

黄瓜棒孢叶斑病菌PCR检测方法的建立

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PCR Assay for Detection of *Corynespora cassiicola*, the Causal Agent of *Corynespora* Leaf Spot of Cucumbe

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摘要 根据黄瓜棒孢叶斑病菌多主棒孢 (*Corynespora cassiicola*) 与棒孢属女贞棒孢 (*Corynespora lieustri*)、威尔士棒孢 (*Corynespora cambrensis*) 和其他常见病原真菌Actin 基因序列差异, 设计多主棒孢的特异性引物Caa5F/Caa5R, 建立了黄瓜棒孢叶斑病菌的PCR 检测方法, 可对引起黄瓜棒孢叶斑病的病原菌扩增出160 bp 的特异性条带, 检测灵敏性为4 pg · μL⁻¹ DNA, 并可从接种后发病的黄瓜叶片总DNA 中检测到特异条带。该引物的PCR 检测方法灵敏性较高, 可直接检测植株总DNA, 无需病原菌的分离培养, 适用于对黄瓜棒孢叶斑病特异快速的检测。

关键词: 黄瓜棒孢叶斑病菌 检测方法 Actin 基因 PCR 检测

Abstract: A rapid PCR detection assay of *Corynespora cassiicola*, the causal agent of *Corynespora* leaf spot of cucumber, was developed based on the Actin gene of the pathogen. Primer pair Caa5F/Caa5R were designed on the different bases of Actin gene sequences between *C. cassiicola* and other common plant fungal pathogens, including *Corynespora lieustri* and *Corynespora cambrensis*, and only *C. cassiicola* performed a 160 bp amplication. *C. cassiicola* could be detected in infected cucumber leaves without isolation or cultivation by the PCR assay. The assay with a high sensitivity of 4 pg · μL⁻¹ DNA per reaction could be a useful tool of rapid detection of *Corynespora* leaf spot of cucumber.

Keywords: *Corynespora cassiicola*, Actin gene, PCR

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