

## Prostatic acid Phosphatase/ACPP Protein, Human (HEK293, GFP-His)

Cat. No.:	HY-P700619
Synonyms:	ACP-3; ACPP; Prostatic Acid Phosphatase; PAPf39; PAP
Species:	Human
Source:	HEK293
Accession:	P15309 (K33-K382)
Gene ID:	55
Molecular Weight:	70.6 kDa

### PROPERTIES

#### AA Sequence

KELK FVTLVF	RHGDRSPIDT	FPTDPIKESS	WPQGGFGLTQ
LGMEQHYELG	EYIRKRYRKF	LNESYKHEQV	YIRSTDVRT
LMSAMTNLAA	LFPPEGVSIW	NPILLWQPIP	VHTVPLSEdq
LLYL PFRNCP	RFQELESETL	KSEEFQKRLH	PYKDFIATLG
KLSGLHGQDL	FGIWSKVYDP	LYCESVHNFT	LPSWATEDTM
TKLRELS ELS	LLSLYGIHKQ	KEKSRLQGGV	LVNEILNHMK
RATQIPSYKK	LIMYSAHDTT	VSGLQMALDV	YNGLLPPYAS
CHLTELYFEK	GEYFVEMYR	NETQHEPYPL	MLPGCSPSCP
LERFAELVGP	VIPQDWSTEC	MTTNSHQVLK	

#### 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 µm filtered solution of 20 mM Tris-HCl, 0.5 M NaCl, 6% Trehalose, pH 8.0.

#### Endotoxin Level

<1 EU/µg, determined by LAL method.

#### Reconstitution

It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH<sub>2</sub>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) is a non-specific tyrosine phosphatase that operates under acidic conditions (pH 4-6), demonstrating its versatility in dephosphorylating a diverse array of substrates, including alkyl, aryl, and acyl

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orthophosphate monoesters, as well as phosphorylated proteins. Notably, ACPD exhibits lipid phosphatase activity, contributing to the inactivation of lysophosphatidic acid in seminal plasma. Functioning as a tumor suppressor in prostate cancer, ACPD plays a crucial role in dephosphorylating ERBB2 and deactivating MAPK-mediated signaling, thereby exerting control over cellular processes implicated in cancer progression. Beyond its tyrosine phosphatase activity, ACPD showcases ecto-5'-nucleotidase activity in dorsal root ganglion neurons, generating adenosine from AMP. This additional function suggests a role in pain modulation, where adenosine acts as a pain suppressor, emphasizing the multifaceted nature of ACPD in cellular processes.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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