SANTA CRUZ BIOTECHNOLOGY, INC.

$G_{\gamma\ 9}$ (N-17): sc-26779

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. 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.
2. Simon, M.I., et al. 1991. Diversity of G proteins in signal transduction. Science 252: 802-808.
3. 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.
4. Kleuss, C., et al. 1992. Different β-subunits determine G protein interaction with transmembrane receptors. Nature 358: 424-426.
5. Blank, J.L., et al. 1992. Activation of cytosolic phosphoinositide phospholipase C by G protein $\beta\gamma$ subunits. J. Biol. Chem. 267: 23069-23075.
6. Iñiguez-Lluhi, J.A., et al. 1992. G protein $\beta\gamma$ subunits sythesized in Sf9 cells. J. Biol. Chem. 267: 23409-23417.

CHROMOSOMAL LOCATION

Genetic locus: GNG8 (human) mapping to 19q13.32; Gng8 (mouse) mapping to 7 A2.

SOURCE

$G_{\gamma\ 9}$ (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of $G_{\gamma\ 9}$ 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-26779 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

$G_{\gamma\ 9}$ (N-17) is recommended for detection of $G_{\gamma\ 9}$ of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

$G_{\gamma\ 9}$ (N-17) is also recommended for detection of $G_{\gamma\ 9}$ in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for $G_{\gamma\ 9}$ siRNA (h): sc-105379, $G_{\gamma\ 9}$ siRNA (m): sc-145286, $G_{\gamma\ 9}$ shRNA Plasmid (h): sc-105379-SH, $G_{\gamma\ 9}$ shRNA Plasmid (m): sc-145286-SH, $G_{\gamma\ 9}$ shRNA (h) Lentiviral Particles: sc-105379-V and $G_{\gamma\ 9}$ shRNA (m) Lentiviral Particles: sc-145286-V.

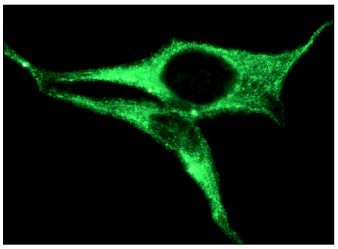
Molecular Weight of $G_{\gamma\ 9}$: 8 kDa.

Positive Controls: mouse brain extract: sc-2253 and rat brain extract: sc-2392.

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) 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



$G_{\gamma\ 9}$ (N-17): sc-26779. Immunofluorescence staining of methanol-fixed BC_3H1 cells showing cytoplasmic localization.

RESEARCH USE

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