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GLS2 Antibody
Catalog # ASC11291

Specification

GLS2 Antibody - Product Information

Application	**WB**
Primary Accession	Q9UI32
Other Accession	NP_037399, 27165
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Calculated MW	**Predicted: 36, 55, 62, 66 kDa**
Application Notes	**Observed: 55, 62 kDa KDa** **GLS2 antibody can be used for detection of GLS2 by Western blot at 0.5 - 1 µg/mL. Antibody can also be used for immunohistochemistry starting at 5 µg/mL. For immunofluorescence start at 20 µg/mL.**

GLS2 Antibody - Additional Information

Gene ID	**27165**

Target/Specificity
GLS2 antibody was raised against an 18 amino acid synthetic peptide near the center terminus of human GLS2.

The immunogen is located within amino acids 300 - 350 of GLS2.

Reconstitution & Storage
Antibody can be stored at 4°C up to one year. Antibodies should not be exposed to prolonged high temperatures.

Precautions
GLS2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

GLS2 Antibody - Protein Information

Name GLS2

Synonyms GA

Function
Plays an important role in the regulation of glutamine catabolism. Promotes mitochondrial respiration and increases ATP generation in cells by catalyzing the synthesis of glutamate and alpha- ketoglutarate. Increases cellular anti-oxidant function via NADH and glutathione production. May play a role in preventing tumor proliferation.

Cellular Location

Mitochondrion.

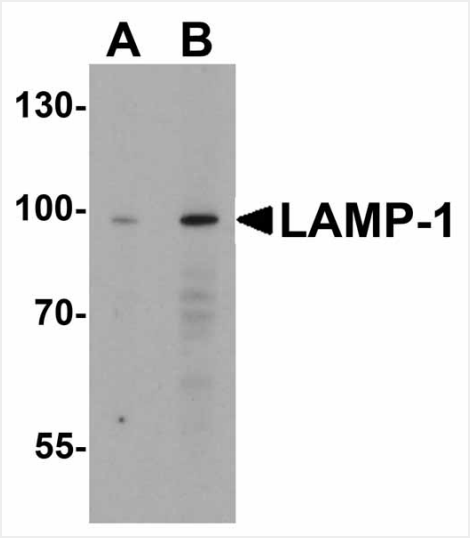
Tissue Location
Highly expressed in liver. Expressed in brain and pancreas. Not observed in heart, placenta, lung, skeletal muscle and kidney. Expression is significantly reduced in hepatocellular carcinomas.

GLS2 Antibody - Protocols

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

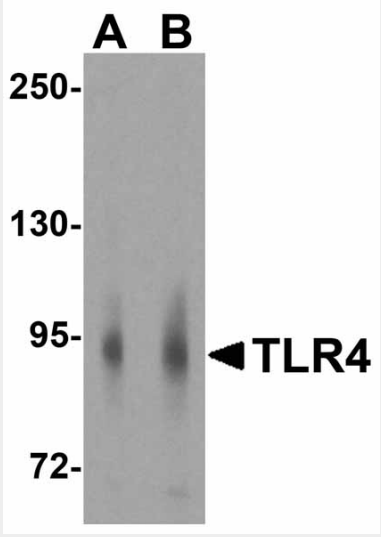
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

GLS2 Antibody - Images



Western blot analysis of LAMP-1 in EL4 cell lysate with LAMP-1 antibody at (A) 1 and (B) 2 µg/mL.

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Western blot analysis of TLR4 in human small intestine lysate with TLR4 antibody at (A) 2 and (B) 4 µg/mL.

GLS2 Antibody - Background

GLS2 Antibody: Phosphate-activated glutaminase, also known as Glutaminase 2 (GLS2), was initially isolated from rat liver, although it has been shown to be expressed in other tissues. Like the functionally similar, larger kidney glutaminase, GLS2 catalyzes the hydrolysis of glutamine to stoichiometric amounts of glutamate and ammonia. Expression of GLS2 is increased by p53 under both stressed and nonstressed conditions, resulting in increased levels of glutamate and alpha-ketoglutarate, which in turn results in enhanced mitochondrial respiration and ATP generation. GLS2 also regulates antioxidant defense function in cells by increasing reduced glutathione levels and decreasing ROS-levels, suggesting that GLS2 acts as a mediator of p53's role in antioxidant defense in addition to its role in energy metabolism.

GLS2 Antibody - References

Chung-Bok MI, Vincent N, Jhala U, et al. Rat hepatic glutaminase: identification of the full coding sequence and characterization of a functional promoter. Biochem. J. 1997; 324:193-200.
Gomez-Fabre PM, Aledo JC, del Castillo-Olivares A, et al. Molecular cloning, sequencing and expression studies of the human breast cancer cell glutaminase. Biochem. J. 2000; 345:365-75.
Hu W, Zhang C, Wu R, et al. Glutaminase 2, a novel p53 target gene regulating energy metabolism and antioxidant function. Proc. Natl. Acad. Sci. USA 2010; 107:7455-60.