Aminopeptidase N/APN Protein, Human (HEK293, His, solution)

Cat. No.:	HY-P7899
Synonyms:	rHuAminopeptidase N/APN Protein, His; Aminopeptidase N; ANPEP; AP-M; APN; AP-N; CD13 antigen; CD13; CD13APN; PEPN; PEPNhAPN
Species:	Human
Source:	HEK293
Accession:	P15144 (K69-K967)
Gene ID:	290
Molecular Weight:	110-130 kDa

PROPERTIES

AA Sequence

K A W N R Y R L P N T L K P D S Y R V T L R P Y L T P N D R G L Y V F K G S S T
V R F T C K E A T D V I I I H S K K L N Y T L S Q G H R V V L R G V G G S Q P P
D I D K T E L V E P T E Y L V V H L K G S L V K D S Q Y E M D S E F E G E L A D
D L A G F Y R S E Y M E G N V R K V V A T T Q M Q A A D A R K S F P C F D E P A
M K A E F N I T L I H P K D L T A L S N M L P K G P S T P L P E D P N W N V T E
F H T T P K M S T Y L L A F I V S E F D Y V E K Q A S N G V L I R I W A R P S A
I A A G H G D Y A L N V T G P I L N F F A G H Y D T P Y P L P K S D Q I G L P D
F N A G A M E N W G L V T Y R E N S L L F D P L S S S S S N K E R V V T V I A H
E L A H Q W F G N L V T I E W W N D L W L N E G F A S Y V E Y L G A D Y A E P T
W N L K D L M V L N D V Y R V M A V D A L A S S H P L S T P A S E I N T P A Q I
S E L F D A I S Y S K G A S V L R M L S S F L S E D V F K Q G L A S Y L H T F A
Y Q N T I Y L N L W D H L Q E A V N N R S I Q L P T T V R D I M N R W T L Q M G
F P V I T V D T S T G T L S Q E H F L L D P D S N V T R P S E F N Y V W I V P I
T S I R D G R Q Q Q D Y W L I D V R A Q N D L F S T S G N E W V L L N L N V T G
Y Y R V N Y D E E N W R K I Q T Q L Q R D H S A I P V I N R A Q I I N D A F N L
A S A H K V P V T L A L N N T L F L I E E R Q Y M P W E A A L S S L S Y F K L M
F D R S E V Y G P M K N Y L K K Q V T P L F I H F R N N T N N W R E I P E N L M
D Q Y S E V N A I S T A C S N G V P E C E E M V S G L F K Q W M E N P N N N P I
H P N L R S T V Y C N A I A Q G G E E E W D F A W E Q F R N A T L V N E A D K L
R A A L A C S K E L W I L N R Y L S Y T L N P D L I R K Q D A T S T I I S I T N
N V I G Q G L V W D F V Q S N W K K L F N D Y G G G S F S F S N L I Q A V T R R
F S T E Y E L Q Q L E Q F K K D N E E T G F G S G T R A L E Q A L E K T K A N I
K W V K E N K E V V L Q W F T E N S K

Biological Activity	Measured by its ability to cleave the fluorogenic peptide substrate, Ala-7-amido-4-methylcoumarin (Ala-AMC). The specific activity is 9172.6 pmol/min/μg, as measured under the described conditions.
Appearance	Solution.
Formulation	Supplied as a 0.2 μm filtered solution of PBS, 5% Trehalose, pH 7.4.

Endotoxin Level	NA
Reconsititution	N/A
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background	Aminopeptidase N (APN, CD13) is a zinc-dependent ectopeptidase of the M1 family. It is a type II integral membrane protein and is located on the surface of many mammalian cells like fibroblasts, epithelial and myeloid cells. APN consists of 967 amino acids (aa), which can be divided into three regions. A short N-terminal region is located in the cytoplasm (aa 1–9), followed by a single-helix transmembrane domain (aa 10–27) and a large extracellular region (aa 28–967). APN is involved in multiple processes. It is most widely known for its protease activity in the renin-angiotensin system, where it proteolytically converts angiotensin III to IV. In addition to its enzymatic activity, it functions as a receptor for coronaviruses and has been proposed to participate in the endocytosis of cholesterol. Some of the functions of APN are mediated by protein-protein interactions[2].

REFERENCES

[1]. Wickström M, et al. Aminopeptidase N (CD13) as a target for cancer chemotherapy. Cancer Sci. 2011;102(3):501-508.

[2]. Kiehstaller S, et al. MMP activation-associated aminopeptidase N reveals a bivalent 14-3-3 binding motif. J Biol Chem. 2020;295(52):18266-18275.

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