

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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Species	Sequence	Score
Homo_sapiens	-----	
Pan_troglodytes	-----	
Macaca_mulatta	-----MPGIRGWM-----	8
Mus_musculus	-----	
Heterocephalus_glaber	-----	
Equus_caballus	----MLVTVASGFECSSVRPWEQWGRKPGSWQPGDSALSGAAAPVRASSGLFLAGRLRCG	55
Pteropus_alecto	-----	
Ornithorhynchus_anatinus	YPPTFSPPRRRLLSLSPFSPPRRNPSSGQDRGQPGGGGLDDPAPGPGPRPRCRGSWAPVLLGNP	60
Latimeria_chalumnae	-----	
Rhinatrema_bivittatum	-----	
Xenopus_tropicalis	-----	
Pavo_muticus	-----	
Pavo_cristatus	-----	
Gallus_gallus	-----	
Anas_platyrhynchos	-----	
Chelonia_mydas	-----	
	1.....10.....20.....30.....40.....50.....60	

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Homo_sapiens	-----MGS--GPRGALS---	LLLLLLA	17		
Pan_troglodytes	-----MGS--GPRGALS---	LLLLLLA	17		
Macaca_mulatta	E PGR RSGYSETS-----P RCPADRPAC GASLAG PR GALS---	LLLMLLA	50		
Mus_musculus	-----MGS--RPRGALS---	LLLLLLA	17		
Heterocephalus_glaber	-----MAS--RPRGALS---	LLLLLLA	17		
Equus_caballus	RRGW RRGLAGVCGLI AWFSGORLALQSQPGHYPLAMSS--GP RR ALS---	LLLLLLA	107		
Pteropus_alecto	-----MGS--GPRGALS---	LLLLLLA	17		
Ornithorhynchus_anatinus	PLRGGRVS SASSPNLGAGRRRR RGAPGVPA GARRRSRPPVAGPRTPASRAPGWLP LIVWVA	120			
Latimeria_chalumnae	-----MMEGGG-----	LLLCVL	13		
Rhinatrema_bivittatum	-----MVAVLEQLHLHTPFKLKMRCWI-	LLLSLLH	30		
Xenopus_tropicalis	-----MNMERWP----	VLLTLLI	14		
Pavo_muticus	-----MNSGI-----	LFLSLLG	12		
Pavo_cristatus	-----MNSGI-----	LFLSLLG	12		
Gallus_gallus	-----MNSGI-----	LFLSLLG	12		
Anas_platyrhynchos	-----MSRGI-----	LFLPFLG	12		
Chelonia_mydas	-----MISWI-----	LFLSLLG	12		
 70 80 90 100 110 120				

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Homo_sapiens	PPSRPAAGCPAPCS	CAGTLVDCGRRGLT	WASLPTAF	PVDTT	ELVLTGNNLT	TALPPGLL	DA		77
Pan_troglodytes	PPSRPAAGCPAPCS	CAGTLVDCGRRGLT	WASLPTAF	PVDTT	ELVLTGNNLT	TALPPGLL	DA		77
Macaca_mulatta	PPSRPAADCPAPCS	CAGTLVDCGRRGLT	WASLPTSF	PVHTT	ELVLTGNNLT	TALPSGLL	DA		110
Mus_musculus	LLSRPASGCPAPCS	CAGTLVDCGRRGLT	WASLPA	AFPDP	TTELVL	TGNNLT	TALPPGLL	DA	77
Heterocephalus_glaber	PPSLAAVGCPEPC	SCAGTQVDCGRRGLT	SASLPA	VFPPD	TTELVL	TGNNLT	TALPPGLL	DT	77
Equus_caballus	PRSCAATRCAPC	VCAGTLVDCGRRGLT	WASLPTAF	PSD	TTDLVL	TGNNLT	TALPPGLL	DA	167
Pteropus_alecto	PPSRPASGCPA	XXXXXX	----	XXXXXXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXX	TALPPGLL	DA		73
Ornithorhynchus_anatinus	LLPAGLSACAPC	RCAGTVVDCGRLGL	TEDLLPAA	FPPAT	TEIVLSAN	NLSAL	PEGLLD	GG	180
Latimeria_chalumnae	LIPGVLLT	CPSCQSC	TGETVDCNGREL	SIETLPIQ	FPLSTREI	FLDNNQLAS	IPNGYF	DS	73
Rhinatrema_bivittatum	FLSLVLGHCP	APCHSSNTVDCNSK	DLTEESLPA	AFPPQ	STKVIRLKH	NLSKAL	PNGLFD	GG	90
Xenopus_tropicalis	SVFPGTSSCP	SSRCGSGIVDCS	QSRGLSTK	SLPASFP	SFTTEVHLN	QNNLAYI	PNGLLDR		74
Pavo_muticus	FLFPVIPT	CPPPCKCAASI	IDCMSKGL	TVTKLPVAF	RPSAEI	INLSYNRL	TSIPSGL	FDN	72
Pavo_cristatus	FLFPVIPT	CPPPCKCAASI	IDCMSKGL	TVTKLPVAF	RPSAEI	INLSYNRL	TSIPSGL	FDN	72
Gallus_gallus	FLPSVIPT	CPPLCKCATNI	IDCMSKGL	TVTRLPA	AFRPSAEI	INLSYNRL	TSIPSGL	FDN	72
Anas_platyrhynchos	FLPLVIPT	CPPLRCKCATNI	IDCTS	KGLTVTKLPVAF	RPSAEI	INLAYNSL	TSIPNGL	FDN	72
Chelonia_mydas	FLPLVITPT	CPSPCQCSAN	IVDCMSGK	LTKSLPAS	FSSTQTIFL	NNLLTSIP	SGLLDN		72
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Homo_sapiens	LPALRTAHLGANPWRCDRLVPLRAWLAGRPERAPYRDLRCVAPPALRGRLLPYLA	137
Pan_troglodytes	LPALRTAHLGANPWRCDRLVPLRAWLAGRPERAPYRDLRCVAPPALRGRLLPYLA	137
Macaca_mulatta	LPALRTAHLGANPWRCDRLVPLRAWLAGRPERAPYRDLRCVAPPALRGRLLPYLA	170
Mus_musculus	LPALRAAHLGANPWRCDRLPLRAWLAGRPERAPYRDLRCVAPPALRGRLLPVA	137
Heterocephalus_glaber	LPVLRAAHLGANPWRCDRLVPLRAWLAGRPERAPYRDLRCVSPPALRGRLLPYAE	137
Equus_caballus	LPELRAAHLGANPWRCDCHLVPLRAWLAGPERSPYRDLRCAAPPALRGRLLPYL	227
Pteropus_alecto	LPLLRAAHLGANPWRCDCHLVPLRAWLAGRRERALYRDLRCAAPPALRGRLLLYLA	133
Ornithorhynchus_anatinus	LTALRAVRLSGNPWRCDGCIHYLRAWLRWQOORGYPYRELRCASPPDLRGRLLIYA	240
Latimeria_chalumnae	LKQVSGVFLSNPNPWCDCDILYLRSLWKQHNRHLYKDVVCSPPNSMRGRVIMYL	133
Rhinatrema_bivittatum	LLGLQEVHLLQNPWTCDNIIYLRSWIKQOSRELYRDVVCSSPPSMRGRLIMYL	150
Xenopus_tropicalis	LPQLRQVNLQGNPWHCDCDILYLRGWLGQONKPLYRDITCASPEPLKGRVIMYL	134
Pavo_muticus	LKSLQTVHLQGNPWECDILYLRSLWQOONRTFYRDVRCASPAHLQGRVVAYLT	132
Pavo_cristatus	LKSLQTVHLQGNPWECDILYLRSLWQOONRTFYRDVRCASPAHLQGRVVAYLT	132
Gallus_gallus	LNSLQAVHLQGNPWECDILYLRSLWQOONRTFYRDVRCASPAHLQGRVVAYLT	132
Anas_platyrhynchos	LKNLQIVYLQGNPWECDILYLRSLWQOONRTFYRDVRCASPAHLQDRIIAYLT	132
Chelonia_mydas	LQSLQVAYLWGNPWECDCDILYLRSLWQOONRTLYRNVVCASPEHLQRIIAYLT	132
190.....200.....210.....220.....230.....240	

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Homo_sapiens	RAACAPGPLCWGALAAQLALLGLGLLHALLLVLLLCRLRRRLRARARARA--AARLSLTDP	195										
Pan_troglodytes	RAACAPGPLCWGALAAQLALLGLGLLHALLLVLLLCRLRRRLRARARARA--AARLSLTDP	195										
Macaca_mulatta	RAACAPGPLCWGALAAQLALLGLGLLHALLLVLLLCRLRRRLRARARARAALRLSLTDP	230										
Mus_musculus	RAACAPGLLCWGALVAQ LALLVLGLLHALLLALLLGRLRRRLRARARS--IQEFSLTAP	195										
Heterocephalus_glaber	RAACAPGRLCRGS L TOLL LLGLGLLHALLLALLLCRLQLRLRA---RTRIAHQSP LTAP	193										
Equus_caballus	RAACTPSALCWGALAAQLLLLGLGLLHALLLLLLLCLRLQLRARARARTRAHRSLTAP	287										
Pteropus_lecto	QAACSPGALCRGSLVAGLVLLGLGMLHALLLVLLLRRLRLRG---RT--ARGFLTAP	187										
Ornithorhynchus_anatinus	FSTCQ-ARYCRWALGAHLCSLVFLLQLALLLVILRLRRYQALAREARRAREP LQTVP	299										
Latimeria_chalumnae	LSTCQ-FWHCNVALVFQICLFIFISIQAILLIFIIVFLRRFEKLSKEANRTAKEIVQEND	192										
Rhinatrema_bivittatum	LSTCQ-YWHCSLALICQICLFFFIITLQAILLIFVIIFLRRFOTIAKEARGTIKEIYQNTD	209										
Xenopus_tropicalis	VTTCC-YWYC NLALVS QICLFLLIITGILLIFIILSLRRFOTIAREARRAKELQYNSE	193										
Pavo_muticus	ISTCQ-YWYCALALFSQVLVIILLFLOAILVIFIIIIYLQRFRMTAEARSTTRDLYPHAD	191										
Pavo_cristatus	ISTCQ-YWYCTLALFSQVLVIILLFLOAILVIFIIIIYLQRFRMTAETRSTTRDLYPHAD	191										
Gallus_gallus	ISTCQ-YWYCSLALFSQVLVIILLFLOAILVIFIIIIYLQRFRMAAEARSTTRDLYQRAD	191										
Anas_platyrhynchos	ISTCQ-HWYCTLALLSQFLLIFFLLVQAILVIFIICYLRRFRMTAKTWTSQDLHQHAD	191										
Chelonia_mydas	ISTCQ-YWYCSIALISQICLFLFILLOAVLLLFIIILFLHRFORIANVARQTKETHQHVD	191										
250.....260.....270.....280.....290.....300											

Homo_sapiens	LVAERAGTDES-----	206
Pan_troglodytes	LVAERAGTDEF-----	206
Macaca_mulatta	LVAEQDGTDES-----	241
Mus_musculus	LVAESARGGAS-----	206
Heterocephalus_glaber	LVDKPAEAGVS-----	204
Equus_caballus	LVAEPPAGAGES-----	298
Pteropus_alecto	LVAEPPGASES-----	198
Ornithorhynchus_anatinus	LVPPQPEAPSA-----	310
Latimeria_chalumnae	---YVKILDD---YQNSE	204
Rhinatrema_bivittatum	AYVYESFSNDAPLYNHSRT	229
Xenopus_tropicalis	SYVDNVPPLHN---YERT	208
Pavo_muticus	TWS-LQER-----	198
Pavo_cristatus	TWS-LQER-----	198
Gallus_gallus	TWS-LQEQ-----	198
Anas_platyrhynchos	T-----	192
Chelonia_mydas	TWAPLSENAHDID-----	204
310.....320	