SANTA CRUZ BIOTECHNOLOGY, INC.

$G_{\gamma\ 9}$ (H-11): sc-390402

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 β γ subunits. J. Biol. Chem. 267: 23069-23075.

CHROMOSOMAL LOCATION

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

SOURCE

$G_{\gamma\ 9}$ (H-11) is a mouse monoclonal antibody raised against amino acids 6-65 representing full length $G_{\gamma\ 9}$ of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

$G_{\gamma\ 9}$ (H-11) is available conjugated to agarose (sc-390402 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390402 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390402 PE), fluorescein (sc-390402 FITC), Alexa Fluor® 488 (sc-390402 AF488), Alexa Fluor® 546 (sc-390402 AF546), Alexa Fluor® 594 (sc-390402 AF594) or Alexa Fluor® 647 (sc-390402 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390402 AF680) or Alexa Fluor® 790 (sc-390402 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

$G_{\gamma\ 9}$ (H-11) is recommended for detection of $G_{\gamma\ 9}$ of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

$G_{\gamma\ 9}$ (H-11) is also recommended for detection of $G_{\gamma\ 9}$ in additional species, including bovine.

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.

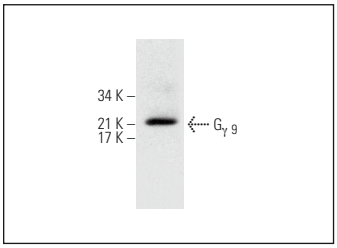
Molecular Weight of $G_{\gamma\ 9}$: 8 kDa.

Positive Controls: T98G cell lysate: sc-2294.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



$G_{\gamma\ 9}$ (H-11): sc-390402. Western blot analysis of $G_{\gamma\ 9}$ expression in T98G whole cell lysate.

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 for detailed protocols and support products.