

# MicroRNA-143 Inhibits Migration and Invasion of Human Non-Small-Cell Lung Cancer and Its Relative Mechanism

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### Abstract :

**Background:** MicroRNAs (miRNAs) play important roles in many biological processes, including cancer development. Among those miRNAs, miR-143 shows tumor-suppressive activity in some human cancers. However, the function and mechanism of miR-143 in lung cancer cells remains unknown. Here we explored the role of miR-143 in lung cancer. **Results:** According to qRT-PCR, we found that miR-143 was notably down-regulated in 19 NSCLC tissues and 5 cell lines. *In vitro* experiments showed us that miR-143 could significantly suppress the migration and invasion of NSCLC cell lines while it had no effects on the growth of NSCLC cell lines, and *in vivo* metastasis assay showed the same results. Finally, we found that the mechanism of miR-143 inhibiting the migration and invasion of NSCLC might be through targeting CD44v3. **Conclusions:** The up-regulated miR-143 in lung cancer could significantly inhibit cell migration and invasion, and this might work through targeting CD44v3, which was newly identified by us.

### Key Word :

NSCLC, miR-143, microRNA (miRNA), migration, invasion, CD44v3.

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