

**GLS Antibody (C-term)**  
**Affinity Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AW5478**

### Specification

#### GLS Antibody (C-term) - Product Information

Application	WB, IHC-P, IF,E
Primary Accession	<a href="#">O94925</a>
Other Accession	<a href="#">P13264</a> , <a href="#">D3Z7P3</a>
Reactivity	Human, Mouse
Predicted	Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	H=73,65;M=74,66;R=74,66 KDa
Isotype	Rabbit IgG
Antigen Source	HUMAN

#### GLS Antibody (C-term) - Additional Information

##### Gene ID 2744

##### Antigen Region

516-545

##### Other Names

Glutaminase kidney isoform, mitochondrial, GLS, K-glutaminase, L-glutamine amidohydrolase, GLS, GLS1, KIAA0838

##### Dilution

WB~~1:1000

IHC-P~~1:25

IF~~1:25

##### Target/Specificity

This GLS antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 516-545 amino acids from the C-terminal region of human GLS.

##### 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

GLS Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

## GLS Antibody (C-term) - Protein Information

**Name** GLS

**Synonyms** GLS1, KIAA0838

### Function

Catalyzes the first reaction in the primary pathway for the renal catabolism of glutamine. Plays a role in maintaining acid-base homeostasis. Regulates the levels of the neurotransmitter glutamate, the main excitatory neurotransmitter in the brain (PubMed:<a href="http://www.uniprot.org/citations/30239721" target="\_blank">30239721</a>, PubMed:<a href="http://www.uniprot.org/citations/30575854" target="\_blank">30575854</a>, PubMed:<a href="http://www.uniprot.org/citations/30970188" target="\_blank">30970188</a>).

### Cellular Location

[Isoform 1]: Mitochondrion {ECO:0000250|UniProtKB:P13264}. Cytoplasm, cytosol. Note=The 74-kDa cytosolic precursor is translocated into the mitochondria and processed via a 72-kDa intermediate to yield the mature 68- and 65-kDa subunits {ECO:0000250|UniProtKB:P13264} [Glutaminase kidney isoform, mitochondrial 68 kDa chain]: Mitochondrion matrix {ECO:0000250|UniProtKB:P13264} Note=Produced by the proteolytic processing of the 74-kDa cytosolic precursor. {ECO:0000250|UniProtKB:P13264}

### Tissue Location

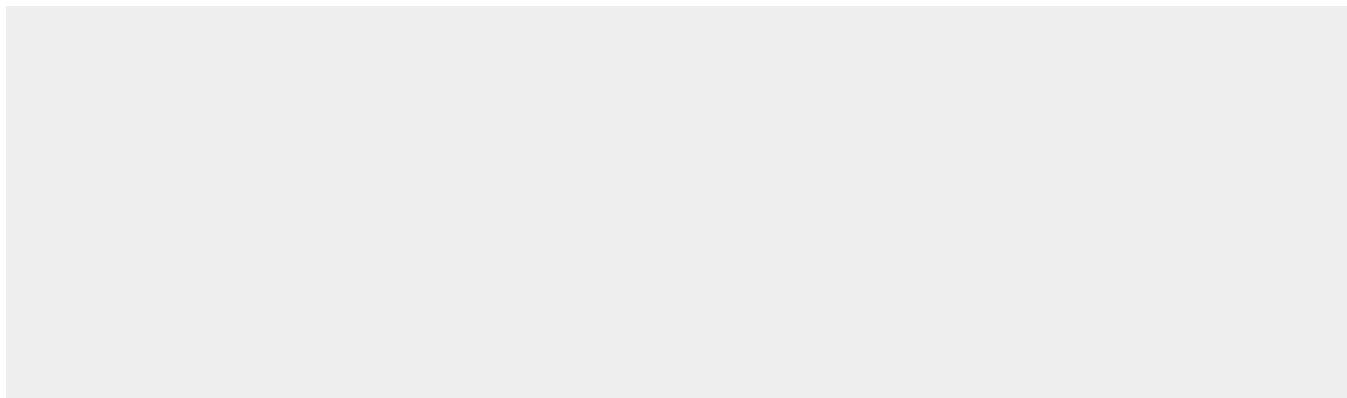
Isoform 1 and isoform 3 are detected in brain cortex. Isoform 3 is highly expressed in astrocytoma, ganglioglioma and ependymoma. Isoform 1 is highly expressed in brain and kidney, but not detected in liver. Isoform 3 is highly expressed in heart and pancreas, detected at lower levels in placenta, lung, pancreas and kidney, but is not detected in liver. Isoform 2 is expressed in cardiac and skeletal muscle.

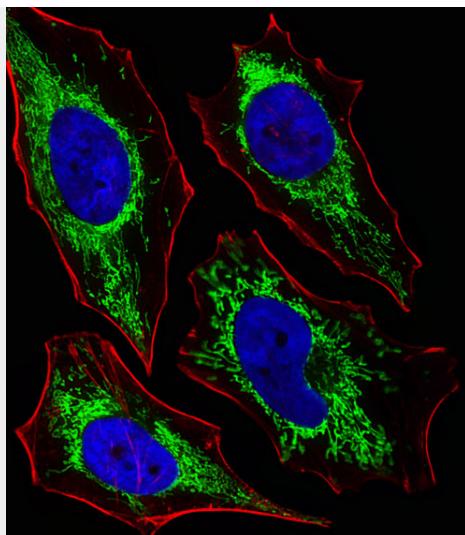
## GLS Antibody (C-term) - Protocols

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

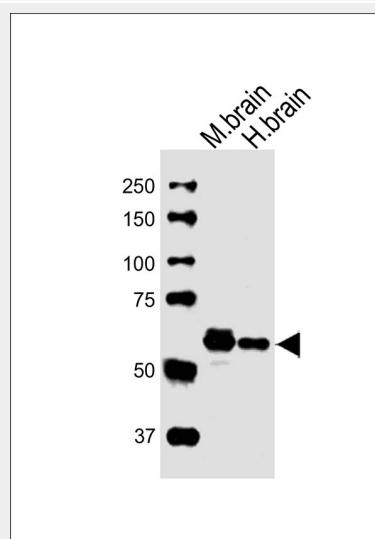
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## GLS Antibody (C-term) - Images

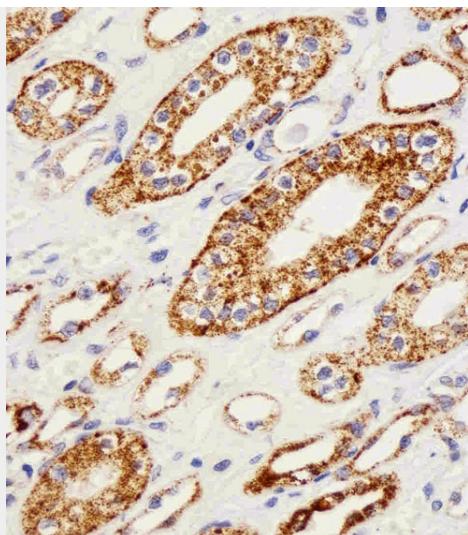




Fluorescent image of HeLa cells stained with XAF1 GLS Antibody (C-term)(Cat#AW5478). AW5478 was diluted at 1:25 dilution. An Alexa Fluor 488-conjugated goat anti-rabbit IgG at 1:400 dilution was used as the secondary antibody (green). DAPI was used to stain the cell nuclear (blue). Cytoplasmic actin was counterstained with Alexa Fluor® 555 conjugated with Phalloidin (red).



All lanes : Anti-GLS Antibody (C-term) at 1:1000 dilution Lane 1: mouse brain lysates Lane 2: human brain lysates Lysates/proteins at 20  $\mu$ g per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution Predicted band size : 73 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Immunohistochemical analysis of paraffin-embedded H.kidney section using GLS Antibody (C-term)(Cat#AW5478). AW5478 was diluted at 1:25 dilution. A peroxidase-conjugated goat anti-rabbit IgG at 1:400 dilution was used as the secondary antibody, followed by DAB staining.

#### **GLS Antibody (C-term) - Background**

Sahai (1983) demonstrated phosphate-activated glutaminase (EC 3.5.1.2) in human platelets. It is the major enzyme yielding glutamate from glutamine. Significance of the enzyme derives from its possible implication in behavior disturbances in which glutamate acts as a neurotransmitter(Prusiner, 1981). High heritability of platelet glutaminase was indicated by studies of Sahai and Vogel (1983) [PubMed 6682827] who found an intraclass correlation coefficient of 0.96 for monozygotic twins and 0.53 for dizygotic twins.

#### **GLS Antibody (C-term) - References**

Swierczynski,J., et.al., *Biochim. Biophys. Acta* 1157 (1), 55-62 (1993)