Supplementary file 1

Differentiation and molecular characterization of endothelial progenitor and vascular smooth muscle cells from induced pluripotent stem cells

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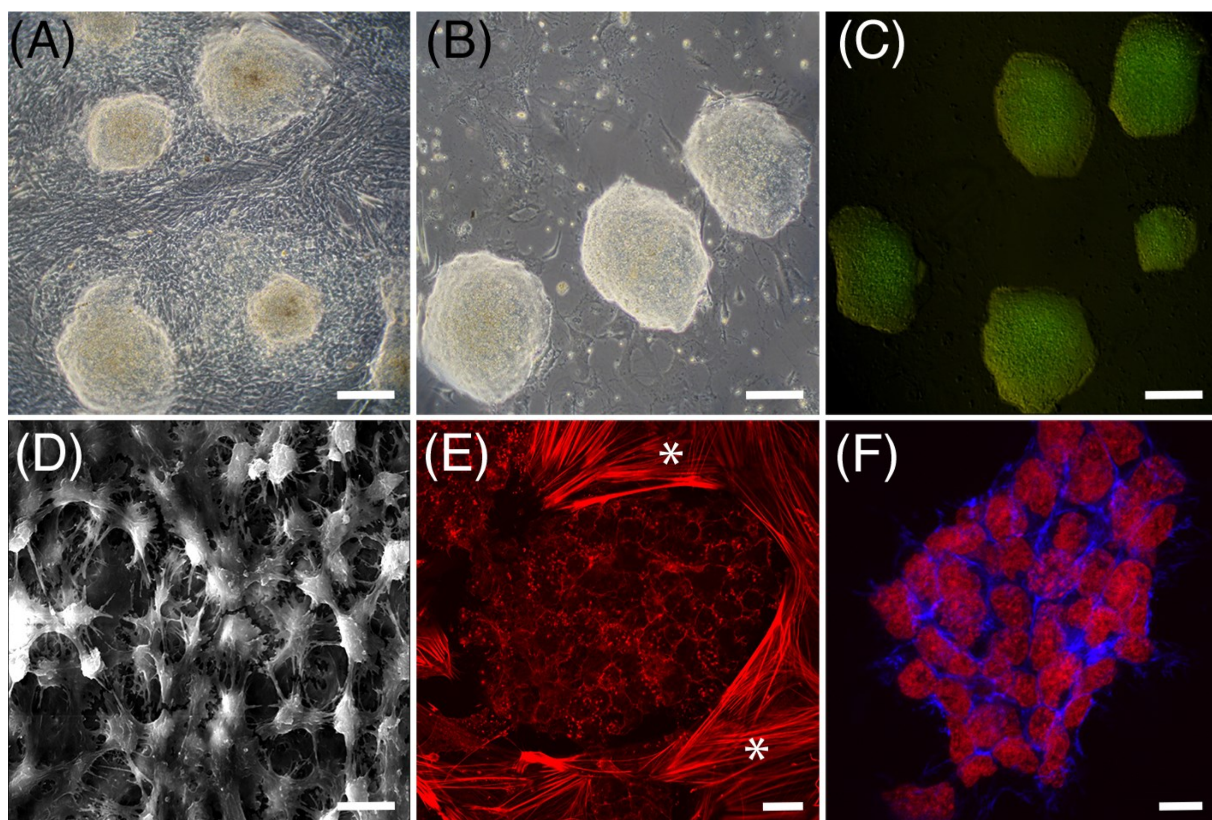

Figure S1. Colonization of embryonic mouse embryonic fibroblast-derived iPS cells (Ng-20D-17). (**A**) iPS colonies grown on MEFs feeder cells. (**B**) Puromycin-resistant iPS colonies after

elimination of MEFs with puromycin treatment. (**C**) Nanog-GFP (green signal) expressing live iPS colonies was visualized by an inverted fluorescent microscope. (**D**) The morphology of iPS cells within a colony was characterized by their small size (around 6-7 µm in diameter) and an extreme number of intercellular protrusions detected by scanning electron microscopy. (**E**) Distinctive patterns of microfilaments (actin cytoskeleton), both in MEFs (stress fibers are labeled red) and iPS cell colonies, were observed in 3-D confocal image stacks. (**F**) Subplasmalemmal microfilament arrays (blue signal) displayed the cell uniformity, smaller cell size, and higher nuclear to cytoplasmic ratio, as well as active chromatin (red signal) within the iPS colonies. Scale bars; 200 µm in **A**, **B**, and **C**; 20 µm in **E**; 10 µm in **D** and **F**.

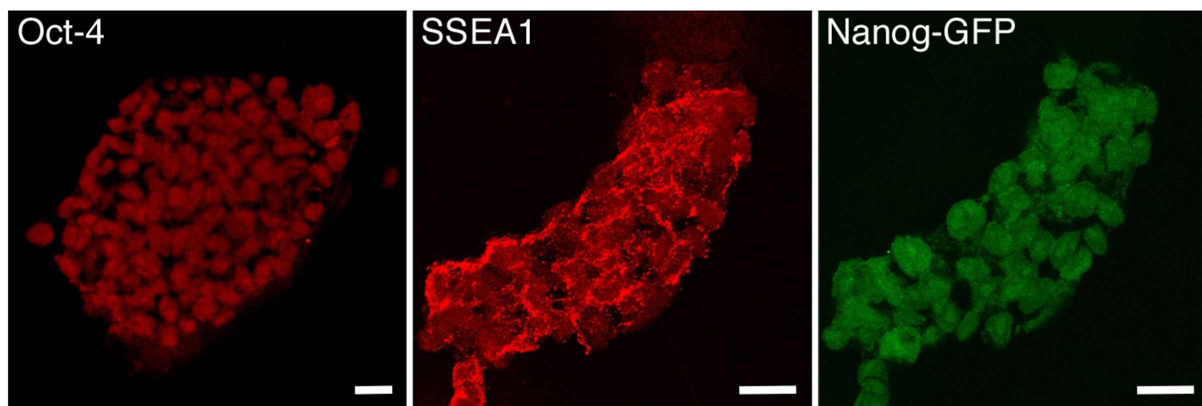

Figure S2. The potency state was validated using certain pluripotency markers in iPS cells after being cultured for 5 days on a MEF feeder layer. **Oct-4** staining strictly confined to the cell nuclei. **SSEA1** staining was restricted to the cell membranes; whereas **Nanog-GFP** positivity was confined to the nuclei in the same cells. Scale bars; 20 µm.