



Full wwPDB X-ray Structure Validation Report ⓘ

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PDB ID : 2DWB / pdb_00002dwb
Title : Aurora-A kinase complexed with AMPPNP
Authors : Kukimoto-Niino, M.; Murayama, K.; Shirouzu, S.; Yokoyama, S.; RIKEN
Structural Genomics/Proteomics Initiative (RSGI)
Deposited on : 2006-08-10
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)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.49

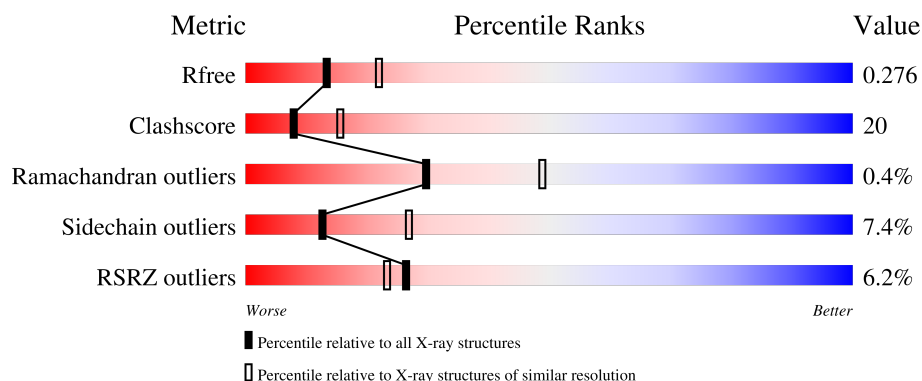
1 Overall quality at a glance

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	285	

2 Entry composition [i](#)

There are 4 unique types of molecules in this entry. The entry contains 2216 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 6.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
			Total	C	N	O	S	Se			
1	A	262	2150	1382	379	383	3	3	0	0	0

There are 6 discrepancies between the modelled and reference sequences:

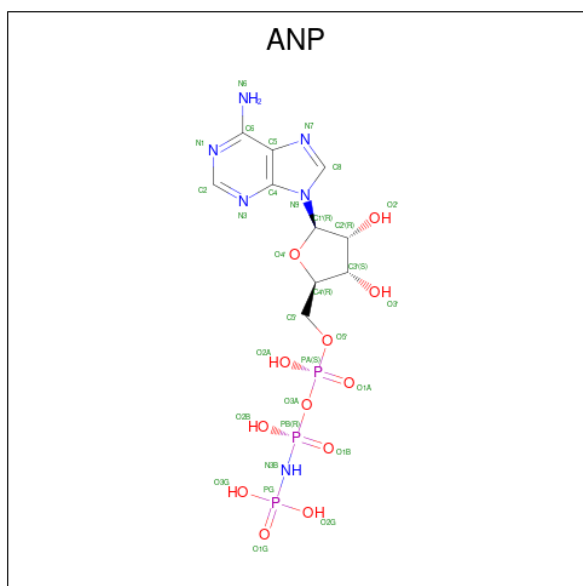
Chain	Residue	Modelled	Actual	Comment	Reference
A	119	GLY	-	cloning artifact	UNP O14965
A	120	HIS	-	cloning artifact	UNP O14965
A	121	MSE	-	cloning artifact	UNP O14965
A	300	MSE	MET	modified residue	UNP O14965
A	305	MSE	MET	modified residue	UNP O14965
A	373	MSE	MET	modified residue	UNP O14965

- Molecule 2 is SULFATE ION (CCD ID: SO4) (formula: O₄S).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
2	A	1	Total	O	S	0	0
			5	4	1		

- Molecule 3 is PHOSPHOAMINOPHOSPHONIC ACID-ADENYLATE ESTER (CCD ID: ANP) (formula: $C_{10}H_{17}N_6O_{12}P_3$).



4 Data and refinement statistics

Property	Value	Source
Space group	P 61 2 2	Depositor
Cell constants a, b, c, α , β , γ	81.47Å 81.47Å 174.18Å 90.00° 90.00° 120.00°	Depositor
Resolution (Å)	44.83 – 2.50 44.83 – 2.50	Depositor EDS
% Data completeness (in resolution range)	98.4 (44.83-2.50) 98.4 (44.83-2.50)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	0.05	Depositor
$\langle I/\sigma(I) \rangle$ ¹	6.61 (at 2.51Å)	Xtriage
Refinement program	CNS 1.1	Depositor
R, R_{free}	0.227 , 0.275 0.228 , 0.276	Depositor DCC
R_{free} test set	1260 reflections (10.26%)	wwPDB-VP
Wilson B-factor (Å ²)	55.0	Xtriage
Anisotropy	0.454	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.37 , 47.8	EDS
L-test for twinning ²	$\langle L \rangle = 0.49$, $\langle L^2 \rangle = 0.32$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.94	EDS
Total number of atoms	2216	wwPDB-VP
Average B, all atoms (Å ²)	57.0	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: SO4, 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	
		RMSZ	$\# Z > 5$	RMSZ	$\# Z > 5$
1	A	0.46	0/2200	1.00	13/2967 (0.4%)

There are no bond length outliers.

All (13) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	149	LEU	N-CA-C	-7.26	98.73	110.20
1	A	380	HIS	CA-C-N	6.28	125.77	119.24
1	A	380	HIS	C-N-CA	6.28	125.77	119.24
1	A	327	PRO	CA-C-N	6.03	127.38	119.84
1	A	327	PRO	C-N-CA	6.03	127.38	119.84
1	A	290	CYS	N-CA-C	5.98	117.67	109.18
1	A	349	PRO	N-CA-C	-5.46	103.23	111.41
1	A	211	GLU	N-CA-C	-5.29	102.02	109.96
1	A	134	GLU	N-CA-C	-5.27	99.93	108.52
1	A	153	LYS	N-CA-C	5.13	117.53	111.33
1	A	204	THR	N-CA-C	5.06	119.93	113.55
1	A	351	PHE	N-CA-C	5.03	119.18	113.19
1	A	249	SER	N-CA-C	-5.01	106.00	111.82

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	2150	0	2157	84	1
2	A	5	0	0	1	0
3	A	31	0	13	3	0
4	A	30	0	0	2	0
All	All	2216	0	2170	86	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 20.

All (86) 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:333:THR:HG22	1:A:336:GLU:H	1.12	1.14
1:A:375:ARG:HD2	1:A:375:ARG:H	1.01	1.09
1:A:375:ARG:HD2	1:A:375:ARG:N	1.85	0.92
1:A:375:ARG:H	1:A:375:ARG:CD	1.85	0.88
1:A:333:THR:HG23	1:A:335:GLN:HE21	1.38	0.87
1:A:335:GLN:HE21	1:A:335:GLN:H	1.29	0.78
1:A:333:THR:HG23	1:A:335:GLN:NE2	2.04	0.73
1:A:335:GLN:H	1:A:335:GLN:NE2	1.86	0.72
1:A:331:ALA:HB1	1:A:336:GLU:OE1	1.89	0.72
1:A:331:ALA:HB1	1:A:336:GLU:CD	2.15	0.72
1:A:333:THR:CG2	1:A:336:GLU:H	1.99	0.71
1:A:333:THR:HG22	1:A:336:GLU:N	1.97	0.70
1:A:190:HIS:HD2	1:A:192:ASN:H	1.36	0.70
1:A:289:LEU:H	1:A:289:LEU:HD22	1.57	0.70
1:A:189:ARG:CZ	1:A:195:ARG:HH21	2.05	0.69
1:A:367:ASN:HD22	1:A:367:ASN:C	2.00	0.69
1:A:253:ILE:HD11	1:A:281:ALA:HB2	1.75	0.68
1:A:373:MSE:HB3	1:A:375:ARG:HD3	1.76	0.68
3:A:502:ANP:O3G	3:A:502:ANP:O2A	2.11	0.68
1:A:225:LEU:O	1:A:226:SER:HB2	1.97	0.63
1:A:204:THR:HG23	1:A:205:ARG:HD3	1.82	0.61
1:A:130:LEU:HD21	1:A:135:ILE:HD11	1.83	0.60
1:A:285:ARG:HG2	1:A:285:ARG:HH21	1.65	0.60
1:A:353:THR:O	1:A:357:ARG:HG3	2.02	0.59
1:A:296:LEU:HD22	1:A:300:MSE:HE3	1.84	0.59
1:A:189:ARG:NH2	1:A:195:ARG:HH21	2.02	0.58
1:A:270:LEU:C	1:A:270:LEU:HD23	2.29	0.57
1:A:373:MSE:HB3	1:A:375:ARG:CD	2.35	0.56
1:A:155:SER:O	1:A:156:LYS:HB2	2.03	0.56
1:A:143:LYS:HG2	3:A:502:ANP:O1B	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:338:TYR:HD2	1:A:339:LYS:HE2	1.69	0.56
1:A:358:ASP:O	1:A:362:ARG:HG3	2.06	0.56
1:A:190:HIS:CD2	1:A:192:ASN:H	2.23	0.54
1:A:296:LEU:HD22	1:A:300:MSE:CE	2.37	0.54
1:A:241:ALA:HB3	1:A:378:LEU:HD21	1.90	0.53
3:A:502:ANP:H8	3:A:502:ANP:O5'	2.08	0.53
1:A:251:ARG:HD2	1:A:308:GLU:OE2	2.09	0.52
1:A:340:ARG:NH2	4:A:30:HOH:O	2.43	0.52
1:A:367:ASN:ND2	1:A:369:SER:H	2.07	0.52
1:A:159:LEU:HD12	1:A:159:LEU:C	2.35	0.51
1:A:327:PRO:HG2	1:A:330:GLU:HB2	1.93	0.51
1:A:333:THR:CG2	1:A:335:GLN:HE21	2.16	0.50
1:A:289:LEU:HD22	1:A:289:LEU:N	2.25	0.50
1:A:195:ARG:HB3	1:A:211:GLU:HB2	1.94	0.49
1:A:188:LEU:HD22	1:A:246:TYR:HE2	1.78	0.49
1:A:164:LEU:N	1:A:164:LEU:HD12	2.28	0.48
1:A:367:ASN:C	1:A:367:ASN:ND2	2.70	0.48
1:A:270:LEU:HD23	1:A:271:LYS:N	2.28	0.48
1:A:327:PRO:HB2	4:A:2:HOH:O	2.13	0.48
1:A:367:ASN:HD22	1:A:368:PRO:N	2.11	0.47
1:A:167:ALA:O	1:A:171:LYS:HG2	2.14	0.47
1:A:301:ILE:HD12	1:A:338:TYR:CD1	2.48	0.47
1:A:335:GLN:O	1:A:339:LYS:HD2	2.14	0.47
1:A:274:ASP:OD2	1:A:274:ASP:C	2.58	0.47
1:A:285:ARG:HG2	1:A:285:ARG:NH2	2.28	0.46
1:A:188:LEU:HD22	1:A:246:TYR:CE2	2.51	0.46
1:A:244:LEU:HD21	1:A:257:ILE:HD11	1.97	0.46
1:A:285:ARG:NH2	1:A:288:THR:O	2.46	0.46
1:A:162:LYS:HG2	1:A:164:LEU:HD11	1.98	0.45
1:A:316:GLY:HA2	1:A:363:LEU:HD23	1.98	0.45
1:A:257:ILE:HG22	1:A:318:LEU:HD11	1.97	0.45
1:A:165:PHE:CE2	1:A:205:ARG:HD2	2.51	0.45
1:A:297:PRO:HG2	1:A:310:VAL:HG13	1.98	0.45
1:A:289:LEU:H	1:A:289:LEU:CD2	2.29	0.45
1:A:151:ARG:HB2	1:A:158:ILE:HD13	1.99	0.45
1:A:340:ARG:HH11	1:A:340:ARG:HB3	1.81	0.45
1:A:333:THR:HB	1:A:336:GLU:HB3	1.99	0.45
1:A:194:LEU:HD11	1:A:211:GLU:O	2.18	0.44
1:A:162:LYS:HB3	1:A:208:LEU:HB2	2.00	0.43
1:A:380:HIS:HA	1:A:381:PRO:HD3	1.91	0.43
1:A:349:PRO:HD2	1:A:352:VAL:CG2	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:346:PHE:HE2	1:A:348:PHE:CZ	2.37	0.42
1:A:285:ARG:HG3	2:A:501:SO4:O4	2.20	0.42
1:A:301:ILE:O	1:A:338:TYR:HE1	2.03	0.42
1:A:259:PRO:HD3	1:A:295:TYR:CE2	2.55	0.42
1:A:157:PHE:HD2	1:A:159:LEU:HD23	1.85	0.42
1:A:296:LEU:HA	1:A:297:PRO:HD3	1.77	0.41
1:A:333:THR:CG2	1:A:335:GLN:HB2	2.50	0.41
1:A:183:GLU:HA	1:A:183:GLU:OE1	2.20	0.41
1:A:165:PHE:HA	1:A:205:ARG:HG3	2.03	0.41
1:A:195:ARG:HG2	1:A:197:TYR:CE2	2.55	0.41
1:A:363:LEU:HD12	1:A:363:LEU:HA	1.95	0.41
1:A:375:ARG:HH21	1:A:375:ARG:HG3	1.84	0.41
1:A:331:ALA:HB1	1:A:336:GLU:CG	2.51	0.41
1:A:201:HIS:HB2	1:A:205:ARG:O	2.21	0.40
1:A:151:ARG:HA	1:A:157:PHE:O	2.22	0.40

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

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:336:GLU:OE2	1:A:336:GLU:OE2[11_555]	1.66	0.54

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	258/285 (90%)	241 (93%)	16 (6%)	1 (0%)	30 49

All (1) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	294	ASP

5.3.2 Protein sidechains ⓘ

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	231/248 (93%)	214 (93%)	17 (7%)	13	27

All (17) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	130	LEU
1	A	149	LEU
1	A	161	LEU
1	A	221	GLU
1	A	222	LEU
1	A	289	LEU
1	A	293	LEU
1	A	300	MSE
1	A	333	THR
1	A	335	GLN
1	A	339	LYS
1	A	340	ARG
1	A	343	ARG
1	A	359	LEU
1	A	363	LEU
1	A	367	ASN
1	A	375	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (9) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	168	GLN
1	A	177	GLN
1	A	185	GLN
1	A	190	HIS
1	A	192	ASN
1	A	223	GLN
1	A	332	ASN
1	A	335	GLN

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Mol	Chain	Res	Type
1	A	367	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 oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

2 ligands are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z > 2$	Counts	RMSZ	$\# Z > 2$
2	SO4	A	501	-	4,4,4	0.39	0	6,6,6	0.09	0
3	ANP	A	502	-	33,33,33	1.55	4 (12%)	45,52,52	2.11	14 (31%)

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	ANP	A	502	-	-	2/18/38/38	0/3/3/3

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	A	502	ANP	PB-N3B	3.84	1.73	1.63
3	A	502	ANP	PB-O3A	3.70	1.63	1.59
3	A	502	ANP	PG-N3B	3.46	1.72	1.63
3	A	502	ANP	PA-O3A	2.57	1.62	1.59

All (14) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A	502	ANP	C5-C4-N3	-5.52	119.12	126.72
3	A	502	ANP	N3-C2-N1	-4.72	121.44	128.58
3	A	502	ANP	N3-C4-N9	4.64	135.05	127.17
3	A	502	ANP	O3A-PB-N3B	4.04	117.79	106.59
3	A	502	ANP	C2-N3-C4	3.95	121.48	111.83
3	A	502	ANP	C5-N7-C8	3.94	109.64	103.45
3	A	502	ANP	O3'-C3'-C4'	-2.95	102.61	111.08
3	A	502	ANP	C4-C5-N7	-2.85	107.32	110.58
3	A	502	ANP	C3'-C2'-C1'	2.71	106.59	101.46
3	A	502	ANP	PA-O5'-C5'	-2.63	106.30	121.35
3	A	502	ANP	N9-C8-N7	-2.49	110.40	113.94
3	A	502	ANP	O2G-PG-O1G	-2.29	107.72	113.45
3	A	502	ANP	O2A-PA-O3A	2.20	113.22	107.27
3	A	502	ANP	O4'-C4'-C3'	2.06	109.24	105.15

There are no chirality outliers.

All (2) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	A	502	ANP	PB-N3B-PG-O1G
3	A	502	ANP	PG-N3B-PB-O1B

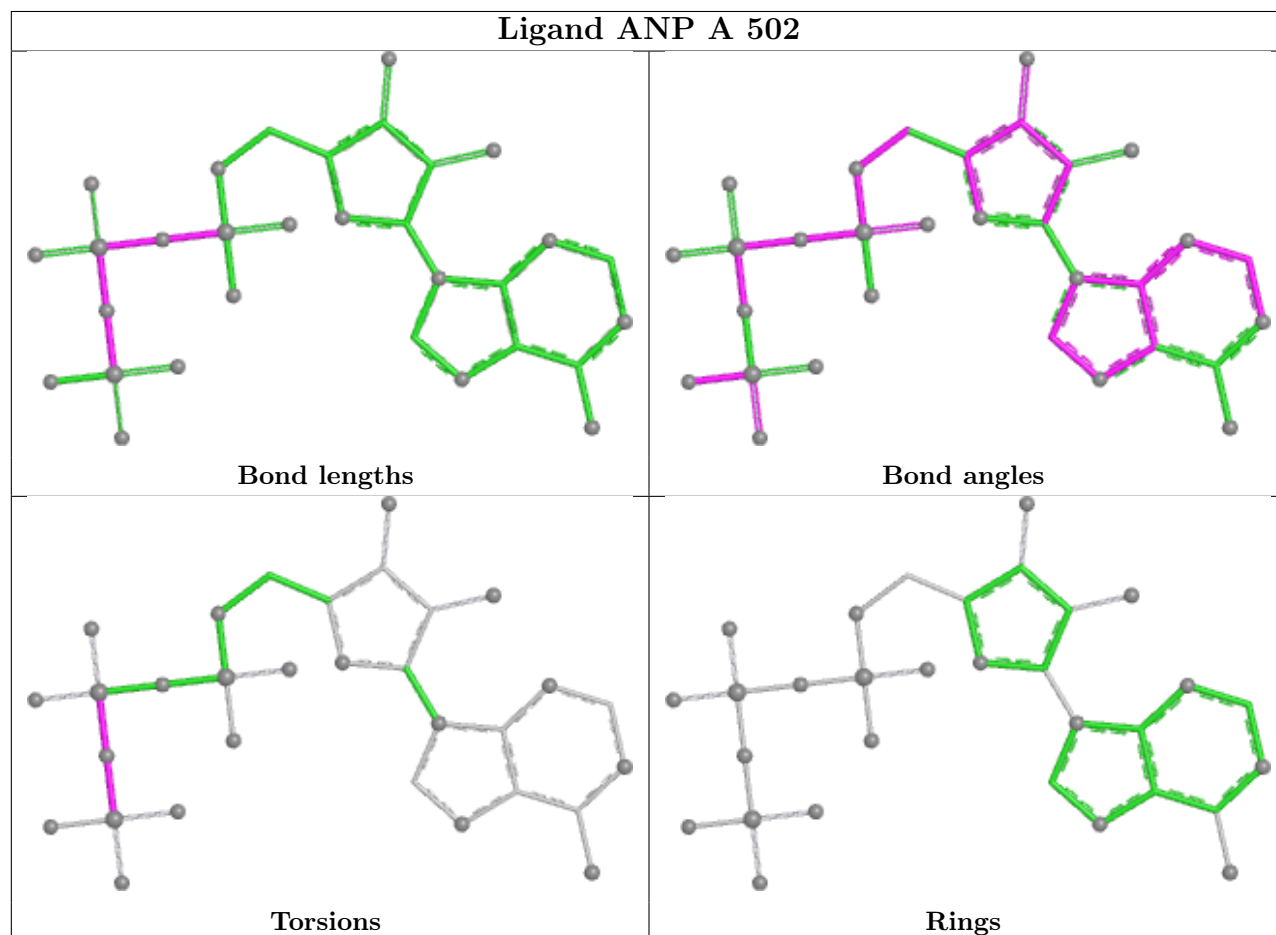
There are no ring outliers.

2 monomers are involved in 4 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	A	501	SO4	1	0
3	A	502	ANP	3	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 [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, 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	259/285 (90%)	0.34	16 (6%) 26 23	35, 53, 86, 109	0

All (16) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	289	LEU	4.5
1	A	281	ALA	4.3
1	A	389	LYS	3.1
1	A	284	SER	2.7
1	A	126	ARG	2.6
1	A	143	LYS	2.6
1	A	293	LEU	2.6
1	A	291	GLY	2.5
1	A	279	VAL	2.4
1	A	168	GLN	2.3
1	A	290	CYS	2.2
1	A	336	GLU	2.2
1	A	203	ALA	2.2
1	A	301	ILE	2.1
1	A	303	GLY	2.0
1	A	176	HIS	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](#)

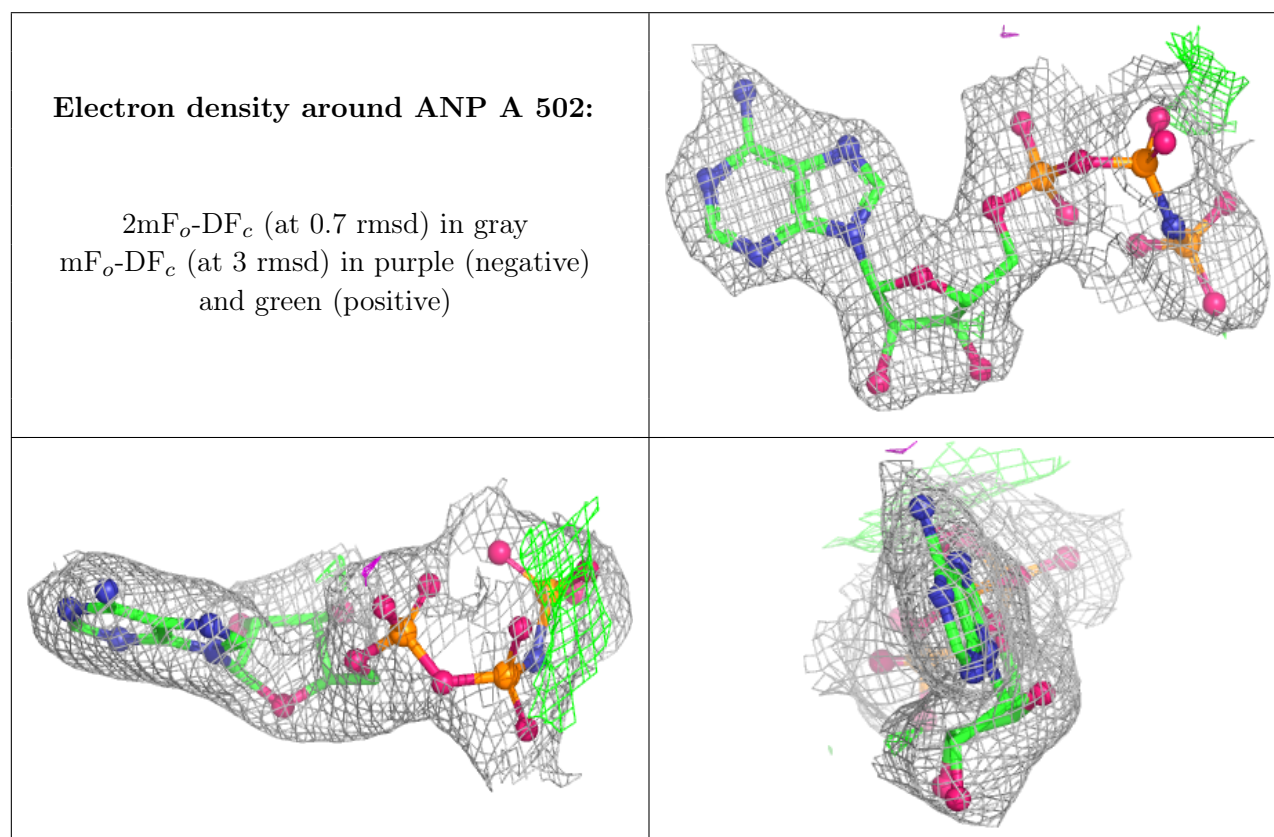
There are no oligosaccharides in this entry.

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(Å ²)	Q<0.9
2	SO4	A	501	5/5	0.73	0.17	115,116,121,122	0
3	ANP	A	502	31/31	0.94	0.08	33,49,78,83	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.



6.5 Other polymers [i](#)

There are no such residues in this entry.