

**Caspase-1 Polyclonal Antibody**  
**Catalog # AP68835****Specification****Caspase-1 Polyclonal Antibody - Product Information**

Application	WB, IHC-P
Primary Accession	<a href="#">P29466</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal

**Caspase-1 Polyclonal Antibody - Additional Information****Gene ID** 834**Other Names**

CASP1; IL1BC; IL1BCE; Caspase-1; CASP-1; Interleukin-1 beta convertase; IL-1BC; Interleukin-1 beta-converting enzyme; ICE; IL-1 beta-converting enzyme; p45

**Dilution**

WB~~Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. ELISA: 1/20000. Not yet tested in other applications.

IHC-P~~N/A

**Format**

Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.

**Storage Conditions**

-20°C

**Caspase-1 Polyclonal Antibody - Protein Information****Name** CASP1**Synonyms** IL1BC, IL1BCE**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:<[a href="http://www.uniprot.org/citations/15326478" target="\\_blank">15326478](http://www.uniprot.org/citations/15326478)</a>, PubMed:<[a href="http://www.uniprot.org/citations/15498465" target="\\_blank">15498465](http://www.uniprot.org/citations/15498465)</a>, PubMed:<[a href="http://www.uniprot.org/citations/1574116" target="\\_blank">1574116](http://www.uniprot.org/citations/1574116)</a>, PubMed:<[a href="http://www.uniprot.org/citations/26375003" target="\\_blank">26375003](http://www.uniprot.org/citations/26375003)</a>, PubMed:<[a href="http://www.uniprot.org/citations/32051255" target="\\_blank">32051255](http://www.uniprot.org/citations/32051255)</a>, PubMed:<[a href="http://www.uniprot.org/citations/37993714" target="\\_blank">37993714](http://www.uniprot.org/citations/37993714)</a>, PubMed:<[a href="http://www.uniprot.org/citations/7876192" target="\\_blank">7876192](http://www.uniprot.org/citations/7876192)</a>, PubMed:<[a href="http://www.uniprot.org/citations/9334240" target="\\_blank">9334240](http://www.uniprot.org/citations/9334240)</a>)

target="\_blank">9334240</a>). 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:<a href="http://www.uniprot.org/citations/15326478" target="\_blank">15326478</a>, PubMed:<a href="http://www.uniprot.org/citations/15498465" target="\_blank">15498465</a>, PubMed:<a href="http://www.uniprot.org/citations/1574116" target="\_blank">1574116</a>, PubMed:<a href="http://www.uniprot.org/citations/32051255" target="\_blank">32051255</a>, PubMed:<a href="http://www.uniprot.org/citations/7876192" target="\_blank">7876192</a>). Cleaves a tetrapeptide after an Asp residue at position P1 (PubMed:<a href="http://www.uniprot.org/citations/15498465" target="\_blank">15498465</a>, PubMed:<a href="http://www.uniprot.org/citations/1574116" target="\_blank">1574116</a>, PubMed:<a href="http://www.uniprot.org/citations/7876192" target="\_blank">7876192</a>). Also initiates pyroptosis, a programmed lytic cell death pathway, through cleavage of GSDMD (PubMed:<a href="http://www.uniprot.org/citations/26375003" target="\_blank">26375003</a>). 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:<a href="http://www.uniprot.org/citations/32051255" target="\_blank">32051255</a>, PubMed:<a href="http://www.uniprot.org/citations/32109412" target="\_blank">32109412</a>, PubMed:<a href="http://www.uniprot.org/citations/32553275" target="\_blank">32553275</a>). Cleaves and activates CASP7 in response to bacterial infection, promoting plasma membrane repair (PubMed:<a href="http://www.uniprot.org/citations/22464733" target="\_blank">22464733</a>). Upon inflammasome activation, during DNA virus infection but not RNA virus challenge, controls antiviral immunity through the cleavage of CGAS, rendering it inactive (PubMed:<a href="http://www.uniprot.org/citations/28314590" target="\_blank">28314590</a>). In apoptotic cells, cleaves SPHK2 which is released from cells and remains enzymatically active extracellularly (PubMed:<a href="http://www.uniprot.org/citations/20197547" target="\_blank">20197547</a>).

#### **Cellular Location**

Cytoplasm. Cell membrane

#### **Tissue Location**

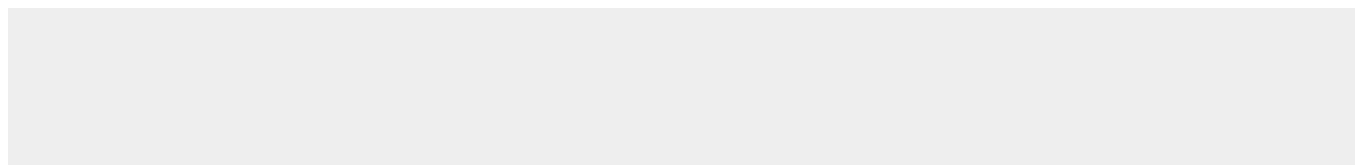
Expressed in larger amounts in spleen and lung. Detected in liver, heart, small intestine, colon, thymus, prostate, skeletal muscle, peripheral blood leukocytes, kidney and testis. No expression in the brain.

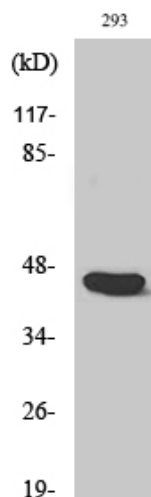
### **Caspase-1 Polyclonal Antibody - Protocols**

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

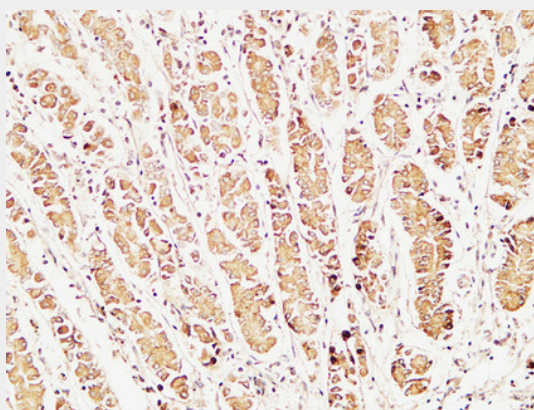
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### **Caspase-1 Polyclonal Antibody - Images**

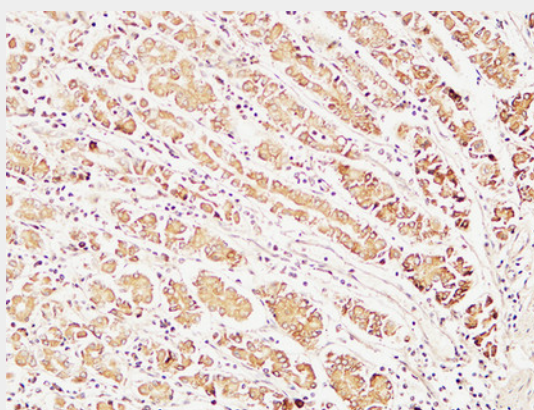




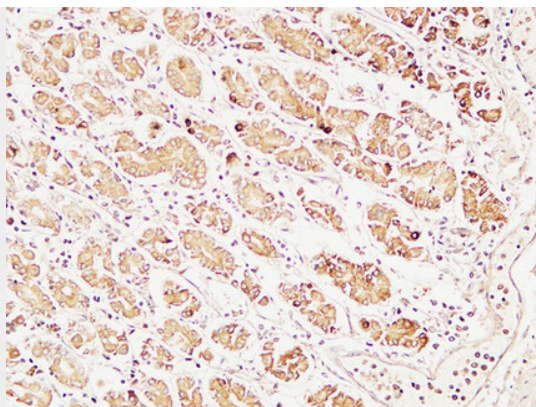
Western Blot analysis of various cells using Caspase-1 Polyclonal Antibody diluted at 1:500



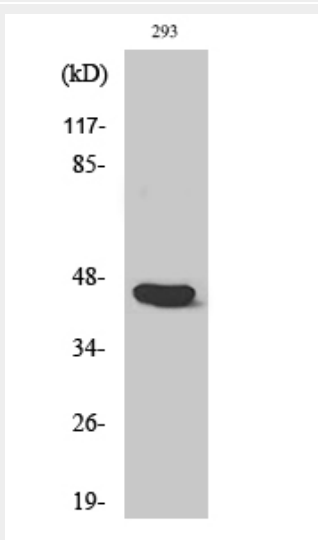
Immunohistochemical analysis of paraffin-embedded Human stomach. 1, Antibody was diluted at 1:100(4°,overnight). 2, High-pressure and temperature EDTA, pH8.0 was used for antigen retrieval. 3,Secondary antibody was diluted at 1:200(room temperature, 30min).



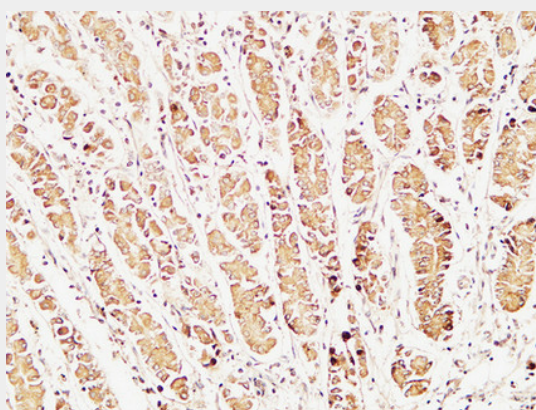
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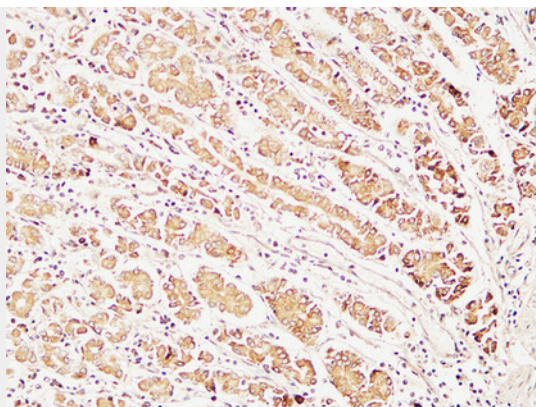


Western Blot analysis of various cells using Caspase-1 Polyclonal Antibody diluted at 1:500

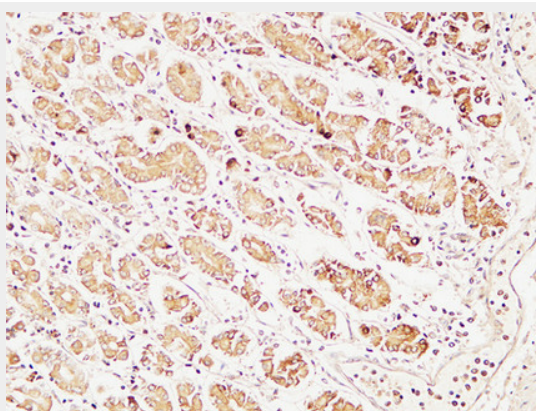


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### **Caspase-1 Polyclonal Antibody - Background**

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. 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).