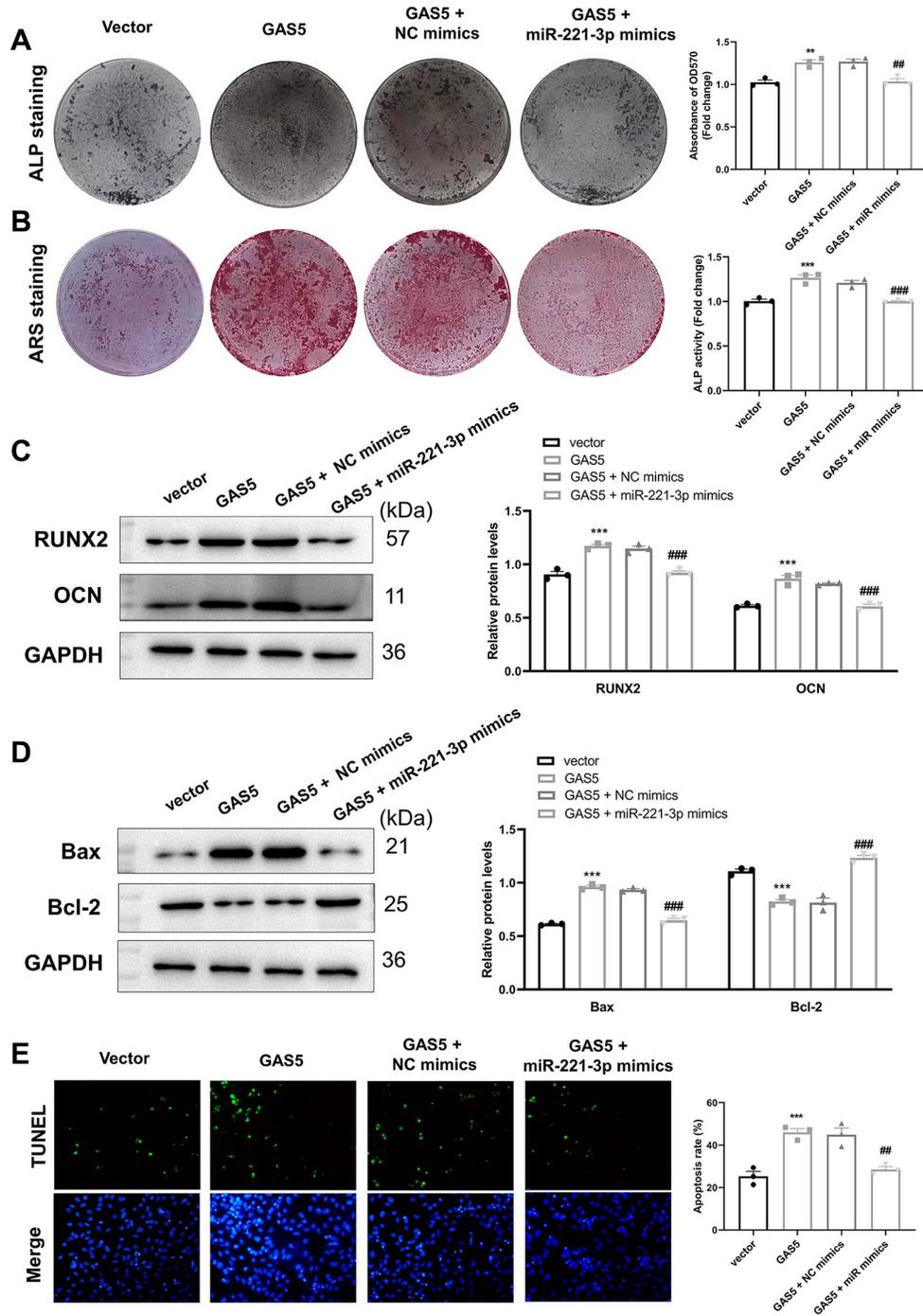
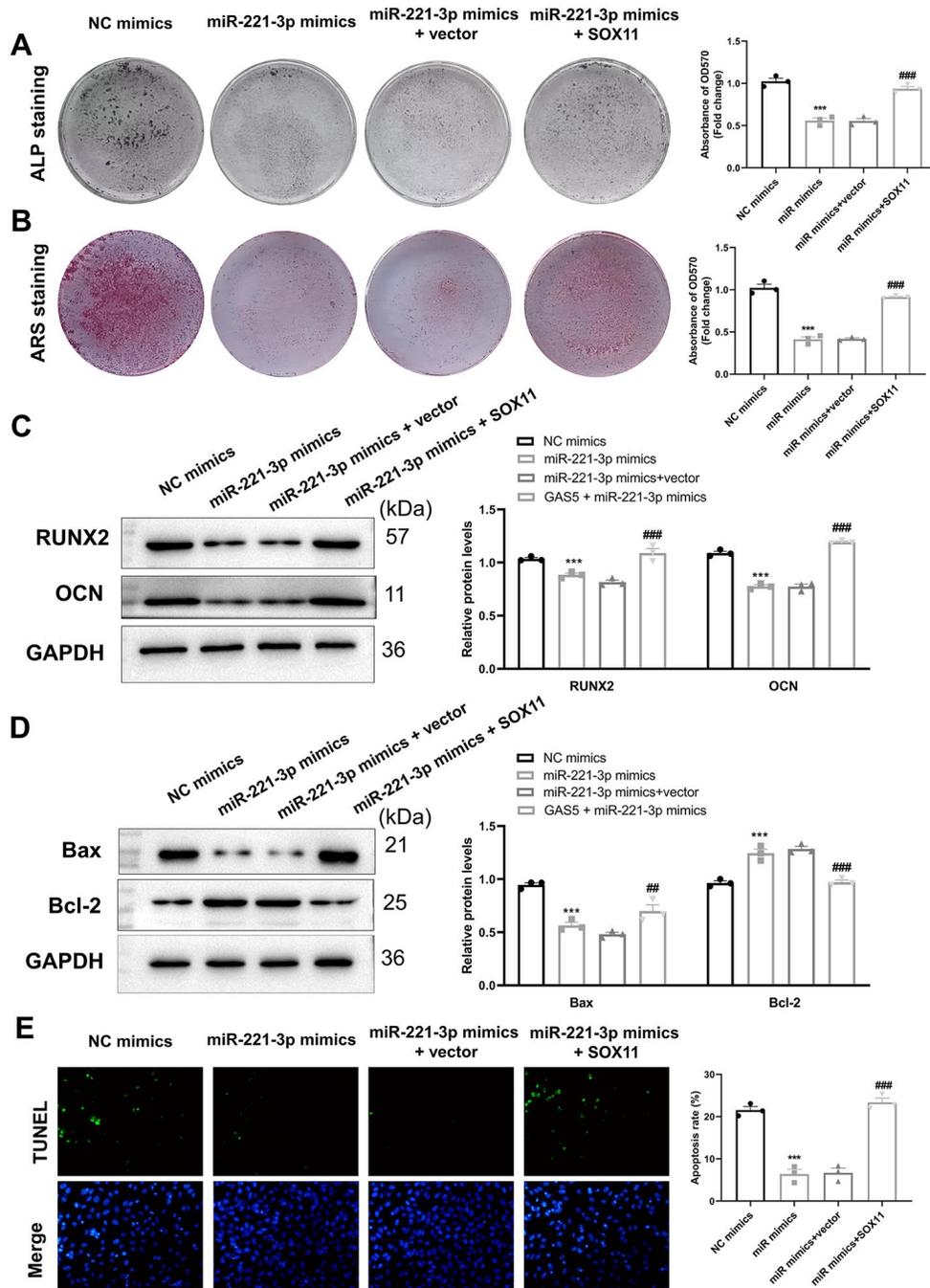


SUPPLEMENTARY FIGURES



**Supplementary Figure 1. The role of GAS5 in the apoptosis and osteogenic differentiation of AFs was mediated by miR-221-3p.** AFs were transfected with or without the GAS5 overexpression vector alone or with the NC or miR-221-3p mimics. (A) ALP and (B) ARS staining assays were used to evaluate the osteogenic differentiation level ( $n = 3$ ). (C) The osteogenic differentiation-related markers were detected using western blotting ( $n = 3$ ). (D) The apoptosis-related protein levels were measured using western blotting ( $n = 3$ ). (E) TUNEL staining assay was employed to evaluate the apoptosis of AFs ( $n = 3$ ). (\*\* $p < 0.01$  and \*\*\* $p < 0.001$ , vs. the vector group; ### $p < 0.01$  and #### $p < 0.001$ , vs. the GAS5 group).



**Supplementary Figure 2. SOX11 mediated the role of miR-221-3p in the apoptosis and osteogenic differentiation of AFs.** AFs were transfected with or without miR-221-3p mimics alone or with the empty or SOX11 overexpression vector. (A) ALP and (B) ARS staining assays were used to evaluate the osteogenic differentiation level ( $n = 3$ ). (C) The osteogenic differentiation-related markers were detected using western blotting ( $n = 3$ ). (D) The apoptosis-related protein levels were measured using western blotting ( $n = 3$ ). (E) TUNEL staining assay was employed to evaluate the apoptosis of AFs ( $n = 3$ ). (\*\*\*)  $p < 0.001$ , vs. the NC mimics group; #  $p < 0.01$  and ###  $p < 0.001$ , vs. the miR-221-3p mimics group).