

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/CENPept Tue Feb 1 11:39:01 2022

Page 1 of 20

Mus_musculus	MSWALEEWKEGLPSRALQKIQEELEGOLEKLKKEKQORQFOLDSLEAALQKQKQKVEDGKT	60
Rattus_norvegicus	MSWALEEWKEGLPTRALQKIQEELEGOLDKLKKEKQORQFOLDSLEAALQKQKQKVEDGKT	60
Homo_sapiens	MSWALEEWKEGLPTRALQKIQEELEGOLDKLKKEKQORQFOLDSLEAALQKQKQKVENEKT	60
Pan_troglodytes	MSWALEEWKEGLPTRALQKIQEELEGOLDKLKKEKQORQFOLDSLEAALQKQKQKVENEKT	60
Macaca_mulatta	MSWALEEWKEGLPTRALQKIQEELEGOLDKLKKEKQORQFOLDSLEAALQKQKQKVENEKT	60
Callithrix_jacchus	-----	
Canis_lupus_familiaris	MSWALEEWKEGLPTRALQKIQEELEGOLDKLKKEKQORQFOLETLEAALQKQKQKVENEKT	60
Equus_caballus	MSWALEEWKEGLPTRALQKIQEELEGOLDKLKKEKQORQFOLETLEAALQKQKQKVENEKT	60
Bos_taurus	MSWALEEWKEGLPTRALQKIQEELEGOLDKLKKEKQORQFOLETLEAALQKQKQKVENEKT	60
Heterocephalus_glaber	MSWALEEWKEGLPTRALQKIQEELEGOLDKLKKEKQORQFOLDTLEAALQKQKQKVEITEKT	60
Pavo_muticus	MSWVVEEWKEGLSPRVLOKIQEELESQVDKLKKEKQORQFOLESLEAALQKQKQKVENEKN	60
Pavo_cristatus	MSWVVEEWKEGLSPRVLOKIQEELESQVDKLKKEKQORQFOLESLEAALQKQKQKVENEKN	60
Gallus_gallus	MSWAVEEWKEGLSPRVLOKIHESQVDKLKKEKQORQFOLESLEAALQKQKQKVENEKN	60
Chelonia_mydas	MSWVVEEWKEGLSTRALQKIQEELESQVDKLKKEKQORQFOLESLEAALQKQKQKVENEKN	60
Xenopus_tropicalis	MSWVVEEWKEGLPTKTLOKIQEELESQVDKLKKEKQORQFOLESLEAFAQKQKQKAESEKS	60
Rhinatrema_bivittatum	MSWAAEAWKEGLPIKALQKIQEELESHLDKLKKEKQORQFOLESLEAFAQKQKQKAEENEKS	60
	1.....10.....20.....30.....40.....50.....60	

Mus_musculus	EGADLKRENQRLMEICEHLEKSRQKLSHELOVKESQVNLQESQLSSCKKQIEKLEQELKR	120
Rattus_norvegicus	EGADLKRENQRLMEICENLEKTRQKLSHELOVKESQVNFQESQLSSCKKQIEKLEQELKR	120
Homo_sapiens	EGTNLKRENQRLMEICESLEKTKQKISHLOVKESQVNFQEGQLNSGKKQIEKLEQELKR	120
Pan_troglodytes	EGTNLKRENQRLMEICESLEKTKQKISHLOVKESQVNFQEGQLNSGKKQIEKLEQELKR	120
Macaca_mulatta	EGTNLKRENQRLMEICESLEKTKQKISHLOVKESQVNFQEGQLNSGKKQIEKLEQELKR	120
Callithrix_jacchus	-----	
Canis_lupus_familiaris	EGANLKRENQSLMEICENLEKTKQKMSHELOVKESQVNFQEGQLNSSKKQIEKLEQELKR	120
Equus_caballus	EGTNLKRENQSLMEICENLEKTKQKIAHDLOVKESQVNFQEGQLNSSKKQIEKLEQELKR	120
Bos_taurus	EGANLKRENQSLMEICENLEKTKQKISHLOVKESQVNFQEGQLNSSKKQIEKLEQELKR	120
Heterocephalus_glaber	EGTNLKRENQRLMEICENLEKSKQKISHLOVKESQVNFQEGQLNSGRKQIEKLEQELKR	120
Pavo_muticus	ETASLKRENQSLMELCDSLDAKQKNSHDLOVKESQVNLISGQLSSSKKEIERLEQELKR	120
Pavo_cristatus	ETASLKRENQSLMELCDSLDAKQKNSHDLOVKESQVNLISGQLSSSKKEIERLEQELKR	120
Gallus_gallus	ETAILKRENQSLMELCDSLDAKQKNSHDLOVKESQVNLISGQLSSSKKEIERLEQELKR	120
Chelonia_mydas	EGATLKRENQSLMELCDNLEKTKQKISHDLOVKESQVNYQAGOLTSSKKQIERLEQELKR	120
Xenopus_tropicalis	EISALKRENQSLIESCDNQEKAKQKIIEYQLKESQVNFLEGQLSASKQIEKLEQELKR	120
Rhinatrema_bivittatum	EVTALKRENQSLMEMCDNFENKQKIYHDQOVKESQVNYLEGQLSSSKKHTEINLELELKR	120
	.....70.....80.....90.....100.....110.....120	

Mus_musculus	CKSEFERSQQAQSAADVSLNPCSTPQKLFATPLTPS-----STYEDLKEKYNKEVEERKR	175
Rattus_norvegicus	CKSEFERSQ---QSAEVS LNPCSTPQKLFATPLTPSQYYICSTYEDLKEKYNKEVEDRKR	177
Homo_sapiens	CKSELERSQQAQSAADVSLNPCNTPTQKIFTTPLTPSQYYSGSKYEDLKEKYNKEVEERKR	180
Pan_troglodytes	CKSELERSQQAQSAADVSLNPCNTPTQKIFTTPLTPSQYYSGSKYEDLKEKYNKEVEERKR	180
Macaca_mulatta	CKSELERSQQAQSAADVSLNPCNTPTQKIFTTPLTPSQYYSGSKYEDLKEKYNKEVEERKR	180
Callithrix_jacchus	-----	
Canis_lupus_familiaris	CKSELERSQQAQSAADVSLRSCSTPQKIFATPLTPSQYYSGSKYEDLKEKYNKEVEERKR	180
Equus_caballus	CKSELERSQQAQSAADVSLNPCNTPTQKIFATPLTPSHYYSGSKYEDLKEKYNKEVEERKR	180
Bos_taurus	CKSELERSQQAQSAADVSLNSCLTPQKIFATPLTPSQYYSGSKYEDLKEKYNKEVEERKR	180
Heterocephalus_glaber	CKSGLERSHPAAPPADCSLCACSS-LQIFAAPPTPGOPYSGSKYEDLREKYNKEVEERRR	179
Pavo_muticus	YKCEFERSQQSLIAADLSFS--GTPQKSFTAPLTPVQSHNDKFEELKEKYKKEVQERKK	178
Pavo_cristatus	YKCEFERSQQSLIAADLSFS--GTPQKSFTAPLTPVQSHNDKFEELKEKYKKEVQERKK	178
Gallus_gallus	YKCEFERSQQSLIAAELSFS--GTPQKSFTAPLTPVQSHNDKFEELKEKYKKEVQERKK	178
Chelonia_mydas	YKSELERSQQTILITGDLFS--STPQKNFAAPLTPNQNNDKFEELKEKYKKEVEERKR	178
Xenopus_tropicalis	YKSDLEKSQSLSFNACDMSVC--ATPQKSFAVAPYTPNKYT-DFRYEELQEKYQKEVEERKR	177
Rhinatrema_bivittatum	YKSELEKSQQ--ISADLSYY--TPPQKSVVIRCSPTQYHNDKFEELKEKYKKEVEERER	177
	.....130.....140.....150.....160.....170.....180	

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/CENPept Tue Feb 1 11:39:01 2022

Page 2 of 20

Mus_musculus	LEEEVKALHAK-KVSLPVSAATMNRDIARHQASSSVFPWQOENTPSRLSSDALKTPLRR	234
Rattus_norvegicus	LEAEVKALHAK-KASLPVSAATMNRDIARHQASSSVFSWQQDKTPSRLSSCSLRTPLR	236
Homo_sapiens	LEAEVKALQAK-KASQTLPAATMNRDIARHQASSSVFSWQQEKTPSHLSSNSQRTPIRR	239
Pan_troglodytes	LEAEVKALQAK-KASQTLPAATMNRDIARHQASSSVFSWQQEKTPSHLSSNSQRTPIRR	239
Macaca_mulatta	LEAEVKALQAK-KASQTLPAATMNRDIARHQASSSVFSWQQEKTPSHLSSNSQRTPIRR	239
Callithrix_jacchus	-----	
Canis_lupus_familiaris	LEAEVKALQATTKVSQAIPQSTMNHRDIARHQASSSVFSWQQEKTPSRLSSSALKTPMRR	240
Equus_caballus	LEAEVKALQAK-KVSQAIPQSTMNHRDIARHQASSSVFSWQQEKTPSRLSSSAOKTPIGR	239
Bos_taurus	LEAEVKALQAK-KASQTIPTSTMNHRDIARHQASSSVFSWQQEKTPSRLSSNTLKTPIRR	239
Heterocephalus_glaber	LEAEVKVLQAK-RASQAVPPTTMNHRDIARHQASSSVFSWQQERTPNQLPSHPKTPSRR	238
Pavo_muticus	LELELRTIQVKKINQPYLQSSSLSHREIARNQASSSVFSWQQEKT-----SRNQETPAKR	234
Pavo_cristatus	LELELRTIQVKKINQPYLQSSSLSHREIARNQASSSVFSWQQEKT-----SRNQETPAKR	234
Gallus_gallus	LELELRTIQVKKINQPYLQSSSLSHREIARNQASSSVFSWQQEKT-----SRNQETPAKR	234
Chelonia_mydas	LEAELRNIIKKINHSHP-QSTKSHREIARNQASSSVFSWQQEKTSCPSSSSQETPLKR	237
Xenopus_tropicalis	LETEMKTLRNVPQPPQAAQSTMTHRDIARHQTSSSVFSWQEDRTPSHPSSTSHDKRLKR	237
Rhinatrema_bivittatum	LEAELKTLQ-----VKKMDTSFSHRDIARHYASSSVFPWQSEHTPRKPPAGSQETPYRR	231
	.....190.....200.....210.....220.....230.....240	

Mus_musculus	DGSAAHFLG-EEVSPNKSSMKTGRGDCSS-LPGEPHSAQLLHQAQONQDLKSKMTELEL	292
Rattus_norvegicus	DVSAAHFLG-EEVTPNKKSSVIGRGDCSG-LPDDPHCSQPLHQAQONQELKSKMNELEL	294
Homo_sapiens	DFSASYFSGEQEVTPSRSTLQIGKRDANSFFDNSSPHLLDQLKAQONQELRNKINELEL	299
Pan_troglodytes	DFSASYFSGEQEVTPSRSTLQIGKRDANSFFDNSSPHLLDQLKAQONQELRNKINELEL	299
Macaca_mulatta	DFCASYFSGEQEVTPSRSTLQIGKRDANSFFDNSSPHLLDQLKVNQONQELRSKINELEL	299
Callithrix_jacchus	-----	
Canis_lupus_familiaris	DLSAAHLSGEQEVTPSRSTLQIGKRDANSFCDNNSNPHLLDQLKAQONQELRNKISDLEL	300
Equus_caballus	DFSASHFSG--EVTTPSRSTLQIGKRDANSFCDNSNPHLLDQLKAQONQELRSKISELEL	297
Bos_taurus	DFSASHFSGEVTPSRSTLQIGKTDANSFCDNSNPHLLDQLKAQONQELRSKISELEL	299
Heterocephalus_glaber	DFSASHIFGEEVTPSRSVLQIGKRDANSFCDNSNPHLLDQLKGNQONQELRSEVNELEL	298
Pavo_muticus	TSSTPYFPWEKEANSS---ILSEKSKFDKSFSEDCN-SSLIIQLRAQONQGLNSNVKDLEQ	290
Pavo_cristatus	TSSTPYFPWEKEANSS---ILSEKSKFDKSFSEDCN-SSLIIQLRAQONQGLNSNVKDLEQ	290
Gallus_gallus	TSSTPYFPWEKEGNSS---IKSEKNKFDNFSFSEDCN-SLLINQLRAQONQELNSTIKDLEQ	290
Chelonia_mydas	GFTSSHFPEWEQATPSHCGLRSKKTDFSNFSDNCDNSSVIEQLKTENQELSSRVQELEH	297
Xenopus_tropicalis	SFASSQLLWDQEEPTPS---KRGVRSNENLGSASDSYTTQLNDQLKTQONQELKSRIINELEM	294
Rhinatrema_bivittatum	GSAASHFPWEQRETPN---KQGLKDVVISLPE-DFSNSQGTETPLRNQONQELRSKVNELEL	287
	.....250.....260.....270.....280.....290.....300	

Mus_musculus	RLQGQEKEMRSQVNKCQDLQLEKTKVELIEKERILNKTRDEVVRSTAQYDQAAAKCTT	352
Rattus_norvegicus	RLRGQEKEMKDQVNKFQELQLEKTKVDLIEKEKILNKTRDEVVRSTAQYEQAAAKCTA	354
Homo_sapiens	RLQGHEKEMKGQVNKFQELQLEKAKVELIEKEKVLNKCDELVRTTAQYDQASTKYTA	359
Pan_troglodytes	RLQGHEKEMKGQVNKFQELQLEKAKVELIEKEKVLNKCDELVRTTAQYDQASTKYTA	359
Macaca_mulatta	RLQGQEKEMKGQVNKFQELQLEKAKVELIEKEKVLNKCDELVRTTAQYDQASTKCTA	359
Callithrix_jacchus	-----	
Canis_lupus_familiaris	HLQGQEKEMKGQVNKCHELQHLKAKAELIEKEKILNKSRLDELMTTAQYDQASSKCTA	360
Equus_caballus	RLQGQEKEMKGQVNKFQELQLERAKVELIEKEKVNKSRLDELVRTTAQYDQASTKCTA	357
Bos_taurus	RLQGQEKEMKGQVNKQELQLEKAKVELNEKEKVLNKNRDELVRTTSQYDQASAKCTA	359
Heterocephalus_glaber	RLQGQEKEMESQAHRFQELQLEKTKVELIEKDKILKNRDELARTTAQYEQAAQCTA	358
Pavo_muticus	QLQALQKEKKSHMNKHQEIQLDRMKLELSEKDKVLNKTDRDKLTQMKTOFDQATAQVQA	350
Pavo_cristatus	QLQALQKEKKSHMNKHQEIQLDRMKLELSEKDKVLNKTDRDKLTQMKTOFDQATAQVQA	350
Gallus_gallus	QLQALEKEKKSHMNKYQETQLDRMKLELSEKDKVLNKTDRDKLTQMKTOFDQATVQVQA	350
Chelonia_mydas	QLQDQEKKEKKFHMNKLQETQLQLEKTKLEFTDKDSILHKIRDELNRMTAQRDQATAQYEM	357
Xenopus_tropicalis	RLQVQEKDLKNQNLKLOESQALYEKTORELAERDKTLVKCKEDLARVTAQCEQAANKCVM	354
Rhinatrema_bivittatum	SLQAQERDLKNHNLNKMKEVQRLQLEKAKSELMEKDKSLTKSCEELVRTNAQFDQLTKSTM	347
	.....310.....320.....330.....340.....350.....360	

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/CENPeptids Tue Feb 1 11:39:01 2022

Page 3 of 20

Mus_musculus	LEQKLKLTTEELSCHRONAESAKRSLEQRIKEKEKELEELSROHOSFQALDSEYTMK	412
Rattus_norvegicus	LEQKLKLTTEELSCHRONAESAKRSLEQRIKEKEKELEELSROHOSFQALDSEYTMK	414
Homo_sapiens	LEQKLKLTTEELSCHRONAESAKRSLEQRIKEKEKELEELSROHOSFQALDSEYTMK	419
Pan_troglodytes	LEQKLKLTTEELSCHRONAESAKRSLEQRIKEKEKELEELSROHOSFQALDSEYTMK	419
Macaca_mulatta	LEQKLKLTTEELSCHRONAESAKRSLEQRIKEKEKELEELSROHOSFQALDSEYTMK	419
Callithrix_jacchus	-----	
Canis_lupus_familiaris	LEQKLRLSEDLSCORNAESAKRSLEQRIKEKEKELEELSROHOSFQALDSEYTMK	420
Equus_caballus	LEQKLKLTTEELSCHRONAESAKRSLEQRIKEKEKELEELSROHOSFQALDSEYTMK	417
Bos_taurus	LEQKLKLTTEELSCHRONAESAKRSLEQRIKEKEKELEELSROHOSFQALDSEYTMK	419
Heterocephalus_glaber	LEQKLKLTTEELNCRONAESAKRSLEQRIKEKEKELEELSROHOSFQALDSEYTMK	418
Pavo_muticus	MEKKMKRLSEELNCRONAESARRSLEQRIKEKEKELEELSROHOSFQALDSEYTMK	410
Pavo_cristatus	MEKKMKRLSEELNCRONAESARRSLEQRIKEKEKELEELSROHOSFQALDSEYTMK	410
Gallus_gallus	MEKKMKRLSEELNCRONAESARRSLEQRIKEKEKELEELSROHOSFQALDSEYTMK	410
Chelonia_mydas	VEQMKMKLSEELNCRONAESARRSLEQRIKEKEKELEELSROHOSFQALDSEYTMK	417
Xenopus_tropicalis	AEQKLKLVDELSCORNAESARRSLEQRIKEKEKELEELSROHOSFQALDSEYTMK	414
Rhinatrema_bivittatum	LEQKLKLTSEELSCORNAESARRSLEQRIKEKEKELEELSROHOSFQALDSEYTMK	407
	.....370.....380.....390.....400.....410.....420	

Mus_musculus	RLTQELQQVKHLSTLQLELEKVTSVKQQLERNLEEFIRLKLRAEQALQASQVAENELRR	472
Rattus_norvegicus	RLTQELQQAKHSLSVLQLELEKVTSVKQQLERNLEEFIRLKLRAEQALQASQVAENELRR	474
Homo_sapiens	RLTQELQQAKNMHNVLQALDKLTSVKQQLERNLEEFIRLKLRAEQALQASQVAENELRR	479
Pan_troglodytes	RLTQELQQAKNMHNVLQALDKLTSVKQQLERNLEEFIRLKLRAEQALQASQVAENELRR	479
Macaca_mulatta	RLTQELQQAKNMHNVLQALDKLTSVKQQLERNLEEFIRLKLRAEQALQASQVAENELRR	479
Callithrix_jacchus	-----	
Canis_lupus_familiaris	RLTQELQQAKNTHNVLQALDKLTSVKQQLERNLEEFIRLKLRAEQALQASQVAENELRR	480
Equus_caballus	RLTQELQQAKNTHNVLQALDKLTSVKQQLERNLEEFIRLKLRAEQALQASQVAENELRR	477
Bos_taurus	RLTQELQQAKNTHNVLQALDKLTSVKQQLERNLEEFIRLKLRAEQALQASQVAENELRR	479
Heterocephalus_glaber	RLTQELQQAKNTHNVLQALDKLTSVKQQLERNLEEFIRLKLRAEQALQASQVAENELRR	478
Pavo_muticus	KLNLQELQQAKNDFNALQAEFDKVMVAVRQHLNHTSDLTQKLRRAEQALLAAQAKETDLTR	470
Pavo_cristatus	KLNLQELQQAKNDFNALQAEFDKVMVAVRQHLNHTSDLTQKLRRAEQALLAAQAKETDLTR	470
Gallus_gallus	KLNLQELQQAKNDFNALQAEFDKVMVAVRQHLNHTSDLTQKLRRAEQALLAAQAKETDLTR	470
Chelonia_mydas	KLNLQELQQAKNDFNALQAEFDKVMVAVRQHLNHTSDLTQKLRRAEQALLAAQAKETDLTR	477
Xenopus_tropicalis	KMSQEAQQAKNDFNALQAEFDKVMVAVRQHLNHTSDLTQKLRRAEQALLAAQAKETDLTR	474
Rhinatrema_bivittatum	KLNLQELQQAKNDFNALQAEFDKVMVAVRQHLNHTSDLTQKLRRAEQALLAAQAKETDLTR	467
	.....430.....440.....450.....460.....470.....480	

Mus_musculus	SSEEMKKENSLIRSQSEQRTREVCHLEELGKVKVSLSKSQNFAEEMKAKNTSQEIMLRD	532
Rattus_norvegicus	SSEEMKKENSLIRSQSEQRTREVCHLEELGKVKVSLSKSQNFAEEMKAKNTSQEIMLRD	534
Homo_sapiens	SSEEMKKENSLIRSQSEQRTREVCHLEELGKVKVSLSKSQNFAEEMKAKNTSQEIMLRD	539
Pan_troglodytes	SSEEMKKENSLIRSQSEQRTREVCHLEELGKVKVSLSKSQNFAEEMKAKNTSQEIMLRD	539
Macaca_mulatta	SSEEMKKENSLIRSQSEQRTREVCHLEELGKVKVSLSKSQNFAEEMKAKNTSQEIMLRD	539
Callithrix_jacchus	-----	
Canis_lupus_familiaris	SSEEMKKENSLIRSQSEQRTREVCHLEELGKVKVSLSKSQNFAEEMKAKNTSQEIMLRD	540
Equus_caballus	SSEEMKKENSLIRSQSEQRTREVCHLEELGKVKVSLSKSQNFAEEMKAKNTSQEIMLRD	537
Bos_taurus	SSEEMKKENSLIRSQSEQRTREVCHLEELGKVKVSLSKSQNFAEEMKAKNTSQEIMLRD	539
Heterocephalus_glaber	SSEEMKKENSLIRSQSEQRTREVCHLEELGKVKVSLSKSQNFAEEMKAKNTSQEIMLRD	538
Pavo_muticus	NFEVVKKEKNLLDAQYEKKLREIHQLEELGAVKQTLKQSQNFAEEMKAKNTSQEIMLRD	530
Pavo_cristatus	NFEVVKKEKNLLDAQYEKKLREIHQLEELGAVKQTLKQSQNFAEEMKAKNTSQEIMLRD	530
Gallus_gallus	NFEVVKKEKNLLDAQYEKKLREIHQLEELGAVKQTLKQSQNFAEEMKAKNTSQEIMLRD	530
Chelonia_mydas	NFEVVKKEKNLLDAQYEKKLREIHQLEELGAVKQTLKQSQNFAEEMKAKNTSQEIMLRD	537
Xenopus_tropicalis	NFEVVKKEKNLLDAQYEKKLREIHQLEELGAVKQTLKQSQNFAEEMKAKNTSQEIMLRD	534
Rhinatrema_bivittatum	NFEVVKKEKNLLDAQYEKKLREIHQLEELGAVKQTLKQSQNFAEEMKAKNTSQEIMLRD	527
	.....490.....500.....510.....520.....530.....540	

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/CENPept Tue Feb 1 11:39:01 2022

Page 4 of 20

Mus_musculus	LQEKLNQQENSLTLEKLKLALADLERQNCSDLLKKREHHIDQLNNKLNKIEKEFEFTLL	592
Rattus_norvegicus	LQEKLNQQENSLTLEKLKLALADLEGQDCSDLLKKREHHIEQLNDKLNKIEKEFEFTLL	594
Homo_sapiens	LQEKINQQENSLTLEKLKLAVADLEKQDCSDLLKKREHHIEQLNDKLSKTEKESKALL	599
Pan_troglodytes	LQEKINQQENSLTLEKLKLAVADLEKQDCSDLLKKREHHIEQLNDKLSKTEKESKALL	599
Macaca_mulatta	LQEKINQQENSLTLEKLKLAVAELEKQDCSDLLKKREHHIEQLNDKLSKTEKESKALL	599
Callithrix_jacchus	-----	
Canis_lupus_familiaris	LQDKINQQENSLTLEKLKLALADLEKQDCSDLLKKREHHIEQLNDKLSKLEKESKALL	600
Equus_caballus	LQEKINQQENSLTLEKLKLALADLEKQDCSDLLKKREHHIEQLNDKLSKTERESEALL	597
Bos_taurus	LQEKINQQENSLTLEKLKLALADLEKQDCSDLLKKREHHIEQLNEKLSKTERESEALL	599
Heterocephalus_glaber	LQEKINQQENSLTLEKLKLALADLEKQDCSDLLKKREHHIEQLNEKLSKIEKESKTL	598
Pavo_muticus	LEEFKINQQNSLSLEKLKLALADMEKQHFNENLLKEKENHIKEQNCKISKMEEELEGLQ	590
Pavo_cristatus	LEEFKINQQNSLSLEKLKLALADMEKQHFNENLLKEKENHIKEQNCKISKMEEELEGLQ	590
Gallus_gallus	LEEFKIKQENSLTLEKLKLALADTEKQQRSTENLLKEKENHIKEQNCKISKMEEELEALQ	590
Chelonia_mydas	LQEKLNQDASLTLEKLKLAIADLEKQDSTIHLKQRESHTEELNSKISKMEKESKALL	597
Xenopus_tropicalis	AFEKLQDHDSATFLN-LKATVHNLEMERNFAQLLKKRENDFEEIKNNLARMMDDETNSLK	593
Rhinatrema_bivittatum	VQEKLQKDDNSYLLQNLKLTVANLEKQDSEADLLKKREHDIEEISNKLNLKESKESL	587
	.....550.....560.....570.....580.....590.....600	

Mus_musculus	SALELKKKECEELKEEKNQISFWKIDSEKLINQIESEKEILLGKINHLETSLKTQOVS-P	651
Rattus_norvegicus	SALELKKKECEELKEEKNQISCWKSENEKLINQIESEKEILLGKVNHLASLKTQOIS-H	653
Homo_sapiens	SALELKKKYEELKEEKTFLSCWKSENEKLLTQMESEKENLQSKINHLETCLKTQOIKSH	659
Pan_troglodytes	SALELKKKYEELKEEKTFLSCWKSENEKLLTQMESEKENLQSKINHLETCLKTQOIKSH	659
Macaca_mulatta	SALELKKKYEELKEEKTFLSCWKSENEKLLTQMESEKENLQSKINHLETCLKTQOIKSH	659
Callithrix_jacchus	-----	
Canis_lupus_familiaris	IALELKKKYEELKEEKTFLFAHWKSENEQLLRQLESEKGSLSQSKVNHLLETCLKTQOIKSH	660
Equus_caballus	TALELKKKECEELKEEKTFLSRCKSENEQLLSQMKSEKESLSQSKVNHLLETCLKTQOIKSH	657
Bos_taurus	SALELKKKYEELKEEKTFLSRWKSENEQLLNQMESEKESLSQSKVNHLLETCLKTQOIKSH	659
Heterocephalus_glaber	SALELTKKYEELNEEKTQFQSHWKSENEKLLYQMEAEKESLSQSKINHLETCLKTQOIKSH	658
Pavo_muticus	RLLGFKQRECEELKKETNAFSQWRNENDHVINKLKLEKEDMLIHISDLESSLSQSQIENH	650
Pavo_cristatus	RLLGFKQRECEELKKETNAFSQWRNENDHVINKLKLEKEDMLIHISDLESSLSQSQIENH	650
Gallus_gallus	RLLGFKQRECEELKKETNAFSQWRNENDHVINKLKLEKEDMLIHIRDLESSLSQSQIENR	650
Chelonia_mydas	KVGLHKEGECEELKEEKTFLSOWKNENEQLVKNKLESEKEELLKSKINDLESFLKIQVQKSN	657
Xenopus_tropicalis	SHLDHKEKECKELINANISLNSWKVEQEKVVGQISRDKDDLKKIQELEHLLQ-----	647
Rhinatrema_bivittatum	STIGLKEREYEELEKKNLAFSQQRHESDNLINQLRSEKEEMLRNVDLEGCLOT-----	641
	.....610.....620.....630.....640.....650.....660	

Mus_musculus	DSNERIRTLEMERENFTVEIKNLQSMLESKMVEIKTQKQAYLELOQKSESSDQKHQKEIE	711
Rattus_norvegicus	DYSERVRTLEMERENLTVEIRNLHSLDSKMVEIETQKQAYLELOQKSESSDQKHQKEME	713
Homo_sapiens	EYNERVRTLEMDRENLSVEIRNLHNVLDSSKVEVETQKLAYMELQKAEFSDQKHQKEIE	719
Pan_troglodytes	EYNERVRTLEMDRENLSVEIRNLHNVLDSSKVEVETQKLAYVELQKAEFSDQKHQKEIE	719
Macaca_mulatta	EYNERVRTLEMDRENLSVEIRNLHNVLDSSKVEVETQKLAYVELQKAEFSDQKHQKEIE	719
Callithrix_jacchus	-----	
Canis_lupus_familiaris	EYNEKVRTLEIESENLNVEIRNLHNVLDSTVEVETQKQAYVDLOQKAEFSDQKHKKEME	720
Equus_caballus	EYNERVRTLEMERENLNVEIRNLNLTIDSKTVEVETQKQAYVELHOKAEFSDQKHKKEME	717
Bos_taurus	EYNERVRTLEMERENLNVEIRNLQNVLDSTAEAEQKRAYGELQKAEFSDQKHKEIE	719
Heterocephalus_glaber	EYNERIRTLELERDNLSEMRNLCSMVDSTREAEQKQAYEELQKAEFSDQKHKKEME	718
Pavo_muticus	EHSEKFKIMETERDRKNIEIKELRDMLGCKSAELEEQKKVCDELRRAECSDDKKYCKDIE	710
Pavo_cristatus	EHSEKFKIMETERDRKNIEIKELRDMLGCKSAELEEQKKVCDELRRAECSDDKKYCKDIE	710
Gallus_gallus	EHSEKFKIMETERDRKNIEIKELRDMLGCKSAELEEQKKVCDELRRAECSDDKKYCKDIE	710
Chelonia_mydas	ESSETVRIMVNEKEKYSLEIKNLQDMVEYKSEKLEAQKAYDELQKAECSDDKYRKEIE	717
Xenopus_tropicalis	-HGDOVHLLLENDKKNLHTQIRTLQEIIVDAKTVDLQNLVCGELRQNLQDYENQKFNSENE	706
Rhinatrema_bivittatum	-HDEKTRLQSEKDKLCLQIENLNKLVESKTSQLEAQKLAFFDELQKKGECTNKKYKQEE	700
	.....670.....680.....690.....700.....710.....720	

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/CENPept Tue Feb 1 11:39:01 2022

Page 5 of 20

Mus_musculus	NMCLKANKLTGQVESLECKLQLLSSEVVTKDQYQDLRMEYETLRDLLKSRGSSSLVTNED	771
Rattus_norvegicus	NMCLKANKLTGQVESLECKLQLLSSEVETKDQYQDLRMEYETMRDSLQARGSSSLVTDEK	773
Homo_sapiens	NMCLKTSQLTGQVEDLEHKLQLLSNEIMDKDRCYQDLHAEYESLRDLLKSKDASLVTNED	779
Pan_troglodytes	NMCLKTSQLTGQVEDLEHKLQLLSNEIMDKDRCYQDLHAEYESLRDLLKSKDASLVTNED	779
Macaca_mulatta	NMCLKTSQLTGQVEDLEHKLQLLSNEIMDKDRCYQDLHAEYESLRDLLKSKDASLVTNED	779
Callithrix_jacchus	-----	
Canis_lupus_familiaris	NMCLKISELTGQVEDLEHKLQLLSSEVIDKDHRYQDLQAEYESLQDLLKPKDSSSLVTNEA	780
Equus_caballus	NMCLKVSQLTGQVEDLEHKLQLLSSEIMDKDQRYQDLRAECESLRDQLKSKDSSSLVTNEA	777
Bos_taurus	NMCLKISHLTGQVEDLEHKLQLLSSEIMDKDQRYQDLHAEESESLRDLLKSRDSSAMTIEP	779
Heterocephalus_glaber	NLCLQTSQLTGQVEDLEQKLQLLSRELMDKAQLYQDLQAEYENLRDLLKSKDSSLSQ-GD	777
Pavo_muticus	NMSCKILQLTNQVSELEEKIQLAASEGLOREQYYHDLGGEYKICCLVKAKDTSEMTEDR	770
Pavo_cristatus	NMSCKILQLTNQVSELEEKIQLAASEGLOREQYYHDLGGEYKICCLVKAKDTSEMTEDR	770
Gallus_gallus	NMSCKILQLTNQVSELEEKIQLAASEGLOREQYYHELLGEYKICCLVKAKDTSEMTEDA	770
Chelonia_mydas	NMTWKISQLTNQVEILEQKLQLAANEVLEKDCYHELHGKYEKICYLVKSKDISSEVTEDR	777
Xenopus_tropicalis	KLQLQISELENAIKEQNCSASLKD-----	730
Rhinatrema_bivittatum	NMLLQITQLTROVEELEPSIFIEK-----	724
	.....730.....740.....750.....760.....770.....780	

Mus_musculus	NQRSSSEDNQRSSSEDNQRGSLAFEEQPAVSDSFANVMGRKGSINSE-----RSDCSVDGG	825
Rattus_norvegicus	NQRSSS-----AFEEQPAVSHSFANLVGEKGSYSE-----RSDSSVDRG	813
Homo_sapiens	HQRSLL-----AFDQOPAMHHSFANIIGEQQSMPSE-----RSECRLEAD	819
Pan_troglodytes	HQRSLL-----AFDQOPAMHHSFANIIGEQQSMPSE-----RSECHLEAD	819
Macaca_mulatta	HQRSLL-----AFDEQPAMHNSFANIIEEQGSMLESE-----RSECHLEAD	819
Callithrix_jacchus	-----	
Canis_lupus_familiaris	HHRSL-----AFEQSSAMNNSFANIIGEQQSMPSE-----RSKCHLEAD	820
Equus_caballus	HHRSL-----AFEQSSAMNSFVNIIGEQQESVPSE-----RSECLPKVD	817
Bos_taurus	HQRSRL-----AFEQSSALNNSFANIIGEQQESVPSE-----RSRCHVATD	819
Heterocephalus_glaber	HQRSCL-----AFEQSSAMSTSFVNAMGEQQSSSSG-----RSQCLLDAD	817
Pavo_muticus	EGGLQSGQDETVD-----NKQLAADKPPFAKGHG-----CARALLGIEK	809
Pavo_cristatus	EGGLQSGQDETVD-----NKQLAADKPPFAKGHG-----CARALLGIEK	809
Gallus_gallus	EDYLQSGQDETVLG-----NKQLAANKPPVAKGHG-----CTRALLGIEK	809
Chelonia_mydas	ELNLQNKHCRTVLGG-----EEQLPVKNSTITDVLMPREPGTISEDWEDHCAKAVLETDK	830
Xenopus_tropicalis	-----	730
Rhinatrema_bivittatum	-----	724
	.....790.....800.....810.....820.....830.....840	

Mus_musculus	RSPEHIAILQNRVTSLESSLESQNMNSDLQMCCELLQIKGEVEENLSKAEQIHQNFVA	885
Rattus_norvegicus	QSPENVAVLQSRVTILLESSLESQNMNSDLQKQCEELLQIKGEIEENLIKADQIHQNFVA	873
Homo_sapiens	QSPKNSAILQNRVDSLEFSLESQNMNSDLQKQCEELVQIKGEIEENLMKAEQMHQSFVA	879
Pan_troglodytes	QSPKNSAILQNRVDSLEFSLESQNMNSDLQKQCEELVQIKGEIEENLMKAEQMHQSFVA	879
Macaca_mulatta	QSPKNSAILQNRVDSLEFSLESQNMNSDLQKQCEELVQIKGEIEENLMKAEQMHQSFVA	879
Callithrix_jacchus	-----	
Canis_lupus_familiaris	QSPRSSAVLQNRVTSLEFSLESQNMNSDLQKQCEELVQIRGEIEENLIKAEQMHQSFVA	880
Equus_caballus	QSPKTSVVLQHRVVSLEFSLESQNMNSDLQKQCEELVQIRGEIEENLIKAEQMHQSFVA	877
Bos_taurus	QSPKSSSMLQNRVVSLEFSLESQNMNSDLQKQCEELVQIKGEIEENLMKAEQMHQSFVA	879
Heterocephalus_glaber	QSPKSSAILHNRVVSLEFSLESQNMNSDLQKQCEELVHIKGEIEENLIKAEQMHQSFVA	877
Pavo_muticus	--MKDLMVLQDQISSLEISPVAKQLNSDQCHODEDLQIKSETEERLCDEQRHESFVT	867
Pavo_cristatus	--MKDLMVLQDQISSLEISPVAKQLNSDQCHODEDLQIKSETEERLCDEQRHESFVT	867
Gallus_gallus	--MKDMMVLQDQISFLEISPVAKQLNSDQCHODEDLQIESETEERLCDEQRHESFIT	867
Chelonia_mydas	NDGQDMSILQDQVSSLEISLMAQKQFKSLLOKPYENLVEIKGETEKKLVEAEQMHGSFVT	890
Xenopus_tropicalis	-----SSYCENLLFQEKQLNSEMQKMKELLLEKEDIQKCLNEAEVLHEQFVT	778
Rhinatrema_bivittatum	-----ISSLEFSLELOKMIIALQNSEELQDKTVAEQHRTEFEKMLESFVT	772
	.....850.....860.....870.....880.....890.....900	

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/CENPept Tue Feb 1 11:39:01 2022

Page 6 of 20

Mus_musculus	ETNQCSISKLOEDAAVHQNIVAETLATLESKEKELOLLKEKLEAQQTEVQKLNKNCLLEG	945
Rattus_norvegicus	ETNQRIGKLOEDAAVHQNIVAETLATLESKEKELOLLKEQLEAQQTEVQKLEKNCLLEG	933
Homo_sapiens	ETSQRISKLOEDTSAHQNVVAETLSALENKEKELOLLNDKVEEQAEIQELKKSNNHLLLED	939
Pan_troglodytes	ETSQRISKLOEDTSAHQNVVAETLSALENKEKELOLLNDKLETEQAEIQELKKSNNHLLLED	939
Macaca_mulatta	ETSQRISKLOEDTSAHQNVVAETLSALENKEKELOLLNDKLATEQAEIQELKQSNHLLLED	939
Callithrix_jacchus	-----	
Canis_lupus_familiaris	ETSQRISKLOEDSSVHQNVAETLVALENKEREFOLENEKLETEQAEIQELKKSNNHLLLE	940
Equus_caballus	ETSQRISKLOEDTSVHQNVAETLVALEDKERELOLLNEKLETEQAEIQELKKSNNHLLLE	937
Bos_taurus	ETSQRISKLOEDTSVHQNVAETLAALLESKERELQLLNEKLETEQAEIGELKKNHLLLE	939
Heterocephalus_glaber	ETSQRICKLOEDTSVHQNVAESLVALEHKEKELOLWKARLESEQVETIEELKKSNNQLLED	937
Pavo_muticus	ETNQHISNLOADISAHQKSIRRTVAIIIEKDLOQLSLRERLENQOTELQDLKVNKNKFLED	927
Pavo_cristatus	ETNQHISNLOADISAHQKSIRRTVAIIIEKDLOQLSLRERLENQOTELQDLKVNKNKFLED	927
Gallus_gallus	ETNQYISNLOADISAHQKSIRKTVAIIIEKDMQLSLRERLENQOTELQDLKTSNKFLED	927
Chelonia_mydas	ETKNHIRNLQGDTSAAQDCIDKTLAALAEKDKQLHTLNKELETOQAEIWDLKINNKLLED	950
Xenopus_tropicalis	GSRSHMESLQENISSKQNYIESIECAVREKEEQITTLTEKLGVLNANLQSVQEKKNELND	838
Rhinatrema_bivittatum	ETNKHERTLOEDASSHTNCIET-KLTTLKEKEQLLOTLKELEIQADMQALINKNKILEG	831
	.....910.....920.....930.....940.....950.....960	

Mus_musculus	TLKELQLLSDTLSSSEKKEMNSIIISLSKKNIEELTQANEALKEVNEALEQEKMNLLQKHEK	1005
Rattus_norvegicus	ALKELOLLTDTLSSSEKKEMNSIIISLRKKDIEELTQANGALKEVNEALROEKMNLLQHQEE	993
Homo_sapiens	SLKELOLLSETLSLEKKEMSSIIISLNKREIEELTQENGTLKEINASLNQEKMNLIQKSES	999
Pan_troglodytes	SLKELOLLSETLSLEKKEMSSIIISLNKREIEELTQENGTLKEMNASLNQEKMNLIQKSES	999
Macaca_mulatta	SLKELOLLSETLSLEKKEMSSIIISLNKREIEELTQENATLKEINASLNQEKMNLIQKSES	999
Callithrix_jacchus	-----	
Canis_lupus_familiaris	SLKELOLLSETLSSEKKEMSSIIISLNKREIEEDLAQENETLKEINATLNQEKITLLQKSES	1000
Equus_caballus	ALKELOLLSETLSSEKKEMSSVISLNKREIEELTQENGTLKEINAAALNQEKINLLQKSES	997
Bos_taurus	SLKELOLLSETLSLEKKELNSIIISLNKKDIEELTQENGTLKEINATLTQEKMNLIQKTES	999
Heterocephalus_glaber	SRKELOLLSETLGSEKKEMSSVISLSKKEIEELTQENGTLKEINEILNQEKMNLVQKNEK	997
Pavo_muticus	SVRQLKLMSETWSSEKKDMSSVICSYSKIEEELTEENATLKDLSRDLEQNQIALLEANRN	987
Pavo_cristatus	SVRQLKLMSETWSSEKKDMSSVICSYSKIEEELTEENATLKDLSRDLEQNQIALLEANRN	987
Gallus_gallus	SVRQLKLMSEMWSSEKKDMSSVICSYSKIEEELTGENATLKDLSRDLEQNQITLLEANRN	987
Chelonia_mydas	SVKQLQLVCDTWNFKKDMSTMLSLREKEIEDLTEENGTLKGINKALEQEKVDLLETNII	1010
Xenopus_tropicalis	KLQELNLLSESWPLERERLNSQISLNREEIERLTEENKRTHQVNDPHNDQE-----	889
Rhinatrema_bivittatum	EIEQLHHLSETWCSEKENLSIIISLSKHELEQLTERNYKLEELNKALHCEKNELLEVNLO	891
	.....970.....980.....990.....1000.....1010.....1020	

Mus_musculus	ITSCIAEQERSIAELSDQYKQERLQLLQRCFEETAVLEDLRGNKYTAQENNAKLECMLE	1065
Rattus_norvegicus	ITRCVAEGERSIAELSGQYKQERLLLLQRCFEETETVLEGLRGDYKAAQENNAKLECMLE	1053
Homo_sapiens	FANYIDEREKSISELSDQYKQEKLLQRCFEETGNAYEDLSQYKAAQEKNSKLECLLNE	1059
Pan_troglodytes	FANYIDEREKSISELSDQYKQEKLLQRCFEETGNAYEDLSQYKAAQEKNSKLECLLNE	1059
Macaca_mulatta	FANYIDEREKSISELSDQYKQENLILLQRCFEETGNAYEDLSQYKAAQEKNSKLECLLNE	1059
Callithrix_jacchus	-----	
Canis_lupus_familiaris	FSNCIDERDKSILELSNQYKEERLLLQRCFEETGRAFEDLSEKYKATQEKNSKLECLLNE	1060
Equus_caballus	FSNCIDERDRSISELANQYQERLILLQKCEETGNAFEDLNEKYKAAQEKNSKLESLLNE	1057
Bos_taurus	FSNCIDERDRSISELSNQYKQERLTLLQRCFEETGNAFQDLSEKYKAVQEKNSKLECLLSE	1059
Heterocephalus_glaber	FSNCIEEQEKSISELSNQYKQEKLLQRCFEETRSFEDLSEKYKAAQEKNLRLLECLLNE	1057
Pavo_muticus	ISNSLKEKEEIIISEMSRKHKKEEQCMETRTEEVSRALKVLQAQYKVVEEENNVNMSILRE	1047
Pavo_cristatus	ISNSLKEKEEIIISEMSRKHKKEEQCMETRTEEVSRALKVLQAQYKVVEEENNVNMSILRE	1047
Gallus_gallus	ISNSLKEKEEIIISEMSRKHKKEEQCMETEEISRELKVLQAQYKLVVEEENNVNMSILRE	1047
Chelonia_mydas	FSNSLKEREESISELSRRHKKEERLSLIERVEEIEKELVDLQGYKYSMEEKANANTEGILRO	1070
Xenopus_tropicalis	-TNKESHQLETTQPSAEDKVEPRGLPDGAG-----	919
Rhinatrema_bivittatum	LSNSVKENEKKVSELLKKHRDEREAILDRGNVERELASLQEQYRAVEEKRENLEMLLNE	951
	.....1030.....1040.....1050.....1060.....1070.....1080	

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/CENPeptids Tue Feb 1 11:39:01 2022

Page 7 of 20

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Mus_musculus          CTALCENRKNELEQLKETFAKEQOEFLTKLAFAEERQNRKLMLELEIEQOTVR---SEITN 1122
Rattus_norvegicus     CTALCENKKNELEQLKETFAKEQOEFLTKLAFTEEQNRKLVLELETEPOTVR---SEITN 1110
Homo_sapiens          CTSLCENRKNELEQLKEAFAKEHQEFLTKLAFAEERNQNLMLELETVQOALR---SEMTD 1116
Pan_troglodytes       CTSLCENRKNELEQLKEAFAKEHQEFLTKLAFAEERNQNLMLELETVQOALR---SEMTD 1116
Macaca_mulatta        CTSLCENRKNELEQLKEAFAKEHQEFLTKLAFAEERNQNLMLELETVQOALR---SEMTD 1116
Callithrix_jacchus    -----
Canis_lupus_familiaris CTSACENRQKELEHLKETFAREHCAFVTKLALAEETNQNVLVLELGAMQOQLR---SEMD 1117
Equus_caballus        CTSVCENKKNELEQLKEAFAREHCAFVTKLALAEERNQNLILELGAVQOQLR---SEITD 1114
Bos_taurus            CTGVCEDRKNELGQLKETFAREHCAFVSQALALAEERNQNLIVELETVQOALQ---SEITD 1116
Heterocephalus_glaber CNSVCESRKNELEQLKETFAKEHQEFLTKLTFAEEQNKLIIEFEVVOQALK---SEIRD 1114
Pavo_muticus          QTALFEEKKAELEQEEKLVLENKDIHKLIASEEMKKNLHLEQOQLQSG-----FSD 1100
Pavo_cristatus        QTALFEEKKAELEQEEKLVLENKDIHKLIASEEMKKNLHLEQOQLQSG-----FSD 1100
Gallus_gallus         QTVVFEEKKAELEQEEKLVLENKYILHKLIASEEIKKLIQELQOQLQSG-----FSD 1100
Chelonia_mydas        QKSHFQESKAESERQEQQLRDERNEFFSKLVSLGKNDLIQELEKVOSELQFKOSEIAH 1130
Xenopus_tropicalis    ----- 919
Rhinatrema_bivittatum QTSHFLETKEFEQECEREFYNMNEKYKLLALSEESNKALKEKLENLQKH-----AEN 1004
.....1090.....1100.....1110.....1120.....1130.....1140

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Mus_musculus          TNKHSMSATDGLRQECITLNEEQNEQNEVS-NLTHENEQLMELTQTKHDSY-LAVEPVE 1180
Rattus_norvegicus     INKHPVSETDALGQESWSSKEEQKEKQKEVS-NLTPENEQLMELTQTKHDYYHLEVEPVE 1169
Homo_sapiens          NONNSKSEAGGLKQEIIMTLKEEQNKMQKEVN-DLLQENEQLMKVMKTKHECNLESEPIR 1175
Pan_troglodytes       NONNSKSEPGGLKQEIIMTLKEEQNKMQKEVN-DLLQENEQLMKVMKTKHECNLESEPIR 1175
Macaca_mulatta        TRNNSKSETDGLKQEIIMTLKEEQNKMQKEVN-DLLQENEQLMKVMKTKHECNLESEPIR 1175
Callithrix_jacchus    -----
Canis_lupus_familiaris IHINSKSEVDGLK-QIMTLKEEQGNIQKELN-SLIQEKHELM-LMETKQEHQILEAEPPVS 1174
Equus_caballus        IONNSKSEADGLKQEIIVTLKEEQSKMQQEVN-ALLQENEHLIKLMKTEHEHONLELEPAR 1173
Bos_taurus            IONSSKRETDGLKQEIIMNLKEEQNKMQQEVN-ALLQENEHLMELMKTKHEHCLELEPIQ 1175
Heterocephalus_glaber LHSSSKSEADGLRQETMTLKEEQNKMQKEVN-DLLQENEQLTKLTKTIHEGOHLKLEPLR 1173
Pavo_muticus          TECVPSPELDCLKQEMS NVKATONAVQEQHGTVCISREQLVKKLGTKSES-LVYDFSCE 1159
Pavo_cristatus        TECVPSPELDCLKQEMS NVKATONAVQEQHGTVCISREQLVKKLGTKSES-LVYDFSCE 1159
Gallus_gallus         VERVPSPELDCLKQGMS NVKATONGIQEQHGTVCISGREQLVKELETKSEP-LAYDFSCE 1159
Chelonia_mydas        IONVSSAELDLRQEMNLVRAEQNKMQEEHN-VLLQENEQLSKVIKTKNES-LACDLVHD 1188
Xenopus_tropicalis    --IENTNELEALQOELVHVKEKHCRLQREYD-RLTNANEELTKLDDLRNNEQSLDNITD 976
Rhinatrema_bivittatum EYIQNAKELDCLKKELIHFKEEQKKRESEHN-QLLQVNEHLTEETRARSEQLKVCDLAFE 1063
.....1150.....1160.....1170.....1180.....1190.....1200

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Mus_musculus          N-----SVKATEDEIGKSSS---QYQMDIDTKDISLDSYKAQLVHLEALVRILEVQ 1228
Rattus_norvegicus     N-----SVKATEEEIRKSSS---QYQMDIDTKDISLDSYKAQLVLEALIKVMEVK 1217
Homo_sapiens          N-----SVKERESERNQC NF---KPQMDLEVKEISLDSYNAQLVQLEAMLRNKKELK 1223
Pan_troglodytes       N-----SVKERESERNQC NF---KPQMDLEVKEISLDSYNAQLVQLEAMLRNKKELK 1223
Macaca_mulatta        N-----CVKERESERNQC NF---KPQMDLEVKEISLDSYNVQLVQLEAMLRNMELK 1223
Callithrix_jacchus    -----
Canis_lupus_familiaris D-----SVK-GESEIKKCHV---QLPMDLETGNLPQDAQSQELSSPK----- 1212
Equus_caballus        D-----SVKERESEINRC DL---QLPMDLEVETSLDSYKAQLAQLEAKIRNMELK 1221
Bos_taurus            D-----SEK-EEREINTCHL---QLPMDLDVVDTSPTDCNAQLVQVESKVRNMELK 1222
Heterocephalus_glaber D-----PVTERENEINTCNF---QLQMDLGVRDIAPNNYNAQMVLQLEALIRNTELK 1221
Pavo_muticus          RRLCSDMLRKGTGEEKDIELNKYQLNLELLQMDLEDREISLEKYRLEVMOQLKTALKKMETE 1219
Pavo_cristatus        RRLCSDMLRKGTGEEKDIELNKYQLNLELLQMDLEDREISLEKYRLEVMOQLKTALKKMETE 1219
Gallus_gallus         RKVCSDQLRKIMEEKDTELNKYQLNLELLHMDLEDREVSLENYRLEVMOQLKIDLKMETE 1219
Chelonia_mydas        RRPTSEQLRVSMEEKENELNKYQVKLELLQMDLEDREVSLENYSTQVMQLEAALKSVVERK 1248
Xenopus_tropicalis    LSAYLKE-----KENS LNNSNFVLETLPMDLDEK----- 1006
Rhinatrema_bivittatum KNHSVEES-----LKES ELKKVQVQLELLQMDLENKQSSMEHYIEIVSKQDELRHLKLA 1118
.....1210.....1220.....1230.....1240.....1250.....1260

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/CENPept Tue Feb 1 11:39:01 2022

Page 8 of 20

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Mus_musculus          LDQSEENKKLHLELOQTIRELETKSSQD-----PQSQARTGLKDCDT-AEEKYV 1277
Rattus_norvegicus     LDRSEEEKNSLRQELQTIREFLGTKTSQD-----TQSQARVGLKDCVEAEKYYV 1267
Homo_sapiens          LQSEKEKEKELQHELOQTIRGDLETSLNLD-----MQSQEISGLKDCIDAEEKYI 1273
Pan_troglodytes       LQSEKEKEKELQHELOQTIRGDLETSLNLD-----MQSQEISGLKDCIDAEEKYI 1273
Macaca_mulatta        LQSEKEKEKELQHELOQTIRGDLETSLNLD-----MQSQEISGLKDCIDAEERYI 1273
Callithrix_jacchus    -----DCDIG-----TEEKYI 1223
Canis_lupus_familiaris -----DCDIG-----TEEKYI 1223
Equus_caballus        LQSEEEKEKELQRELOQTIRGELOTGSLQV-----TQSQEVRGLKD---TEEQYI 1268
Bos_taurus            LQKSEKEE---CLOYELQTRELETEDLQD-----PQSQDISGLGDSIDPEEKYI 1270
Heterocephalus_glaber LQSEKDKCEKLOQELQTLRGELGAGNVQD-----CSSQEMSGLMNCEVDAEGKYS 1271
Pavo_muticus          LEKSVREKETLQKQELLVSKELKAS-----CSQLSLLSEDSQLEDN---DDDDD 1264
Pavo_cristatus        LEKSVREKETLQKQELLVSKELKAS-----CSQLSLLSEDSQLEDN---DDDDD 1264
Gallus_gallus         LEKSVREKETLQKQELLVSKELKAS-----YSQLRLLSEDSQLEDN---DDD-- 1262
Chelonia_mydas        LEESEKEKERMQQELQTIKEELETDPKLVVDKNDQSVESVVDADSQVNSKREIDEKYS 1308
Xenopus_tropicalis    -----DDDDDD-----1006
Rhinatrema_bivittatum LEKSESERKIALQEFYAVKTELLE-----NLNAKEMPLIEQLIKFSDHDIHADYK 1169
.....1270.....1280.....1290.....1300.....1310.....1320

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Mus_musculus          SMLQELSLASQENNAHLQCSLQTAVNKLN---ELGKMCVLRVEKLQLESELNDSRTECI 1333
Rattus_norvegicus     SVLQELSLTSQENNVHLQCSLQTAAMNKLN---ELGKMCVLRVEKLQLESELNDSRSECI 1323
Homo_sapiens          SGPHELSTSQNDNAHLQCSLQTTMKNLN---ELEKICEILQAEKYELVTELNDSRSECI 1329
Pan_troglodytes       SGPHELSTSQNDNAHLQCSLQTTMKNLN---ELEKICEILQAEKYELVTELNDSRSECI 1329
Macaca_mulatta        SVLHGLSTSQNDNAHLQCSLQTAAMNKLN---ELEKICEILQAEKCELVTELNDSRSECI 1329
Callithrix_jacchus    -----DCDIG-----TEEKYI 1223
Canis_lupus_familiaris SVLHELSTSQNDNAHLQCSLQAAMSKLS---ELEKMCEMLQVEKLELMSELNDSRSECI 1279
Equus_caballus        SVLHELSTSQNDNAHLQCSLQTAAMNKLN---ELEKLCEVLRVEKFELISELNDSRSECI 1324
Bos_taurus            SVLQELSTSQNDNAHLQCSLQTAAMNKLN---ELEKMCEALQVEKSELISELNDSRSECI 1326
Heterocephalus_glaber AVLCELSPRQGDASHQCSLQAALSKLH---ELEKMCEMLQVEKLQVSELKDSRAECI 1327
Pavo_muticus          VSHNICGKRAIDELVLSSSLQVITNKL---OLEKICERLQENNVAFASAFKDSKTDGI 1320
Pavo_cristatus        VSLNICGKRAIDELVLSSSLQVITNKL---OLEKICERLQENNVAFASAFKDSKTDGI 1320
Gallus_gallus         VSHN-CGKRGMDQFVLSSSLQVITNKL---ELEKICERLQENNVAFASAFKDSKTDGI 1317
Chelonia_mydas        LVLHELSTSQNDVQLVSLQMTMNRNLN---ELEKMCEMLQIEKLVLTELNDSKTECT 1364
Xenopus_tropicalis    -QIHGCT---DSPTLKGTPTNPKS-----NNDLDLEQELSTLQKQ--- 1043
Rhinatrema_bivittatum EEIKQACSSDFHKLTLAQSENTIFSSLOVSKPKLEKICEVVOLEDFOLTSLEDDLKSECT 1229
.....1330.....1340.....1350.....1360.....1370.....1380

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Mus_musculus          TATSQMTAEVEKLVSEMKMLNHESALSQNELMKDTSGGFHF---DKAN-HSSVFLTPLDS 1389
Rattus_norvegicus     TATSQMAAEVEKLVNEMKMLNHENALSHGELMKDTADVEFD---DKPN-HSSVFLTPLDN 1379
Homo_sapiens          TATRKMMAEEVGKLLNEVKILNDDSGLLHGELVEDIPGGEFG---EQPNEQHPVSLAPLDE 1386
Pan_troglodytes       TATRKMMAEEVGKLLNEVKILNDDSGLLHGELVEDIPGGEFG---EQPNEQHPVSLAPLDE 1386
Macaca_mulatta        TATRKMMAEEVGKLVNEVKILNDDSGLLHGELVEDIPGGEFG---EQANEQHPMCLAPLDE 1386
Callithrix_jacchus    -----DCDIG-----TEEKYI 1223
Canis_lupus_familiaris TATSKMTEVMEKLVNEVKILNDESGLLQGELEKEMAEGESG---EQQNEQKGASLNPLDD 1336
Equus_caballus        TATSKMAGEVEKLVNEVKMLNDENDLLQGEFVKEMPEGEFG---EQQNEQKSVAVNPLDD 1381
Bos_taurus            TATSKMAEEVGKLVNEVETLNDENALLQGEVETPEGEFG---EQQDEQTPVSLNPLDD 1383
Heterocephalus_glaber TATSRMAEEVEKLVNEMKMLNDENSLPQAEVPGEMLASEFD---RQQNEQTPVSLNPLDD 1384
Pavo_muticus          TDINKVAEEKENIINTN--LRIDKAAFLDELTDSDNSNLRMDCGNKEMSFRFKECSTGS 1378
Pavo_cristatus        TDINKVAEEKENIINTN--LRIDKAAFLDELTDSDNSNLRMDCGNKEMSFRFKECSTGS 1378
Gallus_gallus         RDINKMAEEKENIINTN--LRTEKAAFQDELTDSDNSDLRMDCGNKEISFRFKEHSTGS 1375
Chelonia_mydas        T-TDKMAEEVEKIVSEVKILKDEKAIFPDELMDQNVENEVGIHFDDEQMSFKSLECESTEP 1423
Xenopus_tropicalis    DIFSFDIDQAEERATNISDLLVN---ISDHQIGDRPS-----SSLDSSQCDSDS- 1087
Rhinatrema_bivittatum EMADKMAEEAEKLVNEIKLLKDEKSALHTELINLREKK-----HKVSFEIASCYER- 1280
.....1390.....1400.....1410.....1420.....1430.....1440

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/CENRapsTue Feb 1 11:39:01 2022

Page 9 of 20

Mus_musculus	SNFCEQMTLSKKEVRVHFAELQEKFSCLQSEHKILHDQHCEVSSKMSALRSYVDTLKAEN	1449
Rattus_norvegicus	S---EQMTSSNKEVRVHFAELQEKFSCLQSEHKILHDQHCEVSSKMSALRSYVDTLKAEN	1436
Homo_sapiens	SNSYEHLTSLDKEVQMHFAELQEKFLSLQSEHKILHDQHCOMSSKMSSELQTYVDSLKAEN	1446
Pan_troglodytes	SNSYEHLTSLDKEVQMHFAELQEKFSLSQSEHKILHDQHCOMSSKMSSELQTYVDSLKAEN	1446
Macaca_mulatta	SNSYEHLTSLNKEVQMHFAELQEKFSLSQSEHKILHDQHCOMSSKMSSELQTYIDSLKAEN	1446
Callithrix_jacchus	-----	
Canis_lupus_familiaris	RNCYEHLTSLNKEVQMHFAELQEKFLSLQSEHKILHDQHCEVSSKMSSELQSYVDALKAEN	1396
Equus_caballus	GDFCEPLTSLNKEVQMHFAELQEKFSLSQSEHKILHDQHCOMSAKMSQLQSYVDMLKAEN	1441
Bos_taurus	SNFYEHLTMSKKEVQMHFAELQEKFSLSQSEHKILHEQHCLMSSKMSSELQSYVDTLKAEN	1443
Heterocephalus_glaber	SNSYEQLTSLNKEVQTHFAELQEKFSLSQSEHKILHDQRCOMSSKMSSELRSYVDTLKAEN	1444
Pavo_muticus	SSDYEDLKLSSSEEVKIHFAEIKEKLFQFQNEHISLYEQCCSMVSKITELQSCIKILKAEN	1438
Pavo_cristatus	SSDYEDLKLSSSEEVKIHFAEIKEKLFQFQNEHISLYEQCCSMVSKITELQSCIKILKAEN	1438
Gallus_gallus	SSDYEDLKLSSSEEVKIYFAEIKDKFFQFQNEHMKLYEQHCSMVSKIMELQSCIKILRAEN	1435
Chelonia_mydas	NYNVEDLKLSSNKEVKMHFAEVKEKIFSLQREHKILHEQHCSMIFKVSELOQSCIKTLKAEN	1483
Xenopus_tropicalis	----INLN-----KDILGLRISGGWATKP----POSISDNENSGLLTSPN	1125
Rhinatrema_bivittatum	----ENLDVFNKEDKMHFAEIKEKFLSLQTEHQIILEQHNAMMSQMLELQYSTIILRTEK	1336
	.....1450.....1460.....1470.....1480.....1490.....1500	

Mus_musculus	SALSMSLRTLQGDVLVKEGEPAAEGGHGLPLSF-CGADSPSLTNFG-----ETSFYK	1499
Rattus_norvegicus	SVLSMNLRTLQGDVLVKEKEPGAEDGHILPLSF-CRTDSPTLTNFG-----ENSFYK	1486
Homo_sapiens	LVLSTNLRNFQGDVLVKEMQLGLEGLVPSLSSCVPDSSSLSSLG-----DSSFYR	1497
Pan_troglodytes	LVLSTNLRNFQGDVLVKEMQLGLEGLVPSLSSCVPDSSSLSSLG-----DSSFYR	1497
Macaca_mulatta	LVLSTNLRNFQGDVLVKEMQPGLEGLVPSLSS-CVPDPSLSSLG-----DSSFYK	1496
Callithrix_jacchus	-----	
Canis_lupus_familiaris	SMLSTSLRNFQGDVLVKEEMPEPQAGHFLSLSFSCVTDSPSLTSLG-----ESSFCK	1447
Equus_caballus	SVLSTSLRNSQGDVLVKEEMPGPREGRFLSLSFSCVTDSSSITSLG-----ESSFYK	1492
Bos_taurus	SVLSMSLRSSQGDVLVKEVPPGPGEEHLLSLSFSCVTDSPGKASLG-----ESSFYK	1494
Heterocephalus_glaber	SALSVMNLRNLQGDLAGMKP---EERILSLSS-CVINSPSETSFG-----EYSFHK	1491
Pavo_muticus	SVLSASMSSVHIDSLRMSLFSSQNDTQSKLDETKS--AGSLLDVT--FSVVSKVDNCSNS	1494
Pavo_cristatus	SVLSASMSSVHIDSLRMSLFSSQNDTQSKLDETKS--AGSLLDVT--FSVVSKVDNCSNS	1494
Gallus_gallus	SALSASMSSVHIDSLRILLSSSQNDTQSKLDETKS--TDSLLDVT--FSEVSKVDNCSNA	1491
Chelonia_mydas	SALSTSLNKVNADSVFQVTSRQKGEFKLEETKSFSPSCLNEMPYFPEANLLELSFDS	1543
Xenopus_tropicalis	EGTSKRLKETAEINILKSPVPPSORSSPSMNSNNR-GGREANRKS-----	1169
Rhinatrema_bivittatum	LTLNLTLLKKFHPSSIEIQVPFSTTDEELKLSETNS-FSPSKVRESSFLKEAHKVESTFGK	1395
	.....1510.....1520.....1530.....1540.....1550.....1560	

Mus_musculus	DVLEQTGDTCHLS-LEGNASANSCLDEEFSLSLEETLTKESPPAPGRT-----VEG	1552
Rattus_norvegicus	DVLEQTGDTSHLS-LEGNASANPCDVDEVSYSLEENLTKKEIPFASLRT-----VEE	1539
Homo_sapiens	ALLEQTGDMSSLNLEGAVSANQCSVDEVFCSSLOEENLTRKETPSAPAKG-----VEE	1551
Pan_troglodytes	ALLEQTGDMSSLNLEGTVSANQCSVDEVFCSSLOEENLTRKETPSAPAKG-----VEE	1551
Macaca_mulatta	ALLEQTGEMSLNLEGTVSANQCSVDEVFCSSLLEENLTKEKMPAPAKG-----VEE	1550
Callithrix_jacchus	-----	
Canis_lupus_familiaris	DLLDOTGEASLLNLDGTIAANQSNLEEGSCCSPEEENLTKEILSAPGRS-----VED	1501
Equus_caballus	ELLEHTGEASLLNLEGDVSANRSPAEEASSLSLEEVLTKTDTIPAPART-----IEE	1546
Bos_taurus	DLLEHTTETSLLNLEGTVSANQSNVEEVSCSSLEENLTKKEIPSVPLRS-----ARE	1548
Heterocephalus_glaber	DVLEQTGDTSLNLEGSVSAN-----ASLEETLTMKAPATLRS-----VEE	1536
Pavo_muticus	SVCKWTEEINQLKSSVEGISEDVAEV-LIENDHSSHILDSVKELRSTPSKSNPESRIKE	1553
Pavo_cristatus	SVCKWTEEINQLKSSVEGISEDVAEV-LIENDHSSHILDSVKELRSTPSKSNPESRIKE	1553
Gallus_gallus	GVCKWTEEINQLKNSVEGMSEDAQV-LIEDDHSSHILDSVKELRSTPSKSNPESRIKE	1550
Chelonia_mydas	DLCKWREESIWLNISQESVLGDKTEISLVEEPHNDQALDFIAKRESIIHRKSNLESKIRE	1603
Xenopus_tropicalis	-----IPCKSAADSILG-----	1181
Rhinatrema_bivittatum	NLCKLTDLNTDLQHFEEADLANKTDSILGEHFLNSSALDRSKVEVFPFRAAGIKTKVEE	1455
	.....1570.....1580.....1590.....1600.....1610.....1620	

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/CENPapsTue Feb 1 11:39:01 2022

Page 10 of 20

Mus_musculus	LEVLQVYLSLKNLEEKTESQRIMKNKEIEKLEQLLSSERKELSLRKQOYLSKEQWQQ	1612
Rattus_norvegicus	LEILQVYLSIKNLEEKIESQRIMKNKEIEELEQLLSSERKELSLRKQOYLSKEQWQQ	1599
Homo_sapiens	LESACEVYRSLEKLEEKMESQIMKNKEIQELEQLLSSERQELDLRKQOYLSENEQWQQ	1611
Pan_troglodytes	LESACEVYRSLEKLEEKMESQIMKNKEIQELEQLLSSERQELDLRKQOYLSENEQWQQ	1611
Macaca_mulatta	LESACEAYRSLEKLEEKMESQIMKNKEIQELQLLSYERQELDLRKQOYLSENEQWQQ	1610
Callithrix_jacchus	-----	
Canis_lupus_familiaris	LETQCMYLSLKKLEDKIESQEILKNKEIKELEQLLSSEREELDSLARKOYLSENEQWQQ	1561
Equus_caballus	LETLCQMYRQSLQKLEEKMESQIMKNKEIEELEQLLSCERKELDLRKQOYLSENEQWQQ	1606
Bos_taurus	LETLCQTYLESLEKLEEEIESQGITKNKEIKELKELLSSSREELDDLARKOYLSENEQWQQ	1608
Heterocephalus_glaber	LKTLQCGYLSLKNLQEKMESQAMMKDKIEQLRLSSERTELDLRKQOYLSQNEQWQQ	1596
Pavo_muticus	LEMLCQ-----	1559
Pavo_cristatus	LEMLCQ-----	1559
Gallus_gallus	LEMLCQIYEKVIKVLQNLHIQENMKTEIEQEMKNIMLSERREIDKL--QNLSDKKEWQQ	1608
Chelonia_mydas	LQMICQTYEKSISKFEEQFQSRNEMKN-EIQELKQLIISERKESDDLARKONISDNEQWQQ	1662
Xenopus_tropicalis	-----KSLEDQLWMMAVMASGDAGDFKEFLTYQTEVDELKKOHLLEMEACKQ	1229
Rhinatrema_bivittatum	LDALCHTYEQSIKRLQEQFVSHENVKNEIQKQLMLIVNQRELDCLKTOHSSENNQWQQ	1515
	.....1630.....1640.....1650.....1660.....1670.....1680	

Mus_musculus	KLTSVTLEMESKLAAEEKQOTKTLSELEVARLQQLDLSSRSLLGTDLESVVR-CQNDN	1671
Rattus_norvegicus	KLTSVTLEMESKLAAEEKQOTKNLSLELEVARLQQLDLSSRSLLGTDLEGAVR-GPNDG	1658
Homo_sapiens	KLTSVTLEMESKLAAEEKQTEQLSLELEVARLQQLDLSSRSLLGIDTEDAIQ-GRNES	1670
Pan_troglodytes	KLTSVTLEMESKLAAEEKQTEQLSLELEVARLQQLDLSSRSLLGIDTEDAIQ-GRNES	1670
Macaca_mulatta	KLTSVTLEMESKLAAEEKQTEQLSLELEVARLQQLDLSSRSLLGIDTEDAIQ-GRNES	1669
Callithrix_jacchus	-----	
Canis_lupus_familiaris	KLTSVTMEMESKLAAEEKQTEHLSFELEVARLQQLDLSSRSLLGTDLEDALR-GGNTS	1620
Equus_caballus	KLTSVTMEMESKLAAEEKQTEQLSLELEVARLQQLDLSSRSLLGADVEDVIR-DGNDG	1665
Bos_taurus	KLTDVTAEMESKLAAEKRAEHLTLELEVARLQQLDLSSRSLLGTDIEDAIL-GGNDG	1667
Heterocephalus_glaber	KLTSVTLEMESKLAAEEKQTEHLSLELEVARLQQLGLELTSQSWLGADIDDAIQNHQNGS	1656
Pavo_muticus	-----	1559
Pavo_cristatus	-----	1559
Gallus_gallus	KLNYLTTEMECKLAEEGK-TKNLSFDLKTASPOLQVLNSGSLSLPCTDENTTQKKNNT-	1666
Chelonia_mydas	KLNVMTMEMEYKLAAEEKQIEHLSLELEVARLQQLDLSSRSLLCIDIEDITSPNEQENN	1722
Xenopus_tropicalis	KMTAQAAELEVKLAAEEKQTEYLSHELEAARLEQLCLDLARSFLSFDTEDLTKTLEVAN	1289
Rhinatrema_bivittatum	KLKELTTEMETKLAIEKQTEYLSLELESARLEQLCLDLSSRSILVCADSEDHLRIPFEQK	1575
	.....1690.....1700.....1710.....1720.....1730.....1740	

Mus_musculus	YDIKESEVYISETTEKTPKQDIDQCDKDIQDLGLETS-VTESETTRLTGEGCEEQPPK	1730
Rattus_norvegicus	YAIKESEVYISETTEKTPKQDINQCDNDVQDLCLETS-VTETETTRLTGEGCEEQPSK	1717
Homo_sapiens	CDIS--KEHTSETTERTPKHDVHQICDKDAQDNLNLDIEKITETGAVKPTGECSSGEQSPD	1728
Pan_troglodytes	CDIS--KEHTSETTERTPKHDVHQICDKDAQDNLNLDIEKITETGAVKPTGECSSGEQSPD	1728
Macaca_mulatta	CDIS--KEHTSETTERTPKHDVHQICDKDVQDRLRLDIEKITETGAVKLTGECSSGEQSQD	1727
Callithrix_jacchus	-----	
Canis_lupus_familiaris	CDVKESEETLTETKERTPKRDIHQICEGVQDNLNLEMEKITKTSPVRFTGEWSKQSPPE	1680
Equus_caballus	CDIKESEENTSETRARTPKDDIHQIGDKADQDLSLEVEKITETGAVNLTGEWSREQSPD	1725
Bos_taurus	CDIRESEETLTETKERTPKHEIHQICEKDVQDLSLEMEKITKTGATKLTGEWSREQSSPE	1727
Heterocephalus_glaber	CDIKESEETLTETKERTPKQDSHQICEEVQECLSVESEETTGSPLVPRG---AREVPSPE	1713
Pavo_muticus	-----	1559
Pavo_cristatus	-----	1559
Gallus_gallus	----LYQLGVPVGNPALRKNKPKLIPVEKTAVGETAVHENTTETTESKLVEAFSNKFHRG	1722
Chelonia_mydas	GEHPLQVHSLPNENLAPKREKPEIRLCEQITIEKNSECNVAEVTEARSAAECPAKLISE	1782
Xenopus_tropicalis	Q---SICTVLPPIGKLSLSSSELLTNHNLKNLIQSLESINSETKK--DRSILATNCPPIPN	1344
Rhinatrema_bivittatum	N---QQAHMFSIEKSSPKTNKPQRSECKSNITQIGNSSDQDTTKIVGKSSLVNLGKMNE	1632
	.....1750.....1760.....1770.....1780.....1790.....1800	

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/CENPAsTue Feb 1 11:39:01 2022

Page 11 of 20

Mus_musculus	TNCEAPAEADKTDQCSECISELCS--SNVLVPMVDLEDQGSIONLQLOK-DILNENLRLLP	1788
Rattus_norvegicus	ISCEAPAEADRTQDYSECISELFS-PSVLVPMVDLEDQGSIONLHLQK-DTSNENLRLLP	1775
Homo_sapiens	TNYEPPGEDKTDQGSSECISELFS--GNALVPMDFLGNQEDIHNLQLRVKETSNNENLRLLH	1788
Pan_troglodytes	TNYEPPGEDKTDQGSSECISELFS--GNASVPMDFLGNQENIONLQLRVKETSNNENLRLLH	1788
Macaca_mulatta	TNCKTPGEDKSDQGSSECISELFS--GANASVPMDFLGNQENIONLQLRVKETSNNENLRLLH	1787
Callithrix_jacchus	-----	
Canis_lupus_familiaris	TSYETLVQDKTQGCILD-ISELSLSPNALVPIDFLETQVTIENLQVKESSNNENLRLLH	1739
Equus_caballus	TSHETPVEDKTLGCSECVSELPPSGPNALVPMDFLENQVTIONLQVKESSDENLRLLH	1785
Bos_taurus	SSHETPVEDPAQGCSCISELSLSPNALVPRDFLENQVTIQSLELKVKESSNNENLRLLH	1787
Heterocephalus_glaber	TNYETAVGDQSQGCPEHTYELSTGGSCALSPVEFVENQVSVQTLQVKEALNNENLRLLH	1773
Pavo_muticus	-----	1559
Pavo_cristatus	-----	1559
Gallus_gallus	EECRNMSGKNTSSSHHDSALSFSNSSIFLSSDFFENEISTETHQKEIKQKTIEDPKLIY	1782
Chelonia_mydas	TEYRNTLEKKTIDCHSES---SFSNHNISLTPLDFLENQVTIETLQLOIKQTSSENKLLH	1839
Xenopus_tropicalis	EGDENASSLEENS-----ADSTNSNISDSPVSKLSLQEIETLKMQIHOTTAENLKLLQ	1398
Rhinatrema_bivittatum	AEESITSCKNAG-----SCTYISTNSVLPMDFLENQTMKNLQLOQTSNENLVQLLQ	1686
	.....1810.....1820.....1830.....1840.....1850.....1860	

Mus_musculus	EVEDWDDKVESLLNEIMEADSKLSLQEVOLKMKIATCIQLEKIVKDLRKEKADLSEKLES	1848
Rattus_norvegicus	EVEDWDDKVESLLNEIKEADSKLSLQELQKIKIATCIELEKIVKHLKKEETDLSEKLES	1835
Homo_sapiens	VIEDRDRKVESLLNEMKELDSKLHLQEVOLMTKIEACIELEKIVGELKKENSDLSEKLEY	1848
Pan_troglodytes	VIEDRDRKVESLLNEMKELDSKLHLQEVOLMTKIEACIELEKIVGELKKENSDLSEKLEY	1848
Macaca_mulatta	VIEERDRKVENLLNEMKELDSKLHLQEVOLMTKIEACIELEKIVGELKKENSDLSEKLEY	1847
Callithrix_jacchus	-----	
Canis_lupus_familiaris	VIEERDKKIESLLDEIRDLSKLGLOEAQITTKMEACVELEKIVEELKKEKSNLSEKLES	1799
Equus_caballus	VIEERDKKVESLLNELKELDSKLDLQKVLTTKVETCLELEKTVEELKKEKSDLSEKLES	1845
Bos_taurus	GIEERDQKVENLLNEIKELDSKFHLLLEVLTTKIEACVALEKIVEELKKEKLDLNEKLES	1847
Heterocephalus_glaber	AIEDRDRKVENLLNEIKELDSKLDLQELQKTKIETCLOLEKIVEELQKEKCNLSVKSES	1833
Pavo_muticus	-----	1559
Pavo_cristatus	-----	1559
Gallus_gallus	APEG--HKNVDLFMEVKELNSQVDFQNAQLTLENSLTLELEE-TAVEKEENSIGIKEKLES	1839
Chelonia_mydas	GIEESNKKVDALLMEIKELNSRLDLOHTLTAKVTAYAELEKTVLVKKENSDLNEKFES	1899
Xenopus_tropicalis	SLEAGEKKNLNLSAEIESLNKQIEQH---SGKDNIGTELQSRVKELDAEKLQLFKEYES	1454
Rhinatrema_bivittatum	CVEDSKKKINTLLSEVNQNLRLNSQOMDLAAKTSASTELEKQVLELETEKLNLVNETKS	1746
	.....1870.....1880.....1890.....1900.....1910.....1920	

Mus_musculus	LPCNQEVCLRVERSEEDLGFNLDMGANELLSSK-----TKDNAINTEDNYKEKFLDMERE	1903
Rattus_norvegicus	LPCNQEVCPRVERS--DLDFNLDMGDELDFRES-----TKDDAANTEDNYKEKFLDMERE	1888
Homo_sapiens	FSCDHQELLQRVETSEGLNSDLEMHADKSSRED-----IGDNVAKVNDSWKERFLDVENE	1903
Pan_troglodytes	FSCDNQELLQRVETSEGLNSDLEMHADKSSRED-----IEDNVAKVNDSWKERFLDVENE	1903
Macaca_mulatta	FSCDNQELLQRVESSEGLNSNLEMHADKSSHED-----IEDNVAKVNDSWKERFLDVENE	1902
Callithrix_jacchus	-----	
Canis_lupus_familiaris	SSRDNQELHQRTESLEGFNSHLEIGADKLSHAV-----IEDNVAKVNDNWRERFLDMENE	1854
Equus_caballus	FSCDNQKLHQRVESLEGVSSNLEVGTEKSSHEI-----IEDNVANVN-NWRERFFDAENE	1899
Bos_taurus	FSCHNQ----REESSGGLTSNLEMTSKFPHEG-----IEDNVAKVTDNWRERFLQVENE	1898
Heterocephalus_glaber	FSCGDQELGLRVETS--LRNLEMGTDSSQEV-----LKENIAKEDDNWRERFLDVENE	1886
Pavo_muticus	-----	1559
Pavo_cristatus	-----	1559
Gallus_gallus	ASVSKQQLSCGVVSLGKEPEKISAKHNVNKTVLSNTTDLDDIELTKGNCHDLFLGABIE	1899
Chelonia_mydas	VSFDKHQIAYKVMILEKELDKAKSDVDVYKVRLSDVTDMLEDEMTEKGDWHEKFLQSENE	1959
Xenopus_tropicalis	ISQEKQLTGRVGDLEKELASISNAMEVLKEQLSGLSIRESLIANGNLKEQYLETENE	1514
Rhinatrema_bivittatum	ISSNKQQLSCRLMDLEKNLENMTTELEMYKVKLSDITEMFSCLEMAKSDWTEKYLOTKNE	1806
	.....1930.....1940.....1950.....1960.....1970.....1980	

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/CENPAs Tue Feb 1 11:39:01 2022

Page 12 of 20

Mus_musculus	LTRIKSEKANIEHHILSVETNLEVVQAEKLCLEKDTESK-QKVIIDLKEELFTVISERNR	1962
Rattus_norvegicus	LTRIKSEKANIEHHIVSVKANLEVVQAEKLCLEKDTESK-QKVIIVDLKGELFTVISERNR	1947
Homo_sapiens	LSRIRSEKASIEHEALYLEADLEVVQTEKLCLEKDNENK-QKVIVCLEEEELSVVTSEKRNQ	1962
Pan_troglodytes	LSRIRSEKANIEHQALYLEADLEIVQTEKLCLEKDNENK-QKVIVCLEEEELSVVTSEKRNQ	1962
Macaca_mulatta	LSSIRSEKANIEHQALSLEADLEIVQTEKLCLEKDNENN-QKVIVCLEEEELSVVTSEKRNQ	1961
Callithrix_jacchus	-----	
Canis_lupus_familiaris	LKRIKSEKGSIEHHALSVEAELETQTEKLYLVKDNENK-QKAITCLEEEELSVVTSEKRNQ	1913
Equus_caballus	LKRIKSEKSSIELHALSVEADLERVQTEKLYLEKDNENK-QNVITCLEEEELSVVTSEKRNQ	1958
Bos_taurus	LQRIQSEKDSMEHHALSAAEASLEAVQTEKLYLEKDNENK-QTVITCLEEGLSVVTSEKRDQ	1957
Heterocephalus_glaber	LNRMKAEENARIEHRAITMEADLEVAQTEKLCLEKDNENK-QKVIHLEEEELSVATSEKRNQ	1945
Pavo_muticus	-----	1559
Pavo_cristatus	-----	1559
Gallus_gallus	QRQTKSEQVNMETHALFVEGNAEILQAKCQQLERDREINLQTIPTSSLOEQLVSVTAERNH	1959
Chelonia_mydas	LRRTKSEKENIENHALSIEGDIELQKRNQQLKDSSEKTKTIS-TLOEQQLAVITRERNQ	2018
Xenopus_tropicalis	VRRVKSERANMENHALSLEIDLDTIQAKYQQLQEEENFEY-RRSAATLQDRLSVVAEKKNQ	1573
Rhinatrema_bivittatum	LERTKSEKAKIENHALSMEADIKDLQTKNQHLNENSENK-QKLIILNQEHLSVITAEEKNQ	1865
	.....1990.....2000.....2010.....2020.....2030.....2040	

Mus_musculus	LREELDNVSKESKALDQMSKKMKEKIEEELSHQRESLRHIGAVESEVVKADLIQTLTSLFN	2022
Rattus_norvegicus	LREELDNVSKESKALDQMSKKMKEKIEEELSHQRESLRHIGAVESEVVKADLIQTLTSLFS	2007
Homo_sapiens	LRGELDTMSKKTALDQLEKMKKEKTOELESHQSECLHCIVAAEAEVKEKTELLQTLSSD	2022
Pan_troglodytes	LRGELDTMSKKTALDQLEKMKKEKTOELESHQSECLHCIVAAEAEVKEKTELLQTLSSD	2022
Macaca_mulatta	LRGELDTMSKKTALDQLEKMKKEKTOELESHQSECLHCIVAAEAEVKEKTELLQTLSSD	2021
Callithrix_jacchus	-----	
Canis_lupus_familiaris	LHGQDLTSLKEKKELDLMSKKMKQKIQELESREDECLHPSDMAGAEVVKDKMQLVQRLSSD	1973
Equus_caballus	LHGQDLTSLKENKELDLQSEKMKKEKVLELESROGECLOHLDVVGAEVREKTQLLQTLSSS	2018
Bos_taurus	LRGELDTLSKENKELDLQSEKMKKEKIRELESHQSECLH-----	1995
Heterocephalus_glaber	LHGQDLTSLKENKTLAQMSEVMKEKVQALEAEVR-----DRAAALQTLTSLQ	1991
Pavo_muticus	-----	1559
Pavo_cristatus	-----	1559
Gallus_gallus	IGQEQSVLSSENKKEKLGQEQYQKQLEKLEKLETKEDSAKTIRRLEREVKIQTNLLETAKSD	2019
Chelonia_mydas	LSQELSILSENKEELDQLYQTLQEKIKELESNKVDATFIRILEAEAKTQTKLLQTLTKSD	2078
Xenopus_tropicalis	IDQELNLTTEKDELEQMCQKLEKERVEDELELNKVHNRNLKILETELRSILKAELOQAKAS	1633
Rhinatrema_bivittatum	LCQELSLSLFEDKEKLDGMYQKLEKAKDLOSADSTEFIKILEAEIKTQKCLLQTLAKFD	1925
	.....2050.....2060.....2070.....2080.....2090.....2100	

Mus_musculus	VGELTKDKAHLQEQQLQNLQNDQSLSLAIGELIQIGQLNKEKESLVKESQNFQIKLTES	2082
Rattus_norvegicus	VDELTKDKAHLQEQQLQNLQNDQSLSLAIGELIQIGQLNKEKESLVKESQNFQIKLTES	2067
Homo_sapiens	VSELLKDKTHLQEKLSLEKDSQALSLTKCELENQIAQLNKEKELLVKESQSLQARLSES	2082
Pan_troglodytes	VSELLKDKTHLQEKLSLEKDSQALSLTKCELENQIAQLNKEKELLVKESQSLQARLSES	2082
Macaca_mulatta	VSELLKDKTHLQEKLSLEKDSQALSLTKCELENQIAQLNKEKELLVKESQSLQARLSES	2081
Callithrix_jacchus	-----	
Canis_lupus_familiaris	VTQLLEDNTRLQEQQLQSLQSLQSLVKSLELQIQEQLNKEKESLSRESESLQARLHES	2033
Equus_caballus	VSELLEDKGLHLEQLQSLQSLQSLVKSLELENQIQQLSEEKESLVKESQSLQTKLNL	2078
Bos_taurus	-----LQEWLQSLQSLQSLVRSLELENQIQEQLNKEKESLVWESQSLQTKLSES	2045
Heterocephalus_glaber	VSELSENKRNLEQLRRLEGDSQTLSSAAQELSESQVRRLDKEKESLARESESLQAKLSEL	2051
Pavo_muticus	-----	1559
Pavo_cristatus	-----	1559
Gallus_gallus	TDQLSGEKDHLQNLQSLQSLQSLQSLVKSLELENQIQQLSEEKESLVKESQSLQTKLSES	2079
Chelonia_mydas	VDQLSREKDYLVQQLQNLQSLQSLQSLVKSLELENQIQQLSEEKESLVKESQSLQTKLSES	2138
Xenopus_tropicalis	LEQLSAEKDLR--DLQSEKQNVHVEAEG---LKNQLQIQEQYQLLLKDSQEDMQAQLSKV	1688
Rhinatrema_bivittatum	IDQFSKEKTKLSQSLQELKESVLEQLQKDELQRLQQLNKEKELLARDESEILQTKLNVS	1985
	.....2110.....2120.....2130.....2140.....2150.....2160	

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/CENPapsTue Feb 1 11:39:01 2022

Page 13 of 20

Mus_musculus	ECEKQTISKALEVALMEKGEFAVOLSSAQEEVHQLRRGIEKLSVRIEADKKHLSAVAKL	2142
Rattus_norvegicus	ECEKQTISKALEVALMEKGEFAMRLSSTQEEVHQLRRGIEKLSVRIEADKKHLSAVAKL	2127
Homo_sapiens	DYEKLNVSKALEAALVEKGEFALRLSSTQEEVHQLRRGIEKLRVRIEADKKQLHIAEKL	2142
Pan_troglodytes	DYEKLNVSKALEAALVEKGEFALRLSSTQEEVHQLRRGIEKLRVRIEADKKQLHVAEEL	2142
Macaca_mulatta	DYEKLNVSKALEAALVEKGEFALRLSSTQEEVHQLRRGIEKLRVRIEADKKQLHVAEKL	2141
Callithrix_jacchus	-----	
Canis_lupus_familiaris	EHEKLTVAKALEGALMEKGEVAVRLSSTQEEVHQLRRGIEKLRIRIEADKKQLHVLEKL	2093
Equus_caballus	EHEKLDVAKALEAALMEKGEVAVRLSSTQEEVHQLRRGIEKLRVRIEADKKQLHALEKL	2138
Bos_taurus	EHEKLAITKALEAALMEKGEVAVRLSSTQEEVHQLRRGIEKLRVRIEADKKQLHVSEKL	2105
Heterocephalus_glaber	DQERLTVSRALEAALMERDEFAERLGSTQEEVHQLRRGMEKLRVRIEADKKQLHVLGKL	2111
Pavo_muticus	-----	1559
Pavo_cristatus	-----	1559
Gallus_gallus	EIENSKLSRYLDGLITEKRELAARLNSAQKEVNQMRGMEKLIKIKIESDERKKRHIAEKL	2139
Chelonia_mydas	EMENSKLSKTLEGLIEKGEAARLNSSTQEEVDQLRYGIEKLMKIKIESDEKKRRHTVEKL	2198
Xenopus_tropicalis	CSEKDKISKVLECCQYKRELATNLSSAQEEVAQMRAGIEKLVKRMESDEKKKNHLIGKL	1748
Rhinatrema_bivittatum	EAENLKLKSALEGLSEKGEISARLLSAHEEMAQLRSGIEKLIKIRIESDERKKHYMIENL	2045
	.....2170.....2180.....2190.....2200.....2210.....2220	

Mus_musculus	KESQRESDSLKDTVETLERELERSEENQELAILDSENKAEVETLKAQKDEMTKSLRIFE	2202
Rattus_norvegicus	KESQRESDSLKDKVENLERELEMEENQELAILDSENKAEVETLKAQKDEMAKSLRVFE	2187
Homo_sapiens	KERERENDSLKDKVENLERELOMSEENQELVILDAENSKAEVETLKTQIEEMARSLKVFE	2202
Pan_troglodytes	KERERENDSLKDKVENLERELOMSEENQELVILDAENSKAEVETLKTQIEEMARSLKVFE	2202
Macaca_mulatta	KERERENDSLKDKVENLERELOMSEENQELVILDAENSKAEVETLKTQIEEMARSLKVFE	2201
Callithrix_jacchus	-----	
Canis_lupus_familiaris	RESERKADALQDKIENLERELOMSEENQELVILDAENSKAEVETLKTQIMELTTKSLKDL	2153
Equus_caballus	KESERKNDLQDKVENLERELOMSEENQELVILDAENCRAEATLKTQIEELMTESLKVLE	2198
Bos_taurus	KESERRNDLQDKVETLERELOMAEENQELVILDAENCKAEVETLKTQIEELMTERLKDLE	2165
Heterocephalus_glaber	KGSERDNDVLRDKVEGLQRELQOMSEENQELVILDAENAKAEMETLRAQLDELAESLRGSQ	2171
Pavo_muticus	-----	1559
Pavo_cristatus	-----	1559
Gallus_gallus	KENERKSDALLDKVERLERELEMEENLEDAVVQLETAKEAEFTFTEKEEMAELKLCLO	2199
Chelonia_mydas	KESERKADFLDKTEKLERELOMSEENLEDAILOAETANTETETLKIEMEEMAERLKSLE	2258
Xenopus_tropicalis	KETERNSDHLKDKIENLERELLMSEENLESTILQSESSKEEVEKLSMKHALEANVNTFR	1808
Rhinatrema_bivittatum	KDSERKRDLLDKIESLORDLOMNEENLEDMILQAEATTKEEAELKDLNEELVKKLETLE	2105
	.....2230.....2240.....2250.....2260.....2270.....2280	

Mus_musculus	LDLVTVRTERENLAKQLOEKQSRVSELDERCSSLRLLEEKEQARVOMEEDSKSAMLMLQ	2262
Rattus_norvegicus	LDLVNVRSERENLAKQLOEKQSRVSELDLCSSLRSLSEEKEQARVOMERDSKSAMLMLQ	2247
Homo_sapiens	LDLVTLRSEKENLTQIQIEKQGOQSELDKLLSSFKSLLEEKEQAEIQIKESKTAVEMLO	2262
Pan_troglodytes	LDLVTLRSEKENLTQIQIEKQGOQSELDKLLSSFKSLLEEKEQAEIQIKESKTAVEMLO	2262
Macaca_mulatta	LDLVTLRSEKENLTQIQIDKQGOVSELDKLLASVKSLLLEEKEQAEIQIKESKTAVEMLO	2261
Callithrix_jacchus	-----	
Canis_lupus_familiaris	SDLVTVRFEKENLIKQLODKQGOVSELDTLSSFKGQLEEKEREKIEEMKEESRAALEMLR	2213
Equus_caballus	GDLTTVRSEKENLMKELQEKQGOVSELDTLVSSFKNLLEEKEQEKIQMKEQSKAAVEMLO	2258
Bos_taurus	LDLVTIRSEKENLLKQLOEKQGOQASELDTLSSSLKNLLEEKEKEREKIQTKEEAKSAVEMLO	2225
Heterocephalus_glaber	VDLAVLRSEKGLDTKQLOEKQGOVSELDGLSSLSLLEEKEQARAQMEESEKTAVEMIQ	2231
Pavo_muticus	-----	1559
Pavo_cristatus	-----	1559
Gallus_gallus	SQIDDLTSQKECLAKDSKEKQERILELESSNLTTAKLLEEKEEKEKMOIKDEFENAVLLLK	2259
Chelonia_mydas	LAVNAFRSEKEGLTKELQEKQEKISELESSNNTVRLLEEKEKENMOIKEESENVTVLIK	2318
Xenopus_tropicalis	RR-----IVDLERELEKSKERIEELETRVLTLSNALEKSEMEKSCLINEESGOELLLLR	1861
Rhinatrema_bivittatum	LERDTLQSIKEELDEGLKQNEKMSLTETSLSTVTKMLETTEHEKIQMKKESENVALLLO	2165
	.....2290.....2300.....2310.....2320.....2330.....2340	

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/CENPeptids Tue Feb 1 11:39:01 2022

Page 14 of 20

Mus_musculus	MOLKELREEVAALCNDQETLKAQEQSLDPGEEVHHLKSSIRKLKVHIDADEKKHQNILE	2322
Rattus_norvegicus	TOLKELWEEVAALYNDQETLKAQEQSLDPGEEVHHLKSSIQKLKVHIDADKKKOCHILE	2307
Homo_sapiens	NOLKELNEAVALCQDQETIMKATEQSLDPPIEEHHQLRNSIEKLRLARLEADEKKQLCVLQ	2322
Pan_troglodytes	NOLKELNEAVALCQDQETIMKATEQSLDPPIEEHHQLRNSIEKLRLARLEADEKKQLCVLQ	2322
Macaca_mulatta	NOLKELNEAVALCQDQETIMKATEQSLDPSVEEAHQLRNSIEKLRLARLETDEKKQLCVLE	2321
Callithrix_jacchus	-----	-----
Canis_lupus_familiaris	TOLKELNEEIAALCHDQETIQKVKEQSLDPLVQETIHQLRNNTTEKLKARLEADEKEQLRVLG	2273
Equus_caballus	TELKELNEEVAALCDDQETWKAKEPSPDSAAALGVQQLRTSIEKVKVLLLEADEKKQLHTLG	2318
Bos_taurus	TOLRELTEEIAALCDDQETWKVEEQSLDSPAEVQQLRNNTIEKLKVHLDIDKKQLQILE	2285
Heterocephalus_glaber	AOLRELTEEVAALCQDQETPPRAEEQNLDAPGNEVPRLRGSIGRLRLARVEADREKQLHVLO	2291
Pavo_muticus	-----	1559
Pavo_cristatus	-----	1559
Gallus_gallus	SELKGMSE-----	2266
Chelonia_mydas	SOLKNAS-----	2325
Xenopus_tropicalis	AOLNELQEQKRASAKQSDLEALLEQNMQLMOOLEFAHNTSRTLELTMEKVTLELRECKL	1921
Rhinatrema_bivittatum	TOLKDLN-----	2172
	.....2350.....2360.....2370.....2380.....2390.....2400	

Mus_musculus	QLKESKHHADLLKDRVENLEQELILSEKN---MIFQAEKS-----KAEIQT	2365
Rattus_norvegicus	QLKESKHHADLLKDRVENLEQELMLSEKNKEHLIFQAENS-----KAEIQT	2353
Homo_sapiens	QLKESEHHADLLKGRVENLERELEIARTNQEHAALEAENS-----KGEVET	2368
Pan_troglodytes	QLKESEHHADLLKGRVENLERELEIARTNQEHAALEAENS-----KGEVEA	2368
Macaca_mulatta	QLKESEHHADLLKSRVENLERELEIAGKNQEHAALEAENS-----KGEVET	2367
Callithrix_jacchus	-----	-----
Canis_lupus_familiaris	KLKETEHAQASLLKDRVESLERELEISGKNQECVVLEAENS-----KAEVGT	2319
Equus_caballus	ELKESRHHVDLLKDRVENLERELEISKEQERVRLAENS-----KAEVVT	2364
Bos_taurus	KLKSEHQADFLKDTVENLERELKSGENQEHVTLAEKS-----KAEVET	2331
Heterocephalus_glaber	QLKESEHADLLKGSVESLERELELSGRSQEHAVREAKDS-----RAEVET	2337
Pavo_muticus	-----	1559
Pavo_cristatus	-----	1559
Gallus_gallus	---EKLEFSSKEEEFARAKE-----QVLINQVAC-----LEQDKTM	2299
Chelonia_mydas	---EEIKLSFNELEICKAKE-----QDLIYQVGC-----LEHDKTQ	2358
Xenopus_tropicalis	QLDEKTELVLSSLEGKLEEAENLEKKLAELAEQKALSDEKCNAAATKNAELLILIDQNKAE	1981
Rhinatrema_bivittatum	---EKLAFYYSKQETLEAKE-----QGLVSQVVC-----LEHDKTQ	2205
	.....2410.....2420.....2430.....2440.....2450.....2460	

Mus_musculus	LKSEIQORMAQNLDLQLELISRSSENNLMKELKKEQERSDLETINSSIEENLLKDKEQE	2425
Rattus_norvegicus	LKTEIQTMNDQNDLQLELITNTRSEKENLMKELKNEQEQISKLETINSSIERLLTDKEQE	2413
Homo_sapiens	LKAKIEGMTQSLRGLLELDVVTIRSEKENLTNLOKEQERISELEIINSSFENILQKEQE	2428
Pan_troglodytes	LKAKIEGMTQSLRDLELDLVTVIRSEKENLTNLOKEQERISELEIINASSFENILQKEQE	2428
Macaca_mulatta	LKAKIEGMTQSLRDLELDLATVIRSEKENLTNLOKEQERISELEIINSSFENILREKEQE	2427
Callithrix_jacchus	-----	-----
Canis_lupus_familiaris	LKVKIEEMAQNLRDLELDLVHVRSEKENMIKELQKEQERVSELELLNSSFENLLQKEQE	2379
Equus_caballus	LKVKIEEMAQSLRDLELDLGNIRSEKENLTKELOKEQGRVSELEVLNCSFENLLQKEQE	2424
Bos_taurus	LKATVEKMDQNLRLGLDLVNIRSEKEDLTKELOKEQSRVSELETINSSFENLLREKEQE	2391
Heterocephalus_glaber	LKAEIQQIAQNLRDLELDLVNTKSEKENLTKELOKEQCARVSELEILNSSLNLLQKEQH	2397
Pavo_muticus	-----	1559
Pavo_cristatus	-----	1559
Gallus_gallus	LLQEQELKNENIKLDHTRELLAQEVVEYKQKLEKMOENHAFQQIKET----EELSSQ	2355
Chelonia_mydas	LLLELQEVNRISTKLEQSLEAFVQELADCKQTLDEKIQENGALQKKIKDV----EQLSVQ	2414
Xenopus_tropicalis	LLHQVGAEAGETRMNLSLQKIATELGETKRRLEKEEQIFVLECKLEEITSEKKCHLE	2041
Rhinatrema_bivittatum	LLQIQIEVQINNANLESQEEELSQKLECKLKLDEKMQ-----ENDTL	2248
	.....2470.....2480.....2490.....2500.....2510.....2520	

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/CENPAs Tue Feb 1 11:39:01 2022

Page 15 of 20

Mus_musculus	KVQMKEEA---KITVEMLQTLKELNETVVSCLNDQEVSKTKEQ-----	2466
Rattus_norvegicus	KVQVKKEA---RITVEMLQTLKELNETVVSCLNDQEAYKTKEQ-----	2454
Homo_sapiens	KVQMKEKS---STAMEMLQTLKELNERVAALHNDQEACKAKEQ-----	2469
Pan_troglodytes	KVEMKEKS---STAMEMLQTLKELSERVAALHNDQEACKAKEQ-----	2469
Macaca_mulatta	KVQMKEKS---NTAMEMLQTLKELHERVTALHNDQEACKAKEQ-----	2468
Callithrix_jacchus	-----	
Canis_lupus_familiaris	KVQMSEES---KTAVGMLQTLKELNEEMAALCHDQDTWKAQEQ-----	2420
Equus_caballus	KVEMKEES---KIAVEMLQTLKELNEKVAALCNDQEIFKAKEQ-----	2465
Bos_taurus	KVQMKEES---KAAVEMLQTLKELSEEVAILCVDQETWKVEEQSLDSPLEEIQQLRNNI	2448
Heterocephalus_glaber	NVQIKEES---EVAVEMLQALQKVLDEKMITLCNDQAACKRKEQ-----	2438
Pavo_muticus	-----	1559
Pavo_cristatus	-----	1559
Gallus_gallus	LTRMEHEHECWHEKQKQLNQLVLENLKAQPFSDDGTFPDILN-----	2398
Chelonia_mydas	LSHAESERECWKQKEGQLNQLIAELKQKQVHLSNNEILQITILE-----	2457
Xenopus_tropicalis	LLOCEAERDRLNGEIEHQORDLELLQCKVQMESGASESSQAIR-----	2085
Rhinatrema_bivittatum	LHOVRAESESWKLEKERLQNEKDELQEKVLDISTKNDAFQITVD-----	2292
	.....2530.....2540.....2550.....2560.....2570.....2580	

Mus_musculus	-----	2466
Rattus_norvegicus	-----	2454
Homo_sapiens	-----	2469
Pan_troglodytes	-----	2469
Macaca_mulatta	-----	2468
Callithrix_jacchus	-----	
Canis_lupus_familiaris	-----	2420
Equus_caballus	-----	2465
Bos_taurus	GKLKVLCDADKKQQLHILEKLKESSEHQADFLKDTVENLERELKLSGENQEHVILEAEKSK	2508
Heterocephalus_glaber	-----	2438
Pavo_muticus	-----	1559
Pavo_cristatus	-----	1559
Gallus_gallus	-----	2398
Chelonia_mydas	-----	2457
Xenopus_tropicalis	-----	2085
Rhinatrema_bivittatum	-----	2292
	.....2590.....2600.....2610.....2620.....2630.....2640	

Mus_musculus	-----	2466
Rattus_norvegicus	-----	2454
Homo_sapiens	-----	2469
Pan_troglodytes	-----	2469
Macaca_mulatta	-----	2468
Callithrix_jacchus	-----	
Canis_lupus_familiaris	-----	2420
Equus_caballus	-----	2465
Bos_taurus	AEVETLKATVEEMDQNLRLGLQLDLVNIRSDKEDLTKELOKEQSRVSELETILNSSFENLLR	2568
Heterocephalus_glaber	-----	2438
Pavo_muticus	-----	1559
Pavo_cristatus	-----	1559
Gallus_gallus	-----	2398
Chelonia_mydas	-----	2457
Xenopus_tropicalis	-----	2085
Rhinatrema_bivittatum	-----	2292
	.....2650.....2660.....2670.....2680.....2690.....2700	

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/CENPAs Tue Feb 1 11:39:01 2022

Page 16 of 20

Mus_musculus	-----NLSSQVOTLELEKA	2480
Rattus_norvegicus	-----NLGSRVOTLELEKA	2468
Homo_sapiens	-----NLSSQVECLELEKA	2483
Pan_troglodytes	-----NLSSQVECLELEKA	2483
Macaca_mulatta	-----NLSSQVDCLELEKA	2482
Callithrix_jacchus	-----	
Canis_lupus_familiaris	-----NLRQVDALEHEKA	2434
Equus_caballus	-----NLSSQVDSLEHERS	2479
Bos_taurus	EKEQEKVQMKESKA AVEMLQKELEELNEKMAALGNDQETRKVKEQSLSSQVDSLEHEKA	2628
Heterocephalus_glaber	-----SLSSQVDSLELEKA	2452
Pavo_muticus	-----	1559
Pavo_cristatus	-----	1559
Gallus_gallus	-----ILKVAINDLEKELESTLCEKT	2419
Chelonia_mydas	-----NLKASHKDLEKELESTLSEKN	2478
Xenopus_tropicalis	-----DLKSTCNDLEAQLOSSDAEKQ	2106
Rhinatrema_bivittatum	-----TLDISQKKLKRELESARSEKN	2313
	.....2710.....2720.....2730.....2740.....2750.....2760	

Mus_musculus	QLLQDLGEAKNKYIIFQSSVNALTOEVEAGKQKLEKEKEIERTLKEQLKSQEQVLVCKLAQ	2540
Rattus_norvegicus	QLLQDLGEAKNKYIIFQSSVNALTOEVEAGKQKLEKEEEEVRTLKEQLKGQEQVLVCKLAR	2528
Homo_sapiens	QLLQGLDEAKNNYIVLQSSVNGLIQEVEDGKQKLEKKDEEISRLKNQIQDQEQVLVSKLSQ	2543
Pan_troglodytes	QLLQGLDEAKNNYIVLQSSVNGLIQEVEDGKQKLEKKDEEISRLKNQIQDQEQVLVSKLSQ	2543
Macaca_mulatta	QLLQGLDEAKNNYIVLQSSVNGLIQEVEDGKQKLEKKDEEISRLKNQIQDQEQVLVSKLSQ	2542
Callithrix_jacchus	-----	
Canis_lupus_familiaris	QLLQGLEEAKNNYINVQSSANSLSHQQVEDDKQKLKKKDEEINMLKSQIHDREQLASKLSQ	2494
Equus_caballus	QLLQGLDEAKSNYIILQSSVNGLVQEVGGKQKLEKKDEEISILKNQLQDQEQLLSKLSQ	2539
Bos_taurus	QLLQDLDDAKSNMILQSSVNDLIQEVEDGKQKLEKKDEEISILKSQTRDQEQVLVSKLSQ	2688
Heterocephalus_glaber	QLLQDLLEGAKNNYIILQSSVNGLMQEVEDGKQELERKDEELSOLKGQVQDQEQQLASQLSQ	2512
Pavo_muticus	-----	1559
Pavo_cristatus	-----	1559
Gallus_gallus	ALCKKVNEQTENCIKLEVKLSDAEQATSKLQEEFTMERKKLAEQIQLLQEHSEQNKIDLH	2479
Chelonia_mydas	ALVEK-----IQLD	2487
Xenopus_tropicalis	VLVQKVDELTECNTILQSKVHEAEMKIK-----EKKVLDEQLQAVKQIQIEDINTRLIC	2158
Rhinatrema_bivittatum	SLVEKLRDLSETCNDLQRLKLDTAIEKIADNDQFTVEKNALALQMQNTIQQEEENNKIQLD	2373
	.....2770.....2780.....2790.....2800.....2810.....2820	

Mus_musculus	VEGEQQLWQKQKLELRNVTMALEQKVQVLOSENNTLOSTYEALQNSHKSLESELGLIKLE	2600
Rattus_norvegicus	VEGEQQLCQKQKLELRSLTMELEQKVQVLOSENDALQTTYEALQSSYKSLEGEGLIKME	2588
Homo_sapiens	VEGEHQLWKEQNLRLNLTVELEQKIQVLQSKNASLQDTLEVLOSSYKNLENELELTKMD	2603
Pan_troglodytes	VEGEHQLWKEQNLRLNLTVELEQKIQVLQSKNASLQDTLEVLOSSYKNLENELELTKMD	2603
Macaca_mulatta	VEGEHQLWKEQNLRLNLTVELEQKIQVLQSKNASLQDTLEVLOSSYKNLENELELTKMD	2602
Callithrix_jacchus	-----	
Canis_lupus_familiaris	VEGEQQLWKKQKVELENLMVELEQKIQVLQSKNDTLQDTLEALQKSHKDLEKELELTKME	2554
Equus_caballus	VEGEQQLCKNQKIELGNLVVELEQKIQGLQSKNDTLQDTLDMQLQNSYKDLEKELEELAKME	2599
Bos_taurus	MEGEQQLWKKQKADLENLMVELEQKIQVLQSKNDALQDTLEALQNSSRNLEKELELTKLE	2748
Heterocephalus_glaber	VEGERQLWQKQKAEMGTLAVELEQKARELOSKNHTLOESLEGLQNSCRELESELTLTKVE	2572
Pavo_muticus	-----	1559
Pavo_cristatus	-----	1559
Gallus_gallus	LVVSE--KHELTSKSLGAVQKELOEKENIMKREISKYQDKLLQTEKEHQNALKEANRKNEI	2537
Chelonia_mydas	PTTSE--KNEPNKSLDGVQKELEKKREMKREISEYQSRLLQVEKNHQALLAEANRKNEV	2545
Xenopus_tropicalis	ATTTE--KTETETIAKLRIEQEAQADRSRDARELQNRLLQAEAKQAALDALLIQHKE	2216
Rhinatrema_bivittatum	LAASE--NRDLRRSLASVQEELEDEKVKMKKEEIAEYQHRHLHQADISQDTLLGELSKQHEL	2431
	.....2830.....2840.....2850.....2860.....2870.....2880	

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/CENPAsTue Feb 1 11:39:01 2022

Page 17 of 20

Mus_musculus	KVALVER-----VSTISGKEAELQRELRLDMLQKTTOISEDYNKEKNRLTEEEV	2648
Rattus_norvegicus	KMALVER-----VNTMTGKEAELQRELHDVEQKSTQLKEEYSKEKTRLTEDLE	2636
Homo_sapiens	KMSFVEK-----VNKMTAKETELQREMHMAOKTAELOEELSGEKNRLAGELQ	2651
Pan_troglodytes	KMSFVEK-----VNKMTAKETELQREMHMAOKTAELOEELSGEKNRLAGELQ	2651
Macaca_mulatta	KISFVEK-----VNTMTAKETELQREMHMAOKTAELOEELSGEKNRLTGELQ	2650
Callithrix_jacchus	-----	
Canis_lupus_familiaris	NVSFIEKEFQVLTAACKRWQVNTMTGKETELQREMHMAOKTSELKEEFIGEKNRLTEELN	2614
Equus_caballus	KMSFVE-----QVNTMTAKETELQREMHMVRERTTELKEGFTGEKQRLREELN	2647
Bos_taurus	KMSFVE-----KVNTMTVKETELQKEIHAVIQKTVALKEEFSGEKNRLMEELN	2796
Heterocephalus_glaber	NMSLVEK-----VNTMIVKEAELQEGEMQNMVEKTELKEEFSGEKNRLAAELN	2620
Pavo_muticus	-----	1559
Pavo_cristatus	-----	1559
Gallus_gallus	QIEACQEK-----VNSLECFISSQKLEIEHLNSTKEELNNSLKEANQTLGELLK	2586
Chelonia_mydas	EIQACQEK-----LNSLEQCLSQEKLEMLLKSSKEELNNSLKDANQTIEELKK	2594
Xenopus_tropicalis	EIQALQK-----LTLAEHAIGHGYEVERLKAANVELNGLSLSAHRQLEELNQ	2265
Rhinatrema_bivittatum	EIQTYQEK-----MTLAEQTLVHKIETDLKSNQEEELNRALKDAEAKLEEFSSK	2480
	.....2890.....2900.....2910.....2920.....2930.....2940	

Mus_musculus	VLREELQNT-----	2657
Rattus_norvegicus	VVMEELKNT-----	2645
Homo_sapiens	LLLEEIKSSKDQLKELTLENSELKKSILDCMHKDOVEKEGKVREEIAEYQLRLHEAEKKHQ	2711
Pan_troglodytes	LLLEEIKSSKDQLKELTLENSELKKSILDCMHKDOVEKEGKVREEIAEYQLRLHEAEKKHQ	2711
Macaca_mulatta	LLLEEIKSSKDQLKELTLENSELKKSILDCMQDKDOVEKEGKVREEIAEYQLRLHEAEKKHQ	2710
Callithrix_jacchus	-----	
Canis_lupus_familiaris	TMSEEINSSRGQLKELMLENSELKNSLDCIHKDQMEKEEKVREEIANVQLQLQAEKKHQ	2674
Equus_caballus	LMSEEIKSSKGQLKELMLENSELKKSILDCAHKQMEKHEKMREEIAGYHLRLQDAEKKHQ	2707
Bos_taurus	LMLEEVKSSKGQLKELMLENSELKKSILDCVHKDRMEEQGMKGIEAEYQLRLQEAENKHO	2856
Heterocephalus_glaber	VLSEEIKSS-----	2629
Pavo_muticus	-----	1559
Pavo_cristatus	-----	1559
Gallus_gallus	LKADNIN-T-----	2594
Chelonia_mydas	IKVDNLK-C-----	2602
Xenopus_tropicalis	LKVS-----	2269
Rhinatrema_bivittatum	LKVNSLKSM-----	2489
	.....2950.....2960.....2970.....2980.....2990.....3000	

Mus_musculus	-----	2657
Rattus_norvegicus	-----	2645
Homo_sapiens	ALLLDTNKQYEVEIQTYREKLTSKEECLSSQKLEIDLKSSKEELNNSLKATTOILEELK	2771
Pan_troglodytes	ALLLDTNKQYEVEIQTYREKLTSKEECLSSQKLEIDLKSSKEELNNSLKATTOILEELK	2771
Macaca_mulatta	ALLLDTNKQYEIEIHTYREKLTSKEECLTSQKLEMDLLKSSKEELNNSLKATTEALEELK	2770
Callithrix_jacchus	-----	
Canis_lupus_familiaris	ALLLDTNKQYEMEIQTYQEKLSKEECLSSQKAEIDLKSSKEELNNSLKATTOILEELK	2734
Equus_caballus	ALLLDTNKQYEMEIQTYQEKLSKEECLSSQKAEIDLKSSKEELNNSLKATTEILEELK	2767
Bos_taurus	ALLLDTNKQHEMEIQTYREKLTSKEECLSSQKVEIDLKSSKEELNNSLKATTEILEELK	2916
Heterocephalus_glaber	-----	2629
Pavo_muticus	-----	1559
Pavo_cristatus	-----	1559
Gallus_gallus	-----	2594
Chelonia_mydas	-----	2602
Xenopus_tropicalis	-----	2269
Rhinatrema_bivittatum	-----	2489
	.....3010.....3020.....3030.....3040.....3050.....3060	

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/CENPAsTue Feb 1 11:39:01 2022

Page 18 of 20

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Mus_musculus      --KAAHLKSVNLEKELQRAQGKIKLMLKSCROLEGEKEMLOKELSOLEAAQ--QORAG-- 2712
Rattus_norvegicus --KVAHLKKNVNHLEKEFORAQGKIKLLKSCROLEGEKKMLQKELSOLEAAQ--KORAG-- 2700
Homo_sapiens      KTKMDNLKYVNQLKKENERAOGKMKLLIKSCQOLEEEEKEILOKELSQLQAAQEKOKTG-- 2829
Pan_troglodytes   KTKMDNLKYVNQLKKENERAOGKMKLLIKSCQOLEEEEKEILOKELSQLQAAQEKOKTG-- 2829
Macaca_mulatta    KTKMDNLKYVNQLKKENERAOGKIKLLIKSCQOLEEEEKEILOKELSKLQAAQEKOKTG-- 2828
Callithrix_jacchus -----METLOKELSOLEAAQGROKT----- 20
Canis_lupus_familiaris KTKADHVKYTNQLKKENERAOGKIKLLIKSCQOLEEEEKEMLOKELSHLEATOENOKTG-- 2792
Equus_caballus     KAKMDNLKHANQLKKENERAOGKIKLLIKSCQOLEAEKEMLOKELSRLEAAQEKOKTG-- 2825
Bos_taurus        KTKMENLKHADKLKKENDRAOSKIKLLVKSCKOLEEEKVMLQKELSHLEAAQEKORAD-- 2974
Heterocephalus_glaber --KTDHLKYVDQLKKENERAOGKIKLLKSCROLEEEKKMLQKELSDLEAAQ--KOKTG-- 2684
Pavo_muticus      ----- 1559
Pavo_cristatus    ----- 1559
Gallus_gallus     -----IVQLNKEKEFVQSEVQLWIKSCQOMEQEKVLOKOLADCEELLKKKDLSSVS 2645
Chelonia_mydas     -----IVQLKKQNEFACSKMEIWMKSCQOLQKEKEMLOKQIAEHGALLKKOKP-- 2650
Xenopus_tropicalis -----FAELKEEHARVCAALRHQVESCAELEQERDRLKGKINEREEELKHLQAK-- 2318
Rhinatrema_bivittatum -----VLQLRKENEIGOSKLSWKSCQOLEQEREILOKRIVEQVELLSDLQKK-- 2538
.....3070.....3080.....3090.....3100.....3110.....3120

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Mus_musculus      ----SLVDSNVDEVMTENKALKETLEEKVKEADKYLDKYCSLLISHEELEKAKEILEIEV 2768
Rattus_norvegicus ----SLVDSNVDELMTENKELKETLEEKIKEADKYLDKYCSLLISHEELEKTKEILEIQV 2756
Homo_sapiens      ----TVMDTKVDELTTTEIKELKETLEEKTKADEYLDKYCSLLISHEKLEKAKEMLETQV 2885
Pan_troglodytes   ----TVMDTKVDELTTTEIKELKETLEEKTKADEYLDKYCSLLISHEKLEKAKEMLETQV 2885
Macaca_mulatta    ----TVMDIKVDELTTTEIKELKEALEKTKEADEYLDKYCSLLISHEKLEKAKEMLETQV 2884
Callithrix_jacchus ----- 20
Canis_lupus_familiaris ----TVVDSNAEELMAEMKELKETLEEKTKADEYLDKYCSLLISHEKLEKAKEMLETQV 2848
Equus_caballus     ----TVVDANVDELMTMKELKETLEEKTKADEYLEKYCSLLISHEKLEKDKEMLETQV 2881
Bos_taurus        ----TVVDANVDELITMKELKETLEEKTKADEYLDKYCSLLISHEKLEKAKEMLETQV 3030
Heterocephalus_glaber ----ALVDVNVDLMAEIRELKETLEEKAKEADEYLDKYCSLLISYEKLEKAKEMLETQV 2740
Pavo_muticus      ----- 1559
Pavo_cristatus    ----- 1559
Gallus_gallus     EKEGTDENAITTEIKLELELOEAVEVKTREANENLEKYCSLIVKYKLEENEMLKMOV 2705
Chelonia_mydas     ---SADEVASAEEMRLKLEELKESLEEKTKAEENLEKYCTLIKNYKLEENEMLKTOV 2707
Xenopus_tropicalis QQNAEGGASSNEDLLAEIEELKQWLEEKTEADESVEKYCTIMIKSHKLEEDNDTLKKQL 2378
Rhinatrema_bivittatum YDKKADLETSDKALKSELEELKEFVEEKTREADENLEKYCSLIISNKLFEENDMLKKOV 2598
.....3130.....3140.....3150.....3160.....3170.....3180

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Mus_musculus      ARLKSRSRQDLQSSPLLNSIPGP-----SPNTSVSEMKASGQNKASGKRORSSGIW 2822
Rattus_norvegicus ARLSSRNQKQDLQSSPLLDSSVAGP-----SPSTSVSERKSTSGLNKILGKRORSSGIG 2810
Homo_sapiens      AHLCSQQSKQDSRGSPLLGPVVPGP-----SPIPSVTEKRLSSGQNKASGKRORSSGIW 2939
Pan_troglodytes   AHLCSQQSKQDSRGSPLLDPVVPGP-----SPIPSVTEKRLSSGQNKASGKRORSSGIW 2939
Macaca_mulatta    AHLCSQQSKPDSRGSPLLDPVVPGP-----SPILSAAEKRLSSGQKKASGKRORSSGIW 2938
Callithrix_jacchus -----DAAVPGP-----SPIPSATEKRLASDONKASGKRORSSGIW 56
Canis_lupus_familiaris ARLSSR-SKPHLQNSPLLNSVVEA-----SLAPSATEKKLSSGQNTASGKRORSTGIR 2901
Equus_caballus     ARLSSQQSKLNLPSPLLNSVVPGS-----SPAPSVTEKKLPSGQNKASGKRORSSGIR 2935
Bos_taurus        ARLSSQQSKLNLRRSPLVNSLAPGP-----SPVPSATEKKLPSGQNKSSGKRORSSGIR 3084
Heterocephalus_glaber TRLSSQHPKHGLSGSSSLQSSSTTPEP-----CPAPSVGEGRSSSGRSKASGKRORCSGNW 2794
Pavo_muticus      ----- 1559
Pavo_cristatus    ----- 1559
Gallus_gallus     TLLNGQLKQRTSDAVSSSLLNSGNS----STVSSQSDKEMRWNETTKPSTKRORCEDTR 2761
Chelonia_mydas     SLLSAQLKQPN-AVNPSQNSDNP-----VTLLNQSVTEKRSDDEPTKLSGKRORCQKIT 2762
Xenopus_tropicalis DFLSSKLKQLQTSQEVPSPPQRGDHPGPO--SMDQKGGEDNCSAQRVSKQSSKRRRREQDVT 2437
Rhinatrema_bivittatum DLLTTHLKQPLPPPEGPMSIWIQTSDKPVKSSNKKSTKEKRLSKGPTKLSVKRORPLEGK 2658
.....3190.....3200.....3210.....3220.....3230.....3240

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CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/CENPAsTue Feb 1 11:39:01 2022

Page 19 of 20

Mus_musculus	EHGKRAAPSTAETFSKKSRSKSDSKS--TRPAEHEQTEFEPEGLPEVVKKGFADIPITGKTS	2881
Rattus_norvegicus	ENGNGTAPSTPETFSKKSRSKSVSNS-AHPAEDEEETFEFEPEGLPEVVKKGFADIPITGKTS	2869
Homo_sapiens	ENGRGPTPATPESFSKKSKKAVMSG-IHPAEDTEGTEFEFEPEGLPEVVKKGFADIPITGKTS	2998
Pan_troglodytes	ENGRGPTPATPESFSKKSKKAVMSG-IHPAEDMEGTESEFEPEGLPEVVKKGFADIPITGKTS	2998
Macaca_mulatta	ENGRGPTPATPESFSKKSKKAVMSG-IHPAEDTEGTQFEFEPEGLPEVVKKGFADIPITGKTS	2997
Callithrix_jacchus	ENGRGPTPATPESFSKKSKKAVVRG-IHPAEDTEDTEFELEGLSEVVNKGAFADIPITGKTG	115
Canis_lupus_familiaris	EDGGGTASTPETFSKKSRAVRSG-IHPAEEAKDTEFEFEPEGLPEVVKKGFADIPITGKTS	2960
Equus_caballus	ENGEGETPSTPETFSKKSRAVKSG-IHPAEDAEFYAEFEPEGLPEVVKKGFADIPITGKTS	2994
Bos_taurus	EDGGETTPSTPETFSKKSRAIRSG-THLAEDAEDAEEFEFEPEGLPEVVKKGFADIPITGKTS	3143
Heterocephalus_glaber	ESRGGLTPSTPETFPKKSRAVVKSGSIHPAEDEE--EFEFEGLSEVVKKGFADIPITGKTS	2852
Pavo_muticus	-----	1559
Pavo_cristatus	-----	1559
Gallus_gallus	KDNGEPRSPLPETSSKKKRKEDIC---QNLENQENS DYEPDGLPEVVKRGFADIPITERV	2818
Chelonia_mydas	KDDGEPKSPIPETLSKKMKKGAFY---QHS LTHEN TEYEPDGLPEVVKKGFADIPVEKIS	2819
Xenopus_tropicalis	LDKEEPRSPIPQGLAKVRKTASRTVPHQRSTEHEEEFQPDGLPDVVKGFADIPISGKQS	2497
Rhinatrema_bivittatum	GDRSEQKATTPORLAKRVKGGVN-----ASEDMEYEPEGLPEAVKKGFADIPISGESS	2710
	.....3250.....3260.....3270.....3280.....3290.....3300	

Mus_musculus	PYILRRTTMMATRTSPRFATQKLVGSSP-----SLGKENVVESSKPTAGGSRSSQKVKVVOE	2936
Rattus_norvegicus	PYILRRTTMMATRTSPRLAAQKLLGSSP-----TLGKENLVESSKPTAGGSRSSQKVKVVOE	2924
Homo_sapiens	PYILRRTTMMATRTSPRLAAQKLALSPL-----SLGKENLAESSKPTAGGSRSSQKVKVAAQ	3053
Pan_troglodytes	PYILRRTTMMATRTSPRLAAQKLALSPL-----SLGKENLAESSKPTAGGSRSSQKVKVAAQ	3053
Macaca_mulatta	PYILRRTTMMATRTSPRLAAQKLALSPL-----SLGKENLAESSKPTAGGSRSSQKVKVAAQ	3052
Callithrix_jacchus	PYILQENNHGNSDRPPPGCTEVSTLPT-----ESQQR---KSCRVPQTNSWWQITKG-Q	166
Canis_lupus_familiaris	PYVLRRTTMMATRTSPRLAAQKLALSPL-----SLNKENHAETSQPTAGGSRSSQKVKVAAQ	3015
Equus_caballus	PYVLRRTTMMATRTSPRLAAQKLALSPL-----SLDKENHAETSQPTAGGSRSSQKVKVAAQ	3049
Bos_taurus	PYILRRTTMMATRTSPRLAAQKLAASPP-----SLDKENLTETSKPTAGGSRSSQKVKVSOQ	3198
Heterocephalus_glaber	PYVLRRTTVATRTSPRLAALKSALSPL-----SVGKENLEESSKPTASGSRSSQKVKVAAQ	2907
Pavo_muticus	-----	1559
Pavo_cristatus	-----	1559
Gallus_gallus	PYILRRTTLNLWTSPLHLSQSENLPITPHVOTGRWDHLGEHSYSTPGGSKSQKINDEQQ	2878
Chelonia_mydas	PYVLRRTTLNLRTSPRLAAQSQLSPSAQSLQKSSDNLAEISKLTAGGSKSQKVADTQQ	2879
Xenopus_tropicalis	PYILRRTTGPVRKSPRLAALKP--SPSTHEDL-----ENLAHFSPPAAGGSKAQQSKLSEA	2551
Rhinatrema_bivittatum	PYILRRTT--LRTSPRLDAORM-LPSTQOSLQKGSLENVADSSESAAGGSKSQKLSDTKP	2767
	.....3310.....3320.....3330.....3340.....3350.....3360	

Mus_musculus	SSADSHAFQELPAKSLTASNIPGRNS--TESPREGLRAKRAYPASSPAAGP--DPTNNENC	2994
Rattus_norvegicus	SSMDAHAVFQELPAKSLTANNMPGRNS--TESPREGLRAKRACPASSPAAGP--DPMNNENC	2982
Homo_sapiens	SPVDSGTILREPTTKSVPVNNLPERSP--TDSPREGLRVKRGRLVPSPKAGL--ESNGSENC	3111
Pan_troglodytes	SPVDSGTILREPTTKSVPVNNLPERSP--TDSPREGLRVKRGRLVPSPKAGL--ESKGSENC	3111
Macaca_mulatta	SPVDSGTILREPTTKSVPVNNLPERSP--TDSPREGLRVKRGRLVPSPKAGL--EPKGSENC	3110
Callithrix_jacchus	TTVNIHLFLCD-----INRVKAAQOSP--VDSGN-----PPRTIH--EISLGO--	205
Canis_lupus_familiaris	SPADSSSTAFREPTTR---VSSLPERSS--ADSPREGLRAKRSRLAPSPPEAVP--ESKSSENC	3070
Equus_caballus	SPADSGSASREPSTKSLSVSNLPEKSS--ADSPREGLRAKRGHLPSPPEAGP--KSKSGENC	3107
Bos_taurus	SPVDSGTAFRDPIGRSLISINLPERSP--VGSPPREGLRAKRGRHAPSPPESSL--ESKGSENC	3256
Heterocephalus_glaber	SPVGS---AEPTVTSVSVRHFSGRSP--ADSPGDGPRTRRSPPLVPSPDARP--QPMNSENC	2961
Pavo_muticus	-----	1559
Pavo_cristatus	-----	1559
Gallus_gallus	SQARTAFSPMKSSSTRSPLWPYKQSTNIVSDNIRETHMIHRGKDSQNEQALPKQDQQQENC	2938
Chelonia_mydas	CQAETAIEPMESSRSPLRINKQTTKAVAEICRENLTNTHKGRCSLSTQTLDPONEQEKNK	2939
Xenopus_tropicalis	VragSEVGPMEVs--SPLSSYNRLKNPGSDSP---ISRKMAIERISEKLLHEESETEEAC	2606
Rhinatrema_bivittatum	LQVGSGTGTVDSSG--SPLSISNVKKPASESPRDTLLTKSRRSKSGNKLPEOME--DENC	2825
	.....3370.....3380.....3390.....3400.....3410.....3420	

CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep_msa/CENPept Tue Feb 1 11:39:01 2022

Page 20 of 20

Mus_musculus	RVQ	2997
Rattus_norvegicus	RVQ	2985
Homo_sapiens	KVQ	3114
Pan_troglodytes	KVQ	3114
Macaca_mulatta	KVQ	3113
Callithrix_jacchus	---	205
Canis_lupus_familiaris	RVQ	3073
Equus_caballus	RVQ	3110
Bos_taurus	RVQ	3259
Heterocephalus_glaber	RVQ	2964
Pavo_muticus	---	1559
Pavo_cristatus	---	1559
Gallus_gallus	KVQ	2941
Chelonia_mydas	MVQ	2942
Xenopus_tropicalis	HVQ	2609
Rhinatrema_bivittatum	NVQ	2828
...		