

Cathepsin L1 Protein, Mouse (HEK293, His)

Cat. No.:	HY-P7753
Synonyms:	rMuCathepsin L, His; Cathepsin L1; Major excreted protein; p39 cysteine proteinase; CTSL1
Species:	Mouse
Source:	HEK293
Accession:	P06797 (T18-N334)
Gene ID:	13039
Molecular Weight:	Approximately 36.02 kDa.

PROPERTIES

AA Sequence	<p> T P K F D Q T F S A E W H Q W K S T H R R L Y G T N E E E W R R A I W E K N M R M I Q L H N G E Y S N G Q H G F S M E M N A F G D M T N E E F R Q V V N G Y R H Q K H K K G R L F Q E P L M L K I P K S V D W R E K G C V T P V K N Q G Q C G S C W A F S A S G C L E G Q M F L K T G K L I S L S E Q N L V D C S H A Q G N Q G C N G G L M D F A F Q Y I K E N G G L D S E E S Y P Y E A K D G S C K Y R A E F A V A N D T G F V D I P Q Q E K A L M K A V A T V G P I S V A M D A S H P S L Q F Y S S G I Y Y E P N C S S K N L D H G V L L V G Y G Y E G T D S N K N K Y W L V K N S W G S E W G M E G Y I K I A K D R D N H C G L A T A A S Y P V V N H H H H H H </p>
Biological Activity	Measured by its ability to cleave the fluorogenic peptide substrate Z-LR-AMC. The specific activity is 26159.6 pmol/min/μg, as measured under the described conditions.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of 20mM Tris, 150mM NaCl, pH 7.5-8.0. Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
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 ₂ O.
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

Cathepsin L (CTSL) is a cysteine protease that belongs to the papain-like family (peptidase C1A), which is associated with tumor occurrence, development, and metastasis. Cathepsin L is implicated in invasion and metastasis of tumors, inflammatory status, atherosclerosis, renal disease, diabetes, bone diseases, viral infection and other diseases. Functions of Cathepsin L depend on their subcellular localization: Cathepsin L is involved in cell death and inflammation in the cytoplasm, and it also regulates cell cycle in the nucleus and exert degradative roles in the extracellular environment. Cathepsin L is expressed in all tissues and cell types and the primary function of cysteine cathepsins is proteolysis of protein antigens generated by pathogen endocytosis^{[1][2]}.

REFERENCES

[1]. Mei-Ling Han, et al. Cathepsin L upregulation-induced EMT phenotype is associated with the acquisition of cisplatin or paclitaxel resistance in A549 cells. *Acta Pharmacol Sin.* 2016 Dec;37(12):1606-1622.

[2]. Caio P Gomes, et al. Cathepsin L in COVID-19: From Pharmacological Evidences to Genetics. *Front Cell Infect Microbiol.* 2020 Dec 8;10:589505.

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

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