Supplementary information for: "Treatment of donor cells with recombinant KDM4D protein improves preimplantation development of cloned ovine embryos"

Yumei Zhang · Qianqian Wang · Kailing Liu · Enen Gao · Hong Guan · Jian Hou*

State Key Laboratory of Agrobiotechnology and College of Biological Science, China Agricultural University, Beijing, China

*Correspondence: Dr. Jian Hou, State Key Laboratory of Agrobiotechnology and College of Biological Science, China Agricultural University, Yuan-Ming-Yuan West Road, Haidian District, 100193, Beijing, China. E-mail: houjian@cau.edu.cn. Tel: 86-10-62733355

Supplementary Table1: Primers for real-time PCR

Genes	Sequences (5’ to 3’)	Sizes (bp)
GAPDH	Forward: TGATGACATCAAGAAGGTGGTG	240
	Reverse: TCCTTGGAGGCCATGTAGGCCAT	
POU5F1	Forward: CGCAGGGGGACCCGTATCCTT	99
	Reverse: GGGACCGAAGAGTACAGTGTAG	
NANOG	Forward: CCAGCAACGGCAGAATACCC	107
	Reverse: GGGGTTATTCCAGGTCTGGTTA	
SOX2	Forward: CCTGTGGTTACCTCTTCTTCCC	145
	Reverse: CGCTCTGGTAGTGCTGGGACA	
CDX2	Forward: AGCCAGGTCCGCTGAGAAGC	116
	Reverse: TGGGTGACAGTAGGGTTTAACA	
KLF4	Forward: CCCTTCCTGCCCGACCAGAT	210
	Reverse: CCGCCTTCCCCTCTTTGGTT	

Supplementary Figure 1. Expression and purification of recombinant human KDM4D (rhKDM4D). The recombinant protein was produced in *E. coli* and purified by affinity chromatography. Protein samples were analyzed by SDS-PAGE. **(a)** Protein samples before eluted. lane 1, Marker; lane 2, without isopropy-β-D-thiogalactoside (IPTG) induction; lane 3, with IPTG induction; lane 4, soluble protein fraction; lane 5-7, washing solution with non-specific binding protein from the colunm. **(b)** Target protein after elution**.** Lane 1, Marker; lane 2-7, eluent containing rhKDM4D after affinity purification. **(c)** Western blotting identification of purified rhKDM4D protein by anti-6×his antibody. The expected molecular weight of rhKDM4D is 43 kDa.