

caspase-9 (9CSP03): sc-73548

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; Casp9 (mouse) mapping to 4 E1.

SOURCE

caspase-9 (9CSP03) is a mouse monoclonal antibody raised against the prodomain of caspase-9 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

caspase-9 (9CSP03) is recommended for detection of caspase-9 of mouse, rat and 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for caspase-9 siRNA (h): sc-29931, caspase-9 siRNA (m): sc-37227, caspase-9 shRNA Plasmid (h): sc-29931-SH, caspase-9 shRNA Plasmid (m): sc-37227-SH, caspase-9 shRNA (h) Lentiviral Particles: sc-29931-V and caspase-9 shRNA (m) Lentiviral Particles: sc-37227-V.

Molecular Weight of procaspase-9: 46 kDa.

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

Positive Controls: HeLa whole cell lysate: sc-2200, K-562 whole cell lysate: sc-2203 or Saos-2 cell lysate: sc-2235.

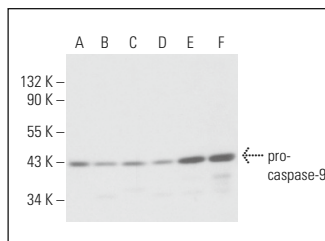
STORAGE

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

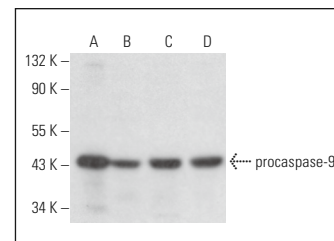
RESEARCH USE

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

DATA



caspase-9 (9CSP03): sc-73548. Western blot analysis of procaspase-9 expression in HeLa (A), Jurkat (B), HuT 78 (C), MOLT-4 (D), UV-treated HeLa (E) and staurosporine-treated HeLa (F) whole cell lysates.



caspase-9 (9CSP03): sc-73548. Western blot analysis of procaspase-9 expression in HeLa (A), HCT-116 (B), Saos-2 (C) and K-562 (D) whole cell lysates.

SELECT PRODUCT CITATIONS

- Zhao, W.J., et al. 2013. NGX6 expression improves the sensitivity of tamoxifen-resistant MCF-7 cells through modulation of the Smad signaling pathway. *Int. J. Oncol.* 42: 2060-2068.
- Rubio, V., et al. 2014. Human acute promyelocytic leukemia NB4 cells are sensitive to esculetin through induction of an apoptotic mechanism. *Chem. Biol. Interact.* 220: 129-139.
- Sun, X., et al. 2015. MicroRNA-221 accelerates the proliferation of laryngeal cancer cell line Hep-2 by suppressing Apaf-1. *Oncol. Rep.* 33: 1221-1226.
- Bai, X., et al. 2016. Effects of maslinic acid on the proliferation and apoptosis of A549 lung cancer cells. *Mol. Med. Rep.* 13: 117-122.
- Roy, S., et al. 2017. α -linolenic acid stabilizes HIF-1 α and downregulates FASN to promote mitochondrial apoptosis for mammary gland chemoprevention. *Oncotarget* 8: 70049-70071.
- Roy, S., et al. 2018. GLA supplementation regulates PHD2 mediated hypoxia and mitochondrial apoptosis in DMBA induced mammary gland carcinoma. *Int. J. Biochem. Cell Biol.* 96: 51-62.
- Gautam, S., et al. 2018. DuCLOX-2/5 inhibition attenuates inflammatory response and induces mitochondrial apoptosis for mammary gland chemoprevention. *Front. Pharmacol.* 9: 314.
- Wang, H., et al. 2018. The proto-oncogene c-Kit inhibits tumor growth by behaving as a dependence receptor. *Mol. Cell* 72: 413-425.e5.
- Roy, S., et al. 2019. ALA-mediated biphasic downregulation of α -7nAChR/HIF-1 α along with mitochondrial stress modulation strategy in mammary gland chemoprevention. *J. Cell. Physiol.* 234: 4015-4029.



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.