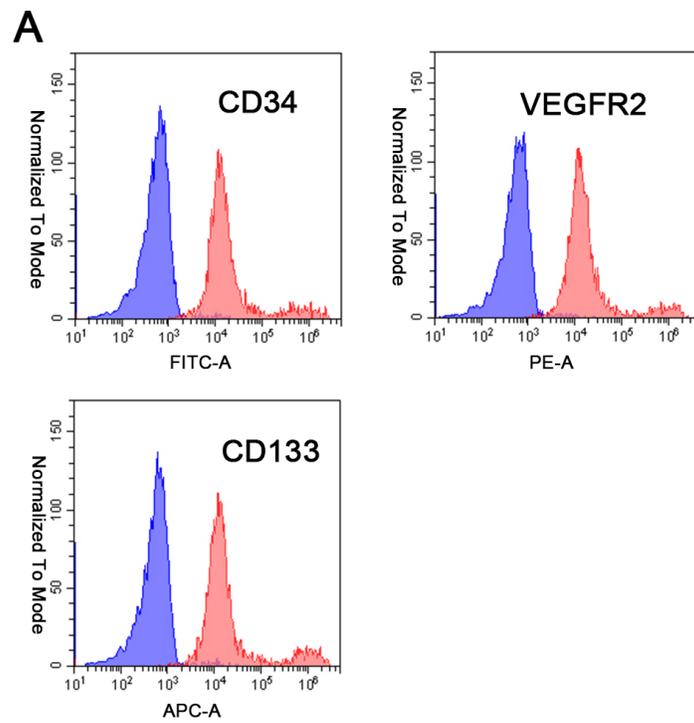
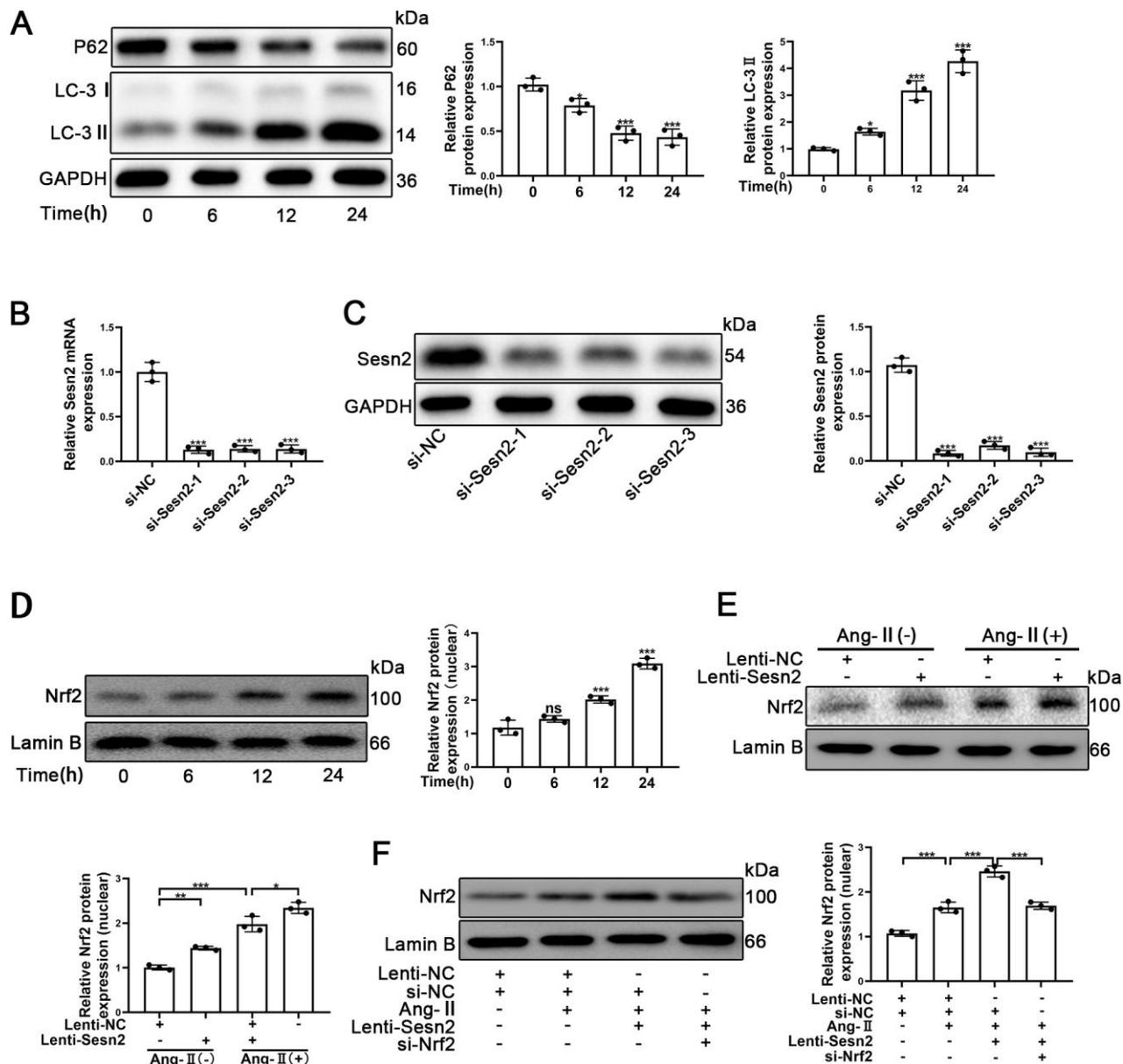


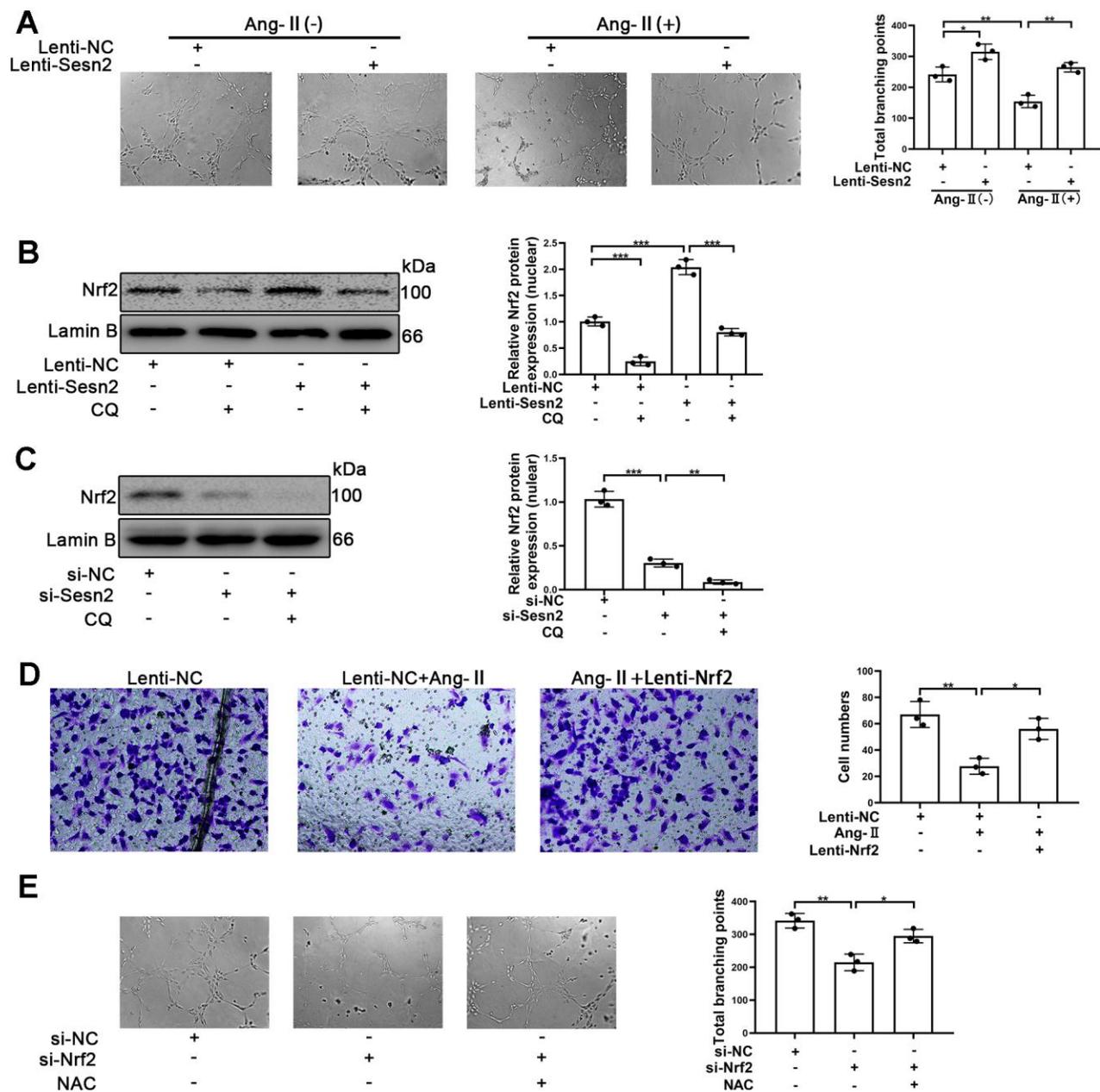
## SUPPLEMENTARY FIGURES



**Supplementary Figure 1. (A)** The flow cytometry was used to detect the marker of CD34, CD133 and VEGFR2. All experiments were performed in triplicate. \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$ , versus the control. Data are represented as mean  $\pm$  SEM.



**Supplementary Figure 2.** (A) The application of Ang-II was found to have induced a decrease P62 protein expression and an increased LC-3II protein expression in EPCs. (B) The levels of Sesn2 mRNA were reduced by the treatments with si-Sesn2. (C) The levels of Sesn2 proteins were reduced by the treatments with si-Sesn2. (D) The levels of Nrf2 proteins were detected in the nuclear of EPCs exposed to Ang-II for prolonged periods of time. (E) The levels of Nrf2 proteins were detected in the nuclear of EPCs divided into Lenti-NC, Lenti-Sesn2, Lenti-NC + Ang-II and Lenti-Sesn2 + Ang-II treatment groups. (F) The levels of Nrf2 proteins were detected in the nuclear of EPCs divided into treatment groups including a control, Ang-II, Ang-II + Lenti-Sesn2, and Ang-II+ Lenti-Sesn2 + si-Nrf2 treatment groups. All experiments were performed in triplicate. \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$ , versus the control. Data are represented as mean  $\pm$  SEM.



**Supplementary Figure 3.** (A) Tube formation abilities were assessed by Matrigel in EPCs detected in the nuclear of EPCs divided into Lenti-NC, Lenti-Sesn2, Lenti-NC + Ang-II and Lenti-Sesn2 + Ang-II treatment groups. Scale bars = 10  $\mu$ m. (B) The levels of Nrf2 proteins were detected in the nuclear of EPCs divided into treatment groups representing the control, CQ, Lenti-Sesn2, and Lenti-Sesn2 + CQ cohorts. (C) The levels of Nrf2 proteins were detected in the nuclear of EPCs divided into treatment groups representing the control, si-Sesn2, and si-Sesn2 + CQ. (D) The migration of EPCs were determined by using Transwell assays in the control, si-Sesn2, and si-Sesn2 + CQ treatment groups. Scale bars = 20  $\mu$ m. (E) Tube formation abilities were assessed by Matrigel in EPCs detected in the nuclear of EPCs divided into treatment groups representative of the control, si-Nrf2 and, si-Nrf2 + NAC. Scale bars = 10  $\mu$ m. All experiments were performed in triplicate. \* $p$  < 0.05, \*\* $p$  < 0.01, \*\*\* $p$  < 0.001, versus the control. Data are represented as mean  $\pm$  SEM.