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Anti-Caspase-14 Antibody

Catalog # ABO11410

Product Information

Application	WB, IHC-P
Primary Accession	P31944
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Inactive Caspase-14(CASP14) detection. Tested with WB, IHC-P in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	23581
Other Names	Caspase-14, CASP-14, 3.4.22.-, Caspase-14 subunit p17, mature form, Caspase-14 subunit p10, mature form, Caspase-14 subunit p20, intermediate form, Caspase-14 subunit p8, intermediate form, CASP14
Calculated MW	27680
Application Details	Immunohistochemistry(Paraffin-embedded Section), 0.5-1 □g/ml, Human, By Heat Western blot, 0.1-0.5 □g/ml, Human, Mouse, Rat
Subcellular Localization	Cytoplasm . Nucleus.
Tissue Specificity	Expressed in keratinocytes of adult skin suprabasal layers (from spinous layers to the stratum granulosum and stratum corneum) (at protein level). Expressed in keratinocytes of hair shaft and sebaceous glands (at protein level). In psoriatic skin only expressed at very low levels (PubMed:11175259). The p17/10 mature form is expressed in epidermis stratum corneum, the p20/p8 intermediate form in epidermis upper granular cells of the stratum granulosum (PubMed:22825846). .
Source	Eukaryota
Protein Name	Caspase-14
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human

	Caspase-14(223-242aa KARKTNPEIQSTLRKRLYLQ), different from the related rat and mouse sequences by four amino acids.
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins
Storage	At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.

Protein Information

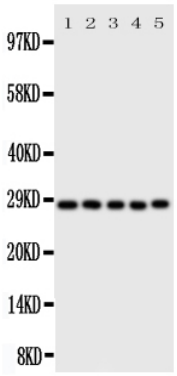
Name	CASP14
Function	Non-apoptotic caspase involved in epidermal differentiation. Is the predominant caspase in epidermal stratum corneum (PubMed:15556625). Seems to play a role in keratinocyte differentiation and is required for cornification. Regulates maturation of the epidermis by proteolytically processing filaggrin (By similarity). In vitro has a preference for the substrate [WY]-X-X-D motif and is active on the synthetic caspase substrate WEHD-ACF (PubMed:16854378, PubMed:19960512). Involved in processing of prosaposin in the epidermis (By similarity). May be involved in retinal pigment epithelium cell barrier function (PubMed:25121097). Involved in DNA degradation in differentiated keratinocytes probably by cleaving DFFA/ICAD leading to liberation of DFFB/CAD (PubMed:24743736).
Cellular Location	Cytoplasm. Nucleus
Tissue Location	Expressed in keratinocytes of adult skin suprabasal layers (from spinous layers to the stratum granulosum and stratum corneum) (at protein level). Expressed in keratinocytes of hair shaft and sebaceous glands (at protein level). In psoriatic skin only expressed at very low levels (PubMed:11175259). The p17/10 mature form is expressed in epidermis stratum corneum, the p20/p8 intermediate form in epidermis upper granular cells of the stratum granulosum (PubMed:22825846).

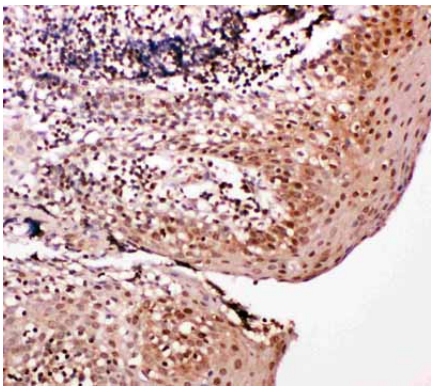
Background

Caspase 14 is an enzyme that in humans is encoded by the CASP14 gene. CASP14 belongs the evolutionarily conserved caspase family. CASP14 was assigned to chromosome 19p13.1. Using Northern blot and semiquantitative RT-PCR analyses, it was showed that CASP14 was transcriptionally upregulated during maintenance of confluent cultures of human epidermal keratinocytes. The expression and processing of this caspase may be involved in keratinocyte terminal differentiation, which is important for the formation of the skin barrier. Caspase 14 seems to play a role in keratinocyte differentiation and cornification and probably regulates maturation of the epidermis by proteolytically processing filaggrin.

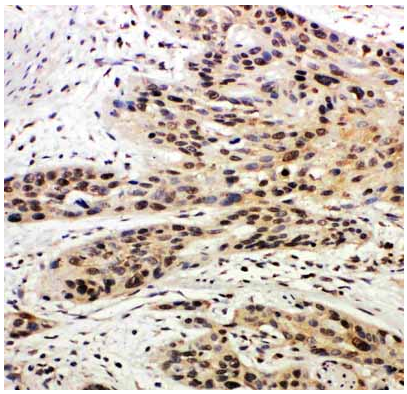
Images

Anti-Caspase-14 antibody, ABO11410, Western blottingAll lanes: Anti Caspase-14 (ABO11410) at 0.5ug/mlLane 1: Rat Brain Tissue Lysate at 50ugLane 2: Rat Liver Tissue Lysate at 50ugLane 3: Rat Spleen Tissue Lysate at 50ugLane 4: A431 Whole Cell Lysate at 40ugLane 5: NIH3T3 Whole Cell Lysate at 40ugPredicted bind size: 28KDObserved bind size: 28KD





Anti-Caspase-14 antibody, ABO11410, IHC(P)IHC(P): Human Tonsil Tissue



Anti-Caspase-14 antibody, ABO11410, IHC(P)IHC(P): Human Oesophagus Squama Cancer Tissue