Glucose-6-Phosphate Isomerase (GPI) Antibody

Cat. No. CP10116

Applications:	**WB, IP, ICC**
Detected MW:	**63 kDa**
Species & Reactivity:	**Human, Mouse, Rat**
Isotype:	**Mouse IgG1**

BACKGROUND

Phosphohexose isomerase (PHI; D-glucose-6-phosphate ketol-isomerase; EC 5.3.1.9) is also known as glucosephosphate isomerase (GPI) and phosphoglucose isomerase (PGI). It is a housekeeping cytosolic enzyme of sugar metabolism that plays a key role in both glycolysis and gluconeogenesis pathways, catalyzing the interconversion of glucose 6-phosphate and fructose 6-phosphate, the second step of the Embden-Meyerhof glycolytic pathway. And this enzyme is universally distributed among Eukaryotes, bacteria, and some Archaea. There is evidence that phosphoglucose isomerase behaves extracellularly as a cytokine. It is produced and secreted by white blood cells, and acts to regulate the growth of several different cell types.[1] Molecular cloning and sequencing have identified PGI as an autocrine motility factor (AMF) found to be a major cell motility–stimulating factor associated with cancer development and progression.[2] Of note, aberrations in PGI expressions or activities due to mutations or deletions in PGI are of significant clinical importance because mutations in PGI lead to hereditary nonspherocytic hemolytic anemia disease.[3] In clinical cancer pathology, the presence of PGI/AMF in the serum and urine is of prognostic value indicating cancer progression. The levels of PGI/AMF and its cell surface receptor gp78/AMFR expressions are associated with the pathologic stage, grade, and degree of tumor penetration to surrounding tissues marking a poor prognosis.[4]

References:

1. Kim, J.W. & Dang, C.V.: Trends Biochem. Sci. 30:142–502, 2005
2. Niinaka, Y. et al.: Cancer Res 58:2667–74, 1998
3. Kanno, H. et al.: Blood 88:2321-2325, 1996
4. Gomm, S. A. et al.: Br. J. Cancer 58:797–804, 1988

TECHNICAL INFORMATION

Source:
Glucose-6-Phosphate Isomerase (GPI) Antibody is a mouse monoclonal antibody raised against purified recombinant human GPI fragment expressed in *E. coli*.

Specificity and Sensitivity:
This antibody detects endogenous glucose-6-phosphate isomerase proteins without cross-reactivity with other family members.

Storage Buffer: PBS and 30% glycerol

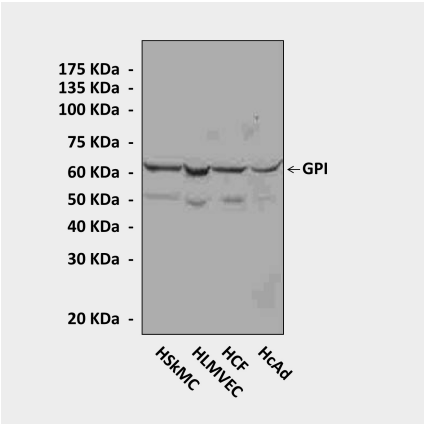
Storage:
Store at -20°C for at least one year. Store at 4°C for frequent use. Avoid repeated freeze-thaw cycles.

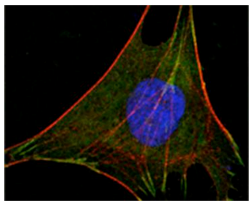
APPLICATIONS

Application:	*Dilution:
WB	1:1000
IP	1:50
IHC	n/d
ICC	1:200
FACS	n/d

**Optimal dilutions must be determined by end user.*

QUALITY CONTROL DATA





Top: Western Blot detection of Glucose-6-phosphate isomerase proteins in various normal primary cell lysates using Glucose-6-phosphate isomerase (GPI) Antibody. **Bottom:** This antibody stains L-02 cells in confocal immunofluorescent analysis (GPI Antibody: Green; Actin filament: Red; and DRAQ5 DNA dye: Blue).