



Figure 3. Conserved PRC2 core complexes. The conserved core proteins of PRC2 (A) and PRC1 (B) complexes in *Drosophila melanogaster*, *Mus musculus*, *Arabidopsis thaliana*, and *Caenorhabditis elegans* are shown. (A) In the mouse, PRC2 variants containing EZH1 or EZH2 have distinct functions, whereas in *Arabidopsis* the ancestral complex has diversified into at least three variants with discrete functions during development. In *C. elegans*, the PRC2 core complex contains only three proteins, with MES-3 not having homology with any other identified PRC2 protein. Apart from these core proteins, several other proteins, which are not shown here, interact with PRC2. For instance, mammalian complexes can contain the histone lysine demethylase JARID2, the Zn-finger protein AEBP2, and various homologs of the *Drosophila* PCL protein (PCL1/2/3). Proteins that share the plant homeodomain (PHD)-domain with PCL, but are otherwise not closely related, are also associated with the VRN-PRC2 complex in *Arabidopsis*. Homologous proteins are indicated by the same color. (B) The core proteins of PRC1 are less conserved than those of PRC2 across the four species. In mammals, all genes encoding the PRC1 core subunits have been expanded (see Table 1), such that a variety of complexes with different isoform composition can be formed. In addition to the core components, several additional proteins can be found in PRC1 that are, however, less well characterized and are not shown. In plants, only homologs of *Drosophila* PSC and SCE have been identified; these are encoded by small gene families. Homologous proteins are indicated by the same color. (Based on Reyes and Grossniklaus 2003, Chanvivattana et al. 2004, and Margueron and Reinberg 2011.)