

NSE4A siRNA (h): sc-90496

BACKGROUND

NSE4A, also known as NSMCE4A (non-structural maintenance of chromosomes element 4 homolog A), is a 385 amino acid protein that belongs to the NSE4 family and exists as two alternatively spliced isoforms. Upon DNA damage, NSE4A gets phosphorylated most likely by Atm or ATR. The gene that encodes NSE4A consists of approximately 18,141 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. Several protein-coding genes, including those that encode chemokines, cadherins, excision repair proteins, early growth response factors (Egrs) and fibroblast growth receptors (FGFRs), are located on chromosome 10. 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, Cockayne syndrome, multiple endocrine neoplasia type 2 and porphyria.

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CHROMOSOMAL LOCATION

Genetic locus: NSMCE4A (human) mapping to 10q26.13.

PROTOCOLS

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

PRODUCT

NSE4A 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 NSE4A shRNA Plasmid (h): sc-90496-SH and NSE4A shRNA (h) Lentiviral Particles: sc-90496-V as alternate gene silencing products.

For independent verification of NSE4A (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-90496A, sc-90496B and sc-90496C.

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

NSE4A siRNA (h) is recommended for the inhibition of NSE4A 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 NSE4A gene expression knockdown using RT-PCR Primer: NSE4A (h)-PR: sc-90496-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.