



**Figure S6** Meiotic defects in *Ythdc2*-deficient meiocytes. **(A)** SYCP3 (red) and  $\gamma$ H2AX (green) were detected in the chromosome spreads of 15.0 d.p.p. *Ythdc2*<sup>+/+</sup> and *Ythdc2*<sup>-/-</sup> spermatocytes. Scale bar, 10  $\mu$ m. **(B)** *Ythdc2*<sup>+/+</sup> and *Ythdc2*<sup>-/-</sup> oocyte chromosome spreads at 15.5 d.p.c. stained for SYCP3 (green) and  $\gamma$ H2AX (red). Scale bar, 10  $\mu$ m. **(C)** *Ythdc2*<sup>+/+</sup> and *Ythdc2*<sup>-/-</sup> oocyte chromosome spreads at 2.0 d.p.p. stained for SYCP3 (green) and SYCP1 (red). Scale bar, 10  $\mu$ m.