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Abnormal Expression of p120-catenin and E-cadherin Is Significantly Correlated with Malignant Phenotype of Human Lung Cancer

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摘要

Background and objective To explore the correlation between p120-catenin (p120ctn) and small GTPases in human lung cancer, and their effect on the cell-cell adhesion, we examined the expression patterns of p120ctn and Rac1, which is the core member of small GTPases, and their correlation with clinicopathological factors. Methods S-P immunohistochemistry, Western Blot, and RT-PCR were used to detect the expression patterns of p120ctn and Rac1 in 138 patients with non-small cell lung cancer (NSCLC) and two kinds of homologous lung cancer cell lines. We also used an in vitro model to evaluate their expression, and to determine whether protein expression correlated with the invasive capacity of lung cancer cell lines. Results In lung cancer, the levels of protein and mRNA expression of p120ctn were significantly lower than normal lung tissue, and Rac1 was also found to be higher in tumor tissue than in normal lung tissue. A correlation between abnormal p120ctn and overexpression of Rac1 (Correlation coefficient=0.720, P <0.001) was also associated with malignancy of lung cancer, such as poor differentiation (P =0.022), high TNM stage (P =0.010),and lymph node metastasis (P =0.009) in NSCLC patients. Abnormal expression of p120ctn and overexpression of Rac1 was significantly associated with the high metastatic capacity of BE1 cells. Conclusion Abnormal p120ctn expression correlates with Rac1 overexpression, which contributes to the malignancy-related of NSCLC.

关键词

Lung neoplasms;Cadherin-associated Src substrate p120; Rac1 GTP-Binding Protein

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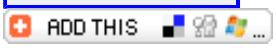
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