

## Product datasheet

# Anti-Cleaved Caspase-3 antibody [EPR21032] $\alpha$ b214430

Recombinant RabMAb

★★★★★ 1 Abreviews 5 References 1 Image

### Overview

<b>Product name</b>	Anti-Cleaved Caspase-3 antibody [EPR21032]
<b>Description</b>	Rabbit monoclonal [EPR21032] to Cleaved Caspase-3
<b>Host species</b>	Rabbit
<b>Specificity</b>	ab214430 recognises both pro-Caspase-3 and p17 cleavage fragments.
<b>Tested applications</b>	<b>Suitable for:</b> WB
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse
<b>Immunogen</b>	Synthetic peptide corresponding to Mouse Cleaved Caspase-3 aa 150-250. Database link: <a href="#">P70677</a>
<b>Positive control</b>	WB: NIH/3T3 cells treated with staurosporine, whole cell lysate.
<b>General notes</b>	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> <li>- High batch-to-batch consistency and reproducibility</li> <li>- Improved sensitivity and specificity</li> <li>- Long-term security of supply</li> <li>- Animal-free production</li> </ul> <p>For more information <a href="#">see here</a>.</p> <p>Our RabMAb<sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <a href="#">RabMAb<sup>®</sup> patents</a>.</p>

### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	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.
<b>Storage buffer</b>	Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol, 0.05% BSA
<b>Purity</b>	Protein A purified
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	EPR21032
<b>Isotype</b>	IgG

## Applications

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Our [Abpromise guarantee](#) covers the use of **ab214430** 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		1/5000. Detects a band of approximately 32, 29, 24, 19, 17 kDa (predicted molecular weight: 31 kDa).

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## Target

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### 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.

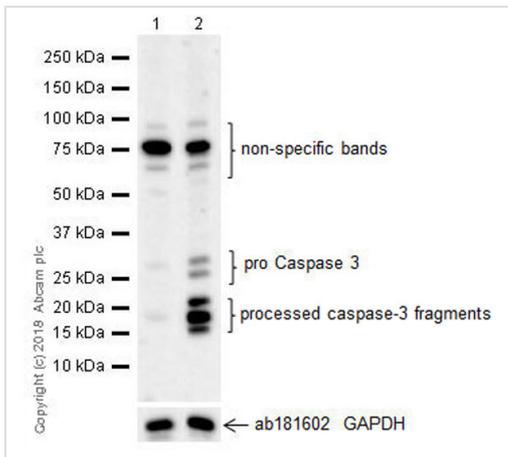
### Cellular localization

Cytoplasm.

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## Images

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Western blot - Anti-Cleaved Caspase-3 antibody [EPR21032] (ab214430)

**All lanes :** Anti-Cleaved Caspase-3 antibody [EPR21032] (ab214430) at 1/5000 dilution

**Lane 1 :** Untreated NIH/3T3 (mouse embryo fibroblast cell line) whole cell lysate

**Lane 2 :** NIH/3T3 cells treated with 1 uM staurosporine for 4 hours, whole cell lysate

Lysates/proteins at 10 µg per lane.

### Secondary

**All lanes :** Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Developed using the ECL technique.

**Predicted band size:** 31 kDa

**Observed band size:** 17,19,24,29,32 kDa

[why is the actual band size different from the predicted?](#)

**Exposure time:** 3 minutes

Blocking and dilution buffer: 5% NFDm/TBST.

Observed molecular masses are consistent with the literature for full-length and cleaved caspase 3 (PMID: 9922454, PMID 16221205).

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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