

Description of Additional Supplementary Files

File Name: Supplementary Data 1

Description: Quantification and statistical analysis for *Chk2*^{+/-} and *Chk2*^{-/-} untreated and AZT-treated ovary experiments.

File Name: Supplementary Data 2

Description: Quantification and statistical analysis for meiotic progression in *Chk2*^{+/-} and *Chk2*^{-/-} oocytes.

File Name: Supplementary Data 3

Description: Differential gene expression and gene ontology for untreated and AZT-treated oocytes and ovaries.

File Name: Supplementary Data 4

Description: Small RNA length distribution and repeat alignment.

File Name: Supplementary Data 5

Description: Quantification and statistical analysis for *Mili;Chk2* untreated and AZT-treated ovary experiments.

File Name: Supplementary Data 6

Description: Differential gene expression in untreated and AZT-treated single-cell clusters.

File Name: Supplementary Data 7

Description: Quantification of follicles and fertility in *Chk2*^{+/-} untreated and *Chk2*^{-/-} untreated and AZT-treated mice.