

[1]李鑫,温泉,周云飞,等.FNBP1参与HeLa细胞的形态控制与生长调控[J].第三军医大学学报,2013,35(19):2046-2050.

Li Xin,Wen Quan,Zhou Yunfei,et al.FNBP1 is involved in morphology control and growth regulation in HeLa cells[J].J Third Mil Med Univ,2013,35(19):2046-2050.

点击复制

FNBP1参与HeLa细胞的形态控制与生长调控

《第三军医大学学报》 [ISSN:1000-5404/CN:51-1095/R] 卷: 35 期数: 2013年第19期 页码: 2046-2050 栏目: 论著 出版日期: 2013-10-15

Title: FNBP1 is involved in morphology control and growth regulation in HeLa cells

作者: 李鑫; 温泉; 周云飞; 何玉霞; 张军
重庆医科大学: 分子医学与肿瘤研究中心, 细胞生物学及遗传学教研室

Author(s): Li Xin; Wen Quan; Zhou Yunfei; He Yuxia; Zhang Jun
Molecular Medicine and Cancer Research Center, Department of Cell Biology and Genetics, Chongqing Medical University, Chongqing, 400016, China

关键词: FNBP1; HeLa细胞; 形态控制; 生长调控

Keywords: formin-binding protein 1; HeLa cells; morphology control; growth regulation

分类号: R329.24; R394.2; R737.33

文献标志码: A

摘要: 目的 研究FNBP1在HeLa细胞形态控制及生长调控过程中的作用。方法 运用RT-PCR、Western blot法在mRNA和蛋白水平验证FNBP1在HeLa细胞中的表达;运用RT-PCR、Western blot法检测靶向siRNA干扰HeLa细胞内源FNBP1的表达情况,并于完全沉默和表达恢复2个时相点检测HeLa细胞在细胞形态、细胞周期等方面的变化。结果 FNBP1在HeLa细胞中稳定表达;FNBP1表达沉默后,HeLa细胞形态发生纤维状转变;FNBP1表达恢复后,HeLa细胞形态恢复至上皮状;FNBP1表达沉默后,干扰组处于S期的细胞为30.36%,较正常组(25.45%)明显增多($P<0.05$);而G₂期干扰组细胞比例(9.28%)低于正常组(11.88%, $P<0.05$);HeLa细胞周期在S期出现阻滞。结论 FNBP1作为关键调控分子,为HeLa细胞的形态建成及维持所必需;FNBP1可能参与HeLa细胞周期调控相关过程。

Abstract: Objective To investigate the role of formin-binding protein 1 (FNBP1) in the morphology control and growth regulation in HeLa cells. Methods The expression of FNBP1 at mRNA and

导航/NAVIGATE

[本期目录/Table of Contents](#)

[下一篇/Next Article](#)

[上一篇/Previous Article](#)

工具/TOOLS

[引用本文的文章/References](#)

[下载 PDF/Download PDF\(1152KB\)](#)

[立即打印本文/Print Now](#)

[查看/发表评论/Comments](#)

[导出](#)

统计/STATISTICS

[摘要浏览/Viewed](#) 94

[全文下载/Downloads](#) 45

[评论/Comments](#)

[RSS](#) [XML](#)

protein levels in HeLa cells was observed by RT-PCR and Western blotting respectively. After si-FNBP1 vector was transfected into HeLa cells, the expression of FNBP1 was detected after 96 (total silence) and 192 h (expression restored) by RT-PCR and Western blotting. The biological effects after silence of endogenetic FNBP1 in morphology and cell cycle were observed by HE stain and flow cytometry. Results FNBP1 was expressed steadily in HeLa cells. After silence of endogenetic FNBP1, the cellular morphology of HeLa cells changed into branched fibrous shape, and then restored to the normal shape as epithelial cells. Silence of FNBP1 resulted in 30.36% cells arrested in S phase, significantly increased compared with those in the normal group (25.45%, $P<0.05$), while those in G_2 stage (9.28%) were lower than the normal group (11.88%, $P<0.05$). These changes were recovered when FNBP1 was restored to express. Conclusion FNBP1 plays an important role in the morphology control in HeLa cells, and also participates in the cell growth regulation.

参考文献/REFERENCES:

李鑫,温泉,周云飞,等. FNBP1参与HeLa细胞的形态控制与生长调控[J].第三军医大学学报,2013,35(19):2046-2050.

相似文献/REFERENCES:

[1]石孟琼,刘雄,周继刚,等.南赤廴提取物诱导宫颈癌HeLa细胞凋亡及作用机制研究[J].第三军医大学学报,2012,34(18):1844.

Shi Mengqiong,Liu Xiong,Zhou Jigang,et al.Apoptosis of cervix cancer HeLa cells induced by Thldiantha nudiflora HemsI extract[J].J Third Mil Med Univ,2012,34(19):1844.

[2]曾建华,钟玲,徐波.地塞米松对宫颈癌移植瘤生长及凋亡的影响[J].第三军医大学学报,2007,29(20):1985.

ZENG Jian-hua,ZHONG Ling,XU Bo.Effect of Dexamethasone on tumor volume and apoptosis of transplanted HeLa cells in mice[J].J Third Mil Med Univ,2007,29(19):1985.

[3]赖国旗,邱宗荫,向廷秀,等.肿瘤坏死因子相关凋亡诱导配体诱导HeLa细胞凋亡的差异蛋白质组分析[J].第三军