

caspase-11 p20 (A-2): sc-374615

BACKGROUND

Caspase-11 plays a crucial role in OLG death and pathogenesis in experimental autoimmune encephalomyelitis (EAE). Caspase-11 also leads to the synthesis of the functional form of the cytokine interleukin-1 β . Caspases are a family of mammalian proteases related to the CED-3 gene of *Caenorhabditis elegans*. These CED-3 orthologs mediate many of the morphological and biochemical features of apoptosis, including structural dismantling of cell bodies and nuclei, fragmentation of genomic DNA, destruction of regulatory proteins, and propagation of other pro-apoptotic molecules. Based on their substrate specificities and DNA sequence homologies, the 14 currently identified caspases may be divided into three groups: apoptotic initiators, apoptotic executioners and inflammatory mediators. Upon activation, caspases appear to play an important role in sequelae of traumatic brain injury, spinal cord injury and cerebral ischemia. In addition, they may also play a role in mediating cell death in chronic neurodegenerative conditions such as Alzheimer's disease, Huntington's disease and amyotrophic lateral sclerosis.

CHROMOSOMAL LOCATION

Genetic locus: Casp4 (mouse) mapping to 9 A1.

SOURCE

caspase-11 p20 (A-2) is a mouse monoclonal antibody raised against amino acids 141-195 of caspase-11 of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG $_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

caspase-11 p20 (A-2) is available conjugated to agarose (sc-374615 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374615 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374615 PE), fluorescein (sc-374615 FITC), Alexa Fluor[®] 488 (sc-374615 AF488), Alexa Fluor[®] 546 (sc-374615 AF546), Alexa Fluor[®] 594 (sc-374615 AF594) or Alexa Fluor[®] 647 (sc-374615 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-374615 AF680) or Alexa Fluor[®] 790 (sc-374615 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

caspase-11 p20 (A-2) is recommended for detection of caspase-11 of mouse and rat origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for caspase-11 siRNA (m): sc-37363, caspase-11 shRNA Plasmid (m): sc-37363-SH and caspase-11 shRNA (m) Lentiviral Particles: sc-37363-V.

Molecular Weight of caspase-11 precursor: 48 kDa.

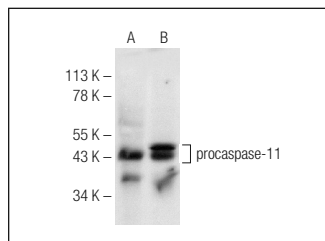
Molecular Weight of caspase-11 p20 subunit: 20 kDa.

Positive Controls: C6 cell lysate: sc-364373.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



caspase-11 (A-2): sc-374615. Western blot analysis of procaspase-11 expression in LPS/IFN γ treated RAW 264.7 (A) and C6 (B) whole cell lysates.

SELECT PRODUCT CITATIONS

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- Quach, C., et al. 2019. A truncating mutation in the autophagy gene UVRAG drives inflammation and tumorigenesis in mice. *Nat. Commun.* 10: 5681.
- Wang, H., et al. 2020. Carbon monoxide inhibits the expression of proteins associated with intestinal mucosal pyroptosis in a rat model of sepsis induced by cecal ligation and puncture. *Med. Sci. Monit.* 26: e920668.
- Colarusso, C., et al. 2021. Caspase-11 and AIM2 inflammasome are involved in smoking-induced COPD and lung adenocarcinoma. *Oncotarget* 12: 1057-1071.
- Yin, K., et al. 2021. Jiangzhi Ligan decoction inhibits GSDMD-mediated canonical/noncanonical pyroptosis pathways and alleviates high-fat diet-induced nonalcoholic fatty liver disease. *Dis. Markers* 2021: 9963534.
- Lee, C.Y., et al. 2021. Suppressing pyroptosis augments post-transplant survival of stem cells and cardiac function following ischemic injury. *Int. J. Mol. Sci.* 22: 7946.
- Cohen, K., et al. 2021. COMMD10 is critical for Kupffer cell survival and controls Ly6C^{hi} monocyte differentiation and inflammation in the injured liver. *Cell Rep.* 37: 110026.
- Yin, F., et al. 2021. Caspase-11 promotes NLRP3 inflammasome activation via the cleavage of pannexin1 in acute kidney disease. *Acta Pharmacol. Sin.* E-published.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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