SANTA CRUZ BIOTECHNOLOGY, INC.

Keratin 77 siRNA (m): sc-146425

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 77, also known as KRT77, K1B or KRT1B, is a 578 amino acid protein that belongs to the intermediate filament family. Exclusively expressed in luminal duct cells of eccrine sweat glands, Keratin 77 undergoes citrullination, which is a deimination of arginine residues. Keratin 77 is encoded by a gene located on human chromosome 12q13.13. Human chromosome 12 encodes over 1,100 genes within 132 million bases and makes up about 4.5% of the human genome.

REFERENCES

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4. Rogers, M.A., et al. 2005. Characterization of new members of the human type II keratin gene family and a general evaluation of the keratin gene domain on chromosome 12q13.13. J. Invest. Dermatol. 124: 536-544.
5. Langbein, L., et al. 2005. Characterization of a novel human type II epithelial keratin K1b, specifically expressed in eccrine sweat glands. J. Invest. Dermatol. 125: 428-444.
6. Schweizer, J., et al. 2006. New consensus nomenclature for mammalian keratins. J. Cell Biol. 174: 169-174.
7. Bazzi, H., et al. 2007. Transcriptional profiling of developing mouse epidermis reveals novel patterns of coordinated gene expression. Dev. Dyn. 236: 961-970.
8. Langbein, L., et al. 2008. New concepts on the histogenesis of eccrine neoplasia from keratin expression in the normal eccrine gland, syringoma and poroma. Br. J. Dermatol. 159: 633-645.

CHROMOSOMAL LOCATION

Genetic locus: Krt77 (mouse) mapping to 15 F3.

PRODUCT

Keratin 77 siRNA (m) is a target-specific 19-25 nt siRNA designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Keratin 77 shRNA Plasmid (m): sc-146425-SH and Keratin 77 shRNA (m) Lentiviral Particles: sc-146425-V as alternate gene silencing products.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

Keratin 77 siRNA (m) is recommended for the inhibition of Keratin 77 expression in mouse cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Keratin 77 gene expression knockdown using RT-PCR Primer: Keratin 77 (m)-PR: sc-146425-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

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

PROTOCOLS

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