

Product Information

Apyrase from potato

Recombinant, expressed in *Pichia pastoris*, ATPase ≥ 1000 units/mg protein, lyophilized powder

A6237

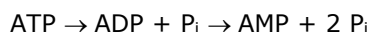
Product Description

CAS Number: 9000-95-7

Enzyme Commission (EC) Number: 3.6.1.5

Synonyms: Nucleoside-triphosphatase, ATP diphosphohydrolase, ADP diphosphohydrolase, Adenosine 5'-diphosphatase, Adenosine 5'-triphosphatase

Many plant and animal tissues contain pyrophosphohydrolases commonly called apyrases. Apyrases catalyze the hydrolysis of a broad range of nucleoside triphosphates and diphosphates, per the following general summary reaction:^{1,2}



Several characteristics distinguish apyrases from other phosphohydrolases, such as:³

- High specific activity
- Broad nucleotide substrate specificity for nucleotides
- Insensitivity to specific inhibitors of P-type, F-type, and V-type ATPases

In addition, apyrases require metal cations for their activity, where the major positive effect is achieved with Ca^{+2} .

This recombinant product was cloned from *Solanum tuberosum* apyrase and expressed in *Pichia pastoris*. This isoform has similar specific activities for hydrolysis of both ATP and ADP.³ The product is lyophilized from a solution containing 50 mM potassium succinate (pH 6.5) and 100 mM NaCl.

Several publications^{4,5} and dissertations^{6,7} have cited use of product A6237 in their research protocols.

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Reagent

Purity: $\geq 90\%$ (SDS-PAGE)

ATPase activity: $\geq 1,000$ units/mg protein

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

Preparation Instructions

This product is soluble in water, such as at 100 units/mL.⁸ It is recommended to reconstitute material in water to a concentration of 100-500 units/mL.

Storage/Stability

Store product at -20 °C. When stored at -20 °C, the enzyme retains activity for at least two years.

After reconstitution, product can be kept at 2-8 °C for up to one week. It is recommended to store the protein in working aliquots at -20 °C.⁸

References

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5. Zhang, X. *et al.*, *Chem. Commun. (Camb.)*, **55(98)**, 14765-14768 (2019).
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