

# PLEKHA4 (P-14): sc-162016

## BACKGROUND

PLEKHA4 (Pleckstrin homology domain-containing family A member 4), also known as PEPP1 (phosphoinositol 3-phosphate-binding protein 1), is a 779 amino acid protein that contains one Pleckstrin homology (PH) domain, which is found in proteins that are involved in intracellular signaling. PLEKHA4 specifically binds to PtdIns3P (phosphatidylinositol-3-phosphate), a phospholipid that resides on early endosomes, but not to other phosphoinositides. Though detected at low levels in normal skeletal muscle, small intestine, liver, heart and kidney, PLEKHA4 is found to be highly expressed in melanoma. The gene encoding PLEKHA4 maps to human chromosome 19, which consists of over 63 million bases, houses approximately 1,400 genes and is recognized for having the greatest gene density of the human chromosomes. There are two isoforms of PLEKHA4 that are produced as a result of alternative splicing events.

## REFERENCES

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- Dowler, S., et al. 2000. Identification of pleckstrin-homology-domain-containing proteins with novel phosphoinositide-binding specificities. *Biochem. J.* 351: 19-31.
- Lemmon, M.A. and Ferguson, K.M. 2001. Molecular determinants in pleckstrin homology domains that allow specific recognition of phosphoinositides. *Biochem. Soc. Trans.* 29: 377-384.
- Online Mendelian Inheritance in Man, OMIM™. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 607769. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>.
- Lemmon, M.A. 2004. Pleckstrin homology domains: not just for phosphoinositides. *Biochem. Soc. Trans.* 32: 707-711.
- Cozier, G.E., et al. 2004. Membrane targeting by pleckstrin homology domains. *Curr. Top. Microbiol. Immunol.* 282: 49-88.
- Grimwood, J., et al. 2004. The DNA sequence and biology of human chromosome 19. *Nature* 428: 529-535.

## CHROMOSOMAL LOCATION

Genetic locus: PLEKHA4 (human) mapping to 19q13.42; Plekha4 (mouse) mapping to 7 B4.

## SOURCE

PLEKHA4 (P-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PLEKHA4 of human origin.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.

## 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-162016 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

PLEKHA4 (P-14) is recommended for detection of PLEKHA4 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 other PLEKHA family members.

Suitable for use as control antibody for PLEKHA4 siRNA (h): sc-97478, PLEKHA4 siRNA (m): sc-152305, PLEKHA4 shRNA Plasmid (h): sc-97478-SH, PLEKHA4 shRNA Plasmid (m): sc-152305-SH, PLEKHA4 shRNA (h) Lentiviral Particles: sc-97478-V and PLEKHA4 shRNA (m) Lentiviral Particles: sc-152305-V.

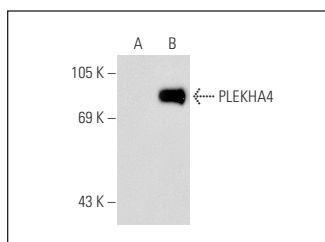
Molecular Weight of PLEKHA4: 85 kDa.

Positive Controls: PLEKHA4 (h): 293T Lysate: sc-116978.

## 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) 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™ Mounting Medium: sc-24941.

## DATA



PLEKHA4 (P-14): sc-162016. Western blot analysis of PLEKHA4 expression in non-transfected: sc-117752 (A) and human PLEKHA4 transfected: sc-116978 (B) 293T whole cell lysates.

## RESEARCH USE

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