

# Filaggrin 2 (T-20): sc-242822

## BACKGROUND

Profilaggrin is a large, insoluble, highly phosphorylated precursor protein and major component of keratohyalin granules in the living cells of the epidermis. 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. Filaggrin 2, also known as FLG2, Ifapsoriasis or IFPS (intermediate filament-associated and psoriasis-susceptibility protein), is a 2,391 amino acid protein that shares common structural features with Filaggrin. Filaggrin 2 contains ten Filaggrin repeats, two EF-hand domains and belongs to both the S-100 and S100-fused protein families.

## REFERENCES

- McKinley-Grant, L.J., et al. 1989. Characterization of a cDNA clone encoding human Filaggrin and localization of the gene to chromosome region 1q21. *Proc. Natl. Acad. Sci. USA* 86: 4848-4852.
- Gan, S.Q., et al. 1990. Organization, structure, and polymorphisms of the human profilaggrin gene. *Biochemistry* 29: 9432-9440.
- 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.
- Kuechle, M.K., et al. 2000. Inducible expression of Filaggrin increases keratinocyte susceptibility to apoptotic cell death. *Cell Death Differ.* 7: 566-573.
- Stemmler, S., et al. 2009. Variation in genes of the epidermal differentiation complex in German atopic dermatitis patients. *Int. J. Immunogenet.* 36: 217-222.
- Wu, Z., et al. 2009. Molecular identification and expression analysis of Filaggrin 2, a member of the S100 fused-type protein family. *PLoS ONE* 4: e5227.

## CHROMOSOMAL LOCATION

Genetic locus: FLG2 (human) mapping to 1q21.3.

## SOURCE

Filaggrin 2 (T-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Filaggrin 2 of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-242822 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Filaggrin 2 (T-20) is recommended for detection of Filaggrin 2 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with Filaggrin.

Suitable for use as control antibody for Filaggrin 2 siRNA (h): sc-88656, Filaggrin 2 shRNA Plasmid (h): sc-88656-SH and Filaggrin 2 shRNA (h) Lentiviral Particles: sc-88656-V.

Molecular Weight of Filaggrin 2: 248 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.

## 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.