

石刁柏花粉植株诱导及其起源鉴定的研究¹⁾

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摘要 采用高渗蔗糖溶液预处理石刁柏花药可以显著抑制花药体细胞分裂和提高花粉愈伤组织诱导率。愈伤组织在转入含低浓度激素的培养其中分化得到了花粉植株。其中单倍体、二倍体、四倍体和非整倍体分别占4.3%、64.5%、17.2%和14.0%。单倍体的频率随愈伤组织培养时间延长而下降。石刁柏幼茎中莽草酸脱氢酶同工酶的多态性表现稳定, 用其作为遗传标记结合细胞学方法可以鉴定花粉植株的起源。

关键词 [石刁柏,花药培养,同工酶标记](#)

分类号

The Induction and Identification of Pollen-originated Plants of Asparagus via Anther Culture

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Abstract

In anther culture of asparagus, pretreating anthers with hypertonic sucrose solution is effective in inhibiting the division of anther wall somatic cells and raising the induction frequency of pollen calli. Plants were regenerated on the medium containing low concentration of plant growth regulators and sucrose, and the percentage of haploids, diploids, tetraploids and aneuploids were 4.3%, 64.5%, 17.2% and 14.0% respectively. The haploid frequency decreased in plants derived from long-term cultured calli. Using the stem shikimate dehydrogenase isozyme marker combined with root or shoot tip chromosome numbering, we can identify the pollen-originated plants of asparagus.

Key words [Asparagus officinalis L.](#) [Anther culture](#) [Isozyme marker](#)

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