

# PACSIN3 siRNA (h): sc-61279

## BACKGROUND

PACSINs are a family of cytoplasm-resident phosphoproteins that aid in vesicle formation and transport. It is presumed that all isoforms oligomerize and bind dynamin, synaptojanin 1 and N-WASP through their Src homology 3 domains. Furthermore, PACSINs colocalize with dynamin, but not with clathrin, indicating that the proteins may play a specific role with a defined population of dynamin at distinct cellular locations. PACSIN3 (protein kinase C and casein kinase substrate in neurons 3) contains a short proline-rich region and lacks asparagine-proline-phenylalanine motifs, which differentiates it from the rest of the PACSIN family. Sequence analysis of cDNAs encoding mouse and human PACSIN3 predict that the human protein consists of 424-amino acids and is 94% identical to the mouse protein. Studies of the mouse protein report predominant expression in mouse lung, skeletal muscle, and heart as well as in brain, kidney, and uterus.

## REFERENCES

1. Modregger, J., et al. 2001. All three PACSIN isoforms bind to endocytic proteins and inhibit endocytosis. *J. Cell Sci.* 113: 4511-4521.
2. Sumoy, L., et al. 2001. PACSIN 3 is a novel SH3 domain cytoplasmic adapter protein of the pacsin-syndapin-F gene family. *Gene* 262: 199-205.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606513. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Mori, S., et al. 2003. PACSIN3 binds ADAM12/meltrin  $\alpha$  and up-regulates ectodomain shedding of heparin-binding epidermal growth factor-like growth factor. *J. Biol. Chem.* 278: 46029-46034.

## CHROMOSOMAL LOCATION

Genetic locus: PACSIN3 (human) mapping to 11p11.2.

## PRODUCT

PACSIN3 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see PACSIN3 shRNA Plasmid (h): sc-61279-SH and PACSIN3 shRNA (h) Lentiviral Particles: sc-61279-V as alternate gene silencing products.

For independent verification of PACSIN3 (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-61279A and sc-61279B.

## 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

PACSIN3 siRNA (h) is recommended for the inhibition of PACSIN3 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  $\mu$ 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

PACSIN3 (F-8): sc-373952 is recommended as a control antibody for monitoring of PACSIN3 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 PACSIN3 gene expression knockdown using RT-PCR Primer: PACSIN3 (h)-PR: sc-61279-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## SELECT PRODUCT CITATIONS

1. Han, G.H., et al. 2022. RNA sequencing and bioinformatics analysis revealed PACSIN3 as a potential novel biomarker for platinum resistance in epithelial ovarian cancer. *J. Gene Med.* 24: e3452.

## 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.