10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

GPX1 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP9315b

Specification

GPX1 Antibody (C-term) - Product Information

Application	**WB, IF, IHC-P, FC,E**
Primary Accession	P07203
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Antigen Region	**164-193**

GPX1 Antibody (C-term) - Additional Information

Gene ID 2876

Other Names
Glutathione peroxidase 1, GPx-1, GSHPx-1, Cellular glutathione peroxidase, GPX1

Target/Specificity
This GPX1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 164-193 amino acids from the C-terminal region of human GPX1.

Dilution
WB~~1:2000
IF~~1:10~50
IHC-P~~1:10~50
FC~~1:25
E~~Use at an assay dependent concentration.

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
GPX1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

GPX1 Antibody (C-term) - Protein Information

Name GPX1 (HGNC:4553)

Function Catalyzes the reduction of hydroperoxides in a glutathione- dependent manner thus regulating cellular redox homeostasis (PubMed:11115402, PubMed:36608588). Can reduce small soluble hydroperoxides such as H2O2, cumene hydroperoxide and tert-butyl hydroperoxide, as well as several fatty acid-derived hydroperoxides (PubMed:11115402, PubMed:36608588). In platelets catalyzes the reduction of 12-hydroperoxyeicosatetraenoic acid, the primary product of the arachidonate 12-lipoxygenase pathway (PubMed:11115402).

Cellular Location
Cytoplasm {ECO:0000250|UniProtKB:P11352}. Mitochondrion {ECO:0000250|UniProtKB:P11352}

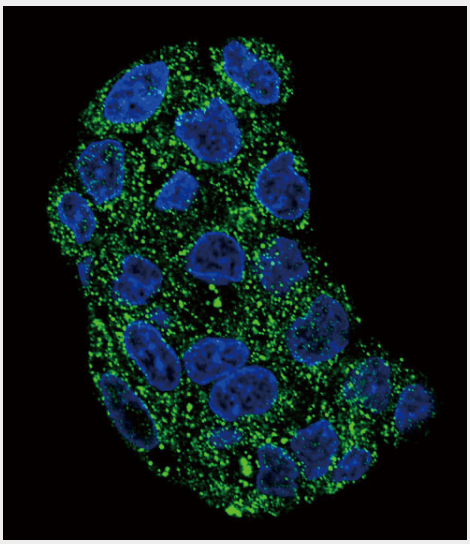
Tissue Location
Expressed in platelets (at protein level).

GPX1 Antibody (C-term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

GPX1 Antibody (C-term) - Images



Confocal immunofluorescent analysis of GPX1 Antibody (C-term)(Cat#AP9315b) with HepG2 cell followed by Alexa Fluor 488-conjugated goat anti-rabbit lgG (green). DAPI was used to stain the cell nuclear (blue).

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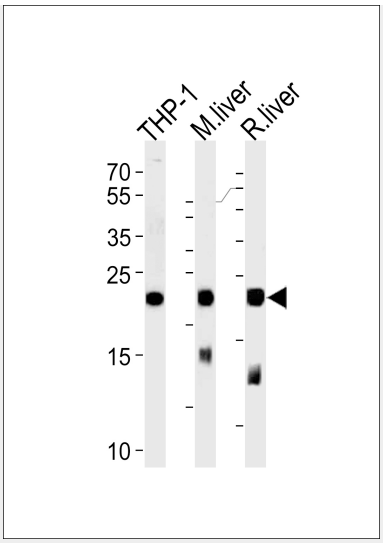
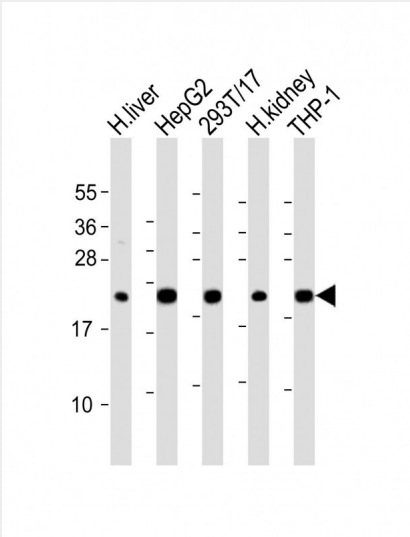


Western blot analysis of lysates from THP-1 cell line mouse liver and rat liver tissue (from left to right),using GPX1 Antibody (C-term)(Cat. #AP9315b).AP9315b was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody.Lysates at 35ug per lane.



All lanes : Anti-GPX1 Antibody (C-term) at 1:2000 dilution Lane 1: human liver lysate Lane 2: HepG2 whole cell lysate Lane 3: 293T/17 whole cell lysate Lane 4: human kidney lysate Lane 5: THP-1 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 22 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

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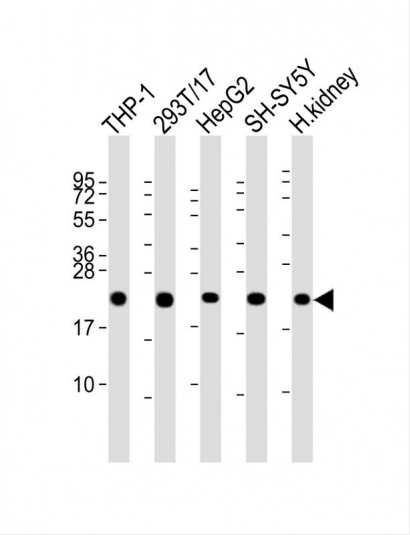

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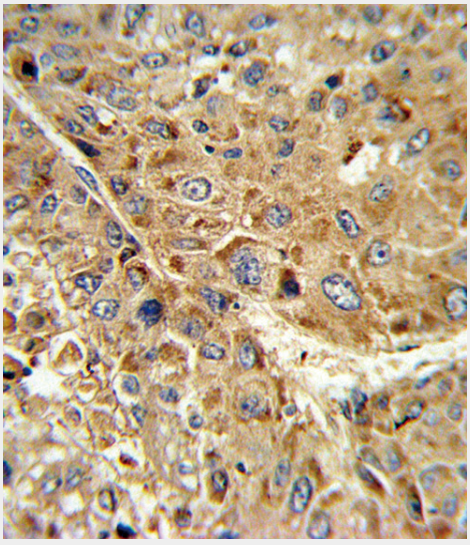

Formalin-fixed and paraffin-embedded human hepatocarcinoma reacted with GPX1 Antibody (C-term), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

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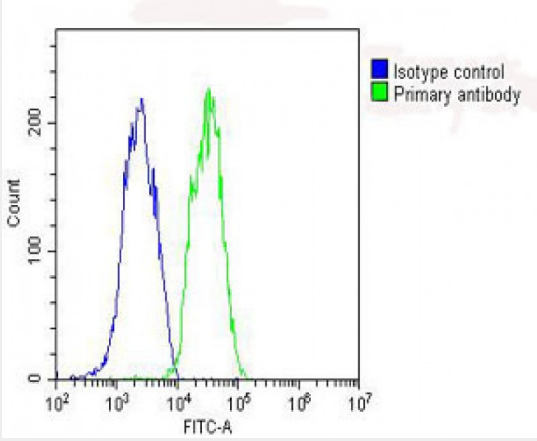
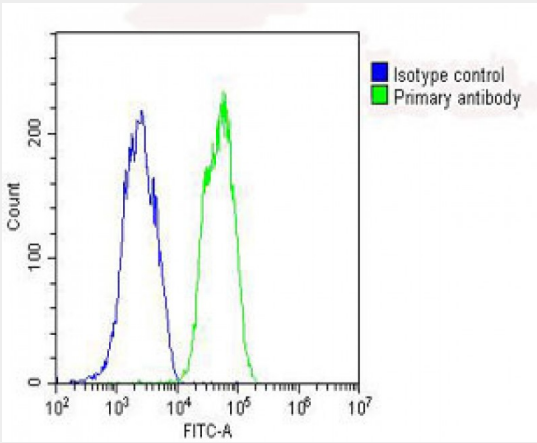


Overlay histogram showing HepG2 cells stained with AP9315b (green line). The cells were fixed with 2% paraformaldehyde (10 min) and then permeabilized with 90% methanol for 10 min. The cells were then icubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (AP9315b, 1:25 dilution) for 60 min at 37ºC. The secondary antibody used was Goat-Anti-Rabbit IgG, DyLight® 488 Conjugated Highly Cross-Adsorbed(OH191631) at 1/200 dilution for 40 min at 37ºC. Isotype control antibody (blue line) was rabbit IgG (1µg/1x10^6 cells) used under the same conditions. Acquisition of >10, 000 events was performed.



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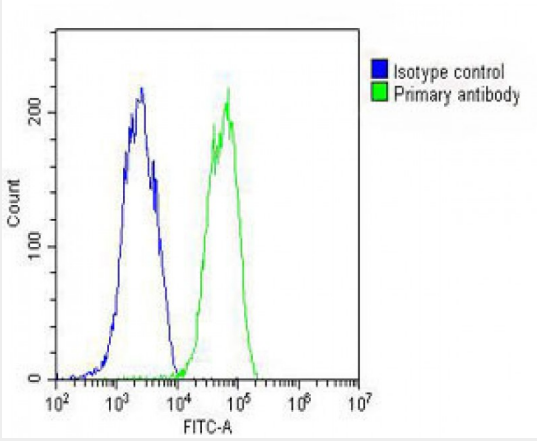

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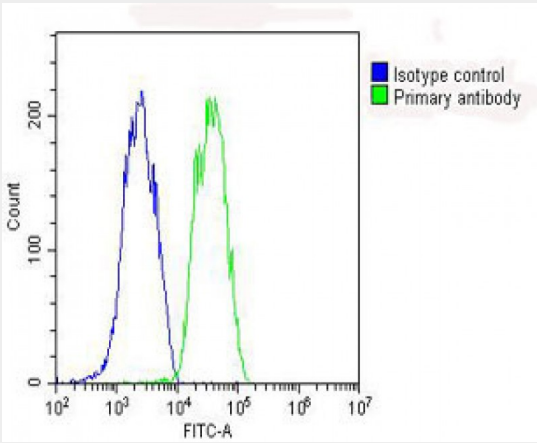

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GPX1 Antibody (C-term) - Background

GPX1 encodes a member of the glutathione peroxidase family. Glutathione peroxidase functions in the detoxification of hydrogen peroxide, and is one of the most important antioxidant enzymes in humans. This protein is one of only a few proteins known in higher vertebrates to contain selenocysteine, which occurs at the active site of glutathione peroxidase and is coded by UGA, that normally functions as a translation termination codon. In addition, this protein is characterized in a polyalanine sequence polymorphism in the N-terminal region, which includes three alleles with five, six or seven alanine (ALA) repeats in this sequence.

GPX1 Antibody (C-term) - References

Moyer,A.M., et.al., Cancer Epidemiol. Biomarkers Prev. 19 (3), 811-821 (2010)
Akimoto,A.K., et.al., Free Radic. Res. 44 (3), 322-331 (2010)
Cao,C., et.al., J. Biol. Chem. 278 (41), 39609-39614 (2003)

GPX1 Antibody (C-term) - Citations

- MARVELD1 interacting with catalase regulates reactive oxygen species metabolism and mediates the sensitivity to chemotherapeutic drugs in epithelial tumors of the reproductive system.
- The Organization of Mitochondrial Supercomplexes is Modulated by Oxidative Stress In Vivo in Mouse Models of Mitochondrial Encephalopathy.