

## CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep\_msa/CCD125.pse Feb 1 11:35:32 2022

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		* : * : **** *	* *: . . :	:	.
Xenopus_tropicalis	MSD--ALSAG---RVCHSEEEEDFMAGGDLGEFGRRKPGGLYDGSVDA	MAEFKIRRVSD	55		
Latimeria_chalumnae	MSE--VHIVENGKEELKSEETEDDMASGDLGDGLGRRPGGIYDTESLNTRVSKSERN	NSD	58		
Rhinatrema_bivittatum	MSEGVPPLPTEQEHENGNPEEEDFLAGGDLGDGYGRRPPGGVYETAEGVSGLISKR	SRLSD	60		
Mus_musculus	MSK--VPRSSSEAD-IWETEDD-MTEGDLGYLGRKPGGIYEVPC--SIT---SKR	RSD	51		
Rattus_norvegicus	MSR--VSRSSSEAD-IWEAEDD-MTEGDLGYLGRRPGGIYEVPC--STT---SKR	RSD	51		
Homo_sapiens	MSK--VARSSSESDEVOLWETEEDDMTEGDLGYLGRKPGGIYEIEF--SHR---	SRKRSD	53		
Pan_troglodytes	MSK--VAKSSSESDEVOLWETEEDDMTEGDLGYLGRKPGGIYEIEF--SHR---	SRKRSD	53		
Macaca_mulatta	MSK--VARSSSESDEVOLWETEEDDMTEGDLGYLGRKPGGIYEVV--SHR---	SRKRSD	53		
Callithrix_jacchus	MSK--VARSSSESDEVOLWETEEDDMTEGDLGYLGRKPSSIYEVV--SHR---	SRKKSD	53		
Canis_lupus_familiaris	MSR--LARPPSEAEVQPWETEDD-LADGDLGYLGRRPGAVFQAQV--SQLS-TSKR	RSD	54		
Bos_taurus	MSR--VARLPSEAEGQAWETEDDDTAEGDLGYLGRRPGGICEVPV--SHLF-KSR	KRSD	55		
Pavo_muticus	-----MEEAEEDDMACGDLGNLGRRPGGVYEGER--LQNYPF	FRSKKVS	42		
Pavo_cristatus	-----MEEAEEDDMACGDLGNLGRRPGGVYEGER--LQNYPF	FRSKKVS	42		
Gallus_gallus	-----MEEAEEDDMACGDLGNLGRRPGGVYEGER--LQNYPF	FRSRKAS	42		
Chelonia_mydas	MSE--AFTLQSKQEKDSEGEDDMTCGDLGNLGRRPGGVYEMEG--LVNHTFRSR	RKGS	56		
	1.....10.....20.....30.....40.....50.....60				

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Xenopus_tropicalis	NHG--HYQLVKKG-	EDSGTASCS--	VLRNNAEAKTHKFGHVGYSRCRKNSI--	DANLE	108	
Latimeria_chalumnae	AKSPSPCPVSRDGL	EDEGAHFHS--	KLSITFDIAFYKYTYTLNEV---	RRRLHSA--DRPCE	111	
Rhinatrema_bivittatum	DRGFGHCLLMKKG-	DDNGTASFQAKSCNSCDASSRKP	GIDVT----	TRCSS--DKNHSE	112	
Mus_musculus	GKNSSPPPFPRKG-	EERSETSFQYSRRKGFDTSAEGV---	RAS--RLSST----	DSNSE	101	
Rattus_norvegicus	GKNPSPPPFPKGG-	EERSETVFQYSRSKGVQDTCARGC---	RASGYRROSSA----	DSNSE	104	
Homo_sapiens	GKNFSPPPFPRKG-	EERNEASFQYSKHKSQQDTFFQVS---	RISNYRROSST----	VDSNSE	107	
Pan_troglodytes	GKNFSPPPFPRKG-	EERNEASFQYSKHKSQQETFFQVS---	RISNYRROSST----	VDSNSE	107	
Macaca_mulatta	GRNFSPPPFPRKG-	EERSEASFQYSKHKSLODTPFQVS---	RMSNYRROSS----	TDSNSE	106	
Callithrix_jacchus	GKNFSPPPFPRKG-	EERSEAFQYSMHESLQDTPQVT---	RISNYRROSNIVPDLNAE	109		
Canis_lupus_familiaris	GKNFSPLPLPGKG-	EERR-ASFQSRHKSLQDTCPKES---	GPSYYGROSS----	DSNSE	106	
Bos_taurus	GKNSSPPLFSRNG-	DKRN SAVFOYSRQKSFQDTYLEGP---	RIPPHKKROSST----	DSNSE	108	
Pavo_muticus	VKAYNTLSSIIGKV-	EENDATPLPCSKRNTFHDGSSKKP----	LSSSTROSSC----	ESSSE	94	
Pavo_cristatus	VKAYNTLSSIIGKV-	EENDATPLPCSKRNTFHDGSSKKP----	LSSSTROSSC----	ESSSE	94	
Gallus_gallus	VKAYNTFSSIIGKV-	EENDATPLPCSKRNSFHGDSSSQP----	LPRSTOQSSC----	ESSSE	94	
Chelonia_mydas	DKIFNP LLLKKG--	EESDAAI FHC SKCNGLYDVSSKKLGISGITRCSRNSS--	ESNSE	111		
	.....70.....	80.....	90.....	100.....110.....120		

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Xenopus_tropicalis	VSEEDLRQVQVELTEEVDFLRLELEASQRQLNRKDEALKLLOSMAMLDKATSHTKEMLOK	168
Latimeria_chalumnae	TYTEELKQRLQEATEEAETLRNLELTTORMLEGKYEALQILQNRVAFEKATTHTKILLQK	171
Rhinatrema_bivittatum	MSNAELRQQLQEVTEELEILRSELEASQRQLEGKDEALKILQNMVAFDKATIHTKVMLQK	172
Mus_musculus	LSDEQLRRRLHEALEDFEILKTELEASQRQLEGKEEALKILOSMAMLGKATSHTTQTMLOK	161
Rattus_norvegicus	LSDEQLRRRLHEALEDFEILKTELEASQRQLEGKEEALKILOSMAVLGKATSHTTQTMLOK	164
Homo_sapiens	LSNEELRQCLNETLEEVEMLKTELEASQRQLRGKEEALKILOSMAILGKATSHTTQAVLOK	167
Pan_troglodytes	LSNEELRQCLNETLEEVEMLKTELEASQRQLRGKEEALKILOSMAILGKATSHTTQAVLOK	167
Macaca_mulatta	LSNEELRQCLHETLEEVETLKTELEASQRQLRGKEEALKILOSMAILGKATSHTTQAVLOK	166
Callithrix_jacchus	LSNEELRQCLHETLEEVETLKTELEASQRQLRGKEEALKILOSMAILGKATSHTTQAVLOK	169
Canis_lupus_familiaris	LSNAELKQRLDHTLEETLEILKTELEASQRQLEGKEEALKILOSMATFGKATSHTTQVVLQK	166
Bos_taurus	LSNVELRQYLHETLEEVETLKTELEASQRQLEGKEEALKILOSMATFGKATSHTTQAVLOK	168
Pavo_muticus	VSNEELKQQLREALEETIEMLKTDLEAAQRKLEGKDEALRILQSMAVFSKATSHTKAMLEK	154
Pavo_cristatus	VSNEELKQQLREALEETIEMLKIDLEAAQRKLEGKDEALRILQSMAVFSKATSHTKAMLEK	154
Gallus_gallus	VSNEELKQQLREALEETIEMLKVELEAAQRKLEGKDEALRILQSMAVFSKATSHTKAMLEK	154
Chelonia_mydas	VSNEELRQQLREALEETIEMLKVELEASQRQLEGKEEALKILOSNMTVFNKATSHTKAMLOK	171
	.....130.....140.....150.....160.....170.....180	

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Xenopus_tropicalis	AEQERRTLEKEISVLEWEIQFDQVRLKNMEETWKEKYERVLCENVIMKESLELRITNEIKA	228
Latimeria_chalumnae	AEEKKKVLEKEVNTLOWEIEFNQVRSONLEQSWKEKYNRINCENAAQLERLELRNQIKS	231
Rhinatrema_bivittatum	MEEQRRALEKEINALOWEIEFEQDKFKNLEESWKEKYERYCENAAKETLELRITNEIKT	232
Mus_musculus	TIEQKRSLEKEINALOWEMEFDQDRFKNIEESWIQKDYRLNCNAVIRENLKLRTEEIKM	221
Rattus_norvegicus	TIEQKRSLEKEINALOWEMEFDQDRFKNIEESWIQKDYRLNCNAVIRETLKLRTEEVKM	224
Homo_sapiens	TMEQNRSLEKEINALOWEIEFDHNRFKNIEESWIQKDYRLNCNAVLENLKVKTTEEIKM	227
Pan_troglodytes	TMEQNRSLEKEINALOWEIEFDHNRFKNIEESWIQKDYRLNCNAVLENLKVKTTEEIKM	227
Macaca_mulatta	TMEQNRSLEKEINALOWEIEFDHNRFKNIEESWIHKDYRLNCNAVLENLKVKTTEEIKM	226
Callithrix_jacchus	TVEQKRSLEKEINALOWEIEFDHNRFRNIEESWTKDYRLNCNAVLENLKVKTTEEIKM	229
Canis_lupus_familiaris	TMEQKRSLEKEVNALOWEIEFDQNRFKSIEESWTKQDYRLNCNAVLEQALNMKTEEIKM	226
Bos_taurus	TVEQKRSLEKEINALOWEIQFDQNRFKNIEESWIQKDYRLNCNAVLEKETLKLKTEEIKM	228
Pavo_muticus	TEEEKRTLEKEINILOWEIEFDQDRFKNIEDTWTEKYDRIYCENTALKEALKLRTEEVKT	214
Pavo_cristatus	TEEEKRTLEKEINILOWEIEFDQDRFKNIEDTWTEKYDRIYCENTALKEALKLRTEEVKT	214
Gallus_gallus	TEEEKRTLEKEINILOWEIEFDQDRFKNIEDTWTEKYDRIYCENTALKEALKLRTEEVKT	214
Chelonia_mydas	TEEQKRALEKEINALOWEIEFDQERFKNIEETLSEKCDRIYCENAAKETLKLRTDEVRA	231
	.....190.....200.....210.....220.....230.....240	

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Xenopus_tropicalis	LKSENITILNQCCLELLAMLDVN- <b>Q</b> OKIFODNLSLNKITSIMDVITAVELAVLGACT- <b>C</b> GDGG	286
Latimeria_chalumnae	LKSENAALNQCNLELLAMLDVK- <b>E</b> QNIFOETLSLNKSSFFSEVITAFELAVLGACN-CNVSG	289
Rhinatrema_bivittatum	LKSENITILNQCYLELLAMLDVK- <b>Q</b> OKMFOKNMSVSTSGFTIDITALELAVLGACTCCNSSG	291
Mus_musculus	LKSKNAVLNQRYLEALAMLDIK- <b>E</b> QKMGQE-----ESGFTDVSGLLEAVLGACL-CHGPG	274
Rattus_norvegicus	LKSENAVLNQRYLEALAMLDIK- <b>Q</b> OKVAQENTIA-EESGFTFEVSGLELAVLGACL-CQGP	281
Homo_sapiens	LKSDNAVLNQRYLEALAMLDIK- <b>Q</b> OKMAQENMCCDKSGFAEASGLELAVLGACL-CHGPG	285
Pan_troglodytes	LKSDNAVLNQRYLEALAMLDIK- <b>Q</b> OKMAQENMCCDKSGFAEASGLELAVLGACL-CHGPG	285
Macaca_mulatta	LKSDNAVLNQCYLEALAMLDIK- <b>Q</b> OKMAQENMCCDKSGFAEASGLELAVLGACL-CHGPG	284
Callithrix_jacchus	LKSDNAVLNRRYLETLAMLDIK- <b>Q</b> OKMAQENMCCDKSGFAEASGLELAVLGACL-CHGPG	287
Canis_lupus_familiaris	LKSENAVLNQRYLEALAMLEVK- <b>Q</b> OMVAQENICHDKSGFTFEVSGLELAVLGACL-CHGLR	284
Bos_taurus	LKSENAITLNOQYLEVLAMLDIK- <b>Q</b> OOQMAQEDTCQDGSGFSEVSGLELAVLGACL-CHRR	287
Pavo_muticus	LKSENAITLNOQHLEFLAMLDVN-KOKIVQENMSVNKRDIITDITGLELAVLGACT-CNSSG	272
Pavo_cristatus	LKSENAITLNOQHLEFLAMLDVN-KOKIVQENMSVNKRDIITDITGLELAVLGACT-CNSSG	272
Gallus_gallus	LKSENAITLNOQRLEFLAMLDVN-MOKIVQENMSVNKRDIITDITGLELAVLGACT-CNSSG	272
Chelonia_mydas	LKSENAITLNOQRLEFLAMLDVK- <b>Q</b> OKIIQENMSINKSGFTFEITGLELAILGACT-CNAPG	289
	.....250.....260.....270.....280.....290.....300	

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Xenopus_tropicalis	--PCPCAKMSAATRKQLLQLRKELEAEKKSKEEAYIMADGFRIAFAEQLKRNRDVLGLQID	344	
Latimeria_chalumnae	GEPCICAKMAAATRKLLLLITQELFVQRKRKEEAYVMADAFRIAFAEQLKRKNDOITLRLT	349	
Rhinatrema_bivittatum	GEPCSCARMSAAATRKQLLQLRREFELEKKSKEEAFIVADAFRIAFAEQLKRNRNEQITLRLN	351	
Mus_musculus	GSPSCCAKMAASTRKLVQLRHELETLQKSKEEAHITADAFRIAFAEQLMRKNEQALRLA	334	
Rattus_norvegicus	GSPSCCAKMAASTRKLVQLRHELETLQKSKEEAHITADAFRIAFAEQLTRKNDQALRLA	341	
Homo_sapiens	GNPCSCARMAASTRKLLLQLKQELETLQKSKEEAYVMADAFRIAFAEQLMRKNDQALQLT	345	
Pan_troglodytes	GNPCSCARMAASTRKLLLQLKQELETLQKSKEEAYVMADAFRIAFAEQLMRKNDQALQLT	345	
Macaca_mulatta	GSPSCCARMAASTRKLLLQLKQELELLQKSKEEAYTMADSFRIAFAEQLMRKNDQALQLT	344	
Callithrix_jacchus	GSPSCCARMAASTRKLLLQLKQELELLQKSKEEAYVMADAFRIAFAEQLMRKNDQALRFT	347	
Canis_lupus_familiaris	GSPCACAAASARKMLLKLKQELGLLQKSKDEAYIMADAFRIAFAEQLMRKNDQALRLT	344	
Bos_taurus	GSPCACARLAASTRKMLLQLKQEMELLQKSKEEAYIMADAFRIAFAEQLMRKNDQALRLT	347	
Pavo_muticus	GQPCSCARMAAVTRKQILHLKQETIELLMKRKDEAFIMADAFRIAFAEQLMOKKDDQALRLA	332	
Pavo_cristatus	GQPCSCARMAAVTRKQILHLKQETIELLMKRKDEAFIMADAFRIAFAEQLMOKKDDQALRLA	332	
Gallus_gallus	GQPCSCAKMAAVTRKQILHLKQETIELLMKSKDEAYIMADAFRIAFAEQLMORKDDQALRLA	332	
Chelonia_mydas	GEPCSCAKMSAATRKQLLQLRQCEALKKSKEEAYIMADAFRIAFAEQLMORKDDQALRLT	349	
	.....310.....320.....330.....340.....350.....360		

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<i>Xenopus tropicalis</i>	SSQONS SDTRLTTHCTPTGYDSESNSILLESKRIVEIVFSLHKELSPKLACVQSSE	514
<i>Latimeria chalumnae</i>	SCLQNK-ESGDSTDAGSCCQNIIDKKRSCPVLSQETLKNAITTLIKKHFFPGAGFCNQSD	521
<i>Rhinatrema bivittatum</i>	GRTLALKDSEAETS--LCHQDTGSQDSLCSAHTSSSQNSSIALDILHSLPSKSAFYDETH	518
<i>Mus musculus</i>	AWHDASELCLGLRDPVQ-SNHVSEPMACICSIQHPPKVSDCPRTLKRSCSLPSTLFYK---	500
<i>Rattus norvegicus</i>	AWQEAELCLGLRDP---HVHVSEPVRCVCSIRHPRKVS GCSRALKRSCSLPNSVFYKLIT	508
<i>Homo sapiens</i>	PWRKTSFVSLGDPPIHSSVCILNSVGCICSIQHSQIDPNY-RTLKRSHSLPSSIIF---	511
<i>Pan troglodytes</i>	PWRKTSFVSLGDPPIHSSVCILNSVGCICSIQHSQIDPNY-RTLKRTHSLPSSIIF----	511
<i>Macaca mulatta</i>	PRHKTSEFVSLGDPVHSSVHIINSVGCICSIQHSQIDPNY-RTLKRSHSLPSSIIF----	510
<i>Callithrix jacchus</i>	PWHKTSFVSLGDPVHSSIHILNSMGCMCSIQHSQIDPNY-RTLKRSHSLPSSIIF----	513
<i>Canis lupus familiaris</i>	-WGKSSSEFPVLHDPVYSSVQILNSVGCICSIQHPRVQNTRTLKRSCSLPSSIIF----	510
<i>Bos taurus</i>	PWQKILEFPVSCDPVHSSVQIFNSVGCICSIQHFTQDQKYRTLKRSHSLPSSNMY-----	513
<i>Pavo muticus</i>	HGGKVVQPSGPAALGPACCCDLASPSLSLSSASNRNGFQNSVRVLRKSHSWPPEAVRH---	492
<i>Pavo cristatus</i>	HGGKVVQPSGPAALGPACCCDLASPSLSLSSASNRNGFQNSVRVLRKSHSWPPEAVRH---	492
<i>Gallus gallus</i>	HGGKAVQPSGPAAPGPVCCCDLASPSLSLSSASDNGNGFQNSVRVLRKSHSWPSESAAH---	492
<i>Chelonia mydas</i>	HQCTASESQESTDPEYSCCQNLGSDNITCSILNTKIYQKSARPLKSHSWPSRNCKENYV	520
	.....490.....500.....510.....520.....530.....540	

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Xenopus_tropicalis  SAAENEAPVGVGHTET----- 531
Latimeria_chalumnae AAEQLQNADESVLPHERSTHMAEEKLDS 549
Rhinatrema_bivittatum TQGTAEITLTETSANHKC----- 535
Mus_musculus ----- 500
Rattus_norvegicus ----- 508
Homo_sapiens ----- 511
Pan_troglodytes ----- 511
Macaca_mulatta ----- 510
Callithrix_jacchus ----- 513
Canis_lupus_familiaris ----- 510
Bos_taurus ----- 513
Pavo_muticus -----EESDPCGKACETVVISI----- 509
Pavo_cristatus -----EESDPCGKACETVVISI----- 509
Gallus_gallus -----EESDPCGKACETVVISI----- 509
Chelonia_mydas QGIAETIDMNCTVQEHSELNNNL----- 543
.....550.....560.....
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