

## Cathepsin E Protein, Human (HEK293, His)

<b>Cat. No.:</b>	HY-P7750
<b>Synonyms:</b>	rHuCathepsin E, His; Cathepsin E; CTSE
<b>Species:</b>	Human
<b>Source:</b>	HEK293
<b>Accession:</b>	P14091 (S20-P396)
<b>Gene ID:</b>	1510
<b>Molecular Weight:</b>	Approximately 42-48 kDa

### PROPERTIES

<b>AA Sequence</b>	<pre> S L H R V P L R R H   P S L K K K L R A R   S Q L S E F W K S H   N L D M I Q F T E S C S M D Q S A K E P   L I N Y L D M E Y F   G T I S I G S P P Q   N F T V I F D T G S S N L W V P S V Y C   T S P A C K T H S R   F Q P S Q S S T Y S   Q P G Q S F S I Q Y G T G S L S G I I G   A D Q V S V E G L T   V V G Q Q F G E S V   T E P G Q T F V D A E F D G I L G L G Y   P S L A V G G V T P   V F D N M M A Q N L   V D L P M F S V Y M S S N P E G G A G S   E L I F G G Y D H S   H F S G S L N W V P   V T K Q A Y W Q I A L D N I Q V G G T V   M F C S E G C Q A I   V D T G T S L I T G   P S D K I K Q L Q N A I G A A P V D G E   Y A V E C A N L N V   M P D V T F T I N G   V P Y T L S P T A Y T L L D F V D G M Q   F C S S G F Q G L D   I H P P A G P L W I   L G D V F I R Q F Y S V F D R G N N R V   G L A P A V P H H H   H H H </pre>
<b>Biological Activity</b>	Measured by its ability to cleave 40µM fluorogenic peptide substrate Mca-PLGL-Dpa-AR-NH <sub>2</sub> that incubated at room temperature for 30min. The specific activity is 14784.79 pmol/min/ug.
<b>Appearance</b>	Lyophilized powder.
<b>Formulation</b>	Lyophilized after extensive dialysis against 20 mM MES, 150 mM NaCl, pH 5.5.
<b>Endotoxin Level</b>	<1 EU/µg, determined by LAL method.
<b>Reconstitution</b>	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
<b>Storage &amp; Stability</b>	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.
<b>Shipping</b>	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

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## Background

Cathepsin E is an aspartic protease and a member of the peptidase A1 family of proteases. As an intracellular, hydrolytic aspartic protease, Cathepsin E is mainly expressed in cells of the immune and gastrointestinal systems, lymphoid tissues, erythrocytes, and cancer cells<sup>[1]</sup>.

Cathepsin E functions by breaking down proteins through the hydrolysis of peptide bonds at a specific peptide sequence site. And Cathepsin E plays an important role in the degradation of proteins, the generation of bioactive proteins, and antigen processing<sup>[2]</sup>.

Human Cathepsin E is synthesized as a precursor protein, consisting of a signal peptide (residues 1-17), a propeptide (residues 18-53), and a mature chain (residues 54-396)<sup>[3]</sup>.

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## REFERENCES

- [1]. T Tsukuba, et al. New functional aspects of cathepsin D and cathepsin E. *Mol Cells*
- [2]. F Grüniger-Leitch, et al. Identification of beta-secretase-like activity using a mass spectrometry-based assay system. *Nat Biotechnol.* 2000 Jan;18(1):66-70.
- [3]. T Azuma, et al. Human gastric cathepsin E. Predicted sequence, localization to chromosome 1, and sequence homology with other aspartic proteinases. *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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