SANTA CRUZ BIOTECHNOLOGY, INC.

HMGN4 siRNA (h): sc-95090

BACKGROUND

HMGN4 (high mobility group nucleosome-binding domain-containing protein 4), also known as NHC (non-histone chromosomal protein), is a 99 amino acid member of the HMGN protein family. Localized to the nucleus, HMGN4 is believed to enhance transcription from chromatin templates by reducing the compactness of the chromatin fibers in the nucleosomes. Widely expressed in a variety of tissues, HMGN4 is encoded by a gene that maps to human chromosome 6, which is within the hereditary hemochromatosis region of chromosome 6. Hereditary hemochromatosis is a genetic disease characterized by the absorption and storage of too much iron in the body. Hereditary hemochromatosis causes a bronzing of the skin and diabetes, as well as eventual organ damage or failure.

REFERENCES

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3. Andersen, R.V., et al. 2004. Hemochromatosis mutations in the general population: iron overload progression rate. Blood 103: 2914-2919.
4. Ueda, T., et al. 2006. Distinct domains in high mobility group N variants modulate specific chromatin modifications. J. Biol. Chem. 281: 10182-10187.
5. Adams, P.C. and Barton, J.C. 2007. Haemochromatosis. Lancet 370: 1855-1860.
6. Lucey, M.M., et al. 2008. Differential expression of the HMGN family of chromatin proteins during ocular development. Gene Expr. Patterns 8: 433-437.
7. Cherukuri, S., et al. 2008. Cell cycle-dependent binding of HMGN proteins to chromatin. Mol. Biol. Cell 19: 1816-1824.
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CHROMOSOMAL LOCATION

Genetic locus: HMGN4 (human) mapping to 6p22.2.

PRODUCT

HMGN4 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 HMGN4 shRNA Plasmid (h): sc-95090-SH and HMGN4 shRNA (h) Lentiviral Particles: sc-95090-V as alternate gene silencing products.

For independent verification of HMGN4 (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-95090A, sc-95090B and sc-95090C.

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

HMGN4 siRNA (h) is recommended for the inhibition of HMGN4 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 HMGN4 gene expression knockdown using RT-PCR Primer: HMGN4 (h)-PR: sc-95090-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.