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hsa-miR-125a-5p Enhances Invasion Ability in Non-Small Lung Carcinoma Cell Lines

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摘要

Background and objective MicroRNAs (miRNAs) are short non-coding RNAs that posttranscriptionally regulate gene expression by partially binding complementary to target sites in mRNAs. Although some impaired miRNA regulations have been observed in many human cancers, the functions of miR-125a are still unclear. The aim of this study is to investigate the expression of hsa-miR-125a-5p in NSCLC cell lines and the relationship between hsa-miR-125a-5p and the invasion of lung cancer cells. Methods The expression of hsa-miR-125a-5p and the effectiveness for a given period time after being transfected sense hsa-miR-125a-5p 2’-O-methyl oligonucleotide, which were 24 h, 36 h, 48 h, 60 h and 72 h, were examined by realtime PCR. Meanwhile, we investigated the modification of invasive ability in A549 and NCI-H460 cells by transwell. Results Real-time PCR showed that hsa-miR-125a-5p was poorly-expressed in 6 lung cancer cell lines, especially in LH7, NCI-H460, SPC-A-1 and A549. The highest expression of hsa-miR-125a-5p occurred in the cells transfected with sense hsa-miR-125a-5p 2’-O-methyl oligonucleotide 36 h. Furthermore, the invasive abilities of A549 and NCI-H46O were enhanced by up-regulating hsa-miR-125a-5p. Conclusion hsa-miR-125a-5p was poorly-expressed in lung cancer cells and it could enhance lung cancer cell invasion by up-regulating hsa-miR-125a-5p.

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