abcam

Product datasheet

Caspase-3 Assay Kit (Fluorometric) ab39383

★★★★★ 1 Abreviews 92 References 画像数 2

製品の概要

製品名	Caspase-3 Assay Kit (Fluorometric)
検出方法	Fluorescent
サンプルの種類	Tissue Extracts, Cell Lysate
アッセイタイプ	Enzyme activity
全工程の試験時間	2h 00m
製品の概要	Caspase-3 Assay Kit (Fluorometric) (ab39383) provides a simple and convenient means for assaying DEVD-dependent caspase activity. The Caspase-3 assay protocol is based on detection of cleavage of substrate DEVD-AFC (AFC: 7-amino-4-trifluoromethyl coumarin). DEVD-AFC emits blue light (λ max = 400 nm). On cleavage of the substrate by CPP32 or related caspases, free AFC emits a yellow-green fluorescence (Ex/Em = 400/505 nm). The signal can be quantified using a fluorometer or a fluorescence microtiter plate reader. Comparison of the fluorescence of AFC from an apoptotic sample with an uninduced control allows determination of the fold increase in Caspase-3/CPP32 activity. Caspase-3 assay protocol summary: - lyse cells / homogenize and lyse tissues in lysis buffer - incubate on ice for 10 min - add reaction buffer and DEVD-AFC substrate and incubate for 1-2 hr at 37ºC - analyze with fluorometer or microplate reader
特記事項	This product is manufactured by BioVision, an Abcam company and was previously called K105 Caspase-3 Fluorometric Assay Kit. K105-100 is the same size as the 100 test size of ab39383. Due to the nature of the substrate, this assay also detects caspase-7 activity. **Other caspase and apoptosis assays** Review the full set of **caspase assays**, or the **apoptosis assay and apoptosis marker guide**.
試験プラットフォーム	Microplate reader

製品の特性

製品の特性

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

内容	100 tests
2X Reaction Buffer I	4 x 2ml
DEVD-AFC	1 x 500µl
DTT II	1 x 400µl
Lysis Buffer I	1 x 100ml

機能 Involved in the activation cascade of caspases responsible for apoptosis execution. At the onset of apoptosis it proteolytically cleaves poly(ADP-ribose) polymerase (PARP) at a '216-Asp- -Gly-217' bond. Cleaves and activates sterol regulatory element binding proteins (SREBPs) between the basic helix-loop-helix leucine zipper domain and the membrane attachment domain. Cleaves and activates caspase-6, -7 and -9. Involved in the cleavage of huntingtin.

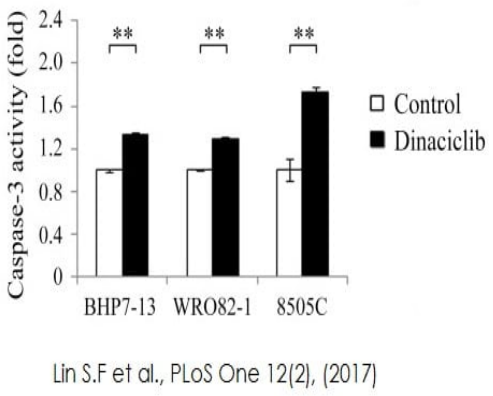
組織特異性 Highly expressed in lung, spleen, heart, liver and kidney. Moderate levels in brain and skeletal muscle, and low in testis. Also found in many cell lines, highest expression in cells of the immune system.

配列類似性 Belongs to the peptidase C14A family.

翻訳後修飾 Cleavage by granzyme B, caspase-6, caspase-8 and caspase-10 generates the two active subunits. Additional processing of the propeptides is likely due to the autocatalytic activity of the activated protease. Active heterodimers between the small subunit of caspase-7 protease and the large subunit of caspase-3 also occur and vice versa.
S-nitrosylated on its catalytic site cysteine in unstimulated human cell lines and denitrosylated upon activation of the Fas apoptotic pathway, associated with an increase in intracellular caspase activity. Fas therefore activates caspase-3 not only by inducing the cleavage of the caspase zymogen to its active subunits, but also by stimulating the denitrosylation of its active site thiol.

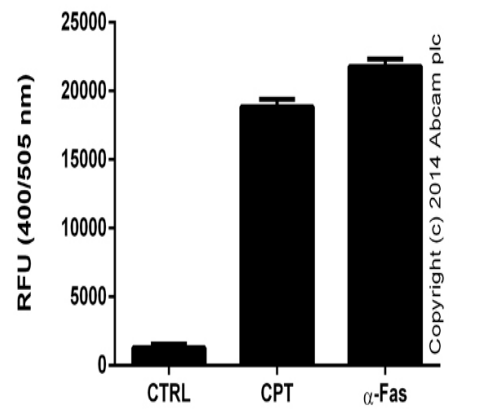
細胞内局在 Cytoplasm.

画像



Functional assays: Caspase-3 assay kit (ab39383)

Caspase-3 activity was analyzed using fluorometric assay kit (ab39383). Thyroid cancer cells were plated at 1 x 10^6 cells in 10 mL of media and incubated overnight. Cells were treated with Dinaciclib (25 nM) for 24 hours. Adherent cells (5 x 10^5) were collected, centrifuged, lysed using 50 µL of lysis buffer on ice for 10 min, incubated with DEVD-AFC substrate and reaction buffer at 37°C for 1.5 hours. Caspase-3 activity was detected by spectrophotometry. The fluorescence intensity of the treated samples was compared with that of control samples to determine the fold-increase in caspase activity. Each condition was performed in duplicate.



Functional assays: Caspase-3 Assay Kit (Fluorometric) (ab39383)

Caspase-3 activity in Jurkat lysates (6.6 x10e5 cells) following 20 hour exposure to 2 uM Camptothecin (**ab120115**) or 10 ng/mL anti-Fas Ab (MBL). Background signal subtracted, duplicates +/- SD.

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit **https://www.abcam.co.jp/abpromise** or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors