

caspase-9 (9CSP01): sc-81663

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 (9CSP01) is a mouse monoclonal antibody raised against full-length recombinant 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.

APPLICATIONS

caspase-9 (9CSP01) 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: K-562 whole cell lysate: sc-2203, Jurkat whole cell lysate: sc-2204 or A-10 cell lysate: sc-3806.

STORAGE

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

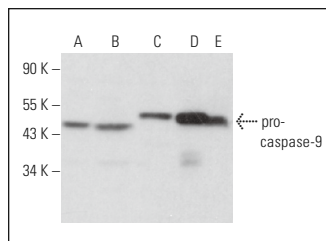
PROTOCOLS

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

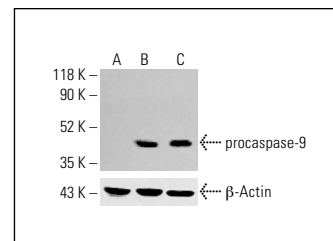
RESEARCH USE

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

DATA



caspase-9 (9CSP01): sc-81663. Western blot analysis of procaspase-9 expression in Jurkat (A), K-562 (B), A-10 (C), RAW 264.7 (D) and NIH/3T3 (E) whole cell lysates.



caspase-9 (9CSP01): sc-81663. Western blot analysis of procaspase-9 expression in untreated HeLa (A), chemically-treated HeLa (B) and K-562 (C) whole cell lysates. β-Actin (C4): sc-47778 used as loading control. Detection reagent used: m-IgG Fc BP-HRP: sc-525409.

SELECT PRODUCT CITATIONS

- Ren, L., et al. 2011. The role of peroxiredoxin V in (-)-epigallocatechin 3-gallate-induced multiple myeloma cell death. *Oncol. Res.* 19: 391-398.
- Zhang, Z.R., et al. 2017. Cucurbitacin B inhibits cell proliferation and induces apoptosis in human osteosarcoma cells via modulation of the JAK2/Stat3 and MAPK pathways. *Exp. Ther. Med.* 14: 805-812.
- 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.
- Mohammadi, A.B., et al. 2019. Sericin alleviates restraint stress induced depressive- and anxiety-like behaviors via modulation of oxidative stress, neuroinflammation and apoptosis in the prefrontal cortex and hippocampus. *Brain Res.* 1715: 47-56.
- Soliman, M.M., et al. 2020. The ameliorative impacts of *Moringa oleifera* leaf extract against oxidative stress and methotrexate-induced hepato-renal dysfunction. *Biomed. Pharmacother.* 128: 110259.
- Wu, W., et al. 2020. Hyperoside ameliorates diabetic retinopathy via anti-oxidation, inhibiting cell damage and apoptosis induced by high glucose. *Front. Pharmacol.* 11: 797.
- Zhao, C., et al. 2021. Anti-inflammatory effects of kaempferol-3-O-rhamnoside on HSV-1 encephalitis *in vivo* and *in vitro*. *Neurosci. Lett.* 765: 136172.
- Elgendy, S.A., et al. 2022. Ameliorative impacts of wheat germ oil against ethanol-induced hepatic and renal dysfunction in rats: involvement of anti-inflammatory, anti-apoptotic, and antioxidant signaling pathways. *Life* 12: 1671.



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.