

G β L (P-16): sc-70282



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 (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. G β L (G protein β subunit-like), also known as LST8, POP3 or WAT1, is a 326 amino acid protein that localizes to the cytoplasm and contains 7 WD repeats. Expressed in a variety of tissues with highest expression in heart, kidney and skeletal muscle, G β L functions as a component of the TORC1 and TORC2 complex and plays an important role in cell growth response to environmental stimuli. Four isoforms of G β L exist due to alternative splicing events.

REFERENCES

1. 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.
2. 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 β L, a positive regulator of the rapamycin-sensitive pathway required for the nutrient-sensitive interaction between raptor and mTOR. *Mol. Cell* 11: 895-904.
3. 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.
4. Long, X., Lin, Y., Ortiz-Vega, S., Yonezawa, K. and Avruch, J. 2005. Rheb binds and regulates the mTOR kinase. *Curr. Biol.* 15: 702-713.
5. Sarbassov, D.D. and Sabatini, D.M. 2005. Redox regulation of the nutrient-sensitive raptor-mTOR pathway and complex. *J. Biol. Chem.* 280: 39505-39509.
6. Online Mendelian Inheritance in Man, OMIM™. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 612190. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

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

SOURCE

G β L (P-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of G β L of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-70282 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

G β L (P-16) is recommended for detection of G β L 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 β L (P-16) is also recommended for detection of G β L in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for G β L siRNA (h): sc-75072, G β L siRNA (m): sc-75073, G β L shRNA Plasmid (h): sc-75072-SH, G β L shRNA Plasmid (m): sc-75073-SH, G β L shRNA (h) Lentiviral Particles: sc-75072-V and G β L shRNA (m) Lentiviral Particles: sc-75073-V.

Molecular Weight of G β L: 36 kDa.

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.

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 or our catalog for detailed protocols and support products.