

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/SIK Date: Tue Feb 1 14:31:16 2022

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*****: .: *: .: .:*****:*****:*****:*****:*****:*****:*****:
Mus_musculus          MVIMSEFSAVPSGTGQGQKPLRVGFYDVERTLGKGNFAVVKLARHRVTKTQVAIKIIDK 60
Rattus_norvegicus     MVIMSEFSAVPTGTGQGQKPLRVGFYDVERTLGKGNFAVVKLARHRVTKTQVAIKIIDK 60
Heterocephalus_glaber MVIMSELSAAPAGLGQGQKPLRVGFYDVERTLGKGNFAVVKLARHRVTKTQVAIKIIDK 60
Homo_sapiens          MVIMSEFSADPAGQGQKPLRVGFYDIERTLGKGNFAVVKLARHRVTKTQVAIKIIDK 60
Pan_troglodytes       MVIMSEFSADPAGQGQKPLRVGFYDIERTLGKGNFAVVKLARHRVTKTQVAIKIIDK 60
Macaca_mulatta        MVIMSEFSADPAGQGQGLQKPLRVGFYDIERTLGKGNFAVVKLARHRVTKTQVAIKIIDK 60
Callithrix_jacchus    MVIMSEFSADPAGQGQ--QKPLRVGFYDIERTLGKGNFAVVKLARHRVTKTQVAIKIIDK 58
Equus_caballus        MVIMSEFSAAPAGSGQGQKPLRVGFYDIERTLGKGNFAVVKLARHRVTKTQVAIKIIDK 60
Bos_taurus            MVIMSELSAAPAGSGQGQKPLRVGFYDIERTLGKGNFAVVKLARHRVTKTQVAIKIIDK 60
Canis_lupus_familiaris MVIMSELSAAPAGSGPGQKPLRVGFYDVERTLGKGNFAVVKLARHRVTKTQVAIKIIDK 60
Gallus_gallus         MVIMSEDASVPA-PSAAQPRPLRVGFYDIERTLGKGNFAVVKLARHRVTKTQVAIKIIDK 59
Pavo_muticus          MVIMSEYASVPA-PSAAQPRPLRVGFYDIERTLGKGNFAVVKLARHRVTKTQVAIKIIDK 59
Pavo_cristatus        MVIMSEYASVPA-PSAAQPRPLRVGFYDIERTLGKGNFAVVKLARHRVTKTQVAIKIIDK 59
Chelonia_mydas        MVIMSDYTSVPT-PNQAQRRPLRVGFYDIERTLGKGNFAVVKLARHRVTKTQVAIKIIDK 59
Anolis_carolinensis   MVIMSDYTPVPT-SNQSQRPLRVGFYDIERTLGKGNFAVVKLARHRVTKTQVAIKIIDK 59
1.....10.....20.....30.....40.....50.....60

:***:*****:*****:***:*****:*****:*****:*****:*****:*****:
Mus_musculus          TRLDSSNLEKIYREVQLMKLLNHPNIIKLYQVMETKDMLYIVTEFAKNGEMFDYLTSGNH 120
Rattus_norvegicus     TRLDSSNLEKIYREVQLMKLLNHPNIIKLYQVMETKDMLYIVTEFAKNGEMFDYLTSGNH 120
Heterocephalus_glaber TRLDPSNLEKIYREVQLMKLLNHPNIIKLYQVMETKDMLYIVTEFAKNGEMFDYLTSGNH 120
Homo_sapiens          TRLDSSNLEKIYREVQLMKLLNHPNIIKLYQVMETKDMLYIVTEFAKNGEMFDYLTSGNH 120
Pan_troglodytes       TRLDSSNLEKIYREVQLMKLLNHPNIIKLYQVMETKDMLYIVTEFAKNGEMFDYLTSGNH 120
Macaca_mulatta        TRLDSSNLEKIYREVQLMKLLNHPNIIKLYQVMETKDMLYIVTEFAKNGEMFDYLTSGNH 120
Callithrix_jacchus    TRLDSSNLEKIYREVQLMKLLNHPNIIKLYQVMETKDMLYIVTEFAKNGEMFDYLTSGNH 118
Equus_caballus        TRLDSSNLEKIYREVQIMKLLNHPNIIKLYQVMETKDMLYIVTEFAKNGEMFDYLTSGNH 120
Bos_taurus            ARLDSSNLEKIYREVQIMKLLNHPNIIKLYQVMETKDMLYIVTEFAKNGEMFDYLTSGNH 120
Canis_lupus_familiaris TRLDSSNLEKIYREVQIMKLLNHPNIIKLYQVMETKDMLYIVTEFAKNGEMFDYLTSGNH 120
Gallus_gallus         TRLDPSNLEKIYREVQIMKLLNHPNIIKLYQVMETKDMLYIVTEFAKNGEMFDHLTSGNH 119
Pavo_muticus          TRLDPSNLEKIYREVQIMKLLNHPNIIKLYQVMETKDMLYIVTEFAKNGEMFDHLTSGNH 119
Pavo_cristatus        TRLDPSNLEKIYREVQIMKLLNHPNIIKLYQVMETKDMLYIVTEFAKNGEMFDHLTSGNH 119
Chelonia_mydas        TRLDPSNLEKIYREVQIMKLLNHPNIIKLYQVMETKDMLYIVTEFAKNGEMFDHLTSGNH 119
Anolis_carolinensis   TRLDPSNLEKIYREVQIMKLLNHPNIIKLYQVMETKDMLYIVTEFAKNGEMFDHLTSGNH 119
.....70.....80.....90.....100.....110.....120

***.***:*****:*****:***:*****:*****:*****:*****:*****:
Mus_musculus          LSENEARQKFWQILSAVEYCHNHHIVHRDLKTENLLLDNMDIKLADFGFGNFYKPGGEPL 180
Rattus_norvegicus     LSENEARKKFWQILSAVEYCHNHHIVHRDLKTENLLLDGNMDIKLADFGFGNFYKPGGEPL 180
Heterocephalus_glaber LSENEARKKFWQILSAVEYCHNHHIVHRDLKTENLLLDGNMDVKLADFGFGNFYKPGGEPL 180
Homo_sapiens          LSENEARKKFWQILSAVEYCHDHHIVHRDLKTENLLLDGNMDIKLADFGFGNFYKSGEPL 180
Pan_troglodytes       LSENEARKKFWQILSAVEYCHDHHIVHRDLKTENLLLDGNMDIKLADFGFGNFYKSGEPL 180
Macaca_mulatta        LSENEARKKFWQILSAVEYCHDHHIVHRDLKTENLLLDGNMDIKLADFGFGNFYKSGEPL 180
Callithrix_jacchus    LSESEARKKFWQILSAVEYCHDHHIVHRDLKTENLLLDGNMDIKLADFGFGNFYKSGEPL 178
Equus_caballus        LSENEARKKFWQILSAVEYCHSHHIVHRDLKTENLLLDGNMDIKLADFGFGNFYKSGEPL 180
Bos_taurus            LSESEARKKFWQILSAVEYCHSHNIVHRDLKTENLLLDNMDIKLADFGFGNFYNPGEPL 180
Canis_lupus_familiaris LSENEARKKFWQILSAVEYCHSHHIVHRDLKTENLLLDGSMMDIKLADFGFGNFYKSGEPL 180
Gallus_gallus         LSESEARKKFWQILSAVEYCHSHHIVHRDLKTENLLLDANMNIKLADFGFGNFYKSGEPL 179
Pavo_muticus          LSESEARKKFWQILSAVEYCHSHHIVHRDLKTENLLLDANMNIKLADFGFGNFYKSGEPL 179
Pavo_cristatus        LSESEARKKFWQILSAVEYCHSHHIVHRDLKTENLLLDANMNIKLADFGFGNFYKSGEPL 179
Chelonia_mydas        LSESEARKKFWQILSAVEYCHSHHIVHRDLKTENLLLDASMNKLADFGFGNFYKSGEPL 179
Anolis_carolinensis   LSESEARKKFWQILSAVEYCHSHHIVHRDLKTENLLLDANMNIKLADFGFGNFYKSGEPL 179
.....130.....140.....150.....160.....170.....180

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*****:***:*****:*****
Mus_musculus      STWCGSPPYAAPEVFEGKEYEGPOLDVWSLGVVLYVLVCGSLPFDGPNLPTLRQVLEGR 240
Rattus_norvegicus STWCGSPPYAAPEVFEGKEYEGPOLDIWSLGVVLYVLVCGSLPFDGPNLPTLRQVLEGR 240
Heterocephalus_glaber STWCGSPPYAAPEVFEGKEYEGPOLDIWSLGVVLYVLVCGSLPFDGPNLPTLRQVLEGR 240
Homo_sapiens      STWCGSPPYAAPEVFEGKEYEGPOLDIWSLGVVLYVLVCGSLPFDGPNLPTLRQVLEGR 240
Pan_troglodytes   STWCGSPPYAAPEVFEGKEYEGPOLDIWSLGVVLYVLVCGSLPFDGPNLPTLRQVLEGR 240
Macaca_mulatta    STWCGSPPYAAPEVFEGKEYEGPOLDIWSLGVVLYVLVCGSLPFDGPNLPTLRQVLEGR 240
Callithrix_jacchus STWCGSPPYAAPEVFEGKEYEGPOLDIWSLGVVLYVLVCGSLPFDGPNLPTLRQVLEGR 238
Equus_caballus    STWCGSPPYAAPEVFEGKEYEGPOLDVWSLGVVLYVLVCGSLPFDGPNLPTLRQVLEGR 240
Bos_taurus        STWCGSPPYAAPEVFEGKEYEGPOLDIWSLGVVLYVLVCGSLPFDGPNLPTLRQVLEGR 240
Canis_lupus_familiaris STWCGSPPYAAPEVFEGKEYEGPOLDIWSLGVVLYVLVCGSLPFDGPNLPTLRQVLEGR 240
Gallus_gallus     STWCGSPPYAAPEVFEGKEYEGPHLDIWSLGVVLYVLVCGSLPFDGPNLPTLRQVLEGR 239
Pavo_muticus      STWCGSPPYAAPEVFEGKEYEGPHLDIWSLGVVLYVLVCGSLPFDGPNLPTLRQVLEGR 239
Pavo_cristatus    STWCGSPPYAAPEVFEGKEYEGPHLDIWSLGVVLYVLVCGSLPFDGPNLPTLRQVLEGR 239
Chelonia_mydas    STWCGSPPYAAPEVFEGKEYEGPHLDIWSLGVVLYVLVCGSLPFDGPNLPTLRQVLEGR 239
Anolis_carolinensis STWCGSPPYAAPEVFEGKEYEGPHLDIWSLGVVLYVLVCGSLPFDGPNLPTLRQVLEGR 239
.....190.....200.....210.....220.....230.....240

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****:***:*** *****:***:***:*** ***:***:***:***
Mus_musculus      FRIPFFMSQDCE TLIRRM LVDP AKRITIAQIRQHRWMQADP-----TLLQDDPAFDMQ 295
Rattus_norvegicus FRIPFFMSQDCE TLIRRM LVDP AKRITIAQIRQHRWMQADP-----TLLQDDPAFSMQ 295
Heterocephalus_glaber FRIPFFMSQDCE TLIRRM LVDP AKRITIAQIRQHRWMQADP-----ALLRQDPALSVL 295
Homo_sapiens      FRIPFFMSQDCE TLIRRM LVDP AKRITIAQIRQHRWMQADP-----CLPGPACPAFSAH 295
Pan_troglodytes   FRIPFFMSQDCE TLIRRM LVDP AKRITIAQIRQHRWMQADP-----CLPGPACPAFSAH 295
Macaca_mulatta    FRIPFFMSQDCE TLIRRM LVDP AKRITIAQIRQHRWMQADP-----CLPGPACSTFSAH 295
Callithrix_jacchus FRIPFFMSQDCE TLIRRM LVDP AKRITIAQIRQHRWMQADP-----CLPGPACPAFSAH 298
Equus_caballus    FRIPFFMSQDCE TLIRRM LVDP AKRITIAQIRQHRWMQADP-----SLLRQACPAFSAH 295
Bos_taurus        FRIPFFMSQDCE TLIRRM LVDP AKRITIAQIRQHRWMQADP-----ALVLPACPGFSL 295
Canis_lupus_familiaris FRIPFFMSQDCE TLIRRM LVDP AKRITIAQIRQHRWMQADP-----SVPRQACPAFSAH 295
Gallus_gallus     FRIPFFMSQDCE TLIRRM LVDP AKRITIAQIRQHRWMQADP-----SLRQQQSLSFMSQ 294
Pavo_muticus      FRIPFFMSQDCE TLIRRM LVDP AKRITIAQIRQHRWMQADP-----SLRQQQSLSFMSQ 294
Pavo_cristatus    FRIPFFMSQDCE TLIRRM LVDP AKRITIAQIRQHRWMQADP-----SLRQQQSLSFMSQ 294
Chelonia_mydas    FRIPFFMSQDCE TLIRRM LVDP AKRITIAQIRQHRWMQADP-----SLRQQQSLSFMSQ 294
Anolis_carolinensis FRIPFFMSQDCE TLIRRM LVDP AKRITIAQIRQHRWMQADP-----SLRQQQSLSFMSH 294
.....250.....260.....270.....280.....290.....300

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.*.*:***:*** *****:***:***:*** *****:***:***
Mus_musculus      GYTSNLGDYNEQVLGIMQALGIDRQRTVESLQNSSYNHFAAIYVLLERLKEHRSAOPSS 355
Rattus_norvegicus GYTSNLGDYNEQVLGIMQALGIDRQRTVESLQNSSYNHFAAIYVLLERLREHRSTOPSS 355
Heterocephalus_glaber GYTSNLGDYNEQVLGIMQALGIDRQRTVESLQNSSYNHFAAIYVLLERLKEHRGAOPLA 355
Homo_sapiens      SYTSNLGDYNEQVLGIMQALGIDRQRTVESLQNSSYNHFAAIYVLLERLKEYRNAQ-CA 354
Pan_troglodytes   SYTSNLGDYNEQVLGIMQALGIDRQRTVESLQNSSYNHFAAIYVLLERLKEYRNAQ-CA 354
Macaca_mulatta    SYTSNLGDYNEQVLGIMQALGIDRQRTVESLQNSSYNHFAAIYVLLERLKEYRNAQ-CA 354
Callithrix_jacchus SYTSNLGDYNEQVLGIMQALGIDRQRTVESLQNSSYNHFAAIYVLLERLKEYRNAQ-CT 357
Equus_caballus    SYTSNLGDYNEQVLGIMQALGIDRQRTVESLQNSSYNHFAAIYVLLERLKEYRNAOPSA 355
Bos_taurus        GYTSSVGDYNEQVLGIMQALGIDRQRTVESLQNSSYNHFAAIYVLLERLKEYRRLTOP-A 354
Canis_lupus_familiaris SYTSNLGDYNEQVLGIMQALGIDRQRTVESLQNSSYNHFAAIYVLLERLKEYRHTOPSA 355
Gallus_gallus     NYTSNLGDYNEQVLGIMQALGIDRQRTVESLQNSSYNHFAAIYVLLERLKEYRSSQLSS 354
Pavo_muticus      NYTSNLGDYNEQVLGIMQALGIDRQRTVESLQNSSYNHFAAIYVLLERLKEYRSSQLSS 354
Pavo_cristatus    NYTSNLGDYNEQVLGIMQALGIDRQRTVESLQNSSYNHFAAIYVLLERLKEYRSSQLSS 354
Chelonia_mydas    NYTSNLGDYNEQVLGIMQALGIDRQRTVESLQNSSYNHFAAIYVLLERLKEYRNOLSN 354
Anolis_carolinensis SYTSNLGDYNEQVLGIMQALGIDRQRTVESLQNSSYNHFAAIYVLLERLKEYRSNOLAN 354
.....310.....320.....330.....340.....350.....360

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Mus_musculus      RPTPAYTRQPQLRSSDLS--SLEVPQEILPCDPFRPSLLCPOPQALAQSVLQAEIDCDLH  413
Rattus_norvegicus RATPAPARQPQLRNSDLS--SLEVPQEILPCDPFRPSLLCPOPQALAQSVLQAEIDCDLH  413
Heterocephalus_glaber R--PMPTRQPRRSLDLS--GLEVPQEGLPGDPFRSSLLCPOPQALAQSVLQAEIDCDLH  411
Homo_sapiens       R--PGPARQPRRSSDLS--GLEVPQEGLSTDPFRPALLCPOPQTLVQSVLQAEIDCDLH  410
Pan_troglodytes    R--PGPARQPRRSSDLS--GLEVPQEGLSTDPFRPALLCPOPQTLVQSVLQAEIDCDLH  410
Macaca_mulatta     R--PGPARQPRRSSDLS--SLELQVPQEGLSTDPFRPALLCPOPQTLVQSVLQAEIDCDLH  412
Callithrix_jacchus R--PGPARQPRRSSDLS--GLEVPQREGFSADPFRPALLCPOPQALVQSVLQAEIDCDLH  413
Equus_caballus     R--PGPARQPRRSSDLS--GFEVPQEGLPGDAFRSALLCPOPQSLGQSVLQAEIDCDLH  411
Bos_taurus         R--PGPARQPRRSTDLS--GFEVPQEGLPGDALRSALLCTOPQTLGQSVLQAEIDCDLH  410
Canis_lupus_familiaris R--PGPARQPRRSSDLS--GFEVTQEAFSGDPFRSSLLCPOPQALGPSVLQHADTDCDPL  411
Gallus_gallus      R--PATGRQPRRSSEIS--NAEMPQDSLTSETLRSSLLYQOPQSLIQPSLQAEIDCCDMN  410
Pavo_muticus       R--PATGRQPRRSSEIS--NAEMPQDSLTSETLRSSLLYQOPQSLIQPSLQAEIDCCDMN  410
Pavo_cristatus     R--PATGRQPRRSSEIS--NAEMPQDSLTSETLRSSLLYQOPQSLIQPSLQAEIDCCDMN  410
Chelonia_mydas     R--PVTGRQPRRSSELS--NIEMPQDSLAESLRSSLLYHQPQNLIQSLQAEIDCCDMN  410
Anolis_carolinensis R--PVSSRQPRRSSDFS--NIELPQDSLAGETLRSSLLYQOPQNLIQSHLQAEIDCCDMN  410
.....370.....380.....390.....400.....410.....420

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...*  *  ::*  *  .  .  :  *  ::*  .  ::*  .  ::*  .  *  ::*  .  .
Mus_musculus      SSLQ-PLFFPLDTNCSGVFRHRSISPSSLLDTAISEEARQGPSLEEEQEVQE---PLPGS  469
Rattus_norvegicus SSLQ-PLFFPLDTNCSGVFRHRSISPSSLLDTAISEEARQGPSLEEEQEVQE---PLPGS  469
Heterocephalus_glaber SSLQ-PLFFAPDANCSGVFRHRSISPSSLLDTAISEEARQGPSLEEEQEAQE---ALRGS  467
Homo_sapiens       SSLQWPLFFPVDASCSGVFRPRPVSPSSSLLDTAISEEARQGPGLEEEQDTOE---SLPSS  467
Pan_troglodytes    SSLQWPLFFPVDASCSGVFRPRPVSPSSSLLDTAISEEARQGPGLEEEQDTOE---SLPSS  467
Macaca_mulatta     SSLQWPLFFPVDASCSGVFRPRPVSPSSSLLDTAISEEARQGPGLEEEQDVOE---SLPSS  469
Callithrix_jacchus GSLLQWPLFFPVDASCSGVFRPRPVSPSSSLLDTAISEEARQGPGLEEEQDDAQE---SLPSS  470
Equus_caballus     SSLQ-PLFFPVDTNCSGVFRHRSISPTSLLDTTISEEVRQGQGLEEEQEQAQM---PLPSS  467
Bos_taurus         SSLQ-PLMFPVDTSFGGVCRHRSISPSSLLDTAISEEARPGPGLDEEQEEVQE---PLPSS  466
Canis_lupus_familiaris SSLQ-PLLFPLDANCSGVFRHRPISPNGLLDAPISEEVGQAPGLEEEQEEAQK---PPSGS  467
Gallus_gallus      NPLQ-PVFFPVDPNFNGLFRNRSISPSSLLETTISEEVRQEKELEDEIKAYDHPIRIPSN  469
Pavo_muticus       NPLQ-PVFFPVDPNFNGLFRNRSISPSSLLETTISEEVRQEKELEDEIKAYDHPIRIPSN  469
Pavo_cristatus     NPLQ-PVFFPVDPNFNGLFRNRSISPSSLLETTISEEVRQEKELEDEIKAYDHPIRIPSN  469
Chelonia_mydas     SPLQ-PVFFPVDPNFNGLFRNRSISPNSLLETTISEEVRQEKDLEEEIKAYN-PLHLPSN  468
Anolis_carolinensis NPLQ-PVFFPVDPNFNSLFRNRSISPNSLLETTISEEVRQDKELEDEIKAFN-PIRLPIN  468
.....430.....440.....450.....460.....470.....480

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:  *****  :  :  .  ****  :  *  .  .  *****  .  *  .  .  *  .
Mus_musculus      TGRRHTLAEVSTHFSPLNPPPCIIVSSSATASPSEGTSSSDSCLPFSASEGPAGLGSGLATP  529
Rattus_norvegicus TGRRHTLAEVSTHFSPLNPPPCIIVSSSAAVSPSEGTSSSDSCLPFSASEGPAGLGGGLATP  529
Heterocephalus_glaber TGRRHTLAEVSTHFSPLTPPPCIIVSSSAAGASEGTSSDSCLTFSASEGLAGLGSGLATQ  527
Homo_sapiens       TGRRHTLAEVSTRLSPLTAPCIIVSPSTTASPAEGTSSSDSCLTFSASKSPAGLSGTPATQ  527
Pan_troglodytes    TGRRHTLAEVSTRLSPLTAPCIIVSPSTTASPAEGTSSSDSCLTFSASKSPAGLSGTPATQ  527
Macaca_mulatta     TGRRHTLAEVSTRLSPLTAPCIIVSPSASASPAEGTSSSDSCLTFSASKSPVGLSGTPATQ  529
Callithrix_jacchus TGRRHTLAEVSSRLSPLTAPCIIVSPSATASPAEGTSSSDSCLTFSASRDPMELSGTSATQ  530
Equus_caballus     SGRRHTLAEVSTCFSPGAPPCIVISSS-VASPSEGTSSSDSCLT-SAGDGLVGLSGRLATQ  525
Bos_taurus         TGRRHTLAEVSTCFSPGAPPCIVISSS-VASPCEGTSSSDSCLT-SAGDGLAGLSGHLAAQ  524
Canis_lupus_familiaris TARRHTLAEVSTCFSPCAPPCIVISSS-TASPSEGTSSSDSCLTFSAGDGPGALSGRLAAQ  526
Gallus_gallus      TSRRHTLAEVTTHFYQHAPPCIVISSS--ASPTEGTSSSDSCLTSSNDSSVALSSSCLAGQ  527
Pavo_muticus       TSRRHTLAEVTTHFYQHAPPCIVISSS--ASPTEGTSSSDSCLTSSNDSSVALSSSCLAGQ  527
Pavo_cristatus     TSRRHTLAEVTTHFYQHAPPCIVISSS--ASPTEGTSSSDSCLTSSNDSSVALSSSCLAGQ  527
Chelonia_mydas     TSRRHTLAEVTTHFYQPCTPPCIVISSS--TSPTEGTSSSDSCLTSSNNSSVALSSSCLADQ  526
Anolis_carolinensis TSRRHTLAEVTTHFYQCSPPCIVISSS--TNGTEGTSSSDSCLTSSANDGSVTLSNCLEEQQ  526
.....490.....500.....510.....520.....530.....540

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Mus_musculus      GLLGTSSPVRLASPFLLGSQSATPVLTQAGLGTAVLPVVSFQEGRRASDTSLTQGLKAFR 589
Rattus_norvegicus GLLGTSSPVRLASPFLLGSQSATPVLTQAGLGTAVLPVVSFQEGRRASDTSLTQGLKAFR 589
Heterocephalus_glaber GLLGTCSPVRLASPFLLGAQSATPVLTQAGLGGAVLLPVVSFQEGRRASDTSLTQGLKAFR 587
Homo_sapiens      GLLGACSPVRLASPFLLGSQSATPVLTQAGLGGAVLLPVVSFQEGRRASDTSLTQGLKAFR 587
Pan_troglodytes   GLLGACSPVRLASPFLLGSQSATPVLTQAGLGGAVLLPVVSFQEGRRASDTSLTQGLKAFR 587
Macaca_mulatta    GLLGACSPVRLASPFLLGSQSATPVLTQAGLGGAVLLPVVSFQEGRRASDTSLTQGLKAFR 589
Callithrix_jacchus GLLGAGSPVRLASPFLLGSQSATPVLTQAGLGGAVLLPVVSFQEGRRASDTSLTQGLKAFR 590
Equus_caballus    GLLGTCSPLRLASPLLGAQSATPVLTQAGLGGAAPLPVVSFQEGRRASDTSLTQGLKAFR 585
Bos_taurus        GLVGACSPRLRLASPLLGTQSATPMLQAQALRGAALLPVVSFQEGRRASDTSLTQGLKAFR 584
Canis_lupus_familiaris GLVGTCSPLRLASPLLGAQSATPVLTQAGAPGGVTLPISTFQEGRRASDTSLTQGLKAFR 586
Gallus_gallus     VMTGSPATARMTS AFLASQSDAPVLTQAGCMGGASLLPVVSFQEGRRASDTSLTQGLKAFR 587
Pavo_muticus      VMTGSPATARMTS PFLLASQSDAPVLTQAGCMGGASLLPVVSFQEGRRASDTSLTQGLKAFR 587
Pavo_cristatus    VMTGSPATARMTS PFLLASQSDAPVLTQAGCMGGASLLPVVSFQEGRRASDTSLTQGLKAFR 587
Chelonia_mydas    VMTGNPATARMTS PFLLTQSQSDTPGLQAQDCMGGASLLPVVSFQEGRRASDTSLTQGLKAFR 586
Anolis_carolinensis MMLGHPATTRVTS SFLASHSDTPVLTQAGCLGGASLLPVVSFQEGRRASDTSLTQGLKAFR 586
.....550.....560.....570.....580.....590.....600

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*****.:*:*****:***:*. .  *  *  .  *: .  .
Mus_musculus      QQLRKNARTKGFLGLNKKIKGLARQVCSS--VRTPRGGMSTFHTPAPSSGLQ----- 639
Rattus_norvegicus QQLRKNARTKGFLGLNKKIKGLARQVCSS--IRGSRGGMSTFHTPAPSSGLQ----- 639
Heterocephalus_glaber QQLRKNARTKGFLGLNKKIKGLARQVCASS--SRVPRAGLSAFHAPAPSPGLQ----- 638
Homo_sapiens      QQLRKTTRTKGFLGLNKKIKGLARQVCAPA--SRASRGGLSPFHAPAQSPGLH----- 638
Pan_troglodytes   QQLRKTTRTKGFLGLNKKIKGLARQVCAPA--SRASRGGLSPFHAPAQSPGLH----- 638
Macaca_mulatta    QQLRKTTRTKGFLGLNKKIKGLARQVCAPA--SRASRGGLSPFHAPAQSPGLH----- 640
Callithrix_jacchus QQLRKTARTKGFLGLNKKIKGLARQVCAPA--SRASRGGLSPFHAPAQSPGLH----- 641
Equus_caballus    QQLRKNARTKGFLGLNKKIKGLARQVCQSSSSSRATRGGLNAFQLPAPSPGLH----- 637
Bos_taurus        QQLRKNARTKGFLGLNKKIKGLARQVCQSSSSSRASRGGLPHAFQLPAPSPGLH----- 636
Canis_lupus_familiaris QQLRKNARTKGFLGLNKKIKGLARQVCQSSSSSRATRGGLSAFQLPQSPGLH----- 638
Gallus_gallus     QQLRKNARAKGFLGLNKKIKGFARQVCSSS--SRAARSAMSPFOHAQPNCTCIY----- 638
Pavo_muticus      QQLRKNARAKGFLGLNKKIKGFARQVCSSS--SRAARSAMSPFOHAQPNCTCIY----- 638
Pavo_cristatus    QQLRKNARAKGFLGLNKKIKGFARQVCSSS--SRAARSAMSPFOHAQPNCTCIY----- 638
Chelonia_mydas    QQLRKNARAKGFLGLNKKIKGFARQVCSSS--ARAARSGMSPFOHSQNTCMY----- 637
Anolis_carolinensis QQLRKNARAKGFLGLNKKIKGLARQVCSSS--ARLARNMGLFOHPQONACLYGSSGNSGG 645
.....610.....620.....630.....640.....650.....660

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      .  .  *  .  **:*:***:*****:  .  :  *
Mus_musculus      --GCTTSENREGSSLLEEVLTQQRLLQLQHHSSTAAASSGCQQGPOLS--PVPYVLAPCD 695
Rattus_norvegicus --GCTASSREGSSLLEEVLTQQRLLQLQHHS--AVSSDYQQAPOLS--PVPYVLTPCDG 692
Heterocephalus_glaber --AGSSGSRESRGLLEEVLTQQRLLQLQHHP--VAPPSCPQAPQLPPTPAPYLLAPCDG 693
Homo_sapiens      --GGAAGSREGWSSLLEEVLTQQRLLQLQHHP--AAAPGCSQAPQPA--PAPFVIAPCDG 691
Pan_troglodytes   --GGAAGSREGWSSLLEEVLTQQRLLQLQHHP--AAAPGCSQAPQPA--PAPFVIAPCDG 691
Macaca_mulatta    --GVAAGSREGSSLLEEVLTQQRLLQLQHHP--AAAPGCSQAAQPA--PAQFVIAPCDG 693
Callithrix_jacchus --SGAASSREGSSLLEEVLTQQRLLQLQHHP--AATPSCSQAPQPN--PTPFVIAPCDG 694
Equus_caballus    --GSGASSREGSSLLEEVLTQQRLLQLQHHP--AAPPTCQ-----APLVLGPCDG 684
Bos_taurus        --GGGAGSWEGRGMLEDVLTQQRLLQLQHHT--TAPASCQP-----APLVLAPCDG 683
Canis_lupus_familiaris --GSGPSSREGSSLLEEVLTQQRLLQLQHHP--AGPPGCQQA-----APLVLAPCDG 686
Gallus_gallus     --SSSGSSREGRNLLLEEVLTQQRMLQLQHHP--LLQPACPQTSQTS--ATNGLPPSDS 690
Pavo_muticus      --SSSGSSREGRNLLLEEVLTQQRMLQLQHHP--LLQPACPQTSPTS--VTNGLPPSDS 690
Pavo_cristatus    --SSSGSSREGRNLLLEEVLTQQRMLQLQHHP--LLQPACPQTSPTS--VTNGLPPSDS 690
Chelonia_mydas    --SSGGSSREGSSLLEEVLTQQRMLQLQHHP--LIQPTCHQPSRVS--ATHCILSPDS 689
Anolis_carolinensis SGSSSGSSRESRNLLLEEVLTQQRILQLQHK-----QPACPQPSQVS--QPHIPLSDT 696
.....670.....680.....690.....700.....710.....720

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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*                               :* . :. . *** *:*:***:~* *.
Mus_musculus      -----LLVSG-----IPLLPTPLLOAGMSPVSAAHLLDTHLHISAG 732
Rattus_norvegicus -----LLVSG-----IPLLPTPLLOPGMSPVSAQAQLLDAHLHISAG 729
Heterocephalus_glaber -----LLVSG-----LPLLPAPLLQTSASPVTSAAHLLDTHLHISAG 730
Homo_sapiens      PGAAP-LPSTLLTSG-----LPLLPPPLLQTSASPVSAQAQLLDTLHIGTG 737
Pan_troglodytes   PGAAP-LPSTLLMSG-----LPLLPPPLLQTSASPVSAQAQLLDTLHIGTG 737
Macaca_mulatta    PGAAP-LPSTLLMSG-----LPLLQPLLQTSASPVSAQAQLLDTLHIGAG 739
Callithrix_jacchus PGATL-LPSTLFTSG-----LPLLPPPLLQAGVSPVTSAAQLLDLQLHIGAS 740
Equus_caballus    ALLVSGLQKGLGLGP-----GPLLPPHLLQAGASPVSAQAQLLDAHLRISRT 731
Bos_taurus        ALHMSGGLQKDLGLGP-----SPLLPPHLLQAGVSPVSAQAQLLDAHLRISGS 730
Canis_lupus_familiaris ALLVSGLQKELGLGP-----GPLLPPHLLHAGGSPVSAARLLDTHLHISHT 733
Gallus_gallus     AGTCKASNSLLLSSELQRENSFELAFGGNSQLLQPHFFGVSVSPVSSAAHLLDTHLYISSN 750
Pavo_muticus      AGTCKASNSLLLSSELQRENSFELAFGGNSQLLQPHFFGVSVSPVSSAAHLLDTHLYISSN 750
Pavo_cristatus    AGTCKASNSLLLSSELQRENSFELAFGGNSQLLQPHFFGVSVSPVSSAAHLLDTHLYISSN 750
Chelonia_mydas    TGTYKTSNSLLLSSELRRNSFELAFGGNTQLLQPHLFGVSVSPVSSAAHLLDTQLYISSN 749
Anolis_carolinensis AG-SKASNSLLLSSELQSENSLELAFH-NTQFLQPHLFGVGVSPVNSTAHLLDTRLHISNN 754
.....730.....740.....750.....760.....770.....780

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. :                               ** *:~* . * ****:
Mus_musculus      PVALPTGPLPQC--LTRLSPGCDPAGLPQGDCEMEDLTSGQRGTFLVLVQ 779
Rattus_norvegicus PVALPTGPLPQC--LTRLSPSCDPAGLPQGDCEMEDLTSGQRGTFLVLVQ 776
Heterocephalus_glaber PGTLP TGALAPC--LARLAPGCDPAGRLQGDCEMKGLTSGQRGAFVLVQ 777
Homo_sapiens      PTALPAVPPPR---LARLAPGCEPLGLLOGDCEMEDLMPCSLGTFLVLVQ 783
Pan_troglodytes    PTALPAVPPPR---LARLAPGCEPLGLLOGDCEMEDLMPCSLGTFLVLVQ 783
Macaca_mulatta     PTTLPAAPPPR---LARLAPGCEPLGLLOGDCEMEDLTPCPLGTFLVLVQ 785
Callithrix_jacchus PTALPAAPLPR---PARLAPGCEPLGLLOGDFEMEDLSPCPLGTFLVLVQ 786
Equus_caballus     SAPLPAATPPQPP-FITMLPPRFDP TGLPQGDCEMEDLTSGQLGTFLVLVQ 779
Bos_taurus        TAPSPAAAAPQPR-FAMLPVSLEPTGLPHGDCEMEDLTSGPLGTFLVLVQ 778
Canis_lupus_familiaris VAPRPAAT-----LPPGFVATGLPQGDCEMEDLTAGQLGTFLVLVQ 773
Gallus_gallus     VSPVGT-TFSQQQSFSQAQSPSYDAVTLQHGDCEMEDLTSNQLGKFVLVK 798
Pavo_muticus      VSPVGT-AFSQQQSFSQAQSPSYDAVALQHGDCEMEDLTSNQLGKFVLVK 798
Pavo_cristatus    VSPVGT-AFSQQQSFSQAQSPSYDAVALQHGDCEMEDLTSNQLGKFVLVK 798
Chelonia_mydas    VSPITINNFSQQQNFSVQSPSYDAVTLQNGDCEMEDLTSSQLGKFVLVK 798
Anolis_carolinensis VSPIAS-MFSQQNGFALQSQSYNAVALQHGDCEMEDLTSTQMGKFVLVK 802
.....790.....800.....810.....820.....

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