

caspase-9 (1-2): sc-56073



The Power to Question

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 (1-2) is a mouse monoclonal antibody raised against a fragment 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.

caspase-9 (1-2) is available conjugated to agarose (sc-56073 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-56073 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-56073 PE), fluorescein (sc-56073 FITC), Alexa Fluor® 488 (sc-56073 AF488), Alexa Fluor® 546 (sc-56073 AF546), Alexa Fluor® 594 (sc-56073 AF594) or Alexa Fluor® 647 (sc-56073 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-56073 AF680) or Alexa Fluor® 790 (sc-56073 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

caspase-9 (1-2) is recommended for detection of the zymogen form of caspase-9 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

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 procaspase-9: 46 kDa.

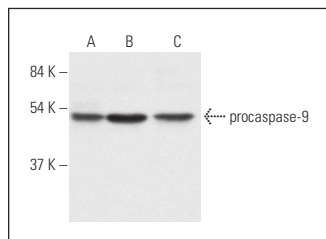
Molecular Weight of caspase-9 activated form: 35 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, MOLT-4 cell lysate: sc-2233 or CCRF-CEM cell lysate: sc-2225.

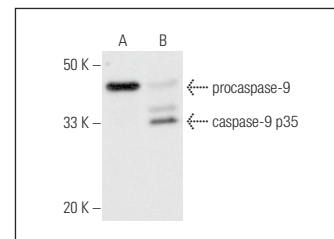
STORAGE

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

DATA



caspase-9 (1-2): sc-56073. Western blot analysis of procaspase-9 expression in CCRF-CEM (A), HeLa (B) and MOLT-4 (C) whole cell lysates.



caspase-9 (1-2): sc-56073. 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

1. Tang, L., et al. 2006. The principal urinary metabolites of dietary isothiocyanates, N-acetylcysteine conjugates, elicit the same anti-proliferative response as their parent compounds in human bladder cancer cells. *Anticancer Drugs* 17: 297-305.
2. Chen, K.F., et al. 2008. Down-regulation of phospho-Akt is a major molecular determinant of bortezomib-induced apoptosis in hepatocellular carcinoma cells. *Cancer Res.* 68: 6698-6707.
3. Liu, W., et al. 2009. MAC related mitochondrial pathway in oroxylin A induces apoptosis in human hepatocellular carcinoma Hep G2 cells. *Cancer Lett.* 284: 198-207.
4. Leja-Szpak, A., et al. 2010. Melatonin induces pro-apoptotic signaling pathway in human pancreatic carcinoma cells (PANC-1). *J. Pineal Res.* 49: 248-255.
5. Guido, C., et al. 2012. Estrogen receptor β (ER β) produces autophagy and necroptosis in human seminoma cell line through the binding of the Sp1 on the phosphatase and tensin homolog deleted from chromosome 10 (PTEN) promoter gene. *Cell Cycle* 11: 2911-2921.
6. Ibrahim, M.Y., et al. 2014. α -mangostin from *Cratoxylum arborescens* demonstrates apoptogenesis in MCF7 with regulation of NF κ B and HSP 70 protein modulation *in vitro*, and tumor reduction *in vivo*. *Drug Des. Devel. Ther.* 8: 1629-1647.
7. Huang, H., et al. 2015. MicroRNA-122 mimic transfection contributes to apoptosis in Hep G2 cells. *Mol. Med. Rep.* 12: 6918-6924.
8. Yin, J., et al. 2016. Antitumor activity of dobutamine on human osteosarcoma cells. *Oncol. Lett.* 11: 3676-3680.
9. Xia, P. and Xu, X.Y. 2017. DKK3 attenuates the cytotoxic effect of natural killer cells on CD133⁺ gastric cancer cells. *Mol. Carcinog.* 56: 1712-1721.

RESEARCH USE

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