Anti-Caspase-3 antibody ab4051

★★★★☆ 2 Abreviews | 15 References | 3 Images

Overview

Product name	Anti-Caspase-3 antibody
Description	Rabbit polyclonal to Caspase-3
Specificity	This antibody reacts with the active form of Caspase-3 (17kDa). Caspase-3 is a member of the interleukin-1 ß-converting enzyme family. Caspase-3 is thought to be associated with induction of apoptosis. Caspase-3 is synthesized as inactive 32 kDa proenzyme and isprocessed during apoptosis generating t-o subunits of 17 kDa and 12 kDa. Caspase 3 stains the epithelial cells of skin, renal proximal tubules and collecting ducts.
Tested applications	IP, WB, IHC-P, Flow Cyt
Species reactivity	**Reacts with:** Mouse, Rat, Sheep, Rabbit, Hamster, Cow, Dog, Human, Pig, Monkey
Immunogen	Synthetic peptide corresponding to Human Caspase-3 aa 167-175. Immunogen = synthetic peptide corresponding to the cleavage site of human caspase 3 (amino acids 167-175). Database link: P42574
Positive control	Tonsil

Properties

Form	Liquid
Storage instructions	Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.05% Sodium Azide Constituents: 1% BSA
Purity	IgG fraction
Purification notes	Purified immunoglobulin fraction of rabbit antiserum against Caspase-3 containing sodium azide as a preservative.
Clonality	Polyclonal
Isotype	IgG

Applications

Our Abpromise guarantee covers the use of **ab4051** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

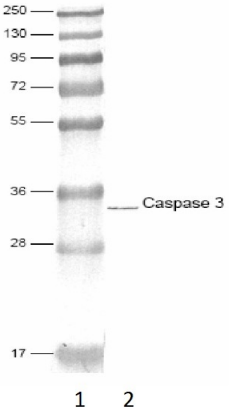
Application	Abreviews	Notes
IP		Use at an assay dependent concentration.
WB		1/100 - 1/500. Predicted molecular weight: 32 kDa.
IHC-P	★★★★☆	Use a concentration of 0.002 mg/ml. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol. Please note that for manual staining we recommend to optimize the primary antibody concentration and incubation time (overnight incubation), and amplification may be required.
Flow Cyt		Use at an assay dependent concentration.

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.
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.

Anti-Caspase-3 antibody images



Western blot - Anti-Caspase-3 antibody (ab4051)

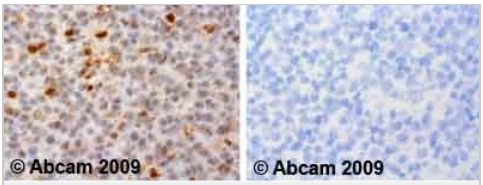
Lane 1 : KDa Ladder

Lane 2 : Anti-Caspase-3 antibody (ab4051)

Lane 1 : As above

Lane 2 : Human Lung Cell Extract

Predicted band size : 32 kDa

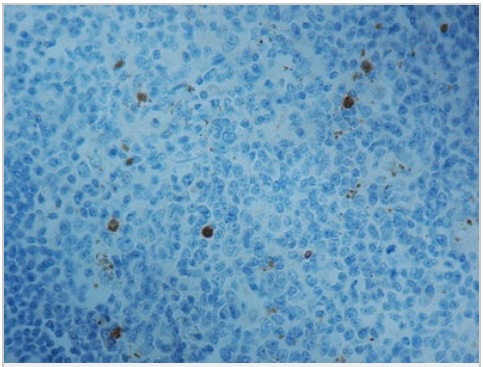


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Caspase-3 antibody (ab4051)

ab4051 staining Human normal tonsil. Staining is localised to the cytoplasm.

Left panel: with primary antibody at 2 ug/ml. Right panel: isotype control.

Sections were stained at room temperature. Slides were peroxidase blocked in 3% H2O2 in methanol for 10 minutes. They were then blocked for 10 minutes (block containing casein 0.25% in PBS) then incubated with primary antibody for 20 minutes and detected for 30 minutes. Colorimetric detection was completed with diaminobenzidine for 5 minutes. Slides were counterstained with Haematoxylin (ab128990) and coverslipped under DePeX.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Caspase-3 antibody (ab4051)

ab4051 staining Caspase-3 in formalin-fixed, paraffin-embedded Human tonsil tissue by Immunohistochemistry.

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