

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/BBSData.ms Tue Feb 1 11:24:39 2022

Page 1 of 5

Pavo_muticus	-----	
Pavo_cristatus	-----	
Gallus_gallus	-----	
Mus_musculus	-----ME	2
Rattus_norvegicus	-----ME	2
Homo_sapiens	-----MV	2
Pan_troglodytes	-----MV	2
Macaca_mulatta	-----MV	2
Callithrix_jacchus	-----MV	2
Heterocephalus_glaber	-----MV	2
Equus_caballus	-----MV	2
Canis_lupus_familiaris	-----MV	2
Bos_taurus	-----	
Rhinatrema_bivittatum	MRGLESEGTAGAGWCCRSDSRSPCVCIASSPHHELPPARQGRICPOYSLPCCGREILLAN	60
Xenopus_tropicalis	-----	
Callorhinchus_milii	-----	
Danio_rerio	-----MDPSC	5
	1.....10.....20.....30.....40.....50.....60	

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Pavo_muticus	MAFRVNSRRHIGLQQLSSLAWAGRTLLGPMRSCKFVVDSTNESMLICSALRLIESLDL	60
Pavo_cristatus	MAFRVNSRRHIGLQQLSSLAWAGRTLLGPMRSCKFVVDSTNESMLICSALRLIESLDL	60
Gallus_gallus	MAFRVNSRRHIGLQQLSSLAWAGRTLLGPMKACKFVVDSTDESMLICSAVRLMESLDL	60
Mus_musculus	MACRVINRRRHVGLQQLSSFAQTGRSFLGPVKATKFIIDAECHESVLISSTVRLLEGLDL	62
Rattus_norvegicus	MDYRVLNRRRHVGLQQLSSFAQTGRSFLGPVKATKFIIDAECHESVLISSTVRLLEGLDL	62
Homo_sapiens	MACRVVNKRRHMGLQQLSSFAETGRTFLGPLKSSKFIIDEECHESVLISSTVRLLESIDL	62
Pan_troglodytes	MACRVVNKRRHMGLQQLSSFAETGRTFLGPLKSSKFIIDEECHESVLISSTVRLLESIDL	62
Macaca_mulatta	MACRVINKRRHMGLQQLSSFAETGRTFLGPLKSSKFIIDEECHESVLISSTVRLLESIDL	62
Callithrix_jacchus	MACRVINKRRHMGLQQLSSFAETGRTFLGPLKSSKFIIDEECHESVLISSTVRLLESIDL	62
Heterocephalus_glaber	MACRVMNKRRHMGLQQLSSFAETGRTFLGPLKSSKFIIDEECHESVLISSTVRLLESIDL	62
Equus_caballus	MACRVINKRRHMGLQQLSSFAETGRTFLGPLKSSKFIIDEECHESVLISSTVRLLESIDL	62
Canis_lupus_familiaris	MACRVINKRRHMGLQQLSSFAETGRTFLGPLKSSKFIIDEECHESVLISSTVRLLESIDL	62
Bos_taurus	MDCRVINRRRHIGLQQLSSFAETGRTFLGPLKSSKFIIDEECHESVLISSTVRLLESIDL	60
Rhinatrema_bivittatum	HCFLAMNKTSHIGLQQLSSLATSGTTFGLGPVKFSKFIVDESTHETTLTCTFRILLESINF	120
Xenopus_tropicalis	-----MAIRGHKGLQQLSMAKSVNSFLGPMKSYKVFVDQTTTHESILTCSAFRLLENLNL	55
Callorhinchus_milii	-----MRSHIGLEQLAALAASGRSLLGSIKSYKFIVDETTDESAVTCSAFRLLENLNL	53
Danio_rerio	KQCSFAMKRRHIGLQQLQAITSATAHAFGLPNKRLKFIQDEDAVGLIGSCPRILLEHLEL	65
70.....80.....90.....100.....110.....120	

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Pavo_muticus	TSAAGQLLNETIQANKEFKTGMSTLLFLVGAWSNAVLECLQQNVPSAIVSVMSEGLDS	120
Pavo_cristatus	TSAAGQLLNETIQANKEFKTGMSTLLFLVGAWSNAVLECLQQNVPSAIVSVMSEGLDS	120
Gallus_gallus	TSAAGQLLNETLQAQSKFKTGMSTLLFLVGAWSNAILECLQQNVPSAIVSVMSEGLDS	120
Mus_musculus	TCAVGHLLEAVQAQNNNTYKIGTSTLLFLVGAWSRAVEDCLHLGIPPTTVIVSVMSEGLNS	122
Rattus_norvegicus	TCAVGHLLEAVQAQNNNTYKIGTSTLLFLVGAWSRAVEDCLHLGVPPTTVIVSVMSEGLNS	122
Homo_sapiens	TSAVGQLLNEAVQAQNNNTYRTGISTLLFLVGAWSAAVEECLHLGVPISIIIVSVMSEGLNF	122
Pan_troglodytes	TSAVGQLLNEAVQAQNNNTYRTGISTLLFLVGAWSAAVEECLHLGVPISIIIVSVMSEGLNF	122
Macaca_mulatta	SSAVGQLLNEAVQAQNNNTYRTGISTLLFLVGAWSAAVEECLHLGVPISIIIVSVMSEGLNF	122
Callithrix_jacchus	TDAVGQLLSEAVQAQNNNTYRTGASTLLFLVGAWSAAVEECLHLGVPISIIIVSVMSEGLNF	122
Heterocephalus_glaber	TSATGQLLNEAVQAQNDTYRTGATLLFLAGAWSSAAVEECLHLGVPISIIIVSVMSEGLNS	122
Equus_caballus	TSAVGQLLSEAVQAQNNNTYRTGATLLFLVGAWSAAVEECLHMGVPSIIIVSVMSEGLNS	122
Canis_lupus_familiaris	TSAVGQLLNEAVQAQNNNTYRTGATLLFLVGAWSAAVEECLHLGVPISIIIVSVMSEGLNS	122
Bos_taurus	TSAVGQLLNEAVQAQNNNTYRTGATLLFLVGAWSAAVEECLHLGVPISIIIVSVMSEGLNS	120
Rhinatrema_bivittatum	TDAVGQLLYETIQNTQNKVYKGTGTTLLFLVGAWSNAVLECLHQGIPISIIIVSVMSEGLNS	180
Xenopus_tropicalis	TSAVGQLFNETIQAHQKSYKGTGTTLLFFMVGAWSAAVEECLHLGIPVSLIVSVMSEGLNS	115
Callorhinchus_milii	NGPIGQLLNETVQTHHKLYKTGTSSLLFLVGAWSKAVLNCLNEDIPITIVSVMSEGLDN	113
Danio_rerio	DGSVGQLLHETVLAQKKLFHSGINTLMFLAGAWSRAVLECLNRGISVSDIKSAMRGGLQE	125
130.....140.....150.....160.....170.....180	

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/BBSData.ms Tue Feb 1 11:24:39 2022

Page 2 of 5

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      .      :      :
Pavo_muticus      CCEEVQCLQISVHVDVVK-----ELCSSSVRPSASESKASQIPGHS      160
Pavo_cristatus    CCEEVQCLQISVHVDVVK-----ELCSSSVRPSASESKASQIPGHS      160
Gallus_gallus     CCEKVQCLQVSVHVDVVK-----ELCSSSVRPSASESKASQIPCGS      160
Mus_musculus      CIEAVVSLQVPIHNVFD-----HMDNTSTVYKLETVNATLCP---      159
Rattus_norvegicus CIEAVVSLQVPIHNVFD-----HIDNTSTVYKLETVDVSLCP---      159
Homo_sapiens      CSEEVVSLHVPVHNIFD-----CMDSTKTFSQLETFSVSLCP---      159
Pan_troglodytes   CSEEVVSLHVPVHNIFD-----CMDSTKTFSQLETFSVSLCP---      159
Macaca_mulatta    CSEEVVSLQVPVHNIFD-----CMDSTKTFFQLETFSVSLCP---      159
Callithrix_jacchus CSEEVVSLQVPVHNVFD-----HMDNTKTFSQLETFNVSILCP---      159
Heterocephalus_glaber CSEEVVSLQVPVHNIFD-----HMGSTKAISELETFSVSLCP---      159
Equus_caballus    CIEEVVSLQVPVHNVFD-----HIDNTKTFSQLETFSVSLGP---      159
Canis_lupus_familiaris CIKEVVSLQVPIYNVFD-----HLDSTKTFSQLETFNISLCP---      159
Bos_taurus        CIEEVESLQVPIHSVCD-----HIDSTETFSGLS---VSLYP---      154
Rhinatrema_bivittatum CIEEVKSLQIPLNIHE-----KSDHESKDLGSKPGDSTSCS---      217
Xenopus_tropicalis CIGHVECLQVFLRSQAT-----SDCTNMKAHSIDCMRFSASG---      152
Callorhinchus_milii AIEALETCQVHIDNLE-----NFNSKQNVLTISKPGRLSCGSDTS      153
Danio_rerio       CLDACTQLAVSVEEFKKS DVRSNDQCIDMMVKHSRYINARTKNTQSDDNVQDFRKLISKS      185
      .....190.....200.....210.....220.....230.....240

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Pavo_muticus      SLNHQIFLYFQKDISASER-VPRNSCFPOEADCNFNKGLVWPLASFGSVASLVRSDDKS      219
Pavo_cristatus    SLNHQIFLYFQKDISASER-VPRNSCFPOEADCNFNKGLVWPLASFGSVASLVRSDDKS      219
Gallus_gallus     SLNRQIYLCFQKDISASEELVPRNSYFPOEADCNFNKGLVWPLASFGSVASLVRSDVDDGS      220
Mus_musculus      -----FLQDPSSGSGLLQEKRFKDATSPLLSTYSLSGRHAESPKFFKPQNNLETEKNTL      213
Rattus_norvegicus -----FLQVPSSGSGLLQEKHDFKDATSOLLSTYSLSGRRAKSPFFKPKQAKVETEN-TS      212
Homo_sapiens      -----FLQVPSDTDLIEELHGLKDVASQTLTISNLSGRPLKSYELFKPQTKVEADNNTS      213
Pan_troglodytes   -----FLQVPSDTDLIEEHALKDVASQTLTISNLSGRPLKSEELFKPQTKVEADKNTS      213
Macaca_mulatta    -----FLQVPSDTDLIEEHLGRDVASQTLTISNLSGRLLKSEFFKPKQAKVEADKNTS      213
Callithrix_jacchus -----FLQSPSNTDLIEEHSKLDVTSQTLTISNLSGRPLKSEFFKPKQTEFEADKNTS      213
Heterocephalus_glaber -----FLQDPSSGASSVQEEHHRDGVPO-LTTYNLRRPVKSPKFFQPDAKIEAGENTS      212
Equus_caballus    -----FLQIPSDTGLMQKEHDLKDVAPQPLTIHNLGRPVKSPQLFRPQAKVEADTNTS      213
Canis_lupus_familiaris -----FLQIPSDTG-LQKEHDLNDVASPSLTITYSLSGIPVKSPKLFRRQTEVEADKNTL      212
Bos_taurus        -----SLQIPSGTGLVQKEHDLKDVTSQSLAFCSLSGRPVKSPQLFRLOAKFEADENIS      208
Rhinatrema_bivittatum -----SMRSQNNVYLLHKEHISETDYLOQNNIVNFEKK--NSKCTSTADSFEPYKLS      269
Xenopus_tropicalis -----DQVKCSSEQKNISLPHVSNVRTTFECPAAFRKEMSLQYTGTVN      195
Callorhinchus_milii SR--HLISDGHSVAKLQISHQSNPSKKMDSVESYSVSHENDQCKQSF SCHVKCFKSTLPA      211
Danio_rerio       DDQCMDMTHKHSRYANTQTEHAQSDDNVDQFKSGGIKSNDQCMDMILKHSRYINTKTEHA      245
      .....250.....260.....270.....280.....290.....300

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Pavo_muticus      -----TSVVS GSGVSA SICKQKKLTHSR YFSTVAKSHV-----      252
Pavo_cristatus    -----TSVVS GSGVSA SICKQKKLTHSR YFSTVAKSHV-----      252
Gallus_gallus     -----TSVIS GSGVSA SICKQKKLTHSR YFSPGAKSHI-----      253
Mus_musculus      -----QVLKNNLYTDSFCKKSALAHSRHFNR TDNSHW-----      245
Rattus_norvegicus -----QALKNNLYTDSFCRKSALTHSRHFNR TENS HW-----      244
Homo_sapiens      -----RTLKNSLLADTCCRQSILIH SRHFNR TDNTEG-----      245
Pan_troglodytes   -----RTLKNSLLADTCCRQSILIH SRHFNR TDNTEE-----      245
Macaca_mulatta    -----RTLKNSLLADTCCRKSILIH SRHFNGTDNTEW-----      245
Callithrix_jacchus -----QTLKNSLLADTCCRKSILIH SRHFNR TNTER-----      245
Heterocephalus_glaber -----QTLKNSLHTDT-FRKSIFIH SRHFNR TDNNOG-----      243
Equus_caballus    QT-----PQTLKNSLLADTCCRKSVLIH SRHLNR TDNSQQ-----      248
Canis_lupus_familiaris QN-----PQTLKNSLLASSHYRKSILIH SRHFNR TANNOW-----      247
Bos_taurus        RT-----PQTLKNNLLADTHCRKSVLTHSRHF SRTRD-HW-----      242
Rhinatrema_bivittatum -----HQISG-----CSFLSNKVKLTHSIHLNRLEKSCS-----      298
Xenopus_tropicalis P-----KTQTYQRKRLFHSRHL-----      212
Callorhinchus_milii AG-----ASPSQSKSSSVFSGKNIKLHL SRHFMSDVGTQ-----      246
Danio_rerio       QSNVNMQDFRKLDDKSDQCKHMTLKHSRHFNRARTKNTQSDVNVDLKGSDIKSIDQCMD      305
      .....310.....320.....330.....340.....350.....360

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/BBSData.ms Tue Feb 1 11:24:39 2022

Page 3 of 5

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Pavo_muticus      -----STHLSDCQVYLSGQSARTCECCGLGYLAMALSHGNQP-----SVKLLQ 295
Pavo_cristatus    -----STHLSDCQVYLSGQSARTCECCGLGYLAMALSHGNQP-----SVKLLQ 295
Gallus_gallus     -----SSHLDGDSQVYLSGQSAYTCECYGLGHLAMALSHGNQP-----SMKLLQ 296
Mus_musculus      -----ISRHDGFLEQLEST-PKVLRCNDFGELAVGLSHGDHS-----SMALAK 287
Rattus_norvegicus -----ISRPDGDFLEHLRST-PKVLRCNDLGELAVGLSHGDHS-----SMTLAK 286
Homo_sapiens      -----VSKPDGDFQEHVTAT-HKTYRCNDLVELAVGLSHGDHS-----SMKLVE 287
Pan_troglodytes   -----VSKPDGDFQEHVTAT-HKTYRCNDLVELAVGLSHGDHS-----SMKLVE 287
Macaca_mulatta    -----VSKPDGDFQEHVTAT-LKTYRCNDLVELAVGLSHGDHS-----SMKLVE 287
Callithrix_jacchus -----VSKPDVDFQEHVTAT-LKTYRCNDLIELAVGLSHGDHS-----SMKLVE 287
Heterocephalus_glaber -----IHKPDGRFQEQRGATTFTQTYRCDDLAELAVGLSHGDHS-----SMKLVE 286
Equus_caballus    -----ISKPDGDFLEQHGAAATPQAYRCNDLVELEVGLSHGDDS-----SMKLVE 291
Canis_lupus_familiaris -----INKPDGDFLEQHGAAATPNTYRCNDLVELEMGLSHGDHN-----SMKLVD 290
Bos_taurus        -----ISKPRGFLEQLSAAAPKTYSCSNLAELVGLSHGDPS-----SMRLVD 285
Rhinatrema_bivittatum -----SWE-DNSQDYTVDPADVLTGNDLGRLLAAALSHGNQR-----SMKLVE 340
Xenopus_tropicalis -----AEELSSFRDVSSEKPTSTLNNETLDGLAKGLAHGYQP-----VMDLVK 255
Callorhinchus_milii -----EEALSDSFD--ESSSTVAADCATFRALAMSLSHGNQS-----AMQLTI 287
Danio_rerio       MTLKHSSTHFNAQTEHNMQDFRKLDDKSDDQCMYMTLKHSRHFNAQTEHTQSEVTMQDFTK 365
                .....370.....380.....390.....400.....410.....420

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Pavo_muticus      SIVEYQHERA-----ECSGS-----SQF 313
Pavo_cristatus    SIVEYQHERA-----ECSGS-----SQF 313
Gallus_gallus     SIVAYQHERA-----ECSGS-----SQF 314
Mus_musculus      AAVRLQWQSLCLOQANWMA-----FMF 310
Rattus_norvegicus AAVRLQWQAVCLOPANCMA-----FMF 309
Homo_sapiens      EAVQLQYQNACVQQGNCTKP-----FMF 310
Pan_troglodytes   EAVQLQYQNACVQQGNCTKP-----FMF 310
Macaca_mulatta    EAVQLQYQNACVQQGNCTKP-----FMF 310
Callithrix_jacchus EAVRLQYQNACVQQGNCRIP-----FMF 310
Heterocephalus_glaber EAVRLQYQNACVQQGNCRIP-----FVF 309
Equus_caballus    AAAQLQYQNARTQQGCSCAMP-----FMF 314
Canis_lupus_familiaris EAVRLQYQNASIQQGNCTMP-----FRF 313
Bos_taurus        EAVRLQYQNAGRQRGSHGL-----FPF 308
Rhinatrema_bivittatum DAIACMHQNM-----DNMSI-----AKF 358
Xenopus_tropicalis KAVILQCAEIK---ENLLDK-----SSF 275
Callorhinchus_milii EAYRVQIQYDRVANSVSRTL-----PQF 310
Danio_rerio       SDIKLDNQSMHMTLKHSRHFNAQTEHTHHDVTVIAQAVSHGCSMHLILLKAYELQNRHL 425
                .....430.....440.....450.....460.....470.....480

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Pavo_muticus      SIAEIIATCCLPGLPESYSVCVCPGFIALVSPQATVIKYFQDKSLWILLMDGDLTEQYRHL 373
Pavo_cristatus    SIAEIIATCCLPGLPESYSVCVCPGFIALVSPQATVIKYFQDKSLWILLMDGDLTEQYRHL 373
Gallus_gallus     SIAEIIATCCLPGLPESYSVCVCPGFIALVSPQATVIKYFQDKSLWILLMDGDLTEQYRHL 374
Mus_musculus      DISRLLTCCIPGLPETFSRVGLGYVTFVTMSITLIKELQDOPFRVILIEGDLTESYRHL 370
Rattus_norvegicus DISRLLTCCIPGLPETFSRVGLGYVTFVTMSITLIKELQDOPFRVILIEGDLTESYRHL 369
Homo_sapiens      DISRIFTCCCLPGLPETSSVCVCPGYITVSVSNNPVIKELQNPVRIVLIEGDLTENYRHL 370
Pan_troglodytes   DISRIFTCCCLPGLPETSSVCVCPGYITVSVSNNPVIKELQNPVRIVLIEGDLTENYRHL 370
Macaca_mulatta    DISRIFTCCCLPGLPETSSVCVCPGYITVSVSNNPVIKELQNPVRIVLIEGDLTENYRHL 370
Callithrix_jacchus DISRIFTCCCLPGLPETSSVCVCPGYITVSVSNNPVIKELQNPVRIVLIEGDLTENYRHL 370
Heterocephalus_glaber DISRLFTCTLPGLPETFSRVGLGYVTFVTMSITLIKELQDOPFRVILIEGDLTESYRHL 369
Equus_caballus    DISRIFTCCCLPGLPETFSRVGLGYVTFVTMSITLIKELQDOPFRVILIEGDLTESYRHL 374
Canis_lupus_familiaris DISRIFTCCCLPGLPETFSRVGLGYVTFVTMSITLIKELQDOPFRVILIEGDLTESYRHL 373
Bos_taurus        DISRIFTCCCLPGLPETFSRVGLGYVTFVTMSITLIKELQDOPFRVILIEGDLTESYRHL 368
Rhinatrema_bivittatum DTAGIVTCCCLPGLPETSSVCVCPGYITVSVSNNPVIKELQNPVRIVLIEGDLTESYRHL 418
Xenopus_tropicalis NISRLTCCCLPGLPETFSRVGLGYVTFVTMSITLIKELQDOPFRVILIEGDLTESYRHL 335
Callorhinchus_milii DIDKLVTCCLPGLPETFSRVGLGYVTFVTMSITLIKELQDOPFRVILIEGDLTESYRHL 370
Danio_rerio       DIHNLATCCIPGVSEDHACVLRGYVTFVTMSITLIKELQDOPFRVILIEGDLTESYRHL 485
                .....490.....500.....510.....520.....530.....540

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/BBSData.ms Tue Feb 1 11:24:39 2022

Page 4 of 5

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**.. *: . * . : . : : : * . * : * .
Pavo_muticus      GFTKPRNVKTVEEYPSLOEGGSRDWLNSMLDILISLKVNLVLVKGDCENLMERCITNN 433
Pavo_cristatus    GFTKPRNVKTVEEYPSLOEGGSRDWLNSMLDILISLKVNLVLVKGDCENLMERCITANN 433
Gallus_gallus     GFTKPRNVKTILEEYPSLOEGGSRTSWLSNMLDILISLEVNLVLVKGDCENLMERCITNN 434
Mus_musculus      GFNKSJNIKTCLDSGELSEDSAEELWTHVLOVLIQFNVTLLILVQGSVSEHLTEKCMHSH 430
Rattus_norvegicus GFNKSJNIKTCLDSGQLSSEDSSTEELWTHVLOVLIQFNVTLLILVQGSVSEHLTEKCMHSH 429
Homo_sapiens      GFNKSJNIKTCLDSMRLOEDSSEELWANHVLOVLIQFNVTLLILVQGSVSEHLIEKCIHSH 430
Pan_troglodytes   GFNKSJNIKTCLDSMQLOEDSSEELWANHVLOVLIQFNVTLLILVQGSVSEHLIEKCIHSH 430
Macaca_mulatta    GFNKSJNIKTCLDSMELQEDSSEELWANHVLOVLIQFNVTLLILVQGSVSEHLIEKCIHSH 430
Callithrix_jacchus GFNKSJNIKTCLDSMKLOEDSSEELWANHVLOVLIQFNVTLLILVQGSVSEHLIEKCIHSH 430
Heterocephalus_glaber GFNKSJNIKTCLDSVKLOEDSSEELWANHVLOVLIQFNVTLLILVQGSVSEHLTEKCMHSH 429
Equus_caballus    GFNKSJNIKTCLDSMKLPQDSSEELWTHVLEILIKFNVTLLILVQGSVSEHLIEKCIHSH 434
Canis_lupus_familiaris GFNKSJNIKTCLDSMKIQNSSEELWTHVLEILIKFNVTLLILVQGSVSEHLIEKCIHSH 433
Bos_taurus        GFNKSJNIKTCLDSVKKVQDSSEELWTHVLEILIKFNVTLLILVQGSVSEHLIEKCIHSH 428
Rhinatrema_bivittatum GFNKSJNIKTCLDSVKKVQDSSEELWTHVLEILIKFNVTLLILVQGSVSEHLIEKCIHSH 478
Xenopus_tropicalis GFNKSJNIKTCLDSVKKVQDSSEELWTHVLEILIKFNVTLLILVQGSVSEHLIEKCIHSH 395
Callorhinchus_milii GFNKSJNIKTCLDSVKKVQDSSEELWTHVLEILIKFNVTLLILVQGSVSEHLIEKCIHSH 430
Danio_rerio       GFNKSJNIKTCLDSVKKVQDSSEELWTHVLEILIKFNVTLLILVQGSVSEHLIEKCIHSH 538
.....550.....560.....570.....580.....590.....600

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Pavo_muticus      ILVIRSVTQNVLSAFGKVTGAQPVTYLTQLKAACLGSGVWVELWKGCDERAMELGQLVPV 493
Pavo_cristatus    ILVIRSVTQNVLSAFGKVTGAQPVTYLTQLKAACLGSGVWVELWKGCDERAMELGQLVPV 493
Gallus_gallus     ILVIRSVTQNVLSAFGKVTGAQPVTYLTQLKAACLGSGVWVELWKGCDERAMELGQLVPV 494
Mus_musculus      RLVIGAVNGSVLQAFEAATRAVPVAYVTQVNECDVGSVSVTFWMS--SPHDINRSNR-IAI 488
Rattus_norvegicus RLVIGAVNGSVLQAFEAATRAVPVAYVTQVNECDVGSVSVTFWMS--SPHDINRSNR-IAI 486
Homo_sapiens      RLVIGAVNGSVLQAFEAATRAVPVAYVTQVNECDVGSVSVTFWMS--SPHDINRSNR-IAI 490
Pan_troglodytes   RLVIGAVNGSVLQAFEAATRAVPVAYVTQVNECDVGSVSVTFWMS--SPHDINRSNR-IAI 490
Macaca_mulatta    RLVIGAVNGSVLQAFEAATRAVPVAYVTQVNECDVGSVSVTFWMS--SPHDINRSNR-IAI 490
Callithrix_jacchus RLVIGAVNGSVLQAFEAATRAVPVAYVTQVNECDVGSVSVTFWMS--SPHDINRSNR-IAI 490
Heterocephalus_glaber RLVIGAVNGSVLQAFEAATRAVPVAYVTQVNECDVGSVSVTFWMS--SPHDINRSNR-IAI 488
Equus_caballus    RLVIGAVNGSVLQAFEAATRAVPVAYVTQVNECDVGSVSVTFWMS--SPHDINRSNR-IAI 494
Canis_lupus_familiaris RLVIGAVNGSVLQAFEAATRAVPVAYVTQVNECDVGSVSVTFWMS--SPHDINRSNR-IAI 493
Bos_taurus        RLVIGAVNGSVLQAFEAATRAVPVAYVTQVNECDVGSVSVTFWMS--SPHDINRSNR-IAI 488
Rhinatrema_bivittatum RLVIGAVNGSVLQAFEAATRAVPVAYVTQVNECDVGSVSVTFWMS--SPHDINRSNR-IAI 538
Xenopus_tropicalis RLVIGAVNGSVLQAFEAATRAVPVAYVTQVNECDVGSVSVTFWMS--SPHDINRSNR-IAI 454
Callorhinchus_milii RLVIGAVNGSVLQAFEAATRAVPVAYVTQVNECDVGSVSVTFWMS--SPHDINRSNR-IAI 490
Danio_rerio       RLVIGAVNGSVLQAFEAATRAVPVAYVTQVNECDVGSVSVTFWMS--SPHDINRSNR-IAI 591
.....610.....620.....630.....640.....650.....660

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Pavo_muticus      RIKVQGIPLLTAVLTITVASKMQLIEDQFWTFVYRLHHALKDGKVFLLGGGAVEFLCLSHS 553
Pavo_cristatus    RIKVQGIPLLTAVLTITVASKMQLIEDQFWTFVYRLHHALKDGKVFLLGGGAVEFLCLSHS 553
Gallus_gallus     RIKVQGIPLLTAVLTITVASKMQLIEDQFWTFVYRLHHALKDGKVFLLGGGAVEFLCLSHS 554
Mus_musculus      LLTAEGINLITAVLTITVASKMQLIEDQFWTFVYRLHHALKDGKVFLLGGGAVEFLCLSHS 548
Rattus_norvegicus LLTAEGINLITAVLTITVASKMQLIEDQFWTFVYRLHHALKDGKVFLLGGGAVEFLCLSHS 546
Homo_sapiens      LLKTEGINLITAVLTITVASKMQLIEDQFWTFVYRLHHALKDGKVFLLGGGAVEFLCLSHS 550
Pan_troglodytes   LLKTEGINLITAVLTITVASKMQLIEDQFWTFVYRLHHALKDGKVFLLGGGAVEFLCLSHS 550
Macaca_mulatta    LLKTEGINLITAVLTITVASKMQLIEDQFWTFVYRLHHALKDGKVFLLGGGAVEFLCLSHS 550
Callithrix_jacchus LLKTEGINLITAVLTITVASKMQLIEDQFWTFVYRLHHALKDGKVFLLGGGAVEFLCLSHS 550
Heterocephalus_glaber LLKTEGINLITAVLTITVASKMQLIEDQFWTFVYRLHHALKDGKVFLLGGGAVEFLCLSHS 548
Equus_caballus    MLKTEGINLITAVLTITVASKMQLIEDQFWTFVYRLHHALKDGKVFLLGGGAVEFLCLSHS 554
Canis_lupus_familiaris VIKTEGINLITAVLTITVASKMQLIEDQFWTFVYRLHHALKDGKVFLLGGGAVEFLCLSHS 553
Bos_taurus        VLKTEGINLITAVLTITVASKMQLIEDQFWTFVYRLHHALKDGKVFLLGGGAVEFLCLSHS 548
Rhinatrema_bivittatum NIKAPRISLVTAVLTITVASKMQLIEDQFWTFVYRLHHALKDGKVFLLGGGAVEFLCLSHS 598
Xenopus_tropicalis SIKAKKLNLTITVASKMQLIEDQFWTFVYRLHHALKDGKVFLLGGGAVEFLCLSHS 514
Callorhinchus_milii QISCFKIAVITVVLCSFVNCKLOVIGDQLWSCVHRLHHALKDGKVFLLGGGAVEFLCLSHS 550
Danio_rerio       SITTDCSVLTAVITVVLCSFVNCKLOVIGDQLWSCVHRLHHALKDGKVFLLGGGAVEFLCLSHS 651
.....670.....680.....690.....700.....710.....720

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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Page 5 of 5

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Pavo_muticus	QMLE--ELSLK	LADKS	AVKESH--SPQLAAS	SSEYK	AVVLR	RALATG	WNLYLS	VIMCNTAK	609				
Pavo_cristatus	QMLA--ELSLK	LADKS	AVKESH--SPQLAAS	SSEYK	AVVLR	RALATG	WNLYLS	VIMCNTAK	609				
Gallus_gallus	QMLA--EQCLK	LAKNA	AKEFR--SPQLAAS	SSEYK	AVVLQ	ALATGWS	OYLS	SVVICNAAK	610				
Mus_musculus	QILA--EQLNRGN	HACLGWLPDSSSW	MASSL	SVYRPT	TVLKS	LAGGWHEFLS	AIMCNTAT	606					
Rattus_norvegicus	QILA--EQLNKG	NHACLGWLPDSSSW	MASSL	SVYRPT	TVLKCLAGGWHEFLS	AIMCNTAT	604						
Homo_sapiens	HILA--EQLKKEN	HACSGWLHNTSSWLASS	LAIYRPT	TVLKFLANGWQKYLS	TLLYNTAN	608							
Pan_troglodytes	QILA--EQLKKEN	HACSGWLHNTSSWLASS	LAIYRPT	TVLKFLANGWQKYLS	TLLYNTAN	608							
Macaca_mulatta	QILA--EQLKKEN	HACSGWLHNTSSWLASS	LAIYRPT	TVLKFLANGWQKYLS	TLLYNTAH	608							
Callithrix_jacchus	QILA--EQLKKN	HACSGWFNPNTSSWLASS	LAIYRPT	TVLKL	LANGWQKYLS	TLLYNTAN	608						
Heterocephalus_glaber	QILA--EQPLQ	KGDRA	CGLWLRDTSSWLASS	LAIYRPT	TVLKCLANGWKYLS	VLLYNTAS	606						
Equus caballus	QILA--EQLSKGN	QAACGLWHLNTSSWLASS	LAIYRPT	TVLQCLANGWHKYLS	TLLYNTAN	612							
Canis_lupus_familiaris	QILA--GQSLSKRN	HVCSCWLHNTSSWLASS	LAIYRPT	TVLNCLANGWHRYLS	TLMYNTAC	611							
Bos_taurus	QSLA--GQSVNKG	NQDCSGWLHNTSSWLASS	AALYRPT	TVLKCLADGWHRYS	TLLRNTAV	606							
Rhinatrema_bivittatum	QKLE--KL	SLKQDDKM	VRQIHHS	SWLARCS	EHYKPSILRAMANGWVKYIS	IVMCNSAK	656						
Xenopus_tropicalis	QKLV--QDPLKSY	KANDSTQFHCL	SSWMTE	SAAYRAPII	RCLAKGLYKYIS	VLLCNMGK	572						
Callorhinchus_milii	KRLISEKA	ALKPQINATDCTGPHCS	RRITEADVLYKSQILQ	FADGWREYLM	TAMYTGM	610							
Danio_rerio	RQYT-----	QLHPDRSP	LDSDAVLELM	SEAWDFISTVM	NLNGS	689							
730.....740.....750.....760.....770.....780												

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Pavo_muticus	AASEFEARTLIDHHLQKAADCGSPSAIVLKEFRRGGMFRGCSIPS---	ADSEEGVKVYDN	666
Pavo_cristatus	AASEFEARTLIDHHLQKAADCGSPSAIVLKEFRRGGMFRGCSIPS---	AGSEEGVKVYDN	666
Gallus_gallus	TASEFEARTLIDHHLQKAADCGSPSAIVLKEFRRGSMFRGCIPF---	TDNEEGVKVYDN	667
Mus_musculus	HPSAVEARTFIQHVNNAIDS GSPSSSYILSEYSLSSGVFHSGIS---	DNLELVPRVYDT	663
Rattus_norvegicus	YPSAVEASTFIQHHVQAADS GSPSSSYILSEYSELSSGLFHSDIS---	NNLELVPRVYDT	661
Homo_sapiens	YSSEFEASTYIQHHLQNATDS GSPSSSYILNEYSKLNSRIFNSDIS---	NKLEQIPRVYDV	665
Pan_troglodytes	YSSEFEASTYIQHHLQNATDS GFPSSSYILNEYSKLNSRIFNSDIS---	NKLEQIPRVYDV	665
Macaca_mulatta	YSSEFEASTYIQHHLQNATDS GSPSSSYILNEYSKLNSRIILNSDIS---	NKLEQIPRVYDV	665
Callithrix_jacchus	HSSEFEASTYVQHHLQNATDS GSPSSSYILNEYSKLNSRIFNSDIS---	NKLEQIPRVYDV	665
Heterocephalus_glaber	YSSELEASTFIQHHLQNAIGS GSPSSSYILKEYSKLASGIFNSSIS---	NKLEQFPRVYDV	663
Equus caballus	YSSEFEASTFIQHHLQNAIDS GSPSSSYILSEYSKLNSGIFNMSGIS---	NKLGIQIPRVYDI	669
Canis_lupus_familiaris	CSSEFEASTFIQQHQLNARDS GSPSSSYILNEYSKLNSGIFNPISIS---	NKLEQIPSIYDI	668
Bos_taurus	YSSDSEAATSIOCHLQNAADS GSPSSSYILNEYSKLNSVIILNLGIS---	DKLEPIPRVYDV	663
Rhinatrema_bivittatum	CRSELESRALIQHHLQKMDCSSPEAYILLKEYAK---	DIADLDFA--SKCEDTIFEIYDN	710
Xenopus_tropicalis	FLSELDSVTFIENELONIIQNSSPTDYIRDEYSKKVLFDIGIGIP---	VTSQSLP-VYDN	628
Callorhinchus_milii	YRTPLDAMSEVORCVNEDVGLFAIIPNVSDESTAEWVGQCWSQFGGTVS	SENRMNSKVYDN	670
Danio_rerio	VANRTAEWTSITHOMRRHTDIG-----	VTDLGLGYDN	721
790.....800.....810.....820.....830.....840		

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Pavo_muticus	V	TAKMEAWRRALDLVLLVLQTDAEIIIG-PKRSQLLNSHSSS-EFMFL	712						
Pavo_cristatus	V	TAKMEAWRRALDLVLLVLQTDAEIIIG-PKRSQLLNSHSSS-EFMFL	712						
Gallus_gallus	V	TAKMEAWRRALDLVLLVLQTDAEIIIG-PRRSQLLNSTRSSS-EFMFL	713						
Mus_musculus	V	TPKIEAWRRALDVLLVLQTDSEIITG-LVHTQM-NSQEELD-GVLFL	708						
Rattus_norvegicus	V	TPKIEAWRRALDLVLLVLQTDSEIITG-LVHTQM-NSQEELD-GVLFL	706						
Homo_sapiens	V	TPKIEAWRRALDLVLLVLQTDSEIITG-HGHTQI-NSQELT-GFLFL	710						
Pan_troglodytes	V	TPKIEAWRRALDLVLLVLQTDSEIITG-HGHTQI-NSQELT-DLFGL	710						
Macaca_mulatta	V	TAKIEAWRRALDLVLLVLQTDSEIITG-HGHTQI-NSQELT-GFLFL	710						
Callithrix_jacchus	V	TPKIEAWRRALDLVLLVLQTDSEIITG-HGHTQI-NSQELE-GFLFL	710						
Heterocephalus_glaber	V	TPKIEAWRRALDLVLLVLQTDSEIITG-LGHVOI-NSQELE-GFLFL	708						
Equus caballus	V	PKIEAWRRALDLVLLVLQTDSEIITG-LGHEI-NSQVEP-GFLFL	714						
Canis_lupus_familiaris	I	IPKIEAWRRALDLVLLVLQTDSEIITG-LGHTOL-NSHETE-GFLFL	713						
Bos_taurus	V	TPKIEAWRRALDLVLLVLQTDNEIITG-LAHTOK-SSQESE-GFLFL	708						
Rhinatrema_bivittatum	V	PKLEAWRRALDTMLVLQDAEILTGSWTLKLKNERSANEFILL	758						
Xenopus_tropicalis	V	IPKQEAARRALHLVLMVLQDAEVITNSAVHNQILLSNSSNGEYLFL	676						
Callorhinchus_milii	V	TVVKLESWRRALDLVLLVLQADVEIITG-----YRANTSRLIEDGY---	711						
Danio_rerio	V	TVVKCEAWRRALDVLFLVLQSDTEIITG-----VSQGENTYNQIMFL	763						