

GIT1/2 (13): sc-135925

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

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- 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 $G_{\beta\gamma}$ subunits. *Proc. Natl. Acad. Sci. USA* 91: 3633-3636.
- Lefkowitz, R.J. 1998. G protein-coupled receptors. III. New roles for receptor kinases and 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, GIT2 (human) mapping to 12q24.11; Git1 (mouse) mapping to 11 B5, Git2 (mouse) mapping to 5 F.

SOURCE

GIT1/2 (13) is a mouse monoclonal antibody raised against amino acids 140-472 of GIT2 of avian origin.

PRODUCT

Each vial contains 50 μ g IgG₁ in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

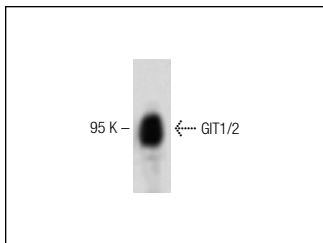
APPLICATIONS

GIT1/2 (13) is recommended for detection of GIT1/2 of mouse, rat, human and avian 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).

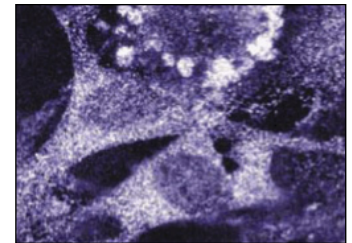
Molecular Weight of GIT1/2: 95/85 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, rat brain extract: sc-2392 or rat cerebrum tissue extract.

DATA



GIT1/2 (13): sc-135925. Western blot analysis of GIT1/2 expression in rat cerebrum tissue extract.



GIT1/2 (13): sc-135925. Immunofluorescence staining of NIH/3T3 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Damacharla, D., Thamilselvan, V., Zhang, X., Mestareehi, A., Yi, Z. and Kowluru, A. 2019. Quantitative proteomics reveals novel interaction partners of Rac1 in pancreatic β -cells: evidence for increased interaction with Rac1 under hyperglycemic conditions. *Mol. Cell. Endocrinol.* 494: 110489.
- Sun, X., Su, V.L. and Calderwood, D.A. 2019. The subcellular localization of type I p21-activated kinases is controlled by the disordered variable region and polybasic sequences. *J. Biol. Chem.* 294: 14319-14332.

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. Not for resale.

PROTOCOLS

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