

Trichohyalin (H-193): sc-98967

BACKGROUND

Trichohyalin is a nine domain-containing structural protein that is produced in the medulla and inner root sheath of hair follicles. Among the structural motifs are two ERF-hand calcium-binding domains located in domain 1. It is a member of the S100-fused protein family and a substrate of transglutaminase and peptidylarginine deaminase. Trichohyalin associates with keratin intermediate filaments (KIF) and peripheral cell envelope barrier proteins to coordinate cornified cell envelope organization.

REFERENCES

- O'Guin, W.M., Sun, T.T. and Manabe, M. 1992. Interaction of Trichohyalin with intermediate filaments: three immunologically defined stages of Trichohyalin maturation. *J. Invest. Dermatol.* 98: 24-32.
- Lee, S.C., Kim, I.G., Marekov, L.N., O'Keefe, E.J., Parry, D.A. and Steinert, P.M. 1993. The structure of human Trichohyalin. Potential multiple roles as a functional EF-hand-like calcium-binding protein, a cornified cell envelope precursor, and an intermediate filament-associated (cross-linking) protein. *J. Biol. Chem.* 268: 12164-12176.
- Manabe, M. and O'Guin, W.M. 1995. Existence of Trichohyalin-keratohyalin hybrid: two major intermediate filament-associated proteins in non-follicular epithelia. *Differentiation* 58: 65-75.
- Tarcsa, E., Marekov, L.N., Andreoli, J., Idler, W.W., Candi, E., Chung, S.I. and Steinert, P.M. 1997. The fate of Trichohyalin. Sequential posttranslational modifications by peptidyl-arginine deaminase and transglutaminases. *J. Biol. Chem.* 272: 27893-27901.
- Ishida-Yamamoto, A., Hashimoto, Y., Manabe, M., O'Guin, W.M., Dale, B.A. and Iizuka, H. 1997. Distinctive expression of Filaggrin and Trichohyalin during various pathways of epithelial differentiation. *Br. J. Dermatol.* 137: 9-16.
- Steinert, P.M., Kartasova, T. and Marekov, L.N. 1998. Biochemical evidence that small proline-rich proteins and Trichohyalin function in epithelia by modulation of the biomechanical properties of their cornified cell envelopes. *J. Biol. Chem.* 273: 11758-11769.
- Steinert, P.M., Parry, D.A. and Marekov, L.N. 2003. Trichohyalin mechanically strengthens the hair follicle: multiple cross-bridging roles in the inner root sheath. *J. Biol. Chem.* 278: 41409-41419.

CHROMOSOMAL LOCATION

Genetic locus: TCHH (human) mapping to 1q21.3; Tchh (mouse) mapping to 3 F2.1.

SOURCE

Trichohyalin (H-193) is a rabbit polyclonal antibody raised against amino acids 23-215 mapping near the N-terminus of Trichohyalin 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.

APPLICATIONS

Trichohyalin (H-193) is recommended for detection of Trichohyalin of human and, to a lesser extent, mouse and rat origin by Western Blotting (starting dilution 1:200, 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Trichohyalin siRNA (h): sc-106636, Trichohyalin siRNA (m): sc-61711, Trichohyalin shRNA Plasmid (h): sc-106636-SH, Trichohyalin shRNA Plasmid (m): sc-61711-SH, Trichohyalin shRNA (h) Lentiviral Particles: sc-106636-V and Trichohyalin shRNA (m) Lentiviral Particles: sc-61711-V.

Molecular Weight of Trichohyalin: 200-220 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (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 or our catalog for detailed protocols and support products.



Try **Trichohyalin (E-11): sc-376684** or **Trichohyalin (F-2): sc-515130**, our highly recommended monoclonal alternatives to Trichohyalin (H-193).