

**Supplemental Figure 1: *dap* mutants produce 32-cell cysts**

(A) Wild-type and (B) *dap*<sup>-/-</sup> mutant egg chambers, stained with (red) Wheat Germ Agglutinin and (green)  $\alpha$ -Orb antibody. The oocyte is indicated by an arrow.

**Supplemental Figure 2: High levels of Cyclin E correlate with MPM2 foci.**

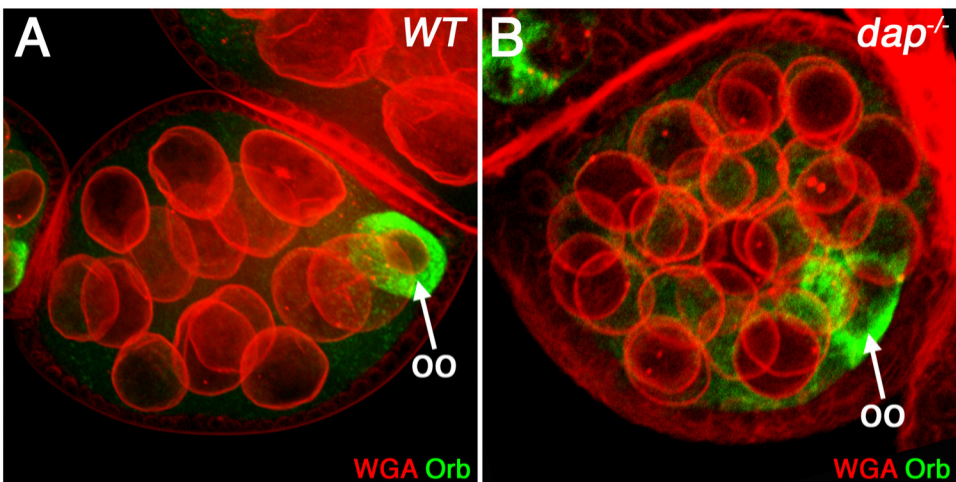
(A-A'') Wild-type germarium stained with (A; A'', red)  $\alpha$ -CycE and (A'; A'', green)  $\alpha$ -MPM2 antibodies and (A'', blue) DAPI.

**Supplemental Figure 3: PCNA and  $\gamma$ -H2Av are co-expressed in *dap*<sup>-/-</sup> mutants**

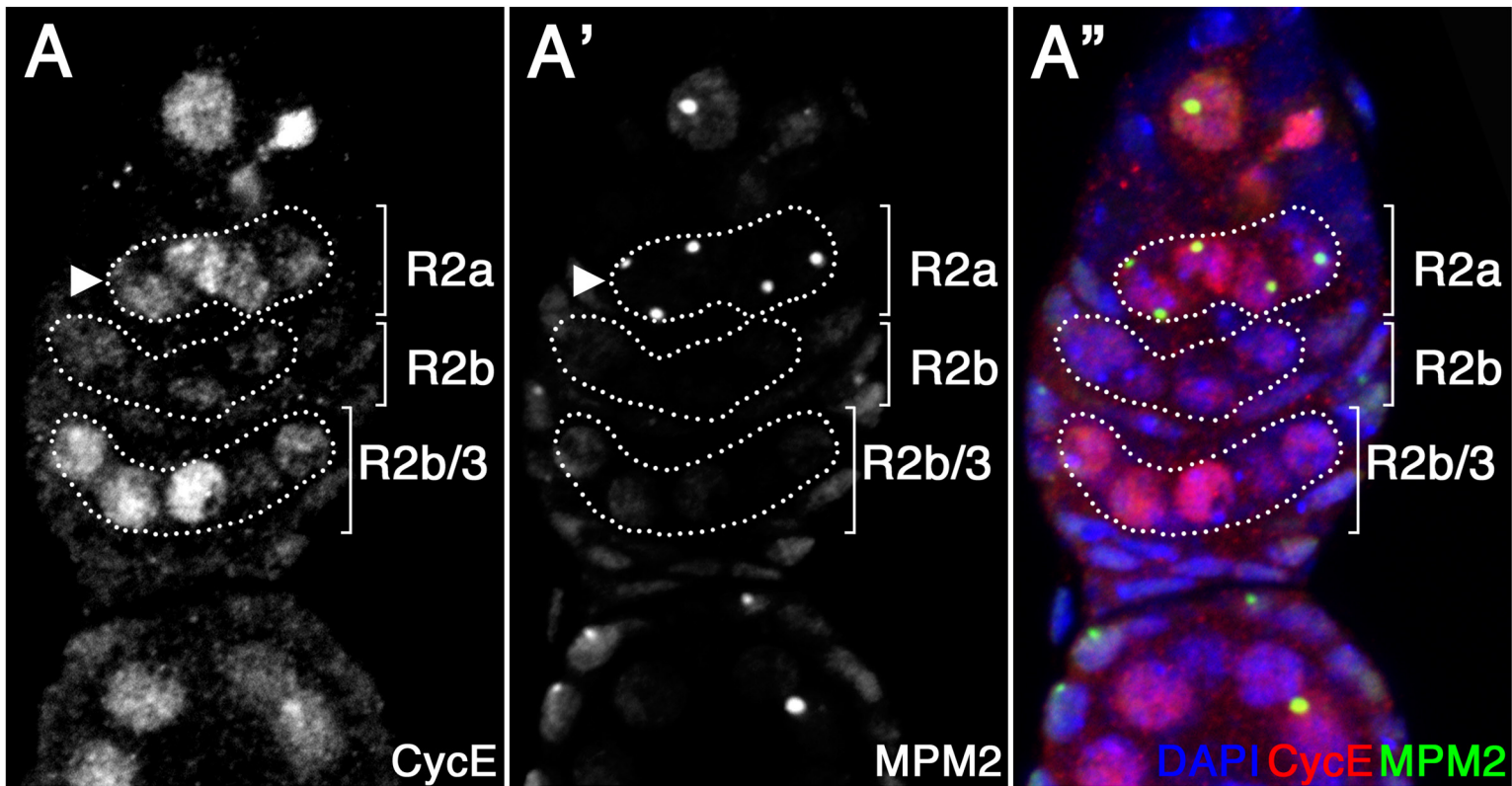
(A) Wild-type and (B) *dap*<sup>-/-</sup> mutant germaria stained with (A, B; A'', B'', green)  $\alpha$ -PCNA and (A', B'; A'', B'', red)  $\alpha$ - $\gamma$ H2Av antibodies and (A'', B'', blue) DAPI. Note that some *dap*<sup>-/-</sup> mutant cysts positive for PCNA in region 2a also contain  $\gamma$ -H2Av foci (B, B', arrowhead).

**Supplemental Figure 4: Dup/Cdt1 is expressed in 16-cell cysts in region 2a prior to SC formation.**

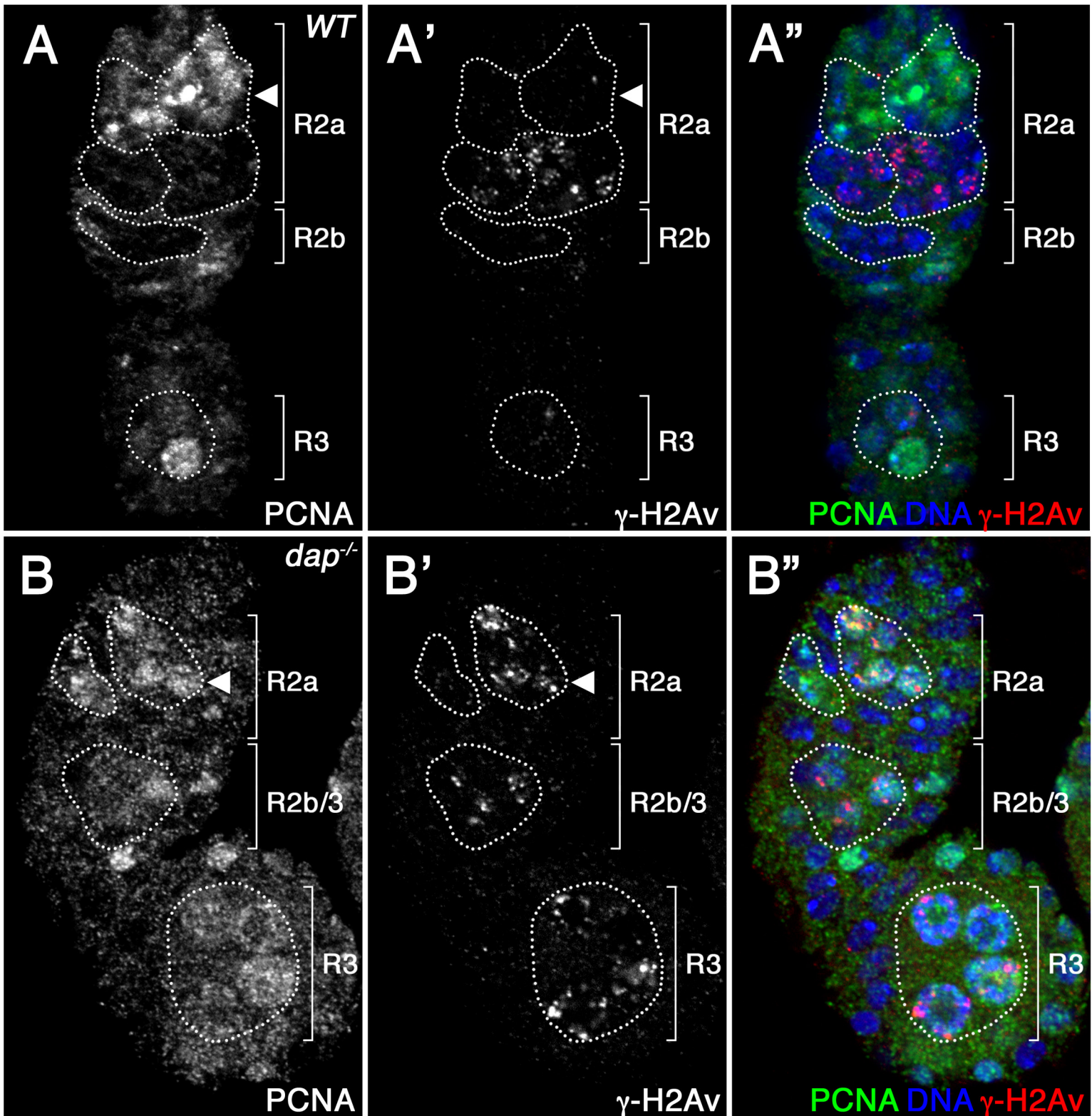
(A-A'') Wild-type germarium labeled with (A; A'', red)  $\alpha$ -Dup/Cdt1 and (A'; A'', green)  $\alpha$ -C(3)G antibodies and (A'', blue) DAPI. Note that the  $\alpha$ -Dup/Cdt1 staining is seen in 16-cell cysts of region 2a before the appearance of C(3)G (arrowhead).



**Supplemental Figure 1**



Supplemental Figure 2



**Supplemental Figure 3**

