SANTA CRUZ BIOTECHNOLOGY, INC.

lacritin siRNA (h): sc-95747

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The lacrimal functional unit (LFU) is an integrated system consisting of lacrimal glands, ocular surface glands (cornea, conjunctiva and meibomian glands), eyelids and associated sensory and motor nerves. The LFU maintains a healthy ocular surface primarily through a properly functioning tear film that provides protection, lubrication and an environment for corneal epithelial cell renewal. LFU cells express thousands of proteins inlcuding lacritin. Lacritin, also known as LACRT, is a 138 amino acid secreted protein that is expressed in secretory granules of many acinar cells in lacrimal gland and in scattered acinar cells of salivary glands. Considered a novel LFU-specific growth factor and glycoprotein in human tears, lacritin flows through ducts to target corneal epithelial cells on the ocular surface and promotes basal tear peroxidase secretion. Downregulation of lacritin leads to blepharitis and other dry eye syndromes.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: LACRT (human) mapping to 12q13.2.

PRODUCT

lacritin 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 lacritin shRNA Plasmid (h): sc-95747-SH and lacritin shRNA (h) Lentiviral Particles: sc-95747-V as alternate gene silencing products.

For independent verification of lacritin (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-95747A and sc-95747B.

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

lacritin siRNA (h) is recommended for the inhibition of lacritin 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 lacritin gene expression knockdown using RT-PCR Primer: lacritin (h)-PR: sc-95747-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.