

		20		40		60		80
Phatr_CDKC2	FTKKHQVGGQ	TYGSVFVGQD	KTIVALKRIN	TKEENGFPIT	ALREVKILKV	LHPNIVTLKE	IVVFMVFEYL	EDLTGVLEVK 80
Thaps_CDKC2	FQKKHQVGEG	TYGSVFVGAD	KTVVALKRIN	TEEENGFPIT	AIREVKILKA	LHDNIVQLKE	IVVFMVFEYL	EDLTGIIIEIK 80
Outgroup	FEKLNRI GEG	TYGI VYRRAR	TTIVALKKVR	MDEKDGIPIS	SLREITLLR	LHPNIVELKE	VVIFLVMGYC	EDLASLELVK 80
Phatr_CDKC1	YERQEIGEG	TYGQVYRARC	KTVVALKKMR	MHGGYGMP LQ	FIREIKILKK	LHPNLLQMI E	VVFLVLVEYV	SDLTGLMDVK 80
Thaps_CDKC1	YCRLEQIGEG	TYGQVYRAKC	LTMVALKKIR	LQSGHGIPPT	VLREIKILKK	LHKAMVKMYE	VVFLFLSLEYI	SDLTGLLDVK 80
Ostta_CDKC	YEKLEQIGEG	TYGQVYMARC	KTIVALKKIR	MDEKEGFPIT	AIREIKILKK	LHRNVVDLKE	IVIYLVFEYM	DDLTGLAEIK 80
Arath_CDKC1	FEKLEQIGEG	TYGQVYMAKE	ITIVALKKIR	MDEREGFPIT	AIREIKILKK	LHENVIQLKE	IVIYMVFEYM	DDLTGLADIK 80
Arath_CDKC2	FEKLEQIGEG	TYGQVYMAKE	ITIVALKKIR	MDEREGFPIT	AIREIKILKK	LHENVIHLKE	IVIYMVFEYM	DDLTGLADIK 80
Arath_CDKC1	YKLVGKIGEG	TYGLVFLART	KPIIAIKKKF	QSDGDGVSPT	AIREIMLLRE	IHENNVKLVN	VILYLAFDYA	EDLYEIRVK 80
Phatr_CDKD1	YKVLKALGQ	TWGVVHKAQ	KSVVAIKKIK	SEPEEGVNFT	AVREIKLLRE	FHENIVELVD	CFVCLVYECA	FDLEKILGK 80
Thaps_CDKD1	YEVIKALGQ	TWGVVHMAKQ	RTIVALKKIK	SEPEEGVNFT	AIREIKLLRE	FHENI IELVD	VFVCLVYECA	DDLEKILKTK 80
Arath_CDK7	YAKLSFLGEG	QFATVYKARD	TTIVAVKKIK	KGARDGINRT	ALREIKILQE	LHENI IGLVD	VFVSLVDFDM	DDLEVI I KIK 80
Xenla_CDK7	YEKLDLFLGEG	QFATVYKARD	KTIVAIKKIK	LGANDGINRT	ALREIKLLQE	LHPNI IGLLD	AFISLVDFDM	EDLEVI I KIK 80
Homsa_CDK7	YEKLDLFLGEG	QFATVYKARD	KTIVAIKKIK	LGAKDGINRT	ALREIKLLQE	LHPNI IGLLD	AFISLVDFDM	EDLEVI I KIK 80
Ostta_CDKD	YERGRTL GEG	TYGVVHEARV	KTVVAIKKIR	LGLKEGVNFT	AIREIKLLQE	IHEHVIELVD	VFLNLVFEYC	GDLEMYIKVK 80
Arath_CDKD1;1	YLKREVLGQ	TYGVVFKATD	TNTVAIKKIR	LGEKEGVNFT	ALREIKLLKE	LHPHI IELID	AFLHIVFEFM	EDLEAVIRVK 80
Arath_CDKD1;2	YLRRQILGEG	TYGVVYKATD	TTTVAVKKIR	LGQKEGVNFT	ALREIKLLKE	LHPHIVELID	AFLHLVFEYM	QDLEAVIRIK 80
Drome_CDK4	YQELNII GEG	AYGTVYRRAR	TTIVALKKVR	ISNENGVPM S	TLREISLLKQ	LHANIVKLYE	VCILLVFEHV	DDVSDLIDIQ 80
Homsa_CDK6	YECVAEIGEG	AYGKVFKAAR	LNFVALKVR	VQGEENGMP L S	TLREIVAVLRH	LHPNVVRLFD	VCLTLVFEHV	DDLTTLVDIK 80
Xenla_CDK4	YEPVAEIGEG	AYGTVYKARD	LSFVALKNVR	VQNGENGLP L S	TIREVTLTKR	LHPNIVKLMD	VCVTLVFEHV	DDLTKYLSIK 80
Homsa_CDK4	YEPVAEIGEG	AYGTVYKARD	PSFVALKSVR	VPGGGGLPIS	TVREVALLR	LHPNVVRLMD	VCVTLVFEHV	DDLRTYLDIK 80
Cyame_CDKB	FRRLEVLGQ	TYGTVYKALD	LTIVALKKTT	LSDDEGIPAT	TLREVSILRA	LCENIVKLID	VILYLVFEYA	EDLKQYMNK 80
Arath_CDKB2;1	FEKLEKVGEG	TYGKVYRARE	KTIVALKKTR	LHDEEGVPST	TLREISILRM	LDPHVRLMD	VQLYLVFEYM	DDVKKFIRIK 80
Arath_CDKB2;2	FEKLEKVGEG	TYGKVYRARE	KTIVALKKTR	LHDEEGVPST	TLREISILRM	LDPHIVRLMD	VQLYLVFEYV	DDLKKFIRVK 80
Chlre_CDKB	YEKIEKIGEG	TYGKVYKARD	ITLVALKKCR	LEEEEGVPST	TLREISLLQM	LSNHIVKLLC	VELYLVFEYL	NDMKKWM DIK 80
Arath_CDKB1;1	YEKLEKVGEG	TYGKVYKAME	KTLVALKKTR	LEDEEGIPPT	ALREISLLQM	LTSYVVRLLC	VELYLVFEYL	DDLKKFIDIQ 80
Arath_CDKB1;2	YEKLEKVGEG	TYGKVYKAME	KTLVALKKTR	LEDEEGIPPT	ALREISLLQM	LQSYIVRLLC	VELYLVFEYL	DDLKKFIDVQ 80
Miccp_CDKB	YEKLEKIGQ	TYGKVYKARD	RTLVALKKTR	LEEEEGVPST	ALREVSLLQM	LSAFVVRLLK	VELYLVFEYL	DDLKNFMDVQ 80
Micpu_CDKB	YEKLEKIGQ	TYGKVYKARD	RTLVALKKTR	LEEEEGVPST	ALREVSLLQM	LSAFIVRLLK	VELYLVFEYL	DDLKNFMDVQ 80
Ostlu_CDKB	YEKLEKIGQ	TYGKVYKARE	RNLVALKKTR	LEEEEGVPST	ALREVSLLQM	LSPYIVRLLR	VELYLVFEFL	DDLKKYMDVQ 80
Ostta_CDKB	YEKLEKIGQ	TYGKVYKARD	RTLVALKKTR	LEEEEGVPST	ALREVSLLQM	LSPYIVRLLR	VELYLVFEFL	DDLKKYMDVQ 80
Cyame_CDKA	YQRLERIGEG	TYGVYRRAR	RTLVALKKIR	LEEEEGVPST	ALREIAILRE	LQPNVVRLLD	VVLVLFVEHL	DDLKRYMDAK 80
Physo_CDKA2	YQRIEKIGEG	TYGVVYKSLD	LTVVALKRIR	LEEDDGIPST	ALREISVLRE	LHPNIVSLLD	CLLFLVFEFM	DDLKRFFMEIK 80
Ectsi_CDKBlike	YTKQEKAGQ	TYGVVYKSWD	NTFVALKKIK	VEEDDGIPGT	ALREISLLKE	LHPNIVELKN	CVLWLI FEWV	DDLKRYMNIK 80
Nanga_CDKA2	YQKIEKL GEG	TYGVVYKARD	KTIVALKRIR	LEEDDGIPST	ALREISLLQE	LHPCIVELLD	CVLYLVFEFV	DDLKKYMEVK 80
Ectsi_CDKB	YQKIEKL GEG	TYGVVYKARD	KTIVALKRIR	LEEDDGIPST	ALREISLLRE	LHPNIVELKD	CVLYLVFEFV	DDLKKYMEVK 80
Phatr_CDKA2	YHKIEKL GEG	TYGVVYKARD	RTIVALKRIR	LEEDDGIPST	ALREISLLRE	LHPNIVDLKD	CVLYLVFEFL	DDLKKYMEIK 80
Thaps_CDKA2	YQKIEKL GEG	TYGVVYKARD	RTIVALKRIR	LEEDDGIPST	ALREISLLRE	LHENIVDLKD	CVLYLVFEFL	DDLKKALEVK 80
Fracy_CDKA2	YQKIEKL GEG	TYGVVYKARD	RTIVALKRIR	LEEDDGIPST	ALREISLLRE	LHENVVELMD	CVLYLVFEFL	DDLKKYMEVK 80
Nanga_CDKA1;2	FTNIQQIGEG	TYGI VYKATT	SNLIALKKIR	LADEEGVPST	AIREISLLKE	LHPNVVTLKD	VILYLVFEYL	DDLKRYMDVK 80
Physo_CDKA1;2	YQKVEKVGEG	TYGI VYKARD	LTIVALKKIR	LEDEEGIPST	AMREISLLKE	LHPNVVLYD	AVLYLVFEFV	EDLKRCLEVK 80
Sacce_CDC28	YKRLEKVGEG	TYGVVYKALD	LPVVALKKIR	LEDEEGVPST	AIREISLLKE	LDDNIVRLYD	IVLYLVFEFL	DDLKRYMEVK 80
Ectsi_CDKA	YQKLEKIGEG	TYGVVYKARD	RTI IALKKIR	LEDEEGIPST	AIREISLLKQ	LHPNIVRL - -	- - - - - - - - - -	- - - - - - - - - - 58
Nanga_CDKA1;1	YQKLEKIGEG	TYGVVYKARD	RTI IALKKIR	LEDEEGIPST	AIREISLLKE	LHPNIVRLYD	VVLTLVFEYL	DDLKKYLDLQ 80
Physo_CDKA1;1	YQKLEKIGEG	TYGVVYKARD	RTI IALKKIR	LEDEEGIPST	AIREISLLKE	LHCNIVRLYN	IVLTLVFEYL	DDLKKYLDLK 80
Thaps_CDKA1	YQKMEKIGEG	TYGVVYKARD	RSI IALKKIR	LEDEEGIPST	AIREISLLKE	LHPNIVRLYD	VVLTLVFEFL	DDLKKYLDLK 80
Phatr_CDKA1	YQKMEKIGEG	TYGVVYKARD	RTI IALKKIR	LEDEEGIPST	AIREISLLKE	LHPNIVRLYD	VVLTLVFEFL	DDLKKYLDLK 80
Fracy_CDKA1	YQKMEKIGEG	TYGI VYKARD	RTI IALKKIR	LEDEEGIPST	AIREISLLKE	LHPNIVRLYD	VVLTLVFEFL	DDLKKYLDLK 80
Drome_CDK2	FEKIEKIGEG	TYGVVYKGRN	RTIVAMKKIR	LEDEEGVPST	AIREISLLKE	LHENIVCLD	VLIYLI FEFL	SDLKKYMDVR 80
Xenla_CDK1	YTKIEKIGEG	TYGVVYKGRH	KTVVAMKKIR	LEEEEGVPST	AIREISLLKE	LHPNIVCLLD	VLLYLI FEFL	SDLKKYLDVK 80
Homsa_CDK1	YTKIEKIGEG	TYGVVYKGRH	KTVVAMKKIR	LEEEEGVPST	AIREISLLKE	LHPNIVSLQD	VLLYLI FEFL	SDLKKYLDVK 80
Schpo_CDC2	YQKVEKIGEG	TYGVVYKARH	KSIVAMKKIR	LESEEGVPST	AIREISLLKE	VDENCVRLLD	ILLYLVFEFL	DDLKKYMDVQ 80
Xenla_CDK2	FQKVEKIGEG	TYGVVYKARN	RTIVALKKIR	LDETEGVPST	AIREISLLKE	LHPNIVKLLD	VILYLVFEFL	NDLKKFMDVK 80
Homsa_CDK2	FQKVEKIGEG	TYGVVYKARN	KTVVALKKIR	XDETEGVPST	AIREISLLKE	LHPNIVKLLD	VILYLVFEFL	HDLKKFMDIK 80
Ostta_CDKA	YEKVAKIGEG	TYGVVYKAKS	LDMVALKRIR	LDDDEGVPST	AIREISLLKE	LHENVVSLL E	VILYLVFEYL	DDLKKHMDIK 80
Ostlu_CDKA	YEKVLKIGEG	TYGVVYKAKN	LDMVALKRIR	LDDDEGVPST	AIREISLLKE	LHENVVSLL E	VILYLVFEYL	DDLKKHMDVK 80
Miccp_CDKA	FEKVEKIGEG	TYGVVYKARD	RDVVALKRIR	LDEEEGVPST	AIREISLLKE	LHENIVSLMD	VILYLVFEFL	DDLKKHLDIK 80
Micpu_CDKA	FEKVEKIGEG	TYGVVYKARN	RNVVALKRIR	LEEEEGVPST	AIREISLLKE	LHENIVSLMD	VILYLVFEHL	DDLKKHLDIK 80
Chlre_CDKA	YEKLERAGEG	TYGVVFKARD	RTIVALKKIR	LEDEEGVPST	AIREISFLKE	LHDNVVRLYD	VLLYLVFEFL	DDLKKQMDIK 80
Arath_CDKA1	YEKVEKIGEG	TYGVVYKARD	KTTIALKKIR	LEDEEGVPST	AIREISLLKE	MHSNIVKLQD	VVLYLVFEYL	DDLKKHMDIK 80

		100		120		140		160
Phatr_CDKC2	SWSQQLLVGH	YMHV IHRDLK	ASNLL I LKIA	DWGLARSWNS	EMLTNKV I TL	WYRPP ELLLG	YTDK I DMWSV	GC I I AEMFRS 160
Thaps_CDKC2	SWSKQLLVGH	YMH I IHRDLK	SSNLL I LKIA	DWGLARSWNS	EMLTNRV I TL	WYRPP ELLLG	YSTK I DMWSV	GC I I AEMFRG 160
Outgroup	C I V LQVLGLQ	Y L H I IHRDLK	VSNLLMVKTA	D FGLARAYGV	PVMTPKVVTL	WYRAPELLLG	QTTS I DMWAV	GC I LAELLHR 160
Phatr_CDKC1	C I FRQLLACA	YMHYVHRDLK	SSNLLVVKLA	D FGLARNIEP	PFFT NKV I TL	WYRPP EILT G	YGPADVWSA	GC I LAELLGK 160
Thaps_CDKC1	SVVQQLLVLE	FMHYVHRDLK	SSN I L I VKLA	D FGLARCLEG	- - F T N K V I TL	WYRPP ELLLG	YGTAVD IWSA	GC I LAEVI GR 158
Ostta_CDKC	CYMKQLLGLH	YCH I LHRDI K	GSNLL I LKLA	D FGLAKP I TN	ENLTNRV I TL	WYRPP ELLLG	YGPSVDMWSA	GC I FAEL I GK 160
Arath_CDKC1	CYMKQLLGLH	YCHV LHRDI K	GSNLL I LKLA	D FGLARSYSH	DHLTNRV I TL	WYRPP ELLLG	YGP A I DMWSV	GC I FAELLAK 160
Arath_CDKC2	CYMKQLLGLH	YCHV LHRDI K	GSNLL I LKLA	D FGLARSYSH	DHLTNRV I TL	WYRPP ELLLG	YGP A I DMWSV	GC I FAELLGK 160
Arath_CDEK1	SLLWQLLGLN	Y L H I IHRDLK	PSN I L VVKIA	D FGLAR I YQA	PLLSDNVVT I	WYRAPELLLG	YTSAVDMWAV	GC I FAELL LK 160
Phatr_CDKD1	QHLLSLLA I S	ACH I LHRDLK	PDNMLFMKLA	D FGLARMHGT	PKLSPQA I TL	WYKPP ELLLG	YSSSADMWSV	GC I FAELLRR 160
Thaps_CDKD1	QHLLTLLA I S	ACH I LHRDLK	PDNCLFMKLA	D FGLARMYGT	PKLSPQA I TL	WYKPP ELLLG	YSSAAD IWSV	GC I FAELLRR 160
Arath_CDK7	AYA IMTLGL E	Y L H I LHRDLK	PNNLLVLK I G	D FGLAKSFGS	PNYTHHVVT R	WYRSP ELLFG	YGTGVDMWAV	GC I LAELMRV 160
Xenla_CDK7	SYMLMTLGL E	Y L H I LHRDLK	PNNLLLLKLA	D FGLAKSFGS	PNYTHQVVT R	WYRSP ELLFG	YGVGVDMWAV	GC I LAELLRV 160
Homsa_CDK7	AYMLMTLGL E	Y L H I LHRDLK	PNNLLLLKLA	D FGLAKSFGS	PNYTHQVVT R	WYRAPELLFG	YGVGVDMWAV	GC I LAELLRV 160
Ostta_CDKD	SYARMTLAVA	HCHV LHRDLK	PNNLL I LKLA	D FGLAR I FGS	PDFTHQVFAR	WYRAPELLLG	YGP GVDWAV	GC I LAELMRV 160
Arath_CDKD1;1	SYLQMILGL E	YCHV LHRDMK	PNNLL I LKLA	D FGLAR I FGS	PGFTHQVFAR	WYRAPELLFG	YDGAVDVWAA	GC I FAELLRR 160
Arath_CDKD1;2	SYMLMTLGLA	YCHV LHRDMK	PNNLL I LKLA	D FGLARLFGS	PNFTHQVFAT	WYRAPELLFG	YGAGVDVWAA	GC I FAELLRR 160
Drome_CDK4	RLSRELLGVD	FLH I IHRDLK	PQNLLVLK I A	D FGLAKTYGS	EMLTSVVVT L	WYRAPEVLL -	YNSTVD IWSA	AC I I FEMFRR 159
Homsa_CDK6	DMMFQLLGLD	FLHV LHRDLK	PQN I L V I KLA	D FGLAR I YSF	QMLTSVVVT L	WYRAPEVLLQ	YATPVDLWSA	GC I FAEMFRK 160
Xenla_CDK4	DLMKQFLGLE	FLH I VHRDLK	PEN I L VVKLA	D FGLAR I YSC	QMLTPVVVT L	WYRAPEVLLQ	YATPVDMWSV	GC I FAEMFRK 160
Homsa_CDK4	DLMRQFLGLD	FLH I VHRDLK	PEN I L VVKLA	D FGLAR I YSY	QMLTPVVVT L	WYRAPEVLLQ	YATPVDMWSV	GC I FAEMFRK 160
Cyame_CDKB	CFAYQMLGLQ	FCH I MHRDLK	PQN I L V I KLA	D FGLGRAFC I	PVYTHEVVT L	WYRAPE I LLG	YSTPVD IWSV	GC I LAEMI GR 160
Arath_CDKB1;1	RLSMQLCGMA	FCH I LHRDLK	PHNLLMLK I A	DLGLARAFTL	PMYTHE I LTL	WYRAPEVLLG	YSTAVDMWSV	GC I FAELVNQ 160
Arath_CDKB2;2	CLMYQLCGMA	FCHV LHRDLK	PHNLLMLK I A	DLGLARAFTL	PMYTHE I LTL	WYRAPEVLLG	YSTGVDMWSV	GC I FAELVKQ 160
Chlre_CDKB	SMVYQL I GVA	YCHV LHRDLK	PQNLLVLKVA	DLGLGRHFSV	PLYTHE I VTL	WYRAPEVLLG	YATPVDMWSV	GC I FAELVKA 160
Arath_CDKB1;1	KLMFQLCGVA	HCHV LHRDLK	PQNLLVLK I A	D FGLARAFTV	PLYTHE I VTL	WYRAPEVLLG	YSTGVDMWSV	GC I FAEMVRQ 160
Arath_CDKB1;2	RFMFQLFGVA	HCHV LHRDLK	PQNLLVLK I A	DLGLGRAFTV	PLYTHE I VTL	WYRAPEVLLG	YSTAVD IWSV	GC I FAEMI RQ 160
Micsp_CDKB	DFMYQLCGCA	HLHV MHRDLK	PQNLLV I KVA	DLGLGRAFSV	PVYTHE I VTL	WYRAPEVLLG	YSTPVD IWSV	GC I FAELAKQ 160
Micpu_CDKB	DFMYQLCGCA	HLHV MHRDLK	PQNLLV I KVA	DLGLGRAFSV	PVYTHE I VTL	WYRAPEVLLG	YSTPVD IWSV	GC I FAELAKQ 160
Ostlu_CDKB	NMYMYQLCGCA	HLHV MHRDLK	PQNMLVLK I A	DLGLGRAFSV	PVYTHE I VTL	WYRAPEVLLG	YSTPVDMWSV	GCMFAEMAKQ 160
Ostta_CDKB	NMYMYQLCGCA	HLHV MHRDLK	PQNMLVLK I A	DLGLGRAFSV	PVYTHE I VTL	WYRAPEVLLG	YSTPVDMWSV	GCMFAEMAKQ 160
Cyame_CDKA	SFLYQL I GVA	Y L H I LHRDLK	PQNLL I LKLA	D FGLARA FGI	PVMTSEV I TL	WYRAPE I LLG	YAAPVDMWSV	GC I FAEMMRK 160
Physo_CDKA2	SLLYQLLGLA	FSH I MHRDLK	PQNLLVLK I A	D FGLARA FSL	PIYTHEVVT L	WYRAPE I LLG	YCPPVD IWSV	GV I FAEMVKK 160
Ectsi_CDKBlike	SYMFMMALE	FCH I MHRDLK	PQNLLVLK I A	D FGLARAFCP	PVLTHEVVT I	WYRAPE I LLG	YAPPLDLWSV	GT I LAEMVKT 160
Nanga_CDKA2	SFLFQ I FGLA	FCH I MHRDLK	PQNLLVLK I A	D FGLARAFCP	P I LTHEVVT L	WYRPP E I LLG	YAPPDVVAC	GA I FVELLKR 160
Ectsi_CDKB	SFLYQLMGLA	FCHV MHRDLK	PQNLLVLKLA	D FGLARAFCP	P I LTHEVVT L	WYRAPE I LLG	YAPPVDLWAV	GT I LVEMVKK 160
Phatr_CDKA2	SYTFQCLGLA	FCHV MHRDLK	PQNLLVLK I A	D FGLARAFCP	P I LTHEVVT L	WYRPP E I LLG	YAPPMDVWA I	GA I LVEMI KR 160
Thaps_CDKA2	SYLFQMCGLA	FCHV MHRDLK	PQNLLVLKLA	D FGLARAFCP	P I LTHEVVT L	WYRPP E I LLG	YAPPVDVWA I	GT I FVEMVKK 160
Fracy_CDKA2	SYLFQ I CGLA	FCHV MHRDLK	PQNLLVLKLA	D FGLARAFCP	P I LTHEVVT L	WYRPP E I LLG	YAPPVDVWA I	GA I FVEMVKK 160
Nanga_CDKA1;2	SYLHQMI GVA	FCHV LHRDLK	PQNLL I LKLA	D FGLARA FNV	PLYTREVVTL	WYRAPE I LLG	YSTPVD TWS I	GC I FAEM LKE 160
Physo_CDKA1;2	SYLYQLL G I A	FCHV LHRDLK	PQNLL I LKLG	D FGLAREYGV	PLYTHEVVT L	WYRAPEVLLG	YSTPVD SWS I	GC I FAEMVKK 160
Sacce_CDC28	KFMMQLCG I A	YCH I LHRDLK	PQNLL I LKLG	D FGLARA FGV	PLYTHE I VTL	WYRAPEVLLG	YSTGVD TWS I	GC I FAEMCRK 160
Ectsi_CDKA	- - - - -	- - - - -HRDLK	PQNLL I LKLA	D FGLARA FGI	PVYTHEVVT L	WYRAPDVLMG	YSTPVD IWS I	GC I FAEMAGR 123
Nanga_CDKA1;1	SFLYQLL GVA	FCHV LHRDLK	PQNLL I LKLA	D FGLARA FGI	PVYTHEVVT L	WYRAPDVLMG	YSTPVD IWS I	GC I FAEMAGR 160
Physo_CDKA1;1	SFLYQLL G I A	YCHV LHRDLK	PQNLL I LKLG	D FGLARA FGI	PVYTHEVVT L	WYRAPDVLMG	YSTPVD IWSV	GC I FAEMAGG 160
Thaps_CDKA1	SFLYQLL GVA	YCHV LHRDLK	PPNLL I LKLA	D FGLARA FGI	PVYTHEVVT L	WYRAPDVLMG	YSTPVD IWSV	GC I FAEMVGR 160
Phatr_CDKA1	SFLYQLL GVA	YCHV LHRDLK	PPNLL I LKLA	D FGLARA FGI	PVYTHEVVT L	WYRSPDVLMG	YSTPVD IWSV	GC I FAEMAGR 160
Fracy_CDKA1	SFLYQLL GVA	YCHV LHRDLK	PPNLL I LKLA	D FGLARA FGI	PVYTHEVVT L	WYRAPDVLLG	YSTPVD IWSV	GC I FAEMAGR 160
Drome_CDK2	SYLYQITAIL	FCHV LHRDLK	PQNLL I I KVA	D FGLGRSFGI	PVYTHE I VTL	WYRAPEVLLG	YSCPVD IWS I	GC I FAEMARK 160
Xenla_CDK1	SYLYQILG I V	FCHV LHRDLK	PQNLL I I KLA	D FGLARA FGI	PVYTHEVVT L	WYRAPEVLLG	YSTPVDVWS I	GT I FAE I AKK 160
Homsa_CDK1	SYLYQILG I V	FCHV LHRDLK	PQNLL I I KLA	D FGLARA FGI	P I YTHEVVT L	WYRSP E VLLG	YSTPVD IWS I	GT I FAELAKK 160
Schpo_CDC2	KFTYQLGVGN	FCH I IHRDLK	PQNLL I LKLA	D FGLARSFGV	PLYTHE I VTL	WYRAPEVLLG	YSTGVD IWSV	GC I FAEMI RS 160
Xenla_CDK2	SYLFQLLGLA	FCHV LHRDLK	PQNLL I I KLA	D FGLARA FGV	PVFTHEVVT L	WYRAPE I LLG	YSTAVD IWSL	GC I FAEMI RR 160
Homsa_CDK2	SYLFQLLGLA	FCHV LHRDLK	PQNLL I I KLA	D FGLARA FGV	PVYTHEVVT L	WYRAPE I LLG	YSTAVD IWSL	GC I FAEMVRR 160
Ostta_CDKA	GYVYQ I C G I A	FCHV LHRDLK	PQNLL I LKLA	D FGLARA FGI	PVYTHEVVT L	WYRAPE I LLG	YSTPVDVWS I	GC I MAEMVHA 160
Ostlu_CDKA	GYVYQ I C G I A	FCHV LHRDLK	PQNLL I LKLA	D FGLARA FGI	PVYTHEVVT L	WYRAPE I LLG	YSTPVDVWS I	GC I FAEMI GK 160
Micsp_CDKA	GYLYQMCG I A	YCHV LHRDLK	PQNLLVLKLA	D FGLARA FGI	PLYTHEVVT L	WYRSP E I LLG	YSTPVDVWS I	GC I FAEMI HA 160
Micpu_CDKA	GYLYQMCGVA	YCHV LHRDLK	PQNLLVLKLA	D FGLARA FGI	PVYTHEVVT L	WYRSP E I LLG	YSTPVDVWS I	GC I FAEMI HA 160
Chlre_CDKA	MYMWQMLG I A	FCH I LHRDLK	PQNLL I LKLA	D FGLARA FGI	PVYTHEVVT L	WYRAPE I LLG	YSTPVD IWS I	GC I FAEMVHR 160
Arath_CDKA1	TYLYQ I L G I A	YCHV LHRDLK	PQNLL I LKLA	D FGLARA FGI	PVFTHEVVT L	WYRAPE I LLG	YSTPVD IWSV	GC I FAEMI QK 160

		180		200		220	
Phatr_CDKC2	GFLKGSNEAT	QLLI FRTCGH	PTKEWPSLGD	KRLWFPLKLP	PAIELIKLMA	LNPWSAEHA	LDAEYF 226
Thaps_CDKC2	GLLKGSSEAS	QLLI FRVMGH	PTTEWPNINK	MPLWLPLRLP	AAMDMINLLA	YNPRWSAAQA	LTAEWF 226
Outgroup	PLLPGTSEIH	QLLI VQLLGT	PSENWPGFSK	LPLVYSLKFP	LGLRLLFLFM	YDPRATAGDC	LESSYF 226
Phatr_CDKC1	PLLPKGSDLE	QLLI ADMLGT	PAPWDYLLSS	MKRVLDLYAA	IAMNLLKLLA	WDPRLTATGA	LQNKYF 226
Thaps_CDKC1	PMFTGKTDM	QLLI FDLIGT	PTDKWEGFRQ	LKLIIDLKYS	KALNLLKLLA	LDPRISARGA	LTHRYF 224
Ostta_CDKC	PILPGKSEME	QMIIFKLCGS	PTPEWPDADK	LPYAFTLVFS	FAKDLLKFLT	LDPRISAKDA	LMHDWF 226
Arath_CDKC1	PILPGKNEQE	QLKIFELCGS	PDEKWPGVSK	MPWFFKVFFR	FALELLKMLV	LDPRISAKDA	LDAEYF 226
Arath_CDKC2	PILPGKTENE	QLKIYELCGS	PDESWPGVSK	MPWYMKVIYR	FALELLKMLV	LDPRISAKDA	LDAEYF 226
Arath_CDKC1	PLFQGEAQLD	QLKIFKILGH	PTMDWPTLVN	LPHWILQVHL	QAYDLLKMLE	YDPRITASQA	LEHEYF 226
Phatr_CDKD1	PFLQGGTDL	QLTI FTVFGT	PNETWADFQT	LPLCWDFI FT	AAISLLSILV	LDPRFTATQC	LSHPYF 226
Thaps_CDKD1	PFLQGGSDVS	QLTI FQVFGT	PTETWPDHNT	LPLCWDFI FT	ACLSLLSMLV	LDPRITANAA	LLHPYF 226
Arath_CDK7	PFMPGDSLD	QLRIFSTLGT	PTEAWPHLSK	LHDYFRLIFT	ALIHLMRLFA	MNPRVSCREA	LSMPYF 226
Xenla_CDK7	PFLPGDSLD	QLRIFETLGT	PTEEWPGMSS	LPDYFKLIFI	ALLELLGLFT	FNPRCTASQA	LRKRYF 226
Homsa_CDK7	PFLPGDSLD	QLRIFETLGT	PTEEWPGMCS	LPDYFKLIFS	ALLDLIGLFL	FNPRITATQA	LKMKYF 226
Ostta_CDKD	PFFAGSSDID	QLKVYAALGT	PTETWPGVSA	LPDFFILTFF	ESLDLLRMLE	YDPRITAAQA	LEHPYF 226
Arath_CDKD1;1	PFLQGGSDID	QLKIFAAFGT	PKADWPDMIC	LPDYYQLLLP	VALDLLKMFT	YDPRISIQQA	LKHRYF 226
Arath_CDKD1;2	PFLPGSTEID	QLKIFQAFGT	PVPSWSDMIY	LPDYFSLIFP	AALDLLKMF I	YDPRITIQQA	LDHRYF 226
Drome_CDK4	ALFPGDSEKN	QLRIFELTGR	PTAQWPGVST	VALEFPFPCP	LADDLLKMLS	YDLRPSALAC	LDHRYF 225
Homsa_CDK6	PLFRGSSDID	QLKILDVIGL	PGEEWPRDVA	LPRQFHI FVT	IGKDLLKCLT	FNPRISAYSA	LSHPYF 226
Xenla_CDK4	PLFCGNSEAD	QLKIFDLIGL	PSEEWPGVDT	LRPSFSVFPV	IGADLLAMLT	FSPRISASDA	LLHPFF 226
Homsa_CDK4	PLFCGNSEAD	QLKIFDLIGL	PPEDWPRDVS	LPRGFVVVVP	MGAQLLEMLT	FNPRISAFRA	LQHSYL 226
Cyame_CDKB	SLFCGESEIE	QLAIFRVLGT	PNEQWPSVVE	LRDWFPILIP	LGCKLLEMLQ	LDPRITAAQA	LRHPFF 226
Arath_CDKB2;1	AIFQGDSEIQ	QLRIFRLLGT	PNEEWPGVST	LKNWYPLAVP	LGVDLLKMLQ	YEPRISAKMA	MEHPYF 226
Arath_CDKB2;2	AIFAGDSEIQ	QLRIFRLLGT	PNEEWPGVSK	LKDWFYPLAVP	LGLDLLKMLE	YEPRISAKKA	MEHPYF 226
Chlre_CDKB	PLFPGDSEYQ	QLHIFKLLGT	PSEDWPGVTK	LRDWPLIFP	LGIDLMRCFA	YDPRISAKEA	LNHPYF 226
Arath_CDKB1;1	ALFPGDSEFQ	QLHIFRLLGT	PTAQWPGVST	LRDWYPLAVP	LGVDLLKMLQ	YNPRISAKTA	LDHPYF 226
Arath_CDKB1;2	ALFPGDSEFQ	QLHIFRLLGT	PTAQWPGVMA	LRDWYPLAVP	LGIDLLQMLK	YNPRISAKAA	LDHPYF 226
Miccp_CDKB	PLFPGDSEIQ	QLHIFKLLGT	PSEDWPGVTR	LRDWYPLVIP	LGIDLLKMLV	YDPRIHATEA	LEHPYF 226
Micpu_CDKB	PLFPGDSEIQ	QLHVFLLGT	PSEEWPGVTR	LRDWYPLVIP	LGIDLMKMLV	YDPRIHATEA	LEHPYF 226
Ostlu_CDKB	PLFPGDSEIQ	QLHIFKLLGT	PSEQWPGVSN	LRDWYPLVIP	LGIDLLKMLV	YDPRIHATEA	LEHPYF 226
Ostta_CDKB	PLFPGDSEIQ	QLHIFKLLGT	PSEQWPGVSN	LRDWYPLVIP	LGIDLLKMLV	YDPRIHATEA	LEHPYF 226
Cyame_CDKA	ALFPGDSEID	QLKIFRALGT	PSEEWPGVSQ	LPDYFPIVLA	GALDLLRLLV	YDPRITARQA	LMHPYF 226
Physo_CDKA2	PLFTGDSEID	QLRIFRTLGT	PNESWPGVTK	LRDYFPLLP	LGLHLLSMLR	YDPRISAKEA	LRHPYF 226
Ectsi_CDKBlike	PMFPGDSEID	EIKIFRVLGT	PTESWPNVTD	LDDWFFLEYA	LGINMLQLLA	YDPRISAKRA	LKHPFF 226
Nanga_CDKA2	AMFQGDSEVD	QLKIFRSLGT	PSEEWPGVTA	LQDWFFLYCP	IGLDLLKLVV	LDPRISAKTA	LYHAFY 226
Ectsi_CDKB	PLFPGDSEID	EIKIFRLLGT	PNEEWPNVTD	LQDWFFLRSQ	MGLDLLKLLY	YDPRISAKRA	LEHAFF 226
Phatr_CDKA2	PLFPGDSEID	QLKIFRQLGT	PREDWPGVTQ	LQDWFFPVLD	LGLELLTILA	YDPRITAKES	LDHAYF 226
Thaps_CDKA2	PLFPGDSEID	ELKIFRQLGT	PNEEWPGVTA	LQDWFFPFLD	TAVDLLRLLA	YSPRITAKDT	LNHPYF 226
Fracy_CDKA2	PLFPGDSEID	QLKIFRLLGT	PNEEWPGVTH	LPDWFFPVTE	LGMDLLRFLF	YDPRITAKDS	LNHPYF 226
Nanga_CDKA1;2	PLFPGDSEID	ELRIFRVLGT	PNDWPKVTE	LPNYFPLNVS	LGLDLLRLLT	YEPRI TCREA	QDHAYF 226
Physo_CDKA1;2	PLFPGDSEID	ELRIFRVLGT	PNEAWPGVST	LPDYFPLVVP	LGLDLLRLLV	YDPRISARAA	MSHPWF 226
Sacce_CDC28	PISFGDSEID	QIKIFRVLGT	PNEAWPDIVY	LPDFFPLVVP	LGIDLLKLLA	YDPRISARRA	AIHPYF 226
Ectsi_CDKA	PLLTGTSESD	QLRIFRQMG	PTPIYPLQGE	LPDY - - VGGP	AYTKLMRRIR	WGEDSNSDEE	VSKPAL 187
Nanga_CDKA1;1	PLFAGSSESD	QLRIFRALGT	PTGYPGVIVE	LPEFFPWLVV	LGIDLLKMLT	FDPRVSARDA	LSHPFF 226
Physo_CDKA1;1	PLFAGTSEAD	QLRIFRLLGT	PTMEYPAIID	LPEYFPLVLP	LGVDLLQMLQ	YDPRITAAQA	MAHPYF 226
Thaps_CDKA1	PLIAGTSEGD	QLRIFRLLGT	PSPAFPGIVD	LPEYLPFLVP	LGVDLLKMLQ	YDPRITANDA	LKHPFF 226
Phatr_CDKA1	PLVAGTSEAD	QLRIFRLLGT	PKLEYPTINE	LPEYMPLLVP	LGIDLLRMLQ	YDPRITAQAA	LEHEYF 226
Fracy_CDKA1	PLVAGTSEDD	QLRIFRLLGT	PKPSFPGIVD	LPDWYPLLVV	LGIELLLMLQ	YDPRITAQDA	LQHRFF 226
Drome_CDK2	PLFQGDSEID	QLRMFRILKT	PTEDWPGVTS	LPDYFPLQLK	LGIDLIKMLI	YDPRISAKDI	LEHPYF 226
Xenla_CDK1	PLFHGDSEID	QLRIFRALGT	PNNWPEVES	LQDYFPLNVK	IGLDLLKMLI	YDPRISAKRA	LLHPYF 226
Homsa_CDK1	PLFHGDSEID	QLRIFRALGT	PNNWPEVES	LQDYFPLHVK	LGLDLLKMLI	YDPRISGKMA	LNHPYF 226
Schpo_CDC2	PLFPGDSEID	EIKIFQVLGT	PNEEWPGVTL	LQDYFPLVVP	GAIELLAMLV	YDPRISAKRA	LQPNYL 226
Xenla_CDK2	ALFPGDSEID	QLRIFRTLGT	PDEVWPGVTT	MPDYFPFVVP	LGRDLLQMLQ	YDSRISAKVA	LTHPFF 226
Homsa_CDK2	ALFPGDSEID	QLRIFRTLGT	PDEVWPGVTS	MPDYFPFVVP	LGRSLLQMLH	YDPRISAKAA	LAHPFF 226
Ostta_CDKA	PLFPGDSEID	ELKIFKTLGT	PGETWPEAKQ	LPDYFPWLCP	LGVDLLSLLQ	YSPRISAKYA	TQHRWF 226
Ostlu_CDKA	PLFPGDSEID	ELKIFKILGT	PNETWPEAQE	LPDYFPWLCP	LGVDLLQMLQ	YTPRISAKHA	MQHKWF 226
Miccp_CDKA	PLFPGDSEID	ELRIFRVLGT	PDDGWQGVQ	LPDYFPWICP	LGLDLLQMLQ	YAPRISARDA	CNHRFF 226
Micpu_CDKA	PLFPGDSEID	QLRIFRVLGT	PDDWPAVSS	LPDYFPWVCP	LGIDLLSLLH	YAPRVSAREA	CEHRFF 226
Chlre_CDKA	PLFPGDSEID	QLKIFQLLGT	PDEAWAGCSA	LPDFFPLAVP	LGVDLLRMLV	YTPRITASAA	MEHAYF 226
Arath_CDKA1	PLFPGDSEID	QLKIFRIMGT	PYEDWRGVTS	LPDYFPLFVP	LGVDLLKMLL	MDPRINARAA	LEHEYF 226