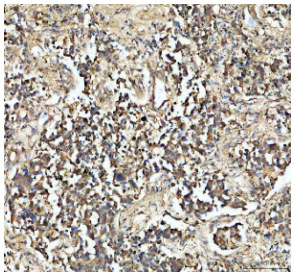
# GPI Antibody / Phosphoglucose Isomerase Antibody (R32536)

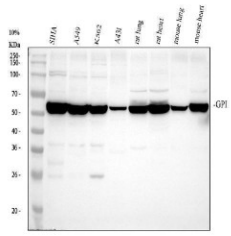
| Catalog No. | Formulation | Size |
|---|---|---|
| R32536 | 0.5mg/ml if reconstituted with 0.2ml sterile DI water | 100 ug |

**Bulk quote request**

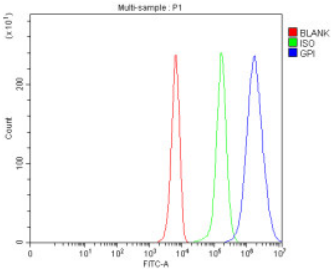
| | |
|---|---|
| **Availability** | 1-3 business days |
| **Species Reactivity** | Human, Mouse, Rat |
| **Format** | Antigen affinity purified |
| **Host** | Rabbit |
| **Clonality** | Polyclonal (rabbit origin) |
| **Isotype** | Rabbit IgG |
| **Purity** | Antigen affinity |
| **Buffer** | Lyophilized from 1X PBS with 2% Trehalose |
| **UniProt** | P06744 |
| **Localization** | Cytoplasmic |
| **Applications** | Western blot: 0.5-1ug/ml<br>Flow cytometry: 1-3ug/million cells<br>Immunohistochemistry (FFPE): 2-5ug/ml |
| **Limitations** | This GPI Antibody / Phosphoglucose Isomerase Antibody is available for research use only. |



GPI Antibody Human Lung Cancer IHC. Immunohistochemistry was performed on FFPE human lung cancer tissue using GPI Antibody. Heat-induced epitope retrieval was carried out in pH 8 EDTA buffer prior to incubation with the primary antibody at 2 ug/ml. Bound antibody was visualized using an HRP-conjugated goat anti-rabbit IgG secondary antibody with DAB chromogen. Moderate to strong cytoplasmic staining is observed throughout the neoplastic cells, consistent with elevated expression of GPI frequently associated with increased glycolytic metabolism in malignant tissues. These results demonstrate that this Phosphoglucose Isomerase Antibody is suitable for immunohistochemical detection of GPI in formalin-fixed, paraffin-embedded human lung cancer tissue.



GPI Antibody Human, Rat and Mouse WB. Western blot analysis was performed using GPI Antibody. Lane 1: human SiHa whole cell lysate; lane 2: human A549 whole cell lysate; lane 3: human K562 whole cell lysate; lane 4: human A431 whole cell lysate; lane 5: rat lung tissue lysate; lane 6: rat heart tissue lysate; lane 7: mouse lung tissue lysate; lane 8: mouse heart tissue lysate. Proteins were separated on a 10% SDS-PAGE gel, transferred to a nitrocellulose membrane, and incubated with the primary antibody at 0.5 ug/ml overnight at 4Â°C. A specific immunoreactive band is detected at approximately 63 kDa in all tested samples, consistent with the expected molecular weight of GPI. These results demonstrate that this Phosphoglucose Isomerase Antibody is suitable for Western blot detection of endogenous GPI across human, rat, and mouse tissues and cell lines.




GPI Antibody K562 Cell FACS. Flow cytometry was performed on fixed and permeabilized human K562 cells using GPI Antibody at 1 ug/1Ã—10^6 cells. Cells were incubated with a DyLight 488-conjugated goat anti-rabbit IgG secondary antibody. Red: unstained cells; green: rabbit IgG isotype control; blue: GPI Antibody. A clear rightward shift of the GPI-stained population relative to the isotype control demonstrates specific intracellular detection of endogenous GPI expression in K562 cells. These results demonstrate that this Phosphoglucose Isomerase Antibody is suitable for flow cytometric analysis of intracellular GPI following fixation and permeabilization.

## Description

GPI Antibody recognizes phosphoglucose isomerase (GPI), a highly conserved glycolytic enzyme that catalyzes the reversible conversion of glucose 6-phosphate to fructose 6-phosphate, an essential step linking glucose uptake to cellular energy production. Because this reaction lies near the beginning of the glycolytic pathway, phosphoglucose isomerase plays a central role in carbohydrate metabolism and cellular bioenergetics. Beyond its intracellular enzymatic function, GPI also serves as a multifunctional secreted protein with cytokine-like activities under alternative names including autocrine motility factor and neuroleukin. NSJ Bioreagents supplies GPI Antibody for reliable detection of this versatile metabolic protein across numerous research applications.

Within cells, phosphoglucose isomerase supports glycolysis and gluconeogenesis by maintaining metabolic flux between phosphorylated glucose and fructose intermediates. When released extracellularly, however, the protein functions independently of its catalytic activity to regulate cell migration, proliferation, tissue remodeling, and neuronal survival. These distinct intracellular and extracellular functions have made GPI an important model for studying protein moonlighting, in which a single protein performs multiple unrelated biological roles. Consequently, GPI Antibody is widely used in studies of metabolism, cancer biology, neurobiology, and cell signaling.

Abnormal expression of phosphoglucose isomerase has been associated with numerous diseases, including breast, colorectal, gastric, pancreatic, and lung cancers, where elevated extracellular activity promotes tumor invasion and metastasis. GPI has also been implicated in autoimmune arthritis, inherited enzyme deficiencies resulting in chronic hemolytic anemia, and neurological disorders involving altered neuronal maintenance. Owing to its dual roles in metabolism and extracellular signaling, GPI continues to attract significant attention as both a disease biomarker and a potential therapeutic target. Researchers frequently employ GPI Antibody to investigate glycolytic regulation, tumor progression, immune responses, and mechanisms linking metabolism with cellular communication.

A GPI Antibody is a valuable reagent for investigating phosphoglucose isomerase function, glycolytic metabolism, extracellular signaling, and disease pathogenesis. By enabling reliable detection of this multifunctional enzyme, a GPI Antibody supports research into energy metabolism, cancer progression, neuronal biology, and the molecular pathways that connect metabolism with cell migration and survival.

For a broader overview of this multifunctional metabolic enzyme and additional validated reagents, visit our GPI Antibody / Glucose 6-Phosphate Isomerase Antibody page.

## Application Notes

Differences in protocols and secondary/substrate sensitivity may require the GPI Antibody / Phosphoglucose Isomerase Antibody to be titrated for optimal performance.

## Immunogen

Amino acids 5-39 (TRDPQFQKLQQWYREHRSELNLRRLFDANKDRFNH) from the human protein were used as the immunogen for the GPI antibody.

## Storage

After reconstitution, the GPI antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

## Alternate Names

Glucose 6-Phosphate Isomerase antibody, Autocrine Motility Factor antibody, Neuroleukin antibody, Phosphohexose Isomerase antibody, Glucose Phosphate Isomerase antibody, AMF antibody


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