

论著

α 粒子诱发人支气管上皮细胞恶性转化不同时期差异表达基因cDNA文库的构建

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摘要 目的: 建立 α 粒子诱发人支气管上皮细胞恶性转化不同时期差异表达基因的文库。方法: 抑制消减杂交法 (SSH)。结果: 建立了3个人支气管上皮细胞恶性转化不同时期差异表达基因的cDNA文库。其中, A 差减文库(永生人支气管上皮细胞BEP2D的cDNA为tester, α 粒子照射BEP2D细胞后35代恶性转化细胞R15Hp35的cDNA为driver) 有416个克隆, B 差减文库(α 粒子照射BEP2D细胞后20代转化细胞R15Hp20的cDNA为tester, BEP2D和R15Hp35细胞的cDNA混合后为driver) 有301个克隆, C 差减文库(R15Hp35细胞的cDNA为tester, BEP2D细胞的cDNA为driver) 有586个克隆。对文库中70个cDNA克隆单向测序后发现: 61个cDNA为已知基因, 9个cDNA在GenBank中无法查到对应的同源序列, 可能代表了新基因。结论: 3个差减文库的cDNA可能代表了 α 粒子诱发人支气管上皮细胞恶性转化不同时期差异表达的基因, 此为进一步研究 α 粒子诱导肺癌发生的分子机制奠定了基础。

关键词 [抑制消减杂交](#) [BEP2D细胞](#) [细胞转化](#)

CONSTRUCTION OF DIFFERENTIALLY EXPRESSED cDNA LIBRARIES FROM DISSEMINATORY MALIGNANT TRANSFORMED HUMAN BRONCHIAL EPITHELIAL CELLS INDUCED BY ALPHAPARTICLE RADIATION

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Abstract Purpose : To construct differentially expressed cDNA libraries from different malignant transformed human bronchial epithelial cells induced by alpha-particle radiation. Methods : Suppression subtractive hybridization (SSH) . Results : Three differentially expressed cDNA libraries were constructed from different malignant transformed human bronchial epithelial cells. The number of clones is 416 in A subtraction library (The cDNAs of BEP2D cells as tester and R15Hp35 cells as driver) , 301 in B subtraction library (The cDNAs of R15Hp20 cells as tester and R15Hp35 and BEP2D cells mixed together as driver.) and 568 in C subtraction library (The cDNAs of R15Hp35 cells as tester and BEP2D cells as driver) . After 70 cDNAs were sequenced and analyzed , 61 cDNAs were found to be known genes , and 9 cDNAs were found to be novel ones. Conclusion : The cDNAs of three subtraction libraries may represent differentially expressed cDNA of different malignant transformed human bronchial epithelial cells induced by alpha-particle radiation. The data provide a basis for further investigation of the molecular mechanism of lung cancer induced by alpha-particle radiation.

Keywords [Suppression subtractive hybridization](#) [BEP2D cell](#) [cell transformation](#)

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