SANTA CRUZ BIOTECHNOLOGY, INC.

caspase-9 p10 (F-7): sc-17784



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 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.

REFERENCES

- 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.

SOURCE

caspase-9 p10 (F-7) is a mouse monoclonal antibody raised against amino acids 315-397 mapping within the C-terminus of caspase-9 p10 of human origin.

PRODUCT

Each vial contains 200 $\mu g~lgG_{2a}$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

caspase-9 p10 (F-7) is available conjugated to agarose (sc-17784 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-17784 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-17784 PE), fluorescein (sc-17784 FITC), Alexa Fluor® 488 (sc-17784 AF488), Alexa Fluor® 546 (sc-17784 AF546), Alexa Fluor® 594 (sc-17784 AF594) or Alexa Fluor® 647 (sc-17784 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-17784 AF680) or Alexa Fluor® 790 (sc-17784 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

STORAGE

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

APPLICATIONS

caspase-9 p10 (F-7) is recommended for detection of precursor and p10 subunit of caspase-9 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1,000), 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), immunohistochemistry (including paraffin-embedded sections) (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 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 p10 cleavage fragment: 10 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, K-562 whole cell lysate: sc-220 or HCT-116 whole cell lysate: sc-364175.

DATA

	A	В	С	D	E	F		1
55 K –								
43 K –	-	-	-	-	-	-	<pre>www.procaspase-9</pre>	
34 K –								
23 K –								



caspase-9 (F-7): sc-17784. Western blot analysis of procaspase-9 expression in Jurkat (A), K-562 (B) HCT-116 (C), Saos-2 (D), COLO 205 (E) and HEK293 (F) whole cell lysates.

Thansigargin: sc-24017, Immunofluorescence staining of methanol-fixed HeLa cells showing mitochondria staining of pro-caspase-9 (A) and cytoplasmic and nuclear staining of caspase-9 p10 in HeLa cells treated with Thapsigargin (B). Antibody tested: caspase-9 p10 (F-7): sc-17784.

SELECT PRODUCT CITATIONS

- 1. Shoulars, K., et al. 2002. Identification of nuclear type II [³H]estradiol binding sites as Histone H4. Biochem. Biophys. Res. Commun. 296: 1083-1090.
- 2. Contant, C., et al. 2021. Anethole induces anti-oral cancer activity by triggering apoptosis, autophagy and oxidative stress and by modulation of multiple signaling pathways. Sci. Rep. 11: 13087.
- 3. Semlali, A., et al. 2022. Rapamycin inhibits oral cancer cell growth by promoting oxidative stress and suppressing ERK1/2, NF κ B and β -catenin pathways. Front. Oncol. 12: 873447.
- 4. Zhu, Y., et al. 2024. Saikosaponin-b2 regulates the proliferation and apoptosis of liver cancer cells by targeting the MACC1/c-Met/Akt signalling pathway. Adv. Pharmacol. Pharm. Sci. 2024: 2653426.

RESEARCH USE

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