

PHLDA3 (H-54): sc-98599

BACKGROUND

PHLDA3 (pleckstrin homology-like domain, family A, member 3), also known as TIH1, is a 127 amino acid protein that contains one PH domain and is expressed in a variety of tissues, with particularly low expression in spleen and liver tissue. Sharing nearly 100% sequence homology with its mouse counterpart, PHLDA3 functions as a tumor suppressor that inhibits Akt signaling and is required for p53-dependent apoptosis. The gene encoding PHLDA3 maps to human chromosome 1, which spans 260 million base pairs, contains over 3,000 genes and comprises nearly 8% of the human genome. Chromosome 1 houses a large number of disease-associated genes, including those that are involved in familial adenomatous polyposis, Stickler syndrome, Parkinson's disease, Gaucher disease, schizophrenia and Usher syndrome. Aberrations in chromosome 1 are found in a variety of cancers, including head and neck cancer, malignant melanoma and multiple myeloma.

REFERENCES

1. Maruyama, K. and Sugano, S. 1994. Oligo-capping: a simple method to replace the cap structure of eukaryotic mRNAs with oligoribonucleotides. *Gene* 138: 171-174.
2. Frank, D., Mendelsohn, C.L., Ciccone, E., Svensson, K., Ohlsson, R. and Tycko, B. 1999. A novel pleckstrin homology-related gene family defined by Ipl/Tssc3, TDAG51, and Tih1: tissue-specific expression, chromosomal location, and parental imprinting. *Mamm. Genome* 10: 1150-1159.
3. Gottlieb, T.M., Leal, J.F., Seger, R., Taya, Y. and Oren, M. 2002. Cross-talk between Akt, p53 and Mdm2: possible implications for the regulation of apoptosis. *Oncogene* 21: 1299-1303.
4. Kawase, T., Ohki, R., Shibata, T., Tsutsumi, S., Kamimura, N., Inazawa, J., Ohta, T., Ichikawa, H., Aburatani, H., Tashiro, F. and Taya, Y. 2009. PH domain-only protein PHLDA3 is a p53-regulated repressor of Akt. *Cell* 136: 535-550.
5. Online Mendelian Inheritance in Man, OMIM™. 2009. Johns Hopkins University, Baltimore, MD. MIM Number: 607054. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: PHLDA3 (human) mapping to 1q32.1; Phlda3 (mouse) mapping to 1 E4.

SOURCE

PHLDA3 (H-54) is a rabbit polyclonal antibody raised against amino acids 31-78 of PHLDA3 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.

STORAGE

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

APPLICATIONS

PHLDA3 (H-54) is recommended for detection of PHLDA3 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).

PHLDA3 (H-54) is also recommended for detection of PHLDA3 in additional species, including porcine.

Suitable for use as control antibody for PHLDA3 siRNA (h): sc-78630, PHLDA3 siRNA (m): sc-152226, PHLDA3 shRNA Plasmid (h): sc-78630-SH, PHLDA3 shRNA Plasmid (m): sc-152226-SH, PHLDA3 shRNA (h) Lentiviral Particles: sc-78630-V and PHLDA3 shRNA (m) Lentiviral Particles: sc-152226-V.

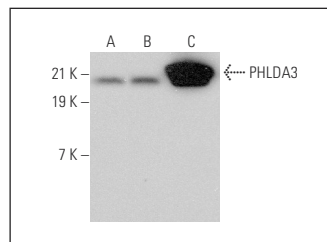
Molecular Weight of PHLDA3: 14 kDa.

Positive Controls: mouse eye extract: sc-364241, MDA-MB-435S whole cell lysate: sc-364184 or RAW 264.7 whole cell lysate: sc-2211.

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



PHLDA3 (H-54): sc-98599. Western blot analysis of PHLDA3 expression in RAW 264.7 (A) and MDA-MB-435S (B) whole cell lysates and mouse eye tissue extract (C).

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.