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泛素-结核抗原融合基因DNA疫苗诱导小鼠较强的细胞免疫应答 [点此下载全文](#)

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摘要:

目的: 构建结核杆菌ESAT6抗原DNA疫苗(pE)和泛素基因与ESAT6抗原基因融合的DNA疫苗(pUE)。方法: 分别将构建的DNA疫苗肌内注射免疫BALB/c雌性小鼠,检测小鼠的血清抗体(IgG1、gG1、IgG2a)、细胞因子(IFN- γ 、L-4)和细胞毒性T淋巴细胞反应(CTL),比较融合基因DNA疫苗和单基因DNA疫苗诱导免疫应答的强度。结果: pE组小鼠血清IgG水平高于pUE组($P < 0.01$),但IgG2a/IgG1比值低于pUE组[(2.28 ± 0.40) vs (3.87 ± 0.60)], $P < 0.05$]。与pE组相比,pUE组小鼠IFN- γ 分泌水平增高($P < 0.01$),IL-4分泌水平下降($P < 0.01$);pUE增强了CTL活性。提示融合基因DNA疫苗诱生的抗原特异的体液免疫应答不及单基因DNA疫苗,但其能诱导更强的细胞免疫应答。结论: 泛素-ESAT6融合基因DNA疫苗对于防治结核病可能比单基因DNA疫苗更为有效。[

关键词: [分枝杆菌](#) [结核 疫苗](#) [DNA](#) [泛素](#) [免疫应答](#)

Ubiquitin and ESAT6 antigen fusion gene DNA vaccine induced stronger cellular immune response in mice [Download Fulltext](#)

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Abstract:

Objective: To construct Mycobacterium tuberculosis ESAT6 (pE) antigen DNA vaccine and ubiquitin-ESAT6 fusion gene (pUE) DNA vaccine. Methods: The constructed DNA vaccines were intramuscularly inoculated into female BALB/c mice separately. The serum antibodies (including IgG, IgG1, and IgG2a), Cytokines (IFN- γ and IL-4), and cytotoxic T lymphocytes response were detected in the immunized mice. Results: Mice in pE group had a higher serum level of IgG ($P < 0.01$) and a lower value of IgG2a/IgG1 [2.28 ± 0.40] vs [3.87 ± 0.60], $P < 0.05$) than mice in pUE group. Besides, mice in pUE group secreted more IFN- γ than those in pE group ($P < 0.01$), but secreted less IL-4 ($P < 0.01$). Furthermore, pUE enhanced the activity of CTL. The results showed that pUE DNA vaccine induced weaker humoral immune response, but stronger cellular immune responses compared to pE DNA vaccine. Conclusion: The pUE DNA vaccine constructed in this study sheds new lights on the prophylactic and therapy of tuberculosis. [

Keywords: [Mycobacterium tuberculosis](#) [vaccines](#) [DNA](#) [ubiquitin](#) [immune response](#)

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