Prostatic acid Phosphatase/ACPP Protein-VLP, Human (386a.a, HEK293, His)

Cat. No.:	HY-P700620
Synonyms:	ACP-3; ACPP; Prostatic Acid Phosphatase; PAPf39; PAP
Species:	Human
Source:	HEK293
Accession:	P15309 (K33-I418)
Gene ID:	55
Molecular Weight:	47.5 kDa

PROPERTIES

AA Sequence	K E L K F V T L V F R H G D R S P I D T F P T D P I K E S S W P Q G F G Q L T Q L G M E Q H Y E L G E Y I R K R Y R K F L N E S Y K H E Q V Y I R S T D V D R T L M S A M T N L A A L F P P E G V S I W N P I L L W Q P I P V H T V P L S E D Q L L Y L P F R N C P R F Q E L E S E T L K S E E F Q K R L H P Y K D F I A T L G K L S G L H G Q D L F G I W S K V Y D P L Y C E S V H N F T L P S W A T E D T M T K L R E L S E L S L L S L Y G I H K Q K E K S R L Q G G V L V N E I L N H M K R A T Q I P S Y K K L I M Y S A H D T T V S G L Q M A L D V Y N G L L P P Y A S C H L T E L Y F E K G E Y F V E M Y Y R N E T Q H E P Y P L M L P G C S P S C P L E R F A E L V G P V I P Q D W S T E C M T T N S H Q V L K V I F A V A F C L I S A V L M V L L F I H I R R G L C W Q R E S Y G N I
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 PBS, 6% Trehalose, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
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 orthophosphate monoesters, as well as phosphorylated proteins. Notably, ACPP exhibits lipid phosphatase activity, contributing to the inactivation of lysophosphatidic acid in seminal plasma. Functioning as a tumor suppressor in prostate cancer, ACPP 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, ACPP 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 ACPP in cellular processes.

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