

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/CRED41412 **Date: Tue Feb 1 11:51:08 2022**

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Species	Sequence	Position
Mus_musculus	MDPGGQDLLALDPGDC	21
Rattus_norvegicus	MDPGGQDLLALDPGDC	31
Homo_sapiens	MELELDAGDC	15
Pan_troglodytes	MELELDAGDC	15
Macaca_mulatta	MELELDAGDC	15
Callithrix_jacchus	MSQMELELDPGDE	18
Heterocephalus_glaber	MVSGTAGSCSGPGSRCSGARRRYAAPRQEFARMAQMELELDPGDC	50
Canis_lupus_familiaris	MELALDLGDC	15
Felis_catus	MELALDLGDC	15
Bos_taurus	MSHMEALALDPGDH	18
Pavo_muticus	MAGPEPLAALPDEDLLDFLLNNDAPAAGSPAGDSPLLGDW	45
Pavo_cristatus	MAGPEPLAALPDEDLLDFLLNNDAPAAGSPAGDSPLLGDW	45
Gallus_gallus	MAGPEPLAALPDGDLDFLLNNDAPAAGSPAGDSPLLGDW	45
Chelonia_mydas	MSCPEEVVASADDELLSFLLTDDAPCAEFSGDEANLLGDW	45
Anolis_carolinensis	MRGND	10

Mus_musculus	LLEESGDLWAATEPDKAPLDLLELSPSENSVQELSDWEVEDLLSSLLSPSVS-----RD	75
Rattus_norvegicus	LLEESGDLWAATEQDIETPLDLELSPSENSVQELSDWEVEDLLSSLLSPSSS-----PD	85
Homo_sapiens	LLEESGDLGTAPDEAVRAPLDWALPLS----EVPSDWEVDLLCLLSPPAS-----LN	65
Pan_troglodytes	LLEESGDLGTAPDEAVRAPLDWELPLS----EVPSDWEVDLLCLLSPPAS-----LN	65
Macaca_mulatta	LLEESGDLRTAPDESVRAPLDWELPLS----EVPSDWEVDLLCLLSPPASS-----LN	66
Callithrix_jacchus	LLEASGDLGTA-HEAIRAPLDWELLSS----EVPSDWELDDLLCLLSPPAS-----LN	67
Heterocephalus_glaber	LLEESGHILRGAPDEAQEAPLDWELPPSQNFVQELSDWEVEDLLNSLLSPPPS-----LD	104
Canis_lupus_familiaris	LLEESGDLGAGP-----PLS----EALSEWEAEDFLSSMLSPPAS-----LN	53
Felis_catus	LLEESGDLGAEQ-----PLS----EALNEWEVEDYLISLLSPPTS-----LN	53
Bos_taurus	LLEESGGGLGAAPDEALTSPDPDWELPLS----ESLSDWDVEDFLSCLPSPPAV-----LN	68
Pavo_muticus	ELL-DKEMDSFISILLNPSEDEPCPLQG-SLPADSDSSITSEDQNLSHSSGS-----DV	96
Pavo_cristatus	ELL-DKEMDSFISILLNPSEDEPCPLQG-SLPADSDSSITSEDQNLSHSSGS-----DV	96
Gallus_gallus	ELL-DKEMDSFISILLSPSEDEPCILQG-CLPADSDSSITSEDQNPFFHSSGS-----DV	96
Chelonia_mydas	ELLNDKEVEDFLSSLLSPFEFGPSALQG-HSPINSDSGISEDQNPFPSPPSSWDASPARDL	104
Anolis_carolinensis	KMP---HGQRRLLRHSGRKRSAATAKEG-AQHLGGERGGG-----L	51
70.....80.....90.....100.....110.....120	

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Mus_musculus	VLGSS	-SSSILH	DHNYSLPQ	EHVSIDL	-----DTSF	FEKE	109		
Rattus_norvegicus	VLNSS	-SSSILH	DHNYSLPQ	EHVSIDL	-----DPGS	FEKE	119		
Homo_sapiens	ILSSSNP	CLVHH	DHTYSLPRE	TVSMDL	-----ESES	CRKE	100		
Pan_troglodytes	ILSSSNP	CLVHH	DHTYSLPRE	TVSMDL	-----ESES	CRKE	100		
Macaca_mulatta	VLSSNP	CLVHH	DHTYSLPRE	TVSMDL	-----ESES	CRKE	101		
Callithrix_jacchus	VLSSSNP	CLVHH	DHTYSLPQ	EAVSVDL	-----ESES	FGKE	102		
Heterocephalus_glaber	VLDSSNF	CSVHH	DHTYCLPQ	EHVSIDL	-----DSGS	CGKE	139		
Canis_lupus_familiaris	VLSSSDS	CLVHH	DHTYSLSQ	QHVSIDL	-----DGGS	YGKE	88		
Felis_catus	VFSSSDS	CLVHH	DHTYSLPQ	QHV	CIDV-----DGGK	YGKE	88		
Bos_taurus	VFSNSD	PCLVQ	HDHTYSLQ	EHVSIDL	GKPEIS	EVWERRGLQLTIHICPFADN	SEYEKE	128	
Pavo_muticus	ASSPQSS	DIVQ	FDHNYSLH	QDWPAL	ES---VRSDMAEGDV	SIDLETWMCLEGTNETLEQS	153		
Pavo_cristatus	ASSPQSS	DIVQ	FDHNYSLH	QDWPAL	ES---VRSDMAEGDV	SIDLETWMCLEGTNETLEQS	153		
Gallus_gallus	ASSPQSS	DIVQ	FDHNYSLH	QDWPAL	ES---VRSDMAEGDV	SIDLETWMCLEGTNETLEQS	153		
Chelonia_mydas	TCSPLSS	SDIVQ	DHSYSLH	QDRAVLES	---VRADTAEGDIS	SIDLDMWGDLGST	EETLVEE	161	
Anolis_carolinensis	AAG	-----QADR	-----RRPP	PREE	-----ACSG	MQE	-----EGQE	KE	79
130.....	140.....	150.....	160.....	170.....	180			

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Mus_musculus      GFHVTPLPGEER-----AAEQEMSRLLTTEEEKKLEKEGLTLPSTLPLTKVEEQVLK 162
Rattus_norvegicus GFRMNPLRVEET-----AAEQELSTLILTEEEKRLLEKEGLTLPSTLPLTKVVEEQVLK 172
Homo_sapiens      GTQMT PQHMEE-----LAEQEIARLVLTDEEKSLLLEKEGLILPETLPLTKTEEQILK 152
Pan_troglodytes   GTQMT PQHMEE-----LAEQEIARLVLTDEEKSLLLEKEGLILPETLPLTKTEEQILK 152
Macaca_mulatta    GTQMT PQHMEE-----LAEQDIVRLVLTDEEKSLLLEKEGLILPETLPLTKMEEQILK 153
Callithrix_jacchus ETQMTTQHVEE-----MAEQETVRLVLTDEEKSLLLEKEGLILPETLPLTKMEEQILK 154
Heterocephalus_glaber RVHMTPPHVEE-----PPEQETARLILTEEEERLLEKEGLASGTLPLTKMEEQVLK 191
Canis_lupus_familiaris EAQTTPLQVEE-----PAEQEIARLILTDEEKRLLLEKEGLTLHGTLPLTKMEEQVLT 140
Felis_catus       GAQTTPLHVEE-----PAEQEIARLILTDEEKRLLLEKEGLTLPGLTPLTKMEEQILT 140
Bos_taurus        RAQMTPLRVEE-----PADQEIARLILTDEEKRLLLEKEGLTLPGLPLTKMEEQVLK 180
Pavo_muticus      CSFPISVAVDAGPQLMPGSPMQSNFPPELVLTDEEKKQLEKDGVSPLTCLPLTKAEERLLK 213
Pavo_cristatus    CSFPISVAVDAGPQLMPGSPMQSNFPPELVLTDEEKKQLEKDGVSPLTCLPLTKAEERLLK 213
Gallus_gallus     CSFPVTVAVDAGPQLMPGAPMQSNFPPELVLTDEEKKQLEKDGVSPLTCLPLTKAEERLLK 213
Chelonia_mydas    QSFSFPVAVPMD-DFVPGTPMQFGFPELILTEEEKQLLREGEVSLPSHLPLTKAEERLLK 220
Anolis_carolinensis -----GTAGNG-----LT-----GGPFLASLCFLQAEERVLK 106
.....190.....200.....210.....220.....230.....240

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Mus_musculus      RVRRKIRNKRAAQESRRKKKKVYVVGLESRLVKYTAQNRELQNKVORLEEQNLSLLDQLRK 222
Rattus_norvegicus RVRRKIRNKRAAQESRRKKKKVYVVGLESRLVKYTAQNRELQNKVORLEEQNLSLLDQLRK 232
Homo_sapiens      RVRRKIRNKRAAQESRRKKKKVYVVGLESRLVKYTAQNMELQNKVOLLEEQNLSLLDQLRK 212
Pan_troglodytes   RVRRKIRNKRAAQESRRKKKKVYVVGLESRLVKYTAQNMELQNKVOLLEEQNLSLLDQLRK 212
Macaca_mulatta    RVRRKIRNKRAAQESRRKKKKVYVVGLESRLVKYTAQNMELQNKVOLLEEQNLSLLHQLRK 213
Callithrix_jacchus RVRRKIRNKRAAQESRRKKKKVYVVGLESRLVKYTAQNMELQNKVOLLEEQNLSLLDQLRK 214
Heterocephalus_glaber QVRRKIRNKRAAQESRRKKKKVYVVGLESRLVKYTAQNLELQNKVOLLEEQNLSLLDQLRK 251
Canis_lupus_familiaris RVRRKIRNKRAAQESRRKKKKVYVVGLESRLVKYTAQNLELQNKVOLLEEQNLSLLDQLRR 200
Felis_catus       RVRRKIRNKRAAQESRRKKKKVYVVGLESRLVKYTAQNLELQNKVOLLEEQNLSLLDQLRR 200
Bos_taurus        RVRRKIRNKRAAQESRRKKKKVYVVGLESRLVKYTAQNLELQNKVOLLEEQNLSLLDQLRR 240
Pavo_muticus      KVRRKIRNKQSAQDSRRKKKIYVDGLENRVAAC TAQNHQKKVOLLQKQNMSSLEQLRK 273
Pavo_cristatus    KVRRKIRNKQSAQDSRRKKKIYVDGLENRVAAC TAQNHQKKVOLLQKQNMSSLEQLRK 273
Gallus_gallus     KVRRKIRNKQSAQDSRRKKKIYVDGLENRVAAC TAQNHQKKVOLLQKQNMSSLEQLRK 273
Chelonia_mydas    RVRRKIRNRQSAQDSRRKKKIYVDGLESRVVCTAQNHELOKKVOLLQKQNMSSLEQLRR 280
Anolis_carolinensis RVRRKIRNKLSAQESRRKKKKVYVVGLESRVVACTAQNSELQKKVOLLQKQNMSSLEQLRK 166
.....250.....260.....270.....280.....290.....300

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Mus_musculus      LQAMVIEIANKTSSGSTCVLVLVFSFCLLLVPAMYSSDARGSVPAEYVVLHRKLRALPSE 282
Rattus_norvegicus LQAMVIEIANKTSSGSTCVLVLLLSFCLLLVPAMYSSDVRGSPAEYVVLHRKLRALPSE 292
Homo_sapiens      LQAMVIEISNKTSSSSTCIVLVVLSFCLLLVPAMYSSDTRGSLPAEHGVLRSQRLRALPSE 272
Pan_troglodytes   LQAMVIEISNKTSSSSTCIVLVVLSFCLLLVPAMYSSDTRGSLPAEHGVLRSQRLRALPSE 272
Macaca_mulatta    LQAMVIEISNKTSSSSTCIVLVVLSFCLLLVPAMYSSDTRGSLPAEHGVLRSQRLRALPSE 273
Callithrix_jacchus LQAMVIAISNKTSSSSTCVLVLLFSFCLLLVPAMYSSDTRESLPAEHGVLFRLRALPSE 274
Heterocephalus_glaber LQAMVIEISNKTSSSSTCVLVLLFSFCLLFVPAMYSSDTRGSLPAEHVVLRSQRLRALPSE 311
Canis_lupus_familiaris LQAMLIQISNKTSSSSTCVLVLLFSFCLLLVPAMYSSDTRGSLPAEHGVLRSQRLRALPSE 260
Felis_catus       LQAMVIQISNKTSSSSTCVLVLLFSFCLLVLPAMYSSDTRGSLPAEHGVLRSQRLRALPSE 260
Bos_taurus        LQAMVIQIANKASSSSTCVLVLLFSFCLLLVPAMYSSDTRGSLPAEHRVLSRQRLRALPSE 300
Pavo_muticus      LQALVRQSTTKTTTASTCIMVLVLSFCLILSPSLYSFGSRGPQPEFR-VLSRQIREFP-- 330
Pavo_cristatus    LQALVRQSTTKTTTASTCIMVLVLSFCLILSPSLYSFGSRGPQPEFR-VLSRQIREFP-- 330
Gallus_gallus     LQALVRQSTTKTTTASTCIMVLVLSFCLILSPSLYSFGSRGPQPEFR-VLSRQIREFP-- 330
Chelonia_mydas    LQALVRQSTTKTTTASTCVMVLLLSFCLVLSPSLYPLGARVQQEGFRGVLSRQIREYPSD 340
Anolis_carolinensis LQAMVQRSTTKTTTASTCIMVLLLSFCLILSPNLFPPFGGQERQAEQVLSRRLRAYQSG 226
.....310.....320.....330.....340.....350.....360

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Mus_musculus      DDHQPKPSALSSE-----LPMDSHOSLDSSEHMFVSSN 317
Rattus_norvegicus DQHQPKLSALQPE-----LPMGSTNQ-LESSEHTFLAPSN 326
Homo_sapiens      DPYQLELPALQSE-----VPKDSHOWLDGSDCVLQAPGN 307
Pan_troglodytes   DPYQLELPALQSE-----VPKDSHOWLDGSDCVLQAPGN 307
Macaca_mulatta    NPYQLELPALQSE-----VPKDCSHOWLDGSDHVLQAPGN 308
Callithrix_jacchus DPYQLELSTLQSE-----VLKDSHOWLDGSDHVLQVPGN 309
Heterocephalus_glaber DPHQLELPALQSA-----VPKDSINQ-SSDLELQVPGN 345
Canis_lupus_familiaris DPHQLELPALQSE-----VPKD-----SSDQELQAPGN 288
Felis_catus       DPHQLELPAQOSE-----VPKD-----SSDQELQALGN 288
Bos_taurus        DPPQLEPPALQSE-----VPKD-----SLNPQLQAASN 328
Pavo_muticus      NKAWQAAPAVQEE-----VVLER---LSPEPEDTSSLGSLNNQSQEEGQSPPKPDPDR 379
Pavo_cristatus    NKAWQAAPTVOEE-----VVLER---LSPEPEDTSSLGSLNNQSQEEGQSPPKPDPDR 379
Gallus_gallus     NKVWQAAPAVQEE-----VVLER---LSPEPEDTSSLGSLN-QSREEGQSPPKPDPDR 377
Chelonia_mydas    TAHFQAAAAQAEGPET-RGERTMEG---LALSEMAPQPGSLN-HSRDGGQSPPKAEHG 395
Anolis_carolinensis AVQELVSDGPQTMAAPGAPLQALEFEETPLPPEALLQPKGPLLQSLGDRSPPPPGQ- 285
.....370.....380.....390.....400.....410.....420

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Mus_musculus      FSCVLYHAPQA---EQPLHWPLWDLSEMLFSDSNLLIQANLSESEGWQPNHSPSLVIFQ 374
Rattus_norvegicus VSCLN-HMAQT---EQPPHWPLLDLSEMPFSGSDLLIQANLTESGGWLSTHSPSSIILQ 382
Homo_sapiens      TSCLLHYMPQAPSAEPPLEWFPDLFSEPLCRGPILPLQANLTRKGGWLPTGSPS-VILQ 366
Pan_troglodytes   TSCLLHYMPQAPSAEPPLEWFPDLFSEPLCRGPILPLQANLTRKGGWLPTGSPC-VILQ 366
Macaca_mulatta    SSCLLYYMPQAPSAEPPLEWFPDLFSEPLCRGPILPLQANLTRKGGWLPTGSPS-VILQ 367
Callithrix_jacchus SSCLLHYMSQALRAERPLEWLPDLFSEPLCRDPILLQANLTRKGVRSLTYSPTS-VILQ 368
Heterocephalus_glaber CSCLLYHMPQPLQAEPPQYRPLLDLFSEPPCPGHMFHLWANLTRKEKWLPNYSPSSVILQ 405
Canis_lupus_familiaris SCCPLYHLQAPGAESPLKLPLVPSSKSPCSCPLLPLHANFTRDGGWLPTHSPTS-VILQ 348
Felis_catus       SCCLLRQMPQAPGAEPALTLPVPSPKSPCSGPVLPANFTREGGWLPTHSPTS-VILQ 348
Bos_taurus        SCCLFHLMPQAPRAEPPQLPLPDGFSGCSCPDSISPLHANLTREEGWLPPTSPTS-VILQ 388
Pavo_muticus      SAFNSNSSSDPPATAGSEVGPPQPQ-EQHSRRDALHSEVLAPWKDESQEWVERTTSVVIIQ 438
Pavo_cristatus    SAFNSNSSSDPPATAGSEVGPPQPQ-EQHSRRDALHSEVLAPWKDESQEWVERTTSVVIIQ 438
Gallus_gallus     SAFNGNSSSDPP--AGSELGHPQPQ-EQHSRRDALHSEVLAPWKDENQEWVERTTSVVIIQ 434
Chelonia_mydas    SAINSNSSSDPPPGASSELGPPHQPEQLPGKGPLHSAQPSAWGAKKQEWVERTTSVVIIQ 455
Anolis_carolinensis DPSDYDSSSNSSSAPAPPAPVLQG--EPPSKE---RAPPAAPLDQEHSWVGRTTSVVIIQ 340
.....430.....440.....450.....460.....470.....480

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: :.
Mus_musculus      GRYSG-- 379
Rattus_norvegicus GRYSG-- 387
Homo_sapiens      DRYSG-- 371
Pan_troglodytes   DRYSG-- 371
Macaca_mulatta    DRYSG-- 372
Callithrix_jacchus DRYSG-- 373
Heterocephalus_glaber GRYSG-- 410
Canis_lupus_familiaris GRYSG-- 353
Felis_catus       GRYSG-- 353
Bos_taurus        GRYSG-- 393
Pavo_muticus      QHRTDEM 445
Pavo_cristatus    QHRTDEM 445
Gallus_gallus     QHRTDEM 441
Chelonia_mydas    PHRADEM 462
Anolis_carolinensis PRRSDEM 347
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