SANTA CRUZ BIOTECHNOLOGY, INC.

GRF-1 (C-4): sc-390997

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The glucocorticoid receptor (GR) is a ligand-dependent, transactivating regulatory protein that is a member of the nuclear receptor superfamily. GRF-1 (glucocorticoid receptor DNA-binding factor 1), also known as p190RhoGAP or simply p190, is a transcriptional regulator which binds to the promoter region of the glucocorticoid receptor gene and represses its expression. By repressing GR expression, GRF-1 acts to down-regulate Rho signaling, thereby mediating both Actin cytoskeletal rearrangements and cell cycle events. Through its GAP domain, GRF-1 is thought to affect cytokinesis by regulating Rho activity; a regulation that is controlled by the ubiquination of the GTP binding region and subsequent degradation of GRF-1. Additionally, GRF-1 plays an important role in oligodendrocyte differentiation, a process that is absent in malignant glioma tumors, implicating GRF-1 as a possible tumor suppressor. GRF-1 expression is regulated by glucocorticoids and the expressed protein exists as two isoforms produced by alternative splicing events.

REFERENCES

1. Dib, K., et al. 2001. Role of p190RhoGAP in β 2 integrin regulation of RhoA in human neutrophils. J. Immunol. 166: 6311-6322.
2. Su, L., et al. 2003. p190RhoGAP is cell cycle regulated and affects cytokinesis. J. Cell Biol. 163: 571-582.
3. Hernández, S.E., et al. 2004. Adhesion-dependent regulation of p190RhoGAP in the developing brain by the Abl-related gene tyrosine kinase. Curr. Biol. 14: 691-696.
4. Holinstat, M., et al. 2006. Suppression of RhoA activity by focal adhesion kinase-induced activation of p190RhoGAP: role in regulation of endothelial permeability. J. Biol. Chem. 281: 2296-2305.
5. Sastry, S.K., et al. 2006. PTP-PEST couples membrane protrusion and tail retraction via VAV2 and p190RhoGAP. J. Biol. Chem. 281: 11627-11636.

CHROMOSOMAL LOCATION

Genetic locus: ARHGAP35 (human) mapping to 19q13.32; Arhgap35 (mouse) mapping to 7 A2.

SOURCE

GRF-1 (C-4) is a mouse monoclonal antibody raised against amino acids 881-1080 mapping within an internal region of GRF-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

GRF-1 (C-4) is available conjugated to agarose (sc-390997 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390997 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390997 PE), fluorescein (sc-390997 FITC), Alexa Fluor® 488 (sc-390997 AF488), Alexa Fluor® 546 (sc-390997 AF546), Alexa Fluor® 594 (sc-390997 AF594) or Alexa Fluor® 647 (sc-390997 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390997 AF680) or Alexa Fluor® 790 (sc-390997 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

GRF-1 (C-4) is recommended for detection of GRF-1 isoforms 1 and 2 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 GRF-1 siRNA (h): sc-97682, GRF-1 siRNA (m): sc-41706, GRF-1 shRNA Plasmid (h): sc-97682-SH, GRF-1 shRNA Plasmid (m): sc-41706-SH, GRF-1 shRNA (h) Lentiviral Particles: sc-97682-V and GRF-1 shRNA (m) Lentiviral Particles: sc-41706-V.

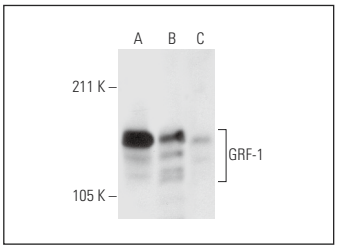
Molecular Weight of GRF-1: 190 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, c4 whole cell lysate: sc-364186 or MCF7 nuclear extract: sc-2149.

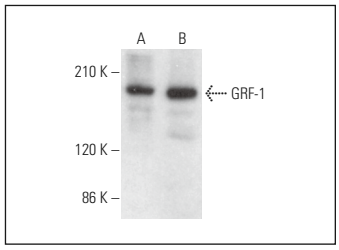
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



GRF-1 (C-4): sc-390997. Western blot analysis of GRF-1 expression in HeLa (**A**) and c4 (**B**) whole cell lysates and MCF7 nuclear extract (**C**).



GRF-1 (C-4): sc-390997. Western blot analysis of GRF-1 expression in HeLa whole cell lysate (**A**) and human brain tissue extract (**B**).

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.

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