SANTA CRUZ BIOTECHNOLOGY, INC.

HoxC9 siRNA (h): sc-75289

BACKGROUND

The Hox proteins are a family of transcription factors that play a role in development and cellular differentiation by regulating downstream target genes. Specifically, the Hox proteins direct DNA-protein and protein-protein interactions that assist in determining the morphologic features associated with the anterior-posterior body axis. Hox proteins are involved in controlling axial patterning, leukemias and hereditary malformations. HoxC9 (homeobox protein HoxC9), also known as HOX3 or HOX3B, is a member of the Abd-B homeobox (Hox) family. It is a 260 amino acid long nuclear protein that contains one homeobox DNA-binding domain. HoxC9 plays a role in the regulation of development, providing cells with positional identities on the anterior-posterior body axis. In addition, HoxC9 is expressed in esophageal cancer cells and may be involved in cancer development.

REFERENCES

1. Redline, R.W., et al. 1994. Expression of Abd-B-type homeobox genes in human tumors. Lab. Invest. 71: 663-670.
2. Miano, J.M., et al. 1996. Restricted expression of homeobox genes distinguishes fetal from adult human smooth muscle cells. Proc. Natl. Acad. Sci. USA 93: 900-905.
3. Ponsuksili, S., et al. 2001. Expression of homeobox-containing genes in cDNA libraries derived from cattle oocytes and preimplantation stage embryo. Mol. Reprod. Dev. 60: 297-301.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 142970. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. López, R., et al. 2006. A subgroup of HOX Abd-B gene is differentially expressed in cervical cancer. Int. J. Gynecol. Cancer 16: 1289-1296.

CHROMOSOMAL LOCATION

Genetic locus: HOXC9 (human) mapping to 12q13.13.

PRODUCT

HoxC9 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 HoxC9 shRNA Plasmid (h): sc-75289-SH and HoxC9 shRNA (h) Lentiviral Particles: sc-75289-V as alternate gene silencing products.

For independent verification of HoxC9 (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-75289A, sc-75289B and sc-75289C.

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.

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

HoxC9 siRNA (h) is recommended for the inhibition of HoxC9 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

HoxC9 (HOXCA6E6): sc-81100 is recommended as a control antibody for monitoring of HoxC9 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 HoxC9 gene expression knockdown using RT-PCR Primer: HoxC9 (h)-PR: sc-75289-PR (20 µl, 438 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.