

研究论文

抗玉米素核苷的单克隆抗体制备及内源玉米素核苷的酶联免疫吸附测定

张龙 季本仁 段金玉

中国科学院昆明植物研究所

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摘要 通过二次成功的细胞融合, 共获得三株分泌抗玉米素核苷(ZR)单克隆抗体的稳定杂交瘤系F2E6、F3G6和F1B9. 其中F2E6分泌的单抗属IgG1、F3G6、F1B9分泌的单抗均属IgM. 以F2E6、F3G6单抗为的ELISA对ZR的检测灵敏度为0.05pmol(-18pg), 线性检测范围为0.05-50pmol. 除玉米素(Z)外, F2E6、F3G6单抗与IPA、6-BA、KT和腺苷几种ZR类似物的交叉反应值都小于0.18%. 用ELISA测定F2E6单抗与ZR反应的亲和常数为 $2.36 \pm 0.99 \times 10^{-8} M$. 本文还报道了包埋抗原的ELISA在植物内源细胞分裂素测定中的应用, 并用此方法测定了黄化玉米(*Zea mays L.*)幼苗中ZR的含量。

关键词 [细胞分裂素](#) [玉米素核苷](#) [单克隆抗体](#) [酶联免疫吸附测定法](#)

分类号

THE PREPARATION OF MONOCLONAL ANTIBODIES AGAINST ZEATIN RIBOSIDE AND THE DETECTION OF ENDOGENOUS CYTOKININS BY ENZYME-LINKED IMMUNOABSORBENT ASSAY (ELISA)

Zhang Long, Ji Benren, Duan Jinyu

Kunming Institute of Botany, Chinese Academy of Sciences, Kunming 650204

Abstract

Abstract Three hybridomas, F2E6, F1B9, F3G6, which secreted monoclonal anti-zeatin riboside antibodies, were produced from two successive fusions of BALB/c spleen cells with Sp2/0 myeloma cells. The mice had been hypersensitized with zeatin riboside-bovine serum albumin conjugate for about 6 months and the positive hybridomas were screened by indirect enzyme-linked immunosorbent assay. Among these hybridomas, F2E6 secretes antibody of the IgG1, both F3G6 and F1B9 secrete the IgM. Two of the monoclonal antibodies, F2E6, F3G6, were characterized by ELISA and found that the detection limits were 0.05 pmol (~18pg) of zeatin riboside and the measuring ranges extended from 0.05-50 pmol.

Key words [Monoclonal antibody](#) [Zeatin riboside](#) [Cytokinins](#) [ELISA](#)

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