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Supplementary Materials

Ethionamide Preconditioning Enhances the Proliferation and Migration of Human Wharton's Jelly-derived Mesenchymal Stem Cells

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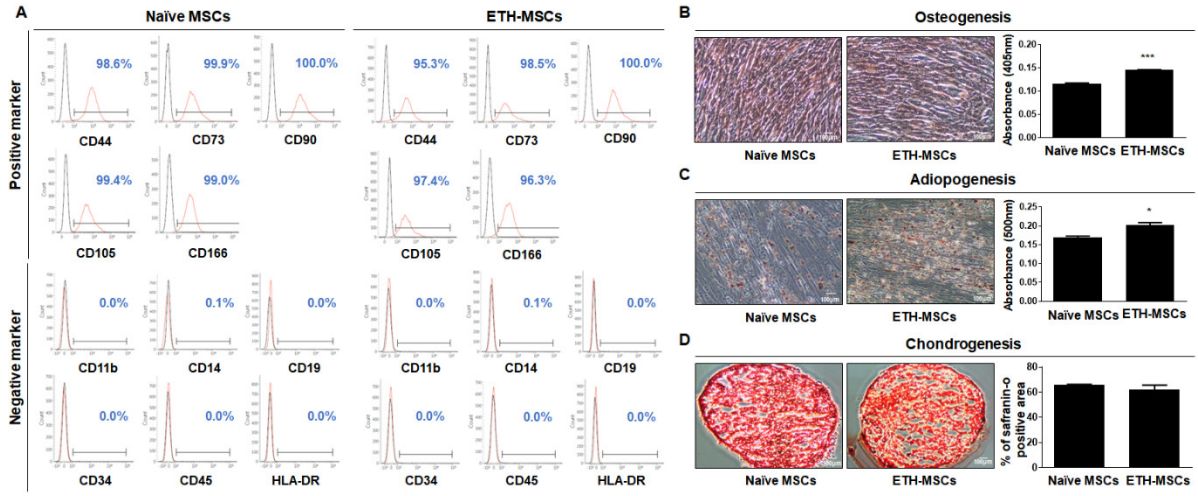

Figure 1. Characterization of ETH-MSCs. MSCs characterization was investigated by FACS analysis and differentiation. (A) After 72 h of preconditioning with ethionamide, the surface markers' alteration change of MSCs were confirmed by flow cytometer. (B) Differentiation ability into osteoblast, adipocyte, and chondrocyte was confirmed by the appropriate staining method for each cell type. The results are obtained from three independent experiments are expressed as percent of naive MSCs ± SEM; *p < 0.05 and ***p < 0.005 vs. naïve MSCs.

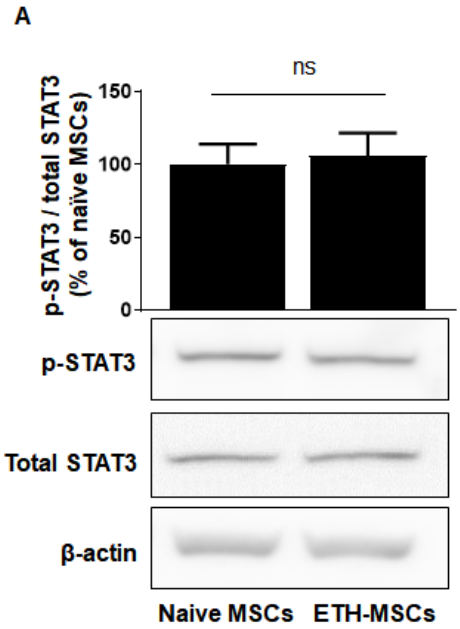

Figure 2. Ethionamide did not stimulate JAK/STAT signaling pathway. Ethionamide did not stimulated MSCs' proliferation via activation of STAT3 signaling pathway. (A) MSCs were exposed to 100 μM of ethionamide for 72h. STAT3 signaling pathways were evaluated by western blotting. β-actin was used as an internal control. The results obtained from three independent experiments were expressed as a percent of untreated control ± SEM; ns, not significant.

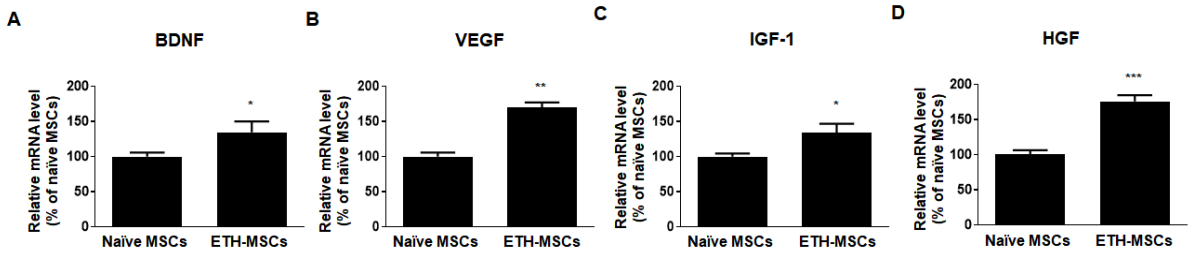

Figure 3. Ethionamide promoted the secretion of paracrine factors. After 72 h of preconditioning, the cells were harvested and the total RNA was subjected to RT-qPCR analyses for paracrine factors. GAPDH was used as an internal control. (A) BDNF, (B) VEGF, (C) IGF-1, and (D) HGF were detected in the MSCs. The results obtained from three independent experiments are expressed as percent of naïve MSCs ± SEM; *$p < 0.05$, **$p < 0.01$ and ***$p < 0.005$ vs. naïve MSCs.