

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/PHYML1.fst Tue Feb 14:18:01 2022

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	* : .	* : . : . : . : *	
Mus_musculus	MAADTRAKAVTLD-----	LRRRLSSSCRLFFPEDPVKIIRGOGQ	40
Rattus_norvegicus	MAADRRAKAATLD-----	LRRRLSSSCRLFFPENPVKIIRGOGQ	40
Bos_taurus	MAADQRGKAATLA-----	LRRRLSSSCRLFFPEDPIKIVRGOGQ	40
Equus_caballus	MLGEGDSKTEPKAPGGRAGGRGPERLGRRAGORRRGEHDAAPRADFRGRRVPSARQAGA		60
Canis_lupus_familiaris	MAADRRGKVTETLA-----	LRRRLSSSCRLFFPEDPIKIVRGOGQ	40
Pavo_muticus	MRRVQSRQETLS-----	LRRQLIGSSCKLFYPNDPLKIVKARGQ	40
Pavo_cristatus	MRRVQSRQETLS-----	LRRQLIGSSCKLFYPNDPLKIVKARGQ	40
Gallus_gallus	MRRVQSRQETLT-----	LRRQLIGSSCKLFYPNDPLKIVKARGQ	40
Chelonia_mydas	MQAQPCSRRETTLA-----	LRRRLIGSSCKLFFPEDPVKIVRAKGO	40
Callithrix_jacchus	MAADRRAKADTLA-----	LRRQLISSSCRLFFPEDPVKIVRAQGO	40
Macaca_mulatta	MAADRRSKADTLA-----	LRRQLISSSCRLFFPEDPVKIVRAQGO	40
Homo_sapiens	MAADQRPKADTLA-----	LRRQLISSSCRLFFPEDPVKIVRAQGO	40
Pan_troglodytes	MAADQRPADTLA-----	LRRQLISSSCRLFFPEDPVKIVRAQGO	40
	1.....10.....20.....30.....40.....50.....60		
	: * :	***** **:***** :****:*****:	
Mus_musculus	-----YLYDEQGREYLDICINN--VAHVGHCHPTVVQAAHEQNVLNTNSRYLHDNI		89
Rattus_norvegicus	-----YLYDEQGREYLDICINN--VAHVGHCHPTVVQAAHEQNVLNTNSRYLHDNI		89
Bos_taurus	-----YMYDEQGAEYIDCINN--VAHVGHCHPLVVQAAHEQNQVLNTNSRYLHDNI		89
Equus_caballus	GPGRSARFSAPWRPTGAERPRRWPCGGGCSVGHCHPLVVQAAHEQNQVLNTNSRYLHDNI		120
Canis_lupus_familiaris	-----YLYDEQGAEYLDICINN--VAHVGHCHPLVVQAAHEQNQVLNTNSRYLHDNI		89
Pavo_muticus	-----YMYDENGROYLDCINN--VAHVGHCHPDVVKAAHEQNQLLNTNARYLHDNL		89
Pavo_cristatus	-----YMYDENGROYLDCINN--VAHVGHCHPDVVKAAHEQNQLLNTNARYLHDNL		89
Gallus_gallus	-----YMYDENGROYLDCINN--VAHVGHCHPDVVKAAHEQNQLLNTNARYLHDNL		89
Chelonia_mydas	-----YIYDEHGREYLDICINN--VSHVGHCHPDVVKAAHEQNQLLNTNSRYLHDNL		89
Callithrix_jacchus	-----YMYDEQGAEYIDCINN--VAHVGHCHPLVVQAAHEQNQVLNTNSRYLHDNI		89
Macaca_mulatta	-----YMYDEQGAEYIDCINN--VAHVGHCHPVVRAAHEQNQVLNTNSRYLHDNI		89
Homo_sapiens	-----YMYDEQGAEYIDCISN--VAHVGHCHPLVVQAAHEQNQVLNTNSRYLHDNI		89
Pan_troglodytes	-----YMYDEQGAEYIDCISN--VAHVGHCHPLVVQAAHEQNQVLNTNSRYLHDNI		89
70.....80.....90.....100.....110.....120		
	::*** * .*****:***:*** * * *:*****:****		
Mus_musculus	VDYAQRLSETLPEQLSVFYFLNSGSEANDLALRLARQYTGHDVVVLDHAYHGHLSSSLID		149
Rattus_norvegicus	VDYAQRLSETLPEKLSVFYFLNSGSEANDLALRLARQYTGHDVVVLDHAYHGHLSSSLID		149
Bos_taurus	VDYAQRLSETLPEKLCVFYFLNSGSEANDLALRLARQYTGHDVVVLDHAYHGHLSSSLID		149
Equus_caballus	VDYAQRLSETLPEKLCVFYFLNSGSEANDLALRLARQYTGHDVVVLDHAYHGHLSSSLID		180
Canis_lupus_familiaris	VDYAQRLSETLPEKLSVFYFLNSGSEANDLALRLARQYTGHDVVVLDHAYHGHLSSSLID		149
Pavo_muticus	TDYAERLSEKLPEKLCTFYFLNSGSEANDLALRMARQFTKHEDVIVLDHAYHGHLTSLID		149
Pavo_cristatus	TDYAERLSEKLPEKLCTFYFLNSGSEANDLALRMARQFTKHEDVIVLDHAYHGHLTSLID		149
Gallus_gallus	TDYAERLSEKLPEKLCTFYFLNSGSEANDLALRMARQFTKHEDVIVLDHAYHGHLTSLID		149
Chelonia_mydas	VDYAKRLSKTLPEKLCTFYFLNSGSEANDLALRLARQYTKHEDIIVLDHAYHGHLTSLID		149
Callithrix_jacchus	VDYAQRLSETLPEQLCVFYFLNSGSEANDLALRLARHYTGHDVVVLDHAYHGHLSSSLID		149
Macaca_mulatta	VDYAQRLSETLPEQLCVFYFLNSGSEANDLALRLARHYTGHDVVVLDHAYHGHLSSSLID		149
Homo_sapiens	VDYAQRLSETLPEQLCVFYFLNSGSEANDLALRLARHYTGHDVVVLDHAYHGHLSSSLID		149
Pan_troglodytes	VDYAQRLSETLPEQLCVFYFLNSGSEANDLALRLARHYTGHDVVVLDHAYHGHLSSSLID		149
130.....140.....150.....160.....170.....180		
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Mus_musculus	ISPYKFRNLGGQKEWVHV-----	APLPDITYR	175
Rattus_norvegicus	ISPYKFRNLGGQKEWVHV-----	APLPDITYR	175
Bos_taurus	ISPYKFRDLGGQKEWVHV-----	APLPDITYR	175
Equus_caballus	ISPYKFRGLGGQKEWVHV-----	APLPDITYR	206
Canis_lupus_familiaris	ISPYKFRDLGGQKEWVHV-----	APLPDITYR	175
Pavo_muticus	ISPYKFRNLEGQKEWVHV-----	APVPDITYR	175
Pavo_cristatus	ISPYKFRNLEGQKEWVHV-----	APVPDITYR	175
Gallus_gallus	ISPYKFRNLEGQKEWVHV-----	APVPDITYR	175
Chelonia_mydas	ISPYKFRNLEGQKEWVHVCTYCSLYTSTISVNLSTTYVALLIIRHCSLVQAPLPDITYR		209
Callithrix_jacchus	ISPYKFRNLGGQKEWVHV-----	APLPDITYR	175
Macaca_mulatta	ISPYKFRNLGGQKEWVHV-----	APLPDITYR	175
Homo_sapiens	ISPYKFRNLGGQKEWVHV-----	APLPDITYR	175
Pan_troglodytes	ISPYKFRNLGGQKEWVHV-----	APLPDITYR	175
190.....200.....210.....220.....230.....240		

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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Mus_musculus	GPYREDHPNPAAEAYAN EVKHVISSAQQKGRKIAAFFAESLPSVSGQIIPPAGYFSQVAEH	235
Rattus_norvegicus	GPYREDHDPDPAGAYASEV KHVISSAQKKGRKIAAFFAESLPSVSGQIIPPAGYFSQVAEH	235
Bos_taurus	GPYREDHPNPAAVAYASEV KRVVSSAQEKGRKIAAFFAESLPSVSGQIIPPAGYFPEVAGH	235
Equus_caballus	GPYREDHPNPAAVAYASEV KRVVSSVQEKGRKIAAFFAESLPSVGGQIIPPAGYFPEVAEH	266
Canis_lupus_familiaris	GLYQEDHDPDPAGAYAN EVKRVVSSVQEKGRKIAAFFVESLPSVAGQIIPPAGFFQVEAEH	235
Pavo_muticus	GLYREDHEDPVTAYAN EVKDI IKQAHKKGRKIAAFFAESLPSVGGQIIPPEGYFQKVAEH	235
Pavo_cristatus	GLYREDHEDPVTAYAN EVKDI IKQAHKKGRKIAAFFAESLPSVGGQIIPPEGYFQKVAEH	235
Gallus_gallus	GLYREDHEDPVTAYAN EVKNIIERAHKKGREIAAFFAESLPSVGGQIIPPEGYFQKVAEH	235
Chelonia_mydas	GIYREDHKDSVLAYAN EVKKIIEQAQKGRKIAAFFIESLPSVGGQIIPPEGYFQMIAEH	269
Callithrix_jacchus	GPYQKDHPNPAAVAYAN EVKRVVSSAQEKGRKIAAFFAESLPSVGGQIIPPAGYFSQVAEH	235
Macaca_mulatta	GPYREDHPNPAAVAYAN EVKRVVSSAQEKGRKIAAFFAESLPSVGGQIIPPAGYFSQVAEH	235
Homo_sapiens	GPYREDHPNPAMAYAN EVKRVVSSAQEKGRKIAAFFAESLPSVGGQIIPPAGYFSQVAEH	235
Pan_troglodytes	GPYREDHPNPAMAYAN EVKRVVSSAQEKGRKIAAFFAESLPSVGGQIIPPAGYFSQVADS	235

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Mus_musculus	I	H	R	A	G	---	---	G	L	F	V	A	D	E	I	Q	V	G	F	G	R	---	---	I	G	-	K	H	258																																					
Rattus_norvegicus	I	R	R	A	G	---	---	G	L	F	V	A	D	E	I	Q	V	G	F	G	R	---	---	V	G	-	K	H	258																																					
Bos_taurus	I	R	R	A	G	---	---	G	V	F	V	A	D	E	I	Q	V	G	F	G	R	---	---	V	G	-	K	H	258																																					
Equus_caballus	V	R	R	A	G	---	---	G	V	F	V	A	D	E	I	Q	V	G	F	G	R	---	---	V	G	-	K	H	289																																					
Canis_lupus_familiaris	I	H	G	A	G	---	---	G	V	F	V	A	D	E	I	Q	V	G	F	G	R	---	---	V	G	-	K	H	258																																					
Pavo_muticus	V	H	K	A	G	---	---	G	V	F	V	A	D	E	I	Q	V	G	F	G	R	---	---	V	G	-	K	H	258																																					
Pavo_cristatus	V	H	K	A	G	---	---	G	V	F	V	A	D	E	I	Q	V	G	F	G	R	---	---	V	G	-	K	H	258																																					
Gallus_gallus	V	H	K	A	G	---	---	G	V	F	V	A	D	E	I	Q	V	G	F	G	R	---	---	V	G	-	K	H	258																																					
Chelonia_mydas	V	H	K	A	G	---	---	G	V	F	V	A	D	E	I	Q	V	G	F	G	R	---	---	V	G	-	K	C	292																																					
Callithrix_jacchus	I	H	R	A	G	---	---	G	V	F	V	A	D	E	I	Q	V	G	F	G	R	---	---	V	G	-	K	H	258																																					
Macaca_mulatta	I	H	K	A	G	---	---	G	V	F	V	A	D	E	I	Q	V	G	F	G	R	---	---	V	G	-	K	H	258																																					
Homo_sapiens	I	R	K	A	G	---	---	G	V	F	V	A	D	E	I	Q	V	G	F	G	R	---	---	V	G	-	K	H	258																																					
Pan_troglodytes	R	E	K	T	S	---	---	S	L	T	S	S	P	W	A	S	P	L	A	M	A	T	L	L	P	A	W	P	---	---	P	Q	P	S	L	W	R	G	H	L	K	P	P	A	L	S	T	S	T	R	G	S	Y	C	T	S	G	I	P	D	L	G	C	S	H	295
	310	320	330	340	350	360																																																						

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Mus_musculus	FWAFQ	LEGED	FVPD	IVTMG	---	KSIGN	GH	HP	VAC	MATTQ	AVS	RA	FE	ATG	-----	303
Rattus_norvegicus	FWAFQ	LEGED	FVPD	IVTMG	---	KSIGN	GH	HP	VAC	LA	T	Q	AVS	RA	FE	ATG
Bos_taurus	FWAFQ	LEGED	FVPD	IVTMG	---	KSIGN	GH	HP	VAC	VA	T	Q	AVS	RA	FE	ATG
Equus_caballus	FWAFQ	LEGED	FVPD	IVTMG	---	KSIGN	GH	HP	VAC	VA	T	Q	AVS	RA	FE	ATG
Canis_lupus_familiaris	FWAFQ	LEGED	FVPD	IVTMG	---	KSIGN	GH	HP	VAC	VA	T	Q	AVS	RA	FE	ATG
Pavo_muticus	FWAFQ	LEGE	E	FIPD	IVTMG	---	KPIGN	GH	PI	AC	V	T	KE	IAE	A	F
Pavo_cristatus	FWAFQ	LEGE	E	FIPD	IVTMG	---	KPIGN	GH	PI	AC	V	T	KE	IAE	A	F
Gallus_gallus	FWAFQ	LEGE	E	FIPD	IVTMG	---	KPIGN	GH	PI	AC	V	T	KE	IAE	A	F
Chelonia_mydas	FWAFQ	LEGED	FVPD	IVTMG	---	KPMGN	GH	PI	AC	V	T	KE	IAE	A	F	AD
Callithrix_jacchus	FWAFQ	LEGK	D	FVPD	IVTMG	---	KSIGN	GH	HP	VAC	VA	T	Q	P	V	A
Macaca_mulatta	FWAFQ	LEGK	D	FVPD	IVTMG	---	KSIGN	GH	HP	VAC	VA	T	Q	P	V	A
Homo_sapiens	FWAFQ	LEGK	D	FVPD	IVTMG	---	KSIGN	GH	HP	VAC	VA	T	Q	P	V	A
Pan_troglodytes	ISSW	K	A	R	T	A	R	V	E	P	H	L	L	L	R	T
	370	380	390	400	410	420				

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Mus_musculus	VEYFNTFTGGNPVSCAVGLAVLDVLKTEQLQAHATNVGGSFLLLEHLTQOKAKHPIIGDVRGT	363
Rattus_norvegicus	VEYFNTFTGGNPVSCAVGLAVLDVLKTEQLQAHATNVGGSFLLMEHLSQOKAKHPIIGDVRGT	363
Bos_taurus	VEYFNTFTGGSPVSCAVGLAVLDVLEKEQLQAHAAACVGSFLLMELLGQOKAKHPIIGDIRGV	363
Equus_caballus	VEYFNTFTGGSPVSCAVGLAVLDVLEKEQLQAHAAACVGSFLLMELLGQOKAKHPIIGDIRGV	394
Canis_lupus_familiaris	VEYFNTFTGGSPVSCAVGLAVLDVLEKEQLQAHAAASVGSYLMELLEEQOKAKHPIIGDVRGT	363
Pavo_muticus	VEYFNTFTGGNPVSCAIGLAVLDVIEKEQLQVHATEVGNFLLMKLLKEQKLKHPPIIGDVRS	363
Pavo_cristatus	VEYFNTFTGGNPVSCAIGLAVLDVIEKEQLQVHATEVGNFLLMKLLKEQKLKHPPIIGDVRS	363
Gallus_gallus	VEYFNTFTGGNPVSCAIGLAVLDVIEKEQLQIHATEVGNFLLMKLLTEQKVKHPIIGDVRS	363
Chelonia_mydas	VEYFNTFTGGNPVSCAIGLAVLDVIEKEHLQAHATQVGNFLLMELLNQOKVKHPIIGDVRGV	397
Callithrix_jacchus	VEYFNTFTGGSPVSCAVGLAVLNVLKEKEQLQAHASSVGSFLLMELLGQOKIKHPIIGDVRGV	363
Macaca_mulatta	VEYFNTFTGGSPVSCAVGLAVLNVLKEKEQLQAHATSVGSFLLMELLRQOKIKHPIVGDVRGV	363
Homo_sapiens	VEYFNTFTGGSPVSCAVGLAVLNVLKEKEQLQDHATSVGSFLLMQLLGQOKIKHPIVGDVRGV	363
Pan_troglodytes	SLSLAQFGGSPVSCAVGLAVLNVLKEQLQDHATSVGSFLLMELLGQOKIKHPIVGDVRGV	415
430.....440.....450.....460.....470.....480	

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Mus_musculus      GLFIGVDLIKDETLRTPATEEAEYLVSRLENYILLSDGPGKNILKFKPPMCFNVDNAQ 423
Rattus_norvegicus GLFIGVDLIKDETLRTPATEEAEYLVSRLENYILLSDGPGRNILKFKPPMCFSLDNAQ 423
Bos_taurus        GLFIGVDLIKDEATRTPATEEADYVVSRLKENYILLSDGPGRNVLKFKPPMCFSLDNAQ 423
Equus_caballus     GLFVGVDLIKDKATRTPEEADYLVSRLENYILLSDGPGRNVLKFKPPMCFSLDNAQ 454
Canis_lupus_familiaris GLFIGVDLIKDEATRTPEEANYVVSRLKDYIILLSDGPGRNVLKFKPPMCFSVDNAQ 423
Pavo_muticus       GLFIGVDLIKDAQKRTPEEAEYLITRLKEEYILLSDGPGRNVLKFKPPMCFMTMEDAK 423
Pavo_cristatus     GLFIGVDLVKDAQKRTPEEAEYLITRLKEEYILLSDGPGRNVLKFKPPMCFMTMEDAK 423
Gallus_gallus      GLFIGVDLIKDAQKRTPEEAEYLITRLKEEYILLSDGPGRNVLKFKPPMCFMTMEDAK 423
Chelonia_mydas     GLFIGVDLIKDAQKRTPEEAEYLITRLKRDYILLSDGPGRNVLKFKPPLCFMTDNAK 457
Callithrix_jacchus GLFIGVDLIKDEATRTPEEAAAYLVSRLENYILLSDGPGRNILKFKPPMCFSLDNAQ 423
Macaca_mulatta     GLFIGVDLIKDEATRTPEEAAAYLVSRLENYVLLSDGPGRNILKFKPPMCFSLDNAQ 423
Homo_sapiens       GLFIGVDLIKDEATRTPEEAAAYLVSRLENYVLLSDGPGRNILKFKPPMCFSLDNAQ 423
Pan_troglodytes    GLFIGVDLIKDEATRTPEEAAAYLVSRLENYVLLSDGPGRNILKFKPPMCFSLDNAQ 475
.....490.....500.....510.....520.....530.....540

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Mus_musculus      HVVAKLDDILTDMEEKVRSCEITLRIKHPP-----EDTHPTQILLTRQD--- 467
Rattus_norvegicus HVVAKLDDILTDMEEKVRSCEITLRIKHPPGMCVPRRLRTATKLSTTHCVTTILPVQCKCPT 483
Bos_taurus        HVVAKLDAILTDMEAKVRSCEITLRLHS----- 450
Equus_caballus     HVVAKLDAILTDMEEKMRSCETLRLQPEAALLSPPLEKMKHSTQIHYWDDGHDQLQTFEE 514
Canis_lupus_familiaris HVVAKMDAILTDMEEKMRSCETLRLRP----- 450
Pavo_muticus       FVADTIDKLLTDMEREHLNQEKSTGST----- 451
Pavo_cristatus     FVADTIDKLLTDMEREHLNQEKSTGST----- 451
Gallus_gallus      FVVDTIDKLLTDMEKEHMQEKSTGST----- 451
Chelonia_mydas     LVVDKMDIILTDMEEREKTCEPVGKHH----- 483
Callithrix_jacchus HVVAKLDAILTDMEEKVRSCEITLRLQ----- 450
Macaca_mulatta     QVVAKLDAILTDMEEKVRSCEITLRLQL----- 450
Homo_sapiens       QVVAKLDAILTDMEEKVRSCEITLRLQ----- 450
Pan_troglodytes    QVVAKLDAILTDMEEKVRSCEITLRLQ----- 502
.....550.....560.....570.....580.....590.....600

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Mus_musculus      ----- 467
Rattus_norvegicus GLGPQAAQIRKMRLFHSMKP 503
Bos_taurus        ----- 450
Equus_caballus     SH----- 516
Canis_lupus_familiaris ----- 450
Pavo_muticus       ----- 451
Pavo_cristatus     ----- 451
Gallus_gallus      ----- 451
Chelonia_mydas     ----- 483
Callithrix_jacchus ----- 450
Macaca_mulatta     ----- 450
Homo_sapiens       ----- 450
Pan_troglodytes    ----- 502
.....610.....620

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