Full wwPDB X-ray Structure Validation Report (i)

Sep 30, 2024 – 12:26 PM JST

PDB ID	:	8I7S
Title	:	The crystal structure of human abl1 kinase domain in complex with ABL1-B1
Authors	:	Zhu, C.; Zhang, Z.
Deposited on	:	2023-02-02
Resolution	:	1.95 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:

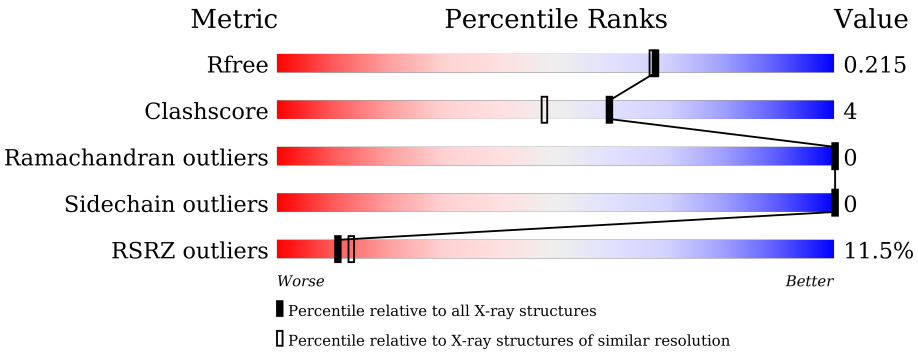
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	3.0
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
CCP4	:	9.0.003 (Gargrove)
Density-Fitness	:	1.0.11
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.39

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 1.95 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}	164625	1306 (1.94-1.94)
Clashscore	180529	1400 (1.94-1.94)
Ramachandran outliers	177936	1387 (1.94-1.94)
Sidechain outliers	177891	1387 (1.94-1.94)
RSRZ outliers	164620	1306 (1.94-1.94)

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	272	6% 88% 9% ·
1	B	272	16% 86% 11% ·

2 Entry composition

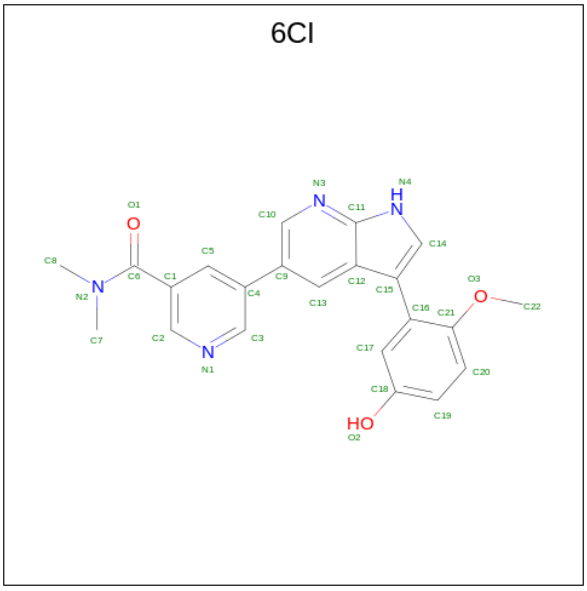
There are 3 unique types of molecules in this entry. The entry contains 4762 atoms, of which 0 are hydrogens and 0 are deuteriums.

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 Tyrosine-protein kinase ABL1.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
1	A	262	Total	C	N	O	P	S	0	0	0
			2122	1367	344	393	1	17			
1	B	264	Total	C	N	O	P	S	0	0	0
			2106	1358	342	389	1	16			

- Molecule 2 is 5-[3-(2-methoxy-5-oxidanyl-phenyl)-1H-pyrrolo[2,3-b]pyridin-5-yl]-N,N-dimethyl-pyridine-3-carboxamide (three-letter code: 6CI) (formula: $C_{22}H_{20}N_4O_3$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
2	A	1	Total	C	N	O	0	0
			29	22	4	3		
2	B	1	Total	C	N	O	0	0
			29	22	4	3		

- Molecule 3 is water.

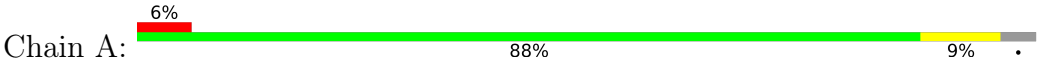
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	A	286	Total O 286 286	0	0
3	B	190	Total O 190 190	0	0

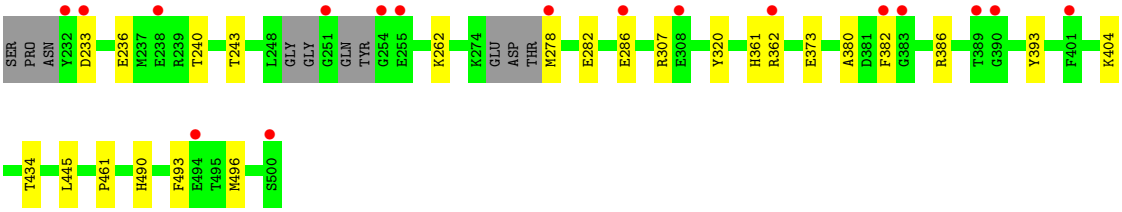
3 Residue-property plots (i)

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: Tyrosine-protein kinase ABL1

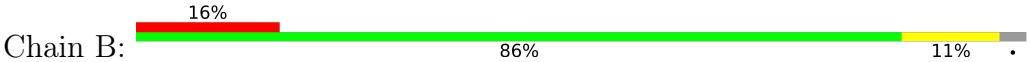
Chain A:

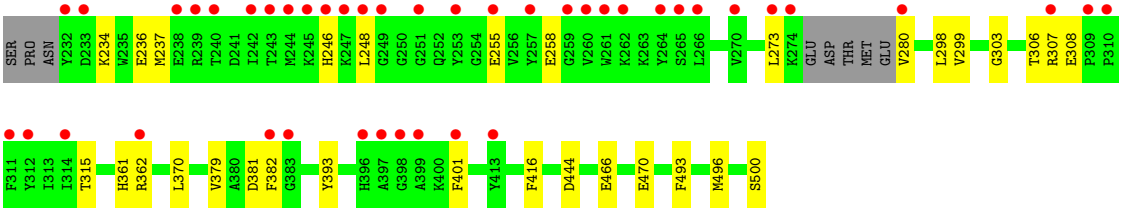




• Molecule 1: Tyrosine-protein kinase ABL1

Chain B:





4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 2	Depositor
Cell constants a, b, c, α, β, γ	104.46Å 132.63Å 56.20Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	40.72 – 1.95 40.72 – 1.95	Depositor EDS
% Data completeness (in resolution range)	99.4 (40.72-1.95) 99.3 (40.72-1.95)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	2.61 (at 1.95Å)	Xtriage
Refinement program	PHENIX 1.9_1692+SVN, PHENIX 1.9_1692+SVN	Depositor
R, R_{free}	0.185 , 0.216 0.186 , 0.215	Depositor DCC
R_{free} test set	3147 reflections (4.99%)	wwPDB-VP
Wilson B-factor (Å^2)	20.6	Xtriage
Anisotropy	0.487	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.35 , 51.2	EDS
L-test for twinning[2]	$< \|L\| > = 0.49$, $< L^2 > = 0.32$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.95	EDS
Total number of atoms	4762	wwPDB-VP
Average B, all atoms (Å^2)	35.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.59% 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: PTR, 6CI

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	0.42	0/2156	0.55	0/2915
1	B	0.37	0/2142	0.53	0/2905
All	All	0.39	0/4298	0.54	0/5820

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	2122	0	2058	16	0
1	B	2106	0	2020	20	0
2	A	29	0	0	0	0
2	B	29	0	0	0	0
3	A	286	0	0	5	1
3	B	190	0	0	1	1
All	All	4762	0	4078	35	1

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 4.

All (35) 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:233:ASP:O	3:A:702:HOH:O	2.06	0.72
1:A:362:ARG:NH2	3:A:707:HOH:O	2.27	0.68
1:A:243:THR:OG1	1:A:262:LYS:HE2	1.95	0.67
1:A:307:ARG:NH2	3:A:706:HOH:O	2.26	0.66
1:A:240:THR:OG1	3:A:703:HOH:O	2.16	0.59
1:B:307:ARG:HG3	1:B:308:GLU:N	2.24	0.53
1:A:404:LYS:HE3	1:A:445:LEU:HD23	1.91	0.52
1:B:236:GLU:OE2	1:B:306:THR:OG1	2.24	0.51
1:B:315:THR:HG21	1:B:382:PHE:HE2	1.75	0.51
1:A:493:PHE:HA	1:A:496:MET:HE3	1.94	0.50
1:A:361:HIS:O	1:A:362:ARG:HB2	2.12	0.50
1:B:444:ASP:OD1	1:B:444:ASP:N	2.40	0.49
1:A:286:GLU:OE2	1:A:382:PHE:HB3	2.12	0.49
1:A:490:HIS:HE1	3:A:734:HOH:O	1.96	0.49
1:B:273:LEU:HD21	1:B:280:VAL:HG22	1.95	0.47
1:B:237:MET:SD	1:B:303:GLY:HA3	2.54	0.47
1:B:381:ASP:OD1	1:B:381:ASP:N	2.47	0.47
1:B:246:HIS:O	1:B:258:GLU:N	2.46	0.47
1:B:493:PHE:HA	1:B:496:MET:HE3	1.96	0.47
1:B:298:LEU:HD23	1:B:379:VAL:HB	1.97	0.47
1:A:386:ARG:HD2	1:B:500:SER:C	2.37	0.45
1:B:248:LEU:HD21	1:B:258:GLU:HB2	1.99	0.45
1:A:278:MET:HE2	1:A:282:GLU:HB3	1.98	0.44
1:B:361:HIS:O	1:B:362:ARG:HB2	2.18	0.44
1:A:236:GLU:HG2	1:A:307:ARG:HH21	1.84	0.43
1:B:401:PHE:CE1	1:B:416:PHE:HZ	2.37	0.43
1:A:380:ALA:HB1	1:A:382:PHE:CE1	2.53	0.42
1:B:273:LEU:HD21	1:B:280:VAL:HA	2.00	0.42
1:B:234:LYS:HD2	3:B:864:HOH:O	2.19	0.42
1:B:299:VAL:HG21	1:B:370:LEU:HD12	2.00	0.42
1:B:466:GLU:O	1:B:470:GLU:HG3	2.19	0.42
1:B:401:PHE:HE1	1:B:416:PHE:HZ	1.68	0.42
1:A:434:THR:HG22	1:A:461:PRO:HB3	2.02	0.41
1:B:255:GLU:H	1:B:255:GLU:HG2	1.57	0.41
1:A:320:TYR:HE2	1:A:373:GLU:HA	1.86	0.40

All (1) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:921:HOH:O	3:B:885:HOH:O[3_444]	2.10	0.10

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	254/272 (93%)	248 (98%)	6 (2%)	0	100	100
1	B	259/272 (95%)	253 (98%)	6 (2%)	0	100	100
All	All	513/544 (94%)	501 (98%)	12 (2%)	0	100	100

There are no Ramachandran outliers to report.

5.3.2 Protein sidechains (i)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	224/237 (94%)	224 (100%)	0	100	100
1	B	217/237 (92%)	217 (100%)	0	100	100
All	All	441/474 (93%)	441 (100%)	0	100	100

There are no protein residues with a non-rotameric sidechain to report.

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

5.3.3 RNA (i)

There are no RNA molecules in this entry.

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

2 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	PTR	A	393	1	15,16,17	1.32	1 (6%)	19,22,24	0.67	0
1	PTR	B	393	1	15,16,17	1.33	1 (6%)	19,22,24	0.64	0

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
1	PTR	A	393	1	-	0/10/11/13	0/1/1/1
1	PTR	B	393	1	-	0/10/11/13	0/1/1/1

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	393	PTR	OH-CZ	-4.22	1.31	1.40
1	B	393	PTR	OH-CZ	-4.07	1.31	1.40

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.5 Carbohydrates (i)

There are no oligosaccharides 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	6CI	B	601	-	31,32,32	2.22	8 (25%)	37,46,46	1.94	10 (27%)
2	6CI	A	601	-	31,32,32	2.10	6 (19%)	37,46,46	1.97	10 (27%)

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	6CI	B	601	-	-	0/18/18/18	0/4/4/4
2	6CI	A	601	-	-	1/18/18/18	0/4/4/4

All (14) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	A	601	6CI	O3-C21	6.71	1.47	1.37
2	B	601	6CI	C6-N2	6.52	1.43	1.34
2	A	601	6CI	C6-N2	6.28	1.42	1.34
2	B	601	6CI	O3-C21	6.19	1.47	1.37
2	B	601	6CI	C1-C6	3.20	1.55	1.50
2	A	601	6CI	C13-C9	3.13	1.46	1.38
2	B	601	6CI	O2-C18	3.01	1.44	1.37
2	B	601	6CI	C13-C9	2.85	1.45	1.38
2	A	601	6CI	C1-C6	2.61	1.54	1.50
2	A	601	6CI	O2-C18	2.49	1.42	1.37
2	B	601	6CI	C15-C16	2.45	1.53	1.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	601	6CI	C11-N3	2.30	1.40	1.37
2	A	601	6CI	C3-C4	-2.17	1.35	1.39
2	B	601	6CI	C3-C4	-2.06	1.35	1.39

All (20) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	B	601	6CI	C10-N3-C11	5.76	122.48	116.69
2	A	601	6CI	C10-N3-C11	5.51	122.23	116.69
2	B	601	6CI	C9-C10-N3	-5.11	120.82	125.55
2	A	601	6CI	C4-C5-C1	-4.42	116.30	121.09
2	A	601	6CI	C9-C10-N3	-4.25	121.61	125.55
2	B	601	6CI	C4-C5-C1	-3.56	117.23	121.09
2	A	601	6CI	C9-C13-C12	-3.11	115.49	122.30
2	A	601	6CI	C5-C1-C2	2.95	120.99	117.95
2	B	601	6CI	O3-C21-C16	2.95	120.66	116.26
2	B	601	6CI	O3-C21-C20	-2.93	119.35	124.37
2	B	601	6CI	C1-C6-N2	2.78	122.10	119.00
2	A	601	6CI	C5-C4-C3	2.71	119.80	117.11
2	B	601	6CI	C3-N1-C2	2.64	121.08	117.48
2	A	601	6CI	C13-C9-C10	2.57	119.83	116.24
2	A	601	6CI	C3-N1-C2	2.43	120.79	117.48
2	B	601	6CI	C5-C4-C3	2.38	119.47	117.11
2	B	601	6CI	C13-C9-C10	2.31	119.47	116.24
2	B	601	6CI	C9-C13-C12	-2.23	117.43	122.30
2	A	601	6CI	C17-C16-C21	2.13	121.45	117.97
2	A	601	6CI	C1-C6-N2	2.12	121.37	119.00

There are no chirality outliers.

All (1) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	A	601	6CI	C12-C15-C16-C21

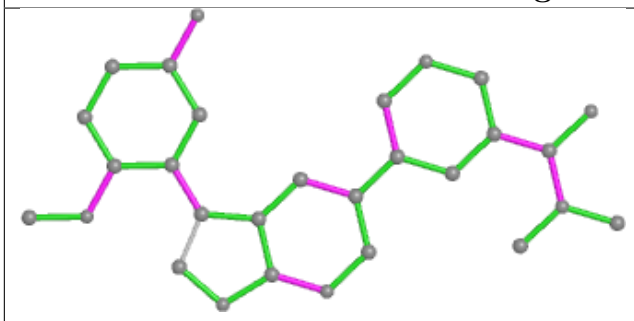
There are no ring outliers.

No monomer is involved in short contacts.

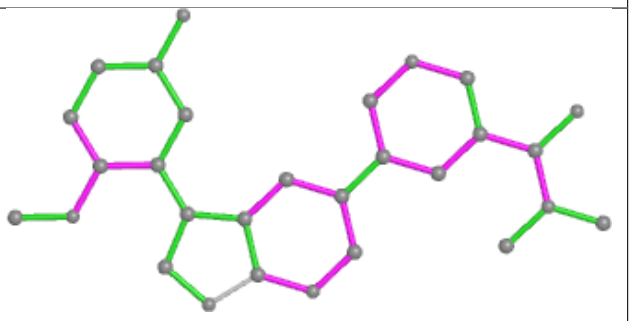
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. 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.

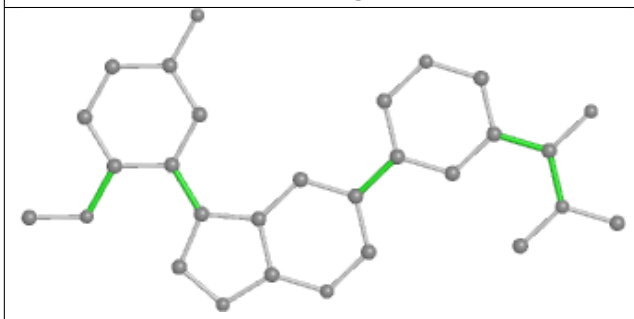
Ligand 6CI B 601



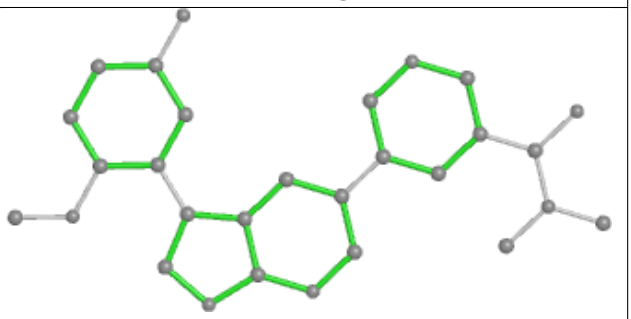
Bond lengths



Bond angles

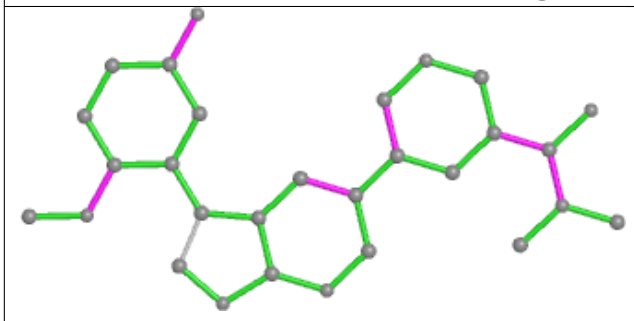


Torsions

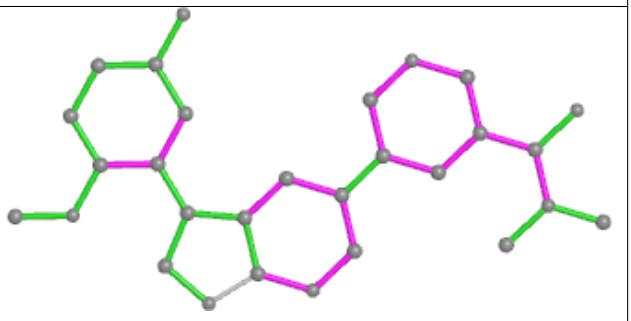


Rings

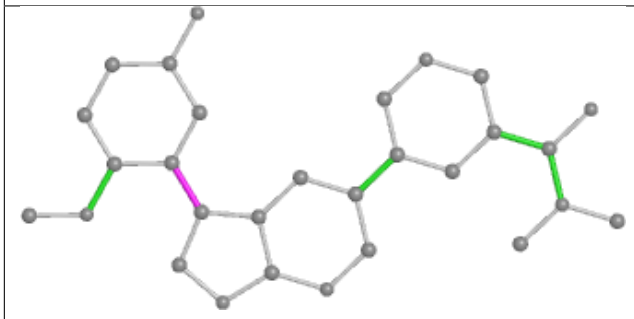
Ligand 6CI A 601



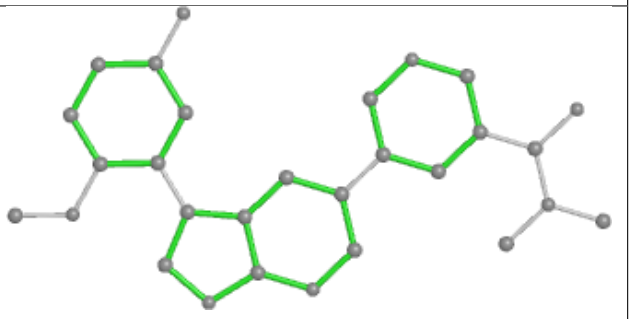
Bond lengths



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

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	261/272 (95%)	0.23	17 (6%) 26 29	11, 25, 61, 81	0
1	B	263/272 (96%)	0.83	43 (16%) 5 6	17, 36, 82, 92	0
All	All	524/544 (96%)	0.53	60 (11%) 11 13	11, 29, 77, 92	0

All (60) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	232	TYR	7.5
1	A	254	GLY	6.3
1	B	401	PHE	6.2
1	B	280	VAL	5.5
1	B	383	GLY	5.4
1	A	390	GLY	5.0
1	B	232	TYR	4.8
1	A	382	PHE	4.5
1	B	382	PHE	4.4
1	A	251	GLY	4.2
1	B	249	GLY	4.0
1	B	397	ALA	3.7
1	A	255	GLU	3.6
1	A	389	THR	3.5
1	B	399	ALA	3.5
1	B	274	LYS	3.5
1	B	257	TYR	3.5
1	B	260	VAL	3.5
1	B	311	PHE	3.3
1	B	261	TRP	3.2
1	B	310	PRO	3.1
1	B	233	ASP	3.1
1	B	248	LEU	3.0
1	B	262	LYS	3.0

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Mol	Chain	Res	Type	RSRZ
1	B	238	GLU	2.9
1	A	500	SER	2.8
1	A	362	ARG	2.7
1	B	362	ARG	2.7
1	B	246	HIS	2.7
1	A	238	GLU	2.6
1	B	243	THR	2.6
1	A	308	GLU	2.6
1	A	233	ASP	2.6
1	B	307	ARG	2.5
1	B	413	TYR	2.5
1	B	240	THR	2.4
1	B	242	ILE	2.4
1	B	266	LEU	2.4
1	B	255	GLU	2.4
1	B	253	TYR	2.4
1	A	286	GLU	2.4
1	B	314	ILE	2.4
1	B	398	GLY	2.4
1	B	312	TYR	2.4
1	B	239	ARG	2.3
1	B	396	HIS	2.3
1	A	401	PHE	2.3
1	A	383	GLY	2.3
1	B	309	PRO	2.3
1	B	245	LYS	2.2
1	A	278	MET	2.2
1	B	265	SER	2.2
1	B	270	VAL	2.2
1	B	251	GLY	2.2
1	B	244	MET	2.2
1	B	259	GLY	2.2
1	B	264	TYR	2.2
1	B	273	LEU	2.1
1	A	494	GLU	2.1
1	B	247	LYS	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	PTR	B	393	16/17	0.89	0.14	31,36,88,91	0
1	PTR	A	393	16/17	0.90	0.11	22,28,82,85	0

6.3 Carbohydrates (i)

There are no monosaccharides in this entry.

6.4 Ligands (i)

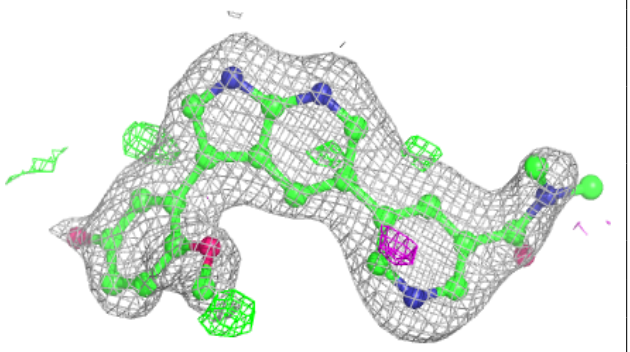
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9'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

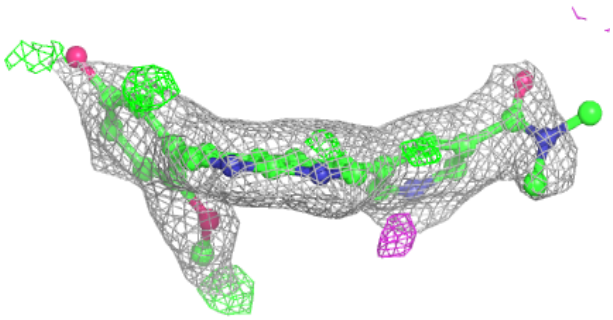
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
2	6CI	B	601	29/29	0.88	0.15	28,39,65,69	0
2	6CI	A	601	29/29	0.93	0.11	13,28,50,57	0

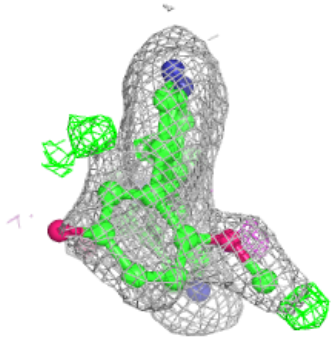
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation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

Electron density around 6CI B 601:

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

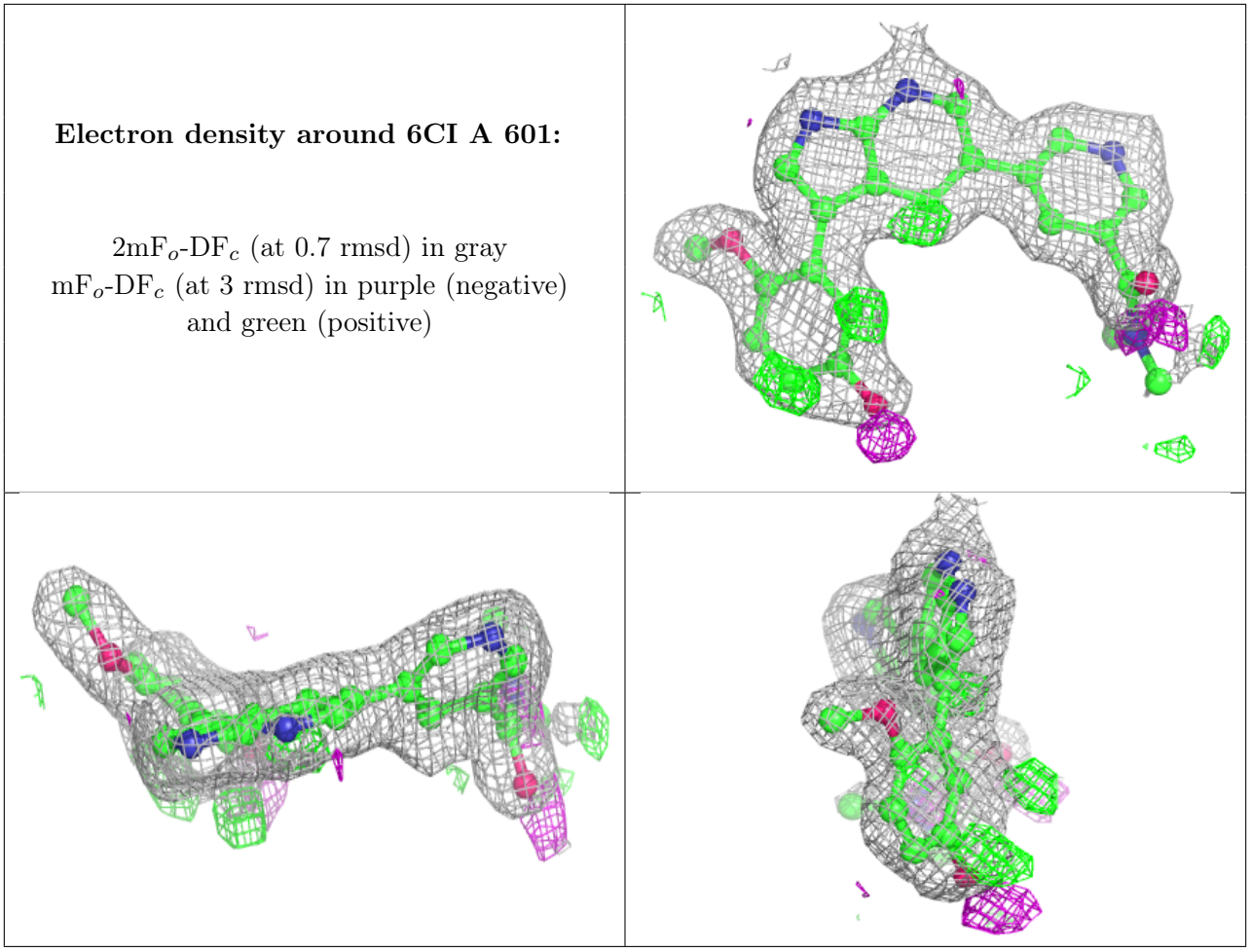






Electron density around 6CI A 601:

$2mF_o$-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.