

SHARPIN siRNA (h): sc-77833

BACKGROUND

SHARPIN (SHANK-associated RH domain interactor), also known as SIPL1, is a 387 amino acid protein that localizes to the cytoplasm and contains one RanBP2-type zinc finger. Expressed at high levels in placenta and skeletal muscle and present at lower levels in colon, brain, heart, liver, kidney, lung, thymus and small intestine, SHARPIN interacts with Shank 1 and is thought to play a role in the control of inflammatory responses and in the overall development of the immune system. SHARPIN exists as three alternatively spliced isoforms and shares 73% sequence identity with its mouse counterpart, suggesting a conserved role between species. The gene encoding SHARPIN maps to human chromosome 8, which consists of nearly 146 million base pairs, houses more than 800 genes and is associated with a variety of diseases and malignancies.

REFERENCES

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- Daigo, Y., et al. 2003. Novel human and mouse genes encoding a Shank-interacting protein and its upregulation in gastric fundus of W/WV mouse. *J. Gastroenterol. Hepatol.* 18: 712-718.
- Seymour, R.E., et al. 2007. Spontaneous mutations in the mouse SHARPIN gene result in multiorgan inflammation, immune system dysregulation and dermatitis. *Genes Immun.* 8: 416-421.
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CHROMOSOMAL LOCATION

Genetic locus: SHARPIN (human) mapping to 8q24.3.

PRODUCT

SHARPIN siRNA (h) is a pool of 2 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 SHARPIN shRNA Plasmid (h): sc-77833-SH and SHARPIN shRNA (h) Lentiviral Particles: sc-77833-V as alternate gene silencing products.

For independent verification of SHARPIN (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-77833A and sc-77833B.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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

SHARPIN siRNA (h) is recommended for the inhibition of SHARPIN 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 SHARPIN gene expression knockdown using RT-PCR Primer: SHARPIN (h)-PR: sc-77833-PR (20 μ l, 553 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

- Brazee, P.L., et al. 2020. Linear ubiquitin assembly complex regulates lung epithelial driven responses during influenza infection. *J. Clin. Invest.* 130: 1301-1314.

PROTOCOLS

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