

caspase-7 (h): 293 Lysate: sc-112228

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

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3. Chandler, J.M., et al. 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., et al. 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., et al. 1999. Cleavage of automodified poly(ADP-ribose) polymerase during apoptosis. Evidence for involvement of caspase-7. *J. Biol. Chem.* 274: 28379-28384.
6. Araya, R., et al. 2002. Yeast two-hybrid screening using constitutive-active caspase-7 as bait in the identification of PA28g as an effector caspase substrate. *Cell Death Differ.* 9: 322-328.
7. Soung, Y.H., et al. 2003. Inactivating mutations of caspase-7 gene in human cancers. *Oncogene* 22: 8048-8052.
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CHROMOSOMAL LOCATION

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

PRODUCT

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

RESEARCH USE

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

APPLICATIONS

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

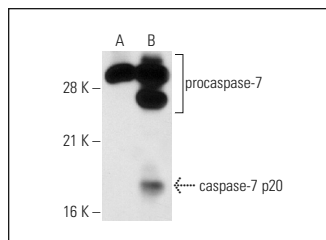
Control 293 Lysate: sc-110760 is available as a Western Blotting negative control lysate derived from non-transfected 293 cells.

caspase-7 p20 (B-5): sc-28295 is recommended as a positive control antibody for Western Blot analysis of enhanced human caspase-7 expression in caspase-7 transfected 293 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 p20 (B-5): sc-28295. Western blot analysis of caspase-7 expression in non-transfected: sc-110760 (A) and human caspase-7 transfected: sc-112228 (B) 293 whole cell lysates.

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.

PROTOCOLS

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