abcam

## Product datasheet

# Anti-Caspase-7 antibody [EPR17029] ab181579

Recombinant RabMAb

**4 References** 5 Images

### Overview

| | |
|---|---|
| **Product name** | Anti-Caspase-7 antibody [EPR17029] |
| **Description** | Rabbit monoclonal [EPR17029] to Caspase-7 |
| **Host species** | Rabbit |
| **Tested applications** | **Suitable for:** ICC/IF, IP, WB |
| **Species reactivity** | **Reacts with:** Mouse, Rat |
| **Immunogen** | Synthetic peptide. This information is proprietary to Abcam and/or its suppliers. |
| **Positive control** | WB: Mouse heart, kidney and spleen tissue lysates. C6, RAW 264.7, PC-12 and NIH/3T3 cell lysates. Rat brain, heart, kidney and spleen tissue lysates. ICC/IF and IP: NIH/3T3 cells. |
| **General notes** | This product is a recombinant monoclonal antibody, which offers several advantages including:<br>- High batch-to-batch consistency and reproducibility<br>- Improved sensitivity and specificity<br>- Long-term security of supply<br>- Animal-free production<br>For more information **see here**.<br>Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**. |

### 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: 0.01% Sodium azide<br>Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA |
| **Purity** | Protein A purified |
| **Clonality** | Monoclonal |
| **Clone number** | EPR17029 |
| **Isotype** | IgG |

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab181579 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** | | 1/250. |
| **IP** | | 1/120. |
| **WB** | | 1/5000. Detects a band of approximately 35, 32, 27, 11 kDa (predicted molecular weight: 34 kDa). |

## Target

**Function** Involved in the activation cascade of caspases responsible for apoptosis execution. Cleaves and activates sterol regulatory element binding proteins (SREBPs). Proteolytically cleaves poly(ADP-ribose) polymerase (PARP) at a '216-Asp-
-Gly-217' bond. Overexpression promotes programmed cell death.

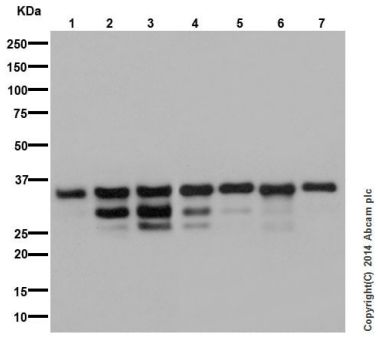
**Tissue specificity** Highly expressed in lung, skeletal muscle, liver, kidney, spleen and heart, and moderately in testis. No expression in the brain.

**Sequence similarities** Belongs to the peptidase C14A family.

**Post-translational modifications** Cleavages by granzyme B or caspase-10 generate the two active subunits. Propeptide domains can also be cleaved efficiently by caspase-3. Active heterodimers between the small subunit of caspase-7 and the large subunit of caspase-3, and vice versa, also occur.

**Cellular localization** Cytoplasm.

## Images




Western blot - Anti-Caspase-7 antibody [EPR17029] (ab181579)

**All lanes :** Anti-Caspase-7 antibody [EPR17029] (ab181579) at 1/5000 dilution

**Lane 1 :** Mouse heart tissue lysate
**Lane 2 :** Mouse kidney tissue lysate
**Lane 3 :** Mouse spleen tissue lysate
**Lane 4 :** C6 (Rat glial tumor cells) lysate
**Lane 5 :** RAW 264.7 (Mouse macrophage cells transformed with Abelson murine leukemia virus) lysate
**Lane 6 :** PC-12 (Rat adrenal gland pheochromocytoma) lysate
**Lane 7 :** NIH/3T3 (Mouse embyro fibroblast cells) lysate

Lysates/proteins at 10 µg per lane.

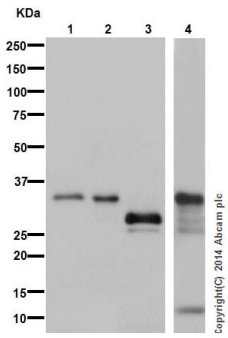
**Secondary**

**All lanes :** Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

**Predicted band size:** 34 kDa
**Observed band size:** 35,32,27 kDa

Observed band size: 35kDa band is the pro-Caspase 7, 32kDa band is the N-terminal propeptide cleaved Caspase 7, and the 27kDa band is an N-terminal truncated caspase 7.

Blocking/Dilution buffer: 5% NFDM/TBST.




Western blot - Anti-Caspase-7 antibody [EPR17029] (ab181579)

**All lanes :** Anti-Caspase-7 antibody [EPR17029] (ab181579) at 1/5000 dilution

**Lane 1 :** Rat brain tissue lysate
**Lane 2 :** Rat heart tissue lysate
**Lane 3 :** Rat kidney tissue lysate
**Lane 4 :** Rat spleen tissue lysate

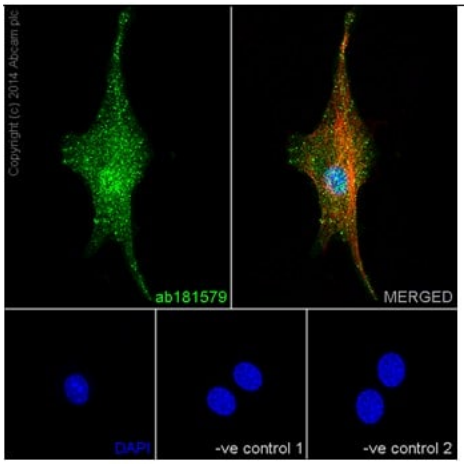
Lysates/proteins at 10 µg per lane.

**Secondary**
**All lanes :** Goat Anti-Rabbit IgG, (H+L),Peroxidase conjugated at 1/1000 dilution

**Predicted band size:** 34 kDa

Observed band size: The 35kDa band is the pro-caspase 7; 32kDa band is the N-terminal propeptide cleaved caspase 7; the 27kDa band is the truncated form and the 11kDa band is Caspase 7 subunit p11.
Lanes 1-4 were from the same blot; the exposure time for lanes 1-3 is 1 min and for lane 4 is 2 min.

Blocking/Dilution buffer: 5% NFDM/TBST.



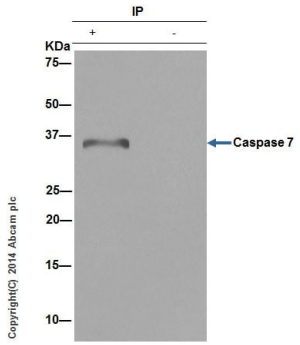

Immunocytochemistry/ Immunofluorescence - Anti-Caspase-7 antibody [EPR17029] (ab181579)

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized NIH/3T3 (Mouse embyro fibroblast cells) cells labeling Caspase-7 with ab181579 at 1/250 dilution, followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (**ab150077**) secondary antibody at 1/400 dilution (green). Cytoplasm and nuclear staining on NIH/3T3 cell line is observed. The nuclear counter stain is DAPI (blue). Tubulin is detected with **ab7291** (anti-Tubulin mouse mAb) at 1/500 dilution and **ab150120** (AlexaFluor®594 Goat anti-Mouse secondary) at 1/500 dilution (red).

The negative controls are as follows:

1. ab181579 at 1/250 dilution followed by **ab150120** (AlexaFluor®594 Goat anti-Mouse secondary) at 1/500 dilution.
2. **ab7291** (anti-Tubulin mouse mAb) at 1/500 dilution followed by **ab150077** (Alexa Fluor®488 Goat Anti-Rabbit IgG H&L) at 1/400 dilution.

Please see Pubmed IDs: 22464733 and 11829465 for further information on Caspase-7 localization.



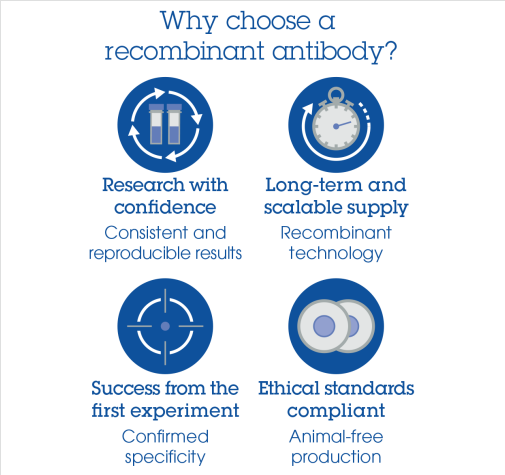

Immunoprecipitation - Anti-Caspase-7 antibody [EPR17029] (ab181579)

Caspase-7 was immunoprecipitated from 1mg of NIH/3T3 (Mouse embyro fibroblast cells) with ab181579 at 1/120 dilution. Western blot was performed from the immunoprecipitate using ab181579 at 1/1000 dilution. Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG, was used as secondary antibody at 1/1500 dilution.

Lane 1: NIH/3T3 whole cell extract. Lane 2: PBS instead of extract.

Blocking/Dilution buffer: 5% NFDM/TBST.

The observed band at 35kDa band is the pro-caspase-7.




Anti-Caspase-7 antibody [EPR17029] (ab181579)

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