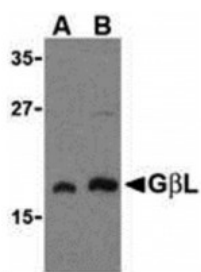


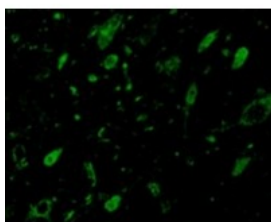


## GBL Antibody

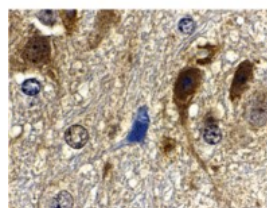
CATALOG NUMBER: 3495



Western blot analysis of GbL in human brain cell lysate with GbL antibody at (A) 1 and (B) 2 ug/mL.



Immunofluorescence of GbL in Mouse Brain cells with GbL antibody at 10 ug/mL.



Immunohistochemistry of GbL in mouse brain tissue with GbL antibody at 10 ug/mL.

### Specifications

<b>SPECIES REACTIVITY:</b>	Human, Mouse, Rat
<b>HOMOLOGY:</b>	Predicted species reactivity based on immunogen sequence: Bovine: (100%)
<b>TESTED APPLICATIONS:</b>	ELISA, IF, IHC-P, WB
<b>APPLICATIONS:</b>	GbL antibody can be used for the detection of GbL by Western blot at 1 and 2 ug/mL. Antibody can also be used for immunohistochemistry starting at 10 ug/mL. For immunofluorescence start at 10 ug/mL.
<b>USER NOTE:</b>	Optimal dilutions for each application to be determined by the researcher.
<b>POSITIVE CONTROL:</b>	1) Cat. No. 1303 - Human Brain Tissue Lysate 2) Cat. No. 1403 - Mouse Brain Tissue Lysate
<b>IMMUNOGEN:</b>	GbL antibody was raised against a 14 amino acid synthetic peptide from near the carboxy terminus of human GbL.  The immunogen is located within the first 50 amino acids of GbL.
<b>HOST SPECIES:</b>	Rabbit

### Properties

<b>PURIFICATION:</b>	GBL Antibody is affinity chromatography purified via peptide column.
<b>PHYSICAL STATE:</b>	Liquid
<b>BUFFER:</b>	GBL Antibody is supplied in PBS containing 0.02% sodium azide.
<b>CONCENTRATION:</b>	1 mg/mL
<b>STORAGE CONDITIONS:</b>	GBL antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
<b>CLONALITY:</b>	Polyclonal
<b>ISOTYPE:</b>	IgG
<b>CONJUGATE:</b>	Unconjugated

### Additional Info

<b>ALTERNATE NAMES:</b>	GBL Antibody: GBL, LST8, POP3, WAT1, GbetaL, GBL, Target of rapamycin complex subunit LST8, G protein beta subunit-like, TORC subunit LST8
<b>ACCESSION NO.:</b>	AAH52292
<b>PROTEIN GI NO.:</b>	30411038
<b>OFFICIAL SYMBOL:</b>	MLST8
<b>GENE ID:</b>	64223

## Background

**BACKGROUND:** GBL Antibody: GbetaL (G protein beta protein subunit-like) is a member of a signaling pathway that regulates mammalian cell growth in response to the presence of nutrients and growth factors. It binds to the kinase domain of TOR (Target of rapamycin, also known as mTOR), an evolutionarily conserved serine/threonine kinase that regulates cell growth and cell cycle through its ability to integrate signals from nutrient levels and growth factors. Rapamycin inhibits TOR resulting in reduced cell growth and reduced rates of cell cycle and cell proliferation. TOR is normally associated with GbetaL and an additional regulatory protein RAPTOR, allowing TOR to control protein biosynthesis. The binding of GbetaL to TOR stimulates TOR's kinase activity towards downstream proteins such as RPS6K (ribosomal protein S6 kinase) and the translation factor 4E-BP1 which leads to increased protein translation and cell growth.

**REFERENCES:**

- 1) Kim D-H, Sarbassov DD, Ali SM, et al. GβL, a positive regulator of the Rapamycin-sensitive pathway required for the nutrient-sensitive interaction between Raptor and mTOR. *Mol. Cell* 2003; 11:895-904.
- 2) Shamji AF, Ngheim P, and Schreiber SL. Integration of growth factor and nutrient signaling: implications for cancer biology. *Mol. Cell* 2003; 12:271-80.
- 3) Fingar DC and Blenis J. Target of rapamycin (TOR): an integrator of nutrient and growth factor signals and coordinator of cell growth and cell cycle progression. *Oncogene* 2004; 23:3151-71.

**FOR RESEARCH USE ONLY**

December 12, 2016