

Caspase 1 Antibody
Rabbit Polyclonal Antibody
Catalog # ABV11238**Specification**

Caspase 1 Antibody - Product Information

Application	WB
Primary Accession	P29452
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	45640

Caspase 1 Antibody - Additional Information**Gene ID** 12362

Positive Control	Western Blot: Jurkat cell lysate, mouse muscle lysate, recombinant protein
Application & Usage	Western blot: 1-4 µg

Other Names

CASP-1, Interleukin-1 beta convertase, IL-1BC, Interleukin-1 beta-converting enzyme, ICE, IL-1 beta-converting enzyme

Target/Specificity

Caspase 1

Antibody Form

Liquid

Appearance

Colorless liquid

Formulation

100 µg (0.5 mg/ml) of antibody in PBS pH 7.2, 0.01 % BSA, 0.03 % ProClin®, and 50 % glycerol.

Handling

The antibody solution should be gently mixed before use.

Reconstitution & Storage

-20 °C

Background Descriptions**Precautions**

Caspase 1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Caspase 1 Antibody - Protein Information

Name Casp1

Synonyms Il1bc

Function

Thiol protease involved in a variety of inflammatory processes by proteolytically cleaving other proteins, such as the precursors of the inflammatory cytokines interleukin-1 beta (IL1B) and interleukin 18 (IL18) as well as the pyroptosis inducer Gasdermin-D (GSDMD), into active mature peptides (PubMed:21147462, PubMed:32109412). Plays a key role in cell immunity as an inflammatory response initiator: once activated through formation of an inflammasome complex, it initiates a pro-inflammatory response through the cleavage of the two inflammatory cytokines IL1B and IL18, releasing the mature cytokines which are involved in a variety of inflammatory processes (PubMed:21147462). Cleaves a tetrapeptide after an Asp residue at position P1 (PubMed:21147462). Also initiates pyroptosis, a programmed lytic cell death pathway, through cleavage of GSDMD (PubMed:32109412). In contrast to cleavage of interleukin IL1B, recognition and cleavage of GSDMD is not strictly dependent on the consensus cleavage site but depends on an exosite interface on CASP1 that recognizes and binds the Gasdermin-D, C-terminal (GSDMD-CT) part (PubMed:32109412). Cleaves and activates CASP7 in response to bacterial infection, promoting plasma membrane repair (PubMed:18667412, PubMed:22464733, PubMed:35705808). Upon inflammasome activation, during DNA virus infection but not RNA virus challenge, controls antiviral immunity through the cleavage of CGAS, rendering it inactive (PubMed:28314590). In apoptotic cells, cleaves SPHK2 which is released from cells and remains enzymatically active extracellularly (By similarity).

Cellular Location

Cytoplasm. Cell membrane {ECO:0000250|UniProtKB:P29466}

Tissue Location

High level expression seen in spleen and lung, low level expression seen in brain, heart, liver, kidney, testis and skeletal muscle.

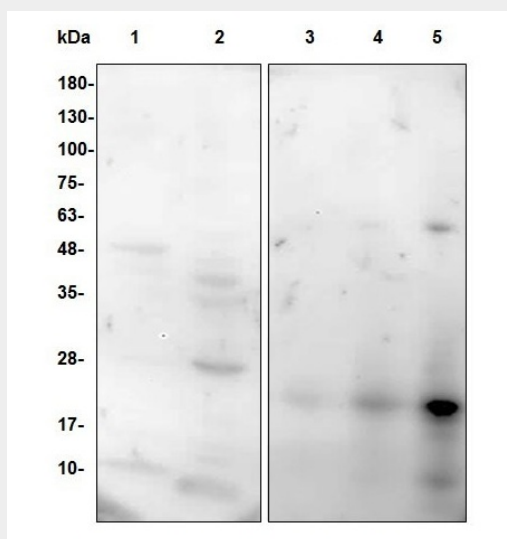
Caspase 1 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)

- [Cell Culture](#)

Caspase 1 Antibody - Images



Western blot with caspase-1 Antibody. Lane 1: 60 µg Jurkat cell lysate; Lane 2: 33 µg Mouse muscle lysate; Lane 3: 1 ng Mouse Recombinant Caspase 1; Lane 4: 5 ng Mouse Recombinant Caspase 1; Lane 5: 25 ng Mouse Recombinant Caspase 1

Caspase 1 Antibody - Background

Caspase-1 (also known as ICE) is a prototypical member of the caspase-family of cysteine proteases. Caspase-1 exists in cells as an inactive 45 kDa proenzyme. The pro-enzyme is matured by proteolysis to yield large (20 kDa) and small (10 kDa) subunits. The active caspase-1 is a heterotetramer consisting of two large and two small subunits. To date the regulatory mechanism of caspase-1 activation and the role of caspase-1 in apoptosis are poorly understood. In THP-1 cells, a large proportion of the caspase-1 is present in the inactive proenzyme form.