

G β_3 (G-5): sc-393908

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 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. The G protein β subunits are important regulators of G protein α subunits as well as of certain signal transduction receptors and effectors. In mammals, there are five different members of the β subunit family.

REFERENCES

- Blatt, C., et al. 1988. Chromosomal localization of genes encoding guanine nucleotide-binding protein subunits in mouse and human. *Proc. Nat. Acad. Sci. USA* 85: 7642-7646.
- 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.
- 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 β subunits of heterotrimeric GTP-binding proteins: characterization of a novel β -subunit cDNA. *Biochem. Biophys. Res. Commun.* 183: 350-356.

CHROMOSOMAL LOCATION

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

SOURCE

G β_3 (G-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 25-52 near the N-terminus of G β_3 of human origin.

PRODUCT

Each vial contains 200 μ g IgG κ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

G β_3 (G-5) is available conjugated to agarose (sc-393908 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393908 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393908 PE), fluorescein (sc-393908 FITC), Alexa Fluor[®] 488 (sc-393908 AF488), Alexa Fluor[®] 546 (sc-393908 AF546), Alexa Fluor[®] 594 (sc-393908 AF594) or Alexa Fluor[®] 647 (sc-393908 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-393908 AF680) or Alexa Fluor[®] 790 (sc-393908 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-393908 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

G β_3 (G-5) is recommended for detection of G β_3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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).

Suitable for use as control antibody for G β_3 siRNA (h): sc-41766, G β_3 siRNA (m): sc-41767, G β_3 shRNA Plasmid (h): sc-41766-SH, G β_3 shRNA Plasmid (m): sc-41767-SH, G β_3 shRNA (h) Lentiviral Particles: sc-41766-V and G β_3 shRNA (m) Lentiviral Particles: sc-41767-V.

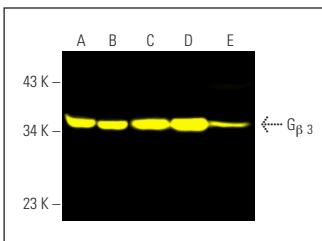
Molecular Weight of G β_3 : 36 kDa.

Positive Controls: A-673 cell lysate: sc-2414, Y79 cell lysate: sc-2240 or HeLa whole cell lysate: sc-2200.

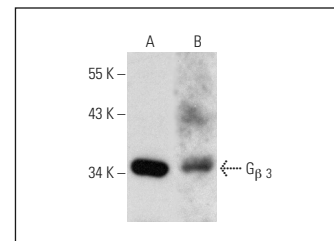
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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 β_3 (G-5) Alexa Fluor[®] 488: sc-393908 AF488. Direct fluorescent western blot analysis of G β_3 expression in Y79 (A), HeLa (B), U-698-M (C), NTERA-2 cl.D1 (D) and U-251-MG (E) whole cell lysates. Blocked with UltraCruz[®] Blocking Reagent: sc-516214.



G β_3 (G-5): sc-393908. Western blot analysis of G β_3 expression in A-673 (A) and C6 (B) whole cell lysates.

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.

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