Molecular Cloning and Spatial Expression of an *ApL1* cDNA for the Large Subunit of ADP-Glucose Pyrophosphorylase from *Arabidopsis thaliana*

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A cDNA, *ApL1a*, corresponding to a homologue of the large subunit of ADP-glucose pyrophosphorylase (AGPase), has been isolated/characterised by screening a cDNA library prepared from leaves of *Arabidopsis thaliana*, followed by rapid amplification of cDNA 3′-ends (3′-RACE). Within the 1685 nucleotide-long sequence (excluding polyA tail), an open reading frame encodes a protein of 522 amino acids (aa), with a calculated molecular weight of 57.7 kDa. The derived aa sequence does not contain any discernible transit peptide cleavage site motif, similarly to two other recently sequenced full-length *Arabidopsis* homologues for AGPase, and shows *ca.* 58–78% identity to homologous proteins from other plants/tissues. The corresponding gene was found to be expressed in all tissues examined (rosette and stem leaves, stems, flowers and fruits). The ubiquitous expression of the gene is consistent with its critical role in starch synthesis in *Arabidopsis.*

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