SANTA CRUZ BIOTECHNOLOGY, INC.

LNX2 siRNA (h): sc-60958

BACKGROUND

LNX2 (ligand of NUMB protein X2, PDZ domain-containing RING finger protein 1, PDZRN1), which interacts with mammalian NUMB and NumbL, contains a RING finger domain, followed by a motif similar to a PTB-binding motif and four PDZ domains. LNX2 and LNX1 (a proposed relative) are multimodular proteins that bind NUMB, a cell fate determinant, through their NPXY motifs. Studies may suggest that LNX proteins act as molecular scaffolds that promote the aggregation of unrelated, interacting proteins, such as NUMB, to definitive subcellular sites. The LNX2 gene maps to chromosome 13q12.2 based on an alignment of the LNX2 sequence with the genomic sequence. LNX proteins may form large networks by homomeric binding, and their expression patterns overlap with those of the NUMB proteins. Furthermore, studies also suggest that the oligomerization of LNX2 and NUMB binding occurs simultaneously.

REFERENCES

1. Xie, Y., et al. 2001. Identification of a human LNX protein containing multiple PDZ domains. Biochem. Genet. 39: 117-126.
2. 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.
3. Rice, D.S., et al. 2002. The LNX family proteins function as molecular scaffolds for Numb family proteins. Mol. Cell. Neurosci. 18: 525-540.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 603728. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Evans, W.J., et al. 2003. Synthesis of arene-soluble mixed-metal Zr/Ce, Zr/Y, and related [[Zr2(OiPr)9]LnX2]n complexes using the dizirconium nonaisopropoxide ligand. Inorg. Chem. 39: 2125-2129.
6. Katoh, M. and Katoh, M. 2004. Identification and characterization of PDZRN3 and PDZRN4 genes in silico. Int. J. Mol. Med. 13: 607-613.
7. Mirza, M., et al. 2005. The cell surface protein coxsackie- and adenovirus receptor (CAR) directly associates with the Ligand-of-Numb Protein-X2 (LNX2). Exp. Cell Res. 309: 110-120.

CHROMOSOMAL LOCATION

Genetic locus: LNX2 (human) mapping to 13q12.2.

PRODUCT

LNX2 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 LNX2 shRNA Plasmid (h): sc-60958-SH and LNX2 shRNA (h) Lentiviral Particles: sc-60958-V as alternate gene silencing products.

For independent verification of LNX2 (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-60958A, sc-60958B and sc-60958C.

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

LNX2 siRNA (h) is recommended for the inhibition of LNX2 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.

GENE EXPRESSION MONITORING

LNX2 (B-3): sc-398156 is recommended as a control antibody for monitoring of LNX2 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-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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 LNX2 gene expression knockdown using RT-PCR Primer: LNX2 (h)-PR: sc-60958-PR (20 µl). 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.