

农学—研究报告

小麦NBS类抗病相关基因片段RGA-A的初步研究

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摘要:

利用同源序列法分离小麦抗病相关基因同源序列。根据已经克隆的抗病基因保守结构NBS区设计引物, 采用RT-PCR方法对小麦抗叶锈病近等基因系材料TcLr24进行扩增。获得了一条通读的525 bp条带RGA-A, 通过BLASTp比较, 序列中含有典型的NBS保守结构域, 与很多已知植物抗病基因的功能相应区域一致, 编码的蛋白与大麦中抗性蛋白亲缘关系较近。半定量RT-PCR分析表明, RGA-A受叶锈菌诱导表达, 表明该基因在小麦叶片中与抗叶锈性相关。该NBS类抗病基因相关片段的获得为研究小麦抗病基因奠定了基础。

关键词: 同源基因

Primery Study of Resistance Homologenes RGA-A Contained NBS in Wheat

Abstract:

In this study, resistance gene homology cDNA sequence from wheat was isolated by using homology-based method. The primers were designed according to the conserved sequence of resistance gene and a 525 bp fragment was isolated from TcLr24. BLASTp analysis showed that the deduced amino acids of protein consisted of a NBS conserved domain, which were identical to the conserved domains of many plant resistance genes. The sequence appeared to be induced by Puccinia triticina and was induced genes in the wheat leaf tissue by semi-quantitative RT-PCR. The sequence which provide the short cut for researching of wheat resistance gene.

Keywords: homologenes

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