肿瘤防治研究 2011, Vol. 38 Issue (7): 770-773 DOI: 10.3971/j.issn.1000-8578.2011.07.011

转染和干扰Runx2基因对K7M2细胞的影响

吴丹凯[1],赵燕颖[2],杨泽成[3],吕佳音[1],张舵舵[4],高忠礼[1]

1.130033长春，吉林大学中日联谊医院骨外科；2.吉林大学第四医院消化内科；3.吉林大学中日联谊医院普外科，4.肿瘤科

Effect of Transfection Runx2 and siRNA Runx2 on K7M2

WU Dan-kai[1] , ZHAO Yan-ying[2], YANG Ze-cheng[3], LV Jia-yin[1]， ZHANG Duo-duo[4], GAO Zhong-li[1]

1.Department of Orthopedics, China-Japan Union Hospital, Jilin University, Changchun 130033, China;2.Department of Internal Medicine, The Fourth Hospital of Jilin Unviersity；3.Department of Surgery, China-Japan Union Hospital of Jilin University,4.Department of Oncology

- 摘要
- 参考文献
- 相关文章

全文: PDF (938 KB) HTML (0 KB) 输出: BibTeX | EndNote (RIS) 背景资料

摘要 目的探讨干扰和转染Runx2基因后对K7M2骨肉瘤细胞体外生物学活性的影响。方法分别将阴性对照质粒、携带Runx2和siRNA Runx2的质粒转染到K7M2细胞中。应用Western blot检测转染和干扰Runx2基因对其蛋白表达的影响，并检测细胞体外的增殖能力(MTT)、侵袭性、迁移性和黏附性的变化，并应用流式细胞仪（FCM）检测相应细胞的凋亡率和细胞周期分布的变化。结果与空白对照组比，转染Runx2和siRunx2组的K7M2细胞中Runx2蛋白表达分别明显增强和减弱，而阴性对照质粒组没有明显改变。转染siRunx2组的细胞，MTT结果显示增殖能力明显下降，迁移性、侵袭性和增殖指数（PI）也明显下降，与空白对照组比差异有统计学意义（$P<0.05$），黏附性和凋亡率却没有明显变化。转染Runx2组K7M2的细胞增殖能力、迁移性、侵袭性和PI明显增高，与空白对照组比差异有统计学意义（$P<0.05$），黏附性和凋亡率没有明显变化。阴性对照组和空白对照组比上述指标没有明显改变。结论Runx2可以促进K7M2细胞增殖，增强细胞的侵袭、迁移能力，其机制可能是和改变细胞周期的分布，使细胞更快的进入G_2/M期有关。

关键词： Runx2 K7M2 骨肉瘤 增殖 siRNA

Abstract:

ObjectiveTo investigate the effect of transfection Runx2 or siRNA Runx2 gene on the in vitro bio-characteristics of K7M2 osteosarcoma cell .MethodsScrambled plasmide，plasmids carrying Runx2 and siRNA Runx2 were transfected into K7M2 cells respectively. Runx2 protein expression after transfecting was detected with Western blot. The proliferation capacity, invasion,migration and adhesiveness were observed. Meanwhile,the apoptosis rate and cell cycle distribution of K7M2 cells in each group were detected using flow cytometry.ResultsCompared with control,Runx2 protein expression of K7M2 cells in the transfected or intervened Runx2 gene group were increased and reduced respectively. The proliferation capacity,migration,invasion and proliferative index in group transfected by siRNA Runx2 was decreased in comparison with control group, and the difference showed statistical deviation.However,the group transfected Runx2 showed opposite characteristics compared with control group. Neither adhesiveness nor apoptosis rate had obvious change in all three groups.There was no obvious change between the scrambled group and control group.ConclusionRunx2 can increase proliferation capacity, invasion,migration of K7M2.The potential mechanism is that it can change the cell cycle distribution,thus make cell transits to G_2/M stage more quickly.

Key words: Runx2 K7M2 Osteosarcoma Proliferation siRNA

收稿日期: 2009-10-30;

服务
把本文推荐给朋友
加入我的书架
加入引用管理器
E-mail Alert
RSS

作者相关文章
吴丹凯
赵燕颖
杨泽成
吕佳音
张舵舵
高忠礼

引用本文:

吴丹凯,赵燕颖,杨泽成等. 转染和干扰Runx2基因对K7M2细胞的影响[J]. 肿瘤防治研究, 2011, 38(7): 770-773.

WU Dan-kai,ZHAO Yan-ying,YANG Ze-cheng et al. Effect of Transfection Runx2 and siRNA Runx2 on K7M2 [J]. CHINA RESEARCH ON PREVENTION AND

TREATMENT, 2011, 38(7): 770-773.

没有本文参考文献

[1] 纪术峰;杨华锋;吴爱国 . PGRMC1参与调控乳腺癌细胞增殖及化疗敏感度的实验[J]. 肿瘤防治研究, 2012, 39(2): 123-126.

[2] 刘安文;蔡婧;张树辉 . MAP4K4对肝癌细胞生物学活性的影响及机制[J]. 肿瘤防治研究, 2012, 39(2): 140-145.

[3] 王炜;王志彬;高玉环 . 国产雷帕霉素对人淋巴瘤细胞Raji增殖的影响[J]. 肿瘤防治研究, 2012, 39(2): 157-160.

[4] 牛国晓;李洁. 半枝莲抗肿瘤机制研究进展[J]. 肿瘤防治研究, 2012, 39(2): 231-233.

[5] 周防震;张晓元;孙奋勇;郭勇 . 二氢杨梅素对人乳腺癌细胞MDA-MB-231的体外抗增殖作用[J]. 肿瘤防治研究, 2012, 39(1): 95-97.

[6] 彭兴春;余明华;骆志国;崔培林 . 褪黑素对肺癌A549细胞诱导的血管内皮细胞增殖的影响[J]. 肿瘤防治研究, 2011, 38(9): 1002-1005.

[7] 吴月兵;范玉华;于丁;夏和顺 . 少年三原发恶性肿瘤1例报告[J]. 肿瘤防治研究, 2011, 38(9): 1096-1096.

[8] 陈正言. 食管黏膜癌变过程中组织细胞增殖、凋亡和p53表达的变化 [J]. 肿瘤防治研究, 2011, 38(8): 918-920.

[9] 邓超;王磊;丁浩然. E-钙黏素在胶质瘤增殖与侵袭中的作用 [J]. 肿瘤防治研究, 2011, 38(8): 957-959.

[10] 何伶芳;高倩颖;侯亚义;. 灵芝孢子油对人胃腺癌细胞BGC823的抑制作用[J]. 肿瘤防治研究, 2011, 38(7): 761-763.

[11] 董林;葛瑞民;祁楠;沈丽. shRNA腺病毒介导的JNK1 RNAi抑制U87MG人胶质瘤细胞的增殖[J]. 肿瘤防治研究, 2011, 38(7): 767-769.

[12] 杨梅松竹;陈罡;党裔武;罗殿中 . DcR3对乳腺癌细胞凋亡的影响及其在乳腺癌血清中的表达[J]. 肿瘤防治研究, 2011, 38(7): 784-787.

[13] 尹雅玲;李鹏;王国红;王亚莉;李东亮 . 孕酮对白血病细胞的抑制增殖和诱导分化作用[J]. 肿瘤防治研究, 2011, 38(6): 632-635.

[14] 刘媛媛;贾秀红;李建厂;韩兆东;谢绍华 . Apolloon反义寡核苷酸对K562细胞增殖和凋亡的影响 [J]. 肿瘤防治研究, 2011, 38(6): 636-638.

[15] 王政华;牟平;刘晓梅;朱志图 . 靶向Bcl-xL基因siRNA在前列腺癌细胞增殖和凋亡中的作用[J]. 肿瘤防治研究, 2011, 38(5): 509-511.