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Polyclonal Anti-CASP14 Antibody

Catalog Number: PA2104

Description

Gene Name	caspase 14, apoptosis-related cysteine peptidase
Recommended Protein Name	Caspase-14
Lot No.	0211312c010448
Size	100μg/vial
Form	lyophilized
Ig type	Rabbit IgG
Specificity	No cross reactivity with other proteins.
Purification	Immunogen affinity purified.
Species	**Reacts with:** human, mouse, rat
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human CASP14(223-242aa KARKTNPEIQSTLRKRLYLQ), different from the related rat and mouse sequences by four amino acids.
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na_2HPO_4, 0.05mg Thimerosal, 0.05mg NaN_3.

Application

	Concentration	Tested Species	Predicted Species	Antigen Retrieval
Western blot	0.1-0.5μg/ml	Hu, Ms, Rat	-	-
Immunohistochemistry (Paraffin-embedded Section)	0.5-1μg/ml	Hu	-	By Heat

WB: The detection limit for CASP14 is approximately 0.5ng/lane under reducing conditions.

Tested Species: In-house tested species with positive results.

Predicted Species: Species predicted to be fit for the product based on sequence similarities.

By Heat: Boiling the paraffin sections in 10mM citrate buffer, pH6.0, for 20mins is required for the staining of formalin/paraffin sections.

Other applications have not been tested.

Optimal dilutions should be determined by end users.

Preparation and storage

Reconstitution: 0.2ml of distilled water will yield a concentration of 500μg/ml.

Storage: At -20˚C for one year. After reconstitution, 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.

Relevant detection systems

Boster provides a series of assays reacted with primary antibodies. Antibody can be supported by chemiluminescence kit EK1002 in WB, supported by SA1022 in IHC(P).

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.

Reference

1. Denecker, G., Hoste, E., Gilbert, B., Hochepied, T., Ovaere, P., Lippens, S., Van den Broecke, C., Van Damme, P., D'Herde, K., Hachem, J.-P., Borgonie, G., Presland, R. B., Schoonjans, L., Libert, C., Vandekerckhove, J., Gevaert, K., Vandenabeele, P., Declercq, W. Caspase-14 protects against epidermal UVB photodamage and water loss. Nature Cell Biol. 9: 666-674, 2007.
2. Eckhart, L., Ban, J., Fischer, H., Tschachler, E. Caspase-14: analysis of gene structure and mRNA expression during keratinocyte differentiation. Biochem. Biophys. Res. Commun. 277: 655-659, 2000.
3. Van de Craen, M., Van Loo, G., Pype, S., Van Criekinge, W., Van den brande, I., Molemans, F., Fiers, W., Declercq, W., Vandenabeele, P. Identification of a new caspase homologue: caspase-14. Cell Death Differ. 5: 838-846, 1998.