

▶ FOXN2 siRNA (m): sc-62342

BACKGROUND

The forkhead domain-containing gene family (Fox) comprises over 20 members in mammals and is defined by a conserved 110 amino-acid motif containing a winged helix structure DNA-binding domain. The members of this gene family have been implicated as key regulators of embryogenesis, cell cycling, cell lineage restriction and cancer. As such, FOXN2 contains a domain with homology to the forkhead DNA binding domain. FOXN2, or Human T-cell leukemia virus enhancer factor, is a 341 amino acid protein mapping to human gene FOXN2, which has been localized to human chromosome 2p16.3. This protein, encoded by a 1,239-bp cDNA isolated from the Jurkat cDNA library, is capable of binding to a region of the human T-cell leukemia virus long terminal repeat (HTLV-I LTR) located between amino acids 155 and 117. This purine-rich region is important in the regulation of gene expression by the Ets family of transcription factors. FOXN2 is a unique cellular gene that may function in the transcriptional regulation of HTLV-I LTR.

REFERENCES

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4. Boehm, T., et al. 2003. Genetic dissection of thymus development in mouse and zebrafish. *Immunol. Rev.* 195: 15-27.
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CHROMOSOMAL LOCATION

Genetic locus: Foxn2 (mouse) mapping to 17 E4.

PRODUCT

FOXN2 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 FOXN2 shRNA Plasmid (m): sc-62342-SH and FOXN2 shRNA (m) Lentiviral Particles: sc-62342-V as alternate gene silencing products.

For independent verification of FOXN2 (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-62342A, sc-62342B and sc-62342C.

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

FOXN2 siRNA (m) is recommended for the inhibition of FOXN2 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.

GENE EXPRESSION MONITORING

FOXN2 (L-20): sc-67490 is recommended as a control antibody for monitoring of FOXN2 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 (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor FOXN2 gene expression knockdown using RT-PCR Primer: FOXN2 (m)-PR: sc-62342-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 or our catalog for detailed protocols and support products.