

PACS1 Antibody

Catalog # ASC11927

Product Information

Application	WB, IF, E
Primary Accession	Q6VY07
Other Accession	NP_060496 , 30089916
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	104898
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	PACS1 antibody can be used for detection of PACS1 by Western blot at 1 - 2 μ g/ml. For immunofluorescence start at 20 μ g/mL.

Additional Information

Gene ID	55690
Other Names	Phosphofurin acidic cluster sorting protein 1, PACS-1, PACS1, KIAA1175
Target/Specificity	PACS1; PACS1 antibody is human, mouse and rat reactive. Multiple isoforms of PACS1 are known to exist. PACS1 antibody is predicted to not cross-react with PACS2.
Reconstitution & Storage	PACS1 antibody can be stored at 4°C for three months and -20°C, stable for up to one year.
Precautions	PACS1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PACS1
Synonyms	KIAA1175
Function	Coat protein that is involved in the localization of trans- Golgi network (TGN) membrane proteins that contain acidic cluster sorting motifs. Controls the endosome-to-Golgi trafficking of furin and mannose-6-phosphate receptor by connecting the acidic-cluster- containing cytoplasmic domain of these molecules with the adapter- protein complex-1 (AP-1) of endosomal clathrin-coated membrane pits. Involved in HIV-1 nef-mediated removal of MHC-I from the cell surface to the TGN. Required for normal ER Ca ²⁺ handling in lymphocytes. Together with WDR37, it plays an essential role in lymphocyte development, quiescence and survival. Required for stabilizing

peripheral lymphocyte populations (By similarity).

Cellular Location

Golgi apparatus, trans-Golgi network {ECO:0000250|UniProtKB:O88588}.
Note=Localizes in the perinuclear region, probably the TGN.

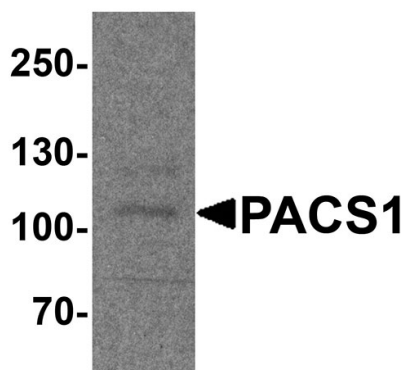
Background

The phosphofurin acidic cluster sorting protein 1 (PACS1), belongs to the PACS family of cytosolic connector proteins that localize different membrane proteins to the trans-Golgi network (TGN) (1,2). Mutations in PACS1 cause defects in cranial-neural crest migration during early development, leading to a recognizable intellectual disability syndrome (3). PACS1, along with the related protein PACS2, also plays a role in HIV-1 Nef-mediated downregulation of cell surface MHC-I molecules to the TGN, thereby enabling HIV-1 to escape immune surveillance (4).

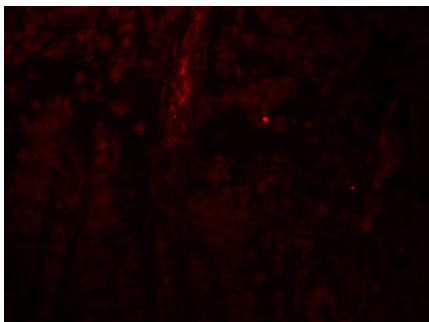
References

- Wan L, Molloy SS, Thomas L, et al. PACS-1 defines a novel gene family of cytosolic sorting proteins required for trans-Golgi network localization. *Cell* 1998; 94:205-16.
- Kottgen M, Benzing T, Simmen T, et al. Trafficking of TRPP2 by PACS proteins represents a novel mechanism of ion channel regulation. *EMBO J.* 2005; 24:705-16.
- Schuurs-Hoeijmakers JH, Oh EC, Vissers LE, et al. Recurrent de novo mutations in PACS1 cause defective cranial-neural-crest migration and define a recognizable intellectual-disability syndrome. *Am. J. Hum. Genet.* 2012; 91:1122-7.
- Dikeakos JD, Thomas L, Kwon G, et al. An interdomain binding site on HIV-1 Nef interacts with PACS-1 and PACS2 on endosomes to down-regulate MHC-I. *Mol. Biol. Cell* 2012; 23:2184-97.

Images



Western blot analysis of PACS1 in rat bladder tissue lysate with PACS1 antibody at 1 µg/ml.



Immunofluorescence of PACS1 in human bladder tissue with PACS1 antibody at 20 µg/mL.

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