

Glucose-6-phosphate isomerase Antibody
Purified Mouse Monoclonal Antibody
Catalog # AO1165a**Specification**

Glucose-6-phosphate isomerase Antibody - Product Information

Application	WB, IHC, ICC, E
Primary Accession	P06744
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Calculated MW	63kDa KDa

Description

Glucose-6-phosphate isomerase, or phosphoglucose isomerase, also known as GPI. It belongs to the GPI family whose members encode multifunctional phosphoglucose isomerase proteins involved in energy pathways and it is an enzyme that catalyzes the conversion of glucose-6-phosphate into fructose 6-phosphate in the second step of glycolysis. The protein functions in different capacities inside and outside the cell. In the cytoplasm, the gene product is involved in glycolysis and gluconeogenesis, while outside the cell it functions as a neurotrophic factor for spinal and sensory neurons. Defects in GPI are the cause of nonspherocytic hemolytic anemia and a severe enzyme deficiency can be associated with hydrops fetalis, immediate neonatal death and neurological impairment.

Immunogen

Purified recombinant fragment of human GPI expressed in E. Coli.

Formulation

Ascitic fluid containing 0.03% sodium azide.

Glucose-6-phosphate isomerase Antibody - Additional Information

Gene ID 2821

Other Names

Glucose-6-phosphate isomerase, GPI, 5.3.1.9, Autocrine motility factor, AMF, Neuroleukin, NLK, Phosphoglucose isomerase, PGI, Phosphohexose isomerase, PHI, Sperm antigen 36, SA-36, GPI

Dilution

WB~~1/500 - 1/2000

IHC~~1/500 - 1/2000

ICC~~N/A

E~~N/A

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

Glucose-6-phosphate isomerase Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Glucose-6-phosphate isomerase Antibody - Protein Information

Name GPI {ECO:0000303|PubMed:2387591, ECO:0000312|HGNC:HGNC:4458}

Function

Isomerase that catalyzes the conversion of alpha-D-glucose-6- phosphate to beta-D-fructose-6-phosphate, the second step in glycolysis, and the reverse reaction in gluconeogenesis, within the cytoplasm (PubMed:28803808). Also shows C2-epimerase activity, interconverting D-glucose-6-phosphate (G6P) and D-mannose-6-phosphate (M6P) (By similarity). Also displays anomerase activity, interconverting alpha and beta-anomeric forms of G6P, D-fructose-6- phosphate and M6P (By similarity). In addition to its metabolic role, this enzyme functions extracellularly as a cytokine: acts as autocrine motility factor (AMF), a secreted angiogenic factor that enhances endothelial cell motility (PubMed:11437381). Functions as neuroleukin, a neurotrophic factor supporting the survival of spinal and sensory neurons (PubMed:11004567, PubMed:3352745). Released by lectin- stimulated T-cells to induce immunoglobulin secretion (PubMed:11004567, PubMed:3352745).

Cellular Location

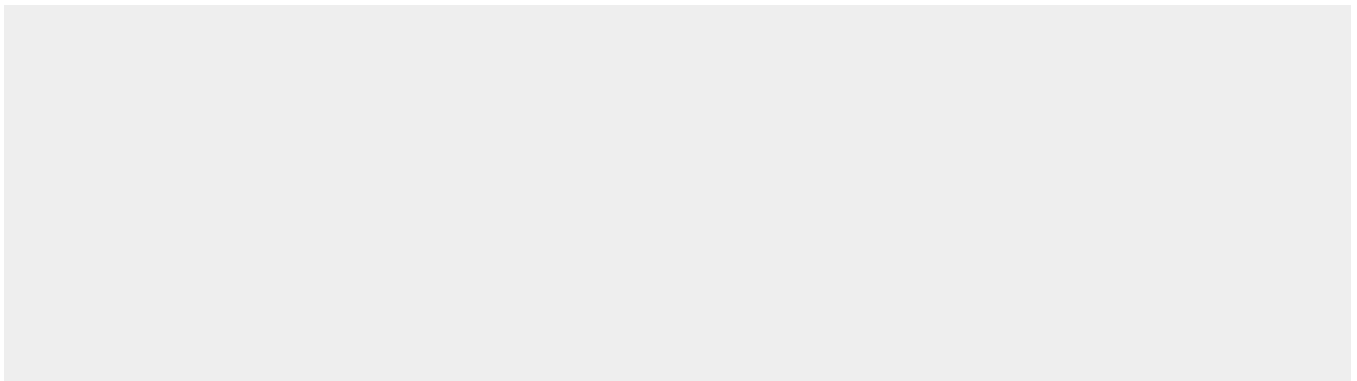
Cytoplasm. Secreted

Glucose-6-phosphate isomerase 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 Cytometry](#)
- [Cell Culture](#)

Glucose-6-phosphate isomerase Antibody - Images



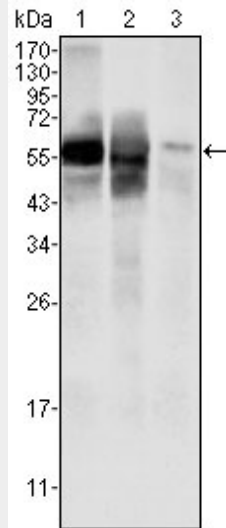


Figure 1: Western blot analysis using GPI mouse mAb against HepG2 (1) , SMMC-7721 (2) cell lysate and rat liver tissues lysate (3).

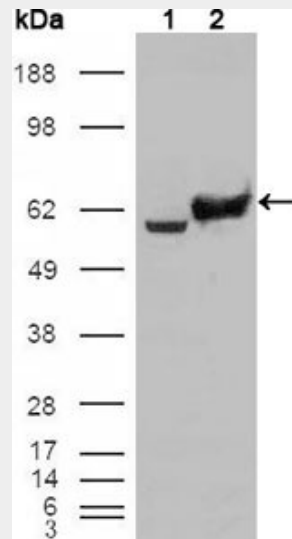


Figure 2: Western blot analysis using GPI mouse mAb against HEK293T cells transfected with the pCMV6-ENTRY control (1) and pCMV6-ENTRY GPI cDNA (2).

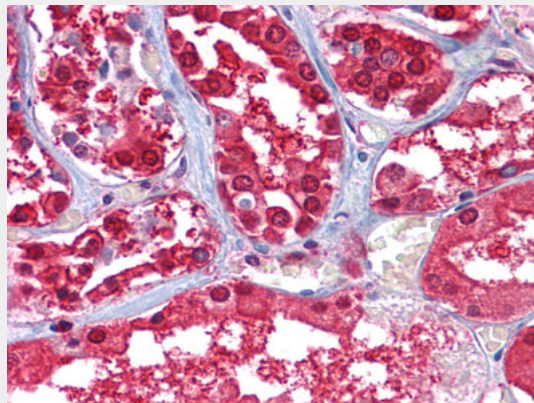


Figure 3: Immunohistochemical analysis of paraffin-embedded human Kidney tissues using GPI mouse mAb.

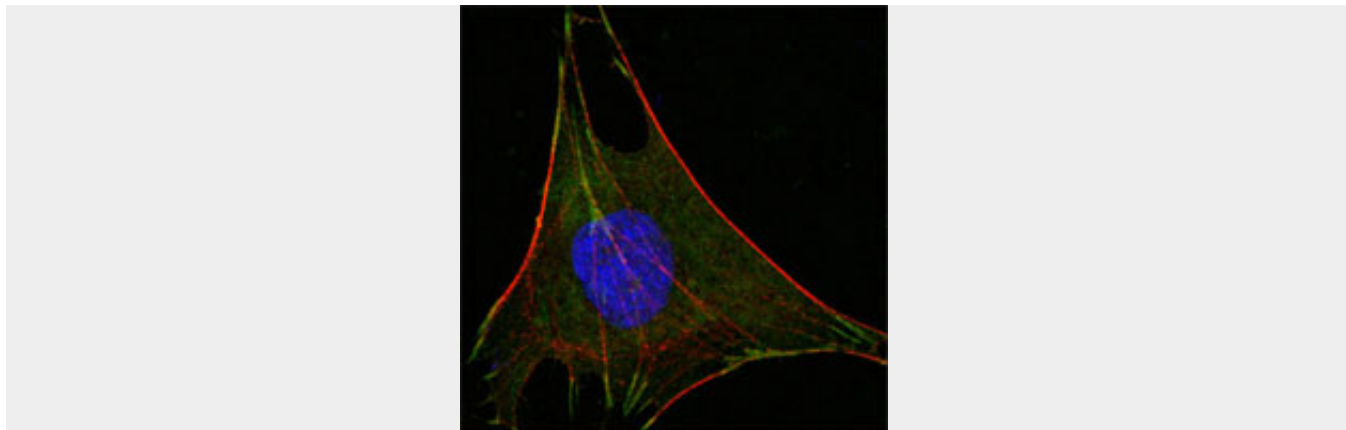


Figure 4: Confocal immunofluorescence analysis of L-02 cells using GPI mouse mAb (green). Red: Actin filaments have been labeled with DY-554 phalloidin. Blue: DRAQ5 fluorescent DNA dye.

Glucose-6-phosphate isomerase Antibody - References

1. Biochem Biophys Res Commun. 2004 Oct 15;323(2):518-22.
2. Biochem Biophys Res Commun. 2006 Oct 20;349(2):838-45.
3. Hum Mutat. 2006 Nov;27(11):1159.
4. Leuk Lymphoma. 2006 Oct;47(10):2234-43.