

研究论文

# 玉米(*Zea mays* L.)两个广谱抗病基因rip和pal 1的原位杂交定位

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收稿日期 1998-8-29 修回日期 1998-12-18 网络版发布日期 接受日期

**摘要** 本文以玉米自交系黄早四为供试材料, 采用cDNA为探针, 对低拷贝小片段的rip和pall基因进行了定位。用生物素标记和相应的酶联级联放大检测系统, 在第8和第3染色体长臂上检测到rip基因的杂交信号, 信号与着丝粒百分距离分别为 $23.66 \pm 1.32$ 和 $72.47 \pm 3.16$ 。在第5和第4染色体长臂以及第2染色体短臂上检测到pal 1基因位点, 信号与着丝粒的百分距离分别为 $20.85 \pm 1.08$ ,  $61.63 \pm 2.21$ 和 $28.23 \pm 0.82$ 。

**关键词** [玉米](#) [rip基因](#) [pal 1基因](#) [原位杂交](#)

分类号

## Mapping of the Two Resistance Genes rip and pal 1 by in situ Hybridization

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**Abstract** In this paper, the low copy genes rip and pall were physically mapped by in situ hybridization. With biotinylated cDNA probes of the two genes and DAB detection, the signals of the rip gene were detected in the long arms of the eighth and third chromosomes. The percent distances from centromere to detection site were respectively  $23.66 \pm 1.32$ ,  $72.47 \pm 3.16$ . And the pall gene was located in the long arms of both the fifth and fourth chromosomes, the short arm of the second chromosome. The percent distances were respectively  $20.85 \pm 1.08$ ,  $61.63 \pm 2.21$ ,  $28.23 \pm 0.82$ .

**Key words** [Maize](#); [Gene rip](#); [Gene pal1](#); [In situ hybridization](#)

DOI:

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