W O R L D W I D E

wwPDB

P R O T E I N   D A T A   B A N K

Full wwPDB X-ray Structure Validation Report ⓘ

Sep 10, 2023 – 03:40 AM EDT

PDB ID	:	4IRY
Title	:	Influenza A virus tail-loop free nucleoprotein at 2.8 A resolution
Authors	:	Ye, Q.; Mata, D.A.; Tao, Y.J.
Deposited on	:	2013-01-15
Resolution	:	2.80 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
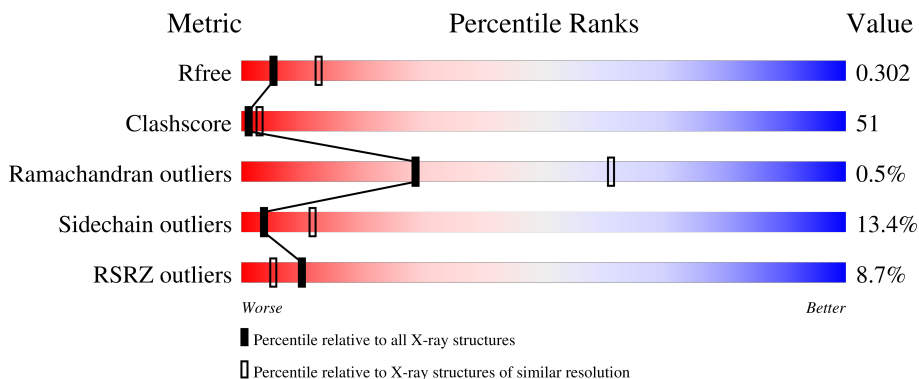http://www.wwpdb.org/validation/2017/FAQs#types.

1 Overall quality at a glance ⓘ

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

The reported resolution of this entry is 2.80 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	Percentile Ranks	Value
Rfree		0.302
Clashscore		51
Ramachandran outliers		0.5%
Sidechain outliers		13.4%
RSRZ outliers		8.7%

Worse   *Better*

▮ Percentile relative to all X-ray structures
▯ Percentile relative to X-ray structures of similar resolution

Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	3140 (2.80-2.80)
Clashscore	141614	3569 (2.80-2.80)
Ramachandran outliers	138981	3498 (2.80-2.80)
Sidechain outliers	138945	3500 (2.80-2.80)
RSRZ outliers	127900	3078 (2.80-2.80)

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 <=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	483	8% / 31% 44% 9% 16%
1	B	483	7% / 36% 46% 6% 12%

2 Entry composition ⓘ

There is only 1 type of molecule in this entry. The entry contains 6586 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 Nucleocapsid protein.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	B	424	Total 3373	C 2089	N 630	O 629	S 25	8	0	0
1	A	404	Total 3213	C 1992	N 597	O 599	S 25	0	0	0

There are 26 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B	425	GLY	-	linker	UNP Q1K9H2
B	426	GLY	-	linker	UNP Q1K9H2
B	427	GLY	-	linker	UNP Q1K9H2
B	428	GLY	-	linker	UNP Q1K9H2
B	429	SER	-	linker	UNP Q1K9H2
B	499	LEU	-	expression tag	UNP Q1K9H2
B	500	GLU	-	expression tag	UNP Q1K9H2
B	501	HIS	-	expression tag	UNP Q1K9H2
B	502	HIS	-	expression tag	UNP Q1K9H2
B	503	HIS	-	expression tag	UNP Q1K9H2
B	504	HIS	-	expression tag	UNP Q1K9H2
B	505	HIS	-	expression tag	UNP Q1K9H2
B	506	HIS	-	expression tag	UNP Q1K9H2
A	425	GLY	-	linker	UNP Q1K9H2
A	426	GLY	-	linker	UNP Q1K9H2
A	427	GLY	-	linker	UNP Q1K9H2
A	428	GLY	-	linker	UNP Q1K9H2
A	429	SER	-	linker	UNP Q1K9H2
A	499	LEU	-	expression tag	UNP Q1K9H2
A	500	GLU	-	expression tag	UNP Q1K9H2
A	501	HIS	-	expression tag	UNP Q1K9H2
A	502	HIS	-	expression tag	UNP Q1K9H2
A	503	HIS	-	expression tag	UNP Q1K9H2
A	504	HIS	-	expression tag	UNP Q1K9H2
A	505	HIS	-	expression tag	UNP Q1K9H2

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| Chain	Residue	Modelled	Actual	Comment	Reference
A	506	HIS	-	expression tag	UNP Q1K9H2

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: Nucleocapsid protein
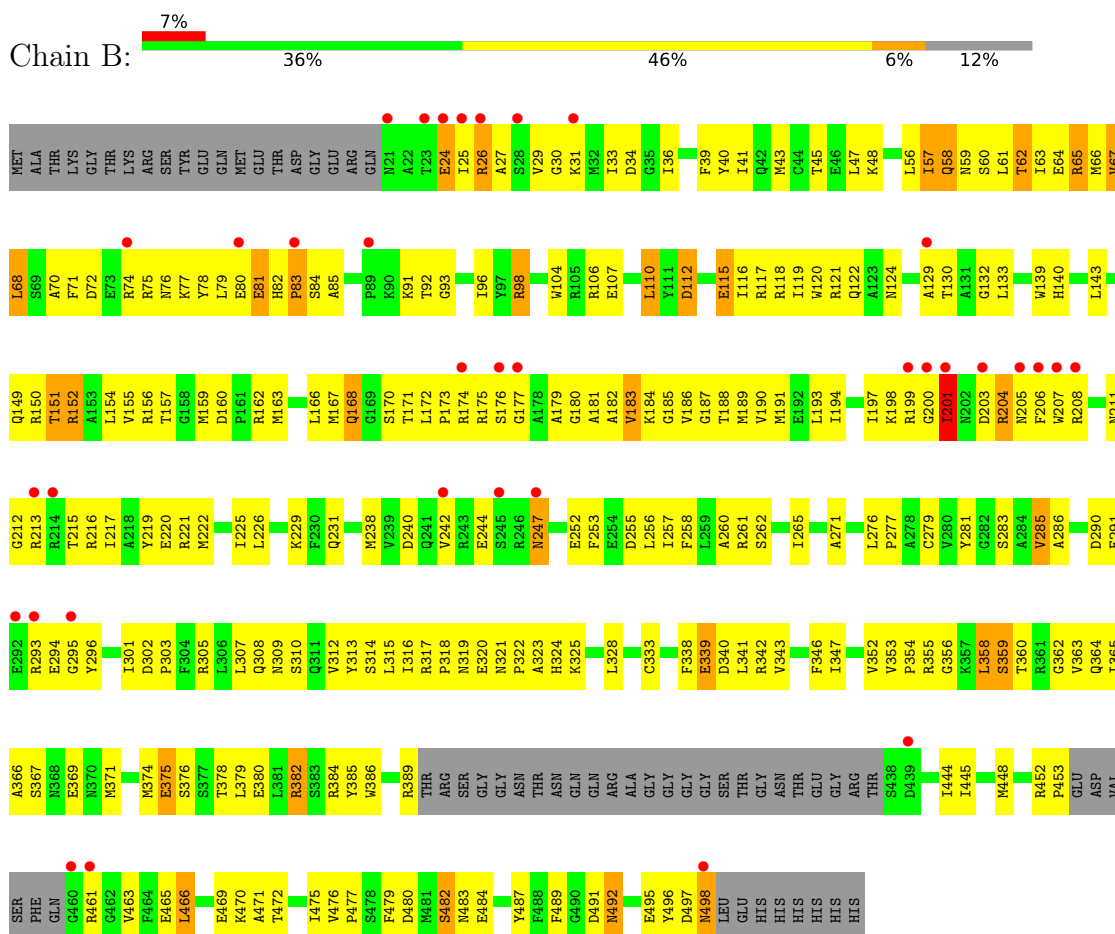
• Molecule 1: Nucleocapsid protein
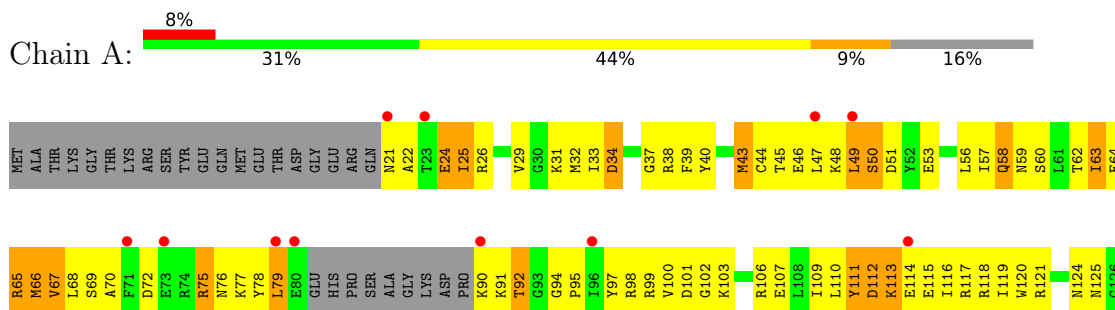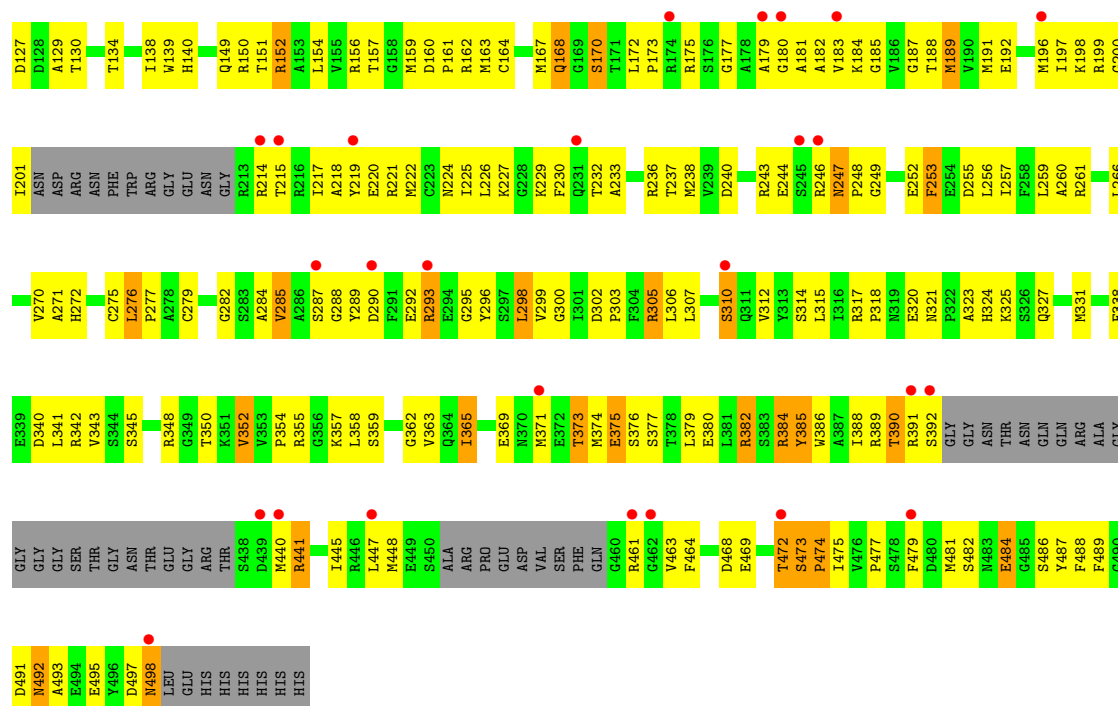
4 Data and refinement statistics ⓘ

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants	60.18Å 155.62Å 97.77Å	Depositor
a, b, c, α, β, γ	90.00° 90.94° 90.00°	
Resolution (Å)	50.00 – 2.80	Depositor
	49.00 – 2.81	EDS
% Data completeness	96.1 (50.00-2.80)	Depositor
(in resolution range)	97.1 (49.00-2.81)	EDS
R_{merge}	0.12	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	2.95 (at 2.81Å)	Xtriage
Refinement program	CNS 1.1	Depositor
R, R_{free}	0.241 , 0.298	Depositor
	0.260 , 0.302	DCC
R_{free} test set	2109 reflections (9.91%)	wwPDB-VP
Wilson B-factor (Å^2)	50.6	Xtriage
Anisotropy	0.633	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.37 , 55.8	EDS
L-test for twinning[2]	$< |L| > = 0.48, < L^2 > = 0.31$	Xtriage
Estimated twinning fraction	0.042 for h,-k,-l	Xtriage
F_o,F_c correlation	0.89	EDS
Total number of atoms	6586	wwPDB-VP
Average B, all atoms (Å^2)	60.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 6.32% of the height of the origin peak. No significant pseudotranslation is detected.*

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[1]Intensities estimated from amplitudes.

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

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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	0.58	0/3261	0.85	4/4375 (0.1%)
1	B	0.57	0/3430	0.84	1/4608 (0.0%)
All	All	0.57	0/6691	0.85	5/8983 (0.1%)

There are no bond length outliers.

All (5) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	385	TYR	CB-CA-C	-5.74	98.93	110.40
1	A	247	ASN	CA-CB-CG	-5.45	101.42	113.40
1	A	199	ARG	C-N-CA	-5.41	110.94	122.30
1	B	201	ILE	CA-CB-CG1	5.19	120.86	111.00
1	A	488	PHE	N-CA-C	5.07	124.69	111.00

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts ⓘ

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	3213	0	3208	331	0
1	B	3373	0	3346	350	0
All	All	6586	0	6554	672	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 51.

WORLDWIDE
wwPDB
PROTEIN DATA BANK

All (672) 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:B:26:ARG:HH11	1:B:26:ARG:CG	1.34	1.39
1:B:199:ARG:HG3	1:B:206:PHE:CE2	1.63	1.33
1:A:65:ARG:HD3	1:A:79:LEU:CD1	1.56	1.32
1:A:196:MET:HG3	1:A:219:TYR:CE1	1.69	1.26
1:B:120:TRP:CZ2	1:B:129:ALA:HB3	1.77	1.20
1:A:365:ILE:HD13	1:A:365:ILE:O	1.41	1.20
1:A:115:GLU:O	1:A:119:ILE:HG13	1.46	1.15
1:A:75:ARG:O	1:A:175:ARG:HG3	1.47	1.14
1:B:82:HIS:CD2	1:B:84:SER:H	1.66	1.12
1:B:199:ARG:HG3	1:B:206:PHE:CZ	1.88	1.08
1:B:26:ARG:HH11	1:B:26:ARG:HG2	0.97	1.08
1:B:82:HIS:CD2	1:B:83:PRO:HD2	1.88	1.08
1:B:364:GLN:O	1:B:365:ILE:HD13	1.54	1.08
1:A:25:ILE:HD13	1:A:25:ILE:H	1.18	1.08
1:B:316:ILE:HG23	1:B:375:GLU:HB3	1.38	1.04
1:B:339:GLU:CD	1:B:389:ARG:HH12	1.59	1.04
1:B:149:GLN:CG	1:B:151:THR:HG23	1.88	1.03
1:A:196:MET:HG3	1:A:219:TYR:HE1	0.95	1.02
1:A:198:LYS:HE3	1:A:253:PHE:CE2	1.94	1.02
1:A:65:ARG:HH11	1:A:79:LEU:HD11	1.23	1.02
1:B:77:LYS:HA	1:B:175:ARG:HB2	1.05	1.00
1:A:189:MET:CE	1:A:189:MET:HA	1.91	1.00
1:B:82:HIS:HB3	1:B:85:ALA:HB2	1.39	0.99
1:A:65:ARG:HD3	1:A:79:LEU:HD13	1.44	0.98
1:B:199:ARG:CG	1:B:206:PHE:CE2	2.46	0.98
1:B:77:LYS:HA	1:B:175:ARG:CB	1.93	0.98
1:B:26:ARG:HG2	1:B:26:ARG:NH1	1.70	0.98
1:B:26:ARG:CG	1:B:26:ARG:NH1	2.09	0.98
1:B:66:MET:CE	1:B:93:GLY:HA2	1.94	0.97
1:A:31:LYS:HA	1:A:292:GLU:HG2	1.47	0.97
1:A:324:HIS:CD2	1:A:359:SER:H	1.81	0.97
1:A:197:ILE:HG23	1:A:248:PRO:HB2	1.47	0.97
1:B:26:ARG:HH11	1:B:26:ARG:HG3	1.25	0.97
1:B:120:TRP:HZ2	1:B:129:ALA:HB3	1.21	0.97
1:B:213:ARG:O	1:B:217:ILE:HD13	1.62	0.96
1:B:180:GLY:O	1:B:184:LYS:HG3	1.66	0.96
1:A:463:VAL:CG2	1:A:475:ILE:HB	1.96	0.96
1:B:152:ARG:HA	1:B:152:ARG:HH11	1.31	0.95
1:A:198:LYS:HE3	1:A:253:PHE:HE2	1.26	0.95
1:A:266:LEU:HD13	1:A:447:LEU:HD23	1.51	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:120:TRP:HZ2	1:A:129:ALA:HB3	1.32	0.92
1:B:98:ARG:HD2	1:B:107:GLU:OE1	1.69	0.92
1:B:77:LYS:CA	1:B:175:ARG:HB2	1.98	0.91
1:B:80:GLU:HG3	1:B:173:PRO:HD3	1.51	0.91
1:B:82:HIS:CD2	1:B:83:PRO:CD	2.54	0.91
1:A:65:ARG:CD	1:A:79:LEU:CD1	2.47	0.90
1:A:324:HIS:HD2	1:A:359:SER:H	1.14	0.90
1:B:262:SER:HA	1:B:448:MET:CE	2.02	0.90
1:B:82:HIS:HD2	1:B:84:SER:H	1.06	0.89
1:A:365:ILE:HD13	1:A:365:ILE:C	1.93	0.89
1:B:82:HIS:HD2	1:B:84:SER:N	1.69	0.89
1:A:318:PRO:HG2	1:A:373:THR:HG22	1.56	0.88
1:B:325:LYS:HB2	1:B:360:THR:HG21	1.57	0.86
1:A:389:ARG:HE	1:A:391:ARG:CB	1.87	0.86
1:B:167:MET:HE2	1:B:187:GLY:HA3	1.55	0.86
1:A:25:ILE:O	1:A:29:VAL:HG22	1.76	0.86
1:B:26:ARG:NH1	1:B:26:ARG:HG3	1.86	0.86
1:A:189:MET:HA	1:A:189:MET:HE2	1.57	0.86
1:A:180:GLY:O	1:A:183:VAL:HG22	1.75	0.85
1:A:65:ARG:HD3	1:A:79:LEU:HD11	1.58	0.85
1:B:212:GLY:O	1:B:216:ARG:HB3	1.76	0.85
1:B:82:HIS:CG	1:B:83:PRO:HD2	2.11	0.85
1:A:196:MET:CG	1:A:219:TYR:CE1	2.59	0.84
1:B:205:ASN:O	1:B:205:ASN:ND2	2.10	0.84
1:B:82:HIS:CG	1:B:83:PRO:CD	2.61	0.84
1:A:65:ARG:HD3	1:A:79:LEU:HD12	1.59	0.83
1:A:464:PHE:HD2	1:A:473:SER:O	1.60	0.83
1:A:120:TRP:CZ2	1:A:129:ALA:HB3	2.13	0.83
1:B:179:ALA:O	1:B:183:VAL:HG23	1.79	0.83
1:B:66:MET:HE3	1:B:93:GLY:HA2	1.61	0.83
1:B:194:ILE:HG23	1:B:253:PHE:CE2	2.13	0.82
1:B:212:GLY:O	1:B:216:ARG:CB	2.27	0.82
1:B:484:GLU:CD	1:B:484:GLU:H	1.83	0.82
1:A:112:ASP:OD1	1:A:112:ASP:N	2.13	0.82
1:A:200:GLY:C	1:A:201:ILE:HG13	1.99	0.82
1:A:266:LEU:CD1	1:A:447:LEU:HD23	2.10	0.82
1:B:159:MET:HE1	1:B:191:MET:CB	2.10	0.81
1:B:262:SER:HA	1:B:448:MET:HE1	1.60	0.81
1:A:91:LYS:HA	1:A:113:LYS:HD3	1.62	0.81
1:A:299:VAL:HG12	1:A:299:VAL:O	1.80	0.81
1:A:65:ARG:HH11	1:A:79:LEU:CD1	1.92	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:66:MET:HE2	1:B:93:GLY:HA2	1.61	0.81
1:A:68:LEU:HD22	1:A:78:TYR:HB3	1.62	0.81
1:B:343:VAL:HA	1:B:479:PHE:HE1	1.45	0.81
1:A:76:ASN:O	1:A:175:ARG:HB2	1.81	0.81
1:B:314:SER:HB3	1:B:379:LEU:HD21	1.63	0.80
1:A:189:MET:HA	1:A:189:MET:HE3	1.62	0.80
1:A:232:THR:O	1:A:236:ARG:HG3	1.81	0.80
1:B:324:HIS:HD2	1:B:359:SER:OG	1.63	0.80
1:B:199:ARG:NE	1:B:206:PHE:HZ	1.80	0.79
1:B:200:GLY:HA2	1:B:206:PHE:CB	2.13	0.79
1:B:79:LEU:CD2	1:B:81:GLU:OE1	2.30	0.79
1:A:440:MET:CE	1:A:440:MET:HA	2.13	0.79
1:B:120:TRP:HZ2	1:B:129:ALA:CB	1.96	0.79
1:B:314:SER:CB	1:B:379:LEU:HD21	2.13	0.79
1:B:465:GLU:HG2	1:B:475:ILE:HD11	1.65	0.79
1:B:316:ILE:CG2	1:B:375:GLU:HB3	2.13	0.78
1:B:67:VAL:HG12	1:B:68:LEU:HD23	1.65	0.78
1:B:312:VAL:O	1:B:379:LEU:HG	1.83	0.78
1:B:174:ARG:O	1:B:174:ARG:HG2	1.84	0.78
1:B:167:MET:CE	1:B:187:GLY:HA3	2.14	0.78
1:B:343:VAL:HA	1:B:479:PHE:CE1	2.19	0.78
1:B:149:GLN:OE1	1:B:491:ASP:HB3	1.84	0.77
1:B:159:MET:HE1	1:B:191:MET:HB2	1.66	0.77
1:B:77:LYS:HD3	1:B:78:TYR:CE1	2.19	0.77
1:B:482:SER:O	1:A:261:ARG:HD3	1.85	0.76
1:B:82:HIS:NE2	1:B:83:PRO:HD2	2.00	0.76
1:A:317:ARG:HD3	1:A:369:GLU:OE1	1.85	0.76
1:A:168:GLN:HG3	1:A:270:VAL:HG11	1.67	0.76
1:A:150:ARG:HD3	1:A:170:SER:OG	1.85	0.75
1:A:151:THR:HA	1:A:154:LEU:HD12	1.68	0.75
1:A:180:GLY:O	1:A:183:VAL:CG2	2.35	0.75
1:A:77:LYS:HA	1:A:175:ARG:HB2	1.69	0.74
1:A:152:ARG:HB2	1:A:495:GLU:OE1	1.87	0.74
1:B:79:LEU:HD23	1:B:81:GLU:OE1	1.88	0.74
1:B:149:GLN:HG3	1:B:151:THR:HG23	1.69	0.74
1:A:70:ALA:HB1	1:A:117:ARG:HD3	1.70	0.73
1:B:82:HIS:CD2	1:B:83:PRO:N	2.57	0.73
1:B:115:GLU:O	1:B:119:ILE:HD12	1.89	0.73
1:B:74:ARG:HG2	1:B:74:ARG:O	1.88	0.73
1:A:91:LYS:HB3	1:A:111:TYR:O	1.88	0.73
1:B:149:GLN:CG	1:B:151:THR:CG2	2.67	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:62:THR:O	1:A:66:MET:SD	2.47	0.73
1:B:59:ASN:O	1:B:62:THR:HG22	1.89	0.72
1:A:290:ASP:HB3	1:A:293:ARG:HE	1.52	0.72
1:B:120:TRP:CE2	1:B:129:ALA:HB3	2.25	0.72
1:B:149:GLN:HG2	1:B:151:THR:HG23	1.70	0.72
1:B:296:TYR:CE1	1:B:302:ASP:HB3	2.25	0.71
1:B:156:ARG:HG3	1:B:156:ARG:HH11	1.55	0.71
1:B:78:TYR:HE2	1:B:133:LEU:HB2	1.56	0.71
1:A:76:ASN:O	1:A:175:ARG:CB	2.37	0.71
1:A:59:ASN:O	1:A:63:ILE:HG12	1.90	0.70
1:B:78:TYR:CE2	1:B:133:LEU:HB2	2.26	0.70
1:B:470:LYS:HG3	1:B:471:ALA:N	2.07	0.69
1:A:180:GLY:HA2	1:A:183:VAL:HG22	1.75	0.69
1:A:113:LYS:O	1:A:117:ARG:HG2	1.92	0.69
1:A:233:ALA:O	1:A:237:THR:HG23	1.92	0.69
1:A:463:VAL:HG23	1:A:475:ILE:HB	1.74	0.69
1:B:205:ASN:ND2	1:B:208:ARG:O	2.25	0.69
1:A:189:MET:HE1	1:A:192:GLU:OE1	1.93	0.69
1:A:389:ARG:HE	1:A:391:ARG:HB2	1.57	0.68
1:B:189:MET:CE	1:B:225:ILE:HG21	2.23	0.68
1:A:39:PHE:CZ	1:A:67:VAL:HG13	2.26	0.68
1:B:120:TRP:CZ2	1:B:129:ALA:CB	2.66	0.68
1:B:197:ILE:O	1:B:201:ILE:HB	1.94	0.68
1:B:149:GLN:HG3	1:B:151:THR:CG2	2.23	0.68
1:B:152:ARG:HD3	1:B:156:ARG:NH1	2.07	0.68
1:A:317:ARG:HA	1:A:374:MET:HE1	1.75	0.68
1:B:82:HIS:CE1	1:B:83:PRO:HD2	2.28	0.68
1:B:199:ARG:NE	1:B:206:PHE:CZ	2.62	0.68
1:A:318:PRO:HG3	1:A:373:THR:O	1.93	0.68
1:B:316:ILE:CD1	1:B:322:PRO:HG3	2.24	0.67
1:A:168:GLN:HG2	1:A:185:GLY:HA3	1.77	0.67
1:B:262:SER:HA	1:B:448:MET:HE3	1.75	0.67
1:B:477:PRO:HB2	1:B:479:PHE:CE2	2.30	0.67
1:A:246:ARG:O	1:A:247:ASN:OD1	2.13	0.67
1:A:63:ILE:HA	1:A:66:MET:SD	2.34	0.67
1:B:470:LYS:CD	1:B:471:ALA:H	2.07	0.67
1:B:339:GLU:CD	1:B:389:ARG:NH1	2.41	0.67
1:B:347:ILE:HD12	1:B:461:ARG:HE	1.60	0.67
1:B:307:LEU:O	1:B:310:SER:HB3	1.94	0.67
1:B:324:HIS:CD2	1:B:359:SER:OG	2.47	0.66
1:A:59:ASN:O	1:A:63:ILE:CG1	2.43	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:181:ALA:HB1	1:A:225:ILE:HD13	1.76	0.66
1:A:463:VAL:HG22	1:A:475:ILE:HB	1.77	0.66
1:B:79:LEU:HD21	1:B:81:GLU:OE1	1.94	0.66
1:B:26:ARG:CG	1:B:295:GLY:HA3	2.26	0.66
1:A:225:ILE:HG22	1:A:229:LYS:HE2	1.77	0.66
1:B:150:ARG:HH12	1:B:171:THR:HG22	1.61	0.66
1:A:117:ARG:O	1:A:121:ARG:HG2	1.96	0.66
1:B:305:ARG:O	1:B:308:GLN:HB2	1.95	0.66
1:A:200:GLY:O	1:A:201:ILE:HG13	1.96	0.65
1:B:162:ARG:HA	1:A:489:PHE:CE2	2.31	0.65
1:A:345:SER:HA	1:A:352:VAL:HG23	1.79	0.65
1:A:159:MET:HE2	1:A:191:MET:HA	1.79	0.65
1:A:306:LEU:O	1:A:310:SER:HB2	1.95	0.65
1:B:57:ILE:HG21	1:B:363:VAL:CG2	2.26	0.65
1:B:157:THR:HG22	1:B:194:ILE:HG21	1.77	0.65
1:B:347:ILE:CD1	1:B:461:ARG:HE	2.08	0.65
1:B:152:ARG:HD3	1:B:156:ARG:HH12	1.61	0.65
1:B:308:GLN:NE2	1:B:382:ARG:HB3	2.12	0.65
1:A:138:ILE:HD13	1:A:183:VAL:HG11	1.78	0.65
1:A:275:CYS:C	1:A:276:LEU:HD23	2.17	0.65
1:A:45:THR:O	1:A:48:LYS:HG2	1.97	0.65
1:A:215:THR:O	1:A:219:TYR:HD2	1.79	0.65
1:B:62:THR:HG21	1:B:96:ILE:HD13	1.77	0.65
1:B:104:TRP:HE1	1:B:376:SER:HB2	1.61	0.64
1:B:307:LEU:O	1:B:310:SER:CB	2.46	0.64
1:A:40:TYR:CE2	1:A:279:CYS:HA	2.32	0.64
1:A:324:HIS:HD2	1:A:359:SER:N	1.93	0.64
1:B:150:ARG:NH1	1:B:171:THR:HG22	2.13	0.64
1:B:325:LYS:CB	1:B:360:THR:HG21	2.27	0.64
1:A:217:ILE:O	1:A:221:ARG:HG3	1.98	0.64
1:A:92:THR:CG2	1:A:116:ILE:CD1	2.76	0.64
1:B:470:LYS:CG	1:B:471:ALA:N	2.60	0.64
1:A:120:TRP:HZ2	1:A:129:ALA:CB	2.07	0.64
1:B:24:GLU:HG3	1:B:25:ILE:HD13	1.80	0.63
1:A:167:MET:O	1:A:170:SER:HB3	1.98	0.63
1:B:199:ARG:CG	1:B:206:PHE:CZ	2.73	0.63
1:B:470:LYS:HD2	1:B:471:ALA:H	1.63	0.63
1:A:45:THR:O	1:A:48:LYS:CG	2.46	0.63
1:A:58:GLN:HG3	1:A:315:LEU:HD12	1.79	0.63
1:B:47:LEU:O	1:B:48:LYS:HG3	1.97	0.63
1:B:26:ARG:HG2	1:B:295:GLY:HA3	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:343:VAL:HG12	1:A:479:PHE:CZ	2.34	0.63
1:B:181:ALA:O	1:B:229:LYS:NZ	2.26	0.63
1:A:375:GLU:CD	1:A:376:SER:H	2.01	0.62
1:B:497:ASP:O	1:B:498:ASN:HB2	1.99	0.62
1:A:343:VAL:HA	1:A:479:PHE:HE1	1.64	0.62
1:B:47:LEU:O	1:B:98:ARG:NH2	2.32	0.62
1:B:240:ASP:O	1:B:244:GLU:HG2	1.98	0.62
1:B:484:GLU:OE2	1:A:261:ARG:NH2	2.33	0.62
1:A:343:VAL:HA	1:A:479:PHE:CE1	2.35	0.62
1:B:41:ILE:CD1	1:B:286:ALA:HB2	2.30	0.62
1:B:193:LEU:HD21	1:B:222:MET:HB2	1.82	0.62
1:B:301:ILE:HG12	1:B:386:TRP:CE2	2.35	0.61
1:B:26:ARG:HB3	1:B:295:GLY:HA3	1.82	0.61
1:A:363:VAL:HG12	1:A:363:VAL:O	1.99	0.61
1:B:168:GLN:OE1	1:B:185:GLY:HA3	2.00	0.61
1:A:354:PRO:HD2	1:A:357:LYS:HD2	1.82	0.61
1:A:238:MET:HB2	1:A:259:LEU:HD11	1.80	0.61
1:B:200:GLY:HA2	1:B:206:PHE:CG	2.35	0.61
1:A:237:THR:OG1	1:A:440:MET:HG3	2.01	0.61
1:B:40:TYR:CE2	1:B:279:CYS:HA	2.35	0.61
1:A:276:LEU:HD23	1:A:276:LEU:N	2.16	0.61
1:B:162:ARG:HA	1:A:489:PHE:CD2	2.36	0.61
1:A:31:LYS:CA	1:A:292:GLU:HG2	2.26	0.61
1:B:281:TYR:O	1:B:285:VAL:HG13	2.01	0.61
1:B:162:ARG:HH22	1:A:486:SER:H	1.49	0.60
1:B:301:ILE:HG12	1:B:386:TRP:CD2	2.36	0.60
1:A:382:ARG:CG	1:A:382:ARG:HH11	2.14	0.60
1:B:177:GLY:O	1:B:181:ALA:CB	2.49	0.60
1:A:160:ASP:O	1:A:163:MET:HB2	2.01	0.60
1:A:440:MET:HA	1:A:440:MET:HE2	1.82	0.60
1:A:92:THR:HG22	1:A:116:ILE:CD1	2.32	0.60
1:B:149:GLN:CD	1:B:151:THR:HG23	2.22	0.60
1:A:217:ILE:HG13	1:A:218:ALA:N	2.17	0.60
1:A:21:ASN:N	1:A:24:GLU:OE2	2.35	0.60
1:B:341:LEU:HD22	1:B:352:VAL:O	2.02	0.60
1:B:182:ALA:O	1:B:271:ALA:HB3	2.02	0.59
1:B:498:ASN:HD22	1:B:498:ASN:C	2.05	0.59
1:B:120:TRP:HE1	1:B:129:ALA:H	1.50	0.59
1:B:384:ARG:HG2	1:B:384:ARG:HH11	1.67	0.59
1:A:115:GLU:O	1:A:119:ILE:CG1	2.37	0.59
1:A:340:ASP:HB3	1:A:343:VAL:HG22	1.82	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:212:GLY:O	1:B:216:ARG:N	2.33	0.59
1:B:106:ARG:HB2	1:B:371:MET:SD	2.43	0.59
1:A:179:ALA:O	1:A:182:ALA:HB3	2.03	0.59
1:A:382:ARG:HH11	1:A:382:ARG:HG3	1.68	0.59
1:A:477:PRO:HB2	1:A:479:PHE:CE2	2.38	0.59
1:A:302:ASP:HB2	1:A:303:PRO:HD3	1.85	0.59
1:B:27:ALA:O	1:B:31:LYS:CB	2.51	0.59
1:B:82:HIS:CD2	1:B:84:SER:N	2.46	0.58
1:A:167:MET:CE	1:A:187:GLY:C	2.71	0.58
1:A:317:ARG:HA	1:A:374:MET:CE	2.33	0.58
1:A:371:MET:HE2	1:A:371:MET:HA	1.84	0.58
1:B:200:GLY:HA2	1:B:206:PHE:HB3	1.85	0.58
1:B:314:SER:HB2	1:B:379:LEU:HD21	1.86	0.58
1:A:284:ALA:HB2	1:A:306:LEU:HD11	1.85	0.58
1:A:215:THR:O	1:A:219:TYR:CD2	2.56	0.58
1:A:224:ASN:O	1:A:227:LYS:HB3	2.03	0.58
1:A:47:LEU:O	1:A:98:ARG:NH1	2.36	0.58
1:B:470:LYS:CG	1:B:471:ALA:H	2.16	0.58
1:A:59:ASN:OD1	1:A:97:TYR:HD1	1.86	0.58
1:A:384:ARG:HD3	1:A:385:TYR:CE1	2.39	0.58
1:B:34:ASP:OD1	1:B:291:PHE:HB2	2.03	0.58
1:B:71:PHE:CE2	1:B:117:ARG:HG2	2.38	0.58
1:A:31:LYS:HG2	1:A:292:GLU:CG	2.34	0.58
1:B:167:MET:HE2	1:B:187:GLY:CA	2.31	0.58
1:B:82:HIS:HD2	1:B:85:ALA:H	1.52	0.57
1:B:98:ARG:HH11	1:B:107:GLU:CD	2.06	0.57
1:A:77:LYS:CA	1:A:175:ARG:HB2	2.34	0.57
1:A:180:GLY:CA	1:A:183:VAL:HG22	2.34	0.57
1:B:199:ARG:HE	1:B:206:PHE:HZ	1.50	0.57
1:B:347:ILE:HD12	1:B:461:ARG:HH21	1.69	0.57
1:B:27:ALA:O	1:B:31:LYS:HB2	2.05	0.57
1:B:72:ASP:O	1:B:75:ARG:HG2	2.04	0.57
1:A:31:LYS:HG2	1:A:292:GLU:HG2	1.85	0.57
1:A:299:VAL:O	1:A:299:VAL:CG1	2.53	0.57
1:B:152:ARG:HD2	1:B:156:ARG:NH2	2.20	0.57
1:A:238:MET:CE	1:A:255:ASP:OD1	2.53	0.57
1:B:25:ILE:HD13	1:B:25:ILE:N	2.19	0.57
1:B:139:TRP:CZ2	1:B:277:PRO:HG3	2.39	0.57
1:B:59:ASN:O	1:B:63:ILE:HG12	2.05	0.57
1:A:63:ILE:O	1:A:67:VAL:HG22	2.05	0.57
1:A:65:ARG:CD	1:A:79:LEU:HD13	2.25	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:167:MET:CE	1:A:187:GLY:HA3	2.34	0.57
1:A:180:GLY:C	1:A:183:VAL:HG22	2.26	0.57
1:B:57:ILE:HG21	1:B:363:VAL:HG21	1.87	0.57
1:B:189:MET:HE3	1:B:225:ILE:HG21	1.87	0.56
1:A:76:ASN:O	1:A:175:ARG:CG	2.53	0.56
1:A:348:ARG:HG2	1:A:348:ARG:HH11	1.70	0.56
1:B:156:ARG:HG3	1:B:156:ARG:NH1	2.15	0.56
1:B:65:ARG:HH11	1:B:79:LEU:HD11	1.69	0.56
1:B:77:LYS:HG2	1:B:176:SER:HB2	1.86	0.56
1:A:307:LEU:HA	1:A:310:SER:HB2	1.86	0.56
1:B:82:HIS:HB3	1:B:85:ALA:CB	2.25	0.56
1:B:117:ARG:O	1:B:121:ARG:HG3	2.05	0.56
1:A:58:GLN:HB2	1:A:97:TYR:CE1	2.41	0.56
1:B:104:TRP:NE1	1:B:376:SER:HB2	2.21	0.56
1:A:65:ARG:CD	1:A:79:LEU:HD11	2.24	0.56
1:A:276:LEU:HD13	1:A:307:LEU:HG	1.88	0.56
1:B:26:ARG:O	1:B:30:GLY:N	2.35	0.56
1:B:484:GLU:HG3	1:A:160:ASP:OD2	2.05	0.56
1:A:492:ASN:HD22	1:A:492:ASN:C	2.07	0.55
1:A:92:THR:HG21	1:A:116:ILE:CD1	2.36	0.55
1:B:307:LEU:HD11	1:B:333:CYS:HB3	1.87	0.55
1:A:380:GLU:OE2	1:A:382:ARG:HG3	2.07	0.55
1:A:97:TYR:OH	1:A:365:ILE:HD12	2.07	0.55
1:A:318:PRO:CG	1:A:373:THR:O	2.54	0.55
1:B:152:ARG:HD2	1:B:156:ARG:HH22	1.71	0.55
1:B:317:ARG:NH1	1:B:369:GLU:OE2	2.39	0.55
1:A:168:GLN:HG2	1:A:185:GLY:CA	2.36	0.55
1:B:159:MET:HE1	1:B:191:MET:CA	2.37	0.55
1:B:308:GLN:CG	1:B:466:LEU:HD11	2.38	0.55
1:A:305:ARG:HG3	1:A:306:LEU:N	2.22	0.55
1:A:219:TYR:CD1	1:A:222:MET:HE3	2.42	0.54
1:B:70:ALA:HB1	1:B:117:ARG:HG3	1.88	0.54
1:A:22:ALA:HA	1:A:25:ILE:HD11	1.90	0.54
1:B:255:ASP:O	1:B:258:PHE:HB3	2.07	0.54
1:B:115:GLU:O	1:B:119:ILE:CD1	2.56	0.54
1:B:159:MET:CE	1:B:191:MET:HA	2.38	0.54
1:A:189:MET:HE2	1:A:189:MET:CA	2.31	0.54
1:B:199:ARG:CG	1:B:206:PHE:HE2	2.17	0.54
1:B:301:ILE:CD1	1:B:469:GLU:HA	2.37	0.54
1:B:305:ARG:HA	1:B:308:GLN:HB2	1.89	0.54
1:B:308:GLN:HG3	1:B:466:LEU:CD1	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:382:ARG:HG3	1:B:382:ARG:HH11	1.72	0.54
1:A:192:GLU:O	1:A:196:MET:HG2	2.08	0.54
1:A:64:GLU:O	1:A:67:VAL:HG23	2.08	0.54
1:A:382:ARG:HG3	1:A:382:ARG:NH1	2.23	0.54
1:B:43:MET:CE	1:B:119:ILE:HD13	2.38	0.53
1:A:75:ARG:O	1:A:175:ARG:CG	2.39	0.53
1:A:345:SER:CA	1:A:352:VAL:HG23	2.39	0.53
1:B:115:GLU:OE1	1:B:118:ARG:NH1	2.38	0.53
1:B:64:GLU:O	1:B:68:LEU:HG	2.09	0.53
1:B:363:VAL:HG22	1:B:363:VAL:O	2.08	0.53
1:B:82:HIS:CD2	1:B:85:ALA:H	2.26	0.53
1:B:463:VAL:CG2	1:B:475:ILE:HB	2.38	0.53
1:A:391:ARG:O	1:A:391:ARG:HG3	2.07	0.53
1:B:463:VAL:HG23	1:B:475:ILE:HB	1.90	0.53
1:A:39:PHE:CE2	1:A:67:VAL:HG13	2.44	0.53
1:B:157:THR:HG22	1:B:194:ILE:CG2	2.39	0.53
1:B:56:LEU:HD23	1:B:59:ASN:ND2	2.24	0.53
1:A:189:MET:CE	1:A:189:MET:CA	2.72	0.53
1:A:252:GLU:HA	1:A:255:ASP:HB2	1.90	0.53
1:A:314:SER:HB2	1:A:379:LEU:HD11	1.90	0.53
1:A:240:ASP:OD1	1:A:243:ARG:NH1	2.42	0.52
1:A:468:ASP:OD1	1:A:472:THR:HB	2.09	0.52
1:A:43:MET:HE1	1:A:46:GLU:HB2	1.91	0.52
1:B:67:VAL:HA	1:B:116:ILE:CG2	2.39	0.52
1:A:25:ILE:HG12	1:A:26:ARG:H	1.75	0.52
1:B:207:TRP:HH2	1:B:219:TYR:HB2	1.72	0.52
1:A:69:SER:HA	1:A:79:LEU:HD23	1.92	0.52
1:B:194:ILE:HG23	1:B:253:PHE:CZ	2.44	0.52
1:B:159:MET:HE1	1:B:191:MET:HA	1.92	0.52
1:B:355:ARG:HD3	1:B:487:TYR:CZ	2.45	0.52
1:B:316:ILE:HD13	1:B:322:PRO:HG3	1.90	0.52
1:B:41:ILE:HD11	1:B:285:VAL:HG22	1.91	0.52
1:B:91:LYS:HG2	1:B:110:LEU:HD22	1.92	0.52
1:A:22:ALA:CA	1:A:25:ILE:HD11	2.40	0.52
1:A:39:PHE:CE2	1:A:67:VAL:CG1	2.93	0.52
1:A:56:LEU:HG	1:A:58:GLN:HG2	1.92	0.52
1:B:26:ARG:CB	1:B:295:GLY:HA3	2.40	0.51
1:B:163:MET:HG2	1:B:166:LEU:HD12	1.92	0.51
1:A:25:ILE:H	1:A:25:ILE:CD1	1.95	0.51
1:A:106:ARG:NH2	1:A:369:GLU:O	2.43	0.51
1:A:92:THR:HG22	1:A:92:THR:O	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:203:ASP:OD2	1:B:206:PHE:N	2.43	0.51
1:A:76:ASN:C	1:A:175:ARG:HB2	2.31	0.51
1:A:124:ASN:O	1:A:125:ASN:HB2	2.10	0.51
1:A:37:GLY:HA3	1:A:285:VAL:HG21	1.92	0.51
1:A:492:ASN:HD22	1:A:493:ALA:N	2.07	0.51
1:A:90:LYS:O	1:A:91:LYS:HG3	2.11	0.51
1:A:189:MET:CE	1:A:192:GLU:OE1	2.58	0.51
1:A:389:ARG:HE	1:A:391:ARG:HB3	1.70	0.51
1:A:185:GLY:HA2	1:A:270:VAL:HG21	1.93	0.51
1:A:214:ARG:HD2	1:A:217:ILE:HD11	1.93	0.51
1:B:143:LEU:HD11	1:B:363:VAL:HG11	1.92	0.51
1:B:325:LYS:CA	1:B:360:THR:HG21	2.41	0.51
1:A:249:GLY:N	1:A:252:GLU:OE1	2.30	0.51
1:B:91:LYS:HG3	1:B:112:ASP:HA	1.92	0.50
1:B:184:LYS:O	1:B:229:LYS:HE3	2.11	0.50
1:A:34:ASP:OD2	1:A:38:ARG:NH2	2.44	0.50
1:A:365:ILE:C	1:A:365:ILE:CD1	2.62	0.50
1:B:382:ARG:HG3	1:B:382:ARG:NH1	2.26	0.50
1:A:72:ASP:O	1:A:75:ARG:HG3	2.11	0.50
1:A:300:GLY:O	1:A:303:PRO:HD2	2.12	0.50
1:A:62:THR:CG2	1:A:95:PRO:HD2	2.42	0.50
1:B:318:PRO:O	1:B:319:ASN:HB2	2.12	0.50
1:A:69:SER:HA	1:A:79:LEU:CD2	2.41	0.50
1:B:149:GLN:CD	1:B:151:THR:CG2	2.80	0.50
1:B:75:ARG:HH21	1:B:78:TYR:HE1	1.57	0.50
1:A:43:MET:O	1:A:47:LEU:HG	2.11	0.50
1:A:168:GLN:NE2	1:A:338:PHE:CG	2.79	0.50
1:B:92:THR:O	1:B:110:LEU:HD23	2.12	0.50
1:B:340:ASP:OD1	1:B:342:ARG:HB2	2.10	0.50
1:A:50:SER:O	1:A:51:ASP:C	2.49	0.50
1:A:196:MET:CG	1:A:219:TYR:HH	2.25	0.50
1:B:76:ASN:O	1:B:173:PRO:HB2	2.12	0.50
1:A:188:THR:O	1:A:192:GLU:HG3	2.12	0.50
1:B:317:ARG:HB2	1:B:320:GLU:CD	2.33	0.49
1:B:129:ALA:O	1:B:133:LEU:HG	2.12	0.49
1:B:384:ARG:HD3	1:B:385:TYR:CZ	2.48	0.49
1:A:45:THR:O	1:A:48:LYS:HG3	2.12	0.49
1:A:64:GLU:OE1	1:A:140:HIS:HE1	1.95	0.49
1:A:184:LYS:O	1:A:229:LYS:HE3	2.12	0.49
1:B:41:ILE:O	1:B:45:THR:HG23	2.12	0.49
1:B:115:GLU:O	1:B:119:ILE:CG1	2.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:301:ILE:HD11	1:B:469:GLU:HA	1.93	0.49
1:A:182:ALA:O	1:A:271:ALA:HB3	2.12	0.49
1:A:32:MET:HE2	1:A:33:ILE:HD13	1.94	0.49
1:A:318:PRO:HG2	1:A:373:THR:CG2	2.37	0.49
1:B:82:HIS:CG	1:B:83:PRO:N	2.80	0.49
1:B:366:ALA:H	1:B:369:GLU:HG3	1.77	0.49
1:A:91:LYS:HD3	1:A:112:ASP:HA	1.95	0.49
1:B:189:MET:CE	1:B:225:ILE:CG2	2.91	0.48
1:A:139:TRP:CZ2	1:A:277:PRO:HG3	2.48	0.48
1:A:167:MET:HE2	1:A:187:GLY:C	2.32	0.48
1:A:290:ASP:HB3	1:A:293:ARG:NE	2.25	0.48
1:A:65:ARG:NH1	1:A:79:LEU:CD1	2.69	0.48
1:B:177:GLY:O	1:B:181:ALA:HB2	2.12	0.48
1:B:308:GLN:CD	1:B:466:LEU:HD11	2.33	0.48
1:A:37:GLY:HA2	1:A:282:GLY:HA2	1.95	0.48
1:B:200:GLY:O	1:B:203:ASP:O	2.31	0.48
1:B:339:GLU:CG	1:B:389:ARG:HH12	2.22	0.48
1:A:24:GLU:H	1:A:24:GLU:CD	2.16	0.48
1:B:62:THR:O	1:B:66:MET:HG3	2.14	0.48
1:A:167:MET:HE1	1:A:187:GLY:C	2.34	0.48
1:B:380:GLU:OE1	1:B:382:ARG:HG3	2.13	0.48
1:A:114:GLU:O	1:A:118:ARG:HB2	2.14	0.48
1:B:308:GLN:NE2	1:B:382:ARG:CB	2.76	0.48
1:B:366:ALA:N	1:B:369:GLU:HG3	2.29	0.48
1:A:79:LEU:HG	1:A:79:LEU:O	2.03	0.48
1:B:484:GLU:OE2	1:A:261:ARG:CZ	2.62	0.48
1:B:41:ILE:HD11	1:B:286:ALA:HB2	1.95	0.48
1:B:190:VAL:O	1:B:194:ILE:HG12	2.14	0.48
1:B:199:ARG:CB	1:B:206:PHE:CE2	2.96	0.48
1:B:303:PRO:O	1:B:307:LEU:HB2	2.14	0.48
1:A:363:VAL:O	1:A:363:VAL:CG1	2.62	0.48
1:B:41:ILE:HD13	1:B:286:ALA:HB2	1.95	0.47
1:B:124:ASN:CG	1:B:129:ALA:HB2	2.35	0.47
1:B:177:GLY:O	1:B:181:ALA:N	2.39	0.47
1:B:238:MET:O	1:B:242:VAL:HG23	2.14	0.47
1:A:472:THR:O	1:A:472:THR:CG2	2.62	0.47
1:A:345:SER:HA	1:A:352:VAL:CG2	2.44	0.47
1:B:379:LEU:N	1:B:379:LEU:HD23	2.29	0.47
1:A:492:ASN:C	1:A:492:ASN:ND2	2.67	0.47
1:A:62:THR:HG23	1:A:95:PRO:HD2	1.95	0.47
1:B:356:GLY:HA2	1:B:492:ASN:HB2	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:353:VAL:HB	1:B:354:PRO:CD	2.45	0.47
1:A:130:THR:O	1:A:134:THR:HG23	2.14	0.47
1:A:163:MET:SD	1:A:260:ALA:HB1	2.53	0.47
1:B:216:ARG:NE	1:B:220:GLU:OE2	2.46	0.47
1:A:62:THR:HG21	1:A:95:PRO:N	2.30	0.47
1:A:64:GLU:OE1	1:A:140:HIS:CE1	2.68	0.47
1:A:162:ARG:HG3	1:A:162:ARG:O	2.12	0.47
1:A:219:TYR:CE1	1:A:222:MET:HE1	2.49	0.47
1:B:477:PRO:HB2	1:B:479:PHE:CD2	2.50	0.47
1:A:115:GLU:OE1	1:A:118:ARG:NH1	2.48	0.47
1:B:171:THR:HB	1:B:496:TYR:CZ	2.49	0.47
1:B:189:MET:HE3	1:B:225:ILE:CG2	2.45	0.47
1:B:313:TYR:CE1	1:B:378:THR:HG22	2.50	0.47
1:A:184:LYS:O	1:A:270:VAL:HG13	2.15	0.47
1:A:214:ARG:O	1:A:217:ILE:HG12	2.15	0.47
1:A:348:ARG:HG2	1:A:348:ARG:NH1	2.30	0.47
1:B:308:GLN:HE21	1:B:382:ARG:HB3	1.79	0.47
1:A:66:MET:HG2	1:A:92:THR:HG23	1.96	0.47
1:A:266:LEU:HD11	1:A:447:LEU:HD23	1.96	0.47
1:A:390:THR:CG2	1:A:461:ARG:HG2	2.45	0.47
1:B:26:ARG:HB3	1:B:295:GLY:CA	2.44	0.46
1:B:41:ILE:HD11	1:B:285:VAL:CG2	2.45	0.46
1:B:151:THR:HA	1:B:154:LEU:HD12	1.95	0.46
1:B:98:ARG:NH1	1:B:107:GLU:OE2	2.48	0.46
1:A:100:VAL:HG23	1:A:100:VAL:O	2.15	0.46
1:A:217:ILE:CG1	1:A:218:ALA:N	2.78	0.46
1:A:232:THR:HG21	1:A:447:LEU:HD21	1.97	0.46
1:B:252:GLU:N	1:B:252:GLU:CD	2.69	0.46
1:A:445:ILE:HA	1:A:448:MET:SD	2.55	0.46
1:B:68:LEU:O	1:B:72:ASP:HB2	2.15	0.46
1:B:106:ARG:NH2	1:B:367:SER:O	2.48	0.46
1:A:317:ARG:HB2	1:A:320:GLU:CD	2.36	0.46
1:B:189:MET:HE2	1:B:225:ILE:HG21	1.97	0.46
1:A:22:ALA:C	1:A:25:ILE:HD11	2.36	0.46
1:A:440:MET:CE	1:A:440:MET:CA	2.91	0.46
1:B:212:GLY:O	1:B:216:ARG:HB2	2.15	0.46
1:B:226:LEU:O	1:B:229:LYS:HB2	2.15	0.46
1:B:380:GLU:OE2	1:B:382:ARG:NH1	2.49	0.46
1:B:56:LEU:HG	1:B:58:GLN:HG2	1.97	0.46
1:B:321:ASN:OD1	1:B:323:ALA:HB3	2.15	0.46
1:A:244:GLU:OE1	1:A:244:GLU:HA	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:74:ARG:O	1:B:74:ARG:CG	2.54	0.46
1:A:39:PHE:CZ	1:A:43:MET:HG3	2.51	0.46
1:A:217:ILE:O	1:A:220:GLU:HB2	2.16	0.46
1:A:317:ARG:HG2	1:A:374:MET:CE	2.46	0.46
1:B:39:PHE:CZ	1:B:43:MET:HG3	2.51	0.46
1:B:261:ARG:HD3	1:A:482:SER:O	2.15	0.46
1:A:60:SER:O	1:A:64:GLU:CG	2.64	0.46
1:B:384:ARG:HG2	1:B:384:ARG:NH1	2.30	0.45
1:B:61:LEU:CD2	1:B:139:TRP:HE1	2.29	0.45
1:B:384:ARG:HG2	1:B:384:ARG:O	2.16	0.45
1:B:445:ILE:O	1:B:448:MET:HB2	2.17	0.45
1:A:111:TYR:HB3	1:A:116:ILE:HD11	1.98	0.45
1:A:340:ASP:O	1:A:343:VAL:HG22	2.15	0.45
1:B:355:ARG:HD3	1:B:487:TYR:CE2	2.51	0.45
1:A:99:ARG:O	1:A:99:ARG:HG2	2.15	0.45
1:A:365:ILE:HA	1:A:369:GLU:OE2	2.16	0.45
1:B:70:ALA:CB	1:B:117:ARG:HG3	2.46	0.45
1:B:116:ILE:N	1:B:116:ILE:HD13	2.30	0.45
1:B:265:ILE:HD12	1:B:448:MET:HE2	1.99	0.45
1:B:29:VAL:HG12	1:B:296:TYR:HB3	1.99	0.45
1:B:168:GLN:HB3	1:B:338:PHE:CE1	2.52	0.45
1:B:181:ALA:HB2	1:B:225:ILE:HD13	1.99	0.45
1:B:325:LYS:NZ	1:B:362:GLY:O	2.47	0.45
1:A:92:THR:CG2	1:A:116:ILE:HD12	2.47	0.45
1:A:253:PHE:O	1:A:257:ILE:HG12	2.16	0.45
1:A:464:PHE:CD2	1:A:473:SER:O	2.52	0.45
1:B:58:GLN:HG3	1:B:315:LEU:HG	1.98	0.45
1:B:475:ILE:HG22	1:B:476:VAL:N	2.32	0.45
1:A:25:ILE:HG12	1:A:26:ARG:N	2.31	0.45
1:B:40:TYR:CD2	1:B:279:CYS:HA	2.52	0.45
1:B:152:ARG:NH2	1:A:492:ASN:OD1	2.50	0.45
1:A:167:MET:CE	1:A:187:GLY:CA	2.95	0.45
1:A:277:PRO:HB2	1:A:279:CYS:SG	2.56	0.45
1:A:477:PRO:HB2	1:A:479:PHE:CZ	2.50	0.45
1:B:167:MET:CE	1:B:187:GLY:CA	2.91	0.45
1:B:180:GLY:O	1:B:184:LYS:CG	2.50	0.45
1:B:312:VAL:HG12	1:B:379:LEU:HD12	1.98	0.45
1:A:113:LYS:H	1:A:113:LYS:HG2	1.46	0.45
1:A:120:TRP:CZ2	1:A:129:ALA:CB	2.90	0.45
1:B:139:TRP:CH2	1:B:277:PRO:HG3	2.52	0.45
1:A:31:LYS:HA	1:A:292:GLU:CG	2.33	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:225:ILE:CG2	1:A:229:LYS:HE2	2.46	0.45
1:B:207:TRP:CH2	1:B:219:TYR:HB2	2.52	0.44
1:B:477:PRO:CB	1:B:479:PHE:CE2	2.99	0.44
1:A:25:ILE:HD13	1:A:25:ILE:N	2.04	0.44
1:A:180:GLY:O	1:A:183:VAL:N	2.51	0.44
1:A:325:LYS:NZ	1:A:362:GLY:O	2.48	0.44
1:B:174:ARG:O	1:B:174:ARG:CG	2.61	0.44
1:B:190:VAL:HG13	1:B:256:LEU:HB3	1.98	0.44
1:A:380:GLU:OE2	1:A:382:ARG:NH1	2.50	0.44
1:B:76:ASN:O	1:B:173:PRO:CB	2.66	0.44
1:B:78:TYR:CE2	1:B:133:LEU:CB	2.99	0.44
1:B:77:LYS:CA	1:B:175:ARG:CB	2.77	0.44
1:B:159:MET:HE1	1:B:191:MET:CG	2.48	0.44
1:B:160:ASP:O	1:B:163:MET:HB2	2.17	0.44
1:B:207:TRP:O	1:B:208:ARG:HD3	2.18	0.44
1:A:65:ARG:NH1	1:A:79:LEU:HD11	2.08	0.44
1:A:473:SER:HA	1:A:474:PRO:HD3	1.63	0.44
1:B:47:LEU:C	1:B:48:LYS:CG	2.87	0.44
1:B:82:HIS:ND1	1:B:83:PRO:HD2	2.33	0.44
1:A:214:ARG:HD2	1:A:217:ILE:CD1	2.47	0.44
1:B:27:ALA:O	1:B:31:LYS:N	2.41	0.43
1:B:56:LEU:HD11	1:B:315:LEU:HG	2.00	0.43
1:B:386:TRP:CD1	1:B:466:LEU:HA	2.53	0.43
1:A:388:ILE:HG12	1:A:464:PHE:HE1	1.83	0.43
1:B:152:ARG:HB2	1:B:495:GLU:HG3	1.99	0.43
1:B:364:GLN:C	1:B:365:ILE:HD13	2.32	0.43
1:A:296:TYR:HE1	1:A:298:LEU:HD23	1.82	0.43
1:A:389:ARG:HG3	1:A:391:ARG:N	2.33	0.43
1:B:302:ASP:HB2	1:B:303:PRO:HD3	2.00	0.43
1:A:240:ASP:OD1	1:A:243:ARG:CZ	2.66	0.43
1:A:259:LEU:HD23	1:A:259:LEU:HA	1.87	0.43
1:B:60:SER:O	1:B:64:GLU:HG3	2.18	0.43
1:B:67:VAL:HA	1:B:116:ILE:HG21	2.01	0.43
1:B:279:CYS:O	1:B:283:SER:HB2	2.19	0.43
1:B:480:ASP:OD2	1:B:483:ASN:ND2	2.51	0.43
1:A:172:LEU:HD11	1:A:183:VAL:CG2	2.49	0.43
1:A:256:LEU:HD23	1:A:256:LEU:HA	1.88	0.43
1:B:198:LYS:HE2	1:B:253:PHE:CE2	2.54	0.43
1:B:199:ARG:HB2	1:B:206:PHE:HE2	1.84	0.43
1:A:62:THR:HG23	1:A:94:GLY:HA3	1.99	0.43
1:A:160:ASP:HB2	1:A:163:MET:HG3	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:170:SER:HA	1:A:188:THR:HG23	2.00	0.43
1:A:340:ASP:OD2	1:A:342:ARG:NH2	2.45	0.43
1:A:355:ARG:HB2	1:A:487:TYR:CZ	2.54	0.43
1:A:157:THR:HG22	1:A:157:THR:O	2.18	0.43
1:A:196:MET:HG3	1:A:219:TYR:CZ	2.38	0.43
1:A:284:ALA:O	1:A:287:SER:HB2	2.19	0.43
1:B:172:LEU:HD12	1:B:173:PRO:HD2	2.01	0.43
1:B:484:GLU:CD	1:B:484:GLU:N	2.62	0.43
1:B:312:VAL:CG1	1:B:379:LEU:HD12	2.48	0.43
1:B:317:ARG:HD3	1:B:369:GLU:OE1	2.19	0.43
1:A:288:GLY:O	1:A:289:TYR:C	2.55	0.43
1:A:484:GLU:H	1:A:484:GLU:HG3	1.44	0.43
1:B:257:ILE:O	1:B:261:ARG:HG3	2.20	0.42
1:A:29:VAL:O	1:A:32:MET:HB3	2.19	0.42
1:A:32:MET:HE2	1:A:33:ILE:CD1	2.49	0.42
1:A:321:ASN:OD1	1:A:323:ALA:HB3	2.18	0.42
1:A:386:TRP:NE1	1:A:464:PHE:HB2	2.34	0.42
1:B:58:GLN:HE21	1:B:58:GLN:HB3	1.62	0.42
1:B:77:LYS:HD3	1:B:78:TYR:CD1	2.53	0.42
1:A:120:TRP:CE2	1:A:124:ASN:ND2	2.87	0.42
1:A:238:MET:HE1	1:A:255:ASP:OD1	2.19	0.42
1:A:107:GLU:HG2	1:A:109:ILE:HG23	2.01	0.42
1:B:204:ARG:HA	1:B:204:ARG:HD2	1.72	0.42
1:B:347:ILE:HD12	1:B:461:ARG:NE	2.29	0.42
1:B:355:ARG:O	1:B:358:LEU:HB2	2.19	0.42
1:A:98:ARG:NH2	1:A:107:GLU:OE1	2.41	0.42
1:A:441:ARG:O	1:A:445:ILE:HG13	2.19	0.42
1:B:211:ASN:O	1:B:215:THR:HG23	2.20	0.42
1:B:386:TRP:HD1	1:B:466:LEU:HA	1.83	0.42
1:A:92:THR:HG21	1:A:116:ILE:HD13	2.00	0.42
1:A:252:GLU:O	1:A:253:PHE:C	2.56	0.42
1:A:498:ASN:HD22	1:A:498:ASN:HA	1.64	0.42
1:A:26:ARG:NH1	1:A:295:GLY:HA3	2.34	0.42
1:A:78:TYR:O	1:A:173:PRO:HG3	2.20	0.42
1:A:112:ASP:OD2	1:A:115:GLU:HB2	2.20	0.42
1:A:152:ARG:O	1:A:156:ARG:HG3	2.19	0.42
1:A:299:VAL:HG13	1:A:389:ARG:HG2	2.00	0.42
1:B:167:MET:O	1:B:168:GLN:C	2.57	0.42
1:A:98:ARG:HH21	1:A:107:GLU:CD	2.18	0.42
1:A:107:GLU:OE2	1:A:109:ILE:CG2	2.68	0.42
1:B:151:THR:O	1:B:155:VAL:HG23	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:217:ILE:O	1:B:221:ARG:HG3	2.19	0.42
1:A:327:GLN:HG2	1:A:331:MET:HE3	2.02	0.42
1:A:340:ASP:O	1:A:343:VAL:CG2	2.67	0.42
1:B:313:TYR:CE1	1:B:378:THR:CG2	3.03	0.42
1:B:325:LYS:HB2	1:B:360:THR:CG2	2.40	0.42
1:B:346:PHE:HE2	1:B:463:VAL:HG21	1.85	0.42
1:B:444:ILE:O	1:B:448:MET:HG3	2.20	0.42
1:B:29:VAL:O	1:B:33:ILE:HG12	2.20	0.42
1:B:452:ARG:HA	1:B:453:PRO:HD3	1.83	0.42
1:A:26:ARG:HG3	1:A:296:TYR:O	2.20	0.42
1:A:38:ARG:O	1:A:39:PHE:C	2.58	0.42
1:A:49:LEU:HB3	1:A:53:GLU:HB2	2.02	0.42
1:B:61:LEU:HD23	1:B:61:LEU:HA	1.78	0.41
1:A:92:THR:HG22	1:A:116:ILE:HD11	2.00	0.41
1:B:170:SER:HA	1:B:188:THR:HG23	2.02	0.41
1:A:167:MET:HE2	1:A:188:THR:N	2.35	0.41
1:A:317:ARG:HH11	1:A:317:ARG:CG	2.32	0.41
1:A:382:ARG:HH11	1:A:382:ARG:CB	2.34	0.41
1:B:61:LEU:HD22	1:B:140:HIS:CD2	2.55	0.41
1:B:475:ILE:CG2	1:B:476:VAL:N	2.83	0.41
1:B:498:ASN:C	1:B:498:ASN:ND2	2.73	0.41
1:A:290:ASP:O	1:A:293:ARG:HG3	2.20	0.41
1:A:371:MET:HE2	1:A:371:MET:CA	2.50	0.41
1:B:247:ASN:HD22	1:B:247:ASN:HA	1.69	0.41
1:A:317:ARG:NH1	1:A:317:ARG:HG3	2.34	0.41
1:B:252:GLU:CD	1:B:252:GLU:H	2.23	0.41
1:A:376:SER:OG	1:A:377:SER:N	2.54	0.41
1:A:382:ARG:HH11	1:A:382:ARG:HB2	1.84	0.41
1:B:75:ARG:O	1:B:175:ARG:HG3	2.20	0.41
1:B:341:LEU:HA	1:B:341:LEU:HD23	1.77	0.41
1:B:61:LEU:HD23	1:B:64:GLU:OE1	2.20	0.41
1:A:172:LEU:HD23	1:A:173:PRO:HD2	2.02	0.41
1:A:324:HIS:HD2	1:A:359:SER:HB2	1.86	0.41
1:A:341:LEU:HD13	1:A:352:VAL:O	2.20	0.41
1:B:301:ILE:HG12	1:B:386:TRP:CE3	2.56	0.41
1:A:149:GLN:HB2	1:A:491:ASP:OD2	2.20	0.41
1:A:226:LEU:HD11	1:A:230:PHE:CE2	2.56	0.41
1:A:290:ASP:CB	1:A:293:ARG:HE	2.25	0.41
1:B:307:LEU:O	1:B:310:SER:HB2	2.19	0.41
1:A:24:GLU:HG2	1:A:25:ILE:HD13	2.03	0.41
1:A:66:MET:HB3	1:A:116:ILE:HD13	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:25:ILE:CD1	1:A:25:ILE:N	2.73	0.40
1:A:324:HIS:HD2	1:A:359:SER:CB	2.34	0.40
1:B:480:ASP:OD2	1:B:483:ASN:CG	2.60	0.40
1:A:31:LYS:HE2	1:A:292:GLU:OE1	2.21	0.40
1:A:152:ARG:HB2	1:A:495:GLU:CD	2.41	0.40
1:A:161:PRO:O	1:A:164:CYS:HB3	2.20	0.40
1:A:327:GLN:HG3	1:A:352:VAL:HG13	2.04	0.40
1:B:41:ILE:CD1	1:B:285:VAL:CG2	2.98	0.40
1:B:225:ILE:O	1:B:229:LYS:HG3	2.21	0.40
1:B:276:LEU:HB2	1:B:281:TYR:CZ	2.55	0.40
1:B:290:ASP:OD1	1:B:293:ARG:HG2	2.22	0.40
1:A:68:LEU:HB3	1:A:79:LEU:HB3	2.02	0.40
1:A:237:THR:OG1	1:A:238:MET:N	2.55	0.40
1:B:185:GLY:O	1:B:186:VAL:C	2.60	0.40
1:B:257:ILE:O	1:B:260:ALA:HB3	2.21	0.40
1:A:114:GLU:HA	1:A:117:ARG:CG	2.51	0.40
1:B:36:ILE:HD11	1:B:132:GLY:HA2	2.03	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

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	394/483 (82%)	377 (96%)	14 (4%)	3 (1%)	19	49
1	B	418/483 (86%)	401 (96%)	16 (4%)	1 (0%)	47	78
All	All	812/966 (84%)	778 (96%)	30 (4%)	4 (0%)	29	61

All (4) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	474	PRO

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Mol	Chain	Res	Type
1	A	177	GLY
1	B	83	PRO
1	A	102	GLY

5.3.2 Protein sidechains ⓘ

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	344/406 (85%)	289 (84%)	55 (16%)	2	7
1	B	359/406 (88%)	320 (89%)	39 (11%)	6	19
All	All	703/812 (87%)	609 (87%)	94 (13%)	4	12

All (94) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	B	24	GLU
1	B	26	ARG
1	B	57	ILE
1	B	58	GLN
1	B	62	THR
1	B	65	ARG
1	B	67	VAL
1	B	68	LEU
1	B	81	GLU
1	B	98	ARG
1	B	110	LEU
1	B	112	ASP
1	B	115	GLU
1	B	122	GLN
1	B	130	THR
1	B	151	THR
1	B	152	ARG
1	B	168	GLN
1	B	183	VAL
1	B	201	ILE

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Mol	Chain	Res	Type
1	B	204	ARG
1	B	231	GLN
1	B	247	ASN
1	B	285	VAL
1	B	294	GLU
1	B	309	ASN
1	B	328	LEU
1	B	339	GLU
1	B	358	LEU
1	B	359	SER
1	B	374	MET
1	B	375	GLU
1	B	382	ARG
1	B	466	LEU
1	B	472	THR
1	B	482	SER
1	B	489	PHE
1	B	492	ASN
1	B	498	ASN
1	A	24	GLU
1	A	25	ILE
1	A	34	ASP
1	A	43	MET
1	A	44	CYS
1	A	49	LEU
1	A	50	SER
1	A	57	ILE
1	A	58	GLN
1	A	63	ILE
1	A	65	ARG
1	A	66	MET
1	A	67	VAL
1	A	75	ARG
1	A	79	LEU
1	A	92	THR
1	A	101	ASP
1	A	103	LYS
1	A	110	LEU
1	A	111	TYR
1	A	112	ASP
1	A	113	LYS
1	A	127	ASP

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Mol	Chain	Res	Type
1	A	152	ARG
1	A	168	GLN
1	A	170	SER
1	A	189	MET
1	A	253	PHE
1	A	272	HIS
1	A	276	LEU
1	A	285	VAL
1	A	293	ARG
1	A	298	LEU
1	A	305	ARG
1	A	310	SER
1	A	312	VAL
1	A	350	THR
1	A	352	VAL
1	A	358	LEU
1	A	365	ILE
1	A	373	THR
1	A	375	GLU
1	A	382	ARG
1	A	384	ARG
1	A	390	THR
1	A	392	SER
1	A	441	ARG
1	A	469	GLU
1	A	472	THR
1	A	473	SER
1	A	481	MET
1	A	484	GLU
1	A	492	ASN
1	A	497	ASP
1	A	498	ASN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (22) such sidechains are listed below:

Mol	Chain	Res	Type
1	B	82	HIS
1	B	142	ASN
1	B	205	ASN
1	B	235	GLN
1	B	247	ASN
1	B	250	ASN

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Mol	Chain	Res	Type
1	B	272	HIS
1	B	308	GLN
1	B	324	HIS
1	B	483	ASN
1	B	492	ASN
1	B	498	ASN
1	A	42	GLN
1	A	76	ASN
1	A	140	HIS
1	A	142	ASN
1	A	149	GLN
1	A	168	GLN
1	A	247	ASN
1	A	324	HIS
1	A	327	GLN
1	A	498	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 monosaccharides in this entry.

5.6 Ligand geometry ⓘ

There are no ligands in this entry.

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, 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	404/483 (83%)	0.64	37 (9%)	9	5	31, 63, 97, 120	0
1	B	423/483 (87%)	0.46	35 (8%)	11	6	26, 49, 97, 123	0
All	All	827/966 (85%)	0.55	72 (8%)	10	5	26, 55, 98, 123	0

All (72) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	498	ASN	7.2
1	B	23	THR	6.8
1	B	207	TRP	6.1
1	A	392	SER	5.4
1	B	461	ARG	5.0
1	A	246	ARG	4.7
1	A	79	LEU	4.7
1	B	205	ASN	3.9
1	A	479	PHE	3.8
1	B	208	ARG	3.8
1	A	447	LEU	3.8
1	A	180	GLY	3.7
1	A	196	MET	3.7
1	B	247	ASN	3.6
1	A	90	LYS	3.6
1	B	214	ARG	3.6
1	B	74	ARG	3.3
1	B	203	ASP	3.3
1	B	206	PHE	3.3
1	B	201	ILE	3.2
1	B	200	GLY	3.1
1	A	290	ASP	3.0
1	A	21	ASN	3.0
1	A	179	ALA	2.9

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Mol	Chain	Res	Type	RSRZ
1	B	213	ARG	2.9
1	A	462	GLY	2.9
1	A	215	THR	2.8
1	A	71	PHE	2.8
1	A	310	SER	2.8
1	A	214	ARG	2.8
1	A	440	MET	2.8
1	B	460	GLY	2.7
1	A	231	GLN	2.7
1	A	472	THR	2.6
1	A	23	THR	2.5
1	A	80	GLU	2.5
1	B	129	ALA	2.5
1	B	242	VAL	2.4
1	B	176	SER	2.4
1	B	293	ARG	2.4
1	A	219	TYR	2.4
1	A	391	ARG	2.4
1	B	199	ARG	2.4
1	A	287	SER	2.3
1	B	26	ARG	2.3
1	B	245	SER	2.3
1	B	83	PRO	2.3
1	B	28	SER	2.2
1	B	25	ILE	2.2
1	A	49	LEU	2.2
1	A	73	GLU	2.2
1	A	293	ARG	2.2
1	B	295	GLY	2.1
1	B	174	ARG	2.1
1	A	245	SER	2.1
1	A	183	VAL	2.1
1	A	439	ASP	2.1
1	A	371	MET	2.1
1	B	177	GLY	2.1
1	A	114	GLU	2.1
1	A	461	ARG	2.1
1	B	24	GLU	2.1
1	B	80	GLU	2.1
1	B	31	LYS	2.1
1	B	89	PRO	2.1
1	B	292	GLU	2.1

Mol	Chain	Res	Type	RSRZ
1	B	439	ASP	2.1
1	B	498	ASN	2.1
1	A	174	ARG	2.0
1	A	47	LEU	2.0
1	B	21	ASN	2.0
1	A	96	ILE	2.0

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

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

6.3 Carbohydrates ⓘ

There are no monosaccharides in this entry.

6.4 Ligands ⓘ

There are no ligands in this entry.

6.5 Other polymers ⓘ

There are no such residues in this entry.