

Product datasheet

Anti-Caspase-3 antibody ab52181

★★★★★ 1 Abreviews 1 References 1 Image

Overview

Product name	Anti-Caspase-3 antibody
Description	Rabbit polyclonal to Caspase-3
Host species	Rabbit
Specificity	ab52181 detects endogenous levels of fragment of activated Caspase-3 resulting from cleavage adjacent to Asp175.
Tested applications	Suitable for: ICC/IF, IHC-P, ELISA
Species reactivity	Reacts with: Mouse, Rat, Human
Immunogen	Synthetic peptide corresponding to Human Caspase-3 aa 126-175. Database link: P42574
Positive control	Human lung carcinoma tissue.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
Storage buffer	Preservative: 0.02% Sodium Azide Constituents: 50% Glycerol, PBS (without Mg ²⁺ and Ca ²⁺), 150mM Sodium chloride, pH 7.4
Purity	Immunogen affinity purified
Purification notes	ab52181 was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Clonality	Polyclonal
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab52181** 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
ICC/IF	★★★★★	Use at an assay dependent concentration. PubMed: 19443712
IHC-P		1/50 - 1/100.
ELISA		1/20000.

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

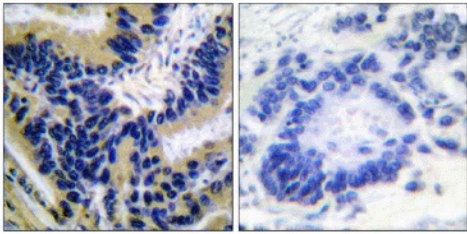
Cleavage by granzyme B, caspase-6, caspase-8 and caspase-10 generates the two active subunits. Additional processing of the propeptides is likely due to the autocatalytic activity of the activated protease. Active heterodimers between the small subunit of caspase-7 protease and the large subunit of caspase-3 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.

Images



CI-peptide

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Anti-Caspase-3 antibody (ab52181)

ab52181 at 1/50 dilution staining Caspase-3 in human lung carcinoma by Immunohistochemistry, Paraffin embedded tissue, in the absence or presence of the immunising peptide.

ab52181 at 1/50 dilution staining Caspase 3 in human lung carcinoma by Immunohistochemistry, Paraffin embedded tissue, in the absence or presence of the immunising peptide.

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