

# Polyclonal Anti- GPX1 Picoband™ Antibody

Catalog Number: PB9203

## Description

<b>Gene Name</b>	glutathione peroxidase 1
<b>Recommended Protein Name</b>	Glutathione peroxidase 1
<b>Lot No.</b>	0921412Da3303120
<b>Size</b>	100µg/vial
<b>Form</b>	lyophilized
<b>Ig type</b>	Rabbit IgG
<b>Specificity</b>	No cross reactivity with other proteins.
<b>Purification</b>	Immunogen affinity purified.
<b>Species</b>	<b>Reacts with:</b> human, mouse, rat
<b>Immunogen</b>	A synthetic peptide corresponding to a sequence in the middle region of human GPX1 (116-146aa EVNGAGAHPLFAFLREALPAPSDATALMTD), different from the related mouse sequence by six amino acids and from the related rat sequence by five amino acids.
<b>Contents</b>	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na <sub>2</sub> HPO <sub>4</sub> , 0.05mg NaN <sub>3</sub> .

## Application

	Concentration	Tested Species	Antigen Retrieval
Western blot	0.1-0.5µg/ml	Hu	-
Immunohistochemistry (Paraffin-embedded Section)	0.5-1µg/ml	Hu, Ms, Rat	By Heat

**WB: The detection limit for GPX1 is approximately 0.25ng/lane under reducing conditions.**

**Tested Species:** In-house tested species with positive results.

**By Heat: Boiling the paraffin sections in 10mM citrate buffer, pH6.0, for 20mins is required for the staining of formalin/paraffin sections.**

*Other applications have not been tested.*

*Optimal dilutions should be determined by end users.*

## Preparation and storage

**Reconstitution:** 0.2ml of distilled water will yield a concentration of 500µg/ml.

**Storage:** At -20°C for one year. After reconstitution, 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.

## Relevant detection systems

Boster provides a series of assays reacted with primary antibodies. Antibody can be supported by chemiluminescence kit EK1002 in WB, supported by SA1022 in IHC(P).

## 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.

## Reference

1. Kiss C, Li J, Szeles A, Gizatullin RZ, Kashuba VI, Lushnikova T, Protopopov AI, Kelve M, Kiss H, Kholodnyuk ID, Imreh S, Klein G, Zabarovsky ER (Jun 1998). "Assignment of the ARHA and GPX1 genes to human chromosome bands 3p21.3 by in situ hybridization and with somatic cell hybrids". *Cytogenet Cell Genet* 79 (3–4): 228–30.
2. "Entrez Gene: GPX1 glutathione peroxidase 1"