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论著

野生型p53基因导入对U937细胞分化、凋亡和CD36受体表达的影响

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摘要 目的： 研究野生型p53基因重组腺病毒载体（AdCMV-p53）导入对U937细胞分化、凋亡和清道夫受体CD36表达的影响。 方法： AdCMV-p53导入U937细胞后，用细胞计数、细胞周期分析、台盼蓝染色排除法计数细胞悬液中的活细胞数目和NBT还原反应观察其对U937细胞生长、分化的影响；RT-PCR、免疫荧光和流式细胞分析检测AdCMV-p53导入对CD36表达的影响。 结果： AdCMV-p53可以高效导入U937细胞，野生型p53基因导入促进U937细胞向巨噬细胞分化，台盼蓝染色发现实验组阳性细胞数（64.6±9.2）%较对照组（14.2±5.5）%明显增多，吞噬能力增强；NBT还原反应实验组（49.7±12.6）%较对照组（6.3±1.8）%升高。RT-PCR和流式细胞分析检测，野生型p53基因导入使得CD36 mRNA转录增强，CD36蛋白表达增加。 结论： 野生型p53基因能影响细胞分化和凋亡，并上调清道夫受体CD36的表达，对于动脉粥样硬化的预防和基因治疗具有潜在意义。

关键词 单核细胞； 细胞凋亡； 抗原,CD36； 基因,p53； U937细胞

分类号 R363

Influences of wild-type p53 gene overexpression on the differentiation, apoptosis and expression of scavenger receptor CD36 in U937 cells*

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Abstract

<FONT face=Verdana>AIM: To study the effect of wild-type p53 gene on the differentiation, apoptosis and expression of scavenger receptor CD36 in U937 cells. METHODS: Recombinant adenovirus vector with wild-type p53 gene was constructed and used to transfect U937 cells. With the expression of wild-type p53 gene following adenoviral infection, transfected U937 cells were largely promoted to differentiate into macrophages. RESUITS: Trypanblue-staining test demonstrated that the percentage of positive cells increased from (14.2±5.5)% to (64.6±9.2)% and nitroblue tetrazolium (NBT) reduction test reached similar results (6.3±1.8)% vs (49.7±12.6)%. Furthermore, CD36 mRNA was up-regulated as confirmed by RT-PCR. The increased expression level of CD 36 was also detected by flow cytometry analysis. CONCLUSION: These results suggest that wild-type p53 gene can affect U937 cells differentiation and apoptosis, up-regulate expression of scavenger receptor CD36. It may have a potential significance on atherogenesis.</FONT>

Key words Monocytes Apoptosis Antigens, CD36 Genes p53 U937 cells

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