

PHLDB2 (N-15): sc-99590

BACKGROUND

PHLDB2 (pleckstrin homology-like domain family B member 2), also known as Protein LL5- β , is a 1,253 amino acid protein that contains a spectrin repeat and C-terminal pleckstrin homology (PH) domain. Through its PH domain, PHLDB2 interacts with several phosphoinositides, with highest affinity for phosphatidylinositol 3,4,5-trisphosphate (PtdIns(3,4,5)P₃). In response to decreased PtdIns(3,4,5)P₃ levels, PHLDB2 translocates to vesicular compartments, whereas at high hormone-stimulated PtdIns(3,4,5)P₃ levels, PHLDB2 is localized to the plasma membrane. This suggests that PHLDB2 serves as a sensor of PtdIns(3,4,5)P₃ levels. In a PI3K-independent fashion, PHLDB2 binds Filamin 2, a protein that is involved in reorganizing the actin cytoskeleton in response to signaling events. PHLDB2 is expressed at highest levels in placenta, heart and kidney. There are three isoforms of PHLDB2 that are produced as a result of alternative splicing events.

REFERENCES

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- Katoh, M. and Katoh, M. 2003. Identification and characterization of human LL5A gene and mouse Ll5a gene in silico. *Int. J. Oncol.* 23: 1477-1483.
- Paranavitan, V., et al. 2003. LL5 β is a phosphatidylinositol (3,4,5)-trisphosphate sensor that can bind the cytoskeletal adaptor, γ -filamin. *J. Biol. Chem.* 278: 1328-1335.
- Kishi, M., et al. 2005. LL5 β : a regulator of postsynaptic differentiation identified in a screen for synaptically enriched transcripts at the neuromuscular junction. *J. Cell Biol.* 169: 355-366.
- Goodson, H.V. and Folker, E.S. 2006. CLASping the cell cortex. *Dev. Cell* 11: 4-5.
- Lansbergen, G., et al. 2006. CLASPs attach microtubule plus ends to the cell cortex through a complex with LL5 β . *Dev. Cell* 11: 21-32.

CHROMOSOMAL LOCATION

Genetic locus: PHLDB2 (human) mapping to 3q13.2; Phldb2 (mouse) mapping to 16 B5.

SOURCE

PHLDB2 (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of PHLDB2 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.

Blocking peptide available for competition studies, sc-99590 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

PHLDB2 (N-15) is recommended for detection of PHLDB2 of mouse, rat and human 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); non cross-reactive with other PHLD family members.

PHLDB2 (N-15) is also recommended for detection of PHLDB2 in additional species, including equine and bovine.

Suitable for use as control antibody for PHLDB2 siRNA (h): sc-77974, PHLDB2 siRNA (m): sc-152228, PHLDB2 shRNA Plasmid (h): sc-77974-SH, PHLDB2 shRNA Plasmid (m): sc-152228-SH, PHLDB2 shRNA (h) Lentiviral Particles: sc-77974-V and PHLDB2 shRNA (m) Lentiviral Particles: sc-152228-V.

Molecular Weight of PHLDB2: 160 kDa.

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.

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.