



NHSL1 siRNA (h): sc-95109

BACKGROUND

NHS (Nance-Horan syndrome protein), also known as congenital cataracts and dental anomalies protein, is a 1,630 amino acid nuclear protein that is implicated in regulation of tooth, brain, eye and craniofacial development. Defects in the gene encoding NHS are the cause of Nance-Horan syndrome (NHS) and cataract congenital X-linked (CXN). Nance-Horan syndrome is a rare disorder characterized by dental anomalies, cataracts, dysmorphic features, and occasionally mental retardation. CXN is an X-linked form of cataracts in which males are affected more severely than females. NHSL1 (NHS-like 1) is a 1,610 amino acid protein that is widely expressed but found at highest levels in adult intestine, kidney, liver, lens and brain, as well as fetal eyes and brain. A member of the NHS family, NHSL-1 exists as two alternatively spliced isoforms that are encoded by a gene that maps to human chromosome 6q23.3.

REFERENCES

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3. Francis, P.J., et al. 2002. A locus for isolated cataract on human Xp. *J. Med. Genet.* 39: 105-109.
4. Burdon, K.P., et al. 2003. Mutations in a novel gene, NHS, cause the pleiotropic effects of Nance-Horan syndrome, including severe congenital cataract, dental anomalies, and mental retardation. *Am. J. Hum. Genet.* 73: 1120-1130.
5. Brooks, S.P., et al. 2004. Identification of the gene for Nance-Horan syndrome (NHS). *J. Med. Genet.* 41: 768-771.
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CHROMOSOMAL LOCATION

Genetic locus: NHSL1 (human) mapping to 6q23.3.

PRODUCT

NHSL1 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 NHSL1 shRNA Plasmid (h): sc-95109-SH and NHSL1 shRNA (h) Lentiviral Particles: sc-95109-V as alternate gene silencing products.

For independent verification of NHSL1 (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-95109A, sc-95109B and sc-95109C.

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

NHSL1 siRNA (h) is recommended for the inhibition of NHSL1 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 NHSL1 gene expression knockdown using RT-PCR Primer: NHSL1 (h)-PR: sc-95109-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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