

Product datasheet

Cathepsin E Activity Assay Kit (Fluorometric) ab211081

[1 References](#) [2 Images](#)

Overview

Product name	Cathepsin E Activity Assay Kit (Fluorometric)
Detection method	Fluorescent
Sample type	Cell Lysate, Purified protein, Tissue Lysate
Assay type	Enzyme activity (quantitative)
Sensitivity	1000 μ U
Species reactivity	Reacts with: Mammals, Other species
Product overview	Cathepsin E Activity Assay Kit (ab211081) provides a convenient method for detecting Cathepsin E activity in tissue and cell lysates. It is based on the ability of an active Cathepsin E to cleave a synthetic MCA-based peptide substrate to release free MCA, which can be easily quantified using a fluorimeter or fluorescence microplate reader at Ex/Em = 320/420 nm.

This assay kit is simple, rapid and can detect as low as 1 mU of Cathepsin E activity in biological samples.

Notes This product is manufactured by BioVision, an Abcam company and was previously called K165 Cathepsin E Activity Assay Kit (Fluorometric). K165-100 is the same size as the 100 test size of ab211081.

Cathepsin E (CTSE, EC: 3.4.23.34) is a gastric aspartyl protease that functions as a disulfide-linked homodimer. This protease has a specificity similar to that of pepsin A and cathepsin D. It is an intracellular proteinase that is found in highest concentration on the surface of epithelial mucus-producing cells of the stomach. It is the first aspartic proteinase expressed in the fetal stomach and is found in more than half of gastric cancers.

Platform Microplate reader

Properties

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

Components	100 tests
CTSE Assay Buffer	1 x 25ml
CTSE Lysis Buffer	1 x 25ml

Components	100 tests
CTSE Substrate	1 x 200µl
Human Cathepsin E (Positive Control) (50 µg)	1 vial
MCA Standard (1 mM)	1 x 25µl

Function May have a role in immune function. Probably involved in the processing of antigenic peptides during MHC class II-mediated antigen presentation. May play a role in activation-induced lymphocyte depletion in the thymus, and in neuronal degeneration and glial cell activation in the brain.

Tissue specificity Expressed abundantly in the stomach, the Clara cells of the lung and activated B-lymphocytes, and at lower levels in lymph nodes, skin and spleen. Not expressed in resting B-lymphocytes.

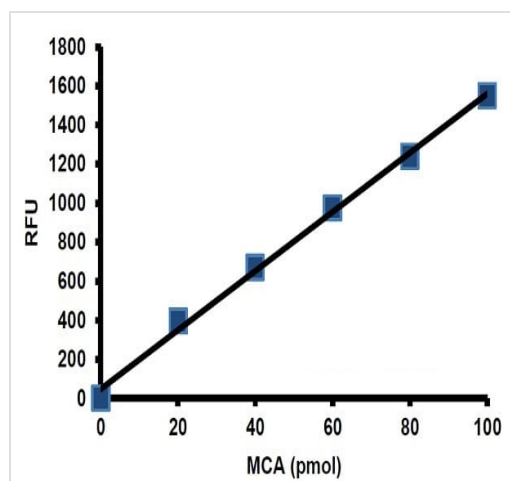
Sequence similarities Belongs to the peptidase A1 family.

Post-translational modifications Glycosylated. The nature of the carbohydrate chain varies between cell types. In fibroblasts, the proenzyme contains a high mannose-type oligosaccharide, while the mature enzyme contains a complex-type oligosaccharide. In erythrocyte membranes, both the proenzyme and mature enzyme contain a complex-type oligosaccharide.

Two forms are produced by autocatalytic cleavage, form I begins at Ile-54, form II begins at Thr-57.

Cellular localization Endosome. The proenzyme is localized to the endoplasmic reticulum and Golgi apparatus, while the mature enzyme is localized to the endosome.

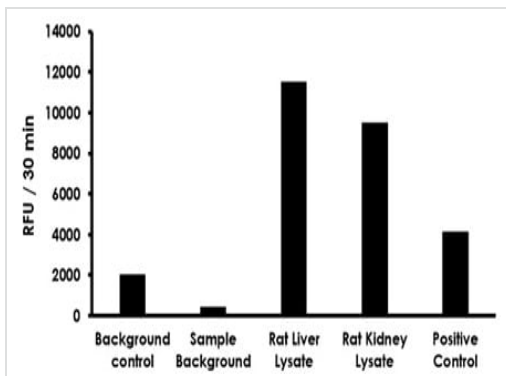
Images



Typical MCA standard calibration curve.

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(ab211081)



Cathepsin E activity in rat liver lysate (6 μ g), rat kidney lysate (12 μ g) and positive control (2 μ L). Background control (blank standard); sample background (sample control without reaction mix).

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