

For Research Use Only

# GPD1 Polyclonal antibody

Catalog Number: 13451-1-AP 10 Publications



## Basic Information

Catalog Number:

13451-1-AP

Concentration:

450 ug/ml

Source:

Rabbit

Isotype:

IgG

Immunogen Catalog Number:

AG4278

GenBank Accession Number:

BC032234

GeneID (NCBI):

2819

UNIPROT ID:

P21695

Full Name:

glycerol-3-phosphate dehydrogenase  
1 (soluble)

Calculated MW:

349 aa, 38 kDa

Observed MW:

32-42 kDa

Purification Method:

Antigen affinity purification

Recommended Dilutions:

WB 1:500-1:3000

IF/ICC 1:20-1:200

## Applications

Tested Applications:

WB, IF/ICC, ELISA

Cited Applications:

WB, IHC, IF

Species Specificity:

human, mouse, rat

Cited Species:

human, mouse, rat

Positive Controls:

WB : mouse liver tissue, HepG2 cells, mouse heart  
tissue, rat liver tissue

IF/ICC : HepG2 cells,

## Background Information

GPD1 (Glycerol-3-phosphate dehydrogenase 1) is an important enzyme belonging to the NAD-dependent glycerol-3-phosphate dehydrogenase family. Its C-terminal structural domain contains multiple helical structures for binding the substrate DHAP, and its N-terminal structural domain contains a  $\beta$ -folded core for binding NADH. GPD1 catalyzes the conversion of dihydroxyacetone phosphate (DHAP) and reduced nicotinamide adenine dinucleotide (NADH) to glycerol-3-phosphate (G3P) and NAD<sup>+</sup>, and plays a key role in carbohydrate and lipid metabolism. GPD1 also works with mitochondrial glycerol-3-phosphate dehydrogenase to form a glycerophosphate shuttle system that facilitates the transfer of reducing equivalents from the cytoplasm to the mitochondria. Abnormal activity of GPD1 has been associated with a variety of metabolic disorders, such as obesity, hypertriglyceridemia, and GPD1 has been implicated in cancer, potentially acting as a tumor suppressor.

## Notable Publications

Author	Pubmed ID	Journal	Application
Shiqi Wu	35749365	Proc Natl Acad Sci U S A	WB
Wenlong Zhang	35836291	J Hematol Oncol	IHC
Zilv Luo	35988808	Cell Signal	WB,IHC,IF

## Storage

Storage:

Store at -20°C. Stable for one year after shipment.

Storage Buffer:

PBS with 0.02% sodium azide and 50% glycerol pH 7.3.

Aliquoting is unnecessary for -20°C storage

For technical support and original validation data for this product please contact:

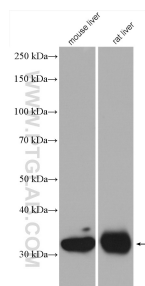
T: 4006900926

E: Proteintech-CN@ptglab.com

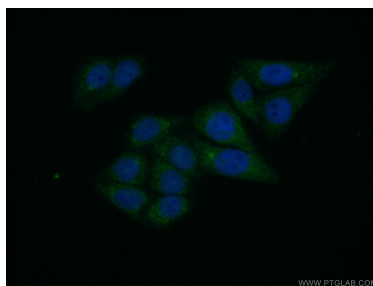
W: ptgcn.com

This product is exclusively available under Proteintech Group brand and is not available to purchase from any other manufacturer.

## Selected Validation Data



Various lysates were subjected to SDS PAGE followed by western blot with 13451-1-AP (GPD1 antibody) at dilution of 1:1500 incubated at room temperature for 1.5 hours.



Immunofluorescent analysis of (10% Formaldehyde) fixed HepG2 cells using 13451-1-AP (GPD1 antibody) at dilution of 1:50 and Alexa Fluor 488-conjugated AffiniPure Goat Anti-Rabbit IgG(H+L).