

## Cathepsin A Protein, Human (HEK293, His, solution)

<b>Cat. No.:</b>	HY-P7745
<b>Synonyms:</b>	rHuCathepsin A, His; Lysosomal protective protein; CTSA; Carboxypeptidase C; Carboxypeptidase L; Cathepsin A
<b>Species:</b>	Human
<b>Source:</b>	HEK 293
<b>Accession:</b>	P10619 (S69-Y480)
<b>Gene ID:</b>	5476
<b>Molecular Weight:</b>	58-60 kDa

### PROPERTIES

<b>AA Sequence</b>	<pre> S Q K D P E N S P V      V L W L N G G P G C      S S L D G L L T E H      G P F L V Q P D G V T L E Y N P Y S W N      L I A N V L Y L E S      P A G V G F S Y S D      D K F Y A T N D T E V A Q S N F E A L Q      D F F R L F P E Y K      N N K L F L T G E S      Y A G I Y I P T L A V L V M Q D P S M N      L Q G L A V G N G L      S S Y E Q N D N S L      V Y F A Y Y H G L L G N R L W S S L Q T      H C C S Q N K C N F      Y D N K D L E C V T      N L Q E V A R I V G N S G L N I Y N L Y      A P C A G G V P S H      F R Y E K D T V V V      Q D L G N I F T R L P L K R M W H Q A L      L R S G D K V R M D      P P C T N T T A A S      T Y L N N P Y V R K A L N I P E Q L P Q      W D M C N F L V N L      Q Y R R L Y R S M N      S Q Y L K L L S S Q K Y Q I L L Y N G D      V D M A C N F M G D      E W F V D S L N Q K      M E V Q R R P W L V K Y G D S G E Q I A      G F V K E F S H I A      F L T I K G A G H M      V P T D K P L A A F T M F S R F L N K Q      P Y           </pre>
<b>Biological Activity</b>	Data is not available.
<b>Appearance</b>	Solution
<b>Formulation</b>	Supplied as a 0.2 µm filter solution of 20 mM PB, 150 mM NaCl, pH 7.4.
<b>Endotoxin Level</b>	<1 EU/µg, determined by LAL method.
<b>Reconstitution</b>	N/A
<b>Storage &amp; Stability</b>	Stored at -80°C. 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.
<b>Shipping</b>	Shipping with dry ice.

### DESCRIPTION

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## Background

Cathepsin A is synthesized as a zymogen, a single-chain precursor of 54 kDa (after signal peptide cleavage and addition of two N-linked glycans) that self-associates into a homodimer. The precursor cathepsin A has two domains, a core domain (1–182 and 303–452) interrupted by a cap domain insertion (183–302).

Cathepsin A is a multicatalytic enzyme with deamidase and esterase in addition to carboxypeptidase activities.

Cathepsin A, lysosomal carboxypeptidase are components of the lysosomal multienzyme complex along with beta-galactosidase. Cathepsin A activates Neu1 and protects GAL and Neu1 against the rapid proteolytic degradation.

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## REFERENCES

[1]. M Hiraiwa, et al. Cathepsin A/protective protein: an unusual lysosomal multifunctional protein. *Cell Mol Life Sci.* 1999 Dec;56(11-12):894-907.

[2]. Nilima Kolli, et al. Proteolytic activation of human cathepsin A. *J Biol Chem*

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

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