

**GLUL Antibody (N-term)**  
**Affinity Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP6892a****Specification**

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**GLUL Antibody (N-term) - Product Information**

Application	WB, IHC-P,E
Primary Accession	<a href="#">P15104</a>
Other Accession	<a href="#">P46410</a> , <a href="#">P15105</a> , <a href="#">Q4R7U3</a> , <a href="#">P16580</a> , <a href="#">P15103</a>
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

E~~Use at an assay dependent concentration.

**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). 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 autopalmitylate 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**

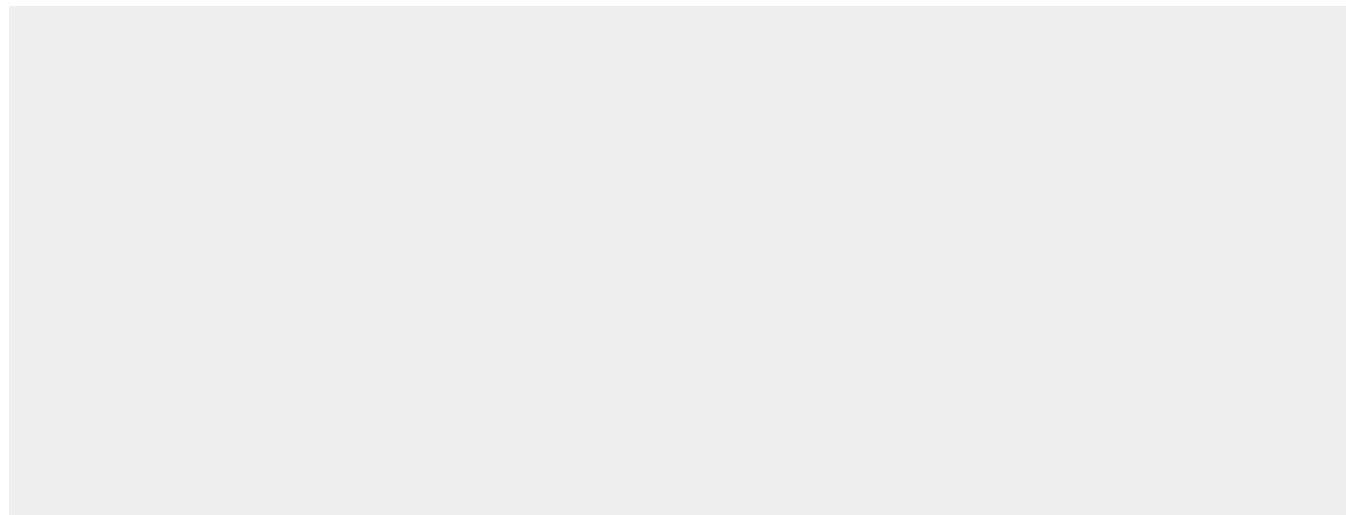
Expressed in endothelial cells.

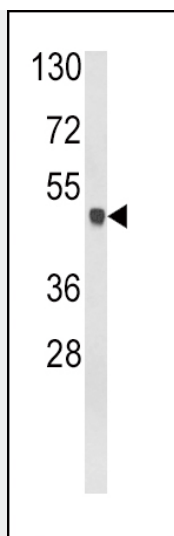
### **GLUL Antibody (N-term) - Protocols**

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

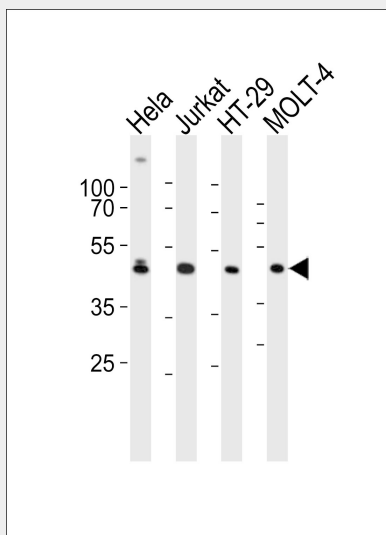
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### **GLUL Antibody (N-term) - Images**

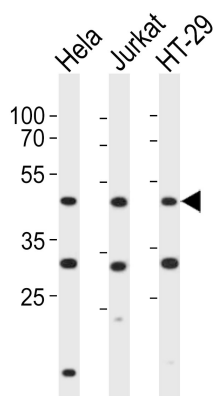




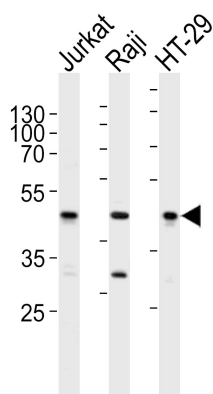
Western blot analysis of GLUL Antibody (N-term) (Cat. #AP6892a) in mouse cerebellum tissue lysates (35ug/lane). GLUL (arrow) was detected using the purified Pab.



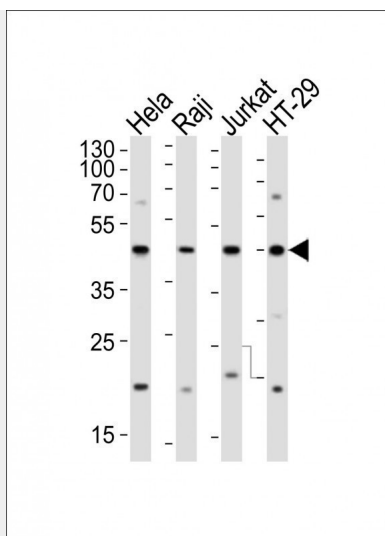
Western blot analysis of lysates from Hela, Jurkat, HT-29, MOLT-4 cell line (from left to right), using GLUL Antibody (N-term)(Cat. #AP6892a). AP6892a was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody. Lysates at 20ug per lane.



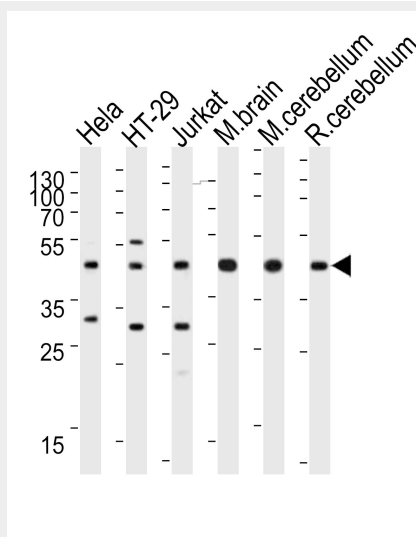
Western blot analysis of lysates from HeLa, Jurkat, HT-29 cell line (from left to right), using GLUL Antibody (N-term)(Cat. #AP6892a). AP6892a was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody. Lysates at 20ug per lane.



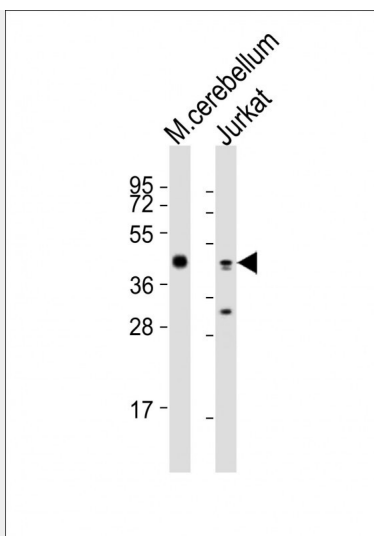
Western blot analysis of lysates from Jurkat, Raji, HT-29 cell line (from left to right), using GLUL Antibody (N-term)(Cat. #AP6892a). AP6892a was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody. Lysates at 20ug per lane.



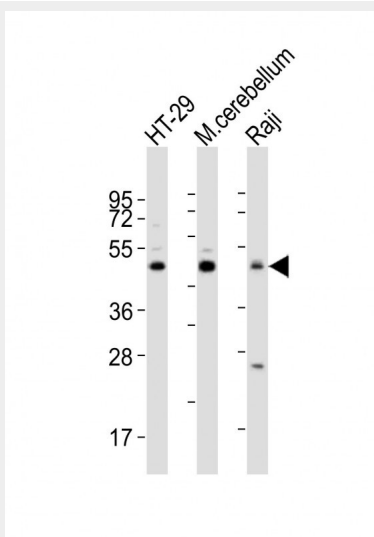
Western blot analysis of lysates from HeLa, Raji, Jurkat, HT-29 cell line (from left to right), using GLUL Antibody (N-term)(Cat. #AP6892a). AP6892a was diluted at 1:2000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody. Lysates at 20ug per lane.



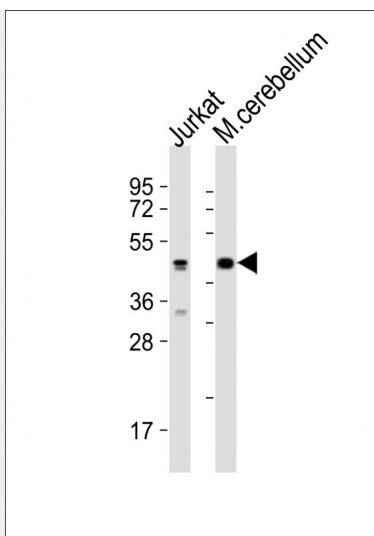
Western blot analysis of lysates from HeLa, HT-29, Jurkat cell line, mouse brain, mouse cerebellum, rat cerebellum tissue lysate(from left to right), using GLUL Antibody (N-term)(Cat. #AP6892a). AP6892a was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as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



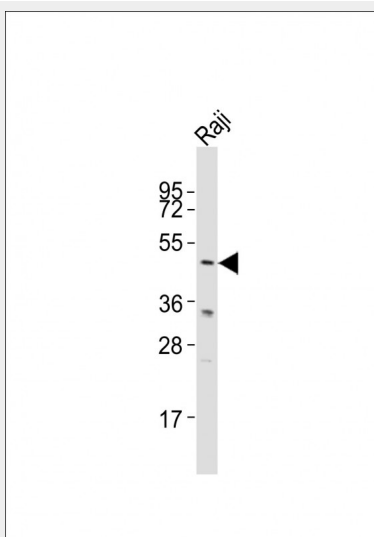
All lanes : Anti-GLUL Antibody (N-term) at 1:2000 dilution Lane 1: mouse cerebellum lysates Lane 2: Jurkat whole cell lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution Predicted band size : 42 kDa Blocking/Dilution buffer: 5%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



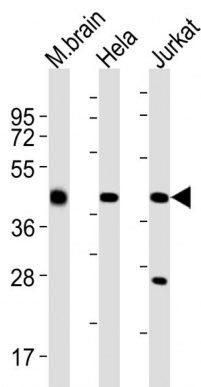
All lanes : Anti-GLUL Antibody (N-term) at 1:2000 dilution Lane 1: HT-29 whole cell lysates Lane 2: mouse cerebellum lysates Lane 3: Raji whole cell lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution Predicted band size : 42 kDa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



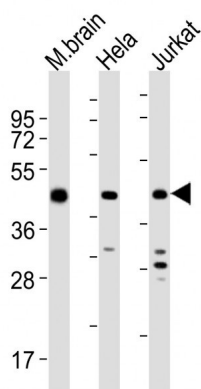
All lanes : Anti-GLUL Antibody (N-term) at 1:2000 dilution Lane 1: Jurkat whole cell lysates Lane 2: mouse cerebellum lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution Predicted band size : 42 kDa Blocking/Dilution buffer: 5%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



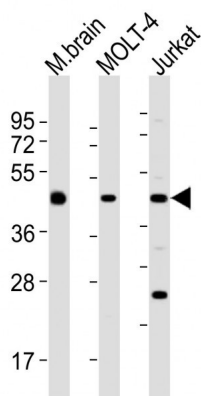
Anti-GLUL Antibody (N-term)at 1:1000 dilution + Raji whole cell lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution Predicted band size : 42 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



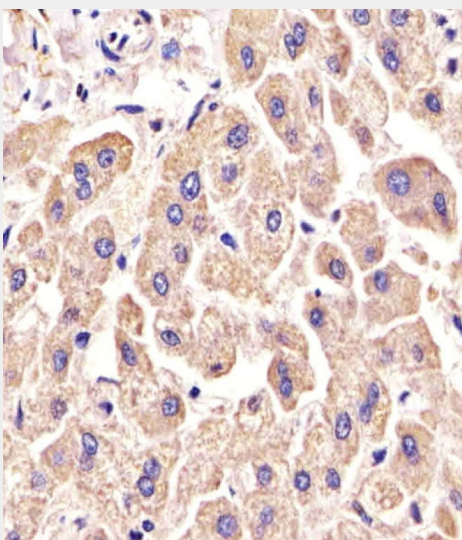
All lanes : Anti-GLUL Antibody (N-term) at 1:2000 dilution Lane 1: mouse brain lysates Lane 2: HeLa whole cell lysates Lane 3: Jurkat whole cell lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution Predicted band size : 42 kDa Blocking/Dilution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



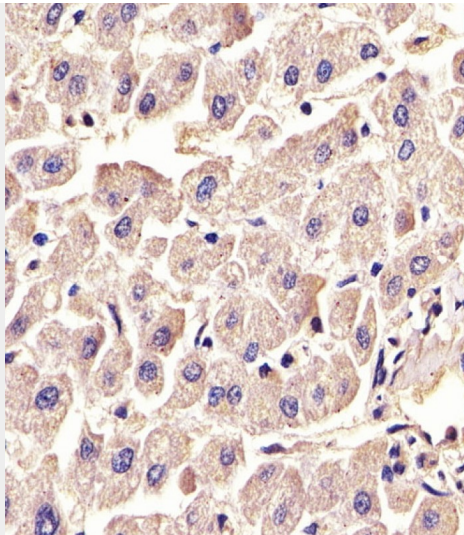
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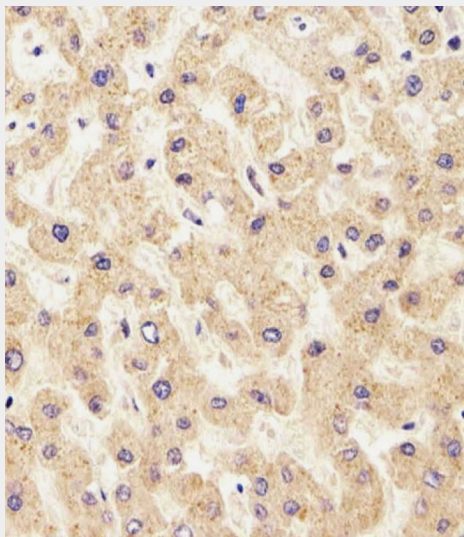
All lanes : Anti-GLUL Antibody (N-term) at 1:2000 dilution Lane 1: mouse brain lysates Lane 2: MOLT-4 whole cell lysates Lane 3: Jurkat whole cell lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution Predicted band size : 42 kDa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



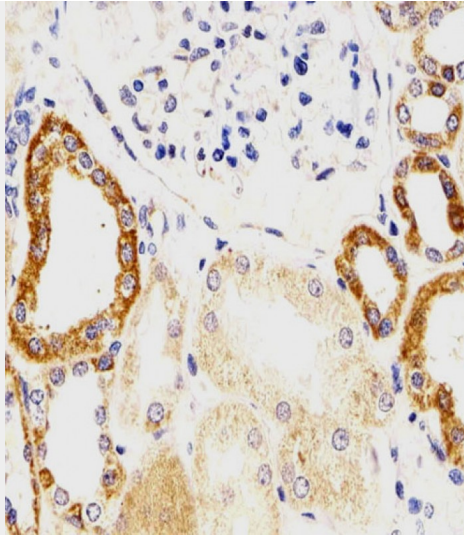
AP6892a staining GLUL in Human liver tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 3% BSA for 0.5 hour at room temperature; antigen retrieval was by heat mediation with a citrate buffer (pH6). 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.



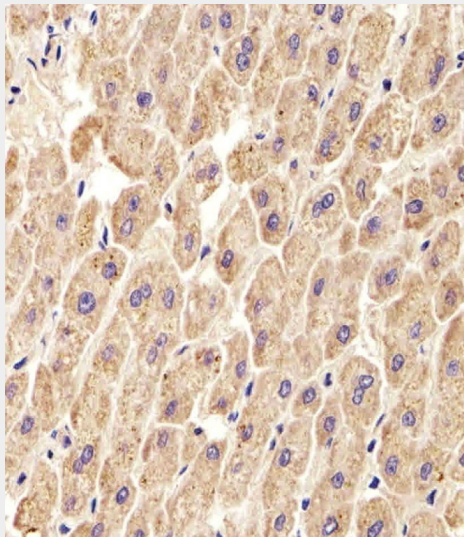
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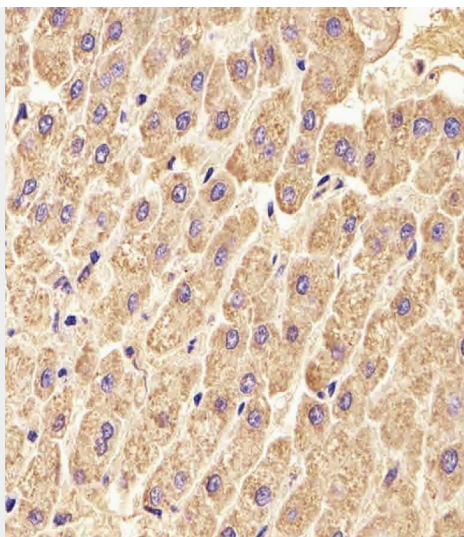
AP6892a staining GLUL in Human liver tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 3% BSA for 0.5 hour at room temperature; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody (1/25) for 1 hour at 37°C. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.



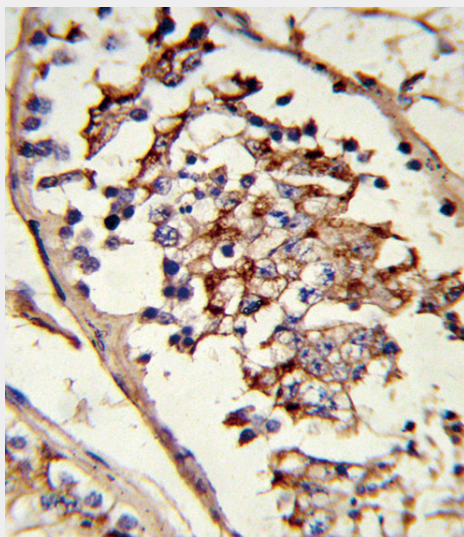
AP6892a staining GLUL in Human kidney tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 3% BSA for 0.5 hour at room temperature; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody (1/25) for 1 hour at 37°C. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.



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.



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)