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NF-1A siRNA (h): sc-43563

BACKGROUND

NF-1, also designated CTF, consists of a family of CCAAT box binding proteins that stimulate DNA replication and activate transcription. Analysis of human NF-1 messenger RNA has revealed two forms of the NF-1 protein arising from an alternate splicing of a single NF-1 gene. NF-1 binds its consensus DNA element as a homodimer via an amino terminal DNA binding domain, and activates transcription through a putatively novel, proline-rich, carboxy terminal transactivation domain. The NF-1 protein has been shown to recognize and bind the adenovirus type 2 promoter and activate transcription of herpes simplex virus thymidine kinase genes. The NF-1 consensus element has been found in the upstream promoter region of myriad eukaryotic genes, including that of Ha-Ras, α -Globin, HSP 70, GRP 78, Histone H1, Myelin basic protein and in the *Xenopus laevis* vitellogenin gene promoter.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: NFIA (human) mapping to 1p31.3.

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.

PRODUCT

NF-1A siRNA (h) 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 NF-1A shRNA Plasmid (h): sc-43563-SH and NF-1A shRNA (h) Lentiviral Particles: sc-43563-V as alternate gene silencing products.

For independent verification of NF-1A (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-43563A, sc-43563B and sc-43563C.

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

NF-1A siRNA (h) is recommended for the inhibition of NF-1A 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor NF-1A gene expression knockdown using RT-PCR Primer: NF-1A (h)-PR: sc-43563-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.