



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 6, 2026 – 02:22 PM UTC

PDB ID : 6GVF / pdb_00006gvf
Title : Crystal structure of PI3K alpha in complex with 3-(2-Amino-benzooxazol-5-yl)-1-isopropyl-1H-pyrazolo[3,4-d]pyrimidin-4-ylamine
Authors : Ouvry, G.; Aurelly, M.; Bonnary, L.; Borde, E.; Bouix-Peter, C.; Chantalat, L.; Clary, L.; Defoin-Platel, C.; Deret, S.; Forissier, M.; Harris, C.S.; Isabet, T.; Lamy, L.; Luzy, A.P.; Pascau, J.; Soulet, C.; Taddei, A.; Taquet, N.; Tomas, L.; Thoreau, E.; Varvier, E.; Vial, E.; Hennequin, L.F.
Deposited on : 2018-06-21
Resolution : 2.50 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	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)

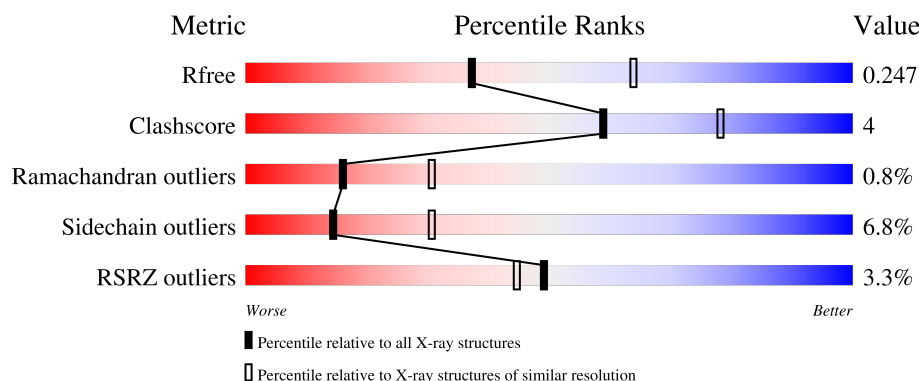
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

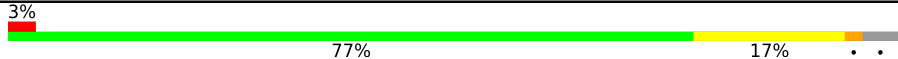
The reported resolution of this entry is 2.50 Å.

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}	180053	5829 (2.50-2.50)
Clashscore	190562	6492 (2.50-2.50)
Ramachandran outliers	187476	6378 (2.50-2.50)
Sidechain outliers	187428	6380 (2.50-2.50)
RSRZ outliers	180081	5833 (2.50-2.50)

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 $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	945	

Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.49

2 Entry composition [i](#)

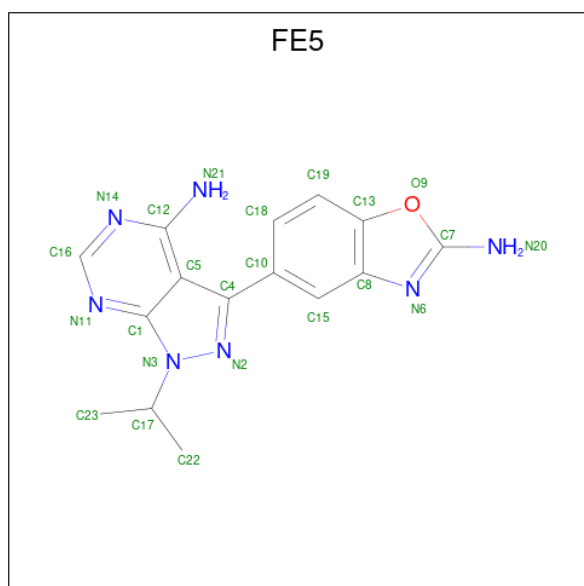
There are 3 unique types of molecules in this entry. The entry contains 7480 atoms, of which 0 are hydrogens and 0 are deuteriums.

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 Phosphatidylinositol 4,5-bisphosphate 3-kinase catalytic sub-unit alpha isoform.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	910	Total	C	N	O	S	25	1	0
			7388	4710	1266	1350	62			

- Molecule 2 is 5-(4-azanyl-1-propan-2-yl-pyrazolo[3,4-d]pyrimidin-3-yl)-1,3-benzoxazol-2-amine (CCD ID: FE5) (formula: C₁₅H₁₅N₇O).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
2	A	1	Total	C	N	O	0	0
			23	15	7	1		

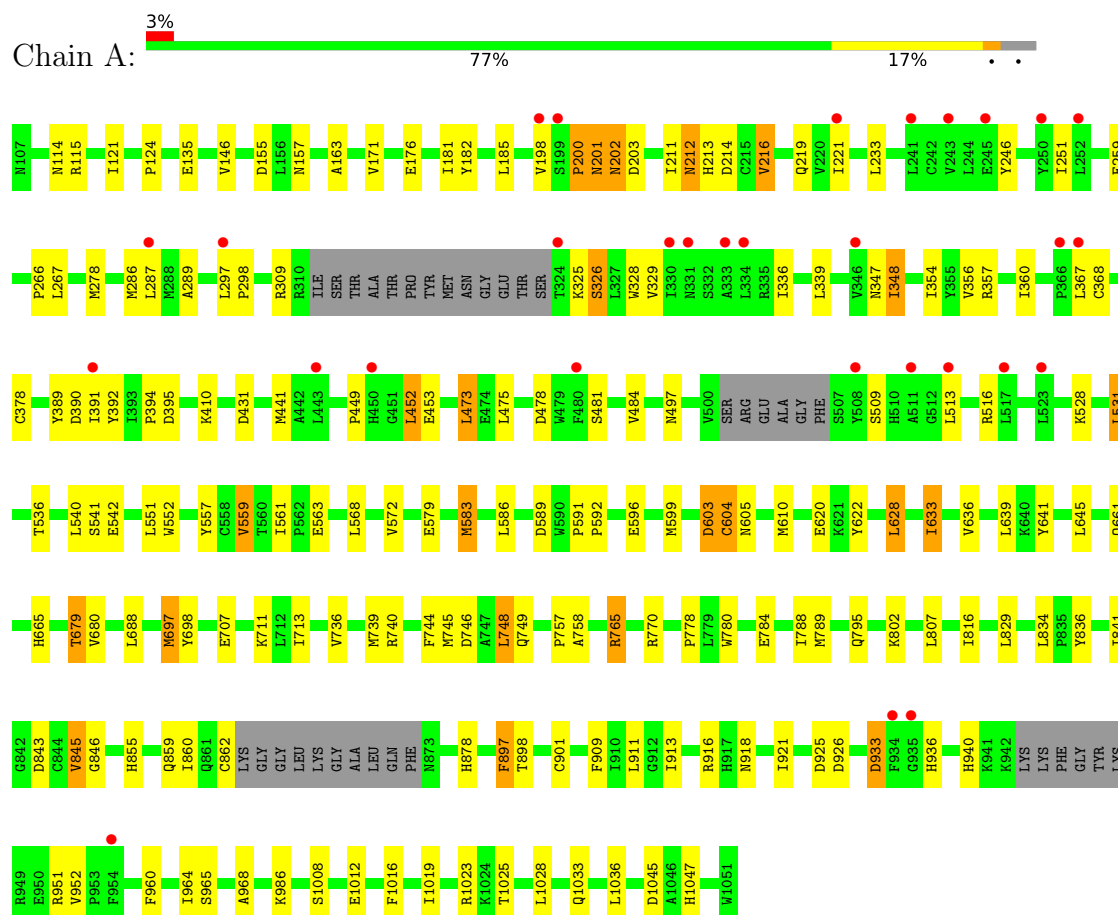
- Molecule 3 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	A	69	Total	O	0	0
			69	69		

3 Residue-property plots

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: Phosphatidylinositol 4,5-bisphosphate 3-kinase catalytic subunit alpha isoform



4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	59.42Å 136.00Å 143.12Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	45.72 – 2.50 45.72 – 2.50	Depositor EDS
% Data completeness (in resolution range)	68.0 (45.72-2.50) 68.0 (45.72-2.50)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.37 (at 2.51Å)	Xtriage
Refinement program	BUSTER 2.10.3	Depositor
R, R_{free}	0.193 , 0.244 0.203 , 0.247	Depositor DCC
R_{free} test set	1337 reflections (3.05%)	wwPDB-VP
Wilson B-factor (Å ²)	84.6	Xtriage
Anisotropy	0.010	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.30 , 80.8	EDS
L-test for twinning ²	$\langle L \rangle = 0.49$, $\langle L^2 \rangle = 0.32$	Xtriage
Estimated twinning fraction	0.004 for -h,l,k	Xtriage
F_o, F_c correlation	0.94	EDS
Total number of atoms	7480	wwPDB-VP
Average B, all atoms (Å ²)	102.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.12% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: FE5

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	0.89	2/7552 (0.0%)	1.40	40/10219 (0.4%)

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	610	MET	SD-CE	5.50	1.93	1.79
1	A	697	MET	SD-CE	5.07	1.92	1.79

All (40) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	633	ILE	N-CA-CB	8.54	119.99	110.51
1	A	843	ASP	CA-CB-CG	6.93	119.53	112.60
1	A	603	ASP	CA-CB-CG	6.30	118.90	112.60
1	A	347	ASN	CA-C-N	6.24	128.65	120.60
1	A	347	ASN	C-N-CA	6.24	128.65	120.60
1	A	758	ALA	N-CA-C	-6.11	105.58	113.16
1	A	746	ASP	CA-CB-CG	6.10	118.70	112.60
1	A	200	PRO	CA-C-N	5.83	132.19	121.70
1	A	200	PRO	C-N-CA	5.83	132.19	121.70
1	A	115	ARG	CA-C-N	5.75	128.45	120.29
1	A	115	ARG	C-N-CA	5.75	128.45	120.29
1	A	114	ASN	CA-C-N	5.58	127.76	120.28
1	A	114	ASN	C-N-CA	5.58	127.76	120.28
1	A	326	SER	CA-C-N	5.58	128.03	120.38
1	A	326	SER	C-N-CA	5.58	128.03	120.38
1	A	1045	ASP	CA-CB-CG	5.57	118.17	112.60
1	A	604	CYS	CA-C-N	5.57	128.30	120.28
1	A	604	CYS	C-N-CA	5.57	128.30	120.28
1	A	497	ASN	N-CA-C	-5.55	105.39	111.82

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	157	ASN	CA-CB-CG	5.54	118.14	112.60
1	A	897	PHE	CA-C-N	5.45	127.59	120.28
1	A	897	PHE	C-N-CA	5.45	127.59	120.28
1	A	431	ASP	CA-CB-CG	5.45	118.05	112.60
1	A	926	ASP	CA-CB-CG	5.44	118.04	112.60
1	A	909	PHE	CA-C-N	5.44	127.62	120.60
1	A	909	PHE	C-N-CA	5.44	127.62	120.60
1	A	348	ILE	CA-C-N	5.40	127.78	120.38
1	A	348	ILE	C-N-CA	5.40	127.78	120.38
1	A	124	PRO	CA-C-N	5.40	128.15	120.53
1	A	124	PRO	C-N-CA	5.40	128.15	120.53
1	A	212	ASN	CA-CB-CG	5.36	117.96	112.60
1	A	878	HIS	CA-C-N	5.29	127.31	120.44
1	A	878	HIS	C-N-CA	5.29	127.31	120.44
1	A	836	TYR	CA-C-N	5.17	124.89	119.92
1	A	836	TYR	C-N-CA	5.17	124.89	119.92
1	A	309	ARG	CA-C-N	5.11	130.90	121.70
1	A	309	ARG	C-N-CA	5.11	130.90	121.70
1	A	289	ALA	CA-C-N	5.09	127.41	120.54
1	A	289	ALA	C-N-CA	5.09	127.41	120.54
1	A	146	VAL	N-CA-C	-5.03	105.64	110.72

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	7388	0	7298	65	0
2	A	23	0	0	0	0
3	A	69	0	0	1	0
All	All	7480	0	7298	65	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 4.

All (65) 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:200:PRO:HA	1:A:202:ASN:N	1.98	0.78
1:A:200:PRO:HA	1:A:202:ASN:H	1.51	0.76
1:A:592:PRO:HB2	1:A:622:TYR:HE2	1.54	0.72
1:A:572:VAL:HG21	1:A:583:MET:HG2	1.74	0.68
1:A:745:MET:O	1:A:749:GLN:HG2	1.94	0.68
1:A:936:HIS:HB2	1:A:940:HIS:HB3	1.82	0.62
1:A:807:LEU:HD12	1:A:846:GLY:HA3	1.81	0.60
1:A:135:GLU:HG2	1:A:645:LEU:HD12	1.84	0.59
1:A:368:CYS:HB2	1:A:390:ASP:HB3	1.84	0.58
1:A:965:SER:HB3	1:A:968:ALA:HB3	1.86	0.58
1:A:163:ALA:HA	1:A:297:LEU:HD21	1.86	0.57
1:A:898:THR:HG22	1:A:964:ILE:HG12	1.85	0.57
1:A:392:TYR:HB3	1:A:395:ASP:HB2	1.87	0.56
1:A:449:PRO:HD2	1:A:452:LEU:HD13	1.87	0.56
1:A:1023:ARG:HG3	1:A:1028:LEU:HD12	1.90	0.54
1:A:1016:PHE:HA	1:A:1019:ILE:HD12	1.90	0.53
1:A:182:TYR:HA	1:A:185:LEU:HD12	1.90	0.53
1:A:216:VAL:HB	1:A:219:GLN:HE21	1.74	0.53
1:A:531:LEU:HD23	1:A:551:LEU:HD23	1.92	0.52
1:A:897:PHE:O	1:A:901:CYS:HB2	2.11	0.51
1:A:829:LEU:HD11	1:A:986:LYS:HB3	1.93	0.51
1:A:221:ILE:HG23	1:A:287:LEU:HD11	1.93	0.51
1:A:713:ILE:HG12	1:A:845:VAL:HG11	1.94	0.50
1:A:744:PHE:CZ	1:A:748:LEU:HD13	2.47	0.50
1:A:328:TRP:HA	1:A:394:PRO:HB3	1.94	0.50
1:A:552:TRP:HZ3	1:A:583:MET:HE2	1.77	0.49
1:A:298:PRO:HG2	1:A:697:MET:HG2	1.93	0.49
1:A:765:ARG:HD3	1:A:784:GLU:HG3	1.95	0.48
1:A:286:MET:HG3	1:A:789:MET:HE3	1.96	0.48
1:A:661:GLN:OE1	1:A:698:TYR:HB2	2.14	0.47
1:A:326:SER:O	1:A:329:VAL:HG22	2.14	0.47
1:A:739:MET:HA	1:A:744:PHE:CD1	2.50	0.47
1:A:360:ILE:HG22	1:A:367:LEU:HD12	1.96	0.47
1:A:636:VAL:O	1:A:639:LEU:HB2	2.14	0.47
1:A:855:HIS:HB3	1:A:859:GLN:HG3	1.96	0.46
1:A:816:ILE:HG21	1:A:911:LEU:HD21	1.97	0.46
1:A:198:VAL:HG12	1:A:203:ASP:HB2	1.97	0.46
1:A:711:LYS:HB2	1:A:748:LEU:HD11	1.97	0.45
1:A:778:PRO:HB3	1:A:802:LYS:HG3	1.98	0.45
1:A:325:LYS:O	1:A:484:VAL:HA	2.16	0.45
1:A:665:HIS:CG	1:A:757:PRO:HG3	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:596:GLU:HA	1:A:599:MET:HE2	1.99	0.44
1:A:897:PHE:HZ	1:A:960:PHE:HD1	1.63	0.44
1:A:121:ILE:HG22	1:A:688:LEU:HB3	2.00	0.44
1:A:181:ILE:HG12	1:A:278:MET:HG2	1.99	0.44
1:A:559:VAL:HG22	1:A:591:PRO:HD3	1.98	0.44
1:A:940:HIS:NE2	1:A:951:ARG:HD2	2.33	0.44
1:A:516:ARG:HB3	1:A:552:TRP:HD1	1.82	0.44
1:A:679:THR:HG22	1:A:680:VAL:HG13	1.98	0.44
1:A:185:LEU:HD21	1:A:213:HIS:HB3	1.99	0.43
1:A:707:GLU:HB3	3:A:1214:HOH:O	2.18	0.43
1:A:356:VAL:HG21	1:A:473:LEU:HD11	2.00	0.43
1:A:336:ILE:HD12	1:A:389:TYR:CE2	2.54	0.43
1:A:568:LEU:HG	1:A:583:MET:HE1	2.00	0.43
1:A:214:ASP:HA	1:A:266:PRO:HB3	2.00	0.42
1:A:604:CYS:HB3	1:A:641:TYR:CZ	2.54	0.42
1:A:770:ARG:HG3	1:A:780:TRP:HB3	2.00	0.42
1:A:528:LYS:HG2	1:A:557:TYR:CZ	2.55	0.42
1:A:1033:GLN:HE22	1:A:1036:LEU:HD22	1.84	0.42
1:A:855:HIS:HB2	1:A:860:ILE:HD11	2.02	0.41
1:A:540:LEU:HD21	1:A:1016:PHE:HD1	1.86	0.41
1:A:916:ARG:HB3	1:A:921:ILE:HD11	2.03	0.41
1:A:952:VAL:HG11	1:A:1047:HIS:HE1	1.85	0.41
1:A:603:ASP:OD1	1:A:605:ASN:HB2	2.21	0.40
1:A:628:LEU:O	1:A:628:LEU:HD12	2.22	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	901/945 (95%)	845 (94%)	49 (5%)	7 (1%)	16 31

All (7) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	202	ASN
1	A	246	TYR
1	A	925	ASP
1	A	933	ASP
1	A	339	LEU
1	A	201	ASN
1	A	481	SER

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	820/859 (96%)	763 (93%)	57 (7%)	14	29

All (57) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	155	ASP
1	A	171	VAL
1	A	176	GLU
1	A	201	ASN
1	A	211	ILE
1	A	212	ASN
1	A	216	VAL
1	A	233	LEU
1	A	251	ILE
1	A	259[A]	GLU
1	A	259[B]	GLU
1	A	267	LEU
1	A	348	ILE
1	A	354	ILE
1	A	357	ARG
1	A	378	CYS
1	A	391	ILE
1	A	410	LYS

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Mol	Chain	Res	Type
1	A	441	MET
1	A	452	LEU
1	A	453	GLU
1	A	473	LEU
1	A	475	LEU
1	A	478	ASP
1	A	509	SER
1	A	513	LEU
1	A	531	LEU
1	A	536	THR
1	A	541	SER
1	A	542	GLU
1	A	559	VAL
1	A	561	ILE
1	A	563	GLU
1	A	579	GLU
1	A	583	MET
1	A	586	LEU
1	A	589	ASP
1	A	620	GLU
1	A	628	LEU
1	A	633	ILE
1	A	679	THR
1	A	736	VAL
1	A	740	ARG
1	A	748	LEU
1	A	765	ARG
1	A	788	ILE
1	A	795	GLN
1	A	834	LEU
1	A	841	ILE
1	A	845	VAL
1	A	862	CYS
1	A	913	ILE
1	A	918	ASN
1	A	933	ASP
1	A	1008	SER
1	A	1012	GLU
1	A	1025	THR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (12) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	114	ASN
1	A	157	ASN
1	A	183	ASN
1	A	219	GLN
1	A	374	GLN
1	A	643	GLN
1	A	676	HIS
1	A	721	GLN
1	A	738	GLN
1	A	825	GLN
1	A	1033	GLN
1	A	1044	ASN

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates ⓘ

There are no oligosaccharides in this entry.

5.6 Ligand geometry ⓘ

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	$\# Z > 2$
2	FE5	A	1101	-	26,26,26	0.33	0	39,39,39	0.66	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	FE5	A	1101	-	-	0/8/8/8	0/4/4/4

There are no bond length outliers.

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	1101	FE5	C1-N3-C17	2.03	131.88	128.35

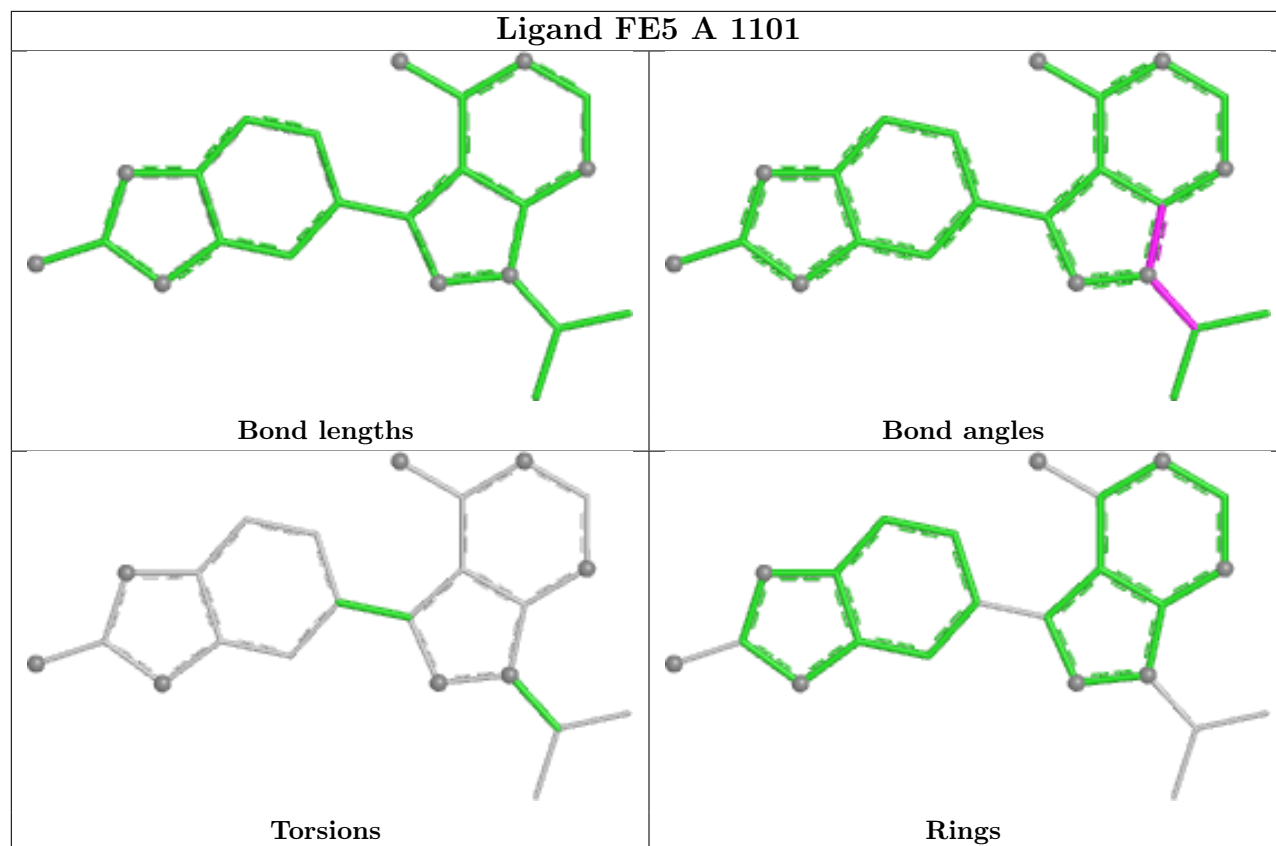
There are no chirality outliers.

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 than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.



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, 95th 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	910/945 (96%)	0.24	30 (3%)	49 45	34, 96, 173, 214	10 (1%)

All (30) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	252	LEU	5.5
1	A	513	LEU	4.5
1	A	367	LEU	4.4
1	A	287	LEU	4.2
1	A	480	PHE	3.7
1	A	934	PHE	3.4
1	A	334	LEU	3.4
1	A	250	TYR	3.2
1	A	508	TYR	2.8
1	A	511	ALA	2.7
1	A	198	VAL	2.6
1	A	241	LEU	2.6
1	A	333	ALA	2.6
1	A	523	LEU	2.5
1	A	450	HIS	2.5
1	A	366	PRO	2.4
1	A	330	ILE	2.4
1	A	954	PHE	2.4
1	A	517	LEU	2.3
1	A	245	GLU	2.3
1	A	297	LEU	2.2
1	A	331	ASN	2.2
1	A	324	THR	2.2
1	A	443	LEU	2.1
1	A	199	SER	2.1
1	A	391	ILE	2.1
1	A	221	ILE	2.1

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Mol	Chain	Res	Type	RSRZ
1	A	243	VAL	2.0
1	A	346	VAL	2.0
1	A	935	GLY	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 oligosaccharides in this entry.

6.4 Ligands [i](#)

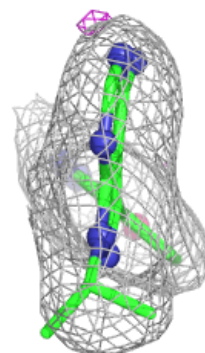
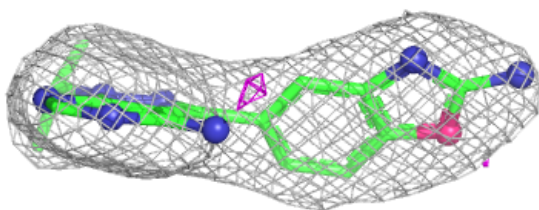
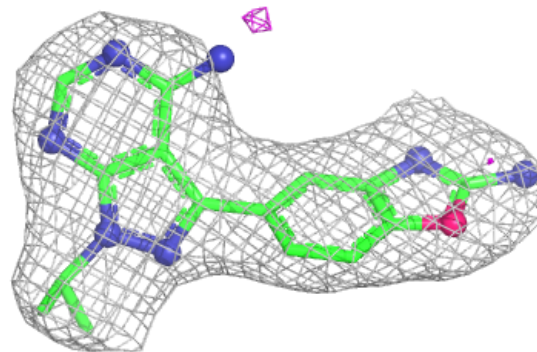
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
2	FE5	A	1101	23/23	0.94	0.07	50,69,80,80	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 FE5 A 1101:

$2mF_o-DF_c$ (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.