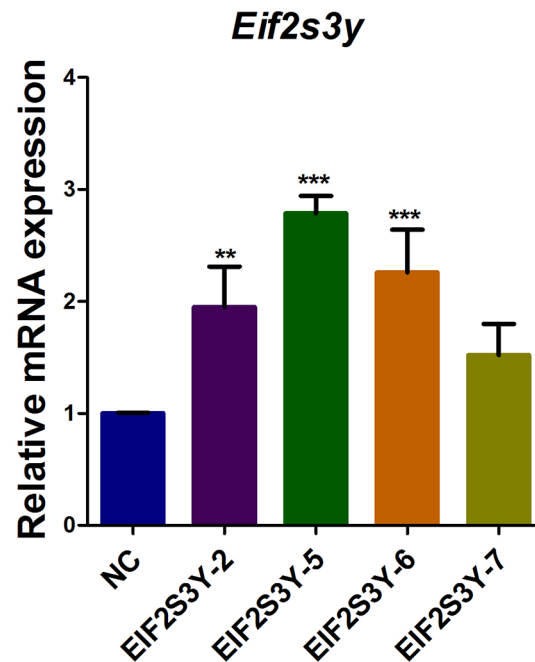
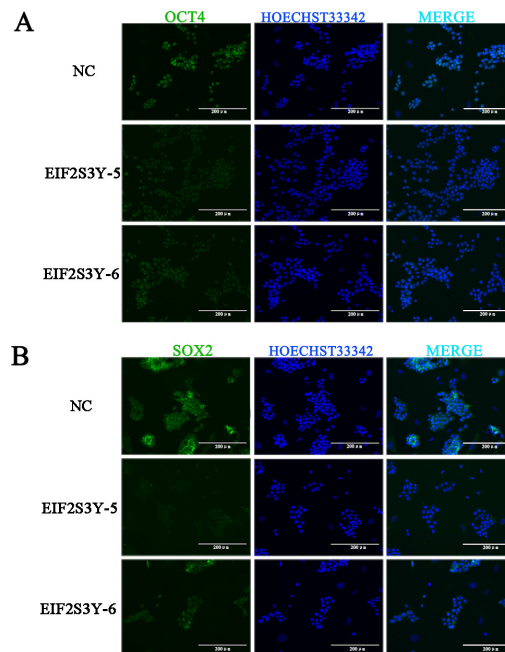


EIF2S3Y suppresses the pluripotency state and promotes the proliferation of mouse embryonic stem cells

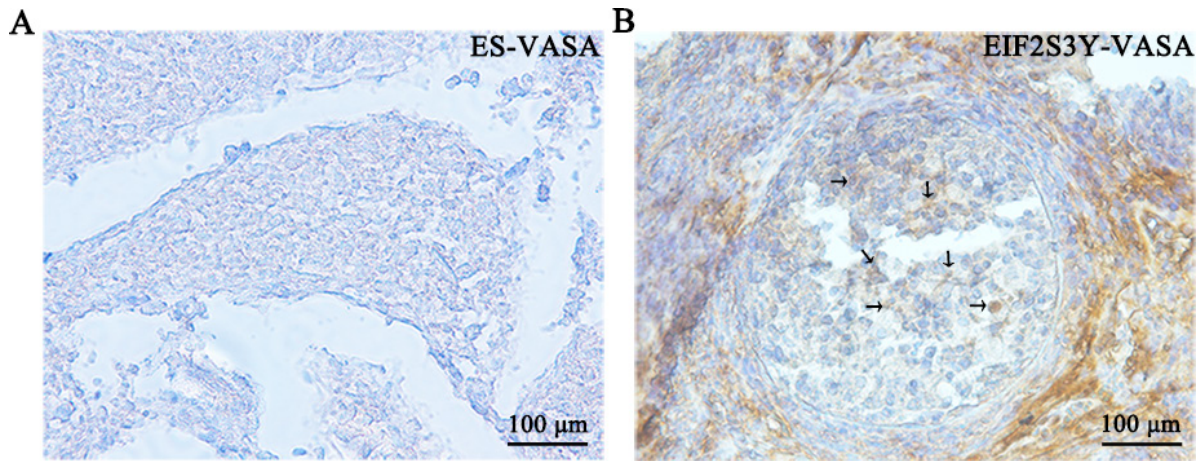
Supplementary Materials



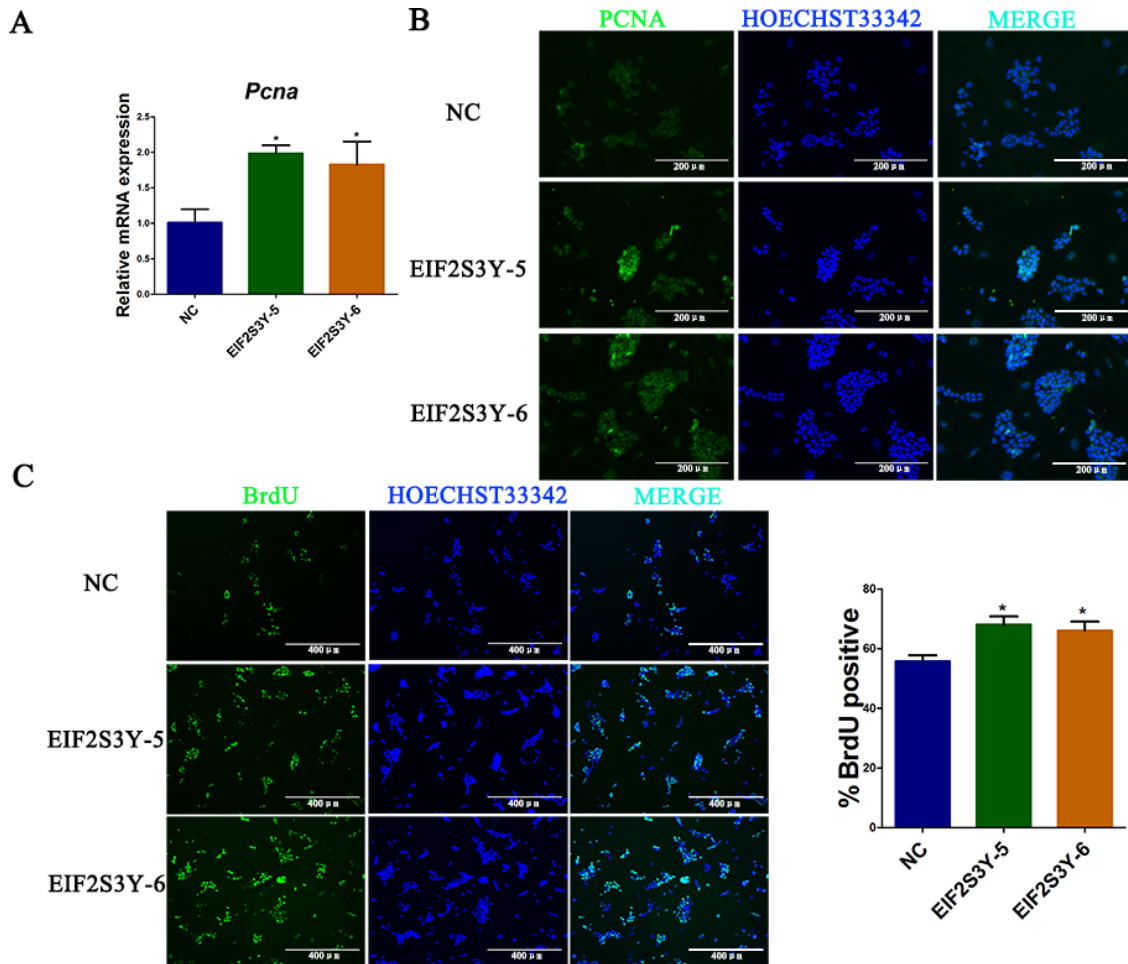
Supplementary Figure 1: *Eif2s3y* mRNA expression profile in ES-derived EIF2S3Y cell lines. Relative expression of *Eif2s3y* mRNA in NC, and EIF2S3Y-(2, 5, 6, 7) cell lines by qRT-PCR. ($n = 3$ for each group, ** $P < 0.01$, *** $P < 0.001$, vs. NC).



Supplementary Figure 2: Immunofluorescence staining of OCT4 and SOX2 in ES-derived EIF2S3Y cell lines. (A, B) Immunofluorescence staining of OCT4 (A) and SOX2 (B) (green), nucleic acids were stained with Hoechst 33342 (blue). Scale bar = 200 μm ($n = 3$ for each group).



Supplementary Figure 3: Immunohistochemistry of VASA in the testes transplanted with ES-derived cell lines. (A) Immunohistochemistry staining of VASA in the testes that were transplanted with ES or EIF2S3Y-5 cell line. VASA positive cells were indicated with arrows. Scale bar, 100 μm ($n = 2$ for each group).



Supplementary Figure 4: Proliferation profile of ES-derived cell lines. (A) Relative expression of *Pcna* by qRT-PCR in NC, EIF2S3Y-5 and EIF2S3Y-6 cell lines. (B) PCNA immunofluorescence staining in NC, EIF2S3Y-5 and EIF2S3Y-6 cell lines. (C) BrdU immunofluorescence staining and percentage of BrdU-positive cells in NC, EIF2S3Y-5 and EIF2S3Y-6 cell lines. ($n \geq 3$ for each group, $*P < 0.05$, vs. NC).

Supplementary Table 1: Sequences of primers used in PCR amplification

Primer Sequence (5'-3')	
<i>Gapdh</i>	Fwd: TGGCCTTCCGTGTTCCCTAC
	Rev: GAGTTGCTGTTGAAGTCGCA
<i>Eif2s3y</i>	Fwd: ATCTTGTCCTCAACCTCAGACT
	Rev: TTCTTTAGCCTGGCTTTCTTTCA
<i>Ssea-1</i>	Fwd: ACGGATAAGGCGCTGGTACTA
	Rev: GGAAGCCATAGGGCACGAA
<i>Nanog</i>	Fwd: TTCTTGCTTACAAGGGTCTGC
	Rev: AGAGGAAGGGCGAGGAGA
<i>Prdm1</i>	Fwd: TGGAGGACGCTGATATGACT
	Rev: CTTACCACGCCAATAACCTC
<i>Oct-4</i>	Fwd: GCGTTCCTCTTTGGAAAGGTGTTTC
	Rev: CTCGAACCACATCCTTCTCT
<i>Sox2</i>	Fwd: CATGAGAGCAAGTACTGGCAAG
	Rev: CCAACGATATCAACCTGCATGG
<i>Klf4</i>	Fwd: TGGTGCTTGGTGAGTTGTGG
	Rev: GCTCCCCCGTTTGGTACCTT
<i>Pcna</i>	Fwd: AGTGGAGAAGCTTGGAAATGGAA
	Rev: GAGACAGTGGAGTGGCTTTTGT
<i>Cylin A</i>	Fwd: TGGCTGTGAACTACATTGA
	Fwd: ACAAACTCTGCTACTTCTGG
<i>Cylin E</i>	Fwd: GTGGCTCCGACCTTTCAGTC
	Fwd: CACAGTCTTGCAATCTTGGCA