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mda-7/IL-24对裸鼠肝癌移植瘤的生长抑制和促凋亡作用 点此下载全文

张小峰 殷正丰 艾 莉 康晓燕 徐 文 李 瑾 施乐华

第二军医大学 东方肝胆外科医院 综合治疗科, 上海 200438;第二军医大学 东方肝胆外科医院 综合治疗科,分子肿瘤实验室，上海 200438;第二军医大学 东方肝胆外科医院 综合治疗科, 上海 200438;第二军医大学 东方肝胆外科医院 综合治疗科,分子肿瘤实验室，上海 200438;第二军医大学 东方肝胆外科医院 综合治疗科,分子肿瘤实验室，上海 200438;第二军医大学 东方肝胆外科医院 综合治疗科,分子肿瘤实验室，上海 200438;第二军医大学 东方肝胆外科医院 综合治疗科, 上海 200438

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摘要：

目的:探讨mda 7/IL 24对裸鼠肝癌细胞移植瘤的生长抑制和促凋亡作用及其相关机制。方法：构建携带mda 7基因的重组腺病毒载体Ad mda 7。以HepG2细胞皮下接种建立裸鼠肝癌移植瘤模型，采用瘤内单点注射的方法分别给予Ad GFP、Ad mda 7和ALLN（毒胡萝卜素，N Ac L L norleucinal）+Ad mda 7，观察瘤质量和瘤体积的变化，通过免疫组化和TUNEL法检测肿瘤组织内凋亡相关蛋白caspase 3活化、细胞增殖相关抗原ki 67和微血管密度、细胞凋亡率，并通过Western blotting检测caspase 12、caspase 3和Bax的表达。结果： Ad.mda 7治疗组和Ad.GFP对照组肿瘤体积分别为（312.6±30.2）mm 3和（520.6±30.0）mm 3（ P <0.01），两组的肿瘤质量分别为（0.321±0.031）g和（0.534±0.030）g（ P <0 01）；Ad.mda 7治疗后瘤细胞的凋亡率显著高于对照组（ P <0.01）；Ad.mda 7可抑制肝癌组织ki 67表达、微血管密度和促进caspase 3的表达。 经 ALLN 处理的裸鼠，明显抑制Ad.mda 7对肝癌细胞的致凋亡作用（ P <0.05），并且下调Ad.mda 7诱导的caspase 12、caspase 3和Bax的表达。结论： Ad.mda 7可显著抑制裸鼠肝癌移植瘤的生长和新生血管的形成，并通过内质网应激通路显著诱导肿瘤细胞的凋亡。

关键词：mda-7 IL-24 肝癌 凋亡 caspase

mda-7/IL-24 inhibits proliferation and promotes apoptosis of transplanted hepatocellular cancer cells in nude mice Download Fulltext

ZHANG Xiao feng YIN Zheng feng AI Li KANG Xiao yan XU Wen LI Jin SHI Le hua

Department of Comprehensive Treatment, Second Military Medical University, Shanghai 200438, China;Department of Molecular Oncology, Eastern Hepatobiliary Surgery Hospital, Second Military Medical University, Shanghai 200438, China;Department of Comprehensive Treatment, Second Military Medical University, Shanghai 200438, China;Department of Molecular Oncology, Eastern Hepatobiliary Surgery Hospital, Second Military Medical University, Shanghai 200438, China;Department of Molecular Oncology, Eastern Hepatobiliary Surgery Hospital, Second Military Medical University, Shanghai 200438, China;Department of Molecular Oncology, Eastern Hepatobiliary Surgery Hospital, Second Military Medical University, Shanghai 200438, China;Department of Comprehensive Treatment, Second Military Medical University, Shanghai 200438, China

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Abstract:

Objective: To study the proliferation inhibition and apoptosis promotion effect of mda 7/IL 24 in transplanted hepatocellular cancer cells in nude mice, and to study the related mechanism. Methods: Recombinant vector Ad.mda 7 was constructed. BALB/c nude mice liver cancer model was established by subcutaneous implanting of HepG2 cells. Nude mice were administered with Ad.GFP, Ad.mda 7 or ALLN+Ad.mda 7 via intra tumor single point injection. The changes of tumor size and weight were observed. Activation of caspase 3, apoptosis of cancer cells, cell proliferation associated antigen ki 67 and microvascular density were assessed by immunohistochemistry and TUNEL method. Caspase 12, caspase 3 and Bax expression was examined via Western blotting. Results: The tumor sizes of Ad.mda 7 treated mice and Ad.GFP treated mice were (312.6±30.24) mm 3 vs (520.6±30.00) mm 3 (P <0.05), and the weights were (0.321±0.031) g vs (0.534±0.030) g, respectively (P <0.05). Ad.mda 7 inhibited expression of ki 67 and CD31, and induced activation of caspase 3 in subcutaneous tumor xenografts. ALLN reversed the apoptosis inducing effect of Ad.mda 7 （ P <0.05）, down regulated the expression of caspase 12, caspase 3 and Bax induced by Ad. Mda 7. Conclusion: mda 7/IL 24 can obviously inhibit proliferation and angiogenesis of transplanted hepatocellular cancer cells, and induce apoptosis of hepatocellular cancer cells through activating the endoplasmic reticulum stress pathway.

Keywords:mda-7 IL-24 hepatocellular neoplasms apoptosis caspase

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