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NIFK siRNA (m): sc-149974

BACKGROUND

The structural proteins for the complex metalloenzyme nitrogenase include NIFK, NIFD and NIFH. These proteins are all necessary for archaeal and bacterial nitrogen fixation. The NIFK gene encodes the b subunit of the nitrogenase molybdenum-iron (MoFe) tetramer. NIFK localizes to the nucleolus where it interacts with the fork-head associated domain of the proliferation marker protein Ki-67 in a mitosis-specific and phosphorylation-dependent manner. NIFK is widely expressed in adult tissues, suggesting other functions in addition to its interaction with Ki-67, which is only expressed in proliferating cells.

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CHROMOSOMAL LOCATION

Genetic locus: Nifk (mouse) mapping to 1 E2.3.

PROTOCOLS

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

PRODUCT

NIFK siRNA (m) is a pool of 3 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 NIFK shRNA Plasmid (m): sc-149974-SH and NIFK shRNA (m) Lentiviral Particles: sc-149974-V as alternate gene silencing products.

For independent verification of NIFK (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-149974A, sc-149974B and sc-149974C.

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

NIFK siRNA (m) is recommended for the inhibition of NIFK 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 NIFK gene expression knockdown using RT-PCR Primer: NIFK (m)-PR: sc-149974-PR (20 μ l). 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.