

论文

艾拉莫德对脂多糖激活大鼠肺泡巨噬细胞系TNF α 产生及NF- κ B活性的抑制作用

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摘要:

目的研究非甾体抗炎药艾拉莫德(T-614)对脂多糖(LPS)刺激的大鼠肺泡巨噬细胞系(NR8383)前炎症反应因子TNF α 基因表达、蛋白合成的影响及其对核因子 κ B(NF- κ B)的作用。方法体外培养NR8383经T-614(13.4, 26.7及53.4 μ mol·L⁻¹)处理, LPS刺激后应用酶联免疫吸附法(ELISA)检测细胞上清液中TNF α 的水平, 半定量逆转录聚合酶链式反应(RT-PCR)检测TNF α mRNA水平, ELISA法检测NF- κ B的活性。结果T-614对LPS诱导的NR8383细胞TNF α mRNA水平和蛋白水平的上调有显著抑制作用, 对NF- κ B的转录活性也有抑制作用。结论 T-614可能通过抑制LPS诱导的NR8383的NF- κ B活性而降低TNF α 的产生。

关键词: 艾拉莫德 大鼠肺泡巨噬细胞系NR8383 肿瘤坏死因子 α 核因子 κ B

Inhibitory effect of igiturimod on TNF α production and NF- κ B activity in LPS-stimulated rat alveolar macrophage cell line

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Abstract:

AimTo investigate the effect of igiturimod (T-614), a non-steroidal anti-inflammatory drug, on TNF α mRNA expression and TNF α production, and on the activity of nuclear factor- κ B (NF- κ B) in the rat alveolar macrophage cell line (NR8383) activated by LPS. MethodsNR8383 cells were pretreated with T-614 (13.4, 26.7, 53.4 μ mol·L⁻¹), then were stimulated with LPS. The production of TNF α in the supernatant of NR8383 was assayed by enzyme-linked immunosorbent assay (ELISA). The TNF α mRNA level was determined by a semi-quantitative PCR assay. Assessment of the NF- κ B DNA binding activity was performed by an ELISA kit. ResultsT-614 inhibited LPS-stimulated mRNA expression and production of TNF α in a concentration-dependent manner, as well as the activity of NF- κ B. The IC₅₀ value of effect of T-614 on TNF α level was 26.2 μ mol·L⁻¹. ConclusionThe inhibitory effect of T-614 on the production of TNF α in LPS-stimulated NR8383 cells may be mediated by suppression of NF- κ B activity.

Keywords: rat alveolar macrophage cell line NR8383 TNF α NF- κ B igiturimod

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