

NPM2 siRNA (h): sc-77504

BACKGROUND

Nucleoplasmin (NP) and nucleophosmin (also called B23) are nuclear chaperones that mediate the assembly of ribosomes. Their activities are mediated through the binding of basic proteins via their acidic domains. Nucleophosmin is more abundant in tumor cells than in normal resting cells. Specifically, stimulation of the growth of normal cells is accompanied by an increase in nucleophosmin protein level. The structure of the N-terminal domain of nucleoplasmin (NP-core) is an eight-stranded β barrel that fits within a stable pentamer. Both NP and NP-core are competent to assemble large complexes that contain the four core histones. NPM2 (nucleophosmin/nucleoplasmin 2) is a 214 amino acid nuclear protein implicated in sperm DNA decondensation during fertilization. A member of the nucleoplasmin family, NPM2 plays a role in nuclear and nucleolar organization and is encoded by a gene located on human chromosome 8.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: NPM2 (human) mapping to 8p21.3.

PROTOCOLS

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

PRODUCT

NPM2 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 NPM2 shRNA Plasmid (h): sc-77504-SH and NPM2 shRNA (h) Lentiviral Particles: sc-77504-V as alternate gene silencing products.

For independent verification of NPM2 (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-77504A, sc-77504B and sc-77504C.

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

NPM2 siRNA (h) is recommended for the inhibition of NPM2 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 NPM2 gene expression knockdown using RT-PCR Primer: NPM2 (h)-PR: sc-77504-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.