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论著

猪囊尾蚴线粒体NADH脱氢酶的基因克隆

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摘要

目的 研究猪囊尾蚴线粒体NADH脱氢酶亚单位1基因的结构特点。 方法 提取猪囊尾蚴mRNA,反转录合成cDNA,构建cDNA文库。用兔抗囊尾蚴抗血清筛选文库,得到阳性克隆,将其亚克隆到pBluescriptSK质粒中测序,并与GenBank中核苷酸序列进行同源性分析。 结果与结论 3次筛选得到1个阳性克隆,其长度为1082bp。其中1～578bp为开放阅读框,编码猪囊尾蚴线粒体NADH脱氢酶亚单位1的192个氨基酸残基,579～1082bp为tRNA-Asn、tRNA-Ile与tRNA-Pro的基因编码区。

关键词 猪囊尾蚴 cDNA文库 NADH脱氢酶

分类号

Cloning and Characterization of Mitochondrial NADH Dehydrogenase Gene of Cysticercus cellulosae

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Abstract

Objective To clone and characterize the NADH1 gene of Cysticercus cellulosae. Methods A cDNA library was constructed from Cysticercus cellulosae and was immunoscreened by using rabbit anti Cysticercus cellulosae polyclonal antibody. The gene structure and its possible function were analyzed by comparing with sequences available in the GenBank, after the insert of positive clone was subcloned and the nucleotide sequence of the insert was determined} by dideoxynucleotide chain termination method. Results and Conclusion A cDNA clone (named TS5) with a length of 1 082 bp was isolated. The 5′ terminal of cloned gene contained one open reading frame of 1-578 bp encoding 192 amino acid residues of mitochondrial NADH dehydrogenase subunit 1 and the 3′ terminal contained three kinds of tRNA genes.

Key words Cysticercus cellulosae cDNA library NADH dehydrogenase

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