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红斑丹毒丝菌C43065株spaA基因的克隆和表达

刘丹丹, 杨振龙, 吾鲁木汗·那孜尔别克

(吉首大学生物资源与环境科学学院, 湖南 吉首 416000)

Cloning and Expression of spaA Gene of Erysipelothrix Rhusiopathiae C43065

LIU Dan-Dan, YANG Zhen-Long, WU Lu-Mu-Han · Na-Zi-尔Bie-Ke

(College of Biology and Environmental Sciences, Jishou University, Jishou 416000, China)

- 摘要
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全文: PDF (810 KB) HTML (1 KB) 输出: BibTeX | EndNote (RIS) 背景资料

摘要 通过PCR从红斑丹毒丝菌C43065株基因组DNA中扩增出编码信号肽除外的成熟SpaA蛋白基因spaA, 将其克隆到表达载体pET32a的BamH I和Hind III位点上, 构建重组表达质粒pET-spaA, 转化大肠杆菌BL21, 在IPTG诱导下表达N端带有Trx标签的融合蛋白rSpaA, SDS-PAGE检测表达蛋白.DNA测序结果表明, spaA基因大小为1794 bp, 编码由597个氨基酸残基组成的成熟SpaA蛋白, SDS-PAGE结果显示在大肠杆菌BL21中成功表达了分子量约为86 kDa的重组rSpaA, 为进一步开展SpaA保护区的研究奠定基础.

关键词: 红斑丹毒丝菌 spaA基因 克隆 原核表达

Abstract: The spaA gene encoding mature surface protective antigen A (SpaA) without signal peptide was amplified from genomic DNA of *E. rhusiopathiae* C43065 by PCR, The BamH I and HindIII digested PCR product was cloned into prokaryotic expression vector pET32a to generate a recombinant plasmid pET-spaA. The recombinant protein rSpaA was expressed in *E. coli* BL21 harboring the recombinant plasmid pET-spaA by IPTG inducing, and the expressed protein was determined by SDS-PAGE. The DNA sequence analysis showed that the spaA gene of C43065 strain was 1794 bp in length. SDS-PAGE analysis revealed a single protein band with a molecular weight of 86 kDa successfully expressed in *E. coli* BL21. The expressed protein of rSpaA will contribute to further study on protective domain of this protein.

Key words: *Erysipelothrix rhusiopathiae* spaA gene cloning prokaryotic expression

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通讯作者: 吾鲁木汗·那孜尔别克, 吉首大学生物资源与环境科学学院教授, 博士, 从事畜禽传染病免疫预防, E-mail: ulum@jsu.edu.cn.

作者简介: 刘丹丹 (1987-), 女, 湖南邵东人, 吉首大学生物资源与环境科学学院硕士研究生, 主要从事微生物生态学研究

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