

VENTX2 siRNA (h): sc-90826

BACKGROUND

The homeobox DNA-binding domain is a 60 amino acid motif that is conserved among many species and functions to bind DNA via a helix-turn-helix structure, thereby playing a role in transcriptional regulation and the control of gene expression. VENTX2 (VENT-like homeobox protein 2), also known as VENTX or HPX42B, is a 258 amino acid protein that localizes to the nucleus and contains one homeobox DNA-binding domain. Expressed in erythroleukemia cells and in the bone marrow of patients recovering from chemotherapy, VENTX2 is thought to function as a transcriptional repressor that may play a role in ventralization, mesodermal patterning and hemopoietic stem cell maintenance. The gene encoding VENTX2 maps to human chromosome 10q26.3, which houses over 1,200 genes and comprises nearly 4.5% of the human genome.

REFERENCES

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3. Moretti, P.A., Davidson, A.J., Baker, E., Lilley, B., Zon, L.I. and D'Andrea, R.J. 2001. Molecular cloning of a human Vent-like homeobox gene. *Genomics* 76: 21-29.
4. Online Mendelian Inheritance in Man, OMIM™. 2004. Johns Hopkins University, Baltimore, MD. MIM Number: 607158. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
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CHROMOSOMAL LOCATION

Genetic locus: VENTX (human) mapping to 10q26.3.

PRODUCT

VENTX2 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 VENTX2 shRNA Plasmid (h): sc-90826-SH and VENTX2 shRNA (h) Lentiviral Particles: sc-90826-V as alternate gene silencing products.

For independent verification of VENTX2 (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-90826A, sc-90826B and sc-90826C.

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 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

VENTX2 siRNA (h) is recommended for the inhibition of VENTX2 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 VENTX2 gene expression knockdown using RT-PCR Primer: VENTX2 (h)-PR: sc-90826-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.