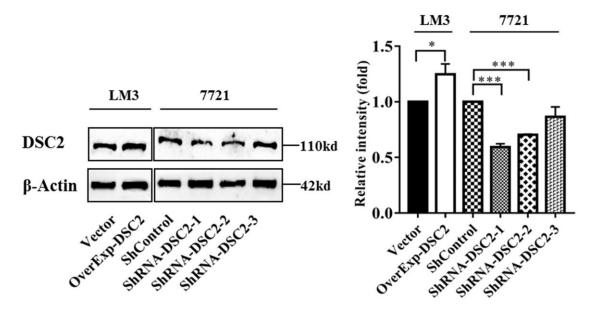
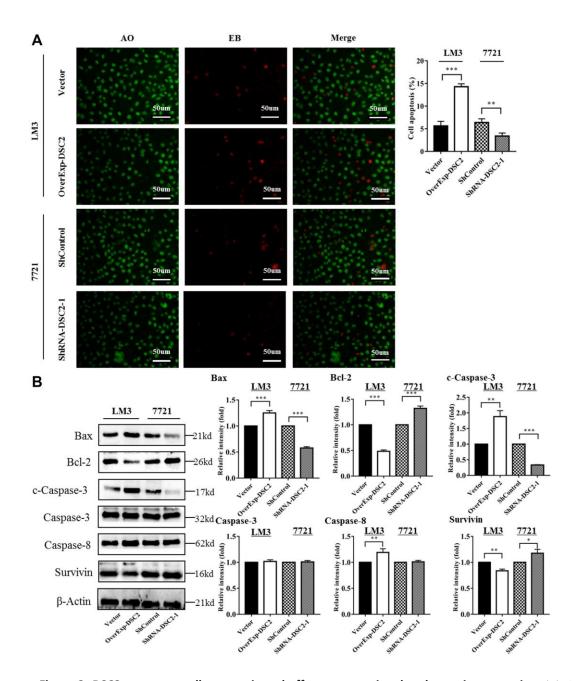
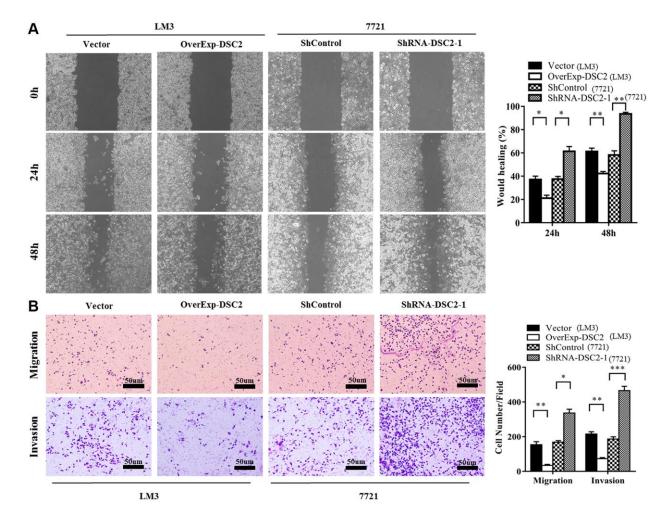
## **SUPPLEMENTARY FIGURES**



**Supplementary Figure 1. OverExp-DSC2 and shRNA-DSC2-1 plasmids were chosen.** DSC2 protein levels in LM3 and 7721 cells transfected with vector, overExp-DSC2, shControl, shRNA-DSC2-1, shRNA-DSC2-2, and shRNA-DSC2-3 were detected by Western blot analysis (repeated for three times).  $^*P < 0.05$ ,  $^{**}P < 0.01$ ,  $^{***}P < 0.001$ .



Supplementary Figure 2. DSC2 promotes cell apoptosis and affects apoptosis-related protein expression. (A) The apoptosis rate of overExp-DSC2-transfected LM3 and shRNA-DSC2-1-transfected 7721 cells were analyzed by Acridine Orange/Ethidium Bromide(AO/EB) assay (repeated three times).  $^*P < 0.05$ ,  $^{**}P < 0.01$ ,  $^{***}P < 0.001$ . (B) The expression levels of Bax, Bcl-2, c-Casp-3, Casp-8, and Survivin in overExp-DSC2-transfected LM3 and shRNA-DSC2-1-transfected 7721 cells were detected by Western blot analysis (repeated for three times).  $^*P < 0.05$ ,  $^{**}P < 0.01$ ,  $^{***}P < 0.001$ .



**Supplementary Figure 3. DSC2 inhibits migration and invasion in HCC cells.** The migration and invasion abilities of overExp-DSC2-transfected LM3 and shRNA-DSC2-1-transfected 7721 cells were respectively detected by wound healing assay (**A**) and transwell assay (**B**) (repeated three times for both).  $^*P < 0.05$ ,  $^{**}P < 0.01$ ,  $^{***}P < 0.001$ .