



# wwPDB X-ray Structure Validation Summary Report ⓘ

May 14, 2020 – 09:54 pm BST

PDB ID : 4OQD  
Title : Crystal structure of the tylM1 N,N-dimethyltransferase in complex with SAH and TDP-Qui3NMe2  
Authors : Thoden, J.B.; Holden, H.M.  
Deposited on : 2014-02-08  
Resolution : 1.60 Å(reported)

This is a wwPDB X-ray Structure Validation Summary Report for a publicly released PDB entry.

We welcome your comments at [validation@mail.wwpdb.org](mailto: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.

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The following versions of software and data (see [references ⓘ](#)) 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

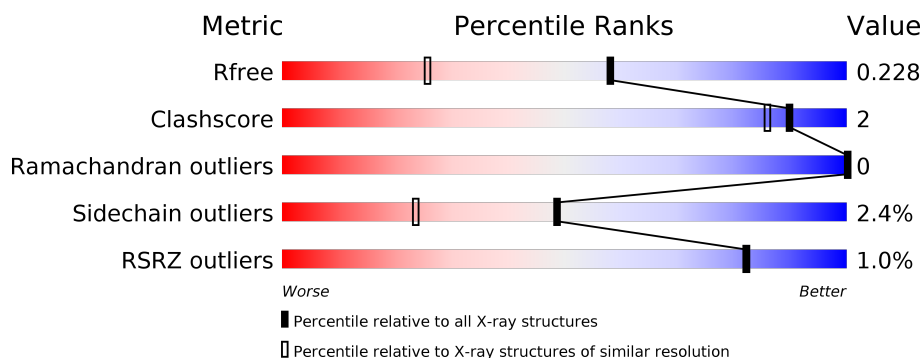
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

## *X-RAY DIFFRACTION*

The reported resolution of this entry is 1.60 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	3398 (1.60-1.60)
Clashscore	141614	3665 (1.60-1.60)
Ramachandran outliers	138981	3564 (1.60-1.60)
Sidechain outliers	138945	3563 (1.60-1.60)
RSRZ outliers	127900	3321 (1.60-1.60)

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  $\geq 3$ , 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  $\leq 5\%$ . 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	263	
1	B	263	
1	C	263	
1	D	263	

## 2 Entry composition

There are 4 unique types of molecules in this entry. The entry contains 8244 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 dTDP-3-amino-3,6-dideoxy-alpha-D-glucopyranose N,N-dimethyltransferase.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	239	Total	C	N	O	S	0	1	0
			1825	1142	334	341	8			
1	B	240	Total	C	N	O	S	0	1	0
			1836	1148	336	345	7			
1	C	241	Total	C	N	O	S	0	3	0
			1853	1159	340	347	7			
1	D	240	Total	C	N	O	S	0	0	0
			1831	1145	336	343	7			

There are 32 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	256	LEU	-	EXPRESSION TAG	UNP P95748
A	257	GLU	-	EXPRESSION TAG	UNP P95748
A	258	HIS	-	EXPRESSION TAG	UNP P95748
A	259	HIS	-	EXPRESSION TAG	UNP P95748
A	260	HIS	-	EXPRESSION TAG	UNP P95748
A	261	HIS	-	EXPRESSION TAG	UNP P95748
A	262	HIS	-	EXPRESSION TAG	UNP P95748
A	263	HIS	-	EXPRESSION TAG	UNP P95748
B	256	LEU	-	EXPRESSION TAG	UNP P95748
B	257	GLU	-	EXPRESSION TAG	UNP P95748
B	258	HIS	-	EXPRESSION TAG	UNP P95748
B	259	HIS	-	EXPRESSION TAG	UNP P95748
B	260	HIS	-	EXPRESSION TAG	UNP P95748
B	261	HIS	-	EXPRESSION TAG	UNP P95748
B	262	HIS	-	EXPRESSION TAG	UNP P95748
B	263	HIS	-	EXPRESSION TAG	UNP P95748
C	256	LEU	-	EXPRESSION TAG	UNP P95748
C	257	GLU	-	EXPRESSION TAG	UNP P95748
C	258	HIS	-	EXPRESSION TAG	UNP P95748
C	259	HIS	-	EXPRESSION TAG	UNP P95748

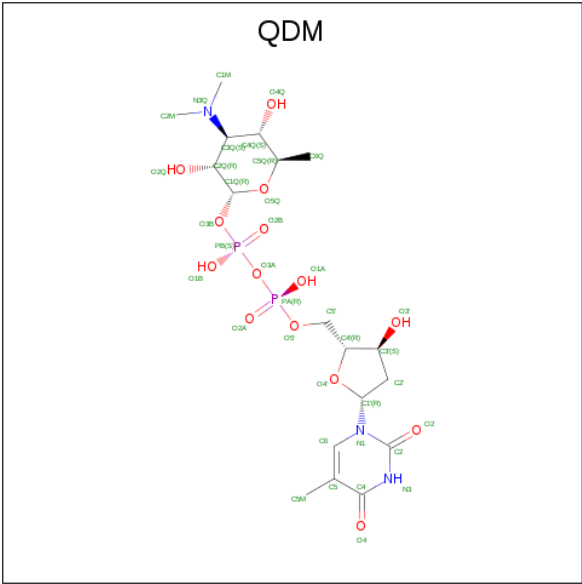
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Chain	Residue	Modelled	Actual	Comment	Reference
C	260	HIS	-	EXPRESSION TAG	UNP P95748
C	261	HIS	-	EXPRESSION TAG	UNP P95748
C	262	HIS	-	EXPRESSION TAG	UNP P95748
C	263	HIS	-	EXPRESSION TAG	UNP P95748
D	256	LEU	-	EXPRESSION TAG	UNP P95748
D	257	GLU	-	EXPRESSION TAG	UNP P95748
D	258	HIS	-	EXPRESSION TAG	UNP P95748
D	259	HIS	-	EXPRESSION TAG	UNP P95748
D	260	HIS	-	EXPRESSION TAG	UNP P95748
D	261	HIS	-	EXPRESSION TAG	UNP P95748
D	262	HIS	-	EXPRESSION TAG	UNP P95748
D	263	HIS	-	EXPRESSION TAG	UNP P95748

- # SAH
- 
- The image displays the chemical structure of S-adenosylmethionine (SAH). The structure is composed of several key moieties: a 5'-methylthioadenosine (MTA) group, a ribose sugar, and a methionine side chain. The MTA group consists of an adenine base (labeled with N1, N2, N3, N6, C2, C4, C5, C6, C8, N9) attached to a ribose sugar (labeled with C1', C2', C3', C4', C5', O4'). The ribose sugar is further attached to a methionine side chain (labeled with C5', C6, C7, C8, C9, N, O, OXT). The methionine side chain includes a methyl group (C9), a methylene group (C8), a methylene group (C7), a methylene group (C6), and a methylthio group (C5', S). The adenine base is shown with its characteristic nitrogen and carbon atoms, and the ribose sugar is shown with its characteristic oxygen and carbon atoms. The methionine side chain is shown with its characteristic carbon and nitrogen atoms. The structure is labeled with various atom names and numbers, including N1, N2, N3, N6, C2, C4, C5, C6, C8, N9, C1', C2', C3', C4', C5', O4', C5', C6, C7, C8, C9, N, O, and OXT.

- Molecule 3 is TDP-3,6-dideoxy-3-N,N-dimethylglucose (three-letter code: QDM) (formula:

C<sub>18</sub>H<sub>31</sub>N<sub>3</sub>O<sub>14</sub>P<sub>2</sub>).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
3	A	1	Total	C	N	O	P	0	0
			37	18	3	14	2		
3	B	1	Total	C	N	O	P	0	0
			37	18	3	14	2		
3	C	1	Total	C	N	O	P	0	0
			37	18	3	14	2		
3	D	1	Total	C	N	O	P	0	0
			37	18	3	14	2		

- Molecule 4 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	A	195	Total	O	0	0
			195	195		
4	B	119	Total	O	0	0
			119	119		
4	C	171	Total	O	0	0
			171	171		
4	D	162	Total	O	0	0
			162	162		



## 4 Data and refinement statistics

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	73.53Å 92.05Å 80.18Å 90.00° 106.10° 90.00°	Depositor
Resolution (Å)	41.24 – 1.60 41.21 – 1.60	Depositor EDS
% Data completeness (in resolution range)	91.4 (41.24-1.60) 91.4 (41.21-1.60)	Depositor EDS
$R_{merge}$	0.07	Depositor
$R_{sym}$	0.07	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	5.53 (at 1.60Å)	Xtriage
Refinement program	REFMAC 5.7.0029	Depositor
R, $R_{free}$	0.181 , 0.216 0.190 , 0.228	Depositor DCC
$R_{free}$ test set	6150 reflections (5.00%)	wwPDB-VP
Wilson B-factor (Å <sup>2</sup> )	16.8	Xtriage
Anisotropy	0.223	Xtriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.37 , 42.6	EDS
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.47$ , $\langle L^2 \rangle = 0.29$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
$F_o, F_c$ correlation	0.96	EDS
Total number of atoms	8244	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	24.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The analyses of the Patterson function reveals a significant off-origin peak that is 37.17 % of the origin peak, indicating pseudo-translational symmetry. The chance of finding a peak of this or larger height randomly in a structure without pseudo-translational symmetry is equal to 4.4671e-04. The detected translational NCS is most likely also responsible for the elevated intensity ratio.*

<sup>1</sup> Intensities estimated from amplitudes.

<sup>2</sup> Theoretical values of  $\langle |L| \rangle$ ,  $\langle L^2 \rangle$  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: SAH, QDM

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	0.60	0/1872	1.12	9/2538 (0.4%)
1	B	0.45	0/1884	0.93	4/2554 (0.2%)
1	C	0.56	0/1907	1.09	8/2585 (0.3%)
1	D	0.52	0/1876	1.03	7/2543 (0.3%)
All	All	0.54	0/7539	1.05	28/10220 (0.3%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	C	0	1

There are no bond length outliers.

The worst 5 of 28 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	200	ASP	CB-CG-OD1	10.08	127.37	118.30
1	C	144	ASP	CB-CG-OD1	9.49	126.84	118.30
1	A	101	ASP	CB-CG-OD1	9.48	126.83	118.30
1	A	136	ARG	NE-CZ-NH1	8.69	124.64	120.30
1	A	144	ASP	CB-CG-OD1	8.44	125.90	118.30

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	C	248	PRO	Peptide



## 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	1825	0	1757	5	0
1	B	1836	0	1763	11	0
1	C	1853	0	1787	7	0
1	D	1831	0	1759	5	0
2	A	26	0	19	0	0
2	B	26	0	19	0	0
2	C	26	0	19	0	0
2	D	26	0	19	0	0
3	A	37	0	31	1	0
3	B	37	0	31	0	0
3	C	37	0	31	0	0
3	D	37	0	31	0	0
4	A	195	0	0	1	0
4	B	119	0	0	1	0
4	C	171	0	0	3	0
4	D	162	0	0	3	0
All	All	8244	0	7266	27	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.

The worst 5 of 27 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:176:THR:HG21	1:B:176:THR:HG21	1.45	0.96
1:C:167:THR:OG1	1:C:176[B]:THR:HG22	1.74	0.87
1:C:176[A]:THR:HG21	1:D:176:THR:HG21	1.66	0.78
1:B:104[B]:ASP:OD1	4:B:492:HOH:O	2.13	0.66
1:B:45:ARG:NH2	1:B:71:SER:O	2.28	0.65

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	238/263 (90%)	236 (99%)	2 (1%)	0	100	100
1	B	239/263 (91%)	236 (99%)	3 (1%)	0	100	100
1	C	242/263 (92%)	240 (99%)	2 (1%)	0	100	100
1	D	238/263 (90%)	235 (99%)	3 (1%)	0	100	100
All	All	957/1052 (91%)	947 (99%)	10 (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	184/202 (91%)	181 (98%)	3 (2%)	62	41
1	B	186/202 (92%)	181 (97%)	5 (3%)	44	20
1	C	188/202 (93%)	184 (98%)	4 (2%)	53	29
1	D	185/202 (92%)	179 (97%)	6 (3%)	39	15
All	All	743/808 (92%)	725 (98%)	18 (2%)	49	24

5 of 18 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	C	106	SER
1	C	118	PHE
1	D	211	ARG

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Mol	Chain	Res	Type
1	B	144	ASP
1	B	169	GLU

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

Mol	Chain	Res	Type
1	B	157	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](#)

8 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	QDM	D	301	-	33,39,39	1.19	2 (6%)	43,60,60	1.71	10 (23%)
3	QDM	B	301	-	33,39,39	1.22	3 (9%)	43,60,60	1.43	6 (13%)
2	SAH	B	300	-	21,28,28	1.14	2 (9%)	20,40,40	2.14	6 (30%)
3	QDM	A	301	-	33,39,39	1.39	4 (12%)	43,60,60	2.18	11 (25%)
2	SAH	D	300	-	21,28,28	1.03	1 (4%)	20,40,40	2.19	7 (35%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
3	QDM	C	301	-	33,39,39	1.41	4 (12%)	43,60,60	2.13	11 (25%)
2	SAH	A	300	-	21,28,28	1.20	2 (9%)	20,40,40	2.44	8 (40%)
2	SAH	C	300	-	21,28,28	1.19	3 (14%)	20,40,40	2.08	5 (25%)

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	QDM	D	301	-	-	3/22/57/57	0/3/3/3
3	QDM	B	301	-	-	2/22/57/57	0/3/3/3
2	SAH	B	300	-	-	0/7/31/31	0/3/3/3
3	QDM	A	301	-	-	2/22/57/57	0/3/3/3
2	SAH	D	300	-	-	0/7/31/31	0/3/3/3
3	QDM	C	301	-	-	4/22/57/57	0/3/3/3
2	SAH	A	300	-	-	0/7/31/31	0/3/3/3
2	SAH	C	300	-	-	0/7/31/31	0/3/3/3

The worst 5 of 21 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	B	301	QDM	O4-C4	4.49	1.35	1.24
3	C	301	QDM	O4-C4	4.49	1.35	1.24
3	A	301	QDM	O4-C4	4.37	1.35	1.24
3	D	301	QDM	O4-C4	4.20	1.35	1.24
3	A	301	QDM	PB-O3B	3.68	1.70	1.60

The worst 5 of 64 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A	301	QDM	C5-C6-N1	-7.50	114.11	122.19
3	A	301	QDM	O5Q-C1Q-O3B	-6.92	102.32	111.36
3	C	301	QDM	O5Q-C1Q-O3B	-6.53	102.83	111.36
2	A	300	SAH	N3-C2-N1	-6.40	118.68	128.68
3	D	301	QDM	C5-C6-N1	-6.38	115.31	122.19

There are no chirality outliers.

5 of 11 torsion outliers are listed below:

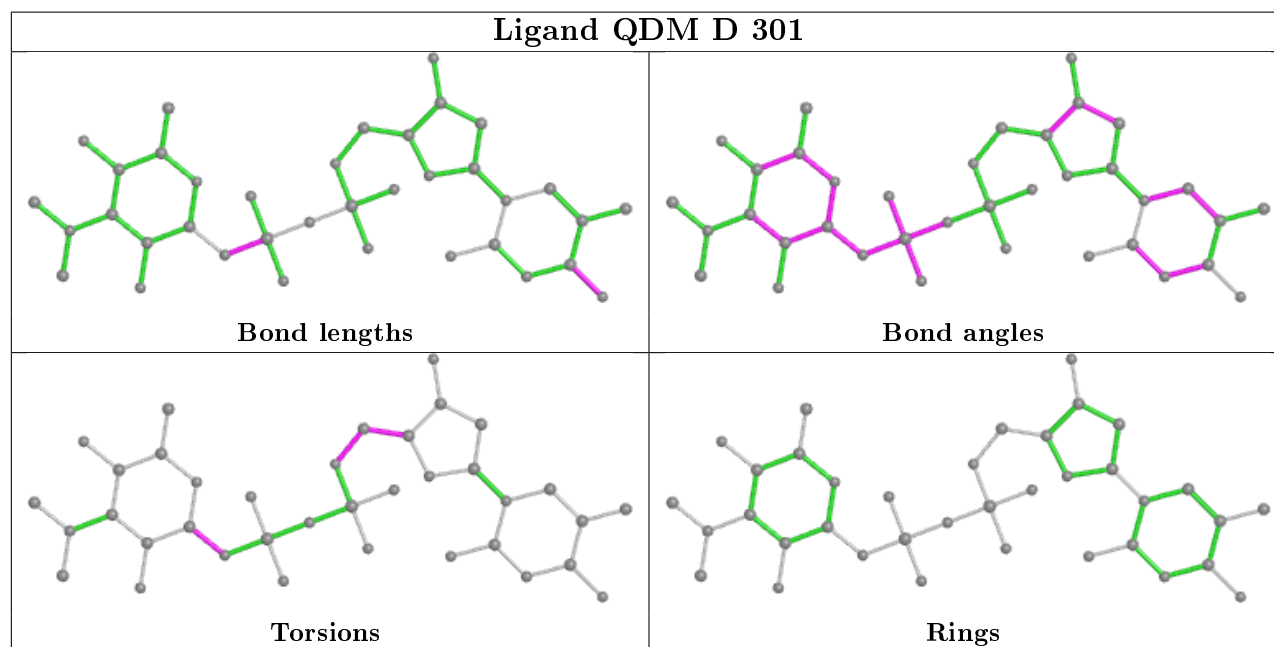
Mol	Chain	Res	Type	Atoms
3	D	301	QDM	O5Q-C1Q-O3B-PB
3	B	301	QDM	O5Q-C1Q-O3B-PB
3	A	301	QDM	O5Q-C1Q-O3B-PB
3	C	301	QDM	O5Q-C1Q-O3B-PB
3	D	301	QDM	C4'-C5'-O5'-PA

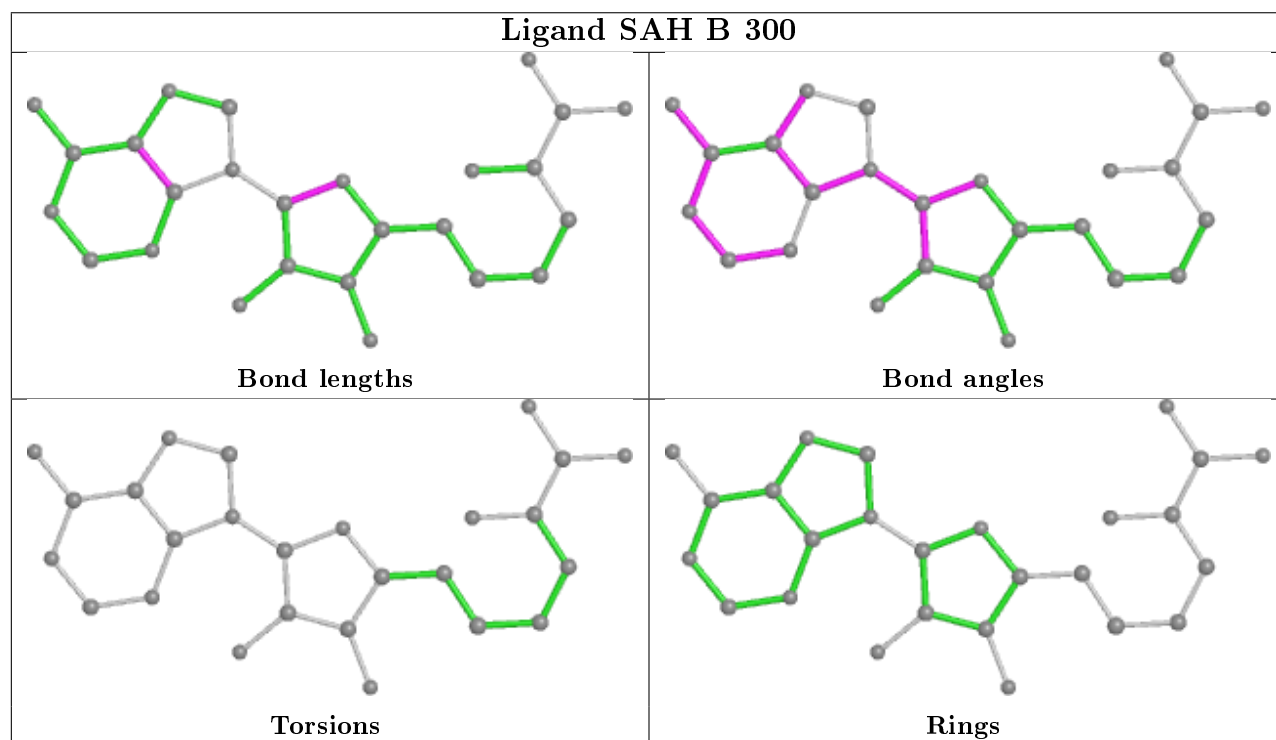
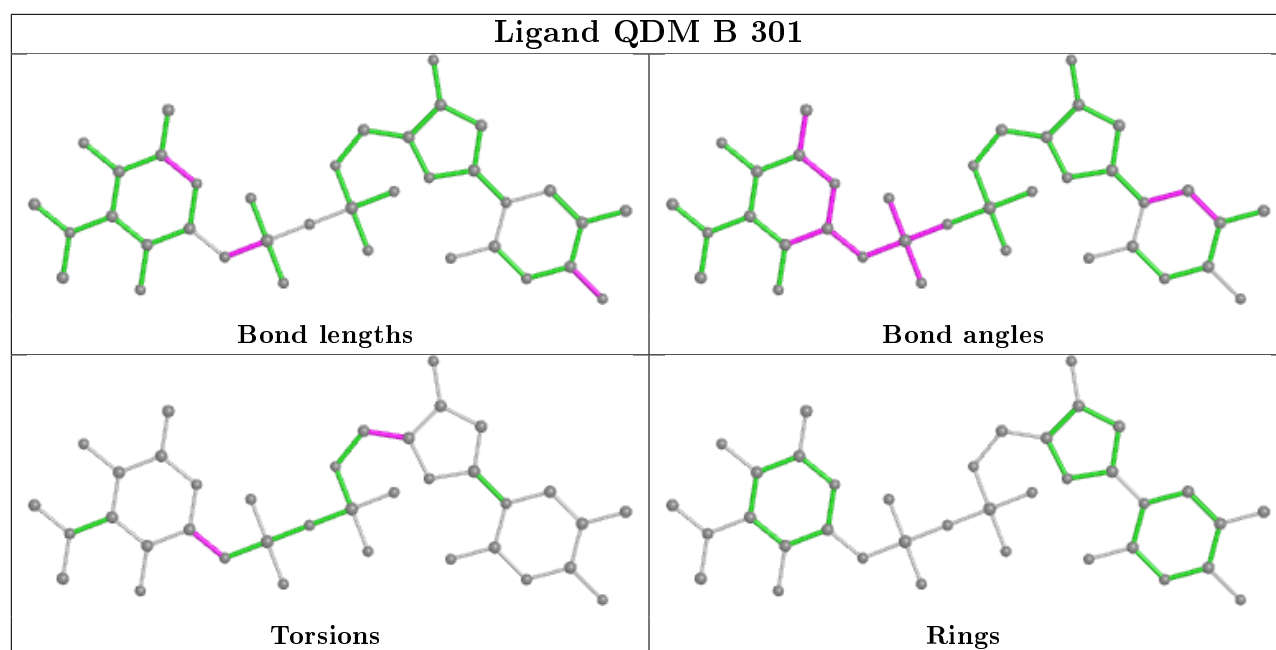
There are no ring outliers.

1 monomer is involved in 1 short contact:

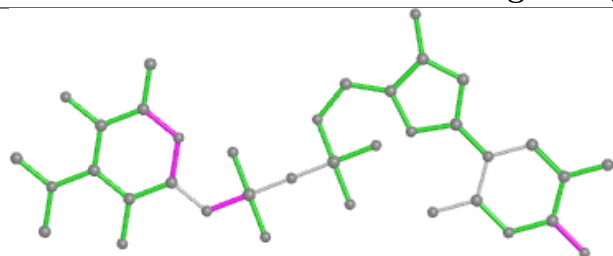
Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	A	301	QDM	1	0

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 than 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.

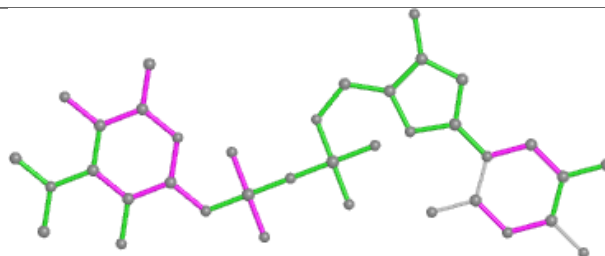




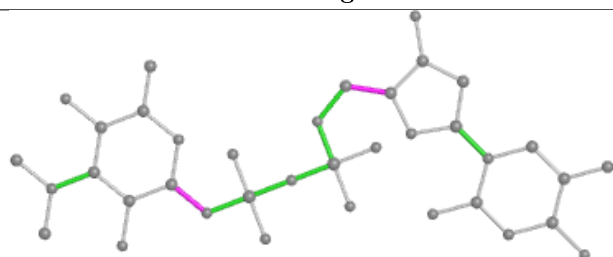
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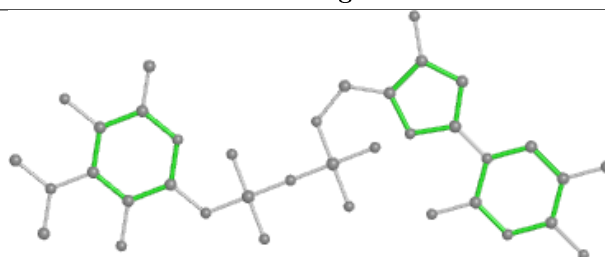
Bond lengths



Bond angles

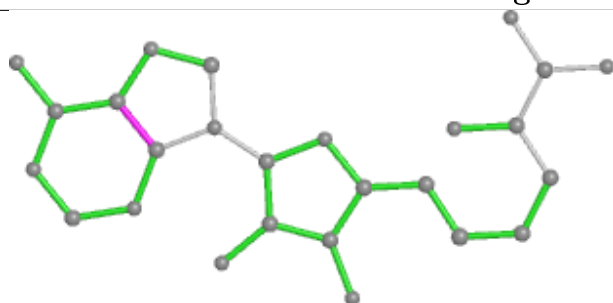


Torsions

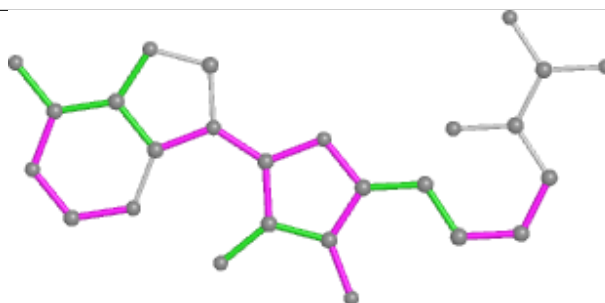


Rings

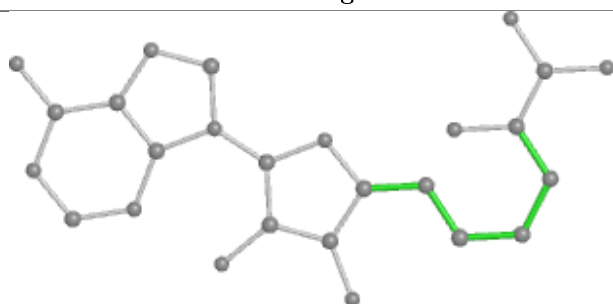
## Ligand SAH D 300



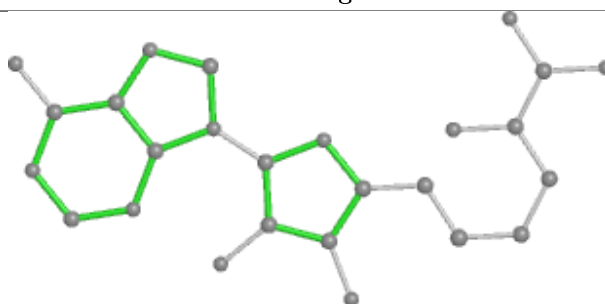
Bond lengths



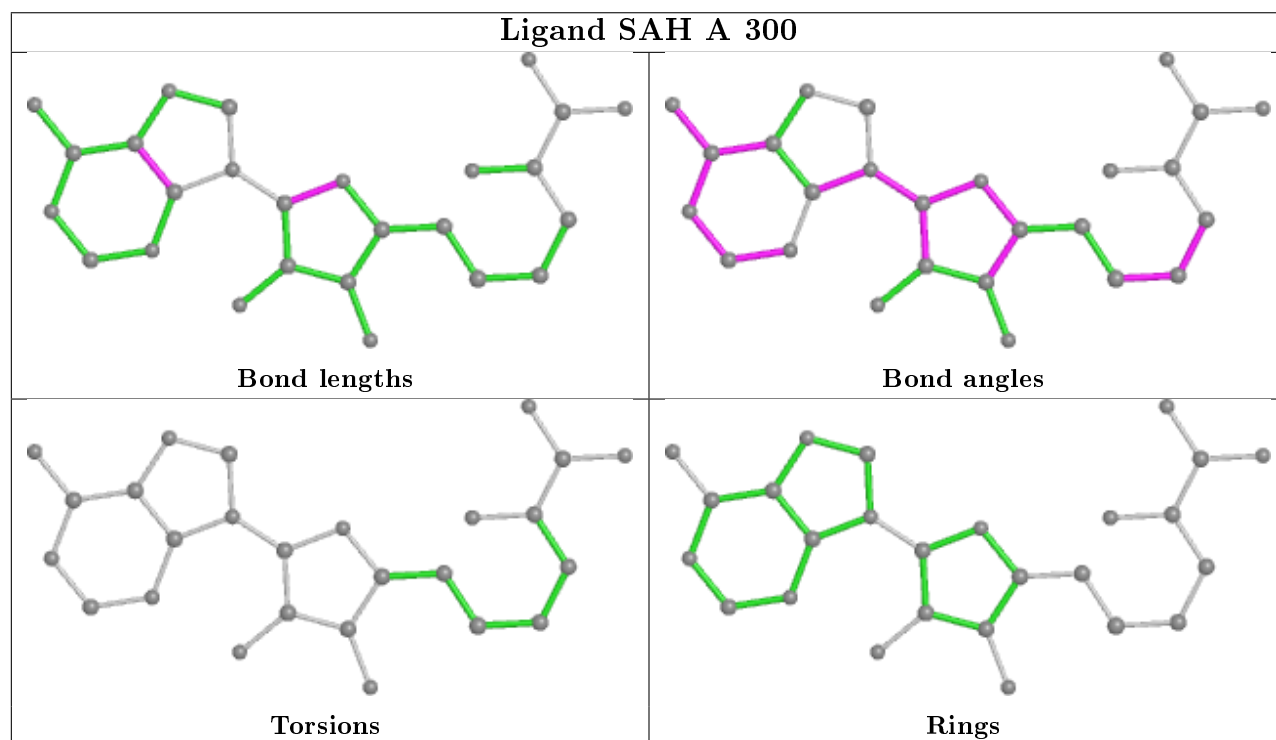
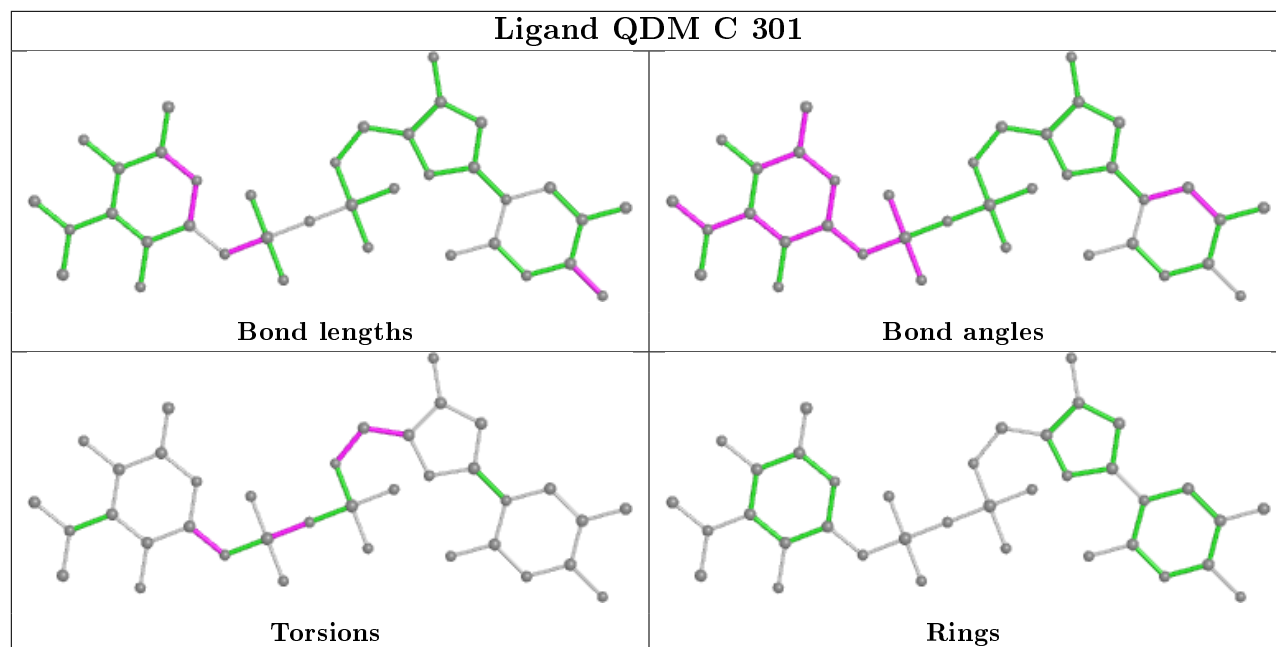
Bond angles



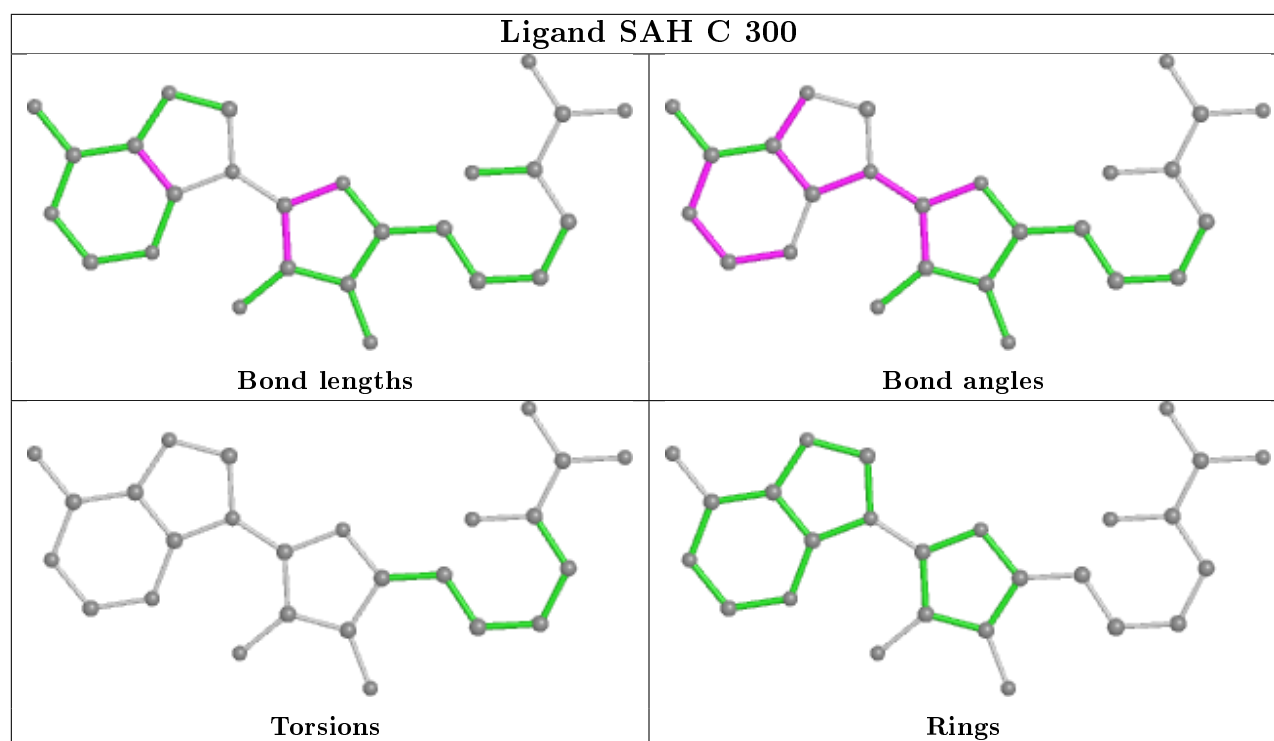
Torsions



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, 95<sup>th</sup> 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 <sup>2</sup> )	Q<0.9
1	A	239/263 (90%)	-0.44	1 (0%) 92 92	12, 19, 31, 68	0
1	B	240/263 (91%)	-0.08	5 (2%) 63 62	17, 27, 46, 58	0
1	C	241/263 (91%)	-0.41	2 (0%) 86 86	13, 21, 34, 69	0
1	D	240/263 (91%)	-0.35	2 (0%) 86 86	14, 22, 36, 53	0
All	All	960/1052 (91%)	-0.32	10 (1%) 82 82	12, 22, 39, 69	0

The worst 5 of 10 RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	250	ALA	4.8
1	B	249	GLY	3.6
1	C	238	PRO	3.0
1	C	249	GLY	2.7
1	D	10	PRO	2.6

### 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](#)

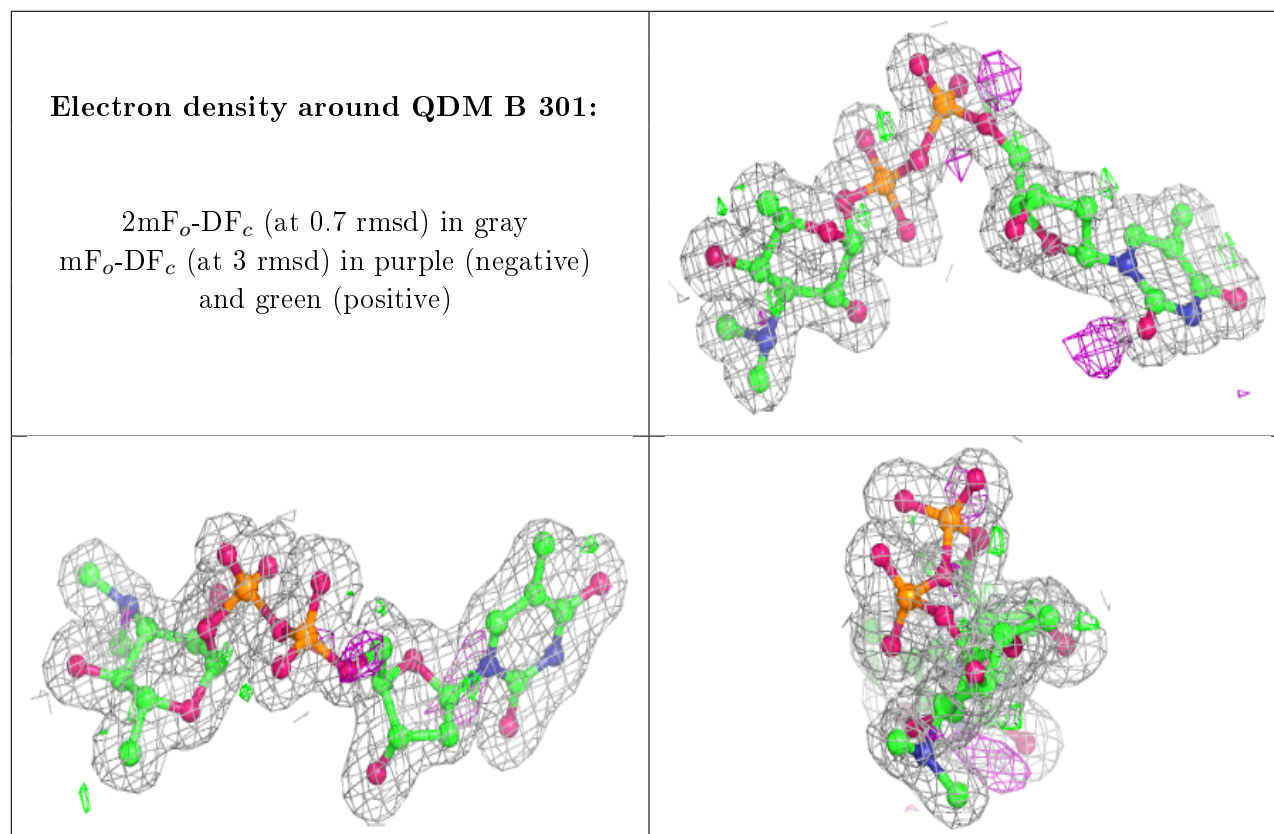
There are no carbohydrates in this entry.

### 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, 95<sup>th</sup> 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.

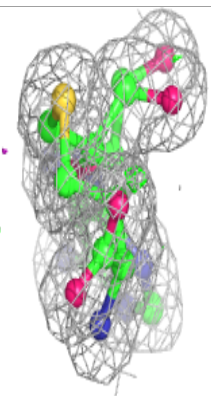
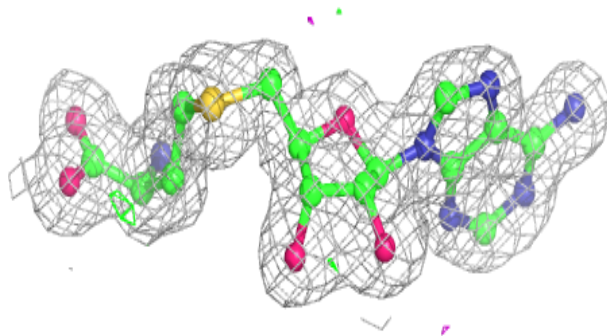
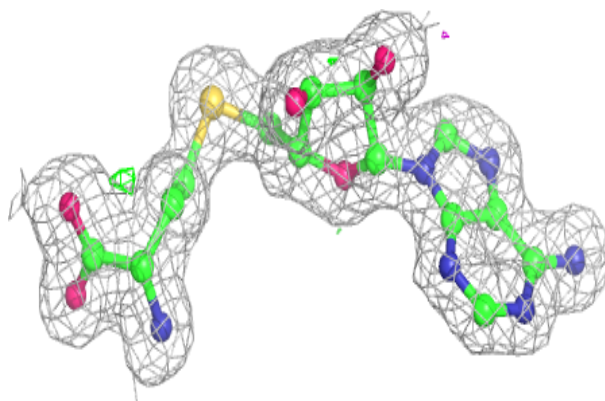
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
3	QDM	B	301	37/37	0.97	0.07	15,20,28,33	0
2	SAH	B	300	26/26	0.97	0.06	17,19,23,23	0
2	SAH	D	300	26/26	0.97	0.06	14,17,19,20	0
3	QDM	C	301	37/37	0.97	0.08	12,16,22,27	0
2	SAH	C	300	26/26	0.97	0.08	13,16,19,19	0
3	QDM	A	301	37/37	0.98	0.09	10,15,18,21	0
2	SAH	A	300	26/26	0.98	0.07	13,15,17,17	0
3	QDM	D	301	37/37	0.98	0.06	14,16,20,22	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.

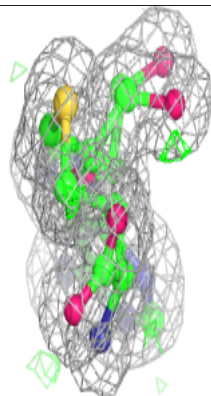
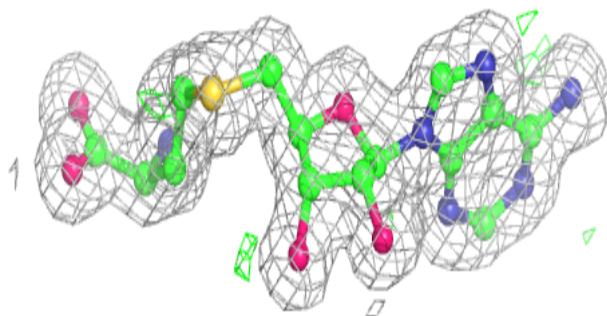
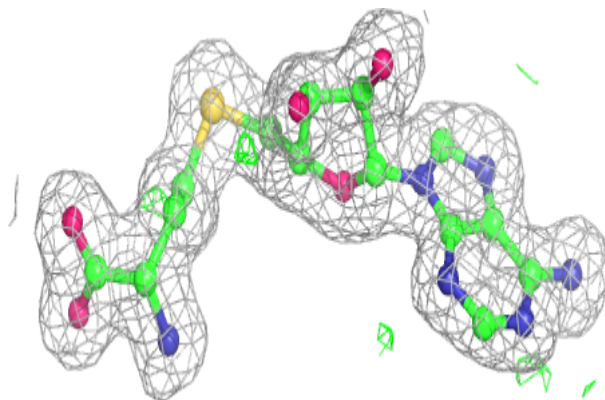


**Electron density around SAH B 300:**

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

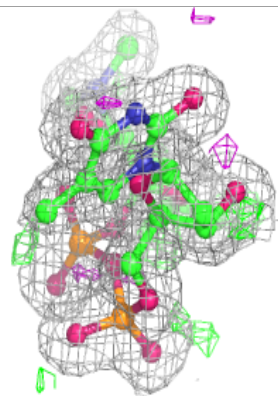
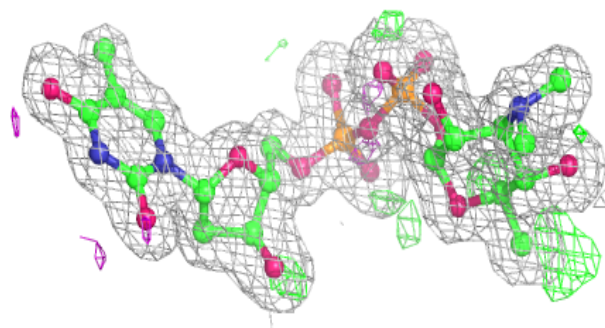
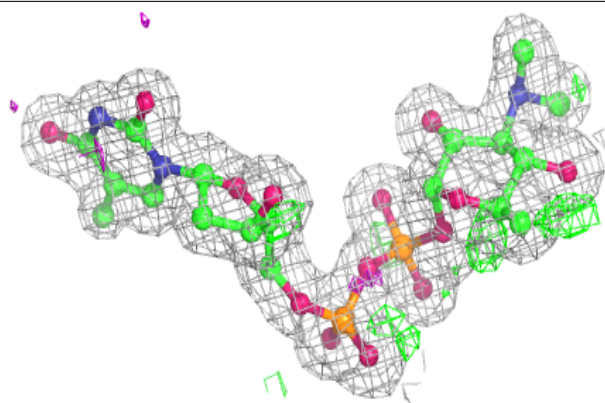
**Electron density around SAH D 300:**

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

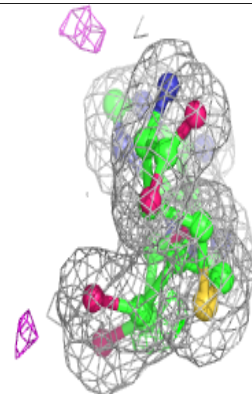
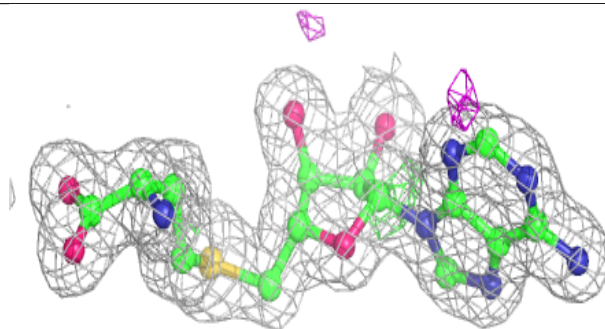
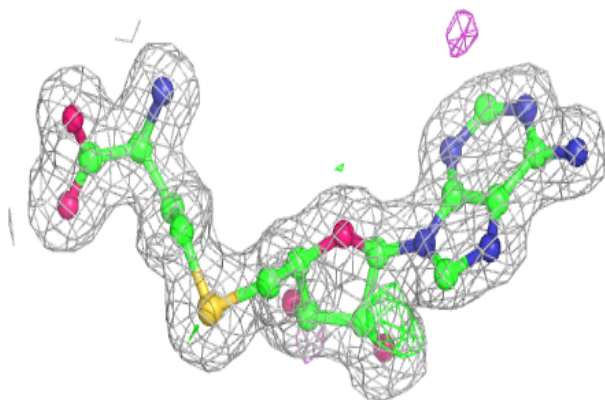


**Electron density around QDM C 301:**

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

**Electron density around SAH C 300:**

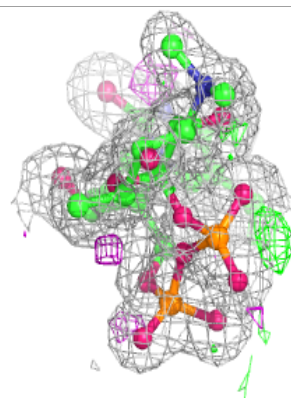
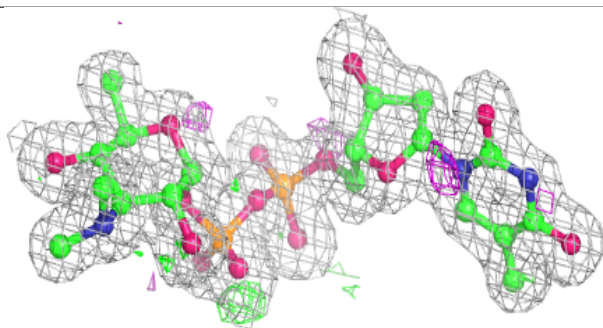
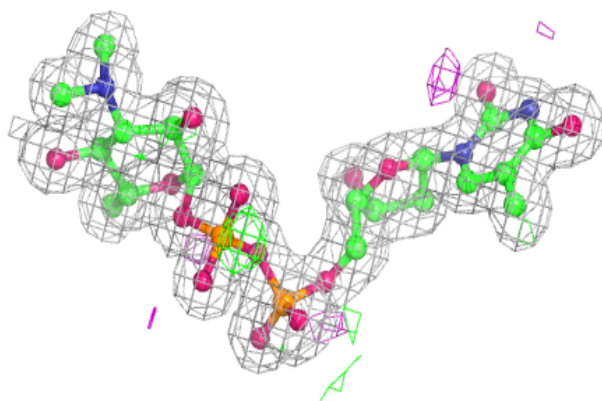
$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



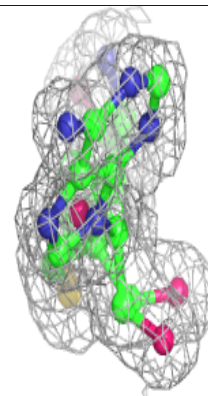
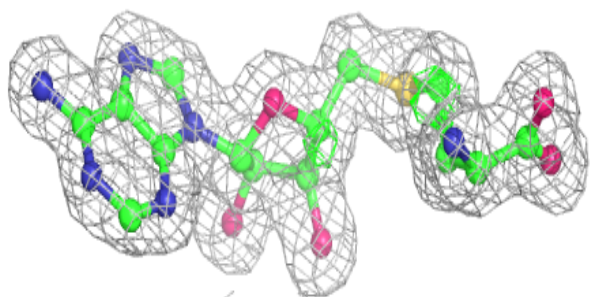
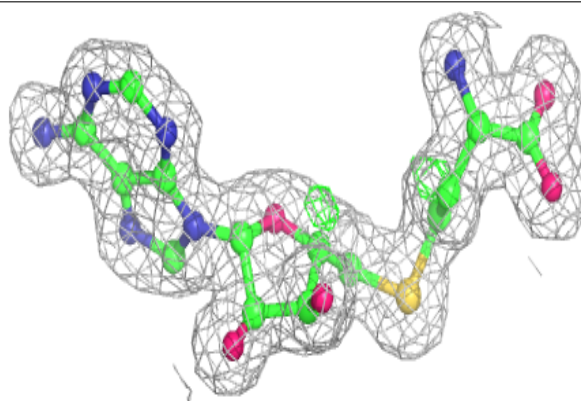


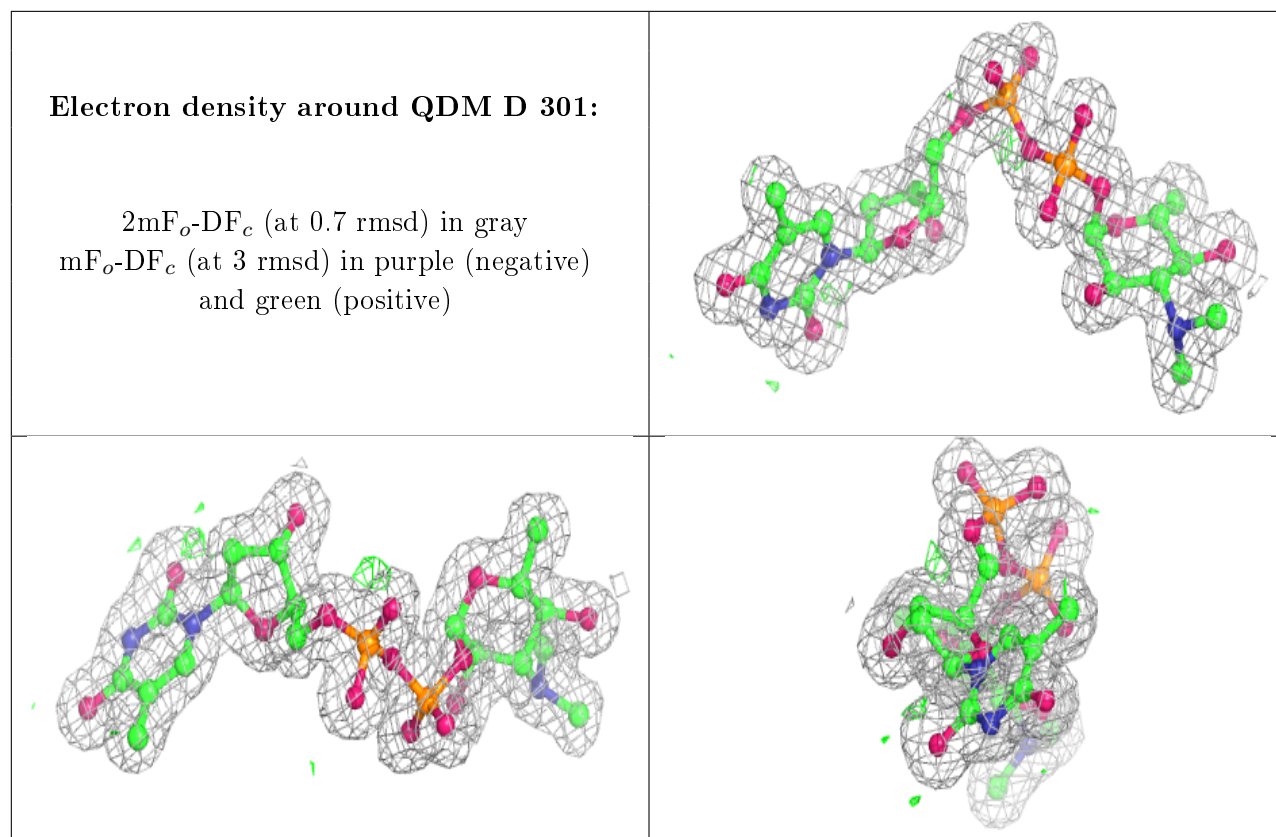
**Electron density around QDM A 301:**

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

**Electron density around SAH A 300:**

$2mF_o-DF_c$  (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.