48~51.miRNA-100下调polo样激酶1表达促进肝癌HepG2细胞凋亡[J].张红鸽,范秉琳,嵇晓辉,蔡新华,朱武凌.中国肿瘤生物

miRNA-100下调polo样激酶1表达促进肝癌HepG2细胞凋亡 点此下载全文

张红鸽 范秉琳 嵇晓辉 蔡新华 朱武凌

新乡医学院 基础医学院 病理科，河南 新乡 453003;新乡医学院 基础医学院 病理科，河南 新乡 453003;新乡医学院 基
新乡医学院 基础医学院 病理科，河南 新乡 453003;新乡医学院 基础医学院 病理科，河南 新乡 453003

基金项目：河南省杰出青年科学基金资助项目（No. 0512000800）

DOI：10.3872/j.issn.1007-385X.2013.1.008

摘要：

目的： 探讨microRNA-100（miR-100）对人肝癌HepG2细胞中polo样激酶1（polo-like kinase 1， Plk1 ）表达
tamine介导，将miR-100 mimics转染入HepG2细胞中，RT-PCR和细胞免疫荧光法检测 Plk1 mRNA和蛋白的表达，并采
胞的凋亡情况。 结果： miR-100 mimics成功转染HepG2细胞，转染效率为（88.75±2.22）%。转染48 h后，miR-10
表达水平明显低于阴性对照组、空白对照组和脂质体组\[（0.71±0.01） vs （0.95±0.01）、（0.92±0.02）、（0.9
miR-100 mimics组Plk1蛋白几乎不表达，同时其细胞凋亡率明显高于阴性对照、空白对照组和脂质体组\[（26.95±6.72）
3 71）%、（9.00±3.37）%，均P<0.05\]。 结论： miR-100能够抑制 Plk1 基因的表达，从而促进肝癌HepG2细胞

关键词：肝癌 HepG2细胞 microRNA-100 Polo样激酶1 凋亡

miRNA-100 promotes hepatic carcinoma HepG2 cell apoptosis through down-regulating polo-like ki
Fulltext

Zhang Hongge Fan Binglin Ji Xiaohui Cai Xinhua Zhu Wuling

Department of Pathology, School of Basic Medical Science, Xinxiang Medical College, Xinxiang 453003, He
Pathology, School of Basic Medical Science, Xinxiang Medical College, Xinxiang 453003, He’nan, China;D
Basic Medical Science, Xinxiang Medical College, Xinxiang 453003, He’nan, China;Department of Patholo
Xinxiang Medical College, Xinxiang 453003, He’nan, China;Department of Pathology, School of Basic Me
College, Xinxiang 453003, He’nan, China

Fund Project:Project supported by the Science Foundation for Distinguished Young Scholars of He’nan

Abstract:

Objective:To explore the effects of microRNA-100（miR-100）on expression of polo-like kinase 1 (Plk
hepatic carcinoma HepG2 cells. Methods: HepG2 cells were transfected with miR-100 mimics by oligofecta
immunofluorescence were used to analyze Plk1 mRNA and protein expressions in HepG2 cells, respective
HepG2 cells was detected by Annexin Ⅴ-FITC kit. Results: HepG2 cells were successfully transfected by m
efficiency was (88.75±2.22) %. 48 h after transfection, the expression of Plk1 mRNA decreased significar
transfection group compared with the negative control, blank control, and liposome groups (\[0.71±0.01
\[0.93±0 02\], P<0.01). 72 h after transfection, Plk1 protein expression was almost undetectable in He
mimics. Meanwhile, the cell apoptosis rate in the miR-100 mimics group was significantly increased in co
control, blank control, and liposome groups (\[26.95±6.72\]% vs \[15.03±5 12\]%, \[6.88±3.71\]%, \[
Conclusion: miR-100 can inhibit the expression of Plk1 gene, therefore promoting the apoptosis of hepati

Keywords:hepatic carcinoma HepG2 cell microRNA-100 polo-like kinase 1 apoptosis