

SNX27 siRNA (m): sc-153673

BACKGROUND

Sorting nexin (SNX) proteins are members of a large family of hydrophilic proteins that interact with a variety of receptor types, are involved in intracellular trafficking and contain a characteristic phox homology (PX) domain. SNX27, a 541 amino acid protein localized to the cytoplasm and early endosome, contains the characteristic PX domain, a Ras-associating domain and a PDZ domain, which is responsible for vesicular localization. Expressed in cells of hematopoietic origin, SNX27 recruits CYTIP and SR-4 to participate in endocytic trafficking and recycling pathways. Four named isoforms of SNX27 exist as a result of alternative splicing events.

REFERENCES

1. Joubert, L., et al. 2004. New sorting nexin (SNX27) and NHERF specifically interact with the 5-HT4a receptor splice variant: roles in receptor targeting. *J. Cell Sci.* 117: 5367-5379.
2. Carlton, J., et al. 2005. Sorting nexins—unifying trends and new perspectives. *Traffic* 6: 75-82.
3. Seet, L.F. and Hong, W. 2006. The Phox (PX) domain proteins and membrane traffic. *Biochim. Biophys. Acta* 1761: 878-896.
4. MacNeil, A.J., et al. 2007. Sorting nexin 27 interacts with the cytohesin associated scaffolding protein (CASP) in lymphocytes. *Biochem. Biophys. Res. Commun.* 359: 848-853.
5. MacNeil, A.J. and Pohajdak, B. 2007. Polarization of endosomal SNX27 in migrating and tumor-engaged natural killer cells. *Biochem. Biophys. Res. Commun.* 361: 146-150.
6. Nassirpour, R. and Slesinger, P.A. 2007. Subunit-specific regulation of KIR3 channels by sorting nexin 27. *Channels* 1: 331-333.

CHROMOSOMAL LOCATION

Genetic locus: *Snx27* (mouse) mapping to 3 F2.1.

PRODUCT

SNX27 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 SNX27 shRNA Plasmid (m): sc-153673-SH and SNX27 shRNA (m) Lentiviral Particles: sc-153673-V as alternate gene silencing products.

For independent verification of SNX27 (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-153673A, sc-153673B and sc-153673C.

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 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

SNX27 siRNA (m) is recommended for the inhibition of SNX27 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

SNX27 (F-2): sc-515707 is recommended as a control antibody for monitoring of SNX27 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 SNX27 gene expression knockdown using RT-PCR Primer: SNX27 (m)-PR: sc-153673-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.