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小麦耐盐突变体的分子生物学鉴定 Molecular Biological Identification of Wheat Salt Tolerant Lines

秘彩莉, 沈银柱, 黄占景, 何聪芬,柏峰, 马闻师, 赵宝存, 葛荣朝 BI Cai-li, SHEN Yin-zhu, HUANG Zhan-jing, HE Cong-fen, BAI Feng, MA Wen-shi, ZHAO Bao-cun, GE Rong-chao
河北师范大学生物系,河北石家庄050016 Biology Department of Hebei Normal University,Shijiazhuang050016,China

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摘要 利用F1花药培养、EMS诱变和耐盐性反复筛选后已稳定9代的小麦耐盐突变体RH8706-49、H8706-34、H8706-44、H8706-48、H8706-57及其亲本濮农3665、百农3039为材料，用生化标记（醇溶蛋白）及分子标记（RAPD）分析了各材料间的差异，发现突变体与亲本相比，不仅发生了蛋白质水平的变异，而且也在DNA水平上证明了突变的发生，从而为耐盐突变体的真实性提供了有力的证据，排除了盐适应的可能性； 经用218 个引物对5个突变体之间的多态性进行RAPD分析，结果表明，它们之间的差异很小，其遗传背景相似，因而它们是一系列耐盐性不同的近似等位基因系。

Abstract: In this paper, 5 wheat salt tolerant mutants (H8706-34、H8706-44、H8706-48、RH8706-49、H8706-57) derived from anther culture、EMS induction and salt tolerance selection and their parents (Punong3665、Bainong3039) were used as materials, all the mutants have inherited stably for 9 generations. Differences were revealed between the mutants and their parents using chemical marker (gliadin) and molecular marker (RAPD), the results showed that compared with the parents, the mutants varied not only on the protein level, but also on the DNA level, which supplied hard evidence of the truth of the mutants and ruled out the possibility of salt adaptation. RAPD analysis were conducted among the 5 mutants by 218 primers, which proved they were a series of near isogenic lines of different salt tolerance because of their little difference and similar genetic background.

关键词 小麦 耐盐突变体 醇溶蛋白 RAPD Key words Wheat Salt tolerant mutants Gliadin RAPD
分类号

Abstract

Key words

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通讯作者