SANTA CRUZ BIOTECHNOLOGY, INC.

NAP1L1 siRNA (h): sc-75871

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The Power to Question

BACKGROUND

Proper nucleosome assembly is critical for compacting DNA into chromatin. NAP1 (nucleosome assembly protein 1) is a nuclear protein that acts as a transcriptional regulator and functions in nucleosome assembly. NAP1L1 (nucleosome assembly protein 1-like 1), also known as NRP, is a 391 amino acid member of the nucleosome assembly protein (NAP) family and may be involved in mediating chromatin formation. Localized to the nucleus and expressed throughout the body, NAP1L1 contains acidic domains which are thought to mediate NAP1L1-histone interaction. Due to its role in DNA replication, NAP1L1 is implicated as an important regulator of cell proliferation. NAP1L1 shares 54% sequence similarity with the *Saccharomyces cerevisiae* Nap1 protein and may be a genetic marker for intestinal carcinomas.

REFERENCES

1. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 164060. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
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3. Okuwaki, M., et al. 2005. Assembly and disassembly of nucleosome core particles containing histone variants by human nucleosome assembly protein I. Mol. Cell. Biol. 25: 10639-10651.
4. Kidd, M., et al. 2006. The role of genetic markers—NAP1L1, MAGE-D2, and MTA1—in defining small-intestinal carcinoid neoplasia. Ann. Surg. Oncol. 13: 253-262.
5. Modlin, I.M., et al. 2006. Genetic differentiation of appendiceal tumor mal-ignancy: a guide for the perplexed. Ann. Surg. 244: 52-60.
6. Al-Dhaheri, M.H., et al. 2006. Identification of novel proteins induced by estradiol, 4-hydroxytamoxifen and acolbifene in T47D breast cancer cells. Steroids 71: 966-978.
7. Eckey, M., et al. 2007. The nucleosome assembly activity of NAP1 is enhanced by Alien. Mol. Cell. Biol. 27: 3557-3568.

CHROMOSOMAL LOCATION

Genetic locus: NAP1L1 (human) mapping to 12q21.2.

PRODUCT

NAP1L1 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see NAP1L1 shRNA Plasmid (h): sc-75871-SH and NAP1L1 shRNA (h) Lentiviral Particles: sc-75871-V as alternate gene silencing products.

For independent verification of NAP1L1 (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-75871A, sc-75871B and sc-75871C.

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

NAP1L1 siRNA (h) is recommended for the inhibition of NAP1L1 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.

GENE EXPRESSION MONITORING

NAP1L1 (2609C3a): sc-81328 is recommended as a control antibody for monitoring of NAP1L1 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor NAP1L1 gene expression knockdown using RT-PCR Primer: NAP1L1 (h)-PR: sc-75871-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Goonawardane, N., et al. 2017. Phosphorylation of Serine 225 in hepatitis C virus NS5A regulates protein-protein interactions. J. Virol. 91: e00805-17.

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.