SANTA CRUZ BIOTECHNOLOGY, INC.

SGIP1 siRNA (h): sc-78847

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The Power to Question

BACKGROUND

SGIP1 (SH3-domain GRB2-like interacting protein 1), also known as endophilin-3-interacting protein, is an 828 amino acid endocytic protein that is exclusively expressed in brain and is highly conserved between species. SGIP1 is considered an important and novel member of a group of neuronal molecules required for the regulation of energy homeostasis. SGIP1 regulates energy homeostasis via interaction with endophilins, which affect receptor signaling in neuronal systems. SGIP1 also plays an essential role in clathrin-mediated endocytosis by interacting with phospholipids and Eps15. Existing as five isoforms produced by alternative splicing events, the gene encoding SGIP1 is located on human chromosome 1, which spans 260 million base pairs, contains over 3,000 genes and comprises nearly 8% of the human genome.

REFERENCES

1. Trevaskis, J., et al. 2005. Src homology 3-domain growth factor receptor-bound 2-like (endophilin) interacting protein 1, a novel neuronal protein that regulates energy balance. Endocrinology 146: 3757-3764.
2. Gregory, S.G., et al. 2006. The DNA sequence and biological annotation of human chromosome 1. Nature 441: 315-321.
3. Uezu, A., et al. 2007. SGIP1α is an endocytic protein that directly interacts with phospholipids and Eps15. J. Biol. Chem. 282: 26481-26489.
4. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 611540. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Stimpson, H.E., et al. 2009. Early-arriving Syp1p and Ede1p function in endocytic site placement and formation in budding yeast. Mol. Biol. Cell 20: 4640-4651.

CHROMOSOMAL LOCATION

Genetic locus: SGIP1 (human) mapping to 1p31.3.

PRODUCT

SGIP1 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 SGIP1 shRNA Plasmid (h): sc-78847-SH and SGIP1 shRNA (h) Lentiviral Particles: sc-78847-V as alternate gene silencing products.

For independent verification of SGIP1 (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-78847A, sc-78847B and sc-78847C.

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.

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

SGIP1 siRNA (h) is recommended for the inhibition of SGIP1 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 SGIP1 gene expression knockdown using RT-PCR Primer: SGIP1 (h)-PR: sc-78847-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.