

SNX18 siRNA (m): sc-153667

BACKGROUND

Sorting nexin (SNX) proteins are members of a large family of hydrophilic PX (phospholipid-binding motif) domain-containing proteins that interact with a variety of receptor types. SNXs are widely expressed, although the tissue distribution of each SNX mRNA varies. The ability of SNXs to bind specific phospholipids, as well as their tendency to form protein-protein complexes, suggests a role for these proteins in cellular membrane trafficking and protein sorting. SNXs may also function specifically in pro-degradative sorting, internalization, endosomal recycling or simply in endosomal sorting. SNXs partially associate with cellular membranes, despite their hydrophilic nature. SNX18, also known as sorting nexin-associated golgi protein 1 (SNAG1), is a 628 amino acid member of the SNX family that is involved in several stages of intracellular trafficking. Localized to the intracytoplasmic membrane, SNX18 contains a phox homology domain and a SH2 domain. Two isoforms of SNX18 exist as a result of alternative splicing events.

REFERENCES

1. Kurten, R.C., et al. 1996. Enhanced degradation of EGF receptors by a sorting nexin, SNX1. *Science* 272: 1008-1010.
2. Haft, C.R., et al. 1998. Identification of a family of sorting nexin molecules and characterization of their association with receptors. *Mol. Cell. Biol.* 18: 7278-7287.
3. Ponting, C.P. 1996. Novel domains in NADPH oxidase subunits, sorting nexins, and PtdIns 3-kinases: binding partners of SH3 domains? *Protein Sci.* 5: 2353-2357.
4. Worby, C.A. and Dixon, J.E. 2002. Sorting out the cellular functions of sorting nexins. *Nature reviews. Mol. Cell Biol.* 3: 919-31.
5. MacCaulay, S.L., et al. 2003. Insulin stimulates movement of sorting nexin 9 between cellular compartments: a putative role mediating cell surface receptor expression and Insulin action. *Biochem. J.* 376: 123-134.
6. Koga, T., et al. 2004. Sorting nexin homologues are targets of phosphatidylinositol 3-phosphate in sporulation of *Schizosaccharomyces pombe*. *Genes Cells* 9: 561-574.

CHROMOSOMAL LOCATION

Genetic locus: Snx18 (mouse) mapping to 13 D2.2.

PRODUCT

SNX18 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 SNX18 shRNA Plasmid (m): sc-153667-SH and SNX18 shRNA (m) Lentiviral Particles: sc-153667-V as alternate gene silencing products.

For independent verification of SNX18 (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-153667A, sc-153667B and sc-153667C.

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

SNX18 siRNA (m) is recommended for the inhibition of SNX18 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.

GENE EXPRESSION MONITORING

SNX18 (F-10): sc-515461 is recommended as a control antibody for monitoring of SNX18 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor SNX18 gene expression knockdown using RT-PCR Primer: SNX18 (m)-PR: sc-153667-PR (20 μ l). 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.