

Table S2

Species	Accession number/ Gene model name *	Common gene name
<i>N. vectensis</i>	estExt_fgenes1_pg.C_340036 *	MyHCb
<i>N. vectensis</i>	estExt_fgenes1_pg.C_1510004 *	MyHCa
<i>C. intestinalis</i>	NP_001071955.1	Myod1
<i>C. intestinalis</i>	XP_002119856.1	MyHCb
<i>C. intestinalis</i>	NP_001027710	Tropomyosin
<i>D. melanogaster</i>	AAB09048.1	Non Muscle MyHCII
<i>D. melanogaster</i>	NP_723999.1	MyHC
<i>D. melanogaster</i>	NP_476650.1	Nautilus/Myod
<i>D. melanogaster</i>	NP_732001	Tropomyosin1 isoform_B
<i>D. melanogaster</i>	NP_524321	Tropomyosin1 isoform_A
<i>Apis mellifera</i>	XP_393334.4	MyHC
<i>I. scapularis</i>	XP_002433460.1	MyHCb
<i>P. humanus corporis</i>	XP_002423957.1	Myosin-9
<i>D. rerio</i>	AAN71741.1	atrialMyHC
<i>D. rerio</i>	AAF00096.2	ventricularMyHC
<i>D. rerio</i>	NP_001018321.1	fastMyCH4
<i>D. rerio</i>	NP_001018343.1	slowMyCH1
<i>D. rerio</i>	NP_571651.1	Myf5
<i>D. rerio</i>	NP_001003982	Myf6
<i>D. rerio</i>	NP_571337.2	Myod1
<i>D. rerio</i>	NP_571081	Myogenin
<i>D. rerio</i>	NP_957228	Tropomyosin 1 alpha
<i>D. rerio</i>	NP_958900	Tropomyosin 3
<i>D. rerio</i>	NP_001019638	Tropomyosin 4
<i>M. musculus</i>	Q6URW6	MyHC14
<i>M. musculus</i>	Q61879	MyHC10
<i>M. musculus</i>	O08638	MyHC11
<i>M. musculus</i>	P13542	MyCH8
<i>M. musculus</i>	NP_542766.1	MyCH7
<i>M. musculus</i>	Q5SX40	MyCH1
<i>M. musculus</i>	NP_032682.1	Myf5
<i>M. musculus</i>	NP_032683.1	Myf6
<i>M. musculus</i>	P10085	Myod1
<i>M. musculus</i>	NP_112466	Myogenin
<i>M. musculus</i>	NP_077745	Tropomyosin 1
<i>M. musculus</i>	NP_033442	Tropomyosin 2
<i>M. musculus</i>	NP_071709	Tropomyosin 3
<i>H. sapiens</i>	AAS98910.1	Sm MyHC1

<i>H. sapiens</i>	NP_005584.2	Myf5
<i>H. sapiens</i>	NP_002460	Myf6
<i>H. sapiens</i>	NP_002469.2	Myod
<i>H. sapiens</i>	NP_002470	Myogenin
<i>H. sapiens</i>	NP_998839	Tropomyosin2 isoform_2
<i>H. sapiens</i>	NP_001036818	Tropomyosin3 isoform_5
<i>H. sapiens</i>	NP_003281	Tropomyosin4 isoform_2
<i>S. purpuratus</i>	SPU_006850/ SPU_021621	MyHC9/10/11
<i>S. purpuratus</i>	SPU_010054	MyHC18A
<i>S. purpuratus</i>	SPU_021119	Sum1/Myod1
<i>S. purpuratus</i>	SPU_006232	Myod2
<i>S. purpuratus</i>	SPU_015983	Myod3
<i>S. purpuratus</i>	SPU_000128	Tropomyosin 1
<i>S. purpuratus</i>	SPU_011034	Tropomyosin 2
<i>B. floridae</i>	estExt_fgenesh2_pg.C_2450027 *	MyHCb1
<i>C. teleta</i>	estExt_fgenesh1_pm.C_1140043 *	MyHCb
<i>S. kowalevskii</i>	XP_002742413.1	MyHCa
<i>S. esculenta</i>	ACD68202.1	MyCvH
<i>L. gigantean</i>	estExt_fgenesh2_pg.C_sca_80337 *	MHCII-1
<i>L. gigantean</i>	fgenesh2_pg.C_sca_98000032 *	MHCII-3
<i>A. irradians</i>	CAA39247.1	MyHC
<i>T. adhaerens</i>	fgeneshTA2_pm.C_scaffold_2000077 *	MyCHb
<i>T. adhaerens</i>	e_gw1.33.84.1 *	MyCHa
<i>A. suum</i>	ADY39976.1	Myosin-3
<i>B. malayi</i>	XP_001899601.1	MyHCb
<i>O. volvulus</i>	AAA29420.1	MyHCb
<i>S. mansoni</i>	AAA29905.1	MyHC
<i>D. pulex</i>	EFX87106.1	MyCH
<i>D. japonica</i>	BAA34954.1	MyHC

*Sequences of these gene models were obtained from Patrick Steinmetz (Steinmetz *et al.*, (2012) Nature 487, 231-4) and are reported below.

>Ta-MHCa *Trichoplax adhaerens* 33:300609-315541e_gw1.33.84.1[Triad1:33303]
MKSSAKELKHLVVEKRAFIDPAVQAQWMAKKYVWIPDDNHGFTAASIKSERGDEATVQLNDGRTTTINREDIQKMNPFPKFDKVEDMADLTLYLNEASVLHNLRD
RYFSGLIYTYSGLCVFFVNPYKRYPIYTDEVVELYKSKKRHEVPPIHYAITDQAYRCMLLEREDQSILCTGESGAGKTENTKKVIQYLAAGAAKEMKDGNDG
GELEAQLLEANPILEAFGNAKTIRNDNSSRFGKIRINFDAAGFIVGANIETYLLEKSRAIRQAPDERNFHIFYQMLLGATPEMKDDLLLEKIDKYNMNSQLVVP
GVDDAAEEFQNTLNAIVMGISNEDTNSSLKILSSLLHMGNLKFDEDKSSDQATLPDNTVAQKVCFLLGVSVDFTFTRALLKPRVKVGRDYPVVAQNKDQASFAVQ
ALSKALYKRLFKWLVS RVNRTLDRTRKQGASFIGILDIAGFEIFKLNSFEQLCINFTEKLLQQLFNHTMFILEQEEYRKENIDWKFDIFGLDLQPTIDIEKPLGILAL
LDEECWFPKATDKTFSKVEKQHKHNPYHKPDPFRENADFLIHYAGKVITYCTNQWLMKNMDPLNDNVITLLQQSSDGFVAGLWKDSNVVGMNATNTDITF
GSSRTRKGMFRTVGGLYKEQLARLMTVLNNTSPNFVRCIIPNNDKKPKGIEANLVLEQLRCNGVLEGIRICRQGFNPRIAFQEFKQRYEILTPGAIPKGFMDARKAV
QKMTVEVLELESRYRILSKLFFRAGTLARLEERDLKLSIITGFQAYCRGNLARKMYLRRVQQTNAIRVIQRNVQAYLKLDRDQWWRLYTKVRPLLNVTQD
DEKRQVEDELKRVREKSEKAQHDLQILEIDYNKVLEEKSLAEQLQTETELCAEAEEMRIRLSIKKNELEELHDAEVKAAEEENNVNLTKEKKKLLQSISDLETS
LEEEEAQRQKLQMEKASLDSKIVAFENDLMKEADTNSKLSKDKKFLEDKVAELTSSFGTLEDKHKHLNRQKAKVDSQLQETEDTLRKEQELRTDLEKIKRLEA
DLRDTNDQLSDATAQVTELQNTLERHSNDLNQANAKIDQEVNARNKAEEKCRDLESQLEITEDLDAERDTRSKIDKQKRQLNEELESKNELLDSLDTTAAQQ
DLRNKREEELKHLKKVLEEDTIAHAEAVSLSKKHNETIEEMNNQIETLKKAKASLEKYKLQADSSSLADVKAECSDHLHASKTELEKKALESQVSDLNGRNTTL
QRKTEDLEQTNLSKLSQSLDTTVAQLVQAEQISSLERTSKSLQIAELQELYEDETQKQKNISMQRHLENKLSHSELIEELEDKENLARQINTQSTQLADARK
SLQQSEIALEDAENAKRKLAKDLCLCQNTLDDLKNTNTKLEKAKTRLQCEVDDLNVLDLEKKGSTISNLEKQRKFDQQLAEERSKSEMIANDRDTAEKTVRSNE
TTIISLKRELEELRDQHEDESERRRQQAEINDLMESKDDAGKNVHELEKAKQTLAAHVEDLKAQLEEELEDELQLAEDGKLRLEVNLAQAASNLDRVVSQRDEQI
EEARRSLKQVRELETEVEDERSQRSQAVSAKKKLEMDVKELESQVELANKSRDDVVRQNKKLQGGVKEMQNELDLRVREELYDQSRDLDRKFRTAEGDLR
QAQEELANSEARRNAEAERDELIEDSASASSLRQSWTDEKKRLESRISELEDELEDEQTESSSQDDKYRKMQMMEQLNSDLAVEKSVSQLEAGKTQLERQN
KDLQAKVSELETSSRAKSKALTQTWESRINNLEEQLSEARERTSLQKNNRRAEKRLKELTIQVEERRHADEYKEQADKASSRLRNMRQLDEAEETSRTQAL
KRKMQRDLDEQMEVSEALTREINALKTRMRLVNYFIAFFLLRFGYIISDVIHYEI

>Ta-MHCb *Trichoplax adhaerens* 2:7673470-7690114fgeneshtA2_pm.C_scaffold_2000077[Triad1:49924]

MDDAEGFLRQKSTIDSCKKWVWIEDKAEGYLSAKILEVNGETLSSEVNTGQRLTVKRDLTQQMNPTKYDKAEDMAALTYLNEAGVLNNLKQRYFSGMI
YTYSGLFCVAVNPYRRLPIYTDKVVEMYKGGKRAEMPPHIFSITDNAYNEMLQERENQSILITGESGAGKTENTKKVIQYVATVAGTGETKSEKKQNLEDQIVQA
NPLMAEAFGNAKTIRNNSSRFGKFRVHFGHLHGKIAGADVESYLLEKSRVVSQTSSEERNYHVYFQILTAADDQMKEKYLVTGKPEDYKFLSEGVARIDAVDDEEE
WHATCDMSMKTLTFTDEERGFLIKVVMAILHFGNVKFKQRPREEQAECPTDADAEEKVAFLLGIQVADLVRSLLRPRIRVGHEVYQGRNNYEQVVSVAALSKSLY
DRMFKWLIARINKTLETKFSKNYFVGLDIAGFEIFQVNLFEQLSINYTNEKLQQFFNNHMFILQEYEEYKKENIDWFEIDFGHDLQPCIDLIEKKLGILSILDEESIYPK
ASDKTFIEKLKKNHDGSKSPFKLPKMSSKNKAHFEIEHYAGTVGYTYVMGWLEKKNKDPLNDSVVDLLRKSTDPIIASLFAHDHQPEGSRKKGSQFLTVSQLHKEQL
EKLMLVNLRNTTPHFVRCIIPNEKKKPGIIEANLVHLQLRCNGVLEGIRICRKGFPNRIIFSEFKQRYAILAPGAIPSGMFMMDGRKAAAKLVDALQLEPNEFRMGTTK
VFFRAGVIGRLEESRDEKLYAILSKFQARMRGFLMRKTFOQMQEQRSGLQIIQRNVRYIVLRNWQWWRLFTKVKPLLNVARSDDELKHMQEELNRTLDKSQKE
ESLRKDLEEQNTKLVEEKQQLFMDLQREQDAYADAEDKIVKLESISKNDMESQIQELNDQLEEEEDNNAQISQVKKRLEAEVENLRTDIEDIEAALQKSDQEKQAK
DDALRSITTELDECQEAVDALTKDKKALEEKELELSNLLAEEDKSNHLTKVKNKLETSLEELQSHLDSEKKHTSDLDKAKRKLESEAKVANEKINEMEGNVKLA
EETIHKRDNEISKLGQSLIEDERTTVAALQKKLREAQSRIDELEEFDNERNVLKLKIEKQKAELLQELDELNEKLEDEAGGAHVLTQDTLTKKREAENRLQSEIESRTK
QHGSQVASMKKKKHNEIIDELENVETLQRAKNKLESEKQHLSGDLDELQSNLESLTKAKNSSDKQLRQLDEQYNEASAKVDEQEKIADLQAALQRLQAEENN
ELSEQVEDGESKINSLTAKKKGLESQLEELKRRKFEDESQARSSVSNNVKNLQAEQLTELLEDEEQESKAEQLRQLTKANADAATWRNKYEIDGAQRVEELEDIK
RKLTAKLTSAEELADEFQMFSSAEKSKNRLSTEMEDLLDLERAQNQCAAMEKKQRKVDAQTAEWNRNKHDTLTIDLENAQREYREQSTELFRVKGSYQETAEL
LVLDGLRRENKQLQNELSDLSEQLNSDGRNAAIEKVKRRKLEVEKEEIALLEEAEASLEQEENKVLRMQLEQSQQLKQEFFERRIHEKEEEMRGLRKNHQRLQEAVN
NSLGSESKSKSEQIRLKKKLEAEITELELTLEAANKSNADLNRSVKKYQSQVKQSMIDDEQRVHEDYRDVKVQKAERRANDVLEGEDELSELEAGLEKSKVQKLE
VDQIDQLQERVQDLTTSNSAALATRRKKLETEIESLHEEIELEGEAKSAEDKYKRANEQIARLTSEIATEHDEQMKEMEAKLNDSSELAGGKASKRHHVTKEARIREL
EADLEAETKQSQEATKQLRKNERRLRELQFSAEEDRKNLERTLAAAEKNNHKMRVLRRLQLEDAEEQTTQYQSKVRKLQHEIEECEERAAEAESALAKAKSRARI
AILFLRLCYCMVLFHLPLSPKPSIL

>NmMHCa *Nematostella vectensis* 151: 35935-66236estExt_fgenesht1_pg.C_1510006

MKYLVVDRAAISDPVALAEWSSKRLVWIPDEKQGVASIKDESKDEYVVEVEGGKKKKVHKDDIQRMNPPKFEKVEDMADLTCLNEASVLHNLKDRYYSGLI
YTYSGLFCVVVNPYKRLPIYTDKVIDMYRGKKRHEVPPHIYAITDTAYRSMQLDRENQSILCTGESGAGKTENTKKVIQYLAAVAGHSYGYKVELEKQLLAANPIL
EAFNGAKTIKNDNSRFGRFIRINFASGFIAGANIETYLLEKSRAIRQNSNERTPHIFYQMAGLEAKERGEILLGKPTDYRFLSNGNMPPVPGIDDAELADSIQCL
TDMNMGEDEIFAIYRVVSAVLHFGNLVFKQERNSDQAILPNNEVAQIKCHLLSPVTEFTRAILKPRVKVGRDYYQRAVTKDQADSSVEAIAKALYERLKFVWV
QKINKSMDBRTKREGASFGILDIAGFEIFQFNSFEQMCINYTNEKLQQLFNHTMFILEQEYERYKEGIDWKFDIFGLDLQPCINLLEKPMGIFALCDEECWFPKATDKT
LVEKLIKEHNKHEKFQIEPFRSQAHFSIIHYAGRVYDNCNWLMLKNQDPLNDNITSLMQGSSTDFVVALWKDAEFVVSQFANSGESPPGSKVRKGMFRTVSQV
YKDQLARLMLVLNNTNPNFVRCIIPNHEKKAGKIASFLVDQLRCNGVLEGNIRICRKGFPNRMFLQFEFKQRYELLTPGVIPKGFMDGRKACEKMLQSLDSSNSY
RIGQSKIFRAGVLAHLEEEERDIKLEIITIFQAFRCGNIARKQYHKRVQQLSAIRVIQRNCLSYLKLNRWQWWRLFTKVKPLLNVTREHEELHQREDELRTLREKL
EKLETEYTDLEKKHSQIEEKAIVAEQLESEREVAQETEEMRQRLQTKKNELEELLSDLEGRITEEEEENVLALTEDKKKLLKEIQDLEDSEEEESARQKLHLEKVS
CEAKIKLEEDLSLVEDTNSKISKEKKTLEELNELDQALIDEEESKGLAKQAKQADMIADLEERLKNEERARQDLDKIRKRLSELAEVSQRLEAAKQVLEAKQVQEL
EAAVHKKDMELNDLNARYDEEMARRTELEKDKRELENSVEELKEDLEVEKSARAKAEKQRRELESEELSKSELEESIDTTAAATDMRVKREAEVLAKKSVEE
ESAKHENLMSELRQKNSKQIEELTIELESTKKNKNSLEKSKKDLENETSSLTIELKAISQEKQEGDRKIKMLLENQMSEANIRLADDEQKVSELTISRNLQKQDLEVQI
SMVESLESKHTALERSKKSLEDTLAEATQDSLQEETHHKLMIISKLKDVENEIVSLQEQLEEEEENKSALQKQLQSAQTQCAEMKKVVEERAAALEEADAVKKKL
REMEALNTTVEEIQGSNAKLEKTRKRLQNEVDDLQLNLDKERSTIANLEKRQRKFDQMMAAEEKAISERYAMERDNEAEREARQNETKVISLSHELEEYQDKLAES
LERRLKLAQTELEGVMSKDDDFGKNVHELEAKRSLEQQLAEMKQTMEELEDELQATEDAKLRMEVNMQAMKTQFERDLAARDQNEEKKRALLKQLRELESE
LDEERKLASAVNANKQQLDLRDELDQLEAANKVKEDGLRQLKKYQQLKDIQRDLDARASRDEIAEHAKENEHKLKQLEADFIQNEEDLSAAERSKRVLE
RERDELAELATLSGGRGATAAEKRYEARIAALEEVEEERTQSELLQEKAAMAMMQMEQMQADLNAERANAAQNNSARASLEKQNKDLKQKLADLESSTRS
RHKMAIASLESKLTNMQEQLDLTETRERALQSKANRKLKERKIKELMLQNEEERHSDQYREQMEKTSGRMKALKRQVDEAEESSSLNSSKRLQRELDDAQAE
NEELNRVNSLRDIRGRGGGRSGYTTPEPRRKARDRPSVTVEESDTSMDAAED

>NmMHCb *Nematostella vectensis* 34:382412-407942estExt_fgenesht1_pg.C_340036[Nemvel1:240778] corrected with estExt_gwp.C_340061

MEFDPNDPLAILRIDKSQIMAAQAEFESKKWVWIPDPKEGYKAAEVKSTKGDNFLVETNDGQVEVEINKNDTEQMNPPKYEKTEDMSNLTYLNEASVHNLKQR
YFSGLIYTYSGLFCVAINPYRRLPIYTDKIVFAYRGKRKTEAPPHVFCICDNAYQNMQLDRENQSMLITGESGAGKTENTKKVIQYLAHVSGGISKDADEHHKKQTG
GSLEDQVIQVTELEAYGNAKTIIRNNSSRFGRKFIIRCHFGPQGGKLAGADIESYRKEERSVIYQIEIRNYHIFYQILYGAPKDLHDQLLESNKTDAYATKACGER
ADGIDDVNEWANTELAADTLGFSAAEKLKSMYKICAACLHWGNSKFKPREEQAEVADPKDLDTKSLFMLKLPAGADFVKNVKPRIKVGREYVYNQGRNLQVNY
SIGALTKSLRYRMFVLWVDRANQTLMTKDRAFFIGVLDIAGFEIFQFNSFEQLCINVTNEKLQQFFNNHMFILQEYEEKREGIHWFEIDFGHDLDEPTINLIFGKGTG
IFAILEEECIVPMTQDTQLKQLNTHDGKSAKFGPKISGKKQVNVYHIEIHHYAGTVGYNVDNWLDKNKDPINEAVASLFAKSGDPFISHLWKEYATEGHTRGK
GGSFQTVSAKHKEQLQSLMDTLTYSTSPHFVRCIIPNELKKAGVIDTPLVIHQLRCNGVLEGIRICRKGFPNRIIPFQEFKQRYQILAPTAVSGQFMDGKKACEKLLAAI
QLEENEYRIGTGYVFFRAGVLGHLEDLRDDRLAKHISMFAQYCKGFLMRKEYRKMCDQRIGSVIQRNVRYLYLRNWAWWWLTYRVKPLLVARADEEMKQK
VEQMKEIEELKGEEALRKELEEKYTKLVEEKNLFLQDFQREQDACADAERNALEKGRKADLEAQVKDMLEQLEDEEESAELSSVVKHLKEGEISDLKQDIEEL
DATLKKVEEKGKQDKNIEQLNEELQQQDEAIAKLQKAKKQVEDERTELDHLQEEQNKVSHLTKTKLKESTLDEVNLLEREKKVARGEVEKVRKLEGLDK
MTQTTLEETQAEKARTEDEVERKRDANIVELSGKLEDSNNLVESLRKRIRELEARVEELEEAERNARSKSERARQLEHEDDLNRLDEQGGATQAMQELNK
KRESDIKLRSEGLSRMEELEAKRKLQALAEHQVNSMRSKQNQQMQEMQEELDQVKTKTKAKLEKEKAQLTNEGDDLAVTVTLQKQKQASEKNEISDQLAESKAEQNEELR
NIQELQAIRSRIEAENADVNRQLEEQENKGGQLGKAKKNLEQQLEELKKQLDDEMRAKAEAAQARLKNLEADFDAMQENFDEAEDGKADLQKQLSRANTEAQS
WKNKYEQDALAKVEELEDARKKLAALKQEMEEALNTAQTKAASAEEKRSRLNSELEDALIDLEKAQTNNANLEKKQKKIDIQINEWRVKLEEVQADLDNSQKE
ARNYSTEMYKIKAAAFDEQSEQV
EALKRENKSLASEVNDLADQLGEGGKSVVELEKLRRKLEMEKEELQTALEEAEGALEGEEGKVLKIQLEMTQLKQEFERKLADRDEEIDTLRKNHQRLDALQA
SLDSEVSKSNELARLRKFFETDCNEMEINLENSMKANQELQKTTKKLQQQVKDLQLMVVEEQRGRRDDARESAARAERRSAELAAELEDLNRNQLQEQADRARRTA
DQERADVDRLEAEVSNQVNNLQQGKRKLEGGVNTMQEELDDAENEAKAADERSKKAAEAFARAQAEVSAQDHATAADRARMSAERIKHSELEDLKKLEEEAA
GGKALKVQIKKLEQRVKELERELDNEAKRSAESQKLAKKNERRRMKEIQFQADEQKQLNARAQENSDRMNNKLKKMRTAVEEAALAAANLARFRKAQTELEE
AEERVEQLESSLQKARGRARTSGVMSGGRAASRETSYRSSSYRASSTSLDDE

>Lg-MHCII-3 *Lottia gigantea* 98:484732-496085fgenesht2_pg.C_sca_98000032[Lotgil:170416]

MAGSYDPNDPDMKYLAVDNRKLMEEQTKAFDGGKCAWVPDPQASFLPAEIVSSKGDEITVKITTNNEQRTVKKQDIQQMNPPKYEKIEDMANMTFLNEASVLH
NLRSRYTSGLIYTYSGLFCIAINPYRRLPIYTLVIAKYRGKRKMEMPPHFLAIDADNAYQSMVQERENQSVLITGESGAGKTENTKKVIMYFAQVAAAMGKGDEE
EEKKDEKKGTLQDQIVQCNPVLEAYGNAKTIIRNNSSRFGRKFIIRHFGTQGGKISGADIEQYLLKSRVTYCPAERNYHIFYQLLSNAIPAYHEKLLVSPDPALYSFI
NQGCLTVDSIDDTQEMKDDTKADFVDFGFEDEKLSYLKCTGAIVHFGEMKFKQGRGEQAESDGNAAEKVAFLLGINPEDLLKGFLPKPIKVGTEFVTQGRKTKDQ
VYVSVALAKSLYDRMFKSMVVRVNTLDTKAQRQFFIGVLDIAGFEIFDFNSFEQLCINVTNERLQQFFNNHMFVLEQEYEEKGIEWFEIDFGMDLQACVLDLIE
KPLGILSILEECMFPKASDKSFMEKLYQNLHGKSPNFGKPVGKKVKGEAHFELHHYAGTVPSYSITAWLEKKNKDPLNETIVELLMHKSKEALVQTLFAPSEPA
SGGPAKKKKSSAFQTISATHRESLNKLMKNLYSTPHFVRCIIPNEFKQPGVEDAHLVLHQLQCNGVLEGIRICRKGFPNRLVHSEFKQRYSILAPNAIPDGFV
TVAGKILVALEMDPNEYKLSGKSTKVFFKAGVLGYLEDLDRERLSIIAMFQAHIRGYLVRNRYKKLCDKRIGLSVIQKNIRKWLAMRNWLWWWMYVVKPLLN
ARAEDEMKQKEEQFEKTKVLEKSEKMKKELEEQNTVLLQKKNDMFLELQTEQDKVVEFEKVENLIKQKIDFEAQIKEMEERCLDEEDAVGNLTEAKKQLQK
ANDDLKKDLEDMETNLVKAEEQKTSKDNQIKTLNDEIAKQEDMIMKVTDKKNMEEANANKLSDSLQAEEDKVNHLKSLKSKLEQSLDEFENNLEREKKIRGDV
EKVKKRLEQDLKMTQESVEDLERIKRELEETMRKKDAEINLSNRVEDEQGLVASLQKKIKELQAIIELEELASEKQARSKEVQRNLSHELEDISDRLEDEAG
GATS AQIDINKKRELELLKLRRELEENQLHHDAQIASFRKKQQESANEMSDEIDQLMKIKSLEKERNHARSEAEELAAQLQHASKNKGMSKMTKQVENQISEF
HFKLEESTRIVSDLQSSKSKLQMEVSEITRLEETEHEKVSIIKEKNTIQSQFEETKRCLEETRIRQKQLQSEVRNLTTDIDSLRDQIEEQDTCAMQRQLSKANSEA
QSWKSKYSEGLSRMEELEAKRKLQAKLADAEQNLEAANKINNLEKVKLQKQTEENEDMMIEVERTSTTANILEKKQRSFDKTTSEWQTKFSELQLEIETVQRE
SRALS AELFRVAKDVSVERMESLRRENKHLADEIRELTDQLSEGGRSVHEIEKIRRRVELEKEELQSALAEAHATLEQEEAKVMRLQLEISQVRQEVDRRVHEK
DEEFENTRRNHQRAIESMQASLEIEIKNTEAMRIRKKLEHDINEIALDAANRNLVEAEKTTKKFQLQITEIQTMIEDERRQKEAREAYNMAERRCGVISCEVE
ELRTSLEQSERSRKTVEVETDIHRISEMTAQFNSINSQKRKLECDIAAMTADNIDELHLTRSSSEDKCKKAICDVARLTELRSQEHCHEKIKRKSLEATTLEKLI
RIDEAEAQGLRGGKRVVQKLEVKIRELQSELETEQMRHSETDKNMRKIERRLKEVLFQADEDKRSQDRLQALVEKLQDKTRTYKKQVEEAEEVASLNLAKFRKV
QSELEDAEERAETAESYSNKLRAKNRSSVSQSRSTSVTRTSVVRMS

>Lg-nmMHCII-1 *Lottia gigantea* 8:4186461-4211712estExt_fgenesht2_pg.C_sca_80337[Lotgil:229681]

MAEDHLVGLSAQELRYLTVDRSLVNDPSVQAEWAGRWKLIWVPDEQNGFVMASIKYGERGDQLEVIVDETQKQRTVHRDDVQKMNPFPKSKVEDMAELTCLNEA
SVLHNLKDRYYSGLIYTYSGLFCVVPYKRLPIYQKVIELYKGGKRHEVPPHYAIADTAYRSMQLDREDQSLCTGESGAGKTENTKKVIQYLAAYVAASSRST

RSSVSNVSHSTNKELSLGELENQLLQANPILESGFNAKTIKNDNSRFGKFIKIRINFDLSGYISGANIESYLLLEKSRRAVRQAESERSHFVYQFLNGATPAQRKEFFLEDD
MSNYRYLSVGNVPVPGVDDSDAFQSLAESMGIMGISTDDQSAILRIVSAVILLGNMFKQERSSDQATLPDNTVAQKACHLLGLPVTAVTQAFLLKPKIKVGRDSV
TKAQTKEQVEFAVEAISKALYERMFKWIVSRINKSLDKTKRQGSFIFGILDIAGFEIFKMNSFEQLCINYTNEKLQQLFNHTMFVLEQEEYQKEGIEWKFDIFGLDL
QPTIDLLEKPMGLALLDEECWFPPKATDKTFVEKLHKQHTTHPKFIKKDFRADCDFSLVHYAGNVPPYQAERWLVKNMDPLNENIVSIMQQASDFTFMANLWK
DAEIVGMGAAAADVTMFGSRTRKGMFRTVSQLYKEQLSKLMSLTRNTNPNFVRCIIPNHEKKAGKINSTVLDQLRCNGVLEGIRICRQGFNPRIIFQEFRQRYEIL
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LEALKTELEDSDTTAAVQDVRRQKREHEVSEMKKVVEATQKQHENQIQDMRNKYSAQIEALSEEIENTRKTGKSVKVKQTLAEENQDLANDLKQVQQAQKES
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RISELEDDVDDEERNCELMAEKARKAQLQVDQIMTDLTSESVSQKLENQRMQLERQNKEMREKLQLELEGQNRARIKATIAALESVKVNLLEEQLDLEAKDRATL
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>Bf-MyHCb1 *Branchiostoma floridae* jgi|Brafl1|127185|estExt_fgenesh2_pg.C_2450027
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EEFEFETTRKNLLRQLESQASLEVEETAKNAEIRAKKKLEADLNELEV ALDNATKANAEAKTTITKLQVTIKELQVQLDDEIRSRLEERQYALLEKRLQLTITTEL
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>Ct-MyHCb *Capitella teleta* jgi|Capca1|157039|estExt_Genewise1.C_1140043
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