

**Glutamine Synthetase Antibody**  
**Rabbit mAb**  
**Catalog # AP90360****Specification**

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**Glutamine Synthetase Antibody - Product Information**

Application	WB, IHC, FC, IP
Primary Accession	<a href="#">P15104</a>
Reactivity	Rat
Clonality	Monoclonal
<b>Other Names</b>	
GLNA; GS; GLUL; GLNS; PIG43 ; PIG59; Glutamine synthetase;	
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	42064 Da

**Glutamine Synthetase Antibody - Additional Information**

Dilution	WB~~1:1000 IHC~~1:100~500 FC~~1:10~50 IP~~N/A
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human Glutamine Synthetase
Description	The protein encoded by this gene 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. This gene is expressed during early fetal stages, and plays an important role in controlling body pH by removing ammonia from circulation.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

**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:<a href="http://www.uniprot.org/citations/16267323">

target="\_blank">16267323</a>, PubMed:<a href="http://www.uniprot.org/citations/30158707" target="\_blank">30158707</a>, PubMed:<a href="http://www.uniprot.org/citations/36289327" target="\_blank">36289327</a>). 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:<a href="http://www.uniprot.org/citations/18662667" target="\_blank">18662667</a>). 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:<a href="http://www.uniprot.org/citations/30158707" target="\_blank">30158707</a>). May act as a palmitoyltransferase for RHOJ: able to autopalmitoylate and then transfer the palmitoyl group to RHOJ (PubMed:<a href="http://www.uniprot.org/citations/30158707" target="\_blank">30158707</a>). Plays a role in ribosomal 40S subunit biogenesis (PubMed:<a href="http://www.uniprot.org/citations/26711351" target="\_blank">26711351</a>). 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:<a href="http://www.uniprot.org/citations/36289327" target="\_blank">36289327</a>).

#### **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**

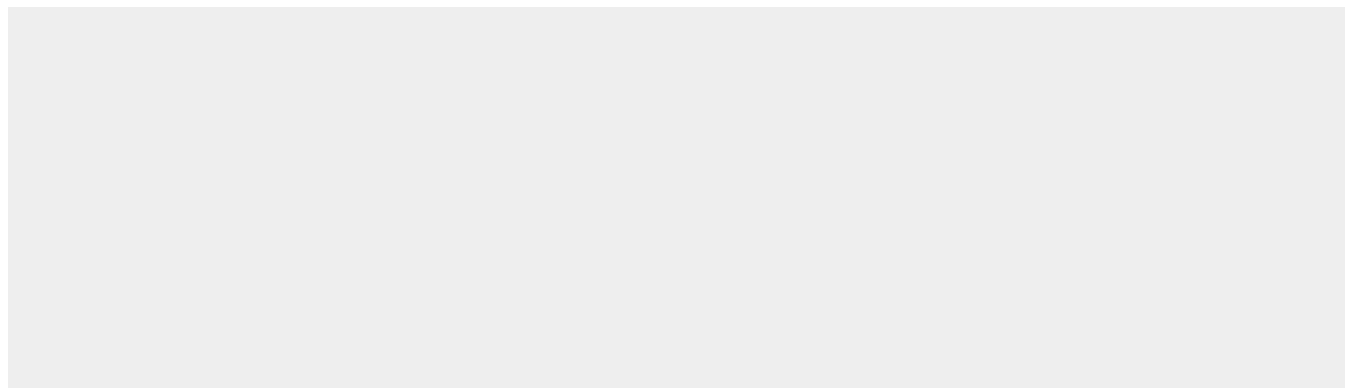
Expressed in endothelial cells.

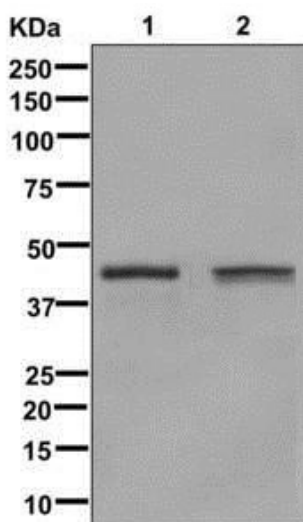
### **Glutamine Synthetase Antibody - Protocols**

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](#)

### **Glutamine Synthetase Antibody - Images**





Western blot analysis of Glutamine Synthetase expression in (1) Jurkat cell lysate; (2) HeLa cell lysate.