

GLUL Antibody (N-term)
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AW5446

Specification

GLUL Antibody (N-term) - Product Information

Application	WB, IHC-P,E
Primary Accession	P15104
Other Accession	P46410 , P15105 , Q4R7U3 , P16580 , P15103
Reactivity	Human
Predicted	Bovine, Chicken, Monkey, Mouse, Pig
Host	Rabbit
Clonality	Polyclonal
Calculated MW	H=42;M=42;R=42 KDa
Isotype	Rabbit IgG
Antigen Source	HUMAN

GLUL Antibody (N-term) - Additional Information

Gene ID 2752

Antigen Region
70-96

Other Names
Glutamine synthetase, GS, Glutamate decarboxylase, Glutamate--ammonia ligase, GLUL, GLNS

Dilution
WB~~1:1000
IHC-P~~1:25

Target/Specificity
This GLUL antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 70-96 amino acids from the N-terminal region of human GLUL.

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

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
GLUL Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

GLUL Antibody (N-term) - Protein Information

Name GLUL {ECO:0000303|PubMed:30158707, ECO:0000312|HGNC:HGNC:4341}

Function

Glutamine synthetase that catalyzes the ATP-dependent conversion of glutamate and ammonia to glutamine (PubMed:16267323, PubMed:30158707, PubMed:36289327). Its role depends on tissue localization: in the brain, it regulates the levels of toxic ammonia and converts neurotoxic glutamate to harmless glutamine, whereas in the liver, it is one of the enzymes responsible for the removal of ammonia (By similarity). Plays a key role in ammonium detoxification during erythropoiesis: the glutamine synthetase activity is required to remove ammonium generated by porphobilinogen deaminase (HMBS) during heme biosynthesis to prevent ammonium accumulation and oxidative stress (By similarity). Essential for proliferation of fetal skin fibroblasts (PubMed:18662667). Independently of its glutamine synthetase activity, required for endothelial cell migration during vascular development: acts by regulating membrane localization and activation of the GTPase RHOJ, possibly by promoting RHOJ palmitoylation (PubMed:30158707). May act as a palmitoyltransferase for RHOJ: able to autopalmitoylate and then transfer the palmitoyl group to RHOJ (PubMed:30158707). Plays a role in ribosomal 40S subunit biogenesis (PubMed:26711351). Through the interaction with BEST2, inhibits BEST2 channel activity by affecting the gating at the aperture in the absence of intracellular L-glutamate, but sensitizes BEST2 to intracellular L-glutamate, which promotes the opening of BEST2 and thus relieves its inhibitory effect on BEST2 (PubMed:36289327).

Cellular Location

Cytoplasm, cytosol. Microsome {ECO:0000250|UniProtKB:P09606} Mitochondrion {ECO:0000250|UniProtKB:P09606}. Cell membrane; Lipid-anchor. Note=Mainly localizes in the cytosol, with a fraction associated with the cell membrane

Tissue Location

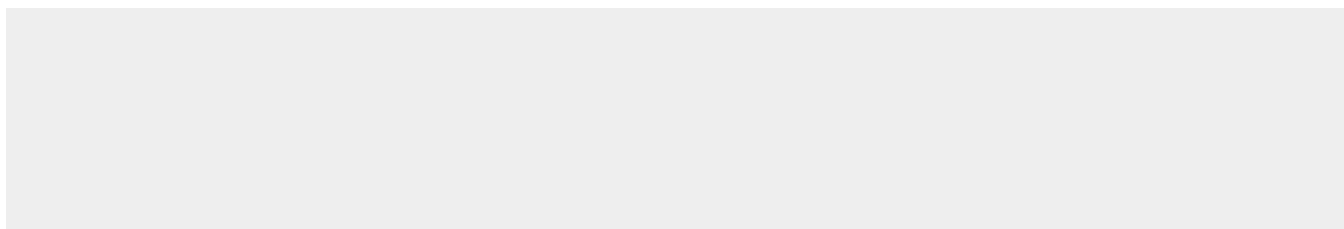
Expressed in endothelial cells.

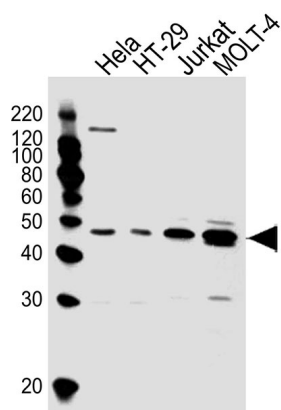
GLUL Antibody (N-term) - Protocols

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

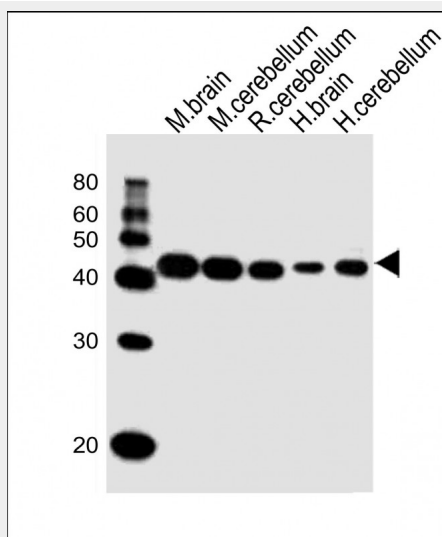
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

GLUL Antibody (N-term) - Images

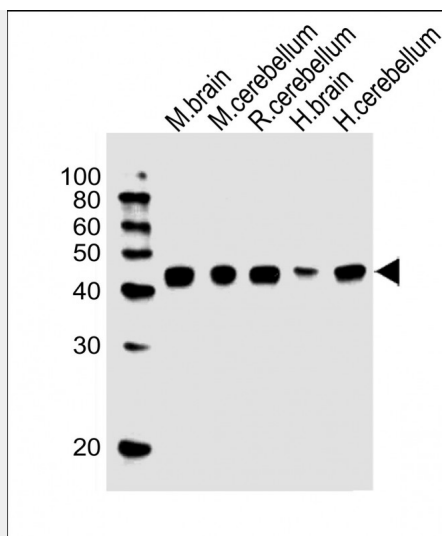




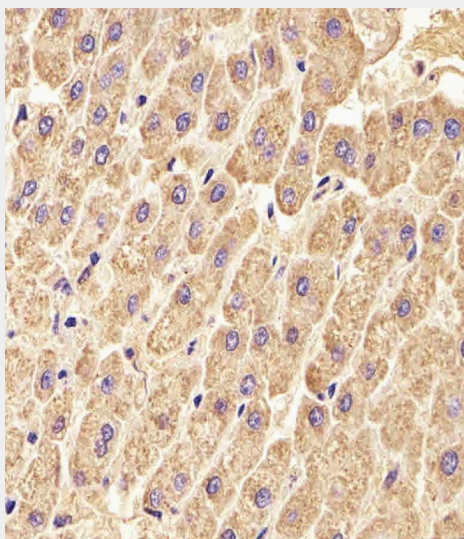
All lanes : Anti-GLUL Antibody (N-term) at 1:1000 dilution Lane 1: Hela whole cell lysates Lane 2: HT-29 whole cell lysates Lane 3: Jurkat whole cell lysates Lane 4: MOLT-4 whole cell lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution Predicted band size : 42 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



All lanes : Anti-GLUL Antibody (N-term) at 1:1000 dilution Lane 1: mouse brain lysates Lane 2: mouse cerebellum lysates Lane 3: rat cerebellum lysates Lane 4: human brain lysates Lane 5: human cerebellum lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution Predicted band size : 42 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



All lanes : Anti-GLUL Antibody (N-term) at 1:1000 dilution Lane 1: mouse brain lysate Lane 2: mouse cerebellum lysate Lane 3: rat cerebellum lysate Lane 4: human brain lysate Lane 5: human cerebellum lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 42 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Immunohistochemical analysis of paraffin-embedded H. liver section using GLUL Antibody (N-term)(Cat#AW5446). AW5446 was diluted at 1:25 dilution. A undiluted biotinylated goat polyvalent antibody was used as the secondary, followed by DAB staining.

GLUL Antibody (N-term) - Background

GLUL belongs to the glutamine synthetase family. It catalyzes the synthesis of glutamine from glutamate and ammonia. Glutamine is a main source of energy and is involved in cell proliferation, inhibition of apoptosis, and cell signaling.

GLUL Antibody (N-term) - References

Di Tommaso, L., et.al., J. Hepatol. 50 (4), 746-754 (2009)