CDKA;1(At3g48750): global tree
File name: CDKA1.mltree1.svg
241 aa residues 150 OTU included.
Results of partial trees included.
Assemble Job Id: GG6jGq selectNalign Job Id: qqLE7z
Tree job id: DctQyw
BP values out of 100
Analyzed by ishikam@nibb.ac.jp
Date: Mon Jun 19 19:25:59 JST 2006

NP_001022747 *Caenorhabditis elegans* P34556 CAA48455 CAA81590 AAD37119 Cyclin-Dependent Kinase family member (cdk-1)/CDC2_CAEEL Cell division control protein 2 homolog (p34 protein kinase) /unnamed protein product /Hypothetical protein T05G5.3 /CDK1 o
CAE65141 *Caenorhabditis briggsae* Hypothetical protein CBG10007
CAA12343 *Sphaerechinus granularis* cyclin dependent kinase 1
XP_781415 *Strongylocentrotus purpuratus* PREDICTED: similar to Cell division control protein 2 homolog (p34 protein kinase) (Cyclin-dependent kinase 1) (CDK1)
BAA23218 *Hemicentrotus pulcherrimus* p34cdc2
XP_623384 *Apis mellifera* PREDICTED: similar to Bm cdc2
XP_307878 *Anopheles gambiae str. PEST* EAA03621 ENSANGP00000018666/ENSANGP00000018666
AAB28426 *Drosophila melanogaster* AAP13990 Cdc2E1-9 product *P element-induced P to S mutation at residue 242*/cdc2-like kinase
AAB28423 *Drosophila melanogaster* AAP13987 Cdc2D57 product *P element-induced G to R mutation at residue 148*/cdc2-like kinase
AAB28424 *Drosophila melanogaster* Cdc2E10 product *P element-induced L to Q mutation at residue 176*
AAB28425 *Drosophila melanogaster* AAP13989 Cdc2E1-24 product *P element-induced E to K mutation at residue 196*/cdc2-like kinase
AAB28421 *Drosophila melanogaster* Cdc2E1-4 product *P element-induced G to D mutation at residue 43*
AAB28427 *Drosophila melanogaster* AAP13988 Cdc2E1-23 product *P element-induced G to D mutation at residue 206*/cdc2-like kinase
AAB28422 *Drosophila melanogaster* AAP13986 Cdc2216 product *P element-induced A to V mutation at residue 145*/cdc2-like kinase
NP_476797 *Drosophila melanogaster* S12009 P23572 CAA40733 CAA40723 AAF52932 AAL28998 cdc2 CG5363-PA/S12009 protein kinase cdc2 (EC 2.7.1.-) /CDC2_DROME Cell division control protein 2 homolog (p34 protein kinase) /CDC2 /p34-cdc2 homologue /CG5363-PA /
BAA21483 *Bombyx mori* Bm cdc2
BAC98412 *Halocynthia roretzi* Cdc2 homologue
AAS59851 *Anabas testudineus* cyclin-dependent kinase 1
Q9DG98 *Oryzias luzonensis* BAB17223 CDC2_ORYLU Cell division control protein 2 homolog (p34 protein kinase) (Cyclin-dependent kinase 1) (CDK1)/serine/threonine kinase Cdc2
Q9DGA5 *Oryzias curvinotus* BAB17216 CDC2_ORYCU Cell division control protein 2 homolog (p34 protein kinase) (Cyclin-dependent kinase 1) (CDK1)/serine/threonine kinase Cdc2
BAB17220 *Oryzias javanicus* serine/threonine kinase cdc2
Q9DGA2 *Oryzias javanicus* BAB17219 CDC2_ORYJA Cell division control protein 2 homolog (p34 protein kinase) (Cyclin-dependent kinase 1) (CDK1)/serine/threonine kinase cdc2
Q9DGD3 *Oryzias latipes* BAB13720 CDC2_ORYLA Cell division control protein 2 homolog (p34 protein kinase) (Cyclin-dependent kinase 1) (CDK1)/Cdc2
NP_997729 *Danio rerio* AAP47014 AAH79527 cell division cycle 2/cell division control protein 2 /Cell division cycle 2
P51958 *Carassius auratus* BAA04605 CDC2_CARAU Cell division control protein 2 homolog (p34 protein kinase) (Cyclin-dependent kinase 1) (CDK1)/cdc2 kinase
P24033 *Xenopus laevis* AAA63562 CDC22_XENLA Cell division control protein 2 homolog 2 (p34 protein kinase 2)/p34cdc2x1.2 kinase
AAH54146 *Xenopus laevis* Cdc2a-prov protein
Q9W739 *Rana dybowskii* AAD43333 CDC2_RANDY Cell division control protein 2 homolog (p34 protein kinase)/cdc2 kinase
CAJ81835 *Xenopus tropicalis* cell division cycle 2, G1 to S and G2 to M
2005165A *Xenopus laevis* P35567 AAA63561 AAH45078 2005165A cdc2 protein/CDC21_XENLA Cell division control protein 2 homolog 1 (p34 protein kinase 1) /p34cdc2x1.1 kinase/Cdc2-prov protein
NP_988908 *Xenopus tropicalis* AAH61617 AAH77651 cell division cycle 2, G1 to S and G2 to M/Cell division cycle 2, G1 to S and G2 to M /Cdc2-prov protein
NP_990645 *Gallus gallus* P13863 CAA34764 cell division cycle 2, G1 to S and G2 to M/CDC2_CHICK Cell division control protein 2 homolog (p34 protein kinase) (Cyclin-dependent kinase 1) (CDK1)/unnamed protein product
NP_062169 *Rattus norvegicus* P39951 CAA43177 AAH91549 cell division cycle 2 homolog A/CDC2_RAT Cell division control protein 2 homolog (p34 protein kinase) (Cyclin-dependent kinase 1) (CDK1)/cdc2(+) /Cdc2a protein
AAB09465 *Mus musculus* p34 cdc2 kinase
NP_031685 *Mus musculus* P11440 AAA37408 AAH24396 BAC26856 BAE22561 BAE40034 cell division cycle 2 homolog A/CDC2_MOUSE Cell division control protein 2 homolog (p34 protein kinase) (Cyclin-dependent kinase 1) (CDK1) /cell cycle protein p34/Cdc2a protei
AAH05614 *Mus musculus* Cdc2a protein
CAA34481 *Mus musculus* unnamed protein product
XP_849450 *Canis familiaris* PREDICTED: similar to Cell division control protein 2 homolog (p34 protein kinase) (Cyclin-dependent kinase 1) (CDK1) isoform 3
NP_001777 *Homo sapiens* XP_507809 *Pan troglodytes* 1306392A *Homo sapiens* P06493 CAA28963 CAA68376 AAH14563 AAM34793 AAP35650 AAP36294*synthetic construct* CAI46271 *Homo sapiens* AAX29605 *synthetic construct* AAX36278 AAX36731 AAX42138 AAX42139 c
BAE01127 *Macaca fascicularis* unnamed protein product
Q5RCH1 *Pongo pygmaeus* CAH90536 CDC2_PONPY Cell division control protein 2 homolog (p34 protein kinase) (Cyclin-dependent kinase 1) (CDK1)/hypothetical protein
NP_776441 *Bos taurus* P48734 AAA18894 cell division cycle 2, G1 to S and G2 to M/CDC2_BOVIN Cell division control protein 2 homolog (p34 protein kinase) (Cyclin-dependent kinase 1) (CDK1) /cyclin-dependent kinase 1
AAI10152 *Bos taurus* Cell division cycle 2, G1 to S and G2 to M
AAD34354 *Paramecium tetraurelia* cyclin-dependent protein kinase Cdk2
XP_569525 *Cryptococcus neoformans var. neoformans JEC21* AAQ08004 *Cryptococcus neoformans var. neoformans* EAL21849 *Cryptococcus neoformans var. neoformans B-3501A* AAW42218 *Cryptococcus neoformans var. neoformans JEC21* Cdc2 cyclin-dependent kinas
AAP94021 *Ustilago maydis* cyclin-dependent kinase 1
NP_595629 *Schizosaccharomyces pombe 972h-* 1101270A *Schizosaccharomyces pombe* P04551 AAA35293 BAA21379 CAC37513 cyclin-dependent protein kinase/1101270A protein CDC2/CDC2_SCHPO Cell division control protein 2 (p34 protein kinase) /CDC2 protein kinas
XP_383308 *Gibberella zeae PH-1* EAA72872 hypothetical protein FG03132.1/hypothetical protein FG03132.1
XP_363436 *Magnaporthe grisea 70-15* hypothetical protein MG01362.4
XP_388644 *Gibberella zeae PH-1* EAA71285 CDC2_AJECA Cell division control protein 2 (Cyclin-dependent protein kinase)/CDC2_AJECA Cell division control protein 2 (Cyclin-dependent protein kinase)
EAQ85277 *Chaetomium globosum CBS 148.51* cell division control protein 2
XP_960117 *Neurospora crassa N150* XP_330428 *Neurospora crassa* EAA30881 CELL DIVISION CONTROL PROTEIN 2 (CYCLIN-DEPENDENT PROTEIN KINASE)/CELL DIVISION CONTROL PROTEIN 2 (CYCLIN-DEPENDENT PROTEIN KINASE) /CELL DIVISION CONTROL PROTEIN 2 (CYCLIN-DEPEN
AAF69500 *Sporothrix schenckii* AAF69501 cyclin-dependent protein kinase CDC2/cyclin-dependent protein kinase CDC2
XP_661786 *Aspergillus nidulans FGSC A4* Q00646 *Emericella nidulans* AAA20597 EAA59281 *Aspergillus nidulans FGSC A4* cell division control protein 2/CDC2_EMENI Cell division control protein 2 (Cyclin-dependent protein kinase) /protein kinase function
BAE57360 *Aspergillus oryzae* unnamed protein product
XP_750689 *Aspergillus fumigatus Af293* EAL88651 cell division control protein 2 kinase/cell division control protein 2 kinase, putative
P54119 *Ajellomyces capsulatus* CAA52405 *Histoplasma capsulatum var. capsulatum* CDC2_AJECA Cell division control protein 2 (Cyclin-dependent protein kinase)/cyclin-dependent protein kinase
XP_500733 *Yarrowia lipolytica CLIB122* CAG82978 hypothetical protein/unnamed protein product
NP_009718 *Saccharomyces cerevisiae* P00546 1002252A CAA25065 CAA56509 CAA85119 Catalytic subunit of the main cell cycle cyclin-dependent kinase (CDK); alternately associates with G1 cyclins (CLNs) and G2/M cyclins (CLBs) which direct the CDK to specif
XP_447125 *Candida glabrata CBS 138* CAG60058 unnamed protein product/unnamed protein product
NP_984154 *Eremothecium gossypii* AAS51978 *Ashbya gossypii ATCC 10895* ADR058Cp/ADR058Cp
XP_451964 *Kluyveromyces lactis NRRL Y-1140* CAH02357 unnamed protein product/unnamed protein product
XP_713525 *Candida albicans SC5314* XP_713486 P43063 *Candida albicans* CAA56338 AAC49450 EAK94372 *Candida albicans SC5314* EAK94417 cyclin-dependent protein kinase Cdc28/cyclin-dependent protein kinase Cdc28 /CDC28_CANAL Cell division control protein
XP_462008 *Debaryomyces hansenii CBS767* CAG90489 hypothetical protein DEHA0G11660g/unnamed protein product
AAD05577 *Pneumocystis carinii* AAC06329 Cdc2 cyclin-dependent kinase/Cdc2 cyclin-dependent kinase
gnl|CMER|CME119C_cyclin_dependent_kinase,_A-type
CAA12223 *Sphaerechinus granularis* cyclin dependent kinase 2
XP_790847 *Strongylocentrotus purpuratus* PREDICTED: similar to Cell division protein kinase 2
AAH70640 *Xenopus laevis* MGC81499 protein
P23437 *Xenopus laevis* CAA32443 CDK2_XENLA Cell division protein kinase 2 (CDC2 homolog Eg1 protein kinase)/Eg1
AAI06637 *Xenopus laevis* Unknown (protein for MGC:132167)
NP_001008136 *Xenopus tropicalis* AAH81346 MGC89594 protein/MGC89594 protein
XP_855929 *Canis familiaris* PREDICTED: similar to cyclin-dependent kinase 2 isoform 3
XP_856011 *Canis familiaris* PREDICTED: similar to cyclin-dependent kinase 2 isoform 5
XP_856049 *Canis familiaris* XP_855969 XP_848347 PREDICTED: similar to cyclin-dependent kinase 2 isoform 6/PREDICTED: similar to cyclin-dependent kinase 2 isoform 4 /PREDICTED: similar to cyclin-dependent kinase 2 isoform 1 isoform 1
P48963 *Mesocricetus auratus* BAA04165 BAA04166 CDK2_MESAU Cell division protein kinase 2/cyclin-dependent kinase /cyclin-dependent kinase
NP_001014934 *Bos taurus* Q5E9Y0 AAX08807 cyclin-dependent kinase 2/CDK2_BOVIN Cell division protein kinase 2 /cyclin-dependent kinase 2 isoform 1
NP_058036 *Mus musculus* NP_904326 NP_955795 *Rattus norvegicus* P97377 *Mus musculus* O55076 *Cricetulus griseus* AAB37128 *Mus musculus* CAA11533 CAA11680 *Cricetulus griseus* CAA11682 AAH05654 *Mus musculus* AAH61832 *Rattus norvegicus* BAE27476 *Mus*
Q63699 *Rattus norvegicus* I78840 BAA05947 *Rattus rattus* BAA05948 CDK2_RAT Cell division protein kinase 2/I78840 protein kinase (EC 2.7.1.37) cdk2, beta splice form - rat/cyclin dependent kinase 2-alpha /cyclin dependent kinase 2-beta
1GII *Homo sapiens* 1GIJ A Chain A, Human Cyclin Dependent Kinase 2 Complexed With The Cdk4 Inhibitor/A Chain A, Human Cyclin Dependent Kinase 2 Complexed With The Cdk4 Inhibitor
AAX36488 *synthetic construct* cyclin-dependent kinase 2
NP_001789 *Homo sapiens* 1B38 2BPM 2BPM 1VYW 1VYW 1OIR 1H01 1JST 1JST 1JSU 1FQ1 2C4G 2C6T 2C6T 1W98 1OGU 1OGU P24941 2C6O 2C6M 2C6L 2C6K 2C6I 2C69 2C68 2A0C 1YKR 2EXM 2BTS 2BTR 2B55 2B54 2B53 2B52 1JSV 2BHH 2BHE 1Y91 1Y8Y 1WCC 1W0X 1URC 1URC 1PYE 1VYZ 1
CAA43807 *Homo sapiens* CDK2
NP_998571 *Danio rerio* AAH49499 AAH62836 cyclin-dependent kinase 2/Cyclin-dependent kinase 2 /Cyclin-dependent kinase 2
P43450 *Carassius auratus* AAB22550 CDK2_CARAU Cell division protein kinase 2/cell division kinase; cyclin-dependent kinase; cdk2
XP_427196 *Gallus gallus* PREDICTED: similar to Cell division protein kinase 3, partial
XP_876057 *Bos taurus* PREDICTED: similar to Cell division protein kinase 3
NP_001249 *Homo sapiens* XP_523720 *Pan troglodytes* Q00526 *Homo sapiens* CAA47001 AAV40830 cyclin-dependent kinase 3/PREDICTED: cyclin-dependent kinase 3 /CDK3_HUMAN Cell division protein kinase 3 /serine/threonine protein kinase /cyclin-dependent ki
AAV68595 *Ostreococcus tauri* cell cycle dependent kinase A
3655_Cre
NP_912550 *Oryza sativa* (japonica cultivar-group) AAN62789 Putative CELL DIVISION CONTROL PROTEIN 2 HOMOLOG 1/Putative CELL DIVISION CONTROL PROTEIN 2 HOMOLOG 1
1814443A *Oryza sativa* P29618 CAA42922 *Oryza sativa* (japonica cultivar-group) 1814443A cdc2 protein:ISOTYPE=cdc2Os-1/CDC21_ORYSA Cell division control protein 2 homolog 1 /Rcdc2-1
B40444 *Zea mays* B40444 protein kinase (EC 2.7.1.37) cdc2 homolog B - maize (fragment)
A40444 *Zea mays* A40444 protein kinase (EC 2.7.1.37) cdc2 homolog A - maize
AAV28534 *Saccharum officinarum* cell-division-cycle-2 kinase; cyclin-dependent kinase
P23111 *Zea mays* AAA33479 CDC2_MAIZE Cell division control protein 2 homolog (p34cdc2)/protein cdc2 kinase
AAD10483 *Triticum aestivum* p34cdc2
BAA21673 *Allium cepa* cdc2 kinase
AAL47481 *Helianthus tuberosus* cyclin-dependent kinase
AAL37195 *Helianthus annuus* cyclin dependent kinase
BAE06268 *Scutellaria baicalensis* cyclin-dependent kinase A1
AAC41680 *Petroselinum crispum* protein kinase p34cdc2
CAD43850 *Daucus carota* cell division cycle protein 2
CAD29319 *Juglans nigra* x *Juglans regia* cyclin-dependent kinase
P24923 *Medicago sativa* AAB41817 CDC21_MEDSA Cell division control protein 2 homolog 1/serine threonine tyrosine kinase
CAA99991 *Sesbania rostrata* cdc2 kinase homologue
P52389 *Vigna unguiculata* CAA61581 CDC2_VIGUN Cell division control protein 2 homolog (p34cdc2)/protein kinase
Q41639 *Vigna aconitifolia* AAA34241 CDC2_VIGAC Cell division control protein 2 homolog (p34cdc2)/protein kinase
Q05006 *Medicago sativa* CAA50038 CDC22_MEDSA Cell division control protein 2 homolog 2/CDC2 kinase
BAA33152 *Pisum sativum* cdc2
BAE80323 *Camellia sinensis* cyclin dependent kinase A
CAA76701 *Lycopersicon esculentum* cyclin-dependent protein kinase p34cdc2
CAD43177 *Coffea arabica* putative cyclin dependent kinase
BAE06269 *Scutellaria baicalensis* cyclin-dependent kinase A2
Q38772 *Antirrhinum majus* T17115 CAA66233 CDC2A_ANTMA Cell division control protein 2 homolog A/T17115 protein kinase cdc2a (EC 2.7.1.-), cyclin-dependent - garden snapdragon/cyclin-dependent kinase
CAA76700 *Lycopersicon esculentum* cyclin-dependent protein kinase p34cdc2
BAA09369 *Nicotiana tabacum* cdc2 homolog
CAA73997 *Petunia* x *hybrida* cyclin dependent kinase
AAB02567 *Nicotiana tabacum* cdc2 gene product
AAG01534 *Nicotiana tabacum* cyclin-dependent kinase A:4
Ppa_CDKA1_8_1
Ppa_CDKA1_14_1 CAD56245 *Physcomitrella patens* **putative cyclin dependent kinase A**
CAA56815 *Pinus contorta* cdc2Pnc
CAA54746 *Picea abies* cdc2Pa
Smo_CDKA1_1_1 Smo_CDKA1_14_1
P93101 *Chenopodium rubrum* CAA71242 CDC2_CHERU Cell division control protein 2 homolog (p34cdc2)/cyclin dependent kinase p34
AAK16652 *Populus tremula* x *Populus tremuloides* CDC2 homolog
XP_463932 *Oryza sativa* (japonica cultivar-group) XP_463933 1814443B *Oryza sativa* P29619 CAA42923 *Oryza sativa* (japonica cultivar-group) BAD07949 BAD07950 p34cdc2/putative p34cdc2 /1814443B cdc2 protein:ISOTYPE=cdc2Os-2/CDC22_ORYSA Cell division c
AAA92823 *Brassica napus* cyclin dependent protein kinase homolog; similar to moth bean p34cdc2 protein, PIR Accession Number JQ2243
AAL91258 *Arabidopsis thaliana* **AT3g48750/T21J18_20**
T49271 *Arabidopsis thaliana* **CAB87903 T49271 CELL DIVISION CONTROL PROTEIN 2 HOMOLOG A - Arabidopsis thaliana/CELL DIVISION CONTROL PROTEIN 2 HOMOLOG A**
AT3G48750 = NP_566911 P24100 CAA40971 AAA32831 BAA01623 AAB22607 AAB23643 AAM61706 ABD59044 CDC2A (CELL DIVISION CONTROL 2); kinase/protein binding /CDC2A_ARATH Cell division control protein 2 homolog A /p34(cdc2) /protein kinase/p32 protein serine/
AAU87546 *Tetrahymena thermophila* cdc2 protein kinase
EAS01666 *Tetrahymena thermophila SB210* Ribosomal protein L13 containing protein
AAM14635 *Giardia intestinalis* Cdc2
XP_767623 *Giardia lamblia ATCC 50803* EAA37469 hypothetical protein GLP_576_19385_20311/GLP_576_19385_20311
CAA04520 *Toxoplasma gondii* AAB96975 putative 34kDa cdc2-related protein kinase/CDC2-like protein kinase TPK2
XP_954049 *Theileria annulata strain Ankara* CAA67306 *Theileria annulata* CAI73372 cdc2-like kinase/cdc2-like kinase /cdc2-like kinase
XP_766249 *Theileria parva strain Muguga* CAA67342 *Theileria parva* EAN33966 cell division control protein 2 related kinase/cdec2-related kinase /cell division control protein 2 related kinase
XP_743249 *Plasmodium chabaudi chabaudi* CAH75998 *Plasmodium chabaudi* cell division control protein/cell division control protein 2 homolog, putative
XP_730212 *Plasmodium yoelii yoelii str. 17XNL* EAA21777 *Plasmodium yoelii yoelii* cdc2 kinase 2/cdc2-related kinase 2
CAA11849 *Plasmodium berghei* cdc2-related kinase 2
XP_677202 *Plasmodium berghei strain ANKA* CAH93935 *Plasmodium berghei* cell division control protein/cell division control protein 2 homolog, putative
1V0P *Plasmodium falciparum* 1V0P 1OB3 1OB3 B Chain B, Structure Of P. Falciparum Pfpk5-Purvalanol B Ligand Complex/A Chain A, Structure Of P. Falciparum Pfpk5-Purvalanol B Ligand Complex /B Chain B, Structure Of P. Falciparum Pfpk5 /A Chain A, Structur
NP_705452 *Plasmodium falciparum 3D7* Q07785 *Plasmodium falciparum K1/Thailand* P61075 *Plasmodium falciparum 3D7* 1V0O *Plasmodium falciparum* 1V0O CAA43923 CAD52689 *Plasmodium falciparum 3D7* cell division control protein 2 homolog /CDC2H_PLAFK Cel
1V0B *Plasmodium falciparum* 1V0B B Chain B, Crystal Structure Of The T198a Mutant Of Pfpk5/A Chain A, Crystal Structure Of The T198a Mutant Of Pfpk5
CAA11852 *Plasmodium knowlesi* cdc2-related kinase 2
AAD29423 *Plasmodium vivax* protein kinase Crk2
P34117 *Dictyostelium discoideum* AAA16056 CDC2H_DICDI CDC2-like serine/threonine-protein kinase CRP /crp
XP_636601 *Dictyostelium discoideum AX4* EAL63070 *Dictyostelium discoideum* CDC2-like protein/CDC2 related protein

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