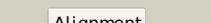
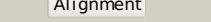
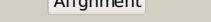
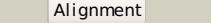
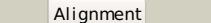
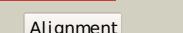
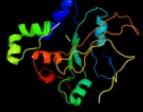
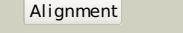
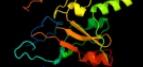
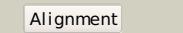
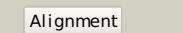
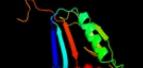
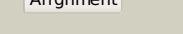
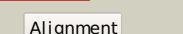


Phyre²

Email	i.a.kelley@imperial.ac.uk
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Date	Thu Jan 5 10:57:22 GMT 2012
Unique Job ID	3071325591bc7dae

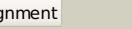
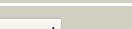
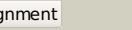
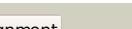
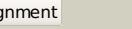
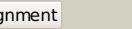
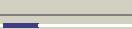
Detailed template information

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	d1j5wa_			100.0	59	Fold: Class II aaRS and biotin synthetases Superfamily: Class II aaRS and biotin synthetases Family: Class II aminoacyl-tRNA synthetase (aaRS)-like, catalytic domain
2	c3rf1B_			100.0	65	PDB header: ligase Chain: B; PDB Molecule: glycyl-tRNA synthetase alpha subunit; PDBTitle: the crystal structure of glycyl-tRNA synthetase subunit alpha from campylobacter jejuni subsp. jejuni nctc 11168
3	c2zzfA_			100.0	23	PDB header: ligase Chain: A; PDB Molecule: alanyl-tRNA synthetase; PDBTitle: crystal structure of alanyl-tRNA synthetase without oligomerization domain
4	c2ztgA_			100.0	21	PDB header: ligase Chain: A; PDB Molecule: alanyl-tRNA synthetase; PDBTitle: crystal structure of archaeoglobus fulgidus alanyl-tRNA synthetase lacking the C-terminal dimerization domain in 3 complex with ala-sa
5	c3hxxA_			100.0	20	PDB header: ligase Chain: A; PDB Molecule: alanyl-tRNA synthetase; PDBTitle: crystal structure of catalytic fragment of e. coli alars in complex2 with amppcp
6	c1yfsB_			100.0	18	PDB header: ligase Chain: B; PDB Molecule: alanyl-tRNA synthetase; PDBTitle: the crystal structure of alanyl-tRNA synthetase in complex2 with L-alanine
7	d1riqa2			100.0	20	Fold: Class II aaRS and biotin synthetases Superfamily: Class II aaRS and biotin synthetases Family: Class II aminoacyl-tRNA synthetase (aaRS)-like, catalytic domain
8	d1riqal			99.7	17	Fold: Putative anticodon-binding domain of alanyl-tRNA synthetase (AlaRS) Superfamily: Putative anticodon-binding domain of alanyl-tRNA synthetase (AlaRS) Family: Putative anticodon-binding domain of alanyl-tRNA synthetase (AlaRS)
9	c1b70A_			97.7	19	PDB header: ligase Chain: A; PDB Molecule: phenylalanyl-tRNA synthetase; PDBTitle: phenylalanyl tRNA synthetase complexed with phenylalanine
10	c2znjB_			97.5	18	PDB header: ligase Chain: B; PDB Molecule: putative uncharacterized protein; PDBTitle: crystal structure of pyrrolysyl-tRNA synthetase from desulfobacterium hafniense
11	d1jjca_			97.3	19	Fold: Class II aaRS and biotin synthetases Superfamily: Class II aaRS and biotin synthetases Family: Class II aminoacyl-tRNA synthetase (aaRS)-like, catalytic domain

12	c3pc0C			97.2	20	PDB header: ligase Chain: C; PDB Molecule: phenylalanyl-trna synthetase, alpha subunit; PDBTitle: crystal structure of e. coli phenylalanine-trna synthetase complexed2 with phenylalanine and amp
13	c2du4B			97.2	17	PDB header: ligase/rna Chain: B; PDB Molecule: o-phosphoseryl-trna synthetase; PDBTitle: crystal structure of archaeoglobus fulgidus o-phosphoseryl-2 trna synthetase complexed with trnacys
14	c1wydB			97.1	20	PDB header: ligase Chain: B; PDB Molecule: hypothetical aspartyl-trna synthetase; PDBTitle: crystal structure of aspartyl-trna synthetase from sulfolobus tokodaii
15	c2du7C			96.9	19	PDB header: ligase Chain: B; PDB Molecule: o-phosphoseryl-trna synthetase; PDBTitle: crystal structure of methanococcus jannaschii o-phosphoseryl-trna2 synthetase
16	d1b8aa2			96.9	17	Fold: Class II aaRS and biotin synthetases Superfamily: Class II aaRS and biotin synthetases Family: Class II aminoacyl-tRNA synthetase (aaRS)-like, catalytic domain
17	c3i7fA			96.9	19	PDB header: ligase Chain: A; PDB Molecule: aspartyl-trna synthetase; PDBTitle: aspartyl trna synthetase from entamoeba histolytica
18	c1asyA			96.7	20	PDB header: complex (aminoacyl-trna synthetase/trna) Chain: A; PDB Molecule: aspartyl-trna synthetase; PDBTitle: class ii aminoacyl transfer rna synthetases: crystal2 structure of yeast aspartyl-trna synthetase complexed with3 trna asp
19	c3l4gl			96.6	17	PDB header: ligase Chain: I; PDB Molecule: phenylalanyl-trna synthetase alpha chain; PDBTitle: crystal structure of homo sapiens cytoplasmic phenylalanyl-trna2 synthetase
20	d1latia2			96.4	17	Fold: Class II aaRS and biotin synthetases Superfamily: Class II aaRS and biotin synthetases Family: Class II aminoacyl-tRNA synthetase (aaRS)-like, catalytic domain
21	c2zimA		not modelled	96.2	16	PDB header: ligase Chain: A; PDB Molecule: pyrrolysyl-trna synthetase; PDBTitle: pyrrolysyl-trna synthetase bound to adenylated pyrrolysine and2 pyrophosphate Fold: Class II aaRS and biotin synthetases
22	d1b76a2		not modelled	95.9	14	Superfamily: Class II aaRS and biotin synthetases Family: Class II aminoacyl-tRNA synthetase (aaRS)-like, catalytic domain PDB header: ligase
23	c2rhqA		not modelled	95.9	15	Chain: A; PDB Molecule: phenylalanyl-trna synthetase alpha chain; PDBTitle: phers from staphylococcus haemolyticus- rational protein2 engineering and inhibitor studies
24	c2dq3A		not modelled	95.6	20	PDB header: ligase Chain: A; PDB Molecule: seryl-trna synthetase; PDBTitle: crystal structure of aq_298
25	c1sryB		not modelled	94.7	21	PDB header: ligase(synthetase) Chain: B; PDB Molecule: seryl-trna synthetase; PDBTitle: refined crystal structure of the seryl-trna synthetase from2 thermus thermophilus at 2.5 angstroms resolution Fold: Class II aaRS and biotin synthetases
26	d2g4ca2		not modelled	93.9	14	Superfamily: Class II aaRS and biotin synthetases Family: Class II aminoacyl-tRNA synthetase (aaRS)-like, catalytic domain PDB header: Class II aaRS and biotin synthetases
27	d1g5ha2		not modelled	93.9	15	Family: Class II aminoacyl-tRNA synthetase (aaRS)-like, catalytic domain PDB header: ligase Chain: A; PDB Molecule: seryl-trna synthetase;
28	c3lssA		not modelled	93.9	20	PDBTitle: trypanosoma brucei seryl-trna synthetase in complex with atp Fold: Class II aaRS and biotin synthetases

29	d1n9wa2		Alignment	not modelled	93.8	26	Superfamily: Class II aaRS and biotin synthetases Family: Class II aminoacyl-tRNA synthetase (aaRS)-like, catalytic domain
30	d1seta2		Alignment	not modelled	92.7	20	Fold: Class II aaRS and biotin synthetases Superfamily: Class II aaRS and biotin synthetases Family: Class II aminoacyl-tRNA synthetase (aaRS)-like, catalytic domain
31	c1wleB_		Alignment	not modelled	91.1	21	PDB header: ligase Chain: B: PDB Molecule: seryl-tRNA synthetase; PDBTitle: crystal structure of mammalian mitochondrial seryl-tRNA synthetase complexed with seryl-adenylate
32	c2dq0A_		Alignment	not modelled	91.0	21	PDB header: ligase Chain: A: PDB Molecule: seryl-tRNA synthetase; PDBTitle: crystal structure of seryl-tRNA synthetase from pyrococcus2 horikoshii complexed with a seryl-adenylate analog
33	d1h4vb2		Alignment	not modelled	90.2	21	Fold: Class II aaRS and biotin synthetases Superfamily: Class II aaRS and biotin synthetases Family: Class II aminoacyl-tRNA synthetase (aaRS)-like, catalytic domain
34	c3qo8A_		Alignment	not modelled	89.1	18	PDB header: ligase Chain: A: PDB Molecule: seryl-tRNA synthetase, cytoplasmic; PDBTitle: crystal structure of seryl-tRNA synthetase from candida albicans
35	c1e22A_		Alignment	not modelled	86.8	19	PDB header: ligase Chain: A: PDB Molecule: lysyl-tRNA synthetase; PDBTitle: lysyl-tRNA synthetase (lysyl) hexagonal form complexed with2 lysine and the non-hydrolysable ATP analogue AMP-PCP
36	d1eova2		Alignment	not modelled	86.7	20	Fold: Class II aaRS and biotin synthetases Superfamily: Class II aaRS and biotin synthetases Family: Class II aminoacyl-tRNA synthetase (aaRS)-like, catalytic domain
37	c3bjuB_		Alignment	not modelled	86.5	23	PDB header: ligase Chain: B: PDB Molecule: lysyl-tRNA synthetase; PDBTitle: crystal structure of tetrameric form of human lysyl-tRNA synthetase
38	c1g5hA_		Alignment	not modelled	86.4	16	PDB header: DNA binding protein Chain: A: PDB Molecule: mitochondrial DNA polymerase accessory subunit; PDBTitle: crystal structure of the accessory subunit of murine mitochondrial2 polymerase gamma
39	d1c0aa3		Alignment	not modelled	86.3	30	Fold: Class II aaRS and biotin synthetases Superfamily: Class II aaRS and biotin synthetases Family: Class II aminoacyl-tRNA synthetase (aaRS)-like, catalytic domain
40	c1efwA_		Alignment	not modelled	85.9	30	PDB header: ligase/rna Chain: A: PDB Molecule: aspartyl-tRNA synthetase; PDBTitle: crystal structure of aspartyl-tRNA synthetase from thermus2 thermophilus complexed to tRNAAsp from escherichia coli
41	c3e9hB_		Alignment	not modelled	85.5	32	PDB header: ligase Chain: B: PDB Molecule: lysyl-tRNA synthetase; PDBTitle: lysyl-tRNA synthetase from bacillus stearothermophilus2 complexed with l-lysylsulfamoyl adenosine
42	c3errB_		Alignment	not modelled	85.4	17	PDB header: ligase Chain: B: PDB Molecule: fusion protein of microtubule binding domain from PDBTitle: microtubule binding domain from mouse cytoplasmic dynein as2 a fusion with seryl-tRNA synthetase
43	c2xgtB_		Alignment	not modelled	85.1	19	PDB header: ligase Chain: B: PDB Molecule: asparaginyl-tRNA synthetase, cytoplasmic; PDBTitle: asparaginyl-tRNA synthetase from brugia malayi complexed2 with the sulphamoyl analogue of asparaginyl-adenylate
44	c1n9wA_		Alignment	not modelled	84.5	28	PDB header: biosynthetic protein Chain: A: PDB Molecule: aspartyl-tRNA synthetase 2; PDBTitle: crystal structure of the non-discriminating and archaeal-2 type aspartyl-tRNA synthetase from thermus thermophilus
45	c1eqrC_		Alignment	not modelled	84.5	30	PDB header: ligase Chain: C: PDB Molecule: aspartyl-tRNA synthetase; PDBTitle: crystal structure of free aspartyl-tRNA synthetase from escherichia coli
46	d1nnha_		Alignment	not modelled	84.1	21	Fold: Class II aaRS and biotin synthetases Superfamily: Class II aaRS and biotin synthetases Family: Class II aminoacyl-tRNA synthetase (aaRS)-like, catalytic domain
47	d1I0wa3		Alignment	not modelled	83.3	30	Fold: Class II aaRS and biotin synthetases Superfamily: Class II aaRS and biotin synthetases Family: Class II aminoacyl-tRNA synthetase (aaRS)-like, catalytic domain
48	c3g1zB_		Alignment	not modelled	83.2	26	PDB header: ligase Chain: B: PDB Molecule: putative lysyl-tRNA synthetase; PDBTitle: structure of idp01693/yjea, a potential tRNA synthetase from salmonella typhimurium
49	c1b8aB_		Alignment	not modelled	83.2	20	PDB header: ligase Chain: B: PDB Molecule: protein (aspartyl-tRNA synthetase); PDBTitle: aspartyl-tRNA synthetase
50	c2cj9A_		Alignment	not modelled	82.5	15	PDB header: ligase Chain: A: PDB Molecule: seryl-tRNA synthetase; PDBTitle: crystal structure of methanoscarcina barkeri seryl-tRNA synthetase complexed with an analog of seryladenylate
51	c1x55A_		Alignment	not modelled	82.4	19	PDB header: ligase Chain: A: PDB Molecule: asparaginyl-tRNA synthetase; PDBTitle: crystal structure of asparaginyl-tRNA synthetase from pyrococcus2 horikoshii complexed with asparaginyl-adenylate analogue
52	c3m4qA_		Alignment	not modelled	82.2	25	PDB header: ligase Chain: A: PDB Molecule: asparaginyl-tRNA synthetase, putative; PDBTitle: entamoeba histolytica asparaginyl-tRNA synthetase (asnrs)
53	d1qf6a4		Alignment	not modelled	81.2	17	Fold: Class II aaRS and biotin synthetases Superfamily: Class II aaRS and biotin synthetases Family: Class II aminoacyl-tRNA synthetase (aaRS)-like, catalytic

					domain
54	c3mf2B_	Alignment	not modelled	70.0	15 PDB header: ligase Chain: B: PDB Molecule: bl10957 protein; PDBTitle: crystal structure of class ii aaRS homologue (bl10957) complexed with 2 amp
55	d1e1oa2	Alignment	not modelled	69.7	20 Fold: Class II aaRS and biotin synthetases Superfamily: Class II aaRS and biotin synthetases Family: Class II aminoacyl-tRNA synthetase (aaRS)-like, catalytic domain
56	d1kmma2	Alignment	not modelled	67.0	23 Fold: Class II aaRS and biotin synthetases Superfamily: Class II aaRS and biotin synthetases Family: Class II aminoacyl-tRNA synthetase (aaRS)-like, catalytic domain
57	d1bbua2	Alignment	not modelled	62.6	20 Fold: Class II aaRS and biotin synthetases Superfamily: Class II aaRS and biotin synthetases Family: Class II aminoacyl-tRNA synthetase (aaRS)-like, catalytic domain
58	c3nrlB_	Alignment	not modelled	58.5	22 PDB header: structural genomics, unknown function Chain: B: PDB Molecule: uncharacterized protein rumgna_01417; PDBTitle: crystal structure of protein rumgna_01417 from ruminococcus gnavus,2 northeast structural genomics consortium target ugr76
59	c1z7nB_	Alignment	not modelled	52.5	14 PDB header: transferase Chain: B: PDB Molecule: atp phosphoribosyltransferase regulatory subunit; PDBTitle: atp phosphoribosyl transferase (hiszg atp-prtase) from2 lactococcus lactis with bound prpp substrate
60	d1wdia_	Alignment	not modelled	42.8	29 Fold: QueA-like Superfamily: QueA-like Family: QueA-like
61	c3ikmC_	Alignment	not modelled	41.9	17 PDB header: transferase Chain: C: PDB Molecule: dna polymerase subunit gamma-2; PDBTitle: crystal structure of human mitochondrial dna polymerase2 holoenzyme
62	c3od1A_	Alignment	not modelled	33.7	16 PDB header: transferase Chain: A: PDB Molecule: atp phosphoribosyltransferase regulatory subunit; PDBTitle: the crystal structure of an atp phosphoribosyltransferase regulatory2 subunit/histidyl-trna synthetase from bacillus halodurans c
63	d1usya_	Alignment	not modelled	32.6	17 Fold: Class II aaRS and biotin synthetases Superfamily: Class II aaRS and biotin synthetases Family: Class II aminoacyl-tRNA synthetase (aaRS)-like, catalytic domain
64	c3racA_	Alignment	not modelled	30.6	16 PDB header: ligase Chain: A: PDB Molecule: histidine-trna ligase; PDBTitle: crystal strucure of histidine--trna ligase subunit from2 alicyclobacillus acidocaldarius subsp. acidocaldarius dsm 446.
65	d1z7ma1	Alignment	not modelled	26.2	15 Fold: Class II aaRS and biotin synthetases Superfamily: Class II aaRS and biotin synthetases Family: Class II aminoacyl-tRNA synthetase (aaRS)-like, catalytic domain
66	d1nj1a3	Alignment	not modelled	25.5	14 Fold: Class II aaRS and biotin synthetases Superfamily: Class II aaRS and biotin synthetases Family: Class II aminoacyl-tRNA synthetase (aaRS)-like, catalytic domain
67	d1nj8a3	Alignment	not modelled	23.6	12 Fold: Class II aaRS and biotin synthetases Superfamily: Class II aaRS and biotin synthetases Family: Class II aminoacyl-tRNA synthetase (aaRS)-like, catalytic domain
68	d1wu7a2	Alignment	not modelled	23.2	17 Fold: Class II aaRS and biotin synthetases Superfamily: Class II aaRS and biotin synthetases Family: Class II aminoacyl-tRNA synthetase (aaRS)-like, catalytic domain
69	d1gjia1	Alignment	not modelled	20.8	35 Fold: Immunoglobulin-like beta-sandwich Superfamily: E set domains Family: NF-kappa-B/REL/DORSAL transcription factors, C-terminal domain
70	c2xczA_	Alignment	not modelled	20.6	21 PDB header: immune system Chain: A: PDB Molecule: possible ats1-like light-inducible protein; PDBTitle: crystal structure of macrophage migration inhibitory factor2 homologue from prochlorococcus marinus
71	c3cmqA_	Alignment	not modelled	20.3	16 PDB header: ligase Chain: A: PDB Molecule: phenylalanyl-trna synthetase, mitochondrial; PDBTitle: crystal structure of human mitochondrial phenylalanine trna2 synthetase
72	d1eaqa_	Alignment	not modelled	16.8	31 Fold: Common fold of diphtheria toxin/transcription factors/cytochrome f Superfamily: p53-like transcription factors Family: RUNT domain
73	c1giaA_	Alignment	not modelled	15.6	33 PDB header: transcription/dna Chain: A: PDB Molecule: c-rel proto-oncogene protein; PDBTitle: crystal structure of c-rel bound to dna
74	d1ljma_	Alignment	not modelled	15.5	31 Fold: Common fold of diphtheria toxin/transcription factors/cytochrome f Superfamily: p53-like transcription factors Family: RUNT domain
75	d1k3zb_	Alignment	not modelled	13.6	17 Fold: Immunoglobulin-like beta-sandwich Superfamily: E set domains Family: NF-kappa-B/REL/DORSAL transcription factors, C-terminal domain
76	c3gacD_	Alignment	not modelled	12.6	15 PDB header: cytokine Chain: D: PDB Molecule: macrophage migration inhibitory factor-like PDBTitle: structure of mif with hpp
77	d1hfoa_	Alignment	not modelled	11.9	17 Fold: Tautomerase/MIF Superfamily: Tautomerase/MIF Family: MIF-related
					Fold: Immunoglobulin-like beta-sandwich

78	d1my7a_		Alignment	not modelled	11.2	17	Superfamily: E set domains Family: NF-kappa-B/REL/DORSAL transcription factors, C-terminal domain
79	d1wh4a_		Alignment	not modelled	11.1	23	Fold: DEATH domain Superfamily: DEATH domain Family: DEATH domain, DD
80	d1oy3c_		Alignment	not modelled	10.8	17	Fold: Immunoglobulin-like beta-sandwich Superfamily: E set domains Family: NF-kappa-B/REL/DORSAL transcription factors, C-terminal domain
81	d1oq1a_		Alignment	not modelled	10.3	29	Fold: Concanavalin A-like lectins/glucanases Superfamily: Concanavalin A-like lectins/glucanases Family: Hypothetical protein YesU
82	d1dpta_		Alignment	not modelled	10.0	24	Fold: Tautomerase/MIF Superfamily: Tautomerase/MIF Family: MIF-related
83	c3b64A_		Alignment	not modelled	9.9	11	PDB header: cytokine Chain: A: PDB Molecule: macrophage migration inhibitory factor-like PDBTitle: macrophage migration inhibitory factor (mif) from2 /leishmania major
84	c3t5sA_		Alignment	not modelled	9.5	16	PDB header: immune system Chain: A: PDB Molecule: macrophage migration inhibitory factor; PDBTitle: structure of macrophage migration inhibitory factor from giardia2 lamblia
85	d2gdga1		Alignment	not modelled	9.4	17	Fold: Tautomerase/MIF Superfamily: Tautomerase/MIF Family: MIF-related
86	d1gd0a_		Alignment	not modelled	8.8	17	Fold: Tautomerase/MIF Superfamily: Tautomerase/MIF Family: MIF-related
87	c2os5C_		Alignment	not modelled	8.7	15	PDB header: cytokine Chain: C: PDB Molecule: acemif; PDBTitle: macrophage migration inhibitory factor from ancylostoma ceylanicum
88	c3jrtA_		Alignment	not modelled	7.8	13	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: integron cassette protein vpc_cass2; PDBTitle: structure from the mobile metagenome of v. paracholerae:2 integron cassette protein vpc_cass2
89	c1zkaA_		Alignment	not modelled	7.7	13	PDB header: transcription Chain: A: PDB Molecule: transcription factor relb; PDBTitle: nf-kb relb forms an intertwined homodimer, y300s mutant
90	d1vcoa2		Alignment	not modelled	7.6	29	Fold: P-loop containing nucleoside triphosphate hydrolases Superfamily: P-loop containing nucleoside triphosphate hydrolases Family: Nitrogenase iron protein-like
91	d2e1za2		Alignment	not modelled	7.6	14	Fold: Ribonuclease H-like motif Superfamily: Actin-like ATPase domain Family: Acetokinase-like
92	c3iacA_		Alignment	not modelled	7.5	16	PDB header: isomerase Chain: A: PDB Molecule: glucuronate isomerase; PDBTitle: 2.2 angstrom crystal structure of glucuronate isomerase from2 salmonella typhimurium.
93	c3mopM_		Alignment	not modelled	7.5	15	PDB header: signaling protein, immune system Chain: M: PDB Molecule: interleukin-1 receptor-associated kinase-like 2; PDBTitle: the ternary death domain complex of myd88, irak4, and irak2
94	d1d2zb_		Alignment	not modelled	7.4	28	Fold: DEATH domain Superfamily: DEATH domain Family: DEATH domain, DD
95	d1uiza_		Alignment	not modelled	7.0	16	Fold: Tautomerase/MIF Superfamily: Tautomerase/MIF Family: MIF-related
96	d1fima_		Alignment	not modelled	6.8	17	Fold: Tautomerase/MIF Superfamily: Tautomerase/MIF Family: MIF-related
97	c1x3nA_		Alignment	not modelled	6.8	14	PDB header: transferase Chain: A: PDB Molecule: propionate kinase; PDBTitle: crystal structure of amppnp bound propionate kinase (tdcd) from2 salmonella typhimurium
98	d1s1ma2		Alignment	not modelled	6.8	23	Fold: P-loop containing nucleoside triphosphate hydrolases Superfamily: P-loop containing nucleoside triphosphate hydrolases Family: Nitrogenase iron protein-like
99	c1nj8C_		Alignment	not modelled	6.4	11	PDB header: ligase Chain: C: PDB Molecule: proline-trna synthetase; PDBTitle: crystal structure of prolyl-trna synthetase from2 methanocaldococcus janaschii