

论著

华支睾吸虫Rho GTPase重组蛋白免疫保护效果

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摘要

【摘要】 目的 探讨华支睾吸虫 (*Clonorchis sinensis*, Cs) Rho GTPase重组蛋白的免疫保护效果。方法 将20只8周龄SD大鼠随机均分为2组, 重组蛋白实验组 (A组) 和PBS对照组 (B组)。A组共免疫5次, 首次和第2周分别用Cs-Rho GTPase重组蛋白 (90 μg/ml) 1 ml加等体积福氏完全佐剂和福氏不完全佐剂稀释后背部、足垫多点皮下注射, 第4、7和11周分别用Cs-Rho GTPase重组蛋白 (90 μg/ml) 1 ml腹腔注射。B组用PBS加佐剂免疫小鼠。末次免疫后, 即灌胃感染华支睾吸虫囊蚴 (50个/只), 感染后第21天起每隔3~5 d粪检1次, 待查见虫卵后, 计数虫卵数, 并用乙醚麻醉处死大鼠, 剖检胆管和胆囊中华支睾吸虫成虫。采集各次免疫前小鼠尾静脉血, ELISA法测定血清IgG、IgG1和IgG2a抗体水平。统计分析各组平均成虫数、虫卵数及抗体水平差异。结果 A组检获平均成虫数为 (9.2±9.9) 条、每克粪便平均虫卵数为 (956.8±1 062.5) 个, B组分别为 (23.25±15.75) 条和 (3 062.5±2 501.8) 个, 两组差异有统计学意义 (P<0.05)。A组血清的抗体吸光度 (A450值) 分别为IgG (0.1、0.45、0.65、0.6、0.65)、IgG1 (0.1、0.45、1.1、1.0、1.1)、IgG2a (0.1、0.7、1.1、1.1、1.1), 而B组IgG、IgG1和IgG2a吸光度 (A450值) 均维持在0.1水平, 两组间差异有统计学意义 (P<0.05)。结论 Cs-Rho GTPase重组蛋白可诱导SD大鼠产生较好的抗华支睾吸虫感染的免疫保护作用。

关键词 [华支睾吸虫; Rho GTPase; 免疫](#)

分类号

Protective Immunity of Cs-Rho GTPase Recombinant Protein Against *Clonorchis sinensis* Infection

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Abstract

【Abstract】 Objective To study the protective immunity induced by recombinant vaccination of Cs-Rho GTPase of *Clonorchis sinensis* (Cs). Methods 20 SD-rats (8 weeks) were divided into two groups: A (recombinant protein experiment group) and B (PBS control group). Rats in group A were immunized with 1 ml protein of Cs-Rho GTPase (90 μg/ml) and 1 ml Freund's complete adjuvant through back and vola. 2 week later, the rats were given 1 ml protein of Cs-Rho GTPase (90 μg/ml) and 1 ml Freund's incomplete adjuvant, followed by 1 ml protein of Cs-Rho GTPase (90 μg/ml) through intraperitoneal injection at 4, 7, 11 week after the first immunization. Rats in group B were given PBS in the same way as group A. All rats were challenged each with 50 *Clonorchis sinensis* metacercariae after the last immunization. 21 d later, fecal samples were collected from all rats for examining eggs (number of eggs per gram feces, EPG) in every 3-5 d. When eggs were found, the rats were sacrificed and worms were collected. IgG, IgG1 and IgG2a in sera were detected by ELISA before every immunization. Mean number of worms and eggs, and antibody level in the experiment group were calculated and statistically compared with the controls. Results The mean number of worms and EPG were (9.2±9.9) and (956.8±1 062.5) respectively in group A, which were significantly lower than those of group B [(23.25±15.75) and (3 062.5±2 501.8) respectively] (P<0.05). The absorbency values of serum IgG (0.1, 0.45, 0.65, 0.6, 0.65), IgG1 (0.1, 0.45, 1.1, 1.0, 1.1), and IgG2a (0.1, 0.7, 1.1, 1.1, 1.1) before every immunization in group A were significantly higher than those of group B (almost always 0.1) (P<0.05). Conclusion Recombinant vaccination of Cs-Rho GTPase induces partial protective immunity against *Clonorchis sinensis* infection in rats.

Key words [Clonorchis sinensis; Rho GTPase; Immunity](#)

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