

PHR1 (H-225): sc-134839

BACKGROUND

Pleckstrin homology domain retinal protein 1 (PHR1), also designated Pleckstrin homology domain-containing family B member 1, is a membrane protein that contains a Pleckstrin homology (PH) domain at its N-terminus and a 27 amino acid transmembrane segment at its C-terminus, along with several casein kinase II phosphorylation sites and a putative protein kinase C (PKC) phosphorylation site. The full-length mouse and human PHR1 proteins contain 243 amino acid residues and share 94% sequence identity. The presence of two transcription start sites and alternative splicing results in four PHR1 isoforms in both humans and mice. All PHR1 isoforms bind to transducin β subunits, the binding of which is dependent upon the N-terminal 137 residues of full-length PHR1. This suggests that the PH domain (amino acids 21 to 128), which is present in all PHR1 isoforms, mediates binding. PHR1 shows predominant expression in the outer segments of photoreceptor cells, both in rods and cones, as well as in retina and brain tissues.

REFERENCES

- Andrews, K.L., Potdar, P.D., Nettesheim, P. and Ostrowski, L.E. 2000. KPL1, which encodes a novel PH domain-containing protein, is induced during ciliated cell differentiation of rat tracheal epithelial cells. *Exp. Lung Res.* 26: 257-271.
- Xu, S., Ladak, R., Swanson, D.A., Soltyk, A., Sun, H., Ploder, L., Vidgen, D., Duncan, A.M., Garami, E., Valle, D. and McInnes, R.R. 2000. PHR1 encodes an abundant, Pleckstrin homology domain-containing integral membrane protein in the photoreceptor outer segments. *J. Biol. Chem.* 274: 35676-35685.
- Xu, S., Wang, Y., Zhao, H., Zhang, L., Xiong, W., Yau, K.W., Hiel, H., Glowatzki, E., Ryugo, D.K. and Valle, D. 2004. PHR1, a PH domain-containing protein expressed in primary sensory neurons. *Mol. Cell Biol.* 24: 9137-9151.
- Etournay, R., El-Amraoui, A., Bahloul, A., Blanchard, S., Roux, I., Pezeron, G., Michalski, N., Daviet, L., Hardelin, J.P., Legrain, P. and Petit, C. 2005. PHR1, an integral membrane protein of the inner ear sensory cells, directly interacts with Myosin 1c and Myosin VIIa. *J. Cell Sci.* 118: 2891-2899.
- Johansson, F.K., Göransson, H. and Westermark, B. 2005. Expression analysis of genes involved in brain tumor progression driven by retroviral insertional mutagenesis in mice. *Oncogene* 24: 3896-3905.

CHROMOSOMAL LOCATION

Genetic locus: PLEKHB1 (human) mapping to 11q13.4; Plekhh1 (mouse) mapping to 7 E3.

SOURCE

PHR1 (H-225) is a rabbit polyclonal antibody raised against amino acids 1-225 mapping at the N-terminus of PHR1 of human origin.

PRODUCT

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

APPLICATIONS

PHR1 (H-225) is recommended for detection of PHR1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

Suitable for use as control antibody for PHR1 siRNA (h): sc-61336, PHR1 siRNA (m): sc-61337, PHR1 shRNA Plasmid (h): sc-61336-SH, PHR1 shRNA Plasmid (m): sc-61337-SH, PHR1 shRNA (h) Lentiviral Particles: sc-61336-V and PHR1 shRNA (m) Lentiviral Particles: sc-61337-V.

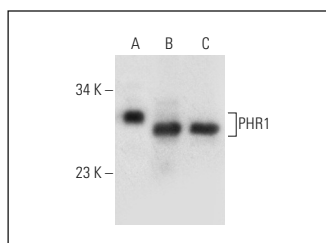
Molecular Weight of PHR1: 27 kDa.

Positive Controls: RPE-J cell lysate: sc-24771, mouse brain extract: sc-2253 or rat brain extract: sc-2392.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



PHR1 (H-225): sc-134839. Western blot analysis of PHR1 expression in RPE-J whole cell lysate (A) and mouse brain (B) and rat brain (C) tissue extracts.

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 or our catalog for detailed protocols and support products.