

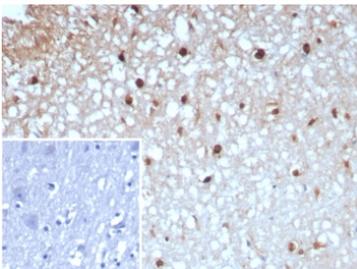
## Glutamine Synthetase Antibody Rabbit Monoclonal / GLUL [clone GLUL/8996R] (V4746)

Catalog No.	Formulation	Size
V4746-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V4746-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V4746SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

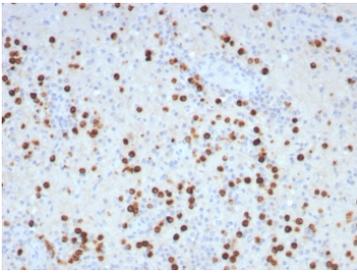
Recombinant **RABBIT MONOCLONAL**

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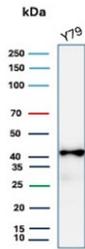
<b>Availability</b>	1-3 business days
<b>Species Reactivity</b>	Human
<b>Format</b>	Purified
<b>Host</b>	Rabbit
<b>Clonality</b>	Recombinant Rabbit Monoclonal
<b>Isotype</b>	Rabbit IgG, kappa
<b>Clone Name</b>	GLUL/8996R
<b>Purity</b>	Protein A/G affinity
<b>UniProt</b>	P15104
<b>Localization</b>	Cytoplasm
<b>Applications</b>	Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT Western Blot : 2-4ug/ml
<b>Limitations</b>	This Glutamine Synthetase antibody is available for research use only.



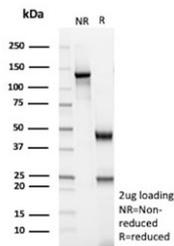
Immunohistochemistry of Glutamine Synthetase Antibody Rabbit Monoclonal GLUL/8996R in human brain tissue. Formalin-fixed, paraffin-embedded human brain sections demonstrate cytoplasmic HRP-DAB brown staining in astrocytic cells distributed throughout the neuropil, consistent with Glutamate-ammonia ligase (GLUL) localization in glial populations. Neuronal cell bodies show comparatively weaker staining. The inset panel shows PBS used in place of primary antibody as a negative control with minimal background signal. Heat-induced epitope retrieval was performed by boiling tissue sections in pH 9 10 mM Tris with 1 mM EDTA for 20 min followed by cooling prior to antibody incubation.



IHC staining of FFPE human brain tissue with GLUL antibody (clone GLUL/8996R).  
HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.



Western blot testing of human Y79 cell lysate with rabbit monoclonal Glutamine Synthetase antibody. Predicted molecular weight ~42 kDa.



SDS-PAGE analysis of purified, BSA-free Glutamine Synthetase antibody (clone GLUL/8996R) as confirmation of integrity and purity.

## Description

Glutamate-ammonia ligase is a cytosolic enzyme encoded by the GLUL gene and commonly referred to as Glutamine synthetase. Glutamine Synthetase Antibody Rabbit Monoclonal GLUL/8996R is designed to detect this key metabolic enzyme, which catalyzes the ATP-dependent conversion of glutamate and ammonia into glutamine, a central step in nitrogen metabolism and cellular ammonia detoxification. GLUL is located on chromosome 1q31.3 and is widely expressed with highly characteristic tissue-specific distribution patterns.

Glutamine synthetase is best known for its sharply defined zonal expression in the liver, where it is predominantly localized to pericentral hepatocytes surrounding central veins. This distinctive pattern reflects metabolic compartmentalization within the hepatic lobule and is frequently used in research investigating liver architecture, regeneration, and tumor-associated pathway activation. In the central nervous system, GLUL is enriched in astrocytes, where it participates in the glutamate-glutamine cycle and supports neurotransmitter recycling. Cytoplasmic expression in astroglial cells is a consistent feature in brain tissue analysis.

Outside liver and brain, GLUL expression can be observed in kidney, skeletal muscle, and selected epithelial tissues depending on metabolic demands. In oncology research, altered glutamine synthetase expression has been described in subsets of hepatocellular carcinoma and other malignancies, where it may correlate with activation of metabolic signaling pathways and cellular proliferation programs. Because of these biologically distinct expression patterns, GLUL is frequently evaluated in both normal tissue mapping and tumor characterization studies.

As a rabbit monoclonal reagent, Glutamine Synthetase Antibody Rabbit Monoclonal GLUL/8996R provides defined target recognition suitable for research applications examining cytoplasmic localization and relative expression levels. Positive cells typically exhibit diffuse to granular cytoplasmic staining consistent with the known intracellular distribution of glutamine synthetase. This antibody supports studies focused on metabolic zonation, astrocyte biology, and disease-associated alterations in glutamine metabolism.

## Application Notes

Optimal dilution of the Glutamine Synthetase antibody rabbit monoclonal should be determined by the researcher.

## Immunogen

A recombinant partial protein sequence (within amino acids 200-373) from the human protein was used as the immunogen for the Glutamine Synthetase antibody rabbit monoclonal GLUL/8996R.

## Storage

Aliquot the Glutamine Synthetase antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.