

β -defensin 6 siRNA (h): sc-77130

BACKGROUND

β -defensins (also designated BDs, or hBDs in human) are small cationic peptides with broad-spectrum antimicrobial activity against a variety of enveloped viruses, fungi and bacteria. Produced in mucosal epithelia and neutrophils of several species, β -defensins are developmentally regulated. The family of β -defensin proteins share a common defensin-motif that is characterized by multiple cysteine residues and a highly conserved tertiary structure. Besides playing a significant role in host immune defense, many β -defensins also are involved in sperm maturation and capacitation. β -defensin 6, also known as BD6, DEFB106 (defensin, β 106), DEFB106B, DEFB106A or DEFB6, is a 65 amino acid secreted protein that is expressed specifically in epididymis, lung and skeletal muscle. It is suggested that β -defensin 6 may be a novel mediator of inflammatory tissue injury.

REFERENCES

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4. Yamaguchi, Y., et al. 2002. Identification of multiple novel epididymis-specific β -defensin isoforms in humans and mice. *J. Immunol.* 169: 2516-2523.
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CHROMOSOMAL LOCATION

Genetic locus: DEFB106A (human) mapping to 8p23.1.

PRODUCT

β -defensin 6 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see β -defensin 6 shRNA Plasmid (h): sc-77130-SH and β -defensin 6 shRNA (h) Lentiviral Particles: sc-77130-V as alternate gene silencing products.

For independent verification of β -defensin 6 (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-77130A and sc-77130B.

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

β -defensin 6 siRNA (h) is recommended for the inhibition of β -defensin 6 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 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.

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.