



# Full wwPDB X-ray Structure Validation Report ⓘ

Apr 29, 2024 – 11:11 am BST

PDB ID : 5O6U  
Title : Structure of the Cascade-I-Fv R-loop complex from *Shewanella putrefaciens*  
Authors : Pausch, P.; Altegoer, F.; Bange, G.  
Deposited on : 2017-06-07  
Resolution : 3.25 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](mailto: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>.

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

MolProbity : 4.02b-467  
Xtriage (Phenix) : 1.13  
EDS : 2.36.2  
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) : 2.36.2

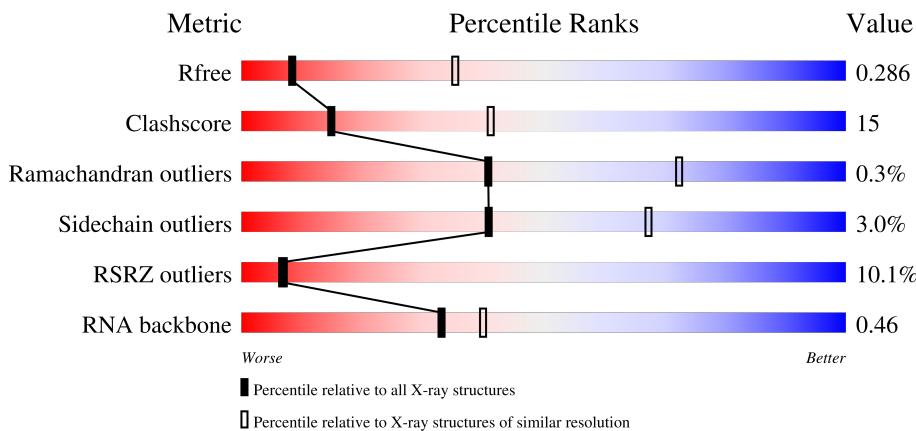
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

The reported resolution of this entry is 3.25 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.



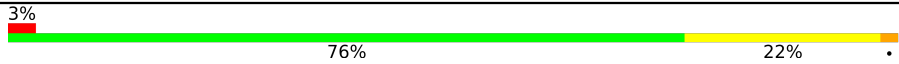

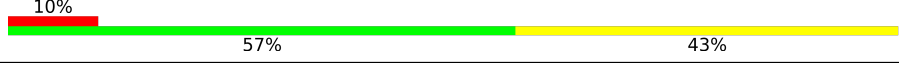
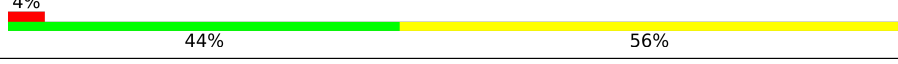
Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
$R_{free}$	130704	1191 (3.30-3.22)
Clashscore	141614	1251 (3.30-3.22)
Ramachandran outliers	138981	1229 (3.30-3.22)
Sidechain outliers	138945	1228 (3.30-3.22)
RSRZ outliers	127900	1154 (3.30-3.22)
RNA backbone	3102	1072 (3.62-2.90)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for  $\geq 3$ , 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	43	
2	B	182	
3	C	315	
3	D	315	

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Mol	Chain	Length	Quality of chain
3	E	315	
4	F	336	
5	H	21	
6	I	27	

## 2 Entry composition [i](#)

There are 6 unique types of molecules in this entry. The entry contains 13131 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 RNA chain called crRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
1	A	43	894	400	164	288	42	0	0	0

- Molecule 2 is a protein called CRISPR-associated protein, Csy4 family.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
2	B	182	1452	933	251	264	4	0	0	0

- Molecule 3 is a protein called Uncharacterized protein.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
3	C	267	2127	1348	366	405	8	16	0	0
3	D	315	2506	1584	429	485	8	20	0	0
3	E	315	2506	1584	429	485	8	16	0	0

- Molecule 4 is a protein called Uncharacterized protein.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
4	F	336	2659	1695	440	510	14	40	0	0

- Molecule 5 is a DNA chain called non-target DNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
5	H	21	420	201	69	129	21	0	0	0

- Molecule 6 is a DNA chain called target DNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
6	I	27	567	266	109	165	27	0	0	0

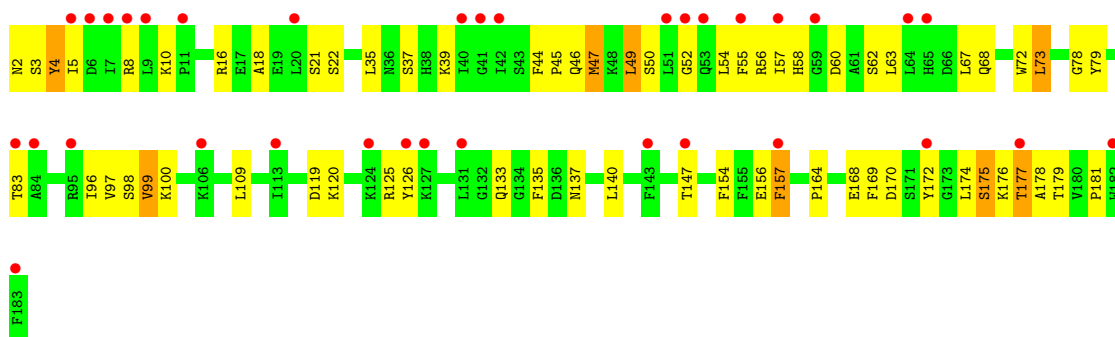
### 3 Residue-property plots [i](#)

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.

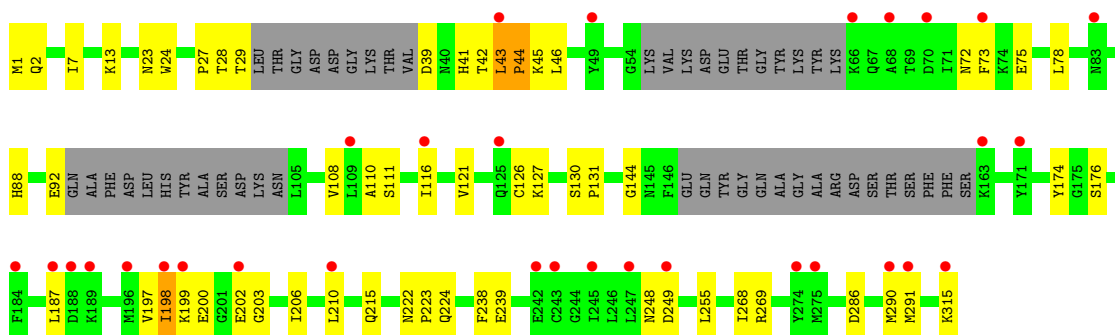
- Molecule 1: crRNA



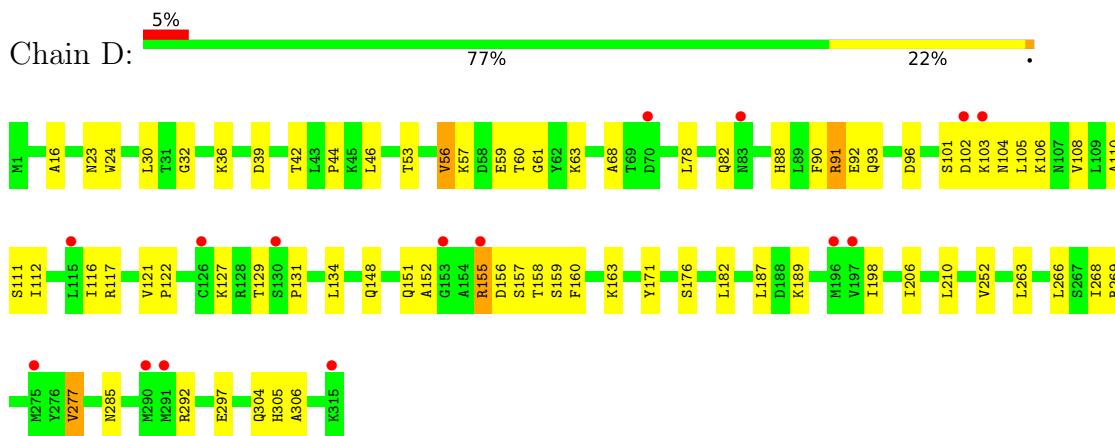
- Molecule 2: CRISPR-associated protein, Csy4 family



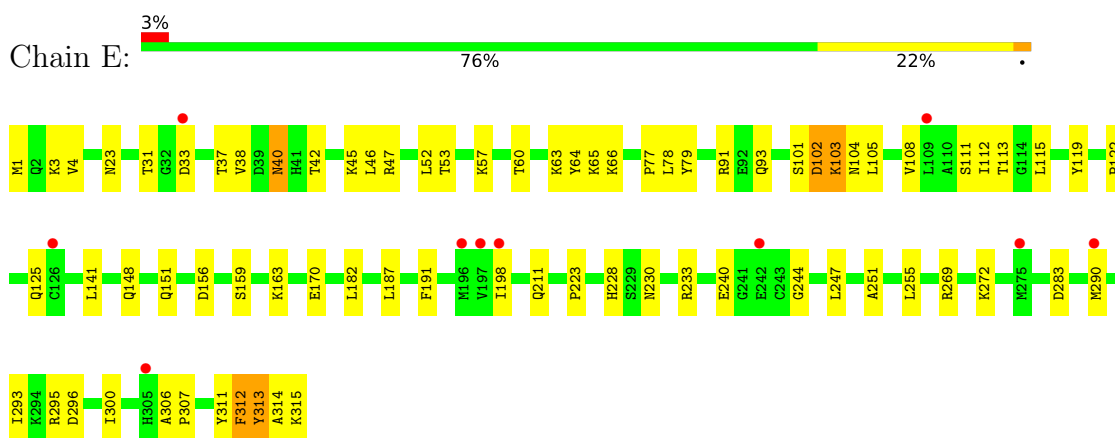
- Molecule 3: Uncharacterized protein



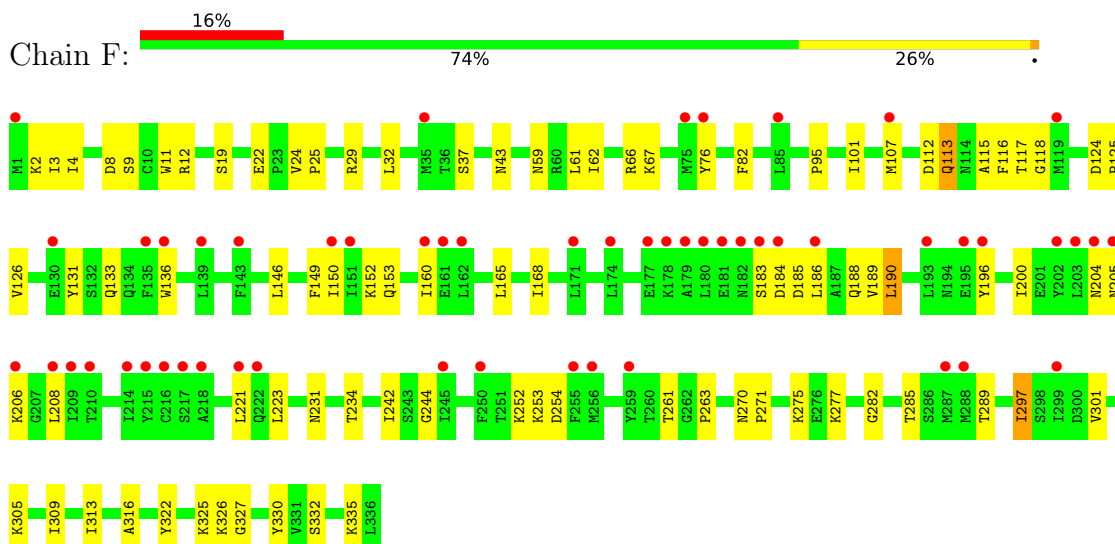
- Molecule 3: Uncharacterized protein



- Molecule 3: Uncharacterized protein

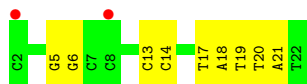


- Molecule 4: Uncharacterized protein

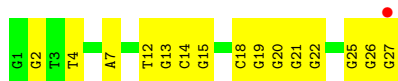


- Molecule 5: non-target DNA





- Molecule 6: target DNA





## 4 Data and refinement statistics

Property	Value	Source
Space group	P 32 2 1	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	143.32Å 143.32Å 172.70Å 90.00° 90.00° 120.00°	Depositor
Resolution (Å)	46.91 – 3.25 46.91 – 3.25	Depositor EDS
% Data completeness (in resolution range)	99.8 (46.91-3.25) 90.8 (46.91-3.25)	Depositor EDS
$R_{merge}$	0.17	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	1.14 (at 3.25Å)	Xtrriage
Refinement program	PHENIX 1.9_1692	Depositor
R, $R_{free}$	0.252 , 0.286 0.255 , 0.286	Depositor DCC
$R_{free}$ test set	1587 reflections (4.84%)	wwPDB-VP
Wilson B-factor (Å <sup>2</sup> )	89.1	Xtrriage
Anisotropy	0.624	Xtrriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.30 , 75.3	EDS
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.47$ , $\langle L^2 \rangle = 0.30$	Xtrriage
Estimated twinning fraction	0.038 for -h,-k,l	Xtrriage
$F_o, F_c$ correlation	0.91	EDS
Total number of atoms	13131	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	130.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.28% of the height of the origin peak. No significant pseudotranslation is detected.*

<sup>1</sup>Intensities estimated from amplitudes.

<sup>2</sup>Theoretical 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](#)

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	0.17	0/999	0.72	0/1555
2	B	0.31	0/1486	0.54	0/2000
3	C	0.28	0/2163	0.52	0/2915
3	D	0.27	0/2554	0.54	0/3446
3	E	0.26	0/2554	0.53	0/3446
4	F	0.23	0/2703	0.41	0/3635
5	H	0.63	0/467	0.92	0/716
6	I	0.50	0/637	0.87	0/985
All	All	0.30	0/13563	0.57	0/18698

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 [i](#)

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	894	0	456	23	0
2	B	1452	0	1460	100	2
3	C	2127	0	2114	68	0
3	D	2506	0	2467	93	1
3	E	2506	0	2467	65	0
4	F	2659	0	2698	61	1
5	H	420	0	238	9	1
6	I	567	0	303	15	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
All	All	13131	0	12203	382	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 15.

All (382) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:16:ARG:CG	3:D:155:ARG:NH1	1.72	1.48
3:C:27:PRO:CA	3:C:42:THR:HA	1.49	1.42
2:B:16:ARG:HG3	3:D:155:ARG:NH1	1.01	1.33
3:D:57:LYS:HG3	3:D:60:THR:CG2	1.66	1.25
3:D:156:ASP:O	3:D:159:SER:HB2	1.26	1.25
3:C:27:PRO:HA	3:C:42:THR:CA	1.66	1.23
3:D:57:LYS:CG	3:D:60:THR:CG2	2.17	1.23
4:F:32:LEU:O	4:F:32:LEU:HD12	1.38	1.21
3:D:57:LYS:HB3	3:D:60:THR:OG1	1.38	1.18
3:D:57:LYS:CB	3:D:60:THR:OG1	1.92	1.16
3:D:57:LYS:CG	3:D:60:THR:HG21	1.76	1.15
3:D:57:LYS:CG	3:D:60:THR:OG1	1.95	1.13
3:C:24:TRP:HE3	3:C:43:LEU:O	1.31	1.13
4:F:32:LEU:HD13	4:F:43:ASN:HB3	1.30	1.12
2:B:16:ARG:CB	3:D:155:ARG:NH1	2.11	1.11
3:E:1:MET:HG2	3:E:313:TYR:OH	1.51	1.10
3:D:57:LYS:HG3	3:D:60:THR:HG23	1.31	1.09
3:D:57:LYS:HG2	3:D:60:THR:HG21	1.32	1.05
2:B:16:ARG:HG3	3:D:155:ARG:CZ	1.87	1.03
2:B:67:LEU:C	2:B:72:TRP:HZ3	1.62	1.02
3:C:187:LEU:HB3	3:C:198:ILE:CD1	1.92	1.00
1:A:17:A:H1'	3:C:127:LYS:HD2	1.46	0.98
3:D:151:GLN:OE1	3:D:158:THR:HG21	1.65	0.97
3:E:103:LYS:HG3	3:E:104:ASN:N	1.80	0.96
3:C:187:LEU:HB3	3:C:198:ILE:HD11	1.47	0.95
3:D:160:PHE:CZ	6:I:2:DG:N2	2.32	0.92
3:C:200:GLU:OE1	3:C:200:GLU:N	2.01	0.92
3:D:101:SER:H	3:D:104:ASN:HB2	1.31	0.92
2:B:22:SER:HA	2:B:140:LEU:HD21	1.53	0.91
2:B:67:LEU:C	2:B:72:TRP:CZ3	2.44	0.91
2:B:16:ARG:HG3	3:D:155:ARG:HH11	1.14	0.91
2:B:16:ARG:CG	3:D:155:ARG:CZ	2.45	0.90
2:B:46:GLN:OE1	2:B:54:LEU:HB2	1.73	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:119:ASP:OD1	2:B:120:LYS:N	2.06	0.89
3:D:57:LYS:CG	3:D:60:THR:CB	2.51	0.89
3:D:151:GLN:OE1	3:D:158:THR:CG2	2.21	0.88
3:C:24:TRP:CE3	3:C:43:LEU:O	2.23	0.88
2:B:67:LEU:O	2:B:72:TRP:CZ3	2.27	0.87
3:D:57:LYS:HG2	3:D:60:THR:CG2	1.91	0.87
3:C:200:GLU:H	3:C:200:GLU:CD	1.70	0.86
2:B:16:ARG:HD2	3:D:155:ARG:NH2	1.91	0.85
3:E:311:TYR:C	3:E:312:PHE:CD1	2.50	0.85
2:B:72:TRP:CD1	2:B:73:LEU:N	2.45	0.84
3:D:57:LYS:CB	3:D:60:THR:HG1	1.89	0.83
3:C:43:LEU:HB3	3:C:44:PRO:CD	2.09	0.82
2:B:67:LEU:HB3	2:B:72:TRP:CZ3	2.14	0.81
3:E:311:TYR:C	3:E:312:PHE:HD1	1.82	0.81
4:F:32:LEU:O	4:F:32:LEU:CD1	2.26	0.81
2:B:67:LEU:O	2:B:72:TRP:CE3	2.35	0.80
3:C:27:PRO:HB3	3:C:42:THR:HG22	1.61	0.80
3:D:57:LYS:HG2	3:D:60:THR:CB	2.12	0.80
3:E:1:MET:CG	3:E:313:TYR:OH	2.30	0.79
2:B:35:LEU:CD2	2:B:37:SER:OG	2.31	0.78
5:H:13:DC:H2''	5:H:14:DC:H5''	1.65	0.78
2:B:72:TRP:CG	2:B:73:LEU:N	2.52	0.78
3:C:27:PRO:HA	3:C:42:THR:HA	0.80	0.77
2:B:46:GLN:OE1	2:B:54:LEU:CB	2.33	0.77
2:B:8:ARG:NH1	2:B:46:GLN:HE22	1.84	0.76
3:D:156:ASP:O	3:D:159:SER:CB	2.21	0.76
3:E:40:ASN:ND2	3:E:40:ASN:O	2.19	0.75
2:B:73:LEU:HD12	2:B:73:LEU:H	1.50	0.75
4:F:253:LYS:NZ	6:I:15:DG:N7	2.35	0.75
2:B:97:VAL:O	2:B:175:SER:O	2.05	0.74
2:B:16:ARG:CD	3:D:155:ARG:CZ	2.66	0.74
2:B:16:ARG:HB3	3:D:155:ARG:NH1	2.03	0.73
2:B:47:MET:HE2	2:B:49:LEU:H	1.53	0.73
3:D:101:SER:O	3:D:105:LEU:N	2.21	0.73
2:B:35:LEU:HD23	2:B:35:LEU:O	1.89	0.73
3:D:57:LYS:CA	3:D:57:LYS:HE2	2.19	0.73
3:D:101:SER:N	3:D:104:ASN:HB2	2.04	0.73
4:F:32:LEU:CD1	4:F:43:ASN:HB3	2.15	0.72
2:B:16:ARG:HD2	3:D:155:ARG:CZ	2.18	0.72
3:C:43:LEU:CB	3:C:44:PRO:CD	2.66	0.71
3:C:43:LEU:HB3	3:C:44:PRO:HD2	1.70	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:57:LYS:HE2	3:D:57:LYS:HA	1.72	0.71
2:B:72:TRP:CD1	2:B:73:LEU:HB3	2.27	0.70
3:C:43:LEU:CD2	3:C:44:PRO:HD3	2.22	0.69
3:C:27:PRO:CA	3:C:42:THR:CA	2.46	0.69
3:C:28:THR:N	3:C:41:HIS:O	2.24	0.69
2:B:10:LYS:HD3	2:B:78:GLY:O	1.92	0.69
3:D:57:LYS:HG2	3:D:60:THR:OG1	1.89	0.69
2:B:49:LEU:C	2:B:49:LEU:HD23	2.13	0.68
4:F:113:GLN:OE1	5:H:14:DC:N4	2.27	0.68
3:C:44:PRO:O	3:C:46:LEU:HD12	1.94	0.67
3:D:112:ILE:HD12	3:D:116:ILE:HD13	1.75	0.67
3:D:57:LYS:HG3	3:D:60:THR:CB	2.19	0.67
3:D:57:LYS:HG3	3:D:60:THR:OG1	1.91	0.66
2:B:35:LEU:HD23	2:B:37:SER:OG	1.95	0.66
3:D:32:GLY:N	3:D:36:LYS:O	2.29	0.66
3:C:187:LEU:HB3	3:C:198:ILE:HD13	1.78	0.65
2:B:73:LEU:HD22	2:B:73:LEU:O	1.97	0.65
3:D:285:ASN:HD21	3:D:292:ARG:HB3	1.60	0.65
3:C:27:PRO:N	3:C:42:THR:HA	2.11	0.65
3:C:200:GLU:N	3:C:200:GLU:CD	2.47	0.65
3:E:3:LYS:HD2	3:E:4:VAL:H	1.61	0.65
1:A:10:C:OP1	3:E:23:ASN:ND2	2.29	0.65
3:C:43:LEU:HD22	3:C:44:PRO:HD3	1.79	0.64
3:C:239:GLU:O	3:C:239:GLU:HG2	1.96	0.64
3:E:53:THR:OG1	3:E:64:TYR:O	2.14	0.63
1:A:11:A:H1'	3:D:127:LYS:HD3	1.80	0.63
3:C:199:LYS:HB2	3:C:202:GLU:HG3	1.80	0.63
3:D:105:LEU:HD11	3:D:121:VAL:HG21	1.80	0.62
3:E:102:ASP:OD1	3:E:102:ASP:N	2.33	0.61
2:B:5:ILE:CG2	2:B:57:ILE:HB	2.30	0.61
3:D:108:VAL:O	3:D:111:SER:OG	2.17	0.61
3:D:110:ALA:HB2	3:D:210:LEU:HD22	1.82	0.60
1:A:16:U:OP1	3:D:23:ASN:ND2	2.33	0.60
3:D:56:VAL:HG13	3:D:63:LYS:HG2	1.83	0.60
3:C:43:LEU:HD22	3:C:44:PRO:CD	2.31	0.60
3:E:1:MET:HG2	3:E:313:TYR:HH	1.66	0.60
4:F:205:ASN:OD1	4:F:206:LYS:NZ	2.33	0.60
4:F:322:TYR:HB2	4:F:327:GLY:H	1.64	0.60
3:E:3:LYS:NZ	3:E:4:VAL:O	2.30	0.60
3:E:151:GLN:HB2	3:E:159:SER:HA	1.83	0.60
3:E:311:TYR:CB	3:E:312:PHE:CE1	2.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:23:ASN:OD1	3:C:45:LYS:HE3	2.02	0.60
3:E:312:PHE:CD1	3:E:312:PHE:N	2.70	0.60
4:F:275:LYS:HG2	4:F:285:THR:HG22	1.83	0.60
2:B:72:TRP:NE1	2:B:73:LEU:HG	2.17	0.60
2:B:177:THR:HG23	2:B:177:THR:O	2.01	0.59
3:E:311:TYR:HB2	3:E:312:PHE:CE1	2.37	0.59
3:E:31:THR:HG23	3:E:65:LYS:HB2	1.84	0.59
3:E:293:ILE:HA	3:E:300:ILE:HD11	1.85	0.59
3:D:263:LEU:O	3:D:277:VAL:HG11	2.02	0.59
4:F:11:TRP:HB2	4:F:325:LYS:HB3	1.83	0.59
2:B:73:LEU:HD13	2:B:73:LEU:C	2.23	0.59
3:D:57:LYS:HA	3:D:57:LYS:CE	2.30	0.59
3:D:57:LYS:HB3	3:D:60:THR:HG1	1.47	0.58
4:F:149:PHE:HA	4:F:153:GLN:HB3	1.86	0.58
3:C:199:LYS:H	3:C:202:GLU:HB2	1.69	0.58
2:B:16:ARG:HB3	3:D:155:ARG:HH22	1.69	0.57
3:C:197:VAL:HG23	3:C:197:VAL:O	2.04	0.57
3:D:106:LYS:HE3	3:D:206:ILE:HA	1.86	0.57
2:B:5:ILE:HG22	2:B:57:ILE:HB	1.86	0.57
4:F:61:LEU:HB3	4:F:313:ILE:HD12	1.85	0.57
2:B:73:LEU:O	2:B:73:LEU:HD13	2.05	0.57
3:D:187:LEU:HD13	3:D:198:ILE:HD13	1.87	0.57
3:E:230:ASN:O	3:E:314:ALA:O	2.22	0.57
4:F:3:ILE:HB	4:F:297:ILE:HG23	1.86	0.57
3:C:28:THR:O	3:C:41:HIS:O	2.23	0.57
5:H:17:DT:C2'	5:H:18:DA:OP1	2.52	0.57
3:E:156:ASP:OD1	3:E:159:SER:N	2.36	0.56
1:A:16:U:H3	6:I:7:DA:H61	1.53	0.56
3:D:59:GLU:HA	3:D:59:GLU:OE1	2.05	0.56
3:E:122:PRO:HB3	4:F:107:MET:HB3	1.86	0.56
3:D:30:LEU:HD13	3:D:68:ALA:HA	1.88	0.56
2:B:49:LEU:HD23	2:B:49:LEU:O	2.06	0.56
2:B:157:PHE:N	2:B:157:PHE:CD2	2.73	0.56
3:E:283:ASP:HB2	3:E:300:ILE:HG23	1.87	0.56
3:E:311:TYR:CB	3:E:312:PHE:CD1	2.89	0.56
3:D:57:LYS:CG	3:D:60:THR:HG1	2.14	0.55
2:B:99:VAL:HB	2:B:174:LEU:CD2	2.36	0.55
2:B:99:VAL:HG12	2:B:174:LEU:HD11	1.88	0.55
3:E:312:PHE:HD1	3:E:312:PHE:N	2.04	0.55
4:F:32:LEU:HB2	4:F:37:SER:HB3	1.88	0.55
2:B:72:TRP:CD1	2:B:73:LEU:CB	2.90	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:292:ARG:HE	3:D:297:GLU:HG2	1.71	0.55
3:C:24:TRP:HA	3:C:44:PRO:HA	1.89	0.54
4:F:184:ASP:N	4:F:184:ASP:OD1	2.40	0.54
2:B:22:SER:HB3	2:B:140:LEU:HD11	1.89	0.54
2:B:10:LYS:CB	2:B:79:TYR:O	2.54	0.54
3:D:160:PHE:CD2	6:I:2:DG:C5	2.91	0.54
2:B:99:VAL:HB	2:B:174:LEU:HD21	1.88	0.54
2:B:10:LYS:N	2:B:79:TYR:O	2.35	0.54
1:A:7:A:N7	4:F:326:LYS:NZ	2.44	0.53
3:C:24:TRP:HE3	3:C:43:LEU:C	2.09	0.53
2:B:10:LYS:HG3	2:B:79:TYR:O	2.08	0.53
2:B:73:LEU:N	2:B:73:LEU:HD12	2.22	0.53
3:C:187:LEU:HD13	3:C:198:ILE:HD12	1.91	0.53
4:F:244:GLY:HA2	4:F:254:ASP:HB2	1.90	0.53
3:C:187:LEU:HD22	3:C:198:ILE:HD13	1.89	0.53
1:A:25:U:H1'	3:D:152:ALA:HB1	1.90	0.53
2:B:73:LEU:N	2:B:73:LEU:CD1	2.72	0.53
4:F:183:SER:H	4:F:186:LEU:HB2	1.75	0.53
2:B:10:LYS:CG	2:B:79:TYR:O	2.56	0.52
3:D:82:GLN:HE22	3:E:272:LYS:HB3	1.74	0.52
3:E:187:LEU:HD13	3:E:244:GLY:HA2	1.90	0.52
1:A:13:A:H5''	3:D:117:ARG:NH2	2.24	0.52
3:E:311:TYR:HB3	3:E:312:PHE:CE1	2.45	0.52
3:E:228:HIS:HE1	3:E:315:LYS:HE3	1.74	0.52
3:D:266:LEU:O	3:D:277:VAL:HG12	2.10	0.51
5:H:19:DT:H2''	5:H:20:DT:H5''	1.92	0.51
2:B:168:GLU:OE1	2:B:168:GLU:N	2.43	0.51
3:C:224:GLN:HB2	3:C:248:ASN:HB2	1.93	0.51
3:E:31:THR:HA	3:E:37:THR:HA	1.91	0.51
4:F:282:GLY:HA2	5:H:19:DT:H1'	1.93	0.51
2:B:4:TYR:HD1	2:B:56:ARG:HD3	1.76	0.51
3:C:199:LYS:O	3:C:203:GLY:N	2.37	0.51
3:D:92:GLU:HG2	3:D:93:GLN:HG3	1.91	0.51
2:B:73:LEU:H	2:B:73:LEU:CD1	2.20	0.51
4:F:32:LEU:HD22	4:F:43:ASN:ND2	2.24	0.51
3:C:29:THR:HG23	3:C:39:ASP:O	2.11	0.51
4:F:126:VAL:HG22	4:F:136:TRP:HE1	1.76	0.51
2:B:96:ILE:HG23	2:B:179:THR:HG22	1.93	0.51
3:E:191:PHE:CE1	4:F:66:ARG:HG2	2.46	0.51
3:E:3:LYS:HG3	3:E:4:VAL:N	2.26	0.50
3:D:82:GLN:HG3	3:D:134:LEU:HB2	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:88:HIS:HA	3:D:91:ARG:HB2	1.94	0.50
3:E:187:LEU:HD23	3:E:198:ILE:HG13	1.93	0.50
3:E:187:LEU:HB3	3:E:198:ILE:HG13	1.93	0.50
4:F:4:ILE:HG22	4:F:332:SER:HB3	1.92	0.50
4:F:117:THR:OG1	4:F:263:PRO:O	2.27	0.50
3:C:7:ILE:HD13	3:C:286:ASP:HB3	1.94	0.50
3:C:248:ASN:OD1	3:C:249:ASP:N	2.42	0.50
3:E:47:ARG:HB3	3:E:77:PRO:HD2	1.94	0.50
2:B:60:ASP:OD2	2:B:62:SER:OG	2.22	0.49
3:D:53:THR:HG22	3:D:53:THR:O	2.12	0.49
3:D:151:GLN:OE1	3:D:158:THR:HG22	2.09	0.49
4:F:204:ASN:HB2	4:F:208:LEU:HB2	1.95	0.49
2:B:96:ILE:HG22	2:B:178:ALA:C	2.32	0.49
3:E:290:MET:HB2	4:F:330:TYR:HB2	1.94	0.49
3:E:101:SER:N	3:E:104:ASN:OD1	2.37	0.49
4:F:185:ASP:O	4:F:188:GLN:HG2	2.12	0.49
3:C:29:THR:O	3:C:29:THR:HG22	2.11	0.49
3:C:239:GLU:HB2	3:C:315:LYS:HD3	1.94	0.49
1:A:5:G:H2'	1:A:6:A:C8	2.48	0.48
3:C:27:PRO:CB	3:C:42:THR:HA	2.36	0.48
5:H:5:DG:H2''	5:H:6:DG:C8	2.48	0.48
3:E:105:LEU:HD12	3:E:108:VAL:HB	1.95	0.48
4:F:131:TYR:OH	4:F:234:THR:OG1	2.30	0.48
3:E:105:LEU:HD11	3:E:119:TYR:CE2	2.47	0.48
3:C:44:PRO:HG2	3:C:46:LEU:HD11	1.96	0.48
3:E:115:LEU:HD13	3:E:255:LEU:HD21	1.94	0.48
2:B:169:PHE:CD2	2:B:175:SER:HB3	2.47	0.48
3:E:57:LYS:O	3:E:60:THR:OG1	2.30	0.48
2:B:39:LYS:HA	2:B:169:PHE:HD1	1.78	0.48
1:A:21:C:C6	3:D:148:GLN:HG2	2.49	0.48
2:B:16:ARG:HB3	3:D:155:ARG:NH2	2.29	0.48
4:F:309:ILE:O	4:F:313:ILE:HG12	2.13	0.48
1:A:36:C:O2	2:B:125:ARG:NH1	2.47	0.48
2:B:67:LEU:CB	2:B:72:TRP:CZ3	2.94	0.48
2:B:170:ASP:N	2:B:170:ASP:OD1	2.48	0.47
4:F:2:LYS:HB2	4:F:335:LYS:HB2	1.97	0.47
3:E:311:TYR:HB2	3:E:312:PHE:CD1	2.48	0.47
2:B:72:TRP:HE1	2:B:73:LEU:HG	1.79	0.47
4:F:168:ILE:HG12	4:F:252:LYS:HG3	1.97	0.47
2:B:10:LYS:HB2	2:B:79:TYR:O	2.14	0.47
3:C:238:PHE:HD2	3:D:96:ASP:HB3	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:E:240:GLU:HG2	4:F:76:TYR:HB3	1.95	0.47
6:I:18:DC:H2''	6:I:19:DG:H8	1.80	0.47
3:E:3:LYS:CG	3:E:4:VAL:N	2.78	0.47
6:I:12:DT:H2'	6:I:13:DG:C8	2.50	0.47
3:E:311:TYR:CB	3:E:312:PHE:HE1	2.27	0.47
4:F:325:LYS:HG2	4:F:326:LYS:HG2	1.96	0.47
2:B:8:ARG:HH12	2:B:46:GLN:HE22	1.60	0.46
3:E:233:ARG:NH2	4:F:316:ALA:O	2.36	0.46
3:C:88:HIS:CD2	3:C:268:ILE:HG23	2.50	0.46
6:I:21:DG:H2''	6:I:22:DG:C8	2.51	0.46
1:A:15:C:C6	3:E:148:GLN:HG2	2.51	0.46
3:D:42:THR:HB	3:D:163:LYS:HG2	1.96	0.46
4:F:62:ILE:HD13	4:F:82:PHE:HE2	1.80	0.46
4:F:112:ASP:HB3	4:F:115:ALA:HB3	1.98	0.46
2:B:45:PRO:HG2	2:B:54:LEU:HD22	1.97	0.46
2:B:175:SER:HB2	2:B:178:ALA:HB3	1.98	0.46
6:I:25:DG:H2''	6:I:26:DG:C8	2.51	0.46
6:I:26:DG:H2''	6:I:27:DG:C8	2.51	0.46
2:B:96:ILE:H	2:B:96:ILE:HG13	1.66	0.45
3:C:27:PRO:HA	3:C:42:THR:N	2.27	0.45
3:D:46:LEU:HD23	3:D:78:LEU:HA	1.98	0.45
3:D:176:SER:HB3	3:E:269:ARG:HH12	1.80	0.45
3:E:306:ALA:HB1	3:E:307:PRO:HD2	1.98	0.45
3:D:182:LEU:HD12	3:D:252:VAL:HG13	1.98	0.45
3:E:101:SER:O	3:E:105:LEU:HB2	2.17	0.45
4:F:204:ASN:N	4:F:208:LEU:O	2.46	0.45
2:B:21:SER:HB2	2:B:55:PHE:HZ	1.81	0.45
3:D:106:LYS:HD3	3:D:206:ILE:HG12	1.99	0.45
2:B:4:TYR:CD2	2:B:4:TYR:O	2.70	0.45
3:E:42:THR:HB	3:E:163:LYS:HG2	1.97	0.45
5:H:20:DT:H2''	5:H:21:DA:C2	2.51	0.45
2:B:72:TRP:NE1	2:B:73:LEU:CG	2.79	0.45
3:E:156:ASP:H	3:E:159:SER:CB	2.30	0.45
3:D:160:PHE:HD2	6:I:2:DG:C5	2.35	0.45
3:E:247:LEU:HB3	3:E:251:ALA:HB3	1.99	0.45
4:F:185:ASP:OD1	4:F:185:ASP:N	2.49	0.45
2:B:99:VAL:CG1	2:B:174:LEU:HD11	2.46	0.45
2:B:100:LYS:O	2:B:154:PHE:HB2	2.17	0.45
4:F:112:ASP:O	4:F:253:LYS:HE2	2.17	0.45
1:A:4:A:P	4:F:29:ARG:HH22	2.40	0.45
4:F:305:LYS:O	4:F:309:ILE:HG12	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:103:LYS:O	3:D:106:LYS:HB3	2.17	0.44
2:B:58:HIS:ND1	2:B:181:PRO:HG2	2.32	0.44
3:C:43:LEU:CD2	3:C:44:PRO:CD	2.93	0.44
3:D:104:ASN:O	3:D:108:VAL:HG23	2.17	0.44
2:B:44:PHE:O	2:B:47:MET:HB3	2.16	0.44
2:B:68:GLN:N	2:B:72:TRP:HZ3	2.11	0.44
3:D:305:HIS:O	3:D:306:ALA:C	2.56	0.44
3:C:176:SER:HB3	3:D:269:ARG:HH12	1.82	0.44
4:F:12:ARG:HA	4:F:12:ARG:HD3	1.71	0.44
4:F:165:LEU:HA	4:F:168:ILE:HG22	1.98	0.44
2:B:133:GLN:O	3:C:269:ARG:NH1	2.50	0.44
3:C:73:PHE:CE2	3:C:144:GLY:HA3	2.53	0.44
4:F:59:ASN:HA	4:F:62:ILE:HG12	2.00	0.44
4:F:186:LEU:O	4:F:190:LEU:HB2	2.17	0.44
4:F:270:ASN:HB3	6:I:14:DC:H2''	1.99	0.44
2:B:98:SER:O	2:B:156:GLU:HG2	2.18	0.44
2:B:18:ALA:O	2:B:21:SER:OG	2.24	0.43
3:C:215:GLN:NE2	3:C:223:PRO:HD2	2.33	0.43
1:A:5:G:O2'	1:A:6:A:OP1	2.31	0.43
3:E:211:GLN:HE22	3:E:223:PRO:C	2.22	0.43
2:B:67:LEU:O	2:B:72:TRP:HE3	1.96	0.43
2:B:98:SER:HB2	2:B:156:GLU:HG3	1.99	0.43
3:C:43:LEU:CB	3:C:44:PRO:HD3	2.45	0.43
3:E:93:GLN:HE22	3:E:112:ILE:HG22	1.83	0.43
4:F:12:ARG:HB2	4:F:289:THR:HB	1.99	0.43
1:A:42:G:H21	2:B:147:THR:HG21	1.82	0.43
2:B:60:ASP:HB3	2:B:63:LEU:HG	2.00	0.43
3:D:88:HIS:CE1	3:D:268:ILE:HG23	2.53	0.43
3:E:46:LEU:HD23	3:E:78:LEU:HA	2.01	0.43
3:E:141:LEU:HG	3:E:170:GLU:HB3	2.00	0.43
4:F:124:ASP:HA	4:F:125:PRO:HD3	1.90	0.43
4:F:146:LEU:O	4:F:150:ILE:HG13	2.19	0.43
2:B:4:TYR:CD1	2:B:56:ARG:HD3	2.54	0.43
3:C:13:LYS:HE2	3:C:174:TYR:CE2	2.54	0.43
3:C:108:VAL:O	3:C:111:SER:OG	2.27	0.43
3:D:103:LYS:HD2	3:D:103:LYS:HA	1.59	0.43
3:D:151:GLN:CD	3:D:158:THR:HG21	2.35	0.43
6:I:26:DG:H2''	6:I:27:DG:H8	1.84	0.43
1:A:8:A:H8	1:A:9:G:H4'	1.84	0.42
3:E:295:ARG:HG3	3:E:296:ASP:H	1.84	0.42
4:F:32:LEU:HD22	4:F:43:ASN:CG	2.39	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:121:VAL:CG2	3:C:126:CYS:HB2	2.49	0.42
3:E:311:TYR:HB2	3:E:312:PHE:HE1	1.79	0.42
2:B:2:ASN:OD1	2:B:3:SER:N	2.52	0.42
3:D:60:THR:OG1	3:D:61:GLY:N	2.52	0.42
3:E:45:LYS:HB3	3:E:79:TYR:CZ	2.55	0.42
3:C:199:LYS:O	3:C:202:GLU:N	2.53	0.42
3:D:39:ASP:HB3	6:I:4:DT:OP2	2.19	0.42
5:H:20:DT:C6	5:H:21:DA:N1	2.88	0.42
3:C:199:LYS:HB2	3:C:202:GLU:CG	2.49	0.42
1:A:12:A:P	3:E:272:LYS:HZ1	2.43	0.42
4:F:24:VAL:HA	4:F:25:PRO:HD3	1.83	0.42
4:F:118:GLY:HA3	4:F:261:THR:O	2.20	0.42
6:I:19:DG:H2''	6:I:20:DG:C8	2.55	0.42
1:A:42:G:H2'	2:B:172:TYR:OH	2.21	0.41
2:B:16:ARG:HB3	3:D:155:ARG:CZ	2.50	0.41
3:C:130:SER:HA	3:C:131:PRO:HD2	1.93	0.41
3:D:24:TRP:HA	3:D:44:PRO:HA	2.01	0.41
2:B:47:MET:C	2:B:47:MET:SD	2.99	0.41
3:C:72:ASN:OD1	3:C:75:GLU:HG3	2.20	0.41
4:F:277:LYS:HE3	5:H:19:DT:O4'	2.21	0.41
3:D:92:GLU:HG2	3:D:93:GLN:N	2.34	0.41
3:E:182:LEU:HD11	3:E:255:LEU:HD13	2.02	0.41
1:A:2:U:OP2	4:F:67:LYS:NZ	2.46	0.41
3:C:176:SER:HB2	3:C:291:MET:CE	2.51	0.41
3:C:206:ILE:HD13	3:C:206:ILE:HA	1.87	0.41
3:E:295:ARG:HG3	3:E:296:ASP:N	2.35	0.41
1:A:37:A:H2'	1:A:38:G:O4'	2.20	0.41
2:B:99:VAL:HG12	2:B:174:LEU:CD1	2.50	0.41
2:B:176:LYS:HD3	2:B:176:LYS:HA	1.83	0.41
3:C:1:MET:HB3	3:C:2:GLN:H	1.65	0.41
3:D:16:ALA:HB3	3:D:171:TYR:HB2	2.02	0.41
2:B:47:MET:SD	2:B:47:MET:O	2.78	0.41
3:D:116:ILE:O	3:D:131:PRO:HD2	2.20	0.41
3:E:52:LEU:HG	3:E:63:LYS:HB3	2.03	0.41
3:C:116:ILE:HD11	3:C:255:LEU:HB3	2.03	0.41
3:C:222:ASN:N	3:C:222:ASN:OD1	2.54	0.41
3:D:121:VAL:HA	3:D:122:PRO:HD2	1.93	0.41
1:A:9:G:C6	4:F:271:PRO:HG3	2.55	0.41
2:B:8:ARG:HH12	2:B:46:GLN:NE2	2.17	0.41
2:B:109:LEU:HB2	2:B:126:TYR:CE1	2.55	0.41
3:C:45:LYS:O	3:C:78:LEU:HD12	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:202:GLU:O	3:C:206:ILE:HG12	2.20	0.41
3:D:90:PHE:HE1	3:D:112:ILE:HG13	1.85	0.41
3:D:189:LYS:HB2	4:F:116:PHE:O	2.21	0.41
3:E:53:THR:HG23	3:E:66:LYS:HG2	2.02	0.41
6:I:20:DG:H2 <sup>''</sup>	6:I:21:DG:C8	2.56	0.41
2:B:5:ILE:O	2:B:5:ILE:HG23	2.21	0.41
2:B:50:SER:O	2:B:52:GLY:N	2.54	0.41
2:B:164:PRO:HA	2:B:179:THR:OG1	2.21	0.41
4:F:19:SER:HB3	4:F:22:GLU:HG2	2.04	0.40
4:F:186:LEU:HA	4:F:189:VAL:HG22	2.03	0.40
2:B:39:LYS:HA	2:B:169:PHE:CD1	2.55	0.40
1:A:11:A:H5 <sup>''</sup>	3:D:129:THR:HG23	2.03	0.40
2:B:100:LYS:HE3	2:B:135:PHE:CE1	2.57	0.40
3:C:43:LEU:HD23	3:C:43:LEU:HA	1.86	0.40
3:D:156:ASP:HB2	3:D:157:SER:H	1.61	0.40
4:F:223:LEU:HD22	4:F:242:ILE:HD11	2.04	0.40
1:A:21:C:C5	3:D:148:GLN:HG2	2.56	0.40
3:C:110:ALA:HA	3:C:210:LEU:HD23	2.02	0.40
3:C:116:ILE:O	3:C:131:PRO:HD2	2.21	0.40
3:E:108:VAL:O	3:E:111:SER:OG	2.37	0.40
4:F:8:ASP:OD1	4:F:9:SER:OG	2.30	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)
2:B:177:THR:OG1	2:B:177:THR:OG1[4_467]	1.46	0.74
2:B:83:THR:OG1	5:H:17:DT:OP1[5_567]	1.92	0.28
3:D:304:GLN:OE1	4:F:95:PRO:O[2_664]	2.17	0.03

## 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	
2	B	180/182 (99%)	171 (95%)	9 (5%)	0	100	100
3	C	257/315 (82%)	250 (97%)	5 (2%)	2 (1%)	19	52
3	D	313/315 (99%)	304 (97%)	8 (3%)	1 (0%)	41	72
3	E	313/315 (99%)	305 (97%)	7 (2%)	1 (0%)	41	72
4	F	334/336 (99%)	322 (96%)	12 (4%)	0	100	100
All	All	1397/1463 (96%)	1352 (97%)	41 (3%)	4 (0%)	41	72

All (4) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	C	44	PRO
3	D	91	ARG
3	C	43	LEU
3	E	91	ARG

### 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	
2	B	158/158 (100%)	149 (94%)	9 (6%)	20	51
3	C	233/272 (86%)	230 (99%)	3 (1%)	69	82
3	D	272/272 (100%)	268 (98%)	4 (2%)	65	80
3	E	272/272 (100%)	263 (97%)	9 (3%)	38	65
4	F	296/296 (100%)	284 (96%)	12 (4%)	30	60
All	All	1231/1270 (97%)	1194 (97%)	37 (3%)	41	67

All (37) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	B	4	TYR
2	B	47	MET
2	B	49	LEU
2	B	73	LEU

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Mol	Chain	Res	Type
2	B	99	VAL
2	B	137	ASN
2	B	157	PHE
2	B	175	SER
2	B	177	THR
3	C	92	GLU
3	C	198	ILE
3	C	290	MET
3	D	56	VAL
3	D	102	ASP
3	D	155	ARG
3	D	277	VAL
3	E	33	ASP
3	E	38	VAL
3	E	40	ASN
3	E	102	ASP
3	E	103	LYS
3	E	113	THR
3	E	125	GLN
3	E	312	PHE
3	E	313	TYR
4	F	101	ILE
4	F	113	GLN
4	F	133	GLN
4	F	152	LYS
4	F	160	ILE
4	F	190	LEU
4	F	196	TYR
4	F	200	ILE
4	F	221	LEU
4	F	231	ASN
4	F	297	ILE
4	F	301	VAL

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (1) such sidechains are listed below:

Mol	Chain	Res	Type
3	D	82	GLN

### 5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	A	41/43 (95%)	15 (36%)	1 (2%)

All (15) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	A	2	U
1	A	5	G
1	A	6	A
1	A	9	G
1	A	14	C
1	A	15	C
1	A	21	C
1	A	22	C
1	A	23	G
1	A	25	U
1	A	26	C
1	A	27	A
1	A	30	G
1	A	36	C
1	A	37	A

All (1) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	A	5	G

## 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 monosaccharides in this entry.

## 5.6 Ligand geometry [i](#)

There are no ligands in this entry.

## 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<sup>th</sup> 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 <sup>2</sup> )	Q<0.9
1	A	43/43 (100%)	0.58	5 (11%) 4 4	94, 126, 150, 157	0
2	B	182/182 (100%)	0.99	34 (18%) 1 1	122, 143, 174, 198	0
3	C	267/315 (84%)	0.68	31 (11%) 4 4	97, 130, 162, 201	4 (1%)
3	D	315/315 (100%)	0.41	15 (4%) 30 28	77, 110, 145, 161	5 (1%)
3	E	315/315 (100%)	0.38	10 (3%) 47 45	74, 112, 144, 176	4 (1%)
4	F	336/336 (100%)	0.80	54 (16%) 1 2	85, 129, 221, 260	10 (2%)
5	H	21/21 (100%)	0.52	2 (9%) 8 9	141, 181, 242, 245	0
6	I	27/27 (100%)	0.21	1 (3%) 41 38	100, 132, 229, 234	0
All	All	1506/1554 (96%)	0.61	152 (10%) 7 7	74, 124, 203, 260	23 (1%)

All (152) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
4	F	256	MET	9.4
3	C	196	MET	8.0
4	F	119	MET	7.3
5	H	2	DC	6.8
2	B	55	PHE	6.7
4	F	160	ILE	6.3
3	E	196	MET	6.3
2	B	7	ILE	6.1
2	B	41	GLY	5.6
3	C	275	MET	5.3
3	C	242	GLU	5.2
4	F	143	PHE	5.0
3	C	291	MET	4.8
4	F	161	GLU	4.7
3	D	290	MET	4.6
3	D	291	MET	4.6

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
4	F	206	LYS	4.6
4	F	139	LEU	4.6
4	F	202	TYR	4.5
4	F	150	ILE	4.5
3	C	245	ILE	4.5
4	F	180	LEU	4.5
4	F	177	GLU	4.4
4	F	205	ASN	4.4
2	B	59	GLY	4.4
4	F	215	TYR	4.2
3	C	290	MET	4.1
2	B	6	ASP	4.1
3	D	196	MET	4.1
3	D	275	MET	4.1
4	F	221	LEU	3.9
3	C	171	TYR	3.9
3	E	305	HIS	3.8
4	F	136	TRP	3.7
2	B	9	LEU	3.7
4	F	179	ALA	3.6
4	F	288	MET	3.5
4	F	174	LEU	3.5
2	B	84	ALA	3.5
4	F	218	ALA	3.5
4	F	204	ASN	3.4
3	D	103	LYS	3.4
4	F	1	MET	3.4
2	B	8	ARG	3.4
2	B	124	LYS	3.4
2	B	42	ILE	3.3
3	C	116	ILE	3.3
4	F	130	GLU	3.3
4	F	196	TYR	3.3
2	B	143	PHE	3.3
2	B	83	THR	3.3
4	F	214	ILE	3.2
3	C	187	LEU	3.2
4	F	208	LEU	3.2
3	E	275	MET	3.2
2	B	52	GLY	3.2
4	F	210	THR	3.2
3	C	49	TYR	3.1

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
4	F	287	MET	3.1
4	F	209	ILE	3.1
4	F	183	SER	3.1
4	F	182	ASN	3.0
4	F	181	GLU	3.0
4	F	135	PHE	3.0
4	F	35	MET	2.9
6	I	27	DG	2.9
3	C	109	LEU	2.9
3	D	70	ASP	2.9
3	C	198	ILE	2.9
2	B	64	LEU	2.9
2	B	57	ILE	2.9
3	D	102	ASP	2.8
4	F	195	GLU	2.8
3	C	247	LEU	2.8
4	F	255	PHE	2.8
3	E	290	MET	2.8
4	F	186	LEU	2.8
3	E	198	ILE	2.7
1	A	11	A	2.7
4	F	193	LEU	2.7
2	B	177	THR	2.7
3	C	43	LEU	2.7
4	F	259	TYR	2.7
2	B	131	LEU	2.7
3	C	163	LYS	2.7
3	C	68	ALA	2.6
2	B	20	LEU	2.6
3	C	315	LYS	2.6
1	A	10	C	2.6
3	C	66	LYS	2.6
3	C	274	TYR	2.5
4	F	178	LYS	2.5
3	D	315	LYS	2.5
2	B	53	GLN	2.5
4	F	75	MET	2.5
3	C	125	GLN	2.5
3	D	83	ASN	2.5
4	F	184	ASP	2.5
2	B	40	ILE	2.4
4	F	216	CYS	2.4

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
3	D	197	VAL	2.4
3	D	155	ARG	2.4
1	A	12	A	2.4
4	F	162	LEU	2.4
2	B	113	ILE	2.4
2	B	127	LYS	2.4
4	F	151	ILE	2.4
3	C	249	ASP	2.4
3	E	109	LEU	2.4
1	A	8	A	2.4
2	B	183	PHE	2.4
1	A	13	A	2.3
3	C	202	GLU	2.3
3	D	153	GLY	2.3
3	C	189	LYS	2.3
2	B	65	HIS	2.3
2	B	51	LEU	2.3
3	C	243	CYS	2.3
3	E	33	ASP	2.3
4	F	85	LEU	2.3
3	C	188	ASP	2.3
4	F	171	LEU	2.3
3	C	210	LEU	2.2
2	B	147	THR	2.2
2	B	106	LYS	2.2
2	B	182	TRP	2.2
5	H	8	DC	2.2
4	F	299	ILE	2.2
4	F	222	GLN	2.2
4	F	107	MET	2.2
3	D	115	LEU	2.2
3	E	197	VAL	2.2
2	B	11	PRO	2.2
3	E	242	GLU	2.2
3	C	83	ASN	2.2
2	B	5	ILE	2.1
4	F	245	ILE	2.1
3	D	130	SER	2.1
2	B	95	ARG	2.1
2	B	126	TYR	2.1
3	C	199	LYS	2.1
2	B	172	TYR	2.1

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Mol	Chain	Res	Type	RSRZ
4	F	203	LEU	2.0
3	D	126	CYS	2.0
3	C	184	PHE	2.0
3	C	70	ASP	2.0
4	F	217	SER	2.0
4	F	76	TYR	2.0
3	C	73	PHE	2.0
2	B	157	PHE	2.0
4	F	250	PHE	2.0
3	E	126	CYS	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 monosaccharides in this entry.

## 6.4 Ligands [i](#)

There are no ligands in this entry.

## 6.5 Other polymers [i](#)

There are no such residues in this entry.