







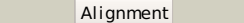

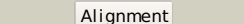

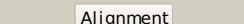

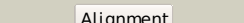

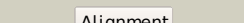

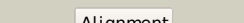



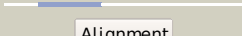
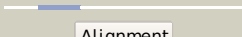
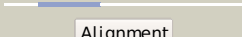
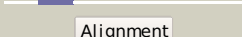

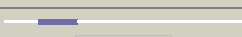

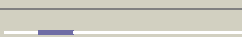

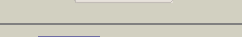



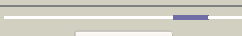

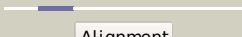


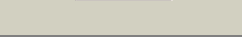
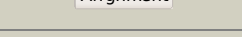


#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	d1k4ma_	 Alignment		100.0	100	Fold: Adenine nucleotide alpha hydrolase-like Superfamily: Nucleotidyl transferase Family: Adenylyltransferase
2	c1yunB_	 Alignment		100.0	37	PDB header: transferase Chain: B: PDB Molecule: probable nicotinate-nucleotide PDBTitle: crystal structure of nicotinic acid mononucleotide2 adenylyltransferase from pseudomonas aeruginosa
3	d1kama_	 Alignment		100.0	40	Fold: Adenine nucleotide alpha hydrolase-like Superfamily: Nucleotidyl transferase Family: Adenylyltransferase
4	d1nuua_	 Alignment		100.0	25	Fold: Adenine nucleotide alpha hydrolase-like Superfamily: Nucleotidyl transferase Family: Adenylyltransferase
5	d1kr2a_	 Alignment		100.0	24	Fold: Adenine nucleotide alpha hydrolase-like Superfamily: Nucleotidyl transferase Family: Adenylyltransferase
6	c3e27B_	 Alignment		100.0	39	PDB header: transferase Chain: B: PDB Molecule: nicotinate (nicotinamide) nucleotide PDBTitle: nicotinic acid mononucleotide (namn) adenylyltransferase2 from bacillus anthracis: product complex
7	c2h29A_	 Alignment		100.0	27	PDB header: transferase Chain: A: PDB Molecule: probable nicotinate-nucleotide PDBTitle: crystal structure of nicotinic acid mononucleotide2 adenylyltransferase from staphylococcus aureus: product3 bound form 1
8	c3f3mA_	 Alignment		100.0	19	PDB header: transferase Chain: A: PDB Molecule: phosphopantetheine adenylyltransferase; PDBTitle: six crystal structures of two phosphopantetheine2 adenylyltransferases reveal an alternative ligand binding3 mode and an associated structural change
9	d1tfua_	 Alignment		100.0	19	Fold: Adenine nucleotide alpha hydrolase-like Superfamily: Nucleotidyl transferase Family: Adenylyltransferase
10	c3nd5D_	 Alignment		100.0	28	PDB header: transferase Chain: D: PDB Molecule: phosphopantetheine adenylyltransferase; PDBTitle: crystal structure of phosphopantetheine adenylyltransferase (ppat)2 from enterococcus faecalis
11	c3ikzA_	 Alignment		100.0	20	PDB header: transferase Chain: A: PDB Molecule: phosphopantetheine adenylyltransferase; PDBTitle: crystal structure of phosphopantetheine adenylyltransferase from2 burkholderia pseudomallei

12	d1od6a_	Alignment		100.0	22	Fold: Adenine nucleotide alpha hydrolase-like Superfamily: Nucleotidylyl transferase Family: Adenylyltransferase
13	d1o6ba_	Alignment		100.0	21	Fold: Adenine nucleotide alpha hydrolase-like Superfamily: Nucleotidylyl transferase Family: Adenylyltransferase
14	d1vlha_	Alignment		100.0	19	Fold: Adenine nucleotide alpha hydrolase-like Superfamily: Nucleotidylyl transferase Family: Adenylyltransferase
15	d1qjca_	Alignment		100.0	21	Fold: Adenine nucleotide alpha hydrolase-like Superfamily: Nucleotidylyl transferase Family: Adenylyltransferase
16	c3h05A_	Alignment		100.0	29	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: uncharacterized protein vpa0413; PDBTitle: the crystal structure of a putative nicotinate-nucleotide2 adenylyltransferase from vibrio parahaemolyticus
17	d1f9aa_	Alignment		100.0	22	Fold: Adenine nucleotide alpha hydrolase-like Superfamily: Nucleotidylyl transferase Family: Adenylyltransferase
18	c3nv7A_	Alignment		100.0	21	PDB header: transferase Chain: A: PDB Molecule: phosphopantetheine adenylyltransferase; PDBTitle: crystal structure of h.pylori phosphopantetheine adenylyltransferase2 mutant i4v/n76y
19	d1ej2a_	Alignment		100.0	20	Fold: Adenine nucleotide alpha hydrolase-like Superfamily: Nucleotidylyl transferase Family: Adenylyltransferase
20	c2qjoB_	Alignment		100.0	20	PDB header: transferase, hydrolase Chain: B: PDB Molecule: bifunctional nmh adenylyltransferase/nudix hydrolase; PDBTitle: crystal structure of a bifunctional nmh adenylyltransferase/adp ribose2 pyrophosphatase (nadm) complexed with adprp and nad from3 synechocystis sp.
21	d1lw7a1	Alignment	not modelled	99.8	17	Fold: Adenine nucleotide alpha hydrolase-like Superfamily: Nucleotidylyl transferase Family: Adenylyltransferase
22	c2r5wA_	Alignment	not modelled	99.8	17	PDB header: hydrolase, transferase Chain: A: PDB Molecule: nicotinamide-nucleotide adenylyltransferase; PDBTitle: crystal structure of a bifunctional nmh2 adenylyltransferase/adp ribose pyrophosphatase from3 francisella tularensis
23	c1lw7A_	Alignment	not modelled	99.8	18	PDB header: transferase Chain: A: PDB Molecule: transcriptional regulator nadr; PDBTitle: nadr protein from haemophilus influenzae
24	c3gmiA_	Alignment	not modelled	99.8	14	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: upf0348 protein mj0951; PDBTitle: crystal structure of a protein of unknown function from2 methanocaldococcus jannaschii
25	d1mrza2	Alignment	not modelled	99.7	21	Fold: Adenine nucleotide alpha hydrolase-like Superfamily: Nucleotidylyl transferase Family: Adenylyltransferase
26	d1coza_	Alignment	not modelled	99.7	26	Fold: Adenine nucleotide alpha hydrolase-like Superfamily: Nucleotidylyl transferase Family: Cytidylyltransferase
27	c2b7lD_	Alignment	not modelled	99.7	23	PDB header: transferase Chain: D: PDB Molecule: glycerol-3-phosphate cytidylyltransferase; PDBTitle: crystal structure of ctp:glycerol-3-phosphate2 cytidylyltransferase from staphylococcus aureus PDB header: biosynthetic protein Chain: B: PDB Molecule: lipopolysaccharide core biosynthesis

28	c3glvB_	Alignment	not modelled	99.2	17	protein; PDBTitle: crystal structure of the lipopolysaccharide core biosynthesis protein2 from thermoplasma volcanium gss1
29	c3do8B_	Alignment	not modelled	99.1	19	PDB header: transferase Chain: B: PDB Molecule: phosphopantetheine adenyllyltransferase; PDBTitle: the crystal structure of the protein with unknown function2 from archaeoglobus fulgidus
30	c3elbA_	Alignment	not modelled	99.0	20	PDB header: transferase Chain: A: PDB Molecule: ethanolamine-phosphate cytidyllyltransferase; PDBTitle: human ctp: phosphoethanolamine cytidyllyltransferase in complex with2 cmp
31	c3op1A_	Alignment	not modelled	99.0	19	PDB header: transferase Chain: A: PDB Molecule: macrolide-efflux protein; PDBTitle: crystal structure of macrolide-efflux protein sp_1110 from2 streptococcus pneumoniae
32	c2x0kB_	Alignment	not modelled	99.0	22	PDB header: transferase Chain: B: PDB Molecule: riboflavin biosynthesis protein ribf; PDBTitle: crystal structure of modular fad synthetase from2 corynebacterium ammoniagenes
33	c1t6zB_	Alignment	not modelled	99.0	19	PDB header: transferase Chain: B: PDB Molecule: riboflavin kinase/fmn adenyllyltransferase; PDBTitle: crystal structure of riboflavin bound tm379
34	c3hl4B_	Alignment	not modelled	98.9	16	PDB header: transferase Chain: B: PDB Molecule: choline-phosphate cytidyllyltransferase a; PDBTitle: crystal structure of a mammalian ctp:phosphocholine2 cytidyllyltransferase with cdp-choline
35	d1jhda2	Alignment	not modelled	98.8	15	Fold: Adenine nucleotide alpha hydrolase-like Superfamily: Nucleotidyl transferase Family: ATP sulfurylase catalytic domain
36	d1x6va2	Alignment	not modelled	98.6	15	Fold: Adenine nucleotide alpha hydrolase-like Superfamily: Nucleotidyl transferase Family: ATP sulfurylase catalytic domain
37	c1jhdA_	Alignment	not modelled	98.6	14	PDB header: transferase Chain: A: PDB Molecule: sulfate adenyllyltransferase; PDBTitle: crystal structure of bacterial atp sulfurylase from the2 riftia pachyptila symbiont
38	c1g8gB_	Alignment	not modelled	98.5	20	PDB header: transferase Chain: B: PDB Molecule: sulfate adenyllyltransferase; PDBTitle: atp sulfurylase from s. cerevisiae: the binary product complex with2 aps
39	c2qjfb_	Alignment	not modelled	98.5	15	PDB header: transferase Chain: B: PDB Molecule: bifunctional 3'-phosphoadenosine 5'- PDBTitle: crystal structure of atp-sulfurylase domain of human paps2 synthetase 1
40	d1g8fa2	Alignment	not modelled	98.5	19	Fold: Adenine nucleotide alpha hydrolase-like Superfamily: Nucleotidyl transferase Family: ATP sulfurylase catalytic domain
41	c1xnbB_	Alignment	not modelled	98.5	13	PDB header: transferase Chain: B: PDB Molecule: bifunctional 3'-phosphoadenosine 5'-phosphosulfate PDBTitle: aps complex of human paps synthetase 1
42	c1r6xA_	Alignment	not modelled	98.5	20	PDB header: transferase Chain: A: PDB Molecule: atp:sulfate adenyllyltransferase; PDBTitle: the crystal structure of a truncated form of yeast atp2 sulfurylase, lacking the c-terminal aps kinase-like domain,3 in complex with sulfate
43	c3cr8C_	Alignment	not modelled	98.4	13	PDB header: transferase Chain: C: PDB Molecule: sulfate adenyllyltransferase, adenyllysulfate PDBTitle: hexameric aps kinase from thiobacillus denitrificans
44	c1m8pB_	Alignment	not modelled	98.4	17	PDB header: transferase Chain: B: PDB Molecule: sulfate adenyllyltransferase; PDBTitle: crystal structure of p. chrysogenum atp sulfurylase in the t-state
45	d1v47a2	Alignment	not modelled	98.3	13	Fold: Adenine nucleotide alpha hydrolase-like Superfamily: Nucleotidyl transferase Family: ATP sulfurylase catalytic domain
46	d1m8pa2	Alignment	not modelled	98.3	19	Fold: Adenine nucleotide alpha hydrolase-like Superfamily: Nucleotidyl transferase Family: ATP sulfurylase catalytic domain
47	c2gksB_	Alignment	not modelled	97.9	14	PDB header: transferase Chain: B: PDB Molecule: bifunctional sat/aps kinase; PDBTitle: crystal structure of the bi-functional atp sulfurylase-aps kinase from2 aquifex aeolicus, a chemolithotrophic thermophile
48	c1v47B_	Alignment	not modelled	97.6	12	PDB header: transferase Chain: B: PDB Molecule: atp sulfurylase; PDBTitle: crystal structure of atp sulfurylase from thermus2 thermophilus hb8 in complex with aps
49	c3guzB_	Alignment	not modelled	96.3	21	PDB header: ligase Chain: B: PDB Molecule: pantothenate synthetase; PDBTitle: structural and substrate-binding studies of pantothenate2 syntheate (ps)provide insights into homotropic inhibition3 by pantoate in ps's
50	c3ag5A_	Alignment	not modelled	90.2	16	PDB header: ligase Chain: A: PDB Molecule: pantothenate synthetase; PDBTitle: crystal structure of pantothenate synthetase from staphylococcus2 aureus
51	c3innB_	Alignment	not modelled	89.9	21	PDB header: ligase Chain: B: PDB Molecule: pantothenate synthetase; PDBTitle: crystal structure of pantoate-beta-alanine-ligase in complex2 with atp at low occupancy at 2.1 a resolution
52	d1ihoa_	Alignment	not modelled	89.6	24	Fold: Adenine nucleotide alpha hydrolase-like Superfamily: Nucleotidyl transferase Family: Pantothenate synthetase (Pantoate-beta-alanine ligase, PanC)
53	c3uk2B_	Alignment	not modelled	89.3	14	PDB header: ligase Chain: B: PDB Molecule: pantothenate synthetase;

53	c3ukzB	Alignment	not modelled	89.3	14	PDBTitle: the structure of pantothenate synthetase from burkholderia2 thailandensis PDB header: ligase
54	c3n8hA	Alignment	not modelled	89.2	17	Chain: A: PDB Molecule: pantothenate synthetase; PDBTitle: crystal structure of pantoate-beta-alanine ligase from francisella2 tularensis
55	c2ejcA	Alignment	not modelled	88.6	24	PDB header: ligase Chain: A: PDB Molecule: pantoate--beta-alanine ligase; PDBTitle: crystal structure of pantoate--beta-alanine ligase (panc)2 from thermotoga maritima
56	d1v8fa	Alignment	not modelled	88.5	22	Fold: Adenine nucleotide alpha hydrolase-like Superfamily: Nucleotidylyl transferase Family: Pantothenate synthetase (Pantoate-beta-alanine ligase, PanC)
57	d2a84a1	Alignment	not modelled	84.2	28	Fold: Adenine nucleotide alpha hydrolase-like Superfamily: Nucleotidylyl transferase Family: Pantothenate synthetase (Pantoate-beta-alanine ligase, PanC)
58	c3mxtA	Alignment	not modelled	77.3	16	PDB header: ligase Chain: A: PDB Molecule: pantothenate synthetase; PDBTitle: crystal structure of pantoate-beta-alanine ligase from campylobacter2 jejuni
59	c3dzcA	Alignment	not modelled	72.8	12	PDB header: isomerase Chain: A: PDB Molecule: udp-n-acetylglucosamine 2-epimerase; PDBTitle: 2.35 angstrom resolution structure of wecb (vc0917), a udp-n-2 acetylglucosamine 2-epimerase from vibrio cholerae.
60	c3focB	Alignment	not modelled	66.7	17	PDB header: ligase Chain: B: PDB Molecule: tryptophanyl-trna synthetase; PDBTitle: tryptophanyl-trna synthetase from giardia lamblia
61	c2dlInA	Alignment	not modelled	53.7	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
62	c3c8zB	Alignment	not modelled	50.5	21	PDB header: ligase Chain: B: PDB Molecule: cysteinyI-trna synthetase; PDBTitle: the 1.6 a crystal structure of mshc: the rate limiting2 enzyme in the mycothiol biosynthetic pathway
63	c1zuwA	Alignment	not modelled	44.5	7	PDB header: isomerase Chain: A: PDB Molecule: glutamate racemase 1; PDBTitle: crystal structure of b.subtilis glutamate racemase (race) with d-glu
64	c2q4dB	Alignment	not modelled	36.9	11	PDB header: structural genomics, unknown function Chain: B: PDB Molecule: lysine decarboxylase-like protein at5g11950; PDBTitle: ensemble refinement of the crystal structure of a lysine2 decarboxylase-like protein from arabidopsis thaliana gene at5g11950
65	c3s81A	Alignment	not modelled	35.7	40	PDB header: isomerase Chain: A: PDB Molecule: putative aspartate racemase; PDBTitle: crystal structure of putative aspartate racemase from salmonella2 typhimurium
66	d2d5ba2	Alignment	not modelled	35.5	19	Fold: Adenine nucleotide alpha hydrolase-like Superfamily: Nucleotidylyl transferase Family: Class I aminoacyl-tRNA synthetases (RS), catalytic domain
67	c2el7A	Alignment	not modelled	34.7	8	PDB header: ligase Chain: A: PDB Molecule: tryptophanyl-trna synthetase; PDBTitle: crystal structure of tryptophanyl-trna synthetase from thermus2 thermophilus
68	c3sp1B	Alignment	not modelled	33.9	11	PDB header: ligase Chain: B: PDB Molecule: cysteinyI-trna synthetase; PDBTitle: crystal structure of cysteinyI-trna synthetase (cyss) from borrelia2 burgdorferi
69	d1ydha	Alignment	not modelled	33.0	11	Fold: MCP/YpsA-like Superfamily: MCP/YpsA-like Family: MoCo carrier protein-like
70	d1f74a	Alignment	not modelled	29.5	10	Fold: TIM beta/alpha-barrel Superfamily: Aldolase Family: Class I aldolase
71	d1jfla1	Alignment	not modelled	28.0	44	Fold: ATC-like Superfamily: Aspartate/glutamate racemase Family: Aspartate/glutamate racemase
72	c2dx7B	Alignment	not modelled	26.2	44	PDB header: isomerase Chain: B: PDB Molecule: aspartate racemase; PDBTitle: crystal structure of pyrococcus horikoshii oT3 aspartate racemase2 complex with citric acid
73	d1iowa1	Alignment	not modelled	25.3	13	Fold: PreATP-grasp domain Superfamily: PreATP-grasp domain Family: D-Alanine ligase N-terminal domain
74	c2q4oA	Alignment	not modelled	24.7	10	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: uncharacterized protein at2g37210/t2n18.3; PDBTitle: ensemble refinement of the crystal structure of a lysine2 decarboxylase-like protein from arabidopsis thaliana gene at2g37210
75	d2q4oa1	Alignment	not modelled	24.7	10	Fold: MCP/YpsA-like Superfamily: MCP/YpsA-like Family: MoCo carrier protein-like
76	d1rqga2	Alignment	not modelled	24.6	29	Fold: Adenine nucleotide alpha hydrolase-like Superfamily: Nucleotidylyl transferase Family: Class I aminoacyl-tRNA synthetases (RS), catalytic domain
77	c3hv0A	Alignment	not modelled	23.2	14	PDB header: ligase Chain: A: PDB Molecule: tryptophanyl-trna synthetase; PDBTitle: tryptophanyl-trna synthetase from cryptosporidium parvum
78	d1iq0a2	Alignment	not modelled	21.1	17	Fold: Adenine nucleotide alpha hydrolase-like Superfamily: Nucleotidylyl transferase Family: Class I aminoacyl-tRNA synthetases (RS), catalytic domain

79	c2zskA	 Alignment	not modelled	20.5	22	PDB header: unknown function Chain: A: PDB Molecule: 226aa long hypothetical aspartate racemase; PDBTitle: crystal structure of ph1733, an aspartate racemase2 homologue, from pyrococcus horikoshii ot3
80	c1woyA	 Alignment	not modelled	20.3	14	PDB header: ligase Chain: A: PDB Molecule: methionyl-trna synthetase; PDBTitle: crystal structure of methionyl trna synthetase y225f mutant2 from thermus thermophilus
81	d1n3la	 Alignment	not modelled	20.2	13	Fold: Adenine nucleotide alpha hydrolase-like Superfamily: Nucleotidyl transferase Family: Class I aminoacyl-tRNA synthetases (RS), catalytic domain
82	c1znyA	 Alignment	not modelled	19.8	18	PDB header: transferase Chain: A: PDB Molecule: guanylate kinase; PDBTitle: crystal structure of mycobacterium tuberculosis guanylate kinase in2 complex with gdp
83	c2ct8A	 Alignment	not modelled	19.3	16	PDB header: ligase/rna Chain: A: PDB Molecule: methionyl-trna synthetase; PDBTitle: crystal structure of aquifex aeolicus methionyl-trna2 synthetase complexed with trna(met) and methionyl-adenylate3 analogue
84	c1u0bB	 Alignment	not modelled	18.4	21	PDB header: ligase/rna Chain: B: PDB Molecule: cysteinyln trna; PDBTitle: crystal structure of cysteinyln-trna synthetase binary2 complex with trnacys
85	d1q0qa2	 Alignment	not modelled	18.2	40	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: Glyceraldehyde-3-phosphate dehydrogenase-like, N-terminal domain
86	c2k4nA	 Alignment	not modelled	18.1	43	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: protein pf0246; PDBTitle: nmr structure of protein pf0246 from pyrococcus furiosus:2 target pfr75 from the northeast structural genomics3 consortium
87	c2qx7A	 Alignment	not modelled	17.8	64	PDB header: plant protein Chain: A: PDB Molecule: eugenol synthase 1; PDBTitle: structure of eugenol synthase from ocimum basilicum
88	c3jxeB	 Alignment	not modelled	17.4	17	PDB header: ligase Chain: B: PDB Molecule: tryptophanyl-trna synthetase; PDBTitle: crystal structure of pyrococcus horikoshii tryptophanyl-trna2 synthetase in complex with trpamp
89	d1hx6a2	 Alignment	not modelled	17.1	56	Fold: Nucleoplasmin-like/VP (viral coat and capsid proteins) Superfamily: Group II dsDNA viruses VP Family: Coat protein p3
90	d1v31a	 Alignment	not modelled	17.1	13	Fold: SWIB/MDM2 domain Superfamily: SWIB/MDM2 domain Family: SWIB/MDM2 domain
91	d1jila	 Alignment	not modelled	16.8	27	Fold: Adenine nucleotide alpha hydrolase-like Superfamily: Nucleotidyl transferase Family: Class I aminoacyl-tRNA synthetases (RS), catalytic domain
92	c2gzmb	 Alignment	not modelled	15.8	12	PDB header: isomerase Chain: B: PDB Molecule: glutamate racemase; PDBTitle: crystal structure of the glutamate racemase from bacillus2 anthracis
93	d1v32a	 Alignment	not modelled	15.3	19	Fold: SWIB/MDM2 domain Superfamily: SWIB/MDM2 domain Family: SWIB/MDM2 domain
94	d1uhra	 Alignment	not modelled	14.8	13	Fold: SWIB/MDM2 domain Superfamily: SWIB/MDM2 domain Family: SWIB/MDM2 domain
95	c3akcA	 Alignment	not modelled	14.5	18	PDB header: transferase Chain: A: PDB Molecule: cytidylate kinase; PDBTitle: crystal structure of cmp kinase in complex with cdp and adp from2 thermus thermophilus hb8
96	c3dhnA	 Alignment	not modelled	14.3	30	PDB header: isomerase, lyase Chain: A: PDB Molecule: nad-dependent epimerase/dehydratase; PDBTitle: crystal structure of the putative epimerase q89z24_bactn2 from bacteroides thetaiotaomicron. northeast structural3 genomics consortium target btr310.
97	c2ts1A	 Alignment	not modelled	14.1	22	PDB header: ligase (synthetase) Chain: A: PDB Molecule: tyrosyl-trna synthetase; PDBTitle: structure of tyrosyl-trna synthetase refined at 2.3 angstroms2 resolution. interaction of the enzyme with the tyrosyl adenylate3 intermediate
98	d2ts1a	 Alignment	not modelled	14.1	22	Fold: Adenine nucleotide alpha hydrolase-like Superfamily: Nucleotidyl transferase Family: Class I aminoacyl-tRNA synthetases (RS), catalytic domain
99	c3tqoA	 Alignment	not modelled	13.1	17	PDB header: ligase Chain: A: PDB Molecule: cysteinyln-trna synthetase; PDBTitle: structure of the cysteinyln-trna synthetase (cyss) from coxiella2 burnetii.