

Supplementary Table S1. Primer sequences used in the RACE and qRT-PCR amplifications.

Supplementary Figure S1. Negative controls of nervous system immunostaining in embryo and larvae of *A. japonicus* by incubating with 1xPBS to verify the specificity of the primary antibody. DAPI was used for nuclear staining (blue). (A) blastula; (B) gastrula; (C) late-gastrula; (D) auricularia; (E) doliolaria; (F) pentactula.

Supplementary Data S1. The identity percentage of the hits for the results of tBLASTn-based analysis.