



# Sck siRNA (m): sc-40929

## BACKGROUND

Src homology 2 (SH2) domains bind specifically to tyrosine-phosphorylated proteins that temporally participate in signal transduction events. Shc-like protein (Sck) is a neuronal adaptor protein that contains an N-terminal PTB (phosphotyrosine binding) domain, a collagen homology (CH) domain, and a conserved C-terminal SH2 domain. Human Sck transcripts are present at high levels in liver, pancreas, prostate and ovary. In vascular endothelial cells, Sck participates in VEGF-induced signal transduction. Treatment of human umbilical vein endothelial (HUVEC) cells with VEGF induces recruitment of Sck to tyrosine-1175 of the kinase insert domain-containing receptor (KDR) and enhances Sck tyrosine phosphorylation.

## REFERENCES

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3. Igarashi, K., et al. 1998. Sck interacts with KDR and Flt-1 via its SH2 domain. *Biochem. Biophys. Res. Commun.* 251: 77-82.
4. Warner, A.J., et al. 2000. The Shc-related adaptor protein, Sck, forms a complex with the vascular-endothelial-growth-factor receptor KDR in transfected cells. *Biochem. J.* 347: 501-509.
5. Online Mendelian Inheritance in Man, OMIM™. 2000. Johns Hopkins University, Baltimore, MD. MIM Number: 605217. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
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7. Ratcliffe, K.E., et al. 2002. Sck is expressed in endothelial cells and participates in vascular endothelial growth factor-induced signaling. *Oncogene* 21: 6307-6316.
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## CHROMOSOMAL LOCATION

Genetic locus: Shc2 (mouse) mapping to 10 C1.

## PRODUCT

Sck siRNA (m) 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Sck shRNA Plasmid (m): sc-40929-SH and Sck shRNA (m) Lentiviral Particles: sc-40929-V as alternate gene silencing products.

For independent verification of Sck (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-40929A, sc-40929B and sc-40929C.

## 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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

Sck siRNA (m) is recommended for the inhibition of Sck expression in mouse 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  $\mu$ M in 66  $\mu$ 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

Sck (E-3): sc-514627 is recommended as a control antibody for monitoring of Sck 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 $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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 $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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 Sck gene expression knockdown using RT-PCR Primer: Sck (m)-PR: sc-40929-PR (20  $\mu$ 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](http://www.scbt.com) for detailed protocols and support products.