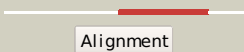

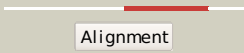



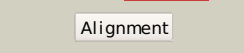



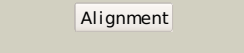

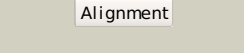

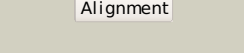



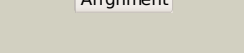

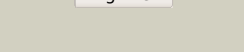


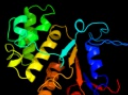







Phyre2

Email	l.a.kelley@imperial.ac.uk
Description	P18004
Date	Thu Jan 5 11:36:30 GMT 2012
Unique Job ID	1f6720e1bfca583d

Detailed template information

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	d1e9ra_	 Alignment		100.0	14	Fold: P-loop containing nucleoside triphosphate hydrolases Superfamily: P-loop containing nucleoside triphosphate hydrolases Family: RecA protein-like (ATPase-domain)
2	c2iusB_	 Alignment		99.7	22	PDB header: membrane protein Chain: B: PDB Molecule: dna translocase ftsk; PDBTitle: e. coli ftsk motor domain
3	c2iutA_	 Alignment		99.7	21	PDB header: membrane protein Chain: A: PDB Molecule: dna translocase ftsk; PDBTitle: p. aeruginosa ftsk motor domain, dimeric
4	c2iuuE_	 Alignment		99.6	21	PDB header: membrane protein Chain: E: PDB Molecule: dna translocase ftsk; PDBTitle: p. aeruginosa ftsk motor domain, hexamer
5	d1ji0a_	 Alignment		98.1	17	Fold: P-loop containing nucleoside triphosphate hydrolases Superfamily: P-loop containing nucleoside triphosphate hydrolases Family: ABC transporter ATPase domain-like
6	d1vpla_	 Alignment		98.0	17	Fold: P-loop containing nucleoside triphosphate hydrolases Superfamily: P-loop containing nucleoside triphosphate hydrolases Family: ABC transporter ATPase domain-like
7	c2nq2C_	 Alignment		98.0	16	PDB header: metal transport Chain: C: PDB Molecule: hypothetical abc transporter atp-binding protein PDBTitle: an inward-facing conformation of a putative metal-chelate2 type abc transporter.
8	c2yz2B_	 Alignment		97.9	15	PDB header: hydrolase Chain: B: PDB Molecule: putative abc transporter atp-binding protein tm_0222; PDBTitle: crystal structure of the abc transporter in the cobalt transport2 system
9	c1oxtb_	 Alignment		97.9	14	PDB header: transport protein Chain: B: PDB Molecule: abc transporter, atp binding protein; PDBTitle: crystal structure of glcv, the abc-atpase of the glucose abc2 transporter from sulfolobus solfataricus
10	c2olkD_	 Alignment		97.9	13	PDB header: hydrolase Chain: D: PDB Molecule: amino acid abc transporter; PDBTitle: abc protein artp in complex with adp-beta-s
11	c3fvqB_	 Alignment		97.8	16	PDB header: hydrolase Chain: B: PDB Molecule: fe(3+) ions import atp-binding protein fbpc; PDBTitle: crystal structure of the nucleotide binding domain fbpc2 complexed with atp

12	d1g6ha_	Alignment		97.8	15	Fold: P-loop containing nucleoside triphosphate hydrolases Superfamily: P-loop containing nucleoside triphosphate hydrolases Family: ABC transporter ATPase domain-like
13	c1z47B_	Alignment		97.8	16	PDB header: ligand binding protein Chain: B: PDB Molecule: putative abc-transporter atp-binding protein; PDBTitle: structure of the atpase subunit cysa of the putative2 sulfate atp-binding cassette (abc) transporter from3 alicyclobacillus acidocaldarius
14	c2r2aB_	Alignment		97.8	13	PDB header: toxin Chain: B: PDB Molecule: uncharacterized protein; PDBTitle: crystal structure of n-terminal domain of zonular occludens toxin from2 neisseria meningitidis
15	d1b0ua_	Alignment		97.8	14	Fold: P-loop containing nucleoside triphosphate hydrolases Superfamily: P-loop containing nucleoside triphosphate hydrolases Family: ABC transporter ATPase domain-like
16	d2qy9a2	Alignment		97.7	21	Fold: P-loop containing nucleoside triphosphate hydrolases Superfamily: P-loop containing nucleoside triphosphate hydrolases Family: Nitrogenase iron protein-like
17	d1vmaa2	Alignment		97.7	30	Fold: P-loop containing nucleoside triphosphate hydrolases Superfamily: P-loop containing nucleoside triphosphate hydrolases Family: Nitrogenase iron protein-like
18	c2xqiA_	Alignment		97.7	23	PDB header: hydrolase/rna Chain: A: PDB Molecule: atp-dependent rna helicase dob1; PDBTitle: structure of mtr4, a dexh helicase involved in nuclear rna2 processing and surveillance
19	c3l9oA_	Alignment		97.6	22	PDB header: hydrolase Chain: A: PDB Molecule: atp-dependent rna helicase dob1; PDBTitle: crystal structure of ntr4, a co-factor of the nuclear exosome
20	d1np6a_	Alignment		97.6	29	Fold: P-loop containing nucleoside triphosphate hydrolases Superfamily: P-loop containing nucleoside triphosphate hydrolases Family: Nitrogenase iron protein-like
21	d1okkd2	Alignment	not modelled	97.6	29	Fold: P-loop containing nucleoside triphosphate hydrolases Superfamily: P-loop containing nucleoside triphosphate hydrolases Family: Nitrogenase iron protein-like
22	c2w0mA_	Alignment	not modelled	97.6	20	PDB header: unknown function Chain: A: PDB Molecule: sso2452; PDBTitle: crystal structure of sso2452 from sulfolobus solfataricus2 p2
23	d1g6oa_	Alignment	not modelled	97.6	23	Fold: P-loop containing nucleoside triphosphate hydrolases Superfamily: P-loop containing nucleoside triphosphate hydrolases Family: RecA protein-like (ATPase-domain)
24	d2i3ba1	Alignment	not modelled	97.6	27	Fold: P-loop containing nucleoside triphosphate hydrolases Superfamily: P-loop containing nucleoside triphosphate hydrolases Family: RecA protein-like (ATPase-domain)
25	c2yl4A_	Alignment	not modelled	97.6	17	PDB header: membrane protein Chain: A: PDB Molecule: atp-binding cassette sub-family b member 10, PDBTitle: structure of the human mitochondrial abc transporter, abcb10
26	d1l7vc_	Alignment	not modelled	97.5	15	Fold: P-loop containing nucleoside triphosphate hydrolases Superfamily: P-loop containing nucleoside triphosphate hydrolases Family: ABC transporter ATPase domain-like
27	d1p9ra_	Alignment	not modelled	97.5	14	Fold: P-loop containing nucleoside triphosphate hydrolases Superfamily: P-loop containing nucleoside triphosphate hydrolases Family: RecA protein-like (ATPase-domain)
28	d3dhwc1	Alignment	not modelled	97.5	15	Fold: P-loop containing nucleoside triphosphate hydrolases Superfamily: P-loop containing nucleoside triphosphate hydrolases

					Family: ABC transporter ATPase domain-like PDB header: hydrolase Chain: A: PDB Molecule: antiviral helicase ski2; PDBTitle: crystal structure of the s. cerevisiae dexh helicase ski2 bound to2 amppnp
29	c4a4zA_	Alignment	not modelled	97.5	16
30	c2f1rA_	Alignment	not modelled	97.5	26
31	d1qzxa3	Alignment	not modelled	97.5	20
32	c2gzaB_	Alignment	not modelled	97.5	20
33	c3jvvA_	Alignment	not modelled	97.4	12
34	d1ls1a2	Alignment	not modelled	97.4	18
35	c2oaq1_	Alignment	not modelled	97.4	17
36	c3a4mB_	Alignment	not modelled	97.4	18
37	c2cnwF_	Alignment	not modelled	97.3	21
38	c2ja1A_	Alignment	not modelled	97.3	21
39	c2j7pA_	Alignment	not modelled	97.3	16
40	c2qy9A_	Alignment	not modelled	97.3	20
41	d1rz3a_	Alignment	not modelled	97.3	29
42	c1zu4A_	Alignment	not modelled	97.2	17
43	c2gszE_	Alignment	not modelled	97.2	19
44	c1vmaA_	Alignment	not modelled	97.2	24
45	c3b9qA_	Alignment	not modelled	97.1	16
46	c2og2A_	Alignment	not modelled	97.1	17
47	d2qm8a1	Alignment	not modelled	97.1	22
48	c2yhsA_	Alignment	not modelled	97.1	21
49	d1byia_	Alignment	not modelled	97.1	20
50	d1tf7a2	Alignment	not modelled	97.0	20
51	d1tf7a1	Alignment	not modelled	97.0	20
52	c2dr3A_	Alignment	not modelled	97.0	20
53	c3c8uA_	Alignment	not modelled	97.0	31

					resolution
54	c3dmdA_	Alignment	not modelled	97.0	26 PDB header: transport protein Chain: A: PDB Molecule: signal recognition particle receptor; PDBTitle: structures and conformations in solution of the signal recognition2 particle receptor from the archaeon pyrococcus furiosus
55	c3hr8A_	Alignment	not modelled	97.0	26 PDB header: recombination Chain: A: PDB Molecule: protein reca; PDBTitle: crystal structure of thermotoga maritima reca
56	dlnksa_	Alignment	not modelled	97.0	19 Fold: P-loop containing nucleoside triphosphate hydrolases Superfamily: P-loop containing nucleoside triphosphate hydrolases Family: Nucleotide and nucleoside kinases
57	c2recB_	Alignment	not modelled	96.9	21 PDB header: helicase PDB COMPND:
58	c1xp8A_	Alignment	not modelled	96.9	21 PDB header: dna binding protein Chain: A: PDB Molecule: reca protein; PDBTitle: "deinococcus radiodurans reca in complex with atp-gamma-s"
59	c1xx6B_	Alignment	not modelled	96.9	18 PDB header: transferase Chain: B: PDB Molecule: thymidine kinase; PDBTitle: x-ray structure of clostridium acetobutylicum thymidine kinase with2 adp. northeast structural genomics target car26.
60	c1u9iA_	Alignment	not modelled	96.9	22 PDB header: circadian clock protein Chain: A: PDB Molecule: kaic; PDBTitle: crystal structure of circadian clock protein kaic with phosphorylation2 sites
61	c3nxsA_	Alignment	not modelled	96.9	24 PDB header: transport protein Chain: A: PDB Molecule: lao/ao transport system atpase; PDBTitle: crystal structure of lao/ao transport system from mycobacterium2 smegmatis bound to gdp
62	c2wwwB_	Alignment	not modelled	96.9	20 PDB header: transport protein Chain: B: PDB Molecule: methylmalonic aciduria type a protein, PDBTitle: crystal structure of methylmalonic acidemia type a protein
63	c3tqcB_	Alignment	not modelled	96.9	14 PDB header: transferase Chain: B: PDB Molecule: pantothenate kinase; PDBTitle: structure of the pantothenate kinase (coaa) from coxiella burnetii
64	c3cmvG_	Alignment	not modelled	96.9	21 PDB header: recombination Chain: G: PDB Molecule: protein reca; PDBTitle: mechanism of homologous recombination from the reca-2 ssdna/dsdna structures
65	d1u94a1	Alignment	not modelled	96.9	21 Fold: P-loop containing nucleoside triphosphate hydrolases Superfamily: P-loop containing nucleoside triphosphate hydrolases Family: RecA protein-like (ATPase-domain)
66	d1rkba_	Alignment	not modelled	96.9	34 Fold: P-loop containing nucleoside triphosphate hydrolases Superfamily: P-loop containing nucleoside triphosphate hydrolases Family: Nucleotide and nucleoside kinases
67	d1mo6a1	Alignment	not modelled	96.9	21 Fold: P-loop containing nucleoside triphosphate hydrolases Superfamily: P-loop containing nucleoside triphosphate hydrolases Family: RecA protein-like (ATPase-domain)
68	c2wwiC_	Alignment	not modelled	96.9	10 PDB header: transferase Chain: C: PDB Molecule: thymidilate kinase, putative; PDBTitle: plasmodium falciparum thymidylate kinase in complex with2 aztmp and adp
69	c2eyuA_	Alignment	not modelled	96.9	21 PDB header: protein transport Chain: A: PDB Molecule: twitching motility protein pilt; PDBTitle: the crystal structure of the c-terminal domain of aquifex2 aeolicus pilt
70	d1ye8a1	Alignment	not modelled	96.9	18 Fold: P-loop containing nucleoside triphosphate hydrolases Superfamily: P-loop containing nucleoside triphosphate hydrolases Family: RecA protein-like (ATPase-domain)
71	c3b85A_	Alignment	not modelled	96.8	24 PDB header: hydrolase Chain: A: PDB Molecule: phosphate starvation-inducible protein; PDBTitle: crystal structure of predicted phosphate starvation-induced atpase2 pho2 from corynebacterium glutamicum
72	d1l8qa2	Alignment	not modelled	96.8	20 Fold: P-loop containing nucleoside triphosphate hydrolases Superfamily: P-loop containing nucleoside triphosphate hydrolases Family: Extended AAA-ATPase domain
73	c2zroA_	Alignment	not modelled	96.8	21 PDB header: hydrolase Chain: A: PDB Molecule: protein reca; PDBTitle: msreca adp form iv
74	d1ki9a_	Alignment	not modelled	96.8	22 Fold: P-loop containing nucleoside triphosphate hydrolases Superfamily: P-loop containing nucleoside triphosphate hydrolases Family: Nucleotide and nucleoside kinases
75	c2gesA_	Alignment	not modelled	96.8	14 PDB header: transferase Chain: A: PDB Molecule: pantothenate kinase; PDBTitle: pantothenate kinase from mycobacterium tuberculosis (mtpank) in2 complex with a coenzyme a derivative, form-i (rt)
76	c2z0hA_	Alignment	not modelled	96.8	24 PDB header: transferase Chain: A: PDB Molecule: thymidylate kinase; PDBTitle: crystal structure of thymidylate kinase in complex with dtdp2 and adp from thermotoga maritima
77	d1sq5a_	Alignment	not modelled	96.8	13 Fold: P-loop containing nucleoside triphosphate hydrolases Superfamily: P-loop containing nucleoside triphosphate hydrolases Family: Phosphoribulokinase/pantothenate kinase
78	d1xp8a1	Alignment	not modelled	96.8	21 Fold: P-loop containing nucleoside triphosphate hydrolases Superfamily: P-loop containing nucleoside triphosphate hydrolases Family: RecA protein-like (ATPase-domain)
79	c2oivB_	Alignment	not modelled	96.8	13 PDB header: isomerase Chain: B: PDB Molecule: reverse gyrase helicase domain;

79	c2iyyB	Alignment	not modelled	96.8	15	PDBTitle: helicase domain of reverse gyrase from thermotoga maritima PDB header: rna-binding Chain: A: PDB Molecule: signal recognition particle protein ffh; PDBTitle: structure of the e. coli signal recognition particle2 bound to a translating ribosome
80	c2iy3A	Alignment	not modelled	96.8	16	Fold: P-loop containing nucleoside triphosphate hydrolases Superfamily: P-loop containing nucleoside triphosphate hydrolases Family: RecA protein-like (ATPase-domain)
81	d1ubea1	Alignment	not modelled	96.8	21	PDB header: transferase Chain: B: PDB Molecule: uridine kinase; PDBTitle: ligand-free structure of uridine kinase from thermus thermophilus hb8
82	c3asyB	Alignment	not modelled	96.8	33	PDB header: ligase Chain: A: PDB Molecule: dethiobiotin synthetase; PDBTitle: crystal structure of a dethiobiotin synthetase from francisella2 tularensis subsp. tularensis schu s4
83	c3of5A	Alignment	not modelled	96.8	18	Fold: P-loop containing nucleoside triphosphate hydrolases Superfamily: P-loop containing nucleoside triphosphate hydrolases Family: Nitrogenase iron protein-like
84	d1xjca	Alignment	not modelled	96.8	22	Fold: P-loop containing nucleoside triphosphate hydrolases Superfamily: P-loop containing nucleoside triphosphate hydrolases Family: Nucleotide and nucleoside kinases
85	d1khta	Alignment	not modelled	96.8	23	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
86	c2gksB	Alignment	not modelled	96.7	21	Fold: P-loop containing nucleoside triphosphate hydrolases Superfamily: P-loop containing nucleoside triphosphate hydrolases Family: Phosphoribulokinase/pantothenate kinase
87	d1lodfa	Alignment	not modelled	96.7	20	Fold: P-loop containing nucleoside triphosphate hydrolases Superfamily: P-loop containing nucleoside triphosphate hydrolases Family: Nitrogenase iron protein-like
88	d1yrba1	Alignment	not modelled	96.7	35	PDB header: hydrolase Chain: C: PDB Molecule: gtpase imap family member 2; PDBTitle: crystal structure of human gtpase imap family member 2 in the2 nucleotide-free state
89	c3pljC	Alignment	not modelled	96.7	27	PDB header: hydrolase Chain: A: PDB Molecule: dna helicase ii; PDBTitle: crystal structure of e. coli uvrd
90	c3lfuA	Alignment	not modelled	96.7	19	PDB header: hydrolase regulator,dna binding protein Chain: A: PDB Molecule: putative dna replication factor; PDBTitle: crystal structure of a putative dna replication regulator hda2 (sama_1916) from shewanella amazonensis sb2b at 1.75 a resolution
91	c3bosA	Alignment	not modelled	96.7	13	Fold: P-loop containing nucleoside triphosphate hydrolases Superfamily: P-loop containing nucleoside triphosphate hydrolases Family: 6-phosphofructo-2-kinase/fructose-2,6-bisphosphatase, kinase domain
92	d1bifa1	Alignment	not modelled	96.7	24	PDB header: replication Chain: C: PDB Molecule: chromosomal replication initiator protein dnaa; PDBTitle: structure of amppcp-bound dnaa from aquifex aeolicus
93	c2hcbC	Alignment	not modelled	96.7	18	PDB header: rna binding protein, transport protein Chain: A: PDB Molecule: signal recognition 54 kda protein; PDBTitle: structures of srp54 and srp19, the two proteins assembling2 the ribonucleic core of the signal recognition particle3 from the archaeon pyrococcus furiosus.
94	c3dm5A	Alignment	not modelled	96.7	26	PDB header: transferase Chain: A: PDB Molecule: shikimate kinase; PDBTitle: structural basis for shikimate-binding specificity of helicobacter2 pylori shikimate kinase
95	c1zuiA	Alignment	not modelled	96.7	30	PDB header: transferase Chain: B: PDB Molecule: thymidylate kinase; PDBTitle: crystal structure of thymidylate kinase (aq_969) from aquifex aeolicus2 vf5
96	c2pbrB	Alignment	not modelled	96.7	27	PDB header: transferase Chain: A: PDB Molecule: thymidylate kinase; PDBTitle: 1.8 angstrom resolution crystal structure of a thymidylate kinase2 (tmk) from vibrio cholerae o1 biovar eltor str. n16961 in complex3 with tmp, thymidine-5'-diphosphate and adp
97	c3lv8A	Alignment	not modelled	96.6	25	Fold: P-loop containing nucleoside triphosphate hydrolases Superfamily: P-loop containing nucleoside triphosphate hydrolases Family: Adenosine-5'phosphosulfate kinase (APS kinase)
98	d1x6va3	Alignment	not modelled	96.6	23	PDB header: transferase Chain: H: PDB Molecule: dephospho-coa kinase; PDBTitle: crystal structure of dephospho-coa kinase (ec 2.7.1.24)2 (dephosphocoenzyme a kinase) (tm1387) from thermotoga maritima at3 2.60 a resolution
99	c2grjH	Alignment	not modelled	96.6	30	PDB header: cell cycle, structural protein Chain: B: PDB Molecule: septin-6; PDBTitle: crystal structure of human septin trimer 2/6/7
100	c2qagB	Alignment	not modelled	96.6	32	PDB header: transcription Chain: B: PDB Molecule: protein clp1; PDBTitle: clp1-atp-pcf11 complex
101	c2npiB	Alignment	not modelled	96.6	23	Fold: P-loop containing nucleoside triphosphate hydrolases Superfamily: P-loop containing nucleoside triphosphate hydrolases Family: Helicase-like "domain" of reverse gyrase
102	d1gkub1	Alignment	not modelled	96.6	19	PDB header: transferase Chain: B: PDB Molecule: thymidine kinase; PDBTitle: thymidine kinase from thermotoga maritima in complex with2 thymidine + appnhp
103	c2qq0B	Alignment	not modelled	96.6	16	Fold: P-loop containing nucleoside triphosphate hydrolases

104	d1fnna2	Alignment	not modelled	96.6	22	Superfamily: P-loop containing nucleoside triphosphate hydrolases Family: Extended AAA-ATPase domain
105	d2p67a1	Alignment	not modelled	96.6	25	Fold: P-loop containing nucleoside triphosphate hydrolases Superfamily: P-loop containing nucleoside triphosphate hydrolases Family: Nitrogenase iron protein-like
106	c2qa5A	Alignment	not modelled	96.6	41	PDB header: cell cycle, structural protein Chain: A: PDB Molecule: septin-2; PDBTitle: crystal structure of sept2 g-domain
107	d1k6ma1	Alignment	not modelled	96.5	27	Fold: P-loop containing nucleoside triphosphate hydrolases Superfamily: P-loop containing nucleoside triphosphate hydrolases Family: 6-phosphofructo-2-kinase/fructose-2,6-bisphosphatase, kinase domain
108	c3t5dC	Alignment	not modelled	96.5	41	PDB header: signaling protein Chain: C: PDB Molecule: septin-7; PDBTitle: crystal structure of septin 7 in complex with gdp
109	c2kjqA	Alignment	not modelled	96.5	30	PDB header: replication Chain: A: PDB Molecule: dnaa-related protein; PDBTitle: solution structure of protein nmb1076 from neisseria meningitidis.2 northeast structural genomics consortium target mr101b.
110	c3bh0A	Alignment	not modelled	96.5	13	PDB header: replication Chain: A: PDB Molecule: dnab-like replicative helicase; PDBTitle: atpase domain of g40p
111	d1ny5a2	Alignment	not modelled	96.5	15	Fold: P-loop containing nucleoside triphosphate hydrolases Superfamily: P-loop containing nucleoside triphosphate hydrolases Family: Extended AAA-ATPase domain
112	c3md0A	Alignment	not modelled	96.5	25	PDB header: transport protein Chain: A: PDB Molecule: arginine/ornithine transport system atpase; PDBTitle: crystal structure of arginine/ornithine transport system2 atpase from mycobacterium tuberculosis bound to gdp (a ras-3 like gtpase superfamily protein)
113	c3be4A	Alignment	not modelled	96.5	21	PDB header: transferase Chain: A: PDB Molecule: adenylate kinase; PDBTitle: crystal structure of cryptosporidium parvum adenylate kinase cgd5_3360
114	d1cr2a	Alignment	not modelled	96.5	16	Fold: P-loop containing nucleoside triphosphate hydrolases Superfamily: P-loop containing nucleoside triphosphate hydrolases Family: RecA protein-like (ATPase-domain)
115	d2afhe1	Alignment	not modelled	96.5	24	Fold: P-loop containing nucleoside triphosphate hydrolases Superfamily: P-loop containing nucleoside triphosphate hydrolases Family: Nitrogenase iron protein-like
116	c2plrB	Alignment	not modelled	96.5	20	PDB header: transferase Chain: B: PDB Molecule: probable thymidylate kinase; PDBTitle: crystal structure of dtmp kinase (st1543) from sulfolobus tokodaii2 strain7
117	c3lxaA	Alignment	not modelled	96.5	22	PDB header: immune system Chain: A: PDB Molecule: gtpase imap family member 1; PDBTitle: crystal structure of human gtpase imap family member 1
118	d1e4va1	Alignment	not modelled	96.5	22	Fold: P-loop containing nucleoside triphosphate hydrolases Superfamily: P-loop containing nucleoside triphosphate hydrolases Family: Nucleotide and nucleoside kinases
119	d1akya1	Alignment	not modelled	96.5	30	Fold: P-loop containing nucleoside triphosphate hydrolases Superfamily: P-loop containing nucleoside triphosphate hydrolases Family: Nucleotide and nucleoside kinases
120	d1zina1	Alignment	not modelled	96.5	26	Fold: P-loop containing nucleoside triphosphate hydrolases Superfamily: P-loop containing nucleoside triphosphate hydrolases Family: Nucleotide and nucleoside kinases