

TGIF2LX1 siRNA (m): sc-154241

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. TGIF2LX (TGFB-induced factor homeobox 2-like, X-linked), also known as TGIFLX, is a 241 amino acid protein that localizes to the nucleus and contains one homeobox DNA-binding domain. Expressed specifically in adult testicular tissue, TGIF2LX is thought to function as a transcriptional regulator that may play a role in spermatogenesis. Like TGIF2LX, TGIF2LY is a nuclear protein that is testis-specific and functions as a transcriptional regulator during spermatid maturation.

REFERENCES

1. Blanco-Arias, P., Sargent, C.A. and Affara, N.A. 2002. The human-specific Yp11.2/Xq21.3 homology block encodes a potentially functional testis-specific TGIF-like retroposon. *Mamm. Genome* 13: 463-468.
2. Skaletsky, H., Kuroda-Kawaguchi, T., Minx, P.J., Cordum, H.S., Hillier, L., Brown, L.G., Repping, S., Pyntikova, T., Ali, J., Bieri, T., Chinwalla, A., Delehaunty, A., Delehaunty, K., Du, H., Fewell, G., Fulton, L., et al. 2003. The male-specific region of the human Y chromosome is a mosaic of discrete sequence classes. *Nature* 423: 825-837.
3. Online Mendelian Inheritance in Man, OMIM[™]. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 300411. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Satoh, S. and Watanabe, S. 2008. TGIF, a homeodomain transcription factor, regulates retinal progenitor cell differentiation. *Exp. Eye Res.* 87: 571-579.
5. Aarabi, M., Ousati-Ashtiani, Z., Nazarian, A., Modarressi, M.H. and Heidari, M. 2008. Association of TGIFLX/Y mRNA expression with azoospermia in infertile men. *Mol. Reprod. Dev.* 75: 1761-1766.
6. Ousati Ashtiani, Z., Ayati, M., Modarresi, M.H., Raoofian, R., Sabah Goulian, B., Greene, W.K. and Heidari, M. 2009. Association of TGIFLX/Y mRNA expression with prostate cancer. *Med. Oncol.* 26: 73-77.

CHROMOSOMAL LOCATION

Genetic locus: Tgif2lx1 (mouse) mapping to X E1.

PRODUCT

TGIF2LX1 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 TGIF2LX1 shRNA Plasmid (m): sc-154241-SH and TGIF2LX1 shRNA (m) Lentiviral Particles: sc-154241-V as alternate gene silencing products.

For independent verification of TGIF2LX1 (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-154241A, sc-154241B and sc-154241C.

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

TGIF2LX1 siRNA (m) is recommended for the inhibition of TGIF2LX1 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 TGIF2LX1 gene expression knockdown using RT-PCR Primer: TGIF2LX1 (m)-PR: sc-154241-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.

PROTOCOLS

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