Datasheet for ABIN1169381

anti-Caspase 1 p20 antibody

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Overview

Quantity:	100 µg
Target:	Caspase 1 p20
Reactivity:	Mouse
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This Caspase 1 p20 antibody is un-conjugated
Application:	Western Blotting (WB), Immunoprecipitation (IP), Immunohistochemistry (IHC)

Product Details

Immunogen:	Recombinant mouse caspase-1.
Clone:	Casper-1
Isotype:	IgG1
Specificity:	Recognizes endogenous full-length and activated (p20 fragment) mouse caspase-1.
Cross-Reactivity:	Mouse (Murine)
Purification:	Purified from concentrated hybridoma tissue culture supernatant.
Purity:	>95 % (SDS-PAGE)

Target Details

Target:	Caspase 1 p20
Alternative Name:	Caspase-1 p20 (Caspase 1 p20 Products)

Target Details

Background:	Caspase-1 is the best-described inflammatory caspase. It processes the cytokines interleukin-1beta (IL-1beta) and IL-18 and induces pyroptotic cell death. Caspase-1 is activated by multiprotein complexes called Inflammasomes in response to numerous stimuli that are detected through distinct inflammasomes. NLRC4 responds to cytosolic flagellin, murine NLRP1b responds to anthrax lethal toxin, AIM2 responds to cytosolic DNA and NLRP3 responds to a variety of agonists including crystals.
UniProt:	P29452

Application Details

Application Notes:	Optimal working dilution should be determined by the investigator.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	Lot specific
Buffer:	In PBS containing 10 % glycerol and 0.02 % sodium azide.
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C,-20 °C
Storage Comment:	Short Term Storage: +4°C Long Term Storage: -20°C Stable for at least 1 year after receipt when stored at -20°C.
Expiry Date:	12 months

Publications

Product cited in:	Yamazaki, Ohshio, Sugamata, Morita: "Lactic acid bacterium, Lactobacillus paracasei KW3110, suppresses inflammatory stress-induced caspase-1 activation by promoting interleukin-10 production in mouse and human immune cells." in: **PLoS ONE**, Vol. 15, Issue 8, pp. e0237754, (2020) (PubMed).

Publications

Hooftman, Angiari, Hester, Corcoran, Runtsch, Ling, Ruzek, Slivka, McGettrick, Banahan, Hughes, Irvine, Fischer, ONeill: "The Immunomodulatory Metabolite Itaconate Modifies NLRP3 and Inhibits Inflammasome Activation." in: **Cell metabolism**, Vol. 32, Issue 3, pp. 468-478.e7, (2020) (PubMed).

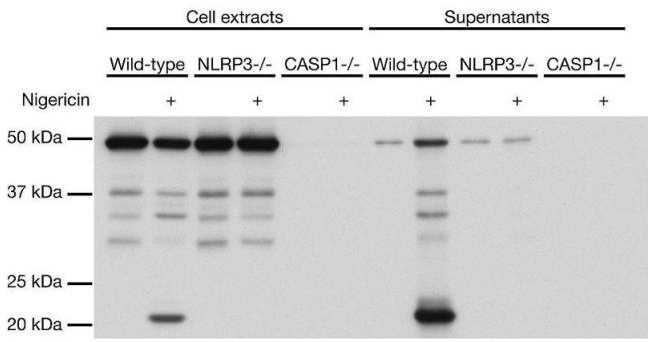
de Vasconcelos, Van Opdenbosch, Van Gorp, Martín-Pérez, Zecchin, Vandenabeele, Lamkanfi: "An Apoptotic Caspase Network Safeguards Cell Death Induction in Pyroptotic Macrophages." in: **Cell reports**, Vol. 32, Issue 4, pp. 107959, (2020) (PubMed).

Heilig, Dilucca, Boucher, Chen, Hancz, Demarco, Shkarina, Broz: "Caspase-1 cleaves Bid to release mitochondrial SMAC and drive secondary necrosis in the absence of GSDMD." in: **Life science alliance**, Vol. 3, Issue 6, (2020) (PubMed).

Wang, Li, Liu, Peng, Zhu, Tu, Yu, Li: "CircHIPK3 Promotes Pyroptosis in Acinar Cells Through Regulation of the miR-193a-5p/GSDMD Axis." in: **Frontiers in medicine**, Vol. 7, pp. 88, (2020) (PubMed).

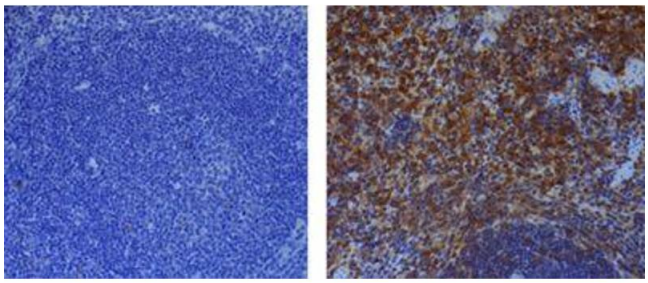
There are more publications referencing this product on: Product page

Images



Western Blotting

Image 1. Mouse caspase-1 (p20) is detected by immunoblotting using anti-Caspase-1 (p20) (mouse), mAb (Casper-1) . Method: Caspase-1 was analyzed by Western blot in cell extracts and supernatants of differentiated bone marrow-derived dendritic cells (BMDCs) from wild-type, NLRP3 -/- and caspase-1 -/- mice activated or not by 5 µM Nigericin for 30 min. Cell extracts and supernatants were separated by SDS-PAGE under reducing conditions, transferred to nitrocellulose and incubated with anti-Caspase-1 (p20) (mouse), mAb (Casper-1) (1µg/ml). Proteins were visualized by a chemiluminescence detection system.



Immunohistochemistry

Image 2. Immunohistochemical staining of endogenous mouse Caspase-1 in mouse spleen using anti-Caspase-1 (p20) (mouse), mAb (Casper-1) (1:500) by standard immunohistochemistry (antigen retrieval performed with sodium citrate).