

Caspase-14 Antibody

Catalog # ASC10156

Product Information

Application	WB, E, IHC-P
Primary Accession	O89094
Other Accession	NP_033939 , 6753280
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	29458
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	Caspase-14 antibody can be used for the detection of caspase-14 by Western blot at 1 μ g/mL. Antibody can also be used for immunohistochemistry starting at 2.5 μ g/mL.

Additional Information

Gene ID	12365
Other Names	Caspase-14 Antibody: MICE, mini-ICE, Caspase-14, Mini-ICE, CASP-14, caspase 14
Target/Specificity	Casp14;
Reconstitution & Storage	Caspase-14 antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	Caspase-14 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	Casp14
Function	Non-apoptotic caspase which is involved in epidermal differentiation. Seems to play a role in keratinocyte differentiation and is required for cornification (PubMed: 18156206). Regulates maturation of the epidermis by proteolytically processing filaggrin (PubMed: 21654840). In vitro is equally active on the synthetic caspase substrates WEHD-ACF and IETD-AFC. Involved in processing of prosaposin in the epidermis (PubMed: 24872419). May be involved in retinal pigment epithelium cell barrier function (By similarity).
Cellular Location	Cytoplasm. Nucleus

Tissue Location

Embryo, adult liver and less in adult brain and kidney. Expressed in differentiating keratinocytes of embryonic skin (at protein level). Expressed in keratinocytes of adult skin suprabasal layers (at protein level).

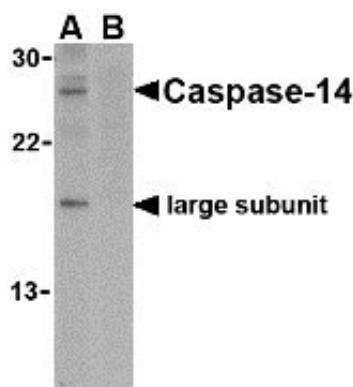
Background

Caspase-14 Antibody: Caspases are a family of cysteine proteases that can be divided into apoptotic and inflammatory caspase subfamilies. Unlike the apoptotic caspases, members of the inflammatory subfamily are generally not involved in cell death but are associated with the immune response to microbial pathogens. Members of this subfamily include caspase-1, -4, -5, and -12 and can activate proinflammatory cytokines such as IL-1b and IL-18. Caspase-14 is highly expressed in embryonic but not adult tissues. It is processed and activated by caspase 8 and caspase 10 in vitro, and by anti-Fas agonist antibody or TNF-related apoptosis inducing ligand in vivo. The expression and processing of this caspase may be involved in the keratinocyte terminal differentiation, which is important for the formation of the skin barrier.

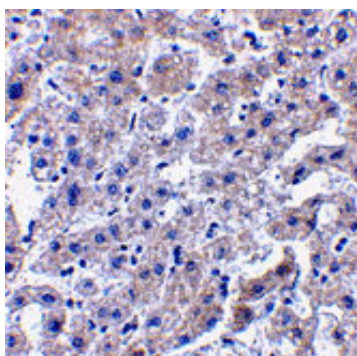
References

Martinon F and Tschopp J. Inflammatory caspases: linking an intracellular innate immune system to autoinflammatory diseases. *Cell* 2004; 117:561-74.
Zhivotovsky B and Orrenius S. Caspase-2 function in response to DNA damage. *Biochim. Biophys. Res. Comm.* 2005; 331:859-67.
Kuida K, Lippke JA, Ku G, et al. Altered cytokine export and apoptosis in mice deficient in interleukin-1 beta converting enzyme. *Science* 1995; 267:2000-3.
Gracie JA, Robertson SE, and McInnes IB. Interleukin-18. *J. Leukoc. Biol.* 2003; 73:213-224.

Images



Western blot analysis of caspase-14 in Jurkat cell lysate in the (A) absence or (B) presence of blocking peptide with caspase-14 antibody at 1 µg/mL.



Immunohistochemistry of caspase-14 in human liver tissue with caspase-14 antibody at 2.5 µg/mL.