WORLDWIDE wwPDB PROTEIN DATA BANK

Full wwPDB X-ray Structure Validation Report ⓘ

Jun 12, 2024 – 05:28 PM EDT

PDB ID	:	4A0L
Title	:	Structure of DDB1-DDB2-CUL4B-RBX1 bound to a 12 bp abasic site containing DNA-duplex
Authors	:	Fischer, E.S.; Scrima, A.; Gut, H.; Thoma, N.H.
Deposited on	:	2011-09-09
Resolution	:	7.40 Å(reported)

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

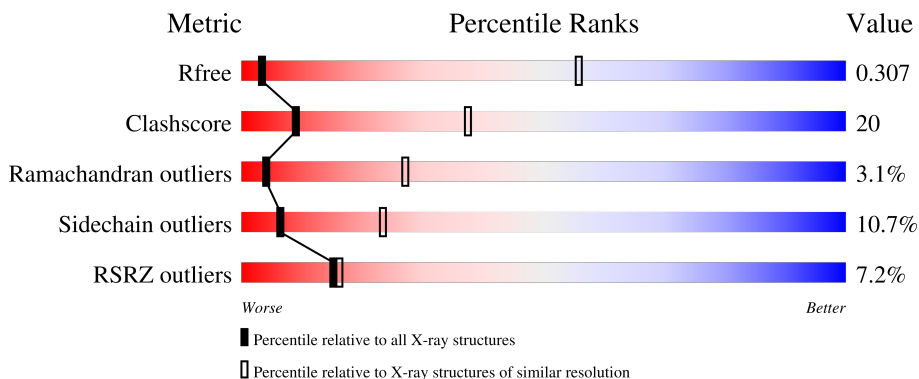|		
MolProbity	:	4.02b-467
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	1.20.1
EDS	:	2.36.2
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36.2

1   Overall quality at a glance ⓘ

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

The reported resolution of this entry is 7.40 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		0.307
Clashscore		20
Ramachandran outliers		3.1%
Sidechain outliers		10.7%
RSRZ outliers		7.2%

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	1004 (10.00-3.90)
Clashscore	141614	1069 (10.00-3.90)
Ramachandran outliers	138981	1002 (10.00-3.90)
Sidechain outliers	138945	1002 (10.00-3.86)
RSRZ outliers	127900	1004 (9.50-3.80)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=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	1144	4% / 64% 25% 7% · ·
1	C	1144	5% / 65% 25% 6% · ·
2	B	382	19% / 74% 16% · 7%
2	D	382	6% / 74% 17% · 7%
3	E	726	6% / 59% 32% 6% ·

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Mol	Chain	Length	Quality of chain
3	H	726	7% · · · 61% · 31% · 5% ·
4	F	98	2% · 10% · 7% · · · 79%
4	I	98	8% · 13% · 7% · · 79%
5	R	12	33% · 75% · 25%
5	T	12	17% · 75% · 25%
6	S	12	33% · 50% · 50%
6	U	12	33% · 50% · 50%

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
5	3DR	T	9	-	-	-	X

2 Entry composition ⓘ

There are 6 unique types of molecules in this entry. The entry contains 35553 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 DAMAGE-BINDING PROTEIN 1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	1105	Total	C	N	O	S	0	0	0
			8517	5403	1417	1652	45			
1	C	1105	Total	C	N	O	S	0	0	0
			8537	5409	1428	1655	45			

There are 8 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-3	GLY	-	expression tag	UNP Q16531
A	-2	GLY	-	expression tag	UNP Q16531
A	-1	GLY	-	expression tag	UNP Q16531
A	0	ARG	-	expression tag	UNP Q16531
C	-3	GLY	-	expression tag	UNP Q16531
C	-2	GLY	-	expression tag	UNP Q16531
C	-1	GLY	-	expression tag	UNP Q16531
C	0	ARG	-	expression tag	UNP Q16531

- Molecule 2 is a protein called DNA DAMAGE-BINDING PROTEIN 2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	B	355	Total	C	N	O	S	0	0	0
			2819	1792	492	524	11			
2	D	355	Total	C	N	O	S	0	0	0
			2843	1806	499	527	11			

There are 40 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B	76	MET	-	expression tag	UNP Q2YDS1
B	77	HIS	-	expression tag	UNP Q2YDS1
B	78	HIS	-	expression tag	UNP Q2YDS1
B	79	HIS	-	expression tag	UNP Q2YDS1

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Chain	Residue	Modelled	Actual	Comment	Reference
B	80	HIS	-	expression tag	UNP Q2YDS1
B	81	HIS	-	expression tag	UNP Q2YDS1
B	82	HIS	-	expression tag	UNP Q2YDS1
B	83	ARG	-	expression tag	UNP Q2YDS1
B	84	ARG	-	expression tag	UNP Q2YDS1
B	85	LEU	-	expression tag	UNP Q2YDS1
B	86	VAL	-	expression tag	UNP Q2YDS1
B	87	PRO	-	expression tag	UNP Q2YDS1
B	88	ARG	-	expression tag	UNP Q2YDS1
B	89	GLY	-	expression tag	UNP Q2YDS1
B	90	SER	-	expression tag	UNP Q2YDS1
B	91	GLY	-	expression tag	UNP Q2YDS1
B	92	GLY	-	expression tag	UNP Q2YDS1
B	93	ARG	-	expression tag	UNP Q2YDS1
B	180	GLN	LEU	variant	UNP Q2YDS1
B	214	ARG	TRP	variant	UNP Q2YDS1
D	76	MET	-	expression tag	UNP Q2YDS1
D	77	HIS	-	expression tag	UNP Q2YDS1
D	78	HIS	-	expression tag	UNP Q2YDS1
D	79	HIS	-	expression tag	UNP Q2YDS1
D	80	HIS	-	expression tag	UNP Q2YDS1
D	81	HIS	-	expression tag	UNP Q2YDS1
D	82	HIS	-	expression tag	UNP Q2YDS1
D	83	ARG	-	expression tag	UNP Q2YDS1
D	84	ARG	-	expression tag	UNP Q2YDS1
D	85	LEU	-	expression tag	UNP Q2YDS1
D	86	VAL	-	expression tag	UNP Q2YDS1
D	87	PRO	-	expression tag	UNP Q2YDS1
D	88	ARG	-	expression tag	UNP Q2YDS1
D	89	GLY	-	expression tag	UNP Q2YDS1
D	90	SER	-	expression tag	UNP Q2YDS1
D	91	GLY	-	expression tag	UNP Q2YDS1
D	92	GLY	-	expression tag	UNP Q2YDS1
D	93	ARG	-	expression tag	UNP Q2YDS1
D	180	GLN	LEU	variant	UNP Q2YDS1
D	214	ARG	TRP	variant	UNP Q2YDS1

- Molecule 3 is a protein called CULLIN-4B.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
3	E	709	5743	3659	979	1074	31	0	0	0

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Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
3	H	709	Total 5773	C 3681	N 978	O 1082	S 32		0	0	0

There are 8 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
E	189	GLY	-	expression tag	UNP Q13620
E	190	GLY	-	expression tag	UNP Q13620
E	191	GLY	-	expression tag	UNP Q13620
E	192	ARG	-	expression tag	UNP Q13620
H	189	GLY	-	expression tag	UNP Q13620
H	190	GLY	-	expression tag	UNP Q13620
H	191	GLY	-	expression tag	UNP Q13620
H	192	ARG	-	expression tag	UNP Q13620

- Molecule 4 is a protein called E3 UBIQUITIN-PROTEIN LIGASE RBX1.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
4	F	21	Total 175	C 118	N 31	O 26	0	0	0
4	I	21	Total 180	C 122	N 32	O 26	0	0	0

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
F	11	MET	-	expression tag	UNP P62878
I	11	MET	-	expression tag	UNP P62878

- Molecule 5 is a DNA chain called 12 BP THF CONTAINING DNA DUPLEX.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	R	12	Total 234	C 111	N 41	O 70	P 12	0	0	0
5	T	12	Total 234	C 111	N 41	O 70	P 12	0	0	0

- Molecule 6 is a DNA chain called 12 BP DNA DUPLEX.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	S	12	Total 249	C 118	N 47	O 72	P 12	0	0	0

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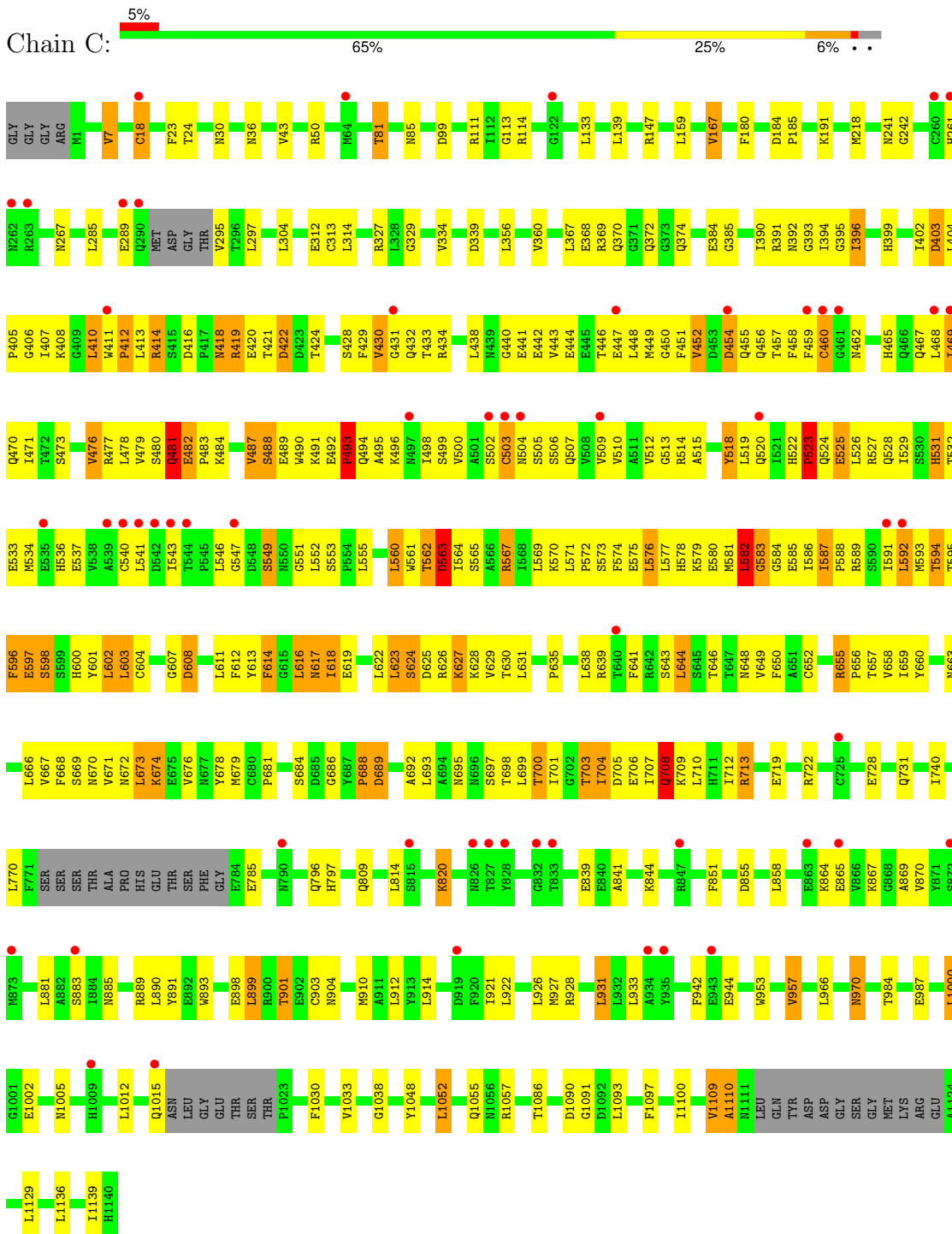| Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
6	U	12	249	118	47	72	12	0	0	0

3 Residue-property plots ⓘ

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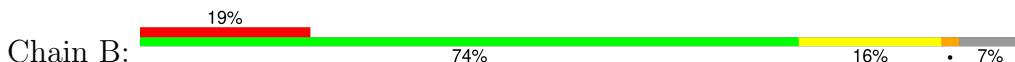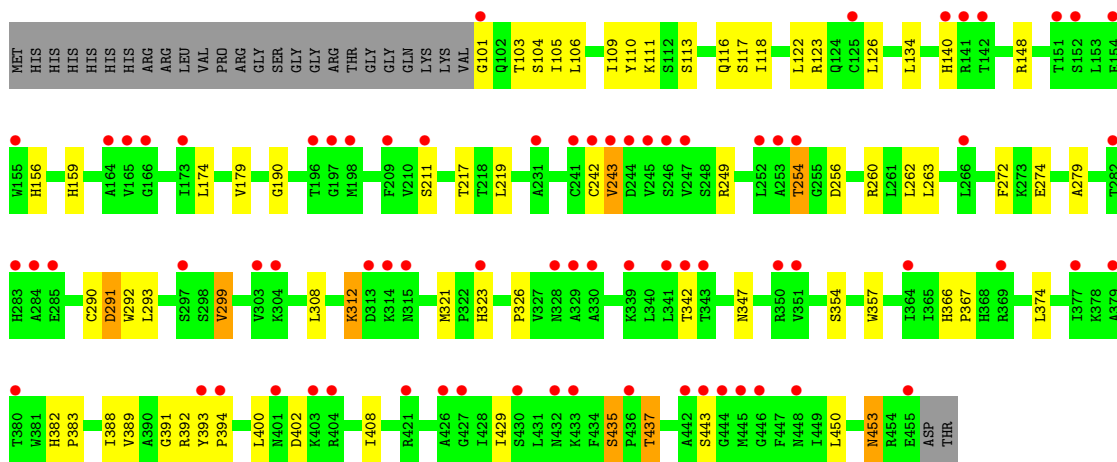
• Molecule 1: DNA DAMAGE-BINDING PROTEIN 1

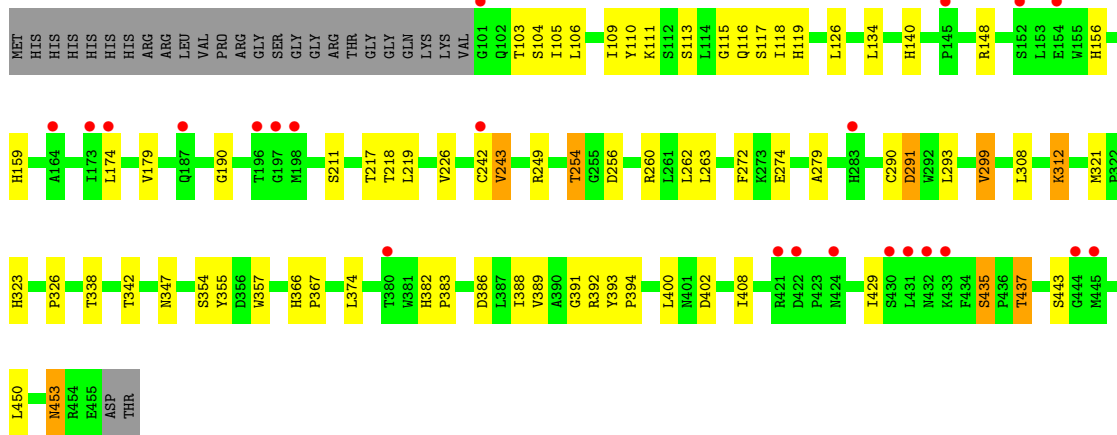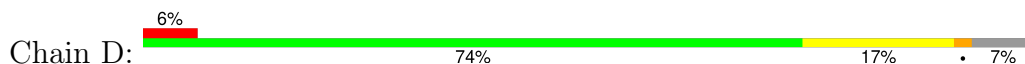• Molecule 1: DNA DAMAGE-BINDING PROTEIN 1

Chain C:
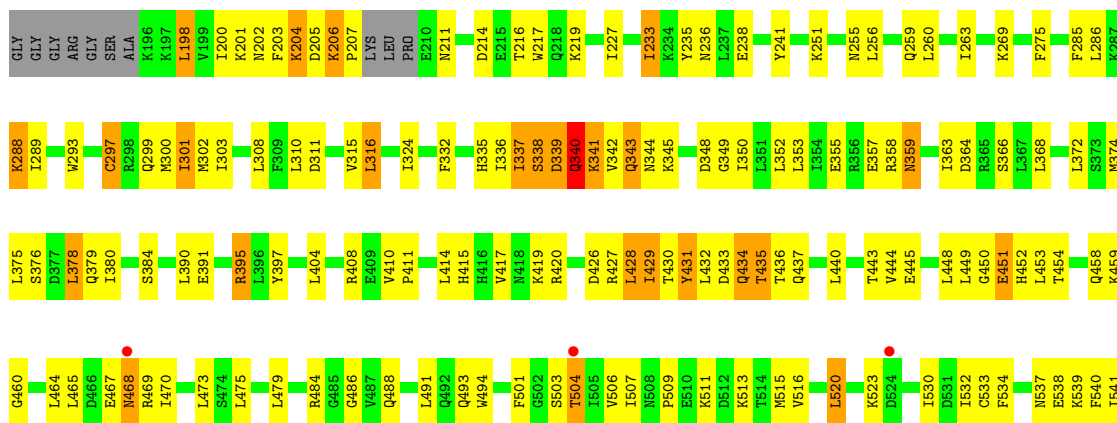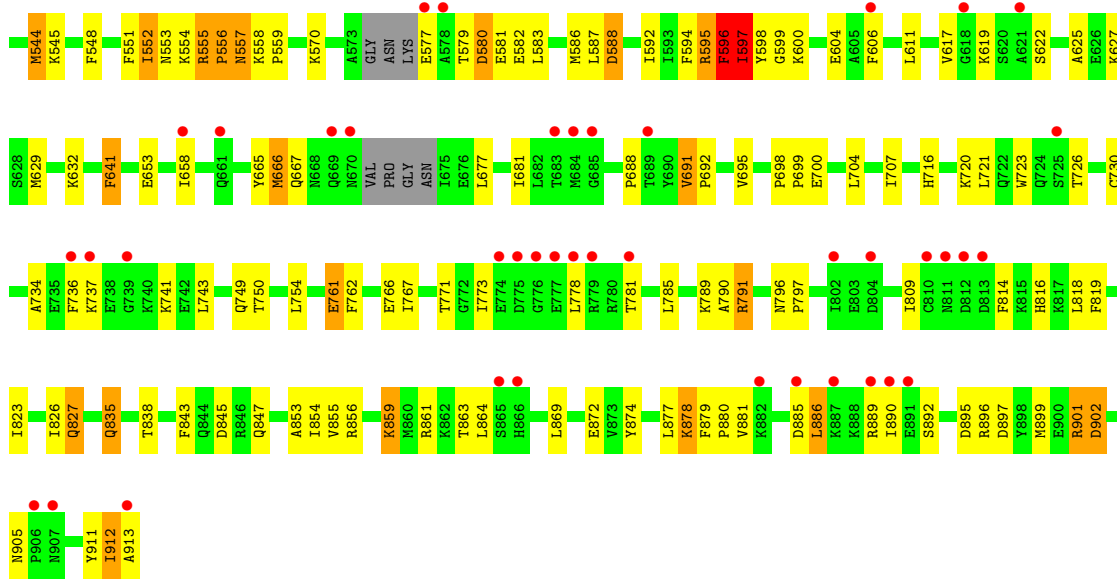
• Molecule 2: DNA DAMAGE-BINDING PROTEIN 2

Chain B:

• Molecule 2: DNA DAMAGE-BINDING PROTEIN 2

Chain D:

• Molecule 3: CULLIN-4B

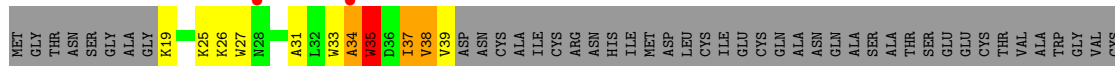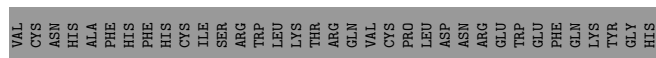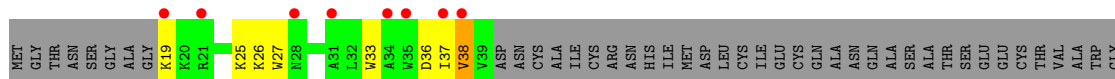Chain E:

M544 K545 F548 F551 I552 N553 K554 R555 P556 N557 K558 P559 K570 A573 GLY ASN LYS E577 A578 T579 D580 E581 E582 L583 M586 L587 D588 I592 I593 F594 R595 F596 I597 Y598 G599 K600 E604 A605 F606 L611 V617 G618 K619 S620 A621 S622 A625 E626 K627

S628 M629 K632 F641 E653 I658 Q661 Y665 M666 N668 Q669 N670 VAL PRO GLY ASN I675 E676 L677 I681 L682 T683 M684 G685 P688 T689 Y690 V691 P692 V695 P698 P699 E700 L704 I707 H716 K720 L721 Q722 W723 Q724 S725 T726 C730

A734 E735 F736 K737 E738 G739 K740 K741 E742 L743 Q749 T750 L754 E761 F762 E766 I767 T771 G772 I773 D775 G776 E777 L778 R779 R780 T781 L785 K789 A790 R791 N796 P797 I802 E803 D804 I809 C810 N811 D812 D813 F814 K815 H816 K817 L818 F819

I823 I826 Q827 Q835 T838 F843 Q844 D845 R846 Q847 A853 I854 V855 R856 K859 M860 R861 K862 T863 L864 S865 H866 L869 E872 V873 Y874 L877 K878 F879 P880 V881 K882 D885 L886 K887 K888 I890 E891 S892 D895 R896 Y898 M899 E900 R901 D902

N905 P906 N907 Y911 I912 A913

● Molecule 3: CULLIN-4B

7%

Chain H:
61%　　　31%　　　5%　·

GLY GLY GLY ARG GLY SER ALA K196 K197 L198 V199 I200 K201 N202 F203 K204 D205 K206 P207 LYS LEU PRO E210 N211 D214 E215 T216 W217 Q218 K219 L220 K221 E222 A223 A226 I227 Q228 N229 S230 T231 S232 I233 K234 Y235 L237 E238 E239 L240 Y241 N246 Y250 K251 N255 L256

Q259 L260 I263 Q271 I272 F275 L286 K287 K288 I289 D290 W293 C297 R298 Q299 M300 I301 M302 L310 D311 V315 L316 I324 I336 I337 S338 D339 Q340 K341 V342 Q343 N344 K345 D348 G349 I350 L351 L352 L353 R358 N359 G360 I363 D364 R365 S366

L367 L368 R369 S370 L371 L372 S373 M374 L378 Q379 I380 S384 E391 R395 L404 R408 H415 H416 V417 N418 K419 R420 D426 R427 L428 I429 T430 Y431 L432 D433 Q434 T435 T436 T443 V444 E445 K446 Q447 L448 L449 G450 E451 T454 L457 Q458 K459 G460 L461

L464 L465 D466 E467 N468 R469 L473 R482 V483 R484 G485 G486 V487 Q488 V489 L490 L491 Q492 Q493 W494 Y497 I498 K499 A500 F501 G502 S503 T504 I507 N508 P509 E510 K511 D512 K513 T514 M515 V516 L519 L520 I530 D531 I532 C533 F534 K539 F540 I541 N542 A543 M544 K545 E546

A547 F548 E549 T550 F551 I552 N553 K554 R555 P556 N557 K558 P559 A560 E561 K570 A573 GLY ASN LYS E577 D580 E581 E582 L583 M586 L587 D588 I592 R595 Y598 G599 K600 E604 A605 F606 L611 V617 G618 K619 S620 A621 S622 A625 E626 K627 F641

E653 I658 Q661 Y665 M666 Q667 N670 VAL PRO GLY ASN I675 E676 L677 I681 P688 V691 P692 M693 E694 V695 P698 P699 E700 L704 I707 H716 R719 K720 L721 Q722 W723 Q724 S725 T726 L727 G728 H729 C730 K733 A734 E735 F736 K737 E738 K741

E742 L743 S746 Q749 T750 L754 E760 E761 F762 E766 I767 A770 T771 G772 I773 E774 D775 L778 T781 L785 K789 A790 R791 N796 P797 D801 I802 E803 D804 G805 D806 I809 C810 N811 F814 K815 H816 K817 L818 F819 I823 I826 Q827

Q835 T838 F843 Q844 D845 R846 Q847 A853 I854 V855 R856 K859 M860 R861 K862 T863 L864 L869 E872 V873 Y874 L877 K878 F879 P880 V881 K882 P883 A884 D885 L886 K887 K888 I890 E891 S892 D895 R896 Y898 M899 E900 R901 D902 N905 Y911 I912 A913
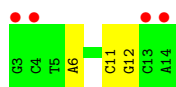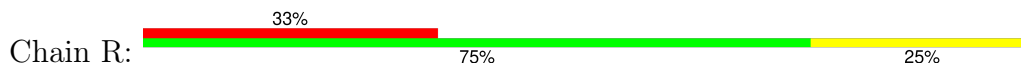
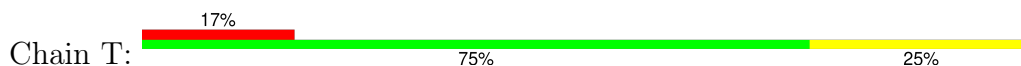● Molecule 4: E3 UBIQUITIN-PROTEIN LIGASE RBX1

Chain F:

- Molecule 4: E3 UBIQUITIN-PROTEIN LIGASE RBX1

Chain I:

- Molecule 5: 12 BP THF CONTAINING DNA DUPLEX

Chain R:

- Molecule 5: 12 BP THF CONTAINING DNA DUPLEX

Chain T:

- Molecule 6: 12 BP DNA DUPLEX

Chain S:

- Molecule 6: 12 BP DNA DUPLEX

Chain U:

4 Data and refinement statistics ⓘ

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α, β, γ	130.80Å　155.84Å　255.39Å 90.00°　　94.17°　　90.00°	Depositor
Resolution (Å)	29.86　–　7.40 29.86　–　7.40	Depositor EDS
% Data completeness (in resolution range)	99.0 (29.86-7.40) 99.2 (29.86-7.40)	Depositor EDS
R_{merge}	0.09	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	2.74 (at 7.23Å)	Xtriage
Refinement program	PHENIX (PHENIX.REFINE)	Depositor
R, R_{free}	0.318　,　0.320 0.312　,　0.307	Depositor DCC
R_{free} test set	1355 reflections (10.00%)	wwPDB-VP
Wilson B-factor (Å^2)	444.7	Xtriage
Anisotropy	0.287	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.26 , 213.5	EDS
L-test for twinning[2]	$< |L| > = 0.45, < L^2 > = 0.28$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.76	EDS
Total number of atoms	35553	wwPDB-VP
Average B, all atoms (Å^2)	253.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 5.82% 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 ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: 3DR

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	0.43	2/8668 (0.0%)	0.66	7/11756 (0.1%)
1	C	0.43	2/8688 (0.0%)	0.66	8/11783 (0.1%)
2	B	0.38	0/2891	0.60	0/3928
2	D	0.38	0/2917	0.60	0/3962
3	E	0.40	3/5831 (0.1%)	0.55	1/7832 (0.0%)
3	H	0.38	0/5865	0.54	0/7878
4	F	0.35	0/179	0.39	0/241
4	I	0.42	0/186	0.43	0/251
5	R	0.92	1/248 (0.4%)	1.13	0/377
5	T	0.92	1/248 (0.4%)	1.12	0/377
6	S	0.89	0/279	1.36	1/429 (0.2%)
6	U	0.88	0/279	1.36	1/429 (0.2%)
All	All	0.43	9/36279 (0.0%)	0.64	18/49243 (0.0%)

All (9) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	C	582	LEU	C-N	6.82	1.45	1.33
1	A	582	LEU	C-N	6.78	1.45	1.33
3	E	579	THR	C-N	-5.89	1.20	1.34
3	E	376	SER	C-N	5.80	1.47	1.34
5	R	11	DC	C1'-N1	5.47	1.56	1.49
5	T	11	DC	C1'-N1	5.41	1.56	1.49
3	E	537	ASN	C-N	-5.21	1.22	1.34
1	C	18	CYS	CB-SG	-5.18	1.73	1.81
1	A	18	CYS	CB-SG	-5.16	1.73	1.81

All (18) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	624	SER	N-CA-C	7.04	130.01	111.00
1	C	624	SER	N-CA-C	7.02	129.95	111.00
1	A	688	PRO	N-CA-C	6.63	129.34	112.10
1	C	688	PRO	N-CA-C	6.56	129.16	112.10
1	A	689	ASP	N-CA-C	-6.55	93.32	111.00
1	C	689	ASP	N-CA-C	-6.45	93.59	111.00
6	U	4	DG	O4'-C1'-N9	6.19	112.33	108.00
6	S	4	DG	O4'-C1'-N9	6.07	112.25	108.00
1	C	688	PRO	CA-N-CD	-5.87	103.28	111.50
1	A	688	PRO	CA-N-CD	-5.85	103.31	111.50
1	C	624	SER	CB-CA-C	-5.84	99.00	110.10
1	A	624	SER	CB-CA-C	-5.81	99.07	110.10
1	C	710	LEU	N-CA-C	5.45	125.71	111.00
1	C	523	PRO	CA-N-CD	-5.28	104.11	111.50
1	A	422	ASP	CB-CG-OD2	5.24	123.02	118.30
3	E	376	SER	O-C-N	5.22	131.05	122.70
1	C	422	ASP	CB-CG-OD2	5.21	122.99	118.30
1	A	523	PRO	CA-N-CD	-5.19	104.23	111.50

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	8517	0	8394	471	0
1	C	8537	0	8432	389	0
2	B	2819	0	2745	88	0
2	D	2843	0	2788	74	0
3	E	5743	0	5773	296	0
3	H	5773	0	5798	241	0
4	F	175	0	184	22	0
4	I	180	0	178	6	0
5	R	234	0	132	3	0
5	T	234	0	132	3	0
6	S	249	0	136	7	0
6	U	249	0	136	7	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
All	All	35553	0	34828	1424	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 20.

All (1424) 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)
3:E:555:ARG:CG	3:E:559:PRO:HD3	1.32	1.56
1:A:354:THR:CG2	1:A:712:ILE:HG21	1.37	1.53
3:E:552:ILE:CG2	3:E:597:ILE:HG12	1.42	1.48
3:H:365:ARG:CB	3:H:430:THR:HG22	1.44	1.45
3:E:555:ARG:HB3	3:E:559:PRO:CG	1.52	1.37
1:A:926:LEU:HD11	2:B:122:LEU:CD2	1.54	1.36
3:E:285:PHE:CE2	3:E:345:LYS:HD2	1.63	1.32
3:E:552:ILE:HG21	3:E:597:ILE:CG1	1.60	1.32
1:A:926:LEU:CD1	2:B:122:LEU:HD21	1.60	1.31
1:C:499:SER:HB3	3:H:238:GLU:CB	1.59	1.30
3:H:220:LEU:CD2	3:H:240:LEU:HD22	1.59	1.30
3:E:449:LEU:CD1	3:E:479:LEU:HD22	1.66	1.26
3:H:220:LEU:HD23	3:H:240:LEU:CD2	1.65	1.25
1:A:709:LYS:O	1:A:710:LEU:HD23	1.39	1.22
3:E:555:ARG:CB	3:E:559:PRO:HG3	1.69	1.21
1:C:841:ALA:O	2:D:104:SER:HA	1.36	1.20
1:A:354:THR:HG21	1:A:712:ILE:CG2	1.70	1.20
3:E:428:LEU:CD2	3:E:432:LEU:HD23	1.73	1.19
1:A:704:ILE:N	1:A:704:ILE:HD12	1.54	1.18
3:E:555:ARG:CG	3:E:559:PRO:CD	2.22	1.17
3:H:226:ALA:HB1	3:H:233:ILE:N	1.58	1.15
1:A:111:ARG:HG3	2:B:292:TRP:CZ2	1.80	1.15
1:A:394:ILE:HG23	1:A:705:ASP:HB3	1.25	1.14
1:A:354:THR:CG2	1:A:712:ILE:CG2	2.24	1.14
1:A:354:THR:HG21	1:A:712:ILE:HG21	1.16	1.13
3:E:449:LEU:HD11	3:E:479:LEU:HD22	1.22	1.13
3:E:285:PHE:CZ	3:E:345:LYS:HD2	1.83	1.13
3:E:555:ARG:HB3	3:E:559:PRO:CD	1.78	1.13
1:C:910:MET:HE1	2:D:105:ILE:HG21	1.25	1.13
1:A:111:ARG:NE	2:B:292:TRP:HE1	1.43	1.12
1:A:354:THR:HG23	1:A:712:ILE:HG21	1.32	1.10
3:E:494:TRP:CE3	3:E:540:PHE:HD2	1.70	1.10
1:A:562:THR:O	1:A:564:ILE:HG13	1.53	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:562:THR:O	1:C:564:ILE:HG13	1.52	1.09
3:E:340:GLN:HG2	3:E:341:LYS:N	1.65	1.09
3:H:365:ARG:CB	3:H:430:THR:CG2	2.30	1.08
1:A:714:THR:HG22	1:A:716:PRO:HD3	1.15	1.08
1:A:356:LEU:HD21	1:A:712:ILE:HG23	1.28	1.08
1:A:912:LEU:HD21	2:B:109:ILE:HG12	1.08	1.08
3:E:552:ILE:HD12	3:E:597:ILE:HD11	1.10	1.08
1:A:354:THR:HG21	1:A:712:ILE:CB	1.84	1.08
3:E:429:ILE:HG12	3:E:429:ILE:O	1.47	1.08
1:A:840:GLU:H	2:B:103:THR:CB	1.66	1.07
3:E:587:LEU:HD22	3:E:629:MET:SD	1.95	1.07
1:A:912:LEU:HD22	2:B:109:ILE:CG2	1.85	1.07
3:E:553:ASN:CB	3:E:598:TYR:HB2	1.84	1.07
1:A:664:HIS:HB2	1:A:1131:LYS:HE3	1.37	1.06
1:A:704:ILE:H	1:A:704:ILE:CD1	1.66	1.06
1:C:910:MET:CE	2:D:105:ILE:HG21	1.84	1.06
3:E:555:ARG:HB3	3:E:559:PRO:HG3	1.05	1.05
3:E:555:ARG:HG2	3:E:559:PRO:HD3	1.38	1.05
1:A:843:PRO:CB	2:B:104:SER:CB	2.36	1.04
3:E:374:MET:HG2	3:E:378:LEU:HD23	1.37	1.04
3:E:428:LEU:HD22	3:E:432:LEU:HD23	1.40	1.04
1:A:912:LEU:HD21	2:B:109:ILE:CG1	1.87	1.03
3:H:286:LEU:HD21	3:H:349:GLY:HA3	1.40	1.03
3:E:555:ARG:HG3	3:E:559:PRO:CD	1.85	1.03
1:A:111:ARG:CG	2:B:292:TRP:HZ2	1.71	1.02
1:A:704:ILE:HD12	1:A:704:ILE:H	0.87	1.02
3:E:555:ARG:CB	3:E:559:PRO:CD	2.36	1.02
3:H:272:ILE:HD11	3:H:340:GLN:HE22	1.17	1.02
1:A:356:LEU:CD2	1:A:712:ILE:HG23	1.90	1.02
3:H:363:ILE:HD13	3:H:363:ILE:C	1.79	1.02
3:E:552:ILE:HD12	3:E:597:ILE:CD1	1.90	1.01
1:C:111:ARG:HH22	2:D:290:CYS:HA	1.21	1.01
1:A:354:THR:CG2	1:A:712:ILE:HD12	1.90	1.01
1:A:354:THR:HG21	1:A:712:ILE:CD1	1.91	1.00
3:E:555:ARG:HG3	3:E:559:PRO:HD3	1.04	1.00
1:C:585:GLU:HG3	3:H:301:ILE:CG2	1.91	1.00
3:H:363:ILE:HD13	3:H:363:ILE:O	1.61	1.00
1:A:714:THR:CG2	1:A:716:PRO:HD3	1.90	0.99
3:E:397:TYR:CD2	3:E:444:VAL:HG13	1.96	0.99
1:C:708:GLN:HA	1:C:708:GLN:NE2	1.75	0.99
1:A:354:THR:CG2	1:A:712:ILE:CD1	2.41	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:912:LEU:CD2	2:B:109:ILE:HG12	1.92	0.98
3:H:220:LEU:HD23	3:H:240:LEU:HD22	0.99	0.98
3:E:555:ARG:CB	3:E:559:PRO:CG	2.33	0.97
3:E:720:LYS:HG3	4:F:34:ALA:HB2	1.47	0.97
3:H:465:LEU:HB3	3:H:497:TYR:CZ	2.01	0.96
1:A:111:ARG:HG3	2:B:292:TRP:HZ2	1.18	0.96
3:E:555:ARG:CB	3:E:559:PRO:HD3	1.95	0.96
1:A:708:GLN:O	1:A:709:LYS:HD3	1.67	0.95
3:H:353:LEU:HD22	3:H:363:ILE:CB	1.96	0.95
1:A:987:GLU:OE2	2:B:156:HIS:HE1	1.49	0.94
3:H:272:ILE:HD11	3:H:340:GLN:NE2	1.83	0.94
1:C:465:HIS:ND1	1:C:523:PRO:HD3	1.82	0.93
3:E:340:GLN:CG	3:E:341:LYS:H	1.80	0.93
3:H:428:LEU:HA	3:H:432:LEU:CB	1.98	0.93
1:A:465:HIS:ND1	1:A:523:PRO:HD3	1.82	0.93
3:H:457:LEU:HB2	3:H:493:GLN:HE21	1.32	0.93
4:F:37:ILE:HG13	4:F:38:VAL:N	1.83	0.93
3:E:340:GLN:CG	3:E:341:LYS:N	2.30	0.92
3:H:226:ALA:HB1	3:H:233:ILE:H	1.25	0.92
1:A:912:LEU:HD22	2:B:109:ILE:HG23	1.48	0.92
3:H:340:GLN:HG2	3:H:341:LYS:HG2	1.50	0.92
3:E:720:LYS:CG	4:F:34:ALA:HB2	2.00	0.92
3:H:353:LEU:HD22	3:H:363:ILE:CG1	2.00	0.92
3:H:417:VAL:HG22	3:H:448:LEU:HD13	1.49	0.92
1:A:715:VAL:HG12	1:A:715:VAL:O	1.71	0.91
1:C:507:GLN:NE2	1:C:552:LEU:HA	1.85	0.91
3:E:494:TRP:CE3	3:E:540:PHE:CD2	2.57	0.91
3:E:597:ILE:HG22	3:E:600:LYS:HG2	1.49	0.91
1:A:507:GLN:NE2	1:A:552:LEU:HA	1.85	0.91
3:E:588:ASP:HA	3:E:632:LYS:HZ1	1.32	0.91
3:E:286:LEU:HD21	3:E:349:GLY:HA3	1.52	0.91
3:H:223:ALA:CB	3:H:240:LEU:HD11	2.01	0.91
1:C:392:ASN:HB2	1:C:1012:LEU:O	1.70	0.90
1:C:111:ARG:NH2	2:D:290:CYS:HA	1.84	0.90
3:H:339:ASP:O	3:H:340:GLN:HB3	1.72	0.90
1:A:465:HIS:CE1	1:A:523:PRO:HD3	2.07	0.90
3:E:588:ASP:HA	3:E:632:LYS:NZ	1.86	0.90
1:C:18:CYS:HB2	1:C:313:CYS:SG	2.12	0.90
1:C:329:GLY:HA3	1:C:384:GLU:HG2	1.54	0.89
3:E:588:ASP:CA	3:E:632:LYS:HZ1	1.86	0.89
1:A:111:ARG:HE	2:B:292:TRP:HE1	1.20	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:E:338:SER:O	3:E:343:GLN:HB2	1.72	0.89
1:C:465:HIS:CE1	1:C:523:PRO:HD3	2.07	0.89
3:H:426:ASP:O	3:H:429:ILE:HG23	1.73	0.89
1:A:18:CYS:HB2	1:A:313:CYS:SG	2.12	0.88
1:A:329:GLY:HA3	1:A:384:GLU:HG2	1.54	0.88
1:A:714:THR:HG22	1:A:716:PRO:CD	2.03	0.88
2:D:323:HIS:NE2	2:D:342:THR:HG21	1.89	0.88
1:C:987:GLU:OE2	2:D:156:HIS:CE1	2.26	0.88
2:B:323:HIS:NE2	2:B:342:THR:HG21	1.88	0.88
1:C:578:HIS:CD2	1:C:623:LEU:HD12	2.09	0.87
1:A:23:PHE:H	1:A:30:ASN:HD22	1.21	0.87
1:A:578:HIS:CD2	1:A:623:LEU:HD12	2.09	0.87
3:E:552:ILE:CG2	3:E:597:ILE:CG1	2.35	0.87
3:E:552:ILE:CD1	3:E:597:ILE:HD11	2.00	0.87
3:H:226:ALA:CB	3:H:233:ILE:N	2.37	0.87
1:A:387:LEU:HG	1:A:717:LEU:HD11	1.56	0.87
1:C:910:MET:SD	2:D:105:ILE:HD13	2.15	0.87
3:H:340:GLN:HG2	3:H:341:LYS:N	1.87	0.86
1:C:649:VAL:HG12	1:C:650:PHE:H	1.39	0.86
3:H:226:ALA:CB	3:H:233:ILE:H	1.86	0.86
1:A:375:LEU:O	1:A:389:ILE:CA	2.23	0.85
3:E:340:GLN:CG	3:E:341:LYS:HG2	2.06	0.85
1:A:499:SER:HB3	3:E:238:GLU:CB	2.06	0.85
1:C:23:PHE:H	1:C:30:ASN:HD22	1.21	0.85
1:C:111:ARG:CZ	2:D:290:CYS:SG	2.64	0.85
1:C:507:GLN:HE22	1:C:553:SER:H	1.24	0.85
1:A:81:THR:HG21	1:A:85:ASN:HD22	1.41	0.85
1:A:520:GLN:HG3	1:A:529:ILE:HG13	1.59	0.85
4:F:38:VAL:O	4:F:39:VAL:HG23	1.77	0.84
1:A:649:VAL:HG12	1:A:650:PHE:H	1.38	0.84
3:H:353:LEU:HD22	3:H:363:ILE:HB	1.57	0.84
3:H:378:LEU:O	3:H:379:GLN:HB2	1.77	0.84
1:A:375:LEU:O	1:A:389:ILE:HA	1.78	0.84
3:E:428:LEU:HD23	3:E:432:LEU:HD23	1.58	0.84
3:E:595:ARG:O	3:E:596:PHE:CG	2.30	0.84
1:C:520:GLN:HG3	1:C:529:ILE:HG13	1.60	0.84
4:F:38:VAL:O	4:F:38:VAL:HG22	1.74	0.84
3:H:220:LEU:HD22	3:H:240:LEU:HD22	1.61	0.83
1:A:840:GLU:HG3	1:A:840:GLU:O	1.76	0.83
1:C:81:THR:HG21	1:C:85:ASN:HD22	1.41	0.83
1:C:841:ALA:O	2:D:104:SER:CA	2.25	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:926:LEU:HD11	2:B:122:LEU:HD21	0.85	0.83
1:C:430:VAL:HG13	3:H:246:ASN:HB3	1.58	0.83
1:A:714:THR:O	1:A:715:VAL:HB	1.77	0.83
1:A:111:ARG:CB	2:B:292:TRP:HZ2	1.91	0.83
1:A:446:THR:HG22	1:A:447:GLU:H	1.43	0.82
1:A:507:GLN:HE22	1:A:553:SER:H	1.25	0.82
4:F:38:VAL:C	4:F:39:VAL:HG23	1.99	0.82
1:A:394:ILE:HG23	1:A:705:ASP:CB	2.07	0.82
1:A:394:ILE:CG2	1:A:705:ASP:HB3	2.08	0.82
3:H:465:LEU:HB3	3:H:497:TYR:CE2	2.14	0.82
1:A:111:ARG:NE	2:B:292:TRP:NE1	2.26	0.82
1:A:404:LEU:HD21	3:E:200:ILE:HD11	1.61	0.82
1:A:585:GLU:OE2	3:E:301:ILE:HG23	1.79	0.82
3:E:332:PHE:CE1	3:E:336:ILE:HG21	2.14	0.82
3:H:461:LEU:HD22	3:H:493:GLN:HB3	1.61	0.82
1:A:509:VAL:HG23	1:A:543:ILE:HD13	1.62	0.81
1:A:987:GLU:OE2	2:B:156:HIS:CE1	2.33	0.81
1:C:585:GLU:OE2	3:H:301:ILE:HG23	1.79	0.81
1:C:482:GLU:CD	1:C:483:PRO:HD3	2.00	0.81
1:A:482:GLU:CD	1:A:483:PRO:HD3	2.00	0.81
1:C:446:THR:HG22	1:C:447:GLU:H	1.43	0.81
3:E:617:VAL:HG11	3:E:827:GLN:HB3	1.62	0.81
3:H:457:LEU:HB3	3:H:493:GLN:HG2	1.60	0.81
3:H:290:ASP:CG	3:H:367:LEU:HD13	2.02	0.81
1:C:926:LEU:CD2	2:D:105:ILE:HD11	2.10	0.81
3:H:340:GLN:HG2	3:H:341:LYS:H	1.46	0.81
1:A:534:MET:HE2	1:A:569:LEU:HD11	1.62	0.81
3:H:617:VAL:HG11	3:H:827:GLN:HB3	1.62	0.81
1:A:912:LEU:HD22	2:B:109:ILE:HG21	1.62	0.81
1:A:111:ARG:CB	2:B:292:TRP:CZ2	2.65	0.80
1:A:413:LEU:HB2	1:A:424:THR:HB	1.63	0.80
1:A:537:GLU:OE1	3:E:236:ASN:HB2	1.81	0.80
3:E:449:LEU:HD13	3:E:479:LEU:HD22	1.64	0.80
1:C:509:VAL:HG23	1:C:543:ILE:HD13	1.62	0.80
1:C:534:MET:HE2	1:C:569:LEU:HD11	1.63	0.80
1:C:987:GLU:OE2	2:D:156:HIS:HE1	1.62	0.80
1:A:356:LEU:HD21	1:A:712:ILE:CG2	2.10	0.80
3:E:595:ARG:C	3:E:596:PHE:CG	2.55	0.79
1:C:413:LEU:HB2	1:C:424:THR:HB	1.63	0.79
1:A:713:ARG:HG3	1:A:714:THR:H	1.47	0.79
1:C:430:VAL:HG22	3:H:246:ASN:HB3	1.63	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:412:PRO:HB2	1:C:422:ASP:OD2	1.83	0.79
1:C:705:ASP:OD1	1:C:707:ILE:HG13	1.83	0.79
1:A:111:ARG:HB3	2:B:290:CYS:SG	2.22	0.78
3:H:220:LEU:CD2	3:H:240:LEU:CD2	2.42	0.78
3:H:340:GLN:CG	3:H:341:LYS:HG2	2.12	0.78
1:A:708:GLN:O	1:A:709:LYS:CD	2.31	0.78
3:E:285:PHE:CE2	3:E:345:LYS:CD	2.58	0.78
1:A:578:HIS:NE2	1:A:623:LEU:HD12	1.99	0.78
1:C:814:LEU:HD11	2:D:106:LEU:HD13	1.66	0.78
1:A:111:ARG:CG	2:B:292:TRP:CZ2	2.53	0.78
3:E:491:LEU:HG	3:E:540:PHE:CZ	2.18	0.78
3:H:901:ARG:O	3:H:902:ASP:HB2	1.84	0.78
3:E:350:ILE:HA	3:E:368:LEU:HD21	1.65	0.78
3:E:339:ASP:CG	3:E:340:GLN:N	2.37	0.78
1:A:354:THR:HG21	1:A:712:ILE:HD12	1.59	0.77
1:A:708:GLN:O	1:A:709:LYS:CE	2.31	0.77
1:C:578:HIS:NE2	1:C:623:LEU:HD12	1.99	0.77
1:A:412:PRO:HB2	1:A:422:ASP:OD2	1.83	0.77
1:A:23:PHE:H	1:A:30:ASN:ND2	1.82	0.77
1:C:507:GLN:HE22	1:C:552:LEU:HA	1.48	0.77
1:A:507:GLN:HE22	1:A:552:LEU:HA	1.48	0.77
1:A:602:LEU:C	1:A:603:LEU:HD23	2.05	0.77
1:C:602:LEU:C	1:C:603:LEU:HD23	2.04	0.77
3:E:901:ARG:O	3:E:902:ASP:HB2	1.84	0.76
1:A:329:GLY:HA3	1:A:384:GLU:CG	2.15	0.76
1:C:649:VAL:HG12	1:C:650:PHE:N	2.00	0.76
1:C:708:GLN:HA	1:C:708:GLN:HE21	1.50	0.76
1:A:707:ILE:O	1:A:708:GLN:CB	2.33	0.76
1:A:709:LYS:O	1:A:710:LEU:CD2	2.30	0.76
1:C:23:PHE:H	1:C:30:ASN:ND2	1.82	0.76
1:A:649:VAL:HG12	1:A:650:PHE:N	2.00	0.76
3:E:417:VAL:HG21	3:E:449:LEU:HD21	1.66	0.76
1:A:450:GLY:HA3	1:A:479:VAL:CG2	2.17	0.75
1:A:448:LEU:HB3	1:A:451:PHE:HD2	1.52	0.75
1:A:452:VAL:HG12	1:A:454:ASP:OD1	1.86	0.75
1:A:664:HIS:C	1:A:1131:LYS:HE2	2.07	0.75
1:C:329:GLY:HA3	1:C:384:GLU:CG	2.16	0.75
3:E:587:LEU:HB3	3:E:632:LYS:HD3	1.67	0.75
3:H:340:GLN:NE2	3:H:342:VAL:HG22	2.01	0.75
1:A:838:PRO:HA	2:B:101:GLY:HA2	1.68	0.75
1:A:987:GLU:OE1	2:B:159:HIS:HB2	1.86	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:452:VAL:HG12	1:C:454:ASP:OD1	1.86	0.74
3:E:595:ARG:O	3:E:596:PHE:CD2	2.40	0.74
4:F:35:TRP:HA	4:F:35:TRP:CE3	2.20	0.74
1:A:10:GLN:OE1	1:A:710:LEU:HD11	1.87	0.74
1:C:450:GLY:HA3	1:C:479:VAL:CG2	2.17	0.74
1:A:375:LEU:O	1:A:389:ILE:CB	2.36	0.74
1:C:585:GLU:CG	3:H:301:ILE:CG2	2.66	0.74
1:A:354:THR:HG22	1:A:712:ILE:CD1	2.17	0.74
1:A:664:HIS:CB	1:A:1131:LYS:HE3	2.18	0.74
1:A:589:ARG:NH1	3:E:241:TYR:HE2	1.85	0.74
1:C:928:ARG:HD2	2:D:437:THR:HG23	1.68	0.74
3:E:374:MET:HG2	3:E:378:LEU:CD2	2.15	0.74
3:H:457:LEU:HB2	3:H:493:GLN:NE2	2.03	0.74
1:A:451:PHE:CD1	1:A:470:GLN:HB2	2.23	0.73
1:C:469:ILE:HD11	1:C:476:VAL:HG23	1.69	0.73
1:C:585:GLU:HG3	3:H:301:ILE:HG21	1.68	0.73
3:H:293:TRP:CH2	3:H:370:SER:HB2	2.22	0.73
1:A:835:MET:HG2	1:A:845:GLN:O	1.88	0.73
1:A:469:ILE:HD11	1:A:476:VAL:HG23	1.69	0.73
1:A:657:THR:HG22	1:A:658:VAL:H	1.53	0.73
1:A:987:GLU:CD	2:B:156:HIS:CE1	2.61	0.73
1:C:910:MET:CE	2:D:105:ILE:HD13	2.19	0.73
1:A:844:LYS:O	1:A:845:GLN:HG3	1.88	0.73
1:A:111:ARG:HB2	2:B:292:TRP:CZ2	2.24	0.73
1:C:448:LEU:HB3	1:C:451:PHE:HD2	1.52	0.73
1:C:563:ASP:OD2	1:C:565:SER:HB3	1.87	0.73
1:A:926:LEU:HD21	2:B:122:LEU:CG	2.18	0.73
1:C:451:PHE:CD1	1:C:470:GLN:HB2	2.23	0.73
1:A:563:ASP:OD2	1:A:565:SER:HB3	1.87	0.72
1:A:354:THR:HG21	1:A:712:ILE:CG1	2.18	0.72
1:A:578:HIS:CD2	1:A:623:LEU:H	2.06	0.72
3:H:465:LEU:HD21	3:H:494:TRP:HD1	1.53	0.72
1:C:578:HIS:CD2	1:C:623:LEU:H	2.06	0.72
1:C:404:LEU:HD21	3:H:200:ILE:HD11	1.70	0.72
1:C:657:THR:HG22	1:C:658:VAL:H	1.52	0.72
1:C:841:ALA:HA	2:D:103:THR:O	1.90	0.72
3:E:353:LEU:CB	3:E:368:LEU:HD11	2.19	0.72
3:E:597:ILE:O	3:E:600:LYS:HE2	1.89	0.72
1:C:926:LEU:HD21	2:D:105:ILE:HD11	1.71	0.72
3:H:847:GLN:HB3	3:H:889:ARG:HD2	1.72	0.72
1:A:111:ARG:HG3	2:B:292:TRP:CE2	2.25	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:585:GLU:OE2	3:H:301:ILE:CG2	2.38	0.72
3:H:461:LEU:CD2	3:H:493:GLN:HB3	2.18	0.72
1:A:912:LEU:CD2	2:B:109:ILE:CG1	2.62	0.72
3:E:597:ILE:O	3:E:600:LYS:HG2	1.88	0.72
1:C:1055:GLN:HE22	1:C:1090:ASP:H	1.36	0.72
1:A:387:LEU:HD11	1:A:735:VAL:HG21	1.72	0.72
1:A:664:HIS:HB2	1:A:1131:LYS:CE	2.18	0.72
1:A:840:GLU:N	2:B:103:THR:CB	2.48	0.72
1:A:842:GLU:O	1:A:844:LYS:HD3	1.90	0.72
1:C:537:GLU:OE1	3:H:236:ASN:HB2	1.89	0.72
1:A:465:HIS:HB2	1:A:467:GLN:HE21	1.54	0.71
1:C:589:ARG:NH1	3:H:241:TYR:CE2	2.58	0.71
1:A:1055:GLN:HE22	1:A:1090:ASP:H	1.37	0.71
1:C:469:ILE:HD13	1:C:470:GLN:N	2.06	0.71
1:C:465:HIS:O	1:C:467:GLN:HG3	1.89	0.71
1:A:394:ILE:HG22	1:A:395:GLY:N	2.05	0.71
3:E:847:GLN:HB3	3:E:889:ARG:HD2	1.72	0.71
1:C:465:HIS:HB2	1:C:467:GLN:HE21	1.54	0.71
3:E:555:ARG:HB2	3:E:559:PRO:HG3	1.68	0.71
1:A:450:GLY:HA3	1:A:479:VAL:HG21	1.73	0.71
1:A:465:HIS:O	1:A:467:GLN:HG3	1.89	0.71
1:A:889:ARG:HD3	1:A:901:THR:HB	1.73	0.71
3:H:229:ASN:C	3:H:231:THR:H	1.94	0.71
1:C:451:PHE:CE1	1:C:470:GLN:HB2	2.26	0.71
1:C:889:ARG:HD3	1:C:901:THR:HB	1.73	0.71
3:E:449:LEU:HD11	3:E:479:LEU:CD2	2.13	0.71
3:H:272:ILE:CD1	3:H:340:GLN:HE22	1.99	0.71
1:A:451:PHE:CE1	1:A:470:GLN:HB2	2.25	0.70
1:A:532:THR:HG22	1:A:533:GLU:N	2.06	0.70
1:A:652:CYS:HB3	1:A:676:VAL:O	1.91	0.70
1:C:399:HIS:NE2	1:C:703:THR:HG22	2.05	0.70
1:C:532:THR:HG22	1:C:533:GLU:N	2.06	0.70
1:C:585:GLU:CG	3:H:301:ILE:HG23	2.21	0.70
3:H:428:LEU:CA	3:H:432:LEU:CB	2.69	0.70
2:B:263:LEU:HB2	2:B:272:PHE:HB3	1.73	0.70
1:C:707:ILE:HG22	1:C:707:ILE:O	1.90	0.70
1:A:480:SER:O	1:A:484:LYS:HA	1.92	0.70
3:E:556:PRO:O	3:E:557:ASN:CG	2.30	0.70
3:H:457:LEU:CB	3:H:493:GLN:HE21	2.04	0.70
2:D:263:LEU:HB2	2:D:272:PHE:HB3	1.72	0.70
3:E:530:ILE:HA	3:E:534:PHE:HB2	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:715:VAL:O	1:A:715:VAL:CG1	2.40	0.70
1:C:561:TRP:O	1:C:587:ILE:CG2	2.40	0.70
3:E:429:ILE:O	3:E:429:ILE:CG1	2.35	0.69
3:H:223:ALA:HB2	3:H:240:LEU:HD11	1.72	0.69
1:C:450:GLY:HA3	1:C:479:VAL:HG21	1.73	0.69
1:A:469:ILE:HD13	1:A:470:GLN:N	2.06	0.69
3:E:597:ILE:O	3:E:600:LYS:CG	2.40	0.69
3:H:530:ILE:HA	3:H:534:PHE:HB2	1.73	0.69
1:C:652:CYS:HB3	1:C:676:VAL:O	1.91	0.69
4:F:37:ILE:HG13	4:F:38:VAL:H	1.57	0.69
1:C:430:VAL:HG13	3:H:246:ASN:CB	2.21	0.69
1:A:452:VAL:HG23	1:A:470:GLN:OE1	1.93	0.69
1:A:561:TRP:O	1:A:587:ILE:CG2	2.40	0.69
1:C:596:PHE:HE1	1:C:648:ASN:HA	1.58	0.69
3:E:428:LEU:HD22	3:E:432:LEU:CD2	2.20	0.69
3:H:336:ILE:O	3:H:342:VAL:HG11	1.91	0.69
1:C:480:SER:O	1:C:484:LYS:HA	1.92	0.69
1:C:592:LEU:HD23	1:C:593:MET:O	1.92	0.69
3:E:350:ILE:HG12	3:E:368:LEU:CD2	2.23	0.69
1:A:389:ILE:O	1:A:390:ILE:CB	2.40	0.69
1:A:1051:LEU:HB2	1:A:1089:ILE:HD13	1.75	0.69
3:E:339:ASP:O	3:E:340:GLN:HB3	1.93	0.69
1:A:596:PHE:HE1	1:A:648:ASN:HA	1.57	0.68
3:H:337:ILE:HG13	3:H:374:MET:CE	2.22	0.68
1:C:618:ILE:HG13	1:C:619:GLU:N	2.08	0.68
3:H:450:GLY:O	3:H:451:GLU:HB2	1.93	0.68
1:C:704:ILE:HD12	1:C:704:ILE:H	1.57	0.68
3:H:762:PHE:HB3	3:H:766:GLU:HG3	1.76	0.68
1:A:592:LEU:HD23	1:A:593:MET:O	1.92	0.68
3:E:598:TYR:CD2	3:E:878:LYS:O	2.46	0.68
3:E:340:GLN:HG2	3:E:341:LYS:HG2	1.76	0.68
1:A:926:LEU:HD11	2:B:122:LEU:HD23	1.70	0.68
1:A:618:ILE:HG13	1:A:619:GLU:N	2.07	0.68
1:C:402:ILE:CD1	3:H:198:LEU:HB3	2.23	0.68
3:E:417:VAL:HG21	3:E:449:LEU:CD2	2.24	0.68
3:E:762:PHE:HB3	3:E:766:GLU:HG3	1.76	0.68
1:A:111:ARG:NH1	2:B:290:CYS:SG	2.67	0.67
1:A:356:LEU:CD2	1:A:712:ILE:CG2	2.70	0.67
1:C:452:VAL:HG23	1:C:470:GLN:OE1	1.93	0.67
3:E:507:ILE:HD11	3:E:554:LYS:NZ	2.09	0.67
3:E:588:ASP:CA	3:E:632:LYS:NZ	2.53	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:430:VAL:CG1	3:H:246:ASN:HB3	2.24	0.67
1:C:499:SER:CB	3:H:238:GLU:CB	2.55	0.67
3:E:450:GLY:C	3:E:452:HIS:H	1.97	0.67
3:E:594:PHE:C	3:E:596:PHE:H	1.96	0.67
1:A:397:HIS:HB2	1:A:703:THR:CG2	2.25	0.67
1:A:354:THR:HG22	1:A:712:ILE:HD13	1.76	0.67
3:E:552:ILE:HG21	3:E:597:ILE:HG12	0.71	0.67
3:E:552:ILE:HG23	3:E:597:ILE:HG12	1.65	0.67
1:A:440:GLY:O	1:A:686:GLY:HA3	1.94	0.67
1:A:840:GLU:O	1:A:840:GLU:CG	2.43	0.67
1:A:912:LEU:CD2	2:B:109:ILE:CG2	2.69	0.67
1:C:440:GLY:O	1:C:686:GLY:HA3	1.94	0.67
1:C:926:LEU:HD21	2:D:126:LEU:HD11	1.76	0.66
3:E:374:MET:CG	3:E:378:LEU:HD23	2.20	0.66
1:A:111:ARG:HB2	2:B:292:TRP:HZ2	1.60	0.66
1:A:714:THR:O	1:A:715:VAL:CB	2.44	0.66
2:D:443:SER:HB2	2:D:450:LEU:HB2	1.76	0.66
4:F:35:TRP:HA	4:F:35:TRP:HE3	1.58	0.66
3:E:340:GLN:HG3	3:E:341:LYS:H	1.59	0.66
3:H:290:ASP:CG	3:H:367:LEU:CD1	2.64	0.66
1:A:710:LEU:O	1:A:711:HIS:C	2.34	0.66
1:A:460:CYS:HA	1:A:469:ILE:O	1.96	0.66
1:C:630:THR:CB	1:C:797:HIS:CE1	2.78	0.66
3:E:720:LYS:HG2	4:F:34:ALA:CB	2.26	0.66
1:A:354:THR:CG2	1:A:712:ILE:HD13	2.24	0.66
1:C:630:THR:HB	1:C:797:HIS:CE1	2.30	0.66
3:H:434:GLN:C	3:H:436:THR:H	1.99	0.66
1:A:536:HIS:CD2	1:A:563:ASP:HB3	2.31	0.66
1:C:926:LEU:HD22	2:D:105:ILE:CD1	2.26	0.66
3:E:332:PHE:CZ	3:E:336:ILE:HG21	2.31	0.66
3:E:599:GLY:HA2	3:E:879:PHE:HB3	1.78	0.66
2:B:443:SER:HB2	2:B:450:LEU:HB2	1.76	0.65
1:C:460:CYS:HA	1:C:469:ILE:O	1.95	0.65
1:C:564:ILE:HG22	1:C:564:ILE:O	1.96	0.65
3:H:363:ILE:C	3:H:363:ILE:CD1	2.53	0.65
1:A:926:LEU:HD21	2:B:122:LEU:HD11	1.78	0.65
3:H:911:TYR:O	3:H:912:ILE:HG13	1.96	0.65
1:C:582:LEU:O	1:C:583:GLY:O	2.14	0.65
3:E:555:ARG:CD	3:E:556:PRO:HD2	2.27	0.65
3:H:464:LEU:HB3	3:H:473:LEU:HD21	1.78	0.65
1:A:354:THR:HG23	1:A:712:ILE:CG2	2.12	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:987:GLU:OE1	2:D:159:HIS:HB2	1.97	0.65
1:A:582:LEU:O	1:A:583:GLY:O	2.14	0.65
3:H:223:ALA:CB	3:H:240:LEU:CD1	2.75	0.65
3:H:340:GLN:HG2	3:H:341:LYS:CG	2.26	0.65
3:E:595:ARG:C	3:E:596:PHE:CD1	2.70	0.65
3:E:285:PHE:CZ	3:E:345:LYS:CD	2.71	0.65
3:E:494:TRP:HE3	3:E:540:PHE:HD2	1.41	0.65
1:C:394:ILE:HD12	1:C:706:GLU:HA	1.78	0.65
1:C:536:HIS:CD2	1:C:563:ASP:HB3	2.31	0.65
3:E:203:PHE:O	3:E:204:LYS:C	2.35	0.65
3:E:417:VAL:HG11	3:E:449:LEU:HD11	1.79	0.65
1:A:711:HIS:O	1:A:713:ARG:N	2.30	0.65
1:C:910:MET:HE1	2:D:105:ILE:CG2	2.16	0.65
1:A:562:THR:O	1:A:564:ILE:N	2.30	0.64
1:C:446:THR:CG2	1:C:447:GLU:H	2.05	0.64
3:E:720:LYS:CG	4:F:34:ALA:CB	2.74	0.64
1:A:564:ILE:HG22	1:A:564:ILE:O	1.96	0.64
1:C:507:GLN:HE22	1:C:553:SER:N	1.94	0.64
1:C:518:TYR:HD1	1:C:519:LEU:N	1.95	0.64
3:E:911:TYR:O	3:E:912:ILE:HG13	1.96	0.64
1:C:667:VAL:HG22	1:C:1015:GLN:O	1.98	0.64
3:E:339:ASP:CG	3:E:340:GLN:H	1.99	0.64
3:E:434:GLN:O	3:E:436:THR:N	2.30	0.64
3:E:594:PHE:O	3:E:596:PHE:N	2.30	0.64
3:H:434:GLN:O	3:H:436:THR:N	2.30	0.64
1:C:520:GLN:HG3	1:C:529:ILE:CG1	2.27	0.64
3:E:494:TRP:CZ3	3:E:540:PHE:HD2	2.14	0.64
3:H:203:PHE:O	3:H:204:LYS:C	2.35	0.64
3:H:230:SER:C	3:H:232:SER:H	2.00	0.64
1:A:589:ARG:NH1	3:E:241:TYR:CE2	2.65	0.64
3:E:415:HIS:O	3:E:419:LYS:HG2	1.97	0.64
1:A:507:GLN:NE2	1:A:553:SER:H	1.95	0.64
1:A:601:TYR:CE2	1:A:666:LEU:HD21	2.33	0.64
1:A:708:GLN:O	1:A:709:LYS:NZ	2.31	0.64
1:C:562:THR:O	1:C:564:ILE:N	2.30	0.64
3:E:450:GLY:O	3:E:452:HIS:N	2.30	0.64
3:E:555:ARG:O	3:E:557:ASN:N	2.30	0.64
1:A:715:VAL:N	1:A:716:PRO:CD	2.60	0.64
1:C:402:ILE:HD13	3:H:198:LEU:CB	2.28	0.64
3:E:555:ARG:O	3:E:556:PRO:C	2.36	0.64
3:H:467:GLU:HG2	3:H:469:ARG:HE	1.63	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:710:LEU:O	1:A:712:ILE:N	2.32	0.63
1:C:926:LEU:CD2	2:D:105:ILE:CD1	2.76	0.63
3:H:230:SER:O	3:H:232:SER:N	2.30	0.63
3:E:411:PRO:HG3	3:E:464:LEU:HD21	1.81	0.63
1:A:507:GLN:HE22	1:A:553:SER:N	1.95	0.63
1:C:430:VAL:CG2	3:H:246:ASN:HB3	2.27	0.63
1:C:601:TYR:CE2	1:C:666:LEU:HD21	2.33	0.63
3:H:229:ASN:O	3:H:231:THR:N	2.30	0.63
3:H:336:ILE:O	3:H:342:VAL:CB	2.45	0.63
3:H:599:GLY:H	3:H:878:LYS:HG2	1.63	0.63
1:A:476:VAL:HG13	1:A:490:TRP:HB3	1.81	0.63
3:E:431:TYR:O	3:E:432:LEU:HB2	1.98	0.63
3:E:595:ARG:HB2	3:E:596:PHE:CZ	2.33	0.63
1:A:518:TYR:HD1	1:A:519:LEU:N	1.96	0.63
3:E:359:ASN:N	3:E:359:ASN:OD1	2.32	0.63
1:A:414:ARG:CB	1:A:462:ASN:HD21	2.12	0.63
3:E:555:ARG:HD2	3:E:556:PRO:HD2	1.81	0.63
3:H:229:ASN:N	3:H:229:ASN:OD1	2.30	0.63
1:A:705:ASP:O	1:A:707:ILE:HG13	1.98	0.63
1:C:414:ARG:CB	1:C:462:ASN:HD21	2.12	0.62
2:D:249:ARG:HE	2:D:291:ASP:HB3	1.64	0.62
1:A:520:GLN:HG3	1:A:529:ILE:CG1	2.27	0.62
1:C:476:VAL:HG13	1:C:490:TRP:HB3	1.81	0.62
1:C:482:GLU:OE1	1:C:483:PRO:HD3	1.99	0.62
1:C:617:ASN:HD21	1:C:619:GLU:HB2	1.64	0.62
1:C:507:GLN:NE2	1:C:553:SER:H	1.94	0.62
3:H:340:GLN:CD	3:H:341:LYS:HG2	2.20	0.62
1:C:562:THR:HG22	1:C:563:ASP:N	2.14	0.62
1:A:7:VAL:HG13	1:A:1091:GLY:HA3	1.81	0.62
1:C:585:GLU:CD	3:H:301:ILE:HG23	2.19	0.62
1:C:839:GLU:H	2:D:103:THR:HG21	1.63	0.62
1:C:928:ARG:NH1	2:D:437:THR:CG2	2.62	0.62
1:C:7:VAL:HG13	1:C:1091:GLY:HA3	1.82	0.62
1:C:928:ARG:NH1	2:D:437:THR:HG23	2.14	0.62
3:E:340:GLN:HG3	3:E:341:LYS:HG2	1.82	0.62
3:E:397:TYR:CD2	3:E:444:VAL:CG1	2.78	0.62
2:B:249:ARG:HE	2:B:291:ASP:HB3	1.63	0.62
3:H:226:ALA:HB1	3:H:232:SER:C	2.18	0.62
1:A:591:ILE:O	1:A:592:LEU:HB2	2.00	0.62
1:A:926:LEU:HD21	2:B:122:LEU:CD1	2.30	0.62
1:C:926:LEU:HD22	2:D:105:ILE:HD11	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:E:720:LYS:HG2	4:F:34:ALA:HB2	1.82	0.62
1:A:354:THR:HG21	1:A:712:ILE:HB	1.78	0.61
1:A:582:LEU:HD13	1:A:583:GLY:H	1.64	0.61
3:E:598:TYR:HD2	3:E:878:LYS:O	1.83	0.61
1:A:562:THR:HG22	1:A:563:ASP:N	2.14	0.61
1:A:617:ASN:HD21	1:A:619:GLU:HB2	1.64	0.61
1:A:926:LEU:HD21	2:B:122:LEU:HG	1.80	0.61
1:C:912:LEU:CD2	2:D:109:ILE:HD13	2.30	0.61
1:C:928:ARG:CZ	2:D:437:THR:CG2	2.78	0.61
4:F:38:VAL:O	4:F:39:VAL:CG2	2.47	0.61
1:A:492:GLU:HG3	1:A:496:LYS:HB2	1.83	0.61
1:C:889:ARG:HG3	1:C:904:ASN:ND2	2.16	0.61
1:C:111:ARG:NH2	2:D:290:CYS:SG	2.73	0.61
1:A:657:THR:HG21	1:A:668:PHE:HB3	1.82	0.61
1:C:591:ILE:O	1:C:592:LEU:HB2	2.00	0.61
3:E:501:PHE:O	3:E:504:THR:HG22	2.01	0.61
5:R:12:DG:N2	6:S:6:DG:C2	2.69	0.61
1:A:889:ARG:HG3	1:A:904:ASN:ND2	2.16	0.61
5:T:12:DG:N2	6:U:6:DG:C2	2.69	0.61
1:A:482:GLU:OE1	1:A:483:PRO:HD3	1.99	0.61
1:C:396:ILE:HD13	1:C:396:ILE:H	1.66	0.60
3:H:415:HIS:O	3:H:419:LYS:HG2	2.00	0.60
1:A:394:ILE:CG2	1:A:395:GLY:N	2.64	0.60
3:H:465:LEU:HD21	3:H:494:TRP:CD1	2.35	0.60
3:H:501:PHE:O	3:H:504:THR:HG22	2.01	0.60
1:C:582:LEU:HD13	1:C:583:GLY:H	1.65	0.60
3:E:414:LEU:HB3	3:E:475:LEU:CD2	2.32	0.60
3:H:206:LYS:CB	3:H:207:PRO:CD	2.79	0.60
1:A:446:THR:CG2	1:A:447:GLU:H	2.05	0.60
1:C:492:GLU:HG3	1:C:496:LYS:HB2	1.83	0.60
1:A:387:LEU:CD1	1:A:735:VAL:HG21	2.31	0.60
3:H:290:ASP:OD1	3:H:367:LEU:CD1	2.50	0.60
3:E:286:LEU:HD21	3:E:349:GLY:CA	2.30	0.60
3:E:587:LEU:CB	3:E:632:LYS:HD3	2.31	0.60
1:A:912:LEU:HD21	2:B:109:ILE:CD1	2.31	0.60
1:A:589:ARG:HD3	3:E:241:TYR:OH	2.02	0.60
1:A:397:HIS:HB2	1:A:703:THR:HG23	1.84	0.59
1:C:392:ASN:HD22	1:C:1012:LEU:C	2.06	0.59
3:E:434:GLN:C	3:E:436:THR:H	2.03	0.59
1:A:889:ARG:HG3	1:A:904:ASN:HD21	1.67	0.59
3:E:596:PHE:CD1	3:E:596:PHE:N	2.69	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:573:SER:OG	1:A:575:GLU:HB2	2.02	0.59
1:A:673:LEU:HD23	1:A:674:LYS:H	1.67	0.59
1:C:851:PHE:HB3	1:C:858:LEU:HD22	1.85	0.59
3:H:446:LYS:HG3	3:H:484:ARG:HH22	1.67	0.59
1:C:402:ILE:HD12	3:H:198:LEU:HB3	1.85	0.59
3:E:337:ILE:O	3:E:342:VAL:CB	2.50	0.59
1:C:441:GLU:HG2	1:C:441:GLU:O	2.02	0.59
3:E:350:ILE:HA	3:E:368:LEU:CD2	2.32	0.59
3:E:375:LEU:HD22	3:E:380:ILE:HB	1.83	0.59
1:A:692:ALA:C	1:A:693:LEU:HD23	2.23	0.59
1:A:851:PHE:HB3	1:A:858:LEU:HD22	1.85	0.59
1:C:912:LEU:HD22	2:D:109:ILE:HD13	1.85	0.59
1:A:454:ASP:OD1	1:A:454:ASP:N	2.28	0.59
1:A:498:ILE:HD12	1:A:498:ILE:N	2.18	0.59
1:A:588:PRO:HB3	1:A:604:CYS:SG	2.43	0.59
1:C:890:LEU:HB3	1:C:903:CYS:HB2	1.84	0.59
3:E:374:MET:O	3:E:378:LEU:N	2.36	0.59
3:E:730:CYS:HB2	4:F:26:LYS:O	2.03	0.59
1:A:396:ILE:HD13	1:A:396:ILE:H	1.68	0.58
1:A:407:ILE:HG21	1:A:410:LEU:HD23	1.85	0.58
1:C:912:LEU:HD21	2:D:109:ILE:CD1	2.33	0.58
3:E:506:VAL:O	3:E:555:ARG:HD3	2.03	0.58
4:F:38:VAL:C	4:F:39:VAL:CG2	2.71	0.58
3:H:337:ILE:O	3:H:338:SER:C	2.41	0.58
3:H:444:VAL:HG12	3:H:448:LEU:HD12	1.84	0.58
1:A:167:VAL:HG13	1:A:180:PHE:HB3	1.84	0.58
1:A:432:GLN:NE2	3:E:207:PRO:HG3	2.18	0.58
1:A:922:LEU:HD23	1:A:957:VAL:HG13	1.84	0.58
1:C:498:ILE:HD12	1:C:498:ILE:N	2.18	0.58
1:C:889:ARG:HG3	1:C:904:ASN:HD21	1.67	0.58
3:E:375:LEU:HD23	3:E:380:ILE:HD12	1.85	0.58
1:A:841:ALA:N	2:B:103:THR:CB	2.65	0.58
3:H:519:LEU:HD21	3:H:552:ILE:HD11	1.85	0.58
1:A:441:GLU:O	1:A:441:GLU:HG2	2.02	0.58
1:C:446:THR:HG22	1:C:447:GLU:N	2.16	0.58
1:C:910:MET:HE1	2:D:105:ILE:HD13	1.86	0.58
3:H:340:GLN:O	3:H:341:LYS:C	2.41	0.58
3:H:604:GLU:HB2	3:H:641:PHE:CE2	2.39	0.58
1:A:926:LEU:CD2	2:B:122:LEU:HD11	2.33	0.58
1:C:414:ARG:HB3	1:C:462:ASN:HD21	1.68	0.58
1:C:573:SER:OG	1:C:575:GLU:HB2	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:477:ARG:HG2	1:C:489:GLU:HG3	1.86	0.58
1:C:692:ALA:C	1:C:693:LEU:HD23	2.23	0.58
1:A:433:THR:HG22	1:A:434:ARG:H	1.69	0.58
1:C:588:PRO:HB3	1:C:604:CYS:SG	2.43	0.58
1:C:600:HIS:HB2	1:C:616:LEU:O	2.04	0.58
1:A:432:GLN:HA	1:A:455:GLN:O	2.04	0.58
1:C:673:LEU:HD23	1:C:674:LYS:H	1.68	0.58
3:E:604:GLU:HB2	3:E:641:PHE:CE2	2.38	0.58
3:H:336:ILE:O	3:H:342:VAL:CG1	2.51	0.58
1:C:695:ASN:OD1	1:C:697:SER:N	2.30	0.58
3:E:491:LEU:HG	3:E:540:PHE:CE1	2.39	0.58
1:A:354:THR:CB	1:A:712:ILE:HD12	2.33	0.58
1:A:493:PRO:HB2	1:A:494:GLN:HE22	1.69	0.58
1:C:502:SER:O	1:C:503:CYS:HB2	2.04	0.58
1:C:814:LEU:HD11	2:D:106:LEU:CD1	2.32	0.58
1:C:903:CYS:HB3	1:C:942:PHE:CE2	2.38	0.58
1:C:953:TRP:CG	2:D:119:HIS:HE1	2.21	0.58
3:E:596:PHE:O	3:E:597:ILE:HG13	2.04	0.58
3:H:339:ASP:O	3:H:340:GLN:CB	2.48	0.58
3:H:464:LEU:HB3	3:H:473:LEU:CD2	2.32	0.58
1:A:502:SER:O	1:A:503:CYS:HB2	2.04	0.57
1:A:890:LEU:HB3	1:A:903:CYS:HB2	1.85	0.57
3:H:734:ALA:HB3	3:H:741:LYS:O	2.04	0.57
1:A:414:ARG:HG2	1:A:414:ARG:HH11	1.69	0.57
1:C:553:SER:O	1:C:571:LEU:HD12	2.03	0.57
3:H:730:CYS:HB2	4:I:26:LYS:O	2.03	0.57
6:U:7:DT:H73	6:U:8:DA:C6	2.39	0.57
1:A:481:GLN:HA	1:A:484:LYS:HZ3	1.68	0.57
1:C:402:ILE:HD13	3:H:198:LEU:HB3	1.86	0.57
1:C:414:ARG:HH11	1:C:414:ARG:HG2	1.69	0.57
1:A:709:LYS:C	1:A:710:LEU:HD23	2.21	0.57
1:A:903:CYS:HB3	1:A:942:PHE:CE2	2.39	0.57
1:C:167:VAL:HG13	1:C:180:PHE:HB3	1.84	0.57
1:C:407:ILE:HG21	1:C:410:LEU:HD23	1.85	0.57
1:C:430:VAL:HG12	1:C:431:GLY:N	2.19	0.57
1:C:481:GLN:HA	1:C:484:LYS:HZ3	1.68	0.57
3:E:734:ALA:HB3	3:E:741:LYS:O	2.04	0.57
3:H:228:GLN:HB3	3:H:229:ASN:OD1	2.04	0.57
6:S:7:DT:H73	6:S:8:DA:C6	2.39	0.57
1:A:553:SER:O	1:A:571:LEU:HD12	2.03	0.57
1:A:669:SER:O	1:A:670:ASN:C	2.43	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:242:CYS:O	2:B:254:THR:HG23	2.05	0.57
3:H:353:LEU:CD2	3:H:363:ILE:HB	2.33	0.57
1:C:922:LEU:HD23	1:C:957:VAL:HG13	1.85	0.57
1:A:503:CYS:SG	1:A:504:ASN:N	2.78	0.57
3:E:588:ASP:N	3:E:632:LYS:NZ	2.53	0.57
1:A:414:ARG:HB3	1:A:462:ASN:HD21	1.68	0.57
1:C:432:GLN:HA	1:C:455:GLN:O	2.04	0.57
1:C:910:MET:SD	2:D:105:ILE:HG21	2.44	0.57
3:E:417:VAL:HG11	3:E:449:LEU:CG	2.35	0.57
3:E:771:THR:HG23	3:E:773:ILE:HG12	1.86	0.57
4:F:38:VAL:O	4:F:38:VAL:CG2	2.48	0.57
3:H:337:ILE:HG21	3:H:374:MET:HE3	1.86	0.57
1:A:600:HIS:HB2	1:A:616:LEU:O	2.04	0.57
1:C:433:THR:HG22	1:C:434:ARG:H	1.69	0.57
1:C:493:PRO:HB2	1:C:494:GLN:HE22	1.70	0.57
1:C:578:HIS:CE1	1:C:623:LEU:HD12	2.39	0.57
1:C:589:ARG:NH1	3:H:241:TYR:HE2	2.02	0.57
1:A:111:ARG:CZ	2:B:292:TRP:HE1	2.14	0.56
3:H:771:THR:HG23	3:H:773:ILE:HG12	1.86	0.56
3:E:417:VAL:HG11	3:E:449:LEU:HD21	1.87	0.56
3:H:204:LYS:O	3:H:205:ASP:HB3	2.04	0.56
1:A:928:ARG:NH1	2:B:437:THR:HG23	2.21	0.56
1:C:429:PHE:O	1:C:430:VAL:O	2.22	0.56
1:C:503:CYS:SG	1:C:504:ASN:N	2.78	0.56
1:C:927:MET:SD	2:D:126:LEU:HD13	2.45	0.56
3:H:658:ILE:HG21	3:H:716:HIS:HE1	1.71	0.56
2:D:242:CYS:O	2:D:254:THR:HG23	2.04	0.56
3:H:353:LEU:HB3	3:H:363:ILE:HG13	1.87	0.56
1:A:430:VAL:HG12	1:A:431:GLY:N	2.19	0.56
1:A:578:HIS:CE1	1:A:623:LEU:HD12	2.40	0.56
1:C:1000:LEU:HD13	1:C:1002:GLU:HB2	1.88	0.56
3:E:410:VAL:HB	3:E:411:PRO:HD3	1.86	0.56
3:E:730:CYS:HB3	4:F:27:TRP:HA	1.88	0.56
1:A:477:ARG:HG2	1:A:489:GLU:HG3	1.86	0.56
1:C:669:SER:O	1:C:670:ASN:C	2.43	0.56
1:C:928:ARG:CZ	2:D:437:THR:HG21	2.35	0.56
3:E:467:GLU:HG2	3:E:469:ARG:HE	1.70	0.56
1:A:111:ARG:CZ	2:B:290:CYS:SG	2.94	0.56
1:A:354:THR:HG22	1:A:712:ILE:HG21	1.70	0.56
1:A:659:ILE:HG22	1:A:660:TYR:N	2.21	0.56
1:A:695:ASN:OD1	1:A:697:SER:N	2.30	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:518:TYR:CD1	1:C:519:LEU:N	2.74	0.56
1:A:664:HIS:CB	1:A:1131:LYS:CE	2.80	0.56
1:A:715:VAL:H	1:A:716:PRO:CD	2.18	0.56
1:A:1000:LEU:HD13	1:A:1002:GLU:HB2	1.88	0.56
3:E:339:ASP:HA	3:E:343:GLN:HB2	1.88	0.56
1:A:429:PHE:O	1:A:430:VAL:O	2.22	0.56
1:A:493:PRO:HB2	1:A:494:GLN:NE2	2.21	0.56
1:A:518:TYR:CD1	1:A:518:TYR:C	2.80	0.56
3:H:434:GLN:C	3:H:436:THR:N	2.59	0.56
1:A:587:ILE:HD11	3:E:308:LEU:CD2	2.36	0.55
1:A:703:THR:OG1	1:A:704:ILE:N	2.39	0.55
1:C:706:GLU:O	1:C:706:GLU:HG2	2.05	0.55
1:A:513:GLY:HA2	3:E:236:ASN:ND2	2.21	0.55
1:A:582:LEU:CD1	1:A:583:GLY:H	2.19	0.55
1:C:493:PRO:HB2	1:C:494:GLN:NE2	2.21	0.55
3:E:658:ILE:HG21	3:E:716:HIS:HE1	1.71	0.55
1:A:403:ASP:HA	1:A:698:THR:HG22	1.88	0.55
1:A:522:HIS:HB3	1:A:523:PRO:HD2	1.88	0.55
1:A:532:THR:CG2	1:A:533:GLU:N	2.69	0.55
1:C:582:LEU:CD1	1:C:583:GLY:H	2.20	0.55
1:A:663:ASN:O	1:A:1131:LYS:HE2	2.06	0.55
1:C:479:VAL:HG12	1:C:480:SER:N	2.22	0.55
1:A:446:THR:HG22	1:A:447:GLU:N	2.15	0.55
3:H:444:VAL:CG1	3:H:448:LEU:HD12	2.35	0.55
1:A:518:TYR:CD1	1:A:519:LEU:N	2.75	0.55
1:A:532:THR:OG1	1:A:574:PHE:HD2	1.90	0.55
1:C:522:HIS:HB3	1:C:523:PRO:HD2	1.89	0.55
1:A:432:GLN:HE22	3:E:207:PRO:CG	2.19	0.55
1:A:448:LEU:HD23	1:A:451:PHE:CE2	2.42	0.55
1:A:479:VAL:HG12	1:A:480:SER:N	2.22	0.55
1:A:663:ASN:O	1:A:1131:LYS:CE	2.55	0.55
1:C:403:ASP:HA	1:C:698:THR:HG22	1.88	0.55
1:C:433:THR:HG22	1:C:434:ARG:N	2.22	0.55
1:C:502:SER:OG	1:C:543:ILE:HG12	2.07	0.55
1:C:525:GLU:OE2	1:C:527:ARG:NH2	2.39	0.55
3:E:597:ILE:O	3:E:600:LYS:CE	2.53	0.55
3:E:734:ALA:HB1	3:E:736:PHE:CE2	2.42	0.55
3:H:730:CYS:HB3	4:I:27:TRP:HA	1.88	0.55
3:H:734:ALA:HB1	3:H:736:PHE:CE2	2.42	0.55
1:A:502:SER:OG	1:A:543:ILE:HG12	2.07	0.55
1:A:713:ARG:HG3	1:A:714:THR:N	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:H:226:ALA:O	3:H:232:SER:N	2.40	0.55
3:H:428:LEU:O	3:H:432:LEU:CB	2.55	0.55
3:H:457:LEU:CD1	3:H:490:LEU:HA	2.37	0.55
1:A:404:LEU:HD21	3:E:200:ILE:CD1	2.36	0.54
1:A:649:VAL:CG1	1:A:650:PHE:H	2.16	0.54
1:C:532:THR:OG1	1:C:574:PHE:HD2	1.90	0.54
3:E:357:GLU:O	3:E:427:ARG:NH2	2.41	0.54
1:A:926:LEU:CG	2:B:122:LEU:HD21	2.35	0.54
2:B:140:HIS:HB2	2:B:453:ASN:HB2	1.88	0.54
1:C:614:PHE:N	1:C:614:PHE:CD1	2.75	0.54
1:A:841:ALA:HA	2:B:103:THR:O	2.07	0.54
1:C:289:GLU:HA	1:C:295:VAL:HA	1.89	0.54
3:H:220:LEU:HD23	3:H:240:LEU:HD23	1.81	0.54
1:A:525:GLU:OE2	1:A:527:ARG:NE	2.41	0.54
1:C:218:MET:CE	1:C:261:HIS:HD2	2.21	0.54
1:C:431:GLY:O	1:C:432:GLN:HB3	2.07	0.54
1:C:448:LEU:HD23	1:C:451:PHE:CE2	2.42	0.54
1:C:1033:VAL:HG11	2:D:115:GLY:HA3	1.89	0.54
2:D:140:HIS:HB2	2:D:453:ASN:HB2	1.89	0.54
3:E:430:THR:O	3:E:431:TYR:CB	2.54	0.54
1:A:289:GLU:HA	1:A:295:VAL:HA	1.88	0.54
1:A:431:GLY:O	1:A:432:GLN:HB3	2.07	0.54
1:A:614:PHE:CD1	1:A:614:PHE:N	2.75	0.54
1:C:518:TYR:CD1	1:C:518:TYR:C	2.79	0.54
1:C:659:ILE:HG22	1:C:660:TYR:N	2.22	0.54
3:E:374:MET:CG	3:E:378:LEU:CD2	2.83	0.54
2:B:299:VAL:HA	2:B:326:PRO:HB3	1.89	0.54
3:E:553:ASN:CB	3:E:598:TYR:CB	2.73	0.54
1:C:285:LEU:HB3	1:C:297:LEU:HD11	1.89	0.54
2:D:299:VAL:HA	2:D:326:PRO:HB3	1.89	0.54
3:E:595:ARG:HB2	3:E:596:PHE:CE1	2.43	0.54
3:E:789:LYS:HB2	3:E:791:ARG:HH12	1.73	0.54
1:C:931:LEU:HD21	1:C:944:GLU:HG3	1.90	0.54
3:E:665:TYR:HD2	3:E:666:MET:SD	2.31	0.54
3:H:229:ASN:C	3:H:231:THR:N	2.61	0.54
1:A:111:ARG:CZ	2:B:292:TRP:NE1	2.71	0.53
1:A:525:GLU:OE2	1:A:527:ARG:NH2	2.39	0.53
1:C:641:PHE:CD2	1:C:679:MET:HE3	2.43	0.53
3:E:449:LEU:HD13	3:E:479:LEU:HB3	1.90	0.53
3:H:223:ALA:HB1	3:H:240:LEU:HD11	1.85	0.53
3:H:231:THR:O	3:H:232:SER:C	2.45	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:H:789:LYS:HB2	3:H:791:ARG:HH12	1.74	0.53
1:A:218:MET:CE	1:A:261:HIS:HD2	2.21	0.53
1:A:578:HIS:HD2	1:A:623:LEU:H	1.56	0.53
3:E:677:LEU:HD13	4:F:27:TRP:CE3	2.43	0.53
1:A:596:PHE:CZ	1:A:649:VAL:HG23	2.43	0.53
1:A:602:LEU:O	1:A:603:LEU:HD23	2.07	0.53
1:A:841:ALA:C	2:B:103:THR:O	2.46	0.53
3:E:767:ILE:O	3:E:771:THR:HG22	2.09	0.53
3:H:336:ILE:O	3:H:342:VAL:HG21	2.09	0.53
1:A:450:GLY:HA3	1:A:479:VAL:HG22	1.91	0.53
1:A:536:HIS:HB2	1:A:560:LEU:HD13	1.90	0.53
1:A:285:LEU:HB3	1:A:297:LEU:HD11	1.90	0.53
1:A:587:ILE:HD11	3:E:308:LEU:HD22	1.91	0.53
3:E:414:LEU:HB3	3:E:475:LEU:HD23	1.90	0.53
3:H:222:GLU:O	3:H:233:ILE:CB	2.57	0.53
3:H:338:SER:O	3:H:343:GLN:HB2	2.09	0.53
6:U:7:DT:H73	6:U:8:DA:N6	2.24	0.53
1:A:433:THR:HG22	1:A:434:ARG:N	2.23	0.53
1:C:596:PHE:CZ	1:C:649:VAL:HG23	2.43	0.53
1:C:602:LEU:O	1:C:603:LEU:HD23	2.08	0.53
1:C:622:LEU:HD12	1:C:622:LEU:C	2.29	0.53
3:E:507:ILE:HD11	3:E:554:LYS:HZ3	1.74	0.53
1:C:113:GLY:H	2:D:338:THR:HG22	1.74	0.53
1:C:649:VAL:CG1	1:C:650:PHE:N	2.71	0.53
3:H:226:ALA:HB2	3:H:233:ILE:CB	2.39	0.53
3:H:271:GLN:HB3	3:H:336:ILE:HD11	1.91	0.53
1:C:536:HIS:HB2	1:C:560:LEU:HD13	1.89	0.53
1:C:578:HIS:HD2	1:C:623:LEU:H	1.55	0.53
3:E:350:ILE:HG21	3:E:372:LEU:HD21	1.90	0.53
3:H:665:TYR:HD2	3:H:666:MET:SD	2.31	0.53
1:A:487:VAL:O	1:A:488:SER:HB2	2.09	0.52
1:A:622:LEU:C	1:A:622:LEU:HD12	2.29	0.52
1:C:532:THR:CG2	1:C:533:GLU:N	2.69	0.52
3:H:336:ILE:O	3:H:342:VAL:HB	2.07	0.52
3:H:365:ARG:O	3:H:431:TYR:CB	2.57	0.52
3:H:767:ILE:O	3:H:771:THR:HG22	2.09	0.52
1:A:869:ALA:HB2	2:B:106:LEU:CB	2.39	0.52
1:C:525:GLU:OE2	1:C:527:ARG:NE	2.41	0.52
3:E:704:LEU:HA	3:E:707:ILE:HG22	1.91	0.52
1:A:594:THR:CG2	1:A:595:THR:N	2.73	0.52
3:E:206:LYS:N	3:E:207:PRO:HD2	2.23	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:H:677:LEU:HD13	4:I:27:TRP:CE3	2.44	0.52
6:S:7:DT:H73	6:S:8:DA:N6	2.24	0.52
1:C:659:ILE:H	1:C:659:ILE:HD12	1.75	0.52
2:B:217:THR:OG1	2:B:254:THR:HG21	2.09	0.52
1:C:912:LEU:HD21	2:D:109:ILE:HD11	1.92	0.52
1:A:658:VAL:HG12	1:A:658:VAL:O	2.09	0.52
1:A:579:LYS:HG2	1:A:581:MET:HE3	1.92	0.52
1:A:664:HIS:O	1:A:1131:LYS:HE2	2.08	0.52
1:A:931:LEU:HD21	1:A:944:GLU:HG3	1.91	0.52
1:C:487:VAL:O	1:C:488:SER:HB2	2.09	0.52
1:C:631:LEU:O	1:C:655:ARG:HB2	2.10	0.52
1:C:649:VAL:CG1	1:C:650:PHE:H	2.17	0.52
3:H:206:LYS:H	3:H:207:PRO:HD2	1.73	0.52
3:H:353:LEU:HD22	3:H:363:ILE:HG12	1.88	0.52
1:C:18:CYS:HB2	1:C:313:CYS:HG	1.72	0.52
1:C:594:THR:CG2	1:C:595:THR:N	2.73	0.52
2:D:217:THR:OG1	2:D:254:THR:HG21	2.10	0.52
3:E:417:VAL:HG11	3:E:449:LEU:CD1	2.40	0.52
1:A:448:LEU:HD23	1:A:451:PHE:HE2	1.75	0.52
1:C:402:ILE:O	1:C:698:THR:HB	2.10	0.52
1:A:408:LYS:HA	1:A:678:TYR:CE1	2.45	0.51
1:A:912:LEU:CD2	2:B:109:ILE:CD1	2.88	0.51
1:C:402:ILE:CD1	3:H:198:LEU:CB	2.87	0.51
1:C:561:TRP:HA	1:C:587:ILE:HG21	1.92	0.51
1:C:562:THR:C	1:C:564:ILE:N	2.64	0.51
4:F:38:VAL:O	4:F:39:VAL:CB	2.57	0.51
1:A:402:ILE:O	1:A:698:THR:HB	2.10	0.51
1:A:659:ILE:HD12	1:A:659:ILE:H	1.75	0.51
1:C:393:GLY:O	1:C:709:LYS:N	2.38	0.51
1:C:578:HIS:CE1	1:C:623:LEU:CD1	2.93	0.51
1:A:578:HIS:CE1	1:A:623:LEU:CD1	2.93	0.51
3:E:311:ASP:O	3:E:316:LEU:HB2	2.10	0.51
3:E:557:ASN:ND2	3:E:843:PHE:HZ	2.09	0.51
3:H:457:LEU:HD11	3:H:490:LEU:HA	1.93	0.51
1:A:838:PRO:CA	2:B:101:GLY:HA2	2.38	0.51
1:C:658:VAL:O	1:C:658:VAL:HG12	2.09	0.51
3:E:390:LEU:HD22	3:E:440:LEU:HD13	1.91	0.51
3:E:491:LEU:HA	3:E:540:PHE:CE2	2.46	0.51
3:E:494:TRP:HE3	3:E:540:PHE:CD2	2.21	0.51
1:A:573:SER:O	1:A:574:PHE:HB2	2.10	0.51
1:C:374:GLN:HG2	1:C:391:ARG:CB	2.39	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:E:600:LYS:HG3	3:E:878:LYS:HG3	1.91	0.51
3:H:704:LEU:HA	3:H:707:ILE:HG22	1.91	0.51
1:A:459:PHE:CD2	1:A:460:CYS:N	2.79	0.51
1:A:471:ILE:HA	1:A:476:VAL:HA	1.92	0.51
1:A:570:LYS:O	1:A:574:PHE:N	2.42	0.51
1:C:459:PHE:CD2	1:C:460:CYS:N	2.79	0.51
1:C:573:SER:O	1:C:574:PHE:HB2	2.10	0.51
3:E:340:GLN:O	3:E:344:ASN:OD1	2.28	0.51
1:C:451:PHE:HD1	1:C:470:GLN:HB2	1.74	0.51
3:H:206:LYS:N	3:H:207:PRO:HD2	2.26	0.51
3:H:598:TYR:HD1	3:H:878:LYS:O	1.94	0.51
3:H:600:LYS:HG3	3:H:878:LYS:HG3	1.91	0.51
3:H:338:SER:O	3:H:343:GLN:HG3	2.10	0.51
1:A:613:TYR:CE1	1:A:627:LYS:HB2	2.46	0.51
1:C:369:ARG:CB	1:C:668:PHE:CB	2.89	0.51
1:C:408:LYS:HA	1:C:678:TYR:CE1	2.46	0.51
1:C:454:ASP:OD1	1:C:454:ASP:N	2.28	0.51
1:A:711:HIS:O	1:A:711:HIS:CD2	2.64	0.51
1:C:970:ASN:OD1	2:D:119:HIS:ND1	2.42	0.51
3:E:340:GLN:HG2	3:E:341:LYS:H	1.42	0.51
3:E:428:LEU:HD22	3:E:432:LEU:HB3	1.91	0.51
3:H:864:LEU:HD23	3:H:869:LEU:HD12	1.92	0.51
1:A:987:GLU:CD	2:B:156:HIS:HE1	2.04	0.50
1:C:490:TRP:CG	1:C:491:LYS:N	2.79	0.50
1:C:671:VAL:O	1:C:673:LEU:N	2.38	0.50
1:A:416:ASP:OD1	1:A:418:ASN:HB2	2.11	0.50
1:A:814:LEU:HD21	2:B:110:TYR:HB2	1.93	0.50
1:C:430:VAL:HG22	3:H:246:ASN:HD22	1.76	0.50
1:C:613:TYR:CE1	1:C:627:LYS:HB2	2.46	0.50
3:H:311:ASP:O	3:H:316:LEU:HB2	2.10	0.50
1:A:394:ILE:CG2	1:A:395:GLY:H	2.24	0.50
1:A:612:PHE:CE2	1:A:628:LYS:HD2	2.47	0.50
1:A:671:VAL:O	1:A:673:LEU:N	2.38	0.50
1:C:471:ILE:HA	1:C:476:VAL:HA	1.92	0.50
1:C:430:VAL:HG22	3:H:246:ASN:CB	2.36	0.50
3:E:494:TRP:CH2	3:E:530:ILE:HG21	2.46	0.50
3:H:216:THR:HA	3:H:219:LYS:HB2	1.93	0.50
1:A:512:VAL:HB	1:A:515:ALA:HB3	1.93	0.50
3:E:761:GLU:HB3	3:E:809:ILE:HG22	1.94	0.50
3:H:457:LEU:HB3	3:H:493:GLN:CG	2.39	0.50
1:A:391:ARG:O	1:A:393:GLY:N	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:571:LEU:O	1:A:572:PRO:C	2.50	0.50
1:C:587:ILE:HD12	1:C:587:ILE:H	1.77	0.50
3:E:886:LEU:O	3:E:890:ILE:HG12	2.12	0.50
1:A:492:GLU:CG	1:A:496:LYS:HB2	2.42	0.50
1:C:512:VAL:HB	1:C:515:ALA:HB3	1.94	0.50
3:E:520:LEU:HD21	3:E:586:MET:HE3	1.93	0.50
1:A:1054:MET:SD	1:A:1129:LEU:HD11	2.52	0.50
3:E:523:LYS:CE	3:E:544:MET:HE2	2.42	0.50
3:H:345:LYS:HA	3:H:348:ASP:HB2	1.93	0.50
3:H:380:ILE:HG22	3:H:384:SER:HB2	1.94	0.50
3:H:494:TRP:CH2	3:H:530:ILE:HG21	2.46	0.50
1:A:561:TRP:HA	1:A:587:ILE:HG21	1.93	0.49
1:A:641:PHE:CD2	1:A:679:MET:HE3	2.47	0.49
1:A:893:TRP:HE3	1:A:899:LEU:HD13	1.77	0.49
1:A:912:LEU:CD2	2:B:109:ILE:HG23	2.33	0.49
1:C:399:HIS:CE1	1:C:703:THR:HG22	2.47	0.49
1:C:416:ASP:OD1	1:C:418:ASN:HB2	2.11	0.49
1:C:612:PHE:CE2	1:C:628:LYS:HD2	2.46	0.49
1:A:490:TRP:CG	1:A:491:LYS:N	2.79	0.49
1:A:668:PHE:N	1:A:668:PHE:CD1	2.80	0.49
2:B:256:ASP:OD2	2:B:260:ARG:HB2	2.12	0.49
1:C:448:LEU:HD23	1:C:451:PHE:HE2	1.75	0.49
3:E:587:LEU:CB	3:E:632:LYS:CD	2.90	0.49
1:C:490:TRP:CD2	1:C:491:LYS:N	2.81	0.49
1:C:695:ASN:OD1	1:C:698:THR:N	2.42	0.49
2:D:211:SER:HB3	2:D:243:VAL:HG13	1.95	0.49
3:E:216:THR:HA	3:E:219:LYS:HB2	1.93	0.49
3:E:350:ILE:HG12	3:E:368:LEU:HD22	1.91	0.49
1:C:707:ILE:O	1:C:708:GLN:O	2.30	0.49
1:C:928:ARG:NH1	2:D:437:THR:HG21	2.27	0.49
3:E:796:ASN:HB2	3:E:797:PRO:HD3	1.94	0.49
3:H:557:ASN:ND2	3:H:843:PHE:HZ	2.10	0.49
1:C:492:GLU:CG	1:C:496:LYS:HB2	2.42	0.49
1:C:570:LYS:O	1:C:574:PHE:N	2.41	0.49
3:E:864:LEU:HD23	3:E:869:LEU:HD12	1.92	0.49
1:A:354:THR:HB	1:A:712:ILE:HD12	1.93	0.49
1:A:602:LEU:C	1:A:602:LEU:HD13	2.33	0.49
1:A:1055:GLN:NE2	1:A:1090:ASP:H	2.09	0.49
1:C:602:LEU:C	1:C:602:LEU:HD13	2.33	0.49
1:C:893:TRP:HE3	1:C:899:LEU:HD13	1.77	0.49
1:A:664:HIS:O	1:A:1131:LYS:NZ	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:450:GLY:HA3	1:C:479:VAL:HG22	1.91	0.49
3:E:380:ILE:HG22	3:E:384:SER:HB2	1.95	0.49
3:E:555:ARG:NE	3:E:556:PRO:HD2	2.27	0.49
3:E:594:PHE:C	3:E:596:PHE:N	2.63	0.49
3:H:365:ARG:CB	3:H:430:THR:O	2.60	0.49
1:A:708:GLN:C	1:A:709:LYS:HD3	2.30	0.49
1:C:571:LEU:O	1:C:572:PRO:C	2.50	0.49
2:D:256:ASP:OD2	2:D:260:ARG:HB2	2.13	0.49
3:E:414:LEU:HG	3:E:479:LEU:HD12	1.94	0.49
1:A:562:THR:C	1:A:564:ILE:N	2.64	0.49
1:A:587:ILE:N	1:A:587:ILE:HD12	2.28	0.49
1:A:596:PHE:CE2	1:A:659:ILE:HG22	2.48	0.49
1:C:394:ILE:HG22	1:C:395:GLY:N	2.27	0.49
3:E:450:GLY:C	3:E:452:HIS:N	2.64	0.49
3:H:230:SER:C	3:H:232:SER:N	2.67	0.49
3:H:622:SER:HB3	3:H:625:ALA:HB2	1.95	0.49
1:A:641:PHE:CE2	1:A:650:PHE:HB2	2.48	0.49
1:A:912:LEU:CD2	2:B:109:ILE:HG21	2.38	0.49
1:C:707:ILE:O	1:C:707:ILE:CG2	2.60	0.49
1:C:1055:GLN:NE2	1:C:1090:ASP:H	2.09	0.49
3:E:397:TYR:CE2	3:E:444:VAL:CG1	2.96	0.49
3:H:886:LEU:O	3:H:890:ILE:HG12	2.12	0.49
1:A:459:PHE:O	1:A:460:CYS:HB3	2.13	0.48
1:A:840:GLU:O	1:A:841:ALA:O	2.30	0.48
3:E:345:LYS:HA	3:E:348:ASP:HB2	1.94	0.48
3:H:781:THR:HG22	3:H:826:ILE:HD13	1.95	0.48
1:A:490:TRP:CD2	1:A:491:LYS:N	2.81	0.48
1:A:514:ARG:HG3	1:A:514:ARG:HH11	1.77	0.48
2:B:211:SER:HB3	2:B:243:VAL:HG13	1.94	0.48
1:C:587:ILE:HD12	1:C:587:ILE:N	2.27	0.48
1:A:443:VAL:HG12	1:A:443:VAL:O	2.13	0.48
1:A:659:ILE:O	1:A:660:TYR:HB3	2.13	0.48
1:C:655:ARG:NH1	1:C:713:ARG:NE	2.60	0.48
3:E:339:ASP:HA	3:E:343:GLN:CB	2.43	0.48
3:E:426:ASP:O	3:E:429:ILE:HG23	2.12	0.48
3:E:622:SER:HB3	3:E:625:ALA:HB2	1.95	0.48
1:A:587:ILE:HD12	1:A:587:ILE:H	1.78	0.48
1:A:596:PHE:HZ	1:A:649:VAL:HG23	1.78	0.48
1:A:731:GLN:HA	1:A:796:GLN:HE21	1.78	0.48
1:A:1136:LEU:O	1:A:1139:ILE:HG12	2.13	0.48
2:B:394:PRO:HB3	2:B:402:ASP:HB3	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:E:339:ASP:OD1	3:E:340:GLN:N	2.38	0.48
3:E:340:GLN:HG3	3:E:341:LYS:CD	2.43	0.48
3:H:761:GLU:HB3	3:H:809:ILE:HG22	1.94	0.48
1:A:385:GLY:HA3	1:A:719:GLU:O	2.14	0.48
1:A:432:GLN:HE22	3:E:207:PRO:HG3	1.79	0.48
1:A:450:GLY:O	1:A:477:ARG:NH2	2.45	0.48
1:A:695:ASN:OD1	1:A:698:THR:N	2.42	0.48
1:C:393:GLY:O	1:C:708:GLN:HA	2.14	0.48
1:C:459:PHE:O	1:C:460:CYS:HB3	2.13	0.48
1:C:596:PHE:HZ	1:C:649:VAL:HG23	1.78	0.48
1:C:722:ARG:NH2	2:D:110:TYR:CD2	2.82	0.48
3:E:781:THR:HG22	3:E:826:ILE:HD13	1.94	0.48
3:H:337:ILE:HG13	3:H:374:MET:HE1	1.96	0.48
3:H:796:ASN:HB2	3:H:797:PRO:HD3	1.94	0.48
1:A:433:THR:O	1:A:434:ARG:HG3	2.14	0.48
1:C:641:PHE:HB2	1:C:681:PRO:HG3	1.95	0.48
2:D:394:PRO:HB3	2:D:402:ASP:HB3	1.96	0.48
3:E:233:ILE:HD13	3:E:233:ILE:H	1.78	0.48
3:E:587:LEU:HB2	3:E:632:LYS:HE3	1.95	0.48
1:A:638:LEU:O	1:A:639:ARG:HG2	2.14	0.48
1:C:392:ASN:CB	1:C:1012:LEU:O	2.54	0.48
1:C:596:PHE:CE2	1:C:659:ILE:HG22	2.47	0.48
1:C:641:PHE:CE2	1:C:650:PHE:HB2	2.48	0.48
1:A:594:THR:HG23	1:A:595:THR:N	2.28	0.48
1:A:679:MET:SD	1:A:679:MET:C	2.92	0.48
1:C:657:THR:HG22	1:C:658:VAL:N	2.24	0.48
1:C:659:ILE:O	1:C:660:TYR:HB3	2.13	0.48
3:H:681:ILE:HD11	3:H:721:LEU:HD22	1.95	0.48
1:A:396:ILE:HD13	1:A:396:ILE:N	2.29	0.48
1:A:459:PHE:CG	1:A:460:CYS:N	2.82	0.48
1:A:711:HIS:O	1:A:711:HIS:CG	2.66	0.48
3:E:588:ASP:N	3:E:632:LYS:HZ1	2.09	0.48
3:H:582:GLU:O	3:H:586:MET:HG2	2.14	0.48
1:A:479:VAL:CG1	1:A:480:SER:N	2.77	0.48
1:C:514:ARG:HG3	1:C:514:ARG:HH11	1.78	0.48
1:C:731:GLN:HA	1:C:796:GLN:HE21	1.78	0.48
1:C:770:LEU:HD13	1:C:865:GLU:HB2	1.95	0.48
3:E:203:PHE:O	3:E:205:ASP:N	2.47	0.48
3:E:892:SER:O	3:E:896:ARG:HD3	2.14	0.48
2:B:272:PHE:HE2	2:B:312:LYS:HA	1.79	0.47
1:C:385:GLY:HA3	1:C:719:GLU:O	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:E:582:GLU:O	3:E:586:MET:HG2	2.14	0.47
3:H:358:ARG:O	3:H:420:ARG:NH1	2.47	0.47
1:A:184:ASP:HB2	1:A:185:PRO:CD	2.44	0.47
1:A:457:THR:HG22	1:A:458:PHE:N	2.29	0.47
1:C:679:MET:SD	1:C:679:MET:C	2.92	0.47
3:H:892:SER:O	3:H:896:ARG:HD3	2.14	0.47
1:A:414:ARG:HB3	1:A:462:ASN:ND2	2.29	0.47
1:A:707:ILE:HG13	1:A:707:ILE:H	1.35	0.47
1:C:414:ARG:HB3	1:C:462:ASN:ND2	2.29	0.47
1:C:450:GLY:O	1:C:477:ARG:NH2	2.46	0.47
1:C:1136:LEU:O	1:C:1139:ILE:HG12	2.13	0.47
3:E:555:ARG:HD2	3:E:555:ARG:HA	1.61	0.47
3:E:681:ILE:HD11	3:E:721:LEU:HD22	1.95	0.47
1:A:641:PHE:HB2	1:A:681:PRO:HG3	1.95	0.47
1:C:402:ILE:HG22	1:C:403:ASP:H	1.80	0.47
1:C:403:ASP:O	1:C:405:PRO:HD3	2.15	0.47
1:A:402:ILE:HD13	3:E:198:LEU:HB3	1.97	0.47
1:C:459:PHE:CG	1:C:460:CYS:N	2.82	0.47
1:C:579:LYS:HG2	1:C:581:MET:HE3	1.95	0.47
1:C:638:LEU:O	1:C:639:ARG:HG2	2.15	0.47
2:D:272:PHE:HE2	2:D:312:LYS:HA	1.79	0.47
3:E:355:GLU:O	3:E:359:ASN:OD1	2.32	0.47
1:A:403:ASP:O	1:A:405:PRO:HD3	2.15	0.47
1:A:715:VAL:H	1:A:716:PRO:HD3	1.80	0.47
1:C:479:VAL:CG1	1:C:480:SER:N	2.77	0.47
3:E:206:LYS:CB	3:E:207:PRO:CD	2.92	0.47
1:A:184:ASP:HB2	1:A:185:PRO:HD2	1.96	0.47
1:A:490:TRP:O	1:A:491:LYS:HB2	2.14	0.47
1:A:531:HIS:ND1	1:A:532:THR:N	2.63	0.47
1:A:656:PRO:HG2	1:A:676:VAL:HG23	1.97	0.47
1:A:843:PRO:N	2:B:104:SER:CB	2.78	0.47
1:A:926:LEU:CD2	2:B:122:LEU:HD21	2.44	0.47
1:A:1048:TYR:O	1:A:1052:LEU:HB2	2.15	0.47
1:C:23:PHE:N	1:C:30:ASN:ND2	2.59	0.47
1:C:184:ASP:HB2	1:C:185:PRO:CD	2.44	0.47
1:C:407:ILE:CD1	1:C:699:LEU:HB2	2.45	0.47
1:C:443:VAL:HG12	1:C:443:VAL:O	2.13	0.47
1:C:532:THR:HG22	1:C:533:GLU:H	1.80	0.47
1:C:594:THR:HG23	1:C:595:THR:N	2.28	0.47
1:C:708:GLN:HE21	1:C:708:GLN:CA	2.20	0.47
3:E:847:GLN:HE22	3:E:885:ASP:HB3	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:407:ILE:CD1	1:A:699:LEU:HB2	2.45	0.47
1:C:585:GLU:OE2	3:H:301:ILE:HG12	2.15	0.47
1:A:218:MET:HE2	1:A:261:HIS:HD2	1.79	0.47
1:A:396:ILE:HD13	1:A:396:ILE:O	2.15	0.47
1:C:396:ILE:HD13	1:C:396:ILE:O	2.15	0.47
1:C:433:THR:O	1:C:434:ARG:HG3	2.14	0.47
3:E:341:LYS:H	3:E:341:LYS:HD2	1.79	0.47
1:A:714:THR:HG22	1:A:715:VAL:N	2.30	0.47
1:A:770:LEU:HD13	1:A:865:GLU:HB2	1.95	0.47
1:A:889:ARG:HD2	1:A:891:TYR:CZ	2.50	0.47
1:C:113:GLY:N	2:D:338:THR:HG22	2.29	0.47
1:C:457:THR:HG22	1:C:458:PHE:N	2.29	0.47
3:E:417:VAL:CG2	3:E:449:LEU:HD21	2.43	0.47
3:E:587:LEU:HB2	3:E:632:LYS:CD	2.44	0.47
3:E:597:ILE:N	3:E:600:LYS:HE2	2.29	0.47
1:A:451:PHE:HD1	1:A:470:GLN:HB2	1.73	0.46
1:A:512:VAL:O	1:A:515:ALA:HB3	2.15	0.46
1:A:579:LYS:HE3	1:A:581:MET:CE	2.45	0.46
1:A:840:GLU:O	1:A:841:ALA:C	2.54	0.46
1:C:531:HIS:ND1	1:C:532:THR:N	2.63	0.46
1:C:643:SER:OG	1:C:644:LEU:N	2.46	0.46
1:C:889:ARG:HD2	1:C:891:TYR:CZ	2.50	0.46
3:E:859:LYS:HB3	3:E:859:LYS:HE3	1.80	0.46
1:A:402:ILE:HG22	1:A:403:ASP:H	1.80	0.46
1:A:432:GLN:HE22	3:E:207:PRO:HG2	1.80	0.46
1:C:114:ARG:NH2	2:D:386:ASP:OD2	2.47	0.46
1:C:218:MET:HE2	1:C:261:HIS:HD2	1.80	0.46
1:C:356:LEU:HD21	1:C:712:ILE:HD13	1.96	0.46
1:C:438:LEU:CD1	1:C:684:SER:HB2	2.46	0.46
1:C:704:ILE:H	1:C:704:ILE:CD1	2.21	0.46
3:E:350:ILE:HG12	3:E:368:LEU:HD23	1.94	0.46
3:E:414:LEU:HG	3:E:479:LEU:CD1	2.45	0.46
3:H:205:ASP:CG	3:H:205:ASP:O	2.53	0.46
3:H:430:THR:O	3:H:431:TYR:CB	2.61	0.46
3:H:911:TYR:CE2	3:H:913:ALA:HB2	2.50	0.46
1:A:360:VAL:HG22	2:B:113:SER:O	2.15	0.46
1:A:451:PHE:HE1	1:A:470:GLN:HB2	1.79	0.46
1:C:579:LYS:HE3	1:C:581:MET:CE	2.45	0.46
1:C:596:PHE:CZ	1:C:659:ILE:HG22	2.50	0.46
1:C:1048:TYR:O	1:C:1052:LEU:HB2	2.15	0.46
1:A:560:LEU:HG	1:A:565:SER:OG	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:396:ILE:N	1:C:396:ILE:CD1	2.78	0.46
3:E:299:GLN:HA	3:E:302:MET:HE3	1.97	0.46
3:E:555:ARG:HE	3:E:556:PRO:HD2	1.80	0.46
3:E:599:GLY:H	3:E:878:LYS:HG2	1.80	0.46
1:A:442:GLU:HG3	1:A:443:VAL:H	1.81	0.46
1:A:664:HIS:O	1:A:1131:LYS:CE	2.64	0.46
1:A:869:ALA:CB	2:B:106:LEU:CB	2.93	0.46
1:C:512:VAL:O	1:C:515:ALA:HB3	2.15	0.46
1:C:560:LEU:HG	1:C:565:SER:OG	2.16	0.46
1:A:596:PHE:CZ	1:A:659:ILE:HG22	2.50	0.46
1:A:709:LYS:C	1:A:710:LEU:CG	2.84	0.46
3:E:341:LYS:O	3:E:345:LYS:HG2	2.15	0.46
3:H:223:ALA:HB1	3:H:240:LEU:CD1	2.43	0.46
1:A:657:THR:HG22	1:A:658:VAL:N	2.24	0.46
1:C:43:VAL:HG21	1:C:50:ARG:CZ	2.46	0.46
3:E:597:ILE:HG22	3:E:597:ILE:O	2.15	0.46
4:F:33:TRP:O	4:F:34:ALA:O	2.34	0.46
1:A:396:ILE:N	1:A:396:ILE:CD1	2.78	0.46
1:A:438:LEU:CD1	1:A:684:SER:HB2	2.45	0.46
1:C:841:ALA:C	2:D:104:SER:HA	2.25	0.46
3:H:226:ALA:CB	3:H:233:ILE:CB	2.94	0.46
3:H:698:PRO:O	3:H:700:GLU:N	2.48	0.46
3:H:847:GLN:HE22	3:H:885:ASP:HB3	1.80	0.46
1:C:490:TRP:O	1:C:491:LYS:HB2	2.15	0.46
3:E:350:ILE:HD13	3:E:372:LEU:CD2	2.45	0.46
3:E:698:PRO:O	3:E:700:GLU:N	2.48	0.46
3:E:720:LYS:HG3	4:F:34:ALA:CB	2.34	0.46
1:A:407:ILE:HD11	1:A:699:LEU:HB2	1.98	0.46
1:A:587:ILE:H	1:A:587:ILE:CD1	2.29	0.46
1:C:184:ASP:HB2	1:C:185:PRO:HD2	1.97	0.46
1:C:656:PRO:HG2	1:C:676:VAL:HG23	1.97	0.46
1:C:1005:ASN:ND2	2:D:113:SER:O	2.46	0.46
1:C:442:GLU:HG3	1:C:443:VAL:H	1.81	0.45
1:C:869:ALA:H	1:C:885:ASN:ND2	2.14	0.45
1:C:953:TRP:HB2	1:C:970:ASN:HB2	1.98	0.45
1:A:715:VAL:O	1:A:716:PRO:C	2.55	0.45
1:A:953:TRP:HZ2	2:B:123:ARG:NH1	2.15	0.45
1:C:513:GLY:HA2	3:H:236:ASN:ND2	2.32	0.45
1:C:546:LEU:O	1:C:549:SER:HB3	2.16	0.45
1:C:597:GLU:O	1:C:598:SER:HB3	2.16	0.45
3:E:911:TYR:CE2	3:E:913:ALA:HB2	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:476:VAL:HG22	1:A:526:LEU:CD1	2.47	0.45
3:E:332:PHE:CZ	3:E:336:ILE:HD12	2.51	0.45
3:E:417:VAL:HG11	3:E:449:LEU:CD2	2.47	0.45
3:E:558:LYS:N	3:E:559:PRO:HD2	2.32	0.45
1:C:926:LEU:CD2	2:D:126:LEU:HD11	2.45	0.45
3:H:340:GLN:NE2	3:H:342:VAL:CG2	2.76	0.45
1:A:411:TRP:HB2	1:A:460:CYS:SG	2.56	0.45
1:C:407:ILE:HD11	1:C:699:LEU:HB2	1.99	0.45
1:C:564:ILE:HG22	1:C:582:LEU:CD1	2.47	0.45
2:D:388:ILE:O	2:D:408:ILE:HA	2.17	0.45
3:E:341:LYS:H	3:E:341:LYS:CD	2.29	0.45
3:E:691:VAL:HA	3:E:692:PRO:HD3	1.85	0.45
3:H:491:LEU:HG	3:H:540:PHE:CZ	2.51	0.45
1:A:643:SER:OG	1:A:644:LEU:N	2.47	0.45
1:A:835:MET:CG	1:A:845:GLN:O	2.61	0.45
3:E:269:LYS:HD2	3:E:335:HIS:CE1	2.52	0.45
3:E:434:GLN:C	3:E:436:THR:N	2.68	0.45
1:A:354:THR:HG22	1:A:712:ILE:HD12	1.84	0.45
1:A:589:ARG:CZ	3:E:241:TYR:CE2	3.00	0.45
1:A:657:THR:CG2	1:A:668:PHE:HB3	2.47	0.45
1:A:707:ILE:HB	1:A:708:GLN:H	1.45	0.45
1:A:889:ARG:CD	1:A:901:THR:HB	2.45	0.45
1:A:1109:VAL:O	1:A:1111:ASN:N	2.42	0.45
1:C:390:ILE:HG22	1:C:391:ARG:N	2.32	0.45
1:C:655:ARG:NH1	1:C:713:ARG:HE	2.15	0.45
3:H:350:ILE:HG21	3:H:372:LEU:HD21	1.98	0.45
6:S:7:DT:C7	6:S:8:DA:C6	2.99	0.45
1:A:629:VAL:HG23	1:A:630:THR:N	2.31	0.45
1:A:953:TRP:HB2	1:A:970:ASN:HB2	1.97	0.45
1:C:411:TRP:HB2	1:C:460:CYS:SG	2.57	0.45
3:E:580:ASP:HA	3:E:583:LEU:HB3	1.99	0.45
3:H:436:THR:HG22	3:H:436:THR:O	2.16	0.45
3:H:580:ASP:HA	3:H:583:LEU:HB3	1.98	0.45
3:H:720:LYS:HB3	4:I:36:ASP:HB2	1.98	0.45
1:A:564:ILE:HG22	1:A:582:LEU:CD1	2.47	0.45
1:C:528:GLN:O	1:C:528:GLN:HG2	2.17	0.45
3:E:507:ILE:HD11	3:E:554:LYS:HZ2	1.80	0.45
1:A:43:VAL:HG21	1:A:50:ARG:CZ	2.46	0.45
1:A:312:GLU:HG3	1:A:327:ARG:HD2	1.98	0.45
1:A:597:GLU:O	1:A:598:SER:HB3	2.17	0.45
1:A:841:ALA:CA	2:B:103:THR:O	2.65	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:444:GLU:HB3	3:H:201:LYS:HB2	1.98	0.45
3:H:861:ARG:NH1	3:H:872:GLU:OE2	2.50	0.45
6:U:7:DT:C7	6:U:8:DA:C6	3.00	0.45
1:A:312:GLU:HG3	1:A:327:ARG:CD	2.47	0.44
1:A:397:HIS:HB2	1:A:703:THR:HG22	1.99	0.44
1:A:528:GLN:O	1:A:528:GLN:HG2	2.17	0.44
1:A:532:THR:CG2	1:A:533:GLU:H	2.30	0.44
1:A:546:LEU:O	1:A:549:SER:HB3	2.17	0.44
1:A:740:ILE:HG23	1:A:785:GLU:HG3	1.99	0.44
1:C:580:GLU:OE2	1:C:626:ARG:HD2	2.17	0.44
1:C:629:VAL:HG23	1:C:630:THR:N	2.31	0.44
1:C:692:ALA:O	1:C:693:LEU:HD23	2.17	0.44
3:E:545:LYS:HE2	3:E:545:LYS:HB3	1.82	0.44
1:A:564:ILE:O	1:A:582:LEU:HD12	2.17	0.44
1:C:312:GLU:HG3	1:C:327:ARG:HD2	1.98	0.44
1:C:396:ILE:HD13	1:C:396:ILE:N	2.29	0.44
1:C:476:VAL:HG22	1:C:526:LEU:CD1	2.47	0.44
1:C:607:GLY:HA2	1:C:635:PRO:HB3	1.99	0.44
1:A:580:GLU:OE2	1:A:626:ARG:HD2	2.17	0.44
1:A:659:ILE:CG2	1:A:660:TYR:N	2.79	0.44
3:E:494:TRP:CZ3	3:E:540:PHE:HB3	2.52	0.44
3:H:340:GLN:HB3	3:H:340:GLN:HE21	1.52	0.44
3:H:391:GLU:HG2	3:H:395:ARG:HH22	1.81	0.44
3:H:719:ARG:HD3	4:I:33:TRP:CE3	2.53	0.44
3:H:853:ALA:HA	3:H:856:ARG:HG2	2.00	0.44
4:I:37:ILE:O	4:I:38:VAL:C	2.56	0.44
1:A:478:LEU:HB3	1:A:488:SER:HB3	1.99	0.44
1:A:692:ALA:O	1:A:693:LEU:HD23	2.17	0.44
1:A:869:ALA:H	1:A:885:ASN:ND2	2.15	0.44
1:C:889:ARG:CD	1:C:901:THR:HB	2.45	0.44
1:C:1057:ARG:HH12	1:C:1110:ALA:HB3	1.83	0.44
3:E:275:PHE:CE2	3:E:289:ILE:HD13	2.53	0.44
3:E:391:GLU:HG2	3:E:395:ARG:HH22	1.81	0.44
3:H:336:ILE:O	3:H:342:VAL:CG2	2.65	0.44
1:A:953:TRP:CZ2	2:B:123:ARG:NH1	2.86	0.44
1:C:659:ILE:CG2	1:C:660:TYR:N	2.80	0.44
3:H:558:LYS:N	3:H:559:PRO:HD2	2.32	0.44
3:H:749:GLN:HG2	3:H:785:LEU:HD11	2.00	0.44
3:E:293:TRP:O	3:E:297:CYS:HB2	2.18	0.44
3:E:743:LEU:HD22	3:E:823:ILE:HD11	2.00	0.44
3:E:853:ALA:HA	3:E:856:ARG:HG2	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:H:275:PHE:CE2	3:H:289:ILE:HD13	2.53	0.44
3:H:736:PHE:HB2	3:H:737:LYS:H	1.62	0.44
1:A:419:ARG:HD3	1:A:421:THR:O	2.18	0.44
1:A:429:PHE:O	1:A:456:GLN:HG3	2.18	0.44
1:C:740:ILE:HG23	1:C:785:GLU:HG3	2.00	0.44
1:C:921:ILE:HB	1:C:933:LEU:HB2	1.99	0.44
3:E:375:LEU:CD2	3:E:380:ILE:HD12	2.48	0.44
3:E:556:PRO:C	3:E:557:ASN:CG	2.77	0.44
3:H:743:LEU:HD22	3:H:823:ILE:HD11	2.00	0.44
1:A:562:THR:O	1:A:563:ASP:C	2.56	0.44
1:A:921:ILE:HB	1:A:933:LEU:HB2	1.99	0.44
1:A:926:LEU:HD21	2:B:122:LEU:CD2	2.48	0.44
1:A:1057:ARG:HH12	1:A:1110:ALA:HB3	1.82	0.44
3:E:336:ILE:HG22	3:E:337:ILE:HD13	2.00	0.44
3:H:293:TRP:O	3:H:297:CYS:HB2	2.18	0.44
3:E:622:SER:HB3	3:E:625:ALA:CB	2.48	0.43
5:T:12:DG:C2	6:U:6:DG:C2	3.06	0.43
1:A:582:LEU:CD1	1:A:583:GLY:N	2.81	0.43
1:A:607:GLY:HA2	1:A:635:PRO:HB3	1.99	0.43
1:C:139:LEU:HG	2:D:355:TYR:HB2	1.99	0.43
1:C:312:GLU:HG3	1:C:327:ARG:CD	2.47	0.43
1:C:430:VAL:O	1:C:456:GLN:HB2	2.19	0.43
1:C:447:GLU:O	1:C:448:LEU:HD12	2.18	0.43
3:E:749:GLN:HG2	3:E:785:LEU:HD11	2.00	0.43
3:H:353:LEU:HD12	3:H:368:LEU:HD21	1.99	0.43
3:H:854:ILE:HD13	3:H:890:ILE:HD13	2.00	0.43
2:B:323:HIS:CD2	2:B:342:THR:HG21	2.53	0.43
2:B:388:ILE:O	2:B:408:ILE:HA	2.17	0.43
1:C:428:SER:OG	1:C:456:GLN:HG2	2.19	0.43
1:C:602:LEU:HD22	1:C:603:LEU:N	2.33	0.43
3:E:861:ARG:NH1	3:E:872:GLU:OE2	2.51	0.43
3:H:741:LYS:HG2	3:H:818:LEU:O	2.19	0.43
1:A:926:LEU:HD21	2:B:122:LEU:HD21	2.01	0.43
2:B:382:HIS:CG	2:B:383:PRO:HD2	2.54	0.43
2:D:383:PRO:HG3	2:D:435:SER:O	2.18	0.43
3:E:555:ARG:HD2	3:E:556:PRO:CD	2.47	0.43
3:E:741:LYS:HG2	3:E:818:LEU:O	2.19	0.43
5:R:12:DG:C2	6:S:6:DG:C2	3.06	0.43
1:A:611:LEU:C	1:A:611:LEU:HD23	2.39	0.43
1:C:429:PHE:O	1:C:456:GLN:HG3	2.18	0.43
1:C:564:ILE:O	1:C:582:LEU:HD12	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:H:229:ASN:O	3:H:231:THR:HG23	2.18	0.43
3:H:750:THR:O	3:H:754:LEU:HB2	2.19	0.43
1:A:602:LEU:HD22	1:A:603:LEU:N	2.34	0.43
1:A:912:LEU:CD2	2:B:109:ILE:HD13	2.48	0.43
2:B:105:ILE:HD12	2:B:126:LEU:HD21	2.01	0.43
2:B:367:PRO:HG2	2:B:392:ARG:HG3	2.01	0.43
1:C:534:MET:HE1	1:C:569:LEU:HD21	2.00	0.43
3:E:340:GLN:HG3	3:E:341:LYS:CG	2.46	0.43
1:A:448:LEU:HD12	1:A:448:LEU:HA	1.80	0.43
1:A:707:ILE:HG22	1:A:709:LYS:HZ1	1.83	0.43
1:A:708:GLN:C	1:A:709:LYS:HE2	2.39	0.43
1:C:673:LEU:HD23	1:C:674:LYS:N	2.33	0.43
3:H:466:ASP:O	3:H:468:ASN:N	2.51	0.43
1:A:428:SER:OG	1:A:456:GLN:HG2	2.19	0.43
1:A:1097:PHE:O	1:A:1100:ILE:HG12	2.18	0.43
1:C:655:ARG:CG	1:C:655:ARG:HH11	2.31	0.43
1:C:655:ARG:NH2	1:C:713:ARG:HD3	2.34	0.43
3:H:300:MET:C	3:H:302:MET:H	2.22	0.43
3:H:337:ILE:HG21	3:H:374:MET:CE	2.48	0.43
3:H:341:LYS:HB3	3:H:341:LYS:HE3	1.79	0.43
1:A:586:ILE:HG21	1:A:608:ASP:N	2.34	0.43
1:A:603:LEU:HD23	1:A:603:LEU:N	2.33	0.43
1:C:419:ARG:HD3	1:C:421:THR:O	2.18	0.43
1:C:478:LEU:HB3	1:C:488:SER:HB3	1.99	0.43
3:E:227:ILE:HD11	3:E:303:ILE:HG13	2.01	0.43
3:E:300:MET:C	3:E:302:MET:H	2.22	0.43
3:H:457:LEU:CD1	3:H:493:GLN:HB2	2.49	0.43
3:H:507:ILE:HD11	3:H:554:LYS:HB3	2.00	0.43
5:R:6:DA:C2	6:S:12:DA:C2	3.07	0.43
1:C:567:ARG:HB3	1:C:579:LYS:HA	2.01	0.43
1:C:1097:PHE:O	1:C:1100:ILE:HG12	2.19	0.43
3:E:450:GLY:HA2	3:E:453:LEU:HD21	2.01	0.43
1:A:494:GLN:O	1:A:495:ALA:HB3	2.19	0.42
1:A:562:THR:C	1:A:564:ILE:H	2.23	0.42
2:B:391:GLY:HA3	2:B:429:ILE:O	2.19	0.42
1:C:603:LEU:HD23	1:C:603:LEU:N	2.34	0.42
1:C:611:LEU:C	1:C:611:LEU:HD23	2.40	0.42
1:C:893:TRP:CE3	1:C:899:LEU:HD13	2.54	0.42
3:E:468:ASN:C	3:E:468:ASN:HD22	2.22	0.42
3:E:509:PRO:C	3:E:511:LYS:H	2.23	0.42
3:E:854:ILE:HD13	3:E:890:ILE:HD13	1.99	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:H:467:GLU:O	3:H:468:ASN:CB	2.66	0.42
3:H:622:SER:HB3	3:H:625:ALA:CB	2.48	0.42
1:C:562:THR:C	1:C:564:ILE:H	2.23	0.42
2:D:382:HIS:CG	2:D:383:PRO:HD2	2.54	0.42
3:E:201:LYS:O	3:E:202:ASN:HB2	2.18	0.42
3:E:311:ASP:HA	3:E:315:VAL:HG23	2.00	0.42
5:T:6:DA:C2	6:U:12:DA:C2	3.07	0.42
1:A:230:ILE:HD11	1:A:285:LEU:HD21	2.02	0.42
1:A:505:SER:OG	1:A:506:SER:N	2.52	0.42
1:C:582:LEU:CD1	1:C:583:GLY:N	2.81	0.42
2:D:367:PRO:HG2	2:D:392:ARG:HG3	2.01	0.42
3:H:311:ASP:HA	3:H:315:VAL:HG23	2.01	0.42
1:A:23:PHE:N	1:A:30:ASN:ND2	2.59	0.42
1:A:414:ARG:HH11	1:A:414:ARG:CG	2.32	0.42
1:A:430:VAL:O	1:A:456:GLN:HB2	2.18	0.42
1:A:586:ILE:HG22	1:A:607:GLY:H	1.83	0.42
1:A:842:GLU:O	1:A:844:LYS:CD	2.65	0.42
1:C:586:ILE:HG22	1:C:607:GLY:H	1.82	0.42
1:C:641:PHE:CD1	1:C:641:PHE:C	2.93	0.42
3:E:599:GLY:N	3:E:878:LYS:HG2	2.34	0.42
3:H:415:HIS:HB3	3:H:419:LYS:HZ1	1.84	0.42
1:A:567:ARG:HB3	1:A:579:LYS:HA	2.01	0.42
2:B:383:PRO:HG3	2:B:435:SER:O	2.18	0.42
1:C:494:GLN:O	1:C:495:ALA:HB3	2.19	0.42
2:D:391:GLY:HA3	2:D:429:ILE:O	2.20	0.42
3:E:397:TYR:CD1	3:E:448:LEU:HD11	2.55	0.42
3:E:750:THR:O	3:E:754:LEU:HB2	2.19	0.42
3:H:467:GLU:O	3:H:468:ASN:HB3	2.20	0.42
1:A:1030:PHE:CZ	1:A:1038:GLY:HA3	2.55	0.42
1:C:413:LEU:HB3	1:C:414:ARG:H	1.69	0.42
1:A:447:GLU:O	1:A:448:LEU:HD12	2.18	0.42
1:C:448:LEU:HD12	1:C:448:LEU:HA	1.80	0.42
1:C:500:VAL:HG12	1:C:541:LEU:HD12	2.01	0.42
1:C:699:LEU:HD13	1:C:700:THR:N	2.35	0.42
3:E:363:ILE:O	3:E:364:ASP:C	2.58	0.42
3:E:523:LYS:CE	3:E:544:MET:CE	2.98	0.42
1:C:1030:PHE:CZ	1:C:1038:GLY:HA3	2.54	0.42
3:E:338:SER:O	3:E:343:GLN:CB	2.57	0.42
3:E:390:LEU:CD2	3:E:440:LEU:HD13	2.50	0.42
3:E:533:CYS:HB2	3:E:534:PHE:HD1	1.85	0.42
1:A:23:PHE:N	1:A:30:ASN:HD22	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:500:VAL:HG12	1:A:541:LEU:HD12	2.01	0.42
1:A:578:HIS:CG	1:A:623:LEU:HD12	2.54	0.42
1:C:451:PHE:HE1	1:C:470:GLN:HB2	1.79	0.42
1:C:505:SER:OG	1:C:506:SER:N	2.52	0.42
1:C:562:THR:O	1:C:563:ASP:C	2.56	0.42
2:D:279:ALA:HB1	2:D:299:VAL:HG22	2.02	0.42
3:E:552:ILE:CG2	3:E:597:ILE:CD1	2.97	0.42
3:E:736:PHE:HB2	3:E:737:LYS:H	1.62	0.42
3:H:445:GLU:OE2	3:H:482:ARG:NE	2.53	0.42
3:H:468:ASN:C	3:H:468:ASN:HD22	2.23	0.42
3:H:509:PRO:C	3:H:511:LYS:H	2.22	0.42
2:B:347:ASN:HA	2:B:366:HIS:O	2.20	0.42
2:D:105:ILE:HD12	2:D:126:LEU:HD21	2.01	0.42
3:H:340:GLN:O	3:H:343:GLN:N	2.52	0.42
3:H:466:ASP:O	3:H:467:GLU:C	2.55	0.42
3:H:855:VAL:O	3:H:859:LYS:HB2	2.20	0.42
1:A:407:ILE:HD13	1:A:699:LEU:HD23	2.01	0.41
1:A:502:SER:O	1:A:503:CYS:CB	2.68	0.41
1:A:1055:GLN:HE22	1:A:1090:ASP:N	2.11	0.41
1:C:368:GLU:O	1:C:629:VAL:HB	2.20	0.41
1:C:576:LEU:C	1:C:577:LEU:HD23	2.41	0.41
3:E:855:VAL:O	3:E:859:LYS:HB2	2.20	0.41
1:C:523:PRO:HB3	1:C:524:GLN:NE2	2.35	0.41
1:C:532:THR:CG2	1:C:533:GLU:H	2.30	0.41
1:C:586:ILE:HG21	1:C:608:ASP:N	2.34	0.41
3:E:606:PHE:CZ	3:E:838:THR:HG23	2.55	0.41
1:A:24:THR:H	1:A:30:ASN:ND2	2.18	0.41
1:A:641:PHE:CD1	1:A:641:PHE:C	2.93	0.41
1:A:708:GLN:C	1:A:709:LYS:CD	2.88	0.41
2:B:354:SER:HA	2:B:357:TRP:CE2	2.56	0.41
1:C:24:THR:H	1:C:30:ASN:ND2	2.18	0.41
1:C:111:ARG:NE	2:D:290:CYS:SG	2.93	0.41
3:E:340:GLN:HB3	3:E:340:GLN:HE21	1.66	0.41
2:B:279:ALA:HB1	2:B:299:VAL:HG22	2.02	0.41
1:C:407:ILE:HD13	1:C:699:LEU:HD23	2.01	0.41
1:C:565:SER:CB	1:C:567:ARG:HH11	2.34	0.41
3:E:397:TYR:CG	3:E:444:VAL:HG13	2.50	0.41
3:E:494:TRP:CZ3	3:E:540:PHE:CD2	3.00	0.41
3:H:606:PHE:CZ	3:H:838:THR:HG23	2.55	0.41
3:H:698:PRO:HA	3:H:699:PRO:HD3	1.98	0.41
1:A:111:ARG:NH2	2:B:292:TRP:CD1	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:712:ILE:O	1:A:713:ARG:O	2.38	0.41
2:D:354:SER:HA	2:D:357:TRP:CE2	2.56	0.41
3:H:465:LEU:HG	3:H:497:TYR:CD2	2.55	0.41
1:A:708:GLN:C	1:A:709:LYS:CE	2.88	0.41
2:D:347:ASN:HA	2:D:366:HIS:O	2.20	0.41
3:E:410:VAL:HG21	3:E:460:GLY:HA3	2.02	0.41
3:H:341:LYS:H	3:H:341:LYS:HD2	1.85	0.41
3:H:533:CYS:HB2	3:H:534:PHE:HD1	1.85	0.41
1:A:576:LEU:C	1:A:577:LEU:HD23	2.41	0.41
1:C:565:SER:OG	1:C:567:ARG:NH1	2.54	0.41
3:E:288:LYS:HD3	3:E:288:LYS:HA	1.88	0.41
3:E:299:GLN:HA	3:E:302:MET:CE	2.51	0.41
3:E:358:ARG:HG3	3:E:427:ARG:HH12	1.86	0.41
3:E:464:LEU:HB3	3:E:473:LEU:CD2	2.51	0.41
3:E:899:MET:HA	3:E:911:TYR:O	2.21	0.41
1:A:394:ILE:HG22	1:A:395:GLY:H	1.82	0.41
1:A:643:SER:O	1:A:644:LEU:C	2.59	0.41
1:A:705:ASP:C	1:A:705:ASP:OD1	2.59	0.41
3:H:206:LYS:CB	3:H:207:PRO:HD3	2.50	0.41
3:H:298:ARG:HB3	3:H:298:ARG:CZ	2.50	0.41
3:H:545:LYS:HB3	3:H:545:LYS:HE2	1.82	0.41
1:A:448:LEU:HB3	1:A:451:PHE:CD2	2.43	0.41
1:A:523:PRO:HB3	1:A:524:GLN:NE2	2.36	0.41
1:A:565:SER:CB	1:A:567:ARG:HH11	2.34	0.41
1:A:699:LEU:HD13	1:A:700:THR:N	2.35	0.41
1:A:703:THR:OG1	1:A:704:ILE:HD12	2.20	0.41
1:C:404:LEU:HD12	1:C:429:PHE:CZ	2.55	0.41
1:C:643:SER:O	1:C:644:LEU:C	2.59	0.41
1:C:926:LEU:HD21	2:D:105:ILE:CD1	2.43	0.41
2:D:323:HIS:CD2	2:D:342:THR:HG21	2.53	0.41
3:E:404:LEU:HD22	3:E:408:ARG:HH21	1.86	0.41
3:E:538:GLU:HA	3:E:541:ILE:HG22	2.03	0.41
3:H:299:GLN:HA	3:H:302:MET:CE	2.51	0.41
3:H:741:LYS:HA	3:H:819:PHE:CE1	2.56	0.41
1:A:561:TRP:O	1:A:587:ILE:HG21	2.19	0.41
1:C:457:THR:CG2	1:C:459:PHE:O	2.69	0.41
3:E:436:THR:O	3:E:436:THR:HG22	2.20	0.41
3:E:468:ASN:HD21	3:E:470:ILE:HG23	1.86	0.41
3:H:272:ILE:HD11	3:H:340:GLN:CD	2.41	0.41
3:H:494:TRP:CE3	3:H:540:PHE:HD2	2.38	0.41
3:H:499:LYS:HE2	3:H:550:THR:HG21	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:S:8:DA:C2	6:S:9:DA:N6	2.88	0.41
1:A:664:HIS:C	1:A:1131:LYS:CE	2.84	0.40
1:C:414:ARG:HH11	1:C:414:ARG:CG	2.32	0.40
1:C:701:ILE:H	1:C:701:ILE:HD12	1.86	0.40
1:C:820:LYS:H	1:C:820:LYS:HG2	1.79	0.40
1:C:1055:GLN:HE22	1:C:1090:ASP:N	2.11	0.40
2:D:218:THR:CG2	2:D:226:VAL:HG13	2.51	0.40
3:E:741:LYS:HA	3:E:819:PHE:CE1	2.56	0.40
3:E:835:GLN:HA	3:E:838:THR:HG22	2.03	0.40
3:H:404:LEU:HD22	3:H:408:ARG:HH21	1.86	0.40
3:H:457:LEU:CB	3:H:493:GLN:HG2	2.43	0.40
6:U:8:DA:C2	6:U:9:DA:N6	2.88	0.40
1:A:404:LEU:HD12	1:A:429:PHE:CZ	2.56	0.40
1:A:870:VAL:HA	1:A:883:SER:O	2.21	0.40
1:C:487:VAL:O	1:C:487:VAL:HG23	2.21	0.40
3:H:226:ALA:HB1	3:H:232:SER:CA	2.51	0.40
3:H:293:TRP:CZ3	3:H:370:SER:HB2	2.53	0.40
1:A:329:GLY:HA3	1:A:384:GLU:HG3	2.00	0.40
1:A:413:LEU:HD13	1:A:468:LEU:HD23	2.03	0.40
1:A:565:SER:OG	1:A:567:ARG:NH1	2.54	0.40
1:A:709:LYS:C	1:A:710:LEU:HG	2.40	0.40
1:C:870:VAL:HA	1:C:883:SER:O	2.21	0.40
3:E:449:LEU:O	3:E:453:LEU:HD13	2.21	0.40
3:E:596:PHE:O	3:E:597:ILE:CG1	2.68	0.40
1:A:457:THR:CG2	1:A:459:PHE:O	2.69	0.40
1:C:1057:ARG:NH1	1:C:1109:VAL:O	2.55	0.40
3:E:681:ILE:HD12	4:F:31:ALA:HB3	2.03	0.40
3:H:198:LEU:HD22	3:H:198:LEU:HA	1.92	0.40
3:H:290:ASP:OD1	3:H:367:LEU:HD13	2.16	0.40
3:H:859:LYS:HB3	3:H:859:LYS:HE3	1.80	0.40
3:H:899:MET:HA	3:H:911:TYR:O	2.21	0.40
1:A:893:TRP:CE3	1:A:899:LEU:HD13	2.54	0.40
1:C:413:LEU:HD13	1:C:468:LEU:HD23	2.03	0.40
1:C:452:VAL:HG22	1:C:477:ARG:NH1	2.37	0.40
1:C:928:ARG:HH11	2:D:437:THR:HG23	1.82	0.40
3:E:358:ARG:O	3:E:420:ARG:NH2	2.55	0.40
3:E:445:GLU:O	3:E:449:LEU:HB2	2.21	0.40
3:H:835:GLN:HA	3:H:838:THR:HG22	2.04	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	1095/1144 (96%)	948 (87%)	105 (10%)	42 (4%)	3	24
1	C	1095/1144 (96%)	967 (88%)	97 (9%)	31 (3%)	5	30
2	B	353/382 (92%)	333 (94%)	16 (4%)	4 (1%)	14	52
2	D	353/382 (92%)	333 (94%)	16 (4%)	4 (1%)	14	52
3	E	701/726 (97%)	603 (86%)	73 (10%)	25 (4%)	3	25
3	H	701/726 (97%)	604 (86%)	72 (10%)	25 (4%)	3	25
4	F	19/98 (19%)	14 (74%)	2 (10%)	3 (16%)	0	3
4	I	19/98 (19%)	16 (84%)	2 (10%)	1 (5%)	2	19
All	All	4336/4700 (92%)	3818 (88%)	383 (9%)	135 (3%)	4	27

All (135) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	367	LEU
1	A	390	ILE
1	A	430	VAL
1	A	583	GLY
1	A	598	SER
1	A	672	ASN
1	A	707	ILE
1	A	708	GLN
1	A	711	HIS
1	A	712	ILE
1	A	713	ARG
1	A	715	VAL
1	A	841	ALA
1	C	367	LEU
1	C	430	VAL
1	C	583	GLY
1	C	598	SER

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Mol	Chain	Res	Type
1	C	672	ASN
1	C	674	LYS
1	C	708	GLN
3	E	204	LYS
3	E	431	TYR
3	E	515	MET
3	E	556	PRO
3	E	595	ARG
3	E	597	ILE
3	E	902	ASP
4	F	34	ALA
4	F	38	VAL
3	H	204	LYS
3	H	431	TYR
3	H	515	MET
3	H	902	ASP
4	I	38	VAL
1	A	389	ILE
1	A	392	ASN
1	A	549	SER
1	A	562	THR
1	A	563	ASP
1	A	584	GLY
1	A	674	LYS
1	A	855	ASP
1	A	1110	ALA
2	B	117	SER
1	C	547	GLY
1	C	549	SER
1	C	562	THR
1	C	563	ASP
1	C	584	GLY
1	C	855	ASP
1	C	1110	ALA
2	D	117	SER
3	E	337	ILE
3	E	435	THR
3	E	596	PHE
3	E	761	GLU
3	E	880	PRO
3	E	912	ILE
3	H	206	LYS

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Mol	Chain	Res	Type
3	H	230	SER
3	H	231	THR
3	H	338	SER
3	H	435	THR
3	H	761	GLU
3	H	880	PRO
3	H	912	ILE
1	A	372	GLN
1	A	418	ASN
1	A	449	MET
1	A	481	GLN
1	A	547	GLY
1	A	624	SER
1	A	644	LEU
1	A	710	LEU
1	A	1109	VAL
1	C	418	ASN
1	C	449	MET
1	C	481	GLN
1	C	624	SER
1	C	644	LEU
1	C	1109	VAL
3	E	557	ASN
3	H	340	GLN
3	H	341	LYS
3	H	468	ASN
1	A	36	ASN
1	A	488	SER
2	B	190	GLY
1	C	36	ASN
1	C	372	GLN
1	C	488	SER
1	C	503	CYS
2	D	190	GLY
3	E	338	SER
3	E	340	GLN
3	E	451	GLU
3	E	699	PRO
3	H	699	PRO
1	A	503	CYS
1	A	592	LEU
1	C	242	GLY

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Mol	Chain	Res	Type
1	C	592	LEU
2	D	291	ASP
3	E	790	ALA
3	H	360	GLY
3	H	467	GLU
3	H	556	PRO
3	H	790	ALA
1	A	242	GLY
1	A	460	CYS
2	B	291	ASP
1	C	460	CYS
4	F	35	TRP
1	A	493	PRO
1	A	551	GLY
2	B	118	ILE
1	C	493	PRO
1	C	551	GLY
2	D	118	ILE
3	E	301	ILE
3	E	688	PRO
3	E	881	VAL
3	H	301	ILE
3	H	688	PRO
3	H	881	VAL
1	A	406	GLY
1	C	406	GLY
3	E	516	VAL
3	H	516	VAL
1	A	523	PRO
1	A	716	PRO
1	C	523	PRO
3	E	206	LYS
3	E	486	GLY
3	H	486	GLY

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	938/1000 (94%)	847 (90%)	91 (10%)	8	27
1	C	944/1000 (94%)	854 (90%)	90 (10%)	8	27
2	B	306/335 (91%)	283 (92%)	23 (8%)	13	38
2	D	313/335 (93%)	290 (93%)	23 (7%)	14	39
3	E	625/660 (95%)	535 (86%)	90 (14%)	3	16
3	H	631/660 (96%)	548 (87%)	83 (13%)	4	18
4	F	17/83 (20%)	13 (76%)	4 (24%)	1	4
4	I	16/83 (19%)	14 (88%)	2 (12%)	4	19
All	All	3790/4156 (91%)	3384 (89%)	406 (11%)	6	23

All (406) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	7	VAL
1	A	81	THR
1	A	99	ASP
1	A	133	LEU
1	A	147	ARG
1	A	159	LEU
1	A	167	VAL
1	A	191	LYS
1	A	241	ASN
1	A	267	ASN
1	A	304	LEU
1	A	314	LEU
1	A	334	VAL
1	A	339	ASP
1	A	360	VAL
1	A	370	GLN
1	A	396	ILE
1	A	403	ASP
1	A	410	LEU
1	A	412	PRO
1	A	414	ARG
1	A	419	ARG
1	A	420	GLU
1	A	452	VAL
1	A	454	ASP
1	A	469	ILE
1	A	473	SER

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Mol	Chain	Res	Type
1	A	476	VAL
1	A	481	GLN
1	A	482	GLU
1	A	487	VAL
1	A	493	PRO
1	A	510	VAL
1	A	518	TYR
1	A	523	PRO
1	A	525	GLU
1	A	531	HIS
1	A	540	CYS
1	A	555	LEU
1	A	560	LEU
1	A	563	ASP
1	A	567	ARG
1	A	576	LEU
1	A	582	LEU
1	A	587	ILE
1	A	594	THR
1	A	596	PHE
1	A	597	GLU
1	A	602	LEU
1	A	603	LEU
1	A	608	ASP
1	A	614	PHE
1	A	616	LEU
1	A	617	ASN
1	A	618	ILE
1	A	623	LEU
1	A	625	ASP
1	A	627	LYS
1	A	646	THR
1	A	673	LEU
1	A	688	PRO
1	A	689	ASP
1	A	700	THR
1	A	704	ILE
1	A	707	ILE
1	A	709	LYS
1	A	710	LEU
1	A	728	GLU
1	A	809	GLN

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Mol	Chain	Res	Type
1	A	820	LYS
1	A	839	GLU
1	A	840	GLU
1	A	844	LYS
1	A	864	LYS
1	A	867	LYS
1	A	881	LEU
1	A	898	GLU
1	A	899	LEU
1	A	901	THR
1	A	914	LEU
1	A	931	LEU
1	A	957	VAL
1	A	966	LEU
1	A	970	ASN
1	A	984	THR
1	A	1000	LEU
1	A	1052	LEU
1	A	1086	THR
1	A	1093	LEU
1	A	1106	GLN
1	A	1129	LEU
2	B	111	LYS
2	B	116	GLN
2	B	134	LEU
2	B	148	ARG
2	B	174	LEU
2	B	179	VAL
2	B	219	LEU
2	B	243	VAL
2	B	254	THR
2	B	262	LEU
2	B	274	GLU
2	B	293	LEU
2	B	299	VAL
2	B	308	LEU
2	B	312	LYS
2	B	321	MET
2	B	374	LEU
2	B	389	VAL
2	B	393	TYR
2	B	400	LEU

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Mol	Chain	Res	Type
2	B	435	SER
2	B	437	THR
2	B	453	ASN
1	C	7	VAL
1	C	81	THR
1	C	99	ASP
1	C	133	LEU
1	C	147	ARG
1	C	159	LEU
1	C	167	VAL
1	C	191	LYS
1	C	241	ASN
1	C	267	ASN
1	C	304	LEU
1	C	314	LEU
1	C	334	VAL
1	C	339	ASP
1	C	360	VAL
1	C	370	GLN
1	C	396	ILE
1	C	403	ASP
1	C	410	LEU
1	C	412	PRO
1	C	414	ARG
1	C	419	ARG
1	C	420	GLU
1	C	452	VAL
1	C	454	ASP
1	C	469	ILE
1	C	473	SER
1	C	476	VAL
1	C	481	GLN
1	C	482	GLU
1	C	487	VAL
1	C	493	PRO
1	C	510	VAL
1	C	518	TYR
1	C	523	PRO
1	C	525	GLU
1	C	531	HIS
1	C	540	CYS
1	C	555	LEU

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Mol	Chain	Res	Type
1	C	560	LEU
1	C	563	ASP
1	C	567	ARG
1	C	576	LEU
1	C	582	LEU
1	C	587	ILE
1	C	594	THR
1	C	596	PHE
1	C	597	GLU
1	C	602	LEU
1	C	603	LEU
1	C	608	ASP
1	C	614	PHE
1	C	616	LEU
1	C	617	ASN
1	C	618	ILE
1	C	623	LEU
1	C	625	ASP
1	C	627	LYS
1	C	646	THR
1	C	655	ARG
1	C	663	ASN
1	C	673	LEU
1	C	688	PRO
1	C	689	ASP
1	C	700	THR
1	C	703	THR
1	C	704	ILE
1	C	708	GLN
1	C	713	ARG
1	C	728	GLU
1	C	809	GLN
1	C	820	LYS
1	C	844	LYS
1	C	864	LYS
1	C	867	LYS
1	C	881	LEU
1	C	898	GLU
1	C	899	LEU
1	C	901	THR
1	C	914	LEU
1	C	931	LEU

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Mol	Chain	Res	Type
1	C	957	VAL
1	C	966	LEU
1	C	970	ASN
1	C	984	THR
1	C	1000	LEU
1	C	1052	LEU
1	C	1086	THR
1	C	1093	LEU
1	C	1129	LEU
2	D	111	LYS
2	D	116	GLN
2	D	134	LEU
2	D	148	ARG
2	D	174	LEU
2	D	179	VAL
2	D	219	LEU
2	D	243	VAL
2	D	254	THR
2	D	262	LEU
2	D	274	GLU
2	D	293	LEU
2	D	299	VAL
2	D	308	LEU
2	D	312	LYS
2	D	321	MET
2	D	374	LEU
2	D	389	VAL
2	D	393	TYR
2	D	400	LEU
2	D	435	SER
2	D	437	THR
2	D	453	ASN
3	E	198	LEU
3	E	211	ASN
3	E	214	ASP
3	E	217	TRP
3	E	233	ILE
3	E	235	TYR
3	E	251	LYS
3	E	255	ASN
3	E	256	LEU
3	E	259	GLN

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Mol	Chain	Res	Type
3	E	260	LEU
3	E	263	ILE
3	E	288	LYS
3	E	297	CYS
3	E	310	LEU
3	E	316	LEU
3	E	324	ILE
3	E	339	ASP
3	E	340	GLN
3	E	341	LYS
3	E	343	GLN
3	E	352	LEU
3	E	359	ASN
3	E	366	SER
3	E	378	LEU
3	E	379	GLN
3	E	395	ARG
3	E	428	LEU
3	E	429	ILE
3	E	433	ASP
3	E	434	GLN
3	E	435	THR
3	E	437	GLN
3	E	443	THR
3	E	451	GLU
3	E	454	THR
3	E	458	GLN
3	E	459	LYS
3	E	465	LEU
3	E	468	ASN
3	E	484	ARG
3	E	488	GLN
3	E	493	GLN
3	E	503	SER
3	E	504	THR
3	E	513	LYS
3	E	520	LEU
3	E	532	ILE
3	E	539	LYS
3	E	544	MET
3	E	548	PHE
3	E	551	PHE

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Mol	Chain	Res	Type
3	E	552	ILE
3	E	555	ARG
3	E	570	LYS
3	E	577	GLU
3	E	580	ASP
3	E	581	GLU
3	E	588	ASP
3	E	592	ILE
3	E	596	PHE
3	E	597	ILE
3	E	611	LEU
3	E	619	LYS
3	E	627	LYS
3	E	641	PHE
3	E	653	GLU
3	E	666	MET
3	E	667	GLN
3	E	691	VAL
3	E	695	VAL
3	E	723	TRP
3	E	726	THR
3	E	778	LEU
3	E	791	ARG
3	E	814	PHE
3	E	816	HIS
3	E	827	GLN
3	E	835	GLN
3	E	845	ASP
3	E	859	LYS
3	E	863	THR
3	E	874	TYR
3	E	877	LEU
3	E	878	LYS
3	E	886	LEU
3	E	895	ASP
3	E	897	ASP
3	E	901	ARG
3	E	905	ASN
4	F	19	LYS
4	F	25	LYS
4	F	35	TRP
4	F	37	ILE

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Mol	Chain	Res	Type
3	H	198	LEU
3	H	211	ASN
3	H	214	ASP
3	H	217	TRP
3	H	229	ASN
3	H	235	TYR
3	H	251	LYS
3	H	255	ASN
3	H	256	LEU
3	H	259	GLN
3	H	260	LEU
3	H	263	ILE
3	H	288	LYS
3	H	297	CYS
3	H	310	LEU
3	H	316	LEU
3	H	324	ILE
3	H	340	GLN
3	H	341	LYS
3	H	342	VAL
3	H	343	GLN
3	H	352	LEU
3	H	363	ILE
3	H	366	SER
3	H	379	GLN
3	H	395	ARG
3	H	429	ILE
3	H	430	THR
3	H	443	THR
3	H	454	THR
3	H	458	GLN
3	H	459	LYS
3	H	465	LEU
3	H	468	ASN
3	H	484	ARG
3	H	488	GLN
3	H	493	GLN
3	H	503	SER
3	H	504	THR
3	H	513	LYS
3	H	520	LEU
3	H	532	ILE

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Mol	Chain	Res	Type
3	H	539	LYS
3	H	544	MET
3	H	548	PHE
3	H	551	PHE
3	H	552	ILE
3	H	556	PRO
3	H	570	LYS
3	H	577	GLU
3	H	580	ASP
3	H	581	GLU
3	H	588	ASP
3	H	592	ILE
3	H	595	ARG
3	H	611	LEU
3	H	619	LYS
3	H	627	LYS
3	H	641	PHE
3	H	653	GLU
3	H	666	MET
3	H	667	GLN
3	H	691	VAL
3	H	695	VAL
3	H	723	TRP
3	H	726	THR
3	H	778	LEU
3	H	791	ARG
3	H	814	PHE
3	H	816	HIS
3	H	827	GLN
3	H	835	GLN
3	H	845	ASP
3	H	859	LYS
3	H	863	THR
3	H	874	TYR
3	H	877	LEU
3	H	878	LYS
3	H	886	LEU
3	H	895	ASP
3	H	897	ASP
3	H	901	ARG
3	H	905	ASN
4	I	19	LYS

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Mol	Chain	Res	Type
4	I	25	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (99) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	4	ASN
1	A	30	ASN
1	A	85	ASN
1	A	156	ASN
1	A	241	ASN
1	A	261	HIS
1	A	374	GLN
1	A	397	HIS
1	A	455	GLN
1	A	462	ASN
1	A	467	GLN
1	A	481	GLN
1	A	494	GLN
1	A	507	GLN
1	A	524	GLN
1	A	536	HIS
1	A	578	HIS
1	A	634	GLN
1	A	648	ASN
1	A	727	GLN
1	A	796	GLN
1	A	885	ASN
1	A	904	ASN
1	A	907	ASN
1	A	908	ASN
1	A	1034	ASN
1	A	1055	GLN
2	B	156	HIS
2	B	269	HIS
2	B	370	GLN
2	B	453	ASN
1	C	4	ASN
1	C	30	ASN
1	C	85	ASN
1	C	156	ASN
1	C	241	ASN
1	C	261	HIS

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Mol	Chain	Res	Type
1	C	374	GLN
1	C	392	ASN
1	C	455	GLN
1	C	456	GLN
1	C	462	ASN
1	C	467	GLN
1	C	481	GLN
1	C	494	GLN
1	C	507	GLN
1	C	524	GLN
1	C	536	HIS
1	C	578	HIS
1	C	634	GLN
1	C	648	ASN
1	C	708	GLN
1	C	727	GLN
1	C	796	GLN
1	C	797	HIS
1	C	885	ASN
1	C	904	ASN
1	C	907	ASN
1	C	908	ASN
1	C	1034	ASN
1	C	1055	GLN
2	D	107	HIS
2	D	269	HIS
2	D	370	GLN
2	D	412	ASN
2	D	453	ASN
3	E	255	ASN
3	E	259	GLN
3	E	340	GLN
3	E	343	GLN
3	E	379	GLN
3	E	402	GLN
3	E	434	GLN
3	E	468	ASN
3	E	557	ASN
3	E	716	HIS
3	E	744	GLN
3	E	827	GLN
3	E	847	GLN

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Mol	Chain	Res	Type
3	E	849	GLN
3	E	905	ASN
3	E	910	ASN
3	H	246	ASN
3	H	255	ASN
3	H	340	GLN
3	H	343	GLN
3	H	379	GLN
3	H	402	GLN
3	H	434	GLN
3	H	468	ASN
3	H	493	GLN
3	H	557	ASN
3	H	716	HIS
3	H	744	GLN
3	H	827	GLN
3	H	847	GLN
3	H	849	GLN
3	H	905	ASN
3	H	910	ASN

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

2 non-standard protein/DNA/RNA residues are modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#|Z| > 2$	Counts	RMSZ	$\#|Z| > 2$
5	3DR	T	9	5	8,11,12	0.37	0	7,14,17	1.19	0
5	3DR	R	9	5	8,11,12	0.36	0	7,14,17	1.20	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
5	3DR	T	9	5	-	1/3/15/16	0/1/1/1
5	3DR	R	9	5	-	1/3/15/16	0/1/1/1

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (2) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
5	R	9	3DR	C3'-C4'-C5'-O5'
5	T	9	3DR	C3'-C4'-C5'-O5'

There are no ring outliers.

No monomer is involved in short contacts.

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	1105/1144 (96%)	0.42	49 (4%)	34	32	98, 183, 251, 326	0
1	C	1105/1144 (96%)	0.49	55 (4%)	28	28	130, 197, 349, 378	0
2	B	355/382 (92%)	1.05	74 (20%)	1	3	275, 328, 394, 423	0
2	D	355/382 (92%)	0.66	23 (6%)	18	18	193, 275, 343, 370	0
3	E	709/726 (97%)	0.44	44 (6%)	20	20	131, 321, 394, 414	0
3	H	709/726 (97%)	0.50	49 (6%)	16	17	226, 289, 381, 399	0
4	F	21/98 (21%)	0.78	2 (9%)	8	11	368, 383, 396, 398	0
4	I	21/98 (21%)	1.54	8 (38%)	0	1	340, 358, 380, 389	0
5	R	11/12 (91%)	1.86	4 (36%)	0	1	301, 317, 376, 403	0
5	T	11/12 (91%)	1.32	2 (18%)	1	4	257, 344, 355, 356	0
6	S	12/12 (100%)	1.74	4 (33%)	0	2	317, 326, 386, 386	0
6	U	12/12 (100%)	1.69	4 (33%)	0	2	286, 320, 350, 363	0
All	All	4426/4748 (93%)	0.54	318 (7%)	15	16	98, 240, 379, 423	0

All (318) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
3	E	775	ASP	10.5
1	C	542	ASP	7.1
3	E	810	CYS	6.3
1	C	503	CYS	5.8
2	D	430	SER	5.8
1	A	770	LEU	5.6
2	B	342	THR	5.3
3	E	779	ARG	5.3
3	H	618	GLY	5.2
1	C	502	SER	5.1
1	A	872	SER	4.8

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Mol	Chain	Res	Type	RSRZ
1	A	542	ASP	4.6
2	D	242	CYS	4.6
2	B	380	THR	4.6
1	A	540	CYS	4.6
1	A	832	GLY	4.5
2	D	197	GLY	4.5
2	B	350	ARG	4.4
6	U	14	DC	4.4
1	C	540	CYS	4.4
2	B	242	CYS	4.4
2	B	283	HIS	4.3
1	A	771	PHE	4.2
1	C	544	THR	4.2
6	S	14	DC	4.2
3	E	774	GLU	4.1
1	C	872	SER	4.1
3	H	803	GLU	4.1
2	B	379	ALA	4.1
1	C	262	ASN	4.1
2	B	284	ALA	4.0
3	H	621	ALA	3.9
2	B	152	SER	3.8
6	U	11	DT	3.8
1	A	590	SER	3.7
1	A	865	GLU	3.7
3	E	684	MET	3.7
1	C	1015	GLN	3.7
3	H	805	GLY	3.7
2	D	432	ASN	3.6
2	B	394	PRO	3.6
3	E	811	ASN	3.6
3	E	577	GLU	3.6
5	R	3	DG	3.6
1	A	815	SER	3.6
2	B	154	GLU	3.5
2	B	244	ASP	3.5
2	B	197	GLY	3.5
1	C	934	ALA	3.5
3	E	669	GLN	3.5
3	H	728	GLY	3.5
3	H	890	ILE	3.5
1	C	541	LEU	3.4

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Mol	Chain	Res	Type	RSRZ
3	H	804	ASP	3.4
2	D	101	GLY	3.4
3	H	577	GLU	3.4
3	E	685	GLY	3.3
3	H	250	TYR	3.3
6	S	13	DG	3.3
3	E	882	LYS	3.3
1	A	768	SER	3.3
2	B	164	ALA	3.3
2	B	426	ALA	3.3
1	A	502	SER	3.3
1	A	544	THR	3.3
2	D	152	SER	3.3
3	H	725	SER	3.3
1	A	591	ILE	3.3
3	E	578	ALA	3.3
3	H	251	LYS	3.2
1	A	769	LYS	3.2
1	C	260	CYS	3.2
1	C	469	ILE	3.2
1	A	539	ALA	3.2
4	I	28	ASN	3.2
3	H	729	HIS	3.2
1	C	461	GLY	3.2
1	A	883	SER	3.2
1	A	503	CYS	3.2
1	C	815	SER	3.1
1	C	261	HIS	3.1
5	T	3	DG	3.1
2	B	142	THR	3.1
2	B	432	ASN	3.1
5	R	14	DA	3.1
2	B	430	SER	3.1
3	H	860	MET	3.1
2	B	433	LYS	3.0
2	D	431	LEU	3.0
3	H	810	CYS	3.0
1	C	832	GLY	3.0
3	H	694	GLU	3.0
1	C	520	GLN	3.0
3	E	776	GLY	3.0
3	E	889	ARG	3.0

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Mol	Chain	Res	Type	RSRZ
1	C	504	ASN	2.9
1	A	916	THR	2.9
1	C	591	ILE	2.9
2	D	173	ILE	2.9
3	E	683	THR	2.9
2	B	243	VAL	2.9
3	E	813	ASP	2.9
1	A	873	MET	2.9
1	A	915	LYS	2.9
1	A	289	GLU	2.8
3	E	621	ALA	2.8
3	H	881	VAL	2.8
2	B	343	THR	2.8
1	C	547	GLY	2.8
3	E	778	LEU	2.8
1	C	847	ARG	2.8
2	B	254	THR	2.8
3	E	661	GLN	2.8
2	B	241	CYS	2.8
2	D	174	LEU	2.8
2	D	283	HIS	2.8
1	A	592	LEU	2.8
1	C	865	GLU	2.7
1	C	431	GLY	2.7
3	E	907	ASN	2.7
2	B	445	MET	2.7
2	B	231	ALA	2.7
3	H	693	MET	2.7
2	D	422	ASP	2.7
3	H	658	ILE	2.7
2	D	444	GLY	2.7
1	C	790	ASN	2.7
3	E	777	GLU	2.7
3	H	733	LYS	2.7
3	H	882	LYS	2.7
2	B	364	ILE	2.7
3	E	618	GLY	2.7
2	B	196	THR	2.7
2	D	380	THR	2.7
2	D	424	ASN	2.7
2	B	285	GLU	2.7
1	C	460	CYS	2.7

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Mol	Chain	Res	Type	RSRZ
2	D	154	GLU	2.7
2	B	393	TYR	2.7
2	B	455	GLU	2.7
1	A	262	ASN	2.6
2	B	442	ALA	2.6
3	H	619	LYS	2.6
3	H	210	GLU	2.6
1	A	863	GLU	2.6
1	C	18	CYS	2.6
2	D	145	PRO	2.6
3	H	661	GLN	2.6
3	H	738	GLU	2.6
1	C	289	GLU	2.6
2	B	448	ASN	2.6
2	B	282	THR	2.6
1	C	290	GLN	2.6
3	H	802	ILE	2.6
1	C	943	GLU	2.6
1	C	468	LEU	2.6
3	H	806	ASP	2.6
2	B	245	VAL	2.6
2	D	196	THR	2.6
1	A	541	LEU	2.6
1	A	874	VAL	2.5
3	E	890	ILE	2.5
1	A	725	CYS	2.5
2	B	421	ARG	2.5
3	E	885	ASP	2.5
2	B	351	VAL	2.5
1	C	447	GLU	2.5
1	A	27	GLU	2.5
1	C	725	CYS	2.5
3	E	524	ASP	2.5
1	A	980	ASP	2.5
1	A	737	SER	2.5
2	B	304	LYS	2.5
2	B	443	SER	2.5
1	A	871	TYR	2.4
1	A	979	LYS	2.4
2	B	297	SER	2.4
3	E	804	ASP	2.4
2	B	403	LYS	2.4

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Mol	Chain	Res	Type	RSRZ
1	C	827	THR	2.4
2	B	151	THR	2.4
3	E	725	SER	2.4
2	B	404	ARG	2.4
2	B	198	MET	2.4
3	H	886	LEU	2.4
2	B	427	GLY	2.4
3	H	891	GLU	2.4
2	B	246	SER	2.4
1	C	411	TRP	2.4
2	B	166	GLY	2.4
4	I	34	ALA	2.4
2	B	444	GLY	2.4
3	E	891	GLU	2.4
1	A	1023	PRO	2.4
2	B	140	HIS	2.4
1	A	122	GLY	2.4
3	H	542	ASN	2.4
3	E	504	THR	2.4
5	T	10	DA	2.4
1	C	454	ASP	2.4
2	B	341	LEU	2.4
3	E	737	LYS	2.4
1	A	1092	ASP	2.3
2	B	252	LEU	2.3
1	C	543	ILE	2.3
4	I	19	LYS	2.3
2	B	330	ALA	2.3
2	D	198	MET	2.3
3	H	901	ARG	2.3
3	H	726	THR	2.3
3	E	913	ALA	2.3
2	D	164	ALA	2.3
3	H	730	CYS	2.3
2	B	211	SER	2.3
4	I	21	ARG	2.3
1	C	826	ASN	2.3
2	B	323	HIS	2.3
1	C	935	TYR	2.3
3	H	546	GLU	2.3
1	C	64	MET	2.3
1	C	640	THR	2.3

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Mol	Chain	Res	Type	RSRZ
3	E	468	ASN	2.3
3	H	775	ASP	2.3
4	I	38	VAL	2.2
3	H	770	ALA	2.2
1	A	816	LEU	2.2
2	D	187	GLN	2.2
3	E	736	PHE	2.2
2	B	314	LYS	2.2
3	H	232	SER	2.2
5	R	4	DC	2.2
2	B	446	GLY	2.2
1	C	459	PHE	2.2
3	H	692	PRO	2.2
1	C	535	GLU	2.2
2	B	369	ARG	2.2
1	C	883	SER	2.2
3	H	801	ASP	2.2
2	B	315	ASN	2.2
1	C	592	LEU	2.2
2	B	377	ILE	2.2
3	H	760	GLU	2.2
6	S	8	DA	2.2
2	B	266	LEU	2.2
3	E	812	ASP	2.2
4	I	31	ALA	2.2
1	C	863	GLU	2.2
6	U	3	DT	2.2
1	C	828	TYR	2.2
2	B	313	ASP	2.2
2	B	101	GLY	2.1
4	F	34	ALA	2.1
1	A	847	ARG	2.1
4	F	28	ASN	2.1
1	C	509	VAL	2.1
2	B	328	ASN	2.1
2	B	329	ALA	2.1
3	E	670	ASN	2.1
3	H	883	PRO	2.1
6	S	9	DA	2.1
2	B	436	PRO	2.1
1	A	504	ASN	2.1
1	A	450	GLY	2.1

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Mol	Chain	Res	Type	RSRZ
1	A	724	ILE	2.1
3	E	802	ILE	2.1
2	B	303	VAL	2.1
3	E	658	ILE	2.1
3	H	670	ASN	2.1
2	B	165	VAL	2.1
2	B	209	PHE	2.1
1	A	62	ALA	2.1
1	C	263	ARG	2.1
2	B	155	TRP	2.1
3	E	906	PRO	2.1
1	C	873	MET	2.1
2	D	433	LYS	2.1
1	C	1009	HIS	2.1
2	B	141	ARG	2.1
1	A	123	ILE	2.1
2	D	445	MET	2.1
3	E	887	LYS	2.1
5	R	13	DC	2.1
2	B	125	CYS	2.1
3	H	889	ARG	2.1
3	E	606	PHE	2.1
1	A	853	TYR	2.1
3	H	746	SER	2.1
1	A	500	VAL	2.1
1	A	559	GLY	2.1
3	H	913	ALA	2.1
1	C	833	THR	2.1
6	U	12	DA	2.1
2	D	421	ARG	2.1
1	A	462	ASN	2.1
4	I	37	ILE	2.1
1	A	125	ASP	2.1
3	E	781	THR	2.1
1	A	892	GLU	2.1
2	B	173	ILE	2.1
3	E	689	THR	2.0
1	C	122	GLY	2.0
3	H	887	LYS	2.0
1	C	539	ALA	2.0
3	E	739	GLY	2.0
2	B	253	ALA	2.0

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Mol	Chain	Res	Type	RSRZ
3	E	865	SER	2.0
1	A	297	LEU	2.0
2	B	247	VAL	2.0
2	B	339	LYS	2.0
2	B	401	ASN	2.0
4	I	35	TRP	2.0
3	H	912	ILE	2.0
3	H	622	SER	2.0
1	C	497	ASN	2.0
3	H	811	ASN	2.0
1	C	919	ASP	2.0
3	H	561	GLU	2.0
3	E	866	HIS	2.0

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

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å²)	Q<0.9
5	3DR	T	9	11/12	0.69	0.68	347,358,362,362	0
5	3DR	R	9	11/12	0.78	0.38	318,324,336,339	0

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.