

GLUL / Glutamine Synthetase Antibody
Rabbit Polyclonal Antibody
Catalog # ALS15223**Specification****GLUL / Glutamine Synthetase Antibody - Product Information**

| | |
|-------------------|--------------------------|
| Application | WB, IHC-P |
| Primary Accession | P15104 |
| Reactivity | Human, Mouse, Rat |
| Host | Rabbit |
| Clonality | Polyclonal |
| Calculated MW | 42kDa KDa |
| Dilution | WB~~1:1000 IHC-P~~N/A |

GLUL / Glutamine Synthetase Antibody - Additional Information**Gene ID** 2752**Other Names**

Glutamine synthetase, GS, 6.3.1.2, Glutamate decarboxylase, 4.1.1.15, Glutamate--ammonia ligase, GLUL, GLNS

Reconstitution & Storage

Long term: -20°C; Short term: +4°C; Avoid freeze-thaw cycles.

Precautions

GLUL / Glutamine Synthetase Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

GLUL / Glutamine Synthetase Antibody - 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](http://www.uniprot.org/citations/16267323), PubMed: [30158707](http://www.uniprot.org/citations/30158707), PubMed: [36289327](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/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.

Volume

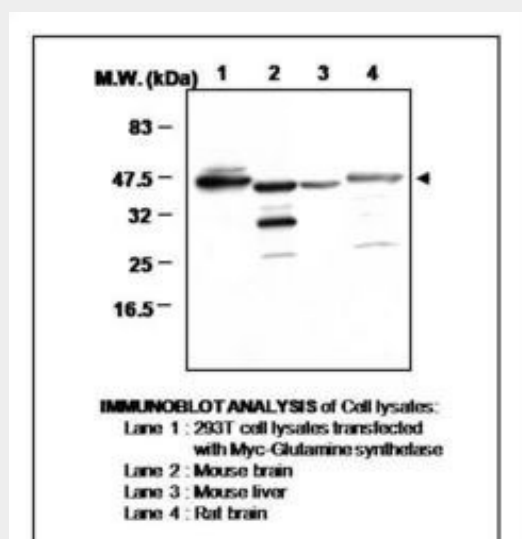
50 µl

GLUL / Glutamine Synthetase Antibody - 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 / Glutamine Synthetase Antibody - Images



0

GLUL / Glutamine Synthetase Antibody - Background

This enzyme has 2 functions: it catalyzes the production of glutamine and 4-aminobutanoate (gamma-aminobutyric acid, GABA), the latter in a pyridoxal phosphate-independent manner (By similarity). Essential for proliferation of fetal skin fibroblasts.

GLUL / Glutamine Synthetase Antibody - References

Gibbs C.S.,et al.Nucleic Acids Res. 15:6293-6293(1987).
van den Hoff M.J.B.,et al.Biochim. Biophys. Acta 1090:249-251(1991).
Christa L.,et al.Gastroenterology 106:1312-1320(1994).
Haberle J.,et al.Submitted (NOV-2003) to the EMBL/GenBank/DDBJ databases.
Bechtel S.,et al.BMC Genomics 8:399-399(2007).