[1]祝冰晶,王宇亮,罗虎,等.CA916798基因通过PI3K/AKT通路参与肺癌顺铂耐药[J].第三军医大学学报,2013,35(07):618-621.
Zhu Bingjing,Wang Yuliang,Luo Hu,et al.CA916798 gene is involved in cisplatin resistance in human lung cancer through PI3K/AKT pathway[J].J Third Mil Med Univ,2013,35(07):618-621.

点击复制

CA916798基因通过PI3K/AKT通路参与肺癌顺铂耐

《第三军医大学学报》[ISSN:1000-5404/CN:51-1095/R] 卷: 35 期数: 2013年第07期 页码: 618-621 栏目: 论著 出版日期: 2013-04-15

Title: CA916798 gene is involved in cisplatin resistance in human lung cancer through PI3K/AKT pathway

作者: 祝冰晶; 王宇亮; 罗虎; 周向东
第三军医大学西南医院呼吸内科

Author(s): Zhu Bingjing; Wang Yuliang; Luo Hu; Zhou Xiangdong
Department of Respiratory Diseases, Southwest Hospital, Third Military Medical University, Chongqing, 400038, China

关键词: CA916798; 耐药; 顺铂; PI3K/AKT

Keywords: CA916798; drug resistance; cisplatin; PI3K/AKT

分类号: R73-361; R734.2; R979.11

文献标志码: A

摘要: 目的 在前期体外研究的基础上，建立裸鼠移植瘤模型，观察阻断PI3K/AKT通路对肺腺癌细胞A549及多药耐药肺腺癌细胞A549/CDDP内CA916798基因mRNA表达的影响。 方法 建立A549、A549/CDDP裸鼠移植瘤模型，以LY294002作用A549组和A549/CDDP组后，比较各组移植瘤生长情况，HE染色观察组织结构变化，实时荧光定量PCR检测肿瘤细胞中CA916798基因mRNA 的表达水平。 结果 成功建立裸鼠移植瘤模型，以LY294002分别阻断A549、A549/CDDP组裸鼠移植瘤细胞的PI3K/AKT通路后，移植瘤体积明显缩小，CA916798基因的表达明显下调（$P<0.05$）。 结论 抑制PI3K/AKT通路能够明显抑制肺腺癌细胞A549及A549/CDDP的恶性增殖。

Abstract: Objective To determine the effect of blocking the PI3K/AKT pathway on the expression of CA916798 gene in nude mouse transplanted tumor of human lung adenocarcinoma cell line A549 and the multidrug-resistant cell line A549/CDDP. Methods A total of 20 nude mice were randomly and equally divided into 4 groups, that is, A549, A549/CDDP, A549+LY294002, and A549/CDDP+LY294002 groups. The animal model with A549 cells and A549/CDDP cells transplanted tumor was established in these corresponding nude mice. LY294002 of 25 mg/kg was treated in the mice of the 2 later groups. The size of tumor was measured, and morphology of the mass was observed after HE staining. Real-time fluorescent quantitative PCR was performed to detect CA916798 mRNA expression in the tumor. Results The model of transplanted tumor was

established in nude mice successfully. Blocking PI3K/AKT pathway with LY294002 resulted in significantly decreased expression of CA916798 at mRNA level (P<0.05), and reduced tumor volume. Conclusion Inhibition of PI3K/AKT pathway significantly inhibits the malignant proliferation in lung adenocarcinoma cell A549 and multidrug-resistant cell line A549/CDDP.

参考文献/REFERENCES:

祝冰晶，王宇亮，罗虎，等. CA916798基因通过PI3K/AKT通路参与肺癌顺铂耐药[J].第三军医大学学报,2013,35(7):618-621.

相似文献/REFERENCES:

[1]吴国明,钱桂生.晚期非小细胞肺癌EGFR-TKIs治疗的耐药机制研究——挑战中蕴含新的曙光[J].第三军医大学学报,2012,34(20):2031.
Wu Guoming,Qian Guisheng.Drug resistance of epidermal growth factor receptor-tyrosine kinase inhibitors in treatment of advanced non-small cell lung cancer—A new dawn in challenge[J].J Third Mil Med Univ,2012,34(07):2031.
[2]周艳,姜军,张毅,等.雌激素受体β及其剪切变异体表达与雌激素受体阻滞剂治疗耐药的关系[J].第三军医大学学报,2007,29(20):1999.
ZHOU Yan,JIANG Jun,ZHANG Yi,et al.Relationship of estrogen receptor-beta and its isoform expressions with tamoxifen resistance in human breast cancer[J].J Third Mil Med Univ,2007,29(07):1999.
[3]向征,张才全,汤为学.TSG101-siRNA对肝癌耐药细胞株QGY/CDDP的逆转作用[J].第三军医大学学报,2008,30(02):170.
XIANG Zheng,ZHANG Cai-quan,TANG Wei-xue.Effect of tumor susceptibitity gene 101-siRNA eukaryotic expression vector and cisplatin on proliferation of QGY/CDDP[J].J Third Mil Med Univ,2008,30(07):170.
[4]王海晶,杨和平,周向东.RNA干扰CA916798基因真核表达载体的构建与鉴定[J].第三军医大学学报,2008,30(01):23.
WANG Hai-jing,YANG He-ping,ZHOU Xiang-dong.Construction and identification of CA916798 eukaryotic expression vector for RNA interference[J].J Third Mil Med Univ,2008,30(07):23.
[5]林辉,刘洁,陈林,等.重庆市2003-2006年肺结核病耐药情况分析[J].第三军医大学学报,2008,30(12):1183.
LIN Hui,LIU Jie,CHEN Lin,et al.Drug resistance of tuberculosis from 2003 to 2006 in Chongqing[J].J Third Mil Med Univ,2008,30(07):1183.
[6]陈幸华,张诚,张曦,等.人淋巴细胞白血病细胞黏附介导耐药模型构建初探[J].第三军医大学学报,2006,28(23):2336.
[7]房殿亮,陈伟庆.p15基因干扰对肝癌耐药的影响[J].第三军医大学学报,2011,33(16):1695.
Fang Dianliang,Chen Weiqing.Influence of siRNA-mediated p15 silencing on CDDP resistance in drug-resistant human hepatoma cell line HepG2/CDDP/2.0[J].J Third Mil Med Univ,2011,33(07):1695.
[8]张辉,左连富,王晓玲,等.人卵巢癌顺铂耐药细胞SCID小鼠腹腔移植模型的建立及其生物学特性的实验研究[J].第三军医大学学报,2005,27(09):874.
[9]何建明,江恒,陈克力,等.结肠癌HT29多细胞球的培养及其结构与生物学特性的观察[J].第三军医大学学报,2010,32(16):1691.
He Jianming,Jiang Heng,Chen Keli,et al.Structure and biological features of multicellular spheroids of colon cancer HT29 cells[J].J Third Mil Med Univ,2010,32(07):1691.
[10]舒丹,曾飚,何华,等.hMLH1基因对人卵巢癌耐药细胞株顺铂敏感性的研究[J].第三军医大学学报,2010,32(23):2527.
Shu Dan,Zeng Biao,He Hua,et al.Effect of hMLH1 gene on cisplatin sensitivity of drug-resistant human ovarian cancer cell line[J].J Third Mil Med Univ,2010,32(07):2527.

更新日期/Last Update: 2013-04-07