

论著

CD40L-PLL-CpG寡核苷酸交联复合物的制备及其对B淋巴细胞的靶向性

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摘要 目的: 探讨CpG寡核苷酸(CpG ODN)对B淋巴细胞的靶向性及免疫增强效应。方法: 制备CD40配体(CD40L)-多聚左旋赖氨酸(PLL)-CpG ODN交联复合物。复合物与脐血单个核细胞(MNCs)共培养, 流式细胞仪检测MNCs对羧基荧光素FAM标记CpG ODN的摄取率、淋巴细胞亚群的表达; MTT法测MNCs增殖情况; ELISA法测培养上清IgG水平。结果: 与CpG ODN相比, MNCs对CD40L-PLL-CpG ODN交联复合物摄取率更高(>98%), 达摄取峰值时间更早, 细胞内荧光强度维持更稳定; MNCs与之共培养后CD19+、CD22+、CD20+细胞表达明显升高, MTT法测MNCs增殖情况、ELISA法测培养上清IgG水平均明显升高。结论: CD40L-PLL载体系统能将CpG ODN靶向作用于B细胞, 增强其免疫效应。

关键词 [CD40配体](#); [寡核苷酸类](#); [交联复合物](#); [B淋巴细胞](#); [靶向](#)

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Preparation of CD40L-PLL-CpG ODN conjugated complex and its targeting B lymphocytes

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Abstract

AIM: To explore the enhancement of CpG oligodeoxynucleotide (CpG ODN) delivery targeting to B lymphocytes and its immunologic efficacy. METHODS: CD40 ligand-PLL-CpG ODN conjugated complex was prepared. Mononuclear cells (MNCs) from umbilical cord blood were cultured with CD40 ligand-PLL-CpG ODN conjugated complex. Uptake rates of FAM labeled CD40 ligand-PLL-CpG ODN complex and subgroups of lymphocytes were analyzed by cytometry. Proliferation of MNCs as detected by MTT assay, and IgG levels of culture supernatants were measured by ELISA. RESULTS: Compared with CpG ODN group, uptake rates of CD40 ligand-PLL-CpG ODN by MNCs were higher (>98%), the peak level of uptake occurred earlier, intracellular fluorescence intensity maintained much more stable. Expressions of CD19+, CD22+, CD20+ increased significantly. A570 values of MNCs proliferation and IgG levels in supernatant were all higher. CONCLUSION: CD40 ligand-PLL carrier system may delivery CpG ODN targeting to B lymphocytes, enhancing its immunological efficiency.

Key words [CD40 ligand](#) [Oligonucleotides](#) [Conjugated complex](#) [B-lymphocytes](#) [Targeting](#)

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