

For Research Use Only

GPD1 Polyclonal antibody

Catalog Number: 13451-1-AP **10 Publications**



Basic Information

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|--|---|---|
| Catalog Number: 13451-1-AP | GenBank Accession Number: BC032234 | Purification Method: Antigen affinity purification |
| Size: 150ul , Concentration: 450 ug/ml by Nanodrop and 333 ug/ml by Bradford method using BSA as the standard; | GeneID (NCBI): 2819 | Recommended Dilutions: WB 1:500-1:3000 IF/ICC 1:20-1:200 |
| Source: Rabbit | UNIPROT ID: P21695 | |
| Isotype: IgG | Full Name: glycerol-3-phosphate dehydrogenase 1 (soluble) | |
| Immunogen Catalog Number: AG4278 | Calculated MW: 349 aa, 38 kDa | |
| | Observed MW: 32-42 kDa | |

Applications

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| Tested Applications: WB, IF/ICC, ELISA | Positive Controls: WB : mouse liver tissue, HepG2 cells, mouse heart tissue, rat liver tissue IF/ICC : HepG2 cells, |
| Cited Applications: WB, IHC, IF | |
| Species Specificity: human, mouse, rat | |
| Cited Species: human, mouse, rat | |

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 β -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⁺, 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

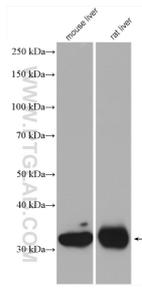
Storage:
Store at -20°C. Stable for one year after shipment.
Storage Buffer:
PBS with 0.02% sodium azide and 50% glycerol pH 7.3.
Aliquoting is unnecessary for -20°C storage

*** 20ul sizes contain 0.1% BSA

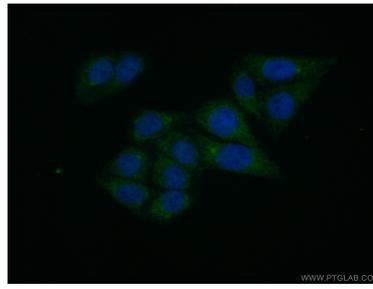
For technical support and original validation data for this product please contact:
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Selected Validation Data



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).