

Xenopus_tropicalis	-----MKMVSSDVRDKTVRKHVEHCFL-VIVVIRMVPGFAST---VDP-TLMPIVNEEY	50	amphibian	
Thamnophis_sirtalis	-----MNKKSSG-YFLLIILLIRMAPSFPTTVSYVDP-TLESM--EYS	39	reptiles	
Anolis_carolinensis	-----MDKKNNGCCLL-MILLIRMAPTLSSTVSYTDP-TLAPVATEHS	41		
Serinus_canaria	-----MKKTQSCFLLI-ILLTRIVPSLSSAVNYTDT-TLEPVVTENS	41		
Corvus_brachyrhynchos	-----MKKTQSCFLLI-ILLTRIVPSLSSTVNYTDP-TLEPVVTENS	41		
Ficedula_albicollis	-----MKKTQTCFLLI-ILLTRIVPSLSSTVNYTDP-TLEPVVTENS	41		
Anser_cygnoides_domesticus	-----MKKTTHSCFLLI-ILLIRMVPSLTATVNYTDP-TLEPVVTENS	41		
Anas_platyrhynchos	-----MKKTTHGCFLLI-ILLIRMVPSLTATVNYTDP-TLEPVVTENS	41		
Apteryx_australis_mantelli	-----MKKTTHSCFLLI-ILLIRMVPSLTSTVNYTDP-TLEPVVTENS	41		
Gallus_gallus	-----MKKTTHSCFLLI-ILLIRMVPSLTATVNYTDP-TLEPVVTENS	41		
Picoides_pubescens	-----MKKTTHGCFLLV-ILLIRMVPSLSSTVNYTDT-TLEPLVTENS	41		
Chaetura_pelagica	-----MKKTQSCILLI-ILLIRMVPSLSSTVNYTDP-TLEPVVTENS	41		
Apaloderma_vittatum	-----MKKRTHSCFLLI-ILLTRMVPSLSSTVNYTDP-TLEPVVTENS	41		aves
Balearica_regulorum_gibbericeps	-----MKKTTHSCFLLI-ILLIRMIPSLSSTVNYTDP-TLEPVVTENS	41		
Cuculus_canorus	-----MKTTHSCFLLV-ILLIKMVPTLSSTVNYTDP-TLEPVVTENS	41		
Caprimulgus_carolinensis	-----MKKTTHSCFLL-IILLMRMVPSLSSTVNYTDP-TLEPVVTENS	41		
Calypte_anna	-----MKKTAHSCILL-IILLIRMAPSLSSTVNYTDP-TLEPVVTENS	41		
Pygoscelis_adeliae	-----MKKTTHSCLLV-IILLIRMVPSLSSTVNYTDP-TLEPVVTENS	41		
Egretta_garzetta	-----MKKTTHICFLL-VILLIRMVPSLSSTVNYTDP-TLEPVVNENS	41		
Nipponia_nippon	-----MKKVTHS-FLLIILLIRMVPSLSSTVNYTDP-TLEPVVTENS	41		
Charadrius_vociferus	-----MVPSLSSTVNYTDP-TLEPVVTENS	24		
Aquila_chrysaetos_canadensis	-----MKKTTHSCFLLLIIFLTRMVPSLSSTVNYTDP-TLEPVVTENS	42		
Phalacrocorax_carbo	-----MVPSLSSTVNYTDP-TLEPVATENS	24		
Sus_scrofa	-----MRFTLTRWCLTLFIFLNRPLPVLPSADGAHTPTLEPEPFLYI	43	mammals	
Mus_musculus	-----MRFLLVNRF'TLLLLLLVSP'PVLQAPT'NL'TDS-GLDQEPFLYL	42		
Rattus_norvegicus	MT'PRRSRMKRRNLRKPKMR'FLLLNR'F'TLLLLLLVSP'PVLQAPT'NL'TDS-GLDQEPFLYL	59		
Jaculus_jaculus	-----MKLSLTLRVAGLFILLNQSPALPYFSNFTLPTNEPDEPFLYT	43		
Pteropus_vampyrus	-----MKFTLTRWCFVLFIFLNHPTPVLPTSSNNTYSPALESSEPFLYV	43		
Cavia_porcellus	-----MRFTFTRQFLAFFILISNPASILPRESENTFP-TFEPEPYLYS	42		
Galeopterus_variegatus	-----MRLRVTCRLLALFVLLNHPTPILPAFSNQTFP-TLDSEPFYLYI	42		
Oryctolagus_cuniculus	MAHLPPSRMKRDLQKPKMF'TLTWRCFALFLLHQPTPVNPASSNDTHP-TVEPEPFLYV	59		
Colobus_angolensis_palliatus	-----MKFTF'TSRCFALFLLNHPIPILPAFSNQTYP-TIEPEPFLYV	42		
Homo_sapiens	-----MRFTF'TSRCLALFLLNHPTPILPAFSNQTYP-TIEPKPFLYV	42		
Pan_troglodytes	-----MRFTF'TSRCLALFLLNHPTPILPAFSNQTYP-TIEPEPFLYV	42		
Canis_lupus_familiaris	-----MKFTLTRCLVLFIFLNHPTPVLPATSN'DTYPPNMESEPFLYV	43		
Equus_caballus	-----MKFSLTRCLVLFIFLNHPTPILPASSNDTYPP'TIESEPFLYV	43		
Ceratotherium_simum_simum	-----MKFSLTRCLVLFIFLNHPTPILPATSN'DTYPP'TIESEPFLYV	43		

<i>Xenopus_tropicalis</i>	ISRQRIINSQFKCYEKMKKDSPYKSKGLYCNRTWDGWL CWDDTPAGINVTQNC PDYFPDF	110	amphibian
<i>Thamnophis_sirtalis</i>	VIHQKIVDSQFKCYERMNRAPPYKKKGLYCNRTWDGWL CWDDTPAGEYADQNC PDYFQDF	99	reptiles
<i>Anolis_carolinensis</i>	AIPQKIVDSQFKCYERMNRTPPYKKKGLFCNRTWDGWL CWDDTPAGEFADQNC PDYFPDF	101	
<i>Serinus_canaria</i>	VIRQKIIDSQFKCYERMNRAPPYKKKGLFCNRTWDGWL CWDDTPAGRLTAQNC PDYFPDF	101	
<i>Corvus_brachyrhynchos</i>	VIRQKIIDSQFKCYERMNRAPPYKKKGLFCNRTWDGWL CWDDTPAGRLTAQNC PDYFPDF	101	
<i>Ficedula_albicollis</i>	VIRQKIIDSQFKCYERMNRAPPYKKKGLFCNRTWDGWL CWDDTPAGRLTAQNC PDYFPDF	101	
<i>Anser_cygnoides_domesticus</i>	VIRQKIIDSQFKCYERMNRAPPYRKKGLFCNRTWDGWL CWDDTPAGRVTAQNC PDYFPDF	101	
<i>Anas_platyrhynchos</i>	VIRQKIIDSQFKCYERMNRAPPYRKKGLFCNRTWDGWL CWDDTPAGRITAQNC PDYFPDF	101	
<i>Apteryx_australis_mantelli</i>	VIRQKIIDSQFKCYERMNRAPPYRKKGLFCNRTWDGWL CWDDTPAGRITAQNC PDYFPDF	101	
<i>Gallus_gallus</i>	VIRQKIIDSQFKCYERMNRAPPYRKKGLFCNRTWDGWL CWDDTPAGRITAQNC PDYFPDF	101	
<i>Picoides_pubescens</i>	VIRQKIIDSQFKCYERMNRAPPYKKKGLFCNRTWDGWL CWDDTPAGRITAQNC PDYFPDF	101	
<i>Chaetura_pelagica</i>	VIRQKIIDSQFKCYERMNRAPPYKKKGLFCNRTWDGWL CWDDTPAGRITAQNC PDYFPDF	101	
<i>Apaloderma_vittatum</i>	VIRQKIIDSQFKCYERMNRAPPYKKKGLFCNRTWDGWL CWDDTPAGRITAQNC PDYFPDF	101	
<i>Balearica_regulorum_gibbericeps</i>	VIRQKIIDSQFKCYERMNRAPPYKKKGLFCNRTWDGWL CWDDTPAGRVTAQNC PDYFPDF	101	
<i>Cuculus_canorus</i>	IIRQKIIDSQFKCYERMNRAPPYKKKGLFCNRTWDGWL CWDDTPAGRITAQNC PDYFPDF	101	
<i>Caprimulgus_carolinensis</i>	IIRQKIIDSQFKCYERMNRAPPYKKKGLFCNRTWDGWL CWDDTPAGRISAQNC PDYFPDF	101	
<i>Calypte_anna</i>	VIRQKIIDSQFKCYERMNRAPPYKKKGLFCNRTWDGWL CWDDTPAGRIAAQNC PDYFPDF	101	
<i>Pygoscelis_adeliae</i>	VIRQKIIDSQFKCYERMNRAPPYKKKGLFCNRTWDGWL CWDDTPAGRITAQNC PDYFPDF	101	
<i>Egretta_garzetta</i>	VIRQKIIDSQFKCYERMNRAPPYKKKGLFCNRTWDGWL CWDDTPAGRITAQNC PDYFPDF	101	
<i>Nipponia_nippon</i>	VIRQKIIDSQFKCYERMNRAPPYKKKGLFCNRTWDGWL CWDDTPAGRVTAQNC PDYFPDF	101	
<i>Charadrius_vociferus</i>	VIRQKIIDSQFKCYERMNRAPPYKKKGLFCNRTWDGWL CWDDTPAGRITAQNC PDYFPDF	84	mammals
<i>Aquila_chrysaetos_canadensis</i>	VIRQKIIDSQFKCYERMNRAPPYKKKGLFCNRTWDGWL CWDDTPAGRITAQNC PDYFPDF	102	
<i>Phalacrocorax_carbo</i>	VIRQKIIDSQFKCYERMNRAPPYKKKGLFCNRTWDGWL CWDDTPAGRITAQNC PDYFPDF	84	
<i>Sus_scrofa</i>	LGRKRMLEAQHRCYDRMQKLPYPYQEGGLYCNRTWDGWL CWDDTPAGVLAEQYCPDYFPDF	103	
<i>Mus_musculus</i>	VGRKKLLDAQYKCYDRIQQLPPYELEGEPYCNRTWDGWL CWDDTPAGATAYQHCPDYFPDF	102	
<i>Rattus_norvegicus</i>	VGRKKLLDAQYKCYDRIQQLPPYELEGEPYCNRTWDGWL CWDDTPAGVMSYQHCPDYFPDF	119	
<i>Jaculus_jaculus</i>	VGRQKLIDAQYKCYHRMEQLPPYELEGEPYCNRTWDGWL CWDDTPAGVMAYQLCPDYFPDF	103	
<i>Pteropus_vampyrus</i>	IGRKKMMDAENKCYRRMQQLPPYQEGEPYCNRTWDGWL CWDDTPAGVVTQQHCPDYFPDF	103	
<i>Cavia_porcellus</i>	VGRKKLVDAQYRCYDRMQQLPPYELEGEPYCNRTWDGWL CWDDTPAGVLSVQLCPDYFPDF	102	
<i>Galeopterus_variegatus</i>	VGRKKLLEAQYKCYDRMQQLPPYELEGEPYCNRTWDGWL CWDDTPAGVMTYQFCPDYFPDF	102	
<i>Oryctolagus_cuniculus</i>	IGRKKLMDAQYKCYDRMEQLPPYQEGEPYCNRTWDGWL CWDDTPAGVLSFYQCPDYFPDF	119	
<i>Colobus_angolensis_palliatus</i>	VGRKKMMDAQYKCYDRMQQLPPYQEGEPYCNRTWDGWL CWDDTPAGVLSYQFCPDYFPDF	102	
<i>Homo_sapiens</i>	VGRKKMMDAQYKCYDRMQQLPAYQEGEPYCNRTWDGWL CWDDTPAGVLSYQFCPDYFPDF	102	
<i>Pan_troglodytes</i>	VGRKKMMDAQYKCYDRMQQLPAYQEGEPYCNRTWDGWL CWDDTPAGVLSYQFCPDYFPDF	102	
<i>Canis_lupus_familiaris</i>	LGRKKMSDAQYKCYDRMQQLPPYQEGEPYCNRTWDGWL CWDDTPAGVLSHQYCPDYFPDF	103	
<i>Equus_caballus</i>	LGRKKMMDAQYKCYDRMQQLPPYQEGEPYCNRTWDGWL CWDDTPAGVLSYQYCPDYFPDF	103	
<i>Ceratotherium_simum_simum</i>	LGRKKMMDAQYKCYDRMQQLPPYQEGEPYCNRTWDGWL CWDDTPAGVLSHQYCPDYFPDF	103	

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Xenopus_tropicalis	DPTERASKYCDENGNWFQHPESNRTWSNYTLNSFTSEKLMAYILYYMAIVGHALSIVS	170	amphibian
Thamnophis_sirtalis	DPTEIATKYCDKTGTWFRHPETNRTWSNYKRCNSFTNEKRKMIFIVYYMTIAGHVLMSVS	159	reptiles
Anolis_carolinensis	DPTEIATKYCDKTGTWFRHPESNRTWSNYTRCNSFTNEKRKMVFILYYMTIVGHALSITS	161	
Serinus_canaria	DPTERASKYCDETGNWFRHPESNRTWSNYTLNSFTSEKLMKAFILYYMAIVGHALSITS	161	aves
Corvus_brachyrhynchos	DPTERASKYCDETGNWFRHPESNRTWSNYTLNSFTSEKLMKAFILYYMAIVGHALSITS	161	
Ficedula_albicollis	DPTERASKYCDETGNWFRHPESNRTWSNYTLNSFTSEKLMKAFILYYMAIVGHALSITS	161	
Anser_cygnoides_domesticus	DPTERASKYCDETGNWFRHPESNRTWSNYTLNSFTSEKLMKAFILYYMAIVGHALSITS	161	
Anas_platyrhynchos	DPTERASKYCDETGNWFRHPESNRTWSNYTLNSFTSEKLMKAFILYYMAIVGHALSITS	161	
Apteryx_australis_mantelli	DPTERASKYCDETGNWFRHPESNRTWSNYTLNSFTSEKLMKAFILYYMAIVGHALSITS	161	
Gallus_gallus	DPTERASKYCDETGNWFRHPESNRTWSNYTLNSFTSEKLMKAFILYYMAIVGHALSITS	161	
Picoides_pubescens	DPTERASKYCDETGNWFRHPESNRTWSNYTLNSFTSEKLMKAFILYYMAIVGHALSITS	161	
Chaetura_pelagica	DPTERASKYCDENGNWFRHPESNRTWSNYTLNSFTSEKLMKAFILYYMAIVGHALSITS	161	
Apaloderma_vittatum	DPTERASKYCDETGNWFRHPESNRTWSNYTLNSFTSEKLMKAFILYYMAIVGHALSITS	161	
Balearica_regulorum_gibbericeps	DPTERASKYCDETGNWFRHPESNRTWSNYTLNSFTSEKLMKAFILYYMAIVGHALSITS	161	
Cuculus_canorus	DPTERASKYCDETGNWFRHPESNRTWSNYTLNSFTSEKLMKAFILYYMAIVGHALSITS	161	
Caprimulgus_carolinensis	DPTERASKYCDETGNWFRHPESNRTWSNYTLNSFTSEKLMKAFILYYMAIVGHALSITS	161	
Calypte_anna	DPTERASKYCDETGNWFRHPESNRTWSNYTLNSFTSEKLMKAFILYYMAIVGHALSITS	161	
Pygoscelis_adeliae	DPTERASKYCDETGNWFRHPESNRTWSNYTLNSFTSEKLMKAFILYYMAIVGHALSITS	161	
Egretta_garzetta	DPTERASKYCDETGNWFRHPESNRTWSNYTLNSFTSEKLMKAFILYYMAIVGHALSITS	161	
Nipponia_nippon	DPTERASKYCDETGNWFRHPESNRTWSNYTLNSFTSEKLMKAFILYYMAIVGHALSITS	161	
Charadrius_vociferus	DPTERASKYCDETGNWFRHPESNRTWSNYTLNSFTSEKLMKAFILYYMAIVGHALSITS	144	
Aquila_chrysaetos_canadensis	DPTERASKYCDETGNWFRHPESNRTWSNYTLNSFTSEKLMKAFILYYMAIVGHALSITS	162	
Phalacrocorax_carbo	DPTERASKYCDETGNWFRHPESNRTWSNYTLNSFTSEKLMKAFILYYMAIVGHALSITS	144	
Sus_scrofa	DAAEKVTKYCGEDGDWYRHPESNISWSNYTMCNAFTPKLQNAVILYYLAIVGHLSLSILT	163	mammals
Mus_musculus	DTAEKVSKYCDENGEWFRHPDSNRTWSNYTMCNAFTPKLQNAVLYYLAIVGHLSLSIAA	162	
Rattus_norvegicus	DPTEKVSKYCDENGEWFRHPDSNRTWSNYTMCNAFTPKLQNAVLYYLAIVGHLSLSIAA	179	
Jaculus_jaculus	DPAESVTKYCDENGDFKHPDSNRTWSNYTMCNAFTPKLQNAVLYYLAIVGHLSLSIFT	163	
Pteropus_vampyrus	DPTEKATRYCDENGDWYKHPENKTWSNYSMCNAFTPEKLKNAYVLYYLAIVGHVSISAT	163	
Cavia_porcellus	DPTEKVTKYCDSEGVVFKHPENNRTWSNYTMCNAFTPEKLQNAVLYYLAIVGHMSISIT	162	
Galeopterus_variegatus	DPTEKVTKYCDEKGVVFKHPENNRTWSNYTMCNAFTPEKLNNAYVLYYLAIVGHLSLSIFT	162	
Oryctolagus_cuniculus	DPTEKVTKYCDSEGVVFKHPGNQOTWSNYTMCNAFTPEKLQNAVLYYLAIVGHLSLSIFT	179	
Colobus_angolensis_palliatus	DPSEKVTKYCDSEGVVFKHPENNRTWSNYTMCNAFTPEKLKNAYVLYYLAIVGHLSLSIFT	162	
Homo_sapiens	DPSEKVTKYCDEKGVVFKHPENNRTWSNYTMCNAFTPEKLKNAYVLYYLAIVGHLSLSIFT	162	
Pan_troglodytes	DPSEKVTKYCDEKGVVFKHPENNRTWSNYTMCNAFTPEKLKNAYVLYYLAIVGHLSLSIFT	162	
Canis_lupus_familiaris	DPSEKVTKYCDEKGDWYKHPENNRTWSNYTMCNAFTPEKLKNAYVLYYLAIVGHLSLSIFT	163	
Equus_caballus	DPAEKVTKYCDEKGDWYKHPENNRTWSNYTMCNAFTPEKLKNAYVLYYLAIVGHLSLSIFT	163	
Ceratotherium_simum_simum	DPAEKVTKYCDEKGVVFKHPENNRTWSNYTMCNAFTPEKLKNAYVLYYLAIVGHLSLSIFT	163	

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Xenopus_tropicalis	LMISLGIFFYFKSLSCQRITLHKNLFTSYVLNSVFTIVHLTAVVPD	230	amphibian
Thamnophis_sirtalis	LLISLGIFFYFKSLSCQRITLHKNLFCSYVLNSVFTLAHLIAIVPD	219	reptiles
Anolis_carolinensis	LLISLGIFFYFKSLSCQRITLHKNLFFSYVLNSVFTLAHLIAVVS	221	
Serinus_canaria	LLISLAIFFYFKSLSCQRITLHKNLFFSYVLNSMFTIAHLIAVVP	221	aves
Corvus_brachyrhynchos	LLISLAIFFYFKSLSCQRITLHKNLFFSYVLNSMFTIAHLIAVVP	221	
Ficedula_albicollis	LLISLAIFFYFKSLSCQRITLHKNLFFSYVLNSMFTIAHLIVVVP	221	
Anser_cygnoides_domesticus	LLISLAIFFYFKSLSCQRITLHKNLFFSYVLNSVFTIAHLIAVVP	221	
Anas_platyrhynchos	LLISLAIFFYFKSLSCQRITLHKNLFFSYVLNSVFTIAHLIAVVP	221	
Apteryx_australis_mantelli	LLISLAIFFYFKSLSCQRITLHKNLFFSYVLNSVFTIAHLIAVVP	221	
Gallus_gallus	LLISLAIFFYFKSLSCQRITLHKNLFFSYVLNSMFTIAHLIVVVP	221	
Picoides_pubescens	LLISLAIFFYFKSLSCQRITLHKNLFFSYVLNSVFTIAHLIAVVP	221	
Chaetura_pelagica	LLISLAIFFYFKSLSCQRITLHKNLFFSYVLNSVFTIAHLIAVVP	221	
Apaloderma_vittatum	LLISLAIFFYFKSLSCQRITLHKNLFCSYVLNSVFTIAHLIAVVP	221	
Balearica_regulorum_gibbericeps	LLISLAIFFYFKSLSCQRITLHKNLFFSYVLNSMFTIAHLIAVVP	221	
Cuculus_canorus	LLISLAIFFYFKSLSCQRITLHKNLFFSYVLNSMFTIAHLIAVVP	221	
Caprimulgus_carolinensis	LLISLAIFFYFKSLSCQRITLHKNLFFSYVLNSMFTIAHLIAVVP	221	
Calypte_anna	LLISLAIFFYFKSLSCQRITLHKNLFFSYVLNSMFTIAHLIAVVP	221	
Pygoscelis_adeliae	LLISLAIFFYFKSLSCQRITLHKNLFFSYVLNSVFTIAHLIAVVP	221	
Egretta_garzetta	LLISLAIFFYFKSLSCQRITLHKNLFFSYVLNSVFTIAHLIAVVP	221	
Nipponia_nippon	LLISLAIFFYFKSLSCQRITLHKNLFFSYVLNSVFTIAHLIAVVP	221	
Charadrius_vociferus	LLISLAIFFYFKSLSCQRITLHKNLFFSYVLNSVFTIAHLIAVVP	204	
Aquila_chrysaetos_canadensis	LLISLAIFFYFKSLSCQRITLHKNLFFSYVLNSMFTIAHLIAVVP	222	
Phalacrocorax_carbo	LLISLAIFFYFKSLSCQRITLHKNLFFSYVLNSMFTIAHLIAVVP	204	
Sus_scrofa	LLISLGIFFMFLRSISLSCQRVTLHKNMFLTYVLSIIIIIVHLVVIVP	223	mammals
Mus_musculus	LVASMLIFWIFKNSLSCQRVTLHKNMFLTYILNSIIIIIHLEVVVP	222	
Rattus_norvegicus	LIASMGIFLFFKNLSCQRVTLHKNMFLTYILNSIIIIIHLEVVVP	239	
Jaculus_jaculus	LVISLGIFFVCFRSLSCQRVTLHKNMFLTYILNSMIIIIHLEVIP	223	
Pteropus_vampyrus	LVISLGIFFMYFKSLGCQRVTLHKNMFLTYILNSMIIIIHLEVVVP	223	
Cavia_porcellus	LVVSLGIFFVYFRSLGCQRVTLHKNMFLTYILNSMIIIIHLEVVVP	222	
Galeopterus_variegatus	LVISLGIFFMYRNLSCQRVTLHKNMFLTYILNSMIIIIHLEVVVP	222	
Oryctolagus_cuniculus	LVISLGIFFMCFRSLGCQRVTLHKNMFLTYILNSMIIIIHLEVVVP	239	
Colobus_angolensis_palliatus	LVISLGIFFVFFKSLGCQRVTLHKNMFLTYILNSMIIIIHLEVVVP	222	
Homo_sapiens	LVISLGIFFVFFRSLGCQRVTLHKNMFLTYILNSMIIIIHLEVVVP	222	
Pan_troglodytes	LVISLGIFFVFFRSLGCQRVTLHKNMFLTYILNSMIIIIHLEVVVP	222	
Canis_lupus_familiaris	LVISLGIFFVFFKSLGCQRVTLHKNMFLTYILNSMIIIIHLEVVVP	223	
Equus_caballus	LVISLGIFFMFFKSLGCQRVTLHKNMFLTYILNSMIIIIHLEVVVP	223	
Ceratotherium_simum_simum	LVISLGIFFVFFKSLGCQRVTLHKNMFLTYILNSMIIIIHLEVVVP	223	

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TMI

TMII

Xenopus_tropicalis	QFFSQYMLGCNYFWMLCEGIYLHTLIVAVFAEEQRLHWYIYLLGWGFPLVPASIHAFART	290	amphibian
Thamnophis_sirtalis	QFFHQYTMGCNYFWMLCEGIYLHTLIVAVFAEEQRLHWYIYLLGWGFPLVPASIHAVARA	279	reptiles
Anolis_carolinensis	QFFHQYMMGCNYFWMLCEGIYLHTLIVAVFAEEQRLHWYIYLLGWGFPLVPASIHAVART	281	
Serinus_canaria	QFFHQYMLGCNYFWMLCEGIYLHTLIVAVFAEEQRLHWYIYLLGWGFPLVPASIHAVARA	281	aves
Corvus_brachyrhynchos	QFFHQYMLGCNYFWMLCEGIYLHTLIVAVFAEEQRLHWYIYLLGWGFPLVPASIHAVARA	281	
Ficedula_albicollis	QFFHQYMLGCNYFWMLCEGIYLHTLIVAVFAEEQRLHWYIYLLGWGFPLVPASIHAVARA	281	
Anser_cygnoides_domesticus	QFFHQYMLGCNYFWMLCEGIYLHTLIVAVFAEEQRLHWYIYLLGWGFPLVPASIHAVARA	281	
Anas_platyrhynchos	QFFHQYMLGCNYFWMLCEGIYLHTLIVAVFAEEQRLHWYIYLLGWGFPLVPASIHAVARA	281	
Apteryx_australis_mantelli	QFFHQYMLGCNYFWMLCEGIYLHTLIVAVFAEEQRLHWYIYLLGWGFPLVPASIHAIARA	281	
Gallus_gallus	QFFHQYMLGCNYFWMLCEGIYLHTLIVAVFAEEQRLHWYIYLLGWGFPLVPASIHAVARA	281	
Picoides_pubescens	QFFHQYMLGCNYFWMLCEGIYLHTLIVAVFAEEQRLHWYIYLLGWGFPLVPASIHAVARA	281	
Chaetura_pelagica	QFFHQYMLGCNYFWMLCEGIYLHTLIVAVFAEEQRLHWYIYLLGWGFPLVPASIHAIARA	281	
Apaloderma_vittatum	QFFHQYMLGCNYFWMLCEGIYLHTLIVAVFAEEQRLHWYIYLLGWGFPLVPASIHAVARA	281	
Balearica_regulorum_gibbericeps	QFFHQYMLGCNYFWMLCEGIYLHTLIVAVFAEEQRLHWYIYLLGWGFPLVPASIHAVARA	281	
Cuculus_canorus	QFFHQYMLGCNYFWMLCEGIYLHTLIVAVFAEEQRLHWYIYLLGWGFPLVPASIHAVARA	281	
Caprimulgus_carolinensis	QFFHQYMLGCNYFWMLCEGIYLHTLIVAVFAEEQRLHWYIYLLGWGFPLVPASIHAVARA	281	
Calypte_anna	QFFHQYMLGCNYFWMLCEGIYLHTLIVAVFAEEQRLHWYIYLLGWGFPLVPASIHAVARA	281	
Pygoscelis_adeliae	QFFHQYMLGCNYFWMLCEGIYLHTLIVAVFAEEQRLHWYIYLLGWGFPLVPASIHAVARA	281	
Egretta_garzetta	QFFHQYMLGCNYFWMLCEGIYLHTLIVAVFAEEQRLHWYIYLLGWGFPLVPASIHAVARA	281	
Nipponia_nippon	QFFHQYMLGCNYFWMLCEGIYLHTLIVAVFAEEQRLHWYIYLLGWGFPLVPASIHAVARA	281	
Charadrius_vociferus	QFFHQYMLGCNYFWMLCEGIYLHTLIVAVFAEEQRLHWYIYLLGWGFPLVPASIHAVARA	264	
Aquila_chrysaetos_canadensis	QFFHQYMLGCNYFWMLCEGIYLHTLIVAVFAEEQRLHWYIYLLGWGFPLVPASIHAVARA	282	mammals
Phalacrocorax_carbo	QFFHQYMLGCNYFWMLCEGIYLHTLIVAVFAEEQRLHWYIYLLGWGFPLVPASIHAVARA	264	
Sus_scrofa	HFFHQYMMSCNYFWMLCEGVYLHTLIVSVFAEQRLWYIYLLGWGFPLIPTTAHAITRA	283	
Mus_musculus	HFLHQYMMSCNYFWMLCEGIYLHTLIVMAVFTDEQRLRWYIYLLGWGFPLVPTTIHAITRA	282	
Rattus_norvegicus	HFFHQYMMACNYFWMLCEGIYLHTLIVMAVFTEDQRLRWYIYLLGWGFPLVPTTIHAITRA	299	
Jaculus_jaculus	HFFHQYMMACNYFWMLCEGIYLHTLIVSVFTEEQRLRYIYLLGWGFPLVPTTIHAITRA	283	
Pteropus_vampyrus	HFFHQYMMACNYFWMLCEGIYLHTLIVAVFAEKQHRWYIYLLGWGFPLVPTTIHAVTRA	283	
Cavia_porcellus	HFFHQYMMACNYFWMLCEGIYLHTLIVSVFNEAKHLRWYIYLLGWGFPLVPTTIHAITRA	282	
Galeopterus_variegatus	HFFHQYMMACNYFWMLCEGIYLHTLIVAVFSGEQHLRWYIYLLGWGFPLVPTTIHAITRA	282	
Oryctolagus_cuniculus	HFFHQYMMSCNYFWMLCEGIYLHTLIVAVFAKQQLRWYIYLLGWGFPLVPTTIHAITRA	299	
Colobus_angolensis_palliatus	HFFHQYMMACNYFWMLCEGIYLHTLIVMAVFTTEKQRLRWYIYLLGWGFPLVPTTIHAITRA	282	
Homo_sapiens	HFFHQYMMACNYFWMLCEGIYLHTLIVAVFTEKQRLRWYIYLLGWGFPLVPTTIHAITRA	282	
Pan_troglodytes	HFFHQYMMACNYFWMLCEGIYLHTLIVAVFTEKQRLRWYIYLLGWGFPLVPTTIHAITRA	282	
Canis_lupus_familiaris	HFFHQYMMACNYFWMLCEGIYLHTLIVAVFTEEQHLRWYIYLLGWGFPLVPTTIHAITRA	283	
Equus_caballus	HFFHQYMMACNYFWMLCEGIYLHTLIVAVFTEEQRLRWYIYLLGWGFPLVPTTIHAITRA	283	
Ceratotherium_simum_simum	HFFHQYMMACNYFWMLCEGIYLHTLIVAVFTEEQRLRWYIYLLGWGFPLVPTTIHAITRA	283	

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TMIII

TMIV

Xenopus_tropicalis	KYFNDNCWMSVETHLLYIVHGPIAALLVNLFFLLNIVLVLVTKLRDTHRAESNMYMKAV	350	} amphibians
Thamnophis_sirtalis	RYFNDNCWISVDTYLLYIVHGPMVMAALLVNFFFLLNIVRVLVTKLRDTHRAESNMYMKAV	339	
Anolis_carolinensis	KYFNDNCWISVDTLLLYVVHGPVMAALLVNFFFLLNIVRVLVTKLRDTHRAESNMYMKAV	341	} reptiles
Serinus_canaria	RYFNDNCWMSVDTLLLYIVHGPMVMAALLVNFFFLLNIVRVLVTKLRDTHRAESNMYMKAV	341	
Corvus_brachyrhynchos	RYFNDNCWMSVDTYLLYIVHGPMVMAALLVNFFFLLNIVRVLVTKLRDTHRAESNMYMKAV	341	} aves
Ficedula_albicollis	RYFNDNCWMSVDTLLLYIVHGPMVMAALLVNFFFLLNIVRVLVTKLRDTHRAESNMYMKAV	341	
Anser_cygnoides_domesticus	KYFNDNCWMSVDTYLLYIVHGPMVMAALLVNFFFLLNIVRVLVTKLRDTHRAESNMYMKAV	341	
Anas_platyrhynchos	KYFNDNCWMSVDTYLLYIVHGPMVMAALLVNFFFLLNIVRVLVTKLRDTHRAESNMYMKAV	341	
Apteryx_australis_mantelli	KYFNDNCWMSVDTLLLYIVHGPMVMAALLVNFFFLLNIVRVLVTKLRDTHRAESNMYMKAV	341	
Gallus_gallus	KYFNDNCWMSVDTLLLYIVHGPMVMAALLVNFFFLLNIVRVLVTKLRDTHRAESNMYMKAV	341	
Picoides_pubescens	KYFNDNCWMSVDTLLLYIVHGPMVMAALLVNFFFLLNIVRVLVTKLRDTHRAESNMYMKAV	341	
Chaetura_pelagica	KYFNDNCWMSVDTLLLYIVHGPMVMAALLVNFFFLLNIVRVLVTKLRDTHRAESNMYMKAV	341	
Apaloderma_vittatum	RYFNDNCWMSVDTLLLYIVHGPMVMAALLVNFFFLLNIVRVLVTKLRDTHRAESNMYMKAV	341	
Balearica_regulorum_gibbericeps	KYFNDNCWMSVDTLLLYIVHGPMVMAALLVNFFFLLNIVRVLVTKLRDTHRAESNMYMKAV	341	
Cuculus_canorus	KYFNDNCWMSVDTLLLYIVHGPMVMAALLVNFFFLLNIVRVLVTKLRDTHRAESNMYMKAV	341	
Caprimulgus_carolinensis	KYFNDNCWMSVDTLLLYIVHGPMVMAALLVNFFFLLNIVRVLVTKLRDTHRAESNMYMKAV	341	
Calypte_anna	KYFNDNCWMSVDTLLLYIVHGPMVMAALLVNFFFLLNIVRVLVTKLRDTHRAESNMYMKAV	341	
Pygoscelis_adeliae	RYFNDNCWMSVDTLLLYIVHGPMVMAALLVNFFFLLNIVRVLVTKLRDTHRAESNMYMKAV	341	
Egretta_garzetta	RYFNDNCWMSVDTLLLYIVHGPMVMAALLVNFFFLLNIVRVLVTKLRDTHRAESNMYMKAV	341	
Nipponia_nippon	RYFNDNCWMSVDTLLLYIVHGPMVMAALLVNFFFLLNIVRVLVTKLRDTHRAESNMYMKAV	341	
Charadrius_vociferus	KYFNDNCWMSVDTLLLYIVHGPMVMAALLVNFFFLLNIVRVLVTKLRDTHRAESNMYMKAV	324	
Aquila_chrysaetos_canadensis	RYFNDNCWMSVDTLLLYIVHGPMVMAALLVNFFFLLNIVRVLVTKLRDTHRAESNMYMKAV	342	
Phalacrocorax_carbo	RYFNDNCWMSVDTLLLYIVHGPMVMAALLVNFFFLLNIVRVLVTKLRDTHRAESNMYMKAV	324	
Sus_scrofa	VLFNDNCWLSVDTNLLYI IHGPMVMAALVNFFFLLNIVRVLVTKMLKESQEAESHMYLKAV	343	} mammals
Mus_musculus	LYYNDNCWLSAETHLLYI IHGPMVMAALVNFFFLLNIVRVLVTKMRQTHEAESYMYLKAV	342	
Rattus_norvegicus	VYYNDNCWLSVETHLLYI IHGPMVMAALVNFFFLLNIVRVLVTKMRQTHEAEAYMYLKAV	359	
Jaculus_jaculus	LYYDDNCWLSVETHLLYI IHGPMVMAALVNFFFLLNIVRVLVTKMRETHEAESHMYLKAV	343	
Pteropus_vampyrus	LYFNDNCWLSVETYLLYI IHGPMVMAALVNFFFLLNIVRVLVKKMRETQEVDSHMYLKAV	343	
Cavia_porcellus	LYFNDNCWISVDTLLLYI IHGPMVMAALVNFFFLLNIVRVLVTKMRETHEAESYMYLKAV	342	
Galeopterus_variegatus	LYFNDNCWLSVETHLLYI IHGPMVMAALVNFFFLLNIVRVLVTKMRETHEAESQMYLKAV	342	
Oryctolagus_cuniculus	IYFNDNCWMSVETHLLYI IHGPMVMAALVNFFFLLNIVRVLVTKMRETHEAESHMYLKAV	359	
Colobus_angolensis_palliatus	VYFNDNCWLSVETHLLYI IHGPMVMAALVNFFFLLNIVRVLVTKMRETHEAESHMYLKAV	342	
Homo_sapiens	VYFNDNCWLSVETHLLYI IHGPMVMAALVNFFFLLNIVRVLVTKMRETHEAESHMYLKAV	342	
Pan_troglodytes	VYFNDNCWLSVETHLLYI IHGPMVMAALVNFFFLLNIVRVLVTKMRETHEAESHMYLKAV	342	
Canis_lupus_familiaris	LYFNDNCWLSVETHLLYI IHGPMVMAALVNFFFLLNIVRVLVSKMRETQEAESHMYLKAV	343	
Equus_caballus	LYFNDNCWLSVETHLLYI IHGPMVMAALVNFFFLLNIVRVLVSKMRETQEAESHMYLKAV	343	
Ceratotherium_simum_simum	LYFNDNCWLSVETHLLYI IHGPMVMAALVNFFFLLNIVRVLVSKMRETQEAESHMYLKAV	343	

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TMV

TMVI

Xenopus_tropicalis	RATLILVPLLGIQFVIFPWRPDTRLAGEIYDYIMNILMHYQGLLVATIFCFFNGEVOGAL	410	} amphibians
Thamnophis_sirtalis	RATLILVPLLGIQFVIFPWRPENKLAGEIYDYIMHILMHYQGLLVATIFCFFNGEVOGTL	399	
Anolis_carolinensis	RATLILVPLLGIQFVIIIPWRPENKLAGEVYDYIMHILMHYQGLLVATIFCFFNGEVOGAL	401	} reptiles
Serinus_canaria	RATLILVPLLGIQFVIIIPWRPENRLAGEIYDYIMHILMHYQGLLVATIFCFFNGEVOGAL	401	
Corvus_brachyrhynchos	RATLILVPLLGIQFVIIIPWRPENRLAGEIYDYIMHILMHYQGLLVATIFCFFNGEVOGAL	401	} aves
Ficedula_albicollis	RATLILVPLLGIQFVIIIPWRPENRLAGEIYDYIMHILMHYQGLLVATIFCFFNGEVOGAL	401	
Anser_cygnoides_domesticus	RATLILVPLLGIQFVIIIPWRPENRLAGEIYDYIMHILMHYQGLLVATIFCFFNGEVOGAL	401	
Anas_platyrhynchos	RATLILVPLLGIQFVIIIPWRPENRLAGEIYDYIMHILMHYQGLLVATIFCFFNGEVOGAL	401	
Apteryx_australis_mantelli	RATLILVPLLGIQFVIIIPWRPENRLAGEIYDYIMHILMHYQGLLVATIFCFFNGEVOGAL	401	
Gallus_gallus	RATLILVPLLGIQFVIIIPWRPENRLAGEIYDYIMHILMHYQGLLVATIFCFFNGEVOGAL	401	
Picoides_pubescens	RATLILVPLLGIQFVIIIPWRPENRLAGEIYDYIMHILMHYQGLLVATIFCFFNGEVOGAL	401	
Chaetura_pelagica	RATLILVPLLGIQFVIIIPWRPENRLAGEIYDYIMHILMHYQGLLVATIFCFFNGEVOGAL	401	
Apaloderma_vittatum	RATLILVPLLGIQFVIIIPWRPENRLAGEIYDYIMHILMHYQGLLVATIFCFFNGEVOGTL	401	
Balearica_regulorum_gibbericeps	RATLILVPLLGIQFVIIIPWRPENRLAGEIYDYIMHILMHYQGLLVATIFCFFNGEVOGAL	401	
Cuculus_canorus	RATLILVPLLGIQFVIIIPWRPENRLAGEIYDYIMHILMHYQGLLVATIFCFFNGEVOGAL	401	
Caprimulgus_carolinensis	RATLILVPLLGIQFVIIIPWRPENRLAGEIYDYIMHILMHYQGLLVATIFCFFNGEVOGAL	401	
Calypte_anna	RATLILVPLLGIQFVIIIPWRPENRLAGEIYDYIMHILMHYQGLLVATIFCFFNGEVOGAL	401	
Pygoscelis_adeliae	RATLILVPLLGIQFVIIIPWRPENRLAGEIYDYIMHILMHYQGLLVATIFCFFNGEVOGAL	401	
Egretta_garzetta	RATLILVPLLGIQFVIIIPWRPENRLAGEIYDYIMHILMHYQGLLVATIFCFFNGEVOGAL	401	
Nipponia_nippon	RATLILVPLLGIQFVIIIPWRPENRLAGEIYDYIMHILMHYQGLLVATIFCFFNGEVOGAL	401	
Charadrius_vociferus	RATLILVPLLGIQFVIIIPWRPENRLAGEIYDYIMHILMHYQGLLVATIFCFFNGEVOGAL	384	
Aquila_chrysaetos_canadensis	RATLILVPLLGIQFVIIIPWRPENRLAGEIYDYIMHILMHYQGLLVATIFCFFNGEVOGAL	402	
Phalacrocorax_carbo	RATLILVPLLGIQFVIIIPWRPENRLAGEIYDYIMHILMHYQGLLVATIFCFFNGEVOGAL	384	
Sus_scrofa	RATLILVPLLGVQFVVLPWRPSTPLLGKIYDYVVHSLIHFQGGFFVAIYCFCNHEVOGAL	403	} mammals
Mus_musculus	KATMVLVPLLGIQFVVFPWRPSPNKVLGKIYDYLHMSLIHFQGGFFVATYCFCNHEVQVTL	402	
Rattus_norvegicus	KATMVLVPLLGIQFVVFPWRPSPNKVLGKIYDYLHMSLIHFQGGFFVATYCFCNHEVQVTL	419	
Jaculus_jaculus	KATMVLVPLLGIQFVVFPWRPSPNKILGKIYDYLHMSLIHFQGGFFVATYCFCNHEVQTTL	403	
Pteropus_vampyrus	RATLILVPLLGIQFVVFPWRPSPNKVLGKIYDYLHMSLIHFQGGFFVAVIYCFYNSEVQTAV	403	
Cavia_porcellus	KATMILVPLLGIQFVVFPWRPSPNKVLGKIYDYFMHSLIHFQGGFFVATYCFCNHEVQTTL	402	
Galeopterus_variegatus	KATMILVPLLGIQFVVFPWRPSPNKILGKIYDYFMHSLIHFQGGFFVATYCFCNKEVQTTV	402	
Oryctolagus_cuniculus	KATMILVPLLGIQFVVFPWRPSPNKILGKIYDYLHMSLIHFQGGFFVATYCFCNHEVQTTV	419	
Colobus_angolensis_palliatus	KATMILVPLLGIQFVVFPWRPSPNKMLGKIYDYVMHSLIHFQGGFFVATYCFCNHEVQTTV	402	
Homo_sapiens	KATMILVPLLGIQFVVFPWRPSPNKMLGKIYDYVMHSLIHFQGGFFVATYCFCNHEVQTTV	402	
Pan_troglodytes	KATMILVPLLGIQFVVFPWRPSPNKMLGKIYDYVMHSLIHFQGGFFVATYCFCNHEVQTTV	402	
Canis_lupus_familiaris	RATLILVPLLGIQFVVFPWRPSPNKMLGKIYDYLHMSLIHFQGGFFVAVIYCFCNHEVQTTV	403	
Equus_caballus	RATLILVPLLGIQFVVFPWRPSPNKMLGKIYDYLHMSLIHFQGGFFVAMIYCFCNHEVQTTV	403	
Ceratotherium_simum_simum	RATLILVPLLGIQFVVFPWRPSPNKMLGKIYDYLHMSLIHFQGGFFVAMIYCFCNHEVQTTL	403	

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TMVI

TMVII

Xenopus_tropicalis	KRQWMQYKTQWGQRRREHCSMRSTSYT-----ATSITEVPIYLYHHDNSNEQ--LN	459	amphibian
Thamnophis_sirtalis	KRQWMQYKTQWGQRRRDHCSTRSTSYT-----ATSITEVPVYLYHRDSNSEH--LN	448	
Anolis_carolinensis	KRQWMQYKTQWGQRRREHCSSTRSTSYT-----ATSITEVPIYLYHHDSSSEQ--FN	450	reptiles
Serinus_canaria	KRQWAQYKTQWGQRRREHCSSTRSTSYT-----ATSITEVPVYLYHHDANNEH--LN	450	
Corvus_brachyrhynchos	KRQWAQYKTQWGQRRREHCSSTRSTSYT-----ATSITEVPVYLYPHDANNEQ--LN	450	aves
Ficedula_albicollis	KRQWTQYKTQWGQRRREHCSSTRSTSYT-----ATSITEVPVYLYHHDANNEQ--LN	450	
Anser_cygnoides_domesticus	KRQWTQYKTQWGQRRREHCSSTRSTSYT-----ATSITEVPVYLYHHDNSNEQ--LN	450	
Anas_platyrhynchos	KRQWTQYKTQWGQRRREHCSSTRSTSYT-----ATSITEVPVYLYHHDNSNEQ--LN	450	
Apteryx_australis_mantelli	KRQWTQYKTQWGQRRREHCSSTRSTSYT-----ATSITEVPVYLYHHDNSNEQ--LN	450	
Gallus_gallus	KRQWTQYKTQWGQRRREHCSSTRSTSYT-----ATSITEVPVYLYHHDNSNEQ--LN	450	
Picoides_pubescens	KRQWTQYKTQWGQRRREHCSSTRSTCT-----ATSI SEVPVYLYHHDNSNEQ--FN	450	
Chaetura_pelagica	KRQWTQYKTQWGQRRREHCSSTRSTSYT-----ATSITEVPVYLYHRDSSNEQ--IN	450	
Apaloderma_vittatum	KRQWTQYKAQWGQRRREHCSSTRSTSYT-----ATSITEVPIYLYHHESNEQ--LN	450	
Balearica_regulorum_gibbericeps	KRQWTQYKTQWGQRRREHCSSTRSTSYT-----ATSITEVPVYLYHHDNSNEQ--LN	450	
Cuculus_canorus	KRQWTQYKTQWGQRRREHCSSTRSTSYT-----ATSITEVPVYLYHHDNSNEQ--LN	450	
Caprimulgus_carolinensis	KRQWTQYKTQWGQRRREHCSSTRSTSYT-----ATSITEVPVYLFHHDNSNEQ--LN	450	
Calypte_anna	KRQWTQYKTQWGQRRREHCSSTRSTSYT-----ATSITEVPVYLYHHDNSNEQ--LN	450	
Pygoscelis_adeliae	KRQWAQYKTQWGQRRREHCSSTRSTSYT-----ATSITEVPVYLYHHDSTNEQ--LN	450	
Egretta_garzetta	KRQWTQYKTQWGQRRREHCSSTRSTSYT-----ATSITELPVYLYHHDNSNEQ--LN	450	
Nipponia_nippon	KRQWTQYKTQWGQRRREHCSSTRSTSYT-----ATSITEVPVYLYHHDNSNEQ--LN	450	
Charadrius_vociferus	KRQWTQYKTQWGQRRREHCSSTRSTSYT-----ATSITEVPVYLYHHDNSNEQ--LN	433	
Aquila_chrysaetos_canadensis	KRQWTQYKTQWGQRRREHCSSTRSTSYT-----ATSITEVPVYLYHHDNSNEQ--LN	451	
Phalacrocorax_carbo	KRQWTQYKTQWGQRRREHCSSTRSTSYT-----ATSITEVPVYLYHHDNSNEQ--LN	433	
Sus_scrofa	KRQWNQYQAQ---RWAGRSTRANAATAAAAAAALAEITVEIPVYICHQEPREPAGEE	460	mammals
Mus_musculus	KRQWTQFKIQWSQRWGR--RPTN---RVVSAPRAVAFAEPDGLPIYICHQEPR--NPPISN	457	
Rattus_norvegicus	KRQWAQFKIQWSHRWGRRRRPTN---RVVSAPRAVAFAEPGGLPIYICHQEPR--NPPVSN	475	
Jaculus_jaculus	KRQWTQFKLQ---HWGTALTNRTAP--QASPAATASAEAGDIDLPIYICHREPPRA----N	455	
Pteropus_vampyrus	KRQWIQFKIQWDQRRGGRNHRPHF--HAATAAAAAAEAEAGDIPVYICHQEPR--NNEPAI	461	
Cavia_porcellus	KRQWAQFKIQWNQRWGTRPSNRSAA--A--RAAAAAAEAGDNIPIYICHQE--PRNDPPN	457	
Galeopterus_variegatus	KRHWAQLRIQWDQRWGPRPSARSTA--R--AA--A---SAEAGDIPVYICHPEPEPRNEPAG	455	
Oryctolagus_cuniculus	KRQWVQFKIQWNQRWGRRPAHRSVS--R--TA--A---SAEAGDIPVYIYHQE--PRNDQAH	470	
Colobus_angolensis_palliatus	KRQWVQFKIQWNQRWGRRPSNRSAA--R--AA--A---AAEAGDIPVYICHQE--PRNEPAN	452	
Homo_sapiens	KRQWAQFKIQWNQRWGRRPSNRSAA--R--AAAA---AAEAGDIPVYIYICHQE--LRNEPAN	453	
Pan_troglodytes	KRQWAQFKIQWNQRWGRRPSNRSAA--R--AAAA---AAEAGDIPVYIYICHQE--PRNEPAN	453	
Canis_lupus_familiaris	KRQWAQFKTQWDQRWGRRNPRRSAA--S--AAAA---AAEAGDIPVYICHQE--PRNEAAN	455	
Equus_caballus	KRHWAQFKTQWNQRWGRRTNNRSIS----NAAA---SAEAGDIPVYICHQE--PRNELAN	454	
Ceratotherium_simum_simum	KRHWAQFKTQWNQRWGRRSNNRSIS----NAAA---AAGARDIPVYICHQE--PRNEPAN	454	

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Xenopus_tropicalis	-GKYGDESEITALNSG--DTYA	478	amphibian
Thamnophis_sirtalis	-GKYIHDSELVALKSG--ETSA	467	reptiles
Anolis_carolinensis	-GKYIDDSELVALKSG--ETSA	469	
Serinus_canaria	-GRYVEDSELVALKSG--DTSA	469	
Corvus_brachyrhynchos	-GRYVEDSELVALKSG--ETSA	469	
Ficedula_albicollis	-GRYLEDSELVALKSG--ETSA	469	
Anser_cygnoides_domesticus	-GRYIDDSELVALKSG--ETSA	469	
Anas_platyrhynchos	-GRYIDDSELVALKSG--ETSA	469	
Apteryx_australis_mantelli	-GRYIDDSELVALKSG--ETSA	469	aves
Gallus_gallus	-GRYVDDSELVALKSG--ETSA	469	
Picoides_pubescens	-GRYTEDESELVALKSG--ETSA	469	
Chaetura_pelagica	-GRYIEDSELVALKSG--ETSA	469	
Apaloderma_vittatum	-GRYVEDSELVALKSG--ETSA	469	
Balearica_regulorum_gibbericeps	-GRYIEDSELVALKSG--ETSA	469	
Cuculus_canorus	-GRYVEDSELVALKSG--ETSA	469	
Caprimulgus_carolinensis	-GRYVEDSELVALKPG--ETSA	469	
Calypte_anna	-GRYTEDESELVALKSG--ETSA	469	
Pygoscelis_adeliae	-GRYIEDSELVALKSG--ETSA	469	
Egretta_garzetta	-GRYIEDSELVALKSG--ETSA	469	
Nipponia_nippon	-GRYAEDSELVALKSG--ETSA	469	
Charadrius_vociferus	-GRYVEDSELVALKSG--ETSA	452	
Aquila_chrysaetos_canadensis	-GRYVEDSELVALKSG--ETSA	470	
Phalacrocorax_carbo	-GRYVEDSELVALKSG--ETSA	452	
Sus_scrofa	PVVEVEGVVEVIAMEVLEQETSA	482	mammals
Mus_musculus	-NEGEESTEMIPMNVIQQDASA	478	
Rattus_norvegicus	-NEGEEGTEMIPMNVIQQDSSA	496	
Jaculus_jaculus	-NQVLEGAEI I PLNTVEQESSA	476	
Pteropus_vampyrus	-NLGEEGAEDIPMEI IEQESCA	482	
Cavia_porcellus	-NQGEEGAEMIVLNI IEKESSA	478	
Galeopterus_variegatus	-NEGERGAELIPLNI IEHESSA	476	
Oryctolagus_cuniculus	-SLGEEGAEI I PLNI IEQESSA	491	
Colobus_angolensis_palliatus	-NQGEESAEI I PLNI IEQETSA	473	
Homo_sapiens	-NQGEESAEI I PLNI IEQESSA	474	
Pan_troglodytes	-NQGEESAEI I PLNI IEQESSA	474	
Canis_lupus_familiaris	-NLGEEGAEVIALEI IEQESSA	476	
Equus_caballus	-NLGGEGAEVIALEI IEQESSA	475	
Ceratotherium_simum_simum	-NLGGEGAEVIALEI IEQESSA	475	

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