

Product datasheet

Anti-Caspase-1 antibody [EPR19672] ab207802

KO VALIDATED Recombinant RabMAB

★★★★☆ **1 Abreviews** **60 References** **5 Images**

Overview

Product name	Anti-Caspase-1 antibody [EPR19672]
Description	Rabbit monoclonal [EPR19672] to Caspase-1
Host species	Rabbit
Tested applications	Suitable for: IP, WB
Species reactivity	Reacts with: Human
Immunogen	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: Untreated THP-1 whole cell lysate; THP-1 treated with 80 nM TPA overnight, then treated with 1 µg/ml LPS for 8 hours whole cell lysate; Human lymph node, thymus and spleen lysates, Wild-type THP-1 cell lysate.
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none">- High batch-to-batch consistency and reproducibility- Improved sensitivity and specificity- Long-term security of supply- Animal-free production <p>For more information see here.</p> <p>Our RabMAB[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAB[®] patents.</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	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol, 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR19672

Isotype

IgG

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab207802 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
IP		1/30.
WB	★★★★★ (1)	1/1000. Detects a band of approximately 45, 42, 35, 22, 20 kDa (predicted molecular weight: 45, 42, 35, 22, 20 kDa).

Target

Function

Thiol protease that cleaves IL-1 beta between an Asp and an Ala, releasing the mature cytokine which is involved in a variety of inflammatory processes. Important for defense against pathogens. Cleaves and activates sterol regulatory element binding proteins (SREBPs). Can also promote apoptosis.

Tissue specificity

Expressed in larger amounts in spleen and lung. Detected in liver, heart, small intestine, colon, thymus, prostate, skeletal muscle, peripheral blood leukocytes, kidney and testis. No expression in the brain.

Sequence similarities

Belongs to the peptidase C14A family.
Contains 1 CARD domain.

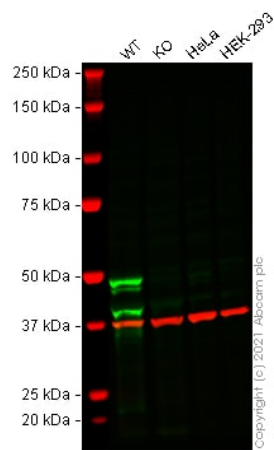
Post-translational modifications

The two subunits are derived from the precursor sequence by an autocatalytic mechanism.

Cellular localization

Cytoplasm.

Images



Western blot - Anti-Caspase-1 antibody [EPR19672]
(ab207802)

All lanes : Anti-Caspase-1 antibody [EPR19672] (ab207802) at 1/1000 dilution

Lane 1 : Wild-type THP-1 cell lysate at 40 µg

Lane 2 : CASP1 knockout THP-1 cell lysate at 40 µg

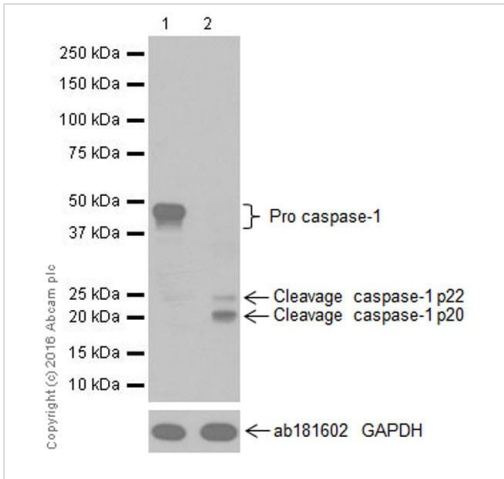
Lane 3 : HeLa cell lysate at 20 µg

Lane 4 : HEK-293 cell lysate at 20 µg

Performed under reducing conditions.

Predicted band size: 45, 42, 35, 22, 20 kDa

False colour image of Western blot: Anti-Caspase-1 antibody [EPR19672] staining at 1/1000 dilution, shown in green; Mouse anti-GAPDH antibody [6C5] ([ab8245](#)) loading control staining at 1/20000 dilution, shown in red. In Western blot, ab207802 was shown to bind specifically to Caspase-1. A band was observed at 22, 35-40, 48 kDa in wild-type THP-1 cell lysates with no signal observed at this size in CASP1 knockout cell line [ab276116](#) (knockout cell lysate [ab277988](#)). To generate this image, wild-type and CASP1 knockout THP-1 cell lysates were analysed. First, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in fluorescent western blot (TBS-based) blocking solution before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Rabbit IgG H&L (IRDye[®] 800CW) preabsorbed ([ab216773](#)) and Goat anti-Mouse IgG H&L (IRDye[®] 680RD) preabsorbed ([ab216776](#)) at 1/20000 dilution.



Western blot - Anti-Caspase-1 antibody [EPR19672] (ab207802)

All lanes : Anti-Caspase-1 antibody [EPR19672] (ab207802) at 1/1000 dilution

Lane 1 : Untreated THP-1 (Human monocytic leukemia cell line) whole cell lysate

Lane 2 : THP-1 (Human monocytic leukemia cell line) treated with 80 nM TPA overnight, then treated with 1 µg/ml LPS for 8 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

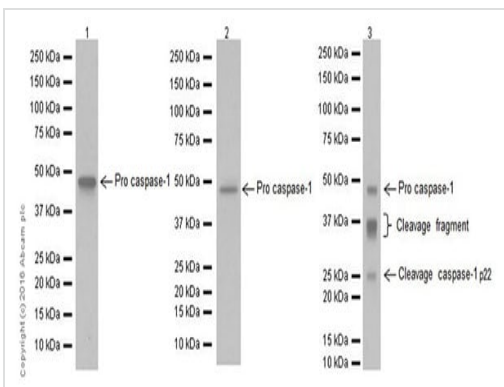
Predicted band size: 45, 42, 35, 22, 20 kDa

Observed band size: 20,22,42,45 kDa

Exposure time: 3 minutes

Blocking/Dilution buffer: 5% NFD/MTBST.

There are six pro-caspase 1 isoforms, generating products between 30-45kDa, Pro-Caspase 1 is cleaved into p20(p22) and p10(p12) subunits. PMID: 8662843. PMID: 7595215. The product recognizes p20(p22) cleavage fragment where the immunogen is located.



Western blot - Anti-Caspase-1 antibody [EPR19672] (ab207802)

All lanes : Anti-Caspase-1 antibody [EPR19672] (ab207802) at 1/1000 dilution

Lane 1 : Human lymph node lysate

Lane 2 : Human thymus lysate

Lane 3 : Human spleen lysate

Lysates/proteins at 10 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/10000 dilution

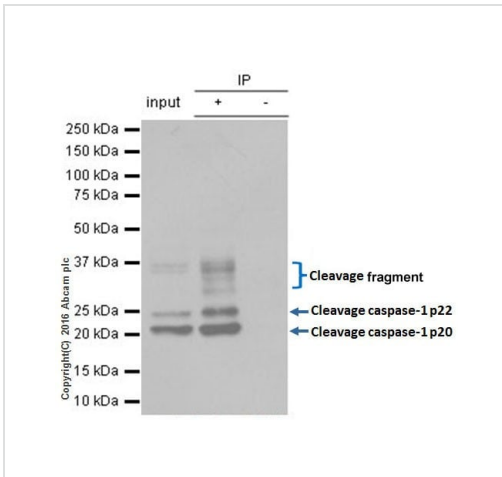
Predicted band size: 45, 42, 35, 22, 20 kDa

Observed band size: 22,35,45 kDa

Exposure time: 1 minute

Blocking/Dilution buffer: 5% NFDm/TBST.

Pro-Caspase 1 is cleaved into p20(p22) and p10(p12) subunits.
PMID: 8662843. PMID: 7595215. The product recognizes p20(p22) cleavage fragment where the immunogen is located.



Immunoprecipitation - Anti-Caspase-1 antibody
[EPR19672] (ab207802)

ab207802 Immunoprecipitating Caspase-1 in THP-1 (human acute monocytic leukemia) whole cell lysate. 2µg of capture antibody in 0.35mg lysate was used. 10µg of cell lysate was incubated with primary antibody at a dilution of 1/1000 and VeriBlot for IP Detection Reagent (HRP) **ab131366** was used for detection at a dilution of 1/1000.

Lane 1: THP-1 (human acute monocytic leukemia) whole cell lysate

Lane 2: THP-1 (human acute monocytic leukemia) whole cell lysate

Lane 3: Rabbit monoclonal IgG (**ab172730**) instead of ab207802 in THP-1 (human acute monocytic leukemia) whole cell lysate

Blocking buffer: 5% NFDm/TBST

Diluting buffer: 5% NFDm/TBST

Why choose a recombinant antibody?

 <p>Research with confidence Consistent and reproducible results</p>	 <p>Long-term and scalable supply Recombinant technology</p>
 <p>Success from the first experiment Confirmed specificity</p>	 <p>Ethical standards compliant Animal-free production</p>

Anti-Caspase-1 antibody [EPR19672] (ab207802)

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

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