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摘要:

目的: 研究EPHA 2 基因修饰的树突状细胞(dendritic cell, DC)疫苗诱导细胞毒性T淋巴细胞(cytotoxic T lymphocyte, CTL)对U251胶质瘤细胞的杀伤效应, 为胶质瘤的免疫治疗提供新的方法。 **方法:** 将重组 EPHA2 腺病毒rAd-EPHA2感染HLA-A2阳性的人外周血来源的DC, 制备EPHA 2 基因修饰的DC疫苗, Western blotting和FACS方法检测感染后DC的 EPHA 表达。以DC疫苗体外刺激HLA-A2阳性的单个核细胞, 酶联免疫斑点实验 (enzyme-linked immunospot assay, ELISPOT) 和标准 51 Cr释放实验分别检测DC疫苗所诱导的CTL活性和对HLA-A2阳性的U251细胞的杀伤作用(另设rAd-Lac Z感染的DC组和PBS组作为对照)。 **结果:** 成功制备了EPHA 2 基因修饰的DC疫苗, 其可有效表达EPHA2蛋白。与感染rAd-LacZ的DC和PBS组相比, 感染rAd-EPHA2的DC疫苗能有效激发CTL活性 $\backslash[(187\pm 21) \text{ vs } (12\pm 4), (18\pm 5)]$ 个, $P<0.01$; 所诱导的CTL对胶质瘤U251细胞有明显的杀伤效应 $\backslash[(45.7\pm 6.8) \% \text{ vs } (7.1\pm 4.5) \%]$, $P<0.01$, 对自身淋巴细胞没有杀伤效应。 **结论:** EPHA 2 基因修饰的DC疫苗能有效激发CTL活性, 并对胶质瘤U251细胞有明显的杀伤活性。

关键词: [EPHA 2 基因](#) [树突状细胞](#) [胶质瘤](#)

Cytotoxic effect of CTLs elicited by dendritic cells infected with adenovirus containing EPHA2 gene on glioma cells [Download Fulltext](#)

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Abstract:

Objective : To explore the cytotoxic effect of cytotoxic T lymphocytes (CTLs) induced by dendritic cells (DCs) modified by EPHA2 gene on U251 glioma cells, and to provide new ways for glioma immune therapy. **Methods:** DCs originated from the HLA-A2 +PBMCs were infected with recombinant adenovirus containing EPHA2 full length cDNA, and the DC vaccine modified by EPHA2 gene was prepared. The expression of EPHA on DCs was detected by Western blotting and FACS. HLA-A2 +PBMCs were stimulated by the DC vaccine in vitro. The specificity CTL activity induced by rAd- EPHA2 -DCs and the cytotoxicity on HLA-A2 +U251 glioma cells were detected by enzyme-linked immunospot assay (ELISPOT) and standard 51 Cr release experiment. **Results:** The DC vaccine modified by EPHA2 gene was successfully prepared, and EPHA2 protein was effectively expressed. Compared to DCs infected with rAd-LacZ and PBS groups, DCs infected with rAd-EPHA2 stimulated CTL activity effectively $\backslash[(187\pm 21) \text{ vs } (12\pm 4), (18\pm 5)]$; $P<0.01$ and the CTLs induced by rAd-EPHA2-DCs produced cytotoxicity effect on U251 cells obviously $\backslash[(45.7\pm 6.8) \% \text{ vs } (7.1\pm 4.5) \%]$, $P<0.01$, and did not cause the cytotoxicity of its own lymphocytes. **Conclusion:** The DC vaccine modified by EPHA2 gene can stimulate the specificity CTL response effectively, and can cause cytotoxicity on glioma U251 cells obviously.

Keywords: [EPHA 2 gene](#) [dendritic cell](#) [glioma](#)

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