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# SNX14 siRNA (m): sc-153666

## 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. SNX14 (Sorting nexin-14) is a 946 amino acid multi-pass membrane protein that contains one PX domain, one PXA domain and one RGS domain and is likely involved in several stages of intracellular trafficking. There are four isoforms of SNX14 that are produced as a result of alternative splicing events.

## REFERENCES

1. Teasdale, R.D., Loci, D., Houghton, F., Karlsson and L., Gleeson, P.A. 2001. A large family of endosome-localized proteins related to sorting nexin 1. *Biochem. J.* 358: 7-16.
2. Carroll, P., Renoncourt, Y., Gayet, O., De Bovis, B. and Alonso, S. 2001. Sorting nexin-14, a gene expressed in motoneurons trapped by an *in vitro* preselection method. *Dev. Dyn.* 221: 431-442.
3. Worby, C.A., Dixon, J.E. 2002. Sorting out the cellular functions of sorting nexins. *Nat. Rev. Mol. Cell Biol.* 3: 919-931.
4. Kerr, M.C., Lindsay, M.R., Luetterforst, R., Hamilton, N., Simpson, F., Parton, R.G., Gleeson and P.A., Teasdale, R.D. 2006. Visualisation of macropinosome maturation by the recruitment of sorting nexins. *J. Cell. Sci.* 119: 3967-3980.
5. Jürgens, G., Geldner, N. 2007. The high road and the low road: trafficking choices in plants. *Cell* 130: 977-979.
6. Verges, M. 2007. Retromer and sorting nexins in development. *Front. Biosci.* 12: 3825-3851.
7. Cullen, P.J. 2008. Endosomal sorting and signalling: an emerging role for sorting nexins. *Nat. Rev. Mol. Cell Biol.* 9: 574-582.

## CHROMOSOMAL LOCATION

Genetic locus: *Snx14* (mouse) mapping to 9 E3.1.

## PRODUCT

SNX14 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see SNX14 shRNA Plasmid (m): sc-153666-SH and SNX14 shRNA (m) Lentiviral Particles: sc-153666-V as alternate gene silencing products.

For independent verification of SNX14 (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-153666A, sc-153666B and sc-153666C.

## 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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

SNX14 siRNA (m) is recommended for the inhibition of SNX14 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  $\mu$ M in 66  $\mu$ 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.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor SNX14 gene expression knockdown using RT-PCR Primer: SNX14 (m)-PR: sc-153666-PR (20  $\mu$ 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](http://www.scbt.com) for detailed protocols and support products.