

Native Potatoes Apyrase

Cat. No. NATE-0085

Lot. No. (See product label)

Introduction

Description Apyrase is found in all eukaryotes and some prokaryotes. Apyrase, from potato, has a crucial role in regulating growth and development. Apyrase is involved in the inactivation of synaptic ATP as a neurotransmitter following nerve stimulation and in the inhibition of ADP induced platelet aggregation to prevent thrombosis. Divalent metal ions are required for activity and best activity is observed with calcium ion at 5 mM.

Applications At least two isoenzymes are found in different varieties of *S. tuberosum*: 4,5 one with a high ATPase/ADPase ratio (~10) and another with a low ratio (~1). Reaction: $\text{ATP} \rightarrow \text{ADP} + \text{P}_i \rightarrow \text{AMP} + 2\text{P}_i$. Apyrase is used to hydrolyze nucleoside triphosphates and diphosphates. For hydrolysis of organic di and triphosphates, the optimal pH is 6, and for inorganic substrates, the optimal pH is 5.1. Apyrase, from Creative Enzymes, has been used in inhibition studies of platelet-aggregation.

Synonyms ATP-diphosphatase; adenosine diphosphatase; ADPase; ATP diphosphohydrolase; apyrase; EC 3.6.1.5; 9000-95-7

Product Information

Source Potatoes

Form lyophilized powder. Partially purified, lyophilized powder containing potassium succinate buffer salts.

EC Number EC 3.6.1.5

CAS No. 9000-95-7

Activity > 200 units/mg protein; > 600 units/mg protein

Buffer H₂O: soluble 1.0 mg/mL

Pathway Purine metabolism, organism-specific biosystem; Pyrimidine metabolism, organism-specific biosystem; Pyrimidine metabolism, conserved biosystem

Unit Definition One unit will liberate 1.0 μmole of inorganic phosphate from ATP or ADP per min at pH 6.5 at 30°C.

Storage and Shipping Information

Storage -20°C