Full wwPDB X-ray Structure Validation Report (i)

Aug 29, 2016 – 11:29 PM EDT

PDB ID	:	5DHW
Title	:	Crystal structure of Arabidopsis thaliana HPPD complexed with sulcotrione
Authors	:	Yang, W.C.; Yang, G.F.
Deposited on	:	2015-08-31
Resolution	:	2.62 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
http://wwpdb.org/validation/2016/XrayValidationReportHelp
with specific help available everywhere you see the (i) symbol.

The following versions of software and data (see references (1)) were used in the production of this report:

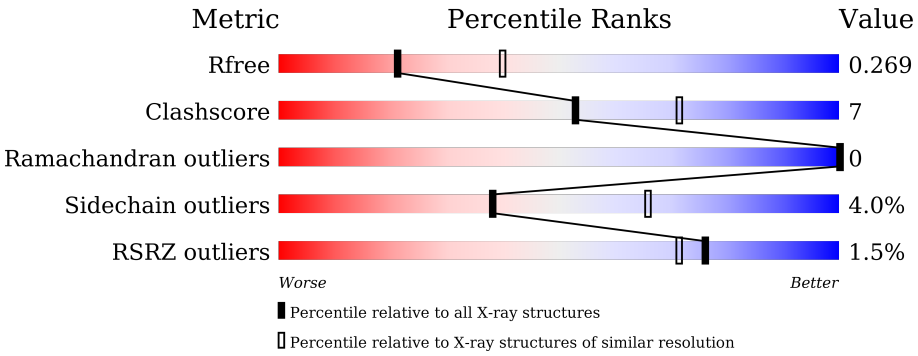
MolProbity	:	4.02b-467
Mogul	:	unknown
Xtriage (Phenix)	:	1.9-1692
EDS	:	rb-20027939
Percentile statistics	:	20151230.v01 (using entries in the PDB archive December 30th 2015)
Refmac	:	5.8.0135
CCP4	:	6.5.0
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	rb-20027939

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 2.62 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}	91344	2700 (2.64-2.60)
Clashscore	102246	3065 (2.64-2.60)
Ramachandran outliers	100387	3015 (2.64-2.60)
Sidechain outliers	100360	3015 (2.64-2.60)
RSRZ outliers	91569	2706 (2.64-2.60)

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. 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	445	69% 13% • 17%
1	B	445	2% 68% 14% • 17%

2 Entry composition

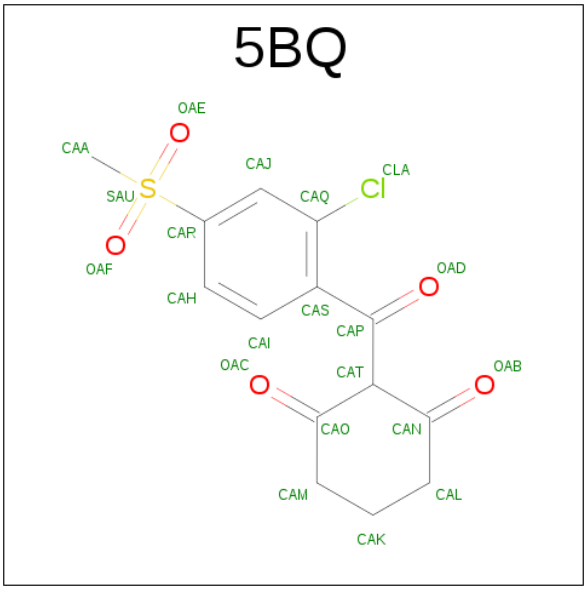
There are 4 unique types of molecules in this entry. The entry contains 5713 atoms, of which 0 are hydrogens and 0 are deuteriums.

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 4-hydroxyphenylpyruvate dioxygenase.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	369	Total	C	N	O	S	0	0	0
			2811	1799	480	519	13			
1	B	371	Total	C	N	O	S	0	0	0
			2791	1784	474	520	13			

- Molecule 2 is 2-[2-chloro-4-(methylsulfonyl)benzoyl]cyclohexane-1,3-dione (three-letter code: 5BQ) (formula: $C_{14}H_{13}ClO_5S$).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
2	A	1	Total	C	Cl	O	S	0	0
			21	14	1	5	1		
2	B	1	Total	C	Cl	O	S	0	0
			21	14	1	5	1		

- Molecule 3 is FE (III) ION (three-letter code: FE) (formula: Fe).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	B	1	Total Fe 1 1	0	0
3	A	1	Total Fe 1 1	0	0

- Molecule 4 is water.

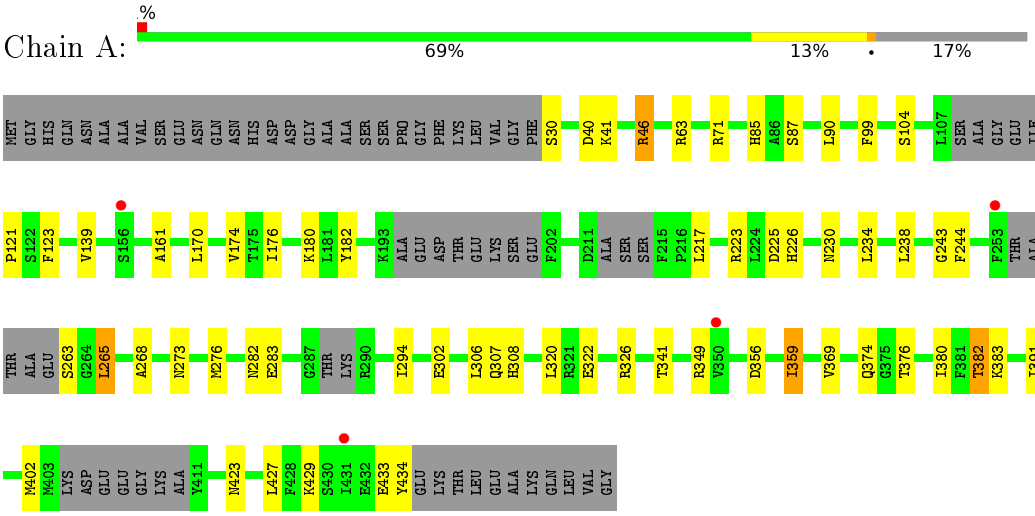
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	A	32	Total O 32 32	0	0
4	B	35	Total O 35 35	0	0

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 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.

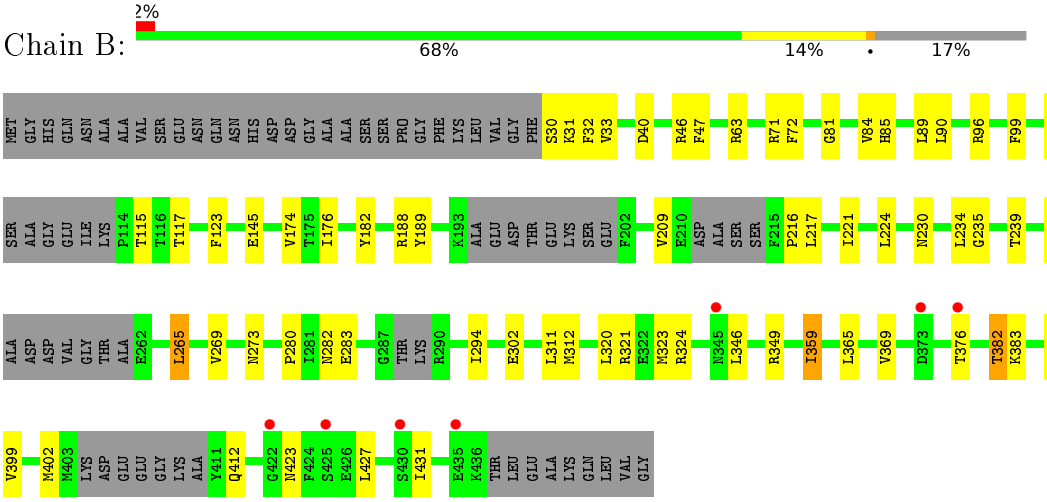
- Molecule 1: 4-hydroxyphenylpyruvate dioxygenase

Chain A:



- Molecule 1: 4-hydroxyphenylpyruvate dioxygenase

Chain B:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 41 21 2	Depositor
Cell constants a, b, c, α, β, γ	95.93Å 95.93Å 196.77Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	47.97 – 2.62 47.97 – 2.62	Depositor EDS
% Data completeness (in resolution range)	99.8 (47.97-2.62) 98.4 (47.97-2.62)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	0.15	Depositor
$< I/\sigma(I) >$ [1]	4.47 (at 2.61Å)	Xtriage
Refinement program	PHENIX (phenix.refine: 1.8.1_1168)	Depositor
R, R_{free}	0.214 , 0.271 0.214 , 0.269	Depositor DCC
R_{free} test set	1408 reflections (5.04%)	DCC
Wilson B-factor (Å^2)	21.6	Xtriage
Anisotropy	0.758	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.34 , 42.0	EDS
L-test for twinning[2]	$< \|L\| > = 0.42$, $< L^2 > = 0.25$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.91	EDS
Total number of atoms	5713	wwPDB-VP
Average B, all atoms (Å^2)	18.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The analyses of the Patterson function reveals a significant off-origin peak that is 27.16 % of the origin peak, indicating pseudo translational symmetry. The chance of finding a peak of this or larger height randomly in a structure without pseudo translational symmetry is equal to 2.3112e-03. The detected translational NCS is most likely also responsible for the elevated intensity ratio.*

[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: 5BQ, FE

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	0.51	0/2876	0.65	0/3883
1	B	0.52	0/2852	0.66	0/3851
All	All	0.52	0/5728	0.66	0/7734

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	2811	0	2689	36	0
1	B	2791	0	2661	39	0
2	A	21	0	0	2	0
2	B	21	0	0	0	0
3	A	1	0	0	0	0
3	B	1	0	0	0	0
4	A	32	0	0	1	0
4	B	35	0	0	0	0
All	All	5713	0	5350	73	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 7.

All (73) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:349:ARG:NH2	1:A:369:VAL:O	2.20	0.75
1:A:225:ASP:OD2	1:A:226:HIS:ND1	2.25	0.65
1:A:302:GLU:OE2	1:B:104:SER:OG	2.15	0.65
1:A:382:THR:HG22	1:A:393:ILE:H	1.61	0.65
1:B:323:MET:HE1	1:B:395:ILE:HG12	1.79	0.64
1:B:349:ARG:NH2	1:B:369:VAL:O	2.31	0.64
1:A:265:LEU:HB3	1:A:294:ILE:CD1	2.28	0.64
1:A:234:LEU:HB2	1:A:283:GLU:HB2	1.84	0.59
1:A:230:ASN:HD21	1:A:307:GLN:HG3	1.68	0.58
1:A:382:THR:HG23	1:A:383:LYS:O	2.04	0.57
1:B:71:ARG:NE	1:B:216:PRO:HB2	2.20	0.56
1:B:89:LEU:HD21	1:B:96:ARG:HD3	1.86	0.56
1:B:321:ARG:HD3	1:B:365:LEU:HD21	1.87	0.56
1:A:104:SER:OG	1:B:302:GLU:OE2	2.17	0.55
1:A:180:LYS:NZ	4:A:704:HOH:O	2.39	0.54
1:A:322:GLU:OE1	1:A:326:ARG:NH2	2.36	0.53
1:A:230:ASN:OD1	1:A:282:ASN:HB2	2.09	0.52
1:B:40:ASP:HB2	1:B:273:ASN:ND2	2.24	0.52
1:B:265:LEU:HB3	1:B:294:ILE:CD1	2.41	0.50
1:B:46:ARG:HD2	1:B:145:GLU:HB2	1.93	0.50
1:A:161:ALA:HB2	1:A:244:PHE:CG	2.46	0.50
1:A:46:ARG:CZ	1:A:276:MET:HG3	2.42	0.49
1:B:234:LEU:HB2	1:B:283:GLU:HB2	1.94	0.49
1:A:433:GLU:O	1:A:434:TYR:HB3	2.11	0.49
1:B:235:GLY:O	1:B:239:THR:HG23	2.12	0.49
1:B:376:THR:HB	1:B:399:VAL:HG13	1.95	0.49
1:B:176:ILE:HD11	1:B:188:ARG:HD3	1.93	0.49
1:A:230:ASN:ND2	1:A:307:GLN:HG3	2.28	0.49
1:A:85:HIS:HB3	1:A:123:PHE:CE2	2.48	0.48
1:A:376:THR:HB	1:A:399:VAL:HG13	1.96	0.48
1:A:46:ARG:HH22	1:A:223:ARG:NE	2.12	0.47
1:B:382:THR:HB	1:B:393:ILE:O	2.14	0.47
1:A:121:PRO:HG3	1:A:170:LEU:HD21	1.97	0.46
1:A:139:VAL:HG11	1:A:306:LEU:HD13	1.96	0.46
1:A:320:LEU:HD11	1:A:380:ILE:HG21	1.97	0.46
1:A:46:ARG:HA	1:A:46:ARG:HD2	1.52	0.46
1:B:346:LEU:HD23	1:B:359:ILE:HG23	1.97	0.46
1:B:90:LEU:HD12	1:B:99:PHE:CE1	2.50	0.46
1:B:269:VAL:HA	1:B:280:PRO:HA	1.99	0.44
1:B:85:HIS:HB3	1:B:123:PHE:CE2	2.52	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:89:LEU:HD11	1:B:96:ARG:HB3	1.98	0.44
1:A:356:ASP:HA	1:A:359:ILE:HG13	2.00	0.44
1:B:324:ARG:NH2	1:B:365:LEU:O	2.51	0.44
1:A:423:ASN:HB3	2:A:600:5BQ:CAA	2.48	0.43
1:B:269:VAL:HG22	1:B:280:PRO:HB3	2.00	0.43
1:B:31:LYS:HE3	1:B:33:VAL:HG12	2.00	0.43
1:B:382:THR:HG22	1:B:393:ILE:H	1.81	0.43
1:B:47:PHE:CG	1:B:224:LEU:HD23	2.52	0.43
1:B:32:PHE:HZ	1:B:251:ALA:HB1	1.83	0.43
1:B:230:ASN:OD1	1:B:282:ASN:HB2	2.18	0.43
1:A:238:LEU:HD21	1:A:268:ALA:HB3	1.99	0.43
1:B:90:LEU:HD12	1:B:99:PHE:HE1	1.82	0.43
1:A:307:GLN:O	1:A:391:ILE:HA	2.19	0.43
1:A:71:ARG:O	1:A:90:LEU:HA	2.19	0.43
1:A:308:HIS:CE1	2:A:600:5BQ:OAD	2.72	0.43
1:A:265:LEU:HB3	1:A:294:ILE:HD11	2.00	0.43
1:B:32:PHE:CZ	1:B:251:ALA:HB1	2.53	0.42
1:B:402:MET:SD	1:B:412:GLN:HB2	2.58	0.42
1:B:81:GLY:O	1:B:117:THR:OG1	2.36	0.42
1:A:341:THR:CG2	1:A:434:TYR:HB2	2.50	0.41
1:B:320:LEU:O	1:B:324:ARG:HG3	2.20	0.41
1:A:423:ASN:O	1:A:427:LEU:HB2	2.20	0.41
1:B:221:ILE:HD12	1:B:311:LEU:HB3	2.01	0.41
1:B:176:ILE:HA	1:B:189:TYR:O	2.20	0.41
1:A:87:SER:HA	1:A:99:PHE:O	2.21	0.41
1:B:382:THR:HG23	1:B:383:LYS:O	2.21	0.41
1:B:427:LEU:O	1:B:431:ILE:HG13	2.21	0.41
1:A:41:LYS:HE3	1:A:243:GLY:O	2.21	0.41
1:A:46:ARG:NH2	1:A:276:MET:HG3	2.36	0.40
1:B:72:PHE:CD2	1:B:209:VAL:HG11	2.56	0.40
1:A:40:ASP:HB2	1:A:273:ASN:ND2	2.36	0.40
1:B:84:VAL:HG21	1:B:115:THR:HA	2.03	0.40
1:B:423:ASN:O	1:B:427:LEU:HB2	2.22	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	355/445 (80%)	343 (97%)	12 (3%)	0	100	100
1	B	357/445 (80%)	340 (95%)	17 (5%)	0	100	100
All	All	712/890 (80%)	683 (96%)	29 (4%)	0	100	100

There are no Ramachandran outliers to report.

5.3.2 Protein sidechains (i)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	293/371 (79%)	279 (95%)	14 (5%)	31	57
1	B	286/371 (77%)	277 (97%)	9 (3%)	47	75
All	All	579/742 (78%)	556 (96%)	23 (4%)	38	66

All (23) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	30	SER
1	A	46	ARG
1	A	63	ARG
1	A	174	VAL
1	A	176	ILE
1	A	182	TYR
1	A	217	LEU
1	A	263	SER

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	265	LEU
1	A	359	ILE
1	A	374	GLN
1	A	382	THR
1	A	402	MET
1	A	429	LYS
1	B	30	SER
1	B	63	ARG
1	B	174	VAL
1	B	182	TYR
1	B	217	LEU
1	B	265	LEU
1	B	312	MET
1	B	359	ILE
1	B	382	THR

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. There are no such sidechains identified.

5.3.3 RNA (i)

There are no RNA molecules in this entry.

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

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 4 ligands modelled in this entry, 2 are monoatomic - leaving 2 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	5BQ	A	600	3	22,22,22	2.76	8 (36%)	26,33,33	2.65	12 (46%)
2	5BQ	B	600	3	22,22,22	2.89	7 (31%)	26,33,33	2.63	11 (42%)

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	5BQ	A	600	3	-	0/14/28/28	0/2/2/2
2	5BQ	B	600	3	-	0/14/28/28	0/2/2/2

All (15) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	600	5BQ	CAR-SAU	-6.72	1.68	1.77
2	A	600	5BQ	CAL-CAN	-6.35	1.39	1.50
2	B	600	5BQ	CAM-CAO	-6.04	1.40	1.50
2	A	600	5BQ	CAM-CAO	-5.89	1.40	1.50
2	B	600	5BQ	CAL-CAN	-5.66	1.40	1.50
2	A	600	5BQ	CAT-CAP	-4.83	1.40	1.53
2	B	600	5BQ	CAT-CAP	-4.78	1.40	1.53
2	B	600	5BQ	CAS-CAP	-4.76	1.40	1.49
2	A	600	5BQ	CAS-CAP	-4.67	1.40	1.49
2	A	600	5BQ	CAR-SAU	-4.08	1.72	1.77
2	A	600	5BQ	CAQ-CLA	-2.07	1.68	1.73
2	A	600	5BQ	OAE-SAU	2.66	1.52	1.44
2	B	600	5BQ	OAE-SAU	2.72	1.53	1.44
2	B	600	5BQ	OAF-SAU	2.95	1.53	1.44
2	A	600	5BQ	OAF-SAU	3.01	1.54	1.44

All (23) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	A	600	5BQ	CAJ-CAR-SAU	-4.83	114.24	119.17
2	B	600	5BQ	OAD-CAP-CAS	-4.61	113.40	120.44
2	A	600	5BQ	OAE-SAU-OAF	-4.34	108.24	117.73
2	A	600	5BQ	OAB-CAN-CAL	-4.29	115.99	122.13
2	B	600	5BQ	OAB-CAN-CAL	-3.99	116.42	122.13

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	B	600	5BQ	CAJ-CAR-SAU	-3.72	115.37	119.17
2	B	600	5BQ	OAC-CAO-CAM	-3.40	117.25	122.13
2	A	600	5BQ	OAC-CAO-CAM	-3.36	117.31	122.13
2	B	600	5BQ	OAE-SAU-OAF	-3.26	110.59	117.73
2	A	600	5BQ	CAJ-CAQ-CLA	-3.26	113.19	118.46
2	A	600	5BQ	OAD-CAP-CAS	-2.95	115.93	120.44
2	A	600	5BQ	CAL-CAK-CAM	-2.19	104.95	111.97
2	B	600	5BQ	CAQ-CAJ-CAR	2.02	120.37	119.03
2	A	600	5BQ	CAS-CAQ-CLA	2.06	124.18	121.03
2	B	600	5BQ	CAS-CAP-CAT	2.13	123.08	119.56
2	A	600	5BQ	CAS-CAP-CAT	2.33	123.42	119.56
2	B	600	5BQ	OAF-SAU-CAA	2.59	112.91	108.54
2	A	600	5BQ	CAI-CAS-CAP	2.97	126.32	118.90
2	B	600	5BQ	CAI-CAS-CAP	3.25	127.01	118.90
2	B	600	5BQ	CAH-CAR-SAU	3.86	123.71	119.64
2	A	600	5BQ	CAA-SAU-CAR	4.97	110.54	104.67
2	A	600	5BQ	CAH-CAR-SAU	5.63	125.58	119.64
2	B	600	5BQ	CAA-SAU-CAR	7.09	113.04	104.67

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

1 monomer is involved in 2 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	A	600	5BQ	2	0

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	369/445 (82%)	-0.14	4 (1%)	82	79	3, 16, 35, 56	1 (0%)
1	B	371/445 (83%)	-0.06	7 (1%)	70	65	4, 16, 38, 54	0
All	All	740/890 (83%)	-0.10	11 (1%)	76	71	3, 16, 37, 56	1 (0%)

All (11) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	431	ILE	3.7
1	B	422	GLY	3.1
1	A	350	VAL	3.0
1	B	345	ASN	2.5
1	B	373	ASP	2.5
1	B	425	SER	2.3
1	B	435	GLU	2.2
1	A	156	SER	2.1
1	A	253	PHE	2.1
1	B	376	THR	2.1
1	B	430	SER	2.1

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

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

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, 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	LLDF	B-factors(Å^2)	Q<0.9
2	5BQ	B	600	21/21	0.96	0.18	1.37	8,19,32,36	0
2	5BQ	A	600	21/21	0.95	0.18	0.33	10,21,37,60	0
3	FE	B	601	1/1	0.99	0.10	-2.88	7,7,7,7	0
3	FE	A	601	1/1	0.99	0.08	-6.37	8,8,8,8	0

6.5 Other polymers

There are no such residues in this entry.