

论文

PDCD4转染卵巢癌细胞系基因表达谱的变化

姜杨, 张霞, 王晓燕, 刘凤鸣, 宋兴国, 张利宁

山东大学医学院免疫学研究所, 济南 250012

摘要:

目的 探讨卵巢癌细胞系SKOV3稳定表达程序性细胞死亡4(PDCD4)基因后基因表达谱的变化。方法 将pDsRed2-N1-PDCD4真核表达载体和pDsRed2-N1空载体分别转染至SKOV3并获得稳定细胞系,应用基因芯片技术分析PDCD4基因转染后基因表达的变化,RT-PCR检测基因的表达以验证芯片结果。结果 PDCD4转染SKOV3后引起大量基因表达的变化,表达明显差异基因共有467个,其中上调255个,下调212个;RT-PCR验证选取的5个基因的表达差异和芯片显示的结果一致。结论 成功筛选出PDCD4基因转染卵巢癌细胞系SKOV3后的差异表达基因,为进一步研究PDCD4的抑癌作用机制提供了实验依据。

关键词: PDCD4基因; 卵巢肿瘤; 基因芯片; 差异基因

Gene expression in the human ovarian cancer cell line after transfection with PDCD4

JIANG Yang, ZHANG Xia, WANG Xiao yan, LIU Feng ming, SONG Xing guo, ZHANG Li ning

Institute of Immunology, School of Medicine, Shandong University, Jinan 250012, China

Abstract:

Objective To investigate the changes of the gene expressive profile of the human ovarian cancer cell line (SKOV3) after transfection with PDCD4. Methods The human ovarian cancer cell line SKOV3 was transfected with plasmids (pDsRed2-N1 and pDsRed2-N1-PDCD4) by using lipofectamine transfection reagent. SKOV3 cells stably expressing PDCD4 were established. Changes of the gene expression were analyzed by using gene chip technology. The related gene expression was detected by RT-PCR to confirm the results of the gene chip. Results PDCD4 transfection induce widespread changes of the gene expressive profile of the human ovarian cancer cellline SKOV3. The chip data suggested that there were 467 differentially expressed genes, in which 255 genes were up-regulated and 212 genes were down-regulated. Five of the differentially expressed genes were detected by RT-PCR, which was consistent with the chip data. Conclusion Gene chip technology was successfully used to screen the genes differentially expressed in the human ovarian cancer cell line SKOV3 transfected with PDCD4. This study provides laboratory evidence for further studying the tumor suppression mechanism of PDCD4.

Keywords: PDCD4 genes; Ovarian tumor; Gene chip technology; Differentially expressed genes

收稿日期 2009-06-09 修回日期 网络版发布日期

DOI:

基金项目:

山东省博士后创新项目专项基金 (200802032)

通讯作者: 姜杨 (1982-), 女, 硕士研究生, 主要从事肿瘤免疫研究。

作者简介: 姜杨 (1982-), 女, 硕士研究生, 主要从事肿瘤免疫研究

作者Email:

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