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论著

丁酸钠诱导的未成熟树突状细胞的免疫学功能研究

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摘要 目的： 探讨丁酸钠对人外周血来源的树突状细胞（DC）的成熟状态和免疫学功能的影响。方法： 通过粒细胞－巨噬细胞集落刺激因子（GM-CSF）和白细胞介素4（IL-4）结合丁酸钠体外诱导人外周血来源的DC，6 d后结合不同成熟因子诱导成熟，并以流式细胞仪、FITC标记的Dextran的内吞检测、混合淋巴细胞反应（MLR）、ELISA法分别检测DC的表面标志、内吞能力、DC刺激淋巴细胞增殖能力和白细胞介素12（IL-12）分泌量的改变。结果： 丁酸钠可以抑制DC成熟，使DC具有较强的抗原吞噬能力，而刺激淋巴细胞增殖能力和IL-12的分泌能力下降。结论： 丁酸钠可以抑制DC成熟，诱导不成熟DC生成，在移植免疫耐受方面具有较好的应用前景。

关键词 树突细胞； 丁酸盐类； 免疫耐受； 白细胞介素12

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Study on the immunological function of sodium butyrate-induced immature human monocyte-derived dendritic cells

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Abstract

<FONT face=Verdana>AIM: To investigate the immunological function of sodium butyrate-induced immature dendritic cells in vitro.METHODS: The human monocyte-derived dendritic cells were induced in the presence of human granulocyte macrophage-colony stimulating factor(GM-CSF) and interleukin-4 (IL-4), combined with sodium butyrate. The immunological function of sodium butyrate-induced dendritic cells was detected by the FCM, endocytic activity, T cells stimulatory proliferation capacity, and interleukin-12 (IL-12) production.
RESULTS: Sodium butyrate could down-regulate the major histocompatibility complex(MHC) class II and costimulatory molecules of dendritic cells, increase the endocytic activity, induce a stage of T-cell anergey, and inhibit the T helper cell type 1-skewing factor IL-12 production. CONCLUSION: Sodium butyrate inhibits the maturation of dendritic cells and induces production of immature dendritic cells, which may help to explore the machenism of its epigenitic modification. </FONT>

Key words Dendritic cells Butyrates Immunotolerance Interleukin-12

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