

植物保护—研究报告

两种同时提取小麦根腐离蠕孢菌DNA和RNA的方法比较

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摘要:

获得足够数量和高质量的RNA和DNA是进行分子生物学研究工作的基础。以小麦根腐离蠕孢菌为原料, 分别采用溶菌酶法和液氮研磨法破碎真菌细胞壁提取DNA, 用琼脂糖凝胶电泳、紫外吸收及聚合酶链式反应(PCR)技术进行核酸完整性和纯度检测。结果表明: 两种方法在提取DNA时都同时得到了高质量的RNA; PCR检测结果表明DNA完整性比较高, 两种方法得到的DNA质量相当; 溶菌酶法中得到的RNA质量优于液氮法。利用溶菌酶破壁法提取小麦根腐离蠕孢菌DNA的提取体系可用于RNA的提取, 为小麦根腐离蠕孢菌核酸的DNA和RNA的同时提取提供了一种简便、安全、可行的方法。

关键词: 聚合酶链式反应技术

Comparing Two Methods for Simultaneous Extraction of DNA and RNA for *Bipolaris sorokiniana*

Abstract:

Obtaining sufficient quantity and high quality of RNA and DNA is the base for carrying out researches in molecular biology. DNA from *Bipolaris sorokiniana* was extracted by two cell wall lysis methods using lysozyme and liquid nitrogen grinding methods, respectively. Integrality and purity of nucleic acids were detected with agarose gel electrophoresis, ultraviolet absorption and PCR. Ideal results were obtained, when extracting DNA, high quality RNA was obtained at the same time, by using both methods. The results of PCR indicated that the integrality of DNA was good, The quality of DNA was similar for the two methods used, while the quality of RNA was better when extracted with lysozyme than it with liquid nitrogen grinding. The DNA extraction system of *Bipolaris sorokiniana* by using lysozyme method was suitable for RNA extraction, it provided a simple, safe and feasible method for extracting both DNA and RNA at the same time from *Bipolaris sorokiniana*.

Keywords: PCR

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