

基础医学

多西紫杉醇诱导前列腺癌PC3细胞凋亡的蛋白质组学研究

萧畔<sup>1</sup>,张怀强<sup>1</sup>,崔亚洲<sup>2</sup>,赵升田<sup>1</sup>,马天加<sup>1</sup>,周春文<sup>1</sup>

1.山东大学第二医院泌尿外科, 济南 250033;  
2.山东医药生物技术研究中心 山东省医学科学院, 济南 250062

摘要:

目的 比较多西紫杉醇诱导激素非依赖性前列腺癌PC3细胞凋亡前后的差异表达蛋白。方法 采用磺酰罗丹明B (SRB)法检测不同浓度多西紫杉醇对前列腺癌PC3细胞增殖的抑制作用;应用胶内差异凝胶电泳对PC3细胞凋亡前后蛋白质进行双向凝胶电泳图谱分析,分离并筛选鉴定相关差异蛋白。结果 半数抑制浓度IC50为20nmol/L。双向凝胶电泳图谱发现表达差异较为明显的18个蛋白质位点,其中8个蛋白表达上调,10个蛋白表达下调。结论 本研究发现的部分差异蛋白可能参与激素非依赖性前列腺癌对紫杉醇类药物的耐药作用。

关键词: 前列腺肿瘤;紫杉醇;蛋白质组学;差异凝胶电泳;细胞凋亡

A proteomics study of docetaxel-induced apoptosis in prostate cancer PC3 cells

XIAO Pan<sup>1</sup>, ZHANG Huai-qiang<sup>1</sup>, CUI Ya-zhou<sup>2</sup>, ZHAO Sheng-tian<sup>1</sup>, MA Tian-jia<sup>1</sup>, ZHOU Chun-wen<sup>1</sup>

1. Department of Urology, The Second Hospital of Shandong University, Jinan 250033, China;  
2. Shandong Medicinal Biotechnology Center, Shandong Academy of Medical Sciences, Jinan 250062, China

Abstract:

Objective To investigate the preliminary molecule mechanism of docetaxel resistance in prostate cancer cells by comparing the differential protein expressions before and after docetaxel-induced apoptosis in androgen independent prostate cancer PC3 cells. Methods The sulforhodamine B method was used to detect the inhibition effect of different concentrations of docetaxel on the proliferation of PC3 cells. Differential gel electrophoresis (DIGE) was adopted to separate and identify the differential proteins before and after docetaxel-induced apoptosis. Results The median inhibitory concentration IC50 was 20nmol/L. Eighteen significant differential protein spots were defined by DIGE. Eight proteins were up-regulated while ten proteins were down-regulated. Conclusion Eighteen significant differential protein spots were identified by using the proteomics method. It was believed that various differential proteins might be involved in the docetaxel resistance in androgen independent prostate cancer therapy.

Keywords: Prostate neoplasms; Docataxel; Proteomics; Differential gel electrophoresis; Apoptosis

收稿日期 2012-05-30 修回日期 网络版发布日期

DOI:

基金项目:

山东省自然科学基金(Z2007C07)

通讯作者: 张怀强(1964-),男,教授,硕士生导师,主要从事泌尿系统肿瘤及微创泌尿外科研究。E-mail: zhqmlhome@cn.yahoo.com

作者简介: 萧畔(1978-),男,硕士,主治医师,主要从事泌尿系统肿瘤研究

作者Email:

参考文献:

本刊中的类似文章

扩展功能

本文信息

- ▶ Supporting info
- ▶ PDF(1534KB)
- ▶ [HTML全文]
- ▶ 参考文献[PDF]
- ▶ 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
- ▶ 引用本文
- ▶ Email Alert
- ▶ 文章反馈
- ▶ 浏览反馈信息

本文关键词相关文章

- ▶ 前列腺肿瘤;紫杉醇;蛋白质组学;差异凝胶电泳;细胞凋亡

本文作者相关文章

PubMed