SANTA CRUZ BIOTECHNOLOGY, INC.

GLIS3 siRNA (h): sc-62382

BACKGROUND

Zinc finger proteins contain DNA-binding domains and have a wide variety of functions, most of which encompass some form of transcriptional activation or repression. GLIS3 (gLIS family zinc finger 3), also known as ZNF515 (zinc finger protein 515), is a 775 amino acid protein that localizes to the nucleus and contains five C_2H_2-type zinc-fingers. Expressed in a variety of tissues, including kidney, brain, liver, lung, ovary, pancreas, thymus and skeletal muscle, GLIS3 functions as both an activator and a suppressor of transcription, specifically binding the consensus sequence 5'-GACCACCCAC-3' through its C_2H_2-type zinc-fingers. Defects in the gene encoding GLIS3 are a cause of NDH syndrome; a neonatal diabetes that is characterized by congenital hypothyroidism, congenital glaucoma, hepatic fibrosis and polycystic kidneys.

REFERENCES

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4. Barbetti, F. 2007. Diagnosis of neonatal and infancy-onset diabetes. Endocr. Dev. 11: 83-93.
5. Beak, J.Y., Kang, H.S., Kim, Y.S. and Jetten, A.M. 2007. Krüppel-like zinc-finger protein GLIS3 promotes osteoblast differentiation by regulating FGF18 expression. J. Bone Miner. Res. 22: 1234-1244.

CHROMOSOMAL LOCATION

Genetic locus: GLIS3 (human) mapping to 9p24.2.

PRODUCT

GLIS3 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see GLIS3 shRNA Plasmid (h): sc-62382-SH and GLIS3 shRNA (h) Lentiviral Particles: sc-62382-V as alternate gene silencing products.

For independent verification of GLIS3 (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-62382A, sc-62382B and sc-62382C.

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

GLIS3 siRNA (h) is recommended for the inhibition of GLIS3 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 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 GLIS3 gene expression knockdown using RT-PCR Primer: GLIS3 (h)-PR: sc-62382-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.