

# HEN1 siRNA (m): sc-45768

## BACKGROUND

The helix-loop-helix (HLH) structures are known motifs commonly found in membrane-active and DNA-binding proteins. The helix-loop-helix proteins HEN1 and HEN2 are DNA-binding proteins that may be involved in cell-type determination in the early nervous system. Studies of expression in normal tissues have demonstrated expression of NHLH1/NSCL-1 and NHLH2/NSCL-2, the genes encoding HEN1 and HEN2, in the developing central and peripheral nervous system, specifically in developing neurons.

## REFERENCES

1. Begley, C.G., et al. 1991. Molecular cloning and chromosomal localization of the murine homolog of the human helix-loop-helix gene SCL. *Proc. Natl. Acad. Sci. USA* 88: 869-873.
2. Begley, C.G., et al. 1992. Molecular characterization of NSCL, a gene encoding a helix-loop-helix protein expressed in the developing nervous system. *Proc. Natl. Acad. Sci. USA* 89: 38-42.
3. Gobel, V., et al. 1992. NSCL-2: a basic domain helix-loop-helix gene expressed in early neurogenesis. *Cell Growth Differ.* 3: 143-148.
4. Lipkowitz, S., et al. 1992. A comparative structural characterization of the human NSCL-1 and NSCL-2 genes. Two basic helix-loop-helix genes expressed in the developing nervous system. *J. Biol. Chem.* 267: 21065-21071.
5. Ibrahim, H.R., et al. 2001. A helix-loop-helix peptide at the upper lip of the active site cleft of lysozyme confers potent antimicrobial activity with membrane permeabilization action. *J. Biol. Chem.* 276: 43767-43774.

## CHROMOSOMAL LOCATION

Genetic locus: Nhlh1 (mouse) mapping to 1 H3.

## PRODUCT

HEN1 siRNA (m) 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see HEN1 shRNA Plasmid (m): sc-45768-SH and HEN1 shRNA (m) Lentiviral Particles: sc-45768-V as alternate gene silencing products.

For independent verification of HEN1 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-45768A, sc-45768B and sc-45768C.

## 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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

HEN1 siRNA (m) is recommended for the inhibition of HEN1 expression in mouse 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  $\mu$ M in 66  $\mu$ 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 HEN1 gene expression knockdown using RT-PCR Primer: HEN1 (m)-PR: sc-45768-PR (20  $\mu$ 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.