

PHACTR1 (D-13): sc-103813

BACKGROUND

In eukaryotes, the phosphorylation and dephosphorylation of proteins on serine and threonine residues is an essential means of regulating a broad range of cellular functions, including division, homeostasis and apoptosis. A group of proteins that are intimately involved in this process are the protein phosphatases. PHACTR1 (phosphatase and Actin regulator 1), also known as RPEL or RPEL1, is a 580 amino acid cytoplasmic protein belonging to the phosphatase and Actin regulator family. Existing as two alternatively spliced isoforms, PHACTR1 contains RPEL repeats and is encoded by a gene located on human chromosome 6, which contains around 1,200 genes and 170 million base pairs. Deletion of a portion of the q arm of chromosome 6 is associated with early onset intestinal cancer suggesting the presence of a cancer susceptibility locus. Porphyria cutanea tarda is associated with chromosome 6 through the HFE gene which, when mutated, predisposes an individual to developing this porphyria.

REFERENCES

- Allen, P.B., Greenfield, A.T., Svenningsson, P., Haspeslagh, D.C. and Greengard, P. 2004. Phactrs 1-4: A family of protein phosphatase 1 and Actin regulatory proteins. *Proc. Natl. Acad. Sci. USA* 101: 7187-7192.
- Online Mendelian Inheritance in Man, OMIM™. 2004. Johns Hopkins University, Baltimore, MD. MIM Number: 608723. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Drögemüller, C., Kuiper, H., Williams, J.L. and Distl, O. 2005. Assignment of the PHACTR1 gene to bovine chromosome 23q24 by fluorescence *in situ* hybridization and radiation hybrid mapping. *Cytogenet. Genome Res.* 109: 533.
- Olsson, K.S., Ritter, B. and Hansson, N. 2007. The HLA-A1-B8 haplotype hitchhiking with the hemochromatosis mutation: does it affect the phenotype? *Eur. J. Haematol.* 79: 429-434.

CHROMOSOMAL LOCATION

Genetic locus: PHACTR1 (human) mapping to 6p24.1; Phactr1 (mouse) mapping to 13 A4.

SOURCE

PHACTR1 (D-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of PHACTR1 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.

Blocking peptide available for competition studies, sc-103813 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

PHACTR1 (D-13) is recommended for detection of PHACTR1 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 PHACTR family members.

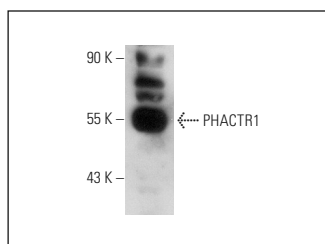
Suitable for use as control antibody for PHACTR1 siRNA (h): sc-95456, PHACTR1 siRNA (m): sc-106404, PHACTR1 shRNA Plasmid (h): sc-95456-SH, PHACTR1 shRNA Plasmid (m): sc-106404-SH, PHACTR1 shRNA (h) Lentiviral Particles: sc-95456-V and PHACTR1 shRNA (m) Lentiviral Particles: sc-106404-V.

Molecular Weight of PHACTR1: 66 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) 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



PHACTR1 (D-13): sc-103813. Western blot analysis of PHACTR1 expression in 293T whole cell lysate.

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.

MONOS
Satisfaction
Guaranteed

Try **PHACTR1 (E-2): sc-514800**, our highly recommended monoclonal alternative to PHACTR1 (D-13).