## Starfish Apaf-1 activates effector caspase-3/9 upon apoptosis of aged eggs

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## **Supplemental Materials and Methods**

**Cytochrome** *c* **assay.** Samples were incubated with 10  $\mu$ M horse heart cytochrome *c* (Sigma) and 1 mM dATP (Invitrogen) final concentration for 60 min at 20°C. DEVDase activity was measured at indicated time by using Ac-DEVD-MCA.

**Immunoprecipitation.** Immunoprecipitation was performed according to the method described previously (Hiraoka *et al.*, 2004). Protein A Sepharose 4B (Sigma) was pre-adsorbed to the anti-caspase-3/9 antibody or rabbit IgG (Amersham). 20  $\mu$ L of cell-free preparation was added to 2  $\mu$ L of Sepharose beads, and incubated at 4°C for 120 min. The 2  $\mu$ L pellet of Sepharose beads was used for western blotting.

a	caspase-3/9_A.pectinifera caspase-3_B.taurus caspase-3_M.musculus caspase-3_R.norvegicus caspase-3_H.sapiens	1 1 1 1	GDSNQEPMDTSLPSKSYIASPTDELPKAPWPGTTPADLTTQEMPMAPLPLADQ NMBNSVDSKSIKTSBTKELKSKSMDSGT NNKTSVDSKSINNFBVKTHHCSKSVDSCT NNBTSVDSKSINNFBTKTHHCSKSMDSCT NNBTSVDSKSIKNLBPKTHHCSESMDSCT
	caspase-3/9_A.pectinifera caspase-3_B.taurus caspase-3_M.musculus caspase-3_R.norvegicus caspase-3_H.sapiens	54 30 30 30 30	das dv dd v vom kskpröt avfinnikhfrtMitrk Crdid Grnin hvöe kigsttlyk Sieesykmdypemglicitinnikhfhen tomacrischdvdaant retsminikvedvrik Y JDS Sykmdypemglicitinnikne histomssrischdvdaant retsminikvedvrik Y JDS Sykmdypemglicitinnikne histomssrischdvdaant retsmalikvevrik Sidn Sykmdypemglicitinnikne histomstrischdvdaant retsmalikvevrik
	caspase-3/9_A.pectinifera caspase-3_B.taurus caspase-3_M.musculus caspase-3_R.norvegicus caspase-3_H.sapiens	111 87 87 87 87	TD OTGEENQOILRDAASHNHOTFDCFILAILSHGVEGATYGVDERIVKIEHHTTYFEGGR NDDTCKEMLELMSNVSKEDHSKRSSFICVLLSHGDEGUIFGTNG-EVNLKKLASFFRGDY NDTTREDTLELMDSVSKEDHSKRSSFVCVILSHGDEGVIYGGNG-PVELKKLTSFFRGDY NDTTREETMELMDSVSKEDHSKRSSFVCVILSHGDEGVIFGTNG-PVDLKKLTSFFRGDY NDLTREEIVELMRDVSKEDHSKRSSFVCVLLSHGEEGIIFGTNG-PVDLKKLTNFFRGDR
	caspase-3/9_A.pectinifera caspase-3_B.taurus caspase-3_M.musculus caspase-3_R.norvegicus caspase-3_H.sapiens	171 146 146 146 146	CPTUACKERDEFLOACRCERFDGGHEATDSKAVAPSDANAEQDSIEPLSDEELAQRMLER CRSUTCKERLETTOACRCREEDDCCTE-TDSCA
	caspase-3/9_A.pectinifera caspase-3_B.taurus caspase-3_M.musculus caspase-3_R.norvegicus caspase-3_H.sapiens	231 181 181 181 181	ELEDDTDASNAIRSKLESOSDATLAPATVPCFVSMRNSERCSMFVOATSEVFLEHANKED 
	caspase-3/9_A.pectinifera caspase-3_B.taurus caspase-3_M.musculus caspase-3_R.norvegicus caspase-3_H.sapiens	291 230 230 230 230	llsmmtrvnnkvarafiesss — — — — Grnkotpaputmurklyfnpgr LmetutrvnrkvaieydsfstdsafhakkotpctmSmutrelyff — — — FmetutrvnrkvatefesfsldstfhakkotpctvSmutrelyfyf — — FmetutrvnrkvatefesfsldatfhakkotpctvSmutrelyfyh — — FmetultrvnrkvatefesfsdatfhakkotpctvSmutrelyfyh — —
h			
D	caspase-3/9_A.pectinifera caspase-9_B.taurus caspase-9_M.musculus caspase-9_R.norvegicus caspase-9_H.sapiens	1 1 1 1	GDSNQEPMDTSLESKSYIASETDELEKAPWPGTTPADLTTQEMEMAP 
	caspase-3/9_A.pectinifera caspase-9_B.taurus caspase-9_M.musculus caspase-9_R.norvegicus	48 48 60 60	LPLADODASDVDDVYQMKSKPRCIAVIINNKHFRTMNTRKGTDDDGRNDNHVFEKL VCPODRAKGNADLAVVINADPCCECLIINNVNFCRESGIRARTCSNIDCERMRORFHLIO VCVPGKIRGHADMAVIDSDPCGECLIINNVNFCPSSGIGRRTGSNLDRDKIEHRFRVLR
	caspase-9_H.sapiens	41	VCTPGKIERHADMANTIDSDPCCECTTINNVNGCPSSGDSURICSHVDCENFOHRECWDR VGALESLRGNADDAYIUSMEDCCECTTINNVNGCRESGDRURCSNIDCEKURRESSDH
	caspase-9_H.sapiens caspase-3/9_A.pectinifera caspase-9_B.taurus caspase-9_M.musculus caspase-9_R.norvegicus caspase-9_H.sapiens	41 105 108 120 120 101	VGFJEGELEGNADLAVI U SMEDCEDLI INNVNE OPSSCI BURICSNIDCENLUR CWER CW VGALESLEGNADLAVI U SMEDCEDLI INNVNE ORSGURURESNIDCENLER RESSIH FTTLYKTDONGE MOOID RODARNI OTFDOFILATISHCOASTICEPEAVER FVJEVKCDITAKOMVOLI MODARODESALDCEVVVI USHCOASTICEPEAVERDCEV FMVEVKNDITAKKMVTAI MEMARKDERALDCFVVVI ISHCOASTICEPEAVERDCES FMVEVKNDITAKKMVTAI MEMARKDERALDCFVVVI ISHCOASTICEPEAVERDCES FMVEVKNDITAKKMVTAI MEMARKDERALDCFVVVI ISHCOASTICEPEAVERDCES FMVEVKNDITAKKMVTAILEDAOQDHGALDCCVVVI ISHCOASTICEPEAVERDCES
	caspase-9_H.sapiens caspase-9_B.taurus caspase-9_B.taurus caspase-9_B.taurus caspase-9_R.norvegicus caspase-9_H.sapiens caspase-9_B.taurus caspase-9_B.taurus caspase-9_R.musculus caspase-9_R.norvegicus caspase-9_H.sapiens	41 105 108 120 101 158 168 180 180 161	VGALESIEKHADMANIDSDEGEDUILINNUNGOPSSCISCISTICSDEDENFOHREWUR GALESIEKHADMANIDSDEGEDUILINNUNGORSCIRGTREGSDEDEKTERRESSEH FTILYKTDORIGEMOOIR RODARODHSALDOCVVUILSHGCOASHLOEPGAVNGTDGCEV FVUEVKCDITAKOMVORIMODARODHSALDOCVVVILSHGCOASHLOEPGAVNGTDGCEV FMVEVKNDLTAKKMVTALMEMARNHRALDOFVVVILSHGCOASHLOEPGAVNGTDGCSV FMVEVKNDLTAKKMVTALMEMARNHRALDOFVVVILSHGCOASHLOEPGAVNGTDGCSV FMVEVKNDLTAKKMVTALMEMARNHRALDOFVVVILSHGCOASHLOEPGAVNGTDGCSV FMVEVKNDLTAKKMVTALMEMARNHRALDOFVVVILSHGCOASHLOEPGAVNGTDGCSV FMVEVKNDLTAKKMVTALMEMARNENARADDCSVVVILSHGCOASHLOEPGAVNGTDGCSV FMVEVKNDLTAKKMVLALLEDAOODHGALDOCVVVILSHGCOASHLOEPGAVNGTDGCSV SIERIVNTENGTGCESLRGKPKLEFFLOACGCEOKDHGEF VACASSISOFFCAVNGTDGCSV SIERIVNTENGTGCESLGCKPKLEFFLOACGCEOKDHGEF VACASSISOFTCAS
	caspase-9_H.sapiens caspase-3/9_A.pectinifera caspase-9_B.taurus caspase-9_M.musculus caspase-9_M.musculus caspase-9_H.sapiens caspase-9_B.taurus caspase-9_B.taurus caspase-9_M.musculus caspase-9_H.sapiens caspase-9_B.taurus caspase-9_B.taurus caspase-9_B.taurus caspase-9_B.taurus caspase-9_B.taurus caspase-9_B.taurus caspase-9_B.taurus caspase-9_B.taurus caspase-9_H.sapiens	41 105 108 120 101 158 168 180 161 218 222 234 234 215	VGALESIECNADIANIIDSDECEDIIINNUNNECESCIEGIAIISEDCENTERRESSEH VGALESIECNADIANIISSMEPCCHCIIINNUNNECESCIEGIARTCSNEDCENTRRESSEH FTILYETDOTGEEMQQIPRDANSHNHQTFDCFILAIISHCVE



**Supplemental Figure S1.** (a, b) Multiple sequence alignment of caspase-3 (a) and caspase-9 (b) from *Homo sapiens*, *Rattus norvegicus*, *Mus musculus*, and *Bos taurus* against starfish, *Asterina pectinifera*, caspase-3/9. Positions with conserved amino acid residues are in a black background. The alignment was performed by MAFFT. (c) Conservation tendency graph of starfish caspase-3/9. The total number of black amino acid residues in a sliding window (every 15 amino acids) of caspase-3 (Supplemental Figure S1 a) was subtracted by the total number of black amino acid residues in the same sliding window of caspase-9 (Supplemental Figure S1 b). The subtracted number of each window was divided by 15, and obtained each value was plotted against the alignment position. A positive value means that the region in starfish caspase-3/9 has a caspase-3-like sequence. The graph shows that starfish caspase-3/9 has a caspase-3/9 has a caspase-3-like sequence in the N-terminal side, and a caspase-3-like sequence in the C-terminal side.











Supplemental Figure S2. Inhibition of ERK1/2 activates caspase-3/9. (a) The number of apoptotic eggs was counted at the indicated time after 1-MA treatment without U0126 (white circle) or with U0126 (black circle). Eggs were treated with 1 µM of U0126 at 6.5 h after 1-MA treatment. (b) Time course of endogenous caspase-3/9 activation with or without U0126. Samples were analyzed by SDS-PAGE and western blotting with anti-caspase-3/9 and anti-ERK1/2 antibodies. Cleaved caspase-3/9 was visible after longer exposures.

H.sapiens	1 MDAKARNCLLQHREALEKDIKTSY-INDHM	ISDGFLTISEEEKVRNEPTQ	QQRAAMLTKHTLKKD-NDS YVSFYNALLHEGYKDLAA	ALLH-DGIPWSS 96	H.sapiens	200	QNLCTRLDQDESFSQRLPLNIEEAKD-RLRILMLRKHPR-	SLLILDDVWDSWVLKAFD-SQC	QILLTTRDKSVTDSVMGPKYVVPVESSLGKEK 2	290
G.gallus	1 MDENSR MCLITNRQALEKDIKTSY-IMDHM	NADQVLTLQEEEKVKQQNTQ	-KERAAMLINTLLTKD-NNAYRSFYNALLHEGYRDLAA	ALLQ-DGIPAFSS 96	G.gallus	200	ONLCSRLEHDSTLPORPPLNIEEAKD-RLRLLMLRKYOR-	SLLVLDDTWDSWVLKAFD-NQC	WLITSRDRSVTDAVSGNKYEIHVESGLTHEK 2	290
C.picta bellii	1HDVKSKNHLLLDHEALCEDIKTST-INDH 1HDVKSRNHLLLDHEALVRDIKTSY-INDH	TADEVLTLOEEEXVKA0TTO	-KERAANLIKIILAKD-NYSYISPINALLHEGIKDUAA	4110-DAIPIISS 96	C.picta bellii	200	ONLCSRLDQDFSLSQRPPLNIEEAKD-RLRLLILRKYPR-	CLHVLDDIWDSWVLKAFD-NOC	WLITSRDRSVTDSVT(19)TGRKTEVPVESGLAHDK 3	290
G.japonicas	5 MDLNAR SYLLQNCKSLERDIKTSY-IMDHM	IADEALTLQEEEKVKAQTSQ	-RERAAMLLEIILTKD-NHAYISFYNALLHEGYKDLAA	ALLQ-DGIPIISP 100	G.japonicas	203	QNLCMRLDQDFTFLQRPPLNIEEAKD-RLRWLMLRKYPR-	SLLVLDDIWDSWVLKAFD-SHC	QILITSRDRSVADSVSGNKYEVPLESGLPHDK 2	293
P.vitticeps A.carolinensis	<ol> <li>MDLKARSYLLRNREALERDIKISY-IMDHY</li> <li>MDLTARSHLLONREALERDIKISY-VTDHY</li> </ol>	(ITDGVLTLLEEEKVKAETTQ (Tadga) tpoffafvkavtto	RERAMLVKLILAKD-DYAYISFYNALVHEGYKDLAA ROR4AKLIKTILKKD-DHAYISFYNALVHEGYKDLAA	ALLQ-DGIPIISP 96 ALLO-DGIPIISP 96	P.vitticeps A.carolineosis	200	QNLCLRLDQDFTYSQRPPLNIEEAKD-RLRSLLLRKYPG- ONLCLRLDQDVTYLORPPLNTFFAKD-RLRVLLFRKYPR-	SLLVLDDIWDPWVLKAFD-SQF SLLVLDDIWDSWVLKAFD-SHF	QILITSRDRSVTDSVTGKKYKVPVESGLTHEK 2 0111TSRDRSVTDSVTGKKYEVPVESGLSHEK 2	290
P.bivittatus	1MDERAKSYLLQNRQALERDIKTSY-IVDH	IGDFALTSLEEEKVKAQTTQ	-KERAAMLLKIIIAKD-NDAYISFYNALLHEGYKDLAT	TLLQ-DGLP-ISP 95	P.bivittatus	199	QNLCLRLDQDFTYSQRPPFNIEEAKD-RLRLLLLRKHPR-	SLLVLDDIWDSWVLKAFD-NHC	RILITSRDRSVTDSVTGNKYEVSVESGLSREK 2	289
0.hannah	1 HDQRARSYLLQNRQALENDIKTSY-IMDHM	NADOTLTVMEEEKVKAQTTR	-KERAAMLLKLIIAKD-NYAYISFYNALQQEGYKDLAA	ALLO-DGLP 92	0.hannah	196	ONLCLRLDQDFTYSQRPPFNIEEAKD-RLRLLLLRTRPR-	SLLVLDDIWESWVLKAFD-NQC	QILITSRDRSIADSVTONKYEVSVESGLAHEK 2	286
A.mississippiensis	1MDWSRNHLLINRLALERDIKTSY-VMDH	ITTDQVLTLQEEEKVKAQATQ	-RORAMILINIILKKD-NNSYISFYNALLHEGYKDLA	ALLH-DGIPSITS 96	A.mississippiensis	200	HNLCSRLDLDFTYAQRPPLNIGEAKD-RLRLLULKKSPR-	SLLVLDDIWDSQTLKAFD-NHC	KVLITSRDRSVTDHVTGRKYEVHVESGUNDEK 2	290
C.porosus	1 MWWKSRNHLVLNRVALERDIQTSY-IMDHM	ISDQVLTLQEEEXVKTQATR	-RORAAMLISIILKKD-NNSYISFYNALLHEGYKDLAA	ALLH-DGIPSITS 96	C.porosus	200	HNLCSRLDLDFTYAQRPPLNIGEAKD-RLRLLMLHKYPR-	SLLVLDDIWDSQTLEAFD-NHC	KVLITSRDRSVTDHVTGRKYEVHMESGLSNEK 2	290
G.gangeticus D.rerio	1MWWSRNHLVLNRLALERDIQISY-IMDHY 1MEERARSRLLRSKATLEODIKASY-LNDHY	LESDQVLTLQEEEKVKAQATR ITSDGVLTNDEEAKVLSKATR		ALLH-DGIPSIIS 96 SLIH-SDIPLISP 96	G.gangeticus D.rerio	200	UNLCSRLDLDFTYAQRPPLNIGEAKD-RLRLLILHKTPR- OSLCFRLED(1)-OSSDTSDRPPSTVEEAKE-RLRELMLRREPR-	SLLVLDD1WDSQTLAAFD-NHC SLLTLDDVWDSSSLRSFD-TOC	KYLLTSRURSVTDHVTGKKTEVMMESGLSNEK 2 RVLLTTRNRALTDSVSGVRYEVPVENGLDEEK 2	290
S. rhinocerousus	1MEERARSCLLRSKDTLEQDIKASY-LMDHM	NSDOILTNDEEARVLGKPTR	-REQATALLEVLLRKD-NRAYISFYNALVRESYGDLAN	ALLH-SDLPLLSP 96	S.rhinocerousus	200	QSLCFRLEQ(1)-QSSDASLRPPCSVEEAKE-RLRFLMHRRFPR-	SLLILDDVWDSFALRSFD-IQC	RVLLTTRNRSLADSVSGTRFEVPVESGLDEEK 2	292
S.grahan	1HEERARSCLLRSK0TLEQDIKASY-LMDH MEEPAR SCLLPSRATI FORTKASY LMDH	NSBOILTNDEEARVLGKPTR	-REQATALLEVILLRKD-NRAYISFYNALVRESYGDLAN	ALLH-SDLPLLSP 96	S.graham P.optterori	200	QSLCFRLEQ(1)-QSSDASLRPPCSVEEAKE-RLRFLMHRRFPR- OSLCFRLEQ(1)-QSSDASLRPPCSVEEAKE-RLRFLMHRRFPR- OSLCFRLEQ(1)-QSSDASLRPPCSVEEAKE-RLRFLMHRRFPR-	SLLILDDWDSFALRSFD-IQC	RVLLTTRNRSLADSVSGTRFEVPVESGLDEEK 2	292
A.mexicanus	1HEERARSCLLRSK0TLEQDIKASY-LNDH	ISDGVLTGVEE ERVLSKPTR	-REQUARTLEVILLIND-NIGATISPINALINESIGDLAS	ALLH-NDLPQLSP 96	A.mexicanus	200	QSLCFRLEQ(1)-QVSEAPLRPPSSLEEAKE-RLRFLHLRKFPR- QSLCFRLEQ(1)-QTVDSPPRPPNSIEEAKE-RLRFLMLRKFPR-	ALLILDDVWDSSSLRAFD-IQC	RVLLTINNKSLTDSVSQQKFSVPVESQLDEEK 2 RVLLTTRNRSLTDSVSQQKESVPVESGLDEEK 2	292
I.punctatus	1HEERARSRLLRSRTTLEQDIKASY-LMDHM	ISDGILTRDEEORVHSKLTR	-KEQATALLEILLCKD-NRAYISFYNALIREQYGDLAA	ALLH-SDLPQLSP 96	I.punctatus	200	QSLCFRLEQ(1)-QSSEACSRPPSSVEEAKE-RLRFLMLRRFPR-	SLLILDDVWDSYTLRAFD-IQC	RVLFTTRNSSLTDSVSGHRFKVPVESGLDDEK 2	292
E.lucius 1 S.salar	4MEEGARSCLLQSRSILEQDIKASY-LMDHM 4MEEGARSCLLQSRSSIEDDIRASY-LMDHM	(IADGVLTRDEEARIRSKLTR (ISDGVLTGDEEORIRSKPTR	KDQAVALLEVLLRKD-NQAYISFYNALVCESYGDLAN RF04AALLELLLRKD-NOAYISFYNALVRESYGDLAS	VLLH-KSLPLVSP 109 SLLH-NSLPLVSP 99	S.salar	213	QTLCFRLEQ(1)-SQEQOPSLSLHRLPTSLDEAKE-RLRFLVHHKTPR- OSLCFRLF0(1)-S0FKDPSSSI HRPPGSLFFAKF-RLRFLMLRRYPR-	SLLILDDIWDCSVLKAFD-IQC SLLILDDIWDSSVLRAFD-IQC	RVLLTTRDRSLADSVTGSKTEVAVDSGLEENQ 3 RVMLTTRDRSLADCVSGFKSEVAVESGLEENQ 2	389
P.latipinna	1 MALQERTRRSLLRLRHQLEQDIRPQD-LMDHM	ISDGVITVDEEEKVRIKPTR	-KDQAAALIDLLLRKD-DCSVISFYNALMKETYHDLAK	SLY-QOLPGVSF 98	P.latipinna	201	QSLCFRLEQ(1)-LDSQSQHRPPTSLDEAKE-RLRFLMLRRYPR-	SLLILDDIWDSSVLKVFD-IHC	RILLTTRNRSLTDSVSGAKYEVEVESVLDDRK 2	295
X.maculatus	<ol> <li>MALQERTRRSLLRLRHQLEQDIKPQD-LNDHM</li> <li>MALEERARSSL NREHHOLECOTKPOE-LNDHM</li> </ol>	ISDGVITVDEEEXVRIKPTR	KDQAAALIELLLRKD-DRSFISFYNALVKETYYDLAK KDQAAALIKLVIEKD-NRCFISFYNALVKETYYDLAR	CPLY-QDLPGVSF 98	X.maculatus	203	QSLCFRLEQ(1)-LDSQSQQRPPTSLDEAKE-RLRFLMLRRFPR- OSLCEDLEQ(1)-OSQSUTOPPTSLDEAKE-RLRFLMLRRFPR-	SLLILDDIWDSSVLKVFD-IHC	RILLTTRNRSLTDSVSGAKYEVEVESGLDDRK 2 RTLLTTRNRSLADSVSCRVEVEVESGLDDRK 2	295
P.nyererei	1 MALEEGARSCLLRFRQKLEEDIKPTY-LMDH	ISDGVMTVDEEERIRTQPTR	-KDQAGALIELLEKD-NLAYISFINALVREATDDUAP	SLLH-RDLPHISL 98	P.nyererei	203	QSLCFRLEQ(1)-LOSQPLHRPPNSLOEAKE-RLRFLMLRRYPR-	SLLILDDIWDSTVLKVFD-IHC	RVLLTTRNRSLTDSVSGAKHEVEVESGLDDK 2	294
0.nilotic	1 MALEEGARSCLLRFRLKLEEDIKPTY-LMDHM	ISDGVMTVDEEERIRTQPTR	-KDQAGALIELLLRKD-NLTYISFYNALVKEAYDDLAS	SLLH-RDLPHISL 98	0.nilotic	202	QSLCFRLEQ(1)-LDSQLLHRPPNSLDEAKE-RLRFLMLRRYPR-	SLLILDDIWDSTVLKVFD-IHC	RVLLTTRNRSLTDSVSGAKHEVEVESGLDENK 2	294
L.bergylta A.limnaeus	<ol> <li>MALEERARSSLLRCRHRLEQDIKPST-LMDHP</li> <li>MALEERARSCLLRERHRLEQDIKPST-LMDHP</li> <li>MALEERARSCLLRERHRLEQDIKPST-LMDHP</li> </ol>	IISDOVLIVEEEERIMVEPHR IISDOVLIGDEEERIMVESTR	KDQAAALLELLIMKD-NRAYTSFYNALVKEAYDGLAN KDQAVALLELLIKKD-NYAYTSFYNALVREAYDDLAN	ALLH-GDLPQ1SP 98 ALLY-DDLPKMSD 98	L.bergylta A.limnaeus	202	QSLCFRLEQ(1)-LDSQSLHRPSSSLDEAKE-RLRFLMLRKTPR- OSLCFRLED(1)-LDSQSLHRPPNSLDEAKE-RMRFLMLRRYPR-	SLLILDDIWDSTVLKAFD-IHC ALLTLDDIWDSTVLKVFD-IHC	RILLTTRVRSLADSVSGAKHEVEVDRGLDENK 2 RILLTTRVRSLADSVSGAKYEVEVESGLDEKK 2	294
S.partitus	1 MALEEGARSCLLRFRHRLEQDIKAGY-LMDHM	ISDGVMTVDEEEKIRIKPTR	-KDQAAALLELLLMKD-NRAYISFYNALVKEAYDDLAH	MLH-GDLPCVVP 98	S.partitus	202	QSLCFRLEQ(1)-LDSQSLSRPPTSLDEAKE-RLRFLMLRRYPR-	SLLILDDIWDSTVLKAFD-IHC	RILLTTRNRSLTDTVSGAKHEVGVQSGLDENK 2	294
T.rubripes	1 MALEEGARSSLLRFRHQLEQDIKPSY-LMDH	ISDGVLSVDEEEKIRTLATR	-KDQAVALLDLLLRKD-NRTYISFYNSLVKETYDDLAT	FLLH-EYLPRLSP 98	T.rubripes	202	QALCFRLEQ(1)-LDSQSLHRPPNSLDEAKE-RLRYLMLRRHPR- OSLCERLEQ(1)-LDAQSDHRPPSSLDEAKE-CLRSLMLRXXPD-	SLLILDDWDSMVLKTFD-IHA	RILLTTRNRSLTDSVGGAKYEVEVESGLDEKK 2	294
A.striatun	1 MANEEQARSCLLRFRHKLEQDIKPTY-LNDH	ISDGA ITVDEE ERVRTQPTR	-KDQAAALLELLLRKD-NRSYISFYNALVKEAYDDDA	ALLH-ADLPSVST 98	A.striatum	202	QSLCFRLEQ(1)-LDAQSLHRPLSSLDEAKE-RLRFLMLRKYPR-	SLLILDDIWDSTVLKVFD-VHC	RVLLTSRNKSTADSVSGSKHEVEVESGLDDKK 2	294
K.marmoratus	1 MVLEERARSSLLRLRNKLEQDIKPPC-LMDHM	ITDGAMTGDEE EKIMTQ PNR	-KDQAAALUNLLLRKD-NCSYISFYNALVKEGYNDLAC	CLLR-ADLPHVSS 98	K.marmoratus	202	QSLCFRLDQ(1)-LDEKSLPPNSLDLAKE-RLRFLMLRKYPR-	SLLILDDIWDSSVLKVFD-VQC	RVLLTTRNRSIADSVGGVKHEVEVESGLDEKK 2	292
L.oculatu C.orientalis	1MEEQARSKLLLCSRSKLEDDIKALY-LMMM 1MEESARACI VRHRAALORDI RTVY-LLDHI	VSDEVLSADEEETVKAKATR VSDEVINI AFEENVRADPSD	-REQAAALIDLILRKD-NHAYVSLYNALIRESYSDLAS OARTAALTDTLLRKD-DSAFTSLYKALLHEGYRDLAF	SLLQ-KDLPLISP 98 FILO-PGLPDTRSP 97	C.orientalis	202	QSLCFRLDLDSQFCQRPPSTIEEAKD-RLRFUMIRKTPR- ONVLARLDPGVPRPPLNLFEARD-RLRLLLHOYPK-	SLLILDDVWDGAVLRAFD-IQC CLLTLDDVWDPWVLKAFD-V0C	RVLLTTRURSLTDCVAGUKFEVSVGRGLEEDK 2 RVLVTSRDSSVASTASGKTFLVPMESSLTHEE 2	292
X.laevis	1 HDEKARSLLLQNRTALVRDIRTAY-IMDHM	ISDQVITPEEEARVKAQHTQ	-VDKANFLINLILGKG-KQAYVSFYNALLHEGYKDLAL	LLK-EAANAEHS 96	X.laevis	200	ONLCTRLDOEAKYSORPPLNAEEARE-RLRLMVNRMYPR-	CLIVLDDVWDSWVLKAFD-IQC	RVLITSRDKSVTDSLSGFKEAVRVDSELEHSK 2	290
A.millepora 11 0.fameolata 11	13MTTEHKEILTSNRVEIVTOLLVOD-VLNFL MTDEHNEILTSNRVETVENLLVOD-VLNFL	RSKMV FOLDOAELIRAE KTS	-KRQAEKLLDLLEKKS-DAA -FYYFRESL-SEPYPHLLE	ELLQ-E-TRRP 204	A.millepora	307	ONLCARLDSDHSROPPRNLEEAKD-RLRVLFAHKYPR- ONLCARLDSDHSROPPRNLEEAKD-RLRVLFAHKYPR-	SLLTLDDLWHSSNVKYFD-TRC	RILVTSRDAGIANFVGGSKAKVCICEGFTENE 3	395
N.vectensis	1	OSKLVLOLYOKECIYVEKTS	-KXXAQRLLDILPTKG-FDAFEHFFTIL-GEKYPQLVG	ALR-SGVSDE 93	N.vectensis	190	ONLCVRLDHDHSRAPPRNLEEAKD-RLRMLFAHQYPR-	SLLVLDDLWNAADVKYFD-IRC	RTLVTTRDASITDSVGGSKVKVRVSEGFSDKE 2	278
S.kowalevskii	5HEBWARSSLLVNRLKIIDOLNVSY-IINHL	IQORVISIDESEIIKHEITH	-RFQAAKLLDMLGKKN-QFAYFSFYRSL-EDYYPHLAE	ELLN-NDIPDOERDAA 102	S.kowalevskii	207	ONLCARLOKEERKAPQNIEEAKD-RLRTIFLHOMPR-	SLLIIDDWDKQVCKTFD-IQA	RIHVTTRDSTVTDLVSGKVIKVKISQGLKVEQ 2	294
S.purpuratus	7 APHTELARINLEVHRATIAGOLIVOY-VLOPL 7 APHTELARINLERHROSLIDOLOVEF-ISOH	ISOLI ISVEUSEVINAEVIR	-RRKAVTFLIMITTKG-QHAYNSTHOVL-GEKHKHLAT	FLE-DAVTGOGH 183	S.purpuratus	203	UNLCARLORDVORSPPHNLEEGKD-RLRVVLIEQMPR- UNLCARLDEDVORSPPHNLEEGKD-RLRALFIDKHPR-	SLLILDDIWSSKVARIFD-VQC	RVWVTTRDRGVTDRVTGPVWRV0LEEGFSEE0 2	296
E.mexicana	1 MDKLHQHILKMLRKSTVAOLDVHNGTIKPL	QSEYILTDQHIIEIEHGISK	-QEKAEILLDILPSRG-PSAFDTFRQAL-RHHYEWLSE	EDMD-KLEESG 94	E.mexicana	198	QLNRLYHLV(4)SDSLKSAPLKDSLIH-FLQIYFSREKHS-	HALLILDOVCDSKITEEFD-FEC	KTLVITANLOVVLEKRPRVVPMNDGFTEAE 2	281
B.terrestris	1 MEXLHKHILRHLRENIVACMEVHWGINKPL	QSEYTLRDQHTQETEKGSSK	-QRKAETLLDTLPSRG-PYAFDTFRQAL-RHHYEWLSD	XOND-KLEENG 94	B.terrestris	198	NRLYHLVKN(4)POSYKPESLKDSLIH-FLQDYFSRAKHC-	NALLILDOVCOKKIIDTFD-FEC	KTLVITADLOVVLEKRPCVIERDGFTEAE 2	281
H. Laboriosa	1MOKFHQNILKILRKNIVVOIDVHNGIIKPL	QSEVILTEQHITEIEIGTTK	-QQKAEILLDILPSRG-PYAFDIFRQAL-RHHYEWLSQ	OMD-KLEENR 94	H. laboriosa	184	NRLYHLVKN(4)PESLKPELLKOSLIH-FLKYHFSRENHC-		KTLVITADLDLVLDKRPSVISVN2	268
D.novaeangliae	1 HDYLHONILKCVRESIVAOMDVFNGIIOPL	KSEYILTDQOVTKIKAGDSK	-QEKAEILLDILPNRG-PDAFDKFRQAL-RHHYEWLSE	EMD-KLEESG 94	D.novaeangliae	190	NRLYHLVKN(4)PETLKSGPLKDYLIH-SLKYHFSRKENS-	HALLILDDVGDNKIIEAFD-FEC	KTLVITANLAIVSDKRPFVMQMNDGFTEAE 2	281
A.Colombicaa S.invicta	1MEKLHKDILIRLRKNIIDOLDVONOVIQPL 1MEKSHKDILIRLRKNIIDOLDVONOVIQPL	RNEYI ITEOMIKNI YIGATK ROENI I KE FOI KCI YMGI TK	EERAAKLLDILPLCG-ANAFGVFHQSLKHHYDWLSD FDRTONLLDILPRCG-TRAFDVFHRSLKHHYFWLSD	XEID-IMLONC 94 X0ID-KLLONY 94	A.colombicaa S.invicta	18/	NTLYYNVRN(4)PELFSSLERNSLIR-YLKYYPSKQENC- NALYYNVRN(2)PESITPLEKDSLID-YLKYYPSR0ENC-	NALLILDOVHNEQIINTFOFQC KALLILDOVYDKKIIDTFD-FKC	KTLVLTONIOVVLKKRPKIIEMNOFFEAE 2 KTLVLTADIEVVSHKKPIIIEMROFFEAE 2	277
F.arisanus	1 MKOFHR NILIKLREAIVOOLDVANGVIGPE	EADCILKPEDLTHIEARETK	-EAQAEFLLDILPNRG-PNAFRTFHQAL-KEHYFWLSN	VENN-DLUMAD 94	F.arisanus	198	NNLYHQIENDPQTWTDD-(4)-GKDQLRK-FLGKYFNDYR	NALLVLDDVWDKAIIDTFD-FNC	KTLVITIDLGVLGERHKEIVEMRHGFTEAE 2	287
A.pisun P. mori	3 IDYNON IPCNILKEHHDSIIQDIQGOM-IL-AL	FETOVLTENEYINIKSERIR	-EKEASRLLELLPSKG-RNGINQFLNHL-STHYSWIAR	ALLQ-HSITIK 97	A.pisum	195	TEILNRLNNQEQLITPPL(2)-DYEDTRK-KIRDLWKEKQLT-	EGLLILDDVCSNETVKSLD-IGC	KILITTNDISIMDOIINTRVKYLKVNEGFEEKE 2	288
P.xylostella	1HDIKKKGLLQQHQKDWRDLDIVY-IIDEL	FINEAISKEDFORVFTLTSR	-AERTRYLIDTLIQNGTNHSFEVFVDTL-QKDHRWLWE	EKFTIDNMONP 95	P.xylostella	192	NKLHRKASS(22)-NDSHSLASYEMCRQDLKD-TLKSVFSEPALK-	DCLLVIDEVNEKRCVDAFD-IGC	KMLVTTRDTOVVANFHPQIVKIENHFEEKE 3	304
P.machaon	1 MDTKYRVLLQHHQQDVVRDLDVTY-ILDEL	FTKDA ISNEDF DNI YKL SSR	-VDRTRYLIDSLLQNGTNRSYEAFVDSL-AKDWQWLYK	OKFT-EESNEA 94	P.machaon	191	NKLYRKATT(20)-ADSHSFYDWSWEDMKD-RL15QFQSQSLK-	ECLLVLDEVNEKKCLRAFD-IGC	KILITTPDTDVVLNFQAQIVKVENNFTEQE 2	299
C.elegans	2 CETECRALSTAHTRLTHDFEPRD-ALTYL	EGIONI FTEDHSELI SKMSTR	TURTRELIDSLLUNGTINGSTEAPVIDSL-ANDWONLTN LERIANFLRIYRROA-SELGPLIDFFNYNNOSHLAD	VFLE-DYIDFAI-NEP 98	C.elegans	205	TDILLMLKSEDBLINFPSVEHVTSVVLKRMICNALID(	2)-NTLEVEDOVVOEETIRWADELRU	RCLVTTRDVEISNAASOTCEFIEVTSLEIDE 2	299
C.sinensis	1MESKETYALRVCGPMIVQSLDPMD-VLDSL	FSGKVLSIAEYQQVFRMCTSGNI	-RDACIKLLDLLRSRP-SGAFECFVKAL-EAENSFLAP	ELR-RLQQQA 96	C.sinensis	259	ISLVDRLER(6)RYSDELRQIQNTPPR(15)TLDESLD-RLRRALMRRQKR(	13) LLL IVLDDVWDVQVGRALSNMPA	AFLVTSRDRSVLQHVETPVERFSLYEGLLEDE 3	390
E.multilocularis	1MDENKLSALKRCYPTFVQSLNTAE-IIDHL 3FETCEH0V0VKD1LSVEEDAEVTWEDCKD-V00	IGGEH ISRDEYERI SAKVTT MPKSTI SK FFT NHT IMSKDA	MDKARTFLEFLFGKS-NEAFKCFQDAL-LQEQPFLAK VSGTLRLFWTLLSKD-FEMVDKFVEFVLRTNVKFLMS	CTLE-EQLEKV 93	E.multilocularis	227	SALIEHVDS(9)QGSEDKREEPY(5)-DVSKMTS-LLHKLLIARQYR( 0K11Y0TDP(3)-SBSDBSSUTKLBTHST04-FLRB1LKSKPVF-	13) LLLIVLDDVWDDCVVSALGTLPA	AFV/TSRDINILQRVLTPV/MESVEADMODGE 3 KULLTREK/WTDELSAATTTNTSLDHHSMTLTDDE 2	347
B.latifrons	6 FSS0DTALGOHYALDIIKGNFLRDFDMRD-VLPCL	QOI FSKLEEQYINAH (6) CTQNAI (8	EEKASRLFAVLRNKN-YAQIRKFMEVL-SSDYLWLVS	SHFD-NVNKVD 104	B.latifrons	203	KLLLTQSTR(10)ERPDQNTKSFKNSIDEYKH-LVGQELRKNSHE-	KCLVVLVNVRNTHALEVFD-LPC	KLLVLTRSKKVSDSFAKKRSTTIRLTNGLTRAE 3	307
B.cucurbitae 5	57ISSODASLDGHYALDIIEGHFLQDFDVRD-IWEHN	QOI FTT PEKQYINAN (6) STQHST (8	I) EEQVSRLFAILRNKD-HTQICKFKESL-RMDYIWLMF	21 ED_NTNV//0 155	R cucurbitae	254	VI I I TVDTD / 10 EDEED	KCLVVLVNVRNTHALEVFN-LPC	KLLVLTRSKKVSDSFAOKLSTTLRLRNGLTKFE 3	25.0
C.capitata 6	60CSSDEETLSPHHAMDIIKGHFLKDFDVRD-IWSYT	HNI FTE SERQYI TAT (6) CTORPS (8	) EEQVSRLFAVLRNKD-YSEICKFMEAL-SYDYLWLWN	<pre>«LFE-NVNKID 158</pre>	C.capitata	257	KLLLTESLR(10)ORSEPNTHAYRNSIDEIKL-SVSKELKKTENK-	KCLVVLVNVGNTYALKAFD-LPC	KLLVITRNKKVSDSFDKKRSTTLRLTSGLTRAE 3	361
C.capitata 6	60CSSDEETLSPHHAMDIIKGHFLKDFDVRD-IWSYT	HNIFTESERQYITAT(6)CTQRPS(8	) EEQVSRLFAVLRNKD-YSEICKFMEAL-SYDYLWLVN	ILFE-NWNKID 158	C.capitata	257	KLLLTESLR(10)ORSEPNTHAYRNSIDEIKL-SVSKELKKTENK-	KCLVVLVNVGNTYALKAFD-LPC	KULIVITRNKKVSDSFDKKRSTTLRLTSGLTRAE 3	361
C.capitata 6	60CSSDEETLSPHHAMDIIKGHFLKDFDVRD-IWSYT	HNI FTESERQYI TAT (6) CTORPS (8	) EEÖVSRLFAVLRNKD-YSEICKFMEAL-SYDYLWLVN	ILFE-NVNKID 158	C.capitata	257	KLLLTESLRI10/DRSEPNTHAYRNSIDEIKL-SVSKELKKTENK-	KCLVVLWIVGNTYALKAFD-LPC	KLLVITRNKKVSDSFDKKRSTTLRLTSGLTRAE 3	361
C.capitata 6	<ul> <li>CSSDEETLSPHHAMDIIXGHFLKDFDVRD-IWSYT</li> <li>SSGKDSVSGITSYVRTVLCEGGVPDRPVVPVT</li> </ul>	HNIFTESERÖYITAT (6) CTORPS (8	I) EEQVISRLFAVLRNKD-YSEICKFMEAL-SYDYLWLVN	00 KSGLUKK 19	9 C.capitata	257	ALLL RY IN L20 EXPERIMENTAL STREET AND STREET AND STREET AND STREET AND STREET AND STREET AND	KCLWLWWGNTYALKAFD-LPC	-KRITRNKKVSDSFDKKRSTTLRLTSGLTRAE	361
C.Capitata 6 H.sapiens 9 G.gallus 9	<ul> <li>CSSDEETLSPHHAMDIIKGHFLKOFDVRD-LWSYT</li> <li>SSGKDSVSGITSYVRTVLCEGGVPORPVVPV7</li> <li>KNGKMANDERTSYVKTALCEGGVPORPVVPV7</li> </ul>	HNI FTESERQYI TAT (6) CTQRPS (8 TRIKL VNAIQQKL SKLKGEPGWY RPKL VDDIXQKLRSLGSDPGWY	) EEQVSRLFAVLRIND-YSEICKFMEAL-SYDYLWLVN TTHGMAGCGKSVLAAEAVREH-SLLEGCFPGGVMVSVGK TVYGMAGCGKTVLTAEALREH-QLLRGCFPGGVMISVGK	QDKSGLLNKL 19 QDKSGLLNKL 19	9 C.capitata 19 H.sapiens 19 G.gallus	257 291 291	ALLLIAFRILIPERE RILLTESRI IDERSE GLETISLENN-HKKADLREGASITIKECKSERLVKEDK- GLETISLENN-HKKADLREGASITIKECKSERLVKSI IGALLROF GLEVIALENN-HKISELPEGASITVECKSERLVISLIGALLROF	KCLWLWVGNTYALKAFD-LPC PNRMEYYLKQLQNKQF PSRMEYYLKQLQNKQF	KLLVITRNKVSDSFDKKRSTTLRLTSGLTRAE	361 387 387
C.capitata e H.sapiens 9 G.gallus 9 C.mydas 9 C.nydas 9		MILFTESERQYITAT(6)CTQRPS(8 TRXKLWATQOKLSKLKGEPGWY RPKLVDDIKUKLRSLGS0PGWY TRXLVATQOKLYMLRSBPGWY	) EEQVSRLFAVURIND-YSEICKRNEAL-SYDYLHUN TTHRMAGCGKSVLAJEAVRDH-SLLEGCFPGGVHWSVGK TVYGNAGCGKTVLTAEALRDH-ULLRCCFPGGVHWTSVGK TVYGNAGCGSVJLTAEALRDH-ULLBCCFPGGVHWTSVGK TVYGNAGCGSVJLTAEALRDH-ULECFPGGVHWTSVGK	00KSGLUKL 19 00KSGLUKL 19 00KAGLUKL 19 00KAGLUKL 19	9 C.capitata 19 H.sapiens 19 G.gallus 19 C.mydas 19 C.nita bellii	257 291 291 311 291	ALCLIAFIRITIOPEOPERITIARIAN AND STOLETAL STREEMANDER RILLTESIRI 1010RSEPSIDETAL-SYSREUKTBM GLETLSLPM-HKKADLPEQASITKECKISPLVVSLTGALLRDF GLETLSLPM-HKTSEPEQASITKECKISPLVVSLTGALLRDF GLETLSLPM-HKTDUPEEASITVRECKISPLVVSLTGALLRDF	KCLVVLVIVVQITYALKAFD-LPC PNRMEYYLKQLQIKQF PSRMEYYLKQLQIKQF PNRMEYYLRQLQIKQF PNRMEYYLRQLQIKKQF	KILLVITFINK/VSDSFDKIRSTTLRLTSGLTRAE 3 	361 387 387 407 387
C.capitata e H.sapiens 9 G.gallus 9 C.mydos 9 C.picta bellii 9 G.japonicas 18	0        CSSDEETLSPHRMDLIXKHFLK0FDVRD-LWSYT           7         SSGKDSVSGTTSYWRTVLCEGOLPORPVVVPV           7         KRIGRANDERTSYWRTKLCEGOLPORPVVPVV           7         KRI	HNLFTESERQYITAT(6)CTQRPS(8 TRIKLVMATQQKLSKLKGEPGWY RPKLVDDIXXKLRSLSSPGWY RPKLVKATQQKLVMLRSBSGWY RPKLVKATQQKLVMLRSBSGWY	) EERVISRLFAVURIKO-YSELCKIPIEAL-SYDYLINUN TIHOMAGCOKSVLAAEANRDH-SLLEGCFPGGVMVSVGK TYYOMAGCOKSVLAALRRDH-LLEGCFPGGVMVSVGK TYYOMAGCOKSVLAALRRDH-LLEGCFPGGVMLSVGK TYYOMAGCOKSVLAALRRDH-LLEGCFPGGVMLSVGK	QDKSGLUHKL         19           QDKAGLUKL         12           QDKAGLUKL         20	9 H.sapiens 99 G.gallus 99 C.gita bellii 12 G.japonicas	257 291 291 311 291 294	ALLLIA TILLIJEDGED	KCLWILWWORTYALXAFD-LPC PNIWEYYLKOLONKOF PSRWEYYLKOLONKOF PNIWEYYLROLONKOF PNIWEYYLROLONKOF	KLLVTIRNOVSDSFDKRRSTTL/RLTSQLTRAE	361 387 387 407 387 390
K.capitata e H.sapiens 9 G.gallus 9 C.mydas 9 C.picta bellii 9 G.japonicas 18 P.viticeps 9 A.carolinensis 9	0        CSSDEETLSPHRMDLIXKHFLK0FDVRD-LWSYT           7         SSGKDSVSGTTSYVRTVLCEGOVPRPVVVV/           7         NRIGRADSVSGTTSYVRTVLCEGOVPRPVVVV/           7         NRIGRADSVSTSYVRTVLCEGOVPRPVVVV/           7         NRI	HULFTESER(YITAT(6))CTQRP5(8 TRICKLVINATOOKLSKLXGEPGW7 BPKLVIDEXCKLR5LGS0PGW7 IRPKLVIXATOOKLVINLRS0PGW7 IRPKLVIXATOOKLVINLRS0PGW7 IRPELXTEOKLWIKS0SGW7 IRPELXTEOKLWIKS0SGW7 IRPELXTEOKLWIKS0SGW7 IRPELXTEOKLWIKS0PGW7 IRPELXTEOKLWIKS0PGW7	) EEGVISRLFAVURIKD-YSELCKPHEAL-SYDYLMUN TTHOMAGCKISVLAAEAIRDH-SLLEGCEPGGYMWSVICK TYYVYMGGCGCYULTAALRDH-HLLEGCEPGGYMWSVICK YVYMGGCGCSVLTAALRDH-HLLEDCEPGGYMWSVICK YVYMGGCGCSVLTAALRDH-SLLBCEPGGYMWSVICK YVYMGGCGCSVLAARRDH-SLLBCEPGGYMWSVICK YVYMGGCGCSVLAARRDH-SLLBCEPGGYMWSVICK	QD	9 H.sapiens 9 G.gallus 9 C.pita bellii 2 G.japonicas 9 A.carolinensis	257 291 291 311 291 294 291 291	ALLLIA MILITESCH UND KANNEN SUDEIN-CSELONDWEI KLLITESCH 1010RSED		KLLVTIRNOVSDSFDKORSTTLALTSQLTRAE 3 KRIRKSSSTVD-EALDEANSISVBNLREDI-KDYTDLS 3 KRIRKSSSTVD-EALDEANSISVBNLREDI-KDYTDLS 3 	361 387 387 407 387 390 387 387 387
K.capitata e H.sapiens 9 G.gallus 9 C.mydas 9 C.njaponicas 18 P.vitticeps 9 A.carolinensis 9 P.bivittatus 9	0        CSSREELSPHEMDLIKKHFLKOFDVRD-IWSYI           7         SSGKIDSVSGTTSYNRTULCEGOVRDPVVPVI           7         KILGRANNDERTSYNRTULCEGOVRDPVVPVI           7         KILGRANNDERTSYNRTULCEGOVRDPVVPVI           7         CHGRANNDERTSYNRTULCEGOVRDPVVPVI           10         LHGRANNDERTSYNRTULCEGOVRDPVVPVI           11         LHGRANNDERTSYNRTULCEGOVRDPVVPVI           12         LHGRANNDERTSYNRTULCEGOVRDPVVPVI           13         LHGRANNDERTSYNRTULCEGOVRDPVVPVI           14         GRANNDOVTSYNRTULCEGOVRDPVVPVI           15         SHGRASTEDITSYNRTULCEGOVRDPVVPVI           16         GRASTEDITSYNRTULCEGOVRDPVVPVI		1) EEVISRI,FAVURIKO-YSELOKIPIEAL-SYDYLINUN TTHOMAGOKSULAIEANIBH-SILLEGCEPAGIYIMMSYOK TYYOMAGOKSULTI, TALAI BIRH-HILLEGCEPAGIYIMMSYOK TYYOMAGOKSULTI, TALAI BIRH-HILLEGCEPAGIYIMMSYOK TYYOMAGOKSULTI, TALAI BIRH-HILLEGCEPAGIYIMMSYOK TYYOMAGOKSULTI, TALAI BIRH-HILLEGCEPAGIYIMMSYOK TYYOMAGOKSULTI, TALAI BIRH-HILLEGCEPAGIYIMMSYOK TYYOMAGOKSULTI, TALAI BIRH-HILLEGCEPAGIYIMMSYOK TYYOMAGOKSULTI, TALAI BIRH-HILLEGCEPAGIYIMMSYOK	QD	<ul> <li>G.capitata</li> <li>H.sapiens</li> <li>G.gallus</li> <li>C.nydas</li> <li>C.nydas</li> <li>G.patca bellii</li> <li>G.japonicas</li> <li>A.carolinensis</li> <li>P.bivitatus</li> </ul>	257 291 291 311 291 294 291 291 290	ALLLIAT KILITERE DE COMMUNICATION SUDE INCL'ESTELIATORI KILITERI I DI DISEP		KLUVTIRNOVSOSFDKORSTTURI TSQUTRAE 3 	361 387 387 387 387 390 387 390 387 387 387 387
L.capitata e H.sapiens 9 G.gallus 9 C.mydos 9 G.japta bellii 9 G.japonicas 11 P.vitticeps 9 A.carolinensis 9 O.hannah 9 D.haucrosumaentus 9		HNLFTESERVYTTAT(6)CT0RPS(8 TRKKLVNATQOKLSKLKGEPGAV TRKKLVNATQOKLSKLKGEPGAV TRKKVTATQOKLTAKSGSGAV TRKLVATQOKLTAKSGSGAV TRKLVATQOKLTAKSGSGAV TRELTATIONCHALSGSGAV TRELTATIONCHALSGSGAV TRELTATIONCHALSGSGAV TRELTATIONCHALSGSGAV TRELTATIONCHALSGSGAV TRELVATIONCHALGADPGAV	J EEDVSRLFAVURIKO-YSELCKPHEAL-SYDYUKUN TUHOMACGKSVLAAEAVREIH-SILESCFPAGYHMVSVGK VYYOMACGKSVLAALAREH-LLIACFPAGYHMVSVGK VYYOMACGKSVLTAALAREH-LLECFPAGYHMVSVGK VYYOMACGKSVLTAALAREH-LLECFPAGYHMVSVGK VYYOMACGKSVLTAALAREH-SLLECFPAGYHMVSVGK VYYOMACGKSVLTAALAREH-SLLECFPAGYHMVSVGK VYYOMACGKSVLTAAELINBI-SLUCEFPAGYHMVSVGK VYYOMACGKSVLTAAELINBI-SLUCEFPAGYHMVSVGK VYYOMACGKSVLTAAELINBI-SLUCEFPAGYHMVSVGK	QD	<ul> <li>C.capitata</li> <li>H.sapiens</li> <li>G.gallus</li> <li>C.nydas</li> <li>G.nydas</li> <li>G.aponicas</li> <li>P.vitticeps</li> <li>A.carolinensis</li> <li>P.bivitatus</li> <li>P.annah</li> <li>P.encorosoumatus</li> </ul>	257 291 291 311 294 291 294 291 290 287 291	ALLLTPSLR11010520 ALLLTPSLR11010520 ALLLTPSLR11010520 ALLTPSLR11010520 ALLTPSLR11010520 ALLTPSLR11010520 ALLTPSLR11010520 ALLTPSLR11010520 ALLTPSLR11010520 ALLTPSLR11010520 ALLTPSLR11010520 ALLTPSLR1101052 ALLTPSLR1101052 ALLTPSLR1101052 ALLTPSLR1101052 ALLTPSLR1101052 ALLTPSLR1101052 ALLTPSLR110105 ALLTPSLR110105 ALLTPSLR110105 ALLTPSLR1101 ALLTPSLR110 ALLTPSLR11		KLUTTRNOVSDSFDKRISTTLALTSQLTARE           -KRIAKSSSTDEALDEANSISVENLAEDI-KDYTDLS           -KRIAKSSSTDEALDEANSISVENLAEDI-KDYTDLS           -KRIAKSSTDEALDEANSISVENLAEDI-KDYTDLS           -KRIAKSSTDEALDEANSISVENLAEDI-KDYTDLS           -KRIAKSSTDEALDEANSISVENLAEDI-KDYTDLS           -KRIAKSSTDEALDEANSISVENLAEDI-KDYTDLS           -KRIAKSSTDTEALDEANSISVENLAEDI-KDYTDLS           -KRIAKSSTDTEALDEANSISVENLAEDI-KDYTDLS           -REXESSTDTEALDEANSISVENLAEDI-KDYTDLS           -REXESSTOTEALDEANSISVENLAEDI-KDYTDLS           -REXESSTOTEALDEANSISVENLAEDI-KDYTDLS           -REXESSTOTEALDEANSISVENLAEDI-KDYTDLS           -REXESSTOTEALDEANSISVENLAEDI-KDYTDLS           -REXESSTOTEALDEANSISVENLAEDI-KDYTDLS           -REXESSTOTEALDEANSISVENLAEDI-KDYTDLS           -REXESSTOT	361 387 387 407 387 390 387 386 383 386 383 387
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L.capitata     t       H.sapiens     9       G.pallus     9       C.mydas     9       G.papotas     18       P.vitticops     9       A.carolinensis     9       O.hannah     9       P.mucrosquamatus     9       A.mississippiensis     9       G.aparticus     9       G.aparticus     9       Jonardow     9       Jonardow     9       G.pangeticus     9       G.particus     9       Jonardow     9	0        CSSDEETLSPHRHMDLIXKHFLK0PDVRD-INSTI           1         S5SIDDVSGTTSVRTNLCEGOVRDAVVPTR           1         S5SIDDVSGTTSVRTNLCEGOVRDAVVPTR           1         S5SIDDVSTSVRTNLCEGOVRDAVVPTR           2         S5SIDDVSTSVRTNLCEGOVRDAVVPTR           3         S1SIDDVSTSVRTNLCEGOVRDAVVPTR           3         S1	HILFTESERVITIAT(6)CT0RPS(8 TRIKLIVIATORIKISKLSGEP	1) EEV/SRLFAVURIKO-YSEICK/FIEAL-SYDYUKUN TUYOMACGOXYULTAEAIRBI-SLLECCFROOMINSIGO TUYOMACGOXYULTAEAIRBI-SLLECCFROOMINSIGO TVYOMACGOXYULTAEAIRBI-SLLECCFROOMINSIGO TVYOMACGOXYULTAEAIRBI-SLLECCFROOMINSIGO TVYOMACGOXYULTAEAIRBI-SLLECCFROOMINSIGO TVYOMACGOXYULTAEAIRBI-SLLECCFROOMINSIGO TVYOMACGOXYULTAEAIRBI-SLLECCFROOMINSIGO TVYOMACGOXYULTAEAIRBI-SLLECCFROOMINSIGO TVYOMACGOXYULTAEAIRBI-SLLECCFROOMINSIGO TVYOMACGOXYULTAEAIRBI-SLLECCFROOMINSIGO TVYOMACGOXYULTAEAIRBI-SLLECCFROOMINSIGO TVYOMACGOXYULTABARDINE-SLLECCFROOMINSIGO TVYOMACGOXYULTABARDINE-SLLECCFROOMINSIGO TVYOMACGOXYULTABARDINE-SLLECCFROOMINSIGO	00	6.capitata 6.capitata 9.G.pallus 9.C.pallus 9.C.pallus 9.C.pata bellii 9.A.carolinensis 9.A.carolinensis 9.A.carolinensis 9.A.carolinensis 9.A.carolinensis 9.A.carolinensis 9.A.carolinensis 9.A.carolinensis 9.A.carolinensis 9.A.carolinensis 9.A.carolinensis 9.C.parosu 9.C.parosu 9.C.parosu 9.C.parosu 9.C.parosu 9.C.parosu 9.C.parosu	257 291 291 291 294 291 294 291 290 287 291 291 291 291 291 293	ALLLIA THAI INTERPENTING AND SIDE INCLOSED AND A ALL AND ALL AND A ALL AND A ALL AND ALL		KLUVTRNOVSDSFDKORSTTURI,TSQUTRAE	387 387 387 407 387 387 387 387 387 387 387 387 387 38
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L.capitata     t       H.sapiens     0       G.pallus     0       C.mydas     0       G.paponicas     10       P.vitticops     9       A.carolinensis     9       A.carolinensis     9       D.hannah     9       G.apatters     9       G.apaterissispiensis     9       G.panoticons     10       D.rerio     9       S.rhinocerousus     9       P.nattereria     9       P.nattereris     9       I.punctatus     9	0        CSSDEETLSPHRIMDLIXKHFLK07DVRD-IWS71           15        CSSDEETLSPHRIMDLIXKHFLK07DVRD-IWS71           15        GRADVSETTSVRTNLCEGOVRDAVVPY           16        GRAVDERTSVRTNLCEGOVRDAVVPY           17		J EEDVSRLFAVURIKO-YSEJCX/THEAL-SYDYUKUN THIMMAC/GXIS/LAAEA/RBH-SLLECCFPGQ/HM/SIG/R YYYYMAC/GXIS/LAAEA/RBH-SLLECCFPGQ/HM/SIG/R YYYYMAC/GXIS/LAAEA/RBH-RLECCFPGQ/HM/SIG/R YYYYMAC/GXIS/LAAEA/RBH-SLLECCFPGQ/HM/SIG/R YYYYMAC/GXIS/LAAEA/RBH-SLLECCFPGQ/HM/SIG/R YYYYMAC/GXIS/LAAEA/RBH-SLLECCFPGQ/HM/SIG/R YYYYMAC/GXIS/LAAEA/RBH-SLLECCFPGQ/HM/SIG/R YYYYMAC/GXIS/LAAEA/RBH-SLLECCFPGQ/HM/SIG/R YYYYMAC/GXIS/LAAEA/RBH-SLLECCFPGQ/HM/SIG/R YYYYMAC/GXIS/LAAEA/RBH-SLLECCFPGQ/HM/SIG/R YYYYMAC/GXIS/LAAEA/RBH-SLLECCFPGQ/HM/SIG/R YYYYMAC/GXIS/LAAEA/RBH-SLLECCFPGQ/HM/SIG/R YYYYMAC/GXIS/LAAEA/RBH-SLLECCFPGQ/HM/SIG/R YYYYMAC/GXIS/LAAEARBH-SLLECCFPGQ/HM/SIG/R YYYYMAC/GXIS/LAAEARBH-SLLECCFPGQ/HM/SIG/R YYYYMAC/GXIS/LAAEARBH-SLLECCFPGQ/HM/SIG/R YYYYMAC/GXIS/LAAEARBH-SLLECCFPGQ/HM/SIG/R YYYYMAC/GXIS/LAAEARBH-ALLECCFPGQ/HM/SIG/R YYYYMAC/GXIS/LAAEARBH-SLLECCFPGQ/HM/SIG/R YYYGM/GXIS/CXI/LAAEARBH-ALLECCFPGQ/HM/SIG/R YYYGM/GXIS/CXI/LAAEARBH-ALLECCFPGQ/HM/SIG/R YYYGM/GXIS/CXI/LAAEARBH-ALLECCFPGQ/HM/SIG/R YYYGM/GXIS/CXI/LAAEARBH-ALLECCFPGQ/HM/SIG/R YYYGM/GXIS/CXI/LAAEARBH-ALLECCFPGQ/HM/SIG/R YYYGM/GXIS/CXI/LAAEARBH-ALLECCFPGQ/HM/SIG/R YYYGM/GXIS/CXI/LAAEARBH-ALLECCFPGQ/HM/SIG/R YYYGM/GXIS/CXI/LAAEARBH-ALLECCFPGQ/HM/SIG/R YYGM/GXIS/CXI/LAAEARBH	0.0         SIGUIDADE         350           0.0         SIGUIDADE         350 <td< td=""><td>C.capitata     C.capitata     C.capitata     C.capitata     G.pallus     G.polcta bellii     O.polcta bellii     O.polcta bellii     C.polcta bellii     C.porosus     C.porosus     C.porosus     C.porosus     G.gapneticus     S.chinocerousus     S.graham     P.mutereri     P.antereri     A.mettereri     S.graham     Amettereri     J.punctatus     Louctaus     Leucius</td><td>291 291 291 291 291 291 291 291 291 291</td><td>ALLLIA FILLIPSER</td><td></td><td>NLLUTINNOVYSOSTDKORSTTL/RLTSQLTARE           -KRIDKSSSTIP-EALD EMISTSVEIDL SDL-KDYYTDLS           -KRIDKSSSTIP-EALD EMISTSVEIDL SDL-KDYYTDLS           -KRIDKSSSTOP-EALD EMISTSVEIDL SDL-KDYYTDLS           -KRIDKSSSTOP-EALD EMISTSVEIDL SDL-KDYYTDLS           -KRIDKSSSTOP-EALD EMISTSVEIDL SDL-KDYYTDLS           -KRIDKSSSTOP-EALD EMISTSVEIDL SDD-KDYYTDLS           -KRIDKSSTOP-EALD EMISTSVEIDL SDD-KDYYTDLS           -KRIDKSSTOP-EALD EMISTSVEIDL SDD-KDYYTDLS           -KRIDKSSTOP-EALD EMISTSVEIDL SDD-KDYYTDLS           -KRIDKSSTOP-EALD EMISTSVEIDL SDD-KDYYTDLS           -REXESSTOP-EALD EMISTSVEIDL SDD-KDYTDLS           -REXESSTOP-E</td><td>387 387 387 387 387 387 387 387 387 387</td></td<>	C.capitata     C.capitata     C.capitata     C.capitata     G.pallus     G.polcta bellii     O.polcta bellii     O.polcta bellii     C.polcta bellii     C.porosus     C.porosus     C.porosus     C.porosus     G.gapneticus     S.chinocerousus     S.graham     P.mutereri     P.antereri     A.mettereri     S.graham     Amettereri     J.punctatus     Louctaus     Leucius	291 291 291 291 291 291 291 291 291 291	ALLLIA FILLIPSER		NLLUTINNOVYSOSTDKORSTTL/RLTSQLTARE           -KRIDKSSSTIP-EALD EMISTSVEIDL SDL-KDYYTDLS           -KRIDKSSSTIP-EALD EMISTSVEIDL SDL-KDYYTDLS           -KRIDKSSSTOP-EALD EMISTSVEIDL SDL-KDYYTDLS           -KRIDKSSSTOP-EALD EMISTSVEIDL SDL-KDYYTDLS           -KRIDKSSSTOP-EALD EMISTSVEIDL SDL-KDYYTDLS           -KRIDKSSSTOP-EALD EMISTSVEIDL SDD-KDYYTDLS           -KRIDKSSTOP-EALD EMISTSVEIDL SDD-KDYYTDLS           -KRIDKSSTOP-EALD EMISTSVEIDL SDD-KDYYTDLS           -KRIDKSSTOP-EALD EMISTSVEIDL SDD-KDYYTDLS           -KRIDKSSTOP-EALD EMISTSVEIDL SDD-KDYYTDLS           -REXESSTOP-EALD EMISTSVEIDL SDD-KDYTDLS           -REXESSTOP-E	387 387 387 387 387 387 387 387 387 387
L.capitata     t       H.sapiens     9       Gallus     9       C.mydos     9       Gpiponicas     10       P.utticops     10       P.utticops     9       G.anual     9       G.monah     9       G.morosquantus     9       A.mississippiensis     0       D.rerio     9       S.rhincerousas     9       A.mexicanus     9       A.mexicanus     9       Lucus     11       S.salar     10       S.latar     12	0        CSSDEETLSPHRIMPLIXKHFLK0PDVRD-INSTI           7         SSGKUS VSGITSYVRTVLCEGOVPQRPVVPV           7         NRIGANARDERTSYVRTKLCEGOVPQRPVVPVV           7         NRI		J EEV/SRLFAVURIKO-YSEJCX/FIEAL-SYDYLINUN TUHOMACGKSVLAAEA/RDH-SLLECCFPGQYMA/SVGX YVYOMACGKSVLAAEA/RDH-LLECCFPGQYMA/SVGX YVYOMACGKSVLTAALRDH-RLLECF/FQGYMA/SVGX YVYOMACGKSVLTAALRDH-RLLECF/FQGYMA/SVGX YVYOMACGKSVLTAALRDH-RLLECF/FQGYMA/SVGX YVYOMACGKSVLTAALRDH-RLLECF/FQGYMA/SVGX YVYOMACGKSVLTAALRDH-RLLECF/FQGYMA/SVGX YVYOMACGKSVLTAALRDH-RLLECF/FQGYMA/SVGX YVYOMACGKSVLTAALRDH-RLLECF/FQGYMA/SVGX YVYOMACGKSVLTAALRDH-RLLECF/FQGYMA/SVGX YVYOMACGKSVLTAALRDH-RLLECF/FQGYMA/SVGX YVYOMACGKSVLTAARLDHH-RLECF/FQGYMA/SVGX YVYOMACGKS	00	<ul> <li>C.Capitata</li> <li>C.Capitata</li> <li>G.Capitata</li> <li>G.Capitas</li> <li>G.Capitas</li> <li>G.Capitas</li> <li>G.Capitas</li> <li>G.Capitas</li> <li>G.Capitas</li> <li>G.Capitas</li> <li>G.Landas</li> <li>G.Landas</li></ul>	291 291 301 291 291 291 291 291 291 291 291 291 29	ALLILY MILLIPSCH UNDER AN AND AND AND AND AND AND AND AND AND		NLLUTINNOVSOSTDKORSTTL/LI,TSQLTARE           -WILMSSSYUY-EALDEANSISVENLAEDT-KONYTOLS           -WILMSSSYUY-EALDEANSISVENLAEDT-KONYTOLS           -WILMSSSYUY-EALDEANSISVENLAET-KONYTOLS           -WILMSSSYUT-EALDEANSISVENLAET-KONYTOLS	361 387 387 407 3887 407 3887 3887 3887 3887 3887 3887 3887 38
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L. capitata     c       H. sapiens     9       G.pallus     9       C.mydas     9       C.mydas     9       G.paponicas     18       P.vitticeps     9       A.carolinensis     9       O.hannah     9       G.pancesquamatus     9       A.mississippiensis     9       G.pancesquamatus     9       A.mississippiensis     9       S.rhinocerousus     9       P.nattersmus     9       P.attersmus     11       P.latignina     10       P.latignina     9       C.variogatus     9       P.merceris     9	0        CSSDEETL.SPHRHMDLIXKHFLK0FDVRD-LWSYT           7         SSGRDSVSGTTSYWRTVLCEGO/PQRPVVPV1           7         NRIGRAINDERTSYWRTLCEGO/PQRPVVPV1           7         NRI	HIL FTESERQYTTAT (6) CTURPS (8 FRIKL VINATOKIL SKLXGEPGWY BRIKL VIXATOKIL SKLXGEPGWY BRIKL VIXATOKIL KIKLSGPGWY BRIKL VIXATOKIL KIKLSGPGWY BRIKL VIXATOKIL KIKLSGPGWY BRIKL VIXATOKIL KIKLSGPGWY BREL KIXTORK (KLXGP)GWY BREL KIXTORK (KLADP)GWY BRELL KIXTORK (KLADP)	J EEV/SRLFAVURIKO-YSCLCX/FIEAL-SYDYLINUN TIHOMACGXSVLAREA/IRDH-SLLECC/PGGYMA/SVCK TYYOMACGXSVLARALROBH-LLECC/PGGYMA/SVCK TYYOMACGXSVLARALROBH-LLECC/PGGYMA/SVCK TYYOMACGXSVLARALROBH-LLECC/PGGYMA/SVCK TYYOMACGXSVLARALROBH-SLLXC/FGGYMA/SVCK TYYOMACGXSVLARALROBH-SLLXC/FGGYMA/SVCK TYYOMACGXSVLARALROBH-SLLXC/FGGYMA/SVCK TYYOMACGXSVLARALROBH-SLLXC/FGGYMA/SVCK TYYOMACGXSVLARALROBH-SLXC/FGGYMA/SVCK TYYOMACGXSVLARALROBH-SLXC/FGGYMA/SVCK TYYOMACGXSVLARALROBH-SLXC/FGGYMA/SVCK TYYOMACGXSVLARALROBH-SLXC/FGGYMA/SVCK TYYOMACGXSVLARALROBH-SLXC/FGGYMA/SVCK TYYOMACGXSVLARALROBH-SLXC/FGGYMA/SVCK TYYOMACGXSVLARALROBH-SLXC/FGGYMA/SVCK TYYOMACGXSVLARALROBH-SLXC/FGGYMA/SVCK TYYOMACGXSVLARALROBH-SLXC/FGGYMA/SVCK TYYOMACGXSVLARALROBH-SLXC/FGGYMA/SVCK TYYOMACGXSVLARARDB-ALTXE/FGGYMA/SVCK TYYOMACGXSVLARARDB-ALTXE/FGGYMA/SVCK TYYOMACGXSVLARARDB-ALTXE/FGGYMA/SVCK TYYOMACGXSVLARARDB-ALTXE/FGGYMA/SVCK TYYOMACGXSVLARARDB-ALTXE/FGGYMA/SVCK TYYOMACGXSVLARARDB-ALTXE/FGGYMA/SVCK TYYOMACGXSVLARARDB-ALTXE/FGYMA/SVCK TYTYOMACGXSVLARARDB-ALTXE/FGYMA/SVCK TYTA/SVCX/SVLARARDB-ALTXE/FGYMA/SVCK TYTAG	3.0         CHERNICH         3.0           20         SSGLUNCL         15           20         SGGLUNCL         15           20         SGLUNCL         15           20         SGLUNCL         15           20         SGLUNCL         15      <	<ul> <li>C.Capitata</li> <li>C.Capitata</li> <li>G.Capitata</li> <li>G.S.Capitas</li> <li>G.S.Capitas</li> <li>G.Capitas</li> <li>G.Capitas</li> <li>C.Pictabellii</li> <li>C.Pictabellii</li> <li>P.Acarolinensis</li> <li>P.Acirosispinensis</li> <li>C.Porosus</li> <li>G.Caprosus</li> <li>G.Caprosus</li> <li>S.Capitas</li> <li>S.Capitas&lt;</li></ul>	257 291 291 291 291 291 291 291 291 293 293 293 293 293 293 3100 296 296 296 295	ALLILYPIN-HKIADI PEQAKSTIXECXISPILVISI IGALI RDF GLETILSI.PIN-HKIADI PEQAKSTIXECXISPILVISI IGALI RDF GLETILSI.PIN-HKIADI PEQAKSTIXECXISPILVISI IGALI RDF GLETILSI.PIN-HKITDI PEBASSTIVECXISPILVISI IGALI RDF GLETILSI.PIN-HKITDI PEBA STIVECXISPILVISI IGALI RDF ALELISI.PIN-HKITDI PEBA STIVECXISPILVISI IGALI RDF ALELISI.PIN-HKITELPEKA STIVECXISPILVISI IGALI RDF ALELIALVIN-GKINPERA STIVECXISPILVISI IGALI RDF		KLUVITRNOVSDSFDKORSTTL/RLTSQLTARE	361 387 387 407 390 387 387 387 387 387 387 387 387 387 387
L.capitata     e       H.sapiens     9       G.pallus     9       C.mydss     9       G.papta     9       G.apota     18       P.vitticops     9       A.carolinensis     9       D.hannah     9       G.apatius     9       G.marchaguaatus     9       A.mississippiensis     9       G.paneticus     9       S.rhinocerousus     9       S.rhinocerousus     9       P.nacterieria     9       S.salar     18       S.valar     9       Y.maculatus     9       P.natregaus     11       S.salar     19       Y.maculatus     9       Q.variagatus     9       P.mytereri     9       P.mereri     9       O.nilotic     9	0        CSSDEETLSPHRMMDLIXKHFLK0PDVRD-IWST           7         SSGADS VSGITSYNRTNLCEGOVRQDVVVPV           7         NRGANANDERTSYNRTKLGEOVRQDVVVPV           7         NRGANANDERTSYNRTKLGEOVRQDVVPVV           7         CH		J EEV/SRLFAVURIKO-YSEJCX/FIEAL-SYDYUKUN TUYKIMAGGKS/U AAEA/RDH-SLLEGCFPGGYMA/SVGX YVYKIMAGGKS/U TALAURH-RLEUCYFPGYMLSYGX YVYKIMAGGKS/U TALAURH-RLEUCYFPGYMLSYGX/ YVYKIMAGGKS/U TALAURHR	LD = UNINCIO         350	<ul> <li>C.Capitata</li> <li>C.Capitata</li> <li>G.Raylas</li> <li>G.Raylas</li> <li>G.Raylas</li> <li>G.Raylas</li> <li>G.Raylas</li> <li>G.Raylas</li> <li>G.Raylas</li> <li>G.Raylas</li> <li>R.Raylas</li> <li>R.Raylas</li> <li>R.Raylas</li> <li>R.Raylas</li> <li>G.Raynas</li> <li< td=""><td>257 291 311 291 291 291 291 291 291 293 293 293 293 293 293 3100 296 296 296 295 295 295 295</td><td>ALLLY PIN-HILDIPEGA</td><td></td><td>NLLUTINNOVYSOSTDKORSTTL/RLTSQLTARE           -WILINGSSSTUPEALDEANSISVENLAEDIKOVYTDLS           -WILINGSSSTUPEALDEANSISVENLAENKOVYTDLS           -WILINGSSTUPEALDEANSISVENLAENKOVYTDLS           -WILINGSSTUPALDEANSISVENLAENKOVYTDLS           -WILINGSSTUPALDEANSISVENLAENKOVYTDLS           -WILINGSSTUPALDEANSISVENLAENKOVYTDLS           -WILINGSSTUPALDEANSISVENLAENKOVYTDLS           -WILINGSSTUPALDEANSISVENLAENKOVYTDLS           -WILINGSSTUPALDEANSISVENLAENKOVYTDLS           &lt;</td><td>361 387 3887 3887 390 3887 3887 3887 3887 3887 3887 3887 388</td></li<></ul>	257 291 311 291 291 291 291 291 291 293 293 293 293 293 293 3100 296 296 296 295 295 295 295	ALLLY PIN-HILDIPEGA		NLLUTINNOVYSOSTDKORSTTL/RLTSQLTARE           -WILINGSSSTUPEALDEANSISVENLAEDIKOVYTDLS           -WILINGSSSTUPEALDEANSISVENLAENKOVYTDLS           -WILINGSSTUPEALDEANSISVENLAENKOVYTDLS           -WILINGSSTUPALDEANSISVENLAENKOVYTDLS           -WILINGSSTUPALDEANSISVENLAENKOVYTDLS           -WILINGSSTUPALDEANSISVENLAENKOVYTDLS           -WILINGSSTUPALDEANSISVENLAENKOVYTDLS           -WILINGSSTUPALDEANSISVENLAENKOVYTDLS           -WILINGSSTUPALDEANSISVENLAENKOVYTDLS           <	361 387 3887 3887 390 3887 3887 3887 3887 3887 3887 3887 388
L.capitata     0       H.sapiens     0       Gapllus     9       C.mydss     9       G.paltas     9       G.pates     9       G.pates     10       P.vitticops     10       P.vitticops     10       P.nitristis     9       G.nanah     9       G.panotics     9       G.panotics     9       G.panotics     9       S.rhinocrosusa     9       S.rhinocrosusa     9       I.punctatus     9       P.natterri     9       V.maculatus     11       S.salar     10       P.natterri     9       J.macrosus     9       C.variegatus     9       P.natterri     9       J.maculatus     9       P.naterri     9       J.maculatus     9       P.neveri     9       Onilotic     9       Libergytta     9       J.limaculatus     9	0        CSSDEETLSPHRIMPLIXGHFLK0FDVRD-INGT           7         SSGAUS VSGITSYVRTVLCEGOVPRDPVVPV           7         NRGANARDERTSYVRTLLCEGOVPRDPVVPV           7         NRGANARDERTSYVRTLLCEGOVPRDPVVPV           7         OHGANARDERTSYVRTLLCEGOVPRDPVVPV           7         OHGANARDERTSYVRTLLCEGOVPRDPVVPV           7         OH		J EEV/SRLFAVURIKO-YSEJCX/THEAL-SYDYUNUN TUYKMACGXVL AAEA/RDH-SLLECCFPGQYMA/SVGX VYYKMACGXVL TAALRDH-ALLECCFPGQYMA/SVGX VYYKMACGXVL TAALRDH-ALLECCFPGQYMA/SVGX VYYKMACGXVX	00	<ul> <li>C.Capitata</li> <li>C.Capitata</li> <li>G.Raylus</li> <li>G.Raylus</li> <li>G.Raylus</li> <li>G.Raylas</li> <li>C.Picta bellii</li> <li>G.P.Vitticeps</li> <li>P.A.Carolinensis</li> <li>P.A.Carolinensis</li> <li>P.A.Carolinensis</li> <li>P.A.Carolinensis</li> <li>C.Porosus</li> <li>G.Gagnapeticus</li> <li>S.Channah</li> <li>S.Chancas</li> <li>S.Chancas</li> <li>S.Chancas</li> <li>P.Raticisippiensis</li> <li>S.Chronsus</li> <li>S.Chancas</li> <li>S.Chancas<!--</td--><td>257 291 291 294 294 291 291 291 291 291 293 293 293 293 293 3100 300 296 296 295 295 295 295 293 293</td><td>ALLILY MILLIPSCHUMPAN SUBCISSION SUBCISSION</td><td></td><td>NLLUTINNOVYSOSPDKORSTITLALTSQLTARE           -WILMSSSYUY-EALDEANSISVPILAEDI-KOYTOLS           -WILMSSSYUY-EALDEANSISVPILAEDI-KOYTOLS           -WILMSSSYUY-EALDEANSISVPILAEDI-KOYTOLS           -WILMSSSYUY-EALDEANSISVPILAEDI-KOYTOLS           -WILMSSSYUT-EALDEANSISVPILAEDI-KOYTOLS           -WILMSSSYSYUT-EALDEANSISVPILAEDI-KOYTOLS           -WILMSSSYYUT-EALDEANSISVPILAEDI-KOYTOLS           -WILMSSSYYUT-ALDEANSISVPILAEDI-KOYTOLS</td><td>361 387 3887 3887 3887 3887 3887 3887 3887</td></li></ul>	257 291 291 294 294 291 291 291 291 291 293 293 293 293 293 3100 300 296 296 295 295 295 295 293 293	ALLILY MILLIPSCHUMPAN SUBCISSION		NLLUTINNOVYSOSPDKORSTITLALTSQLTARE           -WILMSSSYUY-EALDEANSISVPILAEDI-KOYTOLS           -WILMSSSYUY-EALDEANSISVPILAEDI-KOYTOLS           -WILMSSSYUY-EALDEANSISVPILAEDI-KOYTOLS           -WILMSSSYUY-EALDEANSISVPILAEDI-KOYTOLS           -WILMSSSYUT-EALDEANSISVPILAEDI-KOYTOLS           -WILMSSSYSYUT-EALDEANSISVPILAEDI-KOYTOLS           -WILMSSSYYUT-EALDEANSISVPILAEDI-KOYTOLS           -WILMSSSYYUT-ALDEANSISVPILAEDI-KOYTOLS	361 387 3887 3887 3887 3887 3887 3887 3887
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<li>P.Aristissippiensis</li> <li>G.Parosus</li> <li>G.Raynah</li> <li>S.Arinoterousus</li> <li>S.Arinata</li> <li>S.Arinata</li> <li>P.Aratoreria</li> <li>A.Rainatas</li> <li>S.Arinatas</li> <li>A.Arinatas</li> <li>A.Arinatas&lt;</li></ul></td> <td>257 291 291 294 294 291 291 291 291 291 291 293 293 293 293 293 293 310 300 296 296 296 295 295 295 295 293 293 293</td> <td>ALLILYPIN-HKIADI/PEQAKSTIKECKISPI/VISI IGALIROF GLETI.SLPIN-HKIADI/PEQAKSTIKECKISPI/VISI IGALIROF GLETI.SLPIN-HKIADI/PEQASTIKECKISPI/VISI IGALIROF GLETI.SLPIN-HKITUPEEASSIVECKISPI/VISI IGALIROF GLETI.SLPIN-HKITUPEEASSIVECKISPI/VISI IGALIROF GLETI.SLPIN-HKITUPEEASSIVECKISPI/VISI IGALIROF ALETI.SLPIN-HKITUPEEASSIVECKISPI/VISI IGALIROF GLETI.SLPIN-HKITUPEEA SSIVECKISPI/VISI IGALIROF GLETI.SLPIN-HKITUPEEA SSIVECKISPI/VISI IGALIROF ALETI.SLPIN-HKITUPEEA SSIVECKISPI/VISI IGALIROF ALETI.SLPIN-HKITUPEEA SSIVECKISPI/VISI IGALIROF ALETI.SVIN-HKITUPEEA SSIVECKISPI/VISI IGALIROF ALETI.SVIN-HKITUPEEA SSIVECKISPI/VISI IGALIROF 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L.capitata     c       H.sapiens     G       Gpallus     G       C.mydss     G       G.aponicas     10       G.aponicas     10       P.vitticops     9       A.carolinensis     9       D.hannah     9       G.apanetics     9       G.apanetics     9       G.apanetics     9       G.apanetics     9       G.apanetics     9       S.rhinocerousus     9       S.rhinocerousus     9       P.nettereria     9       S.salar     10       P.latipinan     9       P.varcereis     9       P.natice     9       S.naur     11       S.salar     12       S.alar     12       S.alar     12       S.partis     9       P.netreria     9       S.alar     12       S.alar     13       S.alar     14       P.mees     9       A.linnees     9       S.partitus     9       S.atriatus     9	0        CSSDEETLSPHRIMPLIXKHFLK0PDVRD-INSTI           15        CSSDEETLSPHRIMPLIXKHFLK0PDVRD-INSTI           15		J EEV/SRLFAVURIKO-YSEICX/FIEAL-SYDYUKUN TUYKIMAGGKSVLAAEA/RDH-SLLEGCFPGGYMM/SVGX VYYKIMAGGKSVLAAEA/RDH-LLEGCFPGGYMLSVGX VYYKIMAGGKSVLAAEA/RDH-LLEGCFPGGYMLSVGX VYYKIMAGGKSVLAAEA/RDH-SLLEGCFPGGYMLSVGX VYYKIMAGGKSVLAAEA/RDH-SLLEGCFPGGYMLSVGX VYYKIMAGGKSVLAAEA/RDH-SLLEGCFPGGYMLSVGX VYYKIMAGGKSVLAAEA/RDH-SLLEGCFPGGYMLSVGX VYYKIMAGGKSVLAAEA/RDH-SLLEGCFPGGYMLSVGX VYYKIMAGGKSVLAAEA/RDH-SLLEGCFPGGYMLSVGX VYYKIMAGGKSVLAAEA/RDH-SLLEGCFPGGYMLSVGX VYYKIMAGGKSVLAAEA/RDH-SLLEGCFPGGYMLSVGX VYYKIMAGGKSVLAAEA/RDH-SLLEGCFPGGYMLSVGX VYYKIMAGGKSVLAAEA/RDH-SLLEGCFPGGYMLSVGX VYYKIMAGGKSVLAAEA/RDH-SLLEGCFPGGYMLSVGX VYYKIMAGGKSVLAARRDH-SLLEGCFPGGYMLSVGX VYYKIMAGGKSVLAARRDH-SLLEGCFPGGYMLSVGX VYYKIMAGGKSVLAARRDH-SLLEGCFPGGYMLSVGX VYYKIMAGGKSVLAARRDH-SLLEGCFPGGYMLSVGX VYYKIMAGGKSVLAARRDH-SLLEGCFPGGYMLSVGX VYYKIMAGGKSVLAARRDH-SLECFPGGYMLSVGX VYYKIMAGGKSVLAARRDH-SLECFPGGYMLSVGX VYYKIMAGGKSVLAARRDH-SLECFPGGYMLSVGX VYYKIMAGGKSVLAARRDH-SLECFPGGYMLSVGX VYYKIMAGGKSVLAARRDH-SLECFPGGYMLSVGX VYYKIMAGGKSVLAARRDH-SLECFPGGYMLSVGX VYYKIMAGGKSVLAARRDH-SLECFPGGYMLSVGX VYYKIMAGGKSVLAARRDH-SLECFPGGYMLSVGX VYYKIMAGGKSVLAARRDH-SLECFPGGYMLSVGX VYYKIMAGGKSVLAARRDH-SLECFPGGYMLSVGX VYYKIMAGGKSVLAARRDH-SLECFPGGYMLSVGX VYYKIMAGGKSVLAARRDH-SLECFFGGYMLSVGX VYYKIMAGGKSVLAARRDH-SLECFFGGYMLSVGX VYYKIMAGGKSVLAARRDH-SLECFFGGYMLSVGX VYYKIMAGGKSVLAARRDH-SLECFFGGYMLSVGX VYYKIMAGGKSVLAARRDH-SLECFFGGYMLSVGX VYYKIMAGGKSVLAARRDH-SLECFFGGYMLSVGX VYYKIMAGGKSVLAARRDH-SLECFFGGYMLSVGX VYYKIMAGGKSVLAARRDH-SLECFFGGYMLSVGX VYYKIMAGGKSVLAARRDH-SLECFFGGYMLSVGX VYYKIMAGGKSVLAARRDH-SLECFFGGYMLSVGX VYYKIMAGGKSVLAARRDH-SLECFFGGYMLSVGX VYYKIMAGGKSVLAARRDH-SLECFFGGYMLSVGX VYYKIMAGGKSVLAARRDH-SLECFFGGYMLSVGX VYYKIMAGGKSVLAARRDH-SLECFFGGYMLSVGX VYYKIMAGGKSVLAARRDH-SLECFFGGYMLSVGX VYYKIMAGGKSVLAARRDH-SLECFFGGYMLSVGX VYYKIMAGGKSVLAARRDH-SLECFFGGYMLSVGX VYYKIMAGGKSVLAARRDH-SLECFFGGYMLSVGX VYYKIMAGGKSVLAARRDH-SLECFFGGYMLSVGX VYYKIMAGGKSVLAARRDH-SLEGCFFGGYMLSVGX VYYKIMAGGKSVLAARRDH-GLECFFGGYMLSVGX VYYKIMAGGKSVLAARRDH-GLECFFGGYMLSUGX VYYKIMAGGKSVLAARRDH-GLECFFGGYMLSVGX VYYKIMAGGKSVLAARRDH-GLECFFG	0.0         SIG LUNCI           0.0         SIG LUNCI           0.0         SIG LUNCI           0.0         KGL LUNCI           0.0	C.Capitota C.Capitota 9 G.aydas 9 G.aydas 9 G.aydas 9 G.pita bellii 9 C.pita bellii 9 C.pita bellii 9 C.pita bellii 9 A.carolinensis 8 P.bivittatus 9 A.carolinensis 9 A.carolinensis 9 A.carolinensis 9 G.ayanatus 9 A.carolinensis 9 G.ayanatus 9 D.rerio 9 D.rerio 9 D.rerio 9 D.rerio 9 D.rerio 9 D.rerio 9 D.rerio 9 D.rerio 9 D.rerio 9 A.nexicanus 9 J.punctatus 2 E.lucius 2 S.salar 9 A.nexicanus 1 D.nattereri 1 D.nattereri 2 C.variegatus 2 C.variegatus 1 A.linnaeus 1 S.partitus 1 S.partitus 1 S.partitus 1 A.linnaeus 1 S.partitus 1 S.partitus 1 C.variegatus 1 J.nubric	257 291 291 291 291 291 291 291 291 291 293 293 293 293 293 293 310 300 296 296 295 295 295 295 295 293 290 291 3293 310 300 296 295 295 295 295 295 293 290 291 291 291 291 291 291 291 291 291 291	ALLILY MILLIPSCR 100 BSEP		KLUVTRNIXYSDSFDKRISTTL/R,TSQLTRAE           -KRIRKSSSTVEALDEANSISVPILAEDI-KDYYTDLS           -KRIRKSSSTV-SEALDEANSISVPILAEDI-KDYYTDLS           -KRIRKSSTV-SEALDEANSISVPILAEDI-KDYYTDLS           -KRIRKSSTV-SEALDEANSISVPILAEDI-KDYYTDLS           -KRIRKSSTV-EALDEANSISVPILAEDI-KDYYTDLS           -KRIRKSSTVT-EALDEANSISVPILAEDI-KDYYTDLS           -KRIRKSSTVT-ALDEANSISVPILAEDI-KDYYTDLS           -KRIRKSSTVT-ALDEANSISVPILAEDI-KDYYTDLS           -KRIRKSSTVT-ALDEANSISVPILAEDI-KDYYTDLS           -KRIRKSSTVT-ALDEANSISVPILAEDI-KDYYTDLS           -KRIRKSSTVT-ALDEANSISVPILAEDI-KDYYTDLS           -KRIRKSSTVT-ALDEANSISVPILAEDI-KDYYTDLS           -KRIRKSSTVT-ALDEANSISVPILAEDI-KDYTDLS           -KRIRKSSTVT-ALDEANSISVPILAEDI-KDYTDLY	361 3877 3887 38877 38877 38877 38877 38877 38877 38877 38877 38877 38877 38877 38877 38873 3889 3889
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L.capitata     c       H.sapiens     G       Gyallus     G       C.mydas     G       G.poncias     10       G.japonicas     10       P.vitticops     9       A.carolinensis     9       D.hannah     9       G.apadeticus     9       G.apadeticus     9       G.apadeticus     9       G.apadeticus     9       J.mississipiensis     9       G.parattereria     9       P.nattereria     9       J.autericanus     9       J.autericanus     9       P.nattereria     9       P.astereria     9       P.astereria     9       P.astereria     9       P.moresquartus     9       P.astereria     9       P.astereria     9       P.astereria     9       P.astereria     9       P.astereria     9       A.timmens     9       A.timmens     9       A.timata     9       A.timata     9       A.timata     9       A.coriautus     9       Loculatus     9       V.ameulatus     9       Loculatus     9	0        CSSDEETLSPHRMMD1IXKHFLK0PDVRD-1WST           7         SSGADS VSGITSYNRTNLCEGOVRQAVVPV           7         NRGANANDERTSYNRTKLCEGOVRQAVVPV           7         NRGANANDERTSYNRTKLCEGOVRQAVVPV           7         CH		J EEV/SRLFAVURIKO-YSEJCX/FIEAL-SYDYUKUN TUYOMACGKISU AAEA/RDH-SLLECCFPGQYMA/SUGX YYOMACGKISU TAALARDH-ALLECCFPGQYMA/SUGX YYOMACGKISU TAALARDH-ALLECCFPGGYMA/SUGX YYOMACGKISU TAALARDH-ALLECCFPGGYMA/SUGX YYOMACGKISU TAALARDH-ALLECCFPGGYMA/SUGX YYOMACGKISU TAALARDH-ALLECCFPGGYMA/SUGX YYOMACGKISU TAALARDH-ALLECCFPGGYMA/SUGX YYOMACGKISU TAALARDH-ALLECCFPGGYMA/SUGX YYOMACGKISU TAALARDH-ALLECCFPGGYMA/SUGX YYOMACGKISU TAALARDH-ALLECCFPGGYMA/SUGX YYOMACGKISU TAALARDH-ALLECCFPGGYMA/SUGX	XD = JUNICIC         350           XD = MINICIC         350	<ul> <li>C.Capitota</li> <li>C.Capitota</li> <li>C.Capitota</li> <li>G.Capita</li> &lt;</ul>	257 291 291 291 291 291 291 291 293 293 293 293 293 293 293 293 293 293	ALLLYP-NRUDPEGA-STIRECKGSPLVSLIGALRDF- GLEYLSLPM-HKKADLPEGA-STIRECKGSPLVSLIGALRDF- GLEYLSLPM-HKKADLPEGA-STIRECKGSPLVSLIGALRDF- GLEYLSLPM-HKTDPEEA-STIRECKGSPLVSLIGALRDF- GLEYLSLPM-HKTDPEEA-STIRECKGSPLVSLIGALRDF- GLEISLSLPM-HKTDPEEA-STIRECKGSPLVSLIGALRDF- GLEISLSPM-HKTDPEGA-STIRECKGSPLVSLIGALRDF- GLEISLSPM-HKTDPEGA-STIRECKSPLVSLIGALRDF- GLEISLSPM-HKTDPEGA-STIRECKSPLVSLIGALRDF- GLEISLSPM-HKTDPEGA-STIRECKSPLVSLIGALRDF- GLEISLSPM-HKTDPEGA-STIRECKSPLVSLIGALRDF- GLEISLSPM-HKTDPEGA-STIRECKSPLVSLIGALRDF- GLEISLSPM-HKTDPEGA-STIRECKSPLVSLIGALRDF- GLEISLSPM-HKTDPEGA-STIRECKSPLVSLIGALRDF- GLEISLSPM-HKTDPEGA-STIRECKSPLVSLIGALRDF- GLEISLSPM-HKTDPEGA-STIRECKSPLVSLIGALRDF- GLEISLSPM-HKTDPEGA-STIRECKSPLVSLIGALRDF- GLEISLSPM-HKTDPEGA-STIRECKSPLVSLIGALRDF- GLEISLSPM-HKTDPEGA-STIRECKSPLVSLIGALRDF- GLEISLSPM-HKTDPEGA-STIRECKSPLVSLIGALRDF- GLEISLSPM-HKTDPEGA-STIRECKSPLVSLIGALRDF- GLEISLSPM-HKTDPEGA-STIRECKSPLVSLIGALRDF- GLEISLSPM-HKTDPBADA-STIRECKSPLVSLIGALRDF- GLEISLSPM-HKTDPBADA-STIRECKSPLVSLIGALRDF- GLEISLSPM-HKTDPBADA-STIRECKSPLVSLIGALRDF- ALELLALVN-GSRUPEGA-STIRECKSPLVSLIGALRDF- ALELLALVN-GKRUPEGA-STIRECKSPLVSLIGALRDF- ALELALVN-GKRUPEGA-STIRECKSPLVSLIGALRDF- ALELALVN-GKRUPEGA-STIRECKSPLVSLIGALRDF- ALELALVN-GKRUPEGA-ST		ALLUTINNOVYSOSPDKORSTTL/RLTSQLTARE           -ARLINKSSSTUPEALDEANSISVENLARDKONYTDLS           -ARLINKSSSTUPEALDEANSISVENLARDKONYTDLS           -ARLINKSSSTUPEALDEANSISVENLARDKONYTDLS           -ARLINKSSTUPEALDEANSISVENLARDKONYTDLS           -ARLINKSSTUPCALDEANSISVENLARDKONYTDLS           -ARLINKSSTUPALDEANSISVENLARDKONYTDLS           -ARLINKSSTUPALDEANSISVENLARDKONYTDLS           -ARLINKSSTUPALDEANSISVENLARDKONYTDLS           -ARLINKSSTUPALDEANSISVENLARDKONYTDLS           -ARLINKSSTUPALDEANSISVENLARDKONYTDLS           -ARLINKSSTUPALDEANSISVENLARDKONYTDLS           -ARLINKSSTUPALDEANSISVENLARDKONYTDLS           -ARLINKSSTUPALDEANSISVENLARDKONYTDLS <td< td=""><td>361 387 3887 3887 3887 3886 3883 3887 3889 3889 3889 3889 3889 3889</td></td<>	361 387 3887 3887 3887 3886 3883 3887 3889 3889 3889 3889 3889 3889
L.capitata     c       H.sapiens     G       Gyallus     G       C.mydss     G       G.picta bellii     G       G.japonicas     10       M.carolinensis     P       P.vitticops     A.carolinensis       P.bivititus     9       G.nanah     P       G.paneticus     9       G.paneticus     9       G.paneticus     9       J.necresquaetus     9       A.mississippiensis     9       S.rhinocerousus     9       J.nemcicus     11       S.salar     18       P.latipinan     9       P.nattereri     9       S.nancatus     9       S.partham     9       S.partutus     12       S.alar     18       S.partutus     19       S.partitus     19       S.partitus     19       S.partitus     19       S.partitus     19       S.atriatum     9       S.atriatum     9       K.marcatus     19       Corientalis     19       Corientalis     19       Corientalis     19       Contaltipora     10       Cofaretalia     20   <	0        CSSDEETL.SPHRIMDLINGHFLKOPT/WB-UKST           15        GADS VSGITSYWRTVLCEGOVPRDPVVPVT           17         SSGADS VSGITSYWRTVLCEGOVPRDPVVPVT           17         NOGANANDERTSYWRTLCEGOVPRDPVVPVT           17         CO		J EEV/SRLFAVURIKO-YSEJCX/FIEAL-SYDYUNUN TUYKIMAGGKSVLAAEA/RDH-SLLEGCFPGGYMM/SVGX VYYKIMAGGKSVLAAEA/RDH-LLEGCFPGGYMLSVGX VYYKIMAGGKSVLAAEA/RDH-LLEGCFPGGYMLSVGX VYYKIMAGGKSVLAAEA/RDH-LLEGCFPGGYMLSVGX VYYKIMAGGKSVLAAEA/RDH-SLLEGCFPGGYMLSVGX VYYKIMAGGKSVLAAEA/RDH-SLLEGCFPGGYMLSVGX VYYKIMAGGKSVLAAEA/RDH-SLLEGCFPGGYMLSVGX VYYKIMAGGKSVLAAEA/RDH-SLLEGCFPGGYMLSVGX VYYKIMAGGKSVLAAEA/RDH-SLLEGCFPGGYMLSVGX VYYKIMAGGKSVLAAEA/RDH-SLLEGCFPGGYMLSVGX VYYKIMAGGKSVLAAEA/RDH-SLLEGCFPGGYMLSVGX VYYKIMAGGKSVLAAEA/RDH-SLLEGCFPGGYMLSVGX VYYKIMAGGKSVLAAEA/RDH-SLLEGCFPGGYMLSVGX VYYKIMAGGKSVLAAEA/RDH-SLLEGCFPGGYMLSVGX VYYKIMAGGKSVLAAEA/RDH-SLLEGCFPGGYMLSVGX VYYKIMAGGKSVLAAEA/RDH-SLLEGCFPGGYMLSVGX VYYKIMAGGKSVLAAEA/RDH-SLLEGCFPGGYMLSVGX VYYKIMAGGKSVLAAEA/RDH-SLLEGCFPGGYMLSVGX VYYKIMAGGKSVLAAEA/RDH-SLLEGCFPGGYMLSVGX VYYKIMAGGKSVLAAEA/RDH-SLLEGCFPGGYMLSVGX VYYKIMAGGKSVLAAEA/RDH-SLLEGCFPGGYMLSVGX VYYKIMAGGKSVLAAEA/RDH-SLLEGCFPGGYMLSVGX VYYKIMAGGKSVLAAEA/RDH-SLLEGCFPGGYMLSVGX VYYKIMAGGKSVLAAEARRH-LLECFFQGYMLSVGX UVYKIMAGGKSVLAAEARRH-LLECFFQGYMLSVGX UVYKIMAGGKSVLAAEARRH-LLECFFQGYMLSVGX UVYKIMAGGKSVLAAEARRH-LLECFFQGYMLSVGX UVYKIMAGGKSVLAAEARRH-LLECFFQGYMLSVGX UVYKIMAGGKSVLAAEARRH-LLECFFQGYMLSVGX UVYKIMAGGKSVLAAEARRH-LLECFFQGYMLSVGX UUSMAGGKSV	3.0         S.G. LINCL         3.0           0.0         S.G. LINCL         3.0 <td><ul> <li>C.Capitota</li> <li>C.Capitota</li> <li>C.Capitota</li> <li>G.Capita</li> &lt;</ul></td> <td>257 291 291 291 291 291 291 291 293 293 293 293 293 293 293 293 293 293</td> <td>ALLILY MILLIPSCRIDDESEP</td> <td></td> <td>ALLUTINNOVYSOSPDKORSTITLALTSQLTARE           ARILMSSSTVDEALDEAMSISVEHLARDKONYTDLS           ARILMSSSTVDEALDEAMSISVEHLARDKONYTDLS           ARILMSSSTVDEALDEAMSISVEHLARDKONYDLS           ARILMSSSTVDALDEAMSISVEHLARDKONYDLS           ARILMSSSTVDALDEAMSISVEHLARDKONYDLS           ARILMSSSTVDALDEAMSISVEHLARDKONYDLS           ARILMSSSTVDALDEAMSISVELLARD-KONYDLS           ARILMSSSTVDALDEAMSISVELLARD-KONYDLS           ARILMSSSTVDALDEAMSISVELLARD-KONYDLS           ARILMSSSTVDALDEAMSISVELLARD-KONYDLS           ARILMSSSTVDALDEAMSISVELLARD-KONYDLS           ARILMSSSTVDALDEAMSISVELLARD-KONYDLS</td> <td>36 387 3887 3887 3887 3887 3886 3887 3889 3899 3899 3899 3899 3899 3899 3899 3899 3899 3899 3899 389</td>	<ul> <li>C.Capitota</li> <li>C.Capitota</li> <li>C.Capitota</li> <li>G.Capita</li> &lt;</ul>	257 291 291 291 291 291 291 291 293 293 293 293 293 293 293 293 293 293	ALLILY MILLIPSCRIDDESEP		ALLUTINNOVYSOSPDKORSTITLALTSQLTARE           ARILMSSSTVDEALDEAMSISVEHLARDKONYTDLS           ARILMSSSTVDEALDEAMSISVEHLARDKONYTDLS           ARILMSSSTVDEALDEAMSISVEHLARDKONYDLS           ARILMSSSTVDALDEAMSISVEHLARDKONYDLS           ARILMSSSTVDALDEAMSISVEHLARDKONYDLS           ARILMSSSTVDALDEAMSISVEHLARDKONYDLS           ARILMSSSTVDALDEAMSISVELLARD-KONYDLS           ARILMSSSTVDALDEAMSISVELLARD-KONYDLS           ARILMSSSTVDALDEAMSISVELLARD-KONYDLS           ARILMSSSTVDALDEAMSISVELLARD-KONYDLS           ARILMSSSTVDALDEAMSISVELLARD-KONYDLS           ARILMSSSTVDALDEAMSISVELLARD-KONYDLS	36 387 3887 3887 3887 3887 3886 3887 3889 3899 3899 3899 3899 3899 3899 3899 3899 3899 3899 3899 389
L. capitata     0       H. sapiens     9       G.pallus     9       C.mydas     9       C.mydas     9       G.pipta bellii     9       G.pipta bellii     9       A.aroiinensis     9       A.aroiissispiensis     9       A.mississippiensis     9       G.panetus     9       A.mississippiensis     9       S.graham     9       A.metereri     9       A.metereri     9       A.metranus     9       F.ucius     10       P.latiginna     10       P.latiginna     9       A.linneus     9       O.nilotic     9       A.linneus     9       A.tiritum     9       A.vaculatus     9       Corientlis     9       A.ilipora     20       A.vaculatus     9       Corientlis     9       A.ilipora     20       A.vaculatus     9       Corientlis <td>0        CSSDEETLSPHRMPDLIXKHFLK0PDVRD-LWST           7         SSGAUSVSGITSYNRTVLCEGOVRQPVVPVT           7         NOIGANAUBERTSYNRTLCEGOVRQPVVPVT           7         NOI</td> <td>HULFTESERVYTTAT(6)/CT0RPS(8 TRKKLVMATQQKLSKLKGEPGW/ SRKLVMATQQKLSKLKGEPGW/ SRKLVMATQQKLKKLGSEPGW/ SRKLVMATQQKLKKSGEPGW/ SRKLVMATQQKLKKSGEPGW/ SRKLVMATQQKLKKSGEPGW/ SRKLVMATQQKLKKGSEGW/ SRKLVMATQQKLKLGANDGW/ SRKLVMATQQKLKGANDGW/ SRKLVMATQQKLKGANDGW/ SRKLVMATQQKLKGANDGW/ SRKLVMATQQKLKGANDGW/ SRKLVMATQQKLKGAND</td> <td>J EEV/SRLFAVURIKO-YSELCX/PIEAL-SYDYLINUN TDHOMAGGXSVLAREARINDH-SLLEGCFPGGYMM/SVGX VYGMAGGXCVLVTARALRINDH-SLLEGCFPGGYMLSVGX VYGMAGGXSVLTARALRINDH-LLECFPGGYMLSVGX VYGMAGGXSVLTARALRINDH-LLECFPGGYMLSVGX VYGMAGGXSVLTARALRINDH-SLLXCFPGGYMLSVGX ULVQMAGGXVXXARALRINDH-SLLXCFPGGYMLSVGX ULVQMAGGXVXXARALRINDH-SLLXCFPGGYMLSVGX ULVQMAGGXVXXARALRINDH-SLLXCFPGGYMLSVGX ULVQMAGGXVXXARALRINDH-SLLXCFPGGYMLSVGX ULVQMAGGXVXXARALRINDH-SLXCFQCXXXARALRINDH-SLXCFQGYMLSVGX ULVQMAGGXVXXARALRINDH-SLXCFQC</td> <td>X00-MINING         350           X00</td> <td><ul> <li>C.Capitata</li> <li>C.Capitata</li> <li>C.Capitata</li> <li>G.Capitabellii</li> <li>G.Capitabellii</li> <li>G.Capitabellii</li> <li>G.Capitabellii</li> <li>G.Capitabellii</li> <li>G.Capitabellii</li> <li>G.Capitabellii</li> <li>P.Acarolinensis</li> <li>P.Acarolinensis</li> <li>P.Acarolinensis</li> <li>C.Forosus</li> <li>G.Capitabellii</li> <li>D.Carosus</li> <li>G.Capitabellii</li> <li>S.Capitabellii</li> <li>G.Capitabellii</li> <li>G.Capitabellii<!--</td--><td>257 291 311 291 294 291 294 291 291 291 293 293 293 293 293 293 293 293 293 293</td><td>ALLILYDNAULUTESDR. 100 RSEP</td><td></td><td>AULUTINNOVYSOSPDKORSTITLALTSQLTARE           AWILMSSSSTVDEALDEANISTUPULREDIKONYTDLS           AWILMSSSTVDEALDEANISTUPULREDIKONYTDLS           AWILMSSSTVDEALDEANISTUPULREDIKONYTDLS</td><td>36 387 3887 3987 3987 3987 3987 3987 3987</td></li></ul></td>	0        CSSDEETLSPHRMPDLIXKHFLK0PDVRD-LWST           7         SSGAUSVSGITSYNRTVLCEGOVRQPVVPVT           7         NOIGANAUBERTSYNRTLCEGOVRQPVVPVT           7         NOI	HULFTESERVYTTAT(6)/CT0RPS(8 TRKKLVMATQQKLSKLKGEPGW/ SRKLVMATQQKLSKLKGEPGW/ SRKLVMATQQKLKKLGSEPGW/ SRKLVMATQQKLKKSGEPGW/ SRKLVMATQQKLKKSGEPGW/ SRKLVMATQQKLKKSGEPGW/ SRKLVMATQQKLKKGSEGW/ SRKLVMATQQKLKLGANDGW/ SRKLVMATQQKLKGANDGW/ SRKLVMATQQKLKGANDGW/ SRKLVMATQQKLKGANDGW/ SRKLVMATQQKLKGANDGW/ SRKLVMATQQKLKGAND	J EEV/SRLFAVURIKO-YSELCX/PIEAL-SYDYLINUN TDHOMAGGXSVLAREARINDH-SLLEGCFPGGYMM/SVGX VYGMAGGXCVLVTARALRINDH-SLLEGCFPGGYMLSVGX VYGMAGGXSVLTARALRINDH-LLECFPGGYMLSVGX VYGMAGGXSVLTARALRINDH-LLECFPGGYMLSVGX VYGMAGGXSVLTARALRINDH-SLLXCFPGGYMLSVGX ULVQMAGGXVXXARALRINDH-SLLXCFPGGYMLSVGX ULVQMAGGXVXXARALRINDH-SLLXCFPGGYMLSVGX ULVQMAGGXVXXARALRINDH-SLLXCFPGGYMLSVGX ULVQMAGGXVXXARALRINDH-SLLXCFPGGYMLSVGX ULVQMAGGXVXXARALRINDH-SLXCFQCXXXARALRINDH-SLXCFQGYMLSVGX ULVQMAGGXVXXARALRINDH-SLXCFQC	X00-MINING         350           X00	<ul> <li>C.Capitata</li> <li>C.Capitata</li> <li>C.Capitata</li> <li>G.Capitabellii</li> <li>G.Capitabellii</li> <li>G.Capitabellii</li> <li>G.Capitabellii</li> <li>G.Capitabellii</li> <li>G.Capitabellii</li> <li>G.Capitabellii</li> <li>P.Acarolinensis</li> <li>P.Acarolinensis</li> <li>P.Acarolinensis</li> <li>C.Forosus</li> <li>G.Capitabellii</li> <li>D.Carosus</li> <li>G.Capitabellii</li> <li>S.Capitabellii</li> <li>G.Capitabellii</li> <li>G.Capitabellii<!--</td--><td>257 291 311 291 294 291 294 291 291 291 293 293 293 293 293 293 293 293 293 293</td><td>ALLILYDNAULUTESDR. 100 RSEP</td><td></td><td>AULUTINNOVYSOSPDKORSTITLALTSQLTARE           AWILMSSSSTVDEALDEANISTUPULREDIKONYTDLS           AWILMSSSTVDEALDEANISTUPULREDIKONYTDLS           AWILMSSSTVDEALDEANISTUPULREDIKONYTDLS</td><td>36 387 3887 3987 3987 3987 3987 3987 3987</td></li></ul>	257 291 311 291 294 291 294 291 291 291 293 293 293 293 293 293 293 293 293 293	ALLILYDNAULUTESDR. 100 RSEP		AULUTINNOVYSOSPDKORSTITLALTSQLTARE           AWILMSSSSTVDEALDEANISTUPULREDIKONYTDLS           AWILMSSSTVDEALDEANISTUPULREDIKONYTDLS	36 387 3887 3987 3987 3987 3987 3987 3987
L.capitata     c       H.sapiens     G       Gyallus     G       C.mydas     G       G.piota bellii     G       G.pioto bellii     G       J.poncias     18       P.vitticego     A.carolinensis       P.nucresquamatus     G       A.mississippiensis     G       G.gangeticus     G       J.puncresquamatus     S       A.mississippiensis     G       S.chincerousus     S       J.punctatus     P       P.nattereri     S       S. hincinant     S       Y. hartiginan     S       P. Nevereni     O       O.nilotic     S       P.artitus     S       P.meretus     S       S.partitus     S       S.partitus     S       S.corientais     S       Y.laevis     S       S.kamaroratus     S       S. Anallepora     28       O.faveclatata     S       S.kopectaitera     S	0        CSSDEETLSPHRMMD1IXKHFLK0PDVRD-1WST           15        CSSDEETLSPHRMMD1IXKHFLK0PDVRD-1WST           15        SADDVSGTTSVRTNLCEGOVRDAVVPT           16        SADDVSTSVRTNLCEGOVRDAVVPT           17         REGRAVDERTSVRTNLCEGOVRDAVVPT           18        SADDVSTSVRTNLCEGOVRDAVVPT           18        SADDVSTSVRTNLCEGOVRDAVVPT           19        SADSVRDAVSTSVRTNLCEGOVRDAVVPT           11        SADSVRDAVSTSVRTNLCEGOVRDAVVPT           11        SADSVRDAVSTSVRTNLCEGOVRDAVVPT           12        SADSVRDAVSTSVRTNLCEGOVRDAVVPT           13        SADSVRDAVSTSVRTNLCEGOVRDAVVPT           14        SADSVRDAVSTSVRTNLCEGOVRDAVVPT           15        SADSVRDAVSTSVRTNLCEGOVRDAVVPT           16        SADSVRDAVSTSVRTNLCEGOVRDAVVPT           17        SADSVRDAVSTSVRTNLCEGOVRDAVVPT           16        SESSVRDAVSTSVRTNLSEGOVRDAVVPT           17        SESSVRDAVSTSVRTNLSEGOVRDAVVPT           18        SESSVRDAVSTSVRTNLSEGOVRDAVVPT           19        SESSVRDAVSTSVRT	HULFTESERQYTTAT(6)CT08P5(8 TBKKLVIALTOOKISLESERQYT-AT(6)CT08P5(8 TBKKLVIALTOOKISLESEGSPGAV TBKLVIALTOOKISLESEGSP	J EEV/SRLFAVURIKO-YSEJCX/TREAL-SYDYUKUN THIMMAC/GXIS/LAAEA/RAME-SLLECCFPGQ/MM/SIG/ MCV/MAC/GXIVLTAAL/RAME-SLLECCFPGQ/MM/SIG/ CONTYNGA/GXIVLTAAL/RAME-SLLECCFPGQ/MM/SIG/ VI/VGM/GX/GXIVLTAAL/RAME-SLLECCFPGQ/MM/SIG/ VI/VGM/GX/GXIVLTAAL/RB-SLLECCFPGQ/MM/SIG/ VI/VGM/GX/GXIVLTAAL/RB-SLLECCFPGQ/MM/SIG/ VI/VGM/GX/GXIVLTAAL/RB-SLLECCFPGQ/MM/SIG/ VI/VGM/GX/GXIVLTAAL/RB-SLLECCFPGQ/MM/SIG/ VI/VGM/GX/GXIVLTAAL/RB-SLLECCFPGQ/MM/SIG/ VI/VGM/GX/GXIVLTAAL/RB-SLLECCFPGQ/MM/SIG/ VI/VGM/GX/GXIVLTAAL/RB-SLLECCFPGQ/MM/SIG/ VI/VGM/GX/GXIVLTAAL/RB-SLLECCFPGQ/MM/SIG/ VI/VGM/GX/GXIVLTAAL/RB-SLLECCFPGQ/MM/SIG/ VI/VGM/GX/GXIVLTAAL/RB-SLLECCFPGQ/MM/SIG/ VI/VGM/GX/GXIVLTAAL/RB-SLLECCFPGQ/MM/SIG/ VI/VGM/GX/GXIVLTAAL/RB-SLLECCFPGQ/MM/SIG/ VI/VGM/GX/GXIVLTAAL/RB-SLLECCFPGQ/MM/SIG/ VI/VGM/GX/GXIVLTAAL/RB-SLLECCFPGQ/MM/SIG/ VI/VGM/GX/GXIVLTAAL/RB-SLLECCFPGQ/MM/SIG/ VI/VGM/GX/GXIVLTAAL/RB-SLLECCFPGG/MM/SIG/ VI/VGM/GX/GXIVLTAAL/RB-SLLECCFPGG/MM/SIG/ VI/VGM/GX/GXIVLTAAL/RB-SLLECCFPGG/MM/SIG/ VI/VGM/GX/GXIVLTAAL/RB-SLLECCFPGG/MM/SIG/ VI/VGM/GX/GXIVLTAAL/RB-SLLECCFPGG/MM/SIG/ VI/VGM/GX/GXIVLTAAA/RB-SLLECCFPGG/MM/SIG/ VI/VGM/GX/GXIVLTAAL/RB-SLLECCFPGG/MM/SIG/ VI/VGM/GX/GXIVLTAAL/RB-SLLECCFPGG/MM/SIG/ VI/VGM/GX/GXIVLTAAL/RB-SLLECCFPGG/MM/SIG/ VI/VGM/GX/GXIVLTAAA/RB-SLLECCFPGG/MM/SIG/ VI/VGM/GX/GXIVLTAAA/RB-SLLECCFPGG/MM/SIG/ VI/VGM/GX/GXIVLTAAA/RB-SLLECCFPGG/MM/SIG/ VI/VGM/GX/GXIVLTAAA/RB-SLLECCFPGG/MM/SIG/ VI/VGM/GX/GXIVLTAAA/RB-SLLECCFPGG/MM/SIG/ VI/VGM/GX/GXIVLTAAA/RB-SLLECCFPGG/MM/SIG/ VI/VGM/GX/GXIVLTAAA/RB-SLLECCFPGG/MM/SIG/ VI/VGM/GX/GXIVLTAAA/RB-SLLECCFPGG/MM/SIG/ VI/VGM/GX/GXIVLTAAA/RB-SLLECCFPGG/MM/SIG/ VI/VGM/GX/GXIVLTAAA/RB-SLLECCFPGG/MM/SIG/ VI/VGM/GX/GXIVLTAAA/RB-SLLECCFPGG/MM/SIG/ VI/VGM/GX/GXIVLTAAA/RB-SLLECCFPGG/MM/SIG/ VI/VGM/GX/GXIVLTAAA/RB-SLLECCFPGG/MM/SIG/ VI/VGM/GX/GXIVLTAAA/RB-SLLECCFPGG/MM/SIG/ VI/VGM/GX/GXIVLTAAA/RB-SLLECCFPGG/MM/SIG/ VI/VGM/GX/GXIVAAAA/RB-SLLECCFPGG/MM/SIG/ VI/VGM/GX/GXIVAAAAR/RB-LLECCFPGG/MM/SIG/ VI/VGM/GX/GXIVAAAAR/RB-LLECCFPGG/MM/SIG/ VI/VGM/GX/GXIVAAAAAR/RB-LLECCFPGG/MM/SIG/ VI/VGM/GX/GXIVAAAAAR/RB-LLECC	30	<ul> <li>C.Capitata</li> <li>C.Capitata</li> <li>G.Capitata</li> <li>G.S.Capitabellii</li> <li>G.Capitabellii</li> <li>G.Capitabellii</li> <li>G.Capitabellii</li> <li>G.Capitabellii</li> <li>G.Capitabellii</li> <li>G.Capitabellii</li> <li>P.A.Tartisipiensis</li> <li>P.A.Tartisipiensis</li> <li>G.Caporsus</li> <li>G.Capathan</li> <li>A.Cartispiensis</li> <li>S.Francerousus</li> <li>S.Fran</li></ul>	257 291 311 291 294 291 291 291 291 291 291 293 293 293 293 293 293 293 293 293 293	ALLLTPSLR11010BSEP		ALLUTINNOVYSOSPDKORSTITLALTSQLTARE           ARITAKSSSTUPEALDEANSISVEDU, SDL-HOYTDLS           ARITAKSSSTUPEALDEANSISVEDU, SDL-HOYTDLS           ARITAKSSSTUPEALDEANSISVEDU, SDL-HOYTDLS           ARITAKSSTUPEALDEANSISVEDU, SDL-HOYTDLS           ARITAKSSTUPEALDEANSISVEDUARDH-HOYTDLS           ARITAKSSTUPEALDEANSISVEDUARDHSLIPUX-HOHTORYDLS           ARITAKSSTUPEALDEANSISVEDUARDH-HOYTDLS           ARITAKSSTUPEALDEANSISVEDUARDH-HOYTDLS           ARITAKSSTUPEALDEANSISVEDUARDH-HOYTDLS           ARITAKSSTUPEALDEANSISVEDUARDH-HOYTDLS           ARITAKSSTUPEALDEANSISVEDUARDHSLEANSISVEDUARDH-HOYTDLS           ARITAKSSTUP-	36 3887 3887 3997 33867 3387 3387 33887 33887 33887 33889 3389 33
L. capitata     c       H. sapiens     G       G.pallus     G       C.mydas     G       G.paponicas     18       G.paponicas     18       P.vitticops     9       A.carolinensis     9       D.hannah     9       G.apadus     9       A.mississippiensis     9       G.apadeticus     9       G.apadeticus     9       J.microsquamatus     9       A.mississippiensis     9       S.rhinocerousus     9       J.netcianus     9       P.nattriana     9       P.atizinana     9       P.atizinana     9       P.atizinana     9       P.atizinana     9       S.alar     18       S.alar     19       S.partitus     9       S.partitus     9       S.partitus     9       J.alisticus     9 <t< td=""><td>0        CSSDEETLSPHRMMD11XKHFLK0PDVRD-1WST           15        CSSDEETLSPHRMMD11XKHFLK0PDVRD-1WST           15        SANDSVSGTTSVRTKLCEGOVRQPVVPDV           10        GSSDEXTSVRTKLCEGOVRQPVVPDV           10        GSANDSVSTVRTKLCEGOVRQPVVPDV           10        GSANDSVSTVRTKLCEGOVRQPVVPDV           10        GSANDSVSTVRTKLCEGOVRQPVVPDV           10        GSANDSVSTVRTKLCEGOVRQPVVPDV           11        GSANDSVSTVRTKLCEGOVRQPVVPDV           11        GSANDSVSTVRTKLCEGOVRQPVVPDV           12        GSANDSVSTVRTKLCEGOVRQPVVPDV           13        GSANDSVSTVRTKLCEGOVRQPVVPDV           14        </td><td></td><td>J EEV/SRLFAVURIKO-YSEJCX/THEAL-SYDYUNUN TUYKIMAGGKSVLAAEA/RDH-SLLEGCFPGGYMM/SVGX VYYKIMAGGKSVLAAEA/RDH-SLLEGCFPGGYMM/SVGX VYYKIMAGGKSVLAAEA/RDH-RLLEGCFPGGYMM/SVGX VYYKIMAGGKSVLAAEA/RDH-RLLEGCFPGGYMM/SVGX VYYKIMAGGKSVLAAEA/RDH-SLLEGCFPGGYMM/SVGX VYYKIMAGGKSVLAAEA/RDH-SLLEGCFPGGYMM/SVGX VYYKIMAGGKSVLAAEA/RDH-SLLEGCFPGGYMM/SVGX VYYKIMAGGKSVLAAEA/RDH-SLLEGCFPGGYMM/SVGX VYYKIMAGGKSVLAAEA/RDH-SLLEGCFPGGYMM/SVGX VYYKIMAGGKSVLAAEA/RDH-SLLEGCFPGGYMM/SVGX VYYKIMAGGKSVLAAEA/RDH-SLLEGCFPGGYMM/SVGX VYYKIMAGGKSVLAAEA/RDH-SLLEGCFPGGYMM/SVGX VYYKIMAGGKSVLAAEA/RDH-SLLEGCFPGGYMM/SVGX VYYKIMAGGKSVLAAR/RDH-SLLEGCFPGGYMM/SVGX VYXIMAGGKSVLAAR/RDH-SLLEGCFPGGYMM/SVGX VYXIMAGGKSVLAAR/RDH-SLLEGCFPGGYMM/SVGX VYXIMAGGKSVLAAR/RDH-SLLEGCFPGGYMM/SVGX VYXIMAGGKSVLAAR/RDH-SLLEGCFPGGYM/SVGX VYXIMAGGKSVLAAR/RDH-SLLEGCFPGGYM/SVGX VYXIMAGGKSVLAAR/RDH-SLLEGCFPGGYM/SVGX VYXIMAGGKSVLAAR/RDH-SLLEGCFPGGYM/SVGX VYXIMAGGKSVLAAR/RDH-SLLEGCFPGGYM/SVGX VYXIMAGGKSVLAAR/RDH-SLLEGCFPGGYM/SVGX VYX</td><td>3.0         3.0           3.0</td><td><ul> <li>C.Capitata</li> <li>C.Capitata</li> <li>C.Capitata</li> <li>G.Raylas</li> <li>G.Raylas</li> <li>G.Raylas</li> <li>G.Raylas</li> <li>G.Raylas</li> <li>G.Raylas</li> <li>P.Laylatabellii</li> <li>A.Carolinensis</li> <li>P.Navittatus</li> <li>C.Nannah</li> <li>A.Airsisisippiensis</li> <li>G.Raynah</li> <li>S.Prinocerosus</li> <li>D.Perfo</li> <li>D.Ferio</li> <li>S.Prinocerosus</li> <li>J.Punctatus</li> <li>S.Paltereri</li> <li>A.Anattereri</li> <li>J.Punctatus</li> <li>Z.Nauterei</li> <li>J.Punctatus</li> <li>Z.Nauterei</li> <li>J.Punctatus</li> <li>Z.Nauterei</li> <li>J.Punctatus</li> <li>Z.Nauterei</li> <li>J.Punctatus</li> <li>Z.Nauterei</li> <li>J.Punctatus</li> <li>Z.Nauclatus</li> <li>Z.Variegatus</li> <li>S.Salar</li> <li>S.Partitus</li> <li>S.Partitus</li> <li>Lecoylatus</li> <li>K.Amoroatus</li> <li>K.Amoroatus</li> <li>K.Amoroatus</li> <li>K.Amoroatus</li> <li>K.Amoroatus</li> <li>S.Amitaesis</li> <li>S.Partitus</li> <li>S.Amitaesis</li> <li>S.Amitaes</li></ul></td><td>257 291 311 291 294 294 291 290 291 291 291 291 291 293 293 293 293 293 293 293 293 293 293</td><td>ALLLY MILLIESTALIDIORSEP—MITMAYN—SUBEITAL SYSELXATDBA ALLLY SYLALIDIORSEP—MITMAYN—SUBEITAL SYSELXATDBA GLETILS PM-HKISEI PEQA—SIT IRECKISPI VISI IGALIROF— GLEVAL PM-HKISEI PEQA—SIT IRECKISPI VISI IGALIROF— GLEVAL PM-HKISEI PEQA—SIT VIECKISPI VISI IGALIROF— GLETILS PM-HKITUPEEA—SIST VIECKISPI VISI IGALIROF— MILLIST VIM-HKITUPEEA—SIST VIECKISPI VISI IGALIROF— MILLIATVIM-GKIPUEEA—SIST VIECKISPI VISI IGALIROF— MILLIATVIM-GKIPUEEA—SIST VIECKISPI VISI IGALIROF— MILLIATVIM-KIRUPEA—SIST VIECKISPI VISI IGALIROF MILLIATVIM-KIRUPEA—SIST VIECKISPI VISI IGALIROF MILLIATVIM-KIRUPEA—SIST VIECKISPI VISI IGALIROF MILLIATVIM-KIRUPEA—SIST VIECKISPI VISI IGALIROF MILLIATVIM-KIRUPEA—SIST VIECKISPI VISI IGALIR</td><td></td><td>ALLUTINNOVYSOSTDKORSTTL/RLTSQLTARE           ARILMSSSTVDEALDEAMSISVPILAEDI-KOVYTDLS           ARILMSSSTVD-EALDEAMSISVPILAEDI-KOVYTDLS           ARILMSSSTVD-EALDEAMSISVPILAEDI-KOVYTDLS           ARILMSSSTVD-EALDEAMSISVPILAEDI-KOVYTDLS           ARILMSSSTVD-EALDEAMSISVPILAEDI-KOVYTDLS           ARILMSSSTVD-EALDEAMSISVPILAEDI-KOVYTDLS           ARILMSSSTVD-ALDEAMSISVPILAEDI-KOVYTDLS           ARILMSSSTVD-ALDEAMSISVPILAEDI-KOVYTDLS           ARILMSSSTVD-ALDEAMSISVPILAEDI-KOVYTDLS           ARILMSSSTVD-ALDEAMSISVPILAEDI-KOVYTDLS           ARILMSSSTVD-ALDEAMSISVPILAEDI-KOVYTDLS           ARILMSSSTVD-ALDEAMSISVPILAEDI-KOVYTDLS           ARILMSSSTVD-ALDEAMSISVPILAEDI-KOVYTDLS           ARILMSSSTVD-ALDEAMSISVPILAEDI-KOVYTDLS               ARILMSSSTVD-ALDEAMASISVPL-VERD-KELVYDLV</td><td>36 388773388733887338899 38877338877338899 38877338877338899 3889933887338899 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<li>G.Raylas</li> <li>P.Laylatabellii</li> <li>A.Carolinensis</li> <li>P.Navittatus</li> <li>C.Nannah</li> <li>A.Airsisisippiensis</li> <li>G.Raynah</li> <li>S.Prinocerosus</li> <li>D.Perfo</li> <li>D.Ferio</li> <li>S.Prinocerosus</li> <li>J.Punctatus</li> <li>S.Paltereri</li> <li>A.Anattereri</li> <li>J.Punctatus</li> <li>Z.Nauterei</li> <li>J.Punctatus</li> <li>Z.Nauterei</li> <li>J.Punctatus</li> <li>Z.Nauterei</li> <li>J.Punctatus</li> <li>Z.Nauterei</li> <li>J.Punctatus</li> <li>Z.Nauterei</li> <li>J.Punctatus</li> <li>Z.Nauclatus</li> <li>Z.Variegatus</li> <li>S.Salar</li> <li>S.Partitus</li> <li>S.Partitus</li> <li>Lecoylatus</li> <li>K.Amoroatus</li> <li>K.Amoroatus</li> <li>K.Amoroatus</li> <li>K.Amoroatus</li> <li>K.Amoroatus</li> <li>S.Amitaesis</li> <li>S.Partitus</li> <li>S.Amitaesis</li> <li>S.Amitaes</li></ul>	257 291 311 291 294 294 291 290 291 291 291 291 291 293 293 293 293 293 293 293 293 293 293	ALLLY MILLIESTALIDIORSEP—MITMAYN—SUBEITAL SYSELXATDBA ALLLY 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Nucresquantus     G       A.mississippiensis     G       G.gancettus     G       G.apancettus     G       G.apancettus     G       G.apancettus     G       G.apancettus     G       G.pancettus     G       G.pancettus     G       G.pancettus     G       G.pancettus     G       G.pancettus     G       G.pancettus     G       G.mattererii     G       P.latignan     G       P.latignan     G       P.latignan     G       P.attus     G       Pancettus     G       Astriatus     G       Pactintes <td< td=""><td>0        CSSDEETLSPHRIMDLIXKHFLK0PDVRD-INST           1         SSSIDDVSGTTSVRTNLCEGOVRDAPVPF           1         SSSIDDVSGTTSVRTNLCEGOVRDAPVPF           1         SSSIDDVSTSVRTNLCEGOVRDAPVPF           1         SSSIDDVSTSVRTLLEGOVRDAPVPF           1         SS</td><td></td><td>J EEV/SRLFAVURIKO-YSEJCX/THEAL-SYDYURIUN THI/MACGOSISILAZA/NBRI-SLLECF/FAG/MMS/IGO THY/MACGOSISILAZA/NBRI-SLLECF/FAG/MMS/IGO TY/MACGOSISILAZA/NBRI-SLLECF/FAG/MMS/IGO TY/MACGOSISILAZA/NBRI-SLLECF/FAG/MMS/IGO 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TY/MAGOSISILAZA/NBRI-LLECF/FAG/MMS/IGO TY/MAGOSISILAZA/NBRI-LLECF/FAG/MMS/IGO TY/MAG</td><td>3.0        </td><td><ul> <li>C.Capitata</li> <li>C.Capitata</li> <li>C.Capitata</li> <li>G.Capitabellii</li> <li>G.Capitabellii</li> <li>G.Capitabellii</li> <li>G.Capitabellii</li> <li>C.Pictabellii</li> <li>G.P.Vittieps</li> <li>P.Acarolinensis</li> <li>P.Acarolinensis</li> <li>P.Acarolinensis</li> <li>P.Acarolinensis</li> <li>G.P.Capitabellii</li> <li>P.Acarolinensis</li> <li>G.P.Capitabellii</li> <li>G.P.Capitabellii</li> <li>P.Acarolinensis</li> <li>D.Capitabellii</li> <li>G.P.Capitabellii</li> <li>G.P.Capitabelliii</li> <li>G.P.Capitabellii</li> <li>G.P.Capitabellii</li> &lt;</ul></td><td>257 291 311 294 291 294 291 291 291 291 291 291 291 291 293 293 293 293 293 293 293 293 293 293</td><td>ALLLTPSLR110105529</td><td></td><td>ALLUTINNOVYSOSTDKORSTITLALTSQLTARE           ARITAKSSSTVDEALD EANISTSUPIL REDIKONYTDLS           ARITAKSSSTVDEALD EANISTSUPILAL REDVICES           ARITAKSSSTVDEALD 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<li>P.Acarolinensis</li> <li>G.P.Capitabellii</li> <li>P.Acarolinensis</li> <li>G.P.Capitabellii</li> <li>G.P.Capitabellii</li> <li>P.Acarolinensis</li> <li>D.Capitabellii</li> <li>G.P.Capitabellii</li> <li>G.P.Capitabelliii</li> <li>G.P.Capitabellii</li> <li>G.P.Capitabellii</li> &lt;</ul>	257 291 311 294 291 294 291 291 291 291 291 291 291 291 293 293 293 293 293 293 293 293 293 293	ALLLTPSLR110105529		ALLUTINNOVYSOSTDKORSTITLALTSQLTARE           ARITAKSSSTVDEALD EANISTSUPIL REDIKONYTDLS           ARITAKSSSTVDEALD EANISTSUPILAL REDVICES           ARITAKSSSTVDEALD EANISTSUPILAL REDVICES           ARITAKSSTVDEALD EANISTSUPILAL REDVICES           ARITAKSSTVD-	36 36 38 38 38 38 38 38 38 38 38 38 38 38 38
L. capitata     c       H. sapiens     G       Gaplus     G       C. mydas     G       G. porta bellii     G       G. japonicas     10       P. vitticops     9       A. carolinensis     9       D. hannah     9       A. mississippiensis     9       G. apadus     9       A. mississippiensis     9       G. apadeticus     9       J. microsquamatus     9       A. mississippiensis     9       S. chinocerousus     9       J. punctatus     9       P. nattereri     9       J. apattereri     9       A. mississippiuma     9       P. apatteriana     9       P. apattereri     9       A. millego     9       A. marooratus     9       P. myereri     9       A. timmens     9       A. timperatus     9       Loculatu     9       S. kumitera     10       A. wetcensis     9       S. heperclaits     9       S. kumitera     10       A. stricture     10       S. heperclaits     9       S. heperclaits     9       S. heperclaits     9	0        CSSDEETLSPHRMMDLIXKHFLK0PDVRD-INST           7         SSGADS VSGITSYNRTNLCEGOVRQDVVPDY           7         NRGANANDERTSYNRTRLCEGOVRQDVVPDY           7         CHGRANNDERTSYNRTRLCEGOVRQDVVPDY           7         CHGANANDERTSYNRTRLSEGOVRQDVVPDY           7         CH		J EEV/SRLFAVURIKO-YSEJCX/FIEAL-SYDYUNUN TUYKIMAGG/XIVURALAURAHSH-SLLEGCFPGQYMAYSIGX VYYKIMAGG/XIVUTALAURAHSH-LUCC/FPGQYMAXISIGX VYYKIMAGG/XIVUTALAURAHSH-LUCC/FPGQYMAXISIGX VYXXIMAGG/XIVUTALAURAHSH-LUCC/FPGQYMAXISIGX VYXXIMAGG/XIVUTALAURAHSH-LUCC/FPGQYMAXISIGX VYXXIMAGG/XIVUTALAURAHSH-LUCC/FPGQYMAXISIGX VYXXIMAGG/XIVUTALAURAHSH-LUCC/FPGQYMAXISIGX VYXXIMAGG/XIVUTA	XD = JUNCL         350           XD = MINICID         350	<ul> <li>C.Capitata</li> <li>C.Capitata</li> <li>C.Capitata</li> <li>G.Capita</li> &lt;</ul>	257 291 291 291 294 291 294 291 293 293 293 293 293 293 293 293 293 293	ALLLYSUR 1010BSEP		ALLUTINNOVYSOSPDKORSTITLALTSQLTARE           ARILMSSSTUTEALDEANSISVENLARDKONYTOLS           ARILMSSSTUTBALDEANSISVENLARDKONYTOLS           ARILMSSSTUTBALDEANSISVENLARDKONYTOLS           ARILMSSSTUTBALDEANSISVENLARDKONYTOLS           ARILMSSSTUTBALDEANSISVENLARDKONYTOLS           ARILMSSSTUTBALDEANSISVENLARDKONYTOLS           ARILMSSSTUTBALDEANSISVENLARDKONYTOLS           ARILMSSSTUTBALDEANSISVENLARDKONYTOLS           ARILMSSSTUTBALDEANSISVENLARDKONYTOLS           ARILMSSSTUTBALDEA	36 38 38 38 38 38 38 38 38 38 38 38 38 38
L. capitata     c       H. sapiens     G       Gaplus     G       C. mydss     G       G. palots     G       G. papora     B       G. papora     B       P. vitticops     G       A. carolinensis     P       P. bivititicos     G       A. mississippiensis     G       G. apaneticos     G       G. paneticos     G       G. paneticos     G       J. Puncresquaentus     G       A. mississippiensis     G       S. rhinocerousus     S       S. rhinocerousus     S       J. punctatus     G       P. nattereri     S       S. Salar     IB       P. latipina     S       S. anexicanus     G       J. Largetus     S       S. aparta     S       S. A linnees     S       S. Astriatum     G       A. astriatum     G. Corientalis       A. Striatum     S       A. Striatum     S       A. Striatum     B       A. paperites     B       A. Neurosisi     S       D. terrestris     B       D. novaengliae     S       A. combicaa     S	0        CSSDEETLSPHRMMD11XKHFLK07DVRD-1WST           15        GADSVEGTTSYNRTNLCEGOVRQAPVVPVT           15		J EEV/SRLFAVURIND-YSE—JCX/TREAL-SYDYLINUN TUYKIMAGGXISULAAEA/RDH-SLLEGCFPGQYMA/SVGX VYYKIMAGGXISULAAEARDH-LLEGCFPGQYMA/SVGX VYYKIMAGGXISULAAEARDH-LLEGCFPGQYMA/SVGX VYYKIMAGGXISULAARDH-LLEGCFPGQYMA/SVGX VYYKIMAGGXISULAARDH-LLEGCFPGQYMA/SVGX VYYKIMAGGXISULAARDH-LLEGCFPGQYMA/SVGX VYYKIMAGGXISULAARDH-LLEGCFPGQYMA/SVGX VYYKIMAGGXISULAARDH-LLEGCFPGQYMA/SVGX VYYKIMAGGXISULAARDH-LLEGCFPGQYMA/SVGX VYYKIMAGGXISULAARDH-LLEGCFPGQYMA/SVGX VYYKIMAGGXISULAARDH-LLEGCFPGQYMA/SVGX VYYKIMAGGXISULAARDH-LLEGCFPGQYMA/SVGX VYYKIMAGGXISULAARDH-LLEGCFPGQYMA/SVGX VYYKIMAGGXISULAARDH-LLECFFGQYMA/SVGX VYYKIMAGGXISULAARDH-LLECFFGQYMA/SVGX VYYKIMAGGXISULAARDH-LLECFFGQYMA/SVGX VYYKIMAGGXISULAARDH-LLECFFGQYMA/SVGX VYYKIMAGGXISULAARDH-LLECFFGQYMA/SVGX VYYKIMAGGXISULAARDH-LLECFFGQYMA/SVGX VYYKIMAGGXISULAARDH-LLECFFGQYMA/SVGX VYYKIMAGGXISULAARDH-LLECFFGQYMA/SVGX VYYKIMAGGXISULAARDH-LLECFFGQYMA/SVGX VYYKIMAGGXISULAARDH-LLECFFGQYMA/SVGX VYYKIMAGGXISULAARDH-LLECFFGQYMA/SVGX VYYKIMAGGXISULAARDH-LLECFFGQYMA/SVGX VYYKIMAGGXISULAARDH-LLECFFGQYMA/SVGX VYYKIMAGGXISULAARDH-LLECFFGQYMA/SVGX VYYKIMAGGXISULAARDH-LLECFFGQYMA/SVGX VYYKIMAGGXISULAARDH-LLECFFQGYMA/YYKGX VYYKIMAGGXISULAARDH-LLECFFQGYMA/YYKGX VYYKIMAGGXISULAARDH-LLECFFQUXAFYGX VYYKIMAGGXISULAARDH-LLECFFQUXAFYGX VYYKIMAGGXISULAARDH-LLECFFQUXAFYGX VYYKIMAGGXISULAARDH-LLE	GE         SGL UNCL         350           CO         SGL UNCL         150           CO         SGL UNCL <td< td=""><td><ul> <li>C.Capitata</li> <li>C.Capitata</li> <li>C.Capitata</li> <li>G.Capitas</li> <li>G.Capitas</li> <li>G.Capitas</li> <li>G.Capitas</li> <li>G.Capitas</li> <li>C.Pictase</li> <li>C.Pictase</li> <li>P.Capitasis</li> <li>P.Capitasis</li> <li>P.Capitasis</li> <li>P.Capitasis</li> <li>P.Capitasis</li> <li>P.Capitasis</li> <li>P.Capitasis</li> <li>Capitasis</li> <li>Capita</li></ul></td><td>257 2911 2911 2912 2912 2911 2912 2912 293 2933 293</td><td>ALLILYSIALIDIORSEP</td><td></td><td>ALLUTINNOVYSOSTDKORSTITLALTSQLTARE           ARILMSSSTVDEALDEAMSISVEHLARDKONYTDLS           ARILMSSSTVDALDEAMSISVEHLARDKONYTDLS           ARILMSSSTVDALDEAMSISVEHLARDKONYTDLS           ARILMSSSTVDALDEAMSISVEHLARDKONYTDLS           ARILMSSSTVDALDEAMSISVELVEHLARD-KONYTDLS           ARILMSSSTVDALDEAMSISVELVEHLARD-KONYTDLS           ARILMSSSTVDALDEAMSISVELVEHLARD-KONYTDLS           ARILMSSSTVDALDEAMSISVELVEHLARD-KONYTDLS           ARILMSSSTVDALDEAMSISVELV, RENH-ELVINDLT           ARINGSSTVDALDEA</td><td>36 38 38 38 38 38 38 38 38 38 38 38 38 38</td></td<>	<ul> <li>C.Capitata</li> <li>C.Capitata</li> <li>C.Capitata</li> <li>G.Capitas</li> <li>G.Capitas</li> <li>G.Capitas</li> <li>G.Capitas</li> <li>G.Capitas</li> <li>C.Pictase</li> <li>C.Pictase</li> <li>P.Capitasis</li> <li>P.Capitasis</li> <li>P.Capitasis</li> <li>P.Capitasis</li> <li>P.Capitasis</li> <li>P.Capitasis</li> <li>P.Capitasis</li> <li>Capitasis</li> <li>Capita</li></ul>	257 2911 2911 2912 2912 2911 2912 2912 293 2933 293	ALLILYSIALIDIORSEP		ALLUTINNOVYSOSTDKORSTITLALTSQLTARE           ARILMSSSTVDEALDEAMSISVEHLARDKONYTDLS           ARILMSSSTVDALDEAMSISVEHLARDKONYTDLS           ARILMSSSTVDALDEAMSISVEHLARDKONYTDLS           ARILMSSSTVDALDEAMSISVEHLARDKONYTDLS           ARILMSSSTVDALDEAMSISVELVEHLARD-KONYTDLS           ARILMSSSTVDALDEAMSISVELVEHLARD-KONYTDLS           ARILMSSSTVDALDEAMSISVELVEHLARD-KONYTDLS           ARILMSSSTVDALDEAMSISVELVEHLARD-KONYTDLS           ARILMSSSTVDALDEAMSISVELV, RENH-ELVINDLT           ARINGSSTVDALDEA	36 38 38 38 38 38 38 38 38 38 38 38 38 38
C. capitata     0       H. sapiens     9       G. pallus     9       C. mydas     9       C. mydas     9       G. paponicas     10       P. vitticeps     9       A. carolinensis     9       D. namah     9       A. mississippiensis     9       G. panetus     9       A. mississippiensis     9       S. rhinorousas     9       S. rhinorousas     9       S. rhinorousas     9       S. rhinorousas     9       A. mexicianus     9       P. latiginna     10       P. latiginna     10       P. Nerreria     9       O.nilotic     9       S. partitus     9       O. nilotic     9       S. partitus     9       A. circlatus     9       A. Loroticis     11       M. Wantae     9       A. litipora     20       A. inifera     10       N. vectensis     9       A. inifera     10       A. inifera     <	0        CSSDEETLSPHRMMDLIXKHFLK0FDVRD-INST           7         SSGAUS VSGITSYNRTNLCEGOVRRD/VVPVT           7         NOGANADERTSYNRTLLCEGOVRRD/VVPVT           7         NO		J EEV/SRLFAVURIKO-YSELCX/FIEAL-SYDYLINUN TDHOMACGXSVLAREARIBH-SLLEGCFPGQYMA/SVGX VYYGMACGXVLARALRABH-BLLECFPGQYMA/SVGX VYYGMACGXVLARALRABH-BLLECFPGQYMA/SVGX VYYGMACGXSVLARALRABH-BLLECFPGQYMA/SVGX VXYGMACGXSVLARALRABH-BLLECFPGQYMA/SVGX VXYGMACGXSVLARALRABH-BLLECFPGQYMA/SVGX VXYGMACGXSVLARALRABH-BLLECFPGQYMA/SVGX VXYGMACGXSVLARALRABH-BLLECFPGQYMA/SVGX VXYGMACGXSVLARALRABH-BLLECFPGQYMA/SVGX VXYGMACGXSVLARALRABH-BLLECFPGQYMA/SVGX VXYGMACGXSVLARALRABH-BLLECFPGQYMA/SVGX VXYGMACGXSVLARALRABH-BLLECFPGQYMA/SVGX VXYGMACGXSVLARALRABH-BLLECFPGQYMA/SVGX VXYGMACGXSVLARALRABH-BLLECFPGQYMA/SVGX VXYGMACGXSVX	X0-mmulti         350           X0-mmulti <td><ul> <li>C.Capitotae</li> <li>C.Capitota</li> <li>C.Capitotae</li> <li>C.Capitotae</li> <li>G.Capitae</li> <li>G.Capitae</li> <li>G.Capitae</li> <li>C.P.Capitae</li> <li>P.Capitae</li> <li>C.P.Capitae</li> <li>C.P.Capit</li></ul></td> <td>257 291 291 291 291 291 291 291 293 293 293 293 293 293 293 293 293 293</td> <td>ALLITYSTALIDIORSEP</td> <td></td> <td>ALLUTINNOVYSOSPDKORSTITLALTSQLTARE           AVRINKSSSTVDELIDEANISTUPULREDIKONYTDLS           AVRINKSSSTVDELIDEANISTUPULREDIKONYTDLS           AVRINKSSSTVDELIDEANISTUPULREDIKONYTDLS           AVRINKSSSTVDELIDEANISTUPULREDIKONYTDLS           AVRINKSSTVDELIDEANISTUPULREDIKONYTDLS           AVRINKSSTVDALIDEANISTUPULREDIKONYTDLS           AVRINKSSTVDALIDEANISTUPULREDIKONYTDLS           AVRINKSSTVDALIDEANISTUPULREDIKONYTDLS           AVRINKSSTVDALIDEANISTUPULREDIKONYTDLS           AVRINKSSTVDALIDEANISTUPULREDIKONYTDLS           AVRINKSSTVDALIDEANISTUPULREDIKONYTDLS           AVRINSSTVDALIDEANISTUPULREDIKONYTDLS</td> <td>5.5.5 5.</td>	<ul> <li>C.Capitotae</li> <li>C.Capitota</li> <li>C.Capitotae</li> <li>C.Capitotae</li> <li>G.Capitae</li> <li>G.Capitae</li> <li>G.Capitae</li> <li>C.P.Capitae</li> <li>P.Capitae</li> <li>C.P.Capitae</li> <li>C.P.Capit</li></ul>	257 291 291 291 291 291 291 291 293 293 293 293 293 293 293 293 293 293	ALLITYSTALIDIORSEP		ALLUTINNOVYSOSPDKORSTITLALTSQLTARE           AVRINKSSSTVDELIDEANISTUPULREDIKONYTDLS           AVRINKSSSTVDELIDEANISTUPULREDIKONYTDLS           AVRINKSSSTVDELIDEANISTUPULREDIKONYTDLS           AVRINKSSSTVDELIDEANISTUPULREDIKONYTDLS           AVRINKSSTVDELIDEANISTUPULREDIKONYTDLS           AVRINKSSTVDALIDEANISTUPULREDIKONYTDLS           AVRINKSSTVDALIDEANISTUPULREDIKONYTDLS           AVRINKSSTVDALIDEANISTUPULREDIKONYTDLS           AVRINKSSTVDALIDEANISTUPULREDIKONYTDLS           AVRINKSSTVDALIDEANISTUPULREDIKONYTDLS           AVRINKSSTVDALIDEANISTUPULREDIKONYTDLS           AVRINSSTVDALIDEANISTUPULREDIKONYTDLS	5.5.5 5.
C. capitata     c       C. capitata     c       H. sapiens     G       C. aydus     G       C. aydus     G       C. aydus     G       G. paponicas     10       P. vitticego     A. arosissippiensis       G. pancresquaatus     G       A. mississippiensis     G       G. apatterri     G       G. apatterri     G       G. apatterri     G       G. apatterri     G       P. nactequaatus     G       J. caroinas     11       S. chinocerousus     12       S. attiginan     12       S. hitiginan     13       G. variegatus     14       S. hartitus     19       O. niotic     14       S. hartitus     15       S. hartitus     16       S. hartitus     15       S. hartitus     16	0        CSSDEETLSFHRMMDLIXKHFLK0PDVRD-UKST           15        CSSDEETLSFHRMMDLIXKHFLK0PDVRD-UKST           15        SADDVSGTTSVRTLCEGOVRD/VMVP           16        SSDEDTSVRTLCEGOVRD/VMVP           17        SESADDVSGTTSVRTLCEGOVRD/VMVP           18        SEDDVSTSVRTLCEGOVRD/VMVP           19        SADDVSTSVRTLCEGOVRD/VMVP           10        SEDDVSTSVRTLCEGOVRD/VMVP           11        SEDDVSTSVRTLCEGOVRD/VMVP           12        SEDDVSTSVRTLCEGOVRD/VMVP           13        SEDDVSTSVRTLCEGOVRD/VMVP           14        SERSTDOVTSVRTLCEGOVRD/VMVP           15        SEDSTDVRTLCEGOVRD/VMVP           15        SEDSTDVRTLCEGOVRD/VMVP           17        SERSTDVRTLCEGOVRD/VMVP           17        SERSTDVRTLCEGOVRD/VMVP           17        SESSTDVRTLCEGOVRD/VMVP           16        SESSTDVRTLCEGOVRD/VMVPV           17        SESSTDVRTLLEGOVRD/VMVPV           18        SESSTDVRTLLEGOVRD/VMVPV           19        SESSTDVRTLLEGOVRD/VMVPV           10        SESSTDVRTLLEGOVRD/VMVPV           10        SESSTDVRTLSEGOVRD/VMVPV           10        SESSTDVRTLSEGO	HNLFTESERQYTTAT(6)CT0RPS(8 TRUKLVIALGOKLSKLKGEPGAV TRUKLVIALGOKLSKLKGEPGAV TRUKLVIALGOKLSKLKGEPGAV TRUKLVIALGOKLSKLKGEPGAV TRUKLVIALGOKLSKLKGEPGAV TRUKLVIALGOKLSKLKGEPGAV TRUKLVIGKUNGKUNGKGEVEN TRUKLVIGKUNGKUNGKUNGKUNGKUNGKUNGKUNGKUNGKUNGKUN	J EEV/SRLFAVURING-YSEICX/TREAL-SYTUTIONUM THIMMAG GXISH AAEA/REH-SLLEGCFPAGYMAYSIGX THIMMAG GXISH AAEA/REH-SLLEGCFPAGYMAYSIGX THIMMAG GXISH AAEA/REH-SLLEGCFPAGYMAYSIGX TYTOMAG GXISH AAEA/REH-LELECFPAGYMAYSIGX TYTOMAG GXISH AAEA/REH-SLLEGCFPAGYMAYSIGX TYTOMAG GXISH AAEA/REH-SLLECFPAGYMAYSIGX TYTOMAG GXISH AAEA/REH-SLLECFPAGYMAYSIGX TYTOMAG GXISH AAEA/REH-SLLECFPAGYMAYSIGX TYTOMAG GXISH AAEA/REH-SLLECFPAGYMAYSIGX TYTOMAG GXISH AAEA/REH-SLLECFPAGYMAYSIGX TYTOMAG GXISH AAEA/REH-SLLECFPAGYMAYSIGX TYTOMAG GXISH AAEAR/REH-LLECFPAGYMAYSIGX TYTOMAG GXISH AAEAR/REH-LLECFPAGYMAYSIGX TYTOMAG GXISH AAEARREH-ALLECFPAGYMAYSIGX TYTOMAG GXISH AAEARREH-LLECFPAGYMAYSIGX TYTOMAG GXISH AAEARREH-LLECFPAGYMAY	C. P. F. HANKID         350           C. P. F. HANKID         350           C. D. S. S. L. K. K. L. K. K. L. K. L. K. K. K. K. K. L. K. L. K.	<ul> <li>C.Capitota</li> <li>C.Capitota</li> <li>C.Capitota</li> <li>G.Capita</li> &lt;</ul>	257 2911 2911 2912 2911 2911 2911 2911 2931 293	ALLLY MILLIPSCRIDDSEP—MITMAYNM—SUDETAL-SISELANTDMA RULLTSCRIDDDSEP—MITMAYNM—SUDETAL-SISELANTDMA GLETLSLPNM-KIXADLPEQASITIKECKISPUVSLIGALLROF— GLETLSLPNM-KIXTDPEEASIVEKKISPUVSLIGALLROF— GLETLSLPNM-KIXTDPEEASIVEKKISPUVSLIGALLROF— GLETLSLPNM-KIXTDPEEASIVEKKISPUVSLIGALLROF— ALEILSLPNM-KIXTDPEEASIVEKKISPUVSLIGALLROF— GLETLSLPNM-KIXTDPEEASIVEKKISPUVSLIGALLROF— GLETLSLPNM-KIXTDPEEASIVEKKISPUVSLIGALLROF— GLETLSLPNM-KIXTDPEEASIVEKKISPUVSLIGALLROF— ALEILSLPNM-KIXTDPEEASIVEKKISPUVSLIGALLROF— GLETLSLPNM-KIXTDPEAASIVEKKISPUVSLIGALLROF— ALEILSLPNM-KIXTDPEAASIVEKKISPUVSLIGALLROF— ALEILSLPNM-KIXTDPEAASIVEKKISPUVSLIGALLROF— ALEILSLPNM-KIXTDPEAA		ALLUTINNOVYSOSPDKORSTITLALTSQLTARE           ARITAKSSSTUTEALDEANSISVENLAEDIKOVYTDLS           ARITAKSSSTUTEALDEANSISVENLAEDIKOVYTDLS           ARITAKSSSTUTEALDEANSISVENLAEDIKOVYTDLS           ARITAKSSTUTEALDEANSISVENLAEDIKOVYTDLS           ARITAKSSTUTBALDEANSISVENLAEDIKOVYTDLS           ARITAKSSTUTBALDEANSISVENLAEDIKOVYTDLS           ARITAKSSTUTBALDEANSISVENLAEDIKOVYTDLS           ARITAKSSTUTBALDEANSISVENLAEDIKOVYTDLS           ARITAKSSTUTBALDEANSISVENLAEDIKOVYTDLS           ARITAKSSTUTBALDEANSISVENLAEDIKOVYTDLS           ARITAKSSTUTBALDEANSISVENLAEDIKOVYTDLS	5.55 5.55
C. capitata     c       H. sapiens     G       Gaplius     G       C. mydas     G       G. portas     18       G. japonicas     18       P. vitticops     9       A. carolinensis     9       J. Divittius     9       O.hannah     9       A. mississipiensis     9       G. apates     9       A. mississipiensis     9       G. apattereria     9       J. Puncrequeatus     9       P. nattereria     9       J. alteriana     9       P. latigina     9       J. alteriana	0        CSSDEETLSPHRMMDLIXKHFLK07DVRD-INST           15        CSSDEETLSPHRMMDLIXKHFLK07DVRD-INST           15        SANDSVSGTTSVRTKLCEGOVRQAVVVPV           10        GRANDERTSVRTKLCEGOVRQAVVPV           10        GRANDERTSVRTKLCEGOVRQAVVPV           10        GRANDERTSVRTKLCEGOVRQAVVPV           10        GRANDERTSVRTKLCEGOVRQAVVPV           10        GRANDERTSVRTKLCEGOVRQAVVPV           11        GRANDERTSVRTKLCEGOVRQAVVPV           11        GRANDERTSVRTKLCEGOVRQAVVPV           11        GRANDERTSVRTLCEGOVRQAVVPV           12        GRANDERTSVRTLCEGOVRQAVVPV           13        GRANDERTSVRTLCEGOVRQAVVPV           14		J EEV/SRLFAVURIKO-TSELCX/FIEAL-SYDYURIUN TUYKIMAGGXISULAAEA/RDH-SLLEGCFPGQYMAYSUGX (VYYKIMAGGXISULAAEARDH-RLLEGCFPGQYMAYSUGX (VYYKIMAGGXISULTAALRDH-RLLEGCFPGQYMAYSUGX (VYYKIMAGGXISULTAALRDH-RLLEGCFPGQYMAYSUGX (VYYKIMAGGXISULTAALRDH-RLLEGCFPGQYMAYSUGX (VYYKIMAGGXISULTAALRDH-RLLEGCFPGQYMAYSUGX (VYYKIMAGGXISULTAALRDH-RLLEGCFPGQYMAYSUGX (VYYKIMAGGXISULTAALRDH-RLLEGCFPGQYMAYSUGX (VYYKIMAGGXISULTAALRDH-RLLEGCFPGQYMAYSUGX (VYYKIMAGGXISULTAALRDH-RLLEGCFPGQYMAYSUGX (VYYKIMAGGXISULTAALRDH-RLLEGCFPGQYMAYSUGX (VYYKIMAGGXISULTAALRDH-RLLEGCFPGQYMAYSUGX (VYYKIMAGGXISULTAALRDH-RLLEGCFPGQYMAYSUGX (VYYKIMAGGXISULTAALRDH-RLLEGCFPGQYMAYSUGX (VYYKIMAGGXISULTAALRDH-RLLECFPGQYMAYSUGX (VYYKIMAGGXISULTAALRDH-RLLECFPGQYMAYSUGX (VYYKIMAGGXISULTAALRDH-RLLECFPGQYMAYSUGX (VYYKIMAGGXISULTAALRDH-RLLECFPGQYMAYSUGX (VYYKIMAGGXISULTAALRDH-RLLECFPGQYMAYSUGX (VYYKIMAGGXISULTAALRDH-RLLECFPGQYMAYSUGX (VYYKIMAGGXISULTAALRDH-RLLECFPGQYMAYSUGX (VYYKIMAGGXISULTAALRDH-RLLECFPGQYMAYSUGX (VYYKIMAGGXISULTAARRDH-RLLECFPGQYMAISUGX (VYYKIMAGGXISULTAAARRDH-RLLECFPGQYMAISUGX (VYYKIMAGGXISULTA	0.0         SGLUNCI         350           0.0         SGLUNCI         350           0.0         SGLUNCI         150           0.0         SGLUNCI <td< td=""><td><ul> <li>C.Capitota</li> <li>C.Capitota</li> <li>C.Capitota</li> <li>C.Capitota</li> <li>G.Raylas</li> <li>G.Raylas</li> <li>G.P.Caylas</li> <li>G.P.Caylas</li> <li>G.P.Caylas</li> <li>G.P.Caylas</li> <li>P.Caylas</li> <li>P.Caylas</li> <li>P.Caylas</li> <li>P.Caylas</li> <li>P.Caylas</li> <li>C.P.Caylas</li> <li>C.Caylas</li> <li>C.Caylas</li> <li>C.P.Caylas</li> <li>C.P.Caylas</li></ul></td><td>257 291 291 291 291 291 291 291 291 291 291</td><td>ALLLI TESLA I DI DISEP</td><td></td><td>ALLUTINNOVYSOSPDKORSTITLALTSQLTARE           AVRIANSSSTUTEALDEANSISVENLARDKONYTDLS           AVRIANSSSTUTEALDEANSISVENLARDKONYTDLS           AVRIANSSSTUTEALDEANSISVENLARDKONYTDLS           AVRIANSSTUTEALDEANSISVENLARDKONYTDLS           AVRIANSSTUTALDEANSISVENLARDKONYTDLS           AVRIANSSTUTALDEANSISVENLARDKONYTDLS           AVRIANSSTUTALDEANSISVENLARDKONYTDLS           AVRIANSSTUTALDEANSISVENLARDKONYTDLS           AVRIANSSTUTALDEANSISVENLARDKONYTDLS           AVRIANSSTUTALDEANSISVENLARDKONYTDLS           AVRIANSSTUTALDEANSIS</td><td>5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5</td></td<>	<ul> <li>C.Capitota</li> <li>C.Capitota</li> <li>C.Capitota</li> <li>C.Capitota</li> <li>G.Raylas</li> <li>G.Raylas</li> <li>G.P.Caylas</li> <li>G.P.Caylas</li> <li>G.P.Caylas</li> <li>G.P.Caylas</li> <li>P.Caylas</li> <li>P.Caylas</li> <li>P.Caylas</li> <li>P.Caylas</li> <li>P.Caylas</li> <li>C.P.Caylas</li> <li>C.Caylas</li> <li>C.Caylas</li> <li>C.P.Caylas</li> <li>C.P.Caylas</li></ul>	257 291 291 291 291 291 291 291 291 291 291	ALLLI TESLA I DI DISEP		ALLUTINNOVYSOSPDKORSTITLALTSQLTARE           AVRIANSSSTUTEALDEANSISVENLARDKONYTDLS           AVRIANSSSTUTEALDEANSISVENLARDKONYTDLS           AVRIANSSSTUTEALDEANSISVENLARDKONYTDLS           AVRIANSSTUTEALDEANSISVENLARDKONYTDLS           AVRIANSSTUTALDEANSISVENLARDKONYTDLS           AVRIANSSTUTALDEANSISVENLARDKONYTDLS           AVRIANSSTUTALDEANSISVENLARDKONYTDLS           AVRIANSSTUTALDEANSISVENLARDKONYTDLS           AVRIANSSTUTALDEANSISVENLARDKONYTDLS           AVRIANSSTUTALDEANSISVENLARDKONYTDLS           AVRIANSSTUTALDEANSIS	5.5 5.5 5.5 5.5 5.5 5.5 5.5 5.5
C. capitata     c       H. sapiens     G       Gaplius     G       C. mydss     G       G. partis     G       G. paptis     G       G. paptis     G       P. vitticops     G       A. carolinensis     G       P. bivititius     G       G. panoresquaentus     G       A. mississippiensis     G       G. panoresquaentus     G       A. mississippiensis     G       G. panoresquaentus     G       J. nucresquaentus     G       J. encoresquaentus     G       J. anexicanus     G       J. P. antrianus     G       J. Largetus     J       J. Largetus     G       J. Carlegatus     G       J. antilegora     G       J. Anautifiera     G       J. Antriatus     G       J. Anautifiera     B       J. An	0        CSSDEETLSPHRIMPDLIXKHFLK0PDVRD-LWST           7         SSGADS VSGLTSYNRTNLCEGOVRQPVVVPV           7         NBGANADERTSYNRTLLCEGOVRQPVVVPV           7         NBGANADERTSYNRTLLCEGOVRQPVVVPV           7         CH		J EEV/SRLFAVURIND-YSEICX/FIEAL-SYDYUNUN TUHAMACGKSVLAAEA/RDH-SLLECCFPGQYMA/SVGX TUYAMACGKSVLAAEA/RDH-SLLECCFPGQYMA/SVGX TVYAMACGKSVLAAEA/RDH-ALLECLFPGQYMA/SVGX TVYAMACGKSVLAAEA/RDH-ALLECLFPGQYMA/SVGX TVYAMACGKSVLAAEA/RDH-ALLECLFPGQYMA/SVGX TVYAMACGKSVLAAEA/RDH-SLLECFPGQYMA/SVGX TVYAMACGKSVLAAEARRH-LIECFPGQYMA/SVGX TVYAMACGKSVLAAEARHH-LIECFPGQYMA/SVGX TVYAMACG	00	<ul> <li>C.Capitata</li> <li>C.Capitata</li> <li>C.Capitata</li> <li>G.Capitas</li> <li>G.Capitas</li> <li>G.Capitas</li> <li>G.Capitas</li> <li>G.Capitas</li> <li>G.Capitas</li> <li>C.P.Catas</li> <li>P.Capitas</li> <li>C.P.Catas</li> <li>P.Catas</li> <li>P.Catas</li> <li>C.P.Catas</li> <li>P.Catas</li> <li>C.P.Catas</li> <li>C.P.Cat</li></ul>	257 291 291 291 291 291 291 291 291 291 291	ALLLY THAT IN DEPENDENT AND		ALLUTINNOVYSOSPDKORSTITLALTSQLTARE           ARIANSSSTUT-EALDEANSISVEHLARD-KONYTOLS           ARIANSSSTUT-EALDEANSISVEHLARD-KONYTELY	5.5 5.6 5.6 5.6 5.6 5.6 5.6 5.6
C.capitata     0       H.sapiens     0       G.pallus     9       C.mydas     9       C.mydas     9       G.pipta bellii     9       G.pipta bellii     9       Manaba     9       A.carolinensis     9       A.carolinensis     9       A.mississippiensis     9       G.pancesquamtus     9       A.mississippiensis     9       G.pantereria     9       S.rhinocerousus     9       P.nattereria     9       P.lationas     10       P.lationas     11       P.lationas     9       A.maculatus     9       C.variopatus     9       A.timaneus     9       A.timatus     9       A.timatus     9       A.timatus     9       A.timatus     9       A.timatus     9       A.timatus     9       A.collatus     9       Q.orientalis     10       A.pectris     11       A.pectris     11       A.striatum     9       A.colabica     9       A.colabica     9       A.colabica     9       D.novaengliae     9	0        CSSDEETL.SPHRHMD11XKHFLK0PDVRD-1WST           15        CSSDEETL.SPHRHMD11XKHFLK0PDVRD-1WST           15        CSSDEVSGTTSVRTLLCEGOVRDAVPPT           16        GSRAUGETSVRTLLCEGOVRDAVPT           17         ReiGRAUDETSVRTLLCEGOVRDAVPT           18		J EEV/SRLFAVURIKO-YSEJCX/THEAL-SYDYURIUK THI/SMCGOSSI LAAEA/RBH-SLLECCFPGOYMISSIG TYYORAGCOSYU TAEARDH-SLLECCFPGOYMISSIG TYYORAGCOSYU TAEARDH-SLLECCFPGOYMISSIG TYYORAGCOSYU TAEARDH-LLECCFPGOYMISSIG TYYORAGCOSYU TAEARDH-LLECCFPGGINLSIG TYYORAGCOSYU TAEAR	3.0         CONTRACT         3.0           3.0         CONTRACT         CONTRACT           3.0         CON	<ul> <li>C.Capitotae</li> <li>C.Capitota</li> <li>C.Capitotae</li> <li>C.Capitotae</li> <li>G.Capitae</li> <li>G.Capitae</li> <li>G.Capitae</li> <li>G.Capitae</li> <li>C.P.Catae</li> &lt;</ul>	257 291 291 301 291 291 291 291 291 291 291 291 291 29	ALLITSURIUPSEP SUBJECTS SUBJEC		ALUTITRIKKYSDSFDKRSTTLALTSQLTARE           ARITRKSSSTVD-FALDEANSISUPILARIT-KONYTDLS           ARITRKSSSTVD-FALDEANSISUPILARIT-KONYTDLS           ARITRKSSSTVD-FALDEANSISUPILARIT-KONYTDLS           ARITRKSSTVD-FALDEANSISUPILARIT-KONYTDLS           ARITRKSSTVD-FALDEANSISUPILARIT-KONYTDLS           ARITRKSSTVT-FALDEANSISUPILARIT-KONYTDLS           ARITRKSSTVT-ALDEANSISUPILARIT-KONYTDLS           ARITRKSSTVT-ALDEANSISUPILARIT-KONYTDLS           ARITRKSSTVT-ALDEANSISUPILARIT-KONYTDLS           ARITRKSSTVT-ALDEANSISUPILARIT-KONYTDLS	5.5 5.6 5.6 5.6 5.6 5.6 5.6 5.6
C. capitata     c       C. capitata     c       H. sapiens     9       C. aydus     9       C. aydus     9       C. aydus     9       G. japonicas     18       P. vitticops     9       A. carolinensis     9       A. anisissippiensis     9       G. aydus     9       A. mississippiensis     9       G. aydus     9       A. mississippiensis     9       J. Puncrequaatus     9       P. nattereri     9       S. Salinocerouss     9       J. punctatus     9       J. punctatus     9       J. autitum     9       A. autitum     9       A. autitum     9       A. autitus     9       O. nilotic     9       O. nilotic     9       A. Loregaltus     9       A. Loregaltus     9       A. Loregaltus     9       A. Loregaltus     9       A. longonangliae     9       A. nullepora     20       G. faveclata     9       S. honovaengliae     9       A. cologicaa     9       A. cologicaa     9       A. cologicaa     9       B.	0        CSSDEETLSPHRMMD11XKHFLK0PDVRD-1WST           15        CSSDEETLSPHRMMD11XKHFLK0PDVRD-1WST           15        SANDSVSGTTSVRTLCEGOVRQAVVPDV           10        GRANDERTSVRTLCEGOVRQAVVPDV           11        GRANDERTSVRTLCEGOVRQAVVPDV           13        GRANDERTSVRTLCEGOVRQAVVPDV           14        GRANDERTSVRTLCEGOVRQAVVPDV           15        GRANDERTSVRTLCEGOVRQAVVPDV           17        BRANDERTSVRTLCEGOVRQAVVPDV           17        BRANDERTSVRTLCEGOVRQAVVPDV           17        BRANDERTSVRTLLEGOVRQAVVPDV           17        BRANDERTSVRTLLEGOVRQAVVPDV           17        BRANDERTSVRTLLEGOVRQAVVPDV           16        BESFADOXFSPANDLSEOVRQAVVPDV           16        BESFADOXFSPANDLSEOVRQAVVPDV           16        BESFADOXFSPANDLSEOVRQAVVPDV           16        BESFADOXFSPANDLSEOVRQAVPPDV      <		J EQV/SRLFAVURING-YSEJCX/THEAL-SYTUTINU/N TYPOMAGGOSTVLTAALIXE-SLEECFPGQYMA/SUGX YVPOMAGGOSTVLTAALIXEBB-LLTECFPGQYMA/SUGX YVPOMAGGOSTVLTAALIXEBB-LLTECFPGQYMA/SUGX YVPOMAGGOSTVLTAALIXEBB-LLTECFPGQYMA/SUGX YVPOMAGGOSTVLTAALIXEBB-LLTECFPGQYMA/SUGX YVPOMAGGOSTVLTAALIXEBB-LLTECFPGQYMA/SUGX YVPOMAGGOSTVLTAALIXEBB-LLTECFPGQYMA/SUGX YVPOMAGGOSTVLTAALIXEBB-LLTECFPGQYMA/SUGX YVPOMAGGOSTVLTAALIXEBB-LLTECFPGQYMA/SUGX YVPOMAGGOSTVLTAALIXEBB-LLTECFPGQYMA/SUGX YVPOMAGGOSTVLTAALIXEBB-LLTECFPGQYMA/SUGX YVPOMAGGOSTVLTAALIXEBB-LLTECFPGQYMA/SUGX YVPOMAGGOSTVLTAALIXEBB-LLTECFPGQYMA/SUGX YVPOMAGGOSTVLTAALIXEBB-LLTECFPGQYMA/SUGX YVPOMAGGOSTVLTAALIXEBB-LLTECFPGQYMA/SUGX YVPOMAGGOSTVLTAALIXEBB-LLTECFPGQYMA/SUGX YVPOMAGGOSTVLTAALIXEBB-LLTECFPGQYMA/SUGX YVPOMAGGOSTVLTAALIXEBB-LLTECFPGQYMA/SUGX YVPOMAGGOSTVLTAALIXEBB-LLTECFPGQYMA/SUGX YVPOMAGGOSTVLTAALIXEBB-LUXCFPGQYMA/SUGX YVPOMAGGOSTVLTAALIXEBB-LLTUACFPGQYMA/SUGX YVPOMAGGO	X00-minite         350	<ul> <li>C.Capitota</li> <li>C.Capitota</li> <li>C.Capitota</li> <li>C.Capitota</li> <li>G.Raylas</li> <li>G.Raylas</li> <li>G.Raylas</li> <li>G.Raylas</li> <li>G.Raylas</li> <li>G.Raylas</li> <li>A.Carolinensis</li> <li>P.Vittieps</li> <li>A.Carolinensis</li> <li>A.Sarolinensis</li> <li>G.Rayna</li> <li>A.Carolinensis</li> <li>G.Rayna</li> <li>A.Carolinensis</li> <li>G.Rayna</li> <li>G.Rayna<!--</td--><td>257 291 291 291 291 291 291 291 293 293 293 293 293 293 293 293 293 293</td><td>ALLLATY-NILDIPOSED</td><td></td><td>ALLUTINNOVYSOSPDKORSTITLALTSQLTARE           ARILRISSSTUTEALDEANSISVENLARDKONYTOLS           ARIZONSSTUTEALDEANSISVENLARDKONYTOLS           ARIZONSSTUTALDEANSISVENLARDKONYTOLS           ARIZONSSTUTALDEANSISVENLARDKONYTOLS           ARIZONSSTUTALDEANSISVENLARDKONYTOLS           ARIZONSSTUTALDEANSISVENLARDKONYTOLS           ARIZONSSTUTALDEANSISVENLARDKONYTOLS           ARIZONSSTUTALDEANSISVENLARDKONYTOLS           ARIZONSSTUTALDEANSISVENLARDKONYTOLS           ARIZONSSTUTALDEANSISVEN</td><td>5.55 387 387 387 387 387 387 387 387</td></li></ul>	257 291 291 291 291 291 291 291 293 293 293 293 293 293 293 293 293 293	ALLLATY-NILDIPOSED		ALLUTINNOVYSOSPDKORSTITLALTSQLTARE           ARILRISSSTUTEALDEANSISVENLARDKONYTOLS           ARIZONSSTUTEALDEANSISVENLARDKONYTOLS           ARIZONSSTUTALDEANSISVENLARDKONYTOLS           ARIZONSSTUTALDEANSISVENLARDKONYTOLS           ARIZONSSTUTALDEANSISVENLARDKONYTOLS           ARIZONSSTUTALDEANSISVENLARDKONYTOLS           ARIZONSSTUTALDEANSISVENLARDKONYTOLS           ARIZONSSTUTALDEANSISVENLARDKONYTOLS           ARIZONSSTUTALDEANSISVENLARDKONYTOLS           ARIZONSSTUTALDEANSISVEN	5.55 387 387 387 387 387 387 387 387
C. capitata     c       H. sapiens     G       G.pallus     G       C. mydss     G       G. palotas     B       G. japonicas     10       G. japonicas     10       P. vitticops     9       A. carolinensis     9       J. Divititutos     9       O.hannah     9       G. apadeticus     9       G. apadeticus     9       G. apadeticus     9       J. mucrosquamatus     9       A. mississippiensis     9       S. rhinocerousus     9       J. Punctataus     9       P. nattererii     9       J. Jainiana     9       J. Lucus     9       J. Jainiana     9       J. apectinifera	0        CSSDEETLSPHRMMD11XKHFLK07DVRD-1WST           15        CSSDEETLSPHRMMD11XKHFLK07DVRD-1WST           15        SADS VSGITSYNRTNLCEGOVRQAVVVPV           10        GRANDERTSYNRTNLCEGOVRQAVVVPV           10        GRANDERTSYNRTNLCEGOVRQAVVVPV           10        GRANDERTSYNRTNLCEGOVRQAVVVPV           10        GRANDERTSYNRTNLCEGOVRQAVVVPV           10        GRANDERTSYNRTNLCEGOVRQAVVPVV           11        GRANDERTSYNRTNLCEGOVRQAVVPVV           11        GRANDERTSYNRTNLCEGOVRQAVVPVV           11        GRANDERTSYNRTNLCEGOVRQAVVPVV           12        GRANDERTSYNRTNLCEGOVRQAVVPVV           13        GRANDERTSYNRTNLCEGOVRQAVVPVV           14        GRANDERTSYNRTNLCEGOVRQAVVPV           15		I EEV/SRLFAVURIKO-TSEICK/TREAL-SYDYUNUN TUYKOMSCGKSVLAAEA/RDH-SILECCFPGGYMA/SVGK TYYKOMSCGKSVLAAEA/RDH-SILECCFPGGYMA/SVGK TYYKOMSCGKSVLAAEA/RDH-RILECCFPGGYMA/SVGK TYYKOMSCGKSVLAAEA/RDH-RILECCFPGGYMA/SVGK TYYKOMSCGKSVLAAEA/RDH-SILECCFPGGYMA/SVGK TYYKOMSCGKSVLAAEA/RDH-SILECCFPGGYMA/SVGK TYYKOMSCGKSVLAAEA/RDH-SILECCFPGGYMA/SVGK TYYKOMSCGKSVLAAEA/RDH-SILECCFPGGYMA/SVGK TYYKOMSCGKSVLAAEA/RDH-SILECCFPGGYMA/SVGK TYYKOMSCGKSVLAAEA/RDH-SILECCFPGGYMA/SVGK TYYKOMSCGKSVLAAEA/RDH-SILECCFPGGYMA/SVGK TYYKOMSCGKSVLAAEA/RDH-SILECCFPGGYMA/SVGK TYYKOMSCGKSVLAAEA/RDH-SILECCFPGGYMA/SVGK TYKOMSCGKSVLAAEA/RDH-SILECCFPGGYMA/SVGK TYKOMSCGKSVLAAEARRH-AL LECCFPGGYMA/SVGK TYKOMSCGKSVLAAEARRH-AL LECCFPGGYMA/SVGKK TYKOMSCGKSVLAAEARRH-AL LECCFPGGYMA/SVGK TYKOMSCGKSVLAAEARRH-AL LECCFPG	0.0         SIG LINE           0.0         SIG LINE           0.0         SIG LINE           0.0         K64, LINE           0.0         K70, LINE           0.0         K70, LINE           0.0         K70, LINE           0.0	<ul> <li>C.Capitota</li> <li>C.Capitota</li> <li>C.Capitota</li> <li>C.Capitota</li> <li>G.Capita</li> <li>G.Capita</li></ul>	257 291 291 291 291 291 291 291 291 293 293 293 293 293 293 293 293 293 293	ALLLY THE UNE OF SECTION OF SECTI		ALLUTINNOVYSOSPDKORSTITLALTSQLTARE           ARILMSSSYIDEALDEANSISVENLARDKONYTDLS           ARINSSSYIDEALDEANSISVENLARDKONYTDLS           ARINSSSYIDEALDEANSISVENLARDKONYTDLS           ARINOSSYIDEALDEANSISVENLARDKONYTDLS           ARINSSSYIDEALDEANSISVENLARDKONYTDLS           ARINSSSYIDEALDEANSISVENLARDKONYTDLS           ARINSSSYIDEALDEANSISVENLARDKONYTDLS           ARINSSSYIDEALDEANSISVENLARDKONYTDLS           ARINSSSYIDCALDEANSISVENLARDKONYTDLS           ARINSSYSYIDALDEANSISVENLARDKONYTDLS           ARINSSYSYIDALDEANSISVENLARDKONYTDLS           ARINSSYSYIDALDEANSISVENLARDKONYTDLS           ARINSSYSYIDALDEANSISVENLARDKONYTDLS           ARINSSYSYIDALDEANSISVENLARDKONYTDLS           ARINSSYSYIDALDEANSISVENLARDKONYTDLS           ARINSSYSYIDALDEANSISVENLARDKONYTDLS           ARINSSYSYIDALDEANSISVENLARDKON	5,5,5,5,5,5,5,5,5,5,5,5,5,5,5,5,5,5,5,
C. Capitata     0       H. Sapiens     9       G.pallus     9       C.mydas     9       C.mydas     9       C.picta belli     9       G.japonicas     10       P.vitticops     9       A.carolinensis     9       D.namah     9       A.mississippiensis     9       G.panetrus     9       G.panetrus     9       A.mississippiensis     9       C.porous     9       S.nthäme     9       P.atterenus     9       A.mississippiensis     9       C.variagatus     9       P.latiginna     10       P.attereri     9       O.nilotic     9       O.nilotic     9       A.timaeus     9       A.tintae	0        CSSDEETLSPHRIMPD1IXGHFLK07DVRD-1WST           15        GADSVEGTTSYNRTNLCEGOVRQAPVVPVT           15        GADSVEGTTSYNRTNLCEGOVRQAPVVPVT           16        GASNEDERTSYNRTNLCEGOVRQAPVVPVT           17        GANADERTSYNRTNLCEGOVRQAPVVPVT           10        GANADERTSYNRTNLCEGOVRQAPVVPVT           10        GANADERTSYNRTNLCEGOVRQAPVVPT           11        GANADERTSYNRTNLCEGOVRQAPVVPT           12        GANSDOCTSYNRTNLCEGOVRQAPVVPT           12        GANSDOCTSYNRTNLCEGOVRQAPVVPT           13        GASSDOCTSYNRTNLCEGOVRQAPVVPT           14        GANADERTSYNRTNLCEGOVRQAPVVPT           15        GANSDOCTSYNRTNLCEGOVRQAPVVPT           15        GANSDOCTSYNRTNLCEGOVRQAPVVPT           17        GANSDOCTSYNRTNLCEGOVRQAPVVPT           17		J EEV/SRLFAVURIND-YSEICX/FIEAL-SYDYUNUN TUHAMACGKSVLAAEA/RDH-SLLECCFPGQYMA/SVGX TUYAMACGKSVLAAEA/RDH-SLLECCFPGQYMA/SVGX TVYAMACGKSVLAAEA/RDH-LLECCFPGQYMA/SVGX TVYAMACGKSVLAAEA/RDH-RLLECCFPGQYMA/S	0.0         SGLUMOL         350           0.0         SGLUMOL <td< td=""><td><ul> <li>C.Capitota</li> <li>C.Capitota</li> <li>C.Capitota</li> <li>G.Capita</li> &lt;</ul></td><td>257 291 291 291 291 291 291 291 293 293 293 293 293 293 293 293 293 293</td><td>ALLLY THAT IN THE PERAMINANY AND STIDE TALLS SECURITY AND SECURITY AND</td><td></td><td>ALLUTINNOVYSOSPDKORSTITLALTSQLTARE           ARIANSSSTVDEALDEANSISVENLARDKONYTOLS           ARIANSSSTVDALDEANSISVENLARDKONYTOLS           ARIANSSSTVDALDEANSISVENLARDKONYTOLS           ARIANSSSTVDALDEANSISVENLARDKONYTOLS           ARIANSSSTVDALDEANSISVENLARDKONYTOLS           ARIANSSSTVDALDEANSISVENLARDKONYTOLS           ARIANSSSTVDALDEANSISVENLARDKONYTOLS           ARIANSSSTVDALDEANSISVENLARDKONYTOLS           ARIANSSSTVDALDEANSISVENLARDKONYTOLS           ARIANSSSTVDALDEANSISVENLA</td><td>5,5,5,5,5,5,5,5,5,5,5,5,5,5,5,5,5,5,5,</td></td<>	<ul> <li>C.Capitota</li> <li>C.Capitota</li> <li>C.Capitota</li> <li>G.Capita</li> &lt;</ul>	257 291 291 291 291 291 291 291 293 293 293 293 293 293 293 293 293 293	ALLLY THAT IN THE PERAMINANY AND STIDE TALLS SECURITY AND		ALLUTINNOVYSOSPDKORSTITLALTSQLTARE           ARIANSSSTVDEALDEANSISVENLARDKONYTOLS           ARIANSSSTVDALDEANSISVENLARDKONYTOLS           ARIANSSSTVDALDEANSISVENLARDKONYTOLS           ARIANSSSTVDALDEANSISVENLARDKONYTOLS           ARIANSSSTVDALDEANSISVENLARDKONYTOLS           ARIANSSSTVDALDEANSISVENLARDKONYTOLS           ARIANSSSTVDALDEANSISVENLARDKONYTOLS           ARIANSSSTVDALDEANSISVENLARDKONYTOLS           ARIANSSSTVDALDEANSISVENLARDKONYTOLS           ARIANSSSTVDALDEANSISVENLA	5,5,5,5,5,5,5,5,5,5,5,5,5,5,5,5,5,5,5,

H.sapiens	388	ILQKØVKVPTKVLCILVØMETEEVEDILQEF-VNKSLLFCDRNGKSFRYYLHDLQVDFLTEXNCSQ-LQDLHKKIIT	FORYHOPHTLSPD	QEDOMYWYNF	486 H.sapiens	587	EVDINGHLYLEKINKWNTINL-SRLWRPHTDAVYHACFSEDGQRIASCGADKTLQVFKAETGEKLLEIKAHEDEVLCCAFSTDDRFTATCSVD 678
G.gallus C.mvdas	388 488	ILPKDVKVPTKVLCILVDMETEEVEDILQEF-WKSLLFCDRWGNSFHYYLMDLQLDFLTEXNONQ-LQELHKNIW VLOKDVKVPTKVLCILVDMETEEVEDILQEF-WKSLLFCDRWGKSFHYYLHDLOLDFLTEXNONQ-LQELHKKIW	IYKRYYKLHVPVLS IYMKHYOLHIPTPA	QEDCHYWYNF QEDCHYWYNF	486 Gigallus 586 Cimvdas	587 607	ERENTERYLENDNKKSURAL-SRUWRPHRDAVYHACFSRDRENTASCGAUKTLQVFKAESGERLLEISAHDDELLCCTFSADDKYNATCSAD 676 EIKGAFYLENDNKKSNRAL-SRUWRPHTDAVYHACFSRDGRIASCGAUKTLQVFKAESGERLEISAHDDEVLCCTFSADDKYNATCSAD 678
C.picta bellii	388	VLQKDVKVPTKVLCILVDMETEEVEDILQEF-WKSLLFCDRNGKSFHYYLHDLQLDFLTEN/CDQ-LQELHKKIW	YKKHYKLHIPTPA	QEDCMYWYNF	485 C.picta bellii	587	ELKGAFYLEKDHKKSHGAL-SRLWRPHTDAYYHACPSKDGQRIASCGADKTLQVFKAKSGEKLLEIKAHDDEVLCCAFSADDRYVATCSVD 678
G.japonicas P.vitticeps	391 388	VILOKDIKVPSKVFCILVOMETEEAEDILOEF-INKSLLFCDRWGKSFRYYLHDLOLDFLTERNRSQ-LOELHKKAVH VILOKDVKVPSKVFCILVOMETEEVEDILOEF-INKSLLFCDRWGKSFHYYLHDLOLDFLTERNHGO-LOTLHKKVVH	PYKRHYKHSVPNPS PYKRHYKDYVPTST	QEDCHYWYNF QEDCIYWYYF	489 G.japonicas 485 P.vitticeps	590 587	ECAKGSLYVEKIDIKKSMKNI-YRLVKPHKDAYYMACFSQDRKRIASCGSDKTLQIFKAESGKLLEVKAHDOEVLCCAFSADDKFVATCSAD 681 ELAKGSFYVEKIDIKKSJKNI-YRLVKPHTDAYYMACFSQDRKRIASCGADKTLQIFKAESGEKLLEVKAHDOEVLCCAFSADDKFVATCSAD 681
A.carolinensis	388	VLQKDVKVPSKVFCVLVDIETEEAEDILQGF-VNKSLLFCDRNGKSFHYYLHDLQLDFLTENNRDQ-LQALHKKVVH	YXNHYAQYMPNST	QEOWIYWYNF	485 A.carolinensis	587	GLDXGSSFYVEMMIKQSIXUT-YRLWRPHTDA/YHACFSQDPHRIASCGADKTLQIFKAESGEKLLEVKAHDDEVLCCSFSADDRFVATCSAD 678
P.bivittatus O.hannah	387 384	VFQKDVKVPSKVFCILWOMETEEVEDILQEF-WWKSLLFCDRWGKSFCYYLHOLQLDFLMERWCCQ-LQELHKKVVM VLOKDVKVPSKVFCILWOMEIEEVEDILQEF-WWKSLLFCDRWGKSFCYYLHALQLDFLMERWRSE-LOOLHKKVVM	FKKYYKCYMPIPS FKKYYKCYIPISS	DEDCHYWYNF EEDCTYWYNF	485 P.bivittatus 482 O.hannah	585 583	ELVEXDSFYVEXDNKTSVKNN-YRLVYHPHTDAYYNACFSQDQRVASCGADKTLQVFKTESGEXLLEIXAHDOEVLCCAFSVDRFLATCSVD 677 EISKDSLYVEXDNKTSVKNN-YRLVYHPHTDAYYNACFSQDBRILATCGADKTLQFKTESGEXLLEIXAHDOEVLCCAFSVDRFLATCSVD 677
P.mucrosquamatus	388	VLOKOVKVPSKVFCILVOMETEEVEDILQEF-WKSLLFCDQNGKSFCYYLHALQLDFLMERNRRE-LQELHKKVVM	FKKYYKYNIPISS	EEDOHYWYNF	486 P. mucrosquanatus	587	ELSKGSLIVEXDNKTSWSM-YRLWHPHTDAYYNACFSQDHQRIATCGADKTLQVFKTESGEKLLEWAHDOEVLCCAFSHDDRFLATCSHD 678
C.porosus	388 388	ILPROVINY IXVECILIAUREP*****EEVEDINGEF*WASLLF***CORAXS***HTTCHOLQLDFLERAREQ*LQELREALVA ILPROVINYPTKVFCILIAUREP****EEVEDINGEF*WASLLF***CORAXS**FHYYLHOLQLDFLIERAREQ*LQELHEKTVA	YKKHYKLCIPTPG	EEDONYWYNF	486 A.MISSISSIPPIENSIS 486 C.porosus	587 587	EV======UKGAF===VEHDI=====KORKAL=SKLVKKPHTDAVYKACFSDD===GKLASCGAUKTLQV==FKAETGEKLQXEARD=OEVLYCAL===SPDGKFLATCSAD 6/7 EV======CKGAF===VEHDI=====KORKAL=SKLVKRPHTDAVYKACFSDD===GKLASCGAUKTLQV==FKAETGEKLQXEARD=OEVLYCAL===SPDGKFLATCSAD 6/7
G.gangeticus D.cocio	388	ILPKDVKVPTKVFCILVDMEPEEVEDIQQEF-VNKSLLFCORNGKSFHYYLHOLQLDFLIENNREQ-LQELMEKIVK INNYNTIONANN SYLVEI EIEEVENNINGE INNYSLLFCORNGKSFHYYLMOLQLDFLIENNREQ-LQELMEKIVK	WOREY RLCIPTPG	EEDCMYWYNF	486 G.gangeticus	587	EVDKGAFYVEXIDIKØRQIL-SRUWRPHTDAVYHACFSQDGKIASCGADRTVQVFKAETGEKLQSVEAHDDEVLYCALSPDGRFTATCSAD 677 PAGKCAFYVEXIDIKØRQIL-SRUWRPHTDAVYHACFSQDGKIASCGADRTVQVFKAETGEKLQSVEAHDDEVLYCALSPDGRFTATCSAD 677 PAGKCAFYVEXIDIKØRQIL-SRUWRPHTDAVYHACFSQDGKIASCGADRTVQVFKAETGEKLQSVEAHDDEVLYCALSPDGRFTATCSAD 677 PAGKCAFYVEXIDIKØRQIL-SRUWRPHTDAVYHACFSQDGKIASCGADRTVQVFKAETGEKLQSVEAHDDEVLYCALSPDGRFTATCSAD 677 PAGKCAFYVEXIDIKØRQIL-SRUWRPHTDAVYHACFSQDGKCAFGEKLQSVEAHDDEVLYCALSPDGRFTATCSAD 677 PAGKCAFGKCAFGEKLQSVEAHDDEVLYCALSPDGRFTATCSAD 677 PAGKCAFGEKLQSVEAHDGKCAFGEKLQSVEAHDGKCAFGEKLQSVEAHD
S. rhinocerousus	390	VMQKDIKVPAKILSVLWGLELEEVEDILQEF-WKSLLFRDCNQRPYHYYLHDLQLDFLVEQNRDQ-IAELHKKMIR	YQKFYNERPPSSG	OIDCLYWYRF	488 S.rhinocerousus	589	RASRGQLCLDMV5KNNQDSL-SRLWHPQQGSYYYACF5KDGSKTASCGANKALRVFKTTSGEKLLELQAHDEDVLCCAFSPDDRYTATCSSD 680
S.grahan P.nattereri	390 398	VMQKDIKVPAKVLSVLWGLELEEVEDILQEF-VWKSLLFRDCWQRPYHYYLHDLQLDFLVEQNRDQ-IAELHKW1IR VLEKDVKVPAKVLSVLWGKELEDVEDVLOEF-VWKSLLFRDCNQRPYLYYLHDLOLDFLTEQNRSO-LAELHSKVTR	IYQQFYNERPPSSG IYOQAYSKGLPTSV	DIDCLYWYRF DVECLYWYRF	488 S.grahan 488 P.nattereri	589 589	RASRGQLCLDMWKNNQDSL-SRLWHPHQGSYYYACFSKDGSKIASCGANKALRVFKTTSGEKLLELQAHDEDVLCCAFSPDDKITATCSSD 680 RANRGQLYLDMMKSNDESL-SRLWLPHQUSYYYACFSRDGSKIASCGAKTLRVFKSTSGEKLDETLAHDDEVLCCAFSPDDKITATCSSD 680
A.mexicanus	390	VLEKDVKVPAKVLSVLVDLELEEVEDVLQEF-WKSLLFRDCNQRPYMYFLHDLQLDFLTEQNRSQ-LAELHGKVVR	YQQAYAKGPPTSA	OVEGLYWYRF	488 A.mexicanus	589	RASRGQLYLDMMKSOVESL-SRLVLHPHQH5LYYSCFSRD6SKIASCGASKTLRVFKSNSGEKLQEIPAHDDEVLCCAFSPDDRHTATCSSD 680
E.lucius	487	TLENDYKYPANYLSYLWOLELEEVEDYLQEF-WKSLLFRUHWARFTLTFLHOLQLDFLTEQNKSQ-LAELHHAVYL YLEKDYKYPAKYLAYLWOLEPEEVEDYLQOF-WKSLHYRDCHORPYLYYLHOLQLDFLAEHWRSC-LEOLHTKYVC	PYOKHYSQGPPTSG		505 E.lucius	607	CASKALTVUWWKSSLESL-SKLVUPHWSYTTACFSM2GSKLASGGSSKTLRVFISISGEKLRELQARDDEVLCAFSPDRULATCSSD 000 RASKLASGGSSKTLRVFISISGEKLRELEAHEDEVLCAFSPDRULATCSSD 000
S.salar P.latininna	397	VILEKDVRVPAKVLSVLVDLEPEEVEDVLQOF-VNKSLLFRDCHRPVLYVLHDLQLDFLAENNRSD-LESLHTKVVR VROKTVVLDRKTLCVLVDLEPEEVEDVLQOF-VNKSLLFRDCHRPAVLYVLHDLQLDFLAENNRSD-LESLHTKVVR	YQQRYSQGPPTSG	DEECLYWFRF	495 S.salar	595 507	RATRGGLYLOMINKSSLKSL-SRLWQPHQGSTYAACFSHDGTKTASCGSKTLRNFKSTSGEXLLETQAHDOEVLCCAFSPD0RLLATCSSD 687 PDRGGLYLOMINKSSLKSL-SRLWQPHQGSTYAACFSHDGTKTASCGSKTLRNFKSTSGEXLLETQAHDOEVLCCAFSPD0RLLATCSSD 687 PD
X.maculatus	393	VLQKDVKIPAKILCVLWDLEPEEVEDILQEF-WKSLLFVDNNSRLNLYYLHDLQLDFLVEQWRDQ-IESLHSKVW	INHHYREAAPTSG	DEGRLYWIRF	491 X.maculatus	592	PAFKIASKIYFELDIKRITIBNI-SRIVIMPHLGSTYSACFSHDGTKIASCGASKTLKVFKSTSGEKLIEIOAHDEEVLCCAFSPODHLATCSSD 683
C.variegatus P.nvererei	393 392	VILEKOVK IPAKVLSVLVDLEPEEVEDILQEF-VWKSLLFVORNSKPHLYYLHDLQLDFLVEHYRNQ-IESLHSKVVH VILOKOVK IPAKVLSVLVDLEPEEVEDILEEF-VWKSLLFVDNNSKPYLYYLHDLOIDFLLEONRTO-LESLHTKVVH	IYQHHYREAPPHSG IYOOHYRDGPPTSG	DEECLYWIRF DEESLYWIRY	491 C.variegatus 490 P.nvererei	592 591	RAKSGKLYFELDNKSSVENL-SRLVIHPHLGSTYSACFSHDGTKIASCGASKTLKVFKSTSGEKLSEIQAHDEEVLCCAFSPDGRLLATCSSD 683 RTKAGKLYFOLWNKSGVINL-SRLVIHPHDGSTYSACFSDDGTKIASCGASKTLKVFKSTSGEKLNEIPAHDDEVLCCAFSPDGRLLATCSSD 682
O.nilotic	392	VLOKOVKIPAKVLSVLVOLEPEEVEDILEEF-VWKSLLFHONNSKPYLYYLHOLOIDFLLEONRTO-LESLHTKVVR	YQQHYRDGPPTSG	OKESLYWIQY	490 O.nilotic	591	RTKAGKLYFOLWKSGV0NL-SRLVIHPH0GS1YSACFS0DGTKIASCGASKTLKVFKSTSGEKLMEIPAHDDEVLCCAFSPDGRLLATCSSD 682
A.limaeus	392 392	YLEKDIX IPAKYLSYLKOLEPEEYEDILEEF-WKSLLPYUSHNKPLLYTLHOLQLDFLYEQNKIQ-LESLHSKYVQ YLEKDIX IPAKYLSYLKOLEPEEYEDILEEF-WKSLLFYUSHNKPYLYTLHOLQLDFLYEQNKTQ-LESLHSKYVY	MOGHYKDGPPTSG	DEECLYWIRF	490 Libergylta 490 Allinnaeus	591 591	RASKIALITRUMURKESVEGL-SKLYLIPHIQS I TSALFSHDGAKLASUGASKI UNIFKSTSGEKLTELIANDDEVLCAFSPORILLAICSSD 682 RTSKIALITRUMURKSSVESL-SRLYLIPHIQS I TSALFSHDGAKLASUGASKI UNIFKSTSGEKLTELIANDDEVLCAFSPORILLAICSSD 682
S.partitus	392	VLEKDIKVPAKVLSVLVDLEPEEVEDILQEF-VDKSLLFVDSHNKPYLYYLHDLQLDFLVEQNRTQ-LEILHSKVM	YQQHYRDGPPTSG	OEECLYWIRF	490 S.partitus	591	RTSMGKLYEOLWIKSSVENL-SRLVTIHPHQGSTYSACFSHDGTKVASCGASKTLKVFKSTSGENLTEIDAHEDEVLCCAFSPDDHLLATCSTD 682
N.kuhntae	392	rtexdia.1PAArt.Sit.witereeredit.eer-wikst.tid.hkk/rit.tr.but.du/pr.rediki.wi-text.hkvvv Vitexdvik.1PAKvt.Svt.woleteeredit.eer-wikst.trvoshkk?ht.Yvt.hol.qloft.teokkaQ-tost.htkvvk	YQQHYRDIPPTSG	RF	490 N.kuhntae	591	Q4======700KL===PK0UE===RSVESL=STLVIHPHQ6FIYSACFSHD===GKVATCGASKTLKV===FKSTSGEKLAEIQAHE==EVLCCAF===TYDORLIATCSSD 682
A.striatum K.marmoratus	392 398	VLEKOVK IPAKVLSVLVDLELEEVEDILKEF-VWKSLLFVDSKNKRHLYYLKDLQLDFLLEQNRDQ-IESLKTKVVR VLEKOVK IPAKVLSTLVDLEPEEVEDILOEF-VWRSLLEVDIKSKPHLYYLKDLQLDFLVEQNRDQ-IESLKKVVN	YQQHYKDGPPTSG IYONHYRDGPPTSG	DEECLYWIRF	490 A.striatum 488 K.marmoratus	591 589	RAKGGKIYFOLINKSSVDSL-SRLVTHPHQGFTYSACFSHDGTKVASCGTSKTLKVFKSTSGEKLTETQAKEEEVLCCAFTADORLTATCSSD 682 RAKGGKIYFOLWIKSSVDSL-SRLVTHPHQGFTYSACFSHDGTKVASCGASKM KVFKSTSGERLAFTLAHDEEVLCCAFSSDGL
L.oculatu	390	VLEKDVRVPVKVLSVLWDLEPEEVEDILQEF-VWKSLLFRDSNKTPYLYYLHDLQLDFLTEQNRYR-IQELHSXVVH	YÚKYYKNAHPTAG	RY	488 L.oculatu	589	EARGGAFYLDMINKSSLESL-SRLIVQPHCGSTYYACFSRDGEXIASCGATRTVQVFRSYTGEXVLDTVAHEEEVLCCAFSPE0KLIATCSTD 680
C.orientalis X.laevis	387 388	VIXXDMKVPTQVLSLLVOMETEEYEEMLQEF-VWKSLLFCDRWGKTFMYYLHDLQLDFLTEQNRHQ-LRALHAKVVH IIEKDVKLPTQVLCILVOMEREDVEDMMOEF-VWKSLIYCDRWGKSFSYYLHDLQLDYLTERNROR-LTVLHAKLVO	IYQKHYSKNLSSSF IYKKHYSSKLPTVE	QEONHYWYNY QEDCVYWYHY	485 C.orientalis 485 X.laevis	585 587	NLNGGULYIDIANRAVAQAH-TSLVVRPHTDGYYNACFSPDGRIASCGADKTLQVFKTETGENLLSVLAHDOEVLCCAFSADGEVATCSV0 677 ELKSGVLYVAKIDNKORMXUL-PTLVVRPHXDAVFMACFSPDGRXFASCGADKTLQVFRSETGEKLLELEAHDOEVLCCAFSADEKLLATCSAD 678
A.millepora	494	LFDEDSKVPAQVLCILWEEEFEVVEDMEEL-WKSLAKINVKSEDVTETFYSTHNLQLTFLIEQTKDKSLEALHKKLVD	LYGKVYKEKFSOMI	00GYTHMN	593 A.millepora	694	TTATGSFYLDMSNORMESQDT-LLITVMHIGAVYCOPFSQDASKVVSCGADKTVKVMESUSGKQLLSHDGHSOV/HCCSFSSDDARTVSCSAD 786
0. Taveolata N.vectensis	495	TPREESKYPAQVLCILWREPEVVEDMEDL-WRSLARKIVISUUITGINTSYPNLQLIPLUEQAIDLQALHKALVU LFDOGSKYPAQVLCILWDEELEIVEDLMDEL-WRSLARKCVQSQDALGISYSIHNLQLAFLQELSTDKVALHAKIID	LYRDVYGGTGGKFOVME	NUGY [HilN	475 N.vectensis	577	LAGEGALTLINSNGREESGDI-LLTIVKHQBAVTCUPSQDISKVVSCBAUANKVREGGAELLSLTIKSOAVTCAFSKOARLYSCSRD LTKQGKNYTEHCNGRADTLDSRLLTIAKVHCGAVYCCNFSSDSSKWSCGTUNHKVM9S(SGRQLLSISGKG-OVMICAFSHD0SRIISCSAD 670
S.kowalevskii	392	LEDESTRVPASVLSILVDEEIEIVEDTMLEL-WIKSLAMQI-YDKIOKCYRYSVHNLQLOVLVKECPDIAALHRWLW	MHKSCNONYHQLK	Y	489 S.kowalevskii	590	KPOLFYUMSNKENFSYA-CLLTNKVHOAVXKCAQFSCCQKWVSCSGDKTWKVNDSQSGDEYLSLEGHTDPANKCFSPOCTNVASCSD0 679
S.purpuratus	394	IF DAGINESSING SITE REEDITEFTEDDILLAC-MINISCHING - MUDILLAC-HIST FIND ALLOF INDISENOFENDALISS IF AEDINP IPASVL GUNHGE EQESTEDIMEET - INKSLAFQE-INITYKCQMYTTHOLQLOF ITEDIXOD ID AND ALLOF	FHSHCKSEYHTLP	ODGYTHMY	492 S.purpuratus	593	KQNGFYVENOHKYLVRDS-LUKTINTPHSGYTIKAAPINAAGRIALSCGEDGYKFKSSESGKQAFSTEAHN-AWAMKCETSPDGQTINTCSSS 682
E.mexicana B.terrestris	384	IFREDWNITPOTLEILWEGCPFOVEEMMLDL-CHKSLAAXQ-MNDELKSYTYGNHDLLCHLRKKFSKDELTEMHKSLTE Terefynnitpott eti wggspfoveemm dv-cwcsi aaxy-maet rsytygnhu Li chi rikresegei vennissi te	CYRKYCNGDESKLP CYRKYCNGDESKLP	ADNYSYSY	483 E.mexicana 483 E.terrestris	591	RSICTLYVFMXKLG0KDIPIG5EPISTETHTSCFTSDSNLTLIGRETGETFLMOSTYKR0-OVFSGHDRNSRDXCTVTSNEGDCFLSLODM 679 R
M.quadrifasciata	382	IFREDVNITPOTLEILWEGRPFOVEEIMLDL-CHKSLAAKO-WISELRTYTYGVHOLLLCHLRKKCSOVLIOMHKSLIE	ORKYC-NONFSKLP-	TUNYIYSY	481 M.quadrifasciata	589	RSKYLYVFH0XKLR0MDMASSEDMTT0/HTLCFTHDPNLTLTQVGTGETFLMDSFCKRQ-SVFTGHDKSSSDXXTVTSNEGDCFLSLDDH 677
H.laboriosa D.novaeanoliae	269	YTLQILWEGCPFQYEEMMLDL-CHKSLAAKQ-WNDELRSYTYGVHDLLLCHLRKKFSKNELTKMHQSLIE VFSEDVN TTPQTLEILWGGG,FQYEEMMLEL-CHKSLAAKQ-WNNELHSYTYGHHDLLLCHLRKKFSEDQLVDHRSLIE	CYRKYCNDOFSKLP CYRKYCGGDFSKLP	ADNY IYSY	483 D.novaeaneliae	465	RSK0LYLFHXCRLGQPTPCSEETSTETTTCFAYDRDLTLTQXGSEETFLH0SYYXGU-KTPS6HXNSKDXLVTSNEEOCPLSLD0H 554 RSK0LYULHXCTNXCHDTPUSEENSTETCTSCFASDPELTLTQXGAGETFLNDSYXXBU-KTPS6HXXSSSDXCTTSNEEOCPLSLD0H 554
A.colonbicaa	388	IFCEDVNIASKTLEIFVRKOPLEVEEL/ILDL-OKKSLAARI-MNDLKTYIYGVHDLLLTHLRKORTODELVOMHKSVIE	CYRQYCNNDFSKLP	Y	479 A.colombicaa	587	RQEFLYLSHKKSSOYAWISLTEEIPRNICTSSFTNDPELVLTGNTSGKIILCDFQGKQR-KIPNGKGECSIXKIIVSMASDCFLSLSNA 675
F.arisanus	.585 392	IPREDVNTTPKTLETPNDQSTTUVEELALDL-LAKSLTAVA-WORDLKTTITVVHDLLLOHLAVA-THAALMQHHKSLTT IPSEDVNTSPKTTEILVGETTHSASEQMQEL-CHKSLAARQ-WIKELETYVFGVHDLLLCYLRAKLTPEQLSALHAVLTE	CYRVYCKGDFSKLP	TONYSESY	483 S.invicta 491 F.arisanus	598 598	Q======QRTL===TLSHEK===SHHLTP=LPPLT0ELSHWVCLSSFAND===P0FLLTWTSGKJLL==H0TWVGH=KLMGHEKSKLTK1TV(9)TSEEDFFVALN00 695
A.pisum B.mori	395	LEVEDLINTKPEVLISTLIMTIKPTEVEDIDISEL-MIKKSLIVIRA-MIQPLINSYVYSTHDLLLISMLKKMMKQDYKTLIMKKCTD	TROYC KINFANLP	Y	494 A.pisun	597	RTQLYFTYDIRPSOWMPEPHISTVROKTETVTFGRNDEVLIATNSGSTKLWITSOKCHTYNGHTKWTPHLWKNKUXNLFLSTSD 691
P.xylostella	485	ILPOWNKVSAKVLSKLWDKPTTDVEVIDKQL-RSKSLIIES-INQELRNYSYEVHDLDWVLRTCLSD0EDKU,HVEFSK	WYDTLDTCPLELV	ODGYIAFY	586 P.xylostella	615	RCRONELYFELLHEON/DEVXHSTID/XEP/INCVCFLG0YVL/WGTTGVIXVFHIPTINKLXKDLPSSGOPIX/M/IX(1)PSDALIVAALTSD 784
P_sachaon P_xethus	488	VILPONVKVSAKVLTKLWIRELTEVESTIKQL-RSKSLITEF-YDREQONYTYEVMVFD/DYLRTCV/DEED/XXLMBVFLK VILPONVKVSAKVLAKLWIRFLTEVESTIKOL-RSKSLITEF-YDREOCNYTYEVMVFD/DYLRTCV/DEED/XXLMBVFLK	WYSD-TSNPPLDIE	Y	500 P.machaon 500 P.muthus	607	NCKOIELYEELHEONVEEL-KHTTIDVTEITTAVCFLGUNLIGTDSGLIKFFNISTNIHEKELPGKGFSMON_GA(1)PM/PMVAALDSS 696 R
C.elegans	398	WMPPGVDIPVKLWSCVIPVDI(9)-DEVADRLKRL-SKRGALLS-	GKRMPVLTF-	KIDHIIHMF	463 C.elegans	517	
C.sinensis E.multilocularis	50/ 456	IPUSHIYUTPKWAALUWITUUWAEKLUGEP-WAPSLALKU-WYUTSUU-FUTUPSIQUULUKISIWHIMWATMAQPTM IFEONCSUTEOVYEIYWSCTKEEAVDTUQRU-HRPSUVQCR-RDOGSGRNFFSVPNLQLDULRTTVPTRRQQICHCQFVD	IYKARFGGQWNQLA		559 E.multilocularis	759	UNAACAASV(6)YWWRSNSNVARSU-LUNAIPTGT0A/TCLAVELPL0]NRPLGAATKUKNELLUAASUFENAMQUTSSOVEWAPSTLSNNTECLTCUSN 900 VDAAACAASV(6)YWWRSNSNSAOSE-LWNATRTGKDRITAIAHEVD(19)INRPLGTSDGRIIILUVTSGYEIAWRUNRPSVAWAISLLPGNDSCLSCGAO 880
D.melanogaster	374	VEPPSAHIPTILLSLIVEOVI(1)-SOVWVWWKL-HKYSLVEKQPKESTISIPSIYLELKVKLENEYALHRSIVO	INTER-TROSOULIPPY-	LDQYFYSH	470 D.melanogaster	584	FDDRVMFTNGRPHQ-HRQTDNLG0MEGRMAYYLMDFCLTALASGQTLL(3)SLEGEDTYLLR0ESDSSDTLRMMYRNQXMLTTLHOX 672 FD
B.cucurbitae	447	CEPHALITYVPOKLIAALWAARCEKDLOKL-YRHGYLEKE-ISPROEICYKQLFVYOKINAMEVTANDHMEMHRKLD	THEVE-DEARSEVEPTR	RHINDFYFFSC	551 B.cucurbitae	652	FPNEANFEONCCIQCHNILPLPSIPNXVLLDQERALIALSSAISL(6)/WITYSLKJKOPHK/KSNV/DIRF(2)ONAFHLALINN 742
C.capitata	458	<pre>CEPHAIPVPQQLIAALWFDOK(25) CIKDUAKL-HRHGFLEKC-ISPNDDICYKLPF1YDKMLGRYEATQVDGVYVMHRKLUA</pre>	MFVE-DLEARKEVLPFN	ROIHDVYFFLC	581 C.capitata	682	FPRFSUIDECHQRSNIISLPSIPRXILLLDQRRSLVALEQRADILL(b)WTYSVKLRITVKGKSTVIDIRF(2)DNAASILLALVDN 774
H.sapiens	487	LAYMASANNIKELCAUMFSLINTXAKTELVSPANLTHEFVEYHTILDEKOC-AYSEMFQEFLSUNGHLLGRQ-	PFPNIVOLGLCEP	PETSEVYQQAKLQAKQ	506 H.sapiens	679	KNKCINKSITGELINTT-GEHSEQVICCHTTISSHHLLLATGSSOCFLKLMOUNKECKNTRTGRTISSNIKGRTSPOOKLUSCS-406 765
H.sapiens G.gallus C.mydas	487 487 587	LANNASANKE(CAUPSLINTXKTELV)PAR_INEYEYRILDENC-AVSBIPGELSUNNLGND- LANNASANKEND-UPSLINTXKTELVPAR_INEYEYSIDD	PFPNIVOLGLCEP PFPDITQLGLCQP PFPNIIQLGLCQP	PETSEVYQQAKLQAKQ PETSEVYQQAKLQAQQ PETSEVYQQAKLQAQQ	506 H.sapiens 506 G.gallus 506 C.mydas	679 677 700	XXXCIMS0T0ELINT7-6E15E0MCCIFTnSSIILLLATISSSC7LKLMUURECRITMFGFINSWIG8FSROOLLASC5-UD6 765 XXXCIMS0T0ELINT-FEITIE0MCC90RB85PLILATISSSC7LKLMUURECRITROFMANISRFSSROOLLASC5-UD6 765 XXXCIMS0T0E
H.sapiens G.gallus C.mydas C.picta bellii	487 487 587 487	LAYPHNSAWRE(CLUPSLINTCACTELVSPARLINETVEYRHILDEROC-AVSDIPGET.SIMOLLOR- ANPHNCAMUT TOLVISSI INTCACTELVSPARLINETVEYSNID.CSROS-INTERPORTS SIMOL COR- ANPHNCAMUT	PFPNIVQLGLCEP PFPOITQLGLCQP PFPNIIQLGLCQP PFPNIIQLGLCQP	PETSEVYQQAKLQAKQ PETSEVYQQAKLQAKQ PETSEVYQQAKLQAQQ PETSEVYQQAKLQAQQ	506 H.sapiens 506 G.gallus 506 C.mydas 506 C.picta bellii	679 677 700 679	80KCM60T0E
H.sapiens G.gallus C.mydas C.picta bellii G.japonicas P.vitticeps	487 487 587 487 490 487	LAYMNSAWKE(CAUPSLINTCKKTELVPALIDEPVEYINTLDEROC-AVSDIPGETSINDLLOR- LAYMNSAWKE(CAUPSLINTCKKTELVPALIDEPVEYSINLDEROC-INVERIEFESINDLLOR- LAYMNSAWKE(CAUPSLINTCKKTELVPALIDEPVEYSINLDEROC-INVERIEFESINDLOR- LAYMNSAWKEROUSSLINTCKTELVPALIDEPVEYSINLDROT-INVERIEFESINDLOR- LAYMNSAWKEROUSSLINTCKTELVPALIDEPVEYSINLDROT-INVERIEFESINDLOR- LAYMNSAWKEROUSSLINTCKTELVPALIDEPVEYSINLDROT-INVERIEFESINDLOR- LAYMNSAWKEROUSSLINTCKTELVPALIDEPVEYSINLDROT-INVERIEFESINDLOR- LAYMNSAWKEROUSSLINTCKTELVPALIDEPVEYSINDLORROT-INVERIEFESINDLOR-	PFPNIVOLGLCEP PFPDITOLGLCOP PFPNITOLGLCOP PFPNITOLGLCOP PFPNITOLGLCOP PFPLDIVOLGLCOP	VETSEVYQQAKLQAKQ VETSEVYQQAKLQAQQ VETSEVYQQAKLQAQQ VETSEVYQQAKLQAQQ VEDSEVYRQAKLQAQQ VESSEVYRQAKLAALQ	586 H.sapiens 586 G.gallus 586 C.nydas 586 C.picta bellii 589 G.japonicas 589 P.viticeps	679 677 700 679 682 679	KINCDMSTT6ELIHTT-6EHEQMCCHTTRSSH-HLLLAT5SSCFLKLMOUR/EGMTREGRINSHIRAFSPOOLLJSCS-M06         765           KINCDMSTT6E
H.sapiens G.gallus C.mydas C.picta bellii G.japonicas P.vitticeps A.carolinensis P.bivittatas	487 487 587 487 498 487 487 485	LAYMASAWRE LGUNSLUNIGARTELVS PARLINEPYEYHILDERDC-AYSEMYEPLSUNGLLGRO- LAYMASAWRE LGUNSLUNIGARTELVS PARLINEYYEYSIND ERDS-THISHYEPLSUNGLGRO- MANNASAWRE LGUNSLUNIGARTELVS PARLINEYYEYSIND E	PFPNIVQLGLCEP PFPNITQLGLCQP PFPNITQLGLCQP PFNITQLGLCQP PFIDIVQLGLCQP PFIDIVQLGLCQP PFIDIVQLGLCQP	YETSEVYQQAKLQANO YETSEVYQQAKLQAQR YETSEVYQQAKLQAQQ YETSEVYQQAKLQAQQ YESSEVYRQAKLAQQ YESSEVYRQAKLAQQ YESSEVYRQAKLAQQ	585 H.sapiens 585 G.gallus 586 C.nydas 589 G.japonicas 589 P.viticeps 586 P.viticeps 585 P.kcarolinensis 55 P.bivitatus	679 677 700 679 682 679 679 678	KONCINKOTTGE
H.sapiens G.gallus C.mydas C.picta bellii G.japonicas P.vitticeps A.carolinensis P.bivittatus O.hannah	487 487 587 487 490 487 487 487 485 483	LANNASAMIKELCAUPSLINTXAKTELVPAR_DIEPETYINLDERDC-AVSBIPGELSUNOLLON- LANNASAMIKERDC-AVSBIPGETSUNOLLONRDC-AVSBIPGETSUNOLLON- LANNASAMIKE	PFPNIVQLGLCEP PFPDITQLGLCQP PFPNITQLGLCQP PFPNIVQLGLCQP PFPDIVQLGLCQP PSLDIVQLGLCQP PFLDIVQLGLCQP PFLDIVQLGLCQP	PETSEVYQQAKLQAXQ PETSEVYQQAKLQAXQ PETSEVYQQAKLQAQQ PETSEVYQQAKLQAQQ PESSEVYRQAKLQAQQ PESSEVYRQAKLQAQQ PESSEVYQQAKLQAQQ PENSEVYQQAKLQAQQ PENSEVYRQAKLQAQQ	586 H.sapiens 586 G.aylus 586 C.aylas 589 G.laponicas 589 P.utiteps 586 A.carolinensis 58 A.luttatus 58 A.luttatus	679 677 700 679 682 679 679 679 678 637	KUKLINGSTEG         LINTT-GENGEDVICC         HTRSSH-HLLLATISSSCFLKLAUUR/ECRITREGINAR/RFSREQULASCS-LIGE         765           KUKLINGSTEG         CLYV-FEHIEDVICC         PRIPRIS-HLLLATISSSCFLKLAUUR/ECRITREGINAR/RFSREQULASCS-LIGE         765           KUKLINGSTEG         LIVV-FEHIEDVICC         PRIPRISREQULASCS-LIGE         763           KUKLINGSTEG         LIVV-FEHIEDVICC         PRIPRISREQUEAL/SCS         766           KUKLINGSTEG         LIVV-FEHIEDVICC         PRIPRISEQUILASCS         766           KUKLINGSTEG         LIVV-FEHIEDVICC         PRIPRISREQUILASCS         766           KUKLINGSTEG         LIVV-FEHIEDVICC         PRIPRISPRICE/SCS         766           KUKLINGSTEG         LIVV-FEHIEDVICC         PRIPRISREQUILASCS         766           KUKLINGSTEG         LIVV-FEHIEDVICC         PRIPRISREQUILASCS         766           KUKLINGSTEG         LIVV-FEHIEDVICC         PRIPRISREQUILASCS         766           KUKLINGSTEG         LIVV-FEHIEDVICC         PRIPRISREQUILASCS         766           KUKLINGSTEG         LIVV-FEHIEDVICC         PRIPRIS
H.sapiens G.gallus C.mydas C.picta bellii G.japonicas P.vitticops A.carolinensis P.bivittatus O.hamah P.mucrosquamatus A.mississipoiensis	487 487 487 487 487 487 486 483 487 483	LANNUSAWIKE	PFPNIVOLGLCEP PFPOITOLGLCQP PFPNITOLGLCQP PFPNITOLGLCQP PFDIVOLGLCQP PFDIVOLGLCQP PFLDIVOLGLCQP PFLDIVOLGLCQP PFLDIVOLGLCQP	PETSEVYQQAKLQAXQ PETSEVYQQAKLQAQQ PETSEVYQQAKLQAQQ PETSEVYQQAKLQAQQ PESSEVYQQAKLQAQQ PESSEVYQQAKLAQQ PENSEVYRQAKLAQQ PENSEVYRQAKLQAQQ PENSEVYRQAKLQAQQ	566 H.sapiens 566 G.gallus 566 G.gallus 567 G.galas 589 G.japonicas 589 P.uitticops 585 P.oluvittatus 585 P.oluvittatus 585 P.aucrosquamatus 566 A.auroiguensis	679 677 700 679 679 679 678 679 678 637 679 658	WXCINK01TG
H.sapiens G.gallus C.mydas C.picta bellii G.japonicas P.vitticops A.carolinensis P.bivittatus O.hamah P.mucrosquamatus A.mississippiensis C.porosus	487 487 587 487 487 487 487 487 487 487 487	LAYNASAWRXLGUNSLDIXXXTELVG PARLINEYEYRIGLGRAYSBYGPLSUNALLOO AMINASAWRX	PFPNUVQLGLCEP     PFPOITQLGLCEP     PFPOITQLGLCQ     PFPNITQLGLCQ     PFPNITQLGLCQ     PFPOITQLGLCQ     PFDIVQLGLCQ     PFDIVQLGLCQ     PFDIVQLGLCQ     PFDIVQLGLCQ     PFPOITQLGLCQ     PFPOITQLQLCQ     PFP	PETSEVYQQAXLQAXO PETSEVYQQAXLQAXO PETSEVYQQAXLQAXO PETSEVYQQAXLQAXO PETSEVYQQAXLQAXO PESSEVYRQAXLQAXO PETSEVYQQAXLAXO PETSEVYQQAXLXAXO PETSEVYQQAXLXAXO PETSEVYQQAXLXAXO PETSEVYQQAXLXAXO	586 H.sapiens 586 G.gallus 586 C.picta ballii 586 C.picta ballii 586 P.vitticeps 586 P.aurcospanatus 586 P.aurcospanatus 586 A.sarolianatus 586 A.sarolispiensis 586 A.sipoiensis 586 A.sipoiensis	679 677 700 679 679 679 679 678 637 679 658 678	BXICLMOTTGE         LINTY-GENG-ROMCC         PTIDSIN-HLILATSSSOCT         SUBJECT         <
H.sapiens G.gallus C.mydas C.japonicas P.viticeps A.carolinensis P.biritatus O.hannah P.mucrosquamatus A.mississippiensis G.gangeticus G.gangeticus	487 487 490 487 487 487 487 487 487 487 487 487 487	LAYMASAWRE LGUWSLINTGAKTELVS PALLIEFYEYRILDERIG-HYSBWEPLSUNGLGRA- LAYMASAWRE LGUWSLINTGAKTELVS PALLIEFYEYRISTOLDERIG-HYSBWEPLSUNGLGRA- LAYMASAWRE LGUWSLINTGAKTELVS PALLIEFYEYRILDEST-TURHEFER SUNGLGRA- LAYMASAWRE LGUWSLINTGELVS PALLIEFYEYRILDEST-TURHEFER SUNGLGRA- LAYMASAWRE LGUWSLINTGELVS PALLIEFYEYRILDEST-TURHEFER SUNGLGRA- LAYMASAWRE LGUWSLINTGELVS PALLIEFYEYRILDE	PFPNIVQLGLCEP PFPNIVQLGLCP PFPNIVQLCQP PFPNIVQLCQP PFPNIVQLCQP PFDIVQLGLCP PFDIVQLGLCP PFDIVQLGLCP PFDIVQLGLCP PFPDIVQLGLCP PFPDIVQLGLCP PFPNIVQLCP PFPNIVQLCP PFNIVQLCP PFPNIVQLCP PFPNIVQLCP PFPNIVQLCP PFNIVQLCP PFPNIVQLCP PFNIVQLCP PFPNIVQLCP PFNIVQLCP PFPNIVQLCP PFNIVQLCP PFPNIVQLCP PFNIVQLCP PFNIVQLCP PFNIVQLCP PFPNIVQLCP PFNIVQ PFNIVQLCP PFNIVQLCP PFNIVQLCP PFNIVQ PFNIVQLCP PFNIVQLCP PFNIVQLCP PFNIVQ PFNIVQLCP PFNIVQLCP PFNIVQ PFNIVQLCP PFNIVQLCP PFNIVQLCP PFNIVQ PFNIVQLCP PFNIVQLCP PFNIVQ PFNIVQLCP PFNIVQLCP PFNIVQLCP PFNIVQ PFNIVQLCP PFNIVQLCP PFNIVQLCP PFNIVQ PFNIVQLCP PFNIVQLCP PFNIVQ PFNIVQ PFNIVQ PFNIVQ PFNIVQ PFNIVQ PFNIVQ PFNIVQ PFNIVQ PFNIVQ PFNIVQ PFNIVQ P	PETSEVYQQAKLQAKO PETSEVYQQAKLQAQ PETSEVYQQAKLQAQ PESEVYQQAKLQAQ PESEVYRQAKLQAQ PESEVYRQAKLQAQ PESEVYRQAKLAQA PETSEVYQQAKLKAQ PETSEVYQQAKLAQA PETSEVYQQAKLAQA PETSEVYQQAKLAQA	505 H.sapiens 505 G.gallus 505 C.girta bellii 505 C.girta bellii 505 A.girta bellii 505 A.girtaus 505 A.girtaus 50 A.girtaus 505 A.girtaus 505 C.goross 505 C.goross	679 677 700 679 679 679 679 678 637 678 678 678 678 678 678	KIXICIANGTEG         LINTY-GEISEDMICC         HTRISSI-HLLLATGSSOCFLKLMURIPECRIT         HTGINISWIGRSSPROXLASCS-UD         765           KIXICIANGTEG         LIVTY-GEISEDMICC         HTRISSI-HLLLATGSSOCFLKLMURIPECRIT         HTGINISWIGRSSPROXLASCS-UD         765           KIXICIANGTEG         LIVTY-GEISEDMICC         HTRISSICIANGTDOWNSS-THE         766         765           KIXICIANGTEG         LIVTY-GEISEDMICC         HTRISSICIANGTDOWNSS-THE         766         765           KIXICIANGTEG         LIVTY-GEISEDMICC         HTRISSICIANGTDOWNSS-THE         766         766           KIXICIANGTEG         LIVTY-GEISEDMICC         HTRISSICIANGTDOWNSTEDMICC         766         766           KIXICIANGTEG         LIVTY-GEISEDMICC         HTRISSICIANGTDOWNSTEDMICC         766         766           KIXICIXITO         LIVTY-GEISEDMICC         HTRISSICI
H-sapiens G.gallus C.nyteks C.japonicas P.viticops A.carolinessis P.bivitatus O.hannah P.mucrosquanatus A.mississippiensis C.parosus G.gangeticus D.rerio S.rhinoceroosus S.rabam	487 487 487 487 487 487 487 487 487 487	LANNASAWRE LCAUPSLINTEAKTELV PARLIDEPETRILDERIC-HVSDIVETLSUROLLOR- LANNASAWRE LCAUPSLINTEAKTELV PARLIDEPETRISDLERIC-HVSDIVETLSUROLLOR- LANNASAWRE LCAUPSLINTEAKTELV PARLIDEVERSIOLERIC-HVSDIVETLSUROLLOR- LANNASAWRE LCAUPSLINTESURVELV PARLIDEVERSIOLE	PFPAUVQLDLCE     PFPAUVQLDLCE     PFPAUVQLDLCE     PFPAUVQLDLCE     PFPAUVQLDLCE     PFPAUVQLDLCE     PFUJVQLDLCE     PFUJVQLDLCE     PFUJVQLDLCE     PFUJVQLDLCE     PFPUJVQLDLCE     PFPUJVQLDLCE     PFPUJVQLDLCE     PFPUJVQLDLCE     PFPUJVQLDLCE     PFPUJVQLDLSE     PFPUJVDVDLSE     PFPUJVDVDLSE     PFPUJVDVDLSE     PFPUJ	PETSEVYQQAKLQAKO PETSEVYQQAKLQAQ PETSEVYQQAKLQAQ PESEVYQQAKLQAQ PESEVYRQAKLQAQ PESEVYRQAKLQAQ PESEVYRQAKLAQA PETSEVYQQAKLKAQ PETSEVYQQAKLKAQA PETSEVYQQAKLKAQA PETSEVYQQAKLAQA VCSEVYRQALIQAQA VCSEVYRQALIQAQA	566 H.tapiens 566 C.nydas 566 C.nydas 566 C.nydas 566 C.nydas 566 P.auticas 566 P.auticas 568 P.auticas 568 P.autropalantus 568 P.autropalantus 568 C.napoticas 560 C.norosas 560 C.n	679 677 700 679 679 678 637 678 637 678 678 678 678 678 681 681	XXXLINGSTIG         LINTY-6EIS-E0NCC         HTNSSH-HLLATISSSC/L         XXLINUGCSNIT         HTGMNASHRSS-PROLLASCS-L06         765           XXXLINGSTIG         LINTY-6EIS-E0NCC         HTNSSH-HLLATISSSC/L         XXLINUGCSNIT         HTGMNASHRSS-PROLLASCS-L06         765           XXXLINGSTIG         LINTY-6EIS-E0NCC         HTMSSH-HLLATISSSC/L         XXLINUGCSNIT         HTGMNASHRSS-PROLLASCS-L06         765           XXXLINGSTIG         LINTY-FEH         HTMCC         HTMSSH-HLLATISSSC/L         XXLINUGCSNIT         HTMSSHSST-SPORTUSSS-L06         765           XXXLINGSTIG         LINTY-FEH         HTMCC         HTMSSHSF         XXLINUGCSNIT         HTMSSHST-SPORTUSSS-L06         765           XXXLINGSTIG         LINTY-FEH         HTMCC         HTMSSHSF         XXLINUGCSNIT         HTMSSHST-SPORTUSSS-L06         766           XXXLINGSTIG         LINTY-FEH         HTMCC         HTMSSHSF         XXLINUGCSNIT         HTMSSHSTSS-NOTUNCSS-L06         760           XXXLINGSTIG         LINTY-FEH         HTMCC         HTMLASSHSTSS<-NOTUNCSS-L06
H.sapiens G.gallus C.mydas C.picta bellii G.jaonicas P.vitticops A.carolinensis P.mucrosquantus A.tarolinensis P.mucrosquantus A.tarolinensis C.porosus G.gangeticus D.rerio S.rhinoccerousus S.graham P.mattereri	487 487 490 487 486 487 487 487 487 487 487 489 489 489 489	LANNESSINNE	PFPAUVQLQLCP     PFPOTTQLQLQCP     PFPAUTQLQLQCP     PFPAUTQLQLCQP     PFPAUTQLQLCQP     PFPAUTQLQLCQP     PFDTVVQLQLQP     PFDTVVQLQLQP     PFDTVVQLQCQP     PFDTVVQLQQQP     PFDTVVQLQQQP     PFPOTVQLQLQP     PFPOTVQLQLQP     PFPOTVQLQLSPP     PFPOTVQLSPP     P	PETSELYYDDANL DANX PETSELYYDDANL DAOD PETSELYYDDANL DAOD PETSELYYDDANL DAOD PETSELYYDDANL DAOD PESSELYYDDANL KADD PETSELYYDDANL KADD PETSELYYDDANL KADD PETSELYYDDANL KADD PETSELYYDDANL KADD PETSELYYDDANL HOLD WCSELYYRDAU HOLDW WCSELYRDAU HOLDW WCSELYRDAU HOLDW WCSELYRDAU HOLDW	565 H. saplens 566 G. spdat 66 C. spdat 566	679 677 700 679 679 679 679 678 637 678 658 658 658 658 658 658 658 658 658 65	KNICINOTTGE         LINTY-GEISEDINCCHITRISIN-HL LATISSICG1REGRINISINGAPSPOOL LASCS-LIGE         765           KNICINOSTIG         C.Y.YFEIFIEDINCCPORPRISPL LATISSICG1REGRINISINGAPSPOOL LASCS-LIGE         765           KNICINOSTIG         LIVY-FEIFIEDINCCPORPRISUL LATISSICG1REGRINISINGAPSPOOL LASCS-LIGE         766           KNICINOSTIG         LIVY-FEIFIEDINCCPORPRISUL LATISSICG1REGRINISINGAPSPOOL LASCS-LIGE         766           KNICINOSTIG         LIVY-FEIFIEDINCCPORPRISUL LATISSICG1REGRINISINGAPSPOOL LASCSREGRINISINGAPSPOOL LASCSREGRINISINGAPSPOOL LASCSREGRINISINGAPSPOOL LASCSREGRINISINGAPSPOOL LASCSREGRINISINGAPSREGRINISISINGAPSREGRINISINGAPSREGRINISI
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H-sapiens G-pallus C-mydas C-picta bellii G-jaonicas P-vitticops A-carolinensis P-birvittatus O-hannah P-havrcospuantus A-misisispipiensis C-parosus G-gangeticus D-rerio S-minocerosus S-minocerosus S-graham P-nattereri A-mexicanus I-punctatus E-lucius	437 547 437 437 437 437 437 437 437 437 437 4	LAMMASAWRE LGUWSLUNIXAKTEL (% PAL DIEP/EYRILDERIG-HVSDWGPLSUNGLOB)- LAMMASAWRE	PPRNLVQLQ,CC,CEP     PPRVLVQLQ,CC,CEP     PPRVLTQLQ,CCP     PPRVLTQLQ,CCP     PPRVLTQLQ,CCP     PPRVLTQLQ,CCP     PPLTQVQLQ,CCP     PPLTQVQLQ,CCP     PPLTQVQLQ,CCP     PPLTQVQLQ,CCP     PPTQVQLQ,CCP     PPTQVQLQ,CP      PPTQVQLQ,CP     PPTQVQLQ,CP     PPTQVQLQ,CP     PPTQVQLQ,CP     PPTQVQLQ,CP     PPTQVQLQ,CP     PPTQVQLQ,CP      PPTQVQLQ,CP      PPTQVQLQ,CP      PPTQVQLQ,CP      PPTQVQLQ,CP      PPTQVQLQ,CP      PPTQVQLQ,CP      PPTQVQLQ,CP      PPTQVQLQ,CP      PPTQVQLQ,CP      PPTQVQLQ,CP      PPTQVQLQ,CP      PPTQVQLQ,CP      PPTQVQLQ,CP      PPTQVQLQ,CP      PPTQVQLQ,CP      PPTQVQLQ,CP      PPTQVQLQ,CP      PPTQVQLQ,CP       PPTQVQLQ,CP       PPTQVQLQ,CP       PPTQVQLQ,CP       PPTQVQLQ,CP       PPTQVQLQ,CP       P	PETSELVOQAALQAKO PETSELVOQAALQAKO PETSELVOQAALQAKO PETSELVOQAALQAKO PETSELVOQAALQAKO PESSELVIQAALQAKO PESSELVIQAALQAKO PESSELVIQAALQAKO PETSELVOQAALQAKO PETSELVIQAALQAKO PETSELVIQAALQAKO PETSELVIQAALQAKO PETSELVIQAALQAKO PETSELVIQAALQAKO PETSELVIQAALQAKO PETSELVIQAALQAKO PETSELVIQAALQAKO PETSELVIQAALQAKO PETSELVIQAALQAKO PETSELVIQAALQAKO PETSELVIQAALQAKO PETSELVIQAALQAKO	<ol> <li>H.saplens</li> <li>G.apatlus</li> <li>G.apatlus</li> <li>G.apatlus</li> <li>G.apatlus</li> <li>G.apatlus</li> <li>G.apatlus</li> <li>G.apatlus</li> <li>J.atratices</li> <li< td=""><td>679 677 679 679 679 679 679 679 678 678 678 668 668 668 668 668 681 681 681 681 68</td><td>XXXLbirShTG2         LINTY-6E15         EXMCC         HTMSSI-HLLLATGSSOCFL         XLDURDCERT         HTGTHSWHCR55         PEOLLLASS         PEO           XXXLDMSTTG4         LIVTY-FEH         EXMCC         HTMSSI-HLLLATGSSOCFL         XLDURDCERT         HTGMMXSH255         PEOLLLASS         PEO           XXXLDMSTTG4         LIVTY-FEH         EXMCC         HTMSSI-HLLLATGSSOCFL         XLDURDCERT         HTMMSSIGS         PEOLLLASS         PEOLL         PEOLLESS         PEOLESS         PEOLLESS         PEOLLESS</td></li<></ol>	679 677 679 679 679 679 679 679 678 678 678 668 668 668 668 668 681 681 681 681 68	XXXLbirShTG2         LINTY-6E15         EXMCC         HTMSSI-HLLLATGSSOCFL         XLDURDCERT         HTGTHSWHCR55         PEOLLLASS         PEO           XXXLDMSTTG4         LIVTY-FEH         EXMCC         HTMSSI-HLLLATGSSOCFL         XLDURDCERT         HTGMMXSH255         PEOLLLASS         PEO           XXXLDMSTTG4         LIVTY-FEH         EXMCC         HTMSSI-HLLLATGSSOCFL         XLDURDCERT         HTMMSSIGS         PEOLLLASS         PEOLL         PEOLLESS         PEOLESS         PEOLLESS         PEOLLESS
H.sapiens G.gallus C.mydes C.picta belii G.jatticop A.carolinensis P.birvitatus O.hannah P.mercoguamatus C.porosus G.gameticus D.rerio S.grahamerii P.mercorosus S.grahamerii	437 567 439 437 436 437 437 437 437 437 437 439 439 439 439 439 439 439 439 439 439	LANNASAWRE (CAUPSLINTSAKTELV/ PALIDEP/EYINLDERICIVSDIV/EPLSINOLLOR)- LANNASAWRE	PFPNLTV0.LGLCEP     PFPNTTV0.LGLCP     PFPNTTV0.LGLCP     PFPNTTV0.LGLCP     PFPNTTV0.LGLCP     PFPNTTV0.LGLCP     PFPNTV0.LGLCP	ETSEVYOAALOMO ETSEVYOAALOMO ETSEVYOAALOMO ETSEVYÖHALOMO ETSEVYÖHALOMO ESSEVYÖHALOMO ESSEVYÖHALOMO ETSEVYÖHALOMO ETSEVYÖHALOMO ETSEVYÖHALOMO ETSEVYÖHALOMO ETSEVYÖHALOMO ETSEVYÖHALOMO ETSEVYÖHALOMO ETSEVYÖHALOMO ETSEVYÖHALOMO ETSEVYÖHALOMO	H.sapiens     Gaparlues     Go C.spdss     Gaparlues     Go C.spdss     Gaparlues     Go C.spdss     Gaparlues     Go G.aparlues     Go G.aparlues     Go G.aparlues     Gaparlues	679 677 679 679 679 679 637 637 637 637 638 638 638 638 681 681 681 681 681 681 681 681 681 68	XXXLINGSTEZ         LINTY-6215         EXAMPLE         FITSSIN-HLLATISSIC7
H-sapiens G_pallus C_mydas C_picta bellii G_jaonicas P.vitticops A.carolinensis A.carolinensis P.mercopauantos C.porosus G_paneticus D.rerio S.graham P.nattcreri A.mexicanus E.lucius S.salar P.latipina P.latipina	487 587 490 487 487 487 487 487 487 487 487 489 489 489 489 489 489 489 489 489 489	LANNASANNK	PFINITUQU LQL CE PFINITUQU LQ	ETSEYYQAKLQAXO ETSEYYQAKLQAXO ETSEYYQAKLQAXO ETSEYYQAKLQAXO ESSEYYQAKLQAXO ESSEYYQAKLQAXO ESSEYYQAKLQAXO ESSEYYQAKLQAXO ESSEYYQAKLQAXO ETSEYYQAXO ETSEYYYQAYO ETSEYYQAYO ETSEYYQAXO ETSEYYQAXO ETSEYYYQAYO E	565 H.sapiens 565 G.pdmS C.pdmS C.pdmS C.pdmS C.pdmS C.pdmS C.pdmS C.pdmS C.pdmS C.pdmS P.slititopo S.pdmS P.slititopo S.P.slititopo S.S.slititopo S.S.slititopo S.S.slititopo S. Salaro S. Kancola Comparison S. Salaro S. Kancola Comparison S. Salaro S. Kancola Comparison S. Salaro S. Salaro S. Salaro S. Kancola Comparison S. Salaro S.	679 677 679 679 679 679 679 679 668 678 679 668 678 681 681 681 681 681 681 681 681 681 68	KNICLNOTTGE         LINTY-GEIS-EQUNCC         HIFTNESSI-BILLATISSSOCFL         NULKUNKESTIG         PERSINGERSS-PRODUKLISSS-NDD 765           KNICLNOTTGE         LINTY-GEIS-EQUNCC         HIFTNESSI-BILLATISSSOCFL         NULKUNKESTIG         PERSINGERSS-PRODUKLISSS-NDD 71555-ED         763           KNICLNOTTGE         LINTY-GEIS-EQUNCC         HIRTNESSI-LINTS-NDD 71555-ED         763
H-sapiens G_pallus C_mydas C_picta bellii G_jagonicas P_vitticops A-carolinensis P_bivittatus D_handi A-carolinensis A-carolinensis A-carolinensis A-carolinensis S-graha D_rerio S-graha P_rattoreri A-mexicanus E-locios S-salar P_latipiona X-aneuriatus E-vareria S-salar P_latipiona C-variopatus	487 487 487 487 487 487 487 487 487 487	LANNASAWRZ LGUWSLINTXAKTEL (* PALLIEFYEYRILDE RIG-AVSENYEPLSINALLOR) ARMINASAWRZ	FFINUUL, C. CP     FFINUUL,	415E/W04L0A00 415E/W04L0A000 415E/W04L0A000 415E/W04L0A000 415E/W04L0A00 415	56 H.saplens 566 G.aydas 566 C.aydas 566 C.aydas 566 C.aydas 566 C.aydas 566 C.aydas 566 C.aydas 566 C.aydas 567 A.davallenesis 568 A.davallenesis 569 A.davallenesis 569 A.davallenesis 569 A.davallenesis 569 A.davallenesis 560 A.davallene	679 700 679 679 679 679 678 678 678 678 678 678 678 678 678 678	KIXICINOTTCE         LINTY-FEIT         EQNIC         HITTINSIN-HILLATISSUCT_         KLAURIDECRIT         HITTINSIN-REST         PEOL         ASS           KIXICINGTIC         LIVTY-FEIT         EQNIC         HITTINSIN-LILLATISSUCT_         KLAURIDECRIT         HITTINSIN-REST         PEOL         ASS         PEOL         ASS         PEOL         ASS         PEOL
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H.sapiens G.gallus C.aydes C.aydes C.aytotselii G.galtaselii P.viticops A.carolinensis P.barvitatus O.hannah P.mcrosyaanatus C.porosus G.ganeticus D.arerio G.ganeticus D.arerio D.arerio S.salar P.atipiona X.maculatus C.aytotaus S.salar P.latipiona X.maculatus C.aytotaus S.salar P.latipiona X.maculatus C.aytotaus S.salar P.latipiona X.maculatus C.aytotaus S.salar P.latipiona X.maculatus C.aytotaus S.salar P.latipiona X.maculatus C.aytotaus S.salar P.latipiona X.maculatus C.aytotaus S.salar P.latipiona X.maculatus C.aytotaus S.salar P.latipiona X.maculatus C.aytotaus S.salar P.latipiona X.maculatus C.aytotaus S.salar P.latipiona X.maculatus C.aytotaus S.salar P.latipiona X.maculatus C.aytotaus S.salar P.latipiona X.maculatus C.aytotaus S.salar P.latipiona X.laveis S.salitus T.rudripes N.kahntos A.stillepora B.terrestrisi M.qudritsciata H.laborisas S.sanicta	4477 4487 4487 4487 4487 4487 4487 4487	LANNESANNES	779100 0.1 (2) 77910 0.1 (2) 70910	ETSEVYQAALDAAO ETSEVYQAALDAAO ETSEVYQAALDAAO BEESEYYAALDAAO BEESEYYAALDAAO ESSEVYQAALDAAO ESSEVYXAALDAAO ESSEVYXAALDAAO ESSEVYXAALDAAO ESSEVYXAALDAAO ESSEVYXAALDAAO ESSEVYXAALDAAO ESSEVYXAALDAAO ESSEVYXAALDAAO ESSEVYXAALDAAO ESSEVYXAALDAAO ESSEVYXAALDAAO ESSEVXXAAAAO ESSEVXXAADAAO ESSEVXXAAAAO ESSEVXXAADAAO ESSEVX	<ul> <li>H.saplens</li> <li>G.apatlus</li> <li>G.apatlus</li> <li>C.mydas</li> <li>G.apatlus</li> <li>G.apatlus</li> <li>G.apatlus</li> <li>G.apatlus</li> <li>G.apatlus</li> <li>A.carolicensis</li> <li>A.caroli</li></ul>	679 700 677 679 679 679 679 679 679 679 679 679	KNICLNOTTE         LINTY-FEIS-EUNICC         HITTNSSI-HILLATISSUCFL         KULMURECRIT         HITTNSSISSICS         POOLLASCS-NDE         PSO           KNICLNOTTE         LIVY-FEIF         EUNIC         HITTNSSIS         LILLATISSUCFL         KULMURECRIT         HITTNSSISSISSISS         POOLLASCS         PSO           KNICLNOTTE         LIVY-FEIF         EUNIC         HITTNSSISSISS         LILLATISSUT         KULMURECRIT         HITTNSSISSISS         POOLLASCS         PSO           KNICLNOTTE         LIVY-FEIF         EUNIC         HITTNSSISSISS         HITTNSSISSISS         POOLLASCS         POOLLASCS         PSO           KNICLNOTTE         LIVY-FEIF         EUNIC         HITTNSSISSISS         HITTNSSISSISS         POOLLASCS
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HSapiens G.gallus C.aydeis hellii G.japonicas P.viticops A.carolinessis P.biritatus O.hanah P.mercoguantus C.porosos S.rhinocerous S.rhinocerous S.rhinocerous S.rhinocerous S.rhinocerous S.salareri P.netterri A.mexicanus I.puctatus E.lucius S.salar P.netterri A.lamaeus X.variopatus X.variopatus X.variopatus X.variopatus X.variopatus X.variopatus X.lavis A.limensi A.limensi S.akaitesi A.limensi K.mercianus X.lavis A.limensi K.mercianus X.lavis A.limensi K.mercianus X.lavis A.limensi K.mercianus K.mercianus X.lavis A.limensi K.mercianus K.m	4377 4387 4390 4477 4366 4377 4487 4487 4487 4487 4487 4487 4487	LAMMASAWING	FFINUUS, C.C.P.     F	ETSEVYQQALQAVO ETSEVYQQAQQAVO ETSEVYQQAQAVO ETSEVYQQAQAVO ETSEVYQQAVO ETSEVXQAVO ETSEVXQAVO ETSEVXQAVO ETSEVXQAVO ETSEVXQAVO ETSEVXQAVO ETSEVXQAVO ETSEVXQAVO ETSEVXQAVO ETSEVXQAVO ETSEVXQAVO ETSEVXQAVO ETSEVXQAVO ETSEVXQAVO ETSEVXQAVO ET	<ul> <li>H.saplens</li> <li>H.saplens</li> <li>G.apartica bellini</li> <li>G.Lapartica bellini</li> <li>G.Lapartica bellini</li> <li>G.Lapartica bellini</li> <li>G.Lapartica bellini</li> <li>A.carolicensis</li> <li>A.c</li></ul>	679 780 627 780 629 679 679 679 679 679 679 679 679 679 67	XXXCIM00T02         LINTY-6EIS—EQNXC         HITNESIN—HILLATISSDCF1         XLMURDCERT         HIFMENSINGSS-PROLLASCS-NDG         765           XXXCIM00T02         LIVY-FEHI—EQNXCC         HITNESIN_LILLATISSDCF1         XLMURDCERT         HIFMENSINGSS-PROLLASCS-NDG         765           XXXCIM00T02         LIVY-FEHI—EQNXCC         HITNESINGSS         HILLATISSDTV1         XLMURDCERT         HIFMENSINGSS-PROLVISSS-NDG         766           XXXCIM00T02         LIVY-FEHI—EXINCC         HIRNESINGSS
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H.sapiens G.gallus C.aydes C.aydes G.galtus C.aydes G.yatticops A.cardinessis P.bivitatos O.hannah P.mercosuantos C.porosus G.ganeticus D.rerio G.ganeticus D.rerio G.ganeticus S.s.hiboscrosus L.bergyitus S.s.hiboscrosus L.oculatus C.c.rientalis N.laborios S.laricta F.arisans B.corestis S.s.miricta F.arisans S.s.miricta F.arisans S.s.miricta F.arisans A.s.colombica S.s.miricta F.arisans A.s.p.yanstlas P.aystostla	4377 4499 4477 4499 4477 4499 4477 4499 4477 4499 4499 4499 4499 4499 4499 4499 4499 4499 4499 4499 4491 4491 4491 4491	LANNESANING — LEAUNSLIDTAKTEL V — PAULIEN/EPISILLE — DR-HASEN/01/ESINALLEO ALINNESANING — LEAUNSLIDTAKTEL V — PAULIEN/EPISILLE — DR-HABIN/EPISILLEO ALINNESANING — LEAUNSLIDTAKTEL V — PAULIEN/EPISILLEO ALINNESANING & LEAUNSLIDTAKTEL V =	PFINILUX G. CE     PFINILUX	ETSEVYQQALQAAO ETSEVYQQALQAAO ETSEVYQQALQAAO ETSEVYQQALQAAO ETSEVYQQALQAAO ETSEVYQQALQAAO ESSEVYQQALQAAO ESSEVYQQALQAAO ETSEVYQQALQAAO	56 H.saplens 56 G.aydas 65 G.aydas 66 C.aydas 66 C.aydas 66 C.aydas 66 C.aydas 66 C.aydas 66 C.aydas 66 C.aydas 7 All C.aydas 7 All C.aydas 7 All C.aydas 80 A.aydas 80 A.aydas 80 A.aydas 80 A.aydas 81 J.punctus 80 A.aydas 81 J.punctus 80 A.aydas 81 J.punctus 80 A.aydas 81 J.punctus 80 A.aydas 81 J.punctus 80 A.aydas 81 J.punctus 80 A.aydas 91 A.aydas 91 A.aydas 91 A.aydas 92 A.aydas 93 A.aydas 94 A.aydas 95 J.aydas 95 J.aydas 96 J.aydas 96 J.aydas 97 J.ay	6799 6797 6799 6797 6798 6797 6798 6798	XXXCIN00T02         LINTY-4215         EQMCC         HITTNSSI         HLLATSSDCF1         XLLAURCSRT         HTGHISWIGFS         POOLLASCS-406         P65           XXXCINN0T02         LIVY-FEH         EVMCC         PMRNIN         LLLATSSDT         XLLAURCSRT         HTGHIASWIGFS         POOLLASCS         P65           XXXCINN0T02         LIVY-FEH         EVMCC         PMRNIN         LLLATSSDT         KLMAURCSRT         PMRNINSSISS         POOLLASCS         P65           XXXCINN0T02         LIVL         EER         EVMCC         PMRNINSSISS         FXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
HSapiens G.gallus C.aydos nellii G.japonicas P.viticops A.carolinensis P.bzivitatus O.hanah P.mercoguaatus G.gaponicas C.gapoticus D.errio S.rhinocerouss S.gaha P.natterrii A.maxia D.errio S.rhinocerouss S.gaha P.natterrii A.maxia S.salipina S.partitus S.salipus	4373743994489948999489994899948999489994	LANNASANING	PFINUUG, CCP     P	ETSEVIQUALIDANO ETSEVIQUALIDANO ETSEVIQUALIDANO ETSEVIQUALIDANO ETSEVIQUALIDANO ESSEVICINA ES	56 H.saplens 56 G.apats 65 G.patta belli 58 G.patta belli 58 G.patta belli 58 G.patta belli 58 J.patta belli 59 J.patta belli 50 J.patta be	6799 6797 6799 6797 6799 6798 6798 6798	XXXCINK01T62         LINTY-6EIS—E0/MCC         HITYNSSI—HILLATISSDC71         XLXUNUCCSTT         HITSNIKAPS-PROLLASCS-NDG         765           XXXCINK03T02         LIVY-FEHI—E0/MCC         PMRXBI_MILLATISSDC71         XLXUNUCCSTT         HITSNIKAPS-PROLLASCS-NDG         765           XXXCINK03T02         LIVY-FEHI—E0/MCC         PMRXBI_MILLATISSDC71         XLXUNUCST         F67         765           XXXCINK03T02         LIVY-FEHI—E0/MCC         PMRXBI_MILLATISSDC71         XLXUNUCST         F67         765           XXXXINAST102         LIVIX-FEHI—E0/MCC         PMRXBI_MILLASCSDC71         XLXUNUCST         F67         765         765         765         765         766         765         766
HSapiens G.gallus C.ayden G. aydenicas G. aydenicas RStrictops A.carolinessis P.biritatus O.hannah P.merceguanatus C.ayonessis S.chinocerosus S.chinocer	4373734439444774489994489994499944999449	LAMMASAWING	PFINUUG, CCP     P	ETSEVYQQALQAVO ETSEVYQQAQAVO ETSEVYQQAQAVO ETSEVYQQAQAVO ETSEVYQQAQAVO ETSEVYQQAQAVO ETSEVYQQAQAVO ETSEVYQQAQAVO ETSEVYQQAQAVO ETSEVYQQAQAVO ETSEVYQQAVO ETSEVXQ	<ul> <li>H.saplens</li> <li>H.saplens</li> <li>G.apattus</li> <li>C.nydas</li> <li>G.apattus</li> <li>G.apattus</li> <li>A.carolitensis</li> <li>A.carolitensis</li> <li>A.carolitensis</li> <li>A.carolitensis</li> <li>P.mercequantus</li> <li>A.marticensis</li> <li>P.mercequantus</li> <li>A.marticensis</li> <li>A.marterri</li> <li>A.marticensis</li> <li>A.marticensis</li> <li>A.marterri</li> <li>A.marteri</li> <li>A.marteri</li></ul>	6799 6777 7809 6829 6799 6839 6788 6781 6811 6811 6811 6811 6811 6811	XXXCIM00T02         LINTY-6EIS—EQNCC         HITNESIN—HILLATISSDCF1         XLMURDCERT         HIFGHISUNICR55         POOLLASCS-006         P65           XXXCIM00T02         LIVY-FEHI—EQNCC         PRIMINI-LLATISSDCF1         XLMURDCERT         HIFGHISUNICR55         POOLLASCS         P66           XXXCIM00T02         LIVY-FEHI—EQNCC         PRIMINI-LLATISSDTF1         XLMURDCERT         HIFGHISUNICR55         POOLLASCS         P66           XXXCIM00T02         LIVY-FEHI—EQNCC         PRIMINI-LLATISSDTF1         XLMURDCERT         HIFGHISUNICR55         P00           XXXCIM00T02         LIVY-FEHI—EQNCC         PRIMINI-LLATISSDTF1         XLMURDCERT         F66           XXXCIM0T02         LIVY-FEHI—EQNCC         PRIMINI-LLATISSDTF1         XLMURDCERT         F66           XXXXAVET02         LIVY-FEHI—EQNCC         PRIMINI-LLATISSDTF1         XLMURDCERT         F66           XXXXAVET02         LIVY-FEHI—EQNCC         PRIMINI-LLATISSDTF1         XLMURDCERT         F66         F66           XXXXXAVET02         LIVY-FEHI—EQNCC         PRIMINI-LLATISSDTF1         XLMURDCERT         F66         F66           XXXXXXXVET02         STYTE-EEHI — EQNCC         PRISDL         XLUXIXXXXVET0         XLVXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

H.sapiens G.gallus	766 764	TLKLWDATS TVKLWWHS	ANERK-SINVKQFFLNLEDP ANELR-TIEIKDFFRNADE0	-QEDMEVIVKCCS	WSADGAR WSRSSDT	INVAAKN-KIFLF- ILVVAKN-KLLLF-	OIHTSGLLGEIHT OVTTSNLLTOVII	GHHST-IQYCD-FS SHHST-IQYCD-FC	849 847	H.sapiens G.gallus	937 935	VLAVDHIRRLQLINGRTGQIDYLTEAQ ILAIYNOKHIQLINGNTDSIIMOTEPQE-	VSCCCLSP	-HLQYIAFGDENGA	-IEILELW	NNRIFOSRFOH DGRVLTSREAY	KKTWHIQFT RTSVQHCRFT	1012 1013
C.mydas C.picta bellii	786 766	TLKWEVCS		-00DVEVLVKCCS	WSANCAT		OVITSDLLAEVLI	SHHST-IQYCO-FC SHHST-IQYCO-FC	888 849	C.mydas C.picta bellii	903 937	VLAILNOKHLQLINONTGHTDYLTEAQE- VLAILNOKHLQLINONTGHTDYLTEAQE-	SLICCCCLSE	-DLQYAAFGEBIGT -DLQYAAFGEBIGT	VKVLKL9	NRRVFKSRTGH	EKSVQHCQFT EKSVQHCQFT	981 1015
G. japonicas P. witticens	770	TLKLWHVDS	ANELK-TIDMRDYFKSTDEY	-YDDVEVLVKCCC	WSSDGAT		OVKTSDLLAEILI	NPHST-IQYCD-FC	853 858	G.japonicas P.witticens	941	VLAIDSLKRLQLINGCTGQTLYQTGPQE- ILAIDSSKYLQLINGNTGHTVYLTFTQA-	HFICCCCLSE	-DLQHAAFGDKDGT	VKVLSLS	SGKIVKCRSCH	RKAVQRCQFT	1019
A.carolinensis	767	TLMLWYAQS	ANKRK-TVDIRGNFRWDEY	-QODMEVLVKCCS	WSSDSTT	IVVAAKN-KLFRT	OTKISTSLPEVLI	NHHYT-IQYCD-FC	850	A.carolinensis	933	ILAIDSSKRLQLISGYTGNTIYLTKEQD-	SLICCCCLSH	-DRKVAAFGEINGT	-VKVLSL0	NONTLINSRTCH	REAVOHCOFT	1015
0.hannah	716	TLKLWVRS	ANELK-TINIGDFFRNGDGY	-HDEVEVLVKCCS	WSSNSTA	I-VAAKN-KLFLV-	OVETKELLAEALL	SHHNT-IQYCD-FC	845 798	0.hannah	885	ILAIGSLKHLQLINGSTGHAIYLTEEQK-	SSVCCCCLSE	-DLQFAAYGDENGI	-VK	omilitromon		938
P.mucrosquamatus A.mississippiensis	762 765	TUKLWWQS TVKLWETGS	ANELK-TINIGNFFRNGDGY GNELK-CIKIKDFFRNAD	-HDDVEVLVKCCS -EREVEALPKCCS	WSSNGRA WSTDGAT	I VVAAKN-KL FLV- WIVAAKN-KL LLL-	OVETKELLAEALL OVETSDLLEEV-L	SHHNT-IQYCD-FC SYQNT-IQYYD-FC	845 845	P.mucrosquamatus A.mississippiensis	933	ILAIDSLKHLQLINGSTGLAISLTEEUK- ILAILNHTHLQLINGNTGHTVSLTDVED-	S-ISCCCLSE	-DLQFAAYGDENG1 -DLQFAAFGQKNGT	VKVLEVSI	GRVLKSRIGH	KTSVQHCLFT	1010
C.porosus G.gangeticus	765 765	TVKLWTSS TVKLWTSS	GNELK-CIKIKDFFRNAD GNELK-CIKIKDFFRNAD	-ELEVEVLPKCCS ELEVEVLPKCCS	-WSTDSAT -WSTDSAT	WIVAAKN-KLUUL- WIVAAKN-KLUUL-	OVETSDLLEEV-L OVETSDLLEEV-L	SYQNS-IQYYD-FC SYQNA-IQYYD-FC	845 845	C.porosus G.gangeticus	933 933	ILGILNRTHLQLINONTGHTVSLTDVEE- ILGILNRTHLQLINONTGHTVSLTDVEE-	S-ISCCCLSE	-DLQFAAFGQENGT -DLQFAAFGQENGT	VKVLEVSI VKVLEVSI	GGRVLKSFRGH GGRVLKSFRGH	KTSVQHCLFT KTSVQHCLFT	1010 1010
D. rerio S. rhinocerousus	771 771	SLKLFEVSS TLKLFEVSS	ANEWK-SIDVDSFFPES	-DEEIKAMVKCST	WSADGSQ WSADGSR		OVETSDLLLKLKT EVKTSDMLLENKT	SRLST-IQFCH-AC SRLST-V0YCH-AC	851 851	D. rerio S. rhinocerousus	939 939	ITAPDSSNRLQVLSGSTGAVVLES EELS- HVAPDSSNRLQVRTGLAGATLFES EELP-	SRIRCSCISR SRIRCTCISR	-NAAFVALGSEDGT -NASFVALGTEDGT	VQVIEVP	SSKASVKLSGH SGKTSLKLTGH	TKTVHHCQFT TRTVHHCQFT	1017 1017
S.grahan P.pattereri	771	TLKLFEVSS	ANEWK-SID/WSFFPES	-DOEIKAIVKCST	WSADGSR	IICAARN-AVEVE	EVKTSDMLLENKT	SRLST-VQYCH-AC	851	S.grahan P.nattereri	939	IVAPDSRNRLQVRTGSAGAILFESEELP- VVAADSKNRLQVRSG/TGSIFFFSVKOK-	SRIRCTCISR	-NASEVALGTEDGT		SOUTI ATLL CH	TRTVHHCQFT	1017
A.mexicanus	771	SINCLFEVQS		-DOKTGVIVKCST	WSSDGSR	IFCAAKN-TVFMF-		SRIST-VQYCH-AC	855	A.mexicanus	943	WAADSKNRLOVRSGLAGTPVFESEKOK- VAADSKNRLOVRSGLAGTPVFESEKOK-	SRIRCTCICR	-QASAVALGMEDGA	-VQVLEVP	SONTLATLICH	TKTVHHCLFT	1021
E.lucius	789	TINCLWEVSS	TNLWT-SIDVASQFPED	-SEQGGVWKCST	WSSDGRR		OVATELLHEIRT	SRLSS-VQFCH-AC	851	E. Lucius	957	WAADNRNRLQVRVGRTGAVMFQSEEQE-	SRIRCTAICS	-QTVATGQEDGT	VQVLEVP	SGTCLATLQGH	TRTVLHCQFT	1033
S.salar P.latipinna	778 774	TLKLWEVSS TIKLFQVPA	ANEWK-SIDVADHFPEQ ANEWK-TIDVKSFLSES	-REQTAVMVKCST	-WSADGRT -WTADGKR	IICAARN-AVFVF- IICAARN-AALVF-	OVETAAMLLEIRT OVQTSOMLLEIRT	SRLST-VQYCH-SC NRLST-VQYCH-AC	858 853	S.salar P.latipimna	946 941	V\$AADNONRLQVR6GRTGSVLFQSEELP-	SRIRCTAICS CRIRSTOMCK	-QTSAVGLGREDGT -NPSAVALGQENGN	IQVLEVP	SGISLATLIGH	TRTVLHCQFT TRTVLHCQFC	1024
X.maculatus C.variegatus	774 771	TVKLFQVSA TVKLFQVSS	ANEWK-TIDVKSFLSES ANEWK-TIDVKSFPSES	-DOE-DVLVKCST -ENE-EVLVKCST	-WTADGXR -WTGDGTR	IICAARN-AVLVF- IICAARN-AVLVF-	DVQTSDMLLDIKT DVQTSDMLLEIRT	NRLST-VQYCH-AC NRLST-VQYCH-AC	853 850	X.maculatus C.variegatus	941 938	VSAADNONRLQVRDGRTGSVLFQSQELP- VSAADNONRLQVRDGRTGSVLFQSEELP-	FRIRSTOMCR SRIRCTCLCR	-NPSAVVLGQENGN -NPSAVLLGQENGE	VQVLALSI LQVLELP	GKLLATLLGH SGKLLATLLGH	TKTVLHCQFC TKTVLHCQFC	1018 1016
P.nyererei O.nilotic	773 773	TLKVFEVSS	TNExK-TJNVSDHFTON	KE-OVPVKCST	WTADGXR		OVETSOML FEIRT	NRMST-VQYCH-AC	851 851	P.myererei O.milotic	939 939	VSAADNONRLOVRDGRTGSVLFQSEEKS- VSAADNONRLOVRDGRTGSVLFQSEEKS-	SRIRCTCICR	-OPSAVVLGQEDGT	VOVLEVP	SGKLLATLQGH	TKTVLHCQFS	1017
L.bergylta	773	TLKV(8)FPVSS	ANEWK-TINVRDMFAES	DEGEVLVKCST	WTADGKR	IICAARN-AALVF	OVETSQMLLEIRT	NRLST-VQYCH-AC	868	L.bergylta	945	VSAADNONRLOVREGRTGSVLFQSEEMS-	SRIRCTONCR	-OPSAVVLGQEDGT	-WWLEVP	SOKLLATLLOH	TKTVLHCKFT	1023
S.partitus	773	TVKLFQVSS	ANEWK-TIGVRDLVTES	DE-EVLVKCST	WTGDGKR	IICAVRN-AVLVF	OVETSOMLLEIRT	SRLST-VQYCD-AC	851	S.partitus	938	VSAADNONRLOVRDGRTGSVLFQSEEKS-	SRIRCTOMCR	-QPSAVVLGQEDGT	-VQVLEVP	SGKLLATLLGH	TKTVLHCQFS	1017
N. kuhntae	773	TVKLFQVSS	ANEWK-TIDVRSHFADG	E-EVIVKCST	WSPDSKR		OVEISOMLLEIRT	NRLSM-VQYCH-AC	850	N.kuhntae	938	VSAADNONRLQVHDGRTASVLFQSEEMS-	SRIRCTCLSR	-QPSAVALGQESGS	-VOVLOVP	SGKHLATLQGH	-TKTVLHCRFS	1017
A.striatum K.marmoratus	773 771	TVKLFQTSS TVKLFQVPS	ANEWK-TIDVKSMFADS ANEWK-TIKVKDMISDC	-DDE-EVIVKCST -ONE-EVFVKCST	WSPDSKR WTSDCKR	VICAARN-AVLVF- IICATIH-GVLVF-	OVESSOMLLDIKT OVETTDLLLEIKT	NRLSM-VQYCH-AC NRLGT-VQYCH-AC	852 850	A.striatum K.marmoratus	937 937	VSAADNONRLQVRDGRTGSVLFQSEEMS- VSAADNONRLQVRDGRTGSVLFQSEETS-	SRIRCTONCT	-QPSAVALGQESGS -EPSAVGLGQENGS	VQVLEVP	SGKLLATLLGH	TKTVLHCRFC TKTVLHCQFC	1016
L.oculatu C.orientalis	768 765	TLKL	GNEWK-SIDVFSYFPSSP0S ANEFK-SLDLREFFKN0	-REEGOVIVKCGA	WSPDGSR WSLDSSK		OADTCDLLSEIKT GVKTGDLLMELLV	SRHGT-IQFCD-FC SHHTT-IQYCD-FC	851 845	L.oculatu C.orientalis	938 933	VLAPDSRNRLQLRSGNTGEVVYQSEEQE- VLAPDEGGHLQLFNGKTGDFISQSGPQQ-	SRIRSSCLCK YGINCCCLSR	-EPAVSALGRODGV -DLYFAAIGGEDGS	VKVLDIP VRVLEIP	NGNTVSTLAGH STNILKSRIMY	TKPVQHCEFT NKSVQYCQFT	1017 1011
X.laevis A.milleoora	766	SLKIWOVES	ANEEK-SIEVAKLFENED	-ESQPEVLLKCCA	WSNDGSR	INVTTRN-FLCIF	OSTSCOLLSQLKA	CHQILYCD-FC SST-TLSLA-YS	845 941	X.laevis A.milleopra	933 1029	VLATSKODCILLINGMTGETLSQINTQD- IATIDTONRLMIFEGETVAILSQSDAOO-	KCVTCCCLTN	-DYQLAAIGDRDGK	-VKVIDVS	RGEILCKLOGH	SATVOHCOFT	1011
0.faveolata	872	LWKV		-EGGTNSAVTFCC	FKPTGON	IVGVSOT-FVKIM	DSKTGQEIXNIHT	SST-TLSLA-YS	941	0.faveolata	1029	TATTDTONRLMI FEGEDT KLLSOS EGNK-	SRITSISFNS	-DGROVAIGLODGV	-WILESS	TOKVIQEFKSH	-SSRVIOICVFT	1107
S.kowalevskii	765	VVKVWCIST	EDVIV-TY	-KGH-NTNITSCC	FSPDGON	LASSSEY-FIOW	YARTGORLHTCEA	KPSVF-IOWCA-YS	835	S.kowalevskii	924	IVVPDIANRIRI IQGHSG DSKLNR(6)PCEQ-	CRIRCCAISS	KDELAYGTOKGQ	-VKVISFG	GEILHWYPEGH	-TGPVRSCCFS	1001
S.purpuratus	769	KVKV(8)FDASS	ANSDPVM-SY	-TGH-TTSVINAS	PSPDGQY		TI VOGAL VGKC-H	SEANN-VLCCE-FC	833	S.purpuratus	937	KFWAGDNWRCLVTDGRNVDQTFVVSEES-	RRIRAFALTS	-ONTKVAYGSOGGV	-VKVAWVE	THAVERSLEAH	-THOVEQCLFT	1017
E.mexicana B.terrestris	797 797	FLISYCRYGKE	YQYHS-QYNPDL	QKXK11FFRS QKXK11LFCS	VPENINS	LFIVTEK-KAIYV	(8) -HPHHSYNKQIRAIV (7) -HIHSYNKQIRASV	ENEKTVYYCASLT ENEKTVYYCASLT	882 888	E.mexicana B.terrestris	973 971	ITTETLSNTIIALVGOOKVAETEPID- IVTETLSNTIITLVGONKIAETEPIN-	GKINNLILST AKINNLILYA	EKIIYVTOKGI EKIIYVTOKGI	-WIENIR	SKENICIUNFP SKENIPVUNFT	KILNUK SNVELVEILDMK	1049 1047
M.quadrifasciata H.laboriosa	794 671	VLVSYCKYGKQ VLISYCKYDKE	YKYIT-QYNPOL	QEINIIFFHS QKXNIIFFRS	VPGQ-INS	LFIVTDE-KAVYV LFIVTEE-KAVYI	(8) -HMHSYSKQIRASI (8) -HMHSYNKQIRANN	E NKKTNYVCASLT E DKKSVYVCASLT	877 755	M.quadrifasciata H.laboriosa	968 845	WTETLSNTIIALANDKXIAETEPIN- WTETLSNTIIALANDKVIAESKPID-	GKINNLILHE GKISHLILS	EKVIYVTONGI -DEREIIYVTOKGI	-WIFOLE	SKKSICVLNFP LKNNKCILTFQ	KILDVK SNVELVKILNIL	1044 1008
D.novaeangliae A.colombicaa	797 786	VLISYOKTGIE	YKYLS-QYNPNL	HIXKTIFFRN	VPEQ-KDS	LFIVTED-KAVYI	(8) -HMHSYDKQIRASI (8) -CVYNENRKI KGYT	ENKNTVYICGAVT	881	D.movaeangliae A.colombicaa	971 961	WTETFSNTIVTLVGDNIMAESKPID- VIKESPSKTITMLCGENIKESALTK-	GKINDLILLP GEISNLOLSA	-OTRKITFITOKGI	-VSLF0I0	KKET DWL		1045
S.invicta	888	AFVTYANCGKD-Y	TTYRYLT-CYNLQL	-NSTAEKIIFFHH	IPNR-ONS	UNVITKK-EANYV	(7) -CAINFIKQTKAY	DOTVTYVCATIT	888	S.invicta	978	WKESPSKXIIVSKGEDITTETEFIE-	GKTUNLQLSA	-NGNKVVCVTDNQR	-IQLFOTT	TGOLYLDI	KOTVNL	1052
A.pisun	826	PIKT(7)WPFDH	YAGLE-YEK	EKLLSFFY	LPSS-E600(1	1)HLVHTPN-LHRTY	(10)KTSOPPLINTTP	R(3) HYKLSSISEDITN	919	A.pisun	1049	VAGVTKCGTLKV(1)-FEGLDQ(1)-DSMI-		LOQIMITIACEDLS	-VYSLKLQ	TSEYLFKTS0S	-VEQIFAC(8)AFL	1135
P.xylostella	820	TYYV(2)FOMRT	REKLM-SFEENIPINNILW(39	SNEIKENLLFISAI	-WNSGTL	LFISTNDSRVICI-	OLKINSKVPULEN	R(7)MOVSEVUMUEPE R(7)MOVSEV-WYDDFV	905	P.xylostella	1076	PLLAVVDORWIQIIRGRKVLTEI(1)STSD-	DKITTVKLSP	-ONQYVIYGLQSGT	-VIXYILR	SKETKIITOVA		1103
P.machaon P.xuthus	812 801	VHSL(2)IDLIS VHSL(2)IDLIS	KEKVM-SFEESEPLVNILTI(38 KEKVM-SFEESEPLLNILTI(38	SEEVKGDVNFVAAE SEEVKGNYTFVAAE	WKSGTL	LEVATODSRVICV- LEVATODSRVICV-	OLKINTRYFOLDN OLKINTRYFOLDN	R(7) HAVSEVMINDOFH R(7) HAVSEVMINDOFH	947 936	P.machaon P.xuthus	1065	PLLAVVOORNNIQIMRGRKLLTEI(1)PK50- PLLAVVOORNNIQIMRGRKLLTEI(1)PK50-	DQITAVKISP DQITAVKISP	-ONQYIIYGLSTGI ONQYIIYGLSTGI	-VTKYALR	SKECKDILDVY		1143 1131
C.elegans C.sinensis	529 1163	HIWYSLEQ	ISWII-CISTHLALVHATOM(28	SGPTPSCCLFLPTLETP	FPKFDSVTG(2	2)LFAAALTNRVLVW	(11)KLADPESLWTQSK	P(8)SSAHVLCLDACLL	532 1385	C.elegans C.sinensis	533 1438	VGRRRHSADLQF(13)LSGRAN(43)0KLSES(6)SPAR(	19) FGRATAVSFWS	-CGLWAVGYSNG	-MQLHQ LIQIFSL(2)D	KTHLFGIVKRY(4)	-SKPIREQ(8)KMLERV	537 1615
E.multilocularis D.melanopaster	1136 787	RLWIFSLDE TLTVWDLTNGSSN	IGWA-CIASSIPLKA(37 TLELHVE-NVENDTPLALDVFD(35	DGKVAKVCIFIH	WPNQTRAPINP(9 RSTDGRY	9)LVAASIDNLVLVW LLLGTSE-GLIVY-	(11)OLONPETIVTASP 	A(8) PSTTITTLDSQPF SEHIECVDIYELFD	1287 913	E.multilocularis D.melanopaster	1439 985	IGRIKASCSLQL(11) IEGDCQ(31) EQAASA(6) SAFQ( LLAVDSKERIHL IKPAIS(5) STITPT HAAS(	8)SPVPSCAAFST 1)CKINAISAFN	-OMRLLVVGFENGT DEOLEVGYVDGV(1)	-VQVLQM(18)K	PYRNFSVSSRN(22 TALPOOF(1)	2)DLPLDIV(4)KIT	1610 1065
B.latifrons B.cucurbitae	810	DICIFOVLD	YSHLR-GIETFKHLIETIEL(37	ADDAHNAINCAKIU	HINGHKQ			NEDITCVDIQPLDV	934	B.latifrons B.cucarbitae	1009	LLAVDSQNQLHKIDASGHARVYETAP	DIITAITQYG	ERSF1GC/WGV	-LVYLSLY	ATAPAANQQVF(1)	-EQPIEFLQLL	1084
C.capitata	890	DIAVFOVID	YSNSR-GIEKFKHFVESIET(37	ADDRONVINCAKLL	HINGHKQ	LALGTKK-GLIVF		NEDITCVDIYLLDA	1014	C.capitata	1093	LLAVDSQNQVHKI-AYQNNELYE(1)IS	SPITAITLYG	TQAFVGCANGQ	-LFDMS	GHTPQPILTAF	DOSIEFLRLL	1164
H. sapiens	850 848	PONHLAVVALSQYO	VELWITDS-RSKVADCRGHLSK	VHGVMFSPDGSS	FLTSSDOQTI	RLWETI	(-KVCKNSAVHLKQ	EVOVVFQENE-W FLOVVFREVCF-VM-	935 934	H.sapiens G.nallus	1013	ADEKTLISSS-DDAEIQVMWQLDKCIFLRGH-	QETWOFRLLKNS-	RULSWSF0GT1	/KVWNIITG	ANKEKDFVC	HQGTVLSCDISHD	1095
H.sapiens G.gallus C.mydas	850 848 889	PONHLAVVALSQYO AGDELVAVALSHCS PONQLVAVALSHYS	VELINTDS-RSKVADCRGHLSN IELINTIKS-LSKVADCRGHLSN VELINTES-PSKVADCRGHLSN VELINTES-PSKVADCRGHLSN	VHGVMFSPDGSS VHCVTFSSDGSL VHCVTFSPDGSL	FLTSSDOQTI FLTSSEDQTI FLTSSDOQTI	RLWETI RIWETI RIWES!	(-KVCKNSAVMLKQ I-KVCKSSDAVLKS 5-KVCKSSAVVLKS	EVDVVFQENE-VM- ELDVVFHNGE-VM- ELDVVFQODE-VM-	936 934 902	H.sapiens G.gallus C.mydas	1013 1014 982		QETWOFRLLKNSKEADKOFAFLENS-	RLLSWSF0GT	/KVWNIITG /KVWNIITG VWNICTG	NKEKDFVC	HOGTVLSCDISHD HRGAVLSCAVSPD HEDAVLSCAISPD	1095 1097 1025
H.sapiens G.gallus C.mydas C.picta bellii G.japonicas	850 848 889 850 850	PONHLAVVALSQYC ACDELVAVALSHCS PONQLVAVALSHYS PONQLVTVALSHYS PINSQLVAVALSHYS	VELWITDS-RSKVADCRGHLSK IELWITS-LSKVADCRGHTSK VELWITES-PSKVADCRGHLSK VELWITES-FLXVADCRGHLSK VELWITS-FLXVADCRGHSK	VHGVMFSPDGSS VHCVTFSSDGSL VHCVTFSPDGSL VHSVTFSLDGSL	FLTSSDOQTI FLTSSEDQTI FLTSSDOQTI FLTSSDOQTI FLTSSDOQTI	RLWET1 RLWET1 RLWES! RLWET1	(-KVCKNSAVILK) I-KVCKSSDAVLKS S-KVCKSSAVILKR I-KVCKSSAVILKR	EVDVVFQENE-VM- ELDVVFHNGE-VM- ELDVVFQODE-VM- ELDVVFQODE-VM- ELDVSFPGNE-VI-	936 934 982 935 948	H.sapiens G.gallus C.mydas C.picta bellii G.japonicas	1013 1014 982 1016 1020	ADEKTL, ISSS-DOAETQVMNQL,DKCTFL, BGH- TDCQTL, ISSS-HOAVTQVMNQL,NEVFLXGH- 	QETVKOFRLLKNS- KEAIKOFAFLENS- KEAVKNFRLLENS- TESVKNFRLLEIS-	RLLSWSF0GT KLLSWSF0GT RLLSWSF0GT SWSF0GT	/KVWNIITG /KVWNITTG /KVWNICTG /KLWNIATG	NKEKDFVC KTEKDFAC KIEDDFVC KIEEDFVC EPIERDLAC	RQGTVL.SCDISHD RRGAVL.SCAVSPD KEDAVL.SCAISPD KEDAVL.SCAISPD REVALL.SCAVSHD	1096 1097 1025 1099 1103
H.sapiens G.gallus C.mydas C.picta bellii G.japonicas P.vitticeps A.carolinensis	850 848 889 850 854 851 851	PQNHLAVVALSQYC ACDELVAVALSHCS PGNQLVAVALSHYS PKSQLVAVALSHYS PKSQLVAVALSHYS PKSQLVAVALSHYS	VELWITDS-RSKVADCRCHLSN VELWITDS-FSKVADCRCHTSN VELWITES-FSKVADCRCHLSN VELWITES-FLKVADCRCHLSN VELWITES-FLKVADCRCHMSN VELWITES-LSKVADCRCHMSN VELWITES-LSKVADCRCHMSN	VHGVMFSPOGSS VHCVTFSSOGSL VHCVTFSPOGSL VHSVTFSLOGSL VHSVTFSCOGSL VHSVTFSFOGSL	FLTSSDOQTI FLTSSEDQTI -FLTSSDOQTI FLTSSDOQTI FLTSSDOQTI FLTSSDOQTI FLTSSDOQTI	RLWET1 RIWES1 RIWES1 RIWET1 RIWET1	(-KVCKNSAVHLKQ I-KVCKSSDAVLKS S-KVCKSSAVVLKR I-KVCKSSAVVLKR I-KVCKSSAVVLKR S-KVCNFSATVLKR S-KVCNFSATVLNR	EVOVVFQENE-VM- ELDVVFQENE-VM- ELDVVFQODE-VM- ELDVVFQODE-VM- ELDVSFPONE-VI- ELDVLFDVE-AL- ELDVLFLDSD-VI-	936 934 936 940 937 937	H.sapiens G.gallus C.mydas C.picta bellii G.japonicas P.vitticeps A.carolimensis	1013 1014 982 1016 1020 1017 1017		QETWXOFRLLKNS- KEATXOFAFLENS- 	RLLSWSFDGT KLLSWSFDGT SWSFDGT SWSFDGT SWSFDGT SWSFDGT	/KVWIITG /KVWITG /KVWITG /KUWITG /KUWITG /KUWITG /KUWITG	NKEKDFVC KTEKDFAC KIEDDFVC ENERDLAC ELERDLTC EIEKDVIC	HQGTVLSCDISHD HRGAVLSCAISPD HEDAVLSCAISPD HEDAVLSCAISPD HEDAILSCAISPD HEMAILSCAISPD	1095 1097 1025 1099 1103 1100 1100
H.sapiens G.gallus C.mydas C.picta bellii G.japonicas P.vitticeps A.carolinensis P.bivittatus O.hannah	850 848 809 850 854 851 851 846 799	PQNHLAVVALSQYC AGOELVAVALSHYS PGNQLVAVALSHYS PMSQLVAVALSHYS PMSQLVAVALSHYS PMSQLVAVALSHYS PMSQLVAVALSHYS PMSXLVAVALSHYS	VELIANTDS-RSKVADCRCHLSK TELIANTDS-LSKVADCRCHLSK VELIANTES-FSKVADCRCHLSK VELIANTES-FSKVADCRCHLSK VELIANTCSRKVADCRCHMSK VELIANTCS-LSKVADCRCHMSK VELIANTES-LSKVADCRCHMSK VELIANTES-LSKVADCCHMSK VELIANTES-LSKVADCCHMSK	VHGVMFSPOGSS VHCVTFSPOGSL VHCVTFSPOGSL VHCVTFSPOGSL VHSVFSFOGSL VHSVFSFOGSL VHSVTFSLOGSF VHSVMFSLOGSF		RLWET1 RIWET1 WES1 WET1 	K-KVCXNSA.WILXQ -KVCKSSDAVLKS S-KVCKSSA.VILXR F-KVCKSSAXVLXR S-KVFKSSATVLXR S-KVFKSSATVLNR H-KVCKSSTVLNR	EVDVVFQDVE-VM- ELDVVFYMGE-VM- ELDVVFQD0E-VM- ELDVVFQDVE-VM- ELDVSFDVNE-AI- ELDVSFLDNS-VI- ELDVSFLDNE-VW-	936 934 936 937 937 937 932 885	H.sapiens C.aydas C.picta bellii G.japonicas P.vitticeps A.carolinensis O.hamah	1013 1014 982 1016 1020 1017 1017 1012 939		QETWOFRLLKWS- KEATKOFAFLENS- KEATWOFRLLENS- 	RLLSWSFDGT KLLSWSFDGT SWSFDGT 	/KUMIITG /KUMITG /KUMICG /KUMIATG /KUMIYG /KUMIYG /KUMIIG /KUMIITG	NIKEKDFVC KTEKDFAC KIEDDFVC KIEEDFVC BUERDLAC ELEKDITC ELEKDITC ELEKDITC	HQGTVLSCDISHD HRGAVLSCAISPD HEDAVLSCAISPD HEVAVLSCAISPD HEVAILSCAISPD HENAILSCAISPD HEDAVLSCAVSPD	1096 1097 1025 1099 1103 1100 1100 1095 1006
H.sapiens G.gallas C.mytdas G.jaita bellii G.japomicas P.vitticeps A.carolinensis P.bivittatus O.hannah P.murrosquamatus A.mississippiensis	850 848 850 854 851 851 846 799 846 846	PQNHLAVVALSQYC AGOELVAVALSHYS PGNQLVAVALSHYS PRSQLVAVALSHYS PRSQLVAVALSHYS PRSQLVAVALSHYS PRSQLVAVALSHYS PRSXLVAVALSHS PRSXLVAVALSHS PRSXLVAVALSHS	VELMITOS-RSIVARCROHLSI TELMIXS-LSIVARCROHTSI VELMITS-FSIVARCROHTSI VELMIXS-FSIVARCROHLSI VELMIXS-FSIVARCROHSI VELMIXS-CSICARCROHSI VELMIXES-CSICARCROHSI VELMIXES-ISICARCROHSI VELMIXES-ISICARCROHSI VELMIXES-ISICARCROHSI	VHGVMFSPOGSS VHCVTFSPOGSL VHCVTFSPOGSL VHSVTFSLOGSL VHSVFSFOGSL		R[W[7] R[W[7] R[W[7] 	(-KVO0ISAMULX) KVOKSSAMULX KVOKSSAMULX KVOKSSAMULX KVOKSSAMULX KVOKSSAMULX KVOKSSATULR KVOKSSATULR KVOKSSATULR KVOKSSATULR KVOKSSATULR KVOKSATULR K	EVDWFQDNE-WH- ELDWFHKGE-WH- ELDWFQD0E-WH- ELDWFQD0E-WH- ELDWFQDNE-VI- ELDWFDSH-VI- ELDVFDNFKI- ELDVFFDNE-WH- ELDVFFLDNE-WH- ELDVFFLDNE-WH- ELDVFFLDNE-WH- ELDVFF	936 934 936 937 937 937 932 885 932 932	H.sapiens G.gallus C.picta bellii G.japonicas P.vitticeps A.carolimensis P.bivittatus O.hannah P.mucrosquamatus A.mississippiensis	1013 1014 982 1016 1020 1017 1017 1012 939 1012 1011		QETVKOFRLLKNS- 	RLLSHSF0GT RLLSHSF0GT RLLSHSF0GT SHSF0GT 	/KVWIITG /KVWITG /KUWICG /KUWICG /	ANCEKDFVC	HQGTVLSCDISHD HRGAVLSCAISPD HEDAVLSCAISPD HEDAVLSCAISPD HEDAILSCAISPD HEDAILSCAISPD HEDAVLSCAISPD HEDAVLSCAISPD HEDAVLSCAISPD HEDAVLSCAISPD	1096 1097 1025 1099 1103 1100 1100 1095 1096 1095 1094
H.sapiens G.gallus C.mydas D.picta bellii G.japonicas P.vitticeps A.carolinensis P.buittatus O.hannah P.mucrosquamatus A.mississippiensis C.porosus G.camoeticus	850 848 850 854 851 846 846 846 846 846	PONILAVVALSQYC ACDELVXAVALSHYS PONULVYAVALSHYS PONULVYAVALSHYS PINSOVXAVALSHYS PINSOVXAVALSHYS PINSOVXAVALSHYS PINSOVXAVALSHYS PINSOVXAVALSHYS PINULVXAVSHYS PINULVXAVSHYS	VELWITDS-RSXVARCROHLSX EEWNIDS-LSXVARCROHLSX VELWIDS-FSXVARCROHLSX VELWIDS-FLXVARCROHLSX VELXII-TS-STARCROHLSX VELXII-TS-STARCROHLSX VELXII-TS-STARCROHLSX VELXII-TS-STARC	VHOWIFSPOGS- VHCVIFSPOGSL- VHCVIFSPOGSL- VHCVIFSPOGSL- VHSVIFSPOGSL- VHSVIFSPOGSL- VHSVIFSPOGSL- VHCVIFSPOGSL- VHCVIFSPOGSL- VHCVIFSPOGSL-		RLWETI WESE 	C+WORISAMURQ	EV0VVFQDKWH- ELDVVFH0GE-WH- ELDVVFQDGE-WH- ELDVVFQDGE-WH- ELDVFQDKVL- ELDVFQDKVL- ELDVFLDK-WH- ELDVFLDK-WH- ELDVFSLDK-WH- ELDVFSQDK-WH- ELDVFSQDGE-WH- ELDVFQDGE-WH- ELDVFQDGE-WH-	936 934 936 937 937 932 932 932 932 932	H.sapiens G.gallus C.mydas C.picta bellii G.japonicas P.vitticeps A.carolinensis P.bivittatus O.hannah P.mucrosquamatus A.mississippiensis C.porosus G.ganneticus	1013 1014 982 1016 1020 1017 1012 939 1012 1011 1011 1011			RLLSHSF0GT 	/KUNUITG /KUNUITG /KUNUITG /	NKEKDFVC	NOGTVLSC015810           NR GAVLSCA1590           HEDAVLSC	1095 1097 1025 1099 1103 1100 1095 1005 1095 1094 1095
H.sapiens G.gallus C.mydas C.picta bellii G.japonicas P.viticeps A.carolinensis P.bivittatus O.bannah P.mucrosquanatus A.mississippiensis C.porosus G.gangeticus D.ferio S.chinererusus	850 848 859 854 851 851 846 846 846 846 846 846 852 852	PONHLAVVAL 50YC ACDELVAVAL 54CS PONUL VAVAL 54CS PONUL VAVAL 54CS PONUL VAVAL 54CS PINS CONTAVAL 54CS	VELWITDS-RSXVARCROHLSX EEWNIDS-LSXVARCROHLSX VELWITES-FSXVARCROHLSX VELWITES-FLXVARCROHLSX VELWITES-LSXVARCROHLSX VELWITES-LSXVARCROHLSX VELWITES-LSXVARCROHLSX VELWITES-LSXVARCROHLSX VELWITES-LSXVARCROHLSX VELWITES-LSXVARCROHLSX VELWITES-LSXVARCROHLSX VELWITES-LSXVARCROHLSX VELWITES-LSXVARCROHLSX VELWITES-LSXVARCROHLSX VELWITES-LSXVARCROHLSX VELWITES-LSXVARCROHLSX VELWITES-LSXVARCROHLSX VELWITES-LSXVARCROHLSX	VHG/INFS/PDGSS WK/VTFS/SDGSL WK/VK	FLTSSD0QTI FLTSSD0QTI FLTSSD0QTI FLTSSD0QTI FLTSSD0QTI FLTSSD0QTI FVTSSD0QTI FVTSSD0QTI FLTSSD0QTI FLTSSD0QTI FLTSSD0QTI  FLTSSD0QTI  FLTSSD0QTI  FLTSSD0QTI  FLTSSD0QTI  FLTSSD0QTI  FLTSSD0QTI  FLTSSD0QTI   FLTSSD0QTI  		C+KVORISAMU.XQ +KVCKSSAMU.XS +KVCKSSAMU.XS +KVCKSSAMU.XR +KVCKSSAMU.XR +KVCKSSAMU.XR +KVCKSSAMU.XR +KVCKSSAMU.XR +KVCKSSAMU.XR +KVCKSSAMU.XR +KVCKSPETAL.XN +KVCKSAMU.XN +KVCKSAMU.XN +KVCKSAMU.XN +KVCKSAMU.XN + KVCKSAMU.XN + KVCKSAMU.XN + + KVCKSAMU.XN + KVCKAMU.XN + KVCKAMU.XN + KVCKAMU.XN + KVCKAMU.XN + KVCKAMU.XN + KVCKAMU.XN + KVCKAMU.XN + + KVCKAMU.XN + + KVCKAMU.XN + + KVCKAMU.XN + + KVCKAMU.XN + + KVCKAMU.XN + + KVCKAMU.XN + + KVCKAMU.XN + + + KVCKAMU.XN + + + KVCKAMU.XN + + + + + + + + + + + + + + + + + +	EV0W/FQDIE-IM- EL0W/FMOE-M- EL0W/FQDOE-M- EL0W/FQDOE-M- EL0W/FQDOE-M- EL0W/FPORE-TL- EL0W/FQDIE-M- EL0W/FQDIE-M- EL0W/FQDIE-M- EL0W/FQDIE-M- EL0W/FQDIE-M- EL0W/FQDIE-M- DITU/SQDIE-M- DITU/SQDIE-M- DITU/SQDIE-M- DITU/SSKDA-TL-	936 934 936 937 937 932 932 932 932 932 932 932 938	H.sapiens G.gallus C.mydas C.picta bellii G.japonicas P.vitticops A.caroliannis P.morroquantus A.mississipoiensis C.porosus G.gangeticus D.rerio S.rbinorromus	1013 1014 982 1016 1020 1017 1012 939 1012 1011 1011 1011 1018 1018				VKVMIIIG VKVMIIG V	NKEKDFVC	40 GTULSC0 ISH0           47 GAVLSC	1096 1097 1025 1099 1103 1100 1096 1095 1096 1095 1094 1094 1095 1104
H.sapians G.gallus C.pitta belli G.japonicas P.vitticeps A.carolinensis P.bivitatus O.hannah P.mcrosquamatus P.mcrosquamatus A.mississippinsis C.poreus G.gungeticus D.rerio S.rhinocerousus S.graban	850 848 869 850 854 851 846 846 846 846 846 846 846 846 852 852 852	PONHLAVVAL SQYC ACDELVAVAL SAYS PONUL VAVAL SAYS PONUL VAVAL SAYS PONUL VAVAL SAYS PONUL VAVAL SAYS PONUL VAVAL SAYS PONUL VAVAS SA-	VELNITIG-ASIVAC — AGUE IEUNIXG-ISVAC — AGUTS WEIDIG-ISVAC — AGUTS VEIDIG-ISVAC — AGUTS VEIDIG-ISVAC — AGUTS VEIDIG-ISVAC — AGUTS VEINIXG-ISVAC — AGUTS VE	VHG/INFSPDGSS WK/VTFSSDGSL WK/VTFSSDGSL WK/VTFSPDGSL WK/VTFSPDGSL WK/VTFSPGGSL W	FLTSSD0TT -FLTSSD0TT -FLTSSD0TT -FLTSSD0TT -FLTSSD0TT -FTSSD0TT -FTSSD0TT -FTSSD0TT -FLTSSD0TT -FLTSSD0TT -FLTSSD0TT -LLSSD0TT -LLSSSD0TT -LLSSSD0TT -LLSSSD0TT		K-KWORISAMU.KQ -KWORISAMU.KQ -KWOKSSDAVL.KS -KWOKSSAWU.RR -KWOKSAWU.RR -KWO	EV0W/FQDIE-IM- EL0W/FMOE-M- EL0W/FQDIE-M- EL0W/FQDIE-M- EL0W/FQDIE-M- EL0W/FPORE-TL- EL0W/FDDIF-M- EL0W/FDDIF-M- EL0W/FQDIE-M- EL0W/FQDIE-M- EL0W/FQDIE-M- EL0W/FQDIE-M- DIFUS-SHED-TL- DIFUS-SHED-TL- DIFUS-FSHED-TL- DIFUS-FSHED-TL- DIFUS-FSHED-TL-	936 934 936 937 937 932 932 932 932 932 932 932 938 938 938 938 938	R.sapiens G.gallus C.giota bellii G.japonicas P.viticops A.carolianenias P.bivitatus O.hannah P.mcroquanatus A.mississipiensis C.poresus D.revia D.revia D.revia S.rhinkerosus S.rhinkerosus	1013 1014 982 1016 1020 1017 1012 939 1012 1011 1011 1011 1018 1018 1018		-QETWOFRLING 		<pre>//KIWUITG /KIWUITG /KIWUIGG /</pre>	INKEKDFVC           INKEKDFVC           INTEEDFVC           INTEEDFVC           INTEEDFVC           INTEEDFVC	RIGTVLSCDISHD           RIGAVLSCAISPD           REQAVLSC	1096 1097 1025 1099 1103 1100 1095 1096 1095 1094 1095 1104 1104 1104
H-sapins G-gallus C-mydas C-picta hellii G-japonicas P-vitticeps A-carelinensis P-bivittaus O.hannh P-macrosequatus G-gangetius D-rerio S-nhineerousus S-grahan P-aattereri A-mesticamus	850 848 899 850 854 851 846 846 846 846 846 846 846 846 846 852 852 852 852	P(NHLA/VALSQYC ACDELVANALSH-YS P(NULYANALSH-YS P(NULYANALSH-YS P(NULYANALSH-YS P(NULYANALSH-YS P(NULYANALSH-YS P(NULYANALSH-YS P(NULYANALSH-YS P(NULYANALSH-YS P(NULYANALSH-YS P(NULYANALSH-YS P(NULYANALSH-YS P(NULYANALSH-YS P(NULYANALSH-YS) P(	VELWITDS-RSXVADCRGH SI TEUNIXS-LSXVADCRGH SI VELWITS-S-RSXVACRGH SI VELWITS-S-RSXVACRGH SI VELWITS-S-RSXVACRGH SI VELWITS-VELWITS	VHCWIPSPDGSS WHCVIPSPDGSL WH	FLTSSD00TI- FLTSSD0TI- FLTSSD0TI- -FLTSSD0TI- -FLTSSD0TI- -FLTSSD0TI- FLTSSD0TI- FLTSSD0TI- -FLTSSD0TI- -FLTSSD0TI- FLTSSD0TI- LLSSD0TI- -LLSSSD0TI- -LLSSSD0TI- -LLSSSD0TI- -LLSSSD0TI- -LLSSSD0TI- -LLSSSD0TI-	RL         WE         Th	C-KWORISAWLXQ H-KWCKSDAVLLS H-KWCKSDAVLLS H-KWCKSAWLRR H-KWCKSAWLRR H-KWCKSAWLRR H-KWCKSAULUR H-KWCKSAULUR H-KWCKSAULUR H-KWCKSAULUR H-KWCKSAULUR H-KWCKSAULAR H-KWCKSAULAR H-KWCKSAULAR H-KWCKSAULAR H-KWCKSAULAR H-KWCKSAULAR H-KWCKSAULAR H-KWCKSAULAR H-KWKSAULAR H-KWTSAAULAR H-KWTSAAULAR	EV0WFQDEWI- EL0WFQDE-WI- EL0WFQDE-WI- EL0WFQDE-WI- EL0WFQDE-WI- EL0WFQDE-WI- EL0WFQDE-WI- EL0WFQDE-WI- EL0WFQDE-WI- EL0WFQDE-WI- EL0WFQDE-WI- EL0WFQDE-WI- EL0WFQDE-WI- EL0WFQDE-WI- EL0WFQDE-WI- SUB	936 934 902 937 937 932 932 932 932 932 932 938 938 938 938 938 938 938	R.sapiens G.gallus C.giota Dellis C.giota Dellis G.japonicas P.viticops A.corolianonias P.bivitatus O.hannah P.mcrosquantus G.gangeticus D.rerus S.rhinocrosus S.rhinocrosus S.rhanerias P.antereria P.antereria	1013 1014 982 1016 1020 1017 1012 939 1012 1011 1011 1011 1018 1018 1018 1018				(KIWIJITG KIWIJTG KIWIJTG 	INCKOFVC	NOGTVLSC	1095 1097 1025 1099 1103 1006 1095 1095 1094 1095 1104 1104 1104 1105 1109
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H-sapiens G-gallas C-mydas C-mydas C-mydas C-picta bellii G-japonicas P-vitticeps A-carolinensis A-misicas G-ganeticus D-nerio S-nhinecrosus S-nhinecrosus S-nhinecrosus S-nhinecrosus S-salar P-asticerii S-salar P-latiginan X-mecicans C-variegatus S-salar P-latiginan X-mecicans C-variegatus S-salar P-latiginan X-mecicans C-variegatus C-variegatus S-partitus T-rubrics Labergylia A-stratam	850 848 848 851 851 851 851 851 852 852 852 852 852 852 852 852 852 854 852 854 852 852 854 852 854 852 854 852 854 851 854 854 854 854 855 855 855 855 855 855	R904 AV104 SQ-VC AGG V1014 SQ-	VELWITDS-RSXVACC	WRUPSPRCS WRUPSP	-FLTSSD00T1- -FLTSSD0T1- -FLTSSD0T1- -FLTSSD0T1- -FLTSSD0T1- -FLTSSD0T1- -FLTSSD0T1- -FLTSSD0T1- -FLTSSD0T1- -FLTSSD0T1- -FLTSSD0T1- -FLTSSD0T1- -LLTSSD0T1- LLTS		C-RVCDISA/III JQ- +RVCSIS/III JQ- +RVTSIS/III JQ- +RVTSIS/II	EUW/	936 934 936 9402 937 932 932 932 938 938 938 938 938 938 938 938 938 938	H.sapiens G.gallus C.picto belli G.japonicas P.vitticopsois A.bivitatus O.bannah P.necrospusatus G.ganopticus D.rerio S.rhinoceroosus S.rhinoceroosus S.garban P.nattereri A.mexicaus I.punctatus E.sapiratus C.yapretus S.salarina P.nattereri A.mexicaus I.punctatus E.sapiratus C.yapretus S.salarina A.mexicaus I.punctatus E.sapiratus C.yapretu	1013 1014 982 1016 1029 1017 1012 1011 1011 1011 1011 1011 1011				CHARLES CONTRACTOR	RIKEXDFVC	40,GTVLSC         —01580           40,GTVLSC         —01580           40,MTXSC         —41590           40,MTXSC         —01530           40,MTXSC         —01530           40,MTXSC         —1590           40,MTXSC         —159	1996 1997 1025 1089 1100 1099 1005 1005 1005 1005 1005 100
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R-sapiens Gaplius C.mydas C.mydas C.mydas D.piciabellii G.japonicas P.vitticeps A.carolinensis P.bivittaus D.homan A.carolinensis A.carolinensis D.rerio G.aponeticus D.rerio S.graha P.attoreri A.mexicanus L.punctatus E.lucius S.salar P.latigina P.latigina P.latigina P.latigina P.latigina S.salar P.latigina C.variaguts S.salar P.latigina C.variaguts S.salar P.latigina C.variaguts C.variaguts S.salar P.latigina K.manulatus C.variaguts S.salar P.latigina K.manulatus S.partitus T.rubripes N.kuhntea A.striatus K.maronatus Locolatus S.homelerstis S.homelerstis S.homelerstis S.homelerstis S.homelerstis S.homelerstis S.homelerstis S.homelerstis S.homelerstis S.homelerstis S.homelerstis S.homelerstis S.homelerstis S.homelerstis S.homelerstis S.homelerstis S.homelerstis S.homelerstis S.homelerstis B.terrissis S.homelerstis B.terrissis S.homelerstis B.terrissis S.homelerstis B.terrissis S.homelerstis B.terrissis B.terrissis B.terrissis B.terristis B.t	850 848 8489 850 846 846 846 846 846 846 846 846 846 846	R96014201415-09-147 R96014201400-09-147 R96014201400-09-147 R960140000-09-147 R960140000-09-147 R960140000-09-147 R960140000-09-147 R960140000-09-147 R960140000-09-147 R960140000-09-147 R960140000-09-147 R960140000-09-147 R960140000-09-147 R960140000-09-147 R960140	VELMITE-SYMAC — GRUE IEUMITE-FSYMAC — GRUTS WITE-FLOWING - GRUTS WEIDIG - SYMAC — GRUTS WEINIES -	WIGHPSPICES WIGHPSPICES WIGHPSPICE WIGHPSPIC	-FLTSSD00TI- -FLTSSD01TI- FLT		C-RVCDISA/IN_XQ RVCDISA/IN_X	CVW/QCE-M- EUW/WCE-M- EUW/WCE-M- EUW/WCE-M- EUW/	9355 9342 9929 9489 9356 9389 9389 9382 9322 9322 9322 9328 9329 9389 938	R.sapiens G.allus C.apidas C.apidas C.apidas V.apidas V.apidas C.apidas V.apidas C.a	1013 1014 982 902 1016 1027 1017 1017 1017 1017 1011 1011 1011		421W0FRLUSS 421W0		CONTRACTORY AND A CONTRACT A C	RREKDFVC	BIGTU SC	1965 1967 1967 1969 1969 1969 1969 1965 1965 1965 1965
R-sapiens Gapilus C.mydas C.mydas C.mydas C.mydas D.huittless A-carolinensis P.bivittless A-carolinensis P.bivittlus D.hunnin A-mississippiensis G.aponeticus D.reria Sgraha P.attereria A.mexicanus F.uattereria A.mexicanus F.uattereria A.mexicanus F.uattereria A.mexicanus F.uattereria A.mexicanus F.uattereria A.mexicanus F.uattereria A.mexicanus F.uattereria A.mexicanus F.uattereria A.mexicanus C.variagotus F.uattereria A.mexicanus F.uattereria A.mexicanus C.variagotus F.uattereria A.mexicanus C.variagotus F.uattereria A.mexicanus C.variagotus F.uattereria A.striatus K.manotatus L.ecoulatu C.erientalis S.portnisteres F.articos B.terrestris R.tenstican B.terrestris B.terrestris B.terrisos B.terr	850 8489 850 850 846 846 846 846 846 846 846 846 852 852 852 852 852 852 852 852 852 852	R960143/014.59-47 R960143014.59-47 R960147014.59-47 R960147014.59-47 R960147014.59-47 R960147014.59-47 R960147014.59-47 R960147014.59-47 R960147014.59-47 R960147014.59-47 R960147014.59-47 R960147014.59-47 R960147014.59-47 R960147014.59-47 R96014701459-47 R96014701459-47 R96014701479-17 R96014701479-17 R96014701479-17 R96014701479-17 R96014701479-17 R96014701479-17 R96014701479-17 R96014701479-17 R96014701479-17 R96014701479-17 R96014701479-17 R96014701479-17 R96014701479-17 R9601470-17 R960	VELWITES-RSVIAC — RGH S IEUNITES-RSVIAC — RGH S WEINITES-RSVIAC — SGH S WEINITES-RSVIAC — SGH S WEINITES-RSVIAC — RGH S WEINITES-RSVIAC — SGH S WEINITES-RSVIAC — SGH S WEINITES-RSVIAC — RGH S WEINITES-RSVIAC — RGH S WEINITES-RSVIAC — SGH S WEINITES-RSVIAC — SGH S WEINITES-RSVIAC — RGH S WEINITES-RSVIAC — RGH S WEINITES-RSVIAC — SGH S WEINITES-RSVIAC — RGH S WEINITES-RSVIAC — RGH S WEINITES-RSVIAC — SGH S WEINITES-RSVIAC — RGH S WEINITES-RSVIAC — RGH S WEINITES-RSVIAC — SGH S WEINITES-RSVIAC — RGH	WO/#SP0CSS WO/#SP0CS WO/TS	PT TSSD00T     LSSSD0T		C-RVCDISA/III.X0 - RVCDISA/III.X0 - RVCSSA/II.X0 -	EUW/	9355 9342 9356 9377 9372 9322 9322 9322 9322 9322 9322	R.sapiens G.allus C.apidas C.apidas G.apidas G.apidas G.apidas G.apidas G.apidas G.apidas G.apidas G.apidas G.apidas G.apidas G.apidas G.apidas G.apidas G.apidas G.apidas F.amidas G.apidas F.amidas G.apidas F.amidas F.a	1013 1014 982 1016 1027 1017 1017 1017 1017 1012 1011 1018 1018 1018 1029 1019 1018 1029 1019 1018 1029 1019 1018 1029 1019 1018 1029 1019 1018 1029 1019 1018 1029 1019 1019 1019 1019 1019 1019 1019				CONTRACTORY CONTRACT CONTRACTORY CONTRA	RIKEDFVC	BIGTULSC         BISBU           BIGLULSC         BISBU           BIGLULSC         BISBU           BIGLULSC         BISBU           BIGLULSC         AISBU           BIGLULSC         BISBU           BIGLULSC         BISBU           BIGLULSC         HISBU	1965 1967 1967 1969 1969 1969 1969 1969 1965 1964 1965 1964 1965 1964 1965 1964 1965 1964 1965 1964 1965 1964 1965 1964 1965 1964 1965 1964 1965 1964 1965 1964 1965 1964 1965 1965 1964 1965 1964 1965 1965 1965 1965 1965 1965 1965 1965
H.sapiens G.pallas C.mydas C.mydas C.picta bellii G.japonicas P.vitticeps A.carolinensis P.bivittaus O.hannh P.bivittaus G. percess S.probastics S.p	850 8489 850 850 851 846 846 846 846 846 846 852 852 852 852 852 852 852 852 852 852	R988143/114.59-47 R988143/114.59-47 P98014/114	VELNITIS - SSIVAC — RGIS IEUNIZS - SSIVAC — RGIS IEUNIZS - SVAC — RGIS IEUNIZS - CONTRACT - RGIS IEUNIZS - CONTRACT - RGIS IEUNIZS - CONTRACT - RGIS IEUNIZS - SSIVAC - SGIS IEUNIZS - RGIS IEUNIZS - SSIVAC - SGIS IEUNIZS - SSIVAC - SGIS	WO/#SP0055 WO/#SP005 UD/#SP005 UD/#S	PLTSSD00TI     LLSSSD00TI     LLSSSD0TI     LLSSSD0		C-RVCDISA/III.XQ RVCDISA/III.XQ RVCSSA/II.XQ RVCSSA/II.XQ RVCSSA/II.XQ RVCSSA/II.XQ RVCSSA/II.XQ RVCSSA/II.XQ RVCSSA/II.XQ RVCSSA/II.XQ RVCSSA/II.XQ RVCSSA/II.XQ RVCSSA/II.XQ RVCSSA/II.XQ RVCSSA/II.XQ RVTSSA/II.XQ 	CUV/	9355 9344 9356 9349 932 932 932 932 932 932 9338 9338 9338	R.sapiens G.gallus C.apidas C.picto belli G.gaponicas P.c.arolianosis P.c.arolianosis P.c.arolianosis C.parosus G.gapageticus D.rerio S.rhinoecrosus S.rhinoecrosus S.rhinoecrosus S.rainae P.astitereri A.moulcanus I.actican	1013 1014 982 1016 1027 1017 1017 1017 1017 1018 1011 1018 1018				CONTRACTORY CONTRACT CONTRACTORY CONTRA	RIEKOFVC	AUGTVLISC	1965 1967 1825 1969 1160 1969 1969 1969 1969 1969 1969
H.sapiens G.apilus C.mydas C.mydas C.mydas C.mydas D.hunitus D.hunitus D.hunitus D.hunitus A.carolinensis A.carolinensis G.gangokus G.gangokus G.gangokus S.graha P.attionensis S.graha P.attionensis S.graha P.lational F.lation S.salar P.lational F.lation S.salar P.lational F.lation S.salar P.lational F.lation S.salar P.lational S.salar P.lational S.salar P.lational S.salar P.lational S.salar P.lational S.salar P.lational S.salar P.lational S.salar P.lational S.salar P.lational S.salar P.lational S.salar P.lational S.salar P.lational C.varingatus P.lational S.salar P.lational C.varingatus P.lational S.salar P.lational S.salar P.lational S.salar P.lational S.salar P.lational S.salar P.lational S.salar N.wathas S.salar N.salar N.wathas S.salar N.sala	850 848 850 850 850 850 850 850 850 850 850 85	RADIA VINA SQYC ADDIA VINA SQYC ADDIA VINA SQYC PROL VINA SQYC PRO	VELWITCS - SSYLVAC — RGFS IEUNITSS - SSYLVAC — RGFS WELWITSS - SSYLVAC — SSYLVAS WELWITSS - SSYLVAS WELWITS	WO/#SP0055 WO/#SP005 UD/#SP005 UD/#S	PLTSSD00T1     PLTSSD00T1     PLTSSD0T1     LLSSD0T1	-BL         -MC           -FL         -MC           -FL	C-RVCDISA/III.XQ RVCDISA/III.XQ RVCSSA/II.XQ RVCSA/II.XQ RVCSA/II.XQ RV	CUV/	9355 9349 9356 9377 9322 9322 9328 9328 9329 9328 9329 9329	R.sapiens G.gallus C.pitots belli G.gaponicas P.c.strilianosis P.c.strilianosis P.c.strilianosis P.c.strilianosis O.bannah P.astistispiensis C.gaporaus G.gapoticus D.reria D.reria D.reria D.reria D.reria S.rhinoecrossus S.	1013 1014 1017 1017 1017 1017 1017 1017 1017				(	BREKDFVC         SINEKDFVC           SITEKDFVC         SITEKDFVC           SITEKDFVC         SITEKDFVC	AUGTVLISC         —01580           AUGTVLISC         —01580           AUGLVLSC         —41590           AUGLVLSC         —1590           AUGLVLSC         —1590           AUGLVLSC         —1590           AUGLVLSC         —1590           AUGLVLSC         —1590           AUGLVLSC         —1590           AUGLLSC         —1590	1965 1967 1967 1969 1969 1969 1969 1969 1969
H.sapiens G.apilus C.mydas C.mydas C.mydas C.mydas D.huittlus D.hunnih P.huittlus D.hunnih P.huittlus G.gangetius G.gangetius G.gangetius G.gangetius S.graham S.graham F.lattereri A.mexicanes L.ucios S.salar P.latigima X.mexulaus E.lucios S.salar P.latigima X.mexulaus E.lucios S.salar P.lattereri A.misteri A.linneus S.salar P.lattereri A.linneus S.salar N.attereri A.linneus S.salar N.attereri A.linneus S.salar N.attereri A.linneus S.salar N.attereri A.striatus K.mernatus K.mernatus K.amerla	850 848 850 850 850 850 850 850 850 850 850 85	REMIL AVIAL SQLY AGEN VANLAS - SQ PRON VANLAS -	VELWITDS-RSVAC — RGFS IEUNITSS-SSVAC — RGFS WELWITSS-SSVAC — RGFS WELWITSSSVAC — RGFS WELWIT	WO/PSP0255 WO/PSP025 WO/PS	PLTSSD00T1     LLSSD00T1     LLSSD0T1	RL         WG	C-RVCDISA/III.XQ RVCDISA/III.XQ RVCDISA/II.XQ RVCDISA/II.XQ RVCDISA/II.XQ RVCDISA/II.XQ RVCDISA/II.XQ RVCDISA/II.XQ RVCDISA/II.XQ RVCDISA/II.XQ RVCDISA/II.XQ RVCDISA/II.XQ RVCDISA/II.XQ RVCDISA/II.XQ RVCDISA/II.XQ RVTDISA/II	CUV/	9355 9342 9360 9377 9322 9322 9322 9328 9329 9329 9329 9329	R.sapiens G.gallus C.picto belli G.gaponicas P.vitticopolic A.lovitatus O.hannah P.aiticopolic S.rhinoeroosus S.rhinoeroosus S.rhinoeroosus S.rhinoeroosus S.rhinoeroosus S.rhinoeroosus S.rhinoeroosus S.rhinoeroosus S.rhinoeroosus S.rhinoeroosus S.rhinoeroosus S.rhinoeroosus S.rhinoeroosus S.rhinoeroosus S.rhinoeroosus S.rhinoeroosus S.rhinoeroosus S.rhinoeroosus S.rhinoeroosus S. hatipinan S.	1013 1014 1019 1019 1019 1011 1011 1011 1011				(	BREKDFVC         SREKDFVC           SREKDFVC         SREKDFVC<	AUGTVLISC         —01580           AUGTVLISC         —01580           AUGXVLISC         —01590           AUGXVLISC         —01590	1965 1967 1967 1969 1969 1969 1969 1969 1969

H.sapiens	1097	ATKESSTSADKT-AK	IWSFOLLLPL	HELRGHNGCVRCSAFS	VDSTLLAT	GOONGEIRIWNYS	NGELLHLCAP	LS-EEGAATHGGWVTDLCFSPD	1188	H. sapiens	1246 TLE	1248
G.gallus C.mvdas	1098	GSRESSTSADKT-AK ATKESSTSADKT-AK(10)	TWSFESSSVL	HELKGHEACVRCSAFS HELNGHKGCVRCCTES	PSNKLLAT FDOKFLAT	GODKGDIRIWDIL	TGELLHFCSS RGELLHLCSP	VTVDEEEPTHGGWTDLSFSPD VTVDEGESTHGGWTDLCESPE	1190	G.gallus C.mvdas	1248 KL- 1264 LUN(1	1249
C.picta bellii	1100	ATKESSTSADKT-AK	IWSFESSSVL	HVLNGHKGCVRCCTFS	FDNKFLAT	GODNGEIRIWDVS	RGELLHLCSP	VTVDEGESTHGGWVTDLCFSPE	1192	C.picta bellii	1250 MLE	1252
G.japonicas	1184	ATRESTASADKT-AK	IWSFESSSVL	HILSGHEGCVRCCTFS	LDNELLAT	GODNGEIRIWN/S	RGEQLHLCSR	TPIDDGESAHGGWTDLCFSPD	1196	G.japonicas P.vitticens	1254 IMD(3 1244 IME(3	<ul> <li>1259</li> <li>1249</li> </ul>
A.carolinensis	1101	ATHESTTSSDKT-AK	IWSFETSSML	HKLNSHESCVRCCAFS	UNNELLAT	GODNREIRVWDVS	RGELLHLCSR	ASIDEGESAHEGWTDLCFSPD	1193	A.carolinensis	1251 IME	1253
P.bivittatus	1096	ATIFSTTSTDKT-AR	IWSFRSSSAL	HTLNGHRGCVRCCAFS	UNNELLAT	GODNGEIRWWRIS	SGKLLHLYSS	ATTNEGGSAYGGWTDLRFSPD	1188	P.bivittatus	1246 IME	1248
V.nannan P.mucrosquamatus	100/	ATTESTISADKT-AK	TWSFRSSSAL	HTLSGHKDCVRCCTFS	UNNELLAT	GODHGEIRVWSIS GODHGEIRIWSIS	TGTLLHLYFS	ATTNEGGSATGGWTGLHFSP0	1098	P.mucrosquamatus	1246 IME	1248
A.mississippiensis	1095	ATKESSTSVDKT-AK	IWSFKSSSIL	HELKGHEACVRCCTFS	FDNKLLAT	GODKREIRIWDVS	SGELLHLCSP	VIIDEGGLTHDYWVTDLCFSPD	1187	A.mississippiensis	1225	1225
C.porosus G.paggeticus	1095	ATKESSTSVDKT-AK	IWSFKSSSIL	HELKGHEACVRCCTFS	FDNKLLAT FDNKLLAT	GOOKREIRIWOVS	SGELLHLCSP SGELLHLCSP	VTIDEGGPTHDYWTDLCFSPD VTVDEGGPTHDYWTDLCFSPD	1187	C.porosus G.oangeticus	1245 MHE 1246 MHE	1247
D.rerio	1105	GRLFATTSANRT-AK		FLLEGHKDCVRSCRFS	NONKRLAT	GOONGEIRLWSML	DGALLKICPR	OTKDSHNSYHAGW/TDLHFSPD	1197	D.rerio	1255 RLE(4	) 1261
S. rhinocerousus	1105	GRLFATTSADRT-AK		FLLKGHKDCVRSCRFS	WNKRLAT	GODNGEIRLWSML	DGALLKICSQ	ATKDSMDSFHGGW/TDLHFSPD	1197	S. rhinocerousus S. orabae	1238 1255 KVE(4	1238
P.nattereri	1105	GOVESTASADKT-AK		FLLKGHKACVRSCRFS	WDGKRLAT	GOONGEIRLWSML	NGSLLKICSR	ESKDSHDSFHGGWTDLHFSPD	1197	P.nattereri	1256 QVE(4	1262
A.mexicanus	1110	GSLFSTASADKT-AK	WISCASHERV	FSLKGHKACVRSCRFS	DGKRLAT	GOONGEIRLWSMQ	NGHLLKICSC	ERKDSHDSFHGGWTDLHFSPD	1202	A.mexicanus	1259 QVE(4	1264
I.punctatus F.lucius	1100	GOLFITASADKT-AK			NDGRELAT	GOONGEIRLWANN GOONGEIRLWAIN	NGNULKICSR DGTULKICSR	ESKDSPIDSFHUGWVTDLHFSPD ONKDANDSLHGGWTDLHFSPD	1198	E.lucius	1270 UVE(4	1274
S.salar	1113	GQLFATTSADKT-AK		RLLNGHQOCVRSCKFS	WDGRRLAT	GODNGEIRLWMK	DGTLLKICSS	ONKDAMDSLHGGW/TDLHFSPD	1205	S.salar	1263 KVE	1265
P.latipinna	1108	GCLFATTSADKT-TK	LWSCKSWQCV	FTLRGHLDCVRSCRFS	WGKRLAT	GOONGEIRIWSVK	DGSLLKWCSQ	ESKDATDSVHGGWTDLHFSPN	1200	P.latipinna X.maculatus	1258 RVA 1256 RVA	1260
C.variegatus	1105	GCLFATTSADKT-TK	LWSCESWQCV	FTLRGHHECVRSCRFS	NDSKRLAT	GODNGEIRIWRVE	DGSLLKVCAQ	ESKDGTDSLHGGWTDLHFSPN	1199	C.variegatus	1255 RVA	1257
P.nyererei	1106	GFFFATTSTDKT-AK	LWHCESWQCA	NTLIGHQECVRSCRFS	NDSQHLAT	GODNGEIRLWSVK	DGSLLKWCSR	DSKDGHDSLHGGWTDLHFSPD	1198	P.nyererei	1256 RVV	1258
0.milotic	1100	GCLFATTSTOKT-AK	LNHCESNOCA		NDSQHLAT	GOONGEIRLWSVK GOONGEIRLWSVK	DGSLLKVCSQ DGSLLKTCSR	ESKDGRDSLHGGW/TDLHFSPD EGKDARDSLHGGW/TDLHFSPD	1198	L.bergylta	1250 RVV	1263
A.limnaeus	1145	GCHFATTSADKT-AK	LWHCESWQCV	HTLSGHLDCVRSCRFS	NDSRRLAT	GOONGEIRLWSVK	DGSLLKICSR	OGKDGNDSLNGGWTDLNFSSD	1237	A.limnaeus	1291 RVV(1	) 1294
5.partitus T. rubrines	1100	GCLFATTSADKT-AK	UNHCESNQCV	HTUNGHQOCVRSCRFS HAI KGHOECVRSCRFS	NDSQRLAT	GOONGEIRUWSVK	DGSULKICSR DGSULKICSR	OTKDGROSLHGGWTDLHFSPD OSKDGROSLHGGWTDLHFSPD	1198	5.partitus T.rubrines	1255 RVM	1257
N.kuhntae	1105	RCVFATTSADKT-AK	LWSIQSWQCT	HTLRGHQECVRSCRFS	10SRRLAT	GOONGEIRLWSVE	DGSLLKICSR	DSKGGHDSLHGGWVSDLHFSPD	1198	N. kuhntae	1255 RVV	1257
A.striatum	1105	RCLFATTSADKT-AK	LWSFKSWQSE	YTLKGHQECVRSCRFS	MDGRRLAT	GOONGEIRLWSVE	DGSLLKILSR	OSKDGNDSLHGGWSDLHFSPD	1197	A.striatum	1254 RVA	1255
L.oculatu	1105	GKKFSSASADKT-AK		HTLTGHKACVRSVRFS	GDGACLAT	GOONGEIRINGV	DGALLOICTR	GOKDSINESLINGGIWTDLINESPO	1197	L.oculatu	1250 KVE	1252
C.orientalis	1095	ASKFVSTCADKS-AK		YELSGHKGAVRCCRFS	FDSTLLAT	-GOONGEIRLWSVG	SGELLRLCSN	NAIVEGDILHSGWTELHFSRD	1188	C.orientalis	1246 MLK	1248
A. taevis A. milleonra	1090	DKRLLSASUDRY-AK	INSLOPS ILL		DNKYLAI	GOONGKIPINSVQ	NGREVAWCSR		1188	A.milleoora	1337 KIS(1	1245
0.faveolata	1584	DKRLLSASVDRH-AK		YSLGPHPDVVRSASFS	QDNKFICT	GCDDGTVRVMMA	DGRELAWCSK	HDGWVASCWFSSD	1587	0.faveolata	1644 RIN(3	) 1648
N.vectensis	1875	SQRLISASADCF-AK		LSLGRHPDWVRSISFS	PDN-MICT	-GCDOGIVRIMOSY	SGKEVTSCKK	NETWIADCHFTRD	1158	N. vectors is	1215 QI-	1216
A.pectinifera	1884	EKFAVSVSVDKT-AK		HULNGHODIIRTCCIS	PNSRLLAT	GODEGTIKINGLT	SGKELATCAG		1167	A.pectinifera	1224 LIK(9	1285
S.purpuratus	1102	HSHVASVSVDKT-AK		KVLONHIDSVRTCRFS	PDSTLLAT	-CODSCIVRINIS	SGDEVGECHK	HKSWTDIKFSPD	1185	S.purpuratus	1242 RVK(1	5) 1259
E.mexicana R.terrestris	1234	RSFLTVLNENGD-VV	LYKLQKNTIS(9)- LYKLQKNTIS(9)-		QNEKYLAI ONOKYLAI	GFENGDISTIDTS	VLEEIRKLOF	HISSITQLYMAPS HTSSVTDLRMAPS	1226	E.mexicana B.terrestris	1304 10602	1368
H.quadrifasciata	1128	KCFLAILNENGD-W	-LYKLQKNTIS(9)-	YFRKRYTQKLSCCEIS	QOEKYLAI	GFEDGDISVIDIS	TLOEINKLCF	HVSPVTQLYNAPS	1220	H.quadrifasciata	1321 LYG(2	) 1324
H.laboriosa	1103	KRFLTVLNENGD-VI	-LYYLQYDTRT(9)-	HFRIKKYSCKLTCCEIS	ONEKYLAV	-GFESGEISVIDIS	MQEEIRKLCF	HTSSITQLHNAPS	1240	H.laboriosa	1241 LCE(2 1264 VCC(2	1245
A.colombicaa	1125	QKYLAILNESHH-LT	LLYINYENIA(10)	QPHFTHSFAQKAICCDIS	KNEQYIAV	-GLESGRISIINIO	KOMELAQLFF	NWPITOLOWPY	1220	A. colombicaa	1350 LID(7	) 1359
S.invicta	1146	QNYLAILNESYS-LT	LLOMSYKSEE(8)-	HLTHIFAQKTTYCDIS	KNEQYIAV	GFESGQISIIDIQ	KKSEITRLIF	HSNSIMQLOWAPA	1237	S.invicta	1377 LIG(9	) 1388
F.arisanus A.nisum	1188	EDHLALLKSTGE-PA PSNLAVVINGYC-LE		FMAYNERKSLTUGSES	PDGTELAL NNKRFTAT	GADNGTISIYOVY	NNRFYNDLSL NNHKKYTFOP		1272	A. pisum	1415 LPG(2 1355 LPS(2	1419
B.mori	1235	NNVLVICDSENKGFQ	SYELKFONT-(3)-	CLIQEYKLNW/VTSCDIT	SDGYILAM	-GLDCGNVVLWVK	GKRQISLLKH	HNSRVQACSFSPV	1323	8.mori	1427 WHR(1	) 1430
P.xylostella	1281	KNILVICDDYGK-FQ	IFQLREDESG(3)-	RTLHENKVNNKIVSCOLT	SDGLVLAL	GLDSGDVVIWVP	NKCQLYYLRH	HKSKVQTCFFSPV	1369	P.xylostella P.machaon	1530 VHK(5 1523 LHH(3	i) 1537 i) 1528
P.xuthus	1262	KYILAICDDYHR-FQ	TYELKTODK-(3)-	-QPIQVYKLNNRIMCCDLT	ADGSLLAM	GLDSGNVIVWHVS	NQRQLRFLKH	HKTKVQWCRFSPV	1349	P. xuthus	1440	1440
C.elegans	543	LK		EET WHEN CURTURED	M/SALEVETAT		(36)000 L0100(3		544	C.elegans	549	549
E.multilocularis	1776	GRWIAIAATDGT-VC		FEGSHKPLTVRCVKFR	PV(10)EWP1A1 PV(8)-EVLLAS	GODAGALRENCER GODAGNERVWRLT	T(5)-RSVIAARSA		1880	E.multilocularis	1963 PIE(4	7) 2012
D.melanogaster	1150	NSLLFLAYENNI-ID	VFRLIFSONQ(7)-	EEE IAQKAKISYLVAT	00GTNLAM	GFENGTLELFAVE	N(2)-VQLIYSIEE(1	1)HEHCIRQLLFSPC	1243	D.melanogaster	1369 LLE(5	7) 1429
B.latifrons B.cucurbitae	1164	NQLF1VTENYK-1EN NNOLENVTOHYK-1E	VFDIAESLGP(10) TFDLANSLSP(10)	-DMFRGARVSCIAVS	RKANLLAV(8 RKANLIAV(8	B)GEDDISIHVYDCQ B)GEDDISIHVYDCQ	(L(4)-IDLLYTUNG (L(4)-IDLLYTUNG	HAQRWISHRFSPN HNLPINSHRFSPN	126/	B. Latifrons B. cucurbitae	1418 LHD(2 1467 LHD(2	5) 1445 5) 1494
C.capitata	1244	NKQLFVVAQSYK-IE	VFNLADSLAP(9)-	AFKAKVSCVAVS	RNANMIAV(8	B)GEKDISIHVYECQ	L(4)-IELLYDLKG	HSLPINAMRFSPN	1344	C.capitata	1500 LRD(2	0) 1522
N coniene	1190	64			TEES	COTEVT	MCTHI WYTHICO		1245			
H.sapiens G.gallus	1189 1191	GRM	LISAGGYIKMMVV LVSSGGYLKMDVT	/	TGES	SQTFYT	NGTNLKKIHVSP	DFKTYYTVD-NLGILYILQ NFDYYYTVD-NLGILYYLR	1245 1247			
H.sapiens G.gallus C.mydas	1189 1191 1223	GK01 SK01 SM1	LISAGGYIKAMIV LVSSGGYIKAMIV LVSCGGYLKYVCVC		TGES TGES -FLSSA	SQ1FYT LQTFYT -FSSFF1	NGTNLKKIHVSP -NGTNLKSIHVSP -DEQKLINS	DFKTYVTVD-NLGILYILQ NFDYYVTVD-NLGILYILQ SVGAQIE	1245 1247 1264			
H.sapiens G.gallus C.mydas C.picta bellii G.iaennicas	1189 1191 1223 1193 1197	GXI SXI SMI SMI SQI	LISAGGYIXXMNVV LVSSGGYLXXMDVT LVSCGGYLXYVVV LVSCGGYLXXMNVT LVSSGYTXXMNVT	/			-NGTNLKKIHVSP -NGTNLKSIHVSP -DEQKLNS NGTNLKSIYVSS -NGTNLKSIYVSS	DFKTYYTVD-NLGILYILQ NFDYYYTVD-NLGILYILQ SFKYYYTVD-NLGILYILQ SFKYYYTVD-NLGILYILQ	1245 1247 1264 1249 1253			
H.sapiens G.gallus C.mydas C.picta bellii G.japonicas P.vitticeps	1189 1191 1223 1193 1197 1185	GKN SKN SMM SKM NEL	LISAGGYIXMNVV LVSSGGYLKMDVT LVSCGGYLKYVCVC LVSCGGYLKMNVT LVSSGGYIXMNVC LATGDDNGEIRMNVC	[	ТGES -TGES FLSSA -SGQA -TGQP	SQTFYT LQTFYT FSSFFI LQTFYT	-NGTNLKKIH/SP -NGTNLKSIH/SP -DEQKINS -NGTNLKSIY/SS -NGTNLKSIY/SP -NGTNLKSLH/SP	DFXTYYTVD-HLGILYILQ HFDYYYTVD-HLGILYILQ SFXYYTID-HLGILYNLQ SFXYYYTID-HLGILYNLQ DFRYYYTVD-HLGILYNLQ	1245 1247 1264 1249 1253 1243			
H.sapiens G.gallus C.mydas C.picta bellii G.japonicas P.vitticeps A.carolinensis P.bivittatue	1189 1191 1223 1193 1197 1185 1194 1189	G01 S01 SNI SNI NEL NKL	LISAGGYIXMANV LVSSGGYLXMADV LVSCGGYLXYVCVC LVSCGGYLXMAVT LVSSGGYIXMAVU LXSSGGYIXMAVU LVSSAGYIXMAVI	/	TGES TGES	SQTFYT	-NGTNLKKIHVSP NGTNLKKIHVSP OEQKLNS	DFXTYYTVD-NLGILYILQ NFQYYYTVD-NLGILYUL SFXYYYTID-NLGILYULQ DFXYYYTID-NLGILYULQ DFXYYYTVD-NLGILYULQ DFXYYYTVD-NLGILYULQ DFXYYYTVD-NLGILYULQ DFXYYYTVD-NLGILYULQ	1245 1247 1264 1249 1253 1243 1250 1245			
H.sapiens G.gallus C.picta bellii G.japonicas P.vitticeps A.carolinensis P.bivittatus O.hannah	1189 1191 1223 1193 1197 1185 1194 1189 1099	GR01	LISAGGYIXAMNVI LVSSGGYLKAMDVT LVSCGGYLKAMNVT LVSCGGYLKAMNVT LATGDDNGEIRAMNVL LATGDDNGEIRAMNVL LVSSGGCIXAMNVL LVSSGGCIXAMNVL	/		SQTFYT LQTFYT	-NGTNLIKKIH/SP -NGTNLIKSIH/SP -DEQKLNS -NGTNLKSIY/SS -NGTNLKSLH/SP -NGTNLKSLH/SP -NGTNLKSLH/SP -NGTNLKSLH/SP	0FKTYVTVD-NLGILYILQ NFQYYVTVD-NLGILYVLQ SFKYYVTID-NLGILYVLQ DFKYVYTID-NLGILYVLQ DFKYVYTVD-NLGILYVLQ DFKYVYTVD-NLGILYVLQ DFKYVYTVD-NLGILYVLQ DFKYVYTVD-NLGILYVLQ	1245 1247 1264 1249 1253 1243 1250 1245 1155			
H.sapiens G.gallus C.nýcta bellii G.jagonicas P.vitticeps A.carolinensis P.bivittatus O.hannah P.mucrosquantus	1189 1191 1223 1193 1197 1185 1194 1189 1099 1089	GR01	LISAGGYIXMNVI LVSCGGYLXMDVT USCGGYLXMMVT LVSCGGYIXMNVE LVSSGGYIXMNVE LVSSGGYIXMNVE LVSSGGYIXMNVE LVSSGGYXMNVE LVSSGGYXMNVE	/			-NGTNLKXEHVSP NGTNLKSEHVSP DEQKLNS NGTNLKSEHVSS NGTNLKSEHVSS NGTNLKSEHVSS NGTNLKSEHVSS NGTNLKSEHVSS NGTNLKSEHVSS NGTNLKSEHVSS NGTNLKSEHVSP NGTNLKSEHVSP	0FKTYYTV0-HLGLYTLQ NF0YYYTV0-HLGLYYLR SFKYYYTV0-HLGLYYLQ SFKYYYTV0-HLGLYYLQ DFKYYYTV0-HLGLYYLR DFKYYYTV0-HLGLYYLR DFKYYYTU0-HLGLYYLR	1245 1247 1264 1249 1253 1243 1250 1245 1155 1245			
H.sapiens G.gallus C.nyida C.picta bellii G.japonicas P.vitticeps A.carolinensis P.bivittatus O.hannah A.mississippiensis C.porosu	1189 1191 1223 1193 1197 1185 1194 1189 1099 1089 1088 1088	G01	LISAGGYJXAMIVY LVSGGYLXAMUYI LVSGGYLXAMUYI LVSGGYLXAMIYI LVSSGGYJXAMIYU LVSSGGYXAMIYU LVSSGGYXAMIYU LVSSGGYXAMIYU LVSSGGYXAMIYU LVSSGGYXAMIYU LVSSGGYXAMIYU	/			-NGTNL KKLHYSP -NGTNL KSTHYSP DEQKLNS  MGTNL KSTHYSS NGTNL KSLHYSP NGTNL KSLHYSP NGTNL KSLHYSP NGTNL KSLHYSP NGTNL (SSLHYSP NGTNL (SSLHYSP NGTNL (SSLHYSP NGTNL (SSLHYSP NGTNL (SSLHYSP NGTNL (SSLHYSP NGTNL (SSLHYSP NGTNL (SSLHYSP NGTNL (SSLHYSP		1245 1247 1264 1249 1253 1243 1250 1245 1245 1245 1225 1225			
H.sapiens G.gallus C.nydas P.vitticeps A.carolinensis P.bivittatus O.hannah P.nucrosquanatus A.nississippiensis C.porosus G.gamgeticus	1189 1191 1223 1193 1197 1185 1194 1189 1099 1089 1088 1088 1088 1088	601	LISAGGYIXAMIVY LISGGYIXAMIVI LVSGGYIXAMIVI LVSGGYIXAMIVI LVSSGGYIXAMIVI LVSSGGYIXAMIVI LVSSGGYIXAMIVI LVSSGGYIXAMIVI LVSSGGYIXAMIVI LVSSGGYIXAMIVI LVSSGGYIXAMIXI		TGES FLSSA FLSSA TGES GQA TGP TGP TGP TSOS TSOS TRQS TRQS TGES TGES TGES	SQ1FY1	-NGTNL KKLW/SP -NGTNL KSLW/SP DEQKLNS -MGTNL KSLW/SP -NGTNL KSLW/SP -NGTNL KSLW/SP -NGTNL KSLW/SP -NGTNL KSLW/SP -NGTNL KSLW/SP -NGTNL KSLW/SP NGTNL (SLW/SP NGTNL (SLW/SP		1245 1247 1264 1249 1253 1243 1250 1245 1245 1255 1245 1225 1244 1245			
H.sapiens G.gallus C.nydas G.jaconicas P.vitliceps A.carolinensis P.bivittatus O.hannah A.mississipiensis C.porosus G.gangeticus D.creio S.chinocerousus	1189 1191 1223 1193 1197 1185 1194 1189 1089 1088 1088 1088 1088 1088	G01	LISAGGYIXAMUV LVSCGGYIXAMUV LVSCGGYIXAMUV LVSCGGYIXAMUV LVSSGCIXAMUV LVSSGCIXAMUV LVSSGCIXAMUV LVSSGGYIXAMU LVSSGGYIXAMUX LVSSGGYIXAMUX LVSSGGYIXAMUX LVSSGGYIXAMUX		TGES FLSSA FLSSA TGES SGQA TGES TGQP TGQP TGQP TSQS TSQS TSQS TRQS TGES TGES SGEA OSHT		-NGTNLXXLHVSP- 		1245 1247 1264 1249 1253 1243 1250 1245 1255 1245 1255 1244 1255 1254 1254			
H.sapiens G.galtus C.gaydas C.gicta bellii G.japonicas P.viticops A.carolinensis P.bivitatus O.hannah M.microSquahatus A.misSisSippiensis G.gangeticus D.rerio S.rhinocerousus S.garaham	1189 1191 1223 1193 1197 1185 1194 1189 1099 1088 1088 1088 1088 1088 1198 119	G09	L15AGGYIXMMVV LVSGGYLKMAUYI VSGGYLKMAUYI VSSGGYIXMMVV LVSSGGYIXMMVU LVSSGGYIXMMVV LVSSGGYIXMMVV LVSSGGYIXMMVX LVSSGGYLXMMA LVSTGGYIXMMSVE LVSTGGYIXMMSVE LVSTGGYIXMMSVE			S01FYT- -L01FYT- -F55FI- -01FYT- -01FYT- L01FYT- L01FYT- L01FYT- L01FYT- L01FYT- L01FYT- -L01FY	-NGTILLXXLHVSP NGTILLXXLHVSP NGTILXSLHVSP NGTILXSLHVSP NGTILXSLHVSP NGTILXSLHVSP NGTILXSLHVSP NGTILXSLHVSP NGTILXSLHVSP NGTILXSLHVSP MGTLXSLHVSP GOHSVSHLSL GOHSVSHLSL GOHSVSHLSL GOHSVSHLSL	-0FKTVYTIO-HLGLIYIL0 -NF0YVTIO-HLGLIYIL0 -SFRYVTIO-HLGLIYIL0 -0FKYVTIO-HLGLIYIL0 -0FKYVTIO-HLGLIYIL0 -0FKYVTIO-HLGLIYIL0 -0FKYVTIO-HLGLIYIL0 -NFKIFYTIO-HLGLIYIL0 -NFKIFYTIO-HLGLIYIL0 -SFLITY-SLIXIILX -SFLITYSLIXIILX -SFLITYSLIXIILX	1245 1247 1264 1249 1253 1243 1245 1245 1245 1245 1245 1254 1254 1238 1254			
H.sapiens G.gallus C.pitta bellii G.japonicas P.viliceps P.bivitatus O.hannah P.mercoquantus A.mississipiensis C.poroguantus A.mississipiensis G.poroguantus S.ribiocerousus S.ribiocerousus S.ribiocerousus	1189 1191 1223 1193 1197 1185 1194 1089 1088 1088 1088 1088 1198 1198 1198	G01	LISAGGYIXMMVV LVSGGYLXMMV7 LVSGGYLXMMV7 LVSGGYLXMMV7 LVSSGGYIXMMV2 LATGDDIGEJRMV7 LVSSGGYIXMMV2 LVSSGGYIXMMV2 LVSSGGYLXMMV2 LVSSGGYIXMMV2 LVSSGGYIXMMV2 LVSSGGYIXMMV2 LVSTGGYIXMSV2 LVSTGGYIXMSV2 LVSTGGYIXMSV2 LVSTGGYIXMSV2			S01FYT 	-NGTNLIKELIWSP- NGTNLIKSTWSS- DEQICINS- MGTNLIKSTWSS- MGTNLIKSLWSS- 	-0FKTYYTVD-HLGLY1LQ -NF0YYTVD-HLGLY1LQ -SF8YYTVD-HLGLY1LQ -DFKYYTVD-HLGLY1LQ -DFKYYTVD-HLGLY1LQ -DFKYYTVD-HLGLY1LQ -DFKYYTVD-HLGLY1LQ -DFKYYTVD-HLGLY1LQ -DFKYYTVD-HLGLY1LQ -DFKFYTVD-HLGLY1LQ -DFK	1245 1247 1264 1249 1253 1243 1250 1245 1245 1245 1245 1254 1254 1254 1254			
H.sapiens G.gallus C.gitta bellii G.japonicas P.vitticeps A.carolinensis P.bivittatus O.hannah P.necrosquanatus A.nississippiensis C.porosus G.gangeticus D.rerio S.rhinoccrosus S.griman P.nattereri A.mexicanus	1189 1191 1223 1193 1197 1185 1194 1089 1089 1088 1088 1088 1198 1198 1199 1283 1199	G0     G0     S0     S0	LIS—AGOYJXXMUV LVS—SGOYLXXMOYT LVS—CGOYLXXMOYT LVS—CGOYLXXMOYT LVS—SGOYXXMUV LVS—SGOYXXMUV LVS—SGOYXXMUV LVS—SGOYXXMUV LVS—SGOYXXMUV LVS—SGOYXXMUX LVS—SGOYXXMUX LVS—SGOYXXMUX LVS—TGOYJXXMIY LVS—TGOYJXXMIY LVS—TGOYJXXMIY LVS—TGOYJXXMIY LVS—TGOYJXXMIY LVS—TGOYJXXMIY		1665- 1665- 1655- 1662- 160P- 160P- 1505- 1505- 1505- 1505- 1664- 1665- 1665- 1665- 1665- 1666- 1666- 1666-		MGTNL IXCLIM/SP- MGTNL IXSLIM/SP- DERIX IKS MGTNL IXSLIM/SP- MGTNL IXSLIM/SP- MGTNL IXSLIM/SP- MGTNL IXSLIM/SP- MGTNL IXSLIM/SP- MGTNL IXSLIM/SP- MGTNL IXSLIM/SP- MGTNL IXSLIM/SP- GORIS/SILSL MGTNL IXSLIM/SP- TGANL IXSLIM/SP- TGANL IXSLIM/SP- TGANL IXSLIM/SP- TGANL IXSLIM/SP-		1245 1247 1264 1249 1253 1243 1250 1245 1245 1245 1245 1245 1254 1254 1254			
H.sapiens G.gallus C.gayda C.picta bellii G.japonicas P.viticops A.carolinensis P.bivittatus O.bannah P.excrosquanatus A.nissSisponsus G.pangeticus D.rerio S.rhinocremsus S.graha P.extremeri A.mexicanus I.pactatus E.lucius	1189 1191 1223 1193 1197 1185 1194 1089 1088 1089 1198 1198 1198 1198 1199 1203	G01	LIS AGO/IDAMIN LIS SGOILXMOU' LIS SGOILXMOU' LIS SGOILXMOU' LIS SGOILXMOU' LIS SGOILXMOU LIS SGOILXXOU LIS SGOILXXOU L				-NGTNLXX11//SP	-0FKTWYTID-HLGLLYILQ 	1245 1247 1264 1249 1253 1243 1250 1245 1245 1245 1245 1254 1254 1254 1254			
H.sagiens G.gallus C.gitab Dellis C.gitabellis G.gitabellis A.carbinesis A.carbinesis P.abrittatus O.hanah P.abrittatus G.gangetics G.gangetics D.rerio S.rhinocrousus S.graham P.astrereri A.mexicanus I.panctatus S.salar P.latipima	1189 1191 1223 1193 1197 1185 1194 1089 1089 1088 1089 1088 1198 1198 1198	G09	LIS AGOYIDAAHW VIS SGOYIDAAHW VIS SGOYIDAAWU VIS TGOYIDAAWU VIS TGOYIDAAWU VIS TGOYIDAAWU VIS TGOYIDAAWU VIS TGOYIDAAWU VIS TGOYIDAAWU VIS TGOYIDAAWU VIS TGOYIDAAWU VIS TGOYIDAAWU		1665		-NGTULXX1WSP- -NGTULXS1WSP- -OEQULXS- -NGTULXS1WSP- -NGTULXS1WSP- -NGTULXS1WSP- -NGTULXS1WSP- -NGTULXS1WSP- -NGTULXS1WSP- -NGTULXS1WSP- -GONSTSNLS- - -GONSTSNLS- - - GONSTSNLS GONSTSNLS GONSN		1245 1247 1264 1249 1253 1245 1250 1245 1255 1245 1254 1254 1254 1254 1254			
H.sapiens G.galtus C.gitta bellii G.japonicas P.viticops A.carolinensis P.bivitatus O.hannah P.mercogumatus A.mississippiensis C.porosus G.gangeticus D.rerio S.granam P.mattereri A.mexicanus F.uattereri L.panctatus E.uclus S.salar P.lattpinna	1189 1191 1223 1193 1197 1185 1089 1089 1088 1088 1088 1198 1198 1198	G0           S0	LISAGOYIDAANYN VISGGOYIDANYN VISGGOYIDANYN VISGGOYIDANYN VISGGOYIDANYN VISGGOYIDANYN VISGGOYIDANNY VISGGOYIDANNY VISGGOYIDANNY VISGGOYIDANNY VISGGOYIDANNY VISGGOYIDANNY VISGGOYIDANNY VISGGOYIDANNY VISGGOYIDANNY VISGGOYIDANNY VISGGOYIDANNY VISGGOYIDANNY VISGGOYIDANNY VISGGOYIDANNY VISGGOYIDANNY VISGGOYIDANNY VISGGOYIDANNY VISGGOYIDANNY VIS		1625- 1625- 1625- 1625- 1625- 1626- 1627-	501FY1	-NGTNLIKE114759- NGTNLIKE114759- CEQUIDS	-0FKTYYTID-HLGLIYILQ -NF0YYYTID-HLGLIYILQ -SF6YYTID-HLGLIYILQ -0FKYYTID-HLGLIYILQ -0FKYYTID-HLGLIYILQ -0FKYYTID-HLGLIYILQ -0FKYYTID-HLGLIYILQ -0FKYYTID-HLGLIYILQ -0FKYYTID-HLGLIYILQ -0FKYTID-HLGLIYILX -0FKYTID-HLGLIYILX -0FKTYTID-HLGLIYILX -0FKTYTID-HLGLIYILX -0FKTYTID-HLGLIYILX -0FKTYTID-HLGLIYILX -0FKTYTID-HLGLIYILX -0FSTTYTID-HLGLIYILX -0FSTTYTID-HLGLIYILX -0FSTTYTID-HLGLIYILX -0FSTTYTID-HLGLIYILX	1245 1247 1264 1253 1253 1255 1245 1255 1244 1255 1254 1254 1254			
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**Supplemental Figure S3.** Multiple sequence alignment of Apaf-1 family. The species used for alignment were mammals, birds, reptiles, fish, amphibians, cnidarians, hemichordates, echinoderms, insects, nematodes, platyhelminthes. Sequence alignment was generated using MAFFT, and the long insertions were deleted. The pink line on alignment indicates the sfApaf-1 sequence.



**Supplemental Figure S4.** Phylogenetic tree of Apaf-1 family proteins. The phylogenic tree was calculated using CLC Sequence Viewer ver.7.6 (CLC Bio A/S, Aarhus, Denmark) based on the alignment in Fig. S1. The species used for the alignment were mammals (red), birds (orange), reptiles (yellow), fishes (light blue), amphibians (green), cnidarians (blue), hemichordates (black), echinoderms (pink), insects (light green), nematode (purple), platyhelminthes (gray). A bootstrap value, a measure of the confidence in the branch, is attached to each node.



**Supplemental Figure S5.** Co-immunoprecipitation of endogenous sfApaf-1 and caspase-3/9. Cell-free preparations from immature oocytes (im) or apoptotic eggs (ap) were incubated with anti-caspase-3/9 antibody or control IgG-coupled Protein A Sepharose beads. Immunoprecipitates were analyzed by western blotting using anti-sfApaf-1 antibody (upper panel) or anti-caspase-3/9 antibody (lower panel).



**Supplemental Figure S6.** Cytochrome *c* does not activate caspase-3/9 in starfish cell-free preparations. Cell-free preparations using immature oocytes and mature eggs were made according to the method of Chiba *et al.* (1999). Time course of DEVDase activity was measured in the presence (immature  $\blacktriangle$ , mature  $\blacklozenge$ ) or absence (immature △, mature  $\diamond$ ) of 10 µM cytochrome *c* and 1 mM dATP. Positive control experiments were performed in the presence of 2 mM GST-A-CARD (×).



**Supplemental Fig. S7.** Phylogenetic tree of the caspases whose proteolytic activities were examined using recombinants. The phylogenic tree was calculated using CLC Sequence Viewer ver.7.6 (CLC Bio A/S, Aarhus, Denmark) based on the alignment which the long insertions were deleted. The species used for phylogenetic tree were *H. sapiens* caspase-3 (CAC88866) and caspase-9 (BAA87905), *D. rerio* caspase-3 (BAB32409), *Pseudosciaena crocea* caspase-9 (ACJ65026), *C.gigas* caspase-3 (XP\_011449627), *B. floridae* AmphiCASP-3/7 (AAN45849), *C. elegans* CED-3 (AAG42045), *D. melanogaster* Drice (CAA72937) and Dronc (AAD26625), and *A. pectinifera* caspase-3/9. A bootstrap value, a measure of the confidence in the branch, is attached to each node.



**Supplementa Figure S8.** Evolutionary trends of caspases. Conservation of caspases throughout animal evolution. Group I (CARD-effector caspases), Group II (initiator caspases), and Group III (effector caspases) are boxed in pink, green, and blue, respectively.

caspase-3/9	YIAS	SPTDI	ELPF	KAPW	PGT	TPAI	OLTTÇ	)EMP	MAP	LPLA	DQDA	SDV	VD	178
caspase-9	VVLF	RPEII	RKPE	EVLR	P-E	<b>T</b> PRI	PVDIG	SGG	FGD	VGAL	ESLR	GN/	AD	150
	:	*	*		*	**	:		:.	:	:.	. :	.*	

Supplemental Figure Conservation of the MAPK motif. S9. consensus MAPK consensus motif is boxed in caspase-3/9 (136–178 (109–150 starfish aa) and human caspase-9 using MAFFT alignment program. aa). Sequence alignment was generated Symbols at the bottom of protein sequences are indicated conserved sequences (\*), conservative mutations (:), semi-conservative mutations (.), and non-conservative mutations (), respectively.





Supplemental Figure S10. Full-length gels and blots used for Figure 1-7 and Supplementary Figures.

## Supplemental Table S1. Primers for cDNA cloning.

primer	sequences (5'-3')				
decomposite millions for accuracy 2/0	Fw	ATCATHAAYAAYAARAAYTTYSA			
degenerate primers for caspase-3/ 9	Re	GCCTGRATRAARAANAGTTTRGGYTT			
anacifia primara far cachago 2/9	Fw	TGGCAAGAACCTGAAGCACGTG			
specific primers for caspase-579	Re	TCTGCTGCATTTGCTTCCCGGTC			
deconcrete primero for a partial of Apof 1	Fw	GGNGGNGTNCCNATNCCICC			
degenerate primers for a partial simpai-1	Re	ARRAARTCNARYGNARRTYRTG			
deconcrete primero for a partial of Apof 1 for posted PCP	Fw	CATGGNATGGGNGGNATNGGIAAR			
degenerate primers for a partial simpai-1 for nested PCK	Re	ARRTARTAYTTCCANCKIKTIGG			
specific primers for 5' RACE for cDNA transcription		[Phos]CTCAATCTATCCTT			
anacific primare for 5' PACE		CACAGGTTCTGTAGCTTGGT			
specific primers for 5 KACE		AGACTAGACCGTGAGTCC			
and the main and the 5' DACE the mested DCD		CTGATGGCGACCCAGAACAC			
specific primers for 5 KACE for nested PCK		CCCACTCAACCTGGAGGAG			
specific primers for 3' RACE		ATAAGCTGCGCTGCATGA			
specific primers for 3' RACE for nested PCR		CAGGAATGGGATGATGATAAGCT			