SANTA CRUZ BIOTECHNOLOGY, INC.

GIT1 (A-19): sc-9657

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.

CHROMOSOMAL LOCATION

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

SOURCE

GIT1 (A-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of GIT1 of rat origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-9657 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

GIT1 (A-19) 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 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 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.

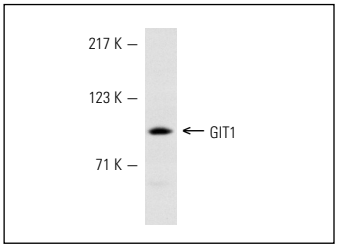
Molecular Weight of GIT1: 95 kDa.

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

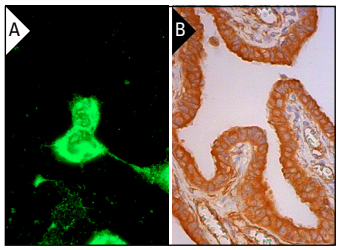
STORAGE

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

DATA



GIT1 (A-19): sc-9657. Western blot analysis of GIT1 expression in rat testis tissue extract.



GIT1 (A-19): sc-9657. Immunofluorescence staining of methanol-fixed F9 cells showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human fallopian tube tissue showing cytoplasmic staining of glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Stockton, R., et al. 2007. Induction of vascular permeability: β PIX and GIT1 scaffold the activation of extracellular signal-regulated kinase by PAK. Mol. Biol. Cell 18: 2346-2355.
2. Hsu, R.M., et al. 2010. Identification of MYO18A as a novel interacting partner of the PAK2/βPIX/GIT1 complex and its potential function in modulating epithelial cell migration. Mol. Biol. Cell 21: 287-301.
3. Gavina, M., et al. 2010. The GIT-PIX complexes regulate the chemotactic response of rat basophilic leukaemia cells. Biol. Cell 102: 231-244.
4. Astro, V., et al. 2011. Liprin-α1 regulates breast cancer cell invasion by affecting cell motility, invadopodia and extracellular matrix degradation. Oncogene 30: 1841-1849.
5. Asperti, C., et al. 2011. Biochemical and functional characterization of the interaction between liprin-α1 and GIT1: implications for the regulation of cell motility. PLoS ONE 6: e20757.
6. Totaro, A., et al. 2012. Biochemical and functional characterisation of αPIX, a specific regulator of axonal and dendritic branching in hippocampal neurons. Biol. Cell 104: 533-552.

RESEARCH USE

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