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

GPX2 Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP55158

Product Information

Application	WB, IHC-P, IHC-F, IF, ICC, E
Primary Accession	P18283
Reactivity	Rat, Dog, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	21954
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human GPX2/Glutathione Peroxidase 2
Epitope Specificity	41-140/190
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Cytoplasm. Mainly cytoplasmic.
SIMILARITY	Belongs to the glutathione peroxidase family.
SUBUNIT	Homotetramer.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Glutathione peroxidase (GPx) enzymes are generally selenium-containing tetrameric glycoproteins that help prevent lipid peroxidation of cell membranes. GPx enzymes reduce lipid hydroperoxides to alcohols, and reduce free hydrogen peroxide to water. GPx members are among the 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. There are eight GPx homologs (GPx-1–8). GPx-1 plays an important role in the antioxidant defense of the vascular wall and neural cells in response to oxidative stress. GPx-2 is the major isoform in the lungs and its basal or inducible expression is dependent on Nrf2. GPx-3 is under regulation by hypoxic stress and the expression and deficiency of GPx-3 is associated with cardiovascular disease and stroke. GPx-5 is selenium-independent; it is bound to the acrosome of sperm, where it may protect sperm from premature acrosome reaction in the epididymis.

Additional Information

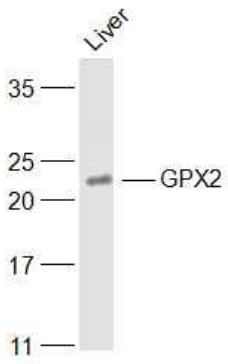
Gene ID	2877
Other Names	Glutathione peroxidase 2, GPx-2, GSHPx-2, 1.11.1.9, Gastrointestinal glutathione peroxidase, Glutathione peroxidase-gastrointestinal, GPx-GI, GSHPx-GI, Glutathione peroxidase-related protein 2, GPRP-2, GPX2

Target/Specificity	Mostly in liver and gastrointestinal tract, not found in heart or kidney.
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,ICC=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Format	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	GPX2 {ECO:0000303|Ref.9, ECO:0000312|HGNC:HGNC:4554}
Function	Catalyzes the reduction of hydroperoxides in a glutathione- dependent manner thus regulating cellular redox homeostasis (PubMed:36608588, PubMed:8428933). Can reduce small soluble hydroperoxides such as H2O2, cumene hydroperoxide and tert-butyl hydroperoxide, as well as several fatty acid-derived hydroperoxides (PubMed:36608588, PubMed:8428933). Cannot reduce phosphatidycholine hydroperoxide (PubMed:8428933).
Cellular Location	Cytoplasm, cytosol.
Tissue Location	Mostly in liver and gastrointestinal tract, not found in heart or kidney.

Images



Sample:
Liver (Mouse) Lysate at 40 ug
Primary: Anti-GPX2 (AP55158) at 1/1000 dilution
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution
Predicted band size: 22 kD
Observed band size: 22 kD