

Figure S6. Multiple sequence alignment of the WBP1/VOPP1 family. This alignment includes aligned regions of the cysteine-rich domains and predicted transmembrane segments (labeled TM at the bottom). The divergent C-terminal low complexity regions for these sequences are not aligned. The sequences are denoted by NCBI gi numbers and accession numbers. Starting residue numbers are shown before the sequences. Conserved cysteines are shaded in yellow. Mutations in conserved cysteines are shaded in black. The four positions with mainly aromatic residues are in red letters. Cysteines near the C-terminal ends of predicted transmembrane segments are shaded in gray. Arginines and lysines near the C-terminal ends of predicted transmembrane segments are shown as blue letters. PY motifs (PPxY or LPxY) in the C-terminal regions after the predicted transmembrane segments are colored in cyan. Sequences with tandem cysteine-rich domains have names shaded in green. Species abbreviations are as follows: Aed.aeg, *Aedes aegypti*; Ail.mel, *Ailuropoda melanoleuca*; Ano.gam, *Anopheles gambiae*; Api.mel, *Apis mellifera*; Bos.tau, *Bos taurus*; Bra.flo, *Branchiostoma floridae*; Cae.bri, *Caenorhabditis briggsae*; Cae.bri, *Caenorhabditis briggsae*; Cae.ele, *Caenorhabditis elegans*; Cae.rem, *Caenorhabditis remanei*; Cal.jac, *Callithrix jacchus*; Cam.flo, *Camponotus floridanus*; Can.lup, *Canis lupus*; Cio.int, *Ciona intestinalis*; Cul.qui, *Culex quinquefasciatus*; Dan.rer, *Danio rerio*; Dro.ana, *Drosophila ananassae*; Dro.ere, *Drosophila erecta*; Dro.gri, *Drosophila grimshawi*; Dro.mel, *Drosophila melanogaster*; Dro.moj, *Drosophila mojavensis*; Dro.per, *Drosophila persimilis*; Dro.pse, *Drosophila pseudoobscura*; Dro.sec, *Drosophila sechellia*; Dro.sim, *Drosophila simulans*; Dro.vir, *Drosophila virilis*; Dro.wil, *Drosophila willistoni*; Dro.yak, *Drosophila yakuba*; Equ.cab, *Equus caballus*; Gal.gal, *Gallus gallus*; Hom.sap, *Homo sapiens*; Mac.mul, *Macaca mulatta*; Mon.dom, *Monodelphis domestica*; Mus.mus, *Mus musculus*; Nem.vec, *Nematostella vectensis*; Oik.dio, *Oikopleura dioica*; Orn.ana, *Ornithorhynchus anatinus*; Ory.cun, *Oryctolagus cuniculus*; Pan.tro, *Pan troglodytes*; Pon.abe, *Pongo abelii*; Rat.nor, *Rattus norvegicus*; Sac.kow, *Saccoglossus kowalevskii*; Str.pur, *Strongylocentrotus purpuratus*; Sus.scr, *Sus scrofa*; Tae.gut, *Taeniopygia guttata*; Tet.the, *Tetrahymena thermophila*; Tet.nig, *Tetraodon nigroviridis*; Tri.adh, *Trichoplax adhaerens*; Xen.tro, *Xenopus tropicalis*; and Xen.lae, *Xenopus laevis*. A one letter code after species abbreviations denotes the following species information: M, mammalian; B, bird; A, amphibian; F, fish; T, tunicate; L, lancelet; E, echinoderm; H, hemichordate; N, nematode; I, insect; P, placozoan; D, cnidarian and C, ciliate.