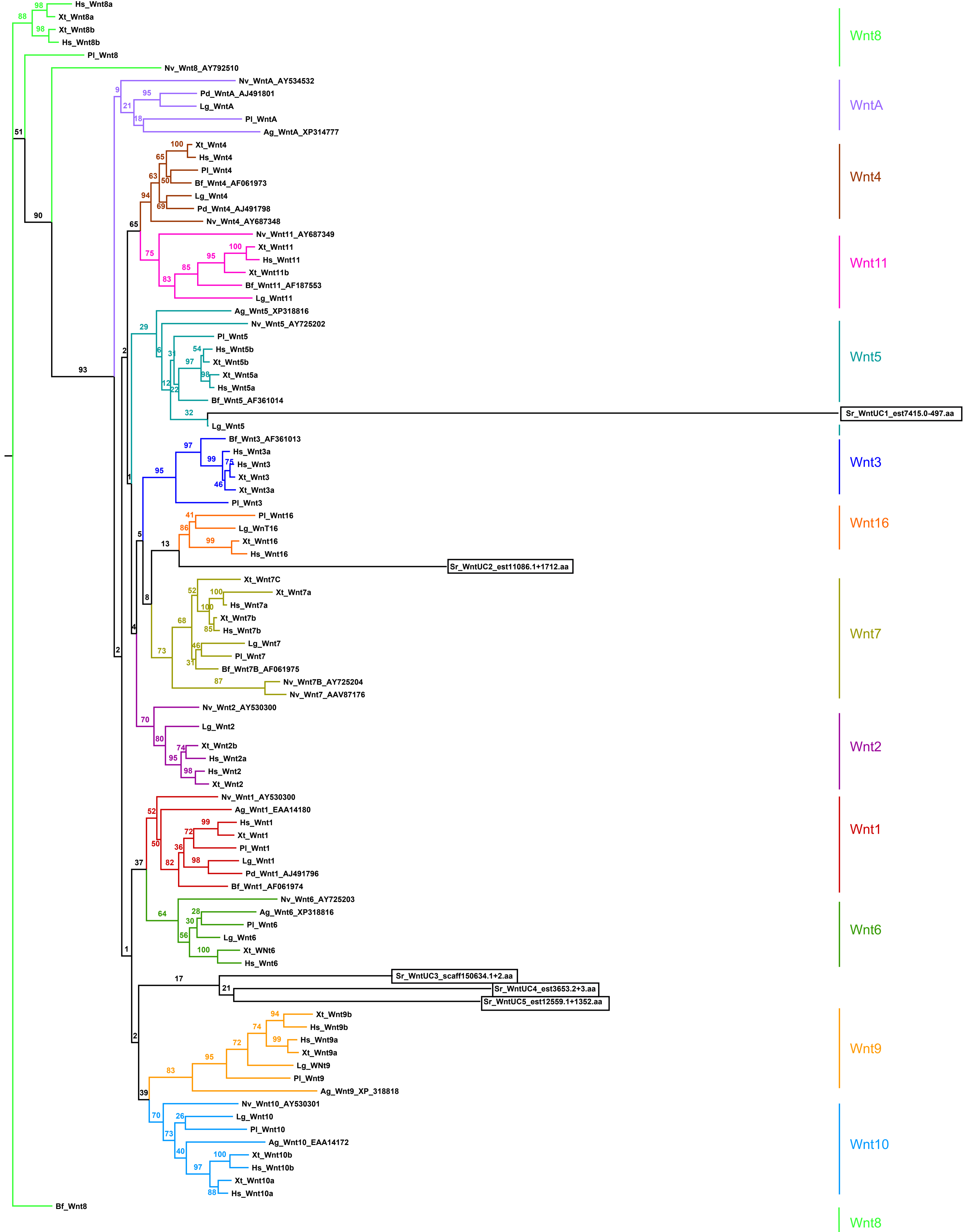


Supplementary Figure 1: *Symsagittifera roscoffensis* Wnts ligands. Phylogenetic analysis of *S. roscoffensis* Wnt relatives was performed as explained in [29] using a maximum-likelihood approach with the program RAxML and 100 bootstrap replications. The alignment of the reference species was provided by Dr. J. C. Croce [115] and included the sequences from the species Pl, Lg, Hs, and Xt (see below for abbreviations); the other sequences are used in [116] and were downloaded from the NCBI database, the accession numbers are indicated after the name. Protein families are highlighted with different colours. *S. roscoffensis* Wnts are marked with a rectangle. Abbreviations: Sr, *Symsagittifera roscoffensis*; Xb, *Xenoturbella bocki*; Lg, *Lottia gigantea*; Hs, *Homo sapiens*; Xt, *Xenopus tropicalis*; Nv, *Nematostella vectensis*; Pl, *Paracentrotus lividus*; Bf, *Branchiostoma floridae*; Pd, *Platynereis dumerilii*; Ag, *Anopheles gambiae*.



Supplementary Figure 2: *Symsagittifera roscoffensis* Wnts (with *Hofstenia miamia* sequences included). Phylogenetic analysis of *S. roscoffensis* Wnt relatives was performed as explained in [29] using a maximum-likelihood approach with the program RAxML and 100 bootstrap replications. The alignment of the reference species was provided by Dr. J. C. Croce [115] and included the sequences from the species Pl, Lg, Hs, and Xt (see below for abbreviations). The other sequences are used in [116] and were downloaded from the NCBI database, the accession numbers are indicated after the name. The *Hofstenia miamia* Wnt sequences were also downloaded from the NCBI database [71]. Protein families are highlighted with different colours. *S. roscoffensis* Wnts are marked with a rectangle. Abbreviations: Sr, *Symsagittifera roscoffensis*; Xb, *Xenoturbella bocki*; Hm, *Hofstenia miamia*; Lg, *Lottia gigantea*; Hs, *Homo sapiens*; Xt, *Xenopus tropicalis*; Pl, *Paracentrotus lividus*; Bf, *Branchiostoma floridae*; Pd, *Platynereis dumerilii*; Ag, *Anopheles gambiae*.

