

caspase-7 (h): 293T Lysate: sc-176076

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. Tiso, N., Pallavicini, A., Muraro, T., Zimbello, R., Apolloni, E., Valle, G., Lanfranchi, G. and Danieli, G.A. 1996. Chromosomal localization of the human genes, CPP32, MCH2, MCH3, and ICH1, involved in cellular apoptosis. *Biochem. Biophys. Res. Commun.* 225: 983-989.
2. Cohen, G.M. 1997. Caspases: the executioners of apoptosis. *Biochem. J.* 326: 1-16.
3. Chandler, J.M., Cohen, G.M. and MacFarlane, M. 1998. Different subcellular distribution of caspase-3 and caspase-7 following Fas-induced apoptosis in mouse liver. *J. Biol. Chem.* 273: 10815-10818.
4. Marcelli, M., Cunningham, G.R., Walkup, M., He, Z., Sturgis, L., Kagan, C., Mannucci, R., Nicoletti, I., Teng, B. and Denner, L. 1999. Signaling pathway activated during apoptosis of the prostate cancer cell line LNCaP: overexpression of caspase-7 as a new gene therapy strategy for prostate cancer. *Cancer Res.* 59: 382-390.
5. Germain, M., Affar, E.B., D'Amours, D., Dixit, V.M., Salvesen, G.S. and Poirier, G.G. 1999. Cleavage of automodified poly(ADP-ribose) polymerase during apoptosis. Evidence for involvement of caspase-7. *J. Biol. Chem.* 274: 28379-28384.

CHROMOSOMAL LOCATION

Genetic locus: CASP7 (human) mapping to 10q25.3.

PRODUCT

caspase-7 (h): 293T Lysate represents a lysate of human 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.

RESEARCH USE

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

APPLICATIONS

caspase-7 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive caspase-7 antibodies.

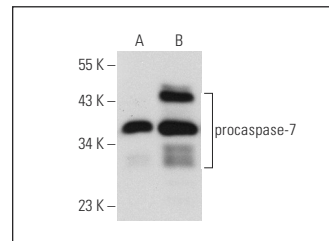
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

caspase-7 (10.1.60): sc-81654 is recommended as a positive control antibody for Western Blot analysis of enhanced human caspase-7 expression in caspase-7 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

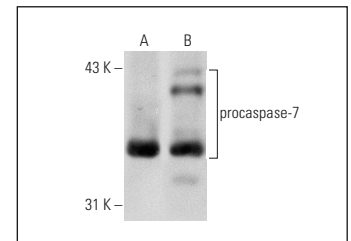
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



caspase-7 (10.1.60): sc-81654. Western blot analysis of procaspase-7 expression in non-transfected: sc-117752 (A) and human caspase-7 transfected: sc-176076 (B) 293T whole cell lysates.



caspase-7 (51): sc-135858. Western blot analysis of procaspase-7 expression in non-transfected: sc-117752 (A) and human caspase-7 transfected: sc-176076 (B) 293T whole cell lysates.

PROTOCOLS

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