

ENPP-7 Protein, Human (HEK293, His)

Cat. No.:	HY-P77358
Synonyms:	Ectonucleotide pyrophosphatase/phosphodiesterase family member 7; NPP-7; Alk-Smase
Species:	Human
Source:	HEK293
Accession:	Q6UWV6 (A22-S439)
Gene ID:	339221
Molecular Weight:	Approximately 50-70 kDa

PROPERTIES

AA Sequence	<pre> A P V Q S Q G S Q N K L L L V S F D G F R W N Y D Q D V D T P N L D A M A R D G V K A R Y M T P A F V T M T S P C H F T L V T G K Y I E N H G V V H N M Y Y N T T S K V K L P Y H A T L G I Q R W W D N G S V P I W I T A Q R Q G L R A G S F F Y P G G N V T Y Q G V A V T R S R K E G I A H N Y K N E T E W R A N I D T V M A W F T E E D L D L V T L Y F G E P D S T G H R Y G P E S P E R R E M V R Q V D R T V G Y L R E S I A R N H L T D R L N L I I T S D H G M T T V D K R A G D L V E F H K F P N F T F R D I E F E L L D Y G P N G M L L P K E G R L E K V Y D A L K D A H P K L H V Y K K E A F P E A F H Y A N N P R V T P L L M Y S D L G Y V I H G R I N V Q F N N G E H G F D N K D M D M K T I F R A V G P S F R A G L E V E P F E S V H V Y E L M C R L L G I V P E A N D G H L A T L L P M L H T E S A L P P D G R P T L L P K G R S A L P P S S </pre>
Biological Activity	Measured by its ability to hydrolyze sphingomyelin to ceramide and phosphorylcholine. The phosphorylcholine is cleaved by Recombinant Human Alkaline Phosphatase/ALPL and the phosphate is measured by a Malachite Green Phosphate Detection Kit. The specific activity is 14449.85 pmol/min/μg.
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4.
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 ₂ O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
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

ENPP-7 protein operates as a choline-specific phosphodiesterase with multifaceted roles in sphingomyelin digestion, ceramide formation, and fatty acid (FA) absorption within the gastrointestinal tract. Notably, it hydrolyzes sphingomyelin, releasing ceramide and phosphocholine, thereby participating in the intricate processes of sphingomyelin breakdown and subsequent ceramide production. Additionally, ENPP-7 displays phospholipase C activity, cleaving phosphocholine from palmitoyl lyso-phosphatidylcholine and platelet-activating factor (PAF), leading to their inactivation. Despite lacking nucleotide pyrophosphatase activity, ENPP-7 may play a role in promoting cholesterol absorption by influencing the levels of sphingomyelin derived from both dietary and endogenous sources within the intestinal lumen. These diverse enzymatic activities highlight the multifunctional role of ENPP-7 in lipid metabolism and absorption processes, underscoring its significance in gastrointestinal physiology.

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

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