

LNX1 siRNA (h): sc-60956

BACKGROUND

LNX1 (ligand of NUMB protein X1, LNX, PDZ domain-containing RING finger protein 2, PDZRN2) is a RING finger and PDZ domain containing protein that associates with NUMB, a phosphotyrosine-binding (PTB) domain-containing protein that functions as a cell fate determinant. Studies indicate that the protein contains an N-terminal PTB domain-binding motif and four PDZ domains. Northern blot analysis has detected the expression of LNX1 in heart, placenta, kidney, pancreas and brain tissues. By radiation hybrid mapping, the LNX gene was localized to human chromosome 4q12 between marker D4S1577 and marker D4S1594. Research suggests that the presence of multiple protein binding domains involved in signal transduction and association with NUMB and SKIP may suggest an important role for LNX in tumorigenesis.

REFERENCES

1. Dho, S.E., et al. 1998. The mammalian NUMB phosphotyrosine-binding domain. Characterization of binding specificity and identification of a novel PDZ domain-containing Numb binding protein, LNX. *J. Biol. Chem.* 273: 9179-9187.
2. Dho, S.E., et al. 2000. Characterization of four mammalian NUMB protein isoforms. Identification of cytoplasmic and membrane-associated variants of the phosphotyrosine binding domain. *J. Biol. Chem.* 274: 33097-33104.
3. Xie, Y., et al. 2001. Identification of a human LNX protein containing multiple PDZ domains. *Biochem. Genet.* 39: 117-126.
4. Nie, J., et al. 2002. LNX functions as a RING type E3 ubiquitin ligase that targets the cell fate determinant Numb for ubiquitin-dependent degradation. *EMBO J.* 21: 93-102.
5. Rice, D.S., et al. 2002. The LNX family proteins function as molecular scaffolds for Numb family proteins. *Mol. Cell. Neurosci.* 18: 525-540.
6. Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 609732. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
7. Sollerbrant, K., et al. 2003. The coxsackievirus and adenovirus receptor (CAR) forms a complex with the PDZ domain-containing protein ligand-of-Numb protein-X (LNX). *J. Biol. Chem.* 278: 7439-7444.
8. Armbruster, V., et al. 2004. Np9 protein of human endogenous retrovirus K interacts with ligand of Numb protein X. *J. Virol.* 78: 10310-10319.
9. Young, P., et al. 2005. LNX1 is a perisynaptic Schwann cell specific E3 ubiquitin ligase that interacts with ErbB2. *Mol. Cell. Neurosci.* 30: 238-248.

CHROMOSOMAL LOCATION

Genetic locus: LNX1 (human) mapping to 4q12.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

PRODUCT

LNX1 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see LNX1 shRNA Plasmid (h): sc-60956-SH and LNX1 shRNA (h) Lentiviral Particles: sc-60956-V as alternate gene silencing products.

For independent verification of LNX1 (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-60956A, sc-60956B and sc-60956C.

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

LNX1 siRNA (h) is recommended for the inhibition of LNX1 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 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor LNX1 gene expression knockdown using RT-PCR Primer: LNX1 (h)-PR: sc-60956-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.