SANTA CRUZ BIOTECHNOLOGY, INC.

Liprin β2 siRNA (h): sc-62563

BACKGROUND

Liprins interact with members of the leukocyte common antigen-related (LAR) family of transmembrane protein tyrosine phosphatases, which are implicated in axon guidance and mammary gland development. Liprins are multivalent proteins that form complex structures and act as scaffolds for the recruitment and anchoring of LAR phosphatases. Based on sequence similarites and binding characteristics, liprins are subdivided into α-type and β-type liprins. Both α- and β-liprins homodimerize via their N-terminal, coiled coil regions. Liprin β2 is expressed strongly in liver, kidney, intestine, heart, lung and testis, however it can be detected at low levels in brain and thymus. Four isoforms exist for Liprin β2 due to splicing variants. Isoform 1 respresents the full length protein. Isoform 2 lacks amino acids 459-469. Isoform 3 contains an alternative sequence for amino acids 127-200 and is truncated at amino acid 200. Isoform 4 lacks amino acids 459-469 and contains an alternative sequence for amino acids 877-882.

REFERENCES

1. Serra-Pagès, C., Medley, Q.G., Tang, M., Hart, A. and Streuli, M. 1998. Liprins, a family of LAR transmembrane protein-tyrosine phosphatase-interacting proteins. J. Biol. Chem. 273: 15611-15620.
2. Kriajevska, M., Fischer-Larsen, M., Moertz, E., Vorm, O., Tulchinsky, E., Grigorian, M., Ambartsumian, N. and Lukanidin, E. 2002. Liprin β1, a member of the family of LAR transmembrane tyrosine phosphatase-interacting proteins, is a new target for the metastasis-associated protein S100A4 (Mts1). J. Biol. Chem. 277: 5229-5235.
3. Heidenblad, M., Jonson, T., Mahlamäki, E.H., Gorunova, L., Karhu, R., Johansson, B. and Höglund, M. 2002. Detailed genomic mapping and expression analyses of 12p amplifications in pancreatic carcinomas reveal a 3.5-Mb target region for amplification. Genes Chromosomes Cancer 34: 211-223.
4. Katoh, M. and Katoh, M. 2003. Identification and characterization of human PPFIA4 gene in silico. Int. J. Mol. Med. 12: 1009-1014.

CHROMOSOMAL LOCATION

Genetic locus: PPFIBP2 (human) mapping to 11p15.4.

PRODUCT

Liprin β2 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 Liprin β2 shRNA Plasmid (h): sc-62563-SH and Liprin β2 shRNA (h) Lentiviral Particles: sc-62563-V as alternate gene silencing products.

For independent verification of Liprin β2 (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-62563A, sc-62563B and sc-62563C.

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 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

Liprin β2 siRNA (h) is recommended for the inhibition of Liprin β2 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

Liprin β2 (H-4): sc-514253 is recommended as a control antibody for monitoring of Liprin β2 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 Liprin β2 gene expression knockdown using RT-PCR Primer: Liprin β2 (h)-PR: sc-62563-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.