

leupaxin siRNA (h): sc-96309

BACKGROUND

Leupaxin, also designated LDPL or LPXN, is a 386 amino acid cytoplasmic protein and member of the paxillin family. Leupaxin is highly expressed in lymphoid tissues such as spleen, lymph node, thymus and appendix, with low expression in bone marrow and fetal liver. Consisting of four leucine-rich LD-motifs at the N-terminus and four LIM domains at the C-terminus, leupaxin associates with a member of the focal adhesion kinase family, PYK2, in lymphoid cells. The leupaxin and PYK2 complex is involved in cell type-specific signaling in which it regulates signaling at sites of adhesion. Leupaxin is a substrate for tyrosine kinase in lymphoid cells and is suggested to participate in and be regulated by tyrosine kinase activity. Leupaxin may be a potential progression marker for a subset of prostate cancer and may act as a novel coactivator of the androgen receptor.

REFERENCES

1. Lipsky, B.P., et al. 1998. Leupaxin is a novel LIM domain protein that forms a complex with PYK2. *J. Biol. Chem.* 273: 11709-11713.
2. Gupta, A., et al. 2003. Leupaxin is a critical adaptor protein in the adhesion zone of the osteoclast. *J. Bone Miner. Res.* 18: 669-685.
3. Watanabe, N., et al. 2005. Leupaxin binds to PEST domain tyrosine phosphatase PEP. *Mol. Cell. Biochem.* 269: 13-17.
4. Chew, V., et al. 2007. Leupaxin negatively regulates B cell receptor signaling. *J. Biol. Chem.* 282: 27181-27191.
5. Sundberg-Smith, L.J., et al. 2008. The LIM protein leupaxin is enriched in smooth muscle and functions as an serum response factor cofactor to induce smooth muscle cell gene transcription. *Circ. Res.* 102: 1502-1511.

CHROMOSOMAL LOCATION

Genetic locus: LPXN (human) mapping to 11q12.1.

PRODUCT

leupaxin 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 leupaxin shRNA Plasmid (h): sc-96309-SH and leupaxin shRNA (h) Lentiviral Particles: sc-96309-V as alternate gene silencing products.

For independent verification of leupaxin (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-96309A, sc-96309B and sc-96309C.

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

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

GENE EXPRESSION MONITORING

leupaxin (B-2): sc-376820 is recommended as a control antibody for monitoring of leupaxin 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 leupaxin gene expression knockdown using RT-PCR Primer: leupaxin (h)-PR: sc-96309-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.

PROTOCOLS

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