

# caspase-9 (LAP 96-2-22): sc-56077

## 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, Ced-3/caspase-1, is comprised of caspase-1, caspase-2, caspase-3, caspase-4, caspase-6, caspase-7 (also designated Mch3, ICE-LAP3 or CMH-1), caspase-9 and caspase-10. 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. Poly(ADP-ribose) polymerase plays an integral role in surveying for DNA mutations and double strand breaks. Caspase-3, caspase-7 and caspase-9, but not caspase-1, have been shown to cleave the nuclear protein PARP into an apoptotic fragment. Caspase-6, but not caspase-3, has been shown to cleave the nuclear lamins, which are critical to maintaining the integrity of the nuclear envelope and cellular morphology. Caspase-10 has been shown to activate caspase-3 and caspase-7 in response to apoptotic stimuli.

## CHROMOSOMAL LOCATION

Genetic locus: CASP9 (human) mapping to 1p36.21.

## SOURCE

caspase-9 (LAP 96-2-22) is a mouse monoclonal antibody raised against full length caspase-9 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

caspase-9 (LAP 96-2-22) is recommended for detection of caspase-9 of human 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for caspase-9 siRNA (h): sc-29931, caspase-9 shRNA Plasmid (h): sc-29931-SH and caspase-9 shRNA (h) Lentiviral Particles: sc-29931-V.

Molecular Weight of caspase-9: 46 kDa.

Molecular Weight of caspase-9 activated form: 35 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Jurkat whole cell lysate: sc-2204 or MOLT-4 cell lysate: sc-2233.

## STORAGE

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

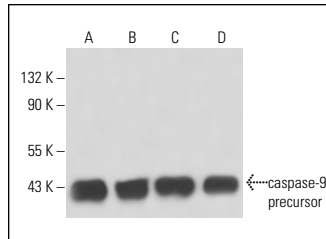
## PROTOCOLS

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

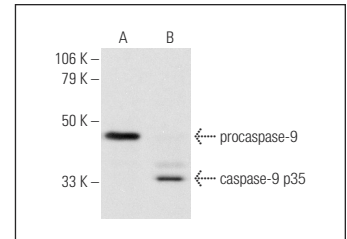
## RESEARCH USE

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

## DATA



caspase-9 (LAP 96-2-22): sc-56077. Western blot analysis of caspase-9 expression in HeLa (A), Jurkat (B), MOLT-4 (C) and HuT 78 (D) whole cell lysates.



caspase-9 (LAP 96-2-22): sc-56077. Western blot analysis of caspase-9 cleavage in untreated (A) and Staurosporine (sc-3510) treated (B) Jurkat whole cell lysates. Note caspase-9 cleavage product expression in lane B.

## SELECT PRODUCT CITATIONS

- Sall, A., et al. 2010. Pro-apoptotic activity of mBNIP-21 depends on its BNIP-2 and Cdc42GAP homology (BCH) domain and is enhanced by coxsackievirus B3 infection. *Cell. Microbiol.* 12: 599-614.
- Khan, S., et al. 2011. A cyano analogue of boswellic acid induces crosstalk between p53/PUMA/Bax and telomerase that stages the human papilloma-virus type 18 positive HeLa cells to apoptotic death. *Eur. J. Pharmacol.* 660: 241-248.
- Ding, L., et al. 2012. Transmissible gastroenteritis virus infection induces apoptosis through FasL- and mitochondria-mediated pathways. *Vet. Microbiol.* 158: 12-22.
- Kumar, S., et al. 2013. The anticancer potential of flavonoids isolated from the stem bark of *Erythrina suberosa* through induction of apoptosis and inhibition of STAT signaling pathway in human leukemia HL-60 cells. *Chem. Biol. Interact.* 205: 128-137.
- Zhao, C. and Ju, J. 2014. Molecular cloning, expression, and anti-tumor activity of a novel serine protease from *Arenicola cristata*. *Acta Biochim. Biophys. Sin.* 46: 450-459.
- Jagadish, N., et al. 2016. Sperm-associated antigen 9 (SPAG9) promotes the survival and tumor growth of triple-negative breast cancer cells. *Tumour Biol.* 37: 13101-13110.
- Zhang, H.P., et al. 2017. Oridonin synergistically enhances JQ1-triggered apoptosis in hepatocellular cancer cells through mitochondrial pathway. *Oncotarget* 8: 106833-106843.
- Cappabianca, L., et al. 2019. Discovery, characterization and potential roles of a novel NF-Yα splice variant in human neuroblastoma. *J. Exp. Clin. Cancer Res.* 38: 482.

## CONJUGATES

See **caspase-9 (96.1.23): sc-56076** for caspase-9 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.