

Supplementary information, Figure S5 Characterization of human pluripotent stem cells and their differentiated derivatives. (A) Immunofluorescence images showing expression of the pluripotency markers OCT4, NANOG, and SOX2 in hESCs. Nuclei were counterstained with Hoechst 33342. Scale bars, 25  $\mu m$ . (B) Flow cytometry analysis of the surface markers CD73, CD90, and CD105 in hMSCs. Red, isotype control; cyan, antibody-stained cells. (C-G) Immunofluorescence images showing expression of PAX6, NESTIN, and SOX2 in hNSCs (C); Tuj1 and MAP2 in human postmitotic neurons (D); SMA, SM22, and caldesmon in hVSMCs (E); pluripotency markers OCT4, NANOG, and SOX2 in iPSCs reprogrammed from hNSCs (nuclei were counterstained with DAPI) (F); and endoderm marker AFP (green), exoderm marker Tuj1 (red), and mesoderm marker SMA (green) in teratomas derived from hNSC-iPSCs (G). Scale bars, 25  $\mu m$  (C-F) or 10  $\mu m$  (G).