

农学—研究进展

流式细胞术在植物学研究中的应用——检测植物核DNA含量和倍性水平

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摘要:

流式细胞仪作为高效的检测工具,在植物学研究的多个领域都发挥了重要作用。兰州大学干旱与草地生态教育部重点实验室分子生态所通过大量的植物流式细胞术实验,针对检测植物核DNA含量和倍性水平,总结出一套详细通用的实验方法。同时着重阐述了各个实验环节的关键点。分析因碎片过多而导致实验失败的原因,并提供了切实可行的解决方法。对今后检测各种植物具有重大指导意义,同时也促进了流式细胞术在植物学研究中的应用。

关键词: C值

Applications of Flow Cytometry in Plant Research——Analysis of Nuclear DNA Content and Ploidy Level in Plant Cells

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Abstract:

As an efficient tool to measure the nuclear DNA content and ploidy level, flow cytometry has been playing very important role in many fields of botany research. Through plenty of flow cytometry experiments, a set of universal experimental procedure for detecting the nuclear DNA content and ploidy level was summarized in the laboratory of molecular ecology, Lanzhou University. At the same time, we had elaborated key points at every experimental stage and solutions to the problems caused by too much fragments which could result in the failure of an experiment, which might provide guidance for the future experiments, and promote applications of flow cytometry in plant research.

Keywords: C-value

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