

Supplementary Table 1. Primer sequences

	Primer name	Direction	Sequence (5'– 3')
<i>sgRNAs</i>	<i>OCT4 Exon2 for Knock-out</i>	F	TTAATACGACTCACTATAGGAGCA GAAGAGGATCACCCCTGTTTTAGA GCTAGAAATAGC
	<i>OCT4 Exon5 for Knock-out</i>	F	GAAATTAATACGACTCACTATAGG ATCCTTTCCTCTGGCGCCAGTTTT AGAGCTAGAAATAGC
	<i>OCT4 Exon5 for Knock-in</i>	F	GAAATTAATACGACTCACTATAGG CTCCCCCATGCATTCAAACCTGGTT TTAGAGCTAGAAATAGC
	<i>T7 long</i>	R	AAAAGCACCGACTCGGTGCCAC TTTTTCAAGTTGATAACGGACTAG CCTTATTTTAACTTGCTATTTCTAG CTCTAAAAC
	<i>T7 short</i>	F	GAATTAATACGACTCACTA
	<i>T7 short</i>	R	AAAAGCACCGACTCGGTGCC
<i>PCR sequencing</i>	<i>OCT4 Exon2 Check-1 for knock-out</i>	F	ACAGATACCCCCACAGACCA
	<i>OCT4 Exon2 Check-1 for knock-out</i>	R	CACATTTGGGGATGTTTCCTT
	<i>OCT4 Exon2 Check-2 for large scale</i>	F	GCAGTCCCAGGACATCAAAG
	<i>OCT4 Exon5 Check-1 for knock-out</i>	F	CCCCTCCCAGAGCTTATGAT
	<i>OCT4 Exon5 Check-1 for knock-out</i>	R	AGCCCAGAGGGGTGACAG
	<i>OCT4 Exon5 Check-2 for large scale</i>	R	CTTAATCCCAAAGCCCTGGT
	<i>eGFP for knock-in</i>	F	CGACAACCACTACCTGAGCA

<i>OCT4 Exon5 Check for knock-in</i>		R	CCCAAGAAATGGCAAAAAGA
<i>qRT-PCR</i>	<i>Nanog</i>	DQ447201	F:TTCCTTCCTCCATGGATCTG R:ATCTGCTGGAGGCTGAGGTA
	<i>CDX2</i>	NM_009942	F: GATGAGGAGCAGGCTACTGG R: CAGCCAAACCAGATGATA
	<i>OCT4</i>	NM_013633	F: CGTGGAGACTTTGCAGCCTGA R: GGCGATGTAAGTGATCTGCTG
	<i>GAPDH</i>	AF017079	F: GGGCATGAACCATGAGAAGT R: AAGCAGGGATGATGTTCTGG

(F: forward. R: reverse)