

Anti-Glutamine Synthetase GLUL Rabbit Monoclonal Antibody
Catalog # ABO14269**Specification****Anti-Glutamine Synthetase GLUL Rabbit Monoclonal Antibody - Product Information**

Application	WB, IHC, IP, FC
Primary Accession	P15104
Host	Rabbit
Isotype	Rabbit IgG
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Liquid

Description

Anti-Glutamine Synthetase GLUL Rabbit Monoclonal Antibody . Tested in WB, IHC, IP, Flow Cytometry applications. This antibody reacts with Human, Mouse, Rat.

Anti-Glutamine Synthetase GLUL Rabbit Monoclonal Antibody - Additional Information

Gene ID 2752

Other Names

Glutamine synthetase, GS, 6.3.1.2, Glutamate--ammonia ligase, Palmitoyltransferase GLUL, 2.3.1.225, GLUL {ECO:0000303|PubMed:30158707, ECO:0000312|HGNC:HGNC:4341}

Calculated MW

42064 MW KDa

Application Details

WB 1:500-1:2000
IHC 1:50-1:200
IP 1:50
FC 1:50

Subcellular Localization

Cytoplasm. Mitochondrion.

Contents

Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.

Immunogen

A synthesized peptide derived from human Glutamine Synthetase

Purification

Affinity-chromatography

Storage

Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

Anti-Glutamine Synthetase GLUL Rabbit Monoclonal 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, 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

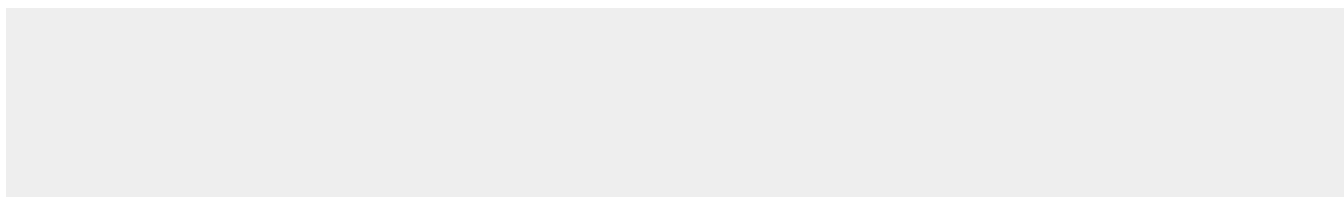
Expressed in endothelial cells.

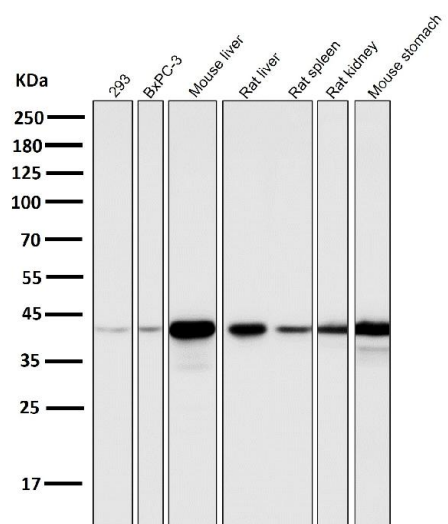
Anti-Glutamine Synthetase GLUL Rabbit Monoclonal Antibody - Protocols

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

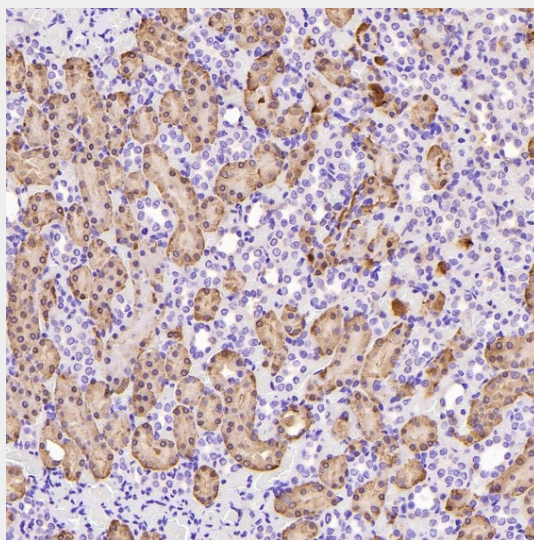
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Anti-Glutamine Synthetase GLUL Rabbit Monoclonal Antibody - Images

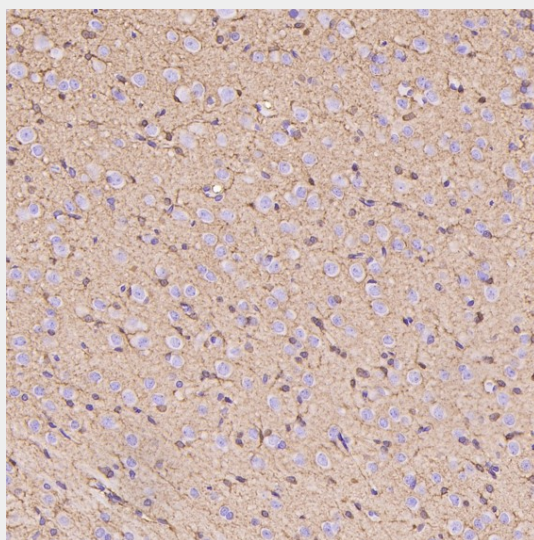




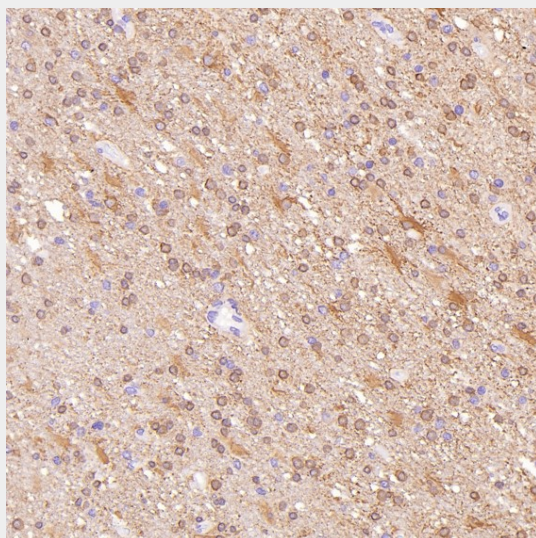
All lanes use the Antibody at 1:5K dilution for 1 hour at room temperature.



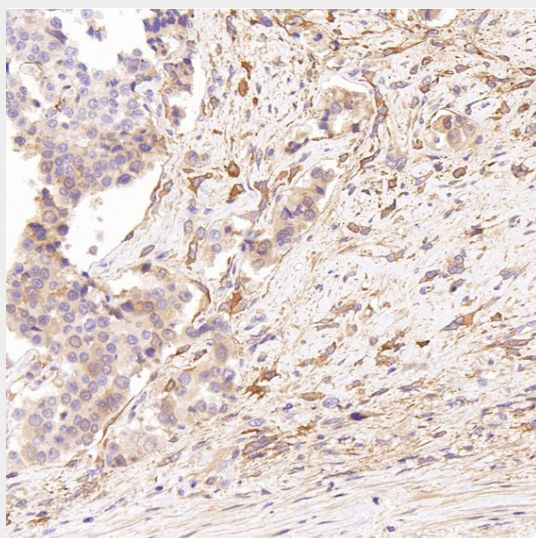
Immunohistochemical analysis of paraffin-embedded Rat kidney, using the Antibody at 1:400 dilution.



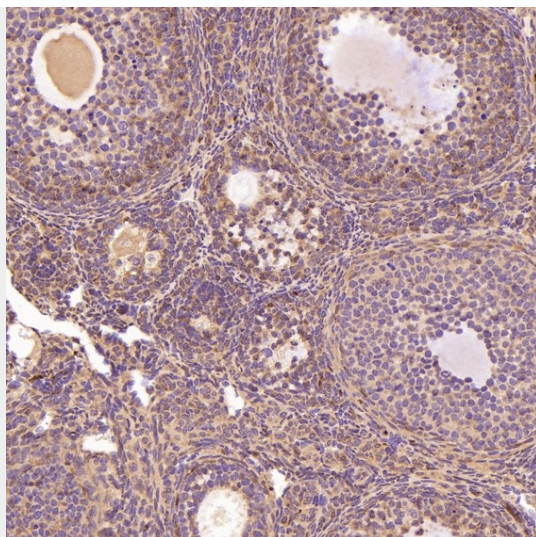
Immunohistochemical analysis of paraffin-embedded Rat cerebral cortex, using the Antibody at 1:400 dilution.



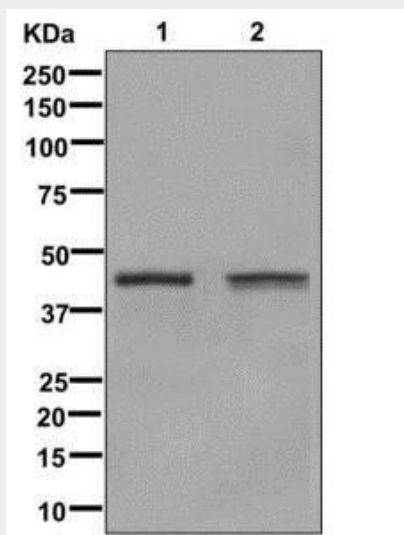
Immunohistochemical analysis of paraffin-embedded Human glioblastoma, using the Antibody at 1:250 dilution.



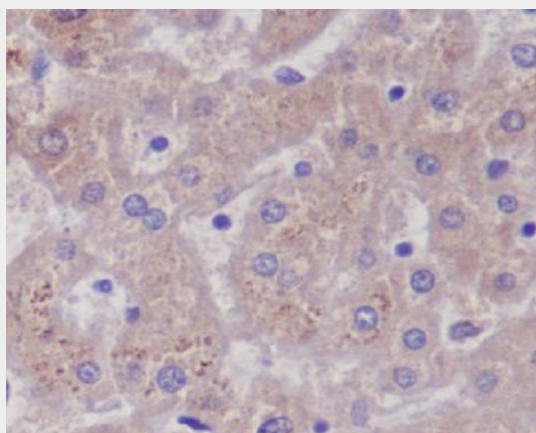
Immunohistochemical analysis of paraffin-embedded Human prostate cancer, using the Antibody at 1:250 dilution.



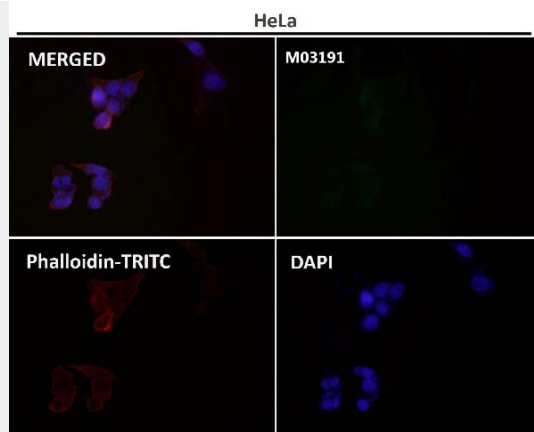
Immunohistochemical analysis of paraffin-embedded Mouse ovary, using the Antibody at 1:400 dilution.



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



Immunohistochemical analysis of paraffin-embedded human liver, using Glutamine Synthetase Antibody.



Immunofluorescent analysis using the Antibody at 1:50 dilution.