

Filaggrin (G-20): sc-25897

BACKGROUND

Profilaggrin is a large, insoluble, highly phosphorylated precursor protein containing several tandem copies of a 324 amino acid stretch. Mammalian profilaggrin is a major protein component of keratohyalin granules in the living cells of the epidermis. Keratohyalin granules contribute to the keratin content of dead cornified cells. During terminal differentiation of the epidermis, profilaggrin is proteolytically processed into active filaggrin molecules that promote aggregation and disulfide-bond formation of keratin intermediate filaments. Active filaggrin is present at a level of the epidermis where keratinocytes are in transition between the live nucleated granular layer and the anucleate cornified layer, suggesting that filaggrin aids in the terminal differentiation process by facilitating apoptotic machinery.

REFERENCES

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- Gan, S.Q., et al. 1990. Organization, structure, and polymorphisms of the human profilaggrin gene. *Biochemistry* 29: 9432-9440.
- Takahashi, M., et al. 1996. Filaggrin linker segment peptide and cystatin α are parts of a complex of the cornified envelope of epidermis. *Arch. Biochem. Biophys.* 329: 123-126.
- Gerritsen, M.J., et al. 1997. Recruitment of cycling epidermal cells and expression of filaggrin, involucrin and tenascin in the margin of the active psoriatic plaque, in the uninvolved skin of psoriatic patients and in the normal healthy skin. *J. Dermatol. Sci.* 14: 179-188.
- Online Mendelian Inheritance in Man, OMIM™. 1998. Johns Hopkins University, Baltimore, MD. MIM Number: 135940. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Kuechle, M.K., et al. 2000. Inducible expression of filaggrin increases keratinocyte susceptibility to apoptotic cell death. *Cell Death Differ.* 7: 566-573.

CHROMOSOMAL LOCATION

Genetic locus: FLG (human) mapping to 1q21.3.

SOURCE

Filaggrin (G-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Filaggrin of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-25897 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

Filaggrin (G-20) is recommended for detection of Filaggrin of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Filaggrin siRNA (h): sc-43364, Filaggrin shRNA Plasmid (h): sc-43364-SH and Filaggrin shRNA (h) Lentiviral Particles: sc-43364-V.

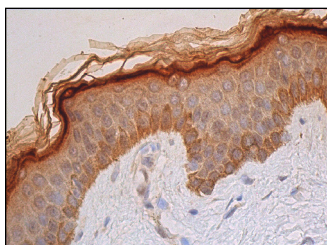
Molecular Weight of Profilaggrin: 350 kDa.

Molecular Weight of processed Filaggrin: 26-45 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



Filaggrin (G-20): sc-25897. Immunoperoxidase staining of formalin fixed, paraffin-embedded human skin tissue showing cytoplasmic staining of keratinocytes, Langerhans cells and melanocytes.

RESEARCH USE

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


 MONOS
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Try **Filaggrin (AKH1): sc-66192** or **Filaggrin (AE21): sc-80609**, our highly recommended monoclonal alternatives to Filaggrin (N-20). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **Filaggrin (AKH1): sc-66192**.