

Legumain Protein, Human (HEK293, His)

Cat. No.:	HY-P70897
Synonyms:	Legumain; Asparaginyl Endopeptidase; Protease Cysteine 1; LGMN; PRSC1
Species:	Human
Source:	HEK293
Accession:	AAH03061.1 (I18-Y433)
Gene ID:	5641
Molecular Weight:	52-60 kDa

PROPERTIES

AA Sequence	<pre> I P I D D P E D G G K H W V V I V A G S N G W Y N Y R H Q A D A C H A Y Q I I H R N G I P D E Q I V V M M Y D D I A Y S E D N P T P G I V I N R P N G T D V Y Q G V P K D Y T G E D V T P Q N F L A V L R G D A E A V K G I G S G K V L K S G P Q D H V F I Y F T D H G S T G I L V F P N E D L H V K D L N E T I H Y M Y K H K M Y R K M V F Y I E A C E S G S M M N H L P D N I N V Y A T T A A N P R E S S Y A C Y Y D E K R S T Y L G D W Y S V N W M E D S D V E D L T K E T L H K Q Y H L V K S H T N T S H V M Q Y G N K T I S T M K V M Q F Q G M K R K A S S P V P L P P V T H L D L T P S P D V P L T I M K R K L M N T N D L E E S R Q L T E E I Q R H L D A R H L I E K S V R K I V S L L A A S E A E V E Q L L S E R A P L T G H S C Y P E A L L H F R T H C F N W H S P T Y E Y A L R H L Y V L V N L C E K P Y P L H R I K L S M D H V C L G H Y </pre>
Biological Activity	Measured by its ability to cleave the fluorogenic peptide substrate, N-carbobenzyloxy-Ala-Ala-Asn-7-amido-4-methylcoumarin (Z-AAN-AMC). The specific activity is 183.34 pmol/min/μg.
Appearance	Solution.
Formulation	Supplied as a 0.2 μm filtered solution of 20 mM Tris-HCl, 150 mM NaCl, 10% Glycerol, pH 8.0.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconstitution	N/A
Storage & Stability	Stored at -80°C for 1 year. 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.
Shipping	Shipping with dry ice

DESCRIPTION

Background

Legumain protein exhibits a strict specificity for the hydrolysis of asparaginyl bonds. Additionally, it demonstrates the ability to cleave aspartyl bonds slowly, particularly in acidic conditions, further expanding its enzymatic versatility. Functionally, Legumain is integral to the processing of proteins for MHC class II antigen presentation within the lysosomal/endosomal system. It also plays a crucial role in MHC class I antigen presentation in cross-presenting dendritic cells by facilitating the cleavage and maturation of Perforin-2 (MPEG1), thereby promoting antigen translocation in the cytosol, as indicated by recent research findings. Moreover, Legumain is essential for normal lysosomal protein degradation in renal proximal tubules and is required for the degradation of internalized EGFR, highlighting its importance in cellular processes and the regulation of cell proliferation.

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

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