



Full wwPDB X-ray Structure Validation Report ⓘ

Oct 11, 2023 – 07:34 AM EDT

PDB ID : 5JT2
Title : BRAFV600E Kinase Domain In Complex with Chemically Linked Vemurafenib Inhibitor VEM-BISAMIDE
Authors : Grasso, M.J.; Marmorstein, R.
Deposited on : 2016-05-09
Resolution : 2.70 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 : 2.35.1
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) : 2.35.1

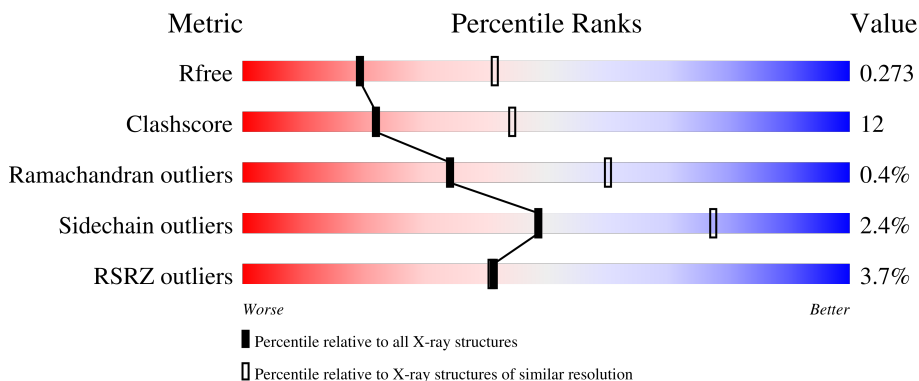
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.70 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	2808 (2.70-2.70)
Clashscore	141614	3122 (2.70-2.70)
Ramachandran outliers	138981	3069 (2.70-2.70)
Sidechain outliers	138945	3069 (2.70-2.70)
RSRZ outliers	127900	2737 (2.70-2.70)

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	280	<div style="display: flex; align-items: center;"> <div style="width: 2%; height: 10px; background-color: red; margin-right: 2px;"></div> <div style="width: 71%; height: 10px; background-color: green; margin-right: 2px;"></div> <div style="width: 20%; height: 10px; background-color: yellow; margin-right: 2px;"></div> <div style="width: 8%; height: 10px; background-color: orange; margin-right: 2px;"></div> <div style="width: 1%; height: 10px; background-color: grey;"></div> </div>
1	B	280	<div style="display: flex; align-items: center;"> <div style="width: 2%; height: 10px; background-color: red; margin-right: 2px;"></div> <div style="width: 67%; height: 10px; background-color: green; margin-right: 2px;"></div> <div style="width: 21%; height: 10px; background-color: yellow; margin-right: 2px;"></div> <div style="width: 10%; height: 10px; background-color: orange; margin-right: 2px;"></div> <div style="width: 1%; height: 10px; background-color: grey;"></div> </div>
1	C	280	<div style="display: flex; align-items: center;"> <div style="width: 5%; height: 10px; background-color: red; margin-right: 2px;"></div> <div style="width: 67%; height: 10px; background-color: green; margin-right: 2px;"></div> <div style="width: 22%; height: 10px; background-color: yellow; margin-right: 2px;"></div> <div style="width: 10%; height: 10px; background-color: orange; margin-right: 2px;"></div> <div style="width: 1%; height: 10px; background-color: grey;"></div> </div>
1	D	280	<div style="display: flex; align-items: center;"> <div style="width: 4%; height: 10px; background-color: red; margin-right: 2px;"></div> <div style="width: 65%; height: 10px; background-color: green; margin-right: 2px;"></div> <div style="width: 18%; height: 10px; background-color: yellow; margin-right: 2px;"></div> <div style="width: 16%; height: 10px; background-color: orange; margin-right: 2px;"></div> <div style="width: 1%; height: 10px; background-color: grey;"></div> </div>

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard

residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
2	BEN	A	801	-	X	-	-

2 Entry composition [i](#)

There are 4 unique types of molecules in this entry. The entry contains 8051 atoms, of which 104 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 Serine/threonine-protein kinase B-raf.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	257	1958	1249	339	358	12	0	0	0
1	B	251	1921	1225	331	353	12	0	0	0
1	C	251	1925	1231	333	349	12	0	0	0
1	D	234	1801	1152	309	329	11	0	0	0

There are 84 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	444	GLY	-	expression tag	UNP P15056
A	445	SER	-	expression tag	UNP P15056
A	446	GLU	-	expression tag	UNP P15056
A	447	PHE	-	expression tag	UNP P15056
A	543	ALA	ILE	engineered mutation	UNP P15056
A	544	SER	ILE	engineered mutation	UNP P15056
A	551	LYS	ILE	engineered mutation	UNP P15056
A	562	ARG	GLN	engineered mutation	UNP P15056
A	588	ASN	LEU	engineered mutation	UNP P15056
A	600	GLU	VAL	engineered mutation	UNP P15056
A	630	SER	LYS	engineered mutation	UNP P15056
A	667	GLU	PHE	engineered mutation	UNP P15056
A	673	SER	TYR	engineered mutation	UNP P15056
A	688	ARG	ALA	engineered mutation	UNP P15056
A	706	SER	LEU	engineered mutation	UNP P15056
A	709	ARG	GLN	engineered mutation	UNP P15056
A	713	GLU	SER	engineered mutation	UNP P15056
A	716	GLU	LEU	engineered mutation	UNP P15056
A	720	GLU	SER	engineered mutation	UNP P15056
A	722	SER	PRO	engineered mutation	UNP P15056
A	723	GLY	LYS	engineered mutation	UNP P15056

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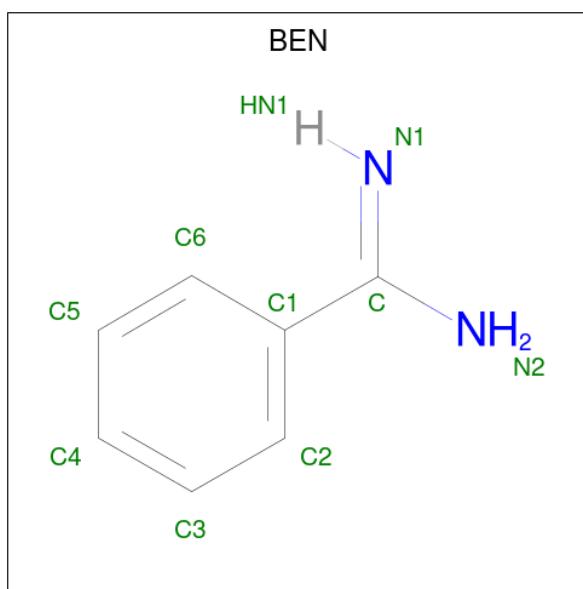
Chain	Residue	Modelled	Actual	Comment	Reference
B	444	GLY	-	expression tag	UNP P15056
B	445	SER	-	expression tag	UNP P15056
B	446	GLU	-	expression tag	UNP P15056
B	447	PHE	-	expression tag	UNP P15056
B	543	ALA	ILE	engineered mutation	UNP P15056
B	544	SER	ILE	engineered mutation	UNP P15056
B	551	LYS	ILE	engineered mutation	UNP P15056
B	562	ARG	GLN	engineered mutation	UNP P15056
B	588	ASN	LEU	engineered mutation	UNP P15056
B	600	GLU	VAL	engineered mutation	UNP P15056
B	630	SER	LYS	engineered mutation	UNP P15056
B	667	GLU	PHE	engineered mutation	UNP P15056
B	673	SER	TYR	engineered mutation	UNP P15056
B	688	ARG	ALA	engineered mutation	UNP P15056
B	706	SER	LEU	engineered mutation	UNP P15056
B	709	ARG	GLN	engineered mutation	UNP P15056
B	713	GLU	SER	engineered mutation	UNP P15056
B	716	GLU	LEU	engineered mutation	UNP P15056
B	720	GLU	SER	engineered mutation	UNP P15056
B	722	SER	PRO	engineered mutation	UNP P15056
B	723	GLY	LYS	engineered mutation	UNP P15056
C	444	GLY	-	expression tag	UNP P15056
C	445	SER	-	expression tag	UNP P15056
C	446	GLU	-	expression tag	UNP P15056
C	447	PHE	-	expression tag	UNP P15056
C	543	ALA	ILE	engineered mutation	UNP P15056
C	544	SER	ILE	engineered mutation	UNP P15056
C	551	LYS	ILE	engineered mutation	UNP P15056
C	562	ARG	GLN	engineered mutation	UNP P15056
C	588	ASN	LEU	engineered mutation	UNP P15056
C	600	GLU	VAL	engineered mutation	UNP P15056
C	630	SER	LYS	engineered mutation	UNP P15056
C	667	GLU	PHE	engineered mutation	UNP P15056
C	673	SER	TYR	engineered mutation	UNP P15056
C	688	ARG	ALA	engineered mutation	UNP P15056
C	706	SER	LEU	engineered mutation	UNP P15056
C	709	ARG	GLN	engineered mutation	UNP P15056
C	713	GLU	SER	engineered mutation	UNP P15056
C	716	GLU	LEU	engineered mutation	UNP P15056
C	720	GLU	SER	engineered mutation	UNP P15056
C	722	SER	PRO	engineered mutation	UNP P15056
C	723	GLY	LYS	engineered mutation	UNP P15056

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Chain	Residue	Modelled	Actual	Comment	Reference
D	444	GLY	-	expression tag	UNP P15056
D	445	SER	-	expression tag	UNP P15056
D	446	GLU	-	expression tag	UNP P15056
D	447	PHE	-	expression tag	UNP P15056
D	543	ALA	ILE	engineered mutation	UNP P15056
D	544	SER	ILE	engineered mutation	UNP P15056
D	551	LYS	ILE	engineered mutation	UNP P15056
D	562	ARG	GLN	engineered mutation	UNP P15056
D	588	ASN	LEU	engineered mutation	UNP P15056
D	600	GLU	VAL	engineered mutation	UNP P15056
D	630	SER	LYS	engineered mutation	UNP P15056
D	667	GLU	PHE	engineered mutation	UNP P15056
D	673	SER	TYR	engineered mutation	UNP P15056
D	688	ARG	ALA	engineered mutation	UNP P15056
D	706	SER	LEU	engineered mutation	UNP P15056
D	709	ARG	GLN	engineered mutation	UNP P15056
D	713	GLU	SER	engineered mutation	UNP P15056
D	716	GLU	LEU	engineered mutation	UNP P15056
D	720	GLU	SER	engineered mutation	UNP P15056
D	722	SER	PRO	engineered mutation	UNP P15056
D	723	GLY	LYS	engineered mutation	UNP P15056

- Molecule 2 is BENZAMIDINE (three-letter code: BEN) (formula: C₇H₈N₂).



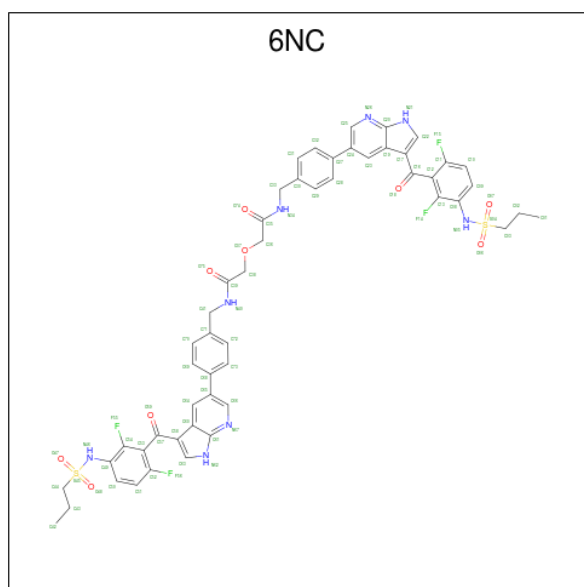
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
			Total	C	H	N		
2	A	1	17	7	8	2	0	0

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
			Total	C	H	N		
2	B	1	17	7	8	2	0	0

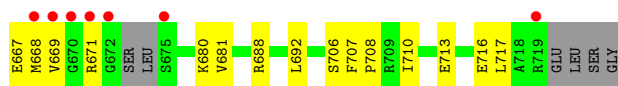
- Molecule 3 is 2,2'-oxybis(N-{[4-(3-{2,6-difluoro-3-[(propane-1-sulfonyl)amino]benzoyl}-1H-pyrrolo[2,3-b]pyridin-5-yl)phenyl]methyl}acetamide) (three-letter code: 6NC) (formula: C₅₂H₄₆F₄N₈O₉S₂).



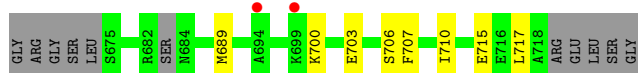
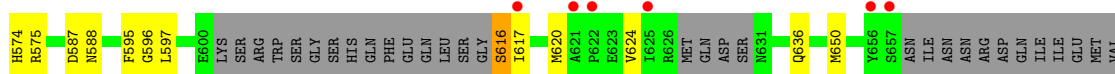
Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	
			Total	C	F	H	N	O			S
3	A	1	119	52	4	44	8	9	2	0	0
3	C	1	119	52	4	44	8	9	2	0	0

- Molecule 4 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	A	49	Total O 49 49	0	0
4	B	63	Total O 63 63	0	0
4	C	26	Total O 26 26	0	0
4	D	36	Total O 36 36	0	0



- Molecule 1: Serine/threonine-protein kinase B-raf



4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	65.10Å 68.44Å 275.60Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	29.59 – 2.70 29.58 – 2.70	Depositor EDS
% Data completeness (in resolution range)	99.7 (29.59-2.70) 96.1 (29.58-2.70)	Depositor EDS
R_{merge}	0.10	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.38 (at 2.72Å)	Xtrriage
Refinement program	PHENIX 1.8.2_1309	Depositor
R, R_{free}	0.212 , 0.273 0.213 , 0.273	Depositor DCC
R_{free} test set	2001 reflections (5.78%)	wwPDB-VP
Wilson B-factor (Å ²)	55.0	Xtrriage
Anisotropy	0.232	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.33 , 52.0	EDS
L-test for twinning ²	$\langle L \rangle = 0.46$, $\langle L^2 \rangle = 0.29$	Xtrriage
Estimated twinning fraction	0.038 for k,h,-l	Xtrriage
F_o, F_c correlation	0.92	EDS
Total number of atoms	8051	wwPDB-VP
Average B, all atoms (Å ²)	41.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 6.38% 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 [i](#)

5.1 Standard geometry [i](#)

Bond lengths and bond angles in the following residue types are not validated in this section: 6NC, BEN

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	0.48	0/1999	0.64	0/2705
1	B	0.48	0/1960	0.66	1/2652 (0.0%)
1	C	0.44	0/1962	0.60	0/2647
1	D	0.44	0/1839	0.62	0/2489
All	All	0.46	0/7760	0.63	1/10493 (0.0%)

There are no bond length outliers.

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	449	ASP	CB-CA-C	-5.23	99.94	110.40

There are no chirality outliers.

There are no planarity outliers.

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	1958	0	1864	43	0
1	B	1921	0	1828	50	0
1	C	1925	0	1846	54	0
1	D	1801	0	1705	39	0
2	A	9	8	7	0	0
2	B	9	8	7	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	A	75	44	0	1	0
3	C	75	44	0	2	0
4	A	49	0	0	8	0
4	B	63	0	0	9	0
4	C	26	0	0	2	0
4	D	36	0	0	5	0
All	All	7947	104	7257	177	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 12.

All (177) 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:C:491:THR:HG23	1:C:494:GLN:HE21	1.29	0.95
1:C:665:ILE:HG22	1:C:666:ILE:H	1.39	0.87
1:A:668:MET:HB3	1:A:674:LEU:HB2	1.59	0.84
1:B:502:VAL:HG13	1:B:516:PHE:CE2	2.17	0.79
1:C:546:THR:HA	4:C:926:HOH:O	1.84	0.77
1:A:461:GLN:NE2	4:B:901:HOH:O	2.18	0.76
1:C:487:VAL:CG1	1:C:490:PRO:HG2	2.16	0.75
1:B:539:HIS:NE2	4:B:901:HOH:O	2.17	0.75
1:C:491:THR:HG23	1:C:494:GLN:NE2	2.03	0.74
1:B:650:MET:HE3	1:B:689:MET:HG2	1.70	0.74
1:B:492:PRO:O	1:B:495:LEU:N	2.19	0.73
1:C:548:PHE:CD2	1:C:552:LYS:HD3	2.23	0.73
1:D:617:ILE:HD12	1:D:620:MET:SD	2.29	0.73
1:B:502:VAL:HG13	1:B:516:PHE:HE2	1.53	0.72
1:C:513:ILE:HD12	1:C:595:PHE:CZ	2.25	0.72
1:C:665:ILE:O	1:C:667:GLU:N	2.21	0.70
1:A:599:THR:O	1:A:602:SER:HB3	1.92	0.70
1:C:668:MET:HG2	1:C:671:ARG:NH2	2.06	0.70
1:D:513:ILE:HD12	1:D:595:PHE:CZ	2.27	0.69
1:B:527:ILE:HD11	1:B:597:LEU:HD21	1.74	0.69
1:B:492:PRO:HB2	4:B:917:HOH:O	1.92	0.68
1:B:576:ASP:OD1	1:B:578:LYS:HE2	1.95	0.67
1:D:448:ASP:OD1	4:D:801:HOH:O	2.13	0.67
1:C:692:LEU:HD13	1:C:713:GLU:HG2	1.75	0.67
1:B:553:LEU:HB3	4:B:954:HOH:O	1.94	0.67
1:B:650:MET:CE	1:B:689:MET:HG2	2.25	0.67
1:B:492:PRO:O	1:B:494:GLN:N	2.28	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:616:SER:N	4:D:802:HOH:O	2.29	0.66
1:A:463:ILE:HA	4:A:901:HOH:O	1.96	0.66
1:C:548:PHE:HB2	1:C:553:LEU:HD21	1.78	0.65
1:C:504:VAL:O	1:C:508:THR:HG23	1.97	0.65
1:D:548:PHE:HB2	1:D:553:LEU:HD21	1.78	0.64
1:D:650:MET:CE	1:D:689:MET:HG2	2.28	0.64
1:D:562:ARG:NH2	4:D:803:HOH:O	2.31	0.64
1:D:548:PHE:HB2	1:D:553:LEU:CD2	2.28	0.63
1:C:462:ARG:HB3	1:D:544:SER:HB2	1.80	0.62
1:B:706:SER:OG	1:B:708:PRO:HD2	2.00	0.61
1:B:651:THR:HG22	1:B:681:VAL:HA	1.82	0.61
1:C:665:ILE:HG22	1:C:666:ILE:N	2.13	0.61
1:A:462:ARG:HB3	1:B:544:SER:HB2	1.81	0.60
1:C:688:ARG:HH22	1:C:716:GLU:HG2	1.67	0.60
1:B:521:THR:O	1:B:522:LYS:HD3	2.03	0.58
1:B:649:LEU:HB3	4:B:954:HOH:O	2.03	0.58
1:A:504:VAL:O	1:A:508:THR:HG23	2.02	0.58
1:A:516:PHE:CE1	1:A:527:ILE:HG23	2.37	0.58
1:C:550:MET:HA	1:C:553:LEU:HD12	1.84	0.58
1:D:706:SER:O	1:D:710:ILE:HG13	2.03	0.58
1:D:620:MET:CE	1:D:624:VAL:HG12	2.34	0.58
1:A:488:THR:HA	1:A:524:GLN:HG3	1.85	0.57
1:B:524:GLN:HG2	1:B:525:LEU:N	2.20	0.57
1:C:636:GLN:H	1:C:636:GLN:CD	2.07	0.57
1:A:445:SER:OG	1:D:449:ASP:OD2	2.23	0.57
1:B:453:PRO:HB2	1:B:456:GLN:HG3	1.86	0.56
1:A:587:ASP:O	1:A:588:ASN:HB2	2.05	0.56
1:A:587:ASP:OD1	1:A:589:THR:HG23	2.04	0.56
3:A:802:6NC:C31	1:B:535:SER:HB2	2.36	0.56
1:B:485:LEU:O	1:B:524:GLN:NE2	2.37	0.56
1:B:625:ILE:HG23	1:B:666:ILE:HG23	1.87	0.56
1:A:516:PHE:HE1	1:A:527:ILE:HG23	1.69	0.56
1:D:491:THR:O	1:D:494:GLN:N	2.39	0.56
1:D:527:ILE:HD11	1:D:597:LEU:HD21	1.86	0.56
1:B:581:ASN:HA	1:B:583:PHE:CZ	2.41	0.55
1:C:447:PHE:CG	1:C:499:LYS:HG3	2.41	0.55
1:C:539:HIS:O	1:C:543:ALA:HB3	2.06	0.55
1:A:463:ILE:HD13	4:A:901:HOH:O	2.07	0.55
1:C:490:PRO:HB2	1:C:494:GLN:NE2	2.22	0.55
1:C:487:VAL:HG13	1:C:490:PRO:HG2	1.89	0.55
1:D:587:ASP:O	1:D:588:ASN:HB2	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:449:ASP:HB3	1:C:450:TRP:HZ2	1.73	0.54
1:A:508:THR:HG22	4:A:946:HOH:O	2.08	0.53
1:D:620:MET:HE2	1:D:624:VAL:HG12	1.90	0.53
1:A:663:ASP:N	4:A:903:HOH:O	2.41	0.53
1:A:506:ARG:NH1	1:D:449:ASP:OD2	2.35	0.53
1:A:520:SER:HB2	1:A:526:ALA:HB3	1.90	0.53
1:A:451:GLU:OE2	1:A:521:THR:OG1	2.22	0.53
1:C:549:GLU:O	1:C:553:LEU:HG	2.08	0.52
1:A:674:LEU:HD22	1:A:675:SER:N	2.24	0.52
1:C:491:THR:CG2	1:C:494:GLN:HE21	2.12	0.52
1:C:548:PHE:HD2	1:C:552:LYS:HD3	1.75	0.52
1:D:502:VAL:HG13	1:D:516:PHE:CE2	2.45	0.52
1:A:651:THR:HG22	1:A:681:VAL:HG12	1.93	0.51
1:B:625:ILE:CG2	1:B:666:ILE:HG23	2.41	0.51
1:D:453:PRO:HB2	1:D:456:GLN:HG3	1.93	0.51
1:B:634:SER:OG	1:B:636:GLN:HG2	2.10	0.51
1:D:558:ARG:NE	4:D:803:HOH:O	2.44	0.51
1:A:530:GLN:HB2	4:A:917:HOH:O	2.11	0.50
1:B:587:ASP:O	1:B:588:ASN:HB2	2.10	0.50
1:B:562:ARG:NH1	1:B:715:GLU:OE1	2.44	0.50
1:C:661:ASN:O	1:C:665:ILE:HG13	2.12	0.50
1:C:520:SER:HB2	1:C:526:ALA:HB3	1.94	0.49
1:D:524:GLN:HA	4:D:828:HOH:O	2.12	0.49
1:C:447:PHE:CD2	1:C:499:LYS:HG3	2.48	0.49
1:D:636:GLN:H	1:D:636:GLN:CD	2.15	0.49
1:C:647:TYR:CE1	1:C:651:THR:HG21	2.47	0.49
1:C:508:THR:O	1:C:508:THR:OG1	2.26	0.49
1:C:647:TYR:OH	1:C:680:LYS:HD2	2.13	0.49
1:C:501:GLU:OE2	1:C:599:THR:HB	2.13	0.49
1:C:688:ARG:HG3	4:C:914:HOH:O	2.13	0.48
1:A:544:SER:HB2	1:B:462:ARG:HD3	1.95	0.48
1:B:513:ILE:HD12	1:B:595:PHE:CZ	2.47	0.48
1:A:571:SER:HA	1:A:635:PHE:HZ	1.77	0.48
1:D:450:TRP:CD1	1:D:518:GLY:HA2	2.48	0.48
1:C:635:PHE:O	1:C:638:ASP:HB2	2.15	0.47
1:C:717:LEU:C	1:C:717:LEU:HD12	2.34	0.47
1:A:677:ASP:OD1	1:A:679:SER:OG	2.32	0.47
1:D:562:ARG:NH1	1:D:715:GLU:OE1	2.47	0.47
1:C:491:THR:H	1:C:494:GLN:NE2	2.13	0.47
1:A:468:PHE:HE2	1:A:601:LYS:CG	2.27	0.47
1:A:487:VAL:H	1:A:524:GLN:HE21	1.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:574:HIS:O	1:C:575:ARG:HB2	2.15	0.47
1:D:452:ILE:HG21	1:D:457:ILE:HG13	1.95	0.47
1:D:650:MET:HE3	1:D:689:MET:HG2	1.96	0.46
1:C:557:ALA:HB2	1:C:649:LEU:HD13	1.98	0.46
1:D:502:VAL:HG13	1:D:516:PHE:HE2	1.81	0.46
1:A:462:ARG:NH1	4:A:906:HOH:O	2.48	0.46
1:B:483:LYS:HG2	1:B:485:LEU:CD1	2.45	0.46
1:C:483:LYS:HE2	3:C:801:6NC:C50	2.46	0.46
1:C:651:THR:HG22	1:C:681:VAL:HG12	1.97	0.46
1:B:506:ARG:HD2	1:C:449:ASP:CG	2.36	0.45
1:C:548:PHE:HB2	1:C:553:LEU:CD2	2.47	0.45
1:A:508:THR:O	1:A:508:THR:OG1	2.27	0.45
1:B:502:VAL:HG13	1:B:516:PHE:CZ	2.50	0.45
1:D:596:GLY:O	1:D:597:LEU:HB2	2.17	0.45
1:B:454:ASP:OD2	1:B:523:PRO:HD3	2.17	0.45
1:C:665:ILE:HG23	1:C:669:VAL:HG23	1.98	0.45
1:B:574:HIS:O	1:B:575:ARG:HB2	2.17	0.45
1:A:706:SER:OG	1:A:708:PRO:HD2	2.16	0.45
1:C:665:ILE:CG2	1:C:669:VAL:HG23	2.47	0.45
1:A:501:GLU:OE2	1:A:599:THR:HB	2.17	0.44
1:A:596:GLY:O	1:A:597:LEU:HB2	2.16	0.44
1:B:452:ILE:HG21	1:B:457:ILE:HG13	1.97	0.44
1:C:587:ASP:O	1:C:588:ASN:HB2	2.16	0.44
1:A:450:TRP:HZ2	1:D:449:ASP:HB3	1.83	0.44
1:A:565:ASP:HB3	4:A:912:HOH:O	2.17	0.44
1:A:570:LYS:HE2	4:A:946:HOH:O	2.17	0.44
1:B:682:ARG:HD2	4:B:941:HOH:O	2.17	0.43
1:B:525:LEU:HA	1:B:525:LEU:HD23	1.62	0.43
1:C:706:SER:O	1:C:710:ILE:HG13	2.18	0.43
1:A:707:PHE:N	1:A:708:PRO:CD	2.82	0.43
1:D:707:PHE:HA	1:D:710:ILE:HB	2.00	0.43
1:A:574:HIS:O	1:A:575:ARG:HB2	2.18	0.43
3:C:801:6NC:O75	1:D:461:GLN:NE2	2.51	0.43
1:D:485:LEU:O	1:D:524:GLN:NE2	2.49	0.43
1:A:550:MET:HA	1:A:553:LEU:HD12	2.01	0.43
1:B:706:SER:O	1:B:710:ILE:HG13	2.19	0.43
1:B:522:LYS:HA	1:B:523:PRO:C	2.39	0.42
1:B:678:LEU:O	1:B:681:VAL:HG13	2.18	0.42
1:A:695:GLU:HB3	1:A:705:PRO:HD3	2.00	0.42
1:B:449:ASP:OD1	1:C:506:ARG:NH1	2.48	0.42
1:B:596:GLY:O	1:B:597:LEU:HB2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:485:LEU:O	1:A:524:GLN:NE2	2.52	0.42
1:C:476:TRP:C	1:C:478:GLY:H	2.23	0.42
1:D:574:HIS:O	1:D:575:ARG:HB2	2.20	0.42
1:D:700:LYS:O	1:D:703:GLU:HB2	2.19	0.42
1:B:453:PRO:HB2	1:B:456:GLN:CG	2.48	0.42
1:D:717:LEU:C	1:D:717:LEU:HD12	2.40	0.42
1:A:639:VAL:HG13	1:A:710:ILE:HD11	2.02	0.42
1:B:627:MET:O	4:B:902:HOH:O	2.22	0.42
1:C:706:SER:OG	1:C:708:PRO:HD2	2.19	0.42
1:D:462:ARG:HA	1:D:472:TYR:CD2	2.55	0.41
1:C:596:GLY:O	1:C:597:LEU:HB2	2.20	0.41
1:B:447:PHE:CG	1:B:448:ASP:N	2.88	0.41
1:B:511:VAL:O	1:B:511:VAL:HG22	2.21	0.41
4:B:951:HOH:O	1:C:477:HIS:HB2	2.20	0.41
1:D:469:GLY:HA3	1:D:484:MET:O	2.21	0.41
1:A:553:LEU:HD11	1:A:682:ARG:CZ	2.51	0.41
1:C:665:ILE:C	1:C:667:GLU:N	2.74	0.41
1:B:650:MET:HE1	4:B:954:HOH:O	2.20	0.41
1:B:662:ARG:O	1:B:666:ILE:HG13	2.21	0.41
1:C:622:PRO:O	1:C:626:ARG:HG2	2.21	0.41
1:B:630:SER:O	1:B:630:SER:OG	2.37	0.40
1:C:707:PHE:N	1:C:708:PRO:CD	2.84	0.40
1:A:706:SER:O	1:A:710:ILE:HG13	2.22	0.40
1:B:452:ILE:CG2	1:B:456:GLN:HB2	2.51	0.40
1:A:476:TRP:C	1:A:478:GLY:H	2.23	0.40
1:D:476:TRP:O	1:D:477:HIS:HB2	2.22	0.40
1:D:650:MET:HE2	1:D:689:MET:HG2	2.03	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	249/280 (89%)	240 (96%)	9 (4%)	0	100	100
1	B	243/280 (87%)	233 (96%)	8 (3%)	2 (1%)	19	43
1	C	237/280 (85%)	227 (96%)	9 (4%)	1 (0%)	34	60
1	D	222/280 (79%)	214 (96%)	7 (3%)	1 (0%)	29	54
All	All	951/1120 (85%)	914 (96%)	33 (4%)	4 (0%)	34	60

All (4) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	B	492	PRO
1	B	493	GLN
1	C	666	ILE
1	D	492	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	196/245 (80%)	191 (97%)	5 (3%)	46	75
1	B	195/245 (80%)	189 (97%)	6 (3%)	40	69
1	C	193/245 (79%)	191 (99%)	2 (1%)	76	91
1	D	181/245 (74%)	176 (97%)	5 (3%)	43	73
All	All	765/980 (78%)	747 (98%)	18 (2%)	49	77

All (18) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	485	LEU
1	A	495	LEU
1	A	508	THR
1	A	674	LEU
1	A	709	ARG
1	B	522	LYS
1	B	576	ASP

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Mol	Chain	Res	Type
1	B	617	ILE
1	B	636	GLN
1	B	664	GLN
1	B	674	LEU
1	C	485	LEU
1	C	494	GLN
1	D	450	TRP
1	D	454	ASP
1	D	485	LEU
1	D	552	LYS
1	D	616	SER

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (3) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	524	GLN
1	C	494	GLN
1	C	539	HIS

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](#)

4 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
3	6NC	A	802	-	80,82,82	1.85	17 (21%)	99,119,119	2.63	33 (33%)
2	BEN	B	801	-	9,9,9	4.62	8 (88%)	7,11,11	0.83	0
3	6NC	C	801	-	80,82,82	1.85	17 (21%)	99,119,119	2.67	32 (32%)
2	BEN	A	801	-	9,9,9	4.79	8 (88%)	7,11,11	0.77	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
3	6NC	A	802	-	-	8/50/58/58	0/8/8/8
2	BEN	B	801	-	-	0/4/4/4	0/1/1/1
3	6NC	C	801	-	-	4/50/58/58	0/8/8/8
2	BEN	A	801	-	-	2/4/4/4	0/1/1/1

All (50) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	A	801	BEN	C6-C1	7.63	1.52	1.39
2	B	801	BEN	C6-C1	7.12	1.51	1.39
2	A	801	BEN	C3-C2	6.96	1.53	1.38
2	B	801	BEN	C3-C2	6.93	1.53	1.38
3	C	801	6NC	C58-C57	6.81	1.57	1.50
3	A	802	6NC	C58-C57	6.30	1.57	1.50
3	C	801	6NC	C39-N40	5.70	1.46	1.33
2	B	801	BEN	C5-C4	5.67	1.53	1.38
3	A	802	6NC	C39-N40	5.63	1.46	1.33
3	C	801	6NC	C35-N34	5.59	1.46	1.33
3	A	802	6NC	C35-N34	5.53	1.46	1.33
2	A	801	BEN	C5-C4	5.47	1.52	1.38
2	A	801	BEN	C2-C1	-4.91	1.30	1.39
2	B	801	BEN	C2-C1	-4.42	1.31	1.39
2	A	801	BEN	C1-C	4.23	1.55	1.47
2	B	801	BEN	C1-C	3.77	1.54	1.47
3	A	802	6NC	C17-C19	3.62	1.45	1.42
2	A	801	BEN	C5-C6	-3.35	1.31	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	C	801	6NC	O48-S45	3.24	1.48	1.43
3	C	801	6NC	S04-N05	3.22	1.69	1.62
3	C	801	6NC	C63-N62	-3.20	1.30	1.36
2	B	801	BEN	C5-C6	-3.18	1.32	1.38
2	B	801	BEN	C-N2	-3.15	1.25	1.33
3	A	802	6NC	O47-S45	3.15	1.48	1.43
3	C	801	6NC	S45-N46	3.13	1.69	1.62
3	A	802	6NC	S04-N05	2.98	1.68	1.62
3	A	802	6NC	C63-N62	-2.94	1.30	1.36
2	A	801	BEN	C-N2	-2.92	1.26	1.33
2	A	801	BEN	C4-C3	-2.83	1.30	1.38
3	A	802	6NC	S45-N46	2.79	1.68	1.62
3	C	801	6NC	C60-C61	-2.78	1.35	1.43
3	A	802	6NC	C60-C61	-2.76	1.35	1.43
3	C	801	6NC	O47-S45	2.76	1.47	1.43
3	A	802	6NC	C41-C71	2.68	1.57	1.51
2	B	801	BEN	C4-C3	-2.65	1.31	1.38
3	A	802	6NC	C38-C39	2.61	1.56	1.51
3	C	801	6NC	C41-C71	2.60	1.57	1.51
3	A	802	6NC	O75-C39	-2.44	1.18	1.23
3	C	801	6NC	C38-C39	2.44	1.56	1.51
3	A	802	6NC	O48-S45	2.42	1.47	1.43
3	A	802	6NC	C27-C24	2.31	1.54	1.49
3	C	801	6NC	O75-C39	-2.28	1.18	1.23
3	C	801	6NC	O74-C35	-2.27	1.18	1.23
3	A	802	6NC	O59-C57	-2.22	1.18	1.22
3	C	801	6NC	O18-C16	-2.14	1.18	1.22
3	C	801	6NC	C19-C20	-2.10	1.37	1.43
3	C	801	6NC	O59-C57	-2.09	1.19	1.22
3	C	801	6NC	C17-C19	2.07	1.44	1.42
3	A	802	6NC	C61-N62	2.05	1.38	1.34
3	A	802	6NC	C25-C24	2.02	1.42	1.39

All (65) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A	802	6NC	O07-S04-O06	-11.48	102.72	119.35
3	C	801	6NC	O48-S45-O47	-10.73	103.81	119.35
3	C	801	6NC	O07-S04-O06	-10.68	103.88	119.35
3	A	802	6NC	O48-S45-O47	-10.40	104.28	119.35
3	C	801	6NC	O07-S04-C03	7.37	119.62	107.86
3	A	802	6NC	O06-S04-C03	6.94	118.92	107.86

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	C	801	6NC	C11-C12-C13	5.86	120.28	115.84
3	C	801	6NC	C24-C25-N26	-5.69	120.28	125.55
3	C	801	6NC	C66-N67-C61	5.53	122.25	116.69
3	A	802	6NC	C52-C53-C54	5.33	119.87	115.84
3	A	802	6NC	C24-C25-N26	-5.23	120.71	125.55
3	C	801	6NC	C25-N26-C20	5.06	121.77	116.69
3	A	802	6NC	C11-C12-C13	4.91	119.56	115.84
3	A	802	6NC	C44-S45-N46	4.91	113.77	106.77
3	C	801	6NC	C65-C66-N67	-4.85	121.06	125.55
3	C	801	6NC	C52-C53-C54	4.85	119.51	115.84
3	A	802	6NC	C66-N67-C61	4.56	121.28	116.69
3	A	802	6NC	C25-N26-C20	4.34	121.06	116.69
3	A	802	6NC	C65-C66-N67	-4.33	121.54	125.55
3	C	801	6NC	C03-S04-N05	-3.93	101.16	106.77
3	C	801	6NC	O37-C36-C35	-3.89	104.02	112.38
3	C	801	6NC	O37-C38-C39	-3.80	104.21	112.38
3	A	802	6NC	C13-C12-C16	-3.76	116.20	121.48
3	C	801	6NC	O47-S45-C44	3.74	113.83	107.86
3	C	801	6NC	O06-S04-C03	3.71	113.77	107.86
3	A	802	6NC	O37-C36-C35	-3.57	104.71	112.38
3	C	801	6NC	C33-N34-C35	-3.50	116.89	122.34
3	A	802	6NC	C71-C41-N40	-3.42	105.73	113.05
3	A	802	6NC	O37-C38-C39	-3.31	105.27	112.38
3	A	802	6NC	O48-S45-C44	3.23	113.02	107.86
3	C	801	6NC	C41-N40-C39	-3.22	117.33	122.34
3	C	801	6NC	C36-C35-N34	3.21	121.88	116.58
3	A	802	6NC	C33-N34-C35	-2.93	117.78	122.34
3	C	801	6NC	C23-C24-C25	2.88	120.27	116.24
3	A	802	6NC	C65-C64-C60	-2.83	116.11	122.30
3	A	802	6NC	C41-N40-C39	-2.79	117.99	122.34
3	C	801	6NC	O74-C35-N34	-2.79	117.75	123.01
3	C	801	6NC	C32-C27-C24	-2.78	116.54	121.36
3	A	802	6NC	O07-S04-C03	2.78	112.30	107.86
3	A	802	6NC	C11-C12-C16	2.77	124.23	121.75
3	A	802	6NC	C64-C65-C66	2.72	120.05	116.24
3	C	801	6NC	C38-C39-N40	2.63	120.93	116.58
3	A	802	6NC	C50-C49-C54	2.62	121.67	117.80
3	C	801	6NC	C09-C08-C13	2.61	121.65	117.80
3	C	801	6NC	C50-C49-C54	2.55	121.56	117.80
3	A	802	6NC	C23-C24-C25	2.54	119.79	116.24
3	C	801	6NC	C44-S45-N46	2.47	110.29	106.77
3	A	802	6NC	C08-N05-S04	-2.46	117.72	123.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	C	801	6NC	C71-C41-N40	-2.44	107.82	113.05
3	C	801	6NC	C30-C33-N34	-2.42	107.86	113.05
3	A	802	6NC	C09-C08-C13	2.42	121.36	117.80
3	A	802	6NC	C38-C39-N40	2.41	120.57	116.58
3	A	802	6NC	O75-C39-N40	-2.37	118.54	123.01
3	A	802	6NC	C36-C35-N34	2.35	120.47	116.58
3	C	801	6NC	C54-C53-C57	-2.30	118.25	121.48
3	A	802	6NC	C22-C17-C16	-2.27	123.37	127.45
3	C	801	6NC	C32-C27-C28	2.22	122.02	117.59
3	A	802	6NC	F15-C11-C12	2.20	121.44	118.01
3	C	801	6NC	C24-C23-C19	-2.18	117.54	122.30
3	A	802	6NC	C49-N46-S45	-2.16	118.43	123.59
3	A	802	6NC	C30-C33-N34	-2.14	108.46	113.05
3	A	802	6NC	O74-C35-N34	-2.13	118.99	123.01
3	C	801	6NC	C29-C28-C27	-2.13	118.06	121.13
3	C	801	6NC	C11-C12-C16	-2.07	119.91	121.75
3	C	801	6NC	O75-C39-N40	-2.02	119.19	123.01

There are no chirality outliers.

All (14) torsion outliers are listed below:

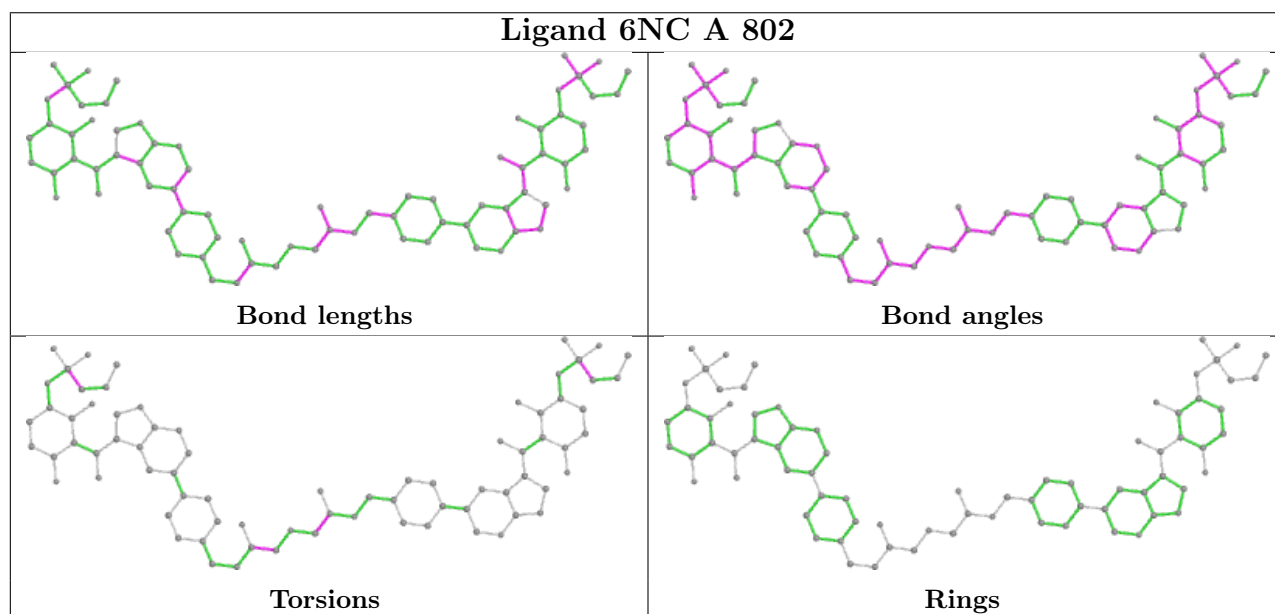
Mol	Chain	Res	Type	Atoms
3	A	802	6NC	C02-C03-S04-N05
3	A	802	6NC	C02-C03-S04-O06
3	A	802	6NC	C02-C03-S04-O07
3	A	802	6NC	C43-C44-S45-O47
3	C	801	6NC	C43-C44-S45-O48
2	A	801	BEN	N1-C-C1-C6
3	A	802	6NC	O37-C38-C39-N40
2	A	801	BEN	N2-C-C1-C2
3	A	802	6NC	O37-C38-C39-O75
3	C	801	6NC	N34-C35-C36-O37
3	A	802	6NC	C43-C44-S45-N46
3	C	801	6NC	O74-C35-C36-O37
3	A	802	6NC	N34-C35-C36-O37
3	C	801	6NC	O37-C38-C39-N40

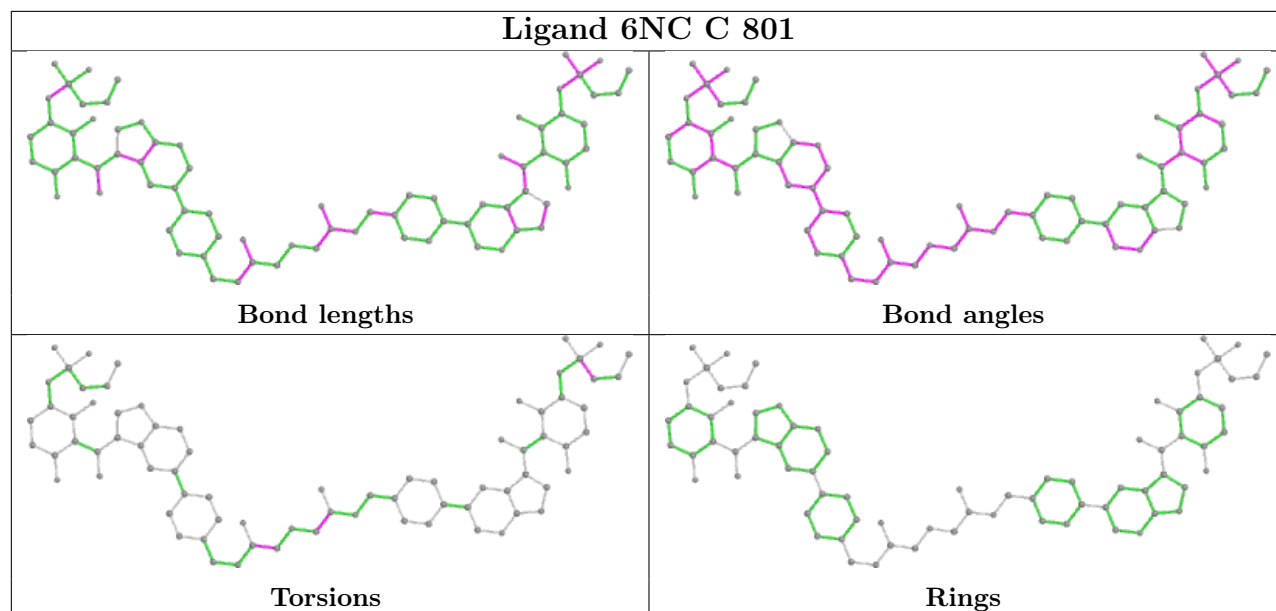
There are no ring outliers.

2 monomers are involved in 3 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	A	802	6NC	1	0
3	C	801	6NC	2	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less 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	257/280 (91%)	-0.10	5 (1%) 66 69	21, 35, 56, 69	0
1	B	251/280 (89%)	-0.13	7 (2%) 53 54	19, 35, 53, 71	0
1	C	251/280 (89%)	0.21	15 (5%) 21 20	21, 48, 69, 85	0
1	D	234/280 (83%)	0.09	10 (4%) 35 33	24, 44, 70, 84	0
All	All	993/1120 (88%)	0.02	37 (3%) 41 41	19, 39, 65, 85	0

All (37) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	C	660	ASN	6.1
1	C	656	TYR	4.5
1	A	604	TRP	4.3
1	C	661	ASN	3.9
1	C	671	ARG	3.7
1	C	669	VAL	3.5
1	C	659	ILE	3.3
1	D	625	ILE	3.3
1	B	659	ILE	3.2
1	D	656	TYR	3.0
1	A	674	LEU	2.9
1	B	465	SER	2.9
1	C	670	GLY	2.9
1	D	699	LYS	2.9
1	D	494	GLN	2.8
1	B	664	GLN	2.7
1	C	487	VAL	2.6
1	B	660	ASN	2.6
1	D	617	ILE	2.6
1	D	694	ALA	2.6
1	C	668	MET	2.5

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Mol	Chain	Res	Type	RSRZ
1	A	668	MET	2.5
1	C	719	ARG	2.5
1	A	582	ILE	2.4
1	B	661	ASN	2.3
1	C	675	SER	2.3
1	B	658	ASN	2.3
1	D	622	PRO	2.3
1	C	554	ILE	2.3
1	C	672	GLY	2.3
1	C	642	PHE	2.2
1	D	657	SER	2.1
1	D	513	ILE	2.1
1	D	621	ALA	2.1
1	B	662	ARG	2.1
1	C	618	LEU	2.1
1	A	719	ARG	2.0

6.2 Non-standard residues in protein, DNA, RNA chains [i](#)

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

6.3 Carbohydrates [i](#)

There are no monosaccharides in this entry.

6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 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.

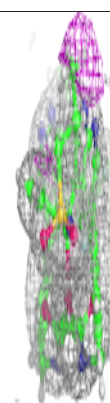
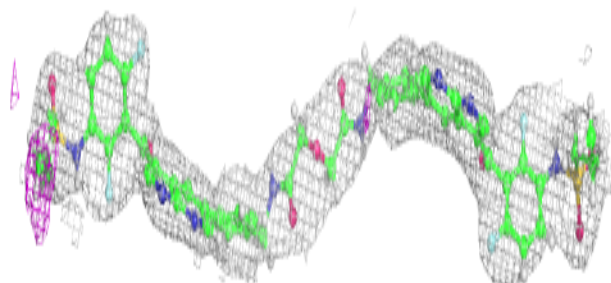
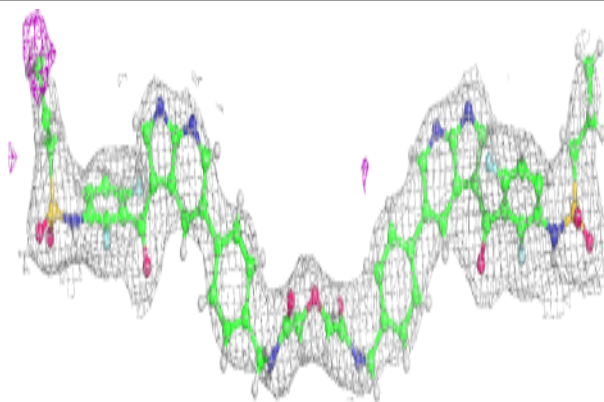
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
3	6NC	C	801	75/75	0.93	0.18	21,34,52,63	0
3	6NC	A	802	75/75	0.95	0.16	18,28,45,49	0
2	BEN	A	801	9/9	0.97	0.18	21,26,30,32	0
2	BEN	B	801	9/9	0.97	0.12	21,25,36,36	0

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.

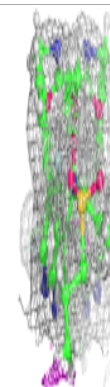
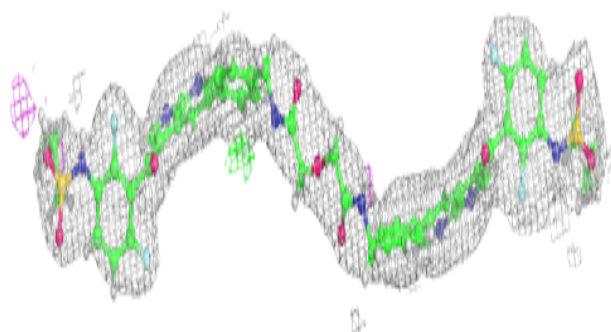
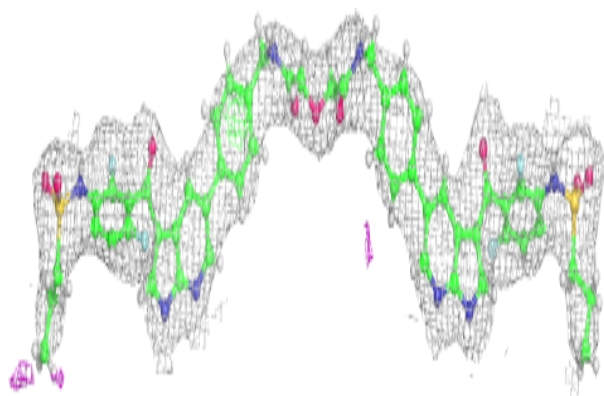
Electron density around 6NC C 801:

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



Electron density around 6NC A 802:

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



6.5 Other polymers [i](#)

There are no such residues in this entry.