

论著

不同佐剂对旋毛虫Ts87重组蛋白免疫小鼠保护性的影响

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摘要

目的 比较福氏完全佐剂(CFA)等6种佐剂对于旋毛虫Ts87重组蛋白(rTs87)免疫保护性的影响。方法 经十二烷基磺酸钠-聚丙烯酰胺凝胶电泳(SDS-PAGE)和蛋白质印迹(Western blotting)分析鉴定的rTs87分别与上述各种佐剂免疫ICR小鼠,每间隔2周免疫1次,共免疫3次。ELISA检测免疫小鼠血中抗原特异性IgG抗体水平。攻击感染45 d后剖杀小鼠取肌幼虫(ML)并计数,计算肌幼虫减虫率。结果 rTs87相对分子质量(Mr)约为40 000,可被旋毛虫感染鼠血清和rTs87免疫鼠血清识别,分别与佐剂CFA(或IFA)、IMS 1312、ISA720、Quil-A及氢氧化铝免疫后均引起较强的IgG抗体反应,各佐剂免疫组减虫率分别为49.4%、49.2%、63.5%、65.1%和70.8%,与空白对照组比较有统计学意义;单纯抗原rTs87免疫组获得了23.7%的减虫率,与对照组及各佐剂免疫组差异均有统计学意义(P<0.05)。结论 佐剂CFA(或IFA)、IMS1312、ISA720、Quil-A及氢氧化铝均能不同程度增强rTs87对小鼠的保护性免疫力,其中佐剂ISA720、Quil-A和氢氧化铝的保护效果更好。

关键词 [旋毛虫](#) [旋毛虫Ts87重组蛋白\(rTs87\)](#) [佐剂](#) [保护性](#)

分类号

Effect of Different Adjuvant Formulations on the Induced Protection of Mice Immunized With Recombinant Protein Ts87 of *Trichinella spiralis*

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Abstract

Objective To study the effect of 6 formulations of adjuvants on immunoprotection in mice induced by the recombinant Ts87 protein (rTs87) of *Trichinella spiralis*. Methods ICR mice were vaccinated subcutaneously 3 times in 2-week intervals with rTs87 and different adjuvants CFA or IFA, Montanide IMS1312, Montanide ISA720, Quil-A and Al(OH)₃, respectively. The antibody response was detected by ELISA and the purified rTs87 was analyzed by SDS-PAGE and Western blot. The protection induced in mice was then evaluated by muscle larvae reduction after *Trichinella spiralis* challenge. Results The results clearly showed that all the 6 adjuvants were able to enhance specific anti-rTs87 IgG response. SDS-PAGE and Western blot revealed that the molecular weight of expressed protein was around Mr 40 000 and could be recognized by sera from mice infected with *Trichinella spiralis* and mice immunized with rTs87. The reduction rate of muscle larvae was 49.4%, 49.2%, 63.5%, 65.1% and 70.8%, respectively. Conclusion Protective immunity of rTs87 can be enhanced by adjuvant CFA or IFA, IMS1312, ISA720, Quil-A and Al(OH)₃, and better effect is observed with the latter 3 adjuvants.

Key words [Trichinella spiralis](#) [Recombinant protein](#) [Adjuvant](#) [Protection](#)

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