

Active Recombinant Mouse Ctsb Protein, His Tagged

Cat. No. Ctsb-11221M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Mouse Cathepsin B, His Tag is expressed from human 293 cells (HEK293). It contains AA His 18-Phe 339 (Accession # P10605-1). This protein carries a polyhistidine tag at the C-terminus. Predicted N-terminus: His 18
Species	Mouse
Source	HEK293
ProteinLength	18-339 aa
Description	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.
Form	Lyophilized from 0.22 µm filtered solution in 50 mM Tris, 150 mM NaCl, pH7.5 with

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	trehalose as protectant.
Bio-activity	Measured by its ability to cleave the fluorogenic peptide substrate Z-LR-AMC. The specific activity is >2800 pmol/min/μg, as measured under the described conditions.
Molecular Mass	This protein contains an Activation peptide, and will be partially processed into Pro form with calculated MW of 37.3 kDa and mature form with calculated MW of 29 kDa under reducing (R) condition. The protein migrates as 43-47 kDa and 32-35 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.
Endotoxin	Less than 1.0 EU/μg by the LAL method/rFC method.
Purity	>90% as determined by SDS-PAGE. >95% as determined by SEC-MALS.
Storage	This product is stable after storage at: -20 to -70 centigrade for 12 months in lyophilized state; -70 centigrade for 3 months under sterile conditions after reconstitution. For long term storage, the product should be stored at lyophilized state at -20 centigrade or lower. Please avoid repeated freeze-thaw cycles.
Reconstitution	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.2 μg/μL. Centrifuge the vial at 4 centigrade before opening to recover the entire contents.

GENE INFORMATION

Gene Name	Ctsb cathepsin B [Mus musculus (house mouse)]
Official Symbol	Ctsb
Synonyms	CTSB; cathepsin B; cathepsin B1; CB;

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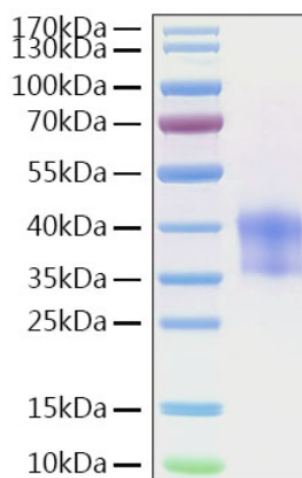
Gene ID 13030

mRNA Refseq NM_007798

Protein Refseq NP_031824

UniProt ID P10605

SDS-PAGE



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