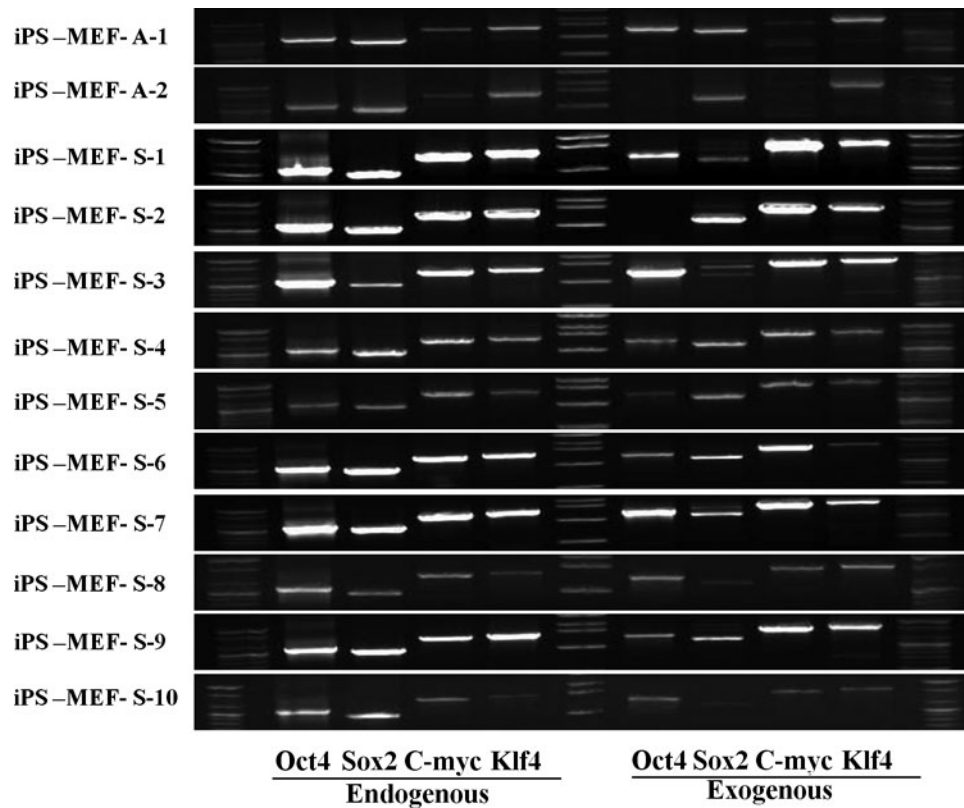


SUPPLEMENTARY FIG. 1. Sequence of events during the generation of iPS cells from MEF cells. Fluoromicroscopic images indicate expression of the Venus protein reporter gene in infected mouse cells and the subsequent ES cell-like colonies. **(A-A')** Three days after infection, MEF cells were cultured for 1 extra day on STO feeder cells 2 days after infection. **(B-B')** Four days after infection, MEF cells were transformed into aggregates. **(C-C')** Five days after infection, the aggregates were expanded. **(D-D')** Six days after infection, ES cell-like colonies initially appeared as compact and domed structures with well-defined edges. **(E-E')** Seven days after infection, the growth of ES cell-like colonies was observed. **(F-F')** Eight days after infection, ES cell-like iPS colonies were generated. These iPS colonies showed growth potential at 2 days **(G-G')** and 4 days after subculture **(H-H')**.

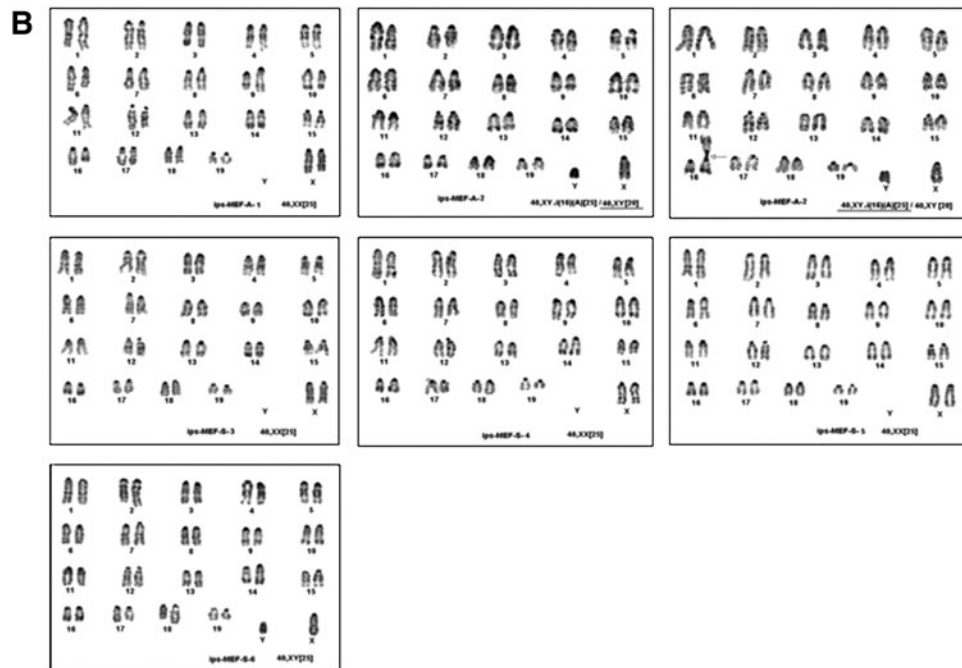


SUPPLEMENTARY FIG. 2. RT-PCR analysis of 12 iPS clones generated from MEF cells. Two iPS cell lines were produced from the adherent cell treatment group, whereas the suspended cell treatment group generated 10 iPS cell lines. The endogenous and exogenous gene expression patterns of the four introduced transcription factor genes were examined in the 12 iPS cell lines.



SUPPLEMENTARY FIG. 3. Treewiew diagram of proteins in different functional groups revealed a high correlation between iPS cells and D3-ES cells. The diagrams indicated more upregulated genes in ES cells and iPS cells than in the parent MEF cells for each of the functional groups. (A) Stem cell proteins. (B) Cell death proteins. (C) Neurogenesis and neural stem cell proteins. (D) Cell surface markers. (E) Members of the JAK-STAT signaling pathway. (F) Members of the PI3K-AKT signaling pathway. (G) Endothelial cell proteins. (H) Cardiovascular cell proteins.

iPS Name	Karyotype	Examined no.	Specificity
iPS-MEF-A-1	40, XX	25	Normal
iPS-MEF-A-2	40, XY 40, XY, i(16)(A)	20 25	Mosaicism
iPS-MEF-S-3	40, XX	25	Normal
iPS-MEF-S-4	40, XX	25	Normal
iPS-MEF-S-5	40, XX	25	Normal
iPS-MEF-S-6	40, XY	25	Normal



SUPPLEMENTARY FIG. 4. Karyotype information of six mouse iPS cell lines (A) and their G-banded morphology (B).