Carboxypeptidase A1/CPA1 Protein, Mouse (HEK293, His)

Cat. No.:	HY-P72868
Synonyms:	Carboxypeptidase A1; Cpa1
Species:	Mouse
Source:	HEK293
Accession:	Q7TPZ8 (N17-Y419)
Gene ID:	109697
Molecular Weight:	Approximately 42-49 kDa

PROPERTIES

AA Sequence	N E N F V G H Q V L R I S A T D E A Q V Q K V R E L E E L E H L K L D F W R D P A R A G L P I D V R V P F P T I Q S V K A F L E Y H D I S Y E I M I E D V Q S L L D E E K Q Q M S A F Q A R A L S T D A F N Y A T Y H T L D E I Y E F M D L L V T E H P Q L V S K I Q I G S T F E G R P I N V L K F S T G G T N R P A I W I D T G I H S R E W V T Q A S G V W F A K K I T K D Y G Q E P T L T A I L D N M D I F L E I V T N P D G F V Y T H K T N R M W R K T R S H T E G S L C V G V D P N R N W D A A F G M P G A S S N P C S E T Y R G K F P N S E V E V K S I V D F V T S H G N I K A F I S I H S Y S Q L L L Y P Y G Y T S E P A P D K E E L D Q L A K S A V T A L T S L H G T K F K Y G S I I D T I Y Q A S G S T I D W T Y S Q G I K Y S F T F E L R D T G L R G F L L P A S Q I I P T A E E T W L A L L T I M D H T V K H P Y
Biological Activity	Measured by its ability to cleave the colorimetric peptide substrate Ac-Phe-Thiaphe-OH in the presence of 5,5'Dithio-bis (2-nitrobenzoic acid) (DTNB). The specific activity is 5420.437 pmol/min/μg, as measured under the described conditions.
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 μm filtered solution of 20 mM Tris, 150 mM NaCl, pH 7.5 or 25 mM Tris-HCL, 150 mM NaCl, pH 7.5.
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	Carboxypeptidase A1 (CPA1) is an enzyme that plays a crucial role in catalyzing the release of C-terminal amino acids from peptides. However, its activity is limited or absent for peptides with C-terminal residues such as -Asp, -Glu, -Arg, -Lys, or -Pro. This substrate specificity indicates that CPA1 exhibits selectivity in its cleavage preferences, preferring certain amino acid residues at the C-terminus of peptides. The enzyme's action in releasing C-terminal amino acids contributes to various physiological processes, such as the digestion of proteins in the digestive system, highlighting its importance in the regulation of peptide and protein metabolism.

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