

# GIT1 (A-1): sc-365084

## 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  $\beta_2$ -adrenergic receptor, thus reducing  $\beta_2$ -adrenergic receptor signaling.

## REFERENCES

- Hausdorff, W.P., et al. 1990. Turning off the signal: desensitization of  $\beta$ -adrenergic receptor function. *FASEB J.* 4: 2881-2889.
- 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.
- Lefkowitz, R.J. 1998. G protein-coupled receptors. III. New roles for receptor kinases and  $\beta$ -arrestins in receptor signaling and desensitization. *J. Biol. Chem.* 273: 18677-18680.
- Pitcher, J.A., et al. 1998. G protein-coupled receptor kinases. *Annu. Rev. Biochem.* 67: 653-692.

## CHROMOSOMAL LOCATION

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

## SOURCE

GIT1 (A-1) 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  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

GIT1 (A-1) is available conjugated to agarose (sc-365084 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365084 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365084 PE), fluorescein (sc-365084 FITC), Alexa Fluor® 488 (sc-365084 AF488), Alexa Fluor® 546 (sc-365084 AF546), Alexa Fluor® 594 (sc-365084 AF594) or Alexa Fluor® 647 (sc-365084 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365084 AF680) or Alexa Fluor® 790 (sc-365084 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-365084 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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## APPLICATIONS

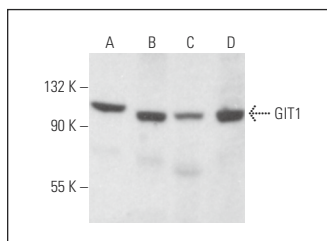
GIT1 (A-1) is recommended for detection of GIT1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution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

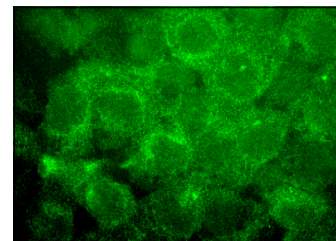
Molecular Weight of GIT1: 95 kDa.

Positive Controls: U-251-MG whole cell lysate: sc-364176, IMR-32 cell lysate: sc-2409 or rat brain extract: sc-2392.

## DATA



GIT1 (A-1): sc-365084. Western blot analysis of GIT1 expression in IMR-32 (A) and U-251-MG (B) whole cell lysates and human testis (C) and rat brain (D) tissue extracts.



GIT1 (A-1): sc-365084. Immunofluorescence staining of formalin-fixed A-431 cells showing membrane localization.

## SELECT PRODUCT CITATIONS

- Damacharla, D., et al. 2019. Quantitative proteomics reveals novel interaction partners of Rac1 in pancreatic  $\beta$ -cells: evidence for increased interaction with Rac1 under hyperglycemic conditions. *Mol. Cell. Endocrinol.* 494: 110489.
- Conde-Dusman, M.J., et al. 2021. Control of protein synthesis and memory by GluN3A-NMDA receptors through inhibition of GIT1/mTORC1 assembly. *Elife* 10: e71575.

## 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](http://www.scbt.com) for detailed protocols and support products.