Legumain Protein, Mouse (HEK293, C-6His)

Cat. No.:	HY-P70216B
Synonyms:	rMuLegumain/Asparaginyl Endopeptidase, His; Legumain; Lgmn; Asparaginyl endopeptidase; Protease cysteine 1; Prsc1
Species:	Mouse
Source:	HEK293
Accession:	O89017 (V18-Y435)
Gene ID:	19141
Molecular Weight:	Approximately 54.8 kDa

PROPERTIES

AA Sequence	V P V G V 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 I V M M Y D D I A N S E E N P T P G V V I N R P N G T D V Y K G V L K D Y T G E D V T P E N F L A V L R G D A E A V K G K G S G K V L K S G P R D H V F I Y F T D H G A T G I L V F P N D D L H V K D L N K T I R Y M Y E H K M Y Q K M V F Y I E A C E S G S M M N H L P D D I N V Y A T T A A N P K E S S Y A C Y Y D E E R G 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 S I S T M K V M Q F Q G M K H R A S S P I S L P P V T H L D L T P S P D V P L T I L K R K L L R T N D V K E S Q N L I G Q I Q Q F L D A R H V I E K S V H K I V S L L A G F G E T A E R H L S E R T M L T A H D C Y Q E A V T H F R T H C F N W H S V T Y E H A L R Y L Y V L A N L C E A P Y P I D R I E M A M D K V C L S H Y
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 242.5616 pmol/min/μg, as measured under the described conditions.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of 50 mM Tris, 300 mM NaCl, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O. 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

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.

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