

For Research Use Only

# Glutamine Synthetase Monoclonal antibody

Catalog Number: 66323-1-Ig

Featured Product

8 Publications



## Basic Information

<b>Catalog Number:</b> 66323-1-Ig	<b>GenBank Accession Number:</b> BC011700	<b>Purification Method:</b> Protein A purification
<b>Size:</b> 150ul, Concentration: 1000 ug/ml by Nanodrop;	<b>GeneID (NCBI):</b> 2752	<b>CloneNo.:</b> 1D10G8
<b>Source:</b> Mouse	<b>UNIPROT ID:</b> P15104	<b>Recommended Dilutions:</b> WB 1:1000-1:8000 IHC 1:50-1:500 IF 1:250-1:1000
<b>Isotype:</b> IgG2b	<b>Full Name:</b> glutamate-ammonia ligase (glutamine synthetase)	
<b>Immunogen Catalog Number:</b> AG6309	<b>Calculated MW:</b> 374 aa, 42 kDa	
	<b>Observed MW:</b> 42 kDa	

## Applications

### Tested Applications:

WB, IHC, IF, ELISA

### Cited Applications:

WB, IF

### Species Specificity:

human, pig, zebrafish

### Cited Species:

human, mouse, rat, zebrafish

**Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (\*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0**

### Positive Controls:

**WB:** Jurkat cells, pig liver tissue, pig brain tissue

**IHC:** human liver cancer tissue, human brain tissue

**IF:** zebrafish retina, human brain tissue

## Background Information

GLUL (Glutamine synthetase) is also named as GS, GLNS and belongs to the glutamine synthetase family. 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 (PMID:18662667). Defects in GLUL are the cause of congenital systemic glutamine deficiency (CSGD). Organismal glutamine production is augmented secondary to an increase in the activity of glutamine synthetase in the lung and skeletal muscle (PMID:7630137). There are other bands with higher (66 kDa, 97 kDa) and lower (30 kDa) molecular weights also detected besides the 42 kDa band indicating the proteolysis of GLUL protein by the ubiquitin system (PMID:10091759).

## Notable Publications

Author	Pubmed ID	Journal	Application
Emily-Rose Martin	36339621	Front Pharmacol	WB
Qizhi Wang	36216131	Pharmacol Res	WB
Matthew J Broadhead	35305541	Acta Neuropathol	IF

## Storage

### Storage:

Store at -20°C. Stable for one year after shipment.

### Storage Buffer:

PBS with 0.02% sodium azide and 50% glycerol pH 7.3.

Aliquoting is unnecessary for -20°C storage

\*\*\* 20ul sizes contain 0.1% BSA

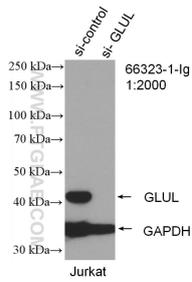
For technical support and original validation data for this product please contact:

T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)

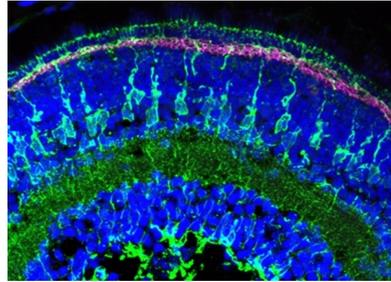
E: proteintech@ptglab.com  
W: ptglab.com

This product is exclusively available under Proteintech Group brand and is not available to purchase from any other manufacturer.

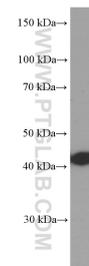
## Selected Validation Data



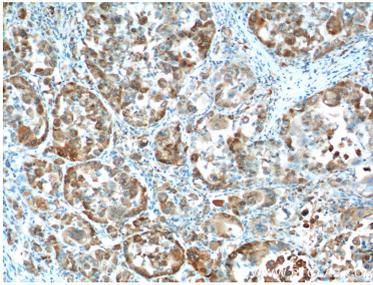
WB result of Glutamine synthetase antibody (66323-1-Ig; 1:2000; incubated at room temperature for 1.5 hours) with sh-Control and sh-Glutamine synthetase transfected Jurkat cells.



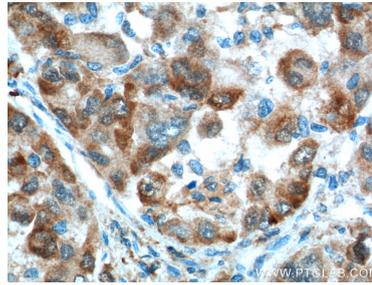
Immunofluorescence analysis of the zebrafish retina at 5 days post fertilisation. Collagen18a1 (aka Endostatin) polyclonal antibody (18301-1-AP, magenta). Dilution 1:200. Glutamine synthetase (66323-1-Ig, green) dilution 1:500. Tissue fixed overnight in 4% PFA; DAPI, blue. Data generated by Natalia Jaroszynska in Professor Ryan MacDonald's lab, University College London, UK.



Jurkat cells were subjected to SDS PAGE followed by western blot with 66323-1-Ig (Glutamine synthetase Antibody) at dilution of 1:4000 incubated at room temperature for 1.5 hours.



Immunohistochemical analysis of paraffin-embedded human liver cancer tissue slide using 66323-1-Ig (Glutamine synthetase Antibody) at dilution of 1:200 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunohistochemical analysis of paraffin-embedded human liver cancer tissue slide using 66323-1-Ig (Glutamine synthetase Antibody) at dilution of 1:200 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).