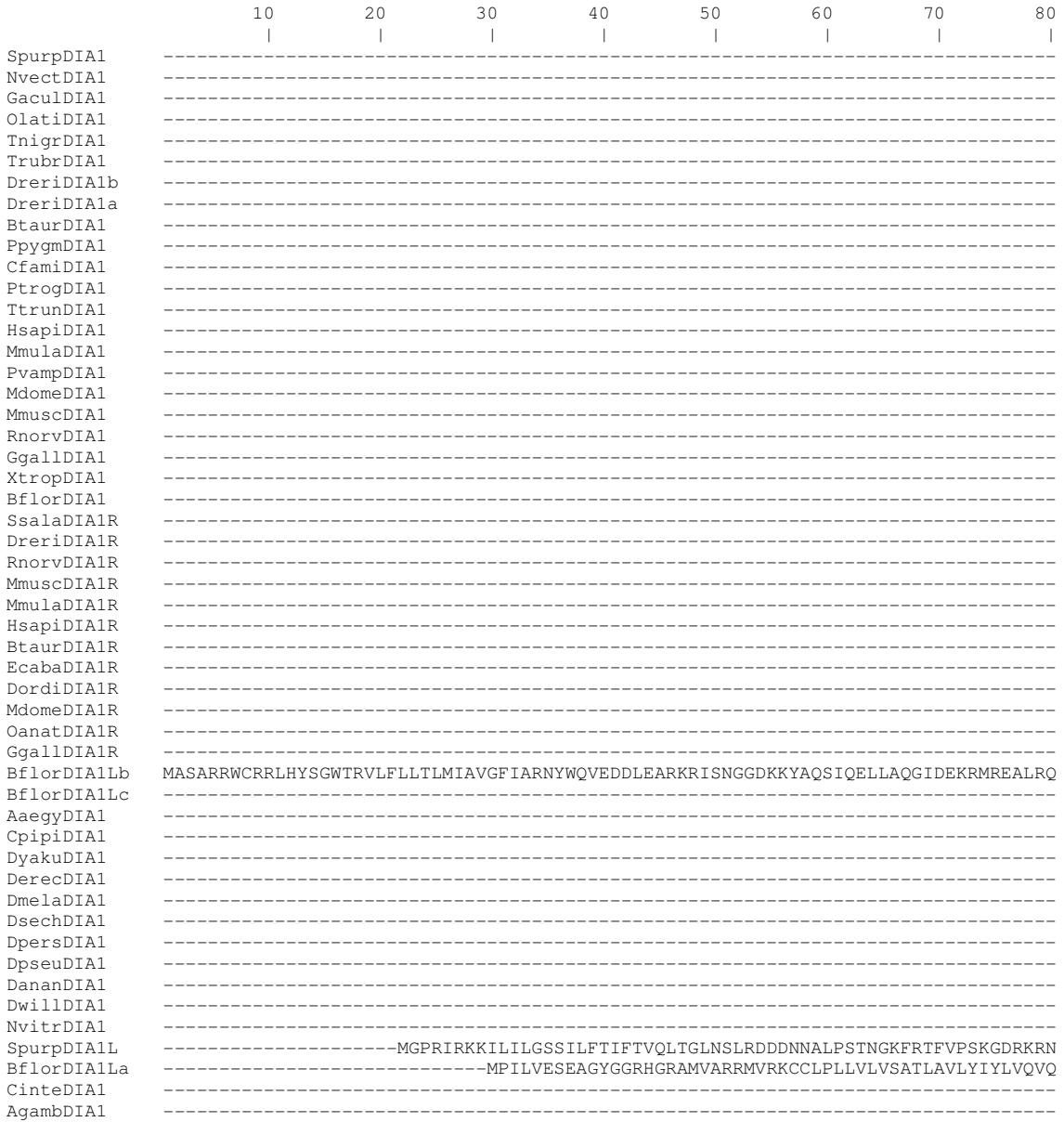


Fig. S7



	90	100	110	120	130	140	150	160
SpurpDIA1	-----MRRYFNQFTNRF	CISTQQLIWL	VVLSMCLFV	YQ-----	LYLHFTANH	LENEYFTEAT	-----	
NvectDIA1	-----MHFGGILRKR	RYICRLVLL	LVIIISFSD	LLWLSYQD	GRAIKWDF	SSQHKLTFQ	EIGLN	-----
GaculDIA1	-----MLRFLPL- KLGRLYRCL	KLLLVVGL	FVILLM	NTHS----	LFASFQK	NELTDRRF	INLN	-----
OlatiDIA1	-----MLRFLPL- KLGRLYRCL	KLLFLVGL	FVILLM	NTHN----	LFASFQK	NELTDRRF	INLN	-----
TnigrDIA1	-----MLRFLPL- KLGRLYRCL	KLLLVVGL	FVILLM	NTHN----	LFASFQK	NELTDRRF	INLN	-----
TrubrDIA1	-----MLRFLPL- KLGRLYRCL	KLLLVVGL	FVILLM	NTHN----	LFASFQK	NELTDRRF	INLN	-----
DreriDIA1b	-----MLRFLPL- KLGRLYRCL	KLLFLLGL	FVILLM	NTHN----	LFASFQK	NELTDRRF	INLN	-----
DreriDIA1a	-----MLRILSL- KFGRVYRC	GKFLFIV	ALFVILL	MNTHN----	LFASFQ	RNELTDRRF	I	GLN
BtaurDIA1	-----MWRLVPP- KLGRLSR	SLKLAAL	GSLLVLM	VHSPS----	LLASWQ	RNELADR	RF	LQLN
PpygmDIA1	-----MWRLVPP- KLGRLSR	SLKLAAL	GSLLVLM	VHSPS----	LLASWQ	RNELADR	RF	LQLN
CfamiDIA1	-----MWRLVPP- KLGRLSR	SLKLAAL	GSLLVLM	VHSPS----	LLASWQ	RNELADR	RF	LQLN
PtrogDIA1	-----MWRLVPP- KLGRLSR	SLKLAAL	GSLLVLM	VHSPS----	LLASWQ	RNELADR	RF	LQLN
TtrunDIA1	-----MWRLVPP- KLGRLSR	SLKLAAL	GSLLVLM	VHSPS----	LLASWQ	RNELADR	RF	LQLN
HsapiDIA1	-----MWRLVPP- KLGRLSR	SLKLAAL	GSLLVLM	VHSPS----	LLASWQ	RNELADR	RF	LQLN
MmuladIA1	-----MWRLVPP- KLGRLSR	SLKLAAL	GSLLVLM	VHSPS----	LLASWQ	RNELADR	RF	LQLN
PvpamDIA1	-----MWRLVPP- KLGRLSR	SLKLAAL	GSLLVLM	VHSPS----	LLASWQ	RNELADR	RF	LQLN
MdomeDIA1	-----MWRLVPP- KLGRLSR	SLKLAAL	GSLLVLM	VHSPS----	LLASWQ	RNELADR	RF	LQLN
MmuscdIA1	-----MWRLVPL- KLGRLSR	ALKLAAL	GSLLVML	LHSPS----	LLASWQ	RNELADR	RF	LQLN
RnorvDIA1	-----MWRLVPL- KLGRLSR	ALKLAAL	GSLLVML	LHSPS----	LLASWQ	RNELADR	RF	LQLN
GgallDIA1	-----MLRLVSL- KLGRLYR	VKLAAL	GSLLAAL	VLNTHS----	LLASLQ	RNELAER	RF	LQLN
XtropDIA1	-----MLRLASL- KFGRLF	RYAKVLF	AASLLV	MLLNTHS----	LLSSFQ	RNELTDRR	F	LSLN
BflorDIA1	-----MRLVRLR	QFRFFSG	WRVRRM	CGFFFF	VVFFYCF	-----		
SsalaDIA1R	----MPL--K	RCQRAVG	SVRLT--	VCVLSW	LLCVCW	APSVV	E	PACT
DreriDIA1R	-----MAG-----	IWSGV	WILCF	ILVFG	TADPS----	PAPQDK	SH	DFRKIFLGLD
RnorvDIA1R	----MELGR	PAAATAF	RQRP	AWMLL	WVSTL	SCSFL	P	ASLPPSL
MmuscdIA1R	----MESQ	WRGAAAT	AFHQ	HLAR	LLLV	WVSTL	SCS	FLP
MmuladIA1R	----MEP- QLGPE	AAALR	PGWLA- LLLW	V	SAL	SCSFL	P	ASSPSSL
HsapiDIA1R	----MEP- QLGPE	AAALR	PGWLA- LLLW	V	SAL	SCSFL	P	ASSLSSL
BtaurDIA1R	----MEP- RLGP	KAAAL	H	L	G	W	P	F
EcabaDIA1R	----MEP- WLGP	EAAAL	R	P	G	W	P	A
DordiDIA1R	----MDP- QLGPE	AAALH	P	G	W	Q	V	L
MdomeDIA1R	----MES- VIH	G	P	L	A	S	P	C
OanatDIA1R	----MGL- RLG	C	R	L	F	S	A	L
GgallDIA1R	----MGR-- WIC	C	S	R	V	A	D	W
BflorDIA1Lb	KAE	E	V	H	R	I	V	K
BflorDIA1Lc	-----							
AaegyDIA1	-----MSQHR	ILTKL	H	V	A	L	F	W
CpipiDIA1	-----MSSGF	Q	R	I	L	V	N	L
DyakuDIA1	-----MHLSP	Q	L	K	V	V	L	I
DerecDIA1	-----MHLSP	Q	L	K	V	V	L	I
DmeladIA1	-----MHLSP	Q	L	K	V	V	L	I
DsechDIA1	-----MHLSP	Q	L	K	V	V	L	I
DpersDIA1	-----MHLSP	G	H	L	R	I	V	L
DpseuDIA1	-----MHLSP	G	H	L	R	I	V	L
DananDIA1	-----MHLSP	G	H	L	R	I	V	L
DwillDIA1	-----MHLLY	Q	L	K	V	V	L	I
NvitrDIA1	-----MLV	T	K	A	S	V	S	F
SpurpDIA1L	LLH	A	G	Q	G	K	E	L
BflorDIA1La	GSP	P	W	S	L	G	S	Q
CinteDIA1	-----MLL	K	M	K	R	Y	L	T
AgambDIA1	-----MQSS	R	L	P	Y	F	V	T

	170	180	190	200	210	220	230	240
SpurpDIA1	KCPACFGT	--SLCKRFRSRGDYRFHSYSSIR	-----	LFDYVN-VKNVYFATYLD	----	QKP-VVMKKLGHNSEHNQFDK		
NvectDIA1	KCPACFGINLSI	CHKLLGGGVTVKSN	---T	-----	PWSEER-IGKVSYGLWGA	----	VKQRVVLKTLTGSSELTAFDN	
GaculDIA1	KCPACFGT	--SWCRKFMNGQVSFETWGRRL	-----	FLDVFN-VKNVYFAQYGEPREGTRR	----	VVLKRLGNSQELAEIDQ		
OlatiDIA1	KCPACFGT	--SWCRKFMNGQVSFETWGRRL	-----	FLDVFN-VKNVYFAQYGEPREGTRR	----	VVLKRLGNSQELAEIDQ		
TnigrDIA1	KCPACFGT	--SWCRKFMNGQVSFETWGRRL	-----	FLDVFN-VKNVYFAQYGEPREGTRR	----	VVLKRLGNSQELADIDQ		
TrubrDIA1	KCPACFGT	--SWCRKFMNGQVSFETWGRRL	-----	FLDVFN-VKNVYFAQYGEPREGTRR	----	VVLKRLGNSQELADIDQ		
DreridDIA1b	KCPACFGT	--SWCRKFMNGQISFETWGRRL	-----	FLDVFN-VKNVFFAQYGEPREGTRR	----	IVLKRLGNSQELADIDQ		
DreridDIA1a	KCPACFGT	--SWCRKFMNGQVTFEMWGRRL	-----	FLDFFN-VKNVFFAQYGEPREGTRR	----	VVLKRLGNSQELAEIDQ		
BtaurDIA1	KCPACFGT	--SWCRRFLNGQVVFEEAWGRRL	-----	LLDFLN-VKNVYFAQYGEPREGRRRVVLKRLGSQRELAQLDQ				
PpygmDIA1	KCPACFGT	--SWCRRFLNGQVVFEEAWGRRL	-----	LLDFLN-VKNVYFAQYGEPREGRRRVVLKRLGSQRELAQLDQ				
CfamIDIA1	KCPACFGT	--SWCRRFLNGQVVFEEAWGRRL	-----	LLDFLN-VKNVYFAQYGEPREGRRRVVLKRLGSQRELAQLDQ				
PtrogDIA1	KCPACFGT	--SWCRRFLNGQVVFEEAWGRRL	-----	LLDFLN-VKNVYFAQYGEPREGRRRVVLKRLGSQRELAQLDQ				
TtrunDIA1	KCPACFGT	--SWCRRFLNGQVVFEEAWGRRL	-----	LLDFLN-VKNVYFAQYGEPREGRRRVVLKRLGSQRELAQLDQ				
HsapiDIA1	KCPACFGT	--SWCRRFLNGQVVFEEAWGRRL	-----	LLDFLN-VKNVYFAQYGEPREGRRRVVLKRLGSQRELAQLDQ				
MmuladDIA1	KCPACFGT	--SWCRRFLNGQVVFEEAWGRRL	-----	LLDFLN-VKNVYFAQYGEPREGRRRVVLKRLGSQRELAQLDQ				
PvpamDIA1	KCPACFGT	--SWCRRFLNGQVVFEEAWGRRL	-----	LLDFLN-VKNVYFAQYGEPREGRRRVVLKRLGSQRELAQLDQ				
MdomeDIA1	KCPACFGT	--SWCRRFLNGQVVFEEAWGRRL	-----	LLDFLN-VKNVYFAQYGEPREGRRRVVLKRLGSQRELAQLDQ				
MmuscdDIA1	KCPACFGT	--SWCRRFLNGQVGFETWGRRL	-----	LLDFLN-VKNVYFAQYGEPREGRRRVVLKRLGSQRELAQLDQ				
RnorvDIA1	KCPACFGT	--SWCRRFLNGQVGFETWGRRL	-----	LLDFLN-VKNVYFAQYGEPREGRRRVVLKRLGSQRELAQLDQ				
GgallDIA1	KCPACWGT	--SWCRKFLNGQLRLESWGRRL	-----	LFDFFN-VKNVYFARYGEPREGSRR	----	VVLKRLGSAQELADIDA		
XtropDIA1	KCPACFGT	--SWCRKFMNGQLSFEWGRRL	-----	LLDFFN-VKNVHFAQYGEPREGSRR	----	VVLKRLGNSHELSELDQ		
BflorDIA1	KCPACFGT	--DLCEEFENKILFKYSSRL	-----	ILDIFN-IKNVYFAIY	----	EGME--VALKRLGHNSEFDQLDR		
SsalaDIA1R	KCNACVGT	--SICKKLLKQIRFDWWMSPD	-----	TTLPLA-EKQSFPGNLTDSDLSWRP	----	VVLSFLSSPCLHSSSDR		
DreridDIA1R	KCNACIGT	--SICKKFFKDEIRFERRLTAQ	-----	SNLSSA-DVRSYEGNYTDSTAGWRP	----	VVVSRLMSPHLHLQSLDN		
RnorvDIA1R	KCNACIGT	--SICKKFFKKEIRLDNSLVSH	-----	LGLPSQ-DLLSYAANYSDDSKTWRP	----	VEISRLVSKYQSEISDK		
MmuscdDIA1R	KCNACIGT	--SICKKFFKKEIRFDNSLASH	-----	LGLPPQ-DLHSYAANYSDDSKTWRP	----	VEISQLVSRVQIEISDR		
MmuladDIA1R	KCNACIGT	--SICKKFFKKEIRSDNWLASH	-----	LGLPPD-FLLSYFANYSDDSKIWRP	----	VEIFRLVSNYQNEISDR		
HsapiDIA1R	KCNACIGT	--SICKKFFKKEIRSDNWLASH	-----	LGLPPD-SLLSYFANYSDDSKIWRP	----	VEIFRLVSKYQNEISDR		
BtaurDIA1R	KCNACIGT	--SICKKFFKKEIRFDNGLALH	-----	LGPDPD-DLPSYSANYSDDFKTWRP	----	VEISRLVSKQNKISDG		
EcabaDIA1R	KCNACIGT	--SICKKFFKKEIRFDNRLASH	-----	LGLPSG-YLPSYSANYSDDSKTWRP	----	VEVSRLVSKQNEISDR		
DordiDIA1R	KCNACIGT	--SICKKFFKKEIRFDNSLASD	-----	LELASD-YLPSYSANYSDDSKTWRP	----	VEIFRLVSKQEONEISDR		
MdomeDIA1R	KCNACIGT	--SICKKFFKKEIRFDNWLASH	-----	LKLPPD-YFSTYPANYSDDTKSWRP	----	VEISRLISKYQHELSDR		
OanatDIA1R	KCNACIGT	--SICKKFFKKEIRFDNWPASH	-----	LKPPPD-HFPGYSANYTDDSKSWRL	----	VEISRLIGKDQNELSDQ		
GgallDIA1R	KCNACIGT	--SICKKFFKKEIRFDTWLSSH	-----	LKLPPS-YLLSYLGNYTDDAQSWRM	----	VDI TRLT TTKYQHADRADQ		
BflorDIA1Lb	KCPACYGES	--LCEQAEVG-LITMDVADKT	-----	LEHKG--VYFGHFRNT	----	E---VVAKRLVGKDGWTRFDE		
BflorDIA1Lc	KCPACFGD	--KCELLRRGHFVKVDSSEDR	-----	YMKKGI-VSTGRIGGV	----	K---VIAKSMNEAGAWQRYER		
AaegyDIA1	LCPGCFPRP	--VNCSEFFENLKSIDS	-----	NE-----	LFELL-THFNQHGVRVYGLSGSEQRVVIKLNKKEHGVLEIS			
CpιδDIA1	LCPECFVSPVTC	GHANFVTIDS	----	SN-----	PWNQLT-CRYNPHGVSYG-LLGSGQKVVIKTLNKNRAVEALRD			
DyakuDIA1	LCPNCFVGGREL	CGEIFQKIAEPSDW	--SK	-----	LLKAIS-LLVDRRAIYFLRFKDDQD	----	VVAKRKIIDAQNQ	
DerecDIA1	LCPDCFVGGQSEL	CVGIFQKIAEPSDW	--SK	-----	LLKAIS-LIVDRRAIYFLRLKDDAQD	----	VVAKRKIIDARNH	
DmeladDIA1	LCPDCFVGGQSEPC	GEIFQKIAEPSDW	--SR	-----	LVKAIS-LLVDRRAIYFLRLKDRDQEV	Q--	LVAKRKIIDAQSN	
DsechDIA1	LCPDCFVGGQKEQ	CGEIFQKIAEPSDW	--SR	-----	LVKAIS-LLVDRRAIHYLRLKDDQAV	Q--	LVAKRKIINAHSY	
DpersDIA1	LCPACFAGQRWQ	CEEIFEAIAPSDW	--SK	-----	LLKGIA-LLIDRREIYFLQLNERHQAA	Q--	LVAKRDAIGGHSY	
DpseudDIA1	LCPACFAGQRWQ	CEEIFEAIAPSDW	--SK	-----	LLKGIA-LLIDRREIYFLQLNERHQAA	Q--	LVAKRDAIGGHSY	
DananDIA1	LCPACFSAQREQC	EEVFRAIREPSDL	--SK	-----	LWKAVT-LLFDRREIFWLEIGPSQEKSSQ	----	LLAKRKSIVASHQ	
DwillDIA1	ECPQCLGQREQC	EKFDTIEEPAKL	--DR	-----	LWKDLT-LLVDPREIYWLELNENREN	--VK	CLAKRKMTRKISK	
NvitrDIA1	KCPACFGD	--SMCQVIDSNEISFEYTDfYS	-----	IFNNLFVKNVYYGKYD	----	KKVIMKKLAQSEELKTFDE		
SpurpDIA1L	RCPLCYGT	--TNCQDIYAGNISFHVG	----	S-----	VNLSEP---HAIRGTWGD	----	RRIVGKRLVSRVFERLEK	
BflorDIA1La	PCPACLGD	--NLCEEFEDGMIDLG	-----	SEVTSWKVKAYTGTWD	----	KVEVMVTQCASEERLERFEE		
CintedDIA1	GNFSCFGT	--SLCKNRNRVGLSEDVPTLRSGWLSIYGELVDLHRVKLNVTYKLPSTLPCNGETCSVQIETSVLGSGNNVNK						
AgambDIA1	LCPECVSSG	--LECNKFDLFTLQDDN	-----	VFNIIN-NIFNSHTTRIGTIVQENKLAVMKHLNRDNTIEKLLQ				

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	250	260	270	280	290	300	310	320							
SpurpDIA1	DLCTNAES	-GLRGCDV	SQQIYKSKLS	-----	DIMYAE	RLEEKDVMG	---L-	SDIVRCPSRRL	LDRIWDTFGERQFDKS-						
NvectDIA1	EICRGV	GK-DSN	-CKISQEA	WDS-----	DVLV	PKPPLQDAVR	-----	KYFDCP	STRFLEKIESVYG-QETPGQ-						
GaculDIA1	KICKRATG	-RPR-	CDLIQAMYKTEFA	-----	RINGDV	RLLTPEVVEG	--W-	SDLVHC	PSQRLLDRLVRRYAETKDSGSF						
OlatiDIA1	KICKRATG	-RPR-	CDLVQAMYKTEFA	-----	RINGDV	RLLTPDVVEG	--W-	SDLVHC	PSQRLLDRLVRRYAETKDSGSF						
TnigrDIA1	KICKRATG	-RPR-	CDLIQAMYKTEFA	-----	RINGDV	RLLTPDVVEG	--W-	SDLVHC	PSQRLLDRLVRRYAETKDSGSF						
TrubrDIA1	KICKRATG	-RPR-	CDLIQAMYKTEFA	-----	RINGDV	RLLTPEVVEG	--W-	SDLVHC	PSQRLLDRLVRRYAETKDSGSF						
DreridDIA1b	KICKRATG	-RPR-	CDLIQAMYKTEFA	-----	RLNGDV	RLLTPDVVEG	--W-	SDLVHC	PSQRLLDRLVRRYAETKDSGSF						
DreridDIA1a	KICKRATG	-RPR-	CDLIQSMYKTEFA	-----	RLNGDV	RLLTPEVVEG	--W-	SDLVHC	PSQRLLDRLVRRYAETKDSGSF						
BtaurDIA1	SICKRATG	-RPR-	CDLLQAMPRTTEFA	-----	RLNGDV	RLLTPEAVEG	--W-	SDLVHC	PSQRLLDRLVRRYAETKDSGSF						
PpygmDIA1	SICKRATG	-RPR-	CDLLQAMPRTTEFA	-----	RLNGDV	RLLTPEAVEG	--W-	SDLVHC	PSQRLLDRLVRRYAETKDSGSF						
CfamidDIA1	SICKRATG	-RPR-	CDLLQAMPRTTEFA	-----	RLNGDV	RLLTPEAVEG	--W-	SDLVHC	PSQRLLDRLVRRYAETKDSGSF						
PtrogDIA1	SICKRATG	-RPR-	CDLLQAMPRTTEFA	-----	RLNGDV	RLLTPEAVEG	--W-	SDLVHC	PSQRLLDRLVRRYAETKDSGSF						
TtrundDIA1	SICKRATG	-RPR-	CDLLQAMPRTTEFA	-----	RLNGDV	RLLTPEAVEG	--W-	SDLVHC	PSQRLLDRLVRRYAETKDSGSF						
HsapiDIA1	SICKRATG	-RPR-	CDLLQAMPRTTEFA	-----	RLNGDV	RLLTPEAVEG	--W-	SDLVHC	PSQRLLDRLVRRYAETKDSGSF						
MmuladDIA1	SICKRATG	-RPR-	CDLLQAMPRTTEFA	-----	RLNGDV	RLLTPEAVEG	--W-	SDLVHC	PSQRLLDRLVRRYAETKDSGSF						
PvampDIA1	SICKRATG	-RPR-	CDLLQAMPRTTEFA	-----	RLNGDV	RLLTPEAVEG	--W-	SDLVHC	PSQRLLDRLVRRYAETKDSGSF						
MdomeDIA1	SICKRATG	-RPR-	CDLLQAMPRTTEFA	-----	RLNGDV	RLLTPDAVEG	--W-	SDLVHC	PSQRLLDRLVRRYAETKDSGSF						
MmuscdDIA1	SICKRATG	-RPR-	CDLLQAMPRTTEFA	-----	RLNGDV	RLLTPEAVEG	--W-	SDLVHC	PSQRLLDRLVRRYAETKDSGSF						
RnorvdDIA1	SICKRATG	-RPR-	CDLLQAMPRTTEFA	-----	RLNGDV	RLLTPEAVEG	--W-	SDLVHC	PSQRLLDRLVRRYAETKDSGSF						
GgallDIA1	KICRRATG	-RGR-	CDLLQALHATEFA	-----	SLNGDV	RLLTPDAVEG	--W-	SDLVHC	PSQRLLDRLVRRYAETKDSGSF						
XtropDIA1	RICKKATG	-RPR-	CDLVQAMYKTDFE	-----	RLNGDV	RLLTPDVVEG	--W-	SDLVHC	PSQRLLDRLVRRYAETKDSGSF						
BflorDIA1	WICETGKE	-GPO-	CHIPSVTYYSNFS	-----	RVIYEG	--LSPKSLGD	-M-	SDMVR	CPSQRLIDRVLEKFAEHLGKET						
SsalaDIA1R	SICRSVGR	-QGP-	CSIEAVLRVTPRF	-----	QSLNQSH	LLPHIVKG	--LAP	PLLR	CPSQRLLDRLVRRYAEEVVDVGSV						
DreridDIA1R	SICTSAGK	-GKS-	CSIEGVLRTSRF	-----	QTWVHSN	LLLPMSVKG	--LVT	PMLR	CPSQRLLDRLVRRYFEVTDVGSV						
RnorvdDIA1R	RICASASG	-PKT-	CSIERILRKTGRF	-----	QKWLQAK	RLLTPDLVQG	--LPS	PFLR	CPSQRLLDRLVRRYAEEVVDAGSI						
MmuscdDIA1R	RICASVSA	-PKT-	CSIERILQKTGRF	-----	QKWLQAK	RLLTPDLVQG	--LPS	PFLR	CPSQRLLDRLVRRYAEEVVDAGSI						
MmuladDIA1R	RICASASA	-PRT-	CSIERVLRKTERF	-----	QKWLQAK	RLLTPDLVQG	--LAS	PLLR	CPSQRLLDRLVRRYAEEVVDAGSI						
HsapiDIA1R	RICASASA	-PKT-	CSIERVLRKTERF	-----	QKWLQAK	RLLTPDLVQG	--LAS	PLLR	CPSQRLLDRLVRRYAEEVVDAGSI						
BtaurDIA1R	RICASAAA	-PKT-	CSIERVLRKTERF	-----	QKWLQAK	RLLTPDLVRG	--LSS	PLLR	CPSQRLLDRLVRRYAEEVVDAGSI						
EcabaDIA1R	RICAFAAA	-PKT-	CSIERVLRKTRRF	-----	QKWLQAK	RLLTPDLVRG	--LPS	PLLR	CPSQRLLDRLVRRYAEEVVDAGSI						
DordidDIA1R	RICAFASA	-PKT-	CSIERILRKTGRF	-----	QKWLQAK	RLLTPDLVQG	--LPS	PFLR	CPSQRLLDRLVRRYAEEVVDAGSI						
MdomeDIA1R	RICASASG	-SKT-	CSIERVLRKTERV	-----	KKWLKAK	RLLTPDLVQG	--LPS	PMLR	CPSQRLLDRLVRRYAEEVVDAGSV						
OanatDIA1R	KICTSVSL	-VKT-	CSIERVLRKTERF	-----	QKWLKAR	RLLTPALVQG	--LPS	LLLRC	PTQRLLDRLVRRYAEEVVDAGSV						
GgallDIA1R	HICTSLLK	-TKT-	CSLERALRRTHRF	-----	QKWLRAK	RLLTPDLVQG	--LSS	PMLR	CPSQRLLDRLVRRYAEEVVDAGSI						
BflorDIA1Lb	FICQNASL	-PKD-	CDVSHMISDTVLVTDNVLQV	SFLQDAWRIA	HTRRS--I--	AMEAC	MTDRLIELIK	TAYDEN	VNGKLS						
BflorDIA1Lc	FICRSSSR	-PHV-	CNASSFILETMLVTDV	ALKVPWLEAWK	ICHLEKS----	ALS	LCVSDR	FLEDVR	QLYVEDGGTDMT						
AaegyDIA1	AVCDELGL	-TQSNCK	FKSDENTLKV	-----	RRKVL	-EQ--	ELEGCI	ICPSKDEK	--ALNRL	LNEVEGT--					
CpipidDIA1	Q-IKDVKK	-AF-----	-----	-----	YELGE	--RPGGF	HLCRT	PSRKP	-RFVSY	LEQRGHA--					
DyakuDIA1	K-AENVEK	-AF-----	-----	-----	YEQEE	--QPGGF	HLCRT	PSRKP	PRFV	SYLEQRGHA--					
DmeladDIA1	Q-IKNVKK	-DF-----	-----	-----	YELEE	--RPGGF	HLCRT	LAREP	-RFV	SYLEQRGHA--					
DsechDIA1	Q-MKNVKK	-AF-----	-----	-----	YELEE	--RPGGF	HLCRT	LAREP	-RFV	SYLEQRGHVY-					
DpersDIA1	RNMGILRE	-AF-----	-----	-----	LEMEE	--RPGGF	QLCR	SGFRTP	-RFV	SYLEQRGHE--					
DpseuDIA1	RNMGILGE	-AF-----	-----	-----	LEMEE	--RPGGF	QLCR	SGFRTP	-RFV	SYLEQRGHE--					
DananDIA1	S-LSSLQE	-EF-----	-----	-----	LNLEE	--RPGGF	HLCRT	AQKSS	-PF	INYL	NQRGYD--				
DwillDIA1	D-----	-----	-----	-----	LHF	--NPGGF	QMC	RNSTR	---	FLAY	LEERGYL--				
NvitrDIA1	MICSDDEL	-HEL	CYQESERKQDSKTN	-----	FYKL	VESELANVGGD	--INN	KMR	LCPT	TTKLEK	LFVN	VKFSHAEN-			
SpurpDIA1L	IICNQSQVD	PKRSCEV	NAAATNSWMSKS	----	SALNR	VHKLHQEVYESQL	IAISATT	CASPD	FFELK	QLYR	VS	RWGTG-			
BflorDIA1La	FVCRNLSET	TATS-CDP	GKVLQEDLK	-----	ERLQP	---	AHLK	SLRE	VFP	NTT	SSLQ	ATCMCS--			
CinteDIA1	WICDRFKK	PTN--CDT	GKVFKSWRAMN	----	KITS	AKGR	LDPNLLK	--I-	SP	PLQ	CP	STRIADR	IVRRVANKQGGVLL		
AgambDIA1	EYCDAYS	SLTKQN	-CRWAQ	HDSVDR	-----	AKE	FITTS	IILDS	-AR	VEG	CIF	PATNNRQ	-SLQR	FLSL	FDSTDN

	410	420	430	440	450	460	470	480
SpurpDIA1	QALKIAEQLSENRF	FALYLT	DVSEDN	LAVND-NG	----EVLVI	DAENI	IVVDR	KKIKEDANPGWVKH-----QSEHEG
NvectDIA1	NLITLHQLSSALDD	WALYIAD	PAPGNF	GVSD-SG	----KVTLL	DLEHLV	VVDLSEV	QMEEANDKPKPS-----D
GaculDIA1	QLMDIAEQLTNNDF	DFALYLLD	VSFDF	AVGPRDG	----KVI	VVDAEN	VLVADKRL	IKQNKPESEFDVWY-----ESRFEE
OlatiDIA1	QLMDIAEQLTNNDF	DFALYLLD	VSFDF	AVGPRDG	----KVI	VVDAEN	VLVADKRL	IKQNKPESEFDVWY-----ESRFEE
TnigrDIA1	QLMDIAEQLTNNDF	DFALYLLD	VSFDF	AVGPRDG	----KVI	IVDAEN	VLVADKRL	IKQNKPESEFDVWY-----ESRFEE
TrunDIA1	QLMDIAEQLTNNDF	DFALYLLD	VSFDF	AVGPRDG	----KVI	IVDAEN	VLVADKRL	IKQNKPESEFDVWY-----ESRFEE
DreriDIA1b	QLMDIAEQLTNNDF	DFALYLLD	VSFDF	AVGPRDG	----KVI	VVDAEN	VVADKRL	IKQNKPESEFDVWY-----ESRFEE
DreriDIA1a	QLMDIAEQLTNNDF	DFALYLLD	VSFDF	AVGPRDG	----KVI	IVDAEN	VLVADKRL	IKQNKPESEFDVWY-----ESRYEE
BtaurDIA1	QLMEIAEQLTNNDF	DFALYLLD	VSFDF	AVGPRDG	----KVI	IVDAEN	VLVADKRL	IKQNKPESEFDVWY-----ESKFDD
PpygmDIA1	QLMEIAEQLTNNDF	DFALYLLD	VSFDF	AVGPRDG	----KVI	IVDAEN	VLVADKRL	IKQNKPESEFDVWY-----ESKFDD
CfamiDIA1	QLMEIAEQLTNNDF	DFALYLLD	VSFDF	AVGPRDG	----KVI	IVDAEN	VLVADKRL	IKQNKPESEFDVWY-----ESKFDD
PtrogDIA1	QLMEIAEQLTNNDF	DFALYLLD	VSFDF	AVGPRDG	----KVI	IVDAEN	VLVADKRL	IKQNKPESEFDVWY-----ESKFDD
TtrunDIA1	QLMEIAEQLTNNDF	DFALYLLD	VSFDF	AVGPRDG	----KVI	IVDAEN	VLVADKRL	IKQNKPESEFDVWY-----ESKFDD
HsapiDIA1	QLMEIAEQLTNNDF	DFALYLLD	VSFDF	AVGPRDG	----KVI	IVDAEN	VLVADKRL	IKQNKPESEFDVWY-----ESKFDD
MmuladIA1	QLMEIAEQLTNNDF	DFALYLLD	VSFDF	AVGPRDG	----KVI	IVDAEN	VLVADKRL	IKQNKPESEFDVWY-----ESKFDD
PvpamDIA1	QLMEIAEQLTNNDF	DFALYLLD	VSFDF	AVGPRDG	----KVI	IVDAEN	VLVADKRL	IKQNKPESEFDVWY-----ESKFDD
MdomeDIA1	QLMEIAEQLTNNDF	DFALYLLD	VSFDF	AVGPRDG	----KVI	IVDAEN	VLVADKRL	IKQNKPESEFDVWY-----ESKFDD
MmuscdIA1	QLMEIAEQLTNNDF	DFALYLLD	VSFDF	AVGPRDG	----KVI	IVDAEN	VLVADKRL	IKQNKPESEFDVWY-----ESKFDD
RnorvDIA1	QLMEIAEQLTNNDF	DFALYLLD	VSFDF	AVGPRDG	----KVI	IVDAEN	VLVADKRL	IKQNKPESEFDVWY-----ESKFDD
GgallDIA1	QLMEIAEQLTNNDF	DFALYLLD	VSFDF	AVGPRDG	----KVI	IVDAEN	VLVADKRL	IKQNKPESEFDVWY-----ESKFDD
XtropDIA1	QLMEIAEQLTNNDF	DFALYLLD	VSFDF	AVGPRDG	----KVI	IVDAEN	VLVADKRL	IKQNKPESEFDVWY-----ESKFDD
BflorDIA1	QMMKIAEYLTNNEAD	GLYLT	DISYEN	FGVTS-DG	----NLFVI	DVENV	IVVVKQ	KADKPRNWEARY-----QSHFDE
SsalaDIA1R	QLLHITQGLGHNSL	GGFLLY	YTRLG	EDMFG	LLD-DQ	---RVFI	TDASSI	GVIDLEQGFPPDPPS---QTGS-----DGDIFS
DreriDIA1R	QLLHITQSLSANSL	RFRFY	TRIPED	MF	GILE-DN	---KVI	IVDTST	IGIDLQEGHPPDK-D-LLPE-----ELDVFS
RnorvDIA1R	QLLGVLESLSRNDL	NLYFF	YFTHV	DAGM	FGIFD-NG	---HLF	IRDASAL	GIIDKQEGSQAAAD---RTGE-----NEDIFS
MmuscdIA1R	QLLRVLESLSRNDL	NLYFF	YFTHV	DAGM	FGIFD-NG	---HLF	IRDASAL	GIIDKQEGSQAAA---RTGE-----NEDIFS
MmuladIA1R	QLLGVLESLSRNDL	NLYFF	YFTHID	AGM	GFVFN-NG	---HLF	IRDASAV	GVIDKQEGSQEAT---RAGE-----NKDIFS
HsapiDIA1R	QLLGVLESLSRNDL	NLYFF	YFTHID	AGM	GFVFN-NG	---HLF	IRDASAV	GVIDKQEGSQEAN---RAGE-----NKDIFS
BtaurDIA1R	QLLGVLESLSRNDL	NLYFF	YFTHV	DADM	GFIFN-NG	---HLF	IRDASAL	GVIDRQEGSQAAS---GAGD-----NKDIFS
EcabaDIA1R	QLLGVLESLSRNDL	NLYFF	YFTHV	DADM	GFIFN-NG	---HLF	IRDASTL	GVIDRQEGSQAAA---RAGE-----NKDIFS
DordiDIA1R	QLLGVLESLSRNDL	NLYFF	YFTHV	DAAM	GFIFS-NG	---HLF	IRDASAL	GVIDKQEGSQAAP---KAGE-----NQDIFS
MdomeDIA1R	QLLGLDLSLRNDL	NLYFF	YFTRID	AGT	FGIFD-NG	---HLF	IRDASTV	GVIDKQEGSLTLD---RQEE-----SKDIFS
OanatDIA1R	QLLGVIEFLRHNDW	NLYFF	YFTRI	HAGT	FGVFD-NG	---HLF	IRDASSL	GVIDRQEGKRPAP---SSPE-----PRDIFS
GgallDIA1R	QLLAVLHSMGTNDL	NLYFF	YFTRV	DVGT	GFVFS-NG	---HLF	IRDASTL	GVIDKQEGSQPID---GQQE-----YKDIFS
BflorDIA1Lb	QLLEMIDKFRNGDP	KWV	IFVDF	SFNN	AVNN-YG	---RLT	LIDFDD	VMLIDREEFVGENK--TEPCD-----LKCFKT
BflorDIA1Lc	QLLQLVDALREKDP	DWV	FLDVS	FQNF	AVDS-RG	---WVRL	IDLDDV	MVIDRRTVVNQEQ---TEMCN-----EQCYTD
AaegyDIA1	ELIKASLNETAGVD	NFR	YLT	DISPD	NI	VVMS	SSEEE-I	KVTFVDLNNVIILDSHSHKRLKP-----SK-----QKHVHS
CpipiDIA1	ELIQASFLFTEGVN	GFR	YLT	INPD	NI	AVQA	QPSGS-F	QVSVFIDLDNVIILDSQSKRLDR-----SK-----ARNIHS
DyakuDIA1	QLMQLSLKLTFGF	SDFR	I	FLTDF	TGDN	FAYDE	HTK---	KVYLIDLDSVVLVD---ASSAT---GQ---AEKYEP
DerecDIA1	QLIQLSLKLTFGF	SDFR	I	FLTDF	TGDN	FAYDE	DSK---	RVYLIDLDSVVLVD---ASSAA---GQ---AEKYVP
DmeladIA1	QLIQLSLKLTFGF	ADFR	I	LTDF	TADN	LAYDE	DTK---	KVYLIDLDSVVLVD---ASFAA---GH---AEKYEP
DsechDIA1	QLIQLSLKLTFGF	ADFR	I	LTDF	TADN	LAYDE	ETK---	KVYLIDLDSVVLVD---ASSMA---GQ---AEKYEP
DpersDIA1	QLLQLSLKLTFGF	ADFR	I	FLTDF	TADN	LAFDE	ASQ---	SVILIDLDSVVLVD---AAVPL---GD---AQKYEP
DpseuDIA1	QLLQLSLKLTFGF	ADFR	I	FLTDF	TADN	LAFDE	ASQ---	SVILIDLDSVVLVD---AAVPL---GD---AQKYEP
DananDIA1	QLIHLSLKLTFGF	ADFR	I	FLTDF	SDNL	TFDE	DTR---	RVLLIDLDSVVMVD---AASTS---GQ---AEKYEP
DwillDIA1	QLLQLAKLSAGFK	GFR	I	YLTDF	TADN	FAYNE	ANG---	TVLLIDMDTMVLVESNDEAESES---QL---SKKYK
NvitrDIA1	SLLQAADTLMKNS	EFA	F	YLT	DISMD	NI	AVNN	EDK----ATFVDLENIIVVEKNPPEKALVGIESWNE-----TYTNAV
SpurpDIA1L	KILQMIEDFHDSSD	KWV	LLLD	DFG	YEN	FVMTS	-EG---	QLKVNLGGMVIDKDOTSTTPDMNPHLNNRTELCNEDCLN
BflorDIA1La	QLLQMLDDFQNKDP	DW	LLMF	VEVNI	EIN	SVSS	-DG---	RLILDGLNMTINKHDLKNSKKRSVC-----NEACFK
CinteDIA1	QLLDLAEHF	TYNDL	NLYM	FALH	RTPR	IGIS	-TG---	KLRIKNADNVILID---NNSKN-----DKGLYE
AgambDIA1	ELIRAGFKFTEGI	HGR	VFL	T	INPD	NVNL	KNDNK	QVYVSIVDLDNVIILDSWAEVFLTKN-----THHVHS

.

	490	500	510	520	530	540	550	560
SpurpDIA1	CGSRRECIMFSHTDLCNHYSDHNYAVCQGLFGKDSPHGD	-----	GGLLHSIPSDL	-----	SSYMRKVK			
NvectDIA1	CS-QPDCLSFSPSDMCSGGSRDHNYAICQGVLAGSSRRQ	-----	GLLHNP	-----	VALKASLN			
GaculDIA1	CD-REACLSFSKESLCSRVTVDHNYAVCQNLLSRYATWRGTT	-----	GGLLHDP	PPAH-----	IAKDGQLL			
OlatiDIA1	CD-REACLSFSKDSLCSRVTVDHNYAVCQNLLSRYATWRGTT	-----	GGLLHDP	PPAH-----	IAKDGQLE			
TnigrDIA1	CD-REACLSFSKDSLCSRVTVDHNYAVCQNLLSRYATWRGTT	-----	GGLLHDP	PPAH-----	IAKDGQLE			
TrubrDIA1	CD-REACLSFSKDSLCSRVTVDHNYAVCQNLLSRYATWRGTT	-----	GGLLHDP	PPAH-----	IAKDGQLE			
DreriDIA1b	CD-KEACLSFSKDMCSRVTVDHNYAICQNLLSRYATWRGSS	-----	GGLLHDP	PPH-----	IAKDGQLE			
DreriDIA1a	CD-KEACLSFSKDLCSRVTVDHNYAVCQDILLSRFSSWRGST	-----	GGLLHDP	PPPD-----	VVKDGRLI			
BtaurDIA1	CD-KEACLSFSKEILCARATVDHNYAVCQNLLSRHATWRGTS	-----	GGLLHDP	PPSE-----	IAKDGRL			
PpygmDIA1	CD-KEACLSFSKEILCARATVDHNYAICQNLLSRHATWRGTS	-----	GGLLHDP	PPSE-----	IAKDGRL			
CfamIDIA1	CD-KEACLSFSKEILCARATVDHNYAVCQNLLSRHATWRGTS	-----	GGLLHDP	PPSE-----	IAKDGRL			
PtrogDIA1	CD-KEACLSFSKEILCARATVDHNYAVCQNLLSRHATWRGTS	-----	GGLLHDP	PPSE-----	IAKDGRL			
TtrunDIA1	CD-KEACLSFSKEILCARATVDHNYAVCQNLLSRHATWRGTS	-----	GGLLHDP	PPSE-----	IAKDGRL			
HsapiDIA1	CD-KEACLSFSKEILCARATVDHNYAVCQNLLSRHATWRGTS	-----	GGLLHDP	PPSE-----	IAKDGRL			
MmuladIA1	CD-KEACLSFSKEILCARATVDHNYAVCQNLLSRHATWRGTS	-----	GGLLHDP	PPSE-----	IAKDGRL			
PvpamDIA1	CD-KEACLSFSKEILCARATVDHNYAVCQNLLSRHATWRGTS	-----	GGLLHDP	PPSE-----	IAKDGRL			
MdomeDIA1	CD-KEACLSFSKEILCARATVDHNYAICQNLLSRHATWRGTS	-----	GGLLHDP	PPGE-----	IAKDGRL			
MmuscdIA1	CD-KEACLSFSKEILCARATVDHNYAVCQNLLSRHATWRGTS	-----	GGLLHDP	PPSE-----	IAKDGRL			
RnorvDIA1	CD-KEACLSFSKEILCARATVDHNYAVCQNLLSRHATWRGTS	-----	GGLLHDP	PPSE-----	IAKDGRL			
GgallDIA1	CD-KEACLSFSKEILCARATVDHNYAVCQNLLSRHATWRGTS	-----	GGLLHDP	PPAD-----	IAKDGRL			
XtropDIA1	CD-KEACLSFSKEILCSRATVDHNYAICQNLLSRHATWRGTS	-----	GGLLHDP	PPAE-----	IAKDGRL			
BflorDIA1	CPGMNCLSFSDVSAALCRYLHTDHNYAVCRNMLSEYASEMGP	-----	GGLLHDP	PET-----	VVRDGTLO			
SsalaDIA1R	CLGQGTSPCHR-SPPCSSVRPTQSLTLLCTALLPRLLTERGAQTTRLPMEGAEAGRLARDV	-----	PLLVGCAD					
DreriDIA1R	CL--SGSCVR--PPPCETVREAQSFILLCKYILN-NLLTSN	-----	DKQSG-LPRAA	-----	VDELLVCAD			
RnorvDIA1R	CL-VSGCQVQ--MSSCDTVPEKQNLVLCQQLLP-QLLRG	-----	KFPSVQ	QEI-----	DSALSLCCK			
MmuscdIA1R	CL-VSDCQIQ--LSSCDTVPEKQSLVLCQQLLP-QLLQ	-----	KFPSVQ	KEI-----	DSALSLCCK			
MmuladIA1R	CL-VSGCQAQ--LPSCESVSEKQSLVLCQKLLP-RLLQ	-----	RFPSVQ	DDI-----	DSALAQCGD			
HsapiDIA1R	CL-VSGCQAQ--LPSCESI SEKQSLVLCQKLLP-RLLQ	-----	RFPSVQ	DDI-----	DSILVQCGD			
BtaurDIA1R	CL-VSGCQTK--LPSCDTIPEKQNLVLCQVLP-LLLQA	-----	KFPSVQ	EI-----	DAELTRCAD			
EcabaDIA1R	CL-LSDCQAE--LPSCDTVPEKQSLVLCQVLP-RLLQ	-----	KFPSVQ	EI-----	DATLTWCGE			
DordiDIA1R	CL-VSGCQAQL-LPSCDNIPDKQSVVLCQQLLP-QLLQ	-----	KFPSVQ	EI-----	DSALAQCGQ			
MdomeDIA1R	CL-VLDCQSP--FPSCSVKEKQSWVMACQQLLP-QLLKE	-----	KFPQPI	QEI-----	DSALVLCGN			
OanatDIA1R	CL-AADCQSD--LPSCNTVQEHQSLVLCRELLP-KLLE	-----	KFPKPV	QEI-----	DALLDRCGD			
GgallDIA1R	CL-TVDCQSA--FVSCNSIREKQSLVMVCQELLP-KLLRG	-----	KFLPPV	QEI-----	DSFLQHCAE			
BflorDIA1Lb	FISQIEAMNSYDSCSAMPQYSQMMYALACVRLLSHLPEHLSEP	-----	NPMDPKPKDHRPDSERP	-----	RLLWGPPEQ	EAKVLE		
BflorDIA1Lc	FQKKLYS-DEYH-CDDIFKYAPMMYASICARLLSNLQKHPERRKWEIREYQEGQSIELDEPPVKGLFHNPPDEIREALE	-----	GFLHSLG	TDS-----	KLEAFR			
AaegyDIA1	RIDCGCFAYIQEDICVHQISDINLFAICQLLYENLNQDREG	-----	GFLHIQ	PND-----	SQPRLSEIR			
CpipiDIA1	RIPCDGCFAYVQEDLCSYQHSINQFAICQLLYENLNQDREG	-----	GFLHIQ	PND-----	SQPRLSEIR			
DyakuDIA1	--LPGEG-FTFDVSAFCSGHLQDANIYQACLLLRDYLKLNLDN	-----	ERLQ					
DerecDIA1	--LPGEG-FTFDVSAFCSGHLQDANIYQACLLLRDYLKLNLDN	-----	ERLQ					
DmeladIA1	--LTGEG-FTFDVSAFCSGHLQDANIYQACLLLRDYLKLNLDN	-----	EKLQ					
DsechDIA1	--LAGEG-FTFDVSAFCSGHLQDANIYQACLLLRDYLKLNLDN	-----	EKLQ					
DpersDIA1	--LPGDG-FTFDVKSFCGQQLDANVYQACLLLRDYLKLNLDN	-----	GRLE					
DpseuDIA1	--LPGDG-FTFDVKSFCGQQLDANVYQACLLLRDYLKLNLDN	-----	GRLE					
DananDIA1	--LPGEG-FTFDVSAFCSGRQLDANVYQACLLLRDYLKLNLDN	-----	ERLQ					
DwillDIA1	--FPEG-FTYDVNAFCNDQDLANIYQVCLLRDQLLPDVK	-----	HRLK					
NvitrDIA1	DLDCQDCFVSPNDICSHKVS DHNFYAI CQHILTQALGAVFHN	-----	QGF	LHDP-----	YILQKHPTLI			
SpurpDIA1L	TFVKQLQTEPDTHCREVPRHVELMYMACHSLSDLMTKYER	-----	FFQPLDTPRKHHPGMLHDAPYEVDVLS					
BflorDIA1La	RFRNLSHRPETS CRQAGRYSQLMYARACQRILGCWQTERS	-----	GRVLS	SSSKDASCAYGRLLGPPREAKQ	ELE			
CinteDIA1	VRYKQEKVDITEENLCDHSENDVNYVVICRHLGGTWK	-----	KYPG	LHDP	KEFG-----	VFSSQMF		
AgambDIA1	KIECNGCFAYVQEDVCRYQNSDLNLFATCQLLENLNQHYAK	-----	GLLHYDR	DAEAFP-----	VLGEASKMLQ			

	570	580	590	600	610	620	630											
SpurpDIA1	GQIAE	CRSPSK	--RDGRYL	VVKEL	KETLM	-----	KLIT											
NvectDIA1	QLLQD	CTAQDM	--RNTRE	ETAQK	LSELLQ	-----	GYL											
GaculDIA1	TLLDE	CTRPKK	--RYGRF	QAAKE	LREYLT	-----	QLAAASS											
OlatiDIA1	ALLDE	CTRPKK	--RYGRF	QAAKE	LREYLT	-----	KLAAASS											
TnigrDIA1	ALLDE	CTRPKK	--RYGRF	QAAKE	LREYLT	-----	QLA											
TrubrDIA1	ALLDE	CTRPKK	--RFGRF	QAAKE	LREYLT	-----	QLAASS											
DreriDIA1b	ALLEE	CANPKK	--RYGRF	QAAKE	LRDYLT	-----	QLSGS											
DreriDIA1a	ALLDE	CTRPQK	--RYGRF	QAAKE	LREFLT	-----	QLTQTS											
BtaurDIA1	ALLDE	CANPKK	--RYGRF	QAAKE	LREYLA	-----	QLSNN											
PpygmDIA1	ALLDE	CANPKK	--RYGRF	QAAKE	LREYLA	-----	QLSNN											
CfamiDIA1	ALLDE	CANPKK	--RYGRF	QAAKE	LREYLA	-----	QLSNN											
PtrogDIA1	ALLDE	CANPKK	--RYGRF	QAAKE	LREYLA	-----	QLSNN											
TtrunDIA1	ALLDE	CANPKK	--RYGRF	QAAKE	LREYLA	-----	QLSNN											
HsapiDIA1	ALLDE	CANPKK	--RYGRF	QAAKE	LREYLA	-----	QLSNN											
MmulaDIA1	ALLDE	CANPKK	--RYGRF	QAAKE	LREYLA	-----	QLSNN											
PvampDIA1	ALLDE	CANPKK	--RYGRF	HAAKE	LREYLA	-----	QLSNN											
MdomeDIA1	ALLDE	CAHPKK	--RFGRF	QAAKE	LREYLA	-----	QLSNN											
MmuscDIA1	ALLDE	CTNPKK	--RYGRF	QAAKE	LRGYLA	-----	QLSHN											
RnorvDIA1	ALLDE	CTNPKK	--RYGRF	QAAKE	LRGYLA	-----	QLSHN											
GgallDIA1	ALLDE	CANPKK	--RYGRF	QAAKE	LREYLA	-----	QLSNN											
XtropDIA1	ALLDE	CANPKK	--RYGRF	KSAKE	LREYLA	-----	QLSNN											
BflorDIA1	RLLAE	CAKPR	--LYGRF	DAAKE	LIELLG	-----	SFLK											
SsalaDIA1R	PSQPD	WRIMAA	--VGS	LMDLL	KPMRPCN	-----	HYTYR											
DreriDIA1R	PSQLD	QTITKS	--VQSL	KNILK	TLRPCSP	-----	QYAYR											
RnorvDIA1R	DASTN	LEVFGA	--TSL	LKNI	LRS	LRTCDP	-----	RFAYR										
MmuscDIA1R	DNSTD	LEVFGA	--TSL	LKDIL	RS	LRTCDP	-----	RFAYR										
MmulaDIA1R	STRPD	PEVLGA	--ASW	LKHIL	RLRPL	LRTCDP	-----	RFAYR										
HsapiDIA1R	SIRPD	PEVLGA	--ASQ	LKDIL	RLRPL	LRTCDP	-----	RFAYR										
BtaurDIA1R	GTRPD	PEVLGA	--ASR	LKDIL	RLRPL	LRTCDP	-----	RFAYR										
EcabaDIA1R	DTRPD	AEVLGA	--ASR	LKDIL	RLRPL	LRTCDP	-----	RFAYR										
DordiDIA1R	GIRPD	SEVFGA	--ASR	LKDIL	RLRPL	LRTCDP	-----	RFAYR										
MdomeDIA1R	SSLSQ	EVIEA	--ASR	LKAIL	KPLR	LRTCDP	-----	RYAYR										
OanatDIA1R	SSLDG	QTVIGG	--ARR	LMDIL	KLS	LRTCDA	-----	RFAYR										
GgallDIA1R	GLADD	QDVNEA	--MAK	LQLLK	PLRSCDS	-----	RFAYR											
BflorDIA1Lb	ELLRG	CVENV	--AGG	RLEAV	GE	LKTFLR	-----	RNAK										
BflorDIA1Lc	GALTQ	CVHETL	--PRG	RLGAV	LR	LQEI	-----	TT										
AaegyDIA1	KLLHC	CVYCP	PPDC	DRQGL	LQVQ	EIIH	-----	DVLH										
CpipiDIA1	QLLH	CVYCV	PPDC	DRQGL	LQVQ	EIID	-----	GILV										
DyakuDIA1	LLLEQ	CVACQ	DDFC	DMRF	QHAYD	LKMLD	-----	SKN										
DerecDIA1	LLLEQ	CVACQ	DDFC	DMRF	QHAYD	LKIVLD	-----	SKI										
DmeladDIA1	LLLEQ	CVACQ	DDFC	DMRF	QHAYD	LKVLE	-----	SNN										
DsechDIA1	LLLEQ	CVACQ	DDFC	DMRF	QHAYD	LKELE	-----	SKN										
DpersDIA1	MLLEQ	CVRC	DDAT	CDMRF	QQAYD	LKLLG	-----	ELLGS										
DpseuDIA1	MLLEQ	CVRC	DDAT	CDMRF	QQAYD	LKLLG	-----	ELLGS										
DananDIA1	LLLEK	CV	EQDD	LC	DMRF	QYAYD	LKLLD	-----	S									
DwillDIA1	EMLND	CV	QEDDK	CDIR	FKYANN	LIDL	LV	-----	EINN									
NvitrDIA1	DLLEQ	CAKPDIG	--YSR	IDIAH	KL	IVLLD	-----	SVIK										
SpurpDIA1L	ELLYE	CVFEGQ	--PGR	RMSV	RV	LKRL	LT	-----	IIQR									
BflorDIA1La	DLLTE	CV	ETK	--AGG	RITALK	QIRV	LLA	-----	A									
CinteDIA1	VLLDI	CSR	GKTAV	APER	RTL	SHSIR	RRLA	ANQL	RVLE	RRR	ICSP	DFKY	RYPE	CELA	EAGIN	LP	SIEL	QWLH
AgambDIA1	NLLSE	CV	YCP	PPDC	QNR	SHIL	KML	HI	IID	-----	QTII							