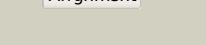
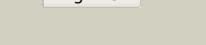


Phyre²

Email	i.a.kelley@imperial.ac.uk
Description	P80668
Date	Thu Jan 5 12:33:16 GMT 2012
Unique Job ID	f4d24dffaa433cce

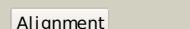
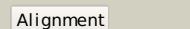
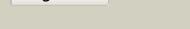
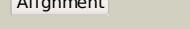
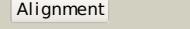
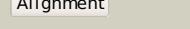
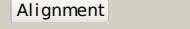
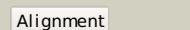
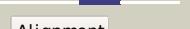
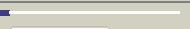
Detailed template information

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	c2o2qA_			100.0	37	PDB header: oxidoreductase Chain: A; PDB Molecule: formyltetrahydrofolate dehydrogenase; PDBTitle: crystal structure of the c-terminal domain of rat2 10' formyltetrahydrofolate dehydrogenase in complex with nadp
2	d1bxsa_			100.0	37	Fold: ALDH-like Superfamily: ALDH-like Family: ALDH-like
3	c3ed6B_			100.0	37	PDB header: oxidoreductase Chain: B; PDB Molecule: betaine aldehyde dehydrogenase; PDBTitle: 1.7 angstrom resolution crystal structure of betaine aldehyde2 dehydrogenase (betb) from staphylococcus aureus
4	c2jg7G_			100.0	28	PDB header: oxidoreductase Chain: G; PDB Molecule: antiquitin; PDBTitle: crystal structure of seabream antiquitin and elucidation of its substrate specificity
5	d1o9ja_			100.0	38	Fold: ALDH-like Superfamily: ALDH-like Family: ALDH-like
6	d1o04a_			100.0	40	Fold: ALDH-like Superfamily: ALDH-like Family: ALDH-like
7	c3qanB_			100.0	31	PDB header: oxidoreductase Chain: B; PDB Molecule: 1-pyrroline-5-carboxylate dehydrogenase 1; PDBTitle: crystal structure of 1-pyrroline-5-carboxylate dehydrogenase from bacillus halodurans
8	c2d4eB_			100.0	36	PDB header: oxidoreductase Chain: B; PDB Molecule: 5-carboxymethyl-2-hydroxymuconate semialdehyde PDBTitle: crystal structure of the hpcc from thermus thermophilus hb8
9	c3iwkB_			100.0	36	PDB header: oxidoreductase Chain: B; PDB Molecule: aminoaldehyde dehydrogenase; PDBTitle: crystal structure of aminoaldehyde dehydrogenase 1 from pisum sativum (psamadh1)
10	d1a4sa_			100.0	35	Fold: ALDH-like Superfamily: ALDH-like Family: ALDH-like
11	d1ag8a_			100.0	40	Fold: ALDH-like Superfamily: ALDH-like Family: ALDH-like

12	d1uzba	Alignment		100.0	31	Fold: ALDH-like Superfamily: ALDH-like Family: ALDH-like
13	c2ve5H	Alignment		100.0	41	PDB header: oxidoreductase Chain: H: PDB Molecule: betaine aldehyde dehydrogenase; PDBTitle: crystallographic structure of betaine aldehyde2 dehydrogenase from pseudomonas aeruginosa
14	c3rh9A	Alignment		100.0	32	PDB header: oxidoreductase Chain: A: PDB Molecule: succinate-semialdehyde dehydrogenase (nad(p)(+)); PDBTitle: the crystal structure of oxidoreductase from marinobacter aquaeolei
15	d1wnda	Alignment		100.0	38	Fold: ALDH-like Superfamily: ALDH-like Family: ALDH-like
16	c3b4wA	Alignment		100.0	35	PDB header: oxidoreductase Chain: A: PDB Molecule: aldehyde dehydrogenase; PDBTitle: crystal structure of mycobacterium tuberculosis aldehyde dehydrogenase2 complexed with nad+
17	c3ifgH	Alignment		100.0	37	PDB header: oxidoreductase Chain: H: PDB Molecule: succinate-semialdehyde dehydrogenase (nadp(+)); PDBTitle: crystal structure of succinate-semialdehyde dehydrogenase from2 burkholderia pseudomallei, part 1 of 2
18	c3ek1C	Alignment		100.0	34	PDB header: oxidoreductase Chain: C: PDB Molecule: aldehyde dehydrogenase; PDBTitle: crystal structure of aldehyde dehydrogenase from brucella2 melitensis biovar abortus 2308
19	d1euha	Alignment		100.0	33	Fold: ALDH-like Superfamily: ALDH-like Family: ALDH-like
20	c3r31A	Alignment		100.0	38	PDB header: oxidoreductase Chain: A: PDB Molecule: betaine aldehyde dehydrogenase; PDBTitle: crystal structure of betaine aldehyde dehydrogenase from agrobacterium2 tumefaciens
21	c3k2wD	Alignment	not modelled	100.0	34	PDB header: oxidoreductase Chain: D: PDB Molecule: betaine-aldehyde dehydrogenase; PDBTitle: crystal structure of betaine-aldehyde dehydrogenase from2 pseudoalteromonas atlantica t6c
22	c3jz4C	Alignment	not modelled	100.0	35	PDB header: oxidoreductase Chain: C: PDB Molecule: succinate-semialdehyde dehydrogenase [nadp(+)]; PDBTitle: crystal structure of e. coli nadp dependent enzyme
23	c1t90B	Alignment	not modelled	100.0	30	PDB header: oxidoreductase Chain: B: PDB Molecule: probable methylmalonate-semialdehyde PDBTitle: crystal structure of methylmalonate semialdehyde2 dehydrogenase from bacillus subtilis
24	c2w8qA	Alignment	not modelled	100.0	34	PDB header: oxidoreductase Chain: A: PDB Molecule: succinate-semialdehyde dehydrogenase, PDBTitle: the crystal structure of human ssadh in complex with ssa.
25	c2hg2A	Alignment	not modelled	100.0	33	PDB header: oxidoreductase Chain: A: PDB Molecule: aldehyde dehydrogenase a; PDBTitle: structure of lactaldehyde dehydrogenase
26	c3i44A	Alignment	not modelled	100.0	34	PDB header: oxidoreductase Chain: A: PDB Molecule: aldehyde dehydrogenase; PDBTitle: crystal structure of aldehyde dehydrogenase from bartonella2 henselae at 2.0a resolution
27	d1ky8a	Alignment	not modelled	100.0	27	Fold: ALDH-like Superfamily: ALDH-like Family: ALDH-like
28	c3prlD	Alignment	not modelled	100.0	33	PDB header: oxidoreductase Chain: D: PDB Molecule: nadp-dependent glyceraldehyde-3-phosphate dehydrogenase; PDBTitle: crystal structure of nadp-dependent glyceraldehyde-3-phosphate2 dehydrogenase from bacillus halodurans c-125

29	d1bi9a	Alignment	not modelled	100.0	37	Fold: ALDH-like Superfamily: ALDH-like Family: ALDH-like
30	c3haza	Alignment	not modelled	100.0	30	PDB header: oxidoreductase Chain: A: PDB Molecule: proline dehydrogenase; PDBTitle: crystal structure of bifunctional proline utilization a2 (puta) protein
31	c3ju8B	Alignment	not modelled	100.0	28	PDB header: oxidoreductase Chain: B: PDB Molecule: succinylglutamic semialdehyde dehydrogenase; PDBTitle: crystal structure of succinylglutamic semialdehyde dehydrogenase from2 pseudomonas aeruginosa.
32	c3rosA	Alignment	not modelled	100.0	28	PDB header: oxidoreductase Chain: A: PDB Molecule: nad-dependent aldehyde dehydrogenase; PDBTitle: crystal structure of nad-dependent aldehyde dehydrogenase from2 lactobacillus acidophilus
33	c3efvC	Alignment	not modelled	100.0	31	PDB header: oxidoreductase Chain: C: PDB Molecule: putative succinate-semialdehyde dehydrogenase; PDBTitle: crystal structure of a putative succinate-semialdehyde dehydrogenase2 from salmonella typhimurium lt2 with bound nad
34	c2vroB	Alignment	not modelled	100.0	21	PDB header: oxidoreductase Chain: B: PDB Molecule: aldehyde dehydrogenase; PDBTitle: crystal structure of aldehyde dehydrogenase from2 burkholderia xenovorans lb400
35	c3r64A	Alignment	not modelled	100.0	30	PDB header: oxidoreductase Chain: A: PDB Molecule: nad dependent benzaldehyde dehydrogenase; PDBTitle: crystal structure of a nad-dependent benzaldehyde dehydrogenase from2 corynebacterium glutamicum
36	c3pqmA	Alignment	not modelled	100.0	31	PDB header: oxidoreductase Chain: A: PDB Molecule: acetaldehyde dehydrogenase; PDBTitle: crystal structure of glyceraldehyde-3-phosphate dehydrogenase gapn2 from methanocaldococcus jannaschii dsm 2661
37	d1ad3a	Alignment	not modelled	100.0	27	Fold: ALDH-like Superfamily: ALDH-like Family: ALDH-like
38	c3v4cb	Alignment	not modelled	100.0	26	PDB header: oxidoreductase Chain: B: PDB Molecule: aldehyde dehydrogenase (nadp+); PDBTitle: crystal structure of a semialdehyde dehydrogenase from sinorhizobium2 meliloti 1021
39	d1ez0a	Alignment	not modelled	100.0	22	Fold: ALDH-like Superfamily: ALDH-like Family: ALDH-like
40	c3lInsD	Alignment	not modelled	100.0	28	PDB header: oxidoreductase Chain: D: PDB Molecule: benzaldehyde dehydrogenase; PDBTitle: benzaldehyde dehydrogenase, a class 3 aldehyde dehydrogenase, with2 bound nadp+ and benzoate adduct
41	c3k9dD	Alignment	not modelled	100.0	20	PDB header: oxidoreductase Chain: D: PDB Molecule: aldehyde dehydrogenase; PDBTitle: crystal structure of probable aldehyde dehydrogenase from listeria2 monocytogenes egd-e
42	d1o20a	Alignment	not modelled	100.0	14	Fold: ALDH-like Superfamily: ALDH-like Family: ALDH-like
43	c3my7A	Alignment	not modelled	100.0	19	PDB header: oxidoreductase Chain: A: PDB Molecule: alcohol dehydrogenase/acetaldehyde dehydrogenase; PDBTitle: the crystal structure of the acdh domain of an alcohol dehydrogenase2 from vibrio parahaemolyticus to 2.25a
44	c2h5gA	Alignment	not modelled	100.0	20	PDB header: oxidoreductase Chain: A: PDB Molecule: delta 1-pyrroline-5-carboxylate synthetase; PDBTitle: crystal structure of human pyrroline-5-carboxylate synthetase
45	d1vlua	Alignment	not modelled	100.0	16	Fold: ALDH-like Superfamily: ALDH-like Family: ALDH-like
46	c1vlub	Alignment	not modelled	100.0	15	PDB header: oxidoreductase Chain: B: PDB Molecule: gamma-glutamyl phosphate reductase; PDBTitle: crystal structure of gamma-glutamyl phosphate reductase (yor232c) from2 saccharomyces cerevisiae at 2.40 a resolution
47	d1k75a	Alignment	not modelled	98.8	18	Fold: ALDH-like Superfamily: ALDH-like Family: L-histidinol dehydrogenase HisD
48	c2yvqA	Alignment	not modelled	52.2	13	PDB header: ligase Chain: A: PDB Molecule: carbamoyl-phosphate synthase; PDBTitle: crystal structure of mgs domain of carbamoyl-phosphate2 synthetase from homo sapiens
49	d1s7ia	Alignment	not modelled	50.6	20	Fold: Ferrodoxin-like Superfamily: Dimeric alpha+beta barrel Family: DGPF domain (Pfam 04946)
50	d1a9xa2	Alignment	not modelled	43.7	22	Fold: Methylglyoxal synthase-like Superfamily: Methylglyoxal synthase-like Family: Carbamoyl phosphate synthetase, large subunit allosteric, C-terminal domain
51	d1wo8a1	Alignment	not modelled	33.5	16	Fold: Methylglyoxal synthase-like Superfamily: Methylglyoxal synthase-like Family: Methylglyoxal synthase, MgsA
52	c3jtpB	Alignment	not modelled	32.6	17	PDB header: protein binding Chain: B: PDB Molecule: adapter protein meca 1; PDBTitle: crystal structure of the c-terminal domain of meca
53	d1y5ea1	Alignment	not modelled	28.9	23	Fold: Molybdenum cofactor biosynthesis proteins Superfamily: Molybdenum cofactor biosynthesis proteins Family: MogA-like

54	c3e5bB	Alignment	not modelled	24.6	14	PDB header: lyase Chain: B: PDB Molecule: isocitrate lyase; PDBTitle: 2.4 a crystal structure of isocitrate lyase from brucella2 melitensis
55	d1o66a	Alignment	not modelled	24.2	10	Fold: TIM beta/alpha-barrel Superfamily: Phosphoenolpyruvate/pyruvate domain Family: Ketopantoate hydroxymethyltransferase PanB
56	c2yukA	Alignment	not modelled	19.7	19	PDB header: transferase Chain: A: PDB Molecule: myeloid/lymphoid or mixed-lineage leukemia PDBTitle: solution structure of the hmg box of human myeloid/lymphoid2 or mixed-lineage leukemia protein 3 homolog
57	d2ioja1	Alignment	not modelled	19.2	17	Fold: MurF and HprK N-domain-like Superfamily: HprK N-terminal domain-like Family: DRTGG domain
58	d1mkza	Alignment	not modelled	16.9	20	Fold: Molybdenum cofactor biosynthesis proteins Superfamily: Molybdenum cofactor biosynthesis proteins Family: MogA-like
59	d1u0ta	Alignment	not modelled	15.3	20	Fold: NAD kinase/diacylglycerol kinase-like Superfamily: NAD kinase/diacylglycerol kinase-like Family: NAD kinase-like
60	d1js8a1	Alignment	not modelled	14.7	11	Fold: Di-copper centre-containing domain Superfamily: Di-copper centre-containing domain Family: Hemocyanin middle domain
61	d2bona1	Alignment	not modelled	14.1	16	Fold: NAD kinase/diacylglycerol kinase-like Superfamily: NAD kinase/diacylglycerol kinase-like Family: Diacylglycerol kinase-like
62	d1h6da1	Alignment	not modelled	13.0	6	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: Glyceraldehyde-3-phosphate dehydrogenase-like, N-terminal domain
63	c3v4gA	Alignment	not modelled	12.5	24	PDB header: dna binding protein Chain: A: PDB Molecule: arginine repressor; PDBTitle: 1.60 angstrom resolution crystal structure of an arginine repressor2 from vibrio vulnificus cmcp6
64	c2ec4A	Alignment	not modelled	12.1	12	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: fas-associated factor 1; PDBTitle: solution structure of the uas domain from human fas-2 associated factor 1
65	d1xxaa	Alignment	not modelled	12.1	24	Fold: DCoH-like Superfamily: C-terminal domain of arginine repressor Family: C-terminal domain of arginine repressor
66	c2pjka	Alignment	not modelled	12.0	22	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: 178aa long hypothetical molybdenum cofactor PDBTitle: structure of hypothetical molybdenum cofactor biosynthesis2 protein b from sulfobolbus tokodaii
67	c3lo3E	Alignment	not modelled	11.7	11	PDB header: structure genomics, unknown function Chain: E: PDB Molecule: uncharacterized conserved protein; PDBTitle: the crystal structure of a conserved functionally unknown2 protein from colwellia psychrerythraea 34h.
68	d2g2ca1	Alignment	not modelled	11.6	16	Fold: Molybdenum cofactor biosynthesis proteins Superfamily: Molybdenum cofactor biosynthesis proteins Family: MogA-like
69	c2l69A	Alignment	not modelled	11.2	19	PDB header: de novo protein Chain: A: PDB Molecule: rossmann 2x3 fold protein; PDBTitle: solution nmr structure of de novo designed protein, p-loop ntpase2 fold, northeast structural genomics consortium target or28
70	c1kb0A	Alignment	not modelled	11.1	23	PDB header: oxidoreductase Chain: A: PDB Molecule: quinohemoprotein alcohol dehydrogenase; PDBTitle: crystal structure of quinohemoprotein alcohol dehydrogenase from2 comamonas testosteroni
71	c2p2sA	Alignment	not modelled	11.1	11	PDB header: oxidoreductase Chain: A: PDB Molecule: putative oxidoreductase; PDBTitle: crystal structure of putative oxidoreductase (yp_050235.1) from2 erwinia carotovora atroseptica scri1043 at 1.25 a resolution
72	d2fug12	Alignment	not modelled	10.9	17	Fold: Nqo1 FMN-binding domain-like Superfamily: Nqo1 FMN-binding domain-like Family: Nqo1 FMN-binding domain-like
73	c3nt5B	Alignment	not modelled	10.8	16	PDB header: oxidoreductase Chain: B: PDB Molecule: inositol 2-dehydrogenase/d-chiro-inositol 3-dehydrogenase; PDBTitle: crystal structure of myo-inositol dehydrogenase from bacillus subtilis2 with bound cofactor and product inosose
74	d1wu2a3	Alignment	not modelled	10.8	13	Fold: Molybdenum cofactor biosynthesis proteins Superfamily: Molybdenum cofactor biosynthesis proteins Family: MoeA central domain-like
75	c1yiqa	Alignment	not modelled	10.1	16	PDB header: oxidoreductase Chain: A: PDB Molecule: quinohemoprotein alcohol dehydrogenase; PDBTitle: molecular cloning and structural analysis of2 quinohemoprotein alcohol dehydrogenase adhiig from3 pseudomonas putida hk5. comparison to the other4 quinohemoprotein alcohol dehydrogenase adhiib found in the5 same microorganism.
76	c2nvwB	Alignment	not modelled	9.8	9	PDB header: transcription Chain: B: PDB Molecule: galactose/lactose metabolism regulatory protein PDBTitle: crystal sctucture of transcriptional regulator gal180p from2 kluyveromyces lactis
77	c2fugA	Alignment	not modelled	9.8	17	PDB header: oxidoreductase Chain: A: PDB Molecule: nadh-quinone oxidoreductase chain 1; PDBTitle: crystal structure of the hydrophilic domain of respiratory

						complex i2 from thermus thermophilus
78	d1ydwaa1		Alignment	not modelled	9.7	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: Glyceraldehyde-3-phosphate dehydrogenase-like, N-terminal domain
79	d1u2ca2		Alignment	not modelled	9.3	Fold: Dystroglycan, domain 2 Superfamily: Dystroglycan, domain 2 Family: Dystroglycan, domain 2
80	c2gguA_		Alignment	not modelled	9.2	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: probable signal peptide protein; PDBTitle: three-dimensional structure of the phospholipid-binding protein from ralstonia solanacearum q8xv73_ralsq in complex with a phospholipid at3 the resolution 1.53 a. northeast structural genomics consortium4 target rsr89
81	c3gfgB_		Alignment	not modelled	9.2	PDB header: oxidoreductase Chain: B: PDB Molecule: uncharacterized oxidoreductase yvaa; PDBTitle: structure of putative oxidoreductase yvaa from bacillus subtilis in2 triclinic form
82	c2q4eB_		Alignment	not modelled	9.0	PDB header: oxidoreductase Chain: B: PDB Molecule: probable oxidoreductase at4g09670; PDBTitle: ensemble refinement of the protein crystal structure of gene product2 from arabidopsis thaliana at4g09670
83	c3ibpA_		Alignment	not modelled	8.9	PDB header: cell cycle Chain: A: PDB Molecule: chromosome partition protein mukb; PDBTitle: the crystal structure of the dimerization domain of escherichia coli2 structural maintenance of chromosomes protein mukb
84	d2ftsa3		Alignment	not modelled	8.8	Fold: Molybdenum cofactor biosynthesis proteins Superfamily: Molybdenum cofactor biosynthesis proteins Family: MoeA central domain-like
85	d2tpta3		Alignment	not modelled	8.6	Fold: alpha/beta-Hammerhead Superfamily: Pyrimidine nucleoside phosphorylase C-terminal domain Family: Pyrimidine nucleoside phosphorylase C-terminal domain
86	c1wx2A_		Alignment	not modelled	8.5	PDB header: oxidoreductase/metal transport Chain: A: PDB Molecule: tyrosinase; PDBTitle: crystal structure of the oxy-form of the copper-bound streptomyces2 castaneoglobiosporus tyrosinase complexed with a caddie protein3 prepared by the addition of hydrogenperoxide
87	d2f7wa1		Alignment	not modelled	8.3	Fold: Molybdenum cofactor biosynthesis proteins Superfamily: Molybdenum cofactor biosynthesis proteins Family: Moga-like
88	d1srqa_		Alignment	not modelled	8.2	Fold: Rap/Ran-GAP Superfamily: Rap/Ran-GAP Family: Rap/Ran-GAP
89	c1kv9A_		Alignment	not modelled	8.0	PDB header: oxidoreductase Chain: A: PDB Molecule: type ii quinohemoprotein alcohol dehydrogenase; PDBTitle: structure at 1.9 a resolution of a quinohemoprotein alcohol2 dehydrogenase from pseudomonas putida hk5
90	c1v9nA_		Alignment	not modelled	7.9	PDB header: oxidoreductase Chain: A: PDB Molecule: malate dehydrogenase; PDBTitle: structure of malate dehydrogenase from pyrococcus horikoshii ot3
91	c2v9vA_		Alignment	not modelled	7.9	PDB header: transcription Chain: A: PDB Molecule: selenocysteine-specific elongation factor; PDBTitle: crystal structure of moorella thermoacetica selb(377-511)
92	d1xrha_		Alignment	not modelled	7.8	Fold: L-sulfolactate dehydrogenase-like Superfamily: L-sulfolactate dehydrogenase-like Family: L-sulfolactate dehydrogenase-like
93	c3uoeb_		Alignment	not modelled	7.7	PDB header: oxidoreductase Chain: B: PDB Molecule: dehydrogenase; PDBTitle: the crystal structure of dehydrogenase from sinorhizobium meliloti
94	c2is8A_		Alignment	not modelled	7.6	PDB header: structural protein Chain: A: PDB Molecule: molybdopterin biosynthesis enzyme, moab; PDBTitle: crystal structure of the molybdopterin biosynthesis enzyme moab2 (ttha0341) from thermus thermophilus hb8
95	c2bonB_		Alignment	not modelled	7.3	PDB header: transferase Chain: B: PDB Molecule: lipid kinase; PDBTitle: structure of an escherichia coli lipid kinase (yegs)
96	d2fiua1		Alignment	not modelled	7.2	Fold: Ferredoxin-like Superfamily: Dimeric alpha+beta barrel Family: Atu0297-like
97	c3f4IF_		Alignment	not modelled	7.2	PDB header: oxidoreductase Chain: F: PDB Molecule: putative oxidoreductase yhhx; PDBTitle: crystal structure of a probable oxidoreductase yhhx in2 triclinic form. northeast structural genomics target er647
98	d1yuua2		Alignment	not modelled	7.1	Fold: Rubredoxin-like Superfamily: Zinc beta-ribbon Family: Prokaryotic DNA topoisomerase I, a C-terminal fragment
99	c3rfqC_		Alignment	not modelled	7.1	PDB header: biosynthetic protein Chain: C: PDB Molecule: pterin-4-alpha-carbinolamine dehydratase moab2; PDBTitle: crystal structure of pterin-4-alpha-carbinolamine dehydratase moab22 from mycobacterium marinum