



Full wwPDB X-ray Structure Validation Report ⓘ

May 13, 2020 – 01:59 pm BST

PDB ID : 5Z3Q
Title : Crystal Structure of a Soluble Fragment of Poliovirus 2C ATPase (2.55 Angstrom)
Authors : Guan, H.; Tian, J.; Zhang, C.; Qin, B.; Cui, S.
Deposited on : 2018-01-08
Resolution : 2.54 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
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

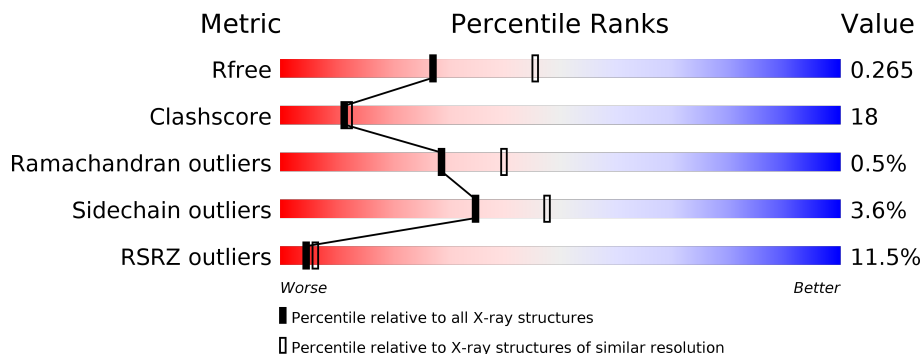
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.54 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	1284 (2.56-2.52)
Clashscore	141614	1332 (2.56-2.52)
Ramachandran outliers	138981	1315 (2.56-2.52)
Sidechain outliers	138945	1315 (2.56-2.52)
RSRZ outliers	127900	1272 (2.56-2.52)

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 $\leq 5\%$. 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	214	71% (green), 22% (yellow), 6% (grey)
1	B	214	72% (green), 21% (yellow), 5% (grey)
1	C	214	13% (red), 53% (green), 33% (yellow), 12% (grey)
1	D	214	3% (red), 60% (green), 33% (yellow), 6% (grey)
1	E	214	11% (red), 52% (green), 38% (yellow), 6% (grey)
1	H	214	31% (red), 25% (green), 15% (yellow), 58% (grey)

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 criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
3	PO4	A	402	-	-	X	-

2 Entry composition i

There are 4 unique types of molecules in this entry. The entry contains 16785 atoms, of which 8193 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 PV-2C.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
			Total	C	H	N	O	S			
1	B	204	3110	974	1536	280	300	20	0	0	0
1	A	202	3072	965	1515	275	297	20	0	0	0
1	D	202	3074	963	1520	274	297	20	0	0	0
1	C	188	2866	897	1419	257	273	20	0	0	0
1	E	201	3062	958	1516	273	295	20	0	0	0
1	H	89	1362	414	687	120	129	12	0	0	0

There are 18 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B	149	ALA	ARG	engineered mutation	UNP P03300
B	207	ALA	GLU	engineered mutation	UNP P03300
B	209	ALA	LYS	engineered mutation	UNP P03300
A	149	ALA	ARG	engineered mutation	UNP P03300
A	207	ALA	GLU	engineered mutation	UNP P03300
A	209	ALA	LYS	engineered mutation	UNP P03300
D	149	ALA	ARG	engineered mutation	UNP P03300
D	207	ALA	GLU	engineered mutation	UNP P03300
D	209	ALA	LYS	engineered mutation	UNP P03300
C	149	ALA	ARG	engineered mutation	UNP P03300
C	207	ALA	GLU	engineered mutation	UNP P03300
C	209	ALA	LYS	engineered mutation	UNP P03300
E	149	ALA	ARG	engineered mutation	UNP P03300
E	207	ALA	GLU	engineered mutation	UNP P03300
E	209	ALA	LYS	engineered mutation	UNP P03300
H	149	ALA	ARG	engineered mutation	UNP P03300
H	207	ALA	GLU	engineered mutation	UNP P03300

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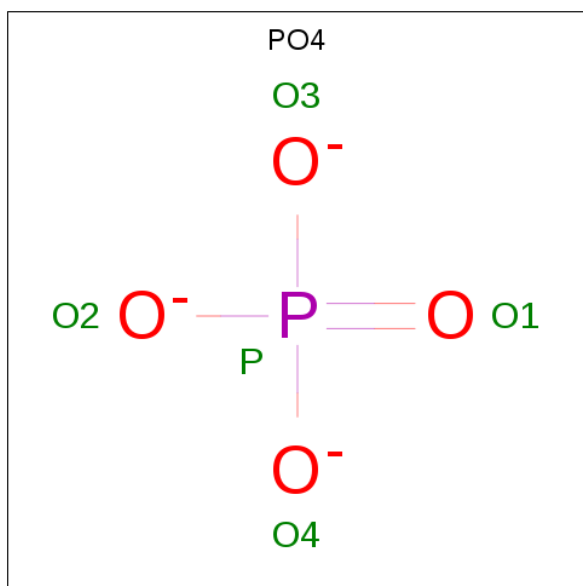
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Chain	Residue	Modelled	Actual	Comment	Reference
H	209	ALA	LYS	engineered mutation	UNP P03300

- Molecule 2 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	D	1	Total Zn 1 1	0	0
2	E	1	Total Zn 1 1	0	0
2	H	1	Total Zn 1 1	0	0
2	B	1	Total Zn 1 1	0	0
2	C	1	Total Zn 1 1	0	0
2	A	1	Total Zn 1 1	0	0

- Molecule 3 is PHOSPHATE ION (three-letter code: PO4) (formula: O₄P).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	B	1	Total O P 5 4 1	0	0
3	A	1	Total O P 5 4 1	0	0
3	D	1	Total O P 5 4 1	0	0

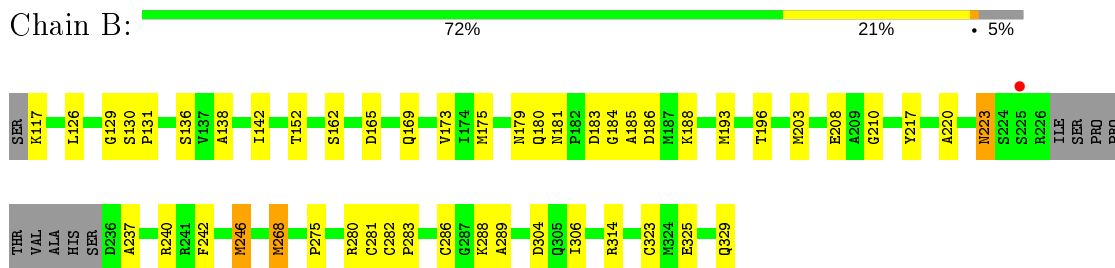
- Molecule 4 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	B	43	Total O 43 43	0	0
4	A	65	Total O 65 65	0	0
4	D	47	Total O 47 47	0	0
4	C	22	Total O 22 22	0	0
4	E	24	Total O 24 24	0	0
4	H	17	Total O 17 17	0	0

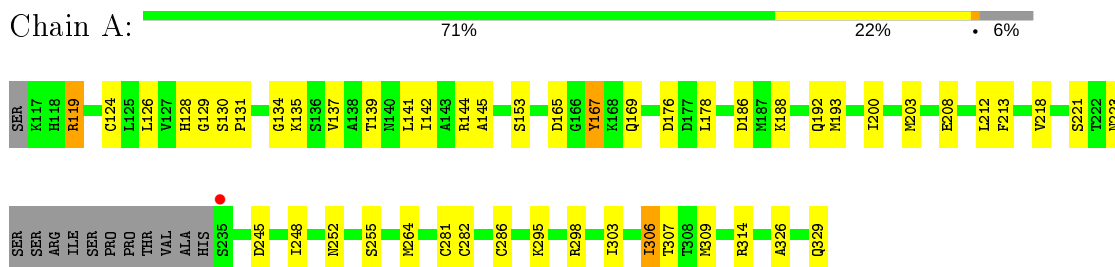
3 Residue-property plots

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

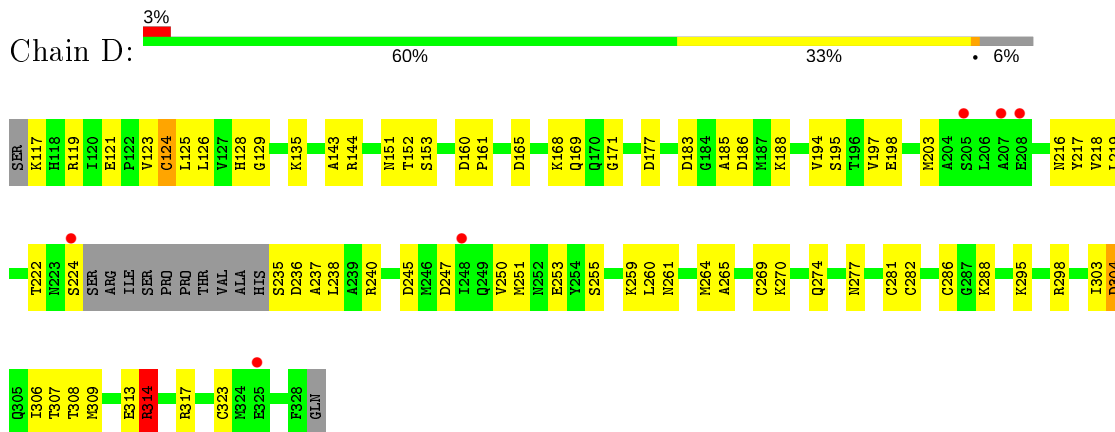
- Molecule 1: PV-2C



- Molecule 1: PV-2C

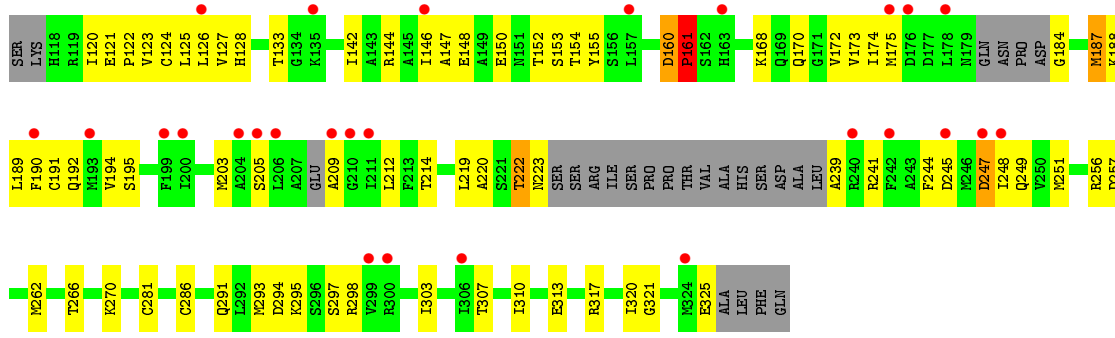


- Molecule 1: PV-2C

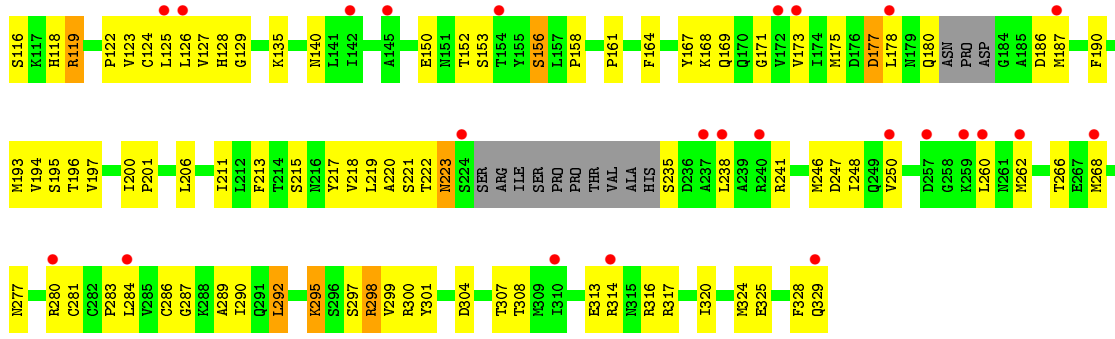


- Molecule 1: PV-2C

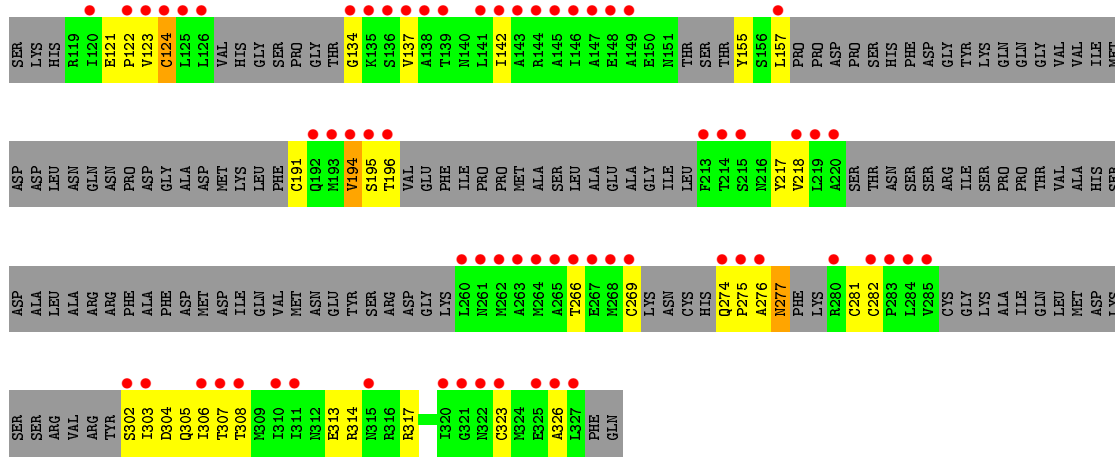




• Molecule 1: PV-2C



• Molecule 1: PV-2C



4 Data and refinement statistics

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α , β , γ	52.70Å 84.07Å 172.56Å 90.00° 94.21° 90.00°	Depositor
Resolution (Å)	40.62 – 2.54 43.81 – 2.55	Depositor EDS
% Data completeness (in resolution range)	99.4 (40.62-2.54) 99.5 (43.81-2.55)	Depositor EDS
R_{merge}	0.12	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.23 (at 2.54Å)	Xtrriage
Refinement program	PHENIX (1.10.1_2155: ???)	Depositor
R, R_{free}	0.202 , 0.265 0.203 , 0.265	Depositor DCC
R_{free} test set	2525 reflections (5.13%)	wwPDB-VP
Wilson B-factor (Å ²)	57.3	Xtrriage
Anisotropy	0.153	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.37 , 60.5	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	0.93	EDS
Total number of atoms	16785	wwPDB-VP
Average B, all atoms (Å ²)	92.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.98% 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 i

5.1 Standard geometry i

Bond lengths and bond angles in the following residue types are not validated in this section: ZN, PO4

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	0.93	2/1582 (0.1%)	0.98	5/2134 (0.2%)
1	B	0.94	1/1599 (0.1%)	0.87	2/2156 (0.1%)
1	C	0.68	0/1468	0.77	0/1976
1	D	0.91	1/1579 (0.1%)	0.88	4/2130 (0.2%)
1	E	0.69	1/1569 (0.1%)	0.78	1/2113 (0.0%)
1	H	0.47	0/672	0.59	0/896
All	All	0.82	5/8469 (0.1%)	0.84	12/11405 (0.1%)

All (5) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	E	124	CYS	CB-SG	-6.63	1.71	1.82
1	A	282	CYS	CB-SG	-5.99	1.72	1.81
1	D	281	CYS	CB-SG	-5.99	1.72	1.81
1	B	217	TYR	CD1-CE1	-5.20	1.31	1.39
1	A	167	TYR	CE2-CZ	-5.11	1.31	1.38

All (12) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	119	ARG	NE-CZ-NH2	-12.11	114.24	120.30
1	A	119	ARG	NE-CZ-NH1	9.81	125.20	120.30
1	B	304	ASP	CB-CG-OD1	7.14	124.72	118.30
1	D	304	ASP	CB-CG-OD1	6.43	124.08	118.30
1	D	314	ARG	NE-CZ-NH1	-6.32	117.14	120.30
1	B	268	MET	CG-SD-CE	-5.61	91.23	100.20
1	D	124	CYS	CA-CB-SG	-5.54	104.02	114.00
1	A	306	ILE	CG1-CB-CG2	-5.31	99.72	111.40
1	A	245	ASP	CB-CG-OD2	-5.12	113.70	118.30
1	A	245	ASP	CB-CG-OD1	5.09	122.88	118.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	E	119	ARG	NE-CZ-NH2	-5.09	117.76	120.30
1	D	304	ASP	CB-CG-OD2	-5.03	113.78	118.30

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	1557	1515	1536	37	2
1	B	1574	1536	1554	33	3
1	C	1447	1419	1432	69	1
1	D	1554	1520	1533	61	0
1	E	1546	1516	1528	80	0
1	H	675	687	681	25	0
2	A	1	0	0	0	0
2	B	1	0	0	0	0
2	C	1	0	0	0	0
2	D	1	0	0	0	0
2	E	1	0	0	0	0
2	H	1	0	0	0	0
3	A	5	0	0	2	0
3	B	5	0	0	0	0
3	D	5	0	0	0	0
4	A	65	0	0	11	0
4	B	43	0	0	2	0
4	C	22	0	0	21	0
4	D	47	0	0	13	0
4	E	24	0	0	9	0
4	H	17	0	0	4	0
All	All	8592	8193	8264	295	3

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 18.

All (295) 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:C:239:ALA:N	4:C:501:HOH:O	1.94	1.01
1:D:117:LYS:N	4:D:501:HOH:O	1.96	0.96
1:A:223:ASN:O	4:A:501:HOH:O	1.85	0.95
1:D:240:ARG:NH2	4:D:503:HOH:O	2.05	0.89
1:C:187:MET:SD	4:C:522:HOH:O	2.31	0.88
1:D:124:CYS:HA	4:D:502:HOH:O	1.76	0.86
1:C:128:HIS:ND1	4:C:504:HOH:O	2.10	0.84
1:C:325:GLU:O	4:C:502:HOH:O	1.95	0.83
1:D:298:ARG:NH2	4:D:504:HOH:O	2.14	0.79
1:H:281:CYS:SG	1:H:282:CYS:N	2.55	0.79
1:E:197:VAL:O	4:E:501:HOH:O	2.01	0.79
1:A:141:LEU:O	4:A:502:HOH:O	2.01	0.78
1:C:244:PHE:O	4:C:503:HOH:O	2.02	0.78
1:H:155:TYR:N	4:H:501:HOH:O	2.19	0.75
1:D:123:VAL:O	4:D:502:HOH:O	2.03	0.75
1:C:126:LEU:O	4:C:503:HOH:O	2.04	0.74
1:D:152:THR:HG21	1:D:171:GLY:H	1.52	0.74
1:C:325:GLU:N	4:C:506:HOH:O	2.18	0.74
1:B:117:LYS:HB3	1:E:116:SER:N	2.03	0.73
1:A:203:MET:HE2	1:A:208:GLU:HB3	1.69	0.73
1:C:191:CYS:SG	1:C:241:ARG:NE	2.62	0.72
1:B:210:GLY:O	1:D:152:THR:HG23	1.89	0.72
1:A:144:ARG:N	4:A:502:HOH:O	2.22	0.71
1:B:165:ASP:HA	1:B:203:MET:HE3	1.73	0.71
1:D:119:ARG:NH1	1:D:197:VAL:O	2.24	0.70
1:D:152:THR:HG22	1:D:153:SER:H	1.55	0.70
1:D:270:LYS:NZ	4:D:506:HOH:O	2.24	0.70
1:E:223:ASN:ND2	1:E:223:ASN:O	2.24	0.70
1:A:134:GLY:N	3:A:402:PO4:O1	2.25	0.70
1:E:250:VAL:N	4:E:503:HOH:O	2.18	0.70
1:B:183:ASP:OD1	1:B:184:GLY:N	2.25	0.70
1:C:147:ALA:O	4:C:505:HOH:O	2.10	0.70
1:D:218:VAL:O	4:D:502:HOH:O	2.09	0.70
1:B:208:GLU:OE1	4:B:501:HOH:O	2.10	0.69
1:D:303:ILE:O	1:D:307:THR:HG22	1.93	0.69
1:H:191:CYS:SG	4:H:515:HOH:O	2.51	0.67
1:E:119:ARG:NH2	1:E:193:MET:O	2.27	0.67
1:C:144:ARG:NH2	4:C:508:HOH:O	2.27	0.67
1:C:191:CYS:O	1:C:195:SER:OG	2.13	0.67
1:D:237:ALA:N	4:D:508:HOH:O	2.28	0.66
1:C:245:ASP:CG	1:C:295:LYS:HE2	2.16	0.66
1:B:165:ASP:HA	1:B:203:MET:CE	2.26	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:326:ALA:O	4:A:503:HOH:O	2.13	0.65
1:C:294:ASP:HB3	1:C:297:SER:HB2	1.78	0.65
1:B:169:GLN:OE1	4:B:502:HOH:O	2.15	0.64
1:E:156:SER:OG	4:E:502:HOH:O	2.15	0.64
1:B:281:CYS:SG	1:B:286:CYS:HB3	2.38	0.64
1:D:135:LYS:NZ	1:D:222:THR:O	2.27	0.64
1:A:303:ILE:O	1:A:307:THR:HG23	1.98	0.63
1:C:222:THR:HG23	4:C:504:HOH:O	1.99	0.62
1:B:325:GLU:O	1:B:329:GLN:HB2	1.99	0.62
1:A:142:ILE:C	4:A:502:HOH:O	2.38	0.61
1:B:203:MET:HE2	1:B:208:GLU:HB3	1.82	0.61
1:A:281:CYS:SG	1:A:286:CYS:HB3	2.41	0.61
1:H:121:GLU:OE2	1:H:317:ARG:NH1	2.33	0.61
1:C:223:ASN:N	4:C:504:HOH:O	2.33	0.61
1:E:219:LEU:N	1:E:219:LEU:HD12	2.15	0.60
1:E:177:ASP:OD1	1:E:177:ASP:N	2.33	0.60
1:C:256:ARG:O	1:C:257:ASP:HB3	2.01	0.60
1:E:140:ASN:ND2	4:E:505:HOH:O	2.34	0.60
1:B:268:MET:HE1	4:A:503:HOH:O	2.02	0.60
1:B:117:LYS:HB3	1:E:116:SER:CA	2.33	0.59
1:C:245:ASP:OD2	1:C:295:LYS:HE2	2.02	0.59
1:D:245:ASP:OD2	1:D:295:LYS:HD3	2.03	0.58
1:D:277:ASN:OD1	1:D:308:THR:HG22	2.04	0.58
1:C:146:ILE:HG13	1:C:172:VAL:HG11	1.86	0.58
1:E:180:GLN:HA	1:E:187:MET:HG3	1.86	0.58
1:D:217:TYR:CZ	1:D:314:ARG:HD2	2.38	0.58
1:E:119:ARG:NE	4:E:501:HOH:O	2.27	0.57
1:D:151:ASN:ND2	4:D:509:HOH:O	2.36	0.57
1:E:167:TYR:CZ	1:E:169:GLN:HA	2.39	0.57
1:E:200:ILE:O	1:E:200:ILE:HG23	2.03	0.57
1:E:297:SER:OG	1:E:299:VAL:HG12	2.04	0.57
1:C:152:THR:C	4:C:505:HOH:O	2.42	0.57
1:D:261:ASN:ND2	1:D:264:MET:SD	2.78	0.57
1:H:276:ALA:N	1:H:304:ASP:OD2	2.34	0.57
1:B:280:ARG:NE	4:A:503:HOH:O	2.37	0.57
1:C:121:GLU:O	1:C:317:ARG:NH1	2.37	0.56
1:C:147:ALA:C	4:C:505:HOH:O	2.43	0.56
1:D:314:ARG:NH1	4:D:510:HOH:O	2.38	0.56
1:B:138:ALA:O	1:B:142:ILE:HG13	2.05	0.56
1:B:185:ALA:HA	1:B:188:LYS:HE3	1.87	0.56
1:C:142:ILE:HG23	1:C:307:THR:HG22	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:216:ASN:HB3	1:D:314:ARG:HE	1.69	0.56
1:E:152:THR:HG22	1:E:153:SER:H	1.71	0.56
1:C:245:ASP:HA	4:C:503:HOH:O	2.04	0.56
1:E:152:THR:HG21	1:E:171:GLY:H	1.69	0.56
1:C:189:LEU:HA	1:C:192:GLN:OE1	2.06	0.55
1:D:304:ASP:OD2	4:D:505:HOH:O	2.18	0.55
1:A:203:MET:CE	1:A:208:GLU:HB3	2.37	0.55
1:C:297:SER:O	1:C:298:ARG:HB3	2.05	0.55
1:E:156:SER:N	4:E:502:HOH:O	2.39	0.55
1:A:203:MET:HE2	1:A:208:GLU:CB	2.35	0.55
1:E:248:ILE:HG13	1:E:290:ILE:HD11	1.89	0.55
1:E:125:LEU:HD21	1:E:127:VAL:HG13	1.88	0.55
1:B:179:ASN:N	1:B:186:ASP:OD2	2.39	0.54
1:D:185:ALA:O	1:D:188:LYS:N	2.39	0.54
1:E:284:LEU:HA	1:E:290:ILE:HG22	1.89	0.54
1:C:150:GLU:OE2	4:C:507:HOH:O	2.18	0.54
1:C:293:MET:HE1	1:C:298:ARG:NH1	2.23	0.54
1:C:170:GLN:N	1:C:170:GLN:OE1	2.37	0.53
1:C:281:CYS:SG	1:C:286:CYS:HB3	2.47	0.53
1:D:168:LYS:O	1:D:169:GLN:HB2	2.08	0.53
1:E:213:PHE:CZ	1:E:215:SER:HB2	2.43	0.53
1:B:286:CYS:SG	1:B:288:LYS:HG3	2.49	0.53
1:H:269:CYS:SG	1:H:281:CYS:SG	3.04	0.53
1:D:247:ASP:OD2	1:D:295:LYS:HG2	2.09	0.52
1:A:326:ALA:C	4:A:503:HOH:O	2.46	0.52
1:E:219:LEU:N	1:E:219:LEU:CD1	2.72	0.52
1:D:277:ASN:OD1	1:D:307:THR:HG23	2.09	0.52
1:C:120:ILE:HD11	1:C:317:ARG:HB3	1.92	0.52
1:C:293:MET:HE3	1:C:298:ARG:CZ	2.39	0.52
1:A:124:CYS:HA	1:A:218:VAL:O	2.10	0.52
1:D:250:VAL:HG12	1:D:251:MET:O	2.10	0.51
1:E:135:LYS:HG2	1:E:221:SER:HB2	1.92	0.51
1:B:246:MET:HE3	1:B:306:ILE:HD11	1.92	0.51
1:C:249:GLN:NE2	1:C:293:MET:SD	2.83	0.51
1:C:155:TYR:O	1:C:173:VAL:HG23	2.10	0.51
1:A:188:LYS:O	1:A:192:GLN:HG3	2.11	0.51
1:A:200:ILE:HG12	1:A:212:LEU:HD23	1.93	0.51
1:D:128:HIS:ND1	1:D:224:SER:HB2	2.26	0.50
1:H:134:GLY:N	4:H:503:HOH:O	2.44	0.50
1:H:191:CYS:N	4:H:502:HOH:O	2.43	0.50
1:E:127:VAL:HG23	1:E:135:LYS:HG3	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:235:SER:O	1:D:238:LEU:HG	2.11	0.50
1:E:316:ARG:O	1:E:320:ILE:HG12	2.12	0.50
1:D:217:TYR:CE1	1:D:314:ARG:HD2	2.47	0.50
1:E:287:GLY:HA2	1:E:290:ILE:O	2.12	0.50
1:C:303:ILE:O	1:C:307:THR:HG23	2.10	0.50
1:E:158:PRO:O	1:E:161:PRO:HB3	2.11	0.50
1:C:191:CYS:SG	1:C:241:ARG:CZ	2.99	0.50
1:A:142:ILE:HG23	1:A:307:THR:HG22	1.94	0.49
1:E:248:ILE:HD11	1:E:290:ILE:CG1	2.42	0.49
1:H:269:CYS:HG	1:H:281:CYS:HG	1.52	0.49
1:D:218:VAL:N	4:D:502:HOH:O	2.03	0.49
1:A:165:ASP:HA	1:A:203:MET:CE	2.42	0.49
1:B:117:LYS:O	1:B:117:LYS:HG2	2.13	0.49
1:B:283:PRO:HB2	1:B:289:ALA:HB2	1.93	0.49
1:C:125:LEU:HD13	1:C:310:ILE:HD11	1.93	0.49
1:D:306:ILE:HD12	1:D:309:MET:CE	2.42	0.49
1:H:277:ASN:OD1	1:H:304:ASP:OD1	2.30	0.49
1:A:306:ILE:HA	1:A:309:MET:HE3	1.95	0.49
1:H:274:GLN:OE1	1:H:275:PRO:HD2	2.12	0.49
1:E:218:VAL:C	1:E:219:LEU:HD12	2.33	0.49
1:E:246:MET:HG3	1:E:292:LEU:HD13	1.95	0.49
1:D:124:CYS:SG	1:D:125:LEU:N	2.85	0.49
1:C:223:ASN:C	4:C:504:HOH:O	2.51	0.48
1:H:277:ASN:OD1	1:H:307:THR:OG1	2.32	0.48
1:C:133:THR:HB	1:C:248:ILE:HD13	1.96	0.48
1:A:135:LYS:O	1:A:139:THR:HG23	2.13	0.48
1:C:175:MET:HB3	1:C:220:ALA:HB2	1.96	0.48
1:D:253:GLU:H	1:D:253:GLU:CD	2.16	0.48
1:E:116:SER:HB2	1:E:118:HIS:CE1	2.49	0.48
1:C:184:GLY:O	1:C:188:LYS:HG2	2.13	0.48
1:D:165:ASP:HA	1:D:203:MET:CE	2.43	0.48
1:A:252:ASN:O	1:A:255:SER:OG	2.32	0.47
1:D:216:ASN:CB	1:D:314:ARG:HE	2.27	0.47
1:E:195:SER:OG	1:E:196:THR:N	2.47	0.47
1:B:126:LEU:HD12	1:B:242:PHE:CE1	2.49	0.47
1:E:200:ILE:HD12	1:E:211:ILE:O	2.14	0.47
1:A:223:ASN:N	1:A:223:ASN:OD1	2.48	0.47
1:D:165:ASP:HA	1:D:203:MET:HE3	1.96	0.47
1:E:325:GLU:HA	1:E:325:GLU:OE1	2.15	0.47
1:H:195:SER:OG	1:H:196:THR:N	2.47	0.47
1:C:212:LEU:HD13	1:E:206:LEU:HD21	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:264:MET:HE3	4:A:526:HOH:O	2.15	0.47
1:E:173:VAL:HG11	1:E:193:MET:CE	2.45	0.47
1:E:328:PHE:O	1:E:329:GLN:HB2	2.14	0.47
1:D:143:ALA:HB2	1:D:219:LEU:HD12	1.97	0.46
1:E:277:ASN:HD21	1:E:308:THR:HG22	1.80	0.46
1:B:237:ALA:O	1:B:240:ARG:HG2	2.15	0.46
1:C:293:MET:CE	1:C:298:ARG:CZ	2.93	0.46
1:H:303:ILE:O	1:H:306:ILE:HG22	2.14	0.46
1:E:194:VAL:HG13	1:E:218:VAL:HG21	1.97	0.46
1:E:295:LYS:NZ	4:E:507:HOH:O	2.42	0.46
1:A:130:SER:HB2	1:A:131:PRO:HD2	1.97	0.46
1:C:123:VAL:HG22	1:C:313:GLU:HG3	1.97	0.46
1:C:128:HIS:CB	4:C:504:HOH:O	2.63	0.46
1:E:126:LEU:HA	1:E:220:ALA:O	2.15	0.46
1:E:152:THR:HG21	1:E:171:GLY:N	2.31	0.46
1:C:160:ASP:N	1:C:161:PRO:HD3	2.30	0.45
1:C:154:THR:HG22	1:C:172:VAL:CG2	2.46	0.45
1:D:247:ASP:OD2	1:D:295:LYS:CG	2.64	0.45
1:C:168:LYS:HB3	1:E:200:ILE:HG21	1.98	0.45
1:H:155:TYR:HE1	1:H:157:LEU:CD2	2.30	0.45
1:B:246:MET:SD	1:B:306:ILE:HD11	2.56	0.45
1:C:262:MET:HE3	1:C:266:THR:HG23	1.98	0.45
1:E:129:GLY:O	1:E:223:ASN:HB3	2.17	0.45
1:E:281:CYS:SG	1:E:286:CYS:HB3	2.55	0.45
1:H:217:TYR:CZ	1:H:314:ARG:HD2	2.50	0.45
1:A:134:GLY:O	1:A:137:VAL:HG12	2.17	0.45
1:C:128:HIS:ND1	1:C:222:THR:HG23	2.32	0.45
1:B:180:GLN:HG3	1:B:181:ASN:N	2.32	0.45
1:H:323:CYS:O	1:H:326:ALA:N	2.47	0.45
1:C:214:THR:HG22	1:C:214:THR:O	2.18	0.44
1:B:280:ARG:NH2	1:A:329:GLN:O	2.50	0.44
1:D:260:LEU:HD23	1:D:260:LEU:C	2.37	0.44
1:C:152:THR:N	4:C:505:HOH:O	2.27	0.44
1:C:175:MET:HE1	1:C:190:PHE:HD2	1.82	0.44
1:B:130:SER:HB3	1:B:131:PRO:HD2	1.99	0.44
1:D:277:ASN:OD1	1:D:308:THR:CG2	2.65	0.44
1:E:222:THR:HG22	1:E:223:ASN:N	2.33	0.44
1:E:283:PRO:HB2	1:E:289:ALA:HB2	2.00	0.44
1:A:128:HIS:O	1:A:248:ILE:HG22	2.18	0.44
1:B:117:LYS:HB3	1:E:116:SER:HB3	1.99	0.44
1:E:235:SER:HA	1:E:238:LEU:CD2	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:147:ALA:CA	4:C:505:HOH:O	2.66	0.44
1:D:123:VAL:HG22	1:D:313:GLU:HG3	1.99	0.44
1:A:298:ARG:NH2	4:A:509:HOH:O	2.36	0.44
1:C:174:ILE:HA	1:C:219:LEU:O	2.18	0.44
1:E:150:GLU:OE1	1:E:217:TYR:OH	2.28	0.44
1:E:313:GLU:O	1:E:317:ARG:HG3	2.18	0.44
1:H:123:VAL:HG12	1:H:124:CYS:N	2.33	0.44
1:D:197:VAL:O	1:D:198:GLU:C	2.56	0.43
1:E:119:ARG:NH2	4:E:501:HOH:O	2.51	0.43
1:D:255:SER:HA	1:D:259:LYS:O	2.19	0.43
1:E:164:PHE:HB2	1:E:201:PRO:HB2	2.00	0.43
1:E:299:VAL:CG2	1:E:300:ARG:N	2.81	0.43
1:A:203:MET:CE	1:A:208:GLU:CB	2.95	0.43
1:B:173:VAL:HG11	1:B:193:MET:CE	2.48	0.43
1:D:129:GLY:O	1:D:135:LYS:HE2	2.17	0.43
1:B:129:GLY:O	1:B:223:ASN:OD1	2.36	0.43
1:E:277:ASN:OD1	1:E:308:THR:HG23	2.18	0.43
1:A:193:MET:HE2	1:A:213:PHE:CZ	2.54	0.43
1:E:299:VAL:HG22	1:E:300:ARG:N	2.33	0.43
1:C:123:VAL:HG11	1:C:310:ILE:HG23	2.01	0.43
1:D:121:GLU:O	1:D:317:ARG:NH1	2.52	0.43
1:D:126:LEU:HD11	1:D:222:THR:HG22	2.00	0.43
1:D:152:THR:HG21	1:D:171:GLY:N	2.28	0.43
1:E:268:MET:HE2	1:E:280:ARG:HD3	2.01	0.43
1:C:184:GLY:O	1:C:187:MET:HG3	2.19	0.43
1:E:173:VAL:HG11	1:E:193:MET:HE1	2.01	0.43
1:E:297:SER:O	1:E:298:ARG:CB	2.66	0.43
1:D:269:CYS:SG	1:D:282:CYS:HA	2.59	0.42
1:C:122:PRO:HG2	1:C:194:VAL:HA	2.02	0.42
1:E:168:LYS:HD2	1:E:168:LYS:HA	1.85	0.42
1:A:306:ILE:HD12	1:A:309:MET:HE3	2.00	0.42
1:B:175:MET:O	1:B:220:ALA:HA	2.19	0.42
1:D:218:VAL:CA	4:D:502:HOH:O	2.60	0.42
1:A:178:LEU:HD12	1:A:186:ASP:HB3	1.99	0.42
1:C:251:MET:SD	1:C:291:GLN:HG3	2.60	0.42
1:E:248:ILE:HD11	1:E:290:ILE:HG12	1.99	0.42
1:E:218:VAL:HG23	1:E:218:VAL:O	2.19	0.42
1:E:152:THR:CG2	1:E:153:SER:H	2.30	0.42
1:E:194:VAL:HG23	1:E:194:VAL:O	2.20	0.42
1:E:250:VAL:HG12	4:E:503:HOH:O	2.19	0.42
1:D:260:LEU:HD21	1:D:265:ALA:CB	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:306:ILE:HD12	1:D:309:MET:HE3	2.01	0.42
1:E:128:HIS:O	1:E:248:ILE:HG22	2.20	0.42
1:A:135:LYS:HB3	1:A:221:SER:HB2	2.02	0.42
1:D:121:GLU:OE1	1:D:194:VAL:HG12	2.19	0.42
1:C:127:VAL:HG13	1:C:248:ILE:CG2	2.50	0.42
1:E:194:VAL:O	1:E:241:ARG:NH1	2.53	0.42
1:H:217:TYR:O	1:H:218:VAL:HG23	2.19	0.42
1:E:122:PRO:HG2	1:E:194:VAL:HG12	2.01	0.41
1:E:262:MET:O	1:E:266:THR:HG23	2.20	0.41
1:H:134:GLY:O	1:H:137:VAL:HB	2.20	0.41
1:H:313:GLU:OE1	1:H:313:GLU:O	2.37	0.41
1:H:142:ILE:HG23	1:H:307:THR:HG22	2.02	0.41
1:H:305:GLN:O	1:H:308:THR:OG1	2.29	0.41
1:E:190:PHE:C	1:E:190:PHE:CD1	2.94	0.41
1:A:126:LEU:HD22	1:A:128:HIS:NE2	2.36	0.41
1:A:145:ALA:N	4:A:502:HOH:O	2.05	0.41
1:C:128:HIS:CG	4:C:504:HOH:O	2.69	0.41
1:D:152:THR:CG2	1:D:171:GLY:H	2.27	0.41
1:E:299:VAL:HG13	1:E:301:TYR:CZ	2.56	0.41
1:E:175:MET:HB3	1:E:178:LEU:HD21	2.03	0.41
1:D:152:THR:HG22	1:D:153:SER:N	2.27	0.41
1:E:247:ASP:OD1	1:E:295:LYS:CG	2.69	0.41
1:B:282:CYS:HB2	1:B:283:PRO:HD2	2.03	0.41
1:A:167:TYR:CZ	1:A:169:GLN:HA	2.55	0.41
1:C:293:MET:CE	1:C:298:ARG:NH1	2.84	0.41
1:D:144:ARG:HD3	1:E:324:MET:SD	2.60	0.41
1:D:185:ALA:O	1:D:186:ASP:C	2.58	0.41
1:E:304:ASP:O	1:E:307:THR:OG1	2.39	0.41
1:C:152:THR:CA	4:C:505:HOH:O	2.69	0.41
1:C:320:ILE:CG1	1:C:321:GLY:N	2.84	0.41
1:D:160:ASP:N	1:D:161:PRO:HD3	2.36	0.41
1:E:260:LEU:HA	1:E:260:LEU:HD23	1.95	0.41
1:A:135:LYS:N	3:A:402:PO4:O1	2.53	0.41
1:D:129:GLY:HA3	1:D:135:LYS:HD3	2.03	0.41
1:B:323:CYS:HB2	1:C:266:THR:HB	2.02	0.40
1:C:203:MET:HG3	1:C:209:ALA:N	2.37	0.40
1:C:247:ASP:OD1	1:C:295:LYS:HG2	2.22	0.40
1:D:286:CYS:SG	1:D:288:LYS:HG2	2.62	0.40
1:E:178:LEU:HA	1:E:186:ASP:OD2	2.21	0.40
1:C:168:LYS:CB	1:E:200:ILE:HG21	2.51	0.40
1:H:122:PRO:HG2	1:H:194:VAL:HA	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:117:LYS:HG3	1:B:196:THR:CG2	2.51	0.40
1:C:126:LEU:HA	1:C:220:ALA:O	2.21	0.40
1:D:251:MET:HG3	1:D:288:LYS:O	2.22	0.40
1:E:123:VAL:CG2	1:E:217:TYR:CD2	3.05	0.40
1:A:129:GLY:O	1:A:223:ASN:CB	2.70	0.40
1:C:147:ALA:O	1:C:148:GLU:C	2.57	0.40
1:H:124:CYS:SG	1:H:194:VAL:HG21	2.61	0.40

All (3) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:183:ASP:OD2	1:C:270:LYS:HZ2[1_455]	1.38	0.22
1:B:275:PRO:O	1:A:298:ARG:HH21[1_655]	1.39	0.21
1:B:275:PRO:O	1:A:298:ARG:NH2[1_655]	2.01	0.19

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	198/214 (92%)	191 (96%)	7 (4%)	0	100	100
1	B	200/214 (94%)	191 (96%)	9 (4%)	0	100	100
1	C	180/214 (84%)	161 (89%)	17 (9%)	2 (1%)	14	19
1	D	198/214 (92%)	183 (92%)	14 (7%)	1 (0%)	29	40
1	E	195/214 (91%)	186 (95%)	8 (4%)	1 (0%)	29	40
1	H	71/214 (33%)	65 (92%)	5 (7%)	1 (1%)	11	15
All	All	1042/1284 (81%)	977 (94%)	60 (6%)	5 (0%)	29	40

All (5) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	D	177	ASP
1	E	298	ARG
1	C	161	PRO
1	C	222	THR
1	H	194	VAL

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	174/185 (94%)	169 (97%)	5 (3%)	42	57
1	B	176/185 (95%)	170 (97%)	6 (3%)	37	50
1	C	162/185 (88%)	155 (96%)	7 (4%)	29	39
1	D	174/185 (94%)	168 (97%)	6 (3%)	37	50
1	E	173/185 (94%)	167 (96%)	6 (4%)	36	49
1	H	77/185 (42%)	73 (95%)	4 (5%)	23	30
All	All	936/1110 (84%)	902 (96%)	34 (4%)	35	47

All (34) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	B	136	SER
1	B	152	THR
1	B	162	SER
1	B	223	ASN
1	B	246	MET
1	B	314	ARG
1	A	119	ARG
1	A	153	SER
1	A	176	ASP
1	A	295	LYS
1	A	314	ARG
1	D	183	ASP
1	D	195	SER
1	D	236	ASP

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Mol	Chain	Res	Type
1	D	274	GLN
1	D	314	ARG
1	D	323	CYS
1	C	124	CYS
1	C	153	SER
1	C	160	ASP
1	C	161	PRO
1	C	187	MET
1	C	205	SER
1	C	247	ASP
1	E	156	SER
1	E	177	ASP
1	E	223	ASN
1	E	292	LEU
1	E	295	LYS
1	E	314	ARG
1	H	124	CYS
1	H	266	THR
1	H	277	ASN
1	H	302	SER

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (2) such sidechains are listed below:

Mol	Chain	Res	Type
1	B	223	ASN
1	E	118	HIS

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 9 ligands modelled in this entry, 6 are monoatomic - leaving 3 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	$\# Z > 2$
3	PO4	D	402	-	4,4,4	0.91	0	6,6,6	0.43	0
3	PO4	A	402	-	4,4,4	0.92	0	6,6,6	0.42	0
3	PO4	B	402	-	4,4,4	0.91	0	6,6,6	0.42	0

There are no bond length outliers.

There are no bond angle outliers.

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
3	A	402	PO4	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, 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	202/214 (94%)	0.39	1 (0%) 91 94	39, 57, 96, 126	0
1	B	204/214 (95%)	0.51	1 (0%) 91 94	40, 62, 102, 127	0
1	C	188/214 (87%)	1.03	27 (14%) 2 3	57, 98, 135, 164	0
1	D	202/214 (94%)	0.53	6 (2%) 50 57	36, 66, 107, 163	0
1	E	201/214 (93%)	0.86	24 (11%) 4 5	66, 93, 120, 167	0
1	H	89/214 (41%)	3.97	66 (74%) 0 0	127, 155, 176, 184	0
All	All	1086/1284 (84%)	0.93	125 (11%) 4 6	36, 79, 153, 184	0

All (125) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	H	260	LEU	16.2
1	H	125	LEU	12.9
1	H	194	VAL	9.9
1	H	262	MET	9.3
1	H	303	ILE	9.2
1	H	284	LEU	8.9
1	H	124	CYS	8.4
1	H	265	ALA	8.3
1	H	275	PRO	7.8
1	H	219	LEU	7.4
1	H	193	MET	7.4
1	H	285	VAL	7.2
1	E	224	SER	6.5
1	H	126	LEU	6.4
1	H	269	CYS	6.3
1	C	206	LEU	6.1
1	H	306	ILE	5.7
1	H	142	ILE	5.6
1	H	326	ALA	5.6

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Mol	Chain	Res	Type	RSRZ
1	H	325	GLU	5.5
1	E	240	ARG	5.5
1	H	141	LEU	5.5
1	H	192	GLN	5.4
1	H	302	SER	5.2
1	C	248	ILE	5.2
1	H	310	ILE	5.2
1	D	208	GLU	4.9
1	H	146	ILE	4.8
1	H	157	LEU	4.8
1	H	264	MET	4.8
1	H	135	LYS	4.8
1	H	267	GLU	4.7
1	C	240	ARG	4.6
1	H	137	VAL	4.6
1	H	138	ALA	4.6
1	H	144	ARG	4.6
1	H	134	GLY	4.6
1	H	327	LEU	4.6
1	H	218	VAL	4.5
1	H	266	THR	4.5
1	H	148	GLU	4.5
1	H	280	ARG	4.4
1	H	196	THR	4.4
1	H	263	ALA	4.3
1	C	210	GLY	4.1
1	H	261	ASN	4.1
1	H	283	PRO	4.1
1	H	123	VAL	4.0
1	C	205	SER	4.0
1	C	299	VAL	4.0
1	E	126	LEU	4.0
1	D	207	ALA	3.9
1	H	122	PRO	3.8
1	H	268	MET	3.7
1	C	126	LEU	3.7
1	C	209	ALA	3.6
1	E	238	LEU	3.6
1	D	205	SER	3.5
1	E	142	ILE	3.5
1	H	213	PHE	3.5
1	H	311	ILE	3.5

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Mol	Chain	Res	Type	RSRZ
1	H	143	ALA	3.4
1	C	193	MET	3.4
1	C	247	ASP	3.3
1	E	237	ALA	3.3
1	H	274	GLN	3.3
1	H	145	ALA	3.2
1	C	163	HIS	3.2
1	H	139	THR	3.2
1	C	245	ASP	3.1
1	D	325	GLU	3.0
1	H	214	THR	3.0
1	H	220	ALA	3.0
1	E	280	ARG	3.0
1	H	307	THR	3.0
1	H	120	ILE	2.9
1	E	260	LEU	2.9
1	E	178	LEU	2.9
1	E	268	MET	2.9
1	C	306	ILE	2.8
1	E	262	MET	2.8
1	H	320	ILE	2.8
1	C	242	PHE	2.8
1	H	282	CYS	2.7
1	C	211	ILE	2.7
1	E	257	ASP	2.7
1	E	145	ALA	2.7
1	H	215	SER	2.7
1	E	187	MET	2.6
1	C	199	PHE	2.6
1	C	176	ASP	2.6
1	H	315	ASN	2.6
1	E	125	LEU	2.5
1	C	190	PHE	2.5
1	H	195	SER	2.5
1	E	154	THR	2.5
1	H	276	ALA	2.5
1	H	147	ALA	2.4
1	H	323	CYS	2.4
1	C	204	ALA	2.3
1	C	178	LEU	2.3
1	C	324	MET	2.3
1	D	224	SER	2.3

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Mol	Chain	Res	Type	RSRZ
1	H	321	GLY	2.3
1	H	136	SER	2.3
1	A	235	SER	2.2
1	E	329	GLN	2.2
1	E	314	ARG	2.2
1	C	175	MET	2.2
1	C	146	ILE	2.2
1	E	250	VAL	2.2
1	H	149	ALA	2.2
1	E	172	VAL	2.1
1	E	173	VAL	2.1
1	C	300	ARG	2.1
1	E	310	ILE	2.1
1	H	322	ASN	2.1
1	C	200	ILE	2.1
1	H	308	THR	2.1
1	D	248	ILE	2.1
1	C	135	LYS	2.1
1	B	225	SER	2.0
1	C	157	LEU	2.0
1	E	259	LYS	2.0
1	E	284	LEU	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, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
2	ZN	H	401	1/1	0.34	0.09	233,233,233,233	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
3	PO4	D	402	5/5	0.81	0.20	68,90,100,110	0
3	PO4	B	402	5/5	0.94	0.13	78,87,96,102	0
3	PO4	A	402	5/5	0.95	0.17	71,74,77,84	0
2	ZN	E	401	1/1	0.98	0.18	94,94,94,94	0
2	ZN	A	401	1/1	0.98	0.20	56,56,56,56	0
2	ZN	D	401	1/1	0.99	0.18	72,72,72,72	0
2	ZN	B	401	1/1	0.99	0.21	62,62,62,62	0
2	ZN	C	401	1/1	0.99	0.17	65,65,65,65	0

6.5 Other polymers [i](#)

There are no such residues in this entry.