中国普通外科杂志 2013, 22(5) 624-628 DOI: 10.7659/j.issn.1005-6947.2013.05.019 ISSN: 1005-6947 CN: 43-1213R

基础研究

Rab25基因对人乳腺癌细胞的生物学行为的影响及其与Her-2/neu基因的关系

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摘要：

目的：探讨Rab25基因表达水平对乳腺癌细胞生物学活性的影响以及其作用与Her-2/neu基因的关系。方法：通过质粒转染和RNA干扰采用，升高或降低不同的乳腺癌细胞株Rab25基因表达，以及升高或降低稳定表达Rab25基因的不同乳腺癌细胞株Her-2/neu基因表达。检测各组细胞的增殖活性、克隆形成率和转移侵袭力。结果：不同细胞株Rab25转染组的增殖活性、克隆形成率、转移侵袭力均较其Rab25干扰组、原株细胞组及阴性对照组有明显增强（均P<0.05）。在稳定表达Rab25基因的不同乳腺癌细胞系中无论升高或降低Her-2/neu基因表达，其增殖活性、克隆形成率、转移侵袭力均无明显改变（均P>0.05）。结论：Rab25基因在乳腺癌细胞中发挥着促进癌细胞生长、增强其增殖及侵袭的作用，且Her-2/neu基因的表达水平不能影响其发挥作用。

关键词： 乳腺肿瘤；Rab25；基因 erbB-2；细胞增殖；肿瘤侵润

Effects of Rab25 gene on biological behaviors in human breast cancer cells and its relation with Her-2/neu gene

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Abstract:

Objective: To investigate the effect of the expression level of Rab25 gene on the biological behaviors of breast cancer cells and the relation of its action with Her-2/neu. Methods: The Rab25 gene in different breast cancer cell lines and Her-2/neu gene in different breast cancer cell lines with stable Rab25 gene expression were increased or decreased by using plasmid transfection and RNA interference techniques. The proliferative activity, colony formation and invasive ability in each group of cells were determined. Results: The proliferation activity, colony formation rate, and invasion ability were all significantly increased in groups of cells transfected with Rab25 gene compared with their corresponding groups of cells with Rab25 gene interference, ogrinal cell lines and negative control group of cells (all P<0.05). The proliferation activity, colony formation rate, and invasion ability in different breast cell lines stably expressing Rab25 gene showed no significant alteration regardless of the Her-2/neu gene expression increase or decrease (all P>0.05). Conclusion: Rab25 gene exerts a promoting effect on growth, proliferation and invasiveness in breast cancer cells, and the expression level of Her-2/neu gene can not influence its action.

Keywords: Breast Neoplasms Rab25 Genes, erbB-2 Cell Proliferation Neoplasm Invasiveness

收稿日期 2012-12-06 修回日期 2013-04-22 网络版发布日期 2013-05-15

DOI: 10.7659/j.issn.1005-6947.2013.05.019

基金项目:

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