Overview

Product name: Anti-active Caspase-3 antibody
Description: Rabbit polyclonal to active Caspase-3
Host species: Rabbit
Tested applications: Suitable for: WB, ICC/IF
Species reactivity: Reacts with: Mouse, Rat, Cow, Dog, Human, Pig
Immunogen: Synthetic peptide corresponding to Human active Caspase-3 aa 167-175 conjugated to Keyhole Limpet Haemocyanin (KLH).
Sequence: ELDCGIETD

Positive control: Human epitheloid carcinoma HeLa cell line, treated with staurosporine and Human recombinant caspase-3, active.

Properties

Form: Liquid
Storage instructions: Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer: pH: 7.40
Preservative: 0.097% Sodium azide
Constituent: 0.0268% PBS
Purity: IgG fraction
Purification notes: Whole antiserum is fractionated and then further purified by ion exchange chromatography. The resulting IgG fraction is further purified by absorption on the Caspase-3 peptide (Human, amino acids 167-178) corresponding to the uncleaved Caspase 3 site sequence.

Clonality: Polyclonal
Isotype: IgG

Applications
Our Abpromise guarantee covers the use of **ab49822** in the following tested applications.

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

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**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**
Anti-active Caspase-3 antibody (ab49822) at 1/1000 dilution

**Secondary**

Goat Anti-Rabbit IgG, Peroxidase conjugate

Developed using the ECL technique.

**Observed band size:** 17 kDa

Why is the actual band size different from the predicted?

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**Please note:** All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE"

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