C.carcharias dnai1.2 dynein axonemal intermediate chain 1 paralog G.aculeatus dnai1.2 dynein axonemal intermediate chain 1 paralog
E.caballus DNAI1 dynein intermediate chain 1 axonemal isoform X3
G.gallus DNAI1 dynein axonemal intermediate chain 1 isoform X1
F. catus DNAI1 dynein axonemal intermediate chain 1 isoform X1
H. sapiens DNAI1 dynein axonemal intermediate chain 1 isoform 2
C.mydas DNAI1 dynein axonemal intermediate chain 1 partial
X.laevis dnail.L dynein axonemal intermediate chain 1 L homeolog
S.salar dnail.2 dynein axonemal intermediate chain 1 paralog 2
D.rerio dnai1.2 dynein axonemal intermediate chain 1 paralog 2 D.rerio dnai1.2 dynein axonemal intermediate chain 1 paralog 2 dupelabel1
H.sapiens DNAI4 dynein axonemal intermediate chain 4 isoform X8
E.caballus WDR78 WD repeatcontaining protein 78
F.catus DNAI4 LOW QUALITY PROTEIN dynein axonemal intermediate ch
G.aculeatus dnai4 dynein intermediate chain 4 axonemal isoform X1
D.rerio wdr78 dynein axonemal intermediate chain 4
D.rerio wdr78 dynein axonemal intermediate chain 4 dupelabel1
S.salar dnai4 dynein axonemal intermediate chain 4 isoform X1
C.carcharias dnai4 dynein intermediate chain 4 axonemal isoform X
G.gallus WDR78 dynein axonemal intermediate chain 4
S.townsendi DNAI4 dynein axonemal intermediate chain 4 isoform X1
C.mydas DNAI4 dynein axonemal intermediate chain 4 isoform X1
X.laevis dnai4.S dynein axonemal intermediate chain 4
consensus

C.carcharias dnail.2 dynein axonemal intermediate chain 1 paralog G.aculeatus dnai1.2 dynein axonemal intermediate chain 1 paralog E.caballus DNAI1 dynein intermediate chain 1 axonemal isoform X3 G.gallus DNAI1 dynein axonemal intermediate chain 1 isoform X1 F.catus DNAI1 dynein axonemal intermediate chain 1 isoform X1 H.sapiens DNAI1 dynein axonemal intermediate chain 1 isoform 2 C.mydas DNAI1 dynein axonemal intermediate chain 1 partial X.laevis dnai1.L dynein axonemal intermediate chain 1 L homeolog S.salar dnai1.2 dynein axonemal intermediate chain 1 paralog 2 D.rerio dnai1.2 dynein axonemal intermediate chain 1 paralog 2
D.rerio dnai1.2 dynein axonemal intermediate chain 1 paralog 2 dupelabe. H.sapiens DNAI4 dynein axonemal intermediate chain 4 isoform X8 E.caballus WDR78 WD repeatcontaining protein 78 F.catus DNAI4 LOW QUALITY PROTEIN dynein axonemal intermediate ch G.aculeatus dnai4 dynein intermediate chain 4 axonemal isoform X1 D.rerio wdr78 dynein axonemal intermediate chain 4 D.rerio wdr78 dynein axonemal intermediate chain 4 dupelabel1 S.salar dnai4 dynein axonemal intermediate chain 4 isoform X1 C.carcharias dnai4 dynein intermediate chain 4 axonemal isoform X G.gallus WDR78 dynein axonemal intermediate chain 4 S.townsendi DNAI4 dynein axonemal intermediate chain 4 isoform X1 C.mydas DNAI4 dynein axonemal intermediate chain 4 isoform X1 X.laevis dnai4.S dynein axonemal intermediate chain 4 consensus

C.carcharias dnai1.2 dynein axonemal intermediate chain 1 paralog G.aculeatus dnai1.2 dynein axonemal intermediate chain 1 paralog E.caballus DNAI1 dynein intermediate chain 1 axonemal isoform X3 G.gallus DNAI1 dynein axonemal intermediate chain 1 isoform X1 F.catus DNAI1 dynein axonemal intermediate chain 1 isoform X1 H.sapiens DNAI1 dynein axonemal intermediate chain 1 isoform 2 C.mydas DNAI1 dynein axonemal intermediate chain 1 partial X.laevis dnai1.L dynein axonemal intermediate chain 1 L homeolog S.salar dnai1.2 dynein axonemal intermediate chain 1 paralog 2 D.rerio dnai1.2 dynein axonemal intermediate chain 1 paralog 2 D.rerio dnai1.2 dynein axonemal intermediate chain 1 paralog 2 dupelabel1 H.sapiens DNAI4 dynein axonemal intermediate chain 4 isoform X8 E.caballus WDR78 WD repeatcontaining protein 78 F.catus DNAI4 LOW QUALITY PROTEIN dynein axonemal intermediate ch G.aculeatus dnai4 dynein intermediate chain 4 axonemal isoform X1 D.rerio wdr78 dynein axonemal intermediate chain 4 D.rerio wdr78 dynein axonemal intermediate chain 4 dupelabel1 S.salar dnai4 dynein axonemal intermediate chain 4 isoform X1 C.carcharias dnai4 dynein intermediate chain 4 axonemal isoform X G.gallus WDR78 dynein axonemal intermediate chain 4 S.townsendi DNAI4 dynein axonemal intermediate chain 4 isoform X1 C.mydas DNAI4 dynein axonemal intermediate chain 4 isoform X1 X.laevis dnai4.S dynein axonemal intermediate chain 4 consensus

M M M M M M M	M M M M L M M
TPATSNSNSTKKPGTT	KGRKRKPH PASAKAPHSYPT
GKH SAH TTV TTV TRA INP TGG NIL	AST LSM AVP KQP KQ SSLRRIW KQR AHK
	VIGREGLP
	ARCHRYQ
	RQLPAAC
	GCPRGKER
	ARRSGRI
	AAAAMPP
	V G P P KVPY Q
SARAANA	
AEGWGQ	
GLQKQI	
PGKGWP	
TTPQPV	
ATMPI	
SPVSSI SPANSIKQILILI TVQGGI	Q1
R.S.R. R.K.Q. A.P K.R K.R K.K R.F K.SRK. K.GKK.	K Γ . K . R . AGD . K . S . Q . K . V . A . A . Γ . V . K .
RMPGE R.TLK R.TLK P.TLKSSSSSS V	Y.WQ.RQN
EERP KVAK KVTP S S IINMGA VVSVTS	NQNGP. GQIG SSNA
SSS KMGGS	
ATQPI FSQPI FSQPI FSRT FSSKT FSSKT FSSKT FSSRV FSSR	
KKS.IS.KS.IS.KKS.IS.TT.IS.LN.VS.LN.VS.MN.VS.FPSHH.QR.LR.AT.SS.ASVIS.	APP. GP WQS. VS GQP. RL KQS. IN KQS. IS VQS. RT NMP. KP PAA. KT
F F V T .SM	KSN VGR YGA TGR IGR AKS SKA
FATMK PGKVK ISTIK SGIHG SGVFR SGVFR SGVLR GNYSR SSIRR SSQKQ VTQSK *	KNKKK GTRKR LTKKR GARKR GTRKR ISKKR ASKKK
ATSVKO ATQTRO GTQTKO AHQSTI PNQST PNQST VNHSS HSHIA MSYTS MSYVSO VN.QS	DEEEA DEDSG DEDTS DEDSG DEDSG DEDSG DEDAS EEDDS DEEDG
RD	VDAGGG TEVAEG TEVGEG TEVGEG TEVGEG TEVGEG TEVGEG
NQSRM. NQSRM. NQSRM. INSII(IKSINFIKSINFAR	GRV. GADEW. GVDEW. GADEW. GTDEW. GADEW. GVEEW. G.DEW.
GFPSRK PLFSGK PLFSGK ASVSRK GSTSRG	SYG.K.AQS.K.STS.K.AQS.K.AQS.K.TQS.K.TQS.K.TQS.K.TQS.K.TQA.K.MQG.K
SFS RVN QVYIEC SI SIL	ALI ATV TVV ATV TLL TLI
GSSHVP L	K
AADSK .QGEK TSTGT TSDGK	
ILDKS ILDKG AVQKA NVDKA	
SALQTP SAQTP SAQTP SSVQTP SYSSGG AQEHR ASFASS	P P P P
IKTTQ RTVTQ RTVIQ RQVVR KHTAM KHTVQ RHSIQ QRDVR KHFVQ KHTIQ KQSIKI	PDQLEI PDQLEI PDQLEI PDQLEI PDQLEI PDQLEI RDQLEI LDQLDI
VFDEEI VVDENC VVDENC VFDESC VFDESC VFDDEC VLDEQC	LTEAEI LTDAEI LTDAEI LTDAEI LTDAEI LTEAEI LTEAEI LTEAEI LTEAEI
DNDVTF GQDVTF GQDVTF GKDVTF GKDVTF GKDVTF	LKEEFT LKEEFT LKEEFT LKEEVT LNEEFT LKEEFT
PQPLYC PHPLYN PHPLYC QPLYC PHSLIV PHPLFE	RTLTA RILTA RVLTA RILTA RILTA RILTA RILTA RILTA RILTA RILTA
QAHPAA NPDPGV NPDPGV QPDPAA /LDATF HPDPIT CPEAGS	ANNPHA ANNPHA ANNPHA ANNPHA ANNPHA ANNPHA ANNPHA ANNPHA ANNPHA
PHAKSC LQSKQG VMSKHS AQSRQS AASKQS VSQRQS	PQ
RLFLD. KVFTAI KVFTAI KIFAS. KIFSS(KLLALS KILSAI	
EISAG LDTSLT LDTSLT .DTSGG QDLL	
	N I N I N I N I
SIAI SIAI STAY LTGTMY SSFSVI	VHYSFI VRYSFI VRYSFI VRYSFI VRYSFI VRYSFI VRYSFI VRYSFI VRYSFI
QTT.A Q.T.T Q.T.T QTT.T QTV.V	ERS.F EGT.Y ERA.Y EGT.Y EGT.Y ERA.Y ERA.Y
Г G V A V A V A V A S I V A	<pre> ⟨PISYV ⟨FIGVV ⟨PIGFV ⟨PISYV ⟨PVSIV ⟨PISSV ⟨PISSV</pre>
STLGQ SMLGQ SMLGH SFTMP SLTGP SLTGP SLGGP SLGGP SLVGP SLVGP SFVGP ***	DQLAVH
S FSRT.Y FSRT.Y FTRSTF	FEME FSQV FSQV YTQV FSLE FSLE
GSSTV GSSTV GSSIV GSSRI GSASA GSSTV TDSGSV ESSRI GSISF GSSSI GSSTV	GNL . VI GNL . II IGNM . II IGNL . II GNL . LI GNM . LI
KSSVS KSSVS SQS RISQ. RISQ. RGSQS RSSRT KSTMS KSTT. KSTTS RSSK.	K K
TIESLI TAESVI TAESVI TMESMI FSDSL IPESMI STESLA TTESMA	
AEDLEE NEEIED TDETKD TDETKD NEEIED . EDIGD . DGTAE AEEIVE	DS DS DS DS DS DS DS DS
TFSKWE LLVKQD LLVKQD PSSKRD TAIQHD PDSLQD PGSRRE	
KLTSFT KLTSFT LSNSIS LSNSIS ISISLS VPGLHQ TAVSLP TISSLL TAISLS	
PDVQGK SDIQSH SDIQSH SDVQV <mark>R</mark> QYFQIRI PDVQV <mark>R</mark> LDVQVRI	DEGRI DEGRI DEGRI DEGRI DEGRI DEGRI DEARI
RNTVKEH REEPKE(RQQSRGS RLRAKEI RQRYRNN RQSLRLS RQHYRDE RQHYRDE RQSARVO RQSAKQO RQSAKQO
LRE IKE LNE VAK	IAN IVT NAS IAA IVAVSY LEP VLE
EDEDDMNINIDDEMEDED	ESDA EPAT GSEE GSQE GSQE GSQE CELAP GSTQ
	.EGI VNTGAEA SAK.LV SESSAVV STK.VV VESTVIE VESTVIE VET.AV
	ADEE VISEAE VSEEAE VISETE .ISETG
LEKTIE LEKTIE LKEVTI LDSTAN LDSTAN LDDVVI LNKIVI	VVEEEDE IKDE.KO ILEEEEE NLEEDEE .EVK
	EPK GTEDTQA EPKESEA EPKE
.TETETLTETETLSEADSI .SETETI .SETETI .IESETL .TETETF .TETETL .TETETL .TETETI .METETI .TDTETL .****	KMDT EAEAG .AEE.E EAETEAG .LETEPG EEG EG
RFFDLPT RLFDLPT RFFNLPT SLLDIPS WLLDIPA WLLDIPA WLLHMPA IFLDLPV RMLDLPP WIFDMPT WLLDMPP WLLDMPP WLLDMPP	VNLALPE SQTDLPA EAEGAEA SQIDMPA SQTDVPA SKEDIPA EHPET.P
	EEGGREV
V T V V V	A DEV A A A A A V V G C
254 213 254 204 207 207 211 207 172 225 223 201	195 155 165 180 165 170 222 159 166 0

	KAAEEEEEKEVIRP GEED.RPDS.VASK EAAEKVAEE.LMTP EAAE.AAEAEEPPP EAAEKVTEEELMTP GAAEKVTEEELMTP STEE.AAEGEEPPP AGEE.GADRED.ST GGEE.RADSVE.SK	RQERKIPNQFNI .TGMKEQKATNQFNI .KQPKERKLTNKFNI .PKVKEKKLANQFNI .KQPKERKLTNQFNI .KQPKERKLTNQFNI .PLMKEQKLTNQFNI .KSRKERKLTNQFNI .AGKKEQKITNQFNI	FSERASQTLNNPLRDREC FSERASQTYNNPVRDREC FCERASQTLNNPVREREC YSERASQSLNNPLRERAC FSERASQTLNNPLRERGC	QMEPPPRTNFSATANQWE QTEPPPRTNFSATANQWE QMEPPPRATFSATANQWE QTEPPPREVFSATANQWE QTEPPPRANFSATANQWE	FDAYEEVL.AKQMAKKE IYDAYVMEL.QKQEKNKE IYDAYVEEL.EKQEKTKE IYDAYVEEL.QKMEKSKE IYDAYVEEL.EKQEKTKE IYDAYVEEL.EKQEKTKE IYDAYVEEL.QKLEKSKE IYDAYVEEL.QKLEKSKE IYDAYVEEL.KKQQKLKE IYDAYVEEL.KKQQKLKE	EKEKTKTPVAK EKEKAKTPVAK EKEKQKPQVAK EKQKAPASK EKAKAVPK	. KDV . DK . SR		TETANDDI MESQSDDI LELQSDDI MESQSDDI MESQTDDL LESQSDDV TESQSDDL VETQSDDI	.TKVTQAAKIVERMVI .TKISNAAKIMERMVI .TKVTQAAKIVERMVI .IKLSQAAKIMERMVI .TKVTKAAKIVERMVI .SKLVKSCKIMERMVI .TKVAKVAKITERMVI	HQNTFDDIAQDFKYFEDG NQNTYDDVAQDFKYYEDA NQNIFDDIAQDFKYFEDA NQNTYDDVAQDFKYYEDA NQNTYDDIAQDFKYYDDA NQNTFDDIAQDFKYFEDF NQNSFDDVTQDFKYFEDF NQNTFDDIAQDFKYFEDA	SDE. ADE. SDE. ADE. ADE. ADE. ADE. ADE. SDE.			FRGQEGTLLP YRDQEGTLLP YRDHRGTLLP YRDQEGTLLP YRDQVGTLLP YRDQEGTLLP YRDQEGTLLP YRDQEGTLLP FRGQEGTLMP YREQEGTLLP	LWKFQNDKAKRLAVTA LWKFQYDKTKRLAVTA LWKFQNDKAKRLAVTA LWKFQNDKAKRLSVTA LWKFQYDKAKRLAVTA LWKFQYDKAKRLAVTA LWKFQNDKAKRLSVTA	ALCWNPKYNDLFAVGI ALCWNPKYRDLFAVGI AICWNPKYKDLFAVGI ALCWNPNYKDFFAVGG ALCWNESYKDLFAVGI	IGSYDFMKQSRGMLLL 7GSYDFMKQSRGMLLL IGSYDFMKQSRGMLLL QGSYDFVKQNRGMVQF LGSYDFTKQGRGMLVF	HSLKNPSYPEYQYSTESSYSLKNSAFPERIYPTDSOYSMKNPSFPEYIFSSESOYTMKNPTFPEYVFSSESOYSKNPSFPEYIFSSESOYSLKNPSFPEYMFSSNSOYTMKNPTFPEYIFSSESOYSLKNPSFPEYVFSTDTOYSLKNPSFPEYVFSTDTOYSLKNSTFPEYIPTSO	VLCLDIHNMYPHLIA VMCLDIHEQHSYLTA IMCLDMHVDHPYLVV IMCLDIHNDHPHLMA IMCLDMHVDHPYLVV VMCLDIHVDHPYLVA IMCLDIHSDHPYLLV VMCLDIHSDHPYLLV VMCLDIHREHPYLLA ILCLDIHKHLPYLVA	VGFYDGCVAVYNIME VGFYDGCVAVYNLKR VGHYDGNVAIYNLKK VGFYDGNVAIYNFKK VGHYDGNVAIYNLKK VGHYDGNVAIYNLKK VGFYDGNVAIYNLKK VGFYDGNVAIYNLKK VGFYDGNVAIYNLKK VGFYDGNVAVYNLKA VGFYDGCVAVYNLKE	ENIAKP.TYKSSAH EEGSEP.VYKSTVH EPHSQP.SFRSSAH EATSQP.SYKSSAH EPHSQP.SFRSSPH EPHSQP.SFCSSAH ESHSQP.GYKSSAH ESHSQP.GYKSSAH ETLQP.IYKSTAH	KSGKHTDPVWQVKWQ KTGKHTDPVWQVCWQ KSGKHTDPVWQVKWQ KSGKHTDPVWQVRWQ KSGKHTDPVWQVKWQ KSGKHSDPVWQVKWQ KSGKHTDPVWQVKWQ KSGKHTDPVWQVKWQ KSGKHTDPVWQVKWQ KSGKHTDPVWQVKWQ	KDDL DNNVN NNDM DDRHN KDDM DNNLN KDDM DNNLN KDDM DNNLN KDDM DQNLN KDDM DNNLN KDDM DNNLN KDDM DNNLN KDDM DNNPN KDDM DNNHN	IFFSVSSDGRI
pelabel1	GGDE.RLENVP.IK MVSVESEEAEKVTQRNKN MLSVESEEAEKVSQRNKN MVSVESEEAMKVRRRNKN LMSVEADDTEVIMEKNNG SVSVESEDAEAVKERNNA SVSVESEDAEAVKERNNA SVSVDSEEAESVKERNNI MVSVDSAEAESIKQRNQI VVSVESEDAARVLERNKI MVSSEAEEADKARKRNVA MVSTESEDAEKVQEQNKD LTATDSENADLVRVRNQA	. PGKREQKVTNQFNI YEVLCRNRLGN . DL' YEILCRNRLGN . DL' YETLCRNRLGN . DL' YAELCRTRMGN . NK' YTELCKNRQGN . DK' YTELCKNRQGN . DK' YMELCKNRMGN . DK' YVDICKNRPGN . DR' YVDICKNRPGN . DR' YGELCKNRVGN . DR' YIELCKNRVGN . DR' YEDLCKDKVGN . DR'	FIDRASQTLNNLPREISC YVERMMQTFNGAPKNKDV YVERMMQTINGAPKNKDV YAERMMQTINGAPKNKDV YVDRAVQTLNGAAKNKQV YVERSMQTFSDASKTKEV YVERSMQTFSDASKTKEV YVERSMQTFNGAPKTKEV YVERSMQTFNGAPKTKEV	QTEPPPRANFSATANQWEQCDKIIMEDKGIMSTAWDIQCDRIIKEDKGIMSTAWDIQCDRIIKEDKGIMSTAWDIQCDKIVKEDKGIMSTAWDIQCDSITMVDKAVMCTVWDNQCDSITMVDKAVMCTVWDNQCDSITMVDAATTATTWDNQCDKINTQETGVMATTWDNQCDKIIMEDKGIVVTTCDIQCDKISTADKEIMATNWDIQCDKILMEDKGIMATSWDIQCDKILMEDKGIMATSWDIQCDRIILEDTGVMASVWDI	TYDFYVEEL.QRREKSKE LYDSYNAME.L.VSLSV YDSLNALE.L.SSLPA HDSYIAME.L.SSLPA YDALIRPE.Q.HEEVSSRE MYDSFNNISDVSANTVVSSE MYDSFNNISDVSANTVVSSE MYDSFKDGE.V.HKEIS.S. LYDNTSQVE.P.TSKA YDSFNALE.V.AVA YDSFNALE.T.TLTPSVT. LYDSYLSPE.S.LPMKEAV.	EKQESQFPNKQSVVESSSKANVIKWPAADSRSRTNVAKQSILDSCGKANVI EQEGAEYPGAAV. ERHEATIPESSSEGHLV ERHEATIPESSSEGHLV DTDKASIPEIVSNHRLHQANQKDLSQINF	KEE. DR.SK	KKMIQ	AEAQSDDT ILAKIHEDEEDHSDAILKS ILARIHDDEEDRSEAILKS ILTKVRDDEVDHSETILKS GSSL.NTESDLQLNVLS VLPL.DEEPDLQLILQS VLPL.DEEPDLQLILQS VVPS.EDEPDPELILQS INIQGTEELERDPEELLKN GLARVHE.EKCHTEATLRS ILSRIHEEEEDRSEAILKS ALTRIPDEVEPDSEEILKS	SQLAKPAKITERMVI DKFHQDLFFMERVLI DKFHQDLFFMERVLI SDKFHQDLFFMERVLI SETFQHCLLVMERSII SDKLKQDLALMERVVI SDKLKQDLALMERVVI SEKFQQDLFVMERIII VEKLKHDLFIMERVII SEKFYQDLFYMERVLI SEKFYQDLFFMERVLI SEKFQQDLFFMERVLI SEKFLQDLFFMERVVV	NQNIFDEVAQDFMYFEDA MENIFQPKLAAYRQLPVI MENIFQPKLAAYRQLPVI MENIFQPKLAAYRQLPII LRNTIQPELAAYRQLPII LANVFQPKLAAYRQLPII LANVFQPKLAAYRQLPII LANVFQPKLAAYRQLPII LENIYQPKLAAYRQLPII MENIFQPKLAAYRQLPII	ADE	SAKHEEVEEES.KKEEE GKKVEEVEEEV.KKEEE GEKLEKTEEEG.QKEEE .EKRQEEES SECEEES	E. E	FRGEKGT LP LEIH.AEESTIPANLER LEIS.AEQSTIPANLER LEIS.TGQSTIPANLER LEIS.TGQSTIPANLER LEIS.TGQSTIPANLER LEIS.TGQSTIPANLER LEGESKNSHCPFLER LSLDE.ESTLTPALER LSLDE.ESTLTPALER LSELNKTSEEMVPPSLEQ LELGEAAKEIPPFLEP LDLSEAPEEILPPSLER LISAMPSNIVSPSLNR	LWKFQYDKAKGLSVTA LWSFSCDLTKGLNVSS LWSFSCDLTKGLNVSS LWSFSCDLTKGLNVSS LWAFSYERSRGRSVSS LWDFSCELTMGRNVSG LWDFSCELTMGRNVSG LWSFSCELTSGRNVSG	ALCWNHIYSDLFAVGI SLAWNKTNPDLLAVGY SLAWNKINSDLLVVGY SLAWNRTNPDLLAVGY SMAWNKINPDFLAVGY CMVWNKKNPDLLAVGY CMVWNKKNPDLLAVGY CMVWNKRNADLLAVGY CMVWNKHNLDLLAVGY CMVWNKHNLDLLAVGY CMAWNKLNPDLLAVGY SMAWNKLNPDLLAVGY SMAWNKLNPDLLAVGY	GSYEFTQQERGMLLF GHFGFKEQKRGLACCV GHFGFKEQKRGLACCV GHFGFREQKRGLACCV GELGSSEQKAGLVCCV GQVEFKNPNSGLVCCV GQVEFKNPNSGLVCCV GQFDFKDQKSGLICCV GQFGYKEQRGGLICCV GGFFFKEQKEGLACCV GGTFRFKEQKIGLACCV GQFGFQEQKKGLACCV GQFGFAEQKGGMACCV	YTLKNPSFPEFIFNTDSC WSIKNPMWPERIYQSPYC WSIKNPTWPERIYQSPYC WSIKNPMWPERIYQSPYC WCLTNPTWPEWDVQCDSA WSLKNPTWPDRYFHCESC WSLKNPTWPDRYFHCESC WSLKNPTWPERIFTCESC WSLKNPMWPERIYNCESC WSLKNPMWPERIFFOCENC	CVMCVDIHEQLSYLVA CVTAVDFSIGAPNLLA CVTAVDFSIGSPNLLA CVTAVDFSIGAPNLLA CVTALDFSSINPSQLA CVTALDFSASNANQLA CVTALDFSASNANQLA CVTALDFSASNASQLA CVTALDFSASNASQLA CVTALDFSADSPNLLA CVTALDFSVANPNLLA CVTALDFSLANPNLLA CVTALDFSLANPNLLA CVTALDFSLANPNLLA	VGLYDGCVSVYDLRK VGYHNGTIAIYNVRS VGYHNGTIAIYNVQS VGYHNGTIAIYNVQS VGMRDGTIAVYKVNS VGMYDGTIAIYNVQT VGMYDGTIAIYNVQT VGMYDGTIAIYNVKS VGHYDGTVAIYNIRN VGMYNGTIVVYDVQS VGMFNGTIAIYNVQC VGMYSGTVAIYNIQG VGMYNGTVAIYNVQT	KKSDQP.MYNSIAS NSNVP.VLDSSES NSNVP.VLDSSES SQHNVSCVLSSSQC SEQTP.ITDSSDC SEQTP.ITDSSDC SEQTP.VIDSSDC	SSGKHTGAVWQVKWQ SPQKHLGPVWQLQWI SPQKHLGPVWQLQWI SPQKHLGPVWQLQWI SPNRHLNPVWQLRWT CANLHTSPVWQLTWI CANLHTSPVWQLTWI CANLHTSPVWQLTWI CANLHTSPVWQLKWT CSAKHTGPVWQLKWV SFDKHLGPVWQLKWV SFDKHLGPVWQLKWV SFDKHLGPVWQLKWI IPNKHTSPVWQLKWI IPNKHTSPVWQLKWI IPNKHTSPVWQLKWI	KDDLDSNHNI EQDRGTTGDGKREI EQDRGTTGDDKREI QQELNLTGDEMGES DHEDGLA.ADKGEI DHEDGLA.ADKGEI DHERGASGEDKGET EQDRNSKEDEKEGT EWDIGTREGNKRER EQDRGTTGEDKGEI EQDRGTTGEDKGEI EQDRGTTGDDKGEI EHDRGNLGDDKGEI	FFSVSTDGRV LVSTSADGRI LVSTSADGRI LVSTSADGRI LVSVSSDGRI LVSVSSDGRI LVSVSSDGRI LISVSADGRI LISTSADGRI LISTSADGRI LISTSADGRI LISTSADGRI LISTSADGRI LISTSADGRI LVSVGADGRI LVSVCADGRI * *******
	VSWTLVKSELVHTDVIKI	KVEGSTT.ES SAEGTTM.QG KVEGGTK.DG KVEGSTT.EV SVEGTTM.EG	LENLQLQIMGCGTSQRGILACGTSLEGLQLYTVGCGTAPEGLQLQTVGCGTSLDGLQLHTVGCGTAPEGLQLHPVGCGTAPEGLQLHPVGCGTAPEGLQLQTIGCGTSPEGLVQLPIMACGTS	FDFHKEIDYMFLVGTEEG FDFHKKIDYLFLVGTEEG FDFHKEIDYMFLVGTEEG FDFHKEIDYMFLVGTEEG FDFHKKIDYLFLVGTEEG FDFHWQIDYLYLVGTEEG FDFHKQIDYLFLVGTEEG FDFHKQIDYLFLVGTEEG	KIHKCSKDYSSEFLDTYEAH KIHKCSKTYSSKYLETYDAH KIYKCSKSYSSQFLDTYDAH KIYKCSKCYSSQFLDVFEAH KIYKCSKSYSSKFLDTYDAH KIYKCSKSYSSQFLDTYDAH KIYKCSKSYSSQFLDTYDAH KIYKCSKSYSSQFLDIFDAH KIHKCSKAYSSQFLETYNAH KIHKCSKAYSSQFLETYNAH	HNMAVDAVSWNPYHTKVFN HNMSVDTVSWNPYHTKVFN HHMAVDAVSWNPYHMKVFJ HNMAVDTVRWNPFHPKVFJ HNMAVDAVKWNHFHTKVFJ	MSCSSDWTVKIWDHTIKT MSCSSDWTVKIWDHTIKT TISCSSDWTVKIWDHTIKT TISCSSDWTVKIWQHDVKT TISCSSDWTVKIWDHTIKT	TPMFIYDLNSAVGDVAW TPMFVFDLNSAVGDVAW TPMFVFDLNAPVADVAW TPMFTFDLNASVGDVAW	APYSSTVFAAVTTNGKTHV APYSSTVFAAVTTDGKAHI APYSSTVFAAVTTDGKAHV APFSSTVFAAVTIDGKVHV SPYSSTVFAAVTTDGKVHT	/FDLSINKYEAICNOP /FDLNINKYEALCTOV /FDLSINKYEAICNOP IFDLAINKYEAICNOP /FDLSINKYEAICNOP /FDLSINKYEALCOOP /FDLSINKYEALCOOP	PVVAKKKNKITHVQFNPI VVVAKKKNKITHIQFNPV PVVAKKKNKITHVQFNPI PV.AAKKNRLTHVQFNLI PVVAKKKNKITHIQFNPI AVVAKKKTKLTHVEFNPV PVVAKKKTKLTHIEFNPV	YPLLIVGDDRGNVISLKI HPIIIVGDDRGHVTCLKI YPVVIIGDERGQVTCLKI HPIIIVGDDRGHVTCLKI HPIIIVGDDRGHIISLKI YPIIIIGDDRGHVTCLKI YPVLIVGDDRGYVTSLKI YPIIIVGDDRGYVTSLKI	SPNIRKMPKESPNIRKMPKESPNIRKMPKESPNIRKMPKESPNIRKIPKESPNIRKKPKES	INGCEVTAFGGSSRQQF	KRGQDPP PRPSKVSSLCEVKGQDPP KKGQEVK KKGQEVQ KKGQEVQ KKGQEVQ KKGQEEQ	QRTEVEVAKME GGMTIPRLSPVRGN KGPEVEIAKLD KGPAVEIAKLD KGPEVEIAKLD KGPEVEIAKLD KGPEVEVAKLD KGPEVEVAKLD	NDTAPLATSGLGTGLC	GLSWGWGRKTPQFSSL			SLPA GPT GPT RAQGQADKAPL TKT KPAK KQGKPESQTHRAEF	683 770 722 699 703 757 702 696			

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X non-conserved \times \geq 50% conserved IKQT<mark>G</mark>MQT.SRKMATDKEKKSEASI IKRARSKR.KN.LPGEKERKNEAMI