Oxytocin evokes a pulsatile PGE2 release from ileum mucosa and is required for repair of intestinal epithelium after injury

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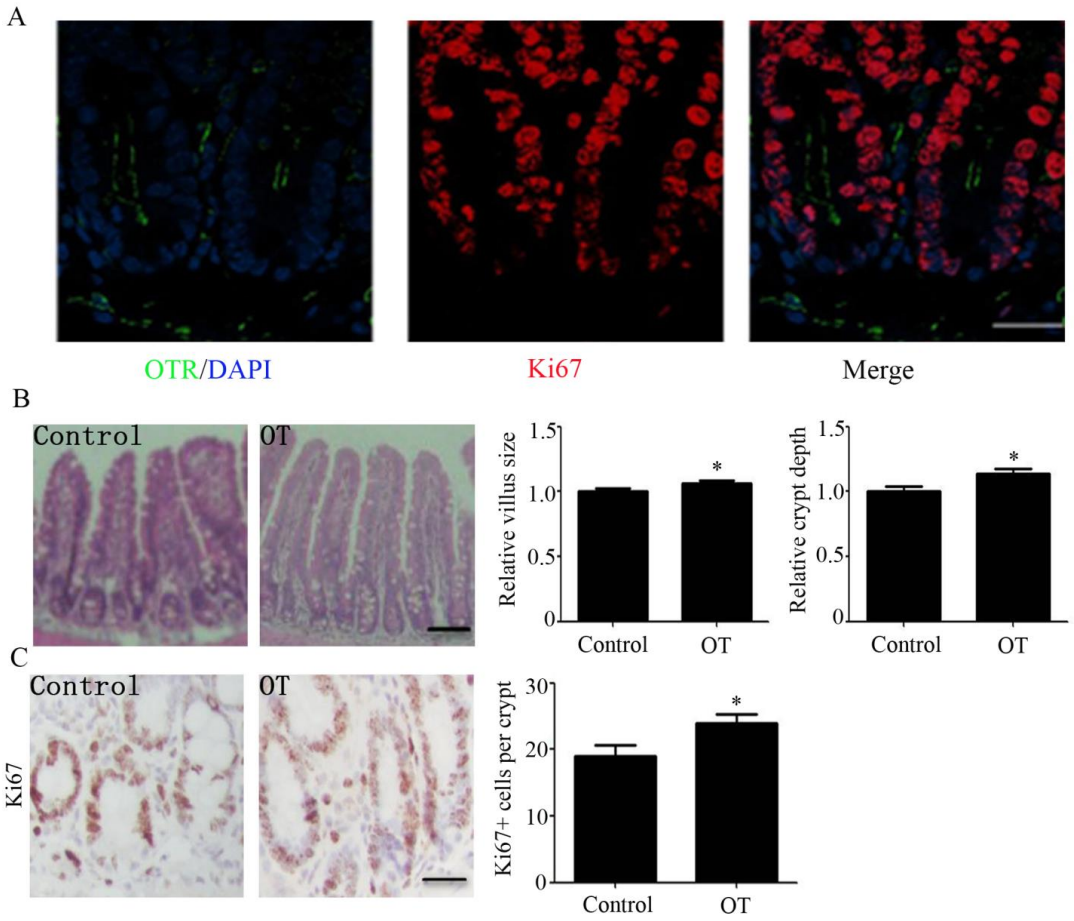
Supplemental figure 1



OTR expressed in TACs, and OT influence the proliferation of small intestine crypt cells

(A) Mouse ileum stained for OTR(green),Ki67(red) and DAPI (blue) shows $Ki67^+$ cells expressed OTR. Scale bar: 50 μm

(B) Effects of exogenous OT on intestinal morphology. Ileums from mice were stained with H&E, and the relative villus sizes and crypt depth were measured and statistically analyzed. Scale bar:100 μm

(C) OT affects the number and distribution of intestinal TACs. Ileums from mice were immunohistochemically stained for $Ki67^+$ cells. The numbers of positive cells were counted in each crypt. Scale bar:50 μm.

Results represent 30 tissue specimens in each group (five mice per group) and the mean ± s.d. of six tissue sections per mouse. *, $P<0.05$.

Video abstract

The small intestinal crypts were isolated. After 4 hours of culture, the crypts were incubated with 2 μM fluo-3, AM for 30 min at 37℃ ,washed by Kerbs solution and observed under a Zeiss LSM780 laser scaning confocal microscope. Confocal calcium imaging reveals OT-evoked intracellular Ca^{2+} elevation and oscillations in ileum crypt cells.