Creative Enzymes®

Native Porcine Adenosine 5'-Triphosphatase

Cat. No. NATE-0089

Lot. No. (See product label)

Introduction

Description ATPases are a class of enzymes that catalyze the decomposition of ATP into ADP and a free phosphate ion. This dephosphorylation reaction releases energy, which the enzyme (in most cases) harnesses to drive other chemical reactions that would not otherwise occur. This process is widely used in all known forms of life. Some such enzymes are integral membrane proteins (anchored within biological membranes), and move solutes across the membrane, typically against their concentRation gradient. These are called transmembrane ATPases.

Applications ATPase is used to liberate inorganic phosphorus from ATP. ATPase, from porcine cerebral cortex, has been used in inhibition assays of Na/K-ATPase activity.

Synonyms ATP phosphohydrolase; ATPase; Adenosine 5'-Triphosphatase; EC 3.6.1.3; adenylpyrophosphatase; ATP monophosphatase; triphosphatase; SV40 T-antigen; adenosine 5'-triphosphatase; ATP hydrolase, complex V (mitochondrial electron transport); (Ca2+ + Mg2+)-ATPase; HCO3−-ATPase; adenosine triphosphatase

Product Information

Species Porcine

Source Porcine cerebral cortex

Form Lyophilized powder containing 90% sucrose, 0.4% EDTA Na4 and 0.06% NaCl

EC Number EC 3.6.1.3

CAS No. 9000-83-3

Activity > 0.3 units/mg protein

Pathway Adrenergic signaling in cardiomyocytes, organism-specific biosystem; Aldosterone-regulated sodium reabsorption, conserved biosystem; Cardiac muscle contraction, conserved biosystem; Aldosterone-regulated sodium reabsorption, conserved biosystem; Cardiac muscle contraction, organism-specific biosystem; Endocrine and other factor-regulated calcium reabsorption, conserved biosystem

Function ATP binding; potassium ion binding; sodium ion binding; ATPase activator activity; protein binding; sodium:potassium-exchanging ATPase activity

Unit Definition One unit will liberate 1.0 μmole of inorganic phosphorus from ATP per min at pH 7.8 at 37°C in the presence of Na+, K+, and Mg2+.

Storage and Shipping Information

Storage −20°C