

论著

A23187联合IFN- $\gamma$ 诱导人外周血单个核细胞生成树突状细胞

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摘要:

目的:研究钙离子载体(calcium ionophore, CI)A23187 联合 $\gamma$ -干扰素(IFN- $\gamma$ ) 诱导健康人外周血单个核细胞(PBMNC) 生成树突状细胞(DC), 探索DC 扩增的新方法。方法:分离健康人PBMNC, 分别加入GM-CSF +IL-4, A23187, A23187+IFN- $\gamma$ 。体外培养72 h 后, 分别于光镜、电镜下观察细胞的形态, 流式细胞仪检测细胞表面标志, M 比色法检测其对同种异体T 细胞的刺激增殖作用, ELISA 检测IL-12 和IFN- $\gamma$  的水平。结果:健康人PBMNC在A23187+IFN- $\gamma$  的条件下培养72 h 后, 与GM-CSF +IL-4 组, A23187 组比较, 能迅速获得典型的树突状细胞形态;CD40, CD83, CD86 分子的表达较均明显升高( $P<0.01$ ), 但CD1a 分子的表达明显下降( $P<0.01$ );具有明显刺激同种异体T 细胞增殖的能力;IL-12, IFN- $\gamma$  的水平比其他组明显增高( $P<0.01$ )。结论:A23187 联合IFN- $\gamma$  诱导健康人PBMNC 能更快速、有效地诱导生成成熟的DC。

关键词: 钙离子载体  $\gamma$ -干扰素 树突状细胞 外周血单个核细胞

Effect of calcium ionophore A23187 plus IFN- $\gamma$  on dendritic cells derived from peripheral blood mononuclear cells

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Abstract:

Objective: To explore the effect of calcium ionophore (CI) A23187 plus IFN- $\gamma$  on dendritic cells(DC) from healthy human peripheral blood mononuclear cells (PBMNC).

Methods: PBMNC from healthy donors were treated with GM-CSF plus IL-4, A23187, and A23187 plus IFN- $\gamma$ , respectively. After culture for 72 h, the change of cellular morphology was observed under light microscope and electron microscope. Surface markers on DC were analyzed by flow cytometry. MTT colorimetry was used to detect the proliferation of allogeneic T cells. Plasma concentrations of IL-12 and IFN- $\gamma$  were measured by ELISA.

Results: PBMNC treated with A23187 plus IFN- $\gamma$  for 72 h presented DC with typical morphology effectively. The surface markers CD40, CD83, and CD86 were obviously increased in group A23187 plus IFN- $\gamma$  ( $P<0.01$ ), but decreased in CD1a ( $P<0.01$ ). In addition, it evidently stimulated the proliferation of allogeneic T cells. The levels of IL-12 and IFN- $\gamma$  were significantly increased compared with other groups ( $P<0.01$ ).

Conclusion: A23187 plus IFN- $\gamma$  can effectively enhance marked transformation of PBMNC into DC.

Keywords: calcium ionophore IFN- $\gamma$  dendritic cells peripheral blood mononuclear cells

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