

小麦苯丙氨酸解氨酶基因和几丁质酶基因转录起始点的鉴定 Identification of the Transcription Start Sites of a Phenylalanine Ammonia-lyase Gene and a Chitinase Gene From Wheat

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摘要 本文应用改良的引物延伸法, 鉴定了一个小麦的苯丙氨酸解氨酶和几丁质酶基因的转录起始点。这种方法只需少量同位素, Sephadex G-25柱和严格的杂交条件。利用两种基因的特异引物及总RNA进行的引物延伸反应产物在电泳的凝胶上均呈现一条十分清楚的带, 表明这两种多拷贝小麦基因的转录分别起始于一个核苷酸。小麦苯丙氨酸解氨酶基因的转录起始点5' -CTGCCGAGT-3' 序列中的第2个C; 而小麦几丁质酶基因转录起始点为5' -ATCACCAGC-3' 序列中的第2个A。它们都分别位于各自基因TATA盒的下游。

Abstract:An improved procedure for primer extension analysis was used to identify the transcription start site of a phenylalanine ammonia-lyase(PAL)gene and a chitinase gene from wheat.This procedure requires less amount of isotope, a Sephadex G-25 column and highly stringent hybridization conditions,One distinct band was detected in each primer extension reaction with total RNA extracted from wheat leaves and the primers specific for the wheat genes.These results indicated that the transcriptions for both genes were initiated at a single nucleotide respectively.For the PAL gene,the band corresponded to the position of the second C in the sequence 5' -CTGCCGAGT-3' .while for the chitinase gene,it corresponded to the second A in the sequence 5' -ATCACCAGC-3' .Both transcription start sites are located downstream of their TATA box.

关键词 [引物延伸法](#) [小麦](#) [苯丙氨酸解氨酶基因](#) [几丁质酶基因](#) **Key words** [Primer extension analysis](#) [Wheat](#) [Phenylalanine ammonia-lyase gene](#) [Chitinase gene](#)

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