

A Ribosomal Protein S10 Gene Is Found in the Mitochondrial Genome in *Solanum Tuberosum*

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Abstract

The S10 ribosomal protein gene (rps10), which has not been previously reported in any angiosperm mitochondrial genome, was identified by sequence analysis in the potato mitochondrial DNA. This gene is found downstream of a truncated non-functional apocytochrome b (cob) pseudogene, and is expressed as multiple transcripts ranging in size from 0.8 to 5.0 kb. Southern hybridization analysis indicates that rps10-homologous sequences are not present in the wheat mitochondrial genome. Sequence analysis of a single-copy region of the pea mitochondrial genome located upstream of cox1 [11] shows that a non-functional rps10 pseudogene is present in this species. These results suggest that the functional genes coding for wheat and pea mitochondrial RPS 10 polypeptides have been translocated to the nucleus.

Key words: apocytochrome b pseudogene, pea cox1, plant mitochondria, potato, S 10 ribosomal protein, wheat