

GBL Antibody (Center)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP8200C

Specification

GBL Antibody (Center) - Product Information

Application	WB, IHC-P,E
Primary Accession	O9BVC4
Other Accession	O9Z2K5 , O9DCJ1 , O17OU5
Reactivity	Human
Predicted	Bovine, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Antigen Region	140-170

GBL Antibody (Center) - Additional Information

Gene ID 64223

Other Names

Target of rapamycin complex subunit LST8, TORC subunit LST8, G protein beta subunit-like, Gable, Protein GbetaL, Mammalian lethal with SEC13 protein 8, mLST8, MLST8, GBL, LST8

Target/Specificity

This GBL antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 140-170 amino acids from the Central region of human GBL.

Dilution

WB~~1:1000
IHC-P~~1:50~100

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

GBL Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

GBL Antibody (Center) - Protein Information

Name MLST8 {ECO:0000303|PubMed:34741373, ECO:0000312|HGNC:HGNC:24825}

Function Subunit of both mTORC1 and mTORC2, which regulates cell growth and survival in response to nutrient and hormonal signals (PubMed:[12718876](#), PubMed:[15268862](#), PubMed:[15467718](#), PubMed:[24403073](#)). mTORC1 is activated in response to growth factors or amino acids (PubMed:[12718876](#), PubMed:[15268862](#), PubMed:[15467718](#), PubMed:[24403073](#)). In response to nutrients, mTORC1 is recruited to the lysosome membrane and promotes protein, lipid and nucleotide synthesis by phosphorylating several substrates, such as ribosomal protein S6 kinase (RPS6KB1 and RPS6KB2) and EIF4EBP1 (4E-BP1) (PubMed:[12718876](#), PubMed:[15268862](#), PubMed:[15467718](#), PubMed:[24403073](#)). In the same time, it inhibits catabolic pathways by phosphorylating the autophagy initiation components ULK1 and ATG13, as well as transcription factor TFE3, a master regulators of lysosomal biogenesis and autophagy (PubMed:[24403073](#)). The mTORC1 complex is inhibited in response to starvation and amino acid depletion (PubMed:[24403073](#)). Within mTORC1, LST8 interacts directly with MTOR and enhances its kinase activity (PubMed:[12718876](#)). In nutrient-poor conditions, stabilizes the MTOR- RPTOR interaction and favors RPTOR-mediated inhibition of MTOR activity (PubMed:[12718876](#)). mTORC2 is also activated by growth factors, but seems to be nutrient-insensitive (PubMed:[15467718](#)). mTORC2 seems to function upstream of Rho GTPases to regulate the actin cytoskeleton, probably by activating one or more Rho-type guanine nucleotide exchange factors (PubMed:[15467718](#)). mTORC2 promotes the serum-induced formation of stress-fibers or F-actin (PubMed:[15467718](#)). mTORC2 plays a critical role in AKT1 'Ser-473' phosphorylation, which may facilitate the phosphorylation of the activation loop of AKT1 on 'Thr-308' by PDK1 which is a prerequisite for full activation (PubMed:[15467718](#)). mTORC2 regulates the phosphorylation of SGK1 at 'Ser-422' (PubMed:[15467718](#)). mTORC2 also modulates the phosphorylation of PRKCA on 'Ser-657' (PubMed:[15467718](#)).

Cellular Location

Lysosome membrane. Cytoplasm {ECO:0000250|UniProtKB:Q9Z2K5}. Note=Targeting to lysosomal membrane depends on amino acid availability: mTORC1 is recruited to lysosome membranes via interaction with GTP-bound form of RagA/RRAGA (or RagB/RRAGB) in complex with the GDP-bound form of RagC/RRAGC (or RagD/RRAGD), promoting its mTORC1 recruitment to the lysosomes

Tissue Location

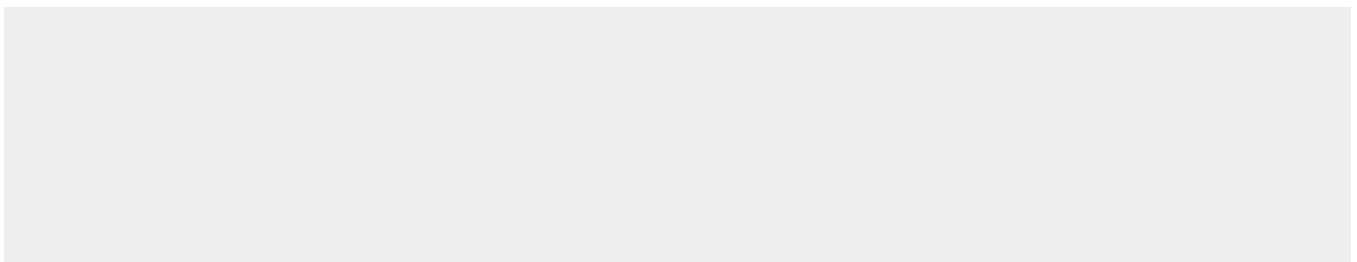
Broadly expressed, with highest levels in skeletal muscle, heart and kidney.

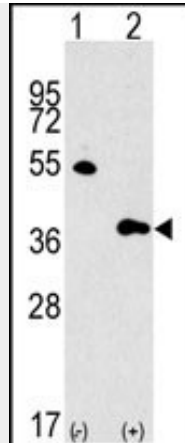
GBL Antibody (Center) - Protocols

Provided below are standard protocols that you may find useful for product applications.

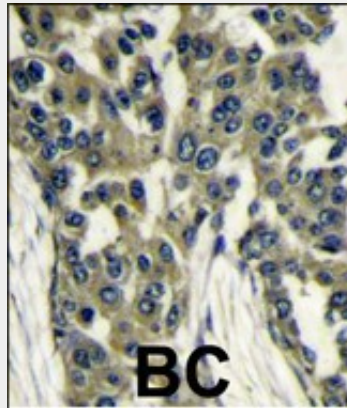
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

GBL Antibody (Center) - Images





Western blot analysis of GBL Antibody (Center) polyclonal antibody(Cat.#AP8200c)(arrow). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the GBL gene (Lane 2) (Origene Technologies).



Formalin-fixed and paraffin-embedded human breast carcinoma reacted with GBL antibody (Center), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

GBL Antibody (Center) - Background

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GBL Antibody (Center) - References

Ota, T., et al., Nat. Genet. 36(1):40-45 (2004).