

Supplementary Material

EZH2 is essential for development of mouse preimplantation embryos

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

^ACollege of Animal Science and Technology, Nanjing Agricultural University, Weigang No.1, Nanjing 210095, China.

^BAnimal Science College, Xinjiang Agricultural University, Nongda rode No.311, Wulumuqi, Xinjiang 830052, China.

^CState 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.

^DCorresponding author. Email: liuhonglin@263.net

Supplement Figure 1

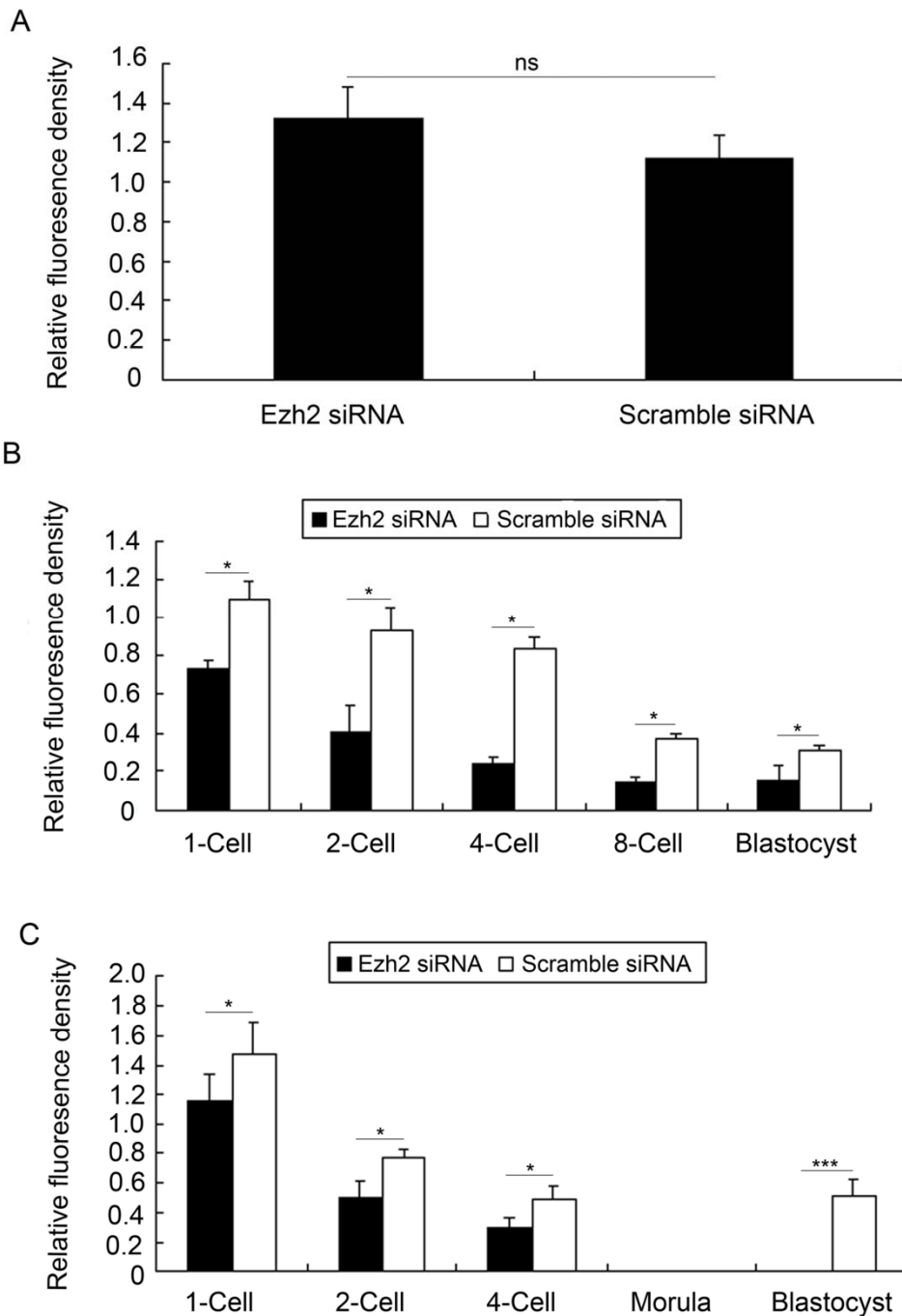


Fig. S1. Relative fluorescence density of H3K27me modification. (A) H3K27me1 modification on Ezh2 siRNA group and Scramble siRNA was not different from that in zygotes (ns > 0.05). (B) H3K27me2 modifications on Ezh2 siRNA and Scramble siRNA group in 1-cell, 2-cell, 4-cell, 8-cell and blastocyst stages 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 (* $P < 0.05$).

Supplement Figure2

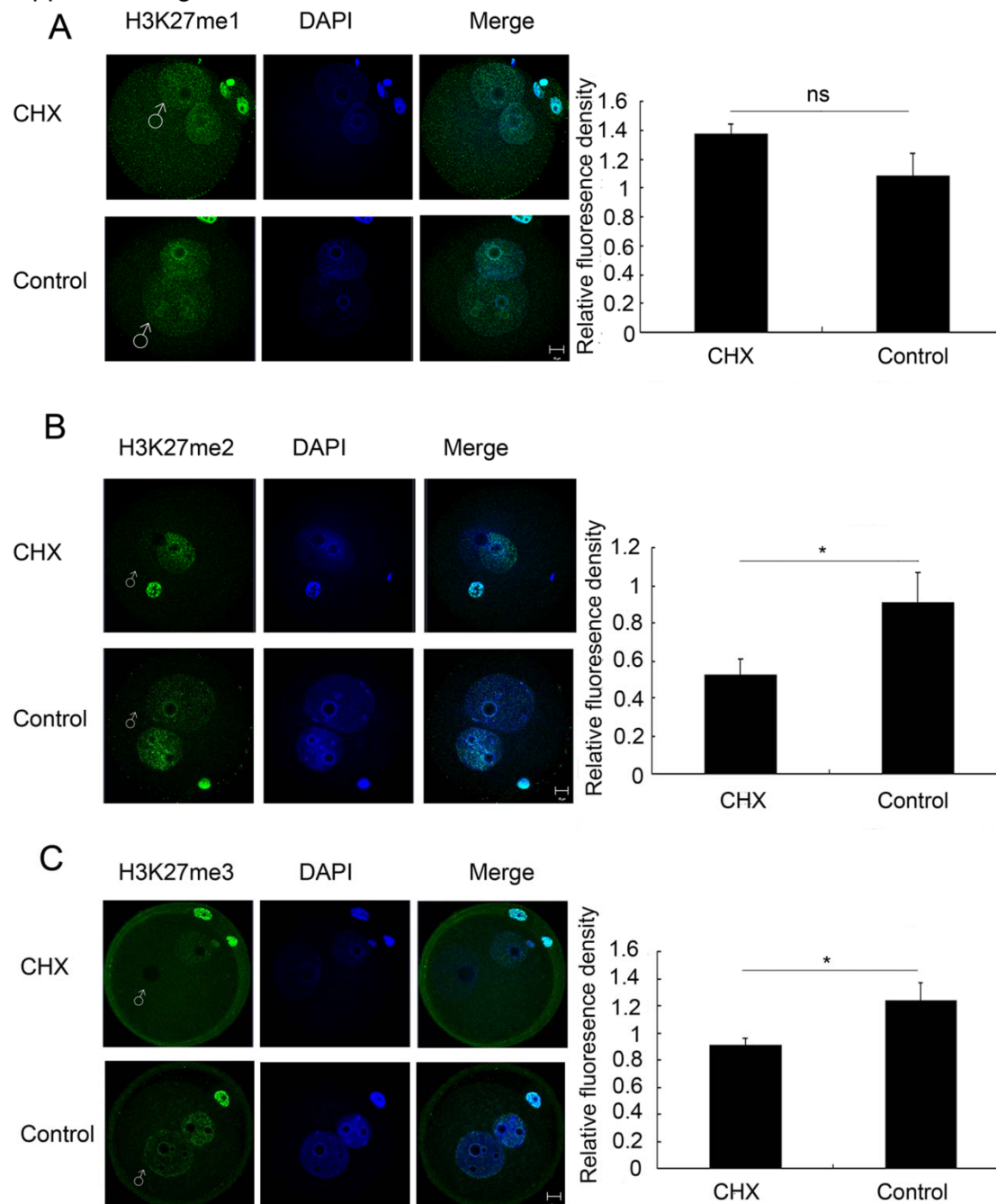


Fig. S2. Detection of H3K27me expression at the zygote stage by IF staining. One-cell embryos were selected for experiments at 12 hpf. (A) H3K27me1 (green) modification was similar in CHX and control groups. DAPI-stained nuclei (blue). Quantification of relative fluorescence intensities of nuclei are 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 \pm s.d. with at least 30 embryos analysed per group ($*P < 0.05$).