

pouched_lamprey	-----MSGDE	EFYLFKNISK	VGPWDGQPF-	HIAPKWAFYL	QAAFMGFVFI	CGTPLNAIVL	VVTIKYKKLR	[70]	
goldfish	-----MDA	WTYQFGNLSK	ISPFEGPQY-	HLAPKWAFYL	QAAFMGFVFF	VGTPLNIAIVL	FVTMKYKKLR	[70]	
carp	-----MDA	WTYQFGNLSK	VSPFEGPQY-	HLAPKWAFYL	QAAFMGFVFL	VGTPMNAIVL	FVTMKYKKLR	[70]	
Malawi_eye-biter	-----GK	HFHLYENISK	ISPFEGPQY-	YLAPVWAFYL	QAAFMGFVFF	AGTPLNFIVL	VATMKYKKLR	[70]	
zebrafish	-----MDA	WAVQFGNASK	VSPFEGPQY-	HIAPKWAFYL	QAAFMGFVFI	VGTPMNGIVL	FVTMKYKKLR	[70]	
Atlantic_halibut	-----MMGK	HFHLYENVSN	VSPFDGPQY-	YLAPQWAFHL	QTIFMGSVLF	AGTPLNFIVL	LVTLYKYYKLR	[70]	
Fuellerborns_cichlid	-----MGK	HFHLYENISK	ISPFEGPQY-	YLAPVWAFYL	QAAFMGFVFF	AGTPLNFIVL	VATMKYKKLR	[70]	
Nile_tilapia	-----MGK	YFHLYENISK	VSPFEGPQY-	YLAPTWAFYL	QAAFMGFVLF	AGTPLNFVVL	VATMKYKKLR	[70]	
killifish	-----MGK	HFHLYENISK	VDPFEGPQY-	YLAPVWAFHL	QALFMGFVFF	TGTPLNFLVVL	LATAKYKKLR	[70]	
zebra_mbuna	-----MGK	HFHLYENISK	ISPFEGPQY-	YLAPVWAFYL	QAAFMGFVFF	AGTPLNFIVL	VATMKYKKLR	[70]	
pink_salmon	-----MGK	DFHLYENISK	VSPFEGPQY-	HLAPKWAFYL	QTAFMGFVFF	AGTPLNFIVL	VATMKYKKLR	[70]	
chum_salmon	-----MGK	DFHLYENISK	VSPFEGPQY-	HLAPIWAFYL	QTAFMGFVFF	AGTPLNFIIIL	VVTVKYKKLR	[70]	
coho_salmon	-----MGK	NFHLYENISK	VSPFEGPQY-	HLAPIWAFYL	QTAFMGFVFF	AGTPLNLIIL	VVTVKYKKLR	[70]	
rainbow_trout	-----MGK	DFHLYENISK	VSPFEGPQY-	HLAPIWAFYL	QTAFMGFVFF	AGTPLNFIIIL	VVTVKYKKLR	[70]	
sockeye_salmon	-----MGK	DFHLYENISK	VSPFEGPQY-	HLAPIWAFYL	QTAFMGFVFF	AGTPLNFIIIL	VVTVKYKKLR	[70]	
chinook_salmon	-----MGK	DFHLYENISK	VSPFEGPQY-	HLAPIWAFYL	QTAFMGFVFF	AGTPLNFIIIL	VVTVKYKKLR	[70]	
Atlantic_salmon	-----MGK	DFHLYENISK	ISPFEGPQY-	HLASMWAFYL	QAAFMGFVFF	AGTPLNFIIIL	VVTVKYKKLR	[70]	
smelt	-----MGK	QFHLYENVSK	IGPFEGPQY-	YLAPVWVFFYL	QAAFMGFVFF	VGTPLNFIIL	MVTIKYKKLR	[70]	
howler_monkey	---MSKMSEEE	EFYLFKNISS	VGPWDGPQY-	HIAPVWAFYL	QAAFMGIVFL	AGLPLNAMVL	VATVRYKRLR	[70]	
cow	--MSKMSEEE	EFYLFKNISL	VGPWDGPQY-	HLAPVWAFHL	QAVFMGFVFF	VGTPLNATVVL	VATLRYKRLR	[70]	
dog	--MSKMSEEE	EFYLFKNISL	VGPWDGPQY-	HIAPVWAFHL	QAVFMGFVFF	AGTPLNGTVL	VATLRYKRLR	[70]	
marmoset	--MSKMSEEE	EFYLFKNISS	VGPWDGQPYP	HIAPSWAYYL	QAAFMGIVFL	IGLPLNFMVL	VATVRYKRLR	[70]	
capuchin_monkey	---MSKMSEEE	EFYLFKNISS	VGPWDGPQY-	HIAPVWAFYL	QAAFMGIVFL	VGLPLNAMVL	VATVRYKRLR	[70]	
chum_salmon	---MSEEE	EFYLFKNASS	VSPFDGPQY-	HVAPVWAFRL	QAAFMGIVFC	IGTPLNGLVVL	VATLLYKRLR	[70]	
brown_lemur	--MCKMSGEE	EFYLFKNLSP	VGPWDGPQY-	HIAPVWAFYL	QAAFMGIVFF	AGAPLNVML	VATLRYKRLR	[70]	
gorilla	---MRKMSEEE	EFYLFKNISP	VGPWDGPQY-	HIAPVWAFYL	QAAFMGIVFL	IGFPLNAMVL	VATLRYKRLR	[70]	
human	---MRKMSEEE	EFYLFKNISS	VGPWDGPQY-	HIAPVWAFYL	QAAFMGIVFL	IGFPLNAMVL	VATLRYKRLR	[70]	
bandicoot	-----MSGDE	EFYLFKNISK	VGPWDGPQY-	HIAPAWAFHC	QTVFMGFVFF	AGTPLNAIVL	IATLRYKRLR	[70]	
African_elephant	---MIKMSGEE	EFYLFKNISS	VGPWGGPQY-	HIGPVWAFHL	QAAFMAFVFF	VGTPLNALVVL	VATLRYKRLR	[70]	
wallaby	-----MSGDE	EFYLFKNISS	VGPWDGPQY-	HIAPAWAFHC	QTVFMGFVFF	AGTPLNAVVL	IATFRYKRLR	[70]	
macaque	---MRKMSEEE	EFYLFKNLSS	VKPWDGPQY-	HIAPVWAFYL	QAAFMGIVFL	AGFPLNAMVL	VATVRYKRLR	[70]	
house_mouse	-----MSGED	DFYLFQNISS	VGPWDGPQY-	HLAPVWAFRL	QAAFMGFVFF	VGTPLNATVVL	VATLRYKRLR	[70]	
talapoin	---MRKMSEEE	EFYLFKNISS	VKPWDGPQY-	HIPVWVAYYL	QAAFMGIVFL	AGFPLNAMVL	VATVRYKRLR	[70]	
Djungarian_hamster	-----VFF	-----	-----	-----	-----	AGVPLNATVVL	VATLRYKRLR	[70]	
chimpanzee	---MRKMSEEE	EFYLFKNISS	VGPWDGPQY-	HIAPVWAFYL	QAAFMGIVFL	IGFPLNAMVL	VATLRYKRLR	[70]	
Norway_rat	-----MSGED	DFYLFQNISS	VGPWDGPQY-	HIAPVWAFHL	QAAFMGFVFF	AGTPLNATVVL	VATLRYKRLR	[70]	
squirrel_monkey	--MSKMPEEE	EFYLFKNISS	VGPWDGPQY-	HIAPVWAFYL	QAAFMGIVFL	AGLPLNSMVL	VATVRYKRLR	[70]	
quokka	-----MSGDE	EFYLFKNISS	VGPWDGPQY-	HIAPAWAFHC	QTVFMGFVFF	AGTPLN?VVL	IATFRYKRLR	[70]	
dunnart	-----MSGDE	EFYLFKNISL	VGPWDGPQY-	HLAPAWAFHF	QTAFMGFVFF	AGTSLNGVVL	IATLRYKRLR	[70]	
pig	MSKMPEEEEEE	EFYLFKNISL	VGPWDGPQY-	HLAPVWVFFHL	QAAFMGFVFL	VGTPLNATVVL	VATLRYKRLR	[70]	
western_tarsier	-----MSEEE	EFYLFKNISS	VGPWDGPQH-	HLAPVWVFFHL	QAAFMGVFFS	VGIPLNTMVL	VATLRYKRLR	[70]	
Caribbean_manatee	---MSKMSEEE	EFYLFKNISS	VGPWDGPQY-	HIAPVWAFRL	QAAFMGFVFF	AGTPLNAMVL	VATLRYKRLR	[70]	
green_anole	-----MSGQE	DFYLFENISS	VGPWDGPQY-	HIAPMWAFFYF	QTAFMGFVFF	AGTPLNAIIL	IATVRYKRLR	[70]	
tokay_gecko	-----MSGEE	DFYLFYANISS	VGPFDGPQY-	HIAPMWAFFYF	QTAFMGFVFF	VGTPLNATVVL	FAIVRYKRLR	[70]	
day_gecko	-----MSGEE	DFYLFYANISS	VGPFDGPQY-	HIAPMWAFFYF	QTAFMGFVFF	AGTPLNGIIL	IAIVRYKRLR	[70]	
pigeon	-----MSGDE	EFYLFKNISS	VGPWDGPQY-	HIAPVWAFYL	QTAFMGFVFL	VGTPFNATVVL	VVTIKYKKLR	[70]	
yellow-crowned_bishop	-----AFYL	-----	-----	-----	-----	QTIFMGLVFL	AGTPLNAIVL	IATVRYKRLR	[70]
red_bishop	-----AFYL	-----	-----	-----	-----	QTIFMGLVFL	AGTPLNAIVL	IATVRYKRLR	[70]
chicken	-----MSSDD	DFYLFYANISS	VGPWDGPQY-	HIAPVWAFYL	QTAFMGIVFA	VGTPLNATVVL	VATVRYKRLR	[70]	
Siberian_rubythroat	-----FYL	-----	-----	-----	-----	QTIFMGLVFL	AGTPLNAIVL	IATVRYKRLR	[70]
bluethroat	-----?FYL	-----	-----	-----	-----	QTIFMGLVFL	AGTPLNAIVL	IATVRYKRLR	[70]
budgerigar	-----MSGEE	EFYLFKNISS	VGPWDGPQY-	HIAPVWAFYL	QTAFMGFVFL	VGTPLNATVVL	VATVRYKRLR	[70]	
blue_tit	-----WAFYL	-----	-----	-----	-----	QTIFMGLVFL	AGTPLNAIVL	IATVRYKRLR	[70]
great_tit	-----AFYL	-----	-----	-----	-----	QTIFMGLVFL	AGTPLNAIVL	IATVRYKRLR	[70]
marsh_tit	-----AFYL	-----	-----	-----	-----	QTIFMGLVFL	AGTPLNAIVL	IATVRYKRLR	[70]
Humboldts_penguin	-----PWDGPQY-	-----	-----	-----	-----	QTAFMGFVFL	VGTPFNATVVL	VATVRYKRLR	[70]
common_canary	-----MDEE	EFYLFKNQSS	VGPWDGPQY-	HIAPMWAFFYL	QTIFMGLVFL	AGTPLNAIVL	IATVRYKRLR	[70]	
zebra_finch	-----MDEE	EFYLFKNQSS	VGPWDGPQY-	HIAPMWAFFYL	QTIFMGLVFL	AGTPLNAIVL	IATVRYKRLR	[70]	
tiger_salamander	-----MLEEE	EFYLFKNISK	VGPWDGPQY-	HIAPWTFYF	QTAFMGFVFF	VGTPLNATVVL	IATVRYKRLR	[70]	
firebelly_newt	-----MVGDD	DFYLFKNISK	VGPWDGPQY-	HIAPWTFYF	QTAFMGFVFF	VGTPLNATVVL	IATVRYKRLR	[70]	
American_bullfrog	-----MLGDE	DFYLFKNVSD	IRPWDGPQY-	HIAPWTFYF	QAI FMGVVFI	IGTPLNATVVL	IATVRYKRLR	[70]	
African_Clawed_frog	-----MLEEE	DFYLFKNVSN	VSPFDGPQY-	HIAPWTFYF	QAI FMGMVFL	IGTPLNATVVL	IATVRYKRLR	[70]	
pouched_lamprey	QPLNYILVNI	SAAGLVFCLF	SISTVIVASV	QGYFFLGPTI	CALEAFFGSL	AGLVTG-WSL	AFLAERYIV	[140]	
goldfish	QPLNYILVNI	SLGGFIFDTF	SVSQVFFSAL	RGYFFFGYTL	CAMEAAMGSI	AGLVTG-WSL	AVLAFERYVV	[140]	
carp	QPLNYILVNI	SLGGFIFDTF	SVSQVFFSAL	RGYFFFGHTM	CAMESAMGSI	AGLVTG-WSL	AVLAFERYVV	[140]	
Malawi_eye-biter	VPLNFILVNI	SFSGFIFDTF	SVSQVFFLASM	RGYFFLGHTL	CALESVAVGSV	AGLVTA-WSL	AVLSFERYLV	[140]	
zebrafish	QPLNYILVNI	SLAGFIFDTF	SVSQVFFCAA	RGYFFLGHTL	CAMEAAMGSI	AGLVTG-WSL	AVLAFERYVV	[140]	
Atlantic_halibut	VPLNYILVNI	CFAGLIFVVF	SVSQVFFVSTM	RGYFFLGHTL	CALESAMGSI	AGLVTS-WSL	AVLSFERYLV	[140]	
Fuellerborns_cichlid	VPLNFILVNI	SFSGFIFVTF	SVSQVFFLASM	RGYFFLGHTL	CALESVAVGSV	AGLVTA-WSL	AVLSFERYLV	[140]	
Nile_tilapia	VPLNFILVNI	SFSGFIFVTF	SVSQVFFLASM	RGYFFLGHTL	CALEAAVGA	AGLVTA-WSL	AVLSFERYLV	[140]	

killifish	APLNYILVNI	SFAGFIFVTF	SVSQVVFVSSA	RGYYFLGYTL	CALEAAMGAV	AGLVTG-WSL	AVLSFERYLV	[140]
zebra_mbuna	VPLNFILVNI	SFSGFIFVTF	SVSQVFLASM	RGYYFLGHTL	CALESAVGSV	AGLVTA-WSL	AVLSFERYLV	[140]
pink_salmon	QPLNYILVDV	SLAGFIFVTF	SVSQVVFVSSA	RGYYFLGYTL	CAMEACMGS	AGLVSA-WSL	AVLAFERYVV	[140]
chum_salmon	QPLNYILVNV	SLAGFIFVTF	SVSQVVFVSSA	RGYYFLGYTL	CAMEACMGS	AGLVSA-WSL	AVLAFERYVV	[140]
coho_salmon	QPLNYILVNV	SLAGFIFVTF	SVSQVVFVSSA	GGYYFLGYTL	CAMEACMGS	AGLVSA-WSL	AVLAFERYVV	[140]
rainbow_trout	QPLNYILVNV	SLAGFIFVTF	SVSQVVFVSSA	RGYYFLGYTL	CAMEACMGS	AGLVSA-WSL	AVLAFERYVV	[140]
sockeye_salmon	QPLNYILVNV	SLAGFIFVTF	SVSQVVFVSSA	RGYYFLGYTL	CAMEACMGS	AGLVSA-WSL	AVLAFERYLV	[140]
chinook_salmon	QPLNYILVNV	SLAGFIFVTF	SVSQVVFVSSA	RGYYFLGYTL	CAMEACMGS	AGLVSA-WSL	AVLAFERYVV	[140]
Atlantic_salmon	QPLNFILVNI	SLAGFIFVTF	SVSQVVFVSSA	RGYYFLGYTL	CAMEACMGS	AGLVSA-WSL	AVLAFERYVV	[140]
smelt	QPLNYILVNI	SVGGFIFAVF	SVSQVVFVSSL	RGYYFLGYTL	CAMEACMGS	AGLVTG-WSL	AVLAFERYVV	[140]
howler_monkey	HPLNYVLVNV	SVGGFLLCIF	SVPVVFVASC	HGYFVFGHRV	CALEGFLGTV	AGLVTG-WSL	AFLAFERYIV	[140]
cow	QPLNYILVNV	SLGGFIYCF	SFVIVFITSC	YGYFVFGHRV	CALEAFLGCT	AGLVTG-WSL	AFLAFERYII	[140]
dog	QPLNYILVNV	SLGGFLYCIS	VS-TVFIASC	QGYFVFGHRV	CALEAFLGST	AGLVTG-WSL	AFLAFERYIV	[140]
marmoset	HPLNYVLVNV	SVGGFLLCIF	SVPVVFVASC	HGYFVFGHRV	CALEGFLGTV	AGLVTG-WSL	AFLAFERYIV	[140]
capuchin_monkey	HPLNYVLVNV	SVGGFLLCIF	SVPVVFVASC	HGYFVFGHRV	CALEAFLGTV	AGLVTG-WSL	AFLAFERYIV	[140]
guinea_pig	QPLNYILVNV	SLGGFLVCIF	SVLAVFIASC	YGYFVFGHRV	CALEGFLGSV	AGMVTG-WSL	AFLAFERYLV	[140]
brown_lemur	QPLNYILVNL	SFSGFLCCIF	SVLPVFIASC	RGYFVFGHRV	CALEGFLGSA	AGLVIG-WSL	AFLAFERYVI	[140]
gorilla	QPLNYILVNV	SFSGFLLCIF	SVPVVFVASC	NGYFVFGHRV	CALEGFLGTV	AGLVTG-WSL	AFLAFERYIV	[140]
human	QPLNYILVNV	SFSGFLLCIF	SVPVVFVASC	NGYFVFGHRV	CALEGFLGTV	AGLVTG-WSL	AFLAFERYIV	[140]
bandicoot	QPLNYILVNI	SLAGFIYCF	SFVTVFISSS	QGYFVFGHRV	CAMEAFLGSV	AGLVTG-WSL	AFLAFERFIV	[140]
African_elephant	QPLNYILVNI	SLGGFLSCIF	SFVIVFISSC	KGYFVFGRYV	CALEAFVGSV	AGLVTG-WSL	AFLAFERYIV	[140]
wallaby	QPLNYILVNI	SLAGFIYCF	SFVTVFISSS	QGYFVFGHRV	CAMEGFLGSV	AGLVTG-WSL	AFLAFERFIV	[140]
macaque	QPLNYILVNV	SFSGFLLCIF	SVPVVFVASC	KGYFVFGHRV	CAFEAFLGTV	AGLVTG-WSL	AFLAFERYIV	[140]
house_mouse	QPLNYILVNV	SLGGFLVCIF	SFVTVFIASC	HGYFVFGHRV	CALEAFLGSV	AGLVTG-WSL	AFLAFERYVV	[140]
talapoin	QPLNYILVNV	SFSGFLLCIF	SVPVVFVASC	KGYFVFGHRV	CGFEAFLGTV	AGLVTG-WSL	AFLAFERYIV	[140]
Djungarian_hamster	QPLNYILVNI	SLGGFLFCIF	SFVTVFIASC	HGYFVFGHRV	CALEAFLGSV	AGLVTG-WSL	AFLAFERYIV	[140]
chimpanzee	QPLNYILVNV	SFSGFLLCIF	SVPVVFVASC	NGYFVFGHRV	CALEGFLGTV	AGLVTG-WSL	AFLAFERYIV	[140]
Norway_rat	QPLNYILVNV	SLGGFLVCIF	SFVTVFIASC	HGYFVFGHRV	CALEAFLGSV	AGLVTG-WSL	AFLAFERYLV	[140]
squirrel_monkey	HPLNYVLVNV	SVGGFLLCIF	SVLPVVFVASC	NGYFVFGHRV	CALEGFLGTV	AGLVTG-WSL	AFLAFERYIV	[140]
quokka	QPLNYILVNI	SLAGFIYCF	SFVTVFISSS	QGYFVFGHRV	CAMEGFLGSV	AGLVTG-WSL	AFLAFERFIV	[140]
dunnart	QPLNYILVNI	SLAGFIFCVF	SFVTVFVSSS	QGYFVFGHRV	CAMEGFLGSV	AGLVTG-WSL	AFLAFERFIV	[140]
pig	QPLNYILVNV	SLGGFIYCF	SFVTVFIASC	HGYFVFGHRV	CAMEAFLGSA	AGLVTG-WSL	AFLAFERYII	[140]
western_tarsier	QPLNYILVNV	SLGGFLLCIF	SVLPVFIASC	RGYFVFGHRV	CALEGFLGSV	AGLVTG-WSL	AFLAFERYMV	[140]
Caribbean_manatee	QPLNYILVNI	SLGGFLYCF	SFVIVFITSC	HGYFVFGRYV	CALEAFLGAT	TGLVTG-WSL	AFLAFERYIV	[140]
green_anole	QPLNYILVNI	SFAGFLFCTF	SFVTVFMASS	QGYFFFGRHV	CAMEAFLGSV	AGLVTG-WSL	AFLAFERYIV	[140]
tokay_gecko	QPLNYILVNI	SAAGFLFCV	SVFTVFISSS	QGYFVFGKHI	CALEAFLGSL	AGLVTG-WSL	AFLAFERYIV	[140]
day_gecko	QPLNYILVNI	SAAGFLFCTF	SVFTVVFVSSA	QGYFVFGKHI	CALEAFLGSL	AGLVTG-WSL	AFLAFERYIV	[140]
pigeon	QPLNYILVNI	SFSGFISCF	SVFTVVFVSSS	QGYFVFGKDM	CALEAFVGT	GGLVTG-WSL	AFLAFERYIV	[140]
yellow-crowned_bishop	QPLNYILVNI	SVSGLMCCVF	CIFTVVFVASS	QGYFVFGKHM	CAFEGFAGAT	GGLVTG-WSL	AFLAFERYIV	[140]
red_bishop	QPLNYILVNI	SVSGLMCCVF	CIFTVVFVASS	QGYFVFGKHM	CAFEGFAGAT	GGLVTG-WSL	AFLAFERYIV	[140]
chicken	QPLNYILVNI	SASGFVSCVL	SFVVFVVASA	RGYFVFGKRV	CELEAFVGT	GGLVTG-WSL	AFLAFERYIV	[140]
Siberian_rubythroat	QPLNYILVNI	SVSGLMCCVF	CIFTVVFVSSS	QGYFVFGKHV	CAFEGFSGAT	VGLVTG-WSL	AFLAFERYIV	[140]
bluethroat	QPLNYILVNI	SVSGLMCCVF	CIFTVVFVSSS	QGYFVFGKHV	CAFEGFSGAT	VGLVTG-WSL	AFLAFERYIV	[140]
budgerigar	QPLNYILVNI	SFCGFLACII	CIFTVVFVSSS	QGYFVFGKHV	CAFEGFMGAT	AGLVTG-WSL	AFLAFERYIV	[140]
blue_tit	QPLNYILVNI	SVSGLMCCVF	CIFTVVFVSSS	QGYFVFGKHM	CAFEGFAGAT	GGLVTG-WSL	AFLAFERYIV	[140]
great_tit	QPLNYILVNI	SVSGLMCCVF	CIFTVVFVSSS	QGYFVFGKHM	CAFEGFAGAT	GGLVTG-WSL	AFLAFERYIV	[140]
marsh_tit	QPLNYILVNI	SVSGLMCCVF	CIFTVVFVSSS	QGYFVFGKHM	CAFEGFAGAT	GGLVTG-WSL	AFLAFERYIV	[140]
Humboldts_penguin	QPLNYILVNI	SFSGFISCF	SVFTVVFVSSS	QGYFVFGKHM	CALEGFVGT	GGLVTG-WSL	AFLAFERYIV	[140]
common_canary	QPLNYILVNI	SVSGLMCCVF	CIFTVVFVASS	QGYFVFGKHM	CRFEGFAGAT	GGMVTG-WSL	AFLAFERYIV	[140]
zebra_finch	QPLNYILVNI	SVSGLMCCVF	CIFTVFIASS	QGYFVFGKHM	CAFEGFAGAT	GGLVTG-WSL	AFLAFERYIV	[140]
tiger_salamander	QPLNYILVNV	SLAGFTFCIF	SVFTVVFVSSS	QGYFVFGKTI	CELEAFLGSV	SGLVTG-WSL	AFLAFERYIV	[140]
firebelly_newt	QPLNYILVNV	SLAGFTFCIF	SFVTVVFVASS	QGYFVFGKFM	CAMEAFLGSV	SGLVTG-WSL	AFLAFERYIV	[140]
American_bullfrog	QPLNYILVNI	SVGGFLICIF	SNFVVFINSW	QGYFFFKAF	CAIEAFVGT	AGLVTG-WSL	AFLAFERYIV	[140]
African_clawed_frog	QPLNYILVNI	TVGGFLMCIF	SIFPVVFVSSS	QGYFFFGRIA	CSIDAFVGT	TGLVTG-WSL	AFLAFERYIV	[140]
pouched_lamprey	ICKPFGNFRF	GSKHALVAVG	LWMLGLSVA	LPPFFGWSRY	IPEGLQCSG	PDWYTVGTYK	KSEYTYFLF	[210]
goldfish	ICKPFGSFKF	GQSQUALGAVA	LTWIIGIGCA	TPPFFGWSRY	IPEGLGTACG	PDWYTKNEEY	NTESYTYFLL	[210]
carp	ICKPFGSFKF	GQGQAMGAVA	LTWVIGIGCA	TPPFFGWSRY	IPEGLGTSCG	PDWYTKNEEY	NCSYTYFLM	[210]
Malawi_eye-biter	ICKPFGAFKF	GSNHALAAVA	FTWFMGIGCA	CPPFFGWSRY	IPEGLGCSG	PDWYTHNEEY	NTSYTHFLM	[210]
zebrafish	ICKPFGSFKF	GQGQAVGAVV	FTWIIGTACA	TPPFFGWSRY	IPEGLGTACG	PDWYTKNEEY	NCSYTYFLL	[210]
Atlantic_halibut	ICKPFGAFKF	GSNHAAGAVA	FTWFMGISCA	IPPPFFGWSRY	IPEGLGCSG	PDWYTHNEEY	HCSSYTNFLM	[210]
Fuellerborns_cichlid	ICKPFGAFKF	GSNHALAAVA	FTWFMGIGCA	CPPFFGWSRY	IPEGLGCSG	PDWYTHNEEY	NTSYTHFLM	[210]
Nile_tilapia	ICKPFGAFKF	GSNHALAAVA	FTWFMGVGCA	CPPFFGWSRY	IPEGLGCSG	PDWYTHNEEY	NTSYTYFLL	[210]
killifish	ICKPFGAFKF	GSSHAAGAVV	FTWFMGVGCS	SPPFFGWSRY	IPEGLGCSG	PDWYTNDEEL	GTTYMYFLL	[210]
zebra_mbuna	ICKPFGAFKF	GSNHALAAVA	FTWFMGIGCA	CPPFFGWSRY	IPEGLGCSG	PDWYTHNEEY	NTSYTHFLM	[210]
pink_salmon	ICKPFGTFKF	DNNQALAAVG	FTWVMGIGCA	TPPFFGWSRY	IPEGLGCSG	PDWYTNNEEY	HCASYTKFLI	[210]
chum_salmon	ICKPFGTFKF	DNNQALAAVG	FTWVMGIGCA	TPPFFGWSRY	IPEGLGCSG	PDWYTNNEEY	HCASYTKFLI	[210]
coho_salmon	ICKPFGTFKF	DNNQALAAVG	FTWVMGIGCA	TPPFFGWSRY	IPEGLGCSG	PDWYTNNEEY	HCASYTKFLI	[210]
rainbow_trout	ICKPFGTFKF	DNNQALAAVG	FTWVMGIGCA	TPPFFGWSRY	IPEGLGCSG	PDWYTNNEEY	HCASYTKFLI	[210]
sockeye_salmon	ICKPFGTFKF	DNNQALAAVG	FTWVMGIGCA	TPPFFGWSRY	IPEGLGCSG	PDWYTNNEEY	HCASYTKFLI	[210]
chinook_salmon	ICKPFGTFKF	DNNQALAAVG	FTWVMGIGCA	TPPFFGWSRY	IPEGLGCSG	PDWYTNNEEY	HCASYTKFLI	[210]

Atlantic_salmon	ICKPFGTFKF	DNNQALAAVA	FTWVMGIGCA	TPPFFGWSRY	IPEGLQCSCG	PDWYTNNEEY	HCASYTKFLI	[210]
smelt	ICKPFGQFKF	GNTQALMAVG	FTWVMGVGCA	TPPFFGWSRY	IPEGLQCACG	PDWYTHNEEY	HCTSYTYFLM	[210]
howler_monkey	ICKPFGNFRF	SSKHALMVVL	TWTWIGIGVS	IPPPFGWSRF	IAEGLQCSCG	PDWYTVGTTY	RSEYYTWFLF	[210]
cow	ICKPFGNFRF	SSKHALMVVV	ATWTIGIGVS	IPPPFGWSRF	VPEGLQCSCG	PDWYTVGTTY	YSEYYTWFLF	[210]
dog	ICKPFGNFRF	SSKHALMVVL	ATWTIGIGVS	IPPPFGWSRF	IPEGLQCSCG	PDWYTVGTTY	RSEYYTWFLF	[210]
marmoset	ICKPFGNFRF	SSKHALMVVL	TWTWIGIGVS	IPPPFGWSRY	IAEGLQCSCG	PDWYTVGTTY	RSEYYTWFLF	[210]
capuchin_monkey	ICKPFGNFRF	SSKHALMVVL	TWTWIGIGVS	IPPPFGWSRF	IAEGLQCSCG	PDWYTVGTTY	RSEYYTWFLF	[210]
guinea_pig	ICKPFGNFRF	SSKHALIVVL	ATWVIGIGVS	IPPPFGWSRY	MPEGLQCSCG	PDWYTVGTTY	RSEYFAWFLF	[210]
brown_lemur	ICKPFGNFRF	SSKHALMVVL	ATWTIGIGVS	IPPPFGWS-F	IPEGLQCSCG	PDWYTVGTTY	RSEYYTWFLF	[210]
gorilla	ICKPFGNFRF	SSKHALTVVL	ATWTIGIGVS	IPPPFGWSRF	IPEGLQCSCG	PDWYTVGTTY	RSESYTWFLF	[210]
human	ICKPFGNFRF	SSKHALTVVL	ATWTIGIGVS	IPPPFGWSRF	IPEGLQCSCG	PDWYTVGTTY	RSEYYTWFLF	[210]
bandicoot	ICKPFGNFRF	HSKHAMMVVL	ATWVIGIGVS	IPPPFGWSRF	IPEGLQCSCG	PDWYTVGTTY	RSEYYTWFLF	[210]
African_elephant	ICKPFGNFRF	SSKHALMVVL	ATWTIGIGVS	IPPPFGWSRF	LPEGLQCSCG	PDWYTVGTTY	RSEYYTWFLF	[210]
wallaby	ICKPFGNFRF	NSKHSMVVVL	ATWVIGIGVS	IPPPFGWSRY	IPEGLQCSCG	PDWYTVGTTY	RSEYYTWFLF	[210]
macaque	ICKPFGNFRF	SSKHALTVVL	ATWTIGIGVS	IPPPFGWSRF	IPEGLQCSCG	PDWYTVGTTY	RSEYYTWFLF	[210]
house_mouse	ICKPFGSIRF	NSKHALMVVL	ATWTIGIGVS	IPPPFGWSRF	IPEGLQCSCG	PDWYTVGTTY	RSEYYTWFLF	[210]
talapoin	ICKPFGNFRF	SSKHALTVVL	ATWVIGIGVS	IPPPFGWSRF	IPEGLQCSCG	PDWYTVGTTY	RSESYTWFLF	[210]
Djungarian_hamster	ICKPFGNFRF	SSKHALIVVL	VTWVIGIGVS	IPPPFGWSRF	IPEGLQCSCG	PDWYTVGTTY	RSESYTWFLF	[210]
chimpanzee	ICKPFGNFRF	SSKHALTVVL	ATWTIGIGVS	IPPPFGWSRF	IPEGLQCSCG	PDWYTVGTTY	RSEYYTWFLF	[210]
Norway_rat	ICKPFGNFRF	NSKHALTVVL	ITWTIGIGVS	IPPPFGWSRF	IPEGLQCSCG	PDWYTVGTTY	RSEHYTWFLF	[210]
squirrel_monkey	ICKPFGNFRF	SSKHALMVVL	TWTWIGIGVS	IPPPFGWSRY	IAEGLQCSCG	PDWYTVGTTY	RSEYYTWFLF	[210]
quokka	ICKPFGNFRF	NSKHSMVVVL	ATWVIGIGVS	IPPPFGWSRY	IPEGLQCSCG	PDWYTVGTTY	HSEYYTWFLF	[210]
dunnart	ICKPFGNFRF	NSKHAMMVVL	ATWVIGIGVS	IPPPFGWSRY	IPEGLQCSCG	PDWYTVGTTY	RSEYYTWFLF	[210]
pig	ICKPFGNFRF	SSKHALIVVL	ATWVIGIGVS	IPPPFGWSRF	LPEGLQCSCG	PDWYTVGTTY	YSEYYTWFLF	[210]
western_tarsier	ICKPFGNFRF	SPKHALMVVL	ATWTIGIGVS	VPPFFGWSRF	IPEGLQCSCG	PDWYTVGTTY	HSEYYTWFLF	[210]
Caribbean_manatee	ICKPFGNFRF	SSKHALMVVL	ATWVIGIGVS	IPPPFGWSRF	MPEGLQCSCG	PDWYTVGTTY	HSEHYTWFLF	[210]
green_anole	ICKPFGNFRF	NSKHALLVVA	ATWVIGIGVS	IPPPFGWSRY	IPEGLQCSCG	PDWYTVGTTY	KSEYYTWFLF	[210]
tokay_gecko	ICKPFGNFRF	SAKHASLVVA	ATWVIGIGVS	IPPPFGWSRF	IPEGLQCSCG	PDWYTVGTTY	RSEYYTWFLF	[210]
day_gecko	ICKPFGNFRF	NAKHASLVVA	ATWVIGIGVS	VPPFFGWSRY	IPEGLQCSCG	PDWYTVGTTY	RSEYYTWFLF	[210]
pigeon	ICKPFGNFRF	NSKHALMAVV	ATWVIGLVA	LPPWFWSRY	VPEGLQCSCG	PDWYTVGTTY	KSEYYTWFLF	[210]
yellow-crowned_bishop	ICKPFGNFRF	NSRHALLVVA	ATWVIGVVA	IPPPFGWSRY	IPEGLQCSCG	PDWYTVGTTY	KSEYYTWFLF	[210]
red_bishop	ICKPFGNFRF	NSRHALLVVA	ATWVIGVVA	IPPPFGWSRY	IPEGLQCSCG	PDWYTVGTTY	RSEYYTWFLF	[210]
chicken	ICKPFGNFRF	SSRHALLVVV	ATWVIGVVA	LPPFFGWSRY	MPEGLQCSCG	PDWYTVGTTY	RSEYYTWFLF	[210]
Siberian_rubythroat	ICKPFGNFRF	NSRHALLVVA	ATWVIGVVA	IPPPFGWSRY	IPEGLQCSCG	PDWYTVGTTY	KSEYYTWFLF	[210]
bluethroat	ICKPFGNFRF	NSRHALLVVA	ATWVIGVVA	IPPPFGWSRY	IPEGLQCSCG	PDWYTVGTTY	KSEYYTWFLF	[210]
budgerigar	ICKPFGNFRF	TAKHALVVVV	ATWVIGVVA	IPPPFGWSRY	VPEGLQCSCG	PDWYTVGTTY	RSEYYTWFLF	[210]
blue_tit	ICKPFGNFRF	NSRHALLVVA	ATWVIGVVA	VPPFFGWSRY	VPEGLQCSCG	PDWYTVGTTY	KSEYYTWFLF	[210]
great_tit	ICKPFGNFRF	NSRHALLVVA	ATWVIGVVA	VPPFFGWSRY	VPEGLQCSCG	PDWYTVGTTY	KSEYYTWFLF	[210]
marsh_tit	ICKPFGNFRF	NSRHALLVVA	ATWVIGVVA	VPPFFGWSRY	VPEGLQCSCG	PDWYTVGTTY	KSEYYTWFLF	[210]
Humboldts_penguin	ICKPFGNFRF	SSKHAVMVVV	ATWVIGVVA	IPPPFGWSRY	IPEGLQCSCG	PDWYTVGTTY	RSEYYTWFLF	[210]
common_canary	ICKPFGNFRF	NSRHALLVVA	ATWVIGVVA	IPPPFGWSRY	IPEGLQCSCG	PDWYTVGTTY	KSEYYTWFLF	[210]
zebra_finch	ICKPFGNFRF	NSRHALLVVA	ATWVIGVVA	IPPPFGWSRY	IPEGLQCSCG	PDWYTVGTTY	KSEYYTWFLF	[210]
tiger_salamander	ICKPMGSFRF	SSKHATMVVL	ATWVIGSVS	IGPLVGSRY	IPEGLQCSCG	PDWYTVGTTY	NSEYTWFLF	[210]
firebelly_newt	ICKPMGNFRF	ASKHALMVVL	TWVIGVVA	IGPLVGSRY	IPEGLQCSCG	PDWYTVGTTY	RSEYYTWFLF	[210]
American_bullfrog	ICKPMGTFTF	TSKHALAVVL	TWVIGVVA	VPPFFGWSRY	IPEGLQCSCG	PDWYTVGTTY	HSEYYTWFLF	[210]
African_clawed_frog	ICKPMGNFNF	SSSHALAVVI	CTWVIGVVS	VPPFLGWSRY	MPEGLQCSCG	PDWYTVGTTY	RSEYYTWFLF	[210]
pouched_lamprey	VFCFVPLSI	IIFSYSLLG	TLRA--VAAQ	QESASTQKA	EREVSRMIV	MVASFCTCYV	PYAALAVYMV	[280]
goldfish	VSCFMPIMI	IIFSYSQLL	ALRA--VAAQ	QESASTQKA	EKEVSRMVV	MVGSFVVCYV	PYAITALYFS	[280]
carp	VTCFILPMMI	IIFSYSQLL	ALRA--VAAQ	QESASTQKA	EKEVSRMVV	MVGSYIVCYV	PYAIAALYFG	[280]
Malawi_eye-biter	VTCFIPLSI	IIFCYSQLL	ALRA--VAAQ	QESASTQKA	EKEVSRMIV	MVGSFVTCYV	PYALAALYFA	[280]
zebrafish	ITCFMMPMTI	IIFSYSQLL	ALRA--VAAQ	QESASTQKA	EREVSRMVV	MVGSFVLCYA	PYAVTAMYFA	[280]
Atlantic_halibut	VTCFILPLTI	IIFSYSQLL	ALRA--VAAQ	QESASTQKA	EKEVSRMIV	MVGSFVTCYV	PYALAALYFA	[280]
Fuellerborns_cichlid	VTCFIPLSI	IIFCYSQLL	ALRA--VAAQ	QESASTQKA	EKEVSRMIV	MVGSFVTCYV	PYALAALYFA	[280]
Nile_tilapia	ITCFIFPLTI	IIFCYSQLL	ALRA--VAAQ	QESASTQKA	EKEVSRMIV	MVGSFVTCYV	PYALAALYFA	[280]
killifish	ITCFMPLSI	IIFSYSQLL	ALRA--VAAQ	QESASTQKA	EKEVSRMIV	MVGSFVTCYA	PYALTLGLWFA	[280]
zebra_mbuna	VTCFIPLSI	IIFCYSQLL	ALRA--VAAQ	QESASTQKA	EKEVSRMIV	MVGSFVTCYV	PYALAALYFA	[280]
pink_salmon	VTCFLMPMSI	IIFSYSQLL	ALRA--VAAA	QESASTQKA	EKEVSRMIV	MVCSFILCYV	PYALAGLYFA	[280]
chum_salmon	VTCFLMPMSI	IIFSYSQLL	ALRA--VAAA	QESASTQKA	EKEVSRMIV	MVCSFILCYV	PYALAGLYFA	[280]
coho_salmon	VTCFLMPMSI	IIFSYSQLL	ALRA--VAAA	QESASTQKA	EKEVSRMIV	MVCSFILCYV	PYALAGLYFA	[280]
rainbow_trout	VTCFLMPMSI	IIFSYSQLL	ALRA--VAAA	QESASTQKA	EKEVSRMIV	MVCSFILCYV	PYALAGLYFA	[280]
sockeye_salmon	VTCFLMPMSI	IIFSYSQLL	ALRA--VAAA	QESASTQKA	EKEVSRMIV	MVCSFILCYV	PYALAGLYFA	[280]
chinook_salmon	VTCFLMPMSI	IIFSYSQLL	ALRA--VAAA	QESASTQKA	EKEVSRMIV	MVCSFILCYV	PYALAGLYFA	[280]
Atlantlc_salmon	VTCFLMPMSI	IIFSYSQLL	ALRA--VAAA	QESASTQKA	EKEVSRMIV	MVCSFILCYV	PYALAGLYFA	[280]
smelt	VTCFMMPLTI	IIFSYSQLL	ALRA--VAAQ	QESASTQKA	EKEVSRMIV	MVGSFVVCYA	PYAITALYFG	[280]
howler_monkey	IFCFIVPLSL	ICFSYAQLL	ALKA--VAAQ	QESASTQKA	EREVSRMVV	MVGSFVVCYV	PYAALAMYMV	[280]
cow	IFCFIVPLSL	ICFSYAQLL	ALKA--VAAQ	QESASTQKA	EREVSRMVV	MVGSFVVCYV	PYAALAMYMV	[280]
dog	IFCFIVPLSL	ICFSYAQLL	ALKA--VAAQ	QESASTQKA	EREVSRMVV	MVGSFVVCYV	PYAALAMYMV	[280]
marmoset	IFCFIVPLAL	ICFSYAQLL	ALKA--VAAQ	QESASTQKA	EREVSRMVV	MVGSFVVCYV	PYAALAMYMV	[280]
capuchin_monkey	IFCFIVPLSL	ICFSYAQLL	ALKA--VAAH	QESASTQKA	EREVSRMVV	MVGSFVVCYV	PYAALAMYMV	[280]
guinea_pig	IFCFIVPLSL	ICFSYAQLL	TLRT--VAAQ	QESASTQKA	EREVSRMVV	MVGSFVVCYV	PYAALAMYMV	[280]

brown_lemur	IFCFIVPLSL	ICFSYSQLLR	ALRA--VAAQ	QGESATTQKA	EREVSRMVVV	MVGSFCLCYV	PYAALAMYIV	[280]
gorilla	IFCFIVPLSL	ICFSYQQLLR	ALKA--VAAQ	QGESATTQKA	EREVSRMVVV	MVGSFVCYV	PYAAFAMYV	[280]
human	IFCFIVPLSL	ICFSYQQLLR	ALKA--VAAQ	QGESATTQKA	EREVSRMVVV	MVGSFVCYV	PYAAFAMYV	[280]
bandicoot	IFCFIPLSL	ICFSYSQLLR	ALRT--VAAQ	QGESATTQKA	EREVSRMVVV	MVGSFCLCYV	PYAALAMYV	[280]
African_elephant	IFCFIVPLSL	ICFSYSQLLG	ALRA--VAAQ	QGESATTQKA	EREVSRMVVV	MVGSFCLCYV	PYAALAMYV	[280]
wallaby	ILCFIMPLSL	ICFSYSQLLG	ALRA--VAAQ	QGESATTQKA	EREVSRMVVV	MVGSFCLCYV	PYAALAMYV	[280]
macaque	IFCFIVPLSL	ICFSYQQLLR	ALKA--VAAQ	QGESATTQKA	EREVSRMVVV	MVGSFVCYV	PYAAFAMYV	[280]
house_mouse	IFCFIPLSL	ICFSYSQLLR	TLRA--VAAQ	QGESATTQKA	EREVSHMVVV	MVGSFCLCYV	PYAALAMYV	[280]
talapoin	IFCFIVPLSL	ICFSYQQLLR	ALKA--VAAQ	QGESATTQKA	EREVSRMVVV	MVGSFVCYV	PYAAFAMYV	[280]
Djungarian_hamster	LFCFIVPLSL	ICFSYSQLLR	TLRA--VAAQ	QGESATTQKA	EREVTLMVVV	MVGSFVCYV	PYAALAMYV	[280]
chimpanzee	IFCFIVPLSL	ICFSYQQLLR	ALKA--VAAQ	QGESATTQKA	EREVSRMVVV	MVGSFVCYV	PYAAFAMYV	[280]
Norway_rat	IFCFIPLSL	ICFSYQQLLR	TLRA--VAAQ	QGESATTQKA	EREVSHMVVV	MVGSFCLCYV	PYAALAMYV	[280]
squirrel_monkey	IFCFIVPLSL	ICFSYAQLLR	ALKA--VAAQ	QGESATTQKA	EREVSRMVVV	MVGSFVCYV	PYAALAMYV	[280]
quokka	ILCFIMPLSL	ICFSYSQLLG	ALRA--VAAQ	QGESATTQKA	EREVSRMVVV	MVGSFCLCYV	PYAALAMYV	[280]
dunnart	IFCFIVPLSL	ICFSYSQLLG	ALRA--VAAQ	QGESATTQKA	EREVSRMVVV	MVGSFCLCYV	PYAAMAMYV	[280]
pig	IFCFIVPLAL	ICFSYSQLLR	ALRA--VAAQ	QGESATTQKA	EREVSHMVVV	MVGSFVCYV	PYAALAMYV	[280]
western_tarsier	IFCFIVPLSL	ICFSYAQLLR	ALRA--VAAQ	QGESATTQKA	EREVSRMVVV	MVGSFCLCYV	PYAALAMYV	[280]
Caribbean_manatee	IFCFIVPLSL	ICLLLLPAAG	ALRA--VAAQ	QGESATTQKA	EREVSRMVVV	MVGSFCLCYV	PYAALAMYV	[280]
green_anole	IFCFIVPLTL	IIFSYSQLLG	ALRA--VAAQ	QGESATTQKA	EREVSRMVVV	MVGSFCLCYV	PYAALAMYV	[280]
tokay_gecko	VLCFIVPLSI	IIFSYSQLLS	ALRA--VAAQ	QGESATTQKA	EREVSRMVVV	MVGSFCLCYV	PYAALAMYV	[280]
day_gecko	IFCFMVPLTI	IIFSYSQLLS	ALRA--VAAQ	QGESATTQKA	EREVSRMVVV	MVGSFCLCYV	PYAALAMYV	[280]
pigeon	IFCFIVPLSL	IIFSYSQLLS	ALRA--VAAQ	QGESATTQKA	EREVSRMVVV	MVGSFCLCYV	PYAALAMYV	[280]
yellow-crowned_bishop	IFCFIVPLSL	IIFSYSQLLS	ALRA--VAAQ	QGESATTQKA	EREVSRMVVV	MVGSFCLCYV	PYAALAMYV	[280]
red_bishop	IFCFIVPLSL	IIFSYSQLLS	ALRA--VAAQ	QGESATTQKA	EREVSRMVVV	MVGSFCLCYV	PYAALAMYV	[280]
chicken	IFCFIVPLSL	IIFSYSQLLS	ALRA--VAAQ	QGESATTQKA	EREVSRMVVV	MVGSFCLCYV	PYAALAMYV	[280]
Siberian_rubythroat	IFCFIVPLSL	IIFSYSQLLS	ALRA--VAAQ	QGESATTQKA	EREVSRMVVV	MVGSFCLCYV	PYAALAMYV	[280]
bluethroat	IFCFIVPLSL	IIFSYSQLLS	ALRA--VAAQ	QGESATTQKA	EREVSRMVVV	MVGSFCLCYV	PYAALAMYV	[280]
budgerigar	IFCFIVPLSL	IIFSYSQLLS	ALRA--VAAQ	QGESATTQKA	EREVSRMVVV	MVGSFCLCYV	PYAALAMYV	[280]
blue_tit	IFCFIVPLSL	IIFSYSQLLS	ALRA--VAAQ	QGESATTQKA	EREVSRMVVV	MVGSFCLCYV	PYAALAMYV	[280]
great_tit	IFCFIVPLSL	IIFSYSQLLS	ALRA--VAAQ	QGESATTQKA	EREVSRMVVV	MVGSFCLCYV	PYAALAMYV	[280]
marsh_tit	IFCFIVPLSL	IIFSYSQLLS	ALRA--VAAQ	QGESATTQKA	EREVSRMVVV	MVGSFCLCYV	PYAALAMYV	[280]
Humboldt's_penguin	IFCFIVPLSL	IIFSYSQLLS	ALRA--VAAQ	QGESATTQKA	EREVSRMVVV	MVGSFCLCYV	PYAALAMYV	[280]
common_canary	IFCFIPLSL	IIFSYSQLLS	PCGA--VAAQ	QGESATTQKA	EREVSRMVVV	MVGSFCLCYV	PYAALAMYV	[280]
zebra_finch	IFCFIVPLSL	IIFSYSQLLS	ALRA--VAAQ	QGESATTQKA	EREVSRMVVV	MVGSFCLCYV	PYAALAMYV	[280]
tiger_salamander	IFCFIPLSL	ICFCYAQLLG	ALRA--VAAQ	QGESATTQKA	EREVTRMVVV	MVGSFCLCYV	PYAAMAMYV	[280]
firebelly_newt	IFCFIPLSL	ICFCYAQLLG	ALRA--VAAQ	QGESATTQKA	EREVTRMVVV	MVGSFCLCYV	PYAAMAMYV	[280]
American_bullfrog	VFCFIPLTL	ICYSYARLLG	ALRA--VAAQ	QGESASTQKA	EKEVSRMVVV	MVGSFCLCYV	PYAAMAMYI	[280]
African_clawed_frog	IFCFVIPLSL	ICFSYGRLLG	ALRA--VAAQ	QGESASTQKA	EREVSRMVVV	MVGSFCLCYV	PYAAMAMYV	[280]
pouched_lamprey	TNRDHNIDL	FVTPAFFSK	ASCYVNPDIY	SFMNKQFRAC	ILETVCGKPI	TDESETSSSR	TEVSSVSTTQ	[350]
goldfish	YAEDSNKDYR	LVAIPSLFSK	SSCVYNPLIY	AFMKNQFNAC	IMETVFGKKI	DESSEVSSKT	ETSSVSA*--	[350]
carp	YAEDTNKDYR	LVAIPALFSK	SSCVYNPLIY	AFMKNQFNAC	IMETVFGKKI	DESSEVSSKT	ETSSVSA*--	[350]
Malawi_eye-biter	YSTDENKDYR	LVTIPAFFSK	SACVYNPLIY	VFMNKQFNAC	IMEMVFGKTM	DESSEVSTKT	EVSTAS*---	[350]
zebrafish	NSDENKDYR	LVAIPAFFSK	SSCVYNPLIY	AFMKNQFNAC	IMETVFGKKI	DESSEVSSKT	ETSSVSA*--	[350]
Atlantic_halibut	HSSDTNKDYR	LVTIPAFFSK	SSCVYNPLIY	VFMNKQFNAC	IMETVFGKKI	DESSEVSSKT	EASSVSTVN*	[350]
Fuellerborns_cichlid	YSTDENKDYR	LVTIPAFFSK	SACVYNPLIY	VFMNKQFNAC	IMEMVFGKTM	DESSEVSTKT	EVSTAS*---	[350]
Nile_tilapia	YSTDENKDYR	LVTIPAFFSK	SSCVYNPLIY	VFMNKQFNAC	IMEMVFGKTM	DESSEVSTKT	EVSTAS*---	[350]
killifish	NSPEVNDYR	LVTIPAFFSK	SSCVYNPLIY	AFMKNQFNAC	IMEMVFGKTM	EEASEVSTKT	EVSTAS*---	[350]
zebra_mbuna	YSTDENKDYR	LVTIPAFFSK	SACVYNPLIY	VFMNKQFNAC	IMEMVFGKTM	DESSEVSTKT	EVSTAS*---	[350]
pink_salmon	YTTSENKDYR	LVTIPAFFSK	SSCVYNPLIY	AFMKNQFNAC	IMETVFGKQI	EETSVSASKT	EVSTA*----	[350]
chum_salmon	YTTSENKDYR	LVTIPAFFSK	SSCVYNPLIY	AFMKNQFNAC	IMETVFGKQI	EETSVSASKT	EVSTA*----	[350]
coho_salmon	YTTSENKDYR	LVTIPAFFSK	SSCVYNPLIY	AFMKNQFNAC	IMETVFGKQI	EETSVSASKT	EVSTA*----	[350]
rainbow_trout	YTTSENKDYR	LVTIPAFFSK	SSCVYNPLIY	AFMKNQFNAC	IMETVFGKQI	EETSVSASKT	EVSTA*----	[350]
sockeye_salmon	YTTSENKDYR	LVTIPAFFSK	SSCVYNPLIY	AFMKNQFNAC	IMETVFGKQI	EETSVSASKT	EVSTA*----	[350]
chinook_salmon	YTTSEVKDYR	LVTIPAFFSK	SSCVYNPLIY	AFMKNQFNAC	IMETVFGKQI	EETSVSASKT	EVSTA*----	[350]
Atlantic_salmon	YTTSENKDYR	LVTIPAFFSK	SSCVYNPLIY	AFMKNQFNAC	IMETVFGKQI	EETSVSASKT	EVSTA*----	[350]
smelt	FSTNENKDYR	MVTIPAMFSK	SSCVYNPLIY	AFMKNQFNAC	IMETVFGKKI	DESSEVSSKT	ETSSVSTA*--	[350]
howler_monkey	NNRNHGLDLR	LVTIPAFFSK	SSCIYNPIIY	CFMKNQFRAC	IMEMVCGKAM	TDESDLSQQ	KTEVSTVSSS	[350]
cow	NNRNHGLDLR	LVTIPAFFSK	SACVYNPIIY	CFMKNQFRAC	IMEMVCGKPM	TDESELSSQ	KTEVSTVSSS	[350]
dog	NNRNHGLDLR	LVTIPAFFSK	SACVYNPIIY	CFMKNQFRAC	IMEMVCGKSM	TDESEMSSQ	KTEVSTVSSS	[350]
marmoset	NNRNHGLDLR	LVTIPAFFSK	SSCIYNPIIY	CFMKNQFRAC	IMEMVCGKAM	TDESDISSQ	KTEVSTVSPS	[350]
capuchin_monkey	NNRNHGLDLR	LVTIPAFFSK	SSCIYNPIIY	SFMNKQFRAC	IMEMVCGKAM	TDESDISSQ	KTEVSTVSTS	[350]
guinea_pig	NNRNHGLDLR	LVTIPAFFSK	SSCIYNPIIY	CFMKNQFRAC	IMELVCRKPM	ADESDMTSQ	KTEVSAVSSS	[350]
brown_lemur	NNRNHGLDLR	LVTIPAFFSK	SACVYNPIIY	CFMKNQFRAC	IMEMVCGKAM	TDESNTSSQ	KTEVSTFSSS	[350]
gorilla	NNRNHGLDLR	LVTIPAFFSK	SSCIYNPIIY	CFMKNQFRAC	IMKMVCGKAM	TDESNTSSQ	KTEVSTVSSS	[350]
human	NNRNHGLDLR	LVTIPAFFSK	SACVYNPIIY	CFMKNQFRAC	IMKMVCGKAM	TDESNTSSQ	KTEVSTVSSS	[350]
bandicoot	NNRNHGLDLR	LVTIPAFFSK	SACVYNPIIY	CFMKNQFRAC	IMEMICRCPM	TDESNTSSQ	KTEVSTVSSS	[350]
African_elephant	NNRNHGLDLR	LVTIPAFFSK	SACVYNPIIY	CFMKNQFRAC	IMEMVCGKSV	ADESNTSSQ	KTEVSTVSSS	[350]
wallaby	NNRNHGLDLR	LVTIPAFFSK	SSCVYNPIIY	CFMKNQFRAC	IMEMVCRKPM	TDESNTSSQ	KTEVSTVSSS	[350]
macaque	NNRNHGLDLR	LVTIPAFFSK	SACVYNPIIY	CFMKNQFRAC	IMKMVCGKAM	TDESNTSSQ	KTEVSTVSSS	[350]
house_mouse	NNRNHGLDLR	LVTIPAFFSK	SSCVYNPIIY	CFMKNQFRAC	IEMVCRKPM	ADESNTSSQ	KTEVSTVSSS	[350]

western_tarsier	QVSPN*----	- [361]
Caribbean_manatee	-----	- [361]
green_anole	SQVSPS*----	- [361]
tokay_gecko	SQVGPS*----	- [361]
day_gecko	SQVSPS*----	- [361]
pigeon	SQVSPS*----	- [361]
yellow-crowned_bishop	-----	- [361]
red_bishop	-----	- [361]
chicken	SQVGPT*----	- [361]
Siberian_rubythroat	-----	- [361]
bluethroat	-----	- [361]
budgerigar	SQVSPS*----	- [361]
blue_tit	S?-----	- [361]
great_tit	-----	- [361]
marsh_tit	-----	- [361]
Humboldts_penguin	S-----	- [361]
common_canary	SQVGPGQPRM *	[361]
zebra_finch	SQVGPS*----	- [361]
tiger_salamander	SQVSPS*----	- [361]
firebelly_newt	SQVSPN*----	- [361]
American_bullfrog	SQVSPSAS*-	- [361]
African_clawed_frog	SQVSPA*----	- [361]