



# caspase-11 p10 (M-50): sc-28231

## 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 $\beta$ . 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.

## REFERENCES

1. Eldadah, B.A., et al. 2000. Caspase pathways, neuronal 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. Johnson, D. 2000. Noncaspase proteases in apoptosis. *Leukemia* 14: 1695-1703.
4. Fadeel, B., et al. 2000. The most unkindest cut of all: on the multiple roles of mammalian caspases. *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 oligodendrocyte 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.
8. Coffey, R.N., et al. 2001. Signaling for the caspases: their role in prostate cell apoptosis. *J. Urol.* 165: 5-14.

## CHROMOSOMAL SOURCE

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

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

## SOURCE

caspase-11 p10 (M-50) is a rabbit polyclonal antibody raised against amino acids 301-350 of caspase-11 of mouse origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

caspase-11 p10 (M-50) is recommended for detection of caspase-11 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], 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).

Molecular Weight of precursor caspase-11 p10: 48 kDa.

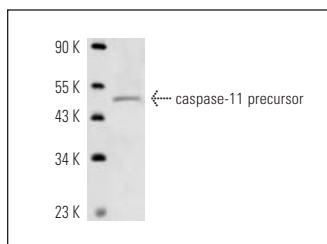
Molecular Weight of caspase-11 p20/p10 subunits: 20/10 kDa.

Positive Controls: rat skeletal muscle tissue extract.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



caspase-11 p10 (M-50): sc-28231. Western blot analysis of caspase-11 precursor expression in rat skeletal muscle tissue extract.

## RESEARCH USE

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