

		Subdomain I	Subdomain II	Subdomain III	Subdomain IV
Akt1	120	FELLNLVCKGSFGKV	IOVRKKDTGE	VYAMKVLSSKK	HPFLVNLNYSFO
DDB0220670	173	FIIFLRMIGRGAFCGV	NIVVKIDTGR	LYAMKVIKKD	HPFIVGLKYSFO
DDB0216386	86	YYFIKPIISKCGYGV	FLAITKSN.K	FFAIKSINKR	NOSIVKLFEFCFO
DDB0220701	1527	FEIIPKISRGAFGKV	YLAQKKKTGD	LYAIKVLKKL	DTIGKHMVKELMVERNLLVOYO
DDB0220700	64	FNFLKVISKCGFCGV	YLAENKITKK	TVAIKVIKKK	DTIKKMMVDQVNIEKTIILSNYK
DDB0185113	810	FEFIKPITKGGYGV	FLAKKIRTKD	IYAIKRLKKK	CNFIVELEFSFO
DDB0229452	232	YKHVECIGKGGYGV	CKFINKKTNE	IRAIKTIRKD	DMIKKNOLDHVKVERNLLAYTS
NdrA	112	FEVIRIIGRGAFCGV	SIVRHRESND	LYAMKRLKKK	NPFWVKMYYSFO
NdrB	130	FESIRIIGRGAFCGV	RIVVKMKNNK	FFAMMKLDKS	GOFTVNIFHTFL
NdrC	718	FKILTOIGKGGFCGV	FLAQKKDTGD	IVTLKRLKKO	EMLKKEQAHAVERDVLASAN
NdrD	1555	FQKLTIAIGKGGFCGV	YLARKKDSNE	IVTLKVKIRKS	TNWWVKLYYSFO
DDB0231558	756	FTLIEKIGEFGFCGV	FLAKKKDTGE	IVAIKRMSKE	KMIEKHQTIVHRSERDILADSNNI
DDB0216387	40	YDIILSTIGCSYGEV	CIVREKSTKO	VYAMKKIYYT	HGSNPWIVSLLYSFO
Pdk1A	69	FIIGKVLIGCSYCAV	VLGTEKETQQ	OYAIKILEKK	TVEWANQRQVSQEKSVML.VD.
Pdk1B	271	EDFIRTICKGAYCKV	KLVIEKETOL	IFASKILNKK	NKWIITKLLYSFO
PKA	336	EKOIRVIGCTFGKV	YLIONTKDGC	YYAMKCLNKA	TYHRANQMTSVTKEKEVMMIPHSSK
pk4	679	KFLDLIGLGSGBAKV	RLCQHIPSER	LFCMKILNQN	DQSOWITRILLYSFH
DDB0185224	334	FNFYGSILGSFCTA	KLCRHRGSGL	FFCSKTLRRE	LIWSKNQVSHIKNERDIIAQGKN
pk2	153	FELLNVIGKGSFGKV	MOVKKKGEDK	IFAMKVLRKD	EVSDTELVKRALRERDAMVICNNKN
DDB0220702	128	EIIKHLVIGKGGFCGV	FOVHVDTQK	VYALKVIKKN	NKRAPKLYCFSID
pk3	498	FELLKVLVGCSFGRV	YLVRKKDTGK	FYAMKVLNKK	QIIKENKIKYVQIEKEITFCKSN
Aurora	110	EDIGKLLGCMRFGCV	YLAREKKSQF	IVALKVLFKN	HPNIVVKLFTR
MLCK-A	8	YEFKEELGRGAFCIV	YLGENKOTKO	RYAIKVINKS	LIIIKEKKAKYVNTEKTIILDSLD
DDB0216385	13	YNITDIIGECTPSTV	TIANHIEKIE	DKYAIKIISKE	NPNIIVKLFTYTFQ
DDB0216309	38	YILGNEIGRGAFCIV	REATSRATGT	KVAIKSINTR	YVVLQKVEHNLNSQKSIILSSIH
pxi	18	YEIGSQIGNGKFAOV	HSGTNKSTGK	KSAIKIMKK	HPFIVVNLHYOAFO
DDB0216308	20	YEGFPEIGRGAFCIV	ROGTHKDITGD	QVAIKAIISKQ	KIIRLQEVHVCNEKQVLM LTD
DDB0229351	566	YQIFDRIGSCTFSDV	YLCINKENGK	QYAMKIIDKS	TIVHEKHEHVNNEINIMLNIS
DDB0216307	56	YVVGKELGRGAFCVV	RECTRKTTS	KVALKYIEKK	AIIARKOVNHTKSEKTIILQCIS
DDB0216312	6	YELHREIGKGAFCVV	FLVTEKTK	QWAMKIIDDK	HPFIVVNLHYAFO
Snf1	31	YRLDKTLGICSEGV	KLAEHIRITGV	KVAIKILNRT	HIIAKSVNTLAEKDLILKKIS
DDB0229364	9	FIIGKTLGQGTTGKV	KLGFHKDITGF	KVGKIKIINKE	HPFIVVNLHYAFO
Lkb1	40	YILGEVILGEGAYGV	KDGMDSTQK	RVAVAKILKRA	DMLKKQKIAHTNTKEVMVLSTMD
MARK-A	109	YLVIRTIGRGAFCGV	KLGYHKIPN	EKVAIKIINKG	QLOTHNIEHOLRREIETQSHLR
MARK-B	65	YLLGKTLGICSTSKV	KIGTNILTGK	OYAIKITKPK	HPNIITALKELFD
MARK-C	46	YEVGKTLGNCCTEGKV	KLGTCNICTKE	NVAIKFIKNN	VLDNERRTYVDWEISIILSKCQ
DDB0231454	542	YTLGKTLGRCNYGVV	KLGTHINTKE	EIAIKILYKE	HPNIILKLYEVYE
DDB0219986	1158	YDIIKTLISTPHN	V.YLANFND	LVVLIKEFGIG	.FIKNKLLMREIEIMKKVGD
FHAK-A	180	YDFIKEIGSCNFCSV	YEGVKNITGK	RVAIKHLNLS	.IVEESAIKIEIEMSTEIN
FHAK-B	625	YYFVKIEGSGCGYGV	YEGLYKLNKG	RVAIKHIDL	.HONIIKLOEVYE
FHAK-C	199	YTIQGILGTCNFCSV	KRCIRRDTGE	VFAVKIIDDK	.HVSEADMKRFTREIEIMKKLK
FHAK-D	218	YDLREVIGTCNEASFV	RLGVEKETGN	KYAIKIIDDK	.LVTMIAQHTDMKVETEVN ILKOSF
FHAK-E	145	YFIGEMIQCQNFATV	KLAVERTTG	KYAVKIVDDK	.FVKKKKHIEQLRREIDIMKKVK
DDB0220010	201	YVFVRKLCGCTEGKV	KLAYHHDTTH	LYAIKIFNKI	.SSSSKAALTEIEIMKKV
Apq1	7	YILDKRICWGAFAOV	YKGSFIKTNE	PFAIKVVVDVC	.KPNIIOLHDAY
tsunami	5	YKLIGOIGEGSEFGKV	YKYRKFFTQ	LVACKVILSKK	.KIKNLKMDKIRREIQONMKLFR
Cdk1	10	YOKLEKIGECTYGV	YKAKEKATGR	MVALKKIRLE	.LLINKPSMRKIEREIVLMLKID
Cdk5	4	YSKIKLIGECTYGV	YKAKNREITGE	IVALKRIRLD	.OMTESEFTRCKREIEILKOLY
Cdk7	4	YNIKALIGECTYGV	SRATVKATQ	IVAIKKIRKI	.DAFGKQIFEROVFSLLQKMN
Cdk8	44	YTFSYEIGSCTYGMV	YKADDKKRPN	NKVAVKKFRST	.KINTHTPKFKSQLNREIEILKFIN
Cdk9	209	HEKIEQIGECTFGKV	YKAKNKSNGD	IVALKVIMD	.KNGSTSKSMEVLVKEYNALKNIK
Cdk10	7	FEKLDTSIGECTYGV	SKGRDKETGR	IVALKVKVIG	.HENVVEIYDIFY
Cdk11	52	FKKLYTINBEGAFGV	YCAQDKETEE	IVALKKIKME	.RLKKQTMGIGRPNNAFFDV LKEIAIMKKNN
DDB0229294	64	YEIIISKIGECISGSV	FKAIIKKGTEE	MVALKNFKGW	.HONIISIISKEVFE
DDB0229424	4	FOIIIELIGSGSYGV	YKAIHNLSKC	TVALKIISVM	.KMFDENLNGHRIIRNLQFNLFOG
DDB0230050	4	YIILSKCGQGTYCSV	FKGIHKITHS	LVALKRVTDI	.GKHIISTYOSIFK
CK2	47	YEIIIRKIGRKYSEV	FEGANIKNNE	KCVIKVLKPV	.AQEDGEPEVVKYLNQJKN
DDB0219953	312	YEVIQKIGRKYSEV	FSGDIDTSD	EVVIKVLKPV	.LSNIVNLRDHFY
C1ka	590	YKVLCTVGSCTFSTV	VECWDTNSSG	QVAIKIVRSA	.KKKKIKREIKILQNLCG
DDB0229841	74	IDPNTIVDCGTCNIM	FIAAFNFTOK	RVILKKLSSKR	.GPNIITLYDVR
DDB0229333	46	ITKKTIIACDINGTM	FQTYNMDTNR	LLIIKKISLL	.OKLKIOREIKILESNG
DDB0229296	102	INLKSIITDCGPDCMV	FRAKNEDSKE	EVIVKKVISVF	.GPNIIPLLDSVK
Dyrk1	304	FEIISIIGKGSFGCV	VKA_fdsVLKE	YVAIKIINKN	.KKYTEDALVEIDILRN EK TGNNSNGKYL SHCIRLLDSFL
Dyrk2	605	FEIVSILGCGSFQCV	VKGYDYKTFGE	MVALKILRNO	.QFKNHLOGRMMLRNCHYQRFNH

	Subdomain I	Subdomain II	Subdomain III	Subdomain IV
YakA	205 YKVLDSIQCOTFCGV . . . . .	LVAIKILKNK . . . . .	QAYFOQGRLEIOTILKSLNDQHD . . . . .	PEDKNHILRLJLDSFI
Prpf4B	490 YQIFSPITGSGVFSTV . . . . .	DVVVIKIIIRNR . . . . .	PSMRHRSGLKEIEILOQKISNTPTS . . . . .	SNOQSHC1OMKDHFN
GSK-3	56 YITEGVIGNCNSFCGVV . . . . .	VVAIKKVLQD . . . . .	ORYKNRELOIMKMLN . . . . .	HINTIVSLEKNSFY
GlkA	91 YEIIKQVGQGTFCKV . . . . .	VAIHKVEKS . . . . .	. . . . .	HPNCLRLDMFY
Erk1	149 YSIVKCICGHGAYGVV . . . . .	KVAIHKKISKA . . . . .	. . . . .	HENLISIKDILK
Erk2	149 YEVLQKIGKGAYCIV . . . . .	TVALKKIFDA . . . . .	FDNLKDTKRTLREIHLRLRFK . . . . .	HENIIKILNVIK
DDB0229430	4 YQFIKOVGDCGAYCDV . . . . .	IVAIKRMKKK . . . . .	FQNATDAORTFREIMFLQEIHG . . . . .	HPNIVKLLLEIIL
Sky1	135 YOVDWKLIGWGHFSTV . . . . .	NSYSKFIYNS . . . . .	FSDWKECIQLREIKAALKKLK . . . . .	NAQDKCVARLLDHFT
DDB0230051	414 OIHKVSTGNGCHFV . . . . .	IYSSSTLAESIILFREAMILYKUN . . . . .	RTYSETAEDEIKAIIINAISKY . . . . .	HNNTLKLSESTITK
DDB0230126	654 YHLPGLISE.NSTTV . . . . .	ALNIPV . . . . .	SSPARILNEIHSILRVGG . . . . .	HENLTKVYQVCQ
Cdc7	622 YRILEKIGQGTFSGV . . . . .	GLIVALKRVAPT . . . . .	HYNVSAFLGALR	
DDB0229971	77 VIISDIAICKGAFATV . . . . .	FVAIKRFEKS . . . . .	KISNEOHSSVSTEFDTIQRNL . . . . .	HENIVRILCREE
DDB0229896	18 YNLGVVIGKGCFCTV . . . . .	FVAAIKOINLT . . . . .	KIPKDQLOGIMNEIDLLKLN . . . . .	HANIVKMYIKVK
DDB0229877	13 YQICEAVGKGAFGV . . . . .	FCAIKQIEKT . . . . .	IISEKOLPSIIQEIILQLTLO . . . . .	HPNIVKFIESYE
DDB0231212	22 YLLIDIICKCCFGVV . . . . .	FSAIHKKIKIM . . . . .	KKKKLOSESOISLMAEINLLKVL . . . . .	HHNIVRMYEHIP
DDB0229915	36 YTLGEKIGRGAFCGV . . . . .	FVAIKQIDS . . . . .	KIDESSLQSVKGEVEILHKL . . . . .	HNNIVKVLGVVE
FNIPK-A	11 WEILSQIGTCAGFCRV . . . . .	IIDICAIIKIIKK . . . . .	. . . . .	HPLIVKYYGYGV
FNIPK-B	11 WEIVTEL . . . . .	KSNV . . . . .	VFTKNEIEIILQOLD . . . . .	IDSIVKCYGWCC
FNIPK-C	33 FEIIRILKKDEFSTT . . . . .	CKAKKLSQFNEK . . . . .	DKNWLKEGOVIEKLN . . . . .	HICVLEYGYSE
FNIPK-D	33 WEIITOLESNQFVT . . . . .	YMSKKLKGPNFTN . . . . .	VKKFDSSKKNEIIIIEIDPRKERETLEKIK . . . . .	NKYVLKYYGCCK
FNIPK-Ea	368 WEIIKP . . . . .	OKNISEN . . . . .	. . . . .	TKHKNAAKIIDVNL . . . . .
FNIPK-Eb	860 WEIISTIGSCGNFGKV . . . . .	FKARKINGIINGS . . . . .	ICKCSLKLGYGYVK	
DPYK4-a	9 WEEISSIGCSNSKSRVLKCRKNGLIENE . . . . .	KVDIVAVKIINNK . . . . .	DKLKIKLSTEVEILNLKD . . . . .	NEHSMKTYGYGY
ZakA-a	9 WEEISFIGECOYCRV . . . . .	IICRKKNGFILNE . . . . .	FFKRNETDILEKIR . . . . .	LFNP1PRYYSHAE
DDB0230002	16 IEKNYR . . . . .	SKAKKNGIINGTIVNKKMIAIKKIKFD . . . . .	DKIQFNEVNNLELIKKNKN . . . . .	EMOISSI1IDYFG
DDB0229378	31 WVIERQLSKGNSFCGV . . . . .	YKAHKKLDPN . . . . .	KFTMKVEVDYLKLLN . . . . .	DPKFVVKYYSLF
Mek1	292 LKIIIRVLGRGAGGV . . . . .	KLAYHETSGT . . . . .	YIALKVIITLD . . . . .	YPPYIVSFYDAFY
MEKKalpha	495 WQKGQILGRGGYCSV . . . . .	YLGLNKDTGE . . . . .	IQENIRKOIIILEKLTHTS . . . . .	HDNIVRVLGTS
DDB0229911	71 YELKETIGKGCGSLV . . . . .	ORAICLPFQE . . . . .	DINSDPKLKNMILSFSKEIEVMRSLR . . . . .	HPNIVVAYHTSFV
DDB0230012	97 YNLIEPIGEGTECRV . . . . .	FKRAYCIPKLE . . . . .	HCKNVSLLEEIRKEIOAMSLCH . . . . .	HPNLIHYHTSFL
MkcA	585 YTFRKEVKCGCFCTV . . . . .	YLVLRNNDMDSK . . . . .	KMDPQFVKDVIEKVVMGN . . . . .	HPNIIITYYNSHM
MkcB	438 YKDSDOVQVKCGCFCTV . . . . .	YFAKSTKEKR . . . . .	RKKEKKFVNKEIRVLEFTN . . . . .	HPNIVKLNHTCHI
MkcC	616 YKNLQKIGSGCGFCGV . . . . .	FLAKSTVDKC . . . . .	TKRQQQONFREAAILAKCD . . . . .	HPNIVSYLRSHL
MkcD	369 FKNLDFEARCGFCGV . . . . .	FCAKNKNPHSAYD . . . . .	SAKAQRTNLNEIGFLNFCK . . . . .	HPNIVKFLCAYQ
MkcE	429 GENAEV . . . . .	YQVFYVNGQYN . . . . .	TLRHKRMLNSEIGFLKYFN . . . . .	SEKKRRNNLNLEISILRYLK . . . . .
MkcF	401 IKFTHMVGRCOYCKV . . . . .	YDALYDKKR . . . . .	SEKKRRNNLNLEISILRYLK . . . . .	HPNIVTYYINSYE
PakA	911 YYNINKIGEGGAGEV . . . . .	FEAINSRTNQ . . . . .	TPKEQHNVLQEIFGLTQCD . . . . .	HPNILKYNCVSL
PakB	570 GEGSTKIGCEAACEV . . . . .	FVVTQLKTN . . . . .	AQNLKTVINEIGMMKNSN . . . . .	HENIVVOYIDSYI
PakC	205 YKNMTKIGCEAACEV . . . . .	FVATSSKNN . . . . .	QQNMLKIVTEIGIMKSCR . . . . .	HONIIDYIDSYI
PakD	1376 YKREVVGGGSTCKV . . . . .	YVGENSITGE . . . . .	NDNAKLLVTEIAIMKTSH . . . . .	HDNIVNYIDSYI
PakE	650 FEFKEKIGQGGYCAV . . . . .	FKVLHRETNF . . . . .	NNNIKNIINEISTMKN . . . . .	HKNVIVKYYSSH
PakF	394 FILDEKLGCGAYCSV . . . . .	YKGTHKDLG . . . . .	PTRIKDIEKIDLLKKCR . . . . .	CPNVLSYYCIS
PakG	139 FLIDCILGTGSYCTV . . . . .	YKAIHKDTNF . . . . .	ESESVSLONEINILKNCK . . . . .	SPNIVSYFGCSLO
PakH	42 FEIOEKIGCEGFCGV . . . . .	YRAIHKSSNT . . . . .	ESEEIEKISILKKC . . . . .	SONIVSYFGSGQ
Krs1	20 FTIVEKIGEGSYCSV . . . . .	YKAINISTGI . . . . .	EANDVEPISKIEQILKKCN . . . . .	NPYVVWSYFGSIM
DDB0216375	23 FDLLIECLGRGSGFCGV . . . . .	YKATYKKTGN . . . . .	NDLEDMEKISFMQCK . . . . .	SPYIVTYYASFR
SvkA	12 YVRQEKGKGSFCGV . . . . .	FKGINKKTN . . . . .	EDFOEILKINEIMKQCK . . . . .	SKYVVOYGYNYF
DDB0216374	21 FRLEVIGQCGFCGV . . . . .	CTCINTVNN . . . . .	DAEDEIEDIQOEINVLSQCE . . . . .	SPFVTKYFGSFL
DDB0216379	23 FQIVEVVGSGSGFCGV . . . . .	CACRWMKKKDRES . . . . .	GEENSSLKKEITILKNTVR . . . . .	CPYIVVKYHCYI
DDB0216377	29 YHIQERICKGSGFCGV . . . . .	FKAVHFGANG . . . . .	ADDVETNLNLVKEIDILKESMD . . . . .	CPYIVVEYKGCYL
DDB0216378	20 FELIEECLGRGSGFCGV . . . . .	YKGKHLPTGN . . . . .	DQEAIKDVRKEISILAECN . . . . .	YPNIVVOYFGSYF
DDB0230010	935 FRDKIKLCTGAFGVN . . . . .	FYAIRKGDSS . . . . .	EDETFLVVEIDLILNRCN . . . . .	HNINVKYYGSW
DDB0229972	173 YESPPTLGK..YDKV . . . . .	ILVILSQOQLQ . . . . .	TTKDSPIIPELYIHSACN . . . . .	HSNIVTYYIESYL
DDB0229973	848 IKLCEOIGSGCGCTVHRCTVDGFT . . . . .	CAVKVLKLK . . . . .	RINLIHQNILSNEFOILKSLK . . . . .	HSGIVNYIGMIN
IfkA-a	449 WKKGSCIERSKNYSV . . . . .	YRGVDEDTDRKLIC(55) VVELKKRLIE . . . . .	NTSPFLVQEKFISEITIMVQLS . . . . .	HONTIAYKLGHRL
SAMK-A	191 YEYVESISLGCVSV . . . . .	GKYKRGQENE . . . . .	KVKMIOKEIESMKYLG . . . . .	NPYIIKYLGTNF
SAMK-B	186 YKLIIEIIGRGAESIV . . . . .	EKYENKLKPN . . . . .	SLNEEKIIKEINKLISY . . . . .	HPNIIKIIIGYYK
SAMK-C	181 YVFIKOMKGCSVNCISL . . . . .	EKYINKKTK . . . . .	ASEKEMIVKEINMLYSIN . . . . .	HPNIIKTYGYYK
SAMK-D	136 YIETISKNKFCIEK . . . . .	KKSQTKVNEY . . . . .	NINEETIINEISILCSID . . . . .	STLNEEKLINEIDTIYLLD . . . . .
DDB0230038	521 AOPSDIIGSCGNCTTORAGIHKDKR . . . . .	IVMKOWNFI . . . . .	TSQATPMLFNEIOLVAIK . . . . .	HPNILALAGASF
DDB0230124	961 IQVGSRICLGCGFCDC . . . . .	YTCNAFSIP . . . . .	RFTDQFLQFKNEMQIRESQ . . . . .	HENLVVPSCCCL
DDB0229871b	695 IKTIIIVKDSYSILEGOYKGKL . . . . .	VSIIKOINGS . . . . .	INDFEMKOLGVLASIK . . . . .	SPLAVRFIGVVF
DDB0229850	51 IEYVCRIGSGSLCRV . . . . .	YKGRLNKGK . . . . .	RFEFKTEFLMMQSTSRS . . . . .	SPFLISFYGVSI
ARCK-1	1112 LEYTEKIGCGASCKV . . . . .	FKGIYRGRV . . . . .	DDEMTRFLKEFGVLASLE . . . . .	SHTIVGLYGVVL

		Subdomain I	Subdomain II	Subdomain III	Subdomain IV
SAPKalpha	351	LEYTEKIGACSSGKV	YKGLYRGKE	. . . . .	SKHVVVHFYGAVL
DDB0229849	529	LEYTLKGCGSSGKV	YKGCLYKGKE	VAIKVLKSM . . . . .	SQFMVTFYGA
DDB0229848	601	LTYNVLLGTCGASGKV	YKGTFNNGOE	VAIKVLKSF . . . . .	AEGVVVFHGAGI
Phg2	807	LEYIKRIGSGTYSKV	YKGKYRDKF	VAIKITMRGS . . . . .	SPILLISFYGSCI
DDB0229847	1949	IVFLNKICGCTSAKV	YRATWRNQE	VAIKIIYRD . . . . .	SPHVWVYFGMV
Spla	2058	LEFGQTIGKGFFGEV	KRGYWRETD	VAIKLIKKA . . . . .	HPNVVOFLGACT
DPYK4-b	299	NKDDTVCGDGFFSVV	KKGYYNETE	VALKKITLI . . . . .	HPTCVMFIGACS
DDB0229872	177	LTVEKEIGQGFFGKV	YKARWRGKS	VAIKVLKGE . . . . .	SONLHKYFGACK
DDB0229844	1476	LFLIKKIGAGSFSKV	YKAKYMG	VAIKKAKLL . . . . .	HPNIWOFMAACI
ZakA-b	379	DKDDSEGGAGNFCDV	KKGLLNTE	VAIKFVKKA . . . . .	HPNIWVLFM
7TMK1	363	FKFGQVIGECYFGEV	RKAIVWKAV	VAVKILHRN . . . . .	GACT
rk1	374	IKIGVRIGKGNYGEV	YLGTWRGSQ	VAVKKLPAH . . . . .	HPNVIOFLGSCL
rk2	391	IKIGVRIGKCNEGEV	YLGTWRGSQ	VAVKKLPAH . . . . .	HPNVIOFLGSCL
rk3	491	IVVQNRIGRGSACAEV	FTGTWRGI	VAIKA	HPNIWOFM
DDB0214883	851	IAIGARIIGRCGYGOV	FRGWSRSTE	VAVKMLFND . . . . .	GACT
Shk1	45	ITTESILCDGSFCV	YKGCRCLKD	VAVKVMLKQ . . . . .	HPNIWVLFM
Shk2	174	YNREAKIGSCAFCSV	YKGIVRCKE	VAIKKLQT . . . . .	GACT
Shk3	24	INFEELIGTGSFCKV	YKGRCROKA	VAVKLLHQK . . . . .	HPNIWVLFM
Shk4	277	IDRTDFIGQGSGFCSV	YKGKCRQE	VAVKIPRKQ . . . . .	GACT
Shk5	237	DVKTDLLGGGAYKV	YKATCRGK	VAVKVPKKQ . . . . .	HPNVVLFM
DDB0229963	1073	IKIDKEIGKCHFSKV	LKGWNKGKD	VAVKKLNSN . . . . .	GACT
DDB0231199	1377	LOILOFICGECALAEV	HKGIWKGKE	VAVKIFNEG . . . . .	HPNLLKLKGACI
DDB0229940	386	VAFGDVIAASCASGKV	YKGIFYKGDR	VAIKVYSSE . . . . .	NPHLLLFLGACT
DDB0218878e	702	VIFGDVIAAGASCKV	YKGIFYKGDR	VAIKVYSSE . . . . .	DHPNFTRFY
Rck1	842	VSIHKWIGCGSSGKV	YNGQYKCKD	VAIKVLGPE . . . . .	CANK
DDB0231197	599	VKINVEIYDSPPLCTV	YSGVYNGMD	VAIKEFSOD . . . . .	DHPNFTRFY
DPYK2	853	IQFIQKVCEGAFSEV	WEWWKCIH	VAIKKLKII . . . . .	GANK
DPYK3-b	1057	VAIVEKVGAGSFANV	FLGIWNGYK	VAIKKILKNE . . . . .	HPNIVMF
Gdt1	1372	IHFQELTEKYSWEIL	YRGTVGDKN	ALLKLKLK . . . . .	ICACY
Gdt2	1290	IIIKINYISEGTCIV	YRGIVWRSSP	VAVKLLKNE . . . . .	HONILPLICC
Gdt4	1349	IVLEKYLSEGSGFVV	YSAIWRSS	VAVKLFKHH . . . . .	CV
Gdt6	1194	IEVKELIISONNLSTV	NIANYRCLO	VVLRKIKTH . . . . .	DN
Gdt8	1038	TEQLIASLPSKVYV	FKGYYRDLA	VAVKKFAIS . . . . .	CFV
Gdt9	1290	LDFDEICGCGTYCMV	YKGKWRSQV	VAIKMMRVG . . . . .	HN
KinX	22	LDFISEIGSGGFCKV	FKGEYL	VAIKKIHL . . . . .	VIS
KinY	32	LKVGESIGSCAYCIV	YRGTLFNSD	VAIKKIQNE . . . . .	GE
DDB0229853	33	LFMDVEIGRGSFQV	OKASYF	VAVKQLSTL . . . . .	PN
DDB0229863	336	. . . VGN	IGSCCKYGV	VAIKKLHEN . . . . .	DV
DDB0229866	35	LEFGQEIGKCGAYKII	FKGEYFGTP	VAIKEISLQ . . . . .	Y
DDB0229851	23	FDPLSIIIGSGGFCKV	YOGVNLNGKE	IGIKKITCH . . . . .	SK
DDB0229865	15	IEENEF SKGSKFAK	YKGSYYGNP	VCVKVIKKD . . . . .	E
GefX	21	LEFNEKIGKCGSFCSV	FRGCYGLD	VAIKKIEKA . . . . .	P
DDB0229867	18	LVFKDIIGKGNFCCV	YRGNYL	VAIKQIPSF . . . . .	D
HH498	530	FKTARKIGACAFCDV	YLV	VAVKRVKIE . . . . .	D
GbpC	878	VKINKEVGRGCAFIV	YEAEWMSEW	IAALKLLP . . . . .	D
Pats1	2247	LMIEIIGCGAAALV	YRARWQ	VAVKKLKTI . . . . .	D
QkqA	1242	ILYEROIGEGGFCL	HKGKLISNKS	DIAIKSLILCNSNNNNNSNNNNNSNNNNFKNNNNEDEFIEKFOEFQ	E
Roco4	1026	IEYEKOIGKCGFGIV	HKGRLVKDKS	VAIKSLILG . . . . .	Q
Roco5	2175	LEIEEKVCGEGFCIV	YKGKLRQ	LVAIKOITID . . . . .	SEGETEMIEKFOEFQ
Roco6	1356	FESPKLIGRAGASKI	YRANLNNDTM	VAVKOLEVV . . . . .	OREV
Roco7	1775	LKFGPOLGSGSYANV	YRGIVNCE	VAIKVLNFD . . . . .	WLN
Roco8	1456	LIYQEEIGVCGGFSRV	YKGIFYKNNT	VAIKQFNFE (120) LSTSSLSNNSSQGEDSMNQISSGKLNAIN	LN
Roco9	3008	ELDPNP1IGEGGTATV	YKGKWRQSD	VAIKLLKTD . . . . .	LL
Roco10	2069	HSQNQENNTSTQSMGMGKQF	. . . . .	VNIKVFNAP . . . . .	GAD
Roco11	1185	VVCEEQIGVCGFCIV	HKGKLLQDKS	LVVAIKSYIVG . . . . .	QNNCARILSSFRHEALSYNFR.
DPYK3-a	726	IKLLEKLESNSKSSNIWQIEYKSTQ	. . . . .	NSSASIDIIRKFOEFHHHEMYIMSSLN . . . . .	IRKFOEFHHHEMYIMSSLN . . . . .
DDB0229956	758	LELTKEIGRCGV	KRGKWK	LVLKOPKDQ(11)LFNGSNVSGSNNSGGNNHHHCNNNSNGSNSE	ELGF
DDB0229957	986	VVLHERIGTCATGDI	YRGLISQDNLNRI	HPI	
DDB0220138	946	IOFFNLIGOGGFSKV	YHGVWRSKD	VAIKOIELO . . . . .	ADPSPEMIQDFYNEVRVLSMFN . . . . .
DDB0220436	345	FNDSNKIGEG..QC	SIYKYM	TAMKRFKPS . . . . .	NNKSLDDFRREVGILSKLKP . . . . .
DDB0230133	192	LEIGNVIGCGGYCAI	YKAKWRGLS	VAVKVISEL . . . . .	LSSSLISKEFENEVILILERUN . . . . .
DDB0229871a	360	LLFIKKIGSGACGEV	CQYEWKTP	VAVKTIFKS . . . . .	SDGSEFEKELEMHKELLH . . . . .
DDB0229955	662	LKISSKIGCGTFCIV	YKGWRGSS	VAIKOIKIN . . . . .	LLRKDKKEEKEVSTILKCLR . . . . .
Bud32	35	DEIGILISQGAEAKT.Y...	ETD	LYGLKICIVKE . . . . .	EDVNNOVQVLEEFRKERTILSRLR . . . . .
DDB0231196	459	IDFHTQIGSAGNASV	FEPTYKGIP	IACKEMPVS . . . . .	KKGIVQPSLYLV
					LGCATV

		Subdomain I	Subdomain II	Subdomain III	Subdomain IV
DDB0229339	482	IDFHTQIGSAGNASV.FEGTYKGMP.....	IACKKEMPVS.....	GTYEQRVDSIKEIAAVGOIEDL.....	GGCTVVKTVGVLK
DDB0231195	777	LSDFSIIGECGFSTV.HKATYINLONT.....	IT.PVAIKSFKNY.....	DDDSFERIYKEVSVHQSQ.....	GENILKLIGVSK
DDB0229335	312	IERRNELIGRCGNCTV.YSGVLKEIDSQGN.EISIPVIAKIKIPTQF	.....LYVMKQRMFF.....	YKSKEVYVEVKELAIHOKIN.....	GICGPKLFVCVK
DDB0216331	4	YEVVKLIGVGGEAKA.LLVKRINSDK.....	.....LYVMKQRMFF.....	.....LLEEANEGGLCEAMSLAKIQ.....	SPYTVRFEVFL
DDB0229344	8	YKLIKDIRSCGEGCKA.ILYEKDGVK.....	.....YVGKKR.....	.....LFDNLKDNQGLKEAMSLARIV.....	HPNTVRFEDAIM
DDB0231281a	25	EERLISIAKDKSCKL.CVLKEIKY.....	.....LNNK.....	.....KKLEE.FKKEEKNEEGIQKRIYQRFNLFNHNKFNSQ.....	MNHTSTIKYIEHIE
DDB0230037a	27	.....V.YIVLNKSNEK.....	.....FICKEIIYT.....	.....QNSNIDNEKRKSEYINLKKFSDTI.....	KYPHLNISKYIEHFI
DDB0219988a	24	.....V.QLVKNKDGK.....	.....LYVCKTIDFN.....	.....NNNETKDSKVKREREYLFLKQYSSP.....	SFSHLNIAYKIHKFE
DDB0231281b	1328	GKNGGIDIILSNPRSLGTYNLIGDSVFR.....	NISFFENKUKLFEK.....	FDTNVNFQKEIEFVKNYSKFLNFDISNRIPREYSILKSIS.....	GMNGVVOQDWSYL
DDB0230037b	1187	EVGSISKIREWKK.FGISSHDAV.....	VFLKYGKKD.....	.....LKSAMLNGKVNDENYYGIAVEDYMKSNELNILYLYLSK.....	QEEDPFTNIERYYL
DDB0219988b	1108	.....V.WLIRDKNNNNNYIR.....	KLSGYIKSKFKE(16)PYLKIAVENGWPISFLSSHFKRDNSNLFDYLFNKELIILELLIKE.....	.....KGVDGISOLESYFV	
DDB0231182	186	INNNMOKTGCRNGCSV.FFVNNNNNSNNNN(52)TFAIKQOLVS.....	.....TPKNKLQTYREKVIHEHNLIL.....	.....ESNKACNPKLINWYK	
IksA	261	FKEDIKIGSCGFGCSV.YLCRHLINGVD.....	.....LGEFAVKVVPVG.....	.....ENLPWLFRVLREVKALETLTK.....	.....HRNINYKHSWL
IreA	575	IITNKILGTCGCGCTI.VYEGKMEGRK.....	.....VAVKRMLSQ.....	.....FVKFADREVSLIHSDE.....	HTNVVRYYAKEE
IrlA	987	RDENNIIGRCGSNCTL.VFRCGIWNDRI.....	.....PVAVKOMOKA.....	.....FNPHISKEIEVLRUTSN.....	NCSNMIRYIDQEE
IrlB	1027	RNESNILGRCGSNCTL.VFKGLWSDKI.....	.....PVAIKOMOKA.....	.....FNPLINKEVEALISTTSK.....	NCSNMIRYIDKEE
IrlC	981	RKEENVLGRCGSNCTL.VFKGIWNNRI.....	.....PVAIKOMOKM.....	.....FNPLISKEIEVLTITLTNK.....	NCYNIVRYIDQEE
IrlD	1054	RKDEFIIGRCGSNCTL.VFKGIWNDRI.....	.....PVAIKQOMHKA.....	.....FNPLISKEIEVLTITLTNK.....	NCNNIVRYIDQEE
IrlE	903	KKESNIGRCGSNCTL.VFKGIWNNRI.....	.....PVAIKOMOKM.....	.....FNPLISKEIEILIGHTN.....	KNLNLVGYIDQEE
IrlF	950	RNESNILGRCGSNCTL.VFKGIWSDKI.....	.....PVAIKOMOKA.....	.....FNPLINKEVEALITLTNK.....	NCSNMIRYIDKEE
DDB0216373	22	YTVNRILGECGFCSV.YLVKDNNSK.....	.....KYALKVMICQ.....	.....TQESINTAKREINAQOTFN.....	HENIMKLIDHSI
DDB0229347	54	VTEVKLVAECGGFCVV.YLVRDDYNNM.....	.....YALKRMFQI.....	.....ERERLEAMKNEIDVMOKLDRN.....	NPNIVVKLEGFKI
DDB0229350	16	LNFVKQIAECGGFSYV.FLVKDSNTSK.....	.....HYALKRILIR.....	.....DEDELKGVKHEISIMKRUETK.....	HKNIVKILDYHK
Nek2	4	YEILGALCKGCGFCVV.SKIKRKEDGR.....	.....VLVWKEICYE.....	.....NMQKEKEKQLLVEVNQNLQKIK.....	HONIVRYYDRII
Nek3	4	YEEIKTICKGCGFCRA.IILVKRKSDGL.....	.....LLVLIKEINV.....	.....EMQPKERSDAMNEVNLSM.....	HENIIGYYDSFI
Nek4	4	YDIKQIGNGSHCDV.YLVRSTIDKK.....	.....KYVMKKIFLK.....	.....EREKTKDTLHEVNVLSQLK.....	HPNIVNEYFESFO
DDB0229345	12	YLIKSQIGSCSYGNT.FKVTHKESQ.....	.....VFCKKSISQVN.....	.....NOENIEKVLEEGKILITVMD.....	HVNVVKLNDSSF
IfkA-b	1024	FEEIEMIKGKGFCSV.VKSRNKLDCR.....	.....YYAIKKIKTK.....	.....GYTDSNOEPLTNKLLREVVTLSRH.....	HOFVVRYYQAWI
IfkB	1	.....MICKGGFCVV.VKSRNKLDCR.....	.....YYAIKKIKTK.....	.....GYTDSNOEPLTNKLLREVVTLSRH.....	HOFVVRYYQAWI
DDB0216407	494	FEEIOLLGRRGGFCOV.VKVRNKLDR.....	.....YYAIKKIKL.....	.....DSNOS.LNRRILREVVTLSRH.....	HOHVVRYYQAWI
DDB0229432	379	FKEISKIGSCGFCSV.YLSEYVLDGH.....	.....KYAIKKVNFS.....	.....ISNNQSPTNASSKIEKVVRREVVALAKD.....	HINILRHYHAWL
DDB0220611e	83	FCEIEKVKCGGYGSV.FKVKNKLGE.....	.....YYALKKIPFK.....	.....NTTKTFLKVLREVKTLASLN.....	HRNIVRYHSAWL
DDB0220652	236	FNDVRLVCKGCGFCIV.FQCCNIFDQM.....	.....EYAVKRIKV.....	.....OKIPTKELM.EVRAMARIN.....	HPNIVRYYGSWI
PLK	163	YRQGEFLICKCGFAKC.YLMTEVETNR.....	.....IYAAKIIPKS.....	.....TLQKTRARSRLKSEIHKSSL.....	HENIVKFEHCFE
Vps15	21	IVFKKSLIGNARFLKT.VKAYHSEEGY.....	.....VVVKIYKKR.....	.....NTKESLEKYKIMLKEIKDNFNITP.....	SFNIMPYQHFIE
TBCK	77	QNNGSIC.GSSSSSSTSNSVSTPKPQSFYVDDAGIAKQLNQS.....	.....SAVSIFSD.....	.....VFDILRSRSYISSL.....	HENLAEFIAAEP
Ttka	714	YLRIEFIGKGSCKV.YK.VLSGDLK.....	.....IYALKYVCLS.....	.....DPNEIEAOQNIEIEMKURK.....	QVNITQOLIDYEV
DDB0220004	508	FOELDLIGECGSFCHV.YKVRHRIDLGC.....	.....LYAIKKTTKKP.....	.....LKGQKDRDIVLREVYGLSAIKD.....	HTNIVRYFNAWE
DDB0229384	177	FDVVCKLIGCGSFSDV.FKVKSKFDGN.....	.....SYAIKQARHQ.....	.....FRGFOERERAVREVKAAVSTPP.....	HTNVLQYYSSWE
DDB0216398	77	FEYINQIGECGSFAKV.YKARSFVDGR.....	.....LYAVKKSKKP.....	.....IWETSERNQHIOEIQENGMKLGH.....	HNNTIAQVMCawe
Scy1	22	GPIVTGKGSKIWTI.HSGTKKEDG.....	.....SAVSIFSD.....	.....IKKNPSKLEVAKNGFKRAKTR.....	HPNVLKYLGDLE
Scy2	30	HDLKEVVCQDKFWKII.YQSTKTTNTTEC.....	.....SLFVFEKLYKEV.....	.....SCKSNLENVITFLKEATTQLRLRHPSTILOVVSVM	HPYILTPINVEV
SLOB1	129	.....KNSMCGGECCVV.SIITPTPSSC.....	.....PWS..MSNE.....	.....KKKRKFETKLL.SIK.....	IHPFIISPVPLVDF
SLOB2	90	KVYFGVLGN.....	.....SLNKLENDRI.....	.....LNSEAGRTTFRTIIKSLE.....	IHPFIISPVPLVDF
DDB0229334	1	.....MDIE.....	.....CDIRKINKL.....	.....NYYNNEIYKLLKLN.....	HPSTIKHYDIDE
DDB0231326	1730	FKDLKRVAKCAYTV.YKGTLGNLDEG.....	.....LEIAVKLMPVP.....	.....KTIHDRCVLYDIFTIELIMDTFRS.....	DSRGCHMFIDYGV
DDB0231559	508	SELGKLIGCGCANCKV.YELHYNFGGVEK.....	.....HCAVKEIKVD.....	.....KYRGAVALKEIESTALSO.....	SPFTVGIYGYFE
DhkG-a	366	YNVLSLL.NCVGCCA.SFTNYYNLYN.....	.....INNS(42)SASAFKPFQLNSSTNSTGSPLIITSQPMFQQLNSNSNTTASSSSP.....	.....ITHSNLNTAITSTT	
DDB0231198	865	ETEIEPASCQGQANI.YMVKHIDWPMLSN.CPEGSYVFKQFIEL(19)YQTYKTGESVDNFKYNFSNVEQTDKKSLETLYEEVWDKUJKRQ.....	.....FSDYIILKMPAISD		
DDB0231179	136	QONRVLIGECHYKV.YRSMYVSSDG.....	.....RSLVNLKMLKG.....	.....KRECTKEVALIDVFD.....	ASKMVTTQYFT.T
DDB0231335	355	IQFDALQSONGMNCIV.KSGT.I.....	.....GSMKVVVKF(93)NNNNNNNSNNNNSDGSSGDDNRNSDNLIKSDLIDECLFNETVS.....	.....H.LLINEFQIN.	
7TMK2	317	IAIHELICMCGSCAMVHKCTVKKGPLR.....	.....GGTFAVKVVMKDC.....	.....TNEDIESLENFIRVYEK.....	SPYIVSYQGSSK
DDB0229381	13	YNNIKEIGRCVSCVV.YKASHKKTQG.....	.....IVAIKLVDMK.....	.....OSKISTEOIQEIRALLTENPEN.....	ERTHINIILKLIQCFI
Bub1	1003	.....WLSCKVQDPPSIW.....	.....KRIKSD.....	.....EFYIGNQIHQRLOERSLTISNSK.....	FPTITHSLLYYTD
DDB0230007	8	.....	.....	.....HQQNQDQINYVDE.NVKENDS.....	TYYLVKRSF.
DDB0229337	57	.....	.....	.....KVQKKSNSKAMKEITVMQKIG.....	YYSNHVVNVYGYFN
DDB0229346	72	.....	.....	.....	
LvsG	403	.....	.....EFVYKWFNYP.....	.....YFFOTEVVKYITFID.....	GIEGTPSI.....
DDB0230125	364	.....	.....EFVYKWFNHP.....	.....NFFKTEVKYITFID.....	GIEGTPTIQO.
DDB0204911e	420	.....	.....QIAIKVEKVD.....	.....AIHPOLLFESKLYKIFO.....	GGIGIPAVKWFG
CK1	9	YRISRKIGCGSCFGEI.YLGTNISTNE.....	.....EVAIKLEPAK.....	.....TKKQVQLRLEVAVIKKQ.....	LCPYVCRFITCGR
DDB0216336	16	WTVVKKICQCAFGEI.FSGKNIINNE.....	.....	.....	

## Subdomain V

## Subdomain VIA

Akt1	T.	EDKLYFILDYV.NGG	ELFYHLO	KDKKFTEDRVRYYGAEIVLALE
DDB0220670	T.	QDSLGMVLDYI.GGG	ELFYHIS	ERETESEETARFYIGOIMLAIG
DDB0216386	T.	KKKLYVMVEFL.HGG	DCASILH	SINTLEERBAKNIIAOIVNGLE
DDB0220701	S.	TDKLYLVMVEYL.IGG	DCASILR	ALGCREEHMAKYIAETVLCLE
DDB0220700	T.	DKKLFFVMVEFL.NGG	DCASILR	SFNNNMPEDLTKNIIAQIIICL
DDB0185113	T.	KEYYYLVMVEYL.QGG	DCFSILQ	MLGSMDENMAKMIIAETVLALE
DDB0229452	SP.	CKEKVLIMEYLY.SGG	DCAFHUN	DVGVCBPEELAKOYTAETVLCLD
NdrA	D.	DNYLYLIMEYLY.PGG	DMMSILL	KYDIEBTNQAFYIAETVLALE
NdrB	D.	ANFLYLYMEYV.PGG	DMMTQII	KYDTETEDATRFYIAETVLALH
NdrC	D.	ANYLYLAMEYH.CGG	DFRAILN	NLGLTSEDEARFYMIEMIEAIS
NdrD	D.	SQYLYLAMEYH.CGG	DFKTILN	NLQRLEDDIAPFYMAEMILAVE
DDB0231558	D.	DOYLYLAMEYV.PGG	DLRSILS	ALNSLDEDSARFYMAEMVEAVD
DDB0216387	D.	NEGVFYYVMEFI.AGG	DFNSCYKRLV	DGKKETEEIKFYIAELVLCLE
Pdk1A	S.	EQCLYYVLELC.SQG	DLLHQIK	KVGSDYRSCQVVAEIIISGLE
Pdk1B	D.	ENNLYFILEYC.PNG	DLLGAIK	KAGCBSIDVVRFYAAEIIIALE
PKA	D.	EKKLYLFEYV.AGG	EVFTHIR	KSMKESNSTAKFYAAEIVLALE
pk4	D.	DRYLYLFQOEI.PGG	ELFDYIR	ANGSLSLYVTQIYAAEIVLALE
DDB0185224	T.	PTKIHFIMEYA.GKK	DLFHHIR	ANKCETEOTTKLIVAEIVLALE
pk2	T.	KDKLYMVLDFV.NGG	ELFFFHK	REGRFSEPRVKIYAAEIVSALD
DDB0220702	N.	EKKLYLVMDFV.NGG	OLFYHLO	KEAISESDOVRFYMAELIALE
pk3	N.	EDFLFMCMMDYV.PGG	ELFHHLQ	KAGKPEPEELAKFYIAEVCSLH
Aurora	D.	DKRVFLIEFA.KGG	ECFKELQ	KVGSENEOTAATYTLQIADALR
MLCK-A	T.	PEKLYLVMELV.TGG	ELFDKIV	EKGYSSEADAANLVKKIVSAVG
DDB0216385	S.	DEDICLVLEWI.PNG	DLFDRIV	KKGVFNEEARLTMKSLLSAVE
DDB0216309	T.	TKHLHLVLELV.TGG	ELFDKIV	ORGEYSEBODASKIVROIVSAVG
pXi	T.	DNEVLLVLELV.TGG	ELFDKIV	EREFYTBODASTLIGTVKVIQ
DDB0216308	S.	NDYLYLVLELI.RGG	ELFDKIV	EKGNYSEKDACNLVROIVSAVE
DDB0229351	S.	ELYYYIVTELL.QGG	ELLYOLEK	NHPSTNENVSNTBEHARKIIKQVIOAVG
DDB0216307	S.	DSHLTLVMELV.TGG	ELBYKIV	ERGSFTBKAGRNVVROVCAGVE
DDB0216312	S.	TDKIYLVVELV.TGG	PLFDRIV	DKKSFTBKEAALKITQOLQSLV
Snf1	T.	TTDIFMVMEYV.TGG	ELFEYIV	KNGLLEDESRRLEFOOMISGV
DDB0229364	T.	SKYLFILLEYV.EGG	ELFDYIV	EKGGLESGEAALFFQQIIIGLE
Lkb1	IE.	EKGKLYIVYEYV.GGG	TSONILE	NAPNGLRPPHOSQFIFROLIEACE
MARK-A	T.	SRALYLVIMEYA.GEG	EVMDFMI	AHGVLTESQARTFFTOIVSAIN
MARK-B	ED.	DVGRICLILELV.SGG	ELFDYIV	ARGRLSEKEGRKFFFROMLCGLI
MARK-C	KR.	EEEGTTYLIVEYV.SGG	ELFDYIV	AREYIKEBEARKFFROMISAIE
DDB0231454	K.	DDAMFILMDYC.QGG	DLEHYVNKFGLKGVK	MVNSPDIDQVLMGVPLPDDTKRIFTOTICLGIA
DDB0219986	.	DRNAFMOMEYI.SGG	NLLDWCRN	NNNDNNNNKRRQFWEIOKIFOOIIIAIA
FHAK-A	T.	KDQQLFFILELA.NGG	ELYNKIG	FNEPLLNEQSKFIFKOLINNAVS
FHAK-B	S.	STDCFFIVELA.TN.	DLSNLLR	KRCVDEDDIKRICKOLLLGFN
FHAK-C	S.	DRYFYIVLELA.TGG	ELFEKIK	QKGRFSEPEAKDTFKOILEAVS
FHAK-D	T.	QKNLYLVLELV.TGG	ELFDKIV	SERKFOEDTCRYILKOLCDSRV
FHAK-E	N.	EKVLSLILELV.ECG	ELLNDIVS	NLFYTBEDKAKTLFROIVDGVL
DDB0220010	DP.	QEYIYIVMEYI.EGG	SIM.	SANETSEBDLARKYERDIVFGLE
Apq1	EE.	TDPTFIYIMIMECC.EGG	DFSKYTR	THKKLTBEKALYFMKOLANGLK
tsunami	N.	KNEFTLVTEYA.DG.	DLISOTIS	EETLSDVLDIYCIVOLIALN
Cdk1	C.	QNRLYLVFEYL.DQ.	DLKKYMD	SVPAICPOLIKSYLYOLIKGLA
Cdk5	T.	ERKLTFLVFEYL.DQ.	DLKKYLD	ECGGEISKPTIKSFMYOLIKGVA
Cdk7	H.	KSNVYLVFELM.QW.	DLOEVIE	DKSIIKPKADIKSYMKMLLOGIE
Cdk8	NP.	KDKLLYLIFDYA.EF.	DLFGIIK	YHRENGSHFSDATIKSLIOWVNLGH
CDK9	SKASA.	SNNHKGSVYMFYEM.DH.	DLNGLMDSP	AFKYFAPGOKCYKLKOLLEG
Cdk10	GS.	TGDKIYLVFEYL.EH.	DVASLIDNI	NKPFKLSIEKCFLLQLRRAVE
Cdk11		GKNINSIFMAMEFI.DH.	DLRGILMEVI	KKPLPSEIKFLIQOLLNGVS
DDB0229294	TNF.	ETSEYIIVFYFY.EH.	DLSGILLS	EHRHSIPQVKCYFKOLLEG
DDB0229424	S.	NDDKLVMVFEYL.EY.	DILWKFIS	PKNKYMILSCTKFFIHOLLEG
DDB0230050	ID.	KNSVLVLIMEFI.EG.	DLWKIMS	NPOCTISLGOIKNFTKOLLEG
CK2	DP.	QSKTPSLIFEYI.NNT	DFK.	HLSPTITDFDVRYYIRELLHAID
DDB0219953	DO.	SSKVCVSLVFPV.NKT	DIRELIVY	TLDDYYTRYYIFELLKAID
C1kA	F.	KDHICLVLKRY.GL.	SIYEFLK	KNRYRPIPLSQIQNISKOLITA
DDB0229841		RKCSDSYOPPLTSILNSIISSNDNPQOHSTLIOQKDDDEFYFESIOP.QY.	SILNLIS	NNMIDQDDCOLFYIELMGLK
DDB0229333	KSLNITKTN.	LIESPVDDGTDLFYFEDOS.DF.	TLYQMR	SDKAASRKOCPYVLYQLOTTIK
DDB0229296	RKSSENLYLISNKNN.	RNNVRLPLLQOKGDDDIYFEYLLP.EF.	TLLQMTI	NKLUTBYNIMIFLYOLTVVK
Dyrk1	F.	RNHLCIVTELL.SY.	NLYDILL	NTHFGVSLNLIKKFAHOTLALF
Dyrk2	F.	RNHLILTFELL.SM.	NLYDFLK	VNHFQGYNLNLVRRFGAOILTSLR

## Subdomain V

## Subdomain VIA

YakA	H.	.KMHLCIVFELL.SV.	.NLFELIK.	.QNNFRGICSTNLIKVFLIOILDALI
Prpf4B	Y.	.RNHLCIVFEP.M.	.SIHQLIK.	.KYGKDIGISLNAVRVYAKQLFLALK
GSK-3	TS	.DNDEVYLNLVLEYV.PD.	.TVYRVSRYH.	.SMSKOPVPNIIFVLYIYOLCRSIN
G1kA	TA	.EDNKKMQLVDFI.PY.	.TIAASLLK.	.KRQLSINFIKVLFYOLCQAIIK
Erk1	PNS	.KEQFEDVYIVSELM.DT.	.DLHQIIT.	.SPQPLSDDHCQYFVYOMLRGLK
Erk2	AD	.NDRDIYLVFEHM.ET.	.DLHAVIR.	.AKILEEIHKQYTIYOLIKALK
DDB0229430	E.	.RDELFFVFEYL.EN.	.NLYYESIK.	.DRTKILLPETTIRNIIYQILQALH
Sky1	HRG	.PNGRHYCMVFL.GN.	.NLLDLIK.	.HHYRGMPITLVMKOTLIALD
DDB0230051	DE	.SSGKYYSVLSPFV.PK.	.DIEFILA.	.ENSQNFGGLGKISPTTTFSDIKYIVYQISVVH
DDB0230126	T.	.PQSIYVIMEPS.TT.	.SIKPLVE.	.SMDQHQDPIISMVISIMKOLQCLL
Cdc7	Y.	.KDQVTLILPFF.EHD.	.SFKDYFF.	.OMSNENIKHYLYALFDSSLR
DDB0229971	N.	.ENYIYIFLEYM.ENG.	.SLSSTILN.	.NFGTEPPESLICNYVENVIKGIV
DDB0229896	T.	.KDNLYIVLEYV.ENG.	.SLSGIIK.	.KGFKKEPEITLVCVYIROVLEGIV
DDB0229877	T.	.SRYLYFALEFI.EGG.	.SLAKIAK.	.RYGCBOEPILLSRYSQVLKGLA
DDB0231212	S.	.SSHSSYIVMEFI.ENG.	.SLEKIIK.	.RHGLLPESLVTVYIAOVNLNGLE
DDB0229915	V.	.QAQLNFILEYV.ENG.	.SLRDVIE.	.KFGPLSPELCIIYLYQMOGLA
FNIPK-A	GE	.IDDDNIYIYMEYI.DGY.	.PVSSILR.	.KQPKNOHPEDIISKIVIDLALILS
FNIPK-B	N.	.KHTTYIIFIYEI.NGY.	.TLEEVYL.	.KNHPIPKEKELSEIIEDLIKSLA
FNIPK-C	D.	.EDDNGYIYTEYI.QGGI.	.DIVETVTN.	.KLLKEHSHSFSOEDITRRCAFOLVLLN
FNIPK-D	D.	.NNQDVYIYLEFI.EYSI.	.PISKVKLI.	.PNDSIDNFNNVSNTIELVTCKLVESEN
FNIPK-Ea	D.	.RNNEFNIYFEYI.DKAI.	.PLSRILLE.	.KLNKKEOFIVATEIJKSIK
FNIPK-Eb	D.	.EDDNLFYIYTEYI.EGST.	.SISDLIK.	.KKPNNRPEEEFKSLMIKIVKALS
DPYK4-a	D.	.DNYIYIYMEYI.EDK.	.KQI.	.RFKESSETISMIADLTETLS
ZakA-a	D.	.DNFIYIYMEYI.EGE.	.NLANILK.	.TKKQGREKESRJISMIADLVETLS
DDB0230002	YGI	.KGKNKLYIYLEFI.EGK.	.TIY.	.ELKKKKFPLNEKOISIILKKCLETMK
DDB0229378	NN.	.SKTYAYIIMEFI.EGE.	.SMKSIIE.	.NKKHSDIEKEIJKELKALV
Mek1	T.	.EGSIFIAMELFM.ELG.	.SLSDIMK.	.KTSTIPEPVLGKIAFOVLOGLV
MEKKalpha	D.	.QSFLSVFLEYI.PGG.	.SISSLLG.	.KGAFASENVVKVYTKQILOGLS
DDB0229911	Y.	.NESLWVIMDFL.SAG.	.SCSDIMR.	.FSFPOGBEEHVJATILKEALKAC
DDB0230012	E.	.NNQLWLWMDYL.GGG.	.SLADIMK.	.FKYFDGIPVLAUTVLKSLKGLE
MkcA	L.	.HDEVWIAMEFM.EGG.	.TLA.	.EASNOQYPQBSNIAVAREVLOGLA
MkcB	D.	.KDSNLWIVMEFM.EGG.	.TFE.	.EAAKAWKEBNNLAYVAKELKGLQ
MkcC	V.	.DDTIWIAMEYM.QGG.	.TLT.	.EASOQHTPBSCIAVAKMILEGLM
MkcD	K.	.SNDELWMIMEFL.SGG.	.TLK.	.NAASNFKECRKJAYVCREILQGLD
MkcE	K.	.NDEEIWMVMEYM.DGG.	.TIRDAIS.	.NFTETEKYVAYITKEIHSLE
MkcF	Y.	.GSDLFIVSEFI.QGG.	.TLE.	.QASASSHVKETOVGFIGLELKAI
PakA	V.	.ADELWVAMEFM.SGG.	.CLTEVLDQY.	.RDIQLNBSQTAFVCQEVLRGLE
PakB	V.	.GDSLWVAMEFM.GGG.	.CLTEILE.	.QFNFSVKLVBACIAYVCAETKGLA
PakC	V.	.NDRELWVAMEFM.GGG.	.CLTDILE.	.AFDNIMKMSPIQIAYVVKETKALQ
PakD	V.	.INHIWLIMEYM.SYG.	.SLTDLISNCINIQCN.	.GNNQQQQQQQQQQQQQTYEIESHAYICQVLOGMD
PakE	S.	.KLTELWILMDHC.AVG.	.SINDMMK.	.ICCDTLDEEQIAVVTLNVLNGIG
PakF	T.	.ESHIWILLDFC.ALG.	.SIRDIIIE.	.STEKTLNEBAOSFVVKNTEKGLI
PakG	Q.	.GDNLWILMEYC.SAN.	.SIRDMLE.	.LTEKSLTBQISVILQOAIKGLH
PakH	L.	.KNKYWILMDYC.SLS.	.SFNDIMO.	.SIGKTHKEBESLILOQSSLGLV
Krs1	K.	.ENEVWIVMEHC.GAC.	.SVCDAMK.	.ITDKTLSBDOIAVVSRDVLOGLA
DDB0216375	K.	.DETCWIIIMEYC.AFG.	.SVSDMMN.	.ITNRVLNBEOIALVCYSTLKGLY
SvkA	K.	.GSKLWIIMEYL.AGG.	.SVLDLMK.	.PGFEDGYIAIILRELKGL
DDB0216374	K.	.ENNLMLIVMEYC.DGG.	.SILLDIMO.	.MCISITLTBAQIAILYQIVEGLV
DDB0216379	K.	.SSMLLIVMEYC.KGG.	.SLLDIIE.	.LCGKRLIBEEIAAVCAGVVKGLV
DDB0216377	K.	.DHQLWIVMEYC.GGG.	.SVSDILLO.	.VIDTISEDEALICCREALKLN
DDB0216378	K.	.GDELFIAMECC.GGG.	.SITEIYQ.	.ELNIPLNBSQIAYVCRETLKGL
DDB0230010	C.	.KGHVWIIILEYC.DGG.	.TVRDILLO.	.ATCTPGNPNNLQIFEEETIAYIITELLEGIV
DDB0229972	D.	.NTGFGIVQEFY.ENG.	.SLSDIYN.	.RSGAQOBESLVAKYTLOIIEALG
DDB0229973	S.	.GNQLWLWMEFY.PH.	.SLKDViT.	.KRTSPHPATEVIWMALEIAKGL
IfkA-a	QE.	.GONTLYIIFOEYN.STL.	.TLQQKILS.	.NGIGHEBSQVKKFTYQIILGLL
SAMK-A	D.	.QKNYYIASKYY.PKG.	.SIK.	.KNTKQSPYSEMAKARISVKILSGID
SAMK-B	D.	.EHYYYIATPYY.KKG.	.SIAKIVK.	.SIKSKNNSGHSESNSVRNISKILNAID
SAMK-C	D.	.ENYYYYASKFY.PKG.	.SIK.	.TKSKSTPYNEINAKKVFHKVILKAID
SAMK-D	D.	.KNYFYIGMKYY.ETF.	.KFK.	.QSNISKFGKNEBOVIRKISFKILSAID
DDB0230038	D.	.NOTFTTTEYI.TGS.	.NLDIVIK.	.NLDEKNELOLILRLSEEIASMS
DDB0230124		.DNNIYIVHPYY.DAS.	.NLOTTIPEQSHN.	.NNNNNNNNNNNNNNNNNNNNNNNNHIIISNEFIHRVSLGISKAMT
DDB0229871b	N.	.TDEYAIISEHVGNG.	.SLLTILMO.	.NHSNOLNWSNTIDLAIOTOSTIO
DDB0229850	VEE	.POKOCYCIITEFC.SRD.	.SIYHIMT.	.DRLIEIGWNRRFFQFSMQLGLO
ARCK-1		.EPKICLWVMEYC.SNC.	.SIYHSIR.	.KNPPSWERFFSFVQQMLAGIN

		Subdomain V	Subdomain VIA
SAPKalpha		.EPKLCMVMENC.SRG.	NNSLDIGWERTFRFAIETVRGIE
DDB0229849		.EPKLCMVMEMYC.SRD.	TKKYDIGWDRFFQFTMQMTLGVQ
DDB0229848		.KDKLCIVMEYC.SRG.	DDTOFTWDNFFFNLGTOAINSND
Phq2	E	.ESQLSMVVEYC.SKG.	NPLLDFDWDWKWFKWMTEVVEGVR
DDB0229847		.DPKICMIMEYC.SNC.	LQMNFTWDWVFKFIAEMVRGVN
Spla	AG	.GEDHHCIVTEWM.GGG.	DHFNLLEQNPHIRLKLAIDIAKGMM
DPYK4-b	KFD	.NKEVNHCIVSEWM.SGG.	NERKILEINPHLRVKILLDIAKGML
DDB0229872	LD	.GPSNDRSIIIMEYM.EGG.	EKSSYHLPPLSQLSIARDIAEGMN
DDB0229844		.EKKLRMVTVEYC.QHG.	KRKMDISWPLVFKWMHOAVDGIN
ZakA-b	KYG	.EKETNHCIVSEWM.SGG.	NNHKVLENNPHLRVKLTDIAKGIL
7TMK1		.ETNLNGIVTEYM.GGG.	DRYFLIKQNPILAWNMAISIARGMF
rk1	I	.PPDICICTEYM.PRG.	DQALQLOWSLLIKMMIDAIAKGVI
rk2	I	.SPDICICTEYM.PRG.	NEKIKISWSLVKRMMIDAIAKGII
rk3	N	.PPEILIVMEYM.PLG.	DPSISLDWPRMKMSMALDIAKGMM
DDB0214883	E	.PSSPCIVTEYL.SRG.	DESIEMDWGLRLQLGDFCARGMT
Shk1	S	.TPGKLMICTELM.KG.	DPMVKLPLITRMRMKAALDAALGVL
Shk2	A	.PEDLSIVTELM.PKG.	KEDTSDFITFKRAILIARDTVLGMT
Shk3	I	.PGRCVIVTELV.PKG.	DOKIQPLPLYLRRMRMARDAAALGIN
Shk4	O	.SGKMQIVTELC.QTD.	RTKKEFSLFRRMQAKDAALGMN
Shk5	K	.PGKVMIVSELM.QTD.	EVEPPPLYERMKMCLDAALGIN
DDB0229963		.NPMICIVMEFL.PSG.	QQQSIKLDSTLILAIADIAKGMO
DDB0231199	APR	.SHKSTFMIVTELM.HKG.	KNKPLSLEDIIKYALSVAOGLA
DDB0229940	O	.NKKYLFHVSELV.KSG.	DKEKPLAYFTQLSIASDIANAMK
DDB0218878e	O	.NKKYLFHVSELV.KSG.	DKEKPPLLYFTQLSIASDIANAMK
Rck1	Y	.DDKYFHTEYC.HNG.	DQRNNISFGQRHLFALGIAKGMR
DDB0231197	K	.NTNKPFIIVTELC.SRG.	KTTGOPPAIPPLIVHMAIDAAOSLE
DPYK2		.KPACIITEYM.AGG.	SSTPKVKYSFPLVLMATDMAIGLL
DPYK3-b		.DPPCIFTEYL.QGG.	IOKIKLNPLMMYKMIHDLDSLGME
Gdt1		.SKDYLCIAFEYP.PLG.	KKKLKMSITQKIRILIDVAKCK
Gdt2		.FSGIHGIVTDYC.SKG.	ENKYKITIIOKIRILIDISKACA
Gdt4	N	.FLNTYGIVIDYH.PRG.	NQNIKLSMVQNIRISLDISRACS
Gdt6		.DSSHLLWIVTEYA.PLG.	OKKEKLSLIQKVKLMIDTAKGCE
Gdt8	N	.ISHVCIVTEYA.KEG.	DSKIKLFSIQKVKFMLDAAKGFT
Gdt9	S	.LEHLCIVTEFS.PIG.	ITNTITNTNTNTSTSTKLTVKQQLRIADIDARGCQ
KinX	N	.NGILFIVTELI.EGG.	NQSIDLPWFRLRANIADVSLAMS
KinY	EPLASPS	.LVNRLLNSSSTWIVTEYI.GGG.	DTKDFPIELRIKLSLDIALAMA
DDB0229853	H	.EGRYMIVTEYI.KGG.	ARGVSNISWTLMKLAIDIASAFS
DDB0229863	N	.EKDEIHIITEFM.DGG.	FGIDIPLTWKEKLRISLDIAOSCR
DDB0229866	R	.GSSLIVTEFV.QGG.	DLAYYDFRNFDDTPEQYIHRKVNVGSSSTPDLSDPVTVNNGEKLVQLAWPLRIKIAYDVACAMA
DDB0229851	K	.ERSLFLLTELV.SGG.	NKSIDITWKLKVKAIDIAASMA
DDB0229865	K	.DSLLFLVTELI.NGG.	DHKFHPWSLRVKIAIDIAEGME
GefX	H	.SSGLYIVTEFV.SGG.	KTPPIGWDKRVSIAVDLAKAMV
DDB0229867	H	.ESGFYLITEFI.EGL.	SVPKPPKWLSRVNIALGVAKTFL
HH498	E	.EKELLLVLEFC.DNG.	ANNNNNNNNNNDIIQSLPSINTLSLNIAANGMN
GbpC		.QPLCMALEYV.RYG.	NSSIEISWGLRLQASEIAKGMO
Pats1		.DPLCIVTEYL.PHG.	KPEMEFSWLFRKLVALDISSGMA
QkqA	N	.PPRMVMEMYV.EHG.	DKERYASLGWTLLKRLMIDIAKGIG
Roco4	N	.PPRMVMEMFV.PCG.	DKAHPIKWSVKLRLMIDIALGIE
Roco5		.DPCCIVMEYI.PNG.	KFSSSITWQLKLKIAINIAADAIIK
Roco6		.SPFTVMEMYI.DCG.	SPIGDOLNGLNWALLKLALDIAKGME
Roco7		.SPFCLVTELL.QYG.	NTAETFSWGTVLKLAIDVAKGMN
Roco8		.FEPYAIIVMEYM.DIG.	KKEDGQVLDWQMLLKIVTDIASGMA
Roco9	E	.PLAIITEFO.SGG.	DLKNPLDWQLRKIAKGIAASLO
Roco10		.NPIAIITEPN.TFG.	RQKHEPIPWNIKLKLADIDARAMD
Roco11	N	.PPRMVMEMFA.PHG.	KKKNIKWSFKVRLMLDIAKGIE
DPYK3-a	D	.S.IIFESF.KGMN.	RDGLKIDMALFIKISKDIASVMG
DDB0229956	O	.PGKMYLVCDDYY.SRG.	ANICPLSNARIHVHALOVAKGMN
DDB0229957	K	.IANWSIVMEYV.PGG.	NPVLVIPYKLVLRMALDIAKGGLH
DDB0220138	H	.ANYCYIITEYL.PRG.	REOLMKLDFKQKVSFAICVALGCY
DDB0220436		.IERIILLEFI.DGN.	SPSSSLPNPLKVIQDFOOTVDAMI
DDB0230133	S	.PKCLVLEYI.EGG.	NPNTFSPOLRLKMANDIAKGMC
DDB0229871a	L	.NGNLAITTEYL.NRG.	TMNKSELSSLVKVKMLIDVAOGMN
DDB0229955	A	.PPNLCFITEYL.PGG.	SKKIKMMOLYKKLAIOIAOGMN
Bud32	DI	.GNNRITYMEFI.KGE.	KNQESTOHQNOIESIMKELGNOIG
DDB0231196	Y	.NQKLFVLMVKE.KCN.	MOREGI.WTSIFKISKDILKGIV

		Subdomain V		Subdomain VIA
DDB0229339	Y.	NEKLFVLVMVKE.KCN.	LISFLSNKSEILK.	MQRGGI.WTSIFKISKELKGII
DDB0231195	L.	KFGLSTIIFKC.DM.	DIKNFI.	CNQINLDFLFFILSTOMVNSVS
DDB0229335	L.	NVGFGIIIERF.DC.	SIHDYIO.	NNNIDFDLFFELAKMVITIR
DDB0216331	D.	NNSNMFSLCIVMEYC.EGG.	DIMDNLFKRISDSFLKNSG(328)NIESSLNINGNNNNNCSTLLKLPRKLFYTWTIY	OICLGVO
DDB0229344	TQI.	GDQIEITIMEFC.EMG.	DILDFLIELSEPQHHHTVT(189)LNIEEHVIHSNEIKGVDSIYLIEQTOLIEWLLDSYGVQ	
DDB0231281a	SKDE.	FGLVDRCIFVTEYY.EDG.	DIS.	SIKEIEFKDIINLFLKMLINLK
DDB0230037a	ILENQ.	QEKEKIKKQYIITIEFY.DGG.	DILSSLKIT.	NKKCFSIKNGDIIYLFKLMLIIFK
DDB0219988a	TRDN.	HGYLQKLTIIEFY.EGG.	DIT.	NLKNLNEVLPKDIIYLFITMLV
DDB0231281b	.	ENDIIYIILMDYF.DGO.	NUU.	EVSQDLINDFTLFSILNOIJKLIF
DDB0230037b	E.	NDKIYAMFPYV.NG.	SCN.LS.	EIDNLNEMDILLNILYOLCFQLH
DDB0219988b	E.	NNIIYIILTKYH.GDY.	SNL.	EEINELNQEDLFEILFOVMSDKLK
DDB0231182	AAPTSNLSNVNNNNNN(45)TKTITTTASIKPNIQYMHLYA.NMG.	TKEYGK.	DNNFEFTISQMKSLLFOVIYSLA	
IksA	EYDQP.	ADFGPKVPCLYIILMEYA.NNG.	NIQODYMA.	EKRDLIPENEIWSFFIDLCHGIG
IreA	D.	DEFIYLAISFC.QK.	SDIDMYVQOTLSLOISP.	TDSPSIQSSNNNGNGNNNGNNNNNNQIIDDNKTQOMILELFKGLE
IrlA	D.	QLFVYLGTLTC.EE.	SDQDILMESK.	RYKEFIEKTTTNITTFNNNNIIDENLYEQRILSLFKDVINGIN
IrlB	D.	KLHVYLGTLTC.DG.	SDQNLIVE.	SGKLNDPFISSNNKSIIELAKDILFGIQ
IrlC	D.	ESCVYLGTLTC.DG.	SDQNLVEKGDNNLT.	LTQFLGYDINSSSKNNSRILLELIKDIVYGIQ
IrlD	D.	DMFVYLGTLTC.NG.	SDQNLVEKDLEIN.	LISTSNENNENNKLKNFIGSELRLLELIKDIVYGIQ
IrlE	D.	ENCVYLGTLTC.DG.	SDOSLYDQS.	KLNEFINONNNQNQNNNNNNRVLDDLIIGMINGVI
IrlF	D.	KHFVYLGTLTC.DV.	SDQ.YLV.	ENGKLNEFINSSGKSINELAKDINGVQ
DDB0216373	SNH.	SQDTKEYRLLPYY.KDG.	TIDODIDN.	ORTIYGKDTKKPLFKEKKCLQFFLKVCCEAQ
DDB0229347	NENR.	NTRETEVLMMLMEYC.SGG.	SVLDIMN.	ARGEFTREEREILAIFSDVCNGVL
DDB0229350	VSD.	KNNTTEMFTILMFYC.SGG.	HIVEIMQ.	KRLSSGSKFTDQEILKIFQDICESVA
Nek2	DK.	PSSRLYIIMEHC.SGG.	DISQIJK.	KCRNRERTYMDEEIWRTLLOILSALQ
Nek3	L.	.NGCLYIIMEYA.NAG.	DIN.	LEIKKRTLQNKTFSEFEILSWFSOIJKALQ
Nek4	IE.	NNQFLCIIMAYC.ESG.	DIFTTLQ.	KKKNEFISEYQILDWFIOIALGLL
DDB0229345	E.	NGNYVIIMEFA.ENG.	DIFQKIE.	NQKRSGKPFSDFEIMHYFCOLVIALN
IfkA-b	EKSCDSFQSLEEGNEEDLS(263)LSTSSSRKKPPKETHTLYIOMEYC.SKK.	TIKTLID.	NVGGIAEEEAFRLLRQIVEGLN	
IfkB	EKSCDSFQSLEEGNEEDLS(261)LSTSSSRKKPPKETHTLYIOMEYC.SKK.	TIKTLID.	NVGGIAEEEAFRLLRQIVEGLN	
DDB0216407	ESAESLTSLTNDNSDDDD(178)SSSKLKNNIKKSTSIPYLYIOMEYC.OK.	ILR.	NLTETGMNLEDDEIWKLFRQIVEGMA	
DDB0229432	ELDPKNNKPRSSSFSSVE(256)NNDKNSNSNNLRLKTYVQIOTQYC.EGK.	TURDILE.	NPDFKNNSKTTILSLFKQIITGVN	
DDB0220611e	ETEELLPPSSSSMASTSLS(305)NNKNNIVSPKINRITTLFIVMOLY.SQ.	TLSQWLENR.	PPDQVNNEENLNIFKQICIGLR	
DDB0220652	E.EIIITNNSIDHYGEND(70)TNDDNNNNYQNLQKOKFSLYIOMFLC.KYS.	TURNLINIEINNIKSI.	TSIQSTSSIANPIGTNILISLKDQCREITROILVALK	
PLK	N.	EENVYIILEL.C.NQK.	TVMDIH.	KKRKYLMEMEYETKYYVQIVIMAVQ
Vps15	T.	DRSGYLIROYF.HN.	NYDRLS.	TRPFLSMIEKKFIAFOLKALE
TBCX	SQ.	KHHHDQMLIVSSEDY.KN.	SIEKOQIEIQ.	AKRQTPIPSNTIGRYAOIJKALS
Ttka	NM.	AKNYIILVLEFG.EI.	DLSKLIQ.	RLOPTNGTNVNFIRIYWQOMQAVH
DDB0220004	E.	DSHIFIOMEHC.NGG.	NIYKWVT.	EHIKOSENLLNLLAKQILTGV
DDB0229384	Q.	NNTLFIQTELC.ENG.	SDQDFLD.	SLSPDQILSEELIWNFLDVCLGIQ
DDB0216398	E.	GGHIFIOMEHC.ERG.	NLKDALN.	LAVQEEGLGKLPPEYMIWOYLCDIANGLS
Scy1	T.	ETNFIYIYTEPI.Q.	LDDELL.	EDIRNFENAIISWGLYQ.EGLS
Scy2	E.	TKTHIHFATEPI.LA.	TLEDILLYYY.	RQRKKSTVDQSSQSEEGYKKKDFTFEELELKGIFQILDGIL
SLOB1	SG.	ANDKILVIRTFF.KQG.	SLRDQVYKSPLSPYD.	TKYIYKOPKSSSSSSSSSQSVLPPIKSQKYCKQILESLL
SLOB2	IPEKH.	.VAVSVRPFYADRG.	SLRDFIHKSKP.	KMPYADKYDTHLQLNEKIVSKFGROIILEALI
DDB0229334	KK.	SEKNVIIYQESI.NGGI.	SID.	KFDNNNNFSQEVIREICEQILALAR
DDB0231326	D.	GENYIVWMSKY.KC.	SIK.	EWRLKQTLFPELLEPLLLNIFTNVLQSVQ
DDB0231559	DE.	KNNFLYIIFLEYC.PNG.	NIFDIIN.	KEKMKSFDEFFSYAFGVVHCTH
DhkG-a	TSNSNSNNNSNNNNSGG.	GGGGGGGGGGGGTINKKRRASLPTPS.	T.PLS.	ASPLLFTNKKYADIDINTFLSIAQIOTTILE
DDB0231198	D.	NPNKRGMILCA.TAG.	SIKTNMILE.	YRSWKLVIRFMMDICLGM
DDB0231179	.	LGFSSTIMENM.VDIGHVTLKQLLS.		MDDKQFSALASPFTCRSQMKPIINAMVIALYS
DDB0231335	.	NTPSIVGIGINMIVMEKV.DGT.	EDE.	KYDK.TKLTKKIFMDLVYLME
7TMK2	VV.	GSSGQIFEIRLFMFYI.PH.	TLDKYLARSVCGDSNGGG(29)NNNNNNNSPLIOPQQQQYVVPYFYSQVWVYLY	OISIGLD
DDB0229381	H.	KTTAIFILEYV.DGG.	TLEDPMY.	SFERGMPLSLISHCLYQSVNAIE
Bub1	K.	SIMLMDHTIDQG.	TLDVV.	STNGVPMEELAMFHIELKLKIE
DDB0230007	.	YSFKEFL.NSDQ.	YL.	SIDTSIIFSKNIMNALY
DDB0229337	.			SGSLPSKLIQSIKFII
DDB0229346	LKGCDRM.	LKPRLLSNDDELIFMFC.E.	DMQYQOTDEMILER.	RKCKGSLVMTRFIMRGILASAY
LvsG	.		QYIQLRNQKIT.	TFMIYQIQLFS
DDB0230125	.	KOQNOTENW.	IOIS.PRG.	EGKPIDISFYTKVFCRNTQ.K
DDB0204911e	N.	QTENW.	IOIS.PRG.	EGKLIIDISFYTKSVEILKN.I
<b>CK1</b>	F.	DGDYNIMVMDLL.GPSLE.	DIFNYC.	GRKEFSLKTVMLGDOMLRRIE
DDB0216336	H.	NDYNYMVMELL.GE.	NUSELRR.	KQLDGKFSLGSLTLKLGVOIQSLO

	Subdomain VIB			Subdomain VII		
Akt1	HLHLS	.GVIYRDLKPENLIL	L.T.NEGHI	CMTDFGLCKEG	.	.
DDB0220670	FLHEH	.GVIYRDLKLENLLMD	LDGNI	CLVDLGLCKEG	.	.
DDB0216386	FIHSC	.GIIHRDLKVENLIFD	KNGII	KIVDFGFSEVGFTG	.	.
DDB0220701	YLHKS	.AIVHRDLKPDNLLID	GLGHI	KLTDFGLSKFDVDESCNIKI	.	.
DDB0220700	YLHNH	.GIIHRDLKPDNLLID	SNGHI	KLTDFGLSKVGLLDRQTVVPPSYFSPTLSGKNNQSSSSSV	.	.
DDB0185113	YLHSI	.GIVHRDVKPDNLLID	KKGHI	KLLDFGNAKKF	.	.
DDB0229452	FIHEK	.SIIHC	I K P K P N N M V I D	SDGHI	KLCDFGLCTGFHRLHSSEFYQMLVGDA	TIK
NdrA	SVHTL	.GYIHRDLKPDNLLID	SKGHV	KVSDFGLCTGLQTNRVPTLAEIYKKYEGDNN	.	.
NdrB	SIHKL	.SYIHRDLKPDNLLID	OKGHI	KLIDFGLSKEGI	EKRNGWNKATMNELRKSCSA	.
NdrC	SLHEM	.GIVHRDCKPSNFVLD	KLGHI	KLIDFGLSKEGFISRNNSKYHTTWKNLREDNTPSNNNNP	.	.
NdrD	SLHRL	.GYIHRDLKPSNFVVD	KLGHL	KLADFGLSKNVVTRYHRSASADNTINTTSTPTTSNINO	.	.
DDB0231558	SCHRL	.GYCHRDLKPEFLIS	RDGHV	VLGDFGSSKLANNSGGGNFGNTLTVPMS	STSYSTS P S S S I	.
DDB0216387	AFHSY	.GIIHRDVKPENLMIN	KDGHL	KITDFGTGKILPQQSSQ0000000000QLPTNSGNLSSL	.	.
Pdk1A	HLHSL	.GIVHRDLKPENLIMS	SDLHV	KLSDFGSAKQLSI	.	.
Pdk1B	YLHGS	.GIAHRDLKPENLILG	KNOHL	KITDFGFAKR	.	.
PKA	FLHKQ	.NIVYRDLKPENLID	NOGHI	KLTDFGFAKR	.	.
pk4	YLHNO	.DIYRDLKPENLID	QYGHI	KLTDFGFSKK	.	.
DDB0185224	YLHAE	.NIIYRDLKPENLID	EKGHI	CITDFGLSKK	.	.
pk2	HLHKO	.DIVYRDLKPENLID	SEGHI	ILTDFGLAKLE	.	.
DDB0220702	HLHDS	.NIVHRDLKPENLID	SOGHC	KLTDFGLSKSGITSVV	.	.
pk3	YLHSN	.NIIYRDLKPENLID	EEGHI	KIADFGWSV	.	.
Aurora	YCHSK	.HV1HRDLKPENLIG	VGGEI			
MLCK-A	YLHGL	.NIVHRDLKPENLILKSKENHL		EVAIADFGLSKI	.	.
DDB0216385	YLHDK	.SVVHRDLKPENLIFSDSYGGI		KLGDFGLAKF	.	.
DDB0216309	HLHAN	.GIAHRDLKPONLICAGEEGDD		IRVADFGLSKI	.	.
pxi	YLHSK	.DIVHCDLKPENLLYS	DNSDQA	IIKLCDFGLSQR	.	.
DDB0216308	YMHOH	.GVCHRDLKPENLICSGDDEKEE		IVRIADFGLSKI	.	.
DDB0229351	FLHSN	.KIVHRDLKPENLIFR	DKSLGS	ILKIIDFGLASYVDHDCNCNNNNNDNNNNN	.	.
DDB0216307	YLHSQ	.GIAHRDLKPENLICNGEGEDM		TIKIADFGLSKI	.	.
DDB0216312	YLHST	.GIVHRDLKPENLILK	TPTDL	TVALSDFGGLSKI	.	.
Snf1	YCHHH	.MVYHRDLKPENLILD	PINKC	IKIADFGLSNM	.	.
DDB0229364	YCHSR	.NICHHRDLKPENLILS	GDKRI	KIADFGMGSI	.	.
Lkb1	YIHQS	.KILHRDLKPENLIFT	HANVL	KLSDFGVAEDSS	.	.
MARK-A	YCHSK	.RAVHRDLKPENLILD	CNRQI	KIIDFGLSNV	.	.
MARK-B	YCHSN	.MVYHRDLKPENLILD	EDGNI	KISDFGCGSNI	.	.
MARK-C	YCHAN	.IIVHRDLKPENLILD	SNGDI	KISDFGGLSNN	.	.
DDB0231454	HCHKL	.NIAHRDILKHNKILFD	NQMV	KIIDFGLS	.	.
DDB0219986	YMHSN	.CIIHRDLKLENVLIR	QDGTP	VIISDFDLSKDIS	.	.
FHAK-A	YLHSK	.GIAHRDLKPENLIFDSYGDDYL		KIKITDFGLARF	.	.
FHAK-B	YLHNL	.GIVHRDLKPENLILYNEFKQGFS		KIKITDFGLSSF	.	.
FHAK-C	YLHDL	.NISHRDLKPENLISAVSHGKS		SVIKVTDFGLAKI	.	.
FHAK-D	YLHSN	.GIAHRDLKPENLILATPNSFL		LKISDFGGLSRA	.	.
FHAK-E	YLHNK	.GIAHRDLKPENLILKHKNFNQND		AIKLTDFGLSRT	.	.
DDB0220010	YLHEO	.KVIHRDLKPENLILVN	SEGVV	KITDFGVVSHI	.	.
Apq1	FLROK	.QIVHRDLKPENLILSDDSEHP		ILKIGDFGFAKF	.	.
tsunami	YLHYK	.KVIHRDLKPENLILIT	SGGQI	KVCDFFGFAKTI	.	.
Cdk1	YSHGH	.RILHRDLKPENLILID	ROGAL	KLADFGGLARAV	.	.
Cdk5	FCHDH	.RVIHRDLKPENLILIN	RKGEL	KLADFGGLARAF	.	.
Cdk7	ACHRN	.WV1HRDLKPENLILMS	INGDL	KLADFGGLAROY	.	.
Cdk8	YLHSN	.WV1HRDLKPSNLILVM	GEGKECG	TVKIGDFGLARIFO	.	.
CDK9	YCHRN	.NVIHRDILKGSNLILID	NNGIL	KLADFGGLARPBN	.	.
Cdk10	YLHSH	.WI1HRDLKCSNLILYG	NNGNL	KLADFGGLARKF	.	.
Cdk11	YMDHN	.WV1HRDLKTANLILYT	NKGVL	KIADFGGLAREY	.	.
DDB0229294	EIHNA	.GVMHRDILKAANLILVN	NKGSL	FIGDLGTTATS	.	.
DDB0229424	ELHSQ	.KIMHDLIKPSNLILIN	PRFDL	KIADFGFTT	.	.
DDB0230050	OCHVN	.GIMHRDILKPANLILIT	TNGVL	KLTDFGLSTS	Y.	.
CK2	FCHSN	.GIMHRDVKPSNVMD	HQKRK	LYLIDWGGLAEOF	.	.
DDB0219953	YTHSK	.GIIHRDLKPELNIAID	HSKRK	LSLIDWGGLAELY	.	.
C1kA	SMHKL	.SLVHTDLKPENLILLE	SSRFTYFDNSIPLQFKNSIDT	TSNNNSVDHYCHLVDTDIVV	IDFGGA	.
DDB0229841	FMHSA	.GVIHRDLDPENSIVDENFNI				.
DDB0229333	YINSA	.GVIHRDSEDPKTAIVN	KEYKT	KFTEFFNCFLLDTD	.	.
DDB0229296	FMHSA	.GVIHRDLDPASITID	.ONO	KLFDFSF	IST	.
Dyrk1	FMSTP	.EVDVHCDLKPENLILRNPKRSA		LKLTEFYFC	.FPSNC	.
Dyrk2	FLSKR	.NIIHADLKPENLILKSPTKSGI		KIIDFGSSC	.	.



	Subdomain VIB	Subdomain VII
SAPKalpha	CLHKWD....PPIVHRDLKSLNLLVN.DKWEI.....	KVCDFGLSR.FN.....
DDB0229849	CLHNWT....POIVHRDFKSLNLLVN.EDWEC.....	KVSDFGLSR.FN.....
DDB0229848	SLHNWT....POVIHRDLKSLNLLVT.ENWTV.....	KICDFGLSR.FD.....
Phg2	YLHSMN....PPMVHRDLKTNLIS.SDWTA.....	KLCDFGLTRTMT.....
DDB0229847	CLHSDK....PVIVHRDLKSLNLLVS.DNWTI.....	KVADFGLSR.FA.....
Spla	YLHGBT....PPILHRDLSSRNLLLD.HNIDPKNPVVS.....	SRQDIKCISDFGLSLRK.....
DPYK4-b	YSHRQ....GIIHRDLTSNNVLLN.FRKKKLLNNNNNNDE.....	QFYDSDEIIAKVCDGFLS.....
DDB0229872	YLHTNFK....EGPIVHRDLTSSNLLN.SSYTVA.....	KINDFGLSKEM.....
DDB0229844	SLHTMR....PALVHRDLKSONLILN.SQFDL.....	KVADFGLAKP.....
ZakA-b	YLHKQ....HIHRDLTSNNVLLD.FKREILPNOLYG.....	SNEFTA KVCDGFLS.....
7TMK1	YLHDWK....PNEIIHRDLSTKNLLLD.ESLTIA.....	KVADFGLSK.....
rk1	YLHNST....PVIIHRDLKSHNLLVD.ENWKV.....	KVADFGLST.....
rk2	YLHGST....PVIIHRDLKSHNLLVD.ENWKV.....	KVADFGLST.....
rk3	YLHCCD....PIVIIHRDLKSHNLLVD.EHYRV.....	KISDFGLSTRFK.....
DDB0214883	YLHSRN....PIIHRDLKTDNLLVD.DSWQV.....	KVADFGLAT.....
Shk1	WLHSSN....PVFIIHRDLKTSNLLVD.ANLTV.....	KVCDFGLSQIKOR.....
Shk2	WLHAS....NIIHLIDLKPANLILV.QNWVV.....	KVADFGLSKYMK.....
Shk3	WLHESN....PVFVHRDTIKSSNLLVD.ENMVR.....	KICDFGLSALKQ.....
Shk4	WLHGI....TRIVHNDLKTTANLILV.INLRV.....	KVTDFFGFSO.....
Shk5	WLHVIC....NIIHRDLKLALNLMIS.KDKTV.....	KIGDFGFSQVIK.....
DDB0229963	HLHTR....NIIHRDLKSSNLLMD.KHFNI.....	KIADLGIA.....
DDB0231199	YLHSV....DFIHRDLKAANILILV.KNNNA.....	KVGDFGLSRV.....
DDB0229940	HLHSI....GVIHRDLKSLNVLLIT.EDFTA.....	KVIDFGTSRN.....
DDB0218878e	HLHSI....GVIHRDLKSLNVLLIT.EDFTA.....	KVIDFGTSRN.....
Rck1	YLHSM....STIHRDLKSMNILLT.KRLKI.....	KIVDFGTSR.....
DDB0231197	FIHSK....NIIHRDVKGNNFLVN.ENWEV.....	KLIDFGVSR.....
DPYK2	HLHSI....TIVHRDLTSNILLD.ELGNI.....	KISDFGLSREKS.....
DPYK3-b	HLHSI....OMIHRDLTSKNILLD.EFKNI.....	KIADFGLAT.....
Gdt1	FLOQS....STIQKTLRARNIFLYDTNENAEV.....	CAKVLDLTSSKT.....
Gdt2	YLHRN....GITHRDLKPENILIT.SLNPKSL.....	VCAKVSDFGTSKE.....
Gdt4	FLHKN....GIIHRDLKPDNVLIV.SFDPDSS.....	ICA KISDFGTCRE.....
Gdt6	FLHSN....DITNCNIKSNNLLLFSTMKEKDDV.....	.CVKISDFGFIKKF.....
Gdt8	FLHAS....BIVHCDIKPDNLLVF.SKE.ISG.....	VCVKICDFGNSEE.....
Gdt9	FLHQC....GIIHRDLKPDNVLVF.DINHNAP.....	VCAKISDFGTSKET.....
KinX	YLHSK....STIVHRDLKSTNLLVD.KNWKI.....	KVCDGFARIV.....
KinY	YLHSR....DIIHRDLKSKNILLD.DSSSP.....	IRGKVCDFGGFARILN.....
DDB0229853	YLHSK....KVIFRDLKAKNLLVD.EIGDG.....	LYRAKVIIDFGFARIF.....
DDB0229863	FLHAR....GIIHRDLKSONILLS.TNRRA.....	KLCDLGLARMF.....
DDB0229866	YLHSR....NVIHRDLKSTNLLVG.DNWRI.....	KVCDMGFARTAQV.....
DDB0229851	YLHEN....GVIHRDLKSTNLLVA.ENWVI.....	KVCDMGLARKM.....
DDB0229865	YLHSK....QTMHRDLKSNILLG.RNWVI.....	KICDFGFAKEI.....
GefX	FLHAK....KIIHRDLKSKNILLD.EFQRI.....	RLCDFGFAR.MS.....
DDB0229867	FLHSK....NIIHRDLKSKNILLDISRNQI.....	KLCDFFGARVGSQYSNGSDSSSEDESSEC.....
HH498	YLHSK....POIIHRDLTSNILLD.RNGIA.....	KIADFGISRFK.....
GbpC	HLHSN....PPVIIHRDLKSPNILLNGITEGQNS.....	VATIIDFGTST.....
Pats1	FLHSST....PPIIHRDLKSPNILLA.SINENAQ.....	TIAKVVDFGLS.....
QkqA	YMONQN....PPIVHRDLRSPNIFLK.SLDENSP.....	VCAKISADFGLS.....
Roco4	YMONQN....PPIVHRDLRSPNIFLQ.SLDENAP.....	VCAKVADFGLS.....
Roco5	HMHGFT....PKICHRDLKSPNILLML.SDMNAAV.....	VCKVSDFGETRA.....
Roco6	FLHSTV....PLLLHRDLKSPNVLL..SMKDGVY.....	TAKVGDFGLSSRMFI.....
Roco7	FLHSCK....PMIVHRDLKSAIILGGSSMDNLVA.....	KVGDGLSI.....
Roco8	FLHNIT....PPLVHRDLKSPNILLA.SHPTNPNE.....	ISAKVSDFGLSR.....
Roco9	TLHDSR....PSVVHRDLKSPNILLS.SKDSLTM.....	ECHLCDFSL.....
Roco10	KLNSHS....PPFLLTNTSSGIILE.KSNDHQSSNGGLE.....	IEPFVNAKIIDFSQS.....
Roco11	YLNQON....PPIVHRDLRSPNIFLF.SLDENAP.....	VCAKVADFGLS.....
DPYK3-a	LLHSK....DVAHGNLTRSIYLD.RFQI.....	VKVSF.....
DDB0229956	YLHSL....GIIHRDLKPGNLLID.QDWNI.....	RISDFGLSR.....
DDB0229957	YLHSL....GIIHDMKSPNLLVS.SLSTSAY.....	VNIKVADFNTCINRSRITAGFF.....
DDB0220138	HLSTYEP....PIYHTDLKTNLILVT.NALKI.....	KIADFGLASFAKKSLTTIINNNNNNTNTAT.....
DDB0220436	YLHNEI....GIIHRDLKPSNLLKN.SKNNK.....	LKLIDFGISKFLNN.....
DDB0230133	FLHRN....BIIHRDLKPEONFLVV.SISPEAP.....	VSIKLADEGLA.....
DDB0229871a	YLHTYS....PPIIHRDLKSLNLLVD.NNFNV.....	KVSDFGLSRFIS.....
DDB0229955	YLHLS....GVIHRDLKSLNLLLD.EHMNV.....	KICDFGLSKL.....
Bud32	IIHEM....NVIGHDLTSNMILLR.ESTNE.....	LVFIDFGLSYT.....
DDB0231196	SLREA....GMYHRDFKTANFLVS.NTGKI.....	LISDFGTSR.....

Subdomain VIB

DDB02229339	SLREV.....GMYHRDFKTANFLVS.NTGKI.....
DDB0231195	QVHNHYPEAEINVYHRDIKLENWLK.TIDGNHT.
DDB0229335	NLHKCH....LNEIFHRDIKPHNWLVKTKTDELV.
DDB0216331	SIHKN....HLVHLDLKSENIFLS.ESQKI.
DDB0229344	ALHRA....SMIHRDLKSENIFIS.GSNKL.
DDB0231281a	EFQN....VIIHRDLKPENIFLR.KFKNNNDGK.
DDB0230037a	EFTQ....VIIHRDLKPDPGSIVN..DYYL.
DDB0219988a	ILKEFKN....SIIHRDLKPENIFFVKNGPDL.
DDB0231281b	ELETV....YSIHHRDLKPDPNILLIK.NDLTI.
DDB0230037b	OLENL....GIFHRDVKPENIISL.RYGNNGIV.
DDB0219988b	ILES.....QIYHRDLKPENILFK.REIVNGNI.
DDB0231182	I-SOKE....FEFVHNDLHFGNVLLT.SFPVDKKYIVYQDKLDNG.
IksA	YLHHS....GIIHRDLKPNNILIHQSYDSITDR.
IreA	HLHSL....NIVHRDLKPKNVLLD.PNNRV.
IrlA	FLHQCO....DIVHNDLNPRNILVH.KGNF.
IrlB	FLHSH....DIVHNDLNPRNILLTI.IGKTSNNNNSS.
IrlC	FLHQQ....GIVHNDLNPRNILLIK.DDRFI.
IrlD	FLHQQ....GIVHNDLNPRNILLIK.DDRFI.
IrlE	FLHDQ....NIVHNDLNPRNILLV р. DNRLI.
IrlF	FLHSH....DIVHNDLNPRNILLTI.STNKNNNNNNKSNNKIKSN.
DDB0216373	VFHNHS....PPLAHRDLKPGENIVLO.NLRRPSNNNNNNNNNNNNNN.
DDB0229347	AMHOО....PPIAHRDLKIENVLYC.EHSNR.
DDB0229350	YMHSQO....PLIIHRDLKVENVLLD.EESGI.
Nek2	EIHNRK....DGVLHRDLKPGNLFLD.ENKNI.
Nek3	YISSR....NILHRDLKTONIFLS.IVNGD.
Nek4	YMHKK....KVIHRDLKTONIFLT.KKNII.
DDB0229345	YHSQO....NIIHRDLKPKNIVLS.SSDSGSGSGSGSGS.
IfkA-b	HIHSQO....QIHRDLKPANIFID.NEQONV.
IfkB	HIHSQO....QIHRDLKPANIFID.NEQONV.
DDB0216407	YVHGO....GIIHRDLKPSNIFFD.SCGDI.
DDB0229432	YIHSM....GMIHRDLKPANIFLS.S.GVI.
DDB0220611e	YIHSK....GIIHRDLKPGNVFLV.REEDHHQOSSFSNISS.
DDB0220652	YIHSQO....GFVHRDITPDNVFVCQSPFGI.
PLK	YLHNN....NIIHRDLKLGNLFID.NMRI.
Vps15	QSSFK....GVFHGDIKSENVLLT.TSNWV.
TBCX	YLHSQ....DLTHRSLSLDNICKLD.DNNQI.
TtkA	TIHEE....KIIHGDLKPAFEVSV.QGSL.
DDB0220004	YIHS...GLVHLDIKPENIYII.YKCNQNOIITNNNNNTCSIM.
DDB0229384	HIHSY....NMLHLDIKPENIFIS.SQGNII.
DDB0216398	HVHEK....GIMHLDIKPENIFIS.NDGVL.
Scy1	FLNNKC....NLTHGNIQSSSIFVN.KGGDW.
Scy2	FLNOTA....KLLHRNISPESTIT.KDLKW.
SLOB1	YLSK...GIQFSHLHLSNIIINQSNTDC.
SLOB2	FLKNH....NFPYFHLNSANVLLD.DQIC.
DDB0229334	FMDNH....QIVHDLNCSNVIIFPETLTI.
DDB0231326	FLGDH....KINHFDIKCDNFLVHPLKKGTTIEEDFWNPQ.
DDB0231559	DIHSNP....KGALIHRDLKASNFVLD.KNNLV.
DhkG-a	SIGHGK....GCIHRDIPNNIYIN.SECKV.
DDB0231198	DIHKC....QIIHRDLKPDPNLLV.FENFSSEASDENDE.
DDB0231179	VNIEK....NYTHFDLNHGNIFVNIIHTLDTQCSISGSGSGS.
DDB0231335	MNIF....EIQHRDLHAANILIK.EDGSL.
7TMK2	NLHAN....KIAHRDLKSNNSNIVTLESESEVK.
DDB0229381	YMSK....KCSHRDLKPANILML.RNRPKPLKQSEQQQQEDO.
Bub1	DLH...GTIHNICANNLHFL.FGOTSDWPWTAG.
DDB0230007	YLHSN....NIIYADLKPNSNLLID.SKGIFKLNSINNSILIEN.
DDB0229337	SNYDY....NAIGKHFKTESILIG.ESSLF.
DDB0229346	YFESH....QVIHOTLHPGNIYIL.EDSLG.
LvsG	FLHQR....EIVHGDLOPSNIHLN.NQMW.
DDB0230125	H.TSR....EVIHRDIRLSNLLMD.SGGDP.
DDB0204911e	H..QR....EVIHRDIRLSNLLMD.SGGDP.
CK1	FIHSN....NFIHRDLKPDPNFLMGIGKRGHV.
DDB0216336	AVHDL....GYLHRDVKPNSFAIGLNPSKRN.

Subdomain VII

LISDFGTSR.  
VFIISDFGLSR..SN  
VVLSDFGLSRENS  
KIGDFGLAK.  
KIGDFGLAIQ.S  
VELDCYLGDYGSAQ.  
CDLGSST.  
EFYLGDMGSSS.  
CLADFGIS.HFSK  
VFIVDFGISQYK  
OSKVCLIDFSSIS..  
EFNNWIVGGDFIVKIISDFGLSRIK.  
EVTHLMISDFGTCDTIGPLES  
KISDMGLLGKL.  
VISDLGLLSKMO  
NNSFIISDLGLLSKME  
ISDLGLLSKME  
ISDLGLLSKME  
ISDLGLLSKMN  
ISDLGLLSKME  
NNNNSEDSIEAIPILMDFGSVREARIKIE  
YKLCDFGSSTIKTFNT  
YKLCDFGSATEEITRM  
KLGDFGLAKI  
YFIKLGDFGIAKIL  
KIGDFGISR  
SNDSIPLLKIADFGVSKLM.  
KIGDFGLATSGAPVSKSDLNSSSTSNTANN  
KIGDFGLATSGAPVSKSDLNSSSTSNAANN  
KIGDFGLAINNKTSTLSPTTNINSSSTSSAGSLTTSNSVQ  
KIGDFGLVKDITATTPTSTPLNTNPSTTPIDTTPTSSANT  
FEENSDGGLLVSKDFGLAVQHTIVSSTPSPTPTSPSLTPVNHSIPIQDQI  
KIGDFGLATTIESLTVDSSNN  
KLGDFGLSTK  
YLSDFACYKPT  
KLTNYGLYY  
KLIIDFGIAKAIQS  
IIDGNKINFNSITFKIGDLGL  
KIGDFGMVKLETTNNNNNGNGCQS  
KIGDFGVCS  
QIGGLDFVSDVKD  
KLGGLGFTCSIETKEPPISNLSQLDL  
QLVDIENCL.  
LISDYENSF.  
KIDFGVTKT  
TNDPNFAVCLA  
KIGDFGTARFD  
KLANFOSIFKKTSSLKKSFKQQHQQSEENNNTLDSDI  
ROREFGLICKITDLGASIQKE  
GSGSGSNTNPVVLGDFGCARKM  
SIIDYGY  
ICKIIGDFDISRSFNNPKVLNVLS  
NNNYQDPDELPILKVTDYGYAS.IS  
ECKGAWKSKGFTLTDFRSRIDTT  
NNNNNNNQOIMITSROOIFNLYNNNIDNDNNNNINE  
KWPSPRTQOOFD  
LLVDFGFANF  
LLVDFGFANF  
VNLIDFGLAKRYRDPK  
ITYLIDFGLARRFVLA

## Subdomain VIII

## Subdomain IX

Akt1		LLTPTDKGTFCGTPPEYLAPENVLQ	GNGYGKQVDWWSEGSILLYEMITGL
DDB0220670		IQEGHVTVTMCGSPEYVAPETIIN	GTGYSKSVDDWWALGTLFYEMIAGL
DDB0216386		NSIKNGNKKNNKCLGTPVYMSPEVIN	KRGYGKTIDWWALGIIIFELLSGE
DDB0220701	MDDS	STTGPNNGNGNTSLNSSQTNLSPYPORKNTLKTPLKPKVKKVVGTPDYLSPFELL	GTGHHGOTVDDWWALGIIILYEFITGS
DDB0220700		LKNSTFLYNTNNNNNTENQKILGTPYYIPPEVIL	GKGYGKTIIDWWSLGIIILYEFITLGY
DDB0185113	SNIGGSNTI (98)	SNIPTTTTTTTTGQOSQQOSQQQQTTPLPPHNIHRKLSCVGTPDYLAPETILL	GIGHGASADWFSLGVILYEFITCGV
DDB0229452		NOKKPTSNDGILGSPRYISPEVLL	FEPOSPADEVWSLGIVMPEELITGT
NdrA		MKLIEATPLTQTERIASWKARRALAYSAVGTPDYLAPENVL	QIGYNKEVDDWWSLGVILYEMIVVGH
NdrB		IREEQDQTPQSRSARFDWSKRQRRLAYSNVGTDPYTAPEVIM	KDGYSACEDDWWSVGVIMPEMLVGV
NdrC		SFTSNTMKAASAYLSGGTNVMAYRPIAHSAVGSPPEYMSPEIVN	DQGYDMTCDDYWSLGCVFVEMICGF
NdrD		NNNSLKSSTSILKNSSDCVGNIHGNNFQ. PLNKKV. TFSKVGSPEYMAPEMIA	GKGYDISDYWSLGVVFFEMIIGD
DDB0231558	LSS	SMIEHTPMKFQGAANGNGPLNSVTDFGSFKD. LSVARLAYSVVGSPEYMAPEVLO	ATRGYGDDEVDDWWSLGCMFYEFITFGV
DDB0216387	SSSLLGSGGGFTPSHWNGMAGSAGSSFGSSLGRSFDTNPPNFSFLRNPHSSYTTSYICGTPQYMAVEVVO	GVNVYSLCDEFWSLGAILFELVTGQ	
Pdk1A	LNNVNNLNV (48)	NNNNNTAAGSNTNTNTNTNINTNINANINNICKTEIPKLTRNNSFVGTAEYVSPELIS	NKETSTDSDLWALGIIYOMASCR
Pdk1B		GSHHKGSRSGSFCGTAEYVCPPELIT	EKSAGVEADLWSYGCILYOLVSGK
PKA		VEDRTFTLCTCGTPEYLAPETIIO	SKGHGKAVDWWALGIIILYEFMLAGY
pk4		ITENTKSMCGCTPEYTAPEPEILS	GHGHCJKSDADWWSLGIIILYEMILVGV
DDB0185224		TVGGKNTSSVCGTFDYMPEPEILN	SSNGHGKPVDDWWALGVVVYELVTGK
pk2		IETTDGTFITFCGTPPEYLAPENVN	GHGHCACDVWWSLGTLILYEMITGL
DDB0220702	VKTNNETFSFAGTLEYMAPEMIO	HATCGKAVDWWSLGILIMYDMMICK	
pk3		GSKNGEGGGFATTFCGTPPEYLAPETIT	GAGHGCKAADWWSVGVILLEFEMITGR
Aurora		HAPNTKRSTFCGTAEYLPPEVIE	KKGYDOTADVWSLGILILYEFITLGK
MLCK-A		IGOTLVMQIACGTPSYVAPEVLN	ATGYDKEVDMWSIGVITYILLICGF
DDB0216385		YEESIGLELAGCTTAYSAPEITN	NOVYRKSVDMWSGCGCILYFILFGR
DDB0216309		FGDDGYLETCCGSPPEYVAPEVLE	CKPYDKACDIWSVGVITYILLICGF
pxi		CGGSPPLRSVLVGTLYTMAPEISS	CTGYGKPVDDWWLWSIGVITYILLICGF
DDB0216308		FEGGEELKTAACGTPDYVAPEILE	CKPYDTSVDMWSIGVITYILLICGF
DDB0229351	NNNNNNNTNGEVIQPSSPPPTKILDVCGTPEFOAPEMVK	RLGYSYPVDIWSTGILILYILLICGF	
DDB0216307		FGTGEALETSCCGTPDYVAPEVLT	GGSYDNAVDMWISIGVITYILLICGF
DDB0216312	VGDDVFMKTTCCGTPSYVAPEVNNI	SNSPATAYSDAVDMWGVGVITYILLICGF	
Snf1		MQDGFILKTSCCSPNPYAAPEVIS	GKLYAGPEVDVWSCGVILYAFLCAK
DDB0229364	VRKDMILLHITSCCSPHYASPEVVS	GIDYDGOKADDVWSCGVILYALLTCK	
Lkb1	QLEDFECLSRSYGSPAFQPPELTQ	FQTTFSPFKIDIWAMGVTLYLMTIGK	
MARK-A		FTPFGSYLKTFCGSETYASPELIL	RKEYNGPSDVWWSMGVILFVLTGK
MARK-B		IKPCNLLSTFCGSPVYAPPFILL	EKRYNGNEVDIWSMGVILYAMVTGQ
MARK-C		IOPGKLLLESFCGSPLYAAPEILK	AEKYLGPPVDIWSLGVILYAVLCGM
DDB0231454	NWSYQEKMSPCGTPAYAAPFMLL	GINYNGPEVDIWSLGVILYSLVTGK	
DDB0219986	ANVNVTVFNINGKTELYKAPEMKE	ONVKGSYSIDIWFAGVMLYKCIIFQFVNNNNNNNGK	
FHAK-A	IHEGELAKTLCGTPLYVAPEVILSLHHK (16)	DINSVGYGKSCDAWSLGALLYIVLCGT	
FHAK-B	DINSNVGYGKSCDAWSLGALLYIVLCGT	VEESOYIOTFCGTPLYFAPEVIAN	
FHAK-C	IGEKEMATTLCGTPLYVAPEIIRNCLHG	NFFSNGYGYGSIDLWSIGVILYLSLCKY	
FHAK-D	DGGAQVNTGYGKEVDVWSLGCGILYILLSGR	DGGAQVNTGYGKEVDVWSLGCGILYILLSGR	
FHAK-E	MDEGTYMKTMCCGTPQYVAPEILTK	GEREGYGKSVDLWSIGVITYILLICGF	
DDB0220010	VSDGSFMKTMCCGTPQYVAPEILTS	SGGHNNGYGLEWDWSMCAILYIMLCGY	
Apq1	FDDDDVVRCRSRCSPEAFLAPELCRN	ESOPISGKGVDVWALGVSYCLIFAR	
tsunami	IDPFSLSDTFCGSPLYMAPEILH	RKNYTVKADLWSVGIILYEMITVG	
	SSNSIILTSLKGTPYIAPETIIO	EOPYDYKADIWSLGLILYQILVGS	
Cdk1		SIPVRVYTHEIVTLWYRAPEVLL	GSKSYSVPVDMMWSVGCIFGEMLNKK
Cdk5		GIPVRTYSHEVVTWLWYRAPDVLM	GSRKYSTPIDIWSAGCIFAEIMASCR
Cdk7		GSPNKVFSPOAVTIFYRAPELIF	GAKSYGSPVDIWSIGCIFAEIMLRT
Cdk8		SPLKPLNENGVVVITIYRSPPELLL	GSKHYTRADVDIWAIGCIFAEIITTK
CDK9		SSEKKQILTMRVITLWYRPPPELLL	GTFHYGPEIDMMWSVGCIMAEILSKK
Cdk10		GYPIESITPCMIVLWYRSPPELLL	GCQKYSTAVDILWSIGCIFGELICR
Cdk11		GSPLKPLSKGVVVTWLWYRAPELIL	DTEIYTPAIDIWWSVGCIFFABIIISKE
DDB0229294	YTKRSVFFSKVVTWLWYRAPELLL	GSTOYGPEDDMWSIGCVLIEIIVTSR	
DDB0229424	YIGNPHLAHQVISLFYRPPPELLM	GSRNYGPEVDIWSVGCIVIVEMLITGF	
DDB0230050	SKRSEKFLOSSNVVSLYRPPPELLL	GSCIYGPEDDMWSVGCILMEMINNS	
CK2	YHPNQDYNVRVASRYPKGPELLV	DMEDYDYSLSLDMWSLIGCMFAGMLFQK	
DDB0219953	YHPGKNVNRVRAHSRHYKPPELLV	NMFDDYDYSLSLDMWSLIGCILFACILLLDR	
C1ka	TFENTHHTAIVCSRSPYRPPPEILL	GMGWSYPCDIWGVGCGILVLEIYIGY	
DDB0229841	PT.FLFNKEYITMTIYRSPAPETIW	GDSLYTEATDVWGAGVIFAEIILICK	
DDB0229333	DYPTDIFV.KDYEETPWFYRSPETII	MLKEFSECDVWSIGVIFABILIGE	
DDB0229296	PVDLFF.NDYDTSSFIYRSPETIW	RNTTYTTAIDVWNIGVIFGEMIILCK	
Dyrk1	HSNERMYKYIQSRFYRSPETLL	ELEYFSIDSMDWSLGCILVEMHVGE	
Dyrk2	ENEQIFTYIQSRFYRSPETIL	GTKYDKSIDIWSLGCILVIFTGV	

## Subdomain VIII

## Subdomain IX

YakA	YEKSTLYTYIQSRH <del>YRSPEVIL</del>	GTVYCASC <del>IDMWSLGCISAEIFIGL</del>
Prpf4B	EIHESITPYLVSRF <del>YRAPEIIL</del>	GHKYDYS <del>IDVWSVGCLAEFFTGK</del>
GSK-3	LIKGETNVSYICSRH <del>YRAPELIF</del>	GSTNYTT <del>IDVWSLGCVIAELLIGO</del>
G1kA	LESNHTSMSYICSRV <del>YRAPELLV</del>	GCSNYTTK <del>IDIWSIGCILAEMLIGK</del>
Erk1	DATHQGFMTEYVATR <del>WYRAPEVIL</del>	SWNKYTKA <del>IDIWSVGCIFAEELLGRK</del>
Erk2	ESIAEANPVLTEYVATR <del>WYRAPEVILL</del>	GSTKYTKGVDMWS <del>IGCILGEKLGEK</del>
DDB0229430	IESKPPFTDYI <del>STRWYRAPEVLL</del>	RCTYYNAP <del>IDIWAvgaiMAEILYSLK</del>
Sky1	WTDKHFDTDIQ.TQY <del>RAPEAIV</del>	KAKWGT <del>PVIDWSAACMAFELATCD</del>
DDB0230051	FGNSITOPTSNPSSY <del>SYLSPYICSVLDKENHSKLSNEIDWKAFDMWSIGCIFIELLYKK</del>	FGRVINTE <del>SDIWSLGVIFIYLLOTKQE</del>
DDB0230126	GNDSEPAEDG.MIYGSPEI	KYNKOTTA <del>IDIWSVGVILLCMISGR</del>
Cdc7	NNNNNNNTN (64) PSTNENGTTTNASSTSNTTSSSSSSNKS <del>KNLRNDPKQPAPRAGTRGFRAPEVLL</del>	RTK
DDB0229971	IKE <del>SDKRYSVGGTPYWMAPEVIE</del>	ISGHCOVS <del>DIWSLGCTIIEELFTSY</del>
DDB0229896	KFD <del>TSAAAVGTPYWMAPIEIE</del>	LNGATT <del>KSDIWSVGCIVIELLTGS</del>
DDB0229877	YSA <del>IDRKLTVVGTFWMAPEVIQ</del>	MDMNARSTAC <del>DIWSLGCTIIEELLTGN</del>
DDB0231212	DLSSDN <del>PDDTFAGTPYWMAPEVIO</del>	MOGISTAC <del>DIWSLGCTIIEELLTGT</del>
DDB0229915	DSESQLRF <del>SVVGTPYWMAPESIE</del>	ISGCCSAS <del>DIWSLGSTMIEELLTGN</del>
FNIPK-A	CDGDSK <del>YSLVGTSTHMPPEVALR</del>	NNTACRKSD <del>DIWSLGCTIIEEMAGGN</del>
FNIPK-B	PSNDGSK <del>CYTOQCSCIGYIPPFIKL</del>	GGQCGRK <del>SDIWSLGCTIIFGCLVIKMGGE</del>
FNIPK-C	NNNNNNNANN (28) GGGGGGEASITSTI <del>STILSGSSSSQLSTPSLESSFSLE</del>	QOKITS <del>KGLSKKSDIWSLGCTIIEELMVCG</del>
FNIPK-D	INFS.....LNI.....	GYEDSIHLD <del>MFLNLGCVLIOMLG</del>
FNIPK-Ea	LDSEVNSNI <del>IGVTFETHMAPEIKLK</del>	NGKLG <del>YKSDIWSLGCTIIEELIVCGN</del>
FNIPK-Eb	IEKNSK <del>YYSFVGTDSHMAPEVKLQ</del>	NGKAGSK <del>SDIWCIGCTMIEAGL</del>
DPYK4-a	DDGDNICKESSFA <del>ITGHTYMAPEVKK</del>	LHRSTKK <del>SDIWSLGCTVIEELIVGG</del>
ZakA-a	NNN.....NNNNNNNNNNNNNNNNNN <del>INNNNNNDLNGSGSIGSTYLNEQYKQSSFAIIGTFNYMAPEVKR</del>	NYRATRK <del>SDIWSLGCTIIEEMAGG</del>
DDB0230002	GDLKRDHYG.....TYLPDECIL	NNVSIVNYTFD <del>VYSLGFISFELFYPTQF</del>
DDB0229378	NIINKTVKLQT <del>ISSVGTTLYMAPEILL</del>	NNKGSNS <del>SLDIWSLGCTIIEEMWKW</del>
Mek1	QHTL <del>SKAVTWGVTVTYSMSPERIS</del>	GRSYSF <del>SDSEIWSLGCTIIECAIGK</del>
MEKKalpha	SGIVSQFK <del>SMQGTPYWMAPEVIK</del>	QTGHGR <del>SSDIWSLGCVIVEMATAQ</del>
DDB0229911	IDTGETS <del>RNTFVGTPCWMAPEIME</del>	QVN <del>YDAVDIWSFGITALEELARGK</del>
DDB0230012	EKNTCCSRKTIV <del>GTPCWMAPETIS</del>	ERGYNQG <del>VDIWSFGITALELIRGK</del>
MkcA	NLSKER <del>IRMGCPFWMAPEMIO</del>	QKQHGY <del>TCDIWSTAICLLELANRN</del>
MkcB	DVATSTPMHMVC <del>SPFWMAPEMIO</del>	QKYH <del>HSTPVDIWSFAISLLEMANQR</del>
MkcC	DANERKL <del>VHMACSPFWMSPEMIR</del>	GESYGC <del>PTDIWSFGITALELANGE</del>
MkcD	SIEKEE <del>INMDCSPESYISPEMIN</del>	GNPH <del>SLSDIWSFGICADEMLIGK</del>
MkcE	LTHLKDQ <del>INMCSPFYMSPETOQ</del>	ERG <del>YNGQVDIWSFGITALELIRGK</del>
MkcF	SVEKGG <del>SQHMVGSPIYMSPEMIR</del>	DKAHGLA <del>DIWSLGIIVVAEMVRGR</del>
PakA	TQIRQ <del>ERNSVVGTPYWMAPELIR</del>	GEECSY <del>PSDIWSFGICILELLFKK</del>
PakB	TKSQK <del>QKRVТИVGTPYWMAPELIR</del>	GNNYDFK <del>VWDIWSLGIIMTREMAEGE</del>
PakC	TQKQ <del>QKRNTVVGTPYWMAPELIR</del>	GONYDRK <del>VDIWSLGIIMAMEMAESE</del>
PakD	TRKKL <del>QRNSVVGTYPWMAPELIR</del>	GHDYGV <del>VKVDIWSLGIIMMMEAEGE</del>
PakE	QTEYQ <del>ANVYIGSPFLYMAPEVIL</del>	GNOYNH <del>HKVDIWSLGIILARELSEGE</del>
PakF	NGALDQ <del>SKEMIQTFLWMAPEVIL</del>	KAPYN <del>NSKADIWSLGITLIEELAEGR</del>
PakG	DSL <del>RGEASQALVGTPFWMAPELIK</del>	KKNYD <del>YDKADIWSLGITIIEEMADGL</del>
PakH	IQSTFS <del>KGSIACTGTPYWMAPELIN</del>	RQNYNNK <del>CDIWSLGITAIEMAESF</del>
Krs1	SDTMAK <del>RQTVIGTPFWMAPEVIQ</del>	QTDYNNK <del>IDVWSLGIVAIELADGE</del>
DDB0216375	SERTRK <del>RNTVIGTPFWMAPEVIO</del>	EIGYDY <del>KADIWSYGITCIEMAESK</del>
SvkA	TDQMTK <del>RNTFVGTPFWMAPEVIK</del>	EVGYDNK <del>KADIWALGISAIEMAEFFH</del>
DDB0216374	VNTGF <del>KQKTVVGSPIWMSPEVIS</del>	OTGYD <del>SKSDIWSMGITAIEMAEGE</del>
DDB0216379	AEQGQ <del>KQKMTVIGSPYWMAPELIM</del>	PKGSNGY <del>DSKADIWSLGITAIEMAESK</del>
DDB0216377	FNTFS <del>KRNTFVGTPYWMAPEVIO</del>	GQGYD <del>QOKADIWSLGITAIELALV</del>
DDB0216378	LDKSS <del>SKRNTFIGTPYWMAPEVEN</del>	ENKYDGK <del>ADVWSLGITAIEMAEGL</del>
DDB0230010	CSLGR <del>GRTRMCGTMGR<del>IAPEVIR</del></del>	RSNP <del>PVYDTKADIWSLGITLIEELAEAE</del>
DDB0229972	SAIEPS <del>IRFSLN<del>GYPFWTSPEVLS</del></del>	REP <del>YDQSDIYSLGCLIEELMAEGT</del>
DDB0229973	LGN <del>GVTLKTCIGTPCYMAAEVLNA</del>	MKPFN <del>HVKVDSWSIGCLIMELIVGH</del>
IfkA-a	GRNIK <del>IFDHEKLN<del>SLKLNLSWI</del></del>	DGGNS <del>GYSLKADIWSFAMLCFELISSL</del>
SAMK-A	IIDSTNL <del>KTLCKKF<del>FWASPDVN</del></del>	OEIQ <del>IFSEKTDIYSFGCTIIEEMIVGW</del>
SAMK-B	IENNTNF <del>KTACCS<del>PFWAAPEILN</del></del>	KSTSDF <del>SRKCDIYSFGCTIIEEMIVGS</del>
SAMK-C	NHHNHNHNHN <del>HDNDNDNTNVKIKTQCMBPRWPSP<del>PEIHR</del></del>	EPPHES <del>SKESDIFSF<del>FGCTIIFELILG</del></del>
SAMK-D	IDLLTNQ <del>KTQFISPCF<del>ITPEFYFK</del></del>	KTKN <del>KISKEADIFSF<del>FGSTISNM<del>IKGG</del></del></del>
DDB0230038	KFMSFQL <del>KNOLLHTO</del>	SGSGK <del>GGYDTKDVFSFGVILWEWF</del>
DDB0230124	FVKDG <del>IFRTGQ<del>QSSP<del>YLAPELFNSN</del></del></del>	CNOYD <del>TNSDQFGFAMILLOLF<del>TRS</del></del>
DDB0229871b	TQENEES <del>LSKLEIK<del>CFNLYSP<del>PELLS</del></del></del>	LNTYS <del>NKSDIYSLSIV<del>YELFETCLTK</del></del>
DDB0229850	LNTEYINSNNQN <del>KSFAFCSP<del>ESSDFQDID</del></del>	TYK <del>DDYTS<del>SSSITSKSDIYSFGIIMFELISRIING</del></del>
ARCK-1	TESNQ <del>ETLNKTRGT<del>SVYCAPEVFE</del></del>	EYS <del>GKEYNERSDMYS<del>MGIVMW</del></del>
		CYM

	Subdomain VIII	Subdomain IX
SAPKalpha	TGSNLETLVKMRGTFAYCAPEVYY	GEOFSGKSVDVSIAVILWELVTRCING.....RYE
DDB0229849	TADNLETLSKIRGTFAYCSPEVAVG	NGSLYTTKSDIYSIGIVEWELVTRVING.....EYS
DDB0229848	TGSNLETLGKLRGTYAYVAPEVYF	GKKYTTKSDVYSMGIILWEMTYRCIKG.....THL
Phq2	MTNVSTLGMRLGT MAYTAPEIYD	GLLFNTKSDVYSLGVI MWEAIQRCISG.....VYL
DDB0229847	TAKSASNRTTRGTFAYCAPEVF	YGIHTTKGDIFSIGIILWELLA VRCI KS.....KYE
Spla	MEQASQMTQSVCIPYMAPEVFK	GDSNSEKSDVSYGMVLFELLTS D.....
DPYK4-b	SNQSESKKLRGCGSIHYMAPENLN	GSPINEKSDIYSFG LIVVOMFS .....
DDB0229872	KPGPTEMTAAMGSLAWMAPECFK	AENYTEKD VDVYSF AII LWEIVT CR.....
DDB0229844	TELQTSNSTIKGT MAYCAPELYN	GISYSEKADVYSLGIVLWELITTRVITG.....KYQ
ZakA-b	SNQSESKKLRGCGSIHYMAPENLN	GSPINEKSDIYSFG LIVVOMFS .Y .....
7TMK1	EQGFE.MTSTVGHLCYQAPEVFI	GELYTPKA DVY SFGLLIVWCII TGE .....
rk1	IEQOGATMTACGTPCWTSPEVLR	SQRYTEKADVY SF GII LWECA TRO .....
rk2	IEQOGATMTACGTPCWTSPEVLR	SQRYTEKADVY SF GII LWECA TRO .....
rk3	KHLDKKTAMTPVGTPCWTSPEVLR	NDPYTEKADV F SFA I V LWEIVTRE .....
DDB0214883	VKSHTFAKTMCGTGWVAPEVLA	EEGYTEKADV Y SY A I V LWE LLL TRL .....
Shk1	GENLKDQDGAKGTPLWMAPEVLO	GRLFNEKADVY SF GLL WO IF TRO .....
Shk2	PDSKD KLLGOAGSPLYMAPEMLV	NQPYDGKV DVE SF SII LWE LLL TKO .....
Shk3	KHKMLKDQSSAKGTPLYMAPEVMM	FKEFNESSDVY SF G II LWE II TRK .....
Shk4	IKEGEFFODKAAKGTPLWMAPEVMM	GNPYNEKADVY SF G II LWE II TKE .....
Shk5	TGTTLSDQKGPKGT ALYMAPEVMM	KHEFNEKADVY SF G II LYE MA TCE .....
DDB0229963	ETSTFTQMTTIGTVAWTAPEILR	HESYNOKADVY SY A I V L Y ELL TGE .....
DDB0231199	IDNNFNMTAVAGTPKWE SPECLM	GEAYTSASDVY SY GM MII BE LA I GD .....
DDB0229940	VDLAKQMTLNLCGTSCYMSPELFK	GNGYDETCDVYAFGIVLWEIIARK .....
DDB0218878e	VDLAKHM TMNLLGTCGTSCYMSPELFK	GNGYDETCDVYAFGIVLWEIIARK .....
Rck1	VANKYNMTTHVGTOAWMAPEIFT	SRTYT NKDVY SY A I I L E II T R K .....
DDB0231197	FVEARLGYTIVGTPNMYACELFN	GOPYHOPADVE SF G V VLWEMFT QD .....
DPYK2	REGSMTMTNGGICNPWRWRPELT K	NLGHYSEKDVY CF SLVV VWE II TGE .....
DPYK3-b	TLSDDMTL SGTINPRWRSPPELT K	GLVYNEKDVY SF GLVV VYE I Y TGK .....
Gdt1	IKGLACNNYIERDVTPI NLTRE ISIIRDPK(29)NNNSNNSSSLKYNITHSF A VLSY ELLIDE .....	
Gdt2	TNERYNLQTRGTVAYMSNEILS	O GS Y T K SDI Y SF G M I C Y E L F SER .....
Gdt4	INGKHELNSKAGTTRYMSPEFILE	GLPYTYSTDVY SF FAIL F ELL SGR .....
Gdt6	EVQNQNEKEIFK	DEKDKOLIDVY EFG IT FY ET M LEE .....
Gdt8	LGEKESKS KPDSTMN YLPN EVFD	GE GY QKSADVY AF G VS I Y E VM VE K .....
Gdt9	NEFSNKNTNCVCGTPIYMSNEILE	KKTYDNSTDVY SF AVI LY EMM IEE .....
KinX	EEDNNKSM TICGTDNWMSPEMIT	GLDYDERSDIF SF G IV LLE II SRV K .....
KinY	KKQQGNRHL SIC GTDS IMAPELIL	GMEYDESVDI SF G V V I L E M I L R K KV .....
DDB0229853	DGKD TNNL TICGSEN TMSPEVIV	GSSYNDSDVY SY G V V I L E L I C GS .....
DDB0229863	EERINKR YTCV GTE I WMAPEVCL	DQSYSTAVDVE SF G IV L V E II TEKI .....
DDB0229866	GGGSRAKRTMTICGT TNCMAPEVVL	GQDYNEACDVFSY G IV L SE II TRMDTTNNL .....
DDB0229851	DKSEKSKM TICGTD DWM APEVLI	GEEYDASCDV E SF G M V I L E L I T R E .....
DDB0229865	TIQNPLSMTICGTD E FM S P E V I L	GIQYTSYSADI Y SF G M V I L E L I T . R .....
GefX	EQT KKS RHM TMC GT EGWV APE ILL	GMSYDTSCD V E SF G V V I L A B L I T G .....
DDB0229867	VNGAAGGGGDDVYKNNGNGKPANYRLLRMSICGTPSFMPPEILL	QOKYDWSVDV FS FG I L C T E L I T .....
HH498	NDIGDKTM TISICGNPRFRSPEVTK	GOKYSEKDV E VEG F G M I L Y E M F T R R .....
GbpC	ALYGGAA LIRCVDQPLWLGP E VLA	GTAYSEPSDVY SF G II I LWE LY T R A .....
Pats1	GLOHTITNRGVENPLWLAPEIILN	KTKEASTOTDVYAFGIVLWE L V T R K .....
QkqA	QOSVY SVS GLL C NFO WMAPE TIG	VEDESYTEKDVY TS F A M I L F T I L T GE .....
Roco4	QOSVH VS GLL C NFO WMAPE TIG	AEEESYTEKADT Y SF F A M I L Y T I L T GE .....
Roco5	VVT SALGRDKL SNSP I WLSPEIMR	GDEYTYCDVY SF G IV L V E II T G L .....
Roco6	OALKHKL RNF PV CGN ITWVAPEIILR	EE EYTVKSDVYAFGLI L H E L L T R K .....
Roco7	KPI GKEVKG R KV V W RWL APE CMG	DGOYTEKIDI Y SF A I V L W E II T RD .....
Roco8	SIVQNFSSKV VDNPTWOSPEV LK	GMEYNEKSDI Y SF G M I L W E C Y H L E .....
Roco9	GFSTT V A N R S V Q N P V W L A P E V I N	NELCS D KSDVYAYGV I L F E L L S RT .....
Roco10	SFLPSLFP T STTPKSYHSPEVLO	KLNYHENSDVY SF G II I L Y E L L T R S .....
Roco11	QOSI LY SVS GLL C NFO WMAPE TIG	AEE SYTEKIDI Y SF S M I L F T I L T GE .....
DPYK3-a	PKLNATDLN NPA I E PRYMAPEMTR	ME DQI SCSIDVYAYAFV L W E A I T SH .....
DDB0229956	VVDNR. MT KTV GTP CYMAPEV LK	GLTDYSOQADVY SF A F V L W E C I S R Q .....
DDB0229957	NRHTGSGDN NKV E KDS KKGTLWMAPEVIR	GAMYSEKDVY SF A I I M W E M V T R K .....
DDB0220138	SSTTTSSANGANSISNNNNNGTTSVDQ S R L A Y A P E I L N	SKHFSEKSDV E SF G T I L W E L V T N K .....
DDB0220436	NNQNNNNNSLNMGSY RY SPPELL CNN	NQNNNLINKSVDV F S F G I M I L W E C L N W T .....
DDB0230133	TSSRSRFY GPT V E C SFLY MSPEVFT	OKKFSRAADVWSYGA C I L I I T N K .....
DDB0229871a	GGIGSSAKTFCGILSWIAPEVFN	GSGYTTKDVY SF G IV L W E II THK .....
DDB0229955	KS KSTE MTKS I C S PI W M S P E L M	GEDYTEKDVYAFGII I LWE L C T G E .....
Bud32	DENEKRLNTFAKTI C I M W Y R C P R LGDCSED	SNSVEDKAVDLY .....
DDB0231196		VLERA .....
		EKTLTHYNEKSEI Y SLG II I LWE L V C V A M T G T Y I .....
		SPK .....

	Subdomain VIII	Subdomain IX
DDB0229339	.DENEKRFNTFAKTI GTLWYRCPRLGDCSGD.	.EKTLNHYNEKSEIYSLGIIILWELICIAMGTYYV..SPK
DDB0231195	.TESNGCQLQQIRGNTNLHIAPECYK.	.GFLFSQSDFISVGISLYQOLAKLVYG..KVF
DDB0229335	.ETNENT.LOKYRGTSVFI PPELND.	.NILYNEKSIDIYSLGVSFMLLYKVVYG..KME
DDB0216331	.KYENS.MSGVACTYYYLSPPEILL.	.NKNYSRPADIFSLGCIFYEMTLNL..
DDB0229344	.AHHTGSIHSETVGTYCYSPEILN.	.STYDKTTDIFSLGCIFYELITLK..
DDB0231281a	.TLYTQNKS TLIGTNQYIAPEVIE.	.KKGHTNLIDIIYSLGKTLLSLSKRN..
DDB0230037a	.OVKTINSSTLIGTNQYIAPDVK.	.RGGYTGTIDIIYGLGKTLLLLN..
DDB0219988a	.MVITDQKNTLIGTNQYMAPFIDLG.	.GYTCKVDIYSLGKTMLSLIT..
DDB0231281b	.ELKNDQDLYYSKDGTLYQOSPEIYSSSEL.	.RGNEDIKNQPKMDVFGILRCVMKYLMSK..
DDB0230037b	.GKHLENYYSDGTFGQYQAPEIYREEL.	.RGDGDIKTQKYKMDVFSLGCTMAFLIKK..
DDB0219988b	.DFGFILKTNESGSKMYQOAPEIYQEEYRS.	.KENDITNQHVKLDIYSLGFTLISHLMKK..
DDB0231182	.LPSNEIIYNQRNDR..SKEFC.	.FYSIDLFSFSSILINKIKIKE..
IksA	.LAPPLYKNNKIRGNTGTTIEYLAPELLOKGV.	.NGEYNSDYDEKCDIWSLGIILLYQAMAYGT..
IreA	.LDNDDQ.SLTFTSDSHGWQPAEYLN.	.GTNRNTKKVDIFSLGCIVVYLLTGA..
IrlA	.VETSYSF.TNNAPGTQEGYHPIEVLO.	.EKRKTKSVDIFSLGCILFYLLTNGO..
IrlB	.VESSYSF.TSNIPTGQGGYHPFEVLO.	.SKRMTKSVDIFSLGCILFYLLTNGO..
IrlC	.VTSSYSF.TMHAPTQOEGFHPEVLL.	.EKRKTKSVDIFSMGCCILFYLMTGGO..
IrlD	.VTSSYSF.TMHAPTQOEGFHPEVLL.	.EKRKTKSVDIFSMGCCILFYLMTGGO..
IrlE	.VSSTYNFSTNAIPTQGDGYHPVEVLL.	.EKRKTKSVDIFSLGCLIFIYIMTNGA..
IrlF	.VESSYSF.TTNVPTGQGGYHPVEVLO.	.SKRMTKSVDIFSLGCILFYLMTNGO..
DDB0216373	.NRKDALSLODEVEQONTTPFYRAPELFDIPS.	.DCQIDERIDVWALGCLLYTMAYNN..
DDB0229347	.ATERGKAEDDINMFTTLFYRAPEMVDLYR.	.GOIIDEKVDIVWALGCLLFKMAFYV..
DDB0229350	.KNKTEMQNAEADDISRHTTLOYRAPEIVDFYR.	.SPVINEKIDIWA LGCLLYKLFFYV..
Nek2	.LINESLYAHTFVGTPYYMSPEQIH.	.GLKYNERSDVIWSVGCCLIYEMATLS..
Nek3	.NSETSLASTVLGTPYYLSPPELIO.	.NEKGYDHKSIDIWSLGCVILYELTTLK..
Nek4	.LNSSEFAKTMIGTPYYMSPECFG.	.SRAYDFKSDIWSLGCCLYEMITLK..
DDB0229345	.SETDLYANTAGTPQYVSYEICN.	.KKPYTNKTDTIWSLGVVILYELMTLS..
Ifka-b	.INLSSSTNSTAQOPTPMWDLNDENLSMTGGVGPFYCCPEILE.	.KNTKHYGTKVDMYSLGIIIFFEMCFO..
IfkB	.INLSSSTNSTAQOPTPMWDLNDENLSMTGGVGPFYCCPEILE.	.KNTKHYGTKVDMYSLGIIIFFEMCFO..
DDB0216407	SVIN..TKQQQQQQQQPQNYWEDEVEGQQQQQQQQQQQQQQQQQQQQHATARVGTLYTSPQE.	.GTNGDSAYDDKVDMYSLGIVFFEMWY..
DDB0229432	IPISTPPPTS(21)AATTHLNSSLGCTI SSSSTTATATTSTTPFMFYNISVN TVGVTLYTASPEQ ILSNKGVF.GGGGYTNTWYTNKTDIYSCGIIILFEMIVG..	
DDB0220611e	ININQOLQQ(>63)PTGQSQ SIPSTPSSLSSSSTPSVSTGTLSRSLEHCKHTSAVGTLYTSSPEQ.	.KKGLYNEKTDIYSLGIIILFELYF..
DDB0220652	.NNNNNNNNNNNNKKVGLGTLYSNEOEQ.	.GDNYNQKTDIYSLGVIVFFEMI SQFK..
PLK	.VEHGERKKTICGTPNYIAPEIIL.	.NSNGHSYEVDVWSIGIILYTLIGK..
Vps15	.F1PEDNPADFSYFDTSGRRTCYIAPERFYETNRG.	.APSNNELTPKMDIFSLGCVIAELFLDG..
TBCK	.LSDHGENVSFPIGNLILSPESIL.	.RGAKGSSNTKADIVWALGCIILHICLGY..
Ttka	.DDTTNIVRESOIGTINYISPEALIDTSQ.	.GGPKOCMKLGRASDIWSLGCILYEMA FGY..
ddb0220004	.LNEATNTKIYSEGDSRYSLRELLH.	.DDMSALKKS DIFSLGCTIYELARCK..
ddb0229384	.NNTSMDSDCNNLSDLDEDDIFFDFLE GDSR YLAEYELL.	.DKKQISKPSDIFSLGIVTFFEMVTGNEMP..TNG
ddb0216398	.TTTGGDDSEGDOIYMAPELLN.	.DIHTPSADIFSLGITEYMATNY..
Scy1	.INNSILRNHN DLIPN.KYKSPEIMKSQ.	.WQQIQQSPSYSIDSWSMLGCLMYECYNGT..
Scy2	.REYQYISGGGGGE SNSNSNYI LPOLDYLAPEFIS.	.QRKFETNSDLFSI GRLIFELS INLEQKALD SHLISO..
SLOB1	.LGMKPLFNDYIYG.	.IG.LPQSF KDNLE..
SLOB2	.LGLEPRFSDFI RQ.	.HNEKIDP.DVLSFGLVILFEMACG..
DDB0229334	.NFLNODYQOSPEV LK.	.SNNFTHKSDIWSLGFILLKMDIK..
DDB0231326	.TODVEGYTTRNRGTEF1KSPMLTIAYAS(7)DRRKVGNSNTASD VWSLGCILFYELLTG D..	
DDB0231559	.CTLNSSLKGNGACTVCFQAFPEASR.	.GKATIQS DSIYSLGVVILFELCAPIYK NY..NYF
DhkG-a	.LVHDNNFTSFHTDDVPEEY G.	.PVDEKSDIYSLGVTF FELLTG R..V
TMID	.DVPIRLCDTNGHENYKSLERYWDYNQC.	.RIKTTFSIRDNE DIFSLGCLVLFILM LTF..
DDB0231198	.NIDLTNSYNNNNNNSSTNNIFFNFNNDYDEESINELFKSYPDLSR FSTSTYYI SPEDTGR TIH.	.SNIGDDRKGYDISN IKSII YYDFN NY..
DDB0231179	.NFTFHTDDVPEEY G.	.RFOYDGEKVDIYSLGCTTFEMVTKHR..
DDB0231335	.DVPIRLCDTNGHENYKSLERYWDYNQC.	.RFOYDGEKVDIYSLGCTTFEMVTKHR..V
7TMK2	.NPTALQQQKLNNFFQOSATT TTTEQTTPEI EVA A.	.TTTPQT IHS AFOQHDILSFGFIVLDFL TLSN..
DDB0229381	.GND SAEI HSTLAGS PLYMAPEI IHIILSP(11)DSSEGYNPLLVDWVAI GAVAFRLITGDDL..IS	.GND SAEI HSTLAGS PLYMAPEI IHIILSP(11)DSSEGYNPLLVDWVAI GAVAFRLITGDDL..IS
Bub1	.IYSQDARYQSPIELLPIG TPLEWLKI.	.NQS TTNVGVWSY NLDYLGICKVMFH ILTCGK..
DDB0230007	.SIYLYLSPPEV LK.	.GYTYSFSSDWSFGVLLFKCITGY..
DDB0229337	.QFFFQDYL YLSSPEN YK.	.GSLVGVNEYSMWTLGIIILYQCLTGE..
DDB0229346		
LvsG		
DDB0230125	.TENEEFYQGT MNTASNR IYNI LIN.	.NRTNHAF SVVESDDLES I .VKVYI MENEQ..
DDB0204911e	.TENEEFYQGT MNTASNR IYNI LIN.	.NETNHAF SVDES DDLES I .VKVYI MENEQ..
CK1	.THOHI PYREHKNLTGTARYASLNTHO.	.GIEQSSRRDDLES IGYVIL MYFN RGS..
ddb0216336	.SGEVRPARESTGFRGTARYASINSHL.	.SKDLGRRDDLWSI FVILIEFAE QG..

Subdomain X

Akt1	PPFYNO	.....DVQEMYRKIMM.....	
DDB0220670	PPFYSE	.....DPHEMTKLILS.....	
DDB0216386	TPFVGD	.....NONMIFEKITNYT.....	
DDB0220701	PPFNDD	.....TPELIFQHILHRD.....	
DDB0220700	PPFQEDEPNESINPKSDNDEKNVRIIFNKITTNHK	.....	
DDB0185113	SPFNGS	.....SVQETFQNILQ.....	
DDB0229452	TPFIGE	.....TPEEIFESILS.....	
NdrA	PPFLSD	.....NTTETCLKILNCKETL.....	
NdrB	PPFCSE	.....SIRETYHKIMNWQTL.....	PK
NdrC	NPF CAD	.....TPNDVF INILRWKETL.....	
NdrD	TPFNGD	.....TPEEVFMNILDWKNIL.....	
DDB0231558	PPFDGD	.....SPEEVMETVLKWK.....	
DDB0216387	ALFVES	.....PDTTEOKIRENTGNWRGLL.....	
Pdk1A	VPFRGK	.....TEFLTQKVSN.....	
Pdk1B	LPIFGF	.....NEYQTFLITK.....	
PKA	PPFYDD	.....DTFAIYNKILA.....	
pk4	PPFVSE	.....GSQNDIFRLIR.....	
DDB0185224	LPFSNSK	.....ESLLNRKAD.....	
pk2	PPFYSQ	.....NVSTMYQKILN.....	
DDB0220702	PPFEHK	.....NRALMQEKLIS.....	
pk3	SPFLAS	.....NRNDMYKSMIQ.....	
Aurora	SPFTSD	.....EEKNLIFH.....	NI
MLCK-A	PPFYGD	.....TVPEIFEOIME.....	AN
DDB0216385	PPFYSD	.....DESEMFEKITK.....	GO
DDB0216309	PPFWDK	.....NNAVLYEKIRN.....	
pXi	PPFDET	.....TG.....	YV
DDB0216308	APFYAD	.....THHELFQKILD.....	LE
DDB0229351	PPFQGK	.....NNMIVMSLIIK.....	GEL
DDB0216307	PPFYAS	.....SQNLLFEKILT.....	AD
DDB0216312	PPFYSE	.....DIRKLFESEL.....	AS
Snf1	LPFDDE	.....SIPMLFKKIRE.....	GV
DDB0229364	LPFDDE	.....NIRRLLNKVKN.....	GA
Lkb1	PPFSGA	.....NMFVLFLENTSK.....	CK
MARK-A	LPFDGD	.....NYVELFQKILA.....	GN
MARK-B	LPWTLT	.....DGVQVEGMDRLLR.....	GE
MARK-C	LPWEGD	.....SQAEISFNSVH.....	GN
DDB0231454	LPF INV	.....TDMIVGKFILP.....	EE
DDB0219986	NNSDGNENDNN	.....NNNNFLIIREPFLLP.....	
FHAK-A	PPFD DDD	.....DDEEMSTPQLFEKIVS.....	GN
FHAK-B	KPFIVDC	.....RDLYHSFIN.....	GN
FHAK-C	PPFD FDH	.....TNNFNKLITNO.....	GL
FHAK-D	PPFGDP	.....OTKDFFEKIKN.....	GG
FHAK-E	PPFD DS	.....REVSIFEQTRN.....	AK
DDB0220010	TPFI SK	.....TNSLLDIYD.....	OI
Apq1	PAYNSG	.....SVPDLIN.....	OL
tsunami	PPFSAN	.....SLADLVHMTLES.....	NI
Cdk1	PLF SGD	.....CEIDQIFRIFRVLGTPDDSIWPGVTKLPEYVSTFPNWP.....	
Cdk5	PLFPGS	.....GTS DQIIFRFLKILGTPNEESWPSITELPPEYKTDFPVHP.....	
Cdk7	PYL PGT	.....GEIDQLRKICSA LGTPNESNWPGVTCLPNYIK.FTDHP.....	
Cdk8	PLF PGKEKDPKI	.....PSLFQDDQVEKIRVLGKPTLDMWPDIKHLPEWKRLLSSMEA F.....	P
CDK9	TLF PGR	.....NSIDOLDKIQYVC GSPNANNWPEAMDLPFWDALKPKRE.....	YN SLSLK
Cdk10	PLI TGN	.....NEVDQIMRFNLLGEPNEQIWPGFSSLPNFKRLNNQIPHQ.....	P
Cdk11	VLL QGS	.....SEIDQMDKIFKLF GTPTEKSWPAFFKLPLAKYFNLTDQ.....	P
DDB0229294	NFLPGS	.....SEQQOLEAI CKLC GTPTEIWPNVSOLONFNQISHLPV.....	Y
DDB0229424	YMFAGS	.....NDSILOELIIFKTF GTPTEKNWPGISKLSGYSPYLGSKSKY.....	PSK
DDB0230050	YLFAGA	.....DETAQDLIFKLF GCPTEKS WPGVSSLPGYNDLFNKQOOQQQNE (38) YNNISTSCLOSPSSSPPIGGYASSLSSDFNSNEYNGYNQTF SNEDCLAISQK.....	
CK2	DPF FGH	.....DNIDQIVKIVKILGTEEFYAYLDKGIVVDHTILSIIIGKHP.....	KPWS
DDB0219953	DPFFNGD	.....NNNDQDLKIVKVLGTD LFLDKFG LSLTDEQSSLIK P.....	ROKS NWE
C1kA	TLFDTH	.....NNVQHLLAMMEKVMG.PFPNSMSNSVSKKYFNDYGTLNRPQNSDE.....	I KSMER VEG
DDB0229841	RLERSF	.....NSKEHHLKSYKLIGAPKASEGAYVVKGELLFFLMEYNRKN.....	SF
DDB0229333	OLF RG E	.....SKQSLLIEISELIGTPTYDECKESTNGFARNFLINIPLK.....	SR
DDB0229296	RLEKTO	.....DFE DHLISI SKLIGNP ATAEDLSIVLSKSIFOYMEKIPKST.....	LTP
Dyrk1	PLF SGQ	.....NEQDQLT KIEVLDLPPSHMIDSSPKAKK FFTKD PINSTYQLKKNEKLKTNVEFC.....	KKKLSEIIGVETGGPQ SRRKN
Dyrk2	PLFPGS	.....DEPEQIACIMEV L GAPPKSVIDNSTRKD I FFEDDGTPKP VN STT.....	GELY TIG

Subdomain X

YakA	PLFPGN	SEYNOISRIVEMRIGIFPSDLDDKGKSSTRYFHRHLGSNSDDNNNNNNNGKPYYTLKSEEDYQRD.	SKTLLPSKKYFNYKTLPEIIQNYGFKKSMSP
Prpf4B	FLFPGK	TNNDMIRLFMEYRGAFSKKMLKKSEFVSNHFNENLVFMKQEIDNIEKTVRKVPH.	DITKPTKDILQFLPK
GSK-3	PLFPGE	NGIDOTVEIIVLGTPTKEQIHAM..NPYYTSFKFPEIKA.	N
GlkA	PLFPGT	NSNDQOLGRIIEVLSGSPKTDDMEAMKPSKPYH.L.QLPNI.	N
Erk1	PLFQGK	DYIHOITLIELTIGSPSEEDICNIAEQAROFIRNMGNQ.	P
Erk2	AMFPGN	STMNOLDLIIETGRPSAEDIEAIKSPFAGTMLESLPP.	SN
DDB0229430	PMFPGS	SEIDOLFKICTIMGSPSTSATWIDGIKLANSMGFTFPNVQP.	PS
Sky1	HLFKPKSG	KGFKEKSSDHALMIELLGKPPRFIFAGGDESRVYFTHKGDLRKIPDLSD.	QWPLFSV
DDB0230051	KLFNNNLNDNNNNN(52)QLYSV	NNNTSTYKESAPKNGNLYFKENHNIIIKSKVERDFNGANLPT.	
DDB0230126	PLFHGH	NNKSVIESIVKIVGRPFQKDIDRMIAANGNMTSDAIQLQYAASL.	PVPFEDS
Cdc7	YPFFIS	PDDMTSFAEVSIIG..TKKIVDIAHLEKKISISHIPPTPW.	RDLRRRL
DDB0229971	PPYFDL	NPIGAMYRIC.	
DDB0229896	PPYYDL	GOMPALFRIV.	
DDB0229877	PPYWDL	GTMPAMFAMV.	
DDB0231212	PPYFGL	APAAALYKIV.	
DDB0229915	PPYYTL	QPMAMFRIV.	
FNIPK-A		LFEKD.	
FNIPK-B	LEETEI	QIDGASFNNNNNNK.	
FNIPK-C	DPK	IT.	
FNIPK-D	CDCT	KDENI.	
FNIPK-Ea	LKLLDI		
FNIPK-Eb	NLCHSE	RD.	
DPYK4-a		NPKKI.	
ZakA-a		DLSOK.	
DDB0230002	EIKPIK	LT.	
DDB0229378		LNOCLQR.	
Mek1	FPGSNLPHQQQP(83)SVPEGMGFWVLLDCIV.		
MEKKalpha	PPWSNI	TELAAVMYHIA.S.	
DDB0229911	APFAEY	PPMKVLLLTQ.	PP
DDB0230012	PPGYDL	PPSKVFMNLLFGNSP.	
MkcA	NKLR.K.	NPIKTMFMVGSEG.	
MkcB	PPMMES	AVKAMFTVATD.	
MkcC	PPHR.K.	SSLTAMFTTATE.	
MkcD	LPHYDS	RLKAMVFVATNNL.	
MkcE	VPHH.K.	SKIKAMFLAGTVGVK.	
MkcF	PPHRDS	RMKAMFYAIN.	
PakA	PPYLEF	PPLRALFLITTO.	
PakB	PPYMSF	PPLRALFLITTK.	
PakC	PPYMDF	PPLRALFLITTK.	
PakD	PPYAKY	PPVRALFLITLLE.	
PakE	PPNRGL	RSMNQOLVEIPNM.	
PakF	PPHIDL	PPMRAMKMPNW.	
PakG	PPLYTM.	PPTRAMLMIPNK.	
PakH	PPLSEV.	NPMRAMYMIIGR.	
Krs1	PPLFNV.	HPMRVIFMIPNPSR.	
DDB0216375	PPYHDL	HPMRVLFMIPTS.	
SvkA	PPRADL	HPMRALFLIPKD.	
DDB0216374	PPLFNL	NPVKVIFVIPFR.	
DDB0216379	PPRFDV	PPSRVIFTIPHQ.	
DDB0216377	PPNSNV	HPMRVIFMIPRE.	
DDB0216378	PPLSEI	HPMKVLFOIPYR.	
DDB0230010	VPYGKD	SSLKALFYTAIH.	
DDB0229972	PPFSHL	GPMEALIEIINPSTTI.	LP
DDB0229973	PPYHQF	QHLOSIEMIINGTC.	PP
IfkA-a	PPLQYQL	QQYDLIKEIEQ.	
SAMK-A	ESYSKK	ENNQPNLQKLP.	
SAMK-B	DPWGK	RNHQSHSPPIPT.	
SAMK-C	YII	TTPIIIILPSIPS.	
SAMK-D	TDFKEDE	EGFEELKRTFAGVLT.	
DDB0230038	RD	IKLSDLKSNTVNGYT.	HYLRP
DDB0230124	PLFQDI	HVSRTDTIL.	NGVRP
DDB0229871b	KPYHEV	TLDfdfQIIHKTSK.	LNLRP
DDB0229850	HPFSEF	KDIKNDFQLLL.SSK.	NGLRP
ARCK-1	IPYQEY	NKMFNAFQVALL.	VNSSKRVLRP

Subdomain X

SAPKalpha	RPFSEY.	KNLQHDFQIIIOATAK	KNLRP
DDB0229849	RPYSEY.	SHIKMDFOIML	NSKEGLRP
DDB0229848	L PYA EY.	PHLKFDYOI L I	SSAKDVRP
Phq2	RPFHEH.	PISMDIQIIILTSK	NKVRP
DDB0229847	KPFSEF.	KHIQYDFQILVQTSK	FNLRP
Spla	EPOODM.	KPMKMAHLAA Y	ESYRP
DPYK4-b	.YASPN.	TIYSPKEMASMVSD	EKLNYRP
DDB0229872	DPYNGM.	EPLRLAFLASV	EDYRL
DDB0229844	RPYEDN.	TEISFDFQIVIMSSK	QGIRP
ZakA-b	APPNTI.	YSPKEMASMVSD	PKQNYRP
7TMK1	OPQNQL.	QPLKMAHLAA Y	ENYRP
rk1	DPYFGI.	PPFQVIFAVGR	EGMRP
rk2	DPYFGI.	PPFQVIFAVGR	EGMRP
rk3	DPYQGM.	PTFOIVISVGQ	HKL RP
DDB0214883	IPYAGK.	NTMQV VRSIDR	GERL
Shk1	ELFPEF.	DNFFKFVAAICEK	OLRP
Shk2	EPYNKL.	YSSYPQLVEGVVN K	KNRP
Shk3	EPFSHH.	RELEKFREAVCVK	HERP
Shk4	APYSSH.	KDYDIFFN AICNE	KERP
Shk5	ELFPEY.	SEIDPFYDAICNK	KLRP
DDB0229963	EPYQGI.	PPMNAGILVASK	GLRP
DDB0231199	EPFLEI.	QSIVELARSVC DK	KLKP
DDB0229940	EPYENI.	NSWSIPVLVAK	GERP
DDB0218878e	EPYENI.	NSWSIPVMVAK	GDRP
Rck1	SAYDEN.	ANINIPNMVMK	GERP
DDB0231197	TPYKNL.	TRIEQALFVQS	GGRP
DPYK2	IPFSDL.	DGSQASAQVAYA	GLRP
DPYK3-b	IPFEGL.	DGTASA AKAAFE	NYRP
Gdt1	ILVGDT.	RK	FGQEKP
Gdt2	IPYYSE.	PHWRIRRELVLK	NERP
Gdt4	VPFREI.	PKREIPRFVRL	GTRP
Gdt6	TPENLS.	NLILE	GERP
Gdt8	IPFH E I.	CYNDIPNRVQD	GFRP
Gdt9	VPFSEI.	D.EKWEIPSKVIS	GWRP
KinX	APYMRD.	ASFGLAEDI VR	NO
KinY	VLERGP.	QSAFEI DQDSA	RO
DDB0229853	RVVKTQ.	LKRTPMNAFD MNLEKA	EH
DDB0229863	ERFPQH.	RFQFDAPAF	LK
DDB0229866	SLKYGL.	DVDVL	LP
DDB0229851	NLT PRI.	RNEDLGVDQKFF	LS
DDB0229865	SKLDER.	LPQNNFDIDY	EELQ
GefX	.RKP GV.	DLWVRSPETCFD INP	EELKQ
DDB0229867	LKR PGKD.	YWVRSQNN GFDINIELN	VNI
HH498	VPFHDY.	EOIAASFKIAN	AERP
GbpC	HPFDEF.	QFGQWMSKLEDEIIR	GLRP
Pats1	DYFGEI.	GFMTLIEEKVIN	GERP
QkqA	IPFDEY.	SFGKM QF INLIR	EENLRP
Roco4	GPFDEY.	SYGKIKF INMIR	EEGLRP
Roco5	LPFDEY.	PVAHSSFM YQLEDEI T	NGLRP
Roco6	H PYREF.	NYS.MVSLO QEDA IK	NGLRP
Roco7	LPFEEY.	VDQLKWN SII EDKIMK	GLRP
Roco8	LPFDEF.	DFKFMSTLED NILS	GLRP
Roco9	RFF SNI.	TFMSEVEGLIT	EGVRP
Roco10	IAFQDH.	DRFSNIVI	SGORP
Roco11	CPFDEF.	TSFGKMEFIRKIRE	EDLRP
DPYK3-a	LPFRKF.	NDISVAAKVAY	ENLRP
DDB0229956	IPYKDF.	AQIQWISMVLE	DSFRP
DDB0229957	L PY SHI.	AFNCEVEDQVL	KGLRP
DDB0220138	IPFDGM.	DPYEVKELLK	SGKRL
DDB0220436	L PY ESSL.	SREQVKQIKT	DMERES
DDB0230133	R PY QEY.	DQLGYLELARVRE	EGLPP
DDB0229871a	OPSGNI.	SATSLG	HP
DDB0229955	L PY SGL.	DSVQLALAVT	TKSLRP
Bud32	FISTHP.	NSEQLFQTILS... NYELTS	
DDB0231196	IPLFQNE.	VDFLIWIHKDYRFSFPVGTP	

Subdomain X

DDB0229339	IALFQNE	VDFSSIWIHKDYRFSFPIGTP	
DDB0231195	H PYHEYQI	ADEPENLNITONTGLIPTIPPNL P	
DDB0229335	NPFYEF	KISKMEYFKTVVALENFLVPIVPTFLP	
DDB0216331	LPLTKRS	FGQELEIGKFDKRKAFKQEFDDSD	
DDB0229344	LLSHNR	IYLGEDMLNDRFDMSQFLSTFPEKY	
DDB0231281a	TGFVYN	RIYLKLIFEIMTNPFETR	
DDB0230037a		RVQQNQY	
DDB0219988a	LVHSP	MNSIFESLFOLCTLENFKIR	
DDB0231281b	FNSS		
DDB0230037b		FNITS	
DDB0219988b	FNCNP		
DDB0231182	SPSSS	TTSTSTSQVLIKSDDSSSSASSSSSSSSSSSSSSSSSSSLP	KS KNK
IksA	LPYRYSGDPF	IDEDPNRNLPSLIDEIAGFSNNRLIFPOIPQRS	
IreA	HPFGHRY	.NREKNVLKGKFIDQIKHL	
IrlA	HPFGNN	KLLRVANIVYDKPDLEPLKFN	
IrlB	HPFGND	KLFRIVNIIISNKMNLTPLNSN	
IrlC	HPFG.D	KFYRIVNILTDPPILEPLKHN	
IrlD	HPFG.D	KFFRMANILTDKPILEPLKHN	
IrlE	HPFG.D	KFSRLRYITSKSYNLSQLSNLN	
IrlF	HPFGND	KLFRIYNIMLNKVNLELLGHN	
DDB0216373	SPFEVC	DNEPNGSVALKVLSG	L
DDB0229347	DPFDGG	SLQIINN	
DDB0229350	TPFEDS	GSLGILNS	
Nek2	PPFEAT	NQAQLTSKIQV	
Nek3	HAFNAA	NLPALVLIK	
Nek4	HAFDAK	EMPSLIFQILO	
DDB0229345	LPFDGR	KETVMRNIQTESTIFKPVNHPN	
Ifka-b	..FOTO	MERSNILRDLRDNLKFPPGFESTK	
Ifkb	..FOTO	MERSNILRDLRDNLKFPPGFESTK	
DDB0216407	VFSTG	HERVIVLRNLREKFEFPSDFERNH	
DDB0229432	.GFETO	FERTTHIKNLKNGIL.PSWFTSKH	
DDB0220611e	.PISTR	MEKARVLTDLRNGVL.PKSFLQKY	
DDB0220652	TTMERS	TTLSKLKKSSLSVLKTN...PNLKQKY	
PLK	PPFETS	DVKHTYORIKQNQYSFPDEPIIS	
Vps15	FPIFDF	SQLLSYRKGEYSPEPIRQRIOD	
TBCX	CIWQDN	NPSIVTNRILHLSGYSTTQSFSNISKSFEQCELKTIINEQHEEYDDEDISEEEKEKRIKDIKLNNRDNMNNFINSLKREEKENSDNSGSS	
Ttka	PPFK	SFSNIIISKYQAIINPHHKIEFPVHPN	
DDB0220004	PLPKSGM	EWDSIRNGILSFKEKEDS	
DDB0229384	PLWEQL	RSDKAIDFLEPGK	YS
DDB0216398	NLPOKGQ	WWRNLLREGKIPFPENDDSIS	
Scy1	MTKAED	IKNLDOIPKQLHQAYQKS	
Scy2	LPKLGVISYYNT	MIEQVRQRQSTMNTQRSDSA	
SLOB1	VICF	GHCLFEMIIGIPLGDHSNINSFIPLFP	
SLOB2		YEMENPHSVDISIPAHCY	
DDB0229334	.SLNN	IPDDL P	
DDB0231326	FLFYDDD	WVKFFIRVTQPGQELITPERKSKVANI	
DDB0231559	FPFGDL	KYLRVASAVSNYLRPILHPVIP	
DhkG-a	LPFQSS	DLSELIHSHLAKKPLVIDLNQNVP	
DDB0231198	YOYKHP	TPLHRDFLTTDFQYIP	
DDB0231179	HPGTLFLFEQN	VLFLLKFHGIEIVPTGGPNNNYTTLKVAFSNDIRNFT	SN
DDB0231335	DTINHDKEKIKNV(66)	NLNSNQKILIDLNNILIEDEEIPI	
7TMK2	YSCFDSDKFDTSN	YYDDDKFNNKSNTKIKKPDLPDYIKKDEKLW	
DDB0229381	VIFPNL	NQTTVLAALVNLAKMIDNGDFQKGLDSIPNE.IR	
Bub1	..E	ELKLSLSQO	
DDB0230007	YPFYSN	DATKLIESIYYDNYLDPIIRLPSDNNDLIQO	
DDB0229337	LPFPFTY	PKIVNFITSSSQNVEIPP	
DDB0229346			
LvsG			
DDB0230125	AVKRTI	KSI PNSEIGLFR TMWEFFNTECFPOYSTL	
DDB0204911e	TVKRNI	LSIPNSEFGFLFR TMWEILKTEFYPQYSTL	
<b>CK1</b>	LPWQGL	KAYTKRDKYEKICDKKAQTKIDTLCO	
<b>DDB0216336</b>	LPWRKL	KDKDQIGEMKQKYNTPD.LVKDLP	

Subdomain XI

Akt1	.. <b>EKLSFEPHFISPDARSILLEOLLERDPEKRLA</b> .....DPNLIKRHPFF
DDB0220670	.. <b>SPLKFPPQISCKNAASLVSLLNRDP</b> SKRLGSG.....ESDVEEIAHPFF
DDB0216386	.. <b>NEINFESYSESEVAIDLQKLLQVDP</b> LKRLGA.....NGADEVKRHPFF
DDB0220701	.. <b>REMEWPEEISSEAKDLI</b> KLNPDPYKRLGA.....NGAYEVKTHPFF
DDB0220700	.. <b>KKLYFPKKLYPVAILDLIEKLLDPNPSVRLGA</b> .....NGVDEVKCHPFF
DDB0185113	.. <b>RNIISWPEDMSPEARDLIDKLLALDPQRQLGF</b> .....NGAEEIKSHPFF
DDB0229452	.. <b>RN.TECIEIOKDAKDLLIKLLDPNPSTRIG</b> .....SKDIKNHPYF
NdrA	.. <b>QIPTDMGLSKEVIDLICKRLVCEKDRYK.S</b> .....ADEIKLHPFF
NdrB	IMEEAKAEVNLSPEAQDLIERFLT..DPMTTRIGF.....NGVEEIQSHPFF
NdrC	.. <b>DWPLFTQELSVEAADILKNM</b> U.EOPHRLGG.....KGKQDFKNHPFF
NdrD	.. <b>DWDLYSDYISEYAVDILQKLIC</b> .EPDKRIG.....IDEMKVHPYF
DDB0231558	.. <b>TMLQREDGVDSDELISGLIN.DGSTRLGSG</b> ..EKGVENIKNHFFF
DDB0216387	.. <b>NTAVQKNQPMSKOAESLIRECIAPE.RKRPD</b> .....ASTIKKHPFF
Pdk1A	.. <b>RELVYPIINMNPVIKDLIVEKLLVIKPTDRLGSSSTPG</b> GFDNLKAHPFF
Pdk1B	.. <b>REFSYSPDNFDKCCMNLIDQLLDLPYKRPT</b> .....ISEIKNHEFF
PKA	.. <b>GRITFPLGFVDADKDLIKRLLTADRTRRLGAL</b> .KD GALDVKNHRWF
pk4	.. <b>EARIQVPEPVDOVARDLIEKLVVTDVEKRLGSL</b> ..EGGIEDIKNHPFF
DDB0185224	.. <b>FOLIFQNSYLSDEIKDFIFOLLSVDPDKRLGT</b> .....FDSCSIRNHKWF
pk2	.. <b>GELKIPTYISPEAKSILLEGLLTREVDKRLGT</b> .....KGGGEVKOHPWF
DDB0220702	.. <b>EKAKFPKVSSSARSLINGLITKDPITKRLGA</b> .....NGAIEIKRHPFF
pk3	.. <b>GNLRMPMFLSSDAODLLEKLLVPDPNKRKGST</b> ..QGFEETSSHPPF
Aurora	QENDVYYPSSI <b>SPEAKDLISRLLVSDPHORIT</b> .....LKDVINHPWI
MLCK-A	YEFPEEYWGGISKEAKDFIGKLLVVDSVKRLN.....ATNALNHPWL
DDB0216385	WEFPSKTOHKYS <b>SDQVKDLIKLLENDPNKRLT</b> .....VKOSLAHKWI
DDB0216309	VDYGWPEGLEV <b>SNEAKDLIVSHLIEKNPKRFT</b> .....FEQCLIHHPWV
pxi	LEFPSP <b>WEWDNISDSAKSLIKGLLNNDP</b> SKRFT.....IDQTLIKHPWI
DDB0216308	YDFP <b>PEPEWNGITDIAKDFISQLLIINPEERWT</b> .....ASOCIKHPWL
DDB0229351	NFDSSVGWDNV <b>SESAKDLIIRKMLNPDP</b> EKRLT.....AQOVLILHEWI
DDB0216307	YDFP <b>PEPEWTHVSEHAKAFIERNLIVKDPDQRHT</b> .....AKOCLDDLWL
DDB0216312	YDFPNDYGVNV <b>SKEAKHFIINCLLTVEPITKRY</b> S.....AKQALEHPWI
Snf1	FSIP..DF...VSPSCADL <b>IKKMLVVDPVKRIT</b> .....IHEIRNHPWF
DDB0229364	FSMP..PY...IHKDAQDL <b>LTKMLTVDPDKRIS</b> .....IKEIKEHPWF
Lkb1	IEFP..ND...LDKDLVNL <b>IKGILQVDHIIQRF</b> S.....LGQIKNHPWC
MARK-A	YTIP..SY...LTHECKSLL <b>ISRMVVDPDKRAT</b> .....MEEIINHPWL
MARK-B	FKYP..SHV..IL <b>SDDVVKDLINRMIVAE</b> PVERAT.....LDEIKTHVWV
MARK-C	YEDP..TH...L <b>SAAEAHVILLRMIIVPNPKDRAT</b> .....IOELKNHPWT
DDB0231454	PSIP.....LDI <b>QDLIKKMLTVDR</b> EHRRLN.....IMNVLNHPWL
DDB0219986	NNLPELPANH..SDORLISL <b>SSIFQRNP</b> KLKRPT.....AHQIAVHPYF
FHAK-A	YRVEKLEKSLI <b>SSAADI</b> VKGLLTVDPKRLT.....VEQALNHPWI
FHAK-B	LGFTSKKWAKI <b>SNYAKDL</b> VRRLLVDPDKRIT.....IKEALNHPWF
FHAK-C	YNFSLPVPWDVV <b>TENAKDLIKKLLNVDP</b> TKRIS.....TKGALSHDWF
FHAK-D	FSFESPYWD <b>EISDEAKSLINKLIKVDV</b> EKRFT.....IDQALNHPWF
FHAK-E	FEFDPEDWSSV <b>SEEAKDLI</b> LLCVDPHRYT.....CNNIIOHPWF
DDB0220010	VNHEPTYPREI <b>NSNDLMDLFKRLLDKNPLTRIO</b> .....IAEIKSHKWT
Apq1	QNKKIKLPSHI <b>SSDCQNL</b> IYSLLOQDVEKRIS.....WEDFFNHKWL
tsunami	EIPKELNKY...PDLVSI <b>FROLLCKNPDKRIG</b> .....WPDLIYHPFV
Cdk1	GOPYNKIFPRCEPLA <b>LDLIAKMLQYE</b> PSKRIS.....AKEALLHPYF
Cdk5	AHOLOSSIVHGL <b>DEKGLNLISKMLQYDP</b> NPORIT.....AAAALKHPYF
Cdk7	ATPFKQLFTA <b>ASDEAIDLISKMLFNP</b> SNRIS.....AADALNHPYF
Cdk8	NSLAKCVG <b>GIDENSOAYDLISKMILYDP</b> SKRIT.....ASEALDHYPF
CDK9	DFYQHENPSFT <b>TKEAFDLIDKLCMDP</b> KKRIT.....ASEALDHQYF
Cdk10	YNNLRELVP <b>TISDTADFLLNOLLTYDP</b> TKRIT.....ASDAIKHPFF
Cdk11	YNNLKS <b>KPHITDNAFDLLNKLL</b> ELNPPEARIS.....ASDALKHYPF
DDB0229294	PSRLRTVFKNF <b>SNDFIELLE</b> EGLLTLNPKKRIT.....AEOALOSPEF
DDB0229424	SLKD <b>ISKFKSFSNSTID</b> LLRMLTLCPKNKRIS.....TKEALNHPWF
DDB0230050	KLIDKFPHLVLLPSV <b>DLASKML</b> TLDPKKRIN.....SLEALEHPWF
CK2	RFITKENQHL <b>AVPEAIDFLIEKLLRYDP</b> AERLT.....TREAMEHPYF
DDB0219953	RFI <b>PYENDDIAQ</b> PDADFLDKLRLRYDPTERLT.....AKEAMKHPYF
C1kA	LKQLKEYFHP <b>CHDSFFDIALSRLLEY</b> QPSKRIS.....ASDAISHPFL
DDB0229841	OPTFNNTFIGCNO <b>QI</b> DLKKNM <b>CWDPRDRY</b> S.....VNEILESPEF
DDB0229333	HGGIPKKRIPNATEE <b>IEILEGML</b> CWNPKKRWP.....IERIIOHPYF
DDB0229296	SVGIKRRFKGASKD <b>OIELLOGM</b> CWDPRKRMT.....IDOLLAHKYF
Dyrk1	EPGHALVDY...L <b>KFLDLIEKMLIYDP</b> QKRIT.....PLEALOHSFF
Dyrk2	TKSFKDSIRSGDEF <b>FDNFIL</b> CLKWEPQRIT.....AEQGLKHDWI

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YakA	QDIEKEKQH..IVFTDFINGLLOLDPNERWS.....PMOAKEHPFI
Prpf4B	NVSIPQDQMKKLQLKDLIEKCTILDPEKRIT.....PFEALNHEFL
GSK-3	PWPRVFKAKDVPAESIDLISKILLYDPSSRLK.....PVEICAHPEF
GlkA	PKFFESLNVEDKTVVDLLSKIFIFDPVKRAS.....IDEITAHPFL
Erk1	KVNFAFMFPKANPDAIDLLEMRLYFDPSKRILT.....VEEALAHPYF
Erk2	PRSLSDMYPASVDAIDLKLKLLQFNPDKRIT.....AEEALAHPFV
DDB0229430	INPLSTLLPNANQDAIELITDLOQDPLKRPT.....PLQALQHRYF
Sky1	LTEKYKFSIQEAKDFEAFLPMLNYLPEKRAT.....AKDCLNHTWL
DDB0230051	DAYNLICALLSFNPITTRIK.....ANQAAFHKEF
DDB0230126	IDNLRSHCSLASDSDLTOMQVPHKRIS.....IEQALSHPFI
Cdc7	RSESSCDKQDVPELYDLERCLDPNPLTRIT.....ASEALLHPFL
DDB0229971	ODDRPPLFDDISSELANFLERCFCKSTEE RAT.....AKELLSHPW
DDB0229896	ODDCPPLFEGISPLKDWMOCFOKDPNLRIS.....AOKLLKHKW
DDB0229877	NNPHPIPNNIASDLKHELLACFVRDTINKRPT.....ASQOLLEHPW
DDB0231212	OEDHPPIPPGISAALKDFLLNCFKKDENIRSS.....AKOLLHHPW
DDB0229915	SDQHPPFPTDISKEFELDYFQOSFKKDPTQRPT.....AQELLOHPF
FNIPK-A	IHGKPCKIPDHLSASCKNFQCLIDPNHRDD.....IINLISHNFI
FNIPK-B	NIWPKIPPHASKFLQNFQKCFEEEVLRFD.....SITLIDHPFL
FNIPK-C	TNFEPТИYHLSNNCKNEIOKCLIODPYHRWD.....TNLLITHKEI
FNIPK-D	DFLFSKIPNHLVEKEKKVISQQLSKNNNOIL.....TDIISNKITT
FNIPK-Ea	.NGIPLIPDHLSNIEKNTQHCLOINPNARFN.....ANEILNYVIK
FNIPK-Eb	DKGIPSIPTHLSNSEKNIIONCLKFDTNARHS.....VESLIITLSN
DPYK4-a	FDGIPIIIPNHVSEIMVDFIKRCLIIDDPNKRSH.....MEEILTHRLI
ZakA-a	LNGIPIIIPDHLSDTLKDFLNUCLVIDPKKRSY.....MEELLSHKLI
DDB0230002	HIYEYVEKSQISPYLENFIKKCI.....GRYLD.....IDVLEIHPFL
DDB0229378	PNNIPVFPVN.S.IFTEILNCFQTEPSKRIK.....SHQLIKHPFF
Mek1	KEEVPILPSTFSKEERSFISECLOKEPTERPT.....ASNLLNHEFV
MEKKalpha	SNSIPNIESHMSOEAFDFLNUCFKRDPKERPD.....ANQLLKHPF
DDB0229911	PSLEGDGESKWSHSEKDIVEKCLKDPSKRPL.....PSKLLHEHREF
DDB0230012	.LQEEDKGVCASHLYKDVLVDKCLQKEPSKRPN.....ASKLLEHKVF
MkcA	IKDPFEDPHKWDSEEHDIINKCLQMDPHKRP.....AQELLKHPF
MkcB	GATGFDDPALWSDCFKDFLSLCLKQDPAERAT.....AEELLKHPF
MkcC	GCAGLDKPERWTIEHBTFLNLCLEMDDPSKRST.....AEQOLLKHPW
MkcD	NLPLLSTTTSSLEERDFLTNCLQFDPSKRRT.....SSQOLLQHPFL
MkcE	FSKEKKYCSCHWSPELFDLNUCLQMDPTKRPT.....PTQOLLOHPF
MkcF	GI..DFPKIRCSDIDLKDMIWOCFESNPKRST.....VDKLMRHPFF
PakA	GLPPIRDAHKWSKEENDFLALCLEKDTKRA.....SSSLIHHHPFL
PakB	GIPDLKDQNKWSDEKDFVKKCLDKDVENRPE.....AKVILLNHPFL
PakC	GIPPLKETTKWSKTFQDFSKCLDINVANRPD.....ATDLLKHPFM
PakD	GVPDFKEENKWSDEIEFVNLCNLDDKRRPD.....AHYLLRHPFL
PakE	PPPPLSNSPKDWSPCPNNFLATCLVKDPVORPS.....VIDLLSHDF
PakF	PPPTFAEPPKKWSPLLNDFLARCLVKDPEKRAS.....PIDLICHHPFL
PakG	PPPTLSKPHHFSKELNDFIGOCQKDPPEKRPS.....AIELLTHPFL
PakH	PPPTFKDEKKWSPPEEVSVFVDKCLTKDINERWS.....PSQOLLDDHPF
Krs1	PPPPLTEPEKWSPEFNDFLAKCLTRKPELRS.....AEEELLKHPF
DDB0216375	TSPTLKKEPHWKSPPEEFSDFIALCLAKEOSORPS.....AKDLLIKHSFF
SvkA	PPPTLE..GNFSKGFKEFCALCLNPKDNPQRPT.....AKDLLIKHF
DDB0216374	QAPTLLEVGNWSPPEENDFISVCLNKEADKRP.....AVDILLNHPF
DDB0216379	PPPSLKIPOSDWSPEFNDFKVQCLSMNPALRPS.....AQQOLLSHPF
DDB0216377	ESPALTDXSISWDSKEDQFLSKCLTKDPAERPT.....AKELLNHEFI
DDB0216378	DPPKLKNQENYSKDFINFQCLQKDPNORKT.....ATELLKHPFV
DDB0230010	.QYKLPNEKKYTKEEVDFLYLICLNPDFPKRPT.....PEMILIHHTFL
DDB0229972	NCLDENEQSLFSELENOFLELCFKKEPSDRAS.....VHDLLRHPWL
DDB0229973	LPTDLIQEPLLQPLILQVLTICIDLNPNHWRPN.....ASQLVQKLTK
IfkA-a	...KTHPSSPISSNAKDFELSCFTINGNGSTNDS..LEAGILLKHPFL
SAMK-A	DNLTISCRALALGDIIGLEQNFKPD.....SKDLOQKLSWF
SAMK-B	....YLTLCEKEVLMNETKYNQNFRAD.....SKQOLLEAQWF
SAMK-C	....GMSLECOILFNETTTKIDSCFWRPT.....SKQOLLNFSWF
SAMK-D	....SRDKVFSFYRSLSLTEINKDEPCFRPS.....SKELLKSFWF
DDB0230038	PLP.NCP.....FTIEKLILKICLSTDPSVRPT.....FTTILKILRQ
DDB0230124	EIPDNVP.....SVFSRLLKACWSADSARPS.....FLTISKILSQ
DDB0229871b	TISNNMP.....NEISKILQOGWFSDSVLRPS.....LDTILIKELI
DDB0229850	SLPNIICP.....EPLEKLYKQCVDQSPLNRP.....CEEVIISLNQ
ARCK-1	TIPIGVP.....QVLKDLITYCLWDHDVSSRPT.....ATEAMTALAV

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SAPKalpha	TIPNACP	.....ESLVSLLIQLDCWDPNLLENRPT.....	CTDILSRLVLT
DDB0229849	TLPONTP	.....PGLEALYKQCVNQEQLTRPS.....	CEEIIEITLNR
DDB0229848	TTPENAP	.....ESLKNLIIARTLWKDSTLRPT.....	TLEFYEEELLK
Phq2	KISENCNP	.....EQLKTLITRCWDENPDKRPN.....	CDEILEILLT
DDB0229847	TIPQNCP	.....EAFSNLISNCWESSPDNRPS.....	CPEILDSLLD
Spla	PIPLTTS	.....SKWKEILTQCWDSNPSDRPT.....	FKOIVVHLKE
DPYK4-b	QIPFNVP	.....LKFKEILTQCDWRNPLNRPK.....	DFSEIIDKLKD
DDB0229872	PL.NGFP	.....PYWVEILISKCWNITPSLRPS.....	FKEILQILNQ
DDB0229844	TMPPNVP	.....PKLSYLIQKCNQDPNERS.....	CQQILLAIITS
ZakA-b	QIPFNVP	.....LKFKEILTQCDWRNPLNRPK.....	DFSIIEIEKLKE
7TMK1	PMPQPMDDPMW	.....ENLGKLEMCKWKSPEERPS.....	FSFILDFFLEA
rk1	PVPONGP	.....PKYIQLLIDCLNENPSHRPT.....	MEQCLEARLES
rk2	PTPKYGP	.....PKYIQLLLKDCLNENPSORPT.....	MEQCILELES
rk3	IVPPQVS	.....APFTRLITECWSEDPOQRPS.....	FOETIVKRLEA
DDB0214883	PMPAWCP	.....PKYAAIMNRCWETDPTHRPS.....	FPEILPIMEG
Shk1	SIPDDCP	.....KSLKELIQKCDWPNEVPRPS.....	FEGIVSELEE
Shk2	IIPDYFP	.....TRLKDLLARCWDHYPSRRPS.....	FAEISKQRIL
Shk3	PIPNDCL	.....DSLRRLLIEKCWDKEPISRPS.....	FKEIISALDH
Shk4	PIPADTL	.....PSLRHLLIQTCDWHNPQNRP.....	FSEILFLRNE
Shk5	PIPDSFP	.....KSLKTLIQKCDWHDPNKRP.....	FNEVTORMNE
DDB0229963	ELPDNCD	.....PNWKKLVWWCWSEDPNKRP.....	FEEITNYLTK
DDB0231199	KISSLVP	.....NFISLILKDCLHNSPKKRP.....	MNOIIOKLCN
DDB0229940	TIPADCP	.....SEYSKLLIACWTDKPKKRPS.....	FKEICDTLKK
DDB0218878e	TIPADCP	.....SEYSKLLIACWTDKPKKRPS.....	FKEICDTLKK
Rck1	ELPKDMO	.....TSISNLLKKCWOQKPSNRPS.....	FIKIVAYLES
DDB0231197	TIPPTVP	.....TTIANLIESCWVQTPHLRPT.....	FTEILKVFYS
DPYK2	PIPEYCD	.....PELKLLLTQCEADPNDRPP.....	FTYIVNKIKE
DPYK3-b	AIPPDCP	.....VSLRKLLTKCWASDPSORPS.....	FTEILTELET
Gdt1	SIGLDKI.D.	.....PNIKNFHCKC..NPIDGFT.....	FNEILKTLKD
Gdt2	SLDOEIFKD	.....TDISDITVRCWSKNSPORPT.....	FDYLSKYLKHK
Gdt4	RLDQDVFAD	.....NDISLILLACWNPNPGRPT.....	FDTLIDLLEK
Gdt6	TLDLEKL.D.	.....ADIRNIITERCWNON..KRST.....	FSEISISLKE
Gdt8	TADLDTI.D.	.....DDIRKIIECCKWIEKSKRPS.....	FSEISLHLEI
Gdt9	TKGLNSL.D.	.....RDIKNLINICWA..PHSLPS.....	FDEIVFSLVK
KinX	LIPTDCP	.....ESLIDIITFNCCSVDPNNRP.....	FKEISQTLKQ
KinY	LIPDDIP	.....VLYSDIALLDCIKYOPPEERPN.....	FSHIIHVILKQ
DDB0229853	LAPESC	.....RAFMDIAKWCCSYNPKDRPT.....	FKIVVEGLKV
DDB0229863	KVPKECP	.....PDFSKLCVDCTKYNPKRPS.....	FIKVLDLTON
DDB0229866	LVPKDCP	.....PPFLKLVLDCTEYDPPDNRPT.....	FKEITERIKS
DDB0229851	KVPADCP	.....KELLRIIVSECCKVAPSGRPS.....	ASNILGLLEY
DDB0229865	KIPSECP	.....REFLELSMKCCNYDPNDRPS.....	FTDIVOTLDO
GefX	KSIGPGCP	.....SELLISVCVECCLYEPLTRPK.....	FDEILSQLKV
DDB0229867	PSPNDCP	.....IQFYDLALKCCSYKHTNRP.....	FSTIVTILES
HH498	PLPQCID	.....HRWSNLIIQICWDQNPNNRPS.....	FDQILTIION
GbpC	TIPPCTCP	.....PEYVETLIOSCWTHEPNSRPT.....	FTSIVEILGQ
Pats1	KIPEDCP	.....EMYSKLIVECWQTDASQRPK.....	FSEIEDRLIK
QkqA	TLIPFDCC	.....PRLSNLIIQLCWSTNPKRPS.....	FTFIIEKELLE
Roco4	TIPEDCP	.....PRLRNVIELCWSGDPKKRPH.....	FSYIVVKELSE
Roco5	TIPONSVCGH	.....PDFITLITDCWQNDPLKRPT.....	FIDIHRSRLLI
Roco6	TISPSYTQTVTGHEYCGLIQDCWQSDIDRRPT	.....	FNKIVVKRIKQ
Roco7	TIPNECP	.....PDMKQLLTDCWSGDPKKRPS.....	FNSILERLST
Roco8	SINONCN	.....RMYSSLITKCNWADPNLRP.....	FNSILKTLNE
Roco9	SLPSHNL	.....PEYDSLNLIIQCAQDPITCRPS.....	FIEITKKLEE
Roco10	SIPLDCL	.....PSFADLIIKDCWSGEPLNRP.....	PSKIIISQLYT
Roco11	TIPSDCP	.....PTISNLIELCWSGDPKKRPH.....	FSYIVKELTN
DPYK3-a	KIPTSCP	.....LIIRKLLINRCWAPLPSDRPT.....	FNDILKLFDH
DDB0229956	PIPDSCL	.....PEFRDLITMCWTSNPDDRPS.....	FQOITYLEN
DDB0229957	PIPmhcn	.....KNYTDIMEQCWDDDPENRPS.....	FDTIHSISK
DDB0220138	EIPENCN	.....EVLKNIILQDCWNOSEDRPT.....	FLSIYHRLEN
DDB0220436	HIPLDHLP	.....KGIQDLIIRLCWKHDPSIRPS.....	FIEIRSRLSE
DDB0230133	MIPPEIE	.....GDLRKIIIACFHRDHTKRPN.....	FENIEQFLDA
DDB0229871a	ELPSNCP	.....QSFSDELKECCNRNPQDRPN.....	FSQILLKLKL
DDB0229955	PIPNAWP	.....YOLSHLIIQACWHQDPLKRPS.....	FTEILNLLNE
Bud32	.....	.....SNSKIVIQLNQVRLRGKK.....	TCFG.....
DDB0231196	.....	.....QSFKLITRMCLPFRDRRPT.....	VRQVLVDNVKA

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DDB0229339	QSLVKIITSMCLPCRDRRPT	VHQILDEVG I
DDB0231195	SRLKRULFLMMSKMPERRPS	IKECIEEIQK
DDB0229335	DSFKEFLFSTMNRIYTCRPN	SEECKERLIT
DDB0216331	EPIADTILDMLNLQDQLRPT	IDLILQNKLF
DDB0229344	EKLAPLVLSMISKNPTRP S	IESIETLQK
DDB0231281a	PVNQHIEFMCRHHENLKYT	LLVSDFQH
DDB0230037a	NKINKIDFEMMCSNESTERPT	VDQLIEFMVC
DDB0219988a	PSIDQIEFVCRQYDQSRYT	ISLSSYTHPN
DDB0231281b	SSKLKEIVEKGFFNYDDRIS	LKELIECLNK
DDB0230037b	TYLNDFIDNM . . . . T	QPHVCKSFKK
DDB0219988b	PSLVQIVKKMIKHKA F	LIKQPTL
DDB0231182	SNRSKDNQSKLD P	PYKLLDHPFF
IksA	RDLKDMITILLRAKPH ERPT	ISOILSTHFI
IreA	PDIHQHVHSMIQFEPEKRP D	IGECINHPFF
IrlA	APALDLVRLMISQDEKKRPT	IDTILNHPLF
IrlB	OLACTLTKSMISKDESIRPT	IONVLNHPLF
IrlC	LVACDLISQMISKNESDRPT	IEKILLHPFF
IrlD	LVACDLISQMISKNESDRPT	TENILLHPFF
IrlE	LVATHLIELMISYDESKRPT	LSSV LKHPLF
IrlF	LLACDLTKSMISNDESKRPT	IENVLNHPLF
DDB0216373	PKPFPPSQTNYSNQFNQ LIDMVNLKD ERLH	LNQVIERIN Q
DDB0229347	NYKIPDN SKYNSNFHKLQFILVADPTQRPS	INDL NYLNE
DDB0229350	NYTIPPNHTHSNDLISL KIMLNPDPI N RPN	IFEITNQLNL
Nek2	GRYNPIPQSYSEHLSKVLSLMINVDPKSRP S	VNEL GYSFI
Nek3	GTYPPIPSHYSNDLRNLLSMLQIDPKNRP S	VNDI ELPFI
Nek4	GOPLPISP NYSODLQNLVYQOLLEKQPTKRP S	IFDIFOMPYI
DDB0229345	EELSSLLFKLLNKNPESRFS	TOQIIEQVF I
IfkA-b	PDQTOIIIRSLLSRDPTQRPS	TKOLLESGLL
IfkB	PDQTOIIIRSLLSRDPTQRPS	TKOLLESGLL
DDB0216407	SROATLIRMLIDKDPAKRP S	AOOLIOSELM
DDB0229432	PEESNLILR MIDINPDNRPT	SDQILSELLP
DDB0220611e	PKVSEL LLLMMKTNPDERPS	ASDILKSDLF
DDB0220652	PNDTDFIDH.LIQSFATRPF	SNOISTDYDN
PLK	HYGKSLLISILNPVP EORPN	LTQILEHDFF
Vps15	PNIQTLLIHLMIQKDPDORYT	PEKYISKWNT
TBC K	NSNIGIGLNGLGKELIEIIEQCLIPNPMDR P D	SETLLDHPYF
Tt kA	ENLLKVLKLCLIRNPHERPT	IP TLINHDFL
DDB0220004	TEFWQLLKSMIHPDPSVRPS	AEQLLEHPLI
DDB0229384	DSLYQVILLDM MKSNI TERIS	LDOILLNENI
DDB0216398	QDLKD LILMMNPDHTRIT	IQSLLKYDKL
Scy1	. . . . . FAVKTESRLN	POKFLESPYF
Scy2	KVCTIILG . . . . DPMRLRGD	LENFIRSSFF
SLOB1	DKVFLILQOIFS . . EKTPT	LEELVKNPWF
SLOB2	PEVRKVLEAIFKPFYGTPT	LEELSKMDFF
DDB0229334	TEQFDFLHSCLATNLSDR LD	AQTLIHHPF I
DDB0231326	PAILDYL DVYFIRD PFYRPT	LRDLITK FIA
DDB0231559	QPLSDL IYSMLNHNEYDRPT	SFEVFKLKK
DhkG-a	LILSNIVNKL LQKSPDDRYQ	SAYGLKKDLE
DDB0231198	IRIKT L ASLLAEQSQRKOS	FNEVYNDLQD
DDB0231179	TQFTTITFD SKENP IISQIINYIQ . YYRN RPN	SSQVLES LIN
DDB0231335	HSKSYN DEROEYI FAKRDNDKF	LLNDKTF
7TMK2	EPVIQIYKSC TSDDPNKRP S	SLGVKFHLAN
DDB0229381	KYGLVDPDIELG ISFTTSLLQOLDPKKRLP	LKETL NH PFL
Bub1	TGKLEIINQSI IQK . DSFS	ELDTL WLPFL
DDB0230007	QHFNDL LISKILEKNPQKRIT	WPKLF IHPFF
DDB0229337	QFYKPENSLLIQLITCCLFKNPAORIS	WNEIVNHSFF
DDB0229346		
LvsG		
DDB0230125	FOQAONINYE	EL.KNEFI
DDB0204911e	FOQAQDKNYE	EL.KNEFI
CK1	GFPSEFATFLNYTRFLKFEDKPD	FLYLRKLLRE
DDB0216336	PQFSQFMKHLKSLNYEDRPN	YVFLQTLND