

# ISSR分子标记及其在植物遗传学研究中的应用

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**摘要** ISSR分子标记是在SSR标记基础上发展起来的一种新技术,其基本原理是在SSR的5'或3'端加锚1~4个嘌呤或嘧啶碱基,然后以此为引物,对两侧具有反向排列SSR的一段基因组DNA序列进行扩增。重复序列和锚定碱基是随机选择的,扩增产物经聚丙烯酰胺或琼脂糖凝胶电泳分离后,每个引物可以产生比RAPD方法更多的扩增片段,因此,ISSR标记是一种快速、可靠、可以提供有关基因组丰富信息的DNA指纹技术。ISSR标记呈孟德尔式遗传,在多数物种中是显性的,目前已广泛用于植物品种鉴定、遗传作图、基因定位、遗传多样性、进化及分子生态学研究。

ISSR Markers and Their Applications in Plant Genetics

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**Abstract:** Recently, inter-simple sequence repeat (ISSR) markers have emerged as an alternative system with reliability and advantages of microsatellites (SSR). The technique involves amplification of genomic segments flanked by inversely oriented and closely spaced microsatellite sequences by a single primer or a pair of primers based on SSRs anchored 5' or 3' with 1-4 purine or pyrimidine residues. The sequences of repeats and anchor nucleotides are arbitrarily selected. Coupled with the separation of amplification products on a polyacrylamide or agarose gels, ISSR amplification can reveal a much larger number of fragments per primer than RAPD. It is concluded that ISSR technique provides a quick, reliable and highly informative system for DNA fingerprinting. ISSR markers are inherited in Mendelian mode and segregated as dominant markers. This technique has been widely used in the studies of cultivar identification, genetic mapping, gene tagging, genetic diversity, evolution and molecular ecology.

**Key words:** molecular markers; ISSR; plant; applications

**关键词** [分子标记](#) [ISSR](#) [植物](#) [应用](#)

分类号

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## Abstract

## Key words

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