

Product Information

Apyrase from potato recombinant, expressed in *Pichia pastoris*

Catalog Number **A6237**
Storage Temperature $-20\text{ }^{\circ}\text{C}$

CAS RN 9000-95-7

EC 3.6.1.5

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

Product Description

A large number of plant and animal tissues contain pyrophosphohydrolases commonly called apyrases. These enzymes catalyze the hydrolysis of a broad range of nucleoside tri- and di-phosphates.^{1,2}



Some characteristics distinguish apyrases from other phosphohydrolases, such as high specific activity, broad nucleotide substrate specificity for nucleotides, and insensitivity to specific inhibitors of P-type, F-type, and V-type ATPases.³ In addition, they require metal cations for their activity, the major positive effect 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 50 mM potassium succinate, pH 6.5, with 100 mM NaCl.

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 $30\text{ }^{\circ}\text{C}$.

Precautions and Disclaimer

This product is 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.

Preparation Instructions

This product is soluble in water. It is recommended to reconstitute material in water to a concentration of 100–500 units/ml.

Storage/Stability

Store product at $-20\text{ }^{\circ}\text{C}$. When stored at $-20\text{ }^{\circ}\text{C}$, the enzyme retains activity for at least two years.

After reconstitution, product can be kept at $2\text{--}8\text{ }^{\circ}\text{C}$ for up to one week. It is recommended to store the protein in working aliquots at $-20\text{ }^{\circ}\text{C}$.

References

1. Kettlun, A.M. et al., Purification and characterization of two isoapyrases from *Solanum tuberosum* var. *Ultimus*. *Phytochemistry*, **31**, 3691–3696 (1992).
2. Komoszynski, M., and Wojtczak, A., Apyrases (ATP diphosphohydrolases, EC (3.6.1.5): function and relationship to ATPases. *Biochim. Biophys. Acta*, **1310**, 233–241 (1996).
3. Handa, M., and Guidotti, G., Purification and cloning of a soluble ATP-diphosphohydrolase (apyrase) from potato tubers (*Solanum tuberosum*). *Biochem. Biophys. Res. Commun.*, **218**, 916–923 (1996).

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