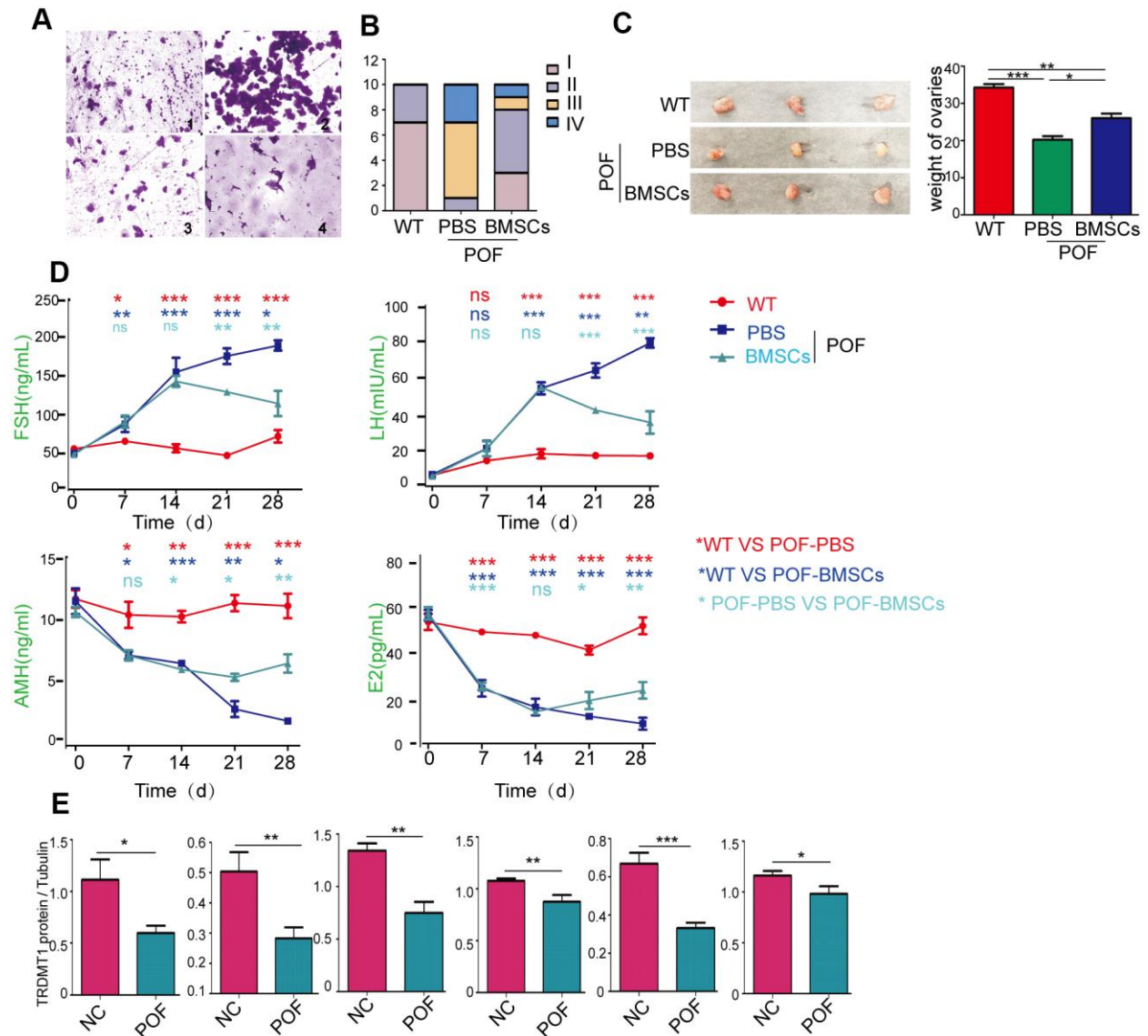
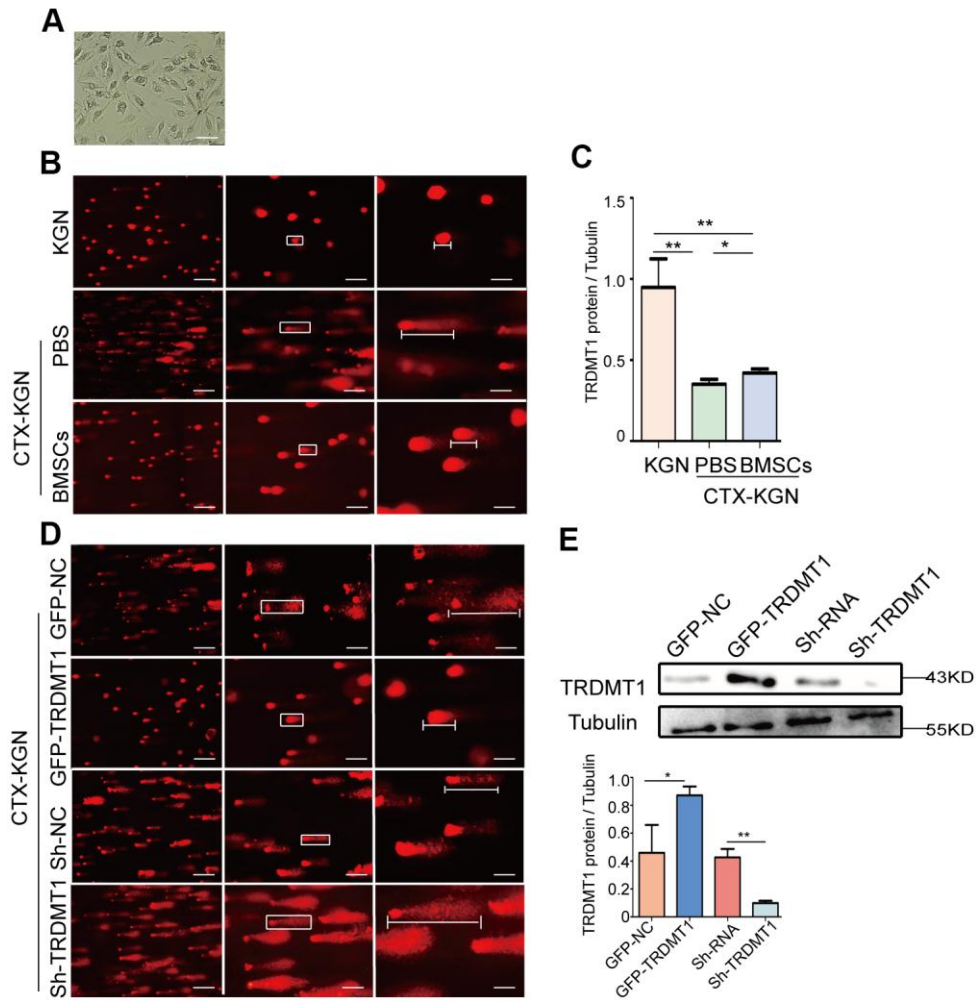


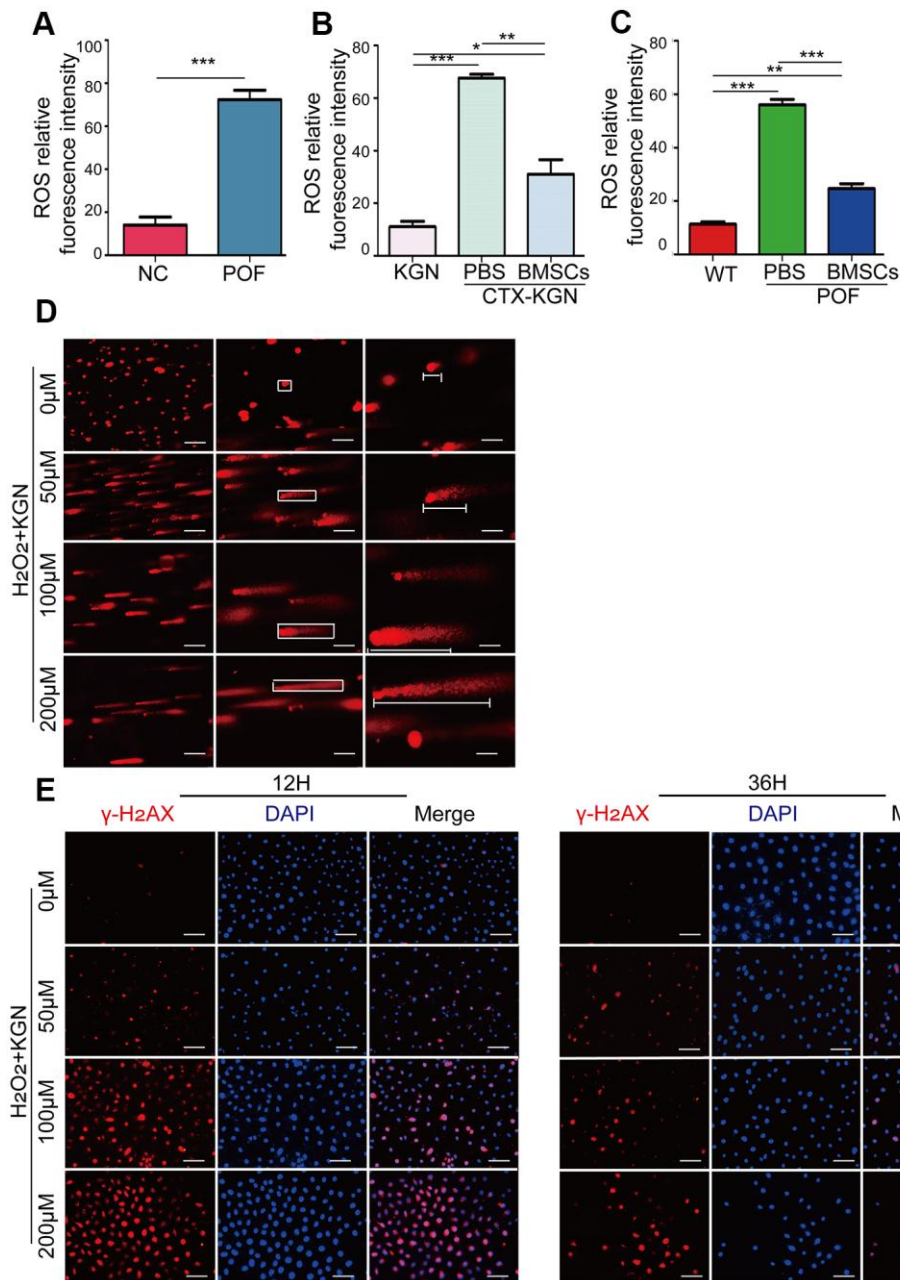
SUPPLEMENTARY FIGURES



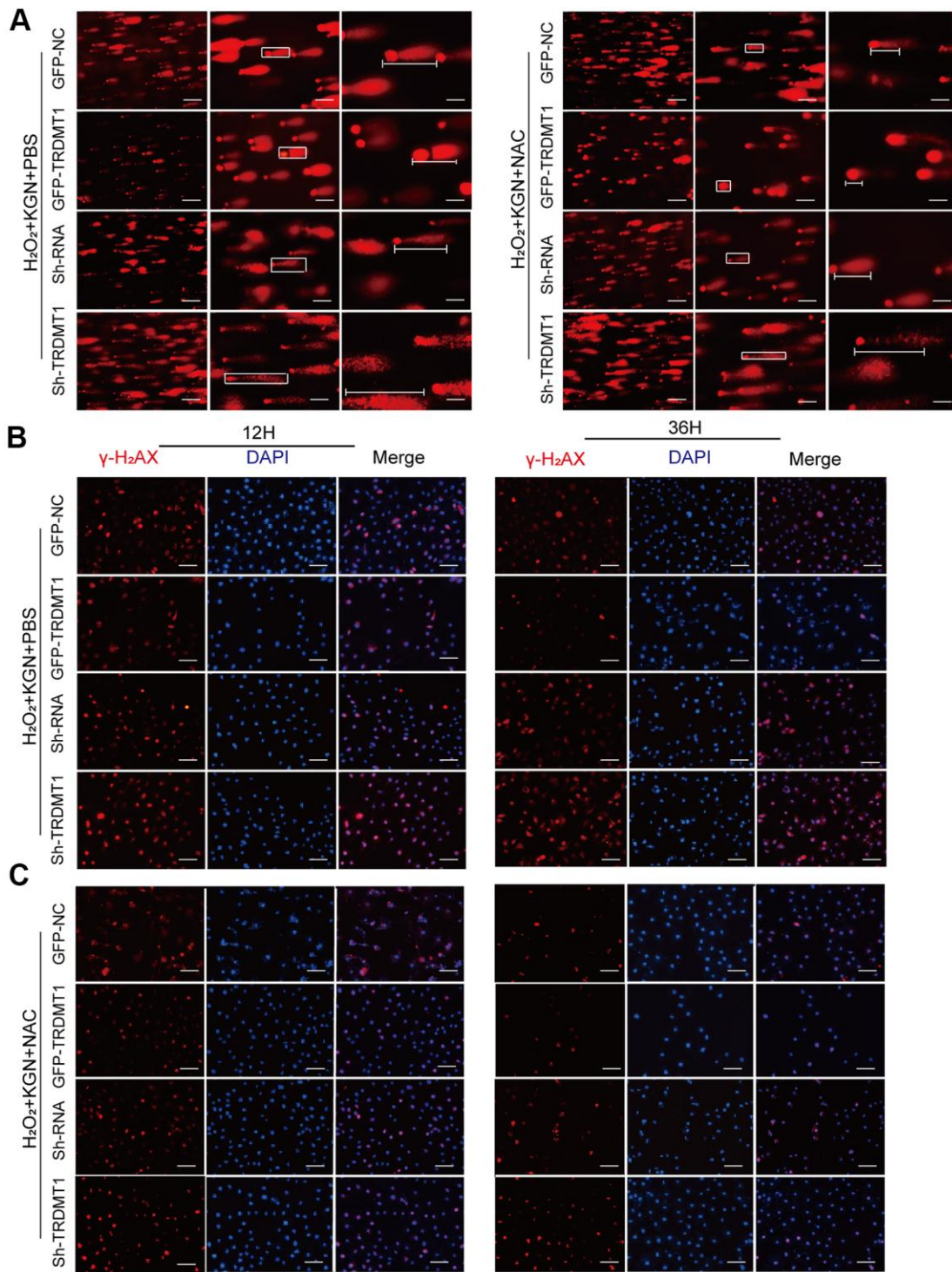
Supplementary Figure 1. (A) Normal estrous cycles: 1, proestrus; 2, estrus; 3, metestrus; and 4, diestrus. Scale bar: 100 μ m. (B) Total numbers of rats from each group categorized into the various estrous patterns (I–IV). I, normal; II, regular cycles with shortened estrus; III, irregular cycles with prolonged diestrus and normal or prolonged estrus; and IV, no cyclicity. Total numbers of rats from each group categorized into the various estrous patterns (I–IV). (C) The weights of ovaries in the WT, POF-PBS and POF-BMSCs groups were measured. (D) Trends for the average levels of FSH, LH, AMH and E2. Comparison of the AMH, E2, FSH, and LH levels between groups at different times. (E) Quantification of Western blot data. The “ns” ($P > 0.05$) indicates no statistically significant difference. * $P < 0.05$, ** $P < 0.01$, and *** $P < 0.001$ for all figures. Statistical significance was determined using two-tailed t-tests for two groups and ANOVA for multiple comparisons. All values are means \pm SD.



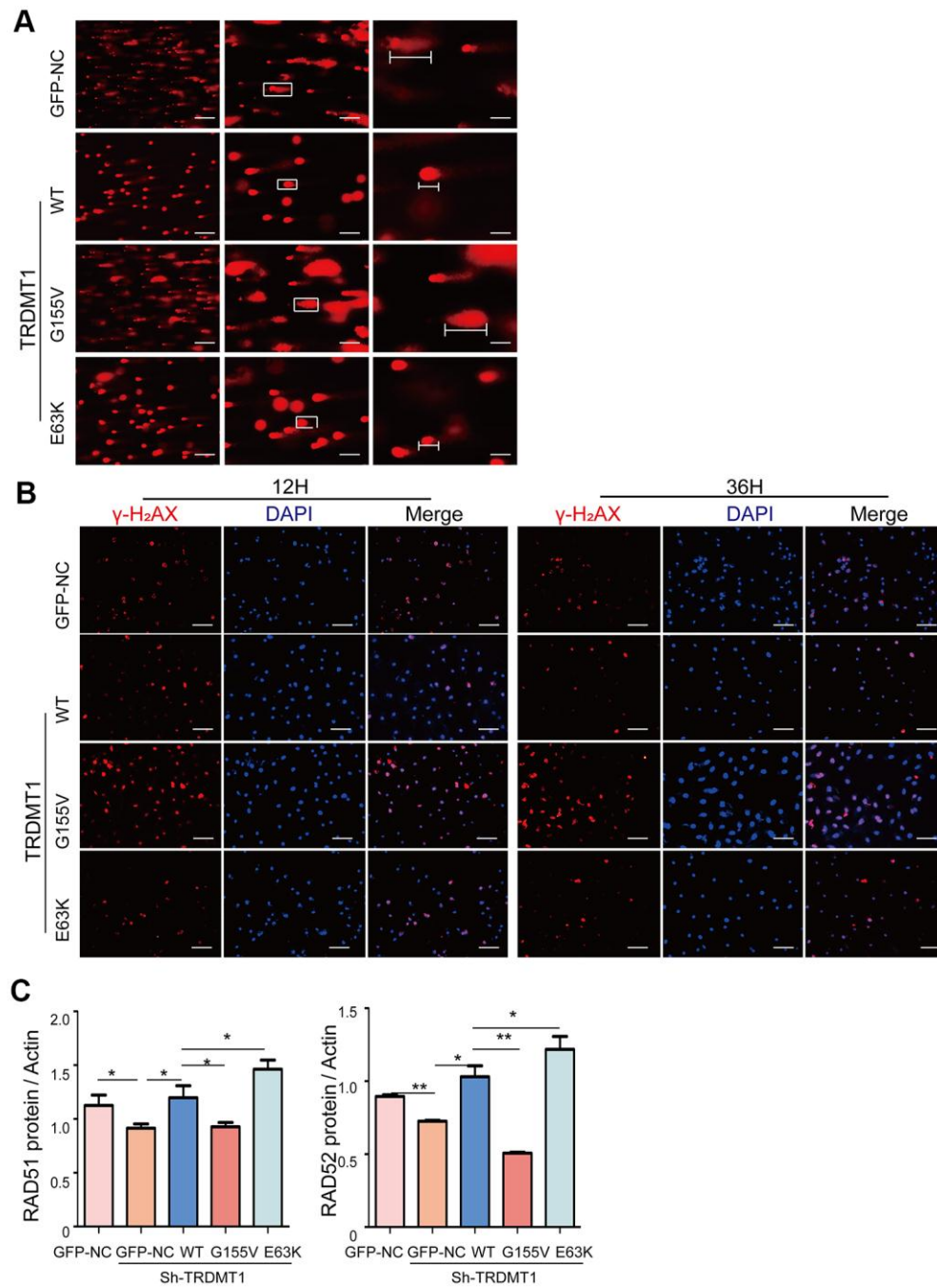
Supplementary Figure 2. (A) Morphology of GCs. Scale bar: 100µm. (B, D) Results of comet assay with different magnifications. (C) Quantification of Western blot data. (E) CTX-KGN transfected with GFP-NC, GFP-TRDMT1, Sh-RNA and Sh-TRDMT1 were confirmed by Western blotting.



Supplementary Figure 3. (A) ROS relative fluorescence intensity was measured in NC and POF groups (B) ROS relative fluorescence intensity was measured in KGN, CTX-KGN-PBS and CTX-KGN-BMSCs groups. (C) ROS relative fluorescence intensity was measured in the ovaries of the WT, POF-PBS and POF-BMSCs groups. (D) Results of comet assay with different magnifications. (E) A wider view with multiple cells for γ -H₂AX immunofluorescence images. Scale bar:100 μ m *P<0.05, **p<0.01, and ***p<0.001. Statistical significance was determined using two-tailed t-tests for two groups and ANOVA for multiple comparisons. All values are means \pm SD.



Supplementary Figure 4. (A) Results of comet assay with different magnifications. (B, C) A wider view with multiple cells for γ -H₂AX immunofluorescence images. Scale bar:100 μ m.



Supplementary Figure 5. (A) Results of comet assay with different magnifications. (B) A wider view with multiple cells for γ -H₂AX immunofluorescence images. Scale bar: 100 μ m. (C) Quantification of Western blot data.