

caspase-14 (C-12): sc-48395

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 composed of caspase-1, caspase-2, caspase-3, caspase-4, caspase-6 and caspase-7 (also designated Mch3, ICE-LAP3 or CMH-1), caspase-9, caspase-10, and caspase-14. 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. 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-14, also designated MICE (for mini-ICE), is highly expressed in embryonic tissues but appears to be absent from adult tissues. Procasase-14 can be processed *in vitro* by caspase-8 and caspase-10 but not by other caspases.

REFERENCES

1. 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.
2. 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.
3. 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.
4. 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.
5. Hu, S., et al. 1998. Caspase-14 is a novel developmentally regulated protease. J. Biol. Chem. 273: 29648-29653.
6. Ahmad, M., et al. 1998. Identification and characterization of murine caspase-14, a new member of the caspase family. Cancer Res. 58: 5201-5205.
7. Van de Craen, M., et al. 1998. Identification of a new caspase homolog: caspase-14. Cell Death Differ. 5: 838-846.

CHROMOSOMAL LOCATION

Genetic locus: CASP14 (human) mapping to 19p13.12.

SOURCE

caspase-14 (C-12) is a mouse monoclonal antibody raised against amino acids 24-122 of caspase-14 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

caspase-14 (C-12) is recommended for detection of caspase-14 of human origin by Western Blotting (starting dilution 1:100, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for caspase-14 siRNA (h): sc-37364, caspase-14 shRNA Plasmid (h): sc-37364-SH and caspase-14 shRNA (h) Lentiviral Particles: sc-37364-V.

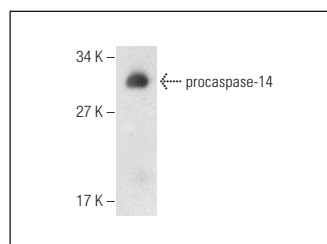
Molecular Weight of procaspase-14: 30/18/11 kDa.

Positive Controls: Hs 294T whole cell lysate or ZR-75-1 cell lysate: sc-2241.

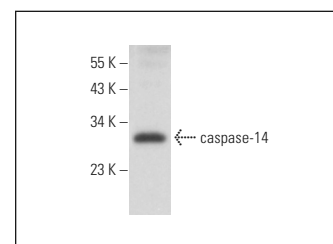
RECOMMENDED SUPPORT REAGENTS

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



caspase-14 (C-12): sc-48395. Western blot analysis of procaspase-14 expression in Hs 294T whole cell lysate.



caspase-14 (C-12): sc-48395. Western blot analysis of caspase-14 expression in ZR-75-1 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Clement, C.C., et al. 2013. Protein expression profiles of human lymph and plasma mapped by 2D-DIGE and 1D SDS-PAGE coupled with nanoLC-ESI-MS/MS bottom-up proteomics. J. Proteomics 78: 172-187.

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.