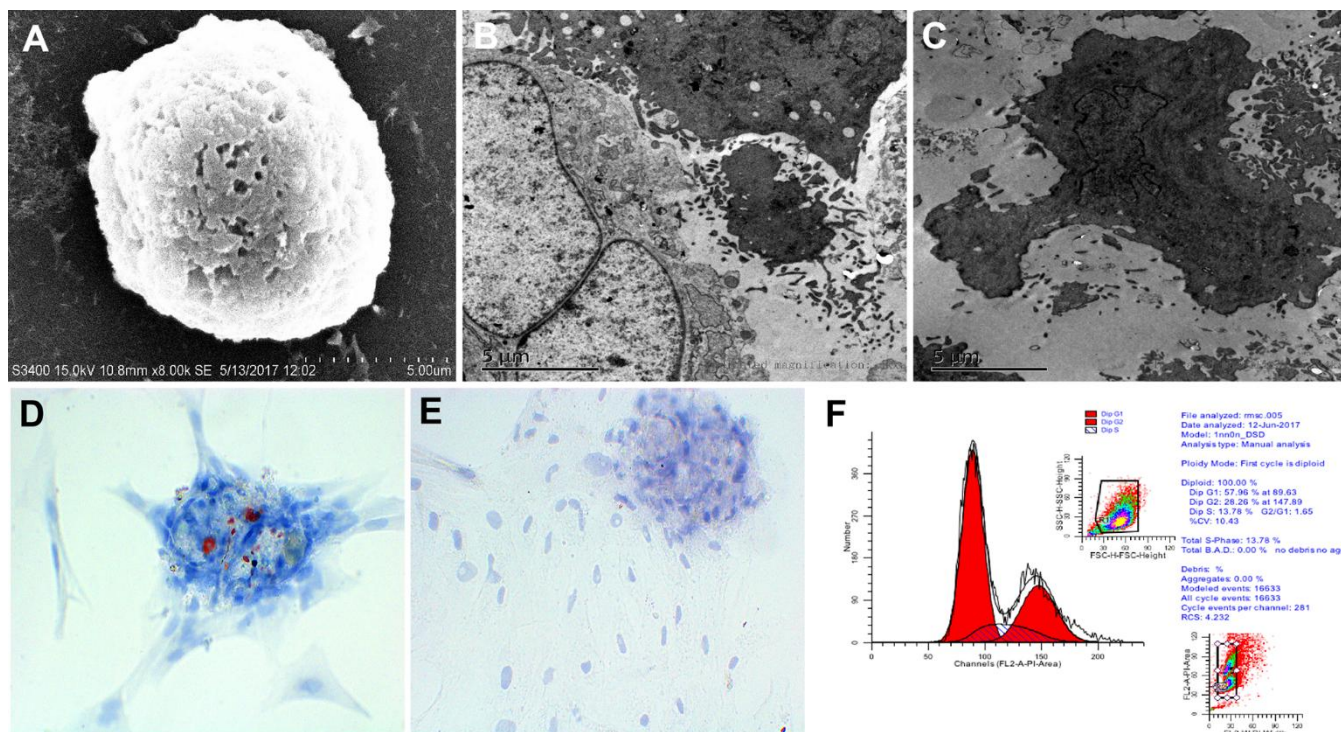
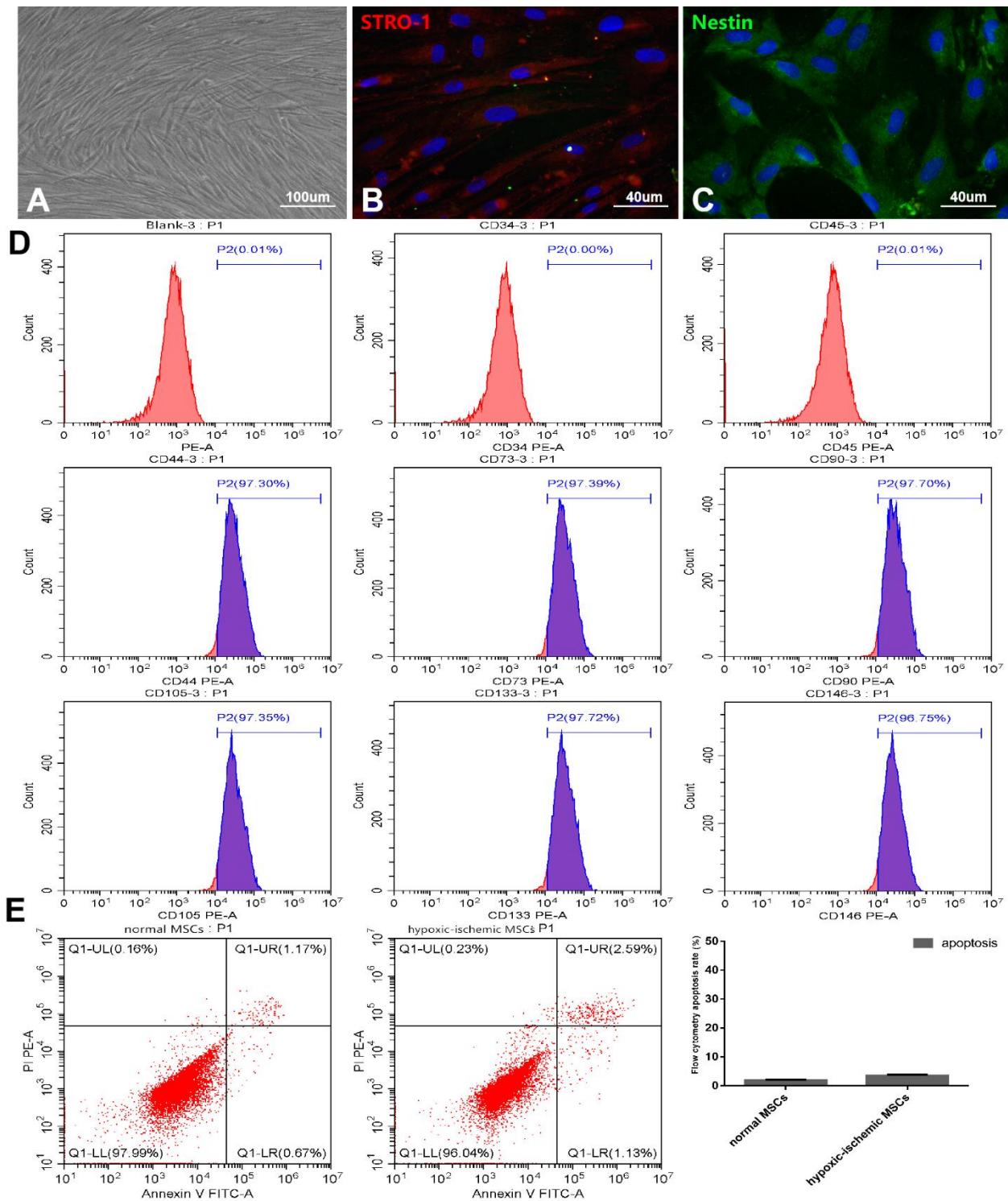


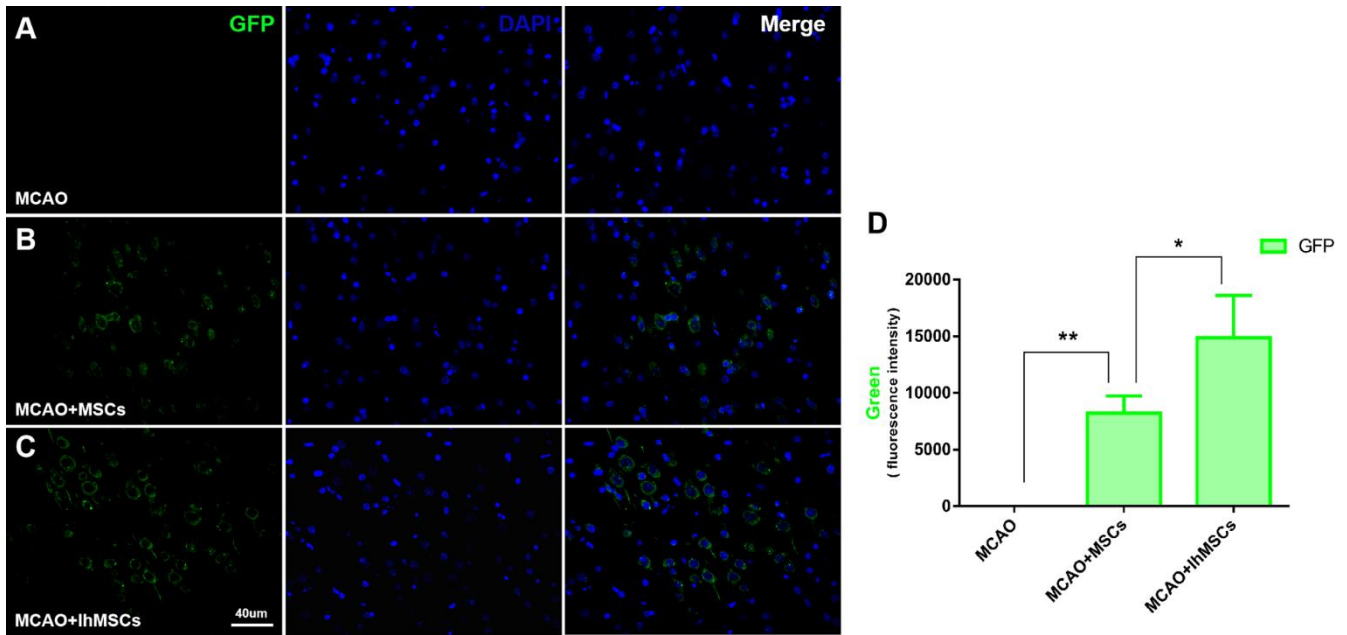
SUPPLEMENTARY FIGURES



Supplementary Figure 1. Biological characteristics of OM-MSCs. (A) The surface of OM-MSCs were observed by scanning electron microscope. (B, C) Ultrastructure of the cells were observed by transmission electron microscopy (TEM). (D) OM-MSCs induced by a lipogenic inducer were stained with Oil Red O. (E) OM-MSCs induced by an osteogenic inducer were stained with alizarin red. (F) The cell cycle detected by flow cytometry.



Supplementary Figure 2. Cell specific markers and apoptosis rates were compared between IhOM-MSCs and OM-MSCs. (A) IhOM-MSCs were mainly exhibited spindle-shaped and a radial arrangement under light microscope. **(B, C)** The specific markers STRO-1 and Nestin of IhOM-MSCs were identified by immunofluorescence. **(D)** The surface markers and purity of IhOM-MSCs were detected by flow cytometry assay. **(E)** The apoptosis rate of both cells as evaluated by flow cytometry with Annexin V/PI staining.



Supplementary Figure 3. NEW-OM-MSCs could migrate to the infarction area through the blood-brain barrier after transplantation. (A) No GFP-positive cells were found in MCAO group. (B) GFP-positive cells were found in MCAO+MSCs group. (C) The number of GFP-positive cells was significantly increased in the MCAO+lhMSCs group compared with the MCAO+MSCs. (D) Histogram of the number of GFP positive cells in each group. (OM-MSCs were replaced by MSCs in the figure. All data are presented as the mean value \pm SD. * $p < 0.05$, ** $p < 0.01$).