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论著

恶性疟原虫FCC1/HN株醛缩酶编码区基因的克隆及表达

张瑞娟[1,2],朱淮民[1],曹毅[1],周爱国[1],郑志强[1],张青锋[1],郑徽[1]
1 第二军医大学病原生物学教研室,上海 200433
2 解放军第306医院,北京 100101

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摘要
目的 克隆恶性疟原虫海南株 (FCC1/HN)株糖酵解醛缩酶 (ALD)编码区基因。 方法 利用已知ALD基因序列设计一对特异性引物,从基因组DNA中用PCR扩增ALD基因,将其克隆入pQE30载体,阳性克隆经酶切鉴定后测序,在此基础上将重组质粒转化大肠埃希菌M15进行表达。 结果 PCR扩增后获得特异性扩增片段,测序结果显示我国的恶性疟原虫FCC1/HN株与恶性疟原虫3D7株ALD基因序列完全相同。重组融合蛋白通过镍 次氮基三乙酸(NiNTA)亲和层析及阳离子交换层析进行纯化。 结论 我国的恶性疟原虫FCC1/HN株与文献报道的恶性疟原虫3D7株ALD编码区基因序列相同,该融合蛋白在大肠埃希菌中获得表达

关键词 恶性疟原虫 醛缩酶 克隆 测序 表达

分类号

Cloning and Expression of Aldolase Encoding Gene of Plasmodium falciparum FCC1/HN Strain

ZHANG Rui-juan,ZHU Huai-min,CAO Yi,ZHOU Ai-guo,ZHENG Zhi-qiang,ZHANG Qing-feng,ZHENG Hui
Department of Pathogenic Biology,The Second Military Medical University,Shanghai,200433,China

Abstract
Objective To clone, sequence, and express the aldolase(ALD)encoding gene of Plasmodium falciparum FCC1/HN strain. Methods The ALD encoding gene was amplified by PCR from genomic DNA of FCC1/HN strain. The positive clones were screened and identified by agarose gel electrophoresis and endonuclease. The recombinant plasmid was transformed into E. coli M15. The fusion protein was expressed by IPTG induction and purified by Ni-NTA affinity chromatography and anion exchange column. Results The ALD gene of P. falciparum was amplified. Analysis of sequencing showed that the ALD gene of P. falciparum was identical with the sequence of other reported isolates. A Mr 41 000 fusion protein was induced by IPTG and was purified by chromatography. Conclusion The ALD gene of P. falciparum FCC1/HN strain was identical to the other reported isolates. ALD fusion protein of P. falciparum was expressed and purified.
Key words *Plasmodium falciparum* Aldolase Cloning Sequencing Expression

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通讯作者
作者个人主页 张瑞娟[1;2];朱淮民[1];曹毅[1];周爱国[1];郑志强[1];张青锋[1];郑徽[1]

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