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PACSIN2 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP8088b

Product Information

Application	WB, IHC-P, E
Primary Accession	Q9UNF0
Reactivity	Human, Rat, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	55739
Antigen Region	342-371

Additional Information

Gene ID	11252
Other Names	Protein kinase C and casein kinase substrate in neurons protein 2, Syndapin-2, Syndapin-II, PACSIN2
Target/Specificity	This PACSIN2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 342-371 amino acids from the C-terminal region of human PACSIN2.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	PACSIN2 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PACSIN2
Function	Regulates the morphogenesis and endocytosis of caveolae (By similarity). Lipid-binding protein that is able to promote the tubulation of the phosphatidic acid-containing membranes it preferentially binds. Plays a role in intracellular vesicle-mediated transport. Involved in the endocytosis of cell-surface receptors like the EGF receptor, contributing to its internalization

	in the absence of EGF stimulus (PubMed:21693584, PubMed:23129763, PubMed:23236520, PubMed:23596323). Essential for endothelial organization in sprouting angiogenesis, modulates CDH5-based junctions. Facilitates endothelial front-rear polarity during migration by recruiting EHD4 and MICALL1 to asymmetric adherens junctions between leader and follower cells (By similarity).
Cellular Location	Cytoplasm {ECO:0000250|UniProtKB:Q9WVE8}. Cytoplasm, cytoskeleton {ECO:0000250|UniProtKB:Q9WVE8}. Cytoplasmic vesicle membrane {ECO:0000250|UniProtKB:Q9WVE8}; Peripheral membrane protein {ECO:0000250|UniProtKB:Q9WVE8}; Cytoplasmic side {ECO:0000250|UniProtKB:Q9WVE8}. Cell projection, ruffle membrane {ECO:0000250|UniProtKB:Q9WVE8}; Peripheral membrane protein {ECO:0000250|UniProtKB:Q9WVE8}; Cytoplasmic side {ECO:0000250|UniProtKB:Q9WVE8}. Early endosome {ECO:0000250|UniProtKB:Q9WVE8}. Recycling endosome membrane. Cell membrane {ECO:0000250|UniProtKB:Q9WVE8}; Peripheral membrane protein {ECO:0000250|UniProtKB:Q9WVE8}; Cytoplasmic side {ECO:0000250|UniProtKB:Q9WVE8}. Cell projection. Membrane, caveola. Cell junction, adherens junction {ECO:0000250|UniProtKB:Q9WVE8}. Note=Detected at the neck of flask- shaped caveolae. Localization to tubular recycling endosomes probably requires interaction with MICALL1 and EHD1 {ECO:0000250|UniProtKB:Q9WVE8}
Tissue Location	Widely expressed.

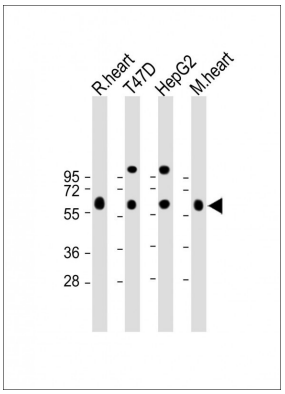
Background

PACSIN may play a role in vesicle formation and transport. This protein homo- and hetero-aggregates with other PACSINs. It also binds dynamin 1, synaptojanin, synapsin 1 and the neural Wiskott-Aldrich syndrome protein (N-WASP). The protein exhibits a cvesicle-like cytoplasmic distribution and is ubiquitously expressed. PACSIN is phosphorylated by casein kinase 2 (CK2) and protein kinase C (PKC). The protein contains 1 FCH domain and 1 SH3 domain.

References

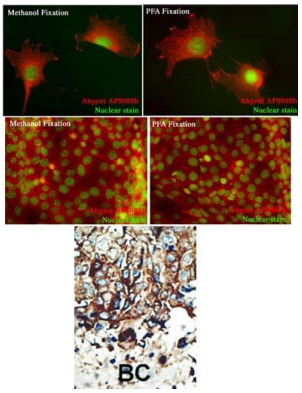
Strausberg, R.L., et al., Proc. Natl. Acad. Sci. U.S.A. 99(26):16899-16903 (2002). Wiemann, S., et al., Genome Res. 11(3):422-435 (2001). Ritter, B., et al., FEBS Lett. 454(3):356-362 (1999). Dunham, I., et al., Nature 402(6761):489-495 (1999).

Images



All lanes : Anti-PACSIN2 Antibody (C-term) at 1:1000 dilution Lane 1: Rat heart tissue lysate Lane 2: T47D whole cell lysate Lane 3: HepG2 whole cell lysate Lane 4: Mouse heart tissuel lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) at 1/15000 dilution. Observed band size : 65kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Formalin-fixed and paraffin-embedded human cancer



tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

Citations

- A junctional PACSIN2/EHD4/MICAL-L1 complex coordinates VE-cadherin trafficking for endothelial migration and angiogenesis
- Expression of a Human Caveolin-1 Mutation in Mice Drives Inflammatory and Metabolic Defect-Associated Pulmonary Arterial Hypertension
- A disease-associated frameshift mutation in caveolin-1 disrupts caveolae formation and function through introduction of a de novo ER retention signal.
- Clostridium difficile Toxin A Undergoes Clathrin-Independent, PACSIN2-Dependent Endocytosis.
- Characterization of a caveolin-1 mutation associated with both PAH and congenital generalized lipodystrophy.
- EHD3 is Required for Tubular Recycling Endosome Stabilization and an Asparagine-Glutamic Acid Residue Pair within its EH Domain Dictates its Selective Binding to NPF Peptides.
- Endocytic recycling protein EHD1 regulates primary cilia morphogenesis and SHH signaling during neural tube development.
- Differential roles of C-terminal Eps15 homology domain proteins as vesiculators and tubulators of recycling endosomes.
- Cooperation of MICAL-L1, syndapin2, and phosphatidic acid in tubular recycling endosome biogenesis.
- The F-BAR protein PACSIN2 regulates epidermal growth factor receptor internalization.
- Pacsin 2 is recruited to caveolae and functions in caveolar biogenesis.
- The F-BAR domain protein PACSIN2 associates with Rac1 and regulates cell spreading and migration.