

p-Op18 (Ser 38): sc-101810

BACKGROUND

Oncoprotein 18 (Op18) is a regulator of microtubule (MT) dynamics. Op18 is a target for both cell cycle and cell surface receptor-coupled kinase systems, and phosphorylation of Op18 on specific combinations of amino acid residues has been shown to switch off MT-destabilizing activity of Op18. Induced expression of the catalytic subunit of cAMP-dependent protein kinase (PKA) results in a dramatic increase in cellular MT polymer content concomitant with phosphorylation and partial degradation of Op18. Phosphorylation of Op18 on two specific sites, Serine 16 and Serine 63, is necessary and sufficient for PKA to switch off Op18 activity in intact cells. PKA phosphorylation downregulates the MT-destabilizing activity of Op18, which in turn promotes increased tubulin polymerization. Op18 has the potential to regulate the MT system in response to external signals such as cAMP-linked agonists.

REFERENCES

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- Gradin, H.M., Larsson, N., Marklund, U. and Gullberg, M. 1998. Regulation of microtubule dynamics by extracellular signals: cAMP-dependent protein kinase switches off the activity of oncoprotein 18 in intact cells. *J. Cell Biol.* 140: 131-141.
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- le Gouvello, S., Manceau, V. and Sobel, A. 1998. Serine 16 of stathmin as a cytosolic target for Ca²⁺/calmodulin-dependent kinase II after CD2 triggering of human T lymphocytes. *J. Immunol.* 161: 1113-1122.

CHROMOSOMAL LOCATION

Genetic locus: STMN1 (human) mapping to 1p36.11; Stmn1 (mouse) mapping to 4 D3.

SOURCE

p-Op18 (Ser 38) is a rabbit polyclonal antibody raised against a short amino acid sequence containing phosphorylated Ser 38 of Op18 of human origin.

PRODUCT

Each vial contains 100 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

p-Op18 (Ser 38) is recommended for detection of Ser 38 phosphorylated Op18 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 and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Op18 siRNA (h): sc-36127 and Op18 siRNA (m): sc-36128.

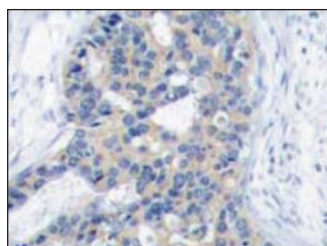
Molecular Weight of p-Op18: 19 kDa.

Positive Controls: Jurkat + PMA nuclear extract: sc-2133 or human breast carcinoma tissue.

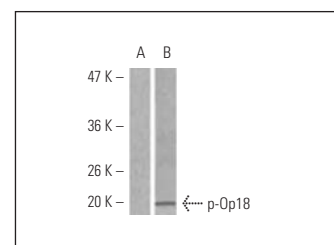
RECOMMENDED SECONDARY REAGENTS

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 B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent) 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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



p-Op18 (Ser 38): sc-101810. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast carcinoma tissue showing cytoplasmic staining.



p-Op18 (Ser 38): sc-101810. Western blot analysis of phosphorylated Op18 expression in untreated (A) and PMA-treated (B) Jurkat whole cell lysates.

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.