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CD11b + NKT细胞抑制Poly I:C诱导小鼠肝损伤中CD8 +T细胞增殖反应 [点此下载全文](#)

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摘要:

目的: 研究Poly I:C诱导的肝损伤模型中肝内上调的CD11b + NKT细胞对CD8 +T细胞增殖反应的作用。方法: 经腹腔注射Poly I:C (20 μg/g) 制备Poly I:C诱导小鼠肝损伤模型, 流式细胞术检测CD11b + NKT细胞的比例、T细胞增殖反应和CD8 +T细胞的杀伤功能, ELISA法检测细胞培养上清中的细胞因子浓度。结果: Poly I:C诱导的肝损伤模型小鼠的肝内CD11b + NKT细胞的比例显著上升[(71.7±5.3)% vs (12.4±3.6)%, P < 0.01]。细胞因子表达谱分析发现, CD11b + NKT细胞分泌IFN-γ、IL-4和IL-10的能力显著低于CD11b - NKT细胞。功能分析发现, CD11b + NKT细胞能够显著抑制anti-CD3/CD28单抗诱导非特异性的和OVA特异性的CD8 +T细胞增殖反应, 而CD11b - NKT细胞没有此抑制功能; 进一步分析发现, CD11b + NKT细胞并不影响CD8 +T细胞的杀伤功能。结论: Poly I:C诱导的肝损伤模型小鼠肝内CD11b + NKT细胞比例升高, 该细胞能够负反馈抑制CD8 +T细胞的增殖反应, 但是并不影响CD8 +T细胞的杀伤功能。

关键词: [NKT细胞](#) [CD11b](#) [CD8 +T细胞](#) [免疫调节](#) [肝损伤](#) [Poly I:C](#)

Effects of CD11b + NKT cells derived from poly-I:C-challenged mice on CD8 T cell proliferation and cytotoxicity [Download Fulltext](#)

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Abstract:

Objective: To investigate the effect of expanded CD11b + NKT cells isolated from the injured murine liver following poly-I:C challenge on the proliferation and function of normal murine CD8 +T cells in vitro. Methods: Male C57BL/6 mice were treated with poly-I:C at 20 μg/g. CD11b + and CD11b - NKT cells were isolated from the liver 24 h after poly-I:C- treatment. CD8 +T cells were isolated from normal male OT-I mice and co-cultured with the isolated hepatic CD11b + and CD11b - NKT cells, respectively. The proliferation and cytotoxic ability of CD8 +T cells in the co-culture were both assessed by flow cytometry. The concentration of major immunoregulatory cytokines was determined by ELISA. Results: Poly-I:C treatment significantly increased the proportion of CD11b + NKT cells in the liver. After stimulation, CD11b + hepatic NKT cells produced less IFN-γ, IL-4 and IL-10 than CD11b - hepatic NKT cells. CD11b + hepatic NKT cells significantly inhibited both antigen-specific and non-specific immune responses of CD8 +T cells, while CD11b - hepatic NKT cells showed no inhibitory effect. CD11b + hepatic NKT cells did not significantly alter the cytotoxic ability of activated CD8 +T cells. Conclusion: Poly-I:C-induced liver injury is associated with the expansion of CD11b + hepatic NKT cells. While these CD11b + hepatic NKT cells have little effect on the cytotoxic activity of activated CD8 +T cells, they significantly inhibit CD8 +T cell proliferation.

Keywords: [NKT cell](#) [CD11b](#) [CD8 +T cell](#) [immune regulation](#) [liver injury](#) [Poly I:C](#)

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