SANTA CRUZ BIOTECHNOLOGY, INC.

Keratin 71 siRNA (h): sc-96042

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The Power to Question

BACKGROUND

The keratin multigene 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. Keratin71 (KRT71), also known as K6IRS1, KRT6IRS1 or KRT6IRS, is a 523 amino acid protein that is a member of the basic/neutral class II keratin protein family. KRT71 is expressed in scalp hair follicles, specifically within the inner root sheath (IRS), and is found in all three layers (Huxley, Henle, and cuticle) of the IRS. Keratin 71 associates with Cytokeratin 16 and/or Cytokeratin17 as this protein heterodimerizes with type I and type II keratins. The gene encoding Keratin 71 maps to human chromosome 12, which encodes over 1,100 genes and comprises approximately 4.5% of the human genome. Chromosome 12 is associated with a variety of diseases and afflictions, including hypochondrogenesis, achondrogenesis and Kniest dysplasia.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: KRT71 (human) mapping to 12q13.13.

PRODUCT

Keratin 71 siRNA (h) is a pool of 3 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 71 shRNA Plasmid (h): sc-96042-SH and Keratin 71 shRNA (h) Lentiviral Particles: sc-96042-V as alternate gene silencing products.

For independent verification of Keratin 71 (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-96042A, sc-96042B and sc-96042C.

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 71 siRNA (h) is recommended for the inhibition of Keratin 71 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 71 gene expression knockdown using RT-PCR Primer: Keratin 71 (h)-PR: sc-96042-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.