SANTA CRUZ BIOTECHNOLOGY, INC.

$G_{\alpha\ s}$ (A-16): sc-26766

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. adenyl 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. The G_s subfamily of G_α subunits includes two closely related proteins, $G_{\alpha\ s}$ and $G_{\alpha\ olf}$, which respectively stimulate adenylate cyclase and mediate response to olfactory stimuli.

REFERENCES

1. Jones, D.T., et al. 1990. Biochemical characterization of three stimulatory GTP-binding proteins. The large and small forms of G_s and the olfactory-specific G protein, G_{olf}. J. Biol. Chem. 265: 2671-2676.
2. Simon, M. I., et al. 1991. Diversity of G proteins in signal transduction. Science 252: 802-808.
3. Iñiguez-Lluhi, J.A., et al. 1992. G protein $\beta\gamma$ subunits synthesized in Sf9 cells. J. Biol. Chem. 267: 23409-23417.
4. Cali, J.J., et al. 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. McLaughlin, S.K., et al. 1992. Gustducin is a taste-cell-specific G protein closely related to the transducins. Nature 357: 563-569.
7. Kleuss, C., et al. 1992. Different β subunits determine G protein interaction with transmembrane receptors. Nature 358: 424-426.

CHROMOSOMAL LOCATION

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

SOURCE

$G_{\alpha\ s}$ (A-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of $G_{\alpha\ s}$ of human 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-26766 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

$G_{\alpha\ s}$ (A-16) is recommended for detection of $G_{\alpha\ s}$ 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

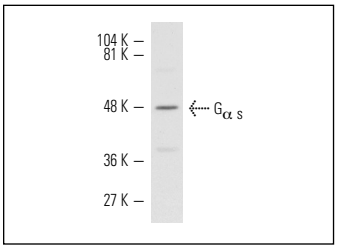
$G_{\alpha\ s}$ (A-16) is also recommended for detection of $G_{\alpha\ s}$ in additional species, including canine, bovine and porcine.

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: TT whole cell lysate: sc-364195.

DATA



$G_{\alpha\ s}$ (A-16): sc-26766. Western blot analysis of $G_{\alpha\ s}$ expression in TT whole cell lysate.

SELECT PRODUCT CITATIONS

1. Filardo, E., et al. 2007. Activation of the novel estrogen receptor G protein-coupled receptor 30 (GPR30) at the plasma membrane. Endocrinology 148: 3236-3245.
2. Halls, M.L., et al. 2009. Relaxin family peptide receptor (RXFP1) coupling to $G_{\alpha\ i3}$ involves the C-terminal Arg752 and localization within membrane Raft Microdomains. Mol. Pharmacol. 75: 415-428.
3. Mishra, P.K., et al. 2011. Exercise mitigates homocysteine-β_2-adrenergic receptor interactions to ameliorate contractile dysfunction in diabetes. Int. J. Physiol. Pathophysiol. Pharmacol. 3: 97-106.

RESEARCH USE

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