

Figure S1. Statistical data of tube forming capacity and biological function of HUVEC cells with SVIL knockdown. (A) Statistical analysis of blood vessel length on the Matrigel. (B) SVIL expression regulated the spreadability of endothelial cells, and the surface area of HUVEC cells was counted at 30 min and 1 h. (C) SVIL expression promoted endothelial cell migration. The number of migrated cells was counted using a Transwell assay. The error bars represent the  $\pm$  SD. \* $P$ <0.05, \*\* $P$ <0.01, \*\*\* $P$ <0.001. SVIL, supervillin; HUVEC, human umbilical vein endothelial cell; ns, not significant; FN, fibronectin.

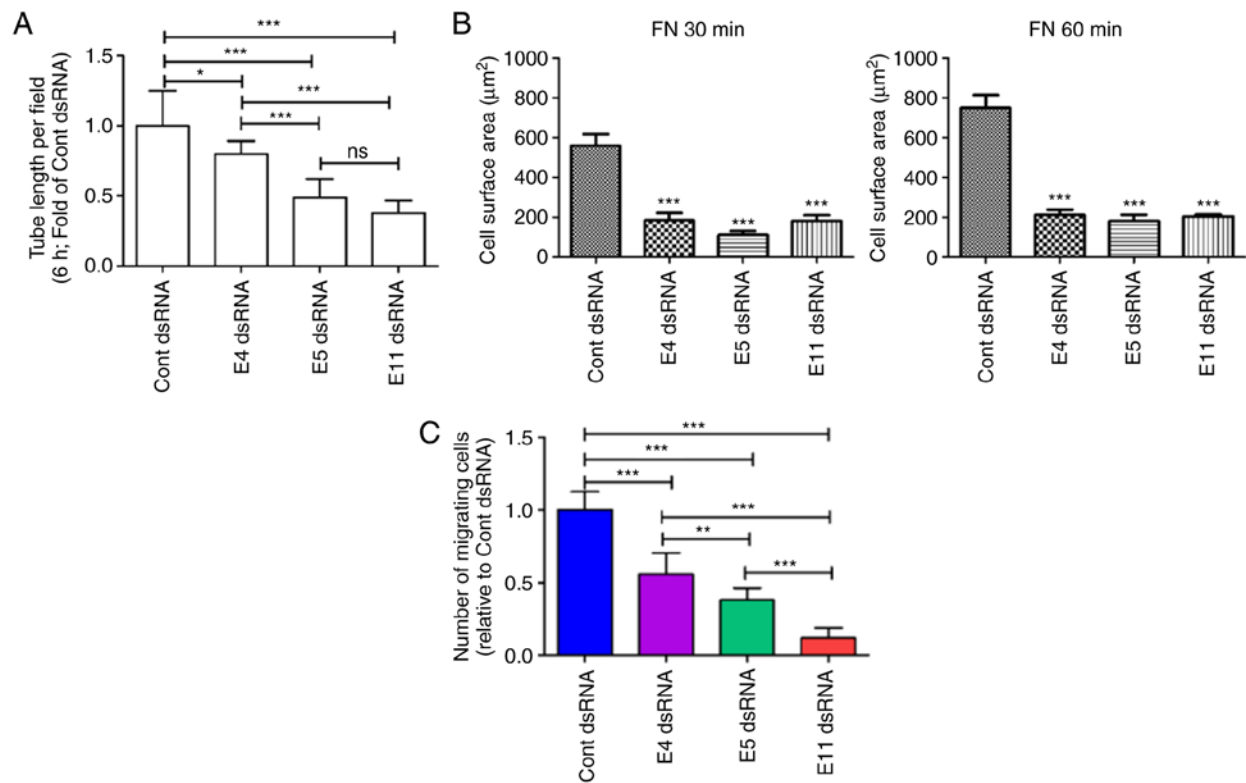


Figure S2. Statistical data of tube forming capacity and biological function of HepG2 cells with SVIL knockdown. (A) Statistical analysis of vasculogenic mimicry rate. (B) SVIL expression promoted the migration ability of HepG2 cells, and the number of transmembrane cells after 16 h was counted. (C) SVIL expression regulated the spreadability of HepG2 cells, and the proportion of cell spread and the surface area of HepG2 cells was counted at 30 min and 1 h. (D) SVIL affected the proliferative capacity of hepatoma cells, and the number of proliferating HepG2 cells labeled with EdU antibody in different knockout groups was counted. \* $P<0.05$ , \*\* $P<0.01$ , \*\*\* $P<0.001$ . SVIL, supervillin; VM, vasculogenic mimicry.

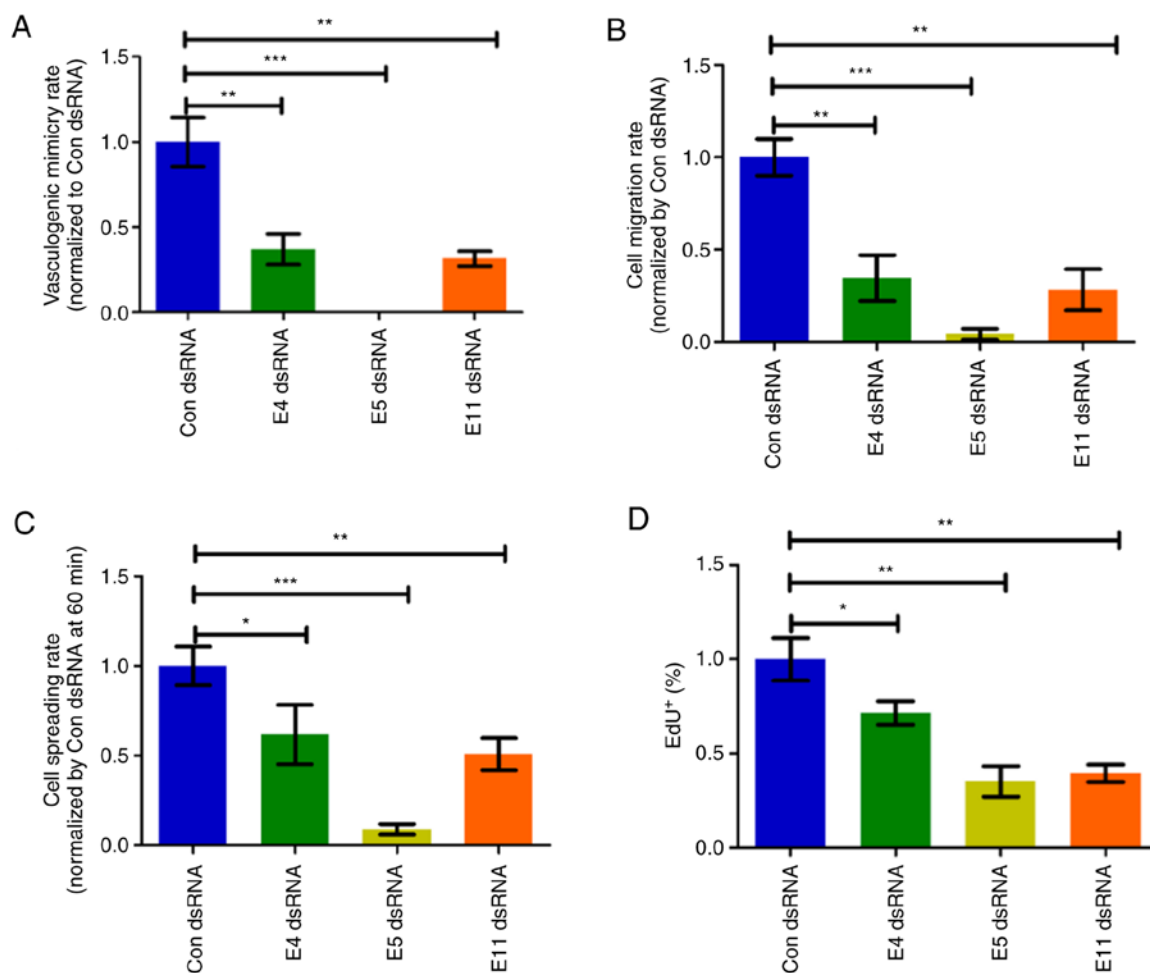


Figure S3. Knockdown of SVIL resulted in cell apoptosis of HepG2 cells. (A) Flow cytometric detection of the apoptosis rate of HepG2 cells knocked down by SVIL with/without VEGF treatment. (B) Cell counting statistical analysis of SVIL knockdown for HepG2 cell proliferation with/without VEGF treatment. The error bars represent the  $\pm$  SD. \* $P$ <0.05, \*\* $P$ <0.01. SVIL, supervillin; VEGF, vascular endothelial growth factor.

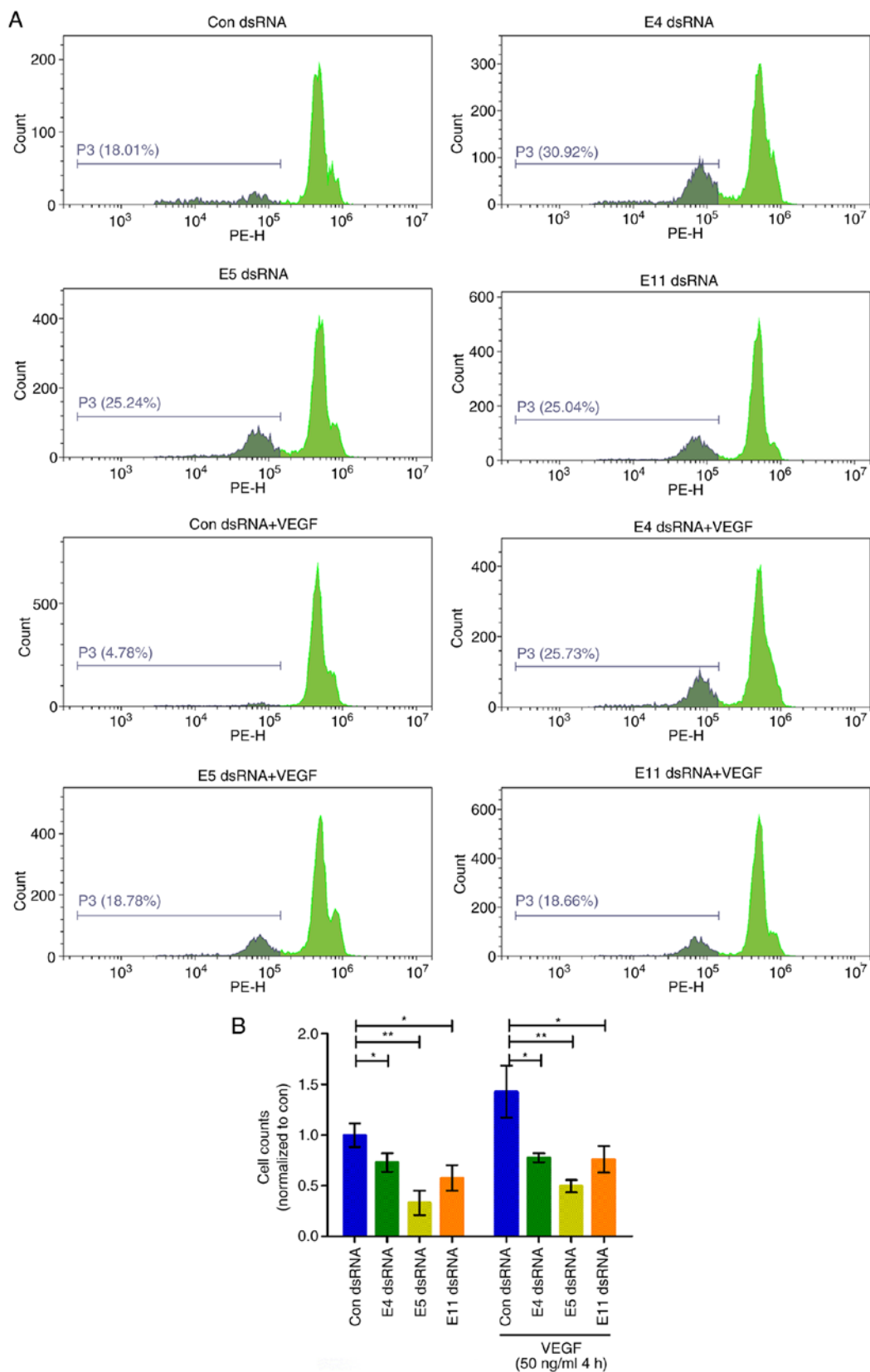


Figure S4. Statistical analysis of the vessel length, vessel area percentage and the number of junctions on the Matrigel. \*P<0.05, \*\*P<0.01, \*\*\*P<0.001. ns, not significant; VEGF, vascular endothelial growth factor.

