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Keratin 73 siRNA (m): sc-146421

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 73, also known as K6IRS3, KRT6IRS3 or IRT6IRS3, is a 540 amino acid protein that is a member of the basic/neutral class II Keratin protein family. Keratin 73 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. Two Keratin 73 isoforms exist due to an alternate splicing event, generating isoform 2 which is a shorter 381 amino acid protein. The gene encoding Keratin 73 maps to human chromosome 12q13.13 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.

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CHROMOSOMAL LOCATION

Genetic locus: Krt73 (mouse) mapping to 15 F2.

PRODUCT

Keratin 73 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Keratin 73 shRNA Plasmid (m): sc-146421-SH and Keratin 73 shRNA (m) Lentiviral Particles: sc-146421-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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

Keratin 73 siRNA (m) is recommended for the inhibition of Keratin 73 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 μ M in 66 μ l. 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 73 gene expression knockdown using RT-PCR Primer: Keratin 73 (m)-PR: sc-146421-PR (20 μ l). 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.