Full wwPDB X-ray Structure Validation Report (i)

Jan 31, 2016 – 09:39 PM GMT

PDB ID	:	1PZN
Title	:	Rad51 (RadA)
Authors	:	Shin, D.S.; Tainer, J.A.
Deposited on	:	2003-07-12
Resolution	:	2.85 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.
We welcome your comments at validation@mail.wwpdb.org
A user guide is available at
http://wwpdb.org/validation/2016/XrayValidationReportHelp
with specific help available everywhere you see the (i) symbol.

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

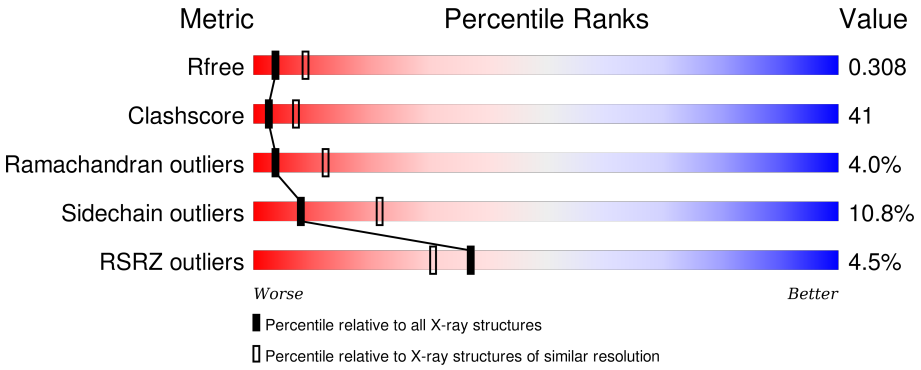
MolProbity	:	4.02b-467
Mogul	:	1.7 (RC4), CSD as536be (2015)
Xtriage (Phenix)	:	1.9-1692
EDS	:	rb-20026688
Percentile statistics	:	20151230.v01 (using entries in the PDB archive December 30th 2015)
Refmac	:	5.8.0135
CCP4	:	6.5.0
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	trunk26865

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

The reported resolution of this entry is 2.85 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	91344	2228 (2.90-2.82)
Clashscore	102246	2499 (2.90-2.82)
Ramachandran outliers	100387	2439 (2.90-2.82)
Sidechain outliers	100360	2442 (2.90-2.82)
RSRZ outliers	91569	2236 (2.90-2.82)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments on the lower bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=5% The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	349	% 39% 38% 8% 14%
1	B	349	% 28% 34% 7% 32%
1	C	349	5% 30% 32% 6% • 32%
1	D	349	4% 27% 34% 7% • 32%
1	E	349	3% 33% 29% 7% 32%

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Mol	Chain	Length	Quality of chain
1	F	349	2% 28% 33% 7% 32%
1	G	349	5% 29% 30% 9% 32%

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
3	IMD	B	359	-	-	X	-
4	GOL	A	374	-	X	-	-
4	GOL	B	367	-	X	-	-
4	GOL	C	368	-	X	-	-
4	GOL	C	370	-	X	-	-
4	GOL	D	369	-	X	-	-
4	GOL	E	371	-	X	-	-
4	GOL	F	366	-	X	-	-
4	GOL	F	372	-	X	-	-
4	GOL	F	373	-	X	-	-
5	MPD	G	378	-	-	-	X

2 Entry composition

There are 6 unique types of molecules in this entry. The entry contains 13820 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 DNA repair and recombination protein rad51.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	300	Total	C	N	O	Se	0	0	0
			2317	1458	419	437	3			
1	B	239	Total	C	N	O	Se	0	0	0
			1879	1184	343	349	3			
1	C	239	Total	C	N	O	Se	0	0	0
			1879	1184	343	349	3			
1	D	239	Total	C	N	O	Se	0	0	0
			1879	1184	343	349	3			
1	E	239	Total	C	N	O	Se	0	0	0
			1879	1184	343	349	3			
1	F	239	Total	C	N	O	Se	0	0	0
			1879	1184	343	349	3			
1	G	238	Total	C	N	O	Se	0	0	0
			1875	1182	342	348	3			

There are 28 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	1	MSE	MET	MODIFIED RESIDUE	UNP O74036
A	98	MSE	MET	MODIFIED RESIDUE	UNP O74036
A	154	MSE	MET	MODIFIED RESIDUE	UNP O74036
A	212	MSE	MET	MODIFIED RESIDUE	UNP O74036
B	1	MSE	MET	MODIFIED RESIDUE	UNP O74036
B	98	MSE	MET	MODIFIED RESIDUE	UNP O74036
B	154	MSE	MET	MODIFIED RESIDUE	UNP O74036
B	212	MSE	MET	MODIFIED RESIDUE	UNP O74036
C	1	MSE	MET	MODIFIED RESIDUE	UNP O74036
C	98	MSE	MET	MODIFIED RESIDUE	UNP O74036
C	154	MSE	MET	MODIFIED RESIDUE	UNP O74036
C	212	MSE	MET	MODIFIED RESIDUE	UNP O74036
D	1	MSE	MET	MODIFIED RESIDUE	UNP O74036
D	98	MSE	MET	MODIFIED RESIDUE	UNP O74036
D	154	MSE	MET	MODIFIED RESIDUE	UNP O74036

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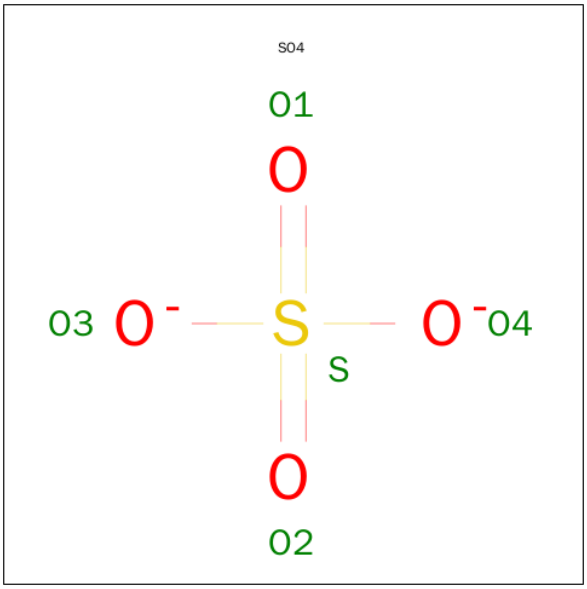
Chain	Residue	Modelled	Actual	Comment	Reference
D	212	MSE	MET	MODIFIED RESIDUE	UNP O74036
E	1	MSE	MET	MODIFIED RESIDUE	UNP O74036
E	98	MSE	MET	MODIFIED RESIDUE	UNP O74036
E	154	MSE	MET	MODIFIED RESIDUE	UNP O74036
E	212	MSE	MET	MODIFIED RESIDUE	UNP O74036
F	1	MSE	MET	MODIFIED RESIDUE	UNP O74036
F	98	MSE	MET	MODIFIED RESIDUE	UNP O74036
F	154	MSE	MET	MODIFIED RESIDUE	UNP O74036
F	212	MSE	MET	MODIFIED RESIDUE	UNP O74036
G	1	MSE	MET	MODIFIED RESIDUE	UNP O74036
G	98	MSE	MET	MODIFIED RESIDUE	UNP O74036
G	154	MSE	MET	MODIFIED RESIDUE	UNP O74036
G	212	MSE	MET	MODIFIED RESIDUE	UNP O74036

- Molecule 2 is SULFATE ION (three-letter code: SO4) (formula: O_4S).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	A	1	Total O S 5 4 1	0	0
2	B	1	Total O S 5 4 1	0	0
2	C	1	Total O S 5 4 1	0	0
2	D	1	Total O S 5 4 1	0	0
2	E	1	Total O S 5 4 1	0	0

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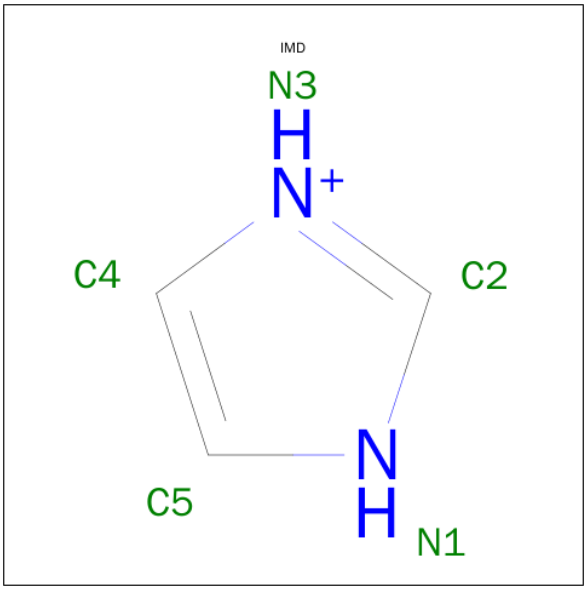
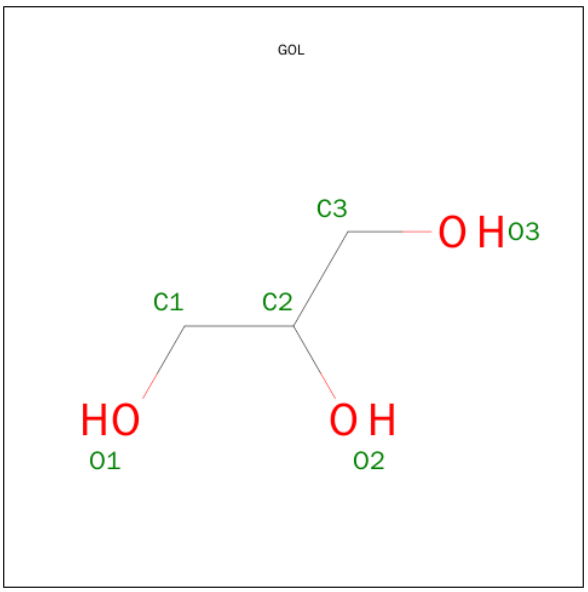
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	F	1	Total O S 5 4 1	0	0
2	G	1	Total O S 5 4 1	0	0

- Molecule 3 is IMIDAZOLE (three-letter code: IMD) (formula: $C_3H_5N_2$).



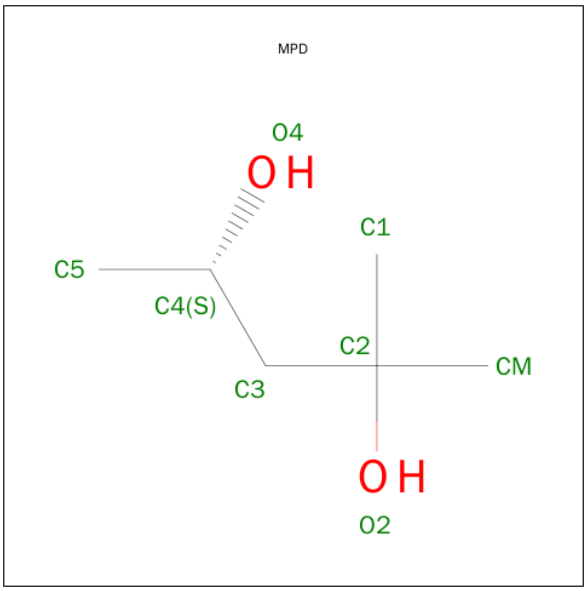
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	A	1	Total C N 5 3 2	0	0
3	A	1	Total C N 5 3 2	0	0
3	B	1	Total C N 5 3 2	0	0
3	B	1	Total C N 5 3 2	0	0
3	A	1	Total C N 5 3 2	0	0
3	C	1	Total C N 5 3 2	0	0
3	F	1	Total C N 5 3 2	0	0
3	A	1	Total C N 5 3 2	0	0
3	B	1	Total C N 5 3 2	0	0

- Molecule 4 is GLYCEROL (three-letter code: GOL) (formula: $C_3H_8O_3$).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
4	F	1	Total	C	O	0	0
			6	3	3		
4	B	1	Total	C	O	0	0
			6	3	3		
4	C	1	Total	C	O	0	0
			6	3	3		
4	D	1	Total	C	O	0	0
			6	3	3		
4	C	1	Total	C	O	0	0
			6	3	3		
4	E	1	Total	C	O	0	0
			6	3	3		
4	F	1	Total	C	O	0	0
			6	3	3		
4	F	1	Total	C	O	0	0
			6	3	3		
4	A	1	Total	C	O	0	0
			6	3	3		

- Molecule 5 is (4S)-2-METHYL-2,4-PENTANEDIOL (three-letter code: MPD) (formula: $C_6H_{14}O_2$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	B	1	Total C O 8 6 2	0	0
5	E	1	Total C O 8 6 2	0	0
5	G	1	Total C O 8 6 2	0	0
5	G	1	Total C O 8 6 2	0	0

- Molecule 6 is water.

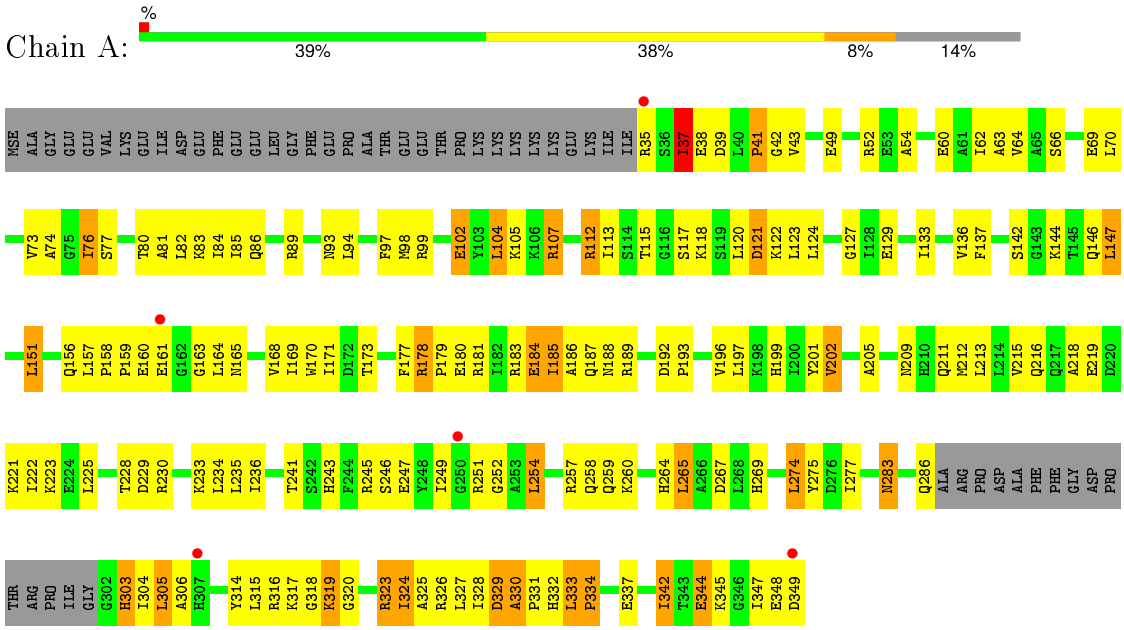
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
6	A	20	Total O 20 20	0	0
6	B	6	Total O 6 6	0	0
6	C	7	Total O 7 7	0	0
6	D	11	Total O 11 11	0	0
6	E	10	Total O 10 10	0	0
6	F	6	Total O 6 6	0	0
6	G	7	Total O 7 7	0	0

3 Residue-property plots (i)

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

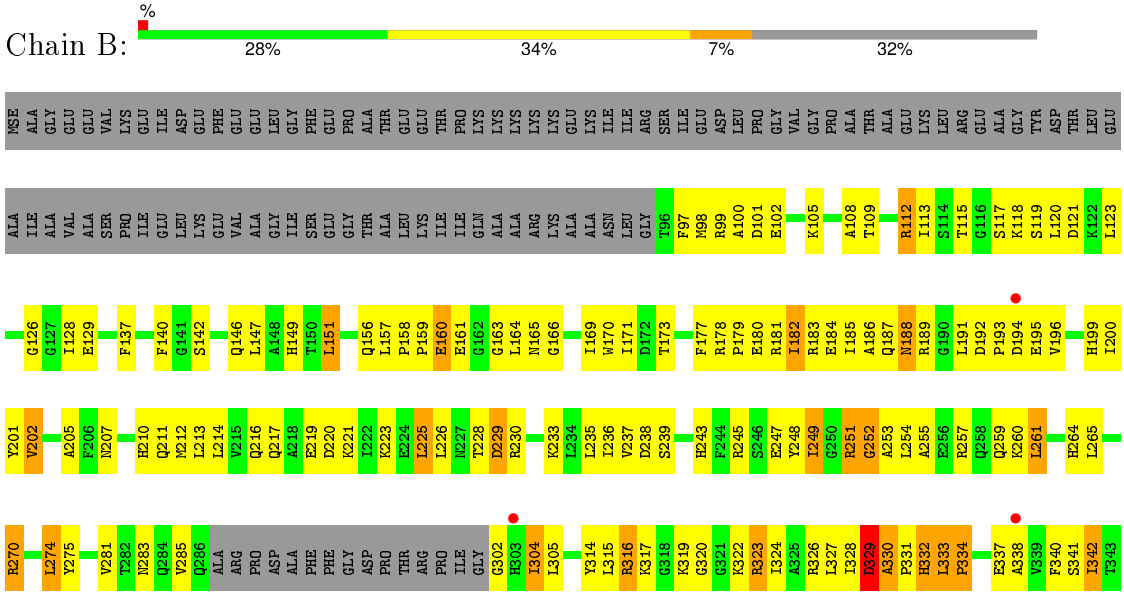
- Molecule 1: DNA repair and recombination protein rad51

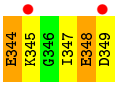
Chain A:



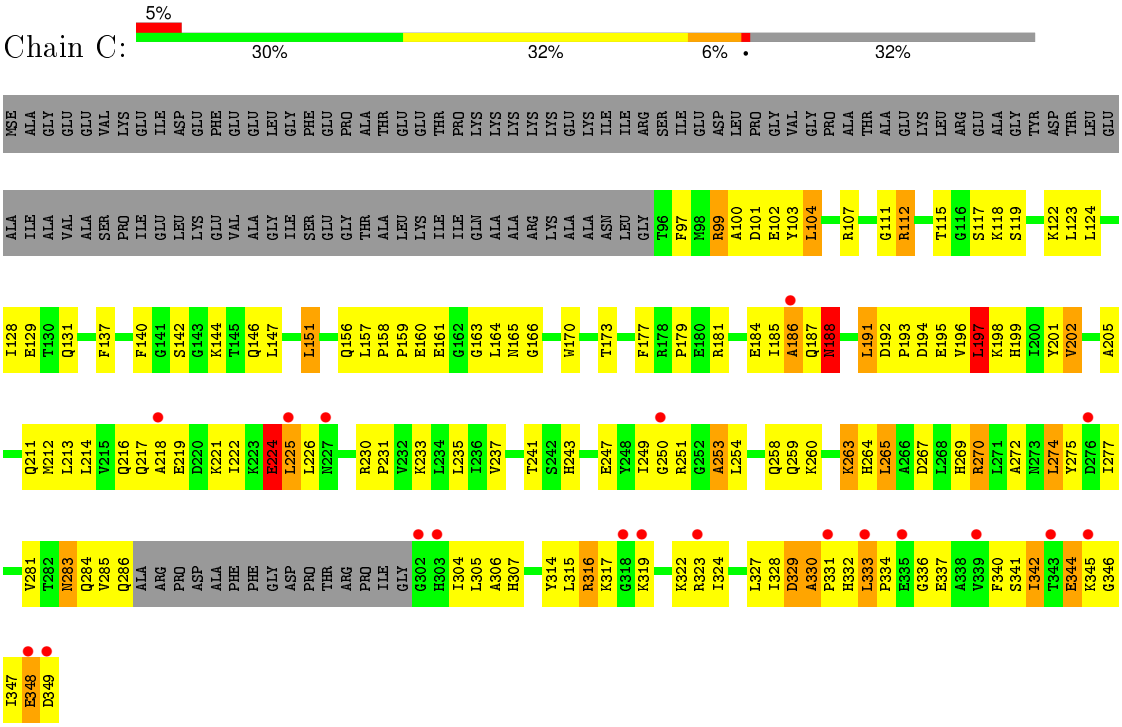
- Molecule 1: DNA repair and recombination protein rad51

Chain B:

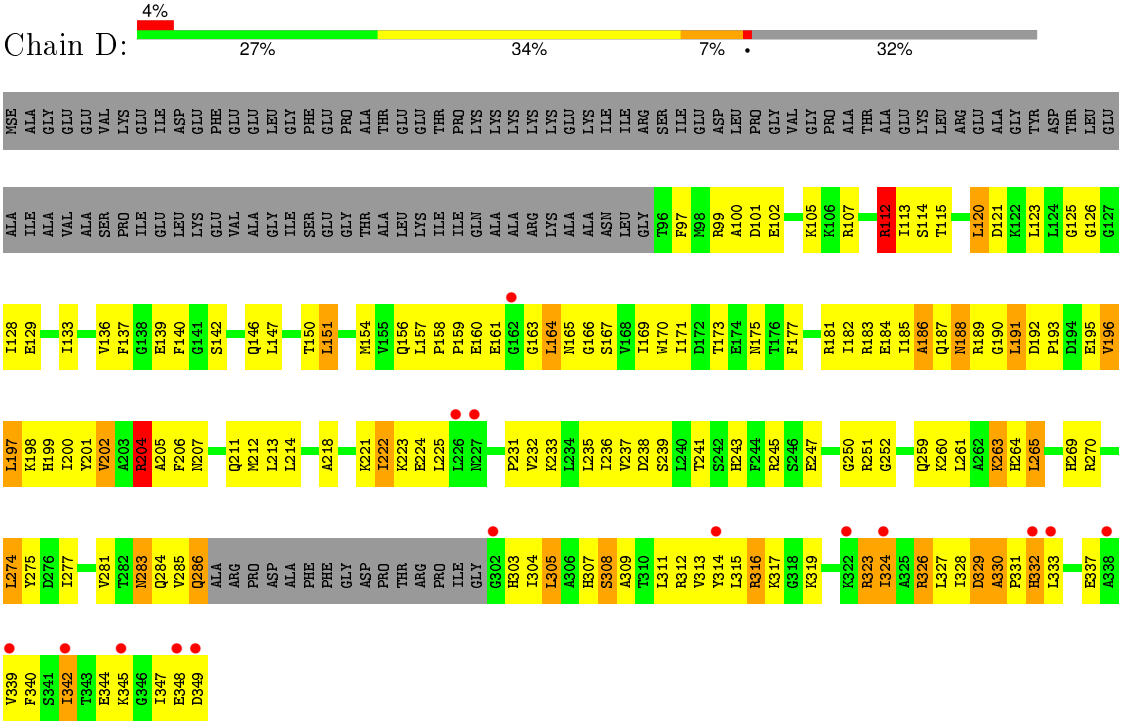




• Molecule 1: DNA repair and recombination protein rad51

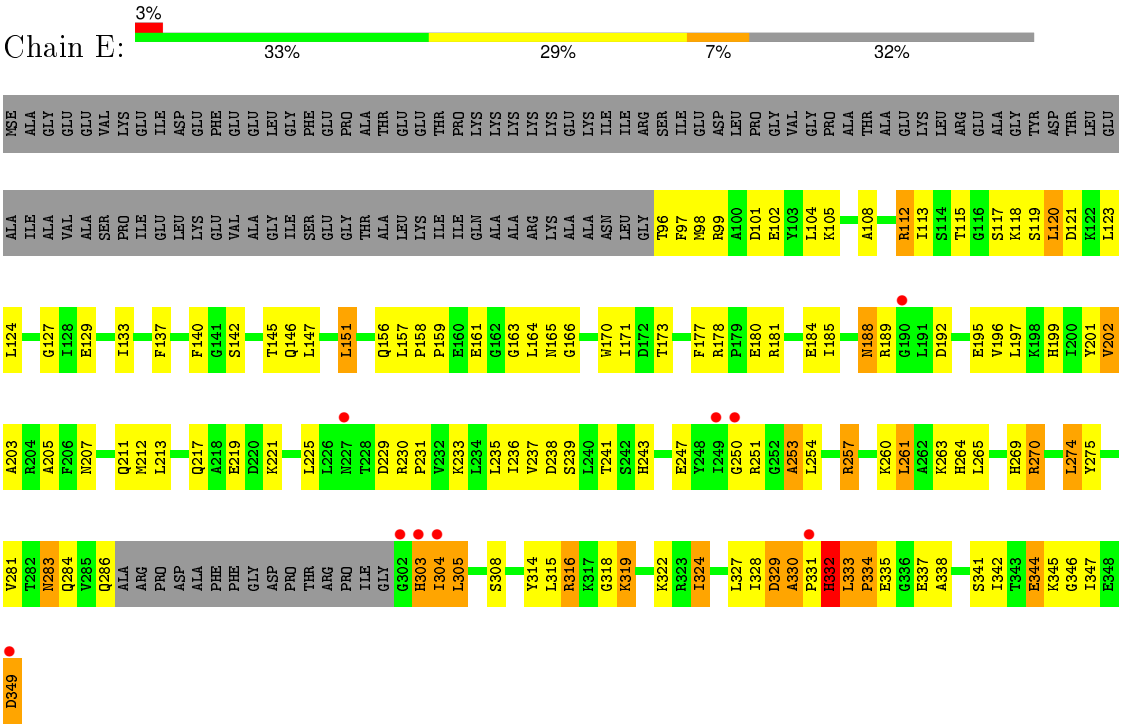


• Molecule 1: DNA repair and recombination protein rad51



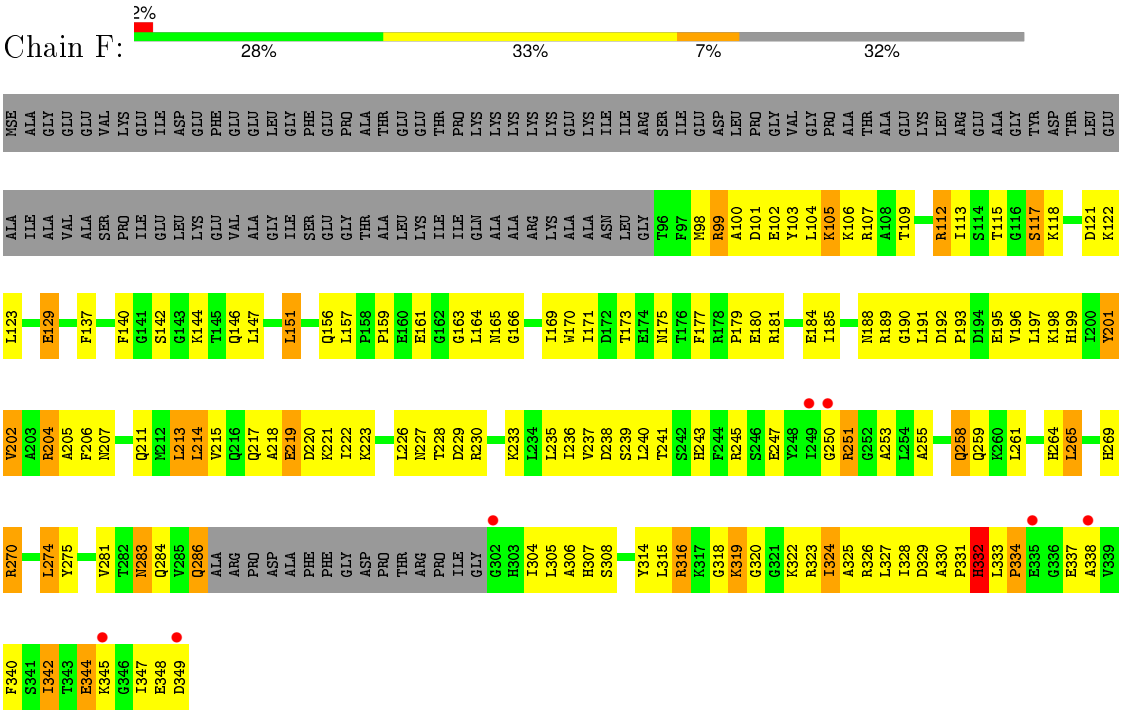
• Molecule 1: DNA repair and recombination protein rad51

Chain E:



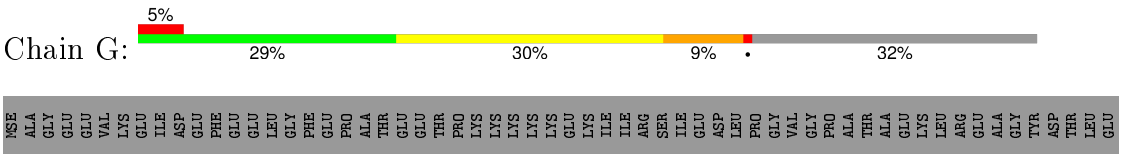
• Molecule 1: DNA repair and recombination protein rad51

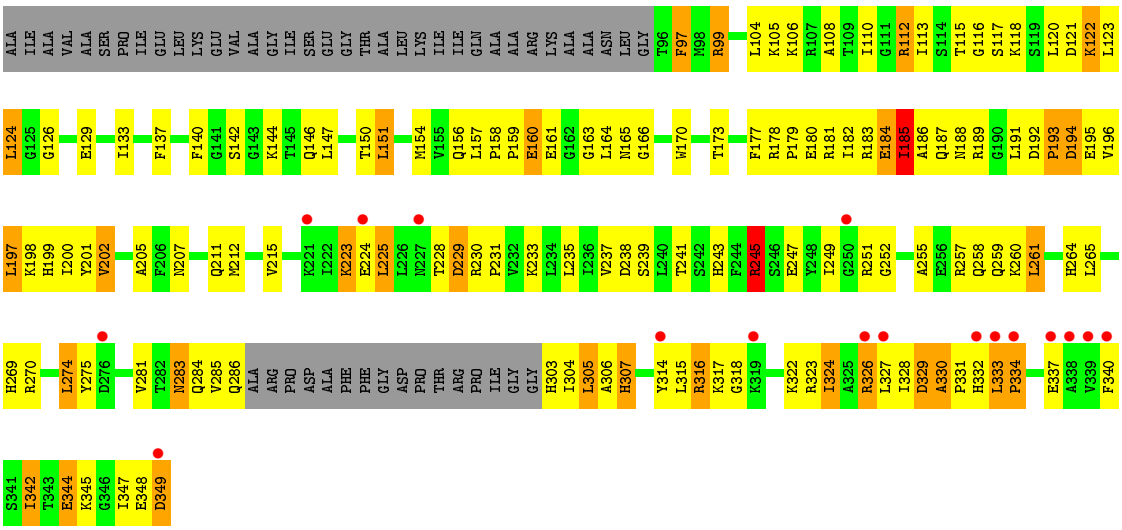
Chain F:



• Molecule 1: DNA repair and recombination protein rad51

Chain G:




ALA ILE ALA VAL ALA SER PRO ILE GLU LEU LYS GLU VAL ALA GLY ILE SER GLU GLY THR ALA LEU LYS ILE ILE GLN ALA ALA ARG LYS ALA ALA ASN LEU GLY T96 F97 N98 R99 L104 K105 K106 R107 A108 T109 I110 G111 R112 I113 S114 T115 G116 S117 K118 S119 L120 D121 K122 L123
L124 G125 G126 E129 I133 F137 F140 G141 S142 G143 K144 T145 Q146 L147 T150 L151 M154 V155 Q156 L157 P158 P159 E160 E161 G162 G163 L164 N165 G166 W170 T173 F177 R178 P179 E180 R181 I182 R183 E184 I185 A186 Q187 N188 R189 G190 L191 D192 P193 D194 E195 V196
L197 K198 H199 I200 Y201 V202 A205 F206 N207 Q211 M212 V215 K221 I222 K223 E224 L225 L226 N227 T228 D229 R230 P231 V232 K233 I234 L235 I236 V237 D238 S239 L240 T241 S242 H243 F244 R245 S246 E247 Y248 I249 G250 R251 G252 A255 E256 R257 Q258 Q259 K260 L261 H264 L265
H269 R270 L274 Y275 D276 V281 T282 N283 Q284 V285 Q286 ALA ARG PRO ASP ALA PHE PHE GLY ASP PRO THR ARG PRO ILE GLY GLY H303 I304 L305 A306 H307 Y314 L315 R316 K317 G318 K319 K322 R323 I324 A325 R326 L327 I328 D329 A330 P331 H332 L333 P334 E337 A338 V339 F340
S341 I342 T343 E344 K345 G346 I347 E348 D349

4 Data and refinement statistics (i)

Property	Value	Source
Space group	C 2 2 21	Depositor
Cell constants a, b, c, α, β, γ	144.16Å 193.12Å 176.93Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	39.12 – 2.85 39.12 – 2.66	Depositor EDS
% Data completeness (in resolution range)	95.3 (39.12-2.85) 93.6 (39.12-2.66)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	0.09	Depositor
$< I/\sigma(I) >$ [1]	1.14 (at 2.65Å)	Xtriage
Refinement program	CNS 1.1	Depositor
R, R_{free}	0.257 , 0.307 0.263 , 0.308	Depositor DCC
R_{free} test set	2723 reflections (4.84%)	DCC
Wilson B-factor (Å^2)	62.0	Xtriage
Anisotropy	0.807	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.33 , 77.3	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning[2]	$< \|L\| > = 0.50$, $< L^2 > = 0.34$	Xtriage
Outliers	0 of 124244 reflections	Xtriage
F_o,F_c correlation	0.93	EDS
Total number of atoms	13820	wwPDB-VP
Average B, all atoms (Å^2)	79.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.17% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

[2] Theoretical values of $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.375 respectively for untwinned datasets, and 0.333, 0.2 for perfectly twinned datasets.

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: GOL, MPD, IMD, SO4

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	0.44	0/2347	0.78	8/3159 (0.3%)
1	B	0.41	0/1905	0.75	7/2560 (0.3%)
1	C	0.40	0/1905	0.76	7/2560 (0.3%)
1	D	0.40	0/1905	0.77	8/2560 (0.3%)
1	E	0.48	0/1905	0.77	6/2560 (0.2%)
1	F	0.45	0/1905	0.78	8/2560 (0.3%)
1	G	0.42	0/1901	0.86	10/2555 (0.4%)
All	All	0.43	0/13773	0.79	54/18514 (0.3%)

There are no bond length outliers.

All (54) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	G	245	ARG	NE-CZ-NH2	-13.27	113.67	120.30
1	G	245	ARG	NE-CZ-NH1	12.99	126.80	120.30
1	A	178	ARG	NE-CZ-NH2	-12.62	113.99	120.30
1	A	178	ARG	NE-CZ-NH1	11.23	125.91	120.30
1	G	112	ARG	NE-CZ-NH2	-9.82	115.39	120.30
1	D	204	ARG	NE-CZ-NH2	9.16	124.88	120.30
1	F	204	ARG	NE-CZ-NH1	-9.16	115.72	120.30
1	F	270	ARG	NE-CZ-NH2	-9.15	115.72	120.30
1	B	112	ARG	NE-CZ-NH2	-9.02	115.79	120.30
1	D	204	ARG	NE-CZ-NH1	-8.99	115.80	120.30
1	B	112	ARG	NE-CZ-NH1	8.71	124.66	120.30
1	F	204	ARG	NE-CZ-NH2	8.37	124.48	120.30
1	E	112	ARG	NE-CZ-NH1	7.93	124.27	120.30
1	E	112	ARG	NE-CZ-NH2	-7.92	116.34	120.30
1	D	316	ARG	NE-CZ-NH1	-7.88	116.36	120.30
1	F	270	ARG	NE-CZ-NH1	7.82	124.21	120.30
1	G	316	ARG	NE-CZ-NH1	-7.82	116.39	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	G	112	ARG	NE-CZ-NH1	7.74	124.17	120.30
1	G	316	ARG	NE-CZ-NH2	7.72	124.16	120.30
1	B	270	ARG	NE-CZ-NH2	-7.65	116.48	120.30
1	C	316	ARG	NE-CZ-NH1	-7.48	116.56	120.30
1	B	270	ARG	NE-CZ-NH1	7.45	124.03	120.30
1	C	270	ARG	NE-CZ-NH2	-7.43	116.58	120.30
1	D	316	ARG	NE-CZ-NH2	7.33	123.96	120.30
1	C	316	ARG	NE-CZ-NH2	7.26	123.93	120.30
1	A	316	ARG	NE-CZ-NH2	-6.52	117.04	120.30
1	A	112	ARG	NE-CZ-NH1	-6.35	117.13	120.30
1	D	270	ARG	NE-CZ-NH1	-6.30	117.15	120.30
1	C	270	ARG	NE-CZ-NH1	6.28	123.44	120.30
1	F	112	ARG	NE-CZ-NH1	-6.20	117.20	120.30
1	C	112	ARG	NE-CZ-NH1	-6.09	117.25	120.30
1	A	112	ARG	NE-CZ-NH2	6.05	123.32	120.30
1	E	316	ARG	NE-CZ-NH2	-5.96	117.32	120.30
1	B	316	ARG	NE-CZ-NH2	-5.91	117.35	120.30
1	D	112	ARG	NE-CZ-NH1	-5.89	117.35	120.30
1	G	245	ARG	CD-NE-CZ	5.78	131.70	123.60
1	F	316	ARG	NE-CZ-NH2	-5.59	117.50	120.30
1	E	270	ARG	NE-CZ-NH1	-5.58	117.51	120.30
1	C	112	ARG	NE-CZ-NH2	5.57	123.08	120.30
1	B	316	ARG	NE-CZ-NH1	5.56	123.08	120.30
1	A	316	ARG	NE-CZ-NH1	5.55	123.07	120.30
1	A	178	ARG	CD-NE-CZ	5.54	131.35	123.60
1	D	112	ARG	NE-CZ-NH2	5.52	123.06	120.30
1	E	316	ARG	NE-CZ-NH1	5.37	122.99	120.30
1	E	344	GLU	N-CA-C	-5.37	96.51	111.00
1	G	344	GLU	N-CA-C	-5.36	96.54	111.00
1	F	112	ARG	NE-CZ-NH2	5.35	122.98	120.30
1	D	270	ARG	NE-CZ-NH2	5.28	122.94	120.30
1	G	270	ARG	NE-CZ-NH1	-5.25	117.68	120.30
1	G	245	ARG	CG-CD-NE	-5.14	101.00	111.80
1	F	344	GLU	N-CA-C	-5.10	97.23	111.00
1	B	344	GLU	N-CA-C	-5.08	97.28	111.00
1	A	344	GLU	N-CA-C	-5.03	97.43	111.00
1	C	344	GLU	N-CA-C	-5.02	97.44	111.00

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	2317	0	2375	213	0
1	B	1879	0	1917	190	0
1	C	1879	0	1917	158	0
1	D	1879	0	1917	184	0
1	E	1879	0	1917	135	0
1	F	1879	0	1917	162	0
1	G	1875	0	1914	173	0
2	A	5	0	0	1	0
2	B	5	0	0	0	0
2	C	5	0	0	1	0
2	D	5	0	0	0	0
2	E	5	0	0	0	0
2	F	5	0	0	1	0
2	G	5	0	0	1	0
3	A	20	0	20	2	0
3	B	15	0	15	8	0
3	C	5	0	5	0	0
3	F	5	0	5	3	0
4	A	6	0	5	0	0
4	B	6	0	4	1	0
4	C	12	0	9	1	0
4	D	6	0	4	2	0
4	E	6	0	4	0	0
4	F	18	0	13	2	0
5	B	8	0	14	0	0
5	E	8	0	14	0	0
5	G	16	0	28	0	0
6	A	20	0	0	5	0
6	B	6	0	0	2	0
6	C	7	0	0	6	0
6	D	11	0	0	2	0
6	E	10	0	0	0	0
6	F	6	0	0	1	0
6	G	7	0	0	0	0
All	All	13820	0	14014	1144	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 41.

All (1144) 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)
4:D:369:GOL:O1	4:D:369:GOL:C1	1.64	1.46
4:F:373:GOL:O1	4:F:373:GOL:C1	1.65	1.42
1:F:324:ILE:HD11	1:F:337:GLU:HB3	1.28	1.11
1:A:317:LYS:HG3	1:A:323:ARG:HH12	0.98	1.10
1:B:324:ILE:HD11	1:B:337:GLU:HB3	1.34	1.09
1:E:330:ALA:H	1:E:331:PRO:HD2	1.15	1.06
1:B:228:THR:HG22	1:B:230:ARG:H	1.18	1.05
1:A:317:LYS:HG3	1:A:323:ARG:NH1	1.73	1.04
1:A:107:ARG:HH11	1:A:107:ARG:HB3	1.16	1.04
1:B:329:ASP:HB3	1:B:331:PRO:HD2	1.41	1.02
1:D:169:ILE:HG13	1:D:222:ILE:HD11	1.44	1.00
1:D:222:ILE:HD12	1:D:232:VAL:HG21	1.42	0.99
1:F:258:GLN:HE21	1:F:258:GLN:HA	1.27	0.98
1:E:156:GLN:NE2	1:E:196:VAL:HG13	1.79	0.97
1:D:183:ARG:HD2	1:D:193:PRO:HB2	1.45	0.97
1:C:251:ARG:HB3	1:D:251:ARG:HB2	1.48	0.96
1:A:330:ALA:H	1:A:331:PRO:HD2	1.30	0.96
1:G:317:LYS:HG3	1:G:323:ARG:HH12	1.29	0.96
1:D:187:GLN:HB3	1:D:193:PRO:HD3	1.44	0.96
1:C:107:ARG:HH11	1:C:107:ARG:HB3	1.30	0.95
1:A:246:SER:O	1:A:249:ILE:HD11	1.70	0.91
1:G:189:ARG:HH21	1:G:345:LYS:HB3	1.34	0.90
1:F:286:GLN:H	1:F:286:GLN:NE2	1.70	0.88
1:D:326:ARG:HB3	1:D:326:ARG:HH21	1.36	0.88
1:C:107:ARG:NH1	1:C:107:ARG:HB3	1.88	0.88
1:B:212:MSE:HE1	1:B:260:LYS:HD3	1.56	0.88
1:G:187:GLN:HB3	1:G:193:PRO:HB3	1.55	0.88
1:A:326:ARG:HD3	1:A:337:GLU:HG2	1.55	0.88
1:D:330:ALA:H	1:D:331:PRO:HD2	1.39	0.87
1:C:212:MSE:HE1	1:C:260:LYS:HD2	1.57	0.87
1:E:327:LEU:HD21	1:E:333:LEU:HD23	1.55	0.87
1:E:269:HIS:NE2	1:E:308:SER:HB3	1.89	0.86
1:E:157:LEU:HD13	1:E:161:GLU:HB2	1.57	0.86
1:A:249:ILE:HD12	1:A:249:ILE:N	1.90	0.86
1:B:330:ALA:H	1:B:331:PRO:HD2	1.37	0.86
1:A:157:LEU:HD13	1:A:161:GLU:CB	2.06	0.85
1:B:169:ILE:HD11	1:B:221:LYS:HG2	1.58	0.85
1:A:317:LYS:CG	1:A:323:ARG:HH12	1.86	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:317:LYS:HG3	1:D:323:ARG:HH12	1.42	0.85
1:C:330:ALA:H	1:C:331:PRO:HD2	1.40	0.85
1:A:37:ILE:HD11	1:A:52:ARG:HH12	1.42	0.85
1:G:115:THR:HG21	1:G:120:LEU:HD22	1.56	0.84
1:C:251:ARG:NH2	1:D:251:ARG:HA	1.93	0.83
1:D:261:LEU:HD22	1:D:304:ILE:HD11	1.60	0.83
1:C:185:ILE:HD12	1:C:346:GLY:N	1.94	0.83
1:F:228:THR:HG22	1:F:229:ASP:H	1.43	0.83
1:D:189:ARG:HH21	1:D:345:LYS:HB3	1.43	0.83
1:G:332:HIS:O	1:G:333:LEU:HB2	1.76	0.83
1:C:181:ARG:NH2	1:C:185:ILE:HD11	1.94	0.83
1:E:96:THR:HG22	1:E:97:PHE:H	1.43	0.83
1:F:340:PHE:HA	1:F:349:ASP:HB2	1.61	0.82
1:G:154:MSE:SE	1:G:189:ARG:HH11	2.11	0.82
1:F:228:THR:HG22	1:F:229:ASP:N	1.95	0.82
1:B:252:GLY:CA	3:B:359:IMD:HN3	1.92	0.82
1:A:252:GLY:H	1:G:251:ARG:NH2	1.77	0.82
1:G:181:ARG:O	1:G:185:ILE:HG22	1.80	0.81
1:F:245:ARG:HB3	1:F:304:ILE:HD11	1.62	0.81
1:B:304:ILE:HD13	1:B:305:LEU:N	1.94	0.81
1:A:212:MSE:HE1	1:A:260:LYS:HD3	1.61	0.81
1:C:251:ARG:HH21	1:D:251:ARG:HA	1.45	0.81
1:A:252:GLY:H	1:G:251:ARG:HH22	1.28	0.81
1:C:157:LEU:HD13	1:C:161:GLU:HB2	1.63	0.81
1:B:317:LYS:HG3	1:B:323:ARG:HH22	1.46	0.80
1:F:324:ILE:HD13	1:F:325:ALA:N	1.96	0.80
1:F:219:GLU:OE1	1:F:270:ARG:NH2	2.14	0.80
1:G:348:GLU:O	1:G:349:ASP:HB2	1.82	0.80
1:B:328:ILE:HD12	1:B:328:ILE:N	1.97	0.79
1:A:144:LYS:HG2	2:A:350:SO4:O1	1.82	0.79
1:F:258:GLN:NE2	1:F:258:GLN:HA	1.98	0.79
1:E:330:ALA:H	1:E:331:PRO:CD	1.93	0.78
1:D:285:VAL:O	1:D:286:GLN:HB3	1.82	0.78
1:A:80:THR:HA	1:A:83:LYS:HE2	1.63	0.78
1:C:329:ASP:HB2	1:C:331:PRO:HD2	1.65	0.78
1:D:114:SER:HA	1:D:121:ASP:OD2	1.83	0.78
1:C:173:THR:HG22	1:C:205:ALA:HB3	1.66	0.78
1:D:188:ASN:OD1	1:D:344:GLU:HB3	1.84	0.78
1:A:330:ALA:N	1:A:331:PRO:HD2	1.98	0.78
1:B:330:ALA:H	1:B:331:PRO:CD	1.98	0.77
1:A:107:ARG:NH1	1:A:107:ARG:HB3	1.98	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:332:HIS:CE1	1:E:178:ARG:HE	2.03	0.77
1:E:286:GLN:H	1:E:303:HIS:CE1	2.03	0.77
1:A:107:ARG:HH11	1:A:107:ARG:CB	1.96	0.77
1:A:157:LEU:HD13	1:A:161:GLU:HB3	1.67	0.77
1:G:163:GLY:O	1:G:164:LEU:HD22	1.85	0.76
1:F:173:THR:HG22	1:F:205:ALA:HB3	1.66	0.76
1:D:139:GLU:OE1	1:D:286:GLN:HG2	1.86	0.76
1:C:104:LEU:O	1:C:104:LEU:HD22	1.84	0.76
1:B:314:TYR:CB	1:B:328:ILE:HD11	2.16	0.75
1:C:187:GLN:HE21	1:C:193:PRO:HG3	1.49	0.75
1:A:74:ALA:HB3	1:A:76:ILE:HD12	1.67	0.75
1:A:221:LYS:HG3	1:A:225:LEU:HD13	1.68	0.75
1:A:38:GLU:HB2	6:A:430:HOH:O	1.86	0.75
1:B:252:GLY:HA2	3:B:359:IMD:HN3	1.50	0.75
1:B:146:GLN:HA	1:B:146:GLN:HE21	1.52	0.75
1:G:117:SER:HB3	1:G:347:ILE:HG22	1.69	0.75
1:A:332:HIS:O	1:A:333:LEU:HB2	1.85	0.75
1:A:324:ILE:CD1	1:A:337:GLU:HB3	2.17	0.74
1:D:156:GLN:NE2	1:D:196:VAL:HG12	2.02	0.74
1:G:317:LYS:HG3	1:G:323:ARG:NH1	2.02	0.74
1:G:113:ILE:HD13	1:G:164:LEU:HD23	1.70	0.74
1:C:99:ARG:HG2	1:C:101:ASP:OD2	1.87	0.74
1:A:199:HIS:HA	6:A:437:HOH:O	1.87	0.74
1:E:304:ILE:HG12	1:E:305:LEU:N	2.03	0.74
1:E:261:LEU:HG	1:E:304:ILE:HD11	1.69	0.73
1:G:225:LEU:HD11	1:G:230:ARG:O	1.86	0.73
1:D:186:ALA:HB1	1:D:196:VAL:HG21	1.70	0.73
1:D:311:LEU:HD11	1:D:327:LEU:HD22	1.71	0.73
1:F:241:THR:HB	1:F:304:ILE:HD12	1.70	0.73
1:E:173:THR:HG22	1:E:205:ALA:HB3	1.71	0.73
1:C:170:TRP:HB3	1:C:202:VAL:HG12	1.71	0.73
1:A:37:ILE:CG1	1:A:38:GLU:H	2.02	0.73
1:B:163:GLY:O	1:B:164:LEU:HD23	1.89	0.73
1:G:157:LEU:HD13	1:G:161:GLU:HB2	1.71	0.72
1:B:157:LEU:HD13	1:B:161:GLU:CB	2.19	0.72
1:G:185:ILE:HA	1:G:345:LYS:H	1.52	0.72
1:C:194:ASP:O	1:C:198:LYS:HE3	1.88	0.72
1:G:187:GLN:HB3	1:G:193:PRO:CB	2.18	0.72
1:B:328:ILE:HD12	1:B:328:ILE:H	1.53	0.72
1:C:187:GLN:HB3	1:C:193:PRO:HD3	1.72	0.72
1:G:156:GLN:NE2	1:G:196:VAL:HG13	2.04	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:146:GLN:HA	1:C:146:GLN:HE21	1.53	0.72
1:D:157:LEU:HD13	1:D:161:GLU:HB2	1.70	0.71
1:A:160:GLU:CD	1:A:160:GLU:H	1.91	0.71
1:D:182:ILE:HD13	1:D:200:ILE:HD12	1.71	0.71
1:C:163:GLY:O	1:C:164:LEU:HD23	1.90	0.71
1:G:118:LYS:HB2	1:G:349:ASP:O	1.89	0.71
1:A:330:ALA:H	1:A:331:PRO:CD	2.03	0.71
1:A:252:GLY:N	1:G:251:ARG:HH22	1.87	0.71
1:C:156:GLN:NE2	1:C:196:VAL:HG13	2.04	0.71
1:E:146:GLN:HA	1:E:146:GLN:HE21	1.55	0.71
1:G:316:ARG:NH1	1:G:324:ILE:HD12	2.06	0.71
1:B:123:LEU:HD12	1:B:334:PRO:HG2	1.71	0.70
1:B:158:PRO:HD2	1:B:161:GLU:HG3	1.73	0.70
1:F:103:TYR:O	1:F:107:ARG:HG3	1.92	0.70
1:B:323:ARG:HE	1:B:342:ILE:HG13	1.57	0.70
1:D:332:HIS:C	1:D:333:LEU:HD22	2.12	0.70
1:F:304:ILE:HG22	1:F:305:LEU:H	1.56	0.70
1:C:181:ARG:HH22	1:C:185:ILE:HD11	1.55	0.70
1:B:118:LYS:H	1:B:349:ASP:HB2	1.54	0.70
1:F:146:GLN:HA	1:F:146:GLN:HE21	1.56	0.70
1:A:63:ALA:O	1:A:89:ARG:HD3	1.91	0.70
1:C:330:ALA:N	1:C:331:PRO:HD2	2.06	0.70
1:C:331:PRO:O	1:C:332:HIS:HB2	1.90	0.70
1:C:170:TRP:HB3	1:C:202:VAL:CG1	2.22	0.70
1:G:324:ILE:C	1:G:324:ILE:HD13	2.12	0.70
1:A:328:ILE:O	1:A:328:ILE:HG22	1.91	0.70
1:D:115:THR:HG21	1:D:120:LEU:HD12	1.72	0.70
1:G:185:ILE:HG13	1:G:345:LYS:HA	1.72	0.69
1:A:156:GLN:NE2	1:A:196:VAL:HG13	2.07	0.69
1:G:187:GLN:HE21	1:G:193:PRO:HG3	1.58	0.69
1:B:170:TRP:HB3	1:B:202:VAL:HG12	1.73	0.69
1:E:328:ILE:O	1:E:329:ASP:HB3	1.91	0.69
1:D:146:GLN:HE21	1:D:146:GLN:HA	1.57	0.69
1:E:230:ARG:NH1	1:E:230:ARG:HB3	2.08	0.69
1:E:157:LEU:HD13	1:E:161:GLU:CB	2.23	0.69
1:A:251:ARG:HE	1:B:251:ARG:NH2	1.91	0.69
1:A:258:GLN:HG3	1:B:249:ILE:CD1	2.22	0.69
1:G:185:ILE:HG13	1:G:345:LYS:CA	2.23	0.69
1:E:177:PHE:CD2	1:E:202:VAL:HG11	2.28	0.69
1:F:221:LYS:NZ	3:F:363:IMD:H4	2.07	0.69
1:B:324:ILE:HD11	1:B:337:GLU:CB	2.18	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:333:LEU:HB3	1:B:334:PRO:HD2	1.75	0.68
1:G:146:GLN:HE21	1:G:146:GLN:HA	1.57	0.68
1:D:317:LYS:HG3	1:D:323:ARG:NH1	2.07	0.68
1:E:221:LYS:HE3	1:E:225:LEU:HD11	1.74	0.68
1:E:274:LEU:HD12	1:E:275:TYR:CZ	2.29	0.68
1:E:124:LEU:HA	1:E:333:LEU:HD21	1.75	0.68
1:C:187:GLN:NE2	1:C:193:PRO:HG3	2.09	0.68
1:B:157:LEU:HD13	1:B:161:GLU:HB2	1.75	0.68
1:A:249:ILE:HD13	1:G:258:GLN:HG3	1.75	0.68
1:D:330:ALA:N	1:D:331:PRO:HD2	2.08	0.68
1:D:159:PRO:HD3	1:D:165:ASN:ND2	2.09	0.68
1:G:189:ARG:NH2	1:G:345:LYS:HB3	2.08	0.68
1:F:142:SER:O	1:F:323:ARG:HD2	1.94	0.68
1:B:317:LYS:HG3	1:B:323:ARG:NH2	2.08	0.67
1:C:159:PRO:HD3	1:C:165:ASN:ND2	2.08	0.67
1:D:173:THR:HG22	1:D:205:ALA:HB3	1.75	0.67
1:B:213:LEU:HG	1:B:217:GLN:OE1	1.94	0.67
1:C:304:ILE:HG12	1:C:305:LEU:N	2.09	0.67
1:F:326:ARG:HD3	1:F:337:GLU:HG2	1.76	0.67
1:B:146:GLN:HE22	1:B:181:ARG:HE	1.42	0.67
1:F:113:ILE:HD11	1:F:164:LEU:HD12	1.75	0.67
1:A:344:GLU:H	1:A:344:GLU:CD	1.98	0.67
1:F:228:THR:CG2	1:F:229:ASP:H	2.06	0.67
1:B:173:THR:HG22	1:B:205:ALA:HB3	1.77	0.67
1:E:327:LEU:C	1:E:328:ILE:HD12	2.15	0.67
1:C:107:ARG:HH11	1:C:107:ARG:CB	2.06	0.67
1:C:188:ASN:O	1:C:188:ASN:ND2	2.26	0.67
1:C:181:ARG:HH22	1:C:185:ILE:CD1	2.08	0.67
1:E:96:THR:HG22	1:E:97:PHE:N	2.10	0.67
1:G:229:ASP:OD2	1:G:229:ASP:N	2.28	0.67
1:C:225:LEU:HB3	1:C:231:PRO:HA	1.76	0.66
1:A:324:ILE:HD11	1:A:337:GLU:HB3	1.76	0.66
1:A:74:ALA:HB3	1:A:76:ILE:CD1	2.25	0.66
1:G:182:ILE:HB	1:G:197:LEU:HD21	1.76	0.66
1:E:261:LEU:HD13	1:E:261:LEU:C	2.15	0.66
1:C:177:PHE:CD2	1:C:202:VAL:HG11	2.31	0.66
1:E:328:ILE:HG22	1:E:328:ILE:O	1.95	0.66
1:E:189:ARG:HE	1:E:345:LYS:HB3	1.61	0.66
1:B:330:ALA:N	1:B:331:PRO:CD	2.59	0.66
1:G:159:PRO:HD3	1:G:165:ASN:ND2	2.10	0.66
1:D:327:LEU:HD13	1:D:333:LEU:HB3	1.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:154:MSE:SE	1:G:189:ARG:NH1	2.79	0.65
1:D:177:PHE:CD2	1:D:202:VAL:HG11	2.30	0.65
1:F:274:LEU:HD12	1:F:275:TYR:CZ	2.31	0.65
1:D:222:ILE:HG21	1:D:277:ILE:HD11	1.78	0.65
1:F:189:ARG:HG3	1:F:189:ARG:HH21	1.61	0.65
1:G:177:PHE:CD2	1:G:202:VAL:HG11	2.32	0.65
1:F:213:LEU:O	1:F:217:GLN:HG3	1.96	0.65
1:B:192:ASP:OD2	1:B:195:GLU:HB2	1.96	0.65
1:F:327:LEU:O	1:F:328:ILE:HD13	1.97	0.65
1:D:328:ILE:HG22	1:D:328:ILE:O	1.96	0.65
1:F:171:ILE:HG23	1:F:214:LEU:HD23	1.77	0.65
1:B:274:LEU:HD12	1:B:275:TYR:CZ	2.32	0.65
1:D:160:GLU:H	1:D:160:GLU:CD	1.99	0.65
1:D:189:ARG:HB3	1:D:345:LYS:HG2	1.77	0.65
1:G:170:TRP:HB3	1:G:202:VAL:HG12	1.79	0.65
1:G:344:GLU:CD	1:G:344:GLU:H	1.99	0.64
1:D:189:ARG:HE	1:D:345:LYS:HB3	1.63	0.64
1:B:170:TRP:HB3	1:B:202:VAL:CG1	2.27	0.64
1:C:225:LEU:HD22	1:C:225:LEU:H	1.62	0.64
1:C:251:ARG:CB	1:D:251:ARG:HB2	2.25	0.64
1:A:37:ILE:CD1	1:A:38:GLU:H	2.11	0.64
1:F:156:GLN:NE2	1:F:196:VAL:HG13	2.13	0.64
1:A:178:ARG:HH11	1:G:332:HIS:CD2	2.15	0.64
1:G:228:THR:HG23	1:G:229:ASP:OD2	1.98	0.64
1:B:219:GLU:CD	1:B:270:ARG:HH22	2.01	0.64
1:B:344:GLU:CD	1:B:344:GLU:H	2.01	0.64
1:F:255:ALA:O	1:F:259:GLN:HB2	1.97	0.64
1:B:324:ILE:HD12	1:B:338:ALA:O	1.98	0.64
1:A:173:THR:HG22	1:A:205:ALA:HB3	1.80	0.64
4:F:373:GOL:HO1	4:F:373:GOL:C1	2.09	0.63
1:A:37:ILE:HD13	1:A:38:GLU:H	1.63	0.63
1:G:188:ASN:O	1:G:345:LYS:HE2	1.98	0.63
1:A:254:LEU:HD22	1:B:249:ILE:HD11	1.80	0.63
1:F:146:GLN:HA	1:F:146:GLN:NE2	2.13	0.63
1:D:186:ALA:CB	1:D:196:VAL:HG21	2.28	0.63
1:B:257:ARG:O	1:B:261:LEU:HB2	1.98	0.63
1:F:251:ARG:N	1:F:251:ARG:HD3	2.11	0.63
1:D:327:LEU:C	1:D:328:ILE:HD12	2.19	0.63
1:C:317:LYS:HG3	1:C:323:ARG:HH12	1.64	0.63
1:F:190:GLY:O	1:F:191:LEU:HD23	1.98	0.63
1:A:69:GLU:O	1:A:73:VAL:HG23	1.99	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:146:GLN:HA	1:A:146:GLN:HE21	1.63	0.63
1:C:344:GLU:CD	1:C:344:GLU:H	2.02	0.63
1:F:177:PHE:CD2	1:F:202:VAL:HG11	2.34	0.63
1:G:187:GLN:HB3	1:G:193:PRO:CG	2.29	0.63
1:E:304:ILE:HG12	1:E:305:LEU:H	1.63	0.63
1:G:327:LEU:HD12	1:G:327:LEU:N	2.14	0.63
1:G:330:ALA:HB3	1:G:331:PRO:HD3	1.81	0.62
1:F:328:ILE:O	1:F:328:ILE:HG22	1.98	0.62
1:A:211:GLN:HE21	1:A:264:HIS:CE1	2.17	0.62
1:F:99:ARG:HB3	1:F:102:GLU:HG2	1.80	0.62
1:C:317:LYS:HG3	1:C:323:ARG:NH1	2.13	0.62
1:F:344:GLU:H	1:F:344:GLU:CD	2.03	0.62
1:A:259:GLN:NE2	1:B:247:GLU:HB3	2.15	0.62
1:G:170:TRP:HB3	1:G:202:VAL:CG1	2.29	0.62
1:B:146:GLN:HA	1:B:146:GLN:NE2	2.14	0.62
1:D:189:ARG:NH2	1:D:345:LYS:HB3	2.13	0.62
1:A:188:ASN:ND2	1:A:344:GLU:CB	2.63	0.62
1:E:146:GLN:HA	1:E:146:GLN:NE2	2.14	0.62
1:E:146:GLN:HE22	1:E:181:ARG:HE	1.48	0.62
1:A:37:ILE:CD1	1:A:52:ARG:HH12	2.13	0.62
1:F:146:GLN:HE22	1:F:181:ARG:HE	1.46	0.62
1:C:218:ALA:O	1:C:222:ILE:HG13	1.99	0.62
1:F:101:ASP:OD2	1:F:102:GLU:N	2.33	0.62
1:G:144:LYS:HG2	2:G:356:SO4:O2	1.99	0.61
1:C:181:ARG:O	1:C:185:ILE:HG12	2.00	0.61
1:G:327:LEU:HD12	1:G:327:LEU:H	1.65	0.61
1:A:170:TRP:HB3	1:A:202:VAL:HG12	1.82	0.61
1:A:171:ILE:CD1	1:G:97:PHE:HE1	2.13	0.61
1:A:219:GLU:O	1:A:223:LYS:HG2	2.00	0.61
1:D:190:GLY:O	1:D:191:LEU:HB2	2.01	0.61
1:E:137:PHE:CZ	1:E:314:TYR:HB2	2.35	0.61
1:E:330:ALA:N	1:E:331:PRO:HD2	1.98	0.61
1:D:222:ILE:HD13	1:D:222:ILE:N	2.16	0.61
1:G:228:THR:HG22	1:G:230:ARG:H	1.65	0.61
1:C:156:GLN:OE1	1:C:199:HIS:HB2	2.01	0.61
1:C:118:LYS:HB2	1:C:349:ASP:OD1	1.99	0.61
1:A:159:PRO:HD3	1:A:165:ASN:ND2	2.15	0.61
1:E:96:THR:HG22	1:E:97:PHE:HD1	1.65	0.61
1:D:185:ILE:HG23	1:D:345:LYS:HA	1.82	0.61
1:A:157:LEU:HD13	1:A:161:GLU:HB2	1.80	0.61
1:G:173:THR:HG22	1:G:205:ALA:HB3	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:252:GLY:CA	1:G:251:ARG:HH22	2.13	0.61
1:A:177:PHE:CD2	1:A:202:VAL:HG11	2.35	0.61
1:E:344:GLU:O	1:E:345:LYS:HB2	2.00	0.61
1:A:251:ARG:HG3	1:A:251:ARG:HH11	1.65	0.61
1:A:178:ARG:HD2	1:G:332:HIS:NE2	2.16	0.60
1:D:274:LEU:HD12	1:D:275:TYR:CZ	2.36	0.60
1:F:98:MSE:CG	1:F:102:GLU:HB2	2.31	0.60
1:C:146:GLN:HA	1:C:146:GLN:NE2	2.16	0.60
1:B:183:ARG:HG3	1:B:193:PRO:HB2	1.83	0.60
1:E:119:SER:HB2	1:E:349:ASP:OD1	2.01	0.60
1:G:274:LEU:HD12	1:G:275:TYR:CZ	2.36	0.60
1:A:331:PRO:HD3	1:B:140:PHE:HZ	1.67	0.60
1:E:257:ARG:NH2	1:E:304:ILE:HB	2.17	0.60
1:F:105:LYS:HG3	1:F:106:LYS:N	2.16	0.60
1:C:274:LEU:HD12	1:C:275:TYR:CZ	2.37	0.60
1:E:333:LEU:HG	1:E:334:PRO:HD2	1.84	0.60
1:D:344:GLU:CD	1:D:344:GLU:H	2.04	0.60
1:G:113:ILE:CD1	1:G:164:LEU:HD23	2.32	0.60
1:G:274:LEU:O	1:G:274:LEU:HD13	2.01	0.60
1:G:328:ILE:HD12	1:G:328:ILE:N	2.16	0.60
1:A:113:ILE:CD1	1:A:164:LEU:HG	2.32	0.60
1:E:344:GLU:H	1:E:344:GLU:CD	2.05	0.60
1:E:201:TYR:CD2	1:E:221:LYS:HE2	2.37	0.60
1:C:111:GLY:HA3	6:C:404:HOH:O	2.00	0.60
1:D:330:ALA:H	1:D:331:PRO:CD	2.10	0.59
1:F:215:VAL:HG21	1:F:264:HIS:NE2	2.16	0.59
1:D:329:ASP:CG	1:D:330:ALA:H	2.02	0.59
1:D:263:LYS:NZ	1:D:263:LYS:HB3	2.17	0.59
1:A:221:LYS:O	1:A:225:LEU:HD13	2.02	0.59
1:D:223:LYS:NZ	1:D:223:LYS:HB2	2.17	0.59
1:C:251:ARG:HA	1:C:254:LEU:HB3	1.84	0.59
1:D:326:ARG:HG2	1:D:327:LEU:N	2.18	0.59
1:D:225:LEU:N	1:D:225:LEU:HD12	2.17	0.59
1:F:332:HIS:CE1	1:G:178:ARG:HH11	2.19	0.59
1:A:42:GLY:HA3	1:A:84:ILE:HD11	1.85	0.59
1:B:255:ALA:O	1:B:259:GLN:HG2	2.02	0.59
1:B:316:ARG:HH12	1:B:326:ARG:HH21	1.49	0.59
1:G:146:GLN:NE2	1:G:146:GLN:HA	2.17	0.59
1:E:146:GLN:HG3	1:E:342:ILE:HD12	1.84	0.59
1:G:196:VAL:C	1:G:198:LYS:H	2.05	0.59
1:D:121:ASP:O	1:D:126:GLY:N	2.32	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:257:ARG:CZ	1:E:304:ILE:HB	2.32	0.59
1:A:228:THR:HG22	1:A:229:ASP:N	2.18	0.59
1:A:317:LYS:HE2	1:A:323:ARG:HH22	1.68	0.58
1:E:328:ILE:O	1:E:329:ASP:CB	2.51	0.58
1:B:228:THR:HG22	1:B:230:ARG:N	2.02	0.58
1:D:146:GLN:NE2	1:D:146:GLN:HA	2.16	0.58
1:G:223:LYS:O	1:G:225:LEU:N	2.35	0.58
1:E:185:ILE:HG12	1:E:346:GLY:N	2.18	0.58
1:C:117:SER:HB3	1:C:347:ILE:HG22	1.85	0.58
1:D:326:ARG:NH2	1:D:326:ARG:HB3	2.13	0.58
1:C:285:VAL:O	1:C:286:GLN:CB	2.51	0.58
1:D:344:GLU:O	1:D:345:LYS:HB2	2.03	0.58
1:F:98:MSE:HG2	1:F:102:GLU:HB2	1.85	0.58
1:B:100:ALA:HB1	1:C:197:LEU:HD13	1.85	0.58
1:B:177:PHE:HE1	1:B:182:ILE:HD12	1.69	0.58
1:E:184:GLU:O	1:E:188:ASN:HB2	2.03	0.58
1:G:112:ARG:HD3	1:G:126:GLY:HA3	1.86	0.58
1:B:314:TYR:N	1:B:328:ILE:HD11	2.19	0.58
1:F:170:TRP:HB3	1:F:202:VAL:CG1	2.33	0.58
1:D:113:ILE:HD11	1:D:164:LEU:HD12	1.84	0.58
1:C:213:LEU:O	1:C:213:LEU:HD23	2.04	0.58
1:D:303:HIS:HE1	1:D:305:LEU:HD13	1.69	0.58
1:B:184:GLU:HG2	6:B:386:HOH:O	2.03	0.58
1:G:156:GLN:OE1	1:G:199:HIS:HB2	2.04	0.58
1:B:156:GLN:OE1	1:B:199:HIS:HB2	2.04	0.58
1:F:104:LEU:HD12	1:G:180:GLU:HG3	1.85	0.58
1:C:185:ILE:HA	6:C:384:HOH:O	2.04	0.58
1:B:314:TYR:HB2	1:B:328:ILE:HD11	1.86	0.58
1:A:258:GLN:HG3	1:B:249:ILE:HD12	1.83	0.58
1:F:251:ARG:C	1:F:253:ALA:H	2.07	0.57
1:B:159:PRO:HD3	1:B:165:ASN:ND2	2.19	0.57
1:E:213:LEU:HD22	1:E:213:LEU:O	2.04	0.57
1:E:225:LEU:HD12	1:E:225:LEU:N	2.19	0.57
1:B:187:GLN:HG3	1:B:188:ASN:N	2.18	0.57
1:C:191:LEU:HD12	1:C:191:LEU:N	2.19	0.57
1:B:99:ARG:HE	1:C:198:LYS:HA	1.67	0.57
1:A:344:GLU:O	1:A:345:LYS:HB2	2.05	0.57
1:E:159:PRO:HD3	1:E:165:ASN:ND2	2.18	0.57
1:A:328:ILE:O	1:A:329:ASP:HB3	2.04	0.57
1:F:137:PHE:CZ	1:F:314:TYR:HB2	2.39	0.57
1:B:316:ARG:NH1	1:B:326:ARG:HH21	2.02	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:154:MSE:SE	1:D:189:ARG:HH11	2.38	0.57
1:A:330:ALA:N	1:A:331:PRO:CD	2.65	0.57
1:C:181:ARG:NH2	1:C:185:ILE:CD1	2.65	0.57
1:E:322:LYS:NZ	1:E:341:SER:HB3	2.18	0.57
1:D:177:PHE:CE1	1:D:182:ILE:HD11	2.38	0.57
1:A:37:ILE:HD11	1:A:52:ARG:NH1	2.17	0.57
1:D:139:GLU:HG2	1:D:286:GLN:HB3	1.86	0.57
1:C:99:ARG:HH22	4:C:368:GOL:H12	1.69	0.57
1:B:332:HIS:HB3	1:B:333:LEU:HD12	1.86	0.57
1:D:170:TRP:HB3	1:D:202:VAL:CG1	2.34	0.57
1:C:226:LEU:HA	1:C:231:PRO:HB3	1.87	0.57
1:B:323:ARG:HG3	1:B:323:ARG:HH21	1.69	0.57
1:D:329:ASP:CG	1:D:330:ALA:N	2.57	0.57
1:A:211:GLN:HE21	1:A:264:HIS:HE1	1.51	0.57
1:D:332:HIS:O	1:D:333:LEU:HD22	2.05	0.56
1:D:146:GLN:HG3	1:D:342:ILE:HD12	1.87	0.56
1:F:170:TRP:HB3	1:F:202:VAL:HG12	1.86	0.56
1:A:320:GLY:HA2	3:A:361:IMD:N3	2.20	0.56
1:A:37:ILE:HG12	1:A:38:GLU:H	1.69	0.56
1:B:187:GLN:C	1:B:189:ARG:H	2.09	0.56
1:A:274:LEU:HD12	1:A:275:TYR:CZ	2.40	0.56
1:G:329:ASP:O	1:G:330:ALA:HB2	2.05	0.56
1:A:274:LEU:O	1:A:274:LEU:HD13	2.04	0.56
1:A:213:LEU:O	1:A:216:GLN:HG2	2.05	0.56
1:A:123:LEU:HG	1:A:327:LEU:HD13	1.86	0.56
1:F:157:LEU:HD13	1:F:161:GLU:CB	2.34	0.56
4:D:369:GOL:C1	4:D:369:GOL:HO1	2.08	0.56
1:D:156:GLN:OE1	1:D:199:HIS:HB2	2.05	0.56
1:B:322:LYS:NZ	1:B:341:SER:HB3	2.20	0.56
1:F:228:THR:HG22	1:F:230:ARG:H	1.70	0.56
1:F:169:ILE:HD11	1:F:221:LYS:CG	2.35	0.56
1:C:286:GLN:HE21	1:C:286:GLN:HA	1.70	0.56
1:E:333:LEU:CG	1:E:334:PRO:HD2	2.36	0.56
1:F:228:THR:CG2	1:F:229:ASP:N	2.62	0.56
1:E:344:GLU:O	1:E:345:LYS:CB	2.54	0.56
1:B:149:HIS:HD2	1:B:182:ILE:HG13	1.70	0.56
1:G:97:PHE:CD2	1:G:97:PHE:N	2.72	0.56
1:G:211:GLN:HE21	1:G:264:HIS:CE1	2.24	0.56
1:A:188:ASN:ND2	1:A:344:GLU:HB3	2.21	0.56
1:D:190:GLY:O	1:D:191:LEU:CB	2.53	0.56
1:F:159:PRO:HD3	1:F:165:ASN:ND2	2.21	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:344:GLU:O	1:G:345:LYS:HB2	2.05	0.56
1:C:188:ASN:OD1	1:C:344:GLU:HB3	2.06	0.56
1:A:163:GLY:O	1:A:164:LEU:HD23	2.04	0.55
1:B:211:GLN:HE21	1:B:264:HIS:HE1	1.54	0.55
1:F:175:ASN:H	1:F:204:ARG:NH1	2.03	0.55
1:A:286:GLN:HA	1:A:286:GLN:NE2	2.20	0.55
1:E:322:LYS:HZ2	1:E:341:SER:HB3	1.71	0.55
1:B:211:GLN:HE21	1:B:264:HIS:CE1	2.24	0.55
1:E:98:MSE:HG3	1:E:102:GLU:OE1	2.06	0.55
1:A:147:LEU:HD22	1:A:151:LEU:HD22	1.88	0.55
1:D:187:GLN:HB3	1:D:193:PRO:CD	2.28	0.55
1:G:314:TYR:HB3	1:G:328:ILE:HD11	1.89	0.55
1:A:37:ILE:CG1	1:A:38:GLU:N	2.69	0.55
1:A:81:ALA:O	1:A:85:ILE:HG12	2.06	0.55
1:B:177:PHE:CD2	1:B:202:VAL:HG11	2.42	0.55
1:F:286:GLN:CD	1:F:286:GLN:H	2.09	0.55
1:D:326:ARG:CB	1:D:326:ARG:HH21	2.12	0.55
1:E:324:ILE:HD11	1:E:337:GLU:HB3	1.89	0.55
1:F:330:ALA:N	1:F:331:PRO:HD2	2.21	0.55
1:B:344:GLU:O	1:B:345:LYS:HB2	2.07	0.55
1:A:82:LEU:C	1:A:82:LEU:HD13	2.27	0.55
1:D:183:ARG:C	1:D:185:ILE:H	2.10	0.55
1:C:196:VAL:C	1:C:198:LYS:H	2.09	0.55
1:F:344:GLU:O	1:F:345:LYS:HB2	2.05	0.55
1:E:274:LEU:HD13	1:E:274:LEU:O	2.06	0.55
1:A:171:ILE:HD11	1:G:97:PHE:HE1	1.71	0.55
1:E:156:GLN:HE22	1:E:196:VAL:HG13	1.68	0.55
1:D:330:ALA:N	1:D:331:PRO:CD	2.68	0.55
1:G:225:LEU:HG	1:G:231:PRO:HA	1.89	0.55
1:D:332:HIS:ND1	6:D:399:HOH:O	2.34	0.54
1:F:274:LEU:HD13	1:F:274:LEU:O	2.07	0.54
1:D:225:LEU:O	1:D:231:PRO:HA	2.06	0.54
1:A:286:GLN:HA	1:A:286:GLN:HE21	1.72	0.54
1:A:118:LYS:O	1:A:122:LYS:HG3	2.07	0.54
1:G:245:ARG:HG3	1:G:245:ARG:O	2.08	0.54
1:D:185:ILE:HG23	1:D:345:LYS:CA	2.38	0.54
1:C:344:GLU:O	1:C:345:LYS:HB2	2.06	0.54
1:F:157:LEU:HD12	1:F:163:GLY:N	2.22	0.54
1:F:157:LEU:O	1:F:163:GLY:HA3	2.07	0.54
1:E:113:ILE:HD11	1:E:164:LEU:HD12	1.90	0.54
1:A:113:ILE:N	1:A:113:ILE:HD13	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:97:PHE:N	1:C:97:PHE:CD1	2.74	0.54
1:G:223:LYS:NZ	1:G:223:LYS:HB2	2.23	0.54
1:C:128:ILE:O	1:C:128:ILE:HG13	2.07	0.54
1:C:196:VAL:O	1:C:198:LYS:N	2.41	0.54
1:D:274:LEU:HD13	1:D:274:LEU:O	2.07	0.54
1:F:192:ASP:HB3	1:F:195:GLU:HB2	1.89	0.54
1:G:196:VAL:O	1:G:198:LYS:N	2.40	0.54
1:C:330:ALA:N	1:C:331:PRO:CD	2.70	0.54
1:B:119:SER:N	1:B:349:ASP:OD1	2.40	0.54
1:E:225:LEU:HD12	1:E:225:LEU:H	1.72	0.54
1:C:274:LEU:O	1:C:274:LEU:HD13	2.08	0.54
1:A:225:LEU:N	1:A:225:LEU:HD12	2.23	0.54
1:D:142:SER:O	1:D:315:LEU:HD13	2.08	0.54
1:D:212:MSE:HE1	1:D:260:LYS:HE2	1.90	0.54
1:A:146:GLN:HA	1:A:146:GLN:NE2	2.23	0.53
1:A:146:GLN:HG3	1:A:342:ILE:HD12	1.90	0.53
1:C:286:GLN:NE2	1:C:286:GLN:HA	2.23	0.53
1:A:215:VAL:HG11	1:A:267:ASP:HB3	1.89	0.53
1:B:117:SER:OG	1:B:349:ASP:HA	2.08	0.53
1:B:184:GLU:O	1:B:187:GLN:HG2	2.09	0.53
1:G:327:LEU:CD1	1:G:327:LEU:H	2.21	0.53
1:C:230:ARG:HG2	1:C:230:ARG:HH11	1.72	0.53
1:C:328:ILE:O	1:C:328:ILE:HG22	2.07	0.53
1:E:170:TRP:HB3	1:E:202:VAL:HG12	1.89	0.53
1:F:214:LEU:HD12	1:F:217:GLN:OE1	2.08	0.53
1:D:235:LEU:C	1:D:235:LEU:HD23	2.29	0.53
1:B:212:MSE:HE1	1:B:260:LYS:CD	2.36	0.53
1:B:99:ARG:NH2	1:C:198:LYS:HG2	2.23	0.53
1:G:137:PHE:CZ	1:G:314:TYR:HB2	2.43	0.53
1:D:113:ILE:CD1	1:D:164:LEU:HD12	2.38	0.53
1:C:142:SER:O	1:C:315:LEU:HD13	2.09	0.53
1:D:323:ARG:H	1:D:323:ARG:HD2	1.73	0.53
1:B:252:GLY:N	3:B:359:IMD:N3	2.56	0.53
1:C:101:ASP:OD1	1:C:102:GLU:N	2.41	0.53
1:A:99:ARG:HH22	4:B:367:GOL:H12	1.73	0.53
1:B:137:PHE:CZ	1:B:314:TYR:HB2	2.42	0.53
1:A:146:GLN:HE22	1:A:181:ARG:HE	1.56	0.53
1:D:167:SER:OG	1:D:225:LEU:HD23	2.08	0.53
1:F:265:LEU:HD21	1:F:306:ALA:HA	1.90	0.53
1:D:154:MSE:SE	1:D:189:ARG:NH1	2.92	0.53
1:A:249:ILE:CD1	1:A:249:ILE:N	2.63	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:146:GLN:HG3	1:G:342:ILE:HD12	1.90	0.53
1:D:170:TRP:HB3	1:D:202:VAL:HG12	1.91	0.53
1:G:255:ALA:O	1:G:259:GLN:HG2	2.08	0.53
1:A:42:GLY:CA	1:A:84:ILE:HD11	2.38	0.53
1:G:257:ARG:NH1	1:G:304:ILE:HD13	2.24	0.53
1:C:103:TYR:CE1	1:C:107:ARG:HD2	2.44	0.53
1:B:157:LEU:HD13	1:B:161:GLU:HB3	1.90	0.53
1:D:182:ILE:HB	1:D:197:LEU:HD21	1.91	0.53
1:E:181:ARG:NH1	1:E:346:GLY:HA2	2.23	0.53
1:F:146:GLN:HG3	1:F:342:ILE:HD12	1.91	0.53
1:E:142:SER:O	1:E:315:LEU:HD13	2.09	0.53
1:G:160:GLU:H	1:G:160:GLU:CD	2.12	0.53
1:D:107:ARG:HD3	1:E:180:GLU:OE2	2.09	0.53
1:D:183:ARG:O	1:D:185:ILE:N	2.42	0.52
1:B:320:GLY:HA2	3:B:360:IMD:HN3	1.74	0.52
1:B:237:VAL:HB	1:B:281:VAL:HG12	1.92	0.52
1:A:324:ILE:HD13	1:A:337:GLU:HB3	1.89	0.52
1:A:251:ARG:HG2	1:B:251:ARG:HG2	1.92	0.52
1:A:170:TRP:HB3	1:A:202:VAL:CG1	2.39	0.52
1:A:82:LEU:O	1:A:86:GLN:HG3	2.09	0.52
1:E:123:LEU:HG	1:E:327:LEU:HD13	1.91	0.52
1:D:222:ILE:N	1:D:222:ILE:CD1	2.72	0.52
1:C:187:GLN:HA	1:C:191:LEU:O	2.10	0.52
1:D:225:LEU:H	1:D:225:LEU:HD12	1.74	0.52
1:G:245:ARG:HH22	1:G:283:ASN:HD21	1.58	0.52
1:D:316:ARG:NH1	1:D:337:GLU:OE2	2.39	0.52
1:D:305:LEU:HD23	1:D:305:LEU:O	2.09	0.52
1:A:158:PRO:HD2	1:A:161:GLU:HG3	1.91	0.52
1:B:99:ARG:NE	1:C:198:LYS:HA	2.23	0.52
1:D:192:ASP:OD2	1:D:195:GLU:HB2	2.09	0.52
1:B:112:ARG:HD3	1:B:126:GLY:HA3	1.92	0.52
1:D:344:GLU:O	1:D:345:LYS:CB	2.58	0.52
1:B:252:GLY:N	3:B:359:IMD:HN3	2.07	0.52
1:C:214:LEU:HA	1:C:217:GLN:OE1	2.10	0.52
1:A:179:PRO:HG2	1:G:104:LEU:HD13	1.92	0.52
1:A:222:ILE:HD13	1:A:277:ILE:CD1	2.40	0.52
1:B:329:ASP:O	1:B:330:ALA:HB2	2.10	0.52
1:F:104:LEU:HB2	1:G:179:PRO:CG	2.40	0.52
1:C:184:GLU:HG2	6:C:384:HOH:O	2.10	0.52
1:B:332:HIS:HB3	1:B:333:LEU:CD1	2.39	0.52
1:C:225:LEU:O	1:C:231:PRO:HA	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:184:GLU:O	1:A:186:ALA:N	2.43	0.52
1:D:326:ARG:NH2	1:D:326:ARG:CB	2.72	0.52
1:G:318:GLY:N	1:G:322:LYS:O	2.31	0.52
1:B:101:ASP:CG	1:B:102:GLU:N	2.63	0.52
1:A:254:LEU:HD13	1:B:249:ILE:HG12	1.92	0.52
1:C:304:ILE:CG1	1:C:305:LEU:N	2.73	0.52
1:C:137:PHE:CZ	1:C:314:TYR:HB2	2.45	0.52
1:F:316:ARG:HG2	1:F:324:ILE:HG22	1.92	0.51
1:B:322:LYS:C	1:B:323:ARG:HD2	2.31	0.51
1:A:165:ASN:HA	1:A:230:ARG:HH12	1.75	0.51
1:E:207:ASN:HB2	1:E:247:GLU:OE1	2.10	0.51
1:E:230:ARG:HH11	1:E:230:ARG:HB3	1.75	0.51
1:E:105:LYS:O	1:E:108:ALA:HB3	2.09	0.51
1:A:331:PRO:CD	1:B:140:PHE:HZ	2.23	0.51
1:F:344:GLU:O	1:F:345:LYS:CB	2.58	0.51
1:E:170:TRP:HB3	1:E:202:VAL:CG1	2.40	0.51
1:C:211:GLN:HE21	1:C:264:HIS:CE1	2.28	0.51
1:A:249:ILE:CD1	1:G:258:GLN:HG3	2.40	0.51
1:F:332:HIS:O	1:F:333:LEU:HB2	2.10	0.51
1:B:183:ARG:CG	1:B:193:PRO:HB2	2.40	0.51
1:C:211:GLN:HE21	1:C:264:HIS:HE1	1.57	0.51
1:E:235:LEU:C	1:E:235:LEU:HD23	2.31	0.51
1:G:207:ASN:HB2	1:G:247:GLU:OE1	2.10	0.51
1:G:195:GLU:O	1:G:198:LYS:HB2	2.11	0.51
1:B:254:LEU:H	3:B:359:IMD:H4	1.75	0.51
1:C:323:ARG:HE	1:C:342:ILE:HG13	1.75	0.51
1:A:317:LYS:HE2	1:A:323:ARG:NH2	2.26	0.51
1:G:185:ILE:HG13	1:G:345:LYS:C	2.31	0.51
1:F:218:ALA:O	1:F:220:ASP:N	2.43	0.51
1:B:99:ARG:HH21	1:C:198:LYS:HG2	1.75	0.51
1:A:344:GLU:O	1:A:345:LYS:CB	2.58	0.51
1:B:320:GLY:HA2	3:B:360:IMD:N3	2.25	0.51
1:G:117:SER:HB2	1:G:349:ASP:OXT	2.11	0.51
1:D:114:SER:CA	1:D:121:ASP:OD2	2.58	0.51
1:G:133:ILE:HD13	1:G:269:HIS:ND1	2.26	0.51
1:G:124:LEU:O	1:G:333:LEU:HD21	2.10	0.51
1:D:177:PHE:HE1	1:D:182:ILE:HD11	1.73	0.51
1:D:171:ILE:HD12	1:D:214:LEU:HB3	1.92	0.51
1:F:221:LYS:HZ2	3:F:363:IMD:H4	1.75	0.51
1:G:316:ARG:NH1	1:G:337:GLU:OE2	2.42	0.51
1:B:182:ILE:HG22	1:B:183:ARG:N	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:118:LYS:N	1:E:349:ASP:OD2	2.44	0.51
1:D:128:ILE:O	1:D:128:ILE:HG13	2.09	0.51
1:D:99:ARG:NE	1:D:101:ASP:OD2	2.41	0.51
1:B:146:GLN:HG3	1:B:342:ILE:HD12	1.92	0.51
1:B:178:ARG:HB2	1:B:181:ARG:HB3	1.93	0.51
1:F:258:GLN:CA	1:F:258:GLN:HE21	2.00	0.51
1:A:169:ILE:HD11	1:A:221:LYS:HG2	1.93	0.51
1:B:251:ARG:O	1:B:253:ALA:N	2.44	0.51
1:A:241:THR:OG1	1:A:283:ASN:ND2	2.44	0.51
1:B:142:SER:O	1:B:315:LEU:HD13	2.11	0.51
1:F:237:VAL:HB	1:F:281:VAL:HG12	1.92	0.50
1:G:142:SER:O	1:G:315:LEU:HD13	2.11	0.50
1:F:179:PRO:HG2	1:F:180:GLU:OE2	2.11	0.50
1:G:187:GLN:O	1:G:187:GLN:HG3	2.12	0.50
1:F:184:GLU:OE2	1:F:344:GLU:HA	2.11	0.50
1:E:316:ARG:NH1	1:E:324:ILE:HD12	2.27	0.50
1:E:120:LEU:HD22	1:E:124:LEU:CD1	2.41	0.50
1:A:331:PRO:HD3	1:B:140:PHE:CZ	2.46	0.50
1:A:37:ILE:HG12	1:A:38:GLU:N	2.26	0.50
1:A:212:MSE:HE1	1:A:260:LYS:CD	2.36	0.50
1:C:187:GLN:HB3	1:C:193:PRO:CD	2.40	0.50
1:B:177:PHE:CE1	1:B:182:ILE:HD12	2.46	0.50
1:G:215:VAL:HG21	1:G:264:HIS:NE2	2.26	0.50
1:D:207:ASN:HA	1:D:243:HIS:ND1	2.27	0.50
1:B:101:ASP:OD1	1:B:102:GLU:N	2.44	0.50
1:F:322:LYS:O	1:F:323:ARG:NH1	2.44	0.50
1:B:274:LEU:HD12	1:B:275:TYR:CE2	2.47	0.50
1:D:327:LEU:CD1	1:D:333:LEU:HB3	2.42	0.50
1:A:304:ILE:HG13	1:A:305:LEU:N	2.27	0.50
1:C:258:GLN:O	1:C:259:GLN:C	2.49	0.50
1:D:252:GLY:HA2	6:D:385:HOH:O	2.11	0.50
1:F:100:ALA:HB3	1:G:197:LEU:HA	1.94	0.50
1:F:101:ASP:OD2	1:F:102:GLU:HG2	2.10	0.50
1:A:228:THR:HG22	1:A:230:ARG:H	1.76	0.50
1:A:286:GLN:O	1:A:286:GLN:HG3	2.12	0.50
1:D:137:PHE:CZ	1:D:314:TYR:HB2	2.46	0.50
1:A:142:SER:O	1:A:315:LEU:HD13	2.11	0.50
1:B:330:ALA:N	1:B:331:PRO:HD2	2.15	0.50
1:G:187:GLN:HB3	1:G:193:PRO:HG3	1.92	0.50
1:F:330:ALA:H	1:F:331:PRO:HD2	1.75	0.50
1:G:178:ARG:O	1:G:181:ARG:HB3	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:248:TYR:OH	1:B:260:LYS:HD2	2.12	0.50
1:C:146:GLN:HG3	1:C:342:ILE:HD12	1.93	0.50
1:B:344:GLU:O	1:B:345:LYS:CB	2.60	0.50
1:D:112:ARG:HD2	1:D:126:GLY:HA3	1.93	0.50
1:E:156:GLN:OE1	1:E:199:HIS:HB2	2.12	0.49
1:A:37:ILE:HG23	1:A:39:ASP:OD2	2.12	0.49
1:B:158:PRO:O	1:B:161:GLU:HB2	2.12	0.49
1:E:274:LEU:HD12	1:E:275:TYR:CE2	2.47	0.49
1:E:99:ARG:HE	1:F:198:LYS:HA	1.77	0.49
1:C:269:HIS:HB3	1:D:206:PHE:CD2	2.47	0.49
1:A:107:ARG:HH21	1:B:178:ARG:CZ	2.25	0.49
1:D:326:ARG:HG2	1:D:327:LEU:H	1.76	0.49
1:F:169:ILE:HD11	1:F:221:LYS:HG2	1.94	0.49
1:A:215:VAL:O	1:A:218:ALA:HB3	2.11	0.49
1:F:219:GLU:CD	1:F:270:ARG:HH22	2.14	0.49
1:C:230:ARG:NH1	1:C:230:ARG:HG2	2.27	0.49
1:F:324:ILE:C	1:F:324:ILE:HD13	2.33	0.49
1:B:146:GLN:HE21	1:B:146:GLN:CA	2.20	0.49
1:G:330:ALA:HB3	1:G:331:PRO:CD	2.41	0.49
1:B:254:LEU:HD21	1:C:249:ILE:HG21	1.94	0.49
1:F:304:ILE:HG22	1:F:305:LEU:N	2.27	0.49
1:G:348:GLU:O	1:G:349:ASP:CB	2.57	0.49
1:A:264:HIS:HD2	6:A:429:HOH:O	1.94	0.49
1:A:257:ARG:NH2	1:A:304:ILE:HD13	2.27	0.49
1:C:324:ILE:HD11	1:C:337:GLU:HB3	1.93	0.49
1:F:201:TYR:CD1	1:F:201:TYR:N	2.81	0.49
1:E:192:ASP:HB3	1:E:195:GLU:HB2	1.94	0.49
1:G:179:PRO:O	1:G:182:ILE:HB	2.13	0.49
1:G:184:GLU:HG2	1:G:185:ILE:N	2.27	0.49
1:D:223:LYS:HB2	1:D:223:LYS:HZ2	1.77	0.49
1:F:318:GLY:O	1:F:319:LYS:C	2.51	0.49
1:F:166:GLY:HA3	1:F:233:LYS:HG3	1.95	0.49
1:D:142:SER:O	1:D:323:ARG:HG2	2.12	0.49
1:C:181:ARG:HG3	1:C:181:ARG:HH21	1.76	0.49
1:E:145:THR:HG23	1:E:238:ASP:OD2	2.13	0.49
1:E:120:LEU:HD22	1:E:124:LEU:HD11	1.94	0.49
1:C:330:ALA:H	1:C:331:PRO:CD	2.17	0.49
1:F:185:ILE:HG23	1:F:345:LYS:C	2.32	0.49
1:F:157:LEU:HD12	1:F:163:GLY:H	1.77	0.49
1:A:118:LYS:N	1:A:349:ASP:OXT	2.46	0.49
1:E:254:LEU:HD12	1:E:254:LEU:O	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:201:TYR:CD1	1:G:201:TYR:N	2.80	0.49
1:A:326:ARG:HD3	1:A:337:GLU:CG	2.37	0.49
1:C:185:ILE:HD13	6:C:384:HOH:O	2.12	0.49
1:E:133:ILE:HD13	1:E:269:HIS:ND1	2.28	0.49
1:E:118:LYS:HB2	1:E:349:ASP:OD2	2.12	0.49
1:A:348:GLU:O	1:A:349:ASP:HB2	2.12	0.49
1:B:316:ARG:NH1	1:B:326:ARG:NH2	2.61	0.49
1:B:328:ILE:CD1	1:B:328:ILE:N	2.70	0.49
1:B:249:ILE:HD13	1:B:249:ILE:H	1.78	0.49
1:C:188:ASN:OD1	1:C:344:GLU:CB	2.61	0.49
1:D:214:LEU:O	1:D:218:ALA:HB2	2.13	0.49
1:C:250:GLY:O	1:C:253:ALA:HB3	2.12	0.49
1:F:144:LYS:HG2	2:F:355:SO4:O4	2.12	0.49
1:F:99:ARG:HD2	1:G:198:LYS:O	2.12	0.48
1:D:245:ARG:NH1	1:D:304:ILE:HG22	2.28	0.48
1:F:250:GLY:O	1:F:253:ALA:HB3	2.12	0.48
1:F:333:LEU:HB3	1:F:334:PRO:HD2	1.96	0.48
1:G:332:HIS:O	1:G:333:LEU:CB	2.53	0.48
1:F:221:LYS:HZ3	3:F:363:IMD:H4	1.75	0.48
1:G:160:GLU:OE1	1:G:160:GLU:N	2.46	0.48
1:D:101:ASP:OD1	1:D:102:GLU:N	2.45	0.48
1:F:147:LEU:HA	1:F:347:ILE:CD1	2.43	0.48
1:A:52:ARG:C	1:A:54:ALA:H	2.16	0.48
1:A:241:THR:HB	1:A:304:ILE:HG21	1.95	0.48
1:B:326:ARG:HG2	1:B:327:LEU:N	2.28	0.48
1:B:123:LEU:CD1	1:B:334:PRO:HG2	2.42	0.48
1:B:189:ARG:HG3	1:B:345:LYS:HG2	1.96	0.48
1:E:324:ILE:HD13	1:E:324:ILE:C	2.34	0.48
1:B:314:TYR:HB3	1:B:328:ILE:HD11	1.93	0.48
1:D:182:ILE:HD13	1:D:200:ILE:CD1	2.41	0.48
1:B:205:ALA:O	1:B:243:HIS:HE1	1.97	0.48
1:C:225:LEU:CD2	1:C:225:LEU:H	2.25	0.48
1:C:117:SER:HB2	1:C:349:ASP:OD2	2.13	0.48
1:E:102:GLU:O	1:E:105:LYS:HB3	2.13	0.48
1:C:166:GLY:HA3	1:C:233:LYS:HG3	1.96	0.48
1:C:147:LEU:HD22	1:C:151:LEU:HD22	1.96	0.48
1:E:314:TYR:HB3	1:E:328:ILE:HD11	1.96	0.48
1:E:331:PRO:HG3	1:F:140:PHE:CZ	2.48	0.48
1:D:313:VAL:HG22	1:D:327:LEU:HD23	1.94	0.48
1:B:245:ARG:NH1	1:B:304:ILE:HG22	2.29	0.48
1:C:344:GLU:O	1:C:345:LYS:CB	2.61	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:111:GLY:CA	6:C:404:HOH:O	2.60	0.48
1:A:180:GLU:HG3	1:G:104:LEU:CD1	2.44	0.48
1:B:225:LEU:O	1:B:228:THR:HB	2.14	0.48
1:F:258:GLN:CA	1:F:258:GLN:NE2	2.64	0.48
1:G:188:ASN:O	1:G:345:LYS:HG2	2.14	0.48
1:D:182:ILE:HD12	1:D:197:LEU:CD2	2.44	0.48
1:E:212:MSE:HE1	1:E:260:LYS:HD3	1.94	0.48
1:F:207:ASN:HA	1:F:243:HIS:ND1	2.28	0.48
1:F:117:SER:HB2	1:F:348:GLU:O	2.13	0.48
1:G:105:LYS:O	1:G:108:ALA:HB3	2.14	0.48
1:D:157:LEU:O	1:D:163:GLY:HA3	2.13	0.48
1:G:192:ASP:OD2	1:G:195:GLU:HB2	2.14	0.48
1:F:226:LEU:HD13	1:F:226:LEU:C	2.34	0.48
1:B:101:ASP:HB3	1:C:197:LEU:O	2.14	0.48
1:F:189:ARG:NH2	1:F:189:ARG:HG3	2.29	0.48
1:A:98:MSE:HG2	1:A:102:GLU:HB3	1.96	0.48
1:G:108:ALA:C	1:G:110:ILE:H	2.17	0.48
1:G:146:GLN:HE22	1:G:181:ARG:HE	1.62	0.48
1:C:195:GLU:HA	1:C:198:LYS:HD2	1.95	0.48
1:C:144:LYS:HG2	2:C:352:SO4:O4	2.14	0.48
1:B:201:TYR:N	1:B:201:TYR:CD1	2.81	0.48
1:G:121:ASP:HB3	1:G:126:GLY:O	2.14	0.47
1:G:331:PRO:O	1:G:332:HIS:HB2	2.13	0.47
1:E:243:HIS:O	1:E:247:GLU:HG3	2.13	0.47
1:D:201:TYR:N	1:D:201:TYR:CD1	2.82	0.47
1:C:235:LEU:HD23	1:C:235:LEU:C	2.34	0.47
1:G:211:GLN:HE21	1:G:264:HIS:HE1	1.62	0.47
1:A:304:ILE:HG13	1:A:305:LEU:H	1.79	0.47
1:C:316:ARG:NH1	1:C:337:GLU:OE2	2.43	0.47
1:A:117:SER:O	1:A:121:ASP:OD1	2.32	0.47
1:C:241:THR:OG1	1:C:283:ASN:ND2	2.47	0.47
1:G:225:LEU:HD12	1:G:228:THR:HB	1.96	0.47
1:B:333:LEU:N	1:B:333:LEU:HD12	2.29	0.47
1:E:238:ASP:HA	1:E:239:SER:HA	1.74	0.47
1:F:147:LEU:HA	1:F:347:ILE:HD11	1.97	0.47
1:D:211:GLN:HE21	1:D:264:HIS:CE1	2.33	0.47
1:D:241:THR:OG1	1:D:283:ASN:ND2	2.47	0.47
1:G:316:ARG:NH1	1:G:326:ARG:HH21	2.13	0.47
1:F:188:ASN:ND2	1:F:344:GLU:HG2	2.29	0.47
1:D:133:ILE:HD13	1:D:269:HIS:ND1	2.29	0.47
1:C:186:ALA:HB1	1:C:193:PRO:HA	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:274:LEU:HD12	1:F:275:TYR:CE2	2.49	0.47
1:A:197:LEU:HD11	1:G:104:LEU:HD22	1.96	0.47
1:G:164:LEU:O	1:G:165:ASN:C	2.52	0.47
1:E:201:TYR:N	1:E:201:TYR:CD1	2.82	0.47
1:F:113:ILE:HD11	1:F:164:LEU:CD1	2.43	0.47
1:C:111:GLY:N	6:C:404:HOH:O	2.47	0.47
1:F:211:GLN:HE21	1:F:264:HIS:CE1	2.33	0.47
1:A:274:LEU:HD12	1:A:275:TYR:CE2	2.49	0.47
1:A:243:HIS:O	1:A:247:GLU:HG3	2.14	0.47
1:E:123:LEU:HG	1:E:327:LEU:CD1	2.45	0.47
1:D:189:ARG:NE	1:D:345:LYS:HB3	2.28	0.47
1:A:201:TYR:N	1:A:201:TYR:CD1	2.83	0.47
1:A:225:LEU:O	1:A:228:THR:HB	2.15	0.47
1:G:251:ARG:HD3	1:G:252:GLY:N	2.29	0.47
1:B:302:GLY:C	1:B:304:ILE:N	2.67	0.47
1:G:157:LEU:O	1:G:163:GLY:HA3	2.14	0.47
1:A:76:ILE:HD13	1:A:76:ILE:N	2.30	0.47
1:B:183:ARG:HG2	1:B:183:ARG:HH11	1.80	0.47
1:B:188:ASN:OD1	1:B:344:GLU:HB3	2.14	0.47
1:F:211:GLN:HE21	1:F:264:HIS:HE1	1.62	0.47
1:G:241:THR:OG1	1:G:283:ASN:ND2	2.48	0.47
1:A:115:THR:CB	1:A:120:LEU:HD23	2.44	0.47
1:B:304:ILE:HD13	1:B:304:ILE:C	2.34	0.47
1:G:228:THR:CG2	1:G:229:ASP:N	2.78	0.47
1:A:251:ARG:NH1	1:A:251:ARG:HG3	2.29	0.47
1:E:333:LEU:HD12	1:E:334:PRO:HD2	1.97	0.47
1:C:254:LEU:HD12	1:C:254:LEU:O	2.14	0.47
1:A:228:THR:CG2	1:A:229:ASP:N	2.77	0.47
1:F:241:THR:OG1	1:F:283:ASN:ND2	2.47	0.47
1:D:348:GLU:O	1:D:349:ASP:HB2	2.14	0.47
1:F:235:LEU:HD23	1:F:235:LEU:C	2.35	0.47
1:D:183:ARG:C	1:D:185:ILE:N	2.68	0.47
1:A:249:ILE:H	1:A:249:ILE:HD12	1.73	0.47
1:A:230:ARG:NH1	1:A:230:ARG:HG2	2.30	0.47
1:E:327:LEU:O	1:E:328:ILE:HD12	2.15	0.46
1:F:332:HIS:C	1:F:333:LEU:HD12	2.35	0.46
1:C:328:ILE:O	1:C:329:ASP:HB3	2.15	0.46
1:E:213:LEU:O	1:E:217:GLN:HG3	2.14	0.46
1:C:123:LEU:HD21	1:C:336:GLY:O	2.14	0.46
1:D:304:ILE:HG12	1:D:305:LEU:N	2.30	0.46
1:D:170:TRP:CE3	1:D:236:ILE:HD12	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:243:HIS:O	1:F:247:GLU:HG3	2.14	0.46
1:A:137:PHE:CZ	1:A:314:TYR:HB2	2.49	0.46
1:E:331:PRO:CG	1:F:140:PHE:HZ	2.29	0.46
1:F:104:LEU:HB2	1:G:179:PRO:HB2	1.96	0.46
1:D:146:GLN:HE22	1:D:181:ARG:HE	1.63	0.46
1:F:219:GLU:O	1:F:223:LYS:HG3	2.15	0.46
1:C:192:ASP:OD2	1:C:195:GLU:HB2	2.15	0.46
1:F:171:ILE:HD12	1:F:214:LEU:HB3	1.97	0.46
1:F:180:GLU:H	1:F:180:GLU:CD	2.18	0.46
1:G:235:LEU:C	1:G:235:LEU:HD23	2.36	0.46
1:D:97:PHE:HE2	1:E:171:ILE:CD1	2.27	0.46
1:C:187:GLN:CB	1:C:193:PRO:HD3	2.44	0.46
1:C:201:TYR:CD1	1:C:201:TYR:N	2.83	0.46
1:G:192:ASP:HA	1:G:193:PRO:HD2	1.74	0.46
1:F:156:GLN:OE1	1:F:199:HIS:HB2	2.15	0.46
1:A:104:LEU:HD12	1:B:180:GLU:HG3	1.98	0.46
1:D:332:HIS:CE1	1:E:178:ARG:NE	2.78	0.46
1:C:348:GLU:HG2	1:C:349:ASP:N	2.30	0.46
1:G:329:ASP:HB3	1:G:330:ALA:H	1.52	0.46
1:B:99:ARG:NE	1:B:101:ASP:OD2	2.48	0.46
1:G:327:LEU:CD1	1:G:327:LEU:N	2.79	0.46
1:C:274:LEU:HD12	1:C:275:TYR:CE2	2.51	0.46
1:B:166:GLY:HA3	1:B:233:LYS:HG3	1.98	0.46
1:A:124:LEU:HD12	1:A:127:GLY:HA2	1.97	0.46
1:E:332:HIS:O	1:E:333:LEU:CB	2.63	0.46
1:A:158:PRO:HB3	1:A:160:GLU:OE1	2.16	0.46
1:B:235:LEU:C	1:B:235:LEU:HD23	2.36	0.46
1:D:187:GLN:NE2	1:D:193:PRO:HG3	2.31	0.46
1:D:313:VAL:HG22	1:D:327:LEU:CD2	2.46	0.46
1:D:323:ARG:HD2	1:D:323:ARG:N	2.31	0.46
1:G:120:LEU:CD2	1:G:124:LEU:HD12	2.45	0.46
1:A:80:THR:O	1:A:84:ILE:HG12	2.15	0.46
1:C:225:LEU:C	1:C:231:PRO:HA	2.35	0.46
1:B:187:GLN:HG3	1:B:188:ASN:H	1.79	0.46
1:C:316:ARG:HG2	1:C:324:ILE:HG23	1.98	0.46
1:E:237:VAL:HB	1:E:281:VAL:HG12	1.98	0.46
1:D:186:ALA:O	1:D:188:ASN:N	2.40	0.46
1:E:286:GLN:H	1:E:303:HIS:HE1	1.56	0.46
1:A:189:ARG:NH2	1:A:345:LYS:O	2.49	0.46
1:B:189:ARG:NE	1:B:345:LYS:HB3	2.30	0.46
1:C:119:SER:O	1:C:122:LYS:HB3	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:140:PHE:HB2	1:G:284:GLN:OE1	2.16	0.46
1:B:137:PHE:HZ	1:B:328:ILE:HG12	1.82	0.45
1:D:221:LYS:O	1:D:225:LEU:HD13	2.16	0.45
1:D:207:ASN:CA	1:D:243:HIS:ND1	2.79	0.45
1:F:118:LYS:O	1:F:122:LYS:HG3	2.16	0.45
1:B:323:ARG:HE	1:B:342:ILE:CG1	2.26	0.45
1:E:133:ILE:HD11	1:E:269:HIS:HA	1.99	0.45
1:A:221:LYS:HG3	1:A:225:LEU:CD1	2.41	0.45
1:E:230:ARG:CB	1:E:230:ARG:HH11	2.28	0.45
1:E:211:GLN:HE21	1:E:264:HIS:CE1	2.33	0.45
1:D:326:ARG:NH1	1:D:337:GLU:OE2	2.49	0.45
1:A:146:GLN:HE22	1:A:181:ARG:NE	2.14	0.45
1:G:243:HIS:O	1:G:247:GLU:HG3	2.16	0.45
1:B:285:VAL:O	1:B:285:VAL:HG13	2.16	0.45
1:F:157:LEU:HD13	1:F:161:GLU:HB3	1.98	0.45
1:G:303:HIS:CG	1:G:304:ILE:N	2.84	0.45
1:D:243:HIS:O	1:D:247:GLU:HG3	2.16	0.45
1:G:106:LYS:C	1:G:108:ALA:H	2.20	0.45
1:C:322:LYS:HG2	1:C:341:SER:HB3	1.98	0.45
1:C:237:VAL:HB	1:C:281:VAL:HG12	1.98	0.45
1:E:158:PRO:HD2	1:E:161:GLU:HG3	1.98	0.45
1:A:158:PRO:HA	1:A:159:PRO:HD3	1.86	0.45
1:A:77:SER:OG	1:A:80:THR:HG23	2.17	0.45
1:C:158:PRO:HA	1:C:159:PRO:HD3	1.85	0.45
1:A:99:ARG:O	1:A:102:GLU:N	2.49	0.45
1:A:160:GLU:OE2	1:A:160:GLU:N	2.49	0.45
1:A:156:GLN:OE1	1:A:199:HIS:HB2	2.16	0.45
1:A:258:GLN:CG	1:B:249:ILE:HD11	2.47	0.45
1:C:269:HIS:HB3	1:D:206:PHE:CE2	2.52	0.45
1:G:305:LEU:HG	1:G:306:ALA:N	2.31	0.45
1:G:344:GLU:O	1:G:345:LYS:CB	2.61	0.45
1:F:245:ARG:HB3	1:F:304:ILE:CD1	2.41	0.45
1:A:43:VAL:HG23	1:A:84:ILE:HD12	1.98	0.45
1:B:182:ILE:HD13	1:B:200:ILE:CD1	2.47	0.45
1:B:185:ILE:HA	6:B:386:HOH:O	2.16	0.45
1:E:211:GLN:HE21	1:E:264:HIS:HE1	1.64	0.45
1:D:307:HIS:ND1	1:D:308:SER:N	2.65	0.45
1:E:333:LEU:CD1	1:E:334:PRO:HD2	2.47	0.45
1:D:169:ILE:HG13	1:D:222:ILE:CD1	2.33	0.45
1:D:185:ILE:O	1:D:189:ARG:HG2	2.17	0.45
1:C:159:PRO:HA	1:C:163:GLY:O	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:182:ILE:O	1:B:183:ARG:C	2.54	0.45
1:G:274:LEU:HD12	1:G:275:TYR:CE2	2.52	0.45
1:D:305:LEU:HB2	1:D:312:ARG:HH21	1.82	0.45
1:A:251:ARG:HE	1:B:251:ARG:HH22	1.64	0.45
1:F:170:TRP:CE3	1:F:236:ILE:HD12	2.52	0.45
1:D:211:GLN:HE21	1:D:264:HIS:HE1	1.65	0.45
1:A:265:LEU:HD21	1:A:306:ALA:HA	1.98	0.45
1:E:117:SER:HB3	1:E:347:ILE:HG22	1.98	0.45
1:D:158:PRO:HA	1:D:159:PRO:HD3	1.81	0.45
1:A:324:ILE:HD12	1:A:325:ALA:N	2.32	0.45
1:A:164:LEU:O	1:A:165:ASN:C	2.56	0.45
1:B:219:GLU:CD	1:B:270:ARG:NH2	2.69	0.45
1:A:146:GLN:HG2	6:A:421:HOH:O	2.17	0.45
1:B:115:THR:HA	1:B:151:LEU:CD1	2.47	0.45
1:A:318:GLY:O	1:A:319:LYS:C	2.54	0.45
1:C:181:ARG:CZ	1:C:185:ILE:HD11	2.47	0.44
1:F:218:ALA:O	1:F:221:LYS:N	2.50	0.44
1:A:258:GLN:HG3	1:B:249:ILE:HD11	1.99	0.44
1:F:142:SER:O	1:F:315:LEU:HD13	2.17	0.44
1:A:49:GLU:HA	1:A:49:GLU:OE2	2.15	0.44
1:F:140:PHE:HB2	1:F:284:GLN:OE1	2.17	0.44
1:D:328:ILE:O	1:D:329:ASP:HB3	2.16	0.44
1:F:222:ILE:HD12	1:F:222:ILE:N	2.32	0.44
1:F:146:GLN:NE2	1:F:181:ARG:HE	2.15	0.44
1:C:224:GLU:N	1:C:224:GLU:OE1	2.50	0.44
1:B:97:PHE:O	1:B:98:MSE:C	2.56	0.44
1:D:166:GLY:HA3	1:D:233:LYS:HG3	1.99	0.44
1:G:238:ASP:HA	1:G:239:SER:HA	1.70	0.44
1:D:115:THR:O	1:D:150:THR:HG21	2.17	0.44
1:E:101:ASP:OD1	1:E:102:GLU:N	2.50	0.44
1:F:192:ASP:O	1:F:195:GLU:N	2.49	0.44
1:B:179:PRO:HD2	1:B:180:GLU:OE1	2.16	0.44
1:A:113:ILE:HD12	1:A:164:LEU:HG	1.98	0.44
1:C:181:ARG:HG3	1:C:181:ARG:NH2	2.32	0.44
1:B:123:LEU:HA	1:B:334:PRO:HG3	1.98	0.44
1:B:183:ARG:HG2	1:B:183:ARG:NH1	2.33	0.44
1:A:286:GLN:CA	1:A:286:GLN:NE2	2.80	0.44
1:F:207:ASN:CA	1:F:243:HIS:ND1	2.81	0.44
1:E:250:GLY:O	1:E:253:ALA:HB3	2.16	0.44
1:G:285:VAL:HG13	1:G:285:VAL:O	2.18	0.44
1:G:192:ASP:O	1:G:194:ASP:N	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:328:ILE:O	1:C:329:ASP:CB	2.65	0.44
1:A:243:HIS:HD2	1:G:307:HIS:HE1	1.64	0.44
1:B:181:ARG:HD2	1:B:181:ARG:O	2.16	0.44
1:B:210:HIS:O	1:B:213:LEU:HB3	2.18	0.44
1:B:160:GLU:CD	1:B:160:GLU:H	2.20	0.44
1:E:241:THR:OG1	1:E:283:ASN:ND2	2.51	0.44
1:A:107:ARG:HH21	1:B:178:ARG:NE	2.16	0.44
1:B:254:LEU:H	3:B:359:IMD:C4	2.31	0.44
1:B:185:ILE:O	1:B:189:ARG:HB2	2.18	0.44
1:A:245:ARG:NH1	1:A:304:ILE:HG22	2.32	0.44
1:G:99:ARG:HH11	1:G:99:ARG:CB	2.31	0.44
1:D:195:GLU:HA	1:D:198:LYS:HD2	1.99	0.44
1:F:222:ILE:O	1:F:226:LEU:HB2	2.17	0.44
1:A:332:HIS:O	1:A:333:LEU:CB	2.59	0.44
1:A:320:GLY:HA2	3:A:361:IMD:HN3	1.82	0.44
1:B:212:MSE:O	1:B:216:GLN:HG3	2.17	0.44
1:B:251:ARG:HH21	1:B:251:ARG:HG2	1.83	0.44
1:E:113:ILE:O	1:E:127:GLY:HA3	2.18	0.44
1:A:201:TYR:CZ	1:A:225:LEU:HD21	2.53	0.43
1:C:186:ALA:CB	1:C:193:PRO:HA	2.48	0.43
1:B:187:GLN:CG	1:B:188:ASN:N	2.80	0.43
1:C:285:VAL:HG13	1:C:285:VAL:O	2.18	0.43
1:C:160:GLU:CD	1:C:160:GLU:H	2.20	0.43
1:F:123:LEU:HD22	1:F:338:ALA:CB	2.48	0.43
1:A:97:PHE:HE2	1:B:171:ILE:CD1	2.31	0.43
1:G:182:ILE:CG2	1:G:196:VAL:HG11	2.48	0.43
1:D:329:ASP:HB2	1:D:331:PRO:HD2	2.00	0.43
1:G:257:ARG:O	1:G:261:LEU:HB2	2.18	0.43
1:B:340:PHE:CD1	1:B:347:ILE:HG23	2.53	0.43
1:A:133:ILE:HD13	1:A:269:HIS:ND1	2.33	0.43
1:E:331:PRO:HG3	1:F:140:PHE:HZ	1.83	0.43
1:F:286:GLN:CD	1:F:286:GLN:N	2.72	0.43
1:E:185:ILE:HG23	1:E:345:LYS:C	2.38	0.43
1:B:170:TRP:CE3	1:B:236:ILE:HD12	2.54	0.43
1:A:251:ARG:HG2	1:B:251:ARG:CG	2.48	0.43
1:G:327:LEU:C	1:G:328:ILE:HD12	2.37	0.43
1:C:265:LEU:HD21	1:C:306:ALA:HB1	1.99	0.43
1:C:140:PHE:HB2	1:C:284:GLN:OE1	2.18	0.43
1:E:166:GLY:HA3	1:E:233:LYS:HG3	1.99	0.43
1:E:334:PRO:C	1:E:335:GLU:HG3	2.38	0.43
1:F:104:LEU:HB2	1:G:179:PRO:CB	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:164:LEU:HD12	1:A:233:LYS:HD3	2.00	0.43
1:D:323:ARG:NH1	1:D:323:ARG:HG3	2.34	0.43
1:A:52:ARG:C	1:A:54:ALA:N	2.71	0.43
1:D:170:TRP:HB3	1:D:202:VAL:HG13	2.00	0.43
1:A:147:LEU:HA	1:A:347:ILE:CD1	2.48	0.43
1:F:115:THR:HA	1:F:151:LEU:CD1	2.48	0.43
1:D:196:VAL:C	1:D:198:LYS:H	2.21	0.43
1:C:251:ARG:CZ	1:D:251:ARG:HA	2.47	0.43
1:A:158:PRO:O	1:A:161:GLU:HB2	2.18	0.43
1:A:201:TYR:CD2	1:A:221:LYS:HD3	2.53	0.43
1:F:129:GLU:HG3	6:F:396:HOH:O	2.19	0.43
1:G:196:VAL:C	1:G:198:LYS:N	2.70	0.43
1:G:115:THR:O	1:G:150:THR:HG21	2.19	0.43
1:C:224:GLU:O	1:C:226:LEU:N	2.51	0.43
1:F:196:VAL:C	1:F:198:LYS:H	2.22	0.43
1:F:240:LEU:HD21	1:F:265:LEU:HD11	2.00	0.43
1:F:269:HIS:NE2	1:F:308:SER:HB3	2.34	0.43
1:A:323:ARG:HH11	1:A:323:ARG:HG3	1.83	0.43
1:B:322:LYS:HZ2	1:B:341:SER:HB3	1.82	0.43
1:D:193:PRO:HA	1:D:196:VAL:HG23	2.00	0.43
1:E:269:HIS:HB3	1:F:206:PHE:CD2	2.53	0.43
1:B:118:LYS:N	1:B:349:ASP:HB2	2.27	0.43
1:D:115:THR:HA	1:D:151:LEU:CD1	2.49	0.43
1:B:219:GLU:OE1	1:B:270:ARG:NH2	2.52	0.43
1:C:263:LYS:HD3	1:C:267:ASP:OD2	2.17	0.43
1:D:123:LEU:HD23	1:D:123:LEU:C	2.38	0.43
1:D:328:ILE:N	1:D:328:ILE:HD12	2.33	0.43
1:C:101:ASP:O	1:C:104:LEU:HB3	2.18	0.43
1:G:324:ILE:HD11	1:G:337:GLU:HB3	2.01	0.43
1:E:113:ILE:N	1:E:113:ILE:HD13	2.33	0.43
1:D:97:PHE:HE2	1:E:171:ILE:HD13	1.82	0.43
1:B:147:LEU:HD22	1:B:151:LEU:HD22	2.01	0.43
1:B:238:ASP:HA	1:B:239:SER:HA	1.72	0.43
1:A:168:VAL:HG22	1:A:234:LEU:HB3	1.99	0.43
1:C:124:LEU:HA	1:C:333:LEU:HD23	2.00	0.43
1:A:303:HIS:ND1	1:A:303:HIS:C	2.72	0.43
1:F:98:MSE:O	1:G:201:TYR:HA	2.19	0.43
1:D:237:VAL:HB	1:D:281:VAL:HG12	2.01	0.43
1:D:147:LEU:HD22	1:D:151:LEU:HD22	2.01	0.43
1:B:243:HIS:O	1:B:247:GLU:HG3	2.19	0.43
1:A:98:MSE:CG	1:A:102:GLU:HB3	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:340:PHE:HA	1:D:349:ASP:C	2.39	0.43
1:B:128:ILE:HG13	1:B:128:ILE:O	2.17	0.43
1:B:316:ARG:HG2	1:B:324:ILE:HG23	2.01	0.42
1:F:305:LEU:HD23	1:F:305:LEU:N	2.33	0.42
1:A:171:ILE:CD1	1:G:97:PHE:CE1	3.00	0.42
1:E:324:ILE:HA	1:E:338:ALA:O	2.19	0.42
1:C:265:LEU:HD21	1:C:306:ALA:CB	2.49	0.42
1:F:218:ALA:O	1:F:222:ILE:HD13	2.19	0.42
1:B:207:ASN:HB2	1:B:247:GLU:OE1	2.19	0.42
1:B:187:GLN:C	1:B:189:ARG:N	2.71	0.42
1:C:119:SER:H	1:C:349:ASP:CG	2.21	0.42
1:F:100:ALA:HB2	1:G:200:ILE:HB	2.00	0.42
1:B:118:LYS:HB2	1:B:349:ASP:CG	2.39	0.42
1:B:274:LEU:HD13	1:B:274:LEU:O	2.19	0.42
1:D:274:LEU:HD12	1:D:275:TYR:CE2	2.54	0.42
1:D:140:PHE:HB2	1:D:284:GLN:OE1	2.19	0.42
1:D:146:GLN:HE21	1:D:146:GLN:CA	2.23	0.42
1:G:340:PHE:CD1	1:G:347:ILE:HG23	2.54	0.42
1:C:222:ILE:CG2	1:C:277:ILE:HD11	2.49	0.42
1:D:324:ILE:HB	1:D:339:VAL:HG22	1.99	0.42
1:B:223:LYS:O	1:B:226:LEU:CB	2.67	0.42
1:B:228:THR:CG2	1:B:229:ASP:N	2.82	0.42
1:C:221:LYS:O	1:C:225:LEU:HD23	2.19	0.42
1:C:340:PHE:CD1	1:C:347:ILE:HG23	2.54	0.42
1:A:105:LYS:HE3	1:A:105:LYS:HA	2.02	0.42
1:D:112:ARG:HD3	1:D:125:GLY:O	2.20	0.42
1:F:320:GLY:C	1:F:322:LYS:H	2.23	0.42
1:F:251:ARG:N	1:F:251:ARG:CD	2.79	0.42
1:B:147:LEU:HA	1:B:347:ILE:CD1	2.49	0.42
1:B:223:LYS:O	1:B:226:LEU:HB3	2.20	0.42
1:F:227:ASN:ND2	1:F:227:ASN:H	2.18	0.42
1:B:105:LYS:NZ	1:B:109:THR:HG21	2.34	0.42
1:E:331:PRO:HB3	1:F:140:PHE:HZ	1.85	0.42
1:A:333:LEU:HB3	1:A:334:PRO:HD2	2.02	0.42
1:E:170:TRP:CE3	1:E:236:ILE:HD12	2.55	0.42
1:B:188:ASN:HD22	1:B:188:ASN:HA	1.59	0.42
1:F:147:LEU:HG	1:F:347:ILE:CD1	2.50	0.42
1:C:316:ARG:HG2	1:C:324:ILE:CG2	2.50	0.42
1:A:97:PHE:N	1:A:97:PHE:CD1	2.88	0.42
1:D:265:LEU:HD12	1:D:265:LEU:HA	1.80	0.42
1:A:235:LEU:HD23	1:A:235:LEU:C	2.40	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:323:ARG:HG3	1:A:323:ARG:NH1	2.34	0.42
1:E:123:LEU:CG	1:E:327:LEU:HD13	2.50	0.42
1:A:225:LEU:CD1	1:A:225:LEU:N	2.83	0.42
1:F:190:GLY:C	1:F:191:LEU:HD23	2.40	0.42
1:A:66:SER:OG	1:A:69:GLU:HG3	2.20	0.42
1:F:330:ALA:N	1:F:331:PRO:CD	2.82	0.42
1:E:147:LEU:HA	1:E:347:ILE:CD1	2.50	0.42
1:C:219:GLU:CD	1:C:270:ARG:HH22	2.23	0.42
1:B:186:ALA:HB2	1:B:196:VAL:HG21	2.01	0.42
1:B:323:ARG:HG3	1:B:323:ARG:NH2	2.32	0.42
1:F:218:ALA:O	1:F:219:GLU:C	2.58	0.42
1:D:139:GLU:CD	1:D:286:GLN:HG2	2.38	0.42
1:E:115:THR:HA	1:E:151:LEU:CD1	2.50	0.42
1:B:328:ILE:CD1	1:B:328:ILE:H	2.26	0.41
1:A:76:ILE:HD13	1:A:76:ILE:H	1.85	0.41
1:B:112:ARG:H	1:B:164:LEU:HD21	1.85	0.41
1:F:142:SER:C	1:F:323:ARG:HD2	2.40	0.41
1:D:225:LEU:H	1:D:225:LEU:CD1	2.33	0.41
1:D:238:ASP:HA	1:D:239:SER:HA	1.68	0.41
1:A:317:LYS:HG3	1:A:323:ARG:CZ	2.45	0.41
1:E:329:ASP:CG	1:E:330:ALA:N	2.74	0.41
1:E:332:HIS:O	1:E:333:LEU:HB2	2.19	0.41
1:G:189:ARG:HE	1:G:345:LYS:HB3	1.85	0.41
1:G:333:LEU:CB	1:G:334:PRO:HD2	2.50	0.41
1:C:179:PRO:HB2	1:C:197:LEU:HD11	2.01	0.41
1:A:171:ILE:HD11	1:G:97:PHE:CE1	2.54	0.41
1:C:285:VAL:O	1:C:286:GLN:HB2	2.20	0.41
1:A:104:LEU:HD23	1:A:105:LYS:HD2	2.02	0.41
1:B:147:LEU:HA	1:B:347:ILE:HD11	2.01	0.41
1:B:171:ILE:HD12	1:B:214:LEU:HB3	2.02	0.41
1:C:243:HIS:O	1:C:247:GLU:HG3	2.21	0.41
1:E:219:GLU:CD	1:E:270:ARG:HH22	2.20	0.41
1:B:322:LYS:HZ3	1:B:341:SER:HB3	1.86	0.41
1:C:100:ALA:HB2	1:D:200:ILE:HB	2.03	0.41
1:F:146:GLN:CA	1:F:146:GLN:HE21	2.21	0.41
1:F:181:ARG:O	1:F:185:ILE:HG13	2.20	0.41
1:E:119:SER:CB	1:E:349:ASP:OD1	2.67	0.41
1:C:115:THR:HA	1:C:151:LEU:CD1	2.50	0.41
1:D:175:ASN:H	1:D:204:ARG:NH1	2.18	0.41
1:E:229:ASP:O	1:E:231:PRO:HD3	2.20	0.41
1:A:230:ARG:HH11	1:A:230:ARG:HG2	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:113:ILE:HD11	1:E:164:LEU:CD1	2.51	0.41
1:B:105:LYS:O	1:B:108:ALA:HB3	2.21	0.41
1:A:62:ILE:HG23	1:A:70:LEU:HD11	2.02	0.41
1:B:113:ILE:HD13	1:B:113:ILE:N	2.34	0.41
1:A:37:ILE:HD13	6:A:430:HOH:O	2.20	0.41
1:G:329:ASP:O	1:G:330:ALA:CB	2.68	0.41
1:A:258:GLN:CG	1:B:249:ILE:CD1	2.96	0.41
1:F:113:ILE:CD1	1:F:164:LEU:CD1	2.98	0.41
1:E:213:LEU:HD13	1:E:217:GLN:OE1	2.20	0.41
1:A:147:LEU:O	1:A:147:LEU:HD23	2.21	0.41
1:D:207:ASN:N	1:D:243:HIS:CE1	2.89	0.41
1:G:305:LEU:HG	1:G:307:HIS:N	2.34	0.41
1:D:187:GLN:CD	1:D:193:PRO:HG3	2.40	0.41
1:E:157:LEU:O	1:E:163:GLY:HA3	2.20	0.41
1:D:323:ARG:HH11	1:D:323:ARG:HG3	1.85	0.41
1:F:170:TRP:HB3	1:F:202:VAL:HG13	2.02	0.41
1:B:221:LYS:HE2	1:B:225:LEU:CD2	2.51	0.41
1:F:258:GLN:HG3	1:G:249:ILE:HD12	2.01	0.41
1:G:182:ILE:O	1:G:185:ILE:HG23	2.20	0.41
1:A:348:GLU:O	1:A:349:ASP:CB	2.69	0.41
1:F:147:LEU:CA	1:F:347:ILE:HD11	2.50	0.41
1:E:147:LEU:HD22	1:E:151:LEU:HD22	2.02	0.41
1:G:147:LEU:HD22	1:G:151:LEU:HD22	2.02	0.41
1:G:120:LEU:O	1:G:121:ASP:C	2.59	0.41
1:C:170:TRP:HB3	1:C:202:VAL:HG13	1.98	0.41
1:A:209:ASN:O	1:A:213:LEU:HB2	2.20	0.41
1:A:142:SER:HB2	1:A:315:LEU:HD12	2.02	0.41
1:F:238:ASP:HA	1:F:239:SER:HA	1.73	0.41
1:F:316:ARG:HG2	1:F:324:ILE:CG2	2.51	0.41
1:D:154:MSE:O	1:D:157:LEU:HG	2.19	0.41
1:D:187:GLN:O	1:D:187:GLN:HG3	2.21	0.41
1:D:186:ALA:C	1:D:188:ASN:H	2.24	0.41
1:G:156:GLN:HE21	1:G:196:VAL:HG13	1.81	0.41
1:B:254:LEU:HD21	1:C:249:ILE:CG2	2.51	0.41
1:G:116:GLY:O	1:G:348:GLU:HA	2.21	0.41
1:G:158:PRO:HA	1:G:159:PRO:HD3	1.87	0.41
1:G:314:TYR:CB	1:G:328:ILE:HD11	2.50	0.41
1:F:265:LEU:HD12	1:F:265:LEU:HA	1.89	0.41
1:D:97:PHE:CD2	1:E:203:ALA:HB2	2.55	0.41
1:C:265:LEU:HD21	1:C:306:ALA:HA	2.03	0.41
1:C:131:GLN:HA	1:C:272:ALA:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:237:VAL:HB	1:G:281:VAL:HG12	2.02	0.41
1:B:191:LEU:HD23	1:B:191:LEU:HA	1.92	0.41
1:G:120:LEU:HD22	1:G:124:LEU:HD12	2.03	0.41
1:G:122:LYS:C	1:G:124:LEU:N	2.74	0.41
1:G:122:LYS:O	1:G:124:LEU:N	2.53	0.41
1:C:187:GLN:HB3	1:C:193:PRO:CG	2.50	0.41
1:E:221:LYS:HA	1:E:221:LYS:HD2	1.86	0.41
1:C:286:GLN:NE2	1:C:286:GLN:CA	2.82	0.41
1:B:348:GLU:OE2	1:B:348:GLU:O	2.39	0.41
1:G:184:GLU:O	1:G:186:ALA:N	2.54	0.40
1:D:323:ARG:HD3	1:D:342:ILE:HD11	2.04	0.40
1:D:308:SER:HB3	1:D:309:ALA:H	1.72	0.40
1:D:100:ALA:HB3	1:E:197:LEU:O	2.21	0.40
1:D:158:PRO:HD2	1:D:161:GLU:OE2	2.21	0.40
1:C:251:ARG:HH21	1:D:251:ARG:CA	2.25	0.40
1:F:219:GLU:HG3	1:F:219:GLU:O	2.20	0.40
1:A:344:GLU:N	1:A:344:GLU:CD	2.72	0.40
1:A:170:TRP:CE3	1:A:236:ILE:HD12	2.56	0.40
1:F:192:ASP:HA	1:F:193:PRO:HD2	1.96	0.40
1:D:136:VAL:HG13	1:D:136:VAL:O	2.21	0.40
1:G:166:GLY:HA3	1:G:233:LYS:HG3	2.02	0.40
1:D:195:GLU:O	1:D:198:LYS:HB2	2.22	0.40
1:G:183:ARG:HH22	1:G:194:ASP:CG	2.23	0.40
1:G:122:LYS:C	1:G:124:LEU:H	2.25	0.40
1:E:205:ALA:O	1:E:243:HIS:HE1	2.03	0.40
1:A:183:ARG:HE	1:A:193:PRO:HB2	1.87	0.40
1:A:136:VAL:O	1:A:136:VAL:HG13	2.21	0.40
1:D:147:LEU:HA	1:D:347:ILE:CD1	2.52	0.40
1:D:147:LEU:HG	1:D:347:ILE:CD1	2.52	0.40
1:G:261:LEU:HD13	1:G:304:ILE:HD11	2.04	0.40
1:G:212:MSE:HE1	1:G:260:LYS:HD3	2.03	0.40
1:E:140:PHE:HB2	1:E:284:GLN:OE1	2.21	0.40
1:E:156:GLN:HE21	1:E:196:VAL:HG13	1.79	0.40
1:G:225:LEU:HD12	1:G:225:LEU:O	2.21	0.40
1:A:60:GLU:HA	1:A:63:ALA:HB3	2.03	0.40
1:F:157:LEU:HD13	1:F:161:GLU:HB2	2.03	0.40
1:A:179:PRO:HD2	1:A:180:GLU:OE1	2.21	0.40
1:A:184:GLU:O	1:A:185:ILE:C	2.60	0.40
1:F:207:ASN:N	1:F:243:HIS:CE1	2.90	0.40
1:E:318:GLY:O	1:E:319:LYS:O	2.39	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	296/349 (85%)	265 (90%)	20 (7%)	11 (4%)	4 14
1	B	235/349 (67%)	203 (86%)	25 (11%)	7 (3%)	5 19
1	C	235/349 (67%)	199 (85%)	25 (11%)	11 (5%)	3 9
1	D	235/349 (67%)	199 (85%)	26 (11%)	10 (4%)	3 11
1	E	235/349 (67%)	212 (90%)	15 (6%)	8 (3%)	5 16
1	F	235/349 (67%)	207 (88%)	23 (10%)	5 (2%)	9 29
1	G	234/349 (67%)	187 (80%)	31 (13%)	16 (7%)	1 3
All	All	1705/2443 (70%)	1472 (86%)	165 (10%)	68 (4%)	4 12

All (68) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	41	PRO
1	A	319	LYS
1	A	334	PRO
1	B	329	ASP
1	B	330	ALA
1	C	329	ASP
1	C	330	ALA
1	D	191	LEU
1	D	319	LYS
1	D	329	ASP
1	D	330	ALA
1	E	303	HIS
1	E	319	LYS
1	E	329	ASP
1	E	330	ALA
1	E	334	PRO
1	F	319	LYS
1	G	184	GLU

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Mol	Chain	Res	Type
1	G	191	LEU
1	G	197	LEU
1	G	225	LEU
1	G	330	ALA
1	G	333	LEU
1	G	334	PRO
1	A	184	GLU
1	A	185	ILE
1	B	252	GLY
1	B	319	LYS
1	C	197	LEU
1	C	225	LEU
1	C	253	ALA
1	D	250	GLY
1	D	308	SER
1	E	332	HIS
1	F	219	GLU
1	G	185	ILE
1	G	224	GLU
1	G	329	ASP
1	A	303	HIS
1	A	329	ASP
1	B	188	ASN
1	C	186	ALA
1	C	224	GLU
1	C	319	LYS
1	D	184	GLU
1	D	186	ALA
1	F	197	LEU
1	F	332	HIS
1	G	193	PRO
1	G	223	LYS
1	G	326	ARG
1	C	188	ASN
1	D	197	LEU
1	G	123	LEU
1	D	164	LEU
1	E	253	ALA
1	E	333	LEU
1	G	122	LYS
1	G	307	HIS
1	A	37	ILE

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Mol	Chain	Res	Type
1	A	330	ALA
1	A	333	LEU
1	C	334	PRO
1	A	192	ASP
1	B	333	LEU
1	B	334	PRO
1	C	333	LEU
1	F	334	PRO

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	242/279 (87%)	217 (90%)	25 (10%)	9 24
1	B	199/279 (71%)	176 (88%)	23 (12%)	7 18
1	C	199/279 (71%)	180 (90%)	19 (10%)	11 28
1	D	199/279 (71%)	175 (88%)	24 (12%)	6 16
1	E	199/279 (71%)	179 (90%)	20 (10%)	9 25
1	F	199/279 (71%)	175 (88%)	24 (12%)	6 16
1	G	199/279 (71%)	179 (90%)	20 (10%)	9 25
All	All	1436/1953 (74%)	1281 (89%)	155 (11%)	8 21

All (155) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	35	ARG
1	A	37	ILE
1	A	41	PRO
1	A	64	VAL
1	A	76	ILE
1	A	93	ASN
1	A	94	LEU
1	A	102	GLU
1	A	104	LEU

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Mol	Chain	Res	Type
1	A	107	ARG
1	A	112	ARG
1	A	121	ASP
1	A	129	GLU
1	A	147	LEU
1	A	151	LEU
1	A	187	GLN
1	A	202	VAL
1	A	254	LEU
1	A	265	LEU
1	A	274	LEU
1	A	283	ASN
1	A	305	LEU
1	A	323	ARG
1	A	324	ILE
1	A	342	ILE
1	B	120	LEU
1	B	121	ASP
1	B	129	GLU
1	B	151	LEU
1	B	160	GLU
1	B	182	ILE
1	B	194	ASP
1	B	202	VAL
1	B	220	ASP
1	B	225	LEU
1	B	229	ASP
1	B	249	ILE
1	B	251	ARG
1	B	261	LEU
1	B	265	LEU
1	B	274	LEU
1	B	283	ASN
1	B	304	ILE
1	B	323	ARG
1	B	329	ASP
1	B	332	HIS
1	B	342	ILE
1	B	348	GLU
1	C	99	ARG
1	C	104	LEU
1	C	112	ARG

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Mol	Chain	Res	Type
1	C	129	GLU
1	C	151	LEU
1	C	188	ASN
1	C	191	LEU
1	C	197	LEU
1	C	202	VAL
1	C	216	GLN
1	C	224	GLU
1	C	263	LYS
1	C	265	LEU
1	C	274	LEU
1	C	283	ASN
1	C	307	HIS
1	C	327	LEU
1	C	342	ILE
1	C	348	GLU
1	D	105	LYS
1	D	112	ARG
1	D	120	LEU
1	D	129	GLU
1	D	151	LEU
1	D	188	ASN
1	D	196	VAL
1	D	202	VAL
1	D	204	ARG
1	D	213	LEU
1	D	222	ILE
1	D	224	GLU
1	D	259	GLN
1	D	263	LYS
1	D	265	LEU
1	D	274	LEU
1	D	283	ASN
1	D	286	GLN
1	D	305	LEU
1	D	323	ARG
1	D	324	ILE
1	D	326	ARG
1	D	332	HIS
1	D	342	ILE
1	E	104	LEU
1	E	112	ARG

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Mol	Chain	Res	Type
1	E	120	LEU
1	E	121	ASP
1	E	129	GLU
1	E	151	LEU
1	E	188	ASN
1	E	202	VAL
1	E	251	ARG
1	E	257	ARG
1	E	261	LEU
1	E	263	LYS
1	E	265	LEU
1	E	274	LEU
1	E	283	ASN
1	E	304	ILE
1	E	305	LEU
1	E	324	ILE
1	E	332	HIS
1	E	349	ASP
1	F	99	ARG
1	F	105	LYS
1	F	109	THR
1	F	112	ARG
1	F	117	SER
1	F	121	ASP
1	F	129	GLU
1	F	151	LEU
1	F	201	TYR
1	F	202	VAL
1	F	213	LEU
1	F	214	LEU
1	F	251	ARG
1	F	258	GLN
1	F	261	LEU
1	F	265	LEU
1	F	274	LEU
1	F	283	ASN
1	F	286	GLN
1	F	307	HIS
1	F	324	ILE
1	F	329	ASP
1	F	332	HIS
1	F	342	ILE

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Mol	Chain	Res	Type
1	G	97	PHE
1	G	99	ARG
1	G	124	LEU
1	G	129	GLU
1	G	151	LEU
1	G	160	GLU
1	G	185	ILE
1	G	194	ASP
1	G	202	VAL
1	G	229	ASP
1	G	245	ARG
1	G	261	LEU
1	G	265	LEU
1	G	274	LEU
1	G	283	ASN
1	G	286	GLN
1	G	305	LEU
1	G	324	ILE
1	G	342	ILE
1	G	349	ASP

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (59) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	86	GLN
1	A	93	ASN
1	A	146	GLN
1	A	165	ASN
1	A	187	GLN
1	A	188	ASN
1	A	199	HIS
1	A	216	GLN
1	A	243	HIS
1	A	259	GLN
1	A	264	HIS
1	A	273	ASN
1	A	283	ASN
1	A	286	GLN
1	B	146	GLN
1	B	165	ASN
1	B	243	HIS
1	B	264	HIS

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Mol	Chain	Res	Type
1	B	273	ASN
1	B	283	ASN
1	C	146	GLN
1	C	165	ASN
1	C	187	GLN
1	C	264	HIS
1	C	273	ASN
1	C	283	ASN
1	C	286	GLN
1	D	146	GLN
1	D	165	ASN
1	D	187	GLN
1	D	199	HIS
1	D	264	HIS
1	D	273	ASN
1	D	283	ASN
1	D	286	GLN
1	D	303	HIS
1	E	146	GLN
1	E	165	ASN
1	E	264	HIS
1	E	273	ASN
1	E	283	ASN
1	E	286	GLN
1	E	303	HIS
1	F	146	GLN
1	F	165	ASN
1	F	211	GLN
1	F	227	ASN
1	F	258	GLN
1	F	273	ASN
1	F	283	ASN
1	F	286	GLN
1	F	332	HIS
1	G	146	GLN
1	G	165	ASN
1	G	187	GLN
1	G	211	GLN
1	G	227	ASN
1	G	273	ASN
1	G	283	ASN

5.3.3 RNA

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates

There are no carbohydrates in this entry.

5.6 Ligand geometry

29 ligands 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	$\#\|Z\| > 2$
2	SO4	A	350	-	4,4,4	0.34	0	6,6,6	0.75	0
3	IMD	A	357	-	3,5,5	0.62	0	4,5,5	0.61	0
3	IMD	A	358	-	3,5,5	0.75	0	4,5,5	0.71	0
3	IMD	A	361	-	3,5,5	0.92	0	4,5,5	0.65	0
3	IMD	A	364	-	3,5,5	0.96	0	4,5,5	0.63	0
4	GOL	A	374	-	5,5,5	4.81	5 (100%)	5,5,5	5.52	3 (60%)
2	SO4	B	351	-	4,4,4	0.42	0	6,6,6	0.80	0
3	IMD	B	359	-	3,5,5	0.61	0	4,5,5	0.57	0
3	IMD	B	360	-	3,5,5	0.81	0	4,5,5	0.70	0
3	IMD	B	365	-	3,5,5	0.92	0	4,5,5	0.66	0
4	GOL	B	367	-	5,5,5	4.73	5 (100%)	5,5,5	5.64	3 (60%)
5	MPD	B	375	-	6,7,7	0.51	0	7,10,10	0.49	0
2	SO4	C	352	-	4,4,4	0.63	0	6,6,6	0.71	0
3	IMD	C	362	-	3,5,5	1.04	0	4,5,5	0.53	0
4	GOL	C	368	-	5,5,5	4.81	5 (100%)	5,5,5	5.62	3 (60%)
4	GOL	C	370	-	5,5,5	4.64	4 (80%)	5,5,5	5.55	3 (60%)
2	SO4	D	353	-	4,4,4	0.44	0	6,6,6	0.74	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
4	GOL	D	369	-	5,5,5	4.98	5 (100%)	5,5,5	5.73	3 (60%)
2	SO4	E	354	-	4,4,4	0.50	0	6,6,6	0.70	0
4	GOL	E	371	-	5,5,5	4.93	5 (100%)	5,5,5	5.60	3 (60%)
5	MPD	E	376	-	6,7,7	0.48	0	7,10,10	0.56	0
2	SO4	F	355	-	4,4,4	0.53	0	6,6,6	0.62	0
3	IMD	F	363	-	3,5,5	0.79	0	4,5,5	0.53	0
4	GOL	F	366	-	5,5,5	4.98	5 (100%)	5,5,5	5.69	3 (60%)
4	GOL	F	372	-	5,5,5	4.82	5 (100%)	5,5,5	5.65	3 (60%)
4	GOL	F	373	-	5,5,5	4.62	5 (100%)	5,5,5	5.74	3 (60%)
2	SO4	G	356	-	4,4,4	0.69	0	6,6,6	0.59	0
5	MPD	G	377	-	6,7,7	0.57	0	7,10,10	0.46	0
5	MPD	G	378	-	6,7,7	0.53	0	7,10,10	0.45	0

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	SO4	A	350	-	-	0/0/0/0	0/0/0/0
3	IMD	A	357	-	-	0/0/0/0	0/1/1/1
3	IMD	A	358	-	-	0/0/0/0	0/1/1/1
3	IMD	A	361	-	-	0/0/0/0	0/1/1/1
3	IMD	A	364	-	-	0/0/0/0	0/1/1/1
4	GOL	A	374	-	-	0/4/4/4	0/0/0/0
2	SO4	B	351	-	-	0/0/0/0	0/0/0/0
3	IMD	B	359	-	-	0/0/0/0	0/1/1/1
3	IMD	B	360	-	-	0/0/0/0	0/1/1/1
3	IMD	B	365	-	-	0/0/0/0	0/1/1/1
4	GOL	B	367	-	-	0/4/4/4	0/0/0/0
5	MPD	B	375	-	-	0/5/5/5	0/0/0/0
2	SO4	C	352	-	-	0/0/0/0	0/0/0/0
3	IMD	C	362	-	-	0/0/0/0	0/1/1/1
4	GOL	C	368	-	-	0/4/4/4	0/0/0/0
4	GOL	C	370	-	-	0/4/4/4	0/0/0/0
2	SO4	D	353	-	-	0/0/0/0	0/0/0/0
4	GOL	D	369	-	-	0/4/4/4	0/0/0/0
2	SO4	E	354	-	-	0/0/0/0	0/0/0/0
4	GOL	E	371	-	-	0/4/4/4	0/0/0/0
5	MPD	E	376	-	-	0/5/5/5	0/0/0/0
2	SO4	F	355	-	-	0/0/0/0	0/0/0/0

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	IMD	F	363	-	-	0/0/0/0	0/1/1/1
4	GOL	F	366	-	-	0/4/4/4	0/0/0/0
4	GOL	F	372	-	-	0/4/4/4	0/0/0/0
4	GOL	F	373	-	-	0/4/4/4	0/0/0/0
2	SO4	G	356	-	-	0/0/0/0	0/0/0/0
5	MPD	G	377	-	-	0/5/5/5	0/0/0/0
5	MPD	G	378	-	-	0/5/5/5	0/0/0/0

All (44) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	F	366	GOL	C3-C2	-8.39	1.20	1.52
4	E	371	GOL	C3-C2	-8.32	1.20	1.52
4	C	368	GOL	C3-C2	-8.10	1.21	1.52
4	B	367	GOL	C3-C2	-8.06	1.21	1.52
4	A	374	GOL	C3-C2	-8.03	1.21	1.52
4	D	369	GOL	C3-C2	-7.99	1.21	1.52
4	C	370	GOL	C3-C2	-7.91	1.22	1.52
4	F	372	GOL	C3-C2	-7.86	1.22	1.52
4	F	373	GOL	C3-C2	-7.60	1.23	1.52
4	D	369	GOL	O2-C2	-3.86	1.32	1.43
4	E	371	GOL	C1-C2	-3.64	1.38	1.52
4	F	372	GOL	C1-C2	-3.61	1.38	1.52
4	A	374	GOL	C1-C2	-3.59	1.38	1.52
4	F	366	GOL	O2-C2	-3.57	1.32	1.43
4	C	368	GOL	C1-C2	-3.54	1.38	1.52
4	F	366	GOL	C1-C2	-3.45	1.39	1.52
4	D	369	GOL	C1-C2	-3.05	1.40	1.52
4	C	370	GOL	C1-C2	-2.91	1.41	1.52
4	B	367	GOL	C1-C2	-2.86	1.41	1.52
4	C	368	GOL	O2-C2	-2.79	1.35	1.43
4	E	371	GOL	O2-C2	-2.78	1.35	1.43
4	B	367	GOL	O2-C2	-2.71	1.35	1.43
4	F	372	GOL	O2-C2	-2.69	1.35	1.43
4	F	373	GOL	C1-C2	-2.64	1.42	1.52
4	A	374	GOL	O2-C2	-2.16	1.37	1.43
4	F	373	GOL	O2-C2	-2.05	1.37	1.43
4	F	366	GOL	O3-C3	2.90	1.54	1.42
4	F	373	GOL	O3-C3	2.98	1.55	1.42
4	D	369	GOL	O3-C3	3.16	1.56	1.42
4	E	371	GOL	O3-C3	3.19	1.56	1.42
4	C	370	GOL	O3-C3	3.26	1.56	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	C	368	GOL	O3-C3	3.28	1.56	1.42
4	F	372	GOL	O3-C3	3.43	1.57	1.42
4	A	374	GOL	O3-C3	3.54	1.57	1.42
4	B	367	GOL	O3-C3	3.65	1.58	1.42
4	B	367	GOL	O1-C1	4.28	1.60	1.42
4	C	368	GOL	O1-C1	4.39	1.61	1.42
4	F	366	GOL	O1-C1	4.52	1.61	1.42
4	E	371	GOL	O1-C1	4.61	1.62	1.42
4	A	374	GOL	O1-C1	4.62	1.62	1.42
4	F	372	GOL	O1-C1	4.72	1.62	1.42
4	C	370	GOL	O1-C1	4.73	1.62	1.42
4	D	369	GOL	O1-C1	5.08	1.64	1.42
4	F	373	GOL	O1-C1	5.38	1.65	1.42

All (27) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	A	374	GOL	O1-C1-C2	2.41	121.87	110.18
4	E	371	GOL	O1-C1-C2	2.88	124.16	110.18
4	F	372	GOL	O1-C1-C2	2.90	124.25	110.18
4	C	370	GOL	O1-C1-C2	3.07	125.05	110.18
4	C	368	GOL	O1-C1-C2	3.19	125.66	110.18
4	F	373	GOL	O1-C1-C2	3.26	125.98	110.18
4	B	367	GOL	O1-C1-C2	3.31	126.23	110.18
4	F	366	GOL	O1-C1-C2	3.34	126.41	110.18
4	D	369	GOL	O1-C1-C2	3.44	126.86	110.18
4	F	373	GOL	O2-C2-C3	6.34	137.74	108.65
4	E	371	GOL	O2-C2-C3	6.53	138.57	108.65
4	A	374	GOL	O2-C2-C3	6.53	138.59	108.65
4	C	368	GOL	O2-C2-C3	6.54	138.65	108.65
4	B	367	GOL	O2-C2-C3	6.54	138.66	108.65
4	C	370	GOL	O2-C2-C3	6.61	138.98	108.65
4	F	366	GOL	O2-C2-C3	6.62	139.02	108.65
4	D	369	GOL	O2-C2-C3	6.63	139.04	108.65
4	F	372	GOL	O2-C2-C3	6.82	139.93	108.65
4	C	370	GOL	O3-C3-C2	10.00	158.66	110.18
4	A	374	GOL	O3-C3-C2	10.17	159.50	110.18
4	B	367	GOL	O3-C3-C2	10.20	159.65	110.18
4	F	372	GOL	O3-C3-C2	10.21	159.72	110.18
4	C	368	GOL	O3-C3-C2	10.22	159.73	110.18
4	E	371	GOL	O3-C3-C2	10.27	159.98	110.18
4	F	366	GOL	O3-C3-C2	10.30	160.14	110.18

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	D	369	GOL	O3-C3-C2	10.40	160.61	110.18
4	F	373	GOL	O3-C3-C2	10.59	161.54	110.18

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

12 monomers are involved in 23 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	A	350	SO4	1	0
3	A	361	IMD	2	0
3	B	359	IMD	6	0
3	B	360	IMD	2	0
4	B	367	GOL	1	0
2	C	352	SO4	1	0
4	C	368	GOL	1	0
4	D	369	GOL	2	0
2	F	355	SO4	1	0
3	F	363	IMD	3	0
4	F	373	GOL	2	0
2	G	356	SO4	1	0

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å^2)	Q<0.9
1	A	297/349 (85%)	-0.10	5 (1%)	73	70	28, 66, 110, 161	0
1	B	236/349 (67%)	0.15	5 (2%)	67	62	32, 74, 132, 170	0
1	C	236/349 (67%)	0.20	19 (8%)	15	9	39, 78, 137, 198	0
1	D	236/349 (67%)	0.31	15 (6%)	23	16	41, 86, 139, 175	0
1	E	236/349 (67%)	0.06	9 (3%)	44	37	30, 62, 116, 197	0
1	F	236/349 (67%)	0.11	7 (2%)	54	47	37, 75, 121, 177	0
1	G	235/349 (67%)	0.22	17 (7%)	18	12	41, 82, 138, 190	0
All	All	1712/2443 (70%)	0.13	77 (4%)	37	31	28, 74, 133, 198	0

All (77) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	F	345	LYS	6.4
1	C	333	LEU	4.7
1	D	302	GLY	4.6
1	G	349	ASP	4.4
1	G	250	GLY	4.2
1	E	302	GLY	3.9
1	C	250	GLY	3.7
1	D	349	ASP	3.7
1	G	332	HIS	3.7
1	G	337	GLU	3.6
1	B	349	ASP	3.5
1	D	338	ALA	3.5
1	D	348	GLU	3.5
1	C	227	ASN	3.4
1	D	333	LEU	3.4
1	D	345	LYS	3.3
1	G	334	PRO	3.3

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Mol	Chain	Res	Type	RSRZ
1	E	249	ILE	3.3
1	E	331	PRO	3.3
1	E	250	GLY	3.2
1	G	339	VAL	3.2
1	F	335	GLU	3.1
1	G	340	PHE	3.1
1	E	304	ILE	3.1
1	E	349	ASP	3.1
1	B	194	ASP	3.0
1	C	331	PRO	2.9
1	D	162	GLY	2.9
1	C	319	LYS	2.9
1	C	335	GLU	2.9
1	G	221	LYS	2.8
1	A	250	GLY	2.8
1	G	276	ASP	2.8
1	C	303	HIS	2.8
1	G	314	TYR	2.7
1	G	319	LYS	2.7
1	F	349	ASP	2.7
1	G	227	ASN	2.7
1	F	250	GLY	2.7
1	G	338	ALA	2.6
1	E	227	ASN	2.6
1	C	343	THR	2.6
1	A	161	GLU	2.6
1	C	276	ASP	2.6
1	E	303	HIS	2.6
1	D	226	LEU	2.6
1	G	224	GLU	2.6
1	E	190	GLY	2.5
1	C	218	ALA	2.5
1	C	339	VAL	2.5
1	F	249	ILE	2.5
1	G	333	LEU	2.4
1	A	35	ARG	2.4
1	A	307	HIS	2.4
1	B	303	HIS	2.3
1	C	348	GLU	2.3
1	C	302	GLY	2.3
1	A	349	ASP	2.3
1	B	345	LYS	2.3

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Mol	Chain	Res	Type	RSRZ
1	C	323	ARG	2.3
1	C	225	LEU	2.3
1	D	324	ILE	2.3
1	D	332	HIS	2.2
1	C	345	LYS	2.2
1	C	318	GLY	2.2
1	D	342	ILE	2.2
1	G	326	ARG	2.1
1	F	302	GLY	2.1
1	G	327	LEU	2.1
1	D	322	LYS	2.1
1	F	338	ALA	2.1
1	D	227	ASN	2.1
1	D	314	TYR	2.1
1	C	349	ASP	2.1
1	D	339	VAL	2.0
1	C	186	ALA	2.0
1	B	338	ALA	2.0

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

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

6.3 Carbohydrates (i)

There are no carbohydrates in this entry.

6.4 Ligands (i)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. The B-factors column lists the minimum, median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å^2)	Q<0.9
5	MPD	G	378	8/8	0.84	0.47	3.38	112,112,112,112	0
4	GOL	F	366	6/6	0.94	0.22	1.73	66,66,66,66	0
5	MPD	E	376	8/8	0.85	0.23	1.33	84,84,84,84	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å^2)	Q<0.9
4	GOL	D	369	6/6	0.83	0.26	1.28	79,79,79,79	0
5	MPD	B	375	8/8	0.94	0.23	0.83	53,53,53,53	0
3	IMD	A	361	5/5	0.71	0.23	0.22	119,119,119,119	0
3	IMD	A	358	5/5	0.86	0.17	-0.16	101,101,101,101	0
2	SO4	F	355	5/5	0.91	0.20	-0.31	91,91,91,91	0
2	SO4	E	354	5/5	0.97	0.14	-0.39	60,60,60,60	0
3	IMD	B	360	5/5	0.90	0.15	-0.45	81,81,81,81	0
2	SO4	B	351	5/5	0.97	0.15	-0.63	65,65,65,65	0
2	SO4	A	350	5/5	0.98	0.14	-0.72	58,58,58,58	0
3	IMD	B	359	5/5	0.90	0.15	-0.84	76,76,76,76	0
2	SO4	G	356	5/5	0.97	0.10	-1.24	66,66,66,66	0
3	IMD	B	365	5/5	0.89	0.12	-1.33	92,92,92,92	0
2	SO4	C	352	5/5	0.96	0.11	-1.47	71,71,71,71	0
2	SO4	D	353	5/5	0.97	0.10	-2.68	78,78,78,78	0
4	GOL	A	374	6/6	0.90	0.21	-	76,76,76,76	0
3	IMD	A	364	5/5	0.91	0.16	-	93,93,93,93	0
3	IMD	F	363	5/5	0.74	0.41	-	100,100,100,100	0
5	MPD	G	377	8/8	0.84	0.24	-	106,106,106,106	0
4	GOL	F	373	6/6	0.94	0.22	-	88,88,88,88	0
4	GOL	E	371	6/6	0.90	0.15	-	66,66,66,66	0
4	GOL	C	368	6/6	0.86	0.13	-	77,77,77,77	0
3	IMD	C	362	5/5	0.85	0.34	-	94,94,94,94	0
4	GOL	F	372	6/6	0.94	0.19	-	76,76,76,76	0
3	IMD	A	357	5/5	0.96	0.08	-	90,90,90,90	0
4	GOL	C	370	6/6	0.85	0.13	-	88,88,88,88	0
4	GOL	B	367	6/6	0.82	0.14	-	68,68,68,68	0

6.5 Other polymers (i)

There are no such residues in this entry.