

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/ANADPcd1 Tue Feb 1 11:10:52 2022

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** : ** : ***** : ***** : ** : . : ** : * * * * : ***** : ***** :
MSDHP EERATMIAAGDLQEFVPRGREHCRRHHPGAHNLPRELQPASELCSDDGAAGLVGS
MSDHP EERATMIAAGDLQEFVPRGREHCRRHHPGAHNLPRELQPASELCSDDGAAGLVGS
MSDHS EERATMIAAGDLQEFIPRGREHCRRHHPGAHNLPRELQPASELCSDDGAAGLVGS
MSNNY EERVMTIAAGDLQEFVPPGRDHCKHHHPNALNLQLRQLQPASELWSSDGAAGLVGS
MSNFS EERATMIAAGDLQEFVPPGRDHCKHHHPNALNLQLRQLQPASELWSSDGAAGLVGS
MSNFS EERATMIAAGDLQEFVPPGRDHCKHHHPNALNLQLRQLQPASELWSSDGAAGLVGS
MSNFI EERTT MIAARDLQEFVPPGRDHCKHHHPNALNLQLRQLQPASELWSSDGAAGLVGS
MSNFI YEERATMIAARDLQEFVPPGRDHCKHHHPNALNLQLRQLQPASELWSSDGAAGLVGS
MSNFI YEERTMIAARDLQEFVPPGRDHCKHHHPNALNLQLRQLQPASELWSSDGAAGLVGS
MSNFI YEERATMIAAGDLQEFVPPGRDHCKHHHPNALNLQLRQLQPASELWSSDGAAGLVGS
MSNFI YEERATMIAAGDLQEFVPPGRDHCKHHHPNALNLQLRQLQPASELWSSDGAAGLVGS
MSNFI YEERATMIAAGDLQEFVPPGRDHCKHHHPNALNLQLRQLQPASELWSSDGAAGLVGS
MSNFI YEERATMIAAGDLQEFVPPGRDHCKHHHPNALNLQLRQLQPASELWSSDGAAGLVGS
MSNFI YEERATMIAAGDLQEFVPPGRDHCKHHHPNALNLQLRQLQPASELWSSDGAAGLVGS
MSNIY EEKQT MIAAGDLQEFVPLGRDHCKHHHPNALNLQLRQLQPASELWSSDGAAGLVGS
1.....10.....20.....30.....40.....50.....60

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*:*****.:** **:*. :*: :*****:*.:***** :* :.****.*
LREVTIHERQRESWQLRKGVDFGEEVDYDEELYVASNMVIWSKGSKSEASAAVKAFSVD 120
LREVTIHERQRESWQLRKGVDFGEEVDYDEELYVASNMVIWSKGSKSEASAAVKAFSVD 120
LREVTIHERQRESWQLRKGVDFGEEVDYDEELYVASNMVIWSKGSKTEASAAVKAFSVD 120
LQEVTIHEKQKESWLLRRGVSDVGEVEYDEELYVAGNMVIWSKGSKSQASAVYKAFSTD 120
LQEVTIHEKQKESWQLRKGVSEIGDAADYDEELYVAGNMVIWSKGSKSQALAVYKAFSTD 120
LQEVTIHEKQKESWQLRKGVSEIGDAADYDEELYVAGNMVIWSKGSKSQALAVYKAFSTD 120
LQEVTIHEKQKESWQLRKGVSEIGEDVDYDEELYVAGNMVIWSKGSKSQALAVYKAFSTD 120
LQEVTIHEKQKESWQLRKGVSEIGEDVDYDEELYVAGNMVIWSKGSKSQALAVYKAFSTD 120
LQEVTIHEKQKESWQLRKGVSEIGEDVDYDEELYVAGNMVIWSKGSKSQALAVYKAFSTD 120
LQEVTIHEKQKESWQLRKGVSEIGEEVDYDEELYVAGNMVIWSKGSKSQALAVYKAFSTD 120
LQEVTIHEKQKESWQLRKGVSEIGEEVDYDEELYMAGNMVIWSKGSKSQALAVYKAFSTD 120
LQEVTIHEKQKESWQLRKGVSEIGEEVDYDEELYVAGNMVIWSKGSKSQALAVYKAFSTD 120
LREVTIHEKNKESWQLRKGVDPGEDAEYDEELYVAGNVVIWSKGSKIQASTVYKAFSTD 120
.....70.....80.....90.....100.....110.....120

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*.* ***** : :.*.:. . :.:*.:*****:*. :*****.* *****
SPVLQALWCDFFTIQQEKSDKADVSGGKEIVQKVCILQSSCVNVHSIDGKDYIAALPFOV 180
SPVLQALWCDFFTIQQEKSDKADVSGGKEIVQKVCILQSSCVNVHSIDGKDYIAALPFOV 180
SPVLQALWCDFFTIQQEKSDKADVSGGKEIVQKVCILQSSCVNVHSIDGKDYVAALPFOV 180
SPVLQALWCDFTVROEKSEKVDNS--DEIVEKCICILQSSCINVHSIEGKDYIASLPFOV 178
STVQALWCDFIISQDKSEKIYKS---HELEKCICILQSSCMNMHSIDGKDYIASLPFOV 177
STVQALWCDFIISQDKSEKIYKS---HELEKCICILQSSCMNMHSIDGKDYIASLPFOV 177
SPVQALWCDFIISQDKSEKAYSS---NEVEKCICILQSSCINMHSIEGKDYIASLPFOV 177
SPVQALWCDFIISQDKSEKAYSS---NEVEKCICILQSSCINMHSIEGKDYIASLPFOV 177
SPVQALWCDFIISQDKSEKAYSS---HEIEKCICILQSSCINMHSIEGKDYIASLPFOV 177
SPVQALWCDFIISQDKSEKAYSS---NEVEKCICILQSSCINMHSVEGKDYIASLPFOV 177
SPVQALWCDFIISQDKSDKDYSS---DEVERCICILQSSCINMHSIEGKDYIASLPFOV 177
SPVQALWCDFIISQDKSEKSYSS---HEVEKCICILQSSCINMHSIEGKDYIASLPFOV 177
SPVQALWCDFFTIFNDKNDNETDE--GKLEKVCVLQSSCINVHNTDGKDYIAPLPFOV 177
.....130.....140.....150.....160.....170.....180

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**.*.**:***:**
ANIWPTKFGLLERSGSS--HEVPPSPPREPLPTMFSSMLHPLDEITPLVCKSG----- 231
ANIWPTKFGLLERSGSS--HEVPPSPPREPLPTMFSSMLHPLDEITPLVCKSG----- 231
ANIWPTKFGLLERSGSS--HEVPPSPPREPLPTMFSSMLHPLDEITPLVCKSG----- 231
ANVWPTKYGLLFERSSTSS--HEVPLSPPREPLPTMFSSMLHPLDEITPLVCKSGDGVNLSA 236
ANVWATKYGLLFERCSSS--HEVPPSLPREPLPTMFSSMLHPLDEITPLVCKSG----- 228
ANVWATKYGLLFERSSSS--HEVPPSLPREPLPTMFSSMLHPLDEITPLVCKSG----- 228
ANVWPTKYGLLFERSASS--HEVPPGSPREPLPTMFSSMLHPLDEITPLVCKSG----- 228
ANVWPTKYGLLFERSTSS--HEVPPGSPREPLPTMFSSMLHPLDEITPLVCKSG----- 228
ANVWPTKYGLLFERSTSS--HEVPPGSPREPLPTMFSSMLHPLDEITPLVCKSG----- 228
ANVWPTKYGLLFERSSTSS--HEVPPGPPPREPLPTMFSSMLHPLDEITPLVCKSG----- 228
ANVWPTKYGLLFERSSSS--CEVPPGPPPREPLPTLFSMLHPLDEITPVCKSG----- 228
ANVWPTKYGLLFERSTSS--HEVPPGPPPREPLPTMFSSMLHPLDEITPLVCKSG----- 228
ANVWPTKYGLLFERNSTLHEVPSPPPREPLPTIFSSMLHPLDEITPLVSRSG----- 230
190.....200.....210.....220.....230.....240

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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      .:****.***:*** * ::**** :***:****.***. *::*:***:***.***. ***:
Pavo_muticus      ---AGVFGSARVQYVADYTLRIVFVNAEPSIVMTYDITVQSLHTVWALRRVKPEEONKVLK 288
Pavo_cristatus    ---AGVFGSARVQYVADYTLRIVFVNAEPSIVMTYDITVQSLHTVWALRRVKPEEONKVLK 288
Gallus_gallus     ---AGVFGSARVQYVADYTLRIVFVNAEPSIVMTYDITVQSLHTVWALRRVKPEEONMVLK 288
Chelonia_mydas    TSLAGVFGSARVQYVADYTLRIVFLNEEPSIVMTYDITVQSLHAVWALRRVKPEEONTVLK 296
Mus_musculus      ----SLFGSSRVQYVVDPAVKIVFLNIDPSIVMTYDAVQNVHSVWTLRRVKPEEENAVLK 284
Rattus_norvegicus ----SLFGSSRVQYVVDPAVKIVFLNIDPSIVMTYDAVQNVHSVWTLRRVKPEEETAVLK 284
Homo_sapiens      ----SLFGSSRVQYVVDHAMKIVFLNTDPSIVMTYDAVQNVHSVWTLRRVKSEENNVVLK 284
Macaca_mulatta    ----SIFGSSRVQYVVDHAMKIVFLNTDPSIVMTYDAVQNVHSVWTLRRVKSEENNVVLK 284
Callithrix_jacchus ----SLFGSPRVQYVVDHAMKIVFLNTDPSIVMTYDAVQNVHSVWTLRRVRSEENNVVLK 284
Canis_lupus_familiaris ----SLFGSSRVQYVVDHAMKIVFLNTEPSIIMTYDITVQSLHSVWALRRVKTEENNVVLK 284
Bos_taurus        ----SLFGSSRVQYVVDHAMKIVFLHTDPSIVMTYDITVQGLHSVWALRRVKTEEGNVVLK 284
Heterocephalus_glaber ----SLFGSSRVQYVVDQAMKIVFLSIDPSFVMTYDSVQNAHSLWTLRRVRAEENNVVLK 284
Xenopus_tropicalis ----GIFGSSRVHYVSDPTLRIVFTHSDPSIVMTYDITVQGSHTVWALRRVKAEENAVLN 286
.....250.....260.....270.....280.....290.....300

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      : ** ** *: :*****:****:****:*** :*****:***:***** *****:*** **
Pavo_muticus      FSEQLGTPQNVAASSSLTAQLRSLSKGDSPMASPFQNYSSIHQSRSASSPSMQSR--SP 346
Pavo_cristatus    FSEQLGTPQNVAASSSLTAQLRSLSKGDSPMASPFQNYSSIHQSRSASSPSMQSR--SP 346
Gallus_gallus     FSEQLGTPQNVAASSSLTAQLRSLSKGDSPMASPFQNYSSIHQSRSVSSPSMQSR--SP 346
Chelonia_mydas    FSEQVGTPQH VATSSSLTAHLRSLSKGDSPMASPFQNYSSIHQSRSLSSSPSVHSSR--SP 354
Mus_musculus      FPEQAGTLQNAATSSSLTAHLRSLSKGESPVASPFQNYSSIHQSRSSTSSPSLHSSR--SP 342
Rattus_norvegicus FPEQAGTLQNAATSSSLTAHLRSLSKGESPVASPFQNYSSIHQSRSASSPSLHSSR--SP 342
Homo_sapiens      FSEQGGTPQNVATSSSLTAHLRSLSKGDSPVTSPPFQNYSSIHQSRSSTSSPSLHSSR--SP 342
Macaca_mulatta    FSEQGGTPQNVATSSSLTAHLRSLSKGDSPVTSPPFQNYSSIHQSRSSTSSPSLHSSR--SP 342
Callithrix_jacchus FSEQGGTPQNVATSSSLTAHLRSLSKGDSPVTSPPFQNYSSIHQSRSSTSSPSLHSSR--SP 342
Canis_lupus_familiaris FSEQGGTPQNVATSSSLTAHLRSLSKGDSPVASPFQNYSSIHQSRSSTSSPSLHSSR--SP 342
Bos_taurus        FSEQGGTPQNVATSSSLTAHLRSLSKGDSPVASPFQNYSSIHQSRSASSPSLHSSR--SP 342
Heterocephalus_glaber FSEQGGTPQNVATSSSLTAHLRSLSKGDSPVASPFQNYSSIHQSRSASSPSLHSSR--SP 342
Xenopus_tropicalis L-EQIGTPQHGMTTSSSLTAHLRSVSKGESPTASPFQNFSSLHQSRSVSSPSIHSSRSHSP 345
.....310.....320.....330.....340.....350.....360

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*****:*****:***:****.***: ***.***. : ***. . . ** ****
Pavo_muticus      SISNMAALSRSHSPALGVHSFSGVQRFNSSINVQSPRRHSITHSPESTCSDSFLVTETEP 406
Pavo_cristatus    SISNMAALSRSHSPALGVHSFSGVQRFNSSINVQSPRRHSITHSPESTCSDSFLVTETEP 406
Gallus_gallus     SISNMAALSRSHSPALGVHSFSGVQRFNSSINVQSPRRHSITHSPESTCSDSFLVTETEP 406
Chelonia_mydas    SISNMAALSRSHSPALGVQSFSGVQRFNFSSNTQSPRRHSASHSPNSASDSDSFLAPETEP 414
Mus_musculus      SISNMAALSRHSPALGVHSFSGAQRFNLSHNSQSPKRHSISHSPSGSFNDSFLAPETEP 402
Rattus_norvegicus SISNMAALSRHSPALGVHSFSGVQRFNLSHNSQSPKRHSISHSPSGSFNDSFLAPETEP 402
Homo_sapiens      SISNMAALSRHSPALGVHSFSGVQRFNLSHNSQSPKRHSISHSPNSNSNGSFLAPETEP 402
Macaca_mulatta    SISNMAALSRHSPALGVHSFSGVQRFNLSHNSQSPKRHSISHSPNSNSNGSFLAPETEP 402
Callithrix_jacchus SISNMAALSRHSPALGVHSFSGVQRFNLSHNSQSPKRHSISHSPNSNSNGSFLAPETEP 402
Canis_lupus_familiaris SISNMAALSRHSPALGVHSFSGVQRFNLSHNSQSPKRHSISHSPNS-SNGSFLAPETEP 401
Bos_taurus        SISNMAALSRHSPALGVHSFSGVQRFNLSHNSQSPKRHSISHSPNSNSNGSFLAPETEP 402
Heterocephalus_glaber SISNMAALSRHSPALGVHSFSGVQRFNLSHNSQSPKRHSISHSPNSNSNGSFLAPETEP 402
Xenopus_tropicalis SISNMAALSRSHSPALGVHSFAGVQRFNFSSNTQSPKRLGASGSPNSTSD-FLSVETEP 404
.....370.....380.....390.....400.....410.....420

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*****:*****:~ :*:*****:*****:*****~*~*~: *** ~*~:****
Pavo_muticus      IVPELCIDHLWTEAITMKREKNSQASKVFITTDLCGQKFLCFLVESQLQLRCVKFOESND 466
Pavo_cristatus    IVPELCIDHLWTEAITMKREKNSQASKVFITTDLCGQKFLCFLVESQLQLRCVKFOESND 466
Gallus_gallus     IVPELCIDHLWTEAITMKREKNSQASKVFITTDLCGQKFLCFLVESQLQLRCVKFOESND 466
Chelonia_mydas    IVPELCIDHLWTEITIMTMRKNSQASKVFITTDLCGQKFLCFLVESQLQLRCVKFOESND 474
Mus_musculus      IVPELCIDHLWTETLPLNIREKNSQASKVFITTDLCGQKFLCFLVEAQLQLRCVKFOESND 462
Rattus_norvegicus IVPELCIDHLWTETLPLNIREKNSQASKVFITTDLCGQKFLCFLVEAQLQLRCVKFOESND 462
Homo_sapiens      IVPELCIDHLWTETITNIREKNSQASKVFITSDLCGQKFLCFLVESQLQLRCVKFOESND 462
Macaca_mulatta    IVPELCIDHLWTETMTNIREKNSQASKVFITSDLCGQKFLCFLVESQLQLRCVKFOESND 462
Callithrix_jacchus IVPELCIDHLWTETMTNIREKNSQASKVFITSDLCGQKFLCFLVESQLQLRCVKFOESND 462
Canis_lupus_familiaris IVPELCIDHLWTETITNIREKNSQASKVFITSDLCGQKFLCFLVESELQLRCVKFOESND 461
Bos_taurus        IVPELCIDHLWTETITRLRKNSQASKVFITSDLCGQKFLCYLVESELQLRCVKFOESND 462
Heterocephalus_glaber IVPELCIDHLWTETITNIREKNSQASKVFITSDLCGQKFLCFLVESQLQLRCVKFOESND 462
Xenopus_tropicalis IVPELCIDHLWTETVANIREKNSQATKVFITTDLCGQKFLCFLLESFHQLRLVKFEESND 464
.....430.....440.....450.....460.....470.....480

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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*:*****:*** *****: .*:*:****.*****:*:*****:*** ** **

KSQILFGSVTNIAQKDAAPVQGVDTLLVLESGSNLVLYSGVVRVGKVFIPGLPAPSLTMS
KSQILFGSVTNIAQKDAAPVQGVDTLLVLESGSNLVLYSGVVRVGKVFIPGLPAPSLTMS
KSQILFGSVTNIAQKDAAPVQGVDTLLVLESGSNLVLYSGIVRVGKVFIPGLPAPSLTMS
KSQILFGSVTNIAQKDAAPVESIDTLLVLEGNLNLVLYTGVRVGKVFIPGLPAPSLTMS
KTQLIFGSVTNIAKDAAPVEKIDTMLVLEGNLNLVLYTGVRVGKVFIPGLPAPSLTMS
KTQLIFGSVTNIAKDAAPVEKIDTMLVLEGNLNLVLYTGVRVGKVFIPGLPAPSLTMS
KTQLIFGSVTNIPAKDAAPVEKIDTMLVLESGSNLVLYTGVRVGKVFIPGLPAPSLTMS
KTQLIFGSVTNIPAKDAAPVEKIDTMLVLESGSNLVLYTGVRVGKVFIPGLPAPSLTMS
KTQLIFGSVTNIPAKDAAPVEKIDTMLVLESGSNLVLYTGVRVGKVFIPGLPAPSLTMS
KTQLIFGSITNIAKDAAPVEKIDTMLVLESGSNLVLYTGVRVGKVFIPGLPAPSLTMS
KTQLIFGSVTNIAQKDAAPVEKIDTMLVLESGSNLVLYTGVRVGKVFIPGLPAPSLTMS
KTQLIFGSVTNIAKDAAPVEKIDTMLVLESGSNLVLYTGVRVGKVFIPGLPAPSLTMS
KTQLIFGSVTNIAKDAAPVEKIDTMLVLESGSNLVLYTGVRVGKVFIPGLPAPSLTMS
KSQILFGSVTNISAKDAAPVEAIDTMVLENNLNLVLYTGVRVGKIFIQGLAAPSGLMS
.....490.....500.....510.....520.....530.....540

. *****.:.: *. :.* * ..:.* : *****.:*:* * :****:* *
 NQMPRPSTPLDSVSTPSKTLNKHGLGLEESMLLSPVPELRDSSKSLHDSTYVEDCTFQOQG
 NQMPRPSTPLDSVSTPSKTLNKHGLGLEESMLLSPVPELRDSSKSLHDSTYVEDCTFQOQG
 NQMPRPSTPLDSVSTPSKTLNKHGLGLEESMLLSPVPELRDSSKSLHDSTYVEDCTFQOQG
 NQMPRPSTPLDSLNPISKPLNKHGLGLEEVLLSPVPELRDSSKSLHDSYIDCTFQQLG
 NMMPRPSTPLDGVGTP-KPLSKLLGSMDEVVLLSPVPELRDSSKSLNDSLYNEDCTFQQLG
 NMMPRPSTPLDGVSTP-KPLSKLLGSMDEVVLLSPVPELRDSSKSLNDSLYNEDCTFQQLG
 NTMPRPSTPLDGVSTP-KPLSKLLGSLDEVVLLSPVPELRDSSKSLHDSLYNEDCTFQQLG
 NTMPRPSTPLDGVSTP-KPLSKLLGSLDEVVLLSPVPELRDSSKSLHDSLYNEDCTFQQLG
 NTMPRPSTPLDGISTP-KPLSKLLGSLDEVVLLSPVPELRDSSKSLHDSLYNEDCTFQQLG
 NTMPRPSTPLDSVSTP-KPLSKLLGSLDEVVLFSPVPELRDSSKSLHDSLYNEDCTFQQLG
 NTMPRPSTPLDGVTTA-NPLSKLLGSLDEVLVLS-PVPELRDSSKSLHDSLYTEDCTFQQLG
 STMPRPSTPLDSVSTP-KPLSKLLGSLDEAVLLSPVPELRDSSKSLHDSLYNEDCTFQOQG
 NPMPRPSTPLESISTPAKPLNKHLPMD EAGMLSPVPELRDSTRLHESLYLDCTFHQFG
550.....560.....570.....580.....590.....600

.:.:**** **:*.:...:****:*.:*****: **.:* *****:*.:****

TFIHALRDPVHNRVTLELSNTIMVRITIP EIATSELVKTCLQGVKAILPKEIAVQMLVKW
TFIHALRDPVHNRVTLELSNTIMVRITIP EIATSELVKTCLQGVKAILPKEIAVQMLVKI
TFIHALRDPVHNRVTLELSNTIMVRITIP EIATSELVKTCLQGVKAILPKEIAVQMLVKW
TFIHSVRDPVHNRVTLELSNSSMVRITIP EIATSELVKRCLQGKISILPKEIAVQMLVKW
TYIHSVRDPVHNRVTLELSNGSMVRITIP EVATSELVQTCLQAIKFILPKEVAIQVLVKW
TYIHSVRDPVHNRVTLELSNGSMVRITIP EVATSELVQTCLQAIKFILPKEVAVQVLVKW
TYIHSIRDPVHNRVTLELSNGSMVRITIP EIATSELVQTCLQAIKFILPKEIAVQMLVKW
TYIHSIRDPVHNRVTLELSNGSMVRITIP EIATSELVQTCLQAIKCILPKEIAVQMLVKW
TYIHSVRDPVHNRVTLELSNGSMVRITIP EIATSELVQTCLRAIKFILPKEIAVQMLVKW
TYIHSIRDPVCNRVTLELSNGSMVRITIP EIATSELVQTCLQAIKFILPKEIAVQMLVKW
TYIHSIRDPVRNRVTLELSNGSMVRITIP EIATSELVQTCLQAIKFILPKEIAVQMLVKW
TYIHSVRDPVHNRVTLELSNGSMVRITIP EVATSELVQTCLQAIKFILPKEVAVQMLVKW
TYIHSVRDPVHNRVTLELSNGSMVRITIP DIATSELVKKCLQAIKYLIPKEIAVQMLVKW
.....610.....620.....630.....640.....650.....660

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* . . . ***** : : ** : ** ** : : ***** : : * * . . . ** ** * ***** : *
YNAYNAPGGPSYRLAWNLFVTCLMNMGGYNTTEKLTWTRNLNVGGSPSPVSAPKKARPSET
YNAYNAPGGPSYRLAWNLFVTCLMNMGGYNTTEKLTWTRNLNVGGSPSPVSAPKKARPSE
YNAYNAPGGPSYRLAWNLFVTCLMNMGGYNTTEKLTWTRNLNVGGSPSPVSAPKKARPSEI
YNAYNAPGGPSYHSEWSLFVTCMLNLMGYNTDRLAWMRNLDEGSLSPVIAPKKARPSET
YNVHSAPGGPSCHSEWSLFVTCMLNMMGYNTDRLAWTRSFDFEGSLSPVIAPKKARPSDT
YNVHSAPGGPSCHSEWSLFVTCMLNMMGYNTDRLAWTRSFDFEGSLSPVIAPKKARPSDT
YNVHSAPGGPSYHSEWNLFVTCMLNMMGYNTDRLAWTRNFD FEGSLSPVIAPKKARPSET
YNVHSAPGGPSYHSEWNLFVTCMLNMMGYNTDRLAWTRNFD FEGSLSPVIAPKKARPSET
YNVHSAPGGPSYHSEWNLFVTCMLNLMGYNTDRLAWTRNFD FEGSLSPVIAPKKARPSET
YSVHSAPGGPSYHSEWNLFVTCMLNMMGYNTDRLAWTRNFD FEGSLSPVIAPKKARPSET
YSVHSAPGGPSDHSEWNLFVTCMLNMMGYNTDRLAWTRNFD FEGSLSPVIAPKKARPSET
YNVHSAPGGPSYHSEWNLFVTCMLNMMGYNTDRLAWTRNFD FEGSLSPVIAPKKARPSET
YNCHNAPGGPTNHSSEWNMFVTCMLNMMGYNTDKLSWTRNCFEGSLSPVIAPKKARPSET
.....670.....680.....690.....700.....710.....720

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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GSDDEDWEYLLSSDYHRNFESHPLSRVLGLDPLEDLAPQD-DFLQSLSLDYSTLLFTHIPA
GSDDEDWEYLLSSDYHRNFESHPLSRVLGLDPLEDLAPQD-DFLQSLSLDYSTLLFTHIPA
GSDDEDWEYLLSSDYHRNFESHPLSRVLGLDPLEVLAPKD-DFLQSLSLDYSTLLFTHIPA
GSDDEDWEYLLNSDYHRLNLESHPLARALRLDPLETSFPKD-DFSPLSLSDSSTLLFTHIPA
GSDDEDWEYLLNSEYHRNVESHLLNKSLCLTALEVSNAKDEDFSQNLSDSSTLLFAHIPA
GSDDDEWYLLNSEYHHNVESHLLNKSLCLNALEVTIKTKDEDFPQNLSDSSTLLFAHIPA
GSDDDEWYLLNSDYHQNVESHLLNRSLCLSPSEASQM KDEFSQNLSDSSTLLFTHIPA
GSDDDEWYLLNSDYHQNVESHLLNRSLCLSPSEASQM KDEFSQNLSDSSTLLFTHIPA
GSDDDEWYLLNSDYHQNVESHLLNRALCLSSSEVSQM KDEFSQNLSDSSTLLFTHIPA
GSDDDEWYLLNSDYHQNVESHLLNRSLCLSPLEVSQM KDEFSQNLILDSSTLLFTHIPA
GSDDDEWYLLNSDYHQNVESHLLNRSLCLSPLEVSQM KDEFSQNLSDSSTLLFTHIPA
GSDDDEWYLLNSDYHQNVESHLLNRSLCLSPLEVSQM KDEFSQNLSDSSTLLFTHIPA
GSDDDEWYLLNSDYHQNVESHLLNRSLCLSPLEVSQM KDEFSQNLSDSSTLLFTHIPA
GSDDEDWEYLNSDYHRNVETHIARALQLDSLDAVAKD-DIQNVVSLDSSALLFSHPA
.730.740.750.760.770.780

[illegible]

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*:          *.:*.**.:*****.:*:** ***          *****.:**:*.***
IIDQG---FMHHPAFFSAEPPSIFQWLSSCLKGGRVQPPYPYLPGICERSKLVILSVALYI
IIDQG---FMHHPAFFSAEPPSIFQWLSSCLKGGRVQPPYPYLPGICERSKLVILSVALY
IIDQG---FMHHPAFFSAEPPSIFQWLSSCLKGGSVQPPYPYLPGICERSKLVILSVALYI
IIDQAQTGFMHHPSSFAEPPSIFQWLSSCLKGEGALPPYLPGICERSKLVLSVALYI
TIDQGMQGMFHHPFPFFTSEPPSIYQWVSSCLKGEGMPPYPYLPGICERSRLVVL SIALYT
TIDQGMQGMFHHPSPFFTSEPPSIYQWVSSCLKGEGTPPYYPYLPGICERSRLVVL SIALYT
TIDPGQTGFMHHPSPFFTSEPPSIYQWVSSCLKGEGMPPYPYLPGICERSRLVVL SIALYI
TIDPGQTGFMHHPSPFFTSEPPSIYQWVSSCLKGEGMPPYPYLPGICERSKLVLSIALYI
MIDPGQTGFMHHPSPFFTSEPPSIYQWVSSCLKGEGMPPYPYLPGICERSRLVLSIALYI
TIDQGTGFMHHPSPFFTPEPPSIYQWVSSCLKGEGMPPYPYLPGICERSRLVVL SIALYI
AIDQGTGSMQYPPFFTPEPPSIYQWVSSCLKGEGVPPYPYLPGICERGLVVL SIALYI
TIDQGTGFMDHPSPFFTSEPPSIYQWVSSCLKGERMPPYPYLPGICERSRLVVL SIALYI
RIEPTQIGFMNYPSPFFTAEPPIYHWLSSRLKGEKVTPYPYLPGICERSKLVLSFALYI
.....850.....860.....870.....880.....890.....900

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[illegible]

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[illegible]

Pavo_muticus	RDLETLPFGVALPIRDAIYYCREQASDWPEAVCVLIGRODLSKQACEGNLLKSKSSVGP	1002
Pavo_cristatus	RDLETLPFGVALPIRDAIYYCREQASDWPEAVCVLIGRODLSKQACEGNLLKSKSSVGP	1002
Gallus_gallus	RDLETLPFGVALPIRDAIYYCREQASDWPEAVCVLIGRODLSRQACDGNLLKSKSSVGP	1002
Chelonia_mydas	RDLESLPFGVALPIRDAVYHCREQASDWPEAVCLLIGRODLSKQACEGNLAKGKSSVAQ	1013
Mus_musculus	RDLETLPFGIALPIRDAIYHCREQPSDWSEAVCLLIGRODLSKQACEGNLPRGKS----	997
Rattus_norvegicus	RDLETLPFGIALPIRDAIYHCREQPSDWSEAVCLLIGRODLSKQACEGNLPRGKS----	997
Homo_sapiens	RDLETLPFGIALPIRDAIYHCREQASDWPEAVCLLIGRODLSKQACEGNLPGKGS----	997
Macaca_mulatta	RDLETLPFGIALPIRDAIYHCREQASDWPEAVCLLIGRODLSKQACEGNLPGKSSVTQ	1001
Callithrix_jacchus	RDLETLPFGVALPIRDAIYHCREQASDWPEAVCLLIGRODLSKQACEGNLPRGKSSVTQ	1001
Canis_lupus_familiaris	RDLETLPFGIALPIRDAIYHCREQASDWPEAVCLLIGRODLSKQACEGNLPGKGS----	996
Bos_taurus	RDLETLPFGIALPIRDAIYHCREQASDWPEAVCLLIGRODLSKQACEGNLPGKGS----	996
Heterocephalus_glaber	RDLETLPFGIALPIRDAIYHCREQASDWPEAVCLLIGRODLSKQACEGNLPRGKS----	995
Xenopus_tropicalis	QDLESLPFGVALPIRHAIVCROQPSDWAGVCILIGRODLSKQACDGNLPKAKPSAGP	1002
970.....980.....990.....1000.....1010.....1020	

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Pavo_muticus	VLSSDSPSGAESEEDDGMNMNDEVMSLIWSKDLRVQEVRRLLQSAHPVRVNVVQMP	1062
Pavo_cristatus	VLSSDSPSGAESEEDDGMNMNDEVMSLIWSKDLRVQEVRRLLQSAHPVRVNVVQMP	1062
Gallus_gallus	VLSSDSPSGAESEEDDGMNMNDEVMSLIWSKDLRVQEVRRLLQSAHPVRVNVVQMP	1062
Chelonia_mydas	VLSSDVPSGAEAEEDDDGMNDMNQEVMSLIWSEDLRVQEVRRLLQSAHPVRVNVVQMP	1073
Mus_musculus	VLSEVSSGTAEAEEDDGMNDLNHEVMSLIWSEDLRVQDVRRLQSAQPVVRVNVVQYPEL	1057
Rattus_norvegicus	VLSSDVASGAEAEEDDGMNDLNHEVMSLIWSEDLRVQDVRRLQSAQPVVRVNVVQYPEL	1057
Homo_sapiens	VLSSDVPSGTETEEDDGMNDMNHEVMSLIWSEDLRVQDVRRLQSAHPVRVNVVQYPEL	1057
Macaca_mulatta	VLSSDVPSGTETEEDDGMNDMNHEVMSLIWSEDLRVQDVRRLQSAHPVRVNVVQYPEL	1061
Callithrix_jacchus	VLSSDVPSGTETEEDDGMNDMNHEVMSLIWSEDLRVQDVRRLQSAHPVRVNVVQYPEL	1061
Canis_lupus_familiaris	VLSSDVPSGTETEEDDGMNDMNQEVMSLIWSEDLRVQDVRRLQSAHPVRVNVVQYPEL	1056
Bos_taurus	VLSSDVPSGTETEEDDGMNDMNQEVMSLIWSEDLRVQDVRRLQSAHPVRVNVVQYPEL	1056
Heterocephalus_glaber	VLSSDVPSGTETEEDDGMNDMNHEVMSLIWSEDLRVQDVRRLQSAHPVRVNVVQYPEL	1055
Xenopus_tropicalis	VPSPEVPPAADAEEEDDGMNDLNQEVMSLIWSEDLRVQEVRRLLQSAHPVRVNVVQMP	1062
1030.....1040.....1050.....1060.....1070.....1080	

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Pavo_muticus	SDHDFIEEKENRLLQLCQRTMALPVGRGMFTLFSYHPIPAEQPLPIPKNLNTGRAPPRNST	1122
Pavo_cristatus	SDHDFIEEKENRLLQLCQRTMALPVGRGMFTLFSYHPIPAEQPLPIPKNLNTGRAPPRNST	1122
Gallus_gallus	SDHDFIEEKENRLLQLCQRTMALPVGRGMFTLFSYHPIPAEQPLPIPKNLNTGRAPPRNST	1122
Chelonia_mydas	SDHEYIEEKENRLLQLCQRTMALPLGRGMFTLFSYHPVPTTEPLPIPKNLNTGRAPPRNTT	1133
Mus_musculus	SDHEFIEEKENRLLQLCQRTMALPVGRGMFTLFSYHPVPTTEPLPVPKNLNTGRAPPRNTT	1117
Rattus_norvegicus	SDHEFIEEKENRLLQLCQRTMALPVGRGMFTLFSYHPVPTTEPLPIPKNLNTGRAPPRNTT	1117
Homo_sapiens	SDHEFIEEKENRLLQLCQRTMALPVGRGMFTLFSYHPVPTTEPLPIPKNLNTGRAPPRNTT	1117
Macaca_mulatta	SDHEFIEEKENRLLQLCQRTMALPVGRGMFTLFSYHPVPTTEPLPIPKNLNTGRAPPRNTT	1121
Callithrix_jacchus	SDHEFIEEKENRLLQLCQRTMALPVGRGMFTLFSYHPVPTTEPLPIPKNLNTGRAPPRNTT	1121
Canis_lupus_familiaris	SDHEFIEEKENRLLQLCQRTMALPVGRGMFTLFSYHPVPTTEPLPIPKNLNTGRAPPRNTT	1116
Bos_taurus	SDHEFIEEKENRLLQLCQRTMALPVGRGMFTLFSYHPVPTTEPLPIPKNLNTGRAPPRNTT	1116
Heterocephalus_glaber	SDHEFIEEKENRLLQLCQRTMALPVGRGMFTLFSYHPVPTTEPLPIPKNLNTGRAPPRNTT	1115
Xenopus_tropicalis	SDHEFIEEKENRLLQLCQRTMALPVGRGMFTLFSYHPVPTTEPLPIPKNLNTGRAPPRNTT	1122
1090.....1100.....1110.....1120.....1130.....1140	

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Pavo_muticus	VDLNSGNIDVPPNMACWASFHNGVAAGLKIAPASRIDSSWIIYNKPKNAEQANEYAGFLM	1182
Pavo_cristatus	VDLNSGNIDVPPNMACWASFHNGVAAGLKIAPASRIDSSWIIYNKPKNAEQANEYAGFLM	1182
Gallus_gallus	VDLNSGNIDVPPNMACWASFHNGVAAGLKIAPASRIDSSWIIYNKPKNAEQANEYAGFLM	1182
Chelonia_mydas	VDLNSGNIDVPPNMACWASFHNGVAAGLKIAPASQIDSAWIVYNKPKHAELANEYAGFLM	1193
Mus_musculus	VDLNSGNIDVPPNMASWASFHNGVAAGLKIAPASQIDSAWIVYNKPKHAELANEYAGFLM	1177
Rattus_norvegicus	VDLNSGNIDVPPNMASWASFHNGVAAGLKIAPASQIDSAWIVYNKPKHAELANEYAGFLM	1177
Homo_sapiens	VDLNSGNIDVPPNMTSWASFHNGVAAGLKIAPASQIDSAWIVYNKPKHAELANEYAGFLM	1177
Macaca_mulatta	VDLNSGNIDVPPNMTSWASFHNGVAAGLKIAPASQIDSAWIVYNKPKHAELANEYAGFLM	1181
Callithrix_jacchus	VDLNSGNIDVPPNMTSWASFHNGVAAGLKIAPASQIDSAWIVYNKPKHAELANEYAGFLM	1181
Canis_lupus_familiaris	VDLNSGNIDVPPNMTSWASFHNGVAAGLKIAPASQIDSAWIVYNKPKHAELANEYAGFLM	1176
Bos_taurus	VDLNSGNIDVPPNMTSWASFHNGVAAGLKIAPASQIDSAWIVYNKPKHAELANEYAGFLM	1176
Heterocephalus_glaber	VDLNSGNIDVPPNMTSWASFHNGVAAGLKIAPASQIDSAWIVYNKPKHAELANEYAGFLM	1175
Xenopus_tropicalis	VDLNSGNIDVPPNMACWANFHNGVAAGLKIAPASQIDSAWIVYNKPKHAELANEYAGFLM	1182
1150.....1160.....1170.....1180.....1190.....1200	

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/ANADP.d File Feb 1 11:10:52 2022

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****.*****:*****:*****:*****

Pavo_muticus	ALGLSGHLTKLATLNHIDYLTGHEMTSIGLLLGVSAAKLGTMMAITRLLSIHIPALLP	1242
Pavo_cristatus	ALGLSGHLTKLATLNHIDYLTGHEMTSIGLLLGVSAAKLGTMMAITRLLSIHIPALLP	1242
Gallus_gallus	ALGLSGHLTKLATLNHIDYLTGHEMTSIGLLLGVSAAKLGTMMAITRLLSIHIPALLP	1242
Chelonia_mydas	ALGLNGHLTKLATLNHIDYLTGHEMTSIGLLLGVSAAKLGTMMAITRLLSIHIPALLP	1253
Mus_musculus	ALGLNGHLTKLATLNHIDYLTGHEMTSIGLLLGVSAAKLGTMDSITRLLSIHVPALLP	1237
Rattus_norvegicus	ALGLNGHLTKLATLNHIDYLTGHEMTSIGLLLGVSAAKLGTMDSITRLLSIHVPALLP	1237
Homo_sapiens	ALGLNGHLTKLATLNHIDYLTGHEMTSIGLLLGVSAAKLGTMDSITRLLSIHIPALLP	1237
Macaca_mulatta	ALGLNGHLTKLATLNHIDYLTGHEMTSIGLLLGVSAAKLGTMDSITRLLSIHIPALLP	1241
Callithrix_jacchus	ALGLNGHLTKLATLNHIDYLTGHEMTSIGLLLGVSAAKLGTMDSITRLLSIHIPALLP	1241
Canis_lupus_familiaris	ALGLNGHLTKLATLNHIDYLTGHEMTSIGLLLGVSAAKLGTMDSITRLLSIHIPALLP	1236
Bos_taurus	ALGLNGHLTKLATLNHIDYLTGHEMTSIGLLLGVSAAKLGTMDSVTRLLSIHIPALLP	1236
Heterocephalus_glaber	ALGLNGHLTKLATLNHIDYLTGHEMTSIGLLLGVSAAKLGTMDSITRLLSIHVPALLP	1235
Xenopus_tropicalis	ALGLNGHLTKLATLNHIDYLTGHEMTSIGLLLGVSAAKLGTMDSITRLLSIHIPALLP	1242

.....1210.....1220.....1230.....1240.....1250.....1260

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Pavo_muticus	PTSTELDVPHNVQAAVIGIGLVYQGTahrHTAEVLLAEIGRPPGPEMEYCTDRESYSLA	1302
Pavo_cristatus	PTSTELDVPHNVQAAVIGIGLVYQGTahrHTAEVLLAEIGRPPGPEMEYCTDRESYSLA	1302
Gallus_gallus	PTSTELDVPHNVQAAVIGIGLVYQGTahrHTAEVLLAEIGRPPGPEMEYCTDRESYSLA	1302
Chelonia_mydas	PTSTELDVPHNVQAAVIGIGLVYQGTahrHTAEVLLAEIGRPPGPEMEYCTDRESYSLA	1313
Mus_musculus	PTSTELDVPHNVQAAVIGIGLVYQGTahrHTAEVLLAEIGRPPGPEMEYCTDRESYSLA	1297
Rattus_norvegicus	PTSTELDVPHNVQAAVIGIGLVYQGTahrHTAEVLLAEIGRPPGPEMEYCTDRESYSLA	1297
Homo_sapiens	PTSTELDVPHNVQAAVIGIGLVYQGTahrHTAEVLLAEIGRPPGPEMEYCTDRESYSLA	1297
Macaca_mulatta	PTSTELDVPHNVQAAVIGIGLVYQGTahrHTAEVLLAEIGRPPGPEMEYCTDRESYSLA	1301
Callithrix_jacchus	PTSTELDVPHNVQAAVIGIGLVYQGTahrHTAEVLLAEIGRPPGPEMEYCTDRESYSLA	1301
Canis_lupus_familiaris	PTSTELDVPHNVQAAVIGIGLVYQGTahrHTAEVLLAEIGRPPGPEMEYCTDRESYSLA	1296
Bos_taurus	PTSTELDVPHNVQAAVIGIGLVYQGTahrHTAEVLLAEIGRPPGPEMEYCTDRESYSLA	1296
Heterocephalus_glaber	PTSTELDVPHNVQAAVIGIGLVYQGTahrHTAEVLLAEIGRPPGPEMEYCTDRESYSLA	1295
Xenopus_tropicalis	PTSTELDVPHNVQAAVIGIGLVYQGTahrHTAEVLLAEIGRPPGPEMEYCTDRESYSLA	1302

.....1270.....1280.....1290.....1300.....1310.....1320

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Pavo_muticus	SGLALGMVCLGHGSNLIGMSDLNVPEQLYQYMGVGHRRFQAGMHREKHKSPSYQIKEGDT	1362
Pavo_cristatus	SGLALGMVCLGHGSNLIGMSDLNVPEQLYQYMGVGHRRFQAGMHREKHKSPSYQIKEGDT	1362
Gallus_gallus	SGLALGMVCLGHGSNLIGMSDLNVPEQLYQYMGVGHRRFQAGMHREKHKSPSYQIKEGDT	1362
Chelonia_mydas	AGLALGMVCLGHGSNLIGMSDLNVPEQLYQYMGVGHRRFQAGMHREKHKSPSYQIKEGDT	1373
Mus_musculus	AGLALGMVCLGHGSNLIGMSDLNVPEQLYQYMGVGHRRFQAGMHREKHKSPSYQIKEGDT	1357
Rattus_norvegicus	AGLALGMVCLGHGSNLIGMSDLNVPEQLYQYMGVGHRRFQAGMHREKHKSPSYQIKEGDT	1357
Homo_sapiens	AGLALGMVCLGHGSNLIGMSDLNVPEQLYQYMGVGHRRFQAGMHREKHKSPSYQIKEGDT	1357
Macaca_mulatta	AGLALGMVCLGHGSNLIGMSDLNVPEQLYQYMGVGHRRFQAGMHREKHKSPSYQIKEGDT	1361
Callithrix_jacchus	AGLALGMVCLGHGSNLIGMSDLNVPEQLYQYMGVGHRRFQAGMHREKHKSPSYQIKEGDT	1361
Canis_lupus_familiaris	AGLALGMVCLGHGSNLIGMSDLNVPEQLYQYMGVGHRRFQAGMHREKHKSPSYQIKEGDT	1356
Bos_taurus	AGLALGMVCLGHGSNLIGMSDLNVPEQLYQYMGVGHRRFQAGMHREKHKSPSYQIKEGDT	1356
Heterocephalus_glaber	AGLALGMVCLGHGSNLIGMSDLNVPEQLYQYMGVGHRRFQAGTHREKHKSPSYQIKEGDT	1355
Xenopus_tropicalis	AGLALGMVCLGHGSNLIGMSDLNVPEQLYQYMGVGHRRFQAGVREKHKSPSYQIKEGDT	1362

.....1330.....1340.....1350.....1360.....1370.....1380

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Pavo_muticus	INVDVTCPGATLAFAMIYKLTNNRSIADWLQAPDTMYLLDFVKPEFLLLRITLARCLILWD	1422
Pavo_cristatus	INVDVTCPGATLAFAMIYKLTNNRSIADWLQAPDTMYLLDFVKPEFLLLRITLARCLILWD	1422
Gallus_gallus	INVDVTCPGATLAFAMIYKLTNNRSIADWLQAPDTMYLLDFVKPEFLLLRITLARCLILWD	1422
Chelonia_mydas	INVDVTCPGATLALAMIYKLTNNRSIADWLRAPDTMYLLDFVKPEFLLLRITLARCLILWD	1433
Mus_musculus	INVDVTCPGATLALAMIYKLTNNRSIADWLRAPDTMYLLDFVKPEFLLLRITLARCLILWD	1417
Rattus_norvegicus	INVDVTCPGATLALAMIYKLTNNRSIADWLRAPDTMYLLDFVKPEFLLLRITLARCLILWD	1417
Homo_sapiens	INVDVTCPGATLALAMIYKLTNNRSIADWLRAPDTMYLLDFVKPEFLLLRITLARCLILWD	1417
Macaca_mulatta	INVDVTCPGATLALAMIYKLTNNRSIADWLRAPDTMYLLDFVKPEFLLLRITLARCLILWD	1421
Callithrix_jacchus	INVDVTCPGATLALAMIYKLTNNRSIADWLRAPDTMYLLDFVKPEFLLLRITLARCLILWD	1421
Canis_lupus_familiaris	INVDVTCPGATLALAMIYKLTNNRSIADWLRAPDTMYLLDFVKPEFLLLRITLARCLILWD	1416
Bos_taurus	INVDVTCPGATLALAMIYKLTNNRSIADWLRAPDTMYLLDFVKPEFLLLRITLARCLILWD	1416
Heterocephalus_glaber	INVDVTCPGATLALAMIYKLTNNRSIADWLRAPDTMYLLDFVKPEFLLLRITLARCLILWD	1415
Xenopus_tropicalis	INVDVTCPGATLALAMIYKLTNNRSIADWLRAPDTMYLLDFVKPEFLLLRITLARCLILWD	1422

.....1390.....1400.....1410.....1420.....1430.....1440

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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*****:*****:*****:*****:*****:*****:*****:*****:*****:*****:*****
Pavo_muticus      DIMPSTEWVDSNVPQIIIRENSIPLHATELPSSSEDLNLETLSQAHVYIIAGACLSLGFRFA 1482
Pavo_cristatus    DIMPSTEWVDSNVPQIIIRENSIPLHATELPSSSEDLNLETLSQAHVYIIAGACLSLGFRFA 1482
Gallus_gallus     DIMPSTEWVDSNVPQIIIRENSIPLHATELPSSSEDLNLETLSQAHVYIIAGACLSLGFRFA 1482
Chelonia_mydas    DILPNSKWVDSNVPQIIIRENSISLSEIELPCSEDLNLETLSQAHVYIIAGACLSLGFRFA 1493
Mus_musculus      DILPNSKWVDSNVPQIIIRENSISLSEIELPCSEDLNLETLSQAHVYIIAGACLSLGFRFA 1477
Rattus_norvegicus DILPNSKWVDSNVPQIIIRENSISLSEIELPCSEDLNLETLSQAHVYIIAGACLSLGFRFA 1477
Homo_sapiens      DILPNSKWVDSNVPQIIIRENSISLSEIELPCSEDLNLETLSQAHVYIIAGACLSLGFRFA 1477
Macaca_mulatta    DILPNSKWVDSNVPQIIIRENSISLSEIELPCSEDLNLETLSQAHVYIIAGACLSLGFRFA 1481
Callithrix_jacchus DILPNSKWVDSNVPQIIIRENSISLSEIELPCSEDLNLETLSQAHVYIIAGACLSLGFRFA 1481
Canis_lupus_familiaris DILPNSKWVDSNVPQIIIRENSISLSEIELPCSEDLNLETLSQAHVYIIAGACLSLGFRFA 1476
Bos_taurus        DILPNSKWVDSNVPQIIIRENSISLSEIELPCSEDLNLETLSQAHVYIIAGACLSLGFRFA 1476
Heterocephalus_glaber DILPNSKWVDSNVPQIIIRENSISLSEIELPCSEDLNLETLSQAHVYIIAGACLSLGFRFA 1475
Xenopus_tropicalis DILPNAQWVNSNVPQIIITDNSISLNATEQPSSEDLNLETLSQAHVYIIAGACLSLGFRFA 1482
.....1450.....1460.....1470.....1480.....1490.....1500

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Pavo_muticus      GSENKAAFNCLDKYATDFLKSLAPTASIIIGHYNLETCLSVLLLSLAMVVAGSGNLKVLQ 1542
Pavo_cristatus    GSENKAAFNCLDKYATDFLKSLAPTASIIIGHYNLETCLSVLLLSLAMVVAGSGNLKVLQ 1542
Gallus_gallus     GSENKAAFNCLDKYATDFLKSLAPTASIIIGHYNLETCLSVLLLSLAMVVAGSGNLKVLQ 1542
Chelonia_mydas    GSENLAAFNCLFKFAKDFMKCLSAPTASITGHYNLETCLSVLLLSLAMVMAGSGNLKVLQ 1553
Mus_musculus      GSENLSAFNCLHKKFAKDFMNYLSAPNASVTGPYNLETCLSVLLLSLAMVMAGSGNLKVLQ 1537
Rattus_norvegicus GSENLSAFNCLHKKFAKDFMNYLSAPNASVTGPYNLETCLSVLLLSLAMVMAGSGNLKVLQ 1537
Homo_sapiens      GSENLSAFNCLHKKFAKDFMNYLSAPNASVTGPYNLETCLSVLLLSLAMVMAGSGNLKVLQ 1537
Macaca_mulatta    GSENLSAFNCLHKKFAKDFMNYLSAPNASVTGPYNLETCLSVLLLSLAMVMAGSGNLKVLQ 1541
Callithrix_jacchus GSENLSAFNCLHKKFAKDFMNYLSAPNASVTGPYNLETCLSVLLLSLAMVMAGSGNLKVLQ 1541
Canis_lupus_familiaris GSENLSAFNCLHKKFAKDFMNYLSAPNASVTGPYNLETCLSVLLLSLAMVMAGSGNLKVLQ 1536
Bos_taurus        GSENLSAFNCLHKKFAKDFMNYLSAPNASVTGPYNLETCLSVLLLSLAMVMAGSGNLKVLQ 1536
Heterocephalus_glaber GSENLSAFNCLHKKFAKDFMNYLSAPNASITGPYNLETCLSVLLLSLAMVMAGSGNLKVLQ 1535
Xenopus_tropicalis GTANLSAFNCLCKFAKDFE-CLSAQAAGITGHYNLETCLSVLLLSLAMVMAGSGNLKVLQ 1541
.....1510.....1520.....1530.....1540.....1550.....1560

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*****:*****:*****:*****:*****:*****:*****:*****:*****:*****:*****:*****
Pavo_muticus      LCRFMHKKTTGGEMNYGFHLAHHMALGLLFLGGGRYSLSTSNSSIAALLCALYPHFPVHST 1602
Pavo_cristatus    LCRFMHKKTTGGEMNYGFHLAHHMALGLLFLGGGRYSLSTSNSSIAALLCALYPHFPVHST 1602
Gallus_gallus     LCRFMHKKTTGGEMNYGFHLAHHMALGLLFLGGGRYSLSTSNSSIAALLCALYPHFPVHST 1602
Chelonia_mydas    LCRFMHKKTTGGEMNYGFHLAHHMALGLLFLGGGRYSLSTSDSSIAALLCALYPHFPVHSS 1613
Mus_musculus      LCRFLHMKTTGGEMNYGFHLAHHMALGLLFLGGGRYSLSTSNSSIAALLCALYPHFPVHST 1597
Rattus_norvegicus LCRFLHMKTTGGEMNYGFHLAHHMALGLLFLGGGRYSLSTSNSSIAALLCALYPHFPVHST 1597
Homo_sapiens      LCRFLHMKTTGGEMNYGFHLAHHMALGLLFLGGGRYSLSTSNSSIAALLCALYPHFPVHST 1597
Macaca_mulatta    LCRFLHMKTTGGEMNYGFHLAHHMALGLLFLGGGRYSLSTSNSSIAALLCALYPHFPVHST 1601
Callithrix_jacchus LCRFLHMKTTGGEMNYGFHLAHHMALGLLFLGGGRYSLSTSNSSIAALLCALYPHFPVHST 1601
Canis_lupus_familiaris LCRFLHMKTTGGEMNYGFHLAHHMALGLLFLGGGRYSLSTSNSSIAALLCALYPHFPVHST 1596
Bos_taurus        LCRFLHMKTTGGEMNYGFHLAHHMALGLLFLGGGRYSLSTSNSSIAALLCALYPHFPVHST 1596
Heterocephalus_glaber LCRFLHMKTTGGEMNYGFHLAHHMALGLLFLGGGRYSLSTSNSSIAALLCALYPHFPVHST 1595
Xenopus_tropicalis LCRFMHKKTTGGEMNYGFHLAHHMALGLLFLGGGRYSLSTSNSSIAALLCALYPHFPVHST 1601
.....1570.....1580.....1590.....1600.....1610.....1620

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*****:*****:*****:*****:*****:*****:*****:*****:*****:*****:*****
Pavo_muticus      DNRYHLQALRHLYVLAADPRLLIPVDVDSNTPCYALIEVTFKGTQWYAEETTEEMMAPTLL 1662
Pavo_cristatus    DNRYHLQALRHLYVLAADPRLLIPVDVDSNTPCYALIEVTFKGTQWYAEETTEEMMAPTLL 1662
Gallus_gallus     DNRYHLQALRHLYVLAADPRLLIPVDVDSNTPCYALIEVTFKGTQWYAEETTEEMMAPTLL 1662
Chelonia_mydas    DNRYHLQALRHLYVLAADPRLLIPVDVDSNTPCYALIEVTFKGTQWYAEETTEEMMAPTLL 1673
Mus_musculus      DNRYHLQALRHLYVLAADPRLLIPVDVDSNTPCYALIEVTFKGTQWYAEETTEEMMAPTLL 1657
Rattus_norvegicus DNRYHLQALRHLYVLAADPRLLIPVDVDSNTPCYALIEVTFKGTQWYAEETTEEMMAPTLL 1657
Homo_sapiens      DNRYHLQALRHLYVLAADPRLLIPVDVDSNTPCYALIEVTFKGTQWYAEETTEEMMAPTLL 1657
Macaca_mulatta    DNRYHLQALRHLYVLAADPRLLIPVDVDSNTPCYALIEVTFKGTQWYAEETTEEMMAPTLL 1661
Callithrix_jacchus DNRYHLQALRHLYVLAADPRLLIPVDVDSNTPCYALIEVTFKGTQWYAEETTEEMMAPTLL 1661
Canis_lupus_familiaris DNRYHLQALRHLYVLAADPRLLIPVDVDSNTPCYALIEVTFKGTQWYAEETTEEMMAPTLL 1656
Bos_taurus        DNRYHLQALRHLYVLAADPRLLIPVDVDSNTPCYALIEVTFKGTQWYAEETTEEMMAPTLL 1656
Heterocephalus_glaber DNRYHLQALRHLYVLAADPRLLIPVDVDSNTPCYALIEVTFKGTQWYAEETTEEMMAPTLL 1655
Xenopus_tropicalis DNRYHLQALRHLYVLAADPRLLIPVDVDSNTPCYALIEVTFKGTQWYAEETTEEMMAPTLL 1661
.....1630.....1640.....1650.....1660.....1670.....1680

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Pavo_muticus	PELHLLKQIRVKGPRYWELLIDLSNETNHLKSILSKGGVLYVKLRAGQLSYKEDPMGWRS	1722
Pavo_cristatus	PELHLLKQIRVKGPRYWELLIDLSNETNHLKSILSKGGVLYVKLRAGQLSYKEDPMGWRS	1722
Gallus_gallus	PELHLLKQIRVKGPRYWELLIDLSNETNHLKSILSKGGVLYVKLRAGQLSYKEDPMGWRS	1722
Chelonia_mydas	PELHLLKQIRVKGPRYWELLIDLSKGTQHLKSILSKDGVLYVKLRAGQLSYKEDPMGWRS	1733
Mus_musculus	PELHLLKQMKVKGPRYWELLIDLSKGEQHLRSILSKDGVLYVKLRAGQLSYKEDPMGWRS	1717
Rattus_norvegicus	PELHLLKQMKVKGPRYWELLIDLSKGEQHLRSILSKDGVLYVKLRAGQLSYKEDPMGWRS	1717
Homo_sapiens	PELHLLKQIKVKGPRYWELLIDLSKGTQHLKSILSKDGVLYVKLRAGQLSYKEDPMGWRS	1717
Macaca_mulatta	PELHLLKQIKVKGPRYWELLIDLSKGTQHLKSILSKDGVLYVKLRAGQLSYKEDPMGWRS	1721
Callithrix_jacchus	PELHLLKQIKVKGPRYWELLIDLSKGTQHLKSILSKDGVLYVKLRAGQLSYKEDPMGWRS	1721
Canis_lupus_familiaris	PELHLLKQIKVKGPRYWELLIDLSKGTQHLKSILSKDGVLYVKLRAGQLSYKEDPMGWRS	1716
Bos_taurus	PELHLLKQIKVKGPRYWELLIDLSKGTQHLKSILSKDGVLYVKLRAGQLSYKEDPMGWRS	1716
Heterocephalus_glaber	PELHLLKQIKVKGPRYWELLIDLSKGTQHLKSILSKDGVLYVKLRAGQLSYKEDPMGWRS	1715
Xenopus_tropicalis	PEFHLLRQIKVKGPRYWEIVDLRKGTEHLKSILSKDGVLYVKLRAGQLSYKEDPMGWRS	1721

.....1690.....1700.....1710.....1720.....1730.....1740

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Pavo_muticus	FSAQTITHGN-EARSFKPEDISAFSTDPALLFAEYFCKPTVNMGQKQEMLDFFSSILYE	1781
Pavo_cristatus	FSAQTITHGN-EARSFKPEDISAFSTDPALLFAEYFCKPTVNMGQKQEMLDFFSSILYE	1781
Gallus_gallus	FSAQTITHGN-EARSFKPEDISAFSTDPALLFAEYFCKPTVNMGQKQEMLDFFSSILYE	1781
Chelonia_mydas	LLAQAVTHRNSETRTFKPETISAFSTDPALLSFADYFCKPAVNMGQKQEILDLFSSILYE	1793
Mus_musculus	LLAQTVANRNSEARAFKPETISSFTSDPALLSFAEYFCKPTVSMGPKQEILDLFSSILYE	1777
Rattus_norvegicus	LLAQTVANRNSEARAFKPETISSFTSDPALLSFAEYFCKPTVSMGPKQEILDLFSSILYE	1777
Homo_sapiens	LLAQTVANRNSEARAFKPETISSFTSDPALLSFAEYFCKPTVNMGQKQEILDLFSSVLYE	1777
Macaca_mulatta	LLAQTVANRNSEARAFKPETISSFTSDPALLSFADYFCKPTVNMGQKQEILDLFSSVLYE	1781
Callithrix_jacchus	LLAQTVANRNSEARAFKPETISSFTSDPALLSFAEYFCKPTVNMGQKQEILDLFSSVLYE	1781
Canis_lupus_familiaris	LLAQTVANRNSEARAFKPETISSFTSDPALLSFAEYFCKPTVNMGQKQEILDLFSSVLYE	1776
Bos_taurus	LLAQTVANRNSEARAFKPETISSFTSDPALLSFAEYFCKPTVNMVQKQELDLFSSVLYE	1776
Heterocephalus_glaber	LLAQTVANRNSEARAFKPETISSFTSDPALLSFAEYFCKPTVSMGQKQEILDLFSSVLYE	1775
Xenopus_tropicalis	LLAQAVTRRNSEVLTFKPEAISAFSTDPALLSFADYFCKSTTDMGQKQDILDLFSSILYE	1781

.....1750.....1760.....1770.....1780.....1790.....1800

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Pavo_muticus	CVTQEKPEMLPTYIAIDQAVRRLERGEMSETFELGQIKLVLEFFNSRCHQGRMSRNPNRG	1841
Pavo_cristatus	CVTQEKPEMLPTYIAIDQAVRRLERGEMSETFELGQIKLVLEFFNSRCHQGRMSRNPNRG	1841
Gallus_gallus	CVTQEKPEMLPTYIAIDQAVRRLERGEMSETFELGQIKLVLEFFNSRCHQGRMSRNPNSRG	1841
Chelonia_mydas	CVTRENPEMLPAYIAIDQAVRILERKEMSETFELWQIKLVLEFFSSSRSHQERARRNPNRG	1853
Mus_musculus	CVAQETPEMLPAYIAMDAQALRSKKRDMSDTSDLWQIKLVLEFFSSSRSHQDRQHTYPKRG	1837
Rattus_norvegicus	CVAQETPEMLPAYIAMDAQALRSKKRDMSDTSDLWQIKLVLEFFSSSRSHQERQHTYPKRG	1837
Homo_sapiens	CVTQETPEMLPAYIAMDAQAIRRLGRREMSETSELWQIKLVLEFFSSSRSHQERLQNHPRKRG	1837
Macaca_mulatta	CVTQETPEMLPAYIAMDAQAIRRLGRREMSETSELWQIKLVLEFFSSSRSHQERLQNHPRKRG	1841
Callithrix_jacchus	CVTQETPEMLPAYIAMDAQAIRRLGRREMSETSELWQIKLVLEFFSSSRSHQERLQNHPRKRG	1841
Canis_lupus_familiaris	CVTQETPEMLPAYIAMDAQAMRLGRREMSETSELWQIKLVLEFFSSSRSHQERLQNHPRKRG	1836
Bos_taurus	CVTQETPEMLPAYIAMDAQAVRRLLGRREMSETSELWQIKLVLEFFSSSRSHQERLQNHPRKRG	1836
Heterocephalus_glaber	CVTQETPEMLPAYIAMDAQAIRRLGRRELSETCELWQIKLVLEFFSSSRSHQERLQNHPRKRG	1835
Xenopus_tropicalis	CVTQENPEMLPAYIAIDQAVRRLERRETTTETFELWQIKLVLEFFSSAGLQERMKKNSNRG	1841

.....1810.....1820.....1830.....1840.....1850.....1860

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Pavo_muticus	LFMNSEFLPVVKCTIDNTLDQWLQAGGDVCLRSYLSROPKDESQONMLACFLVYHVPVP	1901
Pavo_cristatus	LFMNSEFLPVVKCTIDNTLDQWLQAGGDVCLRSYLSROPKDESQONMLACFLVYHVPMP	1901
Gallus_gallus	LFMNSEFLPVVKCTIDNTLDQWLQAGGDVCLRSYLSROPKDESQONMLACFLVYHVPMP	1901
Chelonia_mydas	LFMNSEFLPVVKCTIDNTLDQWLQAGGDVSLHSYLSGQPTESQSLMLACFLVYHVPPTP	1913
Mus_musculus	LFINSEFLPVVKCTVDSTLDQWLQAGGDVCHAYLSGQPVESQSLNMLACFLVYHVPAP	1897
Rattus_norvegicus	LFINSEFLPVVKCTVDSTLDQWLQAGGDVCHAYLSGQPVESQSLNMLACFLVYHVPAP	1897
Homo_sapiens	LFMNSEFLPVVKCTIDNTLDQWLQAGGDVCHAYLSGQPLEESQSLMLACFLVYHVPAP	1897
Macaca_mulatta	LFMNSEFLPVVKCTIDNTLDQWLQAGGDVCHAYLSGQPLEESQSLMLACFLVYHVPAP	1901
Callithrix_jacchus	LFMNSEFLPVVKCTIDNTLDQWLQAGGDVCHAYLSGQPLEESQSLMLACFLVYHVPAP	1901
Canis_lupus_familiaris	LFMNSEFLPVVKCTIDNTLDQWLQAGGDVCHAYLSGQPFESQSLMLACFLVYHVPAP	1896
Bos_taurus	LFMNSEFLPVVKCTIDNTLDQWLQAGGDVCHAYLSGQPFESQSLMLACFLVYHVPAP	1896
Heterocephalus_glaber	LFMNSEFLPVVKCTIDNTLDQWLQAGGDVCHAYLSGQPFESQSLMLACFLVYHVPAP	1895
Xenopus_tropicalis	LFMNSEFLPIMKCTIDNTLDQWLQAGGDVCHAYLSGQPFESQSLMLACFLVYHVPPEP	1901

.....1870.....1880.....1890.....1900.....1910.....1920

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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Pavo_muticus	GQLAAGGLEGITNFSEMLLKFKQOWNVLVRALLRLAPVLLKNPQSMVL	1948
Pavo_cristatus	GQLAAGGLEGITNFSEMLLKFKQOWNVLVRALLRLAPVLLKNPQSMVL	1948
Gallus_gallus	GQLAAGGLDGINFSEMLLKFKQOWNVLVRALLRLAPVLLKNPQSMVL	1948
Chelonia_mydas	QOLSAGGLEGSVSFSEMLLKFRRLKMPVRALLRLAPLLLGNPQSMVL	1960
Mus_musculus	RHLPPMGLEGSTSFAEILLYRFRHLKMPVRALLRLAPVLLGNPQPMVM	1944
Rattus_norvegicus	RHLPPGLLEGSTSFAEILFRFRHLKMPVRALLRLAPVLLGNPQPMVM	1944
Homo_sapiens	QHLPPIGLEGSTSFAEILFKFKQLKMPVRALLRLAPLLLGNPQPMVM	1944
Macaca_mulatta	RHLPPIGLEGSTSFAEILFKFKQLKMPVRALLRLAPLLLGNPQPMVM	1948
Callithrix_jacchus	RHLPPGLLEGSTSFAEILFKFKQLKMPVRALLRLAPLLLGNPQPMVM	1948
Canis_lupus_familiaris	WHLPSIGLEGSTSFAEILFKFKQLKMPVRALLRLAPLLLGNPQPMVM	1943
Bos_taurus	QHLPSIGLEGSTSFAEILFKFKQLKMPVRALLRLAPLLLGNPQPMVM	1943
Heterocephalus_glaber	RHLPPGLLEGSTSFAEILFKFKQLKMPVRALLRLAPLLLGNPQPMVM	1942
Xenopus_tropicalis	KOLSEGGLOGSESFSEMLLKFKDLKMPVRALLRLAPILLGNPQSMVL	1948
1930.....1940.....1950.....1960.....	