

PACSIN1 siRNA (m): sc-36172

BACKGROUND

PACSINs are members of a family of cytoplasmic adapter proteins, which share a conserved C-terminal protein binding SH3 domain and a CDC15-NT domain. PACSIN1-related proteins include syndapin 1 (the rat homolog of PACSIN1), FAP52, EM13 and PSTPIP, all of which seem to be involved in signaling pathways associated with cytoskeletal organization. PACSIN1 expression is restricted to terminally differentiated neural tissue, whereas PACSIN2 is widely expressed. PACSIN2 shows vesicle-like distribution and may be involved in regulating endocytotic processes.

REFERENCES

1. Frosch, P.M., et al. 1993. Molecular cloning of an echinococcal microtrichial antigen immunoreactive in *Echinococcus multilocularis* disease. *Mol. Biochem. Parasitol.* 58: 301-310.
2. Merilainen, J., et al. 1997. FAP52, a novel, SH3 domain-containing focal adhesion protein. *J. Biol. Chem.* 272: 23278-23284.
3. Wu, Y., et al. 1998. Tyrosine phosphorylation regulates the SH3-mediated binding of the Wiskott-Aldrich syndrome protein to PSTPIP, a cytoskeletal-associated protein. *J. Biol. Chem.* 273: 5765-5770.
4. Plomann, M., et al. 1998. PACSIN, a brain protein that is upregulated upon differentiation into neuronal cells. *Eur. J. Biochem.* 256: 201-211.
5. Ritter, B., et al. 1999. PACSIN2, a novel member of the PACSIN family of cytoplasmic adapter proteins. *FEBS Lett.* 454: 356-362.
6. Qualmann, B., et al. 1999. Syndapin I, a synaptic dynamin-binding protein that associates with the neural Wiskott-Aldrich syndrome protein. *Mol. Biol. Cell* 10: 501-513.

CHROMOSOMAL LOCATION

Genetic locus: Pacsin1 (mouse) mapping to 17 A3.3.

PRODUCT

PACSIN1 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see PACSIN1 shRNA Plasmid (m): sc-36172-SH and PACSIN1 shRNA (m) Lentiviral Particles: sc-36172-V as alternate gene silencing products.

For independent verification of PACSIN1 (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-36172A, sc-36172B and sc-36172C.

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

PACSIN1 siRNA (m) is recommended for the inhibition of PACSIN1 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 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

PACSIN1 (A-3): sc-166756 is recommended as a control antibody for monitoring of PACSIN1 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 PACSIN1 gene expression knockdown using RT-PCR Primer: PACSIN1 (m)-PR: sc-36172-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Caron, N.S., et al. 2013. Polyglutamine domain flexibility mediates the proximity between flanking sequences in Huntingtin. *Proc. Natl. Acad. Sci. USA* 110: 14610-14615.

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.