

**Caspase-4 Rabbit pAb**

**Cat NO. :A88515**

**Information:**

Applications	Reactivity:	UniProt ID:	MW(kDa)	Host	Isotype	Size
WB	H	P49662	45 kDa	Rabbit	IgG	100ul,200ul

**Applications detail:**

Application	Dilution
WB	1:1000-2000
The optimal dilutions should be determined by the end user	

**Conjugate:**

UnConjugate

**Form:**

Liquid

**sensitivity:**

Endogenous

**Purification:**

peptide affinity chromatography

**Specificity:**

Antibody is produced by immunizing animals with a synthetic peptide at the sequence of Human Caspase-4

**Storage buffer and conditions:**

Antibody store in 10 mM PBS, 0.5mg/ml BSA, 50% glycerol (buffer) .

Shipped at 4°C. Store at-20°C or -80°C.

Products are valid for one natural year of receipt.Avoid repeated freeze / thaw cycles.

**Tissue specificity:**

Widely expressed, including in keratinocytes and colonic and small intestinal epithelial cells (at protein level). Not detected in brain..

**Subcellular location:**

Cytoplasm, cytosol. Endoplasmic reticulum membrane,Peripheral membrane protein,Cytoplasmic side.

Mitochondrion. Inflammasome. Secreted.

**Function:**

**Introduction:** **WB:** Western Blot **IP:** Immunoprecipitation **IHC:** Immunohistochemistry **ChIP:** Chromatin Immunoprecipitation **ICC/IF:** Immunocytochemistry/Immunofluorescence **F:** Flow Cytometry

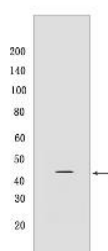
**Cross Reactivity:** **H:** human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Ml:** mink **C:** chicken **Dm** D. melanogaster **X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Hr:** horse

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Inflammatory caspase that acts as an essential effector of the NLRP3 and NLRP6 inflammasomes by mediating lipopolysaccharide (LPS)-induced pyroptosis (PubMed:7797510, PubMed:23516580, PubMed:26375003, PubMed:32109412). Thiol protease that cleaves a tetrapeptide after an Asp residue at position P1: catalyzes cleavage of CGAS, GSDMD and IL18 (PubMed:7797510, PubMed:15326478, PubMed:23516580, PubMed:26375003, PubMed:28314590, PubMed:32109412). Required for innate immunity to cytosolic, but not vacuolar, bacteria (By similarity). Plays a key role in NLRP3-dependent CASP1 activation and IL1B and IL18 secretion in response to non-canonical activators, such as UVB radiation, cholera enterotoxin subunit B and cytosolic LPS (PubMed:26508369, PubMed:22246630, PubMed:23516580, PubMed:24879791, PubMed:25119034, PubMed:26173988, PubMed:26174085, PubMed:25964352). Activated by direct binding to LPS without the need of an upstream sensor (PubMed:25119034). Involved in NLRP6 inflammasome-dependent activation in response to lipoteichoic acid (LTA), a cell-wall component of Gram-positive bacteria, which leads to CASP1 activation and IL1B and IL18 secretion (PubMed:33377178). Independently of NLRP3 inflammasome and CASP1, promotes pyroptosis, through GSDMD cleavage and activation, followed by IL1A, IL18 and HMGB1 release in response to non-canonical inflammasome activators (PubMed:26375003, PubMed:32109412). Plays a crucial role in the restriction of Salmonella typhimurium replication in colonic epithelial cells during infection: in later stages of the infection, LPS from cytosolic Salmonella triggers CASP4 activation, which catalyzes cleavage of GSDMD, resulting in pyroptosis of infected cells and their extrusion into the gut lumen, as well as in IL18 secretion (PubMed:25121752, PubMed:26375003, PubMed:25964352, PubMed:34671164, PubMed:32109412). Cleavage of GSDMD is not strictly dependent on the consensus cleavage site but depends on an exosite interface on CASP4 that recognizes and binds the Gasdermin-D, C-terminal (GSDMD-CT) part (PubMed:32109412). Pyroptosis limits bacterial replication, while cytokine secretion promotes the recruitment and activation of immune cells and triggers mucosal inflammation (PubMed:25121752, PubMed:26375003, PubMed:25964352). Involved in LPS-induced IL6 secretion, this activity may not require caspase enzymatic activity (PubMed:26508369). Involved in cell death induced by endoplasmic reticulum stress and by treatment with cytotoxic APP peptides found in Alzheimer's patient brains (PubMed:23661706, PubMed:15123740, PubMed:22246630). Catalyzes cleavage and maturation of IL18 (PubMed:15326478). In contrast, it does not directly process IL1B (PubMed:7743998, PubMed:7797592, PubMed:7797510). During non-canonical inflammasome activation, cuts CGAS and may play a role in the regulation of antiviral innate immune activation (PubMed:28314590)... (Microbial infection) In response to the Td92 surface protein of the periodontal pathogen

## Validation Data:

### Caspase-4 Rabbit pAb Images



Western blot (SDS PAGE) analysis of extracts from THP-1 cells. Using Caspase-4 Rabbit pAb at dilution of 1:1000 incubated at 4°C over night.

View more information on <http://naturebios.com>

**IMPORTANT:** For western blots, incubate membrane with diluted primary antibody in 1% w/v Milk, 1X TBST at 4°C overnight.