

研究报告

云南野生稻中Xa21基因外显子II的分离及序列分析

钱 君1, 程在全1, 杨明攀2, 刘继梅1, 吴成军1, 黄兴奇 1

1. 云南省农科院生物技术重点实验室, 昆明 650223; 2. 云南大学生命科学学院, 昆明, 650091

收稿日期 2004-5-25 修回日期 2004-11-25 网络版发布日期 接受日期

摘要 Xa21是已经分离克隆的一个具有广谱抗性的水稻白叶枯病抗性基因, 根据已克隆的白叶枯病抗性基因Xa21外显子II序列设计特异性引物对云南三种野生稻及其它稻种进行PCR扩增。结果表明只有普通野生稻(景洪普通野生稻和元江普通野生稻)及长雄野生稻中扩增到了长400 bp的目的片段, 而疣粒野生稻和药用野生稻及栽培稻中均没有扩增到目的片段。通过序列比较发现所克隆的序列同长雄野生稻的氨基酸序列变化是随机的。

关键词 [野生稻](#) [Xa21外显子II](#) [DNA序列](#) [同源性](#) [聚类分析](#)

分类号 [S511.9](#)

Isolation and Sequence Analysis of the Xa21 Gene Exon II Homologs from Different Species of Wild Rice in Yunnan

QIAN Jun1, CHEN Zai-Quan1, YANG Ming-Zhi2, LIU Ji-Mei1, WU Cheng-Jun1, HUANG Xing-Qi

1. Key Laboratory of Biotechnology, Yunnan Academy of Agricultural Science, Kunming 650223, China;
2. College of Life Science, Yunnan University, Kunming 650091, China

Abstract

The Xa21 gene previously cloned from the wild rice species *Oryzae longistaminata* confers broad-spectrum resistance to rice leaf blight caused by different strains of *Xanthomonas oryzae* pv. *oryzae*. Here we attempted to determine the existence of Xa21 homologs in other wild rice species and rice cultivars and the sequence differences between the homologs. We synthesized specific primers based on the reported Xa21 sequence to amplify homologs of the gene exon II from several rice cultivars and three wild rice species in Yunnan Province, China. The fragments cloned from various types of *O. rufipogon* Griff from Jinghong and Yuanjiang, Yunnan Province, were highly homologous to the reported Xa21 gene exon II. However, the fragment was not found in *O. officinalis* Wall. and *O. meyeriana* Baill. Sequence analysis suggested that differences in nucleotides were located randomly in the fragments we cloned.

Key words [wild rice](#) [Xa21 gene exon II](#) [DNA sequence](#) [homology](#) [cluster analysis](#)

DOI:

通讯作者 黄兴奇 xingqih@public.km.yn.cn

扩展功能

本文信息

- ▶ [Supporting info](#)
- ▶ [PDF\(0KB\)](#)
- ▶ [\[HTML全文\]\(0KB\)](#)
- ▶ [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“野生稻”的 相关文章](#)
- ▶ [本文作者相关文章](#)

- [钱 君](#)
- [程在全](#)
- [杨明攀](#)
- [刘继梅](#)
- [吴成军](#)
- [黄兴奇](#)