



RFX7 siRNA (m): sc-152829

BACKGROUND

RFX7 (regulatory factor X 7), also known as regulatory factor X domain-containing protein 2, is a 1,363 amino acid protein that belongs to the regulatory factor X (RFX) family of transcription factors. The RFX7 protein contains a winged helix region, predicted to interact with the major groove of DNA, and a conserved helix H3 predicted to interact with the minor groove. Localizing to nucleus, RFX7 contains one H-T-H motif winged-type DNA-binding domain. The RFX7 gene contains nine exons and exists as two alternatively spliced isoforms. The RFX7 gene is conserved in chimpanzee, canine, bovine, mouse, rat, chicken and zebrafish, and maps to human chromosome 15q21.3. Common variants at chromosome locations 2q37.3, 8q24.21, 15q21.3 and 16q24.1 influence chronic lymphocytic leukemia risk.

REFERENCES

1. Zody, M.C., et al. 2006. Analysis of the DNA sequence and duplication history of human chromosome 15. *Nature* 440: 671-675.
2. Aftab, S., et al. 2008. Identification and characterization of novel human tissue-specific RFX transcription factors. *BMC Evol. Biol.* 8: 226.
3. Online Mendelian Inheritance in Man, OMIM™. 2009. Johns Hopkins University, Baltimore, MD. MIM Number: 612660. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Chu, J.S., et al. 2010. Convergent evolution of RFX transcription factors and ciliary genes predated the origin of metazoans. *BMC Evol. Biol.* 10: 130.
5. Yau, C., et al. 2010. A multigene predictor of metastatic outcome in early stage hormone receptor-negative and triple-negative breast cancer. *Breast Cancer Res.* 12: R85.
6. Crowther-Swanepoel, D., et al. 2010. Common variants at 2q37.3, 8q24.21, 15q21.3 and 16q24.1 influence chronic lymphocytic leukemia risk. *Nat. Genet.* 42: 132-136.
7. SWISS-PROT/TrEMBL (Q2KHR2). World Wide Web URL: <http://www.uniprot.org/uniprot/Q2KHR2>

CHROMOSOMAL LOCATION

Genetic locus: Rfx7 (mouse) mapping to 9 D.

PRODUCT

RFX7 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see RFX7 shRNA Plasmid (m): sc-152829-SH and RFX7 shRNA (m) Lentiviral Particles: sc-152829-V as alternate gene silencing products.

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

RFX7 siRNA (m) is recommended for the inhibition of RFX7 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 RFX7 gene expression knockdown using RT-PCR Primer: RFX7 (m)-PR: sc-152829-PR (20 μ l). 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.