

caspase-12 (M-108): sc-5627

BACKGROUND

A unique family of cysteine proteases has been described that differs in sequence, structure and substrate specificity from any previously described protease family. This family, termed Ced-3/caspase-1, is composed of caspase-1, caspase-2, caspase-3, caspase-4, caspase-6 and caspase-7 (also designated Mch3, ICE-LAP3 or CMH-1), caspase-9, caspase-10, caspase-14, and caspase-5/caspase-12. Ced-3/caspase-1 family members function as key components of the apoptotic machinery and act to destroy specific target proteins which are critical to cellular longevity. Caspase-5 (also designated TY or ICErelIII) can cleave its own precursor, an activity that requires the cysteine 245 residue. The mouse homolog of caspase-5 is designated caspase-12. Frameshift mutations in caspase-5 have been identified in MMP tumors of the endometrium, colon, and stomach, indicating that caspase-5 may be a new target gene in the microsatellite mutator pathway for cancer.

CHROMOSOMAL LOCATION

Genetic locus: Casp12 (mouse) mapping to 9 A1.

SOURCE

caspase-12 (M-108) is a rabbit polyclonal antibody raised against amino acids 38-145 mapping near the N-terminus of caspase-12 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.

APPLICATIONS

caspase-12 (M-108) is recommended for detection of caspase-12 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

Suitable for use as control antibody for caspase-12 siRNA (m): sc-29924, caspase-12 siRNA (r): sc-156117, caspase-12 shRNA Plasmid (m): sc-29924-SH, caspase-12 shRNA Plasmid (r): sc-156117-SH, caspase-12 shRNA (m) Lentiviral Particles: sc-29924-V and caspase-12 shRNA (r) Lentiviral Particles: sc-156117-V.

Molecular Weight of caspase-12: 50 kDa.

Positive Controls: BC₃H1 cell lysate: sc-2299 or NIH/3T3 + UV cell lysate: sc-3804.

STORAGE

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

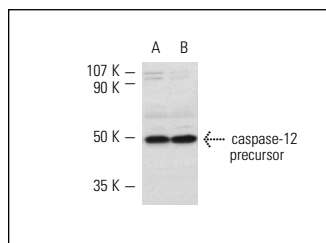
PROTOCOLS

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

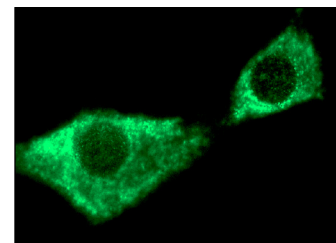
RESEARCH USE

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

DATA



caspase-12 (M-108): sc-5627. Western blot analysis of caspase-12 expression in BC₃H1 (A) and UV-treated NIH/3T3 (B) whole cell lysates.



caspase-12 (M-108): sc-5627. Immunofluorescence staining of methanol-fixed BC₃H1 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Ji, C. and Kaplowitz, N. 2003. Betaine decreases hyperhomocysteinemia, endoplasmic reticulum stress, and liver injury in alcohol-fed mice. *Gastroenterology* 124: 1488-1499.
- Ji, C., et al. 2004. Role of TNF- α in ethanol-induced hyperhomocysteinemia and murine alcoholic liver injury. *Hepatology* 40: 442-451.
- West, T., et al. 2006. Caspase-3 deficiency during development increases vulnerability to hypoxic-ischemic injury through caspase-3-independent pathways. *Neurobiol. Dis.* 22: 523-537.
- García-Escudero, V., et al. 2008. Glioma regression *in vitro* and *in vivo* by a suicide combined treatment. *Mol. Cancer Res.* 6: 407-417.
- Claro, S., et al. 2008. Gamma-radiation induces apoptosis via sarcoplasmic reticulum in guinea pig ileum smooth muscle cells. *Eur. J. Pharmacol.* 590: 20-28.
- Zhao, C.Q., et al. 2010. Both endoplasmic reticulum and mitochondria are involved in disc cell apoptosis and intervertebral disc degeneration in rats. *Age* 32: 161-177.
- Wu, Z.Z. and Chao, C.C. 2010. Knockdown of NAPA using short-hairpin RNA sensitizes cancer cells to cisplatin: implications to overcome chemoresistance. *Biochem. Pharmacol.* E-published.
- Li, T.M., et al. 2011. The novel benzimidazole derivative, MPTB, induces cell apoptosis in human chondrosarcoma cells. *Mol. Carcinog.* 50: 791-803.
- Maddalena, F., et al. 2011. Sorcin induces a drug-resistant phenotype in human colorectal cancer by modulating Ca²⁺ homeostasis. *Cancer Res.* 71: 7659-7669.
- Fatma, N., et al. 2011. Deficiency of Prdx6 in lens epithelial cells induces ER stress response-mediated impaired homeostasis and apoptosis. *Am. J. Physiol., Cell Physiol.* 301: C954-C967.