



# Full wwPDB X-ray Structure Validation Report ⓘ

May 18, 2020 – 09:52 pm BST

PDB ID : 6UI4  
Title : Crystal structure of phenamacril-bound *F. graminearum* myosin I  
Authors : Zhou, Y.; Zhou, X.E.; Gong, Y.; Zhu, Y.; Xu, H.E.; Zhou, M.; Melcher, K.; Zhang, F.  
Deposited on : 2019-09-30  
Resolution : 2.65 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](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

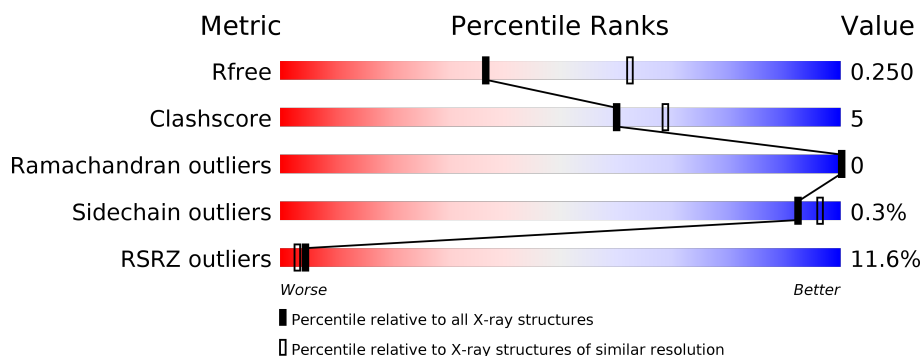
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

## *X-RAY DIFFRACTION*

The reported resolution of this entry is 2.65 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	1332 (2.68-2.64)
Clashscore	141614	1374 (2.68-2.64)
Ramachandran outliers	138981	1349 (2.68-2.64)
Sidechain outliers	138945	1349 (2.68-2.64)
RSRZ outliers	127900	1318 (2.68-2.64)

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	692	<div> <div>4%</div> <div>87%</div> <div>13%</div> </div>
2	B	148	<div> <div>46%</div> <div>78%</div> <div>6%</div> <div>16%</div> </div>

## 2 Entry composition [i](#)

There are 6 unique types of molecules in this entry. The entry contains 6456 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 myosin I.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	692	Total	C	N	O	S	0	0	0
			5507	3493	947	1044	23			

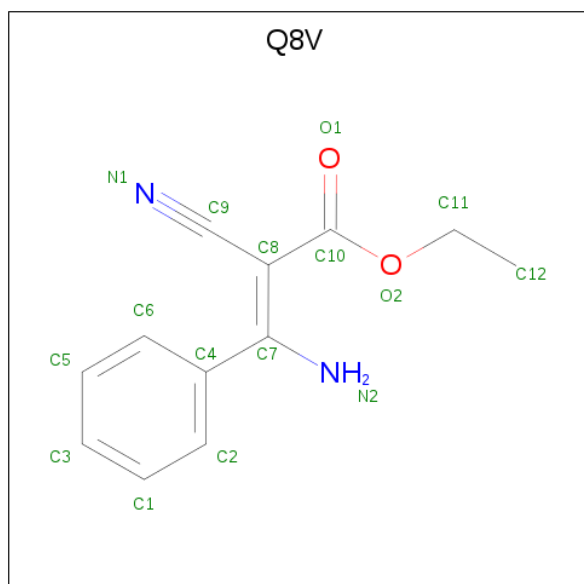
- Molecule 2 is a protein called Calmodulin.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	B	125	Total	C	N	O	S	0	0	0
			875	529	146	194	6			

- Molecule 3 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

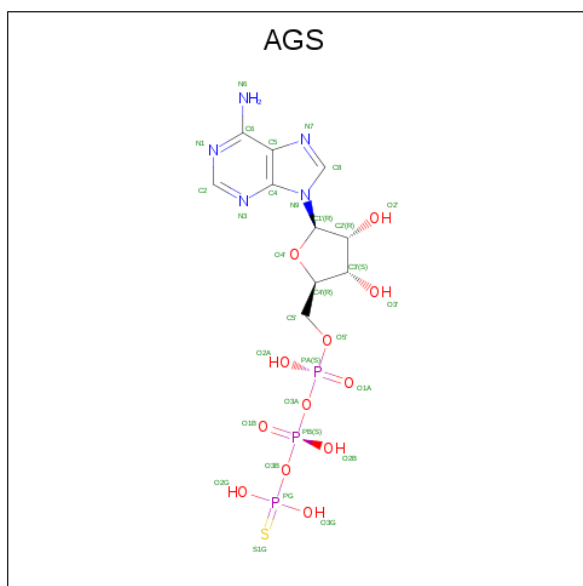
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	A	1	Total	Mg	0	0
			1	1		

- Molecule 4 is ethyl (2Z)-3-amino-2-cyano-3-phenylprop-2-enoate (three-letter code: Q8V) (formula: C<sub>12</sub>H<sub>12</sub>N<sub>2</sub>O<sub>2</sub>) (labeled as "Ligand of Interest" by author).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
4	A	1	Total	C	N	O	0	0
			16	12	2	2		

- Molecule 5 is PHOSPHOTHIOPHOSPHORIC ACID-ADENYLATE ESTER (three-letter code: AGS) (formula: C<sub>10</sub>H<sub>16</sub>N<sub>5</sub>O<sub>12</sub>P<sub>3</sub>S).



Mol	Chain	Residues	Atoms						ZeroOcc	AltConf
5	A	1	Total	C	N	O	P	S	0	0
			31	10	5	12	3	1		

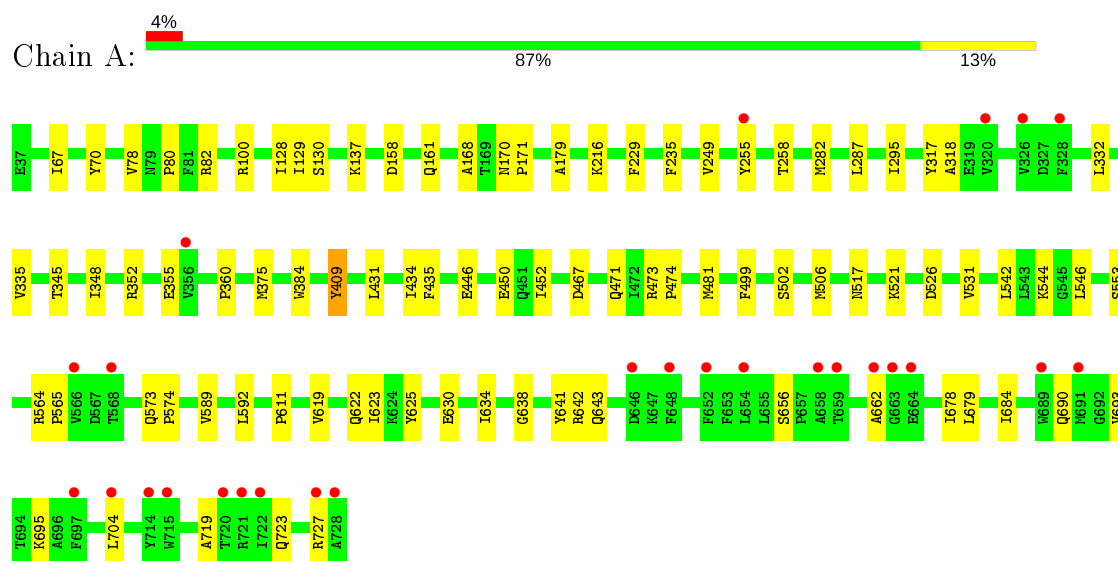
- Molecule 6 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
6	A	26	Total	O	0	0
			26	26		

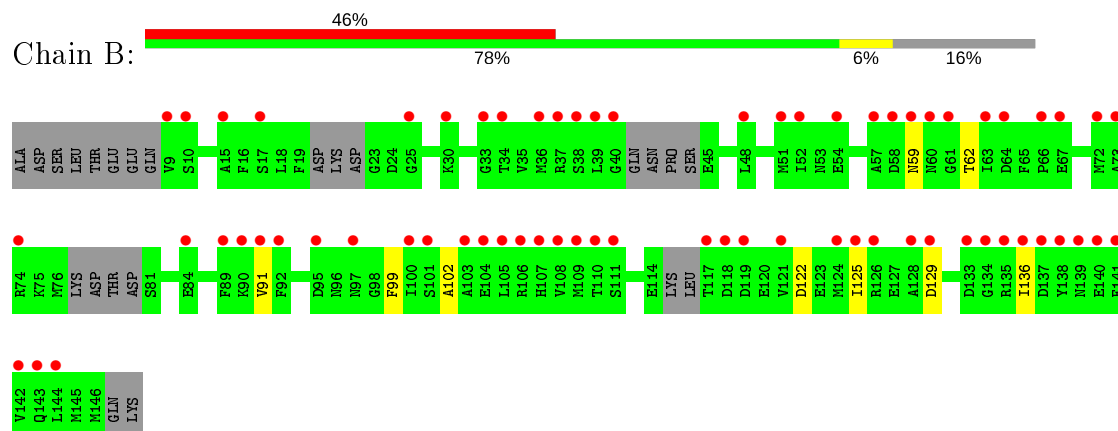
### 3 Residue-property plots [i](#)

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: myosin I



#### • Molecule 2: Calmodulin



## 4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	59.50Å 100.31Å 165.62Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	42.91 – 2.65 48.89 – 2.65	Depositor EDS
% Data completeness (in resolution range)	99.8 (42.91-2.65) 99.9 (48.89-2.65)	Depositor EDS
$R_{merge}$	(Not available)	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	1.69 (at 2.65Å)	Xtriage
Refinement program	PHENIX 1.13 _2998	Depositor
R, $R_{free}$	0.211 , 0.244 0.214 , 0.250	Depositor DCC
$R_{free}$ test set	2110 reflections (7.14%)	wwPDB-VP
Wilson B-factor (Å <sup>2</sup> )	67.4	Xtriage
Anisotropy	0.643	Xtriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.32 , 61.2	EDS
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.49$ , $\langle L^2 \rangle = 0.33$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
$F_o, F_c$ correlation	0.95	EDS
Total number of atoms	6456	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	92.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 6.46% of the height of the origin peak. No significant pseudotranslation is detected.*

<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: AGS, MG, Q8V

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	0.29	0/5621	0.51	0/7607
2	B	0.25	0/876	0.46	0/1179
All	All	0.29	0/6497	0.51	0/8786

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

### 5.2 Too-close contacts [i](#)

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	5507	0	5408	51	0
2	B	875	0	745	6	0
3	A	1	0	0	0	0
4	A	16	0	0	1	0
5	A	31	0	11	1	0
6	A	26	0	0	0	0
All	All	6456	0	6164	58	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 5.

All (58) close contacts within the same asymmetric unit are listed below, sorted by their clash

magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:A:803:AGS:C1'	5:A:803:AGS:O4'	1.65	1.25
1:A:352:ARG:HB2	1:A:355:GLU:HG2	1.59	0.84
2:B:125:ILE:O	2:B:129:ASP:HB2	1.92	0.67
1:A:216:LYS:HE3	1:A:375:MET:HB3	1.77	0.65
1:A:542:LEU:HD22	1:A:546:LEU:HD23	1.80	0.64
1:A:630:GLU:OE1	1:A:630:GLU:N	2.33	0.61
1:A:471:GLN:HG2	1:A:474:PRO:HD2	1.82	0.61
1:A:179:ALA:HB2	1:A:229:PHE:HA	1.84	0.59
1:A:170:ASN:HB2	1:A:171:PRO:HD3	1.86	0.57
1:A:158:ASP:O	1:A:161:GLN:HB2	2.05	0.57
1:A:282:MET:HG2	1:A:287:LEU:HD22	1.88	0.56
1:A:473:ARG:HB3	1:A:474:PRO:HD3	1.87	0.56
2:B:99:PHE:HA	2:B:136:ILE:O	2.07	0.54
1:A:641:TYR:HB2	1:A:704:LEU:HD22	1.89	0.54
1:A:434:ILE:HD11	1:A:589:VAL:HG22	1.90	0.53
1:A:662:ALA:HA	2:B:91:VAL:HG22	1.90	0.53
2:B:102:ALA:HB1	2:B:125:ILE:HD11	1.90	0.52
1:A:82:ARG:HB2	1:A:611:PRO:HB3	1.92	0.52
1:A:481:MET:HG3	1:A:499:PHE:CE1	2.44	0.52
1:A:168:ALA:O	1:A:171:PRO:HD2	2.10	0.51
1:A:295:ILE:HD11	1:A:384:TRP:HZ3	1.74	0.51
1:A:317:TYR:CD1	1:A:360:PRO:HB2	2.46	0.51
1:A:679:LEU:HD22	1:A:684:ILE:HD11	1.91	0.51
1:A:521:LYS:HD2	1:A:526:ASP:OD1	2.12	0.50
1:A:622:GLN:HA	1:A:625:TYR:CE2	2.46	0.49
1:A:255:TYR:HB2	1:A:258:THR:OG1	2.12	0.49
1:A:619:VAL:O	1:A:623:ILE:HG13	2.13	0.48
1:A:719:ALA:O	1:A:723:GLN:NE2	2.44	0.47
1:A:335:VAL:HG12	1:A:553:SER:HA	1.96	0.47
1:A:634:ILE:O	1:A:638:GLY:N	2.39	0.47
1:A:128:ILE:CG2	1:A:431:LEU:HD11	2.45	0.47
1:A:129:ILE:HG22	1:A:137:LYS:HG2	1.97	0.47
1:A:352:ARG:HB2	1:A:355:GLU:CG	2.39	0.47
1:A:235:PHE:CZ	1:A:249:VAL:HG21	2.50	0.46
1:A:70:TYR:CZ	1:A:100:ARG:HG3	2.51	0.46
2:B:59:ASN:ND2	2:B:62:THR:OG1	2.49	0.45
1:A:130:SER:HB3	1:A:435:PHE:CE1	2.53	0.44
1:A:643:GLN:C	1:A:695:LYS:HG3	2.38	0.44
1:A:446:GLU:OE2	1:A:695:LYS:HD2	2.18	0.43
1:A:573:GLN:HA	1:A:574:PRO:HD3	1.80	0.43
1:A:332:LEU:HA	1:A:332:LEU:HD23	1.88	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:450:GLU:HA	1:A:693:VAL:HG22	2.01	0.43
1:A:452:ILE:HD12	1:A:690:GLN:HG2	2.00	0.43
4:A:802:Q8V:C2	4:A:802:Q8V:C9	2.97	0.42
1:A:67:ILE:HG21	1:A:80:PRO:HB3	2.02	0.42
1:A:409:TYR:N	1:A:409:TYR:CD1	2.81	0.42
1:A:467:ASP:O	1:A:471:GLN:HB2	2.20	0.42
1:A:434:ILE:HD13	1:A:592:LEU:HD12	2.02	0.42
1:A:446:GLU:OE1	1:A:642:ARG:HD3	2.20	0.41
1:A:348:ILE:CG2	1:A:544:LYS:HD3	2.51	0.41
1:A:502:SER:O	1:A:506:MET:HG3	2.21	0.41
1:A:643:GLN:OE1	1:A:643:GLN:HA	2.21	0.41
1:A:517:ASN:HA	1:A:531:VAL:HG23	2.02	0.41
1:A:564:ARG:N	1:A:565:PRO:CD	2.84	0.41
1:A:656:SER:HB2	1:A:678:ILE:HA	2.03	0.41
2:B:122:ASP:HA	2:B:125:ILE:HG22	2.03	0.41
1:A:318:ALA:HB3	1:A:345:THR:HG23	2.03	0.40
1:A:67:ILE:HB	1:A:78:VAL:O	2.21	0.40

There are no symmetry-related clashes.

## 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	690/692 (100%)	669 (97%)	21 (3%)	0	100	100
2	B	115/148 (78%)	110 (96%)	5 (4%)	0	100	100
All	All	805/840 (96%)	779 (97%)	26 (3%)	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	588/597 (98%)	586 (100%)	2 (0%)	92	96
2	B	82/131 (63%)	82 (100%)	0	100	100
All	All	670/728 (92%)	668 (100%)	2 (0%)	92	96

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

Mol	Chain	Res	Type
1	A	409	TYR
1	A	727	ARG

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

Mol	Chain	Res	Type
1	A	551	GLN

### 5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

## 5.4 Non-standard residues in protein, DNA, RNA chains [i](#)

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

## 5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

## 5.6 Ligand geometry [i](#)

Of 3 ligands modelled in this entry, 1 is monoatomic - leaving 2 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with  $|Z| > 2$  is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# $ Z  > 2$	Counts	RMSZ	# $ Z  > 2$
5	AGS	A	803	3	26,33,33	4.69	7 (26%)	26,52,52	1.49	5 (19%)
4	Q8V	A	802	-	15,16,16	3.71	5 (33%)	20,20,20	1.87	3 (15%)

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
5	AGS	A	803	3	-	1/17/38/38	0/3/3/3
4	Q8V	A	802	-	-	2/16/17/17	0/1/1/1

All (12) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	A	803	AGS	O4'-C1'	17.53	1.65	1.41
5	A	803	AGS	C2'-C1'	-13.51	1.33	1.53
4	A	802	Q8V	C4-C7	9.78	1.55	1.49
4	A	802	Q8V	C7-N2	7.07	1.50	1.34
5	A	803	AGS	O4'-C4'	-6.22	1.31	1.45
4	A	802	Q8V	C9-C8	5.19	1.53	1.43
4	A	802	Q8V	O2-C10	3.68	1.40	1.33
5	A	803	AGS	O3'-C3'	-3.65	1.34	1.43
4	A	802	Q8V	C8-C10	3.38	1.55	1.47
5	A	803	AGS	C6-N6	2.77	1.44	1.34
5	A	803	AGS	C3'-C4'	2.25	1.58	1.53
5	A	803	AGS	O2'-C2'	2.10	1.47	1.43

All (8) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	A	802	Q8V	O2-C10-C8	5.56	119.52	111.38
5	A	803	AGS	N3-C2-N1	-4.57	121.53	128.68
4	A	802	Q8V	C4-C7-N2	4.45	119.17	114.55

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	A	803	AGS	PA-O3A-PB	-2.66	123.70	132.83
5	A	803	AGS	C4-C5-N7	-2.48	106.81	109.40
5	A	803	AGS	C3'-C2'-C1'	2.37	104.54	100.98
4	A	802	Q8V	O1-C10-C8	-2.15	120.67	125.17
5	A	803	AGS	O2G-PG-O3B	2.13	111.75	104.64

There are no chirality outliers.

All (3) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
4	A	802	Q8V	C8-C10-O2-C11
4	A	802	Q8V	O1-C10-O2-C11
5	A	803	AGS	PA-O3A-PB-O2B

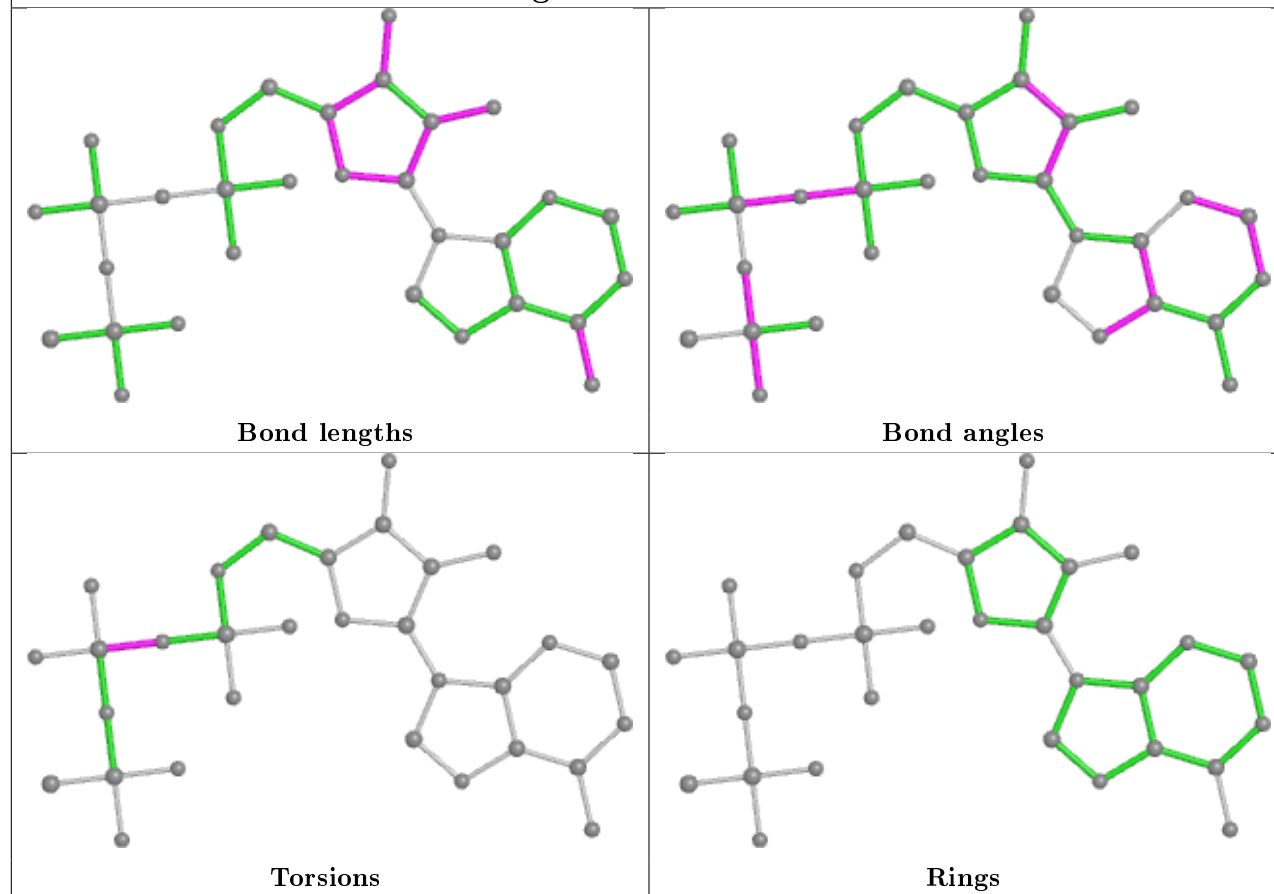
There are no ring outliers.

2 monomers are involved in 2 short contacts:

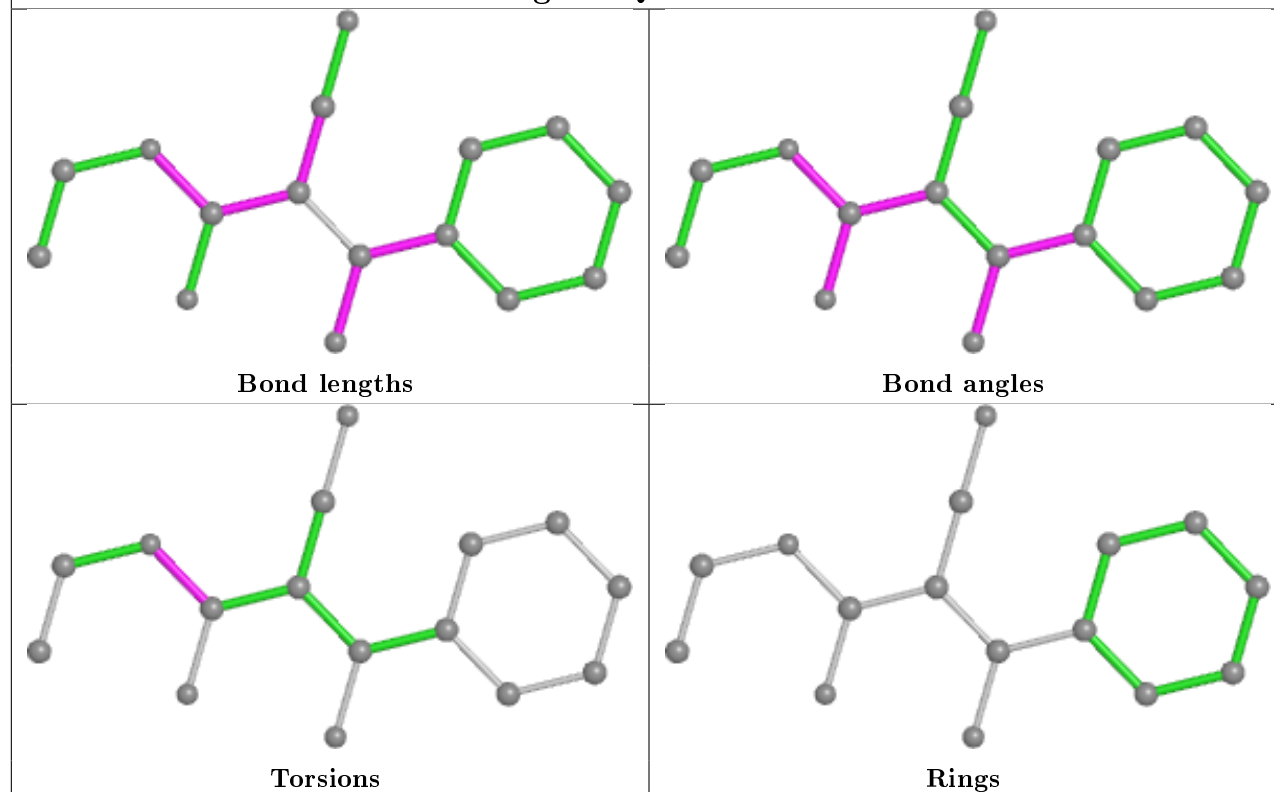
Mol	Chain	Res	Type	Clashes	Symm-Clashes
5	A	803	AGS	1	0
4	A	802	Q8V	1	0

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.

## Ligand AGS A 803



## Ligand Q8V A 802



## 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, 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(Å²)	Q<0.9
1	A	692/692 (100%)	0.36	27 (3%)	39	35	49, 76, 129, 222	0
2	B	125/148 (84%)	2.61	68 (54%)	0	0	113, 158, 197, 212	0
All	All	817/840 (97%)	0.70	95 (11%)	4	3	49, 80, 172, 222	0

All (95) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
2	B	108	VAL	11.3
2	B	37	ARG	9.2
2	B	142	VAL	8.9
2	B	121	VAL	8.9
1	A	566	VAL	8.7
2	B	91	VAL	8.5
2	B	141	PHE	8.3
2	B	89	PHE	7.3
2	B	144	LEU	6.8
2	B	107	HIS	6.4
2	B	105	LEU	6.3
2	B	125	ILE	6.3
2	B	36	MET	6.1
2	B	66	PRO	6.0
2	B	126	ARG	5.8
2	B	72	MET	5.8
2	B	124	MET	5.7
2	B	135	ARG	5.2
1	A	728	ALA	5.2
2	B	138	TYR	4.9
2	B	109	MET	4.8
1	A	663	GLY	4.7
2	B	134	GLY	4.6
2	B	101	SER	4.3

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Mol	Chain	Res	Type	RSRZ
2	B	143	GLN	4.3
1	A	720	THR	4.3
2	B	119	ASP	4.1
1	A	721	ARG	4.1
2	B	74	ARG	4.1
2	B	118	ASP	4.0
2	B	139	ASN	4.0
2	B	100	ILE	4.0
2	B	133	ASP	3.9
2	B	110	THR	3.8
2	B	73	ALA	3.8
2	B	111	SER	3.7
2	B	104	GLU	3.7
1	A	664	GLU	3.6
2	B	137	ASP	3.5
2	B	136	ILE	3.5
2	B	90	LYS	3.5
1	A	715	TRP	3.5
1	A	662	ALA	3.4
2	B	15	ALA	3.4
2	B	17	SER	3.3
2	B	61	GLY	3.3
2	B	106	ARG	3.3
2	B	60	ASN	3.2
2	B	52	ILE	3.2
1	A	714	TYR	3.2
2	B	103	ALA	3.2
2	B	84	GLU	3.1
2	B	92	PHE	3.0
2	B	57	ALA	3.0
1	A	255	TYR	3.0
1	A	691	MET	3.0
2	B	48	LEU	2.9
2	B	34	THR	2.9
2	B	128	ALA	2.9
1	A	652	PHE	2.9
2	B	33	GLY	2.8
1	A	648	PHE	2.8
1	A	568	THR	2.8
1	A	722	ILE	2.8
2	B	30	LYS	2.8
2	B	95	ASP	2.8

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Mol	Chain	Res	Type	RSRZ
1	A	320	VAL	2.7
2	B	129	ASP	2.7
2	B	25	GLY	2.7
1	A	658	ALA	2.7
2	B	140	GLU	2.7
1	A	659	THR	2.7
2	B	64	ASP	2.6
1	A	326	VAL	2.6
2	B	40	GLY	2.5
2	B	117	THR	2.5
2	B	10	SER	2.4
2	B	39	LEU	2.3
1	A	689	TRP	2.3
2	B	59	ASN	2.3
2	B	67	GLU	2.2
1	A	704	LEU	2.2
1	A	697	PHE	2.2
1	A	727	ARG	2.2
1	A	646	ASP	2.2
1	A	328	PHE	2.2
1	A	654	LEU	2.1
2	B	51	MET	2.1
2	B	38	SER	2.1
2	B	58	ASP	2.1
2	B	54	GLU	2.1
2	B	63	ILE	2.1
1	A	356	VAL	2.0
2	B	9	VAL	2.0
2	B	97	ASN	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 ⓘ

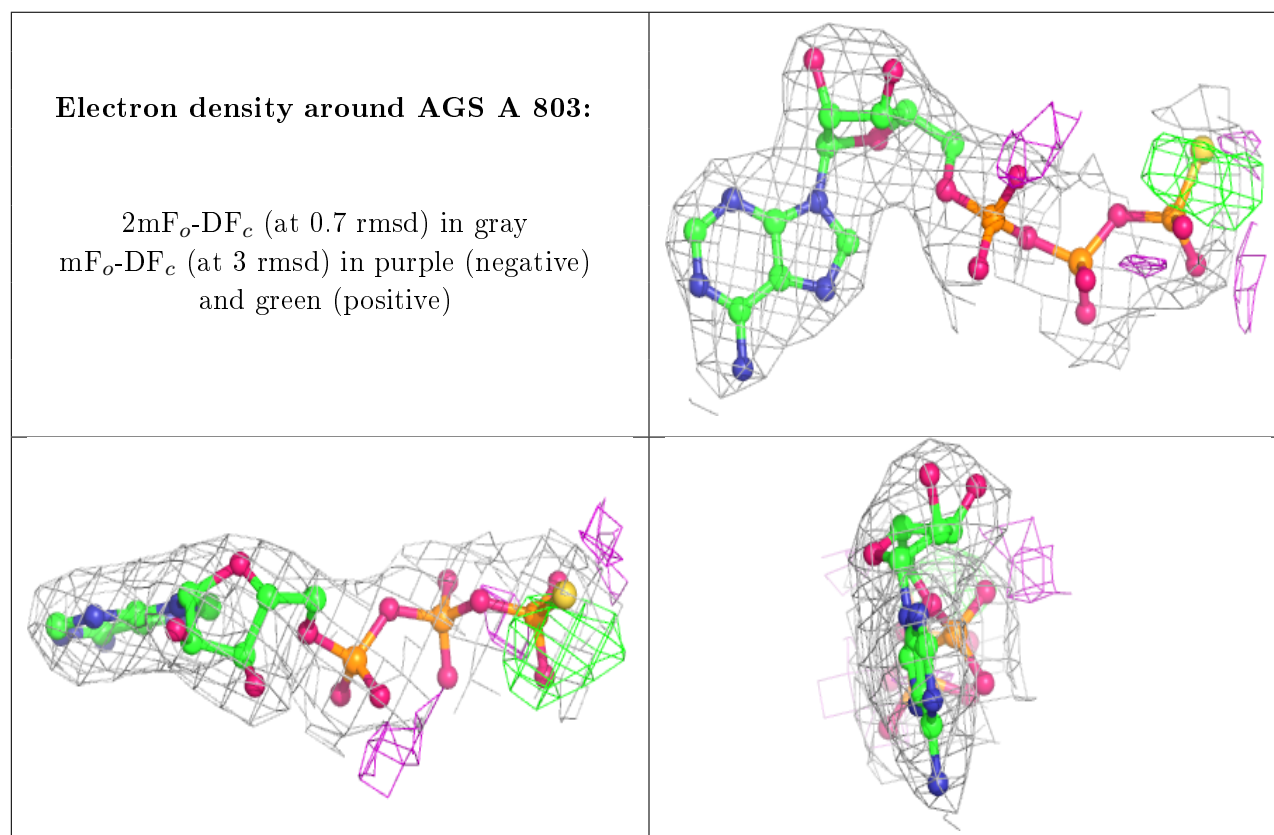
There are no carbohydrates in this entry.

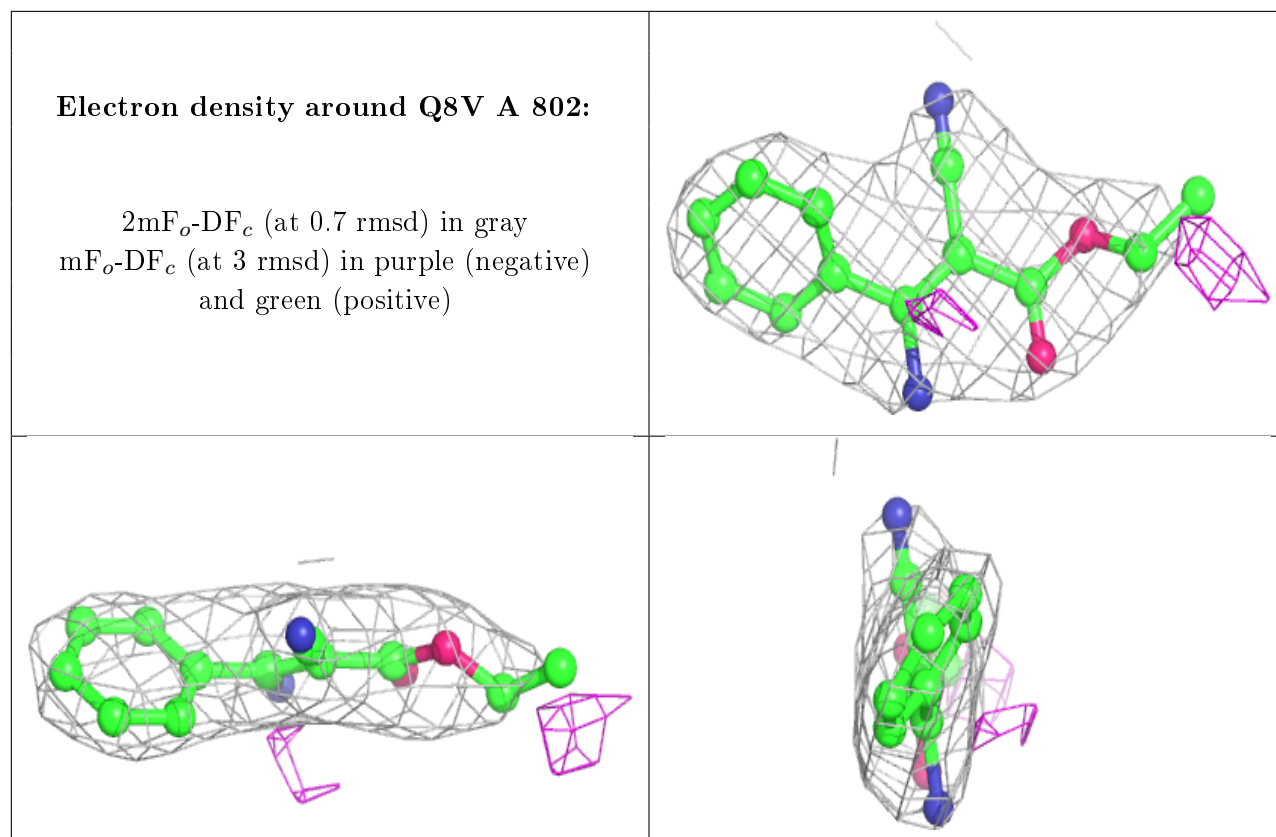
## 6.4 Ligands [i](#)

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(Å <sup>2</sup> )	Q<0.9
3	MG	A	801	1/1	0.88	0.16	57,57,57,57	0
5	AGS	A	803	31/31	0.96	0.20	53,61,69,77	0
4	Q8V	A	802	16/16	0.96	0.30	52,57,65,67	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.





## 6.5 Other polymers [i](#)

There are no such residues in this entry.