[1]幸宇,齐进,邓世雄,等.沉默整合素连接激酶基因对TCA8113舌癌细胞移植瘤生长的影响[J].第三军医大学学报,2014,36(19):1996-2000.

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沉默整合素连接激酶基因对TCA8113舌癌细胞移植瘤生长的影响

分享到：

《第三军医大学学报》[ISSN:1000-5404/CN:51-1095/R] 卷: 36卷 期数: 2014年第19期 页码: 1996-2000 栏目: 论著 出版日期: 2014-10-15

Title: **Effect of integrin-linked kinase silencing on xenograft tumor growth of human tongue cancer cell line TCA8113 in nude mice**

作者: 幸宇; 齐进; 邓世雄; 陈俊霞

重庆医科大学基础医学院：法医生物信息学研究室，细胞生物学及遗传学教研室，分子医学与肿瘤研究中心；重庆医科大学附属口腔医院牙体牙髓科

Author(s): Xing Yu; Qi Jin; Deng Shixiong; Chen Junxia

Laboratory of Forensic Medicine and Biomedical Information, Department of Cell Biology and Genetics, Molecular Medicine and Cancer Research Center, Collage of Basic Medical Science, Chongqing Medical University, Chongqing, 400016; Department of Endodonitics, the Stomatological Hospital of Chongqing Medical University, Chongqing, 400016, China

关键词: 整合素连接激酶; 人舌鳞癌细胞; 移植瘤生长; 微血管

Keywords: ; integrin-linked kinase; human tongue squamous cancer cells; xenograft tumor growth; micro-blood vessel

分类号: R394.3; R730.23; R739.86

文献标志码: A

摘要: 目的 研究沉默TCA8113舌癌细胞整合素连接激酶（integrin-linked kinase，ILK）基因的表达，对其下游底物Akt和GSK3β磷酸化状态及对移植瘤生长和自发性转移的影响。 方法 通过Lipofectamine 2000介导将特异性siILK表达载体和无同源性的对照载体，稳定转染人舌鳞癌TCA8113细胞，分为TCA8113组、TCA8113 vector组和TCA8113 siILK组，将3组细胞分别注入裸鼠皮下构建移植瘤模型，5周后检测瘤质量，对裸鼠肺及瘤组织形态学行常规病理学检查，使用免疫荧光技术检测体外和体内癌细胞p-Akt和p-GSK3β等的表达，并观察瘤组织内血管生成情况。 结果 TCA8113组、TCA8113 vector组肺组织均发生自发性转移瘤，TCA8113 siILK组肺组织未发现自发性转移瘤；TCA8113 siILK组移植瘤细胞形态较其他2组体积减小，核分裂象较少，核浆比例缩小；TCA8113 siILK组在体内和体外实验中的p-Akt和p-GSK3β表达较其他2组均明显下降（$P<0.05$）；TCA8113 siILK组移植瘤质量较其他2组显著降低（$P<0.05$），抑瘤率分别为84%和92%；TCA8113 siILK组移植瘤血管生成

较其他2组也明显减少（*P*<0.05）。 结论 沉默TCA8113舌癌细胞ILK表达可抑制其下游信号传导分子Akt和GSK3β的磷酸化，并抑制移植瘤血管生成，从而抑制移植瘤的生长。

Abstract: Objective To determine the effects of silencing integrin-linked kinase (ILK) in human tongue cancer TCA8113 cells on the expression of its downstream signal molecules p-Akt and p-GSK3β and on the growth and spontaneous metastasis of tumor xenografts. Methods Target cells were constructed by transfecting specific siILK plasmid and a non-homologous vector negative control into TCA8113 cells, TCA8113 vector and TCA8113 siILK cells, respectively. Three groups were injected separately into nude mice subcutaneously to construct xenograft tumor model. Nude mice were sacrificed in 5 weeks later. Weight of the xenograft tumors was measured in these nude mice. Tumors and lungs underwent routine pathological examination. Changes in the expression of p-Akt, p-GSK3β and micro-blood vessels in tumor tissue were detected by immunofluorescence assay and laser scanning confocal microscopy. Results Spontaneous lung metastasis tumors were found both in TCA8113 and TCA8113 vector group, while there was no such finding in the lungs of TCA8113 siILK group. Xenograft tumor cells in TCA8113 siILK group were smaller and had less mitotic figures and karyoplasmic scale compared to the other 2 groups. The expression of p-Akt and p-GSK3β *in vitro* and *in vivo* were obviously inhibited in TCA8113 siILK group compared with the other groups (*P*<0.05). The mean tumor mass was obviously smaller in TCA8113 siILK group than the TCA8113 and TCA8113 vector groups with a tumor inhibitory rate of 84% and 92%, respectively (*P*<0.05). Micro-blood vessel formation was also reduced in TCA8113 siILK group compared to the other groups (*P*<0.05). Conclusion Silencing ILK inhibits the growth of TCA8113 human tongue cancer tumor xenograft through inhibiting the expressions of p-Akt and p-GSK3β as well as blood vessel formation.

参考文献/References:

幸宇, 齐进, 邓世雄, 等. 沉默整合素连接激酶基因对TCA8113舌癌细胞移植瘤生长的影响[J].第三军医大学学报,2014,36(19):1996-2000.

相似文献/References:

[1]幸宇,邓世雄,陈俊霞.沉默整合素连接激酶基因抑制TCA8113舌癌细胞生长和侵袭[J].第三军医大学学报,2013,35(15):1552.

Xing Yu,Deng Shixiong,Chen Junxia.Silencing integrin-linked kinase inhibits growth and metastasis in human tongue cancer TCA8113 cells[J].J Third Mil Med Univ,2013,35(19):1552.

更新日期/Last Update: 2014-09-29