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

Anti-GPX1 Picoband Antibody

Catalog # ABO11894

Specification

Anti-GPX1 Picoband Antibody - Product Information

Application	**WB, IHC**
Primary Accession	P07203
Host	**Rabbit**
Reactivity	**Human, Mouse, Rat**
Clonality	**Polyclonal**
Format	**Lyophilized**

Description
Rabbit IgG polyclonal antibody for Glutathione peroxidase 1(GPX1) detection. Tested with WB, IHC-P in Human;Mouse;Rat.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-GPX1 Picoband Antibody - Additional Information

Gene ID 2876

Other Names
Glutathione peroxidase 1, GPx-1, GSHPx-1, 1.11.1.9, Cellular glutathione peroxidase, GPX1

Calculated MW
22088 MW KDa

Application Details
Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, Mouse, Rat, By Heat
Western blot, 0.1-0.5 µg/ml, Human

Subcellular Localization
Cytoplasm.

Protein Name
Glutathione peroxidase 1

Contents
Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.

Immunogen
A synthetic peptide corresponding to a sequence in the middle region of human GPX1(116-146aa EVNGAGAHPLFAFLREALPAPSDDATALMTD), different from the related mouse sequence by six amino acids and from the related rat sequence by five amino acids.

Purification
Immunogen affinity purified.

Cross Reactivity
No cross reactivity with other proteins

Storage

At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.

Sequence Similarities
Belongs to the glutathione peroxidase family.

Anti-GPX1 Picoband Antibody - 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).

Anti-GPX1 Picoband Antibody - 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

Anti-GPX1 Picoband Antibody - Images

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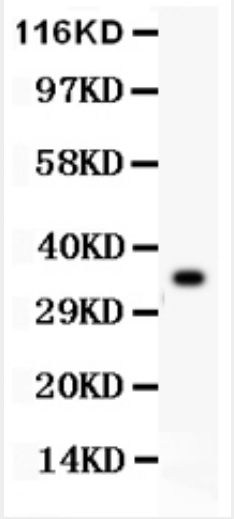
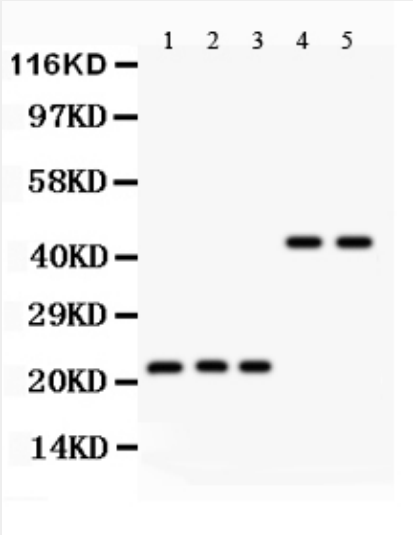


Anti- GPX1 antibody, ABO11894, Western blottingAll lanes: Anti GPX1 (ABO11894) at 0.5ug/mlWB: Recombinant Human GPX1 Protein 0.5ngPredicted bind size: 36KDObserved bind size: 36KD



Anti- GPX1 antibody, ABO11894, Western blottingAll lanes: Anti GPX1 (ABO11894) at 0.5ug/mlLane 1: Rat Kidney Tissue Lysate at 50ugLane 2: Mouse Kidney Tissue Lysate at 50ugLane 3: Rat Spleen Tissue Lysate at 50ugLane 4: HELA Whole Cell Lysate at 40ugLane 5: JURKAT Whole Cell Lysate at 40ugPredicted bind size: 22,44KDObserved bind size: 22,44KD

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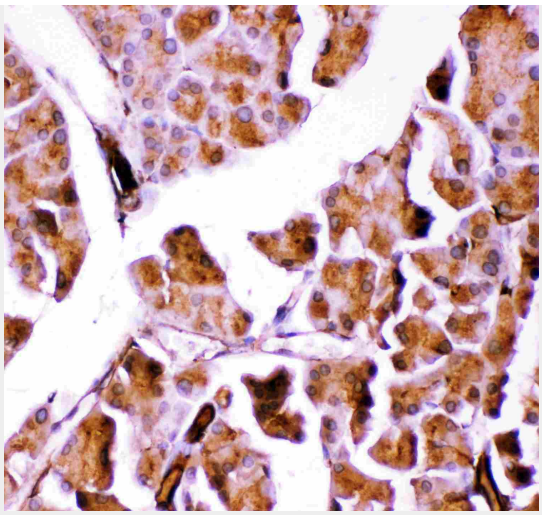
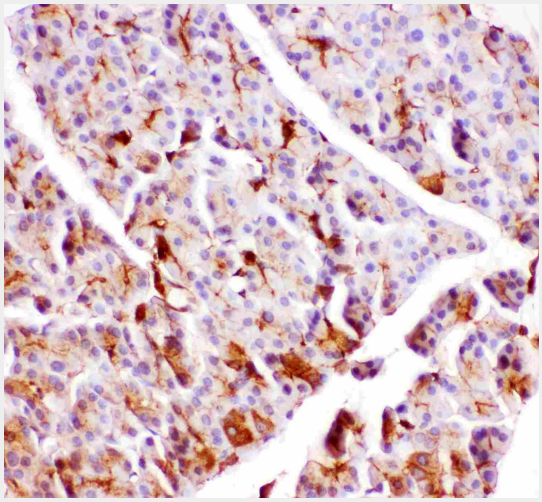
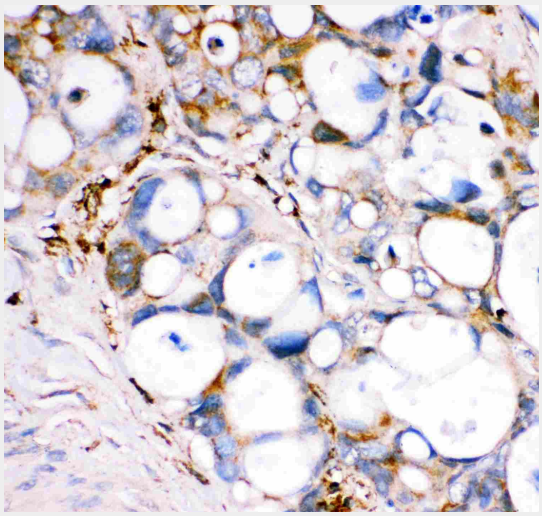


Anti- GPX1 antibody, ABO11894, IHC(P)IHC(P): Mosue Pancreas Tissue



Anti- GPX1 antibody, ABO11894, IHC(P)IHC(P): Rat Pancreas Tissue



Anti- GPX1 antibody, ABO11894, IHC(P)IHC(P): Human Intestinal Cancer Tissue

Anti-GPX1 Picoband Antibody - Background

Glutathione peroxidase 1, also known as, GPX-1 is an enzyme that in humans is encoded by the

GPX1 gene. It is mapped to 3p21.31. This gene encodes a member of the glutathione peroxidase family, consisting of eight known glutathione peroxidases (Gpx1-8) in humans. Glutathione peroxidase functions in the detoxification of hydrogen peroxide, and is one of the most important antioxidant enzymes in humans. It has been reported that the protein encoded by this gene protects from CD95-induced apoptosis in cultured breast cancer cells and inhibits 5-lipoxygenase in blood cells, and its overexpression delays endothelial cell growth and increases resistance to toxic challenges. GPX1 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 the nonsense (stop) codon TGA.