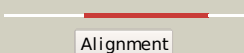
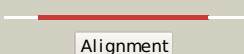
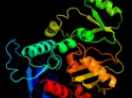
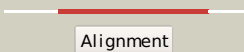
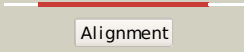
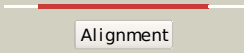
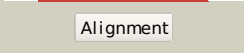


#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	c1gshA_	 Alignment		100.0	99	PDB header: glutathione biosynthesis ligase Chain: A: PDB Molecule: glutathione biosynthetic ligase; PDBTitle: structure of escherichia coli glutathione synthetase at ph 7.5
2	d1gsaa2	 Alignment		100.0	100	Fold: ATP-grasp Superfamily: Glutathione synthetase ATP-binding domain-like Family: ATP-binding domain of peptide synthetases
3	c1uc8B_	 Alignment		100.0	22	PDB header: biosynthetic protein Chain: B: PDB Molecule: lysine biosynthesis enzyme; PDBTitle: crystal structure of a lysine biosynthesis enzyme, lysx,2 from thermus thermophilus hb8
4	c1i7nA_	 Alignment		100.0	15	PDB header: neuropeptide Chain: A: PDB Molecule: synapsin ii; PDBTitle: crystal structure analysis of the c domain of synapsin ii2 from rat brain
5	c2p0aA_	 Alignment		100.0	14	PDB header: neuropeptide Chain: A: PDB Molecule: synapsin-3; PDBTitle: the crystal structure of human synapsin iii (syn3) in complex with2 amppnp
6	c1pk8D_	 Alignment		100.0	14	PDB header: membrane protein Chain: D: PDB Molecule: rat synapsin i; PDBTitle: crystal structure of rat synapsin i c domain complexed to2 ca.atp
7	c1m6vE_	 Alignment		100.0	13	PDB header: ligase Chain: E: PDB Molecule: carbamoyl phosphate synthetase large chain; PDBTitle: crystal structure of the g359f (small subunit) point mutant of2 carbamoyl phosphate synthetase
8	c3bg5C_	 Alignment		100.0	15	PDB header: ligase Chain: C: PDB Molecule: pyruvate carboxylase; PDBTitle: crystal structure of staphylococcus aureus pyruvate2 carboxylase
9	c1kjjA_	 Alignment		99.9	11	PDB header: transferase Chain: A: PDB Molecule: phosphoribosylglycinamide formyltransferase 2; PDBTitle: crystal structure of glyciniamide ribonucleotide2 transformylase in complex with mg-atp-gamma-s
10	c3ln6A_	 Alignment		99.9	19	PDB header: ligase Chain: A: PDB Molecule: glutathione biosynthesis bifunctional protein gshab; PDBTitle: crystal structure of a bifunctional glutathione synthetase from2 streptococcus agalactiae
11	c2qb5B_	 Alignment		99.9	17	PDB header: transferase Chain: B: PDB Molecule: inositol-tetrakisphosphate 1-kinase; PDBTitle: crystal structure of human inositol 1,3,4-trisphosphate 5/6-kinase2 (itpk1) in complex with adp and mn2+

12	c3i12A_	Alignment		99.9	13	PDB header: ligase Chain: A: PDB Molecule: d-alanine-d-alanine ligase a; PDBTitle: the crystal structure of the d-alanyl-alanine synthetase a from2 salmonella enterica subsp. enterica serovar typhimurium str. lt2
13	dlgsaa1	Alignment		99.9	100	Fold: PreATP-grasp domain Superfamily: PreATP-grasp domain Family: Prokaryotic glutathione synthetase, N-terminal domain
14	c1w96B_	Alignment		99.9	12	PDB header: ligase Chain: B: PDB Molecule: acetyl-coenzyme a carboxylase; PDBTitle: crystal structure of the biotin carboxylase domain of acetyl-2 coenzyme a carboxylase from saccharomyces cerevisiae in3 complex with soraphen a
15	c3ln7A_	Alignment		99.9	21	PDB header: ligase Chain: A: PDB Molecule: glutathione biosynthesis bifunctional protein gshab; PDBTitle: crystal structure of a bifunctional glutathione synthetase from2 pasteurella multocida
16	c3g8cB_	Alignment		99.9	13	PDB header: ligase Chain: B: PDB Molecule: biotin carboxylase; PDBTitle: crystal stucture of biotin carboxylase in complex with2 biotin, bicarbonate, adp and mg ion
17	c2xd4A_	Alignment		99.9	15	PDB header: ligase Chain: A: PDB Molecule: phosphoribosylamine--glycine ligase; PDBTitle: nucleotide-bound structures of bacillus subtilis glycylamide2 ribonucleotide synthetase
18	c2dzdB_	Alignment		99.9	14	PDB header: ligase Chain: B: PDB Molecule: pyruvate carboxylase; PDBTitle: crystal structure of the biotin carboxylase domain of2 pyruvate carboxylase
19	c2yyaB_	Alignment		99.9	18	PDB header: ligase Chain: B: PDB Molecule: phosphoribosylamine--glycine ligase; PDBTitle: crystal structure of gar synthetase from aquifex aeolicus
20	c2hjwA_	Alignment		99.9	12	PDB header: ligase Chain: A: PDB Molecule: acetyl-coa carboxylase 2; PDBTitle: crystal structure of the bc domain of acc2
21	c3ouza_	Alignment	not modelled	99.9	11	PDB header: ligase Chain: A: PDB Molecule: biotin carboxylase; PDBTitle: crystal structure of biotin carboxylase-adp complex from campylobacter2 jejuni
22	c1vkzA_	Alignment	not modelled	99.9	15	PDB header: ligase Chain: A: PDB Molecule: phosphoribosylamine--glycine ligase; PDBTitle: crystal structure of phosphoribosylamine--glycine ligase (tm1250) from2 thermotoga maritima at 2.30 a resolution
23	c1ulza_	Alignment	not modelled	99.9	15	PDB header: ligase Chain: A: PDB Molecule: pyruvate carboxylase n-terminal domain; PDBTitle: crystal structure of the biotin carboxylase subunit of pyruvate2 carboxylase
24	c3lp8A_	Alignment	not modelled	99.9	16	PDB header: ligase Chain: A: PDB Molecule: phosphoribosylamine-glycine ligase; PDBTitle: crystal structure of phosphoribosylamine-glycine ligase from2 ehrlichia chaffeensis
25	c2dlna_	Alignment	not modelled	99.9	14	PDB header: ligase(peptidoglycan synthesis) Chain: A: PDB Molecule: d-alanine--d-alanine ligase; PDBTitle: vancomycin resistance: structure of d-alanine:d-alanine2 ligase at 2.3 angstroms resolution
26	c3se7A_	Alignment	not modelled	99.9	15	PDB header: ligase Chain: A: PDB Molecule: vana; PDBTitle: ancient vana
27	c2vpqA_	Alignment	not modelled	99.9	10	PDB header: ligase Chain: A: PDB Molecule: acetyl-coa carboxylase; PDBTitle: crystal structure of biotin carboxylase from s. aureus2 complexed with amppnp
28	c3tqtB_	Alignment	not modelled	99.9	13	PDB header: ligase Chain: B: PDB Molecule: d-alanine--d-alanine ligase; PDBTitle: structure of the d-alanine-d-alanine ligase from coxiella burnetii
29	c3e5nA_	Alignment	not modelled	99.9	14	PDB header: ligase Chain: A: PDB Molecule: d-alanine-d-alanine ligase a;

53	c2qk4A	Alignment	not modelled	99.9	11	Chain: A: PDB Molecule: trifunctional purine biosynthetic protein adenosine-3; PDBTitle: human glycylamide ribonucleotide synthetase
54	c1z2pX	Alignment	not modelled	99.9	12	PDB header: transferase Chain: X: PDB Molecule: inositol 1,3,4-trisphosphate 5/6-kinase; PDBTitle: inositol 1,3,4-trisphosphate 5/6-kinase in complex with mg2+/amp-2 pcp/ins(1,3,4)p3
55	c3k5iB	Alignment	not modelled	99.8	16	PDB header: lyase Chain: B: PDB Molecule: phosphoribosyl-aminimidazole carboxylase; PDBTitle: crystal structure of n5-carboxyaminoimidazole synthase from <i>Aspergillus clavatus</i> in complex with adp and 5-3 aminimidazole ribonucleotide
56	c3n6rK	Alignment	not modelled	99.8	10	PDB header: ligase Chain: K: PDB Molecule: propionyl-coa carboxylase, alpha subunit; PDBTitle: crystal structure of the holoenzyme of propionyl-coa carboxylase (pcc)
57	d1vkza3	Alignment	not modelled	99.8	14	Fold: ATP-grasp Superfamily: Glutathione synthetase ATP-binding domain-like Family: BC ATP-binding domain-like
58	c3df7A	Alignment	not modelled	99.8	20	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: putative atp-grasp superfamily protein; PDBTitle: crystal structure of a putative atp-grasp superfamily2 protein from <i>Archaeoglobus fulgidus</i>
59	d1a9xa5	Alignment	not modelled	99.8	12	Fold: ATP-grasp Superfamily: Glutathione synthetase ATP-binding domain-like Family: BC ATP-binding domain-like
60	d1w96a3	Alignment	not modelled	99.8	12	Fold: ATP-grasp Superfamily: Glutathione synthetase ATP-binding domain-like Family: BC ATP-binding domain-like
61	c2pn1A	Alignment	not modelled	99.8	16	PDB header: ligase Chain: A: PDB Molecule: carbamoylphosphate synthase large subunit; PDBTitle: crystal structure of carbamoylphosphate synthase large subunit (split2 gene in mj) (zp_00538348.1) from <i>Exiguobacterium</i> sp. 255-15 at 2.00 Å resolution
62	d3etja3	Alignment	not modelled	99.7	10	Fold: ATP-grasp Superfamily: Glutathione synthetase ATP-binding domain-like Family: BC ATP-binding domain-like
63	d1iowa2	Alignment	not modelled	99.7	13	Fold: ATP-grasp Superfamily: Glutathione synthetase ATP-binding domain-like Family: ATP-binding domain of peptide synthetases
64	d1kjqaz	Alignment	not modelled	99.7	11	Fold: ATP-grasp Superfamily: Glutathione synthetase ATP-binding domain-like Family: BC ATP-binding domain-like
65	d2j9ga3	Alignment	not modelled	99.7	14	Fold: ATP-grasp Superfamily: Glutathione synthetase ATP-binding domain-like Family: BC ATP-binding domain-like
66	d1ehia2	Alignment	not modelled	99.7	14	Fold: ATP-grasp Superfamily: Glutathione synthetase ATP-binding domain-like Family: ATP-binding domain of peptide synthetases
67	c2r85B	Alignment	not modelled	99.7	16	PDB header: unknown function Chain: B: PDB Molecule: purp protein pf1517; PDBTitle: crystal structure of purp from <i>Pyrococcus furiosus</i> complexed with amp
68	d1ulza3	Alignment	not modelled	99.7	14	Fold: ATP-grasp Superfamily: Glutathione synthetase ATP-binding domain-like Family: BC ATP-binding domain-like
69	d1e4ea2	Alignment	not modelled	99.7	17	Fold: ATP-grasp Superfamily: Glutathione synthetase ATP-binding domain-like Family: ATP-binding domain of peptide synthetases
70	d1a9xa6	Alignment	not modelled	99.6	9	Fold: ATP-grasp Superfamily: Glutathione synthetase ATP-binding domain-like Family: BC ATP-binding domain-like
71	c2z04A	Alignment	not modelled	99.6	16	PDB header: lyase Chain: A: PDB Molecule: phosphoribosylaminimidazole carboxylase atpase PDBTitle: crystal structure of phosphoribosylaminimidazole2 carboxylase atpase subunit from <i>Aquifex aeolicus</i>
72	d1gsoa3	Alignment	not modelled	99.5	13	Fold: ATP-grasp Superfamily: Glutathione synthetase ATP-binding domain-like Family: BC ATP-binding domain-like
73	d2r7ka2	Alignment	not modelled	99.4	11	Fold: ATP-grasp Superfamily: Glutathione synthetase ATP-binding domain-like Family: PurP ATP-binding domain-like
74	d2r85a2	Alignment	not modelled	99.4	15	Fold: ATP-grasp Superfamily: Glutathione synthetase ATP-binding domain-like Family: PurP ATP-binding domain-like
75	c2qf7A	Alignment	not modelled	99.4	17	PDB header: ligase Chain: A: PDB Molecule: pyruvate carboxylase protein; PDBTitle: crystal structure of a complete multifunctional pyruvate carboxylase2 from <i>Rhizobium etli</i>
76	c2cqyA	Alignment	not modelled	98.7	10	PDB header: ligase Chain: A: PDB Molecule: propionyl-coa carboxylase alpha chain, PDBTitle: solution structure of b domain from human propionyl-coa2 carboxylase alpha subunit
77	c3n6xA	Alignment	not modelled	98.3	19	PDB header: ligase Chain: A: PDB Molecule: putative glutathionylspermidine synthase; PDBTitle: crystal structure of a putative glutathionylspermidine synthase2 (mfla_0391) from <i>Methylobacillus flagellatus</i> kt at 2.35 Å resolution

78	c3tinA_	Alignment	not modelled	98.2	21	PDB header: ligase Chain: A: PDB Molecule: ttl protein; PDBTitle: tubulin tyrosine ligase
79	c1wr2A_	Alignment	not modelled	97.8	12	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: hypothetical protein ph1789; PDBTitle: crystal structure of ph1788 from pyrococcus horikoshii ot3
80	c2ioaA_	Alignment	not modelled	97.8	17	PDB header: ligase, hydrolase Chain: A: PDB Molecule: bifunctional glutathionylspermidine PDBTitle: e. coli bifunctional glutathionylspermidine2 synthetase/amidase incomplex with mg2+ and adp and3 phosphinate inhibitor
81	c2nu9E_	Alignment	not modelled	97.7	14	PDB header: ligase Chain: E: PDB Molecule: succinyl-coa synthetase beta chain; PDBTitle: c123at mutant of e. coli succinyl-coa synthetase2 orthorhombic crystal form
82	d1uc8a1	Alignment	not modelled	97.7	21	Fold: PreATP-grasp domain Superfamily: PreATP-grasp domain Family: Lysine biosynthesis enzyme LysX, N-terminal domain
83	d1eucb2	Alignment	not modelled	97.6	12	Fold: ATP-grasp Superfamily: Glutathione synthetase ATP-binding domain-like Family: Succinyl-CoA synthetase, beta-chain, N-terminal domain
84	c1eucB_	Alignment	not modelled	97.4	13	PDB header: ligase Chain: B: PDB Molecule: succinyl-coa synthetase, beta chain; PDBTitle: crystal structure of dephosphorylated pig heart, gtp-2 specific succinyl-coa synthetase
85	d2nu7b2	Alignment	not modelled	97.3	14	Fold: ATP-grasp Superfamily: Glutathione synthetase ATP-binding domain-like Family: Succinyl-CoA synthetase, beta-chain, N-terminal domain
86	d1a9xa4	Alignment	not modelled	96.0	8	Fold: PreATP-grasp domain Superfamily: PreATP-grasp domain Family: BC N-terminal domain-like
87	c3k1tA_	Alignment	not modelled	95.9	17	PDB header: ligase Chain: A: PDB Molecule: glutamate--cysteine ligase gsha; PDBTitle: crystal structure of putative gamma-glutamylcysteine synthetase2 (yp_546622.1) from methylobacillus flagellatus kt at 1.90 a3 resolution
88	c3mwdA_	Alignment	not modelled	94.8	13	PDB header: transferase Chain: A: PDB Molecule: atp-citrate synthase; PDBTitle: truncated human atp-citrate lyase with citrate bound
89	d1w96a2	Alignment	not modelled	94.7	16	Fold: PreATP-grasp domain Superfamily: PreATP-grasp domain Family: BC N-terminal domain-like
90	d1iowa1	Alignment	not modelled	94.6	12	Fold: PreATP-grasp domain Superfamily: PreATP-grasp domain Family: D-Alanine ligase N-terminal domain
91	d2io8a3	Alignment	not modelled	94.5	20	Fold: ATP-grasp Superfamily: Glutathione synthetase ATP-binding domain-like Family: Glutathionylspermidine synthase ATP-binding domain-like
92	d2j9ga2	Alignment	not modelled	94.3	14	Fold: PreATP-grasp domain Superfamily: PreATP-grasp domain Family: BC N-terminal domain-like
93	c2vpmB_	Alignment	not modelled	94.1	13	PDB header: ligase Chain: B: PDB Molecule: trypanothione synthetase; PDBTitle: trypanothione synthetase
94	d1kjqA2	Alignment	not modelled	93.5	13	Fold: PreATP-grasp domain Superfamily: PreATP-grasp domain Family: BC N-terminal domain-like
95	d1ulza2	Alignment	not modelled	93.5	9	Fold: PreATP-grasp domain Superfamily: PreATP-grasp domain Family: BC N-terminal domain-like
96	c2r7mA_	Alignment	not modelled	90.0	13	PDB header: ligase Chain: A: PDB Molecule: 5-formaminoimidazole-4-carboxamide-1-(beta)-d- PDBTitle: crystal structure of faicar synthetase (purp) from m.2 jannaschii complexed with amp
97	c2qzsA_	Alignment	not modelled	89.2	13	PDB header: transferase Chain: A: PDB Molecule: glycogen synthase; PDBTitle: crystal structure of wild-type e.coli gs in complex with adp2 and glucose(wtgsb)
98	c2p6pB_	Alignment	not modelled	88.6	11	PDB header: transferase Chain: B: PDB Molecule: glycosyl transferase; PDBTitle: x-ray crystal structure of c-c bond-forming dtdp-d-olivose-transferase2 urdgt2
99	c2jmhH_	Alignment	not modelled	88.1	14	PDB header: transferase Chain: H: PDB Molecule: glycosyl transferase, group 1 family protein; PDBTitle: crystal structure of a family gt4 glycosyltransferase from2 bacillus anthracis orf ba1558.
100	d1iira_	Alignment	not modelled	86.6	8	Fold: UDP-Glycosyltransferase/glycogen phosphorylase Superfamily: UDP-Glycosyltransferase/glycogen phosphorylase Family: Gtf glycosyltransferase
101	c3ia7A_	Alignment	not modelled	86.4	15	PDB header: transferase Chain: A: PDB Molecule: calg4; PDBTitle: crystal structure of calg4, the calicheamicin glycosyltransferase
102	d2hy5a1	Alignment	not modelled	86.4	17	Fold: DsrEFH-like Superfamily: DsrEFH-like Family: DsrEF-like
103	d2d1pa1	Alignment	not modelled	85.8	20	Fold: DsrEFH-like Superfamily: DsrEFH-like Family: DsrEF-like

104	d1pn3a_	Alignment	not modelled	85.4	10	Fold: UDP-Glycosyltransferase/glycogen phosphorylase Superfamily: UDP-Glycosyltransferase/glycogen phosphorylase Family: Gtf glycosyltransferase
105	d2bisa1	Alignment	not modelled	85.3	10	Fold: UDP-Glycosyltransferase/glycogen phosphorylase Superfamily: UDP-Glycosyltransferase/glycogen phosphorylase Family: Glycosyl transferases group 1
106	d1rzua_	Alignment	not modelled	85.0	15	Fold: UDP-Glycosyltransferase/glycogen phosphorylase Superfamily: UDP-Glycosyltransferase/glycogen phosphorylase Family: Glycosyl transferases group 1
107	d1rrva_	Alignment	not modelled	85.0	5	Fold: UDP-Glycosyltransferase/glycogen phosphorylase Superfamily: UDP-Glycosyltransferase/glycogen phosphorylase Family: Gtf glycosyltransferase
108	c3dojA_	Alignment	not modelled	84.2	15	PDB header: oxidoreductase Chain: A: PDB Molecule: dehydrogenase-like protein; PDBTitle: structure of glyoxylate reductase 1 from arabidopsis2 (atglyr1)
109	c2gejA_	Alignment	not modelled	81.2	10	PDB header: transferase Chain: A: PDB Molecule: phosphatidylinositol mannosyltransferase (pima); PDBTitle: crystal structure of phosphatidylinositol mannosyltransferase (pima)2 from mycobacterium smegmatis in complex with gdp-man
110	c2iv3B_	Alignment	not modelled	80.7	12	PDB header: transferase Chain: B: PDB Molecule: glycosyltransferase; PDBTitle: crystal structure of avigt4, a glycosyltransferase involved2 in avilamycin a biosynthesis
111	d1js1x1	Alignment	not modelled	80.3	12	Fold: ATC-like Superfamily: Aspartate/ornithine carbamoyltransferase Family: Aspartate/ornithine carbamoyltransferase
112	c2hgsA_	Alignment	not modelled	79.5	12	PDB header: amine/carboxylate ligase Chain: A: PDB Molecule: protein (glutathione synthetase); PDBTitle: human glutathione synthetase
113	d1vlva1	Alignment	not modelled	79.0	20	Fold: ATC-like Superfamily: Aspartate/ornithine carbamoyltransferase Family: Aspartate/ornithine carbamoyltransferase
114	d1t0ia_	Alignment	not modelled	78.4	14	Fold: Flavodoxin-like Superfamily: Flavoproteins Family: NADPH-dependent FMN reductase
115	c2pbzC_	Alignment	not modelled	78.3	16	PDB header: ligase Chain: C: PDB Molecule: hypothetical protein; PDBTitle: crystal structure of an imp biosynthesis protein purp from2 thermococcus kodakaraensis
116	c2r60A_	Alignment	not modelled	76.5	10	PDB header: transferase Chain: A: PDB Molecule: glycosyl transferase, group 1; PDBTitle: structure of apo sucrose phosphate synthase (sps) of2 halothermothrix orenii
117	d1otha1	Alignment	not modelled	75.5	19	Fold: ATC-like Superfamily: Aspartate/ornithine carbamoyltransferase Family: Aspartate/ornithine carbamoyltransferase
118	d1pvva1	Alignment	not modelled	75.4	17	Fold: ATC-like Superfamily: Aspartate/ornithine carbamoyltransferase Family: Aspartate/ornithine carbamoyltransferase
119	c2iyaB_	Alignment	not modelled	75.0	16	PDB header: transferase Chain: B: PDB Molecule: oleandomycin glycosyltransferase; PDBTitle: the crystal structure of macrolide glycosyltransferases: a2 blueprint for antibiotic engineering
120	c3kalB_	Alignment	not modelled	74.9	16	PDB header: ligase Chain: B: PDB Molecule: homoglutathione synthetase; PDBTitle: structure of homoglutathione synthetase from glycine max in2 closed conformation with homoglutathione, adp, a sulfate3 ion, and three magnesium ions bound