

Figure S1. The effect of *de novo* retinoic acid synthesis in granulosa cells by FSH+testosterone in the presence of serum

A; The changes in the methylation levels of *Lhcgr* promoter region in granulosa cells, cultured in the medium supplemented with FSH+T in the presence of serum. Granulosa cells were collected from ovaries of immature mice, after treating with eCG for 6 h, and were cultured in the medium supplemented with FSH+T in the presence of 1 % FCS. Sequence analysis was performed more than 5 colonies for each treatment of three replicates. Values are mean \pm SEM. C; Granulosa cells were cultured without any hormones. FSH+T; Granulosa cells were cultured with FSH (50 ng/ml) and testosterone (10 ng/ml). *; Significant differences are observed compared with control ($p < 0.05$).

B; The changes in the expression of *Lhcgr* mRNA in granulosa cells, cultured in the medium supplemented with FSH+T in the presence of serum. Granulosa cells were collected from ovaries of immature mice, after treating with eCG for 6 h, and were cultured in the medium supplemented with FSH+T in the presence of 1 % FCS. Values are mean \pm SEM of three replicates. Levels of mRNA were normalized to that of *L19*. *; Significant differences were observed compared with control ($p < 0.05$).

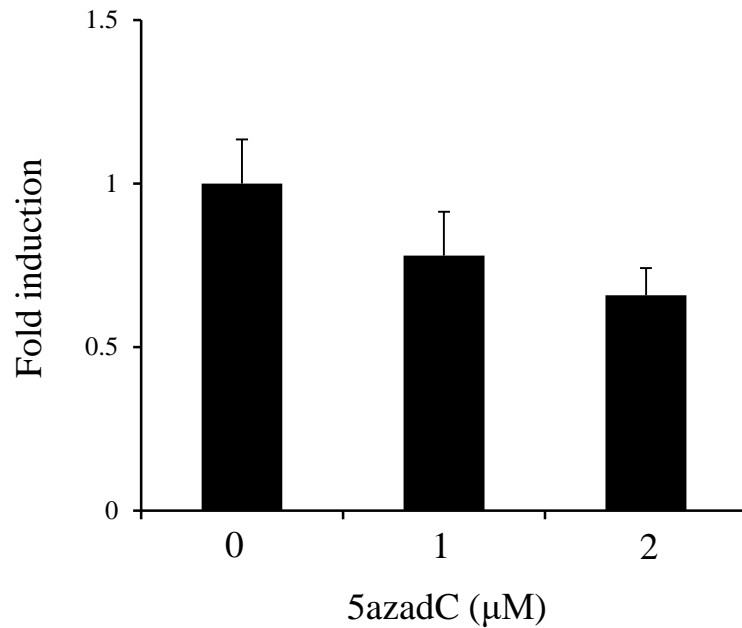


Figure S2. The effect of the methyltransferase inhibitor (5azadC) on the expression of *Lhcgr* in granulosa cells

The effect of methyltransferase inhibitor (5-Aza-2'-deoxycytidine; 5azadC) on the expression of *Lhcgr* in granulosa cells during follicular development. Granulosa cells were collected from ovaries of immature mice, after treating with eCG for 6 h, and were cultured in the absence of FCS for 48 h. Levels of mRNA were normalized to that of *L19*. Values are mean \pm SEM of three replicates.