EZH2 is essential for development of mouse preimplantation embryos

Xian-Ju Huang\textsuperscript{A}, Xuguang Wang\textsuperscript{A,B}, Xueshan Ma\textsuperscript{A,C}, Shao-Chen Sun\textsuperscript{A}, Xiaolong Zhou\textsuperscript{A}, Chengcheng Zhu\textsuperscript{A} and Honglin Liu\textsuperscript{D}

\textsuperscript{A}College of Animal Science and Technology, Nanjing Agricultural University, Weigang No.1, Nanjing 210095, China.

\textsuperscript{B}Animal Science College, Xinjiang Agricultural University, Nongda rode No.311,Wulumuqi, Xinjiang 830052, China.

\textsuperscript{C}State Key Laboratory of Reproductive Biology, Institute of Zoology, Chinese Academy of Sciences, Peking University People’s Hospital, Beichen weste rode No.1, Chaoyang district, Beijing 100101, China.

\textsuperscript{D}Corresponding author. Email: liuhonglin@263.net
Fig. S1. Relative fluorescence density of H3K27me modification. (A) H3K27me1 modification on Ezh2 siRNA group and Scramble siRNA was not different from that in zygotes (ns > 0.05). (B) H3K27me2 modifications on Ezh2 siRNA and Scramble siRNA group in 1-cell, 2-cell, 4-cell, 8-cell and blastocyst stages were significantly different (*P < 0.05). (C) H3K27me3 modifications on Ezh2 siRNA and Scramble siRNA group in 1-cell, 2-cell, 4-cell, morula and blastocyst stages were significantly different (*P < 0.05).
Fig. S2. Detection of H3K27me expression at the zygote stage by IF staining. One-cell embryos were selected for experiments at 12 hpf. (A) H3K27me1 (green) modification was similar in CHX and control groups. DAPI-stained nuclei (blue). Quantification of relative fluorescence intensities of nuclei are shown on the right. Independent-Samples Test revealed no significant difference (ns > 0.05). Error bars represent s.d. of three independent experiments. (B) H3K27me2 (green) modification was reduced in CHX-treated versus control group, especially in male pronuclei (*P < 0.05). (C) H3K27me3 (green) modification was weaker in the CHX-treated group, especially in male pronuclei. Quantification of relative fluorescence intensities of nuclei is shown on the right. The experiments were performed three times. Data are expressed as mean ± s.d. with at least 30 embryos analysed per group (*P < 0.05).