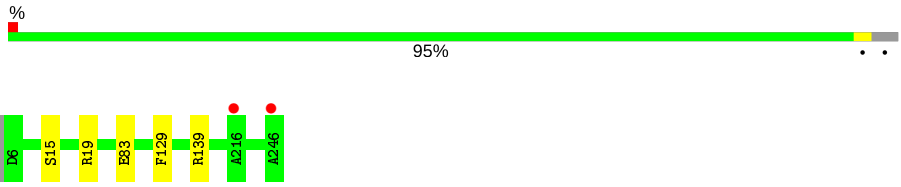
- Molecule 1: Glutaconate CoA-transferase family, subunit A

Chain C:



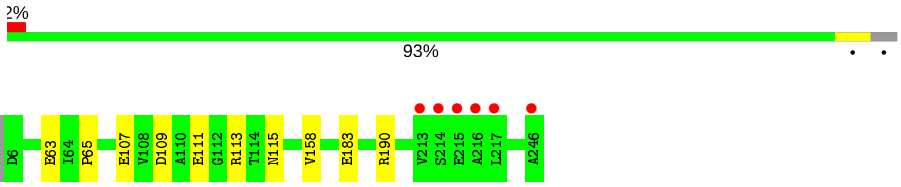
- Molecule 2: Glutaconate CoA-transferase family, subunit B

Chain D:



- Molecule 2: Glutaconate CoA-transferase family, subunit B

Chain B:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α, β, γ	66.55Å 93.39Å 90.04Å 90.00° 103.93° 90.00°	Depositor
Resolution (Å)	46.83 – 2.00 46.83 – 2.00	Depositor EDS
% Data completeness (in resolution range)	99.9 (46.83-2.00) 99.9 (46.83-2.00)	Depositor EDS
R_{merge}	0.12	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	2.02 (at 2.00Å)	Xtriage
Refinement program	PHENIX 1.10.1_2155	Depositor
R, R_{free}	0.164 , 0.197 0.166 , 0.198	Depositor DCC
R_{free} test set	3654 reflections (5.06%)	wwPDB-VP
Wilson B-factor (Å^2)	24.6	Xtriage
Anisotropy	0.481	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.43 , 47.4	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	15714	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 3.71% 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 (i)

5.1 Standard geometry (i)

Bond lengths and bond angles in the following residue types are not validated in this section: GOL, 4PS, ACT

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	0.30	1/2015 (0.0%)	0.45	0/2747
1	C	0.28	1/2082 (0.0%)	0.45	0/2832
2	B	0.25	0/1853	0.47	0/2538
2	D	0.24	0/1829	0.47	0/2501
All	All	0.27	2/7779 (0.0%)	0.46	0/10618

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	179	ASP	C-N	5.96	1.45	1.34
1	C	179	ASP	C-N	5.52	1.44	1.34

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	1957	1969	1958	2	0
1	C	2010	2021	2031	2	0
2	B	1799	1798	1813	5	0
2	D	1788	1796	1805	5	0
3	A	6	0	8	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	C	6	0	8	0	0
3	D	6	0	8	2	0
4	B	4	3	3	0	0
4	C	16	9	12	0	0
4	D	4	3	3	0	0
5	B	26	0	21	1	0
5	D	52	0	42	0	0
6	A	92	0	0	0	0
6	B	96	0	0	1	0
6	C	131	0	0	0	0
6	D	122	0	0	1	0
All	All	8115	7599	7712	14	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 1.

All (14) 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:206:ARG:NH2	2:D:83:GLU:OE1	2.19	0.74
2:B:111:GLU:OE1	2:B:113:ARG:NH2	2.23	0.72
5:B:301:4PS:O26	6:B:401:HOH:O	2.09	0.69
2:D:15[B]:SER:OG	6:D:401:HOH:O	2.16	0.63
2:B:183:GLU:OE1	2:B:190:ARG:NH1	2.38	0.57
2:D:129:PHE:HZ	3:D:303:GOL:H32	1.75	0.51
2:D:15[A]:SER:OG	2:D:19:ARG:NH1	2.44	0.50
2:D:129:PHE:CZ	3:D:303:GOL:H32	2.47	0.49
2:B:63[A]:GLU:HG2	2:B:65:PRO:HD3	1.96	0.47
1:A:53:LEU:HB3	1:A:54:PRO:HD2	1.99	0.44
1:C:53:LEU:HB3	1:C:54:PRO:HD2	1.99	0.44
1:C:21[B]:SER:HG	1:C:157:PHE:HZ	1.63	0.44
2:B:107:GLU:HB2	2:B:115:ASN:HB3	2.03	0.40
2:B:109:ASP:HA	2:B:158:VAL:O	2.22	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	265/265 (100%)	259 (98%)	6 (2%)	0	100	100
1	C	271/265 (102%)	265 (98%)	6 (2%)	0	100	100
2	B	245/248 (99%)	242 (99%)	3 (1%)	0	100	100
2	D	241/248 (97%)	237 (98%)	4 (2%)	0	100	100
All	All	1022/1026 (100%)	1003 (98%)	19 (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	199/201 (99%)	198 (100%)	1 (0%)	88	92
1	C	207/201 (103%)	207 (100%)	0	100	100
2	B	187/193 (97%)	187 (100%)	0	100	100
2	D	184/193 (95%)	183 (100%)	1 (0%)	88	92
All	All	777/788 (99%)	775 (100%)	2 (0%)	92	95

All (2) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	46	ARG
2	D	139	ARG

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

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)

12 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	$\#\|Z\| > 2$
4	ACT	C	302	-	1,3,3	1.32	0	0,3,3	0.00	-
3	GOL	A	301	-	5,5,5	0.36	0	5,5,5	0.28	0
5	4PS	D	301[B]	-	19,25,25	1.79	2 (10%)	30,36,36	1.07	2 (6%)
4	ACT	C	301	-	1,3,3	1.38	0	0,3,3	0.00	-
3	GOL	C	305	-	5,5,5	0.35	0	5,5,5	0.33	0
4	ACT	D	302	-	1,3,3	1.38	0	0,3,3	0.00	-
4	ACT	B	302	-	1,3,3	1.35	0	0,3,3	0.00	-
5	4PS	B	301	-	19,25,25	1.79	2 (10%)	30,36,36	1.09	2 (6%)
5	4PS	D	301[A]	-	19,25,25	1.78	2 (10%)	30,36,36	1.13	2 (6%)
4	ACT	C	303	-	1,3,3	1.48	0	0,3,3	0.00	-
4	ACT	C	304	-	1,3,3	1.28	0	0,3,3	0.00	-
3	GOL	D	303	-	5,5,5	0.38	0	5,5,5	0.22	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	301	-	-	3/4/4/4	-
3	GOL	C	305	-	-	4/4/4/4	-
5	4PS	B	301	-	-	3/33/33/33	-
5	4PS	D	301[A]	-	-	3/33/33/33	-
5	4PS	D	301[B]	-	-	6/33/33/33	-
3	GOL	D	303	-	-	2/4/4/4	-

All (6) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	B	301	4PS	C39-N41	4.90	1.44	1.33
5	D	301[A]	4PS	C39-N41	4.88	1.44	1.33
5	D	301[B]	4PS	C39-N41	4.80	1.44	1.33
5	D	301[B]	4PS	C34-N36	4.69	1.43	1.33
5	B	301	4PS	C34-N36	4.68	1.43	1.33
5	D	301[A]	4PS	C34-N36	4.63	1.43	1.33

All (6) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	B	301	4PS	P24-O23-P20	-2.67	123.66	132.83
5	D	301[A]	4PS	P24-O23-P20	-2.53	124.16	132.83
5	D	301[A]	4PS	O27-C28-C29	-2.43	106.64	110.55
5	D	301[B]	4PS	P24-O23-P20	-2.39	124.64	132.83
5	B	301	4PS	O27-C28-C29	-2.29	106.86	110.55
5	D	301[B]	4PS	O27-C28-C29	-2.18	107.04	110.55

There are no chirality outliers.

All (21) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	A	301	GOL	O1-C1-C2-C3
5	D	301[B]	4PS	P24-O23-P20-O22
5	D	301[B]	4PS	P20-O23-P24-O27
3	C	305	GOL	C1-C2-C3-O3
3	D	303	GOL	O1-C1-C2-C3

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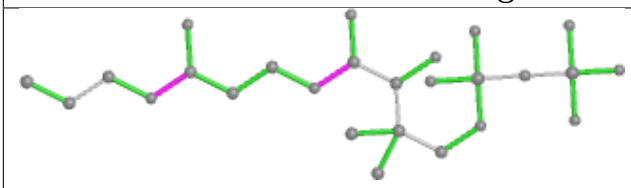
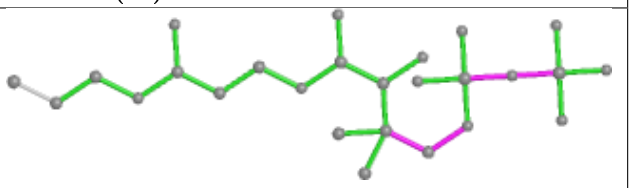
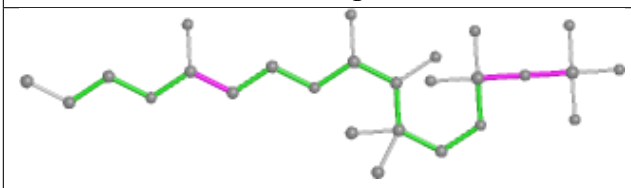
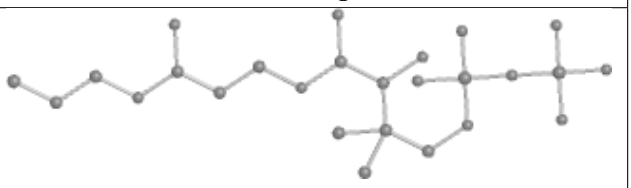
Mol	Chain	Res	Type	Atoms
3	C	305	GOL	O1-C1-C2-C3
3	A	301	GOL	O1-C1-C2-O2
3	C	305	GOL	O2-C2-C3-O3
5	D	301[B]	4PS	C37-C38-C39-O40
3	D	303	GOL	O1-C1-C2-O2
5	D	301[B]	4PS	C37-C38-C39-N41
5	D	301[A]	4PS	C37-C38-C39-O40
3	C	305	GOL	O1-C1-C2-O2
5	B	301	4PS	C37-C38-C39-O40
5	D	301[A]	4PS	C37-C38-C39-N41
5	B	301	4PS	C37-C38-C39-N41
3	A	301	GOL	C1-C2-C3-O3
5	D	301[B]	4PS	P24-O23-P20-O19
5	B	301	4PS	P20-O23-P24-O25
5	D	301[A]	4PS	P20-O23-P24-O25
5	D	301[B]	4PS	P24-O23-P20-O21

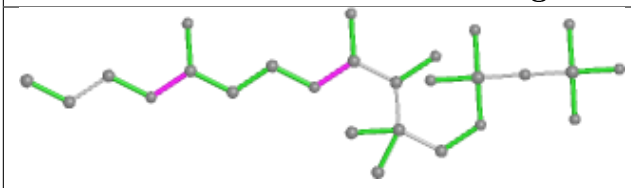
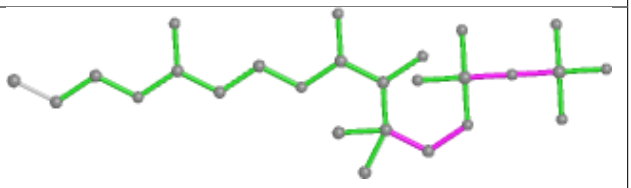
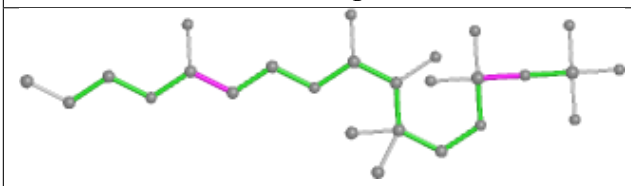
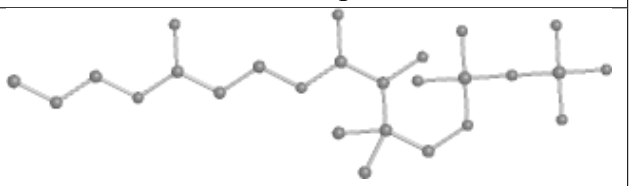
There are no ring outliers.

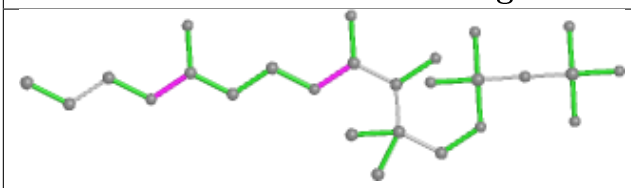
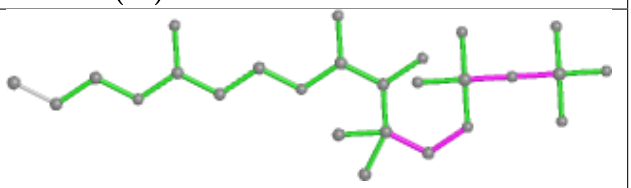
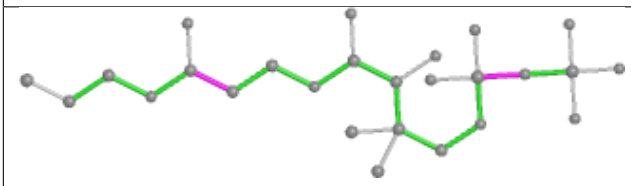
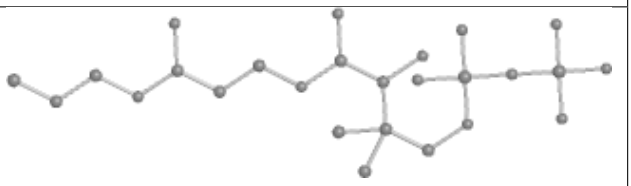
2 monomers are involved in 3 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
5	B	301	4PS	1	0
3	D	303	GOL	2	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less then 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

Ligand 4PS D 301 (B)	
 Bond lengths	 Bond angles
 Torsions	 Rings

Ligand 4PS B 301	
 Bond lengths	 Bond angles
 Torsions	 Rings

Ligand 4PS D 301 (A)	
 Bond lengths	 Bond angles
 Torsions	 Rings

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(Å^2)	Q<0.9
1	A	262/265 (98%)	-0.20	5 (1%) 66 65	20, 27, 50, 71	0
1	C	263/265 (99%)	-0.34	0 100 100	18, 23, 37, 53	0
2	B	241/248 (97%)	-0.17	6 (2%) 57 56	20, 27, 44, 66	0
2	D	241/248 (97%)	-0.24	2 (0%) 86 85	19, 24, 38, 56	0
All	All	1007/1026 (98%)	-0.24	13 (1%) 77 76	18, 25, 43, 71	0

All (13) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	249	THR	6.0
1	A	248	GLU	5.1
2	B	214	SER	4.8
2	B	246	ALA	4.7
2	B	216	ALA	4.0
1	A	136	THR	3.1
2	D	246	ALA	3.0
1	A	205	PRO	2.9
2	D	216	ALA	2.6
2	B	213	VAL	2.6
2	B	215	GLU	2.6
2	B	217	LEU	2.3
1	A	261	THR	2.1

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)

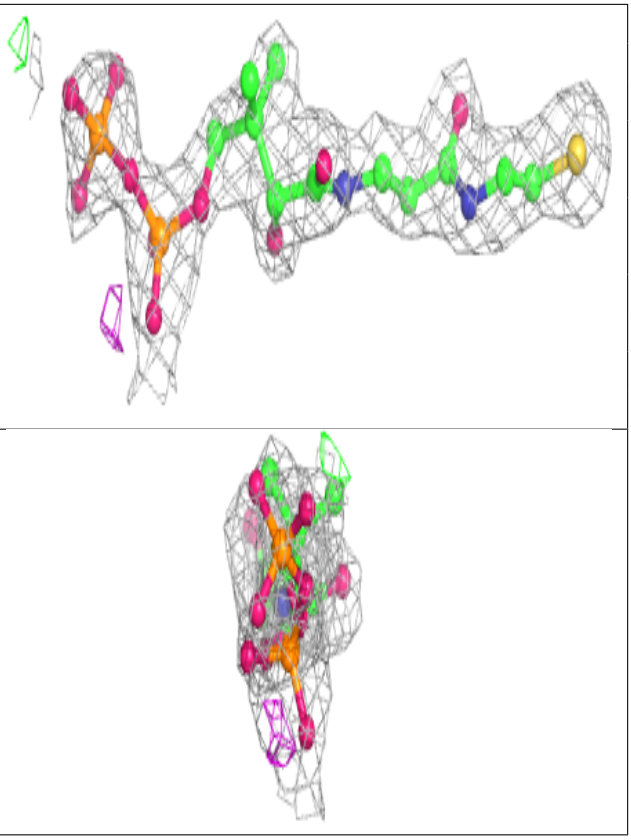
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

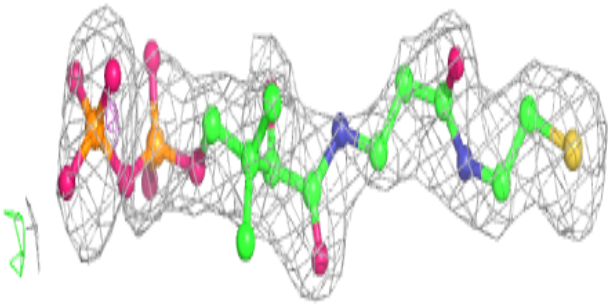
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
3	GOL	D	303	6/6	0.69	0.22	43,48,53,55	0
4	ACT	C	304	4/4	0.75	0.14	23,28,50,57	0
4	ACT	C	303	4/4	0.81	0.29	31,38,44,48	0
5	4PS	B	301	26/26	0.85	0.18	31,45,75,82	0
5	4PS	D	301[B]	26/26	0.91	0.19	24,32,42,51	26
3	GOL	A	301	6/6	0.91	0.12	36,40,45,52	0
5	4PS	D	301[A]	26/26	0.91	0.19	23,32,48,53	26
4	ACT	C	302	4/4	0.92	0.08	40,43,48,48	0
3	GOL	C	305	6/6	0.93	0.14	38,39,42,42	0
4	ACT	B	302	4/4	0.95	0.13	23,28,37,39	0
4	ACT	C	301	4/4	0.95	0.11	25,27,32,32	0
4	ACT	D	302	4/4	0.96	0.13	25,32,33,33	0

The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.

Electron density around 4PS B 301:

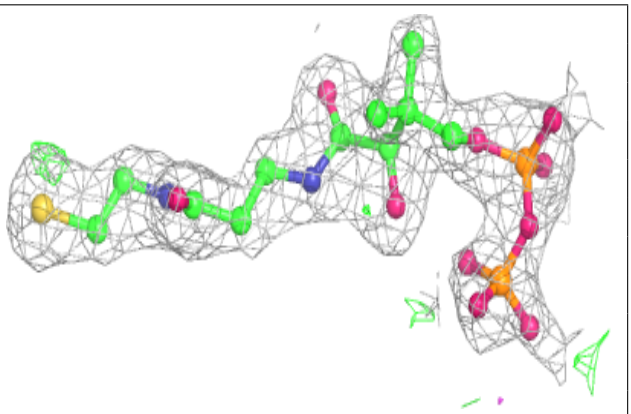
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

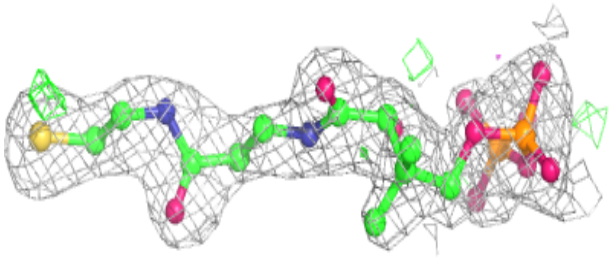


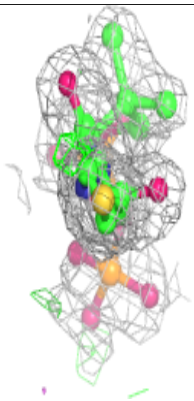


Electron density around 4PS D 301 (B):

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

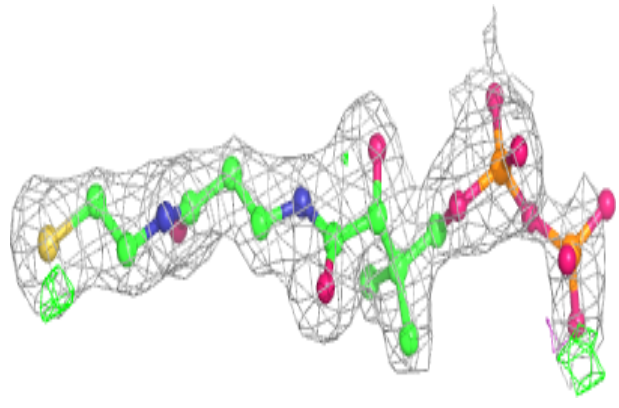


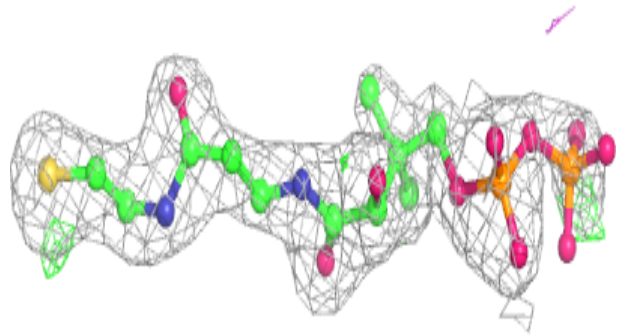


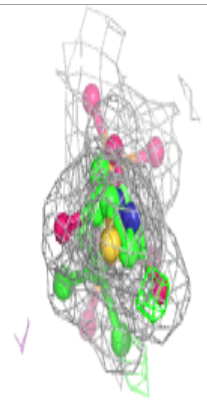


Electron density around 4PS D 301 (A):

$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)







6.5 Other polymers (i)

There are no such residues in this entry.