

$G_{\alpha s}$ (C-17): sc-46975

BACKGROUND

Heterotrimeric G proteins function to relay information from cell surface receptors to intracellular effectors. Each of a very broad range of receptors specifically detects an extracellular stimulus (a photon, pheromone, odorant, hormone or neurotransmitter) while the effectors (e.g. adenylyl cyclase), which act to generate one or more intracellular messengers, are less numerous. 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. More recent evidence, however, has established an important regulatory role for the $\beta\gamma$ subunits. The G_s subfamily of G_{α} subunits includes two closely related proteins, $G_{\alpha s}$ and $G_{\alpha olf}$, which respectively stimulate adenylyl cyclase and mediate response to olfactory stimuli.

REFERENCES

1. Jones, D.T. and Reed, R.R. 1991. $G_{\alpha olf}$: an olfactory neuron-specific G protein involved in odorant signal transduction. *Science* 244: 790-795.
2. Simon, M.I., Strathmann, M.P. and Gautam, N. 1991. Diversity of G proteins in signal transduction. *Science* 252: 802-808.
3. Iñiguez-Lluhi, J.A., Simon, M.I., Robishaw, J.D. and Gilman, A.G. 1992. G protein $\beta\gamma$ subunits synthesized in Sf9 cells. *J. Biol. Chem.* 267: 23409-23417.
4. Cali, J.J., Balcueva, E.A., Rybalkin, I. and Robishaw, J.D. 1992. Selective tissue distribution of G protein γ subunits, including a new form of the γ subunits identified by cDNA cloning. *J. Biol. Chem.* 267: 24023-24027.
5. Von Weizsäcker, E., Strathman, M.P. and Simon, M.I. 1992. Diversity among the β subunits of heterotrimeric GTP-binding proteins: characterization of a novel β subunit cDNA. *Biochem. Biophys. Res. Commun.* 183: 350-356.
6. McLaughlin, S.K., McKinnon, P.J. and Margolskee, R.F. 1992. Gustducin is a taste-cell-specific G protein closely related to the transducins. *Nature* 357: 563-569.

CHROMOSOMAL LOCATION

Genetic locus: GNAS (human) mapping to 20q13.32; Gnas (mouse) mapping to 2 H4.

SOURCE

$G_{\alpha s}$ (C-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of $G_{\alpha s}$ 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-46975 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

$G_{\alpha s}$ (C-17) is recommended for detection of $G_{\alpha s}$ isoforms $\alpha s1$ and $\alpha s2$ of mouse, rat 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), 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).

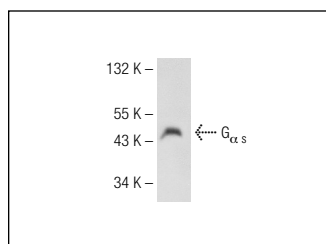
$G_{\alpha s}$ (C-17) is also recommended for detection of $G_{\alpha s}$ isoforms $\alpha s1$ and $\alpha s2$ in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for $G_{\alpha s}$ siRNA (h): sc-29328, $G_{\alpha s}$ siRNA (m): sc-41757, $G_{\alpha s}$ shRNA Plasmid (h): sc-29328-SH, $G_{\alpha s}$ shRNA Plasmid (m): sc-41757-SH, $G_{\alpha s}$ shRNA (h) Lentiviral Particles: sc-29328-V and $G_{\alpha s}$ shRNA (m) Lentiviral Particles: sc-41757-V.

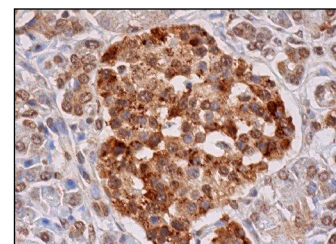
Molecular Weight of $G_{\alpha s}$: 49 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204 or TT whole cell lysate: sc-364195.

DATA



$G_{\alpha s}$ (C-17): sc-46975. Western blot analysis of $G_{\alpha s}$ expression in 293T whole cell lysate.



$G_{\alpha s}$ (C-17): sc-46975. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic and nuclear staining of exocrine glandular cells and cytoplasmic and membrane staining of Islets of Langerhans.

STORAGE

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

PROTOCOLS

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

MONOS
Satisfaction
Guaranteed

Try $G_{\alpha s}$ (12): sc-135914, our highly recommended monoclonal alternative to $G_{\alpha s}$ (C-17).