

Anti-Glutathione Peroxidase 1/GPX1 Antibody Picoband™

Catalog Number: PB9203

About GPX1

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.

Overview

Product Name	Anti-Glutathione Peroxidase 1/GPX1 Antibody Picoband™
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Glutathione Peroxidase 1/GPX1 Antibody Picoband™ catalog # PB9203. Tested in IHC, WB applications. This antibody reacts with Human, Mouse, Rat.
Application	IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na ₂ HPO ₄ .
Storage Instructions	Store at -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P07203

Technical Details

Immunogen	A synthetic peptide corresponding to a sequence in the middle region of human GPX1, different from the related mouse sequence by six amino acids and from the related rat sequence by five amino acids.
Predicted Reactive Species	Human
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P).
Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG

Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Dilute the sample so that the expected range of concentrations fall within the detection range of this kit. If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples. Some PubMed article(s) citing the expression level of this target are as follows: Boster Bio's internal QC testing used: Western blot, 0.1-0.5ug/ml, Human, Mouse, Rat Immunohistochemistry (Paraffin-embedded Section), 2-5ug/ml, Human, Rat, By Heat

Anti-Glutathione Peroxidase 1/GPX1 Antibody Picoband™ (PB9203) Images

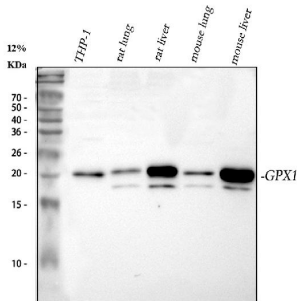


Figure 1. Western blot analysis of GPX1 using anti-GPX1 antibody (PB9203).

Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.

Lane 1: human THP-1 whole cell lysates,

Lane 2: rat lung tissue lysates,

Lane 3: rat liver tissue lysates,

Lane 4: mouse lung tissue lysates,

Lane 5: mouse liver tissue lysates.

After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-GPX1 antigen affinity purified polyclonal antibody (Catalog # PB9203) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for GPX1 at approximately 22 kDa. The expected band size for GPX1 is at 22 kDa.

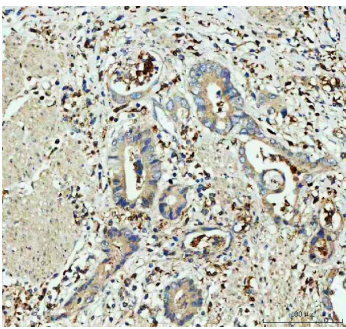


Figure 2. IHC analysis of GPX1 using anti-GPX1 antibody (PB9203).

GPX1 was detected in a paraffin-embedded section of human colorectal adenocarcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-GPX1 Antibody (PB9203) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

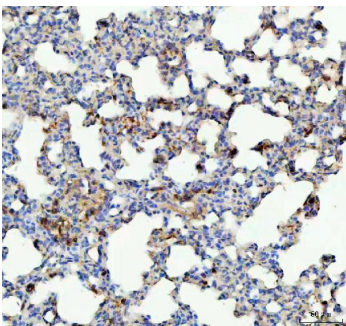


Figure 3. IHC analysis of GPX1 using anti-GPX1 antibody (PB9203).

GPX1 was detected in a paraffin-embedded section of rat lung tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-GPX1 Antibody (PB9203) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

1. PubMed ID: 10.1016/j.biopha.2020.110321, Ibrolipim attenuates early-stage nephropathy in diet-induced diabetic minipigs: Focus on oxidative stress and fibrogenesis

Visit bosterbio.com/anti-gpx1-picoband-trade-antibody-pb9203-boster.html to see all 1 publications.

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