

# G $\beta$ <sub>3</sub> (C-17): sc-25021

## 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 (i.e. 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  $\alpha$ ,  $\beta$  and  $\gamma$  polypeptides are encoded by at least 16, 4 and 7 genes, respectively. Most interest in G proteins has been focused on their  $\alpha$  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. The G protein  $\beta$  subunits are important regulators of G protein  $\alpha$  subunits as well as of certain signal transduction receptors and effectors. In mammals, there are five different members of the  $\beta$  subunit family.

## REFERENCES

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- Gautam, N., et al. 1990. G protein diversity is increased by associations with a variety of  $\gamma$  subunits. *Proc. Natl. Acad. Sci. USA* 87: 7973-7977.
- Simon, M.I., et al. 1991. Diversity of G proteins in signal transduction. *Science* 252: 802-808.
- von Weizsäcker, E., et al. 1992. Diversity among the  $\beta$  subunits of heterotrimeric GTP-binding proteins: characterization of a novel  $\beta$  subunit cDNA. *Biochem. Biophys. Res. Commun.* 183: 350-356.
- Kleuss, C., et al. 1992. Different  $\beta$  subunits determine G protein interaction with transmembrane receptors. *Nature* 358: 424-426.
- Blank, J.L., et al. 1992. Activation of cytosolic phosphoinositide phospholipase C by G protein  $\beta\gamma$  subunits. *J. Biol. Chem.* 267: 23069-23075.

## CHROMOSOMAL LOCATION

Genetic locus: GNB3 (human) mapping to 12p13.31; Gnb3 (mouse) mapping to 6 F2.

## SOURCE

G $\beta$ <sub>3</sub> (C-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of G $\beta$ <sub>3</sub> of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-25021 P, (100  $\mu$ g 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 $\beta$ <sub>3</sub> (C-17) is recommended for detection of G $\beta$ <sub>3</sub> of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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).

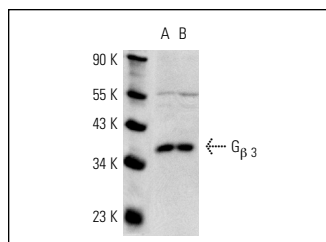
G $\beta$ <sub>3</sub> (C-17) is also recommended for detection of G $\beta$ <sub>3</sub> in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for G $\beta$ <sub>3</sub> siRNA (h): sc-41766, G $\beta$ <sub>3</sub> siRNA (m): sc-41767, G $\beta$ <sub>3</sub> shRNA Plasmid (h): sc-41766-SH, G $\beta$ <sub>3</sub> shRNA Plasmid (m): sc-41767-SH, G $\beta$ <sub>3</sub> shRNA (h) Lentiviral Particles: sc-41766-V and G $\beta$ <sub>3</sub> shRNA (m) Lentiviral Particles: sc-41767-V.

Molecular Weight of G $\beta$ <sub>3</sub>: 36 kDa.

Positive Controls: Y79 cell lysate: sc-2240, Hep G2 cell lysate: sc-2227 or Y79 nuclear extract: sc-2126.

## DATA



G $\beta$ <sub>3</sub> (C-17): sc-25021. Western blot analysis of G $\beta$ <sub>3</sub> expression in Y79 whole cell lysate (A) and Y79 nuclear extract (B).

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

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Try G $\beta$ <sub>3</sub> (G-5): sc-393908 or G $\beta$ <sub>3</sub> (Q-Y5): sc-81904, our highly recommended monoclonal alternatives to G $\beta$ <sub>3</sub> (C-17).