

## PACS-2 (E-17): sc-160643

### BACKGROUND

PACS-2 (phosphofurin acidic cluster sorting protein-2), also known as KIAA0602 or PACS1L, is an 889 amino acid protein that localizes to both the mitochondrion and the lumen of the endoplasmic reticulum (ER) and belongs to the PACS (phosphofurin acidic cluster sorting) family. Expressed in a broad range of tissues with highest expression in skeletal muscle, brain, heart, testis and pancreas, PACS-2 interacts with Polycystin-2 and BID and functions as a sorting protein that regulates mitochondria-ER communication. Additionally, PACS-2 is thought to be involved in ion channel trafficking, specifically direct cluster-containing ion channels to distinct subcellular compartments. Multiple isoforms of PACS-2 exist due to alternative splicing events.

### REFERENCES

1. Esposti, M.D., et al. 2001. Bid, a widely expressed proapoptotic protein of the Bcl-2 family, displays lipid transfer activity. *Mol. Cell. Biol.* 21: 7268-7276.
2. Rao, R.V., et al. 2004. Coupling endoplasmic reticulum stress to the cell death program. *Cell Death Differ.* 11: 372-380.
3. Gajkowska, B., et al. 2004. Translocation of Bax and Bid to mitochondria, endoplasmic reticulum and nuclear envelope: possible control points in apoptosis. *J. Mol. Histol.* 35: 11-19.
4. Simmen, T., et al. 2005. PACS-2 controls endoplasmic reticulum-mitochondria communication and Bid-mediated apoptosis. *EMBO J.* 24: 717-729.
5. Kötting, M., et al. 2005. Trafficking of TRPP2 by PACS proteins represents a novel mechanism of ion channel regulation. *EMBO J.* 24: 705-716.
6. Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 610423. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
7. Atkins, K.M., et al. 2008. HIV-1 Nef binds PACS-2 to assemble a multikinase cascade that triggers major histocompatibility complex class I (MHC-I) down-regulation: analysis using short interfering RNA and knock-out mice. *J. Biol. Chem.* 283: 11772-11784.

### CHROMOSOMAL LOCATION

Genetic locus: PACS2 (human) mapping to 14q32.33; Pacs2 (mouse) mapping to 12 F1.

### SOURCE

PACS-2 (E-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PACS-2 of human origin.

### PRODUCT

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

Blocking peptide available for competition studies, sc-160643 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

PACS-2 (E-17) is recommended for detection of PACS-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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); non cross-reactive with PACS-1a or PACS-1b.

Suitable for use as control antibody for PACS-2 siRNA (h): sc-92426, PACS-2 siRNA (m): sc-151987, PACS-2 shRNA Plasmid (h): sc-92426-SH, PACS-2 shRNA Plasmid (m): sc-151987-SH, PACS-2 shRNA (h) Lentiviral Particles: sc-92426-V and PACS-2 shRNA (m) Lentiviral Particles: sc-151987-V.

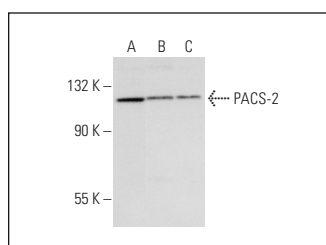
Molecular Weight of PACS-2: 98 kDa.

Positive Controls: A549 cell lysate: sc-2413, K-562 whole cell lysate: sc-2203 or Hep G2 cell lysate: sc-2227.

### 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<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 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<sup>™</sup> Mounting Medium: sc-24941.

### DATA



PACS-2 (E-17): sc-160643. Western blot analysis of PACS-2 expression in A549 (A), K-562 (B) and Hep G2 (C) whole cell lysates.

### STORAGE

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

### RESEARCH USE

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

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.