238~242.抗ATPase F1α抗体MAb3D5AB1对荷A549肺腺癌小鼠的抑制作用[J].周俊平,楼国良,李敏玉,朱海沫,胡宗涛,芦东徽.中国肿瘤生物治疗杂志,2009,16(3)

抗ATPase F1α抗体MAb3D5AB1对荷A549肺腺癌小鼠的抑制作用

点此下载全文

周俊平 楼国良 李敏玉 朱海沫 胡宗涛 芦东徽

解放军第105医院 肿瘤中心，安徽 合肥 230031;第二军医大学 附属长海医院 特诊科，上海 200433;第二军医大学 附属长海医院 特诊科，上海 200433;第二军医大学 附属长海医院 特诊科，上海 200433;解放军第105医院 肿瘤中心，安徽 合肥 230031;解放军第105医院 肿瘤中心，安徽 合肥 230031

基金项目：全军医学科研“十一五计划”资助项目（No.1MA159）

DOI：10.3872/j.issn.1007-385X.2009.3.006

摘要：

目的: 探讨一种新型抗ATPase F1α抗体，人血管抑制和肿瘤转移相关蛋白（human angiostatin interacting and tumor metastasis involving protein，HAI TMIP）抗体MAb3D5AB1（简称GX）对A549肺腺癌小鼠移植瘤的抑制作用。 方法：在C57BL/6小鼠右前腋窝接种A549肺腺癌细胞，制备小鼠荷瘤模型，32只荷瘤小鼠随机分为对照组（无任何处理）及A、B、C治疗组（分别腹腔注射125、250、500 ng/ml GX）。观察各组移植瘤小鼠肿瘤体积、生长延迟时间（tumor growth delay, TGD）及小鼠生存期。免疫组织化学法检测瘤组织内微血管密度。TUNEL法检测肿瘤细胞凋亡。结果：成功建立了荷A549肺癌小鼠模型，治疗组小鼠移植瘤的体积明显减小（ P <0.05）、TGD随GX剂量增加而显著延长（ P <0.01）、瘤组织内微血管密度明显减少（ P <0.05），TUNEL法检测发现各治疗组瘤细胞凋亡率均显著高于对照组（均 P <0.01）。结论：GX可以抑制肿瘤新生血管生成，促进肿瘤细胞凋亡，使A549肺腺癌小鼠移植瘤生长减慢，并延长小鼠生存期。

关键词：肺腺癌 抗ATPase F1α抗体 MAb3D5AB1 微血管密度 凋亡

Inhibitory effect of anti ATPase F1α antibody against lung adenocarcinoma A549 cells in mice

Download Fulltext

ZHOU Jun ping LOU Guo liang LI Min yu ZHU Hai mo HU Zong tao LU Dong hui

Oncology Center, No. 105 Hospital of PLA, Hefei 230031, Anhui, China;Department of Special Clinic, Changhai Hospital, Second Military Medical University, Shanghai 200433, China;Department of Special Clinic, Changhai Hospital, Second Military Medical University, Shanghai 200433, China;Department of Special Clinic, Changhai Hospital, Second Military Medical University, Shanghai 200433, China;Oncology Center, No. 105 Hospital of PLA, Hefei 230031, Anhui, China;Oncology Center, No. 105 Hospital of PLA, Hefei 230031, Anhui, China

Fund Project:Supported by the Medical Science Research “11th Five Year Plan” of PLA（No.1MA159）

Abstract:

Objective:To study the inhibitory effect of a new anti ATPase F1α antibody, anti human angiostatin interacting and tumor metastasis involving protein (HAI TMIP) antibody (MAb3D5AB1,GX), against lung adenocarcinoma cell line A549 in mouse tumor model. Methods: The tumor bearing mouse model was established by injecting A549 cells into the right infra axillary dermis of C57BL/6 mice. Thirty two mice were evenly randomized into 4 groups. The control group was untreated; group A, B, and C were treated with different concentrations of GX (125, 250, 500 ng/ml, respectively). The tumor volume, tumor growth delay (TGD) and survival time of mice was observed in all groups. Microvascular density (MVD) of the tumors was determined by immunocytochemistry and apoptosis of tumor cells was examined by TUNEL assay. Results:Human lung adenocarcinoma A549 implanted animal model was successfully established in C57BL/6 mice. Tumor volumes in all GX treated mice were smaller than that in control mice (P <0.05). TGD in all GX treated mice was prolonged as the concentration of GX increasing. After treatment with GX, the MVD in tumors was significantly decreased (P <0.05) and survival time was increased (P <0.05) compared with those in control group. TUNEL results revealed that apoptosis rate of tumor cells of GX treated mice was higher than that in control mice (P <0 01) . Conclusion: GX can inhibit angiogenesis in implanted A549 tumors and promote apoptosis of A549 cells, thus inhibiting tumor growth and prolonging survival of tumor bearing mice.

Keywords:lung adenocarcinoma ATPase F1α antibody MAb3D5AB1 microvascular density apoptosis

查看全文 查看/发表评论 下载PDF阅读器