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NKX1-2 siRNA (m): sc-150002

BACKGROUND

NKX1-2 (NK1 transcription factor-related protein 2), also known as NKX-1.1, is a 310 amino acid nuclear protein that belongs to the NK-1 homeobox family and contains one homeobox DNA-binding domain. Acting in the CNS, NKX1-2 may be involved in cell specification. The gene that encodes NKX1-2 consists of approximately 2,553 bases and maps to human chromosome 10q26.13. Spanning nearly 135 million base pairs and encoding nearly 1,200 genes, chromosome 10 makes up approximately 4.5% of the human genome. Defects in some of the genes that map to chromosome 10 are associated with Charcot-Marie-Tooth disease, Jackson-Weiss syndrome, Usher syndrome, nonsyndromic deafness, Wolman's syndrome, Cowden syndrome, multiple endocrine neoplasia type 2 and porphyria.

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CHROMOSOMAL LOCATION

Genetic locus: Nkx1-2 (mouse) mapping to 7 F3.

RESEARCH USE

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

PRODUCT

NKX1-2 siRNA (m) 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 NKX1-2 shRNA Plasmid (m): sc-150002-SH and NKX1-2 shRNA (m) Lentiviral Particles: sc-150002-V as alternate gene silencing products.

For independent verification of NKX1-2 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-150002A and sc-150002B.

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

NKX1-2 siRNA (m) is recommended for the inhibition of NKX1-2 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 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor NKX1-2 gene expression knockdown using RT-PCR Primer: NKX1-2 (m)-PR: sc-150002-PR (20 μ l). 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.