



TUG siRNA (h): sc-72020

BACKGROUND

Glut4 is a 12 pass transmembrane protein (12TM) whose carboxy-terminus may dictate its cellular localization. Aberrant Glut4 expression has been suggested to contribute to such maladies as obesity and diabetes. Glut4 null mice have shown that while functional Glut4 protein is not required for maintaining normal glucose levels, it is necessary for sustained growth, normal cellular glucose, fat metabolism and prolonged longevity. TUG (ASPL in humans) regulates the trafficking of glucose via Glut4. Full-length TUG forms a complex with Glut4 and in 3T3-L1 adipocytes and this complex is present in unstimulated cells and is disassembled by Insulin. TUG acts by trapping endocytosed Glut4 and tethering it intracellularly. Insulin mobilizes this pool of retained Glut4 by releasing the tether.

REFERENCES

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6. Amin, M.B., et al. 2006. Alveolar soft-part sarcoma of the urinary bladder with urethral recurrence: a unique case with emphasis on differential diagnoses and diagnostic utility of an immunohistochemical panel including TFE3. *Am. J. Surg. Pathol.* 30: 1322-1325.
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CHROMOSOMAL LOCATION

Genetic locus: ASPSCR1 (human) mapping to 17q25.3.

PROTOCOLS

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

PRODUCT

TUG siRNA (h) 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 TUG shRNA Plasmid (h): sc-72020-SH and TUG shRNA (h) Lentiviral Particles: sc-72020-V as alternate gene silencing products.

For independent verification of TUG (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-72020A, sc-72020B and sc-72020C.

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

TUG siRNA (h) is recommended for the inhibition of TUG expression in human 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 TUG gene expression knockdown using RT-PCR Primer: TUG (h)-PR: sc-72020-PR (20 μ l, 547 bp). 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.