SANTA CRUZ BIOTECHNOLOGY, INC.

Dermcidin (G-81): sc-33656

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Antimicrobial peptides participate in the innate response, which may provide a barrier for protection against infection. The Dermcidin gene encodes an antimicrobial peptide DCD-1, which is constitutively expressed in sweat glands, secreted into the sweat, and transported to the epidermal surface. DCD-1 displays antimicrobial activity in response to a variety of pathogenic microorganisms. Overexpression of Dermcidin in breast cancers promotes cell growth and survival, and is coupled with a focal copy number gain of its locus on human chromosome 12q13.2.

CHROMOSOMAL LOCATION

Genetic locus: DCD (human) mapping to 12q13.2.

SOURCE

Dermcidin (G-81) is a mouse monoclonal antibody raised against human Dermcidin chromatographically purified from sweat of human origin.

PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Dermcidin (G-81) is recommended for detection of Dermcidin precursor and DCD-1 active peptide of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Dermcidin siRNA (h): sc-105288, Dermcidin shRNA Plasmid (h): sc-105288-SH and Dermcidin shRNA (h) Lentiviral Particles: sc-105288-V.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

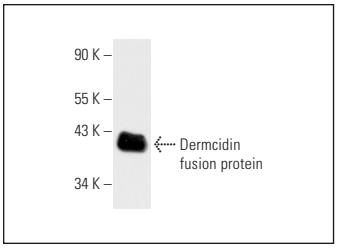
STORAGE

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

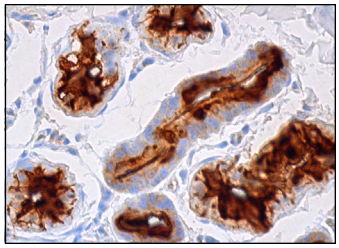
RESEARCH USE

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

DATA



Dermcidin (G-81): sc-33656. Western blot analysis of human recombinant Dermcidin fusion protein.



Dermcidin (G-81): sc-33656. Immunoperoxidase staining of formalin fixed, paraffin-embedded human skin tissue showing cytoplasmic staining of eccrine sweat gland cells.

SELECT PRODUCT CITATIONS

1. Pathak, S., et al. 2009. HIV induces both a down-regulation of IRAK-4 that impairs TLR signalling and an up-regulation of the antibiotic peptide Dermcidin in monocytic cells. Scand. J. Immunol. 70: 264-276.
2. Sakurada, K., et al. 2010. Detection of dermcidin for sweat identification by real-time RT-PCR and ELISA. Forensic Sci. Int. 194: 80-84.
3. Iizuka, T., et al. 2012. Immunolocalization of aquaporin-5 in normal human skin and hypohidrotic skin diseases. J. Dermatol. 39: 344-349.
4. van Dam, A., et al. 2013. Simultaneous labeling of multiple components in a single fingermark. Forensic Sci. Int. 232: 173-179.
5. Rieg, S., et al. 2014. Expression of the sweat-derived innate defence antimicrobial peptide Dermcidin is not impaired in *Staphylococcus aureus* colonization or recurrent skin infections. Clin. Exp. Dermatol. 39: 209-212.
6. Shimoda-Komatsu, Y., et al. 2017. A novel method to assess the potential role of sweating abnormalities in the pathogenesis of AD. Exp. Dermatol. 27: 386-392.
7. Ushigome, Y., et al. 2017. Localized hypohidrosis is an unrecognized sequela of herpes zoster. J. Am. Acad. Dermatol. 76: 160-162.
8. de Beijer, R.P., et al. 2018. Identification and detection of protein markers to differentiate between forensically relevant body fluids. Forensic Sci. Int. 290: 196-206.
9. Yamaga, K., et al. 2018. Claudin-3 loss causes leakage of sweat from the sweat gland to contribute to the pathogenesis of atopic dermatitis. J. Invest. Dermatol. 138: 1279-1287.
10. Coates, M., et al. 2019. The skin transcriptome in hidradenitis suppurativa uncovers an antimicrobial and sweat gland gene signature which has distinct overlap with wounded skin. PLoS ONE 14: e0216249.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.