

Conversion of human fibroblasts into Leydig-like cells

Table S1. Primers for polymerase chain reaction

Gene	Sense primer	Antisense primer
SF1	CCGGAATTCGCCACCATGGACTATTCGTACGACGAGGACC	CCGCTCGAGTCAAGTCTGCTTGGCTTGACGC
GATA4	CCGGAATTCGCCACCATGTATCAGAGCTTGGCCATGGC	CCGCTCGAGTTACGCAGTGATTATGTCCCCGT
NGFI-B	CCGGAATTCGCCACCATGCCCTGTATCCAAGCCCA	CCGCTCGAGTCAGAAGGGCAGCGTGTCC
COUPTF2	CCGGAATTCGCCACCATGGCAATGGTAGTCAGCACG	CCGCTCGAGTTATTGAATTGCCATATACGGCC

Table S2. Primers for quantitative reverse transcription-polymerase chain reaction

Gene	Sense primer	Antisense primer
StAR	GGGGACAAAGTGATGAGTAAAG	GCTCGTGAGTAATGAATGTATC
HSD3B1	AACTCTTTGCTCAGGGTGTAAAT	CTGTCAAGTGTGGAAAGTTCTC
HSD17B3	AATGGCTTGGGAGAAGGTTTG	AGCGGACTACAGGGAGGAGTGT
CYP11A1	TTCAGGCATCAGAATGAGGTT	GGCTGAGCAAAGACAAGAACA
CYP17A1	ATTGGTTACCGCCACGAAGAC	CAACAACCGTAAGGGTATCGC
Vimentin	TGAATGACCGCTTCGCCAACTA	GGTGTTCGGCTTCTCTCTC
Ecadherin	ACAATGCCGCCATCGCTTAC	AACTCTCTCGGTCCAGCCCA
SF-1	CTCACCCACCTTCCAAACAC	CAACCTGCTCATCGAAATGCT
GATA4	GCCTCTTCTTTGCTATCCTC	CGTTCTCAGTCAGTGCGATGT
NGFI-B	GGACTGAAGGAAAAGAAGGCT	CAGTGGCTCTGACTACTATGGC
COUPTF2	TACCTACCAAACGGACGAAAA	GTTGACTCAGCCGAGTACAGC
GAPDH	ACAACCTTGGTATCGTGGAAGG	GCCATCACGCCACAGTTTC

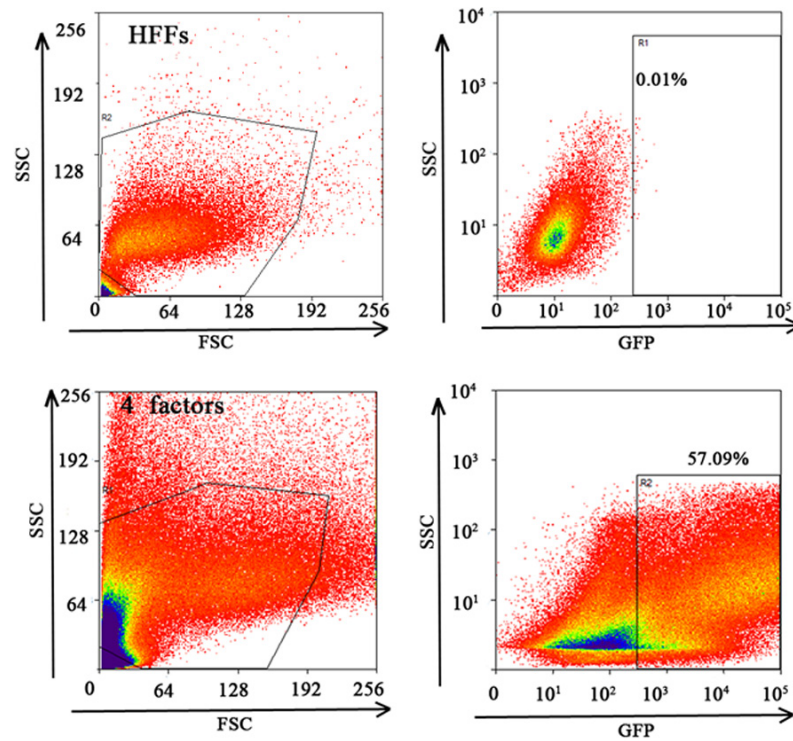


Figure S1. Representative flow cytometry plot for analyses of green fluorescence protein, GFP+ cells 1 week after infection of HFFs with lentiviruses expressing 4 factors, Cells infected with empty vector lentivirus were used as a control. The numbers in each plot indicate the percentage of GFP+ cells.

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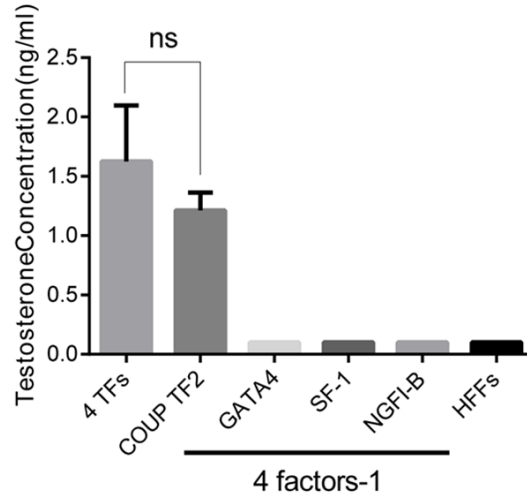


Figure S2. Testosterone production in iLCs transduced with different combinations of factors 1 week after transfection. ns, not significant.

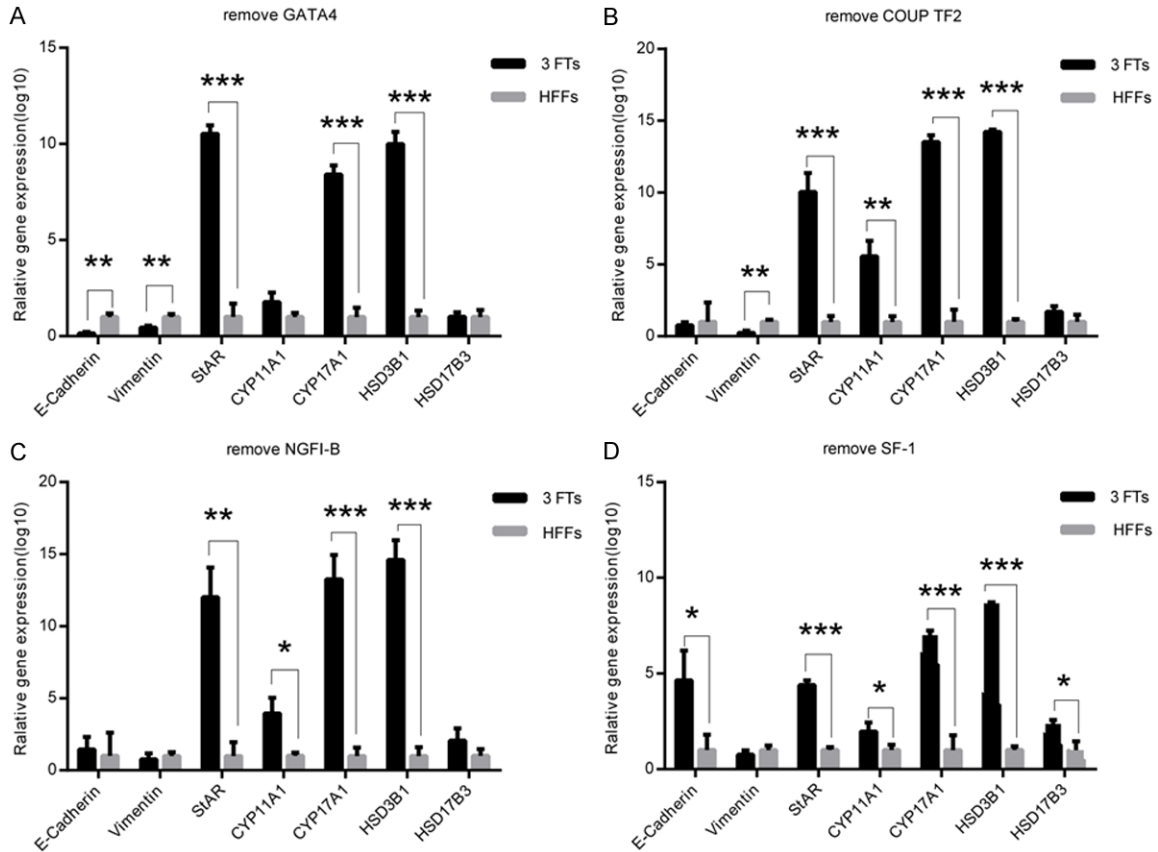


Figure S3. Quantitative RT-PCR analysis of the expression of related genes in iLCs transduced with different combinations of factors 1 week after transfection. Data represent mean \pm SD of triplicate experiments. * $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$. A: *GATA4* removed from the 4F pool. B: *COUP TF2* removed from the 4F pool. C: *NGFI-B* removed from the 4F pool. D: *SF-1* removed from the 4F pool.

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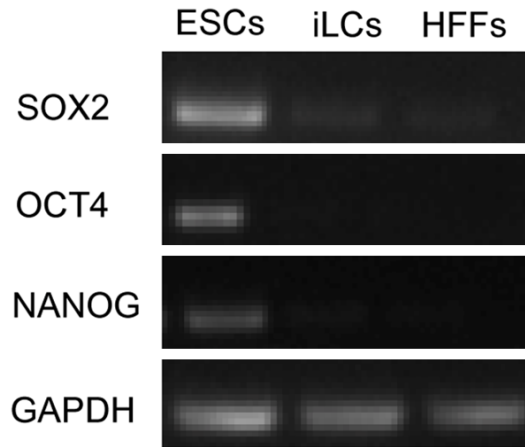


Figure S4. RT-PCR analysis of an ESC-specific marker at day 3 after infection. Primers (5' to 3'): OCT4 forward, CTGGGTTGATCCTCG-GACCT, reverse, CACAGAACTCATACGGCGGG; SOX2 forward, AGTGAAA-CTTTTGTGGAGAC, reverse, GCAGCGTGTACTTATCCTTCTT; NANOG forward, AAAGAATCTCACCTATGCC, reverse, GAAGGAAGAGGAGAGACAGT.

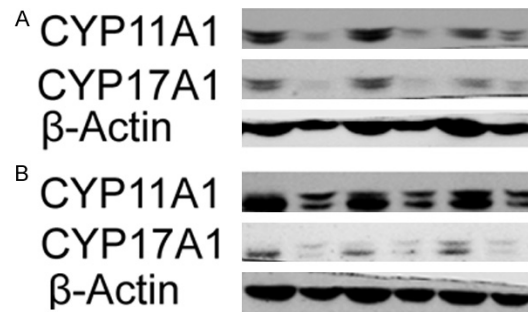


Figure S5. Original western images for protein expression of CYP11A1 and CYP17A1 in iLCs at 3 (A) and 4 weeks (B) after infection.