Supplementary Information

Potential benefits of mesenchymal stem cells and electroacupuncture on the trophic factors associated with neurogenesis in mice with ischemic stroke

Yu Ri Kim^{1,2}, Sung Min Ahn², Malk Eun Pak^{1,3}, Hong Ju Lee^{1,3}, Da Hee Jung^{1,3}, Yong-Il Shin⁴, Hwa Kyoung Shin^{1,2,3,5}, Byung Tae Choi^{1,2,3,5*}

¹Department of Korean Medical Science, School of Korean Medicine, Pusan National University, Yangsan 50612, Republic of Korea

²Korean Medical Science Research Center for Healthy Aging, Pusan National University, Yangsan 50612, Republic of Korea

³Graduate Training Program of Korean Medicine for Healthy Aging, School of Korean Medicine, Pusan National University, Yangsan 50612, Republic of Korea

⁴Department of Rehabilitation Medicine, School of Medicine, Pusan National University, Yangsan 50612, Republic of Korea

⁵Division of Meridian and Structural Medicine, School of Korean Medicine, Pusan National University, Yangsan 50612, Republic of Korea

*Correspondence and requests for materials should be addressed to B.T.C. (email: choibt@pusan.ac.kr)

Supplementary Information Figures

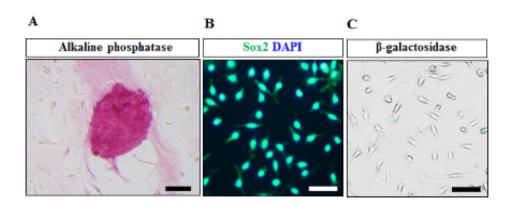


Fig. S1. Assessment of alkaline phosphatase, SOX2, and β -galactosidase activity in cultured mBMSCs obtained at passage 3. Phenotypic characteristics of stem cells were confirmed by (A) alkaline phosphatase and (B) SOX2 staining in cultured mBMSCs. (C) Senescence-associated β -galactosidase staining shown by blue granules was hardly seen in most mBMSCs. Scale bars=50 μ m.

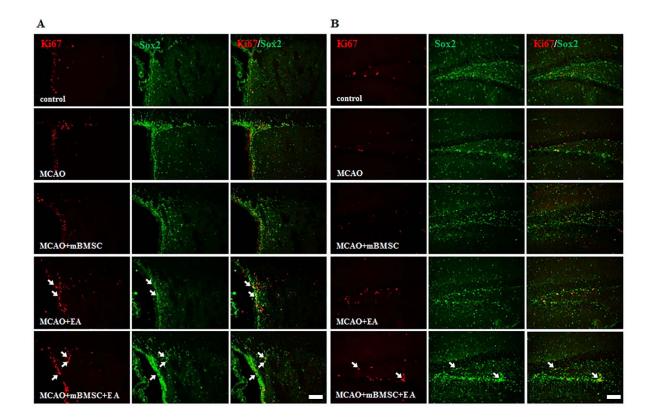


Fig. S2. Effects of mBMSC and EA treatment on proliferation marker as detected by Ki67 and Sox2. (A) Photomicrographs for Ki67 and Sox2 in the SVZ+striatum. (B) Photomicrographs for Ki67 and Sox2 in the hippocampus. Ki67/Sox2 double-positive cells are indicated by arrows. Scale bars= $100 \, \mu m$.

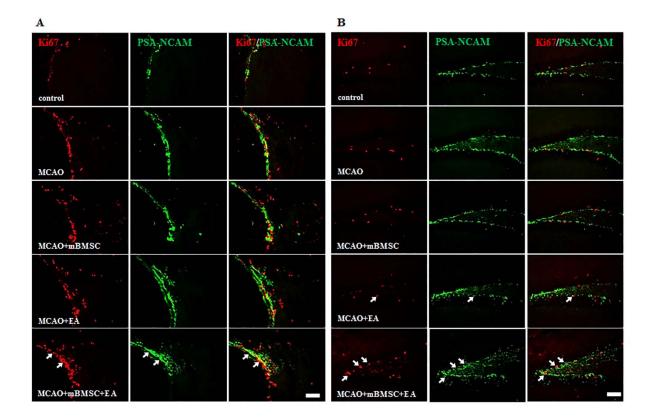


Fig. S3. Effects of mBMSC and EA treatment on immature neuronal marker as detected by Ki67 and PSA-NCAM. (A) Photomicrographs for Ki67 and PSA-NCAM in the SVZ+striatum. (B) Photomicrographs for Ki67 and PSA-NCAM in the hippocampus. Ki67/PSA-NCAM double-positive cells are indicated by arrows. Scale bars=100 μm.

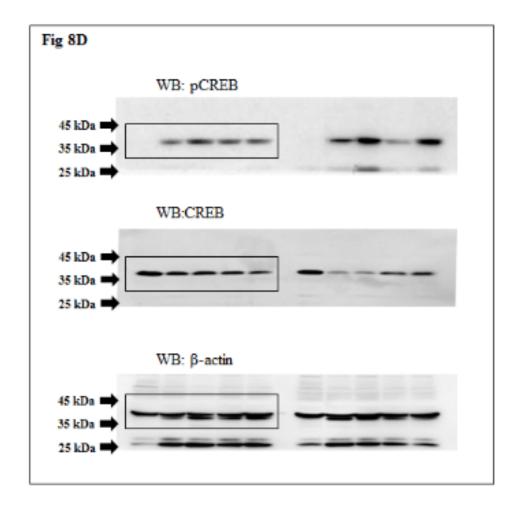


Fig. S4. Blot images of approximate regions used for figures marked with rectangles and molecular size marker (kDa).