

# CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep\_msa/FBND Date: Tue Feb 1 12:10:05 2022

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*      .      : *      :
Pavo_muticus      MGRRRWLCLOP-----CFLWLSCALCAHGAAGQ-----OKPP      33
Pavo_cristatus    MGRRRWLCLOP-----CFLWLSCALCAHGAAGQ-----OKPP      33
Gallus_gallus     MGRQRWLCLOP-----CFLWLSCALCAHGAAGQ-----OKPP      33
Anas_platyrhynchos MGRRRWLCVOP-----CFLWLGCALCAHGAAGQ-----OKPP      33
Chelonia_mydas    MGRQRGLCPQL-----YCLWLGCVALWAHGAAGQ-----QKEQ      33
Mus_musculus      MGRRRRLCLOP-----YFVWLGCVALWAHGTGDPQPPPPKT-----LRPQPPP      44
Rattus_norvegicus MGRRRRLCLOP-----YFVWLGCVALWAHGTGDPQPPPPKT-----LRPQPPP      44
Homo_sapiens      MGRRRRLCLOL-----YFVLWGCVALWAHGTAGQPQPPPKP-----PRPQPPP      44
Pan_troglodytes   MGRRRRLCLOL-----YFLWLVCVWLWAHGTAGQPQPPPKP-----PRPQPPP      44
Macaca_mulatta    MGRRRRLCLOP-----YFLWLGCVALWAHGTAGQPQPPPKP-----PRPQPPP      44
Callithrix_jacchus MGRRLRLCLOP-----YFVWLGFVALWAHGTAGQPQPPPKP-----PRPQPPP      44
Canis_lupus_familiaris MGRRRRLCLOP-----YFVWLGCVALWAHGTAGQPQPPPKPRPQPPQPPQPPQPPQPP      55
Felis_catus       MGRRRRLCLOP-----YFVWLGCVALWAHGTAGQPQPPPKP-----PRPQPPP      44
Equus_caballus    MGRRRRLCLOP-----YFVWLGCVALWAHGTAGQPQPPPKP-----PRPQSP      44
Bos_taurus        MGRRRRLCLOP-----YFVWLGCVALWAHGTAGQPQPPPKA-----PRPQPPP      44
Heterocephalus_glaber MGRRRRLCLOH-----YFVWLGCVALWAHGTAGQPQALQAKP-----LRPQ      41
Rhinatrema_bivittatum MGAQRRAAQH-----WLLLLACGAALGVAAGQR-----      29
Xenopus_tropicalis MLAVTSPSPMPGGARRPVLLLGCLLALLGCATVP-----      34
1.....10.....20.....30.....40.....50.....60

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Pavo_muticus      PRVRPAGGAGGTYPAAAVAHREEGAG-SAAAAGRVRRRGQOEALRGPNVCGSRFHSYCCP      92
Pavo_cristatus    PRVRPAGGAGGTYPAAAVAHREEGAG-SAAAAGRVRRRGQOEALRGPNVCGSRFHSYCCP      92
Gallus_gallus     PRVRPAGGAGGTYPAAAVAHREEGAG-SAAAAGRVRRRGQOEALRGPNVCGSRFHSYCCP      93
Anas_platyrhynchos PRVRPAGGAGGSFP--AAAHREEGAG---SAGRVRRRGQODVLRGPNVCGSRFHSYCCP      87
Chelonia_mydas    -QVRPVGGTDAIYP--ASENREDGAG---AATSRVRRRGQODVLRGPNVCGSRFHSYCCP      87
Mus_musculus      QQVRPAV-AGSEGGFMGPYRDEGAV---AASRVRRRGQOEILRGPNVCGSRFHSYCCP      99
Rattus_norvegicus QQVRPAG-AGSEGGFAGPEYRDEGAL---AASRVRRRGQOEILRGPNVCGSRFHSYCCP      99
Homo_sapiens      QQVRSAT-AGSEGGFLAPEYREEGAA---VASRVRRRGQODVLRGPNVCGSRFHSYCCP      99
Pan_troglodytes   QQVRSAT-AGSEGGFLAPEYREEGAA---VASRVRRRGQODVLRGPNVCGSRFHSYCCP      99
Macaca_mulatta    QQVRSAT-TGSEGGFLAPEYREEGAA---VASRVRRRGQODVLRGPNVCGSRFHSYCCP      99
Callithrix_jacchus QHVSAT-AGSEGGFLVPEYLEEGAA---VASRVRRRGQODVLRGPNVCGSRFHSYCCP      99
Canis_lupus_familiaris QQVRPAA-AGSEGGFAVPEYREEGAA---AASRVRRRGQODVLRGPNVCGSRFHSYCCP      110
Felis_catus       QQVRPAA-AGSEGGFAVPEYREEGAA---AASRVRRRGQODVLRGPNVCGSRFHSYCCP      99
Equus_caballus    QQVRPAA-AGSEGGFAVPEYREEGAA---ATTRVRRRGQODVLRGPNVCGSRFHSYCCP      99
Bos_taurus        QQVRPAA-AGSEGAFAVPEYREEGVA---AASRVRRRGQODVLRGPNVCGSRFHSYCCP      99
Heterocephalus_glaber QQVRPAA-AGSEGGFAVPEYREESAA---AASRVRRRGQODVLRGPNVCGSRFHSYCCP      96
Rhinatrema_bivittatum -----AEGGRRGGLQEPEG-----AASRVRRRGQODALRGPNVCGSRFHSYCCP      73
Xenopus_tropicalis -GVGGQYAFSAESSRGAQDAREGTIS---AASRVRRRGQODALRGPNVCGSRFHSYCCP      89
.....70.....80.....90.....100.....110.....120

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*****:****.***.***.***.***.***
Pavo_muticus      GWKTLPGGNQCIVPICRNSCGDGFCSRPNMCTCASGQISPTCGPKSTQQCSIRCMNGGTC      152
Pavo_cristatus    GWKTLPGGNQCIVPICRNSCGDGFCSRPNMCTCASGQISPTCGPKSTQQCSIRCMNGGTC      152
Gallus_gallus     GWKTLPGGNQCIVPICRNSCGDGFCSRPNMCTCASGQISPTCGPKSTQQCSIRCMNGGTC      153
Anas_platyrhynchos GWKTLPGGNQCIVPICRNSCGDGFCSRPNMCTCASGQISPTCGPKSTQQCSIRCMNGGTC      147
Chelonia_mydas    GWKTLPGGNQCIVPICRNSCGDGFCSRPNMCTCSSGQISPTCGSKSIQQCSIRCMNGGTC      147
Mus_musculus      GWKTLPGGNQCIVPICRNSCGDGFCSRPNMCTCSSGQISPTCGAKSIQQCSVRCMNGGTC      159
Rattus_norvegicus GWKTLPGGNQCIVPICRNSCGDGFCSRPNMCTCSSGQISPTCGAKSIQQCSVRCMNGGTC      159
Homo_sapiens      GWKTLPGGNQCIVPICRNSCGDGFCSRPNMCTCSSGQISSTCGSKSIQQCSVRCMNGGTC      159
Pan_troglodytes   GWKTLPGGNQCIVPICRNSCGDGFCSRPNMCTCSSGQISPTCGSKSIQQCSVRCMNGGTC      159
Macaca_mulatta    GWKTLPGGNQCIVPICRNSCGDGFCSRPNMCTCSSGQISPTCGSKSIQQCSVRCMNGGTC      159
Callithrix_jacchus GWKTLPGGNQCIVPICRNSCGDGFCSRPNMCTCSSGQISPTCGSKSIQQCSLRMNGGTC      159
Canis_lupus_familiaris GWKTLPGGNQCIVPICRNSCGDGFCSRPNMCTCSSGQISPTCGSKSIQQCNVRCMNGGTC      170
Felis_catus       GWKTLPGGNQCIVPICRNSCGDGFCSRPNMCTCSSGQISPTCGSKSIQQCNVRCMNGGTC      159
Equus_caballus    GWKTLPGGNQCIVPICRNSCGDGFCSRPNMCTCSSGQISPTCGSKSIQQCNVRCMNGGTC      159
Bos_taurus        GWKTLPGGNQCIVPICRNSCGDGFCSRPNMCTCSSGQISPTCGSKSIQQCSVRCMNGGTC      159
Heterocephalus_glaber GWKTLPGGNQCIVPICRNSCGDGFCSRPNMCTCSSGQISPTCGAKSIQQCSVRCMNGGTC      156
Rhinatrema_bivittatum GWKTLPGGNQCIVPICRNSCGDGFCSRPNMCTCSSGQISPTCGSKSIQQCNIRCMNGGTC      133
Xenopus_tropicalis GWKTLPGGNQCIVPICRNSCGDGFCSRPNMCTCSGQISPNCGSKTIQQCSVRCMNGGTC      149
.....130.....140.....150.....160.....170.....180

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*:*****:* :****:*:*****
Pavo_muticus      ADDRCCQCKGYVGVYCGQPVCEKGCQNGGRCIGPNRCACVYGFTGPOCERDYRTGPCFTQ 212
Pavo_cristatus    ADDRCCQCKGYVGVYCGQPVCEKGCQNGGRCIGPNRCACVYGFTGPOCERDYRTGPCFTQ 212
Gallus_gallus     ADDRCCQCKGYIGVYCGQPVCEKGCQNGGRCIGPNRCACVYGFTGPOCERDYRTGPCFTQ 213
Anas_platyrhynchos ADDRCCQCKGYVGYTCGQPVCEKGCQNGGRCIGPNRCACVYGFTGPOCERDYRTGPCFTQ 207
Chelonia_mydas    ADDQCQCKGYIGTYCGQPVCEKGCQNGGRCIGPNRCACVYGFTGPOCERDYRTGPCFTQ 207
Mus_musculus      ADDHCQCKGYIGTYCGQPVCEKGCQNGGRCIGPNRCACVYGFTGPOCERDYRTGPCFTQ 219
Rattus_norvegicus ADDHCQCKGYIGTYCGQPVCEKGCQNGGRCIGPNRCACVYGFTGPOCERDYRTGPCFTQ 219
Homo_sapiens      ADDHCQCKGYIGTYCGQPVCEKGCQNGGRCIGPNRCACVYGFTGPOCERDYRTGPCFTQ 219
Pan_troglodytes   ADDHCQCKGYIGTYCGQPVCEKGCQNGGRCIGPNRCACVYGFTGPOCERDYRTGPCFTQ 219
Macaca_mulatta    ADDHCQCKGYIGAYCGQPVCEKGCQNGGRCIGPNRCACVYGFTGPOCERDYRTGPCFTQ 219
Callithrix_jacchus ADDHCQCKGYIGTYCGQPLCEKGCQNGGRCIGPNRCACVYGFTGPOCERDYRTGPCFTQ 219
Canis_lupus_familiaris ADDHCQCKGYIGTYCGQPVCEKGCQNGGRCIGPNRCACVYGFTGPOCERDYRTGPCFTQ 230
Felis_catus       ADDHCQCKGYIGTYCGQPVCEKGCQNGGRCIGPNRCACVYGFTGPOCERDYRTGPCFTQ 219
Equus_caballus    ADDHCQCKGYIGTYCGQPVCEKGCQNGGRCIGPNRCACVYGFTGPOCERDYRTGPCFTQ 219
Bos_taurus        ADDHCQCKGYIGTYCGQPVCEKGCQNGGRCIGPNRCACVYGFTGPOCERDYRTGPCFTQ 219
Heterocephalus_glaber TDDHCQCKGYIGTYCGQPVCEKGCQNGGRCIGPNRCACVYGFTGPOCERDYRTGPCFTQ 216
Rhinatrema_bivittatum IEDQCQCKGYMGHMCQPVCEKGCQNGGRCIGPNRCACVYGFTGPOCERDYRTGPCFTQ 193
Xenopus_tropicalis VEDHCQCKGYVGAHCQPVCEKGCQNGGRCIGPNRCACVYGFTGPOCERDYRTGPCFTQ 209
.....190.....200.....210.....220.....230.....240

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*.*****:*****
Pavo_muticus      VNNQMCQGQLTGIVCTKTLCCATIGRAWGHPCEMCPAQPQPCRRGFIPNIRTGACQDVDE 272
Pavo_cristatus    VNNQMCQGQLTGIVCTKTLCCATIGRAWGHPCEMCPAQPQPCRRGFIPNIRTGACQDVDE 272
Gallus_gallus     VNNQMCQGQLTGIVCTKTLCCATIGRAWGHPCEMCPAQPQPCRRGFIPNIRTGACQDVDE 273
Anas_platyrhynchos VNNQMCQGQLTGIVCTKTLCCATIGRAWGHPCEMCPAQPQPCRRGFIPNIRTGACQDVDE 267
Chelonia_mydas    VNNQMCQGQLTGIVCTKTLCCATIGRAWGHPCEMCPAQPQPCRRGFIPNIRNGACQDVDE 267
Mus_musculus      VNNQMCQGQLTGIVCTKTLCCATIGRAWGHPCEMCPAQPQPCRRGFIPNIRTGACQDVDE 279
Rattus_norvegicus VNNQMCQGQLTGIVCTKTLCCATIGRAWGHPCEMCPAQPQPCRRGFIPNIRTGACQDVDE 279
Homo_sapiens      VNNQMCQGQLTGIVCTKTLCCATIGRAWGHPCEMCPAQPQPCRRGFIPNIRTGACQDVDE 279
Pan_troglodytes   VNNQMCQGQLTGIVCTKTLCCATIGRAWGHPCEMCPAQPQPCRRGFIPNIRTGACQDVDE 279
Macaca_mulatta    VNNQMCQGQLTGIVCTKTLCCATIGRAWGHPCEMCPAQPQPCRRGFIPNIRTGACQDVDE 279
Callithrix_jacchus VNNQMCQGQLTGIVCTKTLCCATIGRAWGHPCEMCPAQPQPCRRGFIPNIRTGACQDVDE 279
Canis_lupus_familiaris VNNQMCQGQLTGIVCTKTLCCATIGRAWGHPCEMCPAQPQPCRRGFIPNIRTGACQDVDE 290
Felis_catus       VNNQMCQGQLTGIVCTKTLCCATIGRAWGHPCEMCPAQPQPCRRGFIPNIRTGACQDVDE 279
Equus_caballus    VNNQMCQGQLTGIVCTKTLCCATIGRAWGHPCEMCPAQPQPCRRGFIPNIRTGACQDVDE 279
Bos_taurus        VNNQMCQGQLTGIVCTKTLCCATIGRAWGHPCEMCPAQPQPCRRGFIPNIRTGACQDVDE 279
Heterocephalus_glaber VNNQMCQGQLTGIVCTKTLCCATIGRAWGHPCEMCPAQPQPCRRGFIPNIRTGACQDVDE 276
Rhinatrema_bivittatum VTNQMCQGVVTGIVCTKTLCCATIGRAWGHPCEMCPAQPQPCRRGFIPNIRSGACQDVDE 253
Xenopus_tropicalis VSNQMCQGVVTGIVCTKTLCCATIGRAWGHPCEMCPAQPQPCRRGFIPNIRSGACQDVDE 269
.....250.....260.....270.....280.....290.....300

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*****:*.*****:* **:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*
Pavo_muticus      CQAIPGVCQGGNCINTVGSYECKCPAGHRONEATQKDDIDECEIIPGVCEGGECSNTVG 332
Pavo_cristatus    CQAIPGVCQGGNCINTVGSYECKCPAGHRONEATQKDDIDECEIIPGVCEGGECSNTVG 332
Gallus_gallus     CQAIPGVCQGGNCINTVGSYECKCPAGHRONEATQKDDIDECEIIPGVCEGGECSNTVG 333
Anas_platyrhynchos CQAIPGVCQGGNCINTVGSYECKCPAGHRONEATQKDDIDECEIIPGVCEGGECSNTVG 327
Chelonia_mydas    CQAIPGVCSGGNCINTVGSYECKCPAGHRONEATQKCEDIDECEIIPGVCEGGECSNTVG 327
Mus_musculus      CQAIPGLCQGGNCINTVGSFECRCPAGHKQSETTQKCEDIDECEIIPGVCEGGECSNTVG 339
Rattus_norvegicus CQAIPGLCQGGNCINTVGSFECRCPAGHKQSETTQKCEDIDECEIIPGVCEGGECSNTVG 339
Homo_sapiens      CQAIPGICQGGNCINTVGSFECRCPAGHKQSETTQKCEDIDECEIIPGICETGECSNTVG 339
Pan_troglodytes   CQAIPGICQGGNCINTVGSFECRCPAGHKQSETTQKCEDIDECEIIPGICETGECSNTVG 339
Macaca_mulatta    CQAIPGICQGGNCINTVGSFECRCPAGHKQSETTQKCEDIDECEIIPGICETGECSNTVG 339
Callithrix_jacchus CQAIPGICQGGNCINTVGSFECRCPAGHKQSETTQKCEDIDECEIIPGICETGECSNTVG 339
Canis_lupus_familiaris CQAIPGICQGGNCINTVGSFECRCPAGHKQSETTQKCEDIDECEIIPGICETGECSNTVG 350
Felis_catus       CQAIPGICQGGNCINTVGSFECRCPAGHKQSETTQKCEDIDECEIIPGICETGECSNTVG 339
Equus_caballus    CQAIPGICQGGNCINTVGSFECRCPAGHKQSETTQKCEDIDECEIIPGICETGECSNTVG 339
Bos_taurus        CQAIPGICQGGNCINTVGSFECRCPAGHKQSETTQKCEDIDECEIIPGICETGECSNTVG 339
Heterocephalus_glaber CQAIPGICQGGNCINTVGSFECRCPAGHKQSETTQKCEDIDECEIIPGICETGECSNTVG 336
Rhinatrema_bivittatum CQAIPGLCQGGNCINTVGSFECRCPAGHKQSETTQKCEDIDECEIIPGICETGECSNTVG 313
Xenopus_tropicalis CQAIPGLCQGGNCINTVGSFECRCPAGHKQSETTQKCEDIDECEIIPGICETGECSNTVG 329
.....310.....320.....330.....340.....350.....360

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**:* *****: * **:*:*****: ***.*****:***: ..*::: *****.*****:..
Pavo_muticus      SYFCLCPRGYVSSTDGSRCIDQRASTCFSLVNGRCAQELPGRFTKROCCCESGRCWAIG 392
Pavo_cristatus    SYFCLCPRGYVSSTDGSRCIDQRASTCFSLVNGRCAQELPGRFTKROCCCESGRCWAIG 392
Gallus_gallus     SYFCLCPRGYVSSTDGSRCIDQRASTCFSLVNGRCAQELPGRFTKROCCCESGRCWAIG 393
Anas_platyrhynchos SYFCICPRGYVTSMDGSRCIDQRASTCFSSLVNGRCAQELPGRFTKMOCCCESGRCWAIG 387
Chelonia_mydas    SYFCICPRGYVTSTDGSRCIDQRTGTCFSSLVNGRCAQELPNRFTKMOCCCESGRCWAIG 387
Mus_musculus      SYFCLCPRGFVTSTDGSRCIDQAGTCFSSLVNGRCAQELPGRMAKAQCCCEPGRCWISIG 399
Rattus_norvegicus SYFCLCPRGFVTSTDGSRCIDQRTGTCFSSLVNGRCAQELPGRMAKAQCCCEPGRCWIGIG 399
Homo_sapiens      SYFCVCPRGYVTSTDGSRCIDQRTGTCFSSLVNGRCAQELPGRMTKMOCCCEPGRCWIGIG 399
Pan_troglodytes   SYFCVCPRGYVTSTDGSRCIDQRTGTCFSSLVNGRCAQELPGRMTKMOCCCEPGRCWIGIG 399
Macaca_mulatta    SYFCVCPRGYVTSTDGSRCIDQRTGTCFSSLVNGRCAQELPGRMTKMOCCCEPGRCWIGIG 399
Callithrix_jacchus SYFCVCPRGYVTSADGSQCIDQRTGTCFSSLVNGRCAQELPGRMTKMOCCCEPGRCWIGIG 399
Canis_lupus_familiaris SYFCICPRGYVTSTDGSRCIDQRTGTCFSSLVNGRCAQELPGRMTKMOCCCEPGRCWIGIG 410
Felis_catus       SYFCVCPRGYVTSTDGSRCIDQRTGTCFSSLVNGRCAQELPGRMTKMOCCCEPGRCWIGIG 399
Equus_caballus    SYFCVCPRGYVTSTDGSRCIDQRTGTCFSSLVNGRCAQELPGRMTKMOCCCEPGRCWIGIG 399
Bos_taurus        SYFCVCPRGYVTSTDGSRCIDQRTGTCFSSLVNGRCAQELPGRMTKMOCCCEPGRCWIGIG 399
Heterocephalus_glaber SYFCVCPRGYVTSTDGSRCIDQRTGTCFSSLVNGRCAQELPGRMTKMOCCCEPGRCWIGIG 396
Rhinatrema_bivittatum SYFCSCPRGYVASIDGSHCIDQAGVCFSSLVNGHCAQDLGSRFTKMOCCCESGRCWALA 373
Xenopus_tropicalis SYCICPRGYVTSGDGSRCIDQRSVCFSGLVNGHCAQEQAGRFTKMOCCCESGRCWALG 389
.....370.....380.....390.....400.....410.....420

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::** *::**::** * ** :* . * . :****:***:
Pavo_muticus      SVPEMCPIRGSDEHLRLCVDGVPAG----GDSRGGGGTGGNGFLPGGNGNGYSPGGAGFI 448
Pavo_cristatus    SVPEMCPIRGSDEHLRLCVDGVPAG----GDSRGGGGTGGNGFLPGGNGNGYSPGGAGFI 448
Gallus_gallus     SVPEMCPVRGSDEHRLCVDGVPAG----GDSRGGGGTGGNGFLPGGNGNGYSPGGAGFI 449
Anas_platyrhynchos SVPEMCPVRGSDEHRLCVDGTSAG----GDSR--GGGTGGNGFLPGGNGNGYSPGGAGFI 442
Chelonia_mydas    SVPEMCPVRGSDEYRRLCTDGVVPG----GDSR--PVGPGGNGFLPGGNGNGYSPGGAGFI 442
Mus_musculus      TIPEACPVRGSEYRRLCLDGLPMGGIPGSVSRPGGTG-----STGNGYGPGGTGFI 452
Rattus_norvegicus TIPEACPVRGSEYRRLCLDGLPMGGIPGSVSRPGGTG-----GNSNGYGPGGTGFI 452
Homo_sapiens      TIPEACPVRGSEYRRLCMDGLPMGGIPGSAGSRPGGTGGNGFAPSGNGNGYGPGGTGFI 459
Pan_troglodytes   TIPEACPVRGSEYRRLCMDGLPMGGIPGSAGSRPGGTGGNGFAPSGNGNGYGPGGTGFI 459
Macaca_mulatta    TIPEACPVRGSEYRRLCMDGLPMGGIPGSAGSRPGGTGGNGFAPSGNGNGYGPGGTGFI 459
Callithrix_jacchus TIPEACPVRGSEYRRLCMDGLPMGGIPGSAGSRPGGTGGNGFAPSGNGNGYGPGGTGFI 459
Canis_lupus_familiaris TIPEACPVRGSEYRRLCMDGLPIGGIPGSAGSRPGGTGGNGFAPSGNG--YGPGGTGFI 468
Felis_catus       TIPEACPVRGSEYRRLCMDGLPIGGIPGSAGSRPGGTGGNGFAPSGNGNGYGPGGTGFI 459
Equus_caballus    TIPEACPVRGSEYRRLCMDGLPIGGIPGSAGSRPGGTGGNGFAPSGNGNGYGPGGTGFI 459
Bos_taurus        TIPEACPVRGSEYRRLCLDGLPIGGIPGSAGSRPGGTGGNGFAPSGNGNGYGPGGAGFI 459
Heterocephalus_glaber TIPEACPVRGSEYRRLCMEGLPMGGIPGSAGSRPGGTGGNGFVFNNGNGYGPGGTGFI 456
Rhinatrema_bivittatum SIPEMCPVRGSDEYRRLCIDGVPA-----GHRPGITGGNGFGPVGNGNGFGPGGTGFI 427
Xenopus_tropicalis SIPEMCPVRGSEYRRLCIEGVVPG-----GPGGFVP-----NGFGPGGTGFI 432
.....430.....440.....450.....460.....470.....480

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* **.* ** *.:**::.. * * *: : *****:.....***** *:
Pavo_muticus      PIPGSNGFSPGVGGAGVGTGGQTSSTGNGPIITGLTILNQTIDICKHHPNLCNNGRCIPTI 508
Pavo_cristatus    PIPGSNGFSPGVGGAGVGTGGQTSSTGNGPIITGLTILNQTIDICKHHPNLCNNGRCIPTI 508
Gallus_gallus     PVPGSNGFSPGVGGAGVGTGGQTPAGNGPIITGLTILNQTIDICKHHPNLCNNGRCIPTI 509
Anas_platyrhynchos PIPGSNGFSPSVGGAGVGTGGQSPSTGNGPIITGLTILNQTIDICKHHPNLCNNGRCIPTI 502
Chelonia_mydas    PIPGGNGFSPGVGGAGVGTGGQSPSTGNGAIITGLTILNQTIDICKHHPNLCNNGRCIPTI 502
Mus_musculus      PIPGDNGFSPGVGGAGVGAGGQ-----GPIITGLTILNQTIDICKHHPNLCNNGRCIPTV 507
Rattus_norvegicus PIPGGNGFSPGVGGAGVGAGGQ-----GPIITGLTILNQTIDICKHHPNLCNNGRCIPTV 507
Homo_sapiens      PIPGGNGFSPGVGGAGVGAGGQ-----GPIITGLTILNQTIDICKHHPNLCNNGRCIPTV 514
Pan_troglodytes   PIPGGNGFSPGVGGAGVGAGGQ-----GPIITGLTILNQTIDICKHHPNLCNNGRCIPTV 514
Macaca_mulatta    PIPGGNGFSPGVGGAGVGAGGQ-----GPIITGLTILNQTIDICKHHPNLCNNGRCIPTV 514
Callithrix_jacchus PIPGGNGFSPGVGGAGVGAGGQ-----GPIITGLTILNQTIDICKHHPNLCNNGRCIPTV 514
Canis_lupus_familiaris PIPGGNGFSPGVGGAGVGAGGQ-----GPIITGLTILNQTIDICKHHPNLCNNGRCIPTV 523
Felis_catus       PIPGGNGFSPGVGGAGVGAGGQ-----GPIITGLTILNQTIDICKHHPNLCNNGRCIPTV 514
Equus_caballus    PIPGGNGFSPGVGGAGVGAGGQ-----GPIITGLTILNQTIDICKHHPNLCNNGRCIPTV 514
Bos_taurus        PIPGGNGFSPGVGGAGVGAGGQ-----GPIITGLTILNQTIDICKHHPNLCNNGRCIPTV 514
Heterocephalus_glaber PIPGGNGFSPGVGGAGVGAGGQ-----GPIITGLTILNQTIDICKHHPNLCNNGRCIPTV 511
Rhinatrema_bivittatum PIPGGNGFTPIGGIGTGIGGHPN--GNGPIGGVATLNQTIDICKHHPNLCNNGRCIPNL 485
Xenopus_tropicalis PPGGGNGFHPGIGGTGIDGQGP-----VINGGVATLNQTIDICKHHPNLCNNGRCIPNL 486
.....490.....500.....510.....520.....530.....540

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*****:::*****:*****:*****:*****:
Pavo_muticus          SSYRCECNMGYKQDANGDCIDVDECTSNPCSNGDCVNTPGSYYCKCHAGFORTPTKQSCI 568
Pavo_cristatus        SSYRCECNMGYKQDANGDCIDVDECTSNPCSNGDCVNTPGSYYCKCHAGFORTPTKQSCI 568
Gallus_gallus         SSYRCECNMGYKQDANGDCIDVDECTSNPCSNGDCVNTPGSYYCKCHAGFORTPTKQACI 569
Anas_platyrhynchos    SSYRCECNMGYKQDANGDCIDVDECTSNPCSNGDCVNTPGSYYCKCHAGFORTPTKQACI 562
Chelonia_mydas        SSYRCECNMGYKQDANGDCIDVDECTSNPCSNGDCVNTPGSYYCKCHAGFORTPTKQACI 562
Mus_musculus          SSYRCECNMGYKQDANGDCIDVDECTSNPCSNGDCVNTPGSYYCKCHAGFORTPTKQACI 567
Rattus_norvegicus     SSYRCECNMGYKQDANGDCIDVDECTSNPCSHGDCVNTPGSYYCKCHAGFORTPTKQACI 567
Homo_sapiens          SSYRCECNMGYKQDANGDCIDVDECTSNPCSNGDCVNTPGSYYCKCHAGFORTPTKQACI 574
Pan_troglodytes       SSYRCECNMGYKQDANGDCIDVDECTSNPCSNGDCVNTPGSYYCKCHAGFORTPTKQACI 574
Macaca_mulatta        SSYRCECNMGYKQDANGDCIDVDECTSNPCSNGDCVNTPGSYYCKCHAGFORTPTKQACI 574
Callithrix_jacchus    SSYRCECNMGYKQDANGDCIDVDECTSNPCSNGDCVNTPGSYYCKCHAGFORTPTKQACI 574
Canis_lupus_familiaris SSYRCECNMGYKQDSNGDCIDVDECTSNPCSNGDCVNTPGSYYCKCHAGFORTPTKQACI 583
Felis_catus           SSYRCECNMGYKQDSNGDCIDVDECTSNPCSNGDCVNTPGSYYCKCHAGFORTPTKQACI 574
Equus_caballus        SSYRCECNMGYKQDANGDCIDVDECTSNPCSNGDCVNTPGSYYCKCHAGFORTPTKQACI 574
Bos_taurus            SSYRCECNMGYKQDANGDCIDVDECTSNPCSNGDCVNTPGSYYCKCHAGFORTPTKQACI 574
Heterocephalus_glaber SSYRCECNMGYKQDANGDCIDVDECTSNPCSNGDCVNTPGSYYCKCHAGFORTPTKQACI 571
Rhinatrema_bivittatum HSRYRCECNMGYKQDAHGDCVDVDECTSNPCSNGDCVNTPGSYYCKCHAGFORTPTKQACI 545
Xenopus_tropicalis    NSYRCECNMGYKQDTQTCECIDVDECTSNPCSNGDCVNTPGSYYCKCHSGFORTPTKQACI 546
.....550.....560.....570.....580.....590.....600

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*****:***:*****:* *****:***:***:*****:***:*****
Pavo_muticus          DIDECIQNGVLCKNGRCVNTDGSFQCICNAGFELTTDGKNCVDHDECTTTNMCLNGMCIN 628
Pavo_cristatus        DIDECIQNGVLCKNGRCVNTDGSFQCICNAGFELTTDGKNCVDHDECTTTNMCLNGMCIN 628
Gallus_gallus         DIDECIQNGVLCKNGRCVNTDGSFQCICNAGFELTTDGKNCVDHDECTTTNMCLNGMCIN 629
Anas_platyrhynchos    DIDECIQNGVLCKNGRCVNTDGSFQCICNAGFELTTDGKNCVDHDECTTTNMCLNGMCIN 622
Chelonia_mydas        DIDECIQNGILCKNGRCVNTDGSFQCICNAGFELTTDGKNCVDHDECTTTNMCLNGMCIN 622
Mus_musculus          DIDECIQNGVLCKNGRCVNTDGSFQCICNAGFELTTDGKNCVDHDECTTTNMCLNGMCIN 627
Rattus_norvegicus     DIDECIQNGVLCKNGRCVNTDGRFQCICNAGFELTTDGKNCVDHDECTTTNMCLNGMCIN 627
Homo_sapiens          DIDECIQNGVLCKNGRCVNTDGSFQCICNAGFELTTDGKNCVDHDECTTTNMCLNGMCIN 634
Pan_troglodytes       DIDECIQNGVLCKNGRCVNTDGSFQCICNAGFELTTDGKNCVDHDECTTTNMCLNGMCIN 634
Macaca_mulatta        DIDECIQNGVLCKNGRCVNTDGSFQCICNAGFELTTDGKNCVDHDECTTTNMCLNGMCIN 634
Callithrix_jacchus    DIDECIQNGVLCKNGRCVNTDGSFQCICNAGFELTTDGKNCVDHDECTTTNMCLNGMCIN 634
Canis_lupus_familiaris DIDECIQNGVLCKNGRCVNTDGSFQCICNAGFELTTDGKNCVDHDECTTTNMCLNGMCIN 643
Felis_catus           DIDECIQNGVLCKNGRCVNTDGSFQCICNAGFELTTDGKNCVDHDECTTTNMCLNGMCIN 634
Equus_caballus        DIDECIQNGVLCKNGRCVNTDGSFQCICNAGFELTTDGKNCVDHDECTTTNMCLNGMCIN 634
Bos_taurus            DIDECIQNGVLCKNGRCVNTDGSFQCICNAGFELTTDGKNCVDHDECTTTNMCLNGMCIN 634
Heterocephalus_glaber DIDECIQNGVLCKNGRCVNTDGSFQCICNAGFELTTDGKNCVDHDECTTTNVCLNGMCIN 631
Rhinatrema_bivittatum DIDECIQNGVLCKNGRCVNTDGSFQCICNAGFELTPDGKNCADHDECTTTNMCLNGMCIN 605
Xenopus_tropicalis    DIDECIQNGILCKHGRCVNTDGSFQCICNAGFELTPDGKNCADHDECTTTNMCLNGMCIN 606
.....610.....620.....630.....640.....650.....660

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*****:*****:***.*****:***:*.*****.*****:*****:***
Pavo_muticus          EDGSFKCICKPGFVLAPNGRYCTDIDECQTSGICMNGHCINTEGSFRCECPPGLAVGVDG 688
Pavo_cristatus        EDGSFKCICKPGFVLAPNGRYCTDIDECQTSGICMNGHCINTEGSFRCECPPGLAVGVDG 688
Gallus_gallus         EDGSFKCICKPGFVLAPNGRYCTDIDECQTSGICMNGHCINTEGSFRCECPPGLAVGVDG 689
Anas_platyrhynchos    EDGSFKCICKPGFVLAPNGRYCTDIDECQTSGICMNGHCINTEGSFRCECPPGLAVGVDG 682
Chelonia_mydas        EDGSFKCICKPGFVLAPNGRYCTDIDECQTPGICMNGHCINTEGSFRCECPPGLAVGVDG 682
Mus_musculus          EDGSFKCVCKPGFILAPNGRYCTDVDECQTPGICMNGHCINNEGSFRCDPPGLAVGVDG 687
Rattus_norvegicus     EDGSFKCICKPGFVLAPNGRYCTDVDECQTPGICMNGHCINNEGSFRCDPPGLAVGVDG 687
Homo_sapiens          EDGSFKCICKPGFVLAPNGRYCTDVDECQTPGICMNGHCINSEGSFRCDPPGLAVGMDG 694
Pan_troglodytes       EDGSFKCICKPGFVLAPNGRYCTDVDECQTPGICMNGHCINSEGSFRCDPPGLAVGMDG 694
Macaca_mulatta        EDGSFKCICKPGFVLAPNGRYCTDVDECQTPGICMNGHCINNEGSFRCDPPGLAVGMDG 694
Callithrix_jacchus    EDGSFKCICKPGFVLAPNGRYCTDVDECQTPGICMNGHCINNEGSFRCDPPGLAVGMDG 694
Canis_lupus_familiaris EDGSFKCICKPGFVLAPNGRYCTDVDECQTPGICMNGHCINNEGSFRCDPPGLAVGVDG 703
Felis_catus           EDGSFKCICKPGFVLAPNGRYCTDVDECQTPGICMNGHCINNEGSFRCDPPGLAVGVDG 694
Equus_caballus        EDGSFKCICKPGFVLAPNGRYCTDVDECQTPGICMNGHCINNEGSFRCDPPGLAVGVDG 694
Bos_taurus            EDGSFKCICKPGFILAPNGRYCTDVDECQTPGICMNGHCINNEGSFRCDPPGLAVGVDG 694
Heterocephalus_glaber EDGSFKCICKPGFILAPNGRYCTDVDECQTPGICMNGHCINNEGSFRCDPPGLAVGVDG 691
Rhinatrema_bivittatum EDGSFKCICKPGFVLASNGRYCTDIDECQTPGICMNGHCINTEGSFRCDPPGLAVGVDG 665
Xenopus_tropicalis    EDGSFKCICKPGFVLASNGRYCTDIDECQTPGICMNGHCINTEGSFRCDPPGLAIGVDG 666
.....670.....680.....690.....700.....710.....720

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# CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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*****
Pavo_muticus      RVCVDTHMRSTCYGGIKKGACIRPFPFPAVTKSECCCANPDYGFGEPCHPCPAKNSAEFHG 748
Pavo_cristatus    RVCVDTHMRSTCYGGIKKGACIRPFPFPAVTKSECCCANPDYGFGEPCHPCPAKNSAEFHG 748
Gallus_gallus     RVCVDTHMRSTCYGGIKKGACIRPFPFPAVTKSECCCANPDYGFGEPCHPCPAKNSAEFHG 749
Anas_platyrhynchos RVCVDTHMRSTCYGGIKKGACVRPFPFPAVTKSECCCANPDYGFGEPCHPCPAKNSAEFHG 742
Chelonia_mydas    RVCVDTHMRSTCYGGIKKGVCVRPFPFPAVTKSECCCANPDYGFGEPCHPCPAKNSAEFHG 742
Mus_musculus      RVCVDTHMRSTCYGEIKKGVCVRPFPFPAVTKSECCCANPDYGFGEPCHPCPAKNSAEFHG 747
Rattus_norvegicus RVCVDTHMRSTCYGEIKKGVCVRPFPFPAVTKSECCCANPDYGFGEPCHPCPAKNSAEFHG 747
Homo_sapiens      RVCVDTHMRSTCYGGIKKGVCVRPFPFPAVTKSECCCANPDYGFGEPCHPCPAKNSAEFHG 754
Pan_troglodytes   RVCVDTHMRSTCYGGIKKGVCVRPFPFPAVTKSECCCANPDYGFGEPCHPCPAKNSAEFHG 754
Macaca_mulatta    RVCVDTHMRSTCYGGIKKGVCVRPFPFPAVTKSECCCANPDYGFGEPCHPCPAKNSAEFHG 754
Callithrix_jacchus RVCVDTHMRSTCYGGIKKGVCVRPFPFPAVTKSECCCANPDYGFGEPCHPCPAKNSAEFHG 754
Canis_lupus_familiaris RVCVDTHMRSTCYGGIKKGVCVRPFPFPAVTKSECCCANPDYGFGEPCHPCPAKNSAEFHG 763
Felis_catus       RVCVDTHMRSTCYGGIKKGVCVRPFPFPAVTKSECCCANPDYGFGEPCHPCPAKNSAEFHG 754
Equus_caballus    RVCVDTHMRSTCYGGIKKGVCVRPFPFPAVTKSECCCANPDYGFGEPCHPCPAKNSAEFHG 754
Bos_taurus        RVCVDTHMRSTCYGGIKKGVCVRPFPFPAVTKSECCCANPDYGFGEPCHPCPAKNSAEFHG 754
Heterocephalus_glaber RVCVDTHMRSTCYGGIKKGVCVRPFPFPAVTKSECCCANPDYGFGEPCHPCPAKNSAEFHG 751
Rhinatrema_bivittatum RVCVDTHMRSTCYGGIKKGVCVRPFPFPAVTKSECCCANPDYGFGEPCHPCPAKNSAEFHG 725
Xenopus_tropicalis RVCVDTHMRSTCYGGIKKGVCVRPFPFPAVTKSECCCANPDYGFGEPCHPCPAKNSAEFHG 726
.....730.....740.....750.....760.....770.....780

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***.*:*****:***:*****:*****:***.*:***:*****
Pavo_muticus      LCSSGVGITVDGRDINECALDPDICSNGICENLRGSYRCNCNSGYEPDPSGRNCVDIDEC 808
Pavo_cristatus    LCSSGVGITVDGRDINECALDPDICSNGICENLRGSYRCNCNSGYEPDPSGRNCVDIDEC 808
Gallus_gallus     LCSSGIGITVDGRDINECALDPDICSNGICENLRGSYRCNCNSGYEPDPSGRNCVDIDEC 809
Anas_platyrhynchos LCSSGIGITVDGRDINECALDPDICSNGICENLRGSYRCNCNSGYEPDPSGRNCVDIDEC 802
Chelonia_mydas    LCSSGVGITVDGRDINECALDPDICSNGICENLRGSYRCNCNSGYEPDPSGRNCVDIDEC 802
Mus_musculus      LCSSGIGITVDGRDINECALDPDICANGICENLRGSYRCNCNSGYEPDASGRNCIDIDEC 807
Rattus_norvegicus LCSSGVGITVDGRDINECALDPDICANGICENLRGSYRCNCNSGYEPDASGRNCIDIDEC 807
Homo_sapiens      LCSSGVGITVDGRDINECALDPDICANGICENLRGSYRCNCNSGYEPDASGRNCIDIDEC 814
Pan_troglodytes   LCSSGVGITVDGRDINECALDPDICANGICENLRGSYRCNCNSGYEPDASGRNCIDIDEC 814
Macaca_mulatta    LCSSGVGITVDGRDINECALDPDICANGICENLRGSYRCNCNSGYEPDASGRNCIDIDEC 814
Callithrix_jacchus LCSSGVGITVDGRDINECALDPDICANGICENLRGSYRCNCNSGYEPDASGRNCIDIDEC 814
Canis_lupus_familiaris LCSSGVGITVDGRDINECALDPDICANGICENLRGSYRCNCNSGYEPDASGRNCIDIDEC 823
Felis_catus       LCSSGVGITVDGRDINECALDPDICANGICENLRGSYRCNCNSGYEPDASGRNCIDIDEC 814
Equus_caballus    LCSSGVGITVDGRDINECALDPDICANGICENLRGSYRCNCNSGYEPDASGRNCIDIDEC 814
Bos_taurus        LCSSGVGITVDGRDINECALDPDICANGICENLRGSYRCNCNSGYEPDASGRNCVDIDEC 814
Heterocephalus_glaber LCSSGVGITVDGRDINECALDPDICANGICENLRGSYRCNCNSGYEPDASGRNCIDIDEC 811
Rhinatrema_bivittatum LCSSGIGITVDGRDINECALDPEICSNGICENLRGSYRCNCNIGYESDTSGRNCVDIDEC 785
Xenopus_tropicalis LCSSGVGITVDGRDINECALDPDICANGICENLRGSYRCNCNSGFESDSTGKNCSAEFHG 786
.....790.....800.....810.....820.....830.....840

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** *****:**** *:.* :.:**** **** .****.**** ****
Pavo_muticus      SVNGLLCDNGLCRNTPGSYSCTCPKGYVFSSTETDTCEDINECESSPCVNGACRNNLGSFS 868
Pavo_cristatus    SVNGLLCDNGLCRNTPGSYSCTCPKGYVFSSTETDTCEDINECESSPCVNGACRNNLGSFS 868
Gallus_gallus     SVNGLLCDNGLCRNTPGSYSCTCPKGYVFSSTETDTCEDINECESSPCVNGACRNNLGSFS 869
Anas_platyrhynchos SVNGLLCDNGLCRNTPGSYSCTCPKGYVFSSTETDTCEDINECESSPCVNAACRNNLGSFN 862
Chelonia_mydas    SVNRLLCDNGLCRNTPGSYSCTCPKGYVFSSTETDTCEDINECESISPCVMSACRNNLGSFN 862
Mus_musculus      LVNRLLCDNGLCRNTPGSYSCTCPPGYVFRTEETETCEDVNECESNPCVNGACRNNLGSFH 867
Rattus_norvegicus LVNRLLCDNGLCRNTPGSYSCTCPPGYVFRTEETETCEDVNECESNPCVNGACRNNLGSFH 867
Homo_sapiens      LVNRLLCDNGLCRNTPGSYSCTCPPGYVFRTEETETCEDINECESNPCVNGACRNNLGSFN 874
Pan_troglodytes   LVNRLLCDNGLCRNTPGSYSCTCPPGYVFRTEETETCEDINECESNPCVNGACRNNLGSFN 874
Macaca_mulatta    LVNRLLCDNGLCRNTPGSYSCTCPPGYVFRTEETETCEDINECESNPCVNGACRNNLGSFN 874
Callithrix_jacchus LVNRLLCDNGLCRNTPGSYSCTCPPGYVFRTEETETCEDINECESNPCVNGACRNNLGSFN 874
Canis_lupus_familiaris LVNRLLCDNGLCRNTPGSYSCTCPPGYVFRTEETETCEDINECESNPCVNGACRNNLGSFN 883
Felis_catus       LVNRLLCDNGLCRNTPGSYSCTCPPGYVFRTEETETCEDINECESNPCVNGACRNNLGSFN 874
Equus_caballus    LVNRLLCDNGLCRNTPGSYSCTCPPGYVFRTEETETCEDINECESNPCVNGACRNNLGSFN 874
Bos_taurus        LVNRLLCDNGLCRNTPGSYSCTCPPGYVFRTEETETCEDINECESNPCVNGACRNNLGSFN 874
Heterocephalus_glaber LVNRLLCDNGLCRNTPGSYSCTCPPGYVFRTEETETCEDINECESNPCVNGACRNNLGSFN 871
Rhinatrema_bivittatum LVNRLLCDNGLCRNTPGSYSCTCPRGYIFRIEDTDCEDINECESNPCVNGACRNNLGSFN 845
Xenopus_tropicalis LVNRLLCDNGLCRNTPGSYSCTCPKGYVFRSDSETCEDINECESSPCVNGACRNNLGSFN 846
.....850.....860.....870.....880.....890.....900

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## CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

**File: /media/morpheus/disk1/fst/pep\_msa/FBND** **Date: Tue Feb 1 12:10:05 2022**

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Pavo_muticus	CECSPGSKLDSTGLICIDSLKGT CWLNIQDSRCEVNINGATLKSECCATLGAAWGSPCER	928
Pavo_cristatus	CECSPGSKLDSTGLICIDSLKGT CWLNIQDSRCEVNINGATLKSECCATLGAAWGSPCER	928
Gallus_gallus	CECSPGSKLDSTGLICIDSLKGT CWLNIQDSRCEVNINGATLKSECCATLGAAWGSPCER	929
Anas_platyrhynchos	CECSPGSKLDSTGLICIDSLKGT CWLNIQDSRCEVNINGATLKSECCATLGAAWGSPCER	922
Chelonia_mydas	CECSPGSKLDSTGLICIDSLKGT CWLNIQDSRCEVNINGATLKSECCATLGAAWGSPCER	922
Mus_musculus	CECSPGSKLSSTGLICIDSLKGT CWLNIQDNRCEVNINGATLKSECCATLGAAWGSPCER	927
Rattus_norvegicus	CECSPGSKLSSTGLICIDSLKGT CWLNIQDNRCEVNINGATLKSECCATLGTAWGSPCER	927
Homo_sapiens	CECSPGSKLSSTGLICIDSLKGT CWLNIQDSRCEVNINGATLKSECCATLGAAWGSPCER	934
Pan_troglodytes	CECSPGSKLSSTGLICIDSLKGT CWLNIQDSRCEVNINGATLKSECCATLGAAWGSPCER	934
Macaca_mulatta	CECSPGSKLSSTGLICIDSLKGT CWLNIQDSRCEVNINGATLKSECCATLGAAWGSPCER	934
Callithrix_jacchus	CECSPGSKLSSTGLICIDSLKGT CWLNIQDSRCEVNINGATLKSECCATLGAAWGSPCER	934
Canis_lupus_familiaris	CECSPGSKLSSTGLICIDSLKGT CWLNIQDNRCEVNINGATLKSECCATLGAAWGSPCER	943
Felis_catus	CECSPGSKLSSTGLICIDSLKGT CWLNIQDNRCEVNINGATLKSECCATLGAAWGSPCER	934
Equus_caballus	CECSPGSKLSSTGLICIDSLKGT CWLNIQDNRCEVNINGATLKSECCATLGAAWGSPCER	934
Bos_taurus	CECSPGSKLSSTGLICIDSLKGT CWLNIQDNRCEVNINGATLKSECCATLGAAWGSPCER	934
Heterocephalus_glaber	CECSPGSKLSSTGLICIDSLKGT CWLNIQDNRCEVNINGATLKSECCATLGAAWGSPCER	931
Rhinatrema_bivittatum	CECSHGSRLDSTGLICIDSLKGT CWLNIH DGRCEVNINGATLKSECCATLGAAWGSPCER	905
Xenopus_tropicalis	CECSPGSRLDATGLICIDSLKGT CWLNIQDGRCEVNINGATLKSECCATLGAAWGSPCER	906
	.....910.....920.....930.....940.....950.....960	

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Pavo_muticus	CELDTACSRGFARVKGVT	CEDVNECDVFP	PGVCPNGRCVNSRGS	SFHCECPEGLTLDGTGRV	988
Pavo_cristatus	CELDTACSRGFARVKGVT	CEDVNECDVFP	PGVCPNGRCVNSRGS	SFHCECPEGLTLDGTGRV	988
Gallus_gallus	CELDTACSRGFARVKGVT	CEDVNECDVFP	PGVCPNGRCVNSRGS	SFHCECPEGLTLDGTGRV	989
Anas_platyrhynchos	CELDTACSRGFARVKGVT	CEDVNECDVFP	PGVCPNGRCVNSKGS	SFHCECPEGLTLDGTGRV	982
Chelonia_mydas	CELDAACPRGFARVKGVT	CEDVNECDVFP	GVCTNGRCVNSRGS	SFHCECPEGLTLDGTGRV	982
Mus_musculus	CELDAACPRGFARIKGV	TCEDVNECEVFP	PGVCPNGRCVNSKGS	SFHCECPEGLTLDGTGRV	987
Rattus_norvegicus	CELDAACPRGFARIKGV	TCEDVNECEVFP	PGVCPNGRCVNSKGS	SFHCECPEGLTLDGTGRV	987
Homo_sapiens	CELDTACPRGLARIKGV	TCEDVNECEVFP	PGVCPNGRCVNSKGS	SFHCECPEGLTLDGTGRV	994
Pan_troglodytes	CELDTACPRGLARIKGV	TCEDVNECEVFP	PGVCPNGRCVNSKGS	SFHCECPEGLTLDGTGRV	994
Macaca_mulatta	CELDTACPRGLARIKGV	TCEDVNECEVFP	PGVCPNGRCVNSKGS	SFHCECPEGLTLDGTGRV	994
Callithrix_jacchus	CEPDTACPRGLARIKGV	TCEDVNECEVFP	GVCPNGRCVNSKGS	SFHCECPEGLTLDVTGRV	994
Canis_lupus_familiaris	CELDTACPRGFARIKGV	SCEDVNECEVFP	PGVCPNGRCVNSKGS	SFHCECPEGLTLDGTGRV	1003
Felis_catus	CELDTACPRGFARIKGV	SCEDVNECEVFP	PGVCPNGRCVNSKGS	SFHCECPEGLTLDGTGRV	994
Equus_caballus	CELDTACPRGFARIKGV	TCEDVNECEVFP	PGVCPNGRCVNSKGS	SFHCECPEGLTLDGTGRV	994
Bos_taurus	CELDTACPRGFARIKGV	TCEDVNECEVFP	PGVCPNGRCVNSKGS	SFHCECPEGLTLDGTGRV	994
Heterocephalus_glaber	CELDTACPRGFARIKGV	TCEDVNECEVFP	PGVCPNGRCVNSKGS	SFHCECPEGLTLDGTGRV	991
Rhinatrema_bivittatum	CELDAACPRGFARVMG	VACEDVNECEVFP	GVCPNGQCVNTKGS	SFHCECPDGLTLDGTGRV	965
Xenopus_tropicalis	CEIDPACPRGFARVMG	VSCEDVNECEVFP	GVCPNGGLCLNTKGS	SFLCECPDGLTLDGTGRL	966
	.....970.....	980.....	990.....	1000.....1010.....1020	

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Pavo_muticus	CLDIRMEQCYLKWDEDECIQSVPGKFRMDACCCAVGAAWGSDCEECPKPGTKKEYEALCPR	1048
Pavo_cristatus	CLDIRMEQCYLKWDEDECIQSVPGKFRMDACCCAVGAAWGSDCEECPKPGTKKEYEALCPR	1048
Gallus_gallus	CLDIRMEQCYLKWDEDECIQSVPGKFRMDACCCAVGAAWGSDCEECPKPGTKKEYEALCPR	1049
Anas_platyrhynchos	CLDIRMEQCYLKWDEDECIQSVPGKFRMDACCCAVGAAWGSDCEECPKPGTKKEYESLCPR	1042
Chelonia_mydas	CLDIRMEQCYLKWDEDECIQSVPGKFRMDACCCAVGAAWGSDCEECPKPGTKKEYEALCPR	1042
Mus_musculus	CLDIRMEHCFLKWDEDECIHPVPGKFRMDACCCAVGAAWGTCEECCKPKPGTKKEYETLCPR	1047
Rattus_norvegicus	CLDVRMEHCFLKWDEDECVHPVPGKFRMDACCCAVGAAWGTCEECCKPKPGTKKEYETLCPR	1047
Homo_sapiens	CLDIRMEQCYLKWDEDECIHPVPGKFRMDACCCAVGAAWGTCEECCKPKPGTKKEYETLCPR	1054
Pan_troglodytes	CLDIRMEQCYLKWDEDECIHLVPGKFRMDACCCAVGAAWGTCEECCKPKPGTKKEYETLCPR	1054
Macaca_mulatta	CLDIRMEQCYLKWDEDECIHPVPGKFRMDACCCAVGAAWGTCEECCKPKPGTKKEYETLCPR	1054
Callithrix_jacchus	CLDIRMEQCYLKWDEDECIHPVPGKFRMDACCCAVGAAWGTCEECCKPKPGTKKEYESLCPR	1054
Canis_lupus_familiaris	CLDIRMEQCYLKWDEDECVHPVPGKFRMDACCCAVGAAWGTCEECCKPKPGTKKEYETLCPR	1063
Felis_catus	CLDIRMEQCYLKWDEDECVHPVPGKFRMDACCCAVGAAWGTCEECCKPKPGTKKEYETLCPR	1054
Equus_caballus	CLDIRMEQCYLKWDEDECVHSPVPGKFRMDACCCAVGAAWGTCEECCKPKPGTKKEYETLCPR	1054
Bos_taurus	CLDIRMEQCYLKWDEDECIHPVPGKFRMDACCCAVGAAWGTCEECCKPKPGTKKEYETLCPR	1054
Heterocephalus_glaber	CLDIRMEQCYLKWDEDECVHPVPGKFRMDACCCAVGAAWGTCEECCKPKPGTKKEYETLCPR	1051
Rhinatrema_bivittatum	CIDIRMEHCYLOWDEDECIQVPVSRFRMDACCCSVGAAWGTDCEECCKPRTKFEALCPR	1025
Xenopus_tropicalis	CLDIRMEHCFLKWDEDECVHPVPGKFRMDACCCAVGAAWGTCEECCKPKPGSQEFELLCPR	1026
	.....1030.....1040.....1050.....1060.....1070.....1080	



# CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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*.:***:****:*.:*****:****:* *****:*.:****:*****
Pavo_muticus      GPGFSNRGDILTGRPFYKDINECKVFPGMCMNGKCRNTIGSFKCRCNSGFALDMEERNCT 1108
Pavo_cristatus    GPGFSNRGDILTGRPFYKDINECKVFPGMCMNGKCRNTIGSFKCRCNSGFALDMEERNCT 1108
Gallus_gallus     GPGFSNRGDILTGRPFYKDINECKVFPGMCMNGKCRNTIGSFKCRCNSGFALDMEERNCT 1109
Anas_platyrhynchos GPGFSNRGDILTGRPFYKDINECKVFPGMCMNGKCRNTIGSFKCRCNSGFALDMEERNCT 1102
Chelonia_mydas    GPGFSNRGDVLTGRPFYKDINECKVFPGMCRNGKCRNTIGSFKCRCNSGFALDMEERNCT 1102
Mus_musculus      GPGFANRGDILTGRPFYKDINECKAFPGMCTYGKCRNTIGSFKCRCNSGFALDMEERNCT 1107
Rattus_norvegicus GPGFANRGDILTGRPFYKDINECKAFPGMCTYGKCRNTIGSFKCRCNSGFALDMEERNCT 1107
Homo_sapiens      GAGFANRGDVLTGRPFYKDINECKAFPGMCTYGKCRNTIGSFKCRCNSGFALDMEERNCT 1114
Pan_troglodytes   GAGFANRGDVLTGRPFYKDINECKAFPGMCTYGKCRNTIGSFKCRCNSGFALDMEERNCT 1114
Macaca_mulatta    GAGFANRGDVLTGRPFYKDINECKAFPGMCTYGKCRNTIGSFKCRCNSGFALDMEERNCT 1114
Callithrix_jacchus GAGFANRGDILSGRPFYKDINECKAFPGMCTYGKCRNTIGSFKCRCNSGFALDMEERNCT 1114
Canis_lupus_familiaris GPGFANRGDVLTGRPFYKDINECKAFPGMCTYGKCRNTIGSFKCRCNSGFALDMEERNCT 1123
Felis_catus       GPGFANRGDVLTGRPFYKDINECKAFPGMCTYGKCRNTIGSFKCRCNSGFALDMEERNCT 1114
Equus_caballus    GPGFANRGDVLTGRPFYKDINECKAFPGMCTYGKCRNTIGSFKCRCNSGFALDMEERNCT 1114
Bos_taurus        GPGFANRGDVLTGRPFYKDINECKAFPGMCTYGKCRNTIGSFKCRCNSGFALDMEERNCT 1114
Heterocephalus_glaber GPGFANRGDILTGRPFYKDINECKAFPGMCTYGKCRNTIGSFKCRCNSGFALDMEERNCT 1111
Rhinatrema_bivittatum GPGFSNRGDVLTGRPFYKDINECKVFPGICSNKCRNTIGSFKCRCNSGFALDMEERNCT 1085
Xenopus_tropicalis GPGFTNRGDVLTGRPFYKDINECKAFPGICITNGKCRNTIGSFKCKCNNGFALDMEERNCT 1086
.....1090.....1100.....1110.....1120.....1130.....1140

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*****:****:*.:****:*.:*****:****:***** *
Pavo_muticus      DIDECRISPDLCGSGTCVNTPGSFCECFDGYESGFMMMKNCMDIDECCERNPLLRCGGMC 1168
Pavo_cristatus    DIDECRISPDLCGSGTCVNTPGSFCECFDGYESGFMMMKNCMDIDECCERNPLLRCGGMC 1168
Gallus_gallus     DIDECRISPDLCGSGTCVNTPGSFCECFDGYESGFMMMKNCMDIDECCERNPLLRCGGMC 1169
Anas_platyrhynchos DIDECRISPDLCGSGTCVNTPGSFCECFDGYESGFMMMKNCMDIDECCERNPLLRCGGTC 1162
Chelonia_mydas    DIDECRISPDLCGSGTCVNTPGSFCECFEGYESGFMMMKNCMDIDECCERNPLLRCGGTC 1162
Mus_musculus      DIDECRISPDLCGSGICVNTPGSFCECFEGYESGFMMMKNCMDIDECCERNPLLRCGGTC 1167
Rattus_norvegicus DIDECRISPDLCGSGICVNTPGSFCECFEGYESGFMMMKNCMDIDECCERNPLLRCGGTC 1167
Homo_sapiens      DIDECRISPDLCGSGICVNTPGSFCECFEGYESGFMMMKNCMDIDECCERNPLLRCGGTC 1174
Pan_troglodytes   DIDECRISPDLCGSGICVNTPGSFCECFEGYESGFMMMKNCMDIDECCERNPLLRCGGTC 1174
Macaca_mulatta    DIDECRISPDLCGSGICVNTPGSFCECFEGYESGFMMMKNCMDIDECCERNPLLRCGGTC 1174
Callithrix_jacchus DIDECRISPDLCGSGICVNTPGSFCECFEGYESGFMMMKNCMDIDECCERNPLLRCGGTC 1174
Canis_lupus_familiaris DIDECRISPDLCGSGICVNTPGSFCECFEGYESGFMMMKNCMDIDECCERNPLLRCGGTC 1183
Felis_catus       DIDECRISPDLCGSGICVNTPGSFCECFEGYESGFMMMKNCMDIDECCERNPLLRCGGTC 1174
Equus_caballus    DIDECRISPDLCGSGICVNTPGSFCECFEGYESGFMMMKNCMDVDECERNPLLRCGGTC 1174
Bos_taurus        DIDECRISPDLCGSGICVNTPGSFCECFEGYESGFMMMKNCMDIDECCERNPLLRCGGTC 1174
Heterocephalus_glaber DIDECRISPDLCGSGVCVNTPGSFCECFEGYESGFMMMKNCMDIDECCERNPLLRCGGTC 1171
Rhinatrema_bivittatum DIDECRISPDLCGSGTCVNTPGDFGCECFEGYESGFMMMKNCMDIDECCERNPLLRCGGIC 1145
Xenopus_tropicalis DIDECRISPDLCGSGTCINTPGSFCECFEGFESGFMMMKNCMDIDECCERNPLLRCGGEC 1146
.....1150.....1160.....1170.....1180.....1190.....1200

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:***** *:*** *:***:*.: *:***:*.:*****:***:***** *:***
Pavo_muticus      VNTEGSFQCDPCVGHLSPSREECIDVNECSLSDNLCRNGNCVNMVGTQYQCSNSGYQAT 1228
Pavo_cristatus    VNTEGSFQCDPCVGHLSPSREECIDVNECSLSDNLCRNGNCVNMVGTQYQCSNSGYQAT 1228
Gallus_gallus     VNTEGSFQCDPCVGHLSPSREECIDVNECSLSDNLCRNGNCVNMVGTQYQCSNSGYQAT 1229
Anas_platyrhynchos VNTEGSFQCDPCVGHLSPSREECIDVNECSLSDNLCRNGKCVNMIGTYQCSNSGYQAT 1222
Chelonia_mydas    VNTEGSFQCDPCPLGHLSPSREDCVDINECSLSDNLCRNGKCVNMIGTYQCSNPGYQAT 1222
Mus_musculus      VNTEGSFQCDPCPLGHLSPSREDCVDINECSLSDNLCRNGKCVNMIGTYQCSNPGYQAT 1227
Rattus_norvegicus VNTEGSFQCDPCPLGHLSPSREDCIDINECSLSDNLCRNGKCVNMIGTYQCSNPGYQAT 1227
Homo_sapiens      VNTEGSFQCDPCPLGHLSPSREDCVDINECSLSDNLCRNGKCVNMIGTYQCSNPGYQAT 1234
Pan_troglodytes   VNTEGSFQCDPCPLGHLSPSREDCVDINECSLSDNLCRNGKCVNMIGTYQCSNPGYQAT 1234
Macaca_mulatta    VNTEGSFQCDPCPLGHLSPSREDCVDINECSLSDNLCRNGKCVNMIGTYQCSNPGYQAT 1234
Callithrix_jacchus VNTEGSFQCDPCPLGHLSPSREDCVDINECSLSDNLCRNGKCVNMIGTYQCSNPGYQAT 1234
Canis_lupus_familiaris VNTEGSFQCDPCPLGHLSPSREDCVDINECSLSDNLCRNGKCVNMIGTYQCSNPGYQAT 1243
Felis_catus       VNTEGSFQCDPCPLGHLSPSREDCVDINECSLSDNLCRNGKCVNMIGTYQCSNPGYQAT 1234
Equus_caballus    VNTEGSFQCDPCPLGHLSPSREDCVDINECSLSDNLCRNGKCVNMIGTYQCSNPGYQAT 1234
Bos_taurus        VNTEGSFQCDPCPLGHLSPSREDCVDINECSLSDNLCRNGKCVNMIGTYQCSNPGYQAT 1234
Heterocephalus_glaber VNTEGSFQCDPCPLGHLSPSHEDCVDINECSLSDNLCRNGKCVNMIGTYQCSNPGYQAT 1231
Rhinatrema_bivittatum VNTEGSFHGDCPPGHDLSPGDCACIDVDECPLSDNLCRNGKCVNMIGTYQCSNPGYQAT 1205
Xenopus_tropicalis INTEGSFCLCNCPPNGHELTPSGDACVDINECSLSDNLCRNGKCVNMIGTYQCSNPGYQAT 1206
.....1210.....1220.....1230.....1240.....1250.....1260

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# CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep\_msa/FBN Date: Tue Feb 1 12:10:05 2022

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*: ** ***** *:*****:****:*****:***** *:*****:****:
Pavo_muticus      ADRQGCVDIDECMIMNGGCDTHCTNSEGSYECSCSDGYALMPDVRTCADIDECENNPDI 1288
Pavo_cristatus    ADRQGCVDIDECMIMNGGCDTHCTNSEGSYECSCSDGYALMPDVRTCADIDECENNPDI 1288
Gallus_gallus     ADRQGCVDIDECMIMNGGCDTHCTNSEGSYECSCSDGYALMPDVRTCADIDECENNPDI 1289
Anas_platyrhynchos SDRQGCIDIDECMIMNGGCDTHCTNSEGSYECSCSDGYALMPDVRTCADIDECENNPDI 1282
Chelonia_mydas    PDRQGCIDIDECMIMNGGCDTHCTNSEGSYECSCSDGYALMPDVRTCADIDECENNPDI 1282
Mus_musculus      PDRQGCIDIDECMIMNGGCDTQCTNSEGSYECSCSEGYALMPDGRSCADIDECENNPDI 1287
Rattus_norvegicus PDRQGCSDIDECMIMNGGCDTQCTNSEGSYECSCSEGYALMPDGRSCADIDECENNPDI 1287
Homo_sapiens      PDRQGCIDIDECMIMNGGCDTQCTNSEGSYECSCSEGYALMPDGRSCADIDECENNPDI 1294
Pan_troglodytes   PDRQGCIDIDECMIMNGGCDTQCTNSEGSYECSCSEGYALMPDGRSCADIDECENNPDI 1294
Macaca_mulatta    PDRQGCIDIDECMIMNGGCDTQCTNSEGSYECSCSEGYALMPDGRSCADIDECENNPDI 1294
Callithrix_jacchus PDRQGCIDIDECMIMNGGCDTQCTNSEGSYECSCSEGYALMPDGRSCADIDECENNPDI 1294
Canis_lupus_familiaris PDRQGCIDIDECMIMNGGCDTRCTNSEGSYECSCSEGYALMPDGRSCADIDECENNPDI 1303
Felis_catus       PDRQGCIDIDECMIMNGGCDTRCTNSEGSYECSCSEGYALMPDGRSCADIDECENNPDI 1294
Equus_caballus    PDRQGCIDIDECMIMNGGCDTQCTNSEGSYECSCSEGYALMPDGRSCADIDECENNPDI 1294
Bos_taurus        PDRQGCIDIDECMIMNGGCDTQCTNSEGSYECSCSEGYALMPDGRSCADIDECENNPDI 1294
Heterocephalus_glaber PDRQGCIDIDECMIMNGGCDTQCTNSEGSYECSCSEGYALMPDGRSCADIDECENNPDI 1291
Rhinatrema_bivittatum QDKQGCIDIDECMIVNGGCDSHCTNSDGSYECSCSDGYALMPDLRTCTDIDECEDNPDI 1265
Xenopus_tropicalis LDRLGCTDIDECTIMNGGCDTHCTNSEGSYECSCLEGYALMPDKRTCTDIDECEDNPDI 1266
.....1270.....1280.....1290.....1300.....1310.....1320

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*****:*****:*****:*****:*****:*****:*****:*****:*****
Pavo_muticus      DGGQCSNIPGEYRCLCYDGFMA SMDMKT CIDVNECDLNSNICMFGECENTKGSFICHQOL 1348
Pavo_cristatus    DGGQCSNIPGEYRCLCYDGFMA SMDMKT CIDVNECDLNSNICMFGECENTKGSFICHQOL 1348
Gallus_gallus     DGGQCSNIPGEYRCLCYDGFMA SMDMKT CIDVNECDLNSNICMFGECENTKGSFICHQOL 1349
Anas_platyrhynchos DGGQCTNIPGEYRCLCYDGFMA SMDMKT CIDVNECDLNSNICMFGECENTKGSFICHQOL 1342
Chelonia_mydas    DGGQCTNIPGEYRCLCYDGFMA SMDMKT CIDVNECDLNSNICMFGECENTKGSFICHQOL 1342
Mus_musculus      DGGQCTNIPGEYRCLCYDGFMA SMDMKT CIDVNECDLNPNICMFGECENTKGSFICHQOL 1347
Rattus_norvegicus DGGQCTNIPGEYRCLCYDGFMA SMDMKT CIDVNECDLNPNICMFGECENTKGSFICHQOL 1347
Homo_sapiens      DGGQCTNIPGEYRCLCYDGFMA SMDMKT CIDVNECDLNSNICMFGECENTKGSFICHQOL 1354
Pan_troglodytes   DGGQCTNIPGEYRCLCYDGFMA SMDMKT CIDVNECDLNSNICMFGECENTKGSFICHQOL 1354
Macaca_mulatta    DGGQCTNIPGEYRCLCYDGFMA SMDMKT CIDVNECDLNSNICMFGECENTKGSFICHQOL 1354
Callithrix_jacchus DGGQCTNIPGEYRCLCYDGFMA SMDMKT CIDVNECDLNSNICMFGECENTKGSFICHQOL 1354
Canis_lupus_familiaris DGGQCTNIPGEYRCLCYDGFMA SMDMKT CIDVNECDLNSNICMFGECENTKGSFICHQOL 1363
Felis_catus       DGGQCTNIPGEYRCLCYDGFMA SMDMKT CIDVNECDLNSNICMFGECENTKGSFICHQOL 1354
Equus_caballus    DGGQCTNIPGEYRCLCYDGFMA SMDMKT CIDVNECDLNSNICMFGECENTKGSFICHQOL 1354
Bos_taurus        DGGQCTNIPGEYRCLCYDGFMA SMDMKT CIDVNECDLNSNICMFGECENTKGSFICHQOL 1354
Heterocephalus_glaber DGGQCTNIPGEYRCLCYDGFMA SMDMKT CIDVNECDLNSNICMFGECENTKGSFICHQOL 1351
Rhinatrema_bivittatum DGGQCTNIPGEYRCLCYDGFMA SMDMKT CIDVNECDLNSNICMFGECENTKGSFICHQOL 1325
Xenopus_tropicalis DGGQCTNIPGEYRCLCFDGFMA SMDMKT CIDVNECDLNSNICMFGECENTKGSFICHQOL 1326
.....1330.....1340.....1350.....1360.....1370.....1380

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**:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*
Pavo_muticus      GYSVKKGTTGCTDVDECEIGAHCMDHASCLNVPGSFKCTCREGWFGNGIKCIDLDECSN 1408
Pavo_cristatus    GYSVKKGTTGCTDVDECEIGAHCMDHASCLNVPGSFKCTCREGWFGNGIKCIDLDECSN 1408
Gallus_gallus     GYSVKKGTTGCTDVDECEIGAHCMDHASCLNVPGSFKCTCREGWFGNGIKCIDLDECSN 1409
Anas_platyrhynchos GYSVKKGTTGCTDVDECEIGAHCMDHASCLNVPGSFKCTCREGWFGNGIKCIDLDECSN 1402
Chelonia_mydas    GYSVKKGTTGCTDVDECEIGAHCMDHASCLNVPGSFKCTCREGWFGNGIKCIDLDECSN 1402
Mus_musculus      GYSVKKGTTGCTDVDECEIGAHCMDHASCLNVPGSFKCTCREGWFGNGIKCIDLDECSN 1407
Rattus_norvegicus GYSVKKGATGCTDVDECEIGAHCMDHASCLNVPGSFKCTCREGWFGNGIKCIDLDECSN 1407
Homo_sapiens      GYSVKKGTTGCTDVDECEIGAHCMDHASCLNIPGSFKCTCREGWFGNGIKCIDLDECSN 1414
Pan_troglodytes   GYSVKKGTTGCTDVDECEIGAHCMDHASCLNIPGSFKCTCREGWFGNGIKCIDLDECSN 1414
Macaca_mulatta    GYSVKKGTTGCTDVDECEIGAHCMDHASCLNIPGSFKCTCREGWFGNGIKCIDLDECSN 1414
Callithrix_jacchus GYSVKKGTTGCTDVDECEIGAHCMDHASCLNIPGSFKCTCREGWFGNGIKCIDLDECSN 1414
Canis_lupus_familiaris GYSVKKGTTGCTDVDECEIGAHCMDHASCLNVPGSFKCTCREGWFGNGIKCIDLDECSN 1423
Felis_catus       GYSVKKGTTGCTDVDECEIGAHCMDHASCLNVPGSFKCTCREGWFGNGIKCIDLDECSN 1414
Equus_caballus    GYSVKKGTTGCTDVDECEIGAHCMDHASCLNVPGSFKCTCREGWFGNGIKCIDLDECSN 1414
Bos_taurus        GYSVKKGTTGCTDVDECEIGAHCMDHASCLNVPGSFKCTCREGWFGNGIKCIDLDECSN 1414
Heterocephalus_glaber GYSVKKGTTGCTDVDECEIGAHCMDHASCLNIPGSFKCTCREGWFGNGIKCIDLDECSN 1411
Rhinatrema_bivittatum GYSVKKGTTGCTDVDECEIGAHCMDHASCLNVPGSFKCTCREGWFGNGIKCIDLDECSN 1385
Xenopus_tropicalis GYAVKKGTTGCTDVDECEIDTHNCHLHATCLNVPGSFKCTCKEGWFGNGIKCIDLDECLN 1386
.....1390.....1400.....1410.....1420.....1430.....1440

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# CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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**:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*
Pavo_muticus      GTHQCSVNAQCVNTPGSRACACAEFTGDGFTCSVDDECAENINLCENGQCLNVPGAYRC 1468
Pavo_cristatus    GTHQCSVNAQCVNTPGSRACACAEFTGDGFTCSVDDECAENINLCENGQCLNVPGAYRC 1468
Gallus_gallus     GTHQCSVNAQCVNTPGSRACACAEFTGDGFTCSVDDECAENINLCENGQCLNVPGAYRC 1469
Anas_platyrhynchos GTHQCSVNAQCVNTPGSRACACAEFTGDGFTCSVDDECAENINLCENGQCLNVPGAYRC 1462
Chelonia_mydas    GTHKCSVNAQCVNTPGSRACACAEFTGDGFTCSVDDECAENINLCENGQCLNVPGAYRC 1462
Mus_musculus      GTHQCSINAQCVNTPGSRACACSEGFTGDGFTCSVDDECAENINLCENGQCLNVPGAYRC 1467
Rattus_norvegicus GTHQCSINAQCVNTPGSRACACSEGFTGDGFTCSVDDECAENINLCENGQCLNVPGAYRC 1467
Homo_sapiens      GTHQCSINAQCVNTPGSRACACSEGFTGDGFTCSVDDECAENINLCENGQCLNVPGAYRC 1474
Pan_troglodytes   GTHQCSINAQCVNTPGSRACACSEGFTGDGFTCSVDDECAENINLCENGQCLNVPGAYRC 1474
Macaca_mulatta    GTHQCSINAQCVNTPGSRACACSEGFTGDGFTCSVDDECAENINLCENGQCLNVPGAYRC 1474
Callithrix_jacchus GTHQCSINAQCVNTPGSRACACSEGFTGDGFTCSVDDECAENINLCENGQCLNVPGAYRC 1474
Canis_lupus_familiaris GTHQCSINAQCVNTPGSRACACSEGFTGDGFTCSVDDECAENINLCENGQCLNVPGAYRC 1483
Felis_catus       GTHQCSINAQCVNTPGSRACACSEGFTGDGFTCSVDDECAENINLCENGQCLNVPGAYRC 1474
Equus_caballus    GTHQCSINAQCVNTPGSRACACSEGFTGDGFTCSVDDECAENINLCENGQCLNVPGAYRC 1474
Bos_taurus        GTHQCSINAQCVNTPGSRACACSEGFTGDGFTCSVDDECAENINLCENGQCLNVPGAYRC 1474
Heterocephalus_glaber GTHQCSINAQCVNTPGSRACACAEFTGDGFTCSVDDECAENINLCENGQCLNVPGAYRC 1471
Rhinatrema_bivittatum RTHHCSLNAQCVNTPGSRACACTDGTGDGYICSDVDECAENINLCENGQCLNIPGAYRC 1445
Xenopus_tropicalis GTHRCSVSAHCLNTPGSRACACAEFTGDGFTCSVDDECAENINLCENGQCLNIPGAYRC 1446
.....1450.....1460.....1470.....1480.....1490.....1500

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**:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*
Pavo_muticus      ECEMGFTPASDSKSCQDIDECFQNICVFGTCNNLPGMFHCICDDGYELDRITGGNCTDID 1528
Pavo_cristatus    ECEMGFTPASDSKSCQDIDECFQNICVFGTCNNLPGMFHCICDDGYELDRITGGNCTDID 1528
Gallus_gallus     ECEMGFTPASDSKSCQDIDECFQNICVFGTCNNLPGMFHCICDDGYELDRITGGNCTDID 1529
Anas_platyrhynchos ECEMGFTPASDSKSCQDIDECFQNICVFGTCNNLPGMFHCICDDGYELDRITGGNCTDID 1522
Chelonia_mydas    ECEMGFTPASDSKSCQDIDECFQNICVFGTCNNLPGMFHCICDDGYELDRITGGNCTDID 1522
Mus_musculus      ECEMGFTPASDSRSCQDIDECFQNICVFGTCNNLPGMFHCICDDGYELDRITGGNCTDID 1527
Rattus_norvegicus ECEMGFTPASDSRSCQDIDECFQNICVFGTCNNLPGMFHCICDDGYELDRITGGNCTDID 1527
Homo_sapiens      ECEMGFTPASDSRSCQDIDECFQNICVFGTCNNLPGMFHCICDDGYELDRITGGNCTDID 1534
Pan_troglodytes   ECEMGFTPASDSRSCQDIDECFQNICVFGTCNNLPGMFHCICDDGYELDRITGGNCTDID 1534
Macaca_mulatta    ECEMGFTPASDSRSCQDIDECFQNICVFGTCNNLPGMFHCICDDGYELDRITGGNCTDID 1534
Callithrix_jacchus ECEMGFTPASDSRSCQDIDECFQNICVFGTCNNLPGMFHCICDDGYELDRITGGNCTDID 1534
Canis_lupus_familiaris ECEMGFTPASDSRSCQDIDECFQNICVFGTCNNLPGMFHCICDDGYELDRITGGNCTDID 1543
Felis_catus       ECEMGFTPASDSRSCQDIDECFQNICVFGTCNNLPGMFHCICDDGYELDRITGGNCTDID 1534
Equus_caballus    ECEMGFTPASDSRSCQDIDECFQNICVFGTCNNLPGMFHCICDDGYELDRITGGNCTDID 1534
Bos_taurus        ECEMGFTPASDSRSCQDIDECFQNICVFGTCNNLPGMFHCICDDGYELDRITGGNCTDID 1534
Heterocephalus_glaber ECEMGFTPASDSRSCQDIDECFQNICVFGTCNNLPGMFHCICDDGYELDRITGGNCTDID 1531
Rhinatrema_bivittatum ECEMGFTPTSDSKSCQDINECFQNICVFGSCNNLPGMFQICDDGYELDRITGGNCTDID 1505
Xenopus_tropicalis ECEMGFTPASDSRSCQDINECAFQNICVFGTCNNLPGMFRCICNEGYELDRITGGNCTDID 1506
.....1510.....1520.....1530.....1540.....1550.....1560

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*****:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*:*
Pavo_muticus      ECADPINC VNGLCVNTPG RYECNCPD FQLNPTGVGCVDN RVGNCYLKYGPRGDGSLSCN 1588
Pavo_cristatus    ECADPINC VNGLCVNTPG RYECNCPD FQLNPTGVGCVDN RVGNCYLKYGPRGDGSLSCN 1588
Gallus_gallus     ECADPINC VNGLCVNTPG RYECNCPD FQLNPTGVGCVDN RVGNCYLKYGPRGDGSLSCN 1589
Anas_platyrhynchos ECADPINC VNGLCVNTPG RYECNCPD FQLNPTGVGCVDN RVGNCYLKYGPRGDGSLSCN 1582
Chelonia_mydas    ECADPINC VNGLCVNTPG RYECNCPD FQLNPTGVGCVDN RVGNCYLKYGPRGDGSLSCN 1582
Mus_musculus      ECADPINC VNGLCVNTPG RYECNCPD FQLNPTGVGCVDN RVGNCYLKYGPRGDGSLSCN 1587
Rattus_norvegicus ECADPINC VNGLCVNTPG RYECNCPD FQLNPTGVGCVDN RVGNCYLKYGPRGDGSLSCN 1587
Homo_sapiens      ECADPINC VNGLCVNTPG RYECNCPD FQLNPTGVGCVDN RVGNCYLKYGPRGDGSLSCN 1594
Pan_troglodytes   ECADPINC VNGLCVNTPG RYECNCPD FQLNPTGVGCVDN RVGNCYLKYGPRGDGSLSCN 1594
Macaca_mulatta    ECADPINC VNGLCVNTPG RYECNCPD FQLNPTGVGCVDN RVGNCYLKYGPRGDGSLSCN 1594
Callithrix_jacchus ECADPINC VNGLCVNTPG RYECNCPD FQLNPTGVGCVDN RVGNCYLKYGPRGDGSLSCN 1594
Canis_lupus_familiaris ECADPINC VNGLCVNTPG RYECNCPD FQLNPTGVGCVDN RVGNCYLKYGPRGDGSLSCN 1603
Felis_catus       ECADPINC VNGLCVNTPG RYECNCPD FQLNPTGVGCVDN RVGNCYLKYGPRGDGSLSCN 1594
Equus_caballus    ECADPINC VNGLCVNTPG RYECNCPD FQLNPTGVGCVDN RVGNCYLKYGPRGDGSLSCN 1594
Bos_taurus        ECADPINC VNGLCVNTPG RYECNCPD FQLNPTGVGCVDN RVGNCYLKYGPRGDGSLSCN 1594
Heterocephalus_glaber ECADPINC VNGLCVNTPG RYECNCPD FQLNPTGVGCVDN RVGNCYLKYGPRGDGSLSCN 1591
Rhinatrema_bivittatum ECADPINC VNGLCVNTPG RYECNCPD FQLNPTGVGCVDT RVGNCYLNFVPRGDGGSFCS 1565
Xenopus_tropicalis ECADPINC VNGLFCVNTPG RYECNCPD FQLNPTGVGCVDT RVGNCYLNFHARGDGTISCS 1566
.....1570.....1580.....1590.....1600.....1610.....1620

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# CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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Pavo_muticus	TEIGVGVSRRSSCCCSL GKAWGNPCETCPPVNSTEYNTLCPGGEGFRPNPITIILEDIDEC	1648
Pavo_cristatus	TEIGVGVSRRSSCCCSL GKAWGNPCETCPPVNSTEYNTLCPGGEGFRPNPITIILEDIDEC	1648
Gallus_gallus	TEIGVGVSRRSSCCCSL GKAWGNPCETCPPVNSTEYNTLCPGGEGFRPNPITIILEDIDEC	1649
Anas_platyrhynchos	TEIGVGVSRRSSCCCSL GKAWGNPCETCPPVNSTEYNTLCPGGEGFRPNPITIILEDIDEC	1642
Chelonia_mydas	TEIGVGVSRRSSCCCSL GKAWGNPCETCPPVNSTEYNTLCPGGEGFRPNPITIILEDIDEC	1642
Mus_musculus	TEVGVGVSRRSSCCCSL GKAWGNPCETCPPVNSTEYNTLCPGGEGFRPNPITIILEDIDEC	1647
Rattus_norvegicus	TEVGVGVSRRSSCCCSL GKAWGNPCETCPPVNSTEYNTLCPGGEGFRPNPITIILEDIDEC	1647
Homo_sapiens	TEIGVGVSRRSSCCCSL GKAWGNPCETCPPVNSTEYNTLCPGGEGFRPNPITIILEDIDEC	1654
Pan_troglodytes	TEIGVGVSRRSSCCCSL GKAWGNPCETCPPVNSTEYNTLCPGGEGFRPNPITIILEDIDEC	1654
Macaca_mulatta	TEIGVGVSRRSSCCCSL GKAWGNPCETCPPVNSTEYNTLCPGGEGFRPNPITIILEDIDEC	1654
Callithrix_jacchus	TEIGVGVSRRSSCCCSL GKAWGNPCETCPPVNSTEYNTLCPGGEGFRPNPITIILEDIDEC	1654
Canis_lupus_familiaris	TEIGVGVSRRSSCCCSL GKAWGNPCETCPPVNSTEYNTLCPGGEGFRPNPITIILEDIDEC	1663
Felis_catus	TEIGVGVSRRSSCCCSL GKAWGNPCETCPPVNSTEYNTLCPGGEGFRPNPITIILEDIDEC	1654
Equus_caballus	TEIGVGVSRRSSCCCSL GKAWGNPCETCPPVNSTEYNTLCPGGEGFRPNPITIILEDIDEC	1654
Bos_taurus	TEIGVGVSRRSSCCCSL GKAWGNPCETCPPVNSTEYNTLCPGGEGFRPNPITIILEDIDEC	1654
Heterocephalus_glaber	TEIGVGVSRRSSCCCSL GKAWGNPCETCPPVNSTEYNTLCPGGEGFRPNPITIILEDIDEC	1651
Rhinatrema_bivittatum	TEIGVGVSRRSSCCCSL GKAWGNPCETCPPVNSTEYNTLCPGGEGFRPNPITIILEDIDEC	1625
Xenopus_tropicalis	TEIGVGVSRRSSCCCSL GKAWGNPCETCPPVNSTEYNTLCPGGEGFRPNPITIILEDIDEC	1626
.....1630.....1640.....1650.....1660.....1670.....1680		

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Pavo_muticus	QELPGLCQGGNCINTFGSFQCECPKGYLSEETRICEIDECVAHPGVCGPGTCYNTLGN	1708
Pavo_cristatus	QELPGLCQGGNCINTFGSFQCECPKGYLSEETRICEIDECVAHPGVCGPGTCYNTLGN	1708
Gallus_gallus	QELPGLCQGGNCINTFGSFQCECPKGYLSEETRICEIDECVAHPGVCGPGTCYNTLGN	1709
Anas_platyrhynchos	QELPGLCQGGNCINTFGSFQCECPKGYLSEETRICEIDECVAHPGVCGPGTCYNTLGN	1702
Chelonia_mydas	QELPGLCQGGNCINTFGSFQCECPKGYLSEETRICEIDECVAHPGVCGPGTCYNTLGN	1702
Mus_musculus	QELPGLCQGGNCINTFGSFQCECPKGYLSEETRICEIDECFAHPGVCGPGTCYNTLGN	1707
Rattus_norvegicus	QELPGLCQGGNCINTFGSFQCECPKGYLSEETRICEIDECFAHPGVCGPGTCYNTLGN	1707
Homo_sapiens	QELPGLCQGGNCINTFGSFQCECPKGYLSEETRICEIDECFAHPGVCGPGTCYNTLGN	1714
Pan_troglodytes	QELPGLCQGGNCINTFGSFQCECPKGYLSEETRICEIDECFAHPGVCGPGTCYNTLGN	1714
Macaca_mulatta	QELPGLCQGGNCINTFGSFQCECPKGYLSEETRICEIDECFAHPGVCGPGTCYNTLGN	1714
Callithrix_jacchus	QELPGLCQGGNCINTFGSFQCECPKGYLSEETRICEIDECFAHPGVCGPGTCYNTLGN	1714
Canis_lupus_familiaris	QELPGLCQGGNCINTFGSFQCECPKGYLSEETRICEIDECFAHPGVCGPGTCYNTLGN	1723
Felis_catus	QELPGLCQGGNCINTFGSFQCECPKGYLSEETRICEIDECFAHPGVCGPGTCYNTLGN	1714
Equus_caballus	QELPGLCQGGNCINTFGSFQCECPKGYLSEETRICEIDECFAHPGVCGPGTCYNTLGN	1714
Bos_taurus	QELPGLCQGGNCINTFGSFQCECPKGYLSEETRICEIDECFAHPGVCGPGTCYNTLGN	1714
Heterocephalus_glaber	QELPGLCQGGNCINTFGSFQCECPKGYLSEETRICEIDECFAHPGVCGPGTCYNTLGN	1711
Rhinatrema_bivittatum	QELPGLCQGGNCINTFGSFQCECPKGYLSEETRICEIDECFTQPGVCGPGTCYNTLGN	1685
Xenopus_tropicalis	QELPGLCQGGNCINTFGSFQCECPKGYLSEETRICEIDECFTQPGVCGPGTCYNTLGN	1686
.....1690.....1700.....1710.....1720.....1730.....1740		

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Pavo_muticus	YTCICPPEYMQVNGGHNCDMRKSFCYRSYNGTTCENELPFNVTKRMCCCTYNVGKAWN	1768
Pavo_cristatus	YTCICPPEYMQVNGGHNCDMRKSFCYRSYNGTTCENELPFNVTKRMCCCTYNVGKAWN	1768
Gallus_gallus	YTCICPPEYMQVNGGHNCDMRKSFCYRSYNGTTCENELPFNVTKRMCCCTYNVGKAWN	1769
Anas_platyrhynchos	YTCICPPEYMQVNGGHNCDMRKSFCYRSYNGTTCENELPFNVTKRMCCCTYNVGKAWN	1762
Chelonia_mydas	YTCICPPEYMQVNRGHNCDMRKSFCYRSYNGTTCENELPFNVTKRMCCCTYNVGKAWN	1762
Mus_musculus	YTCICPPEYMQVNGGHNCDMRKSFCYRSYNGTTCENELPFNVTKRMCCCTYNVGKAWN	1767
Rattus_norvegicus	YTCICPPEYMQVNGGHNCDMRKSFCYRSYNGTTCENELPFNVTKRMCCCTYNVGKAWN	1767
Homo_sapiens	YTCICPPEYMQVNGGHNCDMRKSFCYRSYNGTTCENELPFNVTKRMCCCTYNVGKAWN	1774
Pan_troglodytes	YTCICPPEYMQVNGGHNCDMRKSFCYRSYNGTTCENELPFNVTKRMCCCTYNVGKAWN	1774
Macaca_mulatta	YTCICPPEYMQVNGGHNCDMRKSFCYRSYNGTTCENELPFNVTKRMCCCTYNVGKAWN	1774
Callithrix_jacchus	YTCICPPEYMQVNGGHNCDMRKSFCYRSYNGTTCENELPFNVTKRMCCCTYNVGKAWN	1774
Canis_lupus_familiaris	YTCICPPEYMQVNGGHNCDMRKSFCYRSYNGTTCENELPFNVTKRMCCCTYNVGKAWN	1783
Felis_catus	YTCICPPEYMQVNGGHNCDMRKSFCYRSYNGTTCENELPFNVTKRMCCCTYNVGKAWN	1774
Equus_caballus	YTCICPPEYMQVNGGHNCDMRKSFCYRSYNGTTCENELPFNVTKRMCCCTYNVGKAWN	1774
Bos_taurus	YTCICPPEYMQVNGGHNCDMRKSFCYRSYNGTTCENELPFNVTKRMCCCTYNVGKAWN	1774
Heterocephalus_glaber	YTCICPPEYMQVNGGHNCDMRKSFCYRSYNGTTCENELPFNVTKRMCCCTYNVGKAWN	1771
Rhinatrema_bivittatum	YTCICPPEYMQVNGGHNCDMRKSFCYRSYNGTTCENELPFNVTKRMCCCTYNVGKAWN	1745
Xenopus_tropicalis	YTCICPPEYMQVNGGHNCDMRKSFCYRSYNGTTCENELPFNVTKRMCCCTYNVGKAWN	1746
.....1750.....1760.....1770.....1780.....1790.....1800		

## CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

**File: /media/morpheus/disk1/fst/pep\_msa/FBND** **Date: Tue Feb 1 12:10:05 2022**

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Pavo_muticus	PCEPCPTPGTAEFKNICGNIPGFTFDIHTGKAVDIDECKEIPGICANGVCINQIGSFRC	1828
Pavo_cristatus	PCEPCPTPGTAEFKNICGNIPGFTFDIHTGKAVDIDECKEIPGICANGVCINQIGSFRC	1828
Gallus_gallus	PCEPCPTPGTAEFKNICGNIPGFTFDIHTGKAVDIDECKEIPGICANGVCINQIGSFRC	1829
Anas_platyrhynchos	PCEPCPTPGTAEFKNICGNIPGFTFDIHTGKAVDIDECKEIPGICANGVCINQIGSFRC	1822
Chelonia_mydas	PCEPCPTPGTAEFKTICGNIPGFTFDIHTGKAVDIDECKEIPGICANGVCINQIGSFRC	1822
Mus_musculus	PCEPCPTPGTADFKTICGNIPGFTFDIHTGKAVDIDECKEIPGICANGVCINQIGSFRC	1827
Rattus_norvegicus	PCEPCPTPGTADFKTICGNIPGFTFDIHTGKAVDIDECKEIPGICANGVCINQIGSFRC	1827
Homo_sapiens	PCEPCPTPGTADFKTICGNIPGFTFDIHTGKAVDIDECKEIPGICANGVCINQIGSFRC	1834
Pan_troglodytes	PCEPCPTPGTADFKTICGNIPGFTFDIHTGKAVDIDECKEIPGICANGVCINQIGSFRC	1834
Macaca_mulatta	PCEPCPTPGTADFKTICGNIPGFTFDIHTGKAVDIDECKEIPGICANGVCINQIGSFRC	1834
Callithrix_jacchus	PCEPCPTPGTADFKTICGNIPGFTFDIHTGKAVDIDECKEIPGICANGVCINQIGSFRC	1834
Canis_lupus_familiaris	PCEPCPTPGTADFKTICGNIPGFTFDIHTGKAVDIDECKEIPGICANGVCINQIGSFRC	1843
Felis_catus	PCEPCPTPGTADFKTICGNIPGFTFDIHTGKAVDIDECKEIPGICANGVCINQIGSFRC	1834
Equus_caballus	PCEPCPTPGTADFKTICGNIPGFTFDIHTGKAVDIDECKEIPGICANGVCINQIGSFRC	1834
Bos_taurus	PCEPCPTPGTADFKTICGNIPGFTFDIHTGKAVDIDECKEIPGICANGVCINQIGSFRC	1834
Heterocephalus_glaber	PCEPCPTPGTADFKTICGNIPGFTFDIHTGKAVDIDECKEIPGICANGVCINQIGSFRC	1831
Rhinatrema_bivittatum	PCEACPTPGTANFRALCGSIPGFTFDIHTGKAVDIDECKEIPGICANGVCINQIGSFRC	1805
Xenopus_tropicalis	PCEPCPTPGTANFKHLCSIPGFTFDIHTGKAVDIDECKEIPGICTNGVCINQIGSFRC	1806
.....1810.....1820.....1830.....1840.....1850.....1860		

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Pavo_muticus	CPTGFSYNDLLLVCEIDEC	SNGDNLQ	RNADCINS	PGSYRCECAAGFKLSPNGACVDRN	1888
Pavo_cristatus	CPTGFSYNDLLLVCEIDEC	SNGDNLQ	RNADCINS	PGSYRCECAAGFKLSPNGACVDRN	1888
Gallus_gallus	CPTGFSYNDLLLVCEIDEC	SNGDNLQ	RNADCINS	PGSYRCECAAGFKLSPNGACVDRN	1889
Anas_platyrhynchos	CPTGFSYNDLLLVCEIDEC	SNGDNLQ	RNADCINS	PGSYRCECAAGFKLSPNGACVDRN	1882
Chelonia_mydas	CPTGFSYNDLLLVCEIDEC	SNGDNLQ	RNADCINS	PGSYRCECAAGFKLSPNGACIDRN	1882
Mus_musculus	CPTGFSYNDLLLVCEIDEC	SNGDNLQ	RNADCINS	PGSYRCECAAGFKLSPNGACVDRN	1887
Rattus_norvegicus	CPTGFSYNDLLLVCEIDEC	SNGDNLQ	RNADCINS	PGSYRCECAAGFKLSPNGACVDRN	1887
Homo_sapiens	CPTGFSYNDLLLVCEIDEC	SNGDNLQ	RNADCINS	PGSYRCECAAGFKLSPNGACVDRN	1894
Pan_troglodytes	CPTGFSYNDLLLVCEIDEC	SNGDNLQ	RNADCINS	PGSYRCECAAGFKLSPNGACVDRN	1894
Macaca_mulatta	CPTGFSYNDLLLVCEIDEC	SNGDNLQ	RNADCINS	PGSYRCECAAGFKLSPNGACVDRN	1894
Callithrix_jacchus	CPTGFSYNDLLLVCEIDEC	SNGDNLQ	RNADCINS	PGSYRCECAAGFKLSPNGACVDRN	1894
Canis_lupus_familiaris	CPTGFSYNDLLLVCEIDEC	SNGDNLQ	RHADCLNS	PGSYRCECAAGFKLSPNGACVDRN	1903
Felis_catus	CPTGFSYNDLLLVCEIDEC	SNGDNLQ	RNADCLNS	PGSYRCECAAGFKLSPNGACVDRN	1894
Equus_caballus	CPTGFSYNDLLLVCEIDEC	SNGDNLQ	RNADCINS	PGSYRCECAAGFKLSPNGACVDRN	1894
Bos_taurus	CPTGFSYNDLLLVCEIDEC	SNGDNLQ	RNADCINS	PGSYRCECAAGFKLSPNGACVDRN	1894
Heterocephalus_glaber	CPTGFSYNDLLLVCEIDEC	SNGDNLQ	RNADCINS	PGSYRCECATGFKLSPNGACVDRN	1891
Rhinatrema_bivittatum	CPTGFSYNDLLLVCEIDEC	NGEYLQ	RNADCINS	PGSYRCECSAGFKLSPNGACVDRN	1865
Xenopus_tropicalis	CPTGFSYNDLLLVCEIDEC	SGDYFC	RNADCINS	PGTYRCECSTGFKLLPNGACIDRN	1866
.....1870.....1880.....1890.....1900.....1910.....1920					

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Pavo_muticus	ECLEIPNVCSHGLCVDMOGSYQCICHNGFKASQDQTMCDVDECERHPCGNGTCKNTVGS	1948
Pavo_cristatus	ECLEIPNVCSHGLCVDMOGSYQCICHNGFKASQDQTMCDVDECERHPCGNGTCKNTVGS	1948
Gallus_gallus	ECLEIPNVCSHGLCVDMOGSYQCICHNGFKASQDQTMCDVDECERHPCGNGTCKNTVGS	1949
Anas_platyrhynchos	ECLEIPNVCSHGLCVDMOGSYQCICHNGFKASQDQTMCDVDECERHPCGNGTCKNTVGS	1942
Chelonia_mydas	ECLEIPNVCSHGLCVDMOGSYQCICHNGFKASQDQTMCDVDECERHPCGNGTCKNTVGS	1942
Mus_musculus	ECLEIPNVCSHGLCVDLQGSYQCICNNGFKASQDQTMCDVDECERHPCGNGTCKNTVGS	1947
Rattus_norvegicus	ECLEIPNVCSHGLCVDLQGSYQCICNNGFKASQDQTMCDVDECERHPCGNGTCKNTVGS	1947
Homo_sapiens	ECLEIPNVCSHGLCVDLQGSYQCICHNGFKASQDQTMCDVDECERHPCGNGTCKNTVGS	1954
Pan_troglodytes	ECLEIPNVCSHGLCVDLQGSYQCICHNGFKASQDQTMCDVDECERHPCGNGTCKNTVGS	1954
Macaca_mulatta	ECLEIPNVCSHGLCVDLQGSYQCICHNGFKASQDQTMCDVDECERHPCGNGTCKNTVGS	1954
Callithrix_jacchus	ECLEIPNVCSHGLCVDLQGSYQCICHNGFKASQDQTMCDVDECERHPCGNGTCKNTVGS	1954
Canis_lupus_familiaris	ECLEIPNVCSHGLCVDLQGSYQCICHNGFKASQDQTMCDVDECERHPCGNGTCKNTVGS	1963
Felis_catus	ECLEIPNVCSHGLCVDLQGSYQCICHNGFKASQDQTMCDVDECERHPCGNGTCKNTVGS	1954
Equus_caballus	ECLEIPNVCSHGLCVDLQGSYQCICHNGFKASQDQTMCDVDECERHPCGNGTCKNTVGS	1954
Bos_taurus	ECLEIPNVCSHGLCVDLQGSYQCICHNGFKASQDQTMCDVDECERHPCGNGTCKNTVGS	1954
Heterocephalus_glaber	ECLEIPNVCSHGLCVDLQGSYQCICHNGFKASQDQTMCDVDECERHPCGNGTCKNTVGS	1951
Rhinatrema_bivittatum	ECQEIPNVCSHGLCVDTOGSYQCICYNFKASLDQTMCDVDECERQPCGNGTCKNTVGS	1925
Xenopus_tropicalis	ECLEIPNVCSHGTCVDIEGSYHVCVNNGFKVSPDQTMCDIDECEERQPCGNGTCKNTVGS	1926
.....1930.....1940.....1950.....1960.....1970.....1980		



# CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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***** :***.***:*****: *****:*****:*** ***** *.***
Pavo_muticus      YNCLCYPGFELTHNNDCMDIDECSSFFGQVCRNGRCFNEIGSFKCLCNEGYELTLDGKNC 2008
Pavo_cristatus    YNCLCYPGFELTHNNDCMDIDECSSFFGQVCRNGRCFNEIGSFKCLCNEGYELTLDGKNC 2008
Gallus_gallus     YNCLCYPGFELTHNNDCMDIDECSSFFGQVCRNGRCFNEIGSFKCLCNEGYELTLDGKNC 2009
Anas_platyrhynchos YNCLCYPGFELTHNNDCMDIDECSSFFGQVCRNGRCFNEIGSFKCLCNEGYELTLDGKNC 2002
Chelonia_mydas    YNCLCYPGFELTHNNDCMDIDECSSFFGQVCRNGRCFNEIGSFKCLCNEGYELTPDGKNC 2002
Mus_musculus      YNCLCYPGFELTHNNDCMDIDECSSFFGQVCRNGRCFNEIGSFKCLCNEGYELTPDGKNC 2007
Rattus_norvegicus YNCLCYPGFELTHNNDCMDIDECSSFFGQVCRNGRCFNEIGSFKCLCNEGYELTPDGKNC 2007
Homo_sapiens      YNCLCYPGFELTHNNDCMDIDECSSFFGQVCRNGRCFNEIGSFKCLCNEGYELTPDGKNC 2014
Pan_troglodytes   YNCLCYPGFELTHNNDCMDIDECSSFFGQVCRNGRCFNEIGSFKCLCNEGYELTPDGKNC 2014
Macaca_mulatta    YNCLCYPGFELTHNNDCMDIDECSSFFGQVCRNGRCFNEIGSFKCLCNEGYELTPDGKNC 2014
Callithrix_jacchus YNCLCYPGFELTHNNDCMDIDECSSFFGQVCRNGRCFNEIGSFKCLCNEGYELTPDGKNC 2014
Canis_lupus_familiaris YNCLCYPGFELTHNNDCMDIDECSSFFGQVCRNGRCFNEIGSFKCLCNEGYELTPDGKNC 2023
Felis_catus       YNCLCYPGFELTHNNDCMDIDECSSFFGQVCRNGRCFNEIGSFKCLCNEGYELTPDGKNC 2014
Equus_caballus    YNCLCYPGFELTHNNDCMDIDECSSFFGQVCRNGRCFNEIGSFKCLCNEGYELTPDGKNC 2014
Bos_taurus        YNCLCYPGFELTHNNDCMDIDECSSFFGQVCRNGRCFNEIGSFKCLCNEGYELTPDGKNC 2014
Heterocephalus_glaber YNCLCYPGFELTHNNDCMDIDECSSFFGQVCRNGRCFNEIGSFKCLCNEGYELTPDGKNC 2011
Rhinatrema_bivittatum YNCLCYPGFELTHNNDCMDIDECSSFFGQVCRNGRCFNEIGSFKCLCNEGYELTPDGKNC 1984
Xenopus_tropicalis YNCLCYPGFELTHNNDCMDIDECSSFFGQVCRNGRCFNEIGSFKCLCNEGYELTPDGKNC 1986
.....1990.....2000.....2010.....2020.....2030.....2040
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** ***:.* :* *****:*****. .:***:*** *:***:*****:* *
Pavo_muticus      IDTNECVLPGSCSPGTCQNLEGSFRCICPPGYEVKSESCIDINECEDPNICLFGSCTN 2068
Pavo_cristatus    IDTNECVLPGSCSPGTCQNLEGSFRCICPPGYEVKSESCIDINECEDPNICLFGSCTN 2068
Gallus_gallus     IDTNECVLPGSCSPGTCQNLEGSFRCICPPGYEVKSESCIDINECEDPNICLFGSCTN 2069
Anas_platyrhynchos IDTNECVLPGSCSPGTCQNLEGSFRCICPPGYEVKSESCIDINECEDPNICLFGSCTN 2062
Chelonia_mydas    IDTNECVLPGSCSPGTCQNLEGSFRCICPPGYEVKSESCIDINECEDPNICLFGSCTN 2062
Mus_musculus      IDTNECVLPGSCSPGTCQNLEGSFRCICPPGYEVKSESCIDINECEDPNICLFGSCTN 2067
Rattus_norvegicus IDTNECVLPGSCSPGTCQNLEGSFRCICPPGYEVKSESCIDINECEDPNICLFGSCTN 2067
Homo_sapiens      IDTNECVLPGSCSPGTCQNLEGSFRCICPPGYEVKSESCIDINECEDPNICLFGSCTN 2074
Pan_troglodytes   IDTNECVLPGSCSPGTCQNLEGSFRCICPPGYEVKSESCIDINECEDPNICLFGSCTN 2074
Macaca_mulatta    IDTNECVLPGSCSPGTCQNLEGSFRCICPPGYEVKSESCIDINECEDPNICLFGSCTN 2074
Callithrix_jacchus IDTNECVLPGSCSPGTCQNLEGSFRCICPPGYEVKSESCIDINECEDPNICLFGSCTN 2074
Canis_lupus_familiaris IDTNECVLPGSCSPGTCQNLEGSFRCICPPGYEVKSESCIDINECEDPNICLFGSCTN 2083
Felis_catus       IDTNECVLPGSCSPGTCQNLEGSFRCICPPGYEVKSESCIDINECEDPNICLFGSCTN 2074
Equus_caballus    IDTNECVLPGSCSPGTCQNLEGSFRCICPPGYEVKSESCIDINECEDPNICLFGSCTN 2074
Bos_taurus        IDTNECVLPGSCSPGTCQNLEGSFRCICPPGYEVKSESCIDINECEDPNICLFGSCTN 2074
Heterocephalus_glaber IDTNECVLPGSCSPGTCQNLEGSFRCICPPGYEVKSESCIDINECEDPNICLFGSCTN 2071
Rhinatrema_bivittatum IDTNECVLPGSCSPGTCQNLEGSFRCICPPGYEVKSESCIDINECEDPNICLFGSCTN 2044
Xenopus_tropicalis IDTNECVLPGSCSPGTCQNLEGSFRCICPPGYEVKSESCIDINECEDPNICLFGSCTN 2046
.....2050.....2060.....2070.....2080.....2090.....2100
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Pavo_muticus      TPGGFQCICPTGFVLSNDRRCFDTRQSFCTNFENGKCSVPKAFNTTKAKCCCSKMPGE 2128
Pavo_cristatus    TPGGFQCICPTGFVLSNDRRCFDTRQSFCTNFENGKCSVPKAFNTTKAKCCCSKMPGE 2128
Gallus_gallus     TPGGFQCICPTGFVLSNDRRCFDTRQSFCTNFENGKCSVPKAFNTTKAKCCCSKMPGE 2129
Anas_platyrhynchos TPGGFQCICPTGFVLSNDRRCFDTRQSFCTNFENGKCSVPKAFNTTKAKCCCSKMPGE 2122
Chelonia_mydas    TPGGFQCICPTGFVLSNDRRCFDTRQSFCTNFENGKCSVPKAFNTTKAKCCCSKMPGE 2122
Mus_musculus      TPGGFQCICPTGFVLSNDRRCFDTRQSFCTNFENGKCSVPKAFNTTKAKCCCSKMPGE 2127
Rattus_norvegicus TPGGFQCICPTGFVLSNDRRCFDTRQSFCTNFENGKCSVPKAFNTTKAKCCCSKMPGE 2127
Homo_sapiens      TPGGFQCICPTGFVLSNDRRCFDTRQSFCTNFENGKCSVPKAFNTTKAKCCCSKMPGE 2134
Pan_troglodytes   TPGGFQCICPTGFVLSNDRRCFDTRQSFCTNFENGKCSVPKAFNTTKAKCCCSKMPGE 2134
Macaca_mulatta    TPGGFQCICPTGFVLSNDRRCFDTRQSFCTNFENGKCSVPKAFNTTKAKCCCSKMPGE 2134
Callithrix_jacchus TPGGFQCICPTGFVLSNDRRCFDTRQSFCTNFENGKCSVPKAFNTTKAKCCCSKMPGE 2134
Canis_lupus_familiaris TPGGFQCICPTGFVLSNDRRCFDTRQSFCTNFENGKCSVPKAFNTTKAKCCCSKMPGE 2143
Felis_catus       TPGGFQCICPTGFVLSNDRRCFDTRQSFCTNFENGKCSVPKAFNTTKAKCCCSKMPGE 2134
Equus_caballus    TPGGFQCICPTGFVLSNDRRCFDTRQSFCTNFENGKCSVPKAFNTTKAKCCCSKMPGE 2134
Bos_taurus        TPGGFQCICPTGFVLSNDRRCFDTRQSFCTNFENGKCSVPKAFNTTKAKCCCSKMPGE 2134
Heterocephalus_glaber TPGGFQCICPTGFVLSNDRRCFDTRQSFCTNFENGKCSVPKAFNTTKAKCCCSKMPGE 2131
Rhinatrema_bivittatum TPGGFQCICPTGFVLSNDRRCFDTRQSFCTNFENGKCSVPKAFNTTKAKCCCSKMPGE 2104
Xenopus_tropicalis TPGGFQCICPTGFVLSNDRRCFDTRQSFCTNFENGKCSVPKAFNTTKAKCCCSKMPGE 2106
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# CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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Pavo_muticus      GWGDPCELCPKKEEEVAFQDLCPYGHGTIPGIDDTREDVNECLESPGICSNHGHCINTDGSF 2188
Pavo_cristatus    GWGDPCELCPKKEEEVAFQDLCPYGHGTIPGIDDTREDVNECLESPGICSNHGHCINTDGSF 2188
Gallus_gallus     GWGDPCELCPKKEEEVAFQDLCPYGHGTIPGIDDTREDVNECLESPGICSNHGHCINTDGSF 2189
Anas_platyrhynchos GWGDPCELCPKKEEEVAFQDLCPYGHGTIPGIDDTREDVNECLESPGICSNHGHCINTDGSF 2182
Chelonia_mydas    GWGDPCELCPKKEEEVAFQDLCPYGHGTIPGIDDTREDVNECLESPGICSNHGHCINTDGSF 2182
Mus_musculus      GWGDPCELCPKDDEVAFQDLCPYGHGTVP SLHDTREDVNECLESPGICSNHGHCINTDGSF 2187
Rattus_norvegicus GWGDPCELCPKDDEVAFQDLCPYGHGTVP SLHDTREDVNECLESPGICSNHGHCINTDGSF 2187
Homo_sapiens      GWGDPCELCPKDDEVAFQDLCPYGHGTVP SLHDTREDVNECLESPGICSNHGHCINTDGSF 2194
Pan_troglodytes   GWGDPCELCPKDDEVAFQDLCPYGHGTVP SLHDTREDVNECLESPGICSNHGHCINTDGSF 2194
Macaca_mulatta    GWGDPCELCPKDDEVAFQDLCPYGHGTVP SLHDTREDVNECLESPGICSNHGHCINTDGSF 2194
Callithrix_jacchus GWGDPCELCPKDDEVAFQDLCPYGHGTVP SLHDTREDVNECLESPGICSNHGHCINTDGSF 2194
Canis_lupus_familiaris GWGDPCELCPKDDEVAFQDLCPYGHGTVP SLHDTREDVNECLESPGICSNHGHCINTDGSF 2203
Felis_catus       GWGDPCELCPKDDEVAFQDLCPYGHGTVP SLHDTREDVNECLESPGICSNHGHCINTDGSF 2194
Equus_caballus    GWGDPCELCPKDDEVAFQDLCPYGHGTVP SLHDTREDVNECLESPGICSNHGHCINTDGSF 2194
Bos_taurus        GWGDPCELCPKDDEVAFQDLCPYGHGTVP SLHDTREDVNECLESPGICSNHGHCINTDGSF 2194
Heterocephalus_glaber GWGDPCELCPKDDEVAFQDLCPYGHGTVP SLHDTREDVNECLESPGICSNHGHCINTDGSF 2191
Rhinatrema_bivittatum GWGDPCELCPKKEGEVAFQDLCPYGHGTIPGIGDTREDVNECLESPGICLNHGHCINTDGSF 2164
Xenopus_tropicalis GWGDPCELCPKKEGEVAFQDLCPYGHGTIPGIGDTREDVNECLESPGICLNHGHCINTDGSF 2166
.....2170.....2180.....2190.....2200.....2210.....2220
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*****:.* ** *:*****:*****:.*.*:*** *:.*:***** ***:
Pavo_muticus      RCECPMGYNLDFTGVHCIDTDECSIGNPCNGTCTNVIGSFECNCHGEFEPGPMNCEDI 2248
Pavo_cristatus    RCECPMGYNLDFTGVHCIDTDECSIGNPCNGTCTNVIGSFECNCHGEFEPGPMNCEDI 2248
Gallus_gallus     RCECPMGYNLDFTGVHCIDTDECSIGNPCNGTCTNVIGSFECNCHGEFEPGPMNCEDI 2249
Anas_platyrhynchos RCECPMGYNLDFTGVHCIDTDECSIGNPCNGTCTNVIGSFECNCHGEFEPGPMNCEDI 2242
Chelonia_mydas    RCECPMGYNLDFTGVHCIDTDECSIGNPCNGTCTNVIGSFECNCHGEFEPGPMNCEDI 2242
Mus_musculus      RCECPMGYNLDFTGVRCVDTDECSIGNPCNGTCTNVIGSFECTCNEGFEPGPMNCEDI 2247
Rattus_norvegicus RCECPMGYNLDFTGVRCVDTDECSIGNPCNGTCTNVIGSFECNCHGEFEPGPMNCEDI 2247
Homo_sapiens      RCECPMGYNLDFTGVRCVDTDECSIGNPCNGTCTNVIGSFECNCHGEFEPGPMNCEDI 2254
Pan_troglodytes   RCECPMGYNLDFTGVRCVDTDECSIGNPCNGTCTNVIGSFECNCHGEFEPGPMNCEDI 2254
Macaca_mulatta    RCECPMGYNLDFTGVRCVDTDECSIGNPCNGTCTNVIGSFECNCHGEFEPGPMNCEDI 2254
Callithrix_jacchus RCECPMGYNLDFTGVRCVDTDECSIGNPCNGTCTNVIGSFECNCHGEFEPGPMNCEDI 2254
Canis_lupus_familiaris RCECPMGYNLDFTGVRCVDTDECSIGNPCNGTCTNVIGSFECNCHGEFEPGPMNCEDI 2263
Felis_catus       RCECPMGYNLDFTGVRCVDTDECSIGNPCNGTCTNVIGSFECNCHGEFEPGPMNCEDI 2254
Equus_caballus    RCECPMGYNLDFTGVRCVDTDECSIGNPCNGTCTNVIGSFECNCHGEFEPGPMNCEDI 2254
Bos_taurus        RCECPMGYNLDFTGVRCVDTDECSIGNPCNGTCTNVIGSFECNCHGEFEPGPMNCEDI 2254
Heterocephalus_glaber RCECPMGYNLDFTGVRCVDTDECSIGNPCNGTCTNVIGSFECNCHGEFEPGPMNCEDI 2251
Rhinatrema_bivittatum RCECPMGYNLDFTGVRCVDTDECSIGNPCNGTCTNVIGTFECSCHGEFEPGPMNCEDI 2224
Xenopus_tropicalis RCECPMGYNLDFTGVRCVDTDECSIGNPCNGTCTNAIGTFECLDEGFEPGPMNCEDI 2226
.....2230.....2240.....2250.....2260.....2270.....2280
```

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*** *****:.*.* : **** ** *:*****.***** *:.*:*****:***
Pavo_muticus      NECAQNPLLCAFRICINTYGFYEECTCPVGyelREDQKMCKDLDECAEGLHDCESRGMCKN 2308
Pavo_cristatus    NECAQNPLLCAFRICINTYGFYEECTCPVGyelREDQKMCKDLDECAEGLHDCESRGMCKN 2308
Gallus_gallus     NECAQNPLLCAFRICINTYGFYEECTCPVGyelRDDQKMCKDLDECAEGLHDCESRGMCKN 2309
Anas_platyrhynchos NECAQNPLLCAFRICINTYGFYEECTCPVGyelREDQKMCKDLDECAEGLHDCESRGMCKN 2302
Chelonia_mydas    NECAQNPLLCAFRICINTYGFYEECTCPVGyelREDQKMCKDLDECAEGLHDCESRGMCKN 2302
Mus_musculus      NECAQNPLLCAFRICMNTFGSYECTCPVGyalREDQKMCKDLDECAEGLHDCESRGMCKN 2307
Rattus_norvegicus NECAQNPLLCAFRICMNTFGSYECTCPVGyalREDQKMCKDLDECAEGLHDCESRGMCKN 2307
Homo_sapiens      NECAQNPLLCAFRICMNTFGSYECTCPIGyalREDQKMCKDLDECAEGLHDCESRGMCKN 2314
Pan_troglodytes   NECAQNPLLCAFRICMNTFGSYECTCPIGyalREDQKMCKDLDECAEGLHDCESRGMCKN 2314
Macaca_mulatta    NECAQNPLLCAFRICMNTFGSYECTCPIGyalREDQKMCKDLDECAEGLHDCESRGMCKN 2314
Callithrix_jacchus NECAQNPLLCAFRICMNTFGSYECTCPIGyalREDQKMCKDLDECAEGLHDCESRGMCKN 2314
Canis_lupus_familiaris NECAQNPLLCAFRICMNTFGSYECTCPIGyalREDQKMCKDLDECAEGLHDCESRGMCKN 2323
Felis_catus       NECAQNPLLCAFRICMNTFGSYECTCPIGyalREDQKMCKDLDECAEGLHDCESRGMCKN 2314
Equus_caballus    NECAQNPLLCAFRICMNTFGSYECTCPIGyalREDQKMCKDLDECAEGLHDCESRGMCKN 2314
Bos_taurus        NECAQNPLLCAFRICMNTFGSYECTCPIGyalREDQKMCKDLDECAEGLHDCESRGMCKN 2314
Heterocephalus_glaber NECAQNPLLCAFRICMNTFGSYECTCPIGyalREDQKMCKDLDECAEGLHDCESRGMCKN 2311
Rhinatrema_bivittatum NECAQNPLLCAFRICINTYGFYEECTCPAGYILREDQKMCKDLDECEGLHDCESRGMCKN 2284
Xenopus_tropicalis NECILNPLLCAFRICINTYGFYEECTCPAGYILREDQKMCKDLDECEGLHDCESRGMCKN 2286
.....2290.....2300.....2310.....2320.....2330.....2340
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# CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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*****.* ** *
Pavo_muticus      LIGTFMCICPPGMIRRPDGEGETDENECRTKPGICENGRCMNVIGSYRCECNEGFLSSPS 2368
Pavo_cristatus    LIGTFMCICPPGMIRRPDGEGETDENECRTKPGICENGRCMNVIGSYRCECNEGFLSSPS 2368
Gallus_gallus     LIGTFMCICPPGMTRRPDGEGETDENECRTKPGICENGRCMNVIGSYRCECNEGFLSSPS 2369
Anas_platyrhynchos LIGTFMCICPPGMTRRPDGEGETDENECRTKPGICENGRCMNVIGSYRCECNEGFLSSPS 2362
Chelonia_mydas    LIGTFMCICPPGMTRRPDGEGETDENECRTKPGICENGRCVNIIGSYRCECNEGFOSSPS 2362
Mus_musculus      LIGTFMCICPPGMARRPDGEGCVDENECRTKPGICENGRCVNIIGSYRCECNEGFOSSPS 2367
Rattus_norvegicus LIGTFMCICPPGMARRPDGEGCVDENECRTKPGICENGRCVNIIGSYRCECNEGFOSSPS 2367
Homo_sapiens      LIGTFMCICPPGMARRPDGEGCVDENECRTKPGICENGRCVNIIGSYRCECNEGFOSSPS 2374
Pan_troglodytes   LIGTFMCICPPGMARRPDGEGCVDENECRTKPGICENGRCVNIIGSYRCECNEGFOSSPS 2374
Macaca_mulatta    LIGTFMCICPPGMARRPDGEGCVDENECRTKPGICENGRCVNIIGSYRCECNEGFOSSPS 2374
Callithrix_jacchus LIGTFMCICPPGMARRPDGEGCVDENECRTKPGICENGRCVNIIGSYRCECNEGFOSSPS 2374
Canis_lupus_familiaris LIGTFMCICPPGMTRRPDGEGETDENECRTKPGICENGRCVNTIGSYRCECNEGFOSSPS 2383
Felis_catus       LIGTFMCICPPGMTRRPDGEGETDENECRTKPGICENGRCVNTIGSYRCECNEGFOSSPS 2374
Equus_caballus    LIGTFMCICPPGMTRRPDGEGETDENECRTKPGICENGRCVNTIGSYRCECNEGFOSSPS 2374
Bos_taurus        LIGTFMCICPPGMARRPDGEGCVDENECRTKPGICENGRCVNTIGSYRCECNEGFOSSPS 2374
Heterocephalus_glaber LIGTFMCICPPGMARRPDGEGCVDENECRTKPGICENGRCVNIIGSYRCECNEGFOSSPS 2371
Rhinatrema_bivittatum LIGTFMCICPPGMTRRPDGEGETDENECRTKPGICENGRCVNSIGSYSCECNVGFOSTLS 2344
Xenopus_tropicalis LIGTFMCICPPGMVRRPDGEGCMDENECRTKPGICENGRCVNTIGSYRCDNNEGFOSTPS 2346
.....2350.....2360.....2370.....2380.....2390.....2400

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* **.*.***:**:*****:**:**** *****:*****:***:*** * **:
Pavo_muticus      GIECLDNROGFCFAEVLQTMCOMASSRNLVTKSECCCDGGRGWGNQCELCPLPGTTQYR 2428
Pavo_cristatus    GIECLDNROGFCFAEVLQTMCOMASSRNLVTKSECCCDGGRGWGNQCELCPLPGTTQYR 2428
Gallus_gallus     GIECLDNROGFCFAEVLQTMCOMASSRNLVTKSECCCDGGRGWGNQCELCPLPGTTQYK 2429
Anas_platyrhynchos GIECLDNROGFCFAEVLQTMCOMASSRNLVTKSECCCDGGRGWGNQCELCPLPGTTQYK 2422
Chelonia_mydas    GTECLDNROGFCFAEVLQTMCOMASSRNLVTKSECCCDGGRGWGNQCELCPLPGITQYK 2422
Mus_musculus      GTECLDNROGLCFAEVLQTMCOMASSRNLVTKSECCCDGGRGWGHQCELCPLPGTAQYK 2427
Rattus_norvegicus GTECLDNROGLCFAEVLQTMCOMASSRNLVTKSECCCDGGRGWGHQCELCPLPGTAQYK 2427
Homo_sapiens      GTECLDNROGLCFAEVLQTMCOMASSRNLVTKSECCCDGGRGWGHQCELCPLPGTAQYK 2434
Pan_troglodytes   GTECLDNROGLCFAEVLQTMCOMASSRNLVTKSECCCDGGRGWGHQCELCPLPGTAQYK 2434
Macaca_mulatta    GTECLDNROGLCFAEVLQTMCOMASSRNLVTKSECCCDGGRGWGHQCELCPLPGTAQYK 2434
Callithrix_jacchus GTECLDNROGLCFAEVLQTMCOMASSRNLVTKSECCCDGGRGWGHQCELCPLPGTAQYK 2434
Canis_lupus_familiaris GTECLDNROGLCFAEVLQTMCOMASSRNLVTKSECCCDGGRGWGHQCELCPLPGTAQYK 2443
Felis_catus       GTECLDNROGLCFAEVLQTMCOMASSRNLVTKSECCCDGGRGWGHQCELCPLPGTAQYK 2434
Equus_caballus    GTECLDNROGLCFAEVLQTMCOMASSRNLVTKSECCCDGGRGWGHQCELCPLPGTAQYK 2434
Bos_taurus        GTECLDNROGLCFAEVLQTMCOMASSRNLVTKSECCCDGGRGWGHQCELCPLPGTAQYK 2434
Heterocephalus_glaber GTECLDNROGLCFAEVLQTMCOMASSRNLVTKSECCCDGGRGWGHQCELCPLPGTSQYK 2431
Rhinatrema_bivittatum GTECIDNROGFCFSEVLQTMCOMSSSRILVTKSECCCDGGRGWGHQCEICPLQGTQYK 2404
Xenopus_tropicalis GTECLDTRQGFSEVLQTMCOMSSSRILVTKSECCCDGGRGWGHQCEICPLPGTAQYK 2406
.....2410.....2420.....2430.....2440.....2450.....2460

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* *****:**:***** ** **.*.***:**:*****: *****:.*:****
Pavo_muticus      KLCPHGPGYTTDGRDIDECKVMPNLCRHGQCINTVGSFRCFCKVGYYTDDISSTSCVDLDE 2488
Pavo_cristatus    KLCPHGPGYTTDGRDIDECKVMPNLCRHGQCINTVGSFRCFCKVGYYTDDISSTSCVDLDE 2488
Gallus_gallus     KLCPHGPGYTTDGRDIDECKVMPNLCRHGQCINTVGSFRCFCKVGYYTDDISSTSCVDLDE 2489
Anas_platyrhynchos KLCPHGPGYTTDGRDIDECKVMPNLCRHGQCINTVGSFRCFCKVGYYTDDISSTSCVDLDE 2482
Chelonia_mydas    KLCPHGPGYTTDGRDIDECKVMPNLCRHGQCINTVGSFRCFCKVGYYTTEISGTSCVDLDE 2482
Mus_musculus      KICPHGPGYATDGRDIDECKVMPNLCRHGQCINTVGSFRCFCKVGYYTDDISGTACVDLDE 2487
Rattus_norvegicus KICPHGPGYATDGRDIDECKVMPNLCRHGQCINTVGSFRCFCKVGYYTDDISGTACVDLDE 2487
Homo_sapiens      KICPHGPGYTTDGRDIDECKVMPNLCRHGQCINTVGSFRCFCKVGYYTDDISGTSCIDLDE 2494
Pan_troglodytes   KICPHGPGYTTDGRDIDECKVMPNLCRHGQCINTVGSFRCFCKVGYYTDDISGTSCIDLDE 2494
Macaca_mulatta    KICPHGPGYTTDGRDIDECKVMPNLCRHGQCINTVGSFRCFCKVGYYTDDISGTSCIDLDE 2494
Callithrix_jacchus KICPHGPGYTTDGRDIDECKVMPNLCRHGQCINTVGSFRCFCKVGYYTDDITGTSCIDLDE 2494
Canis_lupus_familiaris KICPHGPGYTTDGRDIDECKVMPNLCRHGQCINTVGSFRCFCKVGYYTDDISGTSCVDLDE 2503
Felis_catus       KICPHGPGYTTDGRDIDECKVMPNLCRHGQCINTVGSFRCFCKVGYYTDDISGTSCVDLDE 2494
Equus_caballus    KICPHGPGYTTDGRDIDECKVMPNLCRHGQCINTVGSFRCFCKVGYYTDDISGTSCVDLDE 2494
Bos_taurus        KICPHGPGYTTDGRDIDECKVMPNLCRHGQCINTVGSFRCFCKVGYYTDDISGTSCVDLDE 2494
Heterocephalus_glaber KICPHGPGYTTDGRDIDECKVMPNLCRHGQCINTVGSFRCFCKVGYYTDDISGTSCVDLDE 2491
Rhinatrema_bivittatum KLCPHGPGYTTDGRDIDECKVMPNLCRHGQCINTVGSFRCFCKVGYYTDDISGTACVDLDE 2464
Xenopus_tropicalis KICPHGPGYTTDGRDIDECKVMPNLCRHGQCINTVGSFRCFCKVGYYTDDISGTACVDLDE 2466
.....2470.....2480.....2490.....2500.....2510.....2520

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	..:*****:****:.*.*****:****.:.:*****:*****.:.:***	
Pavo_muticus	CSQSPKPCNFICKNSEGSYQCS CPRGYILOEDGKTCCKDLDECQTKQHNCOFLCVNTILGGF	2548
Pavo_cristatus	CSQSPKPCNFICKNSEGSYQCS CPRGYILOEDGKTCCKDLDECQTKQHNCOFLCVNTILGGF	2548
Gallus_gallus	CSQSPKPCNFICKNSEGSYQCS CPRGYILOEDGKTCCKDLDECQTKQHNCOFLCVNTILGGF	2549
Anas_platyrhynchos	CSQSPKPCNFICKNSEGSYQCS CPRGYILOEDGKTCCKDLDECQTKQHNCOFLCVNTILGGF	2542
Chelonia_mydas	CSQSPKPCNFICKNSEGSYQCS CPRGYILOEDGKTCCKDLDECQTKQHNCOFLCVNTILGGF	2542
Mus_musculus	CSQSPKPCNFICKNTKGSYQCS CPRGYVLOEDGKTCCKDLDECQTKQHNCOFLCVNTILGGF	2547
Rattus_norvegicus	CSQSPKPCNFICKNTEGSYQCS CPRGYVLOEDGKTCCKDLDECQTKQHNCOFLCVNTILGGF	2547
Homo_sapiens	CSQSPKPCNYICKNTEGSYQCS CPRGYVLOEDGKTCCKDLDECQTKQHNCOFLCVNTILGGF	2554
Pan_troglodytes	CSQSPKPCNFICKNTEGSYQCS CPRGYVLOEDGKTCCKDLDECQTKQHNCOFLCVNTILGGF	2554
Macaca_mulatta	CSQSPKPCNFICKNTEGSYQCS CPRGYVLOEDGKTCCKDLDECQTKQHNCOFLCVNTILGGF	2554
Callithrix_jacchus	CSQSPKPCNFICKNTEGSYQCS CPRGYVLOEDGKTCCKDLDECQTKQHNCOFLCVNTILGGF	2554
Canis_lupus_familiaris	CSQSPKPCNFICKNTEGSYQCS CPRGYVLOEDAKTCKDLDECQTKQHNCOFLCVNTILGGF	2563
Felis_catus	CSQSPKPCNFICKNTEGSYQCS CPRGYVLOEDAKTCKDLDECQTKQHNCOFLCVNTILGGF	2554
Equus_caballus	CSQSPKPCNFICKNTEGSYQCS CPRGYVLOEDGKTCCKDLDECQTKQHNCOFLCVNTILGGF	2554
Bos_taurus	CSQSPKPCNFICKNTEGSYQCS CPRGYVLOEDGKTCCKDLDECQTKQHNCOFLCVNTILGGF	2554
Heterocephalus_glaber	CSQSPKPCNFICKNTEGNVQCS CPRGYILOEDGKTCCKDLDECQTKQHNCOFLCVNTILGGF	2551
Rhinatrema_bivittatum	CTQSPKPCNFICKNTEGSYQCS CPRGYMLOEDGKTCCKDLDECQTKQHNCOFLCFNTIGGF	2524
Xenopus_tropicalis	CSQSPKPCNFICKNTEGSYQCS CPRGYILOEDGKSCCKDLDECQTKQHNCOFLCVNTIGGF	2526
	.....2530.....2540.....2550.....2560.....2570.....2580	

	*****.*.:** *.:***:****:*****:****:*.**:*	
Pavo_muticus	TCKCPPGFTQHHHTACIDNNECGSQPSLCGSKGICONTPGSFTCECORGFSLDSTGLNCED	2608
Pavo_cristatus	TCKCPPGFTQHHHTACIDNNECGSQPSLCGSKGICONTPGSFTCECORGFSLDSTGLNCED	2608
Gallus_gallus	TCKCPPGFTQHHHTACIDNNECGSQPSLCGSKGICONTPGSFTCECORGFSLDSTGLNCED	2609
Anas_platyrhynchos	TCKCPPGFTQHHHTACIDNNECGSQPLLCLGSKGICONTPGSFTCECORGFSLDSTGLNCED	2602
Chelonia_mydas	TCKCPPGFTQHHHTACIDNNECGSQPSLCGSKGICONTPGSFTCECORGFSLDSTGLNCED	2602
Mus_musculus	TCKCPPGFTQHHHTACIDNNECGSQPSLCGAKGICONTPGSFSCECORGFSLDASGLNCED	2607
Rattus_norvegicus	TCKCPPGFTQHHHTACIDNNECGSQPSLCGAKGICONTPGSFSCECORGFSLDASGLNCED	2607
Homo_sapiens	TCKCPPGFTQHHHTACIDNNECGSQPSLCGAKGICONTPGSFSCECORGFSLDATGLNCED	2614
Pan_troglodytes	TCKCPPGFTQHHHTACIDNNECGSQPSLCGAKGICONTPGSFSCECORGFSLDATGLNCED	2614
Macaca_mulatta	TCKCPPGFTQHHHTACIDNNECGSQPSLCGAKGICONTPGSFSCECORGFSLDATGLNCED	2614
Callithrix_jacchus	TCKCPPGFTQHHHTACIDNNECGSQPSLCGAKGICONTPGSFSCECORGFSLDATGLNCED	2614
Canis_lupus_familiaris	TCKCPPGFTQHHHTACIDNNECGSQPSLCGAKGICONTPGSFSCECORGFSLDATGLNCED	2623
Felis_catus	TCKCPPGFTQHHHTACIDNNECGSQPSLCGAKGICONTPGSFSCECORGFSLDATGLNCED	2614
Equus_caballus	TCKCPPGFTQHHHTACIDNNECGSQPSLCGAKGICONTPGSFSCECORGFSLDATGLNCED	2614
Bos_taurus	TCKCPPGFTQHHHTACIDNNECGSQPSLCGAKGICONTPGSFSCECORGFSLDATGLNCED	2614
Heterocephalus_glaber	TCKCPPGFTQHHHTACIDNNECGSQPSLCGAKGICONTPGSFSCECORGFSLDATGLNCED	2611
Rhinatrema_bivittatum	TCKCPPGFTQHHHTACIDNNECGSQPSLCGGKAICONTPGSFACECORGFSLDSTGLNCDD	2584
Xenopus_tropicalis	TCKCPPGFTQHHHTACIDNNECGTQSNVCGLGVCNSPGSFTCECORGFSLDSTGLNCED	2586
	.....2590.....2600.....2610.....2620.....2630.....2640	

	*.*.******::*****.*****:*****:*****:..:.*:***:****	
Pavo_muticus	VDECDGNHRCQHGCQNILGGYRCGCPQGYIQHYOWNQCVDENECSPNPNTCGSASCYNTILG	2668
Pavo_cristatus	VDECDGNHRCQHGCQNILGGYRCGCPQGYIQHYOWNQCVDENECSPNPNTCGSASCYNTILG	2668
Gallus_gallus	VDECDGNHRCQHGCQNILGGYRCGCPQGYIQHYOWNQCVDENECSPNPNTCGSASCYNTILG	2669
Anas_platyrhynchos	VDECDGNHRCQHGCQNILGGYRCGCPQGYIQHYOWNQCVDENECSPNPNTCGSASCYNTILG	2662
Chelonia_mydas	VNECDGNHRCQHGCQNILGGYRCGCPQGYIQHYOWNQCVDENECTNPACGTIASCYNTILG	2662
Mus_musculus	VDECDGNHRCQHGCQNILGGYRCGCPQGYVQHYOWNQCVDENECSPNGACGSASCYNTILG	2667
Rattus_norvegicus	VDECDGNHRCQHGCQNILGGYRCGCPQGYVQHYOWNQCVDENECSPNGACGSASCYNTILG	2667
Homo_sapiens	VDECDGNHRCQHGCQNILGGYRCGCPQGYIQHYOWNQCVDENECSPNPACGSASCYNTILG	2674
Pan_troglodytes	VDECDGNHRCQHGCQNILGGYRCGCPQGYIQHYOWNQCVDENECSPNPACGSASCYNTILG	2674
Macaca_mulatta	VDECDGNHRCQHGCQNILGGYRCGCPQGYIQHYOWNQCVDENECSPNPACGSASCYNTILG	2674
Callithrix_jacchus	VDECDGNHRCQHGCQNILGGYRCGCPQGYIQHYOWNQCVDENECSPNPACGSASCYNTILG	2674
Canis_lupus_familiaris	VDECDGNHRCQHGCQNILGGYRCGCPQGYIQHYOWNQCVDENECSPNPACGSASCYNTILG	2683
Felis_catus	VDECDGNHRCQHGCQNILGGYRCGCPQGYIQHYOWNQCVDENECSPNPACGSASCYNTILG	2674
Equus_caballus	VDECDGNHRCQHGCQNILGGYRCGCPQGYIQHYOWNQCVDENECSPNPACGSASCYNTILG	2674
Bos_taurus	VDECDGNHRCQHGCQNILGGYRCGCPQGYIQHYOWNQCVDENECSPNPACGSASCYNTILG	2674
Heterocephalus_glaber	VDECDGNHRCQHGCQNILGGYRCGCPQGYIQHYOWNQCVDENECSPNGACGSASCYNTILG	2671
Rhinatrema_bivittatum	VDECEGNHRCQHGCQNMGGYRCNCPOGYVQHYOWNQCVDENECSPNACGSASCYNTILG	2644
Xenopus_tropicalis	VDECGGNHRCQHGCQNLVGGYRCSPQGYIQHYOWNQCVDENECASQNTCGSASCYNTILG	2646
	.....2650.....2660.....2670.....2680.....2690.....2700	

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****.*:***::*:*****:***:****.*****:*.*****
Pavo_muticus      SYKACAPSGFSYDQFSSACHDVNECSSAKNPCNYGCSNTEGGYLCGCPPGYRVGOGHCV 2728
Pavo_cristatus    SYKACAPSGFSYDQFSSACHDVNECSSAKNPCNYGCSNTEGGYLCGCPPGYRVGOGHCV 2728
Gallus_gallus     SYKACAPSGFSYDQFSSACHDVNECSSAKNPCNYGCSNTEGGYLCGCPPGYRVGOGHCV 2729
Anas_platyrhynchos SYKACAPSGFSYDQFSSACHDVNECSSAKNPCNYGCSNTEGGYLCGCPPGYRVGOGHCV 2722
Chelonia_mydas    SYKCTCPSGFSYDQFSSACHDVNECSSAKNPCNYGCSNTEGGYLCGCPPGYRVGOGHCV 2722
Mus_musculus      SYKACAPSGFSYDQFSSACHDVNECSSAKNPCNYGCSNTEGGYLCGCPPGYRVGOGHCV 2727
Rattus_norvegicus SYKACAPSGFSYDQFSSACHDVNECSSAKNPCNYGCSNTEGGYLCGCPPGYRVGOGHCV 2727
Homo_sapiens      SYKACAPSGFSYDQFSSACHDVNECSSAKNPCNYGCSNTEGGYLCGCPPGYRVGOGHCV 2734
Pan_troglodytes   SYKACAPSGFSYDQFSSACHDVNECSSAKNPCNYGCSNTEGGYLCGCPPGYRVGOGHCV 2734
Macaca_mulatta    SYKACAPSGFSYDQFSSACHDVNECSSAKNPCNYGCSNTEGGYLCGCPPGYRVGOGHCV 2734
Callithrix_jacchus SYKACAPSGFSYDQFSSACHDVNECSSAKNPCNYGCSNTEGGYLCGCPPGYRVGOGHCV 2734
Canis_lupus_familiaris GYKVCPSGFSYDQFSSACHDVNECSSAKNPCNYGCSNTEGGYLCGCPPGYRVGOGHCV 2743
Felis_catus       GYKVCPSGFSYDQFSSACHDVNECSSAKNPCNYGCSNTEGGYLCGCPPGYRVGOGHCV 2734
Equus_caballus    SYKACAPSGFSYDQFSSACHDVNECSSAKNPCNYGCSNTEGGYLCGCPPGYRVGOGHCV 2734
Bos_taurus        SYKACAPSGFSYDQFSSACHDVNECSSAKNPCNYGCSNTEGGYLCGCPPGYRVGOGHCV 2734
Heterocephalus_glaber SYKACAPSGFSYDQFSSACHDVNECSSAKNPCNYGCSNTEGGYLCGCPPGYRVGOGHCV 2731
Rhinatrema_bivittatum SYKACAPSGFSYDQYSSACHDVNECSSAKNPCNYGCSNTEGGYLCGCPPGYRVGOGHCV 2704
Xenopus_tropicalis SYKACAPTGTFTNQFSSACHDVDECTSSKNPCNYGCSNTEGGYLCGCPPGYRVGOGHCV 2706
.....2710.....2720.....2730.....2740.....2750.....2760

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***:** :***. . . : : :*.***:.* *:***.:: .* :*. :.
SGMGFNKGQYLPVDGDADE-ENALSP EACYECKINGYPKKDNRKRSLNET----- 2778
SGMGFNKGQYLPVDGDADE-ENALSP EACYECKINGYPKKDNRKRSLNET----- 2778
Gallus_gallus     SGMGFNKGQYVPVDEDADE-ENALSP EACYECKINGYPKKDNRKRSLNET----- 2779
Anas_platyrhynchos SGMGFNKGQYLPDGDGDADE-ENALSP EACYECKINGYSKKENRKRSLNET----- 2772
Chelonia_mydas    SGMGFNKGQYLPDGDGDADE-ENALSP EACYECKINGYANKNSRRKRSLNET----- 2773
Mus_musculus      SGMGFNKGQYLSVDAEADENALSP EACYECKINGYTKKDGRRKRSAQEP----- 2780
Rattus_norvegicus SGMGFNKGQYLSVDAEADENALSP EACYECKINGYAKKDGRRKRSAQEP----- 2780
Homo_sapiens      SGMGFNKGQYLSLDTEVDE-ENALSP EACYECKINGYSKKDSRQKRSLHEPD----- 2785
Pan_troglodytes   SGMGFNKGQYLSLDTEVDE-ENALSP EACYECKINGYSKKDSRQKRSLHEPD----- 2785
Macaca_mulatta    SGMGFNKGQYLSLDTEVDE-ENALSP EACYECKINGYSKKDSRQKRSLHEPD----- 2785
Callithrix_jacchus SGMGFNKGQYLSLDTEVDE-ENALSP EACYECKINGYSKKDSRQKRSLHEPD----- 2785
Canis_lupus_familiaris SGMGFNKGQYLSLDAEVDE-ENALSP EACYECKINGYSKKDGROKRSLVQEP----- 2794
Felis_catus       SGMGFNKGQYLSLDAEVDE-ENALSP EACYECKINGYSKKDGROKRSLVQEP----- 2785
Equus_caballus    SGMGFNKGQYLSLDTEVDE-ENALSP EACYECKINGYSNKDSRQKRSLVHEP----- 2785
Bos_taurus        SGMGFNKGQYLSMDTEVDE-ENALSP EACYECKINGYSKKDNRQKRSLHEPK----- 2785
Heterocephalus_glaber SGMGFNKGQYLSLDTEVDE-ENALSP EACYECKINGYSKKDSRQKRSLVHNP----- 2782
Rhinatrema_bivittatum SGMGFAKGQYLPQGGEEDDDNVLSPDACYGCKLNGYSKRDGRKRSLVNDTE----- 2756
Xenopus_tropicalis SGIGFNRGQYLPVGKENSE-DNALSP EACYECKINGYTKTGRMRNNAKNPELERNANT 2765
.....2770.....2780.....2790.....2800.....2810.....2820

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::* :*: :* *: * .*. * . *:***: : ***:***:***:*** :
----IEQVSLESILDVDSPLKMRVNISRLDNKEHILELMPAIEPLTNHVRYIISHGNDG 2834
Pavo_cristatus    ----IEQVSLESILDVDSPLKMRVNISRLDNKEHILELMPAIEPLTNHVRYIISHGNDG 2834
Gallus_gallus     ----IEQVSLESILDMDSPLKMRVNISRLDNKEHILELMPAIEPLTNHVRYIISHGNDG 2835
Anas_platyrhynchos ----IEQVSLESILDMDSPLKMRVNISRLDNKEHILELMPAIEPLTNHVRYIISHGNDG 2828
Chelonia_mydas    -QAEIEQISLESILDIDSPVKMRLNFSGLGNKEHILELMPAIEPLTNHVRYIISHGNDG 2832
Mus_musculus      -ASAEIEQISLESVAMDSPVNMMKFNLSGLGSKHEHILELMPAIEPLNNHIRYVISQGNDDG 2839
Rattus_norvegicus -ASAEIEQISLESVAMDSPVNMMKFNLSGLGSKHEHILELMPAIEPLNNHIRYVISQGNDDG 2839
Homo_sapiens      -PTAVEQISLESVDMDSPVNMMKFNLSHLGSKHEHILELMPAIEPLNNHIRYVISQGNDDG 2844
Pan_troglodytes   -PTAVEQISLESVDMDSPVNMMKFNLSHLGSKHEHILELMPAIEPLNNHIRYVISQGNDDG 2844
Macaca_mulatta    -PTAVEQISLESVDMDSPVNMMKFNLSHLGSKHEHILELMPAIEPLNNHIRYVISQGNDDG 2844
Callithrix_jacchus -PTAVEQISLESVDMDSPVNMMKFNLSGLGSKHEHILELMPAIEPLNNHIRYVISQGNDDG 2844
Canis_lupus_familiaris -PTAVEHISLESVDMDSPVKMKFNLSGLGSKHEHILELMPAIEPLNNHIRYVISQGNDDG 2853
Felis_catus       -PTTVEHISLESVDMDSPVKMKFNLSGLGSKHEHILELMPAIEPLNNHIRYVISQGNDDG 2844
Equus_caballus    -ATAVEQISLESVDMDSPVKMKFNLSGLGSKHEHILELMPAIEPLNNHIRYVISQGNDDG 2844
Bos_taurus        -HIAVKQISLESVDMDSPVKMKFNLSGLGSKHEHILELMPAIEPLNNHIRYVISQGNDDG 2844
Heterocephalus_glaber -PTAVEQISLESVDMDSPVNMMKFNLSGLGSKHEHILELMPAIEPLNNHIRYVISQGNDDG 2841
Rhinatrema_bivittatum -SALLKHISLESILDIDVPLKMKFNLSKLNTEHILELMPAIEPLNNHIRYVISQGNDDG 2815
Xenopus_tropicalis EQAMNGQISLKSILDMDLPLKMLVNLISHLNKKHILELMPAIEPLTNHVRYVITQNTN-M 2824
.....2830.....2840.....2850.....2860.....2870.....2880

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# CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep\_msa/FBND Date: Tue Feb 1 12:10:05 2022

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*:::** * *****: : ** *****:* **: :.:* :* : :.:**.* *** *.
Pavo_muticus      FRIHQRDGLSYLHTAKKKSVP GTYTLEITSIP LHKKKELKKLEDS SEDNYLLGELGEALR 2894
Pavo_cristatus    FRIHQRDGLSYLHTAKKKSVP GTYTLEITSIP LHKKKELKKLEDS SEDNYLLGELGEALR 2894
Gallus_gallus     FRIHQRDGLSYLHTAKKKSVP GTYTLEITSIP LYKKKELKKLEDS NEDSYLLGELGEALR 2895
Anas_platyrhynchos FQIHQRDGLSYLHTAKKKSVP GTYTLEITSIP LYKKKELKKLEDS NEDNYLLGELGEALR 2888
Chelonia_mydas    FQIHQRDGLSYLHTAKKKSVP GTYTLEITSIP LYKKKELKKLEDS NEDNYLLGELGEVLR 2892
Mus_musculus      FRIHQRNGLSYLHTAKKKLAP GTYTLEITSIP LYGKKELRKLEEH NEDDYLLGVLGEALR 2899
Rattus_norvegicus FRIHQRNGLSYLHTAKKKLTP GTYTLEITSV PLYGKKELRKLEERN EDSYLLGVLGEALR 2899
Homo_sapiens      FRIHQRNGLSYLHTAKKKLMP GTYTLEITSIP LYKKKELKKLEES NEDDYLLGELGEALR 2904
Pan_troglodytes   FRIHQRNGLSYLHTAKKKLMP GTYTLEITSV PLYKKKELKKLEES NEDDYLLGELGEALR 2904
Macaca_mulatta    FRIHQRNGLSYLHTAKKKLMP GTYTLEITSV PLYKKKELKKLEES NEDDYLLGELGEALR 2904
Callithrix_jacchus FRINQRHGT SYLHTARKKLVP GTYTLEITSIP LYKRKLEKLL ESYEDDYLLGELGEALR 2904
Canis_lupus_familiaris FRIHQRNGLSYLHTAKRRLAP GTYTLEISSV PLYKKKELKKLEDR NEDDYLLGELGEALR 2913
Felis_catus       FRIHQRNGLSYLHTAKKKLVP GTYTLEITSIP LYKKKELKKLEDH NEDDYLVGELGEALR 2904
Equus_caballus    FRIHQRNGLSYLHTAKRKLVP GTYTLEITSIP LYKKKELKKLEDS NEDDYLLGELGEALR 2904
Bos_taurus        FRIHQRNGLSYLHTAKRKLVP GMYTLEITSV PLYKKKELKKLEDS NEDDYLLGELGEALR 2904
Heterocephalus_glaber FRIHQRNGLSYLHTAKRRLIP GTYTLEIASIP LYRKKELRKLEES NEDDYLMGELGEELR 2901
Rhinatrema_bivittatum FHIHQRVGLSYLHTTKRKTRP GTYTLEITSIP LYKKKDLQKLEDN NDDYLFGEALR 2875
Xenopus_tropicalis FRINQRDGLSYLHAS-QKILPGTYTLEITSIP LYKKTDLIELEQKKEENYLLGELGESLN 2883
.....2890.....2900.....2910.....2920.....2930.....2940

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: * ::::
Pavo_muticus      MRLWLELY 2902
Pavo_cristatus    MRLWLELY 2902
Gallus_gallus     MRLWLELY 2903
Anas_platyrhynchos MRLWLELY 2896
Chelonia_mydas    MRLWIELY 2900
Mus_musculus      MRLQIQLY 2907
Rattus_norvegicus MRLQIQLY 2907
Homo_sapiens      MRLQIQLY 2912
Pan_troglodytes   MRLQIQLY 2912
Macaca_mulatta    MRLQIQLY 2912
Callithrix_jacchus MMLQIQLY 2912
Canis_lupus_familiaris MRLQIQLY 2921
Felis_catus       MRLQIQLY 2912
Equus_caballus    MRLQIQLY 2912
Bos_taurus        MRLQIQLY 2912
Heterocephalus_glaber MRLQIQLY 2909
Rhinatrema_bivittatum MRLQIEFY 2883
Xenopus_tropicalis IRLQIELF 2891
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