

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/APC Date: Tue Feb 1 11:15:51 2022

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Mus_musculus	-----MAAASYDQLLKQVEALKMENSN---LR-----QELEDN---SNHLTKLE-TEASNM	44
Rattus_norvegicus	MYASLSSGPVAALPASVPPVTILGAPSSGGGR-----SRVPGEGRPPGGTRACG-RGASVW	54
Homo_sapiens	-----MAAASYDQLLKQVEALKMENSNLROELEDNSNHLTKLETEASNM	44
Pan_troglodytes	MWLYWCSPPGCHWRONGGAAGLNGDTCIGGOKREETKPLQMAVDNLVERATGDERKRRR	60
Macaca_mulatta	MYASLGS GPVAALPVSVPSTILRSWSTGGSR-----SCVROETKSPGGARTSG-HWASVW	54
Callithrix_jacchus	MYASLGS GPVAALPASLPPSTLGSWSTGGG-----SCVROEGKSEGGARTSG-HWASVW	53
Bos_taurus	MYTPLCSSAVAALPASVPPCAVRSRSSGGGR-----GCVROERKRPGCVRASV-RGASVW	54
Equus_caballus	MYTSLGS GPVAALPASGPPSPLGSWSSGGRR-----GCVPOEGKRPGCVRASG-HGTSVW	54
Canis_lupus_familiaris	-----MAAASYDQLLKQVEALKMEN-----SNLROELEDNSNHLTKLETEASNM	44
Pavo_muticus	-----MAAASYDQLLKQVEALKMEN-----SNLROELEDNSNHLTKLETEASNM	44
Pavo_cristatus	-----MAAASYDQLLKQVEALKMEN-----SNLROELEDNSNHLTKLETEASNM	44
Gallus_gallus	-----MAAASYDQLLKQVEALKMEN-----SNLROELEDNSNHLTKLETEASNM	44
Chelonia_mydas	-----MAAASYDQLLKQVEALKMEN-----SNLROELEDNSNHLTKLETEASNM	44
Xenopus_tropicalis	-----MAAASYDQLLKQVAALKMEN-----TNLROELEDNSNHLTKLESEASNM	44
Callorhinchus_milii	--MAASSASYDQLLKQVEALKMEN-----SNLROELEDNSNHLTQLETEASSM	46
Danio_rerio	-----MAAASYDQLLKQVEALKMEN-----SNLROELEDNSNHLNKLETEASNM	44
	1.....10.....20.....30.....40.....50.....60	

	:	*****:::	* ***::***:*.:. . . * * *	
Mus_musculus	K	-----EVLKQLQGSIEDET	--MTS-GQIDLLERLKEFNLD	S-NFPGVKLRSK 88
Rattus_norvegicus	Q	-----EVLKQLQGSIEDET	--MTS-GQIDLLERLKEFNLD	S-NFPGVKLRSK 98
Homo_sapiens	K	-----EVLKQLQGSIEDEA	--MASSGQIDLLERLKELNLD	SSNFPGVKLRSK 90
Pan_troglodytes	Q	-----EVLKQLQGSIEDEA	--MASSGQIDLLERLKELNLD	SSNFPGVKLRSK 106
Macaca_mulatta	Q	-----EVLKQLQGSIEDEA	--MASSGQIDLLERLKELNLD	SSNFPGVKLRSK 100
Callithrix_jacchus	Q	-----EVLKQLQGSIEDEA	--MASSGQIDLLERLKELNLD	SSNFPGVKLRSK 99
Bos_taurus	Q	-----EVLKQLQGSIEDEA	--MASSGQIDLLERLKELNLD	SSNFPGVKLRSK 100
Equus_caballus	Q	-----EVLKQLQGSIEDEA	--MASSGQIDLLERLKELNLD	SSNFPGVKLRSK 100
Canis_lupus_familiaris	K	-----EVLKQLQGSIEDEA	--MASSGQIDLLERLKELNLD	SSNFPGVKLRSK 90
Pavo_muticus	K	-----EVLKQLQGSIEDEA	--MASSGQIDLLERLKELNLD	SSNFPGVKLRSK 102
Pavo_cristatus	K	-----EVLKQLQGSIEDEA	--MASSGQIDLLERLKELNLD	SSNFPGVKLRPK 102
Gallus_gallus	K	-----EVLKQLQGSIEDEA	--MASSGQIDLLERLKELNLD	SSNFPGVKLRQK 102
Chelonia_mydas	K	-----EVLKQLQGSIEDEA	--MASSGQIDLLERLKELNLD	SSNFPGVKLRPK 90
Xenopus_tropicalis	K	-----EVLKQLQGSIEDEA	--MASSGQIDLLERLKELNLD	SSNFPGVKLRPK 90
Callorhinchus_milii	K	-----EVLKQLQGSIEDEA	--MASSGQIDLLERLKELNLD	SSNFPGVKLRPK 94
Danio_rerio	K	-----EVLKQLQGSIEDS	--KDSQGQIEFLERIKESLD	PSGFSGVKLRSK 90
	70.....80.....90.....100.....110.....120		

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Mus_musculus	MSLR	SYGS	REGSV	SSRS	GECS	SPVPMGS	FPRRTFVNGS	REST	GYLEE	ELEKERS	LLLAD	LDK	148
Rattus_norvegicus	MSLR	SYGS	REGSV	SSRS	GECS	SPVPMGS	FPRRAFVNGS	REST	GYLEE	ELEKERS	LLLAD	LDK	158
Homo_sapiens	MSLR	SYGS	REGSV	SSRS	GECS	SPVPMGS	FPRRGFVNGS	REST	GYLEE	ELEKERS	LLLAD	LDK	150
Pan_troglodytes	MSLR	SYGS	REGSV	SSRS	GECS	SPVPMGS	FPRRGFVNGS	REST	GYLEE	ELEKERS	LLLAD	LDK	166
Macaca_mulatta	MSLR	SYGS	REGSV	SSRS	GECS	SPVPMGS	FPRRGFVNGS	REST	GYLEE	ELEKERS	LLLAD	LDK	160
Callithrix_jacchus	MSLR	SYGS	REGSV	SSRS	GECS	SPVPMGS	FPRRGFVNGS	REST	GYLEE	ELEKERS	LLLAD	LDK	159
Bos_taurus	MSLR	SYGS	REGSV	SSRS	GECS	SPVPMGS	FPRRGFVNGS	RENT	GYLEE	ELEKERS	LLLAD	LDK	160
Equus_caballus	MSLR	SYGS	REGSV	SSRS	GECS	SPVPMGS	FPRRGFVNGS	RENP	GYLEE	ELEKERS	LLLAD	LDK	160
Canis_lupus_familiaris	MSLR	SYGS	REGSV	SSRS	GECS	SPVPMGS	FPRRGFVNGS	RENT	GYLEE	ELEKERS	LLLAD	LDK	150
Pavo_muticus	VSVR	SYGS	REGSV	SSRS	GECS	SPVPMGS	FPRRGFMNGS	REST	GYLEE	ELEKERS	LLLA	ELEK	162
Pavo_cristatus	VSVR	SYGS	REGSV	SSRS	GECS	SPVPMGS	FPRRGFMNGS	REST	GYLEE	ELEKERS	LLLA	ELEK	162
Gallus_gallus	VSVR	SYGS	REGSV	SSRS	GECS	SPVPMGS	FPRRGFMNGS	REST	GYLEE	ELEKERS	LLLA	ELEK	162
Chelonia_mydas	MSLR	SYGS	REGS	MSRS	GECS	SPVPMGS	FPRRGFMNGS	REST	GYLEE	ELEKERS	LLLA	ELEK	150
Xenopus_tropicalis	MSMR	SYGS	REGS	LSGHS	GECS	SPVPVGS	FQRRGLLNGS	REST	GYLEE	ELEKER	LLLIA	EHEK	150
Callorhinchus_milii	MSLH	SYGS	REGSV	SGRS	GECS	SPVPGSS	VPRRGFVNGG	REGT	GYLEE	ELEKERS	LLLA	EIEK	154
Danio_rerio	ASLG	--GS	ADSP	-----	-----	PSPVSS	CPRRGA	SGGRD	SAGY	ELEEKERS	LLVA	ELEK	141
	130	140	150	160	170	180	

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Mus_musculus      EEKEKDWYYAQLQNLTKRIDSLPLTENFSLQDMDTRRQLEYEARQIRAAEEQLGTCQDM 208
Rattus_norvegicus EEKEKDWYYAQLQNLTKRIDSLPLTENFSLQDMDTRRQLEYEARQIRAAEEQLGTCQDM 218
Homo_sapiens      EEKEKDWYYAQLQNLTKRIDSLPLTENFSLQDMDTRRQLEYEARQIRVAMEEQLGTCQDM 210
Pan_troglodytes   EEKEKDWYYAQLQNLTKRIDSLPLTENFSLQDMDTRRQLEYEARQIRVAMEEQLGTCQDM 226
Macaca_mulatta    EEKEKDWYYAQLQNLTKRIDSLPLTENFSLQDMDTRRQLEYEARQIRVAMEEQLGTCQDM 220
Callithrix_jacchus EEKEKDWYYAQLQNLTKRIDSLPLTENFSLQDMDTRRQLEYEARQIRVAMEEQLGTCQDM 219
Bos_taurus        EEKEKDWYYAQLQNLTKRIDSLPLTENFSLQDMDTRRQLEYEARQIRVAMEEQLGTCQDM 220
Equus_caballus    EEKEKDWYYAQLQNLTKRIDSLPLTENFSLQDMDTRRQLEYEARQIRVAMEEQLGTCQDM 220
Canis_lupus_familiaris EEKEKDWYYAQLQNLTKRIDSLPLTENFSLQDMDTRRQLEYEARQIRVAMEEQLGTCQDM 210
Pavo_muticus      EEKEKDWYYAQLQNLTKRIDSLPLTENFSLQDMDTRRQLEYEARQIRAAEEQLGTCQDM 222
Pavo_cristatus    EEKEKDWYYAQLQNLTKRIDSLPLTENFSLQDMDTRRQLEYEARQIRAAEEQLGTCQDM 222
Gallus_gallus     EEKEKDWYYAQLQNLTKRIDSLPLTENFSLQDMDTRRQLEYEARQIRAAEEQLGTCQDM 222
Chelonia_mydas    EEKEKDWYYAQLQNLTKRIDSLPLTENFSLQDMDTRRQLEYEARQIRAAEEQLGTCQDM 210
Xenopus_tropicalis EEKEKRWYYAQLQNLTKRIDSLPLTENFSLQDMDTRRQLEYEARQIRAAEEQLGTCQDM 210
Callorhinchus_milii EEKEKDWYYAQLQNLTKRIDNPLIENFSLQDMDTRRQLEYEARQIRAAEEQLGTCQDM 214
Danio_rerio       EEKEKDWYYAQLQNLTKRIDSLPLTENFSLQDMDTRRQLEYEARQIRAAEDQLGTCQDM 201
.....190.....200.....210.....220.....230.....240

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***.* *: :*****:~::~~* ~*~*~*~* : ~*~* :
Mus_musculus      EKRAQRRIARIQQIEKDILRVROLLOSQAEEA-ERSSQSRHDA-ASHEAGROHEGHGVAE 266
Rattus_norvegicus EKRAQRRIARIQQIEKDILRVROLLOSQAEEA-ERSSQSKHET-ASHEAERQLEGQGVAE 276
Homo_sapiens      EKRAQRRIARIQQIEKDILRIROLLOSQAEEA-ERSSQNKHET-GSHDAERONEGQGVGE 268
Pan_troglodytes   EKRAQRRIARIQQIEKDILRIROLLOSQAEEA-ERSSQNKHET-GSHDAERONEGQGVGE 284
Macaca_mulatta    EKRAQRRIARIQQIEKDILRIROLLOSQAEEA-ERSSQNKHET-GSHDAERONEGQGVAE 278
Callithrix_jacchus EKRAQRRIARIQQIEKDILRIROLLOSQAEEA-ERSSQNKHET-GSHEAERONEGQGVTE 277
Bos_taurus        EKRAQRRIARIQQIEKDILRIROLLOSQAEEA-ERSSQSKHEA-GSHEAERONEGQGVAE 278
Equus_caballus    EKRAQRRIARIQQIEKDILRIROLLOSQAEEA-ERSSQSKHEA-GSHEAERONEGQGVAE 278
Canis_lupus_familiaris EKRAQRRIARIQQIEKDILRIROLLOSQAEEA-ERSSQSKHEA-GSHEAERONEGQGVGE 268
Pavo_muticus      EKRAQVRVARIQQIEKDILRIROLLOSQAEEA-ERAPQGHDA-GSHDTERQSEGQGAPE 280
Pavo_cristatus    EKRAQVRVARIQQIEKDILRIROLLOSQAEEA-ERAPQGHDA-GSHDTERQSEGQGAPE 280
Gallus_gallus     EKRAQVRVARIQQIEKDILRIROLLOSQAEEA-ERAPQGHDA-GSHDTERQSEGQGAPE 280
Chelonia_mydas    EKRAQVRVARIQQIEKDILRIROLLOSQAEEA-ERAPQSKHDS-GSHEAERONEGQGAEE 268
Xenopus_tropicalis EKRVQTRVGKIQQIEKDILRIROLLOSQAEEAERTPSKHDA-GSRDADKLPDGGTSE 269
Callorhinchus_milii EKRAQMRVIRIQQIEKDMLRLRHLQSQTTES-EKASQNKHEQVPRDAEGFSDCQETTE 273
Danio_rerio       EKRAQGRVARIQQIEKDMLRIRTRLOAQSAES-----EVKHEPLSQTEGSHAAGDAGAAA 256
.....250.....260.....270.....280.....290.....300

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Mus_musculus      SNTAASSSG-----QSPATRVVDHETASVLSSS 293
Rattus_norvegicus SNLATSGSG-----QSSAARVDHETAGVLSSS 303
Homo_sapiens      INMATSGNG-----QGSTTRMDHETASVLSSS 295
Pan_troglodytes   INMATSGNG-----QGSTTRMDHETASVLSSS 311
Macaca_mulatta    INMATSGNG-----QGSTTRMDHETASVLSSS 305
Callithrix_jacchus INMATSGNG-----QGSTTRMDHETASVLSSS 304
Bos_taurus        INMATSGSGQVTASLVPLKDVGADLIILKRPRKDSQSGSLQGSTTRIDHETASVLSSS 338
Equus_caballus    INMATSGSG-----QGSTARMDHETASVLSSS 305
Canis_lupus_familiaris INMATSGSA-----QGSTARMDHETASVLSSS 295
Pavo_muticus      ISMSTSNITGQFPKLNEEGVASGSFTNRKKKRQRKTN-NKGKKRGSAAARMHETASVMSSS 339
Pavo_cristatus    ISMSTSNITGQFPKLNEEGVASGSFTNRKKKRQRKTN-NKGKKRGSAAARMHETASVMSSS 339
Gallus_gallus     ISMSTSNITGQFPKLNEEGVASGNFTNRKKRRRKQQQRQIKKRGSAARMHETASVMSSS 340
Chelonia_mydas    ISMATTTNGGQ-----GSTARMDHETASVMST- 294
Xenopus_tropicalis IVTSSNVGSG-----QGSRRADHDTASVMSSN 297
Callorhinchus_milii ASMGTGSG-----QGSARVEQDAASVMSSS 300
Danio_rerio       AASVCS-----QGSARVVDHDSASEMSSA 280
.....310.....320.....330.....340.....350.....360

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      :*.*****
Mus_musculus      GTHSAPRRRLTSHLGTKV-----EMVYSLLSMLGTHDKDDMSRTLLAMSSSSQDSCI 345
Rattus_norvegicus GTHSAPRRRLTSHLGTKV-----EMVYSLLSMLGTHDKDDMSRTLLAMSSSSQDSCI 355
Homo_sapiens      STHSAPRRRLTSHLGTKV-----EMVYSLLSMLGTHDKDDMSRTLLAMSSSSQDSCI 347
Pan_troglodytes   STHSAPRRRLTSHLGTKV-----EMVYSLLSMLGTHDKDDMSRTLLAMSSSSQDSCI 363
Macaca_mulatta    STHSAPRRRLTSHLGTKV-----EMVYSLLSMLGTHDKDDMSRTLLAMSSSSQDSCI 357
Callithrix_jacchus STHSAPRRRLTSHLGTKV-----EMVYSLLSMLGTHDKDDMSRTLLAMSSSSQDSCI 356
Bos_taurus        STHSAPRRRLTSHLGTKV-----EMVYSLLSMLGTHDKDDMSRTLLAMSSSSQDSCI 390
Equus_caballus     STHSAPRRRLTSHLGTKV-----EMVYSLLSMLGTHDKDDMSRTLLAMSSSSQDSCI 357
Canis_lupus_familiaris STHSAPRRRLTSHLGTKV-----EMVYSLLSMLGTHDKDDMSRTLLAMSSSSQDSCI 347
Pavo_muticus       NNYSVPRRLTSHLGTKVTEYKPVEMVYSLLSMLGTHDKDDMSRTLLAMSSSSQDSCI 399
Pavo_cristatus     NNYSVPRRLTSHLGTKVTEYKPVEMVYSLLSMLGTHDKDDMSRTLLAMSSSSQDSCI 399
Gallus_gallus      NNYSVPRRLTSHLGTKVTEYKPVEMVYSLLSMLGTHDKDDMSRTLLAMSSSSQDSCI 400
Chelonia_mydas     --YSVPRRLTSHLGTKVTEYKPVEMVYSLLSMLGTHDKDDMSRTLLAMSSSSQDSCI 352
Xenopus_tropicalis STYSVPRRLTSHLGTKV-----EMVYSLLSMLGTHDKDDMSRTLLAMSSSSQDSCI 349
Callorhinchus_milii SSYSVPRRLTSHLGTKVTEYKPVEMVYSLLSMLGTHDKDDMSRTLLAMSSSSQDSCI 360
Danio_rerio        GSYSVPRRLTSHLGTKV-----EMVYSLLSMLGTHDKDDMSRTLLAMSSSSQDSCI 332
      .....370.....380.....390.....400.....410.....420

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Mus_musculus      RQSGCLPLLIQLLHGNDKDSVLLGNSRGSKEARARASAAALHNIHSQPDDKRGRRREIRVL 405
Rattus_norvegicus RQSGCLPLLIQLLHGNDKDSVLLGNSRGSKEARARASAAALHNIHSQPDDKRGRRREIRVL 415
Homo_sapiens      RQSGCLPLLIQLLHGNDKDSVLLGNSRGSKEARARASAAALHNIHSQPDDKRGRRREIRVL 407
Pan_troglodytes   RQSGCLPLLIQLLHGNDKDSVLLGNSRGSKEARARASAAALHNIHSQPDDKRGRRREIRVL 423
Macaca_mulatta    RQSGCLPLLIQLLHGNDKDSVLLGNSRGSKEARARASAAALHNIHSQPDDKRGRRREIRVL 417
Callithrix_jacchus RQSGCLPLLIQLLHGNDKDSVLLGNSRGSKEARARASAAALHNIHSQPDDKRGRRREIRVL 416
Bos_taurus        RQSGCLPLLIQLLHGNDKDSVLLGNSRGSKEARARASAAALHNIHSQPDDKRGRRREIRVL 450
Equus_caballus     RQSGCLPLLIQLLHGNDKDSVLLGNSRGSKEARARASAAALHNIHSQPDDKRGRRREIRVL 417
Canis_lupus_familiaris RQSGCLPLLIQLLHGNDKDSVLLGNSRGSKEARARASAAALHNIHSQPDDKRGRRREIRVL 407
Pavo_muticus       RQSGCLPLLIQLLHGNDKDSVLLGNSRGSKEARARASAAALHNIHSQPDDKRGRRREIRVL 459
Pavo_cristatus     RQSGCLPLLIQLLHGNDKDSVLLGNSRGSKEARARASAAALHNIHSQPDDKRGRRREIRVL 459
Gallus_gallus      RQSGCLPLLIQLLHGNDKDSVLLGNSRGSKEARARASAAALHNIHSQPDDKRGRRREIRVL 460
Chelonia_mydas     RQSGCLPLLIQLLHGNDKDSVLLGNSRGSKEARARASAAALHNIHSQPDDKRGRRREIRVL 412
Xenopus_tropicalis RQSGCLPLLIQLLHGNDKDSVLLGNSRGSKEARARASAAALHNIHSQPDDKRGRRREIRVL 409
Callorhinchus_milii RQSGCLPLLIQLLHGNDKDSVLLGNSRGSKEARARASAAALHNIHSQPDDKRGRRREIRVL 420
Danio_rerio        RQSGCLPLLIQLLHGNDKDSVLLGNSRGSKEARARASAAALHNIHSQPDDKRGRRREIRVL 392
      .....430.....440.....450.....460.....470.....480

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Mus_musculus      HLLAQIRAYCETCWEWQEAHEQGMDQKNPMPAPVEHQICPAVCVLMKLSFDEEHRHAMN 465
Rattus_norvegicus HLLAQIRAYCETCWEWQEAHEQGMDQKNPMPAPVEHQICPAVCVLMKLSFDEEHRHAMN 475
Homo_sapiens      HLLAQIRAYCETCWEWQEAHEQGMDQKNPMPAPVEHQICPAVCVLMKLSFDEEHRHAMN 467
Pan_troglodytes   HLLAQIRAYCETCWEWQEAHEQGMDQKNPMPAPVEHQICPAVCVLMKLSFDEEHRHAMN 483
Macaca_mulatta    HLLAQIRAYCETCWEWQEAHEQGMDQKNPMPAPVEHQICPAVCVLMKLSFDEEHRHAMN 477
Callithrix_jacchus HLLAQIRAYCETCWEWQEAHEQGMDQKNPMPAPVEHQICPAVCVLMKLSFDEEHRHAMN 476
Bos_taurus        HLLAQIRAYCETCWEWQEAHEQGMDQKNPMPAPVEHQICPAVCVLMKLSFDEEHRHAMN 510
Equus_caballus     HLLAQIRAYCETCWEWQEAHEQGMDQKNPMPAPVEHQICPAVCVLMKLSFDEEHRHAMN 477
Canis_lupus_familiaris HLLAQIRAYCETCWEWQEAHEQGMDQKNPMPAPVEHQICPAVCVLMKLSFDEEHRHAMN 467
Pavo_muticus       HLLAQIRAYCETCWEWQEAHEQGMDQKNPMPAPVDHQICPAVCVLMKLSFDEEHRHAMN 519
Pavo_cristatus     HLLAQIRAYCETCWEWQEAHEQGMDQKNPMPAPVDHQICPAVCVLMKLSFDEEHRHAMN 519
Gallus_gallus      HLLAQIRAYCETCWEWQEAHEQGMDQKNPMPAPVDHQICPAVCVLMKLSFDEEHRHAMN 520
Chelonia_mydas     HLLAQIRAYCETCWEWQEAHEQGMDQKNPMPAPVEHQICPAVCVLMKLSFDEEHRHAMN 472
Xenopus_tropicalis HLLAQIRAYCETCWEWQEAHEQGMDQKNPMPAPVDHQICPAVCVLMKLSFDEEHRHAMN 469
Callorhinchus_milii HLLAQIRAYCETCWEWQEAHEGVDQKNPMPSPVEHQICPAVCVLMKLSFDEEHRHAMN 480
Danio_rerio        HLLAQIRAYCETCWEWQEAHERGVDQKNPMPSPVEHQICPAVCVLMKLSFDEEHRHAMN 452
      .....490.....500.....510.....520.....530.....540

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***                                     *****:***.*****:*****
Mus_musculus      ELG-----GLOAIAELLQVDCMYGLTNDHYSVTLRRYAGMALTNLT 507
Rattus_norvegicus ELGRKATRGISPOELGQGLSGGLQAI AELLQVDCMHGLTDDHYSVTLRRYAGMALTNLT 535
Homo_sapiens      ELG-----GLOAIAELLQVDCMYGLTNDHYSITLRRYAGMALTNLT 509
Pan_troglodytes   ELGRKATRGISSQELGQGLSGGLQAI AELLQVDCMYGLTNDHYSITLRRYAGMALTNLT 543
Macaca_mulatta    ELGRKATRGISSQELGQGLSGGLQAI AELLQVDCMYGLTNDHYSITLRRYAGMALTNLT 537
Callithrix_jacchus ELGRKATRGISSQELGQGLSGGLQAI AELLQVDCMYGLTNDHYSITLRRYAGMALTNLT 536
Bos_taurus        ELGRKATRGISSQELGQGLSGGLQAI AELLQVDCMYGLTNDHYSITLRRYAGMALTNLT 570
Equus_caballus    ELGRKATRGISSQELGQGLSGGLQAI AELLQVDCMYGLTNDHYSITLRRYAGMALTNLT 537
Canis_lupus_familiaris ELGRKATRGISSQELGQGLSGGLQAI AELLQVDCMYGLTNDHYSITLRRYAGMALTNLT 527
Pavo_muticus      ELG-----GLOAIAELLQVDCMYGLTNDHYSVTLRRYAGMALTNLT 561
Pavo_cristatus    ELG-----GLOAIAELLQVDCMYGLTNDHYSVTLRRYAGMALTNLT 561
Gallus_gallus     ELG-----GLOAIAELLQVDCMYGLTNDHYSVTLRRYAGMALTNLT 562
Chelonia_mydas    ELG-----GLOAIAELLQVDCMYGLTNDHYSVTLRRYAGMALTNLT 514
Xenopus_tropicalis ELG-----GLOAIAELLQVDCMYGLTNDHYSVTLRRYAGMALTNLT 511
Callorhinchus_milii ELG-----GLOAIAELLQVDCMYGLTNDHYSVTLRRYAGMALTNLT 522
Danio_rerio       ELG-----GLOAIGELLQVDCMYGLTNDHYSVTLRRYAGMALTNLT 494
.....550.....560.....570.....580.....590.....600

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*****:****:****:*****:*****:*****
Mus_musculus      FGDVANKATLCSMKGCMRALVAQLKSESEDLOQVIASVLRNLSWRADVNSKKTLREVGSV 567
Rattus_norvegicus FGDVANKATLCSMKGCMRALVAQLKSESEDLOQVIASVLRNLSWRADVNSKKTLREVGSV 595
Homo_sapiens      FGDVANKATLCSMKGCMRALVAQLKSESEDLOQVIASVLRNLSWRADVNSKKTLREVGSV 569
Pan_troglodytes   FGDVANKATLCSMKGCMRALVAQLKSESEDLOQVIASVLRNLSWRADVNSKKTLREVGSV 603
Macaca_mulatta    FGDVANKATLCSMKGCMRALVAQLKSESEDLOQVIASVLRNLSWRADVNSKKTLREVGSV 597
Callithrix_jacchus FGDVANKATLCSMKGCMRALVAQLKSESEDLOQVIASVLRNLSWRADVNSKKTLREVGSV 596
Bos_taurus        FGDVANKATLCSMKGCMRALVAQLKSESEDLOQVIASVLRNLSWRADVNSKKTLREVGSV 630
Equus_caballus    FGDVANKATLCSMKGCMRALVAQLKSESEDLOQVIASVLRNLSWRADVNSKKTLREVGSV 597
Canis_lupus_familiaris FGDVANKATLCSMKGCMRALVAQLKSESEDLOQVIASVLRNLSWRADVNSKKTLREVGSV 587
Pavo_muticus      FGDVANKATLCSMKGCMRALVAQLKSESEDLOQVIASVLRNLSWRADVNSKKTLREVGSV 621
Pavo_cristatus    FGDVANKATLCSMKGCMRALVAQLKSESEDLOQVIASVLRNLSWRADVNSKKTLREVGSV 621
Gallus_gallus     FGDVANKATLCSMKGCMRALVAQLKSESEDLOQVIASVLRNLSWRADVNSKKTLREVGSV 622
Chelonia_mydas    FGDVANKATLCSMKGCMRALVAQLKSESEDLOQVIASVLRNLSWRADVNSKKTLREVGSV 574
Xenopus_tropicalis FGDVANKATLCSMKGCMRALVAQLKSESEDLOQVIASVLRNLSWRADVNSKKTLREVGSV 571
Callorhinchus_milii FGDVANKATLCSMKGCMRALVAQLKSESEDLOQVIASVLRNLSWRADVNSKKTLREVGSV 582
Danio_rerio       FGDVANKATLCSMKGCMRALVAQLKSESEDLOQVIASVLRNLSWRADVNSKKTLREVGSV 554
.....610.....620.....630.....640.....650.....660

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*****:*:*****:*****:*****:*****
Mus_musculus      KALMECALEVKKESTLKSVL SALWNLSAHCTENKADICAVD GALAFLVGTLYRSQTNTL 627
Rattus_norvegicus KALMECALEVKKESTLKSVL SALWNLSAHCTENKADICAVD GALAFLVGTLYRSQTNTL 655
Homo_sapiens      KALMECALEVKKESTLKSVL SALWNLSAHCTENKADICAVD GALAFLVGTLYRSQTNTL 629
Pan_troglodytes   KALMECALEVKKESTLKSVL SALWNLSAHCTENKADICAVD GALAFLVGTLYRSQTNTL 663
Macaca_mulatta    KALMECALEVKKESTLKSVL SALWNLSAHCTENKADICAVD GALAFLVGTLYRSQTNTL 657
Callithrix_jacchus KALMECALEVKKESTLKSVL SALWNLSAHCTENKADICAVD GALAFLVGTLYRSQTNTL 656
Bos_taurus        KALMECALEVKKESTLKSVL SALWNLSAHCTENKADICAVD GALAFLVGTLYRSQTNTL 690
Equus_caballus    KALMECALEVKKESTLKSVL SALWNLSAHCTENKADICAVD GALAFLVGTLYRSQTNTL 657
Canis_lupus_familiaris KALMECALEVKKESTLKSVL SALWNLSAHCTENKADICAVD GALAFLVGTLYRSQTNTL 647
Pavo_muticus      KALMECALEVKKESTLKSVL SALWNLSAHCTENKADICAVD GALAFLVGTLYRSQTNTL 681
Pavo_cristatus    KALMECALEVKKESTLKSVL SALWNLSAHCTENKADICAVD GALAFLVGTLYRSQTNTL 681
Gallus_gallus     KALMECALEVKKESTLKSVL SALWNLSAHCTENKADICAVD GALAFLVGTLYRSQTNTL 682
Chelonia_mydas    KALMECALEVKKESTLKSVL SALWNLSAHCTENKADICAVD GALAFLVGTLYRSQTNTL 634
Xenopus_tropicalis KALMECALDVKKESTLKSVL SALWNLSAHCTENKADICAVD GALAFLVGTLYRSQTNTL 631
Callorhinchus_milii SALMECALDVKKESTLKSVL SALWNLSAHCTENKADICAVD GALAFLVGTLYRSQTNTL 642
Danio_rerio       RALMECALEVQKESTLKSVL SALWNLSAHCTENKADICTVPGALAFVGTLYRSQTNTL 614
.....670.....680.....690.....700.....710.....720

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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*****:*****.*****
Mus_musculus      AIIESGGGILRNVSLLIATNEDHRQILRENNCLQTLLOHLKSHSLTIVSNACGTLWNLSA 687
Rattus_norvegicus AIIESGGGILRNVSLLIATNEDHRQILRENNCLQTLLOHLKSHSLTIVSNACGTLWNLSA 715
Homo_sapiens      AIIESGGGILRNVSLLIATNEDHRQILRENNCLQTLLOHLKSHSLTIVSNACGTLWNLSA 689
Pan_troglodytes   AIIESGGGILRNVSLLIATNEDHRQILRENNCLQTLLOHLKSHSLTIVSNACGTLWNLSA 723
Macaca_mulatta    AIIESGGGILRNVSLLIATNEDHRQILRENNCLQTLLOHLKSHSLTIVSNACGTLWNLSA 717
Callithrix_jacchus AIIESGGGILRNVSLLIATNEDHRQILRENNCLQTLLOHLKSHSLTIVSNACGTLWNLSA 716
Bos_taurus        AIIESGGGILRNVSLLIATNEDHRQILRENNCLQTLLOHLKSHSLTIVSNACGTLWNLSA 750
Equus_caballus     AIIESGGGILRNVSLLIATNEDHRQILRENNCLQTLLOHLKSHSLTIVSNACGTLWNLSA 717
Canis_lupus_familiaris AIIESGGGILRNVSLLIATNEDHRQILRENNCLQTLLOHLKSHSLTIVSNACGTLWNLSA 707
Pavo_muticus       AIIESGGGILRNVSLLIATNEDHRQILRENNCLQTLLOHLKSHSLTIVSNACGTLWNLSA 741
Pavo_cristatus     AIIESGGGILRNVSLLIATNEDHRQILRENNCLQTLLOHLKSHSLTIVSNACGTLWNLSA 741
Gallus_gallus      AIIESGGGILRNVSLLIATNEDHRQILRENNCLQTLLOHLKSHSLTIVSNACGTLWNLSA 742
Chelonia_mydas     AIIESGGGILRNVSLLIATNEDHRQILRENNCLQTLLOHLKSHSLTIVSNACGTLWNLSA 694
Xenopus_tropicalis AIIESGGGILRNVSLLIATNEDHRQILRENNCLQTLLOHLKSHSLTIVSNACGTLWNLSA 691
Callorhinchus_milii AIIESGGGILRNVSLLIATNEDHRQILRENNCLQTLLOHLKSHSLTIVSNACGTLWNLSA 702
Danio_rerio        AIIESGGGILRNVSLLIATNEEHRQILRENNCLQTLLOHLKSHSLTIVSNACGTLWNLSA 674
.....730.....740.....750.....760.....770.....780

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**.******:*****:
Mus_musculus      RNPKDQEALWDMGAVSMLKNLIHSHKMIAMGSAALRNLMANRPAPYKDNIMSPGSSL 747
Rattus_norvegicus RNPKDQEALWDMGAVSMLKNLIHSHKMIAMGSAALRNLMANRPAPYKDNIMSPGSSL 775
Homo_sapiens      RNPKDQEALWDMGAVSMLKNLIHSHKMIAMGSAALRNLMANRPAPYKDNIMSPGSSL 749
Pan_troglodytes   RNPKDQEALWDMGAVSMLKNLIHSHKMIAMGSAALRNLMANRPAPYKDNIMSPGSSL 783
Macaca_mulatta    RNPKDQEALWDMGAVSMLKNLIHSHKMIAMGSAALRNLMANRPAPYKDNIMSPGSSL 777
Callithrix_jacchus RNPKDQEALWDMGAVSMLKNLIHSHKMIAMGSAALRNLMANRPAPYKDNIMSPGSSL 776
Bos_taurus        RNPKDQEALWDMGAVSMLKNLIHSHKMIAMGSAALRNLMANRPAPYKDNIMSPGSSL 810
Equus_caballus     RNPKDQEALWDMGAVSMLKNLIHSHKMIAMGSAALRNLMANRPAPYKDNIMSPGSSL 777
Canis_lupus_familiaris RNPKDQEALWDMGAVSMLKNLIHSHKMIAMGSAALRNLMANRPAPYKDNIMSPGSSL 767
Pavo_muticus       RNAKDQEALWDMGAVSMLKNLIHSHKMIAMGSAALRNLMANRPAPYKDNIMSPGSSL 801
Pavo_cristatus     RNAKDQEALWDMGAVSMLKNLIHSHKMIAMGSAALRNLMANRPAPYKDNIMSPGSSL 801
Gallus_gallus      RNAKDQEALWDMGAVSMLKNLIHSHKMIAMGSAALRNLMANRPAPYKDNIMSPGSSL 802
Chelonia_mydas     RNAKDQEALWDMGAVSMLKNLIHSHKMIAMGSAALRNLMANRPAPYKDNIMSPGSSL 754
Xenopus_tropicalis RNAKDQEALWDMGAVSMLKNLIHSHKMIAMGSAALRNLMANRPAPYKDNIMSPGSSL 751
Callorhinchus_milii RNAKDQEALWDMGAVSMLKNLIHSHKMIAMGSAALRNLMANRPAPYKDNIMSPGSSL 762
Danio_rerio        RNAKDQEALWDMGAVSMLKNLIHSHKMIAMGSAALRNLMANRPAPYKDNIMSPGSSL 734
.....790.....800.....810.....820.....830.....840

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***** *****:*****:*** * *** . :*
Mus_musculus      PSLHVRKQKALEAELDAQHLSETFDNIDNLSPKASHRSKQRHKQSLYGDYVFDNRHDD- 806
Rattus_norvegicus PSLHVRKQKALEAELDAQHLSETFDNIDNLSPKASHRSKQRHKQSLYGDYVFDNRHDD- 834
Homo_sapiens      PSLHVRKQKALEAELDAQHLSETFDNIDNLSPKASHRSKQRHKQSLYGDYVFDNRHDD- 808
Pan_troglodytes   PSLHVRKQKALEAELDAQHLSETFDNIDNLSPKASHRSKQRHKQSLYGDYVFDNRHDD- 842
Macaca_mulatta    PSLHVRKQKALEAELDAQHLSETFDNIDNLSPKASHRSKQRHKQSLYGDYVFDNRHDD- 836
Callithrix_jacchus PSLHVRKQKALEAELDAQHLSETFDNIDNLSPKASHRSKQRHKQSLYGDYVFDNRHDD- 835
Bos_taurus        PSLHVRKQKALEAELDAQHLSETFDNIDNLSPKASHRSKQRHKQSLYGDYVFDNRHDD- 869
Equus_caballus     PSLHVRKQKALEAELDAQHLSETFDNIDNLSPKASHRSKQRHKQSLYGDYVFDNRHDD- 836
Canis_lupus_familiaris PSLHVRKQKALEAELDAQHLSETFDNIDNLSPKASHRNKQRHKQSLYGDYVFDNRHDD- 826
Pavo_muticus       PSLHVRKQKALEAELDAQHLSETFDNIDNLSPKASHRNKQRHKQSLYGDYVFDNRHDD- 861
Pavo_cristatus     PSLHVRKQKALEAELDAQHLSETFDNIDNLSPKASHRNKQRHKQSLYGDYVFDNRHDD- 861
Gallus_gallus      PSLHVRKQKALEAELDAQHLSETFDNIDNLSPKASHRNKQRHKQSLYGDYVFDNRHDD- 862
Chelonia_mydas     PSLHVRKQKALEAELDAQHLSETFDNIDNLSPKASHRNKQRHKQSLYGDYVFDNRHDD- 814
Xenopus_tropicalis PSLHVRKQKALEAELDAQHLSETFDNIDNLSPKASHRNKQRHKQSLYGDYVFDNRHDD- 811
Callorhinchus_milii PSLHVRKQKALEAELDAQHLSETFDNIDNLSPKASHRNKQRHKQSLYGDYVFDNRHDD- 822
Danio_rerio        PSLHVRKQKALEAELDAQHLSETFDNIDNLSPKASHRNKQRHKQSLYGDYVFDNRHDD- 786
.....850.....860.....870.....880.....890.....900

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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	* * * * . . . : . : * . . . : * : * : *	
Mus_musculus	--SRSDNFNTGNMTVLSPLYLNTTVLP--SSSSSRGSLDSSRSEKDRSLERERGIGLSAYH	862
Rattus_norvegicus	--NRSDNFNTGNMTVLSPLYLNTTVLP--SSSSSRGSLDSSRSEKDRSLERERGIGLSTYH	890
Homo_sapiens	--NRSDNFNTGNMTVLSPLYLNTTVLP--SSSSSRGSLDSSRSEKDRSLERERGIGLGNHY	864
Pan_troglodytes	--NRSDNFNTGNMTVLSPLYLNTTVLP--SSSSSRGSLDSSRSEKDRSLERERGIGLGNHY	898
Macaca_mulatta	--NRSDNFNAGNMTVLSPLYLNTTVLP--SSSSSRGSLDSSRSEKDRSLERERGIGLGNHY	892
Callithrix_jacchus	--NRSENFNTGNMTVLSPLYLNTTVLP--SSSSSRGSLDSSRSEKDRSLERERGIGLGNHY	891
Bos_taurus	--NRSDNFNTGNMTVLSPLYLNTTVLP--SSSSSRGSLDSSRSEKDRSLERERGISLGNHY	925
Equus_caballus	--NRPDNFNTGNMTVLSPLYLNTTVLP--SSSSSRGSLDSSRSEKDRSLERERGISLGNHY	892
Canis_lupus_familiaris	--NRSDNFNTGNMTVLSPLYLNTTVLP--SSSSSRGSLDSSRSEKDRSLERERGISLGNHY	882
Pavo_muticus	-VCRTESEFNTGNMTVLSPLYLNTVLPG--SSSSSRGNIENCLSEKDRSLDRDRAVGLNAYH	919
Pavo_cristatus	-VCRTESEFNTGNMTVLSPLYLNTVLPG--SSSSSRGNIENCLSEKDRSLDRDRAVGLNAYH	919
Gallus_gallus	-VCRTESEFNTGNMTVLSPLYLNTVLPG--SASSSRGNIENCLSEKDRSLDRDRAVGLNAYH	920
Chelonia_mydas	-ICRTESEFNTISNVTVLSPLYLNTTVLP--SSSSNRGNIENSRSEKDRSVDRERTMGLGNHY	872
Xenopus_tropicalis	-ICRSDNFESLGNLTVLSPLYINSTVLPG--GSSSPRPTMEGNRPEKDR---ERTAGLSNYH	864
Callorhinchus_milii	GVCRRSEFNTGNVTVLSPYMTS-----SSRDGRGSVEGFRAEKDRSAERDRRG---TDTF	874
Danio_rerio	-VCRSDGYNPNPGVGRSPYMTVPLSSPSSRDNRGNAESVRAERDRSLDRRRGFLPDGE	845
910.....920.....930.....940.....950.....960	

	..	*.:. :.***: *.::**	*	:***.*.:. *.	::	*
Mus_musculus	PTTENAGTSSKR	GLQITTTAAQIAKVMEEVSAIHTSQEDRSSASTTEFHCVAADDRSAAR	921			
Rattus_norvegicus	SATENPGTSSKR	GLQLSATAAQIAKVMEEVSAIHTSQEDRSSPASAAELHCVAEERTAAAR	949			
Homo_sapiens	PATENPGTSSKR	GLQISTTTAAQIAKVMEEVSAIHTSQEDRSSGSTTELHCVTDERNALR	923			
Pan_troglodytes	PATENPGTSSKR	GLQISTTTAAQIAKVMEEVSAIHTSQEDRSSGSTTELHCVTDERNALR	957			
Macaca_mulatta	PATENPGTSSKR	GLQISTTTAAQIAKVMEEVSAIHTSQEDRSSGSTTELHCVTDERNALR	951			
Callithrix_jacchus	PATENPGTSSKR	GLQITTTAAQIAKVMEEVSAIHTSQEDRSSGSTTELHCVTDERNALR	950			
Bos_taurus	PATENPGTSSKR	GLQISTTTAAQIAKVMEEVSAIHTSQEDRSSGSTTELHCGTDERNALR	984			
Equus_caballus	PATENSGSSSKR	GLQISTTTAAQIAKVMEEVSAIHTSQEDRSSGSTTELHCGTDERNALR	951			
Canis_lupus_familiaris	PATENPGTSSKR	GLQISTTTAAQIAKVMEEVSAIHTSQEDRSSGSTTELHCGTDERNTLR	941			
Pavo_muticus	PATENSGNSSKRIGM	QISTAAQIAKVMEEVTSMHIPQEDRSSSSTSEMHSCLTEDRNATR	979			
Pavo_cristatus	PATENSGNSSKRIGM	QISTAAQIAKVMEEVTSMHIPQEDRSSSSTSEMHSCLTEDRNATR	979			
Gallus_gallus	PATENSGNSSKRIGM	QISTAAQIAKVMEEVTSMHIPQEDRSSGSTSEMHSCLTEDRNTTR	980			
Chelonia_mydas	PATENAGNASKRIGM	QISTAAQIAKVMEEVINMHIPQEDRSSGSTAEMHSCLTEDRNALR	932			
Xenopus_tropicalis	SATENSGNSSKRIGVQLS	-TTAQISKVMDEVSNIHMVQEDRSSGSASEMHCMCSDERTSQR	923			
Callorhinchus_milii	HSSDIVSDPSKRIGROM	TTSAQIAKVIEEVSNMHLSEDRSSGSADLHCVSDEDTGLR	934			
Danio_rerio	AAKR-----	MMQIPTSAQIAVMEEVQNMHLGMDRSSAGSTPDPHSVQDD--MIR	894			
970.....980.....990.....1000.....1010.....1020				

	: :: * * * . : * : . . * * . : * ** :*****.*:*****:***:	
Mus_musculus	RSSASHTHSNTYNFTKSENSNRTCMPYAKVEYKRSSNDLSNSVTSSDGYGKRGOMKPSV	981
Rattus_norvegicus	RSSASHTHPNTNFAKSESNSNRTCMPYAKVEYKRSSNDLSNSVTSSDGYGKRGOMKPSV	1009
Homo_sapiens	RSSAAHTHSNTYNFTKSENSNRTCMPYAKLEYKRSSNDLSNSVSSSDGYGKRGOMKPSI	983
Pan_troglodytes	RSSAAHTHSNTYNFTKSENSNRTCMPYAKLEYKRSSNDLSNSVSSSDGYGKRGOMKPSI	1017
Macaca_mulatta	RSSAAHTHSNTYNFTKSENSNRTCMPYAKLEYKRSSNDLSNSVSSSDGYGKRGOMKPSI	1011
Callithrix_jacchus	RSSTAHTHSNTYNFTKSENSNRTCMPYAKLEYKRSSNDLSNSVSSSDGYGKRGOMKPSI	1010
Bos_taurus	RSSTTHTHANTYNFTKSENSNRTCPIPYAKVEYKRSSNDLSNSVSSSDGYGKRGOMKPSI	1044
Equus_caballus	RSSTAHTHSNTYNFTKSENSNRTCMPYAKLEYKRSSNDLSNSVSSSDGYGKRGOMKPSI	1011
Canis_lupus_familiaris	RSSTAHTHANTYSFTKSENSNRTCVPYAKLEYKRSSNDLSNSVSSSDGYGKRGOMKPSI	1001
Pavo_muticus	RATTAHTHSNTY-FPKSENSSRPCVPYTKMEYKRASNDLSNSVSSSDGYGKRGOMKPSI	1038
Pavo_cristatus	RATTAHTHSNTY-FPKSENSSRPCVPYTKMEYKRASNDLSNSVSSSDGYGKRGOMKPSI	1038
Gallus_gallus	RAATAHTHSNTY-FPKSENSSRPCVPYTKMEYKRASNDLSNSVSSSDGYGKRGOMKPSI	1039
Chelonia_mydas	RTSTAHAHSNTYNFPKPESENRCVPYAKMEYTRASNDLSNSVSSSDGYGKRGOMKPSI	992
Xenopus_tropicalis	KPSSNHPHSNPFSAKGDSSNRGCPVAFMKMEYKMASNDLSNSVSSSDGYGKRGOMKPSV	983
Callorhinchus_milii	RASSSHPHSNIFNYNKPENPNRTCMPYKGNEYKRSSNDLSNSVSSSDGYGKRGOMKPSI	994
Danio_rerio	ROIAVHGHNIVSYSKTDPGRPCMP--KLEYR-ASNDLSNSVNSTDGYGKRGOMKPSV	951
1030.....1040.....1050.....1060.....1070.....1080	

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Mus_musculus	SQNERWARPKHVIEDEIKONEQRQARSONTSYPVYSEN---	TDDKHLKFQPHFGQQECVS	1098	
Rattus_norvegicus	SQNERWARPKHVIEDEIKONEQRSRSQNTNFPVYSEN---	TDDKHLKFQPHFGQQECVS	1126	
Homo_sapiens	SQNERWARPKHIIIEDEIKQSEQRQSRNQSTTYPVYTES---	TDDKHLKFQPHFGQQECVS	1100	
Pan_troglodytes	SQNERWARPKHIIIEDEIKQSEQRQSRNQSTTYPVYTES---	TDDKHLKFQPHFGQQECVS	1134	
Macaca_mulatta	SQNERWARPKHIIIEDEIKQSEQRQSRQSQTTPPVYTES---	TDDKHLKFQPHFGQQECVS	1128	
Callithrix_jacchus	SQSERWARPKHIIIEDEIKQSEQRQSRQSQTTPPVYTET---	TDDKHLKFQPHFGQQECVS	1127	
Bos_taurus	SQNERWARPKHILEDEIKPNEQRQSRQSQTAYPVYPES---	TDDKHLKFQPHFGQQECVS	1161	
Equus_caballus	SQNERWARPKHIIIEDEIKQSEQRQSRQSQTTPPVYTES---	TDDKHLKFQPHFGQQECVS	1128	
Canis_lupus_familiaris	SQNERWARPKHIIIEDEIKQSEQRQSRQSQTTPPVYTES---	TDDKHLKFQPHFGQQECVS	1118	
Pavo_muticus	SQNERWARPKHIIDDEMKONDORQSRQSQATYPVYTES---	GDDKHKT KYQSPFGQQDCVP	1155	
Pavo_cristatus	SQNERWARPKHIIDDEMKONDORQSRQSQATYPVYTES---	GDDKHKT KYQSPFGQQDCVP	1155	
Gallus_gallus	SQNERWARPKHIIDDEMKONDORQSRQSQATYPVYTES---	GDDKHKMYQSPFGQQDCVP	1156	
Chelonia_mydas	SQNERWARPKHIIIEDEIKONEQRQSRQSQTTPPGYTEG---	GDDNHMKYQSPFGQQD---	1106	
Xenopus_tropicalis	SQNERWARPKHIIDSEMKEQRQPRITTKTTYSSYTEN---	KEEKHKKFPPHFNPENAP	1100	
Callorhinchus_milii	SQNEQWARPKHIVEEMKRNEHQSRKPSSGYSMFCESGCSAEESRIKKFQPRFSQSDCSS		1114	
Danio_rerio	SQNERWARPK-LLDDEMCRPDQKPPRSQSPGYPMYTEGSSEEDKPKKYQPRFVOQLDLPA		1070	
1150.....1160.....1170.....1180.....1190.....1200			

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Mus_musculus	PYR-SRGTS-GSETNRMGSSHAINQNVNQSLCQEDDYEDDKPTNYSERYSEEEQHEEEE					1156
Rattus_norvegicus	PYR-SRGTN-GSETNRMGSSHAVNQNVNQSLCQEDDYEDDKPTNYSERYSEEEQHEEEE-					1183
Homo_sapiens	PYR-SRGAN-GSETNRVGSNHGINQNVSQSLCQEDDYEDDKPTNYSERYSEEEQHEEEE					1157
Pan_troglodytes	PYR-SRGAN-GSETNRVGSNHGINQNVSQSLCQEDDYEDDKPTNYSERYSEEEQHEEEE					1191
Macaca_mulatta	PYR-SRGAN-SSETNRVGSNHGINQNVSQSLCQEDDYEDDKPTNYSERYSEEEQHEEEE					1185
Callithrix_jacchus	PYR-SRGAN-GSETNRVGSNHGINQNVSQSLCQEDDYEDDKPTNYSERYSEEEQHEEEE					1184
Bos_taurus	PYR-SRAAN-GSETNRVGSNHGISQNVNQSLCQEDDYEDDKPTNYSERYSEEGQHEEEE					1218
Equus_caballus	PYR-SRGAN-GSETNRVGSNHGINQNVSQSLCQEDDYEDDKPTNYSERYSEEEQHEEEE					1185
Canis_lupus_familiaris	PYR-SRGAS-GSETNRVGSNHGINQNVSQSLCQEDDYEDDKPTNYSERYSEEEQHEEEE					1175
Pavo_muticus	SFR-SRGSN-GSDQNRVGSTLGNQKVNQSLCQVDDYDDDKPTNYSERYSEEEQHE-EED					1212
Pavo_cristatus	SFR-SRGSN-GSDQNRVGSTLGNQKVNQSLCQVDDYDDDKPTNYSERYSEEEQHE-EED					1212
Gallus_gallus	SFR-SRGSN-GSDQNRVGSTLGNQKVNQSLCQVDDYDDDKPTNYSERYSEEEQHE-EED					1213
Chelonia_mydas	LFR-SRGSN-SSEQNRVGTHGMNQKVNQSLCQVDDYDDDKPTNYSERYSEGEQHEDDED					1164
Xenopus_tropicalis	AYARSRGTTNNQADQSRVGSNLNNKASKPHCQVDDYDDDKTTFNFSERYSEGEQQEDENE					1160
Callorhinchus_milii	YSA--RVHN-NSEPIRVDSEHRM----QSICQVDDYEDEKPTNYSERYSEEEQADEDR-					1166
Danio_erio	FRS--RGSN---EQISSGSHGLNKKTISQTICSVDDYADDKPTNYSERYSEEEQLLEOT-					1124
1210.....1220.....1230.....1240.....1250.....1260					

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      *.:*      :.: :***** ** : .      :.: * .*: .*      .: . .
Mus_musculus      RPTNYSIK-YNEEKHHVDQPIDYSLKYATDIS-SSQKPSFSFSKNSSAOSTKPEHLSPPSS 1214
Rattus_norvegicus RPTNYSIK-YNEEKHHVDQPIDYSLKYATDIS-SSQKPSFSFSKTPSVQGTKEHNSPSS 1241
Homo_sapiens      RPTNYSIK-YNEEKHHVDQPIDYSLKYATDIP-SSQKQSFSSFSKSSSGQSSKTEHMSSSS 1215
Pan_troglodytes   RPTNYSIK-YNEEKHHVDQPIDYSLKYATDIP-SSQKQSFSSFSKSSSGQSSKTEHMSSSS 1249
Macaca_mulatta    RPTNYSIK-YNEEKHHVDQPIDYSLKYATDIP-SSQKQSFSSFSKSSSGQSTKTEHISSSS 1243
Callithrix_jacchus RPTNYSIK-YNEEKHHVDQPIDYSLKYSTDIP-SSQKQSFSSFSKSSSGQSTKTEHISSSS 1242
Bos_taurus        RPTNYSIK-YNEEKHHVDQPIDYSLKYTTDIP-SSQKPAFSFSKNSSGQSTKTEHISSSS 1276
Equus_caballus    RPTNYSIK-YNEEKHHVDQPIDYSLKYTTDIP-SSQKPSFSFSKSSSGQSTKTEHISSSS 1243
Canis_lupus_familiaris RPTNYSIK-YNEEKHHVDQPIDYSLKYATDIP-SSQKPPFSFSKNSSGQSTKTEHLSASS 1233
Pavo_muticus      RPTNYSIK-YNEEEHHVDQPIDYSLKYSTEVPSSSQKPSFTFSKTSSVPSTKTDHISSSS 1271
Pavo_cristatus    RPTNYSIK-YNEEEHHVDQPIDYSLKYSTEVPSSSQKPSFTFSKTSSVQSTKTDHISSSS 1271
Gallus_gallus     RPTNYSIK-YNEEEHQVDQPIDYSLKYSTEVPSSSQKPSFTFSKTSSVQSTKTDHISSSS 1272
Chelonia_mydas    RPTIYSIK-YSEEEHHVDQPIDYSLKYSTEVPSSSQKPSFSFSKSSSGQSTKTDHISSSS 1223
Xenopus_tropicalis RQNKYNIKPYASDEHHGEQPIDYSRKYPTDVPSSAQKPSFPYSNNPSKQKPKKEQVSSSS 1220
Callorhinchus_milii -PTNYSMK-FTEEEHHVEQPIDYSLKYSSEIPPSSQNQAFMYSGSSAOSTKDHGTSSC 1224
Danio_rerio       --PSYSMK--YTEDHHVEQPIDYSLKYS-EAP--SKKGMFSSSKTSSAQSSAKEHLSQDS 1177
.....1270.....1280.....1290.....1300.....1310.....1320

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      : .      :.* :*.:* : * .      .* . * .***:*****
Mus_musculus      ENTAVP-PSNAKRQNLRPSSAQ-RNGQTQKGT---CKVPSINQETIQTVCVEDTPICF 1269
Rattus_norvegicus EAASAP-SSNAKRQSQLHPSSAQ-RNGQTPKGTA---CKVPSINQETMQTYCVEDTPICF 1296
Homo_sapiens      ENTSTP-SSNAKRQNLHPSSAQSRSGQPKAAT---CKVSSINQETIQTVCVEDTPICF 1271
Pan_troglodytes   ENTSTP-SSNAKRQNLHPSSAQSRSGQTKAAT---CKVSSINQETIQTVCVEDTPICF 1305
Macaca_mulatta    ENTSTP-SSNAKRQNLHPSSAQSRSGQTKAAT---CKVSSINQETIQTVCVEDTPICF 1299
Callithrix_jacchus ENTSTP-SSNAKRQNLHPSSAQNRSGQTKAAT---CKVSSINQETIQTVCVEDTPICF 1298
Bos_taurus        ENTSTT-SSNAKRQNLHPSSAQSRSGQTPKATSS-CKVPSINQETIQTVCVEDTPICF 1334
Equus_caballus    ENTSTP-SSNAKRQSQLHPSSAQSRSGQTKAAS---CKVPSINQETIQTVCVEDTPICF 1299
Canis_lupus_familiaris ENTSTP-SSNAKRQNLHPSSAQSRNGQTPKANSS-CKVPSINQETIQTVCVEDTPICF 1289
Pavo_muticus      GNTSAP-SAGSKRQNLHPSSAQSRGGHAQKSAS---CKTPSINQETIQTVCVEDTPICF 1327
Pavo_cristatus    GNTSAP-SAGSKRQNLHPSSAQSRGGHAQKSAS---CKTPSINQETIQTVCVEDTPICF 1327
Gallus_gallus     GNTSAP-SAGSKRQNLHPSSAQSRGGHAQKTAS---CKTPSINQETIQTVCVEDTPICF 1328
Chelonia_mydas    GNTSTP-SASSKRQNLHPSSAAQ-RGGHAQKPAS---CKTPSINQETIQTVCVEDTPICF 1278
Xenopus_tropicalis -NTPTP-SPNSGRQNLHPNSAQTRPGLNRPKQTS---SKPPSITQETIQTVCVEDTPICF 1276
Callorhinchus_milii ASTPSSKISKSSQONCLHPSSAHSRAAPNPAGQKSSACKTPLINQETMQTYCVEDTPICF 1284
Danio_rerio       SSSVAS-LKNQGRQKQLHPSSAQSRSGPTRAVQKNPTCKAPTINQETLQTYCVEDTPICF 1236
.....1330.....1340.....1350.....1360.....1370.....1380

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** ***** :*: .      .      ** : *.: . : . :
Mus_musculus      SRCSSLSSLSADDEI-GCDQTTOEADSANTLQTAEVKENDVTRSAEDPATEVPAVSQNA 1328
Rattus_norvegicus SRCSSLSSLSAEDDEI-GCDQTTOEADSANTLQIAEIKENDVTRSAQDPASDVPVAVSQST 1355
Homo_sapiens      SRCSSLSSLSAEDDEI-GCNQTTOEADSANTLQIAEIKEKIGTRSAEDPVSEVPVAVSQHP 1330
Pan_troglodytes   SRCSSLSSLSAEDDEI-GCNQTTOEADSANTLQIAEIKEKIGTRSAEDPVSEVPVAVSQHT 1364
Macaca_mulatta    SRCSSLSSLSAEDDEI-GCDQTTOEADSANTLQIAEIKDKIGTRSTEDPVSEVPVAVSQHT 1358
Callithrix_jacchus SRCSSLSSLSAEDDEI-GCDQTTOEADSANTLQIAEIKENNGTRSTEDPVSEVPVAVSQHT 1357
Bos_taurus        SRCSSLSSLSAEDDEV-GCDQTTOEASANTLQIAEIKDNSGPRSNEDSVSKVPAGSQHI 1393
Equus_caballus    SRCSSLSSLSAEDDEI-GCEQTTOETESASTLQIAEIKESSTRTSTEDSVSEVPVAVSQHV 1358
Canis_lupus_familiaris SRCSSLSSLSAEDDEI-GCDPAPQEAESANTLQRAEIKENSGTRTTEDAVSEVPAASPHI 1348
Pavo_muticus      SRCSSLSSLSAEDDEI-GRDQSTRVTDTNNTLQIAELKENS GALSTEA AVSEITSTSQHI 1386
Pavo_cristatus    SRCSSLSSLSAEDDEI-GRDQSTRVTHNTNLQIAELKENS GALSTEA AVSEITSTSQHI 1386
Gallus_gallus     SRCSSLSSLSAEDDEI-GRDQSTRVTDINATLQISELKENS GALSAE AVSEITSTSQHI 1387
Chelonia_mydas    SRCSSLSSLSAEDDEI-GRDQATRVT DASNTLQIAELKDNSVILSTEGAVSEVPSTSQHI 1337
Xenopus_tropicalis SRGSSLSSLSAEDDEIEGRERSSRGQESNNTLQITEPKENKSAVSKDGAINETRSSVHHT 1336
Callorhinchus_milii SRCSSLSSLS-SEDEMEGRGAQRVSDGTTLQIIDLKENRAALPNETGISSETSSASHHQ 1343
Danio_rerio       SRGSSLSSLSSEDEMECKRNVNSASNPTLPISF-KQSTNNVAADQRTSESQSSVHYV 1295
.....1390.....1400.....1410.....1420.....1430.....1440

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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* * *      :. : *: *:*****:*****:****:
Mus_musculus      RAKPSRLQASGLS-SESTRHNKAVEFSSGAKSPSKSGAQTPKSPPEHYVQETPLVFSRCT 1387
Rattus_norvegicus  RTKPSRLQASGLA-SESARH-KAVEFSSGAKSPSKSGAQTPKSPPEHYVQETPLVFSRCT 1413
Homo_sapiens       RTKSSRLQGSSLS-SESARH-KAVEFSSGAKSPSKSGAQTPKSPPEHYVQETPLMFSRCT 1388
Pan_troglodytes    RTKSSRLQGSSLS-SESARH-KAVEFSSGAKSPSKSGAQTPKSPPEHYVQETPLMFSRCT 1422
Macaca_mulatta     RTKSSRLQGSSLS-SESTRH-KAVEFSSGAKSPSKSGAQTPKSPPEHYVQETPLMFSRCT 1416
Callithrix_jacchus RTKSSRLQGSSLS-SESTRH-KAVEFSSGAKSPSKSGAQTPKSPPEHYVQETPLMFSRCT 1415
Bos_taurus         RTKSSRLQASGLS-SESARH-KAVEFSSGAKSPSKSGAQTPKSPPEHYVQETPLMFSRCT 1451
Equus_caballus     RTKSSRLQASGLS-SESTRH-KAVEFSSGAKSPSKSGAQTPKSPPEHYVQETPLMFSRCT 1416
Canis_lupus_familiaris RTKSSRLQASGLS-AESTRH-KAVEFSSGAKSPSKSGAQTPKSPPEHYVQETPLMFSRCT 1406
Pavo_muticus       RTKSSRLPTSSLSPSDSSRH-KAVEFSSGAKSPSKSGAQTPKSPPEHYVQETPLMFSRCT 1445
Pavo_cristatus     RTKSSRLPTSSLSPSDSSRH-KAVEFSSGAKSPSKSGAQTPKSPPEHYVQETPLMFSRCT 1445
Gallus_gallus      RTKSSRLPTSSLSPSSESSRH-KAVEFSSGAKSPSKSGAQTPKSPPEHYVQETPLMFSRCT 1446
Chelonia_mydas     RTKSNRLQASSLSPSDSSRH-KAVEFSSGAKSPSKSGAQTPKSPPEHYVQETPLMFSRCT 1396
Xenopus_tropicalis RTKNNRLQTSNISPSDSSRH-KSVEFSSGAKSPSKSGAQTPKSPPEHYVQETPLMFSRCT 1395
Callorhinchus_milii RMKQNLRLHATNVSQPDMRSQ-KAVEFSSGAKSPSKSGAQTPKSPPDHYVQETPLVFSRCS 1402
Danio_rerio        RAKPPRH---LGHGDSRHHKTVFSSGAKSPSKSGAQTPKSPPEHYVQETPLMFSRCT 1352
.....1450.....1460.....1470.....1480.....1490.....1500

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*****.*****:*****: * . * :*:*:*****
Mus_musculus      SVSSLDSEFESRSIASSVQSEPCSG-MVSGIISPDLPSPGQTMPPSRSKTTPPPPP--- 1442
Rattus_norvegicus SVSSLDSEFESRSIASSVQSEPCSG-MVSGIVSPDLPSPGQTMPPSRSKTTPPPPP--P 1470
Homo_sapiens       SVSSLDSEFESRSIASSVQSEPCSG-MVSGIISPDLPSPGQTMPPSRSKTTPPPPP--- 1443
Pan_troglodytes    SVSSLDSEFESRSIASSVQSEPCSG-MVSGIISPDLPSPGQTMPPSRSKTTPPPPP--- 1477
Macaca_mulatta     SVSSLDSEFESRSIASSVQSEPCSG-IVSGIISPDLPSPGQTMPPSRSKTTPPPPP--- 1471
Callithrix_jacchus SVSSLDSEFESRSIASSVQSEPCSG-MVSGIISPDLPSPGQTMPPSRSKTTPPPPP--- 1470
Bos_taurus         SVSSLDSEFESRSIASSVQSEPCSG-MVSGIISPDLPSPGQTMPPSRSKTTPPPPPPPPP 1510
Equus_caballus     SVSSLDSEFESRSIASSVQSEPCSG-MVSGIISPDLPSPGQTMPPSRSKTTPPPPP---P 1472
Canis_lupus_familiaris SVSSLDSEFESRSIASSVQSEPCSG-MVSGIISPDLPSPGQTMPPSRSKTTPPPPP--- 1461
Pavo_muticus       SVSSLDSEFESRSIASSVQSEPCSG-MVSGIISPDLPSPGQTMPPSRSKTTPPPAQQ--- 1501
Pavo_cristatus     SVSSLDSEFESRSIASSVQSEPCSG-MVSGIISPDLPSPGQTMPPSRSKTTPPPAQQ--- 1501
Gallus_gallus      SVSSLDSEFESRSIASSVQSEPCSG-MVSGIISPDLPSPGQTMPPSRSKTTPPPAQQ--- 1502
Chelonia_mydas     SVSSLDSEFESRSIASSVQSEPCSG-MVSGIISPDLPSPGQTMPPSRSKTTPPPAQA--- 1452
Xenopus_tropicalis SVSSLDSEFESHSIASSVASEHMSIISPDLPSPGQTMPPSRSKTTPPPQ--- 1451
Callorhinchus_milii SVSSLDSEFESQSIASSIQSEPCSE-MVSGIISPDLPSPGQTMPPSRSKTTPPPQ--- 1457
Danio_rerio        SVSSLDSEFESHSIASSVQSEPCSG-MVSGIISPDLPSPGQTMPPSRSKTTPPPPP--- 1408
.....1510.....1520.....1530.....1540.....1550.....1560

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. *: : : : * :*:*: : * *:*** *.*****
Mus_musculus      QTVQAKREVPKSK-VPAAEKRESGPKQTAVNAAVQVQVLPDVTLLHFATESTPDGFSC 1501
Rattus_norvegicus QPVQTKREVPKTK-VPAAEQREGGPKQTAVSAAVQVQVLPDADTLLHFATESTPDGFSC 1529
Homo_sapiens       QTAQTKREVPKNK-APTAEKRESGPKQAAVNAAVQVQVLPDADTLLHFATESTPDGFSC 1502
Pan_troglodytes    QTAQTKREVPKNK-APTAEKRESGPKQAAVNAAVQVQVLPDADTLLHFATESTPDGFSC 1536
Macaca_mulatta     QTAQTKREVPKNK-TPTAEKRESGPKQAAVNAAVQVQVLPDADTLLHFATESTPDGFSC 1530
Callithrix_jacchus QTAQTKREVPKSK-APSAEKRESGPKQAAVNAAVQVQVLPDADTLLHFATESTPDGFSC 1529
Bos_taurus         QTVQTKQEVVPKSK-APSAEKRESGPKQAAVNAAVQVQVLPDADTLLHFATESTPDGFSC 1569
Equus_caballus     QTVQTKREVVPKSK-VPNAEKRESGPKQAAVNAAVQVQVLPDADTLLHFATESTPDGFSC 1531
Canis_lupus_familiaris QTVQTKREVVPKSK-ASAAEKRESGPKQAAVNAAVQVQVLPDADTLLHFATESTPDGFSC 1520
Pavo_muticus       --AQVKRDVAKGK-VPSAEKREPGRQAAVNAAVQVQVLPDADTLLHFATESTPDGFSC 1558
Pavo_cristatus     --AQVKRDVAKGK-VPSAEKREPGRQAAVNAAVQVQVLPDADTLLHFATESTPDGFSC 1558
Gallus_gallus      --VQVKRDVTGKSK-VPTAEKREPGRQAAVNAAVQVQVLPDADTLLHFATESTPDGFSC 1559
Chelonia_mydas     --VPVKRETAKGK-VPNVEKRESGSRQAAVNAAVQVQVLPDADTLLHFATESTPDGFSC 1509
Xenopus_tropicalis -TVHAKKDSSKPK-VSGEE-RDKVAKQTGVHSAIQVQVLPQDADTLLHFATESTPDGFSC 1508
Callorhinchus_milii --TOLKREVHKSKEQSNVKSRETGHRQEAVNAAVQVQVLPQDSIDLMHFATENTPDGVSC 1515
Danio_rerio        RSTSVKQKVTVPP---HTEKHDLAPRHAVVSAAVQVQVLPDNDTLLHFATESTPDGFSC 1465
.....1570.....1580.....1590.....1600.....1610.....1620

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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:*****:****:***:***.* *::: *.: : . : : **
Mus_musculus      SSSLSALSLEDFI QKDVELRIMPPVQENDNGNETESEQPESNENQDKEVEKP-DSEKD 1560
Rattus_norvegicus SSSLSALSLEDFI QKDVELRIMPPVQENDNGNETESEQPESNENQDKEVEKP-DSEKD 1588
Homo_sapiens       SSSLSALSLEDFI QKDVELRIMPPVQENDNGNETESEQPESNENQDKEVEKP-DSEKD 1562
Pan_troglodytes    SSSLSALSLEDFI QKDVELRIMPPVQENDNGNETESEQPESNENQDKEVEKP-DSEKD 1596
Macaca_mulatta     SSSLSALSLEDFI QKDVELRIMPPVQENDNGNETESEQPESNENQDKEVEKP-DSEKD 1590
Callithrix_jacchus SSSLSALSLEDFI QKDVELRIMPPVQENDNGNETESEQPESNENQDKEVEKP-DSEKD 1589
Bos_taurus         SSSLSALSLEDFI QKDVELRIMPPVQENDNGNETESEQPESNENQDKEVEKP-DSEKD 1629
Equus_caballus     SSSLSALSLEDFI QKDVELRIMPPVQENDNGNETESEQPESNENQDKEVEKP-DSEKD 1591
Canis_lupus_familiaris SSSLSALSLEDFI QKDVELRIMPPVQENDNGNETESEQPESNENQDKEVEKP-DSEKD 1580
Pavo_muticus       SSSLSALSLEDFI QKDVELRIMPPVQENDNGNETESEQPESNENQDKEVEKP-DSEKD 1618
Pavo_cristatus     SSSLSALSLEDFI QKDVELRIMPPVQENDNGNETESEQPESNENQDKEVEKP-DSEKD 1618
Gallus_gallus      SSSLSALSLEDFI QKDVELRIMPPVQENDNGNETESEQPESNENQDKEVEKP-DSEKD 1619
Chelonia_mydas     SSSLSALSLEDFI QKDVELRIMPPVQENDNGNETESEQPESNENQDKEVEKP-DSEKD 1569
Xenopus_tropicalis ASSLSALSLEDFI QKDVELRIMPPVQENDNGNETESEQPESNENQDKEVEKP-DSEKD 1566
Callorhinchus_milii ASSLSALSLEDFI QKDVELRIMPPVQENDNGNETESEQPESNENQDKEVEKP-DSEKD 1574
Danio_rerio        ASSLSALSLEDFI QKDVELRIMPPVQENDNGNETESEQPESNENQDKEVEKP-DSEKD 1525
.....1630.....1640.....1650.....1660.....1670.....1680

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:* * . ** :*: ** * * * * . : ***** *:*****.
Mus_musculus      LL-DDSDDDDIEILEECII SAMPTKSSRKAKKLAQT-ASKLPPPVARKPSQLPVYKLLPS 1618
Rattus_norvegicus LL-DDSDDDDIEILEECII SAMPTKSSRKAKKLAQT-ASKLPPPVARKPSQLPVYKLLPS 1646
Homo_sapiens       LL-DDSDDDDIEILEECII SAMPTKSSRKAKKLAQT-ASKLPPPVARKPSQLPVYKLLPS 1620
Pan_troglodytes    LL-DDSDDDDIEILEECII SAMPTKSSRKAKKLAQT-ASKLPPPVARKPSQLPVYKLLPS 1654
Macaca_mulatta     LL-DDSDDDDIEILEECII SAMPTKSSRKAKKLAQT-ASKLPPPVARKPSQLPVYKLLPS 1648
Callithrix_jacchus LL-DDSDDDDIEILEECII SAMPTKSSRKAKKLAQT-ASKLPPPVARKPSQLPVYKLLPS 1647
Bos_taurus         LL-DDSDDDDIEILEECII SAMPTKSSRKAKKLAQT-ASKLPPPVARKPSQLPVYKLLPS 1687
Equus_caballus     LL-DDSDDDDIEILEECII SAMPTKSSRKAKKLAQT-ASKLPPPVARKPSQLPVYKLLPS 1649
Canis_lupus_familiaris LL-DDSDDDDIEILEECII SAMPTKSSRKAKKLAQT-ASKLPPPVARKPSQLPVYKLLPS 1638
Pavo_muticus       IL-DDSDDDDIEILEECII SAMPTKSSRKAKKPSQASAPKIPPPVARKPSQLPVYKLLPS 1677
Pavo_cristatus     IL-DDSDDDDIEILEECII SAMPTKSSRKAKKPSQASAPKIPPPVARKPSQLPVYKLLPS 1677
Gallus_gallus      IL-DDSDDDDIEILEECII SAMPTKSSRKAKKPSQASAPKIPPPVARKPSQLPVYKLLPS 1678
Chelonia_mydas     IL-DDSDDDDIEILEECII SAMPTKSSRKAKKPSQASAPKIPPPVARKPSQLPVYKLLPS 1628
Xenopus_tropicalis ML-DDT-DDDIDILEECII SAMPRKPSRKNNKVPQPTAGKPPPPVARKPSQLPVYKLLPS 1624
Callorhinchus_milii MLEDDDDDDIEILEECII SAMPTKSSRKAKKPSQASAPKIPPPVARKPSQLPVYKLLPS 1633
Danio_rerio        ILDDSDDDDDIEILNACINSAMPTKSSRKPKKQSTG---RIPPPVACKPSQLPVYKLLPS 1582
.....1690.....1700.....1710.....1720.....1730.....1740

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*.* :***** : :*:*****:*****: :
Mus_musculus      QNRLQAQKHVSFTP---GDDVPRVYCVGTPINFSTATSLSDLTIESPPNELATGDGVRA 1675
Rattus_norvegicus QSRLQAQKHVSFTP---GDDVPRVYCVGTPINFSTATSLSDLTIESPPNELAAGDGVRA 1703
Homo_sapiens       QNRLQPKHVSFTP---GDDMPRVYCVGTPINFSTATSLSDLTIESPPNELAAGEGVRG 1677
Pan_troglodytes    QNRLQPKHVSFTP---GDDMPRVYCVGTPINFSTATSLSDLTIESPPNELAAGEGVRG 1711
Macaca_mulatta     QNRLQPKHVSFTP---GDDMPRVYCVGTPINFSTATSLSDLTIESPPNELAAGEGVRG 1705
Callithrix_jacchus QNRLQPKHVSFTP---GDDVPRVYCVGTPINFSTATSLSDLTIESPPNELAAGEGVRG 1704
Bos_taurus         QNRLQAQKHVSFTP---GDDMPRVYCVGTPINFSTATSLSDLTIESPPNELAAGEGVRG 1744
Equus_caballus     QNRIQAQKHVSFTP---GDDMPRVYCVGTPINFSTATSLSDLTIESPPNELAAGEGVRG 1706
Canis_lupus_familiaris QNRLQAQKHVSFTP---GDDMPRVYCVGTPINFSTATSLSDLTIESPPNELAAGEGVRG 1695
Pavo_muticus       QSRLQSKHVSFTP---GDDVPRVYCVGTPINFSTATSLSDLTIESPPNELANVDNVGT 1734
Pavo_cristatus     QSRLQSKHVSFTP---GDDVPRVYCVGTPINFSTATSLSDLTIESPPNELANVDNVGT 1734
Gallus_gallus      QSRLQSKHVSFTP---GDDMPRVYCVGTPINFSTATSLSDLTIESPPNELANVDSVGA 1735
Chelonia_mydas     QNRLQSKHVSFTP---GDDMPRVYCVGTPINFSTATSLSDLTIESPPNELANVDNVGT 1685
Xenopus_tropicalis QNRLQSKHVSFTP---GDDMPRVYCVGTPINFSTATSLSDLTIESPPNELANVDNVGT 1681
Callorhinchus_milii QNRIHQSQHVSFTH---SDDMPRVYCVGTPINFSTATSLSDLTIESPPNELANVDNVGT 1689
Danio_rerio        QNRGQPKHVALAH---GDDMPRVYCVGTPINFSTATSLSDLTIESPPNELAGMESSAP 1639
.....1750.....1760.....1770.....1780.....1790.....1800

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	.	:	:	*	. : * . :	* : *****	
Mus_musculus	V-----	NVNTETFTSDN	KDSKKPSLQTNAKAFNEKLPNNEDRVRGSFALDSPHHYTPI	1847			
Rattus_norvegicus	V-----	NVNTETFTSDN	KDSKKQSLKNPKQLNDKLPDNEDRVRGGFTTFDSPHHYTPI	1875			
Homo_sapiens	N-----	NLNAERVFS	DNKDSKKQNLKNNSKVFNDKLPNNEDRVRGSFAFDSPHHYTPI	1849			
Pan_troglodytes	N-----	NLNAERVFS	DNKDSKKQNLKNNSKDFNDKLPNNEDRVRGSFAFDSPHHYTPI	1883			
Macaca_mulatta	N-----	NLNAERVFS	DNKDSKKQNLKNNSKDFNDKLPNNEDRVRGSFAFDSPHHYTPI	1877			
Callithrix_jacchus	N-----	NLNAERALSD	NKDSKKQNLKNNSKDLDNKLPNNEDRVRGSFAFDSPHHYTPI	1876			
Bos_taurus	N-----	NLNAERNFSEN	KDSKKQHLKNNSKDFNDKLPNNEDRVRGSFTTFDSPHHYTPI	1916			
Equus_caballus	N-----	NLNAERTFTS	DNKDSKKQNLKNNSKDFNDKLPNNEDRVRGSFSF DSPHHYTPI	1878			
Canis_lupus_familiaris	N-----	NVNAERTFTS	DNKDSKKQNLKNNSKDFNDKLPSEDRVRGSFTTFDSPHHYTPI	1867			
Pavo_muticus	S-----	QISNERSYPEN	RDACKQNLKNNSRDFNDKLPNNEERVRGSFTTFDSPHHYTPI	1904			
Pavo_cristatus	S-----	QISNERSYPEN	RDACKQNLKNNSRDFNDKLPNNEERVRGSFTTFDSPHHYTPI	1904			
Gallus_gallus	S-----	QINNERSYPEN	RDACKQNLKNNSRDFNDKLPNNEERVRGSFTTFDSPHHYTPI	1905			
Chelonia_mydas	S-----	NESSERTYS	DNKDTKKQNFKNNSRDFNDKLPNNEERVRGSFAFDSPHHYTPI	1857			
Xenopus_tropicalis	L-----	NPSSENQYS---	DPRKQNSKNTSKDANEKIPNNEERTKG-FAFDSPHHYTPI	1850			
Callorhinchus_milii	L	PSSFSAE	GSNSEKKKDMCKSKLOPTKGSRGDFHDKPQSNDRVRGGFVF DSPHHYTPI	1867			
Danio_rerio	N-----	SLADPATY	PDKNKETRKQEPKVIRDFADKPSNAEERTPGFAFDSPHHYTPI	1805			
1930.....1940.....1950.....1960.....1970.....1980						

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*****:.* *::** *:* *  ::
EGTPYCFSRNDSLSSSLDFDDDDVDLSREKAELRKGKESKD----SEAKVTCRPEPNSSQ 1903
EGTPYCFSRNDSLSSSLDFDDDDVDLSREKAELRKGKESKD----SEAKVTCHTPEPSSSQ 1931
EGTPYCFSRNDSLSSSLDFDDDDVDLSREKAELRKAKENKE----SEAKVTSHTELTSNQQ 1905
EGTPYCFSRNDSLSSSLDFDDDDVDLSREKAELRKAKENKE----SEAKVTSHTELTSNQQ 1939
EGTPYCFSRNDSLSSSLDFDDDDVDLSREKAELRKAKENKE----SEAKVTSHTELTSNQQ 1933
EGTPYCFSRNDSLSSSLDFDDDDVDLSREKAELRKGKENKE----SEAKVTSHTELTSNQQ 1932
EGTPYCFSRNDSLSSSLDFDDDDVDLSREKAELRKGKENKE----SEAKVTNHTELTNSQQ 1972
EGTPYCFSRNDSLSSSLDFDDDDVDLSREKAELRKGKENKE----SEAKVTSHSELTSNQQ 1934
EGTPYCFSRNDSLSSSLDFEDDDVDLSREKAELRKGKENKD----SEAKVP SHTEPISNQQ 1923
EGTPYCFSRNDSLSSSLDFDDDDVDLSREKAELRKGKETKE----IETKDCPNTEQPSSQ 1960
EGTPYCFSRNDSLSSSLDFDDDDVDLSREKAELRKGKETKE----IETKDCPNTEQPSSQ 1960
EGTPYCFSRNDSLSSSLDFDDDDVDLSREKAELRKGKEAKE----VETKDCPNVEQPSGQQ 1961
EGTPYCFSRNDSLSSSLDFDDDDVDLSREKAELRKGKETKE----TETKASTDTEQTSNQQ 1913
EGTPYCFSRNDSLSSSLDFDDDDIDLSKEKAELRKEKGTKD----TDRKGYKYNENPAINQ 1906
EGTPYCFSRNDSLSSSLDFDDDDTDLTKEKAELKKEKDRDKKYAAGDVKNCHNEQRPNSQL 1927
EGTPYCFSRNDSLSSSLDFDEEDLDFSKEKAVLRKDKEQRK----VPLLKCSVEQFANTN 1860
.....1990.....2000.....2010.....2020.....2030.....2040

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[illegible]

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*****:*****.:* *****:*****
NSSLSSLSDDIQENNNNKESEPIKEAEPANSQGEP SKPQASGYAPKSFHVEDTPVCFSRN 2023
NSSLSSLSDDVDQENNNNEETGPVRDAEPANAQGQPGK PQASGYAPKSFHVEDTPVCFSRN 2051
NSSLSSLSDDIQENNN-KENEP IKETEPPDSQGEP SKPQASGYAPKSFHVEDTPVCFSRN 2024
NSSLSSLSDDIQENNNNKENEP IKETEPPDSQGEP SKPQASGYAPKSFHVEDTPVCFSRN 2059
NSSLSSLSDDIQENNNNKENEP IKETEPPDSQGEP SKPQASGYAPKSFHVEDTPVCFSRN 2053
NSSLSSLSDDIQENNN-KENEP IKETEPPDSQGEP SKPQASGYAPKSFHVEDTPVCFSRN 2051
NSSLSSLSDDIQENNNNKENEPVKETEPPASQGE PGK PQASGYAPKSFHVEDTPVCFSRN 2092
NSSLSSLSDDIQENNNNKENEPVKETEPPDSQGEP SKPQASGYAPKSFHVEDTPVCFSRN 2054
NSSLSSLSDDIQENNNNKENEPLKEAEPD SQGEPSKPQASGYAPKSFHVEDTPVCFSRN 2043
NSSLSSLSDDIQENNNNKEGEPVKRTEAPDSQIESNR PQTSGYAPKSFHVEDTPVCFSRN 2073
NSSLSSLSDDIQENNNNKEGEPVKRTEAPDSQIESNR PQTSGYAPKSFHVEDTPVCFSRN 2073
NSSLSSLSDDIQENNNNKEGEPVKRTEAPDSQIESNR PQTSGYAPKSFHVEDTPVCFSRN 2074
NSSLSSLSDDIQENNNNKESETTKRTEPPDSQMESSR PQASGYAPKSFHVEDTPVCFSRN 2032
NSSLSSLSDDIQENNN-KETEP IKQTEMETQIGLRR PQTSGYAPKSFHVEDTPVCFSRN 2025
NSSLSSLSDDIQENNNKKSPAQPEQGEPPVPVN---RAQSGYAPKSFHVEDTPVCFSRN 2041
NSSLSSLSDDIQENNNKDCSHKDDVT---QMEAPR PQASGYAPKSFHVEDTPVCFSRN 1962
.....2110.....2120.....2130.....2140.....2150.....2160
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*****::*****::: . : . . . .*: :
Mus_musculus      SSSLSSLSIDSEDDLLEQECISSAMPKKKRPSSRLKSESE-----KQSPRKVGGILAED--LTL 2077
Rattus_norvegicus SSSLSSLSIDSEDDLLEQECISSAMPKKRRPSRLKGEGE-----RQSPRKVGSVLAED--LTL 2105
Homo_sapiens       SSSLSSLSIDSEDDLLEQECISSAMPKKKKPSRLKGDNE-----KHSPRNMGGILGED--LTL 2078
Pan_troglodytes    SSSLSSLSIDSEDDLLEQECISSAMPKKKKPSRLKGDHE-----KYSPRNMGGILAED--LTL 2113
Macaca_mulatta     SSSLSSLSIDSEDDLLEQECISSAMPKKKKPSRLKGDNE-----KHSPRNMGGMLAED--LTL 2107
Callithrix_jacchus SSSLSSLSIDSEDDLLEQECISSAMPKKKKPSRLKGDSE-----KHSPRNMGGILAED--LTL 2105
Bos_taurus         SSSLSSLSIDSEDDLLEQECISSAMPKKKKPSRLKPDNE-----KHSPRNMGGILAED--LTL 2146
Equus_caballus     SSSLSSLSIDSEDDLLEQECISSAMPKKKKPSRFKGDNE-----KHSPRNMGGILAED--LTL 2108
Canis_lupus_familiaris SSSLSSLSIDSEDDLLEQECISSAMPKKKKPSRLKGDTE-----KHSPRNMGGILAED--LTL 2097
Pavo_muticus       SSSLSSLSIDSEDDLLEQECISSAMPKKKKPSRIKSESE-----KNSNRNIGGMLAED--LTL 2127
Pavo_cristatus     SSSLSSLSIDSEDDLLEQECISSAMPKKKKPSRIKSESE-----KNSNRNIGGMLAED--LTL 2127
Gallus_gallus      SSSLSSLSIDSEDDLLEQECISSAMPKKKKPSRIKSESE-----KNSNRNIGGMLAED--LTL 2128
Chelonia_mydas     SSSLSSLSIDSEDDLLEQECISSAMPKKKKPSRVKSESE-----KNSNRNIGGMLAED--LTL 2086
Xenopus_tropicalis SSSLSSLSIDSEDDLLEQECISSAMPKKKKPSKAKNEGE-----KSSSNSVGGILAEEPD LTL 2081
Callorhinchus_milii SSSLSSLSIDSEDDLLEQECISSAMPKKKK-LFAKGKSK-----RENAANSGLGGEDTDEGM 2096
Danio_rerio        SSSLSSLSIDSEDDLLEQECISSAMPKKKKQTPRSKTEESGVKEEKSMMDGILSEEPDLIL 2022
.....2170.....2180.....2190.....2200.....2210.....2220

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.: : * .*:.:*****.*****.*** **..****.*****
Mus_musculus      DLKDLQR-PDSEHAFSPDSENFWDKAIQEGANSIVSSLHQAAAAAACLRSQASSDSDSIL 2136
Rattus_norvegicus DLKDIQR-PESEHGLSPDSENFWDKAIQEGANSIVSSLHQAAAAAACLRSQASSDSDSIL 2164
Homo_sapiens       DLKDIQR-PDSEHGLSPDSENFWDKAIQEGANSIVSSLHQAAAAAACLRSQASSDSDSIL 2136
Pan_troglodytes    DLKDIQR-PDSEHGLSPDSENFWDKAIQEGANSIVSSLHQAAAAAACLRSQASSDSDSIL 2171
Macaca_mulatta     DLKDIQR-PDSEHGLSPDSENFWDKAIQEGANSIVSSLHQAAAAAACLRSQASSDSDSIL 2165
Callithrix_jacchus DLKDIQR-PDSEHGLSPDSENFWDKAIQEGANSIVSSLHQAAAAAACLRSQASSDSDSIL 2163
Bos_taurus         DLKDIQR-PDSEHGLSPDSENFWDKAIQEGANSIVSSLHQAAAAAACLRSQASSDSDSIL 2204
Equus_caballus     DLKDIQR-PDSEHGLSPDSENFWDKAIQEGANSIVSSLHQAAAAAACLRSQASSDSDSIL 2166
Canis_lupus_familiaris DLKDIQR-PDSEHGLSPDSENFWDKAIQEGANSIVSSLHQAAAAAACLRSQASSDSDSIL 2155
Pavo_muticus       DLREIQR-PDSEHGFSPPDSENFWDKAIQEGANSIVSSLHQAAAAASLRSQASSDSDSIL 2185
Pavo_cristatus     DLREIQR-PDSEHGFSPPDSENFWDKAIQEGANSIVSSLHQAAAAASLRSQASSDSDSIL 2185
Gallus_gallus      DLREIQR-PDSEHGFSPPDSENFWDKAIQEGANSIVSSLHQAAAAASLRSQASSDSDSIL 2186
Chelonia_mydas     DLRDIQR-PDSEHGFSPPDSENFWDKAIQEGANSIVSSLHQAAAAASLRSQASSDSDSIL 2144
Xenopus_tropicalis DLRLQIS-PDSENAFSPDSENFWDKAIQEGANSIVSSLHQAAAAASLRSQASSDSDSIL 2139
Callorhinchus_milii SMREQGHSPIPEQAFSPDSENFWDKAIQEGANSIVSSLHQ---AAACLRSQASSDSDSIL 2153
Danio_rerio        DLTDTHS-PISEQALSPDSENFWDKAIQEGANSIVSSLHQ---AAASLRSQASSDSDSIL 2078
.....2230.....2240.....2250.....2260.....2270.....2280

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*****:*****. :::*. . :***:*.***:*. : : * * * *.:*****
Mus_musculus      SLKSGISLGSPPFHLTPDQEEKPFTSNKGPRILKPGEKSTLEAKKIESE-NKGIGGKKVY 2195
Rattus_norvegicus SLKSGVSLGSPPFHLTPDQEEKPFTSHKGPRILKPGEKSTLEAKKIESE-NKGIGGKKVY 2223
Homo_sapiens       SLKSGISLGSPPFHLTPDQEEKPFTSNKGPRILKPGEKSTLETKKIESE-SKGIGGKKVY 2195
Pan_troglodytes    SLKSGISLGSPPFHLTPDQEEKPFTSNKGPRILKPGEKSTLETKKIESE-SKGIGGKKVY 2230
Macaca_mulatta     SLKSGISLGSPPFHLTPDQEEKPFTSNKGPRILKPGEKSTLETKKIESE-SKGIGGKKVY 2224
Callithrix_jacchus SLKSGISLGSPPFHLTPDQEEKPFTSNKGPRILKPGEKSTLETKKIESE-SKGIGGKKVY 2222
Bos_taurus         SLKSGISLGSPPFHLTPDQEEKPFTSNKGPRILKPGEKSTLETKKIESE-NKGIGGKKVY 2263
Equus_caballus     SLKSGISLGSPPFHLTPDQEEKPFTSNKGPRILKPGEKSTLETKKIESE-NKGIGGKKVY 2225
Canis_lupus_familiaris SLKSGISLGSPPFHLTPDQEEKPFTSNKGPRILKPGEKSTLETKKIESE-NKGIGGKKVY 2214
Pavo_muticus       SLKSGISLGSPPFHLTPDQEEKPFTSNKGPRILKPGEKSTLESKKVESE-SKGIGGKKVY 2244
Pavo_cristatus     SLKSGISLGSPPFHLTPDQEEKPFTSNKGPRILKPGEKSTLESKKVESE-SKGIGGKKVY 2244
Gallus_gallus      SLKSGISLGSPPFHLTPDQEEKPFTSNKGPRILKPGEKSTLESKKVESE-SKGIGGKKVY 2245
Chelonia_mydas     SLKSGISLGSPPFHLTPDQEEKPFTSNKGPRILKPGEKSTLETKKVESE-NKGIGGKKVY 2203
Xenopus_tropicalis SLKSGISLGSPPFHLTPDQEEKPFTSNKGPRILKPGEKSTLETKKVESE-NKGIGGKKVY 2198
Callorhinchus_milii SLKSGISLGSPPFHLTPDQEEKPFTSNKGPRILKPGEKSTLETKKVESE-NKGIGGKKVY 2213
Danio_rerio        SLKSGISLGSPPFHLPLNQDDKPAP-NKGPRILKPGEKSSIEAKKKEETAKSLKGGKKVY 2137
.....2290.....2300.....2310.....2320.....2330.....2340

```

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**:*:*:* *.. . .: .: * *****:*.**.* **.***.*:*** * :
Mus_musculus      KSLITGKIRSNSEISSQMKQPLPTNMPISIRGRMTIHIPGLRNSSSSSTSPVSKKGPPPLKT 2255
Rattus_norvegicus KSLITGKIRSNSEISSQMKQPLQTNMPISIRGRMTIHIPGVRNSSSSTSPVSKKGPPPLKT 2283
Homo_sapiens       KSLITGKVRNSENSEISGQMKQPLQANMPISIRGRMTIHIPGVRNSSSSTSPVSKKGPPPLKT 2255
Pan_troglodytes    KSLITGKVRNSENSEISGQMKQPLQANMPISIRGRMTIHIPGVRNSSSSTSPVSKKGPPPLKT 2290
Macaca_mulatta     KSLITGKVRNSENSEISGQMKQPLQANMPISIRGRMTIHIPGVRNSSSSTSPVSKKGPPPLKT 2284
Callithrix_jacchus KSLITGKVRNSENSEISGQMKQPLQANMPISIRGRMTIHIPGVRNSSSSTSPVSKKGPPHKT 2282
Bos_taurus         KSLITGKVRNSENSEISSQMKQPLQTNMPISIRGRMTIHIPGVRNSSSSTSPVSKKGPPPLKT 2323
Equus_caballus     KSLITGKVRNSENSEISGQMKQPLQTNMPISIRGRMTIHIPGVRNSSSSTSPVSKKGPPPLKT 2285
Canis_lupus_familiaris KSLITGKIRSNSEVLSQMKQPLQANMPISIRGRMTIHIPGVRNSSSSTSPVSKKGPPPLKT 2274
Pavo_muticus       KSIITGKARSNSEVSSQLKQPQQTSPVPSIRGRMTIHIPGVRNSSSSTSPVSKKGPPPFKN 2304
Pavo_cristatus     KSIITGKARSNSEVSSQLKQPQQTSPVPSIRGRMTIHIPGVRNSSSSTSPVSKKGPPPFKN 2304
Gallus_gallus      KSIITGKARSNSEVSSQIKQPQQTSPVPSIRGRMTIHIPGVRNSSSSTSPVSKKGPPPFKN 2305
Chelonia_mydas     KSMITGKVRNSENSEVSSQLKQPQTNMPISIRGRMTIHIPGVRNSSSSTSPVSKKGPPPLKN 2263
Xenopus_tropicalis KSLITGKSRSSSDFSSHCKQSVQTNMPISIRGRMTIHIPGVRASSPSTSPVSKKGPPVFKN 2258
Callorhinchus_milii KSLITGKARSNVESSSLAKHHQQTNMPMISIRGRMTIHIPGVRNSSPSTSPIPKKTPF-KN 2272
Danio_rerio        KSLITGKPRPS--LESMAHQHQAQAPVISIRGRMTMVHPGVRSSSPSTSPVPKKPPP-RG 2194
.....2350.....2360.....2370.....2380.....2390.....2400

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**.*. .**:* * .: .: .:.*. *****.****
Mus_musculus      PASKSPSEGGATTSPRGTKPAGKSELSPITRQTS--QISGSKNGSSRSRSGSRDSTPSRPT 2313
Rattus_norvegicus PASKSPSEGPVATTSPRGTKPAVKSELSPITRQTS--HISGSKNGSPSRSGSRDSTPSRPT 2341
Homo_sapiens       PASKSPSEGGTATTSPRGAKPSVKSELSPVARQTS--QIGGSSKAPSRSGSRDSTPSRPA 2313
Pan_troglodytes    PASKSPSEGGTATTSPRGAKPSVKSELSPVARQTS--QIGGSSKAPSRSGSRDSTPSRPA 2348
Macaca_mulatta     PASKSPSEGGTATTSPRGAKPSVKSELSPVARQTS--QIGGSSKAPSRSGSRDSTPSRPA 2342
Callithrix_jacchus PASKSPSEGQAATTSPRGAKPSVKSELSPVARQTS--QIGGSSKAPSRSGSRDSTPSRPA 2340
Bos_taurus         PASKSPSEGGPATTSPRGTKPSVKSELSPVTRQAS--QTAGSKNGSPSRSGSRDSTPSRPA 2381
Equus_caballus     PASKSPSEGGTATTSPRGAKPSVKSELSPVTRQTS--QPAGSKNGSPSRSGSRDSTPSRPA 2343
Canis_lupus_familiaris PASKSPSEGGTATTSPRGTKPSVKSELSPVTRPAP--QPAGANKGSPSRSGSRDSTPSRPA 2332
Pavo_muticus       TNSKSPSEGGSSASSPRGVKS SVKPEPAPVTRQLSGLNQGGSSKGPSRSGSRDSTPSRPQ 2364
Pavo_cristatus     TNSKSPSEGGSSASSPRGVKS SVKPEPAPVTRQLSGLNQGGSSKGPSRSGSRDSTPSRPQ 2364
Gallus_gallus      TNSKSPSEGGSSASSPRGVKS SVKPEPAPVTRQLSGLNQGGSSKGPSRSGSRDSTPSRPQ 2365
Chelonia_mydas     TASKSPNEGQSSSTSSPRGAKS SVKSESPITRQPS--QGGGSSKGPSRSGSRDSTPSRPQ 2321
Xenopus_tropicalis APSKSPNENQSLNSPKGSKP-LKSESFYGSRSS--TSGGSSKGNRSGSRDSTPSRPS 2315
Callorhinchus_milii AASKSPSPGQNSNSPRGIKGPDKPDPSPITAKHTG--TPGASSSKGSRSGSRDSTPSRPS 2331
Danio_rerio        QMSKPPSQAPGAGSSPRTMKVPPSESPSPASGPPS--SQGGSSKASSRSGSRDSTPSRPV 2252
.....2410.....2420.....2430.....2440.....2450.....2460

```

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* *:*:*:* *:*:*:*:*.**.*:*** **.*.*:*.**.*:***
Mus_musculus      QQPLSRPMQSPGRNSISPGRNGISPPNKLSQLP---RTSSPSTASTKSSSGSKMSYTS PG 2370
Rattus_norvegicus QQPLSRPMQSPGRNSISPGRNGISTPNKLSQLP---RTSSPSTASTKSSSGSKMSYTS PG 2398
Homo_sapiens       QQPLSRPIQSPGRNSISPGRNGISPPNKLSQLP---RTSSPSTASTKSSSGSKMSYTS PG 2370
Pan_troglodytes    QQPLSRPIQSPGRNSISPGRNGISPPNKLSQLP---RTSSPSTASTKSSSGSKMSYTS PG 2405
Macaca_mulatta     QQPLSRPIQSPGRNSISPGRNGISPPNKLSQLP---RTSSPSTASTKSSSGSKMSYTS PG 2399
Callithrix_jacchus QQPLSRPIQSPGRNSISPGRNGISPPNKLSQLP---RTSSPSTASTKSSSGSKMSYTS PG 2397
Bos_taurus         QQPLSRPMQSPGRNSISPGRNGISPPNKLSQLP---RTSSPSTASTKSSSGSKMSYTS PG 2438
Equus_caballus     QQPLSRPMQSPGRNSISPGRNGISPPNKLSQLP---RTSSPSTASTKSSSGSKMSYTS PG 2400
Canis_lupus_familiaris QQPLSRPMQSPGRNSISPGRNGISPPNKLSQLP---RTSSPSTASTKSSSGSKMSYTS PG 2389
Pavo_muticus       QQPLSRPLQSPGRNSISPGRNGISPPSKLSQLP---RTSSPSTASTKSSSGGRMSYTS PG 2421
Pavo_cristatus     QQPLSRPLQSPGRNSISPGRNGISPPSKLSQLP---RTSSPSTASTKSSSGGRMSYTS PG 2421
Gallus_gallus      QQPLSRPLQSPGRNSISPGRNGISPPNKLSQLP---RTSSPSTASTKSSSGGRMSYTS PG 2422
Chelonia_mydas     QQPLSRPLQSPGRSSISPGRNGISPPNKLSQLP---RTSSPSTASTKSSSGGRMSYTS PG 2378
Xenopus_tropicalis SQQLSRPLQSPGRNSISPGRNGISPPNKFSQLP---RTSSPSTASTKSSSGGRMSYTS PG 2372
Callorhinchus_milii PQSLSRPLQSPGRSSISPGRNGISPTNKISQLP---RTTSPGSASAKPGSGRMTYTS PG 2388
Danio_rerio        QQSLTRPMQSPGRASVSPGRNGLSPSNKLSQLPQLPRTASPSASTKSSSGGRMAYTS PG 2312
.....2470.....2480.....2490.....2500.....2510.....2520

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*.: *      ::*: * :. :.*.*****.*      .      *.:*****:*****
Mus_musculus      RQLSQONLTKQASLSKNASSIPRSESASKGLNQMSNGSGNKKVELSRMSSTKSSGSESD 2430
Rattus_norvegicus RQLSQONLTKQAGLSKNASSIPRSESASKGLNQMNNSNGSNKKVELSRMSSTKSSGSESD 2458
Homo_sapiens      RQMSQQNLTKQAGLSKNASSIPRSESASKGLNQMNNGGANKKVELSRMSSTKSSGSESD 2430
Pan_troglodytes   RQMSQQNLTKQAGLSKNASSIPRSESASKGLNQMNNGGANKKVELSRMSSTKSSGSESD 2465
Macaca_mulatta    RQMSQQNLTKQAGLSKNASSIPRSESASKGLNQVNNNGGANKKVELSRMSSTKSSGSESD 2459
Callithrix_jacchus RQMSQQNLTKQAGLSKNASSIPRSESASKGLNQMNNGGANKKVELSRMSSTKSSGSESD 2457
Bos_taurus        RQMSQQNLTKQAGLSKNASSIPRSESASKGLNQMSNSNGSNKKVELSRMSSTKSSGSESD 2498
Equus_caballus    RQMSQQNLTKQAGLSKNASSIPRSESASKGLNQMNNSNGGANKKVELSRMSSTKSSGSESD 2460
Canis_lupus_familiaris RQMSQQNLTKQAGLSKNASSIPRSESASKGLNQMSNSNGSNKKVELSRMSSTKSSGSESD 2449
Pavo_muticus      RQMSQQNLTKQAGLSKNASSIPRSESASKGLNQILGTGASNKKTDLSRMSSAKSSGSESD 2481
Pavo_cristatus    RQMSQQNLTKQAGLSKNASSIPRSESASKGLNQILGTGASNKKTDLSRMSSAKSSGSESD 2481
Gallus_gallus     RQMSQQNLTKQAGLSKNASSIPRSESASKGLNQILGTGASNKKTDLSRMSSAKSSGSESD 2482
Chelonia_mydas    RQMSQQNLAKQTGLPKSASGIPRSESASKGLNQILSSSGSNKKVELSRMSSTKSSGSESD 2438
Xenopus_tropicalis RQLSQPNLSKQSGLPKTPSSIPRSESASKGLNQNVN-TGPNKKVELSRMSSTKSSGSESD 2431
Callorhinchus_milii RSLSQQAPSRQTNLGNKNTASITRSESSPKGFNOGANNTVPPKVELSRMSSTKSSGSESD 2448
Danio_rerio       RQLVQPTPTKQSGLPKTPSSIPRSESASK-----ILNQCGPSKKAELSRMSSTKSSGSESD 2368
.....2530.....2540.....2550.....2560.....2570.....2580

```

```

***:* *.:*****:*****:*****..      : . * :** *** :
Mus_musculus      RSERPALVRQSTFIKEAPSPTLRRKLEESASFESLSPSSRPDSPTRSQAQTPVLSPSPLPD 2490
Rattus_norvegicus RSERPALVRQSTFIKEAPSPTLRRKLEESASFESLSPSSRPDSPTRSQAQTPVLSPSPLPD 2518
Homo_sapiens      RSERPALVRQSTFIKEAPSPTLRRKLEESASFESLSPSSRPASPTRSQAQTPVLSPSPLPD 2490
Pan_troglodytes   RSERPALVRQSTFIKEAPSPTLRRKLEESASFESLSPSSRPASPTRSQAQTPVLSPSPLPD 2525
Macaca_mulatta    RSERPALVRQSTFIKEAPSPTLRRKLEESASFESLSPSSRPASPTRSQAQTPVLSPSPLPD 2519
Callithrix_jacchus RSERPALVRQSTFIKEAPSPTLRRKLEESASFESLSPSSRPASPTRSQAQTPVLSPSPLPD 2517
Bos_taurus        RSERPALVRQSTFIKEAPSPTLRRKLEESASFESLSPSSRPDSPTRSQAQTPVLSPSPLPD 2558
Equus_caballus    RSERPALVRQSTFIKEAPSPTLRRKLEESASFESLSPSSRPDSPTRSQAQTPVLSPSPLPD 2520
Canis_lupus_familiaris RSERPALVRQSTFIKEAPSPTLRRKLEESASFESLSPSSRPDSPTRSQAQTPVLSPSPLPD 2509
Pavo_muticus      RSERPALVRQSTFIKEAPSPTLRRKLEESASFESLSPS-RPDSPTRSQQLQTPVLSPSPLPD 2540
Pavo_cristatus    RSERPALVRQSTFIKEAPSPTLRRKLEESASFESLSPS-RPDSPTRSQQLQTPVLSPSPLPD 2540
Gallus_gallus     RSERPALVRQSTFIKEAPSPTLRRKLEESASFESLSPS-RPDSPTRSQQLQTPVLSPSPLPD 2541
Chelonia_mydas    RSERPALVRQSTFIKEAPSPTLRRKLEESASFESLSPS-RPDSPTRSQQLQTPVLSPSPLPD 2497
Xenopus_tropicalis RSERPALVRQSTFIKEAPSPTLRRKLEESASFESLSSSRADSPTRSQTQTPVLSPSPLPD 2491
Callorhinchus_milii RSERPALVRQSTFIKEAPSPTLRRKLEESASFESLSPS-RPDSPTRSQQLQTPVLSPSPLPD 2508
Danio_rerio       RSEKPLVRQSTFIKEAPSPTLRRKLEESASFESLSPS-----STSQSQTPVSSPSPLPD 2422
.....2590.....2600.....2610.....2620.....2630.....2640

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:      * ..* * * . . : * *.: * **.******:.*:*****
Mus_musculus      MSLSTHPSVQAGGWRKLPNLSPTIEYNDGRPTKRHDIAARSHSESPSRLPINRAGTWKRE 2550
Rattus_norvegicus MSLSTHPSVQAGGWRKLPNLSPTIEYSDGRPSKRHDIAARSHSESPSRLPINRAGTWKRE 2578
Homo_sapiens      MSLSTHSSVQAGGWRKLPNLSPTIEYNDGRPAKRHDIAARSHSESPSRLPINRSGTWKRE 2550
Pan_troglodytes   MSLSTHSSVQAGGWRKLPNLSPTIEYNDGRPAKRHDIAARSHSESPSRLPINRSGTWKRE 2585
Macaca_mulatta    MSLSTHSSVQAGGWRKLPNLSPTIEYNDGRPAKRHDIAARSHSESPSRLPINRSGTWKRE 2579
Callithrix_jacchus MSLSTHSSVQAGGWRKLPNLSPTIEYNDGRPAKRHDIAARSHSESPSRLPINRSGTWKRE 2577
Bos_taurus        MSLSTHSSVQAGGWRKLPNLSPTIEYNDGRPVKRHDIAARSHSESPSRLPINRSGTWKRE 2618
Equus_caballus    MSLSMHSSVQAGGWRKLPNLSPTVEYNDGRPAKRHDIAARSHSESPSRLPINRSGTWKRE 2580
Canis_lupus_familiaris MSLSAHPSIQSGGWRKLPNLSPTIEYNDGRPAKRHDIAARSHSESPSRLPINRSGTWKRE 2569
Pavo_muticus      MSLSAHSTAQTSQGWKLPNLSPSVEY-DGRPAKRHDIAARSHSESPSRLPINRSGTWKRE 2599
Pavo_cristatus    MSLSAHSTAQTSQGWKLPNLSPSVEY-DGRPAKRHDIAARSHSESPSRLPINRSGTWKRE 2599
Gallus_gallus     MSLSTHSTAQTSQGWKLPNLSPSVEY-DGRPAKRHDIAARSHSESPSRLPINRSGTWKRE 2600
Chelonia_mydas    MSLSSHSTVQASQGWKLPNLSPSVEYNDGRPAKRHDIAARSHSESPSRLPINRSGTWKRE 2557
Xenopus_tropicalis MSLSTHS-IQAGGWRKMPNLPNPAAEHGDSRR--RHDISRSHSESPSRLPITRSGTWKRE 2548
Callorhinchus_milii DMMLSHLSNQTSSWRKVPPNQNLTAEYLDGRAMRRPDIAARSHSESPSRLPINRSGTWKRE 2568
Danio_rerio       MSLSLPY--QSGGWTQKAPQSQN-SAENGDKSLKRHDISRSHSESPSRLPINRTGTWKRE 2479
.....2650.....2660.....2670.....2680.....2690.....2700

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*****.*.:*****.:****:
Mus_musculus      HSKHSSSLPRVSTWRRGTGSSSSILSASSESESEKAKSEDER-HVSSMP-APROMKENQVPT 2608
Rattus_norvegicus HSKHSSSLPRVSTWRRGTGSSSSILSASSESESEKAKSEDEK-HVNSVP-GPROMKENQVPT 2636
Homo_sapiens      HSKHSSSLPRVSTWRRGTGSSSSILSASSESESEKAKSEDEK-HVNSIS-GTKQSKENQVSA 2608
Pan_troglodytes   HSKHSSSLPRVSTWRRGTGSSSSILSASSESESEKAKSEDEK-HVNSIS-GTKQSKANQVSA 2643
Macaca_mulatta    HSKHSSSLPRVSTWRRGTGSSSSILSASSESESEKAKSEDEK-HVNSIS-GTKQSKENQVSA 2637
Callithrix_jacchus HSKHSSSLPRVSTWRRGTGSSSSILSASSESESEKAKSEDEK-HVNSIS-GTKQSKENQVSA 2635
Bos_taurus        HSKHSSSLPRVSTWRRGTGSSSSILSASSESESEKAKSEDEK-QVNSIS-GSKQTKENQVST 2676
Equus_caballus    HSKHSSSLPRVSTWRRGTGSSSSILSASSESESEKAKSEDEK-HVNSIS-GTKQTKENQVST 2638
Canis_lupus_familiaris HSKHSSSLPRVSTWRRGTGSSSSILSASSESESEKAKSEDEK-HVNSIS-GTKQTKENQVST 2627
Pavo_muticus      HSKHSSSLPRVSTWRRGTGSSSSILSASSESESEKAKSEDEKQHGSLS-GQKQSKQGOAPA 2658
Pavo_cristatus    HSKHSSSLPRVSTWRRGTGSSSSILSASSESESEKAKSEDEKQHGSLS-GQKQSKQGOAPA 2658
Gallus_gallus     HSKHSSSLPRVSTWRRGTGSSSSILSASSESESEKAKSEDEKQHGSLS-GQKQSKQGOAPA 2659
Chelonia_mydas    HSKHSSSLPRVSTWRRGTGSSSSILSASSESESEKAKSEDEKQHGSLS-GHIQTKESQVPA 2616
Xenopus_tropicalis HSKHSSSLPRVSTWRRGTGSSSSILSASSESESEKAKSEDEKQVCSFL-GPKS--ECSSSA 2605
Callorhinchus_milii HSKHSSSLPRVSTWRRGTGSSSSILSASSESESEKAKSEDEKPHLGSFTHGNKQPKESAVPL 2628
Danio_rerio       HSKHSSSLPRVGTWKRTGSSSSILSASSESESEKGRSEDERQPTNPPQ---KSGKEGGGLER 2536
.....2710.....2720.....2730.....2740.....2750.....2760

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:***** * .:          * * * . .:***:*****
Mus_musculus      KGTWRKIKESDISPTGMAQSASSG-AASGAESKPLIYQMAPPVSKTEDVWVRIEDCPIN 2667
Rattus_norvegicus KGTWRKIKESEISPTNTVSQTSSG-AASGAESKTLIYQMAPAVSKTEDVWVRIEDCPIN 2695
Homo_sapiens      KGTWRKIKENEFSPNTNSTQTVSSG-ATNGAESKTLIYQMAPAVSKTEDVWVRIEDCPIN 2667
Pan_troglodytes   KGTWRKIKENEISPTNSTQTVSSG-ATNGAESKTLIYQMAPAVSKTEDVWVRIEDCPIN 2702
Macaca_mulatta    KGTWRKIKENEISPTNSTQTVSSG-ATNGAESKTLIYQMAPAVSKTEDVWVRIEDCPIN 2696
Callithrix_jacchus KGTWRKIKENEISPTNSTQTVSSG-ATNGAESKTLIYQMAPAVSKTEDVWVRIEDCPIN 2694
Bos_taurus        KGTWRKIKESEISPTNSTQTVSSG-AANGAESKTLIYQMAPAVSKTEDVWVRIEDCPIN 2735
Equus_caballus    KGTWRKIKESEISPTNSTQTVSSG-AVNGAESKTLIYQMAPAVSKTEDVWVRIEDCPIN 2697
Canis_lupus_familiaris KGTWRKIKENEISPTNSTQTVSSG-AANGAESKTLIYQMAPAVSKTEDVWVRIEDCPIN 2686
Pavo_muticus      KGTWRKIKENEIPQIMNDPQHSSSS-PTSSSDSKTLIYQMAPAVSKTEDVWVRIEDCPIN 2717
Pavo_cristatus    KGTWRKIKENEIPQIMNDPQHSSSS-PTSSSDSKTLIYQMAPAVSKTEDVWVRIEDCPIN 2717
Gallus_gallus     KGTWRKIKENEIPQIMNDPQHSSSS-ATSSSDSKTLIYQMAPAVSKTEDVWVRIEDCPIN 2718
Chelonia_mydas    KGTWRKIKENEISQIMNSPNSHSSSDATNGADSKTLIYQMAPAVSKTEDVWVRIEDCPIN 2676
Xenopus_tropicalis KGTWRKIKESEILETPSNGSNTIAESSCSLESKTLIYQMAPAVSKTEDVWVRIEDCPIN 2665
Callorhinchus_milii RGTWRKIKDNEILQMSHPOSSAAN---SNEKSLVYQMAPPVSKTEDVWVRIEDCPIN 2684
Danio_rerio       KGTWRKAKGSETSYAP-----MSLDLQDQTDGAMSKSEDVWVRIEDCPIN 2581
.....2770.....2780.....2790.....2800.....2810.....2820

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Mus_musculus      NPRSGRSPTGNTPPVIDSVSEKGSSSIKDSKDTGKQSVGSGS-PVQTVGLETRLNSFVQ 2726
Rattus_norvegicus NPRSGRSPTGNTPPVIDSVSEKGNPSIKDSKDTGKQSVGSGS-PVQTVGLENRLNSFIQ 2754
Homo_sapiens      NPRSGRSPTGNTPPVIDSVSEKANPNIKDSKDNQAKQNVGNGSVPMRTVGLNRLNSFIQ 2727
Pan_troglodytes   NPRSGRSPTGNTPPVIDSVSEKGNPNIKDSKDNQAKQNVGNGSVPMRTVGLNRLNSFIQ 2762
Macaca_mulatta    NPRSGRSPTGNTPPVIDSVSEKGNPN-KDSKDNQAKQNVGNGSVPMRTVGLNRLNSFIQ 2755
Callithrix_jacchus NPRSGRSPTGNTPPVIDSVSEKGNPNIKDSKDNQAKQNVGNGSVPMRTVGLNRLNSFIQ 2754
Bos_taurus        NPRSGRSPTGNTPPVIDTVSEKGNPNPKDSKDNQKQNVNGSAPTRTMGLNRLNSFIQ 2795
Equus_caballus    NPRSGRSPTGNTPPVIDSVSEKGNSHAKDSKDNQKQNVGNASAPGRIMGLNRLNSFIQ 2757
Canis_lupus_familiaris NPRSGRSPTGNTPPVIDTVLEKGNPNAKDAKDNQKQPSVNGSGPVRAVGLNRLNSFIQ 2746
Pavo_muticus      NPRSGRSPTGNTPPVIDSVSEKGIVNGKDSKEIQEKQNPNGSVPVRTIGLENRLNSFFQ 2777
Pavo_cristatus    NPRSGRSPTGNTPPVIDSVSEKGIVNGKDSKEIQEKQNPNGSVPVRTIGLENRLNSFFQ 2777
Gallus_gallus     NPRSGRSPTGNTPPVIDSVSEKGVVNGKDSKEIQEKQNPNGSVPVRTIGLENRLNSFFQ 2778
Chelonia_mydas    NPRSGRSPTGNTPPVIDSVLEKGNANGKDSKDIQKQNVGNAGNVPVRTMGLNRLNSFIQ 2736
Xenopus_tropicalis NPRSGRSPTGNSPPVIDNVLDQGOKE-EAVKDCHTRHNSGNGNVPL----LENRQKSFQ 2720
Callorhinchus_milii NPRPGKSPSTNTPPVIDDLPEMSPDD-EGSGDSQNRQMPGRGT-PPRAPRMEHRLNSFLQ 2742
Danio_rerio       NPRSSKSPTASTPPVIDSLPIKGLACDRDSSESHSKLMS--ENAMSHLGSETNLNLLRS 2639
.....2830.....2840.....2850.....2860.....2870.....2880

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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      :  : *  .: *  ..      *  :      *****..****.* * :*****:****
Mus_musculus      VEAPEQKGTETAKPGQSN-PVSIATETCIAERTPFSSSSSSSKHSSPSGTVAARVTPFNY 2785
Rattus_norvegicus VEAPEQKGTETKAGQSS-PAPVAETGETCMAERTPFSSSSSSSKHSSPSGTVAARVTPFNY 2813
Homo_sapiens      VDAPDQKGTETIKPGQNN-PVPVSETNESSIVERTPFSSSSSSSKHSSPSGTVAARVTPFNY 2786
Pan_troglodytes   VDAPDQKGTETIKPGQNN-PVPVSETNESSIVERTPFSSSSSSSKHSSPSGTVAARVTPFNY 2821
Macaca_mulatta    VDAPDQKGTETIKPGQNN-PVPVSETNESSIVERTPFSSSSSSSKHSSPSGTVAARVTPFNY 2814
Callithrix_jacchus VDAPDQKGTETIKPGQNN-PVPASETNESSIVERTPFSSSSSSSKHSSPSGTVAARVTPFNY 2813
Bos_taurus        VDPPDQKGTETIKPGHSNNPVPASETSESSIAERTPFSSSSSSSKHSSPSGTVAARVSPFNY 2855
Equus_caballus    VDAPDQKGTETAKPGQSN-PVPASETNESSIAERTPFSSSSSSSKHSSPSGTVAARVTPFNY 2816
Canis_lupus_familiaris VEAPDQKGTETAKPGPSN-PVPAPEANESCAAERTPFSSSSSSSKHSSPSGTVAARVTPFNY 2805
Pavo_muticus      MDSPDKKGNETKPLQTN-PVPAPENNESTVSERTPFSSSSSSSKHSSPIGAVAARVTPFNY 2836
Pavo_cristatus    MDSPDKKGNETKPLQTN-PVPAPENNESTVSERTPFSSSSSSSKHSSPIGAVAARVTPFNY 2836
Gallus_gallus     IDSPDKKGNETKPLQTN-PVPAPENNESTVSERTPFSSSSSSSKHNSPIGAVAARVTPFNY 2837
Chelonia_mydas    IDSPDKKGTETKPVLSN-PVPAPETNESIINERTPFSSSSSSSKHSSPSGAVAARVTPFNY 2795
Xenopus_tropicalis LDGSDTKGTDPKTLINN----QQETNENTVAERTPFSSSSSSSKHSSPSGTVAARVTPFNY 2776
Callorhinchus_milii TDSPE-KATELKSAVNS-SATSP EIENNIVTERTPFSSNSSSKHSSPSGTVAARVTPFNY 2800
Danio_rerio       SESLDKKVTDIKPAPSN-PNIGPELHEFPVSERTPFSSSTNSSKHSSPSGAVAARVSPFNY 2698
.....2890.....2900.....2910.....2920.....2930.....2940

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      ** ***:..:..:*****: .  **.:* : : :      ****:****
Mus_musculus      NPSPRKSSADSTSARPSQIPTPVSTNTKKRDSKTDSTESSGAQSPKRHSGSYLVTSV 2842
Rattus_norvegicus NPSPRKSSADSTSARPSQIPTPVGSSTKKRD SKTDSTESSGAQSPKRHSGSYLVTSV 2870
Homo_sapiens      NPSPRKSSADSTSARPSQIPTPVNNNTKKRDSKTDSTESSGTQSPKRHSGSYLVTSV 2843
Pan_troglodytes   NPSPRKSSADSTSARPSQIPTPVNNNTKKRDSKTDSTESSGTQSPKRHSGSYLVTSV 2878
Macaca_mulatta    NPSPRKSSADSTSARPSQIPTPVNNNTKKRDSKTDSTESSGTQSPKRHSGSYLVTSV 2871
Callithrix_jacchus NPSPRKSSADSTSARPSQIPTPVNN- TKKRD SKTDSDSGTQSPKRHSGSYLVTSV 2869
Bos_taurus        NPSPRKSSADSTSARPSQIPTPVNNNTKKRDSKPDSTEPSTQSPKRHSGSYLVTSV 2912
Equus_caballus    NPSPRKSSADSTSARPSQIPTPVNNNTKKRDSKTDSTESSGAQSPKRHSGSYLVTSV 2873
Canis_lupus_familiaris NPSPRKSSADGTSARPSQIPTPVATATKKRDSKTEGAESGGTQSPKRHSGSYLVTSV 2862
Pavo_muticus      NPSRRKSSVDNSSARPSQIPTPVNNSTKKRDSKSENTDSSGTQSPKRHSGSYLVTSV 2893
Pavo_cristatus    NPSRRKSSVDNSSARPSQIPTPVNNSTKKRDSKSENTDSSGTQSPKRHSGSYLVTSV 2893
Gallus_gallus     NPSRRKSSVDNSSARPSQIPTPVNNSTKKRDSKSENTDSSGTQSPKRHSGSYLVTSV 2894
Chelonia_mydas    NPSPRKSSADNSSARPSQIPTPVNNSTKKRDSKTEENTDSSGTQSPKRHSGSYLVTSV 2852
Xenopus_tropicalis NPSPRKSTAESSSTRPSQIPTPVNTSTKKRDSKTEETDSSGSQSPKRHSGSYLVTSV 2833
Callorhinchus_milii IPSPRKSSDSSASRPSQIPTPVSTSTKKKENSKESTESSGNQSPKRHSGSYLVTSV 2857
Danio_rerio       TSPRKSSADGSTPRPSQIPTPISSNAKKRDTKGDTTE-----SGSYIVTSV 2745
.....2950.....2960.....2970.....2980.....2990.....

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