

Amino acid alignment of tunicate GH6 and CesaA proteins

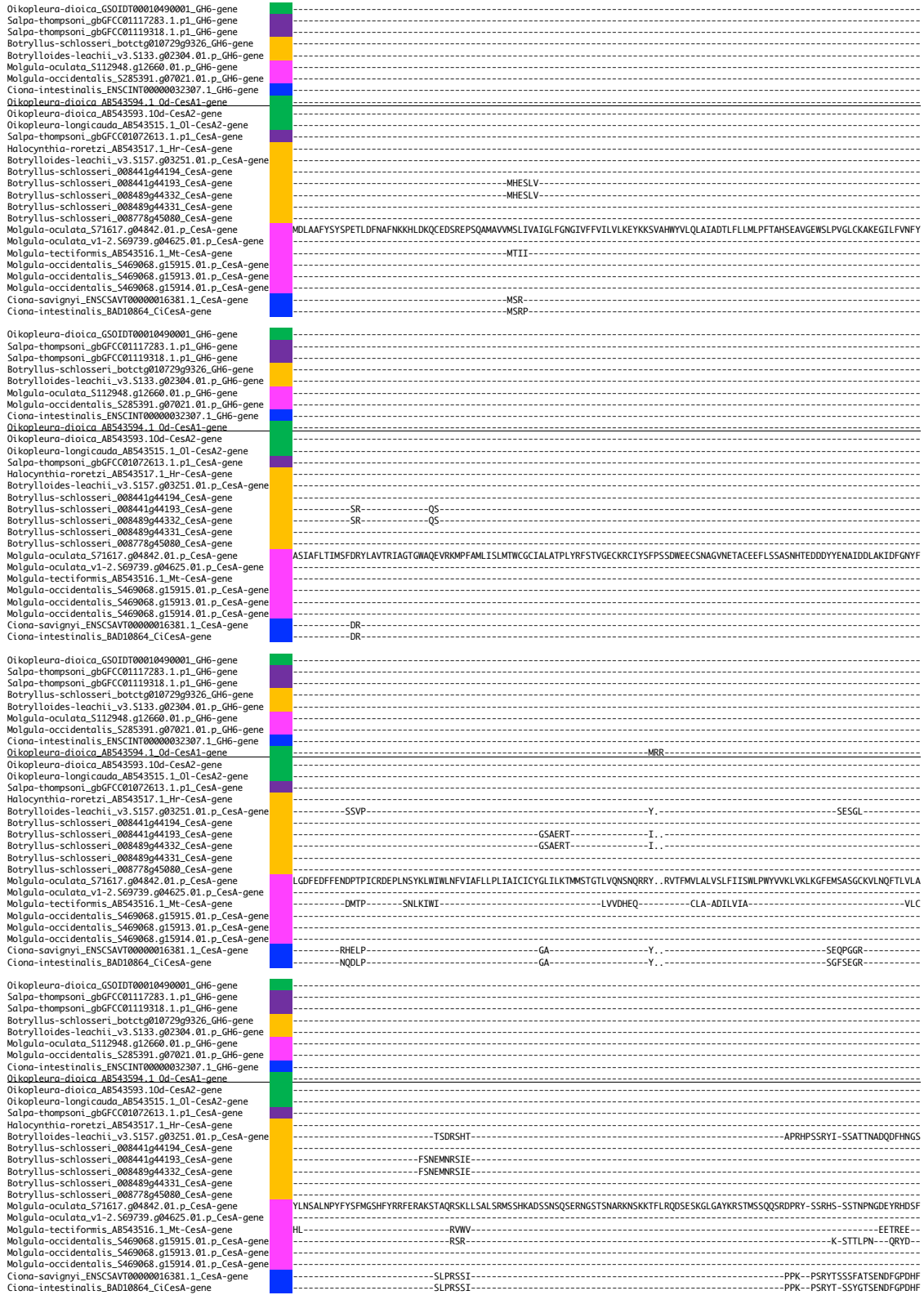


Fig. S1- 1

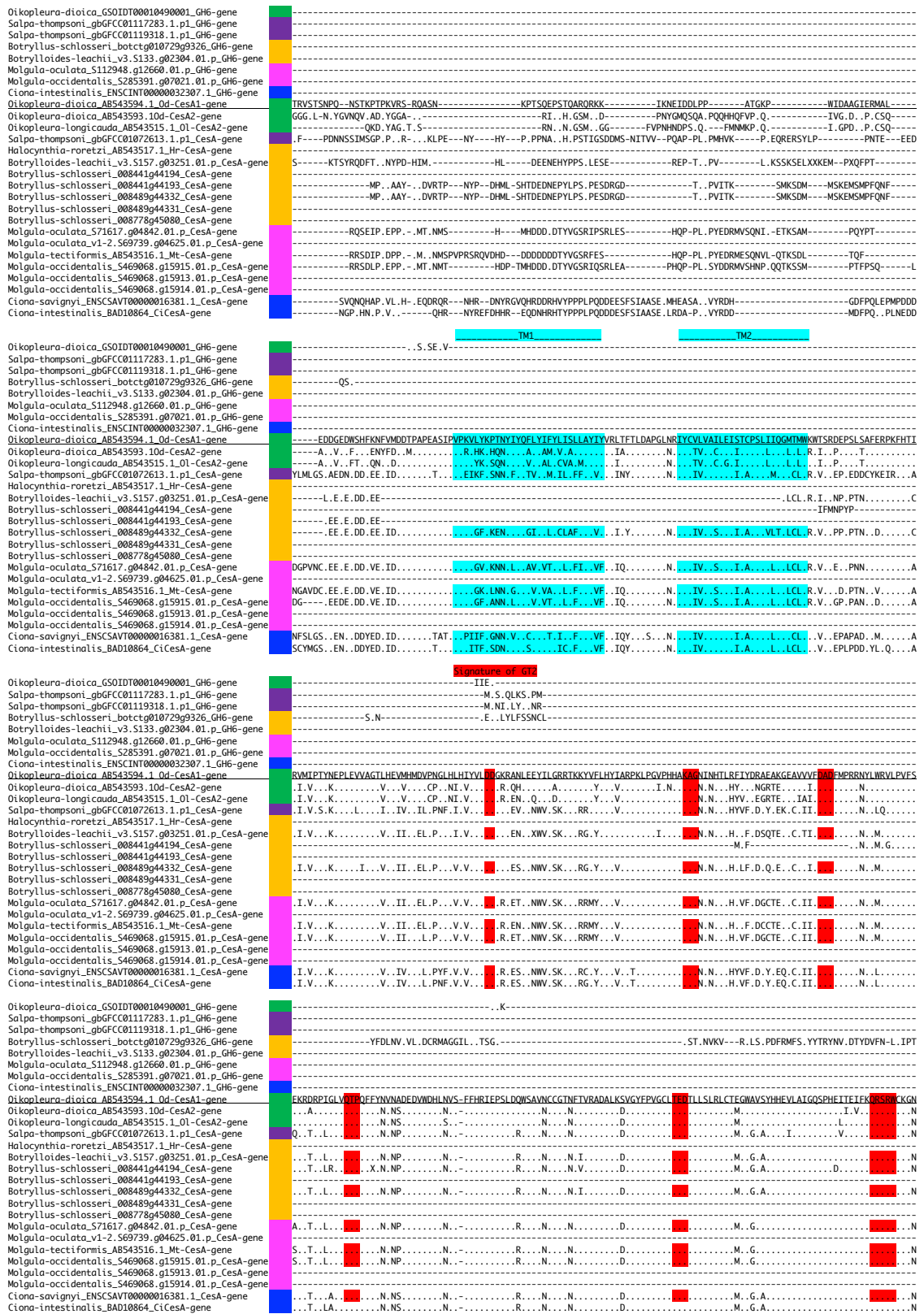


Fig. S1- 3

Oikopleura-dioica_G501D700010490001_GH6-gene	GYQPN.MPQPQQQLNQNN-----P---QTWG-----
Salpa-thompsoni_gbGFC01117283.1.p1_GH6-gene	-----YSNADNYDN-----
Salpa-thompsoni_gbGFC01119318.1.p1_GH6-gene	-----VDF-----
Botryllus-schlosseri_botctc01072909326_GH6-gene	-----NSROPTQPPNFFNRGTVTQSFSPSPSLQNSGVSSPSQSQSQGGFNDRDQSQILYSSNSADAEPQPAASGPPSLADLLRSGX--
Botrylloides-leachii_v3.S133.g02304.01.p_GH6-gene	-----FSQQPVQTSNSFNGLFGQNA-----ENS-----QETDSDXPFQGD-SQILYASNVPVPRSGPVQSGPPSLDILLRQGR--
Molgula-oculata_S112948.g12660.01.p_GH6-gene	-----E.SAYPNQQHHYNAAGGSPSLAQ--PNYNTNNGG-----GIFSNQESNS-YQPYFN-----TAGSLSLIDLLQAAAGR
Molgula-occidentalis_S285391.g07021.01.p_GH6-gene	-----YANSMQNYNRRPNPYANT--P---PNSGGY--QNSNRPSPIFNNNNQPLYPQSSYN-----TGVSSLSLIDLLQAAAGR
Ciona-intestinalis_ENSCINT00000032307.1_GH6-gene	-----YDEDVNYX-----
Oikopleura-dioica_AB543594.1.Od-CesA1-gene	-----
Oikopleura-dioica_AB543593.1.Od-CesA2-gene	-----
Oikopleura-longicauda_AB543515.1.O1-CesA2-gene	-----
Salpa-thompsoni_gbGFC01072613.1.p1_CesA-gene	-----
Halocynthia-roretzi_AB543517.1.Hr-CesA-gene	-----
Botrylloides-leachii_v3.S157.g03251.01.p_CesA-gene	-----
Botryllus-schlosseri_008441g44194_CesA-gene	-----
Botryllus-schlosseri_008441g44193_CesA-gene	-----
Botryllus-schlosseri_008489g44332_CesA-gene	-----
Botryllus-schlosseri_008489g44331_CesA-gene	-----
Botryllus-schlosseri_008778g45080_CesA-gene	-----
Molgula-oculata_S71617.g04842.01.p_CesA-gene	-----
Molgula-oculata_v1-2.S69739.g04625.01.p_CesA-gene	-----
Molgula-tectiformis_AB543516.1.Mt-CesA-gene	-----
Molgula-occidentalis_S469068.g15915.01.p_CesA-gene	-----
Molgula-occidentalis_S469068.g15913.01.p_CesA-gene	-----
Molgula-occidentalis_S469068.g15914.01.p_CesA-gene	-----
Ciona-savignyi_ENSCSAV100000016381.1_CesA-gene	-----
Ciona-intestinalis_BAD10864_CiCesA-gene	-----

Fig. S1- 6

CesA gene tree

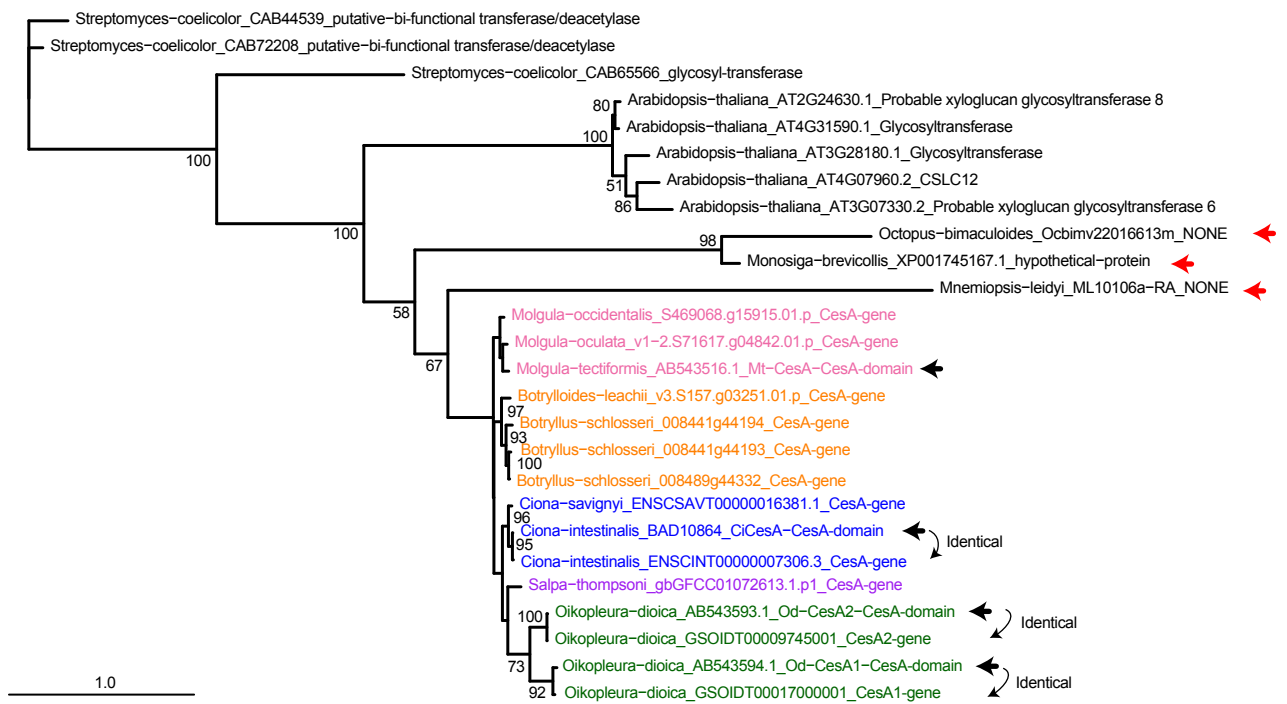


Fig. S2.

Phylogenetic position of the inconsistent *Monosiga brevicollis* sequence

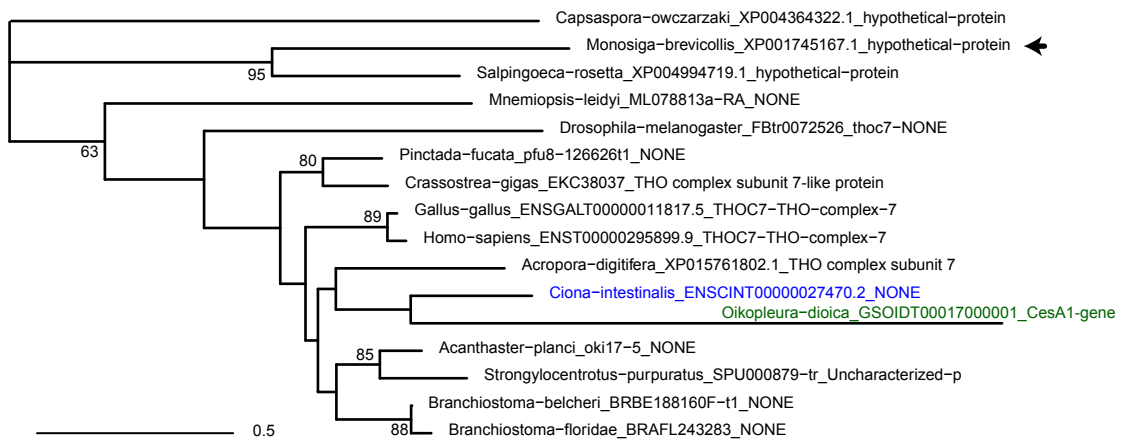


Fig. S3.