SANTA CRUZ BIOTECHNOLOGY, INC.

caspase-9 (10.1.87): sc-81650

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 (10.1.87) is a mouse monoclonal antibody raised against full-length recombinant caspase-9 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

caspase-9 (10.1.87) 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) 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 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: MOLT-4 cell lysate: sc-2233, Jurkat whole cell lysate: sc-2204 or CCRF-CEM cell lysate: sc-2225.

RESEARCH USE

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

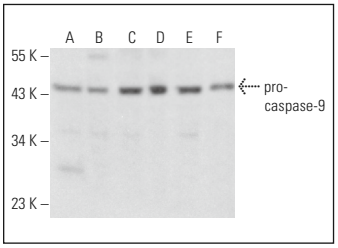
PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

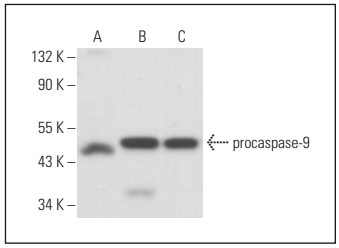
STORAGE

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

DATA



caspase-9 (10.1.87): sc-81650. Western blot analysis of procaspase-9 expression in K-562 (**A**), CCRF-CEM (**B**), Jurkat (**C**), MOLT-4 (**D**), HL-60 (**E**) and Saos-2 (**F**) whole cell lysates.



caspase-9 (10.1.87): sc-81650. Western blot analysis of procaspase-9 expression in NIH/3T3 (**A**), J774.A1 (**B**) and BC_3H1 (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Duan, J., et al. 2013. siRNA targeting of PRDX3 enhances cisplatin-induced apoptosis in ovarian cancer cells through the suppression of the NFκB signaling pathway. Mol. Med. Rep. 7: 1688-1694.
2. He, Y., et al. 2017. Resveratrol improved the progression of chronic prostatitis via the downregulation of c-Kit/SCF by activating SIRT1. J. Agric. Food Chem. 65: 5668-5673.
3. Hua, F., et al. 2018. Daidzein exerts anticancer activity towards SKOV3 human ovarian cancer cells by inducing apoptosis and cell cycle arrest, and inhibiting the Raf/MEK/ERK cascade. Int. J. Mol. Med. 41: 3485-3492.
4. Jin, X., et al. 2019. MicroRNA-105 promotes epithelial-mesenchymal transition of nonsmall lung cancer cells through upregulating Mcl-1. J. Cell. Biochem. 120: 5880-5888.
5. Tan, H., et al. 2020. Peimine inhibits the growth and motility of prostate cancer cells and induces apoptosis by disruption of intracellular calcium homeostasis through Ca^{2+}/CaMKII/JNK pathway. J. Cell. Biochem. 121: 81-92.
6. Balakrishnan, R., et al. 2021. Isolongifolene mitigates rotenone-induced dopamine depletion and motor deficits through anti-oxidative and anti-apoptotic effects in a rat model of Parkinson's disease. J. Chem. Neuroanat. 112: 101890.
7. Hu, H. and Jian, X. 2021. The protective mechanism of action of plantamajoside on a rat model of acute spinal cord injury. Exp. Ther. Med. 21: 378.

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.