

## Cathepsin D Protein, Human (HEK293, C-His)

Cat. No.:	HY-P7748A
Synonyms:	rHuCathepsin D, His; Cathepsin D; CTSD; CPSD
Species:	Human
Source:	HEK293
Accession:	P07339 (L21-L412)
Gene ID:	1509
Molecular Weight:	Approximately 44.78 kDa

### PROPERTIES

AA Sequence	<pre> L V R I P L H K F T   S I R R T M S E V G   G S V E D L I A K G   P V S K Y S Q A V P A V T E G P I P E V   L K N Y M D A Q Y Y   G E I G I G T P P Q   C F T V V F D T G S S N L W V P S I H C   K L L D I A C W I H   H K Y N S D K S S T   Y V K N G T S F D I H Y G S G S L S G Y   L S Q D T V S V P C   Q S A S S A S A L G   G V K V E R Q V F G E A T K Q P G I T F   I A A K F D G I L G   M A Y P R I S V N N   V L P V F D N L M Q Q K L V D Q N I F S   F Y L S R D P D A Q   P G G E L M L G G T   D S K Y Y K G S L S Y L N V T R K A Y W   Q V H L D Q V E V A   S G L T L C K E G C   E A I V D T G T S L M V G P V D E V R E   L Q K A I G A V P L   I Q G E Y M I P C E   K V S T L P A I T L K L G G K G Y K L S   P E D Y T L K V S Q   A G K T L C L S G F   M G M D I P P P S G P L W I L G D V F I   G R Y Y T V F D R D   N N R V G F A E A A   R L H H H H H H           </pre>
Biological Activity	Measured by its ability to cleave a peptide substrate, Mca-PLGL-Dpa-AR-NH <sub>2</sub> . The specific activity is 4624.96 pmol/min/μg, as measured under the described conditions.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of 20 mM MES, 150 mM NaCl, pH 5.5.
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 <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).
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

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**Background**

Cathepsin D, an acid protease, exerts its activity in the intracellular breakdown of proteins. This protease is implicated in the processing of amyloid precursor protein (APP), with its cleavage and activation by ADAM30 leading to the degradation of APP, as evidenced in studies. Cathepsin D's involvement extends to the pathogenesis of various diseases, including breast cancer, and it is suggested to play a role in Alzheimer's disease, highlighting its significance in cellular processes and potential connections to pathological conditions.

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

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