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SANTA CRUZ BIOTECHNOLOGY, INC.

Nkx-2.4 siRNA (m): sc-150000

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Members of the NK-2 family of homeodomain proteins, which include Nkx-2.2, Nkx-2.4, Nkx-2.5, Nkx-2.6 and many others, are key regulators of growth and development in several tissues, including brain, heart and pancreas. Nkx-2.2 is responsible for directing ventral neuronal patterning in response to graded Shh signaling. Nkx-2.4 is a 354 amino acid nuclear protein that is detected in the posterior hypothalamus of the embryo and also in adult testis. Nkx-2.5, also designated cardiac specific homeobox protein (Csx), is a homolog of the *Drosophila* tinman protein and is essential for normal cardiovascular development. Nkx-2.6, also a homolog of the *Drosophila* tinman protein, is expressed in the caudal pharyngeal pouches, the caudal heart progenitors, the sinus venosus, the outflow tract of the heart and in a short segment of the gut between stages E8.5 and E10.5 of embryogenesis.

REFERENCES

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3. Pabst, O., Herbrand, H. and Arnold, H.H. 1998. Nkx2-9 is a novel homeobox transcription factor which demarcates ventral domains in the developing mouse CNS. Mech. Dev. 73: 85-93.
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CHROMOSOMAL LOCATION

Genetic locus: Nkx2-4 (mouse) mapping to 2 G2.

PRODUCT

Nkx-2.4 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-2.4 shRNA Plasmid (m): sc-150000-SH and Nkx-2.4 shRNA (m) Lentiviral Particles: sc-150000-V as alternate gene silencing products.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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-2.4 siRNA (m) is recommended for the inhibition of Nkx-2.4 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-2.4 gene expression knockdown using RT-PCR Primer: Nkx-2.4 (m)-PR: sc-150000-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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