SANTA CRUZ BIOTECHNOLOGY, INC.

HN1 siRNA (h): sc-93940

BACKGROUND

Hematological and neurological expressed 1 protein (HN1), also known as androgen-regulated protein 2 (ARM2), is a 154 amino acid member of the HN1 family. HN1 has been proposed to play a role in embryo development, specifically hemopoietic cell and neurological development. Localized to the nucleus, HN1 is expressed in many fetal and adult tissues, with highest levels of expression in brain, colon, prostate, testis, thymus, skeletal muscle, peripheral blood cells and placenta. HN1 has been identified to have processed pseudogenes in the mouse, rat and human genomes, suggesting that HN1 and its pseudogenes represent a novel gene family. Three isoforms of HN1 exist as a result of alternative splicing events.

CHROMOSOMAL LOCATION

Genetic locus: HN1 (human) mapping to 17q25.1.

PRODUCT

HN1 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 HN1 shRNA Plasmid (h): sc-93940-SH and HN1 shRNA (h) Lentiviral Particles: sc-93940-V as alternate gene silencing products.

For independent verification of HN1 (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-93940A, sc-93940B and sc-93940C.

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

HN1 siRNA (h) is recommended for the inhibition of HN1 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

HN1 (3G6): sc-517032 is recommended as a control antibody for monitoring of HN1 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).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor HN1 gene expression knockdown using RT-PCR Primer: HN1 (h)-PR: sc-93940-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. Varisli, L., et al. 2011. Ubiquitously expressed hematological and neurological expressed 1 downregulates Akt-mediated GSK3β signaling, and its knockdown results in deregulated G_2/M transition in prostate cells. DNA Cell Biol. 30: 419-429.
2. Varisli, L., et al. 2012. Androgen regulated HN1 leads proteosomal degradation of androgen receptor (AR) and negatively influences AR mediated transactivation in prostate cells. Mol. Cell. Endocrinol. 350: 107-117.
3. Tan, S., et al. 2020. Hesperidin administration suppresses the proliferation of lung cancer cells by promoting apoptosis via targeting the miR-132/ZEB2 signalling pathway. Int. J. Mol. Med. 46: 2069-2077.
4. Varisli, L., et al. 2021. HN1 interacts with γ-Tubulin to regulate centrosomes in advanced prostate cancer cells. Cell Cycle 20: 1723-1744.
5. Javed, A., et al. 2023. HN1 is enriched in the S-phase, phosphorylated in mitosis, and contributes to cyclin B1 degradation in prostate cancer cells. Biology 12: 189.
6. Jin, H., et al. 2024. HN1-mediated activation of lipogenesis through Akt-SREBP signaling promotes hepatocellular carcinoma cell proliferation and metastasis. Cancer Gene Ther. 31: 1669-1687.

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.