

caspase-14 (D-10): sc-48336

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. Procaspase-14 can be processed *in vitro* by caspase-8 and caspase-10 but not by other caspases.

CHROMOSOMAL LOCATION

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

SOURCE

caspase-14 (D-10) 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.

caspase-14 (D-10) is available conjugated to agarose (sc-48336 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-48336 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-48336 PE), fluorescein (sc-48336 FITC), Alexa Fluor® 488 (sc-48336 AF488), Alexa Fluor® 546 (sc-48336 AF546), Alexa Fluor® 594 (sc-48336 AF594) or Alexa Fluor® 647 (sc-48336 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-48336 AF680) or Alexa Fluor® 790 (sc-48336 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

caspase-14 (D-10) 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 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 shRNA Plasmid (h): sc-37364-SH and caspase-14 shRNA (h) Lentiviral Particles: sc-37364-V.

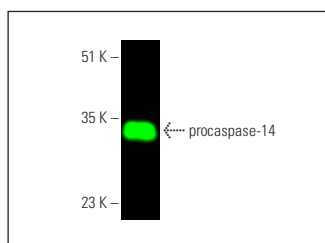
Molecular Weight of caspase-14: 30/18/11 kDa.

Positive Controls: BT-20 cell lysate: sc-2223.

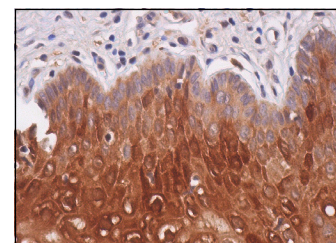
RECOMMENDED SUPPORT REAGENTS

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. 4) 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 (D-10): sc-48336. Near-infrared western blot analysis of procaspase-14 expression in BT-20 whole cell lysate. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 680: sc-516180.



caspase-14 (D-10): sc-48336. Immunoperoxidase staining of formalin fixed, paraffin-embedded human vagina tissue showing cytoplasmic and nuclear staining of squamous epithelial cells.

SELECT PRODUCT CITATIONS

- Scharenberg, C., et al. 2013. Expression of caspase 14 and filaggrin in oral squamous carcinoma. *Head Neck Pathol.* 7: 327-333.
- Gkegkes, I.D., et al. 2013. Expression of caspase-14 and keratin-19 in the human epidermis and appendages during fetal skin development. *Arch. Dermatol. Res.* 305: 379-387.
- Pellerin, L., et al. 2014. Bleomycin hydrolase downregulation in lesional skin of adult atopic dermatitis patients is independent of FLG gene mutations. *J. Allergy Clin. Immunol.* 134: 1459-1461.e7.
- Lemound, J., et al. 2015. Aberrant expression of caspase 14 in salivary gland carcinomas. *J. Oral Pathol. Med.* 44: 444-448.
- Zobiri, O., et al. 2022. Repeated exposures to UVA1 and particulate matter-associated pollutants trigger epidermal barrier dysfunction in skin epithelialization model. *J. Invest. Dermatol.* 142: 3331-3335.e8.

RESEARCH USE

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

PROTOCOLS

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

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