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Pavo muticus		7
Pavo cristatus	MECPTCL	7
Gallus_gallus	MERPTCL	7
Chelonia mydas	MKCPKCD	7
Rhinatrema_bivittatum	mtenegr	7
Rattus_norvegicus	mgcpocg	7
Mus_musculus	MECPOCG	7
Homo_sapiens	MECPSCQ	7
Pan_troglodytes	MECPSCQ	7
Macaca_mulatta		7
Callithrix_jacchus	MLLPAASSCWLQVSVLPPGRRVQPRPAARSDPAPRLRAGLGARALVLRVLAGRMECPSCQ	60
Equus_caballus	MECPSCR	7
Orcinus_orca	MPASGIPLPGGMECPSCR	18
	mecvscg	7
Felis_catus	MECLSCG	7
Callorhinchus_milii	MERMKCDQCG	10 7
Danio_rerio	1102030405060	/
	1405060	
Pavo_muticus Pavo_cristatus Gallus_gallus Chelonia_mydas Rhinatrema_bivittatum Rattus_norvegicus Mus_musculus Homo_sapiens Pan_troglodytes Macaca_mulatta Callithrix_jacchus Equus_caballus Orcinus_orca Canis_lupus_familiaris Felis_catus Callorhinchus_milii Danio_rerio	HAPA-DGPS-CAQCGAQPAAGAGDQAAETGEVNLAPAPDTGPEPGGEPR HAPA-DGPS-CAQCGAQPAAGAGDQAAETGEVNLAPAPDTGPEPGGEPR HVPG-EGPS-CAQCGAQPTAGAGDQAAERGEVNLVPDPDAGPEPEGEPR YISQ-DASPNFCSSCGFRLVPHISTQSMEKVVGSGDVKPAPVPEGEVESGRELK KFTSNLEAEMEPGGELRVEEVPSSPSQGSKGPATEGQMRPPGEEDPTSPL HVSSEKAAKFCSQCGQKLSPAATEQ-DLKNNNALVEASTTEGKTEPGEVLR HVSSEKAPKFCSECGQKLPSAATVQGDLKNNNTLVVSSTPEGKT HVSKEETPKFCSQCGERLPPAAPIA-DSENNNSTMASASEGEMECGQELK HVSKEETPKFCSQCGERLPPAAPIA-DSENNNSTMASASEGEMECGQELK HVSKEEAPRFCSQCGERLPPAAPIA-DSENNNSTMASAPEGMECGQELK HVSKEEAPRFCSQCGERLPPAAPIA-DSENNNSTVVSAPEGMECGQELK HVSKEEAPRFCSQCGGRLPPAAPIA-DSENNNSTVVSAPEGMECGQELK HVSKEEAPRFCSQCGQKLPPAAPAP-DSEKN-HSVTSAPEAEMECGQELK HVSKEEAPKFCSQCGQKLPPAAPAP-DSEKN-HSVTS	54 54 54 57 57 56 56 10 56 56 58 68 59
Pavo_muticus Pavo_cristatus Gallus_gallus Chelonia_mydas Rhinatrema_bivittatum Rattus_norvegicus Mus musculus	EEVVLLSSTDSGKELQTEQGEVLREEVVLLSSTDS	70 70 74 76 74 92 69
Homo_sapiens	EEGGPCLFPGS	67
Pan_troglodytes	EEGGPCLFPGS	67
Macaca_mulatta	EEGGPCL <mark>S</mark> PGS	67
Callithrix_jacchus	EEGSPCLSLGS	120
Equus_caballus	EEGGPKVTSAPQAEMECGQELKEDGSSFLSSGS	88
Orcinus_orca	EDSSLFLSLGS	77
Canis_lupus_familiaris	EDGGPFLSSGSRG EDGGPFLSPGS-N	71
Felis_catus	EDGGPFLSPGS-N	74
Callorhinchus_milii	DYSMOT <mark>TDESGETSWOPTNESGOPSROPT</mark> N <mark>ESG</mark> OLSROLTNESS <mark>O</mark> TSQOL <mark>T</mark> NE <mark>SG</mark> O <mark>TSQO</mark> SESKSLEIQNAN	128 71
Danio_rerio	130140150160170180	/ 1
	130140130100170180	

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Pavo muticus	-GGTLQEGAAVLSSASPECTAAELSSAAERQEEEEGGASLQEDVAALCDVPEAD	123
Pavo cristatus	-GGTLOEGAAVLSSASPECTAAELSSAAERQEEEEGGASLOEDVAALCDVPEAD	123
Gallus_gallus	EGGTLOEGITALSSASETAPECTAAELSSATERKEEEEEKEGGASLLEDVAALCDVSETD	134
Chelonia mydas	RET <mark>QG</mark> KPGELLSQSLGTQSGVSKKKVSMLECAGADCVLCRDL	118
Rhinatrema bivittatum	KSQTKHEQMDSLLPNSDLDSLDSVSGSTGAKQHRGEPVSCQEKVVAPDTDLYTDTVCCLE	134
Rattus norvegicus	-GKELONPEESESDASWTTHVEVDPEVFVDAAEDTAGGPEGAQCPPSKRKKEETAGCE	149
Mus musculus	-GKELEKPEESDSNASWT	86
Homo_sapiens	-DSWQENPEEPCSKASWTVQE	87
Pan_troglodytes	-DSWQENPEEPCSKASWTVQEGATSEVLVDATV-DLISDEWEAANATPSKRRKQDAAPLE	125
Macaca_mulatta	-DSWQENPDEPGSDGSWTIQEGAASEFLVDATV-DLISDEWEAAHAIPRKRRKQDAAPLE	125
Callithrix_jacchus	-EGWOENPEEPCSDASWTVORGAASEVLVDATV-DLMSDEWEAANAMLSKRRKODAALCE	178
Equus caballus	-SDRQENADEPCSDASWTVQRGVASDVLVDLADCTSDEPEAASYTPNKRRKADASLFE	145
Orcinus orca	-GDLQENPDEPCSDISWQMQREVASEGFVDAAGGTSTSDELEAASYSACKRRKEDATPFE	136
		92
Felis catus	- <mark>PLPP</mark> RSLDEPPSSVSLSSRRK -HLQQENLDEPPSDVSGTVPRGVASEVCVDAAGSTSDEREAVNHPPSKRRKEDATLRG	131
Callorhinchus milii	PTNESGDTSQDLTNESGDTSRDPTNEIRDASLDSTNESGETSMDSTNESGLNSPEPTNES	188
Danio_rerio	VSPKRPNENTSPNP	85
Dai: 10_10110	190200210220230240	0.5
	250240	
Pavo muticus	PQHVAGGSSQKSKRKKRKRNKA-KNSPSGHGEQDSLPPGSTAPAQTADPSDGCV	176
Pavo_cristatus	PQHVAGGSSQKSKRKKRKRNKA-KNSPSGHGEQDSLPPGSTAPAQTADPSDGCV	176
Gallus_gallus	PQHVAGGSSQKSKRKNRKTNRG-KKSRSGHGEQDSLPPGSTAPAQAADLSDECV	187
Chelonia_mydas	EESSCFPAVLEWKKRKRNKN-KKNPSDSGLQDSLTSISSAPCSLDS-SLSSELAGAKN	174
Rhinatrema bivittatum	SMAIPDTDTPTVAGAVLSTVTS-VGAVSCQENAAALDTDTSTGAVSCL-ENVGTLDTDMS	192
Rattus_norvegicus	VVDTEQSKKEKRRRRRQGTISSSEAASMSSGLWSLDLPSGPGSHNSALP	198
Mus musculus	TQMSKKEKRRKRQGTISSSEAPSSGLWSLDMPPSPGSHNSALP	130
Homo_sapiens	SKKKKKKKKKKKGNKSASSELASLPLSPASPCHLTLLSNPWPQDTALP	134
Pan_troglodytes	AASVPSADCEQSKKKKRKKKKKGNKSASSELASLPLSPASPCHLTLLSNPWPQDTALP	183
Macaca_mulatta	AAGVPSADCEQSKKKKRKKNKNLNNSASSELDSLPLSPASPCHLTLLSNPEPQDAARP	183
Callithrix jacchus	AASVPSADCQQSKKKKRKKKNHPNDSASSELASLPPSPASPCHLTLLSNLGPQDTALP	236
Equus_caballus	VTDVFSPDLEQSKRKNRKRKKNQKTATPADPGSLVPCSLTSLGDPGPQDTAPP	198 196
Orcinus_orca	VPDACSSDSEQRKGRKRKKKRNQNASTSAELDPLSSSLLGPCSLSSLANPELPDTAPP	138
Canis_lupus_familiaris		189
Felis_catus	VADTFSADPEQRKRKKRSKRKKQNGSASMELDSLAEDSSCPCSVSLPANPGFQDTAPP	
Callorhinchus_milii	EESSLDPTNGSKDVSMDTTIESGEASLDPELSDVEIESNTNTAPATVLQKENNASESKKA	248 134
Danio_rerio	KKKKKKKKKKKKKKKSGVSEGPSSLTSDLSDISLTDKEKKMDTDQSSDS	134
	250260270280290300	
		000
Pavo_muticus	v <mark>sq</mark> eiqtss <mark>s</mark> eaakqsadlia <mark>s</mark> dn <mark>gg</mark> vq <mark>eng</mark> saagcl <mark>gre</mark> ae <mark>g</mark> legvs <mark>ggg</mark> hss	230
Pavo_cristatus	V <mark>SQ</mark> EIQTSS <mark>SEAAKQSADLIASDNGG</mark> VQENGSAAGCLGREAEGLEGVSGGGHSS	230
Gallus_gallus	v <mark>sq</mark> eiqtls <mark>g</mark> evakqsadlia <mark>s</mark> ds <mark>gg</mark> aq <mark>eng</mark> savgrlgreaeglevvsggghcs	241
Chelonia_mydas	<mark>Paqesq</mark> iqehevakaead <mark>ssp</mark> Cnn <mark>e</mark> sqiksdrslCPl <mark>gneg</mark> qspetivedn <mark>P</mark> Cs	228
Rhinatrema_bivittatum	TGGKDNHGKNDLMEVEVSLTSADTSLPGQIPSNQLDKISGHDQVAGSQSIE	243
Rattus_norvegicus	QNQAQQGGTANQPGHSLDTVKMPVEKDGSACVEGSGSS	236
Mus_musculus	QNQAQQGGAASQPGHPLDTENMPMEDGFVHTEGSGSP	167
Homo_sapiens	HSQAQQS <mark>GPTGQPSQPPGT</mark> AT <mark>TPLEG</mark> DGLSAPTEVGDSPLQAQALGEAGVA	185
Pan_troglodytes	HSQAQQSGPTGQPSQPPGTATTPLEGDGLSAPTEVGDSPLQAQALGEAGVA	234
Macaca_mulatta	HSQAQQSGPTGQPSQPPGTATTPLEGDGPFVPTKVGDSPLQAQALGEAGVA	234
Callithrix_jacchus	HSQAQQSGSTGQPSQPPGTGSMPLESNGSYVPTEVGDSTLQAQASGEAGAA	287
Equus_caballus	QHGAQRNGPTSQPSQPPGAGMTPPEGGGHREPAAPAEVGGSSLQGQAAGGAETA	252
Orcinus_orca	Q <mark>SP</mark> AQQGGPTHQTSQPPSVDKTPLEAVGRPLQGQVARGVEAA	238
	QGQAPQGAPSSQPSQPPGTVPSPLEGAGPPG QSQDLQGGAASQPRQPPGADPTPLEGGGHQA	169
Felis_catus	QSQDLQGGAASQPRQPPGADPTPLEGGGHQA	220
Callorhinchus_milii	NKKKKKKKKKQKNNPAGQIKAPPSSKSPKQIRLDSDQKEGEVENHSAITNQTNQGEGRH	308
Danio_rerio	DCSSCIVEDTPTPAEPSSHLSPPENETAGPAQLSASAL	172
	310320330340350360	

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Pavo muticus	MAVMNPSKESSTDNGAAPSPSSAALKEKVGGGSTTQHGVSSGVEERSAVSDAGQ	284
Pavo cristatus	MAVMNPSKESSTDNGAAPSPSSAALKEKVGGGSTTQHGVSSGVEERSAVSDAGQ	284
Gallus gallus	AAVMN <mark>P-LESSTGSGAATAPGS</mark> AALKEM <mark>GGGGS</mark> TAQRGARSGVEERSAASDAGQ	294
Chelonia mydas	SDTMHQSVQNGTNDELAQPAGSRATEKMEDESSPSDGQMGRENKESAKKENESSPAEVGQ	288
Rhinatrema bivittatum	HQSARPLSEASSNVDISQGSHFPIQEEGECQNTAGNHLSSLTEVGREGRAGD	295
Rattus_norvegicus	LRGPVAEGPEDAQRNPAASDYVEVKDLKTSNPSVDKGP	274
Mus musculus	LQGQAAER-TDAQSNLAPSDLAEVKDLNTSKPSVDKGLPL-DGGPALSAFKGHP	219
_	TGSEAQSSPQFQDHTEGEDQDASIPSGGRGLSQEGTGPPTSAGEGHS	232
Homo_sapiens		
Pan_troglodytes	TGSEAQSSPQSQDHTEGEDQDASIPSGGRGLSQEGTGPPTSAGEGHS	281
Macaca_mulatta	TGGEAQSSRQPQDHTEGEDKDASIPSGGRGLSQEGAGPPTSAGEGRS	281
Callithrix_jacchus	TGGRTQSSPQPQDHTEGEDQDASISSGGRGLSEEGAGPPTSAGEGHS	334
Equus_caballus	AGGESPGSLAPQDQQTQGGALPEGKGHHTPDPSKDGGLPQEGAG	296
Orcinus_orca	TDTESL <mark>SSP</mark> VSQDQ- <mark>TLGGAFP</mark> EGKDHHS <mark>PNPS</mark> EGKGLPTSASEGPP	284
	PPGHAKAGGSPLPDQTTGSAPQNGKGRDTPSPSKGVGATASASKDCP	216
Felis_catus	PMGHAEAGGSPLHDQTPGGAVPNAKEHDNPTPSKASGLPQEGAGPTASASKDHP	274
Callorhinchus_milii	PEPQSSPTKSSDASEHQDVNSASKGQRVGSTLGEEQNG-SPTKTTESSDPSPCSSIDHRG	367
Danio_rerio	TT <mark>G</mark> SSKD <mark>G</mark> EESI <mark>G</mark> TTQK <mark>P</mark> VS <mark>AS</mark> ASKA <mark>P</mark> LGVDQQTK <mark>EE</mark> KVKCKDE <mark>G</mark> QKSLS	222
	$\dots \dots 370 \dots 380 \dots 390 \dots 400 \dots 410 \dots 420$	
Pavo muticus	APESGRDSQSLDGKK-KPASMGERTDVSSGISPDTEVPKSKPATSCAKHPSQDTETRP-V	342
Pavo cristatus	APESGRDSQSLDGKK-KPASMGERTDVSSGISPDTEVPKSKPATSCAKHPSQDTETRP-V	342
Gallus gallus	ALETKRDSQSLGGKK-KPASVGERTDVSSGISPDIEVPKSKAATSKAERPSQDTKTSL-V	352
Chelonia_mydas	PSGNRSDTQTSGGDRDALASKEEGESVSLGLCSTMEAPVRKDSNSDADHQSQEKKVSFSE	348
Rhinatrema bivittatum	TSQLKDSTAPQKENRSQVNHRVTREDQKPGKKKNGSATETAASAKEKEIAAKGGKAVP	353
Rattus norvegicus	KMTDASQKASLPESKGEQPGHGEKVPPIDTAANPVKRARKET	316
Mus musculus	KMTDASQKAPLPESKGETSGOEKKVPPIDAAASPVKTAGKET	261
Homo_sapiens	RTEDAAQELLLPESKGGSSEPGTELQTTEQQAGASASMAVDAVAEPANAVKGAGKEM	289
Pan_troglodytes	RTEDAAQELLLPESKGGSSEPRTELQTTEQQAGASASTAVDAAAEPANAVKGAGKEM	338
Macaca_mulatta	GNEDAAQELLLPESKGGSSEPGTEPQTTRQQAGTPASTAVDAAAEPANAVKGAGKEM	338
Callithrix_jacchus	GTEDATQELLLPESKVGSSQPRTEPQTTRQHTGAPASGEGDAAAEPANAVEGAG	388
Equus_caballus	PTTSAGEGRPGKEYAAQEPQPAGQQAAAPTSGAVDAAAKPASPGKEAGKEV	347
Orcinus_orca	RERDAAQELPL <mark>PEPKG</mark> DH <mark>S</mark> RPGK <mark>EP</mark> RA <mark>TGQQ</mark> ARA <mark>P</mark> ASGASVAAAEPADA <mark>G</mark> KRV <mark>GKE</mark> V	341
Canis_lupus_familiaris		273
Felis_catus	GKDGAAWQRPMPDSEPG- <mark>S</mark> EPQK <mark>EP</mark> QSA <mark>GQQ</mark> AGARA <mark>PG</mark> EDAAVTRPAEPVEGARKEG	330
Callorhinchus_milii	AEKDPSLSKAVSEKTHPITSAGSGHSVEGDLTHKKD <mark>SG</mark> RNGGQETDQAERAGEPQLSLTD	427
Danio_rerio	AKAQHTPNANVDQNANVQ <mark>S</mark> DANIDKDSQNVEPQKSS <mark>S</mark> VKTKPSKSTVADPKKTESEKQ	280
	430440450460470480	
Pavo muticus	AKSSKAGQGKQESSQKVSCLPSKEKDTMEKKTPKE-RAQETSEKTKTTNQTSGPQVAR	399
Pavo_cristatus	AKSSKAGQGKQESSQKVSCLPSKEKDTMEKKTPKE-RAQETSEKTKTTNQTSGPQVAR	399
Gallus_gallus	AQSSKAGKGKQESSQKVSSSPSSEKGTMEKKTPNE-RAQETSEKTKKTKATNQTDGPLVR	411
Chelonia mydas	AETAQSRKVEQERKQQASAPVSKNMEGEAKGAPRKGTPEEMEKKTNQTKATQAPK	403
Rhinatrema_bivittatum	PESHSSTEVPGTKTEDQSEKAQKDQEESEKKQRKEEREFESKQQANTSGTKKKDKSGN	411
Rattus norvegicus	-RDDVQKQKPSPVSLATSKDRDQKAELESKLATPVRKSDESRNTQPEDQKKPGG-D	370
Mus musculus	-GEDVRKPKPSPVSPVASKHGDQEAELKGKLATPVRKSNEGGNTQPEDQRKPGE-G	315
Homo sapiens	-KEKTQRMKQPPATTPPFKTHCQEAETKTKDEMAAAEEKVGKNEQGEPEDLKKPEGKN	346
Pan troglodytes	-KEKTQRMKQPPATTPASKTHCQEAETKTKDEMAAAEEKVGKNERGEPEDLKKPEGKN	
		395 395
Macaca_mulatta	-KEKIQGMKQPPTTTAASKTHCQEAETKTKDETATAGEKVGKNEQGEPEDPKKPEGKN	395
Callithrix_jacchus	KSOMTKQLSATTPAFETRROETETKTKTKDEKAAAGEKVGRNERGEPEDPKKPEGKI	445
Equus_caballus	-KNETOKTKRPPASTSASLENRQEAETKDKTGVTGKKVSETEKAKPEAPKKPE	399
Orcinus_orca	-knqtekmkq <mark>pptsvpas</mark> rdnh <mark>qeaat</mark> kdqtgvsggkagenekak <mark>p</mark> kd <mark>pkkpeg</mark> nn	396
Canis_lupus_familiaris		329
Felis_catus	-KAKTQKTKQPPASTPASSEHRQEAETKDKTAATGEKTGRNEKAKPED <mark>PKKPEG</mark> SN	385
Callorhinchus_milii	GGSKRSHLGDGDSGSLVKAKSDQQSDRKIEKDTLNRQEASSQTKKGKEKPKNHTKPSATI	487
Danio_rerio	KS <mark>G</mark> ERDNENSTQ <mark>P</mark> V <mark>S</mark> S <mark>P</mark> KLKRN Q TE ES QKMVF <mark>GP</mark> NSA <mark>P</mark> KKNR <mark>G</mark> SSADSA M KVE <mark>KKP</mark> A <mark>GG</mark> K	340
	490500510520530540	

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	. :*: ***::	
Pavo muticus	KNDAPSVTDNSKEKHQQNNQKPVDKEKQSGGVTVYFHAILSRDFKLNPETD	450
Pavo_cristatus	KNDAPSVTDNSKEKHQQNNQKPVDKEKQSGGVTVYFHAILSRDFKLNPETD	450
Gallus_gallus	KNNAPSVTDKGKEKHQQNNQKPVDKEKRSEGVTVYFHAILSKDFKLNPETD	462
Chelonia mydas	KDYASAVTGNKDKKQQKNQEANENRIKPSQVNHGEGVTVCFHAILSKDFKLDPNQH	459
Rhinatrema bivittatum	QEASTEGPGKGTPGKQKDKIQQKQRPNRS-VNAADQVTVYFHAIISKDFNLDPEKQ	466
Rattus_norvegicus	RNYAAAAKNKNQQAAALEATKSTHDPGDRVTVCFHAIVSRDFGFNPDKH	419
Mus musculus	RNFAAAVKTQQAAAPQQAAAPEPTSAFNPRDTVTVYFHAIVSRHFGFNPEEH	367
Homo_sapiens	RS-AAAVKNEKEQKNQEADVQEVKASTLSPGGGVTVFFHAIISLHFPFNPDLH	398
Pan_troglodytes	RS-AAAVKNEKEQKNQEADVQEVKASMLSPGGGVTVFFHAIISLHFPFIPDLH	447
Macaca_mulatta	KS-AAAAKKEKEQKNQKAGVQEVKARTLSPGRGVTVYFHAIISNHFSFNPDHH	447
Callithrix jacchus	GS-AVARKKE-EOKKOKAGVOEVKPSTLSPGGGVTVYFHAIISKHFSFNPDHH	496
Equus caballus	RNYAAAVKNE-EORNPKAGAHEVKESPLSPEEGVTVYFHAIISKHFKFNPNHD	451
Orcinus orca	RNNAATVKNEREORSORESSHGAKECPLSSLEGITVYFHAIISKHFOFNPROH	449
	KSCVATTKNEKEQRDRKARASEVMGSTPLSVQEGITVYFHAIIPKDCNVNLNSH	383
Felis catus	SSYAAAVKTGKEORNSKAAVCEVKOSPPSLOEGITLYFHAIVSKHFGFDPALH	438
Callorhinchus_milii	NEGGKSDQKDRETTELSRKRNINKNKSPAYQGSDLKPEERVTVYFHAILSKDFKFDVEKH	547
Danio_rerio	KDSSADQKSKESEDTESQCVTLPKRNTRSTQHISSSDRLTIYFHAVLSKDFKFNPEED	398
<u> </u>	550560570580590600	330
	:. * ::* *::* ::.**	
Pavo muticus	KVFVVSDGFSGSGRWER-VCEMSCVKHLDVHGYLIEGYTRLPMGSVNKC-IPYKYWTS-C	507
Pavo_cristatus	KVFVVSDGFSGSGRWER-VCEMSCVKHLDVHGYLIEGYTRLPMGSVNKC-IPYKYWTS-C	507
Gallus gallus	KVFVVSGGFYGSAQWEK-VCEMSCVKRLDVHGYLIEGYAILPIENVDKF-IPYKYWIS-S	519
Chelonia_mydas	KVFIRAQGISGYLNWKDNICELTCAKDLGEHGLLIEGCVTISKDNMNKP-LPYKYFISRS	518
Rhinatrema bivittatum	KVVIRAGKMKEYEDWKEDVCEMSISRDLGDHGFLLEGYTVISKENLNTS-IPYKYCVRGT	525
Rattus_norvegicus	RAYVRGGEGLGQKGWT-DACEMYYTQDLHDLGSLIEGKMDIPRQSLDKP-IPYKYVIHHG	477
Mus_musculus	KVYVRGGEGLGQKGWT-DACEMYCTQDLHDLGSLVEGKMDIPRQSLDKP-IPYKYVIHRG	425
Homo_sapiens	KVFIRGGEEFGESKWDSNICELHYTRDLGHDRVLVEGIVCISKKHLDKY-IPYKYVIYNG	457
Pan_troglodytes	KVVIRGGEEFGGSKWDSNVCELHYTRDLGHDRVLVEGIVCISKKHLDKY-IPYKYVIYNG	506
Macaca_mulatta	KVFIRGGEELGEPKWSRNVCELHCTRDLHRDGILVEGSAVISKKYLNKY-IPYKYVICNN	506
Callithrix_jacchus	KVFIRGGKELGEPEWNRNVCELHCTRNLNHDGVLVEGSAVISKKHLDKY-IPYKYVIFND	555
Equus_caballus	RVFIRGGEEFGNPKWSRDVCEMCYTKDLGDDGSLIEGRAVLSRQHLDKF-IPYKYVVAHD	510
Orcinus orca	KVFVRGGEEFGKPGWNHDVCEMYYTKDLHENGSLVEGRTIISKOHLDKF-IPYKYVLWRG	508
Canis_lupus_familiaris		442
Felis_catus	KVFIRGGEEFGKPKWTRNVCEMHTKDLRENGSLVEGSATLSRQHLDKP-IPYKYVIMRG	497
Callorhinchus milii	RVVLRSGQLTG-GNWTADVLVMNVSQDLGEHGYLIQGQQYFRKEFLNKS-IAYKYAVLRD	605
Danio_rerio	LIFIRAGGPIGNWEENLVELSVSRDLKEHGFLVEGKFICRKIDAEAVSIPYKYVVYKQ	456
Daliio_rerio	610620630640650660	430
	610620630640650660	
	.* **** * . *** *	
Pavo muticus	GEGEFEVIYKKQLVDIVNRCLYVDSK-LINSGEWHQYDDIVCKKPNAIK	555
Pavo_muticus Pavo_cristatus	GEGEFEVIYKKQLVDIVNRCLYVDSK-LINSGEWHQYDDIVCKKPNAIK	555
Gallus_gallus	GEGEYEFIYKKQAVDIVNRCLYVSSN-LINNREWHQYDDIVCKKPSMVK	567
Chelonia mydas	KNGEYEFIYKPCPERVD-VNRCLIIRSK-YLSSGDWHQYDDIVCTKPPDTLMRR	570
Rhinatrema_bivittatum	KKFVYEFIYKPDVTDGINVNRCLFIKRD-CLDDGGWHQYDDIICARPDSGYLQR	
		578 533
Rattus_norvegicus Mus_musculus	SSSKDSVEYEFIYEQPQKKGEHVNRCLQVDST-LLSSGDWHQYDDIIWMRSPGLLQ	532
	GSSKDTVEYEFIYEQAQKKGEHVNRCLRVVST-SLGNGDWHQYDDIICMRSTGFFQ ESFEYEFIYKHQQKKGEYVNRCLFIKSS-LLGSGDWHQYYDIVYMKPHGRLQ	480
Homo_sapiens		508
Pan_troglodytes	ESFEYEFIYKHQQKKGEYVNRCLFIKSS-LLGSGDWHQYYDIVYMKPHGRLQ	557
Macaca_mulatta	KGSAEFEFIYKRQQKEGEHVNRCLFIKSS-LLGSGDWHQYDDIVCMRPPGKFQ	558
Callithrix_jacchus Equus caballus	KGSTEYEFIYKPPQKDGEYVNRCLYIKSSLLLGSGDWHQYDDIVCMKPPGKLW	608
	KGPVEYEFIYKQQQKGGEHVNRCLCVKSS-LLCSGDWHQYDDIICMKPPGSLQ	562 560
Orcinus_orca	K <mark>GPVEYEVIYK</mark> CQQKEGEHVNRCLHVKSS-LLGSGDWHQYDDIICKRPPGKFQ DGCCEYEFIYKQKQKHGDHVNRCLVVRSE-LLALGDWHQYDDMVRMESPGKLQ	560 494
	KGQVEYEFIYKRQQKEGEFVNRCLHVRSE-LLGSGEWHQYDDIVCMKPPGLIQ	494
Felis_catus		549 660
Callorhinchus_milii	KEVEYETIYKHDATEGVHVNRYLCIQSK-FLNQSEWHQYDDIVCAPPAEGWKTYYT	660 509
Danio_rerio	KKNKYDYEYIYKLDAEVPTNRCLFIKSHLLNDEGEWHQYDDIICAQPAKNMFE	509
	670680690710720	

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Pavo muticus	::: .*:: ***: * . : * :*: .* : * : *	613
Pavo_muticus Pavo_cristatus	SLWSNFFQDKNKDVVEGKKIAAEIMLENIFSILGTWSHIMRNFLSQLKQFYVVTKDP	613
Gallus_gallus	SLWS-FLQDKTKDVVEGKKIAAEIMLENIFSILGTWNPINMRNFLFQLRQFHVVAAHP	624
Chelonia mydas	FKNWAGWDDWKKNVERGKQIAAEIMLETIFSILTTWTNINMKNFLNQLHQFYIVTQKP	628
Rhinatrema bivittatum	FKKMFGWDDKKKDLFRGKOIAGKIMLENIFSIPATWSTINLRSFLNOLCOFYIVTSKP	636
Rattus_norvegicus	QAKNYITDGTRKNLVRGKKQAAVIMLDRIFSVLQSWSAINLQTFMTQFRQFYSVVRVP	590
Mus musculus	QAKNRILDSTRKELLKGKKQAAVVMLDRIFSVLQPWSDINLQSFMTQFLQFYSVVREP	538
Homo_sapiens	KVMNHITDGPRKDLVKGKQIAAALMLDSTFSILQTWDTINLNSFFTQFEQFCFVLQQP	566
Pan_troglodytes	KVMSHIIDGPRKDLVKGKQIAAVLMLDSTFSILQTWDIMLNSFFTQFEQFCFVLQQP	615
Macaca_mulatta	KVMNHIADFTRKDLVKGKQIAATVMLDGIFSILQTWDTINLNNFFTQFQQFYFVVRQP	616
Callithrix jacchus	KLVSHFTDGVRKNVVKGKQIASTVMLDSIFSILQTWDTINLNSFFTQFQQFYFVMREP	666
	KLRDHFTDGTRKDLVRGKKIAARVMLDSIFSILQTWNAINLKNFFNQFQQFYSVVHVP	620
Equus_caballus Orcinus orca	KWVDFLTDGIRKDLVKGKOIAAAVMLDRIFSILETWNAINLKNFFTOFOOFYSVIRVP	618
	KLMSSVTDSIRKDLVKGKQVAATLMLDNIFSLLQAWGAINLRSFLVQFQQFFSVVRVP	552
Felis_catus	RMMDHLTDGTRRELVRGKQIAATIMLDTIFSILQIWDAININSFFTQFQQFYSVVRVP	607
Callorhinchus_milii	KAKNYIRNKW <mark>EGKKD</mark> VAN <mark>GK</mark> NLAGRFMLESLFDILSTWNKINLRSFFFQFHQFLLVYSNP	720
Danio_rerio	WVKKTIWSDEKKNVLQGRKIAGTIMLETIFDLLRSWSKINLNNFFSQLRQFYEIYRNP	567
	730740750760770780	
	:.: * * : .:* :	683
Pavo_muticus	CVYDGGYRPWHELGFGPQQVNDLLLQYSRKIARPFLLPEDAEGSQQGVVIKSKLALGLTL	673
Pavo_cristatus	CVYD <mark>GGYRP</mark> WHEL <mark>GFGPQQ</mark> VNDLLL <mark>QYSRK</mark> IARPFLLPEDAEGSQQGVVIKSKLALGLTL	673
Gallus_gallus	SVYDGAYMPWIELGFGTQQVNDLLLQYMRKIASSFLLPEGAEASQKGVVMKSKLALGLTL	684
Chelonia_mydas	MVYEGEPKEWASLEFGEKQVKELLVDCLRKVAQPFLDRNSANAPPKDVTVKSRLGLGLIS	688
Rhinatrema_bivittatum	MVFENQALEWKSLQFGPEQVNELIINSMNNLARPFLDKKLTDVAAETAVV <mark>KSK</mark> LRTGIIL	696
Rattus_norvegicus	MIHDGHARKWSSLQYEEREVRLNLWEHVKKLMMPFLEGKSGESLPADCPVRSKQILGLSI	650
Mus_musculus	MIHDGRARKWTSLQYEEKEVWTNLWEHVKKQMAPFLEGKSGESLPADCPVRSKLTLGLSI	598
Homo_sapiens	MIYEGQAQLWTDLQYREKEVKRYLWQHLKKHVVPLPDGKSTDFLPVDCPVRSKLKTGLIV	626
Pan_troglodytes	MIYEGQAQLWTDLQYREKEVKRYLWQHLKKHVVSLLYGKSTDSLPMDCPVRSKLKIGLIV	675
Macaca_mulatta	MIYEGHAQPWTALQYGEKEVKKDLWEYLQKHMAPFLERKSVDLFPKDCPVRSKLKMGLIV	676
Callithrix_jacchus	MIYEGHPQSWTALQYGEKEVKKDLWDYLKKQMAPFLD-RSGNSLPEDCPVRSKLKMGLIV	725
Equus_caballus	MIYEGRAQPWTTLQYTEKEVQRDLWEDLKRRMAPFLE-SREAPLPKDCPVRNNLRMGLIV	679
Orcinus_orca	MIYEGEEQLWSTLQYEEKEVRKHLWECLTKKMAPFLE-MRADPLPEDCPVRSKLRMGLIV	677
Canis_lupus_familiaris		611
Felis_catus	MIYEGREQPWSALQYDENEVKKNLWWYLKKRSEPFQE-RSGDLRPEAHPVRSRLRMGLIL	666
Callorhinchus_milii	MVFEND <mark>P</mark> KSWKDL <mark>PFGEKEVK</mark> DLILTLL <mark>R</mark> DKAKLLLAKDDQNSEA <mark>G</mark> KDSVER <mark>RLRMG</mark> MLI	780
Danio_rerio	FVFEKKQTKWYQLDYDEKDVRELLKNFMLMHVTPELQKDSNEKSKFIQEPLKAGLIM	624
	790800810820830840	
	:: _: <u>-: *_</u> : : _:	
Pavo_muticus	L <mark>T</mark> VVDFFYL <mark>P</mark> ASKE <mark>D</mark> LA <mark>G</mark> LCG <mark>L</mark> LCLEKK <mark>S</mark> QKAVVDEFHQTIEVFM <mark>SP</mark> VSIFSLNLQLI <mark>N</mark> L	733
Pavo_cristatus	L <mark>T</mark> VVDFFYL <mark>P</mark> ASKE <mark>D</mark> LA <mark>G</mark> LCG <mark>L</mark> LCL <mark>E</mark> KK <mark>S</mark> QKAVVDEFHQTIEVFM <mark>SP</mark> VSIFSLNLQLI N L	733
Gallus_gallus	LTIVDAFQL <mark>P</mark> ASKE <mark>D</mark> LA <mark>GLC</mark> ELLCLEK- <mark>S</mark> QKAVVDEFHQTMEVFASSVSIFSFRIQLINL	743
Chelonia_mydas	VVLGECYELPTNKEDLSRVCSLLCLEQKPQEILLQEMNHNKAVFSVVSYMKPYLSRL	745
Rhinatrema_bivittatum	LVIGEYFKLPTSKEQLTQLCDLLCLEKMSQEAFLQEIGSMKETCSFLPMEQNLKHL	752
Rattus_norvegicus	LCMVEAADFTVPKKDLDSLCYLLIPSADSPEALHRDLSPVLSIRQRWHAYLITL	704
Mus_musculus	LFMVEAAEFTVPKKDLDSLCYLLIPSAGSPEALHSDLSPVLRIRQRWRIYLTNL	652
Homo_sapiens	LFVVEKIEL-LLEGSLDWLCHLLTSDASSPDEFHRDLSHILGIPQSWRLYLVNL	679
Pan_troglodytes	LFVVEKIEL-LLEGSLDWLCHLLISDASSPDEFHHDLSHILGIPQSWRLYLVNL	728
Macaca_mulatta	LFVVEKFQLEDNLTSVCHLLSSDASSPDELHSDLSHILGTSQSWRLYLVNL	727
Callithrix_jacchus	LFIVEKFDFFLPEDELDTMCHLLASDASSLDELHDDLGHVLRTAQGWHEYLMKL	779
Equus_caballus	LFSVEKFNLPLLEDDLASLCNLLCSNANSPDALRNDLNYIFGTSQSWRTHLVNL	733
Orcinus_orca	LF <mark>S</mark> VEKFHFLLPESDLSSLCCLLCSNASSPDALRKDLIHILETSQSWRASMVNL	731
Canis_lupus_familiaris		665
Felis_catus	LFSVETFDLPMLEGDLAWLCNLLYLDACSPGDLHRDLSHIFETRLRWRVFLVNL	720
Callorhinchus_milii	LYL <mark>T</mark> YRYSINMTKK <mark>D</mark> IHAV <mark>C</mark> QLL <mark>S</mark> LQQM <mark>S</mark> SKV <mark>S</mark> EM <mark>E</mark> VQIFKE <mark>TP</mark> LNERFSEALLLM	836
Danio_rerio	LYVWKQYDLKLDYGTLSRLCTAVCLPNLPKDEFLSLWTDITESFSVINSFSDMVEAL	681
	850860870880890900	

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```
:*::*
                             CQRCIDGKIGQWVWILPLLHLCTAS-----AQHDHGPVEEDIWAGLERLPFVEARK---
Pavo_muticus
                                                                                                             784
                             CORCIDGKIGOWVWILPLLHLCTAS-----AQHDHGPVEEDIWAGLERLPFVEARK---
                                                                                                             784
Pavo_cristatus
                             CQRCIDGKVGQWVWILPLLHLCTAP-----MQCDRCPMEEEIWAGLEGLPFAEARK---
Gallus_gallus
                                                                                                             794
                             CORCIDEQVDQWVCILPVLHFFTSSSDFDEGMMVDSHLKSEEIWAGLEGLLFIEFRKKQE
                                                                                                             805
Chelonia_mydas
Rhinatrema bivittatum
                             CORCMEEYVNSWVLIIPLLHEFSSAFSSGDSSSLGVSLKSEDCWAGLVGIPFDDLRKK--
                                                                                                             810
                             CFRCIEV<mark>G</mark>CDRWL<mark>GILPLLHY</mark>CMQQ<mark>SP----P</mark>RKNSKSQTEDVWAGLEGISFSEFRDK--
CLRCIDERCDRWLGILPLLHTCMQKSP----PKKNSKSQPEDTWAGLEGISFSEFRDK--
Rattus_norvegicus
                                                                                                             758
Mus musculus
                                                                                                             706
                             CORCMDTRTYTWLGALPVLHCCMELAP----RHKDAWROPEDTWAALEGLSFSPFREQ--
Homo_sapiens
                                                                                                             733
                             CORCMDTRTYAWLGTLPVLHCCMELAP----RHKDAWRQPEDTWAALEGLSFSPFREQ--
Pan_troglodytes
                                                                                                             782
                             CQRCMDKSMYHWLGTLPVLHCCMELLP----RHKDAWSQPEDTWAALEGISFSQFREQ--
                                                                                                             781
Macaca_mulatta
                             CLRCIDRRRCLWLGTLPVLHCYKEPAP----RPKDAWSQPEDVWAALEGIPFSQWREQ--
Callithrix_jacchus
                                                                                                             833
                             CRRCVSRDLSLWVC<mark>TLPVLHHC</mark>MELA<mark>P</mark>----R<mark>G</mark>KDATIQPEDTWAALEGISFSEFREK--
Equus_caballus
                                                                                                             787
                             CQMCMDRKVDHWVCALPVLHHCMDLSS----PAQDSGVQPEDTWAALEGISFSEFREK--
Orcinus_orca
                                                                                                             785
                            CQKCMEQTVDLWVLTLPLLHYCMELFL---QGKDCRMQPEDIWAALEGISFSEFREK--
CRQCIEKAVDLWVLTLPVLHHCVAPTP----QGKDSRIQPEDTWAALEGIPFSEFREK--
Canis_lupus_familiaris
                                                                                                             719
Felis_catus
                                                                                                             774
Callorhinchus_milii
                             IQKCIEDRSFQWVQVIPVFHIFCSSSK----PTLSFTGHSQDVWAGLEGIAYVNCREK-Y
                                                                                                             891
                             IS<mark>K</mark>LKAENM<mark>P</mark>RWIIVI<mark>P</mark>LLHLLK<mark>G</mark>TSK<mark>P</mark>FEQVITKVNSKYEQSWAGLQGLRSNILS<mark>PG</mark>--
Danio_rerio
                                                                                                             739
                             .....910.....920......930......940......950......960
                                                  *: .* * :**: ::*
Pavo_muticus
                             -SHDAGTLLQLMKEKKYLMGLDPTLVKSWMCVLPA-----ENLAEFIEDFSVDILISL
                                                                                                             836
                             -SHDAGTLLQLMKEKKYLMGLDPTLVKSWMCVLPA-----ENLAEFIEDFSVDILISL
Pavo cristatus
                                                                                                             836
                             -NHNARALLQLMKEKKYLMELDTTLVKSWMCVLPT-----ESLAEFIEDVCGDLLISL
Gallus gallus
                                                                                                             846
Chelonia_mydas
                             ESYKNRALLQLMK<mark>GK</mark>KHLMEVDR<mark>T</mark>LV<mark>RS</mark>WISLL<mark>P</mark>L-----EDLAEFLTVLSVELLDCL
                                                                                                             858
                             -HFYKNAMLSLMKSKKHLLEMDKTLVRSWFCLLPQ-----KDLVDFLTEMPMDLSDVL
Rhinatrema_bivittatum
                                                                                                             862
                             -ASARSQALQLMQNRMALLHVDEYLFRSWFSLVPLESLSSYLENSEEYLSHMPTRVLDCF
Rattus_norvegicus
                                                                                                             817
                             -APTRSQPLQFMQSKMALLRVDEYLFRSWLSVVPLESLSSYLENSIDYLSDVPVRVLDCL
Mus musculus
                                                                                                             765
                             -MLDTSSLLQFMREKQHLLSIDEPLFRSWFSLLPLSHLVMYMENFIEHLGRFPAHILDCL
Homo_sapiens
                                                                                                             792
                             -MLDTSSLLQFMREKQHLLSIDEPLFRSWFSLLPLSHLVKYMENFIEHLGRFPAHILDCF
-TQDTSFLLRFMSQNKHLLSVDEPLFRSWFSLLPLSHLVPYMENFIEHLGHFPAHVLDCF
Pan_troglodytes
                                                                                                             841
                                                                                                             840
Macaca_mulatta
                             -MLDPSSLLQLMDSKRHLLNVDEPLFRSWFSLLPLSHLAQYMENFIEHLRPFPAHVLDCF
Callithrix jacchus
                                                                                                             892
Equus caballus
                             -RPDRKELLQLMERRQHLLNVDECLFRSWFSLLPLSDLVHYMEDVTDYLSRFPPRVLDCL
                                                                                                             846
Orcinus_orca -RADQKQLLQLMGKNRHLLNVDEYLFRSWFSLLPLSNLVHYMEDLIDYLSYSPPRILDCL
Canis_lupus_familiaris -RPDQTHLVKLMSKYIHLLNVDTYLFRSWFSLVPLSNLLDYMENFVEYQSHIPACILDCL
                                                                                                             844
                                                                                                             778
Felis catus
                             -KADRSHLVOLMGKERHLLNVDEFLFRSWFSLLPLRNLVHYMENFMDHLSVFPTCVLDCL
                                                                                                             833
Callorhinchus_milii
                             EYESLWQLFEIMRKNKHLVDF<mark>DG</mark>FLHRSWF<mark>S</mark>LIPMN-----SLFEYVNTVTPDPLVVL
                                                                                                             944
Danio rerio
                             -POERRAMLNLMKTYGHLVEVDRLLIRSWMYLMPLD-----DLVECGSIFPVELLDIL
                                                                                                             791
                             .....970......980......990......1000......1010......1020
                             QGVSYRLQNADPSC----RKSE-VIEKLVKTLLCILDGERARALQTHSWFSCLTLCFKL
Pavo_muticus
                                                                                                             890
                             <mark>QG</mark>VSYRLQNAD<mark>P</mark>SC-----RKSE-VIEKLVKTLLCIL<mark>DG</mark>ERA<mark>R</mark>ALQTHSWF<mark>S</mark>CLTLCF<mark>K</mark>L
                                                                                                             890
Pavo_cristatus
                             <mark>QG</mark>VSY<mark>RLQ</mark>NAA<mark>P</mark>SC-----KK<mark>PE</mark>-VV<mark>G</mark>RLVKTLLCLL<mark>DG</mark>ERA<mark>R</mark>ALQARSWL<mark>S</mark>CLFLCF<mark>K</mark>L
                                                                                                             900
Gallus_gallus
                             L<mark>GIYHR</mark>LQN<mark>T</mark>KI<mark>T</mark>L----RSSE-TIEKLLETLLHVLDRNQHRMLQVNSWK<mark>S</mark>CLHICLKL
QGTYYRLQENNMSY-----<mark>G</mark>DFE-MVETLLKKVLNVMDKNQN<mark>RT</mark>LQS<mark>G</mark>--KFCLNISFK</mark>L
Chelonia mydas
                                                                                                             912
Rhinatrema_bivittatum
                                                                                                             914
                             <mark>QG</mark>ISYRLR<mark>GLG</mark>KIS----KQNIE-DVKKVFKILMYLVDMYQDRIFEESLPQIYLTECADL
                                                                                                             872
Rattus norvegicus
                             QGISYRLPGLRKIS----NQNMKKDVENVFKMLMHLVDIYQHRIFGENLLQIYLTECLTL
Mus_musculus
                                                                                                             821
                             SGIYYRLPGLEQVLNTQDVQDVQ-NVQNILEMLLRLLDTYRDKIPEEALSPSYLTVCLKL
SGIYYRLPGLEQVLNMQDVQDVQ-NVQNILEMLLRLLDTYRDKIPEEALSPSYLTVCLKL
Homo sapiens
                                                                                                             851
Pan_troglodytes
                                                                                                             900
                             LGTYYRLRGLOKIS----SRNMQ-DVLNILKMLLHLLDTYQDKIPEEALSPSYLTVCLKL
Macaca mulatta
                                                                                                             895
                             LGTYYRLQGLEEIS----YLNRE-DVLGILKMLLHLLDASQDKISKEALLPSYLTVCLKL
Callithrix_jacchus
                                                                                                             947
                             VGTYYRVRGLSEIS----HRNLE-DVEKTFKMLLHLLDIYQDKILEEPLIQSYLTVCLKL
LGTWYRLEGLEEIS----NRNSQ-SIKSTFEMLLHLLDMFREKILEEPLIQSYLTVCLKL
                                                                                                             901
Equus_caballus
                                                                                                             899
Orcinus_orca
833
                             LGTWYRLQRLTILS----FSDFE-NTENTFQMLLHLLDIYQDRILEEPLVQSYLTVCLKL
Felis_catus
                                                                                                             888
                             QGLIYRLKEKLHLD------QTTVFENLLQYVKDNLHRVLPGDHTEACKVAALKV
Callorhinchus_milii
                                                                                                             993
                             QLF<mark>TMKCPNNISFT-----SSE-ST</mark>AEALAHIQSQLLQHRYSCPDVD<mark>YG</mark>IQCIQAAC<mark>K</mark>L
                                                                                                             844
Danio_rerio
                             \dots 1030 \dots 1040 \dots 1050 \dots 1060 \dots 1070 \dots 1080
```

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```
HETVCK-RIRRVLDYKIPATSAMMIAKVARLQP--TEQ----VLVDETALEN-PVVEILS
Pavo_muticus
                                                                                                          942
                            HETVCK-RIRRVLDYKIPATSAMMIAKVARLQP--TEQ----VLVDETALEN-PVVEILS
HASVCT-CTKRVLEFKVPATSAMLIAKLARLQP--TEQ----VLGDETALEN-EVVEILS
                                                                                                          942
Pavo_cristatus
Gallus_gallus
                                                                                                          952
                            HQMICL-RTKELKYYKLPATNAEIISRISRIEP--LDG----SR-DETMQKI-PVVEVLO
                                                                                                          963
Chelonia_mydas
                            HEMICE-KTKSLNFSEIPALSANVILKVNMLQE--MRE----IPGKEVESKASTIEDILO
Rhinatrema bivittatum
                                                                                                          967
                            HETVCS-ITADRQFYQTPALSAELVCAVLQLSP--PEH---TEEGLVAKSYEDLVRTTFQ
HETVCN-ITANHQFFEIPALSAELICKLLELSP--PGH---TDEGLPEKSYEDLVTSTLQ
                                                                                                          926
Rattus_norvegicus
Mus musculus
                                                                                                          875
                            heaics-s<mark>tkllkfyelp</mark>al<mark>sae</mark>ivc<mark>r</mark>mirlls--lvd---<mark>sag</mark>qrdetgn-<mark>ns</mark>vqtvfq
                                                                                                          904
Homo_sapiens
                            heai<mark>c</mark>s-s<mark>tk</mark>llkfyelpal<mark>sae</mark>ivc<mark>r</mark>mirlls--lvd---<mark>sag</mark>qgdetgn-<mark>ns</mark>vqtvvq
Pan_troglodytes
                                                                                                          953
                            HEAVCS-S<mark>TK</mark>THEFYELPAL<mark>SAE</mark>IVC<mark>R</mark>MIILLS--LVD---<mark>S</mark>AGQGDETGN-<mark>NS</mark>VQ<mark>T</mark>VFQ
                                                                                                          948
Macaca_mulatta
                             HEAVCS-IIKTPKFYELLALSAEIVCRMIIVLP--LLD---SAGQGDETGN-NSVQTVFQ
Callithrix_jacchus
                                                                                                         1000
Equus_caballus
                            HETICR-ITKDEKFYEMPALSAEIVCRIIILKP--LVE--SAKGQEQETGKKNSVETVFQ
                                                                                                          956
                            HETTCR-ITKEYTFYEMPALSAEIVCRIIILKL--LVD--SAGGQGNETGKKNSVKTVFQ
Orcinus_orca
                                                                                                          954
888
                                                                                                          945
Callorhinchus_milii
                            HELICCGLVRFKMNCGMLTASVEIISELVGSDNSLSGQVADKKPESDEVAAV<mark>PS</mark>GERVLH
                                                                                                         1053
Danio_rerio
                            LEKICSLVRYFGHSQNFTDIPVACMNLVASVSG-----FAQTKQEADTFAEK<mark>T</mark>LVLLN
                                                                                                          897
                            \dots \dots 1090 \dots 1100 \dots 1110 \dots 1120 \dots 1130 \dots 1140
                                                                            * .:: : *
Pavo_muticus
                            AALTHTRTWFKSALSQKLLK--KHLQ-HVMFTFSAELEAWDEFVKMSFPDEQFAERWKST
                                                                                                          999
                            AALTHTRTWFKSALSQKLLK--KHLQ-HVMFTFSAELEAWDEFVKMSFPDEQFAERWKST
EALRCTRSWFKSALSQKLLK--ESHH-HVMFTFNAELEAWNEFVKISFPDEQFNARWKST
                                                                                                          999
Pavo cristatus
Gallus gallus
                                                                                                         1009
Chelonia_mydas
                            RALSA<mark>TK</mark>SWFREVLKQYLLQ--<mark>GH</mark>TD<mark>S</mark>FVTFRF<mark>PDE</mark>LTVWNQFVRISF<mark>P</mark>DECFTEEWKKT
                                                                                                         1021
Rhinatrema_bivittatum
                            KSLKVTKDWFRTVFRTTLPQ--YPPS-----LYEELQVWNRFVTLSFHSEQQAEYWRNS
                                                                                                         1019
                            EALNTTRKWLRTVFKSPMLS---RNFAAVQLSYPDEMAVWRRLVGINFPEKY---GWKGP
Rattus_norvegicus
                                                                                                          980
                            EALATTRNWLRSLFKSRMLS---ISSAYVRLTYSEEMAVWRRLVEIGFPEKH---GWKGS
Mus musculus
                                                                                                          929
                            GTLAATKRWLREVFTKNMLT----SSGASFTYVKEIEVWRRLVEIQFPAEH---GWKES
Homo_sapiens
                                                                                                          956
Pan_troglodytes
                            GTLAATKRWLREVFTKNMLT----YSGASFTYVKEIEVWRRLVEIQFPAEH---GWKES
                                                                                                         1005
                            GTLTATKRWLREVFTNNMLV----YSGVSFTYHKEIEVWRRLVEIHFPVEH---GWKES
                                                                                                         1000
Macaca_mulatta
                            GTLAVTKRWLRAVFTKNMLV----YSGVSFTYFEEIEVWRRLVEIHFPMEH---GWKES
Callithrix jacchus
                                                                                                         1052
Equus caballus
                            STLTATRNWLQRIFKKNMFQYSCFSPGIVSFAYAEEIKVWRRLVEIPFAGEH---VWKKS
                                                                                                         1013
Orcinus_orca GTLAATRSWLORIFQKGVFQTEYSFS--VTFTYCEEIEVWRRLVEINFPAEH---GWKES
Canis_lupus_familiaris GTIINTRAWLQSVFRERIFNIIGARA-VLTFRYTDEIKVWRQLMKINFPVEY---GWKES
                                                                                                         1009
                                                                                                          944
                            GTVAKTRAWLQSIFQESMF--FSYWP-QVTFRYREEIKVWRRLVEINFPVEY---GWKES
IVLKNTRSWMKKLGSQLLKS-----YAAYVDKDELQIWSRLIDLTFGDERLTSIWTTE
Felis catus
                                                                                                          999
Callorhinchus_milii
                                                                                                         1106
Danio rerio
                            DTKQTVRAWMRQTFKGRLLNSHLFSSHLTGTSFSTETEVWNNIIAIDFVCKDFIKEWRDT
                             \dots \dots 1150 \dots \dots 1160 \dots \dots 1170 \dots \dots 1180 \dots \dots 1190 \dots \dots 1200
                                                                           .* * ::** . .*
                            LLADLERRIQEEDPVNQILAYCCQHQRLRDLERSVGCCFENCAIEAVTAACQ--TQGSLL
Pavo_muticus
                                                                                                         1057
                            LLADLERRIQEEDPVNQILAYCCQHQRLRDLERSVGCCFENCAIEAVTAACQ--TQGSLL
Pavo_cristatus
                                                                                                         1057
                            LLA<mark>DLERRIQEEDP</mark>VNQILAYCCQQHRLRDLDR<mark>SIG</mark>CCFETCAIEAVTAACQ--TQSSLL
                                                                                                         1067
Gallus_gallus
                            LLSVLEGRIKQERPVRQIAAYCHHHDKFETLDHSVGKSFENCAMEAVNAACQQ-SEGNLL
LQSDLIGRIKQETPFNQIEVYCRCHDTLEKFHTSIAKCFERCAVEAVHSACQ--SQNSIL
Chelonia mydas
                                                                                                         1080
Rhinatrema_bivittatum
                                                                                                         1077
                            LLGDMEGRLKQESPRLQISFFCSSHCCDEGPHDSVARSIEKCVIEAVSSVCQ-
                                                                                                         1038
Rattus norvegicus
                                                                                               SQTSVL
                            LL<mark>GDMEGRLKQEPP</mark>RLQISFFCSSQCRD<mark>GG</mark>LHDSVSRSFEKCVIEAVSSACQ--SQTSVL
Mus_musculus
                                                                                                          987
                            LLGDMEWRLTKEEPLSQITAYCNSCWDTKGLEDSVAKTFEKCIIEAVSSACQ--SQTSIL
                                                                                                         1014
Homo sapiens
                            LLGDMEWRLTKEEPLSQITAYCNSCWDTKGLEDSVAKTFEKCIIEAVSSACQ--SQTSIL
Pan_troglodytes
                                                                                                         1063
Macaca mulatta
                            LLEDMEWRLKOEKPLSQITAYCSSHWDSEGLEDSVAKTFEKCIIEAVSSACQ--SQTSIL
                                                                                                         1058
                            LLR<mark>DMEGRLK</mark>KEMPLSQI<mark>TAYC</mark>SARWDTDGLEDSVA<mark>K</mark>TFEKCVIEAVSSACQ--SQTSIL
Callithrix_jacchus
                                                                                                         1110
                            LL<mark>GDMEARLKQEKP</mark>LSQISAFCNTAWDAA<mark>GSEDS</mark>VSKCFEKCVIEAVSSACQ--SQTSIL
Equus_caballus
                                                                                                         1071
                            LLGDMEGRLKQEKPLSQISAFCSTNWDAAGAEDSVSKRFEMCAIEAVSSICQ--SQTSIL
                                                                                                         1067
Orcinus_orca
Canis_lupus_familiaris
                            LLEDLEGRIKQEKPFDQICIFCGPQWDARGQEDSVSKCFEKCVVEAVSAASQ--NQTSIL
                                                                                                         1002
                            LMGDLEGRIKQERPLVQISAFCSTHWDAMGLEDSVSRCFEKCVIEAVSTACQ--SQTSIL
Felis_catus
                                                                                                         1057
Callorhinchus_milii
                            LLKDLEGKIKQEKHLRQIEVYCKCHTEINEHNPLVAKCFEDCALDAVHPVCQDKAEAQLF
                                                                                                         1166
                            FTTDFEGKYQQEDHLDQIEAYCSNIEKLKVSQPYLVNSVEKCALQAVSTICQTKSEWKLF
Danio_rerio
                                                                                                         1017
                            \dots \dots 1210 \dots 1220 \dots 1230 \dots 1240 \dots 1250 \dots 1260
```

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. ::*.:* ::*
                           DMISTYNMDQ-FSQLVSTIIVKSWP-KRIEHSQDDFDGILHHLLTWPDIKHIFSFNGTNT
Pavo_muticus
                                                                                                      1115
                           DMISTYNMDQ-FSQLVSTIIVKSWP-KRIEHSQDDFDGILHHLLTWPDIKHIFSFNGTNT
DMISSYNMDQ-FSRLISTIIVKSWP-RKVERSQDDFDEILHHLLTWPDVKHIFTFNGTNT
DLVSSYNLDK-FGKLVSAVITKSWPSSKSGEPMDDFDEVLHHLLVWSDIKHIFNFNGADG
Pavo_cristatus
                                                                                                      1115
Gallus_gallus
                                                                                                      1125
Chelonia_mydas
                                                                                                      1139
Rhinatrema bivittatum
                           SKLSRYNIER-FGKLVSVIITNSWPSNRTGERLDSFDRVLQHLLEWPDVQHIFKLYGSDG
                                                                                                      1136
                           EGLSCQDLQK-FGTLLSAVITKSWPVHNGE-LVSDVDEIFKYLLKWPDVRQLFKLCGTNE
EGLSCQDLQK-FGTLLSAVITKSWPVHNGE-PVFDVDEIFKYLLKWPDVRQLFELCGTNE
Rattus_norvegicus
                                                                                                      1096
Mus musculus
                                                                                                      1045
                            QGFSYSDLRK-FGIVLSAVI<mark>TKSWPR----T</mark>ADNFDDILKHLLTLADVKHVFRLCGTDE
Homo_sapiens
                                                                                                      1068
                           QGFSYSDLRK-FGIVLSAVITKSWPR----TADNFDDILKHLLTLADVKHVFRLCGTDE
Pan_troglodytes
                                                                                                      1117
                           RGLSCYNLQK-FGTLLSAVITKSWPRNNGE-AVDNLDDILKHLLTWADVKHLFKLCGTNE
QGLSCHDLRK-FSTLLSAVITKSWPRHNGE-AVDDLDEVFKHLLTWADVKHLFKLGRTDE
EGISYRDLQK-FGTLVSAVITKSWPRNNGE-AVDDLDEVLKHLLTGPDIRQLFKLYGTDE
                                                                                                      1116
Macaca mulatta
Callithrix_jacchus
                                                                                                      1168
Equus_caballus
                                                                                                      1129
                            EKISYNDLRK-CGTLVSAVITKSWPRSRGE-FVDDLGEVLNHLLTWPEVNHLLKLYGTNE
Orcinus_orca
                                                                                                      1125
1059
                                                                                                      1115
                                                                                                      1225
Danio_rerio
                           ARFNKFRINW<mark>RFG</mark>NLV<mark>ST</mark>IIL<mark>KSWPK</mark>DDK<mark>GTYFEEEEAVLKHLLGWAAAK</mark>NIF<mark>QLHG</mark>ADE
                                                                                                      1077
                            \dots \dots 1270 \dots 1280 \dots 1290 \dots 1300 \dots 1310 \dots 1320
                                                                  :: *: * .
                                                *::
Pavo muticus
                           KLQEQLTIEARIVMAKADSVFTNVTNDLQEGSILIKHLEEIFQHENQFVFIWELKHK---
                                                                                                      1172
                           KLOEOLTIEARIVMAKADSVFTNVTNDLOEGSILIKHLEEIFOHENOFVFIWELKHK---
                                                                                                      1172
Pavo cristatus
                           KLOEOLTNEARIVMAKADSVFMSVTNELOEGSILIKHLEEIFOHENOFVFIWELKHK---
Gallus gallus
                                                                                                      1182
Chelonia_mydas
                           KILEQLTDAAKKLTAVAGSVFTNVAENLLN<mark>GS</mark>ILVKRLELIIKHQKQFICIWELQHK---
                                                                                                      1196
                           EILAQL<mark>TE</mark>DARNLMAIA<mark>DS</mark>VFQETTESLMR<mark>GT</mark>LLVKHLECIVRNRE<mark>Q</mark>FQCIWDLKQK---
Rhinatrema_bivittatum
                                                                                                      1193
                           NITNHITKEGRRLMVTAESVFQKVAGELENGTIVVGQLELILKYKSQFLGIWDINSQ---
Rattus_norvegicus
                                                                                                      1153
                           KIIDNITEEGRQLMATAESVFQKVAGELENGTIVVGQLELILEHQSQFLDIWNLNRR---
Mus musculus
                                                                                                      1102
                           KILA<mark>nvtedak</mark>rliava<mark>ds</mark>vltkvv<mark>gd</mark>lls<mark>gt</mark>ilv<mark>g</mark>qlelii<mark>khknq</mark>fldiwql<mark>rek---</mark>
Homo_sapiens
                                                                                                      1125
Pan troglodytes
                           KILANVTEDAKRLIAVA<mark>DS</mark>VL<mark>T</mark>KVV<mark>G</mark>DLLN<mark>GTILVG</mark>QLELIIKHKN<mark>Q</mark>FLDIWQLREK---
                                                                                                      1174
                           EILANITED<mark>CK</mark>KLMGAADSVFTKIAGDLRNGTILVGQLELIIKHKNQFLDIWQLKEK---
                                                                                                      1173
Macaca_mulatta
                           KIIANITDEGKKLMATADSVFMRVADDLLS<mark>GT</mark>ILV<mark>G</mark>QLELIMKHQDRFLDIW<mark>Q</mark>LKEE---
Callithrix jacchus
                                                                                                      1225
Equus caballus
                           KILANI<mark>TEEGK</mark>KLMATA<mark>DS</mark>VFTKVTEDLLNR<mark>T</mark>ILV<mark>G</del>QLELIMKHRSQFLKIWQLKRK---</mark>
                                                                                                      1186
                           KILENITDEGKKLMATADSVFRKVTNDLISGAILVGQLELIIKHTNOFLDIWOLSKLRCG
Orcinus orca
                                                                                                      1185
Canis_lupus_familiaris KILANITEDSKELLATGSSVFMKVGEDLLHGTILVRHLELIEKHTDQFLGIWESERK---
                                                                                                      1116
Felis catus
                           KVLTNMTEDGKKLLATADSVFTKVTEDLLDGTVLVGHLELIMKHTNQFLDICQLKGK---
                                                                                                      1172
Callorhinchus_milii
                           KLIDEL<mark>TDEAK</mark>ELMALA<mark>DS</mark>VFLDVVNKLQQ<mark>GS</mark>IQIKHLKWIIEKKQNFNTLHDI<mark>K</mark>KQ---
                                                                                                      1282
Danio rerio
                           KLIDQL<mark>SDEAK</mark>EKFAMAT<mark>SLFT</mark>NVLNQLVT<mark>G</mark>KIKMKLLNHILEKKSVFLELLTLDCF---
                            \dots \dots 1330 \dots \dots 1340 \dots \dots 1350 \dots \dots 1360 \dots \dots 1370 \dots \dots 1380
                                                                    ::
                           -----QLLDGQKELLR-QLKEVLRRRREEVTHIMGEKKAIGTFLNMCRKVQASV
Pavo_muticus
                                                                                                      1220
                           -----QLLDGQKELLR-QLKEVLRRRREEVTHVMGEKKAIGTFLNMCRKVQASV
Pavo_cristatus
                                                                                                      1220
                           -----QLLDGQKELLR-QLKEVLQRRREELTHIMAEKKAIGTFLNMCRKVQASV
Gallus_gallus
                                                                                                      1230
Chelonia mydas
                            -----HLSSQEKKQQQNDLEKVLVWRREEIISLKRERNWVGTLLDMCRKVQAFI
                                                                                                      1245
                           -----NLSAPEKKEKRDDLEQVLTWRETELKQLKMEREWVDSLLKMCSSLAEFL
Rhinatrema_bivittatum
                                                                                                      1242
                           -----RLQFQEK---VYDMKGLLDRRKDDLFFLKREKRYVESLLTQLGRVKHFV
Rattus norvegicus
                                                                                                      1199
                           -----RLPSQEK---ACDVRSLLKRRRDDLLFLKQEKRYVESLLRQLGRVKHLV
Mus_musculus
                                                                                                      1148
                           -----SLSPQDE---QCAVEEALDWRREELLLLKKEKRCVDSLLKMCGNVKHLI
Homo sapiens
                                                                                                      1171
                           -----SLSPQDE---KCAVEEALYWRREELLFLKKEKRCVDSLLKMCANVKHLI
Pan troglodytes
                                                                                                      1220
                           -----SVSPQDD---KRTMEEALNWRTEELLFLEKEKRCVDSLLKMCGNVKHLI
Macaca mulatta
                                                                                                      1219
                           -----SLLPQEE---NCAMDEVLDWRIEELLFLRKEERFVDSLLKMCGIVKSLI
Callithrix_jacchus
                                                                                                      1271
                            -----NLSPOEK---RYAMGEVLDRRENELISLKKDKRYVDSLLKLCGKVKDRI
Equus_caballus
                                                                                                      1232
                           LQAHEGLDGSTSLPAHEK---RHAMKEVLSLRKNELVTLKNEKTYVDSLLKLYGRVKDLI
Orcinus_orca
                                                                                                      1242
Canis_lupus_familiaris -----SL<mark>S</mark>SLEN---EHNVGEVLVWRKDELSSLKREKKCVSSLLSMCEKVKQLV
                                                                                                      1162
                           -----CLSPQDK---KQGVKEVLEWRKEELKFLKKEKKCVHSLLKLCGEVKHLV
Felis_catus
                                                                                                      1218
                           -----SGSCQMK----YNQAVLSIRENELKGFNERKDGVDSLLKMCRKITEFV
Callorhinchus_milii
                                                                                                      1326
                           -----<mark>SEEEQ</mark>YKDIDAMKALIQTRQEEVKAIYHERALAGALIAMCHNVEEHV
Danio_rerio
                                                                                                      1181
                           \dots 1390 \dots 1400 \dots 1410 \dots 1420 \dots 1430 \dots 1440
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9		
	* : :: * : : : * : : : * : : : : : : :	
Pavo_muticus	AVHVGEVDRQHSEDLRSAKLNRVVNVGRRPIQTYYRLSQELKECAQKI	1268
Pavo_cristatus	AVHV <mark>GEVD</mark> RQHSEDLR <mark>S</mark> AKLNRVVNV <mark>G</mark> RRPIQTYYRLSQELKECAQKI	1268
Gallus_gallus	TVYV <mark>GEVDRQHSED</mark> LR <mark>SEKLN</mark> RVVSV <mark>G</mark> RRPIQTYYKLSQELKECAQKM	1278
Chelonia_mydas	KVDIVEVEEKYHENLDTKELSEVVDVRELN-FPMEGTQETYYNLSPELKKVAEMM	1299
Rhinatrema bivittatum	KVETDDLQEKQRVDLSVKPLDEVVNVMHLDSFLHEHPTVIHFDLSQKVKDMAKQI	1297
Rattus norvegicus	QVELGNIERIHSQDLSNKKLNEAVIKPPNSSFSNRKTHYYLSPDILEMASKL	1251
	QVDFGNIEIIHSQDLSNKKLNEAVIKLPNSSSYKRETHYCLSPDIREMASKL	1200
Mus_musculus		
Homo_sapiens	QVDFGVLAVRHSQDLSSKRLNDTVTVRLSTSSNSQRATHYHLSSQVQEMAGKI	1224
Pan_troglodytes	QVDFGVLAVRHSQDLSSKRLNDAVTVRLSTSSNSQRTTHYHLSSQVQEMAGKI	1273
Macaca_mulatta	QVDFGELATRHSQDLSSKRLNEAVTVRPPTSSNSQRETHYHLSSQVREMAGKI	1272
Callithrix_jacchus	QVDFGELAIRHSQDLSSKRLDEVVTVRLSSFPISERTTHYNLSPQLQAMAGKI	1324
Equus_caballus	KVDFGEIEERHLEDL <mark>SSKRLNE</mark> AVTPRVSLTSDLEWTTHYNLSPQVVEMARMI	1285
Orcinus_orca	KVDFGEIAERHSEDLSGKRLNQVVMVNLSATSLDSTWTTHYNLSPAVQEMARNA	1296
Canis lupus familiaris	QVDLEKMVEKNLEDLGSKRLCDVVTVRLSSSSPDVKRTVHYNLSPHIQEMAEKV	1216
Felis catus	KVDLEEVTRKHAEDLNGKRLSDAVTVRLSPASPDVKRTTHYSLSPOVQEMARKM	1272
Callorhinchus milii	KVDTEELEERLKADFGSTELKQVMNVTAMSNQSIPQTRPACKAVTWFHLSEQTAEMARNI	1386
Danio_rerio	KVDYKYLEDLYSNDMNEMDLDLFMDVHELNQIPTEASLEVPYFELQDDVRSMAEIL	1237
	145014601470148014901500	
	. ::* :*: * . :	
Pavo muticus	HAFKDSLIFQQFWEEAAMKAREKYGSSDEEEEVVPVMDLDDVFDGLI	1315
Pavo cristatus	HAFKDSLIFQQFWEEAAMKAREKYGSSDEEEEVVPVMDLDDVFDGLI	1315
Gallus_gallus	HAFKDSLIFQQFWEEAAMKAREKYGSSDEEE-VVPGVDLNDVFEGLI	1324
	HRYKDSHIFQLCWERAAQMMVEEYEESEGQIIPILNLHDKLF	_
Chelonia_mydas		1341
Rhinatrema_bivittatum	H <mark>T</mark> FRQ <mark>SHIFQ</mark> LCWEREARSKL <mark>E</mark> EI <mark>ED</mark> IYEGIQKKELNLEELEQELF	1343
Rattus_norvegicus	DSLKDSHVFQDFWHETAELLSNDTLDQDRRELKLSLPDVVDHLY	1295
Mus_musculus	DSLKDSHIFQDFWQETAESLNTLDKDPRELKVSLPEVLEYLY	1242
Homo_sapiens	DLLRDSHIFQLFWREAAEPLSEPKEDQEAAELLSEPEEESERHILELEEVYDYLY	1279
Pan_troglodytes	DLLRDSHIFQIFWREAAEPLSEPKEDQEAAELLSEPEEESERHILELEEVYDYLY	1328
Macaca_mulatta	DLLRDSHIFQIFWRKAAEPLSEPREEQEAAELLSEPEEESEKHILKLEEVYDYLY	1327
Callithrix jacchus	DLLRDSHIFQIFWREAAEPFGVPEEEREAVELPSELEE-SERQMLLIEEVHDYLY	1378
	DLLQDSHIFQMFWAEAAESLSEPVEESERQILQLEEAYEDLY	1327
Equus_caballus		_
Orcinus_orca	DLLKDSHVFQVFWTEAAQELSEPEEELERKLFHPEEMYQCLY	1338
Canis_lupus_familiaris	DQLKDSHIFQVFWENTTEGLRKPEEELEQQILQLEEVYTYLY	1258
Felis_catus	DWLKDSHLFQVFWAEAARALSEPGEELEGQILQPEEAYKYLY	1314
Callorhinchus_milii	HQF <mark>KDSH</mark> VFQMCWEKAAKDLSAKA <mark>P</mark> ADIEFSDEQEGEEELYVESSMA <mark>P</mark> SVTLDQLNARLW	1446
Danio rerio	NIFKDSYIFKLRWGNEAALFVERAEDEELDELDELPITLDVLNEEIF	1284
	151015201530154015501560	
	: :: .:: * : : * .: .: : *: *: *	
Pavo muticus	SPCFTNYERLYDDLRSGSLTLSAVDRIFQDFTNHPEDIKAELNAMCELRPGEGRRWVDRR	1375
_	SPCF INTERLIDDERSGSLILSAVDRIF ODF INTPEDIRALLNAMCELRPGEGRWVDRK	
Pavo_cristatus	S <mark>PCFTNYERLYDDLRSG</mark> SL T LSAVDRIFQDFTNHPEDIKAELNAMCELR <mark>PGEGR</mark> RWVDRR	1375
Gallus_gallus	A <mark>PCFMNYERLYDDLRSG</mark> SL T LSAVDRIFQDFTNHPEDIKAELNIICELR <mark>P</mark> AEGRRWVDRR	1384
Chelonia_mydas	S <mark>PCYHEYKRLYNELQSG</mark> KLTFAEVDTIFNDFTSHYEQISTELQIMCKLDPVDN <mark>R</mark> AWI <mark>G</mark> QR	1401
Rhinatrema_bivittatum	CTCVRKYEALYEDLKSGRLTFAVVDDIFRDYKDRYEELRKDFQIMSQLQAGNQREWIDSR	1403
Rattus_norvegicus	Y <mark>PCYEKFYKLYMNLRSG</mark> EI <mark>T</mark> FADVDVIFRDFK <mark>DKYDE</mark> LNVDLKFMCTLD <mark>P</mark> QDR <mark>KG</mark> WISQ <mark>R</mark>	1355
Mus musculus	NPCYDNFYTLYENLKSGKITFAEVDAIFKDFVDKYDELKNDLKFMCTMNPODOKGWISER	1302
Homo_sapiens	QPSYRKFIKLHQDLKSGEVTLAEIDVIFKDFVNKYTDLDSELKIMCTVDHQDQRDWIKDR	1339
Pan_troglodytes	QPSYRKFIKLHQDLKSGEVTLAEIDVIFKDFVNKYTDLDSELKIMCTVDHQGQRDWIKDR	1388
Macaca_mulatta	QPSYRKFIKLYQDLKSGEVTLAEIDVIFKDFVNKYTDLASELKIMCTVDHQGQRDWIKER	1387
Callithrix_jacchus	L <mark>P</mark> SYRRFIRLYQDLKSGEVTLAEIDVIFKDFENKYEDLALELKTMGTVDKQDPSNWVKER	1438
Equus_caballus	H <mark>PCIEKFTKLYHDLKSGEVTFGEIDAVFRDFMNKY</mark> SDLASDLRIMCALDRQDTKDWIKER	1387
Orcinus_orca	GPCFKRFTKLYQDLKSGEVTFGEIDDIFKNFVNKYSDLTKDLQTMCALYPSDQKDWIKER	1398
Canis_lupus_familiaris	VPCFKKFMKLYEDLRSGKITFQEVNTVFKDFVNKYSNLTSDLRTMCALDPSDQQDWIEDR	1318
Felis_catus	CPCFEKYQDLYEDLKSGEITFQEVNVMFNDFVNKYSNLTFELQLMCALDSSDQRDWIGDR	1374
Callorhinchus_milii	EPCFTHYQSIYQKVKEGSLTFREVDEQFRDYGESYEDLKRDFEIMCKLSPRDGQ-WVGKR	1505
Danio rerio	LPCHAAYRNIYTSLKOGSIDFEDIDEIFRAYKGKYEKLAAEVAIMSKQDFNDDQHWVQTR	1344
	157015801590160016101620	

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	. **.:** : :: .: : : *:* :: : *. *.	
Pavo muticus	FQQIQQYHEMHLTFDAAKIIANVKESLNLSGDFSVLENLLYMTEELESHKTQKLDFISSE	1435
Pavo_cristatus	FQQIQQYHEMHLTFDAAKIIANVKESLNLSGDFSVLENLLYMTEELESHKTQKLDFISSE	1435
Gallus_gallus	FQQIQQYHEMHLTFDAVKIIANVKESLNLSGDFSVLENLLYMTEKLESHKTQKLDFISSE	1444
Chelonia mydas	LQQIQQYHELHLAFDSAKVIAKVKEGLNLSGDFRILQMLLNFTDSFESFKKEKLDSISSA	1461
Rhinatrema bivittatum	LLQIQQYHQLHLAIDSAKVIAQVRDDFRLSGNFNILQTFLHFADDFEFFKQQSLSCINDE	1463
Rattus_norvegicus	VRQIKEYHTLYQAVSSAKVIVQVRRALGVTGDFSVLNPLLNFADDFEDFRNEKLNQISPQ	1415
Mus_musculus	VGQIKEYHTLHQAVSSAKVILQVRRALGVTGDFSVLNPLLNFADSFEDFGNEKLDQISPQ	1362
Homo_sapiens	VEQIKEYHHLHQAVHAA <mark>K</mark> VILQV <mark>KE</mark> SLGLNGDFSVLNTLLNFTDNFDDFRRETLDQINQE	1399
Pan_troglodytes	VEQIEEYHHLHQAVHAAKVILQVKESLGLTGDFSVLNTLLNFTDNFDDFRHETLDQINQE	1448
Macaca_mulatta	VEQIKEYHHLHQAVHAAKVILQVKESLGLTGDFSVLNTLLNFTDDFDNFGHETLDQINQE	1447
Callithrix_jacchus	VEQIKEYHHLHHAVHAARVILQVKESLGLTGDFSVLNTLVNFTDNFDDFCHETLDRINQE	1498
Equus_caballus	V <mark>GQIKEYHHLHQAVNSAK</mark> VIL <mark>EVKESLGLTGDFGVLCTLLNFTDGFE</mark> DFRHEKLDRISQQ	1447
Orcinus_orca	VRQIEEYHHLHQAVD <mark>S</mark> AKVILKVKENLAL <mark>TGDFG</mark> VLHILLSFT-VLDNFRHEKLDRINQQ	1457
Canis_lupus_familiaris	VAOIQEYHHLDQAVSSAKVILEVKENLGLIGNFSILHTLLHFTDNFDKYRHEKLERISRE	1378
Felis catus	VGQIREYHHLHQAVSSAKVILKVKDSLGLTGDFRVLHTLLNFTDNFNQFRHEKLDRISKQ	1434
Callorhinchus milii	IQQIQEYHQLHSAVKCAEIIMRAKDILSLKGNFSVLETLLNMRDESFKEKKLNCISDE	1563
Danio_rerio	IQQIKQYHELHLAVESAKVVMMVKETLCLQGDFQVLEKLLITTHSDFKSERLDSIDNE	1402
	163016401650166016701680	
	10301040103010701070	
	::.:. * :. * :. *: .** : **************	
Banca		1405
Pavo_muticus	LIRAKELLQGITVNRRGCLRELAQQKEFVCWVREALKDINELKVFVDLASISAGENDMDV	1495
Pavo_cristatus	LIRAKELLQGITVNRRGCLRELAQQKEFVCWVREALKDINELKVFVDLASISAGENDMDV	1495
Gallus_gallus	LIHAKELLQGITVNRQGCLRELAQQKEFVCWVREALKDINELKVFVDLASISAGENDMDV	1504
Chelonia_mydas	LMRAKERLQGITEPRRRCLEELALRKDFINWVKEALEDINELKVFVDLASISAGENDMDV	1521
Rhinatrema_bivittatum	LMQTKQELLEISEMRQRCLKEVTRRKDFIVWVTDALRDVNELKVFVDLASISAGENDMDV	1523
Rattus_norvegicus	FIKAKELLQDISELRHRCLEELALQTELVHWLHEALKDINELKVFVDLASISAGENDIDV	1475
Mus_musculus	FIKA <mark>K</mark> QLL <mark>QDISEPR</mark> QRCLEELAR <mark>QTE</mark> LVAWLHKALEDINEL <mark>K</mark> VFVDLA <mark>SISAGENDID</mark> V	1422
Homo_sapiens	LIQAKKLLODISEARCKGLQALSLRKEFICWVREALGGINELKVFVDLASISAGENDIDV	1459
Pan_troglodytes	LIQA <mark>K</mark> KLL <mark>Q</mark> DI <mark>SEAR</mark> CK <mark>G</mark> LQALSL <mark>RKE</mark> FICWVREAL <mark>GGINELK</mark> VFVDLASISA <mark>GEND</mark> IDV	1508
Macaca_mulatta	LIQAKKLLQDISEARCEGLKALSLRKEFIRWVREALGGINELKVFVDLASISAGENDIDV	1507
Callithrix jacchus	LIQAKKLLQDISEARCEALKALSLRKEFICWVREALGGINELKVFVDLASISAGENDIDV	1558
Equus_caballus	LIRAKKLLEDLSESRCQCLRELCLSKELISWVQEALGGINELKVFVDLASISAGENDIDV	1507
Orcinus orca	LIRAKKLLQDVNETRCQCLKELSRRKEFISWVREALGGITELKVFVDLASISAGENDIDV	1517
Canis_lupus_familiaris		1438
Felis catus	LIQAKKLLQDVTEPRCQCLNELSLRKEFISWVREALGGVHELKVFVDLASISAGENDIDV	1494
-	LIEARSLLVNISEPCRKCLEELIQRQQFVHWIKDALGDINELKVFVDLASISAGENDLDV	1623
Callorhinchus_milii	LIEARSLLVNISEPCRACLEELIQAQOFVHWILDALGDINELAVFVDLASISAGENDLDV	1462
Danio_rerio	LIQAKNVLVDITEPRRLCLQELGHRKNFVIWVKEALEDINELKVFVDLASISAGENDLDV	1462
	169017001710172017301740	
	<u>*************************************</u>	
Pavo_muticus	DRVACFHDTVHGYSSLLYELSQESGFDGFMHCLRKLWRALDTDENLPKKLRASAQHLEWL	1555
Pavo_cristatus	DRVACFHDTVHGYSSLLYELSQESGFDGFMHCLRKLWRALDTDENLPKKLRASAQHLEWL	1555
Gallus_gallus	DRVACFHDTVHGYSSLLYELSQESGFHDFMLCLRKLWRALDTDENLPKKLRASAQHLEWL	1564
Chelonia_mydas	DRVACFHDAVLGYSSLLYELKRESGFEEFMQCLKKLWKALESDENLPKKLCDSARHLEWL	1581
Rhinatrema bivittatum	DRVACFHDAILGYSSLLYELKTDMGFAGLMHCLOKLWKALDSDEKLPKKLMDSARHLEWL	1583
Rattus norvegicus	DRVACFHDAVQGYASLLYKLGANTDFNEFMNHLQELWRALDNDQHLPDKLKDSARNLEWL	1535
Mus musculus	DRVACFHDAVQGYASLLYKMDERTNFSDFMNHLQELWRALDNDQHLPDKLKDSARNLEWL	1482
Homo sapiens	DRVACFHDAVQGYASLLFKLDPSVDFSAFMKHLKKLWKALDKDQYLPRKLCDSARNLEWL	1519
Pan_troglodytes	GRVACFHDAVQGYASLLFKLDPSVDFSAFMKHLKKLWKALDKDQYLPRKLCDSARNLEWL	1568
Macaca_mulatta	DRVACFHDAVQGYASLLFKLDPRVGFDAFMKHLKELWKALDNDQYLPRKLCDSARNLEWL	1567
Callithrix_jacchus	DRVACFHDAVQGYASLLYKLDPRVGFNRFMKHLKELWKALDNDQHLPRKLYDSARNLEWL	1618
	DRVACFHDAVQGYAPLLYKLDRSAGFDEFMEQVKELWKALENDQHLPSKLRDSARNLEWL	1567
Equus_caballus Orcinus_orca		
	DRVACFHDAVQGFAPLLYELDTSAGFDEFMQHLKELWKALDNDHHLPQKLCDSARNLEWL	1577
Canis_lupus_familiaris	DRVACFHDAVQGSASLLYKLDTSAGFNEFMMHLKEMWKALEKDPHLPHKLRDSARNLEWL	1498
Felis_catus	DRVACFHDAVQGYSPLLYKLDTSAGFDEFMTHLGELWRALNNDAYLPHKLCDSARNLEWL	1554
Callorhinchus_milii	DRVACFHDAVLGYSSLLYELKPEFGFVDFMPCLQKLWKALKNDHNLSKKLRDSARHLDWL	1683
Danio_rerio	DRVACFHDAVLGYSSMLYDLKPDAGFSLFNEMLKKLWKALDNDSNLPKKLCDSARHIEWL	1522
	$\dots 1750 \dots 1760 \dots 1770 \dots 1780 \dots 1790 \dots 1800$	

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:.*.:***** :**:** * *:: :
                                                                                  : ::
                                KTVKESHGSVELSSLSLAATINSRGVYVLKAPADGRKVSLDNVLHLTLLESSEDHKPSWK
Pavo_muticus
                                                                                                                         1615
                                KTVKESHGSVELSSLSLAATINSRGVYVLKAPADGRKVSLDNVLHLTLLESSEDHKPSWK
                                                                                                                         1615
Pavo_cristatus
Gallus_gallus
                                 <mark>ktvkeshgsvelsslaatinsrgvy</mark>ilka<mark>padgrkvsld</mark>nvlhltllessenhr<mark>p</mark>swk
                                                                                                                         1624
Chelonia_mydas
                                KTVKESHGSVELSSLSLATTINSKGIYIIRAPPEGQKVSLDTVLFLSLPESHGDSEEMRQ
                                                                                                                        1641
Rhinatrema bivittatum
                                KTVKESHGSVELSSLSLATAINRKGIYIIGAPAEGQKVTPDSVLRLNLPESHDGEEEVRL
                                                                                                                         1643
                                KTVKESHGSVELSSLSLATAINSRGIYIIQAPKDGQKVSPDTVLHLLLPDDHGYQEAFRK
Rattus_norvegicus
                                                                                                                         1595
Mus musculus
                                 <mark>ktvkeshgsvelsslslatainsrgvy</mark>viea<mark>pkdgqkispdt</mark>vlrlll<mark>pdghgypealr</mark>t
                                                                                                                         1542
                                KTVNESHGSVERSSLTLATAINQRGIYVIQAPKGGQKISPDTVLHLILPESPGSHEESRE
Homo_sapiens
                                                                                                                        1579
                                KTVNESHGSVERSSLTLATAINQRGIYVIQAPKGGQKISPDTVLHLILPESPGSHEESRE
Pan_troglodytes
                                                                                                                         1628
                                KTVKESHGSVELSSLTLATAINQRGMYVIHAPKGGQKISPDTVLHLVLPGIPGSHEEPRE
Macaca_mulatta
                                                                                                                         1627
Callithrix_jacchus
                                 <mark>KNVKESHGS</mark>VEL<mark>SSLTLATAINQRG</mark>IYVIQA<mark>P</mark>KSD<mark>QK</mark>ISPDTVLHLVL<mark>PEG</mark>SSSHEES<mark>R</mark>K
                                                                                                                         1678
Equus_caballus
                                 <mark>QTvreshgsvelsslslatainsrg</mark>iyviea<mark>prdgokispdt</mark>vlrlil<mark>peshg</mark>dh<mark>o</mark>dv<mark>r</mark>d
                                                                                                                         1627
                                 <mark>ktvkeshgsvelsslslatainsrgiy</mark>vika<mark>padgokispdtvlhlilpeghggheevr</mark>d
Orcinus_orca
                                                                                                                         1637
Canis_lupus_familiaris KTVRESHGSVELSSLSLATAINTKGIYMIGAPTDGQKISPDTVLQLLLPESHGDHEEVRV
                                                                                                                         1558
                                 KTVKESHGSVELTSLSLATAINDKGCYIIRAPADGQKISPDTVLQLSL<mark>PESHGG</mark>REETRD
Felis_catus
                                                                                                                         1614
Callorhinchus milii
                                KTVKESHGSVELSSLSLASAINSDGIYIIGS-EEQHKLSLGSAIKLHLPEVLEDSEELRC
                                                                                                                         1742
Danio_rerio
                                <mark>ktvkdshgsvelssls</mark>la<mark>sainskg</mark>iyvinaqnqkk-lalenilklhimeehd<mark>gg</mark>cet<mark>r</mark>v
                                                                                                                         1581
                                 .....1810......1820......1830......1840......1850......1860
                                      ::::* ******* ::
                                                                                               **.*
                                                                                                       *** *** *
                                                                        : * :.*..:***
                                YSLAELRELQNKLMLMSA-KGEQG-LEVEKFSETFSNVQRLAQAFIDLHSAGNMLFRSWL
YSLAELRELQNKLMLMSA-KGEQG-LEVEKFSETFSNVQRLAQAFIDLHSAGNMLFRSWL
Pavo muticus
                                                                                                                         1673
                                                                                                                         1673
Pavo cristatus
                                YSLAELRELQNKLMLMSA-KGEQG-LEVEKFSETFSNVQRLAQAFIDLYSAGNMLFRSWL
Gallus gallus
                                                                                                                         1682
Chelonia_mydas
                                YSLEELRELL<mark>NK</mark>LMLM<mark>SG-KG</mark>DQ<mark>G-MEVEKFSEVFSNVQR</mark>LALSFIDLYSA<mark>GN</mark>MLFRSWI
                                                                                                                         1699
                                YSLEDLKELQ<mark>NK</mark>LMLM<mark>SG-RG</mark>EQ<mark>G</mark>SMEVETFSEVFSNVQRLTSSFINLHSA<mark>GN</mark>LLFRHWK
Rhinatrema_bivittatum
                                                                                                                         1702
Rattus_norvegicus
                                 YSTEELKELL<mark>NK</mark>LMLM<mark>SGRKD</mark>HSSNVEVETF<mark>SEVFSNMQR</mark>LVHVFINLHCA<mark>GN</mark>MLFRTWT
                                                                                                                         1655
                                 YSTEELKELL<mark>NK</mark>LMLM<mark>SGKKD</mark>HNSNTEVEKF<mark>SE</mark>VF<mark>SNMQR</mark>LVHVFIKLHCA<mark>GN</mark>MLFR<mark>T</mark>WT
Mus musculus
                                                                                                                         1602
                                 YSLEEVKELL<mark>NK</mark>LMLM<mark>SGKKD</mark>RNNTEV-ERFSEVFCSV<mark>QR</mark>LSQAFIDLHSA<mark>GN</mark>MLFRTWI
Homo_sapiens
                                                                                                                         1638
                                YSLEEVKELLNKLMLMSGKKDRNNTEV-ERFSEVFCSVQRLSQAFIDLHSAGNMLFRTWI
YCLEELKELLNKLMLMSGKKDHNNTEV-ERFSEVFCSVQRLSQAFIDLRSAGNMLFRTWT
Pan troglodytes
                                                                                                                         1687
                                                                                                                         1686
Macaca_mulatta
                                 <mark>ysleelkellnk</mark>lmlm<mark>sgkkd</mark>hnnv<mark>e</mark>v-erfqevfcsv<mark>or</mark>lskafidlhca<mark>gn</mark>mlfrtwv
Callithrix jacchus
                                                                                                                         1737
Equus caballus
                                 YSLEELKELLNKLMSGKKDHKNTEV-ELFSEVFSNVORLVOSFINLYSAGNMLFRAWV
                                                                                                                         1686
Orcinus_orca YSLEELKELLNKLMLMSGKKDHNNVEVVEVFSEVFCNVQRLVQSFINLYSAGNMLFRTWT Canis_lupus_familiaris YSLEQLKELLNKLMLMSGKKDHGNVQV-EVFSKVFSNVQRLVQSFINLYCAGNMLFRAWK
                                                                                                                         1697
                                                                                                                         1617
Felis catus
                                FSLEELKELL<mark>NK</mark>LMLM<mark>SGKKD</mark>HSNVQV-EIFSKVFCNVQRLVESFINLYAAGNMLFRNWT
                                                                                                                         1673
                                YTLEELKELONKLMLMSG-KGDHGQEEVERFAEVFANVORLASSFISLCSAGNMLFRRWK
YSLEDLRDLONKLMLMSG-KGEQGQCEVDQFAEVFASVORLVSAFIDLYVAGNPLFRHWE
Callorhinchus_milii
                                                                                                                         1801
Danio rerio
                                  .....1870.....1880.....1890.....1900.....1910......1920
                                                                          * :
                                                  : ::*
                                                                                  * :.: :*
                                AQVHCSPKSELCVLIDFTL-RLIPGLEGQGELADVLPRLCKTMESFLESWQSFMSKKRFQ
Pavo_muticus
                                                                                                                         1732
                                 AQVHC<mark>SPK</mark>SELCVLI<mark>D</mark>FTL-RLI<mark>PG</mark>LE<mark>GQGE</mark>LADVL<mark>PRLCK</mark>TMESFLESWQSFMSK<mark>KR</mark>FQ
                                                                                                                         1732
Pavo_cristatus
                                 AHVH<mark>CSPK</mark>SELCVLI<mark>D</mark>FTL-RLI<mark>PE</mark>LE<mark>GQGELADVLP</mark>RL<mark>CK</mark>TMESFL<mark>E</mark>SWQSFMSK<mark>KR</mark>FQ
                                                                                                                         1741
Gallus_gallus
                                ASV<mark>YCSP</mark>TSEVCISMDFCL-KLV<mark>GQ</mark>LF<mark>GKGDMMAMLLDLCREME</mark>KFLEKWKCFMSEKRSQ
AKV<mark>YCS</mark>SESWIGIHMDFQL-AAVGAIDGQGSVVHLL<mark>P</mark>ALCKEMELLLERWKEYMDRMRSQ
Chelonia mydas
                                                                                                                         1758
Rhinatrema_bivittatum
                                                                                                                         1761
                                AKVYCCP--GGGISMDFGS-KLLNOLTESGDVIOLLGALCROMEDFLHEWKTVVAOKRAT
Rattus norvegicus
                                                                                                                         1712
                                 AKV<mark>YCCP</mark>--D<mark>GG</mark>IFM<mark>N</mark>FGL-ELLS<mark>Q</mark>LTEK<mark>GDVIQLLGALCRQME</mark>DFLDNWKTVVA<mark>QKR</mark>AE
Mus_musculus
                                                                                                                         1659
                                 AMAYCSPKQGVSLQMDFGL-DLVTELKEGGDVTELLAALCRQMEHFLDSWKRFVTQKRME
                                                                                                                         1697
Homo sapiens
                                AMAYCSPKQGVSLQMDFGL-DLVTELKE<mark>GGDVTE</mark>LLAALCRQMEHFLDSWKRFVTEKRME
Pan troglodytes
                                                                                                                         1746
Macaca mulatta
                                AKAYCSPKQGVSIRMNFGL-ELVTELVEGGDVTELLAALCRQMEHFLDSWKKFVTQKRTE
                                                                                                                         1745
                                 TRV<mark>YCSP</mark>NQDVSLLMDF<mark>G</mark>L-EL<mark>G</mark>MKLEE<mark>GGDVTE</mark>VLEAV<mark>CRQME</mark>HFLDSWKRFVT<mark>QKR</mark>ME
Callithrix_jacchus
                                                                                                                         1796
                                AEVYCA<mark>PREG</mark>VSIRMDFRL-GLVSÖLT<mark>GRGP</mark>VAELLEALCRÖMEHFLDCWK<mark>GFVAÖKRAE</mark>
AEVYCSPRKGASIRMDFGL-QLVRÖLVES<mark>GP</mark>VAELLE<mark>TLCRÖ</mark>MEDFLDOWERFVAEKRAE
                                                                                                                         1745
Equus_caballus
                                                                                                                         1756
Orcinus_orca
Canis_lupus_familiaris AEVYCSPRHGVSLRMDFCL-TLINQLKGTGPVVELLEAVSRQMEDFLDHWISFVAEKRAK
                                                                                                                         1676
                                AQV<mark>HCSPR</mark>HGVSIQMDFRL-ERVVQLKGSGSVAELLEAVS<mark>KQLE</mark>QFLDRWEAFVA<mark>EKR</mark>AK
Felis_catus
                                                                                                                         1732
Callorhinchus_milii
                                 AEVYCSTDSPVCVNMDFSV-RGVGAVLANGNVTEQLPVLCRKMEAFLDVWKQFMDQQRSH
                                                                                                                         1860
                                ANINCNSK-EACIIIDFNLGSVVSVVMVEGDVTEQLPEVCKKMESCLRFWQDFMDKQRSQ
Danio_rerio
                                                                                                                         1699
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.....1930.....1940.....1950.....1960.....1970......1980

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	·*** ** ** ·* · · · · · · · · · · · · ·	•
Pavo muticus	HFYLNFYTAEQLVYLCTELGQGRPSQKALMMLSFLKSNCTAED	
Pavo_cristatus	HFYLNFYTAEQLVYLCTELGQGRPSQKALMMLSFLKSNCTAED	VLRASEGH 1783
Gallus_gallus	HFYLNFYTAEQLVYLCTELGQGQPSQKALMMLSFLKSNCTAED	
Chelonia mydas	YFYLNYYTSEQLVYLCRQLGTRQPSENALMMLSFIKHNCTRQD	
Rhinatrema bivittatum	HYYLNYYTAEQLVYLCQRLAHTHVIEDAMTMLSFINSNSAHVQSSLNE	
Rattus_norvegicus		LIQATSAC 1763
Mus_musculus	HFYLNFYTAEQLVYLSSELRKPRPSEAALMMLSFIKGKCTVQD	LV <mark>Q</mark> A <mark>T</mark> SAC 1710
Homo_sapiens	HFYLNFYTAEQLVYLSTELRKQPPSDAALTMLSFIKSNCTLRD	VLRAS <mark>VGC 1748</mark>
Pan_troglodytes		<mark>VLRAS</mark> V <mark>G</mark> C 1797
Macaca_mulatta	HFYLNFYTAEQLVSLSTELRKQPPSDAALTMLSFIKSNCTLMD	
Callithrix_jacchus	HFYLNFYTAEQLVYLSTELRKQPPSDAALMMLSFIKSHCTLRD	
Equus_caballus	HFYLNYYTDEQLVHLSTELKREKPRDATLTMLSFIKSNCSPRD	
Orcinus_orca	HFYLNYYTAEQLVYLGSELRKQVPSSAALTMLSFIKGNCTPRD	
Canis_lupus_familiaris		
Felis_catus	HFYLNYYTAEQLVYLSTELKKATPSDAALTMLSFIKGNCTPKD	
Callorhinchus_milii	CYYLNFYTAEQIVYLCTELFQRNSSSRLQENVLMMLSFVKPDCTAED	
Danio_rerio	HYYLNYYTAEQLVYLCHQLAHNNMEEID-DQVLMMLSFIKPSCSTSD	
	$\dots 1990 \dots 2000 \dots 2010 \dots 2020 \dots 2030 \dots$	2040
Pavo muticus	EPPSSTKAVFDLPALLDEERDLT	TCLEYIWE 1814
Pavo cristatus	EPPSSTKAVFDLPALLDEERDLT	
Gallus_gallus	EPPSSTKAVSDLLALLDEERDLT	
Chelonia mydas	VSERSRKNISDLRELLCSERDLT	
Rhinatrema bivittatum	PRLSWSCAEMT	
Rattus_norvegicus	ENKAARHCLQEAMRKLPQQLLSESTLM	GKLRVIMT 1798
Mus musculus	ESPSLM	
Homo_sapiens	GSFSLV	
Pan_troglodytes	GSEVARYHMRRVMEELPLMLLSEFSLV	
Macaca_mulatta	ESEAARYRVRTVTEELPLMLFSEFSLA	DKLRVIME 1831
Callithrix_jacchus	ESKAARHHVRTVMEELPLMLFSESRLV	D <mark>KVKVIME</mark> 1882
Equus_caballus	D <mark>G</mark> RATSHQGSAVIEELRLTLS <mark>S</mark> KLGLL	
Orcinus_orca	NGRAITHQESTVVEELPLLLFSESRLV	D <mark>KLRVIM</mark> K 1842
Canis_lupus_familiaris	S <mark>GKAARH</mark> HERTAAE <mark>G</mark> LRQAL <mark>PHE</mark> F <mark>S</mark> LV	
Felis_catus	R <mark>G</mark> EAARHEEKTAIQ <mark>G</mark> LQVMLLR <mark>E</mark> L <mark>S</mark> LA	
Callorhinchus_milii	NTVQ <mark>GPET</mark> LLGTRLKPFGGRKVEKRASMQLRVQEIAEARTVE	
Danio_rerio	QYDLIRKGPDQNDDLDFQTFVEVSSMTENESTEKSCPTSDDLIQQLGDASGS	
	20502060207020802090	2100
	* *: . * * *	. * * *
Pavo muticus	: : *: *::** * *. CYMSNMGAFLPNCLDVDTLGAWLKSLASGERECVSRDFPQ	
Pavo_muticus Pavo_cristatus	CYMSNMGAFLPNCLDVDTLGAWLKSLASGERECVSRDFPQ	
Gallus_gallus	CYMSNMGAFLPNCLDVDTLGAWLKSLAGGERECVTRGFPQ	
Chelonia mydas	LYIADMSSFLPGCWDINTLGSCLASLADLEKESVTRVLPR	
Rhinatrema bivittatum	SYMENMSSFMPGSLDINTLGNCLAFLAETEQKTVNRTLPP	S-LLPGNP 1907
Rattus norvegicus	QSLECMSAFLPSCLDLDTLGRCLAHLARLGGSPVERPLPK	G-LQVGQP 1845
Mus musculus	QSLVYMSAFLPHCLDLDALGRCLAHLATMGGTPVERPLPK	G-LQAGQP 1792
Homo sapiens	QSMRCLPAFLPDCLDLETLGHCLAHLAGMGGSPVERCLPR	
Pan_troglodytes	QSMRCLPAFLPDCLDLETLGHCLAYLAGMGGSPVERRLPR	
Macaca_mulatta	OSMECLPAFLPDCLDLETLGRCLAHLAGMGGSPVERHLPR	
Callithrix jacchus	QFMGCLPAFLPDCLDLEALGHCLAHLAGMGGPPVERVLPR	
Equus_caballus	QSMTCMSVFLPHCLDLEALGHCLAHLARMGGPPVERQLPK	G-LOVGOP 1878
Orcinus_orca	HSMTCMSVFLPHCLDLEALGHCLARLARMAGPPVQRELPR	G-LQDGQP 1889
Canis_lupus_familiaris	QSMVCMSAFLPHCLDLEALGLYLASLARMNRHPVERDLPK	G-LHVGQP 1809
Felis_catus	QSLVCMSAFLPHCLDLEALGRCLALLGWMRGCPVERQLPK	G-LHVGRP 1865
Callorhinchus_milii	YYMENMTYFLSGCLDVGTLGGLLNILGDAQKTSIERALPP	G-LLEGRP 2012
Danio_rerio	NYMRDMKAFLPDSLDVPSLGYLLEILANSHREDEGDMSQRDKTRTILRELPN	G-IA <mark>SG</mark> RP 1872
	21102120213021402150	2160

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                             NLITCPRSEVLTSALAVYMNSPNQPLPTFDEVLLCTPQTTAEQVGLFLRRCLIPGSEGEK
Pavo_muticus
                                                                                                          1922
                             NLI<mark>TCPRSEV</mark>LTSALAVYMNSPNQPLPTFDEVLL<mark>CTPQTTAEQ</mark>VGLFLRRCLI<mark>PGSEGEK</mark>
                                                                                                          1922
Pavo_cristatus
Gallus_gallus
                             NLITCPRSEVLTSALAVYMN<mark>SPNQPLPT</mark>FDEVLLCTPQTTAEQVGLFLRRCLI<mark>PGS</mark>EGEK
                                                                                                          1931
                             NLVI<mark>CPRSD</mark>VLTSALAIYMH<mark>SP</mark>CQAL<mark>PTYAE</mark>VLL<mark>CTPET</mark>DF<mark>EQ</mark>VGLFLRRCL<mark>TPG</mark>CK<mark>G</mark>KK
                                                                                                          1947
Chelonia_mydas
Rhinatrema bivittatum
                             NLIL<mark>CPPLEILP</mark>SALAIYMH<mark>SP</mark>DQPLPTYDEVLLCTPQTTFEPVELFLRRCLTPGSKEKK
                                                                                                          1967
                             NLIL<mark>CGHSE</mark>VLSAALAIYMQD<mark>PMQPLPTFDE</mark>VLL<mark>CTPGTT</mark>IEEVELFLRRCLTLDSQEHK
                                                                                                          1905
Rattus_norvegicus
                             NLIL<mark>CGHSE</mark>VL<mark>PAALAIYMQA<mark>PRQPLPTFDE</mark>VLL<mark>CTPATTIEE</mark>VELLLRRCLTS<mark>GS</mark>QGHK</mark>
Mus musculus
                                                                                                          1852
                             NLVVCGHSEVLPAALAVYMQTPSQPLPTYDEVLLCTPATTFEEVALLLRRCLTLGSLGHK
                                                                                                          1890
Homo_sapiens
Pan_troglodytes
                             NLVV<mark>CGHSE</mark>VLPAALAVYMQ<mark>T</mark>PS<mark>QPLPTYDE</mark>VLL<mark>CTP</mark>ATTFEEVALLL<mark>RRC</mark>LTL<mark>GS</mark>L<mark>GHK</mark>
                                                                                                          1939
                             NLVV<mark>CGHSE</mark>VL<mark>PAALAVYMQTPSQP</mark>LP<mark>TYDE</mark>VLL<mark>CTPATT</mark>FEEVALLLRRCL<mark>TPGSPG</mark>HK
                                                                                                          1938
Macaca mulatta
Callithrix_jacchus
                             NLVI<mark>CGHSE</mark>VLTAALAVYMQTQS<mark>QPLPTYDEVLLCTP</mark>ATTFEEVALLLRRCLTPG<mark>SGG</mark>NK
                                                                                                          1989
Equus_caballus
                             NLVV<mark>CGHSE</mark>VL<mark>P</mark>AALAIYMO<mark>TPSOP</mark>L<mark>PSYDEVLLCTPETTFEEVALLLRRCLTLGSWGHR</mark>
                                                                                                          1938
Orcinus_orca
                             NLVVCGHSEVLPAALAIYMQTPNQPLPTYDEVLLCTPETTFEEVALLLRRCLTPGSQGLR
                                                                                                          1949
Canis_lupus_familiaris
                            NLIVCGHSEVLPAALAIYRHMENEPLPTFDEMLLCTPGTTFEEVALLLRRCLTPGSRGRG
                                                                                                          1869
                             NLIV<mark>CGHSE</mark>VLLAALAIYMH<mark>TPQQP</mark>LP<mark>TFDE</mark>VLL<mark>CTPATTLEE</mark>VALLLRRCL<mark>TPGS</mark>RGQG
Felis_catus
                                                                                                          1925
                             NLVVCPRSELLTCALCVYMH<mark>TLHQPLPTYDEVLLCTAETG</mark>LEQIEIFL<mark>RRC</mark>LTKGCRGSK
Callorhinchus milii
                                                                                                          2072
Danio_rerio
                             NLII<mark>CP</mark>SEEILISCISI<mark>YMNS</mark>KN<mark>EPLPTYDEVLLCS</mark>AT<mark>TPYEE</mark>VELFLRRCLSAGYR<mark>G</mark>KK
                                                                                                          1932
                             \dots \dots 2170 \dots 2180 \dots 2190 \dots 2200 \dots 2210 \dots 2220
                             :*::*..: * ::*. : * :*
                                                                                    :* ::**.***::
                                                                      : *:::*:
Pavo_muticus
                             IYTMLFADELSYDVSCRAEELFQHLQG--YNSTYRLLILCNCEREHCYIPSVFSQYKVHM
                                                                                                          1980
                             IYTMLFADELSYDVSCRAEELFQHLQG--YNSTYRLLILCNCEREHCYIPSVFSQYKVHM
                                                                                                          1980
Pavo cristatus
                             IYTMLFADELSYDVSCRAEELFOHLOG--YNSTYRLIILCNCEREHCYIPSVFSOYKVHM
Gallus gallus
                                                                                                          1989
                             IYTMLYADELSYDVSYRLEKLFQNLCRQLHQDNYCLVILCDCEREHSYIPSVFSQYKVHM
Chelonia_mydas
                                                                                                          2007
                             VYTLLHADELVFEVGLKAEQLFRRLEAO-CKEPYQLVMLCNCNQEHYYIPSVFSQHKVHI
VYSLLFADQL<mark>SYEVG</mark>CQAEELFQSLSTQVHREDYQLVILCDAAREHCYIPSTFSQHKVPL
Rhinatrema_bivittatum
                                                                                                          2026
Rattus_norvegicus
                                                                                                          1965
                             VYSLLFADQLSYEVGCQAEEFFQSLCTRAHREDYQLVILCDAAREHCYIPSTFSQYKVPL
Mus musculus
                                                                                                          1912
                             VYSLLFADQLSYEVARQAEELFHNLCTQQHREDYQLVMVCDGDWEHCYLPSAFSQHKVFV
Homo_sapiens
                                                                                                          1950
                             VYSLLFADOLSYEVAROAEELFHNLCMOOHREDYOLVMVCDGDWEHCYLPSAFSOHKVFV
VYSLLFADOLSYEVAROAEELFOKLCMOOHREDYOLVMVCDGDWEHCYLPSAFSOHKVFV
Pan troglodytes
                                                                                                          1999
                                                                                                          1998
Macaca_mulatta
                             IYSLLFADQLSYEVARQAEELFQKLHTQQHREDYQLVMVCDADGEHCYLPSAFSQHKVLV
Callithrix jacchus
                                                                                                          2049
Equus caballus
                             VYSLLYADQLSYDVACQAEVLFQSLRTQRPREDYQLVMVCDCEWEHCYLPSAFSQHKVLF
                                                                                                          1998
                             VYSLLYADOLSYEVACRAEELFLRLCMORHOEHYRLVMVCDHEREHCYLPSAFSOHKVLI
Orcinus orca
                                                                                                          2009
Canis_lupus_familiaris IYSLLYADLLSYEVACQAETLFLNLCLQSHQGDFQLVMICDSQREHCHLPSAFSQHKVLI
                                                                                                          1929
Felis catus
                             VYSLLYADLLSYEVASQAEALFLSLCSQPHHEDFQLVMVCDSEREHCHLPSAFSQHKVLV
                                                                                                          1985
Callorhinchus_milii
                             IYSLLFADALTYDVSVRFEELFKNLQLQ-GRPDYQLVIVCDSDQDHCYIPSAFSQYKSHA
                                                                                                          2131
Danio rerio
                             IYTMLYV<mark>NQ</mark>LNYEVSYKVEKFFQNQNAH-<mark>T</mark>TNDYRLVLI<mark>CE</mark>SNKEHAYL<mark>PS</mark>AF<mark>SQ</mark>FRLHL
                                                                                                          1991
                             .....2230......2240......2250......2260......2270.......2280
                                       *: **
                                                           *** .*..
                                               :: *
                                                                         * :*:*:*.**:**
                             IPORPLAEIOOYLOHHYRVAOPSNSAACVFKGSTCVGIVSSKRAGVGKSLYVKRLHERLE
Pavo_muticus
                                                                                                          2040
                             IPQRPLAEIQQYLQHHYRVAQPSNSAACVFKGSTCVGIVSSKRAGVGKSLYVKRLHERLE
                                                                                                          2040
Pavo_cristatus
                             IPQRPLTEIQQYLQHHYRVAQPSNSAAGVFKGSTCVGIVSSKRAGVGKSLYVKRLHERLE
Gallus_gallus
                                                                                                          2049
Chelonia mydas
                             IPOKPLRDIOMYLRNHYKVMOPAGSAASVFNDNMCVGIVSSKRAGVGKSLYVKRLHEKLK
                                                                                                          2067
                            IPQEPPERIQKYLQKHFTVPRGILSAASVFKDGTCVGIVSSKRAGVGKSLYVKKLQKKLT
Rhinatrema_bivittatum
                                                                                                          2086
                             V<mark>PQAPLP</mark>DIQAYLENHYQVPKQIQSAATVFRDGLCVGIVTSERAGVGKSLYVNTLHK<mark>K</mark>LK
Rattus norvegicus
                                                                                                          2025
                             V<mark>PQAPLP</mark>NIQAYLQSHYQVPKRLL<mark>S</mark>AATVFRDGLCVGIV<mark>TSERAG</mark>VGKSLYVNTLHTKLK
Mus_musculus
                                                                                                          1972
                             TPQAPLEAIQAYLAGHYRVPKQTLSAAAVFNDRLCVGIVASERAGVGKSLYVKRLHDKMK
Homo sapiens
                                                                                                          2010
                             TPQAPLEAIQAYLAGHYRVPEQTLSAAAVFNDRLCVGIVASERAGVGKSLYVKRLHDKMK
Pan troglodytes
                                                                                                          2059
Macaca mulatta
                             TPQAPLEAIQAYLADHYRVPKQTLSAAAVFKDRLCVGIVASERAGVGKSLYVKRLHDKLK
                                                                                                          2058
                             TPQESLEAIQAYLACHYRVPEQTLSAAAVFRDRLCVGIVASERAGVGKSLYVKRLHEKMK
Callithrix_jacchus
                                                                                                          2109
                             TPQAPLEAIQAYLARHYRVPEQIPSAAAVFRDRMCVGIVASERAGVGKSLYVKRLHDKLK
                                                                                                          2058
Equus_caballus
                             TPQAPLKDIQAYLAHHFRVPEQTPSAAATFRDHMCVGIVASERAGVGRSLFVKRLHGQLK
                                                                                                          2069
Orcinus_orca
Canis_lupus_familiaris TPQAPLQDIQAYLAKHFQVPENMPSAADVFRDRMCVGVVTSKRAGVGKSLYVERLHSKLE
                                                                                                          1989
                             TPQAPLRDIQAYLAQHFQVPAHTPSAADVFRDRTCVGIVASKRAGVGKSLYVERLHSKLT
                                                                                                          2045
Felis_catus
                             VPHDSLENIKLYLEKQYKVPPNVLSAASVFNDQMFVRIVSSKRGGVGKSLYVKRLHETLK
Callorhinchus_milii
                                                                                                          2191
                             IPQQPIPSIQQYLHRHFAVPVGISSAAAVFKDRQNVGVVSSERSGVGKSLYIKRLYEKLK
                                                                                                          2051
Danio_rerio
```

 $\dots \dots 2290 \dots \dots 2300 \dots \dots 2310 \dots \dots 2320 \dots \dots 2330 \dots \dots 2340$

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** *** :* :**. :: ::..*
                                                                                     ::*:*:: *:.*:
                              AQQPDCTELLKTIRLIEPAVDEDKVLQSLLPFLESQQPTKPMIFHFDITSSVQSGVPEFL
Pavo_muticus
                                                                                                                2100
                              AQQ<mark>P</mark>DCTELLKTIRLIEPAV<mark>DE</mark>DKVLQSLLPFLESQQPTKPMIFHFDITSSVQSGVPEFL
AQQPDCTELLKTIRLIEPAV<mark>DE</mark>DKVLQSLLPFLESQQPTKPMIFHFDITSSVQSGVPEFL
                                                                                                                2100
Pavo_cristatus
Gallus_gallus
                                                                                                                2109
                              TKLHDSSVPLKTIRLIEPHVDESKVLRSLLSFLHLQYQQKPMIFHFDITSSVQSGIPEFL
                                                                                                                2127
Chelonia_mydas
Rhinatrema bivittatum
                              RG-SYKVTOLKTIRLIDPQVDESKVLRRLLPFLRKQYERAPMIFHFDITSSVQSGISEFL
                                                                                                                2145
                              TKLQDETVPLKIIRLTEPHIDENHVLSALLPFLEKNYQKTPVIFHIDVSTSVQTGIPVFL
Rattus_norvegicus
                                                                                                                2085
Mus musculus
                              AKLRDETV<mark>PLK</mark>II<mark>RLTEPHLDE</mark>NQVLSALL<mark>PFLKEKYQKMP</mark>VIFHI<mark>DISTS</mark>VQ<mark>TG</mark>IPIFL
                                                                                                                2032
                              MQLNVKNV<mark>PLKTIRLIDPQ</mark>VDESRVL<mark>G</mark>ALL<mark>P</mark>FLDAQYQKV<mark>P</mark>VLFHLDV<mark>TSS</mark>VQTGIWVFL
                                                                                                                2070
Homo_sapiens
Pan_troglodytes
                              MQLNVKNV<mark>PLKTIR</mark>LIDPQVDESRVL<mark>G</mark>ALLPFLDAQYQKV<mark>P</mark>VLFHLDV<mark>TSS</mark>VQTGIWVFL
                                                                                                                2119
                              IQLNRKKV<mark>PLKTIR</mark>LI<mark>DPQ</mark>VDESQVLGALLPFLDAQYQKVPMLFHLDVTSSVQTG</mark>IWVFL
                                                                                                                2118
Macaca mulatta
                              VQLRREKV<mark>PLKTIR</mark>LI<mark>DPQVDE</mark>SQVL<mark>G</mark>ALLPFLDVQYQKVPMLFHLDVTSSVQTGIWVFL
Callithrix_jacchus
                                                                                                                2169
Equus_caballus
                              KKFL<mark>G</mark>KKV<mark>PLK</mark>VIRLIDPQVDENQVL<mark>GS</mark>LLPFLDAQYWTRPMIFHFDVTSSVQTGVWVFL
                                                                                                                2118
Orcinus_orca
                              MKFNGEKVPLKIIRLINPQVDENEVLGSLLPFLDARYQRRPIVFHFDVTSSVQTGIWVFL
                                                                                                                2129
Canis_lupus_familiaris RKLRDKEV<mark>PLK</mark>VIRLIDPQVDEKKVLS<mark>SLLP</mark>FLKSYYQTMPVIFHFDV<mark>TSS</mark>VQTGLWVFI
                                                                                                                2049
                              MKLR<mark>GENVPLK</mark>VIRLI<mark>DPQ</mark>V<mark>DE</mark>NQVLS<mark>S</mark>LL<mark>P</mark>FLKARYQTR<mark>P</mark>MIFHF<mark>D</mark>VTSSVQTGLWVFI
Felis_catus
                                                                                                                2105
Callorhinchus_milii
                              KENRSKSC-L<mark>KTIR</mark>LI<mark>EPQVDE</mark>NKVLK<mark>T</mark>VLSLLQTSR<mark>P</mark>L<mark>GPTIFHFDITSSVQKG</mark>LSAFL
                                                                                                                2250
Danio_rerio
                              LN-SKK<mark>P</mark>SQL<mark>KCIR</mark>LTEPKVDENVIIQ<mark>S</mark>LISVLKKNDLS---VYHFDVTTMVKK<mark>G</mark>LHEFL
                                                                                                                2107
                              \dots 2350 \dots 2360 \dots 2370 \dots 2380 \dots 2390 \dots 2400
                              *:**:* ** * .*::*
                                                           ***::*:
                                                                                                  .***:**
                              FKLLVLQYLTDANGNMWLRQKCHLYIIEILE-GSPLPQQ---KVSMSQ-KYNFLDVFPKV
FKLLVLQYLTDANGNMWLRQKCHLYIIEILE-GSPLPQQ---KVSMSQ-KYNFLDVFPKV
Pavo muticus
                                                                                                                2155
Pavo cristatus
                                                                                                                2155
                              FKLLVLQYLTDANGNMWLRQKCHLYVIEILE-VSPLPQQ---TVSVSQ-KYNFLDVFPKV
Gallus gallus
                                                                                                                2164
Chelonia_mydas
                              FKLLVLQYLTDTDGKMWLRQQCHLYIVEILD-VPPAPKKPARFISHGQ-KYNFLDVFPKI
                                                                                                                2185
Rhinatrema_bivittatum
                              FKLLVLQYLMDNDGKMWKRNPHHLYLIEILEGSAVAPKKPIKQVSRGP-QYSFLDLFPKV
                                                                                                                2204
                              FKLLILQYLMDINGKMWRRNPCHLYVVEIPQAHSVRPKR-SSKLNARAPLFKFLDIFPKV
Rattus_norvegicus
                                                                                                                2144
                              FKLLILQYLMDINGKIWRRSPGHLYLVEIPQGLSVQPKR-SSKLNARAPLFKFLDLFPKV
Mus musculus
                                                                                                                2091
                              FKLLILQYLMDINGKMWLRNPCHLYIVEILERRTSVPSRSSALRTRVPQFSFLDIFPKV
Homo_sapiens
                                                                                                                2130
                              FKLLILQYLMDINGKMWLRNPCHLYIVEILERRTSVPSRSSSALRTRVPRFSFLDIFPKV
FKLLILQYLMDINGKMWLRNPCHLYIIEILERRTSVPSRRSSKLRTRVPQFSFLDIFPKV
Pan troglodytes
                                                                                                                2179
                                                                                                                2178
Macaca_mulatta
                              FKLLILQYLMDINGKMWLRSPCHLYIIEILERRTSVQSRRPSMLRTRAPQFSFLDIFPKV
Callithrix jacchus
                                                                                                                2229
Equus caballus
                              FKLLILQYLMDINGKMWRRNPCHLYVVEVLEGNPAPPKR-PSKLNTRAPQIKFLDIFPKV
                                                                                                                2177
                              FKLLILQYLMDVNGKMWLRNPCHLYIVEILEGS-SLPQR-PLKLSTLVPQFNFLDIFPKV
Orcinus orca
                                                                                                                2187
Canis_lupus_familiaris FKLLILRYLMDINGKIWLRNPRHLYIIEILETTPALPKA-PSRRSTHTPQFNFLDVFPKV
                                                                                                                2108
Felis catus
                              FKLLILQYLMDINGKMWLRNPCHLYIIEILERTPVMLKT-PSKRSTHGPQFSFLDIFPRV
                                                                                                                2164
Callorhinchus_milii
                              FKLLILQYLMDTDGKMWKCQPCHLYIIELVEAPQSPSMH-RMRLGNRVPKYSFLDVFPMV
                                                                                                                2309
Danio rerio
                              F<mark>R</mark>LLIL<mark>G</mark>YLMDSK<mark>G</mark>NMWKSSNKHLYVIEILR<mark>PG</mark>LSQND<mark>R</mark>----RA<mark>G</mark>AKVSFNFLDVF<mark>P</mark>IV
                               \dots 2410 \dots 2420 \dots 2430 \dots 2440 \dots 2450 \dots 2460
                                  ****
                                                                          * **::*** **
                              TCKSPKEVLEMETLGROPRDAS---DPGMDEEEFHSEAFORPFOYLKRFDHGYNLDTFWY
Pavo_muticus
                                                                                                                2212
                              TCKSPKEVLEMETLGRQPRDAS---DPGMDEEEFHSEAFQRPFQYLKRFDHGYNLDTFWY
Pavo_cristatus
                                                                                                                2212
                              MCKSPKEVLEMETLKRQPRDAS---DPGMDEEEFHSEAFQRPFQYLRRFDNGHNLDTFWY
TCKSPKEVLDMDVQGGPSEYST---EPGMDQKEFCSEAFQRPFQYLKRFDRGDNLDMFCY
ICRAPKEVLEREMQSHGPQHST---DPGMDHEEFCSEAFQRPFQYLTRFRQNENLDSFCY
Gallus_gallus
                                                                                                                2221
Chelonia mydas
                                                                                                                2242
Rhinatrema_bivittatum
                                                                                                                2261
                              TCRPPKEVINMELT--PKRSHI---EPGMDPAEFCSEAFQRPYQYLRRFHQGQNLDAFRY
                                                                                                                2199
Rattus norvegicus
                              TCRPPKEVINMELT--PERSHT---DPAMDPVEFCSEAFQRPYQYLKRFHQQQNLDTFQY
TCRPPKEVIDMELS--ALRSDT---EPGMDLWEFCSETFQRPYQYLRRFNQNQDLDTFQY
TCRPPKEVIDMELS--ALRSDT---EPGMDLREFCSETFQRPYQYLRRFNQNQDLDTFQY
Mus_musculus
                                                                                                                2146
Homo sapiens
                                                                                                                2185
Pan troglodytes
                                                                                                                2234
                              TCRPPKEVIDMELS--PQRGDT---EPGMDQWEFCSETFQRPYQYLRRFHQNQDLDMFEY
Macaca mulatta
                                                                                                                2233
                              TCRPPKEVIDMELS--PQRSDT---EPGMDEWEFSSEAFQRPYQYLKRFHQNQNLDKFQY
Callithrix_jacchus
                                                                                                                2284
                              TCLPPKEVIGMELN--PERSYR---EPGMDHREFCSETFQRPYQYLKRFHQKQNLDTFQY
                                                                                                                2232
Equus_caballus
                              MCRPPKEVISMELD--PQWSYE---EPGMDQRAFCSETFQRPYQYLRRFHQKENLDTFQY
Orcinus_orca
                                                                                                                2242
Canis_lupus_familiaris
                              TCRPPKEVINMELN--PEESYN---DPGMDLTVFRSETFQRPYQYLKRFHEKKNLDNFQY
                                                                                                                2163
                              TCRPPKEVIDMELS--PEENSR---DPGMDQGVFQSETFQRPYQYLRRFHQKENLDSFLY
                                                                                                                2219
Felis_catus
                              CCRPPKEVLELEVGISEGKAVNGV-DPLMDEKEFRSEAFQRPYQYLRRFRQQQNLDTFSY
Callorhinchus_milii
                                                                                                                2368
                              YCRSPKEVLELEMRMEEHPSFGLSDDPLMDDQEFRSEAYQRPYQYLQRFYNGINLDEFLY
Danio_rerio
                                                                                                                2223
                              \dots \dots 2470 \dots \dots 2480 \dots \dots 2490 \dots \dots 2500 \dots \dots 2510 \dots \dots 2520
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* :* :: :**: :*:*: **: *** **:*** *:**.
                                        . * * .
                                  KAH<mark>SVEGSPAECLQVFLLHCGILDPSWSELRN</mark>FASFLNVQLRDCEASVFCNPEFVQDTLQ
Pavo_muticus
                                                                                                                              2272
                                  KAHSVEGSPAECLQVFLLHCGILDPSWSELRNFASFLNVQLRDCEASVFCNPEFVQDTLQ
Pavo_cristatus
                                                                                                                              2272
Gallus_gallus
                                  KARSVEGSPAEFLQVFLLHCGIVDPSWSELRNFTSFLNVQLRDCEASVFCNPEFVQDTLQ
                                                                                                                              2281
                                                                                                                              2302
                                  EEGSVEGTPAECLQLFLIHCGVIDPTWSELRNFAWFLNVQLRDCEASVFCNPAFVQDTLQ
Chelonia_mydas
                                  IPGSIEGSPVECLQLLLIYCGIMDPSWSELRNFTWFLNLQLRDCESSLFCNVLFVGDVLH
Rhinatrema bivittatum
                                                                                                                              2321
                                  EKDSVEGSPEECLQHFLIYCGLTNPSWSELRNFAWFLNCQLKDCEASVFCNSAFTGDTLR
Rattus_norvegicus
                                                                                                                              2259
Mus musculus
                                  ek<mark>gsvegspeeclohfliycglinpswselrnfawflncolkdceas</mark>ifcksaf<mark>tgdt</mark>lr
                                                                                                                              2206
                                  QEGSVEGTPEECLQHFLFHCGVINPSWSELRNFARFLNYQLRDCEASLFCNPSFIGDTLR
Homo_sapiens
                                                                                                                              2245
Pan_troglodytes
                                  QE<mark>GSVEGTPEECL</mark>QHFLFHCGVIN<mark>PS</mark>WSELRNFARFLNYQLRDCEASLFCNPSFI<mark>GDT</mark>LR
                                                                                                                              2294
                                  QE<mark>GSVEGTPEECLQHFLIYCG</mark>VIN<mark>PSWSELRN</mark>FARFL<mark>NYQLRDCEAS</mark>LFCN<mark>P</mark>SFI<mark>GDT</mark>LR
                                                                                                                              2293
Macaca mulatta
                                  QE<mark>GSVEGTPGECLQHFLIYCG</mark>VIN<mark>PSWAELRN</mark>FARFL<mark>NYQLRDCEAS</mark>LFCNPSF<mark>TGDT</mark>LR
Callithrix_jacchus
                                                                                                                              2344
Equus_caballus
                                  QE<mark>GCIEGTPEECIQHLLFYCG</mark>VID<mark>PS</mark>WAELRNFARFL<mark>NYQLRDCEAS</mark>LFCDLSV<mark>TGDT</mark>LR
                                                                                                                              2292
Orcinus_orca
                                  QK<mark>GSVEGSPGECIQHLLIYCG</mark>VIN<mark>PSWSELRN</mark>FARFL<mark>NYQLRDCEAS</mark>LF<mark>CDP</mark>SFV<mark>GDT</mark>LV
                                                                                                                              2302
                                  OE<mark>GFVEGTPEECLQYFLIYCG</mark>VID<mark>PSWSELQNFAGFLNYQLRDCEAS</mark>VFCNSHVVGDTLQ
QEGCVEGTPTECLQYFLIYCGVIDPSWSELRNFAGFLNYQLRDCEGSLFCNPDVTGDTLG
Canis_lupus_familiaris
                                                                                                                              2223
Felis_catus
                                                                                                                              2279
Callorhinchus milii
                                  LAD<mark>SVEGSHVEWIQLFLIYCG</mark>VA<mark>DPSWSELHN</mark>FAWFL<mark>NLQLRDCETS</mark>VFCDFTFIED<mark>T</mark>LQ
                                                                                                                              2428
Danio_rerio
                                  <mark>QG--vegshvecl</mark>Qmlfeycgiid<mark>ps</mark>wa<mark>elrn</mark>fawfl<mark>nlQlQdceks</mark>vfcdfsfv<mark>gdt</mark>ll
                                                                                                                              2281
                                   .....2530......2540......2550......2560......2570......2580
                                                                                               :.*: ** :*::** * **
                                  *** *** **: **: ***
                                                                      .*** *.
                                  GFKNFVVTFMILMARDFATPSLHISDQSSGRQS-FHLDDVSEDDLLPFRVRKKWESEHHP
Pavo_muticus
                                                                                                                              2331
                                  GFKNFVVTFMILMARDFATPSLHISDOSSGROS-FHLDDVSEDDLLPFRVRKKWESEHHP
Pavo cristatus
                                                                                                                              2331
                                  GFKNFVVTFMILMARDFATPSLHISDOSSGRQS-FNLEDVSEEDLLPFRIRKKWESEHHP
Gallus gallus
                                                                                                                              2340
Chelonia_mydas
                                  GFKNFVVTFMILMARDFATPTLNISDQSPGRQV-FDMKGVTEEDLIPFRIRKKWESEPHP
                                                                                                                              2361
                                  GFKTFVVKFMILMAKDFA<mark>TP</mark>SLNISDQSLGNTA<mark>P</mark>INLDDIKEEDIA<mark>P</mark>FLL<mark>RKKWETEPHP</mark>
Rhinatrema_bivittatum
                                                                                                                              2381
                                  GFKNFVVTFMVLMARDFATPTLQTSDQSPGKHS-ATIDGVAEEDLAPFSLRKRWESEPHP
Rattus_norvegicus
                                                                                                                              2318
                                  GFKNFVVTFMILMARDFATPTLHTSDQSPGRQS-VTIGEVVEEDLAPFSLRKRWESEPHP
Mus musculus
                                                                                                                              2265
                                  GFKKFVVTFM1FMARDFATPSLHTSDQSPGKHM-VTMDGVREEDLAPFSLRKRWESEPHP
Homo_sapiens
                                                                                                                              2304
                                  GFKKFVVTFMIFMARDFA<mark>TPSLHTSDQSPGKHM-VTMDG</mark>VREEDLAPFSLRKRWESEPHP
GFK<mark>N</mark>FVVTFMIFMARDFA<mark>TPTLHTSDQSPGKHM-VTMDG</mark>VKEEDLAPFSLRKRWESEPHP
Pan troglodytes
                                                                                                                              2353
                                                                                                                              2352
Macaca_mulatta
                                  GFKNFVVTFMILMARDFATPTLHTSDOSPGKHM-VTMDGVREEDLAPFSLRKRWESEPHP
Callithrix jacchus
                                                                                                                              2403
                                  GFKKFVVTFMIFMARDFA<mark>TPTLHTSDQSPGK</mark>HM-V<mark>TMDG</mark>VKEEDLA<mark>P</mark>FSLRKKWESEPHP
Equus caballus
                                                                                                                              2351
Orcinus_orca GFKNFVVTFMIFMARDFATPTLHTSDQSPGKYT-VTMDGVKEKDLAPFTLRKRWESEPHPCanis_lupus_familiaris GFKNFVVTFMIFMARDFATPTLHTNDQSPGRHA-VIMDGVRDEDLAPFSLRKRWESEPHP
                                                                                                                              2361
                                                                                                                              2282
Felis catus
                                  GFKNFVVTFMIFMARDFATPTLHTSDQSPGRYA-VPMDGVREEDLAPFTLRRRWESEPHP
                                                                                                                              2338
                                  GFKQFVVSFMILMAKDFA<mark>TPS</mark>LSISDQSPGRQM-V<mark>S</mark>LEGMSEKDIAPFLIRKKWECEPHP
Callorhinchus_milii
                                                                                                                              2487
Danio rerio
                                  GFKNFVVEFMILMAKDFA<mark>TPS</mark>LSI<mark>SDQSPGRLH-EDFSSANEEDLAP</mark>FKIRKRWESEPHP
                                                                                                                              2340
                                   \dots 2590 \dots 2600 \dots 2610 \dots 2620 \dots 2630 \dots 2640
                                  *:*** *: :*****::: *
                                                                                                      *: ** *****::
                                                                         :**:
                                                                                       :*: ::*
                                  YLFFNGDRVSMTFIGFHFQPNGVHG-VDAINPFNGKIIKGNIMSSQLYNGLLLQRVPFDI
Pavo_muticus
                                                                                                                              2390
                                  YLFF<mark>NGD</mark>RV<mark>SMTFIG</mark>FHFQPNGVHG-VDAI<mark>NP</mark>FNGKIIKGNIMSSQLYNGLLL<mark>QR</mark>VPFDI
Pavo_cristatus
                                                                                                                              2390
                                  YLFF<mark>NGD</mark>RV<mark>SMTFIGFHFQPNG</mark>AH<mark>G-VDAINP</mark>LNGRVIKRNIMSSQLYHGLLLQRVPFDV
Gallus_gallus
                                                                                                                              2399
                                  YIFF<mark>NED</mark>RV<mark>SMTFIG</mark>FHLQANN<mark>NGG-IDAINPMSGNIIKKDVMTVQLYKGLVLQRVPFNI</mark>
YIFF<mark>NDDHESMTFIGFHLQPNG</mark>IS<mark>GGVD</mark>AINSVN<mark>GK</mark>IIESNVM<mark>TMQLYQG</mark>LQLQRVPFNI
Chelonia mydas
                                                                                                                              2420
Rhinatrema_bivittatum
                                                                                                                              2441
                                  YVFF<mark>NGDRMTMTFIGFHLKTNSNG</mark>Y-V<mark>D</mark>AI<mark>NPSSG</mark>NII<mark>KKD</mark>VM<mark>TKE</mark>LFD<mark>G</mark>LKL<mark>QR</mark>V<mark>P</mark>FNI
Rattus norvegicus
                                                                                                                              2377
                                  YVFF<mark>NGDHMTMTFIG</mark>FHLETNN<mark>NG</mark>Y-VDAINPSN<mark>GK</mark>VI<mark>KKD</mark>VMTKELFD<mark>G</mark>LRL<mark>QRVPFN</mark>I
Mus_musculus
                                                                                                                              2324
                                  YVFFNDDHTTMTFIGFHLQPNINGS-VDAISHLTGKVIKRDVMTRDLYQGLLLQRVPFNV
YVFFNDDHTTMTFIGFHLQPNINGS-VDAINHLTRKVIKRDVMTRDLYQGLLLQRVPFNV
Homo sapiens
                                                                                                                              2363
Pan troglodytes
                                                                                                                              2412
Macaca mulatta
                                   YVFFNDDRTTMTFI<mark>GFYL<mark>OPN</mark>SKGS-V<mark>D</mark>AINHL<mark>TGK</mark>VIKRDVMTMDLY<mark>QG</mark>LLL<mark>OR</mark>V<mark>P</mark>FNV</mark>
                                                                                                                              2411
                                   YVFF<mark>NHDHTSMTFIGFHLEPN</mark>SH<mark>GG-VD</mark>AI<mark>NHLT</mark>REVI<mark>KRD</mark>VMTVDLYEGLLL<mark>QR</mark>VPFNV
Callithrix_jacchus
                                                                                                                              2462
                                  YVFFNSDHTSMTFIGFHFODNONGS-VDAVDRLSRKVIKKDVMAMGLYRGLLLORVPFNV
YVFFNSDHTSMTFIGFHFOPNONGG-VDAIDRLSGEVIKKDVMTVOLYEGLLLORVPFNV
Equus_caballus
                                                                                                                              2410
Orcinus_orca
                                                                                                                              2420
Canis_lupus_familiaris
                                  YVFF<mark>NGDHTSMT</mark>FI<mark>G</mark>FHIQSNRNAS-L<mark>D</mark>AIH<mark>P</mark>S<mark>SGR</mark>VI<mark>KKD</mark>VM<mark>G</mark>QKLY<mark>QG</mark>LLLQRVPFNV
                                                                                                                              2341
                                  YVFF<mark>NGDHTSMT</mark>FI<mark>GFHIQPNQNG</mark>S-LDAVDLASRTVIKKDVMAMELYRGLSL<mark>QR</mark>VPFNV
Felis_catus
                                                                                                                              2397
                                  YIFF<mark>NSDHTSMTFIGFHLQENG</mark>RGS-VDAV<mark>NP</mark>ANRQVIKEDVMSRQLYQGLLLQRVPFNL
YIFFNDDHDSMTFIGFHLQPNAQKG-VDAVDPSNNRVIKQNIMTMELYEGLKLQRVPFNI
Callorhinchus_milii
                                                                                                                              2546
                                                                                                                              2399
Danio_rerio
```

.....2650.....2660.....2670.....2680.....2690.....2700

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.***
                                                     ***..**.* **..*...*..**.***
                          ** * * :*: :*
                          SFDSLSRLEKLDRLCMVLGISYVTDPDETYELTTDNVLKMLAIEMRFRCNIPVVIMGETG
Pavo_muticus
                                                                                               2450
                          SFDSLSRLEKLDRLCMVLGISYVTDPDETYELTTDNVLKMLAIEMRFRCNIPVVIMGETG
Pavo_cristatus
                                                                                               2450
Gallus_gallus
                          SFDSLSRLEKLDRLCMVLGIPYVTDPDETYELTTDNVLKMLAIEMRFRCNIPVVIMGETG
                                                                                               2459
                         NFDQLPRDEKLEKLCLVLGIQWAMDPDETYELTTDNILKIFAIEMRFRCGIPVIIMGETG
                                                                                               2480
Chelonia_mydas
Rhinatrema bivittatum
                         DFDALSRDOKIEKLCLVLGIOWPLDPDESYELTMDNMLKILAIKMRFRCGIPVIIMGETG
                                                                                               2501
                          NFDSLPRHEKLERLCLALGIEWPSDPDETYELTTDNMLKILAIEMRFRCGIPVIIMGETG
Rattus_norvegicus
                                                                                               2437
Mus musculus
                          DFDNLPRYEKLERLCLALGIEWPIDPDETYELTTDNMLKILAIEMRFRCGIPVIIMGETG
                                                                                               2384
                          DFDKLPRHKKLERLCLTLGIPQATDPDKTYELTTDNMLKILAIEMRFRCGIPVIIMGETG
Homo_sapiens
                                                                                               2423
Pan_troglodytes
                          DFDKLPRHKKLERLCLTLGIPQATDPDKTYELTTDNMLKILAIEMRFRCGIPVIIMGETG
                                                                                               2472
                          DFDKLPRHEKLERLCLTLGIRWAIDPDETYELTTDNMLKILAIEMRFRCGIPVIIMGETG
Macaca_mulatta
                                                                                               2471
Callithrix_jacchus
                          DFDRLPRHEKLERLCLALGIQWAIDPDDTYELTTDNMLKILAIEMRFRCGIPVIIMGETG
                                                                                               2522
                          DFDVL<mark>PRHEKLEKLCLALGIQWPIDPDETYELTTDN</mark>MLKILAIEMRFRCGI<mark>P</mark>VIIMGETG
Equus_caballus
                                                                                               2470
Orcinus_orca
                          DFDQLPRHEKLEKLCLALGIQWPIDPDETYELTTDNMLKILAIEMRFRCGIPVIIMGETG
                                                                                               2480
Canis_lupus_familiaris DFDQLPRQEKLAKLCLALGIQCPIDPDDTYEITTDNMLKILAIEMRFRCGIPVIIMGETG
                                                                                               2401
Felis_catus
                          DFDQL<mark>PRHEKLERL</mark>CLAL<mark>GIQWPMDPDETYELTVDNMLK</mark>ILAIEMRFRCGIPVIIMGE<mark>T</mark>G
                                                                                               2457
Callorhinchus_milii
                          DFDKLERGEKIERLTMVLGIEWPLDPDDTYELTTDNILKILAIHMRFRCGIPVIIMGETG
                                                                                               2606
Danio_rerio
                          DFDQL<mark>PRWEKIER</mark>LSRVL<mark>GIQWPLDPDETYELTTDNMLKMLAVHMRFRCGIP</mark>VIIM<mark>GETG</mark>
                                                                                               2459
                          .....2710......2720......2730......2740......2750......2760
                          *****:.*:..:
                                                ...*******
                                                                     :: :**
                                                                                  ** :. : *:
Pavo_muticus
                          CGKTRLVNFLCKLRRSFIEVENMKLVKVHGGTTAEMIYARIKEAEALAIANKKOHGLDTV
                                                                                               2510
                          CGKTRLVNFLCKLRRSFIEVENMKLVKVHGGTTAEMIYARIKEAEALAIANKKQHGLDTV
                                                                                               2510
Pavo cristatus
                          CGKTRLVNFLCKLRRSFVEVENMKLVKVHGGTTAEMIYARIKEAEALAIANKKOHGLDTV
Gallus gallus
                                                                                               2519
Chelonia_mydas
                          CGKTRLIKFLCELRRSGVDAENMKLVKVHGGTSAEMIHAKIREAEDIAVSNKRQHQFDTI
                                                                                               2540
Rhinatrema_bivittatum
                          CGKTRLIKFMCDLHRSGAVIDNLKLVKVHGGTSAKMIYDKIREAEAIAVVNKLQYQFDTV
                                                                                               2561
Rattus_norvegicus
                          CGKTRLIKFLSDLRRGSIEAETMKLVKVHGGTTPSMIYSRVKDAERTAFFNKAQHNLETI
                                                                                               2497
                          CGKTRLIKFLSDLKRGSVEAETMKLVKVHGGTTPSMIYSKVKEAERTAFSNKAOHKLDTI
Mus musculus
                                                                                               2444
                          CGKTRLIKFLSDLRRGGTNADTIKLVKVHGGTTADMIYSRVREAENVAFANKDQHQLDTI
Homo_sapiens
                                                                                               2483
Pan_troglodytes
                          CGKTRLIKFLSDLRRGGTNADTIKLVKVHGGTTADMIYSRVREAENVAFA<mark>NK</mark>DQHQLDTI
                                                                                               2532
                          CGKTRLIKFLSDLRRAGADADTIKLVKVHGGTTADMIYSRVREAENVAFANKDQHQLDTI
Macaca_mulatta
                                                                                               2531
                          CGKTRLIKFLSDLRRGGANADTIKLVKVHGGTTADVIYSRVWEAENVAFSNKVOHOLDTI
Callithrix jacchus
                                                                                               2582
Equus caballus
                          CGKTRLIKFLSDLRRGGADAETLKLVKVHGGTTADMIYSKVREAEQLALLNKDQHQLDTI
                                                                                               2530
Orcinus orca
                          CGKTRLIKFLSDLRRGGADADTMKLVKVHGGTAADMIYSKVREAEALACFNKDQFQLDTI
                                                                                               2540
2461
Felis catus
                          CGKTRLIKFLSDLRRGSTQAETMKLVKVHGGTTAEMIYSKVREAEELAVFNKEQHQLGTI
                                                                                               2517
Callorhinchus_milii
                          CGKTRLIRFLCELGKAGAPTDNMKLVKVHGGTTADNIRSKIREAEAKAVSNKQEYGFDTV
                                                                                               2666
Danio rerio
                          CGKTRLIKFLCEMHRSGVATDNMKLVKVHGGTSSEMIYTKVREAEAMALRNKLDYGFDTV
                                                                                               2519
                          \dots \dots 2770 \dots 2780 \dots 2790 \dots 2800 \dots 2810 \dots 2820
                          **********
                                                              :**::*******
                          LFFDEANTTEAVSSIKEVLCDHTVEGKPLVPCSGLQIIAACNPYRKHTPKMIQRLELAGL
Pavo_muticus
                                                                                               2570
                          LFFDEANTTEAVSSIKEVLCDHTVEGKPLVPCSGLQIIAACNPYRKHTPKMIQRLELAGL
                                                                                               2570
Pavo_cristatus
                          LFFDEANTTEAV<mark>S</mark>SIKEVL<mark>CDHTVEGKP</mark>LV<mark>P</mark>CSGLQIIAACNPYRKHTPKMIQRLELAGL
                                                                                               2579
Gallus_gallus
                         LFFDEANTTQAVGSIKEVLCDRTVEGQPLVSGSGLQIIAACNPYRKHAEKMIQRLESAGL
LFFDEANTTEAVSSIKEALCDRTVEGVPLAGETGLQIIAACNPYRKHTNDMIKRLESAGL
Chelonia mydas
                                                                                               2600
Rhinatrema_bivittatum
                                                                                               2621
                          LFFDEANTTDAVSCIKEVLCDRTVGGEHLNEDSGLHVIAACNPYRKHSQEMIHRLESAGL
Rattus norvegicus
                                                                                               2557
                          LFF<mark>DEANTTE</mark>AV<mark>S</mark>CI<mark>KEILCDRTVDGEHLHEDSG</mark>LHIIAA<mark>CNP</mark>YRKHSQEMIL<mark>RLES</mark>AGL
Mus_musculus
                                                                                               2504
                          LFFDEANTTEAISCIKEVLCDHMVDGQPLAEDSGLHIIAACNPYRKHSEEMICRLESAGL
Homo sapiens
                                                                                               2543
                          LFFDEANTTEAISCIKEVLCDHMVDGQPLAEDSGLHIIAACNPYRKHSEEMICRLESAGL
Pan_troglodytes
                                                                                               2592
Macaca mulatta
                          LFFDEANTTEAVSCIKEVLCDRTVDGQPLARDSGLHIIAACNPYRKHSEEMICRLESAGL
                                                                                               2591
                          LFF<mark>DEANTTE</mark>AI<mark>SCIKEVLCDRTVDGQP</mark>LAEDSGLHIIAAC<mark>NPYRKHSEE</mark>MICRLESAGL
Callithrix_jacchus
                                                                                               2642
                          LFF<mark>DEANTTE</mark>AI<mark>S</mark>CI<mark>KE</mark>VL<mark>CDRTV<mark>GGEP</mark>LAKD<mark>SG</mark>LHIIAA<mark>CNPYRKHTQE</mark>MIS<mark>RLES</mark>AGL</mark>
Equus_caballus
                                                                                               2590
                          LFF<mark>DEANTTE</mark>AISCI<mark>KE</mark>VL<mark>CDHT</mark>VGGK<mark>P</mark>LVKNSGLHIIAACNPYRKHTQEMICRLESAGL
                                                                                               2600
Orcinus_orca
Canis_lupus_familiaris
                         LFFDEANTTEAISCIKEVLCDHTVDGQPLVKDSGLQIIAACNPYRKHSQEMICRLESAGL
                                                                                               2521
                          LFFDEANTTEAISCIKEVLCDRTVNGQPLAKDSGLHIIAACNPYRKHSQEMIRRLEAAGL
Felis_catus
                                                                                               2577
                          LFFDEANTTEAISCIKEVLCDQTIDGVPLARDTGLRIIAACNPYRKHTAEMIERLESAGL
                                                                                               2726
Callorhinchus_milii
                          LFF<mark>DEANTTE</mark>AI<mark>S</mark>SI<mark>KEILCDNSAEGONLTENTG</mark>LKIIAAC<mark>NPYRKHT</mark>DVMIKRLESAGL
Danio_rerio
                                                                                               2579
```

.....2830.....2840......2850.....2860.....2870......2880

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.* ::*** *******::***:******: :*: **:*:::
                           GYRVKADETKEKLGSVPLRQLVYRVHALPPSMIPLVWDFGQLNNLTEKMYIQQIVQRVTE
Pavo_muticus
                                                                                                      2630
                           GYRVKADETKEKLGSVPLRQLVYRVHALPPSMIPLVWDFGQLNNLTEKMYIQQIVQRVTE
Pavo_cristatus
                                                                                                      2630
Gallus_gallus
                           GYRVKADETKEKLGSIPLRQLVYRVHALPPSMIPLVWDFGQLNNLTEKMYIQQIVQRVTE
                                                                                                      2639
                           GYRVKADKTKDKLGSIPLRQLVYRVHALPPSMIPLVWDFGQLNDITEKIYIQQIVQRLTE
                                                                                                      2660
Chelonia_mydas
Rhinatrema bivittatum
                           GYRVKADETKEKLGSIPLROLVYRVHSLPPSMIPLVWDFGQLNNNAEKKYIQQIVOKLVE
                                                                                                      2681
                           GYRVGAEETADRLGSIPLRQLVYRVHALPPSLIPLVWDFGQLNDSAERLYIQQIVQRLVD
Rattus_norvegicus
                                                                                                      2617
Mus musculus
                           <mark>GYRVSAEETADRLGSIPLRQLVYRVHALPPSLIPLVWDFGQLND</mark>SAEKLYIQQIVQRLVD
                                                                                                      2564
                           GYRVSMEETADRLGSIPLROLVYRVHALPPSLIPLVWDFGQLSDVAEKLYIQQIVQRLVE
Homo_sapiens
                                                                                                      2603
Pan_troglodytes
                           GYRVSMEETADRLGSIPLRQLVYRVHALPPSLIPLVWDFGQLSDVAEKLYIQQIVQRLVD
                                                                                                      2652
                           GYRVSAEETADKLGSIPLRQLVYRVHALPPSLIPLVWDFGQLSDAAEKLYIQQIVQRLVD
                                                                                                      2651
Macaca mulatta
                           GYRVSAEETADRLGS<mark>IPLRQLVYRVHALPPSLIP</mark>LVWDFGQLSDTAEKLYIQQIVQRLVD
Callithrix_jacchus
                                                                                                      2702
                           GYRVSAEETADRLGSIPLRQLVYRVHALPPSLIPLVWDFGQLNDTAEKLYIQQIVQRLVD
Equus_caballus
                                                                                                      2650
                           GYRVSAEETAERLGS<mark>IPLRQLVYRVHALPPSLIP</mark>LVWDFGQLNDSAEKLYIQQIVQRLVN
Orcinus_orca
                                                                                                      2660
2581
                           GYRVR<mark>SEDTAEKLGSTP</mark>LRQLVYRVHAL<mark>PPS</mark>LIPLVWDFGQLNNTAEKLYIQQIVQRTVD
Felis_catus
                                                                                                      2637
Callorhinchus_milii
                           GYRVRAGETEDKLGSIPLRQLVYRVQALPPSMIPLVWDFGQLNDATEKIYIQQIVQRLTL
                                                                                                      2786
Danio_rerio
                           GYRVRAEETDEKLGS I PLRQLVYRVQALPPSMI PLIWDFGQLNDHTEKMYIKQ I VERVĀE
                                                                                                      2639
                            .....2890......2900......2910......2920......2930......2940
                                                            :**.*******:.** **::
                                         : ::* .** :**
                           HIRVDOAEVKVIAEVLIVSQQYMRQRDDECSFVSLRDVERCMEVFKWFYKRSELLLEELE
HIRVDOAEVKVIAEVLIVSQQYMRQRDDECSFVSLRDVERCMEVFKWFYKRSELLLEELE
HIRVDQAEVKVIAEVLIVSQQYMRQRDDECSFVSLRDVERCMEVFKWFYKRSDLLLGELE
Pavo_muticus
                                                                                                      2690
                                                                                                      2690
Pavo cristatus
Gallus gallus
                                                                                                      2699
                           SIQISAAEI<mark>G</mark>VV<mark>T</mark>DVLFA<mark>SQ</mark>RYM<mark>RGR</mark>NDECSFVSLRDVERCVEVF<mark>K</mark>WFYSHSELLLNNLE
Chelonia_mydas
                                                                                                      2720
                           SIQLSS<mark>G</mark>KIELL<mark>T</mark>NVL<mark>SASOCFMRRRHDECS</mark>FVSLRDVERCMEVFKWFYSRSELLWINLE
SVTVDQRETFVIANVLSASOEFMRKRENECGFVSLRDVERCVKVFOWFHDHSNMLLNKLA
Rhinatrema_bivittatum
                                                                                                      2741
                                                                                                      2677
Rattus_norvegicus
                            SVSVN<mark>P</mark>SETCVIADVL<mark>SASO</mark>MFMRKRENECGFVSLRDVERCVKVFRWFHDHSDMLLKELD
Mus musculus
                                                                                                      2624
                            SISLDENGTRVITEVLCASQGFMRKTEDECSFVSLRDVERCVKVFRWFHEHSAMLLAQLN
Homo_sapiens
                                                                                                      2663
                            SISLDEN<mark>GT</mark>HVI<mark>TE</mark>VLCA<mark>SQG</mark>FM<mark>R</mark>KTEDECSFV<mark>S</mark>LRDVERCVKVF<mark>R</mark>WFHEHSAMLLA<mark>Q</mark>LN
Pan troglodytes
                                                                                                      2712
                            SISLDENETRVITEVLCAS<mark>OG</mark>FM<mark>RKREDECGFVSLRDVERCVK</mark>VF<mark>R</mark>WFHEHSAMLLA<mark>Q</mark>LN
                                                                                                      2711
Macaca_mulatta
                           SISLDONETRIIIDILCASOGFMRREDECSFVSLRDVERCMKVFRWFHAHSAMLLAOLN
Callithrix jacchus
                                                                                                      2762
Equus caballus
                            STAVGPNETRVIAEVLSAS<mark>Q</mark>GFM<mark>RKRNNECS</mark>FV<mark>SLRDVERCVRVFRWFYDHSEM</mark>LLSKLD
                                                                                                      2710
Orcinus_orca SIVMVQSETRVITEVLSASQGFMRKRQNECSFVSLRDVERCVKVFKWFYDHSEMLLSKLD Canis_lupus_familiaris SIRIDEDKTHVITEVLSTSQGFMRTRVNECSFVSLRDVERCVRVFRWFYNRSEMLLAKLD
                                                                                                      2720
                                                                                                      2641
                            SV<mark>GVDEAQ</mark>IRAITEVL<mark>SASQ</mark>SFM<mark>RKRGNECGFVSLRDVERCVR</mark>VFMWFYDHRVMLLSQLD
Felis catus
                                                                                                      2697
Callorhinchus_milii
                            <mark>SHSVPAP</mark>SVPRVVQVL<mark>S</mark>ASQGFM<mark>RQRQDECS</mark>FV<mark>SLRDVERCMR</mark>VFVWFYTHRQMLLERLR
                                                                                                      2846
Danio rerio
                           THSIDSGYITVITDVLSASQKYMRTRQDECSFVSLRDVERCMQVFGWFYKKHLMLLSELD
                                                                                                      2699
                              ....2950......2960......2970......2980......2990......3000
                                                         *:*::*: * * *
                                                                                      : .
                           KYLEEKRAPKSPE-----RNNVIWSLVLAVGVCYHASLEKKEAYRNAISKVLPKPYDT
Pavo_muticus
                                                                                                      2743
                           KYLEEKRAPKSPE-----RNNVIWSLVLAVGVCYHASLEKKEAYRNAISKVLPKPYDT
Pavo_cristatus
                                                                                                      2743
                           KYL-EKRALKSPE-----RNNVIWSLVLAVGVCYHASLEKKEAYRNAISKVLPKPYDT
Gallus_gallus
                                                                                                      2751
Chelonia mydas
                           QYLAEKGSDKCKLK-----RNRVIWSLILAVGVCYHASLEKKELYRSVICKYLPKPYDN
                                                                                                      2774
                           KYLMEHKIRKYSMP----TDNVAWSLVLAIGICYHASLDSKDAYRNTVSKELPDPYTN
Rhinatrema_bivittatum
                                                                                                      2795
                           DFLRECCDSTPAFE----RDPVLWSLVMAIGVCYHASLEEKAPYRAAIARCLPKPYNS
Rattus norvegicus
                                                                                                      2731
                           KFLHESSDSTHTFE-----RDPVLWSLVMAIGVCYHASLEEKASYRTAIARCFPKPYNS
Mus_musculus
                                                                                                      2678
                           AFLSKSSVSKNHTE-----RDPVLWSLMLAIGVCYHASLEKKDSYRKAIARFFPKPYDD
Homo sapiens
                                                                                                      2717
                           AFLSKSSVSKNH<mark>TE-----RDP</mark>VLW<mark>S</mark>LMLAIGVCYHASLEKKDSYRKAIARFFPKPYND
Pan_troglodytes
                                                                                                      2766
                           SFLSKSSVSKNHLE-----RDPVLWSLMLAVGVCYHASLEKKDSYRKAIARFFPKPYDD
Macaca mulatta
                                                                                                      2765
                           SFLSRSSASKNHIEW----RHPVLWSLLLAIGVCYHASLEKKDSYRKAIARFFPKPYND
Callithrix_jacchus
                                                                                                      2817
                           SLLCESNVSRNDFE-----RDPVLWSLVLAIGVCYHASLEEKELYRRAISRSFPEPYND
                                                                                                      2764
Equus_caballus
                           SFLCESDVIQNDFE-----RDPILWSLVLAIGVCYHASLEKKESYRKAICRFFPEPYND
                                                                                                      2774
Orcinus_orca
Canis_lupus_familiaris SFLRQSHVSKNNFK-----RDPVLWSLVLALGVCYHASLEQKEPYWKDICVFFPEPYND
                                                                                                      2695
                           AFLCRADVDOSGFE-----REPVLWSLVLALAVCYHASLEOKESYWKTICRLFPEPYND
EFHEAIERVYDGPR-----DEAMWALVLAVGVCYHACLERKNEYRRLISRHLPSPYDQ
Felis_catus
                                                                                                      2751
Callorhinchus_milii
                                                                                                      2899
                           KFESIORTEKTDOHPKDTDERNPILWSLLMAVGVCYHACLEDKEKYRKKICKYFPAAYS-
Danio_rerio
                                                                                                      2758
                            \dots 3010 \dots 3020 \dots 3030 \dots 3040 \dots 3050 \dots 3060
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**::*
                                                          OKKILEEISVMOOLFLSGVHLROTIARNLALKENVFMMVICIELKIPLFLVGKPGSSKSL
Pavo_muticus
                                                                                                          2803
                             QKKILEEISVMQDLFLSGVHLRDTIARNLALKENVFMMVICIELKIPLFLVGKPGSSKSL
                                                                                                          2803
Pavo_cristatus
Gallus_gallus
                             QKKILEEISVMQDLFLSGVHLRDTIARNLALKENVFMMVICIELKIPLFLVGKPGSSKSL
                                                                                                          2811
                             QKGILEEISLMQDLFLSGVPLRNTIARNLALKENVFMMVICIELKIPLFLVGKPGSSKSL
                                                                                                          2834
Chelonia_mydas
Rhinatrema bivittatum
                             PKKILQDITIMQDLFLSGVNLRETIARNLALKENVFMMVICIDLKIPLFLVGKPGSSKSL
                                                                                                          2855
                             PKVILNEITHVQDLFLRDAPIRSNIARNLALKENVFMMVICIELKIPLFLVGKPGSSKSL
Rattus_norvegicus
                                                                                                          2791
Mus musculus
                             <mark>Sr</mark>aildevThv<mark>Q</mark>dlflr<mark>gap</mark>irTnia<mark>rn</mark>lal<mark>ken</mark>vfmmvi<mark>cielkip</mark>lflv<mark>gkpgssks</mark>l
                                                                                                          2738
                             SRLLLDEITRAQDLFLDGVPLRKTIAKNLALKENVFMMVVCIELKIPLFLVGKPGSSKSL
                                                                                                          2777
Homo_sapiens
Pan_troglodytes
                             <mark>SR</mark>LLLDEITQAQDLFLD<mark>GVPLR</mark>KTIAKNLAL<mark>KEN</mark>FFMMVICIELKIPLFLV<mark>GKPGSSKS</mark>L
                                                                                                          2826
                             <mark>Sr</mark>llldeitra<mark>o</mark>dlflo<mark>giplrkt</mark>iaknlal<mark>ken</mark>vfmmvi<mark>cielkip</mark>lflv<mark>gkpgssks</mark>l
                                                                                                          2825
Macaca_mulatta
                             <mark>SR</mark>LLLD<mark>EIT</mark>RV<mark>OD</mark>LFLD<mark>GVPLRKTIAKN</mark>LAL<mark>KEN</mark>VFIMVI<mark>CIELKIP</mark>LFLV<mark>GKPGSSKS</mark>L
Callithrix_jacchus
                                                                                                          2877
Equus_caballus
                             <mark>sk</mark>vildei<mark>trTod</mark>lfln<mark>g</mark>vslrktiaknlalkenvfmmvicielkiplflvgkpgssksl
                                                                                                          2824
Orcinus_orca
                             <mark>sk</mark>iilh<mark>eitqtqd</mark>lflndvsl<mark>rktiakn</mark>lal<mark>ken</mark>vfmmvi<mark>cielkip</mark>lflv<mark>gkpgssks</mark>l
                                                                                                          2834
Canis_lupus_familiaris
                             <mark>sk</mark>vil<mark>eeitqtqd</mark>lfld<mark>g</mark>vsl<mark>rktiarn</mark>aal<mark>ken</mark>vfmmvicielki<mark>p</mark>lflvgkpgssks</mark>l
                                                                                                          2755
                             <mark>sk</mark>vvl<mark>eeitrto</mark>dlfld<mark>g</mark>vsl<mark>rktiarns</mark>al<mark>ken</mark>vfmmviciel<mark>kip</mark>lflv<mark>gkpgssks</mark>l
Felis_catus
                                                                                                          2811
Callorhinchus milii
                             PSKILEQITLVQDLLLSGVPPRDTIAKNAALKENVFMMVICIELKIPLFLVGKPGSSKSL
                                                                                                          2959
Danio_rerio
                             PMKVMQEISVIQDIFLEGVPMGENIARNNALKENVFMMVICIELRIPLFLVGKPGSSKSL
                                                                                                          2818
                             .....3070.....3080.....3090.....3110.....3120
                             :* :***.**
                                           AKTIVADAMOGOAAHSDLFKDLKOIHLVSFQCSPLSTPEGIIGTFKHCARFODGKNLEEY
AKTIVADAMOGOAAHSDLFKDLKOIHLVSFQCSPLSTPEGIIGTFKHCARFODGKNLEEY
Pavo muticus
                                                                                                          2863
Pavo cristatus
                                                                                                          2863
                             AKTIVADAMQGQAAHSDLFKDLKQIHLVSFQCSPLSTPEGIIGTFKHCARFQDGKNLEEY
Gallus gallus
                                                                                                          2871
Chelonia_mydas
                             A<mark>KT</mark>IVADAMQGQAAYSDLYKEMKQIHLVSFQCSPHSTPEGIIGTFKQCARFQDGKNLKEY
                                                                                                          2894
                             AK<mark>T</mark>IVADAM<mark>ÕG</mark>QAAHSDLYKKLKÕIHLVSFÕCSPHSTPEGIIGTFKHCARFÕEGKNLKDY
AKIIVADAM<mark>QG</mark>QAASSDLFRCLKÕVHLVSFQCSPHSTPÕGIISTFKÕCARFÕQGKDLÕQY
Rhinatrema_bivittatum
                                                                                                          2915
Rattus_norvegicus
                                                                                                          2851
                             AKIIVADAMQGQAAFSELFRCLKQVHLVSFQCSPHSTPQGIISTFKQCARFQQGKDLGQY
Mus musculus
                                                                                                          2798
                             AKTIVADAMQGPAAYSDLFRSLKQVHLVSFQCSPHSTPQGIISTFRQCARFQQGKDLQQY
Homo_sapiens
                                                                                                          2837
                             AKTIVADAMQGPAAYSDLFRSLKQVHLVSFQCSPHSTPQGIISTFRQCARFQQGKDLQQY
Pan troglodytes
                                                                                                          2886
                             AKTIVADAMQGPAAYSDLFRSLKQVHLVSFQCSPHSTPQGIIGTFRQCARFQQGKDLQQY
                                                                                                          2885
Macaca_mulatta
                             AKTIVADAMQGPAAHSDLFRSLKQVHLVSFQCSPHSTPQGIIGTFRQCARFQQGKDLQQY
Callithrix jacchus
                                                                                                          2937
                             A<mark>KT</mark>IVA<mark>D</mark>AM<mark>QGQ</mark>AA<mark>PS</mark>DLFRSLKQVHLVSFQCSPHSTPQGIIGTFKQCARFQQGKDLQQY
Equus caballus
                                                                                                          2884
Orcinus_orca AKTIVADAMOGQAAHSDLFRSLKOVHLVSFOCSPHSTPOGIIGTFKOCARFOOGKDLEQY
Canis_lupus_familiaris AKTVVADAMOGPAAHSDLFRSLKOVHLVSFOCSPHSTPOGIISTFKOCARFOOEKDLYQY
                                                                                                          2894
                                                                                                          2815
Felis catus
                             AKTIVADAMQGPAAHSDLFRNLKQVHLVSFQCSPHSTPQGIISTFKQCARFQQGKDLQEY
                                                                                                          2871
                             a<mark>kt</mark>ivadamoroaahsklyrdlkoihlvsfocsphstpegiintfrocarfoesknleey
Callorhinchus_milii
                                                                                                          3019
Danio rerio
                             SKTLVADGMQGQAAHSDLFRKLKQIHLVSFQCSPHSTPEGIINTFKQCARFQEGKNLSEY
                                                                                                          2878
                               ....3130.....3140.....3150......3160......3170......3180
                             VSVVVLDEIGLAEDSPKMPLKTLHPLLEDGCIDDDPLPHKKVGFIGISNWALDPAKMNRG
Pavo_muticus
                                                                                                          2923
                                                                                                          2923
                             VSVVVLDEIGLAEDSPKMPLKTLHPLLEDGCIDDDPLPHKKVGFIGISNWALDPAKMNRG
Pavo_cristatus
                             V<mark>S</mark>VVVL<mark>DEIGLAEDSPKMPLKTLHPLLEDGC</mark>IDDDPL<mark>PHKK</mark>VGFIGISNWALDPAKMNRG
                                                                                                          2931
Gallus_gallus
Chelonia mydas
                             VSVVVLDEIGLAEDSPKMPLKTLHPLLEDGCIDDVPLPHKKVGFIGISNWALDPAKMNRG
                                                                                                          2954
                             V<mark>S</mark>VVVL<mark>DEIGLAEDSPKMPLKTLHPLLEDGC</mark>VD<mark>DDPLPHKK</mark>VGFIGI<mark>SN</mark>WALDPAKMNRG
Rhinatrema_bivittatum
                                                                                                          2975
                             VSVVVLDEVGLAEDSPKMPLKTLHPLLEDGCIEDDPAPYKQVGFVGISNWALDPAKMNRG
Rattus norvegicus
                                                                                                          2911
                             VSVVVLDEVGLAEDSPKMPLKTLHPLLEDGCIEDDPAPYKKVGFVGISNWALDPAKMNRG
Mus_musculus
                                                                                                          2858
                             VSVVVLDEVGLAEDSPKMPLKTLHPLLEDGCIEDDPAPHKKVGFVGISNWALDPAKMNRG
                                                                                                          2897
Homo sapiens
Pan troglodytes
                             VSVVVLDEVGLAEDSPKMPLKTLHPLLEDGCIEDDPAPHKKVGFVGISNWALDPAKMNRG
                                                                                                          2946
Macaca mulatta
                             VSVVVLDEVGLAEDSPKMPLKTLHPLLEDGCIEDDPAPHKKVGFVGISNWALDPAKMNRG
                                                                                                          2945
                             VSVVVLDEVGLAEDSPKMPLKALHPLLEDGCIEDDPAPHKKVGFVGISNWALDPAKMNRG
Callithrix_jacchus
                                                                                                          2997
                             V<mark>S</mark>VVVLDEVGLAED<mark>SPKMPLK</mark>ALHPLLEDGCIEDDPAPHKKVGFIGISNWALDPAKMNRG
                                                                                                          2944
Equus_caballus
                             V<mark>S</mark>VVVLDEVGLAEDSPKMPLKALHPLLEDGCIEDDPAPHKKVGFIGISNWALDPAKMNRG
                                                                                                          2954
Orcinus_orca
Canis_lupus_familiaris
                            VSVVVLDEVGLAEDSPKMPLKALHPLLEYGCIEDNPAPHKKVGFIGISNWALDPAKMNRG
                                                                                                          2875
                             V<mark>S</mark>VVVL<mark>DEVGLAEDSPKMPLKALHPLLEYGCIEDDPAPHQKVG</mark>FIGI<mark>SN</mark>WALD<mark>PAKMN</mark>RG
Felis_catus
                                                                                                          2931
Callorhinchus_milii
                             V<mark>S</mark>VVVLDEIGLAEDSPKMPLKTLHPLLEDGCIDDDPLKHKKVGFVGISNWALDPAKMNRG
                                                                                                          3079
                             VSVVVLDEIGLAEDSQKMPLKTLHPLLEEGCIDDQPSPHKKVGFIGISNWALDPAKMNRG
Danio_rerio
                                                                                                          2938
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.....3190......3200......3210......3220......3230......3240

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	***** * : **::* * * : . * : * : * : * :	
Pavo muticus	IFVSRGDPSKEELIESAKGICCS-ARGALHKVEQYFHHFANAYEIICKAQDREFFGL	2979
Pavo cristatus	IFVSRGDPSKEELIESAKGICCS-ARGALHKVEQYFHHFANAYEIICKAQDREFFGL	2979
Gallus gallus	IFVSRGDPSKEELIESAKGICCS-ARGALHKVEQYFHHFANAYEIICKAQDREFFGL	2987
Chelonia_mydas	IFV <mark>SRG</mark> DPSNKELIESAKGICSS-ERIILQRIECYFPIFADAYEKICKTQDREFFGL	3010
Rhinatrema_bivittatum	IFV <mark>SRGDP</mark> KKGELIESAKGICSSDSNLLLQKIQNYFPIFADVYTDICKMQKLKDKEFFGL	3035
Rattus_norvegicus	IFV <mark>SRGSPN</mark> EKELIESAE <mark>GICSS-D</mark> RLVQD <mark>R</mark> IR <mark>GYFAP</mark> FAKAYETVCQKQDKEFFGL	2967
Mus_musculus	IFV <mark>SRGSPN</mark> EKELIESAE <mark>GICSS-D</mark> RLVQDKIR <mark>GYFAP</mark> FAKAYETVCQKQDKEFF <mark>G</mark> L	2914
Homo_sapiens	IFV <mark>SRGSPNETELIESAKGICSS-DILVQDRVQGYFA</mark> SFAKAYETVCKRQDKEFFGL	2953
Pan_troglodytes	IFVSRSSPNETELIESAKGICSS-DILVQDRVQGYFASFAKAYETVCKRQDKEFFGL	3002
Macaca mulatta	IFVSRGSPNKRELIDSAKGICSS-DSLIQDRIQGYFASFAKAYETVCENQDKEFFGL	3001
Callithrix_jacchus	IFVSRGSPNERELIESAKGICSS-DSLVQCRVQGYFAPFAKAYETVCRSQDKEFFGL	3053
Equus_caballus	IFVSRGSPNKKELIESAKGICSS-EPLVRERIQGYFESFAKAYETVCRNQDKEFFGL	3000
Orcinus_orca	IFVSRGSPNKRELIESARGICSS-EPLVQERIRGYFASFAKAYETVCKRQDKEFFGL	3010
Canis_lupus_familiaris	IFV <mark>SRGSPN</mark> KKELIESAKGICSS-EPLVQKRVQGFFAPFAKAYETVCEKQDKEFFGL	2931
Felis_catus	IFV <mark>SRGSP</mark> SKKELMESA <mark>KGICSS-EPLVQQRVQGFFAPFARAYETVCR</mark> KQDKEFFGL	2987
Callorhinchus milii	IFV <mark>SRGVPD</mark> KSELIETAKGICAS-N <mark>P</mark> MVLRKVQAIFQSLAEAYLNICKEQTKEFFGL	3135
Danio_rerio	IFVSRGDPDENELIESAKGICSS-DVMILEKVRECFKPFAHAYLRICKKQEKGFFGL	2994
	325032603270328032903300	
	3230327032703270	

Pavo_muticus	RDYYSLIKMFFALVKSSKSEPTPRDIAEVVLRNFSGKDDINALEVFTSQLPEKGEVNAHD	3039
Pavo_cristatus	RDYYSLIKMFFALVKSSKSEPTPRDIAEVVLRNFSGKDDINALEIFTSQLPEKGEVNAHD	3039
Gallus_gallus	RDYYSLIKMFFALVKSSKSEPTPRDIAEVVLRNFSGKDDINALEIFTSOLPEKGEVNAHD	3047
Chelonia mydas	RDYYSLIKMILALTKASKREPTPCDIAQVVLRNFSGKDDINALDIFTSRIPKEGEIHADD	3070
Rhinatrema bivittatum	RDYYSLIKMVFALTRSCKKEPSNHDIVQVILRNFSGKDDINAVEIFISKITNEKYTAD	3093
Rattus norvegicus	RDYYSLIKMVFAKAKASKKGLSPRDIAHAVLRNFSGKDDIQALSIFTASLPETLYKEE	3025
Mus_musculus	RDYYSLIKMVFAKAKASKRGLSPQDITHAVLRNFSGKDNIQALSIFTASLPEARYKEE	2972
Homo_sapiens	RDYYSLIKMVFAAAKASNRKPSPQDIAQAVLRNFSGKDDIQALDIFLANLPEAKCSEE	3011
Pan_troglodytes	RDYYSLIKMVFAAAKASNRKPSPQDIAQAVLRNFSGKDDIQALDIFLANLPEAKCSEE	3060
Macaca_mulatta	RDYYSLIKMVFAAAKASNRKPSPQDIAQAVLRNFSGKDDIHALDIFLANLPEAKCSEE	3059
Callithrix jacchus	RDYYSLIKMVFATARASNKKPSPREIAHAVLRNFSGKDDIHALDIFLANLPEALSSEE	3111
Equus_caballus	RDYYSLIKMVFAAAKRSNKKPSPQDIAQAVLRNFSGKDDIHAVDIFTANLPEAKCSKE	3058
Orcinus_orca	RDYYSLIKMVFAAAKASNKEPSPQDIAQAVLRNFSGKDDIHALDIFSSNLPEAKCTEE	3068
	RDYYSLIKMVFAKAKASNKEPSPQDIAQAILRNFSGKDDIHALDIFTANLPEAKCSEE	2989
Canis_lupus_familiaris		
Felis_catus	RDYYSLIKMVFARAKASDKEPSPQDIAQAVLRNFSGKDDIHALDIFTAALPEAKCSEA	3045
Callorhinchus_milii	RDYYSLIKMVFALSKASNSEPTEPEMTHVVLRNFSGSDEVNPREAFKTVLGDEPPDC	3192
Danio_rerio	RDYYSLIKMMFAVAKACDOKPSAEQIVKAVLRNFSGKDDVDAVTFFTSRLNIKPELET	3052
	$\dots 3310 \dots 3320 \dots 3330 \dots 3340 \dots 3350 \dots 3360$	
	:.:*::*: :::**:**:*** * **:**	
Pavo muticus	ISRIELIRONIYSSSEDGDCRYLLVLTENYAALQILQQ-AFFTARQQPEIIF	3090
_ · · · · · · · · · · · · · · · · · · ·	ISRIELIRONIISSSEDGDCRILLVLIENIAALQILQQ-AFFIARQQPEIIF	
Pavo_cristatus	ISRIELIRQNIYSSSEDGDCRYLLVLTENYAALQILQQ-AFFTARQQPEIIF	3090
Gallus_gallus	ISRIELIRQNIYSSSEDGDCRYLLVLTENYAALQILQQ-AFFTARQQPEIIF	3098
Chelonia_mydas	VSTIDLVRQNIRSNSQDGECRYLLVLTENYAALQILQQ-AFFAERQQPEIIF	3121
Rhinatrema bivittatum	VDTIDLVRQNIYSDGQD-ECRYLLILTKNYAALQILQQ-VFFAASKQPEVIF	3143
Rattus_norvegicus	VSTVELIKONIHPDLO-GSSRGLDSADSRYLLVLTRNYVALOILOO-TFFEGOOPEIIF	3082
Mus musculus	VSTVELIKQNIYPGPQ-ASSRGLDGAESRYLLVLTRNYVALQILQQTFFEGQQPEIIF	3029
Homo sapiens	VSPMQLIKQNIFGPSQKVPGGEQEDAESRYLLVLTKNYVALQILQQ-TFFEGDQQPEIIF	3070
Pan_troglodytes	VSPMQLIKQNIFGPSQKVPGGEQEDAESRYLLVLTKNYVALQILQQ-TFFEGDQQPEIIF	3119
Macaca_mulatta	V <mark>SP</mark> LQLIKQNIFGPSQKVPGGQLEDAESRYLLLLTKNYVALQILQQ-TFFKEDQQPEIIF	3118
Callithrix_jacchus	VNPVQLIRQNIFGPSQKGLGGQLEDGESRYLLVLTKNYVALQILQQ-TVFGEDQQPEIIF	3170
Equus_caballus	VSTMELIEQNMYGDLRKVPGRELDDAESRYLLVLTRNYVALQILQQ-TLFSQDQQPEIIF	3117
Orcinus_orca	I <mark>S</mark> TMHLI <mark>QQNIYG</mark> DL <mark>QK</mark> AS <mark>GRE</mark> LD <mark>DSESR</mark> YLLVL <mark>TRNY</mark> VAL <mark>Q</mark> ILQQ-AFFSADQ-PEIIF	3126
Canis_lupus_familiaris	VSTMQLIQQNMYGDLQTVPGRELDDSESRYLLVLTRNYAALQVLQQQMFFSENQQPEIIF	3049
Felis catus	VSTIQLIEQNMCVRLQKAAGGEPDESESRYLLVLTRNYAALQVLQQ-MFFRDDQQPEIIF	3104
Callorhinchus_milii	INALTLVRQNIYSESQDGECRYLLVLTKNYVALQILQQ-MFFNDNLQPEIIF	3243
Danio rerio	ISAIELVRENVTAIGQDEECRYLLVLTKNYAALRILQQ-TFFSDQCQPEIIF	3103
241120_10110	33703380339034103420	3103
	·····	

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	..****** *.********************	
Pavo muticus	GSSFPKDQEYTQICRNINRVKVCMETGQMVVLLNLQNLYESLYDALNQYYVYLAGQKYVD	3150
Pavo_cristatus	GSSFPKDQEYTQICRNINRVKVCMETGQMVVLLNLQNLYESLYDALNQYYVYLAGQKYVD	3150
Gallus_gallus	GSSFPKDQEYTQICRNINRVKVCMETGQMVVLLNLQNLYESLYDALNQYYVYLAGQKYVD	3158
Chelonia mydas	GSSFPKDQEYTQICRNINRVKICMETGQMVVLLNLQNLYESLYDALNQYYVYLAGQKYVD	3181
Rhinatrema bivittatum	GSSFPKDQEYTQICRNINRVKICMETGQMVVLLNLQNLYESLYDALNQYYVYLAGQKYVD	3203
Rattus norvegicus	GSSFPQDQEYTQICRNINRVKVCMETGKMVVLLNLQNLYESLYDALNQYYVYLGGQKYVD	3142
Mus musculus	GSSFPQDQEYTQICRNINRVKICMETGKMVVLLNLQNLYESLYDALNQYYVYLGGQKYVD	3089
Homo_sapiens	GSGFPKDQEYTQLCRNINRVKICMETGKMVLLLNLQNLYESLYDALNQYYVHLGGQKYVD	3130
Pan_troglodytes	GSGFPKDQEYTQLCRNINRVKICMETGKMVLLLNLQNLYESLYDALNQYYVHLGGQKYVD	3179
Macaca mulatta	GSGFPKDQEYTQICRNINRVKICMETGKMVVLLNLQNLYESLYDALNQYYVHLGGQKYVD	3178
Callithrix_jacchus	GSGFPKDQEYTQICRNINRVKICMETGKMVVLLNLQNLYESLYDALNQYYVHLGGQNYVD	3230
Equus_caballus	GSSFPKDQEYTQICRNINRVKICMETGKMVMLLNLQNLYESLYDALNQYYVYLGGQKYVD	3177
Orcinus orca	GSSFPKDQEYTQICRNINRVKICMETGKMVVLLNLQNLYESLYDALNQYYVYLGGQKYVD	3186
Canis_lupus_familiaris	GSSFPRDQEYTQVCRNINRVKICMETGKMVVLLNLQSLYESLYDALNQYYVYLGGQKYVD	3109
Felis catus	GSSFPRDQEYTQICRNINRVKICMETGKTVVLLNLQSLYESLYDALNQYYVYLGGQKYVD	3164
Callorhinchus milii	GSSFPKDQEYTQICRNINRVKICMETGQTVVLLNLQNLYESLYDALNQYYVYLGGQKYVD	3303
Danio rerio	GSSFPKDQEYTQICRNINRVKICMETGQTIVLLNLQNLYESLYDALNQYYVTLGGQKYVD	3163
Juii 10_10110	343034403450346034703480	3203
	******* *:****** *: **: **: ********** *: *:	
Pavo_muticus	L <mark>G</mark> LGTHRVKCRVHPRFRLIVIEEKDVVYKHFPIPLINRLEKHYLDISTVLDKEQRETVKE	3210
Pavo_cristatus	L <mark>G</mark> LGTHRVKCRVHPRFRLIVIEEKDVVYKHFPIPLINRLEKHYLDISTVLDKEQRETVKE	3210
Gallus_gallus	L <mark>G</mark> LGTHRVKCRVHPKFRLIVIEEKDVVYKHFPIPLINRLEKHYLDISTVLDKEQRETVKE	3218
Chelonia_mydas	LGLGTHRVKCRVHPKFRLIVIEEKEVVYKRFPIPLINRLEKHYLDINTVLDKRQRDIVEE	3241
Rhinatrema_bivittatum	LGLGTHRVKCRVHDQFRLIVIEEKDIVYTRFPIPLINRLEKHYLDINTVLNKQQKAIVQD	3263
Rattus_norvegicus	L <mark>G</mark> L <mark>GTHRVKCRVHTDFR</mark> LIVIEEKDVVYKQFPVPLINRLEKHYLDMNTVLQGWQKGIVQE	3202
Mus_musculus	LGLGTHRVKCRVHTAFRLIVIEEKDVVYKQFPVPLINRLEKHYLDMNTVLQPWQKSIVQE	3149
Homo_sapiens	LGLGTHRVKCRVHPNFRLIVIEEKDVVYKHFPIPLINRLEKHYLDINTVLEKWQKSIVEE	3190
Pan_troglodytes	L <mark>G</mark> LGTHRVKCRVHPNFRLIVIEEKDVVYKHFPIPLINRLEKHYLDINTVLEKWQKSIVEE	3239
Macaca_mulatta	LGLGTHRVKCRVHPNFRLIVIEEKDIVYKHFPIPLINRLEKHYLDINTVLEKWQKSVVEE	3238
Callithrix_jacchus	LGLGTHRVKCRVHPNFRLIVIEEKEVVYTHFPIPLINRLEKHYLDINTVLEKWQKNIVEE	3290
Equus_caballus	L <mark>G</mark> LGTHRVKCRVHPDFRLIVIEEKDVVYRHFPIPLINRLEKHYLDINTVLEKWQKNIVED	3237
Orcinus_orca	L <mark>G</mark> LGTHRVKCRVHPDFRLIVIEEKDVVYKHFPIPLINRLEKHYLDINTVLEKWQKNIVEE	3246
Canis_lupus_familiaris	L <mark>G</mark> LGTHRVKCRVHPDFRLIVIEEKDVVYKHFPIPLINRLEKHYLDINTVLEKWQKSIVEE	3169
Felis_catus	L <mark>G</mark> LGTHRVKCRVHPDFRLIVIEEKDVVYKQFPIPLINRLEKHYLDINTVLEKWQRRVVEE	3224
Callorhinchus_milii	LGLGTHRVKCRVHRNFKLIVIEEKEVVHKEFPIPLINRLEKHYLDINTVIDGGQKHLVKC	3363
Danio_rerio	LGLGTHRVKCRVHKDFRLIVIEEKDIVYKQFPIPLINRLEKHYLDLNTLLKSEQKDIVKN	3223
	349035003510352035303540	
	* * . * . * . * . * . * . *	
Pavo muticus	* * * : *. :.*:*** : :****::*. :: LKKWVRDFVAVNTREHLVNQQDYSPSDVFVGYHSD-TCASVVLQTTERLKA-ACPPSQ	3266
Pavo_muticus Pavo_cristatus	LKKWVRDFVAVNTREHLVNQQDYSPSDVFVGYHSD-TCASVVLQTTERLKA-ACPPSQ	3266
Gallus_gallus	LKKWVRDFVAVNTREHLVNQQNYSPSDVFVGYHSD-TCASVVLQTTERLKA-ACPPSQ	3274
Chelonia mydas	LMKWVNDFIAFDTEKHLMGRQEYSPSDVFIGYHSD-TCASVVLQVTEKLKQ-RCRPDE	3274
Rhinatrema bivittatum	LEKWVKDFTTVNTESMLVGQKTYSPFDVFIGYHED-TCASVILQVTEKLKH-DCTTET	3319
Rattus norvegicus	LQRWAHEFADVKADQFIARHK-YSPADVFIGYHSH-ACASVVLQAVERQGC-RNLTEE	3257
Mus_musculus	LQQWAHEFADVKADQFIARHK-YSPADVFIGYHSD-ACASVVLQAVERQGC-RNLTEE	3204
Homo sapiens	LCAWVEKFINVKAHHFQKRHK-YSPSDVFIGYHSD-ACASVVLQVIERQGP-RALTEE	3245
Pan_troglodytes	LRAWVEKFINVKADHFQKRHK-YSPSDVFIGYHSD-ACASVVLQVIERQGP-RALTEE	3294
Macaca mulatta	LRAWVEKFIDVKAEHFLNRHK-YSPSDVFIGYHSD-ACASVVLQVIERQGHREALTEE	3294
Callithrix jacchus	LRAWVEKFVNVKAEQFLDRHK-YSPSDVFIGYHSD-ACASVVLQVIERQGHREALIEE	3345
Equus_caballus	LKVWVEKFIDMKTDPFLARHQ-YSPSDVFIGYHSD-TCASVVLQVIERLGH-GAPINE	3292
Orcinus orca	LKVWVEKFIDVKAEQFLARPK-YSPSDVFMGYHSD-TCASVVLQVIERLGH-KVLTDE	3301
Canis lupus familiaris		3224
Felis catus	LKAWVERFVDVKAQHFAGGHR-YSPSEVFVGYHSD-ACASVVLQVTERLGR-GALTDE	3279
Callorhinchus milii	LSRWVEDFATPRSNQPWMQGNQQKYKLSDVFIGYHSDHTCASVVLQVTERWKQSA	3419
Danio rerio	LEQWVQCFTDVKNKHS-VAPSARRYSPADAFIGYHTD-TCASVVMQVTEQLKGQELSD	3279
241110_10110	355035603570358035903600	52,5

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                                        :::
                                                                                 * . *:
                               LMA<mark>R</mark>VKA<mark>EAQ</mark>LALL<mark>NC</mark>ATPDSVIRLCN<mark>S</mark>-V<mark>G</mark>LF<mark>GTDS</mark>LANVYFKQQQHS<mark>S</mark>FADFLRAHIR
Pavo_muticus
                                                                                                                  3325
                               LMARVKAEAQLALLNCATPDSVIRLCNS-VGLFGTDSLANVYFKQQQHSSFADFLRAHIR
LMARVKAEAQLALLNCATPDSVIRLCNS-GGLFRTDSLANVYFKQQQHSSFADFLRAHIR
LMPNVQQEAQLVLLNCATPDSVVRLGSSRLSSCVADHLANKYFKEQQHTSLVDFLQTHIH
Pavo_cristatus
                                                                                                                  3325
Gallus_gallus
                                                                                                                  3333
                                                                                                                  3357
Chelonia_mydas
Rhinatrema bivittatum
                               FRANVIEQARLALL<mark>NCATPDSVIRLGSSQLGPYMAEQLVRKYFRKQKHNS</mark>LVEFLHSHTQ
                                                                                                                  3379
                               LYRKVFEEAKFILLDCATPDAVVRLSGSSLGSFAANRLSQEYYYKQQHNSFVDFLLAHLR
Rattus_norvegicus
                                                                                                                  3317
                               LYRKVS<mark>EEAR</mark>SILLDCA<mark>TPD</mark>AVVRLS<mark>GSS</mark>LGSFTAKQL<mark>SQEYYYAQQHNS</mark>FVDFLQAHLR
Mus musculus
                                                                                                                  3264
                               LHQKVSEEAKSILLNCATPDAVVRLSAYSLGGFAAEWLSQEYFHRQRHNSFADFLQAHLH
Homo_sapiens
                                                                                                                  3305
                               LHQKVSGEAKLILL<mark>NCATPD</mark>AVVRLSAY<mark>SLGG</mark>FEAESLSQEYFYRQRHNSFADFLQAHLH
Pan_troglodytes
                                                                                                                  3354
                               LYQKVAEEARLILLNCATPDAVVRLSA<mark>SS</mark>LGSFPGKSLSQEYFYRQRHNSFADFLQMHLH
Macaca_mulatta
                                                                                                                  3354
                               LYQ<mark>Q</mark>VS<mark>GEAK</mark>WILL<mark>NCATPD</mark>AVV<mark>R</mark>LSA<mark>S</mark>LLDSFTAESLAHEYFYK<mark>Q</mark>RHNSFADFL<mark>Q</mark>EHLQ
Callithrix_jacchus
                                                                                                                  3405
Equus_caballus
                               FYRKVSDEAKLTLLNCATPDAVVRLRASSLGWSTALSLSREYYAKQQHNSFADFLQAHLH
                                                                                                                  3352
                               LYQEVS<mark>EQAK</mark>LVLL<mark>DCATPD</mark>AVV<mark>R</mark>LNA<mark>SSLG</mark>LFTAQSLSQAYYYR<mark>QQHNS</mark>FADFFQAHLC
Orcinus_orca
                                                                                                                  3361
Canis_lupus_familiaris LYQKVSQEAKLVLLGCATPDAVVRLGTTSLGLFTAQFLSREYYHKQQHNSFADFLQAQLH
                                                                                                                  3284
                               LYQRVCEEAKSILL<mark>GCATPDAVVRLGASSLG</mark>LFTAQAL<mark>SREYY</mark>HT<mark>QQH</mark>SSFADFLRAQLR
Felis_catus
                                                                                                                  3339
Callorhinchus milii
                               SHRQILEDAQKVLLNCATPDSVVRLSQSRLDTTLVATLTHEYFTNQHHDSLADFVLSHSK
                                                                                                                  3479
Danio_rerio
                               <mark>PRKG</mark>ILDES<mark>K</mark>LILL<mark>NCATPD</mark>AVV<mark>R</mark>LDC<mark>TS</mark>LFNVESEHL<mark>SRVYFED<mark>OMHNS</mark>LAEFILSHIQ</mark>
                                                                                                                  3339
                               \dots 3610 \dots 3620 \dots 3630 \dots 3640 \dots 3650 \dots 3660
                                                ***:**:***
                                                                                                 **::*** :**
Pavo_muticus
                               <mark>sg</mark>s----<mark>ecqtaftevttfsr</mark>lltsadsaclerevq<mark>gkaqrp</mark>--qilfl<mark>qq</mark>fdteysfl
                                                                                                                  3378
                               <mark>sg</mark>s----<mark>ecqtaftevttfsrlltsad</mark>sacler<mark>evqgkaqrp</mark>--qilfl<mark>qqfdteys</mark>fl
                                                                                                                  3378
Pavo cristatus
                               <mark>sg</mark>s----ecqtvfteittfsrlltsadsaclerevq<mark>gk</mark>aq<mark>rp</mark>--qilflqqfdteysfl
Gallus gallus
                                                                                                                  3386
Chelonia_mydas
                               AES----RHRTVFTEITTF<mark>SR</mark>LLTATDSERLKAEVQ<mark>GK</mark>VQSLSIRSWSLQQFDTEHSFL
                                                                                                                  3412
                               IGS----GCCTIFTEITTFSRLLTAADRGSLEEQVKDRVQRI--EVLSLQQFDTEHAFL
Rhinatrema_bivittatum
                                                                                                                  3432
                               MDH----HECWAVFTEITTFSRLLTSHDCDVLESELRGLAPKP--IVLSLQQFDTEYSFL
Rattus_norvegicus
                                                                                                                  3371
                               MTH----HECRAVFTEITTFSRLLTGNDCDVLASELRGLASKP--VVLSLOOYDTEYSFL
Mus musculus
                                                                                                                  3318
                               TAD----LERHAIFTEITTFSRLLTSHDCEILESEVTGRAPKP--TLLWLQQFDTEYSFL
Homo_sapiens
                                                                                                                  3359
Pan troglodytes
                               TAD----LGRHAIFTEITTFSRLLTSHDCEILESEVTGRAPKP--TLLWLOOFDTEYSFL
                                                                                                                   3408
                               TTD----LERHAIFTEITTFSRLLTSHDCEILESEVTGRASKL--TLLWLQRFDTEISFL
                                                                                                                  3408
Macaca_mulatta
                               ATD----LACHATFTEITTFSRLLTSHDCEILOSEITGGAPKP--TLLWLOOFDTELSFL
Callithrix jacchus
                                                                                                                  3459
Equus caballus
                               TMD----LGRHAVFTEITTFSRLLTSHDCEILESEVEGRALKP--TILSLQQFDTEYSFL
                                                                                                                  3406
                               TMD----AGRRAVFTEITTFSRLLTSHDCELLESEVMDRALKL--TILSLOHFDTEYSFL
Orcinus orca
                                                                                                                  3415
Canis_lupus_familiaris AVD----LerrVIFTEITTFSRLLTSHDCKILESEVMDGDVRP--TILSLOOFDTESSFL
                                                                                                                  3338
Felis catus
                               TADPERHLERRIVFTEITTFSRLLTNRDCEVLQSEGGDGALKP--MILSLQQFDTEGSFL
                                                                                                                  3397
                               AEN----KFQAAF<mark>TEVTTYSR</mark>LLTAS<mark>DVEFMQ</mark>KELS<mark>G</mark>HIQSI--F<mark>SLS</mark>L<mark>QQ</mark>FDTEHSFL
Callorhinchus_milii
                                                                                                                  3532
Danio rerio
                               QE<mark>G----CSGAFFTEVTTFSR</mark>LLTAS<mark>ETQ</mark>QLQNVVQN-----IELLSLQQFDTEQSFL
                                                                                                                  3388
                               \dots 3670 \dots 3680 \dots 3690 \dots 3700 \dots 3710 \dots 3720
                                                *:*::* .* :* ::::*****: :**:**
                               KGIRDFLEATSGNKVLIIQADFEDGSQNAQLVASAKYTVVNEINKAN-LGEVSVFVYFIM
Pavo_muticus
                                                                                                                  3437
                               <mark>kgirdfleatsgnk</mark>vlii<mark>qadfedg</mark>sqna<mark>q</mark>lva<mark>sakytvvneink</mark>an-l<mark>ge</mark>vsvfvyfim
Pavo_cristatus
                                                                                                                  3437
                               KGIRDFLEATSGNKVLIIQADFEDGSQNAQLVASAKYTVV<mark>NEINK</mark>AN-L<mark>GE</mark>ASVFVYFIM
Gallus_gallus
                                                                                                                  3445
Chelonia mydas
                               <mark>keirn</mark>flds<mark>tsenk</mark>ilii<mark>otdfedgsosao</mark>lia<mark>sakysavneinkve-l<mark>ge</mark>isvfvyfit</mark>
                                                                                                                  3471
                               KEIRNFMEGNVGNKVLIIQNEFEDGCQSAHLIASAKYSAVNEINKVK-LNEVSVFVYFIT
Rhinatrema_bivittatum
                                                                                                                  3491
                               KDVRSCLR<mark>np</mark>arrkilvi<mark>qtdfddg</mark>ih<mark>saqlvasakysaineinktq-gte</mark>dfvfvyfvt
Rattus norvegicus
                                                                                                                  3430
                               KDVRSWLTNPGKRKVLVIQADFDDGTRSAQLVASAKYTAINEINKTQ-GTKDFVFVYFVT
Mus_musculus
                                                                                                                  3377
                               KEVRNCLTNTAKCKILIFQTDFEDGIRSAQLIASAKYSVINEINKIR-ENEDRIFVYFIT
Homo sapiens
                                                                                                                  3418
                               KEVRNCLTNTAKCKILIFQTDFEDGIRSAQLIASAKYSVINEINKIR-ENEDRIFVYFIT
Pan_troglodytes
                                                                                                                  3467
Macaca mulatta
                               KEVRNCLMNTAKCKILIIQTDFEDGIHSAQLIASAKYSAINEINKIQ-ENEDRIFVYFIT
                                                                                                                  3467
                               KEVRNCLTNRAKCKILIIQTDFEDGIHSAQLIASAKYSAINEINKIQ-DSGDRIFVYFIT
KEVRNCLKNKAKCKILIIQTDFEDGVHSAQLIASAKYSAMNEINKIE-GNEGCILVYFIT
REVRNCLAHKASYKILIIQTDFEDGIHSAQLIASAKYSAINEINKIQ-GNKDYVLVYFIT
Callithrix_jacchus
                                                                                                                  3518
Equus_caballus
                                                                                                                  3465
                                                                                                                  3474
Orcinus_orca
Canis_lupus_familiaris
                               RRVQNCLTNVAKCKILIIQMDFEDGVRSAQLIASAKYSAINEINKIQ-GNEDRILVYFIT
                                                                                                                  3397
                               REV<mark>QN</mark>CLSDAARCKILVI<mark>QT</mark>SFEDGVH<mark>SAQ</mark>LIA<mark>SAKYS</mark>AI<mark>NEINKIQ-GNQG</mark>CILVYFIT
Felis_catus
                                                                                                                  3456
Callorhinchus_milii
                               <mark>kkirhsvassognk</mark>illi<mark>otdfgng</mark>sossnlia<mark>sakystinevnks</mark>k-re<mark>gg</mark>tvyvyfit
                                                                                                                  3591
                               KKIKNYLENTTGDKILLIQTDFDEGFQKLNVIASAKYSSINEINKFKKEGSGKIFVYFIT
Danio_rerio
                                                                                                                  3448
                               \dots 3730 \dots 3740 \dots 3750 \dots 3760 \dots 3770 \dots 3780
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	.*. *:.:* :*. *:::** :. : :*:. *: :**:::	
Pavo muticus	KLTRVEGGTSYVGFHGGLWQSVHIDDLRRSKDMISDMSVLQNLTISQMLCE	3488
Pavo cristatus	KLTRVEGGTSYVGFHGGLWQSVHIDDLRRSKDMISDMSVLQNLTISQMLCE	3488
Gallus gallus	KLSRVEGGTSYVGFHGGLWQSVHIDDLRRSKDMISDMSVLQNLTISQMLCD	3496
Chelonia_mydas	KLSRIEGGTSYVGFHGGLWQSVHIDDLRRSKDMVSDVTALRNLTISQLFCE	3522
Rhinatrema_bivittatum	KLPRMEGGTSYVGFHGGLWQSVHIDDLRRPKDMVSDVTALRSLTISQLFYEKEIPKYMAV	3551
Rattus_norvegicus	KLSRMGSGTPYVGFHGGLWRSVHIDDLRRSTVMASDVTKLQNVTISQLFEPVDKP	3485
Mus_musculus	KLSRMGSGTSYVGFHGGLWRSVHIDDLRRSTIMASDVTKLQNVTISQLFKPEDKP	3432
Homo_sapiens	KLSRVGRGTAYVGFHGGLWQSVHIDDLRRSTLMVSDVTRLQHVTISQLFAPGDLP	3473
Pan_troglodytes	KLSRVGRGTAYVGFHGGLWQSVHIDDLRRSTLMVSDVTRLQHVTISQLFAPGDLP	3522
Macaca_mulatta	KLSRMGRGTAYVGFHGGLWQSVHIDDLRRSTLMVSDMTRLQSVTISQLFAPGDLP	3522
Callithrix_jacchus	KLSRMGSGTAYVGFHGGLWQAVHIDDLRRSTVMVSDVTRLQSVTISQLFAPG	3570
Equus_caballus	KL <mark>SRMGSGTSYVGFHGGLWQS</mark> VHIDDLRRSALMVSDVTKLQGAAISQLFRPEGGP KL <mark>SRMGSGTSFVG</mark> SHGGLWQSVHIDDLRRSTVMVSDVTKLQDVAISQLFKPEDQP	3520
Orcinus_orca Canis lupus familiaris	KLSRMESGAAYVGFHGGLWQSVHIDDLQKSTVMIADVTKLQDVAISQLFEPEEKP	3529 3452
Felis_catus	KLSRMESGASYVGFHGGLWQSVHIDDLCKSTVMVSDVTRLQDVTISQLFKPEGNS	3511
Callorhinchus milii	KLPRMEGGSTYIGFHGDPWQSVHIDDLRKSRDMVADVSALKDVAISRLFEVDPEE	3646
Danio_rerio	KLPRMDGGTSYIGFNGGPWKSIHIDDLRRPKDIVSDIKALQGLTISQLFEEKAEK	3503
Danio_rerio	379038003810382038303840	3303
Pavo muticus		3488
Pavo_cristatus		3488
Gallus_gallus		3496
Chelonia mydas		3522
Rhinatrema_bivittatum	EKKAVMDRKVEESKMKAGSQEEHRMEVKTLKETRMEKTKMEAESKKEAIREAEMENEEEA	3611
Rattus_norvegicus		3485
Mus_musculus		3432
Homo_sapiens		3473
Pan_troglodytes		3522
Macaca_mulatta		3522
Callithrix_jacchus		3570
Equus_caballus		3520
Orcinus_orca		3529 3452
Felis catus		3452 3511
Callorhinchus milii		3646
Danio_rerio		3503
Danio_rerio	385038603870388038903900	3303
Pavo_muticus	<mark>D</mark> L <mark>G</mark> KAK <mark>APP</mark> VN <mark>G</mark> EE	
Pavo_cristatus	<mark>D</mark> L <mark>G</mark> KAK <mark>APP</mark> VN <mark>G</mark> EE	3502
Gallus_gallus	<mark>D</mark> S <mark>G</mark> KVR <mark>APP</mark> AN <mark>G</mark> EE	3510
Chelonia_mydas	<mark>D</mark> VDK <mark>PEPMI</mark> VD <mark>G</mark> EE	3536
Rhinatrema_bivittatum	VTQEMAEREEAAR <mark>PQ</mark> DESK <mark>G</mark> EAEMEESEEEV <mark>GLQDESEGE</mark> AEMEESEEEV <mark>G</mark> LQDESEGEA	3671
Rattus_norvegicus	<mark>epe</mark> dd <mark>peeeme</mark> tessk <mark>s</mark>	3502
Mus_musculus	<mark>EQEEMEIE</mark> TSQS	3444
Homo_sapiens	ELGLEHRAEDGHEEAMETEASTSG	3497
Pan_troglodytes	ELGLEHWAEDGREEAMETEASTS	3546 3545
Macaca_mulatta Callithrix jacchus	ELGLEHRAEDGREEAMETEASTS	3545
Equus caballus	ELGLIGHWVEDGGEEAMEMEASMS	3543
Orcinus orca	ELEVEHRAQDDGEEVMETEVATS	3552
Canis lupus familiaris	KLETGOEAGDGLGEAMETEASAS	3475
Felis catus	ELETEHGASDSLEEPMETEAAGS	3534
Callorhinchus_milii	<mark>PE</mark> AMIIDDDTE	3657
Danio_rerio	VDETEAMEVEDMYAG	3518
	391039203930394039503960	

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Pavo_muticus Pavo_cristatus Gallus_gallus Chelonia_mydas Rhinatrema_bivittatum Rattus_norvegicus Mus_musculus Homo_sapiens Pan_troglodytes Macaca_mulatta Callithrix_jacchus Equus_caballus Orcinus_orca Canis_lupus_familiaris Felis_catus Callorhinchus_milii Danio_rerio	EEE	3505 3505 3514 3539 3731 3516 3456 3513 3562 3559 3607 3555 3566 3488 3547 3657 3525
	397039803990400040104020	
Pavo_muticus Pavo_cristatus Gallus_gallus Chelonia_mydas Rhinatrema_bivittatum Rattus_norvegicus Mus_musculus Homo_sapiens Pan_troglodytes Macaca_mulatta Callithrix_jacchus Equus_caballus Orcinus_orca Canis_lupus_familiaris Felis_catus Callorhinchus_milii Danio_rerio	REGEAEASVPEAE	3518 3518 3527 3551 3791 3528 3468 3574 3571 3619 3563 3577 3494 3556 3667 3533
Pavo_muticus Pavo_cristatus Gallus_gallus Chelonia_mydas Rhinatrema_bivittatum Rattus_norvegicus Mus_musculus Homo_sapiens Pan_troglodytes Macaca_mulatta Callithrix_jacchus Equus_caballus Orcinus_orca Canis_lupus_familiaris Felis_catus Callorhinchus_milii Danio_rerio	HCEGEVLDIVVLLRSCVQSAVGMLRDQNENLSRSRKRIEILLSLLSKENGLK HCEGEVLDIVVLLRSCVQSAVGMLRDQNENLSRSRKRIEILLSLLSKENGLK HCEGEVLDIVVLLRSCVQSAVGMLRDQNENLSRSRKRIEILLSLLSKENGLK ECVTQVLDTTTLLRSCVQSAVGMLRDQSEGSCRSTKRIEILLSLLSKENGLK ECVTQVLDTTTLLRSCVQSAVGMLRDQSEGSCRSTKRIEILLGFLSKEDDLK AEEKDVLDTTTLIRSCVQSAVGMLRDQNEVPTRSTRRIEILLSLLTREEELK CDVLDTTRLVRSCVQGAVGMLRDQNESCARNMRRVTILLDLLNEESTLN CDCSQFLDTTRLVQSCVQGAVGMLRDQNESCARNMRRVTILLDLLNEDNTRN DVSILDTTRLLRSCVQSAVGMLRDQNESCTRNMRRVVLLLGLLNEDDACH DVSILDTTRLLRSCVQSAVGMLRDQNESCTRNMRRVVLLLGLLNEDDACH DVSILDTTRLLRSCVQSAVGMLRDQNESCTRNMRRVVLLLGLLNEDDACH DVSILDTTRLLRSCVQSAVGMLRDQNESCTRNMRRVVLLLGLFNEDSAGN DTQILDTTSLLRSCVQSAVGMLRDQNESCTRNMRRVVLLLGLFNEDSAGN DTQVLDTTSMLRSCIQSAVGMLRDQNECSQRSVRRVEILLSLLNEDDRCR DTQILDTTRLLGSCIQGAVGMLRDQNECSQRSVRRVEILLSLLNEDDRCR DTQILDTTRLLGSCIQGAVGMLRDQNEACQRSMRRVSILLSLLDED RSDVLDTSSLLRSCVQGAVGMLRDQNEACQRSMRRVSILLSLLDED RSDVLDTSSLLRSCVQGAVGMLRDQNEEARPRGMQRVEILLGLLSEDDADRGAGARAVP GSHIMDTTSLLRSCIQSAVGTLRD-QDGRQRSMRRVEILLGLLDEDDDDE IDKERVLETTPVIRSCVQAAVSLLRDQHKSYDRSTKRVEMLLLLLEEGDGLK NGCKDVLDTTALVRSCVQSAVGMLRDQ TEGGMRSTKRVEILIMLLAEDQTLQ NGCKDVLDTTALVRSCVQSAVGMLRDQ TEGGMRSTKRVEILIMLLAEDQTLQ	3570 3579 3603 3843 3577 3520 3575 3624 3669 3613 3623 3552 3605 3719 3585

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C		
	** : ** ::: .*: * * * **:*.***:::*	
Pavo muticus	A <mark>SFLKTTR</mark> A <mark>R</mark> LSSLL <mark>KKQEEN</mark> -SFQ <mark>PK</mark> NWVL <mark>R</mark> AA <mark>SNLG</mark> AL QEA<mark>G</mark>TFRHT LW	3620
Pavo cristatus	A <mark>SFLKTTR</mark> ARLSSLL <mark>KKQEEN</mark> -SFQ <mark>PK</mark> NWVL <mark>R</mark> AASNL <mark>G</mark> ALQEA <mark>GTFRHT</mark> LW	3620
Gallus gallus	ASFLKMTRARLSSLLKKQEEN-SFQPKNWVLRAASNLSALQEAGTFRHTLW	3629
Chelonia_mydas	ASFLKIVKNRLFSLLKKQEEN-PFNLKDWVLREAANLNALQEAGTFRHTLW	3653
Rhinatrema bivittatum	EAFLKMLRYRLHDLLKKQEEN-SYNAKEWVVREASNSDALQEAGTFRHTLW	3893
	ASFLRESKMRLHVLLNKQEENQVRSLKEWVTREAANQDALQEAGTFRHTLW	3628
Rattus_norvegicus		
Mus_musculus	ASFLRESKMRLHVLLNKQEENQVRSLKEWVTREAANQDALQEAGTFRHTLW	3571
Homo_sapiens	ASFLRVSKMRLSVFLKKQEESQFHPL-EWLAREACNQDALQEAGTFRHTLW	3625
Pan_troglodytes	ASFLRVSKRRLNVLLKKQEESQFHPL-EWLAREACNQDALQEAGTFRHTLW	3674
Macaca_mulatta	ACFLRV <mark>SKMR</mark> LNVLLKTQEESQLHTL-EWVAREACNQDALQEAGTFRHTLW	3671
Callithrix_jacchus	ASFLOVSKMRLNVLLKKOEDSOFHLLKEWVAREASNODALOEAGTFRHTLW	3720
Equus_caballus	AAFLRVSKMRLYVLLKKQEENYLHNMKEWVEREASNODALQEAGTFRHTLW	3664
Orcinus orca	AAFLRVTKMRLSVLLKKQEENYLYNVKDWVVREASNQDALQEAGTFRQTIW	3674
	SARPLGSPAAAFLRVCKARLHRLLKQQEESSAFSRKDWVSREASNQDALQEAGTFRQTLW	3612
Felis_catus	VKAAFLRASKARLYVLLKQQEDQSLFNMKEWVTREASNQDALQEAGTFRQTLW	3658
Callorhinchus_milii	ASFLGMMKQRLYSLLLKRDEG-SQNPNEWMVREASNLEALQEGGTFRHTLW	3769
Danio_rerio	AEFL <mark>KTLKTR</mark> LHSLLVAHDDN-TISAKSWVSREALNVDALH <mark>EGGT</mark> FRHALW	3635
	$\dots 4150 \dots 4160 \dots 4170 \dots 4180 \dots 4190 \dots 4200$	
	.::* : :** ::: * : ** ** .** .** .* .* .*	
Pavo muticus	KRVQKAITEFLALLIAVIDRNGNLELLARPAPE-WVTNLWMFIFSDTKLLTVPSGVGKNS	3679
Pavo_cristatus	KRVOKAITEFLALLIAVIDRNGNLELLARPAPE-WYTNLWMFIFSDTKLLTVPSGVGKNS	3679
	KRVOKAITOFLALLIAVIDRNGNLELLARPASE-WYTNLWMFIFSDTKLLTVPSGVGKNS	3688
Gallus_gallus		
Chelonia_mydas	KRVQNVVTPFLAHMVSITDRDCNLELLVRPNTEGCVKHLWMFIFSDLNLLSIPYNVGNSS	3713
Rhinatrema_bivittatum	KRIQTTVTPFLAHLVSILDRDGNLELLVGASMKRCVKDLWMFIFMDMKLLSVPY-VKSNS	3952
Rattus_norvegicus	KRVQDVV <mark>T</mark> PILASMISHIDRDGNLELLA <mark>RPGSP</mark> AWAQDLWMFIYSDIKFLNIPLALNNTR	3688
Mus_musculus	KRVQDVVTPILASMIAHIDRDGNLELLAQPDSPAWVQDLWMFIYSDIKFLNISLVLNNTR	3631
Homo_sapiens	KRVQGAVTPLLASMISFIDRDGNLELLTRPDTPPWARDLWMFIFSDTMLLNIPLVMNNER	3685
Pan_troglodytes	KRVQGAVTPLLASMISFIDTDGNLELLTRPDTPPWARDLWMFIFSDTMLLNIPLVMNNER	3734
Macaca_mulatta	KRVQGAVTPLLASMISFIDRDGNLELLTRPDTPPWARDLWMFIFSDMKLLNIPLVMNNAR	3731
Callithrix_jacchus	KRVQGAVTPLLASMISFIDRDGNLELLTRTGTPPWARDLWMFIFSDKKLLNIPLVMNNSR	3780
Equus_caballus	KRVQGAVTPLLASMISFIDRDGNLELLTRPGAPSWARDLWMFIFSDIKLLNIPLVTNDTR	3724
Orcinus_orca	KRVQGAVIPLLASMISFMDRDGNLELLTNPHSPSWARDLWMFIFSDVKLLNIPLVANDTR	3734
Canis_lupus_familiaris	KRVQGMVTPLLASIVSVLDRDSNLELLIRQDAPSWTRDLWMFIFQDTKLLNIPLVTYDMR	3672
Felis catus	KRVQGVVTPLLASMVSVLDIDSNLELLIRPDSPSWTRDLWMFIFRDIKLLNIPLVTNDMR	3718
Callorhinchus milii	KKVQAVITPFLAQIISVVDRDCNLRLLVDPDTPEFVRKLWMDIFNDSNLLDIPYNRNLIS	3829
Danio_rerio	RRVQAVVTPFLAQLVSVVDRDCNLDLLLDRNSGEPLKKLWLEIFRDDKFLSVSPYTRTE-	3694
Danio_rerio	421042204230424042504260	3034
	421042204230424042504200	
	: :*.* :**::: :: :: :: ::	
Pavo_muticus	SQTEIILVQNSMMVSA-DAGNKMPFSWRIKEYLDEMWLKAQYIQNTED-QVENFVDIF	3735
Pavo_cristatus	SQTEIILVQNSMMVSA-DAGNKMPFSWRIKEYLDEMWLKAQYIQNTED-QVENFVDIF	3735
Gallus_gallus	SQTEIILVQNSMMVSA-DAGNKMPFSWRIKEYLDEMWLKAQYIQSTED-QAENFVDIF	3744
Chelonia mydas	SQTETILVQNDMKV <mark>P</mark> A-QAGNEMPFSWRIKDYLEELWLQAQYIPGTEG-HTEKFVGIF	3769
Rhinatrema bivittatum	WQNETILVQNYMKLSG-SVYNEMPFSWRIKDYLEEIWIQAQYIQNMAG-HEEKFIDIF	4008
Rattus_norvegicus	SNSEMPFILVQSHMNLLK-DACNAVPFSWRIRDYLEELWVQAQYITDTEG-LSKKFVEIF	3746
Mus musculus		
_	SNSEMSFILVQSHMNLLK-DAYNAVPFSWRIRDYLEELWVQAQYITDTEG-LSKKFVEIF	3689
Homo_sapiens	HKGEMAYIVVQNHMNLSE-NASMNVPFSWKIKDYLEELWVQAQYITDAEG-LPKKFVDIF	3743
Pan_troglodytes	HK <mark>GEMAYIVVQNYMNLSE-NASNNVPFSWRIKDYLEELWAQAQYIT</mark> DAEG-L <mark>P</mark> KKFVDIF	3792
Macaca_mulatta	HK <mark>GEMAYIMVQNYMNLS</mark> E-NAS <mark>NNVPFSWRIKDYLEELWVQAQYIT</mark> DAEG-L <mark>P</mark> KKFVDIF	3789
Callithrix_jacchus	RQGEMAYIVVQNHMNL <mark>SG</mark> -SAS <mark>N</mark> DVPFSWRIKDYLEELWVQAQYLTDAEG-LPKRFVEIF	3838
Equus_caballus	SKSEMSYIMVQNYMNLAE-GFYNNVPFSWRIKDYLEELWVQAQYITGAEE-SSEKLVEIF	3782
Orcinus orca	SKGEMSYIIVONYMNLSE-DTSNSVPFSWRIKDYLEELWVHTOYITGDEG-LAEKLVELF	3792
Canis_lupus_familiaris		3731
Felis catus		3776
_ · · · · · · · · · · · · · · · · · · ·	SKSEVPYIMVQNHMTLPE-DISNDVPFGWRVKGYLEELWLQAQYITGAEG-LLKKLVEIF	-
Callorhinchus_milii	TQSEIVVPNYMKMDRPEACNLLPFSWRIKDYLDELLVQARYMEGETEQKLNEIF	3883
Danio_rerio	NNSATKTILVQNYMSVDR-NKGCTMPFSWRIKDYLEDLWKHALQQEGHTVKQFEEFF	3750
	$\dots 14270 \dots 14280 \dots 14290 \dots 14300 \dots 14310 \dots 14320$	

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                                                                                              * * * * *
                                                                                        ::
                                 QKTALGEFISALTEGERQELFHCYVIDFIVMTIGVSSTKELQCLQLAFLSCVDEWKAASP
Pavo_muticus
                                                                                                                         3795
                                 QKTAL<mark>G</mark>EFISALTE<mark>GERQE</mark>LFHCYVIDFIVMTI<mark>G</mark>VSSTKELQCLQLAFL<mark>SC</mark>VD<mark>EWK</mark>AA<mark>SP</mark>
                                                                                                                         3795
Pavo_cristatus
Gallus_gallus
                                 QK<mark>T</mark>AL<mark>G</mark>EFISALTE<mark>GERQELFQCYVID</mark>FIVL<mark>TIGVSS</mark>TKELQCLQLAFLS<mark>C</mark>IEEW<mark>K</mark>AA<mark>SP</mark>
                                                                                                                         3804
                                 QKTPLGEFISSLGEAERNMLFHCYVRDFILLTIGLSSSQELQFLQIALLSCIEELKAASV
                                                                                                                         3829
Chelonia_mydas
Rhinatrema bivittatum
                                 QQTPLGQFISSLHEEDRRELFLRYVHDFLLLSMSISSLGELQFLQMALLSCVEELRREEK
                                                                                                                         4068
                                 QK<mark>TP</mark>LGLYLAQFPTAQQQELLQSYLKDFLLLTMKVSSREELMFLQMALRSCLSELQVASG
Rattus_norvegicus
                                                                                                                         3806
Mus musculus
                                 QK<mark>TPLG</mark>VFLAQF<mark>P</mark>VAQQQKLLQSYLKDFLLL<mark>T</mark>MKVSSREELMFLQMALW<mark>SC</mark>LRELQEA<mark>SG</mark>
                                                                                                                         3749
                                 QQTPLGRFLAQLHGEPQQELLQCYLKDFILLTMRVSTEEELKFLQMALWSCTRKLKAASE
Homo_sapiens
                                                                                                                         3803
                                 QQTSL<mark>G</mark>RFLAQLHGEPQQELLQCYLKDFILLTMRVSTEEELKFLQMALWSCTRKL<mark>K</mark>AASE
Pan_troglodytes
                                                                                                                         3852
                                 QQTPLGRFLAQLHGEPQQELLQCYSKDFILLTMRVATEEELEFLQMALWSCIRELKAASE
QQNPLGRFLARLRGEQQQELLQCYSKDFILLTMRVSTREELQFLQMALWSCICELKVALE
                                                                                                                         3849
Macaca_mulatta
Callithrix_jacchus
                                                                                                                         3898
                                 QQTPLGRFLAQLHAEQQQELLQCYLQDFLLLTMRVSTWGELKALRAALLSCICQLTAT--
QQTALGRFLAQLTVDQRQELLQCYLKDFLLLTMRVSTWEELNVLQMALGSCINQLKAG--
Equus_caballus
                                                                                                                         3840
Orcinus_orca
                                                                                                                         3850
                                QQTPLGRFLAQLSVKQQQELFVSYMKDFLLLTMRPSTWDQLNVLHMALWSCINQLHTQ--
QQTSLGRFLAQLSAEQQEELFLCYIKDFLLLTMRVSTWEELRILQVALWSCICQLQAQ--
Canis_lupus_familiaris
                                                                                                                         3789
Felis_catus
                                                                                                                         3834
Callorhinchus_milii
                                 NNA<mark>GFG</mark>KYLSDLSE<mark>G</mark>VKCKCFLMYLH<mark>D</mark>FVLM<mark>T</mark>VSV<mark>S</mark>CAAEFEFL<mark>QG</mark>ALL<mark>SC</mark>INEIKTQKC
                                                                                                                         3943
Danio_rerio
                                 WK<mark>TPLGRYISEATNEMQMEFFYRYLQDFISMTMNVTSEVDFEVLRGAFTS</mark>SVNEV<mark>R</mark>IAHE
                                                                                                                         3810
                                 \dots 4330 \dots 4340 \dots 4350 \dots 4360 \dots 4370 \dots 4380
                                                                                  *:
                                                    :*:. ::*: ::**: *:::
                                RRQEA---VPCLPWVHLGYNQFRSRLQNFSRILAVHPSVVDPLLNL---EDGMPHP--K
RRQEA---VPCLPWVHLGYNQFRSRLQNFSRILAVHPSVVDPLLNL---EDGMPHP--K
Pavo_muticus
                                                                                                                         3846
Pavo cristatus
                                                                                                                         3846
                                RRQEA---MPCLPWVHLGYNQFKSRLQNFSRILAVHPSVVDPLLNVK---EDGVPHS--K
Gallus gallus
                                                                                                                         3856
Chelonia_mydas
                                 GGEEK---MLSLPWVHLGYHQFRSRLQNFSRILAVNPSVLNSLLYQA---EKGSTSSPYE
                                                                                                                         3883
                                EEEEE---VPLLPWVHIGYHQFRHRLQNFSRILAVCPHVLESLTLRI---EEVLALRQHE
T<mark>PEE----GLSLPWVHLAYQ</mark>HFRTRLQNFSRILTIHPQVLSSLSQ----AAEKHNLAGCE
Rhinatrema_bivittatum
                                                                                                                         4122
Rattus_norvegicus
                                                                                                                         3858
                                TPDETYKFPLSLPWVHLAFQHFRTRLQNFSRILTIHPQVLSSLSQ----AAEKHSLAGCE
APEEE----VSLPWVHLAYQRFRSRLQNFSRILTIYPQVLHSLME----ARWNHELAGCE
Mus musculus
                                                                                                                         3805
Homo_sapiens
                                                                                                                         3855
                                APEEE----VSLPWVHLAYQRFRSHLQNFSRILTIYPQVLHSLME----ARWNHELAGCE
APEEE----VSLPWVHLAYQRFRSRLQNFSRILTIYPQVLHSLTE----APRNHELAGCE
Pan troglodytes
                                                                                                                         3904
Macaca_mulatta
                                                                                                                         3901
                                 V<mark>PEEE----VSLPWVHLAYQ</mark>HF<mark>RSRLQNFSRILTIYPQ</mark>ILC<mark>S</mark>LME----ASQNHKLAERE
Callithrix jacchus
                                                                                                                         3950
                                 GPEEQ----ISLPWVHLASQHFRSRLQNFSRILTIHPQILSRLME----APWNHGLARCE
Equus caballus
                                                                                                                         3892
Orcinus_orca RPAEE----ISLPSVHLAYOHFRSRLONFSRILTIYPQVLQSLTK----GTWNHSWARHE Canis_lupus_familiaris RPDEQ----LSLPWVHLAYOHFRSRLONLSRILTIYPQILQVLLCNMTESTRNDRLDRNE
                                                                                                                         3902
                                                                                                                         3845
                                RPQER----VSLPWVHVAYQHFRSRLQNFSRIVTTYPQVLQMLLYNVMGTVRNDRLDGPE
Felis catus
                                                                                                                         3890
                                 ALDDL----SLVWVHVAYQRFKRRLQNFLRMIAVNPKVLELLQGQK---GQIDRAGENE
Callorhinchus_milii
                                                                                                                         3995
Danio rerio
                                 AHES<mark>EA---LS</mark>LVWIHVAYHHFKNRI<mark>QN</mark>LHRMMSLE<mark>PQ</mark>ISQMLLEN-----RYASEGKE
                                 \dots \dots 4390 \dots \dots 4400 \dots \dots 4410 \dots \dots 4420 \dots \dots 4430 \dots \dots 4440
                                     * **
                                                                           **: **.* *:*::
                                 MVLDILAAIVCAEELENQMQTA----HPEIWLQKVKNLQMPIEFICKDKSLQRSDMWCHQ
Pavo_muticus
                                                                                                                         3902
                                 MVLDILAAIVCAEELENQMQTA----HPEIWLQKVKNLQMPIEFICKDKSLQRSDMWCHQ
                                                                                                                         3902
Pavo_cristatus
                                 MVADILAAIVCAEELENHMQAA----<mark>PPEVWLQ</mark>KV<mark>KN</mark>LQM<mark>P</mark>IEFICKDKSLQRSDVRCHQ
                                                                                                                         3912
Gallus_gallus
                                MVLDVFAAMACAEMLEDQVLKS----RPQIWLQQVKNLHMPIELVCMESCSKDSGSQCHQ
MALDVFAAVAGTELLETRALQP----TPEAWLRQVKNLQMPIELICSESYTQGRAQGCQL
Chelonia mydas
                                                                                                                         3939
Rhinatrema_bivittatum
                                                                                                                         4178
                                 MTLDAFAAMACAEILKGDIL<mark>KP</mark>----<mark>sp</mark>rvwl<mark>q</mark>lv<mark>kn</mark>lsm<mark>plelvcsegylqdsg</mark>smtra
Rattus norvegicus
                                                                                                                         3914
                                 MTLDAFAAMACAEMLKGDLLKP----SPKAWLQLVKNLSTPLELVCSEGYLCDSGSMTRS
Mus_musculus
                                                                                                                         3861
                                 MTLDAFAAMACTEMLTRNTLKP----SPOAWLOLVKNLSMPLELICSDEHMOGSGSLAQA
Homo sapiens
                                                                                                                         3911
                                 MTLDAFAAMACTEMLTRNTLKP----<mark>sp</mark>awlqlvknlsmpleli<mark>csd</mark>ehv<mark>qgsg</mark>slaqa
Pan_troglodytes
                                                                                                                         3960
                                 MTLDAFAAMACTEMLTRDTLKP----<mark>spo</mark>awlolvknlsvpleli<mark>csdGhmogsg</mark>slaoa
Macaca mulatta
                                                                                                                         3957
                                 MTLDV<mark>SAAMACTEMLTRHTLKP----SPQ</mark>AWLQLV<mark>KN</mark>LSM<mark>PLELICSDRHMQGSG</mark>TLAQA
Callithrix_jacchus
                                                                                                                         4006
                                 MTLDAFAAMACAEILTRDILKP----<mark>SPO</mark>AWLOIVKNLCMPLELLCSDGYLOGCGSVSKG
MSLDVFAAVACAEMLTENLLKP----SPOAWLOMVKNLRMPLELLCSDGYLOGSRMVT--
                                                                                                                         3948
Equus_caballus
                                                                                                                         3956
Orcinus_orca
                                LTLDALAAVACTEVLTRDILKP----SPQAWLQMVKNLSMPLELLGSKGYLQSCGRMARD
LTLDAFAAMACTEMLTRDILKP----SPQAWLQMVKSLSMPLELLCSDGYLQTCGEMARD
Canis_lupus_familiaris
                                                                                                                         3901
Felis_catus
                                                                                                                         3946
                                 MVLDVYAAAACVEMLEPLATEFRSDASCEAWLQKVKSLQTPIELICADESLSGQ-EARTP
Callorhinchus_milii
                                                                                                                         4054
                                 LVL<mark>DVLAAVACIEYLEPQNLDG--DD</mark>QSLAWLRRVKKLQVPVELVCSLESLHNRGDRCRQ
Danio_rerio
                                                                                                                         3919
                                 \dots \dots 4450 \dots 14460 \dots 14470 \dots 14480 \dots 14490 \dots 14500
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	* * * . *	
Pavo muticus	: .:: * *:: *:**:: * : : : * * . : :::: * .* LLKOLKTCWNRVFCMSLFVEHVLLGTSALMPEVESLVKNHTLLLAKCFEEDSDMKTHPTF	3962
	LLKQLKTCWNRVFCMSLFVEHVLLGTSALMPEVESLVKNHTLLLAKCFEEDSDMKTHPTF	3962
Pavo_cristatus		3902
Gallus_gallus	LLKQLQTCWDRVFCMSLFVEHVLLGTSALMPEVENIVKKHTLLLARCFEENSDMKTRPTF	
Chelonia_mydas	LLQEVKLRWNRVFSMSLFVEHMLLGTESLIPELQDLVKRHILLLGNCLQWDSDVKTHKTF	3999
Rhinatrema_bivittatum	WLQEVKARWNRVFSMALFVEHVVLGVGTRNQTLYILVEQDTIKLGKVLEADADMKMLRPF	4238
Rattus_norvegicus	IIQEVRALWNRIFSIALFVEHVLLGTESQIPELSPLVTKYVSLLDKCLEEDSNLKTYRPF	3974
Mus_musculus	VIQEVRALWNRIFSIALFVEHVLLGTESHIPELSPLVTTYVSLLDKCLEEDSNLKTCRPF	3921
Homo_sapiens	VIREVRAQWSRIFSTALFVEHVLLGTESRVPELQGLVTEHVFLLDKCLRENSDVKTHGPF	3971
Pan_troglodytes	VIREVRAQWSRIFSTALFVEHVLLGTESHVPELQGLVTEHVFLLDKCLRENSDVKTHGPF	4020
Macaca_mulatta	VIREVRAQWSRIFSTALFVEHVLLGTESRVPELCRLVTEHVFLLDKCLRENSDVKMHRPF	4017
Callithrix_jacchus	VIREVRVHWSRIFSTALFVEHVLLEIERQVPELCRLVTEHVFLLDKRLRENSDLKTHRPF	4066
Equus_caballus	VIREVRTHWNRIFSIALFVEHVLLGTKSQIPELGGLVTEYVFLLNKCLQENSDIKTHRPF	4008
Orcinus_orca	VIRDVRTQWNRIFSIALFVEHVLLGTESYIPELCKLVTEYVFLLNKCLQEDSDIKTHRPF	4016
Canis_lupus_familiaris		3961
Felis_catus	VIREVRTQWNRIFPVALFVEHVLLGIESQIPELCELVTEYVFLLNKCLQENSDIKTYRPF	4006
Callorhinchus_milii	PINHIRAGWSRLFSLSLYVEHVVLGVGEVDQQLQDLVGRCAHQLGKCLQGNSDMKSLAPF	4114
Danio_rerio	MVTNIQHGWRRIYSLVLFVEHMLLGVGDLQQKLKPVVLEHTQLLAQVLEQDSNLKKKKPF	3979
	$\dots 4510 \dots 4520 \dots 4530 \dots 4540 \dots 4550 \dots 4560$	
	.*: .* *:: : :: * :* : * * .* .* *: . :*	4000
Pavo_muticus	VAVMKVLCKCKEDISSRLYRYDLKPCSICHGEPKDPVQLCCSHAFCEKCIRSWLIPAHMH	4022
Pavo_cristatus	VAVMKVLCKCKEDISSRLYRYDLKPCSICHGEPKDPVQLCCSHAFCEKCIRSWLIPAHMH	4022
Gallus_gallus	VAVMKVLCKCKEDVSSRLYRYDLKQCSICHGEPKDPVQLCCNHAFCEKCIRAWLIPAHMH	4032
Chelonia_mydas	TAVMKVLYQCKEEANATICKYGLKPCPICLEDPKDPVNLPCDHVFCQSCIKQWLTPGQMF	4059
Rhinatrema_bivittatum	RVVIDVLRDCRDRANRVFCRRGLQDCSICLSDLKEPVCLPCDHTYCKACIGRWLIPGQMI	4298
Rattus_norvegicus	AAVMTTLCNCKDKA <mark>SK</mark> KFCRFGIQPCSICQGDAQDPVCLPCDHVYCLPCIQTWLAPGQMI	4034
Mus_musculus	VAVMTTLCDCKDKASKKFSRFGIQPCFICHGDAQDPVCLPCDHVYCLRCIQTWLIPGQMM	3981
Homo_sapiens	EAVMRTLCECKETASKTLSRFGIQPCSICLGDAKDPVCLPCDHVHCLRCLRAWFASEQMI	4031
Pan_troglodytes	EAVMHTLCECKEIASKTLSRFGVRPCPICLGDAKDPVCLPCDHVHCLRCLRAWFASEQMI	4080
Macaca_mulatta	EAVMSTLCECKERASKTLSRFGVQPCPICLGDAQDPVCLPCDHVYCLRCLRAWFAPGQMM	4077
Callithrix_jacchus	RAVMSTLCECKESASRTFTRFGVQPCPICLGDAQDPVCLPCDHVYCLRCLEAWLVSGQMM	4126
Equus_caballus	LAVVTVLRECKDKA <mark>SKT</mark> LTRFGVQPCPICLGDAQDPVCLPCDHIYCLGCIKTWLVIGQMS	4068
Orcinus_orca	VAVMTTLCKCKDQVSKSLTRFGVKPCP1CLGDAQDPVCLPCDHVFCQRCVKVHLTQGQMG	4076
Canis_lupus_familiaris		4021
Felis_catus	VAVMV T LRK <mark>CK</mark> DQVCK T LARVEIQPCPVCLGDPQDPVCLPCDHVFCLACVKVWVIIGQMR	4066
Callorhinchus_milii	KAVVQ T LKQCKEQASQVYCKYGLKECPICIRELIDPVLLPCNHIYCLQCIKCWLAPGQMN	4174
Danio_rerio	EAVITVLKT <mark>CK</mark> DKASQRII <mark>RFG</mark> LQL <mark>CPVCMGDPRDP</mark> LSLPCDHIYCLTCIRQWLVPGQMH	4039
	$\dots 14570 \dots 14580 \dots 14590 \dots 14600 \dots 14610 \dots 14620$	
	** * :	
Pavo_muticus	CPLCRVAVEDDN-LTVNEELSAAIAKNALFRQRCNNFFIDVVTTMCFKDNEPPDTAVIQE	4081
Pavo_cristatus	CPLCRVAVEDDN-LTVNEELSAAIAKNALFRQRCNNFFIDVVTTMCFKDNEPPDTAVIQE	4081
Gallus_gallus	CPLCRVAVEDDN-LTVNKELSAAIAKNALFRQRCNNFFIDVVTTMCFKDNEPPDTAVIQE	4091
Chelonia_mydas	CPYCKVNLPDDYSVTISQELSVAIKRNAQFRQMCNSFFIDLVSTMCFKDNEPPEKAVIQE	4119
Rhinatrema_bivittatum	CPYCKTVLPDNFNITVSKGLSAALEKYSHFRKLCNNFFIDLVSSVCFKGSVPPDKPVILL	4358
Rattus_norvegicus	CPYCKTELPDKFSPTVSQNHRKAIEKHAQFRHMCNSFFVDLVSTMCFKDNIPPQKSVIDT	4094
Mus_musculus	CPYCLTDLPDKFSPTVSQDHRKAIEKHAQFRHMCNSFFVDLVSTMCFKDNTPPEKSVIDT	4041
Homo_sapiens	CPYCLTALPDEFSPAVSQAHREAIEKHARFRQMCNSFFVDLVSTICFKDNAPPEKEVIES	4091
Pan_troglodytes	CPYCLTALPDEFSPAVSQAHREAIEKHARFRQMCNSFFVDLVSTICFKDNAPPEKEVIES	4140
Macaca_mulatta	CPYCLTDLPDNFSPTVSQRHREVIEKHARFRQMCNSFFVDLVSTMCFKDNAPPEKEVIES	4137
Callithrix_jacchus	CPFCLTVLPDTFSPTVSQEHREAIEKHARLRQTCNSFFVDLVSTMCFKDNAPPEKEVIHS	4186
Equus_caballus	CPLCLTELPHGFSPTVSQEYRDAIGKHACFRQMCNSFFIDLVSTLCFKDNSPPQKDVIEA	4128
Orcinus_orca	CPYCLTDLPDSFSPSVSQEHREVIKKHARFRQMCNSFFVDLVSTMCFKDNSPPQKDVVNV	4136
Canis_lupus_familiaris		4081
Felis_catus	CPLCLTDLPEGFSPAVSQEHRNAIRKHACIRQMCNSFFIDLVSTICFKDNSPPEKEVIDV	4126
Callorhinchus_milii	CPFCLTDLPADFKVVVCDVIREAVRKNSLFRKRCDAFFISLVSMVCFRDNSPPAKDVILQ	4234
Danio_rerio	CPLCVQEVPDNFELKPSDELRRLISQNASFRMRCNAFFIDLVSTMCFKDNTPPSKDIILH	4099
	463046404650466046704680	

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****: **..*::********
                               LLNLLFVYRG--LLEDSDRPAAYTKLLSPFDEEVDETPVIRSVMLKLLLKYSFSDVKNDV
Pavo_muticus
                                                                                                                    4139
                               LLNLLFVY<mark>RG</mark>--LL<mark>E</mark>DSD<mark>RP</mark>AA<mark>YTK</mark>LL<mark>SPFDEEVDETP</mark>VI<mark>RS</mark>VMLKLLL<mark>KYS</mark>FSDVKNDV
Pavo_cristatus
                                                                                                                    4139
                               LL<mark>S</mark>LLFVY<mark>RG--LLG</mark>DSD<mark>RP</mark>AAYTKLL<mark>SPFDE</mark>EVDE<mark>TP</mark>VIRSVMLKLLLKYSFSEVKNDV
Gallus_gallus
                                                                                                                    4149
                               LLRLLFVH<mark>REP</mark>LRI<mark>GP</mark>TNHRTVY<mark>TK</mark>LL<mark>SPFNDVVDKTP</mark>IIRSVVL<mark>K</mark>LLL<mark>KYS</mark>FSDVKAYL
                                                                                                                    4179
Chelonia_mydas
Rhinatrema bivittatum
                               LLSLLFFNKELCQALQRNR-TSHTKSLSPFDDSVDKSPVVRSVVLKLLLKYSFEDVKEYI
                                                                                                                    4417
                               LL<mark>S</mark>LLFV<mark>QKEL-LRD</mark>ASQRHREHTKSL<mark>SPFDDVVDKTP</mark>VIRSVVLKLLLKYSFHEVKGYI
Rattus_norvegicus
                                                                                                                    4153
                               LL<mark>S</mark>LLFVQKEL-LRDAS<mark>QKHREHTKS</mark>L<mark>SPFDD</mark>VVDQTPVIRSVLLKLLLKYSFHEVKDYI
Mus musculus
                                                                                                                    4100
                               LLSLLFV<mark>OKGR-LRDAAORHCEHTKSLSPFND</mark>VVDKTPVIRSVILKLLLKYSFHDVKDYI
Homo_sapiens
                                                                                                                    4150
Pan_troglodytes
                               LLSLLFVQKER-LRDAPQRHREHTKSLSPFNDVVDKTPVIRSVILKLLLKYSFHDVKDYI
                                                                                                                    4199
                               LLSLLFV<mark>QKEL-LRDAPQRRREHTKSLSPFND</mark>VVDK<mark>TP</mark>VIRSVILKLLLKYSFDDVKDYI
                                                                                                                    4196
Macaca mulatta
                               LL<mark>S</mark>LLFV<mark>QKEL-LRDAPERHREHTKSLSPFNDVVDKTP</mark>VI<mark>RS</mark>VIL<mark>K</mark>LLL<mark>KYSFDDVKDY</mark>I
Callithrix_jacchus
                                                                                                                    4245
Equus_caballus
                               LLSLLFVOKEL-LRDAPORHREHTKSLSPFDDVVDKTPVIRSVLLKLLLKHSFHEVKSYI
                                                                                                                    4187
Orcinus_orca
                               LLSLLFVEKEL-FREASQRRREHTKSLSPFDDVVDKTPVIRSVVLKLLLKYSFRDVKDYI
                                                                                                                    4195
Canis_lupus_familiaris LLNLLFVQKEF-LRDTPQRHCEHTKSLSPFDDIVDKTPVIRSVVLKLLLKYSFQEVKDYI
Felis_catus LLNLLFAQKEL-LRGTFQRHREHTKSLSPFDDVVDKTPVIRSVVLKLLLKYSFQEVKDYI
                                                                                                                    4140
                                                                                                                    4185
Callorhinchus_milii
                               LLSRLVIK<mark>KELLTRG</mark>SLTDQ<mark>PYHTGALSPFDESVDRNP</mark>VIRSIVLKLLLKYSFDDIKDYL
                                                                                                                    4294
Danio_rerio
                               LL<mark>S</mark>LLMVEASSL<mark>PP</mark>FK<mark>G</mark>RDRRFL<mark>TK</mark>AL<mark>SPFDD</mark>SVDKN<mark>P</mark>VVR<mark>S</mark>VVL<mark>K</mark>LLLNYSFDHVKDYL
                                                                                                                    4159
                               \dots 4690 \dots 4700 \dots 4710 \dots 4720 \dots 4730 \dots 4730 \dots 4740
                                                        *:* *: .** **: ::
Pavo_muticus
                               ONYLSRVECSHILD<mark>Krdkkelyllfvncleds</mark>myd<mark>kseg</mark>sl<mark>g</mark>cehvnsl<mark>pg</mark>dr<mark>gfp</mark>enyl
                                                                                                                    4199
                                ONYLSRVECSHILDKRDKKELYLLFVNCLEDSMWDKSEGSLGCEHVNSLPGDRGFPENYL
                                                                                                                    4199
Pavo cristatus
                                ODYLCRVEHSCILD<mark>KRDKKELYLLFVNCLEDS</mark>MRD<mark>KS</mark>EGSLGCERVNSLPGDR<mark>GFP</mark>ENYL
Gallus gallus
                                                                                                                    4209
Chelonia_mydas
                                <mark>QDYLVQVE</mark>QCQILD<mark>KDDKTELYALFV<mark>NCLEDS</mark>MYEK<mark>IG</mark>ACTQEDQINCLREDGRFLERYL</mark>
                                                                                                                    4239
Rhinatrema_bivittatum
                               QTYLSDIENPTLLDQEDLTEVYMLFV<mark>NCLEDSMYEK</mark>IGAFTK----TQLREDGLFLKNCH
                                                                                                                    4473
                                <mark>QNYLSQLENKAFLT-EDKTELYLLFINCLEDSVYQKTS</mark>AGCRN-HERVLR<mark>EEG</mark>HFLRTYS
Rattus_norvegicus
                                                                                                                    4211
                                <mark>QNYLT</mark>QLEKKAFLT-<mark>EDKTE</mark>LYLLFIS<mark>CLEDS</mark>VH<mark>QKTS</mark>AGCRN-LEQVLR<mark>EEG</mark>HFLRTYS
Mus musculus
                                                                                                                    4158
                                QEYLTLLKKKAFIT-EDKTELYMLFI<mark>NCLEDS</mark>IL<mark>EKTSAYS</mark>RNDEL<mark>NH</mark>LE<mark>EEG</mark>RFLKAYS
Homo_sapiens
                                                                                                                    4209
                                QEYL<mark>T</mark>LLRKKAFII-<mark>EDKTELYMLFINCLEDS</mark>IL<mark>EKTSAYS</mark>RNDELNHLE<mark>EEG</mark>RFLKAYS
Pan troglodytes
                                                                                                                    4258
                                QDYL<mark>T</mark>LLKKKAFII-EDKTELYMLFI<mark>NCLEDS</mark>IREKTSACSRNDELNHLREEGRFLNTYS
                                                                                                                    4255
Macaca_mulatta
                                ODYL<mark>T</mark>LLKKKAFII-<mark>EDKTELYMLFINCLEDSIHEKTS</mark>VCSRKD<mark>EPNHLREEG</mark>VFLKTYS
Callithrix jacchus
                                                                                                                    4304
Equus caballus
                                DYLSLLEKK<mark>P</mark>FIT-EDKTELYLLFS<mark>NCLEDSIHERNSAFS</mark>VSEESKYLREEGHFLETYL
                                                                                                                    4246
                                Qayl<mark>sqlekkpfla-edkaelyvlfsscledsiheknnt</mark>ffmrdeskylreegqflktyr
Orcinus orca
                                                                                                                    4254
                               Qayl<mark>s</mark>llqqkalvt-<mark>edkte</mark>lyilfs<mark>ncledslyekts</mark>alstseelrylreegaflktys
Canis_lupus_familiaris
                                                                                                                    4199
Felis catus
                                <mark>Qayls</mark>llekkaflt-ed<mark>ktely</mark>ilfst<mark>cledsmyekvs</mark>al<mark>s</mark>ts<mark>eg</mark>qkclred<mark>g</mark>vfletys
                                                                                                                    4244
Callorhinchus_milii
                                 Q<mark>YLTAIQ</mark>TLKLFS<mark>KEDQTELYILYLNC</mark>L<mark>GDSIYEKS</mark>HFC<mark>T</mark>VQ<mark>EMITHLNLEM</mark>DFLQVCL
                                                                                                                    4354
Danio rerio
                               <mark>Q</mark>QHLTEVEQSKILEET<mark>DKAELYCLYMNCLEDSMYDRT</mark>QWHTVAEQQNCFLEETRFLLEFL
                                  ....4750......4760......4770......4780......4790......4800
                                               ::: :** : :** : .:.::
                               PKSNRGAPQ-ESSVEYLQAVAKVRLYLTKAAELLYDLYELTEQDQVEEKKR--YLENVKV
Pavo_muticus
                                                                                                                    4256
                               PKSNRGAPQ-ESSVEYLQAVAKVRLYLTKAAELLYDLYELTEQDQVEEKKR--YLENVKV
Pavo_cristatus
                                                                                                                    4256
                               PKSNQGAPQ-ESSVEYLQAVAKVRLYLTKAAELLYDLHELPEQDQVEEKKR--YLENVKV
                                                                                                                    4266
Gallus_gallus
                               KRNSQETLR-ESSIEYLQGVARVRLCLDRVAELLLEMQRPKEWDKAVDKQQ--YLQKVTR
QDMQKLAPR-ESSIEYLQGMARIRLCLDTAAQLIFEMYGETGTACDSEKRH--YLQQVEA
Chelonia mydas
                                                                                                                    4296
Rhinatrema_bivittatum
                                                                                                                    4530
                               PGLRGSEPVRTASVEYLOEMARVRLCLDLAADFLSELOE - GSELAEDKRC - FLKHVEQ
Rattus norvegicus
                                                                                                                    4267
                               PGLQGQEPVRIASVEYLQEVARVRLCLDLAADFLSELQE--GSELAEDKRR--FLKHVEE
Mus_musculus
                                                                                                                    4214
                               PASRGREPANEASVEYLOEVARIRLCLDRAADFLSEPEG--GPEMAKEKOC--YLOOVKO
Homo sapiens
                                                                                                                    4265
                               PASRGREPANEASVEYLQEVARIRLCLDRAADFLSEPEG--GPEMAKEKQC--YLQQVKQ
Pan_troglodytes
                                                                                                                    4314
                               PVRRGREPANEASVEYLOEVAWIRLCLDRASDFLSQPEG--DPGMAEEKQC--YLQQVKH
Macaca mulatta
                                                                                                                    4311
                               PVRRGQEPAHEASVEYLQEVARIRLCLDRAADFLSEPQG--GPEMAKEKEC--YLQQVKH
Callithrix_jacchus
                                                                                                                    4360
                               <mark>agrrgrkpakeasveylqetarirlcldr</mark>asdfl<mark>selqe--gsemaeek</mark>rr--ylrqver
Equus_caballus
                                                                                                                    4302
                               PVGCSQEPAGEASVEYLQEMARIRLCLDKASEILSELQD--GSEMAEEKRR--YLRQVEH
Orcinus_orca
                                                                                                                    4310
Canis_lupus_familiaris MW-CSPEPASEASVEYLQEMTRIRLCLNKASDFLSELQD--SSETAREKQC--YLQQVER
                                                                                                                    4254
                               AR-R<mark>GPEP</mark>AS<mark>EASVDHLQEMARIRLCLNR</mark>ASDFL<mark>SGLQE--GSEAAEDK</mark>QR--YLQHVER
Felis_catus
                                                                                                                    4299
Callorhinchus_milii
                               RH--ESKPRDOTSIGYLOMMARIRLCFDLAAKLLCESQETFGGVLAYVKTKGIYLDCIKR
                                                                                                                    4412
                               QS--DSVSAHTATVEHLORLARVRLCLDMAADLLVANAGIHDDPSAFIQAF---WNNVVN
Danio_rerio
                                                                                                                    4274
                                \dots \dots 4810 \dots 4820 \dots 4830 \dots 4840 \dots 4850 \dots 4860
```

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* * . . * * . * * .
                                                                             * * * *
                             FCDLTKNDWHRVYLVRKIAHLYGMEFAQKLVMEAR-FNWVFPVEILR-QVQ-GSQSNHID
Pavo_muticus
                                                                                                             4313
                             FCDLTKNDWHRVYLVRKIAHLYGMEFAQKLVMEAR-FNWVFPVEILR-QVQ-GSQSNHID
Pavo_cristatus
                                                                                                             4313
                             FCDLTRNDWHRVYLVRKIAHLYGMEFAQKLVMEAR-FNWVFPVEILR-QVR-HSQSNHID
Gallus_gallus
                                                                                                             4323
                             FCRLAGNDWYRVYLVRKLTNQYGMEFAQKLSYESQ-FHWVFPVEIIQ-QQR--DQPSQID
Chelonia_mydas
                                                                                                             4352
Rhinatrema bivittatum
                             FCTSSTNDWHLVYLVRKLTDKHSLNFVQTLCKDGS-YHWLFPQEIVQQQLQ-MEQMCHVD
                                                                                                             4588
                             FCTRVNNDWHRVYLV<mark>RKLSSQRGMEFVQSFSRQGHPYQWVFPREVLAQQ---KDH</mark>LSQLD
FCTRVNNDWHRVYLV<mark>RKLSSQRGMEFVQSFSKQGHP</mark>CQWVFPRKVIAQQ---KDHVSLMD
Rattus_norvegicus
                                                                                                             4324
Mus musculus
                                                                                                             4271
                             FCIRVENDWHRVYLVRKLSSQRGMEFVQGLSKPGRPHQWVFPKDVVKQQGLRQDHPGQMD
Homo_sapiens
                                                                                                             4325
                             FCIRVENDWHRVYLVRKLSSQRGMEFVQGLSKPGRPHQWVFPKDVVKQQGLQQDHPGQMD
Pan_troglodytes
                                                                                                             4374
                             FCTRVENDWHRVYLVRKLSSQRGMEFVQGLSKPGHPCQWVFPKQVIEQQ---KDHPGQMD
FCTRGENDWHRVYLVRKLSSQRGMEFVQGLSKPGHPCQWVFPKEVIEQQ---KDHPGQMD
                                                                                                             4368
Macaca_mulatta
Callithrix_jacchus
                                                                                                             4417
Equus_caballus
                             FCTQVKNDWYRVYLVRKLTSQQGMEFVQSLSKQGHPAQWVFPEEVISQQ---KDHPGQMD
                                                                                                             4359
                             FCARVQ<mark>NDWYRVYLVRKLTSQQGMEFVQ</mark>SL<mark>SRQGHP</mark>AHWVF<mark>PRG</mark>VIAQQ---K<mark>DHTGQ</mark>MD
Orcinus_orca
                                                                                                             4367
4311
                             FCRLVK<mark>NDWYRVYLVRKLASERGIEFVQ</mark>RL<mark>SRPG</mark>H<mark>P</mark>ARWVFPQAVLAQQ---EDHSSQMD
Felis_catus
                                                                                                             4356
                             MCTRR<mark>GNAWFQIYLVRK</mark>LCSLM<mark>GIESVQQLS-E</mark>DQEHRWLFPAEIVQQQ----R<mark>DAPGQ</mark>ID
LCRQSR<mark>NDWYRVYLIRK</mark>LCSLQGVECVKNLLLQET-YRWLFPQEILEMN----QDDSQID
Callorhinchus milii
                                                                                                             4468
Danio_rerio
                                                                                                             4329
                              .....4870.....4880.....4890.....4900.....4910.....4920
                                            **•
                               :*. * .*:
                                                                                    :.:. :..: *:: *:
Pavo_muticus
                             RYLACGKNYKVLRDAVGKAMIECKPEGLLEAEKASGSTPAVRSVHLLLAIFREVTALYGF
                                                                                                             4373
                             RYLAC<mark>G</mark>KNYKVLRDAV<mark>GK</mark>AMIECKPE<mark>G</mark>LLEAEKAS<mark>GSTP</mark>AVR<mark>S</mark>VHLLLAIFREVTALYGF
                                                                                                             4373
Pavo cristatus
                             RYLVC<mark>GKNYKALRDAVGK</mark>VMI<mark>ECKP</mark>QGLLEAE<mark>K</mark>AS<mark>GS</mark>TTAVRSVHLLLAVF<mark>RE</mark>VTALY<mark>G</mark>F
Gallus gallus
                                                                                                             4383
Chelonia_mydas
                             RYLVC<mark>G</mark>KNYRVLRDAV<mark>GK</mark>AMIECKMK<mark>G</mark>VAEAQKACN<mark>S</mark>SGSA<mark>Q</mark>AVHLLLAIFRELTALYG</mark>C
                                                                                                             4412
Rhinatrema_bivittatum
                             LFLVC<mark>GEEYR</mark>ALRDALCTAILECKMESIVKAQKKCKTSAVEHSVYLLLAIFRELTMLYGS
                                                                                                             4648
Rattus_norvegicus
                             RYLVHGDEYKAVRDAMAKAVLDCKTLDVGNALSTCRSPKDQQTAYLLLALYTEVTALYRS
                                                                                                             4384
                             RYLVHGNEYKAVRDATAKAVLECKTLDIGNALMACRSPKPQQTAYLLLALYTEVAALYRS
Mus musculus
                                                                                                             4331
                             RYLVYGDEYKALRDAVAKAVLECKPLGIKTALKACKTPQSQQSAYFLLTLFREVAILYRS
Homo_sapiens
                                                                                                             4385
                             RYLVY<mark>GDEYKALRDAVAKAVLECKP</mark>LGIKTALKACKTPQSQQSAYFLLTLFREVAILYRS
RYLVY<mark>GDEYK</mark>ALRDAVAKAVLECKPLGIETALKACKTPQSQQSAYFLLTLFREVAILYRS
Pan troglodytes
                                                                                                             4434
Macaca_mulatta
                                                                                                             4428
                             wylvy<mark>gseykalrd</mark>ava<mark>kavleckp</mark>l<mark>gt</mark>etalkac<mark>rtp</mark>ral<mark>q</mark>aahfllalf<mark>re</mark>vavlyr<mark>s</mark>
Callithrix jacchus
                                                                                                             4477
                             RYLVHGEEYKALRDAMGKTILECKPLATVTALKACRNSETROAVHLLLALYREVTILYRS
Equus caballus
                                                                                                             4419
                             QYLVHGDSYKALRDALGKAILECKPLAIETALEACRSPTTQQAAHLTLALFREVTTLYRS
Orcinus orca
                                                                                                             4427
Canis_lupus_familiaris RYLVHGDKYKALRDTVGKAILQNEPLTTVAVLKGGRNHDPELAAHLLLVLFREVAVLYQS
                                                                                                             4371
                             RYLVYGDKYKSLRDAVGKAVLECKPLAIAAAVKVSRNPGPQQAAHLLLALFREVATLYRL
RYLVCGENYRCYRDALARALLECKTQSLTEAQKQCDR<mark>PANEQ</mark>AVYITLAVFREITVLYSS
Felis catus
                                                                                                             4416
Callorhinchus_milii
                                                                                                             4528
Danio rerio
                             QYLACGADYKTIRDAVAKFMLDLHINGIQKAIEDCNCTPMKKAVYVLMAFFREVTSLHRT
                               \dots 4930 \dots 4940 \dots 4950 \dots 4960 \dots 4970 \dots 4980
                                               :
                             SDSSFHPKQQQTRALTEFIQNSKVLSPPDLQNFATSLVMNALPSVLSVDPQSFSNNGALI
Pavo_muticus
                                                                                                             4433
                             SDSSFHPKQQQTRALTEFIQNSKVLSPPDLQNFATSLVMNALPSVLGVDPQSFSNNGALI
Pavo_cristatus
                                                                                                             4433
                             SDSSFHPKQQQTRALTEFIQNSKALSPPDLQNFATSLVMNALPSVLSVDPQSFSSNGALI
Gallus_gallus
                                                                                                             4443
                             RNTNLHPKKEQCDAMNTFIQHSKALDSPALKQFAASLVTNSLP-SLTVRPQHFSPSGALI
QNANMHPKPVQCETVSNFIQNTRAFKSDAVVKFAESLVTNSHP-ALRVSPENSSFRGTVT
Chelonia mydas
                                                                                                             4471
Rhinatrema_bivittatum
                                                                                                             4707
                             RNGSLHPDSKQLEAMNKFINESKILSAPKINRFAKSLVANTLP-LLQTRSANGSLRVTVT
Rattus norvegicus
                                                                                                             4443
                             PNGSLHPEAKQLEAVNKFIKESKILSDPNIRCFARSLVDNTLP-LLKIRSANSILKGTVT
Mus_musculus
                                                                                                             4390
                             HNASLHPTPEQCEAVSKFIGECKILSPPDISRFATSLVDNSVP-LLRAGPSDSNLDGTVT
Homo sapiens
                                                                                                             4444
                             HNASLHPTPEQREAVSKFIGECKILSPPDISRFATSLVDNSLP-LLRAGPSDSNLDGTVT
Pan_troglodytes
                                                                                                             4493
Macaca mulatta
                             HNASLHPTPEQCEAVSKFIGECKILSPPEISHFATSLVDNSLP-LLRAGPSDNHLQGTVT
                                                                                                             4487
                             HNERLHPTPEQREAVSQFIGECKILSSTDIRHFATSLVDNSLP-LLRAGPSNSSLEGTVT
Callithrix_jacchus
                                                                                                             4536
                             QNANLHPKPEQCEAVNKFIEGSKILSPPHVRHFATSLVTNTLP-LLRTGSRDGGLEGTVT
HSANLPPKPQQCEAMKKFIEERKTLSP-DMRRFAISLVNNELP-LLRTGPGDNSLEGTVI
Equus_caballus
                                                                                                             4478
                                                                                                             4485
Orcinus_orca
Canis_lupus_familiaris CNTSLHPKPEQCEALNAFIEEGKIFSSPHMRHFAASLVNNTLP-LLRTGPRDSSLQGTVA
                                                                                                             4430
                             PDANLHPKPEOREALNSFIEESEVLSHODIKLFATSLVADTLP-LLSTGVRDSSLEGTVA
TNQDLHPKPAOCNAIQEYIREDKVPGSAELKTFLVGLTENLNL-VLKVNPHQSTLHRTIQ
Felis_catus
                                                                                                             4475
Callorhinchus_milii
                                                                                                             4587
                             GNPNMHPKPEHCAGLEHFIKNSAIFVNNEMKAFAEKLVRNQLG-ALRVRPHMPSRDLSLV
Danio_rerio
                                                                                                             4448
                             \dots \dots 4990 \dots \dots 5000 \dots \dots 5010 \dots \dots 5020 \dots \dots 5030 \dots \dots 5040
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: .*:.*.: * *
                                                              :::****:*:
                                  : :.*.
                         EMAVHTMAVLLCGRNPILOPLRNLAFSPRTMEHSFLPTMPEDMVAQARAWOGLADLRMYI
Pavo_muticus
                                                                                               4493
                          EMAVHTMAVLLCGRNPILQPLRNLAFSPRTMEHSFLPTMPEDMVAQARAWQGLADLRMYI
                                                                                               4493
Pavo_cristatus
Gallus_gallus
                         EMAVHTMAVLLCGONPILRPLRNLAFSPHTMEHAFLPTMPEDMVAQARAWEGLANLRMYI
                                                                                               4503
                         EIVVHAAALLL<mark>CGQN</mark>RVLEPLRSLAF<mark>SP</mark>ATMQRSFL<mark>PTMPED</mark>LMVQAVNWE<mark>G</mark>MKQLRWYV
                                                                                               4531
Chelonia_mydas
Rhinatrema bivittatum
                         EILIHTAAVLVCGONRILDPLRNLAFFPAKMENSFLPTMPEDLLPQAKAWQGLENLHWYL
                                                                                               4767
                         EMAIHVATILLCGQDKVLEPLRNLAFYPFKMVNAFLPTMPEDLLVHAKFWEGLTNVRWYT
                                                                                               4503
Rattus_norvegicus
Mus musculus
                          EMAVHVATILLCGHNQILKPLRNLAFYPVNMANAFLPTMPEDLLVHARTWRGLENVTWYT
                                                                                               4450
                         EMAIHAAAVLL<mark>CGQN</mark>ELL<mark>EPLKN</mark>LAF<mark>SP</mark>ATMAHAFL<mark>PTMPED</mark>LLAQARRWK<mark>GLE</mark>RVHWYT
Homo_sapiens
                                                                                               4504
Pan_troglodytes
                          EMAIHAAAVLL<mark>CGQN</mark>ELL<mark>GPLKN</mark>LAF<mark>SP</mark>ATMAHAFL<mark>PTMPED</mark>LLA<mark>QAR</mark>RWK<mark>GLE</mark>RVHWYT
                                                                                               4553
                          EMAIHAAAILLCGONKVLEPLKNLAFSPANMAHAFLPTMPEDLLAQARRWKGLEGVHWYT
Macaca_mulatta
                                                                                               4547
Callithrix_jacchus
                         DMAIHAAAVLL<mark>CGQN</mark>KVLEPLKNLAFSPADMANAFL<mark>PTMPED</mark>LLAQARRWKGLEGVQWYT
                                                                                               4596
Equus_caballus
                         EIAIHAATVLLCGONKVLEPLKNLAFSPANMANAFLPTMPEDLLAQARGWRGLEGVRWYT
                                                                                               4538
Orcinus_orca
                          <u>EMAIHVATILLCGQSKVLEPLKNLAFSPELMANAFLPTMPEDLLAQARKWMGLEG</u>VHWYT
                                                                                               4545
4490
                          ELAVHVAILLL<mark>CC</mark>HSEVL<mark>EPLRN</mark>LAF<mark>SP</mark>ATMASAFL<mark>PTMPED</mark>LLA<mark>Q</mark>AQNWK<mark>GLEG</mark>VHWYM
Felis_catus
                                                                                               4535
                         EIIVHATAVYLS<mark>G</mark>QSVTVATL<mark>R</mark>SLVLN<mark>P</mark>ANMVHAFL<mark>PTMPEDLT</mark>DEARRWE<mark>G</mark>LIGVHWYD
Callorhinchus_milii
                                                                                               4647
Danio_rerio
                         EV<mark>TIHMAAVLLCG</mark>NLLLL<mark>QPLQ</mark>KLAL<mark>SP</mark>NNMMASFIPTMPDDMLAVAQ--QAM<mark>G</mark>HLQWYF
                                                                                               4506
                          .....5050......5060......5070......5080......5090......5100
                         **.** * :*** * .
                                                        :** .:_.
                                             . * :*
                                                                  **
                                                                              ***:.**:*
Pavo_muticus
                         CPNGHPCTVGECGRPKQIGRCIECGVEVGGLNYKSVPGFQEFR-SSEDRTQTGHILGDVQ
                                                                                               4552
                         CPNGHPCTVGECGRPKQIGRCIECGVEVGGLNYKSVPGFQEFR-SSEDRTQTGHILGDVQ
                                                                                               4552
Pavo cristatus
Gallus gallus
                         CPNGHPCTVGECGRPMEIGRCIECGLQVGGLKYKAVPGFQEFR-SGEDRTQTGHILGDAQ
                                                                                               4562
Chelonia_mydas
                         CPNGHPCTIGECGRPMEHSRCVDCNALIGGSQHIPVHGFQGVQ-HFTDRTQTGHVLGDPR
                                                                                               4590
Rhinatrema_bivittatum
                         CPNGHYCTIGECGAPMEVARCVDCGAAIGGQQHKSLAGFQMIQGQHVDRTETGHVLKDSS
                                                                                               4827
Rattus_norvegicus
                          CPNGHPCSVGECGOPMEMSICPDCRVPIGGLNHKPSVGFDVIR-NNEDRTQTGHVLGNPQ
                                                                                               4562
                         CPRGHPCSVGECGRPMOESTCLDCGLPVGGLNHTPHEGFSAIR-NNEDRTOTGHVLGSPC
Mus musculus
                                                                                               4509
                         CPNGHPCSVGECGRPMEQSICIDCHAPIGGIDHKPRDGFHLVK-DKADRTQTGHVLGNPQ
Homo_sapiens
                                                                                               4563
                         CPNGHPCSVGECGRPMEQSICIDCHAPIGGIDHKPRDGFHLVK-DKADRTQTGHVLGNPQ
Pan_troglodytes
                                                                                               4612
                                                                                               4606
                         CPNGHPCSVGECGKPMEQSTCIDCHAPIGGINHRPQDGFNLVS-NSTDRTQTGHVLGDPQ
Macaca_mulatta
                         CPNGHPCSVGECGRPMEQSFCVDCRAPIGGINHKPHDGFQMVS-NSVDRTQSGHVLGNPQ
Callithrix jacchus
                                                                                               4655
Equus caballus
                          CPNGHPCSVGECGMPMEQSSCVDCGAPIGGINHRPKDGFQMIQ-NSIDRTQTGHVLGNPP
                                                                                               4597
                          CPNGHACSVGECGLPMEQSFCIDCGVPVGGINHKPKDGFHVIE-NNMDRTQTGHVLGN<mark>PP</mark>
Orcinus orca
                                                                                               4604
4549
Felis catus
                         CPNGHPCSVGECGRPMERSHCVDCGAVIGGINHRPEDGFLAVT-NHADRTQTGHVLGVAL
                                                                                               4594
Callorhinchus_milii
                                                                                               4705
                         CPNGHPCVVGECGMPMSQGRCIECQAEIGGANHLPVGGFKHAR--GGDRTQSGHILGDPN
Danio rerio
                         CPNGHPCTVGECGQPMEVSRCPDCDAEIGGSNHRPVDGFRAMQ-IQADRTQSGHILGDAQ
                          .* * . *** *::: *:
                                                                        :*** . ..
                                                                   :::
                         HRRGOGVSD-RSMSPAVFVLIRLLTHLTMLLGATKDPQSLRNIIKPPVRNSVTFLQQHIQ
Pavo_muticus
                                                                                               4611
                         HRRGQGVSD-RSMSPAVFVLIRLLTHLTMLLGATKDPQSLRNIIKPPVRNSVTFLQQHIQ
Pavo_cristatus
                                                                                               4611
                         HRRGQGVSD-RSMSPVVFVLIRLLTHLTMLLGATKDPQSLRNIIKPPVRNPVTFLQQHIQ
                                                                                               4621
Gallus_gallus
                         NREATVASE-REMSPVVFIVIRLLTHLAMLLGATKDPQSLRGIIKPPVQDPAGFLQLHIE
AREAVVAPD-RDLPPASFVLLRLLMHLAMLLGADSDKNSMLKIIKPQVQDPETFLLSHIR
Chelonia mydas
                                                                                               4649
Rhinatrema_bivittatum
                                                                                               4886
                         SSGTAEASD-RGQSPVVFILTRLLTHLAMLVGAAQTPQALMNIIKPPVQDPQGFLEQHIQ
Rattus norvegicus
                                                                                               4621
                         SSGVAEVSD-RGQSPVVFILTRLLTHLAMLVGATHNPQALTVIIKPWVQDPQGFLQQHIQ
Mus_musculus
                                                                                               4568
                         RRD-VVTCD-RGLPPVVFLLIRLLTHLALLLGASQSSQALINIIKPPVRDPKGFLQQHIL
Homo sapiens
                                                                                               4621
                         RRD-VVTCD-RGLPPVVFLLIRLLTHLALLLGASQSPQALINIIKPPARDPKGFLQQHIL
Pan_troglodytes
                                                                                               4670
Macaca mulatta
                         QRD-MVTCD-RGLPPVVFILIRLLTHLALLLGASQSSQALINIIKPPVRDPKGFLQQHIL
                                                                                               4664
                         RRDLVVTCD-RELPPLVFIFIRLLTHLALLLGAAQSPQALMNIIKPPVRDPQGFLQQHIL
Callithrix_jacchus
                                                                                               4714
                         PRGEAVVSD-RELSPVAFLLIRLLTHLALLLGAAQSPQALSNIIKPAVMDPRGFLWQHVE
LRGEAMVSD-RELSPVVFLLIRLLTHLAMLWGATQSPQALMNIIKPPVRDPKGFLLQHIQ
                                                                                               4656
Equus_caballus
                                                                                               4663
Orcinus_orca
Canis_lupus_familiaris SRDKVLVSD-RELAPDVFLLIRLLTHLALLLGATQRPEAVMNIIKPPVRDPSSFLQRHIH
                                                                                               4608
                         GRRETVVSD-RQLAPAVFLLLRLLTHLAMLLGAAQSPEAVINIIKPPVRDPRGFLQQHIR
KRETVIAPD-RNMSPVSFTLLRLLTHMAMFVGAMYNDQAVAQLIKPQVPQAMPFLGLHIE
Felis_catus
                                                                                               4653
Callorhinchus_milii
                                                                                               4764
                         RRDLPDMQDTKNMSPAPFALLRLLTHMSMLIGTQNNPQSIMQIIKPAVVHPDAFLMQHLL
                                                                                               4625
Danio_rerio
```

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. *::
                                                 :** :
                          EDLAQLTRILGKSVDETINILHLVLGSLLKDPHQHPGQWPVQFDAVLSTKEKRNKWEDIV
Pavo_muticus
                                                                                                  4671
                          EDLAQLTRILGKSVDETINILHLVLGSLLKDPHQHPGQWPVQFDAVLSTKEKRNKWEDIV
Pavo_cristatus
                                                                                                  4671
                          EDLAQLTRILGKSVDETINILHLVLGSLLKDPHQHPRQWPVEFDGVLSTKQKRNKWEEIV
Gallus_gallus
                                                                                                  4681
Chelonia_mydas
                          KDLEQLTKTLGKSADETINVVHLILCSLLKEPHQHPNQWPVRFDGALSTKEHRHEWERIV
                                                                                                  4709
Rhinatrema bivittatum
                          KDMEQLRSTLGKSADETTLVIHLVLCSLLKDPQQQPNQWPVRFDSELSSKDSRNAWERCV
                                                                                                  4946
                          RDLEQL<mark>TKILGKSADETT</mark>HVVHLILSSLLKEQH----QMTLNFTEVL<mark>STKGCRN</mark>NWEKHF
RDLEQL<mark>TK</mark>MLGRSADETIHVVHLILSSLLRVQS----HGVLNFNAELSTKGCRNNWEKHF
Rattus_norvegicus
                                                                                                  4677
Mus musculus
                                                                                                  4624
                          KDLEQLAKMLGHSADETIGVVHLVLRRLLQEQHQLSSRRLLNFDTELSTKEMRNNWEKEI
Homo_sapiens
                                                                                                  4681
Pan_troglodytes
                          KDLEQLAKMLGHSADETIGVVHLVLRRLLQEQHQLSSRRLLNFDTELSTKEMRNNWEKEI
                                                                                                  4730
                          KDLEQL<mark>TK</mark>ML<mark>GHSADET</mark>ISVVHLVLRRLLQEQH<mark>Q</mark>LSGKRFLNFDTRLSTKEMRNNWEKEI
Macaca_mulatta
                                                                                                  4724
Callithrix_jacchus
                          KDLEQLTKILRY<mark>SADETT</mark>SVVHLVLCRLLQ<mark>EG</mark>NQL<mark>SG</mark>KR<mark>P</mark>LNFDTRL<mark>STKENRN</mark>NWEKDI
                                                                                                  4774
Equus_caballus
                          RDLEQLTKTLGRSADETASVVHLVLCSLLREQRPLSCRRPLNFDAELSTKEKRNNWEKLV
                                                                                                  4716
Orcinus_orca
                          RDLEQLMKMLGRSADETASVVHLVLSHLLREHG----HRSLNFDAELSTREKRNSWEKLV
                                                                                                  4719
4668
                          QDLEQL<mark>TRTLGRSADE</mark>AINAVHLVLR<mark>S</mark>LL<mark>G</mark>RQRH<mark>PSGQ</mark>RIFNFDARL<mark>SSREFRN</mark>SWEKAM
RDFQQLMKSLGKSIDETANVVHLLLCNLIQQNQ-----FPGVPNNLASKQERNAWEK</mark>SV
Felis_catus
                                                                                                  4713
Callorhinchus_milii
                                                                                                  4818
Danio_rerio
                          KDMEQLSKALGKGVDDTVSTIHLAIHSLLEPHQTS--QWPDPYDPNLSTKDARNGWENAM
                                                                                                  4683
                           .....5230......5240......5250......5260......5270......5280
                                                     : :*:*: *.*: :: : :*
Pavo muticus
                          ANTVIIPELED--LDKKLLKLNEQIQEDERISSNPIVKVVYGDPVAFLSQLPKDSHIHHS
                                                                                                  4729
                          ANTVIIPELED--LDKKLLKLNEQIQEDERISSNPIVKVVYGDPVAFLSQLPKDSHIHHS
                                                                                                  4729
Pavo cristatus
                          ANTVIIPELEG--LDKKLVMLNKQIQEDERISSNPIVKVVYGDPVTFLSQLPKDSHIHHS
Gallus gallus
                                                                                                  4739
Chelonia_mydas
                          ANTIIIPELKD--LDKILTKLNRQISEDERICSNPVAKIVYGDPVTFLSQLPKDNTMHCS
                                                                                                  4767
                          ANTVIAPEMQH--LDKKLLEVTARISQDERIGSSPVVKMVYGDPMTFLSELPKGSRVHCS
Rhinatrema_bivittatum
                                                                                                  5004
Rattus_norvegicus
                          G-TLLLRELKH--L<mark>DK</mark>TL<mark>P</mark>AINARISQDERISSNPVTKIIYGDPATFLPHLPQKSVVHCS
                                                                                                  4734
                          E-TLLLRELKH--L<mark>DK</mark>NLPAINALISQDERISSNPVTKIIYGDPATFLPHLPQKSIIHCS
Mus musculus
                                                                                                  4681
                          A-AVIS<mark>PELEH--LDKTLPTMN</mark>NLI<mark>SQDKRISSNP</mark>VAKIIYGDPVTFLPHLPRKSVVHCS
Homo_sapiens
                                                                                                  4738
Pan troglodytes
                          A-AVIS<mark>PELEH--LDKTLPIMN</mark>NLI<mark>SQDKRISSNPVAKIIYGDPVTFLPHLP</mark>RKSVVHCS
                                                                                                  4787
                          A-AVISPELEH--LDKTLPTMNILISQDKRISSNPVAKIIYGDPVTFLPHLPRKSVVHCS
                                                                                                  4781
Macaca_mulatta
                          A-AVILPELEH--LDKTLPAVNILMSQDKRISSNPVAKIIYGDPVTFLPHLPRKSVVHCS
Callithrix jacchus
                                                                                                  4831
                          E-ALILPELEH--LDKTLLTVNTLISQDERISSNPVAKIIYSDPVAFLPHLPQNSMVHCS
Equus caballus
                                                                                                  4773
                          E-TIILPELKH--LDKTLLVVNTRISQDERISSNPVAKIVYGDPVAFLPHLPQNSVVHCS
Orcinus orca
                                                                                                  4776
Canis_lupus_familiaris Q-TLLLPELEH--LEKALLTVTASISQDERISSNPVARIVYKDPTVFLPHLPGKSVFHCS
                                                                                                  4725
Felis catus
                          Q-TLILPELEHQHLEKALLTVTTQISQDERLSSNPVARIVYGDPGAFLPHLPQKSVVHCS
                                                                                                  4772
Callorhinchus_milii
                          VDNAITPTLAN--LDQQLREV<mark>N</mark>LRISQDKRICSNPMVKIVYGDPLTFLP-LPRDNVLHCS
                                                                                                  4875
Danio rerio
                          NNDVITHHLKV--LEHQLKEVNAFIREDERVSSNPVMKLTFGEPGRFLRSLPQNSLIHNS
                            \dots 5290 \dots 5300 \dots 5310 \dots 5320 \dots 5330 \dots 5340
                            :*:.* :::: * *:::*
                                                   ... :*:* :***:* *: **::*.**
                          KMWSSRKRISVENLGHVVQQMNAKDAVPLLWKFLQKETELRLVKYLPEILALQRDLVRLF
Pavo_muticus
                                                                                                  4789
                          KMWSSRKRISVENLGHVVQQMNAKDAVPLLWKFLQKETELRLVKYLPEILALQRDLVRLF
                                                                                                  4789
Pavo_cristatus
                          KMWSSRKRISVENLGHVVQQMNAKDTVPLLWKFLQKEPELRLVKYLPEILALQRDLVRLF
                                                                                                  4799
Gallus_gallus
Chelonia mydas
                          RMWSCRKRISVEYLGHVVQQKDGKDVVPILWKFLQKEAEMRLVKFLPDILALQRDLVKRF
                                                                                                  4827
                          RLWSCRKRISIEHLRHVMQQQDGKDTVPVLWKFLQKEAELRQVKFLPEILALQRDLVKRF
Rhinatrema_bivittatum
                                                                                                  5064
                          KIWSCRTKITVEYLOHIVEOKNGKETVPLLWHFLOKEAELRLVKFLPEILALORDLVKOF
                                                                                                  4794
Rattus norvegicus
                          KIWSCRRKITVEYLQHIVEQK<mark>NGKET</mark>VPVLWHFLQKEAELRLVKFLPEILALQRDLVKQF
Mus_musculus
                                                                                                  4741
                          KIWSCRKRITVEYLOHIVEOKNGKERVPILWHFLOKEAELRLVKFLPEILALORDLVKOF
                                                                                                  4798
Homo sapiens
                          KIWSCRKRITVEYLQHIVEQK<mark>NGKE</mark>RVPILWHFLQKEAELRLVKFLPEILALQRDLVKQF
Pan_troglodytes
                                                                                                  4847
Macaca mulatta
                          KIWSSRKRITVEYLQHIVEQKNGKERVPILWHFLQKEAELRLVKFLPEILALQKGLVKRF
                                                                                                  4841
                          KIW<mark>SCRKRITVEHLQHIMEQ</mark>K<mark>NGKERVP</mark>ILWHFL<mark>QKEAELR</mark>LV<mark>K</mark>FL<mark>PEILALQRE</mark>LV<mark>K</mark>RF
Callithrix_jacchus
                                                                                                  4891
                          kmwscrkrvsveylohiveokngketvpilwkflokeaelrlvkflpeilalordlvkrf
                                                                                                  4833
Equus_caballus
                          KMWSCRKRITIENLQHIVEQKNGKETVPVLWKFLQKEAELRLVKFLPEILALQRNLVKRF
                                                                                                  4836
Orcinus_orca
Canis_lupus_familiaris
                          KMWTCRRKVTVDYLQHIVEQKNGKESVPILWKFLQKEAELRLVRFLPEILALQRDLVRRF
                                                                                                  4785
                          KMWACRRRV<mark>TVEYLQHVVEQNSGKDTVP</mark>ILRKFL<mark>QKEAELR</mark>LVK<mark>SLP</mark>EILALQRDLVKQF
                                                                                                  4832
Felis_catus
Callorhinchus_milii
                          AVWSCRERISIEHLAHIVQQE-GKDTVPILCRFLQKEPQLRLVKFLPELLALQGDLVKRF
                                                                                                  4934
                          SIWSCRNKVSLMSLTHIVEQNNGRDTLPVLWRFLQREAELRLVRFLPDILVLQRDLVKKF
                                                                                                  4801
Danio_rerio
                           \dots \dots 5350 \dots \dots 5360 \dots \dots 5370 \dots \dots 5380 \dots \dots 5390 \dots \dots 5400
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	*: *: *: *: .** :* **:.:*	
Pavo muticus	QNTSDAKRCTIREFLSEPLSEAMWALLERRVDVFLSVWNKLRSSLDTNGEFKLPKGYCDA	4849
Pavo_cristatus	QNTSDAKRCTIREFLSEPLSEAMWALLERRVDVFLSVWNKLRSSLDTNGEFKLPKGYCDA	4849
Gallus_gallus	QNSSDVKRCTIREFLSEPLSDVMWVLLERRVDVFLSVWNKLRSSLDTNGEVKLPKGYCDA	4859
Chelonia_mydas	QNITDVEHRTIRDFVSKFHSDEMRNLWQIRVNTFLSVWNKLRRSLDTNGEIKLPTGYCDV	4887
Rhinatrema_bivittatum	QHFTDLEKQKIEDFLESLHSDGMRQAFRRRVEIFICTWNQLRTSLQTSGDIKLPEGICDQ	5124
Rattus_norvegicus	QNVSEVEFSSIRSFIHSHHSDGLQKLLHDRITVFLSTWNALRRSLETNGEIKLPKDYCRS	4854
Mus_musculus	ONVSRVEYSSIRGFIHSHSSDGLRKLLHDRITIFLSTWNALRRSLETNGEIKLPKDYCCS	4801
Homo_sapiens	QNVQQVEYSSIRGFLSKHSSDGLRQLLHNRITVFLSTWNKLRRSLETNGEINLPKDYCST	4858
Pan_troglodytes	ONVOOVEYSSIRGFLSKHSSDGLROLLHNRITVFLSTWNKLRRSLETNGEIKLPKNYCST	4907
	QNVPQVEYSSIRGFLSSHSSEGLRQLLQKRITIFLSTWNKLRRSLETNGEINLPKDYCST	4901
Macaca_mulatta		
Callithrix_jacchus	QNVPQAEYRSIRGFISSHSSDGLRQLLQNRITIFLSTWNKLRKSLETNGEINLPQEYCST	4951
Equus_caballus	QNV <mark>SEVEYNSIRG</mark> FIGSHDADGLKQLFQNRITVFLSTWNKLRRSLETNGEIKL <mark>P</mark> KAYCST	4893
Orcinus_orca	QNVSEVEYRSVKSFISSHNSDGLKQLSQNRIIIFLSTWNKLRRSLETNGEIKLPKDYCSC	4896
Canis_lupus_familiaris	QNASEADYQSIRSFISSHQGDGLKQLFHRRIQIFLSTWNKLRRSLQTNGEIKLPDSYCSA	4845
Felis catus	QNVSEADYQSIRAFISSHHEDGLKQLLRKRIRIFLSTWNKLRMSLQTSGEIKLPEEYCDA	4892
Callorhinchus milii	QNVTEVTMSTISAFLQTLSPESVKHTFESRVASFLYVWNQLRTFLVTNGEIKIPESYCAE	4994
Danio rerio	QNITDLTYKTIREFLQDQKAASLTAWYEKRIKIFLTTWNQIRVSLANTGEIKLPADYTEK	4861
Danio_rerio		4861
	$\dots \dots 5410 \dots \dots 5420 \dots \dots 5430 \dots \dots 5440 \dots \dots 5450 \dots \dots 5460$	
Pavo_muticus	DLTLDSKLEVLLPRRQGLGLCSTALVSYLISLQNDFIHAVNKHIKEDDRYLISPSEVADL	4909
Pavo_cristatus	DLTLDSKLEVLLPRRQGLGLCSTALVSYLISLQNDFIHAVNKHIKEDDRYLISPSEVADL	4909
		4919
Gallus_gallus	DLTLDSKLEVLLPRRQGLGLCSTALVSYLIGLQNDFIHLVNKHIKEDARYLISPSEVADL	
Chelonia_mydas	DLTLD <mark>SEFENLLPRRRGPGLCSTALVSYLISLHN</mark> DLIYTVEKNTMETNSYSIS <mark>PSE</mark> VADL	4947
Rhinatrema_bivittatum	TLSLK <mark>SDLEILLPRR</mark> RGLGLCATALVSYLINMHNEFVYLVEKDTKEAQQYSIS <mark>PSE</mark> VADL	5184
Rattus_norvegicus	DLDLDAKFEVILPRRRGLGLCGTALVSYLISLHNKMVYVVQKLSNEDNSYSVDTSEVADL	4914
Mus musculus	DLDLDAEFEVILPRROGLGLCGTALVSYLISLHNNMVYTVOKFSNEDNSYSVDISEVADL	4861
Homo_sapiens	DLDLDTEFEILLPRRRGLGLCATALVSYLIRLHNEIVYAVEKLSKENNSYSVDAAEVTEL	4918
Pan_troglodytes	DLDLDTEFEILLPRRQGLGLCATALVSYLIRLHNEIVYAVEKLSEENNSYSVDAAEVTDL	4967
Macaca_mulatta	DLDLDADFEILLPRRRGLGLCATALVSYLIRLHNEIVYAVEKLSEGNNSYSVDAADVTDL	4961
Callithrix_jacchus	DLDLDADFEILLPRRRGLGLCATALVSYLIRLHNEIVYAVEKLSEENSSYSVDASEVTDL	5011
Equus_caballus	DLDLDTDFEVILPRRRGQGLCSTALVSYLINLHNEIVYTVEKFSKEDNSYSVDASEVTDL	4953
Orcinus orca	NLDLDTDFEVILPRRQGRGLCSTALVSYLINLHNEIVYAVDKFSKEDNSYSVDASEVADL	4956
Canis_lupus_familiaris		4905
Felis_catus	DLDEDTDFEVILPRRGRGLCSTALVSYLIRLHNEMVYAVGEFSGENNGYTVDASEVTDL	4952
	DINANSTLDVLLPRRQGLGLCSTALISYLVALQNDFVYTVEKYTNKTTPYSVNASDVVDL	5054
Callorhinchus_milii		
Danio_rerio	DLGLDADLQVLLPQRRGLGLCSTALVSYLITIHNDLMYTVEKHTGDDSDYKISPAELTEL	4921
	547054805490550055105520	
	*:: *: ::*: **: :.*** : * :* ::: ::::::::	
Pavo muticus	HLISYEVERDLIPLILSNCQYSMEKGGETLQHFDLERIQQQVISKLFRGKPLITLTGIPT	4969
<u> </u>	HLISYEVERDLIPLILSNCOYSMEKGGETLOHFDLERIOOOVISKLFRGKPLITLTGIPT	4969
Pavo_cristatus		
Gallus_gallus	HLISYEVERDLIPLILSNCQYSMEKGGETLQHFDLERIQQQVISKFLQGKPLITLTGIPT	4979
Chelonia_mydas	HVISYEVERDLV <mark>P</mark> LIL <mark>SNCQYSVEKGGETLQEFN</mark> LEKIQQQVT <mark>SR</mark> FL <mark>QGKPL</mark> ITLV <mark>GIP</mark> T	5007
Rhinatrema_bivittatum	HMISYEVEKDIIPLILSNCQYSVVSGGQTLEEFDLEKIQRQVTSRFLQGKPLITSVGIPT	5244
Rattus_norvegicus	HVISYDVERDLNPLILSNCQYQVQQGGETSQEFDLEKIQRQISSRFLQGKPRLTLKGIPT	4974
Mus musculus	HVISYEVERDLNPLILSNCQYQVQQGGETSQEFDLEKIQRQISSRFLQGKPRLTLKGIPT	4921
Homo sapiens	HVISYEVERDLTPLILSNCQYQVEEGRETVQEFDLEKIQRQIVSRFLQGKPRLSLKGIPT	4978
Pan_troglodytes	HVISYEVERDLTPLILSNCQYQVEEGRETVQEFDLEKIQRQIVSRFLQGKPQLSLKGIPT	5027
Macaca_mulatta	HVISYEVERDLTPLILSNCQYQVEQGRETLQEFDLEKIQRQILSRFLQGKPRLSLKGIPT	5021
Callithrix_jacchus	HVFSYEVERDLTPLILSNCQYQVEQGKETLQEFDLEKIQRQIISRFLQSKPRLSLKGIPT	5071
Equus_caballus	HVISYEVERDLT <mark>P</mark> LIL <mark>SSCQYTVEQGGETLQEFDLEKIQRQITSRFLQGKP</mark> RLTLK <mark>GIP</mark> T	5013
Orcinus orca	HVISYEVERDLIPLILSNCQYHVEQGGETLQEFDLEKIQRQIISRFLQGKPRLTLKGIPT	5016
Canis_lupus_familiaris		4965
Felis catus	HVISYEVERDLVPLILSNCQYRVEQGQETLQEFDLEKIQRQVTGRFLQGKPRLTLKGIPT	5012
_		
Callorhinchus_milii	HVIKYEVERDLIPLISSNCQYTMEKGGETVLEYDLRRIEQQLTNRFLKGKPLVNLMGIPT	5114
Danio_rerio	HVIRYEYDRDLLPLVLANCQYSMECGQETLLEYDLPKIQQQILTRFLQGKPLITINGIPT	4981
	553055405550556055705580	

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	*: *:* *** : * : * : * : : **:: **:	
Pavo muticus	LVYRHDRNYEELFDDIKIKQGLHQSALPSSVMNAISGELQSYSDVCDALSVTEIALEFLA	5029
Pavo_cristatus	LVYRHDRNYEELFDDIKIKQGLHQSALPSSVMNAISGELQSYSDVCDALSVTEIALEFLA	5029
Gallus_gallus	LVYRHDRNYEELFNDIRNKQGLHQSALPSSVMNAISGELQSYSDVCDALFVTEIALEFLA	5039
Chelonia_mydas	LVYRHDRNYEHLFNDVKSKLNQNSLPNSMINMISGELQSYNDICEALSVAEITLGFLA	5065
Rhinatrema_bivittatum	LVYRQDRNYENIFSDVKGKLQQNSL <mark>PNSMINMMSGELHSYSEVCEALS</mark> VAEVAL <mark>G</mark> FLA	5302
Rattus_norvegicus	LVYRRDWNYEHLFMDIKNKMTQNPLPNSAINAISGQLQSYSDACEALSIVEVTLGFLS	5032
Mus_musculus	LVYRRDWNYEHLFMDIKNKMAQSSLPNLAISTISGQLQSYSDACEALSIIEITLGFLS	4979
Homo_sapiens	LVYRHDWNYEHLFMDIKNKMAQDSLPSSVISAISGQLQSYSDACEVLSVVEVTLGFLS	5036
Pan_troglodytes	LVYRHDWNYEHLFMDIKNKMAQDSLPSSVISAISGQLQSYSDACEVLSVVEVTLGFLS	5085
Macaca_mulatta	LVYRHDWNYEHLFMDIKNKMAQDSLPSSVISAISGQLQSYSDACEALSVVEVTLGFLS	5079
	LVYRHDWNYEHLFMDIKNKMPQTSLPSSTLSAISGQLQSYSDACEALSVIEVTLGFLS	5129
Callithrix_jacchus		
Equus_caballus	LVYRRDWNYEHLFMGIRNKMPQNPLPNSAVSAITGQLQSYSNACEALSVIEVTLRFLS	5071
Orcinus_orca	LVYRRDWNYEHLFMDIKNKMPQSPLPNVAISAIRGQLQSYSDACEALSAIEVTLGFLS	5074
Canis_lupus_familiaris		5023
Felis_catus	LVHRRDWNYEHLFADI <mark>K</mark> SKMPQKPLHNAAISAIC <mark>G</mark> QLQSYSDACEALSLVEVTL <mark>G</mark> FLS	5070
Callorhinchus milii	LICRODRNYENIFKDLKNKLPOELLPNSVINTISAELOSYSDICEAFTAVELTLGFLA	5172
Danio_rerio	LVNRQDRNYEIIFKDVKGKVQQELLQPLTQYDLVKELQSYSDVCEALSTVELAVGFLA	5039
	559056005610562056305640	
	33303040	
	<u>:* : * * . :*:* :: </u>	
Pavo_muticus	MAGESTEMLLTDYIENILQMGDQTNPHVLQALRRCHLKHIIALWQLLSTHKSEQLLRLRR	5089
Pavo_cristatus	MA <mark>G</mark> ESTEMLLTDYIENIL <mark>QMGDQTNPH</mark> VLQALR <mark>RC</mark> HLKHIIALWQLL <mark>STHKSEQ</mark> LL <mark>R</mark> LRR	5089
Gallus gallus	MAGENTEMLLTDYIENVLQMGDQTNPHVLQALRRCHLKHIIALWQLLSTHKSEQLLRLRR	5099
Chelonia mydas	MAGEDPDMLLTHYVEVILOMGDOTSPHVLKALSRCHLKHIIALWOLLSTHKSEOLLRLKR	5125
Rhinatrema bivittatum	MTGGESDMPLVTYLKDVLQMRDQMSTHVVQVLSRCHLKHVIALWQFLSAQKSEHLLRLKR	5362
Rattus_norvegicus	TAGGDPSMELNVYIQEVLOMCDOT-SOVLKALNRCOLRHIIALWOFLSAHKSERRLRLKK	5091
Mus_musculus	TAGGDPGMDLNVYIEEVLRMCDQT-AQVLKAFSRCQLRHIIALWQFLSAHKSEQRLRLNK	5038
Homo_sapiens	TAGGDPNMQLNVYTQDILQMGDQT-IHVLKALNRCQLKHTIALWQFLSAHKSEQLLRLHK	5095
Pan_troglodytes	TAGGDPNMQLNVYTQDILQMGDQT-IHVLKALNRCQLKHTIALWQFLSAHKSEQLLRLHK	5144
Macaca_mulatta	TAGGDPNMHLNMYIQDVLRMGDQT-THVSKALDRCQLKHTIALWQFLSAYKSEQLLRLQK	5138
Callithrix jacchus	TAGGEPNMHLNVYIQDVLRMGDQT-AQVLQALNRCQLKHSIALWQFLSAHKSEQLLRLQK	5188
Equus_caballus	TAGGDPNMSLNVYIQDMLRMSEQT-AVALQDLHRCQLRHIIALWQLLSAHKSEQLLHLKK	5130
Orcinus orca	TAGGDPNMHLKVYIQDMLRMGDQA-SQVSEALNRCQLKHTISLWQFLSAHKSEHLLRLRK	5133
Canis_lupus_familiaris		5082
Felis_catus	TAGGNPNMSLNVYVQDVLRMGEQT-ALVLKALHRCQLKHTIALWQLLSAHRSEQLLRLHK	5129
		5232
Callorhinchus_milii	M <mark>SG</mark> EK <mark>PD</mark> LLLVDYLRKVLHM <mark>GDHTAPH</mark> VMEALMRCSLKHIQALWQLLSARKSEYLLRLKR	
Danio_rerio	MTGGEPNMQLGVYLKDVLQMTDHMATHVFKALSRCSLKHCVALWQLLSSLKSETMLRLKR	5099
	565056605670568056905700	
	. * : *: *	
Pavo muticus	DPFEDISTEYKADLSPEMAKLLNTYLVHARLETFLQELHKMIILKLKRVRSADVFRPT	5147
Pavo_cristatus	DPFEDISTEYKADLSPEMAKLLNTYLVHARLETFLQELHKMIILKLKRVRSADVFRPT	5147
Gallus gallus	DPFEDISTEYKADLSPEMAKLLHTYLVHSRLETFLQELHKMIILKLKRVRSVDEFRPT	5157
Chelonia_mydas	D <mark>P</mark> FVDVDAAYKAEL <mark>G</mark> SENTTLLNTFLIQAGLETFLQELHEMIILKLKHTKV <mark>G</mark> DEL <mark>NP</mark> S	5183
Rhinatrema_bivittatum	n <mark>p</mark> feeve <mark>payq</mark> kkl <mark>s</mark> reswrllnafla <mark>q</mark> v <mark>g</mark> letfllelheliflklktpratmdf <mark>np</mark> s	5420
Rattus_norvegicus	ELFQEVDVKYKEDL <mark>SP</mark> RHARLLSTFLNEAGLDSFLLELHEMIVLKLRGAQAESSFNPS	5149
Mus_musculus	ELFREIDVQYKEELSTQHQRLLGTFLNEAGLDAFLLELHEMIVLKLKGPRAANSFNPN	5096
Homo_sapiens	EPFGEISSRYKADLSPENAKLLSTFLNQTGLDAFLLELHEMIILKLKNPQTQTEERFRPQ	5155
Pan_troglodytes	EPFGEISSRYKADLSPENAKLLSTFLNQIGLDAFLLELHEMIILKLKNPQTQTEERFRPQ	5204
Macaca_mulatta	EPFGEISSRYKADLSLDDAKLLSTFLNQIGLDAFLLELHEMIILKLKNPQTEGSFNPE	5196
Callithrix_jacchus	EPFGEISSRYKADLSPEDAKLLSTFLNOTGLDAFLLELHEMMVLKLKNPOTEGSFNPE	5246
Equus_caballus	EPFGEISSKYKVDLSPGDAKLLSTFLNQISLDAFLLELHEMIILKLKNPHTEQDFNPN	5188
Orcinus_orca	EPFGEISPRYKVDLSPENAKLLNTFLNQIGLDAFLLELHEMIVLKLKNPKTAENFNPE	5191
	EPFREISSRYKVGLSPENAKCLSTFLNQMDLDAFLLELHEMMILKLKSPQAEDNFRPE	5140
Felis_catus	EPFREISARYKVGLSPDNAKCLRTFLNQTDLDSFLLELHEMMILKLKSPQAEGNFNPE	5187
Callorhinchus_milii	EPFSGVGDDYRKSLSEEEKKSLQAFFGQSSVDVFILELHEMLILKCRNVQASDALNPT	5290
Danio_rerio	DPFVGISKEYKQPLQEEHKRLLTSFFTKSSADAFLLEMHEFLLLVLKSPKATDTYRPD	5157
	$\dots \dots 5710 \dots \dots 5720 \dots \dots 5730 \dots \dots 5740 \dots \dots 5750 \dots \dots 5760$	

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Pavo_muticus	WG	/KE	<mark>S</mark> LV	AVI	DE	KDSI	LAE	ELζ	ľď	'F <mark>P</mark> D	EIH	ILS	HVA	A <mark>T</mark> W	KAA.	AVE	KR	ER R	ES	5199
Pavo_cristatus	WG	/KE	<mark>S</mark> LV	AVI	DE	KDS	LAE	ELÇ	$\mathbf{r}_{\mathbf{Q}}$	F <mark>P</mark> D	EIH	ILS	HVA	A <mark>T</mark> W	KAA.	AVE	KR	ER R	ES	5199
Gallus_gallus	WG:	LKE	<mark>S</mark> LI	PLI	DE	KDF	LAE	ELÇ	D DA	FPD	EIH	ILS	H <mark>T</mark> A	A <mark>T</mark> W	KAA.	AAF	KR	ER R	ES	5209
Chelonia_mydas	WS:	LKD'	<mark>r</mark> lf	SY	ER	KG <mark>S</mark> 1	VL T	ELI	EDM.	FPE	EII	LS	HCI	AAW.	KAA.	AAI	KR	<mark>DR</mark> R	LS	5235
Rhinatrema_bivittatum	W <mark>S</mark> I	L <mark>RD</mark>	ГLТ	SF	ER	KGVI	OVL <mark>P</mark>	ELI	EEL	FPE	QII	.L <mark>S</mark>	HCV	EAW	KAA.	AAI	RR	DRV	LR	5472
Rattus_norvegicus	W <mark>S</mark> I	LKD'	r <mark>l</mark> v	SY	1ET	KDSI	OVLT	ΈVI	ESÇ	FPD	EII	.MS	SCV	SVW	K <mark>T</mark> A.	ATF	≀ K WI	DRQ	SR	5201
Mus_musculus	W <mark>S</mark> I	LKD'	<mark>[</mark> LV	SYI	1ET	KD <mark>S</mark> I	OILS	EVI	ESÇ	FPE	EII	.MS	SCI	SVW	KIA	ATF	≀ K WI	DRQ	SR	5148
Homo_sapiens	W <mark>S</mark> I	L <mark>RD</mark> '	<mark>[</mark> LV	SYI	4QT	KESI	ILP	EMZ	ASÇ	FPE	EII	ιLΑ	SCV	SVW	K <mark>T</mark> A.	AVI	KW]	NRE	MR	5207
Pan_troglodytes	W <mark>S</mark>	LRD'	<mark>L</mark> LV	SYI	4QT	KESI	ILP	EM/	ASÇ	FPE	EII	LА	SCV	SVW	K <mark>T</mark> A.	AVI	KW]	NRE	MR	5256
Macaca_mulatta	W <mark>S</mark>	LRD'	<mark>L</mark> LV	SYI	1ET	KENI	ILP	EMI	ESÇ	FPE	KII	LА	SCV	SVW	K <mark>T</mark> A.	AVI	KR	DRQ	MR	5248
Callithrix_jacchus	W <mark>S</mark> I	LKD'	<mark>[</mark> LV	SYI	1ET	KESI	ILP	EMI	ESH	FPE	EII	ιLΑ	SCV	SVW	KIA	AAI	KR	DRQ	MR	5298
Equus_caballus	W <mark>S</mark> I	L <mark>RD</mark> '	<mark>[</mark> LV	SYI	1ET	KENI	ILP	EMI	EFÇ	IPE	NII	ιLS	NCV	SVW	KMA.	AEI	KR	ARQ	MR	5240
Orcinus_orca	W <mark>S</mark> I	L <mark>RD</mark> '	<mark>[</mark> LV	SYI	1ET	KESI	ILP	EMI	ESÇ	FPE	EII	ιLS	SCV	SVW	KMA.	AEI	KR	NRQ	TR	5243
Canis_lupus_familiaris	W <mark>S</mark> I	L <mark>RD</mark> '	<mark>[</mark> LV	SYI	1ET	KDS	IPP	ELI	ΞYÇ	FPE	EII	ιLS	NCV	PAW	SLA	V <mark>G</mark> I	KR	ARQ	AT	5192
Felis_catus	W <mark>S</mark> I	LRD'	<mark>L</mark> LV	SYI	1ET	KEGI	IPP	ELI	EFÇ	FPE	EII	ъС	SCV	PVW	RMA.	AEI	KRO	GR <mark>Q</mark>	VR	5239
Callorhinchus_milii	W <mark>S</mark>	LKD:	SLN	SFI	1EQ	KDVI	INLP	ELI	DEC	'F <mark>P</mark> D	RVI)LS	KAV	A <mark>TW</mark>	E <mark>T</mark> A	VLE	'KR	ERL	QLAR	5344
Danio_rerio	WR:	KH'	ľVV	SY	1ER	KDLI	OVPP	EVI	EF	'FPK	EII	LS	EYT	STW	N F S	VNI	₋ RQI	KRS	Qs	5209
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