

GAIP (N-17): sc-6208

BACKGROUND

Heterotrimeric G proteins function to relay information from cell surface receptors to intracellular effectors. In mammals, G protein α , β and γ polypeptides are encoded by at least 16, 4 and 7 genes, respectively. Most interest in G proteins has been focused on their α subunits, since these proteins bind and hydrolyze GTP and most obviously regulate the activity of the best studied effectors. Four G_{α} GTPase-activating proteins (GAPs) have been identified and are designated RGS1 (regulator of G protein signaling), RGS4, RGS10 and GAIP (G_{α} -interacting protein). Each of these proteins has been shown to deactivate specific G_{α} isoforms by increasing the rate at which they convert GTP to GDP. RGS1, RGS4 and GAIP bind tightly to and exhibit GAP activity towards $G_{\alpha i}$, $G_{\alpha o}$, and $G_{\alpha t}$, but not $G_{\alpha s}$. RGS10 increases the GTP hydrolytic activity of several members of the $G_{\alpha i}$ subfamily including $G_{\alpha i-3}$, $G_{\alpha z}$, and $G_{\alpha o}$.

REFERENCES

1. Simon, M.I., et al. 1991. Diversity of G proteins in signal transduction. *Science* 252: 802-808.
2. McLaughlin, et al. 1992. Gustducin is a taste-cell-specific G protein closely related to the transducins. *Nature* 357: 563-569.

CHROMOSOMAL LOCATION

Genetic locus: RGS19 (human) mapping to 20q13.3; Rgs19 (mouse) mapping to 2 H4.

SOURCE

GAIP (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of GAIP of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-6208 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

GAIP (N-17) is recommended for detection of GAIP of mouse 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)], 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 GAIP siRNA (h): sc-40657, GAIP siRNA (m): sc-40658, GAIP shRNA Plasmid (h): sc-40657-SH, GAIP shRNA Plasmid (m): sc-40658-SH, GAIP shRNA (h) Lentiviral Particles: sc-40657-V and GAIP shRNA (m) Lentiviral Particles: sc-40658-V.

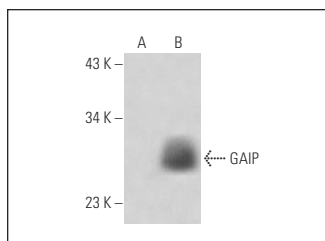
Molecular Weight of GAIP: 25 kDa.

Positive Controls: GAIP (h): 293 Lysate: sc-110588.

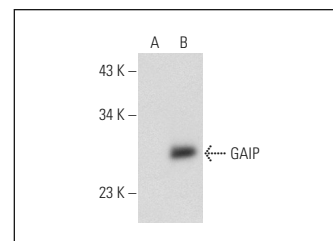
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



GAIP (N-17): sc-6208. Western blot analysis of GAIP expression in non-transfected: sc-110760 (A) and human GAIP transfected: sc-110588 (B) 293 whole cell lysates.



GAIP (N-17): sc-6208. Western blot analysis of GAIP expression in non-transfected: sc-117752 (A) and human GAIP transfected: sc-116813 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Diverse-Pierluissi, M.A., et al. 1999. Regulators of G protein signaling proteins as determinants of the rate of desensitization of presynaptic calcium channels. *J. Biol. Chem.* 274: 14490-14494.
2. L hteenvuo, J.E., et al. 2009. Vascular endothelial growth factor-B induces myocardium-specific angiogenesis and arteriogenesis via vascular endothelial growth factor receptor-1- and neuropilin receptor-1-dependent mechanisms. *Circulation* 119: 845-856.

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 or our catalog for detailed protocols and support products.



Try **GAIP (B-6): sc-271810** or **GAIP (A-10): sc-365157**, our highly recommended monoclonal alternatives to GAIP (N-17).