SANTA CRUZ BIOTECHNOLOGY, INC.

# caspase-9 (3C122): sc-70505

SANTA CRUZ BIOTECHNOLOGY

*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; Casp9 (mouse) mapping to 4 E1.

## SOURCE

caspase-9 (3C122) is a mouse monoclonal antibody raised against the pro-domain of 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 (3C122) 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, CCRF-CEM cell lysate: sc-2225 or MOLT-4 cell lysate: sc-2233.

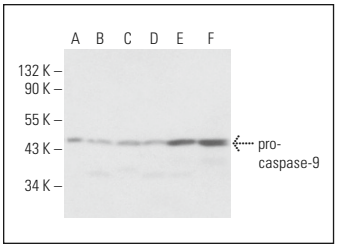
## STORAGE

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

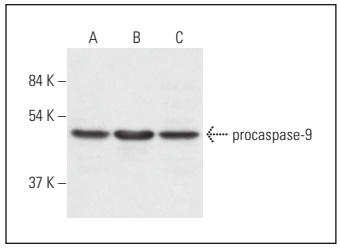
## RESEARCH USE

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

## DATA




caspase-9 (3C122): sc-70505. 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 (3C122): sc-70505. Western blot analysis of procaspase-9 expression in CCRF-CEM (**A**), HeLa (**B**) and MOLT-4 (**C**) whole cell lysates.

## SELECT PRODUCT CITATIONS


1. Lei, X.Y., et al. 2009. Knockdown of human bid gene expression enhances survival of $CD8^+$ T cells. Immunol. Lett. 122: 30-36.
2. Morello, S., et al. 2009. Cl-IB-MECA enhances TRAIL-induced apoptosis via the modulation of NFκB signalling pathway in thyroid cancer cells. J. Cell. Physiol. 221: 378-386.
3. Liu, X., et al. 2015. Apoptosis induced by sonodynamic therapy in human osteosarcoma cells *in vitro*. Mol. Med. Rep. 12: 1183-1188.
4. Rah, B., et al. 2015. PAWR-mediated suppression of Bcl-2 promotes switching of 3-azido withaferin A (3-AWA)-induced autophagy to apoptosis in prostate cancer cells. Autophagy 11: 314-331.
5. Dincel, G.C. and Atmaca, H.T. 2016. Increased expressions of ADAMTS-13 and apoptosis contribute to neuropathology during *Toxoplasma gondii* encephalitis in mice. Neuropathology 36: 211-226.
6. Sun, L., et al. 2017. MIR506 induces autophagy-related cell death in pancreatic cancer cells by targeting the STAT3 pathway. Autophagy 13: 703-714.
7. Dindi, U.M.R., et al. 2023. Ameliorative inhibition of sirtuin 6 by imidazole derivative triggers oxidative stress-mediated apoptosis associated with Nrf2/Keap1 signaling in non-small cell lung cancer cell lines. Front. Pharmacol. 14: 1335305.
8. Lee, J.K., et al. 2024. PKA inhibition kills L-asparaginase-resistant leukemic cells from relapsed acute lymphoblastic leukemia patients. Cell Death Discov. 10: 257.


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.