

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/FAM214B.fasta Tue Feb 1 12:09:07 2022

Page 1 of 5

Mus_musculus	-----	
Rattus_norvegicus	-----	
Homo_sapiens	-----	
Pan_troglodytes	-----	
Macaca_mulatta	-----	
Callithrix_jacchus	-----	
Bos_taurus	-----	
Equus_caballus	-----	
Canis_lupus_familiaris	-----	
Heterocephalus_glaber	-----	
Pavo_muticus	-----	
Pavo_cristatus	-----	
Gallus_gallus	-----	
Chelonia_mydas	-----	
Rhinatrema_bivittatum	-----	
Latimeria_chalumnae	-----MKEGPSPPFCFLEHKICFFFLFRCTLLQ	28
Xenopus_tropicalis	MCQGRAPAAARHRAHCHWRHRNAQGCRRHWTPWGLSESRERNPLILHPDAQNSPGSSTLAP	60
	1.....10.....20.....30.....40.....50.....60	

Mus_musculus	-----MRHVQAE L SPSS-----EPEAGPSQPPVROGT LQ	29
Rattus_norvegicus	-----MRHVQAE L SPSS-----EPEAGPSQPPVTOGT LQ	29
Homo_sapiens	-----MRHVQAE P SPSS-----EPEAGPSQPPVROGA LQ	29
Pan_troglodytes	-----MRHVQAE L SPSS-----EPEAGPSQPPVROGA LQ	29
Macaca_mulatta	-----MRHVQAE P SPSS-----EPEAGPSQPPVROGA LQ	29
Callithrix_jacchus	-----MRHVQAE S SPSS-----EPEAGPSQPPVROGA LQ	29
Bos_taurus	-----MRHVQAE T SPSS-----EPEAGPSQPAVROGA LQ	29
Equus_caballus	-----MRHVQAE L SPSS-----EPEAGPSQPAVROGA LQ	29
Canis_lupus_familiaris	-----MRHVQAE P SPSS-----EPEAGPSQPAVROGA FQ	29
Heterocephalus_glaber	-----MRHVQVE P SPSS-----EPEAGPSQPPVROGA LQ	29
Pavo_muticus	-----MRHIHTES L LP-----EHS---TDSSLRSPSGEAALEPSSOHCAH	38
Pavo_cristatus	-----MRHIHTES L LP-----ERS---TDSSLRSPSGEAALEPSSOHCAH	38
Gallus_gallus	-----MRHIHTET S LP-----ERS---PDSSLRSPSGEAALEPSSOHCAH	38
Chelonia_mydas	-----MRHIHAES L PQ-----EHG---TDSGLSRPGGQAALPPP E RCPR	38
Rhinatrema_bivittatum	-----MRHIHVET S SKE-----QGKDAGPADGGSSSPGQGNVLDPG--QA K E	40
Latimeria_chalumnae	LVGWFGDP P SGSMRHLLET S SREPSSDL C QAPSHLADSSVPPLSGSRGPLDSDPAT Q G	88
Xenopus_tropicalis	RLTLNRTAAGSMRHIEMDL P KE-----EAG--ADGSGAAGSSDSTSQDGASDGRGD	112
70.....80.....90.....100.....110.....120	

	***:	**::*::*	.	.*	:	:	
Mus_musculus	GGLLMGYSPAGGATSPGVYQVSIFSPSAGASE	-----	PPRALKRPPAPP	---	TEGP	PRE	78
Rattus_norvegicus	GGLLMGYSPAGGATSPGVYQVSIFSPSAGVSE	-----	PPRALKRPPAPS	---	TEGP	PRE	78
Homo_sapiens	GGLLMGYSPAGGATSPGVYQVSIFSPSAGTSE	-----	PHRALKRQAPS	---	TEGP	PRE	78
Pan_troglodytes	GGLLMGYSPAGGATSPGVYQVSIFSPSAGTSE	-----	PHRALKRQAPP	---	TEGP	PRE	78
Macaca_mulatta	GGLLMGYSPAGGATSPGVYQVSIFSPSAGTSE	-----	PHRALKRQAPP	---	TEGP	PRE	78
Callithrix_jacchus	GGLLMGYSPAGGATSPGVYQVSIFSPSAGTSE	-----	PHRALKRPPAPP	---	TEGP	PRE	78
Bos_taurus	GGLLMGYSPAGGATSPGVYQVSIFSPSAGASE	-----	PPRALKRPPAPP	---	TEGP	PRE	78
Equus_caballus	GGLLMGYSPAGGATSPGVYQVSIFSPSAGASE	-----	PHRALKRPPAPP	---	TEGP	PRE	78
Canis_lupus_familiaris	GGLLMGYSPAGGATSPGVYQVSIFSPSAGASE	-----	PHRALKRPPAPP	---	TEVP	PRE	78
Heterocephalus_glaber	GGLLMGYSPAGGATSPGVYQVSIFSPSAGASE	-----	SHRALKPAPP	---	TEGS	PRE	78
Pavo_muticus	HGILMGYNETE-IKRQKVYQVSIFSHLSSSESTEQRAG	---	SHPTLKRGYPE	---	ORTPE	GV	RD 96
Pavo_cristatus	HGILMGYNETE-IKRQKVYQVSIFSHLSSSESTEQRAG	---	SHPTLKRGYPE	---	ORTPE	GV	RD 96
Gallus_gallus	HSILMGYNETE-IKRQKVYQVSIFSHLSSSESTEQRAG	---	SHPTLKRSYPE	---	ORTPE	GV	RD 96
Chelonia_mydas	RSIVMGYNKTE-IKRQKVYQVSIFSHLSSSEEPADQRAGGRQA	---	IKRGYPE	---	OWAPE	AG	RD 97
Rhinatrema_bivittatum	CRVLLGYDDSE-IKRQKVYQVSIFSHLSSSPSPDRRTS	---	PRQTIKRGLAE	---	QVAAE	AG	RD 98
Latimeria_chalumnae	PGSLMGYSENQ-IKRQKVYQVSIFSHLSSSAGALDOKAS	---	GKQGIKRSFA	---	EHTFED	HHQ	146
Xenopus_tropicalis	CRVLVGFPEAD-HQLQRVYHVSIIISDVPAS	-----	KAS-SRQPLKRPPD	---	LFQEA	TRS	164
130.....140.....150.....160.....170.....180						

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/FAM214B.fasta Feb 1 12:09:07 2022

Page 2 of 5

```

      :*               *               :.               : *
Mus_musculus      LKRGPGGLG-----AREGLPPEEPSTVGLLSP-----EGL-----GLGLGV 113
Rattus_norvegicus LKRGPGGLG-----AREGLPPEEPSTVGLVSP-----EGL-----GLGLGV 113
Homo_sapiens      LKRGPGGLG-----AREGLPPEEPSTVGLLGP-----EGP-----GLGLGV 113
Pan_troglodytes   LKRGPGGLG-----AREGLPPEEPSTVGLLGP-----EGP-----GLGLGV 113
Macaca_mulatta    LKRGPGGLG-----AREGLPPEEPSTVGLLGP-----EGL-----GLGLGV 113
Callithrix_jacchus LKRGPGGLG-----AREGLPPEEPSTVGLLGP-----EGL-----GLGLGV 113
Bos_taurus        LKRGPGGLG-----AREGLPPEEPSTVGLLGP-----EGL-----GLKLG 113
Equus_caballus    LKRGPGGLG-----AREGLPPEEPSTVGLLGP-----EGL-----GLGLGV 113
Canis_lupus_familiaris LKRGPGGLG-----AREGLPPEEP--VRLG--EGL-----GLGLGV 111
Heterocephalus_glaber LKRGPGGLG-----AREGLPPEEP--VRLG--EGL-----GLGLSV 113
Pavo_muticus      PKRTHWGG--GVDSKRDGGLGQAALDDDD-----TFEDGLLVDELDELSCG 138
Pavo_cristatus    PKRTHWGG--GVDSKRDGGLGQAALDDDD-----TFEDGLLVDELDELSCG 138
Gallus_gallus     PKRTHWGG--GVDSKRDGGLGQAALDDDD-----TFEDGLLVDELDELSCG 138
Chelonia_mydas    PKRAHWGGTGAEARQDGIPELHFGQDAPDA-----TALEDGLLVDELDELSCG 144
Rhinatrema_bivittatum PKRACWGS--AANPRREGALGQSLRDRDQVDSWPGCSPGSPDDPDALEDAFLAELPLCS 157
Latimeria_chalumnae PRRVPWGSLSNVSAASGGLSGPPHDQEHNLPG--EFSSAGCLEEPDLYEDGLAHGELSLCG 205
Xenopus_tropicalis PKRAFWGH---PRSDGPLGQSELGGEDEEQ-----DNIEDGLLVDELDELSCG 207
.....190.....200.....210.....220.....230.....240

```

```

      :****.* ** *.*:               :               :               :
Mus_musculus      ASQHFSHHGLCVVEHGGNTT-----SPWTS-----GTQSTPWLS-----NA 150
Rattus_norvegicus ASQHFSHHGLRVVEQGGSAT-----SSWTS-----GTQSTPWPS-----NA 150
Homo_sapiens      ASQHFSHRGLCVVEQQRSSVT-----SSWTS-----GAWSPPCPPS-----NA 150
Pan_troglodytes   ASQHFSHRGLCVVEQQRSSVT-----SSWTS-----GAWSPPCPPS-----NA 150
Macaca_mulatta    ASQHFSHRGLCVVEQQRSSVT-----SSWTS-----GAWSPPCPPS-----NA 150
Callithrix_jacchus ASQHFSHRGLCVVEQQRSSVT-----SSWTS-----GAWSPPCPPS-----NA 150
Bos_taurus        ASQHFSHHGLCVVEQGGSSST-----SPWTS-----GARSPLPPS-----NA 150
Equus_caballus    ASQHFSHHGLCVVEQGGSSST-----SPWTS-----GARSPLPPS-----NA 150
Canis_lupus_familiaris TSQHFSHHGLCVVEQGGSSST-----SPWTS-----GARSPLPPS-----NA 148
Heterocephalus_glaber ASQHFSHHGLCVVEHGGSSAT-----SPWTA-----GQSPSCPPS-----NA 150
Pavo_muticus      SAQHFSHSGSLQVVEHRCVSS-----PSPKAN-----REDK-LQDTSS-----FWPQHI 180
Pavo_cristatus    SAQHFSHSGSLQVVEHRCVSS-----PSPKAN-----REDK-LQDTSS-----FWPQHI 180
Gallus_gallus     SAQHFSHSGSLQVVEHRCVSS-----PSPKAN-----REDK-LQDTSS-----FWPQHI 180
Chelonia_mydas    SAQHFSHSGSLRVVEHRCGAWG-----SSPRAC-----REDR-LREAAS-----FWPQHT 187
Rhinatrema_bivittatum TAQHFSHSGSLRVVEHRCESAPGQVPGLELGHASARVF-----SGARDQREGS-----PVSQHT 211
Latimeria_chalumnae SAQHFSHSGSLRVVEHRCGSSGLQQAQDEGPGTSENLEDEGHRDFRLVREVGTFATTFOQI 265
Xenopus_tropicalis SAQHFSHSGSLHVTVEHRCGAS-----SSSRES-----LSRLRGSRLFAS-----CQQT 249
.....250.....260.....270.....280.....290.....300

```

```

      :               .
Mus_musculus      SFNTLHTRD-----WAFPDQGGQ-----GC 170
Rattus_norvegicus SCNTLHTRD-----WAFPDQGGQ-----GC 170
Homo_sapiens      SCNTLHTRD-----WASPDPGGQ-----GS 170
Pan_troglodytes   PCNTLHTRD-----WASPDPGGQ-----GS 170
Macaca_mulatta    SCNTLHTRD-----WASPDPGGH-----GS 170
Callithrix_jacchus SCNTLHTRD-----WASPDPGGQ-----GS 170
Bos_taurus        SCNTLHTRD-----WASPDPRGQ-----GS 170
Equus_caballus    SCNTLHTRD-----WASPDPGGQ-----VS 170
Canis_lupus_familiaris SCNSLHTRD-----WASPDPGGQ-----GS 168
Heterocephalus_glaber SYNTLHTRD-----WASPDPGGQ-----GS 170
Pavo_muticus      ACSTLHTRD-----SCPVPPGN-----Q 198
Pavo_cristatus    ACSTLHTRD-----SCPVPPGN-----Q 198
Gallus_gallus     ACSTLHTRD-----SCPVPPGN-----Q 198
Chelonia_mydas    ACSTLHTRD-----SCPAQLGAGPLG--SPRACGSVEGRECPG 223
Rhinatrema_bivittatum SCSTLHISNQGASS-----GWHVCLGSRPVGEGSLDCWRKCRPAEGKEPQLFGS 260
Latimeria_chalumnae TCSLLHIRDQEAALKGSCARVEAEKRAAFLPQRNPQSGFLGEEPLHGGLRNGLPVAGGE 325
Xenopus_tropicalis DPHLVPTQG-----TLHSSPVEAQ-----V 270
.....310.....320.....330.....340.....350.....360

```

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/FAM214B.fasta Feb 1 12:09:07 2022

Page 3 of 5

Mus_musculus	LGETPGP-----APSGQLHTLDTD--LHNLAQIGGKS----	200
Rattus_norvegicus	LGESPGP-----APSGQLHTLDTD--LHNLAQIGGKS----	200
Homo_sapiens	LGESPGP-----APPGQLHTLDTD--LHSLAQIGGKS----	200
Pan_troglodytes	LGESPGP-----APPGQLHTFDTD--LHSLAQIGGKS----	200
Macaca_mulatta	LGESPGP-----APPGQLHTLDTD--LHSLAQIGGKS----	200
Callithrix_jacchus	LGASPGP-----APPGQLHTIDTD--LHSLAQIGGKS----	200
Bos_taurus	LGSSLGP-----APPGQLHTLDTD--LHSLAQIGGKS----	200
Equus_caballus	LGESPGP-----APPGQLHTLDTD--LHSLAQIGDKS----	200
Canis_lupus_familiaris	LGESPGP-----APLGQLHTFDTD--LHSLAQIGGKS----	198
Heterocephalus_glaber	LEDSPGS-----APSGQLHTLDTD--LHSLAQIGSKS----	200
Pavo_muticus	LADCWEN-----GERMSGYNLLDPD--LHNIAQKPQLDCGGT	233
Pavo_cristatus	LADCWEN-----GERMSGYNLLDPD--LHNIAQKPQLDCGGT	233
Gallus_gallus	LADCWDN-----GERMSGHNLDDL--LHNIAQKPQLDCGGR	233
Chelonia_mydas	LAEAREQPAEGSGA-----RREERASSQNRLID--LHNIAQKPWAASGGR	267
Rhinatrema_bivittatum	HLQVGNSAEGHASGKASN-----LKSDGVGSQNILETN--LHDIAQTCTRDSCVR	309
Latimeria_chalumnae	LADPASHFCAGRSTRFAASGISVHGCSLRNGGATSSQNILDNDVSLHKLIAQKDTRDFSLI	385
Xenopus_tropicalis	LPDGLPH-----SPVGNCTKVPSPD-----HAETPTTNQHIL	301
370.....380.....390.....400.....410.....420	

Mus_musculus	-----PVARVGNGSNPWPRESHGTTANGHSP-----	225
Rattus_norvegicus	-----PVARVGNGSNPWPRESHGTTANGHSP-----	225
Homo_sapiens	-----PVAGVGNGGSLWPRESPGTANGHSP-----	225
Pan_troglodytes	-----PVAGVGNGGSLWPRESPGTANGHSP-----	225
Macaca_mulatta	-----PVAGVGNGGSLWPRESPGTANGHSP-----	225
Callithrix_jacchus	-----PVAGVGNGRSLWPRESPGTANGHSP-----	225
Bos_taurus	-----LVSGVGNGGSPWPRESPGTANGCSP-----	225
Equus_caballus	-----PVAGVGNGGSPWPRESPGTANGHSP-----	225
Canis_lupus_familiaris	-----PVAGVGNGGSPWPRESPGTANGHSP-----	223
Heterocephalus_glaber	-----PVARVDNGGSPWPRESPGTANGHSP-----	225
Pavo_muticus	GE-KPGSSP-----AHSCGAGKAEW-PVVANGCKEPLAPOMLLS-----PEPSNLSSQ	280
Pavo_cristatus	GE-KPGSSP-----AHSCGAGKAEW-PVVANGCKEPLAPOMLLS-----PEPSNLSSQ	280
Gallus_gallus	GE-KPGSSP-----AHSSGAGEAEW-PVVANGCKEPLAPOMLLS-----PEPSNLSSQ	280
Chelonia_mydas	GEEQTGGSP-----AHSHGAGREGEP-LTGADGHKEPHTPRVALG-----PESNGLGSS	315
Rhinatrema_bivittatum	HDELAGASEHWGLTQSGHLALNSKKMSN-GSLPGGSKEPTTPRSESSKVQIISANGLTSS	368
Latimeria_chalumnae	EGVEPGTLEGQG---PAPTSPEGVSGSQEQAVPNGGKEQTPPERARM---VSCANGLASS	440
Xenopus_tropicalis	DPVLHSIAQP-----KGPAQMPAQANGN-LAAEPVLKEPLSPQLQPP-----TEGPSSPA	349
430.....440.....450.....460.....470.....480	

Mus_musculus	EHTPPGPGPPGP-----CPTKRRLLPAGE-TLDVSSSEDEGPAP-----RRRRGTILGCPL--A	274
Rattus_norvegicus	EHTPPGPGPPGP-----CPTKRRLLPAGE-ALDVSSSEDEGPAP-----RRRRGTILGCPL--A	274
Homo_sapiens	EHTPPGPGPPGP-----CPTKRRLLPAGE-APDVSSEEEGPAP-----RRRRGSLGHPT--A	274
Pan_troglodytes	EHTPPGPGPPGP-----CPTKRRLLPAGE-APDVSSEEEGPAP-----RRRRGSLGHPT--A	274
Macaca_mulatta	EHTPPGPGPPGP-----CPTKRRLLPAGE-APDVSSEEEGPAP-----RRRRGSLGHPT--A	274
Callithrix_jacchus	EHTPPGPGPPGP-----CPTKRRLLPAGE-APDVSSEEEGPAP-----RRRRGTILGHPT--A	274
Bos_taurus	EHTPPGPGPPGP-----CPTKRRLLPAGE-ALDVSSSEDEGPAP-----RRRRGTILGHPT--A	274
Equus_caballus	EHTPPGPGPPGL-----CPTKRRLLPAGE-ALDVSSSEDEGPAP-----RRRRGTILGHPT--A	274
Canis_lupus_familiaris	EHTPPGPGPPGP-----CPTKRRLLPAGE-ALDVSSSEDEGPAP-----RRRRGTILGHPT--A	272
Heterocephalus_glaber	EHTPPGPGPPGP-----CPTKRRLLPAGE-ALDVSSSEDEGPAP-----RRRRGTILGHPT--A	274
Pavo_muticus	EKTPCGNSSSSS-----CPAKRKLLPAGEIMADSCSEDESLSQLVRKKRALPCHPVPTA	334
Pavo_cristatus	EKTPCGNSSSSS-----CPAKRKLLPAGEIMADSCSEDESLSQLVRKKRALPCHPVPTA	334
Gallus_gallus	EKTPCGNSSSSSSGSSSSCPAKRKLLPAGE-MADSCSEDESLSQLVRKKRALPCHPVPTA	339
Chelonia_mydas	EKTPCMGSRPPGAGGGS-CAAKRKLLPSGEGVADSCSEDESVPAR-ARKKRAPLCHPILTA	373
Rhinatrema_bivittatum	EKTPLTSGKPSSSSSGSG-WAVKRKLLQSSS-TADSCSEDESQSP-AKRKRVPQSPHPVLAS	425
Latimeria_chalumnae	EKTPIASKQLGSGHGGG-CCAKRKLLQASD-ASESCSEDESQAS-AKRSRIQLSRSSISAS	497
Xenopus_tropicalis	ETPPGPSRLCTPGS---SAVKRKLLPSSS-SADSCSEDEGHGK---KWRGGQGCQALHGA	402
490.....500.....510.....520.....530.....540	

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/FAM214B.fasta Feb 1 12:09:07 2022

Page 4 of 5

```

..*:::..**.*.***. :. * : * * . : : * :
Mus_musculus ANSSDAKATPFWSHLLPGPKPEVLDPTDCSPMGRRLKGARRLKLSSLRTLRKGPGLLSPP 334
Rattus_norvegicus ANSSDAKATPFWSHLLPGPKPEVLDPTDCSPMGRRLKGARRLKLSSLRTLRKGPGLLSPP 334
Homo_sapiens ANSSDAKATPFWSHLLPGPKPEVLDPTDCSPMGRRLKGARRLKLSPRLSLRKGPGLLSPP 334
Pan_troglodytes ANSSDAKATPFWSHLLPGPKPEVLDPTDCSPMGRRLKGARRLKLSPRLSLRKGPGLLSPP 334
Macaca_mulatta ANSSDAKATSFWSHLLPGPKPEVLDPTDCSPMGRRLKGARRLKLSPRLSLRKGPGLLSPP 334
Callithrix_jacchus ANSSDAKATPFWSHLLPGPKPEVLDPTDCSPMGRRLKGARRLKLSPRLNLRKGPGLLSAP 334
Bos_taurus ANSSDAKATPFWSHLLPGPKPEVLDPTDCNPMGRRLKGARRLKLSSLRLSLRKGPGLLSPP 334
Equus_caballus ANSSDAKATPFWSHLLPGPKPEVLDPTDCSPMGRRLKGARRLKLSSLRLSLRKGPGLLSPP 334
Canis_lupus_familiaris ANSSDAKATPFWSHLLPGPKPEVLDPTDCSPMGRRLKGARRLKLSSLRLSLRKGPGLLSPP 332
Heterocephalus_glaber ANSSDAKATPFWNHLLPGPKPEVLDPKDCSPMVRRLKGARHLKLSSLRLSLRKGPGLLSPP 334
Pavo_muticus CRSTDAKGAPFWNHLLPAAKG----SADCTTVGRRLKSGRLKSRHLRSLRRLG---TRS 387
Pavo_cristatus CRSTDAKGAPFWNHLLPAAKG----SADCTTVGRRLKSGRLKSRHLRSLRRLG---TRS 387
Gallus_gallus CRSTDAKGAPFWNHLLPTAKS----SADCTTVGRRLKSGRLKSRHLRSLRRLG---TRS 392
Chelonia_mydas CRSTDAKGAPFWNHLLPGAAR----SADGTAVGRRLKSGRLKSRHLRSLRKGPVGTFR 429
Rhinatrema_bivittatum CRSTDAKAAPFWNHLLPSARDPPKSCITDCSSIRQLKSGLOFKSRHLRSLRKGVAGRT 483
Latimeria_chalumnae CRSTDAKAAPFWNHLLPSARGLSKGSSDCTINIGRRLKNGRLKTRHLRSGRRPT----RT 553
Xenopus_tropicalis CRSTDKAAPFWNHLLPAARHSQKILSDHS--GRRPKRGLRLKSRSLSPKQGP----- 454
.....550.....560.....570.....580.....590.....600

```

```

.:. . . :*:*****:*: **.* ** *****:*.**** **:*
Mus_musculus SASPFPPTPAVSRTLLGNFEESLLRGRFAPSGHIEGFTAIEIGASGSYCPQHVTLPTVTTF 394
Rattus_norvegicus SASPFPPTPAVSRTLLGNFEESLLRGRFAPSGHIEGFTAIEIGASGSYCPQHVTLPTVTTF 394
Homo_sapiens SASPVPTPAVSRTLLGNFEESLLRGRFAPSGHIEGFTAIEIGASGSYCPQHVTLPTVTTF 394
Pan_troglodytes SASPVPTPAVSRTLLGNFEESLLRGRFAPSGHIEGFTAIEIGASGSYCPQHVTLPTVTTF 394
Macaca_mulatta SASPVPTPAVSRTLLGNFEESLLRGRFAPSGHIEGFTAIEIGASGSYCPQHVTLPTVTTF 394
Callithrix_jacchus SASPVPTPAVSRTLLGNFEESLLRGRFAPSGHIEGFTAIEIGASGSYCPQHVTLPTVTTF 394
Bos_taurus SASPVPTPAVSRTLLGNFEESLLRGRFAPSGHIEGFTAIEIGASGSYCPQHVTLPTVTTF 394
Equus_caballus SASPVPTPAVSRTLLGNFEESLLRGRFAPSGHIEGFTAIEIGASGSYCPQHVTLPTVTTF 394
Canis_lupus_familiaris SASPVPTPAVSRTLLGNFEESLLRGRFAPSGHIEGFTAIEIGASGSYCPQHVTLPTVTTF 392
Heterocephalus_glaber SASPIPTPAISRTLLGNFEESLLRGRFAPSGHIEGFTAIEIGASGSYCPQHVTLPTVTTF 394
Pavo_muticus SAASWATTTVSHALLGNFEESILKGRFAPSGRIEGFTAIEIGASGSYCPQHVTLPTVTTF 447
Pavo_cristatus SAASWATTTVSHALLGNFEESILKGRFAPSGRIEGFTAIEIGASGSYCPQHVTLPTVTTF 447
Gallus_gallus SAASWATTTVSHALLGNFEESILKGRFAPSGRIEGFTAIEIGASGSYCPQHVTLPTVTTF 452
Chelonia_mydas SAAAWATTSISHALLGNFEESILKGRFAPSGRIEGFTAIEIGASGSYCPQHVTLPTVTTF 489
Rhinatrema_bivittatum SPEPWATSAISRLGNFEESILKGRFVPSGCIEGFTAIEIGASGSYCPQHVTLPTVTTF 543
Latimeria_chalumnae STGAWATSSISRLGNFEESILKGRFTPSGKIEGFTAIEIGASGSYCPQHVTLPTVTTF 613
Xenopus_tropicalis AARSWANSCISRPLGNFEESILRGRFAPSGQIEGFTAIEIGASGSYCPQHVTLPTVTTF 514
.....610.....620.....630.....640.....650.....660

```

```

.:*:::..*.*.***. :. * : * * . : : * :
Mus_musculus DVSEQNAPAPFLGVVDLPLGRKGYSVPKVGTIQVTLFNPNTVVKMFLVTFDFSDMPAA 454
Rattus_norvegicus DVSEQNAPAPFLGVVDLPLGRKGYSVPKVGTIQVTLFNPNTVVKMFLVTFDFSDMPAA 454
Homo_sapiens DVSEQNAPAPFLGIVDLNPLGRKGYSVPKVGTVQVTLFNPNTVVKMFLVTFDFSDMPAA 454
Pan_troglodytes DVSEQNAPAPFLGIVDLNPLGRKGYSVPKVGTVQVTLFNPNTVVKMFLVTFDFSDMPAA 454
Macaca_mulatta DVSEQNAPAPFLGIVDLNPLGRKGYSVPKVGTVQVTLFNPNTVVKMFLVTFDFSDMPAA 454
Callithrix_jacchus DVSEQNAPAPFLGVMDLPLGRKGYSVPKVGTIQVTLFNPNTVVKMFLVTFDFSDMPAA 454
Bos_taurus DVSEQNAPAPFLGVVDLPLGRKGYSVPKVGTIQVTLFNPNTVVKMFLVTFDFSDMPAA 454
Equus_caballus DVSEQNAPAPFLGVVDLPLGRKGYSVPKVGTIQVTLFNPNTVVKMFLVTFDFSDMPAA 454
Canis_lupus_familiaris DVSEQNAPAPFLGVVDLPLGRKGYSVPKVGTVQVTLFNPNTVVKMFLVTFDFSDMPAA 452
Heterocephalus_glaber DVSEQNAPAPFLGVVDLPLGRKGYSVPKVGTVQVTLFNPNTVVKMFLVTFDFSDMPAA 454
Pavo_muticus DISEHSVSPFLGVLDLEALGKKGYSVPKAGTIQVTLFNPNTVVKMFLVTFDFQDMPAN 507
Pavo_cristatus DISEHSVSPFLGVLDLEALGKKGYSVPKAGTIQVTLFNPNTVVKMFLVTFDFQDMPAN 507
Gallus_gallus DISEHSVSPFLGVLDLEALGKKGYSVPKAGTIQVTLFNPNTVVKMFLVTFDFQDMPAN 512
Chelonia_mydas DISEHSAPSPFLGVLDLEALGKKGYSVPKAGTIQVTLFNPNTVVKMFLVTFDFQDMPAS 549
Rhinatrema_bivittatum DISEHSVSPFLGVLDLEALGKKGYSVPKAGTIQVTLFNPNTVVKMFLVTFDFQDMPAS 603
Latimeria_chalumnae DISEHSAPSPFLGVLDLEALGKKGYSVPKAGTIQVTLFNPNTVVKMFLVTFDFQDMPAN 673
Xenopus_tropicalis HISEHSVSPFLGVLDLEALGKKGYSVPKAGTIQVTLFNPNTVVKMFLVTFDFQDMPAN 574
.....670.....680.....690.....700.....710.....720

```


CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/FAM214BT.pe Feb 1 12:09:07 2022

Page 5 of 5

```

*:*****:*****      .*      ::****:****: *:
Mus_musculus          HMTFLRHRLFLVPVGE-----EGNAS-----PTHRLLCYLLHLRFRSSR 493
Rattus_norvegicus     HMTFLRHRLFLVPVGE-----EGNVS-----PTHRLLCYLLHLRFRSSR 493
Homo_sapiens          HMTFLRHRLFLVPVGE-----EGNAN-----PTHRLLCYLLHLRFRSSR 493
Pan_troglodytes       HMTFLRHRLFLVPVGE-----EGNAN-----PTHRLLCYLLHLRFRSSR 493
Macaca_mulatta        HMTFLRHRLFLVPVGE-----EGNAN-----PTHRLLCYLLHLRFRSSR 493
Callithrix_jacchus    HMTFLRHRLFLVPVGE-----EGNAN-----PTHRLLCYLLHLRFRSSR 493
Bos_taurus            HMTFLRHRLFLVPVGE-----EGNAG-----PTRRLLCYLLHLRFRSSR 493
Equus_caballus        HVTFLRHRLFLVPVGE-----EGNAS-----PTRRLLCYLLHLRFRSSR 493
Canis_lupus_familiaris HMTFLRHRLFLVPVGE-----EGNAS-----PTCRLLCYLLHLRFRSSR 491
Heterocephalus_glaber HMTFLRHRLFLVPVGE-----EGNAS-----PTHRLLCYLLHLRFRSSR 493
Pavo_muticus          HMTFLRHRIFLVPVGK-----EKGATVACSEAPGTG----PPRRVLCYLMHLRFHSSK 556
Pavo_cristatus        HMTFLRHRIFLVPVGK-----EKGATVACSEAPGTG----PPRRVLCYLMHLRFHSSK 556
Gallus_gallus         HMTFLRHRIFLVPVGK-----EKGVTVACSEPPGTG----PPRRVLCYLMHLRFHSSK 561
Chelonia_mydas        HLTFLRHRIFLVPVG-----EEGPGGEAPSDPACAS----PPRRVLCYLMHLRFHSSK 597
Rhinatrema_bivittatum HVTFLRHRIFLVPVEEEEE--EDGDRETHSSSDGTDGGVREGRKKILCYLMHLRFQRSK 661
Latimeria_chalumnae   HVTFLRHRIFLVPVEG-----GEGDSEAQDHLDIAIE----RRKILCYLIHLRFQSSK 722
Xenopus_tropicalis    HVTFLRHRIFLVPVEETEKGAGDGPRESGDNEAITTK---ERARRILCYLMHLRFQRSK 631
.....730.....740.....750.....760.....770.....780

```

```

* :: ** :*****:*****:*****:*****:*****:*****:*****:*****:*****:*****:
Mus_musculus          SGRLSLHGDIRLLFSRRSLELDTGLPYELQAVTEAPHNPRYSPLP 538
Rattus_norvegicus     SGRLSLHGDIRLLFSRRSLELDTGLPYELQAVTEAPHNPRYSPLP 538
Homo_sapiens          SGRLSLHGDIRLLFSRRSLELDTGLPYELQAVTEAPHNPRYSPLP 538
Pan_troglodytes       SGRLSLHGDIRLLFSRRSLELDTGLPYELQAVTEAPHNPRYSPLP 538
Macaca_mulatta        SGRLSLHGDIRLLFSRRSLELDTGLPYELQAVTEAPHNPRYSPLP 538
Callithrix_jacchus    SGRLSLHGDIRLLFSRRSLELDTGLPYELQAVTEAPHNPRYSPLP 538
Bos_taurus            SGRLSLHGDIRLLFSRRSLELDTGLPYELQAVTEAPHNPRYSPLP 538
Equus_caballus        SGRLSLHGDIRLLFSRRSLELDTGLPYELQAVTEAPHNPRYSPLP 538
Canis_lupus_familiaris SGRLSLHGDIRLLFSRRSLELDTGLPYELQAVTESPHNPRYSPLP 536
Heterocephalus_glaber SGRLSLHGDIRLLFSRRSLELDTGLPYELQAVTEAPHNPRYSPLP 538
Pavo_muticus          SGKIYLDNIRLLFSRKSIEVDSGIPYELKSFTMPRNPYSPWP 601
Pavo_cristatus        SGKIYLDNIRLLFSRKSIEVDSGIPYELKSFTMPRNPYSPWP 601
Gallus_gallus         SGKIYLDNIRLLFSRKSIEVDSGIPYELKSFTMPRNPYSPWP 606
Chelonia_mydas        SGKIYLDNIRLLFSRKSIEVDSGIPYELKSFTMPRNPYSPWA 642
Rhinatrema_bivittatum SEKIYLDNIRLLFSRKSIEVDSGIPYELKSFTMPRNPYSPQV 706
Latimeria_chalumnae   SGKIYLDNIRLLFSRKSIEVDTGIPYELKSFTMPRNPYSPRL 767
Xenopus_tropicalis    SGKIYLDNIRLLFSRKSIEVDSGIPYELKSFTETPRNPYSPRV 676
.....790.....800.....810.....820.....

```