

论著

pEgr-IL18-B7.1质粒辐射诱导表达特性及其联合辐射抗肿瘤作用

金光辉,田梅,刘树铮[△],杨建征,杨英

吉林大学卫生部放射生物学重点实验室, 吉林 长春 130021

收稿日期 2004-1-14 修回日期 2004-6-30 网络版发布日期 2009-11-7 接受日期 2004-6-30

摘要 目的: 构建pEgr-IL18-B7.1双基因表达质粒, 探讨不同剂量电离辐射诱导下的表达特性, 研究基因放射治疗对恶性黑色素瘤的抑瘤作用。方法: 利用基因重组技术构建包含小鼠IL-18和B7.1的双基因表达质粒pEgr-IL18-B7.1, 分别利用ELISA和流式细胞仪检测不同剂量电离辐射诱导下IL-18和B7.1在体外的表达特性, 以移植肿瘤的生长为判断指标, 探讨基因放射治疗对恶性黑色素瘤的抑瘤作用。结果: 体外实验证实, 双基因表达质粒pEgr-IL18-B7.1在不同剂量X射线诱导下可有效表达IL-18和B7.1, 与放疗联合应用可有效抑制肿瘤生长。结论: 说明多基因联合辐射治疗是有效的抗肿瘤措施之一。

关键词 [白细胞介素18](#); [黑色素瘤](#); [放射疗法](#); [基因疗法](#)

分类号 [R363](#)

Radiation-induced expression of IL-18 and B7.1 genes in transfected B16 cells and antitumor effect of Egr-IL18-B7.1 in vivo

JIN Guang-hui, TIAN Mei, LIU Shu-zheng, YANG Jian-zheng, YANG Ying

MH Radiobiology Research Unit, Jilin University, Changchun 130021, China

Abstract

AIM: Plasmid Egr-IL18-B7.1 was constructed to explore its expression characteristics induced by different doses of radiation and its suppressive effect on melanoma under radiotherapy. METHODS: The plasmid containing both IL-18 and B7.1 genes downstream of Egr-1 was constructed using gene recombination technique. The in vitro expression of IL-18 and B7.1 induced by ionizing radiation was measured with ELISA and flow cytometry, respectively. The effect of gene radiotherapy on malignant melanoma was assayed by observing the growth rate of B16 cells implanted into C57BL/6J mice. RESULTS: Effective expression of IL-18 and B7.1 by plasmid Egr-IL18-B7.1 treated with different doses of X-irradiation were observed and in vivo experiments showed significant inhibition of tumor growth after combined gene-radiotherapy. CONCLUSION: Data presented in this paper implicate that gene radiotherapy with plasmid containing double genes might be one of the effective anticancer therapeutic measures.

Key words [Interleukin-18](#) [Melanoma](#) [Radiotherapy](#) [Gene therapy](#)

DOI: 1000-4718

通讯作者 刘树铮 drliusz@yahoo.com

扩展功能

本文信息

- ▶ [Supporting info](#)
- ▶ [PDF\(2084KB\)](#)
- ▶ [\[HTML全文\]\(0KB\)](#)
- ▶ [参考文献](#)

服务与反馈

- ▶ [把本文推荐给朋友](#)
- ▶ [加入我的书架](#)
- ▶ [加入引用管理器](#)
- ▶ [复制索引](#)
- ▶ [Email Alert](#)
- ▶ [文章反馈](#)
- ▶ [浏览反馈信息](#)

相关信息

- ▶ [本刊中 包含“白细胞介素18; 黑色素瘤; 放射疗法; 基因疗法” 的相关文章](#)
- ▶ [本文作者相关文章](#)

- [金光辉](#)
- [田梅](#)
- [刘树铮](#)
- [杨建征](#)
- [杨英](#)