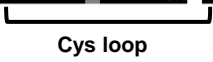


		*	20	*	40	*	60	*	80	*	100
a4Human	:	HVETRAHAEERLLK	LFSGYNKWSRPVANI	SDVVLVRFGLSIAQLIDVDEKNQMMTTNVVVKQEWHDYKLRWDPADYENVT	SIRIPSELIWRPDI	VLYNNADGDFAVTH					
a4Chimp	:	HVETRAHAEERLLK	LFSGYNKWSRPVANI	SDVVLVRFGLSIAQLIDVDEKNQMMTTNVVVKQEWHDYKLRWDPADYENVT	SIRIPSELIWRPDI	VLYNNADGDFAVTH					
a4Marmoset	:	HVETRAHAEERLLK	LFSGYNKWSRPVANI	SDVVLVRFGLSIAQLIDVDEKNQMMTTNVVVKQEWHDYKLRWDPADYENVT	SIRIPSELIWRPDI	VLYNNADGDFAVTH					
a4Rat	:	HIETRAHAEERLLK	LFSGYNKWSRPVANI	SDVVLVRFGLSIAQLIDVDEKNQMMTTNVVVKQEWHDYKLRWDPADYENVT	SIRIPSELIWRPDI	VLYNNADGDFAVTH					
a4Mouse	:	HIETRAHAEERLLK	LFSGYNKWSRPVANI	SDVVLVRFGLSIAQLIDVDEKNQMMTTNVVVKQEWHDYKLRWDPADYENVT	SIRIPSELIWRPDI	VLYNNADGDFAVTH					
a4Cow	:	HAETRAHAEERLLK	LFSGYNKWSRPVANI	SDAVLVRFGLSIAQLIDVDEKNQMMTTNVVVKQEWHDYKLRWDPADYENVT	SIRIPSELIWRPDI	VLYNNADGDFAVTH					
a4Dolphin	:	HVETRAHAEERLLK	LFSGYNKWSRPVANI	SDVVLVRFGLSIAQLIDVDEKNQMMTTNVVVKQEWHDYKLRWDPADYENVT	SIRIPSELIWRPDI	VLYNNADGDFAVTH					
a4Microbat	:	HVETRAHAEERLLK	LFSGYNKWSRPVANI	SDVVLVRFGLSIAQLIDVDEKNQMMTTNVVVKQEWHDYKLRWDPADYENVT	SIRIPSELIWRPDI	VLYNNADGDFAVTH					
a4Megabat	:	HVETRAHAEERLLK	LFSGYNKWSRPVANI	SDVVLVRFGLSIAQLIDVDEKNQMMTTNVVVKQEWHDYKLRWDPADYENVT	SIRIPSELIWRPDI	VLYNNADGDFAVTH					
a4Cat	:	HVETRAHAEERLLK	LFSGYNKWSRPVANI	SDVVLVRFGLSIAQLIDVDEKNQMMTTNVVVKQEWHDYKLRWDPADYENVT	SIRIPSELIWRPDI	VLYNNADGDFAVTH					
a4Dog	:	HVETRAHAEERLLK	LFSGYNKWSRPVANI	SDVVLVRFGLSIAQLIDVDEKNQMMTTNVVVKQEWHDYKLRWDPADYENVT	SIRIPSELIWRPDI	VLYNNADGDFAVTH					
a4Elephant	:	HVETRAHAEERLLK	LFSGYNKWSRPVANI	SDVVLVRFGLSIAQLIDVDEKNQMMTTNVVVKQEWHDYKLRWDPADYENVT	SIRIPSELIWRPDI	VLYNNADGDFAVTH					
a4Kangaroo	:	HVETRAHAEERLLK	LFSGYNKWSRPVANI	SDVVI VRFGLSIAQLIDVDEKNQMMTTNVVVKQEWHDYKLRWDPADYENVT	SIRIPSELIWRPDI	VLYNNADGDFAVTH					
a4Opossum	:	HVETRAHAEERLLK	LFSGYNKWSRPVANI	SDVVLVRFGLSIAQLIDVDEKNQMMTTNVVVKQEWHDYKLRWDPADYENVT	SIRIPSELIWRPDI	VLYNNADGDFAVTH					
a4Platypus	:	HIETRAHAEERLLK	LFSGYNKWSRPVANI	SDVVLVRFGLSIAQLIDVDEKNQMMTTNVVVKQEWHDYKLRWDPADYENVT	SIRIPSELIWRPDI	VLYNNADGDFAVTH					
a4Lizard	:	HVETRAHAEERLLK	LFSGYNKWSRPVANI	SDVVI VRFGLSIAQLIDVDEKNQMMTTNVVVKQEWHDYKLRWDPADYENVT	SIRIPSELIWRPDI	VLYNNADGDFAVTH					
a4Chick	:	HVETRAHAEERLLK	LFSGYNKWSRPVANI	SDVVLVRFGLSIAQLIDVDEKNQMMTTNVVVKQEWHDYKLRWDPADYENVT	SIRIPSELIWRPDI	VLYNNADGDFAVTH					
a4Finch	:	HVETRAHAEERLLK	LFSGYNKWSRPVANI	SDVVLVRFGLSIAQLIDVDEKNQMMTTNVVVKQEWHDYKLRWDPADYENVT	SIRIPSELIWRPDI	VLYNNADGDFAVTH					
a4Frog	:	HIETRAHAEERLLK	LFSGYNKWSRPVANI	SDAVMVRFGLSIAQLIDVDEKNQMMTTNVVVKQEWHDYKLRWDPADYENVT	SIRIPSELIWRPDI	VLYNNADGDFAVTH					
a4Zebrafis	:	MSPAHAHAEERLLQ	SLFINYNKLSRPVANI	SDVVLVRFGLSIAQLIDVDEKNQMMTTNVVVKQEWHDYKLRWDPADYENVT	SIRIPSELIWRPDI	VLYNNADGDFAVTH					
a4Medaka	:	QIETRAHAEERLLQ	NLFARYNKLSRPVANI	SDTVLVRFGLSIAQLIDVDEKNQMMTTNVVVKQEWHDYKLRWDPADYENVT	SIRIPSELIWRPDI	VLYNNADGDFAVTH					
a4Fugu	:	QVAPRAHAEERLLQ	DLFAHYNKLSRPVANI	SDTVLVRFGLSIAQLIDVDEKNQMMTTNVVVKQEWHDYKLRWDPADYENVT	SIRIPSELIWRPDI	VLYNNADGDFAVTH					

		*	120	*	140	*	160	*	180	*	200	*	2
a4Human	:	LTKAHLFHDGRVQWT	PPAIYKSSCSIDVTF	FPFDQNC	TMKFGSWTYDKAKIDL	VNMHSRVDQ	LDWFESGEWVIVDAVGT	YNTIRKYECCA	EIYDPDITYAFV	IIRRLPLFY			
a4Chimp	:	LTKAHLFHDGRVQWT	PPAIYKSSCSIDVTF	FPFDQNC	TMKFGSWTYDKAKIDL	VNMHSRVDQ	LDWFESGEWVIVDAVGT	YNTIRKYECCA	EIYDPDITYAFV	IIRRLPLFY			
a4Marmoset	:	LTKAHLFHDGRVQWT	PPAIYKSSCSIDVTF	FPFDQNC	TMKFGSWTYDKAKIDL	VSMHSRVDQ	LDWFESGEWVIVDAVGT	YNTIRKYECCA	EIYDPDITYAFV	IIRRLPLFY			
a4Rat	:	LTKAHLFYDGRVQWT	PPAIYKSSCSIDVTF	FPFDQNC	TMKFGSWTYDKAKIDL	VSIHSRVDQ	LDWFESGEWVIVDAVGT	YNTIRKYECCA	EIYDPDITYAFI	IIRRLPLFY			
a4Mouse	:	LTKAHLFYDGRVQWT	PPAIYKSSCSIDVTF	FPFDQNC	TMKFGSWTYDKAKIDL	VSMHSRVDQ	LDWFESGEWVIVDAVGT	YNTIRKYECCA	EIYDPDITYAFI	IIRRLPLFY			
a4Cow	:	LTKAHLFHDGRVQWT	PPAIYKSSCSIDVTF	FPFDQNC	TMKFGSWTYDKAKIDL	VSMHSRVDQ	LDWFESGEWVIVDAVGT	YNTIRKYECCA	EIVSDITYAFI	IIRRLPLFY			
a4Dolphin	:	LTKAHLFHDGRVQWT	PPAIYKSSCSIDVTF	FPFDQNC	TMKFGSWTYDKAKIDL	VSMHSHVDQ	LDWFESGEWVIVDAVGT	YNTIRKYECCA	EIVSDITYAFV	IIRRLPLFY			
a4Microbat	:	LTKAHLFHDGRVQWT	PPAIYKSSCSIDVTF	FPFDQNC	TMKFGSWTYDKAKVDL	VSMHSHVDRL	LDWFESGEWVIVDAVGT	YNTIRKYECCA	EIVSDITYAFI	IIRRLPLFY			
a4Megabat	:	LTKAHLFHDGRVQWT	PPAIYKSSCSIDVTF	FPFDQNC	TMKFGSWTYDKAKIDL	VSMHSRVDQ	LDWFESGEWVIVDAVGT	YNTIRKYACCA	EIVY????????????FY				
a4Cat	:	LTKAHLFHDGRVQWT	PPAIYKSSCSIDVTF	FPFDQNC	TMKFGSWTYDKAKIDL	VNMHSRVDQ	LDWFESGEWVIVDAVGT	YNTIRKYECCA	EIVSDITYAFV	IIRRLPLFY			
a4Dog	:	LTKAHLFYDGRVQWT	PPAIYKSSCSIDVTF	FPFDQNC	TMKFGSWTYDKAKIDL	VSMHSRVDQ	LDLWESGEWVIVDAVGT	YNTIRKYECCA	EIVSDITYAFV	IIRRLPLFY			
a4Elephant	:	LTKAHLFHDGRVQWT	PPAIYKSSCSIDVTF	FPFDQNC	TMKFGSWTYDKAKIDL	VSMHRRVDQ	LDYWESGEWVIVDAVGN	YNTIKKYECCA	EIVSDITYAFI	IIRRLPLFY			
a4Kangaroo	:	LTKAHLFYDGRVQWT	PPAIYKSSCSIDVTF	FPFDQNC	TMKFGSWTYDKAKIDL	VSMHSHVDQ	LDYWESGEWVIVDAVGN	YNTIKKYECCA	EIVSDITYSFI	IIRRLPLFY			
a4Opossum	:	LTKAHLFYDGRVQWT	PPAIYKSSCSIDVTF	FPFDQNC	TMKFGSWTYDKAKIDL	VSMHSHVDQ	LDYWESGEWVIVDAVGN	YNTIKKYECCA	EIVSDITYSFI	IIRRLPLFY			
a4Platypus	:	LTKAHLFYDGRVQWT	PPAIYKSSCSIDVTF	FPFDQNC	TMKFGSWTYDKAKIDL	VSMHSHVDQ	LDYWESGEWVIVDAVGN	YNTIKKYECCA	EIVSDITYSFI	IIRRLPLFY			
a4Lizard	:	LTKAHLFYDGRVQWT	PPAIYKSSCSIDVTF	FPFDQNC	TMKFGSWTYDKAKIDL	ESMHRHVDQ	LDYWESGEWVIVDAVGN	YNTIKKYECCA	EIVSDITYSFI	IIRRLPLFY			
a4Chick	:	LTKAHLFYDGRVQWT	PPAIYKSSCSIDVTF	FPFDQNC	TMKFGSWTYDKAKIDL	VSMHSHVDQ	LDYWESGEWVIVDAVGN	YNTIKKYECCA	EIVSDITYSFI	IIRRLPLFY			
a4Finch	:	LTKAHLFYDGRVQWT	PPAIYKSSCSIDVTF	FPFDQNC	TMKFGSWTYDKAKIDL	VSMHSHVDQ	LDYWESGEWVIVDAVGN	YNTIKKYECCA	EIVSDITYSFI	IIRRLPLFY			
a4Frog	:	LTKAHLFHDGRVQWT	PPAIYKSSCSIDVTF	FPFDQNC	TMKFGSWTYDKAKIDL	ISMHSHVDQ	LDYWESGEWVIVDAVGN	YNTIKKYECCA	EIVSDITYSFI	IIRRLPLFY			
a4Zebrafis	:	LTKAQLFYNGRIKWM	PPAIYKSSCSIDVTF	FPFDQNC	TMKFGSWTYDKAKIDL	ISMASHVDQ	LDYWESGEWVIVDAVGN	YNTIKKYECCA	EIVSDITYSFI	IIRRLPLFY			
a4Medaka	:	LTKAHLFYDGRVQWT	PPAIYKSSCSIDVTF	FPFDQNC	TMKFGSWTYDKAKIDL	ISMASHVDQ	LDYWESGEWVIVDAVGN	YNTIKKYECCA	EIVSDITYSFI	IIRRLPLFY			
a4Fugu	:	LTKAQLFYDGRVQWT	PPAIYKSSCSIDVTF	FPFDQNC	TMKFGSWTYDKAKIDL	ISMASHVDQ	LDYWESGEWVIVDAVGN	YNTIKKYECCA	EIVSDITYSFI	IIRRLPLFY			



	20	*	240	*	260	*	280	*	300	*	320
a4Human	:	TINLI	IPCLLISCLTVLVFYLPSE	CGEKITLCISVLLSLTVFLLLITEI	IPSTSLVIPLIGEYLLFTMIFVTL	IVITVFLNVVHHRSPRTHMPT	IVVRRVFLDIVPRL				
a4Chimp	:	TINLI	IPCLLISCLTVLVFYLPSE	CGEKITLCISVLLSLTVFLLLITEI	IPSTSLVIPLIGEYLLFTMIFVTL	IVITVFLNVVHHRSPRTHMPT	IVVRRVFLDIVPRL				
a4Marmoset	:	TVNLI	IPCLLISCLTVLVFYLPSE	CGEKVTLCSVLLSLTVFLLLITEI	IPSTSLVIPLIGEYLLFTMIFVTL	IVITVFLNVVHHRSPRTHMPT	IVVRRVFLDIVPRL				
a4Rat	:	TINLI	IPCLLISCLTVLVFYLPSE	CGEKVTLCSVLLSLTVFLLLITEI	IPSTSLVIPLIGEYLLFTMIFVTL	IVITVFLNVVHHRSPRTHMPT	IVVRRVFLDIVPRL				
a4Mouse	:	TINLI	IPCLLISCLTVLVFYLPSE	CGEKVTLCSVLLSLTVFLLLITEI	IPSTSLVIPLIGEYLLFTMIFVTL	IVITVFLNVVHHRSPRTHMPT	IVVRRVFLDIVPRL				
a4Cow	:	TINLI	IPCLLISCLTVLVFYLPSE	CGEKITLCISVLLSLTVFLLLITEI	IPSTSLVIPLIGEYLLFTMIFVTL	IVITVFLNVVHHRSPRTHMPT	IVVRRVFLDIVPRL				
a4Dolphin	:	TVNLI	IPCLLISCLTVLVFYLPSE	CGEKVTLCSVLLSLTVFLLLITEI	IPSTSLVIPLIGEYLLFTMIFVTL	IVITVFLNVVHHRSPRTHMPT	IVVRRVFLDIVPRL				
a4Microbat	:	TVNLI	IPCLLISCLTVLVFYLPSE	CGEKVTLCSVLLSLTVFLLLITEI	IPSTSLVIPLIGEYLLFTMIFVTL	IVITVFLNVVHHRSPRTHMPT	IVVRRVFLDIVPRL				
a4Megabat	:	TVNLI	IPCLLISCLTVLVFYLPSE	CGEKVTLCSVLLSLTVFLLLITEI	IPSTSLVIPLIGEYLLFTMIFVTL	IVITVFLNVVHHRSPRTHMPT	IVVRRVFLDIVPRL				
a4Cat	:	TINLI	IPCLLISCLTVLVFYLPSE	CGEKITLCISVLLSLTVFLLLITEI	IPSTSLVIPLIGEYLLFTMIFVTL	IVITVFLNVVHHRSPRTHMPT	IVVRRVFLDIVPRL				
a4Dog	:	TINLI	IPCLLISCLTVLVFYLPSE	CGEKITLCISVLLSLTVFLLLITEI	IPSTSLVIPLIGEYLLFTMIFVTL	IVITVFLNVVHHRSPRTHMPT	IVVRRVFLDIVPRL				
a4Elephant	:	TINLI	IPCLLISCLTVLVFYLPSE	CGEKVTLCSVLLSLTVFLLLITEI	IPSTSLVIPLIGEYLLFTMIFVTL	IVITVFLNVVHHRSPRTHMPT	IVVRRVFLDIVPRL				
a4Kangaroo	:	TINLI	IPCLLISCLTVLVFYLPSE	CGEKITLCISVLLSLTVFLLLITEI	IPSTSLVIPLIGEYLLFTMIFVTL	IVITVFLNVVHHRSPRTHMPT	IVVRRVFLDIVPRL				
a4Opossum	:	TINLI	IPCLLISCLTVLVFYLPSE	CGEKITLCISVLLSLTVFLLLITEI	IPSTSLVIPLIGEYLLFTMIFVTL	IVITVFLNVVHHRSPRTHMPT	IVVRRVFLDIVPRL				
a4Platypus	:	TINLI	IPCLLISCLTVLVFYLPSE	CGEKITLCISVLLSLTVFLLLITEI	IPSTSLVIPLIGEYLLFTMIFVTL	IVITVFLNVVHHRSPRTHMPT	IVVRRVFLDIVPRL				
a4Lizard	:	TINLI	IPCLLISCLTVLVFYLPSE	CGEKITLCISVLLSLTVFLLLITEI	IPSTSLVIPLIGEYLLFTMIFVTL	IVITVFLNVVHHRSPRTHMPT	IVVRRVFLDIVPRL				
a4Chick	:	TINLI	IPCLLISCLTVLVFYLPSE	CGEKITLCISVLLSLTVFLLLITEI	IPSTSLVIPLIGEYLLFTMIFVTL	IVITVFLNVVHHRSPRTHMPT	IVVRRVFLDIVPRL				
a4Finch	:	TINLI	IPCLLISCLTVLVFYLPSE	CGEKITLCISVLLSLTVFLLLITEI	IPSTSLVIPLIGEYLLFTMIFVTL	IVITVFLNVVHHRSPRTHMPT	IVVRRVFLDIVPRL				
a4Frog	:	TINLI	IPCLLISCLTVLVFYLPSE	CGEKITLCISVLLSLTVFLLLITEI	IPSTSLVIPLIGEYLLFTMIFVTL	IVITVFLNVVHHRSPRTHMPT	IVVRRVFLDIVPRL				
a4Zebrafis	:	TINLI	IPCLLISCLTVLVFYLPSE	CGEKITLCISVLLSLTVFLLLITEI	IPSTSLVIPLIGEYLLFTMIFVTL	IVITVFLNVVHHRSPRTHMPT	IVVRRVFLDIVPRL				
a4Medaka	:	TINLI	IPCLLISCLTVLVFYLPSE	CGEKITLCISVLLSLTVFLLLITEI	IPSTSLVIPLIGEYLLFTMIFVTL	IVITVFLNVVHHRSPRTHMPT	IVVRRVFLDIVPRL				
a4Fugu	:	TINLI	IPCLLISCLTVLVFYLPSE	CGEKITLCISVLLSLTVFLLLITEI	IPSTSLVIPLIGEYLLFTMIFVTL	IVITVFLNVVHHRSPRTHMPT	IVVRRVFLDIVPRL				

	*	340	*	360	*	380	*	400	*	420	*
a4Human	:	LFMKRPS-VVKDNCRRLES	SMHK--MASAP----	RFWPEPEGEPPATSGTQSLHPP-----	SPSFCVPLDVP	PAEPGP-SCKS---	PSDQLPPQPLEAEKASPHPS				
a4Chimp	:	LFMKRPS-VVKDNCRRLES	SMHK--MASAP----	RFWPEPEGEPPATSGTQSLHPP-----	SPSFCVPLDVP	PAEPGP-SCKS---	PSDQLPAQPLEAEKASPHASP				
a4Marmoset	:	LFMKRPS-VVKDNCRRLES	SMHK--MASAP----	RFWPEPEGEPPITSGTHSWHPP-----	SPSFCVPLDTPADPGH-A	CKS---	PSDPLPALQPPEAEKASPHPLP				
a4Rat	:	LFMKRPS-VVKDNCRRLES	SMHK--MANAP----	RFWPEPVGEPGILSDICNQGLS-----	PAPTFCNPDTAVETQP-T	CRS---	PPLEVPDLKTSEVEKASPCPSP				
a4Mouse	:	LFMKRPS-VVKDNCRRLES	SMHK--MANAP----	RFWPEPESEPGILGDI	CNQGLS-----	PAPTFCNMDTAVETQP-T	CRS---	PSHKVPDLKTSEVEKASPCPSP			
a4Cow	:	LFMKRPS-VVKDNCRRLES	SMHK--AASTP----	HFWPEPQGE-----	ARSPS-----	LTGC-VDQPIKQP-ARTT---	PSDQVPTLQPSETEKASPCLS				
a4Dolphin	:	LFMKRPS-AVKDNCRRLVGS	VHKE--AAGAP----	RFWPEPRGEPELRSRGPAPSPT-----	PSCG-PDR----	PACTS---	PSDQASALRPSAEKAGPCPSP				
a4Microbat	:	LFMKRPP-VIKGNCRRLES	SMHR--MASAP----	RFWPEPEEENPMSKVQSQGPS-----	PTPSFCAPLDAPGKQP-A	CTL---	PSDQAPTLQPAEAEASPCLS				
a4Megabat	:	LFMKRPP-VVKGSCRRLES	SMHK--VAGAP----	RFWPEPE-----	AGRGPS-----	PAPSLCGLDPEVKQP-A	CPL---	AAGQAPAPQPSAQTAGPCASP			
a4Cat	:	LFMKRPS-VVKDNCRRLES	SMHK--MAGAP----	GFWPEPEGEPTLTSAAQSQGPS	PASPASPSSRGLDEPAKAQA-A	CKL---	PSDQVPAPQPSAEKGSPCPSP				
a4Dog	:	LFMKRPS-VVKDNCRRLES	SMHK--MASAP----	GFWPEPEGEPGVPSGTQSRGPS-----	RTPSFCGPVDELAKPPP-A	CKS---	PSGQAPALRPSAEAEASPRPSP				
a4Elephant	:	LFMKRPS-VVKDNCRRLES	VHKE--MANAP----	HFWPEPEGQGPVRRDPSSES-----	FCTSLGEPVKP-----	---	PSEQPDLHPAEARKASACPSP				
a4Kangaroo	:	LFMKRPG-VVKDNCRRLVES	SMHK--LAGGP----	RFWPOP--EPNFVTSTSPPAQSPDRS--	PSASFCVHLD	DPVKQP-VCKS---	PSGQYTVLQHPGPKGS-PCSS				
a4Opossum	:	LFMKRPG-VVKDNCRRLVES	SMHK--LAGGP----	RFWPOP--EPNFVTSTSPQTPERS--	PSASFCVHLED	DPVKQA-VCKS---	PSGQYTVLQHPGPKGS-PCSS				
a4Platypus	:	LFMKRPA-VVKNCKKLIES	SMHK--IASAP----	RFWPEPEGELNFATSSNSPQSQEET--	PSPSVRIHLED	PANPPP-ICKS---	PSG-----PVKDD-GPSP				
a4Lizard	:	LFMKRPT-TVKDNCKKLIES	SMHK--IANSQ----	RFWSETEVEPKFTTS-----	SNEQS--PTSSFCTHLD	DQAKLPPPICKS---	PSGQYSML-LAEPIRAS-CTSL				
a4Chick	:	LFMKRPS-TVKDNCKKLIES	SMHK--LTNSP----	RLWSETDMEPNFTTSSSPQSNEPS--	PTSSFCAHLEEP	AKP--MCKS---	PSGQYSML-HPEPPQVT-CSSP				
a4Finch	:	LFMKRPS-TVKDNCKKLIES	SMHK--ITNAP----	RLWSEMDVEPNFTTSSSPQSNEPS--	PTSSFCAHLEEP	AKPQP-ICKS---	PSGQYSML-HTEPIQVT-CSSP				
a4Frog	:	LFMKRPP--AKDNCKKLIES	LHARSFNPPP----	RLWSEAEIEPAFASSSASPTSRPS--	PTSSCCHOLEQSPNAQV-F	CKS---	PSGQYSML-CEESALTS-CPSP				
a4Zebrafis	:	LFMKRPPASGKRNCGLIEM	MHCQANSQS----	MLRNNILDISPQSPHGLPTSA---	AQDQVQDSTSP--KPLFF	GSS---	PSGQYSML-CEESALTS-CPSP				
a4Medaka	:	LFMKRPPGTAKQHCCKRLIEM	MHCPTTISATGNSQSFWTGLDSE	LRQMTQVHNSLPK----	VDSRILVCS	SPSSSPVDDCSD	EDHPLKADIFCQTPSGQYSPLLEHQ				
a4Fugu	:	LFMKRPPGTAKQHCCKRLIEM	MHRPATVSGFGNSQFWTGL	ETELRQMGVHRTIPKAL---	TDSPSIHVSSP	SPSSPLAN	KNKDNQSLNANTFCQISIGRYSLLSEKQ				

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      440          *          460          *          480          *          500          *          520          *          540
a4Human   : GPCRPP-HGTQAPGLAKARSLSVCHMSS--PGEAVEGGVIR-CRSRSIQYCVPRDDAAPEADGQA-----AGALAS-RNTHSAELPPPDQSPCKCTCKKKEPSSVSPSAT
a4Chimp   : GPCRPP-HGTQAPGLAKARSLSVCHMSS--PGEAVEGGVIR-CRSRSIQYCVPRDDATSEAGGQA-----AGALAS-RNTHSAELPPPDQSPCKCTCKKKEPSSVSPSAT
a4Marmoset : GPCRSS-HSTQASGLAKARSLSVCHMSS--PGEVAEGILR-CRSRSIQYCAPRDDAAPEADGQA-----VGALAS-HKAHSAELPPPDQASPCCKTCRKEPSTSSSAT
a4Rat     : GSCPPPSSSGAPMLIKARSLSVCHMSS--SQEAAEDGIR-CRSRSIQYCVSODGAASLADSKP-----TSSPTS-LKARPSQLPVSDQASPCCKTC-KEPSPVSPVTV
a4Mouse   : GSCHPP-NSSGAPVLIKARSLSVCHMSS--SQEAAEGSIR-CRSRSIQYCVSODGAASLADSKP-----TGSPAS-LKTRPSQLPVSDQTSPCCKTC-KEPSPVSPITV
a4Cow     : GPCRPL-TGTQAPGLTKSRSLSVCHMSS--PSKAVEDGVR-CRSRSIQYCGPREEAASPAHLA-----DSSPSSPTKAPSAELPPPDQAASCKCQCRKEPG--APNAT
a4Dolphin : GPCRPP-TGTRAPGLAKARSLSVCHMSS--PSEVAEGGVR-CRSRSIQYCAPREEAASPADRPA-----DGSPASLTTPASAELLPPDQASPCCKCKCRTEAE--APNAA
a4Microbat : SPSRPT-TSTWDPGLAKAQSLSIQHSS--PNKAPEGGIR-CRSRSIQYCVPRDEGDTAG-----ASSPPS-LQAPWTELPPADQASPCCKCKCK????????????
a4Megabat : GPPRPP-TGTQAPGLSKARSLSVCHMSS--PARAGEGGVR-CRSRSIQYCVPRDEGDTAG-----SPAS-LKAPPAELPPPDQASPCCKTCRKEPSTGSPNTV
a4Cat     : DPCHPP-SGTRAPGLAKARSLSVCHMSS--PAEAAEDGVR-CRSRSIQYCVPRDDAASQAGGPV-----AGSPAF-LKASSAELPPPDQSPCKCRCKQKEP---SPNAA
a4Dog     : DSCRPL-----LTKARSLSVCHMSS--PPEGAEDGVR-CRSRSIQYGGPQDAASEAGGPV-----AGSPAL-LKASSAELPAPEQSPCKCRCKKKEP---SPSAV
a4Elephant : GPGHLL-SSSQATGLAKTRSLSVCHMSS--PSKVEYGGVIR-CRSRSIQYGI FRDDASAQANGQV-----ASAPPS---TCSAEP TAPDQSPCKCKCKKKEPPATSPDAT
a4Kangaroo : PTPQPPNTHPSGFSKVRSLSVCHMSS--SSKMEEGGIR-CRSRSIQYCSLQEDSSQANNGQS-----ASSPAS-LRSPKDEVQPEKPSPCCKCCKKVKAA--AQIV
a4Opossum : PTPHPLNNSHPGFSKVRSLSVCHMSS--SNKVEEGSIR-CRSRSIQYCSLQEDSSQANNGQS-----TSSPAS-LRSQKDEVQPEKPSPCCKCCKKVKATVPVDPV
a4Platypus : SASCHPLSDAQSPGLPKTRSLSVCHMSS--PGKVEEGGIR-CRSRSIQYFYLQEDSSQTN--GQSQVNGQSRSSPAS-LRSHLNRDQQQIKPSPCRCKCKKNKAPASBDPG
a4Lizard  : QPPCHSR-DSQSSMSKSRSLSVCHMSS--SPGKAEETIR-CRSRSIQYCYLQEESSQTN--GQS-----SGSPAS-PRCHLNEEQPKTKPIHCKCKCKKNESASTSGHG
a4Chick   : KPSCHPLSDTQTTSISKGRSLSVCHMSS--PNKTEEGSIR-CRSRSIQYCYLQEDSSQTN--GHS-----SASPAS-QRCHLNEEQPKHQPCKCKCKRGEAAGTPTQG
a4Finch   : QPSCHPLSDTQATSVLGRSLSVCHMSS--PSKAEETIR-CRSRSIQYCYLQEDSSQTN--GHS-----SGSPAS-QRCHLNGEQPKHQPCKCKCKRGGVAGTAAQG
a4Frog    : KPETKLLSEAQPNLMPKVRSLSVCHMSS--PKEANEAVR-CRSRSIQYCFLHEDFSQAN--GQA-----SSSPVA-QKGNENEPQSSHTSPCTCKPKSQQEKVPDPSQG
a4Zebrafis : YTCAYTNSIFASSTSFDPDILLGLTLLHIIIPQDGAKSTECDFQGHSAESVFMEEKESVVLG-----AGSCQH-CLTSEGTSLQKLDLDEAGRCRTRHNMPSAQIFSPS
a4Medaka  : ALCRHISTTHSAPQLSMP-----LGPFPCLSRHPSPLARNGRSLSVCHMCGKQGPQPSAHRC---RSQSFQYCCCLHNDGA---AGFTGQTNKTPQLTETLAAEFA
a4Fugu    : LLHGKSAASSSSQLSLPPTLPLGLLHKRTNKESNTMASIGRSLSVCHMFMFDGQKEAPCRGRYRR--RSRSFQYCCCLHDEGAGLTRATWGQKHPADHLVEIIMAEST

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          *          560          *          580          *          600          *          620
a4Human   : VKTRS-TKAPPHLPLSPALTRAVEGVQYIADHLKAEDTDFSVKEDWKYVAMVIDRIFLWMFIIIVCLLGTIVGLFLPPWLAGMI
a4Chimp   : VKARS-TKAPPHLPLSPALTRAVEGVQYIADHLKAEDTDFSVKEDWKYVAMVIDRIFLWMFIIIVCLLGTIVGLFLPPWLAGMI
a4Marmoset : LKARS-TKVLPHLPLSPALTRAVEGVQYIADHLKAEDTDFSV????????????????????????????????????????????????????????????
a4Rat     : LKAGG-TKAPPQHLPLSPALTRAVEGVQYIADHLKAEDTDFSVKEDWKYVAMVIDRIFLWMFIIIVCLLGTIVGLFLPPWLAGMI
a4Mouse   : LKAGG-TKAPPQHLPLSPALTRAVEGVQYIADHLKAEDTDFSVKEDWKYVAMVIDRIFLWMFIIIVCLLGTIVGLFLPPWLAGMI
a4Cow     : LKTSS-TRAPP--LPLSPALARAVEGVQYIADHLKAEDTDFSVKEDWKYVAMVIDRIFLWVFIIVCLLGTIVGLFLPPWLAGMI
a4Dolphin : LKAPG-AGTPP--QPLSPALARAVEGVQYIADHLKAEDMDFS????????????????????????????????????????????????????????????
a4Microbat : ?????-????????????????????????????????????????????????????????????????????????????????????????????
a4Megabat : LKAHG-TKAAPRHLPLSPALTRAVEGVQYIADHLKAEDTDFSVKEDWKYVAMVIDRIFLWVFIIVCLLGTIVGLFLPPWLAGMI
a4Cat     : LKARG-TKAAPRHLPLSPALTRAVEGVQYIADHLKAEDTDFSVKEDWKYVAMVIDRIFLWVFLVCLLGTIVGLFLPPWLAGMI
a4Dog     : PKARG-TKAPPHLPLSPALTRAVEGVQYIADHLKAEDTDFSVKEDWKYVAMVIDRIFLWVFIIVCLLGTIVGLFLPPWLAGMI
a4Elephant : AHS---TKVPCRHLPLTPALARAVEGVQYIADHLKAEDMDFSV KEDWKYVAMVIDRIFLWVFLVCLLGTIVGLFLPPWLAGMI
a4Kangaroo : TKPRS--TKEQHALLMSPALKLAVEGVQYIADHLKAEDTDFSVKEDWKYVAMVIDRIFLWMFIIIVCLLGTIVGLFLPPWLAGMI
a4Opossum : TKPRS--TKEQHALLMSPALKLAVEGVQYIADHLKAEDTDFSVKEDWKYVAMVIDRIFLWMFIIIVCLLGTIVGLFLPPWLAGMI
a4Platypus : AKSQRSTKEQHALLMSPALKLAVEGVQYIADHLRAEDA DFSV KEDWKYVAMVIDRIFLWMFIIIVCLLGTIVGLFLPPWLAGMI
a4Lizard  : SKTLG--SKDQVLLMSPALKLAVEGVHYIADHLRAEDA DFSV KEDWKYVAMVIDRIFLWMFIIIVCLLGTIVGLFLPPWLAGMI
a4Chick   : SKSHS--NKGEHLVLMSPALKLAVEGVHYIADHLRAEDA DFSV KEDWKYVAMVIDRIFLWMFIIIVCLLGTIVGLFLPPWLAGMI
a4Finch   : SKSHG--AKEQHLVLMSPALKLAVEGVHYIADHLRAEDA DFSV KEDWKYVAMVIDRIFLWMFIIIVCLLGTIVGLFLPPWLAGMI
a4Frog    : AKTVN--AKEHHVLLMSPSLKLAIEGVHYIADHLRAEDA DFSV KEDWKYVAMVIDRIFLWMFIIIVCLLGTIVGLFLPPWLAGMI
a4Zebrafis : SDGSTDLNAAEPVSNLSQSLKLAIEGVHYIADHLRAEDA DFSV R E D W K Y V A M V I D R I F L W M F V L V C I L G T V G L F L P P W L A G M I
a4Medaka  : KDASTQLDNMAPI--VSPAMQRAIEGVQYIADHLRAEDA DFSV KEDWKYVAMVIDRIFLWMFVLCILGSVGLFLPPWLAGMI
a4Fugu    : KDTSSLQDFEVST--ISPAMQRAIEGVQYIADHLRAEDA DFSV KEDWKYVAMVIDRIFLWMFVLCILGSVGLFLPPWLAGMI

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20          *          240          *          260          *          280          *          300          *          320
b2Human    : INLIIPCVLITSLAILVFYLPSPDCGEKMTLCISVLLALTVFLLLIISKIVPPTSLDVPLVGKYLMTMVLVTFISIVTSVCLNVHHRSPTHHTMAPWVKVVFLEKLPALL
b2Chimp    : INLIIPCVLITSLAILVFYLPSPDCGEKMTLCISVLLALTVFLLLIISKIVPPTSLDVPLVGKYLMTMVLVTFISIVTSVCLNVHHRSPTHHTMAPWVKVVFLEKLPALL
b2Marmoset : INLIIPCVLITSLAILVFYLPSPDCGEKMTLCISVLLALTVFLLLIISKIVPPTSLDVPLVGKYLMTMVLVTFISIVTSVCLNVHHRSPTHHTMAPWVKVVFLEKLPALL
b2Rat      : INLIIPCVLITSLAILVFYLPSPDCGEKMTLCISVLLALTVFLLLIISKIVPPTSLDVPLVGKYLMTMVLVTFISIVTSVCLNVHHRSPTHHTMAPWVKVVFLEKLPALL
b2Mouse    : INLIIPCVLITSLAILVFYLPSPDCGEKMTLCISVLLALTVFLLLIISKIVPPTSLDVPLVGKYLMTMVLVTFISIVTSVCLNVHHRSPTHHTMAPWVKVVFLEKLPALL
b2Cow      : INLIIPCVLITSLAILVFYLPSPDCGEKMTLCISVLLALTVFLLLIISKIVPPTSLDVPLVGKYLMTMVLVTFISIVTSVCLNVHHRSPTHHTMAPWVKVVFLEKLPALL
b2Dolphin  : INLIIPCVLITSLAILVFYLPSPDCGEKMTLCISVLLALTVFLLLIISKIVPPTSLDVPLVGKYLMTMVLVTFISIVTSVCLNVHHRSPTHHTMAPWVKVVFLEKLPALL
b2Microbat : INLIIPCVLITSLAILVFYLPSPDCGEKMTLCISVLLALTVFLLLIISKIVPPTSLDVPLVGKYLMTMVLVTFISIVTSVCLNVHHRSPTHHTMAPWVKVVFLEKLPALL
b2Megabat  : INLIIPCVLITSLAILVFYLPSPDCGEKMTLCISVLLALTVFLLLIISKIVPPTSLDVPLVGKYLMTMVLVTFISIVTSVCLNVHHRSPTHHTMAPWVKVVFLEKLPALL
b2Cat      : INLIIPCVLITSLAILVFYLPSPDCGEKMTLCISVLLALTVFLLLIISKIVPPTSLDVPLVGKYLMTMVLVTFISIVTSVCLNVHHRSPTHHTMAPWVKVVFLEKLPALL
b2Dog      : INLIIPCVLITSLAILVFYLPSPDCGEKMTLCISVLLALTVFLLLIISKIVPPTSLDVPLVGKYLMTMVLVTFISIVTSVCLNVHHRSPTHHTMAPWVKVVFLEKLPALL
b2Elephant : INLIIPCVLITSLAILVFYLPSPDCGEKMTLCISVLLALTVFLLLIISKIVPPTSLDVPLVGKYLMTMVLVTFISIVTSVCLNVHHRSPTHHTMAPWVKVVFLEKLPALL
b2Armadill : INLIIPCVLITSLAILVFYLPSPDCGEKMTLCISVLLALTVFLLLIISKIVPPTSLDVPLVGKYLMTMVLVTFISIVTSVCLNVHHRSPTHHTMAPWVKVVFLEKLPALL
b2Kangaroo : INLIIPCVLITSLAILVFYLPSPDCGEKMTLCISVLLALTVFLLLIISKIVPPTSLDVPLVGKYLMTMVLVTFISIVTSVCLNVHHRSPTHHTMAPWVKVVFLEKLPALL
b2Platypus : INLIIPCVLITSLAILVFYLPSPDCGEKMTLCISVLLALTVFLLLIISKIVPPTSLDVPLVGKYLMTMVLVTFISIVTSVCLNVHHRSPTHHTMAPWVKVVFLEKLPALL
b2Lizard   : INLIIPCVLITSLAILVFYLPSPDCGEKMTLCISVLLALTVFLLLIISKIVPPTSLDVPLVGKYLMTMVLVTFISIVTSVCLNVHHRSPTHHTMAPWVKVVFLEKLPALL
b2Chick    : INLIIPCVLITSLAILVFYLPSPDCGEKMTLCISVLLALTVFLLLIISKIVPPTSLDVPLVGKYLMTMVLVTFISIVTSVCLNVHHRSPTHHTMAPWVKVVFLEKLPALL
b2Finch    : INLIIPCVLITSLAILVFYLPSPDCGEKMTLCISVLLALTVFLLLIISKIVPPTSLDVPLVGKYLMTMVLVTFISIVTSVCLNVHHRSPTHHTMAPWVKVVFLEKLPALL
b2Frog     : INLIIPCVLITSLAILVFYLPSPDCGEKMTLCISVLLALTVFLLLIISKIVPPTSLDVPLVGKYLMTMVLVTFISIVTSVCLNVHHRSPTHHTMAPWVKVVFLEKLPALL
b2Zebrafis : INLIIPCVLITSLAILVFYLPSPDCGEKMTLCISVLLALTVFLLLIISKIVPPTSLDVPLVGKYLMTMVLVTFISIVTSVCLNVHHRSPTHHTMAPWVKVVFLEKLPALL
b2Medaka   : INLIIPCVLITSLAILVFYLPSPDCGEKMTLCISVLLALTVFLLLIISKIVPPTSLDVPLVGKYLMTMVLVTFISIVTSVCLNVHHRSPTHHTMAPWVKVVFLEKLPALL
b2Fugu     : INLIIPCVLITSLAILVFYLPSPDCGEKMTLCISVLLALTVFLLLIISKIVPPTSLDVPLVGKYLMTMVLVTFISIVTSVCLNVHHRSPTHHTMAPWVKVVFLEKLPALL

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*          340          *          360          *          380          *          400          *          420          *
b2Human    : FMQQRPHHCARQLRLRRRQREREGAGA-----LFFREAPG-----ADSCTCFVNRSVQGLAGAFGAEPAPVAG----PGRSGE-----
b2Chimp    : FMQQRPHHCARQLRLRRRQREREGAGA-----LFFREAPG-----ADSCTCFVNRSVQGLAGAFGAEPAPVAG----PGRSGE-----
b2Marmoset : FMQQRPHHCARQLRLRRRQREREGAGA-----LFFREAPG-----ADSCTCFVNRSVQGLAGAFGAEPAPVAG----PGRSGE-----
b2Rat      : FLOQPRHRCARQLRLRRRQREREGAGA-----LFFREGPA-----ADPCTCFVNPASVQGLAGAFRAEP-TAAG----PGRSVG-----
b2Mouse    : FLOQPRHRCARQLRLRRRQREREGAGT-----LFFREGPA-----ADPCTCFVNPASMQGLAGAFQAEP-AAAG----LGRSMG-----
b2Cow      : FMQQRPHRCARQLRLRRRQREREGAGA-----LF-REALG-----ADSCTCFVNRSVQGLAGAFGSEPAAPAG----PGRARG-----
b2Dolphin  : FMQQRPHRCARQLRLRRRQRERGREGTGA-----VFYREALG-----ADSCTCFVNRSVQGLAGAFGSEPAAPAG----PGRSGG-----
b2Microbat : FMQQRPHHCARQLRQRRRQREREGAGA-----RFFREAPG-----ADSCTCFVNHASVQGVAGAFGAEPAPVP----GRARG-----
b2Megabat  : FMK????????????????????????????????????????????????????????????????????????????????????????????????????
b2Cat      : FMKRPDSSPARAPRPGQLRLTGLEAAST-----SSLCG-----SSMCSAAPQSPGGSGSRTAGLQDFRPRS----SG-----
b2Dog      : FMQQRPHRCARQLRLRRRQRERERE-AGA-----LFFREAPG-----ES-----YSGSAR---GGVGTD-----
b2Elephant : FMQQRPHHCARQLRLRRRQREREGAGA-----SFFREVPG-----ADSCTCFVNRSVQGLAGAFGAEPQVAG----PG----G-----
b2Armadill : FLOQPRHHGACARQLRLRRRLREREGAGA-----RFLREPRG-----ADSCTCFVNRSVQGVAGACGAEPAPAGG----AGRARE-----
b2Kangaroo : FMKQPRQNCARQHLLRQRRRQREREGEG-----RG-LFFRDAPG-----ANSCTCFVNPASVKEFGGVFGAESALMAG----RAGHVG-----
b2Opossum  : FMKQPRHNCARQLRQRRRQREREGGGVGG--GG-IFFRDAPG-----TNSCTCFVNPASVKEFGGVFGAESAESAHGYRGRAGPVG-----
b2Platypus : FMRRP????????????????????????????????????????????????????????????????????????????????????????????????????
b2Lizard   : FMKQPRQNCARQLRQKRQGHORNAAL-NAAAGSFFLRDAGAR-----SCTCYANPSAAKKGQRGAAATTTTTTTTTGQPPG-----
b2Chick    : FMKQPRQNCARQLRQRRRQRERERE-----AAAATLFLRAGAR-----ACACYANPGAAKAEG--LNGYRERQGGPDPAP-----
b2Finch    : FMKQPRQNCARQLRQRRRQRERERE-----AAAATLFFQAGAR-----ACTCYANPGAAKAEG--LNGYRERQGGQAGPAG-----
b2Frog     : FMKQPRQNCARQLRQRRRQRERERE-----AAGSFFLRDAGAR-----SCTCYANQASVKKYGAQLSELPEGVNGFRDRQGVKVR-----
b2Zebrafis : FMRQPRNSSERQLRQRRRANEQEGGRGGLAAGLMAGLGLSGSSSG-----SKENNEACTCYVNRASVKQFGAELGGGGGGGGSTDLNGIREGGRETRGGAN
b2Medaka   : FMRQPRNSCERQLRQRRRAQEQREGG-----MMGVGVG-----DDSDPCTCYVNRASVKQFGGDLGG--AGGGSMGLNRA-----
b2Fugu     : FMRQPRNSCERQLRQRRRAQEHKEGGCCGEPGGLMVGLGLGNAGSSGGGTTTGIFGKEDSDPCTCYVNRASVKQFGGDLGG--AGG-SMDGLNRARDGREGGSGNQSR

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                *           20           *           40           *           60           *           80           *           100
a7Human      : HVSLQGEFQRKLYKELVKKNYNPLERPVANSDQPLTVYFSLSLQIMDVDEKNQVLTNNIWLQMSWTDHYLQWNVSEYPGVKTVRFDPDGIWKPDILLYNSADERFDATF
a7Chimp      : HVSLQGEFQRKLYKELVKKNYNPLERPVANSDQPLTVYFSLSLQIMDVDEKNQVLTNNIWLQMSWTDHYLQWNVSEYPGVKTVRFDPDGIWKPDILLYNSADERFDATF
a7Marmoset   : HVSLQGEFQRKLYKELVKKNYNPLERPVANSDQPLTVYFSLSLQIMDVDEKNQVLTNNIWLQMSWTDHYLQWNVSEYPGVKTVRFDPDGIWKPDILLYNSADERFDATF
a7Rat        : HVSLQGEFQRRLYKELVKKNYNPLERPVANSDQPLTVYFSLSLQIMDVDEKNQVLTNNIWLQMSWTDHYLQWNVSEYPGVKTVRFDPDGIWKPDILLYNSADERFDATF
a7Mouse      : HVSLQGEFQRRLYKELVKKNYNPLERPVANSDQPLTVYFSLSLQIMDVDEKNQVLTNNIWLQMSWTDHYLQWNVSEYPGVKTVRFDPDGIWKPDILLYNSADERFDATF
a7Cow        : HVSLQGEFQRKLYKDLVKKNYNPLERPVANDSLPLTVYFSLSLQIMDVDEKNQVLTNNIWLQMTWTDHYLQWNASEYPGVKTVRFDPDGIWKPDILLYNSADERFDATF
a7Dolphin    : ???SQGEFQRKLYKDLVKKNYNPLERPVANSDQPLTVYFSLSLQIMDVDEKNQVLTNNIWLQMSWMDHYLQWNVSEYPGVKTVRFDPDGIWKPDILLYN??????????
a7Megabat    : ?????????????????????????????????????????????????????????????DEKNQMMTNNVWL??SWTDHYLQWNVSEYPGVKTVRFDPDGIWKPDILLYNSADERFDATF
a7Cat        : HVSLQGEFQRKLYKELVKKNYNPLERPVANSDQPLTVYFSLSLQIMDVDEKNQVLTNNIWLQMSWTDHYLQWNVSEYPGVKTVRFDPDGIWKPDILLYNSADERFDATF
a7Dog        : HVSLQGEFQRKLYKELVKKNYNPLERPVANSDQPLTVYFSLSLQIMDVDEKNQVLTNNIWLQMSWTDHYLQWNVSEYPGVKTVRFDPDGIWKPDILLYNSADERFDATF
a7Elephant   : ?VSLQGEFQRKLYKDLVKKNYNPLERPVANSDQPLTVYFSLSLQIMDVDEKNQVLTNNIWLQMSWTDHYLQWNVSEYPGVKTVRFDPDGIWKPDILLYNSADERFDATF
a7Armadill   : ?????????????????????????????????????????????????????????????DEKNQVLTNNIWLQMSWTDHYLQWNVSEYPGVKTVRFDPDGIWKPDILLYNSADERFDATF
a7Opossum    : HASLQGEFQRKLYKELVKKNYNPLERPVANSDQPLTVYFSLSLQIMDVDEKNQVLTNNIWLQMYWTDYLYQWNVSEYPGVKTVRFDPDGIWKPDILLYNSADERFDATF
a7Platypus   : ??SQGEFQRKLYRQLVKKNYNPLERPVANSDQPLTVYFSLSLQIMDV????????????????????????????????????????????????????????SADERFDATF
a7Lizard     : ???LQGEYQRKLYKELVKKNYNPLERPVANSDQPLTVYFTLNLRLQIMDV????????????????????????????????????????????????????????RADERFDATF
a7Chick      : RESLQGEFQRKLYKELVKKNYNPLERPVANSDQPLTVYFTLSLMQIMDVDEKNQVLTNNIWLQMYWTDHYLQWNVSEYPGVKTVRFDPDGIWKPDILLYNSADERFDATF
a7Finch      : ?ESLQGEFQRKLYKELVKKNYNPLERPVANSDQPLTVYFTLSLMQIMDVDEKNQVLTNNIWLQMYWTDHYLQWNVSDYPGVKTVRFDPDGIWKPDILLYNSADERFDATF
a7Frog       : KVSQGEYQRKLYKELMKNYNPLERPVLNDSHPLTVYFGMSLMQIMDVDEKNQVLTNNIWLQMWIDYLYQWNVSEYPGVKTVRFDPDGIWKPDILLYNSADERFDASF
a7aZebrafi   : RVSQGEYHQRRLYRDLKMDYNPLERPVDNTHSLTVYFMSLSMQIMDVDEKNQVLTNNIWLQLYWYDYLOWNASEYPGVTVRFDPDSQIWKPDILLYNSADERFDATF
a7bZebrafi   : QVSVOGQPYQRTLLKLLKDYNRMERPVANSDQPLTVYFSLSLQIMDVDEKNQVLTNNIWLNMHWYDYLOWNQSEYPGVKTVRFDPDGIWKPDILLYNSADKFDSTF
a7Medaka     : ?????????????????????????????????????????????????????????????DEKNQVLTNNIWLQLYWKFYLOWNMSDYPGVTVRFDPDSQIWRPDILLYNSADERFDASF
a7aFugu      : ??TVOGQPTTEERLYNYLLRRYNSMIRPVANSETLMLVRLGLSLMQIMDVDEKNQILTNNIWLQMEWTDSYLTWVSEYPGINSRLLPsrNIWKPDILLYNSADERFDATY
a7bFugu      : ??SLQCPHORTLLKLLKDYNRMERPVANSDQPLTVYFTLSLIQIMDVDEKNQILTNNIWLQMSWFDHYLOWNQSEHPGKTVRFDPDGIWKPDILLYNSADDDFDSTF
a7cFugu      : ??SVOGQQRFLTELLKDYNPMERPVANSDQALTVQFSFILIQVMDVDEKNQIITNNAWLQMWYDHYLOWNQSEYPGVKTVRFDPDQVWTIWKPDILLYNSAHDKFDATF

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                *           120           *           140           *           160           *           180           *           200           *           2
a7Human      : HTNVLVNSSGHCQYLPPGIFKSSCYIDVRWFPFDVQCCKLKFGSWSYGGWSDLQMQEADISGYIPNGEWDLVGIPGKRSEKFFECCKEPYPDVTFVTMRRRTLYYGL
a7Chimp      : HTNVLVNSSGHCQYLPPGIFKSSCYIDVRWFPFDVQCCKLKFGSWSYGGWSDLQMQEADISGYIPNGEWDLVGIPGKRSEKFFECCKEPYPDVTFVTMRRRTLYYGL
a7Marmoset   : HTNVLVNSSGHCQYLPPGIFKSSCYIDVRWFPFDVQCCKLKFGSWSYGGWSDLQMQEADISGYIPNGEWDLVGIPGKRSEKFFECCKEPYPDVTFVTMRRRTLYYGL
a7Rat        : HTNVLVNASGHCQYLPPGIFKSSCYIDVRWFPFDVQCCKLKFGSWSYGGWSDLQMQEADISGYIPNGEWDLVGIPGKRSEKFFECCKEPYPDVTFVTMRRRTLYYGL
a7Mouse      : HTNVLVNASGHCQYLPPGIFKSSCYIDVRWFPFDVQCCKLKFGSWSYGGWSDLQMQEADISGYIPNGEWDLVGIPGKRSEKFFECCKEPYPDVTFVTMRRRTLYYGL
a7Cow        : HTNVLVNSSGHCQYLPPGIFKSSCYIDVRWFPFDVQCCKLKFGSWSYGGWSDLQMQEADISGYIPNGEWDLVGVLGKRSEKFFECCKEPYPDVTFVTMRRRTLYYGL
a7Dolphin    : ?????????????????????IFKSSCYIDVRWFPFDVQCCKLKFGSWSYGGWSDLQMQEADISGYIPNGEWDLVGIPGKRSEKFFECCKEPYPDVTFVTMRRRTLYYGL
a7Megabat    : HTNVLVNSSGHCQYLPP????????????????????????????????????????????????????????????????????????????????????????????????????
a7Cat        : HTNVLVNSSGHCQYLPPGIFKSSCYIDVRWFPFDVQCCKLKFGSWSYGGWSDLQMQEADISGYIPNGEWDLVGIPGKRSEKFFECCKEPYPDVTFVTMRRRTLYYGL
a7Dog        : HTNVLVNSSGHCQYLPPGIFKSSCYIDVRWFPFDVQCCKLKFGSWSYGGWSDLQMQEADISGYIPNGEWDLVGIPGKRSEKFFECCKEPYPDVTFVTMRRRTLYYGL
a7Elephant   : HTNVLVNSSGHCQYLPPGIFKSSCYIDVRWFPFDVQCCKLKFGSWSYGGWSDLQMQEADISGYIPNGEWDLVGIPGKRSEKFFECCKEPYPDVTFVTMRRRTLYYGL
a7Armadill   : HTNVLVNSSGHCQYLPPGIFKSSCYIDVRWFPFDVQCCKLKFGSWTYGGWSDLQMQEADISGYIPNGEWDLVGIPGKRSEKFFECCKEPYPDVTFVTMRRRTLYYGL
a7Opossum    : HTNVLVNSSGHCQYLPPGIFKSSCYIDVRWFPFDVQCCKLKFGSWSYGGWSDLQMQEADISGYISNGEWDLVGIPGKRSEKFFECCKEPYPDVTFVTMRRRTLYYGL
a7Platypus   : HTNVLVNSSGHCQYLPPGIFKSSCYIDVRWFPFDVQCCKLKFGSWTYGGWSDLQMQEADVSGYISNGEWDLVGVPGKRSEKFFECCKEPYPDVTFVTMRRRTLYYGL
a7Lizard     : HTNVLVNSSGHCQYLPPGIFKSTCSIDVRWFPFDVQCCKLKFGSWTYGGWSDLQMQEADISGYISNGEWDLVGVPGKRSEKFFECCKEPYPDVTFVTMRRRTLYYGL
a7Chick      : HTNVLVNSSGHCQYLPPGIFKSSCYIDVRWFPFDVQCCKLKFGSWTYGGWSDLQMQEADISGYISNGEWDLVGIPGKRSEKFFECCKEPYPDITFTVTMRRRTLYYGL
a7Finch      : HTNVLVNSSGHCQYLPPGIFKSSCYIDVRWFPFDVQCCKLKFGSWTYGGWSDLQMQEADISGYISNGEWDLVGVPGKRSEKFFECCKEPYPDVTFVTMRRRTLYYGL
a7Frog       : HTNVLVNSSGHCQYLPPGIFKSSCYIDVRWFPFDVQCCKLKFGSWTYGGWSDLQMQLESIDISEYISNGEWDLVGVPGKRSEKFFECCKEPYLDVTFVTIMRRRTLYYGL
a7aZebrafi   : HTNVLVNSSGACQYLPPGIFKSTCYIDVRWFPFDLRCCKLKFGSWTYGGWSDLQMQIDADITGYIANGEWDLVGVPGRNREKFFECCKEPYPDVTFVTMRRRTLYYGL
a7bZebrafi   : KSNVVVNSSGYCNLPPGIFMSTCNVDVRWFPFDIQCKELKFGSWTFDGLLDLQMQNEADISGYMANGEWDLVGVPGRNREKFFECCKEPYLDVTFVTMRRRTLYYAL
a7Medaka     : HTNVLVNSSGHCQYLPPGIFKSTCHIDVRWFPFDVQCCKLKFGSWTYGGWSDLQMQINADITGYIANGEWDLVGVPGRNREKFFECCKEPYPDVTFVTMRRRTLYYGL
a7aFugu      : HTNVLVNSSGHCQYLPPGIFKSTCHIDVRWFPFDVQCCKLKFGSWTFDGLLDLQMQLEADISGYIPNGEWDLVGVPGRNREKFFECCKEPYLDVTFVTMRRRTLYYGI
a7bFugu      : KTNVLVNSSGAYEYQPPGIFMSTCNVDVRWFPFDIQCKELKFGSWTFDGLLDLQMQNEADISGYMANGEWDLVGVPGRNREKFFECCKEPYLDVTFVTMRRRTLYYAL
a7cFugu      : KANVLVNSSGCEYLPPGIFTSTCNVDVRWFPFDIQCKELKFGSWTFDGLLDLQMQKQADVSGYMHNGEWDLVGVPGRNREKFFECCKEPYLDVTFVTMRRRTLYYAL

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Cys loop



	20	*	240	*	260	*	280	*	300	*	320
a7Human	:	NLLIPCVLISALALLVFLLPADS	GEKISLGITVLLSLTVFMLLVAEIMPATSDSVPLIAQYFASTMIIVGLSVVVTVIVLQYHHHPDGGKMPKWTRVILLNWCWFLR								
a7Chimp	:	NLLIPCVLISALALLVFLLPADS	GEKISLGITVLLSLTVFMLLVAEIMPATSDSVPLIAQYFASTMIIVGLSVVVTVIVLQYHHHPDGGKMPKWTRVILLNWCWFLR								
a7Marmoset	:	NLLIPCVLISALALLVFLLPADS	GEKISLGITVLLSLTVFMLLVAEIMPATSDSVPLIAQYFASTMIIVGLSVVVTVIVLQYHHHPDGGKMPKWTRVILLNWCWFLR								
a7Rat	:	NLLIPCVLISALALLVFLLPADS	GEKISLGITVLLSLTVFMLLVAEIMPATSDSVPLIAQYFASTMIIVGLSVVVTVIVLQYHHHPDGGKMPKWTRVILLNWCWFLR								
a7Mouse	:	NLLIPCVLISALALLVFLLPADS	GEKISLGITVLLSLTVFMLLVAEIMPATSDSVPLIAQYFASTMIIVGLSVVVTVIVLQYHHHPDGGKMPKWTRVILLNWCWFLR								
a7Cow	:	NLLIPCVLISALALLVFLLPADS	GEKISLGITVLLSLTVFMLLVAEIMPATSDSVPLIAQYFASTMIIVGLSVVVTVIVLQYHHHPDGGKMPKWTRVILLNWCWFLR								
a7Dolphin	:	NLLIPCVLISALALLVFLLPADS	GEKISLGITVLLSLTVFMLLVAEIMPATSDSVPLIAQYFASTMIIVGLSVVVTVIVLQYHHHPDGGKMPKWTRVILLNWCWFLR								
a7Megabat	:	????????????????????	GEKISLGITVLLSLTVFMLLVAEIMPATSDSVPLIAQYFASTMIIVGLSVVVTVIVLQYHHHPDGGKMPKWTRVILLNWCWFLR								
a7Cat	:	NLLIPCVLISALALLVFLLPADS	GEKISLGITVLLSLTVFMLLVAEIMPATSDSVPLIAQYFASTMIIVGLSVVVTVIVLQYHHHPDGGKMPKWTRVILLNWCWFLR								
a7Dog	:	NLLIPCVLISALALLVFLLPADS	GEKISLGITVLLSLTVFMLLVAEIMPATSDSVPLIAQYFASTMIIVGLSVVVTVIVLQYHHHPDGGKMPKWTRVILLNWCWFLR								
a7Elephant	:	NLLIPCVLISALALLVFLLPADS	GEKISLGITVLLSLTVFMLLVAEIMPATSDSVPLIAQYFASTMIIVGLSVVVTVIVLQYHHHPDGGKMPKWTRVILLNWCWFLR								
a7Armadill	:	NLLIPCVLISALALLVFLLPADS	GEKISLGITVLLSLTVFMLLVAEIMPATSDSVPLIAQYFASTMIIVGLSVVVTVIVLQYHHHPDGGKMPKWTRVILLNWCWFLR								
a7Opossum	:	NLLIPCVLISALALLVFLLPADS	GEKISLGITVLLSLTVFMLLVAEIMPATSDSVPLIAQYFASTMIIVGLSVVVTVIVLQYHHHPDGGKMPKWTRVILLNWCWFLR								
a7Platypus	:	NLLIPCVLISALALLVFLLPADS	GEKISLGITVLLSLTVFMLLVAEIMPATSDSVPLIAQYFASTMIIVGLSVVVTVIVLQYHHHPDGGKMPKWTRVILLNWCWFLR								
a7Lizard	:	NLLIPCVLISALALLVFLLPADS	GEKISLGITVLLSLTVFMLLVAEIMPATSDSVPLIAQYFASTMIIVGLSVVVTVIVLQYHHHPDGGKMPKWTRVILLNWCWFLR								
a7Chick	:	NLLIPCVLISALALLVFLLPADS	GEKISLGITVLLSLTVFMLLVAEIMPATSDSVPLIAQYFASTMIIVGLSVVVTVIVLQYHHHPDGGKMPKWTRVILLNWCWFLR								
a7Finch	:	NLLIPCVLISALALLVFLLPADS	GEKISLGITVLLSLTVFMLLVAEIMPATSDSVPLIAQYFASTMIIVGLSVVVTVIVLQYHHHPDGGKMPKWTRVILLNWCWFLR								
a7Frog	:	NLLIPCVLISALALLVFLLPADS	GEKISLGITVLLSLTVFMLLVAEIMPATSDSVPLIAQYFASTMIIVGLSVVVTVIVLQYHHHPDGGKMPKWTRVILLNWCWFLR								
a7aZebrafi	:	NLLIPCVLISALALLVFLLPADS	GEKISLGITVLLSLTVFMLLVAEIMPATSDSVPLIAQYFASTMIIVGLSVVVTVIVLQYHHHPDGGKMPKWTRVILLNWCWFLR								
a7bZebrafi	:	NLLIPCVLISALALLVFLLPADS	GEKISLGITVLLSLTVFMLLVAEIMPATSDSVPLIAQYFASTMIIVGLSVVVTVIVLQYHHHPDGGKMPKWTRVILLNWCWFLR								
a7Medaka	:	NLLIPCVLISALALLVFLLPADS	GEKISLGITVLLSLTVFMLLVAEIMPATSDSVPLIAQYFASTMIIVGLSVVVTVIVLQYHHHPDGGKMPKWTRVILLNWCWFLR								
a7aFugu	:	NLLIPCVLISALALLVFLLPADS	GEKISLGITVLLSLTVFMLLVAEIMPATSDSVPLIAQYFASTMIIVGLSVVVTVIVLQYHHHPDGGKMPKWTRVILLNWCWFLR								
a7bFugu	:	NLLIPCVLISALALLVFLLPADS	GEKISLGITVLLSLTVFMLLVAEIMPATSDSVPLIAQYFASTMIIVGLSVVVTVIVLQYHHHPDGGKMPKWTRVILLNWCWFLR								
a7cFugu	:	NLLIPCVLISALALLVFLLPADS	GEKISLGITVLLSLTVFMLLVAEIMPATSDSVPLIAQYFASTMIIVGLSVVVTVIVLQYHHHPDGGKMPKWTRVILLNWCWFLR								

	*	340	*	360	*	380	*	400	*	420	*
a7Human	:	MKRPGEDKVR-PACQH---	KQRRCSLASVEMSAVAPP	-----	ASNGNLLYIGFRGLDGVHCVPTPDS						
a7Chimp	:	MKRPGEDKVR-PACQH---	KQRRCSLASVEMSAVAPP	-----	ASNGNLLYIGFRGLDGVHCVPTPDS						
a7Marmoset	:	MKRPGEDKVR-PACQH---	TRRRCSLASVEMSAVAPP	-----	ASNGNLLYIGFRGLDGVHCVPTPDS						
a7Rat	:	MKRPGEDKVR-PACQH---	KPRRCSLASVELSAGAGPP	-----	TSNGNLLYIGFRGLEGMHCAPTDS						
a7Mouse	:	MKRPGEDKVR-PACQH---	KPRRCSLASVELSAGAGPP	-----	TSNGNLLYIGFRGLEGMHCAPTDS						
a7Cow	:	MKRPGEDKVR-PACQH---	NERRCSLASVEMSAVAGPP	-----	ATNGNLLYIGFRGLDTMHCAPTDS						
a7Dolphin	:	MKRPGEDKVR-PACQH---	KQRRCSLASVEMSAMAGPP	-----	ATNGNLLYIGFRGLDSVHCAPTDS						
a7Megabat	:	MKRPGEDRVR-PACQL---	APRRCSLASVDMGAVATPP	-----	AANGNLLYIGFRGLDGGPCAPTDS						
a7Cat	:	MKRPGEDQVR-PACQH---	KPRRCSLASVEMSAVARAT	-----	TTNGNLLYIGFRGLDGVHCAPTDS						
a7Dog	:	MKRPGEDKVR-PACQH---	KQRRCSLASVEMSAVAGPP	-----	TTNGNLLYIGFRGLDGVHCAPTDS						
a7Elephant	:	MKRPGEDKVR-PACQH---	KQRRCSLASVEMNAMAGPP	-----	TSNGNLLYIGFRGLDTVHCAPTDS						
a7Armadill	:	MKRPGEDRVR-PACQH---	KQRRCSLASVELSAPPAPA	-----	ANGNLLYIGFRGLDALHCAPTDS						
a7Opossum	:	MKRPGEDKVR-PACQH---	KQRRCSLASVELNMSGQP	-----	TSNGNLLYIGFRGLEGTCHMCPASDS						
a7Platypus	:	MKRPGEEKVRG-PACQP---	KARRCSLASVEMTALAGQPS	-----	LAPTAAPAANGNLLYIGFRGLDGVHCSPTPDS						
a7Lizard	:	MKRPGEDKVR-PACQH---	KQRRCSLASVEMINTVSGQQ	-----	SSNGNLLYIGFRGLEGVHCTPTTDS						
a7Chick	:	MKRPGEDKVR-PACQH---	KQRRCSLASVEMINTVSGQQ	-----	CSNGNLLYIGFRGLDGVHCTPTTDS						
a7Finch	:	MKRPGEEKVR-PACQH---	KQRRCSLASVEMINTVSGQQ	-----	SSNGNLLYIGFRGLEGVHCTPTTDS						
a7Frog	:	MKRPGEDKVR-PVCOH---	KERRCSLASVDVNTVSGQQ	-----	SSNGNLLYIGFRGLEGHCTPTPDS						
a7aZebrafi	:	MKRPGEDKVR-PACHN---	KQRRCSLASVDLNLIS	-----	NGNLLYIGFRGMD						
a7bZebrafi	:	MKRPGESDP-ERPP--	CAPHLRRCSLSSQSGSLPNAPGSASADLHHHHISSTLHPLHPQSLQAAAAAGHT--	HHLHNQNSANNNGNLLYIGFSSLDEASPPALLAD							
a7Medaka	:	MRRPGEAKVL-LACHNM--	GKRRCSLSSLELSINPVS	-----	VPPQPHVT						
a7aFugu	:	MKRPGEEKVPL-LTGP---	SKVQHRSLVYELNEDTPGP	-----	QPTN						
a7bFugu	:	MKRPGEKDSP-ERPP--	CAPHLRRCSLSSQSGSIPNPP	-----	DHALHPLHPQGLAPLQPGGLHAGQPHVHAQS--SANNNGNLLYIGFSSLDEASPPALLAD						
a7cFugu	:	MKRPGETEPP-SLPHSQTASQSRKLS	SPGTSSSSSSSS	-----	AAARPANTDQLGLSLS						


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      440          *          460          *          480          *          500          *          520          *          540
a7Human   : GVVCGRMACSPT-----HDEHLLHGG-----QPPEGDPDLAKILEEVRYIANRFRCCQDESEAVCSEWK
a7Chimp   : GVVCGRMACSPT-----HDEHLLHGG-----QPPEGDPDLAKILEEVRYIANRFRCCQDESEAVCSEWK
a7Marmoset : GVVCGRMACSPT-----HDEHLLHGG-----QPPEGDPDLAKILEEVRYIANRFRCCQDESEAVCSEWK
a7Rat     : GVVCGRLACSPT-----HDEHLLMHGA-----HPSDGDPLAKILEEVRYIANRFRCCQDESEAVCSEWK
a7Mouse   : GVVCGRLACSPT-----HDEHLLMHGT-----HPSDGDPLAKILEEVRYIANRFRCCQDESEAVCSEWK
a7Cow     : GVVCGRVACSPT-----HDEHLLHAG-----QPSEGDPDLAKILEEVRYIAHRFRCCQDESEAVCSEWK
a7Dolphin : GVVCGRVACSPT-----HDEHLLHCG-----QPSEGDPDLAKILEEVRYIAHRFRCCQDESEAVCSEWK
a7Megabat : GVVCGRLACSPA-----HDAHLLHGG-----QAPEGDPDLAKILEEVRYLAARFRRCQDESDARGSEWK
a7Cat     : GVVCGRMACSPT-----HDEQLLHGG-----QPPEGDPDLAKILEEVRYIANRFRCCQDESEAVCSEWK
a7Dog     : GVVCGRMACSPT-----HDEHLLHGG-----QPSEGDPDLAKILEEIRYIANRFRCCQDESDAICSEWK
a7Elephant : GVVCGRMACSPT-----HDGHLHGG-----QPAEGDPDLAKILEEVRYIANRFRCCQDESEAVCSEWK
a7Armadill : GVVCGRVACSPA-----HDEPLLRAP-----APDGDPLAKILEEVRYIASRFRCCQDESEAVCSEWK
a7Opossum : GVICGRMTCSP-----EENLLHSG-----HTSEGDPDLAKILEEVRYIANRFRCCQDEEEAVCNEWK
a7Platypus : GVICGRMTCSP-----EENLLHSG-----GRRSPDGGPDLAKILEEVRYLANRFRCCQDEEAAVCNEWK
a7Lizard  : GVICGRMTCSP-----DDNLLHSG-----HPSENDPDLAKILEEVRYIANRFRCCQDEEAAVCNEWK
a7Chick   : GVICGRMTCSP-----EENLLHSG-----HPSEGDPDLAKILEEVRYIANRFRCCQDEEEAVCNEWK
a7Finch   : GVICGRMTCSP-----DEENLLHSG-----HPSEGDPDLAKILEEVRYIANRFRCCQDEEEAVCNEWK
a7Frog    : GVICGRMTCSP-----DDENLLHNV-----HHSEGDPDLAKILEEVRYIANRFRCCQDDEEAVCNEWK
a7aZebrafi : TIHYATSPDSGV-----ICSRLVATGEEDVLLPGA-----QASSVSSSGPETELSKILDEVRYISKRFRCCQDEEDTVNEWK
a7bZebrafi : SVQRNSMGGPRPTVVVSPVVGSSPPPHLPSQFCSPPPPTPNLEA--TGCPSTVS-----GGGGCSCSGGGDPQLQAILLEEVRYVADRFRCCQDENESVTEQWK
a7Medaka  : GLHCCSATDPEP-----LCARFI--EEDFLR-----NDSALEVELQOILEEVRFVIGRFRCCQDEKAAVCSEWK
a7aFugu   : GVPGGRAGEDE-----TLLAKGPGSSAGNIER-----ELAKLLDEVHSTAKHFRKQDVMNMAVSNQWK
a7bFugu   : PIQRNNTSTGP-----PRVAGSPPPHLPSQFCSSPPPPASNMD---TGCPSTVSSGGGFGGGGGGLGGCSASAVGDPQLHALLEEVRFVADRFRCCQDEVSGAADQWK
a7cFugu   : SVSNGRVCGGDG----GEGASVERGGPSLVQRLPLSLKSEVPQLEGPTTPGPDASSGSSGAEAAPHPGGGLTQSPVRRQLQALLAEVQFLVBRVKEQDRQLRFAEQWK

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      *          560          *          580
a7Human   : FAACVVDRCLCLMAFSVFTIICTIGILMSAPNFVEAVSKDFA
a7Chimp   : FAACVVDRCLCLMAFSVFTIICTIGILMSAPNFVEAVSKDFA
a7Marmoset : FAACVVDRCLCLMAFSVFTIICTIGILMSAPNFVEAVSKDFA
a7Rat     : FAACVVDRCLCLMAFSVFTIICTIGILMSAPNFVEAVSKDFA
a7Mouse   : FAACVVDRCLCLMAFSVFTIICTIGILMSAPNFVEAVSKDFA
a7Cow     : FAACVVDRCLCLMAFSVFTIILCTIGILMSAPNFVEAVSKDFA
a7Dolphin : FAACVVDRCLCLMAFSVFTIILCTIGILMSAPNFVEAVSKDFA
a7Megabat : FAACVVDRCLCLMAFSVFTIILCTIGILMSAPNFVEAVSKDFA
a7Cat     : FAACVVDRCLCLMAFSVFTIICTIGILMSAPNFVEAVSKDFA
a7Dog     : FAACVVDRCLCLMAFSVFTIICTIGILMSAPNFVEAVSKDFA
a7Elephant : FAACVVDRCLCLMAFSIFTIICTIGILMSAPNFVEAVSKDFA
a7Armadill : FAACVVDRCLCLMAFSVFTIICTIGILMSAPNFVEAVSKDFA
a7Opossum : FAACVVDRCLCLMAFSVFTIICTIGILMSAPNFVEAVSKDFA
a7Platypus : FAASVVDRCLCLMAFSVFTIICTIGILMSAPNFVEAVSKDFA
a7Lizard  : FAASVVDRCLCLMAFSVFTIICTIGILMSAPNFVEAVSKDFA
a7Chick   : FAASVVDRCLCLMAFSVFTIICTIGILMSAPNFVEAVSKDFA
a7Finch   : FAASVVDRCLCLMAFSVFTIICTIGILMSAPNFVEAVSKDFA
a7Frog    : FAASVVDRCLCLMAFSVFTIICTIGILMSAPNFVEAVSKDFA
a7aZebrafi : FAASVIDRCLCLMAFSVFTIILCTIGILMSAPNFVEAVSKDFA
a7bZebrafi : FAASVIDRCLCLMAFSVFTIILCTIGILMSAPNFVEAVSKDFA
a7Medaka  : FAASVIDRCLCLMAFSVFTIILCTIGILMSAPNFVEAVSKDFA
a7aFugu   : FAASVIDRCLCLMAFSVFTIILCTIGILMSAPNFVEAVSKDFA
a7bFugu   : FAASVIDRCLCLMAFSVFTIILCTIGILMSAPNFVEAVSKDFA
a7cFugu   : FAASVIDRCLCLMAFSVFTIILCTIGILMSAPNFVEAVSKDFA

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          *          20          *          40          *          60          *          80          *          100
a10Human  : CLGAEGRLLAKLFRDLFANYTSALRPVADTDQTLNVTLEVTLSQIDMDERNQVLTLYLWIRQEWTDAYLRWDPNAYGGGLDAIRIPSSLVWRPDIIVLYNKADAQPPGSA
a10Chimp  : CLGAEGRLLAKLFRDLFANYTSALRPVADTDQTLNVTLEVTLSQIDMDERNQVLTLYLWIRQEWTDAYLRWDPNAYGGGLDAIRIPSSLVWRPDIIVLYNKADAQPPGSA
a10Marmose : CLGAEGRLLAKLFRDLFANYTSALRPVADTDQTLNVTLEVTLSQIDMDERNQVLTLYLWIRQEWTDAYLRWDPNAYGGGLDAIRIPSSLVWRPDIIVLYNKADAQPPGSA
a10Rat    : CLGAEGRLLAKLFRDLFANYTSALRPVADTDQTLNVTLEVTLSQIDMDERNQVLTLYLWIRQEWTDAYLRWDPNAYGGGLDAIRIPSSLVWRPDIIVLYNKADAQPPGSA
a10Mouse  : CLGAEGRLLAKLFRDLFANYTSALRPVADTDQTLNVTLEVTLSQIDMDERNQVLTLYLWIRQEWTDAYLRWDPNAYGGGLDAIRIPSSLVWRPDIIVLYNKADAQPPGSA
a10Cow    : CLGAEGRLLAKLFRDLFANYTSALRPVADTDQTLNVTLEVTLSQIDMDERNQVLTLYLWIRQEWTDAYLRWDPNAYGGGLDAIRIPSSLVWRPDIIVLYNKADAQPPGSA
a10Dolphin : ?????????????????????????????????????????????????????????????????????????????????????????????????????????????????????
a10Microba : CLGAEGRLLAKLFRDLFANYTSALRPVADTDQTLNVTLEVTLSQIDMDERNQVLTLYLWIRQEWTDAYLRWDPNAYGGGLDAIRIPSSLVWRPDIIVLYNKADAQPPGSA
a10Megabat : CLGAEGRLLAKLFRDLFANYTSALRPVADTDQTLNVTLEVTLSQIDMDERNQVLTLYLWIRQEWTDAYLRWDPNAYGGGLDAIRIPSSLVWRPDIIVLYNKADAQPPGSA
a10Dog    : CLGAEGRLLAKLFRDLFANYTSALRPVADTDQTLNVTLEVTLSQIDMDERNQVLTLYLWIRQEWTDAYLRWDPNAYGGGLDAIRIPSSLVWRPDIIVLYNKADAQPPGSA
a10Elephan : ???EGRLLAKLFRDLFANYTSALRPVADTDQTLNVTLEVTLSQIDMDERNQVLTLYLWIRQEWTDAYLRWDPNAYGGGLDAIRIPSSLVWRPDIIVLYNKADAQPPGSA
a10Armadil : CWGAEGRLLAKLFRDLFANYTSALRPVADTDQTLNVTLEVTLSQIDMDERNQVLTLYLWIRQEWTDAYLRWDPNAYGGGLDAIRIPSSLVWRPDIIVLYNKADAQPPGSA
a10Kangaro : SRAEGRLLAKLFRDLFANYTSALRPVADTDQTLNVTLEVTLSQIDMDERNQVLTLYLWIRQEWTDAYLRWDPNAYGGGLDAIRIPSSLVWRPDIIVLYNKADAQPPGSA
a10Opossum : SQAEGRLLAKLFRDLFANYTSALRPVADTDQTLNVTLEVTLSQIDMDERNQVLTLYLWIRQEWTDAYLRWDPNAYGGGLDAIRIPSSLVWRPDIIVLYNKADAQPPGSA
a10Platypu : ???EGRLLAKLFRDLFANYTSALRPVADTDQTLNVTLEVTLSQIDMDERNQVLTLYLWIRQEWTDAYLRWDPNAYGGGLDAIRIPSSLVWRPDIIVLYNKADAQPPGSA
a10Lizard  : VSGAQRGFAYKLLSDFLFANYSNALRPVADTDQTLNVTLEVTLSQIDMDERNQVLTLYLWIRQEWTDAYLRWDPNAYGGGLDAIRIPSSLVWRPDIIVLYNKADAQPPGSA
a10Chick   : CGAAQRGFAYKLLSDFLFANYSNALRPVADTDQTLNVTLEVTLSQIDMDERNQVLTLYLWIRQEWTDAYLRWDPNAYGGGLDAIRIPSSLVWRPDIIVLYNKADAQPPGSA
a10Frog    : VQGAQRGFAYKLLSDFLFANYSNALRPVADTDQTLNVTLEVTLSQIDMDERNQVLTLYLWIRQEWTDAYLRWDPNAYGGGLDAIRIPSSLVWRPDIIVLYNKADAQPPGSA
a10Zebrafi : CLCAQRGFAYKLLSDFLFANYSNALRPVADTDQTLNVTLEVTLSQIDMDERNQVLTLYLWIRQEWTDAYLRWDPNAYGGGLDAIRIPSSLVWRPDIIVLYNKADAQPPGSA
a10Medaka  : CSAQRGFAYKLLSDFLFANYSNALRPVADTDQTLNVTLEVTLSQIDMDERNQVLTLYLWIRQEWTDAYLRWDPNAYGGGLDAIRIPSSLVWRPDIIVLYNKADAQPPGSA
a10Fugu    : YFAAQRGFAYKLLSDFLFANYSNALRPVADTDQTLNVTLEVTLSQIDMDERNQVLTLYLWIRQEWTDAYLRWDPNAYGGGLDAIRIPSSLVWRPDIIVLYNKADAQPPGSA

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          *          120          *          140          *          160          *          180          *          200          *          2
a10Human  : STNVVLRHDCAVRWDAPAITRSSCRVDVAAPFFDAQCGLTFGSWTHGCHQLDVRPRGAAASLADFVENVEWRVGLGMPARRRVLTYGCCSEPYPDVTFTLLLRRAAAY
a10Chimp  : STNVVLRHDCAVRWDAPAITRSSCRVDVAAPFFDAQCGLTFGSWTHGCHQLDVRPRGAAASLADFVENVEWRVGLGMPARRRVLTYGCCSEPYPDVTFTLLLRRAAAY
a10Marmose : STNVVLRHDCAVRWDAPAITRSSCRVDVAAPFFDAQCGLTFGSWTHGCHQLDVRPRGAAASLADFVENVEWRVGLGMPARRRVLTYGCCSEPYPDVTFTLLLRRAAAY
a10Rat    : STNVVLRHDCAVRWDAPAITRSSCRVDVAAPFFDAQCGLTFGSWTHGCHQLDVRPRGAAASLADFVENVEWRVGLGMPARRRVLTYGCCSEPYPDVTFTLLLRRAAAY
a10Mouse  : STNVVLRHDCAVRWDAPAITRSSCRVDVAAPFFDAQCGLTFGSWTHGCHQLDVRPRGAAASLADFVENVEWRVGLGMPARRRVLTYGCCSEPYPDVTFTLLLRRAAAY
a10Cow    : STNVVLRHDCAVRWDAPAITRSSCRVDVAAPFFDAQCGLTFGSWTHGCHQLDVRPRGAAASLADFVENVEWRVGLGMPARRRVLTYGCCSEPYPDVTFTLLLRRAAAY
a10Dolphin : STNVVLRHDCAVRWDAPAITRSSCRVDVAAPFFDAQCGLTFGSWTHGCHQLDVRPRGAAASLADFVENVEWRVGLGMPARRRVLTYGCCSEPYPDVTFTLLLRRAAAY
a10Microba : STNVVLRHDCAVRWDAPAITRSSCRVDVAAPFFDAQCGLTFGSWTHGCHQLDVRPRGAAASLADFVENVEWRVGLGMPARRRVLTYGCCSEPYPDVTFTLLLRRAAAY
a10Megabat : ITNVVLRHDCAVRWDAPAITRSSCRVDVAAPFFDAQCGLTFGSWTHGCHQLDVRPRGAAASLADFVENVEWRVGLGMPARRRVLTYGCCSEPYPDVTFTLLLRRAAAY
a10Dog    : STNVVLRHDCAVRWDAPAITRSSCRVDVAAPFFDAQCGLTFGSWTHGCHQLDVRPRGAAASLADFVENVEWRVGLGMPARRRVLTYGCCSEPYPDVTFTLLLRRAAAY
a10Elephan : STNVVLRHDCAVRWDAPAITRSSCRVDVAAPFFDAQCGLTFGSWTHGCHQLDVRPRGAAASLADFVENVEWRVGLGMPARRRVLTYGCCSEPYPDVTFTLLLRRAAAY
a10Armadil : STNVVLRHDCAVRWDAPAITRSSCRVDVAAPFFDAQCGLTFGSWTHGCHQLDVRPRGAAASLADFVENVEWRVGLGMPARRRVLTYGCCSEPYPDVTFTLLLRRAAAY
a10Kangaro : STNVVLRHDCAVRWDAPAITRSSCRVDVAAPFFDAQCGLTFGSWTHGCHQLDVRPRGAAASLADFVENVEWRVGLGMPARRRVLTYGCCSEPYPDVTFTLLLRRAAAY
a10Opossum : STNVVLRHDCAVRWDAPAITRSSCRVDVAAPFFDAQCGLTFGSWTHGCHQLDVRPRGAAASLADFVENVEWRVGLGMPARRRVLTYGCCSEPYPDVTFTLLLRRAAAY
a10Platypu : STNVVLRHDCAVRWDAPAITRSSCRVDVAAPFFDAQCGLTFGSWTHGCHQLDVRPRGAAASLADFVENVEWRVGLGMPARRRVLTYGCCSEPYPDVTFTLLLRRAAAY
a10Lizard  : ETNVVLRHDCAVRWDAPAITRSSCRVDVAAPFFDAQCGLTFGSWTHGCHQLDVRPRGAAASLADFVENVEWRVGLGMPARRRVLTYGCCSEPYPDVTFTLLLRRAAAY
a10Chick   : ETNVVLRHDCAVRWDAPAITRSSCRVDVAAPFFDAQCGLTFGSWTHGCHQLDVRPRGAAASLADFVENVEWRVGLGMPARRRVLTYGCCSEPYPDVTFTLLLRRAAAY
a10Frog    : ETNVVLRHDCAVRWDAPAITRSSCRVDVAAPFFDAQCGLTFGSWTHGCHQLDVRPRGAAASLADFVENVEWRVGLGMPARRRVLTYGCCSEPYPDVTFTLLLRRAAAY
a10Zebrafi : ETNVVLRHDCAVRWDAPAITRSSCRVDVAAPFFDAQCGLTFGSWTHGCHQLDVRPRGAAASLADFVENVEWRVGLGMPARRRVLTYGCCSEPYPDVTFTLLLRRAAAY
a10Medaka  : ETNVVLRHDCAVRWDAPAITRSSCRVDVAAPFFDAQCGLTFGSWTHGCHQLDVRPRGAAASLADFVENVEWRVGLGMPARRRVLTYGCCSEPYPDVTFTLLLRRAAAY
a10Fugu    : ETNVVLRHDCAVRWDAPAITRSSCRVDVAAPFFDAQCGLTFGSWTHGCHQLDVRPRGAAASLADFVENVEWRVGLGMPARRRVLTYGCCSEPYPDVTFTLLLRRAAAY

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Cys loop

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20          *          240          *          260          *          280          *          300          *          320
a10Human   : VCNLLPCVLISSLAPLAFHLPADSGEKVSLGVTVLLALTVPFQLLLAESMPPAESVPLIGKYMATMTMVTFSALTILIMNLHYCGPSVRPVPAPAWARALLLGHLAGL
a10Chimp   : VCNLLPCVLISSLAPLAFHLPADSGEKVSLGVTVLLALTVPFQLLLAESMPPAESVPLIGKYMATMTMVTFSALTILIMNLHYCGPSARVPVPAPAWARALLLGHLAGL
a10Marmose : VCNLLPCVLISSLAPLAFHLPADSGEKVSLGVTVLLALTVPFQLLLAESMPPAESVPLIGKYMATMTMVTFSALTILIMNLHYCGPSARVPVPAPAWARALLLGHLAGL
a10Rat     : VCNLLPCVFISSLAPLAFHLPADSGEKVSLGVTVLLALTVPFQLILAESMPPAESVPLIGKYMATMTMVTFSALTILIMNLHYCGPNAHPVPAPAWARVLLLGHLAGL
a10Mouse   : VCNLLPCVFISSLAPLAFHLPADSGEKVSLGVTVLLALTVPFQLILAESMPPAESVPLIGKYMATMTMVTFSALTILIMNLHYCGPNAHPVPAPAWARVLLLGHLAGL
a10Cow     : VCNLLPCVLISSLAPLAFHLPADSGEKVSLGVTVLLALTVPFQLILAESMPPAESVPLIGKYMATMTMVTFSALTILIMNLHYCGPSARVPVPAPAWARALLLGHLAGL
a10Dolphin : VCNLLPCVLISSLAPLAFHLPADSGEKVSLGVTVLLALTVPFQLLLAESMPPAESVPLIGKYMATMTMVTFSALTILIMNLHYCGPSARVPVPAPAWARTLLLGHLAGL
a10Microba : VCNLLPCVLISSLAPLAFHLPADSGEKVSLGVTVLLALTVPFQLILAESMPPAESVPLIGKYMATMTMVTFSALTILIMNLHYCGPSARVPVPAPAWARAFLLGLLAGL
a10Megabat : VCNLLPCVLISSLAPLAFHLPADSGEKVSLGVTVLLALTVPFQLLLAESMPPAESVPLIGKYMATMTMVTFSALTILIMNLHYCGPTARVPVPAPAWARAFLLGHLAGL
a10Dog     : VCNLLPCVLISSLAPLAFHLPADSGEKVSLGVTVLLALTVPFQLLLAESMPPAESVPLIGKYMATMTMVTFSALTILIMNLHYCGPSARVPVPAPAWARTLLLGHLAGL
a10Elephan : VCNLLPCVLISSLAPLAFHLPADSGEKVSLGVTVLLALTVPFQLLLAESMPPAESVPLIGKYMATMTMVTFSALTILIMNLHYCGSSAHPVPAPAWARTLLLGHLAGL
a10Armadil : VCNLLPCVLISSLAPLAFHLPADSGEKVSLGVTVLLALTVPFQLLLAESMPPAESVPLIGKYMATMTMVTFSALTILIMNLHYCGPSARVPVPAPAWARALLLGHLAGL
a10Kangaro : VANLLPCVLISSLAPLAFHLPADSGEKVSLGVTVLLALTVPFQLLLAENMPPAESVPLIGKYMTTALVTASTALTILIMNLHYSGPVGPVPAPAWAQTLLLGHLAGL
a10Opossum : VANLLPCVLISSLAPLAFHLPADSGEKVSLGVTVLLALTVPFQLLLAENMPPAESVPLIGKYMTTALVTASTALTILIMNLHYSGPVGPVPAPAWAQTLLLGHLAGL
a10Platypu : VCNLLPCVLISSLAPLAFLLPAASGEKVS LGVTVLLALTVPFQLLVAETMPPAESVPLIGKYIIVTMTMVTASTALTIFIMNLHYCGPGARVPVPAPAWARALILDRLARLL
a10Lizard  : IFNLLPCVMISFLAPLGFYLPADSGEKVSLGVTVLLALTVPFQLLVAESMPPESENVPLIGKYIATMTMITASTALTIFIMNIHHC GPGAKVPVQWAKVLI LHYMARIF
a10Chick   : IFNLLPCVMISFLAPLGFYLPADSGEKVSLGVTVLLALTVPFQLLVAESMPPESENVPLIGKYIATMTMITASTALTIFIMNIHHC GPGARVPVPPWARRLILHHLARAL
a10Frog    : IFNLLPCVMISFLAPLGFYLPADSGEKVSLGVTVLLALTVPFQLLVAESMPPESENVPLIGKYIATMTMITASTALTIFIMNIHHC GPEAKVPVQWAKKFI LQYMSRIF
a10Zebrafi : IFNLLPCMMISFLAPLGFYLPADSGEKVSLGVTVLLALTVPFQLLVAESMPPESENVPLIGKYIATMTMITASTALTIFIMNIHHC GPEAQPVSWARRFILNYLARFC
a10Medaka  : IFNLLPCMMISFLAPLGFYLPADSGEKVSLGVTVLLALTVPFQLLVAESMPPESENVPLIGKYIATMTMVTASTALTIFIMNIHHC GSEARVPVQWQRFVNLHARIC
a10Fugu    : IFNLLPCMMISFLAPLGFYLPADSGEKVSLGVTVLLALTVPFQLLVAESMPPESENVPLIGKYIATMTMVTASTALTIFIMNIHHC GSEAHVPVSWAERFILNYLARIC

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          *          340          *          360          *          380          *          400          *          420          *
a10Human   : CVRE-RGEPGQSRPP-----ELSPSP---QSPGGAGPPAG-----
a10Chimp   : CVRE-RGEPGQSRPP-----ELSPSP---QSPGGAGPPAG-----
a10Marmose : CVRE-RGQPCGQSRPP-----ESSPIP---EPPEGGAGHPEG-----
a10Rat     : CVRE-RGEPGQSKPL-----ESAPSL---QPP---PASPAG-----
a10Mouse   : CVRE-RGEPGQSKPL-----ESAPSL---QPP---ACPPAG-----
a10Cow     : CVRE-RGEPGQSRPP-----ESSPSP---QPPDRGTGPPAG-----
a10Dolphin : CVRE-RGEPGQSRPP-----ESSPSP---QPPDREAGPPAG-----
a10Microba : CVRE-RGEPGKSRRH-----ESPPSP---QPPEGGAGPPAG-----
a10Megabat : CVRE-RGEPGGRSRPP-----KSPSPSP---QPPKGGACLPAG-----
a10Dog     : CVRE-RGEPGQARPP-----ESSPSP---RPPDGGARPPAV-----
a10Elephan : CVRE-RGEPGQFRPP-----ESPPSP---QPPEEGACPLAG-----
a10Armadil : CVRE-RGEPGQSRPP-----ESLLSP---QPPEGRADPPSG-----
a10Kangaro : CVRE-RGEACGGSQHP-----PVPPLPSMHPKPRLGPGSGAG-----
a10Opossum : CVRE-RGEPGGAQHP-----LVPRRPSVHPKPRLGQGSASG-----
a10Platypu : CMREPEGDPSEPQSAR-----DPETVGGAGGQ-----
a10Lizard  : FVRE-VGESCRSPRPE-----PDP---SPKAPGSGGARG-----PASP-----
a10Chick   : CVRE-VGESCRPQRE-----GTGG--MGPRDPPGEGVEP-----
a10Frog    : FVRE-VGESCRPRTE-----PEPNSERTSKVPGIDGQAKREDIADV-----VKDCPEKLSPKDKEAKEELEHSKYA
a10Zebrafi : FVRE-MGQSCVSVHTD--QPAK-----KGNNTINGQARG----ED-FALRLHEGCSQVKDQFNEDASPTLSPQQRKEHQSGWRIG-----TFVEIE
a10Medaka  : FLRE-AGDSCLSRASSLKQPLSQESDAPSAGAGTTGTNWRNQGQVWRGKVEEDNTGVSLSSTEQDLTKQVIWKEDLFVTDHSAERGAAGGHKEG--EKSNSMSAGGVA
a10Fugu    : FVRE-VGENCMDGTSS-RQPSQMEAEVLSASGVNAKANWDVNGQALGRTDED---AASNTGQDVISDKDLKEDLFVTDHSEE-GAAKPCVEVGKEEATSTFTGGEKE

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440          *          460          *          480          *          500          *          520
a10Human   : -----PCHEPRCLCRQ-EALLHHVATIANTFRSHRAAQRCHEDWKRLARVMDRFFLAIFFSMALVMSLLVLVQAL
a10Chimp   : -----PCHEPRCLCRQ-EALLHHVATIANTFRSHRAAQRCHEDWKRLARVMDRFFLGIFFSMALVMSLLVLVQAL
a10Marmose : -----PCHEPRCLCHQ-EALLRHVATIANTFRSHRAAQRCHEDWKRLARVMDRFFLGIFFSMALVMSLLVLVQAL
a10Rat     : -----PCHEPRCLCHQ-EALLHHIASIASTFRSHRAAQRHEDWKRLARVMDRFFLGIFFCMALVMSLIVLVQAL
a10Mouse   : -----PCHEPRCLCHQ-EALLHHVASIAGTFRSHRAAQRHEDWKRLARVMDRFFLGIFFCMALVMSLLVLVQAL
a10Cow     : -----PCREPRCLCRQ-EALLRHVATIANAETHSHRAAQRHEDWKRLARVMDRFFLGIFFSMALVMSLLVLVQAL
a10Dolphin : -----PCHEPRCLCHQ-EALLRHVATIINTFRSHRAAQRCHBEWKRLARVMDRFFLGIFFSMALVMSLLVLVQAL
a10Microba : -----PCHEPRCLCHQ-EALLHHVATIANTFRSHRAAQRHEDWKRLARVMDRFFLGIFFSMALVMSLLVLVQAL
a10Megabat : -----PCHEPRCLCHQ-EALLRHVATIANTFRSHRAAQRHEDWKRLARVMDRFFLGIFFSMALVMSLLVLVQAL
a10Dog     : -----PCREPRCLCRQ-EALLHHVATIANAETHSHRAAQRHEDWKRLARVMDRFFLGIFFSMALVMSLLVLVQAL
a10Elephan : -----PCHELCCLCHQ-EALLHHVATIANTFRSYRAAQRHEDWKRLARVMDRFFLGIFFSMALVMSLLVLVQAL
a10Armadil : -----PCHEPRCLCHQ-EALLHHVATIANTFRSHRAAQRHEDWKRLARVMDRFFLCIFFSMALVMSL??????
a10Kangaro : -----PCPEPRCPCHQ-EALLRHVGATAVACRSHRAAQLRGDWKRLARVDRFFLAVFFAMVLAMSLLVLGHAI
a10Opossum : -----PCSEPRCPCHQ-EALLRHVGATAVACRSHRAAQLRGDWKRLARVDRFFLAVFFVMVLAMSLLVLGHAI
a10Platypu : -----PCGQPHCPCHQ-VDVRRHVADIARCFRSHQVAQRSGEWRRVARVDRFFMWVFSAMVLAMSLLVLGRGL
a10Lizard  : ----GEAFVDLEGVPG---GSASCAKGGCLCRQSSILRNVEYIANCEFRDQKAASKRTGEWKKVAKVMDRFFMWVFFAMVFI
a10Chick   : -----LCPRSRCLCHH-HAVLSSVGYIAGVFRRHRTAQRRAAEWKKVAKVMDRFFMWVFFIMVFLMSVLVIGKAA
a10Frog    : HSQESGKYYVSEQGGVKGFGYEECPKIHCCLCHN-EALLRNVEYIANCEFRDQKATQKRTGEWKKVAKVMDRFFMWVFFIMVFL
a10Zebrafi : HGESAGATGETGASRKESVKKREILVLSQCLCHQ-CALLRNVEYIANFYQEQKATQRNAEWRKVKVMDRFFMWIFFIMVFLMSL
a10Medaka  : AGEHAEEKSDVEGG-AQQR-REILVRTQCVCQH-CALLRSNVEFIASSYQDQRVAQLRITTEWRKVKVMDRFFMWLFFILFFFM
a10Fugu    : QAEEKKGGPQQRGGRTGSK-REIFVKAQCVCQH-CGLCRNIEYITSSYQDQRAAQLRIGEWKVKVMDRFFMWLFFIMVFI

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