

caspase-14 (32): sc-136351

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. Procaspace-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.

CHROMOSOMAL LOCATION

Genetic locus: CASP14 (human) mapping to 19p13.12; Casp14 (mouse) mapping to 10 C1.

SOURCE

caspase-14 (32) is a mouse monoclonal antibody raised against amino acids 136-257 of caspase-14 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

caspase-14 (32) is available conjugated to agarose (sc-136351 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-136351 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-136351 PE), fluorescein (sc-136351 FITC), Alexa Fluor[®] 488 (sc-136351 AF488), Alexa Fluor[®] 594 (sc-136351 AF594) or Alexa Fluor[®] 647 (sc-136351 AF647), 200 µg/ml, for IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-136351 AF680) or Alexa Fluor[®] 790 (sc-136351 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

caspase-14 (32) is recommended for detection of caspase-14 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for caspase-14 siRNA (h): sc-37364, caspase-14 siRNA (m): sc-37365, caspase-14 shRNA Plasmid (h): sc-37364-SH, caspase-14 shRNA Plasmid (m): sc-37365-SH, caspase-14 shRNA (h) Lentiviral Particles: sc-37364-V and caspase-14 shRNA (m) Lentiviral Particles: sc-37365-V.

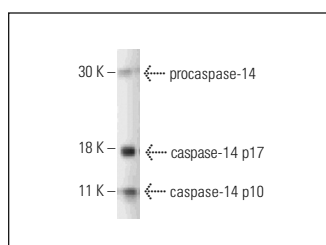
Molecular Weight of procaspase-14: 30/18/11 kDa.

Positive Controls: U-2 OS cell lysate: sc-2295 or mouse testis extract: sc-2405.

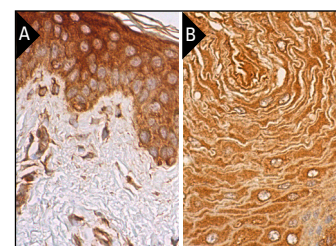
RECOMMENDED SUPPORT REAGENTS

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) 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. 3) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



caspase-14 (32): sc-136351. Western blot analysis of caspase-14 expression in mouse tissue extract.



caspase-14 (32): sc-136351. Immunoperoxidase staining of formalin fixed, paraffin-embedded human skin tissue showing cytoplasmic staining of keratinocytes, fibroblasts, Langerhans cells and melanocytes (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human esophagus tissue showing cytoplasmic staining of squamous epithelial cells (B).

STORAGE

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

RESEARCH USE

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