

caspase-10 p10 (C-13): sc-6184

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, termed Ced-3/caspase-1, is comprised of caspase-1, caspase-2, caspase-3, caspase-4, caspase-6 and 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, 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: CASP10 (human) mapping to 2q33.1.

SOURCE

caspase-10 p10 (C-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of caspase-10 p10 of human origin.

STORAGE

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

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.2% gelatin.

Blocking peptide available for competition studies, sc-6184 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

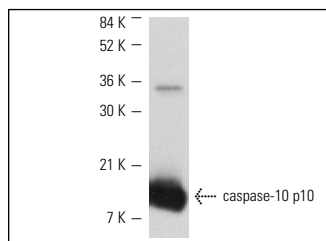
caspase-10 p10 (C-13) is recommended for detection of p10 subunit and precursor of caspase-10 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for caspase-10 siRNA (h): sc-29923, caspase-10 shRNA Plasmid (h): sc-29923-SH and caspase-10 shRNA (h) Lentiviral Particles: sc-29923-V.

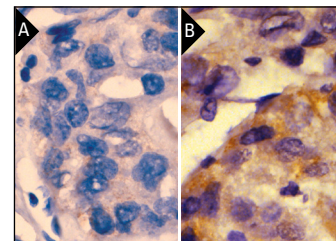
Molecular Weight of caspase-10 p10: 58/10 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

DATA



caspase-10 p10 (C-13): sc-6184. Western blot analysis of human recombinant caspase-10 p10.



caspase-10 p10 (C-13): sc-6184. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human liver tissue showing cytoplasmic localization (A,B).

SELECT PRODUCT CITATIONS

1. Chen, H., et al. 2009. Caspase-10-mediated heat-shock protein 90 β cleavage promotes ultraviolet B irradiation-induced cell apoptosis. *Mol. Cell. Biol.* 29: 3657-3664.

RESEARCH USE

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

MONOS
Satisfaction
Guaranteed

Try **caspase-10 p10 (E-11): sc-393983** or **caspase-10 (WW-H4): sc-134299**, our highly recommended monoclonal alternatives to caspase-10 p10 (C-13).