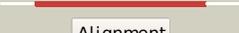
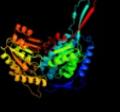
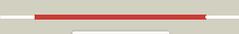


Phyre2

Email	l.a.kelley@imperial.ac.uk
Description	P17445
Date	Thu Jan 5 11:36:12 GMT 2012
Unique Job ID	47924f594f63bc83

Detailed template information

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	c2ve5H_	 Alignment		100.0	77	PDB header: oxidoreductase Chain: H: PDB Molecule: betaine aldehyde dehydrogenase; PDBTitle: crystallographic structure of betaine aldehyde2 dehydrogenase from pseudomonas aeruginosa
2	d1bxa_	 Alignment		100.0	39	Fold: ALDH-like Superfamily: ALDH-like Family: ALDH-like
3	d1a4sa_	 Alignment		100.0	51	Fold: ALDH-like Superfamily: ALDH-like Family: ALDH-like
4	c3ed6B_	 Alignment		100.0	40	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
5	d1o9ja_	 Alignment		100.0	39	Fold: ALDH-like Superfamily: ALDH-like Family: ALDH-like
6	d1o04a_	 Alignment		100.0	42	Fold: ALDH-like Superfamily: ALDH-like Family: ALDH-like
7	d1a98a_	 Alignment		100.0	43	Fold: ALDH-like Superfamily: ALDH-like Family: ALDH-like
8	c2o2qA_	 Alignment		100.0	39	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
9	c2d4eB_	 Alignment		100.0	40	PDB header: oxidoreductase Chain: B: PDB Molecule: 5-carboxymethyl-2-hydroxymuconate semialdehyde PDBTitle: crystal structure of the hpcc from thermus thermophilus hb8
10	c3r31A_	 Alignment		100.0	54	PDB header: oxidoreductase Chain: A: PDB Molecule: betaine aldehyde dehydrogenase; PDBTitle: crystal structure of betaine aldehyde dehydrogenase from agrobacterium2 tumefaciens
11	c3iwkB_	 Alignment		100.0	41	PDB header: oxidoreductase Chain: B: PDB Molecule: aminoaldehyde dehydrogenase; PDBTitle: crystal structure of aminoaldehyde dehydrogenase 1 from2 pisum sativum (psamadh1)

12	c3rh9A_	Alignment		100.0	33	PDB header: oxidoreductase Chain: A: PDB Molecule: succinate-semialdehyde dehydrogenase (nad(p(+))); PDBTitle: the crystal structure of oxidoreductase from marinobacter aquaeolei
13	c3i44A_	Alignment		100.0	32	PDB header: oxidoreductase Chain: A: PDB Molecule: aldehyde dehydrogenase; PDBTitle: crystal structure of aldehyde dehydrogenase from bartonella2 henselae at 2.0a resolution
14	c3k2wD_	Alignment		100.0	35	PDB header: oxidoreductase Chain: D: PDB Molecule: betaine-aldehyde dehydrogenase; PDBTitle: crystal structure of betaine-aldehyde dehydrogenase from2 pseudoalteromonas atlantica t6c
15	c2jg7G_	Alignment		100.0	30	PDB header: oxidoreductase Chain: G: PDB Molecule: antiqutin; PDBTitle: crystal structure of seabream antiqutin and elucidation of2 its substrate specificity
16	c3b4wA_	Alignment		100.0	39	PDB header: oxidoreductase Chain: A: PDB Molecule: aldehyde dehydrogenase; PDBTitle: crystal structure of mycobacterium tuberculosis aldehyde dehydrogenase2 complexed with nad+
17	d1wnda_	Alignment		100.0	38	Fold: ALDH-like Superfamily: ALDH-like Family: ALDH-like
18	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
19	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
20	c3qanB_	Alignment		100.0	30	PDB header: oxidoreductase Chain: B: PDB Molecule: 1-pyrroline-5-carboxylate dehydrogenase 1; PDBTitle: crystal structure of 1-pyrroline-5-carboxylate dehydrogenase from2 bacillus halodurans
21	d1uzba_	Alignment	not modelled	100.0	32	Fold: ALDH-like Superfamily: ALDH-like Family: ALDH-like
22	c1t90B_	Alignment	not modelled	100.0	32	PDB header: oxidoreductase Chain: B: PDB Molecule: probable methylmalonate-semialdehyde dehydrogenase from bacillus subtilis PDBTitle: crystal structure of methylmalonate semialdehyde2 dehydrogenase from bacillus subtilis
23	c3jz4C_	Alignment	not modelled	100.0	37	PDB header: oxidoreductase Chain: C: PDB Molecule: succinate-semialdehyde dehydrogenase [nadp+]; PDBTitle: crystal structure of e. coli nadp dependent enzyme
24	c2w8qA_	Alignment	not modelled	100.0	33	PDB header: oxidoreductase Chain: A: PDB Molecule: succinate-semialdehyde dehydrogenase, PDBTitle: the crystal structure of human ssadh in complex with ssa.
25	d1euha_	Alignment	not modelled	100.0	33	Fold: ALDH-like Superfamily: ALDH-like Family: ALDH-like
26	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
27	c2hg2A_	Alignment	not modelled	100.0	34	PDB header: oxidoreductase Chain: A: PDB Molecule: aldehyde dehydrogenase a; PDBTitle: structure of lactaldehyde dehydrogenase
28	d1ky8a_	Alignment	not modelled	100.0	31	Fold: ALDH-like Superfamily: ALDH-like Family: ALDH-like
						Fold: ALDH-like

29	d1bi9a_	Alignment	not modelled	100.0	40	Superfamily: ALDH-like Family: ALDH-like
30	c3ju8B_	Alignment	not modelled	100.0	30	PDB header: oxidoreductase Chain: B: PDB Molecule: succinylglutamic semialdehyde dehydrogenase; PDBTitle: crystal structure of succinylglutamic semialdehyde dehydrogenase from2 pseudomonas aeruginosa.
31	c3hazA_	Alignment	not modelled	100.0	27	PDB header: oxidoreductase Chain: A: PDB Molecule: proline dehydrogenase; PDBTitle: crystal structure of bifunctional proline utilization a2 (puta) protein
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	c2vroB_	Alignment	not modelled	100.0	26	PDB header: oxidoreductase Chain: B: PDB Molecule: aldehyde dehydrogenase; PDBTitle: crystal structure of aldehyde dehydrogenase from2 burkholderia xenovorans lb400
34	c3efvC_	Alignment	not modelled	100.0	32	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
35	c3r64A_	Alignment	not modelled	100.0	32	PDB header: oxidoreductase Chain: A: PDB Molecule: nad dependent benzaldehyde dehydrogenase; PDBTitle: crystal structure of a nad-dependent benzaldehyde dehydrogenase from2 corynebacterium glutamicum
36	c3pqaA_	Alignment	not modelled	100.0	30	PDB header: oxidoreductase Chain: A: PDB Molecule: lactaldehyde dehydrogenase; PDBTitle: crystal structure of glycerinaldehyde-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	24	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	25	Fold: ALDH-like Superfamily: ALDH-like Family: ALDH-like
40	c3lnsD_	Alignment	not modelled	100.0	26	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	21	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	18	Fold: ALDH-like Superfamily: ALDH-like Family: ALDH-like
43	c3my7A_	Alignment	not modelled	100.0	20	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	19	Fold: ALDH-like Superfamily: ALDH-like Family: ALDH-like
46	c1vlub_	Alignment	not modelled	100.0	18	PDB header: oxidoreductase Chain: B: PDB Molecule: gamma-glutamyl phosphate reductase; PDBTitle: crystal structure of gamma-glutamyl phosphate reductase (yor323c) from2 saccharomyces cerevisiae at 2.40 a resolution
47	d1k75a_	Alignment	not modelled	98.5	17	Fold: ALDH-like Superfamily: ALDH-like Family: L-histidinol dehydrogenase HisD
48	c2yvqA_	Alignment	not modelled	42.9	11	PDB header: ligase Chain: A: PDB Molecule: carbamoyl-phosphate synthase; PDBTitle: crystal structure of mgs domain of carbamoyl-phosphate2 synthetase from homo sapiens
49	d1a9xa2	Alignment	not modelled	40.4	15	Fold: Methylglyoxal synthase-like Superfamily: Methylglyoxal synthase-like Family: Carbamoyl phosphate synthetase, large subunit allosteric, C-terminal domain
50	d1uz5a3	Alignment	not modelled	33.2	14	Fold: Molybdenum cofactor biosynthesis proteins Superfamily: Molybdenum cofactor biosynthesis proteins Family: MoeA central domain-like
51	d1y5ea1	Alignment	not modelled	30.9	21	Fold: Molybdenum cofactor biosynthesis proteins Superfamily: Molybdenum cofactor biosynthesis proteins Family: MogA-like
52	c2yukA_	Alignment	not modelled	30.7	26	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
53	d1xxaa_	Alignment	not modelled	28.1	18	Fold: DCoH-like Superfamily: C-terminal domain of arginine repressor Family: C-terminal domain of arginine repressor

54	c1uz5A	Alignment	not modelled	27.9	15	PDB header: molybdopterin biosynthesis Chain: A: PDB Molecule: 402aa long hypothetical molybdopterin PDBTitle: the crystal structure of molybdopterin biosynthesis moea2 protein from pyrococcus horikoshii
55	c3jtpB	Alignment	not modelled	26.7	14	PDB header: protein binding Chain: B: PDB Molecule: adapter protein meca 1; PDBTitle: crystal structure of the c-terminal domain of meca
56	d2bona1	Alignment	not modelled	26.6	18	Fold: NAD kinase/diacylglycerol kinase-like Superfamily: NAD kinase/diacylglycerol kinase-like Family: Diacylglycerol kinase-like
57	d2g2ca1	Alignment	not modelled	26.6	14	Fold: Molybdenum cofactor biosynthesis proteins Superfamily: Molybdenum cofactor biosynthesis proteins Family: MogA-like
58	d1k99a	Alignment	not modelled	26.1	8	Fold: HMG-box Superfamily: HMG-box Family: HMG-box
59	d1e3ha5	Alignment	not modelled	25.7	34	Fold: Ribonuclease PH domain 2-like Superfamily: Ribonuclease PH domain 2-like Family: Ribonuclease PH domain 2-like
60	c2crjA	Alignment	not modelled	24.0	18	PDB header: gene regulation Chain: A: PDB Molecule: swi/snf-related matrix-associated actin- PDBTitle: solution structure of the hmg domain of mouse hmg domain2 protein hmgx2
61	d1yuaa2	Alignment	not modelled	23.8	18	Fold: Rubredoxin-like Superfamily: Zinc beta-ribbon Family: Prokaryotic DNA topoisomerase I, a C-terminal fragment
62	c2is8A	Alignment	not modelled	23.1	16	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
63	d1o66a	Alignment	not modelled	22.4	19	Fold: TIM beta/alpha-barrel Superfamily: Phosphoenolpyruvate/pyruvate domain Family: Ketopantoate hydroxymethyltransferase PanB
64	c2ec4A	Alignment	not modelled	22.1	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	d1mkza	Alignment	not modelled	21.2	17	Fold: Molybdenum cofactor biosynthesis proteins Superfamily: Molybdenum cofactor biosynthesis proteins Family: MogA-like
66	d1j3xa	Alignment	not modelled	21.0	19	Fold: HMG-box Superfamily: HMG-box Family: HMG-box
67	c1j3xA	Alignment	not modelled	21.0	19	PDB header: dna binding protein Chain: A: PDB Molecule: high mobility group protein 2; PDBTitle: solution structure of the n-terminal domain of the hmgb2
68	d2ioja1	Alignment	not modelled	20.6	19	Fold: MurF and HprK N-domain-like Superfamily: HprK N-terminal domain-like Family: DRTGG domain
69	c3fghA	Alignment	not modelled	20.0	11	PDB header: transcription Chain: A: PDB Molecule: transcription factor a, mitochondrial; PDBTitle: human mitochondrial transcription factor a box b
70	c3q3hA	Alignment	not modelled	19.7	14	PDB header: transferase Chain: A: PDB Molecule: hmw1c-like glycosyltransferase; PDBTitle: crystal structure of the actinobacillus pleuropneumoniae hmw1c2 glycosyltransferase in complex with udp-glc
71	c2eqzA	Alignment	not modelled	19.6	16	PDB header: transcription Chain: A: PDB Molecule: high mobility group protein b3; PDBTitle: solution structure of the first hmg-box domain from high2 mobility group protein b3
72	c1eakA	Alignment	not modelled	19.5	20	PDB header: hydrolase/hydrolase inhibitor Chain: A: PDB Molecule: 72 kda type iv collagenase; PDBTitle: catalytic domain of pronmp-2 e404q mutant
73	c1v9nA	Alignment	not modelled	19.2	23	PDB header: oxidoreductase Chain: A: PDB Molecule: malate dehydrogenase; PDBTitle: structure of malate dehydrogenase from pyrococcus horikoshii ot3
74	c2co9A	Alignment	not modelled	18.5	10	PDB header: transcription Chain: A: PDB Molecule: thymus high mobility group box protein tox; PDBTitle: solution structure of the hmg_box domain of thymus high2 mobility group box protein tox from mouse
75	d1xrha	Alignment	not modelled	18.2	18	Fold: L-sulfolactate dehydrogenase-like Superfamily: L-sulfolactate dehydrogenase-like Family: L-sulfolactate dehydrogenase-like
76	c2pjka	Alignment	not modelled	17.8	13	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 sulfolobus tokodaii
77	d1j46a	Alignment	not modelled	16.7	14	Fold: HMG-box Superfamily: HMG-box Family: HMG-box
78	c1l6jA	Alignment	not modelled	16.5	16	PDB header: hydrolase Chain: A: PDB Molecule: matrix metalloproteinase-9; PDBTitle: crystal structure of human matrix metalloproteinase mmp92 (gelatinase b).
79	c3i0pA	Alignment	not modelled	16.4	12	PDB header: oxidoreductase Chain: A: PDB Molecule: malate dehydrogenase; PDBTitle: crystal structure of malate dehydrogenase from entamoeba histolytica

80	d2lefa_	Alignment	not modelled	15.9	11	Fold: HMG-box Superfamily: HMG-box Family: HMG-box
81	d1rfma_	Alignment	not modelled	15.8	19	Fold: L-sulfolactate dehydrogenase-like Superfamily: L-sulfolactate dehydrogenase-like Family: L-sulfolactate dehydrogenase-like
82	c2cs1A_	Alignment	not modelled	15.8	16	PDB header: dna binding protein Chain: A: PDB Molecule: pms1 protein homolog 1; PDBTitle: solution structure of the hmg domain of human dna mismatch2 repair protein
83	c3uoeb_	Alignment	not modelled	15.7	16	PDB header: oxidoreductase Chain: B: PDB Molecule: dehydrogenase; PDBTitle: the crystal structure of dehydrogenase from sinorhizobium meliloti
84	d1v64a_	Alignment	not modelled	15.5	11	Fold: HMG-box Superfamily: HMG-box Family: HMG-box
85	d1s7ia_	Alignment	not modelled	15.4	8	Fold: Ferredoxin-like Superfamily: Dimeric alpha+beta barrel Family: DGPF domain (Pfam 04946)
86	c1vbiA_	Alignment	not modelled	15.1	18	PDB header: oxidoreductase Chain: A: PDB Molecule: type 2 malate/lactate dehydrogenase; PDBTitle: crystal structure of type 2 malate/lactate dehydrogenase from thermus2 thermophilus hb8
87	d1hsma_	Alignment	not modelled	14.9	13	Fold: HMG-box Superfamily: HMG-box Family: HMG-box
88	c2nqqA_	Alignment	not modelled	14.7	13	PDB header: biosynthetic protein Chain: A: PDB Molecule: molybdopterin biosynthesis protein moea; PDBTitle: moea r137q
89	d1u0ta_	Alignment	not modelled	14.7	13	Fold: NAD kinase/diacylglycerol kinase-like Superfamily: NAD kinase/diacylglycerol kinase-like Family: NAD kinase-like
90	d2fts3_	Alignment	not modelled	14.4	19	Fold: Molybdenum cofactor biosynthesis proteins Superfamily: Molybdenum cofactor biosynthesis proteins Family: MoeA central domain-like
91	d1nxua_	Alignment	not modelled	14.4	25	Fold: L-sulfolactate dehydrogenase-like Superfamily: L-sulfolactate dehydrogenase-like Family: L-sulfolactate dehydrogenase-like
92	d1s99a_	Alignment	not modelled	14.4	12	Fold: Ferredoxin-like Superfamily: MTH1187/YkoF-like Family: Putative thiamin/HMP-binding protein YkoF
93	d1lwma_	Alignment	not modelled	14.0	13	Fold: HMG-box Superfamily: HMG-box Family: HMG-box
94	c2l69A_	Alignment	not modelled	13.8	13	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
95	d2fiua1	Alignment	not modelled	13.6	16	Fold: Ferredoxin-like Superfamily: Dimeric alpha+beta barrel Family: Atu0297-like
96	c3lo3E_	Alignment	not modelled	13.4	15	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.
97	d1wu2a3	Alignment	not modelled	13.2	20	Fold: Molybdenum cofactor biosynthesis proteins Superfamily: Molybdenum cofactor biosynthesis proteins Family: MoeA central domain-like
98	c1wtjB_	Alignment	not modelled	13.2	12	PDB header: oxidoreductase Chain: B: PDB Molecule: ureidoglycolate dehydrogenase; PDBTitle: crystal structure of delta1-piperidine-2-carboxylate2 reductase from pseudomonas syringae pvar.tomato
99	c1b4aA_	Alignment	not modelled	13.1	14	PDB header: repressor Chain: A: PDB Molecule: arginine repressor; PDBTitle: structure of the arginine repressor from bacillus stearothermophilus