SANTA CRUZ BIOTECHNOLOGY, INC.

NMES1 siRNA (h): sc-90103

BACKGROUND

NMES1 (normal mucosa of esophagus-specific gene 1 protein) is an 83 amino acid protein that belongs to the complex I NDUFA4 subunit family. Localizing to the nucleus, NMES1 is expressed mainly in stomach, placenta, small intestine and colon, as well as in normal mucosa of esophagus. The NMES1 protein is down-regulated in esophageal squamous cell carcinoma. It has been suggested that expression of NMES1 is reduced in 16 of 20 esophageal cancers, and in 9 of 12 colon cancer samples. NMES1 shares 31-34% amino acid identity with the mouse, bovine, and human NADH-ubiquinone oxidoreductase MLRQ subunit. The gene that encodes NMES1 maps to human chromosome 15q21.1. Encoding more than 700 genes, chromosome 15 is made up of approximately 106 million base pairs and is about 3% of the human genome. Tay-Sachs disease is a lethal disorder associated with mutations of the HEXA gene, which is encoded by chromosome 15. Marfan syndrome is associated with chromosome 15 through the FBN1 gene.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: C15orf48 (human) mapping to 15q21.1.

PRODUCT

NMES1 siRNA (h) 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 NMES1 shRNA Plasmid (h): sc-90103-SH and NMES1 shRNA (h) Lentiviral Particles: sc-90103-V as alternate gene silencing products.

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

NMES1 siRNA (h) is recommended for the inhibition of NMES1 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 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 NMES1 gene expression knockdown using RT-PCR Primer: NMES1 (h)-PR: sc-90103-PR (20 µl). 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.

PROTOCOLS

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