Full wwPDB X-ray Structure Validation Report (i)

Oct 31, 2023 – 07:33 AM EDT

PDB ID	:	3JRQ
Title	:	Crystal structure of (+)-ABA-bound PYL1 in complex with ABI1
Authors	:	Miyazono, K.; Miyakawa, T.; Sawano, Y.; Kubota, K.; Tanokura, M.
Deposited on	:	2009-09-08
Resolution	:	2.10 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 types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

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

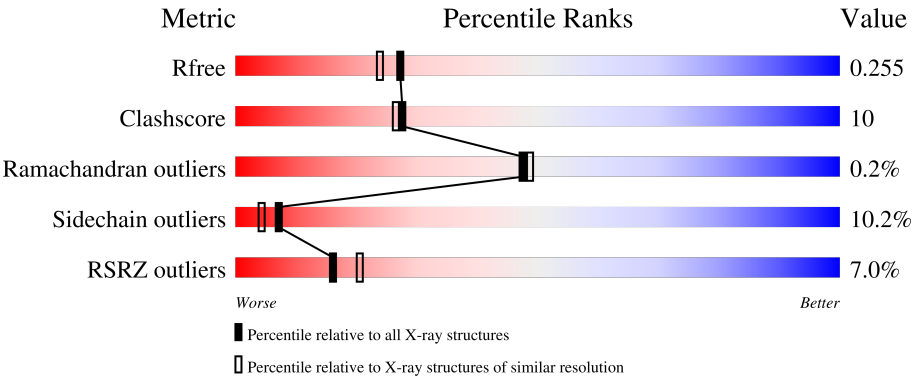
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.36
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36

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 2.10 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	5197 (2.10-2.10)
Clashscore	141614	5710 (2.10-2.10)
Ramachandran outliers	138981	5647 (2.10-2.10)
Sidechain outliers	138945	5648 (2.10-2.10)
RSRZ outliers	127900	5083 (2.10-2.10)

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	326	7%, 62%, 17%, ·, 17%
2	B	186	4%, 70%, 19%, · ·, 7%

2 Entry composition (i)

There are 4 unique types of molecules in this entry. The entry contains 3619 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 Protein phosphatase 2C 56.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	271	Total	C	N	O	S	0	0	0
			2091	1317	366	394	14			

There are 21 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	104	MET	-	EXPRESSION TAG	UNP P49597
A	105	GLY	-	EXPRESSION TAG	UNP P49597
A	106	SER	-	EXPRESSION TAG	UNP P49597
A	107	SER	-	EXPRESSION TAG	UNP P49597
A	108	HIS	-	EXPRESSION TAG	UNP P49597
A	109	HIS	-	EXPRESSION TAG	UNP P49597
A	110	HIS	-	EXPRESSION TAG	UNP P49597
A	111	HIS	-	EXPRESSION TAG	UNP P49597
A	112	HIS	-	EXPRESSION TAG	UNP P49597
A	113	HIS	-	EXPRESSION TAG	UNP P49597
A	114	SER	-	EXPRESSION TAG	UNP P49597
A	115	SER	-	EXPRESSION TAG	UNP P49597
A	116	GLY	-	EXPRESSION TAG	UNP P49597
A	117	LEU	-	EXPRESSION TAG	UNP P49597
A	118	VAL	-	EXPRESSION TAG	UNP P49597
A	119	PRO	-	EXPRESSION TAG	UNP P49597
A	120	ARG	-	EXPRESSION TAG	UNP P49597
A	121	GLY	-	EXPRESSION TAG	UNP P49597
A	122	SER	-	EXPRESSION TAG	UNP P49597
A	123	HIS	-	EXPRESSION TAG	UNP P49597
A	124	MET	-	EXPRESSION TAG	UNP P49597

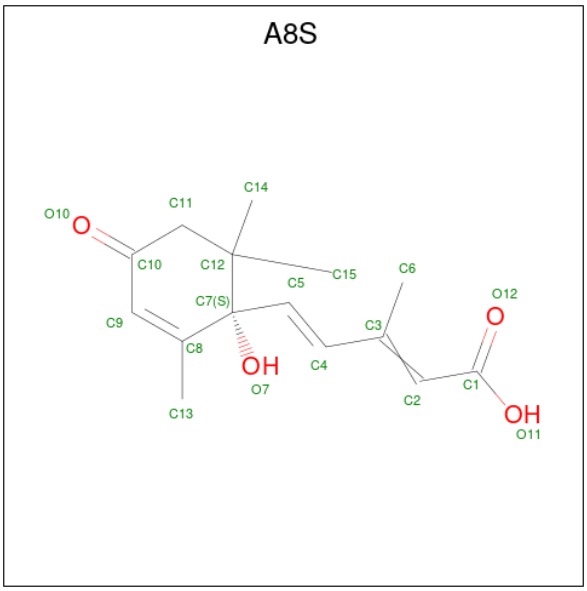
- Molecule 2 is a protein called Putative uncharacterized protein At5g46790.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	B	173	Total	C	N	O	S	0	0	0
			1402	871	258	268	5			

There are 3 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B	25	GLY	-	EXPRESSION TAG	UNP Q8VZS8
B	26	SER	-	EXPRESSION TAG	UNP Q8VZS8
B	27	HIS	-	EXPRESSION TAG	UNP Q8VZS8

- Molecule 3 is (2Z,4E)-5-[(1S)-1-hydroxy-2,6,6-trimethyl-4-oxocyclohex-2-en-1-yl]-3-methylpenta-2,4-dienoic acid (three-letter code: A8S) (formula: $C_{15}H_{20}O_4$).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
3	B	1	Total	C	O	0	0
			19	15	4		

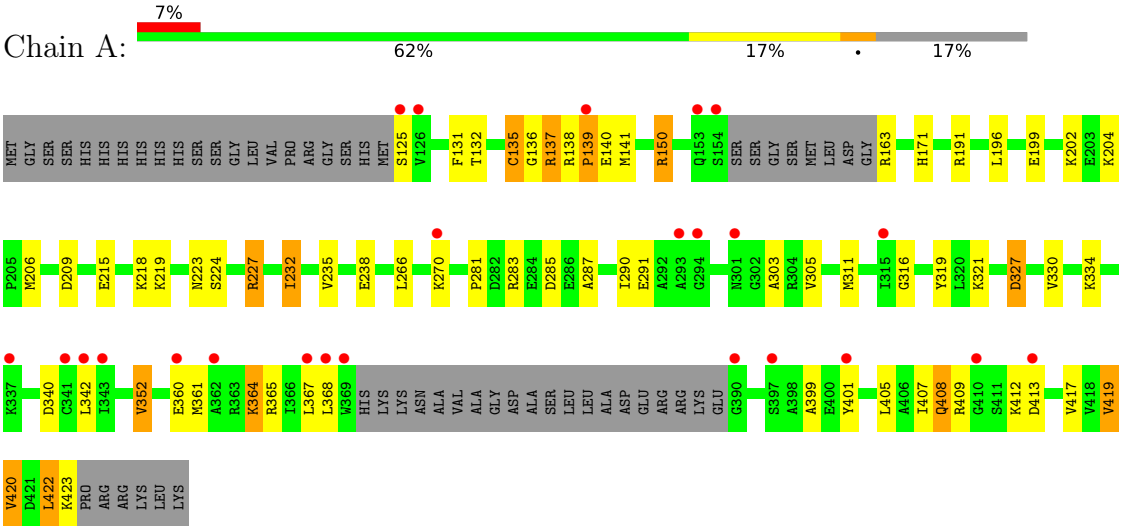
- Molecule 4 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	A	46	Total	O	0	0
			46	46		
4	B	61	Total	O	0	0
			61	61		

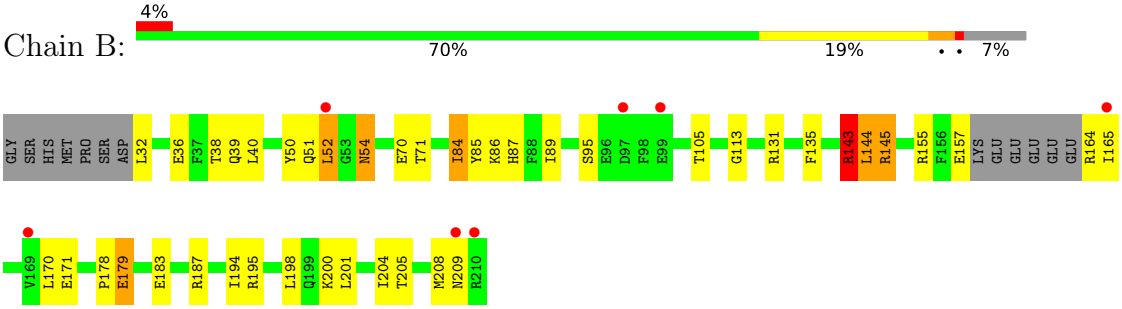
3 Residue-property plots (i)

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: Protein phosphatase 2C 56



• Molecule 2: Putative uncharacterized protein At5g46790



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α, β, γ	49.01Å 60.62Å 84.96Å 90.00° 104.56° 90.00°	Depositor
Resolution (Å)	20.00 – 2.10 19.05 – 2.10	Depositor EDS
% Data completeness (in resolution range)	93.4 (20.00-2.10) 93.5 (19.05-2.10)	Depositor EDS
R_{merge}	0.09	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	2.72 (at 2.11Å)	Xtriage
Refinement program	REFMAC refmac_5.5.0088	Depositor
R, R_{free}	0.198 , 0.249 0.203 , 0.255	Depositor DCC
R_{free} test set	1325 reflections (5.01%)	wwPDB-VP
Wilson B-factor (Å^2)	36.1	Xtriage
Anisotropy	0.200	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.37 , 45.8	EDS
L-test for twinning[2]	$< \|L\| > = 0.47$, $< L^2 > = 0.29$	Xtriage
Estimated twinning fraction	0.048 for h,-k,-h-l	Xtriage
F_o,F_c correlation	0.95	EDS
Total number of atoms	3619	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 5.42% 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

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: A8S

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	0.93	0/2131	0.94	0/2880
2	B	1.27	5/1426 (0.4%)	1.12	4/1929 (0.2%)
All	All	1.08	5/3557 (0.1%)	1.02	4/4809 (0.1%)

All (5) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	135	PHE	CE1-CZ	5.77	1.48	1.37
2	B	36	GLU	CG-CD	5.66	1.60	1.51
2	B	183	GLU	CG-CD	5.54	1.60	1.51
2	B	195	ARG	N-CA	5.50	1.57	1.46
2	B	171	GLU	CG-CD	5.03	1.59	1.51

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	B	87	HIS	N-CA-C	5.95	127.06	111.00
2	B	143	ARG	NE-CZ-NH1	-5.49	117.56	120.30
2	B	187	ARG	NE-CZ-NH2	-5.21	117.69	120.30
2	B	143	ARG	NE-CZ-NH2	5.04	122.82	120.30

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	2091	0	2080	43	0
2	B	1402	0	1376	28	0
3	B	19	0	19	2	0
4	A	46	0	0	2	0
4	B	61	0	0	5	0
All	All	3619	0	3475	70	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 10.

All (70) 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)
2:B:145:ARG:HH21	2:B:145:ARG:HG3	1.41	0.85
2:B:208:MET:HB3	2:B:209:ASN:HA	1.70	0.73
2:B:145:ARG:HG3	2:B:145:ARG:NH2	2.07	0.69
1:A:232:ILE:HD11	1:A:316:GLY:HA2	1.75	0.68
2:B:205:THR:HA	2:B:208:MET:CE	2.28	0.64
1:A:138:ARG:HH12	2:B:113:GLY:H	1.46	0.63
2:B:165:ILE:HD13	4:B:231:HOH:O	1.99	0.62
2:B:155:ARG:NH2	2:B:157:GLU:OE2	2.34	0.60
1:A:420:VAL:HG22	1:A:422:LEU:HD13	1.83	0.59
2:B:85:TYR:O	2:B:200:LYS:HD3	2.02	0.59
1:A:125:SER:N	1:A:150:ARG:HH21	2.02	0.58
1:A:150:ARG:H	1:A:171:HIS:HD2	1.52	0.58
1:A:199:GLU:HG2	1:A:227:ARG:HH22	1.69	0.56
1:A:202:LYS:NZ	1:A:227:ARG:NH1	2.53	0.56
2:B:131:ARG:HD2	4:B:244:HOH:O	2.06	0.56
1:A:399:ALA:HB2	1:A:419:VAL:HG12	1.88	0.56
1:A:420:VAL:HG22	1:A:422:LEU:CD1	2.37	0.55
2:B:205:THR:HA	2:B:208:MET:HE2	1.87	0.55
1:A:365:ARG:HG3	1:A:401:TYR:CD2	2.42	0.55
1:A:137:ARG:HB3	1:A:412:LYS:HA	1.89	0.55
1:A:135:CYS:SG	1:A:138:ARG:O	2.65	0.54
1:A:232:ILE:C	1:A:232:ILE:HD12	2.27	0.54
1:A:202:LYS:HZ2	1:A:227:ARG:NH1	2.06	0.54
1:A:227:ARG:HD3	4:A:3:HOH:O	2.06	0.54
2:B:50:TYR:O	2:B:52:LEU:HD12	2.08	0.53
2:B:144:LEU:HD22	3:B:1:A8S:H11	1.91	0.53
2:B:145:ARG:HH21	2:B:145:ARG:CG	2.17	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:365:ARG:HH21	1:A:368:LEU:HD12	1.74	0.52
1:A:191:ARG:O	1:A:191:ARG:HG3	2.09	0.52
1:A:405:LEU:HA	1:A:408:GLN:HE21	1.73	0.52
1:A:206:MET:HB2	1:A:209:ASP:OD1	2.10	0.51
2:B:205:THR:HA	2:B:208:MET:HE3	1.93	0.51
1:A:125:SER:HB2	1:A:171:HIS:HE1	1.77	0.50
1:A:281:PRO:HG2	1:A:303:ALA:O	2.11	0.50
1:A:232:ILE:HA	1:A:235:VAL:HB	1.93	0.50
1:A:342:LEU:HB3	1:A:420:VAL:HG13	1.94	0.50
2:B:143:ARG:NH1	2:B:143:ARG:HB3	2.27	0.50
2:B:143:ARG:HH12	2:B:178:PRO:HB2	1.77	0.50
2:B:84:ILE:O	2:B:204:ILE:CD1	2.60	0.49
1:A:238:GLU:HG2	1:A:319:TYR:HB3	1.96	0.48
1:A:321:LYS:NZ	4:A:71:HOH:O	2.47	0.48
2:B:205:THR:HG22	2:B:208:MET:HE2	1.96	0.47
2:B:179:GLU:H	2:B:179:GLU:CD	2.16	0.47
1:A:138:ARG:HG3	1:A:412:LYS:O	2.15	0.47
2:B:194:ILE:HG12	3:B:1:A8S:H2	1.97	0.47
2:B:39:GLN:NE2	4:B:236:HOH:O	2.39	0.47
1:A:283:ARG:HG2	1:A:285:ASP:OD2	2.16	0.46
1:A:135:CYS:SG	1:A:139:PRO:HA	2.57	0.45
2:B:201:LEU:HD12	2:B:205:THR:HG23	1.97	0.45
1:A:327:ASP:OD1	1:A:327:ASP:N	2.48	0.44
1:A:340:ASP:OD1	1:A:423:LYS:HE2	2.17	0.44
1:A:219:LYS:HZ2	1:A:223:ASN:HD21	1.65	0.44
1:A:352:VAL:HG13	1:A:409:ARG:HB2	1.99	0.44
1:A:218:LYS:HG2	1:A:330:VAL:HG12	2.01	0.43
1:A:290:ILE:HD13	1:A:305:VAL:HG22	2.00	0.43
2:B:164:ARG:NH1	4:B:226:HOH:O	2.48	0.43
1:A:131:PHE:HA	1:A:417:VAL:O	2.19	0.42
1:A:408:GLN:HE21	1:A:408:GLN:HB2	1.66	0.42
1:A:136:GLY:HA2	1:A:407:ILE:HD11	2.01	0.42
1:A:150:ARG:H	1:A:171:HIS:CD2	2.34	0.42
2:B:71:THR:HG22	2:B:208:MET:HE1	2.02	0.42
2:B:208:MET:O	4:B:247:HOH:O	2.21	0.42
1:A:196:LEU:HA	1:A:224:SER:OG	2.20	0.41
2:B:54:ASN:N	2:B:54:ASN:ND2	2.69	0.41
1:A:202:LYS:NZ	1:A:227:ARG:HH11	2.19	0.41
1:A:281:PRO:HD3	1:A:311:MET:HA	2.02	0.41
2:B:86:LYS:HB2	2:B:89:ILE:HD12	2.02	0.41
2:B:70:GLU:CD	2:B:70:GLU:H	2.25	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:360:GLU:O	1:A:364:LYS:HB2	2.21	0.40
1:A:287:ALA:O	1:A:291:GLU:HG3	2.20	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	265/326 (81%)	252 (95%)	12 (4%)	1 (0%)	34 32
2	B	169/186 (91%)	162 (96%)	7 (4%)	0	100 100
All	All	434/512 (85%)	414 (95%)	19 (4%)	1 (0%)	47 49

All (1) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	139	PRO

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	225/270 (83%)	201 (89%)	24 (11%)	6 3
2	B	158/170 (93%)	143 (90%)	15 (10%)	8 5
All	All	383/440 (87%)	344 (90%)	39 (10%)	7 4

All (39) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	132	THR
1	A	135	CYS
1	A	137	ARG
1	A	140	GLU
1	A	141	MET
1	A	150	ARG
1	A	163	ARG
1	A	204	LYS
1	A	215	GLU
1	A	227	ARG
1	A	232	ILE
1	A	266	LEU
1	A	270	LYS
1	A	327	ASP
1	A	334	LYS
1	A	352	VAL
1	A	361	MET
1	A	364	LYS
1	A	367	LEU
1	A	408	GLN
1	A	413	ASP
1	A	419	VAL
1	A	420	VAL
1	A	422	LEU
2	B	32	LEU
2	B	38	THR
2	B	40	LEU
2	B	51	GLN
2	B	52	LEU
2	B	54	ASN
2	B	84	ILE
2	B	95	SER
2	B	105	THR
2	B	143	ARG
2	B	144	LEU
2	B	145	ARG
2	B	170	LEU
2	B	179	GLU
2	B	198	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (4) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	171	HIS
1	A	223	ASN
1	A	408	GLN
2	B	54	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 monosaccharides in this entry.

5.6 Ligand geometry (i)

1 ligand is 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	A8S	B	1	-	17,19,19	4.62	6 (35%)	17,29,29	6.03	9 (52%)

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	A8S	B	1	-	-	7/10/34/34	0/1/1/1

All (6) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	B	1	A8S	C2-C3	12.68	1.53	1.35
3	B	1	A8S	C11-C10	-8.99	1.34	1.51
3	B	1	A8S	C9-C10	-7.15	1.30	1.45
3	B	1	A8S	O10-C10	5.88	1.32	1.23
3	B	1	A8S	C4-C3	3.53	1.53	1.45
3	B	1	A8S	C9-C8	-3.25	1.30	1.33

All (9) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	B	1	A8S	C8-C9-C10	20.58	144.78	123.82
3	B	1	A8S	C1-C2-C3	-8.36	115.42	128.50
3	B	1	A8S	C13-C8-C9	6.33	132.57	121.08
3	B	1	A8S	C5-C4-C3	-4.98	117.80	125.53
3	B	1	A8S	C6-C3-C2	-4.64	109.70	123.12
3	B	1	A8S	C4-C3-C2	-2.95	111.21	118.77
3	B	1	A8S	C14-C12-C11	-2.83	103.08	108.34
3	B	1	A8S	C11-C10-C9	-2.46	110.99	116.67
3	B	1	A8S	O10-C10-C9	2.27	126.05	121.68

There are no chirality outliers.

All (7) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	B	1	A8S	C1-C2-C3-C4
3	B	1	A8S	C1-C2-C3-C6
3	B	1	A8S	C4-C5-C7-O7
3	B	1	A8S	C4-C5-C7-C12
3	B	1	A8S	C6-C3-C4-C5
3	B	1	A8S	O11-C1-C2-C3
3	B	1	A8S	O12-C1-C2-C3

There are no ring outliers.

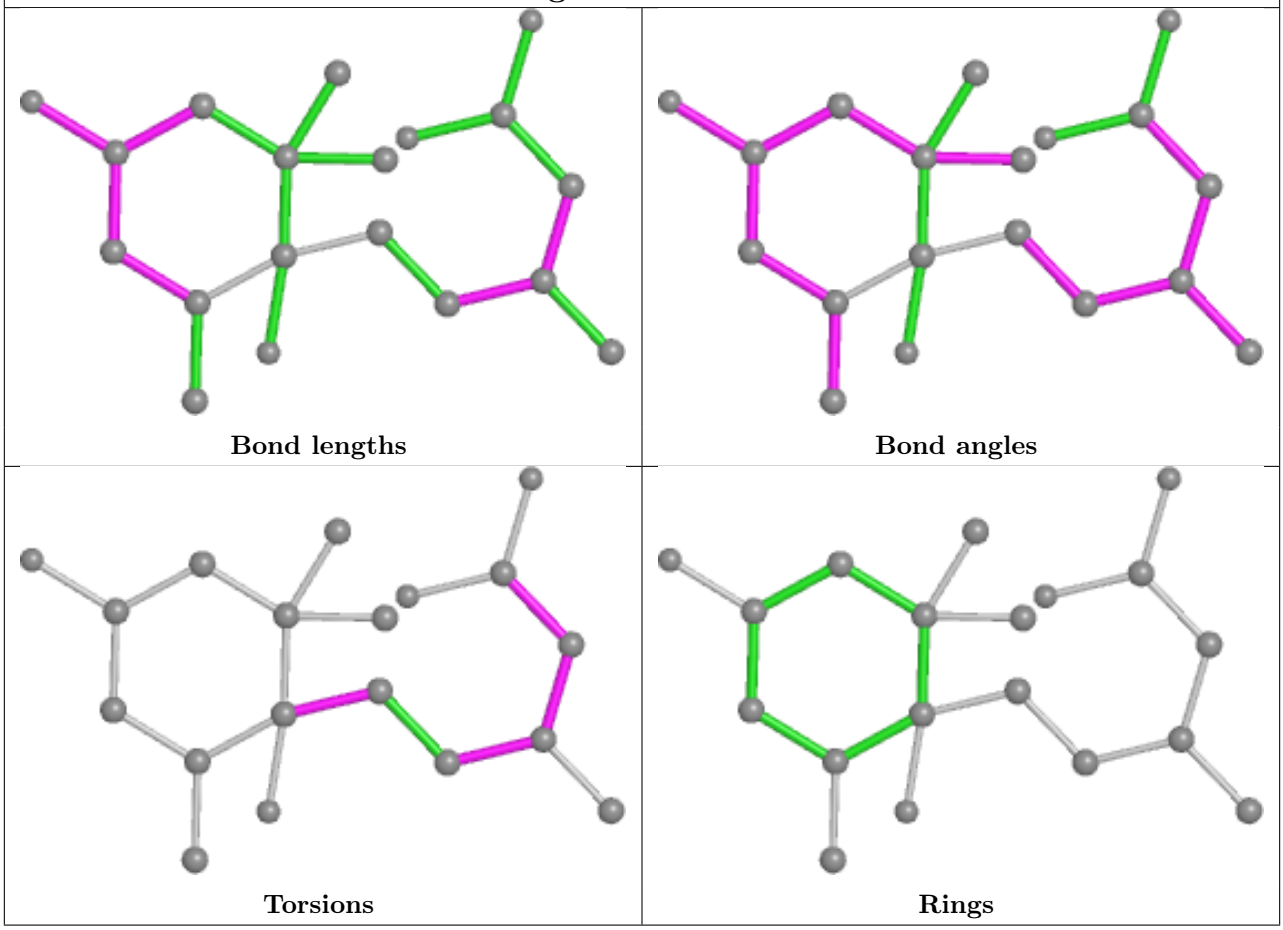
1 monomer is involved in 2 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	B	1	A8S	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 A8S B 1



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

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^{th} 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	271/326 (83%)	0.51	24 (8%) 9 12	21, 31, 44, 52	0
2	B	173/186 (93%)	0.10	7 (4%) 38 44	12, 24, 40, 54	0
All	All	444/512 (86%)	0.35	31 (6%) 16 20	12, 29, 43, 54	0

All (31) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	154	SER	6.4
1	A	126	VAL	6.3
2	B	52	LEU	4.6
1	A	367	LEU	4.5
1	A	369	TRP	4.2
1	A	270	LYS	4.0
1	A	362	ALA	3.7
2	B	209	ASN	3.1
1	A	139	PRO	3.0
1	A	342	LEU	2.9
1	A	401	TYR	2.8
1	A	341	CYS	2.8
1	A	315	ILE	2.7
1	A	368	LEU	2.7
1	A	293	ALA	2.6
1	A	337	LYS	2.5
2	B	165	ILE	2.4
1	A	390	GLY	2.3
1	A	153	GLN	2.3
1	A	410	GLY	2.3
2	B	99	GLU	2.2
1	A	343	ILE	2.1
1	A	397	SER	2.1
2	B	169	VAL	2.1

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Mol	Chain	Res	Type	RSRZ
1	A	360	GLU	2.1
1	A	294	GLY	2.1
1	A	125	SER	2.0
1	A	301	ASN	2.0
2	B	210	ARG	2.0
1	A	413	ASP	2.0
2	B	97	ASP	2.0

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 monosaccharides in this entry.

6.4 Ligands (i)

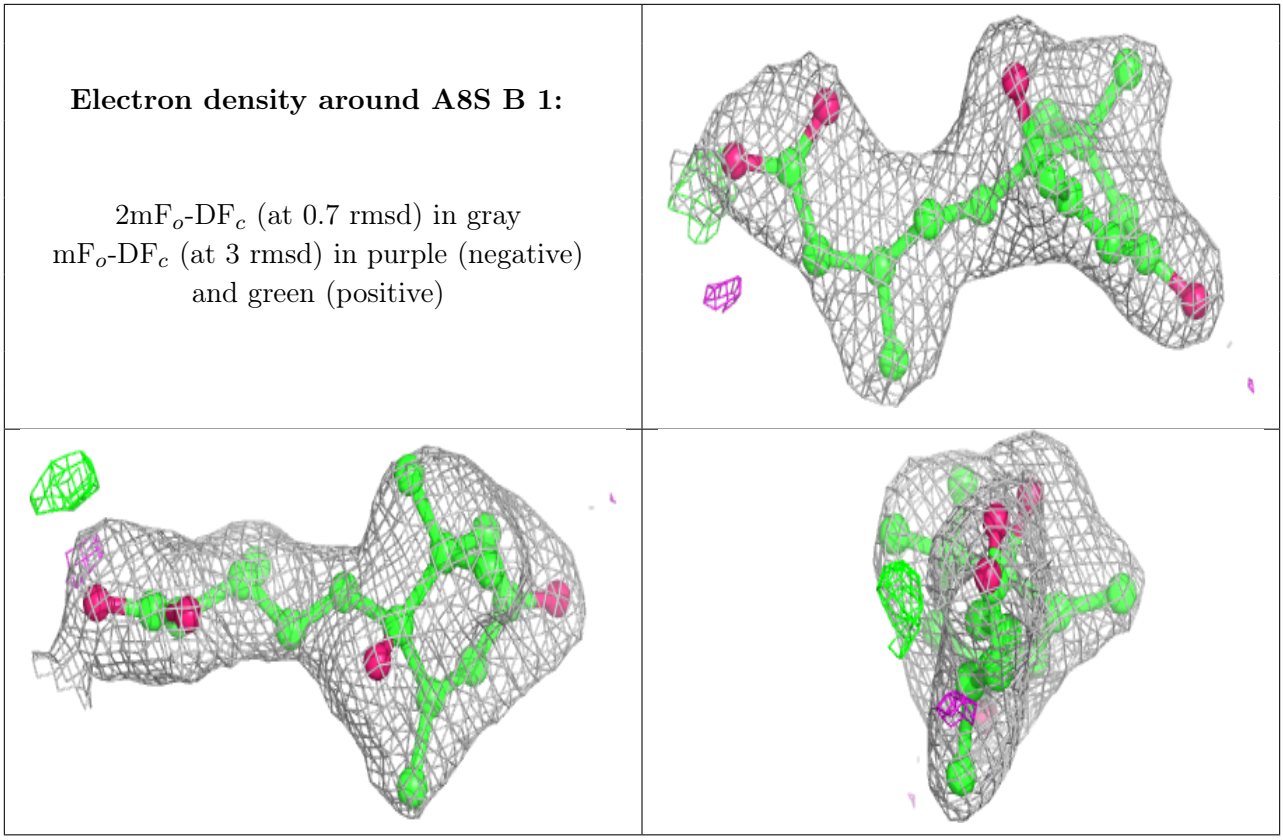
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' 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	A8S	B	1	19/19	0.95	0.21	36,42,54,58	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 A8S B 1:

$2mF_o$-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.