

caspase-9 p35 (A-9): sc-133109

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.

REFERENCE

1. Lindahl, T., et al. 1995. Post-translational modification of poly(ADP-ribose) polymerase induced by DNA strand breaks. *Trends Biochem. Sci.* 20: 405-411.
2. Duan, H., et al. 1996. ICE-LAP3, a novel mammalian homologue of the *Caenorhabditis elegans* cell death protein CED-3 is activated during Fas- and tumor necrosis factor-induced apoptosis. *J. Biol. Chem.* 271: 1621-1625.

CHROMOSOMAL LOCATION

Genetic locus: CASP9 (human) mapping to 1p36.21; Casp9 (mouse) mapping to 4 E1.

SOURCE

caspase-9 p35 (A-9) is a mouse monoclonal antibody raised against amino acids 100-270 mapping within an internal region of caspase-9 p35 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

caspase-9 p35 (A-9) is available conjugated to agarose (sc-133109 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-133109 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-133109 PE), fluorescein (sc-133109 FITC), Alexa Fluor® 488 (sc-133109 AF488), Alexa Fluor® 546 (sc-133109 AF546), Alexa Fluor® 594 (sc-133109 AF594) or Alexa Fluor® 647 (sc-133109 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-133109 AF680) or Alexa Fluor® 790 (sc-133109 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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RESEARCH USE

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

APPLICATIONS

caspase-9 p35 (A-9) is recommended for detection of p35 subunit and precursor of caspase-9 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

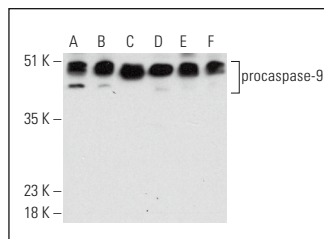
Suitable for use as control antibody for caspase-9 siRNA (h): sc-29931, caspase-9 siRNA (m): sc-37227, caspase-9 shRNA Plasmid (h): sc-29931-SH, caspase-9 shRNA Plasmid (m): sc-37227-SH, caspase-9 shRNA (h) Lentiviral Particles: sc-29931-V and caspase-9 shRNA (m) Lentiviral Particles: sc-37227-V.

Molecular Weight of procaspase-9: 46 kDa.

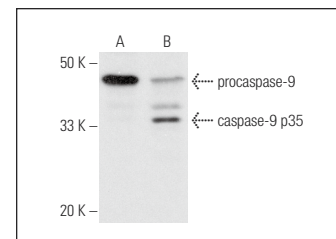
Molecular Weight of caspase-9 p35 activated form: 35 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Jurkat whole cell lysate: sc-2204 or HL-60 whole cell lysate: sc-2209.

DATA



caspase-9 p35 (A-9) HRP: sc-133109 HRP. Direct western blot analysis of procaspase-9 expression in HeLa (A), Jurkat (B), HL-60 (C), RAW 264.7 (D), C6 (E) and NIH/3T3 (F) whole cell lysates.



caspase-9 p35 (A-9): sc-133109. Western blot analysis of caspase-9 p35 cleavage in untreated (A) and Staurosporine (sc-3510) treated (B) Jurkat whole cell lysates. Note caspase-9 p35 cleavage product expression in lane B.

SELECT PRODUCT CITATIONS

1. Brama, M., et al. 2012. Cadmium-induced apoptosis and necrosis in human osteoblasts: role of caspases and mitogen-activated protein kinases pathways. *J. Endocrinol. Invest.* 35: 198-208.
2. Yin, D., et al. 2018. Silence of lncRNA UCA1 represses the growth and tube formation of human microvascular endothelial cells through miR-195. *Cell. Physiol. Biochem.* 49: 1499-1511.
3. Yin, P., et al. 2019. Alsterpaullone induces apoptosis of Hep G2 cells via a p38 mitogen-activated protein kinase signaling pathway. *Oncol. Lett.* 17: 1177-1183.
4. Cui, J., et al. 2020. Chikusetsu saponin IVa protects pancreatic β cell against intermittent high glucose-induced injury by activating Wnt/β-catenin/TCF7L2 pathway. *Aging* 12: 1591-1609.

STORAGE

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