

## Product datasheet for **CF501127**

### Glucose 6 phosphate isomerase (GPI) Mouse Monoclonal Antibody [Clone ID: OTI5G9]

#### Product data:

|                         |  |
|-------------------------|--|
| Product Type:           | Primary Antibodies   |
| Clone Name:             | OTI5G9   |
| Applications:           | IF, IHC, WB  |
| Recommended Dilution:   | WB 1:2000, IHC 1:50, IF 1:100  |
| Reactivity:             | Human, Mouse, Rat  |
| Host:                   | Mouse  |
| Isotype:                | IgG2b  |
| Clonality:              | Monoclonal   |
| Immunogen:              | Full length human recombinant protein of human GPI(NP_000166) produced in HEK293T cell.  |
| Formulation:            | Lyophilized powder (original buffer 1X PBS, pH 7.3, 8% trehalose)  |
| Reconstitution Method:  | For reconstitution, we recommend adding 100uL distilled water to a final antibody concentration of about 1 mg/mL. To use this carrier-free antibody for conjugation experiment, we strongly recommend performing another round of desalting process. (OriGene recommends Zeba Spin Desalting Columns, 7KMWCO from Thermo Scientific) |
| Purification:           | Purified from mouse ascites fluids or tissue culture supernatant by affinity chromatography (protein A/G)  |
| Conjugation:            | Unconjugated   |
| Storage:                | Store at -20°C as received.  |
| Stability:              | Stable for 12 months from date of receipt.   |
| Predicted Protein Size: | 63 kDa   |
| Gene Name:              | glucose-6-phosphate isomerase  |
| Database Link:          | <a href="#">NP_000166</a><br><a href="#">Entrez Gene 292804 Rat</a> <a href="#">Entrez Gene 2821 Human</a><br><a href="#">P06744</a>   |



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**Background:**

This gene belongs to the GPI family whose members encode multifunctional phosphoglucose isomerase proteins involved in energy pathways. The protein encoded by this gene is a dimeric enzyme that catalyzes the reversible isomerization of glucose-6-phosphate and fructose-6-phosphate. 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 this gene are the cause of nonspherocytic hemolytic anemia and a severe enzyme deficiency can be associated with hydrops fetalis, immediate neonatal death and neurological impairment.

**Synonyms:**

AMF; GNPI; NLK; PGI; PHI; SA-36; SA36

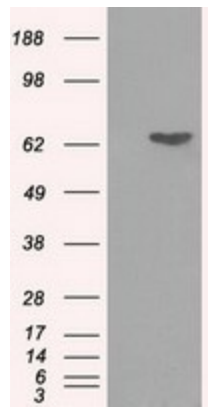
**Protein Families:**

Druggable Genome

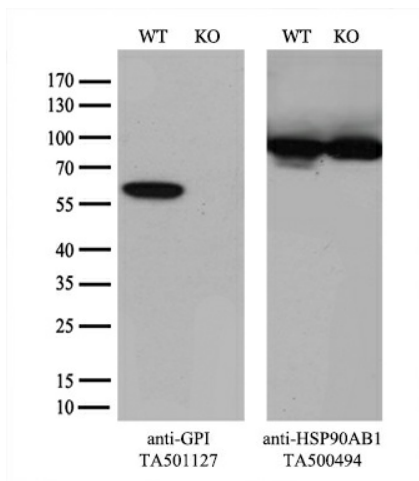
**Protein Pathways:**

Amino sugar and nucleotide sugar metabolism, Glycolysis / Gluconeogenesis, Metabolic pathways, Pentose phosphate pathway, Starch and sucrose metabolism

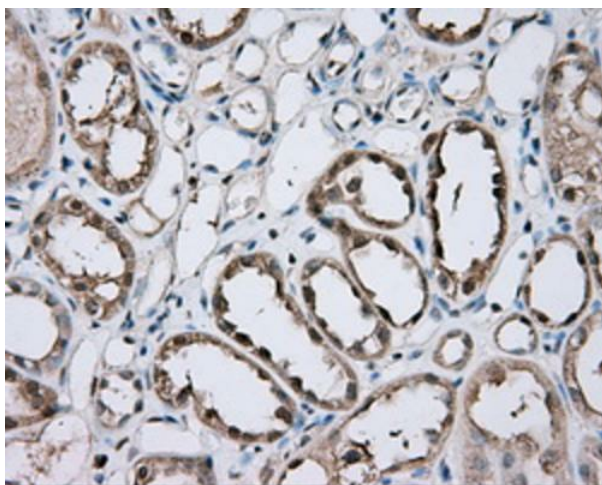
**Product images:**



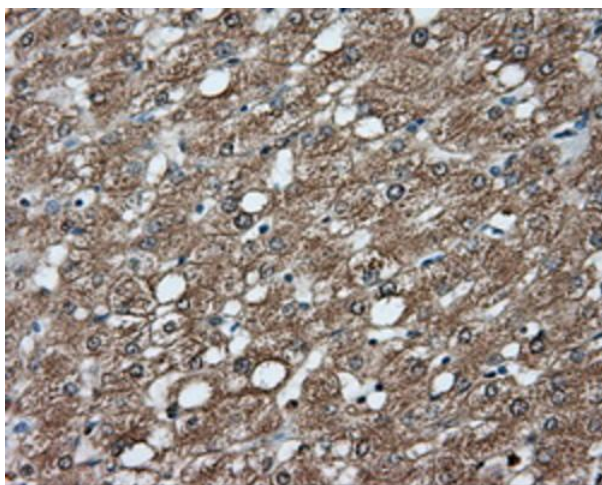
HEK293T cells were transfected with the pCMV6-ENTRY control (Left lane) or pCMV6-ENTRY GPI ([RC201232], Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-GPI. Positive lysates [LY400066] (100ug) and [LC400066] (20ug) can be purchased separately from OriGene.



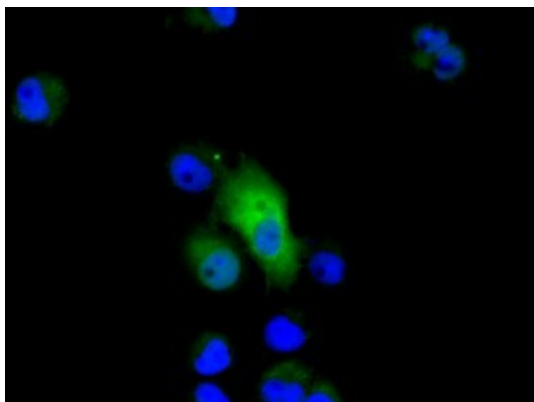
Equivalent amounts of cell lysates (10 ug per lane) of wild-type 293T cells (WT, Cat# LC810293T) and GPI-Knockout 293T cells (KO, Cat# [LC840273] ) were separated by SDS-PAGE and immunoblotted with anti-GPI monoclonal antibody [TA501127] (1:500<sup>o</sup>). Then the blotted membrane was stripped and reprobed with anti-HSP90 antibody as a loading control.



Immunohistochemical staining of paraffin-embedded Kidney tissue within the normal limits using anti-GPI mouse monoclonal antibody. Heat-induced epitope retrieval by EDTA solution buffer pH 8.0 at 120°C for 3 min.



Immunohistochemical staining of paraffin-embedded liver tissue within the normal limits using anti-GPI mouse monoclonal antibody. Heat-induced epitope retrieval by EDTA solution buffer pH 8.0 at 120°C for 3 min.



Anti-GPI mouse monoclonal antibody ([TA501127]) immunofluorescent staining of COS7 cells transiently transfected by pCMV6-ENTRY GPI ([RC201232]).