

Caspase-3 Assay Kit (Colorimetric) ab39401

1 Abreviews 287 References 2 图像

概述

产品名称	Caspase-3 Assay试剂盒(Colorimetric)
检测方法	Colorimetric
样品类型	Cell Lysate, Tissue Lysate
检测类型	Enzyme activity
检测时间	2h 00m
产品概述	<p>Caspase-3 Assay Kit (Colorimetric) ab39401 provides a simple and convenient means for assaying the activity of caspases that recognize the sequence DEVD.</p> <p>The Caspase-3 assay protocol is based on the formation of the chromophore p-nitroaniline (p-NA) by cleavage from the labeled substrate DEVD-pNA. The p-NA can be quantified using a spectrophotometer or a microtiter plate reader reading absorbance at 400 or 405 nm.</p> <p>Comparison of the absorbance of p-NA from an apoptotic sample with an uninduced control allows determination of the fold increase in Caspase-3 activity.</p> <p>Caspase-3 assay protocol summary:</p> <ul style="list-style-type: none"><li>- add samples to wells</li><li>- add reaction buffer and DEVD-p-NA substrate and incubate for 60-120 min at 37°C</li><li>- analyze with microplate reader</li></ul>
说明	<p>This product is manufactured by BioVision, an Abcam company and was previously called K106 Caspase-3 Colorimetric Assay Kit. K106-100 is the same size as the 100 test size of ab39401.</p> <p>Due to the nature of the substrate, this assay also detects caspase-7 activity.</p> <p>Activation of ICE-family proteases/caspases initiates apoptosis in mammalian cells.</p> <p><b>Other caspase and apoptosis assays</b></p> <p>Review the full set of <a href="#">caspase assays</a>, or the <a href="#">apoptosis assay and apoptosis marker guide</a>.</p>
平台	Microplate reader

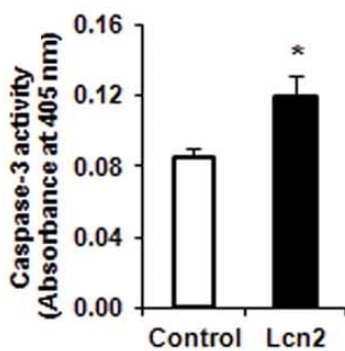
性能

存放说明 Store at -20°C. Please refer to protocols.

组 件	100 tests
2X Reaction Buffer I	4 x 2ml
Lysis Buffer IV	1 x 100ml
DEVD-pNA	1 x 500µl
Dilution Buffer II	1 x 100ml
DTT I	1 x 400µl

功 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.
组织特异性	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.
序列相似性	Belongs to the peptidase C14A family.
翻译后修饰	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.
细胞定位	Cytoplasm.

图 片

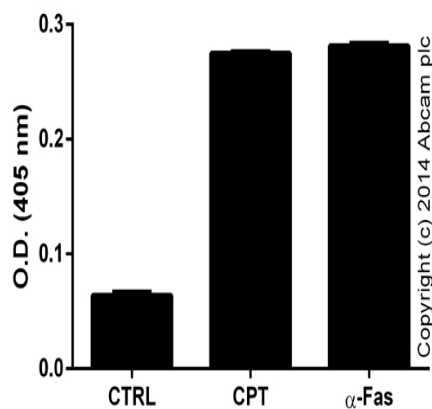


Xu G et al., JBC (2012)

Caspase-3 Assay Kit (Colorimetric) (ab39401)

Image from Xu G. et al. J Biol Chem. 2012;287(7):4808–4817. doi:10.1074/jbc.M111.275719. Fig. 2G.

H9c2 cells were either untreated (*control*) or treated with 2µg/ml of recombinant lipocalin-2 (*Lcn2*) for 24h. Cell lysates were assayed for caspase-3 activity (n = 3, \*, p<0.05). Image obtained from Xu G et al., JBC, 2012 Feb 11;28(7):4808-17



Caspase-3 Assay Kit (Colorimetric) (ab39401)

Caspase-3 in Jurkat lysates (3.3 x10e6 cells) following 20 hour exposure to 2 uM Camptothecin (**ab120115**) or 10 ng/mL anti-Fas Ab (MBL).

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

### 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.cn/abpromise> or contact our technical team.

## Terms and conditions

---

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