Multiple Sequence Alignment of Distant Orthologs

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                          cov     pid  1 [        .         .         .ex1  ex2    .         :         .         .         . 80
 1 Human      100.0% 100.0%   ---MPMISVLGKMFLWQREGPGGRWTCQTSRRVS---------SDPAWAVEWIELPRGLSLSSLGSARTLRGWSRSSRP
 2 Common Toad       69.7%  58.2%   ------------------------------------------------------------------------------------
 3 Common Frog       86.3%  47.5%   ----------------------MGCIGSRSSGT------------VEALRVEWHEGRCSAAFYHQKRPF---LVRRFNLQ
 4 Tropical Frog     86.9%  47.7%   ----------------------MGCIGSRSSGTGERRRFVQSTRLLEALRVEWSEGRCTAALFHQKRSS---FVRRFNLR
 5 Caecilian         75.4%  65.4%   ------------------------------------------------------------------------------------
 6 Sea Lamprey       85.5%  22.5%   ----------------------MGCIGSRRSIVKA-----------EALREWPHKSNGPGSGGGSSVSV--PGSSAGVQ
 7 Thorny Skate      98.6%  51.2%   MRYCGNVSSLEQGLIFHLKAPIMGCIGSKTTIVA---------VDTTLSVEWKEVKSAAALFPLGNTTTS-LVRRLGHQ
 8 Zebrafish         71.6%  49.7%   ------------------------------------------------------------------------------------
 9 Rice Fish         76.2%  32.6%   ------------------------------------------------------------------------MSTMRLRTRSS--
10 Wrasse            71.6%  35.6%   ------------------------------------------------------------------------------------
11 Lungfish          94.3%  59.0%   ----------------------MGCIGSKTTIVA---------VDTTLCVEWKEVKSASTLFPLTNTRTS-SVRRLARQ
   consensus/100%                   ....................................................................................

                          cov     pid 81        .         1         .   ex2 ex3  .         .         .         ex3  ex4    . 160
 1 Human      100.0% 100.0%   SSVDSQD--------------------------LPEVNVCDTVAMLPK-------SRRALTIQEIAALARSSLHGISQVV
 2 Common Toad       69.7%  58.2%   ------------------------------------------MLPK-------SRRALTIHEITALARSSLHGISQVV
 3 Common Frog       86.3%  47.5%   VPSESQEFLESNTYVLSLEDLLEDGRTKSLGSSGVVLHVEDTGEMLPK-------SRRALTIHEITALARSSLHGISQVV
 4 Tropical Frog     86.9%  47.7%   VPTDSQEFLEVTRTFP---------------HYDMLHVEDTGEMLPK-------SRRALTIHEITALARSSLHGISQVV
 5 Caecilian         75.4%  65.4%   ------------------------------------------MLPK-------SRRALTIQEIAALARSSLHGISQVV
 6 Sea Lamprey       85.5%  22.5%   GGLARGDL-------GSCSSETSGPSAPALSGNTSEASVEDTTQILPR-------VRRSRTLTGITALARSSITGLSESV
 7 Thorny Skate      98.6%  51.2%   TSVDCLE---------------------------TTEVNVEDTIEMLPK-------SRRALTIQEIAALARSSLHGESQVV
 8 Zebrafish         71.6%  49.7%   ------------------------------------------MLPK-------SRRALTIQEIAALARSSLHGISQVV
 9 Rice Fish         76.2%  32.6%   --------------------------ERMERQGEEEVKFEETEMILPKSGKSPADSRKSVGIHEFAALARSSLNGISQAV
10 Wrasse            71.6%  35.6%   ------------------------------------------MILPKSGKSPADSRKSVGIQEFAALARSSLNGISQAV
11 Lungfish          94.3%  59.0%   TSVDSQD--------------------------TFEVNVEDTTEMLPK-------SRRALTIQEIAALARSSLHGISQVV
   consensus/100%                   ..............................................hlE+.......sR+uhslpthsALARSSlpGhSpsV

                          cov     pid 161       .         .         .         2         .   ex4   ex5   .         . 240
 1 Human      100.0% 100.0%   KDHVTKPTAMAQGRVAHLIEWKGWSKPSDS-----PAALESAFSSYSDLSEGEQEARFAAGVAEQEAIAEAKLRAWSSVD
 2 Common Toad       69.7%  58.2%   KDHVTKPTAMAQGRVAHLIEWKGWSKPSDN-----PAALETHFNSYSHLSEGEQEARFAAGVAEQEAIAEAKLRAWSSVD
 3 Common Frog       86.3%  47.5%   KDHVTKPTAMAQGRVAHLIEWKGWSKPSDS-----PAALETHFNSYSHLSEGEQEARFAAGVAEQEAIAEAKLRAWSSID
 4 Tropical Frog     86.9%  47.7%   KDHVTKPTAMAQGRVAHLIEWKGWSKPSDS-----PAALETHFNSYSHLSEGEQEARFAAGVAEQEAIAEAKLRAWSSID
 5 Caecilian         75.4%  65.4%   KDHVTKPTAMAQGRVAHLIEWKGWCKPVDS-----PMALESDFNSYSDLSEGEQEARFAAGVAEQEAIAEAKLRAWSSID
 6 Sea Lamprey       85.5%  22.5%   RARVTKP--MARGRVAHLIEWNDWDHGHVQSYHESTLYTDDPYCDTTDMVDGERERFNEGVAQQEALSEARDRAWSSGE
 7 Thorny Skate      98.6%  51.2%   KDHVTKPTAMAQGRVAHLIEWKGWCKPIDS-----PMTLEIDFNSYSDLSEGEQEARFAAGVAEQEIAEAKLKAWSSVD
 8 Zebrafish         71.6%  49.7%   KDHVTKPTAMAQGRVAHLIEWKGWSKPSDT-----TNALETHITSYSHLTEGEQEARFAAGVAEQEAIAEAKLRAWSSVD
 9 Rice Fish         76.2%  32.6%   RDHVTKPTSLAQGRVAHLIEWKGWPKPAGP-----PAGAHSQLSSYSHLTEGEKEARFAAGVAEQVIAEAKLRAWASID
10 Wrasse            71.6%  35.6%   RDHVTKPTSLAQGRVAHLIEWKGWPKPTNP-----PPAAHSHFSSYSHLSEGEKEARFAAGVAEQEAIAEAKLRAWASMD
11 Lungfish          94.3%  59.0%   KDHVTKPTAMAQGRVAHLIEWKGWCKPMDS-----PLALESDFNSYSDLTEGEQEARFAAGVAEQEAIAEAKLRAWSSID
   consensus/100%                   +s+VTKP..hAPGRVAHLIEWpsWs+s.s......s.hhc..hsshochs-GEQEARFAtGVApQE.luEA+L+AWuSh-

                          cov     pid 241       :         ex5       ex6       .         .         3         .         . 320
 1 Human      100.0% 100.0%   GEDSTDDSYDEDFA---GGMDT--------DMAGQLPLGPHLQDLFTGHRFSRPVRQ--GSYEPESDCSQTV--------
 2 Common Toad       69.7%  58.2%   GEDSTDDSYDEDLQ---PSLDH----SQPADFLNPV-----QKDLVSSR-----------ICCCDSDSSRTL--------
 3 Common Frog       86.3%  47.5%   GEDSTDDSYDEDLQ---PSMDH----SQPADFLSPV-----QKDLVSSR-----------ICCCDSDSSRTL--------
 4 Tropical Frog     86.9%  47.7%   GEDSTDDSYDEDLP---PPCDH----SQPSDFLTPV-----QKDLVPSR-----------VCCCDSDSSRTL--------
 5 Caecilian         75.4%  65.4%   GEDSNDESYDEDFA---SASDN----VLPTTTTPHLQPGSYLKDFLHSRLCQLSAGQ--SSCEPESD-------------
 6 Sea Lamprey       85.5%  22.5%   GDGEDGDMGDGSGEWVHIPSVHTPYHTSKDCDLERFPSSVSLSEVLQARLRRLAAARTPPVLSPESVHGVLF-SPDGVA-
 7 Thorny Skate      98.6%  51.2%   GDEMNDDSYDEDFV---PNMEN----TQAADPAAQHPQVNYSRDRLHSHLCQFTVRQ--ASCEQESDSSQTV--------
 8 Zebrafish         71.6%  49.7%   GDESNDDSYDEDFL---PANEP----VTQSTDLSS--YPHYLRDLLQTHLRA----P--GVCEVESGVGADLSPPVGSPG
 9 Rice Fish         76.2%  32.6%   DEDE-DDSNDEDCH---TNRQTCSVPSQSLDPAES--------SPISGPTHQPKIQN--D-EPP------TFDCPLGSST
10 Wrasse            71.6%  35.6%   DDEE-DDSNDEDSH---TNGPAHTISSQSSDAAMS--------NPISGPPCQSEVDG--GEAAP------PCDSPLGPSC
11 Lungfish          94.3%  59.0%   GDDSNDDSYDEDFL---LANDS----TQPADVAVQRPSANYLTDFLHSHLCQLTVRQ--SSCEQESDSSQTV--------
   consensus/100%                   s-t..s-..Dts......s...........s.h..........p.h.s...............................

                          cov     pid 321       .         .         :         .         .         .         .         4 400
 1 Human      100.0% 100.0%   -SPDTLCSSL----CSLEDGL------LGSP-----ARL---ASQLLG-------DELLLAK----LPPSRESAFRSLGP
 2 Common Toad       69.7%  58.2%   -SPETLCSSL----CSLDEEQLL----LGSP-----AQT---VEE-------------SLLM----KPQSGLGPYDRLQD
 3 Common Frog       86.3%  47.5%   -SPETLCSSL----CSLDEERLL----LGSP-----TQL---IEE-------------SLLI----KPQSVLGTYDRLRD
 4 Tropical Frog     86.9%  47.7%   -SPETLCSSL----CSLDEEQLL----LGSP-----AQL---VEE-------------PLLT----KPQSVLGPYSCLQD
 5 Caecilian         75.4%  65.4%   -SPATLCSSL----CSLEDQLLLK-E-LSSP-----AEL---AAKLLGSMSGD--QEAPLSK----LPPSGEEAYRSLGQ
 6 Sea Lamprey       85.5%  22.5%   -LETLVCRGFADGFASVERQRL--------P------DL---AQGLLAAP-----ECLPLQT-----------------
 7 Thorny Skate      98.6%  51.2%   -SPETLCSSL----CSLEDHPLLKVE-LDTP-----TEL---AAKLPGQMDAVPGHREVISQ----LHPSGNIE-CAFRN
 8 Zebrafish         71.6%  49.7%   SQSDTLCSSM----CSLDERHPLLRD-IGRQGDSPAADL---TAKILSALHGG--EEQLLAR----LHRAGLR----RGH
 9 Rice Fish         76.2%  32.6%   --NSPTCERP----PTLNDLHSSGTTSPTLQGKHTSSFLEEEEE----RLEAFEEQLAPLQVQQNEICIHNKPEWRPRAR
10 Wrasse            71.6%  35.6%   --DSLLCDEA----VSHNDPHSSQTNSPTLPSDCTSPFLEEEEEEEEGRLGGPEGQQAPLQEHRSEVCIHSKPEWRPRAR
11 Lungfish          94.3%  59.0%   -SPETICSSL----CSLEDHPLLK-E-LGPP-----SEL---AAKLPGSG---PLARQLISK----LQLGGESAPRNLGQ
   consensus/100%                   ...t.hCpt.....sohpc...................h....t...............l....................

                          cov     pid 401       .         .         .         .         :         .         .         . 480
 1 Human      100.0% 100.0%   LPAQDSLYNSPLTESCLSPAEEEPAPCKDC-Q----------------PL-CPPLTGSWERQRQASDLASSGVVSLDED
 2 Common Toad       69.7%  58.2%   LECEDSSYSMSFSESCLSPSDDELISFPTL----------------------SRGSGVLTLRRKGSDVVSSGVVSLDED
 3 Common Frog       86.3%  47.5%   LECEDSSYSMSFSESCLSPSDDELISFPPI----------------------SRGSGVLTLQRKGSDVVSSGVVSLDED
 4 Tropical Frog     86.9%  47.7%   VECEDSSYSVSFSESCLSPSDDELISFPSV----------------------SRGSGVLSLRRKGSDVMSSGVVSLEDE
 5 Caecilian         75.4%  65.4%   LECEDSTYSMSFTESCLSPTEEELLSCKDY-H-----------------TV-CALHKDSCQVRRVSDVASSGVVSLLDE
 6 Sea Lamprey       85.5%  22.5%   FVRNED-GRAGFPVGTLLPSGEEEEERDEEGELEGEEEEEEEEEEDGRQHQLGAPWGY--------RNSSGAVHLPDL
 7 Thorny Skate      98.6%  51.2%   LICEDSSYSVSYAESCFTPEDD-DMSCCDY-K-----------------SI-SKKEDGEYEGRRKVSDVASSGVVSLEED
 8 Zebrafish         71.6%  49.7%   SPCCLETYSETF--------EDEDSPYKDC-G-----------------GG--VCLPPEYSPRRKVSDVASSGVVSLDEE
 9 Rice Fish         76.2%  32.6%   SSRFDSCYSTSHSESPG---EDEEEEDEEEE-G-----------------SVFHEFRVWHCSPRGFFSDRASSGVASFEE
10 Wrasse            71.6%  35.6%   SSRFDSCYSTSHSESPG---EEDEEDEEEE-G-----------------SVFHEVRVWHCSPRSFFSDRASSGVASFEE
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11 Lungfish        94.3%  59.0%   LICEDSSYSVSYTESCFSPEED-DLPCKDY-Q----------------TV-CAEQEVGYEGRRKVSDVASSGIVSLEEN
   consensus/100%                 ..t..p.hp.sh........t-.................................h........h.SSChsph.-.

                     cov    pid 481         .   ] 494
 1 Human    100.0% 100.0%   EAEPEEQ-------
 2 Common Toad     69.7%  58.2%   EEEQP---------
 3 Common Frog     86.3%  47.5%   EEDQP---------
 4 Tropical Frog   86.9%  47.7%   EDDQP---------
 5 Caecilian       75.4%  65.4%   EEEEAEEQ------
 6 Sea Lamprey     85.5%  22.5%   KEEVAPT-------
 7 Thorny Skate    98.6%  51.2%   EAEDQ---------
 8 Zebrafish       71.6%  49.7%   DVDEEEREEQ----
 9 Rice Fish       76.2%  32.6%   EEIDCEKKDDK---
10 Wrasse          71.6%  35.6%   EERDEDEVKKEFLM
11 Lungfish        94.3%  59.0%   EEEEEEEAEVE---
   consensus/100%                 c............
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