

# CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep\_msa/TME1438H.pps Feb 1 14:47:14 2022

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*:      :.* **. .*****: ***: *: : : : ** : .*.:.*::** ***
Mus_musculus      MEYPWDDLTLAFSRTSMFPFFDIAHYLVSMALKORPGAVAAAWNPLASWLSAMLHCFG 60
Rattus_norvegicus MEYPWDDLTLAFSRTSMFPFFDIAHYLVSMALKORPGAVAAAWNPLSSWLSAMLHCFG 60
Homo_sapiens       MDSPWDELALAFSRTSMFPFFDIAHYLVSMAVKROPGAAALAWKNPISSWFTAMLHCFG 60
Pan_troglodytes    MDSPWDELALAFSRTSMFPFFDIAHYLVSMAVKROPGAAALAWKNPISSWFTAMLHCFG 60
Macaca_mulatta     MDSPWDDLALAFSRTSMFPFFDIAHYLVSMAVKROPGAAALAWKNPISSWFTAMLHCFG 60
Callithrix_jacchus MDFPWDDLALTFSTSMFPFFDFAHYLVSMAVKSOPGAVALAWKNPISSWFTAMLHCFG 60
Canis_lupus_familiaris MDSPWDELTLAFSRTSMFPFFDIAHYLVSMALKROPGAAAVARNKPFSSWFTAMLHCFG 60
Bos_taurus         MESPWNETLAFSRTSMFPFFDIAHYLVSMALKHOPGAAALAWKNPLSSWFTAMLHCFG 60
Equus_caballus     MESEWERLTLAFSRTSMFPFFDIAHYLVSMAMKROPGAAAEARKNPFSSWFTAMLHCFG 60
Heterocephalus_glaber MDSSWDDLTLTFSTSMFPFFDIAHYLVSMAMKHOPGAAAIARKNPVSSWLTAMLHCFG 60
Pavo_muticus       ME--LGQVPLLF SRLPMFPFFDLAHYMASIMALKEORGAVEVSIRSPVACWFSAMLC CFG 58
Pavo_cristatus     ME--LGQVPLLF SRLPMFPFFDLAHYMASIMALKEORGAVEVSIRSPVACWFSAMLC CFG 58
Gallus_gallus      ME--LGQVPLLF SRLPMFPFFDLAHYMASIMALKEORGAVEVSIRSPVACWFSAMLC CFG 58
Chelonia_mydas     ME--LGQVPLRFSRLPMFPFFDAAHYLASVMALKEORGAVEVSRSPIACWFSAMLYCFG 58
Xenopus_tropicalis MES--FSELSLQFSQLSMFPFFETAHYLTSVMSAREQAGAVDVASRSPLASWFS SMLYCFG 59
Rhinatrema_bivittatum MES--LQEMSLQFSEISMFPFFDVAHYLCSVQSLREOKGAMEVAWRSPIACWFSAMLC CFG 59
1.....10.....20.....30.....40.....50.....60

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Mus_musculus      GGILSCMLLAESPLKFLTNHTNILLASSIWYIVFFCPRDLVSQGYSYQPIQFLAAGMKEV 120
Rattus_norvegicus GGILSCILLAEPPLKFLTNHTNILLASSIWYIVFFCPRDLVSQGYSYQPIQLLAAGMKEV 120
Homo_sapiens       GGILSCLLLAEPPLKFLANHTNILLASSIWYITFFCPHDLVSQGYSYLPVQLLASGMKEV 120
Pan_troglodytes    GGILSCLLLAEPPLKFLANHTNILLASSIWYITFFCPHDLVSQGYSYLPVQLLASGMKEV 120
Macaca_mulatta     GGILSCLLLAEPPLKFLANNTNILLASSIWYITFFCPYDLVCQGYSYLPVQLLASGMKEV 120
Callithrix_jacchus GGILSCLLLAEPPLKFLANNTNILLASSIWYITFFCPHDLVSQGYSHLPVQLLASGMKEV 120
Canis_lupus_familiaris GGILSCVLLAEPPLRFLANNTNILLASSIWYITFFCPCDLVSQGYSFPLVQLLAAGMKEV 120
Bos_taurus         GGILSCVLLAEPPLRFLANNTNILLASSIWYIAFFCPCDLISQAYSFLPVQLLAAGMKEV 120
Equus_caballus     GGILSCVLLGEPVLRFLANNTNILLASAIWYITFFCPYDLVSQGYSFPLVQLAAGMKEV 120
Heterocephalus_glaber GGILSCILLAEPPLKFLTNHTNVLLASSIWYITFFCPCDLVSQAYSFLPVQLLAAGMKEV 120
Pavo_muticus       GSVLSSLMLGEPPEVFLAKTNILLASSVWYLVFYCPQDKFYQCFAPLPLRLLIAGMKEV 118
Pavo_cristatus     GSVLSSLMLGEPPEVFLAKTNILLASSVWYLVFYCPQDKFYQCFAPLPLRLLIAGMKEV 118
Gallus_gallus      GSVLSSLMLGEPPEVFLAKTNILLASSVWYLVFYCPQDKFYQCFAPLPLRLLVAGMKEV 118
Chelonia_mydas     GSVLSSLMLAEPPEVGLFANSTNIFLASSVWYLVFFCPHDIVYRCFSFLPLRLMVAGMKEV 118
Xenopus_tropicalis GGILSILLAEPPEVGLSNTTSIILASAVWMVYFYPYDLFYNCFFFLPIRLILAGMKEV 119
Rhinatrema_bivittatum GGILSSIMLAEPPEVGLSNTTNIFLASACWYLTFFYPRNMFYKWC SFLPLRLILAGMKEV 119
.....70.....80.....90.....100.....110.....120

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*****: *: .*. .*: : : : :*****. : : *.:**.: *** : :***
Mus_musculus      TRTWKIVGGVSDANSYYRNAWIVMIVGWARGAGGAVVTACEQLLKGDWKPEGDEWLKMS 180
Rattus_norvegicus TRTWKIVGGVAHANGYYRNGWIVMIAVGWARGAGGAIITACEQLLKGDWKPEGDEWLKMS 180
Homo_sapiens       TRTWKIVGGVTHANSYYKNGWIVMIAIGWARGAGGTIIITNFERLVKGDWKPEGDEWLKMS 180
Pan_troglodytes    TRTWKIVGGVTHANSYYKNGWIVMIAIGWARGAGGTIIITNFERLVKGDWKPEGDEWLKMS 180
Macaca_mulatta     TRTWKIVGGVTHANSYYKNGWIVMIAIGWARGAGGTIIITNFERLVKGDWKPEGDEWLKMS 180
Callithrix_jacchus TRTWKIVGGVTHANSYYKNGWIVMIAIGWARGAGGAIVTNFERLVKGDWKPEGDEWLKMS 180
Canis_lupus_familiaris TRTWKIVGGVKHANSYYKNSWIVMIAIGWARGAGGSIIITNFEQLVKGGWKPEADEWLKMS 180
Bos_taurus         TRTWKIVGGVTHANSYYKNGWIVMIAVGWARGAGGSIIITNFEQLVKGCWKPEAEWLKMS 180
Equus_caballus     TRTWKIVGGVTHADSYKNGWIVMIAIGWARGAGGSIVTNFERLVKGDWKPEADKWMKMS 180
Heterocephalus_glaber TRTWKIVGGVTHANSYYKNGWIVMIAIGWARGAGGTIVTKFEQLVKGDWKPGGDEWLKMS 180
Pavo_muticus       TRTWKIVAGVAHADSHFEDAWLVMVAVGWARGAGSGLISNFEQLVRGVWKPETNELLKMS 178
Pavo_cristatus     TRTWKIVAGVAHADSHFEDAWLVMVAVGWARGAGSGLISNFEQLVRGVWKPETNELLKMS 178
Gallus_gallus      TRTWKIVAGVAHADSHFEDAWLVMVAVGWARGAGSGLISNFEQLVRGVWKPETNELLKMS 178
Chelonia_mydas     TRTWKVITAGIAHANSHYKNAWLIMVAVGWARGAGGGLISNFEQLVRGVWKPESNELLKMS 178
Xenopus_tropicalis TRTWKILSGVAHAHSHYKDAMLVMITIGWARGAGGGLISNFEQLVRGVWKPESNEFLKMS 179
Rhinatrema_bivittatum TRTWKILNGVLHANSRFRNDWMIMIAIGWARGAGGGLISNFEQLVRGVWKPESNELLKMS 179
.....130.....140.....150.....160.....170.....180

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		. * : * : * : * : * : . * : . * . * . * : * :	
Mus_musculus	-----	FPCKITLLGSIMFTFQHTRHLAISKHDLMFLYTIIFLV	217
Rattus_norvegicus	-----	FPCKVTLIGSIMFTFQHTRHLAISKHDLMFLYTIIFLV	217
Homo_sapiens	-----	YPAKVTLIGSVIFTFQHTQH LAISKHNLMFLYTIFIV	217
Pan_troglodytes	-----	YPAKVTLIGSVIFTLQHTQH LAISEHNLMFLYTIFIV	217
Macaca_mulatta	-----	YPSKVTLLGSGVIFTFQHTQH LAISKHNLMFLYTIFIV	217
Callithrix_jacchus	---	YPSKVTLLGSIIFTFQHTQH LAISRHNLMFLYTIFIV	217
Canis_lupus_familiaris	-----	YPAKVTLIGSIIIFTFQHTKYLA VSRHNLMFLYTMFLV	217
Bos_taurus	-----	YPAKVTLIGSVIFTFQQTKYLAI SKHNLMFLFTVFLV	217
Equus_caballus	-----	YA AKVTLIGSIIIFTFQHTKH LAISRHNLMFLYTMFIV	217
Heterocephalus_glaber	HLFLYLGDYEYCSNEFGSTDFVR	SASKLTMLGSGVIFTFQHTHEHLAIS KHSLMFFYTIFLV	240
Pavo_muticus	----	YPVKVTILIGAVLFTLQHSQYLP IARHNLMFLYTVFLV	215
Pavo_cristatus	----	YPVKVTILIGAVLFTLQHSQYLP IARHNLMFLYTVFLV	215
Gallus_gallus	-----	YPVKVTILIGAVLFTLQHSQYLP IARHNLMFYVTIFLV	215
Chelonia_mydas	-----	YPVKVTILVGAVLFTLQHAQNLP ISRHNLMFFYTTIFLV	215
Xenopus_tropicalis	-----	YPVKVTILIGAVLFTLQHGQYLP ISRHNLMFIYTLFLI	216
Rhinatrema_bivittatum	-----	YPVKVTILIGAILFTLQQTHLP VERHNLMVMFTVFLV	216
	.....190.....200.....210.....220.....230.....240		

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Mus_musculus	TIKVTMMTKDIAVILTPFEDILTRMLFGR	QQQFSSSEKKTEV	KPSSNGSAS	SASKRG	277	
Rattus_norvegicus	TIKVTMMTKDAAVILTPFEDILTRMLFGR	QQQFSLSEKKA	EVKPS	SSNGSASS	SASKRG	276
Homo_sapiens	ATKIITMMTTQTSMTMFAPPEDILSWMLFGW	--QQPFSSCEKK	SEAKSP	SNVGS	LASKPV	275
Pan_troglodytes	ATKIITMMTTQTSMTMFAPPEDILSWMLFGW	--QQPFSSCEKK	SEAKSP	SNVGS	LASKPV	275
Macaca_mulatta	ATKIITMMTTQTSMTMFAPPEDILSRMLFGW	--QQPFSSCEKK	SEAKSP	SNVGS	LASKPV	275
Callithrix_jacchus	AIKIITMMTTQTS-MTFAPPEDILCRILFGW	--QPQFSSSEKK	SEAKSP	SGTGS	LASKPS	274
Canis_lupus_familiaris	VTKIITMMITETATVLFAPLEDILGRMLFGW	--QQQFSSCEKK	SETKSSF	NGTGS	STSKPI	275
Bos_taurus	ATKIITMMITKIALVPFACFEDILSRMLFGW	--QQQFSPCEKK	SETKSSF	NGTGS	STSKPV	275
Equus_caballus	TTKIITMMLTETPTVSEFAPPEDMLSRMLFGW	--QQQFSPGKK	SETKSSF	NGTGS	STSKPT	275
Heterocephalus_glaber	TAKIITMMITETSVILGPFEDILSRMLFGW	--QKQFSSWC----	ETKLSS	NGTGS	SASKPV	294
Pavo_muticus	VSKVTMMLTRSTASPPAPIEAALSQMFFGL	----QEPPSKVK	GESASS	SSVCD	QSS	270
Pavo_cristatus	VSKVTMMLTRSTASPPAPIEAALSQMFFGL	----QEPPSKVK	GESASS	SSVCD	QSS	270
Gallus_gallus	VSKVTMMLTRSTASPPAPIEAALSHMFFGL	----QKPPSKVK	GESASS	SSVCD	QSS	270
Chelonia_mydas	VTKIITMMLTQSAVSPFAPFESVLGRILFGW	----QQTPSKVK	GEARVSS	NGTSS	SVCDRSA	271
Xenopus_tropicalis	LIKVTMMLTRSTASPPFLPLETSLQHILFSR	----QQIPAEVR-	ESPSSSGDK	GKPSK	KTL	271
Rhinatrema_bivittatum	VTKIITMMLTHSTSSPFTPEALFGRMLFGE	----BQTS	AEALKSEASAC	SNADL	ASKKLM	272
	.....250.....260.....270.....280.....290.....300					

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Mus_musculus	AEP <span style="background-color: yellow;">SG</span> ----- <span style="background-color: orange;">GAKR</span> -HAKKED	292		
Rattus_norvegicus	TEPPS-----SAKR-HAKKED	291		
Homo_sapiens	DV <span style="background-color: green;">ASD</span> -----NVKKKHHTKKNE	291		
Pan_troglodytes	DV <span style="background-color: green;">ASD</span> -----NVKKKHHTKKNE	291		
Macaca_mulatta	DV <span style="background-color: green;">ASD</span> -----NVKKKHHTKKNE	291		
Callithrix_jacchus	DV <span style="background-color: green;">ASD</span> -----NVKKKHHTKKNE	290		
Canis_lupus_familiaris	AV <span style="background-color: green;">ASD</span> -----TVKKKHHTKKTE	291		
Bos_taurus	AN <span style="background-color: green;">ASD</span> -----KVKKKHHSKKTE	291		
Equus_caballus	AD <span style="background-color: green;">ASD</span> -----KMKKKHAKKTE	291		
Heterocephalus_glaber	<span style="background-color: yellow;">PDASQ</span> -----NVKKKHINKTE	310		
Pavo_muticus	SEQPH-----DGVKKRQAkkTE	287		
Pavo_cristatus	SEQPH-----DGVKKRQAkkTE	287		
Gallus_gallus	SEQPR-----DGVKKRQAkkTE	287		
Chelonia_mydas	<span style="background-color: orange;">GEAS</span> -----ESIKKRQAkkTE	287		
Xenopus_tropicalis	DKD-----SGEQDNKKDN	284		
Rhinatrema_bivittatum	QGNDSDATSDAFMRDSSAVTRERRTKKAD	300		
	.....310.....320.....			