

论著

肝片吸虫组织蛋白酶L1基因cDNA序列的克隆与分析

张韧,李海云

华南农业大学动物科学学院,广州 510642

收稿日期 修回日期 网络版发布日期 接受日期

摘要

目的 研制肝片吸虫的候选DNA疫苗。方法 根据国际发表的相关序列设计引物,在引物端加酶切位点,应用RT-PCR方法。结果 成功地将肝片吸虫组织蛋白酶L1(FheCL1)基因cDNA序列克隆进真核表达载体pcDNA3.1中。对所克隆的FheCL1基因序列及其推导的氨基酸序列进行分析,发现其与已发表序列相比,核苷酸序列有4.3%的差异;推导的氨基酸序列有6.9%的差异。两者蛋白质二级结构主要有3个区域的区别,磷酸化位点有10个不同,但共有一由20个疏水氨基酸残基组成的保守区域。结论 实验构建的pcDNA3.1-FheCL1重组质粒是一种新型的抗肝片吸虫DNA疫苗候选重组质粒;肝片吸虫可能存在不同的亚种,两者的FheCL1基因编码的第1~20个氨基酸残基可能组成膜螺旋。

关键词 [肝片吸虫](#) [组织蛋白酶L1](#) [DNA疫苗](#) [克隆](#)

分类号

Cloning and Sequencing of Cathepsin L1 FheCL1 Gene cDNA of Fasciola hepatica

ZHANG Ren, LI Hai-yun*

College of Animal Science, South China Agricultural University, Guangzhou 510642

Abstract

Objective To search for a candidate DNA vaccine of Fasciola hepatica. Methods Using RT-PCR and digestion with Hind III and BamHI, Fasciola hepatica secreted cathepsin L1 (FheCL1) cDNA was cloned into the expression vector pcDNA3.1. Results The cloning was successful, the cDNA sequence and its deduced amino acid sequence were analyzed. There was much difference between the cloned FheCL1 and the published one. But the first 20 residues of their amino acid sequences were the same. Conclusion The recombinant plasmid pcDNA3.1-FheCL1 may be a new type of candidate DNA vaccine candidate for Fasciola hepatica. It is possible that Fasciola hepatica presents different sub-species but their amino acid residues (1 to 20) encoded by FheCL1 might build up membrane spanning helix.

Key words [Fasciola hepatica](#) [cathepsin L1](#) [DNA vaccine](#) [cloning](#)

DOI:

通讯作者

作者个人主

页 张韧;李海云

扩展功能

本文信息

▶ [Supporting info](#)

▶ [PDF \(292KB\)](#)

▶ [\[HTML全文\]\(0KB\)](#)

▶ [参考文献\[PDF\]](#)

▶ [参考文献](#)

服务与反馈

▶ [把本文推荐给朋友](#)

▶ [加入我的书架](#)

▶ [加入引用管理器](#)

▶ [复制索引](#)

▶ [Email Alert](#)

▶ [文章反馈](#)

▶ [浏览反馈信息](#)

相关信息

▶ [本刊中 包含“肝片吸虫”的 相关文章](#)

▶ 本文作者相关文章

· [张韧](#)

· [李海云](#)