10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

GLUL Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6892a

Specification

GLUL Antibody (N-term) - Product Information

Application	**WB, IHC-P,E**
Primary Accession	P15104
Other Accession	P46410, P15105, Q4R7U3, P16580, P15103
Reactivity	**Human, Mouse**
Predicted	**Bovine, Chicken, Monkey, Pig**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Antigen Region	**70-96**

GLUL Antibody (N-term) - Additional Information

Gene ID 2752

Other Names
Glutamine synthetase, GS, Glutamate decarboxylase, Glutamate--ammonia ligase, GLUL, GLNS

Target/Specificity
This GLUL antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 70-96 amino acids from the N-terminal region of human GLUL.

Dilution
WB~~1:2000
IHC-P~~1:10~50

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
GLUL Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

GLUL Antibody (N-term) - 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). 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

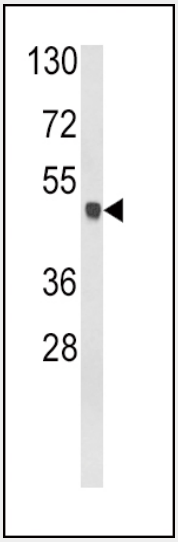
Tissue Location
Expressed in endothelial cells.

GLUL Antibody (N-term) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

GLUL Antibody (N-term) - Images



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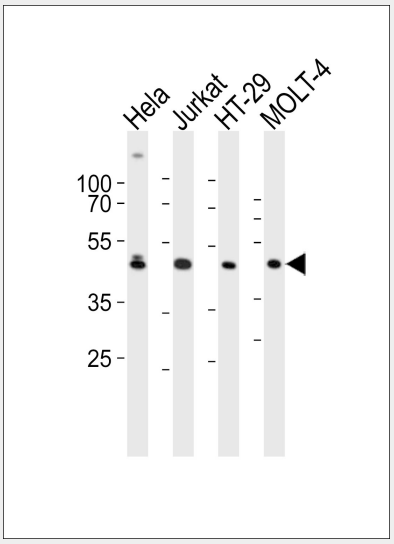
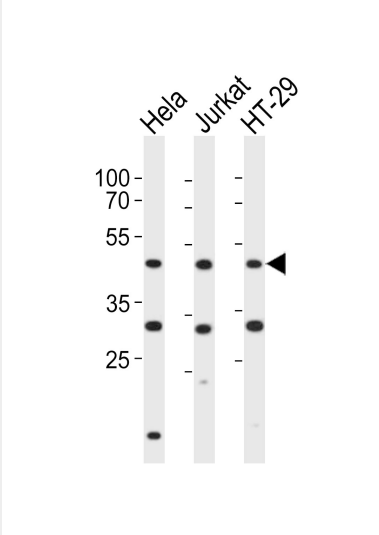
Western blot analysis of GLUL Antibody (N-term) (Cat. #AP6892a) in mouse cerebellum tissue lysates (35ug/lane). GLUL (arrow) was detected using the purified Pab.



Western blot analysis of lysates from Hela, Jurkat, HT-29, MOLT-4 cell line (from left to right), using GLUL Antibody (N-term)(Cat. #AP6892a). AP6892a was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody. Lysates at 20ug per lane.



Western blot analysis of lysates from Hela, Jurkat, HT-29 cell line (from left to right), using GLUL Antibody (N-term)(Cat. #AP6892a). AP6892a was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody. Lysates at 20ug per lane.

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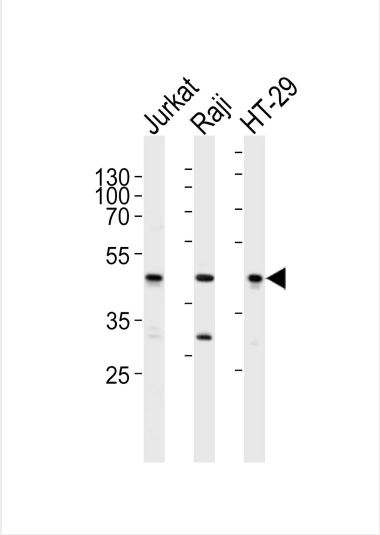
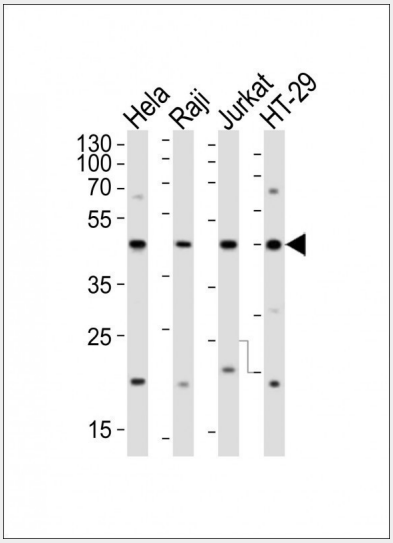


Western blot analysis of lysates from Jurkat, Raji, HT-29 cell line (from left to right), using GLUL Antibody (N-term)(Cat. #AP6892a). AP6892a was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody. Lysates at 20ug per lane.



Western blot analysis of lysates from Hela, Raji, Jurkat, HT-29 cell line (from left to right), using GLUL Antibody (N-term)(Cat. #AP6892a). AP6892a was diluted at 1:2000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody. Lysates at 20ug per lane.

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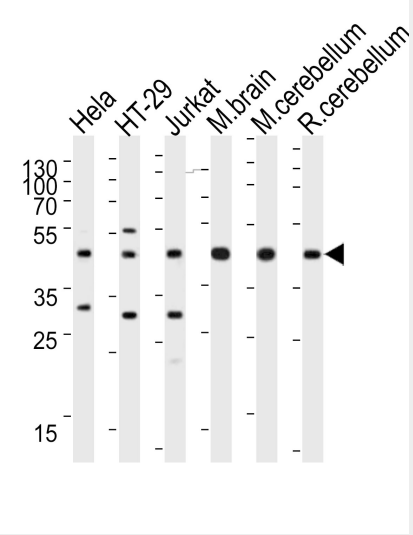
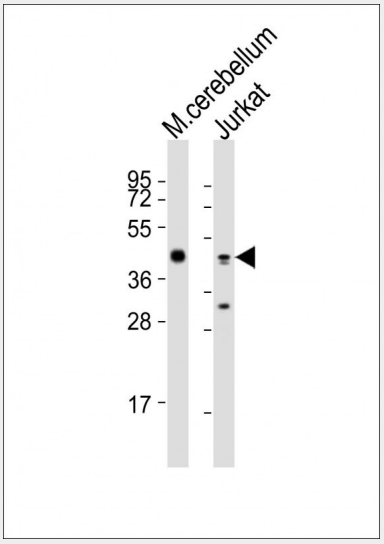


Western blot analysis of lysates from Hela, HT-29, Jurkat cell line, mouse brain, mouse cerebellum, rat cerebellum tissue lysate(from left to right), using GLUL Antibody (N-term)(Cat. #AP6892a). AP6892a was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody. Lysates at 20ug per lane.



All lanes : Anti-GLUL Antibody (N-term) at 1:2000 dilution Lane 1: mouse cerebellum lysates Lane 2: Jurkat whole cell lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution Predicted band size : 42 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

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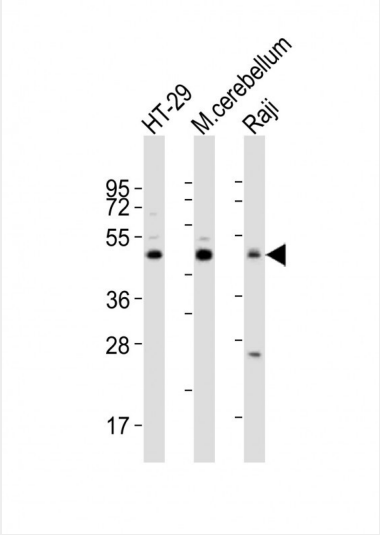
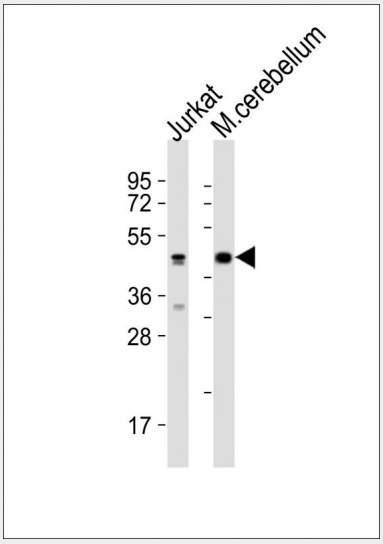


All lanes : Anti-GLUL Antibody (N-term) at 1:2000 dilution Lane 1: HT-29 whole cell lysates Lane 2: mouse cerebellum lysates Lane 3: Raji whole cell lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution Predicted band size : 42 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



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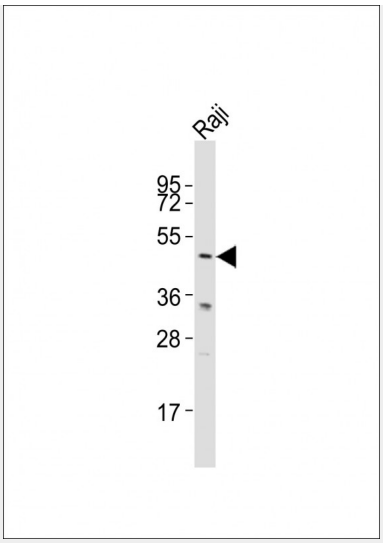
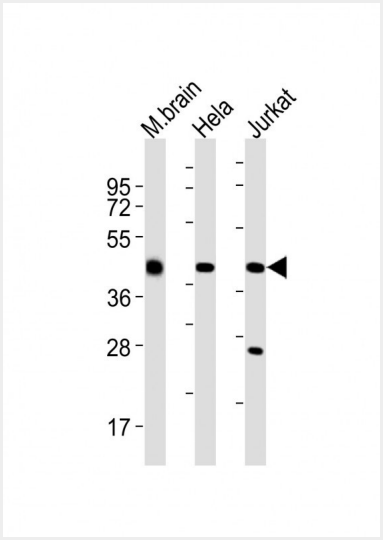


Anti-GLUL Antibody (N-term)at 1:1000 dilution + Raji whole cell lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution Predicted band size : 42 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



All lanes : Anti-GLUL Antibody (N-term) at 1:2000 dilution Lane 1: mouse brain lysates Lane 2: Hela whole cell lysates Lane 3: Jurkat whole cell lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution Predicted band size : 42 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

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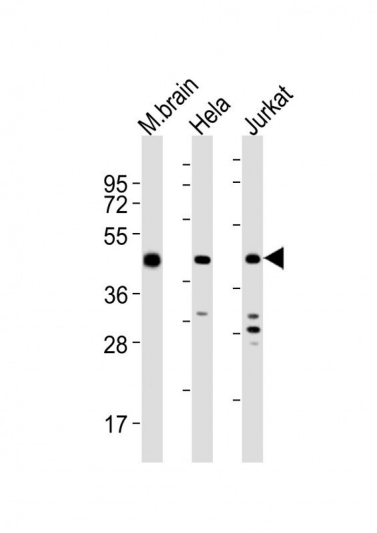

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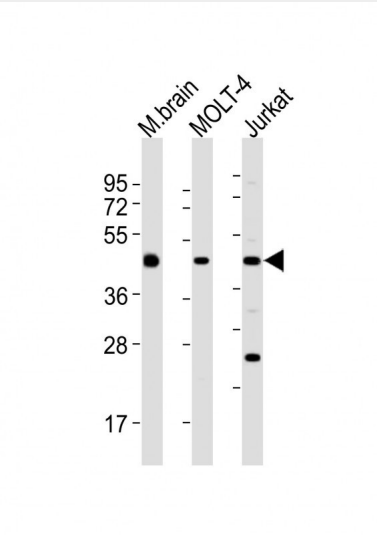

All lanes : Anti-GLUL Antibody (N-term) at 1:2000 dilution Lane 1: mouse brain lysates Lane 2: MOLT-4 whole cell lysates Lane 3: Jurkat whole cell lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution Predicted band size : 42 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

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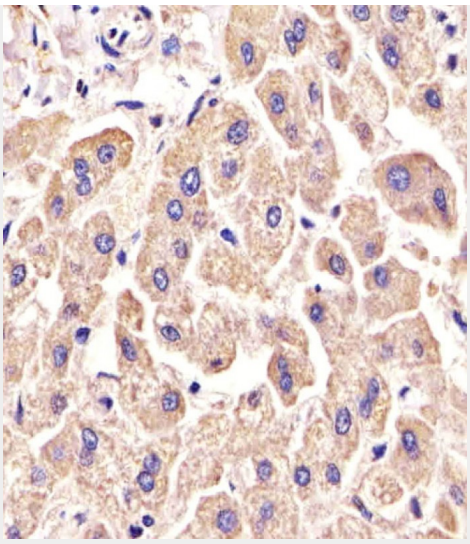
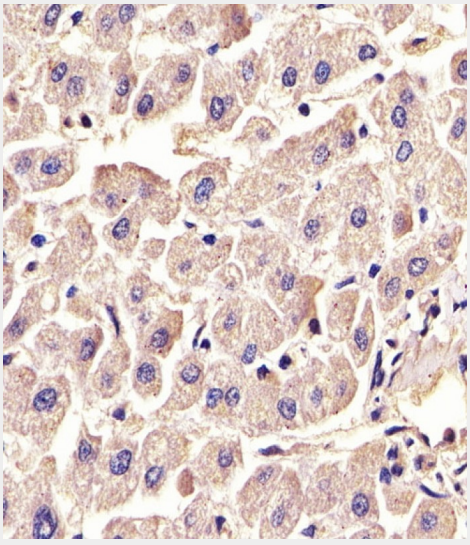


AP6892a staining GLUL in Human liver tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 3% BSA for 0. 5 hour at room temperature; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody (1/25) for 1 hours at 37°C. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.



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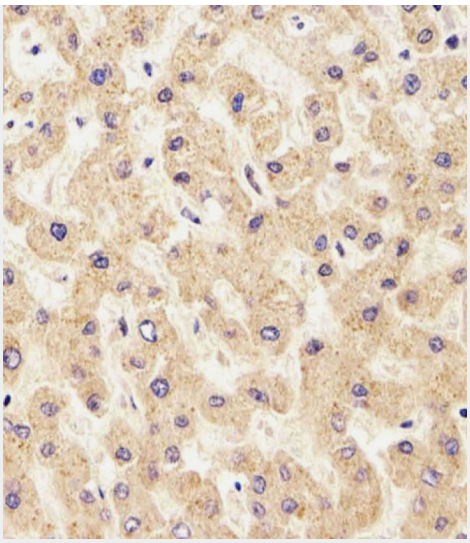

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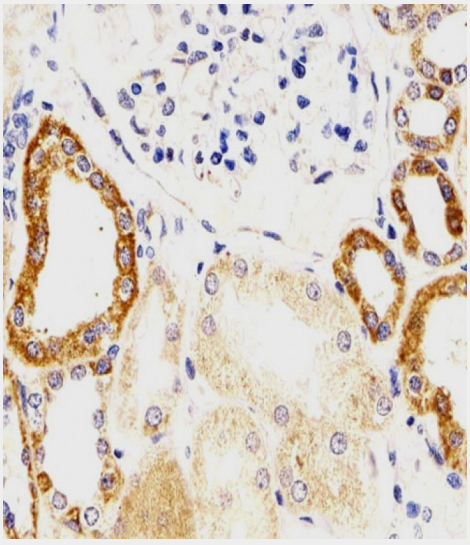

AP6892a staining GLUL in Human kidney tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 3% BSA for 0. 5 hour at room temperature; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody (1/25) for 1 hours at 37°C. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.

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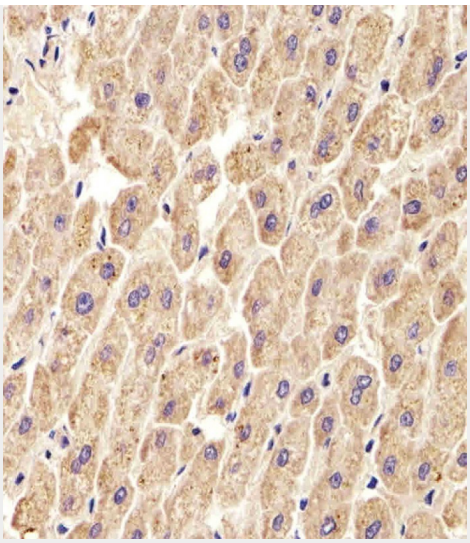
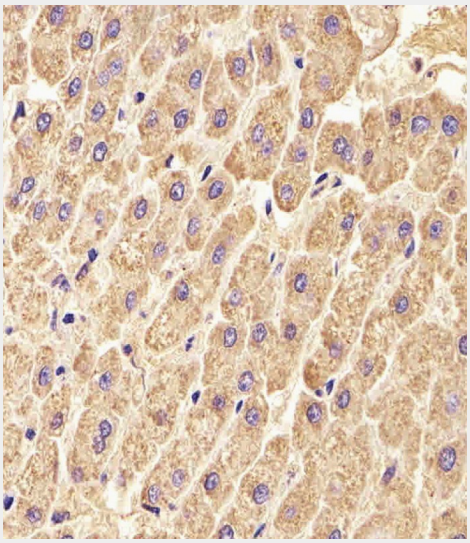


Immunohistochemical analysis of paraffin-embedded H. liver section using GLUL Antibody (N-term)(Cat#AP6892a). AP6892a was diluted at 1:25 dilution. A undiluted biotinylated goat polyvalent antibody was used as the secondary, followed by DAB staining.



Immunohistochemical analysis of paraffin-embedded H. liver section using GLUL Antibody (N-term)(Cat#AP6892a). AP6892a was diluted at 1:25 dilution. A undiluted biotinylated goat polyvalent antibody was used as the secondary, followed by DAB staining.

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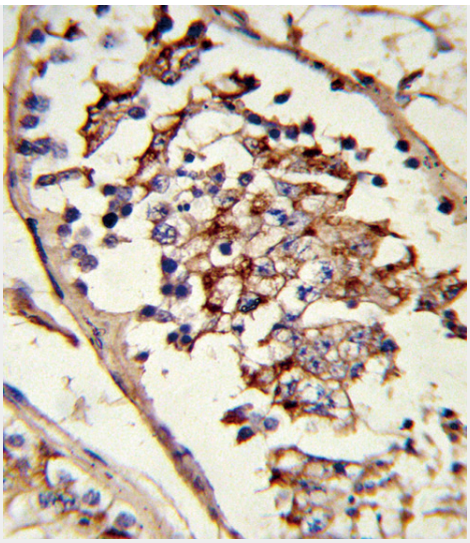

Formalin-fixed and paraffin-embedded human testis tissue reacted with GLUL Antibody (N-term), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

GLUL Antibody (N-term) - Background

GLUL 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.

GLUL Antibody (N-term) - References

Di Tommaso,L., et.al., J. Hepatol. 50 (4), 746-754 (2009)