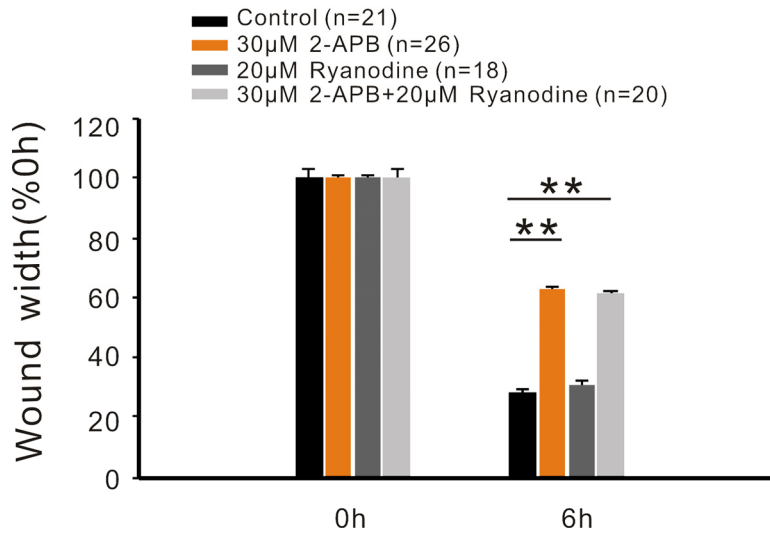
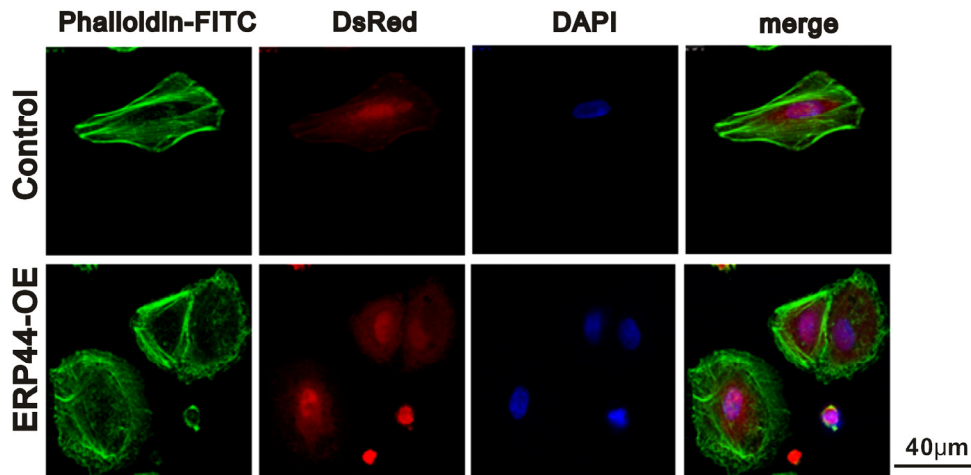


**SUPPLEMENTARY DATA**



**Supplementary Figure 1. IP3Rs but not RYRs are required in A549 cell migration.** IP3R inhibitor, 2-APB, and RYRs inhibitor, ryanodine, were used to explore  $Ca^{2+}$  release channels involved in A549 cell migration. The wound healing of A549 cells that added 30µM 2-APB was obviously inhibited while that of cells stimulated by 20µM ryanodine was not affected. When the cells added 20µM ryanodine along with 30µM 2-APB, the inhibitory effect was shown again.



**Supplementary Figure 2. ERP44 overexpression leads to change of cell morphology.** In control, the A549 cells show polygonal morphology and the microfilaments arrayed regularly while the ERP44 overexpressed cells tend to rounded shape and the microfilaments appear in disorder. Phalloidin-FITC shows the structure of F-actin microfilament; DsRed stands for overexpression level; DAPI indicates nuclei.