Datasheet for ABIN7519744

Cathepsin B Protein (CTSB) (His tag)

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Overview

Quantity:	20 µg
Target:	Cathepsin B (CTSB)
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Biological Activity:	Active
Purification tag / Conjugate:	This Cathepsin B protein is labelled with His tag.

Product Details

Purpose:	Recombinant Human Cathepsin B Protein
Sequence:	RSRPSFHPLS DELVNYVNKR NTTWQAGHNF YNVDMSYLKR LCGTFLGGPK PPQRVMFTED LKLPASFDAR EQWPQCPTIK EIRDQGSCGS CWAFGAVEAI SDRICIHTNA HVSVEVSAED LLTCCGSMCG DGCNGGYPAE AWNFWTRKGL VSGGLYESHV GCRPYSIPPC EHHVNGSRPP CTGEGDTPKC SKICEPGYSP TYKQDKHYGY NSYSVSNSEK DIMAEIYKNG PVEGAFSVYS DFLLYKSGVY QHVTGEMMGG HAIRILGWGV ENGTPYWLVA NSWNTDWGDN GFFKILRGQD HCGIESEVVA GIPRTDQYWE KI
Specificity:	Arg18-Ile339
Purity:	> 97 % by SDS-PAGE.
Sterility:	0.22 µm filtered
Endotoxin Level:	<1EU/µg
Biological Activity Comment:	Measured by its ability to cleave the fluorogenic peptide substrate Z-LR-AMC . The specific

Product Details

activity is >2,500 pmoles/min/µg.

Target Details

Target:	Cathepsin B (CTSB)
Alternative Name:	Cathepsin B (CTSB Products)
Background:	Description: Cathepsin B is a papain-family cysteine protease that is normally located in lysosomes, where it is involved in the turnover of proteins and plays various roles in maintaining the normal metabolism of cells. This protease has been implicated in pathological conditions, e.g., tumor progression and arthritis. In disease conditions, increases in the expression of cathepsin B occur at both the gene and protein levels. Cathepsin B is synthesized as a preproenzyme and the primary pathways for its normal trafficking to the lysosome utilize mannose 6-phosphate receptors (MPRs). Mature cathepsin B has the ability to degrade several extracellular matrix components at both neutral and acidic pH and has been implicated in the progression of several human and rodent tumors progression and arthritis. Cathepsin B expression is increased in many human cancers at the mRNA, protein and activity levels. It is also frequently overexpressed in premalignant lesions, an observation that associates this protease with local invasive stages of cancer. Increased expression of cathepsin B in primary cancers, and especially in preneoplastic lesions, suggests that this enzyme might have pro-apoptotic features. Active cathepsin B is also secreted from tumours, a mechanism likely to be facilitated by lysosomal exocytosis or extracellular processing by surface activators. Cathepsin B is localized to caveolae on the tumour surface, where binding to the annexin II heterotetramer occurs. Thus CTSB is suggested as a tumor marker. Additionally, Cathepsin B can degrade extracellular matrix proteins, such as collagen IV and laminin, and can activate the precursor form of urokinase plasminogen activator (uPA), perhaps thereby initiating an extracellular proteolytic cascade. Name: Cathepsin B, 3.4.22.1, APP secretase, APPS, Cathepsin B1,CTSB
Gene ID:	1508
UniProt:	P07858
Pathways:	Activation of Innate immune Response, Toll-Like Receptors Cascades

Application Details

Restrictions:	For Research Use only

Handling

Format:	Lyophilized
Reconstitution:	Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid votex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stablizer (e.g. 0.1 % BSA, 5 % HSA, 10 % FBS or 5 % Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles.
Concentration:	0.62 mg/mL
Buffer:	Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4.
Storage:	-20 °C,-80 °C
Storage Comment:	Store the lyophilized protein at -20°C to -80°C for 12 months.|After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week.

