

caspase-7 (m): 293T Lysate: sc-119028

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.

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.
3. Fernandes-Alnemri, T.F., et al. 1996. *In vitro* activation of CPP32 and Mch3 by Mch4, a novel human apoptotic cysteine protease containing two FADD-like domains. *Proc. Natl. Acad. Sci. USA* 93: 7464-7469.
4. Duan, H., et al. 1996. ICE-LAP6, a novel member of the ICE/Ced-3 gene family, is activated by the cytotoxic T cell protease granzyme B. *J. Biol. Chem.* 271: 16720-16724.
5. Simbulan-Rosenthal, C.M., et al. 1996. The expression of poly(ADP-ribose) polymerase during differentiation-linked DNA replication complex. *Biochemistry* 35: 11622-11633.
6. Casciola-Rosen, L., et al. 1996. Apopain/CPP32 cleaves proteins that are essential for cellular repair: a fundamental principle of apoptotic death. *J. Exp. Med.* 183: 1957-1964.

CHROMOSOMAL LOCATION

Genetic locus: Casp7 (mouse) mapping to 19 D2.

PRODUCT

caspase-7 (m): 293T Lysate represents a lysate of mouse caspase-7 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

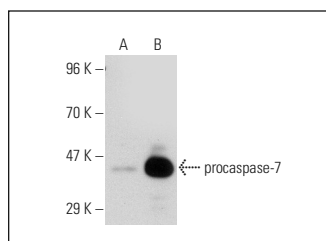
APPLICATIONS

caspase-7 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive caspase-7 antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

caspase-7 (B4-G2): sc-56067 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse caspase-7 expression in caspase-7 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

DATA



caspase-7 (B4-G2): sc-56067. Western blot analysis of procaspase-7 expression in non-transfected: sc-117752 (A) and mouse caspase-7 transfected: sc-119028 (B) 293T whole cell lysates.

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.