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论著

源于细菌CpG基序的寡核苷酸激活单核/巨噬细胞抗白血病效应的研究

陈春燕[1,2]；王红艳[1]；曹倩[1]；肖颖[1]；王琳琳[1]；张荣梅[2]；贾继辉[1,3]△

山东大学医学院 1微生物学教研室，3 实验畸形学教育部重点实验室，山东 济南 250012；2山东大学第二医院血液-肿瘤科，山东 济南 250033

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摘要 目的： 研究源于细菌CpG基序的寡核苷酸激活单核/巨噬细胞抗白血病细胞的作用。
方法: 用血细胞分离机从健康人外周血分离并诱导出单核-巨噬细胞，流式细胞仪检测细胞表面CD14分子和CD16分子表达状况。设计合成含CpG基序的寡核苷酸(CpG-ODN)和不含CpG基序的寡核苷酸（nonCpG-ODN）分别作用于单核/巨噬细胞, MTT法检测经寡核苷酸作用后,单核/巨噬细胞抗白血病K562细胞的效应, 用ELISA法检测其分泌细胞因子IL-12、TNF-α的表达。
结果: 从健康人外周血分离并成功诱导出单核/巨噬细胞，证实CpG-ODN作用于单核/巨噬细胞,可显著增强单核/巨噬细胞体外抗白血病细胞的作用，同时能促进单核/巨噬细胞分泌细胞因子IL-12、TNF-α。
结论: 源于细菌CpG-ODN可增强单核/巨噬细胞介导的抗白血病细胞作用，此为白血病免疫治疗提供了新的途径。

关键词 寡核苷酸类 单核细胞 巨噬细胞； 白血病 K562细胞

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Effect of monocyte/macrophages activated by CpG-oligodeoxynucleotides of bacteria on K562 cells

CHEN Chun-yan[1, 2], WANG Hong-yan[1], CAO Qian[1], XIAO Ying[1], WANG Lin-lin[1], ZHANG Rong-mei[1], JIA Ji-hui[1,3],

1 Department of Microbiology, 3The Key Laboratory of Experimental Teratology, Ministry of Education, Shandong University School of Medicine, Jinan 250012, China; 2 Department of Hematology and Oncology, The Second Hospital of Shandong University, Jinan 250033, China. E-mail: jiajihui@sdu.edu.cn

Abstract

<FONT face=Verdana>AIM: To study the effect of monocyte/macrophages treated with CpG-oligodeoxynucleotides on leukemic K562 cells.
METHODS: The monocytes/macrophages from peripheral blood cells were isolated and induced. The expressions of CD14 and CD16 on monocytes/macrophages were detected by means of flow cytometry. After treated with synthetic CpG-oligodeoxynucleotides, and nonCpG-oligodeoxynucleotides for 24 hours respectively, the inhibiting effect of monocyte/macrophages on K562 cells were detected using MTT method. The secretions of TNF-α and IL-12 from monocytes/macrophages were determined using ELISA method.
RESULTS: The monocytes/macrophages treated with CpG-oligodeoxynucleotides enhanced their antitumor effect on K562 cells and increased the secretion levels of TNF-α and IL-12. Whereas, there was no significant difference between antitumor effect and cytokine secretion of the monocytes/macrophages treated with nonCpG-oligodeoxynucleotide.
CONCLUSION: CpG-oligodeoxynucleotides increases the cytotoxicity of macrophages on K562 cells in vitro, as well as facilitates the IL-12 and TNF-α secretion. It provides a new approach for immunologic treatment of leukemia. </FONT>

Key words Oligonucleotides Monocytes Macrophages Leukemia K562 cells

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通讯作者 贾继辉 jiajihui @sdu.edu.cn