

MK000068=G/427:G/469

Marker: G/427:G/469

Type: Codominant PCR

Description:

Reference: Euphytica 127: 353–365, 2002. PCR-based markers to differentiate the mitochondrial genomes of

petaloid and male fertile carrot (*Daucus carota* L.) Inga C. Bach, Annette Olesen & Philipp W. Simon,

Primers: atp9-d1 (a).....5'-GAAGGTGCAAAATCAATAGG-3'

cmt-9 (b)5'-TACATGGACTTTAAATTGACTTCT-3'

PCR Reaction: 20 µl: [0.4 µg/ml DNA=8 ng; 0.4 µM each primer=8 pMol each; 0.025 U/µl Taq=0.5 U; 1.5 mM MgCl₂=30 nMol; 0.1 mM each dNTP=2 nMol]

PCR Program: 94°C 2:00; 35 cycles of {94°C 1:00; 55°C 1:00; 72°C 2:30}; 72°C 7:00

Screening Method: Product size by agarose gel

Product Sizes: 427 bp in Sp cytoplasm; 469 bp in N cytoplasm

Example:

Diagram of how it works:

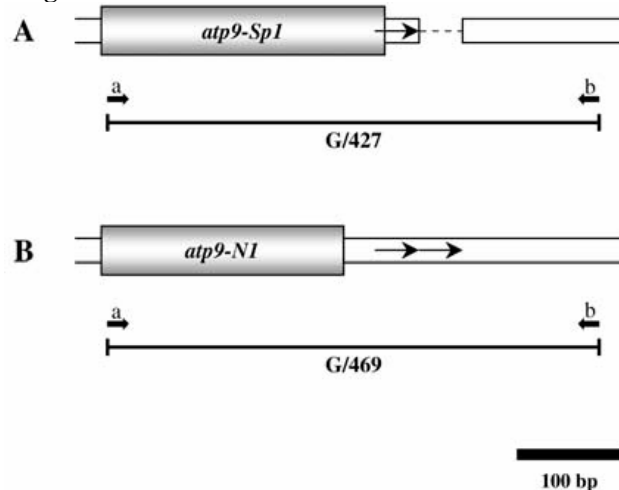


Figure 3. Structures of the full-length *atp9* genes and flanking regions in K826A (A) and K831B (B). The *atp9-N1* gene had a 42 bp direct repeat downstream from the coding region, indicated by thin arrows, resulting in amplification products of 427 and 469 bp from K826A and K831B, respectively (Bars labeled G/427 and G/469). The annealing sites of the primers *atp9-d1* (a) and *cmt-9* (b) are illustrated by thick arrows. A single nucleotide substitution at the site of the stop codon in *atp9-N1* resulted in extension of the *atp9-Sp1* ORF.

Genbank reference: The DNA sequences of the *atp9-Sp1* and *atp9-N1* loci have been assigned GenBank Accession Nos. [AY007823](#) and [AY007822](#), respectively.

Sequence Information:

Map Location:

Published Reference:

Other Information:

Primer Location (lab specific): Box 0 X0

PCR Program Name (lab specific):