



Full wwPDB X-ray Structure Validation Report ⓘ

Oct 5, 2024 – 01:04 pm BST

PDB ID : 6F5P
Title : A mechanism for the activation of the influenza virus transcriptase
Authors : Serna Martin, I.; Grimes, J.M.
Deposited on : 2017-12-02
Resolution : 4.14 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 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)
Xtrriage (Phenix) : 1.13
EDS : 3.0
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)
CCP4 : 9.0.003 (Gargrove)
Density-Fitness : 1.0.11
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.39

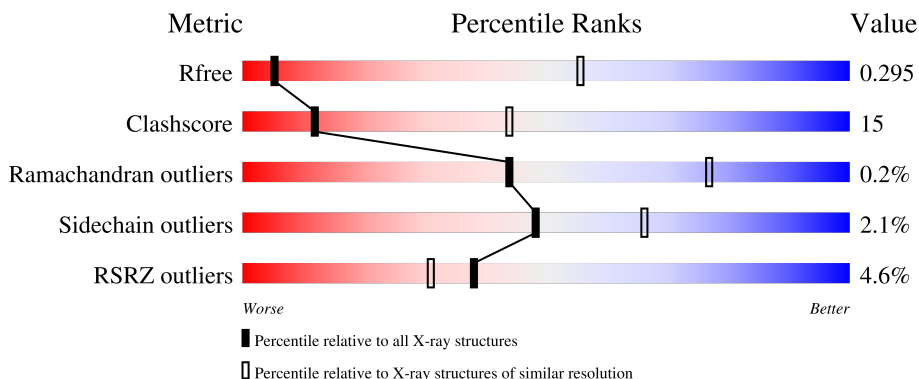
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 4.14 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.



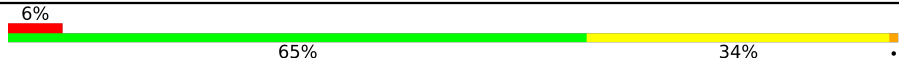


Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	164625	1166 (4.48-3.80)
Clashscore	180529	1233 (4.48-3.80)
Ramachandran outliers	177936	1158 (4.48-3.80)
Sidechain outliers	177891	1145 (4.48-3.80)
RSRZ outliers	164620	1164 (4.48-3.80)

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	709	 3% 64% 34%
1	D	709	 4% 65% 32%
2	B	754	 3% 66% 27% 6%
2	C	754	 3% 66% 28%
3	E	774	 7% 66% 33%

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Mol	Chain	Length	Quality of chain
3	F	774	
4	G	28	
5	H	10	

2 Entry composition [i](#)

There are 6 unique types of molecules in this entry. The entry contains 35282 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 Polymerase acidic protein.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	708	Total	C	N	O	S	0	0	0
			5736	3654	972	1065	45			
1	D	708	Total	C	N	O	S	0	0	0
			5736	3654	972	1065	45			

- Molecule 2 is a protein called RNA-directed RNA polymerase catalytic subunit.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
2	B	710	Total	C	N	O	S	0	0	0
			5643	3584	948	1057	54			
2	C	721	Total	C	N	O	S	0	0	0
			5736	3638	971	1073	54			

- Molecule 3 is a protein called Polymerase basic protein 2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
3	E	771	Total	C	N	O	S	0	0	0
			6140	3883	1079	1141	37			
3	F	771	Total	C	N	O	S	0	0	0
			6140	3883	1079	1141	37			

- Molecule 4 is a protein called DNA-directed RNA polymerase subunit.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
4	G	12	Total	C	N	O	P	0	0	0
			97	56	12	27	2			

- Molecule 5 is a protein called ALA-ALA-ALA-ALA-ALA-ALA-ALA-ALA-ALA-ALA.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
			Total	C	N	O			
5	H	10	Total	C	N	O	50	0	0
			50	30	10	10			

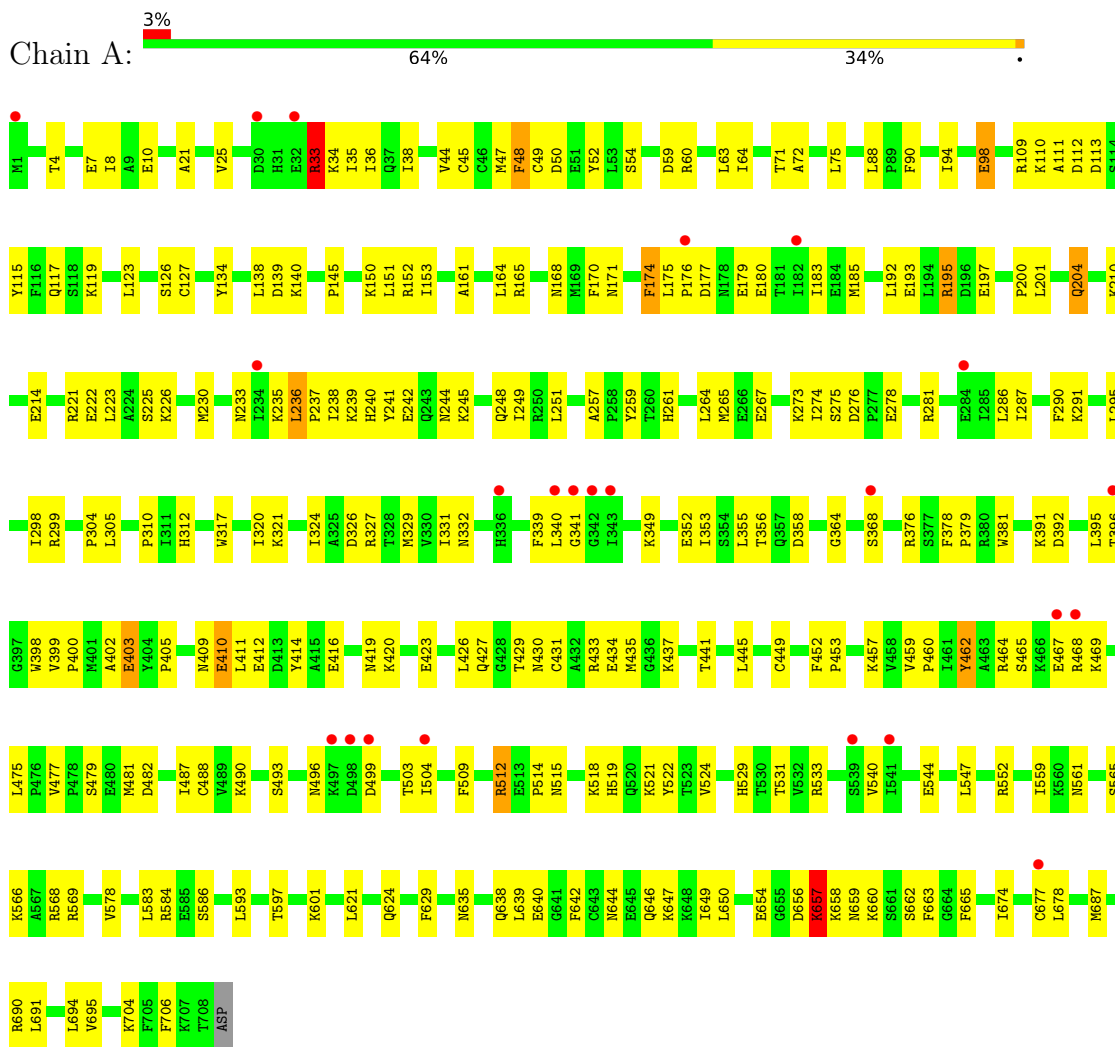
- Molecule 6 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
6	A	2	Total 2	Mg 2	0	0
6	D	2	Total 2	Mg 2	0	0

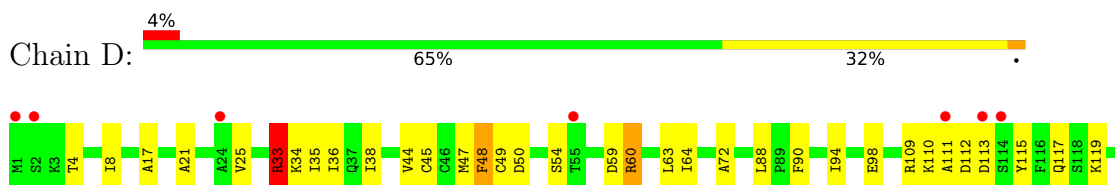
3 Residue-property plots

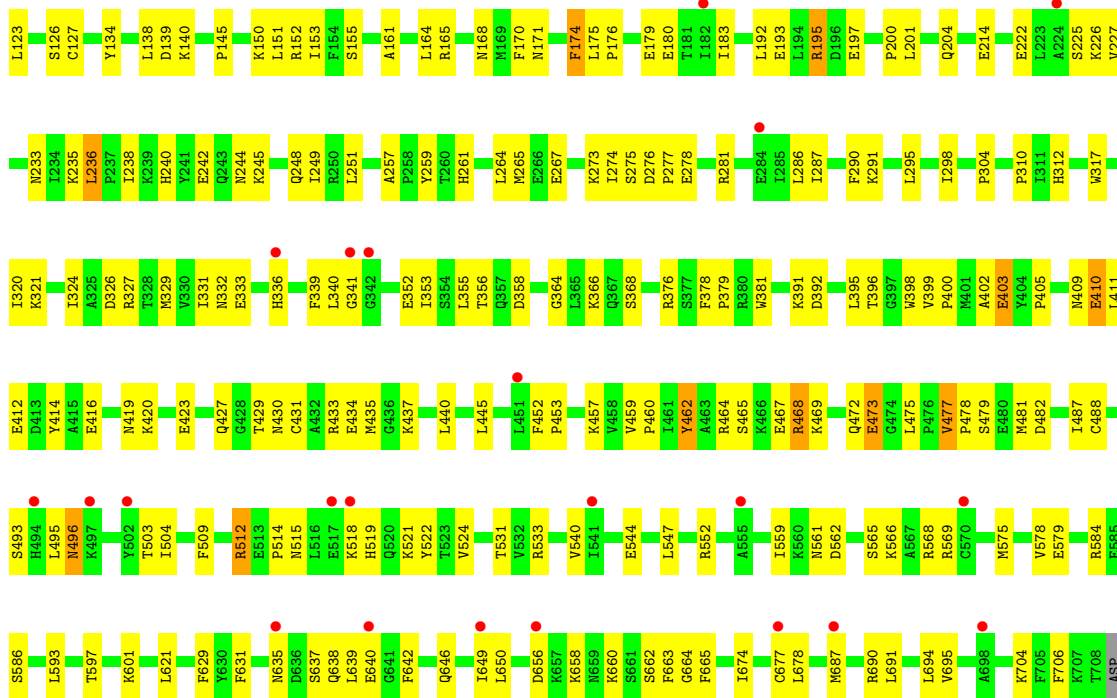
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. 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: Polymerase acidic protein

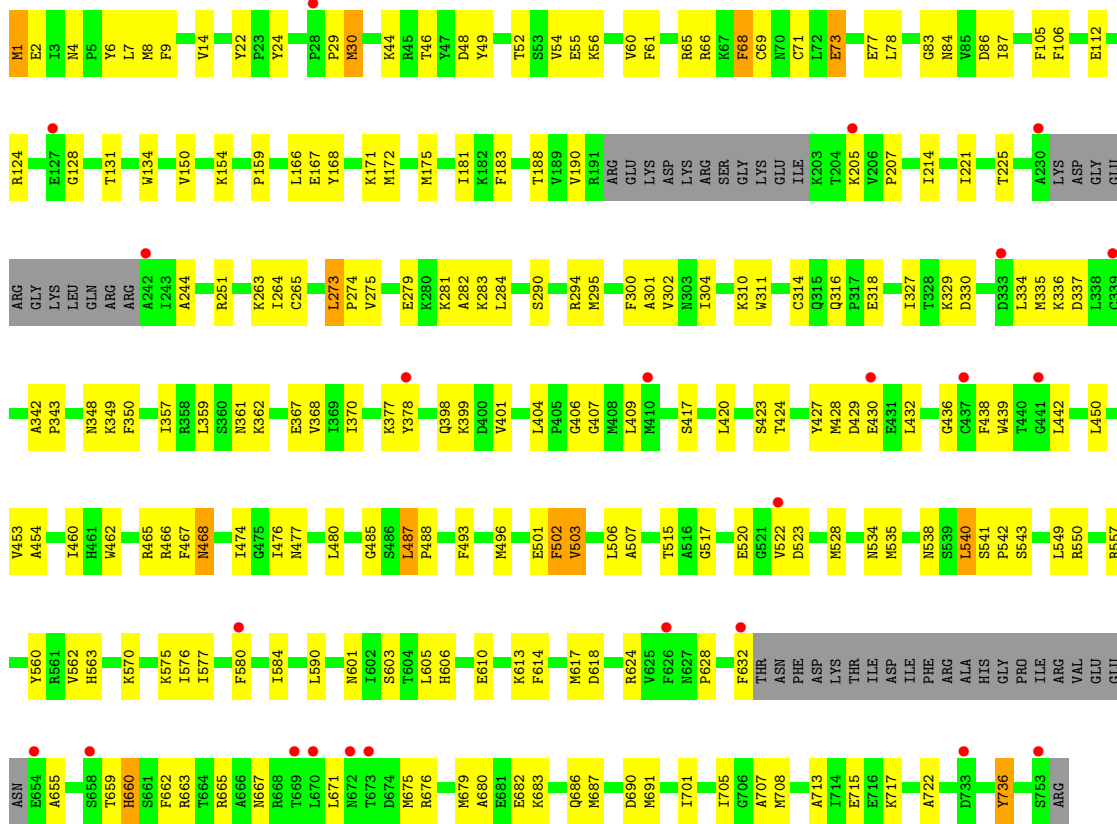


- Molecule 1: Polymerase acidic protein

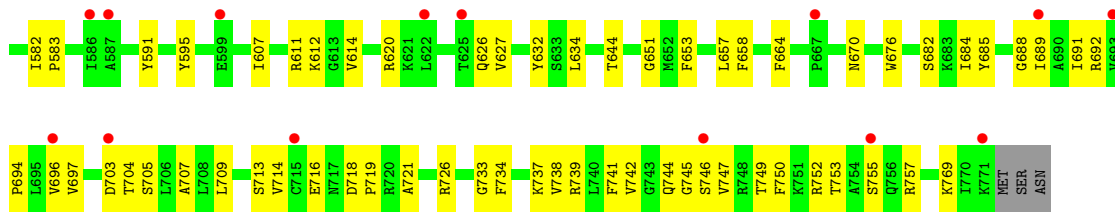




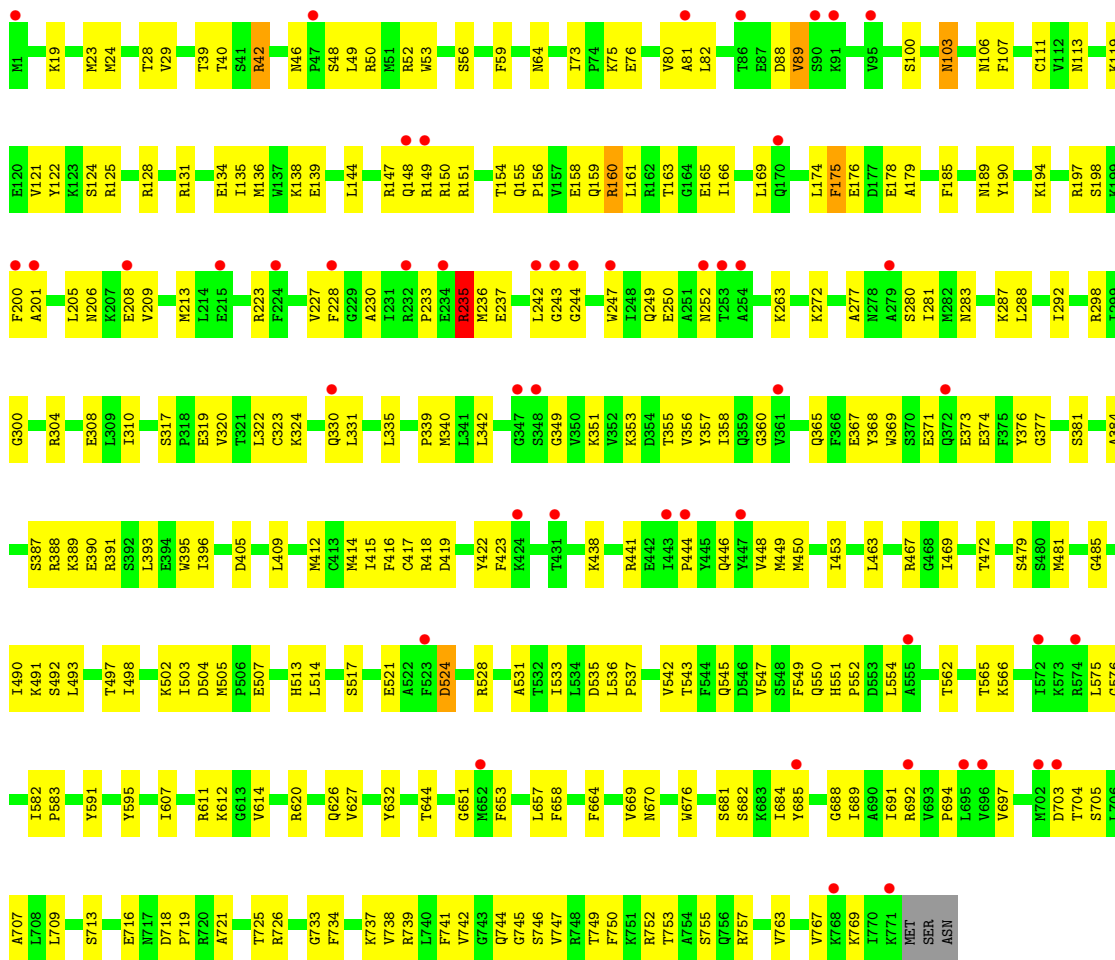
• Molecule 2: RNA-directed RNA polymerase catalytic subunit



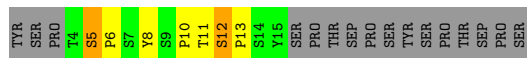
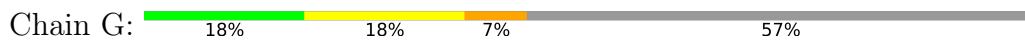
• Molecule 2: RNA-directed RNA polymerase catalytic subunit



● Molecule 3: Polymerase basic protein 2



● Molecule 4: DNA-directed RNA polymerase subunit



● Molecule 5: ALA-ALA-ALA-ALA-ALA-ALA-ALA-ALA-ALA





4 Data and refinement statistics

Property	Value	Source
Space group	P 43 21 2	Depositor
Cell constants a, b, c, α , β , γ	185.70Å 185.70Å 597.59Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	131.31 – 4.14 131.31 – 4.14	Depositor EDS
% Data completeness (in resolution range)	68.9 (131.31-4.14) 68.9 (131.31-4.14)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.35 (at 4.15Å)	Xtrriage
Refinement program	PHENIX (1.10.1_2155: ???)	Depositor
R, R_{free}	0.260 , 0.296 0.260 , 0.295	Depositor DCC
R_{free} test set	27858 reflections (5.06%)	wwPDB-VP
Wilson B-factor (Å ²)	105.8	Xtrriage
Anisotropy	0.115	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.30 , 145.3	EDS
L-test for twinning ²	$\langle L \rangle = 0.46$, $\langle L^2 \rangle = 0.29$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
F_o, F_c correlation	0.82	EDS
Total number of atoms	35282	wwPDB-VP
Average B, all atoms (Å ²)	145.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.29% 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: MG, SEP

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	0.34	2/5855 (0.0%)	0.62	13/7866 (0.2%)
1	D	0.34	2/5855 (0.0%)	0.62	12/7866 (0.2%)
2	B	0.33	2/5741 (0.0%)	0.50	5/7716 (0.1%)
2	C	0.35	2/5835 (0.0%)	0.52	6/7839 (0.1%)
3	E	0.28	2/6251 (0.0%)	0.51	2/8415 (0.0%)
3	F	0.28	2/6251 (0.0%)	0.51	2/8415 (0.0%)
4	G	0.39	0/79	0.57	0/105
5	H	0.30	0/49	2.45	4/67 (6.0%)
All	All	0.32	12/35916 (0.0%)	0.56	44/48289 (0.1%)

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
1	A	0	1
1	D	0	4
2	B	0	1
2	C	0	1
All	All	0	7

All (12) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	D	462	TYR	CE1-CZ	-9.52	1.26	1.38
2	B	736	TYR	CE1-CZ	-9.29	1.26	1.38
1	A	462	TYR	CE1-CZ	-9.20	1.26	1.38
2	C	736	TYR	CE1-CZ	-9.17	1.26	1.38
2	C	736	TYR	CG-CD1	-7.77	1.29	1.39
1	D	462	TYR	CG-CD1	-7.71	1.29	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	462	TYR	CG-CD1	-7.63	1.29	1.39
2	B	736	TYR	CG-CD1	-7.34	1.29	1.39
3	F	249	GLN	CD-NE2	-6.14	1.17	1.32
3	E	249	GLN	CD-NE2	-6.07	1.17	1.32
3	E	249	GLN	CD-OE1	-5.58	1.11	1.24
3	F	249	GLN	CD-OE1	-5.49	1.11	1.24

All (44) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	33	ARG	NE-CZ-NH2	-14.79	112.91	120.30
1	D	33	ARG	NE-CZ-NH2	14.15	127.37	120.30
1	D	33	ARG	NE-CZ-NH1	-14.14	113.23	120.30
1	A	33	ARG	NE-CZ-NH1	12.64	126.62	120.30
1	D	512	ARG	NE-CZ-NH2	-12.58	114.01	120.30
1	A	512	ARG	NE-CZ-NH1	-11.96	114.32	120.30
1	A	512	ARG	NE-CZ-NH2	11.73	126.17	120.30
1	D	512	ARG	NE-CZ-NH1	11.26	125.93	120.30
5	H	7	ALA	N-CA-CB	-10.81	94.96	110.10
3	F	235	ARG	NE-CZ-NH1	10.64	125.62	120.30
3	E	235	ARG	NE-CZ-NH2	10.29	125.44	120.30
5	H	3	ALA	CB-CA-C	-9.86	95.31	110.10
2	C	30	MET	CG-SD-CE	9.64	115.63	100.20
3	F	235	ARG	NE-CZ-NH2	-9.60	115.50	120.30
1	A	340	LEU	CA-CB-CG	9.21	136.49	115.30
3	E	235	ARG	NE-CZ-NH1	-9.20	115.70	120.30
1	D	340	LEU	CA-CB-CG	8.96	135.92	115.30
5	H	6	ALA	CB-CA-C	8.92	123.47	110.10
1	A	33	ARG	CD-NE-CZ	8.70	135.78	123.60
1	D	33	ARG	CD-NE-CZ	8.20	135.08	123.60
1	A	477	VAL	CG1-CB-CG2	-7.02	99.67	110.90
1	D	236	LEU	CB-CG-CD1	-6.95	99.19	111.00
2	B	30	MET	CG-SD-CE	6.77	111.03	100.20
2	C	1	MET	CB-CG-SD	6.58	132.14	112.40
2	B	1	MET	CB-CG-SD	6.55	132.04	112.40
1	A	512	ARG	CD-NE-CZ	6.41	132.57	123.60
1	A	33	ARG	CG-CD-NE	-5.91	99.39	111.80
5	H	3	ALA	N-CA-C	5.85	126.79	111.00
1	D	512	ARG	CD-NE-CZ	5.67	131.54	123.60
2	B	73	GLU	CA-CB-CG	5.66	125.85	113.40
1	A	177	ASP	N-CA-CB	-5.60	100.52	110.60
2	C	487	LEU	CA-CB-CG	5.57	128.10	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	D	477	VAL	CA-CB-CG1	5.46	119.10	110.90
2	C	667	ASN	CB-CA-C	-5.41	99.58	110.40
2	C	78	LEU	CB-CG-CD1	5.31	120.03	111.00
1	D	462	TYR	CD1-CE1-CZ	5.25	124.53	119.80
1	A	657	LYS	CB-CG-CD	5.21	125.15	111.60
2	B	487	LEU	CA-CB-CG	5.19	127.24	115.30
1	D	33	ARG	CG-CD-NE	5.15	122.61	111.80
2	B	736	TYR	CD1-CE1-CZ	5.13	124.42	119.80
1	A	657	LYS	CA-CB-CG	5.11	124.64	113.40
1	A	236	LEU	CB-CG-CD1	-5.11	102.32	111.00
2	C	736	TYR	CD1-CE1-CZ	5.09	124.38	119.80
1	D	462	TYR	CB-CG-CD2	5.08	124.05	121.00

There are no chirality outliers.

All (7) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	204	GLN	Sidechain
2	B	667	ASN	Sidechain
2	C	667	ASN	Sidechain
1	D	204	GLN	Sidechain
1	D	472	GLN	Peptide
1	D	473	GLU	Peptide
1	D	664	GLY	Peptide

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	5736	0	5749	227	0
1	D	5736	0	5749	220	0
2	B	5643	0	5736	185	0
2	C	5736	0	5837	205	0
3	E	6140	0	6250	207	0
3	F	6140	0	6250	226	0
4	G	97	0	73	11	0
5	H	50	0	52	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
6	A	2	0	0	0	0
6	D	2	0	0	0	0
All	All	35282	0	35696	1098	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 15.

All (1098) 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:D:410:GLU:OE1	1:D:411:LEU:N	1.59	1.34
1:A:410:GLU:OE1	1:A:411:LEU:N	1.59	1.34
3:E:367:GLU:O	3:E:418:ARG:NH1	1.87	1.08
3:F:367:GLU:O	3:F:418:ARG:NH1	1.87	1.07
1:A:410:GLU:OE1	1:A:411:LEU:HB2	1.57	1.05
1:D:410:GLU:OE1	1:D:411:LEU:HB2	1.57	1.04
1:A:410:GLU:OE1	1:A:411:LEU:CB	2.13	0.97
1:D:410:GLU:OE1	1:D:411:LEU:CB	2.13	0.96
1:A:690:ARG:HH12	2:B:2:GLU:HB3	1.30	0.93
3:E:228:PHE:HE2	3:E:235:ARG:HH11	0.91	0.91
1:D:233:ASN:HB2	2:C:78:LEU:HD12	1.52	0.91
3:F:228:PHE:HE2	3:F:235:ARG:NH1	1.68	0.90
3:F:228:PHE:HE2	3:F:235:ARG:HH11	1.12	0.90
3:E:131:ARG:NH1	3:E:237:GLU:OE1	2.05	0.90
1:D:140:LYS:NZ	1:D:150:LYS:HE2	1.87	0.89
1:D:236:LEU:HD11	2:C:480:LEU:HD22	1.52	0.89
1:A:352:GLU:OE1	2:B:377:LYS:NZ	2.05	0.89
2:C:665:ARG:HD2	3:F:89:VAL:HG21	1.53	0.89
1:D:410:GLU:OE1	1:D:411:LEU:CA	2.21	0.88
1:A:410:GLU:OE1	1:A:411:LEU:CA	2.21	0.88
1:A:140:LYS:NZ	1:A:150:LYS:HE2	1.87	0.88
3:F:131:ARG:NH1	3:F:237:GLU:OE1	2.05	0.88
2:C:65:ARG:HH21	2:C:348:ASN:HD21	1.23	0.86
1:D:304:PRO:HG3	1:D:310:PRO:HB3	1.57	0.86
1:A:204:GLN:HE22	2:B:56:LYS:HE3	1.38	0.86
3:E:228:PHE:HE2	3:E:235:ARG:NH1	1.74	0.86
1:A:410:GLU:CD	1:A:411:LEU:N	2.30	0.85
1:A:304:PRO:HG3	1:A:310:PRO:HB3	1.56	0.85
2:C:496:MET:HA	2:C:503:VAL:HG21	1.60	0.84
1:D:410:GLU:CD	1:D:411:LEU:N	2.30	0.84
2:B:496:MET:HA	2:B:503:VAL:HG21	1.60	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:65:ARG:HH21	2:B:348:ASN:HD21	1.23	0.83
1:D:690:ARG:HH12	2:C:2:GLU:HB3	1.44	0.83
2:B:686:GLN:OE1	3:E:39:THR:HG21	1.79	0.83
3:E:138:LYS:HB3	3:E:250:GLU:HG2	1.62	0.82
1:D:566:LYS:HE3	1:D:569:ARG:HH21	1.46	0.81
2:B:52:THR:HA	2:B:73:GLU:HG2	1.62	0.80
3:E:174:LEU:HD23	3:E:175:PHE:HB2	1.64	0.80
3:F:415:ILE:HD11	3:F:453:ILE:HD13	1.65	0.79
1:A:566:LYS:HE3	1:A:569:ARG:HH21	1.46	0.78
3:F:174:LEU:HD23	3:F:175:PHE:HB2	1.64	0.78
2:C:52:THR:HG22	2:C:54:VAL:H	1.48	0.78
3:E:283:ASN:O	3:E:287:LYS:NZ	2.15	0.78
2:B:52:THR:HG22	2:B:54:VAL:H	1.48	0.78
3:E:415:ILE:HD11	3:E:453:ILE:HD13	1.65	0.77
1:A:239:LYS:HZ1	4:G:6:PRO:HD2	1.48	0.77
1:D:235:LYS:HE2	1:D:235:LYS:HA	1.67	0.77
3:F:283:ASN:O	3:F:287:LYS:NZ	2.15	0.76
1:D:312:HIS:HB3	1:D:339:PHE:HZ	1.50	0.76
1:D:694:LEU:HD22	2:C:6:TYR:HB3	1.67	0.76
1:A:140:LYS:HZ1	1:A:150:LYS:HE2	1.51	0.76
1:A:235:LYS:HA	1:A:235:LYS:HE2	1.68	0.76
1:A:312:HIS:HB3	1:A:339:PHE:HZ	1.50	0.76
1:A:257:ALA:HB3	1:A:379:PRO:HG3	1.68	0.76
1:D:257:ALA:HB3	1:D:379:PRO:HG3	1.68	0.75
3:E:547:VAL:HG13	3:E:688:GLY:HA2	1.67	0.75
3:F:547:VAL:HG13	3:F:688:GLY:HA2	1.66	0.75
1:A:171:ASN:ND2	2:B:167:GLU:OE2	2.19	0.75
1:A:419:ASN:ND2	2:B:543:SER:OG	2.19	0.75
1:D:640:GLU:OE2	2:C:29:PRO:HD3	1.87	0.75
1:A:151:LEU:HD13	3:E:753:THR:HG23	1.69	0.74
2:B:52:THR:CA	2:B:73:GLU:HG2	2.17	0.74
1:D:151:LEU:HD13	3:F:753:THR:HG23	1.69	0.74
3:F:272:LYS:HZ2	3:F:543:THR:HG23	1.53	0.74
3:F:298:ARG:NH1	3:F:684:ILE:HD11	2.03	0.73
1:A:238:ILE:HD13	1:A:663:PHE:HB2	1.69	0.73
3:F:128:ARG:NH1	3:F:155:GLN:HB3	2.03	0.73
3:E:128:ARG:NH1	3:E:155:GLN:HB3	2.02	0.73
3:F:670:ASN:HB3	3:F:676:TRP:H	1.53	0.73
1:D:658:LYS:HD3	1:D:660:LYS:HZ2	1.53	0.73
1:A:658:LYS:HD3	1:A:660:LYS:HZ2	1.54	0.73
1:A:240:HIS:NE2	1:A:656:ASP:OD2	2.21	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:E:298:ARG:NH1	3:E:684:ILE:HD11	2.03	0.73
3:E:235:ARG:HH21	3:E:252:ASN:HB2	1.52	0.73
1:D:240:HIS:NE2	1:D:656:ASP:OD2	2.22	0.73
1:D:238:ILE:HD12	1:D:665:PHE:HA	1.72	0.72
3:E:670:ASN:HB3	3:E:676:TRP:H	1.53	0.72
3:E:575:LEU:HD13	3:E:582:ILE:HG13	1.71	0.72
2:C:576:ILE:HD11	3:F:100:SER:HB2	1.72	0.72
3:F:575:LEU:HD13	3:F:582:ILE:HG13	1.71	0.71
3:E:607:ILE:HB	3:E:612:LYS:HE3	1.72	0.71
1:A:237:PRO:HG3	4:G:5:SEP:O1P	1.90	0.71
1:D:312:HIS:HB3	1:D:339:PHE:CZ	2.25	0.71
2:C:679:MET:SD	3:F:42:ARG:NH2	2.64	0.71
3:E:272:LYS:HZ2	3:E:543:THR:HG23	1.52	0.71
2:C:154:LYS:HG2	2:C:159:PRO:HA	1.72	0.71
1:A:356:THR:HG22	2:B:377:LYS:NZ	2.05	0.71
1:D:368:SER:HB2	2:C:359:LEU:HD23	1.73	0.71
1:D:54:SER:OG	1:D:98:GLU:OE2	2.07	0.70
1:D:200:PRO:HG3	2:C:318:GLU:HB3	1.70	0.70
1:D:238:ILE:HD13	1:D:663:PHE:HB2	1.73	0.70
1:D:140:LYS:HZ1	1:D:150:LYS:HE2	1.52	0.70
3:F:418:ARG:NH2	3:F:446:GLN:OE1	2.24	0.70
3:E:324:LYS:NZ	3:E:331:LEU:HD22	2.07	0.70
1:D:226:LYS:NZ	2:C:431:GLU:HG3	2.07	0.70
1:D:469:LYS:HD3	1:D:475:LEU:HD13	1.74	0.70
1:A:312:HIS:HB3	1:A:339:PHE:CZ	2.26	0.70
2:B:131:THR:HG21	2:B:251:ARG:HD2	1.73	0.70
2:B:154:LYS:HG2	2:B:159:PRO:HA	1.73	0.70
3:F:607:ILE:HB	3:F:612:LYS:HE3	1.72	0.69
2:C:22:TYR:HD2	2:C:24:TYR:HE2	1.39	0.69
2:C:131:THR:HG21	2:C:251:ARG:HD2	1.73	0.69
2:C:190:VAL:HG22	2:C:205:LYS:HG2	1.75	0.69
1:A:694:LEU:HD22	2:B:6:TYR:HB3	1.74	0.69
3:F:324:LYS:NZ	3:F:331:LEU:HD22	2.07	0.69
3:E:160:ARG:HE	3:E:263:LYS:NZ	1.91	0.69
1:D:412:GLU:HG2	2:C:601:ASN:ND2	2.07	0.69
2:B:190:VAL:HG22	2:B:205:LYS:HG2	1.75	0.69
2:B:275:VAL:HG21	2:B:283:LYS:NZ	2.07	0.69
3:E:197:ARG:HD3	3:E:704:THR:HG22	1.74	0.69
2:B:701:ILE:HD11	3:E:208:GLU:HA	1.74	0.68
2:C:275:VAL:HG21	2:C:283:LYS:NZ	2.07	0.68
1:A:659:ASN:ND2	4:G:12:SEP:O	2.25	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:49:CYS:SG	1:D:50:ASP:N	2.66	0.68
2:C:282:ALA:HB3	3:F:149:ARG:HD3	1.76	0.68
3:F:160:ARG:H	3:F:160:ARG:HD3	1.59	0.68
1:D:352:GLU:OE1	2:C:377:LYS:NZ	2.23	0.68
3:F:197:ARG:HD3	3:F:704:THR:HG22	1.74	0.68
1:A:21:ALA:HA	1:A:38:ILE:HD11	1.76	0.68
1:A:464:ARG:HG2	1:A:482:ASP:HB3	1.74	0.68
3:F:160:ARG:HE	3:F:263:LYS:NZ	1.91	0.68
2:B:517:GLY:N	2:B:523:ASP:OD1	2.27	0.68
1:D:21:ALA:HA	1:D:38:ILE:HD11	1.76	0.68
2:B:682:GLU:OE1	3:E:42:ARG:NH2	2.27	0.68
2:B:22:TYR:HD2	2:B:24:TYR:HE2	1.40	0.68
1:A:138:LEU:HD11	1:A:140:LYS:HE3	1.76	0.68
1:A:200:PRO:HB3	2:B:69:CYS:HB2	1.76	0.67
1:D:414:TYR:HE2	2:C:542:PRO:HG2	1.58	0.67
1:A:238:ILE:HD12	1:A:665:PHE:HA	1.75	0.67
3:E:319:GLU:HG3	3:E:535:ASP:OD2	1.95	0.67
3:E:419:ASP:OD2	3:E:467:ARG:NH1	2.27	0.67
4:G:11:THR:OG1	4:G:12:SEP:O1P	2.10	0.67
1:A:331:ILE:O	1:A:332:ASN:ND2	2.28	0.67
3:F:310:ILE:HD13	3:F:323:CYS:HB3	1.75	0.67
1:A:690:ARG:NH2	2:B:2:GLU:OE1	2.25	0.67
1:D:45:CYS:O	1:D:48:PHE:HB3	1.94	0.67
3:F:319:GLU:HG3	3:F:535:ASP:OD2	1.95	0.67
1:A:356:THR:HG22	2:B:377:LYS:HZ1	1.59	0.67
3:E:418:ARG:NH2	3:E:446:GLN:OE1	2.25	0.66
2:C:517:GLY:N	2:C:523:ASP:OD1	2.27	0.66
3:F:384:ALA:HA	3:F:503:ILE:HD12	1.77	0.66
1:D:399:VAL:HB	1:D:427:GLN:HE22	1.61	0.66
2:B:675:MET:O	2:B:679:MET:HG2	1.95	0.66
3:E:310:ILE:HD13	3:E:323:CYS:HB3	1.75	0.66
3:F:419:ASP:OD2	3:F:467:ARG:NH1	2.28	0.66
1:A:54:SER:HB2	1:A:60:ARG:HE	1.60	0.66
1:D:138:LEU:HD11	1:D:140:LYS:HE3	1.76	0.66
1:D:464:ARG:HG2	1:D:482:ASP:HB3	1.75	0.66
1:A:204:GLN:NE2	2:B:56:LYS:HE3	2.11	0.66
2:C:350:PHE:HB3	2:C:401:VAL:HG21	1.78	0.66
1:A:44:VAL:HG13	1:A:153:ILE:HD11	1.77	0.66
1:D:44:VAL:HG13	1:D:153:ILE:HD11	1.77	0.66
1:D:575:MET:HG2	2:C:544:THR:HA	1.77	0.66
1:A:236:LEU:HD11	2:B:480:LEU:HD22	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:E:160:ARG:HD3	3:E:160:ARG:H	1.59	0.66
1:A:469:LYS:HD3	1:A:475:LEU:HD13	1.76	0.65
3:F:737:LYS:HA	3:F:750:PHE:O	1.96	0.65
2:C:675:MET:O	2:C:679:MET:HG2	1.95	0.65
3:E:737:LYS:HA	3:E:750:PHE:O	1.96	0.65
1:D:265:MET:HG2	1:D:434:GLU:HG2	1.79	0.65
3:E:384:ALA:HA	3:E:503:ILE:HD12	1.77	0.65
1:A:59:ASP:OD2	3:E:769:LYS:NZ	2.28	0.65
1:D:331:ILE:O	1:D:332:ASN:ND2	2.28	0.65
3:F:160:ARG:HE	3:F:263:LYS:HZ2	1.44	0.65
1:A:112:ASP:HB2	1:A:139:ASP:HB2	1.79	0.65
1:A:561:ASN:O	1:A:565:SER:HB3	1.97	0.65
3:F:272:LYS:NZ	3:F:543:THR:HG23	2.12	0.65
1:A:399:VAL:HB	1:A:427:GLN:HE22	1.61	0.65
1:D:658:LYS:HD3	1:D:660:LYS:NZ	2.11	0.65
2:B:350:PHE:HB3	2:B:401:VAL:HG21	1.78	0.64
3:E:272:LYS:NZ	3:E:543:THR:HG23	2.12	0.64
1:D:561:ASN:O	1:D:565:SER:HB3	1.97	0.64
2:B:683:LYS:HA	2:B:686:GLN:HG2	1.79	0.64
3:E:358:ILE:HG13	3:E:360:GLY:H	1.63	0.64
1:A:134:TYR:HB3	1:A:161:ALA:HB2	1.80	0.64
1:D:112:ASP:HB2	1:D:139:ASP:HB2	1.79	0.64
3:E:355:THR:HG22	3:E:365:GLN:HG2	1.80	0.64
2:B:432:LEU:HD23	2:B:466:ARG:HH12	1.62	0.64
3:E:551:HIS:O	3:E:551:HIS:ND1	2.30	0.64
1:A:265:MET:HG2	1:A:434:GLU:HG2	1.79	0.64
1:D:49:CYS:SG	1:D:63:LEU:HD11	2.38	0.64
2:B:398:GLN:HG3	2:B:399:LYS:H	1.63	0.64
2:B:679:MET:SD	3:E:42:ARG:NH2	2.70	0.64
1:A:531:THR:HG22	1:A:544:GLU:HG2	1.80	0.64
3:E:138:LYS:HB3	3:E:250:GLU:CG	2.28	0.63
3:F:280:SER:HB3	3:F:287:LYS:HE2	1.79	0.63
1:A:299:ARG:HE	3:F:545:GLN:HE22	1.46	0.63
1:D:134:TYR:HB3	1:D:161:ALA:HB2	1.80	0.63
1:D:531:THR:HG22	1:D:544:GLU:HG2	1.80	0.63
2:C:398:GLN:HG3	2:C:399:LYS:H	1.63	0.63
3:F:551:HIS:O	3:F:551:HIS:ND1	2.30	0.63
2:C:237:LYS:HE2	2:C:241:ARG:HE	1.62	0.63
1:A:201:LEU:HD21	2:B:87:ILE:HD11	1.81	0.62
1:A:658:LYS:HD3	1:A:660:LYS:NZ	2.12	0.62
2:C:624:ARG:HA	3:F:111:CYS:HB2	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:E:280:SER:HB3	3:E:287:LYS:HE2	1.80	0.62
1:A:584:ARG:NH1	2:B:501:GLU:HG2	2.13	0.62
3:F:156:PRO:HG3	3:F:233:PRO:HB2	1.81	0.62
3:F:235:ARG:HH21	3:F:252:ASN:HB2	1.63	0.62
1:D:320:ILE:HG21	1:D:487:ILE:HG21	1.82	0.62
3:F:415:ILE:HG21	3:F:450:MET:HG2	1.81	0.62
3:F:358:ILE:HG13	3:F:360:GLY:H	1.63	0.62
1:A:49:CYS:SG	1:A:63:LEU:HD11	2.39	0.62
1:A:434:GLU:OE2	1:A:437:LYS:HD3	1.99	0.62
2:C:701:ILE:HD11	3:F:208:GLU:HA	1.81	0.62
1:A:320:ILE:HG21	1:A:487:ILE:HG21	1.82	0.62
1:A:244:ASN:HB2	1:A:704:LYS:O	2.00	0.62
1:A:521:LYS:HD2	1:A:552:ARG:NH1	2.15	0.62
3:E:156:PRO:HG3	3:E:233:PRO:HB2	1.81	0.62
3:F:355:THR:HG22	3:F:365:GLN:HG2	1.80	0.62
1:D:434:GLU:OE2	1:D:437:LYS:HD3	2.00	0.61
1:D:521:LYS:HD2	1:D:552:ARG:NH1	2.15	0.61
2:B:349:LYS:NZ	2:B:407:GLY:O	2.32	0.61
3:F:536:LEU:HD12	3:F:537:PRO:HD2	1.83	0.61
1:D:341:GLY:H	1:D:503:THR:HG21	1.65	0.61
3:E:159:GLN:HA	3:E:304:ARG:HH12	1.66	0.61
2:B:282:ALA:HB3	3:E:149:ARG:HD3	1.82	0.61
2:C:432:LEU:HD23	2:C:466:ARG:HH12	1.63	0.61
2:C:688:VAL:HG13	3:F:24:MET:HE2	1.81	0.61
1:D:244:ASN:HB2	1:D:704:LYS:O	2.00	0.61
3:E:298:ARG:HH12	3:E:684:ILE:HD11	1.64	0.61
3:F:298:ARG:HH12	3:F:684:ILE:HD11	1.65	0.61
1:A:183:ILE:HD13	2:B:334:LEU:HD22	1.83	0.61
3:E:415:ILE:HG21	3:E:450:MET:HG2	1.81	0.61
1:D:259:TYR:HE1	1:D:261:HIS:HB3	1.66	0.61
2:C:624:ARG:NH1	3:F:107:PHE:O	2.31	0.61
3:E:159:GLN:HA	3:E:304:ARG:NH1	2.16	0.61
3:F:159:GLN:HA	3:F:304:ARG:HH12	1.66	0.61
3:F:576:GLY:HA2	3:F:583:PRO:HG3	1.83	0.61
1:A:222:GLU:HA	1:A:225:SER:HB3	1.82	0.61
1:A:259:TYR:HE1	1:A:261:HIS:HB3	1.66	0.61
2:B:584:ILE:HG21	2:B:590:LEU:HD21	1.83	0.61
3:E:536:LEU:HD12	3:E:537:PRO:HD2	1.83	0.61
2:C:31:SER:HB3	2:C:240:ARG:HD2	1.83	0.61
2:C:683:LYS:HA	2:C:686:GLN:HG2	1.83	0.61
3:E:576:GLY:HA2	3:E:583:PRO:HG3	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:222:GLU:HA	1:D:225:SER:HB3	1.83	0.60
2:B:275:VAL:HG21	2:B:283:LYS:HZ1	1.64	0.60
1:A:240:HIS:HB2	1:A:662:SER:O	2.01	0.60
2:B:632:PHE:CD1	3:E:102:ILE:HG12	2.36	0.60
3:F:159:GLN:HA	3:F:304:ARG:NH1	2.16	0.60
1:D:17:ALA:HB2	3:F:763:VAL:HG11	1.83	0.60
1:A:391:LYS:O	1:A:430:ASN:ND2	2.34	0.60
2:C:724:MET:HG3	3:F:725:THR:HG21	1.84	0.60
3:E:138:LYS:HD3	3:E:250:GLU:HG2	1.84	0.60
3:E:281:ILE:HD11	3:E:438:LYS:HB2	1.84	0.60
1:D:240:HIS:HB2	1:D:662:SER:O	2.00	0.60
1:D:578:VAL:HG21	1:D:621:LEU:HG	1.83	0.60
1:D:329:MET:SD	1:D:329:MET:N	2.75	0.60
1:A:200:PRO:HG3	2:B:318:GLU:HB3	1.83	0.60
1:D:445:LEU:HD12	1:D:459:VAL:HG11	1.84	0.60
1:D:391:LYS:O	1:D:430:ASN:ND2	2.34	0.60
3:E:472:THR:HG23	3:E:492:SER:HB3	1.83	0.60
1:A:264:LEU:HD21	1:A:267:GLU:HB2	1.84	0.59
1:A:329:MET:SD	1:A:329:MET:N	2.75	0.59
1:A:578:VAL:HG21	1:A:621:LEU:HG	1.84	0.59
1:D:233:ASN:CB	2:C:78:LEU:HD12	2.28	0.59
1:D:251:LEU:HD21	1:D:378:PHE:HB2	1.84	0.59
2:C:68:PHE:CE1	2:C:406:GLY:HA3	2.38	0.59
2:C:584:ILE:HG21	2:C:590:LEU:HD21	1.83	0.59
3:E:393:LEU:N	3:E:417:CYS:SG	2.75	0.59
3:E:704:THR:HB	3:E:707:ALA:HB3	1.85	0.59
1:A:241:TYR:OH	4:G:10:PRO:HB3	2.03	0.59
2:C:704:PRO:HA	3:F:744:GLN:HG3	1.85	0.59
3:F:552:PRO:HB2	3:F:554:LEU:HG	1.83	0.59
1:A:45:CYS:O	1:A:48:PHE:HB3	2.01	0.59
1:A:90:PHE:HB2	1:A:123:LEU:HD21	1.85	0.59
1:A:690:ARG:NH1	2:B:2:GLU:HB3	2.11	0.59
1:D:90:PHE:HB2	1:D:123:LEU:HD21	1.84	0.59
3:F:614:VAL:HG13	3:F:651:GLY:HA3	1.84	0.59
1:D:640:GLU:HB3	2:C:236:GLY:HA2	1.84	0.59
1:A:445:LEU:HD12	1:A:459:VAL:HG11	1.84	0.59
2:B:487:LEU:HG	2:B:488:PRO:HD2	1.85	0.59
2:C:106:PHE:HB3	2:C:327:ILE:HG23	1.85	0.59
3:F:281:ILE:HD11	3:F:438:LYS:HB2	1.83	0.59
3:F:704:THR:HB	3:F:707:ALA:HB3	1.84	0.59
1:D:110:LYS:HG2	1:D:111:ALA:H	1.68	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:E:552:PRO:HB2	3:E:554:LEU:HG	1.84	0.59
1:D:637:SER:HB2	2:C:238:LEU:HA	1.84	0.59
1:D:649:ILE:HD11	1:D:674:ILE:HD13	1.84	0.59
2:C:31:SER:HB3	2:C:240:ARG:CD	2.33	0.59
3:F:692:ARG:HG3	3:F:694:PRO:HD2	1.85	0.59
1:A:110:LYS:HG2	1:A:111:ALA:H	1.68	0.58
1:A:649:ILE:HD11	1:A:674:ILE:HD13	1.84	0.58
3:F:148:GLN:HB3	3:F:504:ASP:OD2	2.03	0.58
3:F:393:LEU:N	3:F:417:CYS:SG	2.76	0.58
3:F:438:LYS:HG3	3:F:441:ARG:HB2	1.85	0.58
1:A:180:GLU:O	1:A:183:ILE:HG13	2.03	0.58
2:B:665:ARG:HD2	3:E:89:VAL:HG21	1.85	0.58
1:D:236:LEU:CD1	2:C:480:LEU:HD22	2.27	0.58
2:B:68:PHE:CE1	2:B:406:GLY:HA3	2.38	0.58
2:B:290:SER:HB2	3:E:374:GLU:OE2	2.04	0.58
2:B:424:THR:HG22	2:B:474:ILE:HD11	1.84	0.58
1:A:654:GLU:HA	1:A:657:LYS:HB2	1.85	0.58
1:D:419:ASN:ND2	2:C:543:SER:OG	2.37	0.58
2:C:487:LEU:HG	2:C:488:PRO:HD2	1.85	0.58
3:E:148:GLN:HB3	3:E:504:ASP:OD2	2.04	0.58
2:C:349:LYS:NZ	2:C:407:GLY:O	2.32	0.58
2:C:424:THR:HG22	2:C:474:ILE:HD11	1.84	0.58
1:D:140:LYS:HZ3	1:D:145:PRO:HD2	1.67	0.58
1:D:473:GLU:HG3	1:D:475:LEU:HG	1.86	0.58
1:A:251:LEU:HD21	1:A:378:PHE:HB2	1.84	0.58
1:D:214:GLU:OE1	2:C:336:LYS:NZ	2.36	0.58
1:D:264:LEU:HD21	1:D:267:GLU:HB2	1.84	0.58
1:D:242:GLU:N	1:D:242:GLU:OE1	2.37	0.58
3:F:342:LEU:HD23	3:F:377:GLY:HA2	1.86	0.58
1:A:412:GLU:HG2	2:B:601:ASN:ND2	2.19	0.58
2:C:631:PRO:O	3:F:64:ASN:HB2	2.04	0.58
3:E:438:LYS:HG3	3:E:441:ARG:HB2	1.85	0.58
3:F:390:GLU:O	3:F:391:ARG:HG2	2.04	0.58
2:B:439:TRP:HB2	2:B:450:LEU:HD11	1.86	0.57
3:E:342:LEU:HD23	3:E:377:GLY:HA2	1.86	0.57
1:A:233:ASN:HB2	2:B:78:LEU:HD12	1.86	0.57
1:A:642:PHE:HE2	1:A:687:MET:HB2	1.67	0.57
1:D:642:PHE:HE2	1:D:687:MET:HB2	1.68	0.57
3:E:390:GLU:O	3:E:391:ARG:HG2	2.04	0.57
3:E:614:VAL:HG13	3:E:651:GLY:HA3	1.85	0.57
1:A:174:PHE:HB3	1:A:179:GLU:HB3	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:E:479:SER:O	3:E:498:ILE:N	2.28	0.57
2:C:439:TRP:HB2	2:C:450:LEU:HD11	1.85	0.57
2:B:542:PRO:HG3	3:E:247:TRP:HE1	1.69	0.57
2:B:106:PHE:HB3	2:B:327:ILE:HG23	1.85	0.57
2:C:683:LYS:O	2:C:686:GLN:HB2	2.05	0.57
3:F:324:LYS:HZ1	3:F:331:LEU:HD22	1.66	0.57
2:C:275:VAL:HG21	2:C:283:LYS:HZ1	1.69	0.57
1:A:583:LEU:HB3	3:E:246:THR:HG21	1.87	0.57
3:E:147:ARG:N	3:E:227:VAL:O	2.33	0.57
1:D:183:ILE:HD13	2:C:334:LEU:HD22	1.86	0.57
2:B:424:THR:HG21	2:B:476:ILE:HD12	1.87	0.57
1:D:34:LYS:NZ	1:D:180:GLU:OE1	2.39	0.56
2:C:49:TYR:HE2	2:C:310:LYS:HG2	1.70	0.56
2:C:623:ASN:ND2	3:F:113:ASN:H	2.03	0.56
1:A:45:CYS:HB3	1:A:94:ILE:HD11	1.87	0.56
1:A:398:TRP:CG	1:A:433:ARG:HA	2.41	0.56
1:D:165:ARG:HD3	2:C:706:GLY:HA2	1.88	0.56
1:D:341:GLY:N	1:D:503:THR:HG21	2.20	0.56
1:D:355:LEU:HD22	1:D:358:ASP:HB3	1.86	0.56
3:E:76:GLU:OE2	3:E:80:VAL:HB	2.05	0.56
3:F:124:SER:HB2	3:F:128:ARG:HH21	1.71	0.56
1:A:355:LEU:HD22	1:A:358:ASP:HB3	1.87	0.56
1:D:45:CYS:HB3	1:D:94:ILE:HD11	1.87	0.56
2:C:188:THR:HA	2:C:207:PRO:HA	1.88	0.56
3:E:124:SER:HB2	3:E:128:ARG:HH21	1.71	0.56
3:E:692:ARG:HG3	3:E:694:PRO:HD2	1.86	0.56
1:D:59:ASP:OD2	3:F:769:LYS:NZ	2.38	0.56
1:D:566:LYS:HG3	3:F:52:ARG:HH12	1.71	0.56
1:A:54:SER:HB2	1:A:60:ARG:NE	2.20	0.56
1:D:291:LYS:HD3	1:D:324:ILE:HG22	1.87	0.56
1:D:398:TRP:CG	1:D:433:ARG:HA	2.41	0.56
3:E:324:LYS:HZ1	3:E:331:LEU:HD22	1.71	0.56
3:F:76:GLU:OE2	3:F:80:VAL:HB	2.06	0.56
3:F:391:ARG:HH22	3:F:423:PHE:HZ	1.53	0.56
3:F:620:ARG:NH2	3:F:644:THR:O	2.39	0.56
1:D:174:PHE:HB3	1:D:179:GLU:HB3	1.86	0.55
1:D:274:ILE:HA	1:D:481:MET:HB3	1.88	0.55
2:B:83:GLY:O	2:B:316:GLN:NE2	2.39	0.55
2:C:83:GLY:O	2:C:316:GLN:NE2	2.40	0.55
3:F:147:ARG:N	3:F:227:VAL:O	2.33	0.55
1:A:140:LYS:HZ3	1:A:145:PRO:HD2	1.70	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:274:ILE:HA	1:A:481:MET:HB3	1.88	0.55
1:D:281:ARG:HD3	2:C:570:LYS:HB3	1.87	0.55
2:B:49:TYR:HE2	2:B:310:LYS:HG2	1.70	0.55
2:B:188:THR:HA	2:B:207:PRO:HA	1.88	0.55
3:E:381:SER:HB2	3:E:405:ASP:OD2	2.07	0.55
1:D:236:LEU:HD11	2:C:480:LEU:CD2	2.30	0.55
2:C:424:THR:HG21	2:C:476:ILE:HD12	1.87	0.55
2:C:438:PHE:HB2	2:C:453:VAL:HB	1.88	0.55
3:E:713:SER:HB3	3:E:753:THR:HG21	1.89	0.55
1:A:238:ILE:CD1	1:A:663:PHE:HB2	2.35	0.55
3:E:620:ARG:NH2	3:E:644:THR:O	2.39	0.55
3:E:716:GLU:O	3:E:749:THR:OG1	2.18	0.55
3:F:713:SER:HB3	3:F:753:THR:HG21	1.88	0.55
1:A:310:PRO:HD2	3:F:134:GLU:OE2	2.06	0.55
2:B:610:GLU:O	2:B:614:PHE:HB2	2.07	0.55
2:C:61:PHE:HE2	2:C:348:ASN:HD22	1.55	0.55
1:A:34:LYS:NZ	1:A:180:GLU:OE1	2.39	0.55
3:F:393:LEU:HD22	3:F:396:ILE:HD11	1.89	0.55
1:A:291:LYS:HD3	1:A:324:ILE:HG22	1.87	0.55
3:E:391:ARG:HH22	3:E:423:PHE:HZ	1.53	0.55
3:F:472:THR:HG23	3:F:492:SER:HB3	1.89	0.55
1:A:47:MET:O	1:A:152:ARG:NH1	2.40	0.54
1:A:467:GLU:HB3	1:A:479:SER:HB2	1.89	0.54
1:D:419:ASN:O	1:D:423:GLU:HB2	2.07	0.54
1:D:562:ASP:HB2	3:F:49:LEU:HD13	1.89	0.54
3:E:393:LEU:HD22	3:E:396:ILE:HD11	1.89	0.54
3:F:716:GLU:O	3:F:749:THR:OG1	2.18	0.54
3:F:197:ARG:NH1	3:F:703:ASP:O	2.39	0.54
3:E:189:ASN:ND2	3:E:308:GLU:OE1	2.40	0.54
3:E:197:ARG:NH1	3:E:703:ASP:O	2.39	0.54
1:A:176:PRO:O	1:A:180:GLU:HB3	2.06	0.54
1:A:419:ASN:O	1:A:423:GLU:HB2	2.07	0.54
1:D:47:MET:O	1:D:152:ARG:NH1	2.40	0.54
2:B:294:ARG:HG3	3:E:395:TRP:CH2	2.41	0.54
3:F:189:ASN:ND2	3:F:308:GLU:OE1	2.40	0.54
1:A:281:ARG:HD3	2:B:570:LYS:HB3	1.89	0.54
3:F:381:SER:HB2	3:F:405:ASP:OD2	2.07	0.54
1:D:467:GLU:HB3	1:D:479:SER:HB2	1.88	0.54
1:A:287:ILE:HA	1:A:290:PHE:HB2	1.90	0.54
1:D:165:ARG:HE	1:D:170:PHE:HZ	1.55	0.54
2:C:577:ILE:HA	2:C:580:PHE:HB3	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:610:GLU:O	2:C:614:PHE:HB2	2.07	0.54
2:C:708:MET:HG3	3:F:745:GLY:O	2.07	0.54
1:A:210:LYS:HG3	2:B:336:LYS:HZ1	1.73	0.54
1:A:226:LYS:HD2	2:B:466:ARG:NE	2.23	0.54
1:A:183:ILE:HB	2:B:334:LEU:HD13	1.90	0.54
1:A:239:LYS:HZ1	4:G:6:PRO:CD	2.19	0.54
1:A:341:GLY:N	1:A:503:THR:HG21	2.23	0.54
1:A:409:ASN:OD1	1:A:409:ASN:N	2.41	0.54
1:D:287:ILE:HA	1:D:290:PHE:HB2	1.90	0.54
3:E:339:PRO:HD2	3:E:412:MET:HE1	1.89	0.54
3:F:371:GLU:O	3:F:389:LYS:HA	2.08	0.54
1:A:49:CYS:SG	1:A:50:ASP:N	2.82	0.53
2:C:134:TRP:HZ3	2:C:183:PHE:CE1	2.26	0.53
3:E:194:LYS:O	3:E:198:SER:HB3	2.07	0.53
1:A:25:VAL:HG21	1:A:35:ILE:HG22	1.90	0.53
3:E:160:ARG:HE	3:E:263:LYS:HZ2	1.56	0.53
1:D:25:VAL:HG21	1:D:35:ILE:HG22	1.90	0.53
1:D:409:ASN:OD1	1:D:409:ASN:N	2.40	0.53
1:D:412:GLU:HG2	2:C:601:ASN:CG	2.28	0.53
2:B:515:THR:O	3:E:48:SER:HB2	2.08	0.53
1:D:112:ASP:N	1:D:112:ASP:OD1	2.42	0.53
2:B:134:TRP:HZ3	2:B:183:PHE:CE1	2.26	0.53
2:B:577:ILE:HA	2:B:580:PHE:HB3	1.91	0.53
3:F:658:PHE:O	3:F:664:PHE:HA	2.08	0.53
3:F:741:PHE:HA	3:F:747:VAL:HG22	1.91	0.53
1:A:640:GLU:OE2	2:B:29:PRO:HD3	2.08	0.53
1:D:145:PRO:O	1:D:150:LYS:HE3	2.09	0.53
3:E:349:GLY:HA3	3:E:371:GLU:HG2	1.91	0.53
1:A:109:ARG:NH1	1:A:171:ASN:OD1	2.40	0.53
1:A:112:ASP:OD1	1:A:112:ASP:N	2.41	0.53
2:C:44:LYS:O	2:C:48:ASP:HB2	2.09	0.53
3:E:158:GLU:HG3	3:E:159:GLN:HG3	1.91	0.53
3:F:339:PRO:HD2	3:F:412:MET:HE1	1.89	0.53
3:E:453:ILE:HG12	3:E:463:LEU:HD22	1.91	0.53
3:E:626:GLN:O	3:E:632:TYR:HB3	2.09	0.53
3:E:658:PHE:O	3:E:664:PHE:HA	2.08	0.53
3:F:158:GLU:HG3	3:F:159:GLN:HG3	1.91	0.53
3:F:194:LYS:O	3:F:198:SER:HB3	2.08	0.53
1:A:273:LYS:NZ	1:A:286:LEU:HD12	2.24	0.53
3:E:369:TRP:HH2	3:E:528:ARG:HA	1.74	0.53
1:A:341:GLY:H	1:A:503:THR:HG21	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:273:LYS:NZ	1:D:286:LEU:HD12	2.24	0.52
2:B:44:LYS:O	2:B:48:ASP:HB2	2.09	0.52
3:E:741:PHE:HA	3:E:747:VAL:HG22	1.90	0.52
3:F:626:GLN:O	3:F:632:TYR:HB3	2.09	0.52
1:A:239:LYS:HZ3	4:G:6:PRO:HB2	1.74	0.52
1:D:171:ASN:ND2	2:C:167:GLU:OE2	2.41	0.52
2:B:314:CYS:SG	2:B:477:ASN:ND2	2.82	0.52
3:F:387:SER:HG	3:F:395:TRP:HE3	1.58	0.52
3:F:565:THR:HG22	3:F:685:TYR:HB3	1.91	0.52
1:A:223:LEU:HB2	2:B:432:LEU:HD21	1.91	0.52
1:D:660:LYS:HB3	2:C:487:LEU:HB3	1.92	0.52
2:C:314:CYS:SG	2:C:477:ASN:ND2	2.82	0.52
1:D:366:LYS:NZ	2:C:368:VAL:HG23	2.24	0.52
2:B:357:ILE:O	2:B:370:ILE:HG22	2.10	0.52
3:E:565:THR:HG22	3:E:685:TYR:HB3	1.90	0.52
1:D:640:GLU:OE1	2:C:236:GLY:N	2.42	0.52
3:F:349:GLY:HA3	3:F:371:GLU:HG2	1.91	0.52
1:A:355:LEU:HG	2:B:368:VAL:HG11	1.91	0.52
2:B:71:CYS:O	2:B:84:ASN:ND2	2.42	0.52
2:C:357:ILE:O	2:C:370:ILE:HG22	2.09	0.52
3:E:371:GLU:O	3:E:389:LYS:HA	2.09	0.52
2:C:493:PHE:O	2:C:496:MET:HB2	2.10	0.52
3:E:514:LEU:HB2	3:E:524:ASP:HA	1.92	0.52
1:A:145:PRO:O	1:A:150:LYS:HE3	2.09	0.52
3:E:39:THR:HG22	3:E:40:THR:N	2.24	0.52
3:F:741:PHE:CE2	3:F:745:GLY:HA2	2.45	0.52
1:A:531:THR:HG21	3:F:669:VAL:HG13	1.92	0.51
1:D:586:SER:HB3	1:D:593:LEU:HB2	1.92	0.51
3:E:121:VAL:HG22	3:E:200:PHE:HE1	1.75	0.51
3:F:42:ARG:H	3:F:42:ARG:HD2	1.75	0.51
3:F:154:THR:HG22	3:F:236:MET:HB3	1.93	0.51
3:F:682:SER:HA	3:F:691:ILE:HB	1.92	0.51
2:B:535:MET:HG2	3:E:247:TRP:HH2	1.75	0.51
2:C:468:ASN:O	2:C:468:ASN:ND2	2.43	0.51
3:E:682:SER:HA	3:E:691:ILE:HB	1.92	0.51
1:A:165:ARG:HE	1:A:170:PHE:HZ	1.56	0.51
1:A:529:HIS:H	1:A:529:HIS:HD1	1.58	0.51
2:C:279:GLU:HG2	3:F:149:ARG:HD2	1.91	0.51
2:C:506:LEU:HD12	2:C:540:LEU:HD22	1.93	0.51
2:B:61:PHE:HE2	2:B:348:ASN:HD22	1.56	0.51
2:B:65:ARG:NH2	2:B:348:ASN:HD21	2.01	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:506:LEU:HD12	2:B:540:LEU:HD22	1.93	0.51
2:C:668:ARG:HH22	3:F:89:VAL:H	1.59	0.51
3:E:741:PHE:CE2	3:E:745:GLY:HA2	2.46	0.51
3:F:121:VAL:HG22	3:F:200:PHE:HE1	1.75	0.51
2:C:71:CYS:O	2:C:84:ASN:ND2	2.43	0.51
1:A:453:PRO:HA	1:A:493:SER:OG	2.11	0.51
2:B:468:ASN:O	2:B:468:ASN:ND2	2.43	0.51
3:F:228:PHE:CE2	3:F:235:ARG:NH1	2.59	0.51
1:D:176:PRO:O	1:D:180:GLU:HB3	2.10	0.51
2:B:520:GLU:HG2	2:B:560:TYR:CE2	2.46	0.51
1:A:586:SER:HB3	1:A:593:LEU:HB2	1.93	0.51
1:D:155:SER:HB3	3:F:713:SER:OG	2.10	0.51
1:D:317:TRP:CD1	1:D:321:LYS:HD2	2.46	0.51
2:B:55:GLU:HG3	2:B:66:ARG:HG3	1.93	0.51
2:B:624:ARG:NH1	3:E:107:PHE:O	2.42	0.51
3:F:369:TRP:HH2	3:F:528:ARG:HA	1.74	0.51
1:A:140:LYS:HE2	1:A:145:PRO:HD2	1.93	0.51
1:D:183:ILE:HD13	2:C:334:LEU:HD13	1.93	0.51
2:B:105:PHE:HE2	2:B:264:ILE:HG23	1.76	0.51
2:C:520:GLU:HG2	2:C:560:TYR:CE2	2.46	0.51
3:E:277:ALA:HA	3:E:287:LYS:HD3	1.93	0.51
2:B:708:MET:HG3	3:E:745:GLY:O	2.11	0.50
2:C:55:GLU:HG3	2:C:66:ARG:HG3	1.93	0.50
2:C:454:ALA:HB3	2:C:460:ILE:HG12	1.93	0.50
3:F:514:LEU:HB2	3:F:524:ASP:HA	1.92	0.50
1:A:113:ASP:O	1:A:117:GLN:HG2	2.11	0.50
1:A:317:TRP:CD1	1:A:321:LYS:HD2	2.46	0.50
1:D:33:ARG:H	1:D:33:ARG:HD2	1.76	0.50
1:D:453:PRO:HA	1:D:493:SER:OG	2.10	0.50
1:D:660:LYS:HZ3	2:C:489:GLU:HB2	1.76	0.50
3:E:416:PHE:HA	3:E:446:GLN:NE2	2.26	0.50
3:F:416:PHE:HA	3:F:446:GLN:NE2	2.26	0.50
3:F:453:ILE:HG12	3:F:463:LEU:HD22	1.91	0.50
1:A:275:SER:HB3	1:A:482:ASP:OD2	2.11	0.50
2:C:432:LEU:CD2	2:C:466:ARG:HH12	2.25	0.50
3:E:42:ARG:H	3:E:42:ARG:HD2	1.76	0.50
3:E:324:LYS:HD3	3:E:331:LEU:HD13	1.94	0.50
3:F:324:LYS:HD3	3:F:331:LEU:HD13	1.94	0.50
1:A:183:ILE:HD13	2:B:334:LEU:CD2	2.41	0.50
1:D:233:ASN:HB2	2:C:78:LEU:CD1	2.34	0.50
1:D:396:THR:OG1	1:D:468:ARG:N	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:438:PHE:HB2	2:B:453:VAL:HB	1.92	0.50
2:C:105:PHE:HE2	2:C:264:ILE:HG23	1.76	0.50
2:B:493:PHE:O	2:B:496:MET:HB2	2.10	0.50
1:A:185:MET:HE2	2:B:337:ASP:HB3	1.94	0.50
1:D:113:ASP:O	1:D:117:GLN:HG2	2.11	0.50
1:D:259:TYR:CE1	1:D:261:HIS:HB3	2.46	0.50
2:B:432:LEU:CD2	2:B:466:ARG:HH12	2.23	0.50
2:C:65:ARG:NH2	2:C:348:ASN:HD21	2.02	0.50
1:D:238:ILE:CD1	1:D:663:PHE:HB2	2.39	0.50
1:D:514:PRO:HG3	1:D:524:VAL:HG11	1.94	0.50
1:A:267:GLU:OE1	1:A:267:GLU:N	2.42	0.50
1:D:115:TYR:CD1	1:D:175:LEU:HD13	2.47	0.50
1:A:230:MET:HE1	2:B:465:ARG:HE	1.77	0.50
1:A:299:ARG:NE	3:F:545:GLN:HE22	2.08	0.50
1:D:331:ILE:C	1:D:332:ASN:HD22	2.15	0.50
3:E:154:THR:HG22	3:E:236:MET:HB3	1.92	0.50
3:F:277:ALA:HA	3:F:287:LYS:HD3	1.94	0.50
1:A:33:ARG:HH22	1:A:183:ILE:HG21	1.76	0.49
1:A:635:ASN:HA	1:A:639:LEU:HD23	1.94	0.49
1:D:275:SER:HB3	1:D:482:ASP:OD2	2.11	0.49
1:D:405:PRO:HG2	2:C:601:ASN:ND2	2.26	0.49
2:C:304:ILE:HG22	2:C:485:GLY:HA3	1.94	0.49
1:D:635:ASN:HA	1:D:639:LEU:HD23	1.94	0.49
3:E:244:GLY:HA3	3:E:247:TRP:HE3	1.77	0.49
3:E:591:TYR:CD1	3:E:627:VAL:HG21	2.48	0.49
1:A:60:ARG:HD2	1:A:98:GLU:HB2	1.94	0.49
1:A:115:TYR:CD1	1:A:175:LEU:HD13	2.47	0.49
2:C:686:GLN:NE2	3:F:39:THR:OG1	2.45	0.49
1:A:331:ILE:C	1:A:332:ASN:HD22	2.15	0.49
1:D:140:LYS:HE2	1:D:145:PRO:HD2	1.93	0.49
2:B:454:ALA:HB3	2:B:460:ILE:HG12	1.94	0.49
3:E:88:ASP:OD1	3:E:88:ASP:N	2.45	0.49
3:E:317:SER:HB3	3:E:320:VAL:HG23	1.95	0.49
3:E:414:MET:HE2	3:E:463:LEU:HD12	1.95	0.49
3:F:39:THR:HG22	3:F:40:THR:N	2.28	0.49
3:F:591:TYR:CD1	3:F:627:VAL:HG21	2.48	0.49
1:A:514:PRO:HG3	1:A:524:VAL:HG11	1.93	0.49
2:C:496:MET:HG2	2:C:503:VAL:HG11	1.95	0.49
2:C:707:ALA:O	2:C:708:MET:HG2	2.13	0.49
3:F:244:GLY:HA3	3:F:247:TRP:HE3	1.78	0.49
2:B:496:MET:HG2	2:B:503:VAL:HG11	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:523:ASP:OD2	2:C:560:TYR:OH	2.21	0.49
3:E:734:PHE:HA	3:E:752:ARG:HB2	1.95	0.49
3:F:734:PHE:HA	3:F:752:ARG:HB2	1.95	0.49
1:A:499:ASP:OD2	2:B:30:MET:CE	2.61	0.49
2:B:302:VAL:HG11	2:B:460:ILE:HG21	1.94	0.49
3:F:176:GLU:HB2	3:F:197:ARG:HH21	1.77	0.49
1:A:364:GLY:O	2:B:361:ASN:HB3	2.13	0.49
1:D:33:ARG:HH12	1:D:183:ILE:HG21	1.78	0.49
2:B:432:LEU:HD23	2:B:466:ARG:NH1	2.26	0.49
3:E:176:GLU:HB2	3:E:197:ARG:HH21	1.78	0.49
1:A:403:GLU:OE2	1:A:403:GLU:N	2.44	0.48
2:B:52:THR:HG22	2:B:54:VAL:N	2.24	0.48
2:B:172:MET:HA	2:B:175:MET:HE2	1.95	0.48
3:E:39:THR:HG22	3:E:40:THR:OG1	2.13	0.48
1:D:34:LYS:HZ1	1:D:180:GLU:CD	2.16	0.48
1:D:267:GLU:OE1	1:D:267:GLU:N	2.42	0.48
2:B:665:ARG:HE	3:E:60:PRO:HA	1.78	0.48
2:C:462:TRP:NE1	2:C:466:ARG:HD2	2.28	0.48
3:E:122:TYR:CE1	3:E:213:MET:HG2	2.48	0.48
2:B:462:TRP:NE1	2:B:466:ARG:HD2	2.29	0.48
2:C:4:ASN:HB3	2:C:7:LEU:HG	1.94	0.48
3:F:122:TYR:CE1	3:F:213:MET:HG2	2.48	0.48
1:D:109:ARG:NH1	1:D:171:ASN:OD1	2.40	0.48
1:D:236:LEU:HD21	2:C:480:LEU:HD13	1.95	0.48
2:B:22:TYR:CD2	2:B:24:TYR:HE2	2.27	0.48
2:C:432:LEU:HD23	2:C:466:ARG:NH1	2.27	0.48
2:C:606:HIS:NE2	3:F:128:ARG:HD3	2.28	0.48
3:F:479:SER:O	3:F:498:ILE:N	2.28	0.48
2:B:304:ILE:HG22	2:B:485:GLY:HA3	1.94	0.48
1:A:416:GLU:HG2	1:A:420:LYS:HE2	1.94	0.48
1:D:403:GLU:N	1:D:403:GLU:OE2	2.44	0.48
1:D:356:THR:HG22	2:C:377:LYS:NZ	2.28	0.48
1:A:691:LEU:O	1:A:695:VAL:HG23	2.13	0.48
1:D:477:VAL:HG23	1:D:478:PRO:O	2.13	0.48
1:D:691:LEU:O	1:D:695:VAL:HG23	2.13	0.48
2:B:4:ASN:HB3	2:B:7:LEU:HG	1.94	0.48
2:B:350:PHE:HB3	2:B:401:VAL:CG2	2.44	0.48
2:C:172:MET:HA	2:C:175:MET:HE2	1.94	0.48
2:C:286:THR:CG2	3:F:504:ASP:HB2	2.44	0.48
3:F:422:TYR:CE1	3:F:449:MET:HG3	2.48	0.48
1:A:259:TYR:CE1	1:A:261:HIS:HB3	2.45	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:427:TYR:HD2	2:C:430:GLU:HB2	1.79	0.48
3:E:422:TYR:CE1	3:E:449:MET:HG3	2.48	0.48
1:D:416:GLU:HG2	1:D:420:LYS:HE2	1.94	0.47
1:D:518:LYS:HE3	1:D:519:HIS:CE1	2.48	0.47
1:D:665:PHE:HB2	2:C:480:LEU:O	2.14	0.47
2:B:221:ILE:O	2:B:225:THR:OG1	2.23	0.47
2:B:613:LYS:O	2:B:617:MET:HG3	2.14	0.47
1:A:509:PHE:HB3	1:A:547:LEU:HD11	1.97	0.47
1:A:518:LYS:HE3	1:A:519:HIS:CE1	2.49	0.47
1:D:226:LYS:HZ3	2:C:431:GLU:HG3	1.77	0.47
2:C:522:VAL:HG22	2:C:655:ALA:HB1	1.97	0.47
3:E:288:LEU:O	3:E:292:ILE:HG12	2.14	0.47
3:E:444:PRO:O	3:E:448:VAL:HG23	2.15	0.47
1:D:226:LYS:HZ1	2:C:431:GLU:HG3	1.77	0.47
1:D:509:PHE:HB3	1:D:547:LEU:HD11	1.96	0.47
2:B:680:ALA:HA	2:B:683:LYS:HE3	1.96	0.47
3:E:357:TYR:O	3:E:423:PHE:HB3	2.14	0.47
1:A:352:GLU:HG3	2:B:370:ILE:CD1	2.44	0.47
2:C:613:LYS:O	2:C:617:MET:HG3	2.14	0.47
3:F:388:ARG:HB3	3:F:388:ARG:NH1	2.30	0.47
3:F:444:PRO:O	3:F:448:VAL:HG23	2.15	0.47
1:A:317:TRP:O	1:A:321:LYS:HG3	2.14	0.47
1:D:660:LYS:HZ3	2:C:489:GLU:CB	2.27	0.47
2:B:68:PHE:HE1	2:B:406:GLY:HA3	1.78	0.47
2:B:427:TYR:HD2	2:B:430:GLU:HB2	1.79	0.47
2:B:707:ALA:O	2:B:708:MET:HG2	2.14	0.47
3:F:288:LEU:O	3:F:292:ILE:HG12	2.15	0.47
3:F:741:PHE:CZ	3:F:745:GLY:HA2	2.49	0.47
1:A:50:ASP:O	1:A:52:TYR:N	2.48	0.47
1:D:317:TRP:O	1:D:321:LYS:HG3	2.15	0.47
1:D:593:LEU:O	1:D:597:THR:N	2.33	0.47
2:B:503:VAL:O	2:B:503:VAL:HG22	2.15	0.47
2:B:522:VAL:HG22	2:B:655:ALA:HB1	1.97	0.47
2:C:22:TYR:CD2	2:C:24:TYR:HE2	2.26	0.47
2:C:68:PHE:HE1	2:C:406:GLY:HA3	1.79	0.47
2:C:660:HIS:HE1	3:F:106:ASN:ND2	2.13	0.47
3:E:742:VAL:HB	3:E:746:SER:O	2.15	0.47
3:F:317:SER:HB3	3:F:320:VAL:HG23	1.94	0.47
3:F:357:TYR:O	3:F:423:PHE:HB3	2.14	0.47
3:F:632:TYR:OH	3:F:697:VAL:HB	2.15	0.47
3:F:742:VAL:HB	3:F:746:SER:O	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:176:PRO:HA	1:A:180:GLU:HB2	1.97	0.47
1:A:239:LYS:NZ	4:G:6:PRO:HB2	2.29	0.47
1:A:405:PRO:HG2	2:B:601:ASN:ND2	2.30	0.47
2:C:359:LEU:HB2	2:C:368:VAL:HB	1.97	0.47
3:E:632:TYR:OH	3:E:697:VAL:HB	2.15	0.47
3:E:741:PHE:CZ	3:E:745:GLY:HA2	2.50	0.47
1:A:326:ASP:OD1	1:A:327:ARG:N	2.46	0.47
1:D:33:ARG:H	1:D:33:ARG:CD	2.28	0.47
1:D:631:PHE:CD1	2:C:23:PRO:HB3	2.50	0.47
2:B:304:ILE:HG12	2:B:450:LEU:HD23	1.96	0.47
2:B:359:LEU:HB2	2:B:368:VAL:HB	1.97	0.47
2:C:680:ALA:HA	2:C:683:LYS:HE3	1.96	0.47
3:E:368:TYR:HD2	3:E:391:ARG:HB3	1.79	0.47
1:A:10:GLU:HB2	3:E:330:GLN:HE22	1.79	0.47
1:A:151:LEU:HA	3:E:714:VAL:O	2.15	0.47
1:D:434:GLU:HB3	1:D:629:PHE:CE2	2.50	0.47
1:D:278:GLU:O	1:D:281:ARG:HG2	2.16	0.46
1:D:317:TRP:NE1	1:D:321:LYS:HD2	2.30	0.46
1:D:356:THR:HG22	2:C:377:LYS:HZ1	1.79	0.46
2:C:270:GLU:OE1	2:C:270:GLU:N	2.39	0.46
2:C:282:ALA:HB2	3:F:148:GLN:HG2	1.97	0.46
2:C:503:VAL:HG22	2:C:503:VAL:O	2.15	0.46
2:B:557:ARG:HD3	2:B:563:HIS:HA	1.97	0.46
3:E:151:ARG:HA	3:E:223:ARG:O	2.15	0.46
3:F:151:ARG:HB2	3:F:507:GLU:OE2	2.16	0.46
1:A:434:GLU:HB3	1:A:629:PHE:CE2	2.51	0.46
1:D:54:SER:HB2	1:D:60:ARG:HG3	1.96	0.46
2:B:265:CYS:HB3	2:B:274:PRO:HD3	1.97	0.46
3:E:388:ARG:NH1	3:E:388:ARG:HB3	2.30	0.46
3:F:335:LEU:CB	3:F:342:LEU:O	2.64	0.46
3:F:416:PHE:HA	3:F:446:GLN:HE21	1.81	0.46
1:A:368:SER:HB2	2:B:359:LEU:HD23	1.97	0.46
2:B:450:LEU:HD22	2:B:467:PHE:CD2	2.51	0.46
3:F:416:PHE:HD1	3:F:446:GLN:HE22	1.62	0.46
1:A:317:TRP:NE1	1:A:321:LYS:HD2	2.31	0.46
1:A:402:ALA:HB1	1:A:403:GLU:OE2	2.16	0.46
2:C:628:PRO:HG2	3:F:205:LEU:HB3	1.98	0.46
3:F:147:ARG:HG2	3:F:150:ARG:HD3	1.98	0.46
3:F:151:ARG:HA	3:F:223:ARG:O	2.15	0.46
3:F:479:SER:HB2	3:F:497:THR:HB	1.97	0.46
3:F:657:LEU:H	3:F:657:LEU:HD23	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:222:GLU:O	1:A:226:LYS:HB2	2.15	0.46
1:A:299:ARG:NH2	3:F:300:GLY:O	2.49	0.46
1:A:469:LYS:HB3	1:A:469:LYS:HE2	1.69	0.46
3:F:161:LEU:HD12	3:F:165:GLU:HG3	1.98	0.46
3:F:373:GLU:O	3:F:387:SER:HA	2.16	0.46
3:F:414:MET:HE2	3:F:463:LEU:HD12	1.96	0.46
1:A:402:ALA:HB3	2:B:550:ARG:HG2	1.98	0.46
1:D:414:TYR:CE2	2:C:542:PRO:HG2	2.46	0.46
2:C:515:THR:O	3:F:48:SER:HB2	2.16	0.46
3:E:335:LEU:CB	3:E:342:LEU:O	2.64	0.46
3:E:416:PHE:HD1	3:E:446:GLN:HE22	1.63	0.46
1:A:593:LEU:O	1:A:597:THR:N	2.33	0.46
2:C:654:GLU:HB3	3:F:125:ARG:HE	1.80	0.46
3:E:651:GLY:C	3:E:653:PHE:H	2.19	0.46
1:A:278:GLU:O	1:A:281:ARG:HG2	2.16	0.45
1:D:201:LEU:HD21	2:C:87:ILE:HD11	1.97	0.45
1:D:227:VAL:HG23	2:C:466:ARG:HH21	1.80	0.45
1:D:287:ILE:HG23	1:D:460:PRO:HB3	1.98	0.45
2:C:304:ILE:HG12	2:C:450:LEU:HD23	1.98	0.45
1:A:7:GLU:HG3	3:E:511:LYS:HD2	1.98	0.45
1:D:222:GLU:O	1:D:226:LYS:HB2	2.15	0.45
1:D:440:LEU:HD22	1:D:462:TYR:HE2	1.80	0.45
2:C:52:THR:HA	2:C:73:GLU:HB2	1.97	0.45
2:C:710:ILE:HG13	3:F:29:VAL:HA	1.99	0.45
3:E:134:GLU:O	3:E:135:ILE:HG23	2.17	0.45
3:E:147:ARG:HG2	3:E:150:ARG:HD3	1.97	0.45
3:E:151:ARG:HB2	3:E:507:GLU:OE2	2.15	0.45
1:D:165:ARG:HG3	1:D:170:PHE:CZ	2.51	0.45
2:C:265:CYS:HB3	2:C:274:PRO:HD3	1.97	0.45
3:E:479:SER:HB2	3:E:497:THR:HB	1.97	0.45
3:F:134:GLU:O	3:F:135:ILE:HG23	2.17	0.45
1:A:381:TRP:CG	1:A:518:LYS:HD3	2.52	0.45
1:D:381:TRP:CG	1:D:518:LYS:HD3	2.52	0.45
2:C:281:LYS:HB3	2:C:502:PHE:CE2	2.52	0.45
1:A:165:ARG:HG3	1:A:170:PHE:CZ	2.51	0.45
1:A:239:LYS:HB2	1:A:242:GLU:HB3	1.98	0.45
2:B:49:TYR:CE2	2:B:310:LYS:HG2	2.51	0.45
2:C:557:ARG:HD3	2:C:563:HIS:HA	1.98	0.45
3:E:122:TYR:O	3:E:125:ARG:N	2.50	0.45
3:E:161:LEU:HD12	3:E:165:GLU:HG3	1.98	0.45
3:E:387:SER:HG	3:E:395:TRP:HE3	1.61	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:F:368:TYR:HD2	3:F:391:ARG:HB3	1.80	0.45
3:F:469:ILE:HG22	3:F:493:LEU:HD13	1.99	0.45
3:F:651:GLY:C	3:F:653:PHE:H	2.20	0.45
2:C:428:MET:HG3	2:C:429:ASP:H	1.82	0.45
3:E:373:GLU:O	3:E:387:SER:HA	2.16	0.45
3:E:416:PHE:HA	3:E:446:GLN:HE21	1.81	0.45
3:E:721:ALA:HB1	3:E:738:VAL:HA	1.99	0.45
2:B:150:VAL:O	2:B:154:LYS:HG3	2.17	0.45
2:B:713:ALA:O	2:B:717:LYS:HB2	2.17	0.45
3:F:88:ASP:N	3:F:88:ASP:OD1	2.48	0.45
1:A:64:ILE:HG22	1:A:72:ALA:HB1	1.98	0.45
1:A:531:THR:HG21	3:F:669:VAL:HA	1.98	0.45
1:D:568:ARG:HB3	2:C:551:ILE:HD12	1.98	0.45
2:B:281:LYS:HB3	2:B:502:PHE:CE2	2.51	0.45
2:C:286:THR:HG23	3:F:504:ASP:HB2	1.99	0.45
3:E:335:LEU:HB3	3:E:342:LEU:HB2	1.99	0.45
3:E:595:TYR:CD2	3:E:620:ARG:NH1	2.85	0.45
3:F:122:TYR:O	3:F:125:ARG:N	2.50	0.45
3:F:721:ALA:HB1	3:F:738:VAL:HA	1.99	0.45
1:A:115:TYR:OH	1:A:119:LYS:NZ	2.31	0.45
1:D:49:CYS:CB	1:D:63:LEU:HD11	2.47	0.45
1:D:115:TYR:OH	1:D:119:LYS:NZ	2.31	0.45
1:D:559:ILE:HD12	1:D:559:ILE:H	1.82	0.45
2:C:350:PHE:HB3	2:C:401:VAL:CG2	2.44	0.45
2:C:420:LEU:O	2:C:424:THR:HG23	2.17	0.45
2:C:450:LEU:HD22	2:C:467:PHE:CD2	2.52	0.45
1:A:287:ILE:HG23	1:A:460:PRO:HB3	1.98	0.44
1:D:402:ALA:HB1	1:D:403:GLU:OE2	2.16	0.44
2:B:428:MET:HG3	2:B:429:ASP:H	1.82	0.44
2:C:576:ILE:CD1	3:F:100:SER:HB2	2.44	0.44
3:E:351:LYS:HE2	3:E:369:TRP:CZ2	2.53	0.44
3:F:230:ALA:HB3	3:F:235:ARG:HD2	1.98	0.44
1:A:287:ILE:CG2	1:A:460:PRO:HB3	2.47	0.44
1:D:64:ILE:HG22	1:D:72:ALA:HB1	1.98	0.44
2:C:150:VAL:HG12	2:C:154:LYS:HE3	1.99	0.44
3:F:39:THR:HG22	3:F:40:THR:OG1	2.17	0.44
3:F:53:TRP:O	3:F:56:SER:OG	2.35	0.44
1:A:174:PHE:CD2	1:A:179:GLU:HB2	2.52	0.44
1:D:174:PHE:CD2	1:D:179:GLU:HB2	2.52	0.44
1:D:287:ILE:CG2	1:D:460:PRO:HB3	2.48	0.44
1:D:469:LYS:HB3	1:D:469:LYS:HE2	1.68	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:579:GLU:OE1	2:C:543:SER:HB3	2.17	0.44
2:C:52:THR:HG22	2:C:54:VAL:N	2.24	0.44
2:C:284:LEU:HG	2:C:442:LEU:HD22	1.99	0.44
2:C:663:ARG:HH21	3:F:40:THR:HG21	1.82	0.44
2:C:705:ILE:H	3:F:744:GLN:CB	2.29	0.44
3:E:657:LEU:HD23	3:E:657:LEU:H	1.81	0.44
3:F:739:ARG:HA	3:F:749:THR:HG22	1.99	0.44
2:C:535:MET:HG2	3:F:247:TRP:HH2	1.82	0.44
3:F:322:LEU:HD21	3:F:531:ALA:HB1	1.98	0.44
1:A:431:CYS:O	1:A:435:MET:HG3	2.18	0.44
1:D:248:GLN:HG3	1:D:249:ILE:H	1.82	0.44
2:B:671:LEU:HA	2:B:676:ARG:HB2	2.00	0.44
3:E:322:LEU:HD21	3:E:531:ALA:HB1	1.98	0.44
3:F:76:GLU:HB2	3:F:82:LEU:HG	1.99	0.44
2:B:112:GLU:HB2	2:B:263:LYS:HG2	2.00	0.44
2:B:549:LEU:HD11	2:B:605:LEU:HD21	1.99	0.44
2:B:603:SER:HA	3:E:241:ALA:HB2	1.98	0.44
2:C:671:LEU:HA	2:C:676:ARG:HB2	2.00	0.44
2:C:713:ALA:O	2:C:717:LYS:HB2	2.17	0.44
3:E:324:LYS:HZ3	3:E:331:LEU:HD22	1.78	0.44
3:F:351:LYS:HE2	3:F:369:TRP:CZ2	2.52	0.44
1:A:109:ARG:NH1	1:A:171:ASN:HA	2.32	0.44
1:A:248:GLN:HG3	1:A:249:ILE:H	1.83	0.44
1:D:151:LEU:O	3:F:713:SER:OG	2.36	0.44
2:B:78:LEU:HD13	2:B:78:LEU:O	2.17	0.44
2:B:528:MET:HG2	2:B:549:LEU:HD21	2.00	0.44
1:D:109:ARG:NH1	1:D:171:ASN:HA	2.33	0.44
2:B:424:THR:CG2	2:B:474:ILE:HD11	2.47	0.44
2:C:686:GLN:OE1	3:F:39:THR:HG21	2.18	0.44
3:E:469:ILE:HG22	3:E:493:LEU:HD13	1.99	0.44
1:A:353:ILE:HD12	1:A:353:ILE:H	1.83	0.44
1:D:431:CYS:O	1:D:435:MET:HG3	2.18	0.44
1:D:674:ILE:O	1:D:678:LEU:HD13	2.18	0.44
2:B:632:PHE:CD2	3:E:102:ILE:HG23	2.52	0.44
3:E:524:ASP:N	3:E:524:ASP:OD1	2.51	0.44
3:F:374:GLU:HG3	3:F:387:SER:HB3	2.00	0.44
1:A:467:GLU:N	1:A:479:SER:O	2.46	0.43
1:D:183:ILE:CD1	2:C:334:LEU:HD22	2.47	0.43
1:D:273:LYS:HZ3	1:D:286:LEU:HD12	1.83	0.43
2:B:284:LEU:HG	2:B:442:LEU:HD22	1.98	0.43
2:B:436:GLY:O	2:B:454:ALA:HA	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:576:ILE:HD11	3:E:100:SER:HB2	2.00	0.43
2:C:549:LEU:HD11	2:C:605:LEU:HD21	1.99	0.43
3:E:244:GLY:HA3	3:E:247:TRP:CE3	2.53	0.43
3:F:595:TYR:CD2	3:F:620:ARG:NH1	2.86	0.43
1:A:239:LYS:HA	4:G:8:TYR:CE1	2.53	0.43
1:A:559:ILE:HD12	1:A:559:ILE:H	1.82	0.43
1:D:183:ILE:HD13	2:C:334:LEU:CD2	2.47	0.43
1:D:240:HIS:O	1:D:244:ASN:N	2.51	0.43
2:B:294:ARG:HG3	3:E:395:TRP:CZ2	2.53	0.43
2:C:150:VAL:O	2:C:154:LYS:HG3	2.17	0.43
3:E:340:MET:HE1	3:E:409:LEU:HA	1.99	0.43
3:F:335:LEU:HB3	3:F:342:LEU:HB2	1.99	0.43
3:F:684:ILE:HG12	3:F:689:ILE:HG12	2.00	0.43
1:A:200:PRO:CB	2:B:69:CYS:HB2	2.46	0.43
1:A:240:HIS:O	1:A:244:ASN:N	2.51	0.43
1:A:395:LEU:HB2	1:A:398:TRP:CZ2	2.53	0.43
1:A:674:ILE:O	1:A:678:LEU:HD13	2.18	0.43
2:B:181:ILE:HB	2:B:214:ILE:HG22	2.01	0.43
2:B:420:LEU:O	2:B:424:THR:HG23	2.18	0.43
2:C:436:GLY:O	2:C:454:ALA:HA	2.19	0.43
3:E:684:ILE:HG12	3:E:689:ILE:HG12	2.00	0.43
3:E:739:ARG:HA	3:E:749:THR:HG22	1.99	0.43
3:F:139:GLU:N	3:F:139:GLU:OE1	2.52	0.43
3:F:244:GLY:HA3	3:F:247:TRP:CE3	2.53	0.43
3:F:763:VAL:O	3:F:767:VAL:HG23	2.18	0.43
1:A:646:GLN:HG2	1:A:650:LEU:HD23	2.00	0.43
1:D:35:ILE:HG13	1:D:36:ILE:N	2.33	0.43
1:D:295:LEU:O	1:D:298:ILE:HG22	2.18	0.43
1:D:326:ASP:OD1	1:D:327:ARG:N	2.46	0.43
2:C:528:MET:HG2	2:C:549:LEU:HD21	2.00	0.43
3:E:374:GLU:HG3	3:E:387:SER:HB3	2.00	0.43
3:F:169:LEU:HG	3:F:185:PHE:HE2	1.83	0.43
1:D:395:LEU:HB2	1:D:398:TRP:CZ2	2.54	0.43
1:D:637:SER:HB3	2:C:29:PRO:HB3	2.01	0.43
2:C:294:ARG:HG3	3:F:395:TRP:CZ2	2.53	0.43
2:C:424:THR:CG2	2:C:474:ILE:HD11	2.47	0.43
3:F:163:THR:O	3:F:166:ILE:HG22	2.19	0.43
3:F:524:ASP:OD1	3:F:524:ASP:N	2.51	0.43
3:E:419:ASP:O	3:E:422:TYR:HB3	2.18	0.43
1:A:164:LEU:O	1:A:168:ASN:N	2.51	0.43
1:D:164:LEU:O	1:D:168:ASN:N	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:150:VAL:HG12	2:B:154:LYS:HE3	1.99	0.43
3:E:28:THR:OG1	3:E:29:VAL:N	2.52	0.43
3:E:147:ARG:HE	3:E:502:LYS:HG2	1.84	0.43
3:E:163:THR:O	3:E:166:ILE:HG22	2.19	0.43
1:A:355:LEU:HD12	2:B:378:TYR:OH	2.18	0.43
2:B:273:LEU:HD23	2:B:273:LEU:HA	1.83	0.43
2:B:534:ASN:ND2	2:B:538:ASN:OD1	2.49	0.43
2:B:606:HIS:NE2	3:E:128:ARG:HD3	2.33	0.43
2:C:310:LYS:HD2	2:C:310:LYS:N	2.34	0.43
3:E:139:GLU:N	3:E:139:GLU:OE1	2.51	0.43
3:F:340:MET:HE3	3:F:340:MET:HB2	1.94	0.43
1:A:499:ASP:OD2	2:B:30:MET:HE1	2.18	0.43
1:A:704:LYS:HD3	1:A:704:LYS:HA	1.61	0.43
2:B:722:ALA:HB1	2:B:736:TYR:CD2	2.54	0.43
2:C:112:GLU:HB2	2:C:263:LYS:HG2	2.00	0.43
2:C:128:GLY:HA3	2:C:251:ARG:NH2	2.33	0.43
3:F:119:LYS:HE2	3:F:119:LYS:HB3	1.83	0.43
3:F:206:ASN:HB3	3:F:209:VAL:HB	2.00	0.43
1:D:364:GLY:O	2:C:361:ASN:HB3	2.18	0.43
1:D:566:LYS:NZ	3:F:52:ARG:HH11	2.17	0.43
2:B:77:GLU:H	2:B:77:GLU:HG2	1.68	0.43
2:B:420:LEU:O	2:B:423:SER:OG	2.23	0.43
2:C:181:ILE:HB	2:C:214:ILE:HG22	2.01	0.43
3:E:514:LEU:HD12	3:E:524:ASP:HA	2.01	0.43
3:E:595:TYR:CZ	3:E:620:ARG:HG3	2.54	0.43
3:F:549:PHE:CG	3:F:550:GLN:N	2.87	0.43
1:A:396:THR:OG1	1:A:468:ARG:N	2.52	0.42
1:D:140:LYS:CE	1:D:145:PRO:HD2	2.49	0.42
1:D:366:LYS:HZ3	2:C:368:VAL:HG23	1.83	0.42
2:B:705:ILE:H	3:E:744:GLN:CB	2.32	0.42
3:E:755:SER:O	3:E:757:ARG:HG3	2.19	0.42
3:F:419:ASP:O	3:F:422:TYR:HB3	2.19	0.42
1:D:646:GLN:HG2	1:D:650:LEU:HD23	2.00	0.42
2:B:60:VAL:HG23	2:B:61:PHE:CD2	2.54	0.42
2:B:128:GLY:HA3	2:B:251:ARG:NH2	2.33	0.42
2:C:49:TYR:CE2	2:C:310:LYS:HG2	2.51	0.42
3:E:206:ASN:HB3	3:E:209:VAL:HB	2.00	0.42
3:E:228:PHE:CE1	3:E:243:GLY:HA3	2.53	0.42
3:F:514:LEU:HD12	3:F:524:ASP:HA	2.01	0.42
1:A:193:GLU:O	1:A:197:GLU:HG2	2.19	0.42
1:A:222:GLU:N	1:A:222:GLU:OE1	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:237:PRO:HG3	4:G:5:SEP:P	2.59	0.42
1:A:245:LYS:HA	1:A:706:PHE:HB2	2.02	0.42
1:A:400:PRO:O	1:A:568:ARG:NH2	2.47	0.42
2:B:687:MET:O	2:B:691:MET:HB2	2.20	0.42
3:E:46:ASN:HB3	3:E:49:LEU:HB3	2.00	0.42
3:E:169:LEU:HG	3:E:185:PHE:HE2	1.83	0.42
3:E:535:ASP:OD1	3:E:536:LEU:N	2.52	0.42
3:E:733:GLY:O	3:E:752:ARG:HG3	2.19	0.42
3:F:138:LYS:HB3	3:F:250:GLU:HB2	2.02	0.42
1:A:35:ILE:HG13	1:A:36:ILE:N	2.34	0.42
1:A:88:LEU:HD21	1:A:126:SER:OG	2.19	0.42
1:A:176:PRO:HA	1:A:180:GLU:CB	2.50	0.42
1:A:273:LYS:HZ3	1:A:286:LEU:HD12	1.84	0.42
1:A:488:CYS:SG	1:A:504:ILE:HD11	2.59	0.42
1:D:222:GLU:OE1	1:D:222:GLU:N	2.52	0.42
1:D:400:PRO:O	1:D:568:ARG:NH2	2.46	0.42
2:C:60:VAL:HG23	2:C:61:PHE:CD2	2.54	0.42
2:C:311:TRP:CZ2	2:C:417:SER:HB3	2.54	0.42
3:F:103:ASN:OD1	3:F:103:ASN:N	2.52	0.42
3:F:595:TYR:CZ	3:F:620:ARG:HG3	2.54	0.42
1:A:295:LEU:O	1:A:298:ILE:HG22	2.18	0.42
1:A:515:ASN:H	1:A:519:HIS:HD1	1.68	0.42
2:B:570:LYS:HE3	2:B:570:LYS:HB2	1.93	0.42
2:C:302:VAL:HG11	2:C:460:ILE:HG21	2.01	0.42
2:C:697:GLU:N	3:F:178:GLU:OE2	2.48	0.42
3:E:76:GLU:HB2	3:E:82:LEU:HG	2.00	0.42
2:B:294:ARG:HA	3:E:395:TRP:CE2	2.54	0.42
2:B:310:LYS:HD2	2:B:310:LYS:N	2.34	0.42
2:B:502:PHE:CD2	2:B:503:VAL:HG12	2.54	0.42
2:B:659:THR:HG23	2:B:660:HIS:ND1	2.35	0.42
2:C:660:HIS:HE1	3:F:106:ASN:HD21	1.68	0.42
3:E:549:PHE:CG	3:E:550:GLN:N	2.87	0.42
3:F:481:MET:SD	3:F:485:GLY:HA2	2.60	0.42
3:F:755:SER:O	3:F:757:ARG:HG3	2.19	0.42
1:A:452:PHE:CD1	1:A:457:LYS:HD2	2.54	0.42
2:B:128:GLY:HA3	2:B:251:ARG:HH21	1.85	0.42
2:B:362:LYS:HA	2:B:362:LYS:HD2	1.83	0.42
2:C:171:LYS:O	2:C:175:MET:HG3	2.19	0.42
2:C:705:ILE:H	3:F:744:GLN:HB2	1.85	0.42
3:E:103:ASN:N	3:E:103:ASN:OD1	2.52	0.42
3:E:376:TYR:CE2	3:E:505:MET:HG3	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:F:28:THR:OG1	3:F:29:VAL:N	2.52	0.42
3:F:169:LEU:HG	3:F:185:PHE:CE2	2.55	0.42
3:F:228:PHE:CE1	3:F:243:GLY:HA3	2.54	0.42
3:F:340:MET:HE1	3:F:409:LEU:HA	2.01	0.42
3:F:733:GLY:O	3:F:752:ARG:HG3	2.18	0.42
1:A:378:PHE:HA	1:A:379:PRO:HD3	1.95	0.42
1:A:426:LEU:HD21	1:A:621:LEU:HD22	2.02	0.42
1:D:174:PHE:HD1	1:D:175:LEU:H	1.67	0.42
1:D:193:GLU:O	1:D:197:GLU:HG2	2.19	0.42
2:B:46:THR:HG21	2:B:404:LEU:HD13	2.02	0.42
2:C:244:ALA:HB3	2:C:409:LEU:HD13	2.02	0.42
3:E:353:LYS:HG2	3:E:367:GLU:HG2	2.02	0.42
3:F:340:MET:CE	3:F:409:LEU:HD23	2.50	0.42
3:F:704:THR:O	3:F:704:THR:OG1	2.31	0.42
4:G:5:SEP:HA	4:G:6:PRO:HD3	1.79	0.42
1:D:452:PHE:CD1	1:D:457:LYS:HD2	2.54	0.42
1:D:473:GLU:HG3	1:D:475:LEU:CG	2.49	0.42
3:F:376:TYR:CE2	3:F:505:MET:HG3	2.55	0.42
1:D:353:ILE:HD12	1:D:353:ILE:H	1.84	0.42
1:D:704:LYS:HA	1:D:704:LYS:HD3	1.61	0.42
2:B:171:LYS:O	2:B:175:MET:HG3	2.20	0.42
2:C:370:ILE:HD13	2:C:378:TYR:CZ	2.54	0.42
2:C:726:ARG:HD3	2:C:736:TYR:CG	2.55	0.42
3:E:272:LYS:NZ	3:E:542:VAL:H	2.18	0.42
3:E:734:PHE:HA	3:E:752:ARG:HG3	2.00	0.42
3:F:59:PHE:HZ	3:F:81:ALA:O	2.03	0.42
3:F:179:ALA:O	3:F:726:ARG:NH2	2.53	0.42
3:F:324:LYS:HZ3	3:F:331:LEU:HD22	1.82	0.42
3:F:734:PHE:HA	3:F:752:ARG:HG3	2.00	0.42
1:A:140:LYS:CE	1:A:145:PRO:HD2	2.49	0.41
1:D:245:LYS:HA	1:D:706:PHE:HB2	2.02	0.41
2:B:168:TYR:O	2:B:172:MET:HG2	2.20	0.41
2:B:663:ARG:HH21	3:E:40:THR:HG21	1.84	0.41
2:C:46:THR:HG21	2:C:404:LEU:HD13	2.01	0.41
3:E:98:SER:OG	3:E:101:CYS:SG	2.75	0.41
3:E:562:THR:O	3:E:566:LYS:HB2	2.20	0.41
3:F:562:THR:O	3:F:566:LYS:HB2	2.20	0.41
1:D:88:LEU:HD21	1:D:126:SER:OG	2.19	0.41
1:D:378:PHE:HA	1:D:379:PRO:HD3	1.95	0.41
2:B:715:GLU:OE2	3:E:11:TYR:OH	2.19	0.41
2:C:231:LYS:HD2	2:C:231:LYS:HA	1.90	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:420:LEU:O	2:C:423:SER:OG	2.22	0.41
2:C:557:ARG:HB3	2:C:562:VAL:O	2.21	0.41
3:E:169:LEU:HG	3:E:185:PHE:CE2	2.55	0.41
3:E:472:THR:CG2	3:E:492:SER:HB3	2.50	0.41
3:E:718:ASP:CG	3:E:719:PRO:HD3	2.40	0.41
3:F:19:LYS:O	3:F:23:MET:HG2	2.20	0.41
1:A:34:LYS:NZ	1:A:180:GLU:CD	2.74	0.41
1:D:395:LEU:HB3	1:D:465:SER:OG	2.20	0.41
2:B:9:PHE:HD1	2:B:14:VAL:HG22	1.85	0.41
2:B:557:ARG:HB3	2:B:562:VAL:O	2.21	0.41
2:C:128:GLY:HA3	2:C:251:ARG:HH21	1.85	0.41
2:C:329:LYS:HG3	2:C:330:ASP:N	2.35	0.41
2:C:502:PHE:CD2	2:C:503:VAL:HG12	2.54	0.41
2:C:659:THR:HG23	2:C:660:HIS:ND1	2.35	0.41
1:A:4:THR:O	1:A:8:ILE:HG13	2.21	0.41
1:D:327:ARG:NE	1:D:329:MET:SD	2.94	0.41
1:D:488:CYS:SG	1:D:504:ILE:HD11	2.60	0.41
2:B:541:SER:HB2	2:B:542:PRO:HD2	2.01	0.41
1:A:123:LEU:HD13	1:A:127:CYS:SG	2.60	0.41
1:A:140:LYS:NZ	1:A:145:PRO:HD2	2.35	0.41
1:A:327:ARG:NE	1:A:329:MET:SD	2.94	0.41
1:A:441:THR:CG2	1:A:462:TYR:H	2.33	0.41
1:A:449:CYS:HA	1:A:490:LYS:NZ	2.36	0.41
2:B:244:ALA:HB3	2:B:409:LEU:HD13	2.02	0.41
2:B:311:TRP:CZ2	2:B:417:SER:HB3	2.54	0.41
2:B:329:LYS:HG3	2:B:330:ASP:N	2.35	0.41
3:E:481:MET:SD	3:E:485:GLY:HA2	2.60	0.41
3:E:517:SER:N	3:E:521:GLU:O	2.45	0.41
3:F:46:ASN:HB3	3:F:49:LEU:HB3	2.03	0.41
3:F:144:LEU:HD23	3:F:244:GLY:O	2.21	0.41
3:F:147:ARG:HE	3:F:502:LYS:HG2	1.84	0.41
1:D:515:ASN:H	1:D:519:HIS:HD1	1.68	0.41
2:C:93:LEU:HD12	2:C:474:ILE:HD13	2.03	0.41
3:E:179:ALA:O	3:E:726:ARG:NH2	2.53	0.41
3:F:490:ILE:HG22	3:F:491:LYS:HG3	2.03	0.41
1:A:49:CYS:CB	1:A:63:LEU:HD11	2.50	0.41
1:D:123:LEU:HD13	1:D:127:CYS:SG	2.61	0.41
1:D:440:LEU:HD22	1:D:462:TYR:CE2	2.56	0.41
1:D:638:GLN:HB3	1:D:677:CYS:O	2.21	0.41
2:B:722:ALA:HB1	2:B:736:TYR:HD2	1.86	0.41
2:C:359:LEU:O	2:C:367:GLU:HA	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:534:ASN:ND2	2:C:538:ASN:OD1	2.49	0.41
2:C:703:PRO:HA	2:C:704:PRO:HD3	1.97	0.41
3:E:197:ARG:O	3:E:201:ALA:CB	2.69	0.41
3:E:340:MET:CE	3:E:409:LEU:HD23	2.50	0.41
3:F:272:LYS:NZ	3:F:542:VAL:H	2.18	0.41
3:F:353:LYS:HG2	3:F:367:GLU:HG2	2.02	0.41
3:F:595:TYR:CE2	3:F:620:ARG:HG3	2.56	0.41
1:A:123:LEU:HD23	1:A:123:LEU:HA	1.83	0.41
1:A:522:TYR:CZ	1:A:552:ARG:HD2	2.55	0.41
1:D:34:LYS:NZ	1:D:180:GLU:CD	2.73	0.41
1:D:584:ARG:NH1	2:C:501:GLU:HG2	2.35	0.41
2:B:295:MET:SD	2:B:301:ALA:HB2	2.61	0.41
2:B:359:LEU:O	2:B:367:GLU:HA	2.20	0.41
2:B:686:GLN:OE1	3:E:39:THR:CG2	2.61	0.41
3:E:144:LEU:HD23	3:E:244:GLY:O	2.20	0.41
3:E:552:PRO:O	3:E:553:ASP:HB2	2.21	0.41
3:F:242:LEU:HD21	3:F:252:ASN:HD22	1.84	0.41
3:F:517:SER:N	3:F:521:GLU:O	2.45	0.41
1:A:214:GLU:OE1	2:B:336:LYS:NZ	2.54	0.41
1:A:236:LEU:CD1	2:B:480:LEU:HD22	2.47	0.41
1:A:395:LEU:HB3	1:A:465:SER:OG	2.20	0.41
1:A:457:LYS:HE2	1:A:457:LYS:HB3	1.90	0.41
1:D:176:PRO:HA	1:D:180:GLU:HB2	2.01	0.41
1:D:192:LEU:HD23	1:D:195:ARG:NH1	2.36	0.41
1:D:355:LEU:HG	2:C:368:VAL:HG11	2.03	0.41
1:D:522:TYR:CZ	1:D:552:ARG:HD2	2.55	0.41
2:B:370:ILE:HD13	2:B:378:TYR:CZ	2.55	0.41
2:C:295:MET:SD	2:C:301:ALA:HB2	2.61	0.41
2:C:304:ILE:HG13	2:C:450:LEU:HB3	2.02	0.41
2:C:342:ALA:HB3	2:C:343:PRO:HD3	2.03	0.41
3:E:59:PHE:HZ	3:E:81:ALA:O	2.03	0.41
3:E:490:ILE:HG22	3:E:491:LYS:HG3	2.02	0.41
3:F:197:ARG:O	3:F:201:ALA:CB	2.69	0.41
1:A:34:LYS:HZ1	1:A:180:GLU:CD	2.22	0.41
1:A:414:TYR:HE2	2:B:542:PRO:HG2	1.86	0.41
2:B:24:TYR:CD2	2:B:507:ALA:HB1	2.56	0.41
2:B:570:LYS:HD3	2:B:575:LYS:NZ	2.36	0.41
2:C:168:TYR:O	2:C:172:MET:HG2	2.21	0.41
2:C:541:SER:HB2	2:C:542:PRO:HD2	2.02	0.41
3:E:467:ARG:HD3	3:E:467:ARG:HA	1.85	0.41
3:F:718:ASP:CG	3:F:719:PRO:HD3	2.40	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:192:LEU:HD23	1:A:195:ARG:NH1	2.36	0.40
1:A:349:LYS:HA	2:B:367:GLU:O	2.21	0.40
1:A:644:ASN:O	1:A:647:LYS:HE2	2.21	0.40
1:D:4:THR:O	1:D:8:ILE:HG13	2.21	0.40
1:D:277:PRO:O	1:D:281:ARG:HB3	2.21	0.40
1:D:457:LYS:HE2	1:D:457:LYS:HB3	1.89	0.40
2:C:24:TYR:CD2	2:C:507:ALA:HB1	2.56	0.40
2:C:65:ARG:HG3	2:C:405:PRO:HG3	2.03	0.40
3:F:73:ILE:HG22	3:F:75:LYS:H	1.85	0.40
3:F:330:GLN:HG3	3:F:513:HIS:HB2	2.04	0.40
3:F:356:VAL:HG11	3:F:423:PHE:CD2	2.57	0.40
1:A:392:ASP:HA	1:A:429:THR:HA	2.02	0.40
1:D:392:ASP:HA	1:D:429:THR:HA	2.02	0.40
2:B:370:ILE:HD12	2:B:370:ILE:HA	1.80	0.40
2:B:628:PRO:HB3	3:E:206:ASN:OD1	2.22	0.40
2:C:576:ILE:H	2:C:576:ILE:HG13	1.67	0.40
2:C:631:PRO:HG2	2:C:632:PHE:CE1	2.56	0.40
3:E:19:LYS:O	3:E:23:MET:HG2	2.21	0.40
3:E:76:GLU:HG2	3:E:77:HIS:H	1.87	0.40
3:E:330:GLN:HG3	3:E:513:HIS:HB2	2.03	0.40
3:F:705:SER:O	3:F:709:LEU:HD23	2.21	0.40
1:A:624:GLN:NE2	2:B:8:MET:SD	2.94	0.40
1:D:63:LEU:HD12	1:D:63:LEU:N	2.36	0.40
1:D:495:LEU:HD23	1:D:495:LEU:HA	1.86	0.40
1:D:496:ASN:N	1:D:496:ASN:OD1	2.55	0.40
3:E:382:ALA:HA	3:E:400:GLY:HA2	2.03	0.40
3:E:634:LEU:HD23	3:E:696:VAL:HA	2.03	0.40
3:E:705:SER:O	3:E:709:LEU:HD23	2.21	0.40
3:F:565:THR:CG2	3:F:685:TYR:HB3	2.52	0.40
1:A:638:GLN:HB3	1:A:677:CYS:O	2.21	0.40
1:D:333:GLU:HA	1:D:336:HIS:CE1	2.57	0.40
2:C:9:PHE:HD1	2:C:14:VAL:HG22	1.85	0.40
3:F:190:TYR:HE2	3:F:681:SER:HB2	1.87	0.40
3:F:244:GLY:N	3:F:247:TRP:HB2	2.37	0.40
3:F:535:ASP:OD1	3:F:536:LEU:N	2.52	0.40
1:A:47:MET:H	1:A:47:MET:HG3	1.58	0.40
1:A:71:THR:HG22	1:A:75:LEU:HD13	2.04	0.40
2:B:342:ALA:HB3	2:B:343:PRO:HD3	2.03	0.40
2:C:214:ILE:HD12	2:C:214:ILE:HA	1.97	0.40
2:C:404:LEU:HA	2:C:405:PRO:HD3	1.91	0.40
3:E:166:ILE:HD12	3:E:218:PHE:HB2	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:E:244:GLY:N	3:E:247:TRP:HB2	2.37	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	706/709 (100%)	674 (96%)	31 (4%)	1 (0%)	48	82
1	D	706/709 (100%)	678 (96%)	27 (4%)	1 (0%)	48	82
2	B	702/754 (93%)	678 (97%)	23 (3%)	1 (0%)	48	82
2	C	715/754 (95%)	691 (97%)	23 (3%)	1 (0%)	48	82
3	E	769/774 (99%)	732 (95%)	35 (5%)	2 (0%)	37	71
3	F	769/774 (99%)	731 (95%)	36 (5%)	2 (0%)	37	71
4	G	8/28 (29%)	6 (75%)	1 (12%)	1 (12%)	0	4
5	H	8/10 (80%)	6 (75%)	2 (25%)	0	100	100
All	All	4383/4512 (97%)	4196 (96%)	178 (4%)	9 (0%)	44	77

All (9) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
4	G	13	PRO
3	E	89	VAL
3	E	533	ILE
3	F	89	VAL
3	F	533	ILE
1	D	540	VAL
2	B	503	VAL
2	C	503	VAL
1	A	540	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	630/631 (100%)	614 (98%)	16 (2%)	42	62
1	D	630/631 (100%)	616 (98%)	14 (2%)	47	65
2	B	630/669 (94%)	614 (98%)	16 (2%)	42	62
2	C	639/669 (96%)	622 (97%)	17 (3%)	40	60
3	E	676/679 (100%)	667 (99%)	9 (1%)	65	77
3	F	676/679 (100%)	667 (99%)	9 (1%)	65	77
4	G	10/24 (42%)	10 (100%)	0	100	100
All	All	3891/3982 (98%)	3810 (98%)	81 (2%)	48	66

All (81) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	33	ARG
1	A	48	PHE
1	A	98	GLU
1	A	174	PHE
1	A	195	ARG
1	A	221	ARG
1	A	276	ASP
1	A	305	LEU
1	A	376	ARG
1	A	403	GLU
1	A	410	GLU
1	A	496	ASN
1	A	512	ARG
1	A	533	ARG
1	A	601	LYS
1	A	657	LYS
1	D	33	ARG
1	D	48	PHE
1	D	60	ARG
1	D	174	PHE

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Mol	Chain	Res	Type
1	D	195	ARG
1	D	276	ASP
1	D	376	ARG
1	D	403	GLU
1	D	410	GLU
1	D	468	ARG
1	D	496	ASN
1	D	512	ARG
1	D	533	ARG
1	D	601	LYS
2	B	1	MET
2	B	68	PHE
2	B	86	ASP
2	B	124	ARG
2	B	166	LEU
2	B	273	LEU
2	B	279	GLU
2	B	300	PHE
2	B	335	MET
2	B	468	ASN
2	B	502	PHE
2	B	540	LEU
2	B	618	ASP
2	B	660	HIS
2	B	662	PHE
2	B	690	ASP
2	C	68	PHE
2	C	86	ASP
2	C	124	ARG
2	C	166	LEU
2	C	273	LEU
2	C	279	GLU
2	C	300	PHE
2	C	335	MET
2	C	438	PHE
2	C	468	ASN
2	C	493	PHE
2	C	502	PHE
2	C	540	LEU
2	C	618	ASP
2	C	660	HIS
2	C	662	PHE

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Mol	Chain	Res	Type
2	C	690	ASP
3	E	42	ARG
3	E	103	ASN
3	E	136	MET
3	E	160	ARG
3	E	175	PHE
3	E	235	ARG
3	E	250	GLU
3	E	524	ASP
3	E	611	ARG
3	F	42	ARG
3	F	50	ARG
3	F	103	ASN
3	F	136	MET
3	F	160	ARG
3	F	175	PHE
3	F	235	ARG
3	F	524	ASP
3	F	611	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (9) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	204	GLN
1	D	204	GLN
1	D	248	GLN
2	B	348	ASN
2	C	348	ASN
2	C	660	HIS
3	E	78	ASN
3	F	545	GLN
3	F	766	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](#)

2 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
4	SEP	G	5	4	8,9,10	1.55	1 (12%)	8,12,14	1.47	1 (12%)
4	SEP	G	12	4	8,9,10	1.43	1 (12%)	8,12,14	2.15	2 (25%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
4	SEP	G	5	4	-	5/5/8/10	-
4	SEP	G	12	4	-	5/5/8/10	-

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	G	5	SEP	P-O1P	3.41	1.61	1.50
4	G	12	SEP	P-O1P	2.97	1.60	1.50

All (3) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	G	12	SEP	OG-CB-CA	5.12	113.13	108.14
4	G	5	SEP	P-OG-CB	-2.94	110.20	118.30
4	G	12	SEP	O3P-P-OG	2.65	113.79	106.73

There are no chirality outliers.

All (10) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
4	G	5	SEP	N-CA-CB-OG
4	G	5	SEP	CB-OG-P-O2P
4	G	5	SEP	CB-OG-P-O3P
4	G	12	SEP	N-CA-CB-OG

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Mol	Chain	Res	Type	Atoms
4	G	12	SEP	CB-OG-P-O2P
4	G	5	SEP	CB-OG-P-O1P
4	G	12	SEP	CB-OG-P-O1P
4	G	12	SEP	CB-OG-P-O3P
4	G	5	SEP	CA-CB-OG-P
4	G	12	SEP	CA-CB-OG-P

There are no ring outliers.

2 monomers are involved in 5 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
4	G	5	SEP	3	0
4	G	12	SEP	2	0

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 4 ligands modelled in this entry, 4 are monoatomic - leaving 0 for Mogul analysis.

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.

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

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	708/709 (99%)	0.49	23 (3%)	50	38	65, 123, 199, 259	0
1	D	708/709 (99%)	0.53	29 (4%)	42	33	67, 140, 219, 293	0
2	B	710/754 (94%)	0.42	24 (3%)	48	37	63, 115, 202, 293	0
2	C	721/754 (95%)	0.40	19 (2%)	57	43	75, 135, 203, 265	0
3	E	771/774 (99%)	0.80	58 (7%)	22	20	71, 161, 254, 321	0
3	F	771/774 (99%)	0.72	49 (6%)	27	23	82, 161, 229, 299	0
4	G	10/28 (35%)	0.69	0	100	100	167, 181, 197, 197	0
5	H	0/10	-	-	-	-	-	-
All	All	4399/4512 (97%)	0.56	202 (4%)	38	31	63, 139, 226, 321	0

All (202) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
2	B	242	ALA	5.8
3	E	200	PHE	5.3
1	D	341	GLY	4.9
1	A	340	LEU	4.6
1	A	497	LYS	4.5
1	A	1	MET	4.4
1	A	341	GLY	4.3
1	A	336	HIS	4.2
2	C	230	ALA	4.1
1	A	498	ASP	4.1
3	E	696	VAL	3.9
3	E	204	PRO	3.8
1	D	677	CYS	3.7
3	F	148	GLN	3.7
1	D	182	ILE	3.7
1	A	499	ASP	3.7

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Mol	Chain	Res	Type	RSRZ
3	F	702	MET	3.7
3	F	696	VAL	3.7
2	C	242	ALA	3.7
2	B	670	LEU	3.6
3	E	542	VAL	3.6
1	D	342	GLY	3.6
3	F	244	GLY	3.5
3	F	208	GLU	3.5
3	F	224	PHE	3.5
2	C	236	GLY	3.5
1	D	687	MET	3.5
1	D	698	ALA	3.5
3	F	424	LYS	3.4
3	E	571	LEU	3.4
3	E	447	TYR	3.4
3	F	1	MET	3.4
3	E	250	GLU	3.4
3	F	232	ARG	3.3
3	F	170	GLN	3.3
3	F	149	ARG	3.3
3	F	447	TYR	3.3
3	E	703	ASP	3.3
3	E	149	ARG	3.1
2	B	441	GLY	3.1
3	E	366	PHE	3.1
3	F	768	LYS	3.1
2	B	658	SER	3.1
3	F	252	ASN	3.0
2	B	230	ALA	3.0
3	F	247	TRP	3.0
1	D	541	ILE	3.0
3	F	47	PRO	3.0
2	B	669	THR	3.0
2	C	753	SER	2.9
1	D	635	ASN	2.9
3	F	81	ALA	2.9
1	D	517	GLU	2.9
1	D	336	HIS	2.9
1	A	234	ILE	2.9
3	F	95	VAL	2.9
3	E	478	GLY	2.8
1	A	541	ILE	2.8

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Mol	Chain	Res	Type	RSRZ
2	C	434	ALA	2.8
1	A	32	GLU	2.8
3	E	689	ILE	2.8
3	F	555	ALA	2.7
1	D	451	LEU	2.7
3	F	243	GLY	2.7
2	B	753	SER	2.7
3	E	196	MET	2.7
3	E	258	ASN	2.7
2	C	24	TYR	2.7
2	B	654	GLU	2.6
3	E	47	PRO	2.6
3	F	444	PRO	2.6
1	A	677	CYS	2.6
2	C	670	LEU	2.6
3	E	81	ALA	2.6
3	E	212	HIS	2.6
2	B	437	CYS	2.6
1	A	30	ASP	2.6
3	E	312	GLU	2.6
1	D	1	MET	2.6
1	A	539	SER	2.6
3	F	86	THR	2.6
3	E	555	ALA	2.6
1	A	342	GLY	2.6
3	E	308	GLU	2.6
3	E	599	GLU	2.6
3	E	37	LYS	2.5
3	E	344	LYS	2.5
3	F	242	LEU	2.5
3	E	252	ASN	2.5
3	E	573	LYS	2.5
3	E	253	THR	2.5
3	F	372	GLN	2.5
2	C	231	LYS	2.5
2	B	626	PHE	2.5
3	E	550	GLN	2.5
3	F	771	LYS	2.5
2	B	673	THR	2.5
1	D	502	TYR	2.5
3	F	253	THR	2.4
1	D	114	SER	2.4

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Mol	Chain	Res	Type	RSRZ
3	E	215	GLU	2.4
2	C	273	LEU	2.4
2	B	522	VAL	2.4
1	D	284	GLU	2.4
1	A	504	ILE	2.4
3	E	361	VAL	2.4
3	F	200	PHE	2.4
3	F	348	SER	2.4
1	D	494	HIS	2.4
2	B	378	TYR	2.4
3	E	715	CYS	2.4
1	A	176	PRO	2.4
3	E	91	LYS	2.4
3	E	622	LEU	2.4
1	A	343	ILE	2.4
3	E	422	TYR	2.3
1	A	396	THR	2.3
1	D	555	ALA	2.3
3	F	330	GLN	2.3
2	C	150	VAL	2.3
3	E	693	VAL	2.3
3	F	90	SER	2.3
1	A	467	GLU	2.3
1	D	640	GLU	2.3
3	F	572	ILE	2.3
3	E	586	ILE	2.3
3	E	314	ASP	2.3
2	C	274	PRO	2.3
3	F	695	LEU	2.3
2	B	580	PHE	2.3
1	D	656	ASP	2.2
3	E	625	THR	2.2
2	C	442	LEU	2.2
3	E	274	CYS	2.2
1	A	182	ILE	2.2
1	D	111	ALA	2.2
2	C	443	GLN	2.2
3	E	434	ASP	2.2
3	F	279	ALA	2.2
1	A	368	SER	2.2
1	D	497	LYS	2.2
2	C	458	SER	2.2

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Mol	Chain	Res	Type	RSRZ
3	E	41	SER	2.2
3	F	652	MET	2.2
2	C	432	LEU	2.2
3	E	244	GLY	2.2
3	F	692	ARG	2.2
1	D	224	ALA	2.2
3	F	703	ASP	2.2
2	B	205	LYS	2.2
3	E	303	GLU	2.2
3	F	347	GLY	2.2
2	B	333	ASP	2.2
2	B	339	CYS	2.2
3	F	523	PHE	2.2
3	E	374	GLU	2.2
3	E	771	LYS	2.1
3	F	91	LYS	2.1
3	F	443	ILE	2.1
3	E	755	SER	2.1
3	F	215	GLU	2.1
1	D	518	LYS	2.1
1	D	649	ILE	2.1
2	B	28	PRO	2.1
2	B	632	PHE	2.1
3	E	185	PHE	2.1
3	F	228	PHE	2.1
3	F	685	TYR	2.1
2	B	430	GLU	2.1
2	C	669	THR	2.1
3	E	539	ASP	2.1
2	B	127	GLU	2.1
2	B	410	MET	2.1
2	C	437	CYS	2.1
3	E	190	TYR	2.1
3	E	746	SER	2.1
1	A	284	GLU	2.1
1	D	55	THR	2.1
3	F	431	THR	2.1
3	F	254	ALA	2.1
3	E	359	GLN	2.1
1	D	570	CYS	2.1
3	F	361	VAL	2.1
3	F	234	GLU	2.1

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Mol	Chain	Res	Type	RSRZ
1	D	24	ALA	2.1
3	E	279	ALA	2.1
3	E	331	LEU	2.0
1	D	2	SER	2.0
1	D	113	ASP	2.0
3	E	216	LYS	2.0
1	A	468	ARG	2.0
3	E	141	ARG	2.0
2	B	672	ASN	2.0
3	E	667	PRO	2.0
2	B	733	ASP	2.0
3	F	574	ARG	2.0
2	C	237	LYS	2.0
3	E	587	ALA	2.0
3	F	201	ALA	2.0
2	C	25	THR	2.0
3	E	189	ASN	2.0
3	E	311	LEU	2.0

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
4	SEP	G	12	10/11	0.51	0.14	191,224,246,253	0
4	SEP	G	5	10/11	0.77	0.15	184,191,200,207	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(\AA^2)	Q<0.9
6	MG	D	801	1/1	0.03	0.33	145,145,145,145	0
6	MG	A	801	1/1	0.27	0.24	103,103,103,103	0
6	MG	D	800	1/1	0.70	0.17	193,193,193,193	0
6	MG	A	800	1/1	0.85	0.16	116,116,116,116	0

6.5 Other polymers [i](#)

There are no such residues in this entry.