# Legumain Protein, Pig (433a.a, HEK293, His)

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| **Cat. No.:** | HY-P77439 |
| **Synonyms:** | Legumain; Asparaginyl Endopeptidase; Protease Cysteine 1; LGMN; PRSC1 |
| **Species:** | Pig |
| **Source:** | HEK293 |
| **Accession:** | XP_001927117 (M1-Y433) |
| **Gene ID:** | 100154477 |
| **Molecular Weight:** | Approximately 53.7 kDa |

## PROPERTIES

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| **Biological Activity** | The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet. |
| **Appearance** | Lyophilized powder. |
| **Formulation** | Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4. 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. |
| **Reconsititution** | It is not recommended to reconstitute to a concentration less than 100 μg/mL in $ddH_2O$. |
| **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** | 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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