

For Research Use Only

# GPD1 Recombinant antibody

Catalog Number: 84800-1-RR



## Basic Information

<b>Catalog Number:</b> 84800-1-RR	<b>GenBank Accession Number:</b> BC032234	<b>Purification Method:</b> Protein A purification
<b>Size:</b> 100ul , Concentration: 1000 µg/ml by Nanodrop;	<b>GeneID (NCBI):</b> 2819	<b>CloneNo.:</b> 242359D3
<b>Source:</b> Rabbit	<b>UNIPROT ID:</b> P21695	<b>Recommended Dilutions:</b> WB 1:500-1:2000 IF/ICC 1:50-1:500
<b>Isotype:</b> IgG	<b>Full Name:</b> glycerol-3-phosphate dehydrogenase 1 (soluble)	
<b>Immunogen Catalog Number:</b> AG4278	<b>Calculated MW:</b> 349 aa, 38 kDa	
	<b>Observed MW:</b> 32 kDa	

## Applications

<b>Tested Applications:</b> WB, IF/ICC, ELISA	<b>Positive Controls:</b> WB : HepG2 cells, mouse liver tissue IF/ICC : HepG2 cells,
<b>Species Specificity:</b> human	

## 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.

## 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

\*\*\* 20ul sizes contain 0.1% BSA

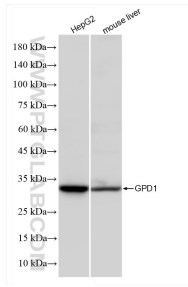
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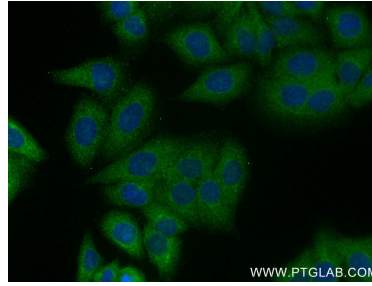
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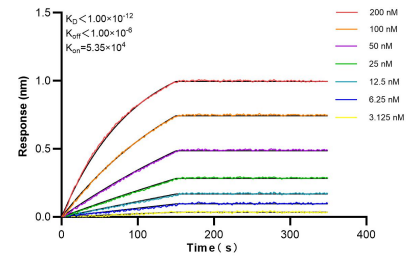
## Selected Validation Data



Various lysates were subjected to SDS PAGE followed by western blot with 84800-1-RR (GPD1 antibody) at dilution of 1:1000 incubated at room temperature for 1.5 hours.



Immunofluorescent analysis of (-20°C Ethanol) fixed HepG2 cells using GPD1 antibody (84800-1-RR, Clone: 242359D3 ) at dilution of 1:200 and CoraLite®488-Conjugated Goat Anti-Rabbit IgG(H+L) (SA00013-2).



Bi-layer interferometry (BLI) kinetic assays of 84800-1-RR against Human GPD1 were performed. The affinity constant is below 1 pM.