

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/CDK4A12.pps Feb 1 11:37:04 2022

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Homo_sapiens      -----
Pan_troglodytes   -----
Macaca_mulatta    -----
Callithrix_jacchus -----
Mus_musculus      -----
Rattus_norvegicus -----
Heterocephalus_glaber -----
Equus_caballus    -----
Canis_lupus_familiaris -----
Bos_taurus        -----
Pavo_muticus      MTAHYRRLSVCFKKMAALYVAALSLTQDGVHRSPPPLCPAGSHRPALPSTNMAPARAPSAS 60
Pavo_cristatus    MTAHYRRLSVCFKKMAALYVAALSLTQDGVHRSPPPLCPAGSHRPALPSTNMAPARAPSAS 60
Gallus_gallus     MTAQDRRLSVGFKKMAALYVASPSLTQDGVHPSPPPLRPAGSHRPILPSTNMAPARPPPAS 60
Chelonia_mydas    -----
1.....10.....20.....30.....40.....50.....60

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Homo_sapiens      -----
Pan_troglodytes   -----
Macaca_mulatta    -----
Callithrix_jacchus -----
Mus_musculus      -----
Rattus_norvegicus -----
Heterocephalus_glaber -----
Equus_caballus    -----
Canis_lupus_familiaris -----
Bos_taurus        -----
Pavo_muticus      THNKDGAPFRSHCALLLPSSALPSAASSPSTQRWRKRLRLFEFORSRQSCAQRRRSRGWL 120
Pavo_cristatus    THNKDGAPFRSHCALLLPSSALPSAASSPSTQRWRKRLRLFEFORSRQSCAQRRRSRGWL 120
Gallus_gallus     THNKDGAPFRSHCALLLPSSSLPSAASSPSTQRWRKRLRPFEFORSRQSCAQRRRSRGWL 120
Chelonia_mydas    -----
.....70.....80.....90.....100.....110.....120

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          **      : : .      * .      *      : * : **
Homo_sapiens      -----MMDLVLEEDVTVPGTILSGCSGLVPSVPDDLDGINPNAGLGNGLLENVSEETVS 53
Pan_troglodytes   -----MMDSVLEEDVTVPGTILSGCSGLVPSVPDDLDGINPNAGLGNGLLENVSEETVS 53
Macaca_mulatta    -----MMDSVLEEDVTLGLTSLSCSGLVPNPDDLDGINPDARLGNGLVLSNVSEETVS 53
Callithrix_jacchus -----MMDSVLEEDVTLPGTILSGCSGLVPNPDDLDGITPKAGLGNGLLENVSEETVS 53
Mus_musculus      -----MDSGMEEEGALPGTILSGCSGLHPVLPDLDVISDTSLGNGVLPSPMSEEEKVS 52
Rattus_norvegicus -----MMDSGMEEDVTLPGTILSGCSGLHPVLPDLDVISDTTGLGNGVLPIMSEEEKVS 53
Heterocephalus_glaber -----MMDSVLEEDVTLPGTILSGCSGLVPPLPDDQN-NSTSAAGLGNGLVLPAAASEEEKVS 52
Equus_caballus    -----MDSVLEEDVTLPGTILSGCSGLVPNLPDDLEGVNSVAGLGNGLVLPVTEETVS 52
Canis_lupus_familiaris -----MDSMLGADATVPGTILGGCSGLARGSPDEVDGIGPGAGLGDVLPDVSEETVS 52
Bos_taurus        -----MDSVLEEDVTFPGTRSGCSGLALGAPDDPEGISPPDPSGNGVLENVSEEEKVS 52
Pavo_muticus      RGPRAGGGMDSLPGEDMTLPVGFEG---SVSALPDISREDSQLEPAGCRGLPDVAEDTVS 177
Pavo_cristatus    RGPRAGGGMDSLPGEDMTLPVGFEG---SVSALPDISREDSQLEPAGCRGLPDVAEDTVS 177
Gallus_gallus     WGPRAGGGMDSLPGEDMTLPVGFEG---SVSALPDISHKGPQLEPAGCRGLPDVAEDTVS 177
Chelonia_mydas    -----MDSLPGEDLTLPEVFGSV-SISRLPDVSRDEPRIGLGVSGVLLDVAEDAVS 51
.....130.....140.....150.....160.....170.....180

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Homo_sapiens      PTRARNMKDFENQITELKKENFNKLRIYFLEERMQQEFHGPTTEHIYKTNIELKVEVESL 113
Pan_troglodytes   PTRARNMKDFENQITELKKENFNKLRIYFLEERMQQEFHGPTTEHIYKTNIELKVEVESL 113
Macaca_mulatta    PTRARNMKDFENQITELKKENFNKLRIYFLEERMQQEFHGPAEHIYKTNIELKVEVESL 113
Callithrix_jacchus PTRARNMKDFENQITELKKENFNKLRIYFLEERMQQEFHGPTTEHIYKTNIELKVEVESL 113
Mus_musculus      PTRARNMKDFENQITELKKENFNKLRIYFLEERIQQEFAGPTTEHIYKTNIELKVEVESL 112
Rattus_norvegicus PTRARNMKDFENQITELKKENFNKLRIYFLEERIQQEFAGPTTEHIYKTNIELKVEVESL 113
Heterocephalus_glaber PTRARNMKDFENQITELKKENFNKLRIYFLEERMQQEFAGPTTEHIYKTNIELKVEVESL 112
Equus_caballus    PTRARNMKDFENQITELKKENFNKLRIYFLEERMQQEFNGPTEHIYKTNIELKVEVESL 112
Canis_lupus_familiaris PTRARNMKDFENQITELKKENFNKLRIYFLEERMQQEFDPTEHIYKTNIELKVEVESL 112
Bos_taurus        PTRARNMKDFENQITELKKENFNKLRIYFLEESLQREGRGRTERACKTNIELKVEVESL 112
Pavo_muticus      PTRARTMKDYENQISDLKKENFNKLRIYFLEMOMQKFDGPTEDMYKINIELKVEIESL 237
Pavo_cristatus    PTRARTMKDYENQISDLKKENFNKLRIYFLEMOMQKFDGPTEDMYKINIELKVEIESL 237
Gallus_gallus     PTRARTMKDYENQISDLKKENFNKLRIYFLEMOMQKFDGPTEDMYKINIELKVEIESL 237
Chelonia_mydas    PTRARTMKDYENQITDLKKENFNKLRIYFLEERMOMQKFDGPTEDIYKINIELKVEVESL 111
.....190.....200.....210.....220.....230.....240

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**:*::**:* ***** *.:*:*****:* **:::* ** ** *:::*
KRELQEREQLLIKASKAVESLAEAGGSEIORVKEDARKKVQQVEDLLTKRILLLEKDVTA
KRELQEREQLLIKASKAVESLAEAGGSEIORVKEDARKKVQQVEDLLTKRILLLEKDVTA
KRELQERERLLIKASKAVESLAEAGGSEIORVKEDARKKVQQVEDLLTERIHLLLEKDVKA
KRELQERERLLIKASKAVESLAEAGGSEIORVKEDARKKVQQVEDLLTKRIRVLQKDVKA
KRELQEKDQLLVKASKAVESLAEAGGSEVORVKEDARKKVQQVEDLLTKRIHLLLEEDVKA
KRELQERDQLLVKASKAVESLAEAGGSEIORVKEDARKKVQQVEELLTKRIHLLLEEDVKA
KRELHKEEQLLIKAFKAVESLAEAGGSEIORVKEDAWKKVQQVEDRLTKRILLLEGDVKA
KRELQEREQLLIKASKAVESLAEAGGSEIORVKEDARKKVQQVEDLLTKRIFVLEEDVKA
KRELQEREQLLIKASKAVESLAEAGGSEVORVKEDAQKKVQQVEDLLTKRIFHLEEDVKA
KRELQERERLLIKASKAVESLAGGGSEVORVKEDAQKKVRQVEDVLTKRIHLLLEEDVKA
KRDQEREKLLIKASKAVESLAQGGAETIORVKEEAQKKLOEMEGILTGRINLLEENLKA
KRDQEREKLLIKASKAVESLAQGGAETIORVKEEAQKKLOEMEGILTGRINLLEENLKA
KRDQEREKLLIKASKAVESLAQGGAETIORVKEEAQKKLOEMEGILTGRINLLEENLKA
KRDQEREKLLIKASKAVESLAQGGAETIORVKEEAHKKVQVEEILSTRINLLEENLKA
.....250.....260.....270.....280.....290.....300

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** *:***: : * **.*: *.*** :.: :. **** *.*****
 AQAELKAFAGTETEKALRLRLSKLSEMKKMHEGDLAMALVLDEKDRLIEELKLSLKS
 AQAELKAFAGTETEKALRLRLSKLSEMKKMHEGDLAMALVLDEKDRLIEELKLSLKS
 AQAELKAFAGTETEKALRLSLESKLEMKMHKGDLMALVLDEKDRLIEELKLSLKS
 AQAELKAFAGTETEKALRLSLESKLEMKKMHEGDLAMALVLDEKDRLIEELKLSLKS
 AQAELKAFAGTETEKALRLSLESKLSAMKKMQEGDLEMTLALAEKDRLIEELKLSLKS
 AQAELKAFAGTETEKALRLSLESKLSAMKKMQEGDLEMTLALAEKDRLIEELKLSLKS
 AQAELKAFAGTETEKALRLSLESKLSAMKKMHAGDLDMALVLEEKDRLIEELKLSLKS
 AQAELKAFAGTAEKALRLSLENKLSAMKKMREGDLEALVLEEKDRLIEELKLSLKS
 AQAELKAFAGTETEKALRLSLENKLSAMKKRHEGDVDMAVVLEQKDLIEDLKLSLKS
 AQAEMEKAFAGTSEKALRLSLESKLSAMKKMREGDLEMAAVLEGKDLIEELKLSLKS
 AQEEVEKAIAMAEKEKALRIVAEQKLSVTNAPARDLDVIAG-AEKGRLEQLNLSLKS
 AQEEVEKAIAMAEKEKALRIVAEQKLSVTNAPARDLDVIVG-AEKGRLEQLNLSLKS
 AQEEVEKAIAMAEKEKTLRIVAEQKLSVTNAPAKDLDMIAG-AED-RLIERLNLNLKS
 AQEEVEKAFAMTEREKLRLAVEQKLSVTINTHPKELDSITEVPEKDLIEQLTLNLKS
310.....320.....330.....340.....350.....360

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 EALIQCLKKEKSQMACPDENVSSGELRGLCAAPREEKERETEAQAOMEHQKERNNSFEERIQ
 EALIQCLKKEKSQMASPDENVSSGELRGLCAAPREEKERETEAQAOMEHQKERNNSFEERIQ
 EALIQCLKKEKSQMASPDENVSSGELRGLCAAPREEKERETEAQAOMEHQKERNNSFEERIQ
 EALIQCLEEEKSQMASPDENVSSGELRGLCAARREEKERETEAQAOMEHQKERNNSFEERIQ
 EALIQCLKKEKSQMASPDENVSSGELRGLSATLREEKERDAE----EWQKERNHFEERIQ
 EALIQCLKKEKSQMASPDENVSSGELRGLSATLREEKERDAE----ERQKERNHFEERIQ
 EALIQCLKKEKSQMASPDENVSSGELRGLFAVRGEEKERDTEAQAOMEYQKERRQFEEDIQ
 EALIQCLEEEKSQMASPDENVSSGELRGLSAAALRGEKESETEAQAOMERQKERNHFEERIQ
 EALIQCLKKEKSQMACPGERVSSGELRGLSAAALRGEQERGAEEAAMERQERHRLREIRIQ
 DALIQCLKKEKSQMASPDENVSSGELRGLSAAALRGDGEGEAEEAQTEREQERSRFEERIQ
 EAVIQRLLEENSQSRPGDGNSSAERLEELTIALRHEKDSEVEAIKMEKLNERNNSFEKKIQ
 EAVIQRLLEENSQSRPGDGNSSAERLEELTIALRHEKDSEVEAIKMEKLNERNNSFEKKIQ
 EAVIQHLEENSQSRLGDGNLSAEKIEELTIALRHEKDGEIEAIKMEKLNERNNSLEKKIQ
 EAVIQHLEEEKSQSECDGNLSAEKIRELTVALSHEKDSIEIAVKMELRNERNCFEKKIQ
370.....380.....390.....400.....410.....420

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ALEEDLREKEREIATEKKNSLKRDKAIOGLTMALKSKEKKVEELNSEIEKLSAFAKARE
ALEEDLREKEREIATEKKNSLKRDKAIOGLTMALKSKEKKVEELNSEIEKLSAFAKARE
ALEEDLREKEREIATEKKNSLKRDKAIOGLTMALKSKEKAEELNSEIEKLSAFAKARE
ALEEDLREKEREISTEKKNSLKRDKAIOGLTMALKSKEKEVEGLNSEIEELSAFAKARE
ALQEDLREKEREIATEKKNLSYKAIQGLTMALKSKEREVEELDSKIKEVTTDSTKGRE
ALQEDLREKEREIATEKKNSLKRDKAIOGLTMALKSKEKEVEELNSEIEELSTTLAKARE
ALQEDLREKEREIATEKKNSLKRDKAIOGLTMALKSKEKEVEELNSEIEELTAFAKARE
ALQEDLREKEREIAEKKNSLKRDKAIOGLTMALKSKEKEVEDLSREMEELSAALAKVTD
ALREDLREKEREIATEKKNSLKRDKAIOGLTMALKAKEKEIEELNSEIEELSAFAKAKE
SLEEELQERENELAVEKKNLGRDKTIOGLTVALKAKEKENEEELASEIEALNASLAKARE
SLEEELQERENELAVEKKNLGRDKTIOGLTVALKAKEKENEEELASEIEALNASLAKARE
SLEEELQERENELAVEKKNLGRDKTIOGLTVALKAKEKENEEELASEVEALTASLAKARE
SLOEELREKENELSVEKKNLGRDKTIOGLTLALKTEKENEELNSEIEALNVSLTKARE

. 430 440 450 460 470 480

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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	.*.:***.:* : :*: ***.:*: *: :*: *: *: : .. *:****.:***:	
Homo_sapiens	TKSTENHRLRRSIKKITQELSDLOQERERLEKDL EEAHREKSKGDCITRDLRNEVEKLRN	448
Pan_troglodytes	TKSTENHRLRRSIKKITQELSDLOQERERLEKDL EEAHREKSKGDCITRDLRNEVEKLRN	448
Macaca_mulatta	TKSAENHRLRRSIKKITQELSDLOQERERLEKDL EEAHREKSRGDCTIRDLRNEVEKLRN	448
Callithrix_jacchus	TKSTENHRLRRSIKKITQELSDLOQERERLEKDL EEAHREKSKGDCITRDLRNEVEKLRN	448
Mus_musculus	TKSTENHRLLRNVKKVTOELNDLKKEKLRLEQALEEAHQEGN RGARTIHDLRNEVEKLRK	446
Rattus_norvegicus	TKNTENHRLLRNVKKVTOELNDLKKEKLRLERDLEEAHREGN RGARTIHDLRNEVEKLRK	444
Heterocephalus_glaber	TKSSENHRLQRNIKKLTQELSDLOQEKERLERDLEKAHREKSGGARTVHDLRNEVEKLRN	472
Equus_caballus	TKSTENHRLRRNVKKVTOELSDLOQEKERLEKDL EEAHREKSKGDATIHDLRNEVEKLRN	447
Canis_lupus_familiaris	NKSAENHRLRRNIKKVTOELSDLOQERERLEKDL EEAHRDRGRGDHTIHDLRNEVEKLRN	446
Bos_taurus	SKSTENHRLRRSIKKVTOELSNLQERERLEKALEAARQERSKG DHTIHDLRNEVEKLRN	447
Pavo_muticus	TKDAENRKLOQRIKRTDQELNDLNLEREKMEKELDEAQLQKSRSDKTINDLRNQEVEKLHG	571
Pavo_cristatus	TKDAENRKLOQRIKRTDQELNDLNLEREKMEKELDEAQLQKSRSDKTINDLRNQEVEKLHG	571
Gallus_gallus	TKDAENHKLQRRIKRTDQELNDLNL EKEKMEKELDEAQLQKSRSDKTINDLRNQEVEKLHG	570
Chelonia_mydas	TKDTENRKLOQRIKRTDQELNDLNLEREKMERELDEAQLQKSRGDKTINDLRNQEKLHG	446
550.....560.....570.....580.....590.....600	

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Homo_sapiens	EVNEREKAMENRYKSLLESNKKLHNQEOVIKHLTESTNQKDVLLOKF----	NEKDLEVI	504	
Pan_troglodytes	EVNEREKAMENRYKSLLESNKKLHNQEOVKHLTESTNQKDVLLOKF----	NEKDLEVI	504	
Macaca_mulatta	EVNEREKAMENRYKNLLSES SKKLHNQEOVIKHLTERTNHKDMLLOKF----	NEKDLEVI	504	
Callithrix_jacchus	EVNEREKAMEDRYKSLLESNKKLHNSQEAIKHLTESTNQKDLLLOKL----	SEKDLEVI	504	
Mus_musculus	EVSEREKAVEKHYKSLPGESSTKTFHTQEQVVRSLTGSGSQEDLLLOKS----	NEKDLEAI	502	
Rattus_norvegicus	EVCEREKAVEKHYKSLPGESSKFHSQEOVKGLTESASQEDLLLOKS----	NEKDLEAI	500	
Heterocephalus_glaber	EVNEREKAMENRYKSLLESNKKLHNQEOVIRHLTESASQKDLLLOKF----	NEKDLEAI	528	
Equus_caballus	EVNEREKALENHDESLLSASHNLPRRDPAMRRAAESAGRTD-LFOKF----	NEKDLEAT	502	
Canis_lupus_familiaris	EVNEREKAMENRYKSLLESNKKLHNSQEQMIRSLRGSIDPEDLLLOQEF----	SEKDSGAV	502	
Bos_taurus	EVNEREKAVESCYSKSLLESNKKLQSQEQVIRSLRESAAQKASLPQKF----	NERDLEAA	503	
Pavo_muticus	EMAEKEKAAEHHYGVLLESNQKLQSQELLIKQLTDNVSQKDLLLOKSEETVKEKEAELQ	631		
Pavo_cristatus	EMAEKEKAAEHHYGILLSESNQKLQSQELLIKQLTDNVSQKDLLLOKSEETVKEKEAELQ	631		
Gallus_gallus	EMAEKEKAVEHHYNILLSESNOQLQSQELLIKQLTDNVSQKNLLLOKSDETIKEKEAEFQ	630		
Chelonia_mydas	EMIEREKAVEHHYNILLSESNOKLQSQELVIKRLTDSVNOKDLLLOKLDAATKEKDVELQ	506		
610.....620.....630.....640.....650.....660			

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Homo_sapiens	QQN----	CYLMAAEDLELRSEGLITEKCS	SQQPPGSKTIFSK--	EKKOSSDYEELIQVLKK	559									
Pan_troglodytes	QQN----	HYLMAAEDLELRSESLITEKCS	SQQPPGSKTIFSK--	EKKOSSDYEELIQVLKK	559									
Macaca_mulatta	QQN----	HYLMTAEDLELRSEGLITEKCP	SQQSPGSKTIFSK--	EKKOSSDYQEELIQVLKK	559									
Callithrix_jacchus	QQN----	CYLMAAEDLQLRSEGLITGKCS	SQQSPGSKTIFSK--	EKKOSSDYEELIQVLKK	559									
Mus_musculus	QQN----	CYLMTAEEELKFGSDGLITEK--	CSQQSPDSKLIFSK--	EKKQS- EYEGLTGDLKA	555									
Rattus_norvegicus	QQN----	CYLMTAEEELKFGSDGLITEK--	CSQQSPDSKLIFSK--	EKKQS- EYEGLTGDLKT	553									
Heterocephalus_glaber	QQN----	RYLMTAEDLEFRSEGLITEKHFS	QQSPGSKLIFFS-	EKKQS-DYEELMQVLKK	582									
Equus_caballus	QOK----	GYLMTAEDLEFMSEELVTEKCS	SRQSPGSKIIFSE--	EKKQL-EYEELIQVLKK	556									
Canis_lupus_familiaris	OPT----	RPSQSGEELRRS-GDAAKCSLRS	PGSNRIFFS-	EKKQL-DYEELLRVLKK	555									
Bos_taurus	QRN----	CGSVLAEEPFEFRSEDLVTEKCS	SQS-PGKSIFSE--	EQQL-SYEELIQVIKK	556									
Pavo_muticus	ELLNKYKNLLRDNQELELKNEGLVKEKYAAQ	SEQSVIRIVRELERKESEYEKLILALKK	691											
Pavo_cristatus	ELLNKYKNLLRDNQELELKNEGLVKEKYAAQ	SEQSVIRIVRELERKESEYEKLILALKK	691											
Gallus_gallus	ELLNKYKNLLRDNQELELKNEGLVKEKYAAQ	SEQSVIRIVRELEEKKESEYEKLILALKK	690											
Chelonia_mydas	ELFNCKNLLKAKEDLELKNEGLIKEKCASESQSI	KIVKELEEKKESEYEELITALRK	566											
670.....680.....690.....700.....710.....720													

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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Homo_sapiens      EQDIYTHLVKSLQESDSINNLOAELNKIFALRKQLEQDVLSYQNLKRTLEEQISEIRRRRE 619
Pan_troglodytes   EQDIYTHLVKSLQESDSINNLOAELNNIFALRKQLEQDVLSYQNLKRTLEEQISEIRRRRE 619
Macaca_mulatta    EQDIYTHLVKSLQESDSINNLOAELNNIFALRKQLEQDVLSYQNLKRTLEEQISEIRRRRE 619
Callithrix_jacchus EQDIYTHLVKSLQESDSINNLOAELNNIFALRKQLEQDVLSYQNLKRTLEEQISEIRRRRE 619
Mus_musculus      EQNIYAHlak-TQDTSVSNLOAELKEVLALRKQLEQDVLAYRNLOKALQEQOLSEIRRSRE 614
Rattus_norvegicus EQNVYAHlakNLDTD--SKLOAELKRVLALRKQLEQDVLAYRNLOKALQEQOLSEIRKRE 611
Heterocephalus_glaber ERDIYTHLVKSLQNSDSIDSLQAEINAFALRKQLEQDVLSYQNLKRTLEEQISEIRRRRE 642
Equus_caballus    EQDIYTHLVKSLQESDSINNLOAELNKIFALRKQLEQDVLSYQNLKRTLEEQISEIRRRRE 616
Canis_lupus_familiaris ERDIYAHLVKSLQDPSINSLOAELNSIFALRKQLEQDVLSYQNLKRTLEEQISEIRRRRE 615
Bos_taurus        ERDIYTRLVKSLQSDSVSALOAEISSVFALRKRLQVLDVLSYQHLRRALQEQOLSEIRRRRE 616
Pavo_muticus      EQNIYSTLVQTFKESDSLNSLOTELNKIFMLRKQLEDDILATRNLOKVLQEQOLSEIRRRRE 751
Pavo_cristatus    EQNIYSTLVQTFKESDSLNSLOTELNKIFMLRKQLEDDILATRNLOKVLQEQOLSEIRRRRE 751
Gallus_gallus     EQNIYSTLVQTFKESDSLNSLOTELNKIFMLRKQLEDDILATRNLOKVLQEQOLSEIRRRRE 750
Chelonia_mydas    EQHIYSTLVKTLKSDSINSLOTELNNIFLLRKQLEDDILANRNLRKVLQEQOLSEIRRRRE 626
.....730.....740.....750.....760.....770.....780

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Homo_sapiens      EE-SFSLYSDQTSYLSICLEENN--RFQVEHFSQEELKKKVSDLIQVLKELYTDNQHLLK 676
Pan_troglodytes   EE-SFSLYSDQTSYLSICLEENN--RFQVEHFSQEELKKKVSDLIQVLKELYTDNQHLLK 676
Macaca_mulatta    EE-SFSLYSDQTSYLSICLEENN--RFQVEHFSQEELKKKVSDLIQVLKELYTDNQHLLK 676
Callithrix_jacchus EE-SFSLYSDQTSYLSICLEENN--RFQVEHFSQEELKKKVSDLIQVLKELYTDNQHLLK 676
Mus_musculus      EE-PFSFYSDQTSYLSICLEENN--QFQLEHFSQEELKKKVSDLIQVLKELYTDNQHLLK 671
Rattus_norvegicus EE-PFSFYSDQTSYLSICLEENN--QFQLEHFSQEELKKKVSDLIQVLKELYTDNQHLLK 668
Heterocephalus_glaber EE-PFSFYSDQTSYLSICLEENN--RFQVEHFSQEELKKKVSDLIQVLKELYTDNQHLLK 699
Equus_caballus    EEPFSFYSDQTSYLSICLEENN--RFQVEHFSQEELKKKVSDLIQVLKELYTDNQHLLK 674
Canis_lupus_familiaris EE-PFSFYSDQTSYLSICLEENN--RFQVEHFSQEELKKKVSDLIQVLKELYTDNQHLLK 672
Bos_taurus        EE-TFSFYSDQTSYLSICLEENN--RLHVEHFSQEELKKKVSDLIQVLKELYTDNQHLLK 673
Pavo_muticus      DE-TLSFCGDQTSYMSICLGEQDNLNLOIDHLSLEELKKKVTDLLLMVKDLQLINQELKT 810
Pavo_cristatus    DE-TLSFCGDQTSYMSICLGEQDNLNLOIDHLSLEELKKKVTDLLLMVKDLQLINQELKT 810
Gallus_gallus     DA-TLSFCGDQTSYMSICLGEQDNLNLOIDHLSLEELKKKVTDLLLMVKDLQLINQELKM 809
Chelonia_mydas    DE-TFSFCGDQTSYMSICLGEQDNLNLOIDHLSLEELKKKVTDLLLMVKDLQLINQELKK 685
.....790.....800.....810.....820.....830.....840

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Homo_sapiens      TIFDLS CMGFQGNFPDRLASTEQT-----ELASKEDETIKIGEDDEINFL 724
Pan_troglodytes   TIFDLS CMGFQGNFPDRLASTEQT-----ELASKEDETIKIGEDDEINFL 724
Macaca_mulatta    TIFDLS CMGFQGNFPDRLASTEQT-----ELASKEDETIKIGEDDEINFL 724
Callithrix_jacchus TIFDLS CMGFQGNFPDRLASTEQT-----ELASKEDETIKIGEDDEINFL 724
Mus_musculus      TIFDLS SVGFQGS---DRLELTKE-----ELVASKEDETIKIGEDDEINFL 716
Rattus_norvegicus TIFDIS CMGFQGNFPDRLASTEQT-----ELASKEDETIKIGEDDEINFL 713
Heterocephalus_glaber TIFDLS CMGFQGNFPDRLASTEQT-----ELASKEDETIKIGEDDEINFL 756
Equus_caballus    TIVDLS SMLGQGS---DRLELTKE-----ELASKEDETIKIGEDDEINFL 719
Canis_lupus_familiaris TMLDLS CMGAQGS---DRLGSAQS-----ELASKEDETIKIGEDDEINFL 717
Bos_taurus        TIFDLS SVGFQGS---DRLELTKE-----ELASKEDETIKIGEDDEINFL 718
Pavo_muticus      KQLGFFTTDSQK---ILNQ-----EFLEITEERVKAQEDGSDRRMQ 851
Pavo_cristatus    KQLGFFTTDSQK---ILNQ-----EFLEITEERVKAQEDGSDRRMQ 851
Gallus_gallus     KQLGFFTTDSQK---ILNQ-----EFLEITEERVKAQEDGSDRRMQ 854
Chelonia_mydas    KQLGLSRSETQK---ILNQ-----EFLEITEERVKAQEDGSDRRMQ 729
.....850.....860.....870.....880.....890.....900

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. : : : : * : : : :
Homo_sapiens      SDQHLLQSSNEIMKDL-----SKGGCKNGYLRHTESKISDCDGAHAPG 766
Pan_troglodytes   SDQHLLQSSNEIMKDL-----SKGGCKNGYLRHTESKISDCDGAHAPG 766
Macaca_mulatta    SDQHLLQSSNEIMKDL-----SKGGCKNGYLRHTESKISDCDGAHAPG 766
Callithrix_jacchus SDQHLLQSSNEIMKDL-----SKGGCKNGYLRHTESKISDCDGAHAPG 766
Mus_musculus      SDQHLLQSSNEIMKDL-----SKGGCKNGYLRHTESKISDCDGAHAPG 758
Rattus_norvegicus SDQHLLQSSNEIMKDL-----SKGGCKNGYLRHTESKISDCDGAHAPG 755
Heterocephalus_glaber SDQHLLQSSNEIMKDL-----SKGGCKNGYLRHTESKISDCDGAHAPG 798
Equus_caballus    SNQHLLQSSNEIMKDL-----SKGGCKNGYLRHTESKISDCDGAHAPG 761
Canis_lupus_familiaris SDQHLLQSSNEIMKDL-----SKGGCKNGYLRHTESKISDCDGAHAPG 759
Bos_taurus        SDECLEQRHKTIMEDS-----SKGGCKNGYLRHTESKISDCDGAHAPG 760
Pavo_muticus      SSQFYERGSQICLHEPMDCPSEVD--KQITPAGCSESFCKDRHCRNPKNPQLEHDTTGKHF 910
Pavo_cristatus    SSQFYERGSQICLHEPMDCPSEVD--KQITPAGCSESFCKDRHCRNPKNPQLEHDTTGKHF 910
Gallus_gallus     NSQFYERDSQVCLHESMDCPPEVD--KQITPAGCSESFCKDRHCRNPKNPQLEHDTTGKHF 913
Chelonia_mydas    SCQSRSETSEACPLPLDRHLDLDMQMTSPDYSQGVCKDRHCRNPKNPQLEHDTTGKHF 789
.....910.....920.....930.....940.....950.....960

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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[illegible][illegible]

	...: ** . *. : : . : : :	
Homo_sapiens	KVGLKDasvQTVATEGDLRLFKHEATREAWEEKPINTALSAEHRPENLHGVPGWQAALLS	924
Pan_troglodytes	KVGLKDasvQTVATEDDLLRFKHEATREAWEEKPINTALSAEHRPENLHGVPGWQAALLS	924
Macaca_mulatta	KVELKDAsvQTVATEGDLRLTKEAVREAWEEKPINTALRAEHRPENLPVGPWQAALLS	924
Callithrix_jacchus	KVELTDAsvQTVATEGDILLRFKHEAKREAWNQSTNIVLSTEHRPENLLRPGPWQAALPS	924
Mus_musculus	TVELKSvsvQTMAIEDTPHGFKPKSKRDAAEKQEAAIFSTELESEALGEMPGQQATHLS	925
Rattus_norvegicus	KVELKSvsvQTMITIEDSTRGFKPERKREAWAGKPPEAVFSTELESEALGEMPGLQATHLS	924
Heterocephalus_glaber	VVELKDAsvQTVPMENHLVRFECEGKREAWKEMPTDAIFGAEPENECR--MPGQQATPFP	965
Equus_caballus	KVELRDASMQTAAMEGDVLRFKHGEGKREAWEEKPTDALFSAEHOPHELCRMPPGRQATRLS	929
Canis_lupus_familiaris	TRELKDAsvQTVAAEGDTLRFNTQKRGVWEIEPPDAFHAEGQPQLCLVPGRPAALS	927
Bos_taurus	KAEQKDasvQTSAVEGDTLRCCHEGPREAWEEQLADTAFSAGRREEPCRTILGQQAPAPT	928
Pavo_muticus	KAELKDVAQTMTTIEGNVMRFKREGNQGASEGKPKYSRLKAEGELQENACKKSEQHERG	1088
Pavo_cristatus	KAELKDVAQTMTTIEGNVMRFKREGNQGASEGKPKYSRLKAEGELQENACKKSEQHERG	1088
Gallus_gallus	KAELKDAATQMTTIEGNVMRFKCEGNKGASEGKTKYSLRNAEGELHQENVCKKSEQHERG	1091
Chelonia_mydas	KVELKDIAQTMTIMEGNVMRLKHEGKRGALEETKYSLRNAE--PQENAYKKDEQHERL	965
	.....1090.....1100.....1110.....1120.....1130.....1140	

		:	:	:	*	:	*	:
Homo_sapiens	LPGITNREA	----	KKSRLP	PILIKP	SRSLGN	MYRLPAT	-Q	EVVTQL	QSQI	LELQ	GELKE	977	
Pan_troglodytes	LPGVTNREA	----	KKSRLP	PILIKP	SRSLGN	MYRLPAT	-Q	EVVTQL	QSQI	LELQ	GELKE	977	
Macaca_mulatta	LPGGTNREA	----	KKSRLP	PILIKP	SQSLRNTY	RLPAT	-Q	EVVTQL	QSQI	LELQ	GELKE	977	
Callithrix_jacchus	FPGGTNREA	----	KKSRLP	PILIKP	SGSSGN	MYHLPGT	-Q	EVVAQL	QSQI	LELQ	GELKE	977	
Mus_musculus	FPSAINPDA	----	EKTGLLI	QIKTPE	LLNLYN	LNPAS	-P	EVVAQL	QSQI	LELQ	RELKE	979	
Rattus_norvegicus	FPSAIDKDD	----	QKTGLLI	QIKTPE	LLNLYN	LNPAS	-Q	EVVAQL	QSQI	LELQ	KELKE	977	
Heterocephalus_glaber	CPSTANKDV	----	KRSRLP	ILAKP	SRSLGN	MYHLPGT	-Q	EVVTHL	QSQI	LELQ	GELNE	1018	
Equus_caballus	FPSGTHKDA	----	QKSRLP	VLLRPS	RSLSGL	SYRLPAT	-Q	AGVAQL	QSQI	LELQ	GELKE	982	
Canis_lupus_familiaris	FPSGADKDA	----	KKSRLP	PILIKP	SRSLGN	VYRLPAT	-Q	EVVAQL	QSQI	LELQ	GELKE	980	
Bos_taurus	FPRRTERDA	----	KKSRLP	VLIIKAS	QSLG	SVCRLPAS	-R	EAVAHQ	LAQV	LKLG	GELKE	981	
Pavo_muticus	FLSRRTNETDA	AHLPRK	SRLP	VLLR	SSRAAG	NWPESRSV	-H	SSDSEL	WRHT	TRAP	YEG	LKA 1147	
Pavo_cristatus	FLSRRTNETDA	AHLPRK	SRLP	VLLR	SSRAAG	NWPESRSV	-H	SSDSEL	WRHT	TRAP	YEG	LKA 1147	
Gallus_gallus	FFSRRTNETDA	AHLPRK	SRLP	VLLR	SSRAAG	NWPVSSSV	-H	RSDSEL	WHHT	GAPY	KGLKA 1150		
Chelonia_mydas	SVASRTNKSDF	FIYPFK	KSRIPI	PLKS	SRSLGNIPL	TSC	-Q	KPDMHL	QHRML	ALDE	GLKE 1024		
	.....	1150	.....	1160	.....	1170	.....	1180	.....	1190	.....	1200

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/CDKs/CDKs_Fst_Feb_1 11:37:04 2022

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      : ..**      : * *      :      :      :
Homo_sapiens      FKTCNKQLH----QKLILAEAVMEGR---PTPDKTLLN---AOPPVGAAAYQDSPGEQKGI 1027
Pan_troglodytes   FKTCNKQLH----QKLILAEAVMEGR---PTPDKTLLN---AOPPVGAAAYQDSPGEQKGI 1027
Macaca_mulatta    FKTCNKQLH----QKLILAEAMMEGR---PTPDKMLLN---AOPPVGAAAYQDNPGGEQKGI 1027
Callithrix_jacchus LKTCNEQLH----QKLILAEAMEDGR---PTPDKTLLN---AQS SVGEAYQDSPGEQKGI 1027
Mus_musculus      FKTRNKQLH----EKLILAEAMMEGL---PVPNSALVNVPAQAQAVVRTAFQDNPGGEQEGP 1032
Rattus_norvegicus YKIRNKQLL----DKLILAEAMMEGM---AVPNS TFVNVPAQAQAVVRTAFQGKPGGEQEGH 1030
Heterocephalus_glaber FKTLNKQLH----QKLILAKAMMDER---PAPDPMLLNVP TAOPLVGAAYQDSSSGEQKGT 1071
Equus_caballus    FKIRNKQLH----KKLILAEAMMEGR---PTPDKTPVK----- 1013
Canis_lupus_familiaris FKICNKQLH----QKLILAEAMMEER---PAADKITLQE---AOPLVGAAYQDGPGEQNGA 1030
Bos_taurus        SKIRNKQLH----QKLILAEAVTEGR---PAPEEALPK---AQNLVRTAYQDGPGEQGGGL 1031
Pavo_muticus      SEVQTKQLQPQANGELLHESGIEDLOEPAQESTLVR---GDSFSKADSSGAQVESQDV 1204
Pavo_cristatus    SEVQTKQLQPQANGELLHESGIEDLOEPAQESTLVR---GDSFSKADSSGAQVESQDV 1204
Gallus_gallus     REVQTEQLQPQANGELLHESGIEDLOEPAQESTLVG---GDSFSKADSSGAQVESQDV 1207
Chelonia_mydas    CKIQNRQLH----KELSLSGSVIENLQEKPEQERVLR---AESLVRRLDCKEIQVDSQAV 1077
.....1210.....1220.....1230.....1240.....1250.....1260

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      :      :
Homo_sapiens      KTTSSVWRDKEMSDQORSYE-----IDSEICPPDDLASLPSC 1065
Pan_troglodytes   KTTSSVWRDKEMSDQOTS YE-----IDSEICPPDDLASLPSC 1065
Macaca_mulatta    KTTSSAWRDKEMSDQOTS YE-----IGSEICPPDDLASLPSC 1065
Callithrix_jacchus KTTSAWRDKEMSDQOTS YE-----IDSDVCPDDLAILPSC 1064
Mus_musculus      ETTQSAGRDKDMSDQYTSFE-----IDSEICPPDDLALLPAC 1070
Rattus_norvegicus ETTHSAGRDKEDVSDQYTSFE-----IDSEICPPDDLALLPAC 1068
Heterocephalus_glaber EATPSAQRDKEGSDQYTSYV-----IDSKVYPTDDLATLPAC 1109
Equus_caballus    -----DSEIYQPDLLAIS PAC 1029
Canis_lupus_familiaris KAMPCVWRATEGDS DHATHETG-----ONAGPCVLRSLDAETRPDGLAVLPTC 1079
Bos_taurus        EATPRVWRDRREGDEEQAAHEPGQHSPVPADQLLCAGHHLGVSCSEVYQPDPAVLPPG 1091
Pavo_muticus      DCGTGGKNEYVMYSNQONCQE-----MENHHDISDVNTQRS LKEI 1244
Pavo_cristatus    DCGTGGKNEYVMYSNQONCQE-----MENHHDISDVNTQRS LKEI 1244
Gallus_gallus     KCDTGGKNEYVMYRNQONCQE-----MENHRDINDVNIQHSLKEI 1247
Chelonia_mydas    GFDTCDKKNENKMIMDQNSQE-----TETPHNISNMNIIHSLKEI 1117
.....1270.....1280.....1290.....1300.....1310.....1320

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      :      :      :      :      :      :      :      :      :      :      :      :      :      :      :
Homo_sapiens      KENP--EDVLSPTS VATYLS SSKSQPSAKVSVMGTDQSEINTSNETEY LKQKIHDLETEL 1123
Pan_troglodytes   KENP--EDVLSPTS VATYLS SSKSQPSAKVSVMGTDQSEINTSNETEY LKQKIHDLETEL 1123
Macaca_mulatta    KENP--EDVLSPTS VATYLS SSKSQPSAKVSVMGTDQSEINTSNETEY LKQKIHDLETEL 1123
Callithrix_jacchus KENP--EDVLSPTS VATYLS SSKSQPSVSVKSVMGTDQSEINTSNETEY LKQKIHDLETEL 1122
Mus_musculus      KENL--EDLLGPSSIATYLD SSKSQLSVKSVVNGTDQSENINIPDDTEDLKQKIHDLOTEL 1128
Rattus_norvegicus KENL--EDFLGPSSIATYLD SSKSQLSVKSVVNGTDQSENINLPDDTEALKQKIHDLOTEL 1126
Heterocephalus_glaber IENP--EHS PCSTSVSTHLS SSKSQLSAKDNVIWTDSENPDISNDTEY LKQKIHDLETEL 1167
Equus_caballus    KENPP--KNFPHP TSGATHLS SECQLSTQSGVIGTDQSENVDTSDNTENL KQKICDLEAEL 1088
Canis_lupus_familiaris QGNS--EGFPGPA AAVACRSKSPLSSTVRVFGAHPSENIDTSNTEY LKQKIHDLETEL 1137
Bos_taurus        DEDPS--EDFPGPPS AATHLS SNTQFSTIKSVVGTDPLENTDTSNDKENLERKICDLETEL 1150
Pavo_muticus      NEELYSMEHEDIDSATAHSGSKCLRS LKLSVTGTDALDDCEVVDDTEELKQRIKNMOS EL 1304
Pavo_cristatus    NEELYSMEHEDIDSATAHSGSKCLRS LKLSVTGTDALDDCEVVDDTEELKQRIKNMOS EL 1304
Gallus_gallus     NEELYSMEHEDTDSARAHPGSKCLRS LSLSVTSDALDDCEVVDDREELKQRIKNMOS EL 1307
Chelonia_mydas    NKEFYSMNDQIDISATTYSGSKSLSLKLS IASTDAFDDYEVIDDLEELKQRIKDMKSEL 1177
.....1330.....1340.....1350.....1360.....1370.....1380

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      :      :      :      :      :      :      :      :      :      :      :      :      :      :      :
Homo_sapiens      EGYQNFI FQLQKHSQCSEAIITVLCGT EGAQDGL---SKPKNGSDGEEMTFSS LHQVR-Y 1179
Pan_troglodytes   EAYQNFI FQLQKHSQCSEAIITVLCGT EGAQDGL---SKPKSGSDGEEMTFSS LHQVR-Y 1179
Macaca_mulatta    EGYQNFI FQLQKHSQCSEAIITVLCGT EGAQDGL---SKPKSSDDEEEMTFSS LHQVR-Y 1179
Callithrix_jacchus EGYQNFI FHLQKHSQCSEAIITVLCGT EGTQDGL---NKPKGGSDEEEMTFSS LHQVR-C 1178
Mus_musculus      EGYRNII VQLLQKHSQCSEAIITVLCGT EGAQDGL---NKPKGHI DEEEMTFSS LHQVR-Y 1184
Rattus_norvegicus EGYRNII VQLQKHSQCSEAIITVLCGT EGAQDGL---NKPKGHI DEEEMTFSS LHQVR-Y 1182
Heterocephalus_glaber EGYRNFVLQLHKHSQCSEAIITVMCET EGAQGS---NKPKGSTDEEDMTFSS LHQVR-Y 1223
Equus_caballus    EGCRNFI FQLQKHSQCSEAIITVLCGT EGAQDGL---NKLKGSTDEEEMTFPRLHQVR-Y 1144
Canis_lupus_familiaris QGYRNFL FQLQKHSQCSEAIITVLCGT EGGQDVL---SKPKGSAD E EEMTFSS LHRVR-Y 1193
Bos_taurus        EGYRNFI LQLQKHSGFSEAIITVLCGT EGAQDGL---SKSKGSAD E EEMAFSS LROVR-Y 1206
Pavo_muticus      EKYRMFV FHLQTS DQLLSGFSNAVLSEAALPGE--GRFVQDAAMO EIKPFSS GLHQLMDH 1362
Pavo_cristatus    EKYRMFV FHLQTS DQLLSGFSNAVLSEAALPGE--GRFVQDAAMO EIKPFSS GLHQLMDH 1362
Gallus_gallus     EKYKMFV FHLQTS DQLLSGISNAVLSDAALPGE--GRFVQDTAMO EIKPFSS GLHQLMDY 1365
Chelonia_mydas    EKYKMFIFHLQSTNPFSSDIFNIVLND AELPMERHVIQMDIDGQETKIFSTVHQVDY 1237
.....1390.....1400.....1410.....1420.....1430.....1440

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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	:	:	:	*	.	*	:	.*	::	:::	:	.	:	::	::::	**	
Homo_sapiens	VKHVKILGPLAPEMIDSRVLENLKOOLEEQEYKLOKEQNLMOLFSEIHNLQNKFRDLS	P	1239														
Pan_troglodytes	VKHVKILGPLAPEMIDSRVLENLKOOLEEQEYKLOKEQNLMOLFSEIHNLQNKFRDLS	P	1239														
Macaca_mulatta	VKHKMLHPLAPEMIDGRMLENKLKOOLEEQEYELQKEQNLMELFSEIHNLQNKFRDLS	P	1239														
Callithrix_jacchus	VKHKMILHLPLAPEMMDGRMPENLKOOLEEQEYELOKEQNLMELLSEIHNMQNKFRDLS	P	1238														
Mus_musculus	VKHKMILRPLTPEMIDGKMLESLSKQOLVDQEQLQKEQDLNLELFGEIHDLNKFQDLS	P	1244														
Rattus_norvegicus	VKHKMILRPLTPEIIDGKMLESLSKQOLVEQEQLQKEQDLNLELFGEIHNQNKFRDLS	P	1242														
Heterocephalus_glaber	VKHKMILRPLSLEMIDGRMLETLKQRLVEQEYELQKEENLNLELFSEIHNLQNFDRDFS	P	1283														
Equus_caballus	VKHLQVLHSLAPERVDSSVLNRRLRVEDYELQKEQNLMELFSETHHLRNKFRDLS	P	1204														
Canis_lupus_familiaris	VKHKMKILROLAPEVADGGLLGLELRQOLLQCEHELQKEQNLMELFSEIHNLQNKFRDLS	P	1253														
Bos_taurus	VKHKMILHPLAPKMMDDGALGSLSGQOLVGQEYELQKEQNLMELFGGIHNLQNKIRDLS	P	1266														
Pavo_muticus	EMRTENRNSQTSKAQTLPWPAONLKEILSANGTELKKEQVADMHP-DEVYCLHNKLRDTSP	P	1421														
Pavo_cristatus	EMRTENRNSQTSKAQTLPWPAONLKEILSANGTELKKEQVADMHP-DEVYCLHNKLRDTSP	P	1421														
Gallus_gallus	EICTENRNQLSKAQTLPRAONLKEILSANETDLKKEQVADMHP-DEVYCLQNKLRDTSP	P	1424														
Chelonia_mydas	EIIHENVNSQSTETPDEQTSQNLKQLLENAELEREQTANMHLLDEVYRLQNKLRDTSP	P	1297														
	.....1450.....1460.....1470.....1480.....1490.....1500															

	::*:.*::*:***:*::** : ** *:~::~:*** ~*:~::~** :* **:	
Homo_sapiens	PRYDSLVSQARELSLQRQQIKDGHGICVISROHMNTMIKA FEELLQASDV DYCVAEGFQ	1299
Pan_troglodytes	PRYDSLVSQARELSLQRQQIKDGHGICVISROHMNTMIKA FEELLQASDV DYCVAEGFQ	1299
Macaca_mulatta	SRYDSLVSQARELSLQRQQIKDGHGICVISROHMNTMIKA FEELLQASDV DYCVAEGFQ	1299
Callithrix_jacchus	SRYDSLVSQARELSLQRQQIKDGHGICVISROHMNTMIKA FEELLQASDV DCCV AEGFQ	1298
Mus_musculus	SRYDSLVSQARELSLQRQQIKDSHGICVIYROHMS TMIKA FEELLQASDV DSCVAEGFR	1304
Rattus_norvegicus	SRYDSLVSQARELSLQRQQIKDSHDICVVCHOHMS TMIKA FEELLQASDV DSCVAEGFR	1302
Heterocephalus_glaber	SRYGSLVSQA KELS LQRQQIKDSHGICVVYROHMNTMIKAF AE LLQASDV DD CMAAGFR	1343
Equus_caballus	SRYDSLVSQARELSFORQQIKDSHGICVIYROHMNTMIKA FEELLQASDV DYVAAGFQ	1264
Canis_lupus_familiaris	SRYDSLVSQARELSLQRQQIKESHGICVIYROHMNTMIKAF ELLRAGGV DHDVAEGFQ	1313
Bos_taurus	SRYDSLVSQAARELSLQRQQIKDSHSICVVCROHVNTMIKA FEELLQASDV DHCVAEGFR	1326
Pavo_muticus	SKYDSLVSQARELSFOHHQIKEIRCGCVTYHOHLTSLI KA FEELLQASDV DYVAEGFR	1481
Pavo_cristatus	SKYDSLVSQARELSFOHHQIKEIRCGCVTYHOHLTSLI KA FEELLQASDV DYVAEGFR	1481
Gallus_gallus	SKYDSVVHSRARELSFOHHQIKEIHSGCVTYHOHLTSLI KA FEELLQASDV DYVAEGFR	1484
Chelonia_mydas	SKYDSLVSQARELSFORQIQKEIHSICVTYHOHLTSLI KA FEELLQASDV DYVAEGFR	1357
	.....1510.....1520.....1530.....1540.....1550.....1560	

	*** * . :: : ** : : * : *		* . . :		.. :	*** . **	
Homo_sapiens	EQLNQCAELLEKLEKLFNLGKSVGVEMN--	TQNELMERIE--	EDNLTYQHLLPESPEPSA	1355			
Pan_troglodytes	EQLNQCAELLEKLEKLFNLGKSVGVEMN--	TQIELMERIE--	EDNLTYQHLLPESPEPSA	1355			
Macaca_mulatta	EQLNQCAELLEKLEKLFNLGKSVGVEMN--	TQNELMERIE--	EDNLTYQHLLPESPEPSA	1355			
Callithrix_jacchus	EQLNQCAELLEKLEKLFNLGKSVGVEMN--	TQNELMERIE--	EDNLTSQHVLTESPEPSA	1356			
Mus_musculus	EQLTQCAGLLEQLERLFLHGKSARVEPH--	PQNELLIKGLRTVEGNLPYHHLLPESPEPSA	1362				
Rattus_norvegicus	EQLTQCAGLLEQLERLFLHGKSARVEPH--	TQTELLRRLRTEEDNLTYQHLLPESPEPSA	1360				
Heterocephalus_glaber	EQLNQCSSELLGKLEKLFNLGKSAGMKPS--	LQNEPVERIE--	EDNFTYQHILPESPDSSA	1399			
Equus_caballus	EQLNQCAQFLEKLEKLFNLGKSVGVERS--	TQNELMERIE--	EDGLPYQHVLPESPEPSA	1320			
Canis_lupus_familiaris	EQLNQCAGLLEKLEKLFNLGKSVGVEDVS--	PQTEVMERME--	EDSSTYRHILPESPEPSA	1369			
Bos_taurus	EQLHCQSAELLEQLFLFGKNSAEVEMK--	TRREARERTI--	EDSFTQHVLPESPVPSA	1382			
Pavo_muticus	EQLNQSVLLFEKLERKLLYGESVGA EVT--	ILYELAOREN--	EKNATVYEELKDES PVPSA	1538			
Pavo_cristatus	EQLNQSVLLFEKLERKLLYGESVGA EVT--	ILYELAOREN--	EKNATVYEELKDES PVPSA	1538			
Gallus_gallus	EQLNQSVLLFEKLERKLVYGESVGA EVT--	ILYELAOREN--	EKNATVYEELKDES PVPSA	1541			
Chelonia_mydas	EQLNQSVOLFEEKLEKKFLYGESLDAEVA--	KLYELAORDN--	EKTITMYQQLKDES PIPSA	1414			
	.....1570.....1580.....1590.....1600.....1610.....1620					

	*	**	*:*:	*	:	*	:	.	:	*	.	
Homo_sapiens	SHALSDYETSEKS	FFSRDQKQDN	ETEKTSVMVNSFSQ	1392								
Pan_troglodytes	SHALSDYETSEKS	FFSQDQKQDN	ETEKTSVMVNNFSQ	1392								
Macaca_mulatta	SHVLSDYETSEKS	FFSQDQKQDN	ETEKTSVMVNNFSQ	1392								
Callithrix_jacchus	SHALSDYETSEKS	FFSQDQKQDN	EMEKTSVMVNNFSQ	1393								
Mus_musculus	SHALSDDEMSEKS	FLSRDPKPDS	DTEKYPAMASHFPQ	1399								
Rattus_norvegicus	SHALSDDEMSEKS	FLSREPKPDS	ETEKYPTIASRFPO	1397								
Heterocephalus_glaber	SHVLSDEEISEKA	SLSRDQQQDS	ETEKVEMVNNHFSQ	VWHLAHGPDPLSSSVQATV	1455							
Equus_caballus	SHALSDCEISEKS	SFSRDQKQDS	ETEKASVLMANTFSQ	1357								
Canis_lupus_familiaris	SHALSDCEVSEKSS	VLSRDQKQDS	EPEKASVLANRFSQ	1407								
Bos_taurus	CHAASDCGLSKKS	CSSQDQKQDS	EAEKASGLANNFSQ	1419								
Pavo_muticus	LHSLSDFDLSEKSS	LGSP EHRHDLGEGORATL	LALLPSQFPP	1579								
Pavo_cristatus	LHSLSDFDLSEKSS	LGSP EHRHDLGEGORATL	LALLPSQFPP	1579								
Gallus_gallus	LHSLSDFDLSEKSS	LGSTEHRHDLGEGOHATL	LALLPSQFPP	1582								
Chelonia_mydas	FHTLSDFEMSEKSS	IGSP EHOODLVEEHDKL	LALVNNKFPF	1455								
1630.....	1640.....	1650.....	1660.....1670.....1680								

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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      :*:***::*** **::** *:.*:.* ***** : *: .
Homo_sapiens      -----DLLMEHIQEIRTLRKRLEESIKTNEKLRKQLERQGS--EFVQGSTSIFASGSEL 1444
Pan_troglodytes   -----DLLMEHIQEIRTLRKRLEESIKTNEKLRKQLERQGS--EFDQGSTNIFASGSEL 1444
Macaca_mulatta    -----DLLMEHIQEIRTLRKRLEESIKTNDKLRKQLERQGS--EFDQGSTNIFASGSEL 1444
Callithrix_jacchus -----DLLMEHIQEIRTLRKRLEESIKTNEKLRKQLERQGS--DFDQGSTNIFASGSEL 1445
Mus_musculus      -----DLLMEHIQEIRTLRKRLEESIKTNEKLRKQLERQGS--ETDQGSRNVSACGLAL 1451
Rattus_norvegicus -----DLLMEHIQEIRTLRKRLEESIKTNEKLRKQLERQGC--ETDQGSTNVSAYSSEL 1449
Heterocephalus_glaber AEYHRLDLLMEHIQEIRTLRKRLEESIKTNEKLRKQLERQWS--EFDQGSTNIFAYGSEL 1513
Equus_caballus    -----DLLMEHIQEIRSLRKRLEESIKTNEQLRRQLERQGA--EFDKGSSNSFAFGSEL 1409
Canis_lupus_familiaris -----DLVMEHIQEIRSLRRRLEESIRTNEELRGQLERQGH--EPDPGATNAFAYGSEL 1459
Bos_taurus        -----DLLMEHIQEIRSLRKRLEESIKTNEKLRKQLERQGT--ECDQGSNNVLGYGPEV 1471
Pavo_muticus      -----ELLMEYLNIRILRQRLEYSIKNNERLRKQLERQVTDKEQDQGSANNFHIGSEQ 1633
Pavo_cristatus    -----ELLMEYLNIRILRQRLEYSIKNNERLRKQLERQVTDKEQDQGSANNFHIGSEQ 1633
Gallus_gallus     -----ELLMEYLNIRILRQRLEYSIKNNERLRKQLERQVTKNKLQGSANNFHIGSEQ 1636
Chelonia_mydas    -----ELLMEHLQEIRSLRQRLED SIKTNERLRQLERQVDMELNQGSNNIFHIGSEQ 1509
.....1690.....1700.....1710.....1720.....1730.....1740

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*.*.*.*: *.*.*.*: * ** :.* :*.*.*:.* *.*.*.* :* *: . :
Homo_sapiens      HSSLTSEIHFLRKQNALNAMLIGSRDKQKENDKLRSLSRKTVSLEHLQREYASVKEE 1504
Pan_troglodytes   HSSLTSEIHFLRKQNALNAMLIGSRDKQKENDKLRSLSRKTVSLEHLQREYASVKEE 1504
Macaca_mulatta    HSSLTSEIQFLRKQNALNAMLIGASIDKQKENDKLRSLSRKTASLEHLQREYASVKEE 1504
Callithrix_jacchus HSSLTSEIHFLRKQNEALNAMLIGSRDKQKENDKLRSLSRKTASLEHLQREYASVKEE 1505
Mus_musculus      HSSLTSEIHFLRKQNEALSMMLKSGSKDKQKESKLRSLARKAESLEQLQLEYTSVREE 1511
Rattus_norvegicus HNSLTSEIQFLRKQNEALSTMLEKGSKEKQKENEKLRSLARKTESLEHLQLEYASVREE 1509
Heterocephalus_glaber HNSLTSEIHFLRKQNEALNMLVKGSDKQKENEKLRSLSRKAASLELLQREYANVKGE 1573
Equus_caballus    HNSLTSEIRFLRKQNALHTMLARGSRDKQKENEKLRSLSRKTVDLLEHLQREYACVRGE 1469
Canis_lupus_familiaris HDSLTSEICFLRKQNALNTMLAKGSRDKQKENEKLRSLSRKAASLELLQREYACVKGD 1519
Bos_taurus        HNSLTSEVRFRLRKQNALNTMLAKGSRDKQKENEKLRSLSRKAASLEHLQREYACVQAE 1531
Pavo_muticus      HNSLTSEVHFLRKQNOVLNAMLAKGSRDKQKENEKLRSLSKKNATIEHLHEDYECIKKE 1693
Pavo_cristatus    HNSLTSEVHFLRKQNOVLNAMLAKGSRDKQKENEKLRSLSKKNATIEHLHEDYECIKKE 1693
Gallus_gallus     HNSLTSEVHFLRKQNOVLNAMLAKGSRDKQKENEKLRSLSKKNATIEHLHEDYECIKKE 1696
Chelonia_mydas    HNSLTSEIHFLRKQNOVLNVMLAKGSRDKQKENEKLRSLSKKNATIEHLHEDYECFKKE 1569
.....1750.....1760.....1770.....1780.....1790.....1800

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Homo_sapiens      NERLQKEGSEKERHNOQLIQEVRCSGOELSRVQEEVKLRQQLLSONDKLLQSLRVELKAY 1564
Pan_troglodytes   NERLQKEGSEKERHNOQLIQEVRCSGOELSRVQEEVKLRQQLLSONDKLLQSLRVELKAY 1564
Macaca_mulatta    NERLQKEGSEKERHNOQLIQEVRCSGOELSRVQEEVKLRQQLLSONDKLLQSLRVELKAY 1564
Callithrix_jacchus NERLQKEGSEKERHSQELIQEARHSRQELSRVQEEVKLRQQLLSONDKLLQSLRVELKAY 1565
Mus_musculus      NERLQDIIEKERHNOELTEEVCSRSQELSRVQEEAKSRQQLLSQDKLLQSLQOMELKVY 1571
Rattus_norvegicus NERLRRDISEKERQNOQLTQEVCSLSQELSRVQEEAKSRQQLLQDKDELQSLQOMELKVY 1569
Heterocephalus_glaber NERLQKEVSEKERHNOQLLDVHSGHQELSRVQEEVKLRQQLLSONDKLLQSLRVELKMY 1633
Equus_caballus    NERLRR-----KEVCVSRSELRAQEVVQLRQQLLAQNDKLLQSLRVELRVY 1515
Canis_lupus_familiaris NERLQSEVRRERERTQQLLRVCSRSSELSRAREEAQLRQQLLSONEELLQSLRVELKVY 1579
Bos_taurus        KERLQREVDGKERENQRLLEACHGRRALSRLQEEVLRQQLLQSDKLLRALRAELKVY 1591
Pavo_muticus      NERLQKQIGKKEDETRYLTCEIYSSRNELNRLQTEMNVKQHQLSENEKLLQSLRTEIKVY 1753
Pavo_cristatus    NERLQKQIGKKEDETRYLTCEIYSSRNELNRLQTEMNVKQHQLSENEKLLQSLRTEIKVY 1753
Gallus_gallus     NERLQKQIGKKEDETRYLTCEIYSSRNELNRLQTEMNVKQHQLSENEKLLQSLRTEIKVY 1756
Chelonia_mydas    NEKLQKQIGKKEDENRHLTHEIYSSRNELNRWQTEMNVKQHQLSENDKLLQSLRVELKVY 1629
.....1810.....1820.....1830.....1840.....1850.....1860

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** : : :
Homo_sapiens      EKLDEEHRRRLREAS-----GEGWKGDPPFDLHSLMEIQALRLQLERSIETSSSTLQSL 1619
Pan_troglodytes   EKLDEEHRRRLREAS-----GEGWKGDPPFDLHSLMEIQALRLQLERSIETSSSTLQSL 1619
Macaca_mulatta    EKLDEEHRRRLREAS-----GEGWKGDPPFDLHSLMEIQALRLQLERSIETSSSTLQSL 1619
Callithrix_jacchus EKLDEEHRRPRESS-----GEGWKGDPPFDLHSLMEIQALRLQLERSIQTNSTLQSL 1620
Mus_musculus      EKLAEEHPRLQDDG----- 1585
Rattus_norvegicus EKLAEEHQKLQESRGEACGGGQKGDPPFSNLHGLLKEIQVLRDQAEISIQTNTLTKSL 1629
Heterocephalus_glaber EKLDEEHRRRQGEARAEALGAGSKGDPCSDLHGLLQALRTQLERSIETNSTLTKSL 1693
Equus_caballus    EKLDEEHRRPREAR-AEASGEGSREQEPFRELQGLLQTEIRALRAQLERSIETSSMLQSKL 1574
Canis_lupus_familiaris ERLDEEHRRPREVG-AEACGEGCRGDPSDLRGLLQTEIQALRGQLEKSIETSSALRSRL 1638
Bos_taurus        EKLDQEQRRPREAG-VEASGEGWRGDLLGHLHGLLAEVQALQALLEKSIKTNMTLQSWV 1650
Pavo_muticus      EKLEEARRKRTDPR-CDASEEFRKDQNNPVDLHELLTEIQGLRVQLERSIETNKTILHQL 1812
Pavo_cristatus    EKLEEARRKRTDPR-CDASEEFRKDQNNPVDLHELLTEIQGLRVQLERSIETNKTILHQL 1812
Gallus_gallus     EKLEEARRKRTDPR-CDASEEFRKDQNNPVDLHELLTEIQSLRVQLERSIETNKTILHEKL 1815
Chelonia_mydas    EKLDEARRRRTDIL-DPGHEEFRKDQNNPLDLHELLTEIQSLRVQLERSIETNKTILHEKL 1688
.....1870.....1880.....1890.....1900.....1910.....1920

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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Homo_sapiens      KEQLARGAEKAQEGALTLAVQAVSIPEVPLQPKHD-GDKYPMESDNSFDLFDSSQAVTP 1678
Pan_troglodytes   EEQLARGAEKAQEGALTLAVQAVSIPEVPLQDKHD-GDKYPMESDNSFDLFDSSQAVTP 1678
Macaca_mulatta    EEQLARGAEKAQEGALTLAIQALSIPVPLQPKHD-GDKDPMESDNSFDLFDSSQAVTP 1678
Callithrix_jacchus EEQLARGAEKAQEGALTLAAQALSIPVPLQPNKHD-GDKYPMESDNSFDLFDSTQAVTP 1679
Mus_musculus      -----SKCPEASDNSFDLFDSTQAMAP 1607
Rattus_norvegicus EKQLSQGSKQAQEGALTLAVQALSIVTEWSLQDKHD-VNKCPEASDNSFDLFDSTQAMAP 1688
Heterocephalus_glaber EEQLAQGPKKQVEGALPLPAQALSILEGSLPLDKHG-GDKYSMASDNSFELFDSTQTVTR 1752
Equus_caballus    EGQLAKGQKKAAEEVALTLALQTLAIPERPLQDRHD-GDRCPMSIDNSCELFDSLAMP 1633
Canis_lupus_familiaris EEQLALEGKRAQEAALTLVALQTLTVPEWPLHPDKHG-GDGCPSVAIDNSCDFLFDSTLAVPP 1697
Bos_taurus        EERLVQDGQKAREAAALALALQTLASAPERPLPLDEPD-GDKCPVATDDSCDLFDPTPATPP 1709
Pavo_muticus      EEQLSKEKKEEMGSVSAVNINCLFKQESQHYAGMNEENLCKCPAASRNICELQKQGHICISL 1872
Pavo_cristatus    EEQLSKEKKEEMGSVSAVNINCLFKQESQHYAGMNEENLCKCPAASRNICELQKQGHICISL 1872
Gallus_gallus     EEQLSKEKKEEMGSVSAVNINCLFKQESQHYAGMNEENLCKCPAASRNICELQKHGHGVPL 1875
Chelonia_mydas    EEQLSKEKKEEAAASVSAVNINIRFKRDSQHYTGMDVGHKFSAPGSNVCELQNCGHGTSP 1748
.....1930.....1940.....1950.....1960.....1970.....1980

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Homo_sapiens      KS-----VSETPPLSGNDTDSLSCDS 1699
Pan_troglodytes   KSDNCFSWLWPFITLLHLLQCLCSAQTVGYWNAQTSLSHPFSETPPLSGNDTDSLSCDS 1738
Macaca_mulatta    KS-----VSETPPLSGNDTDSLSCDS 1699
Callithrix_jacchus KS-----VSETPPLSGNDTDSLPCNG 1700
Mus_musculus      KS-----ASETPLLSGTDVDSLSCDS 1628
Rattus_norvegicus KS-----ASETPLVLSGTDVDSLSCDS 1709
Heterocephalus_glaber NS-----ASEVPPCSGNDVDSLSCDS 1773
Equus_caballus    RS-----ASGTPPLSGNDTDSLSCDS 1654
Canis_lupus_familiaris PS-----ASETPLPSENDSDSLSCDS 1718
Bos_taurus        RS-----ASEMPPLSGNDVDITLSCDS 1730
Pavo_muticus      AQTG-----THTASKDDLD---CC 1888
Pavo_cristatus    AQTG-----THTASKDDLD---CC 1888
Gallus_gallus     AKTG-----THSASKDDLD---CC 1891
Chelonia_mydas    AKAGTPKDK-----NIINKMFCTPETQASKEDLESSSRCS 1785
.....1990.....2000.....2010.....2020.....2030.....2040

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Homo_sapiens      GSSATSTPCVSRLVTGHHLWASKNGRHLGLIEDYEALLKQISQGORLLAEMDIQTOEAP 1759
Pan_troglodytes   GSSATSTPCVSRLVTGHHLWASKNGRHLGLIEDYEALLKQISQGORLLAEMDVQTOEAP 1798
Macaca_mulatta    GSSATSTPCVSRLVAGHRLWASKNGRHLGLIEDYEALLKQIGQGORLLAEMDIQTOEAP 1759
Callithrix_jacchus GSLATSTPCVSLVTGHLWADKSGCHVLGLIEDYEALLKQIGQGORLLAEMYIQIOETP 1760
Mus_musculus      TSSATSPSMPCLVAGHHMWASKSGHHMLGLIEDYDALYKQISWGQTLAKMDVQTOEAL 1688
Rattus_norvegicus TSSATSPSCMPCLVAGHRLWASKSGHHMLGLIEDYDALYKQISWGQTLAKMDIQTOEAL 1769
Heterocephalus_glaber NS-ATTTSCTMPHVPVTHRLWASKSGHHVLGLFEDYDALWQICQGORLLAEMDIQAHEAP 1832
Equus_caballus    GSSVISTPCMSHLVPGHRLWASKSGHHILGLTEDYDALCKQIGQGQKLLAEMDIQTOEAP 1714
Canis_lupus_familiaris GVSATSTSCSTHVPVPGHRLWASKSGCHVLGLTADYEALCQOIGRGQKLLAEMALQIOEAP 1778
Bos_taurus        GSSVVSASVYVSLVPSHHLWASKSGRHHMLGLAEDYDALCDQIGQGMLLAEMDLQIREAP 1790
Pavo_muticus      SSSSSGTSCTPRLVPGHRMWADKNGRHLGLIEDYNALRKQISEGQQVLGEMEVTTLREVA 1948
Pavo_cristatus    SSSSSGTSCTPRLVPGHRMWADKNGRHLGLIEDYNALRKQISEGQQVLGEMEVTTLREVA 1948
Gallus_gallus     STSSSGTSCTPRLVPGHRMWADKNGRHLGLIEDYNALRKQISEGQQVLGEMEVTTLREVA 1951
Chelonia_mydas    SSSSTGTSCTPRLVPGHRMWADKNGRHILGLIEDYNALRKQISEGQKLVSEMEAPLRESE 1845
.....2050.....2060.....2070.....2080.....2090.....2100

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Homo_sapiens      SSTSQELGTGKPHAPPLSKFVSSVSTAKLTLEEAYRRLKLLWRVSLPEDG-QCPLHCEQI 1818
Pan_troglodytes   SSTSQELGTGKPHAPPLSKFVSSVSTAKLTLEEAYRRLKLLWRVSLPEDG-QCPLHCEQI 1857
Macaca_mulatta    SYTSQELGTGKPHAPPLSKFVSSVSTAKLTLEEASRRLKLLWRVSLPEDG-QCPLHCEQI 1818
Callithrix_jacchus SSESQELGTGKPHLVLPLSKFVSSVSTARLTLEEAYRRLTLWRVSLPSDG-QCPLHCKQI 1819
Mus_musculus      SPTSHKLGPKGSSSVPLSKFLSSMNTAKLVLEKASRLKLFWRVSVPTNG-QCSLHCEQI 1747
Rattus_norvegicus SPTSQKLGPKASFVPLSKFLSSMNTAKLILEKASRLKLFWRVSVPTNG-QCSLHCDQI 1828
Heterocephalus_glaber SPTNQELGTGKPHASLCKFVSSSLSTARQILEEASRLKLLWRVSLPPDG-QCTLHCGQI 1891
Equus_caballus    SPTSQELGTGKPHSAPLSRFVTSVSTAKLILDEASRLTLWRVSLPTNG-QCTLHCEQT 1773
Canis_lupus_familiaris RAASPELGTGKPHSVPLHTFVTSVGTAKLILEEAARLLTLFWRVSLPTNG-QCTLHCGQT 1837
Bos_taurus        GPISQELVTGKPHAEPSSSFVTGVSSARRTLDEAAGLLVRFWKVSLPTDG-QCTLHCEQM 1849
Pavo_muticus      GTKLQEPGIKVPDQASLRSFSASTNTVQOILEEAARLLKLLWRVSLPMKAVHGSAGHTQD 2008
Pavo_cristatus    GTKLQEPGIKVPDQASLRSFSASTNTVQOILEEAARLLKLLWRVSLPMKAVHGSAGHTQD 2008
Gallus_gallus     GTKLQEPGIKVPDQASLQSFASASTNTVQOILEEAARLLKLLWRVSLPMKAVHGTVHGTD 2011
Chelonia_mydas    GMKHLEPGVKVPDQESLNNFSANIHTVQOILEEAARLLKLLWRVSLPMKVHSTARCSD 1905
.....2110.....2120.....2130.....2140.....2150.....2160

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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      :*:  :*:** *****: : * *.      :. : **.*.*** :*.:*:*****
Homo_sapiens      GEMKAEVTKLHKKLFEQEKKLQNTMKLLQ----LSKRQEKVIFDQLVVTHKILRKARGNL 1874
Pan_troglodytes   GEMKAEVTKLHKKLFEQEKKLQNTMKLLQ----LSKRQEKVIFDQLVVTHKILRKARGNL 1913
Macaca_mulatta    GEMKAEVTKLHKKLFEQEKKLQNTMKLLQ----LSKRQEKVIFDQLVVTHKILRKARGNL 1874
Callithrix_jacchus GEMKTEITKLHKKLFEQEKKLQNTVKLLQ----LSKRQEKVIFDQLVVTHKILRKARGNL 1875
Mus_musculus      GEMKAENTKLHKKLFEQEKKLQNTAKLLQ----QSKHQEKVIFDQLVITHQVLRKARGNL 1803
Rattus_norvegicus GEMKAEITKLHKKLFEQEKKLQNTAKLLQ----QSKHQEKIIFDQLVITHQVLRKARGNL 1884
Heterocephalus_glaber REMKAEITKLHKKLFEQEKKLQNTVKLLQ----QSKHQEKVIFDQLVITHKVLKARGNL 1947
Equus_caballus    GEMKAEISKLHEKLFQEKKLQNTVKLLQ----LSKHQEKVIFDQLVVTHKILRKARGNL 1829
Canis_lupus_familiaris GEMKAEITKLHKKLFEQEKKLQNSLKLQ----LSKHQEKVIFDQLVITHKVLKARGNL 1893
Bos_taurus        GELKAEISKLHKKLFEQEKKLHNTLKLQ----LSKNQEKVIFDQLVVTHKVLKARGNL 1905
Pavo_muticus      EGMKAEILRLRKKLSEQEKKLHSTVKRLHSTNQLKENMEKVIIDQLVLTHNVLKARGNL 2068
Pavo_cristatus    EGMKAEILRLRKKLSEQEKKLHSTVKRLHSTNQLKENMEKVIIDQLVLTHDVLKARGNL 2068
Gallus_gallus     EGMKAEILRLRKKLSEQEKKLHSTVKRLHSTNQLKENMEKVIIDQLVLTHDVLKARGNL 2071
Chelonia_mydas    EGMKTEILRLHKKLSEQEKKLHITVKRLHSTNQLKENMEKVIIDQLALTHDVLKARGNL 1965
.....2170.....2180.....2190.....2200.....2210.....2220

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      *
Homo_sapiens      ELRPGGAHPGTCSPSRPGS----- 1893
Pan_troglodytes   ELRPGGSHPGTCSPSRPGS----- 1932
Macaca_mulatta    ELRPGGAHPGTCSPSRPGS----- 1893
Callithrix_jacchus ELRPRGAHPGTCSPSRPGS----- 1894
Mus_musculus      ELRPGATRPGASSPSRPGS----- 1822
Rattus_norvegicus ELRPRAAHPGTSSPSRPGS----- 1903
Heterocephalus_glaber EARRGPPGDSQSQQTRLLRMTASQLSQ 1974
Equus_caballus    ELRPGGIHPGTSSPSRPGS----- 1848
Canis_lupus_familiaris ELRPGGAHPGTSSPSRPGS----- 1912
Bos_taurus        EARECPPWNVQSQPTRLLRRTLSQLSQ 1929
Pavo_muticus      EVPAADNQKPASYTSKKRIL----- 2088
Pavo_cristatus    EVPAADNQKPASYTSKKRIL----- 2088
Gallus_gallus     EVPAADNQKPASYTSKKRIL----- 2091
Chelonia_mydas    EVQPAENQKAASHTNKKRIL----- 1985
.....2230.....2240.....

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