肿瘤防治研究
ZHONGLIU FANGZHI YANJIU
Cancer Research on Prevention and Treatment
中华人民共和国卫生部主管
中国抗癌协会系列杂志

肿瘤防治研究 2011, Vol. 38 Issue (5): 495-497 DOI: DOI:10.3971/j.issn.1000-8578.2011.05.003
基础研究

IL-15上调NKG2D表达对CIK细胞杀伤活性的增强效应

梅家转，刘桂举，李瑞君，栗敏，张晓娟

450003 郑州，河南省郑州市人民医院肿瘤内科

Enhancement of Cytotoxicity against IL-15 Up-regulate NKG2D Expression on Cytokine-induced Killer Cells

MEI Jia-zhuan, LIU Gui-ju, LI Rui-jun, LI Min, ZHANG Xiao-juan

Department of Oncology, Zhengzhou People,s Hospital, Zhengzhou 450003, China

全文: PDF (328 KB) HTML (0 KB) 输出: BibTeX | EndNote (RIS) 背景资料

摘要

目的观察IL-15对细胞因子诱导的杀伤细胞(Cytokine-induced killer cells，CIK)NKG2D受体表达及其对食管癌EC9706细胞杀伤活性的影响。方法体外分离外周血单个核细胞，分为两组。对照组：干扰素-γ、白细胞介素-2、CD3单抗诱导培养CIK细胞。IL-15组：加用IL-15培养。流式细胞仪检测细胞免疫表型及CD3+细胞、CD56+细胞表面NKG2D的表达，LDH法测定第14天细胞在效靶比20∶1、30∶1时对EC9706细胞的杀伤活性；效靶比30∶1时，观察NKG2D单抗封闭细胞表面NKG2D分子后对两组细胞杀伤活性的影响。结果随着培养时间的延长，CIK群体细胞及CD56+细胞表面NKG2D表达逐渐增强，IL-15组与对照组相比差异有统计学意义($P<0.05$)；效靶比20∶1、30∶1时，IL-15组细胞对EC9706细胞的杀伤活性均较对照组明显增强，差异均有统计学意义($P<0.05$)；效靶比30∶1时NKG2D单抗封闭CIK细胞表面NKG2D分子后，对照组细胞、IL-15组细胞对EC9706细胞的杀伤活性均较阻断前明显下降，差异均有统计学意义 ($P<0.05$)。结论IL-15上调CIK细胞表面NKG2D分子表达，增强CIK细胞对EC9706细胞的杀伤活性，CIK细胞通过NKG2D发挥作用。

关键词： 关键词：细胞因子诱导的杀伤细胞 NKG2D 食管癌 细胞治疗 IL-15

Abstract： ObjectiveTo analyse the effects of IL-15 on the expression of NKG2D and the cytotoxicity of cytokine-induced killer (CIK) cells against human esophagus carcinoma cell EC9706 in vitro. MethodsPeripheral blood mononuclear cells were isolated from healthy donors then divided into two groups: the control group (cells were cultured in the presence of IFN-γ, anti-CD3 antibody and IL-2) and IL-15 group (cells were cultured in the presence of IFN-γ, anti-CD3 antibody, IL-2 and 10 ng/ml IL-15). Phenotypic characteristics of CIK cells and the expression of NKG2D were analyzed by flow cytometry. After 14 days culture, cytotoxicity of CIK cells against EC9706 cells was measured by using a standard LDH releasing assay. Effector cells were added to target cells at E∶T radios of 20∶1, 30∶1. In blocking experiments, NKG2D monoclonal antibody was added to CIK cells for 15 min before plating at 30∶1 E∶T ratio. ResultsNKG2D molecules were significantly up-regulated during the culture period on CD3+ cells (the CIK cells population) and the CD56+cells. The differences of NKG2D expressions were significant between IL-15 group and the control group ($P<0.05$). Cytotoxicity of CIK cells treated by the IL-15 group was higher than that of the control group, both at 20∶1 E∶T ratios and at 30∶1 E∶T ratios ($P<0.05$). When the NKG2D molecules on CIK cell ular membrance were blocked by the NKG2D monoclonal antibody, the cytolytic activity in the control group cells and IL-15 group cells was significantly inhibited. ConclusionIL-15 up-regulated the expression of NKG2D on CIK cells, which enhanced

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
梅家转
刘桂举
李瑞君
栗敏
张晓娟

the NKG2D mediated cytotoxicity against EC9706 cells.CIK cells played a role through the NKG2D molecules.

Key words： Key words：Cytokine-induced killer cells NKG2D Esophagus Carcinoma Cell therapy IL-15

收稿日期: 2010-09-19;

引用本文:

梅家转,刘桂举,李瑞君等. IL-15上调NKG2D表达对CIK细胞杀伤活性的增强效应 [J]. 肿瘤防治研究, 2011, 38(5): 495-497.

MEI Jia-zhuan,LIU Gui-ju,LI Rui-jun et al. Enhancement of Cytotoxicity against IL-15 Up-regulate NKG2D Expression on Cytokine-induced Killer Cells [J]. CHINA RESEARCH ON PREVENTION AND TREATMENT, 2011, 38(5): 495-497.

没有本文参考文献

[1] 刘丽华;;孟君;张璁;段玉青;王士杰;单保恩 . 运用MALDI-TOF MS方法建立食管癌患者血清蛋白指纹图谱诊断模型[J]. 肿瘤防治研究, 2012, 39(2): 169-172.

[2] 王丽芳;卢安;孟凡茹;曹青;纪昕;单保恩 . 香加皮三萜类化合物对实验性大鼠食管癌的阻断作用及机制[J]. 肿瘤防治研究, 2012, 39(1): 23-27.

[3] 侯向生;万清廉;郑慧禹;常国涛 . 大网膜环包术预防食管胃吻合口瘘临床应用体会[J]. 肿瘤防治研究, 2012, 39(1): 118-119.

[4] 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.

[5] 张振华;吴敬波 . 脂质体阿霉素热化疗对食管癌细胞的毒性实验研究[J]. 肿瘤防治研究, 2011, 38(7): 736-739.

[6] 林宏伟;白桦;栗敏;肖鹏;陈奎生;张红新 . 间隙连接蛋白Cx26和Cx43的表达及与食管鳞癌浸润和转移关系[J]. 肿瘤防治研究, 2011, 38(7): 809-813.

[7] 吴正国;龚家权 . 机械吻合和手工吻合在国人食管癌术后吻合口瘘发生率的Meta分析[J]. 肿瘤防治研究, 2011, 38(7): 823-826.

[8] 巩合义;和劲光;李宝生 . 18F-FDG PET/CT在食管癌中的应用 [J]. 肿瘤防治研究, 2011, 38(7): 840-843.

[9] 孙晓宏;庞作良;罗洞波. 转录水平环氧合酶-2在食管癌中的表达及临床意义 [J]. 肿瘤防治研究, 2011, 38(7): 830-831.

[10] 吕鹏;胡志坚. 乙醇脱氢酶2基因多态性与食管癌发病风险的Meta分析[J]. 肿瘤防治研究, 2011, 38(5): 579-583.

[11] 许林平;庞雅青;买玲. 食管癌血管形成相关因子的表达及意义 [J]. 肿瘤防治研究, 2011, 38(3): 286-290.

[12] 曾同霞;马彦清;徐莉;蔡金凤;李锋;何玲;秦江梅. 免疫相关基因Tap2、HLA-DR9与新疆哈萨 克族食管癌的交互作用[J]. 肿瘤防治研究, 2011, 38(2): 210-213.

[13] 石国庆;吴会超;徐刚 . 超声内镜在食管癌TN分期中的应用 [J]. 肿瘤防治研究, 2011, 38(12): 1413-1414.

[14] 傅玲;王明玉;曾洪生. 洛铂联合替加氟治疗晚期食管癌的临床观察[J]. 肿瘤防治研究, 2011, 38(12): 1426-1428.

[15] 何婷玉;杨艳丽;赵国强 . siRNA抑制食管癌EC9706细胞CXCR4基因表达的实验[J]. 肿瘤防治研究, 2011, 38(10): 1117-1120.