SANTA CRUZ BIOTECHNOLOGY, INC.

HoxD8 siRNA (m): sc-146072

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. HoxD8 (homeobox D8), also known as HOX4E, is a 290 amino acid protein that localizes to the nucleus and contains one homeobox DNA-binding domain. One of several members of the homeobox superfamily, HoxD8 functions as a sequence-specific transcription factor that is important for the correct positioning of developing limb buds on the anterior-posterior axis.

REFERENCES

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2. Redline, R.W., et al. 1992. Human HOX4E: a gene strongly expressed in the adult male and female urogenital tracts. Genomics 13: 425-430.
3. Rosen, D.R., et al. 1993. Dinucleotide repeat polymorphism in the HOX4E locus. Hum. Mol. Genet. 2: 617.
4. Zákány, J., et al. 1999. Hox genes and the making of sphincters. Nature 401: 761-762.
5. Goodman, F.R. 2002. Limb malformations and the human HOX genes. Am. J. Med. Genet. 112: 256-265.
6. Kosaki, K., et al. 2002. Complete mutation analysis panel of the 39 human HOX genes. Teratology 65: 50-62.
7. Yekta, S., et al. 2004. MicroRNA-directed cleavage of HOXB8 mRNA. Science 304: 594-596.
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CHROMOSOMAL LOCATION

Genetic locus: Hoxd8 (mouse) mapping to 2 C3.

PRODUCT

HoxD8 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see HoxD8 shRNA Plasmid (m): sc-146072-SH and HoxD8 shRNA (m) Lentiviral Particles: sc-146072-V as alternate gene silencing products.

For independent verification of HoxD8 (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-146072A, sc-146072B and sc-146072C.

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

HoxD8 siRNA (m) is recommended for the inhibition of HoxD8 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 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

HoxD8 (E-11): sc-515357 is recommended as a control antibody for monitoring of HoxD8 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 HoxD8 gene expression knockdown using RT-PCR Primer: HoxD8 (m)-PR: sc-146072-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.