SANTA CRUZ BIOTECHNOLOGY, INC.

PACSIN2 siRNA (m): sc-36174

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 microtrichal 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: Pacsin2 (mouse) mapping to 15 E1.

PRODUCT

PACSIN2 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see PACSIN2 shRNA Plasmid (m): sc-36174-SH and PACSIN2 shRNA (m) Lentiviral Particles: sc-36174-V as alternate gene silencing products.

For independent verification of PACSIN2 (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-36174A, sc-36174B and sc-36174C.

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 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

PACSIN2 siRNA (m) is recommended for the inhibition of PACSIN2 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 µM in 66 µl. 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

PACSIN2 (F-12): sc-390136 is recommended as a control antibody for monitoring of PACSIN2 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-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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 PACSIN2 gene expression knockdown using RT-PCR Primer: PACSIN2 (m)-PR: sc-36174-PR (20 µl, 437 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Meng, H., et al. 2011. PACSIN 2 represses cellular migration through direct association with cyclin D1 but not its alternate splice form cyclin D1b. Cell Cycle 10: 73-81.

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.