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SANTA CRUZ BIOTECHNOLOGY, INC.

# Nkx-6.3 siRNA (m): sc-150001

## BACKGROUND

Members of the Nkx family of homeodomain proteins are key regulators of growth and development in several tissues, including brain, heart and pancreas. The Nkx-6 family is involved in the patterning of the pancreas and central nervous system and consists of three proteins: Nkx-6.1, Nkx-6.2 and Nkx-6.3. Nkx-6.1 is responsible for cellular differentiation in the ventral neural tube and spinal meninges in response to Shh. Nkx-6.2 is also expressed during neural tube development by neural progenitor cells. During development, Nkx-6.2 regulates interneuron fates by repressing the expression of Dbx1, a class I homeodomain transcription repressor. Nkx-6.3 is a 265 amino acid homeobox protein that shows selective expression in the duodenal and glandular endoderm, in contrast to Nkx-6.1 and Nkx-6.2 that are broadly expressed in the ventral positions of the developing CNS. Nkx-6.3 is required in differentiation of gastrin-producing G-cells in the stomach and antrum. There are two isoforms of Nkx-6.3 that are produced as a result of alternative splicing events.

## REFERENCES


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## PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

## CHROMOSOMAL LOCATION

Genetic locus: Nkx6-3 (mouse) mapping to 8 A2.

## PRODUCT

Nkx-6.3 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Nkx-6.3 shRNA Plasmid (m): sc-150001-SH and Nkx-6.3 shRNA (m) Lentiviral Particles: sc-150001-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 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

Nkx-6.3 siRNA (m) is recommended for the inhibition of Nkx-6.3 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 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 Nkx-6.3 gene expression knockdown using RT-PCR Primer: Nkx-6.3 (m)-PR: sc-150001-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.