

MicroRNA-145 functions as a tumor suppressor by targeting matrix metalloproteinase 11 and Rab GTPase family 27a in triple negative breast cancer

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Through increasing evidences have documented that microRNA-145 (*miR-145*) acts as a tumor suppressor in breast cancer, its exact role in triple negative breast cancer (TNBC) remains poorly understood. In this study, the expression of *miR-145* in human TNBC cells and samples from 30 patients was analyzed. *miR-145* was significantly downregulated in HCC1937 cells and TNBC tissues and cells proliferation and induced G1 phase arrest, whereas MDA-MB-231 cells did not show growth inhibition. *miR-145* exhibited inhibitory effects on cell invasion through the post-transcriptional silencing of matrix metalloproteinase 11 (MMP11) and Rab GTPase family 27a (Rab27a) in TNBC cells. Additionally, the silencing of MMP11 and Rab27a could be reversed by overexpression of *miR-145* in TNBC cells. These results suggest that *miR-145* plays an important role in TNBC malignancy.

Biography

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