SANTA CRUZ BIOTECHNOLOGY, INC.

GIT1 (B-2): sc-373882

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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

1. Hausdorff, W.P., et al. 1990. Turning off the signal: desensitization of β-adrenergic receptor function. FASEB J. 4: 2881-2889.
2. Pei, G., et al. 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 $G_{\beta\gamma}$ subunits. Proc. Natl. Acad. Sci. USA 91: 3633-3636.
3. 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.
4. Pitcher, J.A., et al. 1998. G protein-coupled receptor kinases. Annu. Rev. Biochem. 67: 653-692.
5. Premont, R.T., et al. 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.
6. Premont, R.T., et al. 2000. A second ARF GTPase-activating protein that interacts with GRKs. Functional diversity of GIT2 through alternative splicing. J. Biol. Chem. 275: 22373-22380.

CHROMOSOMAL LOCATION

Genetic locus: GIT1 (human) mapping to 17p11.2; Git1 (mouse) mapping to 11 B5.

SOURCE

GIT1 (B-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 7-35 near the N-terminus of GIT1 of rat origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-373882 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

GIT1 (B-2) is recommended for detection of GIT1 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 GIT1 siRNA (h): sc-35477, GIT1 siRNA (m): sc-35478, GIT1 siRNA (r): sc-45954, GIT1 shRNA Plasmid (h): sc-35477-SH, GIT1 shRNA Plasmid (m): sc-35478-SH, GIT1 shRNA Plasmid (r): sc-45954-SH, GIT1 shRNA (h) Lentiviral Particles: sc-35477-V, GIT1 shRNA (m) Lentiviral Particles: sc-35478-V and GIT1 shRNA (r) Lentiviral Particles: sc-45954-V.

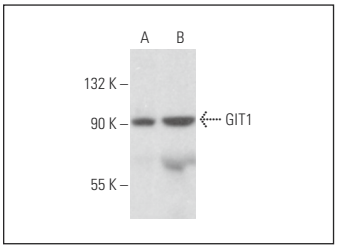
Molecular Weight of GIT1: 95 kDa.

Positive Controls: rat testis extract: sc-2400, IMR-32 cell lysate: sc-2409 or rat brain extract: sc-2392.

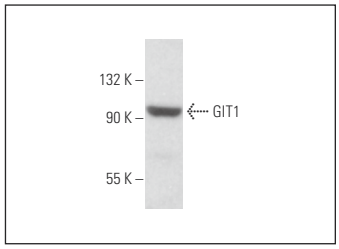
RECOMMENDED SUPPORT REAGENTS

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



GIT1 (B-2): sc-373882. Western blot analysis of GIT1 expression in rat brain (**A**) and rat testis (**B**) tissue extracts.



GIT1 (B-2): sc-373882. Western blot analysis of GIT1 expression in IMR-32 whole cell lysate.

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.