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Screening Metastasis-associated Genes from Anoikis Resistant A549 Lung Cancer Cells by Human Genome Array

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摘要

Background and objective As a barrier to metastases, cells normally undergo apoptosis after they lose contact with their extra cellular matrix (ECM). This process has been termed "anoikis". Tumour cells that acquire malignant potential have developed mechanisms to resist anoikis and thereby survive after detachment from their primary site while traveling through the lymphatic and circulatory systems. This "anoikis resistance" is considered the first step to tumor metastases. The aim of this study was to screen metastasis-associated genes from anoikis resistant and adherent growth A549 lung cancer cell by Human Genome Array. Methods Establish anoikis resistant A549 lung cancer cell lines by using poly-hydroxyethyl methacrylate resin processed petri dishes, which causes cell free from adherent. The different expressed gene between anoikis resistant A549 cell and adherent growth A549 cell was tested using human V2.0 whole-genome oligonucleotide microarray, a product of Capitalbio Corporation, Beijing. Screen metastasis-associated genes. Results 745 different expressed genes were screened, including 63 highly metastasis-associated genes. Conclusion The successfully established anoikis resistant A549 cell lines and screened different expressed genes provide us basis for further research on metastasis of lung cancer.

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