PHACTR3 (H-3): sc-390843

**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. PHACTR3 (phosphatase and Actin regulator 3), also known as Scapinin (scaffold-associated PP1-inhibiting protein), is a 559 amino acid nuclear matrix protein that inhibits protein phosphatase 1 (PP1) activity by binding actin and PP1α, the catalytic subunit. PHACTR3 is highly expressed in brain, and expressed at lower levels in placenta, thymus and spleen. Mutations in the gene encoding PHACTR3 are found in non-small cell lung carcinoma and these mutations are associated with worse prognosis. There are three isoforms of PHACTR3 that are expressed as a result of alternative splicing events. PHACTR3 is upregulated in several tumor types, with isoform 3 being the major form in GOTO, HL-60 and U937 cell lines.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: PHACTR3 (human) mapping to 2q13.32; Phactr3 (mouse) mapping to 2 H4.

**SOURCE**

PHACTR3 (H-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 257-244 within an internal region of PHACTR3 of human origin.

**PRODUCT**

Each vial contains 200 µg IgG kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PHACTR3 (H-3) is available conjugated to agarose (sc-390843 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390843 HRP), 200 µg/ml, for WB, IHC/IP and ELISA; to either phycoerythrin (sc-390843 PE), fluorescein (sc-390843 FITC), Alexa Fluor® 488 (sc-390843 AF488), Alexa Fluor® 546 (sc-390843 AF546), Alexa Fluor® 594 (sc-390843 AF594) or Alexa Fluor® 647 (sc-390843 AF647), 200 µg/ml, for WB (RGB), IF, IHC/IP and FCM; and to either Alexa Fluor® 680 (sc-390843 AF680) or Alexa Fluor® 790 (sc-390843 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-390843 P (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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**APPLICATIONS**

PHACTR3 (H-3) is recommended for detection of PHACTR3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for PHACTR3 siRNA (h): sc-76114, PHACTR3 siRNA (m): sc-152201, PHACTR3 shRNA Plasmid (h): sc-76114-SH, PHACTR3 shRNA Plasmid (m): sc-152201-SH, PHACTR3 shRNA (h) Lentiviral Particles: sc-76114-V and PHACTR3 shRNA (m) Lentiviral Particles: sc-152201-V.

Molecular Weight of PHACTR3 isoforms: 60-75 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132, HL-60 nuclear extract: sc-2147 or THP-1 cell lysate: sc-2238.

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGk BP-HRP: sc-516102 or m-IgGk BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGk BP-FITC: sc-516140 or m-IgGk BP-PE: sc-516141 (dilution range: 1:100-1:200) with UltraCruz® Hard-set Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

**DATA**

![Western blot analysis of PHACTR3 expression in HeLa (A), Abspre (B), NIH/3T3 (C) and HEK293 (D) whole cell lysates.](image1)

PHACTR3 (H-3): sc-390843. Western blot analysis of PHACTR3 expression in HeLa (A) and NIH/3T3 (B) whole cell lysates.

![Western blot analysis of PHACTR3 expression in Jurkat (A) and HL-60 (B) nuclear extracts and THP-1 whole cell lysate (C).](image2)

PHACTR3 (H-3): sc-390843. Western blot analysis of PHACTR3 expression in Jurkat (A) and HL-60 (B) nuclear extracts and THP-1 whole cell lysate (C).

**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 for detailed protocols and support products.