

Product datasheet

Cathepsin B Inhibitor Screening Kit (Fluorometric) ab185438

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Overview

Product name	Cathepsin B Inhibitor Screening Kit (Fluorometric)
Detection method	Fluorescent
Sample type	Inhibitor compounds
Assay type	Semi-quantitative
Product overview	Abcam's Cathepsin B Inhibitor Screening Kit (ab185438) utilizes the ability of Cathepsin B to cleave the synthetic AFC based peptide substrate to release AFC, which can be easily quantified using a fluorometer or fluorescence microplate reader. In the presence of a Cathepsin B-specific inhibitor, the cleavage of the substrate is reduced/abolished resulting in decrease or total loss of the AFC fluorescence. This high-throughput adaptable assay kit is simple, sensitive, and rapid tool to screen the potential inhibitors of Cathepsin B.

Visit our [FAQs](#) page for tips and troubleshooting.

Notes This product is manufactured by BioVision, an Abcam company and was previously called K147 Cathepsin B (CTSB) Inhibitor Screening Kit (Fluorometric). K147-100 is the same size as the 100 test size of ab185438.

Cathepsin B (CTSB, EC 3.4.22.1) is a lysosomal cysteine proteinase that is suggested to participate in intracellular degradation and turnover of proteins. It has also been implicated in tumor invasion and metastasis.

Platform Microplate reader

Properties

Storage instructions Store at -20°C. Please refer to protocols.

Components	100 tests	100 tests
Cathepsin B Assay Buffer	1 x 15ml	1 x 15ml

Components	100 tests	100 tests
Cathepsin Inhibitor	1 x 20µl	1 x 20µl
Cathepsin B Substrate	1 x 0.2ml	1 x 0.2ml
DTT I	1 x 150µl	1 x 150µl
Human Cathepsin B	1 x 5µl	1 x 5µl

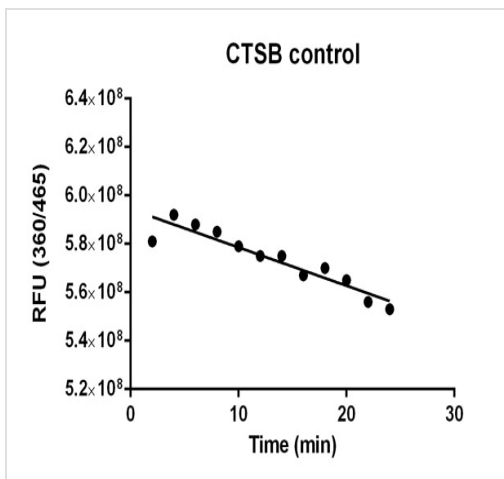
Relevance

Cathepsin B is a normal lysosomal proteinase that is expressed in all cells. It is a cysteine endoproteinase structurally and functionally related to the papain family of proteases. Cathepsin B is synthesized as an inactive pro enzyme which, by removal of a 62 amino acid propeptide, is activated to the single chain form of 31 kDa or the two chain form (25 and 5 kDa subunits). Matured Cathepsin B is normally localized in the lysosomes where it functions in protein turnover. Cathepsin B is also shown capable of degrading extracellular matrix proteins at acidic and neutral pH. Endogenous inhibitors of cysteine proteases, the cystatins and stefins, may play a major role in regulating Cathepsin B activity. In tumor cells and in cells exposed to mitogens, cathepsin B displays altered cellular trafficking resulting in the secretion of the 43 kDa precursor. Elevated levels of Cathepsin B correlate with malignancy suggesting that this enzyme may be a useful prognostic marker for several types of human cancers. Cathepsin B has also been implicated in the pathogenesis of rheumatoid arthritis, muscular dystrophy and tumour metastasis. It is also known as amyloid precursor protein secretase and is involved in the proteolytic processing of amyloid precursor protein (APP).

Cellular localization

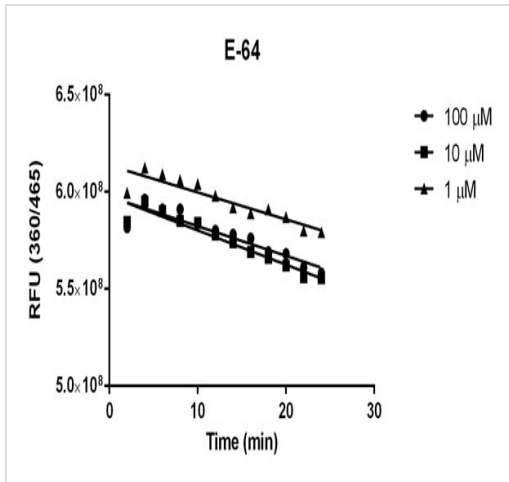
Lysosome. Melanosome. Note=Identified by mass spectrometry in melanosome fractions from stage I to stage IV.

Images



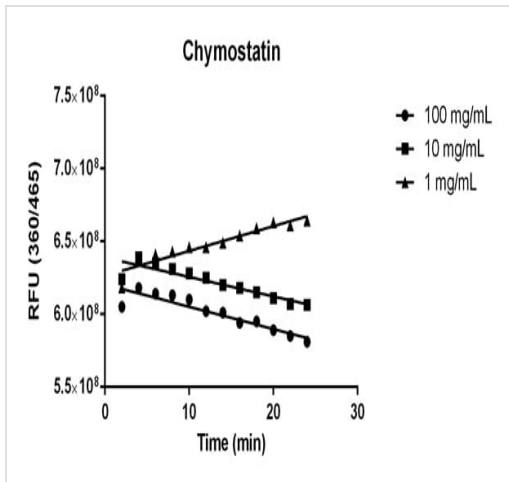
Inhibition of Cathepsin B activity by the CTSB control

Inhibition of Cathepsin B activity by the Cathepsin B inhibitor CTSB control



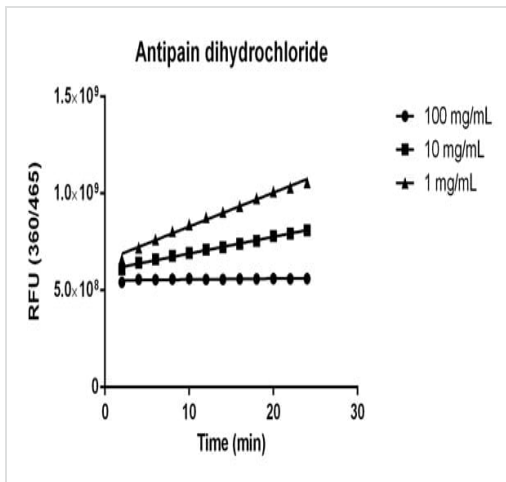
Inhibition of Cathepsin B activity by the Cathepsin B inhibitor E-64

Inhibition of Cathepsin B activity by the Cathepsin B inhibitor E-64



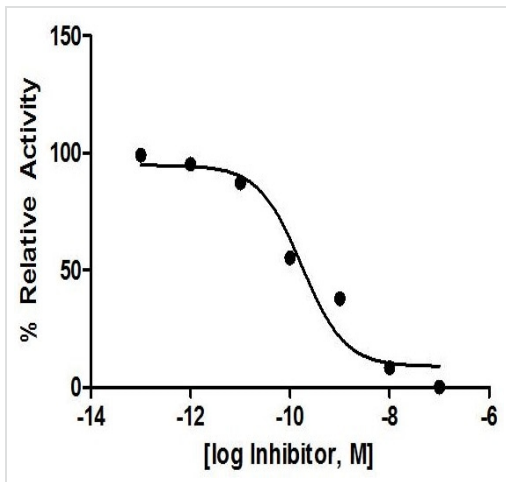
Inhibition of Cathepsin B activity by the Cathepsin B inhibitor Chymostatin

Inhibition of Cathepsin B activity by the Cathepsin B inhibitor Chymostatin



Inhibition of Cathepsin B activity by the Cathepsin B inhibitor Antipain dihydrochloride

Inhibition of Cathepsin B activity by the Cathepsin B inhibitor Antipain Dihydrochloride



Inhibition of Cathepsin B activity by Cathepsin B Inhibitor Screening Kit was performed following kit protocol. This is example data only.

Inhibition of Cathepsin B activity by the Cathepsin B Inhibitor [F-F-FMK]

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