

Full wwPDB X-ray Structure Validation Report (i)

Dec 2, 2023 - 05:07 pm GMT

PDB ID : 2BZ5

Title: Structure-based Discovery of a New Class of Hsp90 Inhibitors

Authors: Barril, X.; Brough, P.; Drysdale, M.; Hubbard, R.E.; Massey, A.; Surgenor,

A.; Wright, L.

Deposited on : 2005-08-11

Resolution : 1.90 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.orgA 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 (1)) were used in the production of this report:

MolProbity: 4.02b-467

Mogul : 1.8.4, 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)

 $Refmac \quad : \quad 5.8.0158$

CCP4 : 7.0.044 (Gargrove)

Ideal geometry (proteins) : Engh & Huber (2001) Ideal geometry (DNA, RNA) : Parkinson et al. (1996)

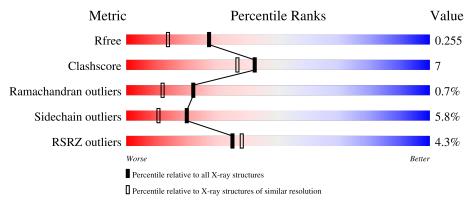
Validation Pipeline (wwPDB-VP) : 2.36

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 1.90 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 $(\# \mathrm{Entries})$	Similar resolution $(\# \text{Entries, resolution range}(\text{\AA}))$
R_{free}	130704	6207 (1.90-1.90)
Clashscore	141614	6847 (1.90-1.90)
Ramachandran outliers	138981	6760 (1.90-1.90)
Sidechain outliers	138945	6760 (1.90-1.90)
RSRZ outliers	127900	6082 (1.90-1.90)

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	235	82%	7% 11%
1	В	235	77%	9% • • 11%



2 Entry composition (i)

There are 3 unique types of molecules in this entry. The entry contains 3871 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 HEAT SHOCK PROTEIN HSP90-ALPHA.

Mol	Chain	Residues	Atoms			ZeroOcc	AltConf	Trace		
1	A	210	Total 1662	C 1053	11	O 330	S 6	0	3	0
1	В	210	Total 1650	C 1047			S 5	0	0	0

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	63	SER	THR	conflict	UNP P07900
В	63	SER	THR	conflict	UNP P07900

• Molecule 2 is 2,5-DICHLORO-N-[4-HYDROXY-3-(2-HYDROXY-1-NAPHTHYL)PHENY L]BENZENESULFONAMIDE (three-letter code: AB4) (formula: C₂₂H₁₅Cl₂NO₄S).

\mathbf{Mol}	Chain	Residues	Atoms				ZeroOcc	AltConf		
2	A	1	Total 30	C 22	Cl 2	N 1	O 4	S 1	0	0



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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	
2	В	1	Total 30		Cl 2	N 1	O 4	S 1	0	0

• Molecule 3 is water.

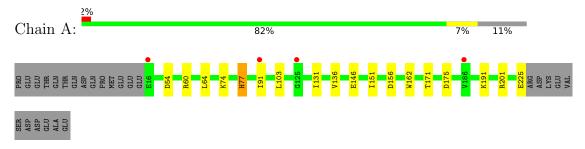
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	A	284	Total O 284 284	0	0
3	В	215	Total O 215 215	0	0



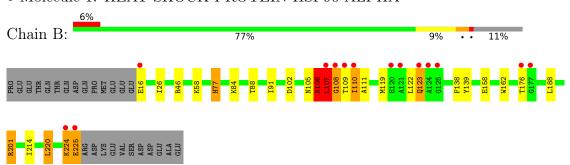
3 Residue-property plots (i)

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: HEAT SHOCK PROTEIN HSP90-ALPHA



• Molecule 1: HEAT SHOCK PROTEIN HSP90-ALPHA





4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 2	Depositor
Cell constants	64.46Å 88.56Å 98.96Å	Donositor
a, b, c, α , β , γ	90.00° 90.00° 90.00°	Depositor
Resolution (Å)	30.00 - 1.90	Depositor
Resolution (A)	29.37 - 1.90	EDS
% Data completeness	88.6 (30.00-1.90)	Depositor
(in resolution range)	88.7 (29.37-1.90)	EDS
R_{merge}	0.06	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) > 1$	2.50 (at 1.91Å)	Xtriage
Refinement program	REFMAC 5.1.24	Depositor
D D.	0.195 , 0.254	Depositor
R, R_{free}	0.197 , 0.255	DCC
R_{free} test set	2023 reflections (5.03%)	wwPDB-VP
Wilson B-factor (Å ²)	24.0	Xtriage
Anisotropy	0.218	Xtriage
Bulk solvent $k_{sol}(e/Å^3)$, $B_{sol}(Å^2)$	0.33, 42.5	EDS
L-test for twinning ²	$ < L >=0.51, < L^2>=0.34$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.96	EDS
Total number of atoms	3871	wwPDB-VP
Average B, all atoms (Å ²)	27.0	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 40.51 % 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 2.7049e-04. The detected translational NCS is most likely also responsible for the elevated intensity ratio.

²Theoretical 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.



¹Intensities estimated from amplitudes.

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: AB4

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		
IVIOI	Chain	RMSZ	# Z > 5	RMSZ	# Z > 5	
1	A	0.83	0/1705	0.88	$2/2297 \ (0.1\%)$	
1	В	0.85	0/1674	0.89	$2/2257 \ (0.1\%)$	
All	All	0.84	0/3379	0.89	4/4554 (0.1%)	

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

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

There are no bond length outliers.

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	$Observed(^o)$	$\operatorname{Ideal}({}^{o})$
1	В	108	GLY	N-CA-C	6.71	129.88	113.10
1	A	60	ARG	NE-CZ-NH1	6.50	123.55	120.30
1	A	175	ASP	CB-CG-OD2	5.58	123.32	118.30
1	В	220	LEU	CB-CG-CD2	5.49	120.33	111.00

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	В	107	LEU	Peptide



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	1662	0	1656	7	0
1	В	1650	0	1646	37	0
2	A	30	0	14	0	0
2	В	30	0	13	5	0
3	A	284	0	0	1	0
3	В	215	0	0	6	1
All	All	3871	0	3329	46	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 7.

All (46) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	$\begin{array}{c} \text{Interatomic} \\ \text{distance } (\text{\AA}) \end{array}$	Clash overlap (Å)
1:B:105:ASN:O	1:B:108:GLY:HA3	1.28	1.24
1:B:105:ASN:O	1:B:108:GLY:CA	2.10	0.99
1:B:109:THR:O	1:B:109:THR:HG23	1.71	0.90
1:B:102:ASP:O	1:B:106:ASN:N	2.09	0.85
1:B:107:LEU:HB3	1:B:139:TYR:OH	1.81	0.81
1:B:107:LEU:HD11	1:B:162:TRP:HE1	1.52	0.75
1:B:107:LEU:O	3:B:2124:HOH:O	2.04	0.74
2:B:1226:AB4:H23	3:B:2140:HOH:O	1.87	0.74
1:B:122:LEU:O	1:B:123:GLN:HB2	1.87	0.73
1:B:158:GLU:OE1	1:B:158:GLU:CB	2.39	0.69
1:B:106:ASN:HD22	2:B:1226:AB4:H29	1.58	0.68
1:B:109:THR:O	1:B:109:THR:CG2	2.43	0.67
1:B:122:LEU:O	1:B:123:GLN:CB	2.44	0.66
1:B:105:ASN:O	1:B:107:LEU:N	2.35	0.60
1:B:201:ARG:HG2	3:B:2094:HOH:O	2.01	0.60
1:B:106:ASN:ND2	2:B:1226:AB4:H29	2.16	0.59
1:B:105:ASN:C	1:B:107:LEU:H	2.08	0.56
1:B:102:ASP:O	1:B:106:ASN:HB2	2.05	0.56
1:B:138:PHE:CD1	2:B:1226:AB4:H28	2.42	0.55
1:A:146[B]:GLU:HG2	1:A:191:LYS:HG2	1.90	0.53
1:B:77:HIS:CD2	1:B:77:HIS:C	2.81	0.52



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A4 1		Interatomic	Clash	
Atom-1	Atom-2	${\rm distance} \ (\mathring{\rm A})$	overlap (Å)	
1:B:224:LYS:O	1:B:225:GLU:HB2	2.10	0.51	
1:B:105:ASN:C	1:B:107:LEU:N	2.64	0.51	
1:B:91:ILE:HD12	1:B:91:ILE:N	2.26	0.51	
1:B:119:MET:O	1:B:122:LEU:O	2.29	0.49	
2:B:1226:AB4:H27	2:B:1226:AB4:C12	2.43	0.49	
1:B:108:GLY:O	3:B:2125:HOH:O	2.19	0.47	
1:A:91:ILE:N	1:A:91:ILE:HD12	2.30	0.47	
1:B:77:HIS:O	1:B:77:HIS:HD2	1.97	0.47	
1:B:107:LEU:HD21	3:B:2123:HOH:O	2.15	0.47	
1:B:201:ARG:CG	3:B:2094:HOH:O	2.62	0.47	
1:B:107:LEU:N	1:B:108:GLY:HA3	2.30	0.47	
1:A:77:HIS:CD2	1:A:77:HIS:C	2.90	0.46	
1:B:106:ASN:HA	1:B:109:THR:HB	1.98	0.46	
1:B:26:ILE:HD13	1:B:107:LEU:O	2.16	0.45	
1:B:224:LYS:H	1:B:224:LYS:NZ	2.14	0.45	
1:A:156:ASP:OD2	3:A:2196:HOH:O	2.21	0.44	
1:A:146[B]:GLU:HG2	1:A:191:LYS:CG	2.48	0.43	
1:A:131:ILE:HG13	1:A:136:VAL:HG23	2.00	0.43	
1:B:107:LEU:HB3	1:B:139:TYR:HH	1.80	0.43	
1:B:110:ILE:N	1:B:110:ILE:HD12	2.32	0.43	
1:B:109:THR:O	1:B:110:ILE:HB	2.20	0.42	
1:B:88:THR:HA	1:B:188:LEU:O	2.20	0.41	
1:B:107:LEU:CD1	1:B:162:TRP:HE1	2.28	0.41	
1:A:162:TRP:HA	1:A:171:THR:O	2.21	0.41	
1:B:109:THR:C	1:B:111:ALA:H	2.23	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-1 Atom-2		$egin{aligned} \operatorname{Clash} \ \operatorname{overlap}\ (ext{Å}) \end{aligned}$	
3:B:2064:HOH:O	3:B:2064:HOH:O[2_655]	2.16	0.04	

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	Perce	ntiles
1	A	211/235 (90%)	206 (98%)	5 (2%)	0	100	100
1	В	208/235~(88%)	196 (94%)	9 (4%)	3 (1%)	11	3
All	All	419/470 (89%)	402 (96%)	14 (3%)	3 (1%)	22	12

All (3) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	В	110	ILE
1	В	123	GLN
1	В	106	ASN

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles		
1	A	184/205~(90%)	176 (96%)	8 (4%)	29 19		
1	В	179/205 (87%)	166 (93%)	13 (7%)	14 6		
All	All	363/410 (88%)	342 (94%)	21 (6%)	20 10		

All (21) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	54	ASP
1	A	64	LEU
1	A	74	LYS
1	A	77	HIS
1	A	103	LEU
1	A	151	ILE
1	A	201	ARG
1	A	225	GLU
1	В	16	GLU
1	В	46	ARG



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Mol	Chain	Res	Type
1	В	58	LYS
1	В	77	HIS
1	В	84	LYS
1	В	106	ASN
1	В	107	LEU
1	В	176	THR
1	В	201	ARG
1	В	214	ILE
1	В	220	LEU
1	В	224	LYS
1	В	225	GLU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (5) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	35	ASN
1	A	79	ASN
1	В	77	HIS
1	В	79	ASN
1	В	106	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)

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	Trino	e Chain	Chain	Chain	Chain	Chain	Chain	Chain	Chain	Chain	Chain	Chain	Chain	Chain Res	Link	Bo	Bond lengths			Bond angles		
MIOI	Type		nes	Link	Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2												
2	AB4	В	1226	1	31,33,33	2.40	6 (19%)	44,49,49	2.16	11 (25%)												
2	AB4	A	1226	-	31,33,33	2.01	6 (19%)	44,49,49	1.71	8 (18%)												

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	AB4	В	1226	1	-	0/11/15/15	0/4/4/4
2	AB4	A	1226	-	-	0/11/15/15	0/4/4/4

All (12) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	$Observed(\AA)$	Ideal(Å)
2	В	1226	AB4	O8-S1	7.13	1.51	1.43
2	A	1226	AB4	O9-S1	6.53	1.50	1.43
2	В	1226	AB4	O9-S1	6.37	1.50	1.43
2	A	1226	AB4	C14-N5	-5.91	1.33	1.43
2	В	1226	AB4	C14-N5	-5.61	1.34	1.43
2	В	1226	AB4	C2-S1	3.82	1.83	1.77
2	В	1226	AB4	S1-N5	3.15	1.68	1.63
2	A	1226	AB4	O8-S1	2.72	1.46	1.43
2	A	1226	AB4	C18-C11	2.64	1.42	1.37
2	A	1226	AB4	C30-C28	2.53	1.42	1.36
2	A	1226	AB4	C17-C16	2.25	1.41	1.36
2	В	1226	AB4	C10-C2	2.02	1.43	1.40

All (19) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	\mathbf{Z}	$\mathbf{Observed}(^o)$	$\operatorname{Ideal}({}^{o})$
2	В	1226	AB4	O9-S1-O8	-6.56	111.49	119.55
2	В	1226	AB4	C2-C10-CL22	6.55	126.29	121.49
2	A	1226	AB4	O9-S1-O8	-6.19	111.94	119.55
2	В	1226	AB4	O25-C11-C3	4.91	122.44	116.31
2	В	1226	AB4	C7-C20-CL24	4.47	124.73	119.15



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Mol	Chain	Res	Type	Atoms	\mathbf{Z}	$Observed(^o)$	$Ideal(^{o})$
2	В	1226	AB4	O8-S1-C2	3.61	113.61	107.66
2	В	1226	AB4	C23-C20-CL24	-3.39	114.06	119.35
2	A	1226	AB4	C7-C20-CL24	3.21	123.17	119.15
2	В	1226	AB4	C19-C10-CL22	-3.20	111.99	118.41
2	A	1226	AB4	C2-C10-CL22	3.11	123.77	121.49
2	A	1226	AB4	O25-C11-C3	3.08	120.16	116.31
2	A	1226	AB4	O8-S1-N5	2.80	113.74	106.73
2	A	1226	AB4	C2-S1-N5	2.61	110.32	107.27
2	A	1226	AB4	C4-C6-C15	2.59	120.82	118.85
2	В	1226	AB4	C19-C10-C2	2.45	121.72	120.05
2	В	1226	AB4	C10-C2-S1	-2.40	121.68	123.25
2	В	1226	AB4	O26-C13-C16	-2.15	114.69	122.20
2	В	1226	AB4	C4-C6-C15	2.09	120.44	118.85
2	A	1226	AB4	C19-C23-C20	2.06	121.41	119.24

There are no chirality outliers.

There are no torsion outliers.

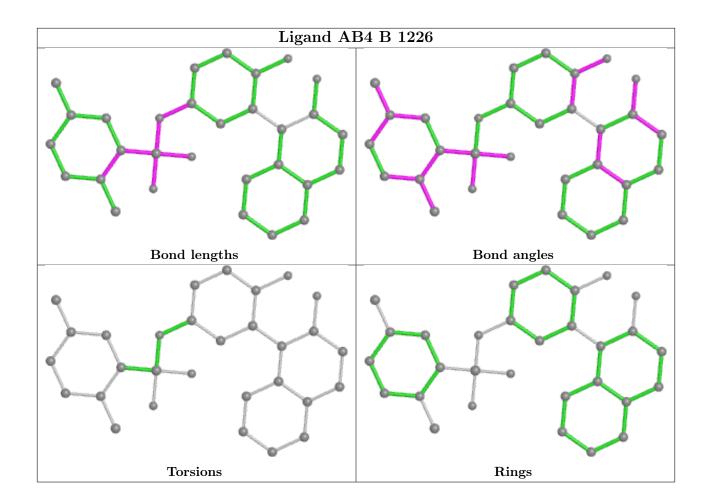
There are no ring outliers.

1 monomer is involved in 5 short contacts:

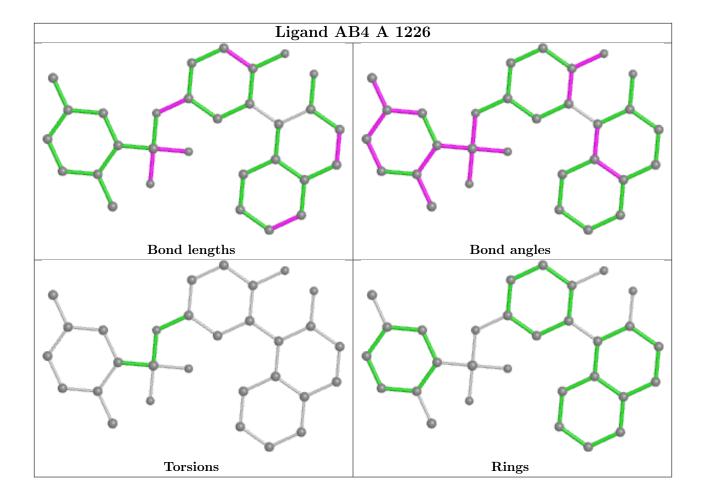
Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	В	1226	AB4	5	0

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.









5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.



6 Fit of model and data (i)

6.1 Protein, DNA and RNA chains (i)

In the following table, the column labelled '#RSRZ>2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95^{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>	$\# \mathrm{RSRZ}{>}2$	$OWAB(A^2)$	Q<0.9
1	A	210/235~(89%)	-0.25	4 (1%) 66 69	16, 22, 34, 48	1 (0%)
1	В	210/235~(89%)	0.04	14 (6%) 17 20	18, 26, 45, 58	1 (0%)
All	All	420/470 (89%)	-0.11	18 (4%) 35 38	16, 24, 41, 58	2 (0%)

All (18) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	В	107	LEU	4.9
1	В	177	GLY	4.3
1	В	108	GLY	3.5
1	В	110	ILE	3.5
1	В	176	THR	3.5
1	A	16	GLU	3.3
1	В	16	GLU	3.2
1	В	225	GLU	3.2
1	В	109	THR	2.7
1	A	125	GLY	2.7
1	В	121	ALA	2.5
1	В	123	GLN	2.5
1	A	186	VAL	2.5
1	В	120	GLU	2.5
1	В	224	LYS	2.4
1	В	124	ALA	2.3
1	A	91	ILE	2.1
1	В	125	GLY	2.1

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.

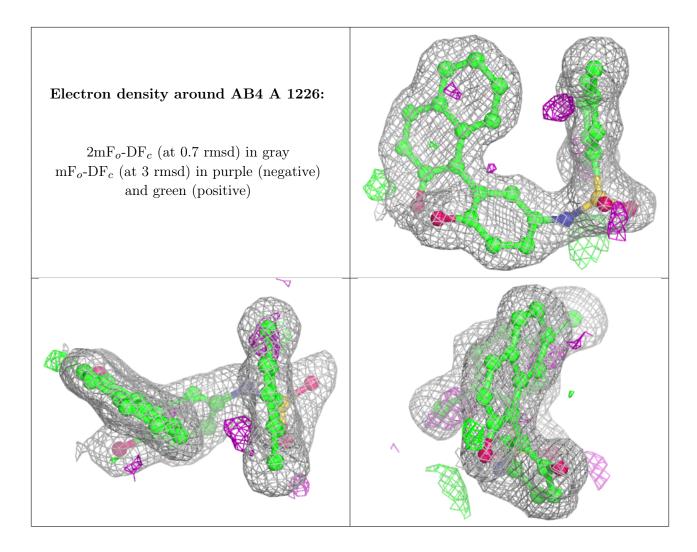
Mol	Type	Chain	Res	Atoms	RSCC	RSR	${f B-factors}({f A}^2)$	Q<0.9
2	AB4	В	1226	30/30	0.84	0.21	43,49,63,67	0
2	AB4	A	1226	30/30	0.97	0.09	17,21,29,32	0

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 AB4 B 1226: $2 {\rm mF}_o\text{-}{\rm DF}_c$ (at 0.7 rmsd) in gray ${\rm mF}_o\text{-}{\rm DF}_c$ (at 3 rmsd) in purple (negative) and green (positive)





6.5 Other polymers (i)

There are no such residues in this entry.

