遗传 2003 25 (5): 583-586 ISSN: 0379-4172 CN: 11-5450/R

快速简便筛选cDNA文库的SSS法 SSS Method for Screening cDNA Library

瞿文全1,2,金治平1,赵德修1,陈亚琼1,2,李名扬2 QU Wen-Quan1,2,JIN Zhi-Ping1,ZHAO De-Xiu1,CHEN Ya-Qiong1,2,LI Ming-Yang2
1.中国科学院植物研究所,北京 100093; 2.西南农业大学农业生物技术中心,重庆 400716 1.Key Laboratory of Photosynthesis and Environmental Molecular Physiology,No.249101070,Institute of Botany,Chinese Academy of Sciences,Beijing 100093,China; 2.Central of Agricultural Biotechnology,Southwest Agricultural University,Chongqing 400716,China

收稿日期 修回日期 网络版发布日期 接受日期

摘要 建立了一种快速简便筛选cDNA文库的方法—SSS法（subsection screening）。该方法用cDNA噬菌体平板划块分组和根据目的基因设计的一对特异性引物，用PCR技术逐级筛选cDNA文库获得目的基因。与其它筛选cDNA文库的方法相比，该方法范围可控，目标明确，易于获得目的基因，而且快速、简捷、省时，一般可在一周内筛选出目的基因。本实验室利用该方法在半个月内筛选出了一个查耳酮异构酶(chalcone isomerase)(CHI)基因，一个黄酮类化合物3′-羟化酶(flavonoid 3′ hydroxylase)(F3′H)基因，一个热激蛋白(heat shock protein)(HSP)基因和一个1 484 bp 热激蛋白基因片段。此方法用于同时筛选多个基因，可收到事半功倍的效果，对其它文库筛选也有借鉴意义。

Abstract:A quick and simple method subsection screening (SSS) method for screening cDNA library by PCR was established.With this method,cDNA phage plate was cut into several blocks and a couple of primers was designed according to target gene.And then the target genes were obtained by screening cDNA library.Comparing with other methods,this method has many advantages such as controlled range and clear target,and also quick and simple for obtaining the target genes.It is possible to get a target gene in one week in general by this method.Thus,the CHI gene,F3′H gene,HSP gene and one HSP partial fragment,were obtained respectively in half month in our lab.We can get twice the result with half the effort when we screen several genes in the same time.It is also suitable to screen other libraries.

关键词 SSS法 cDNA文库 PCR 文库筛选 Key words subsection screening method cDNA library PCR library screening
分类号

Abstract

Key words

DOI:

通讯作者