

# CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep\_msa/KIAD20261.pep Feb 1 12:32:14 2022

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Pavo_muticus      -----
Pavo_cristatus    -----
Gallus_gallus      -----
Anas_platyrhynchos -----
Chelonia_mydas     -----
Mus_musculus       -----
Rattus_norvegicus  -----
Homo_sapiens       -----
Pan_troglodytes    -----
Macaca_mulatta     -----
Canis_lupus_familiaris -----
Equus_caballus     -----
Bos_taurus        -----
Rhinatrema_bivittatum -----
Latimeria_chalumnae MEEGLGAEAAPFLGLSSSELPERRGGGGEAAAAEGAEGKGQSSPAGAQGGGGGLQIDSGG 60
Xenopus_tropicalis -----
1.....10.....20.....30.....40.....50.....60

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Pavo_muticus      -----
Pavo_cristatus    -----
Gallus_gallus      -----
Anas_platyrhynchos -----
Chelonia_mydas     -----
Mus_musculus       -----
Rattus_norvegicus  -----
Homo_sapiens       -----
Pan_troglodytes    -----
Macaca_mulatta     -----
Canis_lupus_familiaris -----
Equus_caballus     -----
Bos_taurus        -----
Rhinatrema_bivittatum -----
Latimeria_chalumnae PAGGLGGTKGSESGDEETSTDAATLLREKRVSAAPGQEKGTGIKEETDGKTNLDLGRMER 120
Xenopus_tropicalis -----
.....70.....80.....90.....100.....110.....120

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Pavo_muticus      -----
Pavo_cristatus    -----
Gallus_gallus      -----
Anas_platyrhynchos -----
Chelonia_mydas     -----
Mus_musculus       -----
Rattus_norvegicus  -----
Homo_sapiens       -----
Pan_troglodytes    -----
Macaca_mulatta     -----
Canis_lupus_familiaris -----
Equus_caballus     -----
Bos_taurus        -----
Rhinatrema_bivittatum -----
Latimeria_chalumnae VQADNDSKNDVVMGQSPGFMTSSSITRTDGIAAKMQGESLAIGKERASPOGMLNCDLRFI 180
Xenopus_tropicalis -----
.....130.....140.....150.....160.....170.....180

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Pavo_muticus	-----	
Pavo_cristatus	-----	
Gallus_gallus	-----	
Anas_platyrhynchos	-----	
Chelonia_mydas	-----	
Mus_musculus	-----	
Rattus_norvegicus	-----	
Homo_sapiens	-----	
Pan_troglodytes	-----	
Macaca_mulatta	-----	
Canis_lupus_familiaris	-----	
Equus_caballus	-----	
Bos_taurus	-----	
Rhinatrema_bivittatum	-----	
Latimeria_chalumnae	ANRNGQFNDGKVGDCNQVSPNERAELEQVSDLKQSGPSDSRSPAGGLQPLDAVGISSCS	240
Xenopus_tropicalis	-----	
	.....190.....200.....210.....220.....230.....240	

Pavo_muticus	-----MLKSQP	6
Pavo_cristatus	-----MLKSQP	6
Gallus_gallus	-----MLRSRP	6
Anas_platyrhynchos	-----	
Chelonia_mydas	-----	
Mus_musculus	-----	
Rattus_norvegicus	-----	
Homo_sapiens	-----	
Pan_troglodytes	-----	
Macaca_mulatta	-----	
Canis_lupus_familiaris	-----	
Equus_caballus	-----	
Bos_taurus	-----	
Rhinatrema_bivittatum	-----	
Latimeria_chalumnae	GGGPSRVKGSAGTVDEFNTLNYCDLKCHDRGEKGLVESPVLEEKHRNCSSGGLDLESGRG	300
Xenopus_tropicalis	-----	
	.....250.....260.....270.....280.....290.....300	

Pavo_muticus	AAGGSPAAAEALCARGAA--DMDSARPVDVAEQTAGLAAGGDLSTERASAGRP RRREEQR	64
Pavo_cristatus	AAGGSPAAAEALCARGAA--DMDSARPVDVAEQTAGLAAGGDLSTERASAGRP RRREEQR	64
Gallus_gallus	AAGGAPAAAEALCARGAA--DMDSARPADVAEQTAGHAAGGDLSTERASACPPQRREEQR	64
Anas_platyrhynchos	-----MDPERP-----R	7
Chelonia_mydas	-----MSLARPEG--DMESPAAGDASEAAAPVGGPPE-----ENEQ	34
Mus_musculus	--MSVPEPPGEMERAAEE--ERPPPPTGEGNEEEVVVAAAARASGLVRRRSASSVDDEEE	56
Rattus_norvegicus	--MSVPETPGEMERAAEE--ERPPPPTGEGNEEE--VVAAAARASGLVRRRSASSVDDEEE	55
Homo_sapiens	--MSVPGTPGAMEPAGEE--ERPPPAA--EGEDDEEEVAAAQTS GPAHGRSASSLEDADD	55
Pan_troglodytes	--MSVPGTPGAMEPAGEE--ERPPPAA--EGEDDEEEVAAAQTS GPAHGRSASSLEDADD	55
Macaca_mulatta	--MSVPGTPGAMEPAGEE--ERPPPAA--EGEDDEEEVAAAATASGPARGRTASFLADADG	55
Canis_lupus_familiaris	--MSVPRTPGQMEPAGEE--ERPPPAP--EEEDGEEAMAAVPA SGPAQGRSASSRENEGD	55
Equus_caballus	--MSVPETPGEMEPAGEE--ERPPPAA--EEEDDEEEVAAAAPS GPARGRSASSSQEDADD	55
Bos_taurus	--MSVPGKPGEMKPAGEE--ERPPPAA--EEEDDDE--LVAAAPALRPAR--RSASLREDADD	53
Rhinatrema_bivittatum	-----MDAAGAG--EGSDGLP--APSGARTEDRGPRGGGRRRRRQQQEEEEEE	44
Latimeria_chalumnae	STLSLADGNFDIVSGVSGCRDPSPIAGDRMGASPVDEASPVGVEEMMLAGMISDSSH	360
Xenopus_tropicalis	-----	
	.....310.....320.....330.....340.....350.....360	

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Pavo_muticus	DEDGSDAGGESGGCSWEQS-LSPLEQQGYRILREFLLEKYRPLTAPFLKPLADQECVREE	123
Pavo_cristatus	DEDGSDAGGESGGCSWEQS-LSPLEQQGYRILREFLLEKYRPLTAPFLKPLADQECVREE	123
Gallus_gallus	DEDGSDAGGESGGCSWEQS-LSPLEQQGYRILREFLLEKYRPLTAPFLKPLADQECVRAE	123
Anas_platyrhynchos	GEDGAGAGGQAGSGWEOR-LSPLEQQGYRILREFLLEKHRPLTAPFLKPLADPASIKEE	66
Chelonia_mydas	QPEEENAGDSSPRYRWQON-LSPLEQQGYRILCDFLLEKHRPLTAPFLKP---QAQVAEE	90
Mus_musculus	-AAASETTTVAGGGCKEQE-LTYELOQGYRILGEFLQEKHRGLTAPFLQPLGGVAAGEEE	114
Rattus_norvegicus	-FAAAETTVVAGGGCKEQE-LTYELOQGYRILGEFLQEKHRGLTAPFLQPLGGVAAGEEE	113
Homo_sapiens	QEEEMEAMVIGGGCKEQE-LTYELOQGYRILGEFLQEKHRGLTAPFLQPLGGVATAEEE	114
Pan_troglodytes	QEEEMEAMVIGGGCKEQE-LTYELOQGYRILGEFLQEKHRGLTAPFLQPLGGVATAEEE	114
Macaca_mulatta	QEEEMEAMVIGGGCKEQE-LTYELOQGYRILGEFLQEKHRGLAAPFLQPLGGVATA-EE	113
Canis_lupus_familiaris	QEEEEEAMVVGGGCKEQE-LTYELOQGYRILGEFLQEKHRGLTAPFLQPLGGVAAGEEE	114
Equus_caballus	QEEEEEAMVVGGGCKEQE-LTYELOQGYRILGEFLQEKHRGLTAPFLQPLGGVAASEEE	114
Bos_taurus	-DEEEEMVVGGGCKEQE-LTYELOQGYRILGEFLQEKHRGLTAPFLQPLGGVATREEE	111
Rhinatrema_bivittatum	AAAAAAAATTRKERGWEQE-LSPELRQGYRILCEFLLEKHRGLTAPFLQEKVEEEEAVAT	103
Latimeria_chalumnae	LPDLVPVTSSEKRQEEEDLSYELQGYRILCEFLLEKHRSLIAPFLNPVSSLDYRDYE	420
Xenopus_tropicalis	-----	
	.....370.....380.....390.....400.....410.....420	

Pavo_muticus	GGAG-----SLSGHNSSSHSAQOSPAGMWLLKMEEFSSGQYAGIADFVDFRQMLETCYR	178
Pavo_cristatus	GGAG-----SLSGHNSSSHSAQOSPAGMWLLKMEEFSSGQYAGIADFVDFRQMLETCYR	178
Gallus_gallus	GGAG-----SLSGHNSSSHSAQOSPAGMWLLKMEEFSSGQYAGIADFVDFRQMLETCYR	178
Anas_platyrhynchos	GGGGGGGDSLPGHGGSHCAP--PAGMWLLKMEEFSSGQYAGIADFVDFRQMLETCYR	124
Chelonia_mydas	GGTA-----SLAGSSGSDSFPQQAAGMWLLKMEERFSSGQYTAITDFVADFRLMLETCYR	145
Mus_musculus	VAEG-----RRSGGRGSRVPPQPSQGMCLLKMEEFSSGQYRGITEFVADFRLMLETCYR	170
Rattus_norvegicus	VAEG-----RRSGGRGSRVPPQPSQGMCLLKMEEFSSGQYRGITEFVADFRLMLETCYR	169
Homo_sapiens	VAEG-----PRSGGRGGRAPFPQPGQGMCLLKMEEFSSGQYGGITEFVADFRLMLETCYR	170
Pan_troglodytes	VAEG-----PRSGGRGGRAPFPQPGQGMCLLKMEEFSSGQYGGITEFVADFRLMLETCYR	170
Macaca_mulatta	VAEG-----PRSGGRGGRAPFPQPGQGMCLLKMEEFSSGQYGGITEFVADFRLMLETCYR	169
Canis_lupus_familiaris	VAEG-----PRSWGRGSRALPPQLGQGMCLLKMEEFSSGQYGGITEFVADFRLMLETCYR	170
Equus_caballus	EAEG-----PRSGSRGSRVHPQPPGQCMCLLKMEEFSSGQYGGITEFVADFRLMLETCYR	170
Bos_taurus	AAEG-----PRGGGRGSRALPPQPGQGMCLLKMEEFSSGQYGGITEFVADFRLMLETCYR	167
Rhinatrema_bivittatum	-----IGLLGMEEFVGGRYQGICDFVADFRLMLETCYR	137
Latimeria_chalumnae	NRIQ-----EPMWLLKLEDKFADREYQSTITEFVADFRLMLETCYR	460
Xenopus_tropicalis	-----	
	.....430.....440.....450.....460.....470.....480	

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Pavo_muticus	LHGVDHWLSKQAQKLEMMLEQKLALLS-RHLREKTSIAVTSRGSYGLEDEKGTPTCTSTRR	237
Pavo_cristatus	LHGVDHWLSKQAQKLEMMLEQKLALLS-RHLREKTSIAVTSRGSYGLEDEKGTPTCTSTRR	237
Gallus_gallus	LHGVDHWLSKQAQKLEMMLEQKLALLS-RHLREKTSIAVTSRGSYGLEDEKGTPTCTSTRR	237
Anas_platyrhynchos	LHGVDHWLSKQAQKLEMMLEQKLALLS-RHLREKTSIAVTSRGCYQGEDEKGTPTCTSTRR	183
Chelonia_mydas	LHGVDHWLSKQAQKLEMMLEQKLALLS-RHLREKTTIAVTSKGYGLEDEKGTACTSTRR	204
Mus_musculus	LHGVDHWISKQGQKLEMLLEQKLALLS-RHLREKTTIAVTSRGYYGLEEEKGTACTSTRR	229
Rattus_norvegicus	LHGVDHWISKQGQKLEMLLEQKLALLS-RHLREKTTIAVTSRGYYGLEEEKGTACTSTRR	228
Homo_sapiens	LHGVDHWISKQGQKLEMMLEQKLALLS-RHLREKTTIAVTSRGYYGLEDEKGTACTSTRR	229
Pan_troglodytes	LHGVDHWISKQGQKLEMMLEQKLALLS-RHLREKTTIAVTSRGYYGLEDEKGTACTSTRR	229
Macaca_mulatta	LHGVDHWISKQGQKLEMMLEQKLALLS-RHLREKTTIAVTSRGYYGLEDEKGTACTSTRR	228
Canis_lupus_familiaris	LHGVDHWISKQGQKLEMMLEQKLALLS-RHLREKTTIAVTSKGYGLEDEKGTACTSTRR	229
Equus_caballus	LHGVDHWISKQGQKLEMMLEQKLALLS-RHLREKTTIAVTSRGYYGLEDEKGTACTSTRR	229
Bos_taurus	QHGVDHWISKQGQKLEMMLEQKLALLS-RHLREKTTIAVTSRGYYGLEDEKGTACTSTRR	226
Rhinatrema_bivittatum	RHGVDHWLSKQAQKVETMLEQKLALLS-RPLREKTTIAVTSKGRYGLEDEKGTACTSTRR	196
Latimeria_chalumnae	YHGVDHWLSKQAQKLEMMLEQKLALLS-RPLREKTTIAVTSKGRYGLEDEKGVLLTPTTRR	519
Xenopus_tropicalis	-----MQVDROSQLHSPMNLRDKTSIAVTSKGRYEPEDNKGALCTTTRR	44
	.....490.....500.....510.....520.....530.....540	

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Pavo_muticus      RSTPRNLVGLSTGMFESVMVQVLRQEEQLRAKEEKKRMREQERKEAEEASQKEIEEWEKSL 297
Pavo_cristatus    RSTPRNLVGLSTGMFESVMVQVLRQEEQLRAKEEKKRMREQERKEAEEASQKEIEEWEKSL 297
Gallus_gallus     RSTPRNLVGLSTGMFESVMVQVLRQEEQLRAKEEKKRMREQERKEAEEASQKEIEEWEKSL 297
Anas_platyrhynchos RSTPRNLVGLSAGMFESVMVQVLRQEEQLRAKEEKKRMREQERKEAEEASQKEIEEWEKSL 243
Chelonia_mydas    RSTPRSLAGLATGIFESIMVQVLRQEEQLRAKEEKKRLREQERKEAEEASQKEIEEWEKSL 264
Mus_musculus      RSTPRSLAGLTSGVFESIMVQVLRQEEQLRAKEEKKRLREQERKEAEEASQKEIEEWEKSL 289
Rattus_norvegicus RSTPRSLAGLTSGVFESIMVQVLRQEEQLRAKEEKKRLREQERKEAEEASQKEIEEWEKSL 288
Homo_sapiens      RSTPRSLAGLTSGVFESIMVQVLRQEEQLRAKEEKKRLREQERKEAEEASQKEIEEWEKSL 289
Pan_troglodytes   RSTPRSLAGLTSGVFESIMVQVLRQEEQLRAKEEKKRLREQERKEAEEASQKEIEEWEKSL 289
Macaca_mulatta    RSTPRSLAGLTSGVFESIMVQVLRQEEQLRAKEEKKRLREQERKEAEEASQKEIEEWEKSL 288
Canis_lupus_familiaris RSTPRSLAGLTSGVFESIMVQVLRQEEQLRAKEEKKRLREQERKEAEEASQKEIEEWEKSL 289
Equus_caballus    RSTPRSLAGLTSGVFESIMVQVLRQEEQLRAKEEKKRLREQERKEAEEASQKEIEEWEKSL 289
Bos_taurus        RSTPRSLAGLTSGVFESIMVQVLRQEEQLRAKEEKKRLREQERKEAEEASQKEIEEWEKSL 286
Rhinatrema_bivittatum RSTPRSLAGLTSGVFESIMVQVLRQEEQLRAKEEKKRLREQERKEAEEASQKEIEEWEKSL 256
Latimeria_chalumnae RSTPRSLAGLTSGVFESIMVQVLRQEEQLRAKEEKKRLREQERKEAEEASQKEIEEWEKSL 579
Xenopus_tropicalis RCITRGLA--NAGAAESVMVQVLRQEEQLRAKEEKKRLREQERKEAEEASQKEIEEWEKSL 102
.....550.....560.....570.....580.....590.....600

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Pavo_muticus      LAQAAPTRMETMWEIPAIGHFLCLAQQILNLPEIVFYELERCLLMPQCNAPFLSKIMTSLL 357
Pavo_cristatus    LAQAAPTRMETMWEIPAIGHFLCLAQQILNLPEIVFYELERCLLMPQCNAPFLSKIMTSLL 357
Gallus_gallus     LAQAAPTRMETMWEIPAIGHFLCLAQQILNLPEIVFYELERCLLMPQCNAPFLSKIMTSLL 357
Anas_platyrhynchos LAQAAPTRMETMWEIPAIGHFLCLAQQILNLPEIVFYELERCLLMPQCNAPFLSKIMTSLL 303
Chelonia_mydas    LAQAAPTRMETMWEIPAIGHFLCLAQQILNLPEIVFYELERCLLMPQCNAPFLSKIMTSLL 324
Mus_musculus      LAQAAPACMENMWEIPAIGHFLCLAQQILNLPEIVFYELERCLLMPQCNAPFLSKIMTSLL 349
Rattus_norvegicus LAQAAPACMENMWEIPAIGHFLCLAQQILNLPEIVFYELERCLLMPQCNAPFLSKIMTSLL 348
Homo_sapiens      LAQAAPTOMETMWEIPAIGHFLCLAQQILNLPEIVFYELERCLLMPQCNAPFLSKIMTSLL 349
Pan_troglodytes   LAQAAPTOMETMWEIPAIGHFLCLAQQILNLPEIVFYELERCLLMPQCNAPFLSKIMTSLL 349
Macaca_mulatta    LAQAAPTOMETMWEIPAIGHFLCLAQQILNLPEIVFYELERCLLMPQCNAPFLSKIMTSLL 348
Canis_lupus_familiaris LAQAAPTOMETMWEIPAIGHFLCLAQQILNLPEIVFYELERCLLMPQCNAPFLSKIMTSLL 349
Equus_caballus    LAQAAPTOMETMWEIPAIGHFLCLAQQILNLPEIVFYELERCLLMPQCNAPFLSKIMTSLL 349
Bos_taurus        LAQAAPTOMETMWEIPAIGHFLCLAQQILNLPEIVFYELERCLLMPQCNAPFLSKIMTSLL 346
Rhinatrema_bivittatum LAQAAPTOMETMWEIPAIGHFLCLAQQILNLPEIVFYELERCLLMPQCNAPFLSKIMTSLL 316
Latimeria_chalumnae LAQAAPTOMETMWEIPAIGHFLCLAQQILNLPEIVFYELERCLLMPQCNAPFLSKIMTSLL 639
Xenopus_tropicalis LALSEPTSMQSLWEIPAIGHFLCLAQQILNLPEIVFYELERCLLMPQCNAPFLSKIMTSLL 162
.....610.....620.....630.....640.....650.....660

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Pavo_muticus      SPPHRRSTLHRRPTLSYRAWEAALRQKVQHWYNVVGQTDNPSSAEKLGCLCPQFFKVLGE 417
Pavo_cristatus    SPPHRRSTLHRRPTLSYRAWEAALRQKVQHWYNVVGQTDNPSSAEKLGCLCPQFFKVLGE 417
Gallus_gallus     SPPHRRSTLHRRPTLSYRAWEAALRQKVQHWYNVVGQTDNPSSAEKLGCLCPQFFKVLGE 417
Anas_platyrhynchos SPPHRRSTLHRRPTLSYRTWEAALRQKVQHWYNVVGQTDNPSSAEKLGCLCPQFFKVLGE 363
Chelonia_mydas    SPPHRRSTLHRRPTLPYRTWEAALRQKVQWYTVVGQTDNPDCAEKLGCLCPQFFKVLGE 384
Mus_musculus      SPPHRRPTLHRRPTLPYRTWEAALRQKVQWYTVVGQTDNPDCAEKLGCLCPQFFKVLGE 409
Rattus_norvegicus SPPHRRPTLHRRPTLPYRTWEAALRQKVQWYTVVGQTDNPDCAEKLGCLCPQFFKVLGE 408
Homo_sapiens      SPPHRRPTLHRRPTLPYRTWEAALRQKVQWYTVVGQTDNPDCAEKLGCLCPQFFKVLGE 409
Pan_troglodytes   SPPHRRPTLHRRPTLPYRTWEAALRQKVQWYTVVGQTDNPDCAEKLGCLCPQFFKVLGE 409
Macaca_mulatta    SPPHRRPTLHRRPTLPYRTWEAALRQKVQWYTVVGQTDNPDCAEKLGCLCPQFFKVLGE 408
Canis_lupus_familiaris SPPHRRPTLHRRPTLPYRTWEAALRQKVQWYTVVGQTDNPDCAEKLGCLCPQFFKVLGE 409
Equus_caballus    SPPHRRPTLHRRPTLPYRTWEAALRQKVQWYTVVGQTDNPDCAEKLGCLCPQFFKVLGE 409
Bos_taurus        SPPHRRPTLHRRPTLPYRTWEAALRQKVQWYTVVGQTDNPDCAEKLGCLCPQFFKVLGE 406
Rhinatrema_bivittatum SPPHRRSTLHRRPTLPYRAWEAALRQKVQWYTVVGQAEKLGCLCPQFFKVLGE 376
Latimeria_chalumnae SPPHRRPTLHRRPTFSYRTWEAALSQKVHGWYSVVGQADPNSCAEKLGCLCPQFFKVLGE 699
Xenopus_tropicalis SAPHRRSTLHRRPTLPYQEWETTLRQVQWYTMVGQAEKLGCLCPQFFKVLGE 222
.....670.....680.....690.....700.....710.....720

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	***: .**:*:*****:*****:***:***** **:	
<i>Pavo_muticus</i>	VNPLQEKPFHELPPFYQKWLLKGLCDFVYETQKDQDAVLGQPIHECREVILGYDYLENA	477
<i>Pavo_cristatus</i>	VNPLQEKPFHELPPFYQKWLLKGLCDFVYETQKDQDAVLGQPIHECREVILGYDYLENA	477
<i>Gallus_gallus</i>	VNPLQEKPFHELPPFYQKWLLKGLCDFVYETQKDQDAVLGQPIHECREVILGYDYLENA	477
<i>Anas_platyrhynchos</i>	VNPLQEKPFHELPPFYQKWLLKGLCDFVYETQKDQDAVLGQPIHECREVILGYDYLENA	423
<i>Chelonia_mydas</i>	VNPLEGTPFHELPPFYQKWLLKGLCDFVYETQKDQDAVLGQPIHECREVILGYDYLENA	444
<i>Mus_musculus</i>	VNPLEERPFFHELPPFYQKWLLKGLCDFVYETQKEVQDAVLGQPIHECREVILGYDYLENA	469
<i>Rattus_norvegicus</i>	VNPLEERPFFHELPPFYQKWLLKGLCDFVYETQKEVQDAVLGQPIHECREVILGYDYLENA	468
<i>Homo_sapiens</i>	VNPLEEKPFFHELPPFYQKWLLKGLCDFVYETQKEVQDAVLGQPIHECREVILGYDYLENA	469
<i>Pan_troglodytes</i>	VNPLEEKPFFHELPPFYQKWLLKGLCDFVYETQKEVQDAVLGQPIHECREVILGYDYLENA	469
<i>Macaca_mulatta</i>	VSPLEEKPFHELPPFYQKWLLKGLCDFVYETQKEVQDAVLGQPIHECREVILGYDYLENA	468
<i>Canis_lupus_familiaris</i>	VNPLEEKPFFHELPPFYQKWLLKGLCDFVYETQKEVQDAVLGQPIHECREVILGYDYLENA	469
<i>Equus_caballus</i>	VNPLEEKPFFHELPPFYQKWLLKGLCDFVYETQKEVQDAVLGQPIHECREVILGYDYLENA	469
<i>Bos_taurus</i>	VNPLEEKPFFHELPPFYQKWLLKGLCDFVYETQKEVQDAVLGQPIHECREVILGYDYLENA	466
<i>Rhinatrema_bivittatum</i>	TSPLEEKSFHKLPPFYQKWLLKGLCDFVYETQSEVQDSVLGQPIHECREVILGYDSQENA	436
<i>Latimeria_chalumnae</i>	TNPLENTPFHELPPFYQKWLLKGLCDFVYETQKEVQDAVLGQPIHECREVILGYDSQENS	759
<i>Xenopus_tropicalis</i>	VSPLEKTFHELPPFYQKWLLKGLCDFVYETQSEVQDAVLGQPIHECREVILGYDAQENA	282
	.....730.....740.....750.....760.....770.....780	

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Pavo_muticus	YVHFPOFCGADVRIYKQKPFOAPEFPPSPPIKVKKVPRTKVEKVKHEYVSKSNGAVSSGSR	537		
Pavo_cristatus	YVHFPOFCGADVRIYKQKPFOAPEFPPSPPIKVKKVPRTKVEKVKHEYVSKSNGAVSSGSR	537		
Gallus_gallus	YVHFPOFCGADVRIYKQKPFOAPEFPPSPPIKVKKVPRTKIEKVKYEYVSKSNGAVSSGGR	537		
Anas_platyrhynchos	YVHFPOFCGADVRIYKQKPFRAPEFPSPPIKVKRPRIKVEKAKHDYVRKSGNDVSSGGR	483		
Chelonia_mydas	YVHFPOFCGADVRIYKQKPFAPPAFPPIKVKKVPRIKLEKVKECYVSKSNGEVRFSGR	504		
Mus_musculus	YVHFPOFCGADVRIYKQRPFQAPEFFPVPIIKVKRVPRIKLEKFCDYANTSNGEHR-CTK	528		
Rattus_norvegicus	YVHFPOFCGADVRIYKQRPFQAPEFFPVPIIKVKRVPRIKLEKFCDYVNTSNGEHR-CNR	527		
Homo_sapiens	YVHFPOFCGADVRIYKQRPFQAPEFFIPPIKIQRVPRIKLEKLKCDYVSTNSGEHR-CSR	528		
Pan_troglodytes	YVHFPOFCGADVRIYKQRPFQAPEFFIPPIKIQRVPRIKLEKLKCDYVSTNSGEHR-CSR	528		
Macaca_mulatta	YVHFPOFCGADVRIYKQRPFQAPEFFIPPIKIQRVPRIKLEKLKCDYVSTNSGEHR-CSR	527		
Canis_lupus_familiaris	YVHFPOFCGADVRIYKQRPFQAPEFFIPPIKIQRVPRIKLEKLKCDYVSTNSGEHR-CSR	528		
Equus_caballus	YVHFPOFCGADVRIYKQRPFQAPEFFPVPIIKIQRVPRIKLEKLKCDYVSTNSGEHR-CSR	528		
Bos_taurus	YVHFPOFCGADVRIYKQRPFQAPEFFIPPIKIQRVPRIKLEKLKCDYVSASNGEHR-CSR	525		
Rhinatrema_bivittatum	YIHFPQFCGADIRIYKQRPFQAPEFFIPPIKIRRPPRIKLQKMKIEYSNKSNGEVKFTGE	496		
Latimeria_chalumnae	YIHFPQFCGADIRIYKQRPHRAPPEFPPIHIKVHRAPOVKIEKVKTENFHKNHENIKVVDN	819		
Xenopus_tropicalis	YIHFPQFCGADVRYKQRPFRAPEFPAPPVRRATKRLEKAKCKISNKNCNDLR-PAK	341		
	.....790.....800.....810.....820.....830.....840			

Pavo_muticus	GDLLPRSK----	SEVGKSMG	SIDSCPEK	DTHLDSFS	SVTEIKIN--	CEMKTSGV	CDIKKT	591
Pavo_cristatus	GDLLPRSK----	SEVGKSMG	SIDSCPEK	DTHLDSFS	SVTEIKIN--	CEMKTSGV	CDIKKT	591
Gallus_gallus	GDLLPRSK----	SEVGKSMG	IAGCPEK	DTHLDSFS	SVTEIKIN--	CEMKTSGV	CDIKKA	591
Anas_platyrhynchos	EELLPCSK----	TEAGKCV	DSVSCPE	KEKCLDS	SFSVTEIKIN--	CEMKTSGV	SDIKKT	537
Chelonia_mydas	EELLPHCK----	IETGKSMD	SLICCPAK	-IHLDSFS	SITTEKEMKPN	CEIKMHRAC	DIKKT	559
Mus_musculus	EGLPLAFK----	KEQEIDFD	-PACCPK	-MNFNDH	DIILEMEVKS	NCNDIKVHRP	CEIEKT	582
Rattus_norvegicus	EGLPLTFK----	KEQEIDFD	-PAYCPAK	-MNFNDH	DIIVEVEVKA	NCNDIKVHRP	CEIEKT	581
Homo_sapiens	DSLPSSEFK----	KEQENNFD	-PACCPAK	-MILDNHD	ISVEMGVKS	NYEIRIRRP	CEIKKT	582
Pan_troglodytes	DSLSSSEFK----	KEQENNFD	-PACCPAK	-MILDNHD	ISVEMEVKS	NYEIRIRRP	CEIKKT	582
Macaca_mulatta	DSMPSAFK----	KEQENNFD	-PACCPK	-MILDNHD	ISVEMEVKS	NYEIRIRRP	CEIKKT	581
Canis_lupus_familiaris	-GLSSGFK----	KEQELNFD	-ATWGSK	-MNLNHD	ISDEMVKSS	CEIRIHRP	CEIKKT	581
Equus_caballus	EGLPSAFK----	KEQEINF	D-PTCCPAK	-MNLNHD	ISVEMEVKS	SCEIRICRP	YBIKKT	582
Bos_taurus	EGLPSAFR----	KEQEINF	D-PTCCPAK	-MNLNHD	ISVETEVNS	NCCEIRIRRP	CEMNIT	579
Rhinatrema_bivittatum	EELLPGPK----	-TSLDMHF	DSLESCLPD	-KDINGCS	MPAESETKPN	CEIKIHRT	CDAKKT	551
Latimeria_chalumnae	DCWLPNINPK	EKGQKIGD	GFDSLQNC	PTPE-PKSEK	TALPEREVNS	SCETKKPR	TDSEVKK	878
Xenopus_tropicalis	IVLPEICR----	ASLQSCS	EQKNCPEK	-PHTEYCS	SSSTPDQDMK	IIIVETKQ	VEPCNLAET	395
	.....850.....	.....860.....	.....870.....	.....880.....	.....890.....	.....900		

# CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep\_msa/KIAD20261pep Feb 1 12:32:14 2022

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*      *** .. .. *:.. . :*.** * *: : . . *
Pavo_muticus      GCY---KENLRHLISSGEIVSMADHFS SGERRPAENGOGCAEMARVKVEISPFKENTLKA 648
Pavo_cristatus    GCY---KENLRHLISSGEIVSMADHFS SGERRPAENGOGCAEMARVKVEISPFKENTLKA 648
Gallus_gallus     GCY---KENLRHLISSGEIVSMADRFSS SGERRPAENGOGCAEMARVKVEISPFKENTLKA 648
Anas_platyrhynchos GCY---KENLRNLIGSGEIVGMAGDFSS SGERRPAENGOGCAEMARVTVEISPFKENTLKA 594
Chelonia_mydas    GCC---KENQEKPI SPGEIVGFGEPLSPGEIRVVENGEKRHEASLIKTEPSPLKTNLTLT 616
Mus_musculus      DCC---KENLQKPRSPGEVTGFGEPLSPGEIRFIENQEKYGEASKIKTESNPLKENALKS 639
Rattus_norvegicus DCC---KENLQKPRSPGEVTGFGEPLSPGEIRFIENQEKYGEASKIKTESNPLKENALKS 638
Homo_sapiens      DCC---KENLEKPRSPGEVTGFGEPLSPGEIRFIENQEKYGEASRIKIEPSPLKENTLKS 639
Pan_troglodytes   DCC---KENLEKPGSPGEVTGFGEPLSPGEIRFIENQEKYGEASRIKIEPSPLKENTLKS 639
Macaca_mulatta    DCC---KENLEKPGSPGEVTGFGEPLSPGEIRFIENQEKYGEASRIKIEPSPLKENALKS 638
Canis_lupus_familiaris DCY---KENLEEPGSPGEVTGFGEPLSPGEIRFIENQEKYGEASRVKPEPSPLKENALKS 638
Equus_caballus    DCC---KENLEKPGSPGEVTGFGEPLSPGEIRFIENQEKYGEASRVKPEPSPLKENALKS 639
Bos_taurus        DCC---KENLEKPGSPGEVTSFGEPLSPGEIRFIENQEKYGEASRVKPEPSPLKENALKS 636
Rhinatrema_bivittatum SCC---KENMKKPVSPGEIVGYGEALSPGEVRIVENGEKYSEAPLLKTEPSPLKENALKT 608
Latimeria_chalumnae KCLDSSKENLEKPS SPGEIVGYGAPLSPGEIRIVENGNLCGDVSLKSEPSPLKENAAKT 938
Xenopus_tropicalis SCC---KENVEKPI SPREVVGYPEPLSPGEIRVLEDVAKYGEAAKDKSE-----SGLKT 446
.....910.....920.....930.....940.....950.....960

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*: :*. * . : . : :. . ** :* *****:*. :
Pavo_muticus      CQVLVNGTHNDNQETDYNRSACEIMLENSLR--SNNKLIKLRAKKKKKKKKKLKDILNEN 707
Pavo_cristatus    CQVLVNGTHNDNQETDYNRSACEIMLENSLR--SNNKLIKLRAKKKKKKKKKLKDILNEN 707
Gallus_gallus     CQMLVNGTHNDNQETDYNRSACEIMLENSLR--NNNKLIKLRAKKKKKKKKKLKDILNEN 707
Anas_platyrhynchos CQVLVNGTHND-QEIDYHKSAKETVLENSLQ--NNKKLSKLRAKKKKKKKKLKDILNEN 651
Chelonia_mydas    CQVHVNGSHSNPDMMNCHKVAREMFLENSLWNNKKLKLTKLRAKKKKKKKKLKDILNAH 676
Mus_musculus      CQIHVNGSHIDHPDINCHKVVRDILLEHSLQSHKKLKLTKMRAKKKKKKKKLKDVLNEN 699
Rattus_norvegicus CQIHVNGSHIDHPDINCKAVRDILLEHSLQSHKKLKLTKMRAKKKKKKKKLKDVLSEN 698
Homo_sapiens      CQIHVNGSHSDHPEINCHKVVRDILLEQSLQSHKKLKLTKMRAKKKKKKKKLKDVLNEN 699
Pan_troglodytes   CQIHVNGSHSDHPEINCHKVVRDILLEQSLQSHKKLKLTKMRAKKKKKKKKLKDVLNEN 699
Macaca_mulatta    CQIHVNGSHSDHPEINCHKVVRDILLEQSLQSHKKLKLTKMRAKKKKKKKKLKDVLNEN 698
Canis_lupus_familiaris CQIHVNGSHSDHPEINCHKVVRDILLEQ---SHKKIKLTKMRAKKKKKKKKLKDVLNEN 695
Equus_caballus    CQIHVNGSHSDHPEINCHKVVRDILLEQSLQSHKKLKLTKMRAKKKKKKKKLKDVLNEN 699
Bos_taurus        CQIHVNGSHSDHPEINCHKVVRDILLEQSLQSHKKLKLTKMRAKKKKKKKKLKDILNEN 696
Rhinatrema_bivittatum CQVHVNGSHSDNPDNLCHRMARDIILEHSLNLNKKLKLAKVRAKKKKKKKKLKDILNEN 668
Latimeria_chalumnae CKRHMNGSHSGKLDVCK-LVTKDIAPQFLGQKKDLKLLKMRIRAKKKKKKKLKDILNDN 997
Xenopus_tropicalis CQIHVNGSHSDSSDVICHQVAMDIILDNSLNLNKKLKLKSRIRAKKKKKKKLKDILNDH 506
.....970.....980.....990.....1000.....1010.....1020

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** : : * : : : : *.. ** : *****: : * : : *
Pavo_muticus      LQKKLDDLQRRREVHLYPFKSYKSEIOSKLF--KKKAKHKKHKS GKKSVSKKAITKKRKG 765
Pavo_cristatus    LQKKLDDLQRRREVHLYPFKSYKSEIOSKLF--KKKAKHKKHKS GKKSVSKKAITKKRKG 765
Gallus_gallus     LQKKLDDLQRRREVHLYPFKSYKSEIOSKLF--KKKAKHKKHKS GKKSVSKKAITKKRKG 765
Anas_platyrhynchos LQKKIDDLQRRREIHLHPFKSYKSEIOSKLFIIKKKAKHKKHKS GKKSVSKKAITKKRKG 711
Chelonia_mydas    LQKRDDLQRRREILPHFPKTYKPEIQNKLFIIKKKAKHKKHKS GKKSISKKAITKKRKA 736
Mus_musculus      LQRKREGLHS-----LPFKSYKPEIQNKLLIIKKKGKHKHKS GKKSISKKAITKKRKT 753
Rattus_norvegicus LQRKREGLHS-----LPFKSYKPEIQNKLLIIKKKGKHKHKS GKKSISKKAITKKRKT 752
Homo_sapiens      LQRKREGLHS-----LAFKSYKPEIQNKLLIIKKKAKHKKHKS GKKSVSKKAITKKRKT 753
Pan_troglodytes   LQRKREGLHS-----LAFKSYKPEIQNKLLIIKKKAKHKKHKS GKKSVSKKAITKKRKT 753
Macaca_mulatta    LQRKREGLHS-----LAFKSYKPEIQNKLLIIKKKAKHKKHKS GKKSISKKAITKKRKT 752
Canis_lupus_familiaris LQRKRESLHS-----LAFKSYKPEIQNKLLIIKKKAKHKKHKS GKKSISKKAITKKRKT 749
Equus_caballus    LQRKREGLHS-----LAFKSYKPEIQNKLLIIKKKAKHKKHKS GKKSISKKAITKKRKT 753
Bos_taurus        LQRKRESLHS-----LAFKSYKPEIQNKLLIIKKKAKHKKHKS GKKSISKKAITKKRKT 750
Rhinatrema_bivittatum LQEKRDGLHA-----HPFKSYKPEIOSTLFILIKKTKHKKHKS GKKSVSKKAITKKRKA 722
Latimeria_chalumnae LQSRPDGLRQ-----LAKSYRLDTOKSFLMKKAKHKKHKS GKKSTSKRTNVKKKKI 1051
Xenopus_tropicalis LQVKCDTLQL-----HKFRSLKTEIOSKLYLTKKRAKKHKKHKS GKNITVSKKAVAKNRKT 560
.....1030.....1040.....1050.....1060.....1070.....1080

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## CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep\_msa/KIAD20261.pse Feb 1 12:32:14 2022

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	. : .*:.*:*****:*****.* * ** *: :*** :**.*:*.***** **:*	
Pavo_muticus	VTKS-AIPEFOLICTNLDELRELITKTIENELKDLEDIKKKSGRWYHRKQAVKELHGTILIR	824
Pavo_cristatus	VTKS-AIPEFOLICTNLDELRELITKTIENELKDLEDIKKKSGRWYHRKQAVKELHGTILIR	824
Gallus_gallus	VTKS-AIPEFOLICTNLDELRELITKTIENELKDLEDIKKKSGRWYHRKQAVKELHGTILIR	824
Anas_platyrhynchos	VTKS-AIPEFOLICTNLDELRELITKTIENELKDLEDIKKKSGRWYHRKQAVKELHGTILIR	770
Chelonia_mydas	VTKP-TVPEFOLICTNLDELRELITKTIENELKDLENIRKKSGRWYHRKQAVKELHCTILVR	795
Mus_musculus	VTKSPAVPEFOLICTNLDELRELITKTIENELKDLENSRKKS GKWYHRRQAVKELHSTILIR	813
Rattus_norvegicus	VTKSPAVPEFOLICTNLDELRELITKTIENELKDLENSRKKS GRWYHRRQAVKELHSTILIR	812
Homo_sapiens	VIKSPTVPEFOLICTNLDELRELITKTIENELKDLENSRKKS GKWYHRRQAVKELHSTILIR	813
Pan_troglodytes	VIKSPTVPEFOLICTNLDELRELITKTIENELKDLENSRKKS GKWYHRRQAVKELHSTILIR	813
Macaca_mulatta	VTKSPTVPEFOLICTNLDELRELITKTIENELKDLENSRKKS GKWYHRRQAVKELHSTILIR	812
Canis_lupus_familiaris	VTKSPTVPEFOLICTNLDELRELITKTIENELKDLENSRKKS GKWYHRRQAVKELHGTILIR	809
Equus_caballus	VTKSPTVPEFOLICTNLDELRELITKTIENELKDLENSRKKS GKWYHRRQAVKELHSTILIR	813
Bos_taurus	VTKSPTVPEFOLICTNLDELRELITKTIENELKDLENNRKKS GKWYHRRQAVKELHSTILIR	810
Rhinatrema_bivittatum	VSRLPTVLQFOLVCTNLDELRELITKTERELKDLENNKKKS GKWYFRROAVKELHSTILIR	782
Latimeria_chalumnae	APRPSSEPSFKLICITNLDDLRELITKTEELKELDSSRKKS AKWYFRROAVKELHCTLMR	1111
Xenopus_tropicalis	SANSTIAPEFOLVCTNLDELRELIKKIGELKVLVETNNKKKS EKWYFRROAVKELHCTILVR	620
	.....1090.....1100.....1110.....1120.....1130.....1140	

[illegible]

	.	:	:	:	:	:*	:	:	:	*
Pavo_muticus	VSS-KSSESAEYVEIPRKDHGPNDEMILLEMNLPAGKSKLLKKESTSKEIHKTLLKSFKR	943								
Pavo_cristatus	VSS-KSSESAEYVEIPRKDHGPNDEMILLEMNLPAGKSKLLKKESTSKEIHKTLLKSFKR	943								
Gallus_gallus	VSS-KSSESAEYVEIPRKDHPNDNEMKLEMLNPAGKSKLLKKESTSKEIHKTLLKSFKR	943								
Anas_platyrhynchos	VSS-KSSESAEHVEIPRKDHPDNDEMKLLEMLNPAGKSRLLKKESTSKEIQTKLPKSVKR	889								
Chelonia_mydas	VAS-KSSETAHEILIKQORSEFDEMILLEMDFPAGRSRLKKELTSEIKIQTLSRSIKR	914								
Mus_musculus	EVS-KSVDAAEPLDTLEKEQEESDDMKLSEIGFPMARSKLLKKELPSKDIVKTLPKTLKR	932								
Rattus_norvegicus	ELS-KSVDAAEPLDSLDEREDSDDMKLSDIGFPMARSKLLKKELPSKDIVKTLPAALKR	931								
Homo_sapiens	EIS-KSIDSTEPLDILEKDHFDSDDMKLSEIDFPMARSKLLKKELPSKDLPKTLTKLR	932								
Pan_troglodytes	EIS-KSIDSTEPLDILEKDHFDSDDMKLSEIDFPMARSKLLKKELPSKDLPKTLTKLR	932								
Macaca_mulatta	EIS-KSIDLTEPLDILEKHDFSDDMKLSEIDFPMARSKLLKKELPSKDLPKTLTKLR	931								
Canis_lupus_familiaris	EII-KCVDATEPLDILEKEHFDSDDKLSEIDFPMARSKLKKELPSKDVLIKILPKTLKR	928								
Equus caballus	EFS-KSIDSTESLDILEKDHFDSDDMKLSEIDFPMARSKLLKKELPSKDGPKTLPKTLKR	932								
Bos_taurus	EISSKSVDTTEPLDILEKDHFDLDDMKLSEIDFPMARSKLLKKELPSKDVLTLPKTLKR	930								
Rhinatrema_bivittatum	ETN-TFLDSSEPHILKNDP--DGTELSEMDFSAGKSKLMRKESFSKEVQRTLPKTFKR	899								
Latimeria_chalumnae	EVD-CLTEFAEQEIMKKNPTMDDTOPSDMELSTCRMRLPRKEGGSEIQKALPKTLKR	1230								
Xenopus_tropicalis	TIG-----ICHQNILLRNDELTPNFKEMDIHE---RGKIPKELLVRDLWKSPPACKR	731								
	.....1210.....1220.....1230.....1240.....1250.....1260									



## CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep\_msa/KIAD20261261.pse Feb 1 12:32:14 2022

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	* : * . : : : . * : : * : . : : :	
Pavo_muticus	QSKQNSCLDQNTNELSPRKKAKLSTSEAAVQSSSE---SSLQTDSCSLTDPK-QLEGSSPES	999
Pavo_cristatus	QSKQNSCLDQNTNELSPRKKAKLSTSEAAVQSSSE---SSLQTDSCSLTDPK-QLEGSSPES	999
Gallus_gallus	QSKQNSCLDQNTNELSPRKKAKLSTSEAAVQSSSE---SSLQTDSCSLTDLK-QLEGSSPES	999
Anas_platyrhynchos	QSKQNCCLDQNTNELSPRKKAKLSTSEAAVQSSSE---SSLQTDSCSLTELK-QIEGSSPES	945
Chelonia_mydas	QSKQNSSLDDSTKDLSPRKKAKLSTSEATVQSAK---SEMQTNSCLSELK-QSELSSPES	970
Mus_musculus	QSKQSSYLDDSTKELSPRKKAKLSTNETSVENLE---VNMQIE-CLKESK-PPELPTPES	987
Rattus_norvegicus	QSKQSSCPDDSAEELSPRKRARLSTSEPSAENLD---VEMPID-CLSECK-PAELPFQES	986
Homo_sapiens	QSKQTDYVDDSTKELSPRKKAKLSTNETTVENLE---SDVQID-CFSESK-HTEPSFPES	987
Pan_troglodytes	QSKQTDYVDDSTKELSPRKKAKLSTNETTVENLE---SDVQID-CFSESK-HTEPSFPES	987
Macaca_mulatta	QSKQTDYVDDSTKELSPRKKAKLSTNETTVENLE---SDVQID-CFNESEK-HAEPSPFPES	986
Canis_lupus_familiaris	QSKQTNLYDDSTKELSPRKRARLSTNETTVENVE---GEMQID-CLNELK-HTEPLFPES	983
Equus_caballus	QSKQTSYLDDSTKELSPRKKAKLSTTETTVENVVD---GNLQID-CLNESK-HAEPLFPES	987
Bos_taurus	QSKQIISYLDDSTKELSPRKKAKLSTNETTVENAE---GDVQMD-CLNESK-HTEPLCPES	985
Rhinatrema_bivittatum	QCKQNSCMENAKELLPRKKTKFSTCDASVHGLE---GGTQTVYCMSEQR-QTE--SPPL	953
Latimeria_chalumnae	QCKQSSFLDEYAKEFSRKKIKPSLNEVADNRITAGLTVEQSESWPELKTAEELSAKT	1290
Xenopus_tropicalis	QCRQSTSPSTETKDFVSKKKTKLSSQEDSLHCIG---LAQTCRLKDTK--HVELEGQH	785
	.....1270.....1280.....1290.....1300.....1310.....1320	

	:	..	**::*****	*****:	:	..	:					
Pavo_muticus	FSLPDPATS	VSSFLKGT	KPIQ	ALLAKNIGNKVTLTNQLS	PPPGIN	VSTSEKPVLS	SPVESS 1059					
Pavo_cristatus	FSLPDPATS	VSSFLKGT	KPIQ	ALLAKNIGNKVTLTNQLS	PPPGIN	VSTSEKPVLS	SPVESS 1059					
Gallus_gallus	FSLTDPATS	VSSFLKGT	KPIQ	ALLAKNIGNKVTLTNQLS	PPPGIN	VSTSEKPVLS	SPVESS 1059					
Anas_platyrhynchos	FSLTDPATS	VSSFLKGT	KPIQ	ALLAKNIGNKVTLTNQVSP	SGIN	VSTSEKPVLS	SPVESS 1005					
Chelonia_mydas	FALTD	SAMSVN	FLKGT	KPIQ	ALLAKNIGNKVTLTNQLTPPMGRD	JF	ASEKAVMS	SVSS 1030				
Mus_musculus	FASKA	-SVPV	STLQ	KGTKPIQ	ALLAKNIGNKVTLTNQLPP	STGRSV	PAVEK	PALSPEDTS 1046				
Rattus_norvegicus	FASKD	-SVPV	STLQ	KGTKPIQ	ALLAKNIGNKVTLTNQLPP	STGRSV	PAVEK	PAPSPAETS 1045				
Homo_sapiens	FASLD	-SVPV	STLQ	KGTKPIQ	ALLAKNIGNKVTLTNQLPP	STGRNAL	AVEK	PVLSPEEAS 1046				
Pan_troglodytes	FASLD	-SVPV	STLQ	KGTKPIQ	ALLAKNIGNKVTLTNQLPP	STGRNAL	AVEK	PVLSPEEAS 1046				
Macaca_mulatta	FASLD	-SVPV	CTLQ	KGTKPIQ	ALLAKNIGNKVTLTNQLPP	STGRS	ASAVEK	PVLSPEEAS 1045				
Canis_lupus_familiaris	FASMD	-STPV	SILQ	KGTKPIQ	ALLAKNIGNKVTLTNQLSP	STGRS	PPAVEK	AILSPPEAS 1042				
Equus_caballus	FASVE	-STPV	STLQ	KGTKPIQ	ALLAKNIGNKVTLTNQLPP	STGRS	ASAVEK	PVISPPEAS 1046				
Bos_taurus	FASLD	-STPV	STLQ	KGTKPIQ	ALLAKNIGNKVTLTNQLPP	STGRS	ASAVEK	PVISPPEAS 1044				
Rhinatrema_bivittatum	ESLMD	SATS	VSSIL	IGTKPVQ	ALLAKNIGNKVTLTNQLPS	ALGRSL	SSSEK	SGLSP--- 1010				
Latimeria_chalumnae	TSNAD	TATSS	SLDF	OKPLKPIQ	ALLAKNVGNKVTLT	LSQLPSS	VCCT	SAGFDKTA	VTVVQSG 1350			
Xenopus_tropicalis	ISKDT	ICAS	VTD	SVKGT	KPIQ	ALLAKNIGNKVTLT	SHQVQ	STDET	VSTGET	SAISLMQSV 845		
	.....	1330	.....	1340	.....	1350	.....	1360	.....	1370	.....	1380

	*. :. : ****. :. * :*:: ...*** **: :.* *:*****:*	
Pavo_muticus	LIKPALPCQTGSKTPLQMVYKMPNGHCVPVDLHSSSVKIQMOPVIDPKSGEKVMOQVLIL	1119
Pavo_cristatus	LIKPALPCQTGSKTPLQMVYKMPNGHCVPVDLHSSSVKIQMOPVIDPKSGEKVMOQVLIL	1119
Gallus_gallus	LIKPALPCQTGSKTPLQMVYKMPNGHCVPVDLHNSSVKIQMOPVIDPKTGEKVMQOVLIL	1119
Anas_platyrhynchos	LTKPALPCQTNSTKPLQMVYKMPNGHCVPIDLHNSSVKIQMOPVIDPKTGEKVMQOVLIL	1065
Chelonia_mydas	PLKPALPCQTNSTKPLQMVYKMPSGHCVPIDVHNSSVKIQMOPVIDPKTGEKVMQOVLIL	1090
Mus_musculus	PLKPALTCLTSTKGPLQMVYKMPCGOWLPVDLHSSSVKIQMOPMVDSTGEKIMOQVLIL	1106
Rattus_norvegicus	PIKPALTCLTSTKGPLQMVYKIPCGOWLPVDLHSSSVKIQMOPVVDSTGEKIMOQVLIL	1105
Homo_sapiens	PIKPALTCHTNTKGPLQMVYKMPCGOWLPIDLQNSSSVKIQVQPMVDPKTGEKIMOQVLIL	1106
Pan_troglodytes	PIKPALTCHTNTKGPLQMVYKMPCGOWLPIDLQNSSSVKIQVQPMVDPKTGEKIMOQVLIL	1106
Macaca_mulatta	PVKPALTCHTNTKGPLQMVYRMPCGOWLPIDLQNSSSVKIQMOPVVDPKTGEKIMOQVLIL	1105
Canis_lupus_familiaris	PIKPALTCHSTTKGPLQMVYKMPCGOWLPVDLQNSSSVKIQMOPVLDPKTGEKIMOQVLIL	1102
Equus_caballus	PIKPALTCHTSTTKGPLQMVYKMPCGOWLPIDLHNSSVKIQMOPVLDPKTGEKIMOQVLIL	1106
Bos_taurus	PIKPALTCHTSTTKGPLQMVYKMPCGOWLPDLHNSSVKIQMOPMLDPKSGEKIMOQVLIL	1104
Rhinatrema_bivittatum	--KSALPCQTNSESPLOMVCKMPGGQCVPIDLHNSVKIQVQPIIDPKTGEQLMQOVFIL	1068
Latimeria_chalumnae	PTKPTVSCQAPVKNPLOMLYKRSDBGSCVPINLSSSPVKIAVOPVIDPKTGEKLMQOVLIL	1410
Xenopus_tropicalis	QAKPLLPQGETSKNPLOMIYKLPDGCIPIDINNSTVKIHVQPMTESKNREKIMOQVLF	905
	.....1390.....1400.....1410.....1420.....1430.....1440	



## CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep\_msa/KIAD20261.pssm Feb 1 12:32:14 2022

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TVFNKNTSNLS	QGTG	STNST	QTLP	-ATT	SN-LVSS	SAVKVC	QTEHEKLR	TEVS	TTTF	PVFL	1237
TVFNKNTSNLS	QGTG	STNST	QTLP	-ATT	SN-LVSS	SAVKVC	QTEHEKLR	TEVS	TTTF	PVFL	1237
TIFNKNICNL	SGTV	STNST	QTLP	-TTTS	-LVSS	TVKVC	QTEHDKLR	TEVS	TTTF	PVFL	1237
TIFNKNTSNLS	QGTG	PKNSIQ	TLPG	ITSTS	-NLL	STVKVC	QTEHDKIK	TTVS	TTTF	PVSL	1184
TVFNKSVTHLS	QVTS	PVNR	QPLSS	SVTATS	NLLAS	SAVKIS	QSSEAGK	TKT	TVS	PD	1199
TVLSKSTSP	SSNV	---	ARSQ	PLSP	VASV	SNALTS	SPVKTS	QSSEAGK	VKSTAS	ST	1218
TVLNKTVTL	SSNV	---	ARSQ	PLSP	VT	SVSNVLI	SPVKTS	QSSEAGK	VKSTVS	SN	1218
TAFNKITIT	PLSN	ISS	--ARP	QPLSP	VT	SVSNLLT	PSVKTS	QSSEAGK	AKNAVS	AA	1224
TVFNKITIT	PLSN	ISS	--ARP	QPLSP	VT	SVSNLLT	PSVKTS	QSSEAGK	AKNAVS	AA	1224
TVFNKITIT	PLSN	VTS	--ARP	QPLSP	VT	SVNNLLT	PSVKTS	QSSEAGK	T	KN	1223
IVFNRTIT	PLSN	VSS	--GRP	QPLSP	PKTS	ISNFLT	PPVKTS	QSSES	GKGK	H	1220
TVFNKITIT	PLSN	VSS	--GRP	QPLSP	VT	SVNNLLT	PPVKTS	QSSEAGK	VKN	TVS	1224
TAFNKITV	PLSN	VSS	--ARP	QSLT	SVTS	ISNLLA	PPVKTS	QSSEAGK	FKNTVS	A	1222
TVFNKSAVQ	VT	KLNI	PVNR	LQT	FP	SVTTNN	-LLAS	AGKVC	QSE	TD	1186
LSLDKNIT	PD	LKMT	ST	-LSG	MP	SAVR	TSV	SPS	ITTSKVS	Q	1512
LAFPEKIV	VELT	TPVHS	-----	-----	-----	TSMV	HVPET	GIST	SDINVS	QL	994
.....1510	.....1520	.....1530	.....1540	.....1550	.....1560						

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:      *      *      :      :      :      *      :*****:*:**
SSPSISTASQSLVSATALSASTNTATAFHCLASQQATESF--ETROELKTVCIRESQSIL 1295
SSPSISTASQSLVSATALSASTNTATAFHCLASQQATESF--EARQELKTVCIRESQSIL 1295
SSPSISTASQSLISATALSASTNTATAFHCLASQQATESF--ETROELKTVCIRESQSIL 1295
TSPTISTASQSLISATTLSTSTNTASALFHCLASQQTTESF--ETROELKTVCIRESQSIL 1242
PSSVTSTLGPLASATTLSGSANTTCSIHSLAPQQASDSC--EAKQELKTVCIRESQSIL 1257
TSPTISSTVQPLLPATTLNESTDPGSSIPCFS--QQTVDSS--EAKQELKTVCIRDSQSIL 1275
TSPTISSTVQPLLPATTLNEFTDPGSSLPCFS--QQTVDSS--EAKQELKTVCIRDSQSIL 1275
ASPTISSTGQPLSSTTTLNGSTNPGSSFNCFA--QQTADSS--EAKQELKTVCIRDSQSIL 1281
ASPTISSTGQPLLSTTTLNGSTNPGSSFNCFA--QQTADSS--EAKQELKTVCIRDSQSIL 1281
ASPTISSTGQPLSSTTTLNGSTNPGSSFNCFA--QQTADSS--EAKQELKTVCIRDSQSIL 1280
AS--SISSTVQPLLASATLRSRSTDPGSSLNCF--QQTADSS--EAKQELKTVCIRDSQSIL 1276
ASPTISSTVQTVLSATTLSGSTNPGSSLNCF--QPPSDCS--EAKQELKTVCIRDSQSIL 1281
ASPTISSTVQPLSATTLNGSTNSSSSLNCF--QQTADSS--EAKQELKTVCIRDSQSIL 1279
ASPIVSVTVQPTSTTATLSEASTVSIHVSVPQQVDSF--EVRQELKTVCIRESQSIL 1244
TISTISTMVPQVASAVTLCKSAFVGGGQSKLTQOHSQSTAONENKQELKTVCIRDSSEIH 1572
LATVTSPLVQSDTGKAAQKDIAS--HTLHLSPTLPKSS--ESKQELKTVCIRDSQSIL 1050
.....1570.....1580.....1590.....1600.....1610.....1620

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## CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep\_msa/KIAD2026T.psa Feb 1 12:32:14 2022

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	* *****:*****.*:	:	...*:::*:**:*...*	
Pavo_muticus	VTTRGGNTGIVKVQTNPDQISPTSVSSGSVLTYASQFKAFIVPKTTALSSSTLPSVA--T	1353		
Pavo_cristatus	VTTRGGNTGIVKVQTNPDQISPTSVSSGSVLTYASQFKAFIVPKTTALSSSTLPSVA--T	1353		
Gallus_gallus	VTTRGGNTGIVKVQTNPDQISPTSISSGSVLTYASQFKAFIVPKTTALSSSTLPSVA--T	1353		
Anas_platyrhynchos	VTTRGGNTGIVKVQTNPDQISSTSISSSVFTYAPQFQAFIVPKTTALPSTPSSIA--T	1300		
Chelonia_mydas	VTTRGGNTGIVKVQTNPDQISPTNLSPNSVFTYAPQLQAFIVPKSTTLSTSTFSSVA--T	1315		
Mus_musculus	VRTRGGNTGVVKVQTNPEQNSPNSLSSSSVFTFTPQFQAFIVPKSTSCSA--SSQVAGVT	1333		
Rattus_norvegicus	VRTRGGNTGVVKVQTNPEQNSPNSLSSSSVFTFAPQFQAFIVPKSTSCPT--SSQVAGVT	1333		
Homo_sapiens	VRTRGGNTGVVKVQTNPDQNSPNTVSSSVFTFAPQLQAFIVPKSTTSSS--AFSPVAGTT	1340		
Pan_troglodytes	VRTRGGNTGVVKVQTNPDQNSPNTVSSSVFTFAPQLQAFIVPKSTTSSS--AFSPVAGTT	1340		
Macaca_mulatta	VRTRGGNTGVVKVQTNPDQNSPNTVSSSVFTFAPQLQAFIVPKSTTSSS--AFSPVAGTT	1339		
Canis_lupus_familiaris	VRTRGGNTGVVKVQTNPDQNSPNSLSASSVFTFAPQLQAFIVPKSTTSSSVFSPVAGIT	1336		
Equus_caballus	VRTRGGNTGVVKVQTNPDQNSPNSLSSSGSVFTFAPQLQAFLLPKSTTSSSAFSPVAGTT	1341		
Bos_taurus	VRTRGGNTGVVKVQTNPDQNSPNSLSSSSVFTIAPQLQAFIVPKSTASSSAFSSVAGTT	1339		
Rhinatrema_bivittatum	VRTRGGNTGVVKVQTNLDQNSSTLSPSSVFSYAPQLQAFIVSKASTLSPSTFSSVTAAE	1304		
Latimeria_chalumnae	VTTRGGNTGVVKVQTNSSDQNSPTLSPNTVFTYTLQQLPTFLVSNNTLQPATLTSSSSST	1632		
Xenopus_tropicalis	VRTRGGNTGVVKVQTNISQDQ----TINPSSVFSFTPLQSFVLVSKPKTSASSTLTTPVPPAL	1106		
	.....1630.....1640.....1650.....1660.....1670.....1680			

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Pavo_muticus	ATSS	LPRFGQSCVSGFAPSTGSSFNTPSFPANFNQAMDKSIKFITLQQPATGS--TLGQV	1410											
Pavo_cristatus	ATSS	LPRFGQSCVSGFAPSTGSSFNTPSFPANFNQAMDKSIKFITLQQPATGS--TLGQV	1410											
Gallus_gallus	ATSS	LPHFGQSSVSGFAPSTGSSFNTPPPPADFNQAVDKSIKFITLQPATGS--SLGQV	1410											
Anas_platyrhynchos	ATSG	LPHFGQTCSVSGFTPTTASSVNIPSFVPDFNQ--EKNIKFITVQQPAAGG--TLGQV	1355											
Chelonia_mydas	AASS	LPLFGQSFSVGAFAPSTTSSTVIPALPAGLNQLIGKNLKFPPLGOLPTSGLDQV	1372											
Mus_musculus	TTSS	LPSFSQASTS-----VSISCGFHPPMGKNLKSTQGOTLSSG--YVGPM	1378											
Rattus_norvegicus	ATSS	LPSFSQAPT-----MSITCGSHPPVGKNLKSTVGTFFSSG--YAGPM	1378											
Homo_sapiens	TTSS	LSPFSQTPTS-----VSIPASFAPSMGKNLKLTLGHATTGSG--DLGHV	1385											
Pan_troglodytes	TTSS	LSPFSQTPTS-----VSIPASFAPSMGKNLKLTLGHPTGSG--DLGHM	1385											
Macaca_mulatta	TTSS	LSPFSQTPTS-----VSIPASLAPSMGKNLKLTLGYPTGSG--DLGHM	1384											
Canis_lupus_familiaris	TTSS	LPPFSQTPTS-----VSIPTGFNP SVGKNLRLLTGOPSCSG--NLGHM	1381											
Equus caballus	TTSS	LPPFGHTPTS-----ISIPAAFNPSVGKNLKLTLGOPACSG--NLGHM	1386											
Bos_taurus	ATSS	LPSFGQALT-----VSIPAGENPSLGKNLKFTLSQPSCSG--NLGHM	1384											
Rhinatrema_bivittatum	TISP	MPPVGPCPAVSEFSPPP---AINVPANVNPLMGKNLKFTILGOLSGGGGSLCQL	1360											
Latimeria_chalumnae	AAISGVLPFGQSSSSVAQLSAP-VSFPAPAGLNQLIGKGVKIAISOASSG--ELDQV	1689												
Xenopus_tropicalis	SVLPLPGFYSSSEYSQISS--- <td>1154</td>	1154												
	.....1690.....1700.....1710.....1720.....1730.....1740													

Species	Sequence	Position
Pavo_muticus	VENTCRVSCPS-SSCISSASSSISATPNSPI-----SVTSSG-----QNNITVVTTPNS	1456
Pavo_cristatus	VENTCRVSCPS-SSCISSASSSISATPNSPI-----SVTSSG-----QNNITVVTTPNS	1456
Gallus_gallus	VENTCQVSCPS-SSCISSASSSISATPNSPI-----SVTSTS-----QNNITVVTTPNS	1456
Anas_platyrhynchos	IENTSQV-CP--LSCISSASSSISATPKSPA-----IVTSVG-----QNSTIITTPNS	1399
Chelonia_mydas	IEKIQQVSSPTFLSSISSTSTLVPATPNGIV-----NVVSISSGNIEQSSIDVTQTP	1424
Mus_musculus	IEKTSYMPSSPLKPSVSSSS-LLPSTTNSSV-----SVISISTGNFGQTNTNVIHTS	1429
Rattus_norvegicus	IEKMPCMPSSPLKPSISSSS-LLPPPSTNSSV-----SVISISAGNFGQSNASVIHTS	1429
Homo_sapiens	IDKTSHMPSSPLKSSICSST-LLPSTTSSSV-----SVISISAAFNFGQNNANIIHTP	1436
Pan_troglodytes	IDKTSHMPSSPLKSSICSST-LLPSTTSSSV-----SVISISAAFNFGQNNANIIHTP	1436
Macaca_mulatta	IDKTSHMPSSPLKSSVCSSST-LLPSTTSSSV-----SVISISAAFNFGQNNANIIHTP	1435
Canis_lupus_familiaris	IDKASHMPSSPLKSSVSSGV-LLPSTANNSI-----SVISISTGNLGQTANANVIHTP	1432
Equus_caballus	IDKTSHILSSPLKSSVSSST-LLTSTVNSSV-----SVISISTGNFGQTANANIIHTP	1437
Bos_taurus	IDKTSMPSSPLKSSVSSSP-LLS-TANSSV-----SVINVSTGNCGQTSNNVIRTP	1434
Rhinatrema_bivittatum	ADKNGQGPTVLPTISTNSWLPAPACPVNINIS---GSSVSTVSSGNMRQSNAMITHSS	1417
Latimeria_chalumnae	TNTAMKVSSPSFLPTVSPNSSLPATPSTLSIINMSASSLGTVSSGNILKSHMVVTPPS	1749
Xenopus_tropicalis	CKVSDNLQTSNLLSTVSPSSWLPNSWGNM----AAVSNKLSHDDLSHGRSVVITVAT	1210

## CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep\_msa/KIAD20261.pse Feb 1 12:32:14 2022

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	: . :	:	.	*	.	. : *	.	.
Pavo_muticus	SVQQQCDIKTKINSVIQSESSS--VINGDFISGTSVKFTLVINPPILSPCGASGVNVIP	1514						
Pavo_cristatus	SVQQQCDIKTKINSVIQSESSS--VINGDFISGTSVKFTLVINPPILSPCGASGVNVIP	1514						
Gallus_gallus	SVQQQCDITKTKINSVIQSESSS--VINGDFISGTPVOKLTLVTNPPILSPCGASGVNVIP	1514						
Anas_platyrhynchos	SMQQQGDAKITKINSVIQYESSSSATNGDLISGTPVOKLTLVTNPPILSPCGASGVNVIP	1459						
Chelonia_mydas	STQQQVDIKTKKPVPVTQPETAT--ATNGDVIRGTPIQKLMLVTNPPILSPCATGVNIIP	1482						
Mus_musculus	TKPQQVCDCITSYPVTR--SEATTAVNGDVLGETPGQKLMLVSAPSLGPSGSVPSVNTPA	1487						
Rattus_norvegicus	TKPQQVCDCITSYPTVG--SEATAINGDVL-----SVVSAPPPLPPPAPSAAVAP	1479						
Homo_sapiens	TKQQQVDYIITSYPVTR--SEATAATNGDVISGTPVOKLMLVSAPSIILSGNGTAINMTP	1494						
Pan_troglodytes	TKQQQVDYIITSYPVTR--SEATAATNGDVISGTPVOKLMLVSAPSIILSGNTAINMTP	1494						
Macaca_mulatta	TKQQQVDYIITSYPVTR--SEATAATNGDVISGTPVOKLMLVSAPSIILSGNGTAINMTP	1493						
Canis_lupus_familiaris	NKQQQVDYFMKNFPVTR--SEATAATNGDAISGTAVHKLMLVSAPSIILSGSGTAINVTP	1490						
Equus caballus	TKQQQVDYIITSYPVTR--SEATAATNGDVISGTPVOKLMLVSAPSVLSGGSETAINVTP	1495						
Bos_taurus	AKHQQVDYIVTKSYPVTR--SEATAN--GDIIISGTPVOKLMLVSAPSVLSGGSGTSINVAP	1490						
Rhinatrema_bivittatum	SVQQQMDEPNVVQ-----ADSTMPTNGEVIGGISSQKLMLVSGPSILTNPNLATTVNMVA	1471						
Latimeria_chalumnae	SAQQSFQEQRKNLIVTQ--PEASYKSAGVDLGTAPOKIILVTPSPSVTCPFPAKVMTMA	1806						
Xenopus_tropicalis	TDIQTTEPKMSKISVVQ--PDSTITRSELVGNQLQKVM LVISPPLTG---MNUSA	1264						
	.....1810.....1820.....1830.....1840.....1850.....1860							

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<i>Pavo muticus</i>	SL	ASTGVS	AQ	KL	VF	INT	PI	PN	GP	SAT	SLVAES	SLKHN	LP	SS	IS	KTFV	SS	TE	Q	P	L	V	L	I	P	S	1574																																
<i>Pavo cristatus</i>	SL	ASTGVS	AQ	KL	VF	INT	PI	PN	GP	SAT	SLVAES	SLKHN	LP	SS	IS	KTFV	SS	TE	Q	P	L	V	L	I	P	S	1574																																
<i>Gallus gallus</i>	SL	APT	GVS	AQ	KL	VF	INT	PI	PN	GP	SAT	TLVAES	SLKHN	LP	SS	IS	KTFV	SAT	Q	P	L	V	L	I	P	S	1574																																
<i>Anas platyrhynchos</i>	SL	TSSG	IS	AQ	KL	VF	INT	PI	PN	GP	SV	TLNVAES	SLKHN	LP	SS	LS	KTF	FD	K	T	Q	P	L	V	L	I	P	1519																															
<i>Chelonia mydas</i>	T	P	T	S	T	G	V	S	A	Q	K	L	V	F	I	N	T	P	I	P	S	P	S	N	A	S	L	V	A	E	S	L	K	Q	A	L	P	S	S	I	S	K	T	Y	V	N	I	P	E	Q	P	L	L	I	P	S	1542		
<i>Mus musculus</i>	E	P	T	S	A	G	V	S	T	Q	K	V	V	F	I	N	A	P	V	P	G	G	A	S	S	A	I	V	A	E	S	L	R	O	S	L	P	S	P	L	N	K	T	Y	I	K	N	P	E	Q	P	I	V	L	I	P	S	1547	
<i>Rattus norvegicus</i>	A	P	A	S	A	G	A	S	T	Q	K	V	V	F	I	N	A	P	A	S	G	T	S	S	S	A	L	V	A	E	S	L	K	Q	T	L	P	S	P	L	S	K	T	Y	V	K	N	P	E	Q	P	I	V	L	I	P	S	1539	
<i>Homo sapiens</i>	A	L	T	S	T	G	V	S	A	Q	K	L	V	F	I	N	A	P	V	P	S	G	T	S	T	P	T	L	V	A	E	S	L	K	Q	T	L	P	P	P	L	H	K	A	Y	V	K	T	P	E	Q	P	I	V	L	I	P	S	1554
<i>Pan troglodytes</i>	A	L	T	S	T	G	V	S	A	Q	K	L	V	F	I	N	A	P	V	P	S	G	T	S	T	P	T	L	V	A	E	S	L	K	Q	T	L	P	P	P	L	N	K	A	Y	V	K	T	P	E	Q	P	I	V	L	I	P	S	1554
<i>Macaca mulatta</i>	A	L	T	S	T	G	V	S	A	Q	K	L	V	F	I	N	A	P	V	P	S	G	T	S	T	P	T	L	V	A	E	S	L	K	Q	T	L	P	P	P	L	N	K	A	Y	V	K	T	P	E	Q	P	I	V	L	I	P	S	1553
<i>Canis lupus familiaris</i>	A	P	T	S	T	G	V	S	A	Q	K	L	V	F	I	N	A	P	I	P	S	G	S	S	T	P	A	I	V	A	E	P	L	K	Q	T	L	P	P	P	L	N	K	T	Y	V	K	S	P	E	Q	P	I	V	L	I	P	S	1550
<i>Equus caballus</i>	A	P	T	S	T	G	V	S	A	Q	K	L	V	F	I	N	A	P	I	P	S	G	A	S	T	P	T	I	V	A	E	P	L	K	Q	T	L	P	P	P	L	N	K	T	Y	V	K	T	P	E	Q	P	I	V	L	I	P	S	1555
<i>Bos taurus</i>	A	P	T	S	P	G	V	S	A	Q	K	L	V	F																																													

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Pavo_muticus	MGAPIRINSSPTVAQVKDKVIGLNIGQTIVNTKGSAAQTPPVNILHSAISKGEDKKN-IG	1633
Pavo_cristatus	MGAPIRINSSPTVAQVKDKVIGLNIGQTIVNTKGSAAQTPPVNILHSAISKGEDKKN-IG	1633
Gallus_gallus	MGAPIRINSSPTTIAQVKDKVIGLNIGQTIVNTKGSAAQTPPVNILHSAVSKGEDKKN-IG	1633
Anas_platyrhynchos	IGAPIRIHSSPTIAQVKDKVIGLNIGQTIVNTKGNAAQTPPVNLLHSAISKGEDKKS-MG	1578
Chelonia_mydas	MGAPIKASSPTVSQIKDKVIGLNIGQAIVNSTGNTQHPPVINILKSAAPKGIIDVNSKG	1602
Mus_musculus	VGAPIKINSSPTVSQIKDKVIGLNIGQAIINPPGNLPAMSSINILQSVMPKGEDKSS-KS	1606
Rattus_norvegicus	VGAPRVNSSPAVSQIKDKVIGLNIGQAIINPPGNLPVSSINILQSVMPKAEDKSN-KG	1598
Homo_sapiens	VGTPIKINSSPAVSQIKDKVIGLNIGQAIVNTSGTVPAIP SINILQNVTPKGEDKSS-KG	1613
Pan_troglodytes	VGTPIKINSSPAVSQIKDKVIGLNIGQAIVNTSGTVPAIP SINILQNVTPKGEDKSS-KG	1613
Macaca_mulatta	VGTPIKINSSPAVSQIKDKVIGLNIGQAIVNTSGTVPAIP SINILQNVTPKGEDKSS-KG	1612
Canis_lupus_familiaris	VGAPIKINSSPTVSQIKDKVIGLNIGQAIVNSSGSVPAVPSINILQNVTPKGEEST-KG	1609
Equus_caballus	VGAPIKINSSPTVSQIKDKVIGLNIGQAIVNTSGSVPAIP SINILQNVTPKGEEST-KG	1614
Bos_taurus	VGTPIKINSSPTVSQIKDKVIGLNIGQAIVNTSGSVPALPSINILQNVTSKGEEST-KG	1609
Rhinatrema_bivittatum	MGAQIKVHPSSTISQVKDKVIGLNIGQAIINAGNAHNVSQVNLONAS-KGIDDTNCKG	1589
Latimeria_chalumnae	LGASIKTNSSSTVSQVKDKVIGLNIGQAIVNTCGSALRIPALMMPKISKKIDEQSNKG	1926
Xenopus_tropicalis	LGSPVKIISTPIVSQVKDVTIGLTIGQTIVNTGHAANNMLPMNIFOKILTKGDESIL---	1375
	.....1930.....1940.....1950.....1960.....1970.....1980	



## CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

File: /media/morpheus/disk1/fst/pep\_msa/KIAA2026.fasta Tue Feb 1 12:32:14 2022

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	. . :	.	*		. . :	:	.	: . :	*	
Pavo_muticus	LALS	LTST	SLVPVCS	SFMSQ	SAVS	VNESL	CVAAKATN	SFSVPTANACPE	SVSVAPSGTS	1693
Pavo_cristatus	LALS	LTST	SLVPVCS	SFMSQ	SAVS	VNESL	CVAAKATN	SFSVPTANACPE	SVSVAPSGTS	1693
Gallus_gallus	LALS	LTST	NSLPVPCS	SFISQ	SAVS	VNESL	CVAAKATN	SFSVPTANACPE	SVSVAPSGTS	1693
Anas_platyrhynchos	LALSVTSSS	SLVPVCS	SFVSQ	SAVS	VNESVC	VAAKATN	SFSVTITANV	SAESVSVTPSGTS		1638
Chelonia_mydas	FILPLSTS	GSLVPGCS	GFFVNQ	SITS	VNESIS	VAAKA---	FIVTTANACLDS	SVSVTPSGTS		1659
Mus_musculus	CISPISPNS	SNAPASSN	NIVNHSLPAASES	----	ARTANTFS	GIGASVPLSSL	SVASSPAS			1662
Rattus_norvegicus	CISPISPSSNS	VPPASSN	IVSQTLPPASES	----	ARAANTFS	GIAANVPLSSL	SVTSSPAS			1654
Homo_sapiens	YILPLSTS	GNSVPVSSNFVSQ	NITPVNESV	VSSARAVNVLS	VTGANLSLGS	SFPVTSASAS				1673
Pan_troglodytes	YILPLSTS	GNSVPVSSNFVSQ	NITPVNESV	VSSARAVNVLS	VTGANLSLGS	SLPVTASAS				1673
Macaca_mulatta	YILPLSTS	GNSIPVSSNFVSQ	NITPVNESV	VSSARAVNMLS	VTGANLSLGS	SLVTASAS				1672
Canis_lupus_familiaris	YVLPLSTS	GNSIPVSSNFVSQ	NITPVNESV	VSSATRAVMF	SVTGANMSLGS	SLVTSTAS				1669
Equus_caballus	YVLPLSTS	GNSIPVSSNIVSQ	NITPVNESV	VSTARAVNM	FSVTGANVSLGS	SLVTSTAS				1674
Bos_taurus	YVLPLSTS	GSSIPIVSSNFMSQ	NITPVNESV	VSSASRTVM	MFSGTGANVSLGS	SVSVTSTPAS				1669
Rhinatrema_bivittatum	FILPLSTA	SNLVPGCSNFVTON	-AAINDSVSVGPRCAN	--AFITANS	CLGSLSVTSSCTS					1646
Latimeria_chalumnae	FVLPLSTV	SNISIPGS-----	LSVTVNESIIPCC	KIGATS	AVATGVKS	VGIVSSTIILS				1980
Xenopus_tropicalis	KRIIVSNVINL	IPGTENG	AHTADQNPNND-----	CIVTTAKWPTG	CAAASSINS					1424
	.....1990.....	2000.....	2010.....	2020.....	2030.....	2040				

	..*	:.*	..*	:	*::**::****::*:.																																																								
Pavo_muticus	S	G	T	R	P	T	A	L	S	G	G	N	D	P	S	-	R	V	R	P	-	V	L	G	N	R	L	C	T	A	N	I	G	N	T	V	G	I	S	T	V	K	T	G	H	L	A	S	S	V	L	I	S	T	T	Q	P	V	V	S	1751
Pavo_cristatus	S	G	T	R	P	T	A	L	S	G	G	N	D	P	S	-	R	V	R	P	-	V	L	G	N	R	L	C	T	A	N	I	G	N	T	V	G	I	S	T	V	K	T	G	H	L	A	S	S	V	L	I	S	T	T	Q	P	V	V	S	1751
Gallus_gallus	-	G	T	R	P	T	V	L	S	G	G	N	D	P	S	-	K	V	R	P	-	V	L	G	S	R	L	C	T	A	N	I	G	N	T	V	G	I	S	T	V	K	T	G	H	L	A	S	S	V	L	I	S	T	T	Q	P	M	V	S	1750
Anas_platyrhynchos	S	G	T	R	P	T	V	L	I	G	N	D	P	S	-	R	I	R	P	-	I	L	G	N	R	L	C	T	A	N	I	G	N	T	V	G	I	S	T	V	K	T	G	H	L	A	S	S	V	L	I	S	T	T	Q	P	V	V	S	1696	
Chelonia_mydas	V	G	T	O	P	T	V	L	S	G	N	D	T	S	S	T	I	R	P	-	V	T	S	R	L	C	T	S	N	I	G	N	T	M	A	I	S	T	V	K	T	G	H	L	A	S	S	V	L	I	S	T	T	Q	P	R	V	S	1718		
Mus_musculus	A	G	T	R	P	P	V	L	S	G	N	D	T	S	S	R	I	M	P	-	V	L	S	N	R	L	C	P	S	N	L	G	N	T	V	A	I	S	T	V	K	T	G	H	L	A	S	S	V	L	I	S	T	T	Q	P	T	V	S	1721	
Rattus_norvegicus	V	G	T	R	P	P	V	L	S	G	N	D	T	S	S	R	I	M	P	-	V	L	S	N	R	L	C	T	S	N	L	G	N	T	V	A	I	S	T	V	K	T	G	H	L	A	S	S	V	L	I	S	T	T	Q	P	A	V	S	1713	
Homo_sapiens	A	G	A	O	P	P	V	L	S	G	N	D	T	S	S	R	I	M	P	-	I	L	S	N	R	L	C	S	S	S	L	G	N	T	V	A	I	S	T	V	K	T	G	H	L	A	S	S	V	L	I	S	T	T	Q	P	V	V	S	1732	
Pan_troglodytes	A	G	A	R	P	P	V	L	S	G	N	D	T	S	S	R	I	L	P	-	I	L	S	N	R	L	C	S	S	S	L	G	N	T	V	A	I	S	T	V	K	T	G	H	L	A	S	S	V	L	I	S	T	T	Q	P	V	V	S	1732	
Macaca_mulatta	A	G	T	R	P	P	V	L	S	G	N	D	T	S	S	R	I	M	P	-	I	L	S	N	R	L	C	S	S	S	L	G	N	T	V	A	I	S	T	V	K	T	G	H	L	A	S	S	V	L	I	S	T	T	Q	P	V	V	S	1731	
Canis_lupus_familiaris	V	G	T	R	P	P	V	L	S	G	N	D	T	S	S	R	I	M	P	-	M	L	S	N	R	L	C	T	S	N	L	G	N	T	V	A	I	S	T	V	K	T	G	H	L	A	S	S	V	L	I	S	A	T	Q	P	T	V	S	1728	
Equus_caballus	V	G	T	R	P	P	V	L	S	G	N	D	T	S	S	R	I	M	P	-	I	L	S	N	R	L	C	T	S	N	L	G	N	T	V	A	I	S	T	V	K	T	G	H	L	A	S	S	V	L	I	S	T	T	Q	P	T	V	S	1733	
Bos_taurus	V	G	T	R	P	P	V	L	S	G	N	D	T	S	S	R	I	M	P	-	S	L	S	N	R	L	C	T	S	N	L	G	N	T																											

[illegible]



# CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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      . . . . .
Pavo_muticus      VTAAGPSNAG-IQKPQSLLTASPNTGKVISFSPSSSLQCCQ-VPPSLEKQSPAYTV--- 1862
Pavo_cristatus    VTAAGPSNAG-IQKPQSLLTASPNTGKVISFSPSSSLQCCQ-VPPSLEKQSPAYTV--- 1862
Gallus_gallus     VTAAGPSNAG-TQKPQSLLTASPNTGKVVSFSPSSSLQCKQ-VPPSLEKQSPAYSV--- 1861
Anas_platyrhynchos VSAAVPSNAG-IHKPQSVLTTAPANTGKVIITFPTLSSSLQCCQ-VPLCTEKQSHAY----- 1805
Chelonia_mydas    ISAAVPTNAN-FHKPQNVLFPASPTTGKIIISFNFASLPCQQ-IPPSLTTPAHAYSCAPG 1834
Mus_musculus      TTTIVPTNAN-TNKPPAELS-PSASPGKIVNISNVTSMPNQH-MSPSLVKSTLGNNSIAG 1838
Rattus_norvegicus TTATVPTNAN-TTKPPAEFSSPSPSPGKIVISNVPSPVNPQH-VPPSLVKTTLSNNSLAG 1831
Homo_sapiens      ISTTVPTNVN-TNKPQTELSSSLSTSPGKIINTSNFASLPNQQ-----ALVK-TPSYSSAPG 1846
Pan_troglodytes   ISTTVPINVN-TNKPQTELSSSLSTSPGKIINTSNFASLPNQQ-----ALVK-TPSYSSAPG 1846
Macaca_mulatta    ISTTVPTNVN-TNKPQTELSSSLSPSPGKIVNISNFAILLNQQ-----ALVK-TPSYSSAPG 1845
Canis_lupus_familiaris TSTTVPTNIN-TNKPQTELPPLSPSPGKVINISNFAILLNQQKISPALVKSTPSYSSAPG 1847
Equus_caballus    ISTTVPTNIN-TNKPQTELPPLSPSPGKIINISNFAILLNQQ-MSPALVKSTPSYTSAPS 1851
Bos_taurus        VSTTVPTNIN-TNKPQTELPPLSPNPGKIINISNFAILLNQQ-MSPAFLKSTPSYSSTPG 1846
Rhinatrema_bivittatum IPAAVPTNTN-VQKPQ-ALIPSSPNTGKVINLSNTTSLPNQQIPPSGVRLAHTNSGTPDL 1815
Latimeria_chalumnae SSVVLSSTSSITRSPIVQAPLQNLKMFSPSSGCLVPVQSSANSLLKPTQCNTPLTG 2160
Xenopus_tropicalis YSKTLLSTNVC-----TSQGLQTLPTLVTKPRSDSYFSQ----- 1566
      .....2170.....2180.....2190.....2200.....2210.....2220

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      : : . . . . . : * * * : : * * . * * : * : * : * * * * *
Pavo_muticus      -ASTVQMCAASPAITSKTGGQLSEPCIQOKIVINTCVPLAPGTQIMINGTCFVVPPQGLG 1921
Pavo_cristatus    -ASTVQMCAASPAITSKAGGQLSEPCIQOKIVINTCVPLAPGTQIMINGTCFVVPPQGLG 1921
Gallus_gallus     -ASTIQMCVASPAITSKTGGQLNEPCIQOKIVINTCMPLAPGTQIMINGTCFVVPPQGLG 1920
Anas_platyrhynchos -TSTIQMCAASPAVTSKAG-QPNEPSIQOKIVINTCMPLAPGTQIMINGTCFVVPPQGLG 1863
Chelonia_mydas    -ASVIQTATASPTVTSQAMGQLNETCIQOKIVINTCTPLAPGTHIMINGTRFIVPPQGLG 1893
Mus_musculus      -GSAIHTCSPPSNITSLAGAPFSEPCIQOKIVINTSTPLAPGTQIMINGARFIVPPQGLG 1897
Rattus_norvegicus -GSAIHTCSPPSNITGLAGAPFTEPCIQOKIVINTSTPLAPGTQIMINGARFIVPPQGLG 1890
Homo_sapiens      -GTTIHTASAPSNVTSVLGSGFSEPCIQOKIVINTSTPLAPGTQIMINGTRFIVPPQGLG 1905
Pan_troglodytes   -GTTIHTASAPSNVTSVLGSGFSEPCIQOKIVINTSTPLAPGTQIMINGTRFIVPPQGLG 1905
Macaca_mulatta    -GATIHTASAPSNVTSVLGSGFSEPCIQOKIVINTSTPLAPGTQIMINGTRFIVPPQGLG 1904
Canis_lupus_familiaris -GSAIHTATAPSNVNSVIGGQFSESCIQOKIVINTSTPLAPGTQIMINGTRFIVPPQGLG 1906
Equus_caballus    -GSAIHTATAPSNVTSVVGQFSEPCIQOKIVINTSTPLAPGTQIMINGTRFIVPPQGLG 1910
Bos_taurus        -VTAIHTATAPSNVTSVLGSGFSEPCIQOKIVINTSTPLAPGTQIMINGARFIVPPQGLG 1905
Rhinatrema_bivittatum -LSCIQTPSASSTVTSQVGHQLNETCIQOKVLVNTSSPLVPGTQIMINGIRFIVPPQGLG 1874
Latimeria_chalumnae PTSAIQSGTAASAI PGQVGVLLNGPCVQOKILINTSAPLAPGTQIMFNNTKFFVPPQGLG 2220
Xenopus_tropicalis --SSVPLQISSALPTTQLCGQLNDSLVOOKIIINTSTPLAPGTQITINGTRFIVPPQGLG 1624
      .....2230.....2240.....2250.....2260.....2270.....2280

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      * * * : * : . . . . . * : : : :
Pavo_muticus      AGSHVLLLS CNTKQTPPLNINHSQEAQGIPMVNPITSKIIVLAPGNSLSWQTSQQLLNKST 1981
Pavo_cristatus    AGSHVLLLS CNTKQTPPLNINHSQEAQGIPMVNPITSKIMLAPGNSLSWQTSQQLLNKST 1981
Gallus_gallus     AGSHVLLLS SYNTKQTPPLNINHGQEAQGVVNPITSKIILAPSNLSWQTSQRLLNKST 1980
Anas_platyrhynchos AGSHVLLLS SYNTKQTPPLNINHGQEAQGIPIVNSITSKIMLAPSNLSLQTSKHPLKNST 1923
Chelonia_mydas    AGSHVLLIS ANPKHGPPLLINNGQARGLPFVNHIQNTILAPSNLSWQTSKHPLKSST 1953
Mus_musculus      AGSHVLLISTNPKYGPPLVLNSGQSILATPVDNPV-QKIIQTSNSSLSGQPLKPSVRNPS 1956
Rattus_norvegicus AGSHVLLIATNPKYGPPLLLNSGQSILATPVDNPV-QKIIQTSNSSLSGQPLKHSVRNST 1949
Homo_sapiens      AGSHVLLISTNPKYGAPVLVNSGQGIQSTPIDNSA-QKITLASNNSLSGQPLQHPLRSPT 1964
Pan_troglodytes   AGSHVLLISTNPKYGAPVLVNSGQGIQSTPIDNSA-QKITLASNNSLSGQPLQHPLRSPT 1964
Macaca_mulatta    AGSHVLLISTNPKYGAPVLVNSGQGIQSTPIDNSA-QKITLASNNSLSGQPLQHPLRSPT 1963
Canis_lupus_familiaris VGSHVLLISTNPKYGPPLVLNSGQGLPPTSVDNP--AEITLTSNNSLSGQPVKQSLRSST 1964
Equus_caballus    AGSHVLLIS ANPKYGLPLVLNSGQSIQPTPVDNPT-QKVTLASNNSLSGQPVKHSNRNST 1969
Bos_taurus        AGSHVLLISTNPKYGPPLVNSGQGAQPTPVDNLA-QKITLASNNSLSGQPVKHCLKSST 1964
Rhinatrema_bivittatum AGSHVLLISTNAKHDSFVTSNVQGTPIPIDNPVQKSLLAASSSLAWHPLKQPLKSST 1934
Latimeria_chalumnae AGSHILLIS GNAKQGPSQFINNVQAGSVTLGSTA--KSRLASSFSGGQDIKLQSHNST 2278
Xenopus_tropicalis VGSHVLLISASTKQGVSLGNSSTGHGLGNSNTTEQOMTLKQNMSLT-QDLNKPLTIS- 1682
      .....2290.....2300.....2310.....2320.....2330.....2340

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# CLUSTAL 2.1 MULTIPLE SEQUENCE ALIGNMENT

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      :  ::  .  .  ::
Pavo_muticus      KIVNSFGSAEALPIVHATPQILSTPSSSGASLPAATLSVSSVIKSP-ANVPPTSSVVS 2040
Pavo_cristatus    KIVNSFGSAEALPIVHATPQILSTPSSSGASLPAATLSVSSVIKSP-ANVPPTSSVVS 2040
Gallus_gallus     KIVNSFGSADALPIVHATPQILSTPSSSCTPLPAATLSVSSVIKSP-AYVPTTSSVVS 2039
Anas_platyrhynchos KIVNSFGSADALPIVHATPQVLAAPASSCTPLSTTTLSVSSVIKSP-ANVLAPSAVVS 1982
Chelonia_mydas    KIVNSLGTANTLPIVHATPQIVNTAAKSSAPPSTATLSMSSVIKPP-VNVLAKTSLVPAI 2012
Mus_musculus      KTVNSLGSFSSLSAVHTPPHIINTPAKVCVPP-APPAALTSVIKSSPATLLAKTSLVSAI 2015
Rattus_norvegicus KIVNSFGSPSSLSAVHTAPHIVNTPAKACVPP-APPAPLTSVIKASPAALLAKTSLVSAV 2008
Homo_sapiens      KFINSFGNASSIPTVHTSPQILINTTAKVPVPPPVPVTVSLTSVIKSP-ATLLAKTSLVSAI 2023
Pan_troglodytes   KFISFSGNASSIPTVHTSPQIINTTAKVPVPPPVPVTVSLTSVIKSP-ATLLAKTSLVSAI 2023
Macaca_mulatta    KFINSFGNASSIPTVHTSPQIINTTAKVPVPPPVPVTVSLTSVIKSP-ATLLAKTSLVSAI 2023
Canis_lupus_familiaris KIVNSLGNASHLPTVHTTPIINTTAKVSVPPPTPTVSLTSVIKSP-APPAPLLAKTSLVSAI 2024
Equus_caballus    KIVNSLGNASCLPTVHTTPIINTTAKVSVPPPTPTVSLTSVIKSP-APPAPLLAKTSLVSAI 2029
Bos_taurus        KIVNSLGNASSLSTIPAAPQIINPTAKVSVPPPVPVTVSLTSVIKSP-APPAPLLAKTSLVSAI 2024
Rhinatrema_bivittatum KIVNSLGIANTVPIVHTTPOVNNNTAKPSDLFPAAVVTMPFQPSQ-SAFVEKTPMVSTV 1993
Latimeria_chalumnae QIVNSVTKVHTSPVALAAPQVSTITKTSIKPVAVTAVATPAVTQS--RLLSKPVLATTA 2336
Xenopus_tropicalis KNMNLFTTINLVPAAHAS--TLNMTSKDSIPVDGPPLSCPQFTTAL-----KPLLISAL 1734
      .....2350.....2360.....2370.....2380.....2390.....2400

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      .  .  .  *  :  *  .  .  :  .  .  :  *  :  .  .  .
Pavo_muticus      HPSNTHLPRNTSVFQLDTSIKKLLVSPGAILNAINTPASKV-SSLSSSLPPVVVSTSR 2099
Pavo_cristatus    HPSNTHLPRNTSVFQLDTSIKKLLVSPGAILNAINTPASKV-SSLSSSLPPVVVSTSR 2099
Gallus_gallus     HPSNSHLPSNTSVFQLDTSIKKLLVSPGAILNAINTPASKV-SSLSSSLPPVVVSTSR 2098
Anas_platyrhynchos HPPNSHLPSNTSVFHLDTSIKKLLVSPGAILNAINTPASKG-SSVSSSLPPVVVSTSRN 2041
Chelonia_mydas    NAGNSQLPSSTSVFHLDTSIKKLLVSPGAILNAINTPASKVVSSLSSSLSPIAVSKSIN 2072
Mus_musculus      SSSNPPLPSSTSVLHLDTSVKKLLVSPGAILNTINTPAKA-PSLSSSLPPVVV-ASQN 2073
Rattus_norvegicus SPSNPPLPSSTSVFHLDTSVKLLVSPGAILNTINTPAKA-PSLSSSLPPVVV-ASQN 2066
Homo_sapiens      CPSNPPLPSSTSVFHLDPVKKLLVSPGAILNTINTPAKV-SSLSPSLSQIVVSASRS 2082
Pan_troglodytes   CPSNPPLPSSTSVFHLDPVKKLLVSPGAILNTINTPAKV-SSLSPSLSQIVVSASRS 2082
Macaca_mulatta    CPSNPPLPSSTSVFHLDPVKKLLVSPGAILNTINTPAKV-SSLSPSLSQIVS-ASRN 2081
Canis_lupus_familiaris CSTNPPLPSNTSVFHLDTSVKLLVSPGAILNTINTPAKV-SSVSPSLSQIVVSASRN 2083
Equus_caballus    CSSNPPLPTSTSVFHLDTSVKLLVSPGAILNTINTPAKV-SSLSSSLSQIVVSASRN 2088
Bos_taurus        CSSNPPLPSNTSVFHLDTSVKLLVSPGAILNTINTPAKV-SSVSPSLSQIVS-ASRN 2082
Rhinatrema_bivittatum YTGKTLPLPSSTSEFHLDTSVKLLVSPGAILNTVNTPTSKV--QSSPALSQIVVSPQKS 2051
Latimeria_chalumnae QSIKSSSLSDTVALPLDMPVSKLLVSPGAILNTISTPAANT-RFLSPPTALGLTATSSC 2395
Xenopus_tropicalis QQGRSPQPSNTILPLPADTTVK-----NSGVLNTVLPPSILS-----DSKN 1774
      .....2410.....2420.....2430.....2440.....2450.....2460

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      .  ::  .  .  .  *
Pavo_muticus      STAVFPISQSSCLDKPDNAAS---- 2120
Pavo_cristatus    STAVFPISQSSCLDKPDNAAS---- 2120
Gallus_gallus     STTVFPISQSSCLDKPDNAAS---- 2119
Anas_platyrhynchos PTTVFPISQSSCLDKPDKAAS---- 2062
Chelonia_mydas    PTNVFPAFQSSGLGKSDKAAS---- 2093
Mus_musculus      PASVFPAFPSSALEKPDTAAS---- 2094
Rattus_norvegicus PAPVFPAFPSSGLEKPDTAAS---- 2087
Homo_sapiens      PASVFPAFQSSGLEKPDRAAS---- 2103
Pan_troglodytes   PASVFPAFQSSGLEKPDRAAS---- 2103
Macaca_mulatta    PASVFPAFQSSGLEKPDTAAS---- 2102
Canis_lupus_familiaris PASVFPTFHSSDLENPDTAAS---- 2104
Equus_caballus    PASVFPAFQSSGLEKPDTAAS---- 2109
Bos_taurus        PASVFPAFQSSGLEKPDTAAS---- 2103
Rhinatrema_bivittatum ANMVFPVFHSSGSEIPNTTAS---- 2072
Latimeria_chalumnae ALSVIPPYQAPSSSTKPNTAASTTLE 2420
Xenopus_tropicalis SDLAFAAHQPSVPDKSHITIAL---- 1795
      .....2470.....2480.....

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