

Product datasheet

Anti-Cleaved Caspase-3 antibody ab2302

★★★★☆ [58 Abreviews](#) [1223 References](#) [3 Images](#)

Overview

Product name	Anti-Cleaved Caspase-3 antibody
Description	Rabbit polyclonal to Cleaved Caspase-3
Host species	Rabbit
Tested applications	Suitable for: WB
Species reactivity	Reacts with: Human, Recombinant fragment
Immunogen	Synthetic peptide corresponding to Human Cleaved Caspase-3. Synthetic peptide mapping to the N-terminus adjacent to the cleavage site of human caspase-3 Database link: P42574 (Peptide available as ab38283)
Positive control	WB: HeLa (treated with staurosporine) whole cell lysate. Camptothecin treated Jurkat whole cell lysate. Cleaved Caspase 3 recombinant protein.
General notes	<p>This product is manufactured by BioVision, an Abcam company and was previously called 3015 Anti-Caspase-3 (Active) Polyclonal Antibody.</p> <p>Caspases are synthesized as inactive pro-enzymes that are processed to active form in cells undergoing apoptosis. Caspase 3 has been extensively studied and implicated to play an important role in apoptosis. Active caspase 3 proteolytically cleaves and activates other caspases, as well as relevant targets in the cells (e.g., PARP). This affinity purified antibody recognizing the active forms of caspase-3 provides a new tool for identifying apoptotic cell populations in both tissue sections and cultured cells.</p> <p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle.

Storage buffer	Preservative: 0.03% Proclin 300 Constituents: PBS, 30% Glycerol (glycerin, glycerine), 0.5% BSA, 0.146% EDTA
Purity	Immunogen affinity purified
Primary antibody notes	Caspases are synthesized as inactive pro-enzymes that are processed to active form in cells undergoing apoptosis. Caspase 3 has been extensively studied and implicated to play an important role in apoptosis. Active caspase 3 proteolytically cleaves and activates other caspases, as well as relevant targets in the cells (e.g., PARP). This affinity purified antibody recognizing the active forms of caspase-3 provides a new tool for identifying apoptotic cell populations in both tissue sections and cultured cells.
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab2302 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	★★★★★ (16)	1/50 - 1/500. Detects a band of approximately 17 kDa.

Target

Function 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. Triggers cell adhesion in sympathetic neurons through RET cleavage.

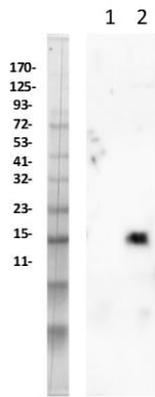
Tissue specificity Highly expressed in lung, spleen, heart, liver and kidney. Moderate levels in brain and skeletal muscle, and low in testis. Also found in many cell lines, highest expression in cells of the immune system.

Sequence similarities Belongs to the peptidase C14A family.

Post-translational modifications 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.

Cellular localization Cytoplasm.

Images



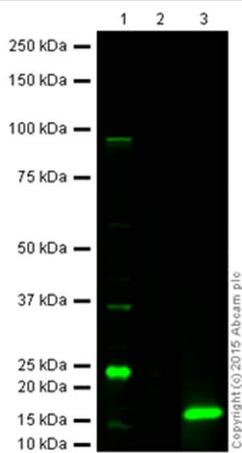
Western blot - Anti-Cleaved Caspase-3 antibody (ab2302)

All lanes : Anti-Cleaved Caspase-3 antibody (ab2302)

Lane 1 : Untreated Jurkat cell line (human T cell leukemia cell line from peripheral blood)

Lane 2 : Camptothecin treated Jurkat cell line (human T cell leukemia cell line from peripheral blood)

Lysates/proteins at 60 µg per lane.



Western blot - Anti-Cleaved Caspase-3 antibody (ab2302)

All lanes : Anti-Cleaved Caspase-3 antibody (ab2302) at 1 µg/ml

Lane 1 : HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate (2 uM Staurosporine, 4Hr) at 20 µg

Lane 2 : HeLa whole cell lysate (untreated) at 20 µg

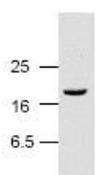
Lane 3 : Cleaved Caspase 3 (recombinant protein) at 0.1 µg

Secondary

All lanes : 800CW Goat Anti-Rabbit IgG at 1/10000 dilution

Performed under reducing conditions.

Additional bands at: 17 kDa (possible mature (processed) protein), 24 kDa, 35 kDa. We are unsure as to the identity of these extra bands.



Western blot - Anti-Cleaved Caspase-3 antibody (ab2302)

Anti-Cleaved Caspase-3 antibody (ab2302) at 1 µg/ml +

Camptothecin

(2 µM) treated Jurkat (Human T cell leukemia cell line from peripheral blood) whole cell lysate

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