

植物诱变育种 • 农业生物技术

小麦新品系2-26中抗白粉病基因的遗传分析和RAPD标记

赵勤, 白罗, 傅体华

四川农业大学农学院,四川 成都 611130

摘要:

由小麦白粉病菌引起的白粉病是世界上很多小麦种植区的主要病害之一。本研究对稳定抗白粉病品系2-26中的抗病基因采用常规遗传方法进行了分析。结果表明,2-26中存在一对显性抗白粉病基因,暂命名为*Pm2-26*。运用RAPD方法对白粉病抗感亲本和抗感池进行DNA多态性分析,获得2个紧密连锁的RAPD标记(SBSC2和SBSI20),为进一步转化为稳定可靠的SCAR标记提供了基础。

关键词: 小麦 白粉病 抗性基因 分子标记

GENETIC ANALYSIS AND RAPD MARKERS OF POWDERY MILDEW RESISTANCE GENE IN WHEAT LINE 2-26

ZHAO Qin, BAI Luo, FU Ti-hua

Agronomy College, Sichuan Agricultural University, Chengdu, Sichuan 611130

Abstract:

Powdery mildew, caused by *Blumeria Graminis* f.sp. *tritici*, is one of the most important damaging diseases in many regions of the world. In present study, genetic analysis of resistance for powdery mildew in a stable wheat line 2-26, which was derived from the hybrid progeny between *Triticum durum-Dasypyrum villosum* amphiploid and common wheat, was carried out. The result indicated the powdery mildew resistance in line 2-26 is controlled by a single dominant gene and temporarily named *Pm2-26*. Molecular markers and bulked sergeant analysis were used to characterized the powdery mildew resistance gene. Two RAPD markers (SBSC2 and SBSI20) were found tightly linked to the resistance gene in line 2-26. These results provided a basis to further transfer into stable SCAR marker in future. In addition, the gene origin in line 2-26 and relationships with other resistance genes were also discussed in this paper.

Keywords: wheat powdery mildew resistance gene molecular marker

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通讯作者: 傅体华(1965-),男,四川安岳人,教授,主要从事植物遗传与育种学研究。Tel:028-86290866;E-mail:futihua@yahoo.com.cn

作者简介: 赵 勤(1958-),女,山东矩野人,实验师,主要从事遗传学实验教学及研究。Tel:028-86290978;E-mail:z654321q@163.com

作者Email: futihua@yahoo.com.cn

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