

人类与医学遗传学

## RAB5A基因对肺腺癌细胞微丝的影响

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**摘要** 为研究RAB5A基因对肺腺癌细胞中微丝的影响, 通过FITC标记的鬼笔环肽对AGZY83-a细胞骨架中的微丝特异染色, 利用共聚焦激光扫描显微镜发现RAB5A过表达后微丝束变密。经Superarray肿瘤转移相关基因微芯片分析RAB5A对肿瘤转移相关基因的表达影响, 发现了3个与细胞骨架调节相关基因表达发生变化, NM23H1与Rac1的表达受到抑制, 同时S100A4的表达增加。以前有研究认为S100A4基因可抑制NM23H1基因表达, 为验证NM23H1基因的表达降低是否由于S100A4表达增高所致, 利用RNAi沉默AGZY83-a细胞中S100A4基因的表达, 发现NM23H1基因表达增高, 由此推断RAB5A基因可能通过上调S100A4基因表达, 来抑制NM23H1基因表达。

**关键词** [RAB5A基因](#); [微丝](#); [共聚焦激光扫描显微镜](#); [微芯片](#); [RNA干扰](#)

分类号

## The Effect of RAB5A Gene on Rearrangement of Microfilaments in Human Lung Adenocarcinoma Cells

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### Abstract

To study the effect of RAB5A gene on microfilaments in human lung adenocarcinoma cells, AGZY83-a cells were stained with fluorescein isothiocyanate (FITC)-phalloidin. Microfilament bundles in RAB5A gene over-expressed AGZY83-a cells were shown to be denser than in control cells using confocal laser scanning microscope (CLSM). According to the analysis of Tumor Metastasis Microarray on RAB5A gene, three genes related to the regulation of cytoskeleton were identified, including NM23H1, Rac1 (downregulated in RAB5A overexpressing cells), and S100A4 (upregulated in RAB5A overexpressing cells). Previous studies demonstrated that S100A4 gene functioned to suppress the expression of NM23H1 gene. To test if this elevated expression of S100A4 results in the down-regulation of NM23H1, RNAi was applied to silence the expression of S100A4 in AGZY83-a cells. Our data indicated that expression of NM23H1 was increased following the inhibition of S100A4 expression. Altogether, the results indicated that RAB5A gene was involved in the suppression of expression of NM23H1 by promoting the expression of S100A4.

**Key words** [RAB5A gene](#); [microfilaments](#); [confocal laser scanning microscopy](#); [superarray](#); [RNAi](#)

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