

论著

日本血吸虫CAI基因的亚克隆表达与免疫保护效果研究

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摘要

目的 克隆和表达日本血吸虫(Schistosomajaponicum,Sj)CAI基因,并对表达产物进行免疫保护效果测定,评价其作为血吸虫疫苗候选分子的潜能。方法 将SjCAI基因亚克隆至pGEX5X3载体,转化入感受态大肠杆菌ER2566,在异丙基βD硫代半乳糖苷(IPTG)诱导下进行表达,用表达产物免疫小鼠,并设分别注射等体积的弗氏完全佐剂和PBS的两组对照组,观察免疫保护效果。结果 在IPTG诱导下,表达载体中的SjGST基因与重组的SjCAI基因在大肠杆菌中获得了高效融合表达,将其免疫小鼠,诱导产生了29.87%的减虫率和63.71%的减卵率。结论 SjCAI基因亚克隆至pGEX5X3载体后可在大肠杆菌中高效表达,表达产物能诱导产生一定水平的抗Sj保护性免疫力

关键词 [日本血吸虫](#) [CAI蛋白](#) [表达](#) [免疫保护](#)

分类号

Study on the Subcloning, Expression and Immunoprotection with Schistosoma japonicum CAI Gene

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Abstract

Objective To subclone and express the new gene of Schistosoma japonicum (Sj) CAI and evaluate the immunoprotective effect of the recombinant molecule. Methods The cDNA of SjCAI gene was subcloned into expression vector pGEX-5X-3 to form recombinants which were then used to transform to E.coli strain ER 2566. Expression was induced by IPTG. The mice were vaccinated with the expressed protein and the immunoprotective effect was tested. Results Fusion protein of SjGST-CAI was highly expressed in E. coli as inclusion bodies. The worm reduction rate and the liver egg reduction rate in vaccination group of SjGST-CAI were 29.87% and 63.71%, respectively. Conclusion SjCAI gene can be highly expressed in E .coli after subcloning into pGEX-5X-3 vector and the expressed fusion protein can induce immunoprotective effect against Sj in mice.

Key words [Schistosoma japonicum](#) [CAI protein](#) [expression](#) [immunoprotection](#)

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