

Full wwPDB X-ray Structure Validation Report (i)

Sep 25, 2023 – 11:46 AM EDT

PDB ID : 5W7T

Title : STRUCTURE OF PHOSPHORYLATED WNK1

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Deposited on : 2017-06-20

Resolution : 2.01 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 (1)) 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)

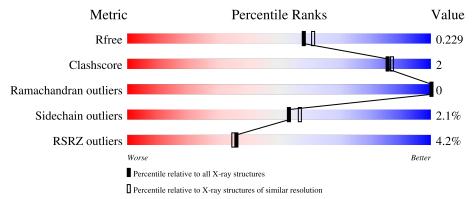
Validation Pipeline (wwPDB-VP) : 2.35.1

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure: $X\text{-}RAY\ DIFFRACTION$

The reported resolution of this entry is 2.01 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 $(\# \mathrm{Entries})$	$\begin{array}{c} {\rm Similar\ resolution} \\ (\#{\rm Entries,\ resolution\ range(\mathring{\rm A})}) \end{array}$
R_{free}	130704	8085 (2.00-2.00)
Clashscore	141614	9178 (2.00-2.00)
Ramachandran outliers	138981	9054 (2.00-2.00)
Sidechain outliers	138945	9053 (2.00-2.00)
RSRZ outliers	127900	7900 (2.00-2.00)

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	277	94%	5%
1	В	277	91%	9%



2 Entry composition (i)

There are 3 unique types of molecules in this entry. The entry contains 4927 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 Serine/threonine-protein kinase WNK1.

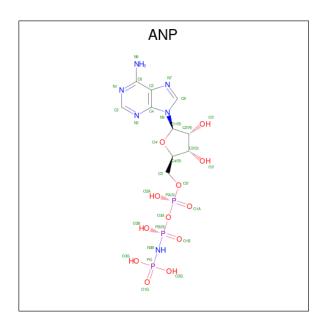
ľ	Mol	Chain	Residues		Atoms			ZeroOcc	AltConf	Trace		
	1	A	277		C 1417	- '	O 415	-	~	0	0	0
	1	В	277	Total 2228	C 1417		0	_	~	0	0	0

There are 8 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	206	GLY	-	expression tag	UNP Q9JIH7
A	207	ALA	-	expression tag	UNP Q9JIH7
A	208	MET	-	expression tag	UNP Q9JIH7
A	209	ASP	-	expression tag	UNP Q9JIH7
В	206	GLY	-	expression tag	UNP Q9JIH7
В	207	ALA	-	expression tag	UNP Q9JIH7
В	208	MET	-	expression tag	UNP Q9JIH7
В	209	ASP	-	expression tag	UNP Q9JIH7

• Molecule 2 is PHOSPHOAMINOPHOSPHONIC ACID-ADENYLATE ESTER (three-letter code: ANP) (formula: C₁₀H₁₇N₆O₁₂P₃) (labeled as "Ligand of Interest" by depositor).





Mol	Chain	Residues	Atoms			ZeroOcc	AltConf		
9	٨	1	Total	С	N	О	Р	0	0
2	A	1	31	10	6	12	3	U	0
9	D	1	Total	С	N	О	Р	0	0
2	Б	1	31	10	6	12	3	U	0

• Molecule 3 is water.

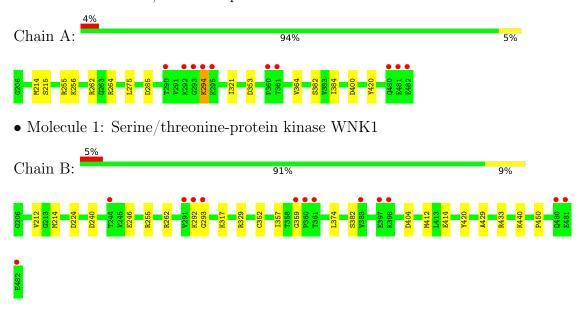
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	A	199	Total O 199 199	0	0
3	В	210	Total O 210 210	0	0



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: Serine/threonine-protein kinase WNK1





4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants	45.17Å 62.23Å 120.90Å	Donositon
a, b, c, α , β , γ	90.00° 92.26° 90.00°	Depositor
Resolution (Å)	30.66 - 2.01	Depositor
Resolution (A)	30.66 - 2.01	EDS
% Data completeness	94.4 (30.66-2.01)	Depositor
(in resolution range)	94.4 (30.66-2.01)	EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) > 1$	1.58 (at 2.01Å)	Xtriage
Refinement program	REFMAC 5.8.0155	Depositor
D D.	0.172 , 0.227	Depositor
R, R_{free}	0.181 , 0.229	DCC
R_{free} test set	2130 reflections (5.06%)	wwPDB-VP
Wilson B-factor (Å ²)	26.5	Xtriage
Anisotropy	0.066	Xtriage
Bulk solvent $k_{sol}(e/Å^3)$, $B_{sol}(Å^2)$	0.35, 48.4	EDS
L-test for twinning ²	$< L >=0.47, < L^2>=0.30$	Xtriage
Estimated twinning fraction	0.118 for h,-k,-l	Xtriage
F_o, F_c correlation	0.95	EDS
Total number of atoms	4927	wwPDB-VP
Average B, all atoms (Å ²)	32.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: The largest off-origin peak in the Patterson function is 5.84% of the height of the origin peak. No significant pseudotranslation is detected.

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: SEP, ANP

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	0.95	0/2259	0.98	6/3032~(0.2%)	
1	В	0.96	0/2259	1.00	7/3032~(0.2%)	
All	All	0.96	0/4518	0.99	13/6064 (0.2%)	

There are no bond length outliers.

All (13) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	$Observed(^o)$	$\operatorname{Ideal}({}^{o})$
1	В	214	MET	CG-SD-CE	-7.12	88.81	100.20
1	В	255	ARG	NE-CZ-NH2	-6.41	117.10	120.30
1	A	285	ASP	CB-CG-OD1	5.94	123.64	118.30
1	A	400	ASP	CB-CG-OD1	5.86	123.57	118.30
1	A	262	ARG	NE-CZ-NH1	5.75	123.17	120.30
1	В	404	ASP	CB-CG-OD1	5.68	123.41	118.30
1	В	262	ARG	NE-CZ-NH1	5.57	123.08	120.30
1	A	285	ASP	CB-CG-OD2	-5.37	113.47	118.30
1	A	275	LEU	CA-CB-CG	5.30	127.50	115.30
1	В	240	ASP	CB-CG-OD2	-5.23	113.59	118.30
1	В	240	ASP	CB-CG-OD1	5.15	122.93	118.30
1	В	412	MET	CG-SD-CE	-5.09	92.05	100.20
1	A	275	LEU	CB-CG-CD2	-5.08	102.36	111.00

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	2228	0	2252	9	0
1	В	2228	0	2253	10	0
2	A	31	0	13	0	0
2	В	31	0	13	1	0
3	A	199	0	0	1	0
3	В	210	0	0	4	1
All	All	4927	0	4531	20	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 2.

All (20) 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:A:255:ARG:O	1:A:294:LYS:HB3	1.92	0.69
1:A:256:LYS:HG3	1:A:294:LYS:HE3	1.81	0.62
1:B:440:LYS:HE2	3:B:759:HOH:O	2.05	0.56
1:B:357:ILE:HG22	1:B:359:GLY:N	2.21	0.56
1:A:255:ARG:HB2	1:A:294:LYS:HE2	1.88	0.54
1:B:212:VAL:O	1:B:212:VAL:HG12	2.07	0.54
1:B:429:ALA:O	1:B:433:ARG:HG3	2.09	0.52
1:B:212:VAL:O	1:B:212:VAL:CG1	2.57	0.51
1:B:329:ARG:HD3	3:B:782:HOH:O	2.10	0.51
1:A:384:ILE:HG22	1:A:384:ILE:O	2.10	0.51
1:A:321:ILE:HD12	1:A:321:ILE:N	2.27	0.48
1:B:357:ILE:CG2	1:B:359:GLY:O	2.63	0.46
2:B:501:ANP:H8	3:B:636:HOH:O	2.17	0.45
1:B:292:LYS:HA	1:B:293:GLY:HA2	1.85	0.44
1:A:255:ARG:O	1:A:294:LYS:CB	2.65	0.42
1:A:294:LYS:HE2	1:A:294:LYS:HB2	1.72	0.41
1:B:352:CYS:HB2	1:B:414:GLU:OE1	2.21	0.41
1:A:264:ARG:NH1	3:A:623:HOH:O	2.53	0.41
1:A:214:MET:HG2	1:A:215:SER:O	2.21	0.41
1:B:440:LYS:NZ	3:B:619:HOH:O	2.54	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	$\begin{array}{c} {\rm Interatomic} \\ {\rm distance} \ (\rm \AA) \end{array}$	Clash overlap (Å)
3:B:711:HOH:O	3:B:713:HOH:O[2_455]	2.06	0.14

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	Percen	tiles
1	A	274/277 (99%)	269 (98%)	5 (2%)	0	100	100
1	В	274/277 (99%)	266 (97%)	8 (3%)	0	100	100
All	All	548/554 (99%)	535 (98%)	13 (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	Rotameric Outliers		Percentiles		
1	A	243/243 (100%)	239 (98%)	4 (2%)	62	67		
1	В	243/243 (100%)	237 (98%)	6 (2%)	47	49		
All	All	486/486 (100%)	476 (98%)	10 (2%)	53	57		

All (10) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	294	LYS
1	A	353	ASP
1	A	364	VAL

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Mol	Chain	Res	Type
1	A	420	TYR
1	В	224	ASP
1	В	246	GLU
1	В	317	LYS
1	В	374	LEU
1	В	420	TYR
1	В	450	PRO

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	Trino	Chain	Dag	Link	Bond lengths			В	ond ang	gles
IVIOI	Type	Chain	Res	Lilik	Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
1	SEP	A	382	1	8,9,10	0.66	0	8,12,14	2.25	3 (37%)
1	SEP	В	382	1	8,9,10	0.70	0	8,12,14	2.17	1 (12%)

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.

N	/Iol	Type	Chain	Res	Link	Chirals	Torsions	Rings
	1	SEP	A	382	1	-	1/5/8/10	-
	1	SEP	В	382	1	-	3/5/8/10	-



There are no bond length outliers.

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	\mathbf{Z}	$\mathbf{Observed}(^o)$	$\operatorname{Ideal}({}^{o})$
1	В	382	SEP	OG-CB-CA	5.73	113.72	108.14
1	A	382	SEP	OG-CB-CA	4.31	112.34	108.14
1	A	382	SEP	O3P-P-OG	-2.79	99.31	106.73
1	A	382	SEP	O3P-P-O2P	2.53	117.29	107.64

There are no chirality outliers.

All (4) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
1	A	382	SEP	CA-CB-OG-P
1	В	382	SEP	CB-OG-P-O2P
1	В	382	SEP	CB-OG-P-O3P
1	В	382	SEP	CB-OG-P-O1P

There are no ring outliers.

No monomer is involved in short contacts.

5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

2 ligands are modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with |Z| > 2 is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol Type	Type	Chain	Chain	Chain	Chain	Res	Link	Во	ond leng	hs	В	Bond angles		
WIOI	ioi Type Chain Re	nes	LIIIK	Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z >2					
2	ANP	A	501	-	29,33,33	1.78	7 (24%)	31,52,52	1.92	8 (25%)				
2	ANP	В	501	-	29,33,33	1.95	8 (27%)	31,52,52	2.68	13 (41%)				



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	ANP	A	501	-	-	3/14/38/38	0/3/3/3
2	ANP	В	501	-	-	3/14/38/38	0/3/3/3

All (15) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	$\operatorname{Observed}(\operatorname{\AA})$	Ideal(A)
2	A	501	ANP	PB-O1B	5.39	1.54	1.46
2	В	501	ANP	PG-N3B	4.87	1.76	1.63
2	В	501	ANP	PB-O1B	4.37	1.53	1.46
2	В	501	ANP	PB-N3B	4.01	1.73	1.63
2	A	501	ANP	PB-N3B	3.76	1.73	1.63
2	A	501	ANP	PG-N3B	3.73	1.73	1.63
2	В	501	ANP	PB-O3A	3.07	1.62	1.59
2	В	501	ANP	C5-C4	2.88	1.48	1.40
2	В	501	ANP	PG-O2G	-2.66	1.49	1.56
2	В	501	ANP	PB-O2B	-2.65	1.49	1.56
2	В	501	ANP	O4'-C1'	2.38	1.44	1.41
2	A	501	ANP	PB-O2B	-2.32	1.50	1.56
2	A	501	ANP	PB-O3A	2.08	1.61	1.59
2	A	501	ANP	C5-C4	2.07	1.46	1.40
2	A	501	ANP	PG-O3G	-2.03	1.51	1.56

All (21) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	\mathbf{Z}	$Observed(^o)$	$\operatorname{Ideal}({}^{o})$
2	В	501	ANP	C2-N1-C6	5.79	128.66	118.75
2	В	501	ANP	C4-C5-N7	5.74	115.38	109.40
2	В	501	ANP	O4'-C1'-C2'	-5.55	98.81	106.93
2	В	501	ANP	C1'-N9-C4	-4.99	117.88	126.64
2	В	501	ANP	O2G-PG-O3G	4.49	119.61	107.64
2	В	501	ANP	N3-C2-N1	-4.39	121.82	128.68
2	A	501	ANP	N3-C2-N1	-4.38	121.83	128.68
2	A	501	ANP	O2G-PG-O3G	3.91	118.04	107.64
2	A	501	ANP	O2B-PB-O1B	3.56	117.39	109.92
2	A	501	ANP	O3A-PB-N3B	3.16	115.36	106.59
2	В	501	ANP	O2B-PB-O1B	3.08	116.38	109.92
2	A	501	ANP	O2A-PA-O1A	2.97	126.92	112.24
2	A	501	ANP	O1G-PG-N3B	-2.90	107.51	111.77

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Mol	Chain	Res	Type	Atoms	Z	$Observed(^o)$	$Ideal(^{o})$
2	A	501	ANP	O2B-PB-O3A	2.83	114.10	104.64
2	В	501	ANP	O1G-PG-N3B	-2.80	107.64	111.77
2	В	501	ANP	O2A-PA-O1A	2.70	125.61	112.24
2	В	501	ANP	O2B-PB-O3A	-2.17	97.39	104.64
2	В	501	ANP	PB-O3A-PA	-2.17	124.97	132.62
2	В	501	ANP	C5-C6-N1	-2.16	115.47	120.35
2	A	501	ANP	PB-O3A-PA	-2.05	125.39	132.62
2	В	501	ANP	N6-C6-N1	2.04	122.81	118.57

There are no chirality outliers.

All (6) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	A	501	ANP	PB-N3B-PG-O1G
2	A	501	ANP	PG-N3B-PB-O1B
2	В	501	ANP	PB-N3B-PG-O1G
2	В	501	ANP	PG-N3B-PB-O1B
2	A	501	ANP	PG-N3B-PB-O3A
2	В	501	ANP	PG-N3B-PB-O3A

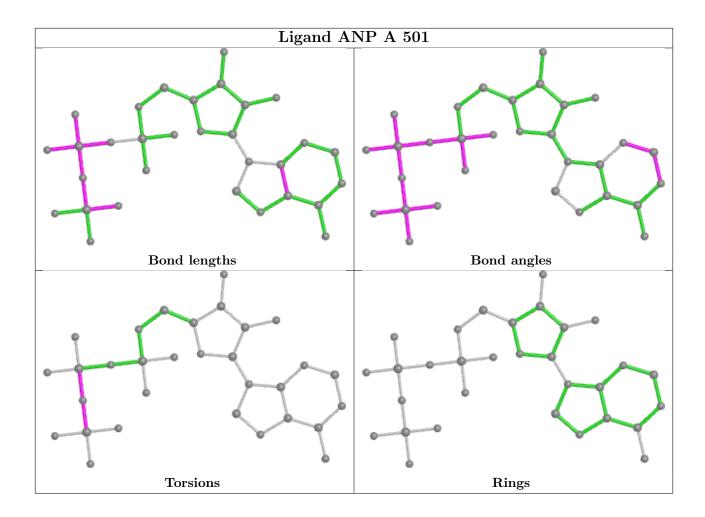
There are no ring outliers.

1 monomer is involved in 1 short contact:

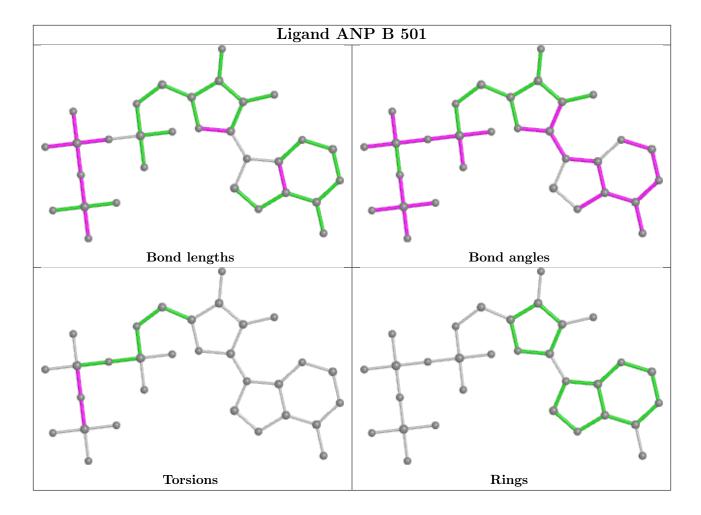
Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	В	501	ANP	1	0

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 $>$	$\#\mathrm{RSRZ}{>}2$	$OWAB(A^2)$	Q<0.9
1	A	276/277 (99%)	0.03	10 (3%) 42 42	16, 29, 52, 87	0
1	В	276/277 (99%)	-0.01	13 (4%) 31 30	15, 28, 52, 98	0
All	All	552/554 (99%)	0.01	23 (4%) 36 35	15, 29, 52, 98	0

All (23) RSRZ outliers are listed below:

Mol	Chain	Res	Res Type	
1	A	293	GLY	9.6
1	A	294	LYS	6.7
1	В	481	GLU	4.1
1	A	480	GLN	3.8
1	В	292	LYS	3.8
1	A	361	THR	3.5
1	В	397	GLU	3.5
1	A	360	PRO	3.4
1	A	290	THR	3.2
1	В	361	THR	3.1
1	В	398	LYS	3.0
1	В	291	VAL	3.0
1	A	482	GLU	3.0
1	A	295	LYS	3.0
1	A	292	LYS	2.8
1	В	383	VAL	2.6
1	В	480	GLN	2.6
1	В	293	GLY	2.4
1	В	244	THR	2.3
1	A	481	GLU	2.3
1	В	359	GLY	2.3
1	В	482	GLU	2.0
1	В	360	PRO	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	$\mathbf{B} ext{-}\mathbf{factors}(\mathbf{\mathring{A}}^2)$	Q < 0.9
1	SEP	В	382	10/11	0.84	0.24	43,59,89,90	0
1	SEP	A	382	10/11	0.94	0.17	41,47,54,57	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.

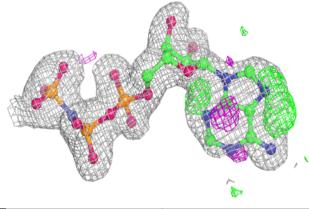
Mol	Type	Chain	Res	Atoms	RSCC	RSR	$\mathbf{B} ext{-}\mathbf{factors}(\mathbf{\mathring{A}}^2)$	Q<0.9
2	ANP	В	501	31/31	0.94	0.09	21,29,42,49	0
2	ANP	A	501	31/31	0.96	0.10	23,36,49,51	0

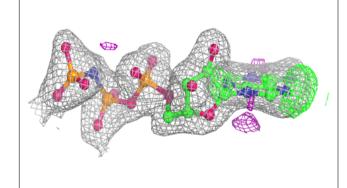
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation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

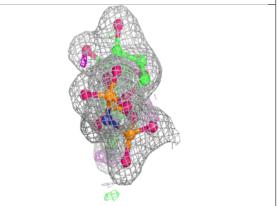


Electron density around ANP B 501:

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

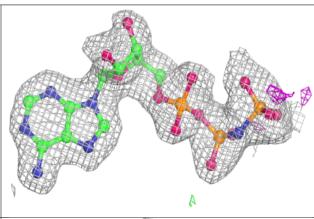


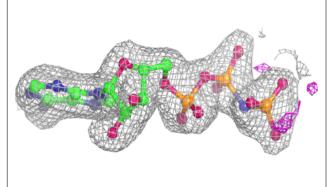


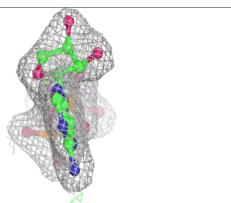


Electron density around ANP A 501:

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









6.5 Other polymers (i)

There are no such residues in this entry.

