

Keratin 35 (M-13): sc-161095

BACKGROUND

The keratin multigene family is made of the "soft" epithelial cytokeratins and the "hard" hair keratins. While the epithelial cytokeratins are involved in the layering and formation of epithelia, the hair keratins are responsible for creating nails and hair. There are two types of hair keratins: the acidic type I hair keratin proteins and the basic/neutral type II hair keratin proteins. Keratin 35, is also known as HA5, Ha-5, hHa5, KRTHA5 or KRT35, is a 485 amino acid protein belonging to the intermediate filament family. Keratin 35 is mainly expressed in supramatrical cells and the lowermost cortical cells of the hair bulb. Keratin 35 may participate in the determination of follicle and fibre morphology. The gene encoding Keratin 35 is located on human chromosome 17, which comprises over 2.5% of the human genome and encodes over 1,200 genes.

REFERENCES

1. Rogers, M.A., Nischt, R., Korge, B., Krieg, T., Fink, T.M., Lichter, P., Winter, H. and Schweizer, J. 1995. Sequence data and chromosomal localization of human type I and type II hair keratin genes. *Exp. Cell Res.* 220: 357-362.
2. Winter, H., Rogers, M.A., Gebhardt, M., Wollina, U., Boxall, L., Chitayat, D., Babul-Hirji, R., Stevens, H.P., Zlotogorski, A. and Schweizer, J. 1997. A new mutation in the type II hair cortex keratin hHb1 involved in the inherited hair disorder monilethrix. *Hum. Genet.* 101: 165-169.
3. Bowden, P.E., Hainey, S.D., Parker, G., Jones, D.O., Zimonjic, D., Popescu, N. and Hodgins, M.B. 1998. Characterization and chromosomal localization of human hair-specific keratin genes and comparative expression during the hair growth cycle. *J. Invest. Dermatol.* 110: 158-164.
4. Winter, H., Labrèze, C., Chapalain, V., Surlève-Bazeille, J.E., Mercier, M., Rogers, M.A., Taieb, A. and Schweizer, J. 1998. A variable monilethrix phenotype associated with a novel mutation, Glu402Lys, in the helix termination motif of the type II hair keratin hHb1. *J. Invest. Dermatol.* 111: 169-172.
5. Rogers, M.A., Winter, H., Langbein, L., Wolf, C. and Schweizer, J. 2000. Characterization of a 300 kbp region of human DNA containing the type II hair keratin gene domain. *J. Invest. Dermatol.* 114: 464-472.
6. Coulombe, P.A. and Omary, M.B. 2002. 'Hard' and 'soft' principles defining the structure, function and regulation of keratin intermediate filaments. *Curr. Opin. Cell Biol.* 14: 110-122.
7. Langbein, L. and Schweizer, J. 2005. Keratins of the human hair follicle. *Int. Rev. Cytol.* 243: 1-78.
8. Gilon, M., Sher, N., Cohen, S. and Gat, U. 2008. Transcriptional activation of a subset of hair keratin genes by the NFκB effector p65/RelA. *Differentiation* 76: 518-530.
9. Yu, Z., Gordon, S.W., Nixon, A.J., Bawden, C.S., Rogers, M.A., Wildermoth, J.E., Maqbool, N.J. and Pearson, A.J. 2009. Expression patterns of keratin intermediate filament and keratin associated protein genes in wool follicles. *Differentiation* 77: 307-316.

STORAGE

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

CHROMOSOMAL LOCATION

Genetic locus: Krt35 (mouse) mapping to 11 D.

SOURCE

Keratin 35 (M-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Keratin 35 of mouse 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-161095 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Keratin 35 (M-13) is recommended for detection of Keratin 35 of mouse and rat 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 other Keratin family members.

Suitable for use as control antibody for Keratin 35 siRNA (m): sc-146414, Keratin 35 shRNA Plasmid (m): sc-146414-SH and Keratin 35 shRNA (m) Lentiviral Particles: sc-146414-V.

Molecular Weight of Keratin 35: 50 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.

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.