SANTA CRUZ BIOTECHNOLOGY, INC.

$G_{\gamma\ 10}$ (FL-68): sc-28592

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. Evidence, however, has established an important regulatory role for the $\beta\gamma$ subunits. It is becoming increasingly clear that different G protein complexes expressed in different tissues carry structurally distinct members of the γ as well as the α and β subunits and that preferential associations between members of subunit families increase G protein functional diversity.

REFERENCES

1. Blatt, C., et al. 1988. Chromosomal localization of genes encoding guanine nucleotide-binding protein subunits in mouse and human. Proc. Natl. Acad. Sci. USA 85: 7642-7646.
2. Gautam, N., et al. 1990. G protein diversity is increased by associations with a variety of γ subunits. Proc. Natl. Acad. Sci. USA 87: 7973-7977.
3. Simon, M.I., et al. 1991. Diversity of G proteins in signal transduction. Science 252: 802-808.
4. von Weizsäcker, E., et al. 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.
5. Kleuss, C., et al. 1992. Different β subunits determine G protein interaction with transmembrane receptors. Nature 358: 424-426.
6. Blank, J.L., et al. 1992. Activation of cytosolic phosphoinositide phospholipase C by G protein $\beta\gamma$ subunits. J. Biol. Chem. 267: 23069-23075.
7. Hurowitz, E.H., et al. 2000. Genomic characterization of the human heterotrimeric G protein α, β and γ subunit genes. DNA Res. 7: 111-120.

CHROMOSOMAL LOCATION

Genetic locus: GNG10 (human) mapping to 9q31.3; Gng10 (mouse) mapping to 4 B3.

SOURCE

$G_{\gamma\ 10}$ (FL-68) is a rabbit polyclonal antibody raised against amino acids 1-68 representing full length $G_{\gamma\ 10}$ 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.

STORAGE

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

APPLICATIONS

$G_{\gamma\ 10}$ (FL-68) is recommended for detection of $G_{\gamma\ 10}$ 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); partially cross reactive with other G_{γ} proteins.

$G_{\gamma\ 10}$ (FL-68) is also recommended for detection of $G_{\gamma\ 10}$ in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for $G_{\gamma\ 10}$ siRNA (h): sc-41784, $G_{\gamma\ 10}$ siRNA (m): sc-41785, $G_{\gamma\ 10}$ shRNA Plasmid (h): sc-41784-SH, $G_{\gamma\ 10}$ shRNA Plasmid (m): sc-41785-SH, $G_{\gamma\ 10}$ shRNA (h) Lentiviral Particles: sc-41784-V and $G_{\gamma\ 10}$ shRNA (m) Lentiviral Particles: sc-41785-V.

Molecular Weight of $G_{\gamma\ 10}$: 8 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.