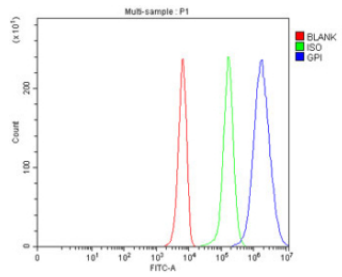
GPI Antibody / Glucose-6-phosphate isomerase (R32536)

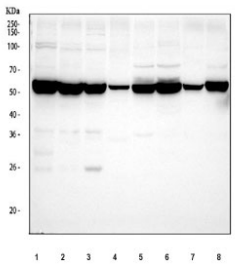
Catalog No.	Formulation	Size
R32536	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
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 Flow Cytometry : 1-3ug/million cells
Limitations	This GPI antibody is available for research use only.



Flow cytometry testing of fixed and permeabilized human K562 cells with GPI antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= GPI antibody.



Western blot testing of 1) human SiHa, 2) human A549, 3) human K562, 4) human A431, 5) rat lung, 6) rat heart, 7) mouse lung and 8) mouse heart tissue lysate with GPI antibody at 0.5ug/ml. Predicted molecular weight: ~63 kDa.

Description

Glucose-6-phosphate isomerase (GPI), alternatively known as phosphoglucose isomerase (PGI) or phosphohexose isomerase(PHI), is an enzyme that in humans is encoded by the GPI gene on chromosome 19. This gene encodes a member of the glucose phosphate isomerase protein family. The encoded protein has been identified as a moonlighting protein based on its ability to perform mechanistically distinct functions. In the cytoplasm, the gene product functions as a glycolytic enzyme (glucose-6-phosphate isomerase) that interconverts glucose-6-phophsate and fructose-6-phosphate. Extracellularly, the encoded protein (also referred to as neuroleukin) functions as a neurotrophic factor that promotes survival of skeletal motor neurons and sensory neurons, and as a lymphokine that induces immunoglobulin secretion. The encoded protein is also referred to as autocrine motility factor based on an additional function as a tumor-secreted cytokine and angiogenic factor. 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. Alternative splicing results in multiple transcript variants.

Application Notes

Differences in protocols and secondary/substrate sensitivity may require the GPI 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.