

PACSIN3 (C-3): sc-166923

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 co-localize 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. PACSIN3 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 α and upregulates ectodomain shedding of heparin-binding epidermal growth factor-like growth factor. *J. Biol. Chem.* 278: 46029-46034.
5. Houdart, F., et al. 2005. The regulatory subunit of PDE6 interacts with PACSIN in photoreceptors. *Mol. Vis.* 11: 1061-1070.
6. Cuajungco, M.P., et al. 2006. PACSINs bind to the TRPV4 cation channel. PACSIN 3 modulates the subcellular localization of TRPV4. *J. Biol. Chem.* 281: 18753-18762.

CHROMOSOMAL LOCATION

Genetic locus: PACSIN3 (human) mapping to 11p11.2; Pacsin3 (mouse) mapping to 2 E1.

SOURCE

PACSIN3 (C-3) is a mouse monoclonal antibody raised against amino acids 151-250 mapping within an internal region of PACSIN3 of human origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

PACSIN3 (C-3) is recommended for detection of PACSIN3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PACSIN3 siRNA (h): sc-61279, PACSIN3 siRNA (m): sc-61280, PACSIN3 shRNA Plasmid (h): sc-61279-SH, PACSIN3 shRNA Plasmid (m): sc-61280-SH, PACSIN3 shRNA (h) Lentiviral Particles: sc-61279-V and PACSIN3 shRNA (m) Lentiviral Particles: sc-61280-V.

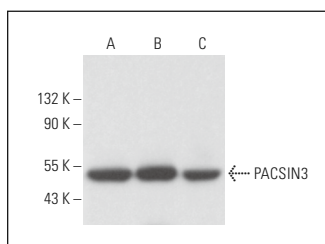
Molecular Weight of PACSIN3: 48 kDa.

Positive Controls: NCI-H460 whole cell lysate: sc-364235, A-673 cell lysate: sc-2414 or HeLa whole cell lysate: sc-2200.

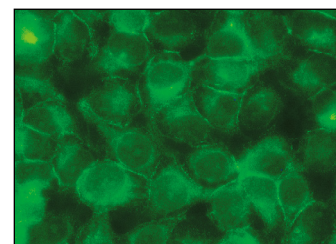
RECOMMENDED SUPPORT REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



PACSIN3 (C-3): sc-166923. Western blot analysis of PACSIN3 expression in NCI-H460 (A), HeLa (B) and A-673 (C) whole cell lysates.



PACSIN3 (C-3): sc-166923. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization.

SELECT PRODUCT CITATIONS

1. Wint, H., et al. 2023. Pacsin 2-dependent N-cadherin internalization regulates the migration behaviour of malignant cancer cells. *J. Cell Sci.* 136: jcs260827.

RESEARCH USE

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