Full wwPDB X-ray Structure Validation Report ⓘ

May 25, 2020 – 09:12 am BST

PDB ID	:	3ZKB
Title	:	CRYSTAL STRUCTURE OF THE ATPASE REGION OF Mycobacterium tuberculosis GyrB WITH AMPPNP
Authors	:	Agrawal, A.; Roue, M.; Spitzfaden, C.; Petrella, S.; Aubry, A.; Volker, C.; Mossakowska, D.; Hann, M.; Bax, B.; Mayer, C.
Deposited on	:	2013-01-22
Resolution	:	2.90 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/XrayValidationReportHelp
with specific help available everywhere you see the ⓘ symbol.

The following versions of software and data (see references ⓘ) were used in the production of this report:

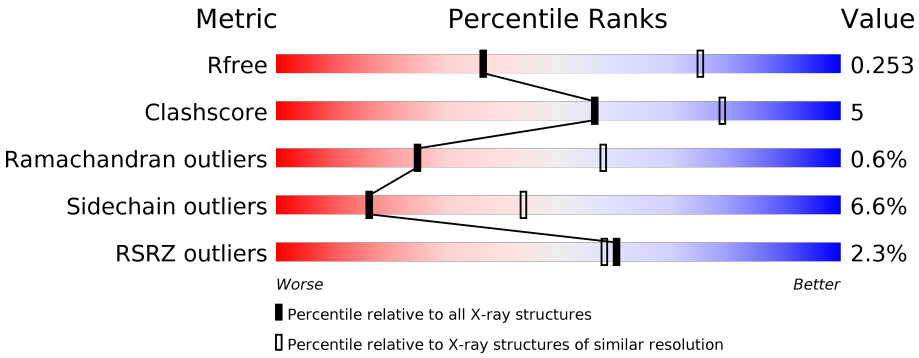
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.11
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.11

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 2.90 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	1957 (2.90-2.90)
Clashscore	141614	2172 (2.90-2.90)
Ramachandran outliers	138981	2115 (2.90-2.90)
Sidechain outliers	138945	2117 (2.90-2.90)
RSRZ outliers	127900	1906 (2.90-2.90)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments on 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	432	71% 16% • 12%
1	B	432	76% 13% 12%
1	C	432	74% 15% • 10%
1	D	432	75% 15% 9%
1	E	432	72% 16% • 11%
1	F	432	76% 12% • 11%

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Mol	Chain	Length	Quality of chain
1	G	432	2% 75% 12% 12%
1	H	432	% 70% 16% 12%
1	I	432	3% 74% 12% 13%
1	J	432	% 74% 14% 11%
1	K	432	3% 71% 15% 13%
1	L	432	4% 75% 13% 12%
1	M	432	3% 72% 16% 11%
1	N	432	3% 77% 9% 14%
1	O	432	2% 72% 14% 12%
1	P	432	2% 67% 18% 13%

2 Entry composition

There are 4 unique types of molecules in this entry. The entry contains 46952 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 DNA GYRASE SUBUNIT B.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	380	Total	C	N	O	S	0	0	0
			2887	1809	509	563	6			
1	B	382	Total	C	N	O	S	0	0	0
			2874	1798	505	565	6			
1	C	387	Total	C	N	O	S	0	0	0
			2938	1842	516	574	6			
1	D	392	Total	C	N	O	S	0	0	0
			2954	1844	518	586	6			
1	E	386	Total	C	N	O	S	0	0	0
			2912	1821	511	574	6			
1	F	383	Total	C	N	O	S	0	0	0
			2888	1807	505	570	6			
1	G	381	Total	C	N	O	S	0	0	0
			2864	1796	502	560	6			
1	H	379	Total	C	N	O	S	0	0	0
			2866	1794	502	564	6			
1	I	375	Total	C	N	O	S	0	0	0
			2827	1768	494	559	6			
1	J	384	Total	C	N	O	S	0	0	0
			2884	1806	506	566	6			
1	K	376	Total	C	N	O	S	0	0	0
			2838	1778	497	557	6			
1	L	382	Total	C	N	O	S	0	0	0
			2862	1791	501	564	6			
1	M	383	Total	C	N	O	S	0	0	0
			2888	1808	509	565	6			
1	N	373	Total	C	N	O	S	0	0	0
			2816	1763	495	552	6			
1	O	379	Total	C	N	O	S	0	0	0
			2877	1803	506	562	6			
1	P	376	Total	C	N	O	S	0	0	0
			2822	1768	489	559	6			

There are 80 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-4	GLY	-	expression tag	UNP I6WX66
A	-3	PRO	-	expression tag	UNP I6WX66
A	-2	LEU	-	expression tag	UNP I6WX66
A	-1	GLY	-	expression tag	UNP I6WX66
A	0	SER	-	expression tag	UNP I6WX66
B	-4	GLY	-	expression tag	UNP I6WX66
B	-3	PRO	-	expression tag	UNP I6WX66
B	-2	LEU	-	expression tag	UNP I6WX66
B	-1	GLY	-	expression tag	UNP I6WX66
B	0	SER	-	expression tag	UNP I6WX66
C	-4	GLY	-	expression tag	UNP I6WX66
C	-3	PRO	-	expression tag	UNP I6WX66
C	-2	LEU	-	expression tag	UNP I6WX66
C	-1	GLY	-	expression tag	UNP I6WX66
C	0	SER	-	expression tag	UNP I6WX66
D	-4	GLY	-	expression tag	UNP I6WX66
D	-3	PRO	-	expression tag	UNP I6WX66
D	-2	LEU	-	expression tag	UNP I6WX66
D	-1	GLY	-	expression tag	UNP I6WX66
D	0	SER	-	expression tag	UNP I6WX66
E	-4	GLY	-	expression tag	UNP I6WX66
E	-3	PRO	-	expression tag	UNP I6WX66
E	-2	LEU	-	expression tag	UNP I6WX66
E	-1	GLY	-	expression tag	UNP I6WX66
E	0	SER	-	expression tag	UNP I6WX66
F	-4	GLY	-	expression tag	UNP I6WX66
F	-3	PRO	-	expression tag	UNP I6WX66
F	-2	LEU	-	expression tag	UNP I6WX66
F	-1	GLY	-	expression tag	UNP I6WX66
F	0	SER	-	expression tag	UNP I6WX66
G	-4	GLY	-	expression tag	UNP I6WX66
G	-3	PRO	-	expression tag	UNP I6WX66
G	-2	LEU	-	expression tag	UNP I6WX66
G	-1	GLY	-	expression tag	UNP I6WX66
G	0	SER	-	expression tag	UNP I6WX66
H	-4	GLY	-	expression tag	UNP I6WX66
H	-3	PRO	-	expression tag	UNP I6WX66
H	-2	LEU	-	expression tag	UNP I6WX66
H	-1	GLY	-	expression tag	UNP I6WX66
H	0	SER	-	expression tag	UNP I6WX66
I	-4	GLY	-	expression tag	UNP I6WX66
I	-3	PRO	-	expression tag	UNP I6WX66

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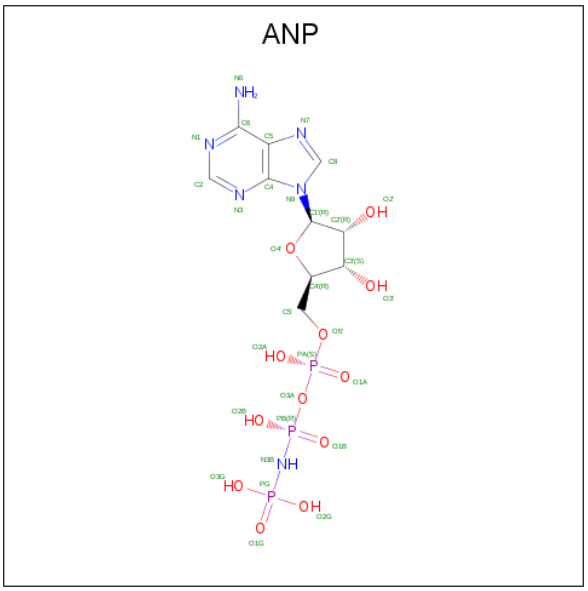
Chain	Residue	Modelled	Actual	Comment	Reference
I	-2	LEU	-	expression tag	UNP I6WX66
I	-1	GLY	-	expression tag	UNP I6WX66
I	0	SER	-	expression tag	UNP I6WX66
J	-4	GLY	-	expression tag	UNP I6WX66
J	-3	PRO	-	expression tag	UNP I6WX66
J	-2	LEU	-	expression tag	UNP I6WX66
J	-1	GLY	-	expression tag	UNP I6WX66
J	0	SER	-	expression tag	UNP I6WX66
K	-4	GLY	-	expression tag	UNP I6WX66
K	-3	PRO	-	expression tag	UNP I6WX66
K	-2	LEU	-	expression tag	UNP I6WX66
K	-1	GLY	-	expression tag	UNP I6WX66
K	0	SER	-	expression tag	UNP I6WX66
L	-4	GLY	-	expression tag	UNP I6WX66
L	-3	PRO	-	expression tag	UNP I6WX66
L	-2	LEU	-	expression tag	UNP I6WX66
L	-1	GLY	-	expression tag	UNP I6WX66
L	0	SER	-	expression tag	UNP I6WX66
M	-4	GLY	-	expression tag	UNP I6WX66
M	-3	PRO	-	expression tag	UNP I6WX66
M	-2	LEU	-	expression tag	UNP I6WX66
M	-1	GLY	-	expression tag	UNP I6WX66
M	0	SER	-	expression tag	UNP I6WX66
N	-4	GLY	-	expression tag	UNP I6WX66
N	-3	PRO	-	expression tag	UNP I6WX66
N	-2	LEU	-	expression tag	UNP I6WX66
N	-1	GLY	-	expression tag	UNP I6WX66
N	0	SER	-	expression tag	UNP I6WX66
O	-4	GLY	-	expression tag	UNP I6WX66
O	-3	PRO	-	expression tag	UNP I6WX66
O	-2	LEU	-	expression tag	UNP I6WX66
O	-1	GLY	-	expression tag	UNP I6WX66
O	0	SER	-	expression tag	UNP I6WX66
P	-4	GLY	-	expression tag	UNP I6WX66
P	-3	PRO	-	expression tag	UNP I6WX66
P	-2	LEU	-	expression tag	UNP I6WX66
P	-1	GLY	-	expression tag	UNP I6WX66
P	0	SER	-	expression tag	UNP I6WX66

- Molecule 2 is PHOSPHOAMINOPHOSPHONIC ACID-ADENYLATE ESTER (three-letter code: ANP) (formula: $C_{10}H_{17}N_6O_{12}P_3$).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
2	A	1	Total	C	N	O	P	0	0
			31	10	6	12	3		
2	B	1	Total	C	N	O	P	0	0
			31	10	6	12	3		
2	C	1	Total	C	N	O	P	0	0
			31	10	6	12	3		
2	D	1	Total	C	N	O	P	0	0
			31	10	6	12	3		
2	E	1	Total	C	N	O	P	0	0
			31	10	6	12	3		
2	F	1	Total	C	N	O	P	0	0
			31	10	6	12	3		
2	G	1	Total	C	N	O	P	0	0
			31	10	6	12	3		
2	H	1	Total	C	N	O	P	0	0
			31	10	6	12	3		
2	I	1	Total	C	N	O	P	0	0
			31	10	6	12	3		
2	J	1	Total	C	N	O	P	0	0
			31	10	6	12	3		
2	K	1	Total	C	N	O	P	0	0
			31	10	6	12	3		
2	L	1	Total	C	N	O	P	0	0
			31	10	6	12	3		
2	M	1	Total	C	N	O	P	0	0
			31	10	6	12	3		
2	N	1	Total	C	N	O	P	0	0
			31	10	6	12	3		

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
2	O	1	Total	C	N	O	P	0	0
			31	10	6	12	3		
2	P	1	Total	C	N	O	P	0	0
			31	10	6	12	3		

- Molecule 3 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	P	1	Total	Mg	0	0
			1	1		
3	G	2	Total	Mg	0	0
			2	2		
3	J	1	Total	Mg	0	0
			1	1		
3	D	2	Total	Mg	0	0
			2	2		
3	K	1	Total	Mg	0	0
			1	1		
3	E	1	Total	Mg	0	0
			1	1		
3	H	1	Total	Mg	0	0
			1	1		
3	B	2	Total	Mg	0	0
			2	2		
3	I	1	Total	Mg	0	0
			1	1		
3	C	2	Total	Mg	0	0
			2	2		
3	A	1	Total	Mg	0	0
			1	1		
3	N	1	Total	Mg	0	0
			1	1		
3	O	1	Total	Mg	0	0
			1	1		
3	L	1	Total	Mg	0	0
			1	1		
3	F	1	Total	Mg	0	0
			1	1		
3	M	1	Total	Mg	0	0
			1	1		

- Molecule 4 is water.

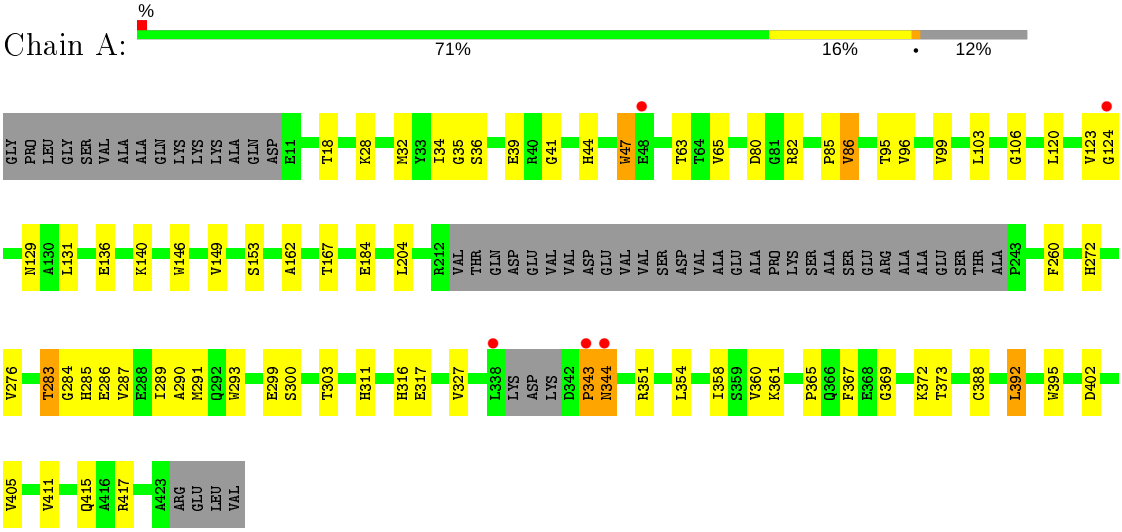
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	A	44	Total O 44 44	0	0
4	B	31	Total O 31 31	0	0
4	C	62	Total O 62 62	0	0
4	D	40	Total O 40 40	0	0
4	E	45	Total O 45 45	0	0
4	F	26	Total O 26 26	0	0
4	G	25	Total O 25 25	0	0
4	H	29	Total O 29 29	0	0
4	I	24	Total O 24 24	0	0
4	J	33	Total O 33 33	0	0
4	K	11	Total O 11 11	0	0
4	L	13	Total O 13 13	0	0
4	M	16	Total O 16 16	0	0
4	N	14	Total O 14 14	0	0
4	O	12	Total O 12 12	0	0
4	P	14	Total O 14 14	0	0

3 Residue-property plots (i)

These plots are drawn for all protein, RNA and DNA 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.

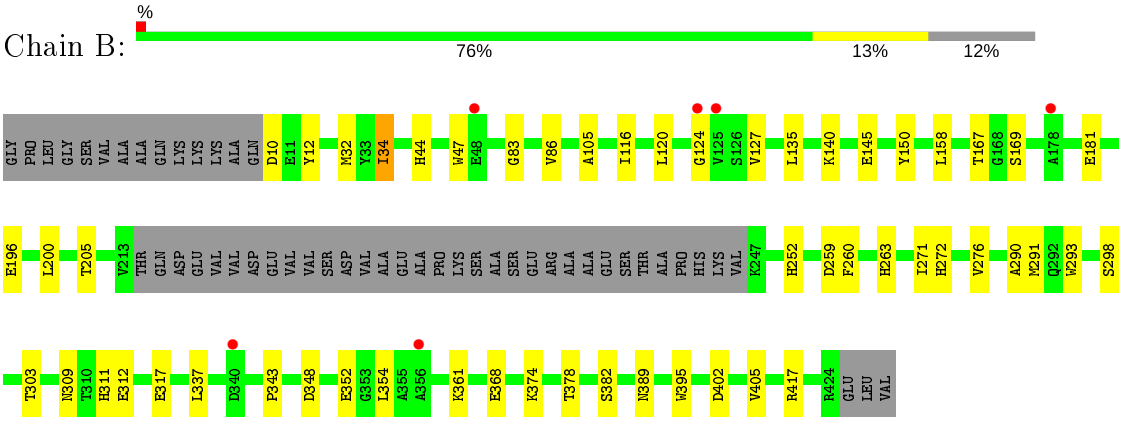
- Molecule 1: DNA GYRASE SUBUNIT B

Chain A:



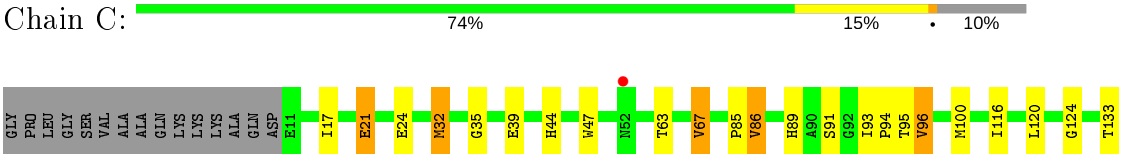
- Molecule 1: DNA GYRASE SUBUNIT B

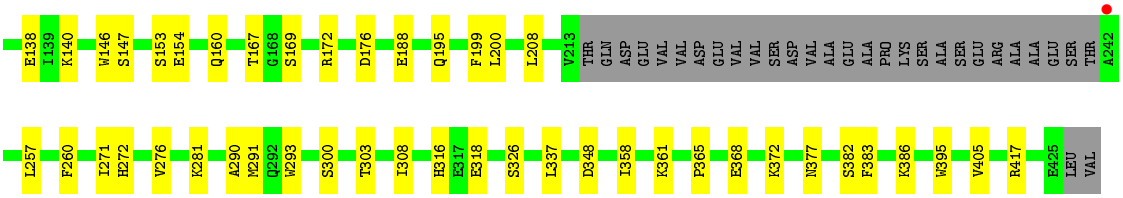
Chain B:



- Molecule 1: DNA GYRASE SUBUNIT B

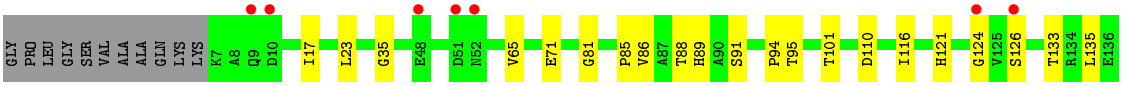
Chain C:

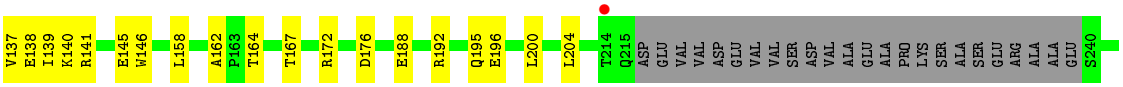


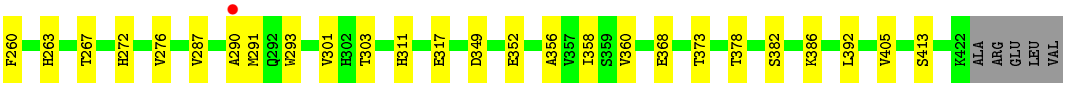


• Molecule 1: DNA GYRASE SUBUNIT B

Chain D:

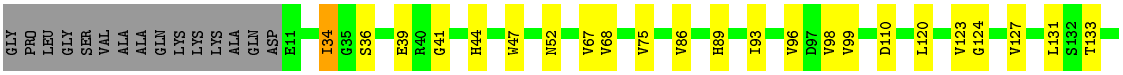


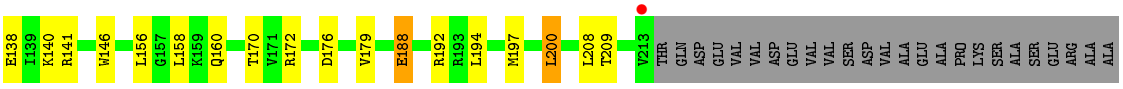


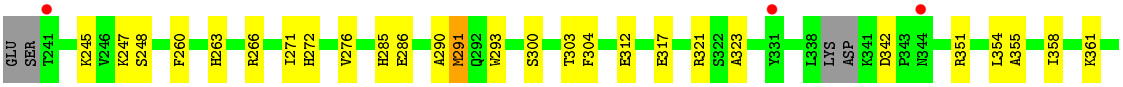


• Molecule 1: DNA GYRASE SUBUNIT B

Chain E:

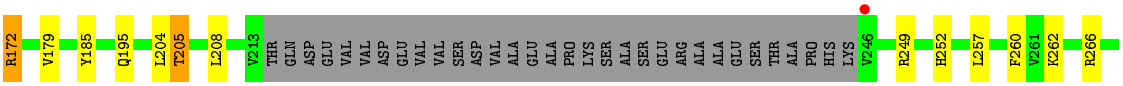


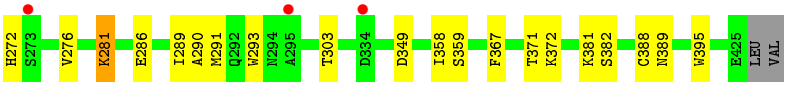




• Molecule 1: DNA GYRASE SUBUNIT B

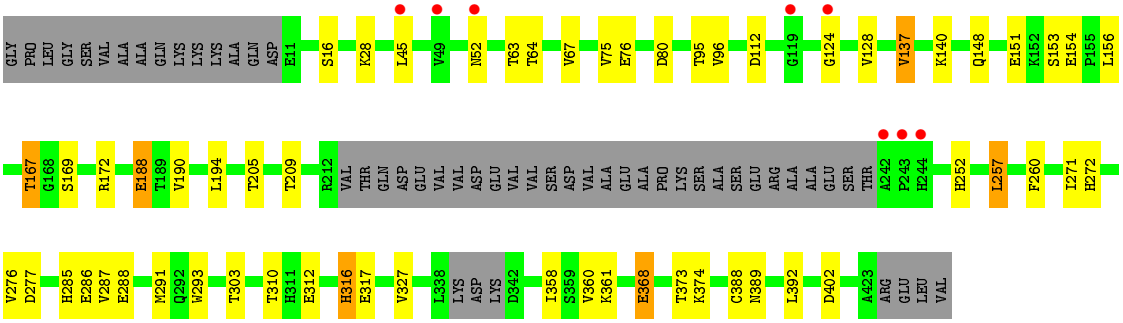
Chain F:





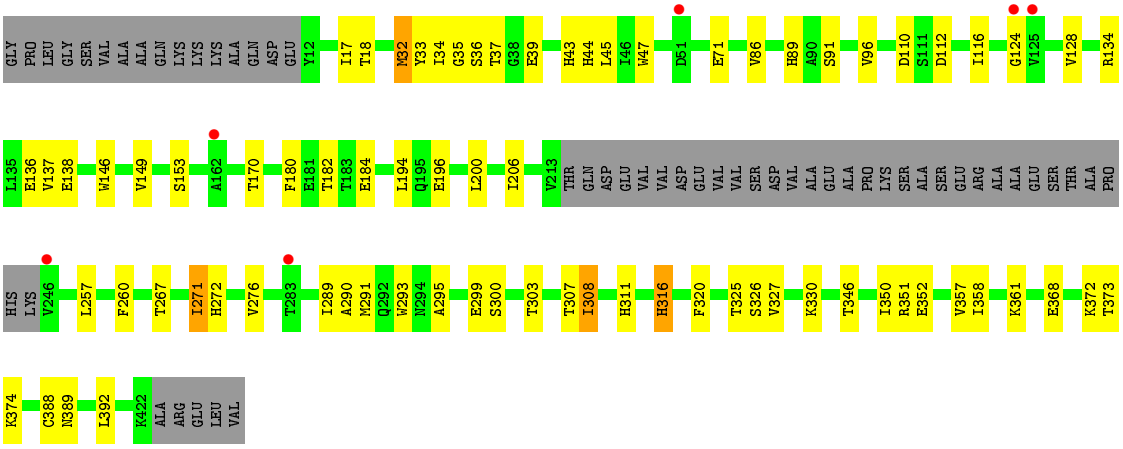
• Molecule 1: DNA GYRASE SUBUNIT B

Chain G:



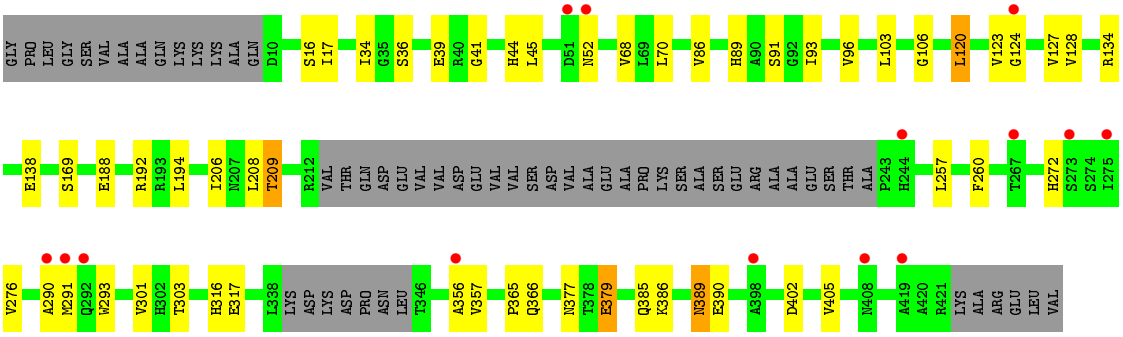
• Molecule 1: DNA GYRASE SUBUNIT B

Chain H:



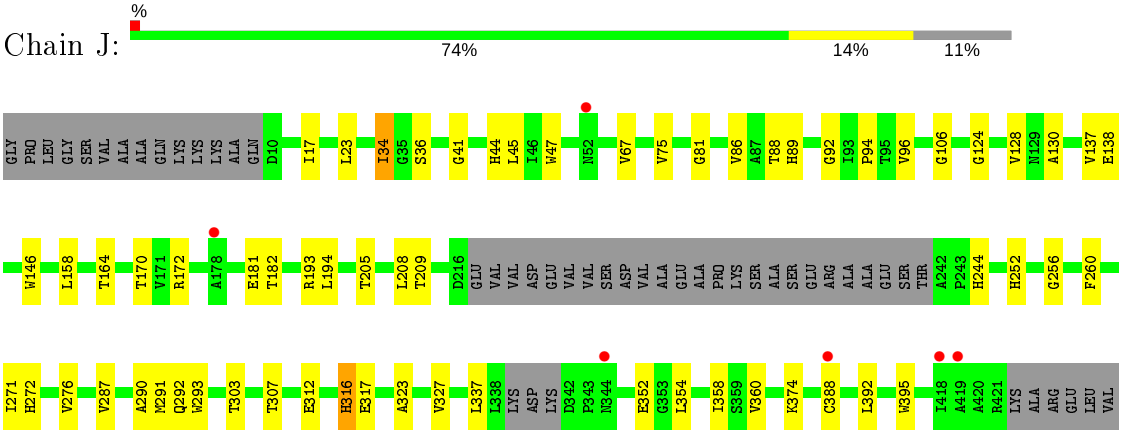
• Molecule 1: DNA GYRASE SUBUNIT B

Chain I:



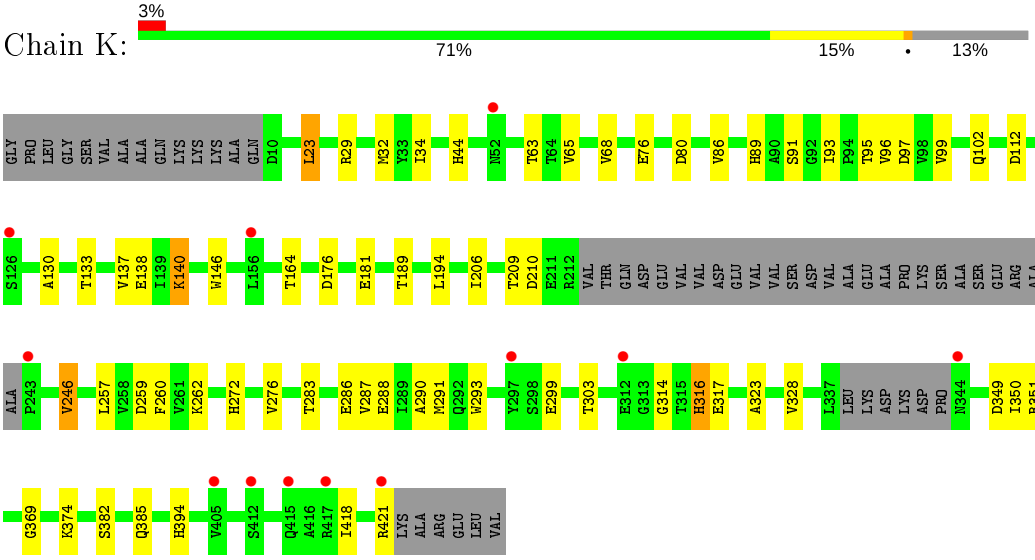
• Molecule 1: DNA GYRASE SUBUNIT B

Chain J:



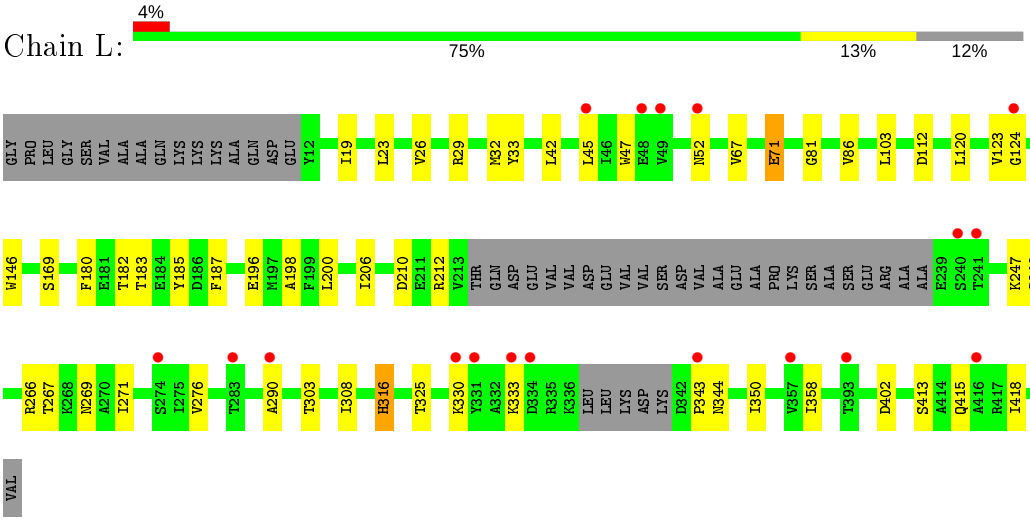
• Molecule 1: DNA GYRASE SUBUNIT B

Chain K:



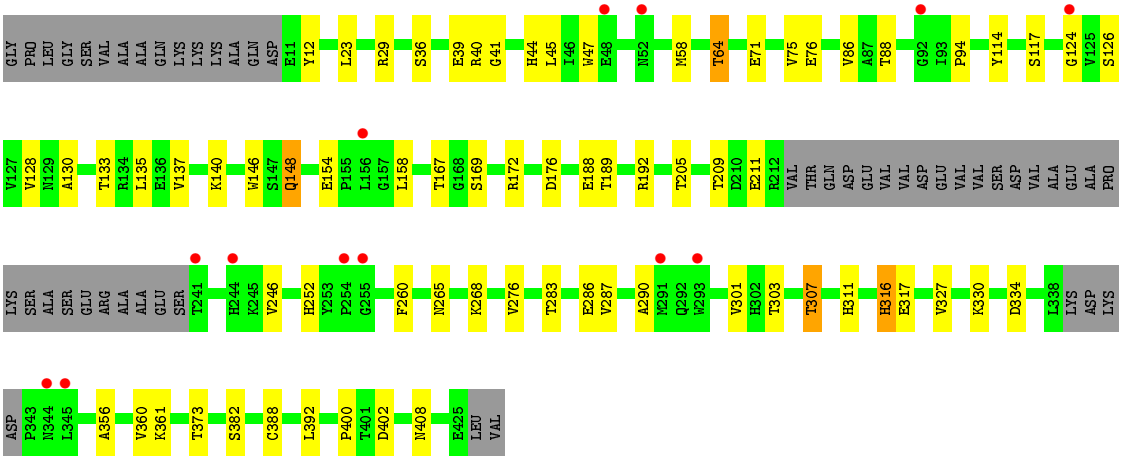
• Molecule 1: DNA GYRASE SUBUNIT B

Chain L:



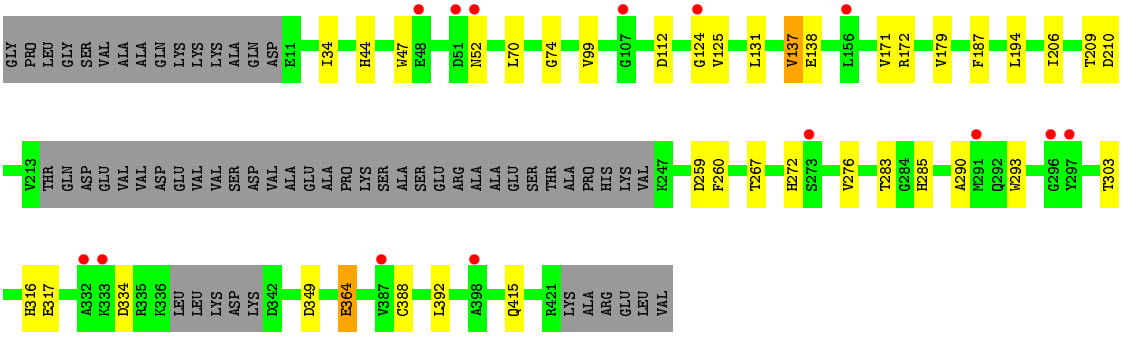
• Molecule 1: DNA GYRASE SUBUNIT B

Chain M:



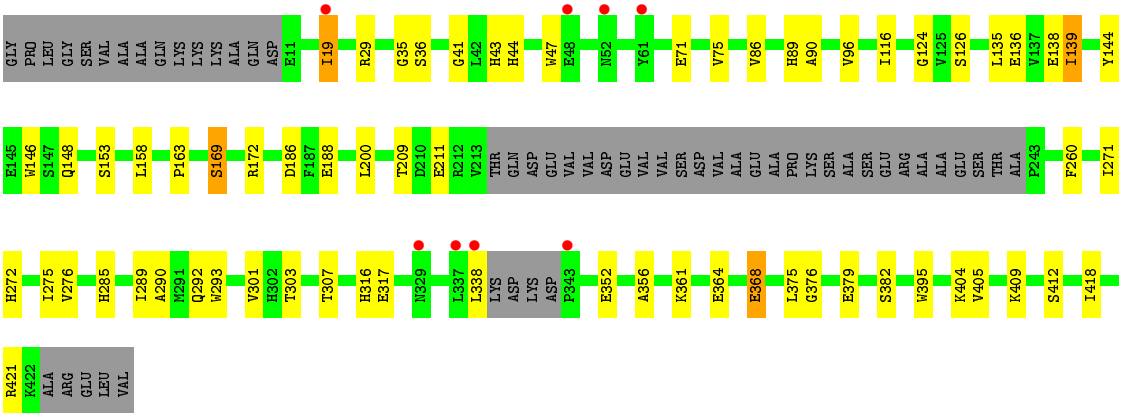
• Molecule 1: DNA GYRASE SUBUNIT B

Chain N:



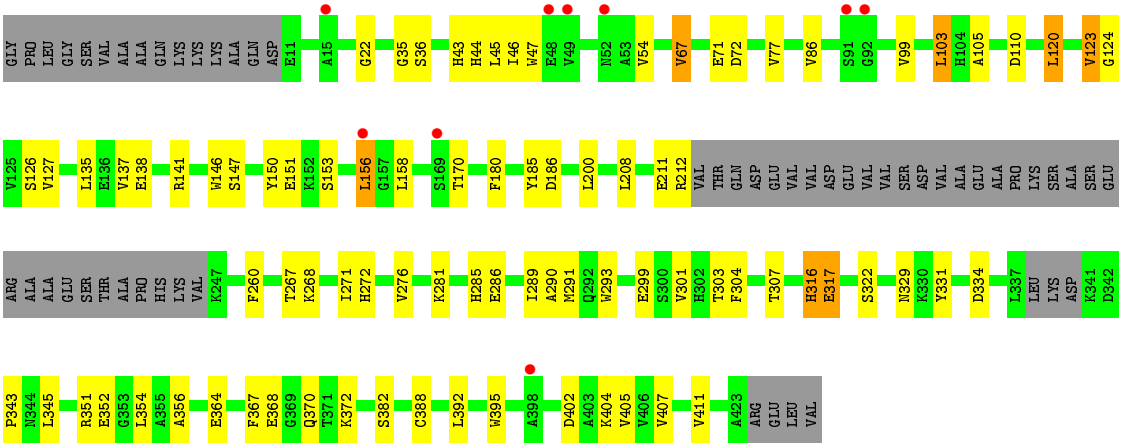
• Molecule 1: DNA GYRASE SUBUNIT B

Chain O:



• Molecule 1: DNA GYRASE SUBUNIT B

Chain P:


GLY PRO LEU GLY SER VAL ALA ALA GLN LYS LYS LYS ALA GLN ASP E11 A15 G22 G35 S36 H43 H44 L45 I46 W47 E48 V49 N52 A53 V54 V67 E71 D72 V77 V86 S91 G92 V99 L103 H104 A105 D110 L120 V123 G124
V125 S126 V127 L135 E136 V137 E138 R141 W146 S147 Y150 E151 K152 S153 L156 G157 L158 S169 T170 F180 Y185 D186 L200 L208 E211 R212 VAL THR GLN ASP GLU VAL VAL ASP GLU VAL VAL SER ASP VAL ALA GLU ALA PRO LYS SER ALA SER GLU
ARG ALA ALA GLU SER THR ALA PRO HIS LYS VAL K247 F260 T267 K268 I271 H272 V276 K281 H285 E286 I289 A290 M291 Q292 W293 E299 S300 V301 H302 T303 F304 T307 H316 E317 S322 N329 K330 Y331 D334 L337 LEU LYS ASP K341 D342
P343 N344 L345 R351 E352 G353 L354 A355 A356 E364 F367 E368 G369 Q370 T371 K372 S382 C388 L392 W395 A398 D402 A403 K404 V405 V406 V407 V411 A423 ARG GLU LEU VAL

4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 1	Depositor
Cell constants a, b, c, α, β, γ	101.36Å 138.20Å 147.69Å 105.28° 92.31° 107.23°	Depositor
Resolution (Å)	24.94 – 2.90 24.94 – 2.90	Depositor EDS
% Data completeness (in resolution range)	98.2 (24.94-2.90) 98.2 (24.94-2.90)	Depositor EDS
R_{merge}	0.05	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.98 (at 2.89Å)	Xtriage
Refinement program	BUSTER 2.11.4	Depositor
R, R_{free}	0.182 , 0.240 0.195 , 0.253	Depositor DCC
R_{free} test set	7966 reflections (5.00%)	wwPDB-VP
Wilson B-factor (Å^2)	66.0	Xtriage
Anisotropy	0.668	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.24 , 49.6	EDS
L-test for twinning[2]	$< \|L\| > = 0.49$, $< L^2 > = 0.32$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.95	EDS
Total number of atoms	46952	wwPDB-VP
Average B, all atoms (Å^2)	99.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 9.69% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

[2] Theoretical 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.

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: MG, 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	0.45	0/2942	0.68	0/3991
1	B	0.44	0/2928	0.66	0/3978
1	C	0.46	0/2994	0.69	0/4062
1	D	0.44	0/3010	0.67	0/4091
1	E	0.46	0/2967	0.69	0/4030
1	F	0.43	0/2942	0.64	0/3997
1	G	0.42	0/2919	0.65	0/3967
1	H	0.43	0/2920	0.66	0/3966
1	I	0.41	0/2881	0.65	0/3913
1	J	0.44	0/2938	0.69	0/3993
1	K	0.44	0/2892	0.65	0/3927
1	L	0.47	0/2916	0.65	0/3963
1	M	0.43	0/2943	0.65	0/3995
1	N	0.43	0/2869	0.65	0/3896
1	O	0.42	0/2931	0.65	0/3975
1	P	0.43	0/2875	0.65	0/3907
All	All	0.44	0/46867	0.66	0/63651

There are no bond length outliers.

There are no bond angle outliers.

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	2887	0	2803	35	0
1	B	2874	0	2760	26	0
1	C	2938	0	2857	33	0
1	D	2954	0	2823	30	0
1	E	2912	0	2795	39	0
1	F	2888	0	2772	20	0
1	G	2864	0	2755	28	0
1	H	2866	0	2764	33	0
1	I	2827	0	2701	25	0
1	J	2884	0	2769	33	0
1	K	2838	0	2730	34	0
1	L	2862	0	2749	21	0
1	M	2888	0	2784	30	0
1	N	2816	0	2714	15	0
1	O	2877	0	2791	32	0
1	P	2822	0	2700	39	0
2	A	31	0	13	1	0
2	B	31	0	13	0	0
2	C	31	0	13	0	0
2	D	31	0	13	0	0
2	E	31	0	13	1	0
2	F	31	0	13	1	0
2	G	31	0	13	1	0
2	H	31	0	13	0	0
2	I	31	0	13	2	0
2	J	31	0	13	1	0
2	K	31	0	13	1	0
2	L	31	0	13	1	0
2	M	31	0	13	0	0
2	N	31	0	13	0	0
2	O	31	0	13	2	0
2	P	31	0	13	0	0
3	A	1	0	0	0	0
3	B	2	0	0	0	0
3	C	2	0	0	0	0
3	D	2	0	0	0	0
3	E	1	0	0	0	0
3	F	1	0	0	0	0
3	G	2	0	0	0	0
3	H	1	0	0	0	0
3	I	1	0	0	0	0
3	J	1	0	0	0	0
3	K	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	L	1	0	0	0	0
3	M	1	0	0	0	0
3	N	1	0	0	0	0
3	O	1	0	0	0	0
3	P	1	0	0	0	0
4	A	44	0	0	0	0
4	B	31	0	0	0	0
4	C	62	0	0	0	0
4	D	40	0	0	1	0
4	E	45	0	0	0	0
4	F	26	0	0	0	0
4	G	25	0	0	1	0
4	H	29	0	0	0	0
4	I	24	0	0	0	0
4	J	33	0	0	0	0
4	K	11	0	0	0	0
4	L	13	0	0	0	0
4	M	16	0	0	0	0
4	N	14	0	0	0	0
4	O	12	0	0	1	0
4	P	14	0	0	0	0
All	All	46952	0	44475	450	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 5.

All (450) 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)
2:O:601:ANP:H5'2	2:O:601:ANP:H8	1.55	0.87
1:P:272:HIS:HE1	1:P:293:TRP:H	1.22	0.85
1:A:287:VAL:HG23	1:A:360:VAL:HG12	1.61	0.82
1:C:89:HIS:HD2	1:C:91:SER:HB2	1.44	0.81
1:H:272:HIS:HE1	1:H:293:TRP:H	1.28	0.80
1:P:272:HIS:CE1	1:P:293:TRP:H	2.03	0.76
1:A:272:HIS:HE1	1:A:293:TRP:H	1.34	0.76
1:P:22:GLY:HA2	1:P:103:LEU:HD11	1.68	0.75
1:G:272:HIS:HE1	1:G:293:TRP:H	1.35	0.73
1:E:365:PRO:HA	1:E:377:ASN:HD21	1.56	0.71
1:B:348:ASP:O	1:B:352:GLU:HB2	1.91	0.71
1:L:123:VAL:HG12	1:L:127:VAL:HG23	1.74	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:P:329:ASN:HD21	1:P:345:LEU:H	1.39	0.70
1:G:272:HIS:CE1	1:G:293:TRP:H	2.09	0.69
1:K:272:HIS:CE1	1:K:293:TRP:H	2.11	0.69
1:E:272:HIS:HE1	1:E:293:TRP:H	1.40	0.68
1:A:299:GLU:HG3	1:A:351:ARG:HB3	1.76	0.68
1:K:272:HIS:HE1	1:K:293:TRP:H	1.40	0.68
1:E:291:MET:HB2	1:E:354:LEU:HD11	1.75	0.67
1:J:312:GLU:HB2	1:J:374:LYS:HG3	1.77	0.67
1:P:103:LEU:HB3	1:P:123:VAL:HG13	1.76	0.67
1:J:287:VAL:HG23	1:J:360:VAL:HG12	1.76	0.67
1:E:138:GLU:HB2	1:E:170:THR:HB	1.77	0.67
1:K:23:LEU:HG	1:K:130:ALA:HB2	1.77	0.67
1:O:272:HIS:HE1	1:O:293:TRP:H	1.41	0.66
1:M:86:VAL:HG11	1:M:146:TRP:CD2	2.30	0.66
1:K:29:ARG:HE	1:L:120:LEU:HB2	1.63	0.64
1:F:272:HIS:HE1	1:F:293:TRP:H	1.45	0.63
1:F:89:HIS:HD2	1:F:91:SER:H	1.45	0.63
1:K:287:VAL:HG23	1:K:360:VAL:HG12	1.81	0.62
1:B:303:THR:HG21	1:B:317:GLU:HB2	1.81	0.62
1:H:276:VAL:HB	1:H:291:MET:HG2	1.82	0.62
1:O:303:THR:HG21	1:O:317:GLU:HB2	1.81	0.62
1:E:276:VAL:HB	1:E:291:MET:HG2	1.80	0.61
1:O:301:VAL:HG22	1:O:356:ALA:HB3	1.82	0.61
1:E:194:LEU:HD23	1:E:197:MET:HE3	1.81	0.61
1:E:36:SER:O	1:E:41:GLY:HA3	2.01	0.61
1:H:272:HIS:CE1	1:H:293:TRP:H	2.15	0.61
1:I:276:VAL:HB	1:I:291:MET:HG2	1.82	0.61
1:D:301:VAL:HG12	1:D:356:ALA:HB3	1.82	0.60
1:G:312:GLU:HG3	1:G:373:THR:HB	1.82	0.60
1:L:45:LEU:HD11	1:L:180:PHE:CZ	2.37	0.60
1:O:200:LEU:HD23	1:O:307:THR:HA	1.83	0.60
1:E:52:ASN:HB3	2:E:601:ANP:N7	2.15	0.60
1:G:257:LEU:HD22	1:G:288:GLU:HG3	1.83	0.60
1:K:418:ILE:HA	1:K:421:ARG:HE	1.67	0.59
1:M:330:LYS:O	1:M:334:ASP:HB2	2.02	0.59
1:D:276:VAL:O	1:D:290:ALA:HA	2.01	0.59
1:E:86:VAL:HG11	1:E:146:TRP:CD2	2.37	0.59
1:H:44:HIS:HA	1:H:47:TRP:CD1	2.37	0.59
1:E:323:ALA:HB2	1:E:385:GLN:HA	1.84	0.59
1:J:45:LEU:HD22	1:J:128:VAL:HA	1.84	0.59
1:C:89:HIS:HD2	1:C:91:SER:CB	2.14	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:316:HIS:CD2	1:O:375:LEU:HB3	2.38	0.59
1:D:188:GLU:HB3	1:D:192:ARG:HH21	1.68	0.58
1:K:68:VAL:HB	1:K:76:GLU:HB3	1.85	0.58
1:P:71:GLU:HA	1:P:212:ARG:HG2	1.86	0.58
1:N:276:VAL:O	1:N:290:ALA:HA	2.03	0.58
1:G:303:THR:HG22	1:G:358:ILE:HB	1.85	0.57
1:G:151:GLU:HB2	1:G:156:LEU:HD11	1.85	0.57
1:K:303:THR:HG21	1:K:317:GLU:HB2	1.85	0.57
1:B:291:MET:HB2	1:B:354:LEU:HD11	1.85	0.57
1:I:103:LEU:HD22	1:I:123:VAL:HG22	1.87	0.57
1:A:85:PRO:HB2	1:A:95:THR:HG21	1.86	0.57
1:E:86:VAL:HG13	1:E:158:LEU:HD21	1.86	0.57
1:A:82:ARG:HD2	1:B:12:TYR:HB3	1.87	0.57
1:M:303:THR:HB	1:M:316:HIS:CE1	2.40	0.57
1:A:272:HIS:CE1	1:A:293:TRP:H	2.19	0.56
1:N:272:HIS:HE1	1:N:293:TRP:H	1.51	0.56
1:A:411:VAL:O	1:A:415:GLN:HG2	2.05	0.56
1:J:316:HIS:CD2	1:J:316:HIS:H	2.23	0.56
1:A:86:VAL:HG11	1:A:146:TRP:CD2	2.40	0.56
1:G:303:THR:HG21	1:G:317:GLU:HB2	1.88	0.56
1:J:388:CYS:HB3	1:J:392:LEU:HD12	1.87	0.56
1:C:272:HIS:CE1	1:C:293:TRP:H	2.24	0.56
1:O:148:GLN:HB2	1:O:158:LEU:HD12	1.88	0.56
1:A:276:VAL:HB	1:A:291:MET:HG2	1.88	0.56
1:C:276:VAL:HB	1:C:291:MET:HG2	1.87	0.56
1:G:205:THR:HG23	1:G:252:HIS:HB2	1.88	0.56
1:C:21:GLU:O	1:C:24:GLU:HB2	2.05	0.56
1:D:272:HIS:CE1	1:D:293:TRP:H	2.23	0.55
1:P:281:LYS:HG2	1:P:286:GLU:HG3	1.89	0.55
1:L:330:LYS:HA	1:L:333:LYS:HE2	1.88	0.55
1:I:276:VAL:O	1:I:290:ALA:HA	2.07	0.55
1:M:29:ARG:HH12	1:N:364:GLU:HG3	1.72	0.55
1:O:44:HIS:HA	1:O:47:TRP:CD1	2.42	0.55
1:G:303:THR:HB	1:G:316:HIS:CE1	2.42	0.55
1:H:303:THR:HG22	1:H:358:ILE:HB	1.89	0.55
1:A:388:CYS:O	1:A:392:LEU:HB2	2.07	0.55
1:C:272:HIS:HE1	1:C:293:TRP:H	1.54	0.55
1:N:272:HIS:CE1	1:N:293:TRP:H	2.25	0.55
1:A:136:GLU:HG2	1:A:149:VAL:HG22	1.89	0.54
1:B:276:VAL:HB	1:B:291:MET:HG2	1.90	0.54
1:I:272:HIS:HE1	1:I:293:TRP:H	1.56	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:271:ILE:HD12	1:O:405:VAL:HG12	1.88	0.54
1:D:89:HIS:HD2	1:D:91:SER:H	1.56	0.54
1:I:194:LEU:HD22	1:I:206:ILE:HG21	1.89	0.54
1:J:272:HIS:CE1	1:J:293:TRP:H	2.25	0.54
1:A:162:ALA:HB2	1:K:209:THR:HG21	1.90	0.54
1:D:86:VAL:HG13	1:D:158:LEU:HD21	1.90	0.54
1:E:34:ILE:HD13	1:E:127:VAL:HG11	1.88	0.54
1:P:316:HIS:H	1:P:316:HIS:CD2	2.26	0.54
1:B:205:THR:HG23	1:B:252:HIS:HB2	1.90	0.54
1:I:89:HIS:CD2	1:I:91:SER:H	2.25	0.54
1:L:86:VAL:HG11	1:L:146:TRP:CD2	2.43	0.54
1:H:45:LEU:HD22	1:H:128:VAL:HA	1.90	0.54
1:H:138:GLU:HB2	1:H:170:THR:HB	1.90	0.54
1:H:276:VAL:O	1:H:290:ALA:HA	2.07	0.54
1:D:301:VAL:HG21	4:D:2037:HOH:O	2.08	0.53
1:H:136:GLU:HG2	1:H:149:VAL:HG22	1.89	0.53
1:E:312:GLU:HG2	1:E:373:THR:HB	1.90	0.53
1:O:116:ILE:HD13	1:O:361:LYS:HB3	1.90	0.53
1:D:139:ILE:HG22	1:D:141:ARG:HG2	1.90	0.53
1:D:287:VAL:HG23	1:D:360:VAL:HG12	1.90	0.53
1:E:120:LEU:HD13	1:E:365:PRO:HG2	1.91	0.53
1:J:276:VAL:O	1:J:290:ALA:HA	2.07	0.53
1:J:276:VAL:HB	1:J:291:MET:HG2	1.91	0.53
1:B:312:GLU:HB2	1:B:374:LYS:HG3	1.90	0.53
1:C:308:ILE:HD13	1:C:372:LYS:HD3	1.90	0.53
1:E:68:VAL:HG22	1:E:209:THR:HB	1.91	0.53
1:H:327:VAL:HG11	1:H:392:LEU:HB3	1.91	0.53
1:C:86:VAL:HA	1:C:96:VAL:HG22	1.90	0.53
1:J:34:ILE:HD13	1:J:44:HIS:HB3	1.90	0.52
1:A:120:LEU:HD13	1:A:365:PRO:HG2	1.92	0.52
1:E:188:GLU:O	1:E:192:ARG:HG2	2.10	0.52
1:G:95:THR:CG2	1:H:17:ILE:HG13	2.40	0.52
1:N:131:LEU:HG	1:N:179:VAL:HG11	1.92	0.52
1:B:140:LYS:O	1:B:167:THR:HA	2.09	0.52
1:C:383:PHE:HA	1:C:386:LYS:HE3	1.90	0.52
1:D:133:THR:HG23	1:D:176:ASP:HA	1.90	0.52
1:M:148:GLN:HB2	1:M:158:LEU:HA	1.90	0.52
1:M:36:SER:O	1:M:41:GLY:HA3	2.10	0.52
1:N:388:CYS:O	1:N:392:LEU:HB2	2.09	0.52
1:E:34:ILE:HG13	1:E:44:HIS:HB3	1.91	0.51
1:M:205:THR:HG23	1:M:252:HIS:HB2	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:P:44:HIS:HA	1:P:47:TRP:CD1	2.46	0.51
1:B:276:VAL:O	1:B:290:ALA:HA	2.10	0.51
1:B:34:ILE:HD13	1:B:127:VAL:HG11	1.92	0.51
1:C:96:VAL:O	1:C:100:MET:HB2	2.10	0.51
1:J:86:VAL:HG11	1:J:146:TRP:CD2	2.46	0.51
1:K:63:THR:HG22	1:K:80:ASP:OD2	2.11	0.51
1:D:272:HIS:HE1	1:D:293:TRP:H	1.57	0.51
1:F:281:LYS:HD2	1:F:286:GLU:HG3	1.93	0.51
1:A:369:GLY:HA2	1:B:32:MET:HA	1.92	0.50
1:C:89:HIS:HE1	1:D:17:ILE:O	1.94	0.50
1:H:325:THR:HA	1:H:350:ILE:HD13	1.93	0.50
1:H:311:HIS:CE1	1:H:373:THR:HG22	2.46	0.50
1:M:86:VAL:HG11	1:M:146:TRP:CE3	2.46	0.50
1:B:44:HIS:HA	1:B:47:TRP:CD1	2.46	0.50
1:H:289:ILE:HD12	1:H:358:ILE:HG13	1.93	0.50
1:P:43:HIS:CE1	1:P:186:ASP:H	2.30	0.50
1:E:200:LEU:HD21	1:E:304:PHE:CD1	2.47	0.50
1:J:88:THR:HA	1:J:94:PRO:HA	1.94	0.50
1:O:36:SER:O	1:O:41:GLY:HA3	2.11	0.50
1:A:343:PRO:O	1:A:344:ASN:HB2	2.12	0.50
2:O:601:ANP:C8	2:O:601:ANP:H5'2	2.37	0.50
1:P:271:ILE:HD12	1:P:293:TRP:HB3	1.92	0.50
1:A:65:VAL:HG23	1:A:204:LEU:HD11	1.94	0.50
1:D:276:VAL:HB	1:D:291:MET:HG2	1.93	0.49
1:L:415:GLN:HA	1:L:418:ILE:HD12	1.93	0.49
1:F:140:LYS:O	1:F:167:THR:HA	2.12	0.49
1:F:34:ILE:HG22	1:F:36:SER:O	2.12	0.49
1:B:276:VAL:HG22	1:B:395:TRP:CE2	2.47	0.49
1:G:287:VAL:HG23	1:G:360:VAL:HG12	1.94	0.49
1:L:276:VAL:O	1:L:290:ALA:HA	2.13	0.49
1:M:301:VAL:HG22	1:M:356:ALA:HB3	1.95	0.49
1:A:103:LEU:HD22	1:A:123:VAL:HG22	1.94	0.49
1:A:286:GLU:HB3	1:A:361:LYS:HB2	1.95	0.49
1:J:272:HIS:HE1	1:J:293:TRP:H	1.59	0.49
1:P:303:THR:HG21	1:P:317:GLU:HB2	1.94	0.49
1:E:303:THR:HG21	1:E:317:GLU:HB2	1.95	0.49
1:A:311:HIS:CE1	1:A:373:THR:HG22	2.47	0.49
1:D:85:PRO:HB2	1:D:95:THR:HG21	1.95	0.49
1:F:89:HIS:CD2	1:F:91:SER:H	2.29	0.49
1:H:37:THR:HG23	1:H:180:PHE:HA	1.95	0.49
1:I:385:GLN:O	1:I:389:ASN:HB2	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:34:ILE:HG13	1:K:44:HIS:HB3	1.95	0.49
1:K:133:THR:HG23	1:K:176:ASP:HA	1.95	0.48
1:K:93:ILE:HG22	1:K:97:ASP:HB2	1.95	0.48
1:M:265:ASN:HA	1:M:268:LYS:HB2	1.95	0.48
1:A:303:THR:HG21	1:A:317:GLU:HB2	1.94	0.48
1:L:23:LEU:HD22	1:L:130:ALA:HB2	1.96	0.48
1:B:140:LYS:HG2	1:B:145:GLU:HG2	1.94	0.48
1:L:26:VAL:HG13	1:L:33:TYR:CD2	2.48	0.48
1:M:286:GLU:HB2	1:M:361:LYS:HB2	1.95	0.48
1:A:18:THR:O	1:B:105:ALA:HA	2.13	0.48
1:J:23:LEU:HD22	1:J:130:ALA:HB2	1.95	0.48
1:C:368:GLU:HG3	1:D:35:GLY:HA2	1.96	0.48
1:D:89:HIS:CD2	1:D:91:SER:H	2.32	0.48
1:O:368:GLU:HG2	1:P:35:GLY:HA2	1.96	0.48
1:P:301:VAL:HG22	1:P:356:ALA:HB3	1.95	0.48
1:E:300:SER:HB2	1:E:355:ALA:HA	1.95	0.48
1:I:68:VAL:HG22	1:I:209:THR:HG23	1.94	0.48
1:M:276:VAL:O	1:M:290:ALA:HA	2.14	0.48
1:N:194:LEU:HD22	1:N:206:ILE:HG21	1.96	0.48
1:N:303:THR:HG21	1:N:317:GLU:HB2	1.96	0.48
1:O:409:LYS:HD2	4:O:2007:HOH:O	2.14	0.48
1:H:32:MET:HG2	1:H:33:TYR:CE2	2.49	0.48
1:J:303:THR:HG22	1:J:358:ILE:HB	1.95	0.48
1:I:34:ILE:HG13	1:I:44:HIS:HB3	1.95	0.48
1:K:299:GLU:HG3	1:K:351:ARG:HB3	1.95	0.48
1:B:116:ILE:HD13	1:B:361:LYS:HB3	1.96	0.48
1:G:190:VAL:HG12	1:G:194:LEU:HD11	1.96	0.48
1:H:257:LEU:HD22	1:H:357:VAL:HG11	1.95	0.48
1:K:120:LEU:HB2	1:L:29:ARG:HE	1.79	0.48
1:A:291:MET:HB2	1:A:354:LEU:HD11	1.95	0.47
1:F:205:THR:HG23	1:F:252:HIS:HB2	1.96	0.47
1:K:86:VAL:HG11	1:K:146:TRP:CD2	2.49	0.47
1:B:271:ILE:HD12	1:B:293:TRP:HB3	1.96	0.47
1:D:65:VAL:HG23	1:D:204:LEU:HD11	1.96	0.47
1:O:19:ILE:HG23	1:P:105:ALA:HB2	1.97	0.47
1:G:310:THR:OG1	1:G:316:HIS:CE1	2.67	0.47
1:J:316:HIS:HD2	1:J:316:HIS:H	1.62	0.47
1:P:135:LEU:HB3	1:P:150:TYR:HB2	1.96	0.47
1:C:276:VAL:HG22	1:C:395:TRP:CE2	2.49	0.47
1:K:257:LEU:HD11	1:K:288:GLU:HB3	1.97	0.47
1:M:287:VAL:HG23	1:M:360:VAL:HG12	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:89:HIS:CG	1:O:90:ALA:H	2.32	0.47
1:K:276:VAL:HB	1:K:291:MET:HG2	1.96	0.47
1:O:138:GLU:HA	1:O:146:TRP:O	2.14	0.47
1:A:63:THR:HG22	1:A:80:ASP:OD2	2.15	0.47
1:I:106:GLY:HA2	2:I:601:ANP:H4'	1.96	0.47
1:M:45:LEU:HD22	1:M:128:VAL:HA	1.96	0.47
1:N:44:HIS:HA	1:N:47:TRP:CD1	2.50	0.47
1:K:259:ASP:HA	1:K:262:LYS:HD2	1.97	0.47
1:G:75:VAL:O	1:G:172:ARG:HA	2.15	0.47
1:H:388:CYS:O	1:H:392:LEU:HB2	2.15	0.47
1:K:314:GLY:HA2	1:K:374:LYS:HE3	1.97	0.47
1:P:151:GLU:HB2	1:P:156:LEU:HD11	1.96	0.47
1:A:289:ILE:HD12	1:A:358:ILE:HG13	1.97	0.47
1:F:276:VAL:O	1:F:290:ALA:HA	2.15	0.47
1:C:93:ILE:HG23	1:C:94:PRO:HD2	1.97	0.47
1:G:286:GLU:HB3	1:G:361:LYS:HB2	1.96	0.47
1:I:36:SER:O	1:I:41:GLY:HA3	2.15	0.47
1:K:316:HIS:CD2	1:K:316:HIS:H	2.33	0.47
1:L:42:LEU:HG	1:L:185:TYR:CE1	2.49	0.47
1:P:276:VAL:O	1:P:290:ALA:HA	2.14	0.47
1:J:138:GLU:HB2	1:J:170:THR:HB	1.95	0.46
1:H:34:ILE:HG22	1:H:36:SER:O	2.15	0.46
1:I:366:GLN:H	1:I:377:ASN:HD21	1.64	0.46
1:J:34:ILE:HD13	1:J:44:HIS:CD2	2.50	0.46
1:M:189:THR:HG22	1:M:192:ARG:HH22	1.79	0.46
1:H:89:HIS:CD2	1:H:91:SER:H	2.34	0.46
1:L:303:THR:HG22	1:L:358:ILE:HB	1.97	0.46
1:P:45:LEU:HD11	1:P:180:PHE:CZ	2.50	0.46
1:H:368:GLU:HB2	1:H:374:LYS:HB2	1.98	0.46
1:H:116:ILE:HD13	1:H:361:LYS:HB3	1.97	0.46
1:L:187:PHE:CD1	1:L:210:ASP:HB2	2.50	0.46
1:O:71:GLU:HG3	1:O:211:GLU:O	2.15	0.46
1:A:367:PHE:CD1	1:A:372:LYS:HB3	2.51	0.46
1:C:89:HIS:CD2	1:C:91:SER:HB2	2.36	0.46
1:I:386:LYS:O	1:I:390:GLU:HB2	2.16	0.46
1:B:135:LEU:HB3	1:B:150:TYR:HB2	1.96	0.46
1:M:44:HIS:HA	1:M:47:TRP:CD1	2.51	0.46
1:G:388:CYS:O	1:G:392:LEU:HB2	2.16	0.45
1:H:271:ILE:HD12	1:H:295:ALA:HA	1.97	0.45
1:M:36:SER:HB2	1:M:40:ARG:HH21	1.80	0.45
1:O:136:GLU:HB2	1:O:172:ARG:HB2	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:138:GLU:CD	1:C:172:ARG:HH22	2.19	0.45
1:E:312:GLU:HB2	1:E:374:LYS:HG3	1.97	0.45
1:O:29:ARG:HD2	1:P:120:LEU:HD12	1.98	0.45
1:P:388:CYS:HB3	1:P:392:LEU:HD12	1.97	0.45
1:A:276:VAL:O	1:A:290:ALA:HA	2.16	0.45
1:A:327:VAL:HG11	1:A:392:LEU:HB3	1.99	0.45
1:D:86:VAL:HG11	1:D:146:TRP:CD2	2.52	0.45
1:M:140:LYS:O	1:M:167:THR:HA	2.15	0.45
1:O:139:ILE:HG23	1:O:169:SER:HB3	1.98	0.45
1:E:303:THR:HG22	1:E:358:ILE:HB	1.99	0.45
1:G:45:LEU:HD22	1:G:128:VAL:HA	1.98	0.45
1:I:89:HIS:HD2	1:I:91:SER:H	1.64	0.45
1:K:328:VAL:HG11	1:K:350:ILE:HG12	1.98	0.45
1:M:88:THR:HA	1:M:94:PRO:HA	1.97	0.45
1:O:276:VAL:HG22	1:O:395:TRP:CE2	2.51	0.45
1:P:299:GLU:HG3	1:P:351:ARG:HB3	1.98	0.45
1:F:303:THR:HG22	1:F:358:ILE:HB	1.99	0.45
1:G:276:VAL:HB	1:G:291:MET:HG3	1.97	0.45
1:I:89:HIS:HE1	1:J:17:ILE:O	2.00	0.45
1:C:44:HIS:HA	1:C:47:TRP:CD1	2.52	0.45
1:F:276:VAL:HG22	1:F:395:TRP:CE2	2.52	0.45
1:F:65:VAL:HG23	1:F:204:LEU:HD11	1.99	0.45
1:H:194:LEU:HD22	1:H:206:ILE:HG21	1.99	0.45
1:I:366:GLN:N	1:I:377:ASN:HD21	2.15	0.45
1:M:388:CYS:O	1:M:392:LEU:HB2	2.17	0.45
1:F:367:PHE:CD1	1:F:372:LYS:HB3	2.52	0.45
1:C:116:ILE:HG21	1:C:361:LYS:HB3	1.99	0.44
1:C:86:VAL:HG11	1:C:146:TRP:CE2	2.52	0.44
1:D:303:THR:HG21	1:D:317:GLU:HB2	1.99	0.44
1:H:308:ILE:HD12	1:H:372:LYS:HD3	1.99	0.44
1:I:120:LEU:HD13	1:I:365:PRO:HG2	1.99	0.44
1:K:369:GLY:HA2	1:L:32:MET:HA	1.98	0.44
1:M:311:HIS:CE1	1:M:373:THR:HG22	2.52	0.44
1:O:75:VAL:O	1:O:172:ARG:HA	2.17	0.44
1:A:129:ASN:OD1	1:A:153:SER:HA	2.18	0.44
1:B:86:VAL:HG12	1:B:158:LEU:HD21	1.99	0.44
1:C:32:MET:HG3	1:D:121:HIS:CE1	2.52	0.44
1:F:108:LYS:HD2	2:F:601:ANP:O1B	2.18	0.44
1:K:89:HIS:CD2	1:K:91:SER:H	2.35	0.44
1:P:138:GLU:HB2	1:P:170:THR:HB	2.00	0.44
1:E:140:LYS:O	1:E:141:ARG:HB3	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:351:ARG:HG2	1:E:354:LEU:HD23	2.00	0.44
1:I:303:THR:HG21	1:I:317:GLU:HB2	2.00	0.44
1:J:327:VAL:HG11	1:J:392:LEU:HB3	1.99	0.44
1:P:407:VAL:O	1:P:411:VAL:HG23	2.17	0.44
1:C:195:GLN:HG2	1:C:199:PHE:CE2	2.53	0.44
1:E:276:VAL:O	1:E:290:ALA:HA	2.18	0.44
1:E:272:HIS:CE1	1:E:293:TRP:H	2.28	0.44
1:O:418:ILE:HG23	1:O:421:ARG:HH21	1.82	0.44
1:P:200:LEU:HD21	1:P:304:PHE:CD2	2.52	0.44
1:L:303:THR:HB	1:L:316:HIS:CE1	2.53	0.44
1:I:377:ASN:HB3	1:I:379:GLU:OE1	2.18	0.44
1:J:205:THR:HG23	1:J:252:HIS:HB2	2.00	0.44
1:O:272:HIS:CE1	1:O:293:TRP:H	2.29	0.44
1:P:331:TYR:HD2	1:P:407:VAL:HG21	1.82	0.44
1:F:131:LEU:HD22	1:F:179:VAL:HG11	2.00	0.43
1:G:140:LYS:O	1:G:167:THR:HA	2.18	0.43
1:I:301:VAL:HG22	1:I:356:ALA:HB3	2.00	0.43
1:N:70:LEU:HD12	1:N:74:GLY:HA3	1.99	0.43
1:O:316:HIS:H	1:O:316:HIS:CD2	2.35	0.43
1:C:85:PRO:HB2	1:C:95:THR:HG21	2.00	0.43
1:I:123:VAL:HG13	1:I:127:VAL:HG23	2.00	0.43
1:M:23:LEU:HD22	1:M:130:ALA:HB2	2.00	0.43
1:O:89:HIS:CG	1:O:90:ALA:N	2.86	0.43
1:P:291:MET:HB2	1:P:354:LEU:HD11	2.00	0.43
1:A:140:LYS:O	1:A:167:THR:HA	2.19	0.43
1:B:272:HIS:CE1	1:B:293:TRP:H	2.37	0.43
1:H:43:HIS:HB3	1:H:47:TRP:CZ2	2.53	0.43
1:J:44:HIS:HA	1:J:47:TRP:CD1	2.54	0.43
1:O:276:VAL:O	1:O:290:ALA:HA	2.18	0.43
1:O:275:ILE:HG12	1:O:292:GLN:HB2	1.99	0.43
1:G:368:GLU:HG2	1:H:35:GLY:HA2	2.00	0.43
1:K:323:ALA:HB2	1:K:385:GLN:HG3	2.00	0.43
1:P:276:VAL:HG22	1:P:395:TRP:CE2	2.54	0.43
1:C:35:GLY:HA2	1:D:368:GLU:HG3	2.00	0.43
1:E:317:GLU:HG2	1:E:321:ARG:HD2	1.99	0.43
1:E:34:ILE:HD13	1:E:127:VAL:CG1	2.47	0.43
1:K:276:VAL:O	1:K:290:ALA:HA	2.19	0.43
1:M:303:THR:HG21	1:M:317:GLU:HB2	2.01	0.43
1:O:376:GLY:HA3	1:P:36:SER:HB3	2.01	0.43
1:F:93:ILE:HB	1:F:94:PRO:HD2	1.98	0.43
1:H:86:VAL:HG11	1:H:146:TRP:CD2	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:103:LEU:HD22	1:L:123:VAL:HG13	2.01	0.43
1:E:44:HIS:HA	1:E:47:TRP:CD1	2.54	0.43
1:L:325:THR:HA	1:L:350:ILE:HD13	2.00	0.43
1:J:86:VAL:HG11	1:J:146:TRP:CE2	2.54	0.43
1:K:194:LEU:HD22	1:K:206:ILE:HG21	2.01	0.43
1:O:35:GLY:HA2	1:P:368:GLU:HG3	2.01	0.43
1:J:323:ALA:CB	1:J:388:CYS:HB2	2.49	0.43
1:K:181:GLU:HA	1:N:283:THR:HB	2.00	0.43
1:I:17:ILE:O	1:J:89:HIS:HE1	2.02	0.42
1:K:140:LYS:HG2	1:K:164:THR:HG21	2.00	0.42
1:K:65:VAL:HB	1:K:206:ILE:HG12	2.00	0.42
1:P:67:VAL:HG23	1:P:77:VAL:HG22	2.01	0.42
1:B:309:ASN:HD21	1:B:311:HIS:HB3	1.84	0.42
1:K:291:MET:HB2	1:K:354:LEU:HD11	2.01	0.42
1:E:133:THR:HG23	1:E:176:ASP:HA	1.99	0.42
1:E:89:HIS:HD2	1:E:98:VAL:HG21	1.84	0.42
1:G:327:VAL:HG11	1:G:392:LEU:HB3	2.01	0.42
1:J:86:VAL:HG13	1:J:158:LEU:HD21	2.00	0.42
1:O:144:TYR:HA	1:O:163:PRO:HA	2.00	0.42
1:C:120:LEU:HD13	1:C:365:PRO:HG2	2.00	0.42
1:L:71:GLU:HG2	1:L:212:ARG:HA	2.02	0.42
1:N:137:VAL:HG12	1:N:171:VAL:HG22	2.00	0.42
1:B:259:ASP:O	1:B:263:HIS:HD2	2.02	0.42
1:K:125:VAL:HG12	2:K:601:ANP:O1A	2.19	0.42
1:M:58:MET:SD	1:M:307:THR:HB	2.59	0.42
1:N:52:ASN:HD21	1:N:125:VAL:HB	1.85	0.42
1:O:86:VAL:HG22	1:O:158:LEU:HD21	2.01	0.42
1:B:196:GLU:O	1:B:200:LEU:HD22	2.19	0.42
1:D:352:GLU:OE1	1:D:413:SER:HB2	2.19	0.42
1:H:86:VAL:HG11	1:H:146:TRP:CE2	2.54	0.42
1:M:133:THR:HG23	1:M:176:ASP:HA	2.01	0.42
1:P:54:VAL:HG11	1:P:307:THR:HG21	2.00	0.42
1:G:67:VAL:HA	1:G:76:GLU:O	2.19	0.42
1:J:75:VAL:O	1:J:172:ARG:HA	2.20	0.42
1:P:316:HIS:H	1:P:316:HIS:HD2	1.65	0.42
1:B:272:HIS:HE1	1:B:293:TRP:H	1.67	0.42
1:C:67:VAL:HG22	1:C:208:LEU:HD13	2.01	0.42
1:J:194:LEU:HD12	1:J:208:LEU:HB2	2.01	0.42
1:D:23:LEU:HD11	1:D:101:THR:HA	2.02	0.42
1:D:311:HIS:CE1	1:D:373:THR:HG22	2.54	0.42
1:E:208:LEU:O	1:E:248:SER:HA	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:316:HIS:H	1:H:316:HIS:CD2	2.38	0.42
1:J:272:HIS:NE2	1:J:292:GLN:HG3	2.34	0.42
1:J:36:SER:O	1:J:41:GLY:HA3	2.20	0.42
1:K:210:ASP:O	1:K:246:VAL:HG13	2.19	0.42
1:N:34:ILE:HD12	1:N:44:HIS:HB3	2.02	0.42
1:A:44:HIS:HA	1:A:47:TRP:CD1	2.54	0.42
1:B:83:GLY:HA2	1:B:169:SER:HB2	2.01	0.42
1:I:257:LEU:HD13	1:I:357:VAL:HG12	2.02	0.42
1:P:367:PHE:CD1	1:P:372:LYS:HB3	2.55	0.41
1:P:86:VAL:HG13	1:P:158:LEU:HD21	2.01	0.41
1:D:88:THR:HA	1:D:94:PRO:HA	2.01	0.41
1:A:283:THR:HB	1:A:284:GLY:H	1.70	0.41
1:D:140:LYS:O	1:D:167:THR:HA	2.20	0.41
1:J:291:MET:HB2	1:J:354:LEU:HD11	2.02	0.41
1:O:43:HIS:CE1	1:O:186:ASP:H	2.38	0.41
1:A:36:SER:O	1:A:41:GLY:HA3	2.20	0.41
1:E:146:TRP:CZ3	1:E:160:GLN:HB2	2.55	0.41
1:E:131:LEU:HD22	1:E:179:VAL:HG11	2.02	0.41
1:L:52:ASN:HB3	2:L:601:ANP:N7	2.36	0.41
1:A:35:GLY:HA2	1:B:368:GLU:HA	2.02	0.41
1:C:276:VAL:O	1:C:290:ALA:HA	2.20	0.41
1:F:276:VAL:HB	1:F:291:MET:HG2	2.02	0.41
1:G:137:VAL:HG23	1:G:148:GLN:HB3	2.03	0.41
1:D:303:THR:HG22	1:D:358:ILE:HB	2.03	0.41
1:C:160:GLN:HB3	1:E:245:LYS:HA	2.03	0.41
1:M:114:TYR:HB3	1:M:117:SER:HB3	2.02	0.41
1:I:45:LEU:HD22	1:I:128:VAL:HA	2.02	0.41
1:M:64:THR:HG23	1:M:205:THR:HB	2.02	0.41
1:P:123:VAL:HG12	1:P:127:VAL:HG23	2.02	0.41
1:C:133:THR:HG23	1:C:176:ASP:HA	2.02	0.41
1:F:46:ILE:HD11	1:F:185:TYR:CD1	2.55	0.41
1:G:52:ASN:HB3	2:G:601:ANP:N7	2.35	0.41
1:H:200:LEU:HD13	1:H:307:THR:HA	2.03	0.41
1:M:327:VAL:HG11	1:M:392:LEU:HB3	2.02	0.41
1:P:146:TRP:HB3	1:P:158:LEU:HD11	2.03	0.41
1:C:200:LEU:HD23	1:C:257:LEU:HD21	2.02	0.41
1:I:52:ASN:HB3	2:I:601:ANP:N7	2.35	0.41
1:P:46:ILE:HD11	1:P:185:TYR:CD1	2.56	0.41
1:A:276:VAL:HG22	1:A:395:TRP:CE2	2.55	0.41
1:L:198:ALA:HB2	1:L:206:ILE:HD12	2.02	0.41
1:M:75:VAL:O	1:M:172:ARG:HA	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:187:PHE:CD2	1:N:210:ASP:HB2	2.56	0.41
1:C:140:LYS:O	1:C:167:THR:HA	2.21	0.41
1:F:257:LEU:HD11	1:F:359:SER:HB3	2.03	0.41
1:C:303:THR:HG22	1:C:358:ILE:HB	2.03	0.40
1:G:312:GLU:HB2	1:G:374:LYS:HG3	2.03	0.40
1:J:106:GLY:HA2	2:J:601:ANP:H4'	2.03	0.40
1:A:106:GLY:HA2	2:A:601:ANP:H4'	2.04	0.40
1:D:145:GLU:HG2	1:D:162:ALA:O	2.21	0.40
1:C:17:ILE:O	1:D:89:HIS:HE1	2.03	0.40
1:E:286:GLU:HB3	1:E:361:LYS:HB2	2.03	0.40
1:H:182:THR:HG22	1:H:184:GLU:H	1.86	0.40
1:J:303:THR:HG21	1:J:317:GLU:HB2	2.03	0.40
1:C:89:HIS:CD2	1:C:91:SER:H	2.39	0.40
1:F:44:HIS:CE1	1:F:371:THR:HA	2.57	0.40
1:G:188:GLU:HB2	4:G:2018:HOH:O	2.20	0.40
1:J:276:VAL:HG22	1:J:395:TRP:CE2	2.56	0.40
1:K:93:ILE:HD13	1:K:102:GLN:HE22	1.86	0.40
1:P:71:GLU:HB2	1:P:211:GLU:O	2.20	0.40
1:D:195:GLN:HE22	1:D:263:HIS:CE1	2.40	0.40
1:F:76:GLU:HG3	1:F:172:ARG:HG3	2.04	0.40
1:G:276:VAL:HB	1:G:291:MET:CG	2.52	0.40
1:M:76:GLU:HG3	1:M:172:ARG:HH11	1.86	0.40
1:E:200:LEU:HD21	1:E:304:PHE:CG	2.56	0.40
1:E:263:HIS:O	1:E:266:ARG:HG2	2.22	0.40
1:E:75:VAL:O	1:E:172:ARG:HA	2.20	0.40
1:G:63:THR:HG22	1:G:80:ASP:OD2	2.22	0.40
1:H:299:GLU:HG3	1:H:351:ARG:HB3	2.04	0.40
1:L:86:VAL:HG11	1:L:146:TRP:CE2	2.57	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	374/432 (87%)	354 (95%)	17 (4%)	3 (1%)	19	51
1	B	378/432 (88%)	362 (96%)	13 (3%)	3 (1%)	19	51
1	C	383/432 (89%)	368 (96%)	13 (3%)	2 (0%)	29	61
1	D	388/432 (90%)	375 (97%)	11 (3%)	2 (0%)	29	61
1	E	380/432 (88%)	365 (96%)	14 (4%)	1 (0%)	41	71
1	F	379/432 (88%)	366 (97%)	11 (3%)	2 (0%)	29	61
1	G	375/432 (87%)	361 (96%)	13 (4%)	1 (0%)	41	71
1	H	375/432 (87%)	360 (96%)	13 (4%)	2 (0%)	29	61
1	I	369/432 (85%)	355 (96%)	12 (3%)	2 (0%)	29	61
1	J	378/432 (88%)	360 (95%)	13 (3%)	5 (1%)	12	37
1	K	370/432 (86%)	351 (95%)	17 (5%)	2 (0%)	29	61
1	L	376/432 (87%)	356 (95%)	17 (4%)	3 (1%)	19	51
1	M	377/432 (87%)	358 (95%)	18 (5%)	1 (0%)	41	71
1	N	367/432 (85%)	350 (95%)	16 (4%)	1 (0%)	41	71
1	O	373/432 (86%)	358 (96%)	14 (4%)	1 (0%)	41	71
1	P	370/432 (86%)	353 (95%)	14 (4%)	3 (1%)	19	51
All	All	6012/6912 (87%)	5752 (96%)	226 (4%)	34 (1%)	25	58

All (34) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	344	ASN
1	L	343	PRO
1	B	124	GLY
1	D	124	GLY
1	E	124	GLY
1	F	124	GLY
1	G	124	GLY
1	H	124	GLY
1	I	124	GLY
1	J	81	GLY
1	J	124	GLY
1	J	256	GLY
1	L	81	GLY
1	P	124	GLY
1	A	124	GLY
1	B	120	LEU

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Mol	Chain	Res	Type
1	H	112	ASP
1	J	244	HIS
1	K	124	GLY
1	P	343	PRO
1	C	124	GLY
1	K	95	THR
1	O	124	GLY
1	C	377	ASN
1	I	120	LEU
1	J	92	GLY
1	M	124	GLY
1	A	343	PRO
1	B	343	PRO
1	L	124	GLY
1	P	120	LEU
1	F	81	GLY
1	N	124	GLY
1	D	81	GLY

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	302/350 (86%)	283 (94%)	19 (6%)	18 46
1	B	297/350 (85%)	285 (96%)	12 (4%)	31 65
1	C	307/350 (88%)	283 (92%)	24 (8%)	12 34
1	D	306/350 (87%)	287 (94%)	19 (6%)	18 47
1	E	302/350 (86%)	283 (94%)	19 (6%)	18 46
1	F	299/350 (85%)	280 (94%)	19 (6%)	17 45
1	G	296/350 (85%)	275 (93%)	21 (7%)	14 40
1	H	299/350 (85%)	277 (93%)	22 (7%)	13 38
1	I	293/350 (84%)	274 (94%)	19 (6%)	17 45
1	J	298/350 (85%)	283 (95%)	15 (5%)	24 57

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	K	295/350 (84%)	278 (94%)	17 (6%)	20 50
1	L	297/350 (85%)	275 (93%)	22 (7%)	13 38
1	M	299/350 (85%)	277 (93%)	22 (7%)	13 38
1	N	293/350 (84%)	278 (95%)	15 (5%)	24 56
1	O	301/350 (86%)	281 (93%)	20 (7%)	16 44
1	P	292/350 (83%)	263 (90%)	29 (10%)	8 24
All	All	4776/5600 (85%)	4462 (93%)	314 (7%)	16 44

All (314) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	28	LYS
1	A	32	MET
1	A	34	ILE
1	A	39	GLU
1	A	47	TRP
1	A	86	VAL
1	A	96	VAL
1	A	99	VAL
1	A	131	LEU
1	A	184	GLU
1	A	260	PHE
1	A	283	THR
1	A	285	HIS
1	A	300	SER
1	A	316	HIS
1	A	392	LEU
1	A	402	ASP
1	A	405	VAL
1	A	417	ARG
1	B	10	ASP
1	B	34	ILE
1	B	181	GLU
1	B	260	PHE
1	B	298	SER
1	B	337	LEU
1	B	378	THR
1	B	382	SER
1	B	389	ASN
1	B	402	ASP

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Mol	Chain	Res	Type
1	B	405	VAL
1	B	417	ARG
1	C	21	GLU
1	C	32	MET
1	C	39	GLU
1	C	63	THR
1	C	67	VAL
1	C	86	VAL
1	C	96	VAL
1	C	147	SER
1	C	153	SER
1	C	154	GLU
1	C	169	SER
1	C	188	GLU
1	C	260	PHE
1	C	271	ILE
1	C	281	LYS
1	C	300	SER
1	C	316	HIS
1	C	318	GLU
1	C	326	SER
1	C	337	LEU
1	C	348	ASP
1	C	382	SER
1	C	405	VAL
1	C	417	ARG
1	D	71	GLU
1	D	110	ASP
1	D	116	ILE
1	D	126	SER
1	D	135	LEU
1	D	137	VAL
1	D	138	GLU
1	D	164	THR
1	D	172	ARG
1	D	196	GLU
1	D	200	LEU
1	D	260	PHE
1	D	267	THR
1	D	349	ASP
1	D	378	THR
1	D	382	SER

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Mol	Chain	Res	Type
1	D	386	LYS
1	D	392	LEU
1	D	405	VAL
1	E	34	ILE
1	E	39	GLU
1	E	67	VAL
1	E	93	ILE
1	E	96	VAL
1	E	99	VAL
1	E	110	ASP
1	E	123	VAL
1	E	156	LEU
1	E	188	GLU
1	E	200	LEU
1	E	247	LYS
1	E	260	PHE
1	E	271	ILE
1	E	285	HIS
1	E	291	MET
1	E	342	ASP
1	E	374	LYS
1	E	404	LYS
1	F	19	ILE
1	F	71	GLU
1	F	96	VAL
1	F	111	SER
1	F	172	ARG
1	F	195	GLN
1	F	205	THR
1	F	208	LEU
1	F	249	ARG
1	F	260	PHE
1	F	262	LYS
1	F	266	ARG
1	F	281	LYS
1	F	289	ILE
1	F	349	ASP
1	F	381	LYS
1	F	382	SER
1	F	388	CYS
1	F	389	ASN
1	G	16	SER

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Mol	Chain	Res	Type
1	G	28	LYS
1	G	64	THR
1	G	96	VAL
1	G	112	ASP
1	G	137	VAL
1	G	153	SER
1	G	154	GLU
1	G	167	THR
1	G	169	SER
1	G	188	GLU
1	G	209	THR
1	G	257	LEU
1	G	260	PHE
1	G	271	ILE
1	G	277	ASP
1	G	285	HIS
1	G	316	HIS
1	G	368	GLU
1	G	389	ASN
1	G	402	ASP
1	H	18	THR
1	H	32	MET
1	H	39	GLU
1	H	71	GLU
1	H	96	VAL
1	H	110	ASP
1	H	134	ARG
1	H	137	VAL
1	H	153	SER
1	H	196	GLU
1	H	260	PHE
1	H	267	THR
1	H	271	ILE
1	H	300	SER
1	H	308	ILE
1	H	316	HIS
1	H	320	PHE
1	H	326	SER
1	H	330	LYS
1	H	346	THR
1	H	352	GLU
1	H	389	ASN

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Mol	Chain	Res	Type
1	I	16	SER
1	I	39	GLU
1	I	70	LEU
1	I	86	VAL
1	I	93	ILE
1	I	96	VAL
1	I	134	ARG
1	I	138	GLU
1	I	169	SER
1	I	188	GLU
1	I	192	ARG
1	I	208	LEU
1	I	209	THR
1	I	260	PHE
1	I	316	HIS
1	I	379	GLU
1	I	389	ASN
1	I	402	ASP
1	I	405	VAL
1	J	34	ILE
1	J	67	VAL
1	J	96	VAL
1	J	137	VAL
1	J	164	THR
1	J	181	GLU
1	J	182	THR
1	J	193	ARG
1	J	209	THR
1	J	260	PHE
1	J	271	ILE
1	J	307	THR
1	J	316	HIS
1	J	337	LEU
1	J	352	GLU
1	K	23	LEU
1	K	32	MET
1	K	96	VAL
1	K	99	VAL
1	K	112	ASP
1	K	137	VAL
1	K	138	GLU
1	K	140	LYS

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Mol	Chain	Res	Type
1	K	189	THR
1	K	246	VAL
1	K	260	PHE
1	K	283	THR
1	K	286	GLU
1	K	316	HIS
1	K	349	ASP
1	K	382	SER
1	K	394	HIS
1	L	19	ILE
1	L	47	TRP
1	L	67	VAL
1	L	71	GLU
1	L	112	ASP
1	L	169	SER
1	L	182	THR
1	L	183	THR
1	L	196	GLU
1	L	200	LEU
1	L	247	LYS
1	L	248	SER
1	L	260	PHE
1	L	266	ARG
1	L	267	THR
1	L	269	ASN
1	L	271	ILE
1	L	308	ILE
1	L	316	HIS
1	L	344	ASN
1	L	402	ASP
1	L	413	SER
1	M	12	TYR
1	M	39	GLU
1	M	64	THR
1	M	71	GLU
1	M	126	SER
1	M	135	LEU
1	M	137	VAL
1	M	148	GLN
1	M	154	GLU
1	M	169	SER
1	M	188	GLU

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Mol	Chain	Res	Type
1	M	209	THR
1	M	211	GLU
1	M	246	VAL
1	M	260	PHE
1	M	283	THR
1	M	307	THR
1	M	316	HIS
1	M	382	SER
1	M	400	PRO
1	M	402	ASP
1	M	408	ASN
1	N	99	VAL
1	N	112	ASP
1	N	137	VAL
1	N	138	GLU
1	N	172	ARG
1	N	209	THR
1	N	259	ASP
1	N	260	PHE
1	N	267	THR
1	N	285	HIS
1	N	316	HIS
1	N	334	ASP
1	N	349	ASP
1	N	364	GLU
1	N	415	GLN
1	O	19	ILE
1	O	96	VAL
1	O	126	SER
1	O	135	LEU
1	O	139	ILE
1	O	153	SER
1	O	169	SER
1	O	188	GLU
1	O	209	THR
1	O	260	PHE
1	O	285	HIS
1	O	289	ILE
1	O	338	LEU
1	O	352	GLU
1	O	364	GLU
1	O	368	GLU

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Mol	Chain	Res	Type
1	O	379	GLU
1	O	382	SER
1	O	404	LYS
1	O	412	SER
1	P	67	VAL
1	P	72	ASP
1	P	99	VAL
1	P	103	LEU
1	P	110	ASP
1	P	123	VAL
1	P	126	SER
1	P	137	VAL
1	P	141	ARG
1	P	147	SER
1	P	153	SER
1	P	156	LEU
1	P	208	LEU
1	P	260	PHE
1	P	267	THR
1	P	268	LYS
1	P	285	HIS
1	P	289	ILE
1	P	316	HIS
1	P	317	GLU
1	P	322	SER
1	P	334	ASP
1	P	352	GLU
1	P	364	GLU
1	P	370	GLN
1	P	382	SER
1	P	402	ASP
1	P	404	LYS
1	P	405	VAL

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (83) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	272	HIS
1	A	311	HIS
1	A	366	GLN
1	A	408	ASN
1	B	160	GLN

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Mol	Chain	Res	Type
1	B	263	HIS
1	B	272	HIS
1	B	309	ASN
1	C	89	HIS
1	C	104	HIS
1	C	272	HIS
1	C	309	ASN
1	C	316	HIS
1	D	44	HIS
1	D	66	ASN
1	D	89	HIS
1	D	263	HIS
1	D	272	HIS
1	D	311	HIS
1	D	389	ASN
1	E	44	HIS
1	E	272	HIS
1	E	309	ASN
1	E	311	HIS
1	E	377	ASN
1	F	89	HIS
1	F	104	HIS
1	F	195	GLN
1	F	272	HIS
1	F	311	HIS
1	G	44	HIS
1	G	89	HIS
1	G	160	GLN
1	G	201	ASN
1	G	272	HIS
1	G	316	HIS
1	G	408	ASN
1	H	44	HIS
1	H	89	HIS
1	H	272	HIS
1	H	316	HIS
1	H	415	GLN
1	I	89	HIS
1	I	272	HIS
1	I	377	ASN
1	I	385	GLN
1	I	408	ASN

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Mol	Chain	Res	Type
1	J	44	HIS
1	J	89	HIS
1	J	102	GLN
1	J	316	HIS
1	J	385	GLN
1	K	89	HIS
1	K	102	GLN
1	K	272	HIS
1	K	292	GLN
1	L	89	HIS
1	L	201	ASN
1	L	265	ASN
1	L	272	HIS
1	L	294	ASN
1	L	311	HIS
1	L	316	HIS
1	M	89	HIS
1	M	160	GLN
1	M	311	HIS
1	M	316	HIS
1	N	44	HIS
1	N	89	HIS
1	N	272	HIS
1	N	366	GLN
1	O	44	HIS
1	O	272	HIS
1	O	311	HIS
1	O	316	HIS
1	O	408	ASN
1	O	415	GLN
1	P	44	HIS
1	P	89	HIS
1	P	272	HIS
1	P	309	ASN
1	P	316	HIS
1	P	329	ASN

5.3.3 RNA

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 carbohydrates in this entry.

5.6 Ligand geometry (i)

Of 36 ligands modelled in this entry, 20 are monoatomic - leaving 16 for Mogul analysis.

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	ANP	I	601	3	29,33,33	3.50	13 (44%)	31,52,52	1.62	5 (16%)
2	ANP	M	601	3	29,33,33	3.58	13 (44%)	31,52,52	1.59	7 (22%)
2	ANP	G	601	3	29,33,33	3.48	12 (41%)	31,52,52	1.50	5 (16%)
2	ANP	P	601	3	29,33,33	3.51	12 (41%)	31,52,52	1.70	6 (19%)
2	ANP	A	601	3	29,33,33	3.47	12 (41%)	31,52,52	1.49	5 (16%)
2	ANP	K	601	3	29,33,33	3.43	12 (41%)	31,52,52	1.59	4 (12%)
2	ANP	E	601	3	29,33,33	3.52	13 (44%)	31,52,52	1.55	2 (6%)
2	ANP	H	601	3	29,33,33	3.54	11 (37%)	31,52,52	1.51	5 (16%)
2	ANP	J	601	3	29,33,33	3.46	11 (37%)	31,52,52	1.51	5 (16%)
2	ANP	C	601	3	29,33,33	3.51	12 (41%)	31,52,52	1.50	5 (16%)
2	ANP	L	601	3	29,33,33	3.44	10 (34%)	31,52,52	1.50	6 (19%)
2	ANP	N	601	3	29,33,33	3.54	11 (37%)	31,52,52	1.45	4 (12%)
2	ANP	B	601	3	29,33,33	3.58	12 (41%)	31,52,52	1.77	7 (22%)
2	ANP	D	601	3	29,33,33	3.43	12 (41%)	31,52,52	1.58	3 (9%)
2	ANP	F	601	3	29,33,33	3.46	12 (41%)	31,52,52	1.45	5 (16%)
2	ANP	O	601	3	29,33,33	3.51	13 (44%)	31,52,52	1.63	6 (19%)

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	I	601	3	-	2/14/38/38	0/3/3/3
2	ANP	M	601	3	-	2/14/38/38	0/3/3/3
2	ANP	G	601	3	-	3/14/38/38	0/3/3/3
2	ANP	P	601	3	-	3/14/38/38	0/3/3/3
2	ANP	A	601	3	-	5/14/38/38	0/3/3/3
2	ANP	K	601	3	-	1/14/38/38	0/3/3/3
2	ANP	E	601	3	-	2/14/38/38	0/3/3/3
2	ANP	H	601	3	-	4/14/38/38	0/3/3/3
2	ANP	J	601	3	-	5/14/38/38	0/3/3/3
2	ANP	C	601	3	-	4/14/38/38	0/3/3/3
2	ANP	L	601	3	-	3/14/38/38	0/3/3/3
2	ANP	N	601	3	-	2/14/38/38	0/3/3/3
2	ANP	B	601	3	-	3/14/38/38	0/3/3/3
2	ANP	D	601	3	-	4/14/38/38	0/3/3/3
2	ANP	F	601	3	-	2/14/38/38	0/3/3/3
2	ANP	O	601	3	-	4/14/38/38	0/3/3/3

All (191) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	601	ANP	PB-O1B	10.80	1.63	1.46
2	C	601	ANP	PB-O1B	10.79	1.63	1.46
2	M	601	ANP	PB-O1B	10.73	1.63	1.46
2	P	601	ANP	PB-O1B	10.70	1.63	1.46
2	H	601	ANP	PB-O1B	10.68	1.63	1.46
2	L	601	ANP	PB-O1B	10.65	1.63	1.46
2	E	601	ANP	PB-O1B	10.64	1.63	1.46
2	G	601	ANP	PB-O1B	10.37	1.62	1.46
2	J	601	ANP	PB-O1B	10.32	1.62	1.46
2	N	601	ANP	PB-O1B	10.28	1.62	1.46
2	I	601	ANP	PB-O1B	10.22	1.62	1.46
2	K	601	ANP	PB-O1B	10.15	1.62	1.46
2	F	601	ANP	PB-O1B	10.14	1.62	1.46
2	D	601	ANP	PB-O1B	10.07	1.62	1.46
2	O	601	ANP	PB-O1B	10.06	1.62	1.46
2	A	601	ANP	PB-O1B	10.06	1.62	1.46
2	N	601	ANP	PG-O1G	7.73	1.58	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	A	601	ANP	PG-O1G	7.54	1.58	1.46
2	O	601	ANP	PG-O1G	7.48	1.58	1.46
2	F	601	ANP	PG-O1G	7.40	1.57	1.46
2	B	601	ANP	PG-O1G	7.39	1.57	1.46
2	I	601	ANP	PG-O1G	7.37	1.57	1.46
2	M	601	ANP	PG-O1G	7.33	1.57	1.46
2	B	601	ANP	C4-N3	7.33	1.45	1.35
2	H	601	ANP	PG-O1G	7.31	1.57	1.46
2	E	601	ANP	PG-O1G	7.25	1.57	1.46
2	K	601	ANP	PG-O1G	7.23	1.57	1.46
2	G	601	ANP	PG-O1G	7.12	1.57	1.46
2	N	601	ANP	C4-N3	7.10	1.45	1.35
2	O	601	ANP	C4-N3	7.09	1.45	1.35
2	P	601	ANP	PG-O1G	7.04	1.57	1.46
2	J	601	ANP	PG-O1G	6.95	1.57	1.46
2	H	601	ANP	C4-N3	6.84	1.45	1.35
2	L	601	ANP	C4-N3	6.82	1.45	1.35
2	C	601	ANP	PG-O1G	6.80	1.57	1.46
2	D	601	ANP	C4-N3	6.79	1.45	1.35
2	M	601	ANP	C4-N3	6.75	1.45	1.35
2	G	601	ANP	C4-N3	6.71	1.44	1.35
2	D	601	ANP	PG-O1G	6.69	1.56	1.46
2	E	601	ANP	C4-N3	6.65	1.44	1.35
2	I	601	ANP	C4-N3	6.58	1.44	1.35
2	P	601	ANP	C4-N3	6.53	1.44	1.35
2	L	601	ANP	PG-O1G	6.53	1.56	1.46
2	J	601	ANP	C4-N3	6.42	1.44	1.35
2	K	601	ANP	C4-N3	6.40	1.44	1.35
2	F	601	ANP	C4-N3	6.40	1.44	1.35
2	C	601	ANP	C4-N3	6.37	1.44	1.35
2	A	601	ANP	C4-N3	6.34	1.44	1.35
2	M	601	ANP	C2'-C1'	-5.93	1.44	1.53
2	C	601	ANP	C2'-C1'	-5.86	1.44	1.53
2	J	601	ANP	C2'-C1'	-5.75	1.45	1.53
2	H	601	ANP	C2'-C1'	-5.75	1.45	1.53
2	D	601	ANP	C2'-C1'	-5.66	1.45	1.53
2	I	601	ANP	C2'-C1'	-5.58	1.45	1.53
2	G	601	ANP	C2'-C1'	-5.50	1.45	1.53
2	O	601	ANP	C2'-C1'	-5.47	1.45	1.53
2	E	601	ANP	C2'-C1'	-5.38	1.45	1.53
2	F	601	ANP	C2'-C1'	-5.36	1.45	1.53
2	K	601	ANP	C2'-C1'	-5.36	1.45	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	N	601	ANP	C2'-C1'	-5.31	1.45	1.53
2	A	601	ANP	C2'-C1'	-5.22	1.45	1.53
2	L	601	ANP	C2'-C1'	-5.19	1.45	1.53
2	B	601	ANP	C2'-C1'	-5.15	1.45	1.53
2	P	601	ANP	C2'-C1'	-5.15	1.45	1.53
2	J	601	ANP	C8-N7	5.06	1.43	1.34
2	J	601	ANP	C6-N6	4.96	1.52	1.34
2	L	601	ANP	C6-N6	4.96	1.52	1.34
2	A	601	ANP	C6-N6	4.92	1.52	1.34
2	P	601	ANP	C6-N6	4.89	1.51	1.34
2	B	601	ANP	C6-N6	4.89	1.51	1.34
2	G	601	ANP	C8-N7	4.88	1.43	1.34
2	H	601	ANP	C6-N6	4.87	1.51	1.34
2	F	601	ANP	C8-N7	4.87	1.43	1.34
2	K	601	ANP	C6-N6	4.86	1.51	1.34
2	I	601	ANP	C6-N6	4.85	1.51	1.34
2	E	601	ANP	C8-N7	4.84	1.43	1.34
2	E	601	ANP	C6-N6	4.83	1.51	1.34
2	G	601	ANP	C6-N6	4.82	1.51	1.34
2	F	601	ANP	C6-N6	4.81	1.51	1.34
2	P	601	ANP	C8-N7	4.80	1.43	1.34
2	M	601	ANP	C6-N6	4.78	1.51	1.34
2	M	601	ANP	C8-N7	4.78	1.43	1.34
2	C	601	ANP	C6-N6	4.76	1.51	1.34
2	N	601	ANP	C6-N6	4.76	1.51	1.34
2	O	601	ANP	C6-N6	4.75	1.51	1.34
2	B	601	ANP	C8-N7	4.74	1.43	1.34
2	D	601	ANP	C6-N6	4.74	1.51	1.34
2	N	601	ANP	C8-N7	4.70	1.43	1.34
2	H	601	ANP	C8-N7	4.67	1.43	1.34
2	O	601	ANP	C8-N7	4.66	1.43	1.34
2	K	601	ANP	C8-N7	4.61	1.42	1.34
2	C	601	ANP	C8-N7	4.56	1.42	1.34
2	A	601	ANP	C8-N7	4.54	1.42	1.34
2	I	601	ANP	C8-N7	4.49	1.42	1.34
2	D	601	ANP	C8-N7	4.47	1.42	1.34
2	L	601	ANP	C8-N7	4.36	1.42	1.34
2	P	601	ANP	PG-N3B	-4.28	1.52	1.63
2	D	601	ANP	C2-N1	4.28	1.41	1.33
2	M	601	ANP	PG-N3B	-4.23	1.52	1.63
2	O	601	ANP	C2-N1	4.23	1.41	1.33
2	A	601	ANP	PG-N3B	-4.23	1.52	1.63

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	C	601	ANP	PG-N3B	-4.18	1.52	1.63
2	L	601	ANP	C2-N1	4.18	1.41	1.33
2	N	601	ANP	PG-N3B	-4.15	1.52	1.63
2	J	601	ANP	C2-N1	4.12	1.41	1.33
2	P	601	ANP	C2-N1	4.11	1.41	1.33
2	N	601	ANP	C2-N1	4.11	1.41	1.33
2	G	601	ANP	PG-N3B	-4.10	1.52	1.63
2	D	601	ANP	PG-N3B	-4.07	1.52	1.63
2	I	601	ANP	PG-N3B	-4.01	1.52	1.63
2	K	601	ANP	PG-N3B	-4.01	1.52	1.63
2	B	601	ANP	PG-N3B	-4.00	1.52	1.63
2	F	601	ANP	C2-N1	3.99	1.41	1.33
2	H	601	ANP	C2-N1	3.98	1.41	1.33
2	C	601	ANP	C2-N1	3.93	1.41	1.33
2	E	601	ANP	C2-N1	3.88	1.41	1.33
2	K	601	ANP	C2-N1	3.87	1.41	1.33
2	L	601	ANP	PG-N3B	-3.85	1.53	1.63
2	G	601	ANP	C2-N1	3.85	1.41	1.33
2	O	601	ANP	PG-N3B	-3.84	1.53	1.63
2	I	601	ANP	C2-N1	3.84	1.41	1.33
2	E	601	ANP	PG-N3B	-3.83	1.53	1.63
2	M	601	ANP	C2-N1	3.82	1.41	1.33
2	O	601	ANP	C3'-C4'	-3.81	1.43	1.53
2	B	601	ANP	C3'-C4'	-3.80	1.43	1.53
2	I	601	ANP	C3'-C4'	-3.80	1.43	1.53
2	A	601	ANP	C2-N1	3.76	1.40	1.33
2	F	601	ANP	PG-N3B	-3.73	1.53	1.63
2	A	601	ANP	C3'-C4'	-3.70	1.43	1.53
2	B	601	ANP	C2-N1	3.69	1.40	1.33
2	F	601	ANP	C3'-C4'	-3.63	1.43	1.53
2	H	601	ANP	PG-N3B	-3.62	1.53	1.63
2	N	601	ANP	C3'-C4'	-3.56	1.43	1.53
2	K	601	ANP	C3'-C4'	-3.55	1.43	1.53
2	H	601	ANP	C3'-C4'	-3.55	1.43	1.53
2	L	601	ANP	C3'-C4'	-3.52	1.44	1.53
2	D	601	ANP	C3'-C4'	-3.47	1.44	1.53
2	J	601	ANP	PG-N3B	-3.44	1.54	1.63
2	J	601	ANP	C3'-C4'	-3.44	1.44	1.53
2	P	601	ANP	C3'-C4'	-3.39	1.44	1.53
2	G	601	ANP	C3'-C4'	-3.38	1.44	1.53
2	E	601	ANP	C3'-C4'	-3.32	1.44	1.53
2	C	601	ANP	C3'-C4'	-3.31	1.44	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	M	601	ANP	C3'-C4'	-3.30	1.44	1.53
2	C	601	ANP	C2'-C3'	-2.86	1.45	1.53
2	P	601	ANP	C2'-C3'	-2.75	1.45	1.53
2	F	601	ANP	C2'-C3'	-2.72	1.45	1.53
2	I	601	ANP	C2'-C3'	-2.71	1.45	1.53
2	K	601	ANP	C2'-C3'	-2.69	1.46	1.53
2	M	601	ANP	C2-N3	-2.67	1.27	1.32
2	H	601	ANP	C2'-C3'	-2.67	1.46	1.53
2	E	601	ANP	C2'-C3'	-2.67	1.46	1.53
2	O	601	ANP	C2'-C3'	-2.63	1.46	1.53
2	N	601	ANP	C2'-C3'	-2.58	1.46	1.53
2	B	601	ANP	C2-N3	-2.57	1.27	1.32
2	A	601	ANP	C2'-C3'	-2.56	1.46	1.53
2	D	601	ANP	C2'-C3'	-2.55	1.46	1.53
2	P	601	ANP	PB-N3B	-2.52	1.56	1.63
2	L	601	ANP	C2'-C3'	-2.50	1.46	1.53
2	I	601	ANP	C2-N3	-2.49	1.28	1.32
2	M	601	ANP	C2'-C3'	-2.47	1.46	1.53
2	I	601	ANP	PB-N3B	-2.47	1.56	1.63
2	G	601	ANP	C2'-C3'	-2.46	1.46	1.53
2	C	601	ANP	C2-N3	-2.42	1.28	1.32
2	J	601	ANP	C2'-C3'	-2.41	1.46	1.53
2	B	601	ANP	C2'-C3'	-2.40	1.46	1.53
2	A	601	ANP	PB-N3B	-2.40	1.57	1.63
2	E	601	ANP	PB-O3A	2.37	1.62	1.59
2	E	601	ANP	C2-N3	-2.35	1.28	1.32
2	F	601	ANP	C2-N3	-2.35	1.28	1.32
2	H	601	ANP	C2-N3	-2.33	1.28	1.32
2	K	601	ANP	C2-N3	-2.33	1.28	1.32
2	O	601	ANP	PB-N3B	-2.30	1.57	1.63
2	G	601	ANP	PB-N3B	-2.27	1.57	1.63
2	A	601	ANP	C2-N3	-2.25	1.28	1.32
2	G	601	ANP	C2-N3	-2.25	1.28	1.32
2	M	601	ANP	PB-N3B	-2.25	1.57	1.63
2	B	601	ANP	PB-N3B	-2.25	1.57	1.63
2	N	601	ANP	PB-N3B	-2.23	1.57	1.63
2	J	601	ANP	C2-N3	-2.21	1.28	1.32
2	O	601	ANP	C2-N3	-2.21	1.28	1.32
2	K	601	ANP	PB-N3B	-2.19	1.57	1.63
2	F	601	ANP	PB-N3B	-2.17	1.57	1.63
2	D	601	ANP	C2-N3	-2.14	1.28	1.32
2	C	601	ANP	PB-N3B	-2.13	1.57	1.63

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	D	601	ANP	PB-N3B	-2.12	1.57	1.63
2	M	601	ANP	PB-O3A	2.10	1.61	1.59
2	I	601	ANP	C5'-C4'	-2.07	1.45	1.51
2	P	601	ANP	C2-N3	-2.05	1.28	1.32
2	O	601	ANP	C5'-C4'	-2.02	1.45	1.51
2	E	601	ANP	PB-N3B	-2.01	1.58	1.63

All (80) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	B	601	ANP	N3-C2-N1	-6.28	118.86	128.68
2	E	601	ANP	N3-C2-N1	-6.02	119.27	128.68
2	J	601	ANP	N3-C2-N1	-5.58	119.95	128.68
2	H	601	ANP	N3-C2-N1	-5.50	120.09	128.68
2	I	601	ANP	N3-C2-N1	-5.44	120.17	128.68
2	C	601	ANP	N3-C2-N1	-5.42	120.20	128.68
2	M	601	ANP	N3-C2-N1	-5.42	120.21	128.68
2	A	601	ANP	N3-C2-N1	-5.37	120.28	128.68
2	N	601	ANP	N3-C2-N1	-5.36	120.30	128.68
2	P	601	ANP	N3-C2-N1	-5.34	120.33	128.68
2	O	601	ANP	N3-C2-N1	-5.27	120.44	128.68
2	D	601	ANP	N3-C2-N1	-5.14	120.64	128.68
2	G	601	ANP	N3-C2-N1	-5.13	120.66	128.68
2	F	601	ANP	N3-C2-N1	-5.10	120.70	128.68
2	L	601	ANP	N3-C2-N1	-5.09	120.72	128.68
2	K	601	ANP	N3-C2-N1	-4.95	120.94	128.68
2	D	601	ANP	O1B-PB-N3B	-4.42	105.26	111.77
2	K	601	ANP	C3'-C2'-C1'	3.67	106.51	100.98
2	B	601	ANP	C3'-C2'-C1'	3.51	106.26	100.98
2	L	601	ANP	C3'-C2'-C1'	3.50	106.24	100.98
2	P	601	ANP	PA-O3A-PB	-3.44	120.51	132.62
2	E	601	ANP	C3'-C2'-C1'	3.41	106.11	100.98
2	I	601	ANP	O1B-PB-N3B	-3.38	106.79	111.77
2	K	601	ANP	PA-O3A-PB	-3.29	121.04	132.62
2	M	601	ANP	O1B-PB-N3B	-3.11	107.19	111.77
2	P	601	ANP	O3G-PG-O1G	-3.04	105.81	113.45
2	B	601	ANP	PA-O3A-PB	-3.01	122.01	132.62
2	P	601	ANP	O5'-C5'-C4'	3.01	119.35	108.99
2	B	601	ANP	O1B-PB-N3B	-3.00	107.35	111.77
2	J	601	ANP	O3G-PG-O1G	-2.96	106.02	113.45
2	I	601	ANP	O1G-PG-N3B	-2.91	107.48	111.77
2	H	601	ANP	C3'-C2'-C1'	2.88	105.32	100.98

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	O	601	ANP	C3'-C2'-C1'	2.87	105.30	100.98
2	K	601	ANP	O5'-C5'-C4'	2.85	118.79	108.99
2	O	601	ANP	O5'-C5'-C4'	2.83	118.73	108.99
2	F	601	ANP	PA-O3A-PB	-2.81	122.71	132.62
2	A	601	ANP	PA-O3A-PB	-2.78	122.82	132.62
2	G	601	ANP	O1G-PG-N3B	-2.78	107.68	111.77
2	B	601	ANP	O3G-PG-O1G	-2.75	106.54	113.45
2	N	601	ANP	PA-O3A-PB	-2.72	123.04	132.62
2	P	601	ANP	O1B-PB-N3B	-2.71	107.79	111.77
2	P	601	ANP	C3'-C2'-C1'	2.71	105.05	100.98
2	I	601	ANP	C3'-C2'-C1'	2.68	105.01	100.98
2	C	601	ANP	O3G-PG-O1G	-2.67	106.73	113.45
2	G	601	ANP	PA-O3A-PB	-2.63	123.35	132.62
2	N	601	ANP	C3'-C2'-C1'	2.63	104.93	100.98
2	C	601	ANP	C3'-C2'-C1'	2.63	104.93	100.98
2	C	601	ANP	PA-O3A-PB	-2.62	123.40	132.62
2	I	601	ANP	PA-O3A-PB	-2.57	123.58	132.62
2	L	601	ANP	O2G-PG-O1G	-2.53	107.08	113.45
2	A	601	ANP	O3G-PG-O1G	-2.51	107.13	113.45
2	O	601	ANP	O3G-PG-O1G	-2.49	107.20	113.45
2	G	601	ANP	O5'-C5'-C4'	2.48	117.54	108.99
2	F	601	ANP	O3G-PG-O1G	-2.47	107.25	113.45
2	C	601	ANP	O5'-C5'-C4'	2.46	117.46	108.99
2	A	601	ANP	C3'-C2'-C1'	2.46	104.68	100.98
2	H	601	ANP	O3G-PG-O1G	-2.45	107.30	113.45
2	F	601	ANP	C3'-C2'-C1'	2.36	104.53	100.98
2	H	601	ANP	O5'-C5'-C4'	2.35	117.09	108.99
2	J	601	ANP	O5'-C5'-C4'	2.34	117.06	108.99
2	M	601	ANP	O3G-PG-O1G	-2.32	107.61	113.45
2	M	601	ANP	C3'-C2'-C1'	2.30	104.45	100.98
2	J	601	ANP	C3'-C2'-C1'	2.30	104.44	100.98
2	G	601	ANP	O2B-PB-O3A	2.27	112.22	104.64
2	B	601	ANP	O5'-C5'-C4'	2.25	116.75	108.99
2	H	601	ANP	PA-O3A-PB	-2.25	124.69	132.62
2	O	601	ANP	C5'-C4'-C3'	-2.25	106.76	115.18
2	A	601	ANP	O5'-C5'-C4'	2.24	116.70	108.99
2	L	601	ANP	PA-O3A-PB	-2.23	124.75	132.62
2	L	601	ANP	O5'-C5'-C4'	2.23	116.66	108.99
2	N	601	ANP	O5'-C5'-C4'	2.19	116.53	108.99
2	M	601	ANP	PA-O3A-PB	-2.19	124.91	132.62
2	M	601	ANP	O2B-PB-O3A	2.17	111.88	104.64
2	F	601	ANP	O2B-PB-O3A	2.16	111.84	104.64

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	L	601	ANP	O3G-PG-O1G	-2.11	108.16	113.45
2	J	601	ANP	PA-O3A-PB	-2.09	125.24	132.62
2	D	601	ANP	PA-O3A-PB	-2.07	125.32	132.62
2	M	601	ANP	O5'-C5'-C4'	2.06	116.08	108.99
2	B	601	ANP	C2-N1-C6	2.01	122.20	118.75
2	O	601	ANP	O4'-C1'-C2'	-2.00	104.00	106.93

There are no chirality outliers.

All (49) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	P	601	ANP	PG-N3B-PB-O1B
2	P	601	ANP	PA-O3A-PB-O1B
2	P	601	ANP	PA-O3A-PB-O2B
2	K	601	ANP	PB-O3A-PA-O5'
2	H	601	ANP	PB-N3B-PG-O1G
2	H	601	ANP	PG-N3B-PB-O1B
2	H	601	ANP	PA-O3A-PB-O1B
2	H	601	ANP	PA-O3A-PB-O2B
2	J	601	ANP	PB-N3B-PG-O1G
2	J	601	ANP	PG-N3B-PB-O1B
2	J	601	ANP	PA-O3A-PB-O1B
2	J	601	ANP	PA-O3A-PB-O2B
2	J	601	ANP	C5'-O5'-PA-O1A
2	N	601	ANP	PG-N3B-PB-O1B
2	B	601	ANP	PG-N3B-PB-O1B
2	B	601	ANP	PA-O3A-PB-O1B
2	I	601	ANP	PG-N3B-PB-O1B
2	E	601	ANP	PG-N3B-PB-O1B
2	E	601	ANP	PB-O3A-PA-O5'
2	L	601	ANP	PB-N3B-PG-O1G
2	L	601	ANP	PG-N3B-PB-O1B
2	M	601	ANP	PB-N3B-PG-O1G
2	M	601	ANP	PB-O3A-PA-O5'
2	A	601	ANP	PB-N3B-PG-O1G
2	A	601	ANP	PG-N3B-PB-O1B
2	A	601	ANP	PA-O3A-PB-O1B
2	A	601	ANP	PA-O3A-PB-O2B
2	C	601	ANP	PB-N3B-PG-O1G
2	C	601	ANP	PG-N3B-PB-O1B
2	C	601	ANP	PA-O3A-PB-O1B
2	G	601	ANP	PB-N3B-PG-O1G

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Mol	Chain	Res	Type	Atoms
2	G	601	ANP	PA-O3A-PB-O1B
2	G	601	ANP	PA-O3A-PB-O2B
2	D	601	ANP	PA-O3A-PB-O1B
2	D	601	ANP	PA-O3A-PB-O2B
2	D	601	ANP	C5'-O5'-PA-O1A
2	F	601	ANP	PB-N3B-PG-O1G
2	O	601	ANP	PB-N3B-PG-O1G
2	O	601	ANP	PG-N3B-PB-O1B
2	O	601	ANP	C3'-C4'-C5'-O5'
2	O	601	ANP	O4'-C4'-C5'-O5'
2	N	601	ANP	PB-O3A-PA-O5'
2	L	601	ANP	PB-O3A-PA-O5'
2	C	601	ANP	PB-O3A-PA-O5'
2	B	601	ANP	PA-O3A-PB-O2B
2	F	601	ANP	PA-O3A-PB-O2B
2	A	601	ANP	C5'-O5'-PA-O1A
2	I	601	ANP	PB-N3B-PG-O1G
2	D	601	ANP	PB-N3B-PG-O1G

There are no ring outliers.

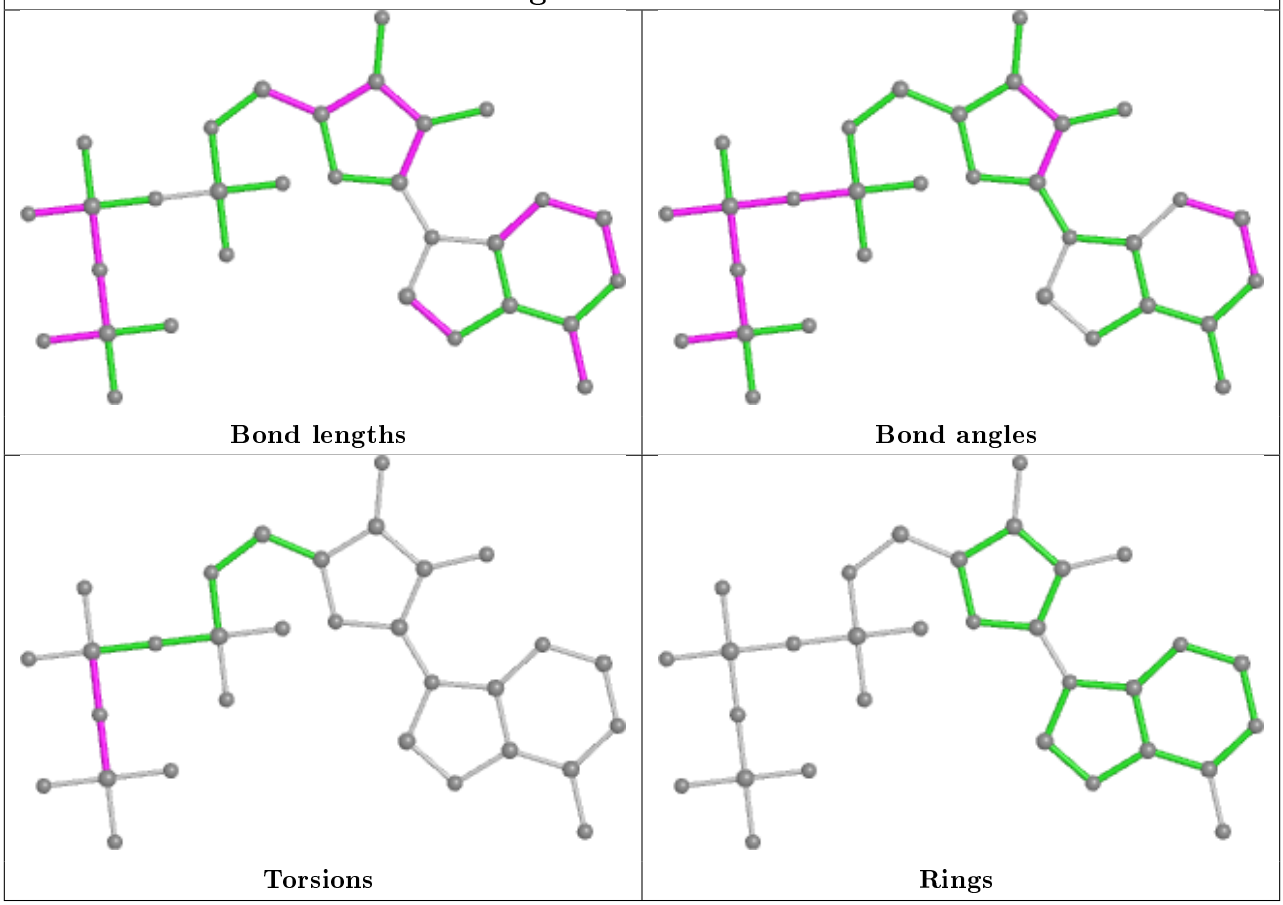
9 monomers are involved in 11 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	I	601	ANP	2	0
2	G	601	ANP	1	0
2	A	601	ANP	1	0
2	K	601	ANP	1	0
2	E	601	ANP	1	0
2	J	601	ANP	1	0
2	L	601	ANP	1	0
2	F	601	ANP	1	0
2	O	601	ANP	2	0

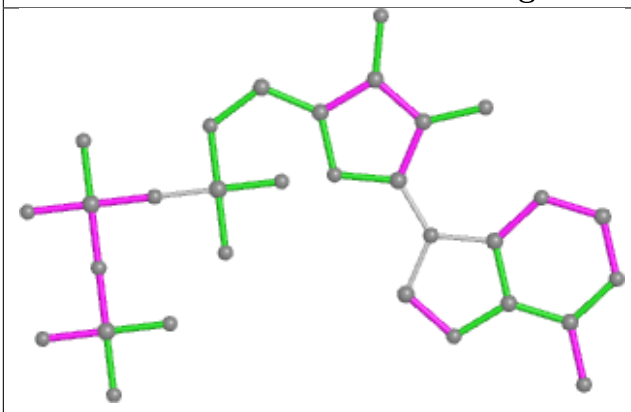
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less 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.

Ligand ANP I 601



Ligand ANP M 601



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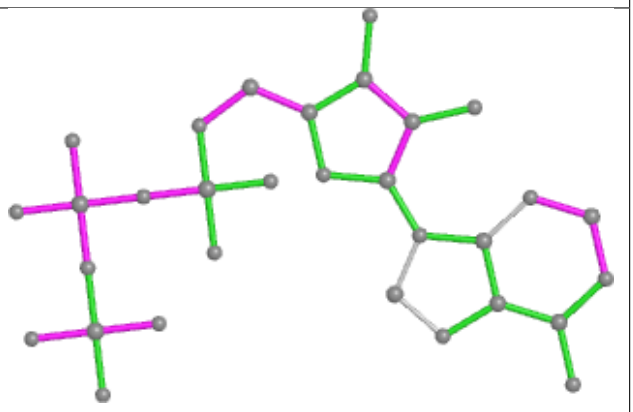
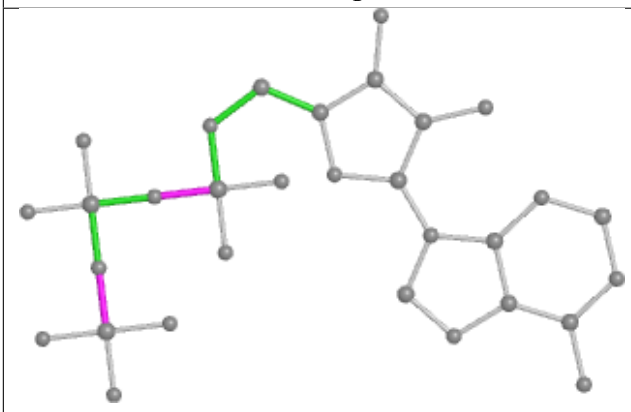
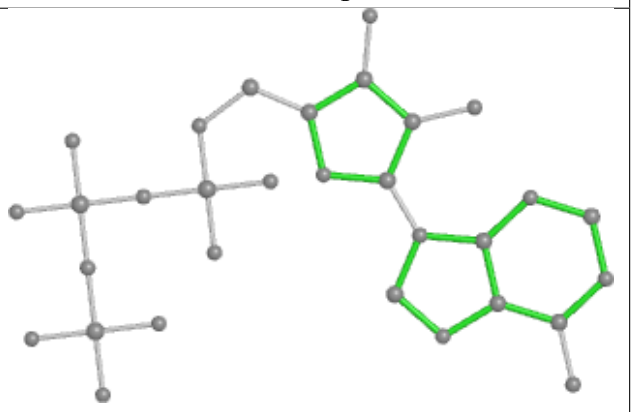


Bond angles

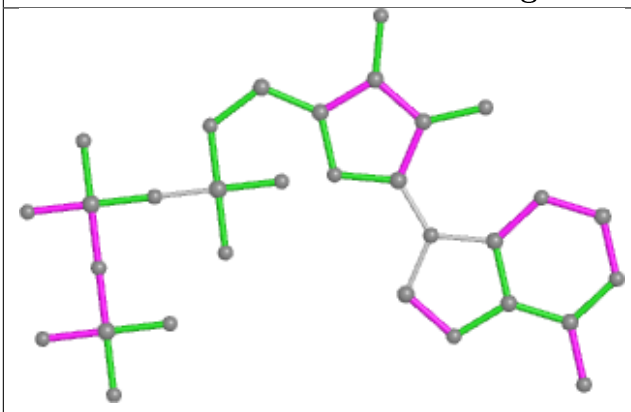


Torsions



Rings

Ligand ANP G 601



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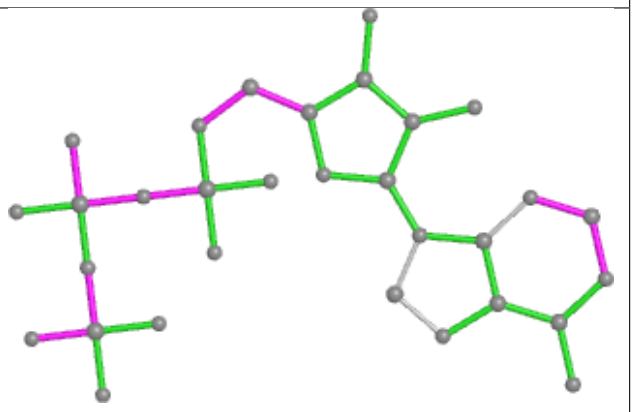

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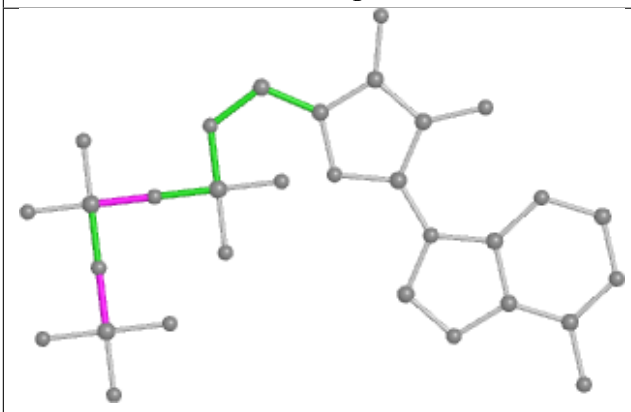

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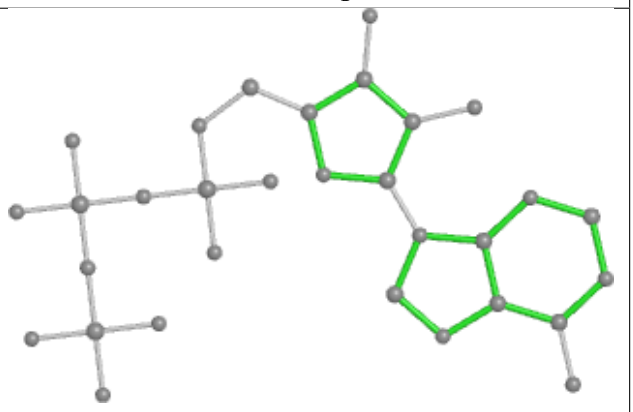
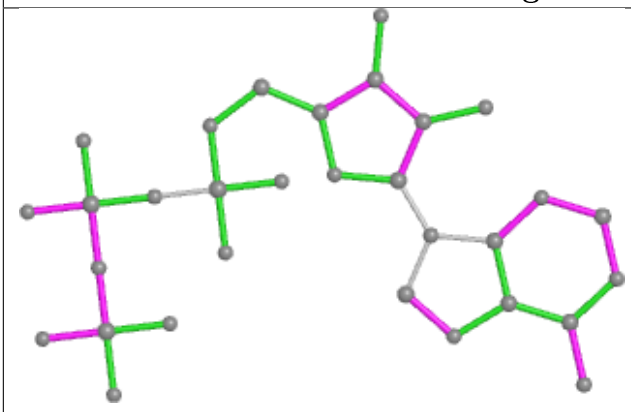


Rings

Ligand ANP P 601



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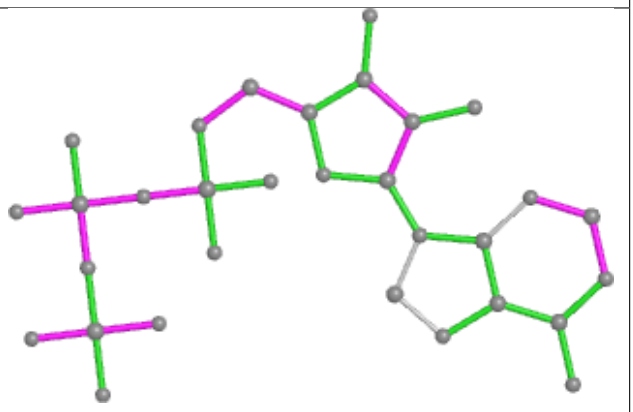

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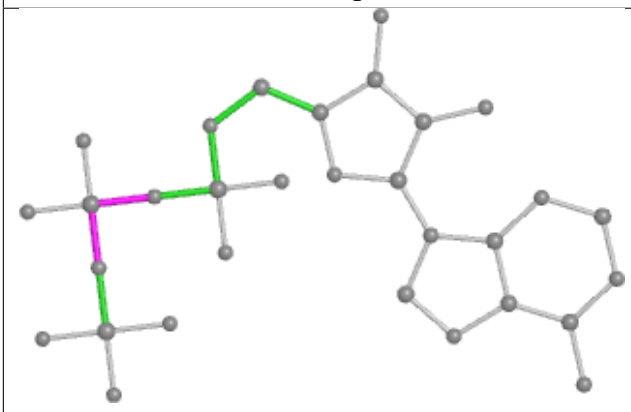

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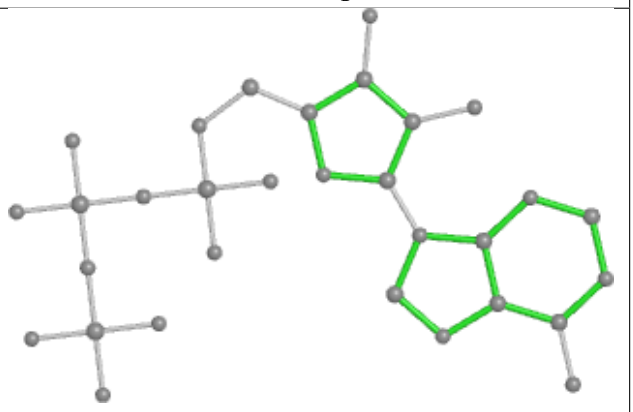
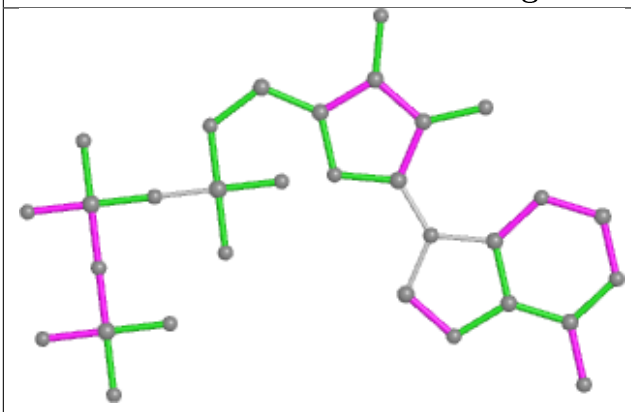


Rings

Ligand ANP A 601



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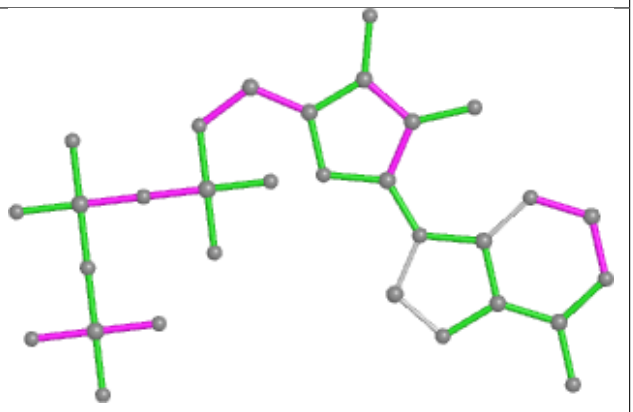

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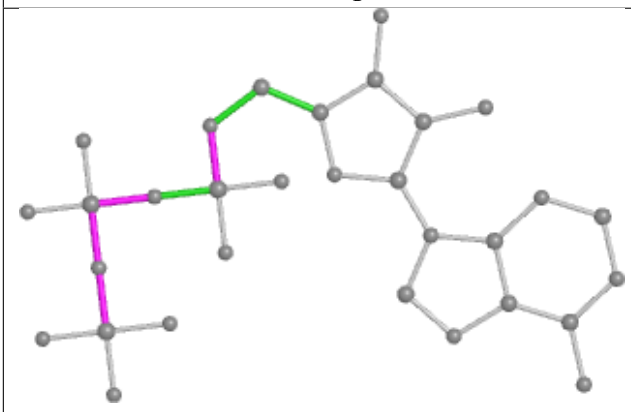

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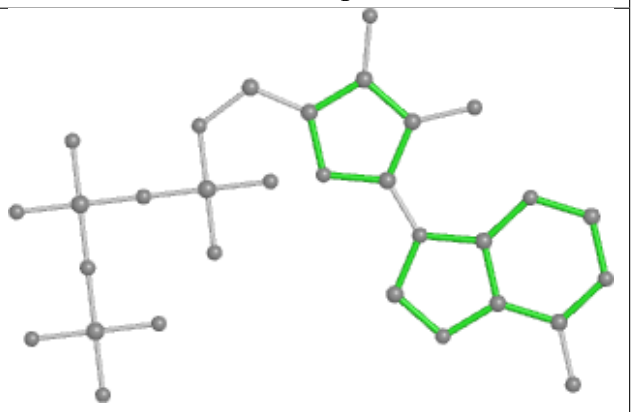

Rings

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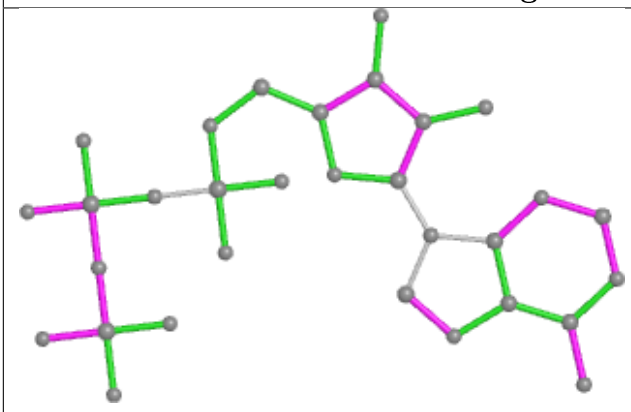

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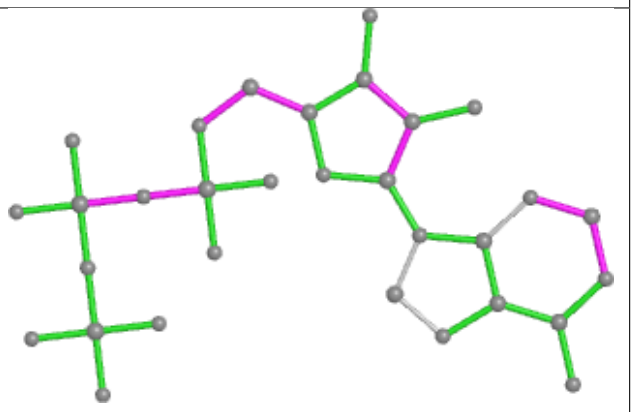

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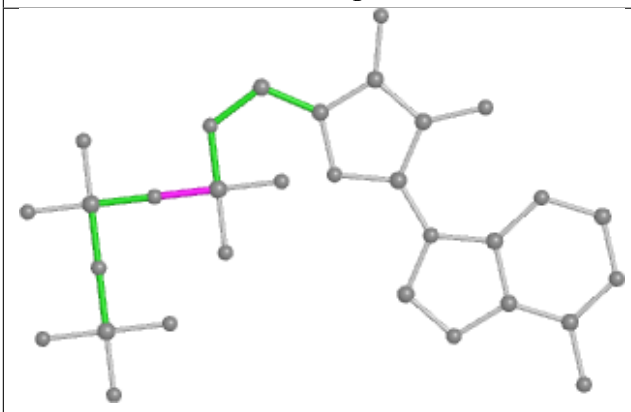

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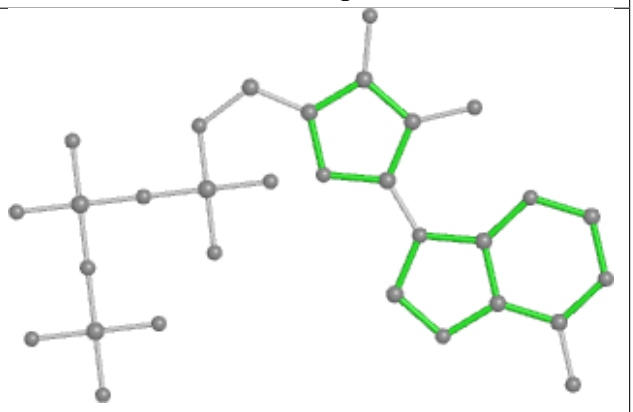
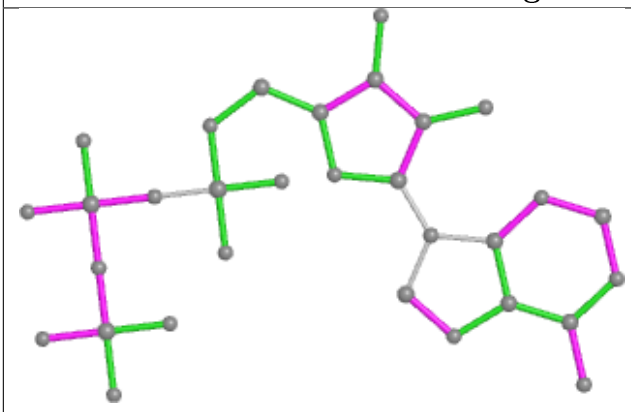


Rings

Ligand ANP E 601



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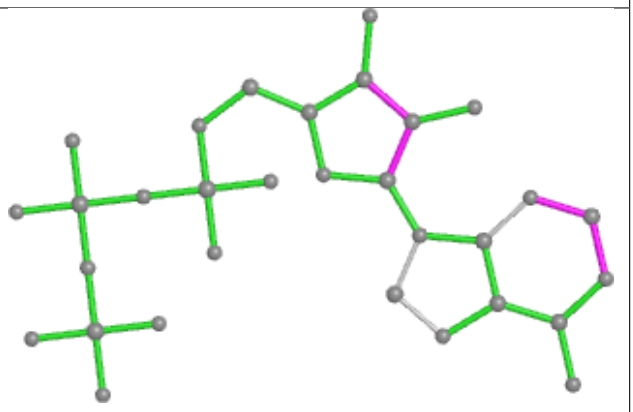

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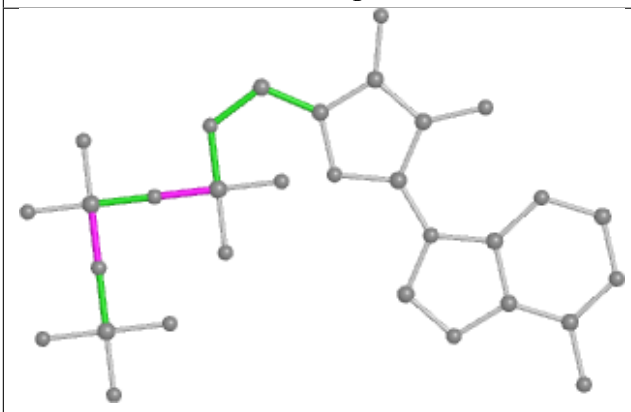

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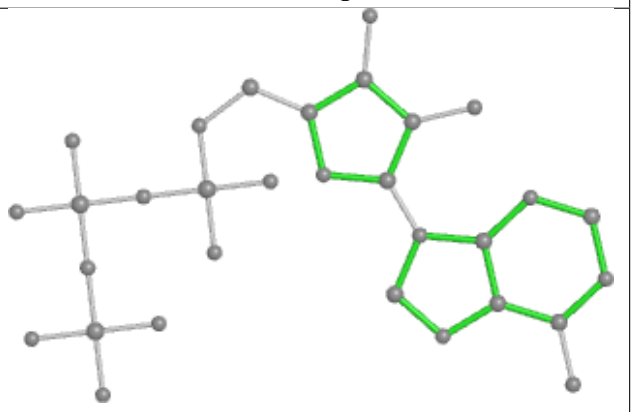

Rings

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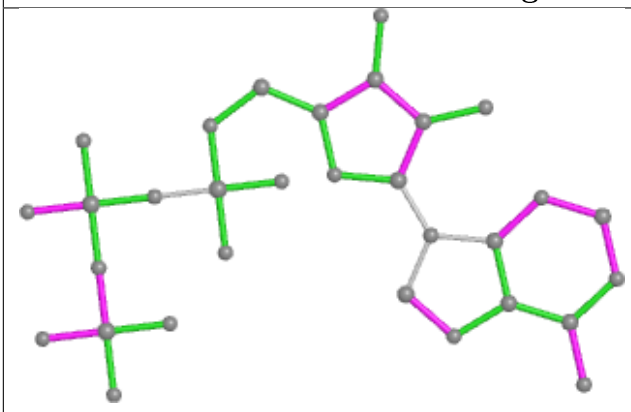

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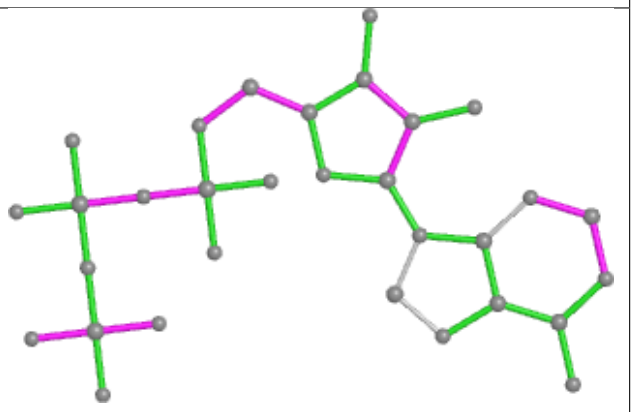

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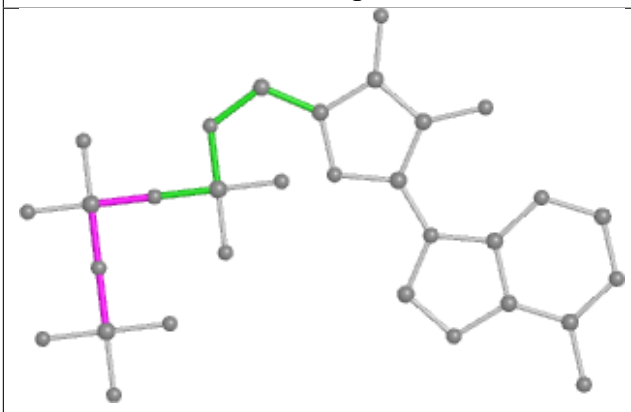

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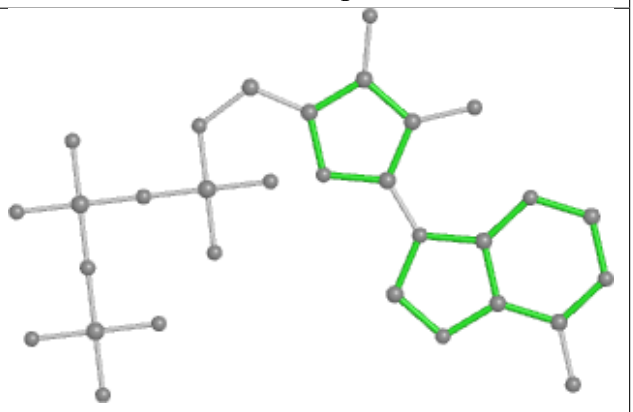

Rings

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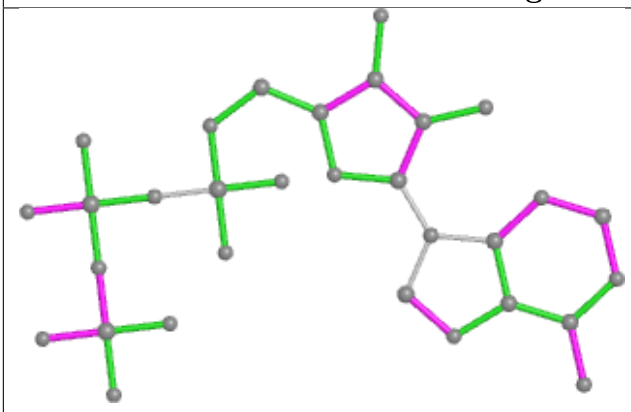

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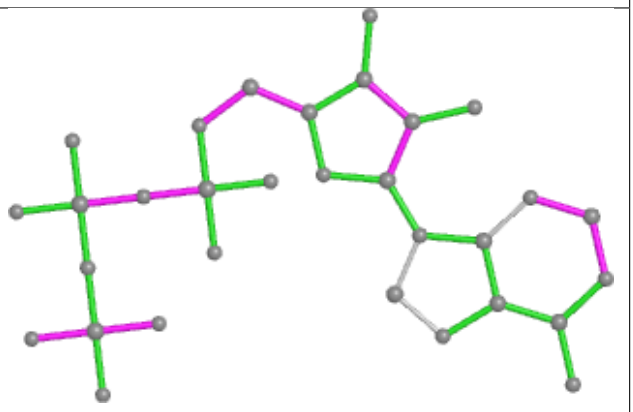

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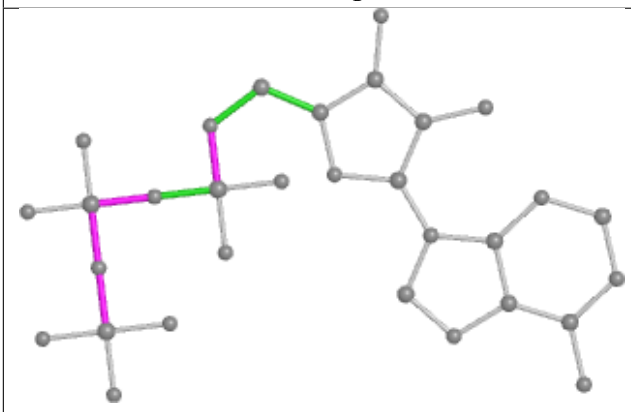

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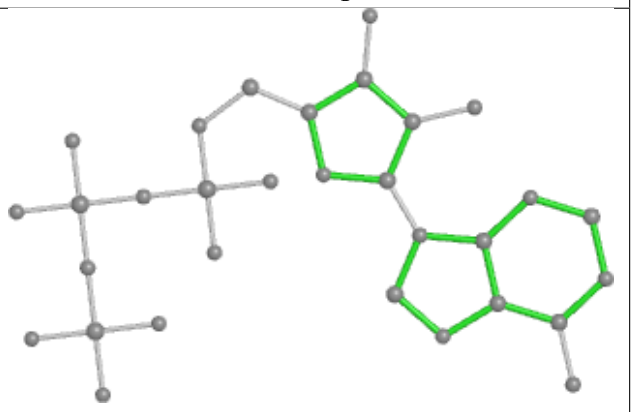

Rings

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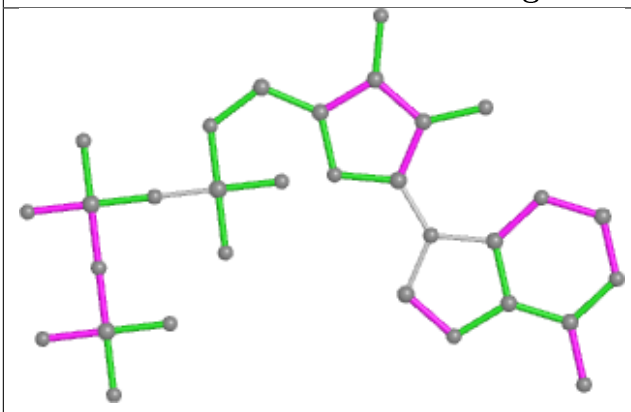

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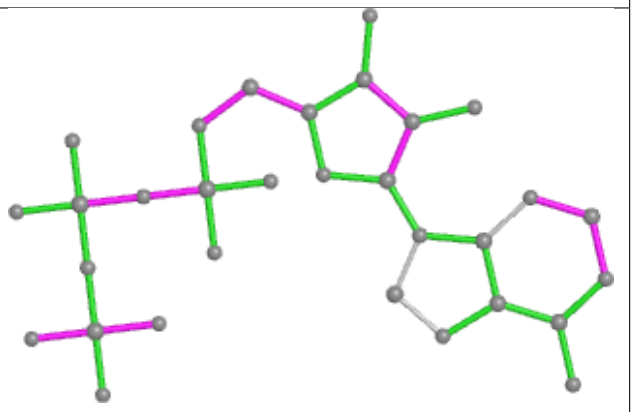
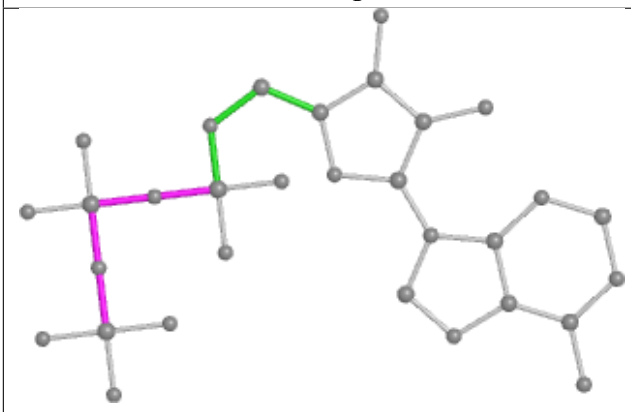


Bond angles



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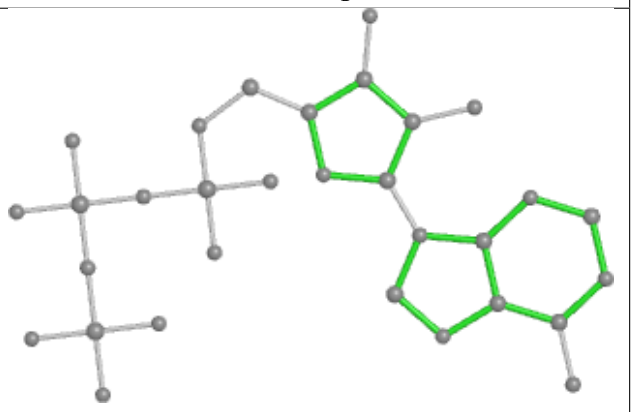
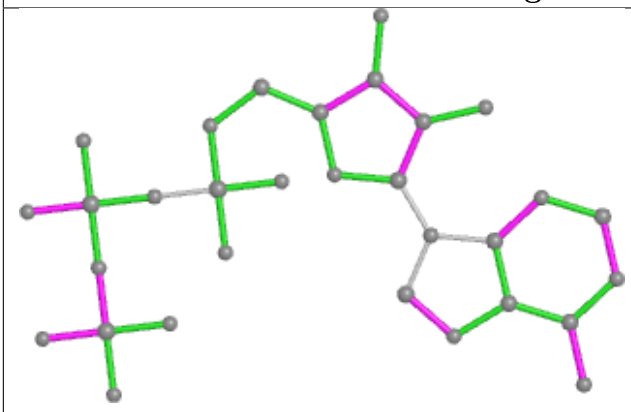


Rings

Ligand ANP L 601



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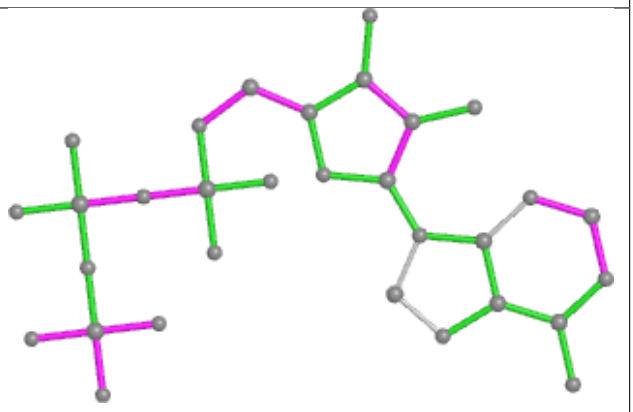
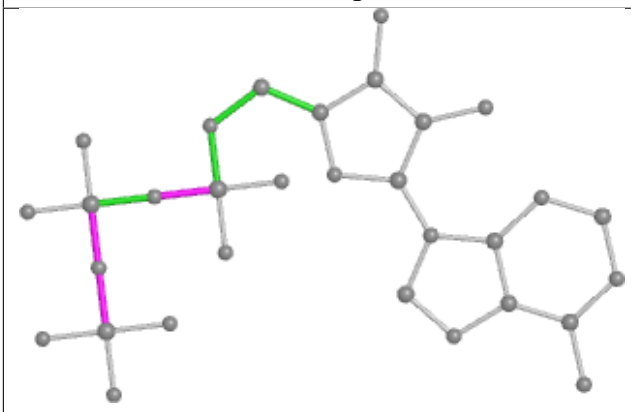
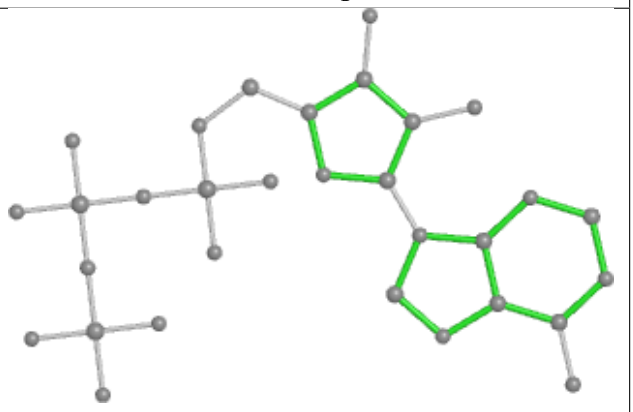


Bond angles

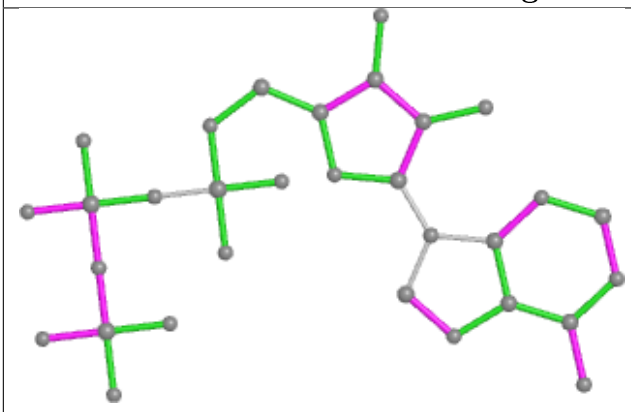


Torsions

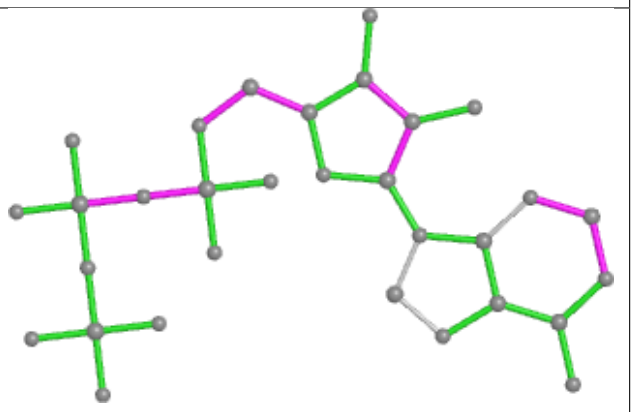


Rings

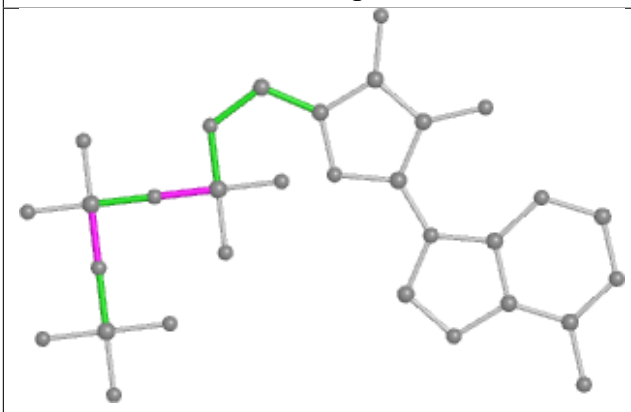
Ligand ANP N 601



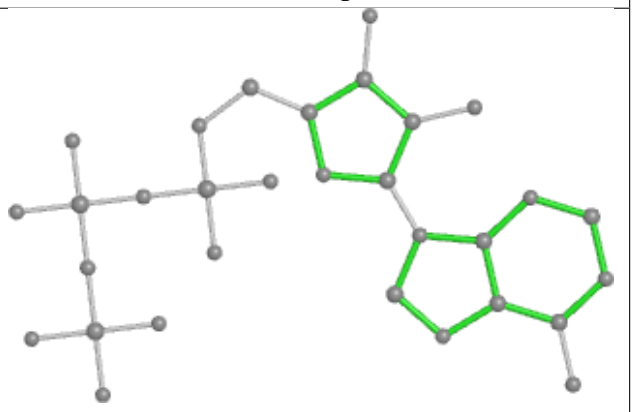
Bond lengths



Bond angles

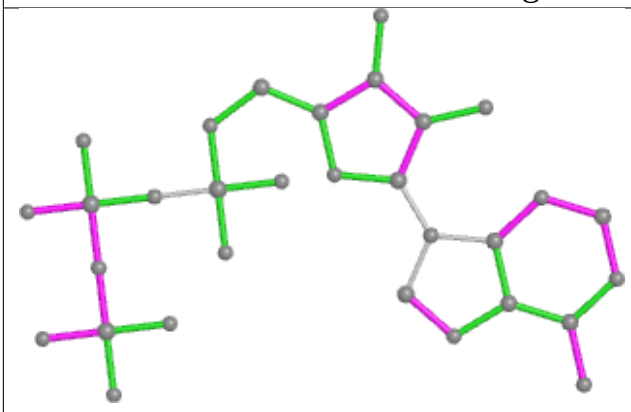


Torsions

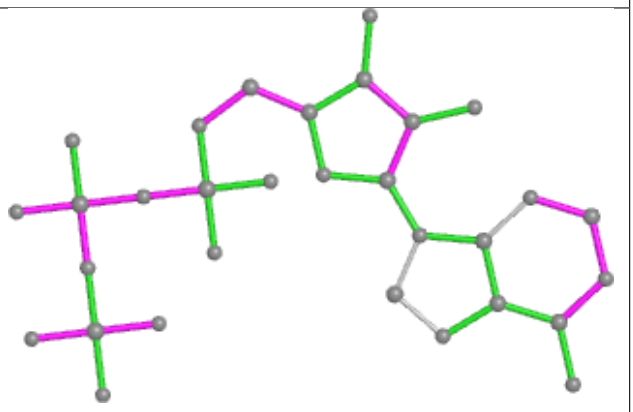


Rings

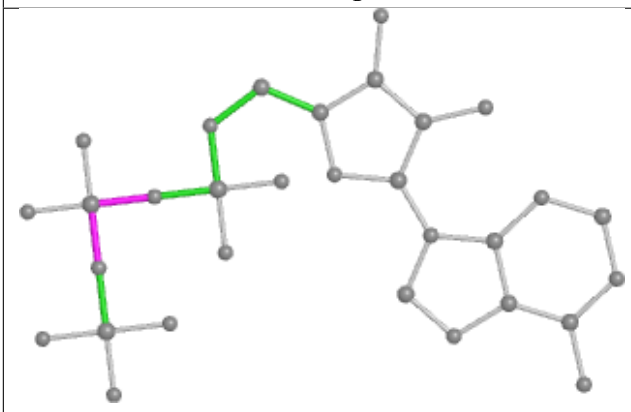
Ligand ANP B 601



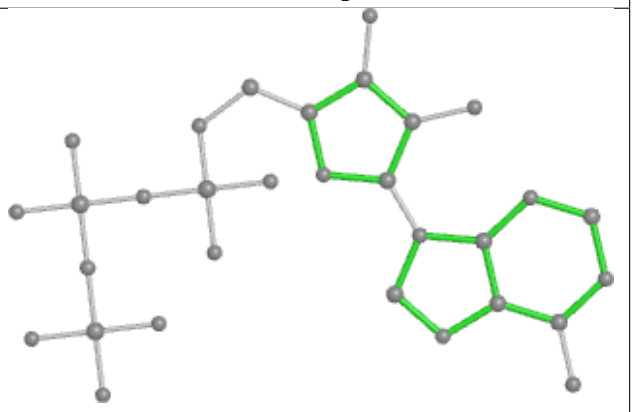
Bond lengths



Bond angles

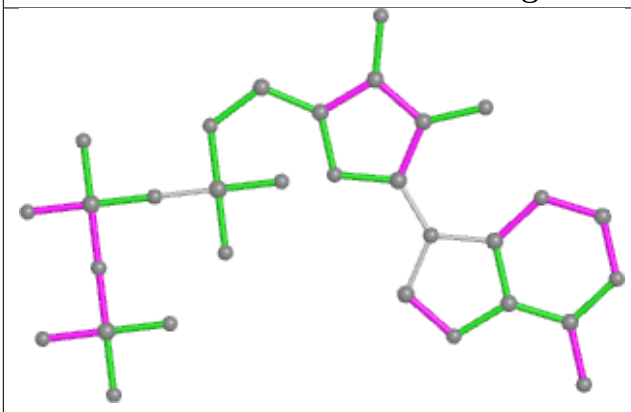


Torsions

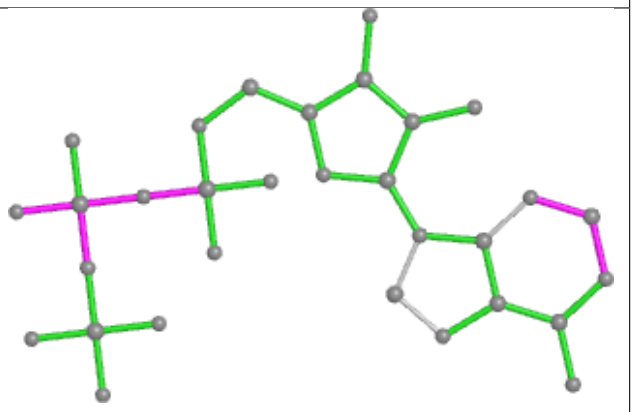


Rings

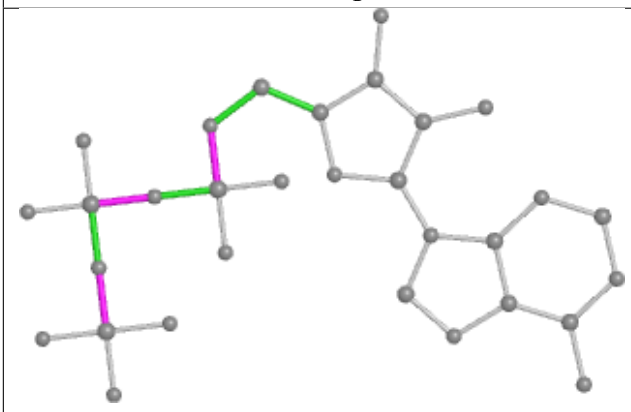
Ligand ANP D 601



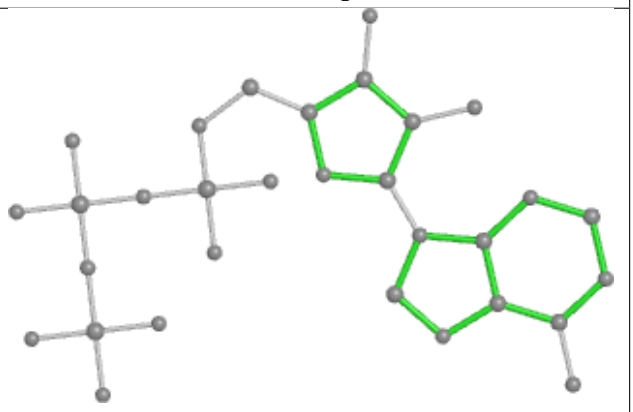
Bond lengths



Bond angles

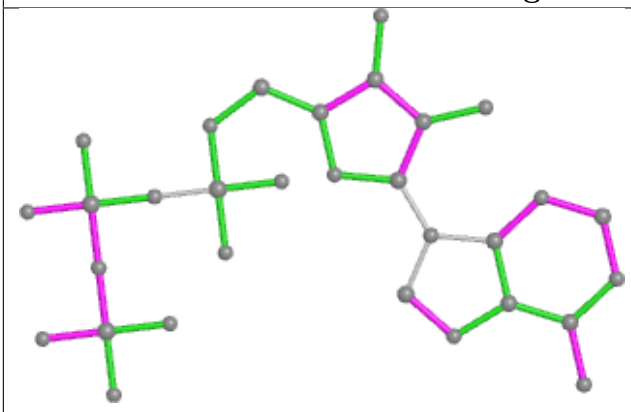


Torsions

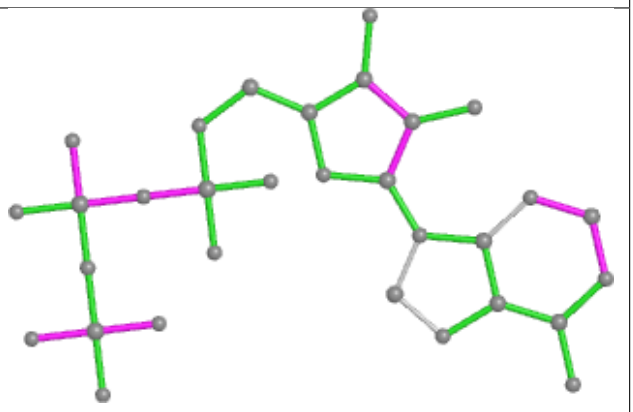


Rings

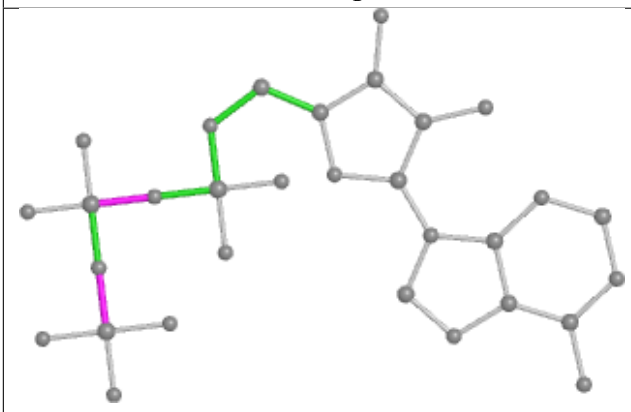
Ligand ANP F 601



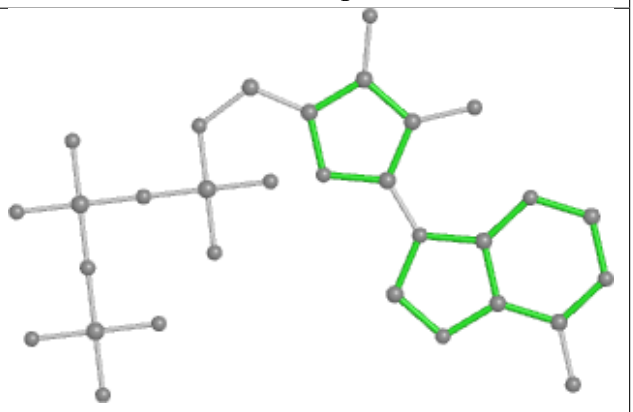
Bond lengths



Bond angles

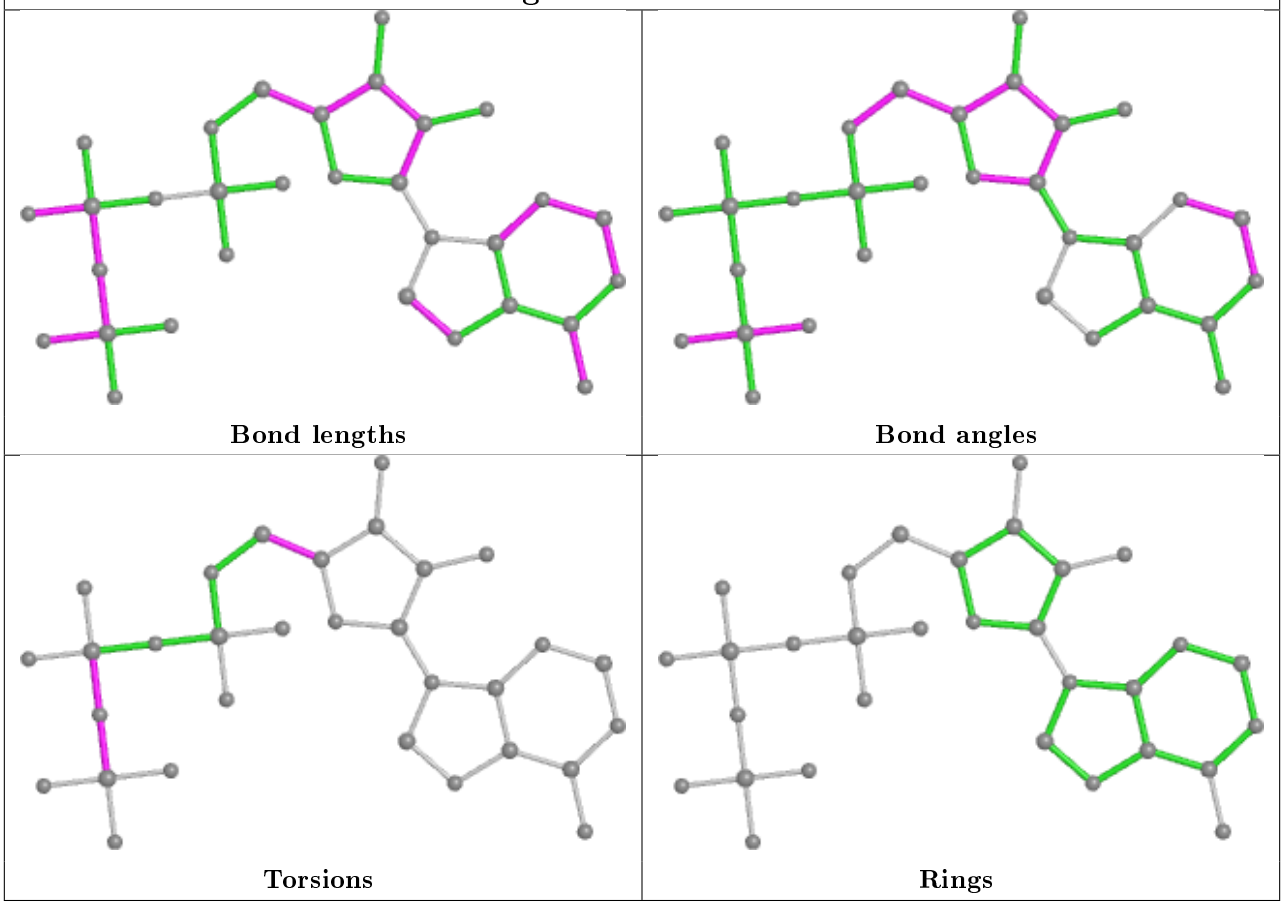


Torsions



Rings

Ligand ANP O 601



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, 95^{th} percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled 'Q< 0.9' lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å^2)	Q<0.9
1	A	380/432 (87%)	-0.33	5 (1%)	77	77	53, 85, 146, 167	0
1	B	382/432 (88%)	-0.25	6 (1%)	72	71	49, 93, 147, 176	0
1	C	387/432 (89%)	-0.40	2 (0%)	91	91	50, 72, 122, 151	0
1	D	392/432 (90%)	-0.32	9 (2%)	60	58	51, 79, 132, 170	0
1	E	386/432 (89%)	-0.38	4 (1%)	82	82	50, 78, 132, 161	0
1	F	383/432 (88%)	-0.25	6 (1%)	72	71	65, 96, 138, 156	0
1	G	381/432 (88%)	-0.29	8 (2%)	63	61	67, 93, 122, 156	0
1	H	379/432 (87%)	-0.25	6 (1%)	72	71	64, 91, 122, 137	0
1	I	375/432 (86%)	-0.08	14 (3%)	41	37	66, 101, 176, 192	0
1	J	384/432 (88%)	-0.38	6 (1%)	72	71	56, 83, 144, 172	0
1	K	376/432 (87%)	-0.03	12 (3%)	47	43	71, 104, 176, 190	0
1	L	382/432 (88%)	0.11	19 (4%)	28	25	74, 112, 180, 195	0
1	M	383/432 (88%)	-0.11	13 (3%)	45	40	78, 108, 145, 166	0
1	N	373/432 (86%)	-0.04	14 (3%)	40	36	74, 109, 152, 173	0
1	O	379/432 (87%)	-0.20	8 (2%)	63	61	78, 100, 131, 161	0
1	P	376/432 (87%)	-0.15	9 (2%)	59	56	76, 108, 139, 151	0
All	All	6098/6912 (88%)	-0.21	141 (2%)	60	58	49, 96, 149, 195	0

All (141) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	H	246	VAL	5.2
1	F	246	VAL	5.1
1	O	338	LEU	4.8
1	I	356	ALA	4.6
1	A	343	PRO	4.5

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Mol	Chain	Res	Type	RSRZ
1	G	243	PRO	4.5
1	I	292	GLN	4.3
1	O	52	ASN	4.0
1	P	92	GLY	3.9
1	I	290	ALA	3.8
1	D	9	GLN	3.8
1	K	415	GLN	3.7
1	M	124	GLY	3.7
1	M	344	ASN	3.5
1	O	48	GLU	3.5
1	L	283	THR	3.4
1	L	124	GLY	3.4
1	L	240	SER	3.4
1	P	156	LEU	3.3
1	K	243	PRO	3.3
1	M	244	HIS	3.3
1	F	126	SER	3.3
1	I	273	SER	3.3
1	L	393	THR	3.3
1	N	124	GLY	3.3
1	L	334	ASP	3.2
1	A	338	LEU	3.2
1	G	49	VAL	3.1
1	L	241	THR	3.1
1	L	274	SER	3.1
1	G	124	GLY	3.1
1	K	412	SER	3.1
1	L	290	ALA	3.0
1	J	418	ILE	3.0
1	K	344	ASN	3.0
1	M	291	MET	3.0
1	K	405	VAL	3.0
1	O	343	PRO	2.9
1	O	19	ILE	2.9
1	N	51	ASP	2.9
1	D	290	ALA	2.9
1	G	52	ASN	2.9
1	M	52	ASN	2.9
1	E	344	ASN	2.9
1	G	242	ALA	2.9
1	A	48	GLU	2.8
1	I	408	ASN	2.8

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Mol	Chain	Res	Type	RSRZ
1	N	333	LYS	2.8
1	F	52	ASN	2.8
1	I	291	MET	2.7
1	I	52	ASN	2.7
1	K	297	TYR	2.7
1	J	419	ALA	2.7
1	N	273	SER	2.6
1	C	52	ASN	2.6
1	K	52	ASN	2.6
1	M	293	TRP	2.6
1	G	45	LEU	2.6
1	M	48	GLU	2.6
1	D	52	ASN	2.6
1	L	333	LYS	2.6
1	M	92	GLY	2.6
1	P	91	SER	2.6
1	H	124	GLY	2.6
1	F	295	ALA	2.6
1	I	419	ALA	2.6
1	L	357	VAL	2.5
1	N	398	ALA	2.5
1	A	344	ASN	2.5
1	N	291	MET	2.5
1	N	52	ASN	2.5
1	A	124	GLY	2.5
1	L	254	PRO	2.5
1	N	296	GLY	2.5
1	L	343	PRO	2.4
1	N	48	GLU	2.4
1	H	162	ALA	2.4
1	P	48	GLU	2.4
1	L	48	GLU	2.4
1	M	156	LEU	2.4
1	D	124	GLY	2.4
1	H	51	ASP	2.4
1	D	10	ASP	2.4
1	D	126	SER	2.4
1	I	275	ILE	2.4
1	I	244	HIS	2.4
1	B	356	ALA	2.3
1	H	125	VAL	2.3
1	M	255	GLY	2.3

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Mol	Chain	Res	Type	RSRZ
1	G	244	HIS	2.3
1	L	330	LYS	2.3
1	B	178	ALA	2.3
1	O	61	TYR	2.3
1	D	214	THR	2.3
1	H	283	THR	2.3
1	K	126	SER	2.3
1	I	124	GLY	2.3
1	L	416	ALA	2.2
1	J	52	ASN	2.2
1	G	119	GLY	2.2
1	B	125	VAL	2.2
1	O	329	ASN	2.2
1	E	241	THR	2.2
1	I	51	ASP	2.2
1	N	107	GLY	2.2
1	N	297	TYR	2.2
1	P	52	ASN	2.2
1	I	398	ALA	2.2
1	B	124	GLY	2.2
1	O	337	LEU	2.2
1	L	331	TYR	2.2
1	M	345	LEU	2.2
1	J	178	ALA	2.2
1	D	51	ASP	2.2
1	L	49	VAL	2.2
1	N	156	LEU	2.1
1	M	241	THR	2.1
1	B	340	ASP	2.1
1	K	421	ARG	2.1
1	P	398	ALA	2.1
1	E	213	VAL	2.1
1	K	156	LEU	2.1
1	N	332	ALA	2.1
1	B	48	GLU	2.1
1	C	242	ALA	2.1
1	M	254	PRO	2.1
1	P	169	SER	2.1
1	E	331	TYR	2.1
1	L	52	ASN	2.1
1	P	49	VAL	2.1
1	J	388	CYS	2.0

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Mol	Chain	Res	Type	RSRZ
1	D	48	GLU	2.0
1	L	45	LEU	2.0
1	N	387	VAL	2.0
1	F	273	SER	2.0
1	K	312	GLU	2.0
1	P	15	ALA	2.0
1	I	267	THR	2.0
1	K	417	ARG	2.0
1	F	334	ASP	2.0
1	J	344	ASN	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 carbohydrates 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	B-factors(Å^2)	Q<0.9
3	MG	B	1001	1/1	0.87	0.16	83,83,83,83	0
3	MG	D	602	1/1	0.90	0.29	58,58,58,58	0
3	MG	L	602	1/1	0.93	0.41	74,74,74,74	0
3	MG	C	1001	1/1	0.94	0.44	85,85,85,85	0
3	MG	P	602	1/1	0.95	0.42	97,97,97,97	0
2	ANP	O	601	31/31	0.95	0.32	98,102,105,106	0
3	MG	K	602	1/1	0.96	0.28	54,54,54,54	0
3	MG	B	602	1/1	0.96	0.29	57,57,57,57	0
2	ANP	P	601	31/31	0.96	0.28	94,98,108,111	0
2	ANP	B	601	31/31	0.96	0.22	56,81,90,93	0
2	ANP	I	601	31/31	0.96	0.28	70,75,80,83	0
2	ANP	F	601	31/31	0.96	0.27	72,90,100,102	0
2	ANP	K	601	31/31	0.96	0.25	90,96,104,106	0

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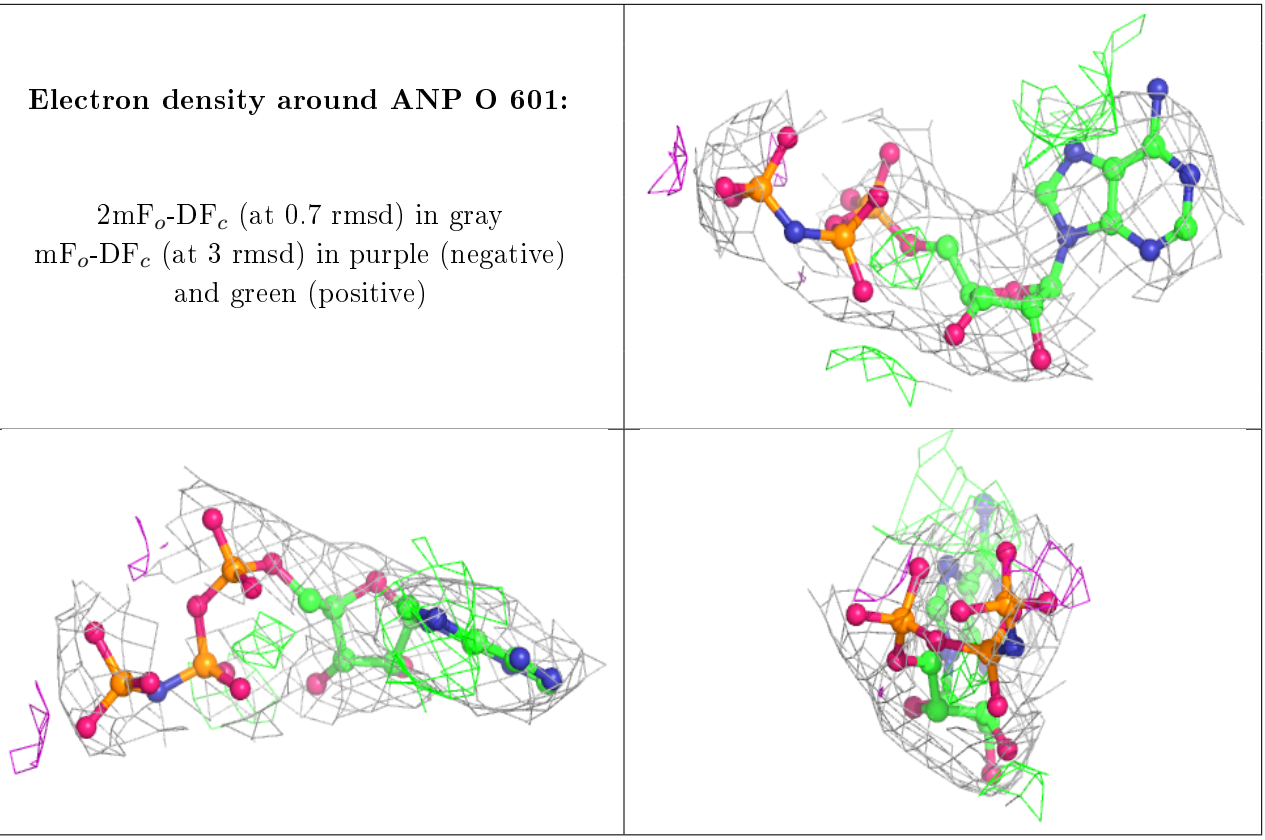
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
3	MG	O	602	1/1	0.97	0.42	76,76,76,76	0
3	MG	G	602	1/1	0.97	0.23	63,63,63,63	0
2	ANP	H	601	31/31	0.97	0.24	69,77,80,83	0
2	ANP	E	601	31/31	0.97	0.27	62,69,73,76	0
2	ANP	G	601	31/31	0.97	0.22	63,78,82,83	0
2	ANP	D	601	31/31	0.97	0.23	58,64,68,74	0
2	ANP	L	601	31/31	0.97	0.25	74,92,98,99	0
3	MG	D	1001	1/1	0.97	0.06	78,78,78,78	0
3	MG	E	602	1/1	0.97	0.21	56,56,56,56	0
3	MG	J	602	1/1	0.98	0.45	60,60,60,60	0
2	ANP	J	601	31/31	0.98	0.24	49,63,68,69	0
3	MG	C	602	1/1	0.98	0.28	51,51,51,51	0
3	MG	G	1001	1/1	0.98	0.10	76,76,76,76	0
2	ANP	N	601	31/31	0.98	0.29	81,89,95,97	0
3	MG	F	602	1/1	0.98	0.32	53,53,53,53	0
2	ANP	M	601	31/31	0.98	0.28	76,87,92,93	0
2	ANP	A	601	31/31	0.98	0.27	56,65,76,81	0
2	ANP	C	601	31/31	0.98	0.26	43,56,63,65	0
3	MG	M	602	1/1	0.98	0.29	51,51,51,51	0
3	MG	H	602	1/1	0.99	0.30	58,58,58,58	0
3	MG	A	602	1/1	0.99	0.40	50,50,50,50	0
3	MG	I	602	1/1	0.99	0.61	82,82,82,82	0
3	MG	N	602	1/1	0.99	0.32	75,75,75,75	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.

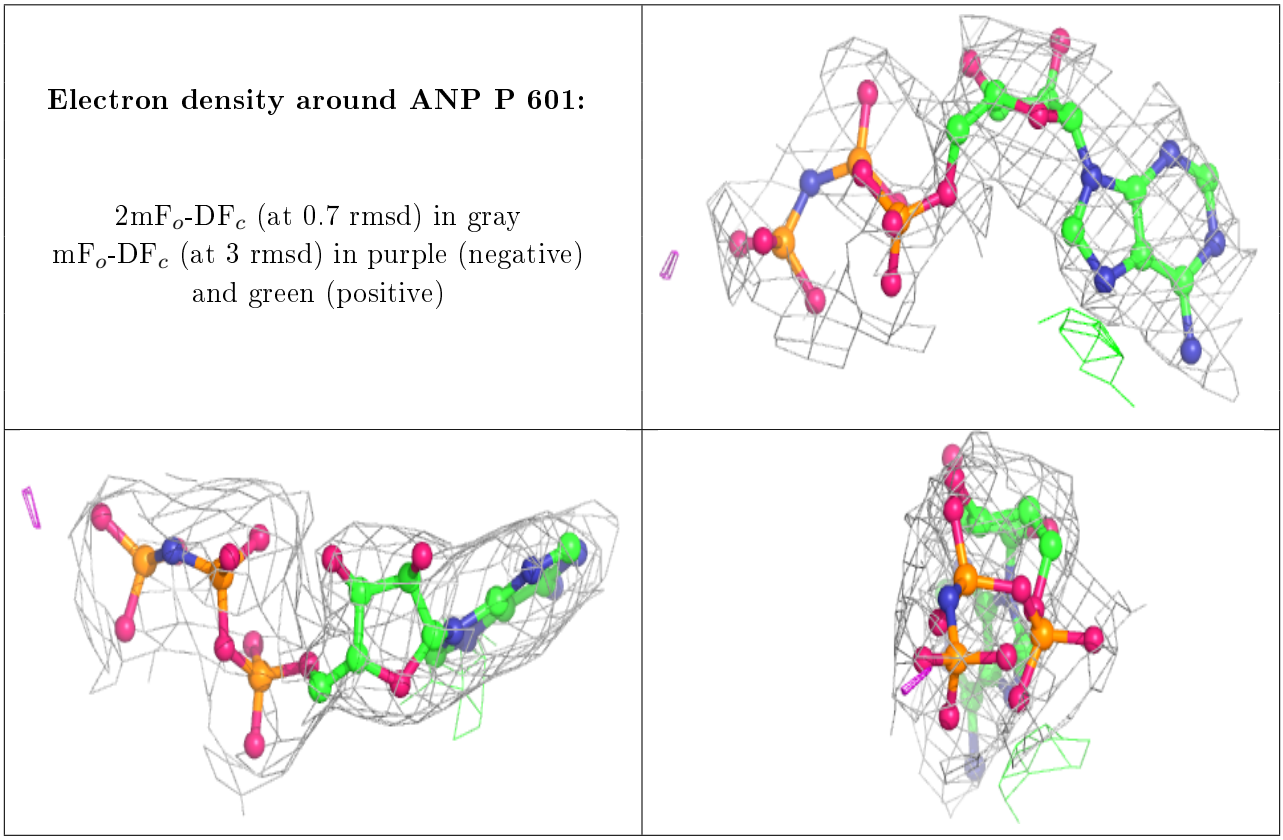
Electron density around ANP O 601:

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



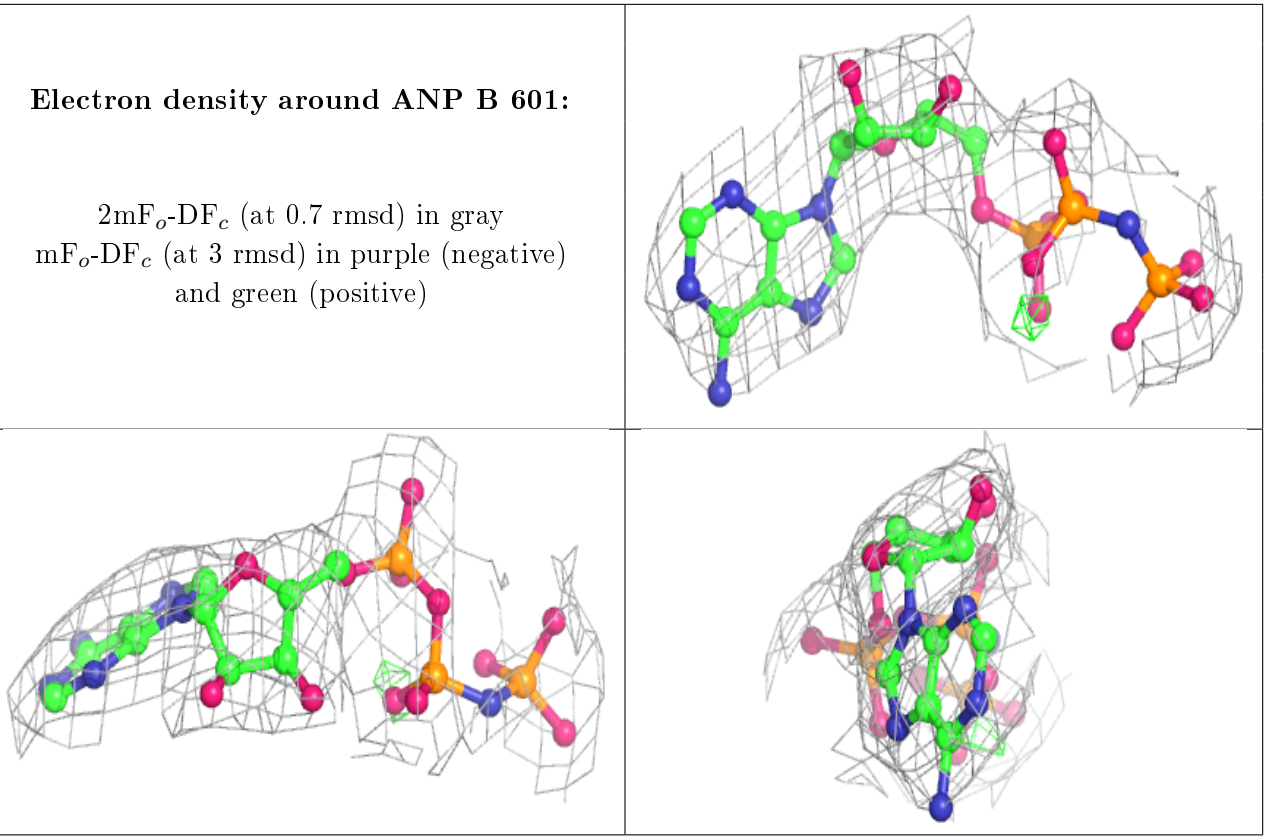
Electron density around ANP P 601:

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



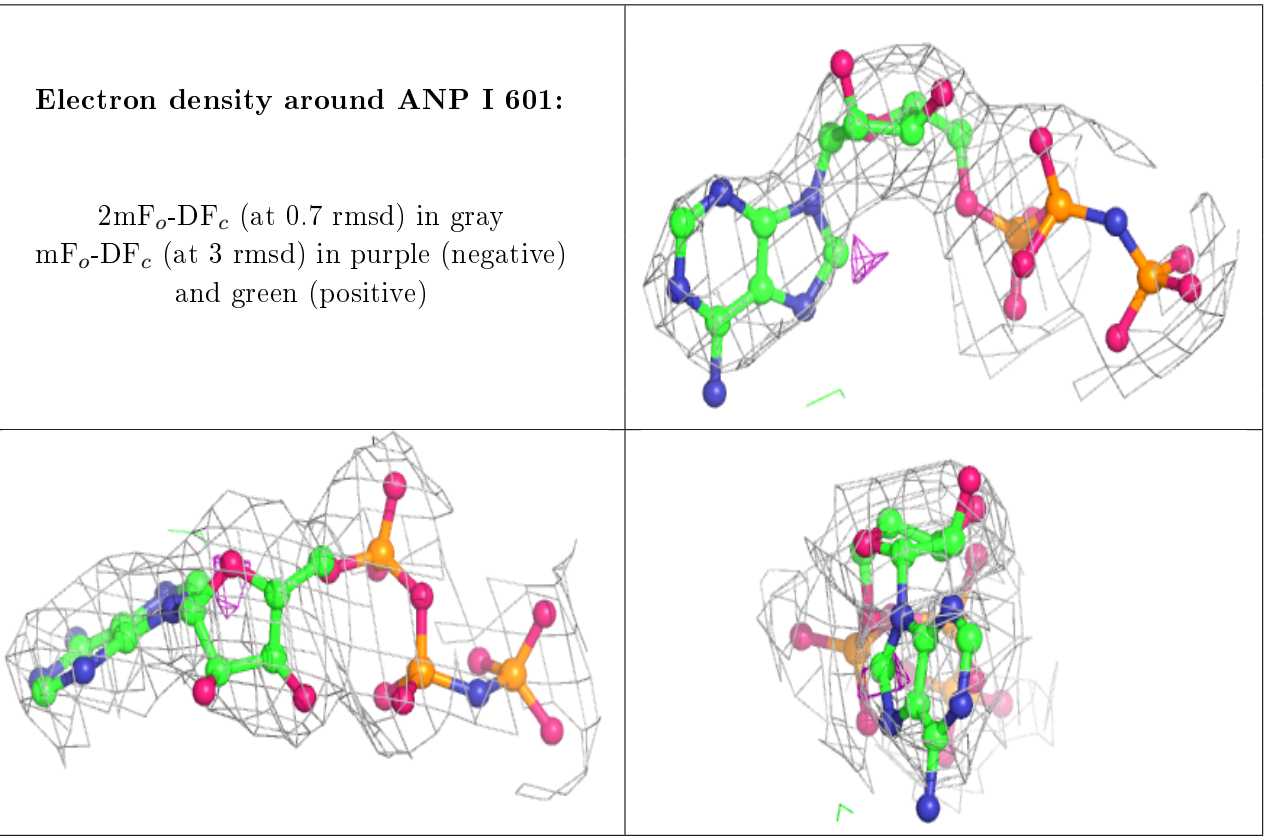
Electron density around ANP B 601:

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



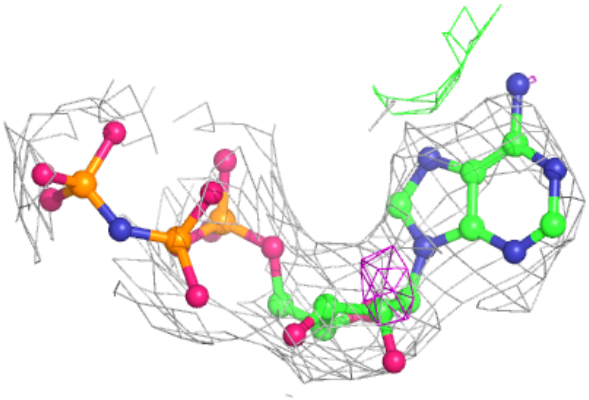
Electron density around ANP I 601:

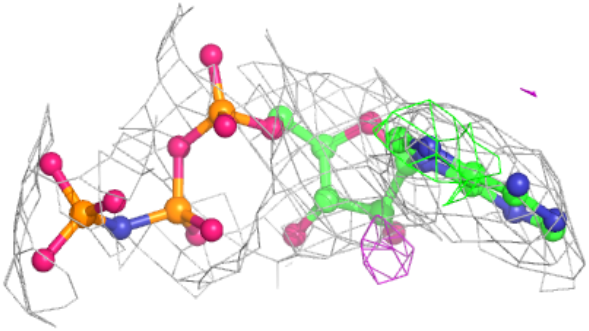
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

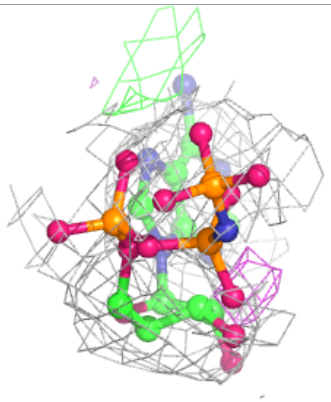


Electron density around ANP F 601:

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

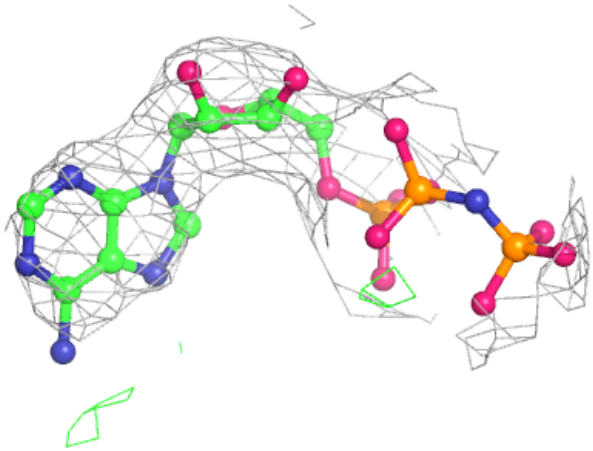


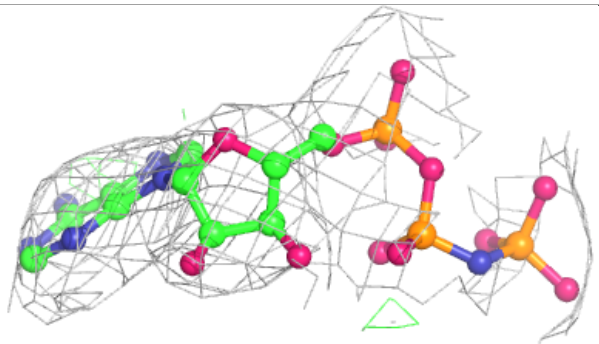


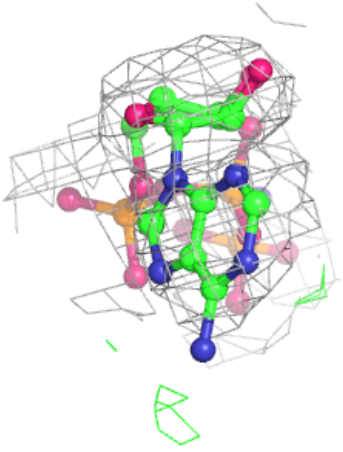


Electron density around ANP K 601:

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

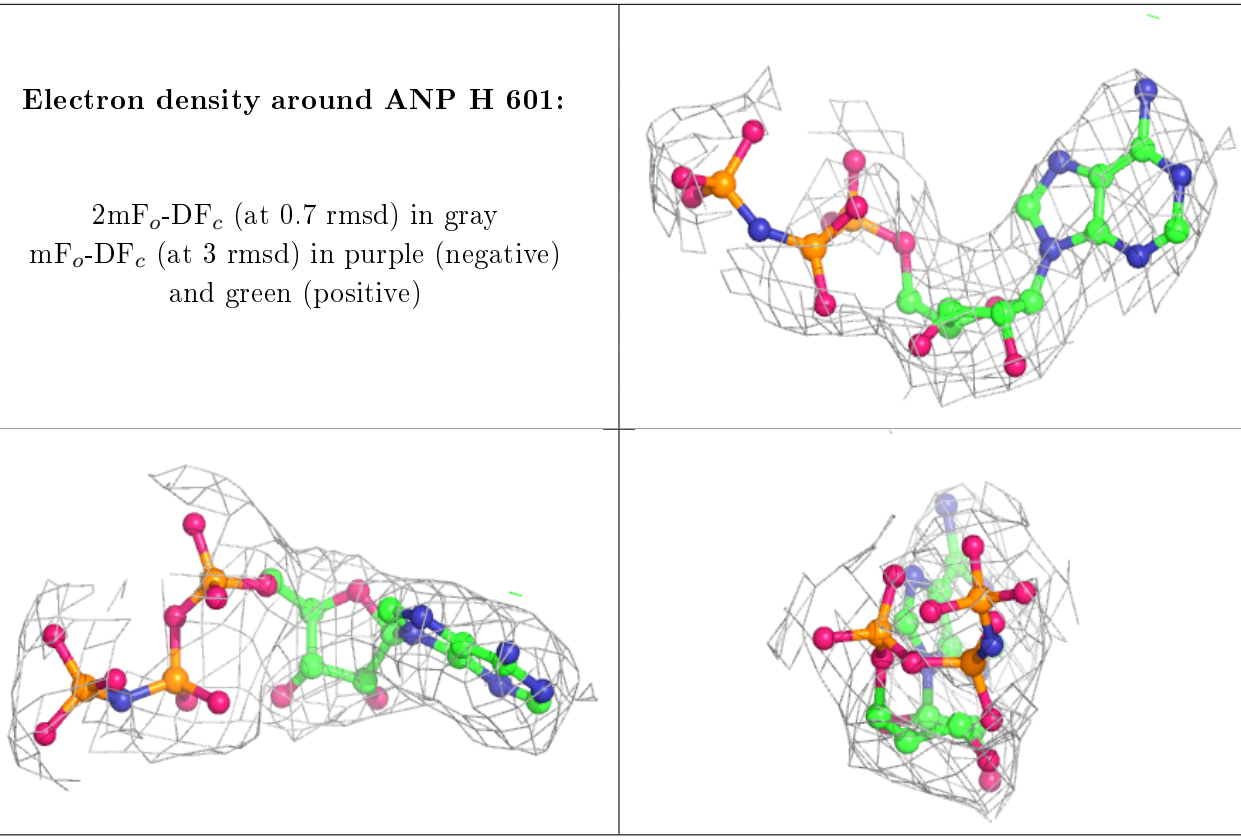






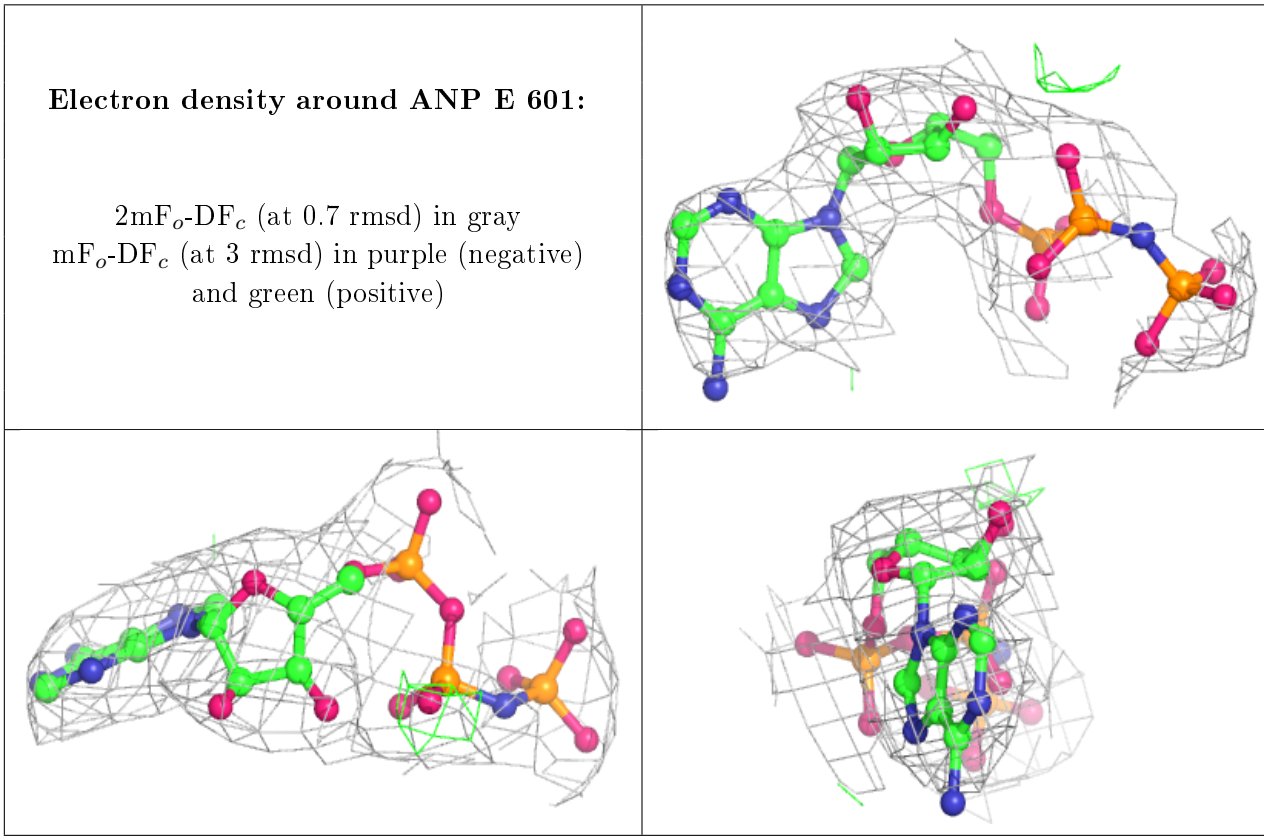
Electron density around ANP H 601:

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



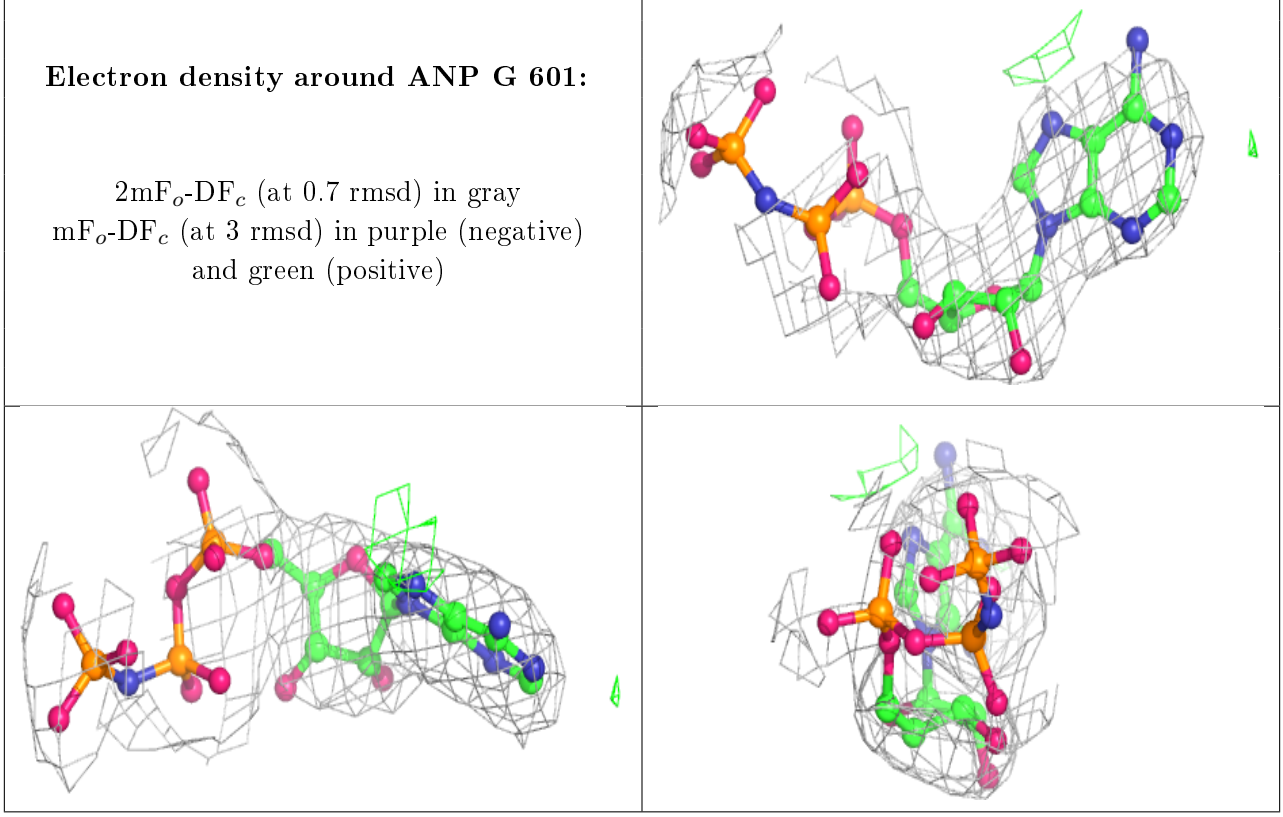
Electron density around ANP E 601:

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



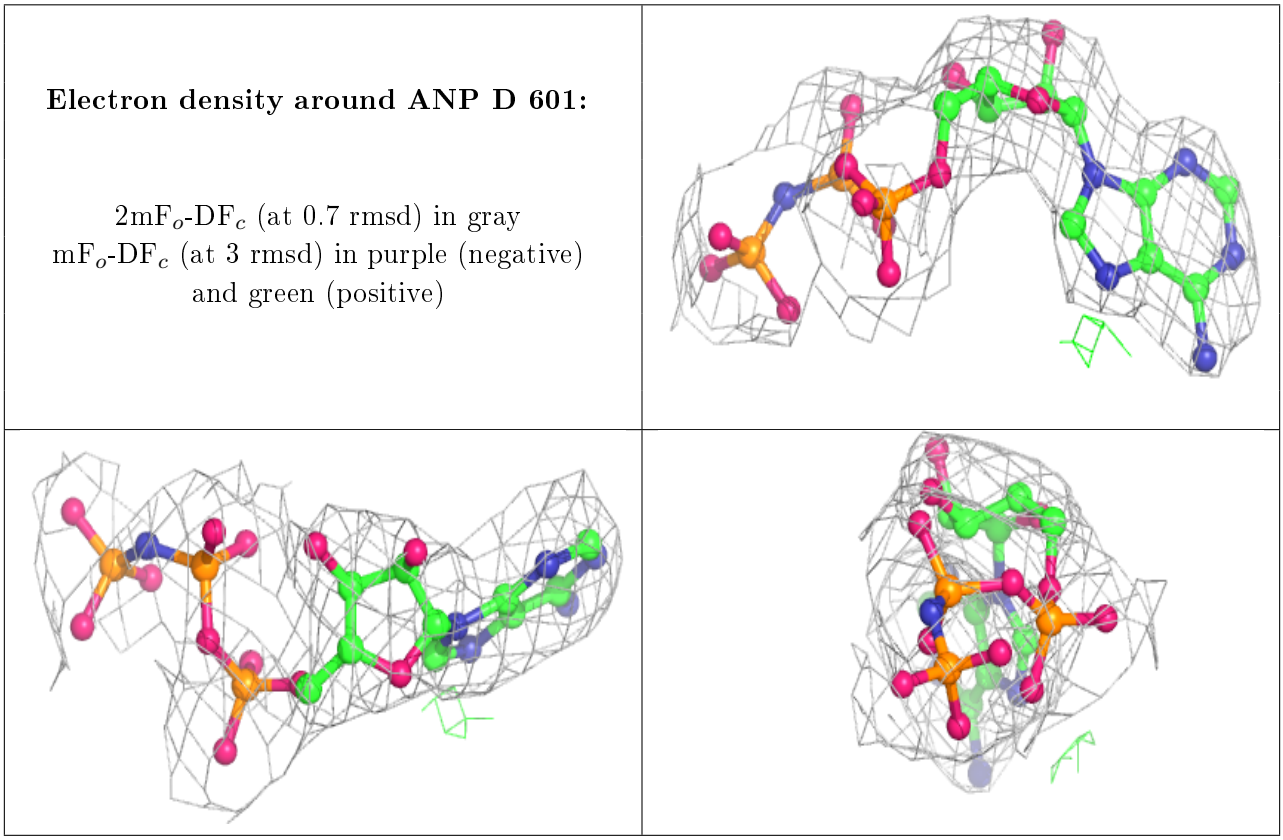
Electron density around ANP G 601:

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



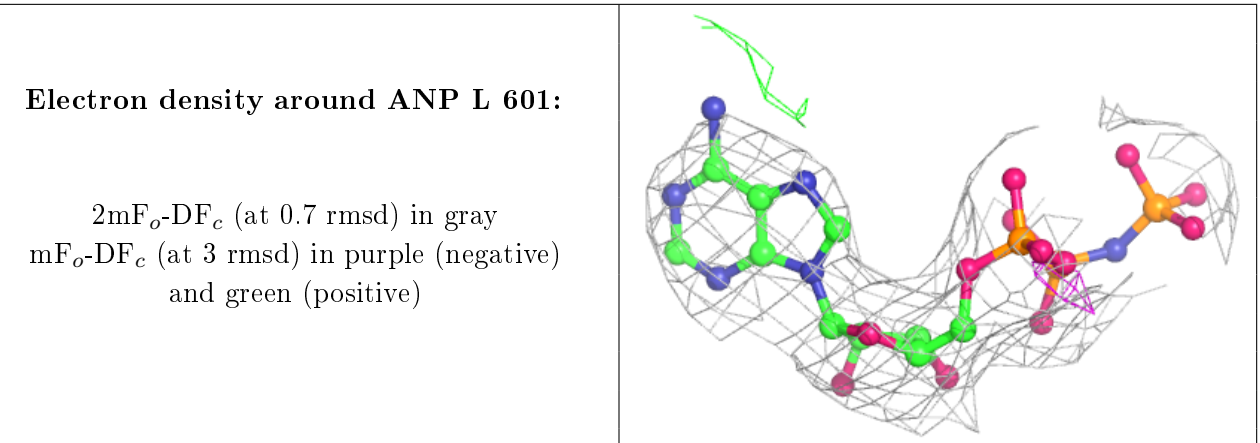
Electron density around ANP D 601:

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



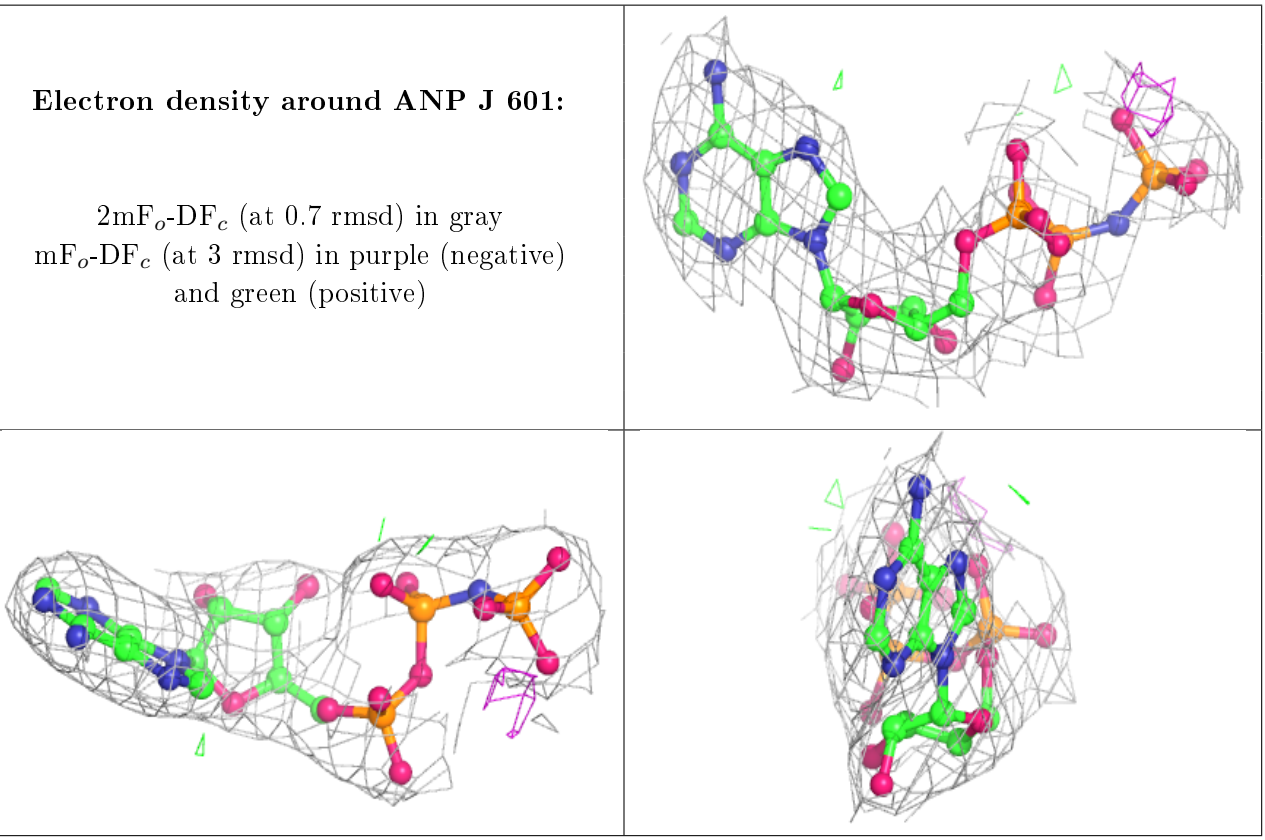
Electron density around ANP L 601:

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



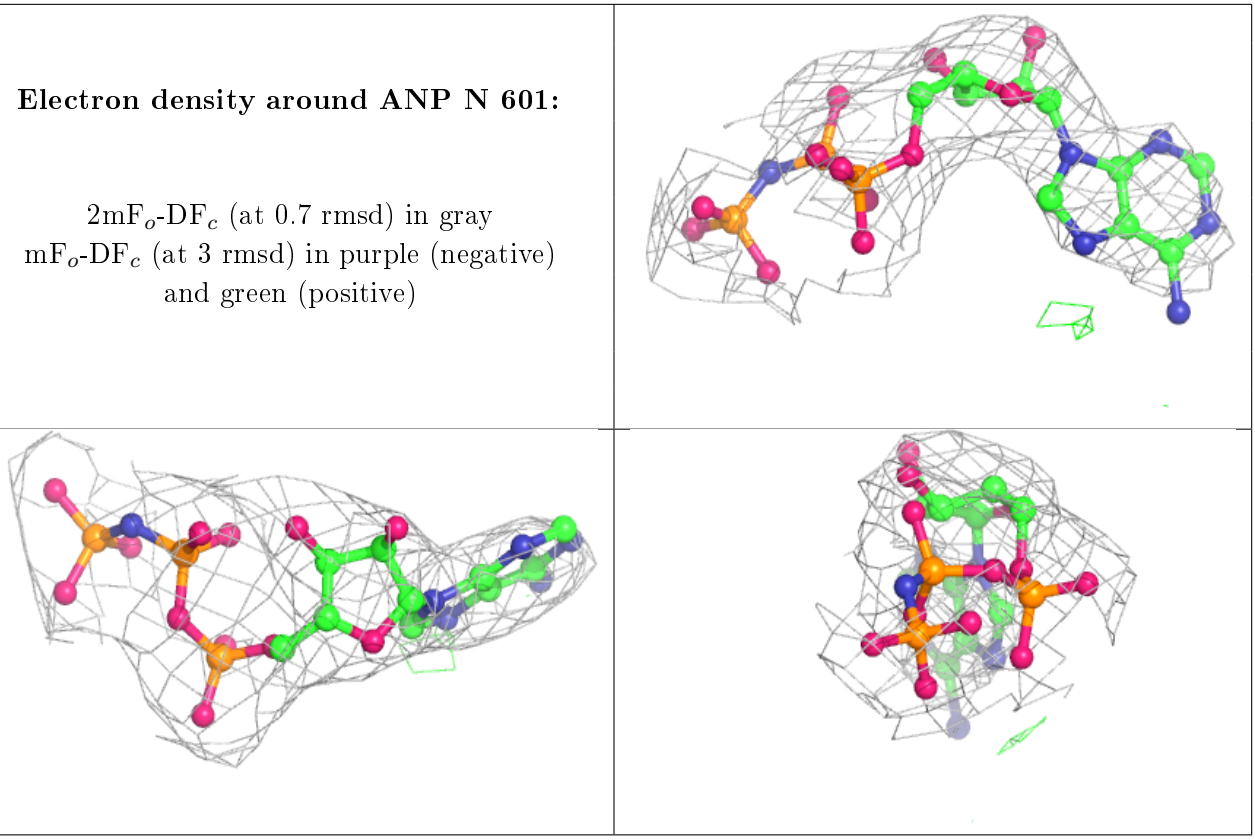
Electron density around ANP J 601:

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



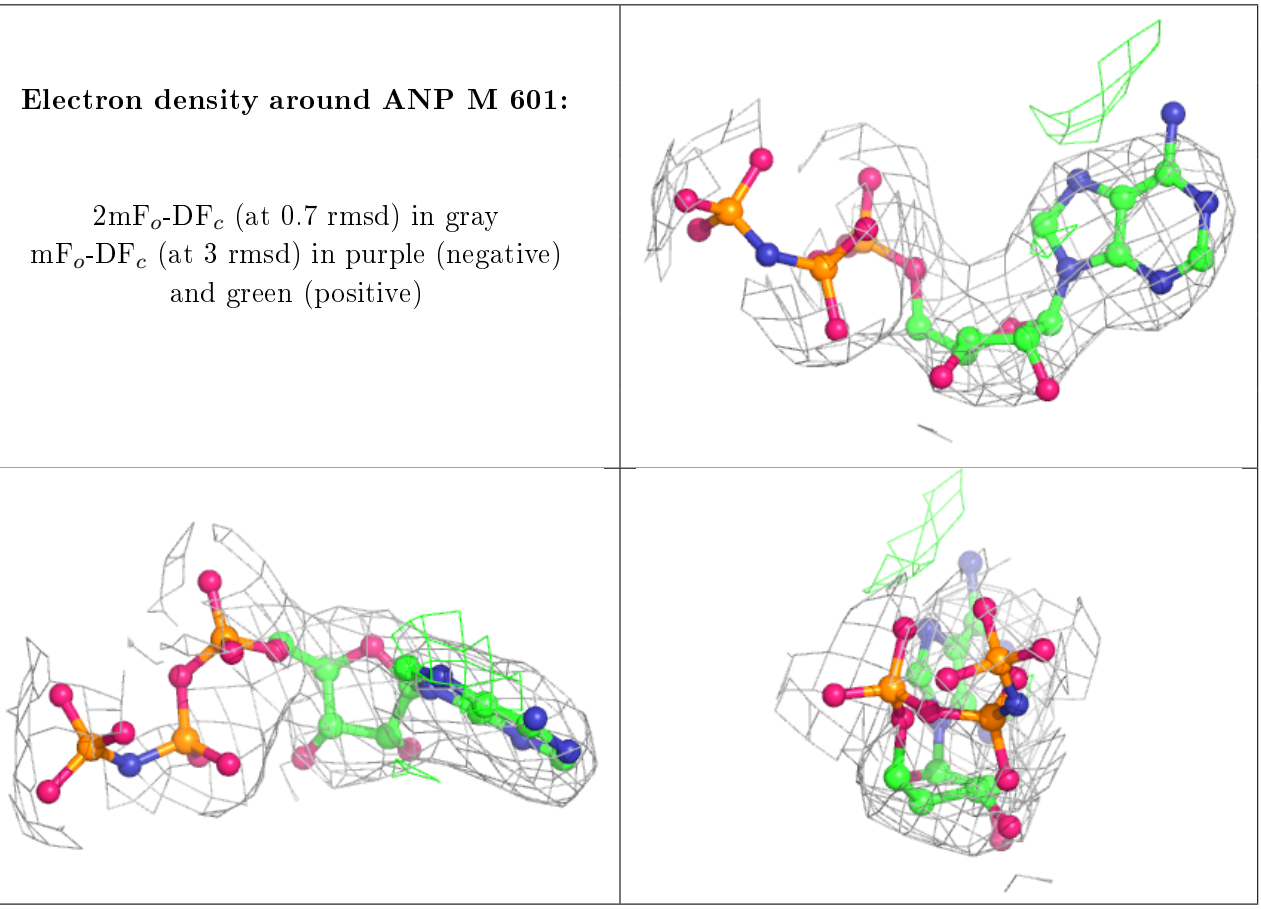
Electron density around ANP N 601:

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



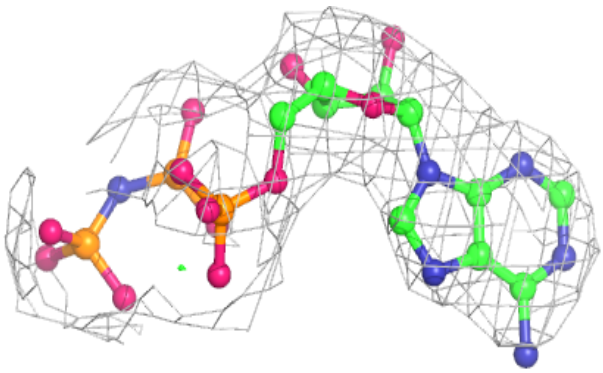
Electron density around ANP M 601:

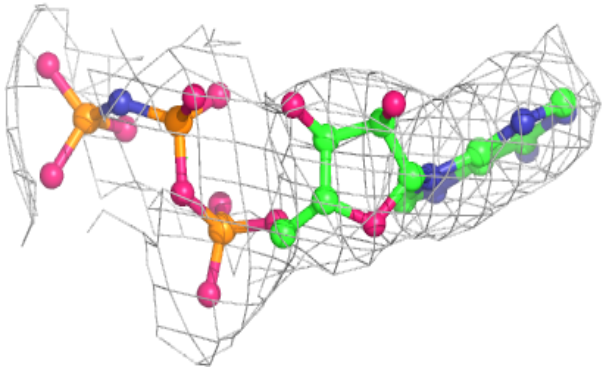
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

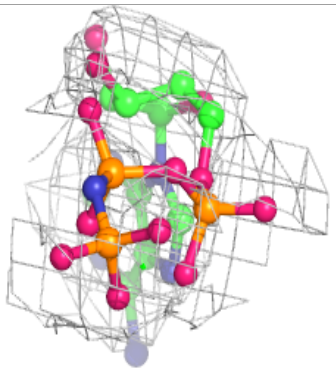


Electron density around ANP A 601:

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

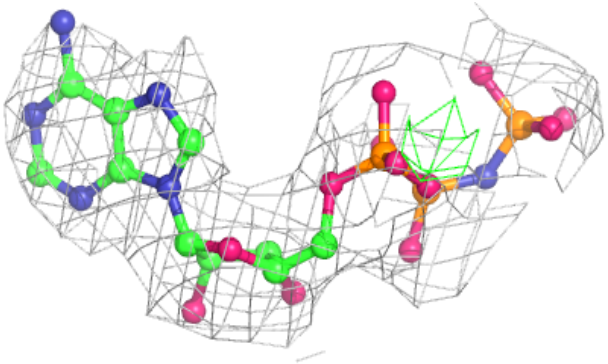


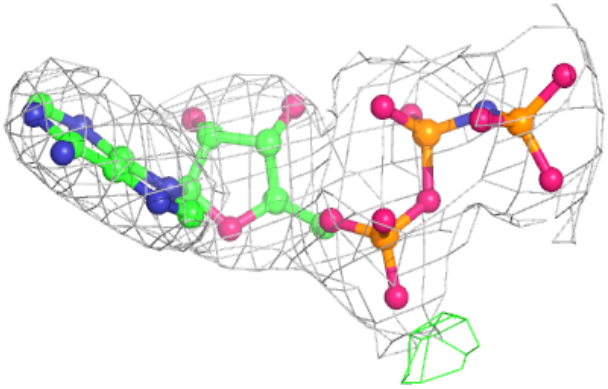


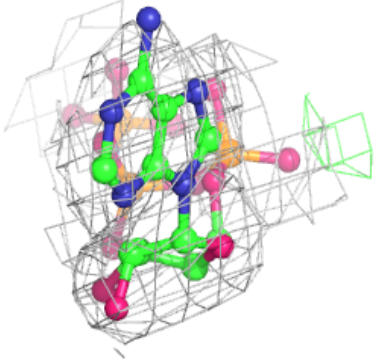


Electron density around ANP C 601:

$2mF_o$-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.