

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/MALEBps Tue Feb 1 13:58:32 2022

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Pavo_muticus	MLEKRRQGCAGSPSS-----SSSSSSAGPCPAPSPYKSAAASPPALTPCRLRSRRRA	53
Pavo_cristatus	MLEKRRQGCAGSPSS-----SSSSSSAGPCPAPSPYKSAAASPPALTPCRLRSRRRA	53
Gallus_gallus	MLEKRRQGCAGSPSS-----SSSSSSAGPCPAPSPYKSAAASPPALTPCRLRSRRRA	53
Anas_platyrhynchos	MLEKRRQGCAGSPSSSSSSSSSSSSSSSGPSPAPSPYKSAAASPPALTPCRLRSRRRA	60
Chelonia_mydas	-----	
Mus_musculus	-----	
Rattus_norvegicus	-----	
Homo_sapiens	-----	
Pan_troglodytes	-----	
Macaca_mulatta	-----	
Callithrix_jacchus	-----	
Bos_taurus	-----	
Equus_caballus	-----	
Canis_lupus_familiaris	-----	
Rhinatrema_bivittatum	-----	
Xenopus_tropicalis	-----	
	1.....10.....20.....30.....40.....50.....60	

	::: : : *:: :**: **	
Pavo_muticus	ALPSPLSAPEPRGGAGG-TMATVVVEAD-----SEPSCSLPNPAA-PSPSLSHRFLDSKF	106
Pavo_cristatus	ALPSPLSAPEPRGGAGG-TMATVVVEAD-----SEPSCSLPNPAA-PSPSLSHRFLDSKF	106
Gallus_gallus	ALPSPLSAPEPRGGAGG-AMATVVVEAD-----SEPSCSLPNPAA-PSPSLSHRFLDSKF	106
Anas_platyrhynchos	ALLP--SSPRSRGAEWGTAMATVVVEVD-----SEPSCSIPNPTS-PSPSLSHRFLDSKF	112
Chelonia_mydas	-----MATVVVEAE-----PDPSCSIPNPTS-PTPSLSHRFLDSKF	35
Mus_musculus	-----MATVVVEATE-----PEPSGSIANPAASTSPSLSHRFLDSKF	37
Rattus_norvegicus	-----MATVVVEATE-----PEPSGSIANPAASTSPSLSHRFLDSKF	37
Homo_sapiens	-----MATVVVEATE-----PEPSGSIANPAASTSPSLSHRFLDSKF	37
Pan_troglodytes	-----MATVVVEATE-----PEPSGSIANPAASTSPSLSHRFLDSKF	37
Macaca_mulatta	-----MATVVVEATE-----PEPSGSIANPAASTSPSLSHRFLDSKF	37
Callithrix_jacchus	-----MATVVVEATE-----PEPSGSIANPAASTSPSLSHRFLDSKF	37
Bos_taurus	-----MATVVVEAAE-----PEPSGSIANPAASTSPSLSHRFLDSKF	37
Equus_caballus	-----MATVVVEAAE-----PEPSGSIANPAASTSPSLSHRFLDSKF	37
Canis_lupus_familiaris	-----MATVLEAAE-----PEPAGSIANPAASTSPSLSHRFLDSKF	37
Rhinatrema_bivittatum	-----MATVLEPAPLPVPASEAACSIIPNPSS-TSPSLSHRFLDSKF	40
Xenopus_tropicalis	-----MATLVEPGPA-----MDPAHTVPIPA--SPSLSHRFLDSKF	35
	.....70.....80.....90.....100.....110.....120	

	*****: ** *:*: * :.*** *****: ** :*****:*****: **	
Pavo_muticus	YLLVVIGELVTEEHLRRAIANIERGIRSWDTNLI ECNLDQELKLFVSRHSARFSPEVVRGQ	166
Pavo_cristatus	YLLVVIGELVTEEHLRRAIANIERGIRSWDTNLI ECNLDQELKLFVSRHSARFSPEVVRGQ	166
Gallus_gallus	YLLVVIGELVTEEHLRRAIANIERGIRSWDTNLI ECNLDQELKLFVSRHSARFSPEVVRGQ	166
Anas_platyrhynchos	YLLVVIGELVTEEHLRRAIANIERGIRSWDTNLI ECNLDQELKLFVSRHSARFSPEVVRGQ	172
Chelonia_mydas	YLLVVIGELVTEEHLRRAIGNIERGIRSWDTNLI ECNLDQELKLFVSRHSARFSPEVVRGQ	95
Mus_musculus	YLLVVVGETVTEEHLRRAIGNIELGIRSWDTNLI ECNLDQELKLFVSRHSARFSPEVVRGQ	97
Rattus_norvegicus	YLLVVVGETVTEEHLRRAIGNIELGIRSWDTNLI ECNLDQELKLFVSRHSARFSPEVVRGQ	97
Homo_sapiens	YLLVVVGEIVTEEHLRRAIGNIELGIRSWDTNLI ECNLDQELKLFVSRHSARFSPEVVRGQ	97
Pan_troglodytes	YLLVVVGEIVTEEHLRRAIGNIELGIRSWDTNLI ECNLDQELKLFVSRHSARFSPEVVRGQ	97
Macaca_mulatta	YLLVVVGEIVTEEHLRRAIGNIELGIRSWDTNLI ECNLDQELKLFVSRHSARFSPEVVRGQ	97
Callithrix_jacchus	YLLVVVGEIVTEEHLRRAIGNIELGIRSWDTNLI ECNLDQELKLFVSRHSARFSPEVVRGQ	97
Bos_taurus	YLLVVVGEIVTEEHLRRAIGNIELGIRSWDTNLI ECNLDQELKLFVSRHSARFSPEVVRGQ	97
Equus_caballus	YLLVVVGEIVTEEHLRRAIGNIELGIRSWDTNLI ECNLDQELKLFVSRHSARFSPEVVRGQ	97
Canis_lupus_familiaris	YLLVVVGEIVTEEHLRRAIGNIELGIRSWDTNLI ECNLDQELKLFVSRHSARFSPEVVRGQ	97
Rhinatrema_bivittatum	YLLVVIGEIVTEDHLRCAIANIERGIRSWDTNLI ECNLDQELKLFVSRHSARFSPEVVRGQ	100
Xenopus_tropicalis	YLLVVIGEIVTEEHVRCALSNIERGIRSWDTNLI ECNLDQELKLFVSRHSARFSPEVVRGQ	95
130.....140.....150.....160.....170.....180	

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*****:*****
Pavo_muticus      KILHHRSDVLETVVLINPSDEAVSTEVRMLITDAARHKLLVLTGQCFENTGELILQSGSF 226
Pavo_cristatus    KILHHRSDVLETVVLINPSDEAVSTEVRMLITDAARHKLLVLTGQCFENTGELILQSGSF 226
Gallus_gallus     KILHHRSDVLETVVLINPSDEAVSTEVRMLITDAARHKLLVLTGQCFENTGELILQSGSF 226
Anas_platyrhynchos KILHHRSDILETVVLINPSDEAVSTEVRMLITDAARHKLLVLTGQCFENTGELILQSGSF 232
Chelonia_mydas    KILHHRSDVLETVVLINPSDEAVSTEVRMLITDAARHKLLVLTGQCFENTGELILQSGSF 155
Mus_musculus      KILHHRSDVLETVVLINPSDEAVSTEVRMLITDAARHKLLVLTGQCFENTGELILQSGSF 157
Rattus_norvegicus KILHHRSDVLETVVLINPSDEAVSTEVRMLITDAARHKLLVLTGQCFENTGELILQSGSF 157
Homo_sapiens      KILHHRSDVLETVVLINPSDEAVSTEVRMLITDAARHKLLVLTGQCFENTGELILQSGSF 157
Pan_troglodytes   KILHHRSDVLETVVLINPSDEAVSTEVRMLITDAARHKLLVLTGQCFENTGELILQSGSF 157
Macaca_mulatta    KILHHRSDVLETVVLINPSDEAVSTEVRMLITDAARHKLLVLTGQCFENTGELILQSGSF 157
Callithrix_jacchus KILHHRSDILETVVLINPSDEAVSTEVRMLITDAARHKLLVLTGQCFENTGELILQSGSF 157
Bos_taurus        KILHHRSDVLETVVLINPSDEAVSTEVRMLITDAARHKLLVLTGQCFENTGELILQSGSF 157
Equus_caballus    KILHHRSDVLETVVLINPSDEAVSTEVRMLITDAARHKLLVLTGQCFENTGELILQSGSF 157
Canis_lupus_familiaris KILHHRSDVLETVVLINPSDEAVSTEVRMLITDAARHKLLVLTGQCFENTGELILQSGSF 157
Rhinatrema_bivittatum KILHHRSDVLETVVLINPSDEAVSTEVRMLITDAARHKLLVLTGQCFENTGELILQSGSF 160
Xenopus_tropicalis KILHHRSDVLETVVLINPSDEAVSTEVRMLITDAARHKLLVLTGQCFENTGELILQSGSF 155
.....190.....200.....210.....220.....230.....240

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*****:*****:
Pavo_muticus      SFQNFIEIFTDQEIGELLSTTHPANKASLTFLCPEEGDWKNSNLDHRNLQDFINIKLNS 286
Pavo_cristatus    SFQNFIEIFTDQEIGELLSTTHPANKASLTFLCPEEGDWKNSNLDHRNLQDFINIKLNS 286
Gallus_gallus     SFQNFIEIFTDQEIGELLSTTHPANKASLTFLCPEEGDWKNSNLDHRNLQDFINIKLNS 286
Anas_platyrhynchos SFQNFIEIFTDQEIGELLSTTHPANKASLTFLCPEEGDWKNSNLDHRNLQDFINIKLNS 292
Chelonia_mydas    SFQNFIEIFTDQEIGELLSTTHPANKASLTFLCPEEGDWKNSNLDHRNLQDFINIKLNS 215
Mus_musculus      SFQNFIEIFTDQEIGELLSTTHPANKASLTFLCPEEGDWKNSNLDHRNLQDFINIKLNS 217
Rattus_norvegicus SFQNFIEIFTDQEIGELLSTTHPANKASLTFLCPEEGDWKNSNLDHRNLQDFINIKLNS 217
Homo_sapiens      SFQNFIEIFTDQEIGELLSTTHPANKASLTFLCPEEGDWKNSNLDHRNLQDFINIKLNS 217
Pan_troglodytes   SFQNFIEIFTDQEIGELLSTTHPANKASLTFLCPEEGDWKNSNLDHRNLQDFINIKLNS 217
Macaca_mulatta    SFQNFIEIFTDQEIGELLSTTHPANKASLTFLCPEEGDWKNSNLDHRNLQDFINIKLNS 217
Callithrix_jacchus SFQNFIEIFTDQEIGELLSTTHPANKASLTFLCPEEGDWKNSNLDHRNLQDFINIKLNS 217
Bos_taurus        SFQNFIEIFTDQEIGELLSTTHPANKASLTFLCPEEGDWKNSNLDHRNLQDFINIKLNS 217
Equus_caballus    SFQNFIEIFTDQEIGELLSTTHPANKASLTFLCPEEGDWKNSNLDHRNLQDFINIKLNS 217
Canis_lupus_familiaris SFQNFIEIFTDQEIGELLSTTHPANKASLTFLCPEEGDWKNSNLDHRNLQDFINIKLNS 217
Rhinatrema_bivittatum SFQNFIEIFTDQEIGELLSTTHPANKASLTFLCPEEGDWKNSNLERHNLQDFINIKLNS 220
Xenopus_tropicalis SFQNFIEIFTDQEIGELLSTTHPGNKASLTFLCPEEGYWKNSNLERHNLQDFINIKLNS 215
.....250.....260.....270.....280.....290.....300

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*****:*****
Pavo_muticus      SILPEMEGLSEFTEYLSSEVEVPSPFIDILEPPTS GGGFLKLSKPCCYIFPGGRGDSALFAV 346
Pavo_cristatus    SILPEMEGLSEFTEYLSSEVEVPSPFIDILEPPTS GGGFLKLSKPCCYIFPGGRGDSALFAV 346
Gallus_gallus     SILPEMEGLSEFTEYLSSEVEVPSPFIDILEPPTS GGGFLKLSKPCCYIFPGGRGDSALFAV 346
Anas_platyrhynchos SILPEMEGLSEFTEYLSSEVEVPSPFIDILEPPTS GGGFLKLSKPCCYIFPGGRGDSALFAV 352
Chelonia_mydas    SILPEMEGLSEFTEYLSSEVEVPSPFIDILEPPTS GGGFLKLSKPCCYIFPGGRGDSALFAV 275
Mus_musculus      SILPEMEGLSEFTEYLSSEVEVPSPFIDILEPPTS GGGFLKLSKPCCYIFPGGRGDSALFAV 277
Rattus_norvegicus SILPEMEGLSEFTEYLSSEVEVPSPFIDILEPPTS GGGFLKLSKPCCYIFPGGRGDSALFAV 277
Homo_sapiens      SILPEMEGLSEFTEYLSSEVEVPSPFIDILEPPTS GGGFLKLSKPCCYIFPGGRGDSALFAV 277
Pan_troglodytes   SILPEMEGLSEFTEYLSSEVEVPSPFIDILEPPTS GGGFLKLSKPCCYIFPGGRGDSALFAV 277
Macaca_mulatta    SILPEMEGLSEFTEYLSSEVEVPSPFIDILEPPTS GGGFLKLSKPCCYIFPGGRGDSALFAV 277
Callithrix_jacchus SILPEMEGLSEFTEYLSSEVEVPSPFIDILEPPTS GGGFLKLSKPCCYIFPGGRGDSALFAV 277
Bos_taurus        SILPEMEGLSEFTEYLSSEVEVPSPFIDILEPPTS GGGFLKLSKPCCYIFPGGRGDSALFAV 277
Equus_caballus    SILPEMEGLSEFTEYLSSEVEVPSPFIDILEPPTS GGGFLKLSKPCCYIFPGGRGDSALFAV 277
Canis_lupus_familiaris SILPEMEGLSEFTEYLSSEVEVPSPFIDILEPPTS GGGFLKLSKPCCYIFPGGRGDSALFAV 277
Rhinatrema_bivittatum SILPEMEGLSEFTEYLSSEVEVPSPFIDILEPPTS GGGFLKLSKPCCYIFPGGRGDSALFAV 280
Xenopus_tropicalis SILPEMEGLSEFTEYLSSEVEVPSPFIDILEPPTS GGGFLKLSKPCCYIFPGGRGDSALFAV 275
.....310.....320.....330.....340.....350.....360

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-:*****:***: :*:::* ***:***:***

GSTTNSDWMKNLISPDLGVVFLNVPENLKNMDPSFRVKRSVEEACFTLQYLNKLSMKPEP
GSTTNSDWMKNLISPDLGVVFLNVPENLKNMDPSFRVKRSVEEACFTLQYLNKLSMKPEP
GSTTNSDWMKNLISPDLGVVFLNVPENLKNMDPSFRVKRSVEEACFTLQYLNKLSMKPEP
GSTTNSDWMKNLISPDLGVVFLNVPENLKNLDPNIRVKRSVEEACFTLQYLNKLSMKPEP
GSTTNSDWMKNLISPDLGVVFLNVPENLKNPDPNFRVKRSIEEACFTLQYLNKLSMKPEP
GSTNSDWMKNLISPDLGVVFLNVPENLKDPEPNIKMKRSIEEACFTLQYLNKLSMKPEP
GSTNSDWMKNLISPDLGVVFLNVPENLKNPEPNIKMKRSTEEACFTLQYLNKLSMKPEP
GSTTNSDWMKNLISPDLGVVFLNVPENLKNPEPNIKMKRSIEEACFTLQYLNKLSMKPEP
GSTTNSDWMKNLISPDLGVVFLNVPENLKNPEPNIKMKRSIEEACFTLQYLNKLSMKPEP
GSTTNSDWMKNLISPDLGVVFLNVPENLKNPEPNIKMKRSIEEACFTLQYLNKLSMRPEP
GSTTNSDWMKNLISPDLGVVFLNVPENLKNPEPNIKMKRSIEEACFTLQYLNKLSMKPEP
GSTTNSDWMKNLISPDLGVVFLNVPENLKNPEPNIKMKRSIEEACFTLQYLNKLSMKPEP
GSTTNSDWMKNLISPDLGVVFLNVPENLKNPEPNIKMKRSTEEACFTLQYLNKLSMKPEP
GSTTNSDWMKNLISPDLGVVFLNVPENLKNPEPNIKMKRSIEEACFTLQYLNKLSMKPEP
GSTTNSDWMKNLISPDLGVVFLNVPENLKNPEPNFRVRSIEEACFTLQYLNKLSMKPEP
GSTTNSDWLKNLISPDLGVVFLNVPDNLKNPEPNFKVRSLEEACFTLQYLNKLSMKPEP
.....430.....440.....450.....460.....470.....480

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*:.*.**:.*:*****.*:.*.*****:**:..::*: : **.*
LFRNVGNTIDPIILFQKMGVGKLEMYVLNPVKSSKEMQYFMHQWSGTSKDKAEFLLPSGQ
LFRNVGNTIDPIILFQKMGVGKLEMYVLNPVKSSKEMQYFMHQWSGTSKDKAEFLLPSGQ
LFRNVGNTIDPIILFQKMGVGKLEMYVLNPVKSSKEMQYFMHQWSGTSKDKAEFLLPNGQ
LFRNVGNTIDPIILFQKMGVGKLEMYVLNPVKSSKEMQYFMQWSGTNRDKAEFLLPNGQ
LFRSIGNTIDPIILFQKMGVGKLEMYVLNPVKNSKEMQYFMQQWSTSKDKTEILLPNGQ
LFRSVGNTIEPVILFQKMGVGKLEMYVLNPVKSSKEMQYFMQQWGTGNKDKAELILPNGQ
LFRSVGNAIEPVILFQKMGVGKLEMYVLNPVKSSKEMQYFMQQWGTGNKDKAELILPNGQ
LFRSVGNTIDPVILFQKMGVGKLEMYVLNPVKSSKEMQYFMQQWGTGNKDKAEFILPNGQ
LFRSVGNTIDPVILFQKMGVGKLEMYVLNPVKSSKEMQYFMQQWGTGNKDKAEFILPNGQ
LFRSVGNTIDPVILFQKMGVGKLEMYVLNPVKSSKEMQYFMQQWGTGNKDKAELILPNGQ
LFRSVGNTIDPVILFQKMGVGKLEMYVLNPVKSSKEMQYFMQQWGTGNKDKAELILPNGQ
LFRSVGNTIDPVILFQKMGVGKLEMYVLNPVKSSKEMQYFMQQWGTGNKDKAELILPNGQ
LFRSVGNTIDPVILFQKMGVGKLEMYVLNPVKSSKEMQYFMQQWGTGNKDKAELILPNGQ
LFRSVGNTIDPVILFQKMGVGKLEMYVLNPVKSSKEMQYFMQQWGTGNKDKAELILPNGQ
LFRSVGNTIDPVILFQKMGVGKLEMYVLNPVKSSKEMQYFMQQWGTGNKDKAELILPNGQ
LFRSVGNTIDPIILFQKMGVGKLEMYVLNPVKGSTEMQYFMQQWSGNNKEKTGLILPNGQ
          490.....500.....510.....520.....530.....540

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*:::*.:::*****:.*:*****:***:*****:*****:
ELDIPLSYFTSVSSLIWHPANPAEKIIRVLFPGNSTQYNILEGLEKCLKHDLFKQPMVT
ELDIPLSYFTSVSSLIWHPANPAEKIIRVLFPGNSTQYNILEGLEKCLKHDLFKQPMVT
ELDIPLSYFTSVSSLIWHPANPAEKIIRVLFPGNSTQYNILEGLEKCLKHDLFKQPMVT
ELDIPLSYFTSVSSLIWHPANPAEKIIRVLFPGNSTQYNILEGLEKCLKHDLFKQPMVT
EVDIPVSYLTSVSSLIWHPANPAEKIIRVLFPGNSTQYNILEGLEKCLKHDLFKQPMVT
EVDIPISYLTSVSSLIWHPANPAEKIIRVLFPGNSTQYNILEGLEKCLKHDLFKQPLAT
EVDIPISYLTSVSSLIWHPANPAEKIIRVLFPGNSTQYNILEGLEKCLKHDLFKQPLAT
EVDLPISYLTSVSSLIWHPANPAEKIIRVLFPGNSTQYNILEGLEKCLKHDLFKQPLAT
EVDLPISYLTSVSSLIWHPANPAEKIIRVLFPGNSTQYNILEGLEKCLKHDLFKQPLAT
EVDLPISYLTSVSSLIWHPANPAEKIIRVLFPGNSTQYNILEGLEKCLKHDLFKQPLAT
EVDLPISYLTSVSSLIWHPANPAEKIIRVLFPGNSTQYNILEGLEKCLKHDLFKQPLAT
EIDIPISYLTSVSSLIWHPANPAEKIIRVLFPGNSTQYNILEGLEKCLKHDLFKQPLAT
EIDIPIISCLTSVSSLIWHPANPAEKIIRVLFPGNSTQYNILEGLEKCLKHDLFKQPLAT
EIDIPIISYLTSVSSLIWHPANPAEKIIRVLFPGNSTQYNILEGLEKCLKHDLFKQPLAT
ELDIPINFTSVSSLIWHPANPAKDIIRVLFPGNSTQYNILEGLEKCLKHDLFKQPIVT
EVELPVNYFTSISSLIWHPANPSEKIVRVLPFGNTTQYQILEGLEKCLKHDLFKQPIVT
.....550.....560.....570.....580.....590.....600

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***:..: : ***:***:~:**** : * :~::~* **~ * ~* :
QKDLTGNIASPAVKQAKLKORTDSKESLKPAAKTPPSKTVRKESKEETLEPAKPSPAPEK
QKDLTGNIASPAVKQAKLKORTDSKESLKPAAKTPPSKTVRKESKEETLEPAKPSPAPEK
QKDLTGNIASPAVKQAKLKORTDSKESLKPAAKTPPSKTVRKESKEETLEPAKPSPALEK
QKDLTGNIASPAVKQAKLKORTDSKESLKPAAKTPPSKTARKESKEETPEPAKPSPAPEK
QKDLTGNIIPSPAVKQAKLKORTDSKESLKPATKTLSTKTVRKESKEEASEPAKPSPP--EK
QKDLTGQVPTPPVKQVKLKQRADSRESLKPATKPVASKSVRKESKEETPEVTKTSQVEKT
QKDLTGQVSTPPVKQVKLKQRADSRESLKPATKPLPSKSVRKESKEEAPKATKASQVEKT
QKDLTGQVPTPVVKQTKLKQRADSRESLKPAAKPLPSKSVRKESKEETPEVTKVNVHVEKP
QKDLTGQVPTPVVKQTKLKQRADSRESLKPAAKPLPSKSVRKESKEETPEVTKVNVHVEKP
QKDLTGQVPTPVVKQTKLKQRADSRESLKPAAKPLPSKSVRKESKEETPEVTKVNVHVEKP
QKDLTGQVPTPVVKQTKLKQRADSRESLKPAATKPLPSKSVRKESKEETPEVAKVNVHVEKP
QKDLTGQVPTPVVKQTKLKQRADSRESLKPATKPLPSKTVRKESKEETPEVTKVNVHVEKP
QKDLTGQVATPAVKQVKLKQRADSRESLKPAAKPLPSKTVRKESKEETPEVTKG--LEKA
QKDLTGQVATPTVKQVKLKQRADSRESLKPATKPLPSKSVRKESKEETPEVTKANHVEKP
QKDLTGQVAAPAVKQVKLKQRADSRESLKPAAKPLPSKSVRKESKEETPEVTKANHVEKP
QKDLTDNVFSQPVKQTKMKQRTDSKESLKTSIKTTLSTKTVKKDSREEKLEVAKSITPDKA
QKDLSDNVSSPAVKQAKIKORAESKESLKMSTKTPSPKPVKSGKEEPEAVKSSHTEQS
.....610.....620.....630.....640.....650.....660

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:      * *: *      . **      *      .      :      * *      : *      :      :      * *
PQKLESKEKTPVKKEKPAKPETKTIIVAEKDVTSK-----EQLGKSETPEKQAT-----DVKPK
PQKLESKEKTPVKKEKPAKPETKTIIVAEKDVTSK-----EQLGKSETPEKQAT-----DVKPK
PQKLESKEKTPVKKEKAVKPEKTIIVAEKDVTTK-----EQLGKSETSEKQASEKQDVKPK
TQKLESKEKVPVKKEKPAKEAKPIVAEKDITSK-----EQLLKSETPEKQAT-----DVKPK
PQKVESKEKTPVKKEKPAKAETKPLVTEKDMTVK-----EQLVKSEIAEKQAA-----DVKPK
PK-VESKEKVLVKKDKPVKTESKPSVTEKEVSK-----EQSPVKAEVAEKQAT-----ESKPK
PK-VESKEKVIIVKKDKPGKVESKPSVTEKEVPSK-----EQSPVKAEVAEKAAT-----ESKPK
PK-VESKEKVMVKKDKPIKTETKPSVTEKEVPSK-----EPSPVKAEVAEKQAT-----DVKPK
PK-VESKEKVTAKKDKPVKTETKPSVTEKEVPSK-----EPSPVKAEVAEKQAT-----DVKPK
PK-VESKEKVTVKKDKPVKTETKPSVTEKEVPSK-----EPSPVKAEVAEKQAT-----DVKPK
PK-VESKEKVTVKKDKPVKTETKPSVTEKEVPSK-----EPSPVKAEVAEKQAT-----DVKPK
PK-VESKEKVTVKKDKPVKTETKPPVTEKETPSK-----ELPPAKAEGAEEKQGT-----DVKPK
PK-VESKEKVTVKKDKPVKTETKPPVAEKEVPSK-----EVPPVKAEGADKQGT-----DVKPK
PK-VESKEKVTVKKDKPVKTETKPPVTEKEVPSKEKEELPPVKAEVAEAKPTT-----DVKPK
QK-VEIKEKISVKKETPTKTE-----KEFTSK-----EPSPKSETAEKQKS-----DIKPK
QK-AESKDKVPVKKSE-----TKFLPEAN-KEPTIKQEQQVEKQKA-----DVKPK
.....670.....680.....690.....700.....710.....720

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Pavo_muticus      VTKEKSVKKEVKAKEPEEKDEKEK--PKKEVSKKEEKTPIKKEEKPKEEDIKKEVKKVEVK 758
Pavo_cristatus    VTKEKSVKKEVKAKEPEEKDEKEK--PKKEVSKKEEKTPIKKEEKPKEEDIKKEVKKVEVK 758
Gallus_gallus     VTKEKSVKKEVKAKEPEEKDEKEK--PKKEVSKKEEKTPIKKEEKPKEEDIKKEVKKVEVK 761
Anas_platyrhynchos VTKEKSVKKEVKAKEPEEKDEKEK--PKKEVSKKEEKTPIKKEEKPKEEDIKKEVKKVEVK 764
Chelonia_mydas    VAKEKHVKKEVKKVSEEEKREEKEK--PKKEVSKKEEKTPIKKEEKPKEEDIKKEVKKVEVK 686
Mus_musculus      VTKDKVVKKEIKTKLEEKKEEKP-----KEVKKEDKTPLKKDEKPRKEEVKKEIKKEIK 687
Rattus_norvegicus VTKDKVVKKEIKTKPEEKKEEKP-----KEVKKEDKTPLKKDEKPRKEEVKKEIKKEIK 687
Homo_sapiens      AAKEKTVKKETKVKPEDKKEEKEK--PKKEVAKKEDKTPIKKEEKPKEEVKKEVKKVEVK 689
Pan_troglodytes   AAKEKTVKKETKVKPEDKKEEKEK--PKKEVAKKEDKTPIKKEEKPKEEVKKEVKKVEVK 689
Macaca_mulatta    AAKEKTVKKETKVKPEDKKEEKEK--PKKEVAKKEDKTPIKKEEKPKEEVKKEVKKVEVK 689
Callithrix_jacchus AAKEKTVKKEAKVKPEDKKEEKEK--PKKEVAKKEDKTPLKKEEKPKEEVKKEVKKVEVK 689
Bos_taurus        VAKEKTVKKETKPKAEKKKEEKEKPKKEVAKKEDKTPIKKEEKPKEEVKKEVKKVEVK 689
Equus_caballus    VAKEKTVKKETKPKAEKKKEEKEKPKKEVAKKEDKTPIKKEEKPKEEVKKEVKKVEVK 689
Canis_lupus_familiaris VTKEKTVKKETKAKSEEEKKEEKEK--PKKEVAKKEDKTPIKKEEKPKEEVKKEVKKVEVK 691
Rhinatrema_bivittatum VGKVKPLKNEVKKVSEEEKKEEKEK--PKKEISKEDKTSSKKEEKP-----KKEVKREMK 679
Xenopus_tropicalis IVKEKAVKKEVKSSEEDVKEDKGK-----KDPVKKEDRPVVKKEKA-----KKEVKKEKSK 669
.....730.....740.....750.....760.....770.....780

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      * * : * * * : : * * * : * * : * * : * * : * * : * *
Pavo_muticus      KEEKKEAKKEVKKKEAPPKEAKKEVKKKEEKEIKKEEKEAKKDIKKVPKETKKTTPAPSAEA 818
Pavo_cristatus    KEEKKEAKKEVKKKEAPPKEAKKEVKKKEEKEIKKEEKEAKKDIKKVPKETKKTTPAPSAEA 818
Gallus_gallus     KEEKKEAKKEVKKKEAPPKEAKKEVKKKEEKEIKKEEKEAKKDIKKVPKETKKTTPAPSAEA 821
Anas_platyrhynchos KEEKKEIKKEVKKKEAPPKEVKKKEAKKEEKEVKKKEEKEAKKDIKKVPKETKKTTPAPSAEA 824
Chelonia_mydas    KEERKESKKELKKETPQKEAKKEAKKEEKEIKKEEKEAKKDIKKVPKETKKTTPAPSAEA 746
Mus_musculus      KEERKELKKKEVKKETPLKDAKKEVKKKEEKEVKKKEEKEPKKEIKKISKDIKKS--TPLSDT 746
Rattus_norvegicus KEEKKELKKKEVKKETPLKDAKKEVKKDEKKEVKKKEEKEPKKEIKKISKDIKKS--TPLSDT 746
Homo_sapiens      KEEKKEPKKEVKKETPPKEVKKKEVKKKEEKEVKKKEEKEPKKEIKKLPKDAKKSSTPLSEA 749
Pan_troglodytes   KEEKKEPKKEVKKETPPKEVKKKEVKKKEEKEVKKKEEKEPKKEIKKLPKDAKKSSTPLSEA 749
Macaca_mulatta    KEEKKEPKKEVKKETPPKEAKKEVKKKEEKEVKKKEEKEPKKEIKKLPKDAKKSSTPLSEA 749
Callithrix_jacchus KEEKKEPKKEVKKETPPKEAKKEVKKKEEKEVKKKEEKEPKKEIKKLPKDAKKSSTPLSEA 749
Bos_taurus        KEEKKEIKKEVKKETPLKEAKKEVKKKEEKEIKKEEKEPKKEIKKLPKDTKKSSTPLVSEA 749
Equus_caballus    KEEKKEVKKKEVKKETPLKEAKKEVKKKEEKEIKKEEKEPKKEIKKLPKDTKKSSTPLVSEA 749
Canis_lupus_familiaris KEEKKEPKKEVKKETPLKEAKKEVKKKEEKEIKKEEKEPKKEIKKLPKDTKKSSTPLSEA 751
Rhinatrema_bivittatum KEDKKEAKKEKKDAP-----QKEIKKEEKEPKKEAKKLPKETKKASAPPTTEA 727
Xenopus_tropicalis KEEKKELKKKEVKKETPQKEVKKESKKEEKE--KKEEKEKKEGKKPLKETKKVPAPSTIDS 727
.....790.....800.....810.....820.....830.....840

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      : * * : * * : * * : * * : * * : * * : * * : * * : * *
Pavo_muticus      KKP-AAKPKPKQKKEEPAKKEAVPAGKAKEKGKVKTVKKEKSVSGA-----QTALAAGVGA 872
Pavo_cristatus    KKP-AAKPKPKQKKEEPAKKEAVPAGKAKEKGKVKTVKKEKSVSGA-----QTALAAGVGA 872
Gallus_gallus     KKP-AAKPKPKQKKEEPAKKEAVPAGKAKEKGKIKTVKKEKSVSGA-----QTALAAGVGA 875
Anas_platyrhynchos KKP-AAKPKPKQKKEEPAKKEAVPAGKPKKEGKIKTVKKEKSVSGA-----QAALAAGVGA 878
Chelonia_mydas    RKP-VTKPKAQKKEEPVKKKEAGPAGKPKKEGKIKTVKKEKSVSET-----QAAVAVVG-A 799
Mus_musculus      KKPSALKPKVAKKEESTKKEPLAAGKLDKGKVKVIKKEGKTTEA-----AATAVGTAAT 801
Rattus_norvegicus KKPAALKPKVAKKEESTKKEPIAAGKLDKGKVKVIKKEGKTTEA-----AATAVG---- 797
Homo_sapiens      KKPAALKPKVPKKEESVKKDSVAAGKPKKEGKIKVIKKEGKAEEA-----VAAAVGTGAT 804
Pan_troglodytes   KKPAALKPKVPKKEESVKKDSVAAGKPKKEGKIKVIKKEGKAEEA-----VAAAVGTGAT 804
Macaca_mulatta    KKPAALKPKVPKKEEPVKKDSVAAGKPKKEGKIKVIKKEGKAEEA-----VAAAVGTGAA 804
Callithrix_jacchus KKPAALKPKVPKKEESVKKDSLATGKPKKEGKIKVIKKEGKAEEA-----VAAAVATGAT 804
Bos_taurus        KKPAALKPKVPKKEEPVKKEAAGKPKKEGKIKVVKKEGKTAAEA-----AAAALGTVA 804
Equus_caballus    KKPAALKPKVPKKEEPVKKEAAGKPKKEGKIKVVKKEGKAEEA-----VAAAVGTVA 804
Canis_lupus_familiaris KKPAALKPKVPKKEEAVKKEAAGKPKKEGKIKVVKKEGKTAAEA-----AAAALGSVAG 806
Rhinatrema_bivittatum RKP-MVKPKAQK--EPPVKKEAAGKPKKEGKIKVTKKGSKNER-----KAAVTAVGAA 780
Xenopus_tropicalis KKT--SVKKVQKDDVIKKDSATPSKTKDK--AKVIKKEKTKVTEKKPVSGAVAAAAVSA 783
.....850.....860.....870.....880.....890.....900

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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..::
: * ***** *: * : . : :
Pavo_muticus      VTTVAAVAAAEITASGK----ELEAERSLMSSPEDLTkdFEELKAEVEtIKATRPQVAL 928
Pavo_cristatus    VTTVAAVAAAEITASGK----ELEAERSLMSSPEDLTkdFEELKAEVEtIKATRPQVAL 928
Gallus_gallus     ATTVAAVAAAEITASGK----ELEAERSLMSSPEDLTkdFEELKAEVEtIKATRPQVAL 931
Anas_platyrhynchos ATTVAAVAAAEITASGK----ELEAERSLMSSPEDLTkdFEELKAEVEtIKtTKPQVAL 934
Chelonia_mydas    VAAAAAAAAGVVGANK----ELEAERSLMSSPEDLTkdFEELKAEVEtIVKtKPQVEL 855
Mus_musculus      TAAVVAAAGIAASGPVK----ELEAERSLMSSPEDLTkdFEELKAEeIDVAKDIKPQLEL 857
Rattus_norvegicus TAAVAAAAGVAASGPAK----ELEAERSLMSSPEDLTkdFEELKAEeIDVAKDIKPQLEL 853
Homo_sapiens      TAAVMAAAGIAAIGPAK----ELEAERSLMSSPEDLTkdFEELKAEeVDVTKDIKPQLEL 860
Pan_troglodytes   TAAVMAAAGIAAIGPAK----ELEAERSLMSSPEDLTkdFEELKAEeVDVTKDIKPQLEL 860
Macaca_mulatta    TAAVVAAAGIAATGPAK----ELEAERSLMSSPEDLTkdFEELKAEeVDVTKDIKPQLEL 860
Callithrix_jacchus TAAV--AAGIVATGPTK----ELEAERSLMSSPEDLTkdFEELKAEeVDITKDIKPQLEL 858
Bos_taurus        AAAVAG---LATTGPAK----ELEAERSLMSSPEDLTkdFEELKAEeVDVAKDIKPQLEL 857
Equus_caballus    AAAVAAAAGIATTGPAK----ELEAERSLMSSPEDLTkdFEELKAEeVDVARDMKPQLEL 860
Canis_lupus_familiaris AAAVAAAG-AAGASSAK----ELEAERSLMSSPEDLTkdFEELKAEeVDVAKDMKPQLEL 861
Rhinatrema_bivittatum AVTAAVATAAAVTTTAAGKAANLEAERSLMSSPEDLTkdFEDLKAeVL-VANKtQPQLEI 839
Xenopus_tropicalis AAAAAAAAI PASVETTRKAADLLAERSLMSSPEDLTkdFEELRDEeI-VLNTVELKSQL 842
.....910.....920.....930.....940.....950.....960

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* . : : : : : * ***** ** ***** *: .
Pavo_muticus      IEDELKLTGKEHKEAFEVQKEKLDNEGPAESsDEGIITTEAEGECEQtPEELEPVEKHRV 988
Pavo_cristatus    IEDELKLTGKEHKEAFEVQKEKLDNEGPAESsDEGIITTEAEGECEQtPEELEPVEKHRV 988
Gallus_gallus     IEDELKLTGKEHKDAFEVQKEKLDNEGPAESsDEGIITTEAEGECEQtPEELEPVEKHRV 991
Anas_platyrhynchos IEDELKLSGKEQKEAFDIQKEKLDNEGPAESsDEGIITTEAEGECEQtPEELEPVEKHRV 994
Chelonia_mydas    IEGEEKLADSEQKEVREIQKEKLDTEGPADsPDEGIITTEAEGECEQtPEELEPVEKHRV 915
Mus_musculus      IEDEEKLKETQPGAYVIQKETEVSKGSAESpDEGIITTEGEGECEQtPEELEPVEKQGV 917
Rattus_norvegicus IEDEEKLKETEPGEAYVIQKETEVSKGSAESpDEGIITTEGEGECEQtPEELEPVEKQGV 913
Homo_sapiens      IEDEEKLKETEPVEAYVIQKEREVTKGPAESpDEGIITTEGEGECEQtPEELEPVEKQGV 920
Pan_troglodytes   IEDEEKLKETEPVEAYVIQKEREVTKGPAESpDEGIITTEGEGECEQtPEELEPVEKQGV 920
Macaca_mulatta    IEDEEKLKETEPVEAYVIQKETEVTKGPAESpDEGIITTEGEGECEQtPEELEPVEKQGV 920
Callithrix_jacchus IEDEGKLKETEPVEAYVIQKETEVTKGSAESpDEGIITTEGEGECEQtPEELEPVEKQGV 918
Bos_taurus        IEDEEKLKQTEPVEAYVIQKETEVIKGPAESpDEGIITTEGEGECEQtPEELEPVEKQGV 917
Equus_caballus    IEDEEKLKETEPVEAYVIQKETEVIKGPAESpDEGIITTEGEGECEQtPEELEPVEKQGV 920
Canis_lupus_familiaris IEDEEKLKDAEPVEAYVLQKETEVIKGPAESpDEGIITTEGEGECEQtPEELEPVEKQGV 921
Rhinatrema_bivittatum TENKEKQEVTL PNEVHVVNKEALDIEEHDES PDEGIITTEAEGECEQtPEELEPVEKHKA 899
Xenopus_tropicalis QEPsDE-ADIVHIESYAIKKDHTSSEEPADsPDEGIITTEG--ECEQtPEELEPVEKHRT 899
.....970.....980.....990.....1000.....1010.....1020

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:: * :*****: :*****.*****.:: * . . : :
Pavo_muticus      DDIEKFDEDEGTGLEESSEAGDYEEKAETEEAEEERGEDEEEKTPLDITTKPY-MEEARRIHD 1047
Pavo_cristatus    DDIEKFDEDEGTGLEESSEAGDYEEKAETEEAEEERGEDEEEKTPLDITTKPC-MEEARRIHD 1047
Gallus_gallus     DDIEKFDEDEGTGLEESSEAGDYEEKAETEEAEEERGEDEEEKTPLDATKPY-MEEARRIHD 1050
Anas_platyrhynchos DDNEKFDEDEGTGLEESSEAGDYEEKAETEEAEEERGEDEEEKTPLDITTKPY-MEEARKVKG 1053
Chelonia_mydas    DDHEKFDEDEGTGFEESSSEAGDYEEKAETEEAEEQDEDEEEKATVGIITKQD-IGMEREMGE 974
Mus_musculus      DDIEKFDEDEGAGFEESSSETGDYEEKAETEEAEEPEEDGEDNASGSASKHS-PTEDDESAS 976
Rattus_norvegicus DDIEKFDEDEGAGFEESSSEAGDYEEKAETEEAEEPEEDGEDNVSGSASKHS-PTEDDEEIAK 972
Homo_sapiens      DDIEKFDEDEGAGFEESSSETGDYEEKAETEEAEEPEEDGEEHVCSASKHS-PTEDDEESAK 979
Pan_troglodytes   DDIEKFDEDEGAGFEESSSETGDYEEKAETEEAEEPEEDGEEHVCSASKHS-PTEDDEESAK 979
Macaca_mulatta    DDIEKFDEDEGAGFEESSSETGDYEEKAETEEAEEPEEDGEEHICVSASKHS-PTYEESAK 979
Callithrix_jacchus DDIEKFDEDEGAGFEESSSETGDYEEKAETEEAEEPEEDGEEHVCSASKHS-PTEDDEESAK 977
Bos_taurus        EDTEKFDEDEGAGFEESSSETGDYEEKAETEEAEEPEEDAEDHVRVSTSKHS-LAEESASAK 976
Equus_caballus    DDIEKFDEDEGAGFEESSSEAGDYEEKAETEEAEEPEEDGEETVCVSTSKHSPVEEEESTK 980
Canis_lupus_familiaris EDTEKFDEDEGAGFEESSSETGDYEEKAETEEAEEPEEDVEETVCVSTSKHS-LTEESASAK 980
Rhinatrema_bivittatum DENERFDEDEGTGFEESSSEVGDYEEKAETEEVDEQIEDIERASLNVTEQHDLEYSTEVGE 959
Xenopus_tropicalis DENEKFEDEGTGLEESSEAGDYEEKAETEEVVEEQVEKTSLEDQPAEEDGTEEDLDIDA 959
.....1030.....1040.....1050.....1060.....1070.....1080

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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*:::****	::	:**.*:::***	*:	:		
Pavo_muticus	YSEEIMAEADAN-KD--EKYIEKADYEISDERAEEDREEAVEKAETEETEEE--EE-DKA	1101									
Pavo_cristatus	YSEEIMAEADAN-KD--EKYIEKADYEISDERAEEDREEAVEKAETEETEEE--EE-DKA	1101									
Gallus_gallus	YSDEIMSEADANIKD--EKYTEKADYEISDERAEEDREEAVEKAETEETEEE--EE-DKA	1105									
Anas_platyrhynchos	SAEEMAEVDANIKD--EKYTEKADYEASDERAEEDREEAVEKAETEETEEE--EE-DKA	1108									
Chelonia_mydas	TEADKYAK-----TK--DKYVVEASEAGDERAEEDMEETVEKAETEETEEEEAE--DKM	1026									
Mus_musculus	AEADVHLKE-----KRESVVSGDDRAEEDMDLVLEKGAEQSEEEGEEE-DKA	1023									
Rattus_norvegicus	AEADVHIKE-----KRESVASGDDRAEEDMDALEKGAEQSEEEGEEEE-DKA	1020									
Homo_sapiens	AEADAYIRE-----KRESVASGDDRAEEDMDAIEKGAEQSEEEADEE-DKA	1026									
Pan_troglodytes	AEADAYIRE-----KRESVASGDDRAEEDMDAIEKGAEQSEEEADEE-DKA	1026									
Macaca_mulatta	AEADAYIRE-----KRESVASGDDRAEEDMDAIEKGAEQSEEEADEE-DKA	1026									
Callithrix_jacchus	AEADAYIRE-----KRESVASGDDRAEEDMDAIEKGAEQSEEEADEE-DKA	1024									
Bos_taurus	AEADAHVKE-----KRESVASGDDRAEEDMDALEKGAEQSEEEAEFEE-DRA	1023									
Equus caballus	AEADVHIKE-----KRESVTSGDDRAEEDMDAIVEKGAEQSEEEADEE-DRT	1027									
Canis_lupus_familiaris	AEADVHVKE-----KRESLASGDDRAEEDMDAIVEKGAEQSEEEGEEE-DRA	1027									
Rhinatrema_bivittatum	TEEEAEFTDEHVKHRDEKNIEREEPDIGDEQAIEDMDDIVLEKGAEETEETEEID--KN	1017									
Xenopus_tropicalis	YESRKEKHDS-----HEDIATDAEQAEEDIDESLEKGADETTEEVDI--KT	1008									
	.....1090.....1100.....1110.....1120.....1130.....1140									

	.*	::	.*	*	**	*	.*	.*	.	*	**	**	:
Pavo_muticus	EDIRDEEE	-AEKIE	-AEED	YVMAV	VDKAAE	EAGE	VEDKYGLLIIT	PTKRSE	POS	PAVE	EPAS		1159
Pavo_cristatus	EDIRDEEE	-AEKIE	-AEED	YVMAV	VDKAAE	EAGE	VEDKYGLLIIT	PTKRSE	POS	PAVE	EPAS		1159
Gallus_gallus	EDIRDEEE	-TEKIE	-AEED	YVMAV	VDKAAE	EAGE	VEDKYGLLIIT	PTKRSE	POS	PAVE	EPAS		1163
Anas_platyrhynchos	EDIRDEEE	-TEKIE	-AEED	YVMAV	VDKAAE	EAGE	VEDKYGLLIIT	PTKRSE	POS	PAVE	EPAS		1166
Chelonia_mydas	EDVRDEEE	TEKVE	-AEED	YVMAV	VDKAAE	EAGE	VEDKYGLLIIT	PTKHSE	POS	PAVE	EPAS		1085
Mus_musculus	EDAREEG	GYEPDKTE	-AED	-YVMAV	ADKAAE	EAGVTEE	OYGVLGTS	-AKQPG	IQSP	SRE	EPAS		1080
Rattus_norvegicus	EDAREED	HPEPDKTE	-AED	-YVMAV	VDKAAE	EAGVTE	DYDFLGT	P- AKQPG	VQSP	SRE	EPAS		1077
Homo_sapiens	EDAREEE	EYEPEKME	-AED	-YVMAV	VDKAAE	EAGGAE	EYOYGF	LTTTP- TKQ	LGAQ	SPG	RE	EPAS	1083
Pan_troglodytes	EDAREEE	EYEPEKME	-AED	-YVMAV	VDKAAE	EAGGAE	EYOYGF	LTTTP- TKQ	PGAQ	SPG	RE	EPAS	1083
Macaca_mulatta	EDAREEE	EYEPEKME	-AED	-YVMAV	VDKAAE	EAGGAE	EYOYGF	LTTTP- TKQ	PGAQ	SPG	RE	EPAS	1083
Callithrix_jacchus	EDAREEE	EYEPEKIE	-AED	-YVMAV	VDKAAE	EAGGAE	EYOYGF	LTTTP- TKQ	PGAQ	SPG	RE	EPAS	1081
Bos_taurus	EDAREED	EYEPEKAE	-AED	-YVRAV	VDKAAE	A-----	OYGF	LTMATMA- PKP	VGAQ	SPVQ	EPAS		1075
Equus_caballus	EDAREEE	EYEPEKVE	-AED	-YVMAV	VDKAAE	EAGGA	EYOYGF	LTTTS- AKPL	LGAQ	SPARE	EPAS		1084
Canis_lupus_familiaris	EDAREEE	EYEPEKAE	-AED	-YVMAV	VDKAAE	ASGV	EYOYGF	LASA- IKQ	PGAQ	SPARE	EPAS		1084
Rhinatrema_bivittatum	EDVMEEEE	ETEKLEKAE	EEDYE	IDREG	KAAAL	IDESANKY	GLFIIT	SAKRSE	PPSP	VPVE	PGS		1077
Xenopus_tropicalis	DDAKDDE	QETEKYE	-AERDY	TAV	KEKSE	FISDS	DDKYVLSA	IP- CKT	SEPPS	PAVE	PGA		1066
	.....	1150.....	.....	1160.....	.....	1170.....	.....	1180.....	.....	1190.....	.....	1200	

	*****.*****:** *****.*:*****.*****:*****:*	
Pavo_muticus	SIHDETLPGGSESEATVSDEENREDQPEEFTATSGYTQSTIEISSEPTPMDEMSTPRDVM	1219
Pavo_cristatus	SIHDETLPGGSESEATVSDEENREDQPEEFTATSGYTQSTIEISSEPTPMDEMSTPRDVM	1219
Gallus_gallus	SIHDETLPGGSESEATVSDEENREDQPEEFTATSGYTQSTIEISGEPTPMDEMSTPRDVM	1223
Anas_platyrhynchos	SIHDETLPGGSESEATVSDEENREDQPEEFTATSGYTQSTIEISSEPTPMDEMSTPRDVM	1226
Chelonia_mydas	SIHDETLPGGSESEATVSDEENREDQHEEFTATSGYTQSTIEISSEPTPMDEMSTPRDIM	1145
Mus_musculus	SIHDETLPGGSESEATASDEENREDQPEEFTATSGYTQSTIEISSEPTPMDEMSTPRDVM	1140
Rattus_norvegicus	SIHDETLPGGSESEATASDEENREDQPEEFTATSGYTQSTIEISSEPTPMDEMSTPRDVM	1137
Homo_sapiens	SIHDETLPGGSESEATASDEENREDQPEEFTATSGYTQSTIEISSEPTPMDEMSTPRDVM	1143
Pan_troglodytes	SIHDETLPGGSESEATASDEENREDQPEEFTATSGYTQSTIEISSEPTPMDEMSTPRDVM	1143
Macaca_mulatta	SIHDETLPGGSESEATASDEENREDQPEEFTATSGYTQSTIEISSEPTPMDEMSTPRDVM	1143
Callithrix_jacchus	SIHDETLPGGSESEATASDEENREDQPEEFTATSGYTQSTIEISSEPTPMDEMSTPRDVM	1141
Bos_taurus	SIHDETLPGGSESEATASDEENREDQPEEFTATSGYTQSTIEISSEPTPMDEMSTPRDVM	1135
Equus_caballus	SIHDETLPGGSESEATASDEENREDQPEEFTATSGYTQSTIEISSEPTPMDEMSTPRDVM	1144
Canis_lupus_familiaris	SIHDETLPGGSESEATASDEENREDQPEEFTATSGYTQSTIEISSEPTPMDEMSTPRDVM	1144
Rhinatrema_bivittatum	LIHDETLPGGSESEATVSDEENRDDQHEEFTATSGFTHSTIEISSEPTPMDEMSTPRDVM	1137
Xenopus_tropicalis	FIHDETLPGGSESEATVSDEENREDQPEEFTATSGFTHSTIEISSEPTPMDDMSTPRDVM	1126
1210.....1220.....1230.....1240.....1250.....1260	

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SDETNNEESESPSQ EYVNITKYETSLYSQEFGRPKLSPLPDAFNGLSEGSKTEATEGKDY
SDETNNEESESPSQ EYVNITKYETSLYSQEFGRPKLSPLPDAFNGLSEGSKTEATEGKDY
SDETNNEESESPSQ EYVNITKYETSLYSQEFGRPKLSPLPDAFNGLSEGSKTEATEGKDY
SDETNNEESESPSQ EYVNITKYETSLYSQEFGRPKLSPLDALNGLSEGSKTEATEGKDY
SDETNNEESESPSQ EYVNVAKYETSVYSQ EYTRPKLSPLHDALNGLSEGSKTDATEGKDY
SDETNNEESESPSQ EYVNITKYESSLYSQEYSKPA---VASFNGLSEGSKTDATEGKDY
TDETNNEESESPSQ EYVNITKYESSLYSQEYSKPV---VASFNGLSDGSKTDATEGRDY
SDETNNEESESPSQ EYVNITKYESSLYSQEYSKPAD---VTPLNGFSEGSKTDATEGKDY
SDETNNEESESPSQ EYVNITKYESSLYSQEYSKPAD---VTPLNGFSEGSKTDATEGKDY
SDETNNEESESPSQ EYVNITKYESSLYSQEYSKPAD---VTPLNGFSEGSKTDATEGKDY
SDETNNEESESPSQ EYVNITKYESSLYSQEYSKPA---VTPLNGFSEGSKTDATEGKDY
SDETNNEESESPSQ EYVNITKYESSLYSQEYAKPA---VTSLNGLSDGSKTDATEGRDY
SDETNNEESESPSQ EYVNITKFESSLYSQEYSKPA---VTSLNGLSEGSKTDATEGKDY
SDEINNEESESPSQ EYVNITKYESSLYSQEYGKPA---VASLNGLSEGSKTDATEGKDY
SDETNNEESESPSQ EYVSTIKYETSLYSQ EYDRTRLSPLPDAFSVSSDESKTDATEGKDY
SDETNNEESESPSQ EYVNITKYEANLCSQ EYDRTRVSPLPDALNGLSDVSKTDATEGLEY
.....1270.....1280.....1290.....1300.....1310.....1320

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*****:*****:***:* :* :::: : * *.:
NASASTISPPSSLEEDKFCRSAFQDVYRQKES---ETAKLEIKETHPEDVDVSGKRSPAK
NASASTISPPSSLEEDKFCRSAFQDVYRQKES---ETAKLEIKETHPEDVDVSGKRSPAK
NASASTISPPSSLEEDKFCRSAFQDVYRQKES---ETAKLEIKETCPEDVDVTGKRSPAK
NASASTISPPSSLEEDKFCRSVFQDVYRQKESIEIQTALEIKETCPED--VSGKLSPAK
NASASTLSPPSSLEEDKFCSSSFQEMYHQRENEIKSTAKLEIKDTFSQAFEKE--KHSPAK
NASASTISPPSSMEEDKFSKSALRDAYCSEEKELKASAELEIKD----VSDER--LSPAK
NASASTISPPSSMEEDKFSKSALRDAYRPEETDVKTGAELDIK----VSDER--LSPAK
NASASTISPPSSMEEDKFSRSALRDAYCS---EVKASTTLDIKDSISAVSSEK---VSPSK
NASASTISPPSSMEEDKFSRSALRDAYCS---EVKASTTLDIKDTISAVSSEK---VSPSK
NASASTISPPSSMEEDKFSRSALRDAYCS---EVKASTTLDIKDTISAVSGGK---LSPSK
NASASTISPPSSMEEDKFSRSALRDAYCS---EVKASTTLDIKDAISAVSGDK---LSPSK
NASASTISPPSSMEEDKFSRSALREAYYSEEKDVRAATLEIKDTVSPVLDEK---LSPPK
NASASTISPPSSMEEDKFIKSALRDAYCEEQDVKASATLEIKDTVSAVSEK---LSPSK
NASASTISPPSSMEEDKFSKSALRDAYCADEKDLKAGATLAIRDITISAVSEEK---LSPPK
NASASTISPPSSLEEDKFNKSSSLQEICTQSDAEIRTTTKLDIQDTFSDDLGEK-----D
NASASTLSPPSSLEEDKFCSSSLREAYTYGSSGTIGSTKLEINFELDEPHS-----
.....1330.....1340.....1350.....1360.....1370.....1380

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* * ***: ****.*****.* ***: . :. **: SPADSLSPSPVAKTPLGERSVNFSLTPNEIKVSAETASIT-ALPSVHQEIAEEHCASPE
SPADSLSPSPVAKTPLGERSVNFSLTPNEIKVSAETASIT-ALPSVHQEIAEEHCASPE
SPADSLSPSPVAKTPLGERSVNFSLTPNEIKVSTETASIT-ALPSVHQEIAEEHCASPE
SPADSLSPSPVAKTPLGERSVNFSLIPNEIKVLAEPAPVA-ALPSVRQEVAAEEHCASPE
SPVQSPSPSPVAKTPLSERSVNFSLTPNEIEASVEPVVLT-ALPDEHPVEIEHSVSPD
SPSLSPSPSPSPIEKTPLGERSVNFSLTPNEIKVSAEGEARS-VSPGVTQAVVEEHCASPE
SPSLSPSPSPSPIEKTPLGERSVNFSLTPNEIKASAEGEATAVVS PGVTQAVVEEHCASPE
SPSLSPSPSPSPLEKTPLGERSVNFSLTPNEIKVSAEAEVAP-VSPEVTQEVVEEHCASPE
SPSLSPSPSPSPLEKTPLGERSVNFSLTPNEIKVSAEAEVAP-VSPEVTQEVVEEHCASPE
SPSLSPSPSPSPLEKTPLGERSVNFSLTPNEIKVSAEAEVAP-VSPEVTQEVVEEHCASPE
SPSLSPSPSPSPLEKTPLGERSVNFSLTPNEIKVSAEAEVAP-VSPEVTQEVVEEHCASPE
SPSLSPSPSPSPIEKTPLGERSVNFSLTPNEIKVSAEAEVAP-VSPEVTQEVVEEHCASPE
SPSLSPSPSPSPIEKTPLGERSVNFSLTPNEIKVSAEAEVVP-VSPEVTQEVVEEHCASPE
SPSLSPSPSPSPIEKTPLGERSVNFSLTPNEIQVSAEAEAVP-VSPEVTQEVVEEQCASPE
SPSPSPSPSPSPVEKTPLGERSVNFSLTPNEIQVSAEAEAAP-VSPEVT-QVVEEHCASPE
SPNKSPAPPSPIAKTPLSERSVNFSLTPNEIKTSPDLGVLP-ALPDIHQEVVEHG-TSPD
-PSKSPVPPSPISKTLPSERSVNFSLTPNEIKASELGVLP--LPDEAHEVNEQCASPE
1390. 1400. 1410. 1420. 1430. 1440.

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/MALEBpsTue Feb 1 13:58:32 2022

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***** **:***:*****:*****: : * : : . ** .*: : *:.
Pavo_muticus      DKTLEVASPSQSAAGSAGHTPYQSPIDEKSSQLPSETSEKSSEAPVSVFSEVKDESAK 1455
Pavo_cristatus    DKTLEVASPSQSAAGSAGHTPYQSPIDEKSSQLPSETSEKSSEAPVSVFSEVKDESAK 1455
Gallus_gallus     DKTLEVASPSQSAAGSAGHTPYQSPIDEKSSQLPSETSEKSSEAPVSVFSEVKDEST 1459
Anas_platyrhynchos DKTLEVASPSQSAAGSAGHTPYQSPIDEKSSQLPSETSEKSTEAPVSVFSEVKDESAK 1463
Chelonia_mydas    DKTLEVVSPAQSAAGSAGHTPYQSPIDEKSSQLPSELTEKAAEAPVSVFEFSDAKDETA 1383
Mus_musculus      EKTLEVVSPSQSVTGSAGHTPYQSPIDEKSSHLPTVEVTEKPPQAVPVSVFEFSEAKDENER 1369
Rattus_norvegicus EKTLEVVSPSQSVTGSAGHTPYQSPIDEKSSHLPTVEVTEKPPQAVPVSVFEFTEAKDENER 1367
Homo_sapiens      DKTLEVVSPSQSVTGSAGHTPYQSPIDEKSSHLPTVEVTEKPPQAVPVSVFEFSDAKDENER 1374
Pan_troglodytes   DKTLEVVSPSQSVTGSAGHTPYQSPIDEKSSHLPTVEVTEKPPQAVPVSVFEFSDAKDENER 1374
Macaca_mulatta    DKTLEVVSPSQSVTGSAGHTPYQSPIDEKSSHLPTVEVTEKPPQAVPVSVFEISDAKDDSER 1374
Callithrix_jacchus DKTLEVVSPSQSVTGSAGHTPYQSPIDEKSSHLPTVEVTEKPPQAVPVSVFEFSDAKDENER 1372
Bos_taurus        DKTLEVVSPSQSVTGSAGHTPYQSPIDEKSSHLPTVEVTEKPPQAVPVSVFEFSDAKDESER 1368
Equus_caballus    EKTLEVVSPSQSVTGSAGHTPYQSPIDEKSSHLPTVEVTEKPPQAVPVSVFEFSEAKDDSER 1377
Canis_lupus_familiaris EKTLEVVSPSQSATGSAGHTPYQSPIDEKSSHLPTVEVTEKPPQAVPVSVFEFSDAKDENER 1376
Rhinatrema_bivittatum DKTLEVLSPSQSTAGSAGHTPYHQSPIDEKSSHLPTVEVTEKPPQAVPVSVFEFSDTKDKQDS 1369
Xenopus_tropicalis EKTLEVTSPSQSAAGSAGHTPYHQSPIDEKSSHLPTVEVTEKPPQAVPVSVFEIYDSKEKND 1355
.....1450.....1460.....1470.....1480.....1490.....1500

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.:*****:*****:***. *: :*: : :
Pavo_muticus      PRISPMDEPVPDESPIEKVLSPLRSPPLIGSETSYDMFLSADVKSPTRDYGSPSEGKPE 1515
Pavo_cristatus    PRISPMDEPVPDESPIEKVLSPLRSPPLIGSETSYDMFLSADVKSPTRDYGSPSEGKPE 1515
Gallus_gallus     PRISPMDEPVPDESPIEKVLSPLRSPPLIGSETSYDMFLSADVKSPTRDYGSPSEGKPE 1519
Anas_platyrhynchos PRISPMDEPVPDESPIEKVLSPLRSPPLIGSETSYDMFLSADVKSPTRDYGSPSEGKPE 1523
Chelonia_mydas    PRISPMDEPVPDESPIEKVLSPLRSPPLIGSETSYDMFLSADVKSPTRDYGSPSEGKPE 1443
Mus_musculus      ASLSPMDEPVPDESPIEKVLSPLRSPPLIGSETSYDMFLSADVKSPTRDYGSPSEGKPE 1429
Rattus_norvegicus SSISPMDEPVPDESPIEKVLSPLRSPPLIGSETSYDMFLSADVKSPTRDYGSPSEGKPE 1427
Homo_sapiens      ASVSPMDEPVPDESPIEKVLSPLRSPPLIGSETSYDMFLSADVKSPTRDYGSPSEGKPE 1434
Pan_troglodytes   ASVSPMDEPVPDESPIEKVLSPLRSPPLIGSETSYDMFLSADVKSPTRDYGSPSEGKPE 1434
Macaca_mulatta    ASVSPMDEPVPDESPIEKVLSPLRSPPLIGSETSYDMFLSADVKSPTRDYGSPSEGKPE 1434
Callithrix_jacchus ASISPMDEPVPDESPIEKVLSPLRSPPLIGSETSYDMFLSADVKSPTRDYGSPSEGKPE 1432
Bos_taurus        ASISPMDEPVPDESPIEKVLSPLRSPPLIGSETSYDMFLSADVKSPTRDYGSPSEGKPE 1428
Equus_caballus    ASISPMDEPVPDESPIEKVLSPLRSPPLIGSETSYDMFLSADVKSPTRDYGSPSEGKPE 1437
Canis_lupus_familiaris ASISPMDEPVPDESPIEKVLSPLRSPPLIGSETSYDMFLSADVKSPTRDYGSPSEGKPE 1436
Rhinatrema_bivittatum PKISPMDEPVPDESPIEKVLSPLRSPPLIGSETSYDMFLSADVKSPTRDYGSPSEGKPE 1429
Xenopus_tropicalis PRISPMDEPVPDESPIEKVLSPLRSPPLIGSETSYDMFLSADVKSPTRDYGSPSEGKPE 1414
.....1510.....1520.....1530.....1540.....1550.....1560

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:: .*: : : : * . : * * . * : .
Pavo_muticus      KEKSPVQMSPAEASSVGLFQEKQDEKSMEFMVIKEGFSLEKRMEDTEPSSSQSSLVLDE 1575
Pavo_cristatus    KEKSPVQMSPAEASSVGLFQEKQDEKSMEFMVIKEGFSLEKRMEDTEPSSSQSSLVLDE 1575
Gallus_gallus     KEKSPVQMSPAEASSVGLFQEKQDEKSMEFMVIKEGFSLEKRMEDTEPSSSQSSLVLDE 1579
Anas_platyrhynchos KEKSPVQMSPAEASSVGLFQEKQDEKSMEFMVIKEGFSLEKRMEDTEPSSSQSSLVLDE 1583
Chelonia_mydas    KEKSPVQISPVSEVTSTSLYQDKQEGKSTDFAPIKEDFGQEKKTDDVEAMSSQPALALDE 1502
Mus_musculus      KQGFDPRESVSDLTSTGLYQDKQEGKSTDFAPIKEDFGQEKKTDDVEAMSSQPALALDE 1489
Rattus_norvegicus KQGFSDKESVSDLTSTGLYQDKQEGKSTDFAPIKEDFGQEKKTDDVEAMSSQPALALDE 1486
Homo_sapiens      KQGFSDKESVSDLTSTGLYQDKQEGKSTDFAPIKEDFGQEKKTDDVEAMSSQPALALDE 1494
Pan_troglodytes   KQGFSDKESVSDLTSTGLYQDKQEGKSTDFAPIKEDFGQEKKTDDVEAMSSQPALALDE 1494
Macaca_mulatta    KQGFSDKESVSDLTSTGLYQDKQEGKSTDFAPIKEDFGQEKKTDDVEAMSSQPALALDE 1494
Callithrix_jacchus KQGFSDKESVSDLTSTGLYQDKQEGKSTDFAPIKEDFGQEKKTDDVEAMSSQPALALDE 1492
Bos_taurus        KEASPDQISPVSDMTSTGLYQDKQEGKSTDFAPIKEDFGQEKKTDDVEAMSSQAGLTLDE 1488
Equus_caballus    KQGFSDKESVSDLTSTGLYQDKQEGKSTDFAPIKEDFGQEKKTDDVEAMSSQAGLTLDE 1497
Canis_lupus_familiaris KQGFSDKESVSDMTSTGLYQDKQEGKSTDFAPIKEDFGQEKKTDDVEAMSSQAGLTLDE 1496
Rhinatrema_bivittatum KN---TEEGTSEIISVGLSHEGKDEKDLMTAKGSFSLKTKVEDLEATSQYLSGLDE 1485
Xenopus_tropicalis NEKSPTRISPVSEMTSTGLYQDKQEGKSTDFAPIKEDFGQEKKTDDVEAMSSQAGLTLDE 1471
.....1570.....1580.....1590.....1600.....1610.....1620

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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*      :  **:*. . * *:*****.*****: *.*****:*****
Pavo_muticus      RKLTDGLSPTQIDISQFGSLKEDTKMSISEGTVSDKSATPVDEVVAEDTYSHIEGVASVS 1635
Pavo_cristatus    RKLTDGLSPTQIDISQFGSLKEDTKMSISEGTVSDKSATPVDEVVAEDTYSHIEGVASVS 1635
Gallus_gallus     RKLTDGLSPTQIDISQFGSLKEDTKMSISEGTVSDKSATPVDEVVAEDTYSHIEGVASVS 1639
Anas_platyrhynchos RKLTDGLSPTQIDISQFGSLKEDTKMSISEGTVSDKSATPVDEVVAEDTYSHIEGVASVS 1643
Chelonia_mydas    RKLGDVSPQIDVDSQFGSFKEDTKMSISEGTVSDKSATPVDDVVAEDTYSHIEGVASVS 1562
Mus_musculus      RKLGGDVSPQIDVDSQFGSFKEDTKMSISEGTVSDKSATPVDEGVAEDTYSHMEGVASVS 1549
Rattus_norvegicus RKLGGDVSPQIDVDSQFGSFKEDTKMSISEGTVSDKSATPVDEGVAEDTYSHMEGVASVS 1546
Homo_sapiens      RKLGDVSPQIDVDSQFGSFKEDTKMSISEGTVSDKSATPVDEGVAEDTYSHMEGVASVS 1553
Pan_troglodytes   RKLGDVSPQIDVDSQFGSFKEDTKMSISEGTVSDKSATPVDEGVAEDTYSHMEGVASVS 1553
Macaca_mulatta    RKLGDVSPQIDVDSQFGSFKEDTKMSISEGTVSDKSATPVDEGVAEDTYSHMEGVASVS 1553
Callithrix_jacchus RKLGDVSPQIDVDSQFGSFKEDTKMSISEGTVSDKSATPVDEGVAEDTYSHMEGVASVS 1551
Bos_taurus        RKLGGDVSPQIDVDSQFGSLKEDTKMSISEGTVSDKSATPVDEGVVEDTYSHMEGVASVS 1548
Equus_caballus    RKLGGDVSPQIDVDSQFGSLKEDTKMSISEGTVSDKSATPVDEGVAEDTYSHMEGVASVS 1557
Canis_lupus_familiaris RKLGGDVSPQIDVDSQFGSFKEDTKMSISEGTVSDKSATPVDEGVAEDTYSHMEGVASVS 1556
Rhinatrema_bivittatum KKSTGEMSPQIDVDSQFGSFKEDTKMSISEGTASDKSATPVDEVVAEDTYSHIEGVASVS 1545
Xenopus_tropicalis GKYAGDFSPQIDVDSQFGSFKEDTKMSISEGTASDKSATPVDEVVAEDTYSHIEGVASVS 1531
.....1630.....1640.....1650.....1660.....1670.....1680

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*****. *****:*****:***
Pavo_muticus      TASVATSSFFPEPTTDDVSPSLHAEVGSHPHSTEVDDSLVSVVQTPPTTFQETEMSPSKEEC 1695
Pavo_cristatus    TASVATSSFFPEPTTDDVSPSLHAEVGSHPHSTEVDDSLVSVVQTPPTTFQETEMSPSKEEC 1695
Gallus_gallus     TASVATSSFFPEPTTDDVSPSLHAEVGSHPHSTEVDDSLVSVVQTPPTTFQETEMSPSKEEC 1699
Anas_platyrhynchos TASVATSSFFPEPTTDDVSPSLHAEVGSHPHSTEVDDSLVSVVQTPPTTFQETEMSPSKEEC 1703
Chelonia_mydas    TASVATSSFFPEPTTDDVSPSLHAEVGSHPHSTEVDDSLVSVVQTPPTTFQETEMSPSKEEC 1622
Mus_musculus      TASVATSSFFPEPTTDDVSPSLHAEVGSHPHSTEVDDSLVSVVQTPPTTFQETEMSPSKEEC 1609
Rattus_norvegicus TASVATSSFFPEPTTDDVSPSLHAEVGSHPHSTEVDDSLVSVVQTPPTTFQETEMSPSKEEC 1606
Homo_sapiens      TASVATSSFFPEPTTDDVSPSLHAEVGSHPHSTEVDDSLVSVVQTPPTTFQETEMSPSKEEC 1613
Pan_troglodytes   TASVATSSFFPEPTTDDVSPSLHAEVGSHPHSTEVDDSLVSVVQTPPTTFQETEMSPSKEEC 1613
Macaca_mulatta    TASVATSSFFPEPTTDDVSPSLHAEVGSHPHSTEVDDSLVSVVQTPPTTFQETEMSPSKEEC 1613
Callithrix_jacchus TASVATSSFFPEPTTDDVSPSLHAEVGSHPHSTEVDDSLVSVVQTPPTTFQETEMSPSKEEC 1611
Bos_taurus        TASVATSSFFPEPTTDDVSPSLHAEVGSHPHSTEVDDSLVSVVQTPPTTFQETEMSPSKEEC 1608
Equus_caballus    TASVATSSFFPEPTTDDVSPSLHAEVGSHPHSTEVDDSLVSVVQTPPTTFQETEMSPSKEEC 1617
Canis_lupus_familiaris TASVATSSFFPEPTTDDVSPSLHAEVGSHPHSTEVDDSLVSVVQTPPTTFQETEMSPSKEEC 1616
Rhinatrema_bivittatum TASVATSSVLEPTTDDVSPSLHAEVGSHPHSTEVDDSLVSVVQTPPTTFQETEMSPSKEEC 1605
Xenopus_tropicalis TASVATSSFFPEPTTDDVSPSLHAEVGSHPHSTEVDDSLVSVVQTPPTTFHETEMSPSRDEC 1591
.....1690.....1700.....1710.....1720.....1730.....1740

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*****. . . :::* **:* **.******.*****:***: .
Pavo_muticus      PRPMSISPPDFSPKTAKSRTVPVHDHRSPEQSTMSVEFGQESPEQSLAMDFSROSPPEYPTA 1755
Pavo_cristatus    PRPMSISPPDFSPKTAKSRTVPVHDHRSPEQSTMSVEFGQESPEQSLAMDFSROSPPEYPTA 1755
Gallus_gallus     PRPMSISPPDFSPKTAKSRTVPVHDHRSPEQSTMSVEFGQESPEQSLAMDFSROSPPEYPTA 1759
Anas_platyrhynchos PRPMSISPPDFSPKTAKSRTVPVHDHRSPEQSTMSVEFGQESPEQSLAMDFSROSPPEYPPV 1763
Chelonia_mydas    PRPMSISPPDFSPKTAKSRTVPVQEHRSPEQSTMSVEFSQESPEQSLAMDFSROSPPEHPTV 1682
Mus_musculus      PRPMSISPPDFSPKTAKSRTVPVQDHRS-EQSSMSIEFGQESPEHSLAMDFSROSPDHPTL 1668
Rattus_norvegicus PRPMSISPPDFSPKTAKSRTVPVQDHRS-EQSSMSIEFGQESPEHSLAMDFSROSPDHPTV 1665
Homo_sapiens      PRPMSISPPDFSPKTAKSRTVPVQDHRS-EQSSMSIEFGQESPEQSLAMDFSROSPDHPTV 1672
Pan_troglodytes   PRPMSISPPDFSPKTAKSRTVPVQDHRS-EQSSMSIEFGQESPEQSLAMDFSROSPDHPTV 1672
Macaca_mulatta    PRPMSISPPDFSPKTAKSRTVPVQDHRS-EQSSMSIEFGQESPEHSLAMDFSROSPDHPTV 1672
Callithrix_jacchus PRPMSISPPDFSPKTAKSRTVPVQDHRS-EQSSMSIEFGQESPEHSLAMDFSROSPDHPTV 1670
Bos_taurus        PRPMSISPPDFSPKTAKSQTPVQDHRS-EQSSMSIEFGQESPEHSLAMDFSROSPDHPTV 1667
Equus_caballus    PRPMSISPPDFSPKTAKSRTVPVQDHRS-EQSSMSIEFGQESPEHSLAMDFSROSPDQPTV 1676
Canis_lupus_familiaris PRPMSISPPDFSPKTAKSRTVPVQDHRS-EQSSMSIEFGQESPEHSLAMDFSROSPDHPTV 1675
Rhinatrema_bivittatum PRPMSISPPDFSPKASKRTPVQEHRSPEQSTMSVEFSQESPENSLAMDFSROSPPEHHTV 1665
Xenopus_tropicalis PRPMSISPPDFSPKIGKSSILLHEQRSPEQSTM--EFSQESPEQSFAMDFSQSPPEHPAV 1649
.....1750.....1760.....1770.....1780.....1790.....1800

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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.: : **:*****:****: :. :.:. * :. : . :.:. *.*:
Pavo_muticus      GTGIHHISENGPTEVDYSPSDIQDPTFARKISPVEHTSYSQEKDISEIISVSQIEASSSS 1815
Pavo_cristatus    GTGIHHISENGPTEVDYSPSDIQDPTFARKISPVEHTSYSQEKDISEIISVSQIEASSSS 1815
Gallus_gallus     GTGIHHISENGPTEVDYSPSDIQDPTFARKISPVEHTSYSQEKDISEIISVSQIEASSSS 1819
Anas_platyrhynchos GTSIHHISENGPTEVDYSPSDIQDPTFAQKISPVEQTSYSQEKDISEIISVSQIEASSSS 1823
Chelonia_mydas    GTSVHHISENGPTEVDYSPSEIQDPTFASHKISPVEQTCYTQEKDLSEIISVSQIEASPST 1742
Mus_musculus      GASVLHITENGPTTEVDYSPSDIQDSSSLSHKIPPTTEEPSYTDNDLSELISVSQVEASPST 1728
Rattus_norvegicus GAGMLHITENGPTTEVDYSPSDIQDSSSLSHKIPPTTEEPSYTDNDLSELISVSQVEASPST 1725
Homo_sapiens      GAGVLHITENGPTTEVDYSPSDMQDSSSLSHKIPPTTEEPSYTDNDLSELISVSQVEASPST 1732
Pan_troglodytes   GAGVLHITENGPTTEVDYSPSDMQDSSSLSHKIPPTTEEPSYTDNDLSELISVSQVEASPST 1732
Macaca_mulatta    GAGVLHITENGPTTEVDYSPSDMQDSSSLSHKIPPTTEEPSYTDNDLSELISVSQVEASPST 1732
Callithrix_jacchus GAGVLHITENGPTTEVDYSPSDMQDSSSLSHKIPPTTEEPSYTDNDLSELISVSQVEASPST 1730
Bos_taurus        GAGMLHITENGPTTEVDYSPSDMQDSSSLSHKIPPTTEEPSYTDNDLSELISVSQVEASPST 1727
Equus_caballus    GAGMLHITENGPTTEVDYSPSDLDSSSLSHKIPPTTEEPSYTDNDLSELISVSQVEASPST 1736
Canis_lupus_familiaris GAGMLHITENGPTTEVDYSPSDMQDSSSLSHKIPPTTEEPSYTDNDLSELISVSQVEASPST 1735
Rhinatrema_bivittatum GSSMHIAENGPTTEVDYSPSDMQEPAFAHQIAAVEKAFYSENKDLTQFISGSQVDISPST 1725
Xenopus_tropicalis SSCMLHISENGPTEVEYSPSDPHESYFGKNIS-IDNVCYDANTEDLQKAECNVEASPST 1708
.....1810.....1820.....1830.....1840.....1850.....1860

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** ***** :*** *: : . :.:.*: : *:: : *****.* **:.
Pavo_muticus      SSAHTPSQVTSPLPEET--FSGAVPPRDMSLHS-FTSEKVQSLG-EKLSPKSDLSPLTPR 1871
Pavo_cristatus    SSAHTPSQVTSPLPEET--FSGAVPPRDMSLHS-FTSEKVQSLG-EKLSPKSDLSPLTPR 1871
Gallus_gallus     SSAHTPSQVTSPLPEET--FSGAVPPRDMSLHS-FTSEKVQSLG-EKLSPKSDLSPLTPR 1875
Anas_platyrhynchos SSAHTPSQVTSPLPEET--FAGAAPPDRDMSLHSLTSEKVQSLG-EKLSPKSDLSPLSPR 1880
Chelonia_mydas    SSEHTPSQVASPLQDET--LSAVMPPRDMLHSSFTSEKMQSLG-EKLSPKSDLSPLTTR 1799
Mus_musculus      SSAHTPSQIASPLQDET--LSDVVPVRDMSLYASLASEKVQSLGEKLSPKSDISPLTPR 1786
Rattus_norvegicus SSAHTPSQIASPLQDET--LSDVVPVRDMSLYASLASEKVQSLGEKLSPKSDISPLTPR 1783
Homo_sapiens      SSAHTPSQIASPLQDET--LSDVAPPDRDMSLYASLTSEKVQSLGEKLSPKSDISPLTPR 1790
Pan_troglodytes   SSAHTPSQIASPLQDET--LSDVAPPDRDMSLYASLTSEKVQSLGEKLSPKSDISPLTPR 1790
Macaca_mulatta    SSAHTPSQIASPLQDET--LSDVAPPDRDMSLYASLTSEKVQSLGEKLSPKSDISPLTPR 1790
Callithrix_jacchus SSAHTPSQIASPLQDET--LSDVAPPDRDMSLYASLTSEKVQSLGEKLSPKSDISPLTPR 1788
Bos_taurus        SSAHTPSQIASPLQDET--LSDAVPPRDISLYASLTSEKVQSLDAEKLSPKSDISPLTPR 1785
Equus_caballus    SSAHTPSQIASPLQDET--LSDVVPVRDISLYASLTSEKVQSLGEKLSPKSDISPLTPR 1794
Canis_lupus_familiaris SSAHTPSQIASPLQDET--LSDVVPVRDISLYASLTSEKVQSLGEKLSPKSDISPLTPR 1793
Rhinatrema_bivittatum SSAHTPSQATSPLNNEH--LEDVVQHTDISLYSSQNAEKMQLS-EKLSPEPDLSPLTPR 1782
Xenopus_tropicalis SSAHTPSQVSSPLKEEGSLTDVIQNTDLPLYSPPILEHMYFME-GKLSPETDASPLTPT 1767
.....1870.....1880.....1890.....1900.....1910.....1920

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*: ** :.:.:. : . . . . : : :.
Pavo_muticus      ESSPLYSPTFPDSPAFAVTEAVSASHASP-LSLQVSSDEVFGYQA----VTLQETLTKHSP 1926
Pavo_cristatus    ESSPLYSPTFPDSPAFAVTEAVSASHASP-LSLQVSSDEVFGYQA----VTLQETLTKHSP 1926
Gallus_gallus     ESSPLYSPTFPDSPAFAVTEAVSASHASP-LSLQVSSDKVFGYQA----VTLQETLTKHSP 1930
Anas_platyrhynchos ESSPLYSPTFPDSPAFAVTEAVSASHASP-LSLQVSSDKVFGYQA----VTLQETLTKHSP 1935
Chelonia_mydas    ESSPLYSPTFPDSPAFAVTEAVSASHASP-LSLQVSSDKVFGYQA----VTLQETLTKHSP 1858
Mus_musculus      ESSPLYSPTFPDSPAFAVTEAVSASHASP-LSLQVSSDKVFGYQA----VTLQETLTKHSP 1846
Rattus_norvegicus ESSPTYSPTFPDSPAFAVTEAVSASHASP-LSLQVSSDKVFGYQA----VTLQETLTKHSP 1843
Homo_sapiens      ESSPLYSPTFPDSPAFAVTEAVSASHASP-LSLQVSSDKVFGYQA----VTLQETLTKHSP 1850
Pan_troglodytes   ESSPLYSPTFPDSPAFAVTEAVSASHASP-LSLQVSSDKVFGYQA----VTLQETLTKHSP 1850
Macaca_mulatta    ESSPLYSPTFPDSPAFAVTEAVSASHASP-LSLQVSSDKVFGYQA----VTLQETLTKHSP 1850
Callithrix_jacchus ESSPLYSPTFPDSPAFAVTEAVSASHASP-LSLQVSSDKVFGYQA----VTLQETLTKHSP 1848
Bos_taurus        ESSPLYSPTFPDSPAFAVTEAVSASHASP-LSLQVSSDKVFGYQA----VTLQETLTKHSP 1845
Equus_caballus    ESSPLYSPTFPDSPAFAVTEAVSASHASP-LSLQVSSDKVFGYQA----VTLQETLTKHSP 1854
Canis_lupus_familiaris ESSPLYSPTFPDSPAFAVTEAVSASHASP-LSLQVSSDKVFGYQA----VTLQETLTKHSP 1853
Rhinatrema_bivittatum ESSPLYSPTFPDSPAFAVTEAVSASHASP-LSLQVSSDKVFGYQA----VTLQETLTKHSP 1841
Xenopus_tropicalis ESSPLYSPTFPDSPAFAVTEAVSASHASP-LSLQVSSDKVFGYQA----VTLQETLTKHSP 1825
.....1930.....1940.....1950.....1960.....1970.....1980

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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Pavo_muticus	EPLFSPEKEDSEKSSRSPEELSSYSYEATEKTTRSPEDISYSYEA	1978
Pavo_cristatus	EPLFSPEKEDSEKSSRSPEELSSYSYEATEKTTRSPEDISYSYEA	1978
Gallus_gallus	EPLFSPEKEDSEKSSRSPEELSSYSYEATEKTTRSPEDISYSYEA	1982
Anas_platyrhynchos	EPLFSPEKEDSEKSSRSPEELSSYSYEATEKTARSPEDISYSYEA	1987
Chelonia_mydas	EPLASTEKDETEKITRSEAISSYSYETTGTTRSPAISYSYETTGT	1918
Mus_musculus	LTTSSVEKDSGGK---TPGDFNYAYQKPEAAGSPDEEDYDYESQ	1895
Rattus_norvegicus	LTTSSVEKDNGGK---TPGDFNYAYQKPESTTESPDEEDYDYES	1892
Homo_sapiens	LSTPGLEKDSGGK---TPGDFSAYAYQKPEETTRSPDEEDYDYES	1899
Pan_troglodytes	LSTPGLEKDSGGK---TPGDFSAYAYQKPEETTRSPDEEDYDYES	1899
Macaca_mulatta	LATPGLEKDSGGK---TPGDFSAYAYQKPEKTTRSPDEEDYDYES	1899
Callithrix_jacchus	LATPGME-DSGGK---TPGDFSAYAYQKPEKTTRSPDEEDYNYES	1896
Bos_taurus	LTTTPGMEEDTGGK---TPGDFSAYAYEKPETTTRSPDEEGYDYE	1894
Equus_caballus	LTTSGVEKDSGGK---TPGDFSAYAYQKPEQTTRSPDEEGYDYES	1903
Canis_lupus_familiaris	LTSSGVE-DSGGK---TPGDFSAYAYQKPEKTTRSPDEEVYDYES	1901
Rhinatrema_bivittatum	K-----	1842
Xenopus_tropicalis	PFVCAADLDE-----	1835

.....1990.....2000.....2010.....2020.....2030.....2040

Pavo_muticus	-----QATDYSYETTGEITRSPDIDYSYIEGGKITRSPGATDYSY	2028
Pavo_cristatus	-----QATDYSYETTGEITRSPDIDYSYIEGGKITRSPGATDYSY	2028
Gallus_gallus	-----QATDYSYETTGTITRSPDIDYSYEMRGKMTTRSPGDTIDYSY	2032
Anas_platyrhynchos	-----EATDYSYETTGTITRSPDIDYSYEMTGKTRSPGATDYSYEM	2037
Chelonia_mydas	EAAEKTTTRSPAISHSYETTEKITRSPDIDYSYEMTGKTRSPVAIS	1978
Mus_musculus	-----DVGYYEYKERTIKSPCDSGSYETIEKTIKT	1928
Rattus_norvegicus	-----DVGYYEYKERTIKSPCDSGSYETIEKTIKT	1925
Homo_sapiens	-----DVGYYEYKERTIKSPCDSGSYETIEKTIKT	1932
Pan_troglodytes	-----DVGYYEYKERTIKSPCDSGSYETIEKTIKT	1932
Macaca_mulatta	-----DVGYYEYKERTIKSPCDSGSYETIEKTIKT	1932
Callithrix_jacchus	-----DVGYYEYKERTIKSPCDSGSYETIEKTIKT	1929
Bos_taurus	-----DVGYYEYKERTIKSPCDSGSYETIEKTIKT	1927
Equus_caballus	-----DVGYYEYKERTIKSPCDSGSYETIEKTIKT	1936
Canis_lupus_familiaris	-----DVGYYEYKERTIKSPCDSGSYETIEKTIKT	1934
Rhinatrema_bivittatum	-----	1842
Xenopus_tropicalis	-----	1835

.....2050.....2060.....2070.....2080.....2090.....2100

Pavo_muticus	PGDTDYSYEMAQKTTRSPGDTDYSYEMTRKTTRSPGDTDYSYH	2088
Pavo_cristatus	PGDTDYSYEMAQKTTRSPGDTDYSYEMTRKTTRSPGDTDYSYH	2088
Gallus_gallus	PGDTDYSYELTQKTTRSPGDTDYSYEMTRKTTRSPGDTDYSYH	2092
Anas_platyrhynchos	PGETDYSYDMTGKTTRSPGDTDYSYETTGTTRSPDIDYSYIEGK	2097
Chelonia_mydas	PEAMDYSCERTGKTTRSPDIDYSYETTGTTRSPDIDYSYIEGK	2038
Mus_musculus	PEDGGYTCEITEKTTRTPEEGGYSYIESEKTTRTPEVSGYTYE	1988
Rattus_norvegicus	PEDGGYSCEITEKTTRTPEEGGYSYIESEKTTRTPEVSGYTYE	1985
Homo_sapiens	PEDGDYSYIEIEKTTRTPEEGGYSYIESEKTTRTPEVSGYTYE	1992
Pan_troglodytes	PEDGDYSYIEIEKTTRTPEEGGYSYIESEKTTRTPEVSGYTYE	1992
Macaca_mulatta	PEDGDYSYIEIEKTTRTPEEGGYSYIESEKTTRTPEVSGYTYE	1992
Callithrix_jacchus	PEDGDYSYIEIEKTTRTPEEGGYSYIESEKTTRTPEVSGYTYE	1989
Bos_taurus	PEDGGYAYEITEKTTRTPEEGGYSYIESEKTTRTPEVSGYTYE	1987
Equus_caballus	PEDGGYAYEITEKTTRTPEEGGYSYIESEKTTRTPEVSGYTYE	1996
Canis_lupus_familiaris	PEDGGYAYDIAEKTTRTPEEGGYSYIESEKTTRTPEVSGYTYE	1994
Rhinatrema_bivittatum	-----SSEILDKGD-----SEKPVMSDVLGYSSGTTDRN	1872
Xenopus_tropicalis	-----RENYHSVSDSYNYGGDINDKYS-----	1857

.....2110.....2120.....2130.....2140.....2150.....2160

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Pavo_muticus	RIGKGTQSLDAMDSSYEAMGRTTESPEAISYCYDTSGRTTTRSP-----	2131
Pavo_cristatus	RIGKGTQSLDAMDSSYEAMGRTTESPEAISYCYDTSGRTTTRSP-----	2131
Gallus_gallus	RIGKGTQSLDAMDSSYEAMGKTTESPETISYCYDTSGRTTTRSP-----	2135
Anas_platyrhynchos	RIGKATKSLDAMDYSFEATGKTTKSPETMDYCYETTGRTTTRSP ^{EA} TAYS ^Y ETT ^{GK} ST ^{SSP}	2157
Chelonia_mydas	RTGKTSRSP ^{EA} VEYSYERIGKTTTRSP ^{EA} VSYSEPI ^{EKT} TTTRSP ^{EA} MDYS ^{FET} TGK ST TRSP	2098
Mus_musculus	DTEDGGHTLGD ^{CS} YSYET ^{TE} KITS ^{FP} ES ^{ES} YSYET ST KT ^{TR} TRSP-----	2031
Rattus_norvegicus	DTEDGGHTLGD ^{CS} YSYET ^{TE} KITS ^{FP} ES ^{ES} YSYET ^{TT} KT ^{TR} TRSP-----	2028
Homo_sapiens	DSEDGGHTLGD ^{PS} YSYET ^{TE} KITS ^{FP} ES ^{EG} YSYET ST KT ^{TR} TRIP-----	2035
Pan_troglodytes	DSEDGGHTLGD ^{PS} YSYET ^{TE} KITS ^{FP} ES ^{EG} YSYET ST KT ^{TR} TRIP-----	2035
Macaca_mulatta	DSEDGGHTLGD ^{PS} YSYET ^{TE} KITS ^{FP} ES ^{ES} YSYET ^{AT} KT ^{TR} TRIP-----	2035
Callithrix_jacchus	DSEDGGHTLGD ^{PS} YSYET ^{TE} KITS ^{YP} ES ^{ES} YSYET ^{AS} AK ^{MT} TRIP-----	2032
Bos_taurus	DSEEGGHTLGD ^{SS} YSYET ^{TE} KTAG ^{FP} ES ^{ES} YSYET ST TT ^{TR} TRSP-----	2030
Equus_caballus	DSENGGHTLGD ^{SS} YSYET ^{TE} KVAS ^{FP} ES ^{ES} YSYET ST AT ^{AR} TRSP-----	2039
Canis_lupus_familiaris	DSEIVGHALGD ^{SG} YSYK ^{TE} KIAS ^{YP} EPES ^{ES} YSYEA ST TATRAP-----	2037
Rhinatrema_bivittatum	-----	1872
Xenopus_tropicalis	-----	1857
	.....2170.....2180.....2190.....2200.....2210.....2220	

	.. : : * ***** : ** : *****	
Pavo_muticus	EATDYSFETTEKATRSPPEATSYSYEAS-AHFTPGKS-LAESRQDVDLCLVSSCEYKHPKT	2189
Pavo_cristatus	EATDYSFETTEKATRSPPEATSYSYEAS-AHFTPGKS-LAESRQDVDLCLVSSCEYKHPKT	2189
Gallus_gallus	EATDYSFET-EKATRSPPEATSYSYEAS-AHFTPGKS-LAESRQDVDLCLVSSCEYKHPKT	2192
Anas_platyrhynchos	EATDYSFETTEQATRSPPEATSYSYEAS-AHFTPGKS-LAESRQDVDLCLVSSCEYKHPKT	2215
Chelonia_mydas	EAVSYAYETPGKITRSPPEATSYSYKTD-VHFAAEKSS-LAETRODVDLCLVSSCEYKHPKT	2157
Mus_musculus	DTSAYCYETMEKITKTTPQASTYSYETS DRCYTTEKKS PSEARQDVDLCLVSSCEFKHPKT	2091
Rattus_norvegicus	DTSAYCYETMEKITKTTPQASTYSYETS DRCYTPERKKS PSEARQDVDLCLVSSCEFKHPKT	2088
Homo_sapiens	DTSYCYETAEKITRTPQASTYSYETS DLCYTAEKKS PSEARQDVDLCLVSSCEYKHPKT	2095
Pan_troglodytes	DTSTYCYETAEKIARTTPQASTYSYETS DLCYTAEKKS PSEARQDVDLCLVSSCEYKHPKT	2095
Macaca_mulatta	DTSTYCYETTEKITRTPQASTYSYETS DLCYTAEKKS PSEARQDVDLCLVSSCEYKHPKT	2095
Callithrix_jacchus	DTSTYCYETTEKISRTPQASTYSYETS DLCYTAEKKS PSEARQDVDLCLVSSCEYKHPKT	2092
Bos_taurus	DASAYCYETPEKITRAPQVSSYAYETS DQCYTAEKKS PSEARQDVDLCLVSSCEYKHPKT	2090
Equus_caballus	DAPTYGYETAERIPGTPQASAYAYETS DQCYTAEKKS PSEARQDVDLCLVSSCEYKHPKT	2099
Canis_lupus_familiaris	DASTYCYETAEKITRTPQAATYSYETS DQCYTAEKKS PSEARQDVDLCLVSSCEYKHPKT	2097
Rhinatrema_bivittatum	-----FATEKSYLAEARQDVDLCLVSSCEYKHPKT	1902
Xenopus_tropicalis	-----VADKHSFAEGRQDVDLCLVSSACEYKHPKT	1886
	.....2230.....2240.....2250.....2260.....2270.....2280	

	*****:****:::..** :.* *. **.*** :.*****.*	
Pavo_muticus	ELSPSFINPNPLEWFASEEQSQDQEKLLTQSGGAQPPSGGKQOGRQCDETPPPTSVSESAP	2249
Pavo_cristatus	ELSPSFINPNPNLEWFASEEQSQDQEKLLTQSGGAQPPSGGKQOGRQCDETPPPTSVSESAP	2249
Gallus_gallus	ELSPSFINPNPNLEWFASEEQSQDQEKLLTQSGGAQPPSGGKQOGRQCDETPPPTSVSESAP	2252
Anas_platyrhynchos	ELSPSFINPNPNLEWFASEEQSQDQEKPLTQSGGAQPPSGGKQOGRQCDETPPPTSVSESAP	2275
Chelonia_mydas	ELSPSFINPNPNLEWFASEEQSQDQEKPLTQSGGAQPPSGGKQOARQCDETPPPTSVSESAP	2217
Mus_musculus	ELSPSFINPNPNLEWFAGEEPTEESEKPLTQSGGAPPPSGGKQOGRQCDETPPPTSVSESAP	2151
Rattus_norvegicus	ELSPSFINPNPNLEWFAGEEPTEESEKPLTQSGGAPPPSGGKQOGRQCDETPPPTSVSESAP	2148
Homo_sapiens	ELSPSFINPNPNLEWFASEEPTEESEKPLTQSGGAPPPPGGKQOGRQCDETPPPTSVSESAP	2155
Pan_troglodytes	ELSPSFINPNPNLEWFASEEPTEESEKPLTQSGGAPPPPGGKQOGRQCDETPPPTSVSESAP	2155
Macaca_mulatta	ELSPSFINPNPNLEWFASEEPTEESEKPLTQSGGAPPPPGGKQOGRQCDETPPPTSVSESAP	2155
Callithrix_jacchus	ELSPSFINPNPNLEWFASEEPTEESEKPLTQSGGAPPPPGGKQOGRQCDETPPPTSVSESAP	2152
Bos_taurus	ELSPSFINPNPNLEWFASEEPTEESEKPLTQSGGAPPPPGGKPOGRQCDETPPPTSVSESAP	2150
Equus_caballus	ELSPSFINPNPNLEWFASEEPTEESEKPLTQSGAAPPPPGGKPOGRQCDETPPPTSVSESAP	2159
Canis_lupus_familiaris	ELSPSFINPNPNLEWFASEEPTEESEKPLTQAGGAPPPPGGKPOGRQCDETPPPTSVSESAP	2157
Rhinatrema_bivittatum	ELSPSFINPNPNLEWFANDDHSQEQEKPIVLGGTQPPSGGKQOARQCDETPPPTSVSESV	1962
Xenopus_tropicalis	ELSPSFINPNPIEWFASEDHSQEQEKPLAQLGGQPPSGGKQKSRQCDETPPPTSVSESAP	1946
2290.....2300.....2310.....2320.....2330.....2340	

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*****:***:*:*:*:*:*
Pavo_muticus      SQTSDVPPETEECP SITADANIDSEDESETIPTDKTITYKHIDPPPVPMDRSPSPRHP 2309
Pavo_cristatus    SQTSDVPPETEECP SITADANIDSEDESETIPTDKTITYKHIDPPPVPMDRSPSPRHP 2309
Gallus_gallus     SQTSDVPPETEECP SITADANIDSEDESETIPTDKTITYKHIDPPPVPMDRSPSPRHP 2312
Anas_platyrhynchos SQTSDVPPETEECP SITADANIDSEDESETIPTDKTITYKHIDPPPVPMDRSPSPRHP 2335
Chelonia_mydas    SQTSDVPPETEECP SITADANIDSEDESETIPTDKTITYKHIDPPPVPMDRSPSPRHP 2277
Mus_musculus      SQTSDVPPETEECP SITADANIDSEDESETIPTDKTVTYKHMPPPAPMDRSPSPRHP 2211
Rattus_norvegicus SQTSDVPPETEECP SITADANIDSEDESETIPTDKTVTYKHMPPPAPMDRSPSPRHP 2208
Homo_sapiens      SQTSDVPPETEECP SITADANIDSEDESETIPTDKTVTYKHMPPPAPVQDRSPSPRHP 2215
Pan_troglodytes   SQTSDVPPETEECP SITADANIDSEDESETIPTDKTVTYKHMPPPAPVQDRSPSPRHP 2215
Macaca_mulatta    SQTSDVPPETEECP SITADANIDSEDESETIPTDKTVTYKHIDPPPAPVQDRSPSPRHP 2215
Callithrix_jacchus SQTSDVPPETEECP SITADANIDSEDESETIPTDKTVTYKHMPPPAPVQDRSPSPRHP 2212
Bos_taurus        SQTSDVPPETEECP SITADANIDSEDESETIPTDKTVTYKHMPPPAPMDRSPSPRHP 2210
Equus_caballus    SQTSDVPPETEECP SITADANIDSEDESETIPTDKTVTYKHMPPPAPMDRSPSPRHP 2219
Canis_lupus_familiaris SQTSDVPPETEECP SITADANIDSEDESETIPTDKTVTYKHMPPPAPMDRSPSPRHP 2217
Rhinatrema_bivittatum SQTSDVPPETEECP SITADANIDSEDESETIPTDKTVTYKSMDDPPVPMQDPSPPRHP 2022
Xenopus_tropicalis SQTSDVPPETEECP SITADANIDSEDESETIPTDKTVTYKHMPLPMPVQDPSPPSRHP 2006
.....2350.....2360.....2370.....2380.....2390.....2400
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**.*:***:*.:.:*****.:***:***:* ** ***.*****.:*.: *** ****.
Pavo_muticus      DVSMVDPEALPIDQNLGKPLKKDLKEKTKTKKTGKTGKSSSPVKKSDGKSKQ-VASPKP- 2367
Pavo_cristatus    DVSMVDPEALPIDQNLGKPLKKDLKEKTKTKKTGKTGKSSSPVKKSDGKSKQ-VASPKP- 2367
Gallus_gallus     DVSMVDPEALPIDQNLGKPLKKDLKEKTKTKKTGKTGKSSSPVKKSDGKSKQ-VASPKP- 2370
Anas_platyrhynchos DVSMVDPEALPVDQNLGKPLKKDLKEKTKTKKTGKTGKSSSPVKKSDGKSKQ-VASPKP- 2393
Chelonia_mydas    DVSMVDPEALPVDQNLGKPLKKDLKEKTKTKKLGTGKTGKSSSPAKKSDGKSKQ-VASPKPG 2336
Mus_musculus      DVSMVDPDALAVDQNLGKALKKDLKEKTKTKKPGTKTKSSSPVKKGDGKSKPLAASPKPG 2271
Rattus_norvegicus DVSMVDPEALAIEQNLGKALKKDLKEKTKTKKPGTKTKSSSPVKKGDGKSKPLAASPKPG 2268
Homo_sapiens      DVSMVDPEALAIEQNLGKALKKDLKEKTKTKKPGTKTKSSSPVKKSDGKSKPLAASPKPA 2275
Pan_troglodytes   DVSMVDPEALAIEQNLGKALKKDLKEKTKTKKPGTKTKSSSPVKKSDGKSKPLAASPKPA 2275
Macaca_mulatta    DVSMVDPEALALEQNLGKALKKDLKEKTKTKKPGTKTKSSSPVKKSDGKSKPLAASPKPA 2275
Callithrix_jacchus DVSMVDPEALAIEQNLGKALKKDLKEKTKTKKPGTKTKSSSPVKKSDGKSKPLAASPKPG 2272
Bos_taurus        DVSMMDPEALAIEQNLGKALKKDLKEKTKTKKPGTKTKSSSPVKKGDGKSKPLAASPKPG 2270
Equus_caballus    DVSMMDPEALAIEQNLGKALKKDLKEKTKTKKPGTKTKSSSPVKKADGKSKPLAASPKPA 2279
Canis_lupus_familiaris DVSMMDPEALAIEQNLGKALKKDLKEKTKTKKPGTKTKSSSPVKKGDGKSKPLAASPKPG 2277
Rhinatrema_bivittatum DVSMIDPEAMPVDQNLGKPMKKDIREKTKIKKQGTGKSSSPARKSESKSKS-GASPKAG 2081
Xenopus_tropicalis DVCMMMDPEALPVEQNLGKPLKKDIKEKAKTKKVGTKTKSSSPARKSEIKSKLSAASPKPG 2066
.....2410.....2420.....2430.....2440.....2450.....2460
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*:::*:*:*****:.....* * *: :*:*:*:***.*:*****:*
Pavo_muticus      AAKDSLEKSSKTASPKKKEVEKASKNISTPEVKT-RVEEKDKDTKNAVNTTASKSAKTA 2426
Pavo_cristatus    AAKDSLEKSSKTASPKKKEVEKASKNISTPEVKT-RVEEKDKDTKNAVNTTASKSAKTA 2426
Gallus_gallus     AAKDSLEKSSKTASPKKKEVEKASKNISTPEVKT-RVEEKDKDTKNAVNTTASKSAKTA 2429
Anas_platyrhynchos AVKESLEKTSKTASPKKKEVEKATKNISNPEVKS-RVEEKDKDTKNAANTTASKSAKTA 2452
Chelonia_mydas    GLKESLDKVSRTASPKKKEAEKAAKNISIPEVKSSRVEEKDEAKNATNSTSKSAKSA 2396
Mus_musculus      ALKESSDKVSRVASPKKKEVEKATKTTTTPEVKATRGEEDKETKNAANASASKSAKTA 2331
Rattus_norvegicus ALKESSDKVSRVASPKKKEVEKAMKTTTTPEVKATRGEEDKETKNAANASASKSVKTA 2328
Homo_sapiens      GLKESSDKVSRVASPKKKEVEKAAKPTTTTPEVKAARGEEDKETKNAANASASKSAKTA 2335
Pan_troglodytes   GLKESSDKVSRVASPKKKEVEKAAKPTTTTPEVKAARGEEDKETKNAANASASKSAKTA 2335
Macaca_mulatta    GLKESSDKVSRVASPKKKEVEKAAKPTTTTPEVKAARGEEDKETKNAANASASKSAKTA 2335
Callithrix_jacchus GLKESSDKVSRVASPKKKEVEKAAKPTTTTPEVKAARGEEDKETKNAANASASKSAKTA 2332
Bos_taurus        ALKESSDKVSKVASPKKKEVEKATKTTTTPEVKAARGEEDKETKNAANASTSKSVKTA 2330
Equus_caballus    GLKESSDKVSRVASPKKKEVEKATKTAPTPEVKAARGEEDKETKNAANTSTSKSVKTA 2339
Canis_lupus_familiaris GLKESSDKVSRVASPKKKEVEKATKTTTTPEVKAARGEEDKETKNAANASTSKSVKTA 2337
Rhinatrema_bivittatum GLKESVEKSSKTVPKKKDPVEKAPKSSFSEAKSSRAEENDKELKNATNSTASKSAKTA 2141
Xenopus_tropicalis PIKETLEKGSKTVPKKKDSVEKGPKGSLNQEIKSIKTEEDKQTKNATNSTASKSAKTA 2126
.....2470.....2480.....2490.....2500.....2510.....2520
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Pavo_muticus	TTGPGTTTSAKSTAVPPGPPVYLDLVYIPNHSNSKNVDVEFFKRVRSYYVVS	2486
Pavo_cristatus	TTGPGTTTSAKSTAVPPGPPVYLDLVYIPNHSNSKNVDVEFFKRVRSYYVVS	2486
Gallus_gallus	TTGPGTTTSAKSTAVPPGPPVYLDLVYIPNHSNSKNVDVEFFKRVRSYYVVS	2489
Anas_platyrhynchos	TTGPGTTTSAKSTAVPPGPPVYLDLVYIPNHSNSKNVDVEFFKRVRSYYVVS	2512
Chelonia_mydas	TSGPGNSKPAKSTAVPPGPPVYLDLVYIPNHSNSKNVDVEFFKRVRSYYVVS	2456
Mus_musculus	TAGPGTTTAKSSTVPPGLPVYLDLCYIPNHSNSKNVDVEFFKRVRSYYVVS	2391
Rattus_norvegicus	TAGPGTTTAKSSTVPPGLPVYLDLCYIPNHSNSKNVDVEFFKRVRSYYVVS	2388
Homo_sapiens	TAGPGTTTAKSSTVPPGLPVYLDLCYIPNHSNSKNVDVEFFKRVRSYYVVS	2395
Pan_troglodytes	TAGPGTTTAKSSTVPPGLPVYLDLCYIPNHSNSKNVDVEFFKRVRSYYVVS	2395
Macaca_mulatta	TAGPGTTTAKSSTVPPGLPVYLDLCYIPNHSNSKNVDVEFFKRVRSYYVVS	2395
Callithrix_jacchus	TAGPGTTTAKSSTVPPGLPVYLDLCYIPNHSNSKNVDVEFFKRVRSYYVVS	2392
Bos_taurus	TAGPGTTTAKSSTVPPGLPVYLDLCYIPNHSNSKNVDVEFFKRVRSYYVVS	2390
Equus_caballus	TAGPGTTTAKSSTVPPGLPVYLDLCYIPNHSNSKNVDVEFFKRVRSYYVVS	2399
Canis_lupus_familiaris	AAGPGTTTAKSSTVPPGLPVYLDLCYIPNHSNSKNVDVEFFKRVRSYYVVS	2397
Rhinatrema_bivittatum	TTGTGASKPAKSTAVPPGPPVYLDLVYIPNHSNCKNVDIEFFKRVRSYYVVS	2201
Xenopus_tropicalis	NTSGTSTKTSKSAVPPGPPVYLDLVYIPNHSNKNVDIEFFKRVRSYYVVS	2186
	.....2530.....2540.....2550.....2560.....2570.....2580	

	*****:*****:*****:*****:*****	
Pavo_muticus	EPSRAVLDSLLEGKAQWESNMQVTLIPTHDSEVMREWYQETHEKQODLNIMVLASSSTVV	2546
Pavo_cristatus	EPSRAVLDSLLEGKAQWESNMQVTLIPTHDSEVMREWYQETHEKQODLNIMVLASSSTVV	2546
Gallus_gallus	EPSRAVLDSLLEGKAQWESNMQVTLIPTHDSEVMREWYQETHEKQODLNIMVLASSSTVV	2549
Anas_platyrhynchos	EPSRAVLDSLLEGKAQWESNMQVTLIPTHDSEVMREWYQETHEKQODLNIMVLASSSTVV	2572
Chelonia_mydas	EPSRAVLDSLLEGKAQWESNMQVTLIPTHDSEVMRDWYQETHEKQODLNIMVLASSSTVV	2516
Mus_musculus	EPSRAVLDDLLEGKAQWGSNMQVTLIPTHDSEVMREWYQETHEKQODLNIMVLASSSTVV	2451
Rattus_norvegicus	EPSRAVLDDLLEGKAQWGSNMQVTLIPTHDSEVMREWYQETHEKQODLNIMVLASSSTVV	2448
Homo_sapiens	EPSRAVLDDLLEGKAQWGSNMQVTLIPTHDSEVMREWYQETHEKQODLNIMVLASSSTVV	2455
Pan_troglodytes	EPSRAVLDDLLEGKAQWGSNMQVTLIPTHDSEVMREWYQETHEKQODLNIMVLASSSTVV	2455
Macaca_mulatta	EPSRAVLDDLLEGKAQWGSNMQVTLIPTHDSEVMREWYQETHEKQODLNIMVLASSSTVV	2455
Callithrix_jacchus	EPSRAVLDDLLEGKAQWGSNMQVTLIPTHDSEVMREWYQETHEKQODLNIMVLASSSTVV	2452
Bos_taurus	EPSRAVLDDLLEGKAQWGSNMQVTLIPTHDSEVMREWYQETHEKQODLNIMVLASSSTVV	2450
Equus_caballus	EPSRAVLDDLLEGKAQWGSNMQVTLIPTHDSEVMREWYQETHEKQODLSIMVLASSSTVV	2459
Canis_lupus_familiaris	EPSRAVLDDLLEGKAQWGSNMQVTLIPTHDSEVMREWYQETHEKQODLNIMVLASSSTVV	2457
Rhinatrema_bivittatum	EPSRAVLDSLLEGKAQWGSNMQVTLIPTHDSEVMRDWYQETHEKQODLNIMVLASSSTVV	2261
Xenopus_tropicalis	EPSRAVLDSLLEGKAQWGNMQVTLIPTHDSEVMREWYQETHEKQODLNIMVLASSSTVV	2246
	.....2590.....2600.....2610.....2620.....2630.....2640	

Pavo_muticus	MODESFPACKIEL	2559
Pavo_cristatus	MODESFPACKIEL	2559
Gallus_gallus	MODESFPACKIEL	2562
Anas_platyrhynchos	MODESFPACKIEL	2585
Chelonia_mydas	MODESFPACKIEL	2529
Mus_musculus	MODESFPACKIEL	2464
Rattus_norvegicus	MODESFPACKIEL	2461
Homo_sapiens	MODESFPACKIEL	2468
Pan_troglodytes	MODESFPACKIEL	2468
Macaca_mulatta	MODESFPACKIEL	2468
Callithrix_jacchus	MODESFPACKIEL	2465
Bos_taurus	MODESFPACKIEL	2463
Equus_caballus	MODESFPACKIEL	2472
Canis_lupus_familiaris	MODESFPACKIEL	2470
Rhinatrema_bivittatum	MODESFPACKIEL	2274
Xenopus_tropicalis	MODESFPACKIEL	2259
	.....2650...	