

## Product datasheet

# Cathepsin D Activity Assay Kit (Fluorometric) ab65302

★★★★☆ 3 Abreviews 20 References 画像数 4

### 製品の概要

製品名	Cathepsin D Activity Assay Kit (Fluorometric)
サンプルの種類	Tissue Extracts, Cell Lysate
アッセイタイプ	Quantitative
全工程の試験時間	2h 00m
種交差性	交差種: Mammals, Other species
製品の概要	<p>Abcam's Cathepsin D Activity Assay Kit is a fluorescence-based assay that utilizes the preferred cathepsin-D substrate sequence GKPILFFRLK(Dnp)-D-R-NH<sub>2</sub>) labeled with MCA. Cell lysates or other samples that contain cathepsin-D will cleave the synthetic substrate to release fluorescence, which can then easily be quantified using a fluorometer or fluorescence plate reader at Ex/Em = 328/460 nm.</p> <p>Visit our <a href="#">FAQs page</a> for tips and troubleshooting.</p>

**特記事項** Apoptosis can be mediated by mechanisms other than the traditional caspase-mediated cleavage cascade. There is growing recognition that alternative proteolytic enzymes such as the lysosomal cathepsin proteases may initiate or propagate proapoptotic signals. Cathepsins are lysosomal enzymes that are also used as sensitive markers in various toxicological investigations.

### 製品の特性

**保存方法** Store at -20°C. Please refer to protocols.

内容	ラベル	100 tests
CD Cell Lysis Buffer	WM	1 x 25ml
CD Reaction Buffer	NM	1 x 5ml
CD Substrate (1mM)	Brown	1 x 200µl

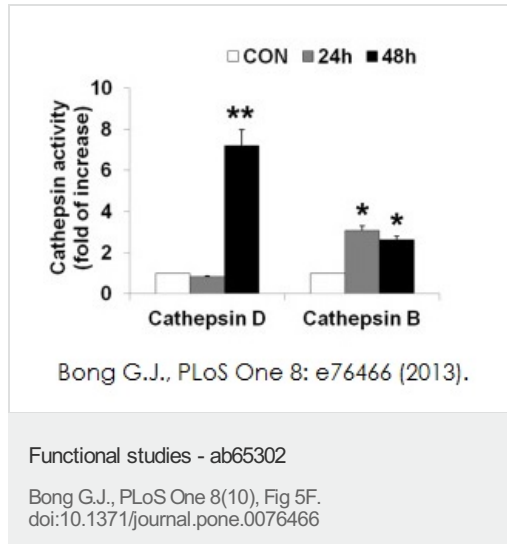
**関連性** Cathepsin D is a normal lysosomal protease that is expressed in all cells. It is an aspartyl protease with a pH optimum in the range of 3-5, and contains two N linked oligosaccharides. Cathepsin D is synthesized as an inactive pro enzyme. Activation involves the proteolytic removal of the 43 amino acid profragment and an internal cleavage to generate the two chain form made up of 34 and 14 kDa subunits. Cathepsin D contains the mannose-6-phosphate lysosomal localization signal that targets the enzyme to the lysosomal compartment where it functions in the normal degradation of proteins. In certain tumor cells, Cathepsin D is abnormally processed and

is secreted in its precursor form. Numerous clinical studies as well as in vitro evidence suggest that cathepsin D plays an important role in malignant transformation and may be a useful prognostic indicator for breast cancer and possibly Alzheimer's disease.

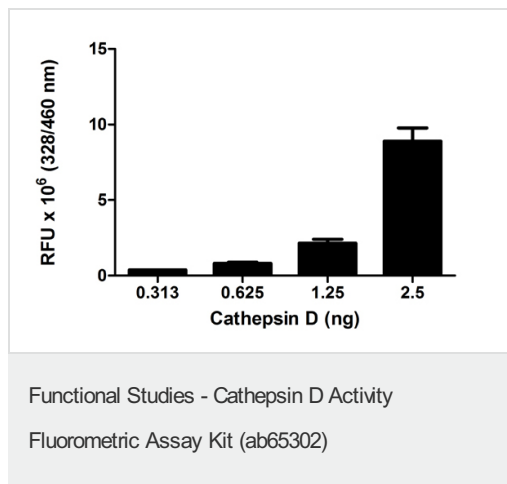
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Lysosome. Melanosome. Note=Identified by mass spectrometry in melanosome fractions from stage I to stage IV.

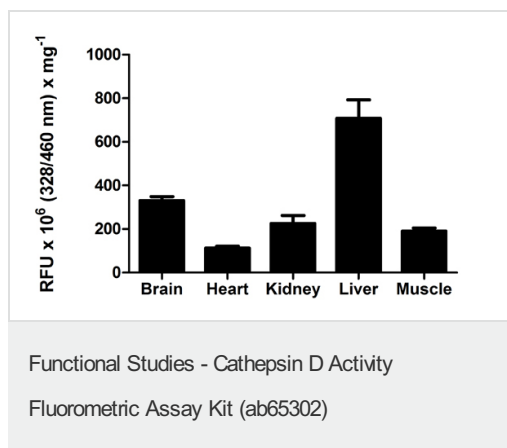
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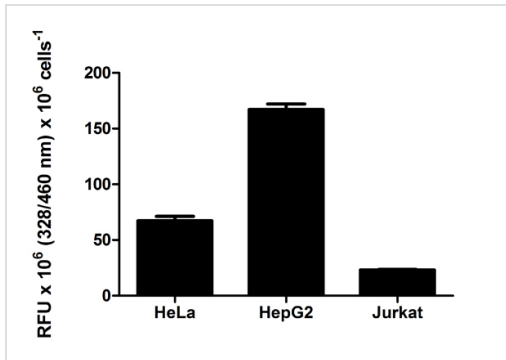
Enzyme activity of Cathepsin B and Cathepsin D was determined using Cathepsin B/D activity assay kit (ab65300 and ab65302). Neuro2a cell lysates were centrifuged at 10,000 xg for 10 minutes at 4°C and supernatant was used for the assay. Cathepsin activity was performed at the 24 and 48 hours time points by cleavage of the fluorescence peptide substrate [DnP-DR-MCA, GKPIILFFRLK(DnP)-DR substrate peptide labeled with MCA]. Data represent the mean ± SD (\* $p < 0.05$ , \*\* $p < 0.001$ ).



Cathepsin D levels were measured in standard control samples from ab119586; background signal subtracted (duplicates +/- SD).



Cathepsin D measured in mouse tissue lysates (mg of extracted protein), background signal subtracted (duplicates +/- SD).



Cathepsin D measured in cell lysates, background signal subtracted (duplicates +/- SD).

Functional Studies - Cathepsin D Activity  
Fluorometric Assay Kit (ab65302)

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