SANTA CRUZ BIOTECHNOLOGY, INC.

RFXAP siRNA (m): sc-37750

BACKGROUND

The regulatory factor X (RFX) proteins include RFX1-5, RFX-B/Ank and RFX-associated protein (RFXAP). RFX proteins are essential class II transcription factors and activate the enhancer elements of several hepatitis B virus genes as well as promote the induction of MHC class II genes in response to interferon-γ stimulation. Structural characteristics of the RFX family include a centrally located DNA-binding domain (DBD) and a C-terminal D region that facilitates dimerization. RFX5, RFX-B/Ank and RFXAP comprise the RFX trimer, which binds to X and S boxes in MHC class II promoters. Even though RFXAP lacks a DNA-binding domain, RFXAP and RFX-B/Ank are essential to the RFX DNA-binding function. The RFXAP interacts specifically with RFX5. Loss of RFXAP function is linked to MHC class II deficiency disease class D. The gene encoding human RFXAP maps to chromosome 13q13.3.

REFERENCES

1. Katan, Y., et al. 1997. The transcriptional activation and repression domains of RFX1, a context-dependent regulator, can mutually neutralize their activities. Nucleic Acids Res. 25: 3621-3628.
2. Durand, B., et al. 1997. RFXAP, a novel subunit of the RFX DNA binding complex is mutated in MHC class II deficiency. EMBO J. 16: 1045-1055.
3. Masternak, K., et al. 1998. A gene encoding a novel RFX-associated transactivator is mutated in the majority of MHC class II deficiency patients. Nat. Genet. 20: 273-277.
4. Gajiwala, K.S., et al. 2000. Structure of the winged-helix protein hRFX1 reveals a new mode of DNA binding. Nature 403: 916-921.
5. Nekrep, N., et al. 2000. Mutations in the bare lymphocyte syndrome define critical steps in the assembly of the regulatory factor X complex. Mol. Cell. Biol. 20: 4455-4461.
6. LocusLink Report (LocusID: 5994). http://www.ncbi.nlm.nih.gov/LocusLink/

CHROMOSOMAL LOCATION

Genetic locus: Rfxap (mouse) mapping to 3 C.

PRODUCT

RFXAP 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see RFXAP shRNA Plasmid (m): sc-37750-SH and RFXAP shRNA (m) Lentiviral Particles: sc-37750-V as alternate gene silencing products.

For independent verification of RFXAP (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-37750A, sc-37750B and sc-37750C.

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 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.

APPLICATIONS

RFXAP siRNA (m) is recommended for the inhibition of RFXAP 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 RFXAP gene expression knockdown using RT-PCR Primer: RFXAP (m)-PR: sc-37750-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.