

# MicroRNA-567 inhibits cell proliferation, migration and invasion by targeting FGF5 in osteosarcoma

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## Abstract

MicroRNAs (miRNAs) have been widely reported to have important regulatory roles in various human tumors, including osteosarcoma (OS). The aim of this study was to focus on the role of less well-known miRNA-567 (miR-567) in OS. We found the expression of miR-567 was significantly reduced in OS tissues and cell lines (MG-63, U2OS and Saos-2) compared with the adjacent normal tissues and normal osteoblastic cells (hFOB), respectively. Moreover, exogenous miR-567 overexpression inhibited OS cell proliferation, migration and invasion by CCK-8, Transwell assays, respectively. We further explored the mechanism underlying the suppressive effects of miR-567 on OS cells and identified a potential target of miR-567 binds to the 3'UTR of fibroblast growth factor 5 (FGF5) using TargetScan program. Furthermore, enforced expression of miR-567 decreased the expression of FGF5 in both MG-63 and U2OS cells using luciferase reporter assay and Western blotting. We also showed that overexpression of FGF5 could partially antagonize the suppressive effects of miR-567 on OS cell proliferation, migration and invasion. Taken together, our data indicated that miR-567 may function as a tumor suppressor by negatively regulating FGF5 and be potential therapeutic targets for the treatment of OS.

### How to Cite

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