

# caspase-14 (H-99): sc-5628

## 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. Pro-caspase-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; Casp14 (mouse) mapping to 10 C1.

## SOURCE

caspase-14 (H-99) is a rabbit polyclonal antibody raised against amino acids 24-122 mapping near the N-terminus of caspase-14 of human origin.

## PRODUCT

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

## APPLICATIONS

caspase-14 (H-99) is recommended for detection of p20 subunit and precursor of caspase-14 of mouse, rat and 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) 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 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 kDa.

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

## STORAGE

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

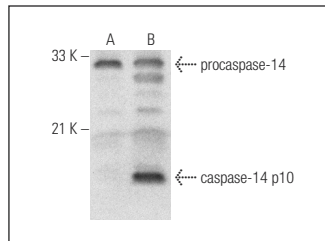
## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

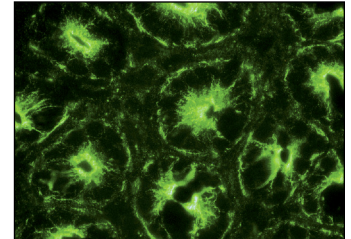
## RESEARCH USE

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

## DATA



Western blot analysis of caspase-14 cleavage in untreated (A) and Staurosporine (sc-3510) treated (B) Jurkat whole cell lysates. Antibodies tested include caspase-14 (H-99): sc-5628 (A,B). Note cleavage of caspase-14 in lane B.



caspase-14 (H-99): sc-5628. Immunofluorescence staining of normal mouse intestine frozen section showing cytoplasmic staining.

## SELECT PRODUCT CITATIONS

- Chien, A.J., et al. 2002. Processing of native caspase-14 occurs at an atypical cleavage site in normal epidermal differentiation. *Biochem. Biophys. Res. Commun.* 296: 911-917.
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- Bayo, P., et al. 2008. Glucocorticoid receptor is required for skin barrier competence. *Endocrinology* 149: 1377-1388.
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- Hibino, T., et al. 2010. Purification and characterization of active caspase-14 from human epidermis and development of the cleavage site-directed antibody. *J. Cell. Biochem.* 109: 487-497.
- Yamamoto, M., et al. 2011. Quantification of activated and total caspase-14 with newly developed ELISA systems in normal and atopic skin. *J. Dermatol. Sci.* 61: 110-117.


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