

论著

日本血吸虫组织蛋白酶L1基因在大肠埃希菌中的表达

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摘要

目的 在原核表达体系大肠埃希菌中进行日本血吸虫组织蛋白酶L1(SjCL1)基因表达。方法 通过PCR从质粒pcDNA3-SjCL1中扩增得到SjCL1基因,定向克隆至原核表达载体pGEX-4T-1中,构建重组质粒pGEX-SjCL1,将该重组质粒转化大肠埃希菌JM109,转化子经异丙基- β -D-硫代半乳糖苷诱导表达,采用十二烷基硫酸钠-聚丙烯酰胺凝胶电泳(SDS-PAGE)和蛋白质印迹法(Westernblotting)分析SjCL1基因表达产物。结果 获得长约1kb的PCR片段,构建了pGEX-SjCL1质粒。SDS-PAGE和Westernblotting检测表达产物,相对分子质量为62000。结论 SjCL1基因在大肠埃希菌中以融合形式得到表达。

关键词 [日本血吸虫](#) [组织蛋白酶类](#) [基因表达](#)

分类号

Expression of Proteinase Cathepsin L1 Gene of *Schistosoma japonicum* in *Escherichia coli*

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Abstract

Objective To express the proteinase cathepsin L1 gene of *Schistosoma japonicum* (SjCL1) in *Escherichia coli* JM109 cells. Methods The SjCL1 gene was amplified from the recombinant plasmid pcDNA3-SjCL1 by PCR. The gene was cloned into a prokaryotic expression vector pGEX-4T-1 to construct a recombinant plasmid pGEX-SjCL1. The *E. coli* JM109 cells were transformed with the recombinant plasmid pGEX-SjCL1 and the transformants were induced by IPTG to express the recombinant protein, the target protein was then identified by SDS-PAGE and Western blotting. Results A 1 kb length PCR product was obtained and a recombinant plasmid pGEX-SjCL1 was constructed. The expression product was detected by SDS-PAGE and Western blotting and an expression band about 62 000 was found. Conclusion The SjCL1 gene is effectively expressed in the *E. coli* JM109 cells.

Key words [Schistosoma japonicum](#) [cathepsins](#) [gene expression](#)

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