

GRF-1 (2389D3a): sc-81094

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 ubiquitination 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.
6. Kusama, T., et al. 2006. Inactivation of Rho GTPases by p190 RhoGAP reduces human pancreatic cancer cell invasion and metastasis. *Cancer Sci.* 97: 848-853.
7. Wildenberg, G.A., et al. 2006. p120-catenin and p190RhoGAP regulate cell-cell adhesion by coordinating antagonism between Rac and Rho. *Cell* 127: 1027-1039.

CHROMOSOMAL LOCATION

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

SOURCE

GRF-1 (2389D3a) is a mouse monoclonal antibody raised against a recombinant protein corresponding to an internal region of GRF-1 of human origin.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

PRODUCT

Each vial contains 100 μ g IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 1.0% stabilizer protein.

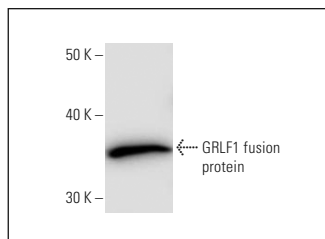
APPLICATIONS

GRF-1 (2389D3a) is recommended for detection of GRF-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)].

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.

DATA



GRF-1 (2389D3a): sc-81094. Western blot analysis of human recombinant GRLF1 fusion protein.

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.