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Caspase-5 Antibody

Catalog # ASC10296

Product Information

Application	WB, IF, ICC, E
Primary Accession	P51878
Other Accession	P51878, 212276423
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	49736
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	Casp-5 antibody can be used for the detection of caspase-5 by Western blot at 0.5 - 2 □g/mL. Antibody can also be used for immunocytochemistry starting at 2 □g/mL. For immunofluorescence start at 2 □g/mL.

Additional Information

Gene ID	838
Other Names	Caspase-5 Antibody: ICH-3, ICEREL-III, ICE(rel)III, ICH3, Caspase-5, Protease ICH-3, CASP-5, caspase 5, apoptosis-related cysteine peptidase
Target/Specificity	CASP5; Depending on cell lines or tissues used, other cleavage products may be observed.
Reconstitution & Storage	Caspase-5 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	Caspase-5 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CASP5 {ECO:0000303|PubMed:16893518, ECO:0000312|HGNC:HGNC:1506}
Function	Thiol protease that acts as a mediator of programmed cell death (PubMed:28314590, PubMed:29898893). Initiates pyroptosis, a programmed lytic cell death pathway through cleavage of Gasdermin-D (GSDMD): cleavage releases the N-terminal gasdermin moiety (Gasdermin- D, N-terminal) that binds to membranes and forms pores, triggering pyroptosis (PubMed:29898893). Also mediates cleavage and maturation of IL18 (PubMed:37993714). Cleavage of GSDMD and IL18 is not strictly dependent on the consensus cleavage site but depends on an exosite interface on CASP4

	(PubMed:37993714). During non-canonical inflammasome activation, cuts CGAS and may play a role in the regulation of antiviral innate immune activation (PubMed:28314590).
Tissue Location	Expressed in barely detectable amounts in most tissues except brain, highest levels being found in lung, liver and skeletal muscle.

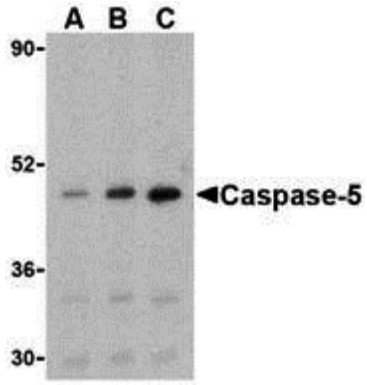
Background

Caspase-5 Antibody: Caspases are a family of cysteine proteases that can be divided into the apoptotic and inflammatory caspase subfamilies. Unlike the apoptotic caspases, members of the inflammatory subfamily are generally not involved in cell death but are associated with the immune response to microbial pathogens. Members of this subfamily include caspase-1, -4, -5, and -12. Activation of these caspases results in the cleavage and activation of proinflammatory cytokines such as IL-1β and IL-18. Caspase-5 can interact with caspase-1; both are constituents of the NALP1 inflammasome, a complex that can trigger the cleavage of pro-IL-1β. Expression of caspase-5 can be regulated by lipopolysaccharide (LPS) and IFN-gamma.

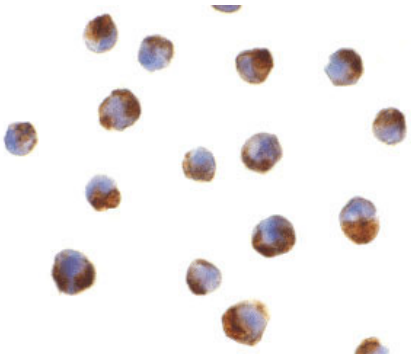
References

Martinon F and Tschopp J. Inflammatory caspases: linking an intracellular innate immune system to autoinflammatory diseases. Cell 2004; 117:561-74.
Kuida K, Lippke JA, Ku G, et al. Altered cytokine export and apoptosis in mice deficient in interleukin-1 β converting enzyme. Science 1995; 267:2000-3.
Gracie JA, Robertson SE, and McInnes IB. Interleukin-18. J. Leukoc. Biol. 2003; 73:213-224.
Martinon F, Burns K, and Tschopp J. The inflammasome: a molecular platform triggering activation of the inflammatory caspases and processing of proIL-1beta. Mol. Cell. 2002; 10:417-26.

Images

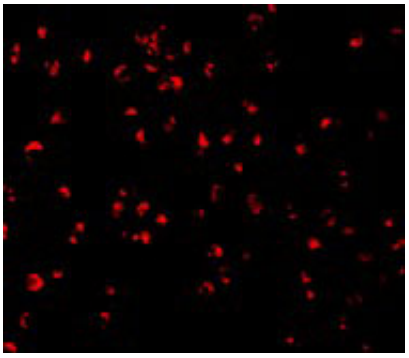


Western blot analysis of caspase-5 in Ramos cells with caspase-5 antibody at (A) 0.5, (B) 1, and (C) 2 µg/mL.



Immunocytochemistry of caspase-5 in P815 cells with caspase-5 antibody at 2 µg/mL.

Immunofluorescence of Caspase-5 in P815 cells with Caspase-5 antibody at 2 µg/mL.



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