[1]王志,张艺,黄亚琴,等.干性基因Nanog在膀胱癌组织中的表达及其对膀胱癌细胞增殖与耐药的作用[J].第三军医大学学报,2014,36(07):655-658.

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干性基因Nanog在膀胱癌组织中的表达及其对膀胱癌细胞增殖与

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《第三军医大学学报》[ISSN:1000-5404/CN:51-1095/R] 卷: 36 期数: 2014年第07期 页码: 655-658 栏目: 论著 出版日期: 2014-04-15

Title: Expression of Nanog in bladder cancer and its role in proliferation and drug resistance of bladder cancer cells

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关键词: Nanog; 膀胱癌; 增殖; 顺铂; 5637

Keywords: Nanog; bladder cancer; proliferation; cisplatin; 5637 cells

分类号: R394.2; R730.23; R737.14

文献标志码: A

摘要: 目的 探讨胚胎干细胞关键转录因子Nanog在膀胱癌组织中的表达及在膀胱癌5637细胞中的作用。 方法 采用免疫组化方法检测Nanog蛋白在46例膀胱癌组织中的表达。应用慢病毒载体上调5637细胞中Nanog的表达，通过克隆形成实验检测细胞增殖，通过MTT法检测细胞对化疗药物顺铂的敏感性。 结果 膀胱癌组织中Nanog的阳性率为50%，且其表达与组织的病理分级呈正相关，相关系数为0.989（P<0.05）；Real-time PCR和Western blot结果表明感染慢病毒LV-Nanog的5637细胞株中Nanog mRNA和蛋白的表达明显高于感染慢病毒LV-Con的对照组细胞株。5637-C和5637-Nanog的克隆形成率分别为(4.6±0.9)%和(9.0±1.0)%，显示过表达Nanog的5637细胞克隆形成率上升（P<0.01）。以5、10、20、40 μmol/L 顺铂处理细胞72 h，对照组5637-C的存活率分别为（64.5±4.9）%、（53.1±4.6）%、（43.4±3.9）%和（21.0±2.7）%，5637-Nanog的存活率分别为（80.9±5.6）%、（68.5±4.2）%、（47.9±5.1）%和（25.2±4.2）%，在浓度为5 μmol/L和10 μmol/L时5637-Nanog对顺铂的敏感性降低。 结论 Nanog的表达增高与膀胱癌病理分级相关，Nanog基因的表达升高能增强膀胱癌细胞的增殖能力，降低对顺铂化疗药物的敏感性。

Abstract: Objective To determine the expression of embryonic stem cells key transcription factor Nanog in bladder cancer tissues and its role in human bladder cancer cell line 5637. Methods Immunohistochemical assay were performed to detect the expression of Nanog gene in 46 tissue samples of bladder cancer. Nanog was over-expressed through lentivirus vector LV-Nanog in 5637 cells. Plate colony formation assay and MTT assay were used to evaluate the effects of Nanog over-expression on the proliferation and chemo-sensitivity in 5637 cells. Results The positive rate of Nanog was 50% in bladder cancer tissues, and increased expression of Nanog in bladder cancer was significantly associated with pathological grade (correlation coefficient=0.989, P<0.05). Real-time PCR and Western blotting showed that the Nanog expression was obviously higher in the 5637 cells infected with LV-Nanog than those infected with LV-Con lentivirus. The colony formation rate of 5637-C cells and 5637-Nanog cells was (4.6±0.9)% and (9.0±1.0)%, respectively, indicating that over-expression Nanog can increase colony formation rate in 5637 cells (P<0.01). After cisplatin treatment at 5, 10, 20 and 40 μmol/L for 72 h, the

survival rate of 5637-C cells was (64.5±4.9)%, (53.1±4.6)%, (43.4±3.9)% and (21.0±2.7)% respectively, while the 5637-Nanog cells was (80.9±5.6)%, (68.5±4.2)%, (47.9±5.1)% and (25.2±4.2)%, respectively. The chemo-sensitivity assay showed exogenous Nanog expression was significantly decreased the chemo-sensitivity of 5637 cells to cisplatin (5 and 10 μmol/L) compared with the control cells.

Conclusion Nanog protein expression is significantly correlated with the histological grade. Over-expression of Nanog increases the proliferation and decreases the cisplatin sensitivity in 5637 cells.

参考文献/REFERENCES:

王志，张艺，黄亚琴，等. 干性基因Nanog在膀胱癌组织中的表达及其对膀胱癌细胞增殖与耐药的作用[J].第三军医大学学报,2014,36(7):655-658.

相似文献/REFERENCES:

[1]李雪梅,季惠翔,李珍燕,等.早期应用一件式造口袋处理根治性膀胱全切患者术后尿外渗[J].第三军医大学学报,2012,34(18):1870.
Li Xuemei,Ji Huixiang,Li Zhenyan,et al.Ostomy bags in management of perioperative urine leakage in bladder cancer patients after radical cystectomy: a report of 97 cases[J].J Third Mil Med Univ,2012,34(07):1870.

[2]高娟,康炜,陈俊霞,等.siRNA沉默整合素连接激酶对人膀胱癌细胞凋亡的影响[J].第三军医大学学报,2012,34(21):2154.
Gao Juan,Kang Wei,Chen Junxia,et al.Integrin-linked kinase siRNA induces apoptosis in human bladder cancer BIU-87 cells[J].J Third Mil Med Univ,2012,34(07):2154.

[3]杨家荣,陈磊,杨慧,等.姜黄素对膀胱癌细胞增殖及凋亡的影响[J].第三军医大学学报,2007,29(24):2350.
YANG Jia-rong,CHEN Lei,YANG Hui,et al.Curcumin inhibits proliferation of cell strain of bladder carcinoma and induces its apoptosis[J].J Third Mil Med Univ,2007,29(07):2350.

[4]杨登科,靳凤烁.分枝杆菌Ag85B/IL-2融合蛋白对小鼠膀胱癌抑癌效应的研究[J].第三军医大学学报,2007,29(18):1772.
YANG Deng-ke,JIN Feng-shuo.Anti-tumor effect of mycobacterium Ag85B/IL-2 fusion protein on syngeneic mice bearing bladder cancer[J].J Third Mil Med Univ,2007,29(07):1772.

[5]于冬梅,阎晓初,郭德玉,等.VEGF和nm23蛋白在膀胱移行细胞癌中表达及临床意义[J].第三军医大学学报,2006,28(21):2180.

[6]李铭,梁文杰,曾亚平,等.蝙蝠葛碱对人膀胱癌T-24细胞株生长增殖的抑制作用[J].第三军医大学学报,2006,28(18):1860.

[7]胡兴平,王豪,张力,等.Studer回肠代膀胱术23例[J].第三军医大学学报,2006,28(06):583.

[8]罗顺文,叶钢,张荣贵,等.全反式维甲酸增强HSV-TK/GCV对BIU-87细胞旁观者效应的观察[J].第三军医大学学报,2005,27(05):385.

[9]郭永灿,罗春丽,颜令,等.PLCε shRNA质粒构建及功能鉴定[J].第三军医大学学报,2009,31(17):1657.
GUO Yong-can,LUO Chun-li,YAN Ling,et al.Construction and functional identification of phospholipase C epsilon shRNA expression vector in bladder cancer cell line T24[J].J Third Mil Med Univ,2009,31(07):1657.

[10]刘洁,庄乾元,张维怡.葡萄籽提取物原花青素对人膀胱癌BIU87细胞周期的影响及其机制研究[J].第三军医大学学报,2009,31(17):1661.
LIU Jie,ZHUANG Qian-yuan,ZHANG Wei-yi.Grape seed procyanidin extract arrests cell cycle of human bladder cancer cell line BIU87[J].J Third Mil Med Univ,2009,31(07):1661.

更新日期/Last Update: 2014-04-03