Human Cathepsin B / CTSB (18-339) Protein, His Tag (Pro-form, MALS verified)

Catalog # CTB-H52H3

Synonym

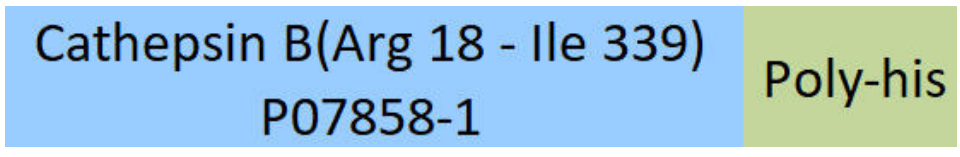
CTSB, CPSB, APPS

Source

Human Cathepsin B (18-339) Protein, His Tag (CTB-H52H3) is expressed from human 293 cells (HEK293). It contains AA Arg 18 - Ile 339 (Accession # P07858-1).

Predicted N-terminus: Arg 18

Molecular Characterization



This protein carries a polyhistidine tag at the C-terminus.

The protein has a calculated MW of 37.8 kDa. The protein migrates as 40-43 kDa when calibrated against Star Ribbon Pre-stained Protein Marker under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 1.0 EU per μg by the LAL method / rFC method.

Purity

>90% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

Formulation

Supplied as 0.2 μm filtered solution in 50 mM NaAc, 2 M NaCl, pH5.0 with glycerol as protectant.

Contact us for customized product form or formulation.

Shipping

This product is supplied and shipped with dry ice, please inquire the shipping cost.

Storage

Please avoid repeated freeze-thaw cycles.

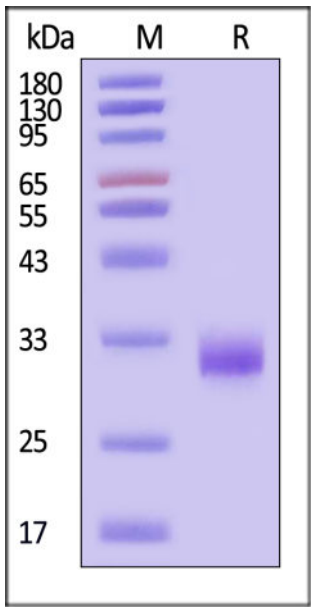
This product is stable after storage at:

- The product MUST be stored at -70°C or lower upon receipt;
- -70°C for 3 months under sterile conditions.

ACRO Quality Management System

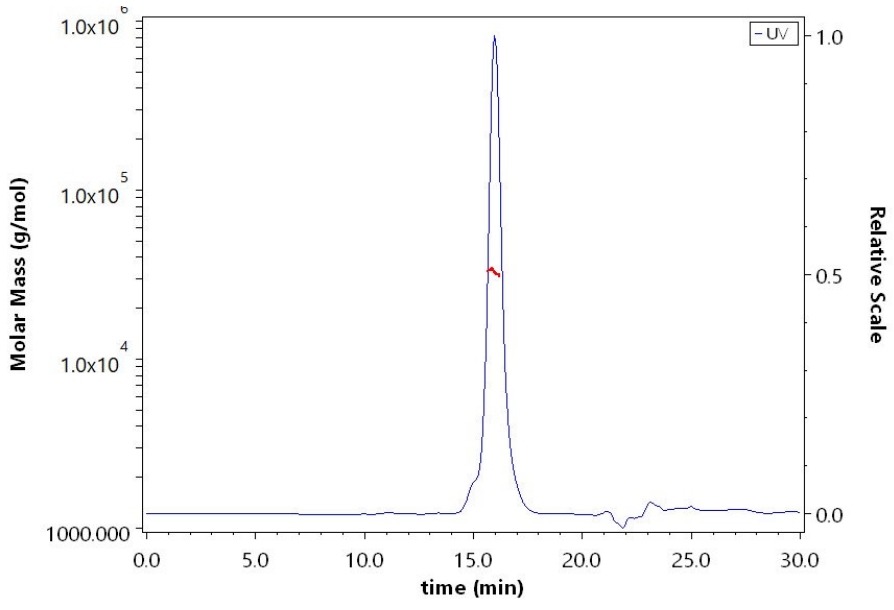
- QMS(ISO, GMP)
- Quality Advantages
- Quality Control Process

SDS-PAGE



Human Cathepsin B (18-339) Protein, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With Star Ribbon Pre-stained Protein Marker).

SEC-MALS



The purity of Human Cathepsin B (18-339) Protein, His Tag (Cat. No. CTB-H52H3) is more than 90% and the molecular weight of this protein is around 30-45 kDa verified by SEC-MALS.

Bioactivity

Measured by its ability to cleave the fluorogenic peptide substrate Z-LR-AMC.
The specific activity is >3,500 pmol/min/μg (QC tested).

Background

Cathepsin B (CTSB) is also known as APP secretase (APPS) and CPSB, is an enzymatic protein belonging to the peptidase C1 family. Cathepsin B / CTSB is synthesized as a preproenzyme. Following removal of the signal peptide, the inactive proenzyme undergoes further modifications including removal of the pro region to result in the active enzyme. The catalytic activity of Cathepsin B / APPS contains: Hydrolysis of proteins with broad specificity for peptide bonds; Preferentially cleaves -Arg-Arg-|-Xaa bonds in small molecule substrates (thus differing from cathepsin L); In addition to being an endopeptidase, shows peptidyl-dipeptidase activity, liberating C-terminal dipeptides. As a thiol protease, cathepsin B / CPSB is believed to participate in intracellular degradation and turnover of proteins and has also been implicated in tumor invasion and metastasis. Overexpression of cathepsin B has been associated with esophageal adenocarcinoma and other tumors.