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PACS2 Antibody

Catalog # ASC11928

Product Information

Application	WB, E
Primary Accession	Q86VP3
Other Accession	NP_056012, 155029546
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	97702
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	PACS2 antibody can be used for detection of PACS2 by Western blot at 1 - 2 g/ml.

Additional Information

Gene ID	23241
Other Names	Phosphofurin acidic cluster sorting protein 2, PACS-2, PACS1-like protein, PACS2, KIAA0602, PACS1L
Target/Specificity	PACS2; PACS2 antibody is human, mouse and rat reactive. At least three isoforms of PACS2 are known to exist; this antibody will detect all three. PACS2 antibody is predicted to not cross-react with PACS1.
Reconstitution & Storage	PACS2 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.
Precautions	PACS2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PACS2 (HGNC:23794)
Synonyms	KIAA0602, PACS1L
Function	Multifunctional sorting protein that controls the endoplasmic reticulum (ER)-mitochondria communication, including the apposition of mitochondria with the ER and ER homeostasis. In addition, in response to apoptotic inducer, translocates BID to mitochondria, which initiates a sequence of events including the formation of mitochondrial truncated BID, the release of cytochrome c, the activation of caspase-3 thereby causing cell death. May also be involved in ion channel trafficking, directing acidic cluster-containing ion channels to distinct subcellular compartments.

Cellular Location	Endoplasmic reticulum. Mitochondrion
Tissue Location	Broadly expressed, with greatest levels in skeletal muscle followed by heart, brain, pancreas and testis

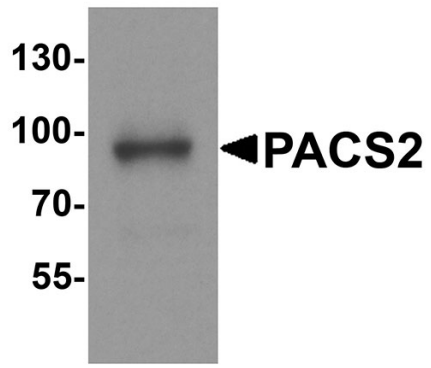
Background

PACS2 (phosphofurin acidic cluster sorting protein-2), 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 family (1,2). It is expressed in a broad range of tissues with highest expression in skeletal muscle, brain, heart, testis and pancreas (2,). PACS2 interacts with Polycystin-2 and BID and functions as a sorting protein that regulates mitochondria-ER communication and is thought to be involved in ion channel trafficking, specifically direct cluster-containing ion channels to distinct subcellular compartments (3-5).

References

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.
Brasacchio D, Noori T, House C, et al. A functional genomics screen identifies PCAF and ADA3 as regulators of human granzyme B-mediated apoptosis and Bid cleavage. Cell Death Differ. 2014; 21:748-60.
Werneburg NW, Bronk SF, Guicciardi ME, et al. Tumor necrosis factor-related apoptosis-inducing ligand (TRAIL) protein-induced lysosomal translocation of proapoptotic effectors is mediated by phosphofurin acidic cluster sorting protein-2 (PACS-2). J. Biol. Chem. 2012; 287:24427-37.
You H and Thomas G. A homeostatic switch in PACS-2 links membrane traffic to TRAIL-induced apoptosis. Cell Cycle 2009; 8:2679-80.

Images



Western blot analysis of PACS2 in mouse brain tissue lysate with PACS2 antibody at 1 µg/ml.