

GIT1 (13): sc-135924

BACKGROUND

Heterotrimeric G protein-mediated signal transduction is a dynamically regulated process with the intensity of signal decreasing over time despite the continued presence of the agonist. G protein-coupled receptor kinases (GRKs) are activated by activated G protein-coupled receptors, and they function to phosphorylate and inactivate cell surface receptors in the heterotrimeric G protein signaling cascade. GIT1 (for GRK-interactor 1) and GIT2 are GTPase-activating proteins (GAP) for members of the ADP ribosylation factor (ARF) family of small GTP-binding proteins, which are involved in vesicular trafficking. GIT1 overexpression results in reduced internalization and resensitization of β 2-adrenergic receptor, thus reducing β 2-adrenergic receptor signaling.

REFERENCES

- Hausdorff, W.P., Caron, M.G. and Lefkowitz, R.J. 1990. Turning off the signal: desensitization of β -adrenergic receptor function. *FASEB J.* 4: 2881-2889.
- Pei, G., Tiberi, M., Caron, M.G. and Lefkowitz, R.J. 1994. An approach to the study of G-protein-coupled receptor kinases: an *in vitro*-purified membrane assay reveals differential receptor specificity and regulation by G β γ subunits. *Proc. Natl. Acad. Sci. USA* 91: 3633-3636.
- Lefkowitz, R.J. 1998. G protein-coupled receptors. III. New roles for receptor kinases and β -arrestins in receptor signaling and desensitization. *J. Biol. Chem.* 273: 18677-18680.
- Pitcher, J.A., Freedman, N.J. and Lefkowitz, R.J. 1998. G protein-coupled receptor kinases. *Annu. Rev. Biochem.* 67: 653-692.
- Premont, R.T., Claing, A., Vitale, N., Freeman, J.L., Pitcher, J.A., Patton, W.A., Moss, J., Vaughan, M. and Lefkowitz, R.J. 1998. β 2-adrenergic receptor regulation by GIT1, a G protein-coupled receptor kinase-associated ADP ribosylation factor GTPase-activating protein. *Proc. Natl. Acad. Sci. USA* 95: 14082-14087.
- Premont, R.T., Claing, A., Vitale, N., Perry, S.J. and Lefkowitz, R.J. 2000. The GIT family of ADP-ribosylation factor GTPase-activating proteins. Functional diversity of GIT2 through alternative splicing. *J. Biol. Chem.* 275: 22373-22380.

CHROMOSOMAL LOCATION

Genetic locus: GIT1 (human) mapping to 17q11.2; Git1 (mouse) mapping to 11 B5.

SOURCE

GIT1 (13) is a mouse monoclonal antibody raised against amino acids 664-770 of GIT1 of rat origin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PRODUCT

Each vial contains 50 μ g IgG_{2a} in 500 μ l PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

GIT1 (13) is recommended for detection of GIT1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for GIT1 siRNA (h): sc-35477, GIT1 siRNA (m): sc-35478, GIT1 shRNA Plasmid (h): sc-35477-SH, GIT1 shRNA Plasmid (m): sc-35478-SH, GIT1 shRNA (h) Lentiviral Particles: sc-35477-V and GIT1 shRNA (m) Lentiviral Particles: sc-35478-V.

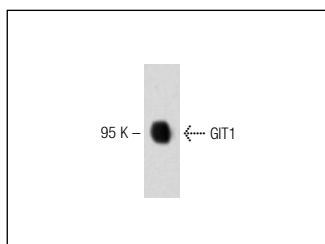
Molecular Weight of GIT1: 95 kDa.

Positive Controls: rat brain extract: sc-2392, rat testis extract: sc-2400 or SK-N-SH cell lysate: sc-2410.

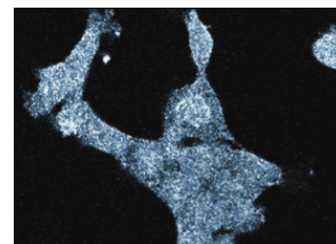
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (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-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



GIT1 (13): sc-135924. Western blot analysis of GIT1 expression in rat brain tissue extract.



GIT1 (13): sc-135924. Immunofluorescence staining of A432 cells showing cytoplasmic staining.

RESEARCH USE

For research use only, not for use in diagnostic procedures. Not for resale.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.