



wwPDB X-ray Structure Validation Summary Report ⓘ

Nov 5, 2023 – 10:14 pm GMT

PDB ID : 5LEY
Title : Human 20S proteasome complex with Oprozomib at 1.9 Angstrom
Authors : Schrader, J.; Henneberg, F.; Mata, R.; Tittmann, K.; Schneider, T.R.; Stark, H.; Bourenkov, G.; Chari, A.
Deposited on : 2016-06-30
Resolution : 1.90 Å(reported)

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

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

A user guide is available at

<https://www.wwpdb.org/validation/2017/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

MolProbity : 4.02b-467
Mogul : 1.8.4, CSD as541be (2020)
Xtriage (Phenix) : 1.13
EDS : 2.36
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) : 2.36

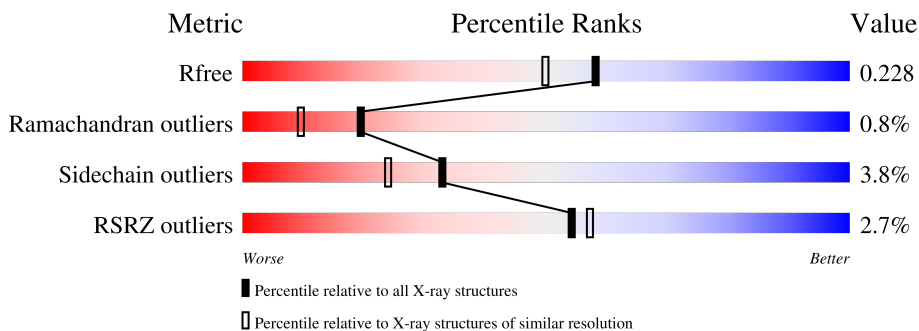
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 1.90 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	6207 (1.90-1.90)
Ramachandran outliers	138981	6760 (1.90-1.90)
Sidechain outliers	138945	6760 (1.90-1.90)
RSRZ outliers	127900	6082 (1.90-1.90)

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 of the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	234	
1	O	234	
2	B	261	
2	P	261	
3	C	248	
3	Q	248	

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Mol	Chain	Length	Quality of chain
4	D	241	4% 90% 5% ..
4	R	241	2% 91% 5% .
5	E	263	4% 83% 6% 11%
5	S	263	3% 86% . 10%
6	F	255	83% 9% . 6%
6	T	255	4% 84% 9% . 6%
7	G	246	2% 93% 5% ..
7	U	246	6% 91% 6% .
8	H	234	2% 88% 5% . 6%
8	V	234	3% 88% 5% . 6%
9	I	205	94% 5%
9	W	205	96% .
10	J	201	89% 7% ..
10	X	201	90% 6% ..
11	K	204	89% 8% ..
11	Y	204	89% 8% .
12	L	213	94% 5%
12	Z	213	96% .
13	M	219	94% 5% .
13	a	219	91% 7% .
14	N	205	93% 5% .
14	b	205	94% 5% .
15	c	4	50% 50%
15	d	4	50% 50%

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit crite-

ria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
7	6V1	U	47	X	-	-	-

2 Entry composition [i](#)

There are 20 unique types of molecules in this entry. The entry contains 51947 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 Proteasome subunit alpha type-2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	230	Total	C	N	O	S	0	3	0
			1788	1145	301	336	6			
1	O	230	Total	C	N	O	S	0	0	0
			1741	1111	293	331	6			

- Molecule 2 is a protein called Proteasome subunit alpha type-4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
2	B	248	Total	C	N	O	S	0	2	0
			1922	1217	331	363	11			
2	P	247	Total	C	N	O	S	0	2	0
			1898	1200	321	366	11			

- Molecule 3 is a protein called Proteasome subunit alpha type-7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
3	C	237	Total	C	N	O	S	0	2	0
			1798	1121	320	352	5			
3	Q	240	Total	C	N	O	S	0	0	0
			1825	1139	321	360	5			

- Molecule 4 is a protein called Proteasome subunit alpha type-5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
4	D	233	Total	C	N	O	S	0	1	0
			1762	1105	290	356	11			
4	R	233	Total	C	N	O	S	0	1	0
			1753	1103	293	346	11			

- Molecule 5 is a protein called Proteasome subunit alpha type-1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
5	E	234	Total 1822	C 1144	N 325	O 342	S 11	0	1	0
5	S	236	Total 1853	C 1160	N 335	O 347	S 11	0	3	0

- Molecule 6 is a protein called Proteasome subunit alpha type-3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
6	F	239	Total 1888	C 1198	N 325	O 353	S 12	0	4	0
6	T	240	Total 1856	C 1178	N 315	O 351	S 12	0	1	0

- Molecule 7 is a protein called Proteasome subunit alpha type-6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
7	G	244	Total 1912	C 1214	N 321	O 364	S 13	0	2	0
7	U	238	Total 1815	C 1147	N 304	O 350	S 14	0	1	0

- Molecule 8 is a protein called Proteasome subunit beta type-7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
8	H	220	Total 1664	C 1047	N 284	O 320	S 13	0	2	0
8	V	220	Total 1622	C 1023	N 269	O 318	S 12	0	2	0

- Molecule 9 is a protein called Proteasome subunit beta type-3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
9	I	204	Total 1613	C 1028	N 270	O 295	S 20	0	3	0
9	W	204	Total 1599	C 1018	N 267	O 295	S 19	0	2	0

- Molecule 10 is a protein called Proteasome subunit beta type-2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
10	J	196	Total 1590	C 1021	N 271	O 288	S 10	0	3	0

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
10	X	196	1576	1012	267	287	10	0	2	0

- Molecule 11 is a protein called Proteasome subunit beta type-5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
11	K	200	1545	974	269	293	9	0	0	0
11	Y	199	1570	991	278	291	10	0	3	0

- Molecule 12 is a protein called Proteasome subunit beta type-1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
12	L	213	1636	1038	277	310	11	0	2	0
12	Z	213	1642	1041	280	310	11	0	1	0

- Molecule 13 is a protein called Proteasome subunit beta type-4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
13	M	216	1692	1067	291	322	12	0	1	0
13	a	216	1688	1064	291	321	12	0	2	0

- Molecule 14 is a protein called Proteasome subunit beta type-6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
14	N	202	1519	953	258	295	13	0	1	0
14	b	203	1524	956	259	296	13	0	1	0

- Molecule 15 is a protein called bound Oprozomib.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
15	c	4	37	25	4	7	1	0	0	0
15	d	4	37	25	4	7	1	0	0	0

- Molecule 16 is CHLORIDE ION (three-letter code: CL) (formula: Cl).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
16	A	4	Total 4	Cl 4	0	0
16	B	2	Total 2	Cl 2	0	0
16	C	2	Total 2	Cl 2	0	0
16	D	2	Total 2	Cl 2	0	0
16	E	3	Total 3	Cl 3	0	0
16	F	1	Total 1	Cl 1	0	0
16	G	2	Total 2	Cl 2	0	0
16	H	2	Total 2	Cl 2	0	0
16	I	1	Total 1	Cl 1	0	0
16	K	4	Total 4	Cl 4	0	0
16	M	4	Total 4	Cl 4	0	0
16	N	3	Total 3	Cl 3	0	0
16	O	4	Total 4	Cl 4	0	0
16	P	1	Total 1	Cl 1	0	0
16	Q	2	Total 2	Cl 2	0	0
16	R	2	Total 2	Cl 2	0	0
16	S	3	Total 3	Cl 3	0	0
16	U	1	Total 1	Cl 1	0	0
16	V	2	Total 2	Cl 2	0	0
16	W	1	Total 1	Cl 1	0	0
16	Y	5	Total 5	Cl 5	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
16	a	3	Total Cl 3 3	0	0
16	b	4	Total Cl 4 4	0	0

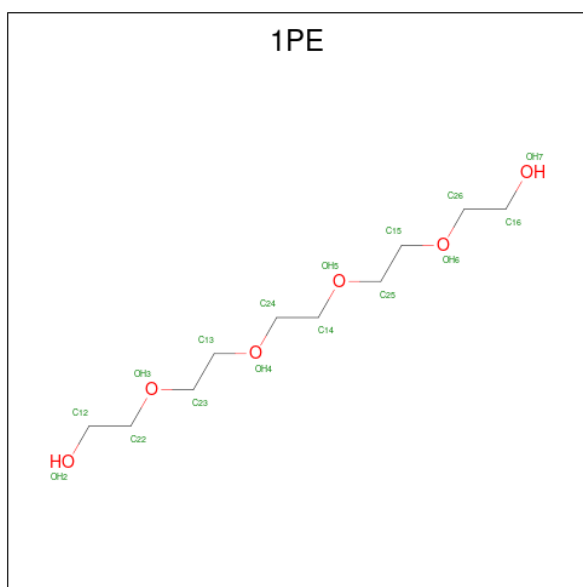
- Molecule 17 is POTASSIUM ION (three-letter code: K) (formula: K).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
17	G	1	Total K 1 1	0	0
17	L	1	Total K 1 1	0	0
17	N	1	Total K 1 1	0	0
17	U	1	Total K 1 1	0	0
17	Z	1	Total K 1 1	0	0
17	b	1	Total K 1 1	0	0

- Molecule 18 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
18	H	2	Total Mg 2 2	0	0
18	I	2	Total Mg 2 2	0	0
18	J	1	Total Mg 1 1	0	0
18	K	1	Total Mg 1 1	0	0
18	L	1	Total Mg 1 1	0	0
18	V	1	Total Mg 1 1	0	0
18	W	1	Total Mg 1 1	0	0
18	X	1	Total Mg 1 1	0	0

- Molecule 19 is PENTAETHYLENE GLYCOL (three-letter code: 1PE) (formula: C₁₀H₂₂O₆).



Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
19	H	1	Total	C O	0	0
			16	10 6		
19	H	1	Total	C O	0	0
			16	10 6		
19	I	1	Total	C O	0	0
			16	10 6		
19	I	1	Total	C O	0	0
			16	10 6		
19	L	1	Total	C O	0	0
			16	10 6		
19	M	1	Total	C O	0	0
			16	10 6		
19	V	1	Total	C O	0	0
			16	10 6		
19	W	1	Total	C O	0	0
			16	10 6		
19	Z	1	Total	C O	0	0
			16	10 6		

- Molecule 20 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
20	A	109	Total	O	0	0
			109	109		
20	B	120	Total	O	0	0
			120	120		
20	C	76	Total	O	0	0
			76	76		

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
20	D	93	Total O 93 93	0	0
20	E	137	Total O 137 137	0	0
20	F	180	Total O 180 180	0	0
20	G	187	Total O 187 187	0	0
20	H	157	Total O 157 157	0	0
20	I	155	Total O 155 155	0	0
20	J	133	Total O 133 133	0	0
20	K	98	Total O 98 98	0	0
20	L	124	Total O 124 124	0	0
20	M	148	Total O 148 148	0	0
20	N	168	Total O 168 168	0	0
20	O	89	Total O 89 89	0	0
20	P	117	Total O 117 117	0	0
20	Q	74	Total O 74 74	0	0
20	R	122	Total O 122 122	0	0
20	S	118	Total O 118 118	0	0
20	T	92	Total O 92 92	0	0
20	U	102	Total O 102 102	0	0
20	V	112	Total O 112 112	0	0
20	W	111	Total O 111 111	0	0
20	X	124	Total O 124 124	0	0

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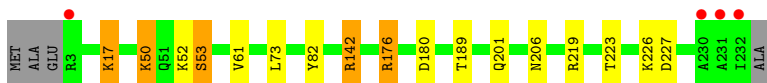
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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
20	Y	137	Total 137	O 137	0	0
20	Z	164	Total 164	O 164	0	0
20	a	167	Total 167	O 167	0	0
20	b	126	Total 126	O 126	0	0
20	c	1	Total 1	O 1	0	0
20	d	1	Total 1	O 1	0	0

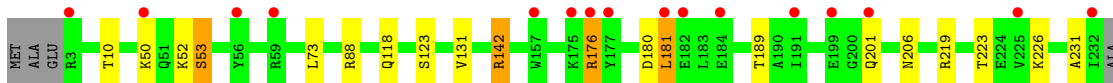
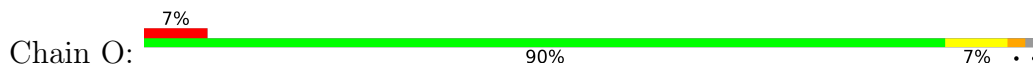
3 Residue-property plots [i](#)

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red dot above a residue indicates a poor fit to the electron density ($RSRZ > 2$). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

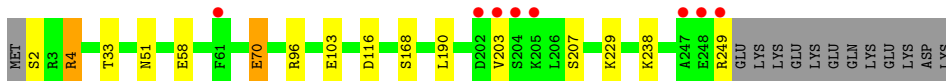
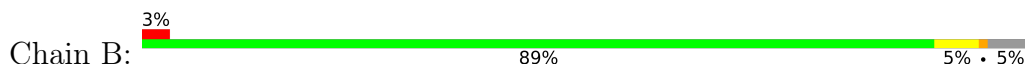
- Molecule 1: Proteasome subunit alpha type-2



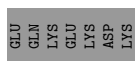
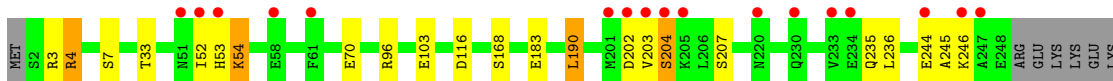
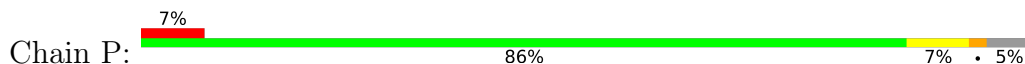
- Molecule 1: Proteasome subunit alpha type-2



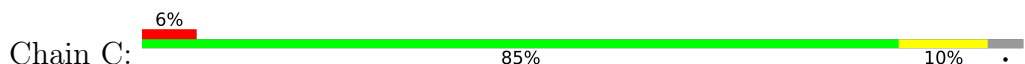
- Molecule 2: Proteasome subunit alpha type-4



- Molecule 2: Proteasome subunit alpha type-4



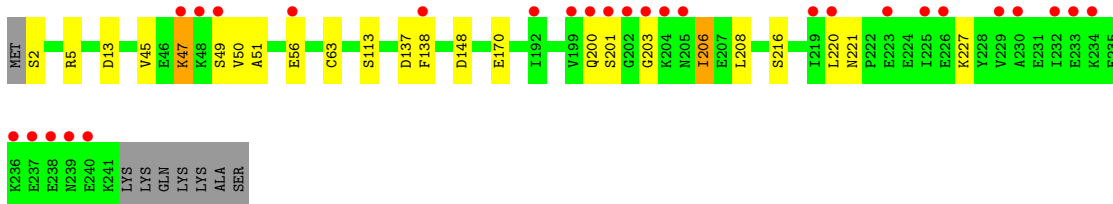
- Molecule 3: Proteasome subunit alpha type-7



LYS
LYS
GLN
LYS
LYS
ALA
SER

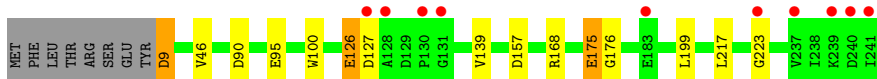
- Molecule 3: Proteasome subunit alpha type-7

Chain Q: 11% 87% 9% . .



- Molecule 4: Proteasome subunit alpha type-5

Chain D: 4% 90% 5% . .



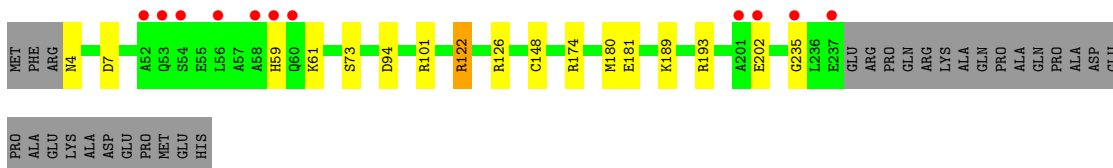
- Molecule 4: Proteasome subunit alpha type-5

Chain R: 2% 91% 5% . .



- Molecule 5: Proteasome subunit alpha type-1

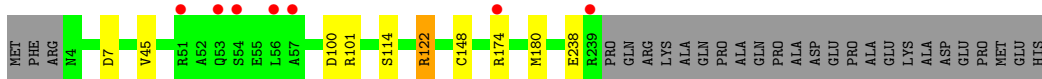
Chain E: 4% 83% 6% 11%



PRO
ALA
GLU
LYS
ALA
ASP
GLU
PRO
MET
GLU
HIS

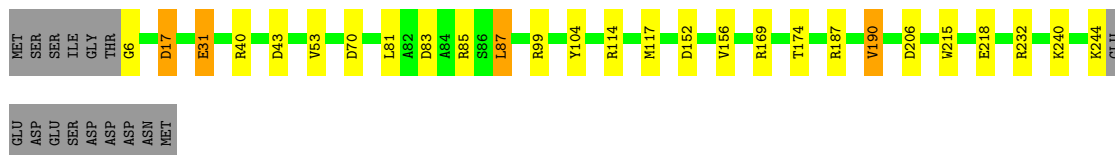
- Molecule 5: Proteasome subunit alpha type-1

Chain S: 3% 86% 10%

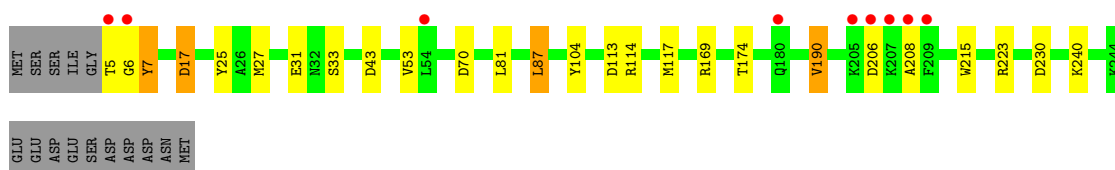
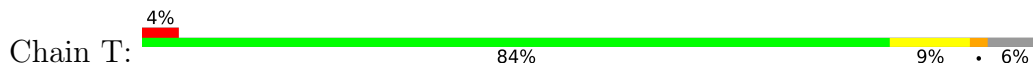


- Molecule 6: Proteasome subunit alpha type-3

Chain F: 83% 9% 6%



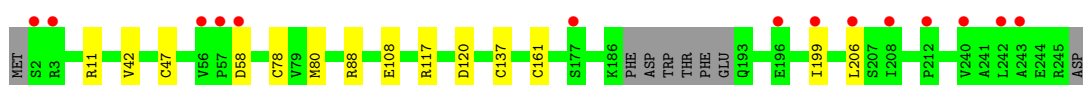
● Molecule 6: Proteasome subunit alpha type-3



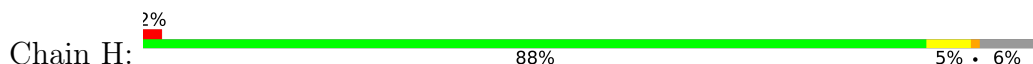
● Molecule 7: Proteasome subunit alpha type-6



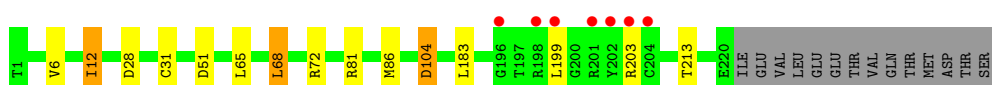
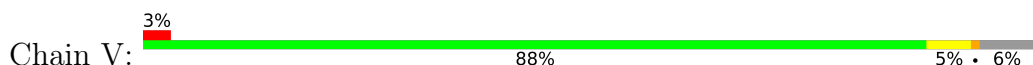
● Molecule 7: Proteasome subunit alpha type-6



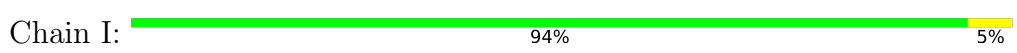
● Molecule 8: Proteasome subunit beta type-7



● Molecule 8: Proteasome subunit beta type-7



● Molecule 9: Proteasome subunit beta type-3

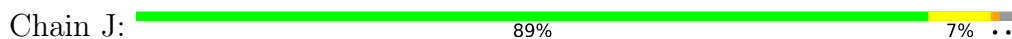




- Molecule 9: Proteasome subunit beta type-3



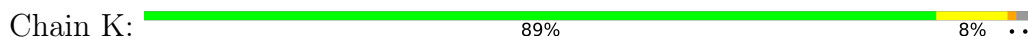
- Molecule 10: Proteasome subunit beta type-2



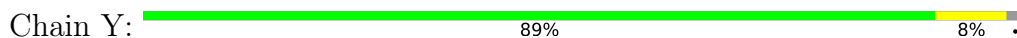
- Molecule 10: Proteasome subunit beta type-2



- Molecule 11: Proteasome subunit beta type-5



- Molecule 11: Proteasome subunit beta type-5



- Molecule 12: Proteasome subunit beta type-1



- Molecule 12: Proteasome subunit beta type-1





- Molecule 13: Proteasome subunit beta type-4

Chain M: 94% 5%



- Molecule 13: Proteasome subunit beta type-4

Chain a: 91% 7%



- Molecule 14: Proteasome subunit beta type-6

Chain N: 93% 5%



- Molecule 14: Proteasome subunit beta type-6

Chain b: 94% 5%



- Molecule 15: bound Oprozomib

Chain c: 50% 50%



- Molecule 15: bound Oprozomib

Chain d: 50% 50%



4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	113.39Å 202.65Å 315.14Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	170.45 – 1.90 106.69 – 1.90	Depositor EDS
% Data completeness (in resolution range)	97.8 (170.45-1.90) 97.8 (106.69-1.90)	Depositor EDS
R_{merge}	0.09	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.26 (at 1.90Å)	Xtrriage
Refinement program	REFMAC 5.8.0103	Depositor
R, R_{free}	0.188 , 0.225 0.195 , 0.228	Depositor DCC
R_{free} test set	27607 reflections (4.99%)	wwPDB-VP
Wilson B-factor (Å ²)	37.8	Xtrriage
Anisotropy	0.172	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.33 , 44.5	EDS
L-test for twinning ²	$\langle L \rangle = 0.48$, $\langle L^2 \rangle = 0.31$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
F_o, F_c correlation	0.97	EDS
Total number of atoms	51947	wwPDB-VP
Average B, all atoms (Å ²)	50.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.81% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: MG, CL, OAS, 6VA, 6V9, K, YCM, 1PE, 6V1

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	0.92	2/1833 (0.1%)	0.94	5/2489 (0.2%)
1	O	0.81	1/1778 (0.1%)	0.92	7/2419 (0.3%)
2	B	0.99	4/1958 (0.2%)	1.01	6/2645 (0.2%)
2	P	0.89	2/1934 (0.1%)	0.96	7/2617 (0.3%)
3	C	0.95	2/1818 (0.1%)	1.05	8/2469 (0.3%)
3	Q	0.91	1/1839 (0.1%)	1.01	6/2497 (0.2%)
4	D	0.95	3/1789 (0.2%)	0.97	5/2424 (0.2%)
4	R	1.06	2/1780 (0.1%)	1.05	6/2408 (0.2%)
5	E	0.94	2/1842 (0.1%)	1.00	7/2493 (0.3%)
5	S	0.92	1/1878 (0.1%)	0.97	5/2541 (0.2%)
6	F	1.09	5/1935 (0.3%)	1.16	26/2605 (1.0%)
6	T	1.00	3/1894 (0.2%)	1.11	16/2556 (0.6%)
7	G	1.09	2/1909 (0.1%)	0.98	7/2579 (0.3%)
7	U	0.92	2/1804 (0.1%)	0.95	7/2441 (0.3%)
8	H	1.05	1/1697 (0.1%)	1.17	11/2299 (0.5%)
8	V	0.88	2/1655 (0.1%)	1.01	8/2251 (0.4%)
9	I	1.03	2/1648 (0.1%)	1.24	14/2219 (0.6%)
9	W	0.84	1/1630 (0.1%)	1.11	12/2197 (0.5%)
10	J	1.06	1/1613 (0.1%)	1.28	14/2180 (0.6%)
10	X	0.97	2/1599 (0.1%)	1.24	13/2163 (0.6%)
11	K	1.01	2/1576 (0.1%)	1.11	12/2131 (0.6%)
11	Y	1.10	4/1610 (0.2%)	1.20	14/2172 (0.6%)
12	L	0.93	3/1672 (0.2%)	1.05	6/2257 (0.3%)
12	Z	1.09	4/1675 (0.2%)	1.11	6/2257 (0.3%)
13	M	1.04	2/1728 (0.1%)	1.06	7/2339 (0.3%)
13	a	1.09	3/1724 (0.2%)	1.07	8/2336 (0.3%)
14	N	1.13	4/1548 (0.3%)	1.00	4/2095 (0.2%)
14	b	1.08	3/1554 (0.2%)	1.00	5/2104 (0.2%)
All	All	0.99	66/48920 (0.1%)	1.06	252/66183 (0.4%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if

the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
2	P	0	5
3	C	0	1
3	Q	0	2
4	D	0	5
4	R	0	2
5	E	0	1
6	T	0	1
7	U	1	0
9	I	0	1
9	W	0	1
10	J	0	2
10	X	0	2
12	L	0	1
12	Z	0	1
13	a	0	1
All	All	1	26

The worst 5 of 66 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
7	G	108	GLU	CD-OE1	13.81	1.40	1.25
14	N	150	GLU	CG-CD	11.07	1.68	1.51
12	Z	3	SER	CB-OG	10.22	1.55	1.42
13	a	75	GLU	CD-OE1	10.04	1.36	1.25
14	b	150	GLU	CG-CD	9.59	1.66	1.51

The worst 5 of 252 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	X	86	ARG	NE-CZ-NH2	-21.50	109.55	120.30
10	J	86	ARG	NE-CZ-NH2	-21.33	109.63	120.30
10	J	86	ARG	NE-CZ-NH1	20.61	130.60	120.30
10	X	86	ARG	NE-CZ-NH1	18.78	129.69	120.30
9	I	69	ARG	NE-CZ-NH1	17.32	128.96	120.30

All (1) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
7	U	47	6V1	C1

5 of 26 planarity outliers are listed below:

Mol	Chain	Res	Type	Group
3	C	237	GLU	Peptide
4	D	127	ASP	Peptide
4	D	175[A]	GLU	Peptide
4	D	175[B]	GLU	Mainchain,Peptide
4	D	223	GLY	Peptide

5.2 Too-close contacts [i](#)

Due to software issues we are unable to calculate clashes - this section is therefore empty.

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	231/234 (99%)	219 (95%)	7 (3%)	5 (2%)	6 1
1	O	228/234 (97%)	217 (95%)	5 (2%)	6 (3%)	5 1
2	B	248/261 (95%)	238 (96%)	8 (3%)	2 (1%)	19 9
2	P	247/261 (95%)	232 (94%)	12 (5%)	3 (1%)	13 4
3	C	236/248 (95%)	220 (93%)	9 (4%)	7 (3%)	4 0
3	Q	237/248 (96%)	221 (93%)	6 (2%)	10 (4%)	3 0
4	D	232/241 (96%)	223 (96%)	6 (3%)	3 (1%)	12 4
4	R	232/241 (96%)	221 (95%)	7 (3%)	4 (2%)	9 2
5	E	232/263 (88%)	225 (97%)	6 (3%)	1 (0%)	34 24
5	S	236/263 (90%)	228 (97%)	7 (3%)	1 (0%)	34 24
6	F	241/255 (94%)	239 (99%)	2 (1%)	0	100 100
6	T	239/255 (94%)	232 (97%)	4 (2%)	3 (1%)	12 4
7	G	241/246 (98%)	237 (98%)	4 (2%)	0	100 100
7	U	232/246 (94%)	227 (98%)	4 (2%)	1 (0%)	34 24

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
8	H	220/234 (94%)	217 (99%)	3 (1%)	0	100	100
8	V	220/234 (94%)	216 (98%)	3 (1%)	1 (0%)	29	18
9	I	205/205 (100%)	201 (98%)	4 (2%)	0	100	100
9	W	204/205 (100%)	198 (97%)	6 (3%)	0	100	100
10	J	195/201 (97%)	193 (99%)	2 (1%)	0	100	100
10	X	195/201 (97%)	193 (99%)	2 (1%)	0	100	100
11	K	198/204 (97%)	195 (98%)	3 (2%)	0	100	100
11	Y	200/204 (98%)	197 (98%)	3 (2%)	0	100	100
12	L	213/213 (100%)	211 (99%)	2 (1%)	0	100	100
12	Z	212/213 (100%)	210 (99%)	2 (1%)	0	100	100
13	M	215/219 (98%)	209 (97%)	6 (3%)	0	100	100
13	a	216/219 (99%)	208 (96%)	8 (4%)	0	100	100
14	N	201/205 (98%)	198 (98%)	2 (1%)	1 (0%)	29	18
14	b	202/205 (98%)	200 (99%)	1 (0%)	1 (0%)	29	18
All	All	6208/6458 (96%)	6025 (97%)	134 (2%)	49 (1%)	19	9

5 of 49 Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	50	LYS
1	A	52	LYS
1	A	53	SER
3	C	50	VAL
3	C	216	SER

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	185/191 (97%)	173 (94%)	12 (6%)	17	8
1	O	176/191 (92%)	164 (93%)	12 (7%)	16	7

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	B	199/221 (90%)	190 (96%)	9 (4%)	27	18
2	P	196/221 (89%)	183 (93%)	13 (7%)	16	8
3	C	179/210 (85%)	169 (94%)	10 (6%)	21	11
3	Q	184/210 (88%)	175 (95%)	9 (5%)	25	15
4	D	189/203 (93%)	182 (96%)	7 (4%)	34	25
4	R	187/203 (92%)	184 (98%)	3 (2%)	62	60
5	E	192/223 (86%)	183 (95%)	9 (5%)	26	16
5	S	195/223 (87%)	191 (98%)	4 (2%)	53	48
6	F	199/212 (94%)	188 (94%)	11 (6%)	21	12
6	T	192/212 (91%)	181 (94%)	11 (6%)	20	11
7	G	202/207 (98%)	196 (97%)	6 (3%)	41	33
7	U	186/207 (90%)	182 (98%)	4 (2%)	52	47
8	H	181/195 (93%)	174 (96%)	7 (4%)	32	23
8	V	172/195 (88%)	162 (94%)	10 (6%)	20	10
9	I	176/174 (101%)	174 (99%)	2 (1%)	73	73
9	W	173/174 (99%)	172 (99%)	1 (1%)	86	87
10	J	166/170 (98%)	158 (95%)	8 (5%)	25	16
10	X	165/170 (97%)	159 (96%)	6 (4%)	35	26
11	K	154/159 (97%)	143 (93%)	11 (7%)	14	6
11	Y	158/159 (99%)	150 (95%)	8 (5%)	24	14
12	L	175/178 (98%)	169 (97%)	6 (3%)	37	28
12	Z	175/178 (98%)	172 (98%)	3 (2%)	60	57
13	M	180/181 (99%)	177 (98%)	3 (2%)	60	57
13	a	178/181 (98%)	173 (97%)	5 (3%)	43	36
14	N	158/159 (99%)	154 (98%)	4 (2%)	47	41
14	b	158/159 (99%)	155 (98%)	3 (2%)	57	53
All	All	5030/5366 (94%)	4833 (96%)	197 (4%)	33	23

5 of 197 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	O	223	THR
5	S	101	ARG

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Mol	Chain	Res	Type
2	P	7[B]	SER
3	Q	2	SER
6	T	81	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 43 such sidechains are listed below:

Mol	Chain	Res	Type
5	S	86	ASN
10	X	24	ASN
6	T	63	ASN
8	V	116	HIS
10	X	174	ASN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

18 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
7	6V1	G	47	7	12,15,16	2.70	5 (41%)	9,20,22	2.29	1 (11%)
7	6V1	U	161	7	12,15,16	1.77	2 (16%)	9,20,22	3.25	5 (55%)
15	6V9	d	1	15	6,8,9	0.65	0	3,10,12	4.60	2 (66%)
7	YCM	U	137	7	7,9,10	1.45	1 (14%)	4,10,12	2.06	2 (50%)
10	6V1	X	91	10	12,15,16	1.88	3 (25%)	9,20,22	5.23	6 (66%)
7	YCM	G	137	7	7,9,10	2.17	4 (57%)	4,10,12	2.46	1 (25%)
7	6V1	U	47	7	12,15,16	2.01	4 (33%)	9,20,22	2.17	3 (33%)
15	6V9	c	1	15	6,8,9	0.79	0	3,10,12	2.82	2 (66%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
15	OAS	c	2	15	5,6,9	0.72	0	2,6,11	2.60	1 (50%)
3	YCM	C	63	3	7,9,10	0.88	0	4,10,12	0.78	0
15	OAS	c	3	15	5,6,9	0.85	0	2,6,11	0.37	0
5	6V1	S	148	5	12,15,16	1.88	4 (33%)	9,20,22	2.68	3 (33%)
15	OAS	d	3	15	5,6,9	0.92	0	2,6,11	0.63	0
10	6V1	J	91	10	12,15,16	1.91	2 (16%)	9,20,22	5.07	6 (66%)
5	6V1	E	148	5	12,15,16	1.61	2 (16%)	9,20,22	3.20	3 (33%)
7	6V1	G	161	7	12,15,16	1.61	3 (25%)	9,20,22	2.31	4 (44%)
3	YCM	Q	63	3	7,9,10	1.50	1 (14%)	4,10,12	3.68	3 (75%)
15	OAS	d	2	15	5,6,9	1.35	1 (20%)	2,6,11	4.50	2 (100%)

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. ^{1,2} means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
7	6V1	G	47	7	-	0/6/25/27	0/1/1/1
7	6V1	U	161	7	-	1/6/25/27	0/1/1/1
15	6V9	d	1	15	-	0/0/2/4	0/1/1/1
7	YCM	U	137	7	-	3/6/8/10	-
10	6V1	X	91	10	-	2/6/25/27	0/1/1/1
7	YCM	G	137	7	-	2/6/8/10	-
7	6V1	U	47	7	1/1/5/6	0/6/25/27	0/1/1/1
15	6V9	c	1	15	-	0/0/2/4	0/1/1/1
15	OAS	c	2	15	-	3/3/5/9	-
3	YCM	C	63	3	-	1/6/8/10	-
15	OAS	c	3	15	-	0/3/5/9	-
5	6V1	S	148	5	-	2/6/25/27	0/1/1/1
15	OAS	d	3	15	-	0/3/5/9	-
10	6V1	J	91	10	-	2/6/25/27	0/1/1/1
5	6V1	E	148	5	-	2/6/25/27	0/1/1/1
7	6V1	G	161	7	-	1/6/25/27	0/1/1/1
3	YCM	Q	63	3	-	3/6/8/10	-
15	OAS	d	2	15	-	3/3/5/9	-

The worst 5 of 32 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
7	G	47	6V1	CB-SG	-6.08	1.75	1.82
10	J	91	6V1	C1-SG	-5.28	1.77	1.83
7	U	47	6V1	CB-SG	-4.91	1.76	1.82
7	U	161	6V1	CB-SG	-4.51	1.77	1.82
10	X	91	6V1	C1-SG	-4.46	1.78	1.83

The worst 5 of 44 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	J	91	6V1	C5-C4-N3	9.81	113.91	108.13
10	X	91	6V1	C5-C4-N3	8.99	113.43	108.13
10	X	91	6V1	O7-C2-N3	8.39	134.40	124.14
10	J	91	6V1	O7-C2-N3	7.23	132.99	124.14
5	E	148	6V1	C2-N3-C4	-7.09	108.83	113.04

All (1) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
7	U	47	6V1	C1

5 of 25 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
5	E	148	6V1	C3-C6-N3-C2
5	E	148	6V1	C3-C6-N3-C4
7	G	137	YCM	CE-CD-SG-CB
7	G	137	YCM	SG-CD-CE-NZ2
10	J	91	6V1	C3-C6-N3-C2

There are no ring outliers.

No monomer is involved in short contacts.

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 83 ligands modelled in this entry, 74 are monoatomic - leaving 9 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
19	1PE	M	305	-	15,15,15	0.57	0	14,14,14	0.37	0
19	1PE	V	304	-	15,15,15	0.77	0	14,14,14	0.83	1 (7%)
19	1PE	I	303	-	15,15,15	0.55	0	14,14,14	1.00	1 (7%)
19	1PE	H	305	-	15,15,15	0.59	0	14,14,14	0.66	0
19	1PE	Z	301	-	15,15,15	0.64	0	14,14,14	0.58	0
19	1PE	W	303	-	15,15,15	0.66	0	14,14,14	0.46	0
19	1PE	H	306	-	15,15,15	0.60	0	14,14,14	0.49	0
19	1PE	L	301	-	15,15,15	0.62	0	14,14,14	0.77	0
19	1PE	I	304	-	15,15,15	0.55	0	14,14,14	0.91	1 (7%)

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
19	1PE	M	305	-	-	7/13/13/13	-
19	1PE	V	304	-	-	7/13/13/13	-
19	1PE	I	303	-	-	7/13/13/13	-
19	1PE	H	305	-	-	4/13/13/13	-
19	1PE	Z	301	-	-	5/13/13/13	-
19	1PE	W	303	-	-	8/13/13/13	-
19	1PE	H	306	-	-	7/13/13/13	-
19	1PE	L	301	-	-	7/13/13/13	-
19	1PE	I	304	-	-	5/13/13/13	-

There are no bond length outliers.

All (3) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
19	I	303	1PE	C25-OH5-C14	2.43	123.82	113.29
19	I	304	1PE	OH6-C15-C25	-2.26	100.20	110.39
19	V	304	1PE	OH5-C25-C15	2.00	119.42	110.39

There are no chirality outliers.

5 of 57 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
19	I	304	1PE	C24-C14-OH5-C25
19	I	303	1PE	C15-C25-OH5-C14
19	Z	301	1PE	C16-C26-OH6-C15
19	L	301	1PE	C16-C26-OH6-C15
19	H	306	1PE	OH4-C13-C23-OH3

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data i

6.1 Protein, DNA and RNA chains i

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	A	230/234 (98%)	-0.01	4 (1%) 70 72	30, 47, 80, 96	0
1	O	230/234 (98%)	0.40	16 (6%) 16 18	40, 62, 100, 123	0
2	B	248/261 (95%)	0.07	8 (3%) 47 50	34, 49, 89, 136	0
2	P	247/261 (94%)	0.30	17 (6%) 16 19	39, 58, 99, 134	0
3	C	236/248 (95%)	0.42	14 (5%) 22 25	34, 59, 102, 140	0
3	Q	239/248 (96%)	0.68	28 (11%) 4 5	35, 63, 118, 149	0
4	D	233/241 (96%)	0.30	10 (4%) 35 38	36, 56, 86, 121	0
4	R	233/241 (96%)	-0.00	5 (2%) 63 66	33, 44, 67, 92	0
5	E	233/263 (88%)	0.17	11 (4%) 31 34	29, 42, 87, 105	0
5	S	235/263 (89%)	0.10	7 (2%) 50 53	34, 48, 81, 106	0
6	F	239/255 (93%)	-0.01	0 100 100	26, 36, 57, 75	0
6	T	240/255 (94%)	0.27	9 (3%) 40 43	35, 51, 85, 110	0
7	G	241/246 (97%)	0.06	4 (1%) 70 72	27, 40, 74, 106	0
7	U	235/246 (95%)	0.38	14 (5%) 21 24	41, 59, 93, 129	0
8	H	220/234 (94%)	0.07	4 (1%) 68 71	28, 37, 68, 100	0
8	V	220/234 (94%)	0.05	7 (3%) 47 50	38, 49, 81, 103	0
9	I	204/205 (99%)	-0.07	0 100 100	29, 37, 58, 73	0
9	W	204/205 (99%)	-0.06	0 100 100	37, 49, 71, 78	0
10	J	195/201 (97%)	-0.11	1 (0%) 91 92	29, 40, 57, 70	0
10	X	195/201 (97%)	-0.13	0 100 100	33, 42, 56, 69	0
11	K	200/204 (98%)	-0.03	1 (0%) 91 92	33, 44, 68, 83	0
11	Y	199/204 (97%)	-0.08	1 (0%) 91 92	27, 36, 58, 69	0
12	L	213/213 (100%)	0.00	0 100 100	33, 48, 70, 85	0
12	Z	213/213 (100%)	-0.05	0 100 100	28, 38, 60, 74	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
13	M	216/219 (98%)	0.02	1 (0%) 91 92	27, 39, 61, 89	0
13	a	216/219 (98%)	-0.05	1 (0%) 91 92	29, 40, 61, 81	0
14	N	202/205 (98%)	-0.02	2 (0%) 82 84	27, 35, 55, 87	0
14	b	203/205 (99%)	-0.06	1 (0%) 91 92	32, 40, 66, 96	0
15	c	0/4	-	-	-	-
15	d	0/4	-	-	-	-
All	All	6219/6466 (96%)	0.10	166 (2%) 54 57	26, 45, 84, 149	0

The worst 5 of 166 RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
2	P	204	SER	15.3
1	O	232	ILE	10.9
4	D	241	ILE	10.1
3	Q	232	ILE	8.3
5	E	54	SER	8.2

6.2 Non-standard residues in protein, DNA, RNA chains [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
7	6V1	U	47	15/16	0.83	0.28	73,107,113,116	0
7	YCM	U	137	10/11	0.85	0.24	51,60,74,76	0
3	YCM	C	63	10/11	0.90	0.10	52,53,61,61	0
10	6V1	X	91	15/16	0.91	0.20	35,54,58,65	0
3	YCM	Q	63	10/11	0.92	0.10	52,54,64,65	0
7	YCM	G	137	10/11	0.92	0.10	31,40,53,56	0
5	6V1	E	148	15/16	0.93	0.14	33,49,59,60	0
7	6V1	U	161	15/16	0.93	0.13	53,71,79,80	0
10	6V1	J	91	15/16	0.93	0.19	33,51,56,57	0
5	6V1	S	148	15/16	0.94	0.16	37,61,67,67	0
7	6V1	G	47	15/16	0.95	0.16	38,57,61,61	0
7	6V1	G	161	15/16	0.96	0.12	33,51,58,61	0
15	OAS	c	2	7/10	0.96	0.12	34,37,41,44	0
15	OAS	d	2	7/10	0.97	0.13	27,30,37,40	0
15	6V9	c	1	8/9	0.98	0.08	38,39,41,42	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
15	OAS	c	3	7/10	0.98	0.12	35,35,38,38	0
15	OAS	d	3	7/10	0.98	0.10	27,28,29,30	0
15	6V9	d	1	8/9	0.99	0.09	33,33,35,36	0

6.3 Carbohydrates [i](#)

There are no monosaccharides in this entry.

6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
19	1PE	M	305	16/16	0.78	0.24	70,73,87,90	0
19	1PE	I	304	16/16	0.82	0.22	53,62,77,81	0
16	CL	O	303	1/1	0.83	0.18	85,85,85,85	0
19	1PE	L	301	16/16	0.84	0.13	53,64,70,71	0
19	1PE	H	306	16/16	0.87	0.24	55,66,88,88	0
19	1PE	W	303	16/16	0.87	0.12	52,61,70,71	0
16	CL	V	302	1/1	0.88	0.08	56,56,56,56	0
16	CL	A	302	1/1	0.88	0.09	65,65,65,65	0
19	1PE	I	303	16/16	0.89	0.14	50,55,61,67	0
19	1PE	Z	301	16/16	0.89	0.12	53,61,66,66	0
16	CL	V	303	1/1	0.90	0.07	59,59,59,59	0
19	1PE	V	304	16/16	0.90	0.12	44,54,78,83	0
16	CL	K	305	1/1	0.91	0.14	59,59,59,59	0
16	CL	H	303	1/1	0.91	0.07	53,53,53,53	0
19	1PE	H	305	16/16	0.92	0.13	39,53,62,62	0
16	CL	D	301	1/1	0.92	0.15	66,66,66,66	0
16	CL	C	301	1/1	0.92	0.12	60,60,60,60	0
16	CL	Q	301	1/1	0.93	0.19	67,67,67,67	0
16	CL	Q	302	1/1	0.93	0.14	63,63,63,63	0
18	MG	W	301	1/1	0.93	0.07	38,38,38,38	0
16	CL	R	301	1/1	0.93	0.10	57,57,57,57	0
16	CL	M	302	1/1	0.94	0.11	61,61,61,61	0
16	CL	a	303	1/1	0.94	0.09	56,56,56,56	0
16	CL	O	304	1/1	0.94	0.11	62,62,62,62	0
16	CL	O	302	1/1	0.94	0.06	59,59,59,59	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
16	CL	Y	303	1/1	0.95	0.04	67,67,67,67	0
16	CL	Y	304	1/1	0.95	0.06	56,56,56,56	0
16	CL	Y	305	1/1	0.95	0.17	59,59,59,59	0
16	CL	O	301	1/1	0.95	0.07	55,55,55,55	0
16	CL	b	301	1/1	0.95	0.07	48,48,48,48	0
18	MG	V	301	1/1	0.95	0.07	53,53,53,53	0
16	CL	D	302	1/1	0.95	0.14	61,61,61,61	0
16	CL	K	304	1/1	0.95	0.18	60,60,60,60	0
18	MG	I	301	1/1	0.96	0.10	34,34,34,34	0
18	MG	J	301	1/1	0.96	0.04	51,51,51,51	0
16	CL	N	303	1/1	0.96	0.06	47,47,47,47	0
16	CL	P	301	1/1	0.96	0.06	52,52,52,52	0
16	CL	B	301	1/1	0.96	0.08	41,41,41,41	0
16	CL	M	301	1/1	0.96	0.21	57,57,57,57	0
16	CL	C	302	1/1	0.96	0.12	62,62,62,62	0
16	CL	a	301	1/1	0.96	0.12	60,60,60,60	0
16	CL	S	301	1/1	0.96	0.29	65,65,65,65	0
16	CL	S	302	1/1	0.96	0.08	62,62,62,62	0
16	CL	b	302	1/1	0.96	0.14	62,62,62,62	0
17	K	b	305	1/1	0.96	0.06	46,46,46,46	0
18	MG	H	301	1/1	0.96	0.04	45,45,45,45	0
16	CL	W	302	1/1	0.97	0.06	50,50,50,50	0
16	CL	N	301	1/1	0.97	0.10	43,43,43,43	0
18	MG	I	305	1/1	0.97	0.07	30,30,30,30	0
16	CL	K	302	1/1	0.97	0.08	38,38,38,38	0
18	MG	L	303	1/1	0.97	0.07	39,39,39,39	0
16	CL	K	303	1/1	0.97	0.04	69,69,69,69	0
16	CL	R	302	1/1	0.97	0.12	53,53,53,53	0
18	MG	X	301	1/1	0.97	0.03	53,53,53,53	0
16	CL	a	302	1/1	0.97	0.08	47,47,47,47	0
16	CL	B	302	1/1	0.97	0.10	57,57,57,57	0
16	CL	E	302	1/1	0.97	0.07	51,51,51,51	0
16	CL	A	301	1/1	0.97	0.07	48,48,48,48	0
16	CL	b	303	1/1	0.97	0.09	51,51,51,51	0
16	CL	b	304	1/1	0.97	0.08	51,51,51,51	0
17	K	L	302	1/1	0.97	0.05	50,50,50,50	0
17	K	U	302	1/1	0.97	0.04	42,42,42,42	0
16	CL	I	302	1/1	0.97	0.08	44,44,44,44	0
16	CL	G	301	1/1	0.98	0.10	46,46,46,46	0
16	CL	S	303	1/1	0.98	0.05	53,53,53,53	0
16	CL	U	301	1/1	0.98	0.11	54,54,54,54	0
16	CL	G	302	1/1	0.98	0.05	61,61,61,61	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
16	CL	A	304	1/1	0.98	0.09	56,56,56,56	0
16	CL	H	304	1/1	0.98	0.05	49,49,49,49	0
16	CL	Y	302	1/1	0.98	0.12	59,59,59,59	0
16	CL	M	304	1/1	0.98	0.10	54,54,54,54	0
16	CL	A	303	1/1	0.98	0.06	49,49,49,49	0
16	CL	N	302	1/1	0.98	0.07	47,47,47,47	0
16	CL	E	303	1/1	0.98	0.07	57,57,57,57	0
16	CL	F	301	1/1	0.98	0.06	51,51,51,51	0
18	MG	K	301	1/1	0.98	0.05	35,35,35,35	0
17	K	Z	302	1/1	0.99	0.06	42,42,42,42	0
16	CL	M	303	1/1	0.99	0.05	44,44,44,44	0
17	K	G	303	1/1	0.99	0.06	35,35,35,35	0
18	MG	H	302	1/1	0.99	0.11	34,34,34,34	0
16	CL	Y	301	1/1	0.99	0.13	35,35,35,35	0
17	K	N	304	1/1	0.99	0.06	41,41,41,41	0
16	CL	E	301	1/1	0.99	0.11	57,57,57,57	0

6.5 Other polymers [i](#)

There are no such residues in this entry.