



ZHX3 siRNA (m): sc-63248

BACKGROUND

Zinc-fingers and homeobox (ZHX) proteins are transcription factors that interact with the activation domain of the A subunit of nuclear factor-Y (NF-YA). ZHX1-3 are ubiquitously expressed proteins expressed in various tissues. They act as transcriptional repressors and localize to the nucleus. The ZHX proteins contain two Cys₂-His₂-type zinc-finger motifs and five homeodomains (HDs). These domains allow the ZHX proteins to form homodimers, but they can also form heterodimers with each other. However, this dimerization is not required for repressor activity. Hypermethylation-mediated silencing of ZHX2 is an epigenetic event involved in hepatocellular carcinoma (HCC).

REFERENCES

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2. Hirano, S., et al. 2002. Rat zinc-fingers and homeoboxes 1 (ZHX1), a nuclear factor-YA-interacting nuclear protein, forms a homodimer. *Gene* 290: 107-114.
3. Yamada, K., et al. 2002. Functional analysis and the molecular dissection of zinc-fingers and homeoboxes 1 (ZHX1). *Biochem. Biophys. Res. Commun.* 297: 368-374.
4. Shou, Z., et al. 2003. Genomic structure and analysis of transcriptional regulation of the mouse zinc-fingers and homeoboxes 1 (ZHX1) gene. *Gene* 302: 83-94.
5. Yamada, K., et al. 2003. Analysis of zinc-fingers and homeoboxes (ZHX)-1-interacting proteins: molecular cloning and characterization of a member of the ZHX family, ZHX3. *Biochem. J.* 373: 167-178.
6. Kawata, H., et al. 2003. Zinc-fingers and homeoboxes (ZHX) 2, a novel member of the ZHX family, functions as a transcriptional repressor. *Biochem. J.* 373: 747-757.
7. Kawata, H., et al. 2003. The mouse zinc-fingers and homeoboxes (ZHX) family; ZHX2 forms a heterodimer with ZHX3. *Gene* 323: 133-140.

CHROMOSOMAL LOCATION

Genetic locus: *Zhx3* (mouse) mapping to 2 H2.

PRODUCT

ZHX3 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see ZHX3 shRNA Plasmid (m): sc-63248-SH and ZHX3 shRNA (m) Lentiviral Particles: sc-63248-V as alternate gene silencing products.

For independent verification of ZHX3 (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-63248A, sc-63248B and sc-63248C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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

ZHX3 siRNA (m) is recommended for the inhibition of ZHX3 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 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 ZHX3 gene expression knockdown using RT-PCR Primer: ZHX3 (m)-PR: sc-63248-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.