

G_βL (E-9): sc-514982

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. Each subunit of the G protein complex is encoded by a member of one of three corresponding gene families (α , β , γ). In mammals, there are five different members of the β -subunit family. The β subunits of the G proteins are important regulators of G protein subunits as well as of certain signal transduction receptors and effectors. In contrast to G_{β1-4}, which are at least 83% homologous, G_{β5} is only 50% homologous to the other β subunits. Human G_{β5} is expressed at high levels in brain, pancreas, kidney, and heart.

REFERENCES

- Rodgers, B.D., Levine, M.A., Bernier, M. and Montrose-Rafizadeh, C. 2001. Insulin regulation of a novel WD-40 repeat protein in adipocytes. *J. Endocrinol.* 168: 325-332.
- Kim, D.H., Sarbassov, D.D., Ali, S.M., Latek, R.R., Guntur, K.V., Erdjument-Bromage, H., Tempst, P. and Sabatini, D.M. 2003. G_βL, a positive regulator of the rapamycin-sensitive pathway required for the nutrient-sensitive interaction between raptor and mTOR. *Mol. Cell* 11: 895-904.
- Oshiro, N., Yoshino, K., Hidayat, S., Tokunaga, C., Hara, K., Eguchi, S., Avruch, J. and Yonezawa, K. 2004. Dissociation of raptor from mTOR is a mechanism of rapamycin-induced inhibition of mTOR function. *Genes Cells* 9: 359-366.

CHROMOSOMAL LOCATION

Genetic locus: MLST8 (human) mapping to 16p13.3; Mlst8 (mouse) mapping to 17 A3.3.

SOURCE

G_βL (E-9) is a mouse monoclonal antibody raised against amino acids 71-326 mapping at the C-terminus of G_βL of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

G_βL (E-9) is available conjugated to agarose (sc-514982 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514982 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514982 PE), fluorescein (sc-514982 FITC), Alexa Fluor[®] 488 (sc-514982 AF488), Alexa Fluor[®] 546 (sc-514982 AF546), Alexa Fluor[®] 594 (sc-514982 AF594) or Alexa Fluor[®] 647 (sc-514982 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-514982 AF680) or Alexa Fluor[®] 790 (sc-514982 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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RESEARCH USE

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

APPLICATIONS

G_βL (E-9) is recommended for detection of G_βL 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_βL siRNA (h): sc-75072, G_βL siRNA (m): sc-75073, G_βL shRNA Plasmid (h): sc-75072-SH, G_βL shRNA Plasmid (m): sc-75073-SH, G_βL shRNA (h) Lentiviral Particles: sc-75072-V and G_βL shRNA (m) Lentiviral Particles: sc-75073-V.

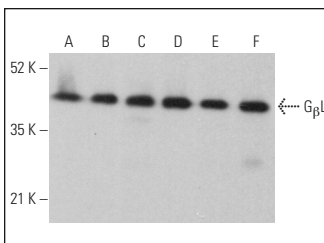
Molecular Weight of G_βL: 36 kDa.

Positive Controls: A-375 cell lysate: sc-3811, HL-60 whole cell lysate: sc-2209 or human heart extract: sc-363763.

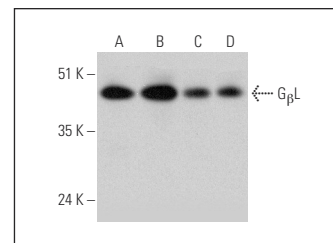
RECOMMENDED SUPPORT REAGENTS

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_βL (E-9): sc-514982. Western blot analysis of G_βL expression in A-375 (A), MCF7 (B), PC-3 (C), NIH/3T3 (D), M1 (E) and RPE-J (F) whole cell lysates.



G_βL (E-9): sc-514982. Western blot analysis of G_βL expression in A-375 (A) and HL-60 (B) whole cell lysates and human heart (C) and human brain (D) tissue extracts.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.