




Product datasheet

Anti-Caspase-3 antibody [ABM1C12] ab208161

KO **VALIDATED**

[11 References](#) [6 Images](#)

Overview

Product name	Anti-Caspase-3 antibody [ABM1C12]
Description	Mouse monoclonal [ABM1C12] to Caspase-3
Host species	Mouse
Specificity	ab208161 recognizes both pro- and active Caspase 3 after apoptosis has been induced in wildtype cells and not knockout cells
Tested applications	Suitable for: WB, IHC-P
Species reactivity	Reacts with: Human Predicted to work with: Rat, Rabbit, Hamster, Cat, Dog, Pig, Chimpanzee, Cynomolgus monkey 
Immunogen	Recombinant full length protein corresponding to Mouse Caspase-3 aa 1 to the C-terminus. Database link: P70677  Run BLAST with  Run BLAST with
Positive control	Ramos cell lysate. Human colon, adenocarcinoma of rectum, spleen and squamous cell carcinoma of lung tissues.
General notes	<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. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.05% Sodium azide Constituents: 0.05% BSA, 99% PBS

Purity	Protein G purified
Clonality	Monoclonal
Clone number	ABM1C12
Isotype	IgG1
Light chain type	kappa

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab208161 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		Use a concentration of 2 µg/ml. Predicted molecular weight: 31 kDa.
IHC-P		Use a concentration of 5 µg/ml.

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.

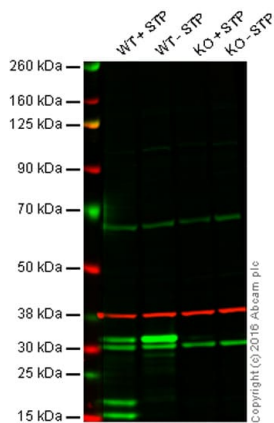
Tissue specificity Highly expressed in lung, spleen, heart, liver and kidney. Moderate levels in brain and skeletal muscle, and low in testis. Also found in many cell lines, highest expression in cells of the immune system.

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



Western blot - Anti-Caspase-3 antibody [ABM1C12] (ab208161)

Lane 1: Wild-type HAP1 cell lysate + Staurosporine (1 μ M for 4h)

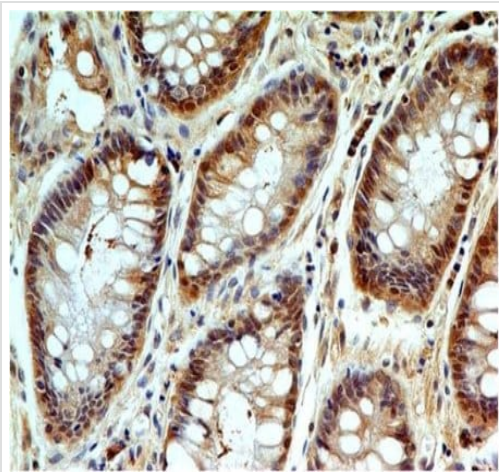
Lane 2: Wild-type HAP1 cell lysate

Lane 3: Caspase-3 knockout HAP1 cell lysate + Staurosporine (1 μ M for 4h)

Lane 4: Caspase-3 knockout HAP1 cell lysate

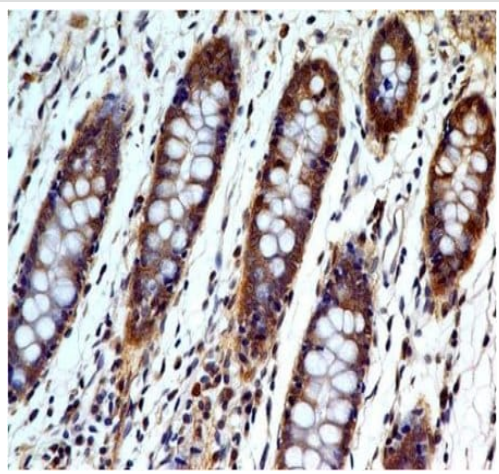
Lanes 1 - 4: Merged signal (red and green). Green - ab208161 observed at 35 kDa. Red - loading control, **ab181602**, observed at 37 kDa.

ab208161 was shown to recognise pro + active Caspase 3 when Caspase 3 knockout samples were used, along with additional cross-reactive bands. Wild-type and Caspase 3 knockout samples (\pm Staurosporine treatment) were subjected to SDS-PAGE. ab208161 at a concentration of 2 μ g/ml and **ab181602** (loading control to GAPDH) at a dilution of 1/10000 were incubated overnight at 4°C. Blots were developed with Goat anti-Mouse IgG H&L (IRDye[®] 800CW) preadsorbed (**ab216772**) and Goat Anti-Rabbit IgG H&L (IRDye[®] 680RD) preadsorbed (**ab216777**) secondary antibodies at 1/10000 dilution for 1 hour at room temperature before imaging.



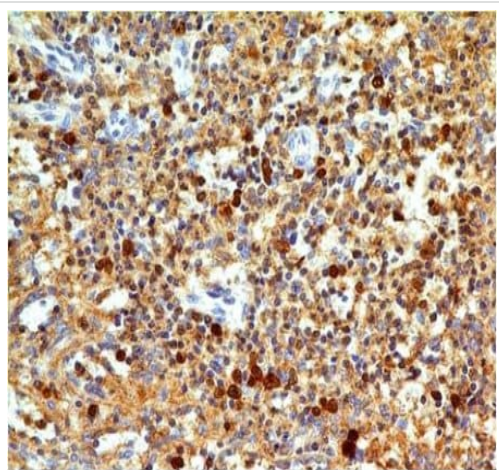
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Caspase-3 antibody [ABM1C12] (ab208161)

Immunohistochemical analysis of formalin-fixed paraffin-embedded Human adenocarcinoma of rectum tissue labeling active + pro Caspase 3 with ab208161 at 5 μ g/ml .



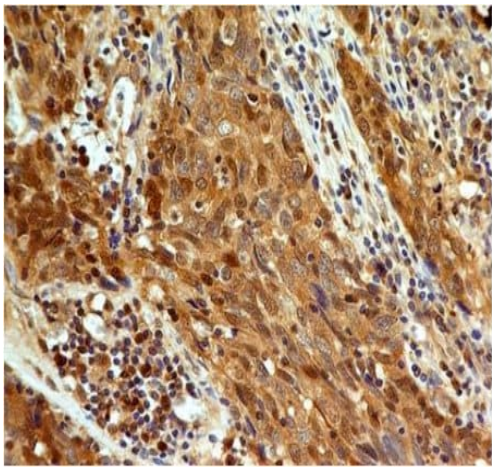
Immunohistochemical analysis of formalin-fixed paraffin-embedded Human colon tissue labeling active + pro Caspase 3 with ab208161 at 5 $\mu\text{g/ml}$.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Caspase-3 antibody [ABM1C12] (ab208161)



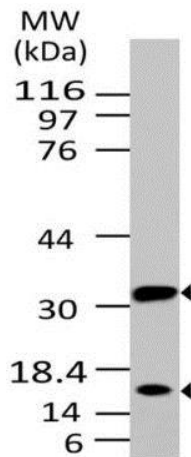
Immunohistochemical analysis of formalin-fixed paraffin-embedded Human spleen tissue labeling active + pro Caspase 3 with ab208161 at 5 $\mu\text{g/ml}$.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Caspase-3 antibody [ABM1C12] (ab208161)



Immunohistochemical analysis of formalin-fixed paraffin-embedded Human squamous cell carcinoma of lung tissue labeling active + pro Caspase 3 with ab208161 at 5 µg/ml .

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Caspase-3 antibody [ABM1C12] (ab208161)



Anti-Caspase-3 antibody [ABM1C12] (ab208161) at 2 µg/ml + Ramos cell lysate

Predicted band size: 31 kDa

Western blot - Anti-Caspase-3 antibody [ABM1C12] (ab208161)

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