

Neuropeptide precursors and neuropeptides in the sea cucumber *Apostichopus japonicus*: a genomic, transcriptomic and proteomic analysis

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Supplementary Figure 1 Alignment of *Apostichopus japonicus* neuropeptides with related peptides in other taxa. **A.** Vasopressin/oxytocin-type peptides, **B.** NG peptides, **C.** Gonadotropin-releasing hormone (GnRH)-type and corazonin (CRZ)-type peptides, **D.** Cholecystokinin (CCK)-type peptides, **E.** Thyrotropin-releasing hormone (TRH)-type peptides, **F.** Orexin (OX)-type peptides, **G.** LQ: Luquin (LQ)-type peptides, **H.** kisspeptin (KP)-type peptides, **I.** Somatostatin (SS)-type peptides, **J.** Calcitonin (CT)-type peptides, **K.** Pigment-dispersing factor (PDF)-type peptides, **L.** Pedal peptide-type peptides, **M.** Glycoprotein hormone alpha-2 (GPA2)-type peptides, **N.** Glycoprotein hormone beta-5 (GPB5)-type peptides, **O.** Bursicon alpha-type (BALP)-type peptides, **P.** Bursicon beta (BBLP)-type peptides, **Q.** Insulin-like peptide A chain (ILPA)-type peptides, **R.** Insulin-like peptide B chain (ILPB)-type peptides, **S.** L-type SALMFamide peptides, **T.** F-type SALMFamide peptides, **U.** AN peptides, **V.** Ajn9 and Spn9, **W.** Ajn11, Spn11 and Arn11, **X.** Ajn15, Spn15, Arn15a and Arn15b, **Y.** Ajn18, Spn18, Arn18, **Z.** Ajnp23 and Amp23-derived peptides, **AA.** Ajn25 and Arn25. **Abbreviations for post-translational modifications:** pQ, pyroglutamate; a, amide. Species abbreviations: *Apostichopus japonicus* (Ajap); *Strongylocentrotus purpuratus* (Spur); *Asterias rubens* (Arub); *Ophionotus victoriae* (Ovic); *Saccoglossus kowalevskii* (Skow); *Branchiostoma floridae* (Bflo); *Ciona intestinalis* (Cint); *Danio rerio* (Drer); *Gavialis gangeticus* (Ggan); *Petromyzon marinus* (Pmar); *Takifugu rubripes* (Trub); *Homo sapiens* (Hsap); *Alvinella pompejana* (Apom); *Aplysia californica* (Acal); *Lottia gigantea* (Lgig); *Capitella teleta* (Ctel); *Daphnia pulex* (Dpul); *Dendroctonus ponderosae* (Dpon); *Drosophila melanogaster* (Dmel); *Drosophila virilis* (Dvir); *Hypsibius dujardini* (Hduj); *Ilyanasa obsoleta* (Iobs); *Lymnaea stagnalis* (Lsta); *Procambrus clarkia* (Pcla); *Tribolium castaneum* (Tcas); *Caenorhabditis elegans* (Cele).

