

Figure S1. **EdU incorporation features of proliferative XX and XY germ cells.** Green fluorescence was detected in germ cells with EdU+ (A2, ovary; B2, testis) but was absent in EdU- (A1, ovary; B1, testis). A3 and B3 are magnified image of A2 and B2, respectively. ccOg, condensed chromatin oogonia; PO, perinucleolar oocytes; Spg, spermatogonia, Spc, spermatocyte.

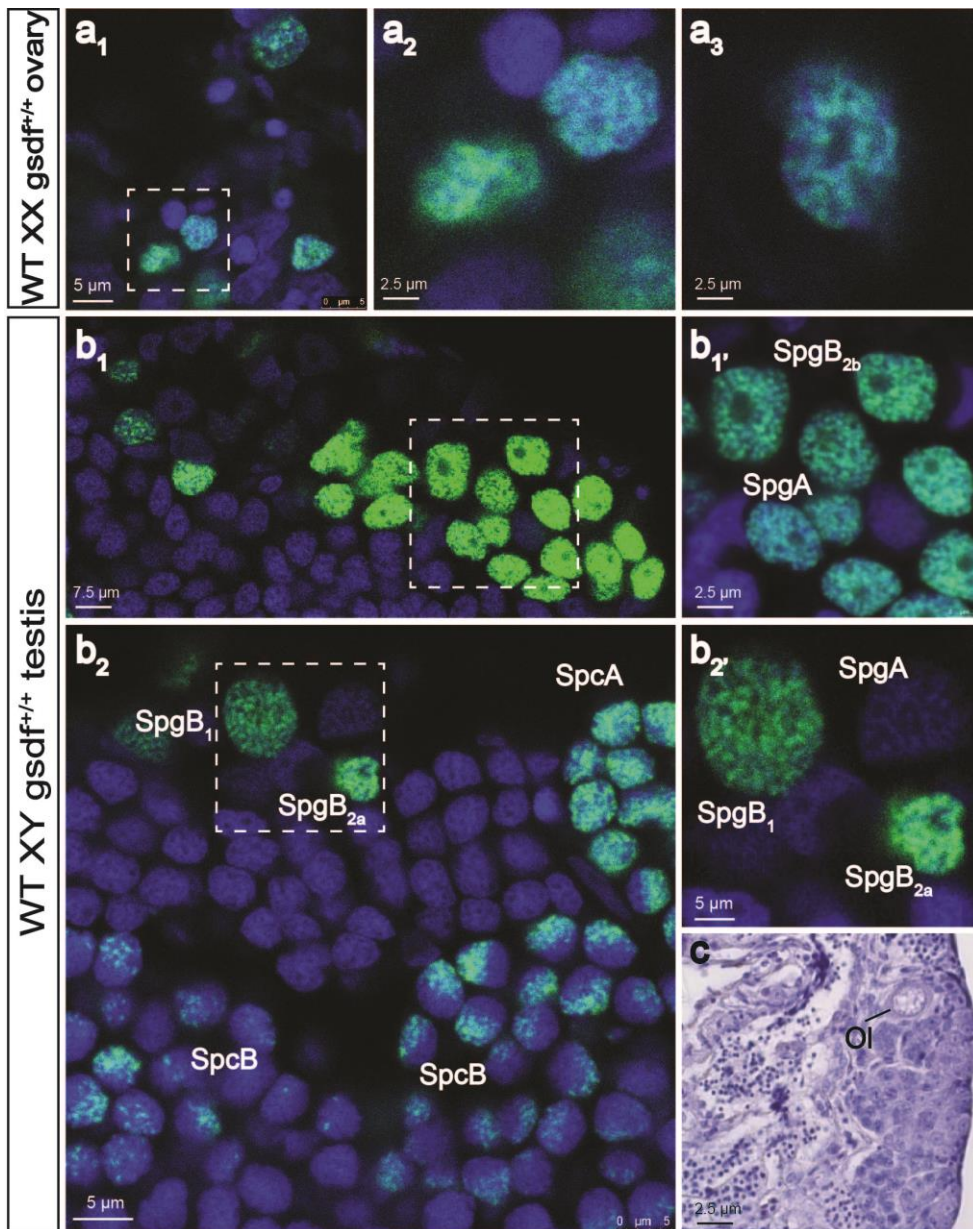


Figure S2. **Morphological changes in the nucleolus of germ cells in normal ovary and testis.** (a) EdU signals in cystic oogonia with larger nucleoli in normal XX ovary at low magnification (a₁); magnified images (a₂ and a₃). (b) EdU signals in heterologous spermatogonia (b₁–b₂'). (c) An oocyte-like (OI) diplotene rarely present in normal XY testes.

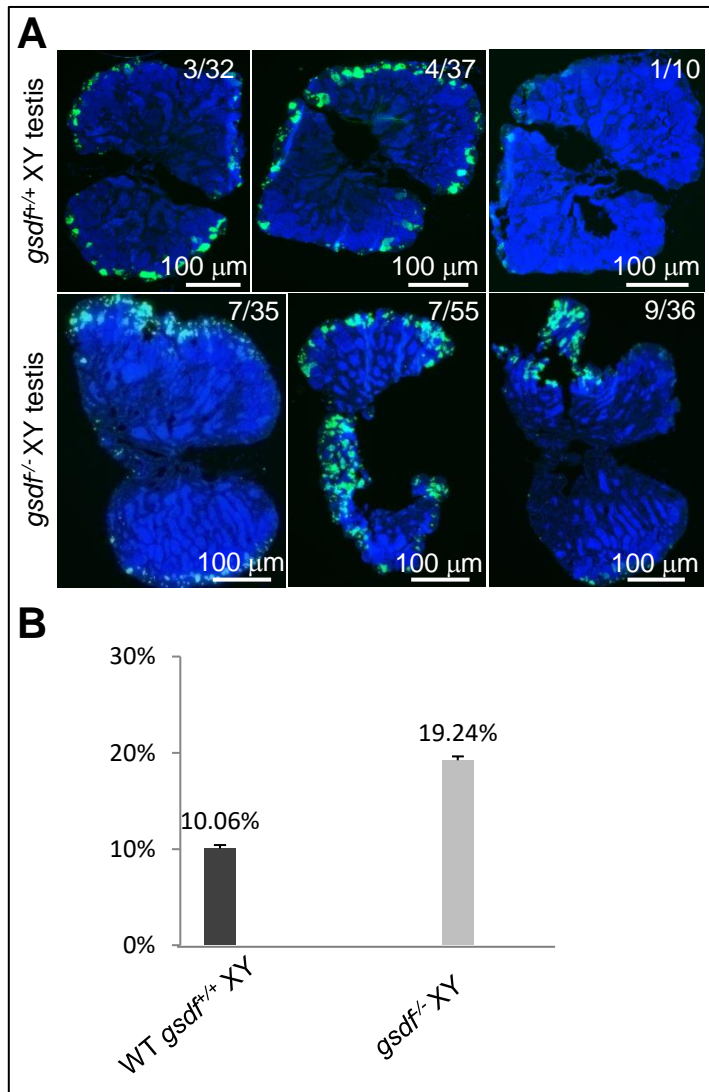


Figure S3. **Proportion of SpgB2a in total SpgB in normal and *gsdf*-deficient testes.** (A) EdU-positive spermatogonia in normal XY testes (upper panel) and *gsdf*^{-/-} XY testes (lower panel). (B) The bar graph shows the percentage ratio of SpgB2a to SpgB in intact and defective *gsdf* testes.