

# Rho GAP p190-B (H-160): sc-30206

## BACKGROUND

Rho GAP p190-B (ARHGAP5, RhoGAP5; Rho GTPase activating protein 5, p190-B, RasGAP-associated p105 protein) negatively regulates Rho GTPases by stimulating the hydrolysis of bound GTP. Two transcript variants encoding different isoforms have been found for the human gene. Rho GAP p190-B localizes diffusely in the cytoplasm, and in fibrillar patterns that co-localize with  $\alpha 5/\beta 1$  integrin receptor in normal human foreskin fibroblasts, RD muscle cells, and HT-1080 cells. Rho GAP p190-B interacts with transmembrane plexin receptors and mediates semaphorin signalling to the Actin cytoskeleton, guiding cell migration and axon extension. Plexin activation leads to the disassembly of integrin-based focal adhesive structures and to Actin cytoskeleton remodelling and inhibition of cell migration. SHP-2-dependent dephosphorylation of Rho GAP p190-B leads to the activation of RhoA in myoblasts, supporting the idea that myogenesis is under the influence of SHP-2 activity on the Rho GAP p190/RhoA pathway.

## REFERENCES

1. Foster, R., et al. 1994. p190 RhoGAP, the major RasGAP-associated protein, binds GTP directly. *Mol. Cell. Biol.* 14: 7173-7181.
2. Chang, J.H., et al. 1995. c-Src regulates the simultaneous rearrangement of actin cytoskeleton, p190RhoGAP, and p120RasGAP following epidermal growth factor stimulation. *J. Cell Biol.* 130: 355-368.
3. Burbelo, P.D., et al. 1995. p190-B, a new member of the Rho GAP family, and Rho are induced to cluster after integrin cross-linking. *J. Biol. Chem.* 270: 30919-30926.
4. Tatsis, N., et al. 1998. The function of the p190 Rho GTPase-activating protein is controlled by its N-terminal GTP binding domain. *J. Biol. Chem.* 273: 34631-34638.
5. Chen, J.C., et al. 2003. Oncogenic Ras leads to Rho activation by activating the mitogen-activated protein kinase pathway and decreasing Rho-GTPase-activating protein activity. *J. Biol. Chem.* 278: 2807-2818.
6. Wolf, R.M., et al. 2003. p190RhoGAP can act to inhibit PDGF-induced gliomas in mice: a putative tumor suppressor encoded on human chromosome 19q13.3. *Genes Dev.* 17: 476-487.
7. Wennerberg, K., et al. 2003. Rnd proteins function as RhoA antagonists by activating p190 RhoGAP. *Curr. Biol.* 13: 1106-1115.

## CHROMOSOMAL LOCATION

Genetic locus: ARHGAP5 (human) mapping to 14q12; Arhgap5 (mouse) mapping to 12 B3.

## SOURCE

Rho GAP p190-B (H-160) is a rabbit polyclonal antibody raised against amino acids 1091-1250 mapping within an internal region of Rho GAP p190-B of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

Rho GAP p190-B (H-160) is recommended for detection of Rho GAP p190-B of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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 Rho GAP p190-B siRNA (h): sc-44077, Rho GAP p190-B siRNA (m): sc-44986, Rho GAP p190-B shRNA Plasmid (h): sc-44077-SH, Rho GAP p190-B shRNA Plasmid (m): sc-44986-SH, Rho GAP p190-B shRNA (h) Lentiviral Particles: sc-44077-V and Rho GAP p190-B shRNA (m) Lentiviral Particles: sc-44986-V.

Molecular Weight of Rho GAP p190-B: 190 kDa.

## 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 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 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.

## SELECT PRODUCT CITATIONS

1. O'Brien, M., et al. 2008. Expression of Rho GTPase regulators in human myometrium. *Reprod. Biol. Endocrinol.* 6: 1.

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

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Try **Rho GAP p190-B (G-11): sc-393241** or **Rho GAP p190-B (54): sc-136187**, our highly recommended monoclonal alternatives to Rho GAP p190-B (H-160).