

Identification and subcellular localization of two isoenzymes of apyrase from *Solanum tuberosum*

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Two forms of ATP-diphosphohydrolase were identified in *Solanum tuberosum* tuber var. *Ultimus*. Their hydrolytic activity ratios (ATPase/ADPase) were over 10 for form A and 1 for form B. In the potato tuber homogenate the hydrolytic activity ratio is 3.0, as a result of contributions of the two forms of apyrase. These two apyrases (A and B) were partially separated and the possibility that they are produced as an artifact by partial proteolysis or subunit aggregation was excluded. The subcellular localization of the *Ultimus* isoapyrases was studied by differential centrifugation. These enzymes are localized in distinct compartments. The high ratio enzyme (A) lies mainly in the soluble fraction, while the low ratio apyrase (B) is principally bound to membranes. The two isoapyrases differ greatly in their kinetic properties and pI, but only slightly in Mr. Both enzymes immunocross-react with antiapyrase *Desirée*, which is important for isoenzyme detection by the immunowestern blot. This is th