



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 6, 2026 – 07:58 AM UTC

PDB ID : 5CSL / pdb_00005csl
Title : Crystal structure of the 500 kD yeast acetyl-CoA carboxylase holoenzyme dimer
Authors : Wei, J.; Tong, L.
Deposited on : 2015-07-23
Resolution : 3.20 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

<https://www.wwpdb.org/validation/2017/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

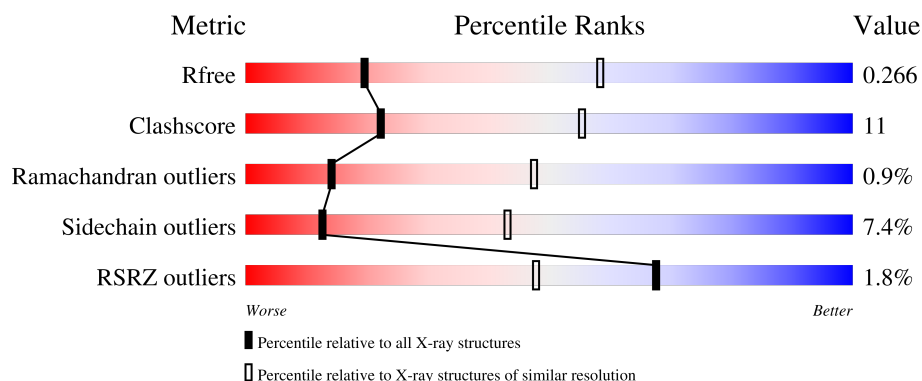
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.20 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	180053	1466 (3.20-3.20)
Clashscore	190562	1573 (3.20-3.20)
Ramachandran outliers	187476	1548 (3.20-3.20)
Sidechain outliers	187428	1547 (3.20-3.20)
RSRZ outliers	180081	1466 (3.20-3.20)

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

Mol	Chain	Length	Quality of chain
1	A	2218	<div> <div> <div></div> <div>67%</div> <div>23%</div> <div>• 8%</div> </div> </div>
1	B	2218	<div> <div> <div>2%</div> <div>67%</div> <div>23%</div> <div>• 7%</div> </div> </div>

2 Entry composition

There are 3 unique types of molecules in this entry. The entry contains 32777 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.

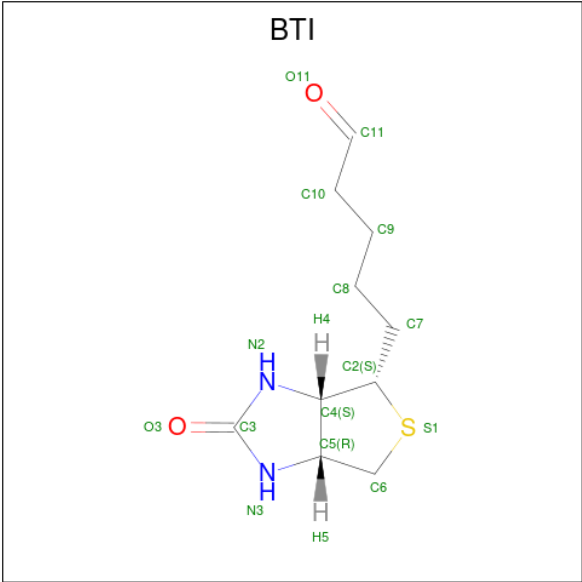
- Molecule 1 is a protein called Acetyl-CoA carboxylase.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	2050	Total	C	N	O	S	0	0	0
			16249	10332	2798	3062	57			
1	B	2072	Total	C	N	O	S	0	0	0
			16402	10428	2835	3085	54			

There are 12 discrepancies between the modelled and reference sequences:

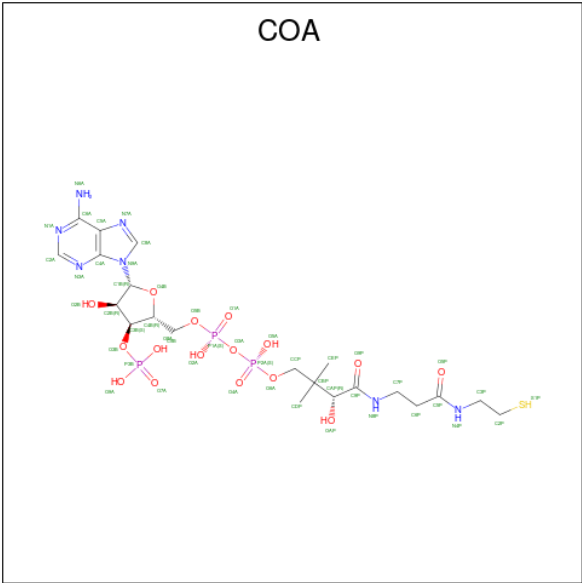
Chain	Residue	Modelled	Actual	Comment	Reference
A	2234	HIS	-	expression tag	UNP Q00955
A	2235	HIS	-	expression tag	UNP Q00955
A	2236	HIS	-	expression tag	UNP Q00955
A	2237	HIS	-	expression tag	UNP Q00955
A	2238	HIS	-	expression tag	UNP Q00955
A	2239	HIS	-	expression tag	UNP Q00955
B	2234	HIS	-	expression tag	UNP Q00955
B	2235	HIS	-	expression tag	UNP Q00955
B	2236	HIS	-	expression tag	UNP Q00955
B	2237	HIS	-	expression tag	UNP Q00955
B	2238	HIS	-	expression tag	UNP Q00955
B	2239	HIS	-	expression tag	UNP Q00955

- Molecule 2 is 5-(HEXAHYDRO-2-OXO-1H-THIENO[3,4-D]IMIDAZOL-6-YL)PENTANAL (CCD ID: BTI) (formula: C₁₀H₁₆N₂O₂S).

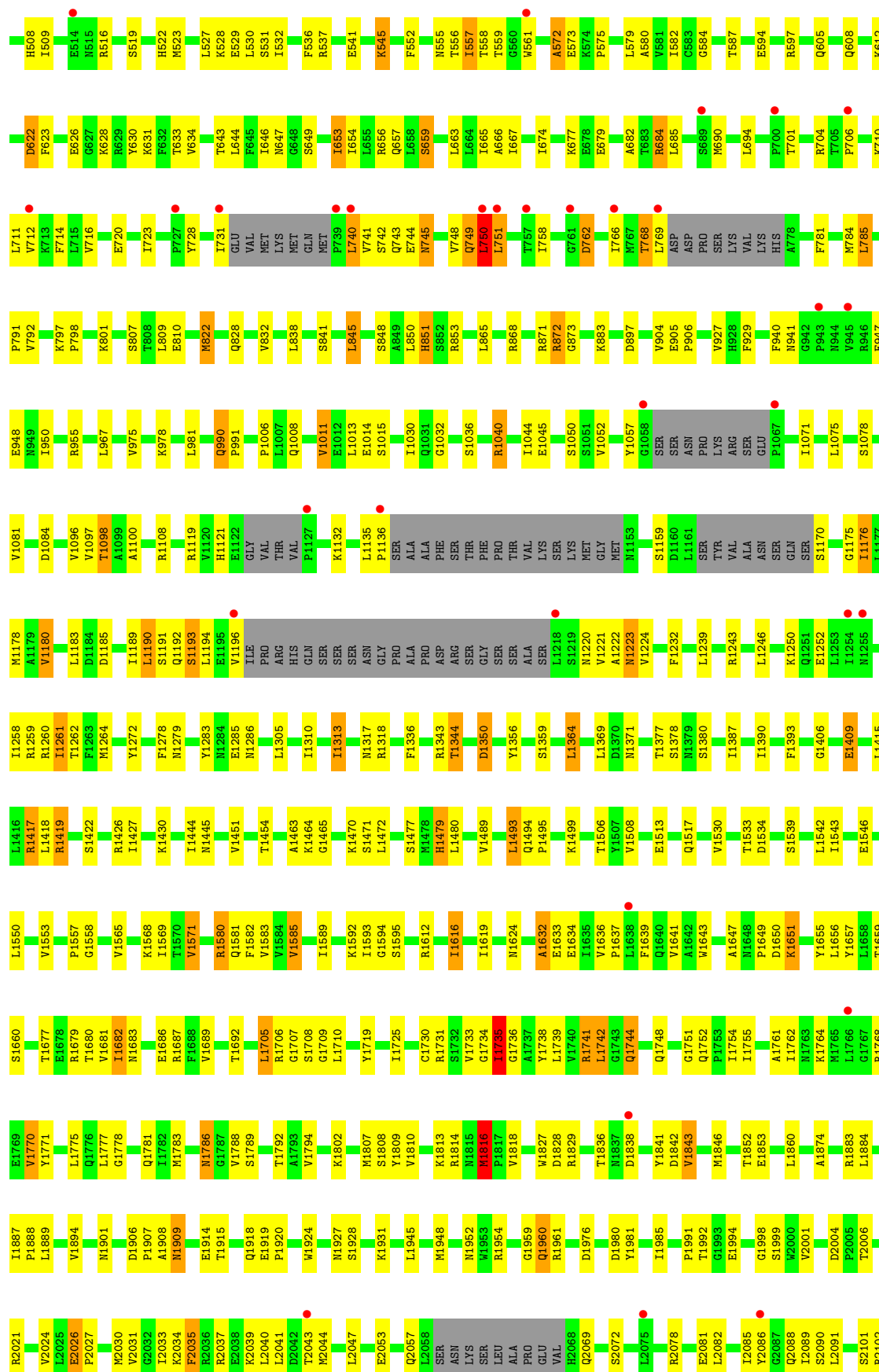


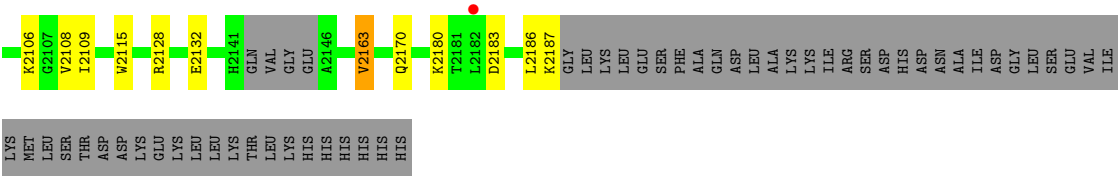
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
2	A	1	Total	C	N	O	S	0	0
			15	10	2	2	1		
2	A	1	Total	C	N	O	S	0	0
			15	10	2	2	1		

- Molecule 3 is COENZYME A (CCD ID: COA) (formula: $C_{21}H_{36}N_7O_{16}P_3S$).



Mol	Chain	Residues	Atoms						ZeroOcc	AltConf
3	A	1	Total	C	N	O	P	S	0	0
			48	21	7	16	3	1		
3	B	1	Total	C	N	O	P	S	0	0
			48	21	7	16	3	1		





4 Data and refinement statistics

Property	Value	Source
Space group	P 43 21 2	Depositor
Cell constants a, b, c, α , β , γ	159.87Å 159.87Å 614.43Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	49.93 – 3.20 49.93 – 3.20	Depositor EDS
% Data completeness (in resolution range)	97.2 (49.93-3.20) 97.2 (49.93-3.20)	Depositor EDS
R_{merge}	0.15	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.32 (at 3.19Å)	Xtriage
Refinement program	REFMAC 5.7.0029	Depositor
R, R_{free}	0.219 , 0.266 0.220 , 0.266	Depositor DCC
R_{free} test set	6460 reflections (4.89%)	wwPDB-VP
Wilson B-factor (Å ²)	84.6	Xtriage
Anisotropy	0.009	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.31 , 50.5	EDS
L-test for twinning ²	$\langle L \rangle = 0.47$, $\langle L^2 \rangle = 0.29$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.93	EDS
Total number of atoms	32777	wwPDB-VP
Average B, all atoms (Å ²)	96.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.61% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: BTI, COA

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	0.79	2/16580 (0.0%)	1.02	23/22444 (0.1%)
1	B	0.77	2/16738 (0.0%)	1.02	22/22654 (0.1%)
All	All	0.78	4/33318 (0.0%)	1.02	45/45098 (0.1%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	B	0	1

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	B	2187	LYS	C-O	6.03	1.35	1.23
1	A	791	PRO	N-CA	-5.62	1.43	1.47
1	A	779	LEU	N-CA	5.16	1.53	1.45
1	B	1057	TYR	CA-C	5.15	1.59	1.52

All (45) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	927	VAL	N-CA-C	-9.06	101.72	110.42
1	A	1735	ILE	CB-CA-C	-7.89	101.48	112.14
1	A	687	VAL	CB-CA-C	-6.79	103.89	111.23
1	B	1493	LEU	N-CA-C	6.53	118.40	111.28
1	A	1770	VAL	CB-CA-C	-6.44	105.39	111.06
1	A	1829	ARG	N-CA-C	6.40	115.68	108.25
1	B	2004	ASP	CA-C-N	6.33	126.03	119.82

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	2004	ASP	C-N-CA	6.33	126.03	119.82
1	A	1672	GLU	N-CA-C	-6.32	103.31	111.02
1	B	1571	VAL	CB-CA-C	-6.25	100.69	110.69
1	B	1843	VAL	CB-CA-C	-6.18	101.15	111.29
1	A	1183	LEU	N-CA-C	6.07	118.69	111.71
1	B	152	HIS	CB-CA-C	-5.73	109.98	116.63
1	B	2026	GLU	CA-C-N	-5.67	112.86	119.32
1	B	2026	GLU	C-N-CA	-5.67	112.86	119.32
1	B	1919	GLU	CA-C-N	5.65	125.66	119.90
1	B	1919	GLU	C-N-CA	5.65	125.66	119.90
1	A	1786	ASN	CB-CA-C	-5.65	101.25	110.85
1	A	38	VAL	CB-CA-C	-5.62	104.68	112.04
1	A	1676	LEU	N-CA-C	-5.58	100.30	109.40
1	A	674	ILE	CB-CA-C	-5.50	102.26	111.29
1	A	58	VAL	N-CA-C	5.50	114.66	106.85
1	A	745	ASN	N-CA-C	5.40	118.34	109.76
1	A	1571	VAL	N-CA-C	5.23	115.81	108.17
1	B	838	LEU	CA-C-N	-5.22	113.53	119.28
1	B	838	LEU	C-N-CA	-5.22	113.53	119.28
1	B	1735	ILE	N-CA-CB	5.22	117.00	110.47
1	A	1735	ILE	N-CA-CB	5.21	117.63	110.54
1	B	822	MET	N-CA-C	5.20	117.36	111.02
1	B	35	LEU	N-CA-C	5.18	119.88	113.50
1	A	1990	PRO	CA-C-N	5.18	125.10	119.76
1	A	1990	PRO	C-N-CA	5.18	125.10	119.76
1	B	1894	VAL	N-CA-C	5.18	115.31	107.75
1	A	1894	VAL	CB-CA-C	-5.18	103.43	110.42
1	A	1909	ASN	CA-C-N	5.16	124.77	119.05
1	A	1909	ASN	C-N-CA	5.16	124.77	119.05
1	B	785	LEU	CA-C-N	-5.15	114.65	119.85
1	B	785	LEU	C-N-CA	-5.15	114.65	119.85
1	B	1493	LEU	CB-CA-C	-5.15	102.24	110.79
1	B	1585	VAL	CB-CA-C	-5.13	103.56	111.31
1	A	1571	VAL	CB-CA-C	-5.12	102.18	110.28
1	B	2163	VAL	N-CA-C	5.11	115.59	108.84
1	A	969	VAL	CB-CA-C	-5.11	105.17	112.22
1	A	812	ILE	CB-CA-C	-5.06	105.31	112.14
1	B	1816	MET	N-CA-C	-5.01	102.88	110.39

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	B	768	THR	Peptide

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	16249	0	16225	344	1
1	B	16402	0	16387	388	1
2	A	30	0	31	6	0
3	A	48	0	32	4	0
3	B	48	0	32	3	0
All	All	32777	0	32707	695	2

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 11.

All (695) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:297:ARG:NH2	1:B:555:ASN:O	1.71	1.22
1:B:723:ILE:HA	1:B:745:ASN:HB3	1.37	1.05
1:B:1841:TYR:CE1	1:B:1846:MET:HE2	1.98	0.98
1:B:466:ASP:O	1:B:466:ASP:OD1	1.82	0.98
1:A:1243:ARG:NH1	1:A:1283:TYR:O	2.00	0.93
1:A:1493:LEU:HD11	1:A:1507:TYR:CE1	2.03	0.93
1:B:710:LYS:O	1:B:731:ILE:HG23	1.73	0.89
1:B:868:ARG:O	1:B:872:ARG:HB2	1.75	0.86
1:A:297:ARG:NH2	1:A:555:ASN:O	2.09	0.86
1:A:723:ILE:HA	1:A:745:ASN:HB3	1.58	0.85
1:B:1135:LEU:HB3	1:B:1136:PRO:HD2	1.59	0.85
1:B:552:PHE:HA	1:B:557:ILE:HD11	1.58	0.85
1:A:853:ARG:NH2	1:B:123:THR:OG1	2.09	0.85
1:A:1223:ASN:HB2	1:A:1264:MET:HE2	1.60	0.84
1:A:211:VAL:HG13	1:A:220:VAL:HG13	1.59	0.84
1:A:1657:TYR:CD2	1:A:1687:ARG:HG2	2.16	0.81
1:B:1189:ILE:O	1:B:1192:GLN:HG2	1.80	0.81
1:B:1730:CYS:HA	1:B:1752:GLN:OE1	1.80	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1040:ARG:NH1	1:B:1081:VAL:O	2.15	0.80
1:A:1593:ILE:HD11	3:A:2303:COA:C4A	2.13	0.79
1:B:2044:MET:SD	1:B:2082:LEU:HD23	2.23	0.79
1:A:945:VAL:HG11	1:A:950:ILE:HD11	1.64	0.79
1:B:2082:LEU:HG	1:B:2086:TYR:CE2	2.18	0.79
1:A:220:VAL:HG21	1:A:355:LEU:HG	1.66	0.78
1:A:1735:ILE:HD13	1:A:1735:ILE:H	1.45	0.78
1:B:1344:THR:HG21	1:B:1393:PHE:HZ	1.49	0.78
1:B:1317:ASN:HB3	1:B:1371:ASN:HD21	1.50	0.77
1:A:324:ARG:O	1:A:325:HIS:HB2	1.83	0.76
1:B:556:THR:C	1:B:557:ILE:HG13	2.11	0.76
1:B:1783:MET:HA	1:B:1786:ASN:HB2	1.68	0.76
1:A:1643:TRP:CE3	1:A:1649:PRO:HB2	2.21	0.75
1:A:1981:TYR:CD2	1:A:1985:ILE:HD11	2.22	0.75
1:A:211:VAL:CG1	1:A:220:VAL:HG13	2.16	0.75
1:A:1643:TRP:CZ3	1:B:2085:ILE:HG12	2.22	0.75
1:A:744:GLU:HB3	1:A:769:LEU:CD2	2.16	0.74
1:A:2085:ILE:HD11	1:B:1650:ASP:OD1	1.87	0.74
1:A:2163:VAL:HA	1:A:2170:GLN:NE2	2.02	0.74
1:B:387:GLU:O	1:B:390:THR:OG1	2.04	0.74
1:B:2044:MET:HE2	1:B:2082:LEU:HB3	1.69	0.74
1:A:1582:PHE:CD2	1:A:1807:MET:HE1	2.23	0.73
1:A:864:GLU:OE1	1:A:868:ARG:NH1	2.22	0.73
1:B:2163:VAL:HA	1:B:2170:GLN:OE1	1.88	0.73
1:A:585:ALA:HA	1:A:621:VAL:HG11	1.71	0.72
1:A:1643:TRP:HZ3	1:B:2085:ILE:HG12	1.52	0.72
1:B:1422:SER:HB3	1:B:1445:ASN:OD1	1.91	0.71
1:B:1593:ILE:HD11	3:B:2301:COA:C4A	2.20	0.71
1:A:1441:ARG:HG3	1:A:1469:PHE:HE1	1.55	0.71
1:A:2004:ASP:OD2	1:A:2006:THR:HG22	1.91	0.71
1:B:537:ARG:NH2	1:B:679:GLU:OE2	2.23	0.71
1:B:365:GLU:OE2	1:B:381:ASN:OD1	2.08	0.70
1:B:557:ILE:HG23	1:B:561:TRP:CG	2.26	0.70
1:A:1981:TYR:CG	1:A:1985:ILE:HD11	2.26	0.70
1:B:1909:ASN:C	1:B:1909:ASN:HD22	1.97	0.70
1:B:2031:VAL:HG21	1:B:2091:LEU:HD23	1.72	0.70
1:A:744:GLU:HB3	1:A:769:LEU:HD21	1.73	0.69
1:B:35:LEU:HD23	1:B:169:LYS:HD2	1.75	0.69
1:B:1222:ALA:O	1:B:1261:ILE:HA	1.92	0.69
1:A:517:GLN:OE1	1:A:520:ARG:NH2	2.26	0.69
1:A:1443:LEU:CD2	1:A:1478:MET:HE3	2.22	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:587:THR:HG22	1:B:663:LEU:HD12	1.74	0.69
1:B:1647:ALA:O	1:B:1649:PRO:HD3	1.94	0.68
1:A:711:LEU:HB2	1:A:758:ILE:HD11	1.76	0.68
1:B:1243:ARG:NH1	1:B:1283:TYR:O	2.26	0.68
1:A:1443:LEU:HD21	1:A:1478:MET:HE3	1.76	0.67
1:A:630:TYR:CE1	1:A:781:PHE:CE1	2.83	0.67
1:A:1841:TYR:CE1	1:A:1846:MET:CE	2.78	0.67
1:B:2044:MET:CG	1:B:2082:LEU:HD23	2.25	0.67
1:B:2128:ARG:NE	1:B:2132:GLU:OE1	2.21	0.67
1:B:124:ASN:HA	1:B:127:ASN:OD1	1.95	0.67
1:A:1678:GLU:O	1:A:1689:VAL:HG12	1.94	0.66
1:A:565:LEU:HD13	1:A:570:MET:HE3	1.78	0.66
1:A:1841:TYR:CE1	1:A:1846:MET:HE3	2.29	0.66
1:A:579:LEU:HD11	1:A:672:HIS:CD2	2.31	0.66
1:B:156:ASN:OD1	1:B:158:LEU:N	2.28	0.66
1:A:541:GLU:OE1	1:A:691:THR:OG1	2.13	0.66
1:A:723:ILE:N	1:A:726:GLN:OE1	2.30	0.65
1:B:318:ASP:OD1	1:B:320:SER:OG	2.14	0.65
1:A:2022:ALA:HB3	1:A:2103:MET:HE2	1.78	0.65
1:B:1223:ASN:HB3	1:B:1262:THR:HB	1.79	0.65
1:B:2082:LEU:HG	1:B:2086:TYR:HE2	1.62	0.65
1:A:108:GLU:O	1:A:112:MET:HG3	1.97	0.65
1:B:545:LYS:HG3	1:B:572:ALA:O	1.98	0.64
1:A:1641:VAL:HG21	1:B:2089:ILE:HD13	1.80	0.64
1:A:1197:ILE:HD12	1:A:1256:ALA:HB1	1.80	0.64
1:A:1643:TRP:HZ3	1:B:2085:ILE:CG1	2.11	0.64
1:A:657:GLN:HA	1:A:663:LEU:HD23	1.81	0.63
1:B:1135:LEU:HB3	1:B:1136:PRO:CD	2.29	0.63
1:B:1719:TYR:CE2	1:B:1744:GLN:HG3	2.33	0.63
1:B:822:MET:SD	1:B:981:LEU:HA	2.37	0.63
1:A:1593:ILE:HD11	3:A:2303:COA:C5A	2.28	0.63
1:A:1643:TRP:CZ3	1:B:2085:ILE:CG1	2.82	0.63
1:B:657:GLN:HA	1:B:663:LEU:HD23	1.81	0.63
1:B:716:VAL:HG23	1:B:728:TYR:HA	1.81	0.62
1:B:1991:PRO:HG3	1:B:2115:TRP:HB2	1.81	0.62
1:A:318:ASP:OD1	1:A:320:SER:OG	2.18	0.62
1:A:69:ILE:HG23	1:A:489:TYR:CE1	2.35	0.62
1:A:1005:THR:HB	1:A:1006:PRO:HD3	1.82	0.62
1:A:1493:LEU:HD11	1:A:1507:TYR:CZ	2.35	0.62
1:B:2040:LEU:O	1:B:2043:THR:HG22	2.00	0.62
1:B:1643:TRP:CE3	1:B:1649:PRO:HB3	2.35	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:2301:BTI:C3	1:B:1998:GLY:HA3	2.29	0.62
1:A:725:GLY:HA2	1:A:741:VAL:HG13	1.82	0.62
1:A:1652:GLY:HA2	1:B:2085:ILE:HD13	1.81	0.62
1:A:587:THR:HG22	1:A:663:LEU:HD12	1.81	0.61
1:A:300:GLU:OE2	1:A:327:LYS:NZ	2.32	0.61
1:A:1338:THR:HG21	1:A:1368:ILE:HG23	1.82	0.61
1:A:646:ILE:HG21	1:A:785:LEU:HG	1.81	0.61
1:B:2078:ARG:HA	1:B:2081:GLU:OE1	2.01	0.61
1:A:334:VAL:HG21	1:A:342:PHE:CE1	2.36	0.61
1:A:751:LEU:CD1	1:A:766:ILE:HG13	2.31	0.61
1:B:711:LEU:HB2	1:B:758:ILE:HD11	1.81	0.61
1:A:735:LYS:HG2	1:B:1954:ARG:NH1	2.15	0.60
1:B:1444:ILE:HG23	1:B:1454:THR:HG22	1.83	0.60
1:A:453:HIS:CD2	1:A:516:ARG:HA	2.37	0.60
1:A:1655:TYR:CD1	1:A:1689:VAL:HG23	2.36	0.60
1:A:2093:PHE:O	1:A:2097:HIS:CD2	2.54	0.60
1:B:316:GLY:O	1:B:333:PRO:HA	2.01	0.60
1:A:955:ARG:HG3	1:A:962:LEU:HD21	1.84	0.60
1:A:2178:ASN:HB3	1:A:2181:THR:CG2	2.30	0.60
1:B:1194:LEU:HD12	1:B:1252:GLU:HB3	1.83	0.60
1:B:1344:THR:HG21	1:B:1393:PHE:CZ	2.35	0.60
1:B:1841:TYR:HE1	1:B:1846:MET:HE2	1.59	0.60
1:B:1078:SER:O	1:B:1108:ARG:NH2	2.35	0.60
1:B:35:LEU:HG	1:B:168:ARG:O	2.02	0.59
1:A:1192:GLN:HG3	1:A:1193:SER:N	2.16	0.59
1:B:1643:TRP:CD1	1:B:1643:TRP:H	2.20	0.59
1:A:1643:TRP:CZ2	1:B:2089:ILE:HD11	2.37	0.59
1:A:2088:GLN:O	1:A:2089:ILE:C	2.46	0.59
1:A:744:GLU:CB	1:A:769:LEU:HD21	2.32	0.59
1:A:1694:ILE:HA	1:B:2102:ARG:HD3	1.84	0.59
1:B:1272:TYR:CE1	1:B:1318:ARG:HD2	2.37	0.59
1:A:945:VAL:CG1	1:A:950:ILE:HD11	2.33	0.59
1:A:330:GLU:OE2	1:A:387:GLU:HB3	2.03	0.58
1:A:2093:PHE:O	1:A:2097:HIS:HD2	1.86	0.58
1:B:156:ASN:OD1	1:B:156:ASN:C	2.45	0.58
1:B:654:ILE:HD12	1:B:792:VAL:CG2	2.33	0.58
1:A:711:LEU:HD22	1:A:764:MET:HE2	1.86	0.58
1:A:1716:SER:OG	1:B:1976:ASP:OD2	2.20	0.58
1:B:295:ARG:HB3	1:B:558:THR:HG21	1.84	0.58
1:A:1593:ILE:CD1	3:A:2303:COA:C4A	2.81	0.58
1:B:297:ARG:HH22	1:B:555:ASN:C	2.12	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1927:ASN:OD1	1:B:1928:SER:N	2.37	0.58
1:A:1808:SER:O	1:A:1883:ARG:NH2	2.36	0.57
1:B:584:GLY:HA2	1:B:685:LEU:HD11	1.86	0.57
1:B:1751:GLY:HA2	1:B:1775:LEU:HD21	1.86	0.57
1:A:1735:ILE:HD13	1:A:1735:ILE:N	2.17	0.57
1:A:1378:SER:HB3	1:A:1379:ASN:OD1	2.04	0.57
1:A:1691:LYS:HA	1:A:1691:LYS:HE2	1.86	0.57
1:B:297:ARG:NH2	1:B:555:ASN:C	2.58	0.57
1:A:594:GLU:OE2	1:A:597:ARG:NH2	2.38	0.57
1:A:1564:MET:CE	1:A:1585:VAL:HG12	2.35	0.57
1:B:1643:TRP:CZ3	1:B:1649:PRO:HB3	2.39	0.57
1:B:1084:ASP:OD2	1:B:1318:ARG:HD3	2.05	0.56
1:A:106:ASN:HB2	1:B:659:SER:HB3	1.87	0.56
1:B:701:THR:O	1:B:766:ILE:HG23	2.05	0.56
1:B:744:GLU:HG3	1:B:769:LEU:CD2	2.35	0.56
1:B:556:THR:O	1:B:557:ILE:HG13	2.05	0.56
1:B:117:ILE:HD13	1:B:137:ILE:HG23	1.88	0.56
1:B:537:ARG:HD2	1:B:537:ARG:N	2.20	0.56
1:B:665:ILE:HD12	1:B:674:ILE:CD1	2.36	0.56
1:B:1050:SER:O	1:B:1071:ILE:HD13	2.06	0.56
1:A:665:ILE:HG13	1:A:674:ILE:HD12	1.88	0.56
1:A:704:ARG:HA	1:A:762:ASP:O	2.05	0.56
1:A:734:MET:HA	1:A:1766:LEU:HB3	1.87	0.55
1:A:124:ASN:OD1	1:A:129:ALA:HB2	2.07	0.55
1:A:1652:GLY:HA2	1:B:2085:ILE:CD1	2.35	0.55
1:A:708:PRO:O	1:A:733:VAL:HG22	2.07	0.55
1:A:734:MET:O	1:A:735:LYS:HB2	2.07	0.55
1:A:970:LEU:O	1:A:973:SER:OG	2.24	0.55
1:A:1441:ARG:HG3	1:A:1469:PHE:CE1	2.39	0.55
1:A:185:ASP:OD2	1:A:227:TYR:OH	2.25	0.55
1:A:646:ILE:CG2	1:A:785:LEU:HG	2.36	0.55
1:A:1641:VAL:CG1	1:A:1653:PHE:HB2	2.36	0.55
1:B:1176:ILE:HD11	1:B:1196:VAL:HB	1.89	0.55
1:A:106:ASN:OD1	1:A:111:ARG:NH1	2.39	0.55
1:A:1987:ILE:HG21	1:A:2014:MET:HE2	1.88	0.55
1:B:1097:VAL:O	1:B:1098:THR:C	2.50	0.55
1:B:1317:ASN:C	1:B:1317:ASN:OD1	2.48	0.55
1:B:1841:TYR:CE1	1:B:1846:MET:CE	2.81	0.55
1:A:1753:PRO:HB3	1:A:1775:LEU:HD23	1.88	0.55
1:B:1994:GLU:HA	1:B:2021:ARG:O	2.07	0.55
1:A:1348:ARG:HG3	1:A:1350:ASP:OD1	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1451:VAL:HG22	1:B:1517:GLN:CG	2.37	0.54
1:B:1272:TYR:CD1	1:B:1318:ARG:HD2	2.42	0.54
1:B:1651:LYS:HE3	1:B:1651:LYS:HA	1.89	0.54
1:B:1909:ASN:C	1:B:1909:ASN:ND2	2.64	0.54
1:A:306:ASP:HA	1:A:406:ILE:HG23	1.88	0.54
1:A:751:LEU:HD11	1:A:766:ILE:HG13	1.89	0.54
1:B:32:PHE:CZ	1:B:359:VAL:HG21	2.43	0.54
1:A:73:LYS:HE3	1:A:389:PRO:HG3	1.88	0.54
1:A:770:ASP:C	1:A:772:PRO:HD3	2.33	0.54
1:A:583:CYS:SG	1:A:674:ILE:HD11	2.48	0.54
1:B:941:ASN:HD21	1:B:1013:LEU:HA	1.73	0.54
1:A:56:HIS:CD2	1:A:409:GLY:HA3	2.42	0.54
1:B:630:TYR:CE1	1:B:781:PHE:CD1	2.96	0.54
1:A:1641:VAL:HG12	1:A:1653:PHE:HB2	1.90	0.54
1:B:904:VAL:O	1:B:905:GLU:C	2.51	0.53
1:B:1119:ARG:HB3	1:B:1121:HIS:CE1	2.42	0.53
1:B:1178:MET:HE3	1:B:1224:VAL:HG22	1.89	0.53
1:B:2026:GLU:O	1:B:2027:PRO:C	2.50	0.53
1:A:1180:VAL:HG22	1:A:1189:ILE:CD1	2.38	0.53
1:A:1706:ARG:NH1	1:B:2006:THR:CG2	2.71	0.53
1:A:646:ILE:HG23	1:A:647:ASN:H	1.74	0.53
1:A:1517:GLN:O	1:A:1521:SER:HB2	2.08	0.53
1:B:372:ASP:OD1	1:B:372:ASP:N	2.39	0.53
1:B:1735:ILE:HD12	1:B:1735:ILE:N	2.23	0.53
1:A:90:ARG:O	1:A:91:THR:C	2.51	0.53
1:B:1580:ARG:NH2	1:B:1810:VAL:O	2.41	0.53
1:B:177:GLY:O	1:B:181:ARG:HG3	2.09	0.53
1:B:1426:ARG:C	1:B:1427:ILE:HG13	2.33	0.52
1:B:1783:MET:CA	1:B:1786:ASN:HB2	2.38	0.52
1:A:1128:ILE:HG21	1:A:1196:VAL:HG21	1.90	0.52
1:A:1624:ASN:ND2	1:A:1733:VAL:H	2.07	0.52
1:A:1767:GLY:O	1:A:1768:ARG:HG3	2.07	0.52
1:B:196:ALA:HB2	1:B:355:LEU:HD22	1.91	0.52
1:B:63:LEU:HB2	1:B:143:VAL:HG11	1.92	0.52
1:A:76:ARG:HD3	1:B:529:GLU:OE2	2.10	0.52
1:B:72:VAL:HG13	1:B:112:MET:HE1	1.91	0.52
1:B:453:HIS:CD2	1:B:516:ARG:HA	2.44	0.52
1:A:545:LYS:HD2	1:A:572:ALA:O	2.09	0.52
1:A:1354:GLN:HG3	1:A:1403:ALA:HB2	1.92	0.52
1:B:101:GLU:HB3	1:B:499:HIS:CD2	2.44	0.52
1:B:809:LEU:O	1:B:810:GLU:C	2.51	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1451:VAL:HG22	1:B:1517:GLN:HG3	1.92	0.52
1:A:333:PRO:HG3	1:A:450:PRO:HB3	1.92	0.52
1:A:1223:ASN:HB3	1:A:1262:THR:HB	1.91	0.52
1:B:1748:GLN:NE2	1:B:1789:SER:OG	2.43	0.52
1:A:828:GLN:O	1:A:832:VAL:HG23	2.10	0.52
1:A:1176:ILE:CD1	1:A:1197:ILE:HG13	2.40	0.52
1:A:1631:MET:HE2	1:B:2034:LYS:HB3	1.91	0.52
1:B:1044:ILE:HD13	1:B:1075:LEU:CD2	2.39	0.52
1:A:1176:ILE:HD12	1:A:1197:ILE:HG13	1.92	0.52
1:A:1958:GLY:H	2:A:2302:BTI:HN3	1.58	0.51
1:B:334:VAL:HG21	1:B:342:PHE:CE1	2.45	0.51
1:B:579:LEU:CD1	1:B:667:ILE:HD12	2.40	0.51
1:B:1619:ILE:HG13	1:B:1725:ILE:CG2	2.40	0.51
1:B:2033:ILE:HG22	1:B:2034:LYS:CD	2.41	0.51
1:A:2178:ASN:HB3	1:A:2181:THR:HG22	1.92	0.51
1:A:1655:TYR:OH	1:A:1682:ILE:HD11	2.10	0.51
1:A:1709:GLY:O	1:A:1710:LEU:C	2.53	0.51
1:B:69:ILE:HG23	1:B:489:TYR:CE1	2.45	0.51
1:B:1369:LEU:HD21	1:B:1415:LEU:HD23	1.93	0.51
1:A:108:GLU:HG2	1:A:111:ARG:NH2	2.25	0.51
1:A:1176:ILE:HD12	1:A:1197:ILE:CG1	2.41	0.51
1:A:1533:THR:OG1	1:A:1535:ASP:OD2	2.28	0.51
1:A:1642:ALA:HB3	1:A:1654:GLN:HB3	1.92	0.51
1:B:990:GLN:HG3	1:B:991:PRO:CD	2.40	0.51
1:B:1633:GLU:HA	1:B:1636:VAL:HG23	1.92	0.51
1:A:1180:VAL:HG13	1:A:1185:ASP:HB2	1.92	0.51
1:A:1757:THR:OG1	2:A:2301:BTI:H4	2.11	0.51
1:A:1758:GLY:O	1:A:1759:ALA:C	2.53	0.51
1:B:1286:ASN:C	1:B:1286:ASN:OD1	2.54	0.51
1:A:1103:GLN:O	1:A:1107:ARG:HG2	2.11	0.51
1:A:1301:GLU:OE2	1:A:1441:ARG:NH2	2.44	0.51
1:B:646:ILE:HG23	1:B:647:ASN:N	2.25	0.51
1:B:1189:ILE:O	1:B:1190:LEU:C	2.54	0.51
1:A:311:ASN:N	1:A:311:ASN:HD22	2.09	0.51
1:A:1443:LEU:HD12	1:A:1443:LEU:N	2.25	0.51
1:B:744:GLU:CG	1:B:769:LEU:CD2	2.89	0.51
1:B:1735:ILE:HD12	1:B:1735:ILE:H	1.76	0.51
1:B:1344:THR:HB	1:B:1356:TYR:OH	2.11	0.51
1:A:1315:THR:O	1:A:1317:ASN:N	2.44	0.50
1:B:56:HIS:CD2	1:B:409:GLY:HA3	2.46	0.50
1:B:865:LEU:HD12	1:B:868:ARG:NH2	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:214:ASP:O	1:A:218:GLY:N	2.41	0.50
1:B:1580:ARG:HG3	1:B:1580:ARG:HH11	1.76	0.50
1:A:1682:ILE:O	1:A:1685:GLU:HG2	2.10	0.50
1:A:2004:ASP:OD2	1:A:2006:THR:CG2	2.59	0.50
1:B:306:ASP:HA	1:B:406:ILE:HG23	1.92	0.50
1:B:388:HIS:N	1:B:389:PRO:CD	2.74	0.50
1:A:389:PRO:HA	1:A:392:GLU:HB2	1.93	0.50
1:A:1968:LEU:HD23	1:B:1783:MET:HE1	1.93	0.50
1:B:927:VAL:HG13	1:B:1006:PRO:HG3	1.93	0.50
1:B:323:ARG:O	1:B:323:ARG:HG3	2.12	0.50
1:A:1636:VAL:N	1:A:1637:PRO:CD	2.74	0.50
1:B:312:ILE:HG12	1:B:412:MET:HE3	1.93	0.50
1:B:1044:ILE:HD13	1:B:1075:LEU:HD21	1.93	0.50
1:A:300:GLU:HG2	1:A:365:GLU:HG2	1.93	0.50
1:A:1365:MET:HE3	1:A:1369:LEU:HD11	1.94	0.50
1:A:1763:ASN:ND2	1:A:1770:VAL:H	2.10	0.50
1:A:2041:LEU:HD13	1:A:2051:TYR:OH	2.12	0.50
1:A:2046:ARG:NH1	1:B:1637:PRO:HA	2.26	0.50
1:B:541:GLU:HG2	1:B:572:ALA:CB	2.41	0.50
1:B:666:ALA:O	1:B:791:PRO:HB3	2.12	0.50
1:B:1883:ARG:HA	1:B:1887:ILE:O	2.12	0.50
1:A:723:ILE:HG22	1:A:724:LYS:N	2.27	0.50
1:B:214:ASP:OD1	1:B:214:ASP:C	2.55	0.50
1:B:1959:GLY:O	1:B:1960:GLN:C	2.55	0.50
1:A:819:GLN:O	1:A:820:VAL:C	2.54	0.49
1:B:1406:GLY:HA2	1:B:1409:GLU:CG	2.42	0.49
1:A:1827:TRP:CE3	1:A:1828:ASP:HA	2.47	0.49
1:A:2173:THR:O	1:A:2174:TRP:C	2.54	0.49
1:B:1350:ASP:N	1:B:1350:ASP:OD1	2.45	0.49
1:B:1783:MET:HA	1:B:1786:ASN:CB	2.40	0.49
1:A:716:VAL:HG11	1:A:722:ILE:HD11	1.94	0.49
1:A:1493:LEU:HD11	1:A:1507:TYR:HE1	1.68	0.49
1:B:1192:GLN:HG3	1:B:1193:SER:N	2.26	0.49
1:B:1471:SER:HB2	1:B:1479:HIS:HD2	1.77	0.49
1:B:1594:GLY:HA3	1:B:1624:ASN:HA	1.94	0.49
1:B:105:ALA:HB1	1:B:497:ASN:O	2.12	0.49
1:B:557:ILE:CG2	1:B:561:TRP:CG	2.94	0.49
1:B:626:GLU:O	1:B:628:LYS:N	2.44	0.49
1:B:723:ILE:HA	1:B:745:ASN:CB	2.26	0.49
1:B:1180:VAL:HG13	1:B:1185:ASP:HB2	1.93	0.49
1:A:701:THR:O	1:A:766:ILE:HG23	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1305:LEU:HB3	1:B:1310:ILE:HD11	1.95	0.49
1:A:72:VAL:HA	1:A:112:MET:HE1	1.93	0.49
1:A:1457:TYR:OH	1:A:1476:GLY:HA3	2.12	0.49
1:B:751:LEU:HD13	1:B:766:ILE:HG13	1.95	0.49
1:B:1479:HIS:ND1	1:B:1480:LEU:HG	2.28	0.49
1:B:2030:MET:O	1:B:2033:ILE:N	2.42	0.49
1:A:485:ASN:OD1	1:A:522:HIS:CD2	2.66	0.49
1:A:638:GLY:O	1:A:639:ASN:C	2.55	0.49
1:A:736:MET:HE1	1:B:1918:GLN:HB3	1.93	0.49
1:A:1701:GLY:HA2	1:B:2024:VAL:HG23	1.93	0.49
1:B:1906:ASP:OD2	1:B:1908:ALA:HB3	2.13	0.49
1:B:579:LEU:HD12	1:B:667:ILE:HD12	1.95	0.49
1:B:828:GLN:O	1:B:832:VAL:HG23	2.12	0.49
1:A:118:GLU:OE1	1:B:656:ARG:NH2	2.46	0.49
1:A:296:ALA:HB3	1:A:367:LEU:HD11	1.94	0.49
1:A:2087:GLY:O	1:A:2090:SER:OG	2.26	0.49
1:B:1278:PHE:CE1	1:B:1285:GLU:HB2	2.48	0.49
1:B:947:GLU:O	1:B:948:GLU:C	2.55	0.49
1:A:933:TYR:OH	1:A:979:ASN:ND2	2.45	0.48
1:A:1631:MET:HE2	1:B:2034:LYS:CB	2.43	0.48
2:A:2301:BTI:O3	1:B:1998:GLY:HA3	2.13	0.48
1:B:364:VAL:HG22	1:B:380:LEU:HD12	1.95	0.48
1:B:682:ALA:HB1	1:B:694:LEU:O	2.12	0.48
1:B:1708:SER:O	1:B:1709:GLY:C	2.56	0.48
1:A:1852:THR:HG22	1:A:1853:GLU:N	2.29	0.48
1:A:2047:LEU:HD13	1:B:1641:VAL:HG23	1.94	0.48
1:B:1679:ARG:NH1	1:B:1686:GLU:OE1	2.45	0.48
1:A:296:ALA:HB1	1:A:368:TYR:O	2.13	0.48
1:B:185:ASP:OD1	1:B:188:SER:HB3	2.13	0.48
1:B:537:ARG:HD2	1:B:537:ARG:H	1.78	0.48
1:B:940:PHE:HA	1:B:950:ILE:HD13	1.95	0.48
1:A:404:LEU:HG	1:A:408:MET:HE2	1.95	0.48
1:B:2031:VAL:HG22	1:B:2090:SER:HB2	1.95	0.48
1:A:630:TYR:CE1	1:A:781:PHE:CD1	3.01	0.48
1:B:498:ILE:HD12	1:B:536:PHE:CE2	2.48	0.48
1:A:990:GLN:HG3	1:A:991:PRO:CD	2.44	0.48
1:A:1569:ILE:HG22	1:A:1571:VAL:CG2	2.43	0.48
1:B:1418:LEU:O	1:B:1419:ARG:HB2	2.12	0.48
1:B:1530:VAL:HG23	1:B:1530:VAL:O	2.13	0.48
1:B:66:ASN:HD22	1:B:67:ASN:H	1.61	0.48
1:B:744:GLU:CG	1:B:769:LEU:HD22	2.42	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1818:VAL:HB	1:B:1888:PRO:HG2	1.96	0.48
1:A:411:PRO:HG2	1:A:414:ARG:HG2	1.95	0.48
1:B:224:ASP:O	1:B:228:GLN:HG2	2.14	0.48
1:B:405:GLN:O	1:B:408:MET:N	2.37	0.48
1:A:1103:GLN:O	1:A:1107:ARG:CG	2.61	0.48
1:A:1182:HIS:CD2	1:A:1184:ASP:H	2.32	0.48
1:B:1841:TYR:HE1	1:B:1846:MET:CE	2.22	0.48
1:A:665:ILE:HG22	1:A:667:ILE:HG13	1.96	0.48
1:B:36:ASN:HB3	1:B:41:LEU:HD22	1.96	0.48
1:B:261:GLY:O	1:B:278:ALA:HB1	2.14	0.48
1:B:334:VAL:HG12	1:B:335:THR:N	2.29	0.48
1:B:545:LYS:CG	1:B:572:ALA:O	2.61	0.48
1:B:1592:LYS:C	1:B:1593:ILE:HG12	2.39	0.48
1:A:711:LEU:HD22	1:A:764:MET:CE	2.43	0.47
1:A:2033:ILE:HG22	1:A:2034:LYS:CD	2.42	0.47
1:B:1741:ARG:O	1:B:1741:ARG:HD3	2.14	0.47
1:B:594:GLU:OE1	1:B:597:ARG:NH2	2.47	0.47
1:B:850:LEU:O	1:B:851:HIS:C	2.56	0.47
1:A:1624:ASN:HD21	1:A:1733:VAL:H	1.61	0.47
1:B:1827:TRP:CE3	1:B:1828:ASP:HA	2.49	0.47
1:B:2044:MET:HG3	1:B:2082:LEU:HD23	1.96	0.47
1:A:1104:VAL:O	1:A:1105:TYR:C	2.58	0.47
1:B:1612:ARG:O	1:B:1814:ARG:NH2	2.46	0.47
1:A:853:ARG:CZ	1:B:123:THR:OG1	2.63	0.47
1:A:1659:THR:O	1:A:1662:GLY:N	2.48	0.47
1:B:1239:LEU:O	1:B:1243:ARG:HG2	2.14	0.47
1:A:186:LYS:HD3	1:A:288:PHE:HZ	1.78	0.47
1:A:751:LEU:HD13	1:A:766:ILE:HG13	1.96	0.47
1:A:753:GLN:O	1:A:756:SER:OG	2.31	0.47
1:B:941:ASN:ND2	1:B:1013:LEU:HA	2.29	0.47
1:A:486:VAL:HG11	1:A:526:ALA:CB	2.45	0.47
1:A:1173:ARG:HH21	1:A:1259:ARG:NH1	2.13	0.47
1:A:1344:THR:HG21	1:A:1393:PHE:HZ	1.79	0.47
1:B:29:PRO:HD2	1:B:32:PHE:CD2	2.49	0.47
1:B:485:ASN:HB2	1:B:522:HIS:HD2	1.79	0.47
1:B:649:SER:HB3	1:B:784:MET:HB3	1.97	0.47
1:B:744:GLU:HG3	1:B:769:LEU:HD22	1.95	0.47
1:B:1377:THR:O	1:B:1380:SER:OG	2.27	0.47
1:B:1616:ILE:HD12	1:B:1813:LYS:HB3	1.96	0.47
1:B:1741:ARG:HD3	1:B:1741:ARG:C	2.40	0.47
1:B:1816:MET:HE3	1:B:1816:MET:HB3	1.89	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1952:ASN:CG	1:B:1952:ASN:O	2.57	0.47
1:A:250:MET:HE2	1:A:292:LEU:HD13	1.97	0.47
1:B:2108:VAL:HG23	1:B:2109:ILE:HG23	1.97	0.47
1:A:743:GLN:HA	1:A:743:GLN:HE21	1.80	0.47
1:A:1786:ASN:HB3	1:A:1788:VAL:HG23	1.97	0.47
1:B:990:GLN:HG3	1:B:991:PRO:HD3	1.96	0.47
1:B:1827:TRP:O	1:B:1829:ARG:N	2.43	0.47
1:A:1708:SER:HB3	1:A:1735:ILE:HD12	1.97	0.47
1:A:1516:ARG:HG3	1:A:1537:PHE:CD1	2.50	0.46
1:A:1918:GLN:O	1:A:1920:PRO:HD3	2.14	0.46
1:A:2033:ILE:HG22	1:A:2034:LYS:HD3	1.96	0.46
1:B:1783:MET:HE3	1:B:1788:VAL:HG11	1.95	0.46
1:A:433:ASP:H	1:A:445:GLN:HE22	1.62	0.46
1:A:480:PHE:HD1	1:A:530:LEU:HD13	1.79	0.46
1:B:1189:ILE:HG22	1:B:1193:SER:OG	2.16	0.46
1:A:69:ILE:CG2	1:A:489:TYR:CE1	2.98	0.46
1:A:412:MET:HA	1:A:415:ILE:HD12	1.96	0.46
1:A:1682:ILE:HG22	1:A:1683:ASN:ND2	2.30	0.46
1:A:1730:CYS:O	1:A:1752:GLN:NE2	2.48	0.46
1:B:845:LEU:O	1:B:848:SER:HB2	2.16	0.46
1:B:1243:ARG:HH12	1:B:1283:TYR:C	2.23	0.46
1:A:716:VAL:HG12	1:A:717:GLU:N	2.30	0.46
1:A:1496:LYS:O	1:A:1499:LYS:HB3	2.16	0.46
1:B:385:GLN:HB3	1:B:387:GLU:OE1	2.15	0.46
1:B:530:LEU:HD21	1:B:532:ILE:HD12	1.96	0.46
1:B:646:ILE:HG22	1:B:649:SER:OG	2.15	0.46
1:B:905:GLU:HB3	1:B:906:PRO:HD3	1.97	0.46
1:A:376:TYR:CD2	1:A:376:TYR:N	2.83	0.46
1:A:1829:ARG:CZ	1:A:2119:ARG:HE	2.28	0.46
1:A:1862:ASP:OD1	1:A:1885:GLY:N	2.42	0.46
1:B:172:PHE:HE2	1:B:175:PRO:HD2	1.79	0.46
1:B:955:ARG:NH1	1:B:1914:GLU:OE1	2.48	0.46
1:B:1735:ILE:O	1:B:1739:LEU:N	2.36	0.46
1:A:1253:LEU:HD23	1:A:1258:ILE:HD12	1.98	0.46
1:A:1594:GLY:O	1:A:1624:ASN:HA	2.14	0.46
1:A:1643:TRP:CH2	1:B:2085:ILE:HG13	2.50	0.46
1:A:1842:ASP:O	1:A:1843:VAL:C	2.58	0.46
1:B:868:ARG:HB3	1:B:872:ARG:HH21	1.81	0.46
1:B:1422:SER:CB	1:B:1445:ASN:OD1	2.62	0.46
1:B:1657:TYR:CE2	1:B:1687:ARG:HG2	2.51	0.46
1:A:759:VAL:O	1:A:762:ASP:HB2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1592:LYS:O	1:A:1593:ILE:CG1	2.64	0.46
1:A:2024:VAL:HG22	1:B:1705:LEU:HD13	1.97	0.46
1:B:2035:PHE:HE1	1:B:2043:THR:HG21	1.80	0.46
1:A:1643:TRP:CH2	1:B:2089:ILE:HD11	2.50	0.45
1:A:1843:VAL:CG2	1:A:1895:GLU:HA	2.46	0.45
1:B:2031:VAL:HG13	1:B:2090:SER:HB2	1.98	0.45
1:A:714:PHE:CD2	1:A:750:LEU:HD13	2.50	0.45
1:B:72:VAL:O	1:B:75:ILE:N	2.49	0.45
1:B:317:ARG:HG2	1:B:332:ALA:HB2	1.99	0.45
1:B:1582:PHE:CD2	1:B:1807:MET:HE1	2.52	0.45
1:B:1194:LEU:CD1	1:B:1252:GLU:HB3	2.46	0.45
1:A:334:VAL:HG21	1:A:342:PHE:HE1	1.81	0.45
1:A:931:GLU:C	1:A:933:TYR:H	2.24	0.45
1:A:1644:ASN:OD1	1:A:1652:GLY:O	2.35	0.45
1:B:623:PHE:CD1	1:B:694:LEU:HD22	2.52	0.45
1:B:1260:ARG:HA	1:B:1278:PHE:O	2.16	0.45
1:B:1809:TYR:O	1:B:1945:LEU:HD11	2.16	0.45
1:B:2033:ILE:HG22	1:B:2034:LYS:HD3	1.98	0.45
1:A:1173:ARG:NH2	1:A:1259:ARG:HD2	2.31	0.45
1:A:1635:ILE:HG22	1:A:1635:ILE:O	2.16	0.45
1:A:1901:ASN:OD1	1:A:1901:ASN:C	2.58	0.45
1:B:1981:TYR:CD2	1:B:1985:ILE:HD11	2.52	0.45
1:A:711:LEU:HA	1:A:731:ILE:HG22	1.99	0.45
1:B:1220:ASN:O	1:B:1258:ILE:HA	2.17	0.45
1:B:1860:LEU:HD21	1:B:1948:MET:HE1	1.99	0.45
1:A:532:ILE:O	1:A:532:ILE:HG22	2.16	0.45
1:A:1305:LEU:HB3	1:A:1310:ILE:HD11	1.99	0.45
1:A:1964:PHE:O	1:B:1786:ASN:ND2	2.50	0.45
1:B:460:THR:HA	1:B:504:SER:O	2.17	0.45
1:B:575:PRO:HG2	1:B:580:ALA:HB2	1.98	0.45
1:B:1030:ILE:C	1:B:1032:GLY:H	2.24	0.45
1:B:1581:GLN:HB2	1:B:1616:ILE:HD11	1.98	0.45
1:A:520:ARG:HD2	1:A:547:LEU:O	2.16	0.45
1:B:541:GLU:OE2	1:B:690:MET:HA	2.16	0.45
1:B:704:ARG:HA	1:B:762:ASP:O	2.16	0.45
1:B:1180:VAL:CG1	1:B:1185:ASP:HB2	2.47	0.45
1:B:2053:GLU:O	1:B:2057:GLN:HG3	2.17	0.45
1:A:1489:VAL:HG12	1:A:1490:LYS:H	1.81	0.45
1:A:1516:ARG:HG3	1:A:1537:PHE:CG	2.52	0.45
1:A:1685:GLU:HG3	1:A:1685:GLU:O	2.15	0.45
1:B:366:TYR:O	1:B:378:LEU:CD1	2.65	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1655:TYR:CE1	1:B:1689:VAL:HG22	2.52	0.45
1:B:1783:MET:CE	1:B:1788:VAL:HG11	2.47	0.45
1:A:1097:VAL:O	1:A:1100:ALA:N	2.50	0.45
1:A:1659:THR:O	1:A:1660:SER:C	2.59	0.45
1:A:1736:GLY:O	1:A:1740:VAL:HG23	2.17	0.45
1:B:2034:LYS:O	1:B:2039:LYS:HD2	2.16	0.45
1:A:575:PRO:HG2	1:A:580:ALA:HB2	1.99	0.44
1:B:67:ASN:ND2	1:B:128:TYR:CE2	2.80	0.44
1:B:405:GLN:O	1:B:406:ILE:C	2.60	0.44
1:A:2159:TYR:CE1	1:A:2171:VAL:HG13	2.52	0.44
2:A:2301:BTI:N3	1:B:1998:GLY:CA	2.80	0.44
1:B:131:VAL:HG13	1:B:159:LEU:HA	2.00	0.44
1:B:205:GLY:O	1:B:208:VAL:HG23	2.17	0.44
1:B:646:ILE:HG23	1:B:647:ASN:H	1.81	0.44
1:B:1682:ILE:HG22	1:B:1683:ASN:N	2.32	0.44
1:B:1754:ILE:O	1:B:1778:GLY:HA3	2.17	0.44
1:A:541:GLU:CD	1:A:691:THR:HG1	2.26	0.44
1:A:822:MET:HE3	1:A:823:ASN:OD1	2.18	0.44
1:B:55:GLY:HA2	1:B:409:GLY:O	2.16	0.44
1:B:2183:ASP:HA	1:B:2186:LEU:HD12	1.99	0.44
1:A:129:ALA:HA	1:A:153:ALA:HB2	1.98	0.44
1:A:575:PRO:O	1:A:576:ASP:C	2.60	0.44
1:A:644:LEU:HD21	1:A:653:ILE:HD12	1.99	0.44
1:B:296:ALA:O	1:B:559:THR:HG23	2.18	0.44
1:B:1493:LEU:HD21	1:B:1558:GLY:HA3	2.00	0.44
1:B:1707:GLY:O	1:B:1710:LEU:HB3	2.17	0.44
1:A:42:GLU:HG2	1:A:43:GLU:N	2.31	0.44
1:B:1738:TYR:O	1:B:1742:LEU:HD22	2.17	0.44
1:A:698:ASN:O	1:A:700:PRO:HD3	2.18	0.44
1:A:975:VAL:O	1:A:976:SER:C	2.61	0.44
1:A:1883:ARG:HA	1:A:1887:ILE:O	2.18	0.44
2:A:2302:BTI:H5	1:B:1762:ILE:HD13	1.99	0.44
1:B:1175:GLY:HA2	1:B:1221:VAL:O	2.17	0.44
1:B:2037:ARG:O	1:B:2041:LEU:HG	2.18	0.44
1:A:250:MET:HE2	1:A:292:LEU:CD1	2.48	0.44
1:A:722:ILE:HG13	1:A:748:VAL:HG21	2.00	0.44
1:A:793:ILE:HD13	1:B:117:ILE:HG12	2.00	0.44
1:A:848:SER:OG	1:B:132:ASP:HB2	2.18	0.43
1:A:1706:ARG:HE	1:B:2108:VAL:HA	1.82	0.43
1:A:1771:TYR:HD2	1:A:1776:GLN:OE1	2.01	0.43
1:B:42:GLU:HG2	1:B:43:GLU:N	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:711:LEU:HB2	1:B:758:ILE:CD1	2.48	0.43
1:B:809:LEU:HD12	1:B:929:PHE:CE2	2.53	0.43
1:B:1176:ILE:HG22	1:B:1178:MET:HE2	1.99	0.43
1:B:1493:LEU:HD11	1:B:1557:PRO:HB2	2.00	0.43
1:A:457:CYS:HB3	1:A:543:LEU:HD13	1.99	0.43
1:A:729:ALA:O	1:A:740:LEU:HB2	2.18	0.43
1:A:1564:MET:HE1	1:A:1585:VAL:HG12	2.00	0.43
1:A:1707:GLY:O	1:A:1710:LEU:HB3	2.18	0.43
1:B:73:LYS:HE3	1:B:389:PRO:HG3	1.99	0.43
1:B:377:PHE:CZ	1:B:379:GLU:HA	2.52	0.43
1:B:1836:THR:HG22	1:B:1838:ASP:H	1.83	0.43
1:B:2088:GLN:O	1:B:2089:ILE:C	2.61	0.43
1:A:565:LEU:HD22	1:A:570:MET:CE	2.48	0.43
1:A:1236:GLU:O	1:A:1240:VAL:HG23	2.18	0.43
1:B:1369:LEU:HD21	1:B:1415:LEU:CD2	2.48	0.43
1:B:2078:ARG:HG3	1:B:2082:LEU:HD13	2.00	0.43
1:A:744:GLU:HB3	1:A:769:LEU:HD23	2.00	0.43
1:A:830:ILE:HG22	1:A:834:ARG:HD2	1.99	0.43
1:A:1176:ILE:CD1	1:A:1197:ILE:CG1	2.97	0.43
1:B:557:ILE:CG2	1:B:561:TRP:CB	2.96	0.43
1:B:527:LEU:O	1:B:528:LYS:C	2.62	0.43
1:B:582:ILE:CG2	1:B:653:ILE:HD11	2.49	0.43
1:B:1770:VAL:CG1	1:B:1771:TYR:CD1	3.02	0.43
1:A:734:MET:HA	1:A:1766:LEU:CB	2.47	0.43
1:A:1471:SER:H	1:A:1479:HIS:HD2	1.66	0.43
1:B:459:ILE:HD11	1:B:509:ILE:HD12	2.00	0.43
1:B:1470:LYS:O	1:B:1471:SER:C	2.60	0.43
1:B:2043:THR:O	1:B:2047:LEU:HD13	2.19	0.43
1:A:622:ASP:OD1	1:A:622:ASP:C	2.61	0.43
1:A:722:ILE:HG22	1:A:723:ILE:N	2.33	0.43
1:A:1425:ILE:HG22	1:A:1426:ARG:N	2.34	0.43
1:A:1708:SER:HB2	1:B:2001:VAL:HG12	2.00	0.43
1:B:975:VAL:HA	1:B:978:LYS:HD3	2.01	0.43
1:A:813:LEU:HA	1:A:978:LYS:HG2	2.00	0.43
1:A:2006:THR:HG23	1:B:1710:LEU:HA	2.00	0.43
1:B:608:GLN:NE2	1:B:1907:PRO:HA	2.34	0.43
1:B:1279:ASN:O	1:B:1283:TYR:HA	2.18	0.43
1:B:1313:ILE:HD12	1:B:1336:PHE:HE1	1.84	0.43
1:A:1190:LEU:O	1:A:1194:LEU:HG	2.19	0.43
1:B:1014:GLU:OE2	1:B:1417:ARG:NH1	2.52	0.43
1:B:1494:GLN:N	1:B:1495:PRO:CD	2.81	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:655:LEU:CD2	1:A:665:ILE:HG12	2.49	0.43
1:A:1925:HIS:HB3	1:A:1926:PRO:HD2	2.01	0.43
1:A:2101:SER:HB2	1:B:1692:THR:HG21	1.99	0.43
1:B:297:ARG:O	1:B:367:LEU:HD12	2.19	0.43
1:B:499:HIS:CD2	1:B:501:PHE:H	2.37	0.43
1:A:2002:VAL:HG23	1:A:2003:VAL:HG13	2.01	0.42
1:B:1246:LEU:O	1:B:1250:LYS:N	2.52	0.42
1:A:342:PHE:HA	1:A:345:MET:HE3	2.01	0.42
1:A:1356:TYR:O	1:A:1357:LEU:C	2.61	0.42
1:B:509:ILE:HG22	1:B:523:MET:HE1	2.02	0.42
1:B:1097:VAL:O	1:B:1100:ALA:N	2.52	0.42
1:B:1194:LEU:HD23	1:B:1194:LEU:HA	1.89	0.42
1:A:138:ALA:HB1	1:A:143:VAL:CG2	2.50	0.42
1:A:714:PHE:CG	1:A:750:LEU:HD13	2.54	0.42
3:A:2303:COA:O9P	3:A:2303:COA:H141	2.19	0.42
1:B:466:ASP:O	1:B:466:ASP:CG	2.59	0.42
1:A:1365:MET:HE1	1:A:1415:LEU:HD21	2.01	0.42
1:B:198:VAL:O	1:B:199:PRO:C	2.61	0.42
1:B:714:PHE:CG	1:B:750:LEU:HD13	2.54	0.42
1:B:1044:ILE:O	1:B:1045:GLU:C	2.63	0.42
1:A:2124:TRP:O	1:A:2125:ARG:C	2.62	0.42
1:B:646:ILE:CG2	1:B:649:SER:OG	2.67	0.42
1:B:1733:VAL:HA	1:B:1755:ILE:O	2.19	0.42
1:B:1761:ALA:O	1:B:1762:ILE:C	2.61	0.42
1:B:1632:ALA:HB1	1:B:1634:GLU:OE1	2.20	0.42
1:B:665:ILE:HG13	1:B:674:ILE:HD12	2.01	0.42
1:B:1659:THR:O	1:B:1660:SER:C	2.62	0.42
1:B:1852:THR:HG22	1:B:1853:GLU:N	2.35	0.42
1:A:274:LEU:HD23	1:A:277:GLN:NE2	2.34	0.42
1:A:601:ILE:O	1:A:602:GLU:C	2.59	0.42
1:A:663:LEU:HD23	1:A:663:LEU:HA	1.92	0.42
1:B:1430:LYS:O	1:B:1430:LYS:HG3	2.18	0.42
1:B:2031:VAL:CG2	1:B:2090:SER:HB2	2.50	0.42
1:A:2164:ASP:O	1:A:2165:HIS:C	2.63	0.42
1:B:150:TRP:CZ2	1:B:386:VAL:HG23	2.54	0.42
1:B:714:PHE:HB3	1:B:750:LEU:HD11	2.02	0.42
1:B:1223:ASN:HB2	1:B:1264:MET:HE2	2.00	0.42
1:A:722:ILE:HA	1:A:726:GLN:OE1	2.20	0.42
1:A:1589:ILE:O	1:A:1589:ILE:HG13	2.20	0.42
1:A:1781:GLN:H	1:A:1781:GLN:CD	2.27	0.42
1:B:101:GLU:HB3	1:B:499:HIS:CG	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1639:PHE:CD1	1:B:1639:PHE:C	2.98	0.42
1:B:1998:GLY:O	1:B:2001:VAL:HG22	2.19	0.42
1:A:485:ASN:OD1	1:A:522:HIS:NE2	2.53	0.41
1:A:904:VAL:O	1:A:905:GLU:C	2.63	0.41
1:A:1629:ILE:HG13	1:B:2034:LYS:HE3	2.02	0.41
1:A:2044:MET:HE1	1:A:2079:GLU:HA	2.02	0.41
1:B:797:LYS:O	1:B:798:PRO:C	2.63	0.41
1:A:1180:VAL:CG2	1:A:1189:ILE:HD13	2.51	0.41
1:A:1180:VAL:CG2	1:A:1189:ILE:CD1	2.98	0.41
1:A:1444:ILE:HG23	1:A:1454:THR:HG22	2.02	0.41
1:B:364:VAL:HG11	1:B:366:TYR:CZ	2.55	0.41
1:B:871:ARG:C	1:B:873:GLY:H	2.28	0.41
1:B:1589:ILE:HG13	1:B:1589:ILE:O	2.18	0.41
1:B:1655:TYR:O	1:B:1656:LEU:HD12	2.21	0.41
1:B:1733:VAL:O	1:B:1736:GLY:N	2.54	0.41
1:A:73:LYS:HZ3	1:A:77:SER:HG	1.65	0.41
1:A:333:PRO:HG3	1:A:450:PRO:CB	2.50	0.41
1:A:1759:ALA:HB1	1:A:1771:TYR:HB2	2.03	0.41
1:B:95:VAL:HG22	1:B:115:GLN:CG	2.51	0.41
1:B:1768:ARG:O	1:B:1770:VAL:N	2.53	0.41
1:A:1026:ARG:O	1:A:1029:LEU:N	2.54	0.41
1:A:1489:VAL:HG12	1:A:1490:LYS:N	2.36	0.41
1:A:1727:LEU:HB2	1:A:1803:ILE:HD11	2.03	0.41
1:A:2024:VAL:HG22	1:B:1705:LEU:CD1	2.51	0.41
1:A:2163:VAL:HA	1:A:2170:GLN:HE21	1.84	0.41
1:B:1901:ASN:OD1	1:B:1901:ASN:C	2.63	0.41
1:A:380:LEU:C	1:A:380:LEU:HD23	2.46	0.41
1:A:654:ILE:CD1	1:A:792:VAL:HG21	2.51	0.41
1:A:1482:PRO:O	1:A:1485:THR:OG1	2.29	0.41
1:A:1496:LYS:O	1:A:1499:LYS:N	2.52	0.41
1:B:665:ILE:HD12	1:B:674:ILE:HD11	2.02	0.41
1:B:1183:LEU:HD23	1:B:1232:PHE:CZ	2.56	0.41
1:B:1874:ALA:HB3	1:B:1931:LYS:HD2	2.01	0.41
1:A:1852:THR:HG22	1:A:1853:GLU:H	1.85	0.41
1:B:557:ILE:CG2	1:B:561:TRP:CD2	3.04	0.41
1:B:622:ASP:OD1	1:B:631:LYS:HA	2.20	0.41
1:B:1194:LEU:HD12	1:B:1252:GLU:CB	2.49	0.41
1:B:1884:LEU:O	1:B:1887:ILE:HG13	2.21	0.41
1:A:297:ARG:NH1	1:A:318:ASP:OD2	2.54	0.41
1:A:654:ILE:HD12	1:A:792:VAL:CG2	2.51	0.41
1:A:722:ILE:HG12	1:A:748:VAL:HG23	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:485:ASN:CB	1:B:522:HIS:HD2	2.34	0.41
1:B:1593:ILE:CD1	3:B:2301:COA:C4A	2.95	0.41
1:B:1762:ILE:HG21	1:B:1771:TYR:HE1	1.85	0.41
1:A:28:LEU:O	1:A:29:PRO:C	2.64	0.41
1:A:1075:LEU:HD12	1:A:1075:LEU:HA	1.94	0.41
1:A:1483:ILE:HG13	1:A:1484:ALA:N	2.36	0.41
1:B:634:VAL:HG22	1:B:644:LEU:HD22	2.02	0.41
1:B:1119:ARG:HH22	1:B:1132:LYS:HG3	1.85	0.41
1:B:1677:THR:HA	1:B:1689:VAL:O	2.21	0.41
1:A:393:MET:HE1	1:A:512:PHE:HB2	2.03	0.41
1:A:734:MET:SD	1:A:1766:LEU:HB2	2.61	0.41
1:A:1492:TRP:HZ3	1:A:1558:GLY:O	2.03	0.41
1:A:1587:ASN:HB2	1:A:1623:ALA:O	2.21	0.41
1:A:1682:ILE:O	1:A:1683:ASN:C	2.62	0.41
1:A:2000:TRP:CD1	1:A:2000:TRP:C	2.98	0.41
1:B:58:VAL:O	1:B:58:VAL:HG12	2.19	0.41
1:B:97:MET:HG2	1:B:137:ILE:HD13	2.02	0.41
1:B:415:ILE:O	1:B:418:ILE:N	2.54	0.41
1:B:714:PHE:C	1:B:716:VAL:H	2.28	0.41
1:B:731:ILE:HD12	1:B:740:LEU:HD21	2.03	0.41
1:B:741:VAL:HG12	1:B:742:SER:O	2.20	0.41
1:B:1180:VAL:CG2	1:B:1189:ILE:CD1	2.98	0.41
1:B:1364:LEU:HD13	1:B:1387:ILE:HG12	2.03	0.41
1:B:1472:LEU:HD23	1:B:1472:LEU:HA	1.88	0.41
1:B:1734:GLY:HA3	3:B:2301:COA:S1P	2.61	0.41
1:A:646:ILE:HG23	1:A:647:ASN:N	2.36	0.41
1:A:940:PHE:HA	1:A:950:ILE:HD13	2.03	0.41
1:A:1310:ILE:CG2	1:A:1323:TYR:CD1	3.04	0.41
1:A:1909:ASN:OD1	1:A:1909:ASN:C	2.64	0.41
1:A:1986:ILE:HD13	1:A:2122:PHE:CD2	2.56	0.41
1:B:684:ARG:CB	1:B:684:ARG:HH11	2.34	0.41
1:B:1960:GLN:HE21	1:B:1960:GLN:HB2	1.67	0.41
1:A:460:THR:HA	1:A:505:GLN:HA	2.03	0.40
1:A:633:THR:HG23	1:A:645:PHE:HB2	2.03	0.40
1:A:1128:ILE:HD11	1:A:1192:GLN:NE2	2.36	0.40
1:A:1511:PHE:N	1:A:1512:PRO:CD	2.84	0.40
1:A:1561:ALA:O	1:A:1562:ILE:HD12	2.21	0.40
1:A:1748:GLN:HE22	1:A:1783:MET:HB2	1.87	0.40
1:A:1862:ASP:O	1:A:1865:SER:OG	2.29	0.40
1:B:330:GLU:CG	1:B:387:GLU:HG2	2.51	0.40
1:B:418:ILE:O	1:B:419:ARG:C	2.63	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:744:GLU:OE2	1:B:744:GLU:HA	2.21	0.40
1:B:1008:GLN:HA	1:B:1011:VAL:HB	2.03	0.40
1:B:1543:ILE:HD11	1:B:1553:VAL:HG11	2.02	0.40
1:A:1598:PRO:O	1:A:1601:ASP:HB2	2.21	0.40
1:B:541:GLU:HG2	1:B:572:ALA:HB1	2.03	0.40
1:A:984:ALA:O	1:A:985:ILE:C	2.64	0.40
1:B:748:VAL:HG12	1:B:749:GLN:N	2.36	0.40
1:B:1842:ASP:C	1:B:1842:ASP:OD1	2.65	0.40
1:A:163:LEU:O	1:A:166:SER:HB3	2.22	0.40
1:A:388:HIS:N	1:A:389:PRO:CD	2.84	0.40
1:A:565:LEU:HD22	1:A:570:MET:HE2	2.04	0.40
1:A:1439:PRO:HB2	1:A:1459:GLU:HB2	2.02	0.40
1:A:1592:LYS:C	1:A:1593:ILE:HG12	2.46	0.40
1:A:1706:ARG:HH12	1:B:2006:THR:HG22	1.85	0.40
1:A:2128:ARG:HE	1:A:2132:GLU:CD	2.29	0.40
1:B:79:ARG:HG2	1:B:89:ASP:O	2.21	0.40
1:A:714:PHE:HB3	1:A:750:LEU:HD11	2.03	0.40
1:A:1996:ARG:O	1:A:1997:GLY:C	2.64	0.40
1:B:188:SER:O	1:B:192:VAL:HG23	2.21	0.40
1:B:1463:ALA:C	1:B:1465:GLY:H	2.29	0.40
1:B:1624:ASN:OD1	1:B:1624:ASN:C	2.64	0.40

All (2) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:440:ASP:OD1	1:A:440:ASP:OD1[7_555]	2.14	0.06
1:B:1170:SER:O	1:B:2180:LYS:NZ[7_645]	2.14	0.06

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	2030/2218 (92%)	1810 (89%)	201 (10%)	19 (1%)	14	47
1	B	2050/2218 (92%)	1836 (90%)	197 (10%)	17 (1%)	16	50
All	All	4080/4436 (92%)	3646 (89%)	398 (10%)	36 (1%)	14	47

All (36) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	1316	ASP
1	B	712	VAL
1	A	573	GLU
1	A	820	VAL
1	B	572	ALA
1	B	750	LEU
1	B	851	HIS
1	A	169	LYS
1	A	216	LYS
1	A	831	GLU
1	A	1378	SER
1	A	1683	ASN
1	A	2080	ARG
1	B	1098	THR
1	B	1464	LYS
1	B	1632	ALA
1	B	1682	ILE
1	A	431	GLU
1	A	1914	GLU
1	B	315	PHE
1	B	1378	SER
1	B	1479	HIS
1	B	1595	SER
1	A	184	GLY
1	A	569	LYS
1	A	712	VAL
1	A	1004	SER
1	B	184	GLY
1	B	706	PRO
1	B	1052	VAL
1	B	1744	GLN
1	A	1843	VAL
1	A	680	VAL
1	A	1475	PRO
1	A	1649	PRO

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Mol	Chain	Res	Type
1	B	294	GLY

5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	1769/1912 (92%)	1640 (93%)	129 (7%)	13	43
1	B	1782/1912 (93%)	1649 (92%)	133 (8%)	12	42
All	All	3551/3824 (93%)	3289 (93%)	262 (7%)	13	43

All (262) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	39	ASP
1	A	60	SER
1	A	124	ASN
1	A	185	ASP
1	A	189	SER
1	A	268	GLU
1	A	311	ASN
1	A	326	GLN
1	A	335	THR
1	A	376	TYR
1	A	391	THR
1	A	471	SER
1	A	508	HIS
1	A	537	ARG
1	A	567	THR
1	A	573	GLU
1	A	602	GLU
1	A	633	THR
1	A	643	THR
1	A	644	LEU
1	A	654	ILE
1	A	689	SER

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Mol	Chain	Res	Type
1	A	691	THR
1	A	718	ASN
1	A	738	MET
1	A	740	LEU
1	A	743	GLN
1	A	745	ASN
1	A	749	GLN
1	A	750	LEU
1	A	751	LEU
1	A	756	SER
1	A	762	ASP
1	A	768	THR
1	A	770	ASP
1	A	796	THR
1	A	797	LYS
1	A	801	LYS
1	A	825	SER
1	A	841	SER
1	A	845	LEU
1	A	865	LEU
1	A	883	LYS
1	A	915	SER
1	A	990	GLN
1	A	1011	VAL
1	A	1023	LEU
1	A	1044	ILE
1	A	1075	LEU
1	A	1081	VAL
1	A	1114	THR
1	A	1173	ARG
1	A	1180	VAL
1	A	1185	ASP
1	A	1190	LEU
1	A	1191	SER
1	A	1221	VAL
1	A	1223	ASN
1	A	1330	SER
1	A	1343	ARG
1	A	1348	ARG
1	A	1364	LEU
1	A	1366	SER
1	A	1390	ILE

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Mol	Chain	Res	Type
1	A	1417	ARG
1	A	1419	ARG
1	A	1431	ASP
1	A	1508	VAL
1	A	1521	SER
1	A	1527	SER
1	A	1534	ASP
1	A	1546	GLU
1	A	1555	ARG
1	A	1562	ILE
1	A	1565	VAL
1	A	1578	ARG
1	A	1583	VAL
1	A	1585	VAL
1	A	1592	LYS
1	A	1608	THR
1	A	1616	ILE
1	A	1638	LEU
1	A	1648	ASN
1	A	1656	LEU
1	A	1677	THR
1	A	1678	GLU
1	A	1687	ARG
1	A	1691	LYS
1	A	1706	ARG
1	A	1726	THR
1	A	1732	SER
1	A	1735	ILE
1	A	1755	ILE
1	A	1756	LEU
1	A	1765	MET
1	A	1766	LEU
1	A	1770	VAL
1	A	1777	LEU
1	A	1781	GLN
1	A	1791	LEU
1	A	1792	THR
1	A	1797	LEU
1	A	1822	GLU
1	A	1824	LYS
1	A	1839	GLU
1	A	1843	VAL

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Mol	Chain	Res	Type
1	A	1854	SER
1	A	1884	LEU
1	A	1912	SER
1	A	1924	TRP
1	A	1968	LEU
1	A	1999	SER
1	A	2001	VAL
1	A	2018	VAL
1	A	2021	ARG
1	A	2025	LEU
1	A	2035	PHE
1	A	2041	LEU
1	A	2062	SER
1	A	2083	LEU
1	A	2089	ILE
1	A	2101	SER
1	A	2114	GLU
1	A	2117	GLU
1	A	2119	ARG
1	A	2127	ARG
1	A	2140	SER
1	A	2149	LEU
1	A	2180	LYS
1	B	35	LEU
1	B	37	THR
1	B	44	SER
1	B	66	ASN
1	B	108	GLU
1	B	124	ASN
1	B	156	ASN
1	B	269	GLU
1	B	335	THR
1	B	360	SER
1	B	367	LEU
1	B	371	ASP
1	B	387	GLU
1	B	391	THR
1	B	416	SER
1	B	457	CYS
1	B	466	ASP
1	B	468	PHE
1	B	471	SER

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Mol	Chain	Res	Type
1	B	508	HIS
1	B	519	SER
1	B	531	SER
1	B	545	LYS
1	B	557	ILE
1	B	573	GLU
1	B	605	GLN
1	B	612	LYS
1	B	622	ASP
1	B	633	THR
1	B	643	THR
1	B	653	ILE
1	B	659	SER
1	B	677	LYS
1	B	684	ARG
1	B	720	GLU
1	B	740	LEU
1	B	743	GLN
1	B	745	ASN
1	B	749	GLN
1	B	750	LEU
1	B	751	LEU
1	B	762	ASP
1	B	768	THR
1	B	785	LEU
1	B	801	LYS
1	B	807	SER
1	B	841	SER
1	B	845	LEU
1	B	853	ARG
1	B	872	ARG
1	B	883	LYS
1	B	897	ASP
1	B	967	LEU
1	B	990	GLN
1	B	1011	VAL
1	B	1015	SER
1	B	1036	SER
1	B	1040	ARG
1	B	1096	VAL
1	B	1159	SER
1	B	1176	ILE

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Mol	Chain	Res	Type
1	B	1180	VAL
1	B	1190	LEU
1	B	1191	SER
1	B	1193	SER
1	B	1223	ASN
1	B	1259	ARG
1	B	1261	ILE
1	B	1313	ILE
1	B	1343	ARG
1	B	1344	THR
1	B	1350	ASP
1	B	1359	SER
1	B	1364	LEU
1	B	1390	ILE
1	B	1409	GLU
1	B	1417	ARG
1	B	1419	ARG
1	B	1477	SER
1	B	1489	VAL
1	B	1499	LYS
1	B	1506	THR
1	B	1508	VAL
1	B	1513	GLU
1	B	1533	THR
1	B	1534	ASP
1	B	1539	SER
1	B	1542	LEU
1	B	1546	GLU
1	B	1550	LEU
1	B	1565	VAL
1	B	1568	LYS
1	B	1569	ILE
1	B	1571	VAL
1	B	1580	ARG
1	B	1583	VAL
1	B	1585	VAL
1	B	1616	ILE
1	B	1651	LYS
1	B	1680	THR
1	B	1681	VAL
1	B	1705	LEU
1	B	1706	ARG

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Mol	Chain	Res	Type
1	B	1731	ARG
1	B	1735	ILE
1	B	1741	ARG
1	B	1742	LEU
1	B	1764	LYS
1	B	1770	VAL
1	B	1777	LEU
1	B	1781	GLN
1	B	1786	ASN
1	B	1792	THR
1	B	1794	VAL
1	B	1802	LYS
1	B	1808	SER
1	B	1816	MET
1	B	1843	VAL
1	B	1889	LEU
1	B	1909	ASN
1	B	1915	THR
1	B	1920	PRO
1	B	1924	TRP
1	B	1960	GLN
1	B	1961	ARG
1	B	1980	ASP
1	B	1992	THR
1	B	1999	SER
1	B	2035	PHE
1	B	2069	GLN
1	B	2072	SER
1	B	2101	SER
1	B	2106	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (83) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	126	ASN
1	A	194	GLN
1	A	212	HIS
1	A	228	GLN
1	A	280	ASN
1	A	343	HIS
1	A	370	HIS
1	A	445	GLN

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Mol	Chain	Res	Type
1	A	453	HIS
1	A	497	ASN
1	A	515	ASN
1	A	672	HIS
1	A	698	ASN
1	A	743	GLN
1	A	828	GLN
1	A	846	HIS
1	A	861	GLN
1	A	880	GLN
1	A	916	ASN
1	A	921	HIS
1	A	958	ASN
1	A	979	ASN
1	A	988	HIS
1	A	990	GLN
1	A	1070	ASN
1	A	1121	HIS
1	A	1182	HIS
1	A	1282	ASN
1	A	1321	HIS
1	A	1384	HIS
1	A	1605	ASN
1	A	1624	ASN
1	A	1644	ASN
1	A	1683	ASN
1	A	1748	GLN
1	A	1763	ASN
1	A	1937	ASN
1	A	1941	ASN
1	A	2060	ASN
1	A	2097	HIS
1	A	2170	GLN
1	B	66	ASN
1	B	194	GLN
1	B	228	GLN
1	B	280	ASN
1	B	298	HIS
1	B	343	HIS
1	B	381	ASN
1	B	427	HIS
1	B	453	HIS

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Mol	Chain	Res	Type
1	B	499	HIS
1	B	508	HIS
1	B	517	GLN
1	B	522	HIS
1	B	721	HIS
1	B	743	GLN
1	B	823	ASN
1	B	835	ASN
1	B	880	GLN
1	B	944	ASN
1	B	979	ASN
1	B	988	HIS
1	B	990	GLN
1	B	1031	GLN
1	B	1182	HIS
1	B	1319	ASN
1	B	1371	ASN
1	B	1384	HIS
1	B	1479	HIS
1	B	1522	GLN
1	B	1560	ASN
1	B	1605	ASN
1	B	1683	ASN
1	B	1748	GLN
1	B	1774	ASN
1	B	1781	GLN
1	B	1786	ASN
1	B	1815	ASN
1	B	1909	ASN
1	B	1925	HIS
1	B	1960	GLN
1	B	2057	GLN
1	B	2070	GLN

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

4 ligands are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# $ Z > 2$	Counts	RMSZ	# $ Z > 2$
3	COA	A	2303	-	47,50,50	1.36	5 (10%)	69,75,75	1.85	14 (20%)
3	COA	B	2301	-	47,50,50	1.38	8 (17%)	69,75,75	1.83	16 (23%)
2	BTI	A	2302	-	15,16,16	0.82	0	20,21,21	2.21	7 (35%)
2	BTI	A	2301	1	15,16,16	0.91	1 (6%)	20,21,21	2.13	6 (30%)

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
3	COA	A	2303	-	-	8/48/64/64	0/3/3/3
3	COA	B	2301	-	-	13/48/64/64	0/3/3/3
2	BTI	A	2302	-	-	2/6/27/27	0/2/2/2
2	BTI	A	2301	1	-	4/6/27/27	0/2/2/2

All (14) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	A	2303	COA	C5A-C4A	4.97	1.47	1.39
3	B	2301	COA	C5A-C4A	4.82	1.47	1.39
3	A	2303	COA	P2A-O3A	3.75	1.63	1.59
3	A	2303	COA	C5A-C6A	3.03	1.49	1.41
3	A	2303	COA	P1A-O3A	3.00	1.62	1.59
3	B	2301	COA	P2A-O3A	2.78	1.62	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	B	2301	COA	P1A-O3A	2.70	1.62	1.59
3	A	2303	COA	C8A-N7A	2.50	1.36	1.31
3	B	2301	COA	C4A-N3A	2.47	1.39	1.34
3	B	2301	COA	C8A-N7A	2.40	1.36	1.31
2	A	2301	BTI	C3-N2	-2.25	1.31	1.35
3	B	2301	COA	C5A-N7A	-2.25	1.35	1.39
3	B	2301	COA	C5A-C6A	2.18	1.47	1.41
3	B	2301	COA	OAP-CAP	2.01	1.45	1.42

All (43) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A	2303	COA	C5A-C4A-N3A	-6.21	118.16	126.72
2	A	2302	BTI	C2-C4-N2	5.83	119.52	113.34
3	B	2301	COA	N3A-C2A-N1A	-5.44	120.35	128.58
3	A	2303	COA	N3A-C4A-N9A	5.32	136.22	127.17
3	B	2301	COA	N3A-C4A-N9A	5.05	135.75	127.17
2	A	2301	BTI	C2-C4-N2	-4.82	108.24	113.34
3	B	2301	COA	C5A-C4A-N3A	-4.76	120.17	126.72
3	A	2303	COA	C2P-C3P-N4P	4.40	122.29	112.31
3	A	2303	COA	C2A-N3A-C4A	4.07	121.76	111.83
2	A	2302	BTI	C6-S1-C2	4.00	98.31	89.98
3	B	2301	COA	C2A-N3A-C4A	3.99	121.58	111.83
3	B	2301	COA	C4A-N9A-C8A	3.82	109.75	105.74
2	A	2301	BTI	C2-C4-C5	3.74	113.47	108.89
3	A	2303	COA	N3A-C2A-N1A	-3.60	123.14	128.58
3	A	2303	COA	C4A-N9A-C8A	3.44	109.34	105.74
3	A	2303	COA	C4A-C5A-N7A	-3.40	106.70	110.58
3	B	2301	COA	C2A-N1A-C6A	3.20	123.99	118.73
3	B	2301	COA	N6A-C6A-N1A	3.14	125.38	118.38
2	A	2302	BTI	C6-C5-N3	3.06	117.12	113.18
3	B	2301	COA	C2B-C1B-N9A	3.02	120.81	113.30
2	A	2301	BTI	O3-C3-N3	2.97	130.16	125.89
2	A	2301	BTI	O3-C3-N2	-2.90	121.72	125.89
3	A	2303	COA	C5A-N7A-C8A	2.81	107.87	103.45
2	A	2302	BTI	C6-C5-C4	2.80	113.49	109.06
2	A	2301	BTI	C7-C2-C4	-2.79	106.62	114.51
3	B	2301	COA	C5A-C6A-N6A	-2.77	116.43	123.29
3	A	2303	COA	O5P-C5P-C6P	-2.55	117.40	122.02
3	B	2301	COA	C2B-C3B-C4B	2.53	107.67	103.24
3	A	2303	COA	C6A-C5A-N7A	2.51	136.94	132.09
2	A	2302	BTI	C5-N3-C3	2.45	115.99	112.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A	2303	COA	N9A-C8A-N7A	-2.44	110.47	113.94
3	B	2301	COA	N9A-C8A-N7A	-2.41	110.51	113.94
3	A	2303	COA	O5A-P2A-O4A	2.33	123.29	112.44
3	A	2303	COA	O5P-C5P-N4P	2.31	127.56	123.03
3	B	2301	COA	C2P-C3P-N4P	2.30	117.53	112.31
3	A	2303	COA	O3B-P3B-O7A	-2.30	101.13	109.33
3	B	2301	COA	C5A-N7A-C8A	2.26	107.00	103.45
2	A	2302	BTI	N2-C3-N3	-2.21	106.29	108.85
2	A	2302	BTI	C4-C2-S1	2.20	107.53	105.03
3	B	2301	COA	C3B-C2B-C1B	2.20	104.72	99.89
3	B	2301	COA	C4B-O4B-C1B	2.05	113.99	109.47
3	B	2301	COA	CEP-CBP-CAP	2.04	112.24	108.77
2	A	2301	BTI	C8-C9-C10	-2.03	104.10	113.86

There are no chirality outliers.

All (27) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	A	2301	BTI	C11-C10-C9-C8
2	A	2301	BTI	S1-C2-C7-C8
2	A	2301	BTI	C4-C2-C7-C8
2	A	2302	BTI	C11-C10-C9-C8
3	A	2303	COA	CCP-O6A-P2A-O3A
3	A	2303	COA	CDP-CBP-CCP-O6A
3	A	2303	COA	CEP-CBP-CCP-O6A
3	A	2303	COA	CAP-CBP-CCP-O6A
3	A	2303	COA	S1P-C2P-C3P-N4P
3	B	2301	COA	C5B-O5B-P1A-O1A
3	B	2301	COA	CCP-O6A-P2A-O4A
3	B	2301	COA	CCP-O6A-P2A-O5A
3	B	2301	COA	CDP-CBP-CCP-O6A
3	B	2301	COA	CEP-CBP-CCP-O6A
3	B	2301	COA	CAP-CBP-CCP-O6A
3	B	2301	COA	C5P-C6P-C7P-N8P
3	B	2301	COA	S1P-C2P-C3P-N4P
3	B	2301	COA	C3B-C4B-C5B-O5B
2	A	2301	BTI	C7-C8-C9-C10
3	B	2301	COA	O4B-C4B-C5B-O5B
3	A	2303	COA	C5P-C6P-C7P-N8P
2	A	2302	BTI	C2-C7-C8-C9
3	A	2303	COA	CCP-O6A-P2A-O5A
3	B	2301	COA	CCP-O6A-P2A-O3A

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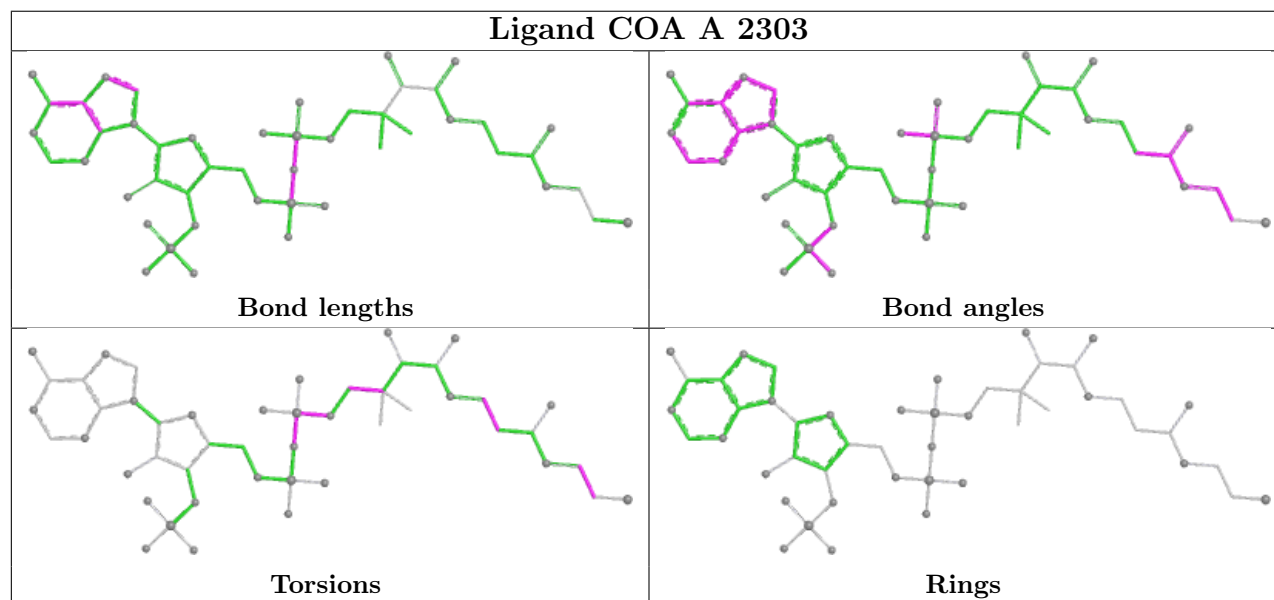
Mol	Chain	Res	Type	Atoms
3	B	2301	COA	C2B-C3B-O3B-P3B
3	B	2301	COA	O9P-C9P-CAP-OAP
3	A	2303	COA	P1A-O3A-P2A-O5A

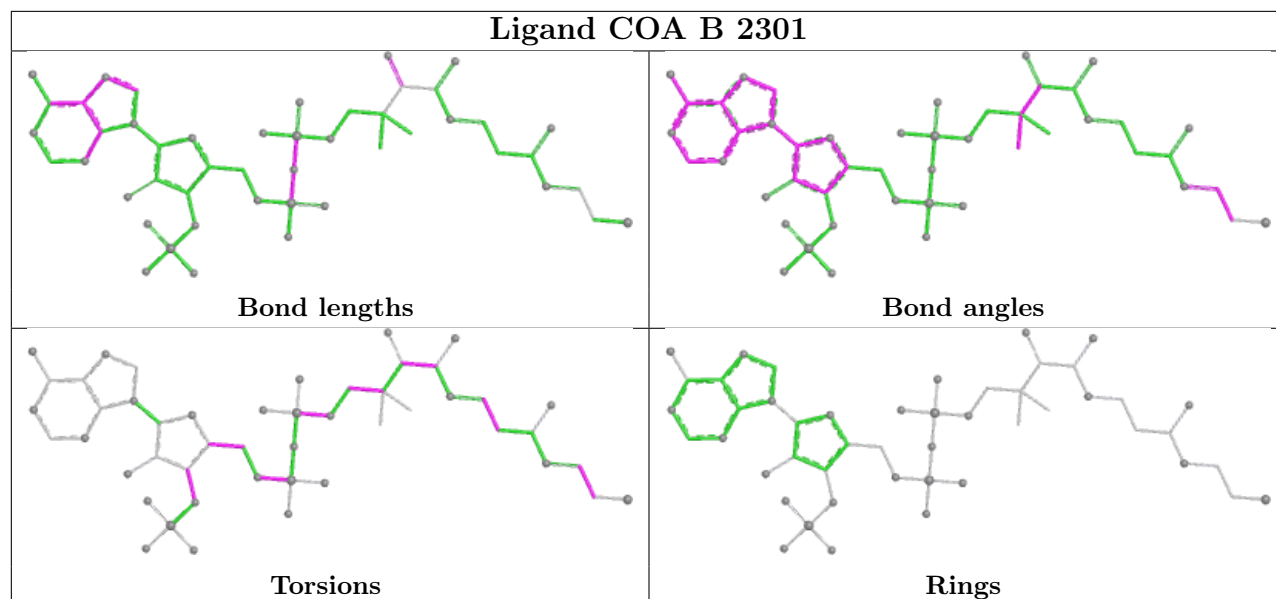
There are no ring outliers.

4 monomers are involved in 13 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	A	2303	COA	4	0
3	B	2301	COA	3	0
2	A	2302	BTI	2	0
2	A	2301	BTI	4	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.





5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	A	2050/2218 (92%)	-0.03	23 (1%) 78 61	46, 89, 147, 228	0
1	B	2072/2218 (93%)	0.02	50 (2%) 59 40	43, 88, 170, 239	0
All	All	4122/4436 (92%)	-0.00	73 (1%) 67 48	43, 89, 159, 239	0

All (73) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	A	225	ASP	7.9
1	B	1136	PRO	5.5
1	B	218	GLY	3.8
1	B	1196	VAL	3.6
1	B	226	ILE	3.5
1	B	262	ILE	3.5
1	A	793	ILE	3.4
1	A	900	LEU	3.2
1	B	739	PRO	3.1
1	A	888	ALA	3.0
1	B	945	VAL	3.0
1	A	2183	ASP	2.9
1	B	1255	ASN	2.9
1	B	2043	THR	2.8
1	B	217	THR	2.8
1	B	740	LEU	2.8
1	B	1638	LEU	2.8
1	B	1058	GLY	2.8
1	A	856	ALA	2.8
1	A	219	LEU	2.7
1	B	731	ILE	2.7
1	A	1127	PRO	2.6
1	B	769	LEU	2.6
1	B	712	VAL	2.6

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Mol	Chain	Res	Type	RSRZ
1	A	1478	MET	2.6
1	A	282	ILE	2.5
1	B	449	ILE	2.5
1	B	706	PRO	2.5
1	A	1681	VAL	2.5
1	A	1218	LEU	2.5
1	A	1492	TRP	2.4
1	B	1127	PRO	2.4
1	B	289	ILE	2.4
1	B	477	GLU	2.4
1	B	2182	LEU	2.4
1	B	1067	PRO	2.4
1	A	1680	THR	2.3
1	B	751	LEU	2.3
1	B	757	THR	2.3
1	A	1647	ALA	2.3
1	B	561	TRP	2.3
1	B	1254	ILE	2.3
1	B	220	VAL	2.3
1	B	2086	TYR	2.3
1	A	870	LEU	2.2
1	B	2075	LEU	2.2
1	B	189	SER	2.2
1	A	440	ASP	2.2
1	B	274	LEU	2.2
1	B	1218	LEU	2.2
1	A	1135	LEU	2.2
1	B	235	PRO	2.2
1	B	761	GLY	2.2
1	B	766	ILE	2.1
1	B	689	SER	2.1
1	B	514	GLU	2.1
1	A	220	VAL	2.1
1	B	282	ILE	2.1
1	B	179	ALA	2.1
1	B	727	PRO	2.1
1	A	876	PHE	2.1
1	B	355	LEU	2.1
1	B	257	GLY	2.1
1	A	278	ALA	2.1
1	A	849	ALA	2.1
1	B	700	PRO	2.1

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Mol	Chain	Res	Type	RSRZ
1	B	943	PRO	2.1
1	B	750	LEU	2.0
1	B	1838	ASP	2.0
1	A	1329	THR	2.0
1	B	327	LYS	2.0
1	B	347	LYS	2.0
1	B	1766	LEU	2.0

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

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

6.3 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

6.4 Ligands [i](#)

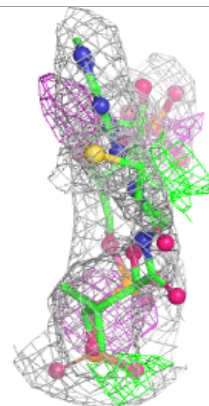
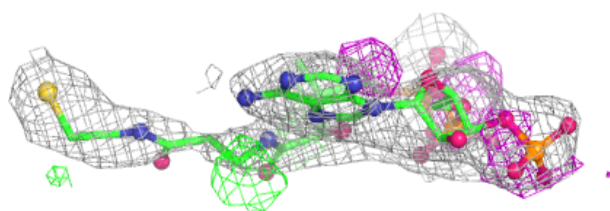
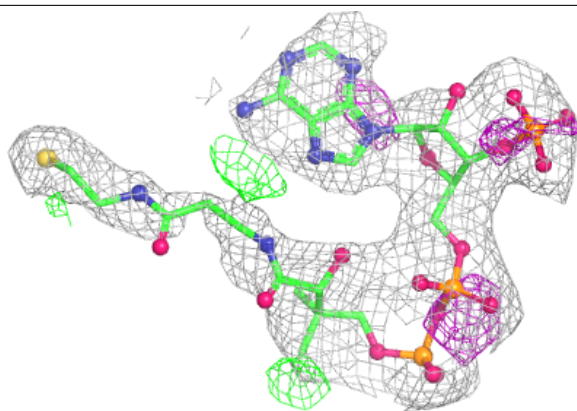
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
3	COA	B	2301	48/48	0.84	0.16	71,128,148,158	0
2	BTI	A	2302	15/15	0.88	0.19	70,80,93,100	0
2	BTI	A	2301	15/15	0.89	0.17	66,74,78,82	0
3	COA	A	2303	48/48	0.93	0.11	74,104,123,129	0

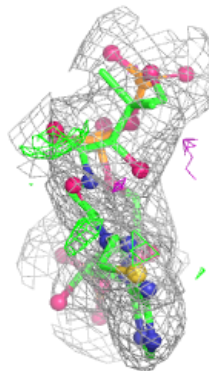
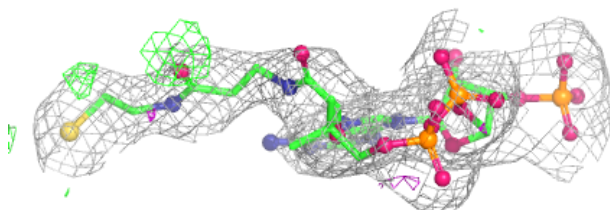
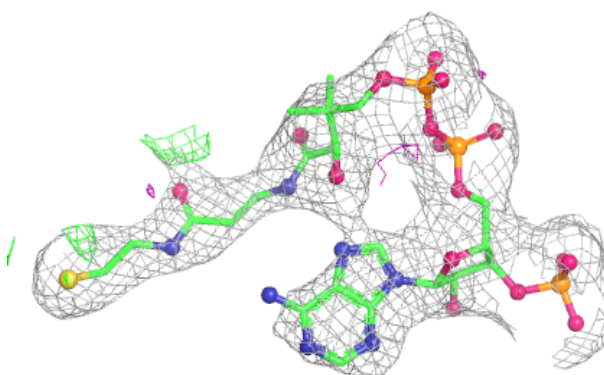
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.

Electron density around COA B 2301:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

**Electron density around COA A 2303:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



6.5 Other polymers [i](#)

There are no such residues in this entry.