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体外构建的H_{TA}-$HSP70_{BCG}$冲激的树突状细胞疫苗的抗肿瘤作用

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Antitumor Effects Induced by Dendritic Cell Vaccine Pulsed with H_{TA}-$HSP70_{BCG}$ Complex Reconstituted in Vitro

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摘要

目的 观察体外构建的榄香烯复合瘤苗抗原-卡介苗热休克蛋白70复合物（H_{TA}—$HSP70_{BCG}$）诱导的树突状细胞疫苗的抗肿瘤效应。方法 来源于小鼠的肝癌Hca-F榄香烯复合疫苗的抗原（HTA）与卡介苗来源的HSPT0（$HSP70_{BCG}$）在体外构建成HTA—$HSP70_{BCG}$复合物，用GM-CSF和IL-4诱导树突状细胞（DCs），分别用HTA—$HSP70_{BCG}$、HTA和HSP70麟对其冲激。用肿法检测该DCs刺激的全脾细胞的增殖活性及被刺激的脾细胞的细胞毒活性。用流式细胞仪检测DCs表面（瑚6和CD40的表达。结果 体外构建HTA—$HSP70_{BCG}$可以诱导DCs成熟，表现为DCs表达CD86和CD40上调，该DCs可以刺激全脾细胞增殖并使其产生特异性杀瘤活性，其强度明显大于HTA。结论 体外构建HTA—HSP70麟复合物可以诱导DCs成熟，该DCs可以激活脾细胞产生较强的特异性抗瘤效应。

关键词： 热休克蛋白70 树突状细胞 肿瘤瘤苗 抗瘤效应

Abstract： Objective To investigate antitumor effects induced by dendritic cells (DCs) pulsed with complex of tumor antigen from elemene-combo tumor cell vaccine-heat shock protein 70 of BCG (H_{TA}-$HSP70_{BCG}$) . Methods Tumor antigen peptides from elemene-combo Hca-F cell (H_{TA}) combined with $HSP70_{BCG}$into H_{TA}-$HSP70_{BCG}$ in vitro. DCs were induced in medium with GM-CSF and IL-4 and pulsed with H_{TA}-$HSP70_{BCG}$, H_{TA} and $HSP70_{BCG}$, respectively. The proliferation stimulating effects on un-separated splenocytes and the cytotoxicity of the splenocytes activated with DCs were evaluated with MTT assay. The expression of CD40 and CD86 on the surface of DCs was assessed by flow cytometer. Results Pulsing of H_{TA}-$HSP70_{BCG}$, resulted in DCs maturation , characterized by up-regulation of CD86 and CD40. Proliferation index of un-separated splenocytes from H_{TA}-$HSP70_{BCG}$ group was significantly increased as compared with H_{TA} group . Un-separated splenocytes from DCs pulsed with H_{TA}-$HSP70_{BCG}$ revealed the cytotoxicity agaist Hca-F , The H_{TA} failed to reveal the cytotoxicity against Hca-F. Conclusion H_{TA}-$HSP70_{BCG}$ could induce DCs maturation and the mature DCs could activate splenocytes to generate more potent specific antitumor effect .

Key words： Heat shock protein70 Dendritic cell Tumor vaccine Antitumor effects

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