

PHACTR3 (N-20): sc-85816

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 PP1 α , 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

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CHROMOSOMAL LOCATION

Genetic locus: PHACTR3 (human) mapping to 20q13.32; Phactr3 (mouse) mapping to 2 H4.

SOURCE

PHACTR3 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of PHACTR3 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-85816 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PHACTR3 (N-20) is recommended for detection of PHACTR3 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 PHACTR1, PHACTR2 and PHACTR4.

PHACTR3 (N-20) is also recommended for detection of PHACTR3 in additional species, including equine and avian.

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.

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.

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.