

Filaggrin (AKH1): sc-66192

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.

CHROMOSOMAL LOCATION

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

SOURCE

Filaggrin (AKH1) is a mouse monoclonal antibody raised against purified foreskin Filaggrin of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Filaggrin (AKH1) is available conjugated to agarose (sc-66192 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-66192 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-66192 PE), fluorescein (sc-66192 FITC), Alexa Fluor[®] 488 (sc-66192 AF488), Alexa Fluor[®] 546 (sc-66192 AF546), Alexa Fluor[®] 594 (sc-66192 AF594) or Alexa Fluor[®] 647 (sc-66192 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-66192 AF680) or Alexa Fluor[®] 790 (sc-66192 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Filaggrin (AKH1) is recommended for detection of Filaggrin and Profilaggrin 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) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

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.

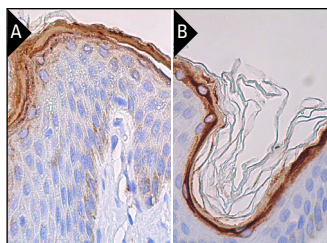
STORAGE

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



Filaggrin (AKH1): sc-66192. Immunoperoxidase staining of formalin fixed, paraffin-embedded human vulva/anal skin (A) and human skin (B) tissue showing staining of stratum corneum.

SELECT PRODUCT CITATIONS

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3. Sakabe, J., et al. 2013. Kallikrein-related peptidase 5 functions in proteolytic processing of profilaggrin in cultured human keratinocytes. *J. Biol. Chem.* 288: 17179-17189.
4. Mainzer, C., et al. 2014. Insulin-transferrin-selenium as an alternative to foetal serum for epidermal equivalents. *Int. J. Cosmet. Sci.* 36: 427-435.
5. Mcheik, J.N., et al. 2015. Study of proliferation and 3D epidermal reconstruction from foreskin, auricular and trunk keratinocytes in children. *Burns* 41: 352-358.
6. Hänel, K.H., et al. 2016. Control of the physical and antimicrobial skin barrier by an IL-31-IL-1 signaling network. *J. Immunol.* 196: 3233-3244.
7. Na, T.Y., et al. 2017. The trisaccharide raffinose modulates epidermal differentiation through activation of liver X receptor. *Sci. Rep.* 7: 43823.
8. Trisno, S.L., et al. 2018. Esophageal organoids from human pluripotent stem cells delineate Sox2 functions during esophageal specification. *Cell Stem Cell* 23: 501-515.e7.
9. Ziegler, C., et al. 2019. The long non-coding RNA LINC00941 and SPRR5 are novel regulators of human epidermal homeostasis. *EMBO Rep.* 20: e46612.
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11. Kim, B.E., et al. 2021. Particulate matter causes skin barrier dysfunction. *JCI Insight* 6: e145185.

PROTOCOLS

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