File: /media/morpheus/disk1/fst/pep\_msa/SNCAARepTue Feb 1 14:37:18 2022 Page 1 of 6

Pavo muticus	-MEAPEYLDLDEIDFSDDIS	19
Pavo cristatus	-MEAPEYI.DI.DETDESDDIS	19
Gallus_gallus	-MEAPEYLDLDEIDFSDDIS	19
Anolis carolinensis	-MEAPEYLDLDEIDFSDDIS	19
Mus_musculus	-MEAPEYLDLDEIDFSDDIS	19
Rattus norvegicus	-MEAPEYLDLDEIDFSDDIS	19
Homo_sapiens	-MEAPEYLDLDEIDFSDDIS	19
Pan_troglodytes	-MEAPEYLDLDEIDFSDDISDNRSQGNRLQKLGLEDTDREDAMGFSSHRAKLTVVAALGA	59
Macaca mulatta	-MEAPEYLDLDEIDFSDDISDNRSQGNRLQKLGLEDTDREDALGFGSHRAKLTVVAALGA	59
Callithrix_jacchus	-MEAPEYLDLDEIDFSDDISDNRSQGNRLQKLGLEDTGRGDALGFGSCRAKLTVVAALGD	59
Canis_lupus_familiaris	-MEAPEYLDLDEIDFSDDIS	19
Felis_catus	-MEAPEYLDLDEIDFSDDIS	19
Equus_caballus	-MEAPEYI.DI.DETDESDDTS	19
Bos taurus	-MEAPEYLDLDEIDFSDDIS	19
Heterocephalus_glaber	-MEAPEYLDLDEIDFSDDIS	19
Latimeria chalumnae		
Xenopus_tropicalis	MMEAPEYLDLDEIDFSDDIS	20
Rhinatrema bivittatum	-MEAPEYLDLDEIDFSDDIS	19
THITITIACT CHIA_DIVICCACAM	1102030405060	
	**.:.*. ::*:	
Pavo muticus	YSITSLKTIPELCRRCDSONEDRSVSSSSWNCGGSTLIG	58
Pavo cristatus	YSITSLKTIPELCRRCDSQNEDRSVSSSSWNCGGSTLIG	58
Gallus_gallus	YSITSLKTIPELCRRCDSQNEDRSVSSSSWNCGGSALIG	58
Anolis carolinensis	YSVTSLKTIPELHRKCDSONEDRTVSGTNWSLGVATLLG	58
Mus musculus	YSVTSLKTIPALCRRCDSQNEDRSVSSSGWNCGVSTLIT	58
Rattus norvegicus	YSVTSLKTIPALCRRCDSONEDRPVSSSSWNCGVSTLIT	58
Homo sapiens	YSVTSLKTIPELCRRCDTQNEDRSVSSSSWNCGISTLIT	58
Pan_troglodytes	CHCPENEYSVTSLKTIPELCRRCDTQNEDRSVSSSSWNCGISTLIT	105
Macaca_mulatta	CHCPENEYSVTSLKTIPELCRRCDTQNEDRSVSSSSWNCGISTLIT	105
Callithrix_jacchus	CHCPENEYSVTSLKTIPELCRRCDTQNEDKSVSSSSWNCGISTLIT	105
Canie lunus familiaris	YSVTSLKTIPELCRRCDSQSEDRSVSSSSWNCNVSALIT	58
Felis_catus	YSVTSLKTIPELCRRCDAQSEDRSVSSSSWNCSVSALIT	58
Equus_caballus	YSVTSLKTIPELCRRCDSQSEDRSVDQHCKTSPSSVKIVSSSSWNCGVSTLIT	72
Bos taurus	YSVTSLKTIPELCRRCDSQNEDRSVSSSGWNCGVSTLIT	58
Heterocephalus glaber	VSVTSI,KTTPEI,CRRCDSONEDRSVSSSSWNCCTSTI,TT	58
Latimeria chalumnae	MAVSNSNSNSNSCAVSTLIG	17
Xenopus_tropicalis	YSITSLKTIPELCRRCDPQNDDRSVSSTNWSCGVSTLIG	59
Rhinatrema bivittatum	YSVTSLKTIPELCRRCDSQNEDRSVSNTSWNCGVSTLIG	58
THITITIACT CHIA_DIVICCACAM	708090100110120	50
	. *****: **********	
Pavo_muticus	NAQKPTGIADASNKFRPVKRVSPLKHQPESSENNESDDQKNQKGEYQKGGESQ	111
Pavo_cristatus	NAQKPTGIADASNKFRPVKRVSPLKHQPESSENNESDDQKNQKGEYQKGGESQ	111
Gallus gallus	NAQKPTGIADACNKFRPVKRVSPLKHQPESCENNESDDQKNQKGEYQKGSESQ	111
Anolis_carolinensis	NGQKPTGIAEVYSKFRPVKRVSPLKHQPESSENNESDDQKNQKVEYKKDGDSP	111
Mus musculus	NPOKPTGIADVYSKFRPVKRVSPLKHOPETLENNENEDOKNNTVEYOKGGETD	111
Rattus norvegicus	NPQKPTGIADVYSKFRPVKRVSPLKHQPETLESNESDDQKNNTVEYQKGGETD	111
Homo sapiens	NTQKPTGIADVYSKFRPVKRVSPLKHQPETLENNESDDQKNQKVVEYQKGGESD	112
Pan troglodytes	NTQKPTGIADVYSKFRPVKRVSPLKHQPETLENNESDDQKNQKVVEYQKGGESD	159
Macaca mulatta	NTQKPTGIADVYSKFRPVKRVSPLKHQPETLENNESDDQKNQKVVEYQKGGESD	159
Callithrix_jacchus	NTQKPTGIADVYSKFRPVKRVSPLKHQPETLENNESDDQKNQKVVEYQKGGESD	159
Canis_lupus_familiaris	NTQKPTGIADVYSKFRPVKRVSPLKHQPETLENNESDDQKNQKVEYQKGGDPD	111
Felis catus	NTQKPTGIADVYSKFRPVKRVSPLKHQPETLDNNESDDQKNQKVECQKGSDSE	111
Equus caballus	NTQKPTGIADVYSKFRPVKRVSPLKHQPETLENNESDDQKNQKTEYQKGSESD	125
Bos taurus	NTQKPTGIADVYSKFRPVKRVSPLKHQPETLENNESDDQKNQKAEYQKGNDPD	111
Heterocephalus glaber	NTQKPTGIADVYSKFRPVKRVSPLKHQPETLENNESDDQKNHKVEYQKEGDPD	111
Latimeria chalumnae	TGQKPTGIADVYSKFRPVKRVSPLKHQPENTENEDSSVQQDQKEDYHDQKEDYHKGDVSE	77
Xenopus_tropicalis	NTQKPTGIADVYSKFRPVKRVSPLKHQPESPQINESDDQKEEKEENQKNGD-P	111
Rhinatrema bivittatum	NAQKPTGITDVYNKFRPVKRVSPLKHQPESPESNESDDQKEEKEDYQKNSNCK	111
	130140150160170180	_

File: /media/morpheus/disk1/fst/pep\_msa/SNCAARepTue Feb 1 14:37:18 2022 Page 2 of 6

S		
Bassa	* * **: *******************************	170
Pavo_muticus Pavo cristatus	PAPPNDDQSPGEGEN-LKSKNIEPTVLLGELEHYDLDMDEILDVPYIKSNQQLVPFTKVA PAPPNDDQSPGEGEN-LKSKNIEPTVLLGELEHYDLDMDEILDVPYIKSNQQLVPFTKVA	170 170
Gallus_gallus	PAPPNDDQSPGEGEN-LKSKNIEPTVLLGELEHYDLDMDEILDVPYIKSNQQLVPFTKVA	170
Anolis_carolinensis	SAAQTGNQTLGSGES-LKAKCVEPGVLLGELEHYDLDMDEILDVPYIKSSQQLAAYTKAA	170
Mus musculus	QGPQPEELSPEDGVGGLPGKGSEPSQALGELEHYDLDMDEILDVPYIKSSQQLAPLTKVT	171
Rattus_norvegicus	QGPQPEELSPEDGVGGLPGKGSEPSQALGELEHYDLDMDEILDVPYIKSSQQLAPLTKVT	171
Homo_sapiens	LGPQPQELGPGDGVGGPPGKSSEPSTSLGELEHYDLDMDEILDVPYIKSSQQLASFTKVT	172
Pan_troglodytes	LGPQPQELGPGDGVGGPPGKSSEPSTSLGELEHYDLDMDEILDVPYIKSSQQLASFTKVT	219
Macaca_mulatta	LGPQPEELSPGDGVGGPPGKSSEPSTSLGELEHYDLDMDEILDVPYIKSSQQLASFTKVT	219
Callithrix_jacchus	LGHQPEDLSPGDGLGGPPGKNSEPSTPLGELEHYDLDMDEILDVPYIKSSQQLASFTKVT	219
Canis_lupus_familiaris		171
Felis catus	PGPPPEELSPGDGDSGPQSKSTEPSTLLGELEHYDLDMDEILDVPYIKSSQQLAPFTKVT	171
Equus_caballus	PGPQPEELSPGDREGIPQSKSTEPSTLLGELEHYDLDMDEILDVPYIKSNQQLASFTKVT	185
Bos_taurus	PGPQPEELGPRAVEGSPQRKSTEPSTLLGELEHYDLDMDEILDVPYIKSSQQLASFTKAT	171
<pre>Heterocephalus_glaber</pre>	QGPQTEELGPEDGVGGLPGKSSEPSSALGELEHYDLDMDEILDVPYIKSSQQLASFSKVT	171
Latimeria_chalumnae	NTPQPSSQCLGDRQG-FKAKEVGASTLLGDLEHYDLDMDEILDVPYIKSNQQLTPFTKVA	136
Xenopus_tropicalis	DKSSTTENI <mark>P</mark> ADD <mark>GG-YKTKSIEAS</mark> VLL <mark>GEIEHYDLDMDEILDVPYIKSSQQLS</mark> LF <b>TK</b> VA	170
Rhinatrema_bivittatum	NVPQTCELCPGDEQG-LKDKSIEPGVSLGELEHYDLDMDEILDVPYIKSNQQLAPCSKVA	170
	190200210220230240	
	.:*:* * : :****:* : *	
Pavo_muticus	PEKKIFGVCSTVNGVSGKTCSTESTEPAGVTQFCVLSPVKGSQLRKTQPIVLDQHKHL	228
Pavo_cristatus	PEKKIFGVCSTVNGVSGKTCSTESTEPAGVTQFCVLSPVKGSQLRKTQPIVLDQHKHL	228
Gallus_gallus	PEKKTFGVSSTVNGVSGKTCSTESTEPAGVTQFCVLSPVKGSQLRKTQPIVLDQHKHL	228
Anolis_carolinensis	PEKRILGVYSTLNGLNSKLYSAGNTEKAPTGTTQFCVLSPVKSSQLRKAQPIVPDQHTHL	230
Mus_musculus	SEKRILGLCTTINGLSAKTCPIASTENSTPNMTPFCVLSPVKSPHLRKAPTALRDQHKLS	231
Rattus_norvegicus	SEKRILGLCTTVNGLSAKTCPIVSAETSTPNMAPLCVLSPVKSPHLRKVPSVLRDQHKLP	231
Homo_sapiens	SEKRILGLCTTINGLSGKACSTGSSESSSSNMAPFCVLSPVKSPHLRKASAVIHDQHKLS	232 279
Pan_troglodytes	SEKRILGLCTTINGLSGKACSTGSSESSSSNMAPFCVLSPVKSPHLRKASAVIHDOHKLS SEKRILGLCTTINGLSGKACSTGSSESSSSNMAPFCVLSPVKSPHLRKASAVIRDOHKLA	279 279
Macaca_mulatta		279
Callithrix_jacchus Canis_lupus_familiaris	SEKRILGLCTSINGLSGKVCSTGSSENSPSNMAPFCVLSPLKSPHLRKASAVIRDQHKLS SDKRILGLCTTINGLSGKACSPGSAESSPSNMTPFCVLSPVKSPHLRKASSVIRDQPKLS	279
Felis_catus	SDKRILGLCTTINGLSGKACSPGSAESSPSTLTPFCVLSPVKSPHLRKASSVIRDQPKLS SDKRILGLCTTINGLSGKACSPGSAESSPSTLTPFCVLSPVKSPHLRKASSIIRDQQKLS	231
Equus_caballus	SEKRILGLCTTINGLSSKACSTGTPENSPSNMTPFCVLSPVKSPHLRKASSVVRDQQKLS	245
Bos_taurus	SEKRILGLCTSINGLSGKACPTGSAESSPSNMTPFCVLSPVKSPHLRKASSVVQDQQKLS	231
Heterocephalus_glaber	SEKRILGLCTTINGLSGKACSTGSTENSSSNMTPFCVLSPVKSPHLRKASAVLRDPHKLS	231
Latimeria_chalumnae	PEKRILGVCSSGKGHGNKTCSVVSPENLPVSATQFCVLSPVKSSELRKAHAIVPDQHKHS	196
Xenopus_tropicalis	AEKRTSNIYPLVKGKTGTIGNVENLSSNGAQFCVLSPVKNPAQPSVLDQNRHS	223
Rhinatrema bivittatum	PEKRTSVACSTVTGKSCSGGSAENSQSSMSQFCVLSPVKSSELRKTQPIVLDQHRHS	227
1012110010110 <u>-</u> 21110000	250260270280290300	/
	: . : * : .*::. ::*: * *: * :::	
Pavo_muticus	TEELELSQPLAKCSSAHESETQGKGFLCRTFVGPQAHKTEKTMP-NCHLRTFHLQTAVAE	287
Pavo_cristatus	TEELELSQPLAKCSSAHESETQGKGFLCRTFVGPQAHKTEKTMP-NCHLRTFHLQTAVAE	287
Gallus_gallus	TEELELSQPLAKCSSVHETEAQGKGFLCRTFVGPQAHKTEKTMP-NCHLRTFHLQTTVAE	287
Anolis_carolinensis	VEGFEFPRPLVKCGSVQEPEAQTKGFLNRTFGDNMEKTLS-HSQLRTFHLQAAVTE	285
Mus_musculus	TEDSESSPALGKCGPAYESENHSKDFLNKVFSDPHSRKIEKSGP-DCKLRSFHLQSSAAG	290
Rattus_norvegicus	AEESENS <mark>PAPGKCGP</mark> AFESENHSKDFLNKVFSDPHSRKAEKSGP-DCKLRPFRLQTSAAG	290
Homo_sapiens	TEETEISPPLVKCGSAYEPENQSKDFLNKTFSDPHGRKVEKTTP-DCQLRAFHLQSSAAE	291
Pan_troglodytes	TEETEISPPLVKCGSAYEPENQSKDFLNKTFSDPHGRKVEKTTP-DCQLRAFHLQSSAAE	338
Macaca_mulatta	TEETEISPPLVKCGSAYEPENQSKDFLNKTFSDPHGRKVEKTTP-DCQLRAFHLQSSAAE	338
Callithrix_jacchus	TEEPEISPPLVKCGSAYENQSKDFLNKTFSDSHGRKVEKTTP-DCQLRAFHLQSSAAE	336
	TEESESSPPLVKCGSAYEPENQSKDFLNKTFSDPHGRKREKATP-DCQLRAFHLQSSATE	290
Felis_catus	AEESESSPPLVKCGSAYEPENQSKDFLNKTFSDPHSRKREKAMP-DCQLRDFHPQSSATE	290
Equus_caballus	TEEAESSPPLVKCGSAYEPENQSKDFLNKTFSDPHSRKVEKAMP-DCQLRAFHLQSSATE	304
Bos_taurus	PEESESSPPLVKSGSAYEPENQGKDFLHKTFSDPHSRKVDKAMAPDCQLRAFHLQSSATD	291
Heterocephalus_glaber	TGESESSPPPIKCGSAYEPESQNKDFLNKAFNDPRNRKIEKTMP-DCQLRAFHVQSSATE	290
Latimeria_chalumnae	AGGLELSQALVKCGSIHERETQSVGFLNRTCADSHVHKTDKTMP-NCQPRTFHLQMTTTD	255
Xenopus_tropicalis Rhinatrema bivittatum	SGGLELSQSGIQSGSVHEPEYQNKGFLNRTLSDSHAQKLEKNMP-NCQLRAFHLQGAATD AGGVKPSQLFVKCSASHEPEAQNKGFFNRTFADSHTQKAEKTMP-SCQLRAFHLQAAATE	282 286
KIIIIIatrema_DIVITTatum	310320330340350360	286
	340350	

File: /media/morpheus/disk1/fst/pep\_msa/SNCAARepTue Feb 1 14:37:18 2022 Page 3 of 6

	<u> </u>	
Pavo_muticus	SKQ-LEELNMSWSSAGGPEERSEEVKKFKSILNIVKEGQISLLPHLAADNLDKIHDECDN	346
Pavo_cristatus	SKQ-LEELNMSWSSAGGPEERSEEVKKFKSILNIVKEGQISLLPHLAADNLDKIHDECDN	346
Gallus_gallus	SKQ-LEELNMSWSSAGGPEERSEEVKKFKSILNIVKEGQISLLPHLAADNLDKIHDECDN	346
Anolis_carolinensis	NKQDESSSNA <mark>N</mark> WN <mark>SSGGLEERNENMKKNKSILNIVKEGQLS</mark> LLHHLAVDNLDKIHDENGN	345
Mus_musculus	A <mark>KTEEPINGMNWTNTQGTEERTEYLKK</mark> VRSILNIVNEGQISLL <mark>P</mark> HLAADNLDKIHDENGN	350
Rattus_norvegicus	A <mark>KPEEQVNG</mark> VSWA <mark>SAQGAEERTEYLQKVRSILNIVNEGQISLLPHLAADNLDK</mark> IHDE <mark>NGN</mark>	350
Homo_sapiens	<mark>SKPEEQ</mark> VS <mark>GLNRTSSQGPEERSEYLKK</mark> VKSILNIVKEGQISLLPHLAADNLDKIHDENGN	351
Pan_troglodytes	<mark>skpeeq</mark> vs <mark>glnrtssqgpeerseylkkvks</mark> ilnivkegqisllphlaadnldkihdengn	398
Macaca_mulatta	<mark>skpeeq</mark> vs <mark>glnwtssogpeerseylkkvks</mark> ilnivkegqisllphlaadnldkihdengn	398
Callithrix_jacchus	SKQEEQVSSMNWPSSQSPEERSEYLKKVKSILSIVKEGQISLLPHLAADNLDKIHDENGN	396
Canis lupus familiaris		350
Felis catus	PKVEEQIGGVSWTSSQGPEERSEYLKKGKSILNIVKEGQISLLPHLAADNLDKIHDETGN	350
Equus_caballus	TKLEEQIGGMNWTSSQGPEERSEYLKKVKSILNIVKEGQISLLPHLAADNLDKIHDENGN	364
Bos taurus	PKLEEOIGGMNWTSSOGPEERNEYLKKVKSILNIVKEGOISLLPHLAADNLDKIHDESGN	351
Heterocephalus glaber	PKLDEQVNGMNWTSSQGLEERNEYLKKVKSILNIVKEGQISLLPHLAADNLDKIHDENGN	350
Latimeria_chalumnae	SKLDEVNSNTNWNTRGGPGERNEDLKKVKSILNIVKEGQISLLPHLAVDNLEKIHDENGN	315
Xenopus_tropicalis	TQLDGINGNLNWNFSEERSEDMKKIKSIINIVKEGQISLLPHIAVDNLDQIHDENGN	339
Rhinatrema bivittatum	TKTDELNSSMNWNNPEEKSEDAKKIKSIFNIVKEGQISLLPHITVDNLDKIHDENRN	343
Rninatrema_bivittatum		343
	370380390400410420	
	******.******************************	
B		400
Pavo_muticus	NLLHVAASK <mark>GHAECLQHLTSLMGEDCLNERNMEQ</mark> LTPAGLAIKNGQLECVRWMVSETEAI	406
Pavo_cristatus	NLLHVAASKGHAECLQHLTSLMGEDCLNERNMEQLTPAGLAIKNGQLECVRWMVSETEAI	406
Gallus_gallus	NLLHVAA <mark>SKGHAECLQHLTSLMGEDCLNERNIEQLTPAG</mark> LAI <mark>KNGQLECVR</mark> WMV <mark>SETE</mark> AI	406
Anolis_carolinensis	NLLHVAA <mark>SQGHAECLQHLTSLMGEDCLNERNSERLTPAG</mark> LAI <mark>KNGQLEC</mark> VRWMVSE <b>TE</b> AI	405
Mus_musculus	NLLHIAA <mark>SKGHAECLQHLTSLMGEDCLNERNTEQLTPAG</mark> LAIK <mark>NGQLECVR</mark> WMVSE <b>TE</b> AI	410
Rattus_norvegicus	NLLHVAASK <mark>GHAEC</mark> LQHLTSLM <mark>GEDCLNERNAEQLTP</mark> AGLAIKNGQL <mark>EC</mark> VRWMVSETEAI	410
Homo_sapiens	NLLHIAAS <mark>QGHAEC</mark> LQHLTSLM <mark>GEDCLNERNTEK</mark> LTPAGLAIKNGQLECVRWMVSETEAI	411
Pan_troglodytes	NLLHIAASQGHAECLQHLTSLMGEDCLNERNTEKLTPAGLAIKNGQLECVRWMVSETEAI	458
Macaca_mulatta	NLLHIAASQGHAECLQHLTSLMGEDCLNERNTEKLTPAGLAIKNGQLECVRWMVSETEAI	458
Callithrix_jacchus	NLLHIAASQGHAECLQHLTSLMGEDCLNERNTEKLTPAGLAIKNGQLECVRWMVSETEAI	456
Canis_lupus_familiaris	NLLHVAASQGHAECLQHLTSLMGEDCLSERNAEKLTPAGLAIKNGQLECVRWMVSETEAI	410
Felis catus	NLLHVAASQGHAECLQHLTSLMGEDCLSERNAERLTPAGLAIKNGQLECVRWMVSETEAI	410
Equus_caballus	NLLHIAASQGHAECLQHLTSLMGEDCLSERNAEKLTPAGLAIKNGQLECVRWMVSETEAI	424
Bos_taurus	NLLHVAASQGHAECLQHLTSLMGEDCLNERNVEKLTPAGLAIKNGQLECVRWMVSETEAI	411
<del>_</del>		
Heterocephalus_glaber	NLLHITASR <mark>G</mark> HVECLQHLTSLMGEDCLNERNAEKLTPAGLAIKNGQLECVRWMVSETEAI	410
Latimeria_chalumnae	NLLHIAASQGHAECLQHLTSLMGEDCLNERNNEKLTPAGLAIKNGQLECVRWMVSETEAI	375
Xenopus_tropicalis	NLLHIAASQGHAECLQHLTSLMGEDCLSERNDEKLTPAGLAIKRGQLECVRWMVSETEAI	399
Rhinatrema_bivittatum	NLLHLAASQGHAECLQHLTSLMGEDCLNERNEDLLTPAGLAIKNGQLECVRWMVSETEAI	403
	430440450460470480	
	****.:*.******.:*.*****************	
Pavo_muticus	AELSCSKDHPSLIHYAGCYGQEKILLWLLQFMQEQGISLDEVDQDGNTAVHIAAQHGYLG	466
Pavo_cristatus	AELSCSKDHPSLIHYAGCYGQEKILLWLLQFMQEQGISLDEVDQDGNTAVHIAAQHGYLG	466
Gallus_gallus	AELSCSKDHPSLIHYAGCYGQEKILLWLLQFMQEQGISLDEVDQDGNTAVHIAAQHGYLG	466
Anolis_carolinensis	AELSCSKDHPSLIHYAGCYGQEKILLWLLQFMQEQGISLDEVDQNGNSAVHVAAQQGYLG	465
Mus_musculus	AELSCSKDFPSLIHYAGCYGQEKILLWLLQFMQEQGISLDEVDREGNSAVHVASQHGYLG	470
Rattus_norvegicus	AELSCSKDFPSLIHYAGCYGQEKILLWLLQFMQEQGISLDEVDQEGNSAVHVASQHGYLG	470
Homo_sapiens	AELSCSKDFPSLIHYAGCYGQEKILLWLLQFMQEQGISLDEVDQDGNSAVHVASQHGYLG	471
Pan troglodytes	AELSCSKDFPSLIHYAGCYGQEKILLWLLQFMQEQGISLDEVDQDGNSAVHVASQHGYLG	518
Macaca mulatta	AELSCSKDFPSLIHYAGCYGOEKILLWLLOFMOEOGISLDEVDODGNSAVHVASOHGYLG	518
Callithrix_jacchus	AELSCSKDFPSLIHYAGCYGOEKILLWLLOFMOEOGISLDEVDODGNSAVHVASOHGYLG	516
Canis_lupus_familiaris		470
Felis catus	AELSCSKDFPSLIHYAGCFGQEKILLWLLQFMQEQGISLDEVDQDGNSAVHVASQHGYLG	470
Equus_caballus	AELSCSKDFPSLIHYAGCFGQEKILLWLLQFMQEQGISLDEVDQDGNSAVHVASQHGYLG	484
	AELSCSKDFPSLIHYAGCFGQEKILLWLLQFMQEQGISLDEVDQDGNSAVHVASQHGYLG AELSCSKDFPSLIHYAGCFGQEKILLWLLQFMQEQGISLDEVDQDGNSAVHVASQHGYLG	471
Bos_taurus		
Heterocephalus_glaber	AELSCSKDFPSLIHYAGCYGQEKILLWLLQFMQEQGISLDEVDQDGNSAVHVASQHGYLG	470
Latimeria_chalumnae	AELSCCKDHPSLIHYAACYGQEKILLWLLQFMQEQGISLDEVDQYGNSAVHIASQHGYLG	435
Xenopus_tropicalis	AELSCSKDHPSLIHYAAGYGQEKILLWLLQFMQEQGISLDEIDKCGNSAVHIASQHGYLG	459
Rhinatrema_bivittatum	AELSCSRDYPSLIHYAASYGQEKILLWLLQFMQEQGISLDEVDQDGNSAVHVASQHGYLG	463
	490500510520530540	

File: /media/morpheus/disk1/fst/pep\_msa/SNCAARepTue Feb 1 14:37:18 2022 Page 4 of 6

	*************************************	
Pavo muticus	CIQTLVEYGANVTMONHVGEKPSQSAERHGHTMCSRYLVVVETCMSLASQVVKLTKQLKE	526
Pavo_cristatus	CIQTLVEYGANVTMONHVGEKPSOSAERHGHTMCSRYLVVVETCMSLASOVVKLTKOLKE	526
Gallus_gallus	CIQTLVEYGANVTMQNHVGEKPSQSAERHGHTMCSRYLVVVETCMSLASQVVKLTKQLKE	526
Anolis_carolinensis	CIQTLVEYGANVTMQNHAGEKPSQSAERQGHTMCSRYLIVVETCMSLASQVVKLTKQLKE	525
Mus_musculus	CIQTLVEYGANVTMQNHAGEKPSQSAERHGHTLCSRYLVVVETCMSLASQVVKLTKQLKE	530
Rattus_norvegicus	CIQTLVEYGANVTMQNHAGEKPSQSAERHGHTLCSRYLVVVETCMSLASQVVKLTKQLKE	530
Homo_sapiens	CIQTLVEYGANVTMQNHAGEKPSQSAERQGHTLCSRYLVVVETCMSLASQVVKLTKQLKE	531
Pan_troglodytes	CIQTLVEYGANVTMQNHAGEKPSQSAERQGHTLCSRYLVVVETCMSLASQVVKLTKQLKE	578
Macaca_mulatta	CIQTLVEYGANVTMQNHAGEKPSQSAERQGHTLCSRYLVVVETCMSLASQVVKLTKQLKE	578
Callithrix_jacchus	CIQTLVEYGANVTMQNHAGEKPSQSAERQGHTLCSRYLVVVETCMSLASQVVKLTKQLKE	576
Canis_lupus_familiaris		530
Felis_catus	CIQTLVEYGANVTMHNHAGEKPSQSAERHGHTLCSRYLVVVETCMSLASQVVKLTKQLKE	530
Equus_caballus	CIQTLVEYGANVTMQNHVGEKPSQSAERHGHTLCSRYLVVVETCMSLASQVVKLTKQLKE	544
Bos_taurus	CIQTLVEYGANVTMQNHAGEKPSQSAERHGHSLCSRYLVVVETCMSLASQVVKLTKQLKE	531
Heterocephalus_glaber	CIQTLVEYGANVTMQNHVGDKPSQSAERHGHTLCSRYLVVVETCMSLASQVVKLTKQLKE	530
Latimeria_chalumnae	CIQTLVEYGANVTIHNQAGEKPSQSAEHHGHTTCSRYLVVVETCMSLASQVVKLTKQLKE	495
Xenopus_tropicalis	CIQTLVEYGANVTMQNHAGEKPSQSAERQGHTMCSRYLVVVETCMSLASQVVKLTKQLKE	519
Rhinatrema_bivittatum	CIQTLVEYGANVTMQNQAGEKPSQCAEHHGHTLCSRYLVVVETCMSLASQVVKLTKQLKE	523
	$\dots \dots $	
	** :::.** :**::	
Pavo_muticus	QTVERVTLQNQLQQLLEAQRSEGKSLPTSTSSP-SSPASGKPQWKPSEADELSPPKSKLN	585
Pavo_cristatus	QTVERVTLQNQLQQLLEAQRSEGKSLPTSTSSP-SSPASGKPQWKPSEADELSPPKSKLN	585
Gallus_gallus	QTVERVTLQNQLQQLLEAQRPEGKSL <mark>P</mark> TSTSS <mark>P</mark> -SSPASGKPQWKPTEADELSPPKSKLN	585
Anolis_carolinensis	QTVEHVTLQNQLQQVLEKQRSEVKSLPTSPSSP-SSPISGKPQWKPSDIDDSTLPKNKLN	584
Mus_musculus	QTVERVTLQSQLQQLLEAQKSEGKSLPSSPSSP-SSPASTKSQWKALDTDEESTGKSKVG	589
Rattus_norvegicus	QTVERVTLQSQLQQLLEAQKSEGKSLPSSPSSP-SSPASRKSQWKILDADDESTGKSKLG	589
Homo_sapiens	QTVERVTLQNQLQQFLEAQKSEGKSLPSSPSSP-SSPASRKSQWKSPDADDDSVAKSKPG	590
Pan_troglodytes Macaca mulatta	QTVERVTLQNQLQQFLEAQ <mark>KSEGKSLPSSP</mark> SSP-SSPASRKSQW <mark>KSP</mark> DAEDDSVAKSKPG QTVERVTLQNQLQQFLEAQKSEGKSLPSSPSSP-SSPACRKSQWKSPDADDDSVAKSKPG	637 637
<del>_</del>	QTVERVILQNQLQQFLEAQKSEGKSLPSSPSSP-SSPASRKSQWKSPDADDDSVAKSKPG	635
Callithrix_jacchus		587
Canis_lupus_familiaris Felis_catus	QTMERVTLQNQLQQLLEAQKSEDKSLLSSPSSP-SSPASRRSQWKSPDADDESVAKSKPG	589
Felis_Catus Equus_caballus	QTMERVTLQNQLQQLLEAQKSEGKSLLSSPSSP-SSPASRKSQWKSPDADDESLAKSKPG	603
Bos_taurus	QTTQRVTLQNQLQQLLEAQKSEGKSLLSSPSSP-SSPACRKSQWKSPDAEDESVAKSKSG	590
Heterocephalus_glaber	QTVERVTLQNQLQQLLEAQKSEGKSLPSSPSSP-SSPASRKSQWRVPDIGDESTAKSKLG	589
Latimeria_chalumnae	QTAERVTLQVHLQHLLEAQREESGSLPTSPSSPLISPGSSRPEQKTANLNHSALQKIKTS	555
Xenopus tropicalis	OTAERINLOTHLOOLLEAHRTEGRSLPTSPSSP-SSPASGSNOWKTIDAEDLN-OKGKLN	577
Rhinatrema bivittatum	QTTERVTLQSQLQQLLEAQKSDDRSIPTSPSSP-SSPASGGLQQNMCDADDMSSQKGKPC	582
MIIIIaci ema_Diviccacum	610620630640650660	302
	:	
Pavo_muticus	-AQDGIQILGSLGTSNRARAKIKDEDSDKILRQLLGKEISENVCTQEKLTLEFQD	639
Pavo_cristatus	-AQDGIQILGSLGTSNRARAKIKDEDSDKILRQLLGKEISENVCTQEKLTLEFQD	639
Gallus_gallus	-AQDGIQILGSLGTSSRTRAKIKDEDSDKILRQLLGKEISENVCMQEKLTLEFQD	639
Anolis_carolinensis	-TODGIQIFGSVGTPHHNQPKIKDEDSDRILRQLLGKEISEDACMQEKLSLEFRD	638
Mus_musculus	-AQEGIQVLGSLSVSSRARTKGKDEDSDKILRQLLGKEISENVCTQEKLSLEFQD	643
Rattus_norvegicus	-TQEGIQVLGNLSSRARTKGKDEDSDKILRQLLGKEISENVCTQEKLSLEFQD	641
Homo_sapiens	-VQEGIQVLGSLSASSRARPKAKDEDSDKILRQLLGKEISENVCTQEKLSLEFQD	644
Pan_troglodytes	-VQEGIQVLGSLSASSRARPKAKDEDSDKILRQLLGKEISENVCTQEKLSLEFQD	691
Macaca_mulatta	-VQEGIQVLGSLSASSRARPKAKDEDSDKILRQLLGKEISENVCTQEKLSLEFQD	691
Callithrix_jacchus	-VQEGIQVLGSLSASSRARPKAKDEDSDKILRQLLGKEISENVCTQEKLSLEFQD	689
Canis_lupus_familiaris		641
Felis_catus	-VQEGIQVLGSLSASSRARAKAKDEDSDKILRQLLGKDISESVCTQEKLSLEFQD	643
Equus_caballus	-VQEGIQVLGSVSASSRARAKAKDEDSDKILRQLLGKDISENVCAQEKLSLEFQD	657
Bos_taurus	-VQEGIQVLGSLSASSRARAKVKDEDSDKILRQLLGKDISENVCTQEKLSLEFQD	644
Heterocephalus_glaber	-IQEGIQVLGSLSASSGVRAKTKEEDSDKILRQLLGKEISENVCTQEKLTLEFQD	643
Latimeria_chalumnae	RTSEALQNVTNLGA <mark>P</mark> NKNLLKQKDEDSDKILRQLLGKEISENVCTQEKLSLEFQK <mark>G</mark> QQQQ	615
Xenopus_tropicalis	GYSENYQSLNTS-IPSRLRCRALDDESDKILRQLLGKDIAENVSSPEKLSLEFQD	631
Rhinatrema_bivittatum	SSHNGFSVLGTTGTPGRLRSKAKDEDSDKILRQLLGKEISENVCT-QKLSLEFQE	636
	670680690700710720	

File: /media/morpheus/disk1/fst/pep\_msa/SNCAARepTue Feb 1 14:37:18 2022 Page 5 of 6

```
:::* **.**:::***:*** . *** * . *:::: ***
                                   * •
                         --AHASSKNVKKILPEKRELKLARLRQLMQRSLSESDTDSANSEDHKNTPVKRTDKLRPQ
Pavo_muticus
                                                                                             697
                         --AHASSKNVKKILPEKRELKLARLRQLMQRSLSESDTDSANSEDHKNTPVKRTDKLRPQ
Pavo_cristatus
                                                                                             697
                         --AHASSKNVKKILPEKRELKLARLROLMORSLSESDTDSANSEDHKNTPVKRTDKLRPO
Gallus_gallus
                                                                                             697
Anolis carolinensis
                         --VHAS-KSMKKAPLEKKELKLARLKHLMORSLSESDTDSNNSEDOKNTPVRRTDKPRPO
                                                                                             695
                         --AQASSRNSKKIPLEKRELKLARLRQLMORSLSESDTDSNNSEDPKNTPVKRADRPRPQ
                                                                                             701
Mus musculus
                         --AQVSSRNSKKIPLEKRELKLARLRQLMQRSLSESDTDSNNSEDPKNTPVKRVDRPRPQ
                                                                                             699
Rattus_norvegicus
Homo_sapiens
                         --AQASSRNSKKIPLEKRELKLARLRQLMQRSLSESDTDSNNSEDPKTTPVRKADRPRPQ
                                                                                             702
                         --AQASSRNSKKIPLEKRELKLARLRQLMQRSLSESDTDSNNSEDPKTTPVRKADRPRPQ
Pan_troglodytes
                                                                                             749
Macaca_mulatta
                         --AQASSRNSKKIPLEKRELKLARLRQLMQRSLSESDTDSNNSEDPKNTPVRKADRPRPQ
                                                                                             749
                         --AQASSRNSKKIPLEKRELKLARLRQLMQRSLSESDTDSNNSEDPKNTPVRKADRPRPQ
                                                                                             747
Callithrix_jacchus
Canis_lupus_familiaris --AQASSRNSKKIPAEKRELKLARLRQLMQRSLSESDTDSNTSEDPKSTPVRKADRPRPQ
                                                                                             699
                         --AQASSRNSKKIPADKRELKLARLRQLMQRSLSESDTDSNTSEDPKSTPVRKADRPRPQ
                                                                                             701
Felis_catus
Equus_caballus
                         --AQASSRNSKKIPLEKRELKLARLRQLMQRSLSESDTDSNNSEDPKSTPVRKAERPRPQ
                                                                                             715
                         --AQTSSRHSKKIPLEKRELKLARLKQLMQRPLSEADTDSNNSEDPKGTPVRKVDRPRPQ
                                                                                             702
Bos_taurus
                         --AQACSRHSKKIPLEKRELKLARLRQLMQRSLSESDTDSNNSEDPKNTPVRRADRPRPQ
Heterocephalus_glaber
                                                                                             701
                         EGVSAV<mark>PKVLKRIPAEKRELKLARLRQIMQRSLSESDTDSYNSEDQKSTP</mark>VKKADKPRPQ
                                                                                             675
Latimeria_chalumnae
Xenopus_tropicalis
                         --<mark>GQ</mark>AT-RSGKRIPPEKREYKLARLRQLMQRSLSESDTDSNNSEDQKNPVVRKADKPRPQ
                                                                                             688
                         --GQVPSRSGKRMLPERRELKLVRLRHLMQRSLSESDTDSNNSEDQKNTPVRKVEKSRPQ
                                                                                             694
Rhinatrema bivittatum
                         ......730......740......750......760......770.......780
                                     :*.*:*:*: *:
                                                       ***** ::*** :** :** ::
                         PIVESVE---SAESLHLMIKKHTSAAG--RRFPFGTRASKSVDGHSPSPTSESSDPDNEA
Pavo muticus
                                                                                             752
                         PIVESVE---SAESLHLMIKKHTSAAG--RRFPFGTRASKSVDGHSPSPTSESSDPDNEA
Pavo cristatus
                                                                                             752
Gallus_gallus
                         PIVESVE---SAESLHLMIKKHASAA<mark>G</mark>--RRFPFGTRASKSVDGHSPSPTSESSDPDNEA
                                                                                             752
Anolis_carolinensis
                         PIVESTE---STENLHLMIKRHTLASG--RRFPFGMKTSKSLDGHSPSPTSESSDPDNES
                                                                                             750
                                                                                             759
Mus_musculus
                         PIVESVENVDSAESLHLMIKKHSLASG--RRFPFGMKASKSLDGHSPSPTSESSEPDLDS
                         PIVESVENMDSAESLHLMIKKHSVASG--RRFPFGMKASKSLDGHSPSPTSESSEPDLDS
Rattus_norvegicus
                                                                                             757
                         PIVESVESMDSAESLHLMIKKHTLASGG-RRFPFSIKASKSLDGHSPSPTSESSEPDLES
Homo_sapiens
                                                                                             761
                         PIVESVESMDSAESLHLMIKKHTLASGG-RRFPFSIKASKSLDGHSPSPTSESSEPDLES
PIVESVESMDSAESLHLMIKKHTLASGG-RRFPFSIKTSKSLDGHSPSPTSESSEPDLES
Pan_troglodytes
                                                                                             808
                                                                                             808
Macaca_mulatta
                         PIVESVESMDSTESLHLMIKKHTLASGG-RRFPFGIKASKSLDGHSPSPTSESSEPDLES
Callithrix_jacchus
                                                                                             806
757
                         PIVGSVESVDSAESLHLMIKKHTLASG--RRFPFGIKASKSLDGHSPSPTSESSEPDLES
Felis_catus
                                                                                             759
                         PIVESVESMDSAESLHLMIKKHTLASG--RRFPFGIKASKSLDGHSPSPTSESSEPDLES
                                                                                             773
Equus_caballus
Bos taurus
                         PIVESVEGVDSAESLHLMIKKHTLASG--RRFPFSIKASKSLEGHSPSPTSESSEPDLES
                                                                                             760
                         PIVESVESMOSTESLHLMIKKHSLASG--RRFPFSTKASKSLDGHSPSPTSESSEPDLES
                                                                                             759
Heterocephalus_glaber
                         PIVENME---CTESLQLMIKKHTSAAG--RRFPFSVRSSKSADGHSSSPTSESSDPDYES
Latimeria chalumnae
                                                                                             730
                         PIVENVE---NSENLQLIIKKHTQASSASRRFPFGLKSSKSVDGHSPSPTSESSDPDYEP
                                                                                             745
Xenopus_tropicalis
                         PIVENTE---STESLQLMIRKHTLAAAG-RRFPFGIRASKSVDGHNSSPTSESSDPDYET
Rhinatrema bivittatum
                                                                                             750
                         .....790......800......810......820......830......840
                                                .: ::*. *****************
                         QYQ-<mark>SGTVP</mark>QSQFC<mark>GD</mark>SSPSSTDSAAAQKVATSPKSALKSPSSKRRTSQNLKLRVTFEEP
Pavo_muticus
                                                                                             811
Pavo cristatus
                         QYQ-<mark>sgtvp</mark>qsqfc<mark>gdssp</mark>sstdsaaa<mark>qkvatspksalksp</mark>sskrrtsqnlklrvtfeep
                                                                                             811
                         QYQ-<mark>sgtvp</mark>qsqfc<mark>gdsspsstdgaaaqkvatspks</mark>al<mark>kspsskrrtsqnlklrvtfeep</mark>
                                                                                             811
Gallus_gallus
                         LYQ-IGTVSQNQMSGDACQSSPETSTSHKVATSPKSALKSPSSKRRTAQNLKLRVTFEEP
                                                                                             809
Anolis carolinensis
                         H<mark>GPG</mark>LGMTPPTQPSTEATQSSPDSTAAQKVATSPKSALKSPSSKRRTSQNSKLRVTFEEP
Mus_musculus
                                                                                             819
                         HCPSLGMTPPTQPSTEATQCSPDSATAQKVATSPKSALKSPSSKRRTSQNSKLRVTFEEP
QYPGSGSIPPNQPSGDPQQPSPDSTAAQKVATSPKSALKSPSSKRRTSQNLKLRVTFEEP
Rattus norvegicus
                                                                                             817
Homo_sapiens
                                                                                             821
                         QYPGSGSIPLNQPSGDPQQPSPDSTAAQKVATSPKSALKSPSSKRRTSQNLKLRVTFEEP
                                                                                             868
Pan troglodytes
                         QYPGSGSTPPNQPSGDPPQPNPDSTAAQKVATSPKSALKSPSSKRRTSQNLKLRVTFEEP
                                                                                             868
Macaca_mulatta
                         QYPGSGSTPPNQPSGDPPQPSPDSTAAQKVATSPKSALKSPSSKRRTSQNLKLRVTFEEP
                                                                                             866
Callithrix_jacchus
                         QC<mark>PGSGTTPPSQSPGDPTQPSPDSTAAQKVAMSPKSALKSP</mark>SSKRRTSQNLKLRVTFEE<mark>P</mark>
                                                                                             817
Canis_lupus_familiaris
                         QCPASGTTPPSQPSGDPTQPSPDSTATQKVAMSPKSALKSPSSKRRTSQNLKLRVTFEEP
                                                                                             819
Felis_catus
                         HC<mark>PGSGTTPPNQPSGDSTQPSPDSTAAQKVATSPKSALKSPSSKRRTSQNLKLRVTFEEP</mark>
Equus_caballus
                                                                                             833
                         QCPGSGNTPSSQPSGEAPQPSPDSTAAQKVATSPKSALKSPSSKRRTSQNSKLRVTFEEP
                                                                                             820
Bos_taurus
                         QYPGSGNIPPSQPSGDPTQSSPDSTAAQKVATSPKSALKSPSSKRRTSQNSKLRVTFEEP
Heterocephalus_glaber
                                                                                             819
Latimeria_chalumnae
                         HYQ-AGSVSRTQPAGDSSQSGSDGAGSQKVTTSPKSALKSPSSKRRTSQNLKLRVTFEEP
                                                                                             789
                         HYQ-MS<mark>SIP</mark>QCS<mark>GAAE-SNSSPNSSSAQKT-TSPKSALKSPSSKRRTSQNLKLRVTFEEP</mark>
                                                                                             802
Xenopus_tropicalis
Rhinatrema bivittatum
                         QYQ-A<mark>GS</mark>ISRKEIA<mark>GDNSHSVADSATAQKAATSPKS</mark>ALKS<mark>P</mark>SSKRRTSQNLKLRVTFEEP
                                                                                             809
                          ......850.......860.......870.......880.......890.......900
```

File: /media/morpheus/disk1/fst/pep\_msa/SNCAARepTue Feb 1 14:37:18 2022 Page 6 of 6

	***:	
Pavo muticus	VVQVELAEAELNEEKDKERGKALSRAPPSSGEPSGDOMKRPFGTFRSIMETLSGNON-NN	870
Pavo cristatus	VVQVELAEAELNEEKDKERGKALSRAPPSSGEPSGDQLKRPFGTFRSIMETLSGNQN-NN	870
Gallus_gallus	VVQVELAEAELNEEKDKGKALPRAPASTGEPSGDQLKRPFGTFRSIMETLSGNQN-NN	868
Anolis carolinensis	VVQVEQTEIGLNGERDKERSKVLQRPPNAETGEQQKRPFGTFRSIMETLSGNQN-NN	865
Mus musculus	VVQMEQTGLELNGEKDKDKGRAPQRTSESGEQMKRPFGTFRSIMESLSGNQN-NN	873
Rattus_norvegicus	VVQMEQTSLELNGEKDKERGRAPQRTSESGEQMKRPFGTFRSIMESLSGNQN-NN	871
Homo_sapiens	VVQMEQPSLELNGEKDKDKGRTLQRTSTSNESGDQLKRPFGAFRSIMETLSGNQN-NN	878
Pan_troglodytes	VVQMEQPSLELNGEKDKDKGRTLQRTSTSNESGDQLKRPFGAFRSIMETLSGNQN-NN	925
Macaca mulatta	VVQMEQPSLELNGEKDKDKGRTLQRTSTSNESGDQLKRPFGAFRSIMETLSGNQN-NN	925
Callithrix_jacchus	VVQMEQPSLELNGEKDKDKGRTLQRTSTSNESGDQLKRPFGAFRSIMETLSGNQN-NN	923
Canis lupus familiaris		874
Felis catus	VVOMEOASLEPTGEKDRDKGRTPORTSTGSESGDOLKRPFGTFRSIMETLSGNON-NN	876
Equus_caballus	VVQMEQTSLELNGEKDRDKGRTFQRTSTSSESGDQLKRPFGTFRSIMETLSGNQN-NN	890
Bos_taurus	VVQMEQTSLELNGEKEREKGRTLQRTSAASESGDQLKRPFGTFRSIMETLSGNQN-NN	877
Heterocephalus glaber	VVQMEQTGLELNGEKDKDKGRTLPRNSTSSESGEQLKRPFGTFRSIMETLSGNQN-NN	876
Latimeria chalumnae	VVQLEQAEFDACNSGDKESDRAFPPAPPSAESGDSWKRPFGTFRSIMETLSGNQN-NN	846
Xenopus_tropicalis	VVQVEHIEDVPNEEKEKE-TSKAPQKAP-SNGETGEQQKRPFGALRSIMESFSGNQN-NN	859
Rhinatrema bivittatum	VVQVEQAELELSQENDKDGSSKALQQVQPTSGEAGEQMKRPFGAFRSIMESLSGNQNSNN	869
	910920930940950960	
	** : : *:.: ::.**:* : : . : * :.*.	
Pavo_muticus	NNCQTANLIKTSSTLPFSSLGRKTADSKGNPAALT-KGRNKPGPCFSHTNLSS-STLNEE	928
Pavo_cristatus	NNCQTANLIKTSSTLPFSSLGRK <mark>T</mark> ADS <mark>KGNP</mark> AALT-KGRNKPGPCFSHTNLSS-STLNEE	928
Gallus_gallus	NNCQTANLIKTSSTLPFSSLGRKAGDSKGNPAALT-KGRNKPGPCFSYTNLSS-STLNEE	926
Anolis_carolinensis	NNYQTSSLTKTSSPFTSLGRKATDSKGNSANSA-KGKNKPAPYSGCVSFST-SMLIED	921
Mus_musculus	NNYQPASQLKTCT-LPLTSLGRKTADAKGNPVSPASKGKNKAAMYSSCIHLPS-NALVEE	931
Rattus_norvegicus	NNYQPASQLKTCT-LPLTSLGRKTADAKGNPVSPASKGKNKAAMYSSCIHLPS-NALVEE	929
Homo_sapiens	NNYQAANQLKTST-L <mark>P</mark> LTSLGRKT-DAKGNPASSASKGKNKAA	919
Pan_troglodytes	NNYQAANQLKTST-LPLTSLGRKT-DAKGNPASSASKGKNKAEMYSSCINLSS-NMLIEE	982
Macaca_mulatta	NNYQAANQLKTST-LPLTSLGRKTTDAKGNPASSTNKGKNKAEMYSSCINLSS-NTLIEE	983
Callithrix_jacchus	NNYQAANQLKTST-LPLTSLGRKTADAKGNPASSA <mark>SKGKNK</mark> AEMYSSCINLSS-NTLIEE	981
Canis_lupus_familiaris		932
Felis_catus	NNYQAANQLKTST-LPLTSLGRKTTDAKRS <mark>P</mark> VSSA <mark>SKGKNKAEMYG</mark> SCVTLSS-NTLTEE	934
Equus_caballus	NNYQAANQLKTST-L <mark>P</mark> LTSLGRKTADAKGN <mark>P</mark> TSSASKGKNKAEMY <mark>S</mark> SCINLSS-N <mark>P</mark> LIEE	948
Bos_taurus	NNYQASNQLKTST-L <mark>P</mark> LTSLGRKVTDGKGNT <mark>G</mark> SSA <mark>SKGKNKAEMYG</mark> SCINLSS-NTLIEE	935
Heterocephalus_glaber	NNYQTAIQLKTST-L <mark>P</mark> LTSLGRKMTDAKGNPVNSAGKGKTKAEMYSSCINLSS-NMLIEE	934
Latimeria_chalumnae	NNLHAATAMKTSATL <mark>P</mark> LSPLGRKTAEMRANAVFPT-KIKNKTVSVV	891
Xenopus_tropicalis	NNCQAANTAKASS-S-FTSLGKKATEAKANPAGPA-KGKNKTESYTCCGSISSTRALLED	916
Rhinatrema_bivittatum	NNCQVTNVSKTST-LPFTSLGKKVMDSRANPVSAT-KAKNKADTNIYCTNFSS-LAMIED	926
	970980990100010101020	
David mutique	HPCS-YAWHDNVSRKSQKSYSQKSSEETELQEFFL 962	
Pavo_muticus Pavo cristatus	HPCS-YAWHDNISRKSQKSYSQKSSEETELQEFFL 962	
Gallus_gallus	HLCN-YAWHDNISRKSQKSYSQKSSEETELQEFFL 960	
Anolis_carolinensis	RLCN-YAWHNATDRKLQQSYSRSCFDEPELQEFFL 955	
Mus musculus	HLRD-YARHNDIKRNATKTYHMKHTAEPEPRELFL 965	
Rattus_norvegicus	HLRD-YARLNDIKRNTKKTYNVKHIAEPEPKELFL 963	
Homo sapiens	919	
Pan_troglodytes	HLRN-DTRHNDINRKMKKSYSIKHIAEPESKELFL 1016	
Macaca mulatta	HLHN-YARHNDINRKMKKSYSIKHIAEPESKELFL 1017	
Callithrix_jacchus	HWRN-YARHNDINRKMKKSCSIKHIAEPESKELFL 1015	
Canis lupus familiaris		
Felis catus	PLRN-RARHNDINRKMKKSYSIKHIAEPESNELFL 968	
Equus_caballus	HLRN-SARHNAINRKVKKSYSIKHIAEPEPKELFL 982	
Bos taurus	HLHN-YARHDDISRKMKKSYSIKHVAEPESKELFL 969	
Heterocephalus glaber	HLHN-CARHNDINRKMKK-YSIRHIAEPESKELFL 967	
Latimeria_chalumnae	891	
Xenopus tropicalis	LLPNTPAWPNVVDRTVKILLEDINGKEEEMKEFFL 951	
Rhinatrema_bivittatum	QLH <mark>N-CAWRNGINGRMKNS</mark> LDKM <mark>GIEDKELQELFL 960</mark>	
- <del>-</del>	1030104010501060	