

ACPP/Prostatic Acid Phosphatase Protein, Mouse (HEK293, His)

Cat. No.:	HY-P74430
Synonyms:	ACP-3; ACPP; Prostatic Acid Phosphatase; PAPf39; PAP
Species:	Mouse
Source:	HEK293
Accession:	Q8CE08 (M1-R381)
Gene ID:	56318
Molecular Weight:	Approximately 47 kDa

PROPERTIES

Biological Activity	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μ m filtered solution of PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/ μ g, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 μ g/mL in ddH ₂ O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	Prostatic Acid Phosphatase (ACPP) protein serves as a versatile non-specific tyrosine phosphatase, exhibiting its catalytic activity under acidic conditions (pH 4-6) on a broad range of substrates, including alkyl, aryl, and acyl orthophosphate monoesters, as well as phosphorylated proteins. Notably, ACPP also displays lipid phosphatase activity, contributing to the inactivation of lysophosphatidic acid in seminal plasma. Beyond its tyrosine phosphatase functions, ACPP demonstrates ecto-5'-nucleotidase activity in dorsal root ganglion neurons, leading to the generation of adenosine from AMP. This extracellular adenosine, in turn, contributes to a reduction in chronic pain by activating A1R in nociceptive neurons. The multifaceted enzymatic activities of ACPP highlight its potential significance in various cellular processes and its therapeutic implications, particularly in pain management.
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Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA