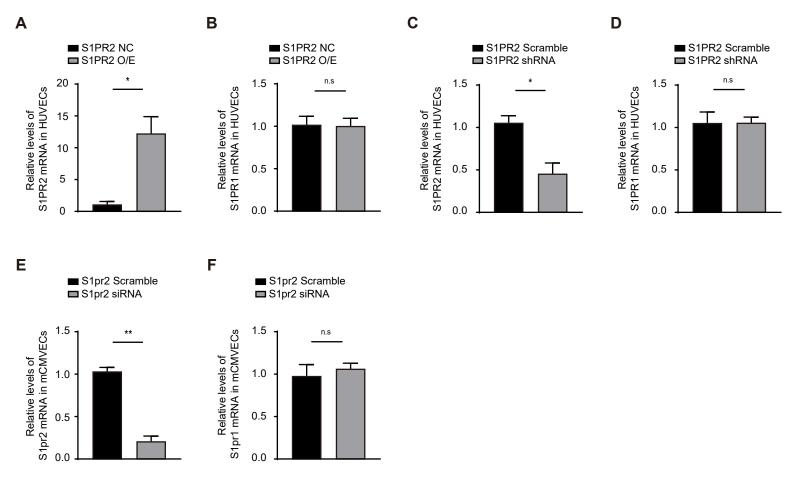
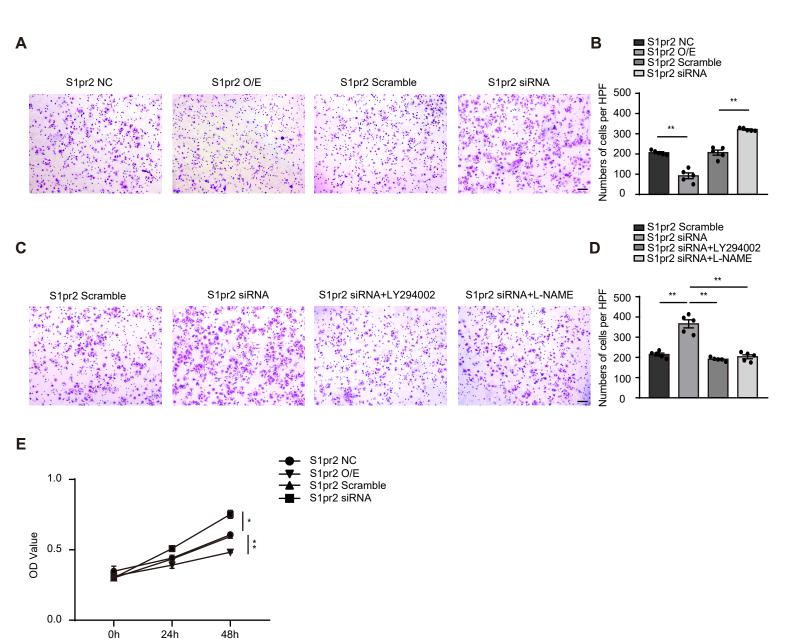
## **Supplementary Figure 1**



Supplementary Figure 1. The efficiency of S1PR2 knockdown and overexpression in ECs transfected with vectors carrying S1PR2/S1pr2 or their shRNA/siRNA. A-D, Relative mRNA expression levels of S1PR2 and S1PR1 in HUVECs infected with S1PR2 over-expressing (O/E) lentivirus and its corresponding NC empty control lentivirus (A-B), and S1PR2 shRNA lentivirus and its corresponding scramble control lentivirus (C-D) (n = 3). E-F, Relative mRNA expression levels of S1pr2 and S1pr1 in mCMVECs transfected with S1pr2 siRNA or its corresponding scramble siRNA (n = 3). Data are mean  $\pm$  SEM. n.s indicates not significant. \*P < 0.05; \*\*P < 0.01.

## **Supplementary Figure 2**



Supplementary Figure 2. S1pr2 inhibits cell migration and proliferation in mouse cardiac microvascular endothelial cell line (mCMVECs). A-B, S1pr2 inhibits the ability of cell migration in mCMVECs, as shown by transwell chemotactic assay (n = 5). C-D, S1pr2 inhibits the ability of migration of mCMVECs through AKT/eNOS signaling pathway, as shown by transwell chemotactic assay (n = 5). LY294002, AKT inhibitor. L-NAME, eNOS antagonist. E, S1pr2 inhibits the ability of cell proliferation of mCMVECs, as shown by MTT assay (n = 5). Scale Bars, 200  $\mu$ m. Data are mean  $\pm$  SEM. n.s indicates not significant. \*P < 0.05; \*\*P < 0.01.