

# CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep\_msa/SLF Date: Tue Feb 1 14:35:31 2022

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Pavmut	MAPAGPAARVRGGGRRAGPPVRRR---RETLRDCSAAGLRRLPALSTRPAAVPGGSCGSTA	57
Pavcri	MAPAGPAARVRGGGRRAGPPVRRR---RETLRDCSAAGLRRLPALSTRPAAVPGGSCGSTA	57
Gallus_gallus	MAPVGPAAGVRSVRRAGPPVRRRKRRESLRDRITAAGLWRPALITGPAALPGGSCDSAA	60
Anas_platyrhynchos	MLGAAWWSPPGGGLRAVDG-----	19
Chelonia_mydas	-----	
Mus_musculus	-----	
Rattus_norvegicus	-----	
Homo_sapiens	-----	
Pan_troglodytes	-----	
Macaca_mulatta	-----	
Callithrix_jacchus	-----MGDRITLVDPHWQRNSASRRVITTYGVFGLAQGHIGTRGRVPSRRQV	44
Canis_lupus_familiaris	-----MNVEWT	6
Equus_caballus	-----	
Bos_taurus	-----	
Latimeria_chalumnae	-----	
Rhinatrema_bivittatum	-----	
Xenopus_tropicalis	-----M	1
	1.....10.....20.....30.....40.....50.....60	

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Pavmut	APGVSQAASGGRKRRIQFTGFRKKEKKALREMLLKLDVFDNKKYRNCTHIAKKLKCS	117
Pavcri	APGVSQAASGGRKRRIQFTGFRKKEKKALREMLLKLDVFDNKKYRNCTHIAKKLKCS	117
Gallus_gallus	APGVSQAASGGRKRRIQFTGFRKKEKKALREMLLKLDVFDNKKYRNCTHIAKKLKCS	120
Anas_platyrhynchos	----RRVASGGLKRRIQLTGFRGREKKALVELLFLKLDVFDNKKYRNCTHIAKKLKCS	75
Chelonia_mydas	-----MATAVQKRRIQLTGFRKKEKKALVELLFLKLDVFDNKKYRNCTHIAKKLKCS	54
Mus_musculus	-----MEDSATKHIIQMTGFKMEEKEALVKLLLKLDCTFIKSEKYKNCTHIAERLKCS	54
Rattus_norvegicus	-----MEGGATKHVIQMTGFKMEEKEALVKLLLKLDCTFIKSEKYKNCTHIAERLKCS	54
Homo_sapiens	-----MEDGTPKHIIQMTGFKMEEKEALVKLLLKLDCTFIKSEKYKNCTHIAERLKCS	54
Pan_troglodytes	-----MEDGAPKHIIQMTGFKMEEKEALVKLLLKLDCTFIKSEKYKNCTHIAERLKCS	54
Macaca_mulatta	-----MEDGAPKHIIQMTGFKMEEKEALVKLLLKLDCTFIKSEKYKNCTHIAERLKCS	54
Callithrix_jacchus	LRVEKTMEDGAPKHIIQMTGFKMEEKEALVKLLLKLDCTFIKSEKYKNCTHIAERLKCS	104
Canis_lupus_familiaris	LNFAIKMEDGAPKHIIQMTGFKMEEKEALVKLLLKLDCTFIKSEKYKNCTHIAERLKCS	66
Equus_caballus	-----MEDGAPKHIIQMTGFKMEEKEALVKLLLKLDCTFIKSEKYKNCTHIAERLKCS	54
Bos_taurus	-----MEDDAPKHIIQMTGFKMEEKEALVKLLLKLDCTFIKSEKYKNCTHIAERLKCS	54
Latimeria_chalumnae	MPINEKQMEGCVQKCVQLTGFKGEERETLINLLKLDCKFIKSEYRGCTHIAKKPCQS	60
Rhinatrema_bivittatum	-----MEEDVPKRKIIQITGFKDREKDELVELLFMLDCIFIDSEKYENCTHIAKQVCKS	54
Xenopus_tropicalis	NVQRCAMEVTSRKRIIQFTGFRDKEKESLVELLFLKLDCTFIKSEYENCTHIAKNPCRS	61
	.....70.....80.....90.....100.....110.....120	

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Pavmut	EKFLAACAAGKWILTKYEIINSAESGRWLDETTYEWGYKIEKDSHYSPQMOSAPKRWRKE	177
Pavcri	EKFLAACAAGKWILTKYEIINSAESGRWLDETTYEWGYKIEKDSHYSPQMOSAPKRWRKE	177
Gallus_gallus	EKFLAACAAGKWILTKYEIINSAESGRWLDETTYEWGYKIEKDSHYSPQMOSAPKRWRKE	180
Anas_platyrhynchos	EKFLAACAAGKWILTKYEIINSAESGRWLDETTYEWGYKIEKDSHYSPQMOSAPKRWRKE	135
Chelonia_mydas	EKFLAACAAGKWILTKDYIINSVESGRWLDETTYEWGYKIEKDSHYSPQMOSAPKRWRKE	114
Mus_musculus	EKFLAACAAGKWILTKDYIINSVESGRWLDETTYEWGYKIEKDSHYSPQMOSAPKRWRKE	114
Rattus_norvegicus	EKFLAACAAGKWILTKDYIINSVESGRWLDETTYEWGYKIEKDSHYSPQMOSAPKRWRKE	114
Homo_sapiens	EKFLAACAAGKWILTKDYIINSVESGRWLDETTYEWGYKIEKDSHYSPQMOSAPKRWRKE	114
Pan_troglodytes	EKFLAACAAGKWILTKDYIINSVESGRWLDETTYEWGYKIEKDSHYSPQMOSAPKRWRKE	114
Macaca_mulatta	EKFLAACAAGKWILTKDYIINSVESGRWLDETTYEWGYKIEKDSHYSPQMOSAPKRWRKE	114
Callithrix_jacchus	EKFLAACAAGKWILTKDYIINSVESGRWLDETTYEWGYKIEKDSHYSPQMOSAPKRWRKE	164
Canis_lupus_familiaris	EKFLAACAAGKWILTKDYIINSVESGRWLDETTYEWGYKIEKDSHYSPQMOSAPKRWRKE	126
Equus_caballus	EKFLAACAAGKWILTKDYIINSVESGRWLDETTYEWGYKIEKDSHYSPQMOSAPKRWRKE	114
Bos_taurus	EKFLAACAAGKWILTKDYIINSVESGRWLDETTYEWGYKIEKDSHYSPQMOSAPKRWRKE	114
Latimeria_chalumnae	EKFLAVCAAGKWILTKYEVIVSAKAGRWVDEAAYEWGSYLSKGSVYPVAMETAARKWREK	120
Rhinatrema_bivittatum	EKYLATCAAGKWILTKDYVINSVESGRWLDETTYEWGYKIEKDSHYSPQMOSAPKRWRKE	114
Xenopus_tropicalis	EKWLAACSAGKWILTKDYVINSVESGRWLDETTYEWGYRIERHSPYSPQMOSAPKRWRHE	121
	.....130.....140.....150.....160.....170.....180	

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* : . ***: *** : : . : : . * : * * : * : . : ***: : .
Pavmut      LENSAPGAFHRWKVILAVKEGYERVAPIRRVLEAGKATVYSSQNVESGITHVFLNKFF 237
Pavcri      LENSAPGAFHRWKVILAVKEGYERVAPIRRVLEAGKATVYSSQNVESGITHVFLNKFF 237
Gallus_gallus LKNSGAPGAFHRWKVILAVKEGYEQVAAIRRVLEAGKATVCSSQNVESDITHVFLNKFF 240
Anas_platyrhynchos LMQSSAPGAFHRWKVILAVKEGGKRMMSVIRVLOAGKATICSSQNMGSDITHIFLHNKFF 195
Chelonia_mydas LTCSGALGAFHRWKVILLVKEGDKRRDSITRVLEAGKAIYPPQKEVRAVTHVFTDNKSV 174
Mus_musculus LKRTGAPGAFHRWKVLLVRAD-KRSDSLRVLEAGKANVILPKNSPSGITHVIASNARI 173
Rattus_norvegicus LKRTGAPGAFHRWKVLLVRAD-KRSDSLRVLEAGKANVILPRSSPSGITHVIASNARI 173
Homo_sapiens LKRTGAPGAFHRWKVLLVVRTD-KRSDSLIRVLEAGKANVILPKSSPSGITHVIASNARI 173
Pan_troglodytes LKRTGAPGAFHRWKVLLVVRTD-KRSDSLIRVLEAGKANVILPKSSPSGITHVIASNARI 173
Macaca_mulatta LKRTGAPGAFHRWKVLLVVRTD-KRSDSLIRVLEAGKANVILPKSSPSGITHVIASNARI 173
Callithrix_jacchus LKRTGAPGAFHRWKVLLVVRTD-KRSDSLIRVLEAGKANVILPKSSPSGITHVIASNARI 223
Canis_lupus_familiaris LKRTGAPGAFHRWKVLLVRAD-KRSDSLRVLEAGKANVILPKSSQSGITHVIASNARI 185
Equus_caballus LKRTGAPGAFHRWKVLLVRAD-KRSDSLRVLEAGKANVILPKSSPSGITHVIASNARI 173
Bos_taurus LKRTGAPGAFHRWKVLLVRAD-KRSDSLRVLEAGKANVILPKNSPTGITHVIASNARI 173
Latimeria_chalumnae LECSRAPGAFHDWKVFLRKKDKRRGAFAFERILRAGKATILSRETSPNEVTHVLTNNMVV 180
Rhinatrema_bivittatum LTRSSAPGAFHRWKVLLVKEGDKRRDAFVRVLLAGKAHYHQNIEGEITHVFTNNRSL 174
Xenopus_tropicalis LTRTGVKGAFRKWKVAILVDKQKQREAFERVLRAQAIIICNAEELHEEVTHVFFKQSNF 181
.....190.....200.....210.....220.....230.....240

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Pavmut      PVQKEKCFSEAQYYPLOYVEDYLLEKDIQN-TEVTQIKG----- 275
Pavcri      PVQKEKCFSEAQYYPLOYVEDYLLEKDIQN-TEVTQIKG----- 275
Gallus_gallus PVQKEKCFSEAQYYPLOYVEDYLLEKDIQN-TEVTQING----- 278
Anas_platyrhynchos LMQNEKRFPEDQCYPLYIEDYLFKEIQN-IEVTQIMNY----- 233
Chelonia_mydas SIEREKHLFEAPYYPVQYIGDYLFENEIQNITEDNOMNH----- 213
Mus_musculus SAEREQENFKAPFYPIQYLGDFLLEKEIQN-DEHSQISPAWTKYNNQEKGN----DVGFP 228
Rattus_norvegicus SAEREQENFKAPFYPIQYLGDFLLEKEIQN-DEDSQISSGRITKYNQEKSKDFKRDGMGFL 232
Homo_sapiens KAEKEKDNFKAPFYPIQYLGDFLLEKEIQN-DEDSQTNVWTEHSNEETNKDFRKDAGFL 232
Pan_troglodytes KAEKEKDNFKAPFYPIQYLGDFLLEKEIQN-DEDSQTNVWTEHSNEETNKDFRKDAGFL 232
Macaca_mulatta KAEKEKDNFKAPFYPIQYLGDFLLEKEIQN-DEDSQTNVWTEHSNEEKNKDFRKDAGFL 232
Callithrix_jacchus KAEKEKDNFKAPFYPIQYLGDFLLEKEIQN-DEDSQTSVWTKHSNEEKNKDFRDDAGFL 282
Canis_lupus_familiaris KAEQEKDHFKAPFYPIQYLGDFLLEKEIQN-DEDSQSNVWHKHNQEKNKDFWKDMGFL 244
Equus_caballus KAEQEKDNFKAPFYPIQYLGDFLLEKEIQN-GEDSQTNVWNKHSNEEKNKDFRKDMRFL 232
Bos_taurus KAEQEKDDFKAPFYPIQYLEDLLEKEIHN-DEDSQTNSTWKNHSSQEKSNDFRENMGFL 232
Latimeria_chalumnae LTEEEKKAFNAPYYPVKYLGKFLLEVSSENTESVVOQKQIEMG----- 221
Rhinatrema_bivittatum RAQQERKDFSAPYYPYPIQYLGDFLLENTVRRNSENNLVEYLS----- 216
Xenopus_tropicalis DANREKQNFDKSYHSVQYLGSYLLEDPIEG----- 211
.....250.....260.....270.....280.....290.....300

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Pavmut      ----- 275
Pavcri      ----- 275
Gallus_gallus ----- 278
Anas_platyrhynchos ----- 233
Chelonia_mydas ----- 213
Mus_musculus EMKGAG-ENMYRTQ-----NKMENHNKNVSDRFVLSEHH 261
Rattus_norvegicus EMKGAG-ENMYRTQ-----NKMGNHNENVDKFFVLSEHH 265
Homo_sapiens EMKGALRETMRTQ-----KEMQNH-EDVNVGSILIQHH 265
Pan_troglodytes EMKGALRETMRTQ-----KEMQNH-EDVNVGSILIQHH 265
Macaca_mulatta EMKGALKETMYRTQ-----KEMQNHDEDVNVGSILSEHH 266
Callithrix_jacchus EMKGALRETMRTQ-----KEMQNHDEDVNVGSILTEHH 316
Canis_lupus_familiaris EMKGALKETMCRTQ-----KEIQNHDEDVNVSSILLTEHH 278
Equus_caballus EMKGALRETTCTRTQ-----KEIQNHDEDVNVSSILLTEHR 266
Bos_taurus EMKGTCLKETMCRTQGFPGGASGKEPACQCRRHKFGGSVPEKEMKNHDEDVTISSILLTEHQ 292
Latimeria_chalumnae ----- 221
Rhinatrema_bivittatum ----- 216
Xenopus_tropicalis ----- 211
.....310.....320.....330.....340.....350.....360

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Pavmut	-----	275
Pavcri	-----	275
Gallus_gallus	-----	278
Anas_platyrhynchos	-----	233
Chelonia_mydas	-----	213
Mus_musculus	KK-KFKDFRKDIRSVKKRNTLRRHGLENOKETKKKDKNIQRSYILRKKNKKE--GYCKTD	318
Rattus_norvegicus	KK-KFRDFRKDMKSIKKTNTFRRAHENQKETKKKDKNVORSYILRKKNIKE--GYCKTD	322
Homo_sapiens	KKEKFSGSSKDLKFVKMRNTFGSHTYENQKEIKKKDEDIORSYTLRRKRKKGKESNCKKG	325
Pan_troglodytes	KKEKFSGSSKDLKFVKMRNTFGSHTYENQKEIKKKDEDIORSYTLRRKRKKEKESNCKKD	325
Macaca_mulatta	KKEKFSGSSKDLKFVKMRNTFGSHTYENQKEIKKKDEDVORSYTLRRKRKKEKESNCKKD	326
Callithrix_jacchus	KKEKSSGSSKDLKFVKMRNTFRHTYENQKEIKKKDEDIORSYALRRKRKKEKESDCKKD	376
Canis_lupus_familiaris	KKEKLKRSRKGLKFVKMRGALRRHTCGTQKEIKKKDEDIORSYTLRRKRKKEKESDCKKD	338
Equus_caballus	KKEKFRDSCDKLKFVKMRNALGRHTYGNQKEIKKKDEGILRSYTLRRKCKKEKGRVSRKD	326
Bos_taurus	SKERFRDSRKNLKFVKMRNALGRHTYRNG-EMKKKDEDISTYTLRRKRKKEKESDCKKD	351
Latimeria_chalumnae	-----	221
Rhinatrema_bivittatum	-----	216
Xenopus_tropicalis	-----	211
	.....370.....380.....390.....400.....410.....420	

Pavmut	-----FLPAQETDKKKSNMQLIEMKNAVI---KHM	302
Pavcri	-----FLPAQETDKKKSNMQLIEMKNAVI---KHM	302
Gallus_gallus	-----FLPAHETDKNKSNMQLIEMKNAVI---KHM	305
Anas_platyrhynchos	-----FLPAQETDQNESNVKLVELKNAVL---KHM	260
Chelonia_mydas	-----LLAEQEARDTMSDMQLIEMKNALI---KHI	240
Mus_musculus	DAHDTIRSMKKRGHYREQEMKNPLLLTDGTEKSKTKDVKTNMNLIEIKNALKKQIYKDI	378
Rattus_norvegicus	DAHDTTRSTLKKRWSYRDQEMKNSLLTDCAKESKTKDVKANVDLIEVKNALKKQIHRDI	382
Homo_sapiens	VEHEKIKSTLRRHIYNRDQEMKNSIFAAYAKESKAMAICTDQDVVEIKNTLR---KHI	381
Pan_troglodytes	VEHEKIKSTLRRHIYNRDQEMKNSIFAAYAKESKAMAICTDQDVVEIKNTLR---KHI	381
Macaca_mulatta	VEHEKIKSTLRRHIYNRDQEMKNSIFAAYAKESKAMAICTDQDVVEIKNTLR---KHI	382
Callithrix_jacchus	VEHEEIKSTLRRHMYNRDQEMKNSIFAAYTESKNMDIRTDQDVVEIKHALR---KHI	432
Canis_lupus_familiaris	IEHNKIRSTSRKHVY-RDQEMKNSVFADRAKESKTKDVEITDQDVIAEIKNDLR---KHI	393
Equus_caballus	VEHNKIETTLRKQIY-RDQEMKNSIFADHAKESKTKDIRTDMQDIVEIKNTLR---KHI	381
Bos_taurus	IEHD--RSTLRKHIIY-RDQERKNSVFAGHAKESKTKDIRTNVDIVDLKNALR---KHI	404
Latimeria_chalumnae	-----MSLRCTQETLPSIKGLELSTPNAEPREKTPNC	254
Rhinatrema_bivittatum	-----VCDPLERRSRDDLNMQFAEMKIITLK---QHI	245
Xenopus_tropicalis	-----ASEEMTFEQVDDIIONMIW---KRF	232
	.....430.....440.....450.....460.....470.....480	

Pavmut	.. : : * * : : : : * :	
Pavcri	YFVEAAKQKFTH-KDFLNRNCPKVKNITNLSGGRLYIFEELIEEHLSEVIEELAVGQKYS	361
Gallus_gallus	YFVEAAKQKFTH-KDFLNRNCPKVKNITNLSGGRLYIFEELIEEHLSEVIEELAVGQKYS	361
Anas_platyrhynchos	YFVEAAKQKFAH-KDFLNRNCPKVKNITNLSGGRLYIFEELIEEHLSEVIEELAVGQKYS	364
Chelonia_mydas	YFVESAKHKSAH-KDQLN--NPKLKNITLSTAWRIFEGLEIEEHLDPDVISVAAVQKYS	317
Mus_musculus	YFAQTQVKQKSTQ-IDQLSGCGTEVKTVDLSRGILCILEGLVEGHFFTDVITELAAQKYS	299
Rattus_norvegicus	YRAQAVRYNCIR-VDKQPVYNVEVKNSEFPFGILNLIENLIEGQFFKEAIEELSSLOAHY	437
Homo_sapiens	YRAQAVRYNCIR-VDKQPVYNVEVKNAEFPRGILNLIENLIEGQFFKEAIEELSSLOAHY	441
Pan_troglodytes	YRAQAVRYNCIR-IDKQPVYNVEVKNAEFPRGVLNLIENLIEGQFFKEAIEELSTLOAHY	440
Macaca_mulatta	YRAQAVRYNCIR-IDKQPVYNVEVKNAEFPRGVLNLIENLIEGQFFKEAIEELSTLOAHY	440
Callithrix_jacchus	YRAQAVRYNCIR-IDKQPVYNVEVKNAEFPRGVLNLIENLIEGQFFKEAIEELSTLOAHY	441
Canis_lupus_familiaris	YRAQAFRHNIR-VDKQPVYNVEVKNAEFPRGILNLIENLIEGQFFKEAIEELSSLOAHY	491
Equus_caballus	YRAQAIRYSCIR-IDKQPVYNVEVKNAEFPRGVLNLIENLIEGQFFKEAIEELSSLOAHY	452
Bos_taurus	YRAQAIRYSCIR-IDKQPVYNVEVKNAEFPRGVLNLIENLIEGQFFKEAIEELSSLOAHY	440
Latimeria_chalumnae	YRAQAVRYRGIR-IDKQPAYNVEVKNAEFPRGILNLIENLIEGQFFKEAIEELSSLOAHY	463
Rhinatrema_bivittatum	TTASLQEEFEI-VLKKHLCSQFTPLPLPRAIFRNIEENLLDGOFFMEALQELRSQLDNF	313
Xenopus_tropicalis	CLAQAFHHRVYVGGITLHLYLKAENFETPRVSLNRIEGLLEGHFFIEAIEELSSLLPYF	305
	CLAQGLHHQCIK--RHRIVKKGNVNSFDNGRACLNRVEGLIDGHFFIEALGELECLLP-T	289
	.....490.....500.....510.....520.....530.....540	

## CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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Pavmut	LPPVQLFHSLLEHVLL	ENTDAVFCAKLHHVLYLVLQHDPPWKS	TSMLGYLLDLLQCPICK	421									
Pavcri	LPPVQLFHSLLEHVLL	ENTDAVFCAKLHHVLYLVLQHDPPWKS	TSMLGYLLDLLQCPICK	421									
Gallus_gallus	LPPVQLLHSLLERVLL	ENTDAVFCAKLHHVLDLILQHDPPWKS	TSMLGYLLDLLQCPICK	424									
Anas_platyrhynchos	LPPVHFFHSLLEHVLL	GNITDAVFLAKFRHVLYVVLQCDPPWKS	PSLTRYLLDFLQCPICK	377									
Chelonia_mydas	IPPVQLHLSLLEHMLQ	GNITAFSAKFPHILLYILLQDPPWKS	PSMLRYYLEFLQCPICM	359									
Mus_musculus	IPPVCLLHAILLENVL	QDKIDT-FSGRYFHILSALLHLHPPWKS	PAMLKYYLELFQCPCTCM	496									
Rattus_norvegicus	VPPVCLLHAILLENVL	QDNIDT-FSGRYFHILSALLHLHPPWKS	PAMSRYYLELFQCPCTCM	500									
Homo_sapiens	IPPVCVLHAILLENVL	QDNIDT-FSGRYFHILSALLHLHPPWKS	PAMSRYYLELFQCPCTCM	499									
Pan_troglodytes	IPPVCVLHAILLENVL	QDNIDT-FSGRYFHILSALLHLHPPWKS	PAMSRYYLELFQCPCTCM	499									
Macaca_mulatta	IPPVCIHLAILLENVL	QDNIDT-FSGRYFHILSALLHLHPPWKS	PAMSRYYLELFQCPCTCM	500									
Callithrix_jacchus	IPPICLHAILLENILQ	DNIDT-FSGRYFHILSALLHLHPPWKS	PAMSRYYLELFQCPCTCM	550									
Canis_lupus_familiaris	IPPVCLLHAILLENIL	QDNIDT-FSGRYFHILSALLHLHPPWKS	PAMSRYYLELFQCPCTCM	511									
Equus_caballus	IPPACLLHAILLENVL	QDNIDT-FSGRYFHILSALLHLHPPWKS	PAMSRYYLELFQCPCTCM	499									
Bos_taurus	IPPVYLLHAILLENIL	QDNIDT-FSGRYFHILSALLHLHPPWKS	PAMSTYYLELFQCPCTCM	522									
Latimeria_chalumnae	IPPVCLLQSVLQTI	MODADIVLSSTFLQVLYMLLHLYPPWQSPSRVKYYLDLILQCPVCK	373										
Rhinatrema_bivittatum	VPPVHFLQTLIEHLM	OGNLNINLLSRIFDIFYTLVHLHPPWKS	SDMLRYLLDLLQCPVCT	365									
Xenopus_tropicalis	LPPIHVFLQTLIKNLL	QGNIDTCFGRLEDIFYNLLWFHPWKS	SRMVOYYLDFLQCPCLQ	349									
	.....550.....	560.....	570.....	580.....	590.....	600							

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Pavmut	KGTWNLIEMLVRSCLYCR-NICHAVPVSGK	-----	ADEQRTVHKITLLKFFFDLVKAEVEF		475
Pavcri	KGTWNLIEMLVRSCLYCR-NICHAVPVSGK	-----	ADEQRTVHKITLLKFFFDLVKAEVEF		475
Gallus_gallus	KGTWNLIEMLVRSCLHCK-NICHAVPVSGK	-----	ADEQRTVHKITLLKFFFDLVKAEVES		478
Anas_platyrhynchos	NGTWSFVEMLVRSCLYCK-IICHAAPDSGK	-----	ADEQRIVHKITLLKFFFDLVKAEVEF		431
Chelonia_mydas	RGTWSLIEVEMLVRSCLYCK-SFCHAVSSEK	-----	ISDQRVVKALLKFFFDLVNAEVOA		413
Mus_musculus	KGAWDFTEVLIRSCLFNE-DFCHQISEN	-----	ISTKVNLITLLKFFFNLLGEVRH		547
Rattus_norvegicus	KGAWPLVEMLVRSCLFNE-GFCHQISEN	-----	IGSKVAHLITLLKFFFNLLGEVRH		551
Homo_sapiens	KGAWSLVEVLIRSCLFNE-SFCHQISEN	-----	IGSKVLHLITLLKFFFNLTIESEVOH		550
Pan_troglodytes	KGAWSLVEVLIRSCLFDE-SFCHQISEN	-----	IGSKVLHMLITLLKFFFNLTIESEVOH		550
Macaca_mulatta	KGAWSLVEVLIRSCLFNE-SFCHQISEN	-----	IGSKVLHLITLLKFFFNLTIESEVOY		551
Callithrix_jacchus	KGAWSLVEVLIRSCLFNE-SFCHQISEN	-----	IGSKVLHLITLLKFFFNLTIESEVOH		601
Canis_lupus_familiaris	KGAWSLIEVLIRSCLYNE-SFCHQISKNI	-----	IGTKVLYLITLLKFFFNLTIESEVRH		563
Equus_caballus	KGAWSLIEVLVRSCLFNE-SFCHQISENI	-----	IGSKVLHLITLLKFFFNLTIESEVRH		551
Bos_taurus	KGTWSLIEVLIRSCLFNE-SFCHQISENI	-----	IGSKVLHLITLLKFFFNLTIESEVRH		574
Latimeria_chalumnae	RGSWSFIDMVIRSCIYNG-SSCHLVSGPDVS	----	ELELKFYKAMLYFFNLFEAELDA		428
Rhinatrema_bivittatum	RGTWSLIEMLVRSCLNSK-CFCHAINSQEME	----	LKEQKIVHETITLLKFVLDVVOAEVOA		420
Xenopus_tropicalis	RGSWPFIEVLARSFLNEQLSLCHSSPDVGNETSKMDVNIRVVAACILKYVANIIOEEAKA				409
	.....610.....620.....630.....640.....650.....660				

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Pavmut	L	T	E	R	L	V	E	G	I	N	S	H	Q	H	Q	V	M	--Q	T	V	L	L	K	T	F	W	L	G	D	E	T	S	V	L	F	T	K	H	I	N	I	L	V	D	W	V	I	L	S	H	R	E	L	E	R	K	N	533	
Pavcri	L	T	E	R	L	V	E	G	I	N	S	H	Q	H	Q	V	M	--Q	T	V	L	L	K	T	F	W	L	G	D	E	T	S	V	L	F	T	K	H	I	N	I	L	V	D	W	V	I	L	S	H	R	E	L	E	R	K	N	533	
Gallus_gallus	L	K	K	S	I	L	V	E	G	I	N	S	H	Q	H	Q	V	M	--Q	T	V	L	L	K	T	F	W	L	G	S	E	T	S	V	L	F	T	K	H	I	N	I	L	V	D	W	V	I	H	S	Y	R	E	L	E	S	K	N	536
Anas_platyrhynchos	L	T	K	S	L	V	E	E	I	N	S	H	Q	H	Q	V	M	--Q	T	V	L	L	K	T	F	W	L	G	S	E	T	S	V	L	F	T	K	H	I	N	I	L	A	D	W	V	I	L	S	H	R	E	L	N	R	T	N	489	
Chelonia_mydas	L	T	R	R	L	C	E	G	A	N	S	O	L	L	Q	V	M	--Q	T	V	L	L	K	T	F	W	L	G	S	E	T	S	S	L	L	T	K	Q	I	N	I	L	V	D	W	V	I	H	S	Y	R	E	K	F	K	T	N	471	
Mus_musculus	L	S	Q	K	L	C	D	W	S	D	S	Q	S	L	K	I	T	G	--K	A	I	L	H	E	I	F	W	S	G	S	E	T	S	G	L	L	T	K	P	V	N	M	L	E	W	T	I	Y	S	H	K	E	K	C	K	S	N	605	
Rattus_norvegicus	L	S	Q	K	L	C	D	W	S	D	S	Q	N	L	K	V	A	E	--K	A	I	L	H	E	I	F	W	S	G	S	E	T	S	G	L	L	T	K	P	V	N	M	L	E	W	T	I	Y	S	H	K	E	K	C	K	S	N	609	
Homo_sapiens	L	S	Q	K	L	D	W	S	D	S	Q	N	L	K	I	T	G	--K	A	M	L	L	E	I	F	W	S	G	S	E	T	S	G	L	L	T	K	P	V	N	M	L	E	W	T	I	Y	S	H	K	E	K	F	K	S	N	608		
Pan_troglodytes	L	S	Q	K	L	D	W	S	D	S	Q	N	L	K	I	T	G	--K	A	M	L	L	E	I	F	W	S	G	S	E	T	S	G	L	L	T	K	P	V	N	M	L	E	W	T	I	Y	S	H	K	E	K	F	K	S	N	608		
Macaca_mulatta	L	S	Q	K	L	D	W	S	D	S	Q	N	L	K	I	T	G	--K	A	M	L	L	E	I	F	W	S	G	S	E	T	S	G	L	L	T	K	P	V	N	M	L	E	W	T	I	Y	S	H	K	E	K	C	K	S	N	609		
Callithrix_jacchus	L	S	Q	K	L	D	W	S	D	S	Q	S	L	K	I	T	G	--K	A	M	L	L	E	I	F	W	S	G	S	E	T	S	G	L	L	T	K	P	V	N	M	L	E	W	T	I	Y	S	H	K	E	K	C	K	S	N	659		
Canis_lupus_familiaris	L	S	Q	K	L	D	W	S	D	S	Q	S	L	K	I	T	G	--K	A	I	L	L	E	I	F	W	S	G	N	E	A	S	G	L	L	T	K	P	V	N	M	L	E	W	T	I	Y	S	H	K	E	K	C	K	S	N	621		
Equus_caballus	L	S	Q	K	L	D	W	S	D	S	Q	S	L	K	I	T	G	--K	A	V	L	L	E	I	F	W	S	G	S	E	T	S	G	L	L	T	K	P	V	N	M	L	E	W	T														



# CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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      . . . . . * . . . . . : . . . . . : . . . . . : . . . . . : . . . . . :
Pavmut  DAFRRREIACLLNAILGTVDYWIVSGLLMDRNVFHQIADDLAHYIAIACDDFSICDFKMF 593
Pavcri  DAFRRREIACLLNAILGTVDYWIVSGLLMDRNVFHQIADDLAHYIAIACDDFSICDFKMF 593
Gallus_gallus DAFRRREIACLLNAILGTVDYWIVSGLLMDRNVFHQIADDLAHYIAIACDDFSISDFKMF 596
Anas_platyrhynchos DAFRCIEASLLKAILGTVEYWIISGLLMDRNVFCQIAGDLAQYIAIACDDFSVHDLQTF 549
Chelonia_mydas DVFKDEVAMLLTGILGTVEYWILSGFMMDRNVLHQVADDLANYIAISCDDFSTQELKMF 531
Mus_musculus DVFKHELSYLLTGILGAAVDYWIFLGIQMGGRNVIRHMSDDLGSYISLSCDDFSSKELEIF 665
Rattus_norvegicus DVFKHELSYLLTGILGTAVDYWIFLGIQMGGRNVIRHMSDDLGSYISLSCDDFSSKELEIF 669
Homo_sapiens DVFKHELAYLLLAGILGAAIDYWIFLGLKMGRNVMRHMSDDLGSYVSLSCDDFSSQELEIF 668
Pan_troglodytes DVFKHELAYLLLAGILGAAIDYWIFLGLKMGRNVMRHMSDDLGSYVSLSCDDFSSQELEIF 668
Macaca_mulatta DVFKHELAYLLTGILGAAIDYWIFLGLKMGRNVMRHMSDDLGSYISLSCDDFSSQELEIF 669
Callithrix_jacchus DVFKHELAYLLLAGILGAAIDYWIFLGLKMGRNVMQHMSDDLGSYISLSCDDFSSQELEIF 719
Canis_lupus_familiaris DVFKHELAYLLTGILGAAIDYWIFLGLKKGKVMRHMMSDDLGSYVSLSCDDFTSQELEIF 681
Equus_caballus DVFKHELAYLLTGILGAAVDYWIFLGLKMGRNVMRHMSDDLGSYVSLSCDDFSSQELEIF 669
Bos_taurus DVFRHELAYLLTGILGAAIDYWIVLGLNMGRNVMRHMSDDVGSYVSLSCDDFSSQDLEIF 692
Latimeria_chalumnae EVS--EVAFLLSGMLGVAVEYWLLLSRIKDRYVNVQVENDIASIFILCDDFSAEELEKL 543
Rhinatrema_bivittatum DVFKHQVAYLLNGILGAAVEYWVLLGFLLDKCMIQVTVLANYISILCDDFSSSELEVL 540
Xenopus_tropicalis DVLVQEVASSLNMMMLSSAVEYWILLGFYLNKLIYQVAHDLAFFICVPCEDFSSMEEKKF 526
      .....730.....740.....750.....760.....770.....780

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      . . . . . * * * * * * : : : : . . . . . * * * * * * : . . . . . :
Pavmut  ICSIPSLWLQMFVAEAVFKKMCQRNVITISTEPLSLQKIIGPYFLALREMGMCETRKVRK 653
Pavcri  ICSIPSLWLQMFVAEAVFKKMCQRNVITISTEPLSLQKIIGPYFLALREVMCETRKVRK 653
Gallus_gallus ICSIPSLWLQMFVAEAVFKKMCQRNVITISTEPLSLQKIIGPYFLALREVMCETRKVRK 656
Anas_platyrhynchos ICTIPSLWLQMFVAEAVFKKLCQNNVTISTEPLSLQKIVCSYLPALREVMGCDTRKMHK 609
Chelonia_mydas ICSIPSLWLQMFVAEAVFKKLCQNNVTISTEPLSLQKIVCSYLPALREVMGCDTRKMHK 591
Mus_musculus ICSFSSSWLQMFVAEAVFKKLCQNNVTISTEPLSLQKIVCSYLPALREVMGCDTRKMHK 725
Rattus_norvegicus ICSFSSSWLQMFVAEAVFKKLCQNNVTISTEPLSLQKIVCSYLPALREVMGCDTRKMHK 729
Homo_sapiens ICSFSSSWLQMFVAEAVFKKLCQNNVTISTEPLSLQKIVCSYLPALREVMGCDTRKMHK 728
Pan_troglodytes ICSFSSSWLQMFVAEAVFKKLCQNNVTISTEPLSLQKIVCSYLPALREVMGCDTRKMHK 728
Macaca_mulatta ICSFSSSWLQMFVAEAVFKKLCQNNVTISTEPLSLQKIVCSYLPALREVMGCDTRKMHK 729
Callithrix_jacchus ICSFSSSWLQMFVAEAVFKKLCQNNVTISTEPLSLQKIVCSYLPALREVMGCDTRKMHK 779
Canis_lupus_familiaris ICSFSSSWLQMFVAEAVFKKLCQNNVTISTEPLSLQKIVCSYLPALREVMGCDTRKMHK 741
Equus_caballus ICSFSSSWLQMFVAEAVFKKLCQNNVTISTEPLSLQKIVCSYLPALREVMGCDTRKMHK 729
Bos_taurus ISSFSSSWLQMFVAEAVFKKLCQNNVTISTEPLSLQKIVCSYLPALREVMGCDTRKMHK 752
Latimeria_chalumnae LSLIQSPWLQMFVAEAVFKKLCQNNVTISTEPLSLQKIVCSYLPALREVMGCDTRKMHK 603
Rhinatrema_bivittatum ICSIPSPWLQMFVAEAVFKKLCQNNVTISTEPLSLQKIVCSYLPALREVMGCDTRKMHK 600
Xenopus_tropicalis ISSIASPWLQMFVAEAVFKKLCQNNVTISTEPLSLQKIVCSYLPALREVMGCDTRKMHK 586
      .....790.....800.....810.....820.....830.....840

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      . . . . . * * * * * * : : : : . . . . . * * * * * * : . . . . . :
Pavmut  TK--KIGHWPCPASQRALQMLNGGEQNOVKVLPDLPSLFRDSN--CRTRKRA----KASD 705
Pavcri  TK--KIGHWPCPASQRALQMLNGGEQNOVKVLPDLPSLFRDSN--CRTRKRA----KASD 705
Gallus_gallus AK--EIGHWPGPASQRALQMLNGGEQNOVKVLPDLPSLFRGSK--CCTRKRA----KASD 708
Anas_platyrhynchos AKKKKIGHRPCPESQRALQMLNGGEQNOVKVLPDLPSLFRGSK--CCTRKRA----KASD 667
Chelonia_mydas VKKKKIGHRPCPESQRALQMLNGGEQNOVKVLPDLPSLFRGSK--CCTRKRA----KASD 651
Mus_musculus PK--KLCQRPCLESQRALQMLNGGEQNOVKVLPDLPSLFRGSK--CCTRKRA----KASD 782
Rattus_norvegicus PK--KLCQRPCLESQRALQMLNGGEQNOVKVLPDLPSLFRGSK--CCTRKRA----KASD 787
Homo_sapiens SK--KIGQRPCFDSQRTLLMLNGTKQKQVEGLPELPELNLAKCSSLKRLKKKSEGEELSC 786
Pan_troglodytes SK--KIGQRPCFDSQRTLLMLNGTKQKQVEGLPELPELNLAKCSSLKRLKKKSEGEELSC 786
Macaca_mulatta SK--KIGQRPCFDSQRTLLMLNGTKQKQVEGLPELPELNLAKCSSLKRLKKKSEGEELSC 787
Callithrix_jacchus SK--KIGQRPCFDSQRTLLMLNGTKQKQVEGLPELPELNLAKCSSLKRLKKKSEGEELSC 837
Canis_lupus_familiaris PK--KIGQRPCFDSQRTLLMLNGTKQKQVEGLPELPELNLAKCSSLKRLKKKSEGEELSC 799
Equus_caballus SK--KIGQRPCFDSQRTLLMLNGTKQKQVEGLPELPELNLAKCSSLKRLKKKSEGEELSC 787
Bos_taurus PK--KIGQRPCFDSQRTLLMLNGTKQKQVEGLPELPELNLAKCSSLKRLKKKSEGEELSC 810
Latimeria_chalumnae LQGKKMGQWPQSEPRRPLFTLTGSRQSHARVLPDLPPNLSSTDPLSKRLRRTSVPEQST 663
Rhinatrema_bivittatum KKRNMKGFPWPQSEPRRPLFTLTGSRQSHARVLPDLPPNLSSTDPLSKRLRRTSVPEQST 660
Xenopus_tropicalis KRKRKIGQRCLESQKALLMLNGENNYGDVLLDLPR-----VLPKLRKRSSESASFV 638
      .....850.....860.....870.....880.....890.....900

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# CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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: ** : : * **:**** . *:.*:*** ** . * ** ** :*****
Pavmut T-KENRSLWAEENFYRRNAKGQTALHGACIRNKVERLIQLLSPGIDINSKDYAGWTPL 764
Pavcri T-KENRSLWAEENFYRRNAKGQTALHGACIRNKVERLIQLLSPGIDINSKDYAGWTPL 764
Gallus_gallus T-KENC SHWVEEMNFYRRNAKGQTALHGACIRNKVERLIQLLSPGIDINSKDYAGWTPL 767
Anas_platyrhynchos T-KENWYISAEAAHFYRRNVKGETALHEACIRNKVERLIQLLSPGIDINVKDYAGWTPL 726
Chelonia_mydas T-KENRHPLDEEMHFYKTNKGETALHIACIRNKVERLIQLLPFPGTIDINVKDYAGWTPL 710
Mus_musculus S-KENCPSLVTKMNFHKTNLKGETALHRVCIKNOVEKLIIILLSLPGIDINVKDNAGWTPL 841
Rattus_norvegicus S-KENCPSLVTKMNFHKTNLKGETALHRVCIKNOVEKLIIILLSLPGIDINVKDNAGWTPL 846
Homo_sapiens S-KENCPSVVKMNFHKTNLKGETALHRACINNOVEKLIIILLSLPGIDINVKDNAGWTPL 845
Pan_troglodytes S-KENCPSVVKMNFHKTNLKGETALHRACINNOVEKLIIILLSLPGIDINVKDNAGWTPL 845
Macaca_mulatta S-KENCPSVVKMNFHKTNLKGETALHRACINNOVEKLIIILLSLPGIDINVKDNAGWTPL 846
Callithrix_jacchus S-KENCPSVVKMNFHKTNLKGETALHRACINNOVEKLIIILLSLPGIDINVKDNAGWTPL 896
Canis_lupus_familiaris S-KENCPSLVTKMNFHKTNLKGETALHRACINNOVEKLIIILLSLPGIDINVKDNAGWTPL 858
Equus_caballus S-KENCPSLVTKMNFHKTNLKGETALHRACINNOVEKLIIILLSLPGIDINVKDNAGWTPL 846
Bos_taurus S-KENCPSLVTKINFHKTNLKGETALHRACINNOVDRLIIILLSMPGIDINVKDNAGWTPL 869
Latimeria_chalumnae SAKQNCVSEQKRLNKC NLKGETALHRACINNOVEKLIELLSFSGIDINVKDNAGWTPL 723
Rhinatrema_bivittatum S-KENCLSLNQEEHFCKHNTKGETALHIACMKNKVEKLIIILLSLPGTCINLKDYAGWTPL 719
Xenopus_tropicalis A-KENLPLSDQDQSF SRHNTKGETALHTACRNKVKKLIIILLSLPGTEINVKD HAGWTPL 697
.....910.....920.....930.....940.....950.....960

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*****:.* ** ** *:***:***:*****:***** ***** ** ** :
Pavmut HEACNHGSTVCVSEILQRCPEVDLLSQVDGVTPLHDALSNGHVEIGKLLLOHGGPVLLQR 824
Pavcri HEACNHGSTVCVSEILQRCPEVDLLSQVDGVTPLHDALSNGHVEIGKLLLOHGGPVLLQR 824
Gallus_gallus HEACNHGSTVCVSEILQRCPEVDLLSQVDGVTPLHDALSNGHVEIGKLLLOHGGPVLLQR 827
Anas_platyrhynchos HEACNHGSTVCVREILQRCPEVDLLSQVDGVTPLHDALSNGHVEIGKLLLOHGGPVLLQQ 786
Chelonia_mydas HEACNHGSTVCVREILQRCPEVDLLSQVDGVTPLHDALSNGHVEIGKLLLOHGGPVLLQQ 770
Mus_musculus HEACNYGNTVCVQEIILQRCPEVDLLTQVDGVTPLHDALSNGHVEIGKLLLOHGGPELLQQ 901
Rattus_norvegicus HEACNYGNTVCVREILQRCPEVDLLTQVDGVTPLHDALSNGHVEIGKLLLOHGGPELLQQ 906
Homo_sapiens HEACNYGNTVCVQEIILQRCPEVDLLTQVDGVTPLHDALSNGHVEIGKLLLOHGGPVLLQQ 905
Pan_troglodytes HEACNYGNTVCVQEIILQRCPEVDLLTQVDGVTPLHDALSNGHVEIGKLLLOHGGPVLLQQ 905
Macaca_mulatta HEACNYGNTVCVQEIILQRCPEVDLLTQVDGVTPLHDALSNGHVEIGKLLLOHGGPVLLQQ 906
Callithrix_jacchus HEACNYGNTVCVQEIILQRCPEVDLLTQVDGVTPLHDALSNGHVEIGKLLLOHGGPVLLQQ 956
Canis_lupus_familiaris HEACNYGNTVCVQEIILQRCPEVDLLTQVDGVTPLHDALSNGHVEIGKLLLOHGGPVLLQQ 918
Equus_caballus HEACNYGNTVCVQEIILQRCPEVDLLTQVDGVTPLHDALSNGHVEIGKLLLOHGGPVLLQQ 906
Bos_taurus HEACNYGNTVCVQEIILQRCPEVDLLTQVDGVTPLHDALSNGHVEIGKLLLOHGGPVLLQQ 929
Latimeria_chalumnae HEACNHGSTECVREILQRCPKVDLLSQVDGVTPLHDALSNGHVEIGKLLLOHGGPVLLPQ 783
Rhinatrema_bivittatum HEACNHGSTECVREILQRCPEVDLLSQVDGVTPLHDALSNGHVEIGKLLLOHGGPVLLQQ 779
Xenopus_tropicalis HEACNHGSTECVREILHHCPEVDLLSHVDGVTPLHDALLNGHVEIGKLLLOHGGPTLLQQ 757
.....970.....980.....990.....1000.....1010.....1020

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Pavmut RDSGKPLDLYVQSLPVKQELLNIVLPDEKIESFYEHTQQDFSSQKELWLILFNKMLLN 884
Pavcri RDSGKPLDLYVQSLPVKQELLNIVLPDEKIESFYEHTQQDFSSQKELWLILFNKMLLN 884
Gallus_gallus RDSNGKPLDLYVQSPQVKQELLNIVLPDEKIESFYQRTQQDFSSQKELWLILFNKMLLN 887
Anas_platyrhynchos RDSNGKPLDLYVESLPVKQELLNIVHPDEKIERFYERTEQDYCSQKELWLILFNKMLLN 846
Chelonia_mydas RDFYGKPLDLYVESLAVKQELLDIVHPDEETVKDFYERVEKDFHSQKELWLILFNKMLLN 830
Mus_musculus RNSKGELPLDLYVLSPKDKELFAITNIDTVDNFHAKTQKHFYHQLEFGSFLLSRMLLN 961
Rattus_norvegicus RNSKGELPLDLYVLSPKDKELFAITNIDTVDNFHAKTQKHFYHQLEFGSFLLSRMLLN 966
Homo_sapiens RNAKGELPLDLYVSPQIKEELFAITKIEDTVENFHAQAEKHFHYQLEFGSFLLSRMLLN 965
Pan_troglodytes RNAKGELPLDLYVSPQIKEELFAITKIEDTVENFHAQAEKHFHYQLEFGSFLLSRMLLN 965
Macaca_mulatta RNAKGELPLDLYVSPQIKEELFAITKVEDTVENFHAQAEKHFHYQLEFGSFLLSRMLLN 966
Callithrix_jacchus RNAKGELPLDLYVSPQIKEELFAITKIEDTVENFHAQAEKHFHYQLEFGSFLLSRMLLN 1016
Canis_lupus_familiaris RNSKGELPLDLYVSPQIKEELFAITKIEDTVENFHAQAEKHFHYQLEFGSFLLSRMLLN 978
Equus_caballus RNSKGELPLDLYVSPQIKEELFAITKIEDTVENFHAQAEKHFHYQLEFGSFLLSRMLLN 966
Bos_taurus RNSKGELPLDLYVSPQIKEELFAITKIEDTVENFHAQAEKHFHYQLEFGSFLLSRMLLN 989
Latimeria_chalumnae RDCDGKPLDLYVSPQKELFAITQLEETIEDFNDVHKEFCNQIDFGSYLLCRLLLN 843
Rhinatrema_bivittatum RDLEGKPLDLYVASSQKELFASIVQLQETVEDFHERLGLAICSSQIEFGSFLLCKMLLN 839
Xenopus_tropicalis KDSYGNFPLDYIASPOLKSELFDDVQLNETIEDFHKHAALEYDSHKIEFMAFLLSRMLLN 817
.....1030.....1040.....1050.....1060.....1070.....1080

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# CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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: *::.*
Pavmut      FCSVYNLFSP--LTLRGVAHSSMLLVMTADSHKMKGMFFPAHWLVDYFKELETFOKLPOF  942
Pavcri      FCSVYNLFSP--LTLRGVAHSSMLLVMTADSHKMKGMFFPAHWLVDYFKELETFOKLPOF  942
Gallus_gallus FCSVYNLFSPFTLTTLREVAHSNMFLAMTADSHKMKGTFFPAHWLVDYFKELETFOKLPOF  947
Anas_platyrhynchos FCSVYNLFSPFPSILREVACSSRLPVRARDYCKIESTFSADWLVDYFKELETFOKLPOF  906
Chelonia_mydas FCSVYNLSSPSPLPFKEVAHLNLSPLVAINGCKLKSRSLTDWLVDLYVGELQTFOKLPEF  890
Mus_musculus FCSIFDLSSEFILAFKGLGHLNELLMACNS-DTEASNAHTDWLLDVYARNIKTLKKLPSPV 1020
Rattus_norvegicus FCSIFDLSSEFILAFKGLSHLNELLMACNT-DTEPTSAHSDWLLDLYTRNIKTLLKKLPSPV 1025
Homo_sapiens FCSIFDLSSEFILASKGLTHLNELLMACKS-HKETTSVHTDWLLDLYAGNIKTLOKLPHI 1024
Pan_troglodytes FCSIFDLSSEFILASKGLTHLNELLMACKS-HKETTSVHTDWLLDLYAGNIKTLOKLPHI 1024
Macaca_mulatta FCSIFDLSSEFILASKGLTHLNELLMACKS-HKETTSVHTDWLLDLYAGNIKTLOKLPHI 1025
Callithrix_jacchus FCSVFDLSSEFILASKGLTYLNELPMVCKS-HKETTSVHTDWLLDIYARNIKTLQKLPHI 1075
Canis_lupus_familiaris FCSIFDLSSEFLLAFKGLTHLNELLVACKN-YKETTSAHADWLLDLYARNIKTLQTLNPI 1037
Equus_caballus FCSIFDLSSEFLLAFKGLTHLNELLVACKN-CKETTSVHTDWLLDLYARNIKTLQKLPHI 1025
Bos_taurus FCSIFGLSSE-SLAFKGLTHLSELLIACQN-YKETTSVHTDWLLDLYARNIMTLQKLPHI 1047
Latimeria_chalumnae YCSIYDLSLDFIPLNSKTCFNVITQITGVDRSKNMTNSFSDGLVVQYAKDLETLLIKLPDI  903
Rhinatrema_bivittatum FCSVYDLPLSVTTTLNVKAICSDVAQLMSDSKSKRAISFSDWLVEHYARNLENFOKIHEF  899
Xenopus_tropicalis FHSLYDLPAN--SHAAMKLCNAAFFINHIRSKETRVSFATSFVECYIENVVTLQKLSDL  875
.....1090.....1100.....1110.....1120.....1130.....1140

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:. : : . * : : :
Pavmut      IEEVSTYMYAFPGGEQMKALLATLETVVKI-----NOLFA----- 976
Pavcri      IEEVSTYMYAFPGGEQMKALLATLETVVKI-----NOLFA----- 976
Gallus_gallus IEEVSTYMYAFPGGEQMKALLATLETVVKI-----NOLFA----- 981
Anas_platyrhynchos LQEISTNMFIFFPGGEQMKALLATLETMVEA-----NOLFT----- 940
Chelonia_mydas IQEISENLKKSFGGEQVHPLLATLETMAMA-----TQLSTFHLNH----- 930
Mus_musculus LKELPENLNVCPGVHTEALLVTLEMMCRS-----ITEFS----- 1054
Rattus_norvegicus LKELPENLNVCPGVHTEALLVTLEMMCRS-----ITEFS----- 1059
Homo_sapiens LKELPENLNVCPGVHTEALLVTLEMMCRS-----VMEFS----- 1058
Pan_troglodytes LKELPEDLKVCPGVHTEALMVTLEMMCRS-----VMEFS----- 1058
Macaca_mulatta LKELPENLKVCPGVHTEALMVTLEMMCRSKSSKYIHILSFYSFQDDQKNIPHKSQM 1082
Callithrix_jacchus LKELPENLKVCPGVHTEALMVTLEMMCRS-----VTEFS----- 1109
Canis_lupus_familiaris LKELPENLKVCPGVHTEALLVTLEMMCRS-----VTEFS----- 1071
Equus_caballus LKELPDNLKVCPGVHTEALLVTLEMMCRS-----VSEFS----- 1059
Bos_taurus LKELPENVKVCPGVHTEALLVTLEVMCRS-----VTEIS----- 1081
Latimeria_chalumnae LQQLPENLRKCPGQHVQVLLALLETMATQ-----ASNL----- 936
Rhinatrema_bivittatum LREIPDNIQQCTRLHAQTLISVLKTLAIQLS-----IASKQ----- 936
Xenopus_tropicalis PPAVPDALMHTGGIHLQILLATIHTLASHS-----SAMEKK----- 911
.....1150.....1160.....1170.....1180.....1190.....

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