

CASP4 Antibody (Center)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP21390c

Specification

CASP4 Antibody (Center) - Product Information

Application	WB,E
Primary Accession	P49662
Reactivity	Human
Host	Rabbit
Clonality	polyclonal
Isotype	Rabbit Ig
Calculated MW	43262

CASP4 Antibody (Center) - Additional Information

Gene ID 837

Other Names

Caspase-4, CASP-4, ICE(rel)-II, Protease ICH-2, Protease TX, Caspase-4 subunit 1, Caspase-4 subunit 2, CASP4, ICH2

Target/Specificity

This CASP4 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 163-197 amino acids from the Central region of human CASP4.

Dilution

WB~~1:2000

Format

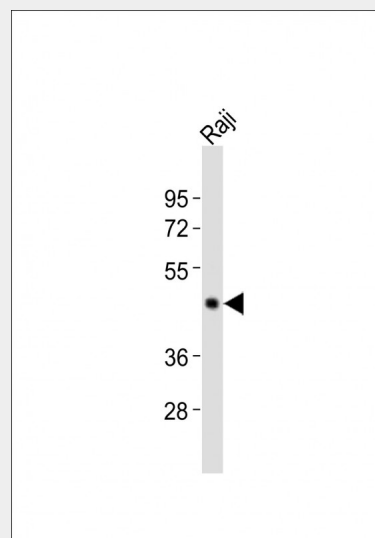
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

CASP4 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.



Anti-CASP4 Antibody (Center) at 1:2000 dilution + Raji whole cell lysates
Lysates/proteins at 20 µg per lane.
Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution
Predicted band size : 43 kDa
Blocking/Dilution buffer: 5% NFDM/TBST.

CASP4 Antibody (Center) - Background

Involved in the activation cascade of caspases responsible for apoptosis execution. Involved in ER-stress induced apoptosis. Cleaves caspase-1.

CASP4 Antibody (Center) - References

Faucheu C., et al. EMBO J. 14:1914-1922(1995).
Munday N.A., et al. J. Biol. Chem. 270:15870-15876(1995).
Kamens J., et al. J. Biol. Chem. 270:15250-15256(1995).
Fernandes-Alnemri T., et al. Submitted (JUN-1995) to the EMBL/GenBank/DBJ databases.
Taylor T.D., et al. Nature 440:497-500(2006).

CASP4 Antibody (Center) - Protein Information**Name** CASP4

{ECO:0000303|PubMed:15123740,
ECO:0000312|HGNC:HGNC:1505}

Function

Inflammatory caspase that acts as an essential effector of NLRP3 inflammasome-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:23516580, PubMed:24879791, PubMed:25119034, PubMed:22246630, PubMed:26174085, PubMed:26173988, PubMed:26508369, PubMed:25964352). Thiol protease that cleaves a tetrapeptide after an Asp residue at position P1 (PubMed:7797510, PubMed:23516580). 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: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 Alzheimer's patient brains (PubMed:15123740, PubMed:22246630, PubMed:23661706). Activated by direct binding to LPS without

the need of an upstream sensor (PubMed:25119034). Does not directly process IL1B (PubMed:7743998, PubMed:7797510, PubMed:7797592). During non-canonical inflammasome activation, cuts CGAS and may play a role in the regulation of antiviral innate immune activation (PubMed:28314590).

Cellular Location

Cytoplasm, cytosol. Endoplasmic reticulum membrane; Peripheral membrane protein; Cytoplasmic side. Mitochondrion Inflammasome. Secreted
Note=Predominantly localizes to the endoplasmic reticulum (ER) Association with the ER membrane requires TMEM214 (PubMed:15123740) Released in the extracellular milieu by keratinocytes following UVB irradiation (PubMed:22246630).

Tissue Location

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

CASP4 Antibody (Center) - 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](#)