

TABLE S1. Sequence data for PKA catalytic subunit homologs from chordates collected and manipulated as described in Materials and Methods S1.

Species	PKA catalytic subunit homologs in FASTA format
<i>P. troglodytes</i>	<p>>ENSPTRP00000018062_Pan_troglodytes (a) MASNSSDVKEFLAKAKEDFLKKWESPAQNTAHLDDQFERIKTLGTGTSFGRVMLVKHKETGNHYAMKILDKQKV VKLKQIEHTLNEKRILQAVNFPFLVKLEFSFKDNSNLYMVMYVPGGEMFSLRRIRGRFSEPHARFYAAQIV LTFEYLHSLDLIYRDLKPENLLIDQQGYIQVTDGFAKRVKGRWTWLCGTPPEYLAPEIILSKGYNKAVDWWA LGVLIYEMAAGYPPFFADQPIQIYEKIVSGKVRFP SHFSDDLKDLLRNLLQVDLTKRFGNLLKNGVNDIKNHK WFATTDWIAIYQRKVEAPFIPKFKGPGDTSNFDDYEEEEIRVSI NEKCKEFGFSEF</p> <p>>ENSPTRP00000042330_Pan_troglodytes (b) MAAYREPPCNQYTGTTALQKLEGFASRLFHRHSGKTAHQKTALENDLSHFSEHTALWDRSMKEFLAKAKE DFLKKWENPTQNNAGLEDFERKKTLGTGTSFGRVMLVKHKATEQYAMKILDKQKVVKLKQIEHTLNEKRILQ AVNFPFLVRLEYAFKDNSNLYMVMYVPGGEMFSLRRIRGRFSEPHARFYAAQIVLTFEYLHSLDLIYRDLK PENLLIDHQGYIQVTDGFAKRVKGRWTWLCGTPPEYLAPEIILSKGYNKAVDWWALGVLIYEMAAGYPPFFA DQPIQIYEKIVSGKVRFP SHFSDDLKDLLRNLLQVDLTKRFGNLLKNGVSDIKTHKWFATTDWIAIYQRKVEA PFI PKFRGSGDTSNFDDYEEEDI RVSITEKCAKEFGFSEF</p> <p>>ENSPTRP00000035898_Pan_troglodytes (g) MGNAPAKKDTEQEESVNEFLAKARGDFLYRWGNPAQNTASSDQFERLRTLGMGSFGRVMLVRHRETGGHYAM KILNKQKVVLMKQVEHILNEKRILQAIDFPFLVKLQFSFKDNSYLYLVMYVPGGEMFSLRRIRGRFSEPHA CFYAAQVVLAFOYLHSLDLIHRDLKPENLLIDQQGYLQVTDGFAKRVKGRWTWLCGTPPEYLAPEIILSKGY NKAVDWWALGVLIYEMAVGFSPFYADQPIQIYEKIVSGRVRFP SKLSSDLKDLLSLLQVDLTKRFGNLRNG VGDIKNHKWFATTSWIAIYEKKVEAPFIPKYTGPGDASNFDYEEEEELRISINEKCAKEFGFSEF</p>
<i>G. gorilla</i>	<p>>ENSGGOT00000006754_Gorilla_gorilla_translated (g) MGNAPTCKDTEQEESMNEFLAKARGDFLYRWGNPAQNTASSDQFERLRTLGMGSFGRVMLVRHRTGGHYAM KILNKQKVVLMKQVEHILNEKRILQAIDFPFLVKLQFSFKDNSYLYLVMYVPGGEMFSLRRIRGRFSEPHA CFYAAQVVLAFOYLHSLDLIHRDLKPENLLIDQQGYLQVTDGFAKRVKGRWTWLCGTPPEYLAPEIILSKGY NKAVDWWALGVLIYEMAMGFPPFYADQPIQIYEKIVSGRVRFP SKLSSDLKDLLSLLQVDLTKRFGNLRNG VGDIKNHKWFATTNWIAIYEKKVEAPFIPKYTGPGDASNFDYEEEEELRISINEKCAKEFGFSEF</p>
<i>P. pygmaeus abelii</i>	<p>>ENSPPYP00000001399_Pongo_abelii (b) MAAYREPPCNQYTGTTALQKLEGFASRLFHRHSGKTAHQKTALENDLSHFSEHTALWDRSMKEFLAKAKE DFLKKWENPTQNNAGLEDFERKKTLGTGTSFGRVMLVKHKATEQYAMKILDKQKVVKLKQIEHTLNEKRILQ AVNFPFLVRLEYAFKDNSNLYMVMYVPGGEMFSLRRIRGRFSEPHARFYAAQIVLTFEYLHSLDLIYRDLK PENLLIDHQGYIQVTDGFAKRVKGRWTWLCGTPPEYLAPEIILSKGYNKAVDWWALGVLIYEMAAGYPPFFA DQPIQIYEKIVSGKVRFP SHFSDDLKDLLRNLLQVDLTKRFGNLLKNGVSDIKTHKWFATTDWIAIYQRKVEA PFI PKFRGSGDTSNFDDYEEEDI RVSITEKCAKEFGFSEF</p> <p>>ENSPPYP000000021585_Pongo_abelii (g) MGNAPAKKDTEQEKSATEFLVKARGDFLYRWGNPAQNTASSDQFERLRTLGTGTSFGRVMLVRHRETGGHYAM KILHKQKLVKLVKQVEHTLNEKRILQAIDFPFLVKLQFSFKDNSYLYLVMYVPGGEMFSLRRIRGRFSEPHA CFYAAQVVLAFOYLHSLDLIHRDLKPENLLIDQQGYLQVTDGFAKRVKGRWTWLCGTPPEYLAPEIILSKGY NKAVDWWALGVLIYEMTAGFPPFYADEPIQIYEKIVSGRVRFP SKLSSDLKDLLSLLQVDLTKRFGNLRNG VGDIKNHKWFATTNWIAIYEKKVEAPFIPKYTGPGDASNFDYEEEEELRISINEKCAKEFGFSEF</p>
<i>M. mulatta</i>	<p>>ENSMUP00000004604_Macaca_mulatta (b) SVKEFLAKAKEDFLKKWENPTQNNAGLEDFERKKTLGTGTSFGRVMLVKHKATEQYAMKILDKQKVVKLKQI EHTLNEKRILQAVNFPFLVRLEYAFKDNSNLYMVMYVPGGEMFSLRRIRGRFSEPHARFYAAQIVLTFEYL HSLDLIYRDLKPENLLIDHQGYIQVTDGFAKRVKGRWTWLCGTPPEYLAPEIILSKGYNKAVDWWALGVLI EMAAGYPPFFADQPIQIYEKIVSGKVRFP SHFSDDLKDLLRNLLQVDLTKRYGNLLKNGVSDIKTHKWFATTD WIAIYQRKVEAPFIPKFKGPGDTSNFDDYEEEDI RVSITEKCAKEFGFSEF</p> <p>>ENSMUP000000026815_Macaca_mulatta (g) MGNAAAKKDTEQETVNEFLAKARGDFLYRWGNPAQNTASSDQFERLRTLGTGTSYGRVMLVRHRETGNHYAM ILDKQKVVRLKQVEHTLNEKRILQAIDFPFLVKLQFSFKDNSNLYLVMYVPGGEMFSLRRIRGRFSEPHAR FYAAQVVLAFOYLHSLDLIHRDLKPENLLIDQQGYLQVTDGFAKRVKGRWTWLCGTPPEYLAPEIILSKGYN KAVDWWALGVLIYEMTAGFPPFYADQPIQIYEKIVSGKVRFP SQLSPDLKDLLSLLQVDLTKRFGNLLKNGV GDIKNHKWFATTNWIALFEKKVEAPFIPKYTGPGDASNFDYEEEEELRISVNEKCAKFAEF</p>
<i>P. hamadryas</i>	<p>>ENSP000000366488_Papio_hamadryas (g) MGNAAAKKDTEQESVNEFLAKARGDFLYRWGNPAQNTASSDQFERLRTLGTGTSYGRVMLVRHRETGNHYAM ILDKQKVVRLKQVEHTLNEKRILQAIDFPFLVKLQFSFKDNSNLYLVMYVPGGEMFSLRRIRGRFSEPHAR FYAAQVVLAFOYLHSLDLIHRDLKPENLLIDQQGYLQVTDGFAKRVKGRWTWLCGTPPEYLAPEIILSKGYN KAVDWWALGVLIYEMTAGFPPFYADQPIQIYEKIVSGKVRFP SQLSPDLKDLLSLLQVDLTKRFGNLLKNGV GDIKNHKWFATTNWIALFEKKVEAPFIPKYTGPGDASNFDYEEEEELRISVNEKCAKFAEF</p>

<p><i>C. jacchus</i></p>	<p>>ENSCJAP00000045124_Callithrix_jacchus (b) MGNAATAKKGSEVESVKEFLAKAKEDFLKKWENPTSPNAGLEDFERKKTTLGTGSFGRVMLVKHKATEQYYAM KILDKQKVVKLKQIEHTLNEKRILQAVNFPFLVRLLEYAFKDNSNLYMVMVEYVPGGEMFSLHRRIGRFSEPHA RFYAAQIVLTFEYLHSLDLIYRDLKPENLLIDHQGYIQVTDGFAKRVKGRWTWLCGTPEYLAPETILSKGY NKAVDWWALGVLIYEMAAGYPPFFADQPIQIYEKIVSGKVRFPSPHFSSDLKDLLRNLQVLDLTKRFGNLKNG VSDIKTHKWFATTDWIAIYQRKVEAPFIPKFRGSGDTSNFDDYEEEDIRVSITEKCGREFDEF</p> <p>>ENSCJAP00000049480_Callithrix_jacchus_truncated (g) RAKEDFLYRWEHPVQNTASSDQFELLKTLGAGSFGRVVLVRHQESGGHYAMKILNKQKVVKLKQVEQVLSEK RILQAINFPFLVQLQFSFRDNSNLYLVMEYVPGGDMFSLRRLRVGKFRPHACFCAAQIVLAFQYLYHSRDLIH RDLKPENIVIDQQGYLRVTDGFAKRVKGRWTWLCGTPEYLAPETILNKGYKAVDWWALGVLIYEMAMGFP PFYADQAVQIYQKIVSGKVQFPSPHVSSDLKDLLRNLQVLDLSKRFGNLRNGVGDINKHKWFTTTNWIAYEK KVKAPFIPKLAGPGDASNFDNYEEEEIWSINEKCANEFSEF</p> <p>>ENSCJAP00000040924_Callithrix_jacchus (rt) MGNVPAKDEQKVVKEFIAGAKEDFLRRWERPVQNTARLDQFKLLKTLGIGSFGRVVLVSHRESGSHYAMKI LNKEKVVRLKQVQVHLNEKRILQAITDFPFLVRLHFSFRDNSNLYLVMEYVPGGDVPSHLQVGRFTEPHAGF YAAQIVLAFQYLYHSLDLIHRDLKPENIVIDQQGYLRVTDGFAKRVKGRWTWLCGTPEYLAPETILNKGYK AVDWWTLGVLIYEMAVGFPFFYADQRNSVFQNILSGKVRFPSPHVSSDLKDLLRNLQVLDLSKRFGNLRNGV DINKHKWFATTDWIAIYEQVEAPFIPKFAKPGDASNFDNYEEEEIRISINEKYANEFSEQF</p>
<p><i>O. garnettii</i></p>	<p>>ENSOGAP00000010597_Otolemur_garnettii (a) MGNAAAAKKGSEQESVKEFLAKAKEDFLKKWENPAQNTAHLDFERIKTLGTGSFGRVMLVRHKETGNHYAM KILDKQKVVKLKQIEHTLNEKRILQAVNFPFLVRLLEYAFKDNSNLYMVMVEYVPGGEMFSLHRRIGRFSEPHA RFYAAQIVLTFEYLHSLDLIYRDLKPENLLIDQQGYIQVTDGFAKRVKGRWTWLCGTPEYLAPETILSKGY NKAVDWWALGVLIYEMAAGYPPFFADQPIQIYEKIVSGKVRFPSPHFSSDLKDLLRNLQVLDLTKRFGNLKNG VNDIKNHKWFATTDWIAIYQRKVEAPFIPKFKGPGDTSNFDDYEEEDIRVINEKCGKEFSEF</p> <p>>ENSOGAP00000005225_Otolemur_garnettii (b) MAAYRELPNCQFTGTTTALQKLEGFASRLFHRHSGKADLKTALENDSLHFSEHTAVWDRSMKEFLAKAKEDF LKKWENPPNNAGLEDFERKKTTLGTGSFGRVMLVKHKATEQYYAMKILDKQKVVKLKQIEHTLNEKRILQAV NFPFLVRLLEYAFKDNSNLYMVMVEYVPGGEMFSLHRRIGRFSEPHARFYAAQIVLTFEYLHSLDLIYRDLKPE NLLIDHQGYIQVTDGFAKRVKGRWTWLCGTPEYLAPETILSKGYKAVDWWALGVLIYEMAAGYPPFFADQ PIQIYEKIVSGKVRFPSPHFSSDLKDLLRNLQVLDLTKRFGNLKNGVSDIKTHKWFATTDWIAIYQRKVEAP FIPKFRGSGDTSNFDDYEEEDIRVITEKCAKEFGEF</p>
<p><i>T. syrichta</i></p>	<p>>ENSTSYPO0000000346_Tarsius_syrichta (b) MAAYRELPNCQYFTGTTTALQKLEGFASRLFHRHSGKTAHQDKTALENDSLHFSEHTASWDRSMKEFLAKAKE DFLKKWENPAPNNAGLEDFERKKTTLGTGSFGRVMLVKHKATEQYYAMKILDKQKVVKLKQIEHTLNEKRILQ AVNFPFLVRLLEYAFKDNSNLYMVMVEYVPGGEMFSLHRRIGRFSEPHARFYAAQIVLTFEYLHSLDLIYRDLK PENLLIDHQGYIQVTDGFAKRVKGRWTWLCGTPEYLAPETILSKGYKAVDWWALGVLIYEMAAGYPPFFA DQPIQIYEKIVSGKVRFPSPHFSSDLKDLLRNLQVLDLTKRFGNLKNGVSDIKTHKWFATTDWIAIYQRKVEA PFIKFRGSGDTSNFDDYEEEDIRVITEKCGKEFGEF</p>
<p><i>S. scrofa</i></p>	<p>>ENSSSCP00000014641_Sus_scrofa (a) MGNAAAAKKGSEQESVKEFLAKAKEDFLKKWENPAQNTAHLQDFERIKTLGTGSFGRVMLVKHKETGNHFAM KILDKQKVVKLKQIEHTLNEKRILQAVNFPFLVRLLEYAFKDNSNLYMVMVEYVPGGEMFSLHRRIGRFSEPHA RFYAAQIVLTFEYLHSLDLIYRDLKPENLLIDQQGYIQVTDGFAKRVKGRWTWLCGTPEYLAPETILSKGY NKAVDWWALGVLIYEMAAGYPPFFADQPIQIYEKIVSGKVRFPSPHFSSDLKDLLRNLQVLDLTKRFGNLKNG VNDIKNHKWFATTDWIAIYQRKVEAPFIPKFKGPGDTSNFDDYEEEDIRVINEKCGKEFSEF</p>
<p><i>D. ordii</i></p>	<p>>ENSODORP00000014055_Dipodomys_ordii (a) MGNAAAAKKGSEQESVKEFLAKAKEDFLKKWENPAQNTAHLQDFDRIKTLGTGSFGRVMLVKHKETGNHYAM KILDKQKVVKLKQIEHTLNEKRILQAVNFPFLVRLLEYAFKDNSNLYMVMVEYVPGGEMFSLHRRIGRFSEPHA RFYAAQIVLTFEYLHSLDLIYRDLKPENLLIDQQGYIQVTDGFAKRVKGRWTWLCGTPEYLAPETILSKGY NKAVDWWALGVLIYEMAAGYPPFFADQPIQIYEKIVSGKVRFPSPHFSSDLKDLLRNLQVLDLTKRFGNLKNG VNDIKNHKWFATTDWIAIYQRKVEAPFIPKFKGAGDTSNFDDYEEEDIRVINEKCGKEFSEF</p>
<p><i>C. porcellus</i></p>	<p>>ENSCPOP00000016885_Cavia_porcellus (a) SVKEFLAKAKEDFLKKWESPAQNTASLDQDFRIKTLGTGSFGRVMLVKHKETGNHYAMKILDKQKVVKLKQV EHTLNEKRILQAVNFPFLVRLLEYAFKDNSNLYMVMVEYVPGGEMFSLHRRIGRFSEPHARFYAAQIVLTFEYL HSLDLIYRDLKPENLLIDHQGYIQVTDGFAKRVKGRWTWLCGTPEYLAPETILSKGYKAVDWWALGVLIY EMAAGYPPFFADQPIQIYEKIVSGKVRFPSPHFSSDLKDLLRNLQVLDLTKRFGNLKNGVNDIKNHKWFATTD WIAIYQRKVEAPFIPKFKGAGDTSNFDDYEEEDIRVINEKCGKEFSEF</p> <p>>ENSCPOP00000008705_Cavia_porcellus (b) LRNSYMTKPFYSYMFVKEFLAKAKEDFLKKWENPPNNAGLEDFERKKTTLGTGSFGRVMLVKHKATEQYYAM KILDKQKVVKLKQIEHTLNEKRILQAVNFPFLVRLLEYAFKDNSNLYMVMVEYVPGGEMFSLHRRIGRFSEPHA RFYAAQIVLTFEYLHSLDLIYRDLKPENLLIDHQGYIQVTDGFAKRVKGRWTWLCGTPEYLAPETILSKGY NKAVDWWALGVLIYEMAAGYPPFFADQPIQIYEKIVSGKVRFPSPHFSSDLKDLLRNLQVLDLTKRFGNLKNG VSDIKTHKWFATTDWIAIYQRKVEAPFIPKFRGSGDTSNFDDYEEEDIRVITEKCSKEFSDF</p>
<p><i>O. cuniculus</i></p>	<p>>ENSOCUP00000003134_Oryctolagus_cuniculus (b) MGNAATAKKGSEVESVKEFLAKAKEDFLKKWENPPNNAGLEDFERKKTTLGTGSFGRVMLVKHKATEQYYAM KILDKQKVVKLKQIEHTLNEKRILQAVNFPFLVRLLEYAFKDNSNLYMVMVEYVPGGEMFSLHRRIGRFSEPHA RFYAAQIVLTFEYLHSLDLIYRDLKPENLLIDHQGYIQVTDGFAKRVKGRWTWLCGTPEYLAPETILSKGY NKAVDWWALGVLIYEMAAGYPPFFADQPIQIYEKIVSGKVRFPSPHFSSDLKDLLRNLQVLDLTKRFGNLKNG VSDIKTHKWFATTDWIAIYQRKVEAPFIPKFRGSGDTSNFDDYEEEDIRVITEKCAKEFCEF</p>

<i>E. caballus</i>	<p>>ENSECAP00000020287 Equus caballus (b) MSARKSSEASACSSSEVSVEFLAKAKEDFLKKWENPAQNNAGLEDFERKKTTLGTGSFGRVMLVKHKATEQY YAMKILDKQKVVKLKQIEHTLNEKRILQAVNFPFLVRLLEYSFKDNSNLYMMEYVPGGEMFSLRRIGRFSE PHARFYAAQIVLTFEYLHSLDLIYRDLKPENLLIDHQGYIQVTDGFAKRVKGRWTWLCGTPEYLAPEIILSKGY KGYNKAVDWWALGVLIYEMAAGYPPFFADQPIQIYEKIVSGKVRFPSSHFSDDLKDLLRNLLQVDLTKRFGNL KNGVSDIKTHKWFATTDWIAIYQRKVEAPFIPKFRGSGDTSNFDDYEEEDIRVSI TEKCAKEFCE</p>
<i>P. vampyrus</i>	<p>>ENSPVAP00000016560 Pteropus vampyrus (a) MGNAAAACGGSEQESVKEFLAKAKEDFLKKWENPAQNTAHLDQFERIKTLGTGSFGRVMLVKHKETGSHFAM KILDKQKVVKLKQIEHTLNEKRILQAVNFPFLVRLLEYSFKDNSNLYMIMEYVPGGEMFSLRRIGRFSEPHA RFYAAQIVLTFEYLHSLDLIYRDLKPENLLIDQQGYIQVTDGFAKRVKGRWTWLCGTPEYLAPEIILSKGY NKAVDWWALGVLIYEMAAGYPPFFADQPIQIYEKIVSGKVRFPSSHFSDDLKDLLRNLLQVDLTKRFGNLKNG VNDIKNHKWFATTDWIAIYQRKVEAPFIPKFKGPGDTSNFDDYEEEDIRVSI NEKCGKEFSE</p>
<i>T. truncatus</i>	<p>>ENSTTRP00000013926 Tursiops truncatus (a) MGNAAAPKGGSEQESVKEFLAKAKEDFLKKWENPAQNTAHLDQFERIKTLGTGSFGRVMLVKHKETGNHFAM KILDKQKVVKLKQIEHTLNEKRILQAVNFPFLVRLLEYSFKDNSNLYMIMEYVPGGEMFSLRRIGRFSEPHA RFYAAQIVLTFEYLHSLDLIYRDLKPENLLIDQQGYIQVTDGFAKRVKGRWTWLCGTPEYLAPEIILSKGY NKAVDWWALGVLIYEMAAGYPPFFADQPIKIYDKIVSGKVRFPSSHFSDDLKDLLRNLLQVDLTKRFGNLKNG VNDIKNHKWFATTDWIAIYQRKVEAPFIPKFKGPGDTSNFDDYEEEDIRVSI SEKCGKEFSE</p> <p>>ENSTTRP00000010712 Tursiops truncatus (b) MAAYRELPCNQYTGTALQKLEGFASRLFHRHSGKTAHDQKTTLENSLHFSEHTALWDRSMKEFLAKAKED FLKKWENPAPNNAGLEDFERKKTTLGTGSFGRVMLVKHKATEQYYAMKILDKQKVVKLKQIEHTLNEKRILQ AVNFPFLVRLLEYSFKDNSNLYMMEYVPGGEMFSLRRIGRFSEPHARFYAAQIVLTFEYLHSLDLIYRDLK PENLLIDHQGYIQVTDGFAKRVKGRWTWLCGTPEYLAPEIILSKGYNKAVDWWALGVLIYEMAAGYPPFFAD QPIQIYEKIVSGKVRFPSSHFSDDLKDLLRNLLQVDLTKRFGNLKNGVSDIKTHKWFATTDWIAIYQRKVEAP FIPKFRGSGDTSNFDDYEEEDIRVSI TEKCGKEFCE</p>
<i>M. eugenii</i>	<p>>ENSMEUP00000001850 Macropus eugenii (a) KEFLAKAKEEFLKKWESPQSTVQLDQFDRIKTLGTGSFGRVILVKHRETGNFYAMKVLKQKVVKLKQIEH TMNEKRILQAINFPFLVRLLEYSFKDNTNLYMMEYVPGGEMFSLRRIGRFSEPHARFYAAQIVLTFEYLH SLDLIYRDLKPENLLIDQQGYIQVTDGFAKRVKGRWTWLCGTPEYLAPEIILSKGYNKAVDWWALGVLIYEM AAGYPPFFADQPIQIYEKIVSGKVRFPSSHFSDDLKDLLRNLLQVDLTKRYGNLKNVNDIKNHKWFATTDWI AIYQRK</p> <p>>ENSMEUP00000011811 Macropus eugenii (rt) MGNAAATKGGSELESVKEFLAKAKEEFLKWEAPAQNTALEHFDRIKTLGTGSFGRVMLVKHKETGNHFAM KILDKQKVVKLKQIEHTLNEKRILQAVNFPFLVRLLEYSFKDNTNLYMMEYVVLGGEMFSLRRIGRFSEPHA RFYAAQIVLTFEYLHSLDLIYRDLKPENLLIDQHGYYIQVTDGFAKRVKGRWTWLCGTPEYLAPEIILSKGY NKAVDWWALGVLIYEM</p>
<i>M. domestica</i>	<p>>ENSMODP00000015141 Monodelphis domestica (a) SVKEFLAKAKEEFLKKWENPSQPSVIQLDLYERLKTTLGTGSFGRVVLVKSKETGNFFAMKILDKQKVVKLKQ IEHTMNEKRILQISFPFLVKLECAFKNNSNLYMMEYVAGGEMFSLRRIGRFSEPHARFYAAQIVLTFEYL HSLDLIYRDLKPENLLIDQQGYIQVTDGFAKRVKGRWTWLCGTPEYLAPEIILSKGYNKAVDWWALGVLI YEMAAGYPPFFADQPIQIYEKIVSGKVRFPSSHFSDDLKDLLRNLLQVDLTKRYGNLKNVNDIKNHKWFATT DWIAIYQRKVEAPFIPKCKGPGDTSNFDDYEEELRISISEKCKEFAEF</p>
<i>A. carolinensis</i>	<p>>ENSACAP00000005713 Anolis carolinensis (b) MAAQKELQGNPSTGTANALQRLEGFANRLFHRHSGSSSELKAAQENESPHFSELAALWERSMKEFLAKAKE DFLRKWESPQNTAGLEDFERLKTTLGTGSFGRVMLVKHKATEQYAMKILDKQKVVKLKQIEHTLNEKRILQ AVNFPFLVRLLEYSFKDNSNLYMMEYVPGGEMFSLRRIGRFSEPHARFYAAQIVLTFEYLHSLDLIYRDLK PENLLIDQQGYIQVTDGFAKRVKGRWTWLCGTPEYLAPEIILSKGYNKAVDWWALGVLIYEMAAGYPPFFA DQPIQIYEKIVSGKVRFPSSHFSDDLKDLLRNLLQVDLTKRYGNLKNVNDIKNHKWFATTDWIAIYQRKVEA PFIKCRGPGDTSNFDDYEEEDIRVSLTEKCAKEFADF</p>

<p><i>T. rubripes</i></p>	<p>>ENSTRUP00000013710 Takifugu rubripes (a) MGNAPTARKGSEMESVKEFLAKAKEDFLKKWENPAQNTACLEQFERLKTTLGTGSFGRVMLVKHRETGQHYAM KILNKQKVVKLKQIEHTLNEKRI LQAVSFPFLVRLVLEYSFKDNTNLYMVMEYVPGGEMFSLHRRIGRFSEPHA RFYAAQIVLTFEYLHSLDLIYRDLKPENLLIDQQGYIQVTDGFGFAKRVKGRWTWLCGTPEYLAPEI ILSKGY NKAVDWWALGVLVYEMAAGYPPFFADQPIQIYEKIVSGKVRFPSPHFSSDLKDLLRNLQVLDLTKRFGNLKNG VNDIKGHKWFATTDWIAIYQKKEVAPFIPKCKGPGDTSNFDDYEEEEIRVSFTEKCAKEFAEF</p> <p>>ENSTRUP00000032221 Takifugu rubripes (a) MGNTPTTKKGNEMESVKEFLAKAKEDFLKKWENPAQNTAALDHFERLKTTLGTGSFGRVMLVKHKEGQHFAM KILNKQKVVKLKQIEHTLNEKRI LQAVNFPFLVLCLEHSFKDNSNLYMVMEYVPGGEMFSLHRRIGRFSEPHA RFYAAQIVLTFEYLHSLDLIYRDLKPENLLIDQQGYIQVTDGFGFAKRVKGRWTWLCGTPEYLAPEI ILSKGY NKAVDWWALGVLVYEMAAGYPPFFADQPIQIYEKIVSGKVRFPSPHFSSDLKDLLRNLQVLDLTKRFGNLKNG VNDIKGHKWFATTDWIAIYQKKEVAPFIPKCKGPGDTSNFDDYEEEEIRVSI TEKCAKEFAEF</p> <p>>ENSTRUP00000015108 Takifugu rubripes (b) MGNAATAKKGNEQESVKEFLAKAKEDFLRKWECPPQCTTGLDDDFRDKTLGTGSFGRVMLVKHKETNQFYAM KILDKQKVVKLKQIEHTLNEKRI LQAVSFPFLVRLVYSFKDNSNLYMVMEYVPGGEMFSLHRRIGRFSEHHA RFYAAQI I LTFEYLHSLDLIYRDLKPENLLIDQQGYIQVTDGFGFAKRVKGRWTWLCGTPEYLAPEI ILSKGY NKAVDWWALGVLVYEMAAGYPPFFADQPIQIYEKIVSGKVRFPSPHFSSDLKDLLRNLQVLDLTKRFGNLKNG VNDIKNHKWFSTTDWIAIYERKVEAPFIPKCRGPGDTSNFDDYEEEDVHVSQTEKCAKEFADF</p> <p>>ENSTRUP00000026750 Takifugu rubripes (b) MGNAATAKKGNELESVKEFLAKAKEDFLRKWECPPQSTTCLDDDFRDLKTTLGTGSFGRVMLVKHKGTQFYAM KILDKQKVVKLKQIEHTLNEKRI LQAVSFPFLVRLVYAFKDNSNLYMVMEYVPGGEMFSLHRRIGRFSEPHA RFYAAQIVLTFEYLHSLDLIYRDLKPENLLIDHHGYIQVTDGFGFAKRVKGRWTWLCGTPEYLAPEI ILSKGY NKAVDWWALGVLVYEMAAGYPPFFADQPIQIYEKIVSGKVRFPSPHFSSDLKDLLRNLQVLDLTKRFGNLKNG VNDIKGHKWFATTDWIAIYERKVEAPFIPKCRGPGDTSNFDDYEEEEIRVSLTEKCAKEFAEF</p>
<p><i>O. latipes</i></p>	<p>>ENSORLP00000008832 Oryzias latipes (a) AAIPTHNMFLFAVKEFLAKAKEDFLKKWENPAQNTAALDHFERLKTTLGTGSFGRVMLVKHKETGQHFAMKIL DKQKVVKLKQIEHTLNEKRI LQAVSFPFLVQLEHSFKDTSNLYMVMEYVPGGEMFSLHRRIGRFSEPHARFY AAQIVLTFEYLHSLDLIYRDLKPENLLIDQQGYIQVTDGFGFAKRVKGRWTWLCGTPEYLAPEI ILSKGY VDWWALGVLVYEMAAGYPPFFADQPIQIYEKIVSGKVRFPSPHFSSDLKDLLRNLQVLDLTKRFGNLKNGVND IKGHKWFATTDWIAIYQKKEVAPFIPKCKGPGDTSNFDDYEEEEIRVSFSEKCAKEFAEF</p> <p>>ENSORLP00000018527 Oryzias latipes truncated (a) VKEFLAKAKEDFLKKWENPSONTANLEQFERLKTTLGTGSFGRVMLVKHRETGQHYAMKILNKQKVVKLKQIE HTLNEKRI LQAVSFPFLVRLVLEYSFKDNTNLYMVMEYVPGGEMFSLHRRIGRFSEPHARFYATQIVLTFEYLH ALDLIYRDLKPENLLIDQQGYIQVTDGFGFAKRVKGRWTWLCGTPEYLAPEI ILSKGYNKAVDWWALGVLVY EMAAGYPPFFADQPIQIYEKIVSGKVRFPSPHFSSDLKDLLRNLQVLDLTKRFGNLKNGVNDIKGHKWFATTDW IAIYQKKEVAPFIPKCKGPGDTSNFDDYEEEEIRVSFSEKCAKEFAEF</p> <p>>ENSORLP00000007943 Oryzias latipes (b) MGNTATAKKGNEQESVKEFLAKAKEDFLRKWECPPQCTTSLDDDFERFKTTLGTGSFGRVMLVKHKATNQFYAM KILDKQKVVKLKQIEHTLNEKRI LQAVSFPFLVRLVYAFKDNSNLYMVMEYVPGGEMFSLHRRIGRFSEHHA RFYAAQIVLTFEYLHSLDLIYRDLKPENLLIDHHGYIQVTDGFGFAKRVKGRWTWLCGTPEYLAPEI ILSKGY NKAVDWWALGVLVYEMAAGYPPFFADQPIQIYEKIVSGKVRFPSPHFSSDLKDLLRNLQVLDLTKRFGNLKNG VNDIKNHKWFSTTDWIAIYERKIEAPFIPKCRGPGDTSNFDDYEEEDIHVSQTEKCGKEFADF</p> <p>>ENSORLP00000021647 Oryzias latipes (b) MGNAATAKKGNELESVKEFLAKAKEDFLRKWECPPQSTTCLDDDFRDKTLGTGSFGRVMLVKHKSSEQFYAM KILDKQKVVKLKQIEHTLNEKRI LQAVSFPFLVRLVYAFKDNSNLYMVMEYVPGGEMFSLHRRIGRFSEPHA RFYAAQIVLTFEYLHSLDLIYRDLKPENLLIDHHGYIQVTDGFGFAKRVKGRWTWLCGTPEYLAPEI ILSKGY NKAVDWWALGVLVYEMAAGYPPFFADQPIQIYEKIVSGKVRFPSPHFSSDLKDLLRNLQVLDLTKRFGNLKNG VNDIKGHKWFATTDWIAIYERKVEAPFIPKCRGPGDTSNFDDYEEEEIRVSLTEKCAKEFAEF</p>
<p><i>G. aculeatus</i></p>	<p>>ENSGACP00000013822 Gasterosteus aculeatus (a) MGNTPTAKKGNEMESVKEFLAKAKEDFLKKWENPAQNTAALDHFERLKTTLGTGSFGRVMLVKHKEGQHFAM KILDKQKVVKLKQIEHTLNEKRI LQAVSFPFLVRLVLEYSFKDNTNLYMIMEYVPGGEMFSLHRRIGRFSEPHA RFYAAQIVLTFEYLHSLDLIYRDLKPENLLIDQQGYIQVTDGFGFAKRVKGRWTWLCGTPEYLAPEI ILSKGY NKAVDWWALGVLVYEMAAGYPPFFADQPIQIYEKIVSGKVRFPSPHFSSDLKDLLRNLQVLDLTKRFGNLKNG VNDIKGHKWFATTDWIAIYQKKEVAPFIPKCKGPGDTSNFDDYEEEEIRVSFTEKCAKEFAEF</p> <p>>ENSGACP00000024909 Gasterosteus aculeatus fixedExon5 (a) MGNAPTARKGSEMESVKEFLAKAKEDFLKKWESPAQNTAGLEQFERLKTTLGTGSFGRVMLVKHRETGQHYAM KILNKQKVVKLKQIEHTLNEKRI LQAVSFPFLVRLVLEYSFKDNTNLYMVMEYVPGGEMFSLHRRIGRFSEPHA RFYAAQIVLTFEYLHSLDLIYRDLKPENLLIDQQGYIQVTDGFGFAKRVKGRWTWLCGTPEYLAPEI ILSKGY NKAVDWWALGVLVYEMAAGYPPFFADQPIQIYEKIVSGKVRFPSPHFSSDLKDLLRNLQVLDLTKRFGNLKNG VNDIKGHKWFATTDWIAIYQKKEVAPFIPKCKGPGDTSNFDDYEEEEIRVSFNEKCGKEFAEF</p> <p>>ENSGACP00000023579 Gasterosteus aculeatus (b) MGNAATAKKGNELESVKEFLAKAKEDFLRKWECPPQSATCLDDDFRDLKTTLGTGLWRVMLVKHKATEQHFAM KILDKQKVVKLKQIEHTLNEKRI LQAVSFPFLVRLVLEYSFKDNTNLYMVMEYVPGGEMFSLHRRIGRFSEPHA RFYAAQIVLTFEYLHSLDLIYRDLKPENLLIDHHGYIQVTDGFGFAKRVKGRWTWLCGTPEYLAPEI ILSKGY NKAVDWWALGVLVYEMAAGYPPFFADQPIQIYEKIVSGKVRFPSPHFSSDLKDLLRNLQVLDLTKRFGNLKNG VNDIKGHKWFATTDWIAIYERKVEAPFIPKCRGPGDTSNFDDYEEEEIRVSVTEKCGKEFAEF</p> <p>>ENSGACP00000012693 Gasterosteus aculeatus (b) MGNAATAKKGNEQESVKEFLAKAKEDFLRKWECPPQSTTGLDDDFRDKTLGTGSFGRVMLVKHKEGQHFAM KILDKQKVVKLKQIEHTLNEKRI LQAVSFPFLVRLVLEYSFKDNTNLYMVMEYVPGGEMFSLHRRIGRFSEHHA RFYAAQIVLTFEYLHSLDLIYRDLKPENLLIDHHGYIQVTDGFGFAKRVKGRWTWLCGTPEYLAPEI ILSKGY NKAVDWWALGVLVYEMAAGYPPFFADQPIQIYEKIVSGKVRFPSPHFSSDLKDLLRNLQVLDLTKRFGNLKNG VNDIKNHKWFSTTDWIAIYERKVEAPFIPKCRGPGDTSNFDDYEEEDIRVSQTEKCAKEFAEF</p>

<i>T. nigroviridis</i>	<p>>ENSTNIP00000013350_Tetraodon_nigroviridis (a) MGNTPTTKKGNEMESVKEFLAKAKEDFLRKKWENPAQQTAAALDHFDRKLTGLTGSGFRVMLVKHKETGQHFAM KILDKQKVVKLKQIEHTLNEKRILQAVNFPFLVCLLEHSFKDNSNLYMVMEYVPGGEMFSLRRIGRFSEPHA RFYAAQIVLTFEYLHSLDLIYRDLKPENLLIDQQGYIQVTDGFAKRVKGRWTWLCGTPEYLAPEIILSKGY NKAVDWWALGVLIIYEMAAGYPPFFADQPIQIYEKIVSGKVRFPESHSSDLKDLLRNLQVLDLTKRFGNLRNG VNDIKGHKWFAATTDWIAIYQRKVEAPFIPKCKGPGDTSNFDDYDEEEIRVSFTEKCAKEFAEF</p> <p>>ENSTNIP00000015136_Tetraodon_nigroviridis (b) VSPVKEFLAKAKEDFLRKECPQRCTTGLDDDFDRKLTGLTGSGFRVMLVKHKETNQFYAMKILDKQKVVKLK QIEHTLNEKRILQAVSFPFLVRLVYAFKDNSNLYMVMEYVPGGEMFSLRRIGRFSEQHARFYAAQIILTFE YLHSLDLIYRDLKPENLLIDQQGYIQVTDGFAKRVKGRWTWLCGTPEYLAPEIILSKGYNKAVDWWALGVL IYEMAAGYPPFFADQPIQIYEKIVSGKVRFPESHSSDLKDLLRNLQVLDLTKRFGNLRNGVNDIKNHKWFST TDWIAIYEKKVEAPFLPKCRGPGDTSNFDDYEEEDVHISQTEKCAKEFDDF</p> <p>>ENSTNIP00000011358_Tetraodon_nigroviridis (b) MGNAATAKKGNELESVKEFLAKAKEDFLRKECPQSTTCLDDDFDRKLTGLTGSGFRVMLVKHKETEYFYAM KILDKQKVVKLKQIEHTLNEKRILQAVSFPFLVKLEYAFKDNSNLYMVMEYVPGGEMFSLRRIGRFSEPHA RFYAAQIVLTFEYLHSLDLIYRDLKPENLLIDHGGYIQVTDGFAKRVKGRWTWLCGTPEYLAPEIILSKGY NKAVDWWALGVLIIYEMAAGYPPFFADQPIQIYEKIVSGKVRFPESHSSDLKDLLRNLQVLDLTKRFGNLRNG VNDIKGHKWFAATTDWIAIYERKVEAPFIPKCRGPGDTSNFDDYDEEEIRVSLTEKCAKEFAEF</p>
<i>C. intestinalis</i>	<p>>ENSCINP00000013406_Ciona_intestinalis MGNTPAKKGDAESVKAFLAEAKEEFLKKNENPIQNNKSLDDFERLKTGLTGSGFRVILVKRKNENSYAMK ILDKQKVVKLKQVEHTLNEKKILQAINFPFLVKMDFSFKDNSNLYMVLEVYVIGGEMFSLRRIGRFSESHSR FYAAQIVLGFYELHYLDIYRDLKPENLLIDQQGYIQVTDGFAKRVKGRWTWLCGTPEYLAPEIILSKGYN KAVDWWALGVLIIYEMAAGYPPFFADQPIQIYEKIVSGKVRFPESHSSDLKDLLRNLQVLDLTKRFGNLRNG SDIKGHRWFQPIDWIAVYQRKLDAPFIPKFKHPGSTENFDDYEEBQLRVHSTEKCVKEFADF</p>
<i>C. savignyi</i>	<p>>Homolog1_Ciona_savignyi MGNTPAKKGDAESVKAFLAEAKEEFLKKNENPIQNNKSLDDFERLKTGLTGSGFRVILVKRKNENTSFYAMK ILDKQKVVKLKQVEHTLNEKKILQAINFPFLVKMDFSFKDNSNLYMVLEVYVIGGEMFSLRRIGRFSESHSR FYAAQIVLGFYELHYLDIYRDLKPENLLIDQQGYIQVTDGFAKRVKGRWTWLCGTPEYLAPEIILSKGYN KAVDWWALGVLIIYEMAAGYPPFFADQPIQIYEKIVSGKVRFPESHSSDLKDLLRNLQVLDLTKRFGNLRNG ADIKGHRWFQPIDWIAVYQKLEAPFMPKFKHPGSTENFDDYEEBQLRIHSTEKCVKEFADF</p>
<i>P. marinus</i>	<p>>Homolog1_Petromyzon_marinus KEFLAKAKEDFMRKWNENPQNTSCLEDFERIKTLTGSGFRVMLVKHKSSDQFFAMKILDKQKVVKLKQVEH TLNEKRILQAIISFPFLVRLVLEYSFKDNSNLYMVLEVYVPGGEMFSLRRIGRFSEPHSRFYAAQIVLAFEYLHS LDLIYRDLKPENLLIDQQGYIQVTDGFAKRVKGRWTWLCGTPEYLAPEIILSKGYNKAVDWWALGVLIIYEM AAGYPPFFADQPIQIYEKIVSGKVRFPESHSSDLKDLLRNLQVLDLTKRFGNLRNGVNDIKNHKWFSTTDWI AIYQRKVEAPFIPKCKGPGDASNFDDYDEEEIRISSTEKCAKEFADF</p> <p>>Homolog2_Petromyzon_marinus KEFLAKAKEDFLKKNENPQNTSCLEDFERMKTGLTGSGFRVMLVKHKATDRYFAMKILDKQKIMRLKQVEH TLNEKRILQAIISFPFLVLSLEYSYKDNSNLYMVLEVYVPGGEMFSLRRIGRFSEPHSRFYAAQIVLAFEYLHS LDLIYRDLKPENLLIDQQGYIQXXGYNKAVDWWALGVLIIYEM AAGYPPFFADQPIQIYEKIVSGK</p>
<i>S. acanthias</i>	<p>>Homolog1_Squalus_acanthias MGNAATAKKGNEIESVKEFLAKAKEDFLRKEWSPQNTAGLDDFERQKTLTGSGFRVMLVKHKETEYFYAM KILDKQKVVKLKQIEHTLNEKRILQAVNFPFLVLEYSFRDNSNLYM</p> <p>>Homolog2_Squalus_acanthias KSHRKNPTDLFCFKIMNQCSEVTCQQAADHKGSKMSSALQKLENLAIRLFNRSTRGSPQDFETGSESDIRPE SEYCLAWNLMKDFLAKAKEEFLEKWPSTQNTASLDDFERTKTLTGSGFRVMLVKHKITKEHYAMKILDK QKVVKLKQIEHTLNEKKILQAVRFPFLVRLVFTFKDNTNLYMVMEYIQGGEMFSLRRSRGRFSEPHARFYAA QIVLAFEYLHSLDLVYRDLK</p>
<i>L. erinacea</i>	<p>>Homolog1_Leucoraja_erinacea MKLWRLTSREWNKDSNSSPSIVYKDHHPKNQEIETVKDYLEKAREEFLQKWPSONTASLDDFDRTKTLG TGSFGRVMLVKHKATKEHYAMKILDKQKVVKLKQIEHTLNEKRILQAVRFPFLVRLVFSFKDNTNLYMVMEY IQGGEMFSLRRSRGRFSEPHSRFYAAQIVLAFEYLHSLDLLYRDLKPENILN</p> <p>>Homolog2_Leucoraja_erinacea MKLWRLTSREWNKDSNSSPSIVYKDHHPKNQEIETVKDYLEKAREEFLQKWPSONTASLDDFDRTKTLG TGSFGRVMLVKHRATKEHYAMKILDKQNVVQLKQIEHTLNEKRILQAVRFPFLVRLVFSQDNTNLYMAME</p>