



wwPDB X-ray Structure Validation Summary Report

Feb 26, 2014 – 04:01 PM GMT

PDB ID : 4IMY
Title : The AFF4 scaffold binds human P-TEFb adjacent to HIV Tat
Authors : Alber, T.; Schulze-Gahmen, U.
Deposited on : 2013-01-03
Resolution : 2.94 Å(reported)

This is a wwPDB validation summary report for a publicly released PDB entry.

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at <http://wwpdb.org/ValidationPDFNotes.html>

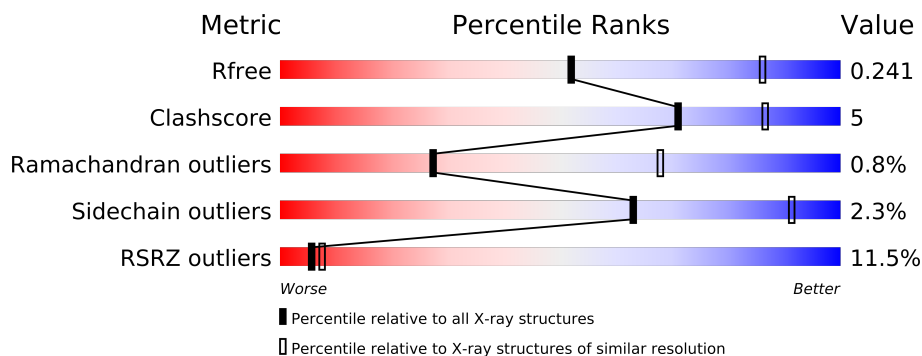
The following versions of software and data (see [references](#)) were used in the production of this report:

MolProbity : 4.02b-467
Mogul : 1.15 2013
Xtriage (Phenix) : dev-1323
EDS : stable22639
Percentile statistics : 21963
Refmac : 5.8.0049
CCP4 : 6.3.0 (Settle)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et. al. (1996)
Validation Pipeline (wwPDB-VP) : stable22683

1 Overall quality at a glance

The reported resolution of this entry is 2.94 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}	66092	1424 (2.98-2.90)
Clashscore	79885	1761 (2.98-2.90)
Ramachandran outliers	78287	1708 (2.98-2.90)
Sidechain outliers	78261	1710 (2.98-2.90)
RSRZ outliers	66119	1425 (2.98-2.90)

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. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density.

Mol	Chain	Length	Quality of chain
1	A	332	
1	C	332	
1	E	332	
2	B	264	
2	D	264	
2	F	264	
3	G	75	
3	H	75	
3	I	75	

The following table lists non-polymeric compounds that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Geometry	Electron density
4	AMP	A	401	-	X
4	AMP	C	401	-	X

2 Entry composition

There are 5 unique types of molecules in this entry. The entry contains 29134 atoms, of which 14526 are hydrogens and 0 are deuterium.

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 Cyclin-dependent kinase 9.

Mol	Chain	Residues	Atoms							ZeroOcc	AltConf	Trace
1	A	315	Total	C	H	N	O	P	S	0	0	0
			5120	1625	2585	435	459	1	15			
1	C	311	Total	C	H	N	O	P	S	0	0	0
			5079	1608	2569	433	453	1	15			
1	E	314	Total	C	H	N	O	P	S	0	0	0
			5128	1626	2593	435	458	1	15			

There are 6 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-1	GLY	-	EXPRESSION TAG	UNP P50750
A	0	HIS	-	EXPRESSION TAG	UNP P50750
C	-1	GLY	-	EXPRESSION TAG	UNP P50750
C	0	HIS	-	EXPRESSION TAG	UNP P50750
E	-1	GLY	-	EXPRESSION TAG	UNP P50750
E	0	HIS	-	EXPRESSION TAG	UNP P50750

- Molecule 2 is a protein called Cyclin-T1.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
2	B	250	Total	C	H	N	O	S	0	0	0
			3974	1282	1971	342	370	9			
2	D	251	Total	C	H	N	O	S	0	0	0
			4020	1292	1996	348	375	9			
2	F	249	Total	C	H	N	O	S	0	0	0
			3974	1280	1973	342	370	9			

- Molecule 3 is a protein called AF4/FMR2 family member 4.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
3	G	33	Total	C	H	N	O	S	0	0	0
			470	160	222	36	50	2			

Continued on next page...

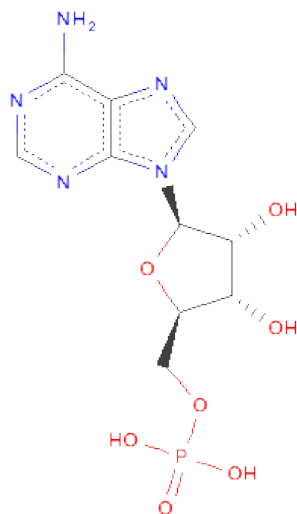
Continued from previous page...

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
3	H	53	Total	C	H	N	O	S	0	3	0
			783	254	362	83	80	4			
3	I	33	Total	C	H	N	O	S	0	0	0
			462	153	219	41	47	2			

There are 9 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
G	-1	SER	-	EXPRESSION TAG	UNP Q9UHB7
G	0	ASN	-	EXPRESSION TAG	UNP Q9UHB7
G	1	ALA	-	EXPRESSION TAG	UNP Q9UHB7
H	-1	SER	-	EXPRESSION TAG	UNP Q9UHB7
H	0	ASN	-	EXPRESSION TAG	UNP Q9UHB7
H	1	ALA	-	EXPRESSION TAG	UNP Q9UHB7
I	-1	SER	-	EXPRESSION TAG	UNP Q9UHB7
I	0	ASN	-	EXPRESSION TAG	UNP Q9UHB7
I	1	ALA	-	EXPRESSION TAG	UNP Q9UHB7

- Molecule 4 is ADENOSINE MONOPHOSPHATE (three-letter code: AMP) (formula: $C_{10}H_{14}N_5O_7P$).



Mol	Chain	Residues	Atoms						ZeroOcc	AltConf
4	A	1	Total	C	H	N	O	P	0	0
			35	10	12	5	7	1		
4	C	1	Total	C	H	N	O	P	0	0
			35	10	12	5	7	1		

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
4	E	1	Total	C	H	N	O	P	
			35	10	12	5	7	1	
								0	0

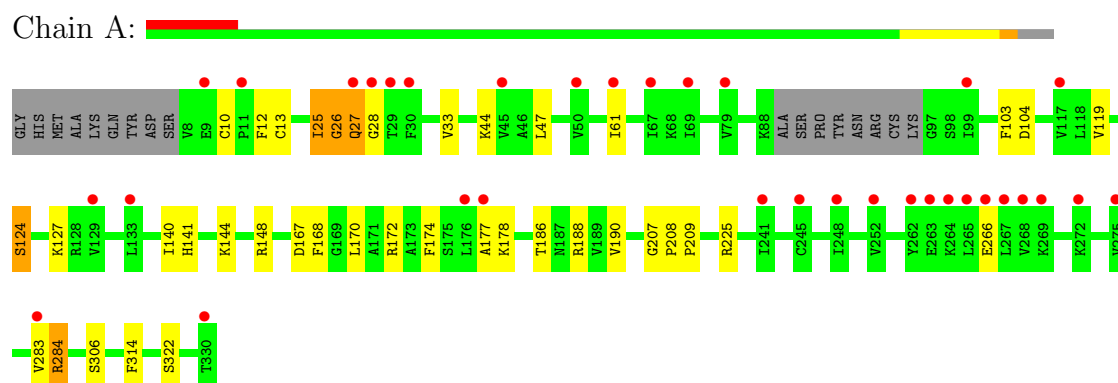
- Molecule 5 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
5	A	3	Total	O		
			3	3	0	0
5	B	2	Total	O		
			2	2	0	0
5	C	5	Total	O		
			5	5	0	0
5	D	3	Total	O		
			3	3	0	0
5	E	5	Total	O		
			5	5	0	0
5	F	1	Total	O		
			1	1	0	0

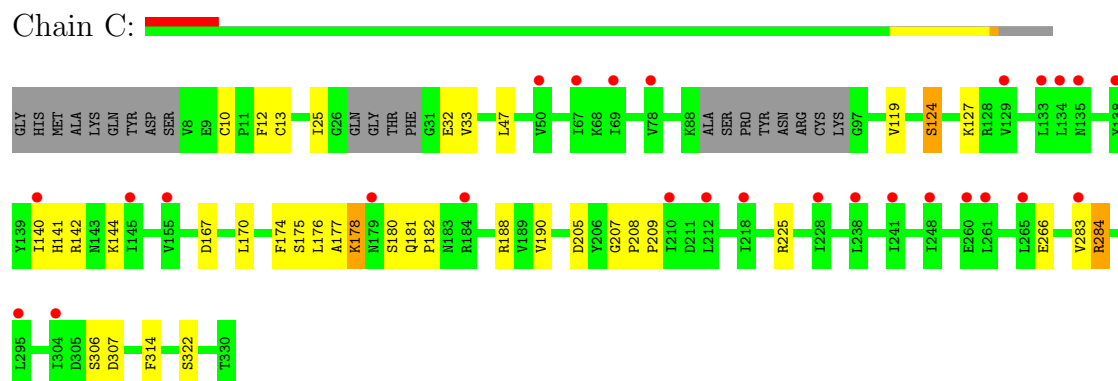
3 Residue-property plots

These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of errors 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.

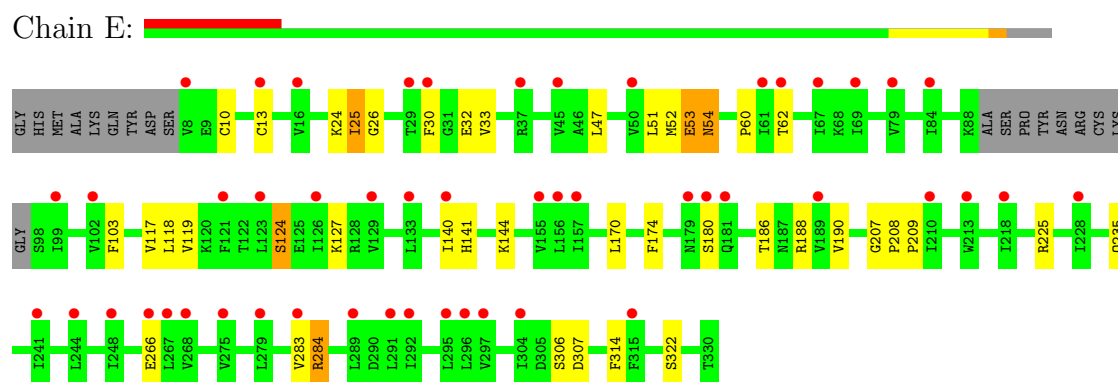
- Molecule 1: Cyclin-dependent kinase 9



- Molecule 1: Cyclin-dependent kinase 9

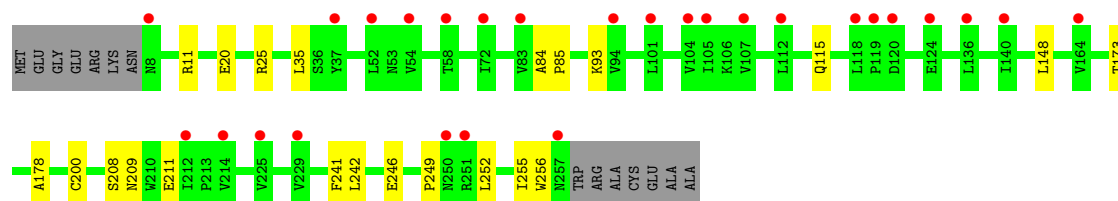


- Molecule 1: Cyclin-dependent kinase 9



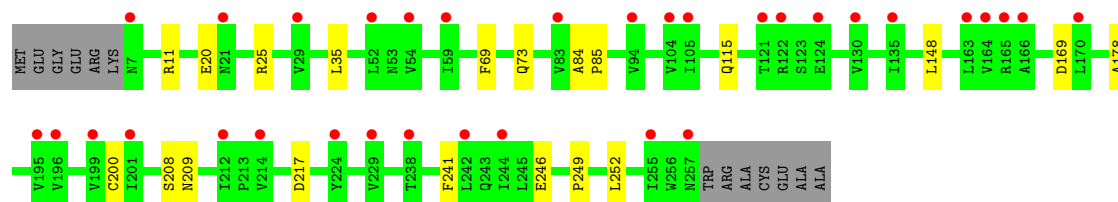
- Molecule 2: Cyclin-T1

Chain B:



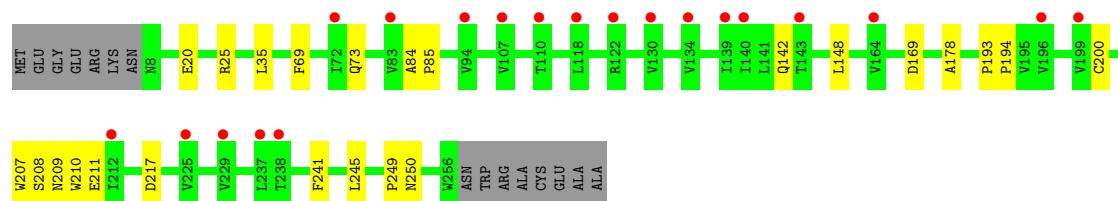
- Molecule 2: Cyclin-T1

Chain D:



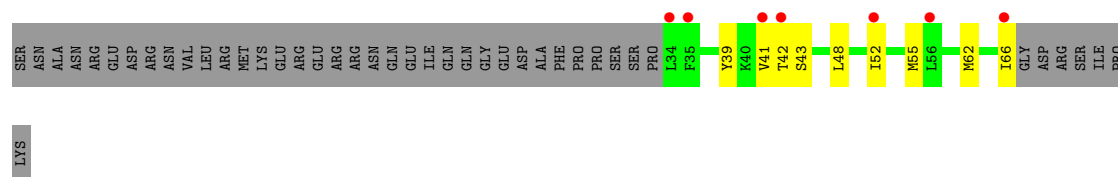
- Molecule 2: Cyclin-T1

Chain F:



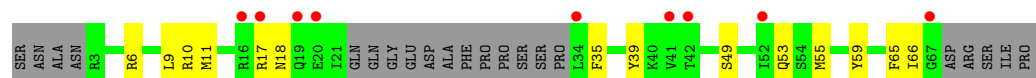
- Molecule 3: AF4/FMR2 family member 4

Chain G:



- Molecule 3: AF4/FMR2 family member 4

Chain H:



- Molecule 3: AF4/FMR2 family member 4

Chain I:



4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	100.69Å 126.30Å 195.63Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	48.76 – 2.94 48.76 – 2.93	Depositor EDS
% Data completeness (in resolution range)	99.7 (48.76-2.94) 94.7 (48.76-2.93)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	0.09	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.03 (at 2.96Å)	Xtriage
Refinement program	PHENIX (PHENIX.REFINE: 1.8-1069)	Depositor
R, R_{free}	0.207 , 0.245 0.208 , 0.241	Depositor DCC
R_{free} test set	1886 reflections (3.67%)	DCC
Wilson B-factor (Å ²)	84.4	Xtriage
Anisotropy	0.085	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.34 , 75.1	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning	$\langle L \rangle = 0.49$, $\langle L^2 \rangle = 0.32$	Xtriage
Outliers	0 of 54129 reflections	Xtriage
F_o, F_c correlation	0.93	EDS
Total number of atoms	29134	wwPDB-VP
Average B, all atoms (Å ²)	131.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.36% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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

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	0.23	0/2574	0.40	0/3475
1	C	0.23	0/2547	0.40	0/3436
1	E	0.23	0/2574	0.40	0/3474
2	B	0.25	0/2053	0.39	0/2801
2	D	0.32	2/2074 (0.1%)	0.39	0/2828
2	F	0.25	0/2051	0.38	0/2798
3	G	0.24	0/252	0.36	0/340
3	H	0.22	0/424	0.38	0/566
3	I	0.23	0/246	0.37	0/330
All	All	0.25	2/14795 (0.0%)	0.39	0/20048

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	D	115	GLN	CD-NE2	-7.70	1.13	1.32
2	D	115	GLN	CD-OE1	-6.63	1.09	1.24

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 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 hydrogens added by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, and the number in parentheses is this value normalized per 1000 atoms of the molecule in the chain. The Symm-Clashes column gives symmetry related clashes, in the same way as for the Clashes column.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	2535	2585	0	27	1
1	C	2510	2569	0	30	0
1	E	2535	2593	0	33	1
2	B	2003	1971	0	17	0
2	D	2024	1996	0	10	0
2	F	2001	1973	0	13	0
3	G	248	222	0	10	0
3	H	421	362	0	13	0
3	I	243	219	0	7	0
4	A	23	12	0	7	0
4	C	23	12	0	1	0
4	E	23	12	0	1	0
5	A	3	0	0	0	0
5	B	2	0	0	1	0
5	C	5	0	0	0	0
5	D	3	0	0	0	0
5	E	5	0	0	0	0
5	F	1	0	0	0	0
All	All	14608	14526	0	131	1

Clashscore is defined as the number of clashes calculated for the entry per 1000 atoms (including hydrogens) of the entry. The overall clashscore for this entry is 5.

The worst 5 of 131 close contacts within the same asymmetric unit are listed below.

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:26:GLY:O	1:A:28:GLY:N	2.06	0.88
1:E:186:TPO:HG22	1:E:186:TPO:O2P	1.79	0.82
1:C:307:ASP:OD1	3:H:17:ARG:NH2	2.14	0.81
1:C:178:LYS:NZ	1:C:180:SER:OG	2.14	0.81
1:C:177:ALA:HB1	1:C:178:LYS:HG3	1.64	0.80

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

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:44:LYS:NZ	1:E:307:ASP:OD2[2_554]	2.02	0.18

5.3 Torsion angles

5.3.1 Protein backbone ⓘ

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	310/332 (93%)	291 (94%)	15 (5%)	4 (1%)	18	54
1	C	304/332 (92%)	288 (95%)	14 (5%)	2 (1%)	30	72
1	E	309/332 (93%)	289 (94%)	16 (5%)	4 (1%)	18	54
2	B	248/264 (94%)	237 (96%)	10 (4%)	1 (0%)	43	82
2	D	249/264 (94%)	237 (95%)	11 (4%)	1 (0%)	43	82
2	F	247/264 (94%)	236 (96%)	10 (4%)	1 (0%)	43	82
3	G	31/75 (41%)	30 (97%)	1 (3%)	0	100	100
3	H	52/75 (69%)	49 (94%)	2 (4%)	1 (2%)	12	42
3	I	31/75 (41%)	30 (97%)	1 (3%)	0	100	100
All	All	1781/2013 (88%)	1687 (95%)	80 (4%)	14 (1%)	27	68

5 of 14 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	27	GLN
1	A	26	GLY
1	A	190	VAL
2	B	249	PRO
1	C	190	VAL

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution. The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	276/292 (94%)	270 (98%)	6 (2%)	64	91
1	C	274/292 (94%)	265 (97%)	9 (3%)	50	86

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	E	277/292 (95%)	269 (97%)	8 (3%)	55	88
2	B	221/239 (92%)	218 (99%)	3 (1%)	78	95
2	D	225/239 (94%)	221 (98%)	4 (2%)	71	93
2	F	222/239 (93%)	217 (98%)	5 (2%)	63	91
3	G	25/69 (36%)	25 (100%)	0	100	100
3	H	36/69 (52%)	33 (92%)	3 (8%)	16	43
3	I	23/69 (33%)	23 (100%)	0	100	100
All	All	1579/1800 (88%)	1541 (98%)	38 (2%)	63	91

5 of 38 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	C	306	SER
2	D	241	PHE
3	H	11[A]	MET
2	D	148	LEU
1	E	25	ILE

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 33 such sidechains are listed below:

Mol	Chain	Res	Type
1	C	187	ASN
2	D	53	ASN
2	F	56	GLN
1	C	230	GLN
1	C	302	GLN

5.3.3 RNA ⓘ

There are no RNA chains in this entry.

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

3 non-standard protein/DNA/RNA residues are modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the chemical component dictionary. The Link

column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z > 2$	Counts	RMSZ	$\# Z > 2$
1	TPO	A	186	1	10,10,11	5.65	2 (20%)	12,14,16	1.20	2 (16%)
1	TPO	C	186	1	10,10,11	5.79	2 (20%)	12,14,16	0.98	1 (8%)
1	TPO	E	186	1	10,10,11	5.73	2 (20%)	12,14,16	1.60	3 (25%)

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
1	TPO	A	186	1	-	0/9/11/13	0/0/0/0
1	TPO	C	186	1	-	0/9/11/13	0/0/0/0
1	TPO	E	186	1	-	0/9/11/13	0/0/0/0

The worst 5 of 6 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	C	186	TPO	O-C	17.82	1.23	1.11
1	E	186	TPO	O-C	17.75	1.23	1.11
1	A	186	TPO	O-C	17.44	1.23	1.11
1	C	186	TPO	CA-C	2.84	1.53	1.48
1	A	186	TPO	CA-C	2.51	1.53	1.48

The worst 5 of 6 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	E	186	TPO	OG1-CB-CG2	3.51	115.99	110.13
1	E	186	TPO	O2P-P-OG1	2.68	114.81	107.09
1	E	186	TPO	C-CA-N	-2.51	107.86	111.94
1	A	186	TPO	OG1-CB-CG2	2.17	113.75	110.13
1	C	186	TPO	P-OG1-CB	-2.12	110.82	120.17

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

5.5 Carbohydrates ⓘ

There are no carbohydrates in this entry.

5.6 Ligand geometry ⓘ

3 ligands are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# $ Z > 2$	Counts	RMSZ	# $ Z > 2$
4	AMP	A	401	-	25,25,25	0.99	2 (8%)	38,38,38	1.91	6 (15%)
4	AMP	C	401	-	25,25,25	1.01	2 (8%)	38,38,38	2.01	7 (18%)
4	AMP	E	401	-	25,25,25	0.98	2 (8%)	38,38,38	1.92	6 (15%)

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
4	AMP	A	401	-	-	0/10/26/26	0/1/3/3
4	AMP	C	401	-	-	0/10/26/26	0/1/3/3
4	AMP	E	401	-	-	0/10/26/26	0/1/3/3

The worst 5 of 6 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	C	401	AMP	C5-C4	2.97	1.47	1.40
4	E	401	AMP	C5-C4	2.89	1.47	1.40
4	A	401	AMP	C5-C4	2.83	1.46	1.40
4	A	401	AMP	C4-N9	-2.44	1.34	1.37
4	C	401	AMP	C4-N9	-2.33	1.34	1.37

The worst 5 of 19 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	C	401	AMP	N3-C2-N1	-6.88	122.96	128.71
4	E	401	AMP	N3-C2-N1	-6.88	122.96	128.71
4	A	401	AMP	N3-C2-N1	-6.81	123.01	128.71
4	C	401	AMP	N3-C4-N9	5.94	136.16	125.43
4	A	401	AMP	N3-C4-N9	5.86	136.00	125.43

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

In the following table, the column labelled ‘#RSRZ> 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95th percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q< 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	A	315/332 (94%)	0.66	34 (10%) 6 9	75, 100, 196, 269	0
1	C	311/332 (93%)	0.48	27 (8%) 10 13	78, 107, 185, 227	0
1	E	314/332 (94%)	0.75	50 (15%) 3 4	70, 114, 191, 246	0
2	B	250/264 (94%)	0.77	27 (10%) 6 9	80, 113, 192, 228	0
2	D	251/264 (95%)	0.64	33 (13%) 4 6	70, 118, 186, 241	0
2	F	249/264 (94%)	0.52	20 (8%) 12 15	79, 113, 171, 214	0
3	G	33/75 (44%)	0.85	7 (21%) 1 2	98, 161, 215, 237	0
3	H	53/75 (70%)	0.67	9 (16%) 2 3	115, 164, 213, 250	0
3	I	33/75 (44%)	-0.02	1 (3%) 48 58	116, 159, 206, 208	0
All	All	1809/2013 (89%)	0.63	208 (11%) 5 7	70, 112, 194, 269	0

The worst 5 of 208 RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	C	248	ILE	9.4
1	A	330	THR	9.1
1	A	29	THR	7.8
1	E	248	ILE	6.6
1	E	275	VAL	6.5

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

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. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled ‘Q< 0.9’ lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
1	TPO	E	186	11/12	0.23	-0.32	110,124,152,177	0
1	TPO	C	186	11/12	0.20	-0.45	92,106,125,130	0
1	TPO	A	186	11/12	0.17	-0.68	106,118,141,146	0

6.3 Carbohydrates

There are no carbohydrates in this entry.

6.4 Ligands

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. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
4	AMP	A	401	23/23	0.46	4.04	111,153,371,371	0
4	AMP	C	401	23/23	0.34	2.52	112,157,206,211	0
4	AMP	E	401	23/23	0.38	1.73	124,160,241,245	0

6.5 Other polymers

There are no such residues in this entry.