[KD Validated] Anti-Glutathione Peroxidase 4 Rabbit pAb

Purified Rabbit Polyclonal Antibody

Catalog # P104253

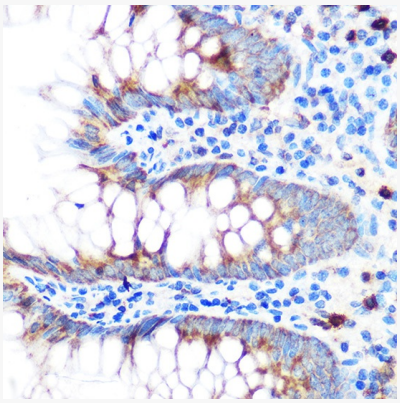
Product Information

Application	WB, IHC-P, IF (Cell)/ICC, ELISA
Reactivity	Human, Mouse, Rat
Dilution	WB 1:15000~1:60000; IHC-P 1:50~1:200; IF 1:50~1:200
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Label	Unconjugated
Immunogen	Recombinant fusion protein containing a sequence corresponding to amino acids 74-197 of GPX4 (NP_002076.2).
Format	Affinity purified polyclonal antibody supplied in PBS with 0.02% sodium azide and 50% glycerol, pH 7.3.
Storage	Shipped on wet ice. Store at -20°C. Stable for 24 months from date of receipt. Aliquoting is unnecessary for -20°C storage.
Precautions	Anti-Glutathione Peroxidase 4 Rabbit pAb is for research use only and not for use in diagnostic or therapeutic procedures.

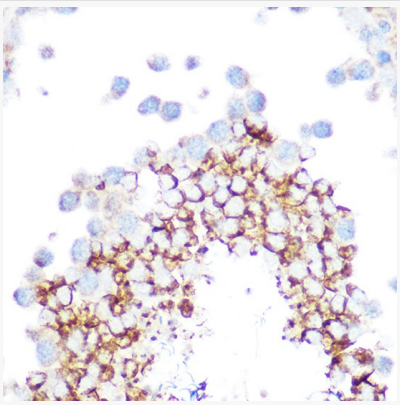
Protein Information

Synonyms	MCSP; SMDS; GPx-4; PHGPx; snGPx; GSHPx-4; snPHGPx; GPX4.
Calculated MW	Calculated MW: 22 kDa; Observed MW: 20 kDa
Uniprot ID	P36969
Gene ID	2879
Background	The protein encoded by this gene belongs to the glutathione peroxidase family, members of which catalyze the reduction of hydrogen peroxide, organic hydroperoxides and lipid hydroperoxides, and thereby protect cells against oxidative damage. Several isozymes of this gene family exist in vertebrates, which vary in cellular location and substrate specificity. This isozyme has a high preference for lipid hydroperoxides and protects cells against membrane lipid peroxidation and cell death. It is also required for normal sperm development; thus, it has been identified as a 'moonlighting' protein because of its ability to serve dual functions as a peroxidase, as well as a structural protein in mature spermatozoa. Mutations in this gene are associated with Sedaghatian type of spondylometaphyseal dysplasia (SMDS). This isozyme is also a selenoprotein, containing the rare amino acid selenocysteine (Sec) at its active site. Sec is encoded by the UGA codon, which normally signals translation termination. The 3' UTRs of selenoprotein mRNAs contain a conserved stem-loop structure, designated the Sec insertion sequence (SECIS) element, that is necessary for the recognition of UGA as a Sec codon, rather than as a stop signal. Transcript variants resulting from alternative splicing or use of alternate promoters have been described to encode isoforms with different subcellular localization.

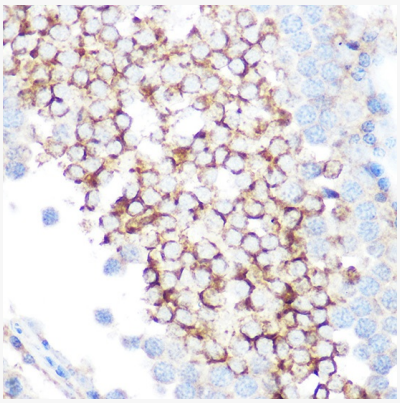
Validation Images



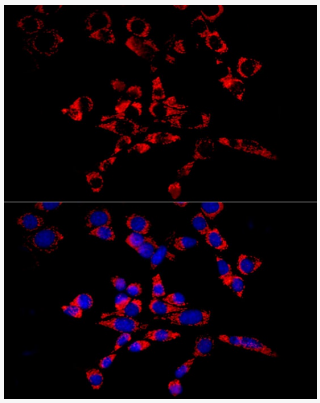
Immunohistochemistry analysis of paraffin-embedded Human appendix tissue using GPX4 Rabbit pAb (P104253) at a dilution of 1:100 (40× lens). Microwave antigen retrieval was performed with 0.01 M Tris-EDTA repair solution (pH 9.0) prior to IHC staining.



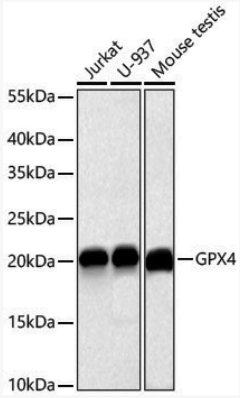
Immunohistochemistry analysis of paraffin-embedded Mouse testis tissue using GPX4 Rabbit pAb (P104253) at a dilution of 1:100 (40× lens). Microwave antigen retrieval was performed with 0.01 M Tris-EDTA repair solution (pH 9.0) prior to IHC staining.



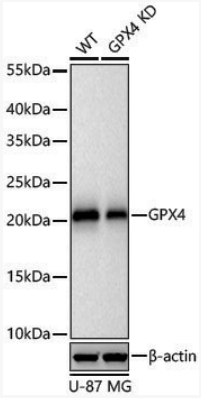
Immunohistochemistry analysis of paraffin-embedded Rat testis tissue using GPX4 Rabbit pAb (P104253) at a dilution of 1:100 (40× lens). Microwave antigen retrieval was performed with 0.01 M Tris-EDTA repair solution (pH 9.0) prior to IHC staining.



Immunofluorescence analysis of NIH/3T3 cells using GPX4 Rabbit pAb (P104253) at dilution of 1:100 (40× lens). Secondary antibody: Cy3-conjugated Goat anti-Rabbit IgG (H+L) at 1:500 dilution. Blue: DAPI for nuclear staining.



Western blot analysis of various lysates using [KD Validated] GPX4 Rabbit pAb (P104253) at 1:15,000 dilution incubated overnight at 4°C.
Secondary antibody: HRP-conjugated Goat anti-Rabbit IgG (H+L) (LF102) at 1:10,000 dilution.
Lysates/proteins: 25 µg per lane.
Blocking buffer: 3% nonfat dry milk in TBST.
Detection: ECL Kit.
Exposure time: 10s.



Western blot analysis of lysates from wild type (WT) and GPX4 knockdown (KD) U-87 MG cells using [KD Validated] GPX4 Rabbit pAb (P104253) at 1:15,000 dilution incubated overnight at 4°C.
Secondary antibody: HRP-conjugated Goat anti-Rabbit IgG (H+L) (LF102) at 1:10,000 dilution.
Lysates/proteins: 25 µg per lane.
Blocking buffer: 3% nonfat dry milk in TBST.
Detection: ECL Kit.
Exposure time: 10s.