

TIEG2 siRNA (m): sc-38547

BACKGROUND

Originally isolated from osteoblastic cells, the TGF β -inducible early gene 1 (TIEG1) is a Krüppel-like zinc finger transcription factor that regulates cellular growth and differentiation. TIEG1 is regulated as an early response gene by TGF β 1. It is expressed in both acinar and ductular epithelial cells from exocrine pancreas and may serve as an early response gene in pancreatic cells, and overexpression of TIEG1 in TGF β -sensitive epithelial cells induces apoptosis. TIEG1 is expressed at high levels in PBLs, spleen and colon, and at lower levels in thymus, small intestine, ovary, prostate and skeletal muscle. The nuclear TIEG2 protein, which shares significant homology with TIEG1, was originally isolated from globin-expressing human fetal erythroid cells. TIEG2 is expressed in fetal liver, and overexpression of TIEG2 in cultured epithelial cells inhibits cellular proliferation. TIEG2 expression is upregulated by TGF β 1 and serum deprivation.

REFERENCES

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- Neve, B., et al. 2005. Role of transcription factor KLF11 and its diabetes-associated gene variants in pancreatic β cell function. *Proc. Natl. Acad. Sci. USA* 102: 4807-4812.

CHROMOSOMAL LOCATION

Genetic locus: Klf11 (mouse) mapping to 12 A1.3.

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.

PRODUCT

TIEG2 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 TIEG2 shRNA Plasmid (m): sc-38547-SH and TIEG2 shRNA (m) Lentiviral Particles: sc-38547-V as alternate gene silencing products.

For independent verification of TIEG2 (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-38547A, sc-38547B and sc-38547C.

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

TIEG2 siRNA (m) is recommended for the inhibition of TIEG2 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 TIEG2 gene expression knockdown using RT-PCR Primer: TIEG2 (m)-PR: sc-38547-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.