

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Caspase-14 in direct ELISA and Western Blot.
Source	Monoclonal Mouse IgG _{2B} Clone # 868715
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human Caspase-14 Ser2-Gln242 Accession # P31944
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

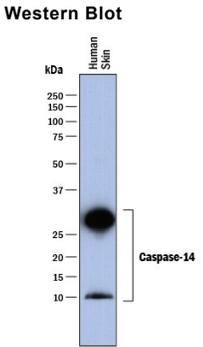
APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	0.2 µg/mL	See Below
Immunohistochemistry	8-25 µg/mL	See Below
Simple Western	2 µg/mL	See Below

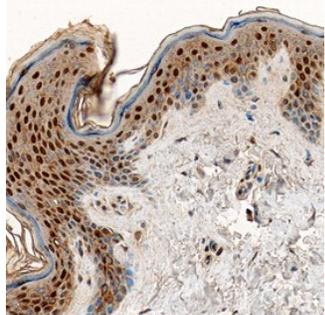
DATA

Western Blot



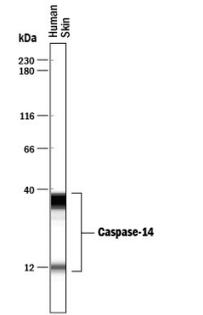
Detection of Human Caspase-14 by Western Blot. Western blot shows lysates of human skin tissue. PVDF membrane was probed with 0.2 µg/mL of Mouse Anti-Human Caspase-14 Monoclonal Antibody (Catalog # MAB8215) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). Specific bands were detected for full length Caspase-14 at approximately 28-30 kDa and the p10 subunit at approximately 10 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunohistochemistry



Caspase-14 in Human Epidermis. Caspase-14 was detected in immersion fixed paraffin-embedded sections of human epidermis using Mouse Anti-Human Caspase-14 Monoclonal Antibody (Catalog # MAB8215) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Mouse HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS002) and counterstained with hematoxylin (blue). Specific staining was localized to the nuclei of suprabasal keratinocytes. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

Simple Western



Detection of Human Caspase-14 by Simple Western™. Simple Western lane view shows lysates of human skin tissue, loaded at 0.5 mg/mL. Specific bands were detected for full length Caspase-14 at approximately 36 kDa and the p10 subunit at approximately 12 kDa (as indicated) using 2 µg/mL of Mouse Anti-Human Caspase-14 Monoclonal Antibody (Catalog # MAB8215). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.



PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Caspase-14 belongs to the evolutionarily conserved caspase family of cysteinyl aspartate-specific proteinases that frequently play a central role in apoptosis. Caspases exist as inactive proenzymes that undergo proteolytic processing at conserved aspartic residues to produce large and small subunits that dimerize to form an active enzyme. Caspase-14 is processed to form p19 and p10 subunits, but unlike many caspases, this activation is believed to be non-apoptotic. Expressed within hair follicles and sebaceous glands in the epidermis, Caspase-14 processing is implicated in terminal keratinocyte differentiation and cornification. Caspase-14 expression may also protect against psoriasis and epidermal UVB photodamage. Full-length human Caspase-14 is 242 amino acids (aa) in length, and shares 71% and 72% aa sequence identity with mouse and rat Caspase-14, respectively.