

# CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep\_msa/ZBTB5pts Tue Feb 1 14:55:12 2022

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*****.: *****:*
Pavo_muticus      -----MDFPGHFEEIFQQLNYQRLHG 21
Pavo_cristatus    -----MDFPGHFEEIFQQLNYQRLHG 21
Gallus_gallus     -----MDFPGHFEEIFQQLNYQRLHG 21
Anas_platyrhynchos -----MRKSRGDTLLVLR-----IMDFPGHFEEIFQQLNYQRLHG 35
Chelonia_mydas    -----MFSFKQFWYLPLLLGKTVAVAKGIRIMDFPGHFEEIFQQLNYQRLHG 47
Mus_musculus      -----MDFPGHFEEIFQQLNYQRLHG 21
Rattus_norvegicus -----MDFPGHFEEIFQQLNYQRLHG 21
Bos_taurus        ---MARVDRGSDCQRNARVAAVQSLEHPSLYIWIGCKSIMDFPGHFEEIFQQLNYQRLHG 57
Homo_sapiens       -----MDFPGHFEEIFQQLNYQRLHG 21
Pan_troglodytes   -----MDFPGHFEEIFQQLNYQRLHG 21
Macaca_mulatta    -----MDFPGHFEEIFQQLNYQRLHG 21
Callithrix_jacchus -----MDFPGHFEEIFQQLNYQRLHG 21
Canis_lupus_familiaris MLTLNQGGGLKIIHKGCRLPSPLLENLFSFAEIFRFRIMDFPGHFEEIFQQLNYQRLHG 60
Heterocephalus_glaber -----MDFPGHFEEIFQQLNYQRLHG 21
Rhinatrema_bivittatum -----MDFPGHFEEIFQQLNYQRLHG 21
Latimeria_chalumnae -----MQQTRGKCAWRNENFEIPFVNMDMDFPGHFEEIFQQLNYQRLHG 41
Xenopus_tropicalis -----MTMDFPGHFEEIFQQLNYQRLHG 23
1.....10.....20.....30.....40.....50.....60

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*****.*****.:*****.*****.:*****:
Pavo_muticus      QLCDCVIVVGNRHFKAHRSVLAACSTHFRALFTVAEGDQTMNMIQLDSEVVTAEAF AALI 81
Pavo_cristatus    QLCDCVIVVGNRHFKAHRSVLAACSTHFRALFTVAEGDQTMNMIQLDSEVVTAEAF AALI 81
Gallus_gallus     QLCDCVIVVGNRHFKAHRSVLAACSTHFRALFTVAEGDQTMNMIQLDSEVVTAEAF AALI 81
Anas_platyrhynchos QLCDCVIVVGNRHFKAHRSVLAACSTHFRALFTVAEGDQTMNMIQLDSEVVTAEAF AALL 95
Chelonia_mydas    QLCDCVIVVGNRHFKAHRSVLAACSTHFRALFTVAEGDQTMNMIQLDSEVVTAEAF AALI 107
Mus_musculus      QLCDCVIVVGNRHFKAHRSVLAACSTHFRALFSVAEGDQTMNMIQLDSEVVTAEAF AALI 81
Rattus_norvegicus QLCDCVIVVGNRHFKAHRSVLAACSTHFRALFSVAEGDQTMNMIQLDSEVVTAEAF AALI 81
Bos_taurus        QLCDCVIVVGNRHFKAHRSVLAACSTHFRALFSVAEGDQTMNMIQLDSEVVTAEAF AALI 117
Homo_sapiens       QLCDCVIVVGNRHFKAHRSVLAACSTHFRALFSVAEGDQTMNMIQLDSEVVTAEAF AALI 81
Pan_troglodytes   QLCDCVIVVGNRHFKAHRSVLAACSTHFRALFSVAEGDQTMNMIQLDSEVVTAEAF AALI 81
Macaca_mulatta    QLCDCVIVVGNRHFKAHRSVLAACSTHFRALFSVAEGDQTMNMIQLDSEVVTAEAF AALI 81
Callithrix_jacchus QLCDCVIVVGNRHFKAHRSVLAACSTHFRALFSVAEGDQTMNMIQLDSEVVTAEAF AALI 81
Canis_lupus_familiaris QLCDCVIVVGNRHFKAHRSVLAACSTHFRALFSVAEGDQTMNMIQLDSEVVTAEAF AALI 120
Heterocephalus_glaber QLCDCVIVVGNRHFKAHRSVLAACSTHFRALFSVAEGDQTMNMIQLDSEVVTAEAF AALI 81
Rhinatrema_bivittatum QLCDCVIVVGNRHFKAHRSVLAACSTHFRALFTVAEGDQTMNMIQLDSEVVTAEAF AALI 81
Latimeria_chalumnae QLCDCVIVVGNRHFKAHRSVLAACSTHFRALFTVAEGDQTMNMIQLDSEVVTAEAF AALI 101
Xenopus_tropicalis QLCDCVIVVGSRHFKAHRSVLAACSTHFRALFTVAEGDQSMNMIQLDSEVVTSEAF AALI 83
.....70.....80.....90.....100.....110.....120

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*****.:*****.:*****.:*****.:*****:
Pavo_muticus      DMMYTSTLMLGESNVMDILLAASHLHLNSVVKACKHYLTTRTLPMSPPSDRVQEQNARIQ 141
Pavo_cristatus    DMMYTSTLMLGESNVMDILLAASHLHLNSVVKACKHYLTTRTLPMSPPSDRVQEQNARIQ 141
Gallus_gallus     DMMYTSTLMLGESNVMDILLAASHLHLNSVVKACKHYLTTRTLPMSPPSDRVQEQNARIQ 141
Anas_platyrhynchos DMMYTSTLMLGESNVMDVLLAASHLHLNSVVKACKHYLTTRTLPMSPPTDRVQEQNARMQ 155
Chelonia_mydas    DMMYTSTLMLGESNVMDVLLAASHLHLNSVVKACKHYLTTRTLPMSPPSDRVQEQNARMQ 167
Mus_musculus      DMMYTSTLMLGESNVMDVLLAASHLHLNSVVKACKHYLTTRTLPMSPSSERAQEQSARMQ 141
Rattus_norvegicus DMMYTSTLMLGESNVMDVLLAASHLHLNSVVKACKHYLTTRTLPMSPPSERVQEQSARMQ 141
Bos_taurus        DMMYTSTLMLGESNVMDVLLAASHLHLNSVVKACKHYLTTRTLPMSPPSERVQEQSARMQ 177
Homo_sapiens       DMMYTSTLMLGESNVMDVLLAASHLHLNSVVKACKHYLTTRTLPMSPPSERVQEQSARMQ 141
Pan_troglodytes   DMMYTSTLMLGESNVMDVLLAASHLHLNSVVKACKHYLTTRTLPMSPPSERIQEQSARMQ 141
Macaca_mulatta    DMMYTSTLMLGESNVMDVLLAASHLHLNSVVKACKHYLTTRTLPMSPPSERVQEQSARMQ 141
Callithrix_jacchus DMMYTSTLMLGESNVMDVLLAASHLHLNSVVKACKHYLTTRTLPMSPPSERVQEQSARMQ 141
Canis_lupus_familiaris DMMYTSTLMLGESNVMDVLLAASHLHLNSVVKACKHYLTTRTLPMSPPSERVQEQSARMQ 180
Heterocephalus_glaber DMMYTSTLMLGESNVMDVLLAASHLHLNSVVKACKHYLTTRTLPMSPPSERIQEQSARMQ 141
Rhinatrema_bivittatum DMMYTSTLMLGESNVMDVLLAASHLHLNSVVKACKHYLTTRTLPMSPPNDRVQEQNARMQ 141
Latimeria_chalumnae DMMYTSTLMLGESNVMDVLLAASHLHLNSVVKACKHYLTTRTLPMSPPSDRVQEQNARMQ 161
Xenopus_tropicalis DMMYTSTLMLGESNVMDVLLAASHLHLNSVVKACKHYLTTRTLPMSPPNDRQAQEQSARMQ 143
.....130.....140.....150.....160.....170.....180

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## CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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	*****:.*.***:.* *	.*:.*:.*..::**.*:***** :	
Pavo_muticus	RSFMLQQLGLSIVSSALNSTQSSEEQPMSTMSSTI	---RSN-IEQRSAFFPIRRLHKKRQSS	197
Pavo_cristatus	RSFMLQQLGLSIVSSALNSTQSSEEQPMSTMSSTM	---RSN-IEQRSAFFPIRRLHKKRQSS	197
Gallus_gallus	RSFMLQQLGLSIVSSALNSTQSSEEQPMSTMSSTM	---RSN-IEQRSAFFPIRRLHKKRQSS	197
Anas_platyrhynchos	RSFMLQQLGLSIVSSALNSSQNSEEQPNAMSSTM	---RSN-IEQRTTFPIRRLHKKRQSS	211
Chelonia_mydas	RSFMLQQLGLSIVSSALNSTQNAEEQNTMNSSM	---RSN-IEQRTTFPIRRLHKKRQSS	223
Mus_musculus	RSFMLQQLGLSIVSSALSSSQSAEEPTAPMSSSM	---RSS-LDQRTFPFPMRRLHKKRQSV	197
Rattus_norvegicus	RSFMLQQLGLSIVSSALSSSQSGEEPSAPMSSSM	---RNN-LDQRTFPFPMRRLHKKRQTV	197
Bos_taurus	RSFMLQQLGLSIVSSALSSSQSGEEQAPMSSSL	---RGN-LDQRTFPFPMRRLHKKRQSA	233
Homo_sapiens	RSFMLQQLGLSIVSSALNSSQNGEEQAPMSSSM	---RSN-LDQRTFPFPMRRLHKKRQSA	197
Pan_troglodytes	RSFMLQQLGLSIVSSALNSSQNGEEQAPMSSSM	---RSN-LDQRTFPFPMRRLHKKRQSA	197
Macaca_mulatta	RSFMLQQLGLSIVSSALNSSQNGEEQAPMSSSM	---RNN-LDQRTFPFPMRRLHKKRQSA	197
Callithrix_jacchus	RSFMLQQLGLSIVSSALNSSQTGEEQAPMSSSM	---RSN-LDQRTFPFPMRRLHKKRQSA	197
Canis_lupus_familiaris	RSFMLQQLGLSIVSSALNASQSGEEQAPMSSSM	---RST-LDQRTFPFPMRRLHKKRQSA	236
Heterocephalus_glaber	RSFMLQQLGLSIVSSALNASQGGEEQAPMSSSM	---RNN-LDQRTFPFPMRRLHKKRQSA	197
Rhinatrema_bivittatum	RSFMLQQLGLSIVSSALNSSQSTEEQQNAMSSSM	---RSNIVEQRTATFPPIRRLHKKRQTS	198
Latimeria_chalumnae	RSFMLQQLGLSLVNSALSSQNTTEEQQTMSSSI	---RNNIVEQRTATFPPIRRLHKKRQPSA	218
Xenopus_tropicalis	RSFMLQQLGLSIVSSALNSQNTDQSQQQSSSISSGRN	MMVEQRTATFPPIRRLHKKRQSS	203
	.....190.....200.....210.....220.....230.....240		

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Pavo_muticus	EDRARQRM <del>PA</del> IDEAVS-DVAPESGQSVVHSREDFFSPDSLKIVDNSKADAVITDNOEDNN	256
Pavo_cristatus	EDRARQRM <del>PA</del> IDEAVS-DVAPESGQSVVHSREDFFSPDSLKIVDNSKADAVITDNOEDNN	256
Gallus_gallus	EDRARQRM <del>PA</del> IDEAVS-DVAPESGQS-VHSREDFFSPDSLKIVDNSKADAVITDNOEDNN	255
Anas_platyrhynchos	EDRARQRM <del>PA</del> IDESVS-DVTIPESGQLVVHSREDFFSADSLKIVDNSKADAITDNOEDGT	270
Chelonia_mydas	EDRARQRI <del>RP</del> TIDESIISDVAPESGQSVVHSREEFFSPDSLKIVDNSKADVITNNQEDNT	283
Mus_musculus	EERARQRLRS <del>ME</del> ESAISDVTIPESGPAGVHSREEFFSPDSLKIVDNP <del>KPD</del> GMADNOEDGA	257
Rattus_norvegicus	EERARQRLRS <del>ME</del> ESAISDVTIPESGPSGVHSREEFFSPDSLKIVDNP <del>KPD</del> GMADNOEDSA	257
Bos_taurus	EERARQRLR <del>P</del> TLDESAISDVTIPENGP-GVHSREEFFSPDSLKIVDNP <del>KAD</del> GMADNPDDST	292
Homo_sapiens	EERARQRLR <del>P</del> SIDESAISDVTIPENGPSGVHSREEFFSPDSLKIVDNP <del>KAD</del> GMTDNOEDSA	257
Pan_troglodytes	EERARQRLR <del>P</del> SMDESAISDVTIPENGPSGVHSREEFFSPDSLKIVDNP <del>KAD</del> GMTDNOEDSA	257
Macaca_mulatta	EERARQRLR <del>P</del> SMDESAISDVTIPENGPSGVHSREEFFSPDSLKIVDNP <del>KAD</del> GMTDNOEDSA	257
Callithrix_jacchus	EERARQRLR <del>P</del> SMDESAISDVTIPENGP <del>P</del> GVHSREEFFSPDSLKIVDNP <del>KAD</del> GMTDNOEDSA	257
Canis_lupus_familiaris	EERARQRLR <del>P</del> TMDESA <del>I</del> ADVTIPENGPSGVHSREEFFSPDSLKIVDNP <del>KGD</del> GMTDNOEDSA	296
Heterocephalus_glaber	EERARQRLR <del>P</del> SMDESAISDVTIPENGPSGVHSREEFFSPDSLKIVDNP <del>KPD</del> GMTDNOEDST	257
Rhinatrema_bivittatum	EERARQRM <del>RP</del> SMDEAIS-DVTIPESGQSVVHSREEFFSPDSLKMVENS <del>KSD</del> AMADH <del>Q</del> EDNT	257
Latimeria_chalumnae	EDRPRQRI <del>RP</del> SVDEQIISDSIPESGQSVVHSREEFFSPDSLKLSDNS <del>KSE</del> ANVDTHEDNT	278
Xenopus_tropicalis	EERARQMR <del>NS</del> VDDCLN-DVTIPESVQSVNHSREEFFSPDSMKMDN <del>LKSD</del> SI <del>PD</del> NHEDST	262
	.....250.....260.....270.....280.....290.....300	

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Pavo_muticus	IMFDQSFSQAQEDTOVPSQSDNSGGNISOMSMASQATQVETSFDQEAASEKNNFP	316
Pavo_cristatus	IMFDQSFSQAQEDTOVPSQSDNSGGNISOMSMASQATQVETSFDQEAASEKNNFP	316
Gallus_gallus	ILFDQSFSQAQEDTOVPSQSDNSGGNISOMSMASQATQVETSFDQEAASEKNNFP	315
Anas_platyrhynchos	IMFDQSFSQAQEDTOVPSQSDNSGGNIPOMSMASQATQVETSFDQEAASEKNNFP	330
Chelonia_mydas	IMFDQSFGAQEDAQVPSQSDNSGGNISOMSMASQATQVETSFDQEAASEKNNFP	343
Mus_musculus	MMFDRPFGAQEDAQVPSQSDGSAG-----NMASRATQVETSFEQEAVAEKGSFO	312
Rattus_norvegicus	MMFDRPFGAQEDAQMPQSQSDGSAG-----NMASRATQVETSFEQEAVAEKGSFO	312
Bos_taurus	IMFDQSFSQAQEDAQVPSQSDNSASNMAQLSMASRATQVETSFEQETIAEKSAFO	352
Homo_sapiens	IMFDQSFGTQEDAQVPSQSDNSAGNMAQLSMASRATQVETSFDQEAAPKSSFO	317
Pan_troglodytes	IMFDQSFGTQEDAQVPSQSDNSAGNMAQLSMASRATQVETSFDQEAAPKSSFO	317
Macaca_mulatta	IMFDQSFGTQEDAQVPSQSDNSAGNMAQLSMASRATQVETSFDQEAATEKSSFO	317
Callithrix_jacchus	IIFDQSFGTQEDAQVPSQSDNSAGNMAQLSMASRATQVETSFDQEAATEKSSFO	317
Canis_lupus_familiaris	IMFDQSFGAQEDAQVPSQSDNTAGNMAQLSMASRATQVETSFEQEAATEKSGFO	356
Heterocephalus_glaber	IMFDQSFGAQEDAQVPSQSDNSASNIAQLSMASRATQVETSFEQEAATEKSGFO	317
Rhinatrema_bivittatum	IMFDQSFSQAQEDTOVPSQSDNSGGTVSOMSMAQATQVETSFDQESACEKNSFO	317
Latimeria_chalumnae	IMFDQSFGSQEDTOVPSQSD---NNLSQMTVATQGTQVETSFDQDTSTKTKGFH	335
Xenopus_tropicalis	IMFDGSYSNQEDTOVPSQSDNS-----ASIGSQAAQVETSYSQDSACKNIYSSE	316
	.....310.....320.....330.....340.....350.....360	

## CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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	: :*: ****:*****:*****:**** :*:**:*****	
Pavo_muticus	SINEKE-HMRVVVKSEPLSSPEPQDEVSDVTSQAEGSESVEVEGGVVSAEKIELSPSSD	375
Pavo_cristatus	SINEKE-HMRVVVKSEPLSSPEPQDEVSDVTSQAEGSESVEVEGGVVSAEKIELSPSSD	375
Gallus_gallus	SINEKE-HMRVVVKSEPLSSPEPQDEVSDVTSQAEGSESVEVEGGVVSAEKIELSPSSD	374
Anas_platyrhynchos	TLNEKE-HMRVVVKSEPLSSPEPQDEVSDVTSQAEGSESVEVEGGVVSAEKIELSPSSD	389
Chelonia_mydas	SLNEKE-HMRVVVKSEPLSSPEPQDEVSDVTSQAEGSESVEVEGGVVSAEKIELSPSSD	402
Mus_musculus	GLGEKE-HMRVVVKSEPLSSPEPQDEVSDVTSQAEGSESVEVEGGVVSAEKIDLSPESSD	371
Rattus_norvegicus	GLGEKE-HMRVVVKSEPLSSPEPQDEVSDVTSQAEGSESVEVEGGVVSAEKIDLSPESSD	371
Bos_taurus	GLGEKE-HMRVVVKSEPLSSPEPQDEVSDVTSQAEGSESVEVEGGVVSAEKIDLSPESSD	411
Homo_sapiens	GLGEKE-HMRVVVKSEPLSSPEPQDEVSDVTSQAEGSESVEVEGGVVSAEKIDLSPESSD	376
Pan_troglodytes	GLGEKE-HMRVVVKSEPLSSPEPQDEVSDVTSQAEGSESVEVEGGVVSAEKIDLSPESSD	376
Macaca_mulatta	GLGEKE-HMRVVVKSEPLSSPEPQDEVSDVTSQAEGSESVEVEGGVVSAEKIDLSPESSD	376
Callithrix_jacchus	GLSEKE-HMRVVVKSEPLSSPEPQDEVSDVTSQAEGSESVEVEGGVVSAEKIDLSPESSD	376
Canis_lupus_familiaris	GLGEKE-HMRVVVKSEPLSSPEPQDEVSDVTSQAEGSESVEVEGGVVSAEKIDLSPESSD	415
Heterocephalus_glaber	GLGEKE-HMRVVVKSEPLSSPEPQDEVSDVTSQAEGSESVEVEGGVVSAEKIDLSPESSD	376
Rhinatrema_bivittatum	GLAEKEHMRVVIKSEPLSSPEPQDEVSDVTSQAEGSESVEVEGGIASAEKIELSPSSD	377
Latimeria_chalumnae	NLNDKEEHMRVVVKSEPLSSPEPQDEVSDVTSQAEGSESVEVEGGMVNADKIELSPSSD	395
Xenopus_tropicalis	IVDGKD-HMRVIVKSEPLSSPEPQDEVSDVTSQAEGSEPVEVE-VVASAEKIELSPSSD	374
	.....370.....380.....390.....400.....410.....420	

	*****:*****:::~::~*** *:~:*****.* * .. *.***:*****	
Pavo_muticus	RSFSDPQSTTDRVGDIIHIMEVSNNLEHKSTFSISNFLNKGRGGSYGASQTTDDNIPNTTS	435
Pavo_cristatus	RSFSDPQSTTDRVGDIIHIMEVSNNLEHKSTFSISNFLNKGRGGSYGASQTTDDNIPNTTS	435
Gallus_gallus	RSFSDPQSTTDRVGDIIHIMEVSNNLEHKSTFSISNFLNKGRGGSYGASQTTDDNIPNTTS	434
Anas_platyrhynchos	RSFSDPQSSSTDRVGDIIHIMEVSNNLEHKSSFSISNFLNKSRRGGSYGASQNDNIPNTTS	449
Chelonia_mydas	RSFSDPQSSSTDRVGDIIHILEVSNNLEHKSTFSISNFLNKSRRGNFGANQN--DDNIPNTTS	461
Mus_musculus	RSFSDPQSSSTDRVGDIIHILEVTNNLEHKTSFSISNFLNKSRRGSNFSASQSTDDNLPNTTS	431
Rattus_norvegicus	RSFSDPQSSSTDRVGDIIHILEVTNNLEHKTSFSISNFLNKSRRGSNFSSTQSTDDNLPNTTS	431
Bos_taurus	RSFSDPQSSSTDRVGDIIHILEVTNNLEHKSTFSISNFLNKSRRGSNFSSTNQNNDDNLPNTTS	471
Homo_sapiens	RSFSDPQSSSTDRVGDIIHILEVTNNLEHKSTFSISNFLNKSRRGNFTANQNNDNIPNTTS	436
Pan_troglodytes	RSFSDPQSSSTDRVGDIIHILEVTNNLEHKSTFSISNFLNKSRRGNFTANQNNDNIPNTTS	436
Macaca_mulatta	RSFSDPQSSSTDRVGDIIHILEVTNNLEHKSTFSISNFLNKSRRGNFTANQNNDNIPNTTS	436
Callithrix_jacchus	RSFSDPQSSSTDRVGDIIHILEVTNNLEHKSTFSISNFLNKSRRGNFTANQNNDNIPNTTS	436
Canis_lupus_familiaris	RSFSDPQSSSTDRVGDIIHILEVTNNLEHKSTFSISNFLNKSRRGSNFSANQNNDNIPNTTS	475
Heterocephalus_glaber	RSFSDPQSSSTDRVGDIIHILEVTNNLEHKSTFSISNFLNKSRRGSNFSANQNNDNIPNTTS	436
Rhinatrema_bivittatum	RSFSDPQSSSTDRVGDIIQILEVTNNLEHKSAFSISNFLSK--RGDGFANQSSDDNIPNTTS	436
Latimeria_chalumnae	RSFSDPQSSSTDRVGEELHMLEATNNLETKSAFSISNFLNKSRRAGSYNGSQSNDNIPNTTS	455
Xenopus_tropicalis	RSFSDPQSSSTDRVGNLHLDVTDNLEHKSSFSISNFLSKRRNGSLG--QNSDDNIPNTTS	432
	.....430.....440.....450.....460.....470.....480	

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Pavo_muticus	DCRMDSDASFLMSPE-SGPAGGHSSATVSHVENPFSEPAESHFVRPMQDVMGLPCVQTSG	494
Pavo_cristatus	DCRMDSDASFLMSPE-SGPAGGHSSATVSHVENPFSEPAESHFVRPMQDVMGLPCVQTSG	494
Gallus_gallus	DCRMDSDASFLMSPE-SGPAGGHSSATVSHVENPFSEPAESHFVRPMQDVMGLPCVQTSG	493
Anas_platyrhynchos	DCRMDSEASYLMSPE-SGPASGHSSATVSHVENPFSEPADSHFVRPMQDVMGLPCVQTSG	508
Chelonia_mydas	DCRMDGDAAYLMSPE-SGPTNGHSSATVSHVENPFNESADSHFVRPMQDVMGLPCVQTSG	520
Mus_musculus	DCRLGEAPYLLSPE-AGPAGGPSAPGSHVENPFSEPADSHFVRPMQDVMGLPCVQTSG	490
Rattus_norvegicus	DCRLGEAPYLLSPE-AGPAGGPSAPGSHVENPFSEPADSHFVRPMQDVMGLPCVQTSG	490
Bos_taurus	DCRLGEAPYLLSPE-AGPASGPSAPGAHVNPFFSEPSDSHFVRPMQDVMGLPCVQTSG	530
Homo_sapiens	DCRLSEAPYLLSPE-AGPAGGPSAPGSHVENPFSEPADSHFVRPMQDVMGLPCVQTSG	495
Pan_troglodytes	DCRLSEAPYLLSPE-AGPAGGPSAPGSHVENPFSEPADSHFVRPMQDVMGLPCVQTSG	495
Macaca_mulatta	DCRLSEAPYLLSPE-AGPAGGPSAPGSHVENPFSEPADSHFVRPMQDVMGLPCVQTSG	495
Callithrix_jacchus	DCRLSEAPYLLSPE-AGPAGGPSAPGSHVENPFSEPTDSHFVRPMQDVMGLPCVQTSG	495
Canis_lupus_familiaris	DCRLGEAPYLLSPE-AGPAGGPSAPGSHVENPFSEPADSHFVRPMQDVMGLPCVQTSG	534
Heterocephalus_glaber	DCRMEDGEAPYLLSPE-AGPAGGSSAPGSHVENPFSEPTDSHFVRPMQDVMGLPCVQTSG	495
Rhinatrema_bivittatum	DCRMEGDATYILMSPE-SGPPGGHSSVSVSHGDNPNFPNDPSDSHFVRPMQDVMGLPCVOSSG	495
Latimeria_chalumnae	DCRMGETQFLMSPE-SAGPNGGSTSTTVSHVENPFNDSSDSHFVRPMQDVMGLPCVQPSG	515
Xenopus_tropicalis	DCRMDGEVSYLVLSPE-AGTNS-HSSTAMSHIDNPFSDSQDSHFTRPMQDVMTLSCVQSSN	490
	.....490.....500.....510.....520.....530.....540	



# CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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Pavo_muticus      YRAAEQFGMDFPSGLGLHS-LSRAMIGSVRGGASSFPGYRRIAPKMPVVTSVRS--SQL 551
Pavo_cristatus    YRAAEQFGMDFPSGLGLHS-LSRAMIGSVRGGASSFPGYRRIAPKMPVVTSVRS--SQL 551
Gallus_gallus     YRAAEQFGMDFPSGLGLHS-LSRAMIGSVRGGASSFPGYRRIAPKMPVVTSVRS--SQL 550
Anas_platyrhynchos YRAAEQFGMDFPSGLGLHS-LSRAMIGSARGGASSFPGYRRIAPKMPVVTSVRS--SQL 565
Chelonia_mydas    YRAAEQFGMDFPSGLGLHS-LSRAMMGSPRGGASNFPYRRIAPKMPVVTSVRS--SQM 577
Mus_musculus      YQG-EQFGMDFPSGLGLHSSFSRAMMGSPRGGASNFPYRRIAPKMPVVTSVRS--SQI 547
Rattus_norvegicus YQG-EQFGMDFPSGLGLHSSFSRAMMGSPRGGASNFPYRRIAPKMPVVTSVRS--SQI 547
Bos_taurus        YQGGEQFGMDFPSGLGLHSSFSRVMMGSPRGGASNFPYRRIAPKMPVVTSVRS--SQI 588
Homo_sapiens       YQGGEQFGMDFPSGLGLHSSFSRVMIGSPRGGASNFPYRRIAPKMPVVTSVRS--SQI 553
Pan_troglodytes   YQGGEQFGMDFPSGLGLHSSFSRVMIGSPRGGASNFPYRRIAPKMPVVTSVRS--SQI 553
Macaca_mulatta    YQGGEQFGMDFPSGLGLHSSFSRVMIGSPRGGASNFPYRRIAPKMPVVTSVRS--SQI 553
Callithrix_jacchus YQG-EQFGMDFPSGLGLHSSFSRVMIGSPRGGASNFPYRRIAPKMPVVTSVRS--SQI 552
Canis_lupus_familiaris YQGGEQFGMDFPSGLGLHSSFSRVMMGSPRGGASNFPYRRIAPKMPVVTSVRS--SQI 592
Heterocephalus_glaber YQG-EQFGMDFPSGLGLHSSFSRVMMGSPRGGASNFPYRRIAPKMPVVTSVRS--SQI 552
Rhinatrema_bivittatum YRGAEQYGMDFPRSGLGLHS-LNRSMMG---RGTNSFPSYRRIAPKMPIVTSVRS--AQI 549
Latimeria_chalumnae YRGGEQFGLDFPRSGLGLHS-MSRTMISSTRGGASSFPGYRRIAPKVPIMNSVRMEGSQI 574
Xenopus_tropicalis YRGNDPFGMDFPSGLGLHS-MSRSIMGSRGRGCNFPNYRRIAPKMPIVTSVRS--AQL 547
.....550.....560.....570.....580.....590.....600

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Pavo_muticus      QDNSSPSSQLIINGATS-FENGHPSPQGPPLTRASADVLSKCKKALSEHNVLVVEGARKY 610
Pavo_cristatus    QDNSSPSSQLIINGATS-FENGHPSPQGPPLTRASADVLSKCKKALSEHNVLVVEGARKY 610
Gallus_gallus     QDNSSPSSQLIINGTTS-FENGHPSPQGPPLTRASADVLSKCKKALSEHNVLVVEGARKY 609
Anas_platyrhynchos QDNSSGSQIINGTTS-FDNGHSPQGPPLTRASADVLSKCKKALSEHNVLVVEGARKY 624
Chelonia_mydas    QDSTNSQLMMNGTSSSFENGHPSPQGPPLTRASADVLSKCKKALSEHNVLVVEGARKY 637
Mus_musculus      SENSASSQLMMNGATS-FENGHTSPQGPPLTRASADVLSKCKKALSEHNVLVVEGARKY 606
Rattus_norvegicus SENQASSQLMMNGASS-FENGHS SPQGPPLTRASADVLSKCKKALSEHNVLVVEGARKY 606
Bos_taurus        PENSASSQLMMNAATSSSFENGHPSPQGPPLTRASADVLSKCKKALSEHNVLVVEGARKY 648
Homo_sapiens       PENSTSSQLMMNGATSSSFENGHPSPQGPPLTRASADVLSKCKKALSEHNVLVVEGARKY 613
Pan_troglodytes   PENSTSSQLMMNGATSSSFENGHPSPQGPPLTRASADVLSKCKKALSEHNVLVVEGARKY 613
Macaca_mulatta    PENSTSSQLMMNGATSSSFENGHPSPQGPPLTRASADVLSKCKKALSEHNVLVVEGARKY 613
Callithrix_jacchus PENSSPSSQLMMNGATSSSFENGHPSPQGPPLTRASADVLSKCKKALSEHNVLVVEGARKY 612
Canis_lupus_familiaris PENSASSQLMMNAATSSSFENGHPSPQGPPLTRASADVLSKCKKALSEHNVLVVEGARKY 652
Heterocephalus_glaber PENSASSQLMMNGATSSSFENGHPSPQGPPLTRASADVLSKCKKALSEHNVLVVEGARKY 612
Rhinatrema_bivittatum QDSTSSAQLLMNGATSSSYENGHTSQQGPPLTRASADVLSKCKKALSEHNVLVVEGARKY 609
Latimeria_chalumnae QDSTPNSQLMINGASSSFESGHS SQLGHPPLTRASADVLSKCKKALSEHNVLVVEGARKY 634
Xenopus_tropicalis QDNASNSQLLMNGGNSSYENGHTSQQGPPLTRASADVLSKCKKALSEHNVLVVEGARKY 607
.....610.....620.....630.....640.....650.....660

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*****.....*
Pavo_muticus      ACKICCKTFLTLTDCKKHIRVHTGEKPYACLKCGKRFSQSSHLYKHSKTTCLRWOSSNLP 670
Pavo_cristatus    ACKICCKTFLTLTDCKKHIRVHTGEKPYACLKCGKRFSQSSHLYKHSKTTCLRWOSSNLP 670
Gallus_gallus     ACKICCKTFLTLTDCKKHIRVHTGEKPYACLKCGKRFSQSSHLYKHSKTTCLRWOSSNLP 669
Anas_platyrhynchos ACKICCKTFLTLTDCKKHIRVHTGEKPYACLKCGKRFSQSSHLYKHSKTTCLRWOSSNLP 684
Chelonia_mydas    ACKICCKTFLTLTDCKKHIRVHTGEKPYACLKCGKRFSQSSHLYKHSKTTCLRWOSSNLP 697
Mus_musculus      ACKICCKTFLTLTDCKKHIRVHTGEKPYACLKCGKRFSQSSHLYKHSKTTCLRWOSSNLP 666
Rattus_norvegicus ACKICCKTFLTLTDCKKHIRVHTGEKPYACLKCGKRFSQSSHLYKHSKTTCLRWOSSNLP 666
Bos_taurus        ACKICCKTFLTLTDCKKHIRVHTGEKPYACLKCGKRFSQSSHLYKHSKTTCLRWOSSNLP 708
Homo_sapiens       ACKICCKTFLTLTDCKKHIRVHTGEKPYACLKCGKRFSQSSHLYKHSKTTCLRWOSSNLP 673
Pan_troglodytes   ACKICCKTFLTLTDCKKHIRVHTGEKPYACLKCGKRFSQSSHLYKHSKTTCLRWOSSNLP 673
Macaca_mulatta    ACKICCKTFLTLTDCKKHIRVHTGEKPYACLKCGKRFSQSSHLYKHSKTTCLRWOSSNLP 673
Callithrix_jacchus ACKICCKTFLTLTDCKKHIRVHTGEKPYACLKCGKRFSQSSHLYKHSKTTCLRWOSSNLP 672
Canis_lupus_familiaris ACKICCKTFLTLTDCKKHIRVHTGEKPYACLKCGKRFSQSSHLYKHSKTTCLRWOSSNLP 712
Heterocephalus_glaber ACKICCKTFLTLTDCKKHIRVHTGEKPYACLKCGKRFSQSSHLYKHSKTTCLRWOSSNLP 672
Rhinatrema_bivittatum ACKICCKTFLTLTDCKKHIRVHTGEKPYACLKCGKRFSQSSHLYKHSKTTCLRWOSSNLP 669
Latimeria_chalumnae ACKICCKTFLTLTDCKKHIRVHTGEKPYACLKCGKRFSQSSHLYKHSKTTCLRWOSSNLP 694
Xenopus_tropicalis ACKICCKTFLTLTDCKKHIRVHTGEKPYACLKCGKRFSQSSHLYKHSKTTCLRWOSSNIP 667
.....670.....680.....690.....700.....710.....720

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## CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep\_msa/ZBTB5tps Tue Feb 1 14:55:12 2022

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      .:***
Pavo_muticus      STLL 674
Pavo_cristatus    STLL 674
Gallus_gallus     STLL 673
Anas_platyrhynchos STLL 688
Chelonia_mydas    STLL 701
Mus_musculus      STLL 670
Rattus_norvegicus STLL 670
Bos_taurus        STLL 712
Homo_sapiens      STLL 677
Pan_troglodytes   STLL 677
Macaca_mulatta    STLL 677
Callithrix_jacchus STLL 676
Canis_lupus_familiaris STLL 716
Heterocephalus_glaber STLL 676
Rhinatrema_bivittatum STLL 673
Latimeria_chalumnae NSLL 698
Xenopus_tropicalis TALL 671
      ....
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