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SANTA CRUZ BIOTECHNOLOGY, INC.

Synip siRNA (m): sc-153987

BACKGROUND

Insulin-responsive glucose transporter (GLUT4) is a member of the facilitative glucose transporters that is predominantly, but not exclusively, expressed in adipose tissues and skeletal and cardiac muscle. Insulin-stimulated glucose transport and GLUT4 translocation between the plasma membrane and one or more intracellular compartments require regulated interaction between the v-SNARE, VAMP2, t-SNARE and syntaxin 4. A novel syntaxin 4-binding protein, Synip, specifically interacts with syntaxin 4 protein. Insulin induces the dissociation of the Synip:syntaxin 4 complex by reducing the binding affinity of Synip for syntaxin 4. However, the C-terminal domain of Synip does not dissociate from syntaxin 4 in response to Insulin, but rather inhibits glucose transport and GLUT4 translocation. In conclusion, Synip is an Insulin-regulated syntaxin 4-binding protein directly involved in the control of glucose transport and GLUT4 vesicle translocation.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Stxbp4 (mouse) mapping to 11 D.

PRODUCT

Synip 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 Synip shRNA Plasmid (m): sc-153987-SH and Synip shRNA (m) Lentiviral Particles: sc-153987-V as alternate gene silencing products.

For independent verification of Synip (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-153987A, sc-153987B and sc-153987C.

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

Synip siRNA (m) is recommended for the inhibition of Synip 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 Synip gene expression knockdown using RT-PCR Primer: Synip (m)-PR: sc-153987-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.

PROTOCOLS

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