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| Reference sequence (1): Cavia\_porcellus\_(domestic\_guinea\_pig)\_1  Identities normalised by aligned length.  Colored by: identity |
| cov pid 1 [ . . . . : . . . 80  1 Cavia\_porcellus\_(domestic\_guinea\_pig)\_1 100.0% 100.0% ----------------------------------------------MARASG------------------------SERH  2 Homo\_sapiens\_@human@\_1, 100.0% 70.1% ----------------------------------------------MARAVG------------------------PERR  3 Danio\_rerio\_(zebrafish)\_1 99.8% 45.5% ----------------------MTSLCRALSRSKLNQSDTFQSQKSLSRSAAG----QSRRRFSSSSESPPDVSPNVEAR  4 Danio\_rerio\_(zebrafish)\_2 99.8% 42.6% MAKSALDMAEWKHNTSAPSSASMTSLCRALSRSKLNQSDTFQSQKSLSRSAAG----QSRRRFSSSSESPPDVSPNVEAR  5 Danio\_rerio\_(zebrafish)\_3 99.8% 43.2% MAKSALDMAEWKHNTSAPSSASMTSLCRALSRSKLNQSDTFQSQKSLSRSAAG----QSRRRFSSSSESPPDVSPNVEAR  6 Drosophila\_melanogaster\_(fruit\_fly)\_1 98.4% 36.0% ----------------------------------------------MPAAKCG----CLK----------------KEAR  7 Drosophila\_melanogaster\_(fruit\_fly)\_2 98.2% 36.0% ----------------------------------------------MPAAKCG----CLK----------------KEAR  8 Drosophila\_melanogaster\_(fruit\_fly)\_3 99.1% 37.6% M---------------------DIPVLKTNGHERLASLD-----KSMPPASPTLPSPTIRRNKSDGKLMAQDV---KEAR  consensus/100% ..............................................hs.u.s.........................Et+  consensus/90% ..............................................hs.u.s.........................Et+  consensus/80% ..............................................hstuts.........................EtR  consensus/70% ..............................................hstusss....p.+................hEAR  cov pid 81 . 1 . . . . : . 160  1 Cavia\_porcellus\_(domestic\_guinea\_pig)\_1 100.0% 100.0% LLLIYTGGTLGM-QSKGGVLVPGPG-LVTLLRTLPMFHDKEFAQAQ------GLPDHA---LALPPAS-HGPRVLYTVLE  2 Homo\_sapiens\_@human@\_1, 100.0% 70.1% LLAVYTGGTIGM-RSELGVLVPGTG-LAAILRTLPMFHDEEHARAR------GLSEDT---LVLPPAS-RNQRILYTVLE  3 Danio\_rerio\_(zebrafish)\_1 99.8% 45.5% VLVINTGGTIGM-TYHNNVLSPEPNAFVETLRKLPILHDEQYAQHTRLYDYYKPQENT---LVLPLSK-QNKRIVYTVLE  4 Danio\_rerio\_(zebrafish)\_2 99.8% 42.6% VLVINTGGTIGM-TYHNNVLSPEPNAFVETLRKLPILHDEQYAQHTRLYDYYKPQENT---LVLPLSK-QNKRIVYTVLE  5 Danio\_rerio\_(zebrafish)\_3 99.8% 43.2% VLVINTGGTIGM-TYHNNVLSPEPNAFVETLRKLPILHDEQYAQHTRLYDYYKPQENT---LVLPLSK-QNKRIVYTVLE  6 Drosophila\_melanogaster\_(fruit\_fly)\_1 98.4% 36.0% VHVIYVGGTIGMIRNESGVLHTAPKVLARQLQEFPSCHDRNYT----------SKDNDGPMMVLPAVSGAPYRVLYDLIE  7 Drosophila\_melanogaster\_(fruit\_fly)\_2 98.2% 36.0% VHVIYVGGTIGMIRNESGVLHTAPKVLARQLQEFPSCHDRNYT----------SKDNDGPMMVLPAVSGAPYRVLYDLIE  8 Drosophila\_melanogaster\_(fruit\_fly)\_3 99.1% 37.6% VKVIYTGGTIGMVRNERNVLAPIPNALVRSIRKYPNIHDEEYALRR-----FGASASMAP-LVLPIVQGVDRRVIYQISE  consensus/100% lhhl.sGGTlGM.p.c.sVL.s.st.hst.lpphP.hHDcpas............tp....hsLP.sp..s.RllYpl.E  consensus/90% lhhl.sGGTlGM.p.c.sVL.s.st.hst.lpphP.hHDcpas............tp....hsLP.sp..s.RllYpl.E  consensus/80% lhlI.sGGTIGM.p.ctsVL.stPt.hsp.LpphP.hHDcpas...........p-ss...hVLP.sp.ts.RllYsllE  consensus/70% VhVI.TGGTIGM.p.cssVLsPtPsshscpLRchP.hHDcpYA.tp......tsp-ss...LVLPhsp.tshRllYsllE  cov pid 161 . . . 2 . . . . 240  1 Cavia\_porcellus\_(domestic\_guinea\_pig)\_1 100.0% 100.0% CQPLLDSSDMTIDDWIRIAKIIERHYEQYQGFVVIHGTDTMASGASMLSFMLENLHKPVILTGAQVPIRVLWNDARENLL  2 Homo\_sapiens\_@human@\_1, 100.0% 70.1% CQPLFDSSDMTIAEWVCLAQTIKRHYEQYHGFVVIHGTDTMAFAASMLSFMLENLQKTVILTGAQVPIHALWSDGRENLL  3 Danio\_rerio\_(zebrafish)\_1 99.8% 45.5% YSPLLDSCNMTTDDWATIGKDIEKHYEQYDGFVILHGTDTMAYTASALSFMCENLGKPVILTGSQVPIYEMRNDGRDNLL  4 Danio\_rerio\_(zebrafish)\_2 99.8% 42.6% YSPLLDSCNMTTDDWATIGKDIEKHYEQYDGFVILHGTDTMAYTASALSFMCENLGKPVILTGSQVPIYEMRNDGRDNLL  5 Danio\_rerio\_(zebrafish)\_3 99.8% 43.2% YSPLLDSCNMTTDDWATIGKDIEKHYEQYDGFVILHGTDTMAYTASALSFMCENLGKPVILTGSQVPIYEMRNDGRDNLL  6 Drosophila\_melanogaster\_(fruit\_fly)\_1 98.4% 36.0% FCPLMDSSCMGFCDWKRIANEVGKTYKSYDGFVILHGTDTLAYSASALAFMLESLNKPVVFTGAQIPIFEARSDGRENFL  7 Drosophila\_melanogaster\_(fruit\_fly)\_2 98.2% 36.0% FCPLMDSSCMGFCDWKRIANEVG-TYKSYDGFVILHGTDTLAYSASALAFMLESLNKPVVFTGAQIPIFEARSDGRENFL  8 Drosophila\_melanogaster\_(fruit\_fly)\_3 99.1% 37.6% YTPLLDSSNMTMNDWARIASDIQQSYEFFDGFVVLHGTDTLSYTASALSFMLENLGKTVIITGSQIPIFETRTDGKDNFT  consensus/100% hpPLhDSssMshs-Whplup.lt.pYc.apGFVllHGTDThu.sAShLuFMhEsLtKsVlhTGuQlPIh.hhsDu+-Nhh  consensus/90% hpPLhDSssMshs-Whplup.lt.pYc.apGFVllHGTDThu.sAShLuFMhEsLtKsVlhTGuQlPIh.hhsDu+-Nhh  consensus/80% hpPLhDSssMshsDWhpIuppltppYcpYcGFVllHGTDThAasAShLuFMhEsLtKsVlhTGuQlPIathhsDGR-NhL  consensus/70% asPLhDSssMThsDWtpIup-Ip+pYEpYDGFVlLHGTDThAYoASALSFMhENLsKPVIlTGuQlPIaEhRsDGR-NhL  cov pid 241 : . . . . 3 . . 320  1 Cavia\_porcellus\_(domestic\_guinea\_pig)\_1 100.0% 100.0% GALLVAGQYIIPEVCLFMNSQLFRGNRVTKVDSQKFEAFCSPNLSPLATVGADVTIAWDLVRKVKWKDPLVVHSNMEHDV  2 Homo\_sapiens\_@human@\_1, 100.0% 70.1% GALLMAGQYVIPEVCLFFQNQLFRGNRATKVDARRFAAFCSPNLLPLATVGADITINRELVRKVDGKAGLVVHSSMEQDV  3 Danio\_rerio\_(zebrafish)\_1 99.8% 45.5% GALLIAGQFVIPEVCLYFHHKLYRGNRVTKVDAGSFNAFNSPNLPPLANAEVDIKINWDTVWRANTTAKFTVNTQMNRNV  4 Danio\_rerio\_(zebrafish)\_2 99.8% 42.6% GALLIAGQFVIPEVCLYFHHKLYRGNRVTKVDAGSFNAFNSPNLPPLANAEVDIKINWDTVWRANTTAKFTVNTQMNRNV  5 Danio\_rerio\_(zebrafish)\_3 99.8% 43.2% GALLIAGQFVIPEVCLYFHHKLYRGNRVTKVDAGSFNAFNSPNLPPLANAEVDIKINWDTVWRANTTAKFTVNTQMNRNV  6 Drosophila\_melanogaster\_(fruit\_fly)\_1 98.4% 36.0% GALLIAGNYSIPEVLVFFGNKILRGCRSTKLNSDSFHALDSPNFAPLGRASVNIEINSRQIFRPCNIKPFSLHSELEKNV  7 Drosophila\_melanogaster\_(fruit\_fly)\_2 98.2% 36.0% GALLIAGNYSIPEVLVFFGNKILRGCRSTKLNSDSFHALDSPNFAPLGRASVNIEINSRQIFRPCNIKPFSLHSELEKNV  8 Drosophila\_melanogaster\_(fruit\_fly)\_3 99.1% 37.6% SALIIAGNYIIPEVCIFFGHKLMRGNRTVKVSSNALDAFDSPNVPPLARIGIDVNVDYRLIFRPCTIERFCVHLNLDENV  consensus/100% uALlhAGpa.IPEVhlahtpplhRGsRssKlsutthtAhsSPNh.PLuphthslpls.c.lh+sp.ht.hslp.phppsV  consensus/90% uALlhAGpa.IPEVhlahtpplhRGsRssKlsutthtAhsSPNh.PLuphthslpls.c.lh+sp.ht.hslp.phppsV  consensus/80% GALLlAGpa.IPEVhlaFtpplhRGsRsTKlsutpFpAhsSPNhsPLupstsslpIs.c.lh+sssht.hslpophpcsV  consensus/70% GALLIAGpalIPEVClaFtpKLhRGNRsTKVsusuFpAFsSPNlsPLApstlDIpINhchlaRsssht.FsVpophp+NV  cov pid 321 . . : . . . . 4 400  1 Cavia\_porcellus\_(domestic\_guinea\_pig)\_1 100.0% 100.0% ALLRLYPGIPASLVRAFLQPPLKGVVLETFGSGNGP-SKPDLLQELRAAAQRGLIMVNCSQCLRGSVTPGYAT--SLAGA  2 Homo\_sapiens\_@human@\_1, 100.0% 70.1% GLLRLYPGIPAALVRAFLQPPLKGVVMETFGSGNGP-TKPDLLQELRVATERGLVIVNCTHCLQGAVTTDYAA--AMAGA  3 Danio\_rerio\_(zebrafish)\_1 99.8% 45.5% GLLRLFPGITADTVRAFLQPPMDGIVLETYGSGNAPDNRADLLGEIRKATQRGLIMINCTQCLRGSVTTSYATGQALSDA  4 Danio\_rerio\_(zebrafish)\_2 99.8% 42.6% GLLRLFPGITADTVRAFLQPPMDGIVLETYGSGNAPDNRADLLDEIRKATQRGLIMINCTQCLRGSVTTSYATGQALSDA  5 Danio\_rerio\_(zebrafish)\_3 99.8% 43.2% GLLRLFPGITADTVRAFLQPPMDGIVLETYGSGNAPDNRADLLDEIRKATQRGLIMINCTQCLRGSVTTSYATGQALSDA  6 Drosophila\_melanogaster\_(fruit\_fly)\_1 98.4% 36.0% ALLRIYPGISASVVQAILKEPTKGVVLQTFGAGNFPVNREDLLDELREAVHRGVIIVNITQCSAGMVANIYETSQGLMEV  7 Drosophila\_melanogaster\_(fruit\_fly)\_2 98.2% 36.0% ALLRIYPGISASVVQAILKEPTKGVVLQTFGAGNFPVNREDLLDELREAVHRGVIIVNITQCSAGMVANIYETSQGLMEV  8 Drosophila\_melanogaster\_(fruit\_fly)\_3 99.1% 37.6% GLLRIFPSISHSTFRAFLAPPIRGVVLQSFGSGNIPSNRKDLIDELRAAGERGVIIINCTQCPNGTVAEIYDTGKVLCDV  consensus/100% uLLRlaPuIstshhpAhLt.PhcGlVhpoaGuGNhP.s+.DLltElR.AspRGllhlNhopC.tG.Vs..Yts..sh.ts  consensus/90% uLLRlaPuIstshhpAhLt.PhcGlVhpoaGuGNhP.s+.DLltElR.AspRGllhlNhopC.tG.Vs..Yts..sh.ts  consensus/80% uLLRlaPGIsAshVpAhLp.PhcGlVLpTaGuGNhP.s+.DLLpElRtAspRGlIhlNhTQC.tG.Vss.YtT..uL.ts  consensus/70% uLLRlaPGIoAssVRAFLpPPhcGlVLpTaGSGNhPsNRtDLLsElRtAspRGlIhlNCTQC.pGsVss.YsTupuLs-s  cov pid 401 . . . . : . . . 480  1 Cavia\_porcellus\_(domestic\_guinea\_pig)\_1 100.0% 100.0% NIVSGLDMTSEAALAKLSYVLGLPELSLERRQELLAKDLRGEMTLPTADLHQSSPPGSTLGQGVARLFSLFGCQEEDSVQ  2 Homo\_sapiens\_@human@\_1, 100.0% 70.1% GVISGFDMTSEAALAKLSYVLGQPGLSLDVRKELLTKDLRGEMTPPSVEERRPSLQGNTLGGGVSWLLSLSGSQEADALR  3 Danio\_rerio\_(zebrafish)\_1 99.8% 45.5% GLVAGCDMTPEAALSKLSYVLAKQNLSIEEKKKMLSRNLRGEMI-ADVGGAKLSLSDSRFIQVIAKSLSISCKEELEAIR  4 Danio\_rerio\_(zebrafish)\_2 99.8% 42.6% GLVAGCDMTPEAALSKLSYVLAKQNLSIEEKKKMLSHNLRGEMI-ADVGGAKLSLSDSRFIQVIAKSLSISCKEELEAIR  5 Danio\_rerio\_(zebrafish)\_3 99.8% 43.2% GLVAGCDMTPEAALSKLSYVLAKQNLSIEEKKKMLSHNLRGEMI-ADVGGAKLSLSDSRFIQVIAKSLSISCKEELEAIR  6 Drosophila\_melanogaster\_(fruit\_fly)\_1 98.4% 36.0% GVIPGYDMTQEAAFTKLAYVLSKPEWDIPNKKKVMLLSLRGELT----TNKVAKINDIDLIEGVARTLHMSTAMERQQMC  7 Drosophila\_melanogaster\_(fruit\_fly)\_2 98.2% 36.0% GVIPGYDMTQEAAFTKLAYVLSKPEWDIPNKKKVMLLSLRGELT----TNKVAKINDIDLIEGVARTLHMSTAMERQQMC  8 Drosophila\_melanogaster\_(fruit\_fly)\_3 99.1% 37.6% GVIPGFDMTPEAALAKLAYVIGKEEWSLDMKKQMMQSSLRGELT----SLKAPKMEDYDLVDAVARSLHLSSPQELDQLG  consensus/100% sllsGhDMT.EAAhsKLuYVlu..thsl..+pphh..sLRGEhh....t.t..p..s.phhtsluh.hph.s..E.ptht  consensus/90% sllsGhDMT.EAAhsKLuYVlu..thsl..+pphh..sLRGEhh....t.t..p..s.phhtsluh.hph.s..E.ptht  consensus/80% GllsGhDMT.EAAhsKLuYVLup.phsl..+Kchh.hsLRGEhh....s.th.phps.phhpslA+.LphSst.Ehpthp  consensus/70% GllsGhDMTsEAALuKLuYVLuK.phSl-pKKchhtpsLRGEhh....sttt.plsD.chlpslA+oLplSstpEh-tlp  cov pid 481 . 5 . . . . : . 560  1 Cavia\_porcellus\_(domestic\_guinea\_pig)\_1 100.0% 100.0% DAVMPSLALALAHAGELEALQALMELGSDLRLKDSNGQTLLHVAARNGRDGVVTMLLHRGMDVNARDRDGLSPLLLAVQG  2 Homo\_sapiens\_@human@\_1, 100.0% 70.1% NALVPSLACAAAHAGDVEALQALVELGSDLGLVDFNGQTPLHAAARGGHTEAVTMLLQRGVDVNTRDTDGFSPLLLAVRG  3 Danio\_rerio\_(zebrafish)\_1 99.8% 45.5% DALTPTLVCVAAKIGDVDALEAIREMGTDLSMADYDGRTPLHIAACEGHLKVVEYLLGKGATVYAKDRFGHTPLRNAVRF  4 Danio\_rerio\_(zebrafish)\_2 99.8% 42.6% DALTPTLVCVAAKIGDIDALEAIREMGTDLSMADYDGRTPLHIAACEGHLKVVEYLLGKGATVYAKDRFGHTPLRNAVRF  5 Danio\_rerio\_(zebrafish)\_3 99.8% 43.2% DALTPTLVCVAAKIGDIDALEAIREMGTDLSMADYDGRTPLHIAACEGHLKVVEYLLGKGATVYAKDRFGHTPLRNAVRF  6 Drosophila\_melanogaster\_(fruit\_fly)\_1 98.4% 36.0% STFYPALVAAAVTEGDVHKLGDLKQYGANLCDTNCDGRSAMHLACFLGKLNCVCFLISAGCPVNVHDRFNRTPLHEAIDT  7 Drosophila\_melanogaster\_(fruit\_fly)\_2 98.2% 36.0% STFYPALVAAAVTEGDVHKLGDLKQYGANLCDTNCDGRSAMHLACFLGKLNCVCFLISAGCPVNVHDRFNRTPLHEAIDT  8 Drosophila\_melanogaster\_(fruit\_fly)\_3 99.1% 37.6% ETLFPAMINAAVAEGDPKKINNLKAYGADLSGTNHDQRTALHLACQLGNVEIVKYLLQNGVSVHVRDRYDRTPLLEAVAT  consensus/100% pshhPshh.shst.G-.ctltslhthGssLt.hs.stpo.hHhAs..Gp.thVphLlttGhsV.s+Dp.shoPLh.Alth  consensus/90% pshhPshh.shst.G-.ctltslhthGssLt.hs.stpo.hHhAs..Gp.thVphLlttGhsV.s+Dp.shoPLh.Alth  consensus/80% sshhPsLsssAsp.GDlctLtslhphGssLs.sshsGposhHlAsh.G+hpsVphLlttGssV.s+DR.shoPLh.Alph  consensus/70% sslhPsLlssAsp.GDlctLpsl+phGsDLshsshDGRTsLHlAsp.G+lpsVpaLLtpGssV.s+DRas+TPLhpAVch  cov pid 561 . . . 6 . . . . 640  1 Cavia\_porcellus\_(domestic\_guinea\_pig)\_1 100.0% 100.0% RHRECIRLLRKAGACLSPQDLKDAGTELCRLASRADMEGLQAWGQAGADLQQPGYDGRSALCVAEAAGNQEVLALL----  2 Homo\_sapiens\_@human@\_1, 100.0% 70.1% RHPGVIGLLREAGASLSTQELEEAGTELCRLAYRADLEGLQVWWQAGADLGQPGYDGHSALHVAEAAGNLAVVAFL----  3 Danio\_rerio\_(zebrafish)\_1 99.8% 45.5% RHKDVVKLLRKTGAHFSREEMADAGTELCSLAAAGDLEGLEIWQLAGVDLTMTSYDGQTPIEVARATGCVESVEFL----  4 Danio\_rerio\_(zebrafish)\_2 99.8% 42.6% RHKDVVKLLRKTGAHFSREEMADTGTELCSLAAAGDLEGLEIWQLAGVDLTMTSYDGQTPIEVARATGCVESVEFL----  5 Danio\_rerio\_(zebrafish)\_3 99.8% 43.2% RHKDVVKLLRKTGAHFSREEMADTGTELCSLAAAGDLEGLEIWQLAGVDLTMTSYDGQTPIEVARATGCVESVEFL----  6 Drosophila\_melanogaster\_(fruit\_fly)\_1 98.4% 36.0% DNHDIINALLKNGAKLNDQPLV-QAELLRALTERGKIKRLESFRLAGANLTLADRTGRTALHYACQLGNHEVVDYLLPHY  7 Drosophila\_melanogaster\_(fruit\_fly)\_2 98.2% 36.0% DNHDIINALLKNGAKLNDQPLV-QAELLRALTERGKIKRLESFRLAGANLTLADRTGRTALHYACQLGNHEVVDYLLPHY  8 Drosophila\_melanogaster\_(fruit\_fly)\_3 99.1% 37.6% DSHEIIQLLINCGAHLTGSSRA-VGEQLCAAAARGSMIRLKSYQYAGADLAQSDPSGRTALHVAALHGFPEVVQYVLPYF  consensus/100% cp.thlthLhpsGAphs.p.h...up.Lpths.tuph.tLp.a..AGssLt.ss.sGposlphAt.hG..tslthl....  consensus/90% cp.thlthLhpsGAphs.p.h...up.Lpths.tuph.tLp.a..AGssLt.ss.sGposlphAt.hG..tslthl....  consensus/80% cp+-llphLhcsGAphstp.hh.tup.LptLsttuchctLp.at.AGssLs.sshsGposlchApthGs.EsVtaL....  consensus/70% cp+-llpLLhKsGA+hoppphs.sGppLCuLAttGclctLc.aphAGsDLs.sshsGpTslcVApttGshEsVpaL....  cov pid 641 : . . . . ] 699  1 Cavia\_porcellus\_(domestic\_guinea\_pig)\_1 100.0% 100.0% -----RNLALVGPE-------------------------VPPA---------------I  2 Homo\_sapiens\_@human@\_1, 100.0% 70.1% -----QSLEGAVGE-------------------------VLPG---------------V  3 Danio\_rerio\_(zebrafish)\_1 99.8% 45.5% -----KQAALYQTQ-----------------NGEYIEFTAAPR---------------S  4 Danio\_rerio\_(zebrafish)\_2 99.8% 42.6% -----KQAALYQTQHQADEGNEPVFEEDEDENGEYIEFTAAPR---------------S  5 Danio\_rerio\_(zebrafish)\_3 99.8% 43.2% -----KQAALYQTQ--------PVFEEDEDENGEYIEFTAAPR---------------S  6 Drosophila\_melanogaster\_(fruit\_fly)\_1 98.4% 36.0% ENPYIKDELGMSPI-------------DYAKAANHAHILTLMRFKEKELAKKDPCSCTQ  7 Drosophila\_melanogaster\_(fruit\_fly)\_2 98.2% 36.0% ENPYIKDELGMSPI-------------DYAKAANHAHILTLMRFKEKELAKKDPCSCTQ  8 Drosophila\_melanogaster\_(fruit\_fly)\_3 99.1% 37.6% ENPNEKDMLGLTAM-------------DYAERGGHAAVMEVLK---------------S  consensus/100% .....pp..hh.s.............................t................  consensus/90% .....pp..hh.s.............................t................  consensus/80% .....+p.hhhts..........................sh.t................  consensus/70% .....Kphhhhps..................tutahthhsh.+...............p |