

## SEASONAL DIFFERENCES IN TRANSCRIPT INITIATION FROM PROMOTERS OF TWO PEACH DEHYDRIN GENES:

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A peach genomic clone, G10a, carries two dehydrin genes in tandem. The first gene, Ppdhn1, represents a Y2K9-type dehydrin based on the presence of conserved 'Y' and 'K' domains. The second gene, Ppdhn2, encodes a Y2SK3-type. G10a encodes approximately 1100 bp 5' of the Ppdhn1 translation start site and contains the full length promoter. Likewise, the region between Ppdhn1 and Ppdhn2 (1120 bp) contains the entire promoter for Ppdhn2. cDNAs were synthesized from total RNA isolated from peach bark tissue at various times during the year. These cDNAs served as templates for different primer combinations designed to detect transcripts initiating from various regions of each promoter. Ppdhn1 transcripts from July, January and February bark appeared to originate predominantly from two regions of the Ppdhn1 promoter, whereas transcripts from December, May and June bark apparently initiated from only one region. Although Ppdhn2 transcripts were also detected from two regions of the Ppdhn2 promoter in July, January and February bark, no transcripts were observed from bark isolated in August, December, March, May or June. These results suggest that multiple signals are acting on the two promoters at different times of the year and that some of these signals affect transcript abundance of the two Ppdhn promoters differently.