SANTA CRUZ BIOTECHNOLOGY, INC.

FOXR2 siRNA (m): sc-143650

BACKGROUND

The Forkhead-box (FOX) genes comprise a superfamily of at least 43 members that express proteins which are involved in transcriptional regulation and may be associated with the pathogenesis of various cancers. FOXR2 (Forkhead box protein R2), also known as FOXN6 (Forkhead box protein N6), is a 311 amino acid nuclear protein that belongs to the FOX family and contains one fork-head DNA-binding domain. Like other members of the FOX family, FOXR2 is not abundantly expressed in normal tissues but is found at very high levels in breast cancer and primary cancer cell lines and is thought to act as a transcription factor. Through chromosomal aberrations such as retroviral integration, gene amplification or translocation, FOXR2 may be involved the development of certain invasive carcinomas.

REFERENCES

1. Katoh, M. and Katoh, M. 2004. Identification and characterization of human FOXK1 gene in silico. Int. J. Mol. Med. 14: 127-132.
2. Katoh, M. and Katoh, M. 2004. Germ-line mutation of Foxn5 gene in mouse lineage. Int. J. Mol. Med. 14: 463-467.
3. Katoh, M. and Katoh, M. 2004. Characterization of human FOXN4 gene in silico. Int. J. Mol. Med. 14: 949-953.
4. Katoh, M. and Katoh, M. 2004. Identification and characterization of human FOXN6, mouse Foxn6, and rat Foxn6 genes in silico. Int. J. Oncol. 25: 219-223.
5. Katoh, M. and Katoh, M. 2004. Human FOX gene family (review). Int. J. Oncol. 25: 1495-1500.

CHROMOSOMAL LOCATION

Genetic locus: Foxr2 (mouse) mapping to X F3.

PRODUCT

FOXR2 siRNA (m) is a target-specific 19-25 nt siRNA 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 FOXR2 shRNA Plasmid (m): sc-143650-SH and FOXR2 shRNA (m) Lentiviral Particles: sc-143650-V as alternate gene silencing 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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

APPLICATIONS

FOXR2 siRNA (m) is recommended for the inhibition of FOXR2 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor FOXR2 gene expression knockdown using RT-PCR Primer: FOXR2 (m)-PR: sc-143650-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.