

论文

miR-122表达载体的构建及其对HepG2.2.15细胞增殖的抑制作用

范春光¹, 王春梅², 王燕¹, 李丽¹, 孙汶生³, 刘玉刚¹, 李瑞峰¹

山东大学医学院 1.病理生理学研究所; 2.微生物研究所; 3.免疫研究所, 济南 250012

摘要:

目的 构建miR-122表达载体并检测其表达对HepG2.2.15细胞恶性表型的逆转作用。方法 以HepG2.2.15细胞基因组DNA为模板, PCR扩增miR-122前体cDNA序列, 以质粒pSilencer3.1-H1 neo为母本, 构建miR-122表达载体将其转染HepG2.2.15细胞。表达后, 利用ELISA检测HepG2.2.15细胞HBV复制和表达的变化, 利用CCK8检测细胞增殖的变化。结果 构建的miR-122表达载体可在HepG2.2.15细胞中表达。转染后HepG2.2.15细胞中HBV复制、表达以及细胞增殖均被抑制。结论 miR-122表达载体可在HepG2.2.15细胞中有效表达, 其表达可抑制HBV复制、表达以及细胞增殖。

关键词: miR-122; 表达载体; 肝炎病毒, 乙型; 癌, 肝细胞; HepG2.2.15

Construction of an miR-122 expression vector and its inhibitory effects on proliferation of HepG2.2.15 cells

FAN Chun-guang¹, WANG Chun-mei², WANG Yan¹, LI Li¹, SUN Wen-sheng³, LIU Yu-gang¹, LI Rui-feng¹

1. Department of Pathophysiology; 2. Department of Microbiology; 3. Institute of Immunology, School of Medicine, Shandong University, Jinan 250012, China

Abstract:

Objective To construct an miR-122 expression vector and examine the effect of miR-122 expression in reversing the malignant phenotype of the HepG2.2.15 cell line. Methods Genomic DNA of the HepG2.2.15 cell line was used as a template and the target gene fragment was PCR-amplified. The product was confirmed by enzymatic digestion and sequencing. The vector was transfected into HepG2.2.15 cells. HBsAg and HBeAg in the supernatant from cell cultures were measured, and HBV-DNA level was detected by real-time PCR. Cell proliferation after transfection was monitored. Results The MiR-122 expression vector was expressed in HepG2.2.15 cells, leading to inhibition of HBV replication and expression as well as proliferation of HepG2.2.15 cells. Conclusion MiR-122, expressed by means of an expression vector, inhibits HBV replication and expression. Proliferation of HepG2.2.15 cells was also impaired.

Keywords: miR-122; Expression vector; Hepatitis B virus; Carcinoma, hepatocellular; HepG2.2.15

收稿日期 2011-03-31 修回日期 网络版发布日期

DOI:

基金项目:

国家自然科学基金青年基金资助项目(No.30801036)

通讯作者: 李瑞峰(1955-), 男, 教授, 主要从事2型糖尿病、胰岛素抵抗发病原因与机制以及衰老与抗衰老机制研究。 E-mail: ruifeng@sdu.edu.cn 刘玉刚(1974-), 男, 副教授, 主要从事HBV感染及其相关肝癌发生机制的研究。

作者简介: 范春光(1985-), 男, 硕士研究生, 主要从事肝癌发生机制的研究。

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(1057KB)
- [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

- miR-122; 表达载体; 肝炎病毒; 癌, 肝细胞; HepG2.2.15

本文作者相关文章

PubMed