

# CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /home/ceglab2/Desktop/ajinkya/pavo/MSData/ClustalBTree.ph 15 16:45:53 2022

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Homo_sapiens      -----MAISPRSDATFSSQ      14
Pan_troglodytes   -----MVIRERPRSVQLRMAISPRSDATFSSQ      27
Macaca_mulatta    -----MVIRERPRSVRLRMAISPRSDATFSSQ      27
Callithrix_jacchus -----MAISPGSDASFSSQ      14
Bos_taurus        -----MAISPGSDAAFSSQ      14
Equus_caballus    -----MAISPGSDAAFSSQ      14
Dasypus_novemcinctus -----MASSPGTDEGFSSQ      14
Mus_musculus      -----MASNPGSDAALGTO      14
Ornithorhynchus_anatinus -----MEAGGEPLPSGARTASSPGSNASYSQ      27
Pavo_muticus      -----MASSPGSHAALAHQ      14
Pavo_cristatus    -----MASSPGSHAALAHQ      14
Gallus_gallus     -----MWVQALFWQPAHGRMASSPGSNASLSDQ      28
Anas_platyrhynchos -----MASSPENNASLSDQ      14
Chelonia_mydas    -----MASSPGSNASLSRE      14
Rhinatrema_bivittatum MGHFRPSTSTSGVGATGSHGNRRSREAGLPINWDRESESRSGPAARMAGCPASKPSLSGQ      60
Xenopus_tropicalis -----MPOIDFRIKPEAKSPHRLKLCVPNWLNMANNSGSNSSLQGH      42
Latimeria_chalumnae -----MSSYHGSIVSLISH      14
1.....10.....20.....30.....40.....50.....60

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Homo_sapiens      KSTPSESPTKKFPLTEEEIFYMNCRAAYLTVFKSSLENIIISKDQLYLALQHAGRNPSSQ      74
Pan_troglodytes   KSTRSESPRTKKFPLTEEEIFYMNCRAAYLTVFKSSLENIIISKDQLYLALQHAGRNPSSQ      87
Macaca_mulatta    KSTPSESPTKKFPLTEEEIFYMNCRAAYLTVFKSSLENIIISKDQLYLALQHAGRNPSSQ      87
Callithrix_jacchus KSTPSESPTKKFPRTEEEIFYMNCRAAYLTVFKSSLENIVSKDQLYLALQHAGRNPSSQ      74
Bos_taurus        KPTHSESPRSKKFLLTEEEIFYMNCRAAYLTVFKSSLDNIIISKDQLYLALQHAGRNPSSQ      74
Equus_caballus    KSTLSESPRSKRFPPLTEEEIFYMNCRAAYLTVFKSSLENIIISKDQLYLALQHAGRNPSSQ      74
Dasypus_novemcinctus KSPLESSESRTKKFPLTEEEIFYMNCRAAYLTVFKSSLENIIISKDQLYLALQHAGRNPSSQ      74
Mus_musculus      NPLLSGSPRTKKFPLTEQEVFYMNCRAAYLTIFKSSLENIIISKDQLYLALQHAGRNPSSQ      74
Ornithorhynchus_anatinus KSTLSEGSRTKKSHHAAEEAFYLNCRAYLSVFKSSLESIIISRDQLCLALQOAGRNPSSQ      87
Pavo_muticus      KGTRSEGSQAKKSQAHEEAIFYKNCRAAYLTVFKSSLENIKSKEQLTLVLQOAGRNPSSQ      74
Pavo_cristatus    KGTRSEGSQAKKSQAHEEAIFYKNCRAAYLTVFKSSLENIKSKEQLTLVLQOAGRNPSSQ      74
Gallus_gallus     KGTCSEGSQAKKSQAHEEAIFYKNCRAAYLTVLKSLENIKSKEQLTLVLQOAGRNPSSQ      88
Anas_platyrhynchos KVTIRSESPQAKKSQAHEEAIFYKNCRAAYLTVLKSLENIKSKEQLRLVLQOAGRNPSSQ      74
Chelonia_mydas    KCTILSESSQAKKSQYSEEEIFYMNCRAAYLAVFKSSLENIKSKEQLYLVLQOAGRNPSSQ      74
Rhinatrema_bivittatum KCTLAENSEEKKAAQSTEEEIFYVACRAAYLTVFRSSLENIASKEQLCLVLQOAGRNPSSQ      120
Xenopus_tropicalis KYAASEQQENQKPPQSEEEIFYLASRAAYLTVFKSSLDNITNKDQLRLVLQOAGRNPSSQ      102
Latimeria_chalumnae KSTDGSESKKKRHTEEEIFYMTCAAYLAVFRSSLENITSKKQLCLVLQOAGRNPSSQ      71
.....70.....80.....90.....100.....110.....120

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Homo_sapiens      TINKYWTPTAKLNFDDFCIILRKEKPTSKAELLKSFKQLDVNDGDCILHTDLYKFLTKR      134
Pan_troglodytes   TINKYWTPTAKLNFDDFCIILRKEKPTSKAELLKSFKQLDVNDGDCILHTDLYKFLTKR      147
Macaca_mulatta    TINKYWTPTAKLNFDDFCIILRKEKPTSKAELLKSFKQLDVNDGDCILHTDLYKFLTKR      147
Callithrix_jacchus TINKYWTPTAKLNFDDFCIILRKEKPTSKVLLKSFKQLDINDGDCILHADLYKFLTKR      134
Bos_taurus        TINKYWTSQTAKLNFDDFCIILRKEKPTSKAELLKSFKQLDVNDGDCILHTDLYKLLTKR      134
Equus_caballus    TINKYWTPTAKLNFDDFCIILRKEKPTSKAELLKSFKQLDVNDGDCILHTDLYKLLTKR      134
Dasypus_novemcinctus TINKYWTPTAKMNFDDFCIILRKEKPTSKAELLKSFKKLDVNDGDCILHTDLYKILTKR      134
Mus_musculus      TINKYWTPTAKLNFDDFCIILSKEKPTSKAELLKSFKKLDVNDGDCILHTDLYKILTKR      134
Ornithorhynchus_anatinus IINKYWTPTAKLNFDDFCAILKKEKPTSKAELLGAFQKIDANDGFIILHTDLEFVLSR      147
Pavo_muticus      AVNKYWTSQTTTLNFDDFCITLREETPATKSELLEAFGKIDTDNTGYLLHDELYKLLTTE      134
Pavo_cristatus    AVNKYWTSQTTTLNFDDFCITLREETPATKSELLEAFGKIDTDNTGYLLHDELYKLLTTE      134
Gallus_gallus     TVNKYWTSQTTTLNFDDFCITLKEETPATKTELLEAFGKIDTDNTGYILHDELHKLTTTE      148
Anas_platyrhynchos TVNKYWTSQTTTLNFDDFCISILKEETPATKTELLEAFRQKIDTDNTGYILHDELYKILTKR      134
Chelonia_mydas    TVNQYWTPTQTTTLNFDDFCNILLKKEPATKTELLKAFKVDTNNDGYILHTELYKILTKR      134
Rhinatrema_bivittatum TLNKYWTAKTKGLNFDDFCAILRKENPATKTELLKAFQKIDPGNTGYILHDELYQILTKR      180
Xenopus_tropicalis VLNKYWTPTRTKQLNFDDFCAILKKEPATKNELLKAFRNIDTYNKGYILHNDLYQVLTTKR      162
Latimeria_chalumnae TLDKCWTPTKTKLNFDDFCIDILKKENSTTERELLKSAFQKIDVNDGHIHDELYNVLTQ      131
.....130.....140.....150.....160.....170.....180

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# CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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Homo_sapiens      GEKMTREEVNAIINLADVNADGKFDYIKFCKLYMTTNEQCLKTTLEKLEVD SKLMRHQFG 194
Pan_troglodytes   GEKMTREEVNAIINLADVNDDGKFDYIKFCKLYMTTNEQCLKTTLEKLEVD SKLMRHQFG 207
Macaca_mulatta    GEKMTREEVNAIINLTDVNADGKFDYIKFCKLYMTTNEQCLKTTLEKLEVD SKMRRHQFG 207
Callithrix_jacchus GEKMTREEVNAIINLVDVNADGKFDYIKFCKLYMTTNEQCLKTTLEKLEVD SKLRRHQFG 194
Bos_taurus        GEKMTREEVNAIINLADVNADGKFDYIKFCKLYMATNEQCLKTTLEKLEVD SKLRRQFG 194
Equus_caballus    GEKMTREEVNAIVNLADVNADGKFDYIKFCKLYLTNEQCLKTALEKLEVD SKLRQHFG 194
Dasypus_novemcinctus GEKMTREEVSAIINLADVNADGKFDYIKFCKLYMTTNEQCLKTTLEKLEVD SKLRRQFG 194
Mus_musculus      GEKMTQEEVNAVAVINLADINANGKFDYVFKCKLYMTTNEQCLKTTLEKLEVD SKLRRQFG 194
Ornithorhynchus_anatinus GEKMTREKELDAMINLIDVNSDGKFDYKFKCKLYMATNEQCLQTALEKLEVES SKLRRQFG 207
Pavo_muticus      GEKMTLDEVSAITKLPDFNCNGKLDYKFKCDLYMTTNEQCCRAALEKLEADNRSRHRQFG 194
Pavo_cristatus    GEKMTLDEVSAITKLPDFNCNGKLDYKFKCDLYMTTNEQCCRAALEKLEADNRSRHRQFG 194
Gallus_gallus     GEKMTLDEVSAITKLPDFNCNGKLDYKFKCDLYMTTNEQCCRTALEKLEADSR LRHRQFG 208
Anas_platyrhynchos GEKMTLDEVSAITNLADINCSGKLDYKFKCDLYMATNEQCCKTALEKLEVDGR LKRRQFG 194
Chelonia_mydas    GERMTVEEVNAITKLADVNSNGKLDYKFKCKLYVTTNEQCRKTALEKLEVD SRLRRQFG 194
Rhinatrema_bivittatum GEKMSQEEVNAIINLTDVNSGRLDYKFKCKLYIATKEQCLKTASEKLEADSK LRQOHFG 240
Xenopus_tropicalis GEKMSHEEVNSVFR LAEVNSNGKLDYKFKCNTFFRTNEQCAKVASERMDSNSKAKRQFG 222
Latimeria_chalumnae GEKMSVNEVKSIIQLADVNNDGKLDYKFKCFMTTTEHCQRAALEKLETDTK LRQOFG 191
.....190.....200.....210.....220.....230.....240

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. . . * : : . . : : * . :
Homo_sapiens      NHIEGSPERDPSPVPKPSPKITRKTDPE TFLNKGDT-RSSLLSATRKFKTSVSFTVTMGA 253
Pan_troglodytes   NHIKGSPERDPSPVPKPSPKITRKTDPE TFLNKGDT-RSSLLSATRKFKTSVSFTVTMGP 266
Macaca_mulatta    NHIEGSPERDPSPVPKPSPKIIRKTDQETFSNKGDT-RSSLLSATRKFKTSVSFTITMGA 266
Callithrix_jacchus NHIEGFSERDPSPVRKPSPSIIRKTDQKTF SNKGDS-RSSLLSATRKFKASLSFTITMGV 253
Bos_taurus        SHVEGSPERAPSPVAKASPRIIRKADQESF SNKGDT-RNSSLATARQFKTSVSFTVTMGA 253
Equus_caballus    SHIEASPEREPSVPVPKPSPRIMRRSDEDTFTNKGDT-RSSLLATTRKFKTSVSFTVTMGA 253
Dasypus_novemcinctus SHIEESPERNPLPVPKPSPRIVRKTDQETFS SKGDM-RSPLLSTNKKFKTSVSFTITMGA 253
Mus_musculus      SHMEGSPERGSPAPKPSPRVIRKNDQETFS SKGDT-SHALLSTTRKFKTSVSFTITMMSA 253
Ornithorhynchus_anatinus SHVEGSPERGLTPIPKPSPRITSKTEHGIPP NRGDSQTSSRPSSARKFKASVSCSIIMGA 267
Pavo_muticus      SEATSPGEGIALPVSKPSLKTILRKTDHKP APPKGDSRAPSR--PAQSCKASSSSTISVCA 252
Pavo_cristatus    SEAEATPEGITVPGSKPSLKIVRKTDHKP APPKGDSRTPSR--SAQSCKASSSSTISMCA 266
Gallus_gallus     SEGETSTEGITLPLVKPSPKISRKTDHKL APPTKGDSRTPSRPLSAQGCKASVSTISMCA 254
Anas_platyrhynchos SQVETSSERATSPISKPSRRTTRKTDHKP APPKRGDNRTSSRPSSAQCKASVSTISMGT 254
Chelonia_mydas    SHAGKSPECTASSASKPAPRSPGKTNLDPI PKKVD--SARPLSARSYKASVSTIISMGA 298
Rhinatrema_bivittatum SYIEKSPERSASPSKSSSQGNSKLYDSETPR KAENK--SSRPSSARSFKATISTVINMGI 281
Xenopus_tropicalis SQTEGFSPSHSQSSPSKQLEGSSWKLETETTPRKADGRPSRPSSARSRRASVSTFSMG- 250
Latimeria_chalumnae .....250.....260.....270.....280.....290.....300

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Homo_sapiens      NGNRNSKLMPEPNLIK-----DWQHMQS 275
Pan_troglodytes   NGNRNSKLTPEPNLIK-----DWQHMQS 288
Macaca_mulatta    NGNRNSKLTPEPNLIKCPVNLWHCPRGSI STSKNSSIFEFPKWHKWCLLPVYQDWQYMQS 326
Callithrix_jacchus NSNQNSKLTKEPNLIK-----DWQCMQS 275
Bos_taurus        DSNQNSKLTIEPHSIK-----EWQCVQS 275
Equus_caballus    NSNRNSKLTPEPNSVK-----EWQCVQS 275
Dasypus_novemcinctus NSNRNSKLTPEPNSVK-----EWQQTQT 275
Mus_musculus      NSNQDSTLTPEPNLKD-----WQCAQS 274
Ornithorhynchus_anatinus RSTKNSKLTPEPDSLK-----EWQCTQS 289
Pavo_muticus      SSSRSTINLIEPNTMK-----EWLCAQS 274
Pavo_cristatus    SSSRSTINLIEPNTMK-----EWLCAQS 274
Gallus_gallus     SSNRSTINLIEPNTMK-----EWQCAQS 288
Anas_platyrhynchos SSNRITKLTIEPHTIK-----EWQCAQS 276
Chelonia_mydas    SSNTNSELTIEPNTVK-----DWQCAQS 276
Rhinatrema_bivittatum NSAKNSKLTIEPNTIK-----EWQCTQS 320
Xenopus_tropicalis PSTRIAKLTPEPNNLK-----NWLTTAS 303
Latimeria_chalumnae ASSRSMKLTPEPKAIK-----DWQYTHS 272
.....310.....320.....330.....340.....350.....360

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# CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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:***:***: :*: :* :*:*** :* :* :* :*:***:
Homo_sapiens      KGCFFLEEDGEIISHQYRMQIAQRSMVYLTIKPLNLSQVEGKPSPWLSVDTALYILKENE 335
Pan_troglodytes   KGCFFLEEDGEIISHQYRMQIAQRSMVYLTIKPLNLSQVEGKPSPWLSVDTALYILKENE 348
Macaca_mulatta    KGCFFLEEDGEIISHQYRMQIAQRSMVYLTIKPLNLSQVEGKPSPWLSVDTALYILKENE 386
Callithrix_jacchus KGCFFLEEDGEIVSHQYRMQIAQRSMVYLTIKPLNLSQVEGKPSPWLSVDTALYILKENE 335
Bos_taurus        KGCFFLEEDGEIISHQYKMQIAQRSLVYITIKPLSLQAEGKPSPWLSVDTALYILKENE 335
Equus_caballus     KGCFFLEEDGEIVSHQYRMQIAQRSMVYLTIKPLNLSQAEKGKPSPWLSVDTALYILKENE 335
Dasypus_novemcinctus KGCFFLEEDGEIISHQYRMQIAQRSLVYITIKPLNLSQVEGKPSPWLSVDTALYILKENE 335
Mus_musculus       KGCFFLEEDGEVVSQYKMHIAQRSLVYITIKPLNLSQVEGKRCPWLSVDTALYILKENE 334
Ornithorhynchus_anatinus KGCFFLEEDGEIVSHQYRMHISQRSTVYITIKPLNLSQVEGKPSQWLAVDTALYILKEIE 349
Pavo_muticus       KGCFFLEEDGEIVSHKYRLHLPQSSTVCITIKPLRLHQTGK-CPWLSVDTVLYVLKES 333
Pavo_cristatus     KGCFFLEEDGEIVSHKYRLHLPQSSTVCITIKPLRLHQTGK-CPWLSVDTVLYVLKES 333
Gallus_gallus      RGCFFLEEDGEIISHKYRLHLPQSSTVCITIKPLRLHQTGK-SCHWLSVDTVLYVLKENE 348
Anas_platyrhynchos RGCFFLEEDGEIISHKYRLHVPQSTVCITIKPLNLSQVEGKSCHWLSVDTALYVLKENE 336
Chelonia_mydas      KGCFFLEEDGEIITHKYRLYLPQSTVYITIKPLNLSQVEGKPSPWLSVDTALYVLKENE 336
Rhinatrema_bivittatum KGCFFLEEDGEIVTHRYRLHIPQKSTVYITIKPLNLSQVEGKPSQWISVDTAVYVLKED 380
Xenopus_tropicalis  KGCFFLEDNGDIISHHYKLQVLQKSAVHLTIKPLNLSKAEGKLSPWMSVDTALYILKEND 363
Latimeria_chalumnae KGCFFLEEDGGIMSHQYRLYLPQKSAVYLSIKPLNLSQVEGKPSPWMSMDTALYVLKENE 332
.....370.....380.....390.....400.....410.....420

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: :* ** :* :*
Homo_sapiens      SQANLQLVCFTTELNRNRE-----VFGWTGELGPGIYWLIPSTTGCRLRKKIKP 382
Pan_troglodytes   SQANLQLVCFTTELNRNRE-----VFGWTGELGPGIYWLIPSTTGCRLRKKIKP 395
Macaca_mulatta    SQANLQLVCFTTELNRNRE-----VFGWTGELGPGIYWLIPSTTGCRLRKKINP 433
Callithrix_jacchus SQANLQLVCFTTELNRNRE-----VFGWTGELGPGIYWLIPSTTGCRLRKEIKP 382
Bos_taurus        SQANLQLVCFTTELNRNRE-----VFGWTGELGPGIYWLIPSTTGCRLRKEIKP 382
Equus_caballus     SQANLQLMCFTTELNRNRE-----VFGWTGELAPGMYWLIPSTTGCRLRKEGQA 382
Dasypus_novemcinctus SQANLQLMCFTTELNRNRE-----VFGWSGELGPGIYWLIPSTTGCRLKKEVKP 382
Mus_musculus       NPAPQLMCFTTELNRNRE-----VFGWTGELEAGIYWLIPSTTGCRLKKETKP 381
Ornithorhynchus_anatinus GOENLQLVCFTTELNRNRE-----VFGWKGLGSGIYWLIPFTTGCRLKKKKNQ 396
Pavo_muticus       POENLQLVCFTDQONKE-----MFGWKGLPSGVYWLIPFTTGCRLKKGKTP 380
Pavo_cristatus     POENLQLVCFTDQONKE-----MFGWKGLPSGVYWLIPFTTGCRLKKGKTP 380
Gallus_gallus      TOENLQLVCFTDQONKE-----MFGWKGLPSGVYWLIPFTTGCRLKKVKSQ 395
Anas_platyrhynchos IOENLQLVGFTTEQONKE-----MSGWKGLASGFYWLIPFTTGCRLKKVKTQ 383
Chelonia_mydas      SQENLQLMSFTEARNKE-----MFRWKGLGSGIYWLIPFTTGCRLKKIKKQ 383
Rhinatrema_bivittatum -DEDLQLVCFTTELRTNELTSSKHISVKRNMTFGWKGEMSGVYWLIPFTTGCRLRKKRKH 439
Xenopus_tropicalis G--QADLISFTELRNKE-----ISGWKGELGVGVYWLIPFTTGCRLRKKKKQ 408
Latimeria_chalumnae HSEDMLEFFTELRDKE-----KFGWKGLNAGVYRLIPFTTGCRLKKKKRQ 379
.....430.....440.....450.....460.....470.....480

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** **.*: * ** * :*: :*: *****:*****:***.**:
Homo_sapiens      VTDEAQLVYRDETGEFLTKFKSTLSDIFEVIDLDGNGLLSLEEYNNFFELRTSGEKCDE 442
Pan_troglodytes   VTDEAQLVYRDETGEFLTKFKSTLSDIFEVIDLDGNGLLSLEEYNNFFELRTSGEKCDE 455
Macaca_mulatta    VTDEAQLVYRDQTGKFLTKFKSTLSDIFEVIDLDGNGLLSLEEYNNFFELRTSGEKCDE 493
Callithrix_jacchus VTDEAQLVYRDETGEFLTKFKSTLSDIFEVIDLDGNGLLSLEEYNNFFELRTSGEKCDE 442
Bos_taurus        VTEEAQLVYRDETGEFLTKFKSTLSDIFEVIDLDGNGLLSLEEYNNFFELRTSGEKCDE 442
Equus_caballus     VAEAAQLVYRDETGGLLLTQEFRSTLSDIFEVIDLDGNGLLSLEEYNNFFELRTSGEKCDE 442
Dasypus_novemcinctus ITEEAQLVYRDEKGELFLTKFKSTLSDIFEVIDLDGNGLLSLEEYNNFFELRTSGEKCDE 442
Mus_musculus       VTEEAQLVHRDETGEFLSLTSEFRSTLSIFEVIDLDGNGLLSLEEYNNFFELRTSGEKCDE 441
Ornithorhynchus_anatinus ITEEAQLVFRGEKGELSLTSEFRSTLSIFEVIDLDGNGLLSLEEYNNFFELRTSGEKCDE 456
Pavo_muticus       ITGEAKLVYRDEDEGELALTREFRAALLDIFETIDLDGNGLLSLEEYNNFFELRTSGETCDE 440
Pavo_cristatus     ITGEAKLVYRDEDEGELALTREFRAALLDIFETIDLDGNGLLSLEEYNNFFELRTSGETCDE 440
Gallus_gallus      ITGEAKLVYRDEDEGELALTKEFRAALLDIFETIDLDGNGLLSLEEYNNFFELRTSGETCDE 455
Anas_platyrhynchos ITGEAKLVYRGESSELALTKECRAALLDIFETIDLDGNGLLSLEEYNNFFELRTSGEKCDE 443
Chelonia_mydas     ITGEATLVYRNEDGELSLTKEFKAALLDIFEMIDLDGNGLLSLEEYNNFFELRTSGEKCDE 443
Rhinatrema_bivittatum VTAEARLVHRDESNDLVLTKEFRATLSDFIDVIDLDGNGLLSLEEYNNFFELRTSGEKCDD 499
Xenopus_tropicalis TIKEARLVYRDENEDLVLTPEFKSALSDMFEIIDLDGNGLLSLEEYNNFFEMRSSGEKCDD 468
Latimeria_chalumnae NIREAKLVYRDDSGELALTKEFRATLSDFEVIDLDGNGLLSLEEYNNFFELRTSGEKCDE 439
.....490.....500.....510.....520.....530.....540

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Homo_sapiens	FVIDIYAEKCKPKIKAVHMEACSGOLEKAICKSVLSNGDAKVMGDGYENIIVHTYS	CDDTI	562					
Pan_troglodytes	FVIDIYAEKCKPKIKAVHMEACSGOLEKAICKSVLSNGDAKVMGDGYENIIVHTYS	CDDTI	575					
Macaca_mulatta	FVIDIYAEKCKPKIKAVHMEACSGOLEKAICKSVLSNGDAKVMGDGYENIIVHTYS	CDDTI	613					
Callithrix_jacchus	FVIDIYAEKCKPKIKAVHMEACSGOLEKAICKSVLSNGDAKVMGDGYENIIVHTYN	CDDTI	562					
Bos_taurus	FVIDIYADKCKPRIKAVHMEACSGOLEKAICKSVLNKGNAKVMGDGYENIIIYT	KRDTWI	562					
Equus_caballus	FVIDIVYADKCKPRIKAVHMEACSGOLEKAVCKSVLSKGDAKVMGDGYEDIIVHTYT	CDTWTI	562					
Dasybus_novemcinctus	FVIDIYAEKCKIRIKAVHMEAGSGLEKTICKSVLNKGDAKVMGDGYENIIVHTYC	DDTI	562					
Mus_musculus	FVINIYAERCKPRIKVHMEACSGOLEKAICKSVLDRSDAKVMGDGYENIIVHTCN	YDITI	561					
Ornithorhynchus_anatinus	FVIDIYAEKCKPRIKAVCLRAGSGQLERAICKSVVNQGDALMDGYENVVVHTYRS	DTRI	576					
Pavo_muticus	FVIDIYAEKCKPRIKAIYLEAGSWOLNRAICKSVVNKGDAKVMGDCENIIVYT	YRTGMRI	560					
Pavo_cristatus	FVIDIYAEKCKPRIKAIYLEAGSWOLNRAICKSVVNKGDAKVMGDCENIIVYT	YRTGMRI	560					
Gallus_gallus	FVIDIYAEKCKPRIKAIYLEAGSWOLNRAICKSVVNKGDAKVMGDCENIIVYT	YRTGMRI	575					
Anas_platyrhynchos	FVIDIYAEKCKPRIKAIYLEAGSWOLNRAICKSVANKGDAKVMGDCENIIVT	FTGTTRI	563					
Chelonia_mydas	FVINIYAEKCKPRIKAIYLEAGSRNLNRAICKSVVNKGDAKVLDSGESIIVYT	YKSYTRI	563					
Rhinatrema_bivittatum	FIIDVF AEKCKPRLKATNLQAGSGOLEQAICKSVVMKGEAKVMGDGYENVIIYT	YKSDTRI	619					
Xenopus_tropicalis	FVIEVYAEKCKPRLKTVSLESSNKLOGA VCKSAKLKGD AKSMEGYEDVIIYT	YKNDTHI	588					
Latimeria_chalumnae	FIVEVFAEKCKAKLKTVNL EQDKLLNTAICKSVISKGEAKVIKHDNVIIYT	YKSDTRI	559					
	.....610.....620.....630.....640.....650.....660							

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Homo_sapiens	TSVIENKSDKVVIIHISNELSKNCINNRRGLNIFAVEVGPKSTMVCOHVMPLNERQEWIYY	622
Pan_troglodytes	TSVIENKSDKVVIIHINNLSKNCINNRRGLNIFAVEVGPKSTMVCOHVMPLNERQEWIYY	635
Macaca_mulatta	TSVIENKSDKVVIIHINNLSKNCVNNRGLNIFAVEVGPKSTMVCOHVMPLNERQEWIYY	673
Callithrix_jacchus	TSVVENKSDKVVIIHINNLSKNCINNRRGLNIFAVEVAPNSTMVCOHVMPLNEQEWIYY	622
Bos_taurus	TAVIENKSDDKVIIHVNNELSENVCVNNRGLGIFAVEVAPNSTMVCOHVMPLNERQEWIYY	622
Equus_caballus	TSVIENKSDNKAIHISNELSRNCVNNRGLNIFAVEVAPKSSAMVCOHVMPLNGQOEWMSS	622
Dasybus_novemcinctus	TSVIENKSDNKVIIHINNLSKNCINNRRGLNIFAVEVAPKSSAMVCOHVMPLNERQEWIYN	622
Mus_musculus	TSIIENKSDNKVIIHINNLSKNCVNNRGLNIFAVEVAPRSTMVCOHVMPLNEQEWEIYC	621
Ornithorhynchus_anatinus	SSVIENKSDTKVIIVNNLSKNCVNNRGLNIFAVEVAPKSSMMVCOHVMPLTERQEWIYN	636
Pavo_muticus	TSVIENKSDNKVIVHVNNESRNCLSNRGLAVFAVEVAPKSSMMVSOHVMPLNEQEEWLYS	620
Pavo_cristatus	TSVIENKSDNKVIVHVNNESRNCLSNRGLAVFAVEVAPKSSMMVSOHVMPLNEQEEWLYS	620
Gallus_gallus	TSVIENKSDNKVIVHVNNESRNCLSNRGLAVFAVEVAPKSSMMVSOHVMPLNEQEEWLYN	635
Anas_platyrhynchos	TSVIENKSENKVIIHVNNESKNCLSNRGLTVFAVEVAPKSTVSHVGLPLNEQEEWLYN	623
Chelonia_mydas	TSVIENKSENKVIIHVNNESKNCVNNRGLNIFAVEVAPKSSMMVCOHVMPLKEQEWEIYN	623
Rhinatrema_bivittatum	TSVIENKSVNKVVLHVNNESKNCVSSRGLSTFAVEVPPKSTQITICHTMPLNESQEWIYN	679
Xenopus_tropicalis	TSVMENKSDKLLIQVNNEQSKNCISSRGLHVFAVELLPKSSVMVCOHVMPLNEKEQWMYN	648
Latimeria_chalumnae	SSVIENKSNKVTIQVNNEQSKNCISNRGLIIFAVEVAPSTTVCOHVMPLNERQDWIYN	619
	.....670.....680.....690.....700.....710.....720	

## CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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		*		
Homo sapiens	----	CIYSLIS	-----	629
Pan troglodytes	----	CIYSLIS	-----	642
Macaca mulatta	----	CIYSLIS	-----	680
Callithrix jacchus	----	CTYSLIS	-----	629
Bos taurus	----	CVYSLIS	-----	629
Equus caballus	----	SSPSSCTFSAWSWCPFAWPCSSPGTAFFPSPTLAVVRQAAKIGATAWSWILSILGRGL	-----	682
Dasypus novemcinctus	----	CVFSLLS	-----	629
Mus musculus	----	CVYSLVA	-----	628
Ornithorhynchus anatinus	----	CVDSIAS	-----	643
Pavo muticus	----	CVHSLLR	-----	627
Pavo cristatus	----	CVHSLLR	-----	627
Gallus gallus	----	CVHSLLR	-----	642
Anas platyrhynchos	----	CVHSLLR	-----	630
Chelonia mydas	----	CVHSLIP	-----	630
Rhinatrema bivittatum	----	CIQNILA	-----	686
Xenopus tropicalis	----	CVQSILS	-----	655
Latimeria chalumnae	----	CIDCILQATAK	-----	631
	.....	730.....740.....750.....760.....770.....780		

Homo_sapiens	-----	629
Pan_troglodytes	-----	642
Macaca_mulatta	-----	680
Callithrix_jacchus	-----	629
Bos_taurus	-----	629
Equus_caballus	PAQCTIAQ	690
Dasyus_novemcinctus	-----	629
Mus_musculus	-----	628
Ornithorhynchus_anatinus	-----	643
Pavo_muticus	-----	627
Pavo_cristatus	-----	627
Gallus_gallus	-----	642
Anas_platyrhynchos	-----	630
Chelonia_mydas	-----	630
Rhinatrema_bivittatum	-----	686
Xenopus_tropicalis	-----	655
Latimeria_chalumnae	-----	631
	.....	