SANTA CRUZ BIOTECHNOLOGY, INC.

caspase-11 (M-20): sc-15882

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

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-1β. 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 3 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 iischemia. 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.

REFERENCES

1. Eldadah, B.A., et al. 2000. Caspase pathways, neuonal apoptosis, and CNS injury. J. Neurotrauma 17: 811-829.
2. Chang, H.Y., et al. 2000. Proteases for cell suicide: functions and regulation of Caspases. Microbiol. Mol. Biol. Rev. 64: 821-846.
3. Fadeel, B., et al. 2000. The most unkindest cut of all: on the multiple roles of mammalian caspases. Leukemia 14: 1514-1525.
4. Johnson, D. 2000. Noncaspase proteases in apoptosis. Leukemia 14: 1695-1703.
5. Grutter, M.G. 2000. Caspases: key players in programmed cell death. Curr. Opin. Struct. Biol. 10: 649-655.
6. Hisahara, S., et al. 2001. Caspase-11 mediates dgliodendrocyte CEll death and pathogenesis of autoimmune-mediated demyelination. J. Exp. Med. 193: 111-122.
7. Harrison, D.C., et al. 2001. Caspase mRNA expression in a rat model of focal cerebral ischemia. Brain Res. Mol. Brain Res. 89: 133-146.

CHROMOSOMAL LOCATION

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

SOURCE

caspase-11 (M-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of caspase-11 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-15882 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

caspase-11 (M-20) is recommended for detection of p10 subunit and precursor of caspase-11 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (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/p10 subunits: 20/10 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Wang, M., et al. 2005. Role of endogenous testosterone in myocardial proinflammatory and proapoptotic signaling after acute ischemia-reperfusion. Am. J. Physiol. Heart Circ. Physiol. 288: H221-H226.
2. Wang, M., et al. 2005. p38 mitogen activated protein kinase mediates both death signaling and functional depression in the heart. Ann. Thorac. Surg. 80: 2235-2241.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.