SANTA CRUZ BIOTECHNOLOGY, INC.

Keratin 36 siRNA (h): sc-94098

BACKGROUND

The Keratin multi-gene family is made of "soft" epithelial cytokeratins and "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 Keratins: the acidic class I Keratin proteins and the basic/neutral class II Keratin proteins. Keratin 36, also known as HA6, KRTHA6 or hHa6, is a 467 amino acid protein that is a member of the type I acidic class of the Keratin family 36 and forms a heterodimer with type II Keratins. Expressed in the hair folicle, Keratin 36 becomes phosphoylated at amino acid residues 315 (Thr) and 328 (Ser). Two Keratin 36 isoforms exist due to an alternate splicing event, generating isoform 2 which is a shorter, 417 amino acid protein. The gene encoding Keratin 36 maps to human chromosome 17.

REFERENCES

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4. Langbein, L., Rogers, M.A., Winter, H., Praetzel, S., Beckhaus, U., Rackwitz, H.R. and Schweizer, J. 1999. The catalog of human hair keratins. I. Expression of the nine type I members in the hair follicle. J. Biol. Chem. 274: 19874-19884.
5. Langbein, L. and Schweizer, J. 2005. Keratins of the human hair follicle. Int. Rev. Cytol. 243: 1-78.
6. Olsen, J.V., Blagoev, B., Gnad, F., Macek, B., Kumar, C., Mortensen, P. and Mann, M. 2006. Global, *in vivo,* and site-specific phosphorylation dynamics in signaling networks. Cell 127: 635-648.

CHROMOSOMAL LOCATION

Genetic locus: KRT36 (human) mapping to 17q21.2.

PRODUCT

Keratin 36 siRNA (h) is a pool of 2 target-specific 19-25 nt siRNAs 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 36 shRNA Plasmid (h): sc-94098-SH and Keratin 36 shRNA (h) Lentiviral Particles: sc-94098-V as alternate gene silencing products.

For independent verification of Keratin 36 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-94098A and sc-94098B.

RESEARCH USE

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

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 36 siRNA (h) is recommended for the inhibition of Keratin 36 expression in human 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 36 gene expression knockdown using RT-PCR Primer: Keratin 36 (h)-PR: sc-94098-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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