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[1] 盛新颖, 詹少华, 樊洪泓, 等. 利用SSR分子标记鉴定“梅桥”大豆种质纯度[J]. 大豆科学, 2010, 29(02): 210-214. [doi:10.11861/j.issn.1000-9841.2010.02.0210]
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利用SSR分子标记鉴定“梅桥”大豆种质纯度

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摘要: “梅桥”大豆是安徽省淮北地区农家菜用大豆品种, 长期的连续种植导致纯度比较混杂, 产量明显下降, 利用SSR分子标记技术对92单株“梅桥”大豆种质纯度进行鉴定, 以期对梅桥大豆的提纯复壮提供理论依据。结果表明: 采用改良的CTAB方法, 可以提取高质量的大豆基因组DNA; 在优化SSR-PCR反应体系的基础上, 筛选出8对SSR引物, 平均每个引物得到条带数10.6个, 条带的多态性频率为70.9%, 梅桥大豆的种质纯度为38.04%。

Abstract: “Meiqiao” is a vegetable soybean with good quality in Huaibei Anhui Province, as result of continuous cultivation, the purity and yield reduced seriously. In this article, 92 plants were selected to identify the purity using SSR molecular markers so that it could provide theoretical guide for purification and rejuvenation of “Meiqiao” Soybean. The results showed that the high quality soybean genomic DNA was extracted by improved CTAB method, under optimization of SSR-PCR reaction system, eight SSR primers were selected and 10.6 bands were obtained from each one, the rate of polymorphic bands was 70.9%, the purity of “Meiqiao” Soybean germplasm was 38.04%.

参考文献/References:

- [1] 宋启建. 大豆SSR分子标记的创制及其应用[J]. 大豆科学, 1999, 18(3): 248-254. (Song Q J. A Review of development and application of simple sequence repeats (SSR) in soybean [J]. Soybean Science, 1999, 18(3): 248-254.)
- [2] 詹少华, 盛新颖, 樊洪泓, 等. 大豆EST序列长度与SSR特性的关系[J]. 大豆科学, 2009, 28(2): 204-209. (Zhan S H, Sheng X Y, Fan H H, et al. Relationship between the length of soybean ESTs sequence and characters of EST-SSR[J]. Soybean Science, 2009, 28(2): 204-209.)
- [3] 王凤格, 赵久然, 王璐, 等. 适于玉米杂交种纯度鉴定的SSR核心引物的确定[J]. 农业生物技术学报, 2007, 5(6): 964-969. (Wang F G, Zhao J R, Wang L, et al. Determination of SSR core primers for maize hybrid purity identification [J]. Journal of Agricultural Biotechnology, 2007, 5(6): 964-969.)
- [4] 李艺, 铁双贵, 朱位红, 等. 鉴定玉米杂交种郑单958种子纯度的SSR标记筛选[J]. 玉米科学, 2008, 16(1): 40-43. (Li Y, Tie S G, Zhu W H, et al. Selection of SSR markers for Zhengdan 958 maize hybrid seed purity identification [J]. Journal of Maize Sciences, 2008, 16(1): 40-43.)
- [5] 刘之熙, 陈祖武, 朱克永, 等. 利用SSR分子标记快速鉴定杂交水稻种子纯度技术体系的优化[J]. 杂交水稻, 2008, 23(1): 60-63. (Liu Z X, Chen Z W, Zhu K Y, et al. Optimization of the rapid purity identification system of hybrid rice seeds by using SSR markers[J]. Hybrid Rice, 2008, 23(1): 60-63.)
- [6] 李驰, 卢新雄, 张志斌, 等. 利用SRAP和SSR分子标记检测分析29份棉花种质遗传完整性[J]. 植物遗传资源学报, 2007, 8(1): 21-25. (Li C, Lu X X, Zhang Z B, et al. Genetic integrity analysis of cotton (Gossypium hirsutum L. var.) accessions using SRAP and SSR markers [J]. Journal of Plant Genetic Resources, 2007, 8(1): 21-25.)

- [7]李菊芬, 许玲, 马国斌. 应用SSR分子标记鉴定甜瓜杂交种纯度[J]. 农业生物技术学报, 2008, 16 (3): 494-500. (Li J F, Xu L, Ma G B. Identification of melon hybrid purity by SSR markers[J]. Journal of Agricultural Biotechnology, 2008, 16 (3): 494-500.)
- [8]谢皓, 陈学珍, 于同泉, 等. 一种大豆品种纯度鉴定方法与程序的建立[J]. 种子, 2007, 26(9): 104-107. (Xie H, Chen X Z, Yu T Q, et al. Development of the method and procedure of variety purity identification in soybean[J]. Seed, 2007, 26(9): 104-107.)
- [9]田蕾, 关荣霞, 刘章雄, 等. 用SSR标记鉴定大豆杂交组合F₁的方法研究[J]. 植物遗传资源学报, 2008, 9(4): 443-447. (Tian L, Guan R X, Liu Z X, et al. Verity identification of soybean hybrids using SSR markers[J]. Journal of Plant Genetic Resources, 2008, 9(4): 443-447.)
- [10]Diwan N, P R Cregan. Automated sizing of fluorescent - labeled simple sequence repeat (SSR) markers to assay genetic variation in soybean[J]. Theoretical and Applied Genetics, 1997, 95:723-733.
- [11]关荣霞, 刘燕, 刘章雄, 等. 利用SSR方法鉴定大豆品种纯度[J]. 分子植物育种, 2003, 1(3): 357-360. (Guan R X, Liu Y, Liu Z X, et al. Purity identification of soybean varieties with SSR technique[J]. Molecular Plant Breeding, 2003, 1(3): 357-360.)
- [12]詹少华, 尹艺林. 大豆基因组DNA提取纯化方法研究[J]. 安徽农业科学, 2008, 36(23):9871- 9872, 9928. (Zhan S H, Yin Y L. Study on extraction and purification methods of soybean genomic DNA[J]. Journal of Anhui Agricultural Science, 2008, 36(23): 9871-9872, 9928.)
- [13]冯国军, 徐启江, 李玉花, 等. 普通菜豆SSR反应条件的优化[J]. 东北农业大学学报, 2007, 38(1): 27-34. (Feng G J, Xu Q J, Li Y H, et al. Optimal condition for simple sequence repeat in common bean (*Phaseolus vulgaris*L.)[J]. Journal of Northeast Agricultural University, 2007, 38(1): 27-34.)
- [14]Powell W, Machray G C, Provan J. Polymorphism revealed by simple sequence repeats [J]. Trends Plant Science, 1996, 1(7): 215-222.
- [15]秦君, 李英慧, 刘章雄, 等. 用SSR分子标记解析大豆品种绥农14与系谱亲本间的遗传关系[J]. 中国农业科学, 2008, 41 (12): 3999-4007. (Qin J, Li Y H, Liu Z X, et al. Genetic relationship among parents of elite soybean (*Glycine max*) cultivars Suinong 14 pedigree revealed by SSR markers[J]. Scientia Agricultura Sinica, 2008, 41(12): 3999-4007.)

相似文献/References:

- [1]刘章雄, 李卫东, 孙石, 等. 1983-2010年北京大豆育成品种的亲本地理来源及其遗传贡献[J]. (article.aspx?type=view&id=201301001)大豆科学, 2013, 32(01):1. [doi:10.3969/j.issn.1000-9841.2013.01.002]
LIU Zhang-xiong, LI Wei-dong, SUN Shi, et al. Geographical Sources of Germplasm and Their Nuclear Contribution to Soybean Cultivars Released during 1983 to 2010 in Beijing[J]. Soybean Science, 2013, 32(02):1. [doi:10.3969/j.issn.1000-9841.2013.01.002]
- [2]李彩云, 余永亮, 杨红旗, 等. 大豆脂质转运蛋白基因GmLTP3的特征分析[J]. (article.aspx?type=view&id=201301002)大豆科学, 2013, 32(01):8. [doi:10.3969/j.issn.1000-9841.2013.01.003]
LI Cai-yun, YU Yong-liang, YANG Hong-qi, et al. Characteristics of a Lipid-transfer Protein Gene GmLTP3 in *Glycine max*[J]. Soybean Science, 2013, 32(02):8. [doi:10.3969/j.issn.1000-9841.2013.01.003]
- [3]王明霞, 崔晓霞, 薛晨晨, 等. 大豆耐盐基因GmHAL3a的克隆及RNAi载体的构建[J]. (article.aspx?type=view&id=201301003)大豆科学, 2013, 32(01):12. [doi:10.3969/j.issn.1000-9841.2013.01.004]
WANG Ming-xia, CUI Xiao-xia, XUE Chen-chen, et al. Cloning of Halotolerance 3 Gene and Construction of Its RNAi Vector in Soybean (*Glycine max*) [J]. Soybean Science, 2013, 32(02):12. [doi:10.3969/j.issn.1000-9841.2013.01.004]
- [4]张春宝, 李玉秋, 彭宝, 等. 线粒体ISSR与SCAR标记鉴定大豆细胞质雄性不育系与保持系[J]. (article.aspx?type=view&id=201301005)大豆科学, 2013, 32(01):19. [doi:10.3969/j.issn.1000-9841.2013.01.005]
ZHANG Chun-bao, LI Yu-qiu, PENG Bao, et al. Identification of Soybean Cytoplasmic Male Sterile Line and Maintainer Line with Mitochondrial ISSR and SCAR Markers[J]. Soybean Science, 2013, 32(02):19. [doi:10.3969/j.issn.1000-9841.2013.01.005]
- [5]卢清瑶, 赵琳, 李冬梅, 等. RAV基因对拟南芥和大豆不定芽再生的影响[J]. (article.aspx?type=view&id=201301006)大豆科学, 2013, 32(01):23. [doi:10.3969/j.issn.1000-9841.2013.01.006]
LU Qing-yao, ZHAO Lin, LI Dong-mei, et al. Effects of RAV gene on Shoot Regeneration of Arabidopsis and Soybean [J]. Soybean Science, 2013, 32(02):23. [doi:10.3969/j.issn.1000-9841.2013.01.006]
- [6]杜景红, 刘丽君. 大豆fad3c基因沉默载体的构建[J]. (article.aspx?type=view&id=201301007)大豆科学, 2013, 32(01):28. [doi:10.3969/j.issn.1000-9841.2013.01.007]
DU Jing-hong, LIU Li-jun. Construction of fad3c Gene Silencing Vector in Soybean[J]. Soybean Science, 2013, 32(02):28. [doi:10.3969/j.issn.1000-9841.2013.01.007]
- [7]张伟伟, 樊颖伦, 牛腾飞, 等. 大豆“冀黄13”突变体筛选及突变体库的建立[J]. (article.aspx?type=view&id=201301008)大豆科学, 2013, 32(01):33. [doi:10.3969/j.issn.1000-9841.2013.01.008]
ZHANG Li-wei, FAN Ying-lun, NIU Teng-fei, et al. Screening of Mutants and Construction of Mutant Population for Soybean Cultivar "Jihuang13" [J]. Soybean Science, 2013, 32(02):33. [doi:10.3969/j.issn.1000-9841.2013.01.008]
- [8]盖江南, 张彬彬, 吴瑶, 等. 大豆不定胚悬浮培养基因型筛选及基因枪遗传转化的研究[J]. (article.aspx?type=view&id=201301009)大豆科学, 2013, 32(01):38. [doi:10.3969/j.issn.1000-9841.2013.01.009]
GAI Jiang-nan, ZHANG Bin-bin, WU Yao, et al. Screening of Soybean Genotypes Suitable for Suspension Culture with Adventitious Embryos and Genetic Transformation by Particle Bombardment[J]. Soybean Science, 2013, 32(02):38. [doi:10.3969/j.issn.1000-9841.2013.01.009]
- [9]王鹏飞, 刘丽君, 唐晓飞, 等. 适于体细胞胚发生的大豆基因型筛选[J]. (article.aspx?type=view&id=201301010)大豆科学, 2013, 32(01):43. [doi:10.3969/j.issn.1000-9841.2013.01.010]
WANG Peng-fei, LIU Li-jun, TANG Xiao-fei, et al. Screening of Soybean Genotypes Suitable for Somatic Embryogenesis [J]. Soybean Science, 2013, 32(02):43. [doi:10.3969/j.issn.1000-9841.2013.01.010]
- [10]刘德兴, 年海, 杨存义, 等. 耐酸铝大豆品种资源的筛选与鉴定[J]. (article.aspx?type=view&id=201301011)大豆科学, 2013, 32(01):46. [doi:10.3969/j.issn.1000-9841.2013.01.011]
LIU De-xing, NIAN Hai, YANG Cun-yi, et al. Screening and Identifying Soybean Germplasm Tolerant to Acid Aluminum [J]. Soybean Science, 2013, 32(02):46. [doi:10.3969/j.issn.1000-9841.2013.01.011]
- [11]魏巍, 薛永国, 王伟威, 等. 应用关联分析鉴定大豆对腐霉菌的抗性基因[J]. (article.aspx?type=view&id=201303004)大豆科学, 2013, 32(03):295. [doi:10.11861/j.issn.1000-9841.2013.03.0295]
WEI Lai, XUE Yong-guo, WANG Wei-wei, et al. Identification of Resistance Genes to Pythium Species in Soybeans by Association Analysis[J]. Soybean Science, 2013, 32(02):295. [doi:10.11861/j.issn.1000-9841.2013.03.0295]
- [12]焦东燕, 刘兵强, 闫龙, 等. 大豆亲本差异对杂种F₁产量的影响[J]. (article.aspx?type=view&id=201104009)大豆科学, 2011, 30(04):574. [doi:10.11861/j.issn.1000-9841.2011.04.0574]
JIAO Dong-yan, LIU Bing-qiang, YAN Long, et al. Effect of Soybean Parental Difference on F₁ Yield Heterosis [J]. Soybean Science, 2011, 30(02):574. [doi:10.11861/j.issn.1000-9841.2011.04.0574]
- [13]董建生, 杨守萍, 喻德跃, 等. 大豆质核互作雄性不育系NJCMS2A的育性恢复性遗传和育性恢复基因的SSR标记[J]. (article.aspx?type=view&id=200802001)大豆科学, 2008, 27(02):181. [doi:10.11861/j.issn.1000-9841.2008.02.0181]
DONG Jian-sheng, YANG Shou-ping, YU De-yue, et al. Inheritance and Gene Tagging of Male Fertility Restoration of Cytoplasmic-Nuclear Male Sterile Line NJCMS2A in Soybean[J]. Soybean Science, 2008, 27(02):181. [doi:10.11861/j.issn.1000-9841.2008.02.0181]
- [14]王惠, 于佰双, 段玉玺, 等. 大豆胞囊线虫抗性基因的SSR标记研究[J]. (article.aspx?type=view&id=200702018)大豆科学, 2007, 26(02):204. [doi:10.3969/j.issn.1000-9841.2007.02.018]

WANG Hui, YU Bai-shuang, DUAN Yu-xi, et al. A SENSITIVE MOLECULAR MARKER SSR ASSOCIATED WITH RESISTANT GENE TO HETERODERA GLYCINES[J]. Soybean Science, 2007, 26(02):204. [doi:10.3969/j.issn.1000-9841.2007.02.018]
[15]夏冰, 卢新雄, 陈晓玲, 等. 利用SSR分子标记检测分析30份大豆种质遗传完整性[J]. (article.aspx?type=view&id=200703003)大豆科学, 2007, 26(03):305. [doi:10.3969/j.issn.1000-9841.2007.03.003]
XIA Bing, LU Xin-xiong, CHEN Xiao-ling, et al. DETECTION OF GENETIC INTEGRITY OF SOYBEAN GERMPLASM USING SSR MARKERS[J]. Soybean Science, 2007, 26(02):305. [doi:10.3969/j.issn.1000-9841.2007.03.003]

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