

Recombinant Human CTSB protein, His-tagged

Cat. No. CTSB-385H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human CTSB protein (Arg18-Ile339), fused to His tag at C-terminus, was expressed in human 293 cells (HEK293).
Species	Human
Source	HEK293
ProteinLength	322
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 proenzyme. 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 um filtered solution in 50 mM Tris, 150 mM NaCl, pH8.0, 10% trehalose.

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

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Molecular Mass	The protein has a calculated MW of 36.7 kDa (pro-form) and 29.0 kDa (mature-form). Due to glycosylation, The reducing (R) protein migrates as 42-50 kDa (pro-form) band in SDS-PAGE and there may be a 34 kDa (mature-form) band.
Endotoxin	Less than 1.0 EU per ug by the LAL method.
Purity	>95% as determined by SDS-PAGE.
Storage	For long term storage, the product should be stored at lyophilized state at -20 centigrade or lower. Please avoid repeated freeze-thaw cycles. This product is stable after storage at: -20 centigrade to -70 centigrade for 12 months in lyophilized state; -70 centigrade for 3 months under sterile conditions after reconstitution.
Reconstitution	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.2 ug/ul. Centrifuge the vial at 4°C before opening to recover the entire contents.

GENE INFORMATION

Gene Name	CTSB
Official Symbol	CTSB
Synonyms	CTSB; cathepsin B; cathepsin B1; APP secretase; cysteine protease; amyloid precursor protein secretase; APPS; CPSB
Gene ID	1508
mRNA Refseq	NM_001908

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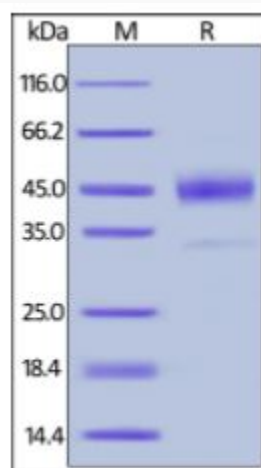
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Protein Refseq NP_001899

MIM 116810

UniProt ID P07858

SDS-PAGE of CTSB-385H



Human Cathepsin B, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.

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