Full wwPDB X-ray Structure Validation Report ⓘ

Jun 24, 2024 – 06:51 AM EDT

PDB ID	:	5W85
Title	:	CRYSTAL STRUCTURE OF IRAK-4 WITH A 4,6-DIAMINONICOTINAMIDE INHIBITOR (COMPOUND NUMBER 9)
Authors	:	Sack, J.S.
Deposited on	:	2017-06-21
Resolution	:	2.25 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 ⓘ 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 ⓘ) were used in the production of this report:

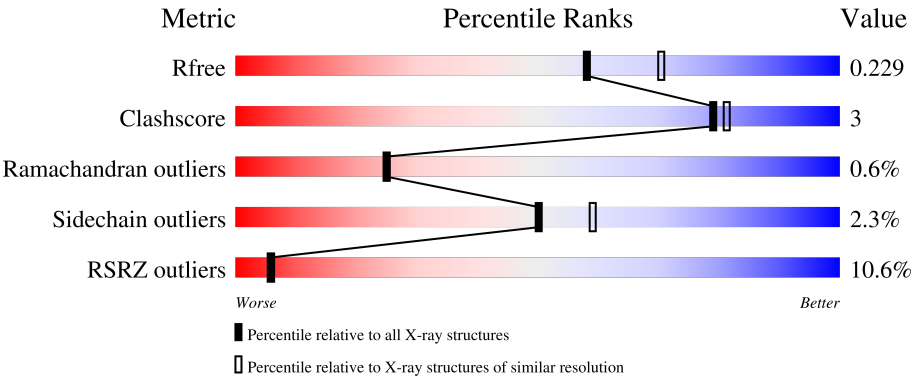
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.37.1
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.37.1

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 2.25 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	1377 (2.26-2.26)
Clashscore	141614	1487 (2.26-2.26)
Ramachandran outliers	138981	1449 (2.26-2.26)
Sidechain outliers	138945	1450 (2.26-2.26)
RSRZ outliers	127900	1356 (2.26-2.26)

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	305	6% 85% 7% 8%
1	B	305	13% 83% 8% • 8%

2 Entry composition (i)

There are 3 unique types of molecules in this entry. The entry contains 4586 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.

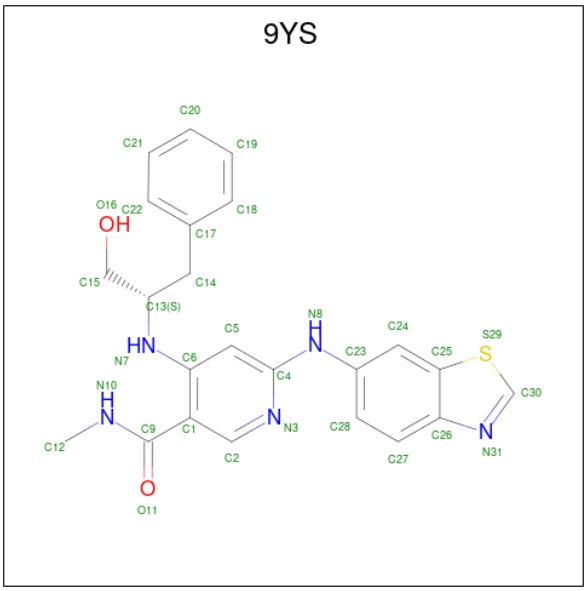
- Molecule 1 is a protein called Interleukin-1 receptor-associated kinase 4.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
1	A	281	Total	C	N	O	P	S	0	0	0
			2216	1390	370	439	3	14			
1	B	282	Total	C	N	O	P	S	0	0	0
			2201	1376	371	437	3	14			

There are 8 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	156	GLY	-	expression tag	UNP Q9NWZ3
A	157	ALA	-	expression tag	UNP Q9NWZ3
A	158	MET	-	expression tag	UNP Q9NWZ3
A	159	GLY	-	expression tag	UNP Q9NWZ3
B	156	GLY	-	expression tag	UNP Q9NWZ3
B	157	ALA	-	expression tag	UNP Q9NWZ3
B	158	MET	-	expression tag	UNP Q9NWZ3
B	159	GLY	-	expression tag	UNP Q9NWZ3

- Molecule 2 is 6-[(1,3-benzothiazol-6-yl)amino]-4-{[(2S)-1-hydroxy-3-phenylpropan-2-yl]amino}-N-methylpyridine-3-carboxamide (three-letter code: 9YS) (formula: $C_{23}H_{23}N_5O_2S$).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
2	A	1	Total	C	N	O	S	0	0
			31	23	5	2	1		
2	B	1	Total	C	N	O	S	0	0
			31	23	5	2	1		

- Molecule 3 is water.

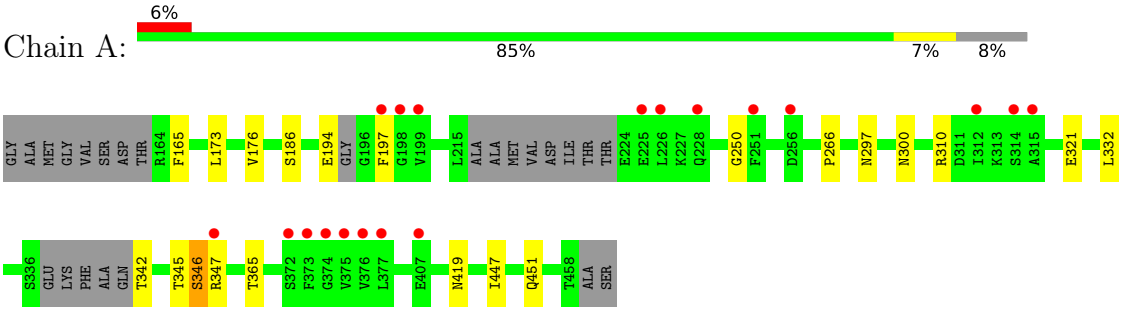
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	A	59	Total	O	0	0
			59	59		
3	B	48	Total	O	0	0
			48	48		

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.

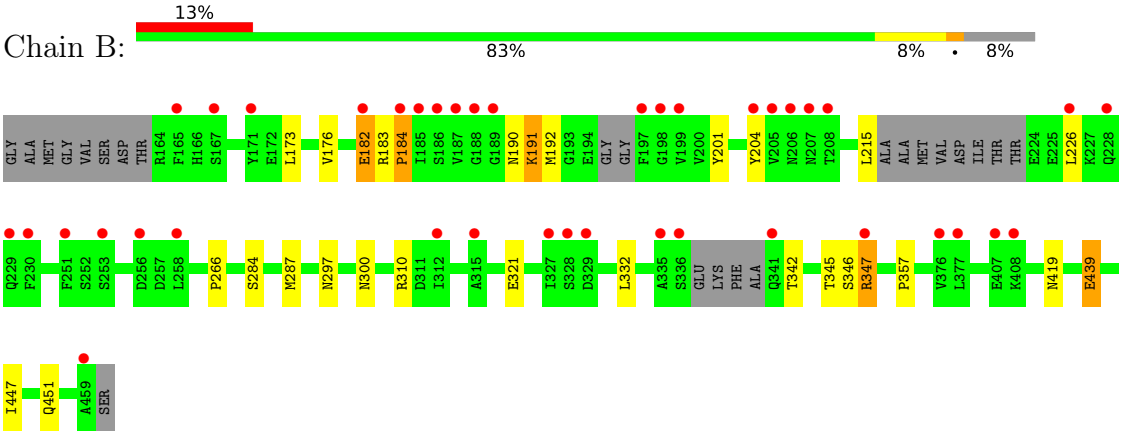
• Molecule 1: Interleukin-1 receptor-associated kinase 4

Chain A:



• Molecule 1: Interleukin-1 receptor-associated kinase 4

Chain B:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	I 2 2 2	Depositor
Cell constants a, b, c, α, β, γ	88.44Å 125.56Å 141.33Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	29.72 – 2.25 29.72 – 2.25	Depositor EDS
% Data completeness (in resolution range)	94.1 (29.72-2.25) 94.1 (29.72-2.25)	Depositor EDS
R_{merge}	0.06	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	4.39 (at 2.24Å)	Xtriage
Refinement program	BUSTER 2.11.7	Depositor
R, R_{free}	0.227 , 0.251 0.217 , 0.229	Depositor DCC
R_{free} test set	780 reflections (2.20%)	wwPDB-VP
Wilson B-factor (Å^2)	45.3	Xtriage
Anisotropy	0.672	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.35 , 55.4	EDS
L-test for twinning[2]	$< \|L\| > = 0.49$, $< L^2 > = 0.33$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.95	EDS
Total number of atoms	4586	wwPDB-VP
Average B, all atoms (Å^2)	65.0	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 41.73 % 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 2.2624e-04. The detected translational NCS is most likely also responsible for the elevated intensity ratio.*

[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: 9YS, TPO, SEP

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	0.49	0/2218	0.67	0/2986
1	B	0.48	0/2201	0.64	0/2964
All	All	0.49	0/4419	0.65	0/5950

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	2216	0	2172	9	0
1	B	2201	0	2138	16	0
2	A	31	0	0	0	0
2	B	31	0	0	0	0
3	A	59	0	0	0	0
3	B	48	0	0	0	0
All	All	4586	0	4310	25	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 3.

All (25) 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:B:183:ARG:O	1:B:191:LYS:HB3	1.78	0.84
1:B:284:SER:H	1:B:287:MET:HE3	1.48	0.79
1:A:297:ASN:HD22	1:A:451:GLN:HE21	1.44	0.66
1:B:297:ASN:HD22	1:B:451:GLN:HE21	1.49	0.61
1:B:266:PRO:HG2	1:B:321:GLU:HG3	1.85	0.57
1:B:357:PRO:HG3	1:B:439:GLU:HG2	1.87	0.56
1:A:297:ASN:ND2	1:A:451:GLN:HE21	2.05	0.55
1:A:310:ARG:HD3	1:A:332:LEU:O	2.10	0.52
1:B:297:ASN:ND2	1:B:451:GLN:HE21	2.08	0.51
1:A:266:PRO:HG2	1:A:321:GLU:HG3	1.92	0.50
1:A:173:LEU:HA	1:A:176:VAL:HG22	1.93	0.50
1:B:176:VAL:HG22	1:B:204:TYR:H	1.76	0.49
1:B:310:ARG:HD3	1:B:332:LEU:O	2.11	0.49
1:B:183:ARG:O	1:B:191:LYS:N	2.45	0.48
1:B:173:LEU:HA	1:B:176:VAL:HG12	1.97	0.46
1:B:183:ARG:CB	1:B:184:PRO:HD3	2.46	0.46
1:B:215:LEU:HB3	1:B:226:LEU:HD23	1.99	0.44
1:A:300:ASN:HA	1:A:447:ILE:HG21	1.99	0.43
1:B:300:ASN:HA	1:B:447:ILE:HG21	2.00	0.42
1:B:190:ASN:O	1:B:201:TYR:HA	2.20	0.42
1:A:165:PHE:HB3	1:A:250:GLY:HA2	2.02	0.42
1:A:346:SEP:O	1:A:347:ARG:HB3	2.21	0.41
1:B:284:SER:H	1:B:287:MET:CE	2.23	0.41
1:A:321:GLU:H	1:A:321:GLU:CD	2.24	0.40
1:B:321:GLU:H	1:B:321:GLU:CD	2.25	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	271/305 (89%)	261 (96%)	10 (4%)	0	100 100
1	B	271/305 (89%)	259 (96%)	9 (3%)	3 (1%)	14 10
All	All	542/610 (89%)	520 (96%)	19 (4%)	3 (1%)	25 25

All (3) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	B	347	ARG
1	B	182	GLU
1	B	184	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	241/260 (93%)	236 (98%)	5 (2%)	53 62
1	B	236/260 (91%)	230 (98%)	6 (2%)	47 56
All	All	477/520 (92%)	466 (98%)	11 (2%)	50 59

All (11) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	186	SER
1	A	194	GLU
1	A	197	PHE
1	A	365	THR
1	A	419	ASN
1	B	182	GLU
1	B	191	LYS
1	B	192	MET
1	B	347	ARG
1	B	419	ASN
1	B	439	GLU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (15)

such sidechains are listed below:

Mol	Chain	Res	Type
1	A	190	ASN
1	A	232	GLN
1	A	244	ASN
1	A	297	ASN
1	A	300	ASN
1	A	419	ASN
1	A	442	ASN
1	B	166	HIS
1	B	190	ASN
1	B	232	GLN
1	B	244	ASN
1	B	297	ASN
1	B	300	ASN
1	B	419	ASN
1	B	442	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)

6 non-standard protein/DNA/RNA residues 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	$\#\|Z\| > 2$
1	TPO	B	342	1	8,10,11	1.01	0	10,14,16	1.22	2 (20%)
1	SEP	A	346	1	8,9,10	0.99	0	8,12,14	1.20	1 (12%)
1	TPO	A	345	1	8,10,11	1.80	3 (37%)	10,14,16	1.07	0
1	TPO	B	345	1	8,10,11	1.34	1 (12%)	10,14,16	1.28	2 (20%)
1	TPO	A	342	1	8,10,11	0.96	0	10,14,16	1.28	2 (20%)
1	SEP	B	346	1	8,9,10	0.89	0	8,12,14	2.04	2 (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
1	TPO	B	342	1	-	1/9/11/13	-
1	SEP	A	346	1	-	0/5/8/10	-
1	TPO	A	345	1	-	2/9/11/13	-
1	TPO	B	345	1	-	3/9/11/13	-
1	TPO	A	342	1	-	1/9/11/13	-
1	SEP	B	346	1	-	5/5/8/10	-

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	345	TPO	CB-CA	3.00	1.60	1.53
1	A	345	TPO	P-OG1	-2.99	1.53	1.59
1	B	345	TPO	CB-CA	2.74	1.60	1.53
1	A	345	TPO	CG2-CB	2.32	1.57	1.51

All (9) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	B	346	SEP	OG-CB-CA	4.08	112.12	108.14
1	B	346	SEP	O2P-P-OG	3.67	116.50	106.73
1	A	346	SEP	O3P-P-OG	3.11	115.00	106.73
1	A	342	TPO	O2P-P-OG1	2.60	117.64	105.99
1	B	342	TPO	O2P-P-OG1	2.54	117.36	105.99
1	A	342	TPO	P-OG1-CB	-2.26	116.37	123.21
1	B	345	TPO	O2P-P-OG1	2.21	115.89	105.99
1	B	342	TPO	P-OG1-CB	-2.15	116.71	123.21
1	B	345	TPO	CG2-CB-CA	2.06	117.23	113.16

There are no chirality outliers.

All (12) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
1	A	345	TPO	N-CA-CB-OG1
1	B	345	TPO	N-CA-CB-OG1
1	B	345	TPO	O-C-CA-CB
1	B	346	SEP	N-CA-CB-OG
1	B	346	SEP	CB-OG-P-O1P

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Mol	Chain	Res	Type	Atoms
1	B	346	SEP	CB-OG-P-O2P
1	B	346	SEP	CB-OG-P-O3P
1	A	342	TPO	CB-OG1-P-O1P
1	B	342	TPO	CB-OG1-P-O1P
1	B	346	SEP	CA-CB-OG-P
1	B	345	TPO	CA-CB-OG1-P
1	A	345	TPO	O-C-CA-CB

There are no ring outliers.

1 monomer is involved in 1 short contact:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
1	A	346	SEP	1	0

5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

2 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	$\#\|Z\| > 2$
2	9YS	A	4000	-	32,34,34	0.49	0	35,46,46	0.83	2 (5%)
2	9YS	B	4000	-	32,34,34	0.50	0	35,46,46	0.78	1 (2%)

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
2	9YS	A	4000	-	-	0/20/20/20	0/4/4/4
2	9YS	B	4000	-	-	0/20/20/20	0/4/4/4

There are no bond length outliers.

All (3) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	A	4000	9YS	C25-C26-N31	3.04	114.63	107.87
2	B	4000	9YS	C25-C26-N31	2.92	114.36	107.87
2	A	4000	9YS	C23-C24-C25	-2.07	118.60	120.95

There are no chirality outliers.

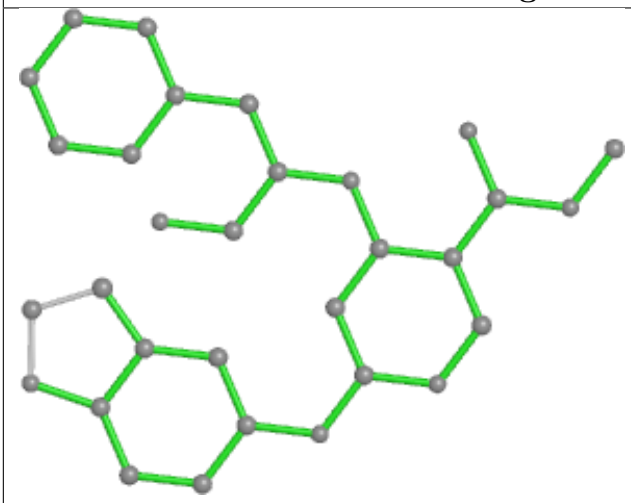
There are no torsion outliers.

There are no ring outliers.

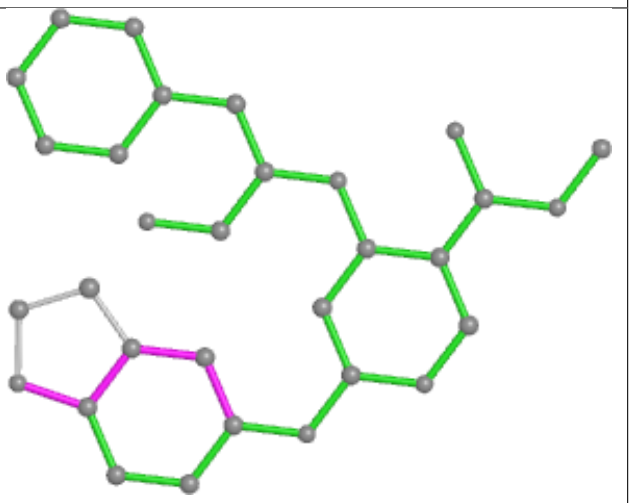
No monomer is involved in short contacts.

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.

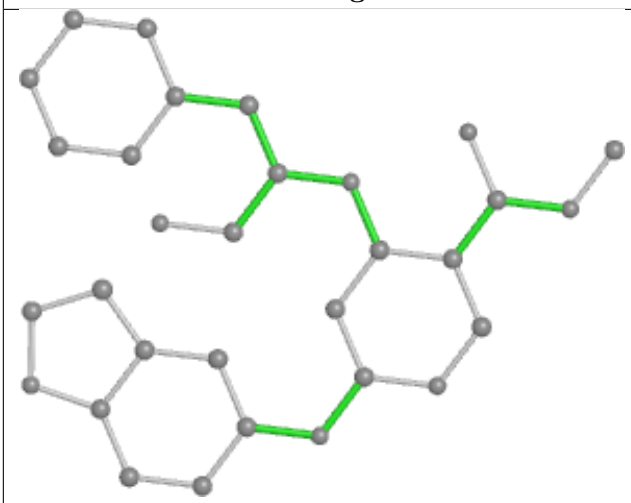
Ligand 9YS A 4000



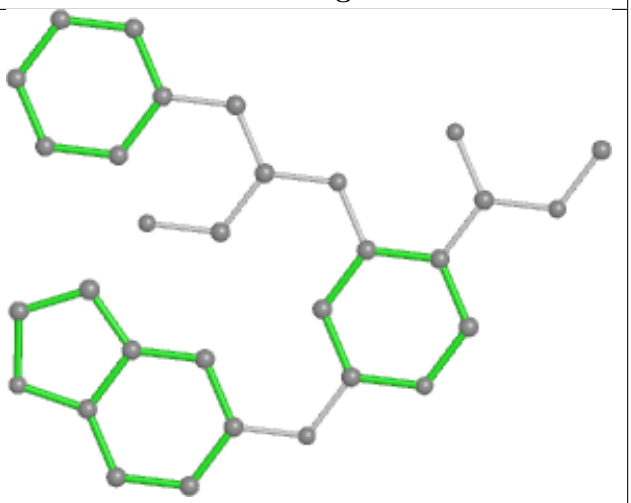
Bond lengths



Bond angles

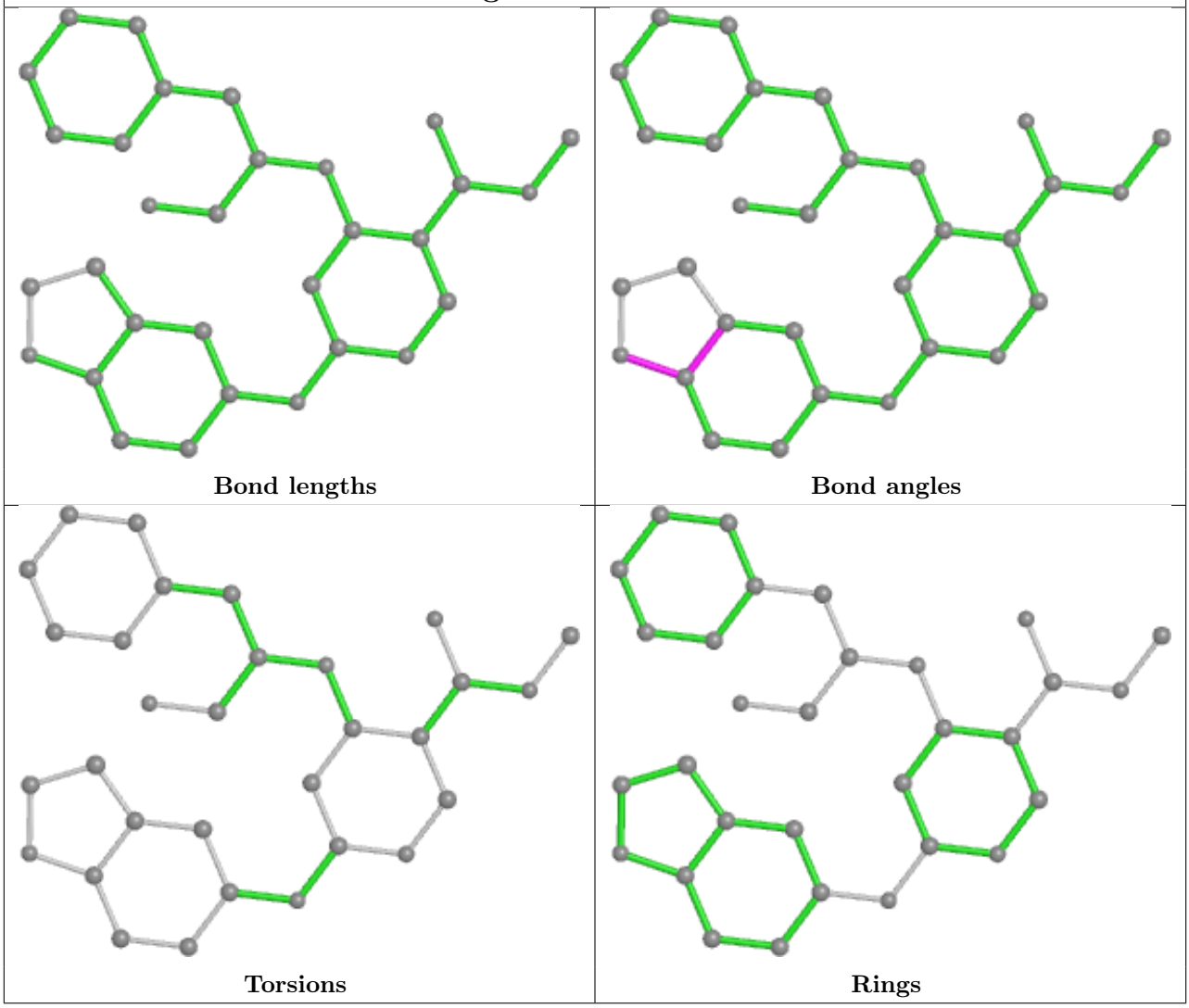


Torsions



Rings

Ligand 9YS B 4000



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	278/305 (91%)	0.33	19 (6%)	17	18	36, 57, 93, 105	0
1	B	279/305 (91%)	0.67	40 (14%)	2	2	39, 63, 116, 133	0
All	All	557/610 (91%)	0.50	59 (10%)	6	6	36, 59, 108, 133	0

All (59) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	B	226	LEU	8.1
1	B	251	PHE	7.3
1	A	226	LEU	6.3
1	B	206	ASN	6.1
1	B	165	PHE	5.9
1	B	186	SER	5.3
1	B	207	ASN	5.2
1	B	198	GLY	5.0
1	A	197	PHE	4.7
1	B	335	ALA	4.7
1	B	189	GLY	4.6
1	B	188	GLY	4.3
1	B	199	VAL	4.1
1	A	198	GLY	4.1
1	B	256	ASP	4.0
1	B	187	VAL	4.0
1	B	204	TYR	3.9
1	B	376	VAL	3.7
1	B	341	GLN	3.7
1	A	376	VAL	3.6
1	B	328	SER	3.6
1	B	336	SER	3.4
1	B	253	SER	3.3
1	A	256	ASP	3.2

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Mol	Chain	Res	Type	RSRZ
1	B	230	PHE	3.1
1	B	258	LEU	3.1
1	B	197	PHE	3.0
1	B	228	GLN	2.9
1	A	315	ALA	2.9
1	A	251	PHE	2.9
1	A	375	VAL	2.8
1	B	205	VAL	2.8
1	B	171	TYR	2.8
1	B	312	ILE	2.8
1	A	225	GLU	2.8
1	B	407	GLU	2.8
1	B	185	ILE	2.7
1	A	377	LEU	2.7
1	B	329	ASP	2.6
1	B	184	PRO	2.6
1	B	327	ILE	2.6
1	A	314	SER	2.5
1	A	374	GLY	2.5
1	B	182	GLU	2.5
1	A	407	GLU	2.5
1	A	199	VAL	2.4
1	A	373	PHE	2.4
1	A	347	ARG	2.3
1	B	408	LYS	2.2
1	B	347	ARG	2.2
1	A	228	GLN	2.2
1	A	372	SER	2.2
1	A	312	ILE	2.1
1	B	377	LEU	2.1
1	B	167	SER	2.1
1	B	315	ALA	2.1
1	B	208	THR	2.0
1	B	459	ALA	2.0
1	B	229	GLN	2.0

6.2 Non-standard residues in protein, DNA, RNA chains (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
1	SEP	A	346	10/11	0.76	0.23	84,90,98,98	0
1	SEP	B	346	10/11	0.78	0.25	88,93,101,102	0
1	TPO	A	342	11/12	0.86	0.20	96,98,104,105	0
1	TPO	B	342	11/12	0.90	0.16	100,102,105,105	0
1	TPO	B	345	11/12	0.97	0.12	83,86,87,89	0
1	TPO	A	345	11/12	0.97	0.12	81,83,83,85	0

6.3 Carbohydrates (i)

There are no monosaccharides in this entry.

6.4 Ligands (i)

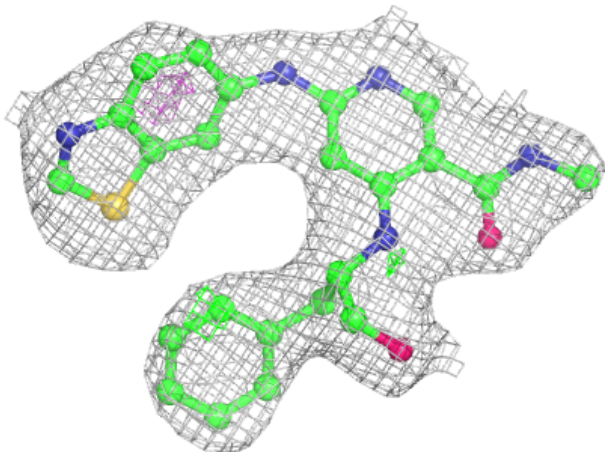
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9'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

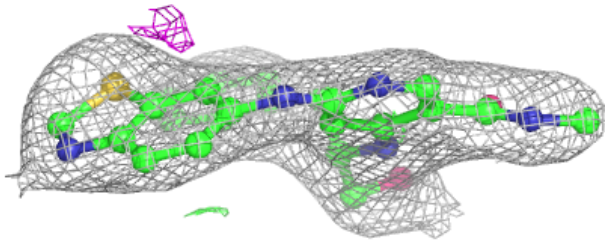
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
2	9YS	B	4000	31/31	0.94	0.16	54,60,68,69	0
2	9YS	A	4000	31/31	0.98	0.12	40,46,53,55	0

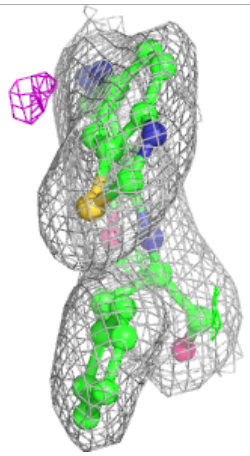
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation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

Electron density around 9YS B 4000:

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

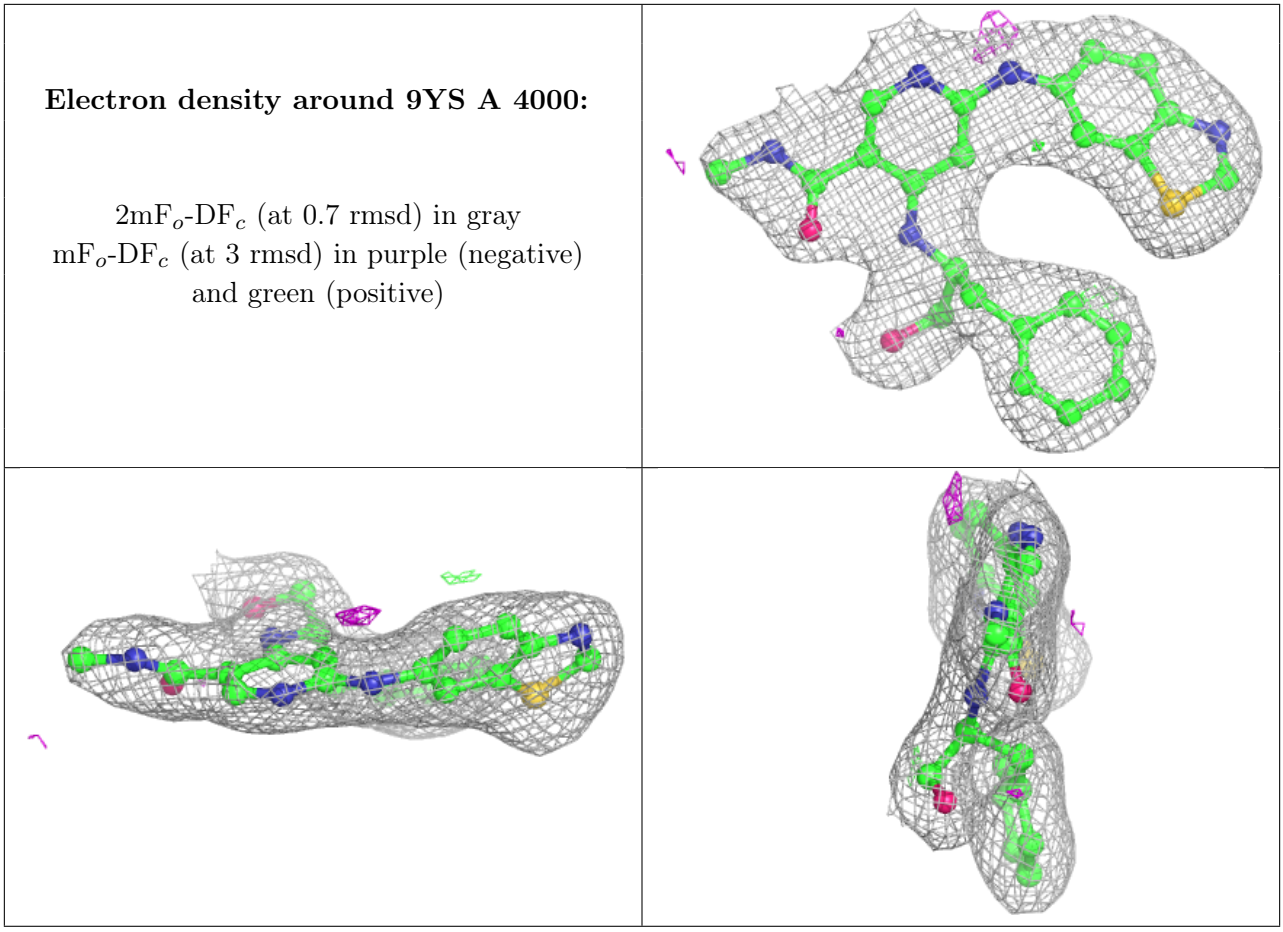






Electron density around 9YS A 4000:

$2mF_o$-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

There are no such residues in this entry.