

# G $\beta$ L (V-24): sc-130760

## 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. G $\beta$ L (G protein  $\beta$  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 $\beta$ 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 $\beta$ L exist due to alternative splicing events.

## 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 $\beta$ L, 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.
- 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.
- 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.
- 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.

## SOURCE

G $\beta$ L (V-24) is a purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of G $\beta$ L of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

## RESEARCH USE

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

## APPLICATIONS

G $\beta$ L (V-24) is recommended for detection of G $\beta$ L of 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

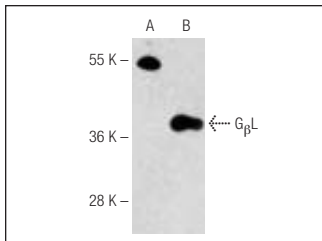
Suitable for use as control antibody for G $\beta$ L siRNA (h): sc-75072, G $\beta$ L shRNA Plasmid (h): sc-75072-SH and G $\beta$ L shRNA (h) Lentiviral Particles: sc-75072-V.

Molecular Weight of G $\beta$ L: 36 kDa.

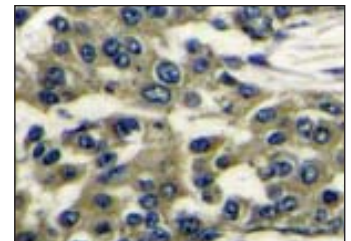
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

## DATA



G $\beta$ L (V-24): sc-130760. Western blot analysis of GBL expression in non-transfected (A) and human GBL transfected (B) 293 whole cell lysates.



G $\beta$ L (V-24): sc-130760. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast carcinoma tissue showing cytoplasmic localization.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.