

Rho GAP p190-B (G-11): sc-393241

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.

CHROMOSOMAL LOCATION

Genetic locus: ARHGAP5 (human) mapping to 14q12; Arhgap5 (mouse) mapping to 12 C1.

SOURCE

Rho GAP p190-B (G-11) is a mouse monoclonal 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 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Rho GAP p190-B (G-11) is available conjugated to agarose (sc-393241 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393241 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393241 PE), fluorescein (sc-393241 FITC), Alexa Fluor® 488 (sc-393241 AF488), Alexa Fluor® 546 (sc-393241 AF546), Alexa Fluor® 594 (sc-393241 AF594) or Alexa Fluor® 647 (sc-393241 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393241 AF680) or Alexa Fluor® 790 (sc-393241 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

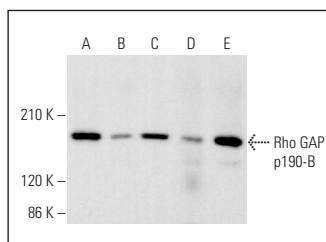
Rho GAP p190-B (G-11) is recommended for detection of Rho GAP p190-B of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, 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.

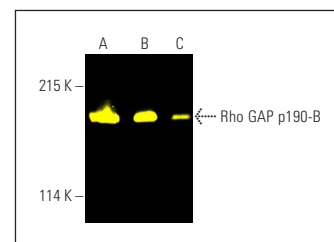
Molecular Weight of Rho GAP p190-B: 190 kDa.

Positive Controls: HEK293T whole cell lysate: sc-45137, 3T3-L1 cell lysate: sc-2243 or SK-BR-3 cell lysate: sc-2218.

DATA



Rho GAP p190-B (G-11): sc-393241. Western blot analysis of Rho GAP p190-B expression in 3T3-L1 (A), Caki-1 (B), SK-BR-3 (C), BT-20 (D) and L6 (E) whole cell lysates.



Rho GAP p190-B (G-11) Alexa Fluor® 488: sc-393241 AF488. Direct fluorescent western blot analysis of Rho GAP p190-B expression in SK-BR-3 (A), HEK293T (B) and 3T3-L1 (C) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214.

SELECT PRODUCT CITATIONS

1. Poirier, M.B., et al. 2020. F-Actin flashes on phagosomes mechanically deform contents for efficient digestion in macrophages. *J. Cell Sci.* 133: jcs239384.
2. Dai, Y., et al. 2020. Identification and characterization of a new isoform of small GTPase RhoE. *Commun. Biol.* 3: 572.
3. Taga, S., et al. 2022. miR-486-5p inhibits invasion and migration of HTR8/SVneo trophoblast cells by down-regulating ARHGAP5. *Placenta* 123: 5-11.

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.

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