

PACS-1b (R-18): sc-8467

BACKGROUND

Phosphofurin acidic cluster sorting protein-1 (PACS-1) is related to a family of cytosolic proteins, including HIV-1 Nef and β -arrestin, that direct the internalization of cell surface receptors through the association with the clathrin/AP-2 sorting machinery. Similarly, PACS-1 participates in the localization of membrane proteins to the secretory pathway membrane compartments. Within the secretory pathway, the *trans*-Golgi network (TGN)/endosomal system is essential for sorting and distributing soluble and membrane associated proteins, and for producing lysosomes for exocytosis. PACS-1 is expressed from two distinct reading frames, which generate both a larger form, designated PACS-1a, and a smaller protein that is designated PACS-1b. PACS-1 proteins preferentially bind to the endoprotease, furin, as well as to the mannose 6-phosphate receptor, where they then facilitate the trafficking and localization of these proteins to the TGN, in a phosphorylation dependent manner.

REFERENCES

1. Wan, L., Molloy, S.S., Thomas, L., Liu, G., Xiang, Y., Rybak, S.L. and Thomas, G. 1998. PACS-1 defines a novel gene family of cytosolic sorting proteins required for *trans*-Golgi network localization. *Cell* 94: 205-216.
2. Benmerah, A., Lamaze, C., Begue, B., Schmid, S.L., Dautry-Varsat, A. and Cerf-Bensussan, N. 1998. AP-2/Eps15 interaction is required for receptor-mediated endocytosis. *J. Cell. Biol.* 140: 1055-1062.
3. Takahashi, S., Nakagawa, T., Banno, T., Watanabe, T., Murakami, K. and Nakayama, K. 1995. Localization of furin to the *trans*-Golgi network and recycling from the cell surface involves Ser and Tyr residues within the cytoplasmic domain. *J. Biol. Chem.* 270: 28397-28401.
4. Teuchert, M., Schäfer, W., Berghöfer, S., Hoflack, B., Klenk, H.D. and Garten, W. 1999. Sorting of Furin at the *trans*-Golgi network. *J. Biol. Chem.* 274: 8199-8207.
5. Le Borgne, R., et al. 1997. Mannose 6-phosphate receptors regulate the formation of clathrin-coated vesicles in the TGN. *J. Cell. Biol.* 137: 335-345.
6. Jones, B.G., Thomas, L., Molloy, S.S., Thulin, C.D., Fry, M.D., Walsh K.A. and Thomas, G. 1995. Intracellular trafficking of furin is modulated by the phosphorylation state of a casein kinase II site in its cytoplasmic tail. *EMBO J.* 14: 5869-5883.

SOURCE

PACS-1b (R-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of PACS-1b of rat origin.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-8467 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PACS-1b (R-18) is recommended for detection of PACS-1b of rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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