

论著

## 白细胞介素18基因转染的肺癌细胞对树突状细胞免疫特性的影响

张在云, 吴金民

浙江大学医学院附属邵逸夫医院肿瘤中心, 浙江 杭州 310016

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**摘要** 目的: 研究IL-18基因转染的肺癌细胞对树突状细胞(DC)表型和免疫活性的影响。方法: 构建含IL-12 P40信号肽序列的分泌型人IL-18表达载体并转染NCI-H460肺癌细胞。从人外周血诱导DC, 分为未转染组(NT)、空载体组(PV)、基因转染组(GT)和单纯DC组(PD), 用流式细胞仪分别测定未经转染肺癌细胞、空载体转染细胞及基因转染细胞刺激的DC和单纯DC表面CD54、CD80、CD83及CD86的表达。用MTT法测定上述4组DC刺激T细胞增殖的作用。用ELISA法测定上述4组DC培养上清中IL-12的表达量。结果: 分泌型IL-18表达载体酶切及测序结果与预期结果一致。IL-18转染细胞表达IL-18融合基因及18 kD蛋白。GT组DC表面分子的表达、刺激T细胞增殖的作用及IL-12分泌量均高于其余3组。结论: IL-18基因转染的肺癌细胞可促进DC表面分子表达, 增强DC免疫刺激活性及其IL-12的分泌。

**关键词** [白细胞介素18](#); [树突细胞](#); [肺肿瘤](#); [免疫力](#)

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## Effect of lung cancer cells transfected with interleukin 18 gene on the immunological activity of dendritic cells

ZHANG Zai-yun, WU Jin-min

Center of Oncology, Sir Run Run Shaw Hospital, Zhejiang University School of Medicine, Hangzhou 310016, China. E-mail: ZZY6603@sina.com.cn

### Abstract

<FONT face=Verdana>AIM: To study the effect of interleukin 18 gene transfected lung cancer cells on the phenotype and immunological activity of dendritic cells (DC). <BR>METHODS: A secretive IL-18 expression vector containing IL-12 P40 signal sequence was constructed and transfected into NCI-H460 lung cancer cells. DC induced from human peripheral blood were divided into 4 groups (NT, PV, GT and PD). DC were stimulated by non-transfected NCI-H460 cells, pure vector transfected NCI-H460 cells and IL-18 transfected NCI-H460 cells respectively for group NT, PV, GT, and non-stimulated DC for group PD. CD54, CD80, CD83 and CD86 on DC in the 4 groups were detected with flow cytometry. T cell proliferation stimulated by DC in the 4 groups was assayed with MTT method. IL-12 release in cultured DC supernatant was measured by ELISA. <BR>RESULTS: Sequencing result of the secretive IL-18 was correct. The transfected cells expressed IL-18 fusion gene and 18 kD IL-18 protein. DC in GT group expressed more surface molecules than those in other 3 groups. T cell proliferation and IL-12 secretion in GT group were higher than those in other 3 groups. <BR>CONCLUSION: IL-18 gene transfected NCI-H460 cell increases surface molecule expressions on DC. It also enhances immunological activity and IL-12 secretion in DC. </FONT>

**Key words** [Interleukin-18](#) [Dendritic cells](#) [Lung neoplasms](#) [Immunity](#)

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通讯作者 张在云 [ZZY6603@sina.com.cn](mailto:ZZY6603@sina.com.cn)

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