

β -defensin 128 siRNA (h): sc-77125

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 128 is a 93 amino acid secreted protein that most likely contains a signal peptide sequence that requires cleavage by proteolytic enzymes in order to become biologically active.

REFERENCES

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3. Schutte, B.C., et al. 2002. Discovery of five conserved β -defensin gene clusters using a computational search strategy. *Proc. Natl. Acad. Sci. USA* 99: 2129-2133.
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5. Rodríguez-Jiménez, F.J., et al. 2003. Distribution of new human β -defensin genes clustered on chromosome 20 in functionally different segments of epididymis. *Genomics* 81: 175-183.
6. Zhang, Z., et al. 2004. Signal peptide prediction based on analysis of experimentally verified cleavage sites. *Protein Sci.* 13: 2819-2824.
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8. Patil, A.A., et al. 2005. Cross-species analysis of the mammalian β -defensin gene family: presence of syntenic gene clusters and preferential expression in the male reproductive tract. *Physiol. Genomics* 23: 5-17.
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CHROMOSOMAL LOCATION

Genetic locus: DEFB128 (human) mapping to 20p13.

PRODUCT

β -defensin 128 siRNA (h) 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 β -defensin 128 shRNA Plasmid (h): sc-77125-SH and β -defensin 128 shRNA (h) Lentiviral Particles: sc-77125-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

β -defensin 128 siRNA (h) is recommended for the inhibition of β -defensin 128 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.