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[KD Validated] GPX4 Rabbit pAb

Catalog No.: A1933 **117 Publications**

Basic Information

Observed MW
22kDa/20kDa

Calculated MW
22kDa

Category
Primary antibody

Applications
ELISA,WB,IHC-P,IF/ICC

Cross-Reactivity
Human, Mouse, Rat

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.

Recommended Dilutions

WB	1:1000 - 1:5000
IHC-P	1:50 - 1:200
IF/ICC	1:50 - 1:200

Immunogen Information

Gene ID
2879

Swiss Prot
P36969

Immunogen
Recombinant fusion protein containing a sequence corresponding to amino acids 74-197 of GPX4 (NP_002076.2).

Synonyms
MCSP; SMDS; GPx-4; PHGPx; snGPx; GSHPx-4; snPHGPx; GPX4

Contact

400-999-6126

cn.market@abclonal.com.cn

www.abclonal.com.cn

Product Information

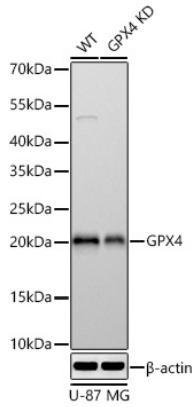
Source
Rabbit

Isotype
IgG

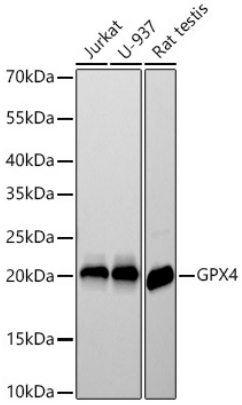
Purification
Affinity purification

Storage
Store at -20℃. Avoid freeze / thaw cycles.
Buffer: PBS with 0.09% Sodium azide,50% glycerol,pH7.3.

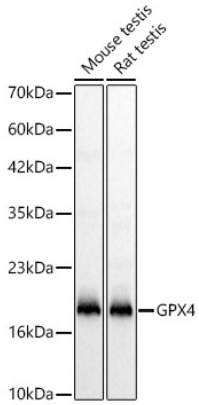
Validation Data



Western blot analysis of lysates from wild type (WT) and GPX4 knockdown (KD) U-87 MG cells using GPX4 Rabbit pAb (A1933) at 1:3000 dilution incubated overnight at 4℃.
Secondary antibody: HRP-conjugated Goat anti-Rabbit IgG (H+L) (AS014) at 1:10000 dilution.
Lysates/proteins: 25 µg per lane.
Blocking buffer: 3% nonfat dry milk in TBST.
Detection: ECL Basic Kit (RM00020).
Exposure time: 30s.

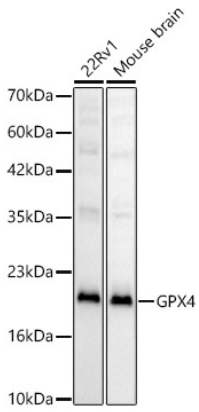


Western blot analysis of various lysates using GPX4 Rabbit pAb (A1933) at 1:3000 dilution incubated overnight at 4℃.
Secondary antibody: HRP-conjugated Goat anti-Rabbit IgG (H+L) (AS014) at 1:10000 dilution.
Lysates/proteins: 25 µg per lane.
Blocking buffer: 3% nonfat dry milk in TBST.
Detection: ECL Basic Kit (RM00020).
Exposure time: 30s.

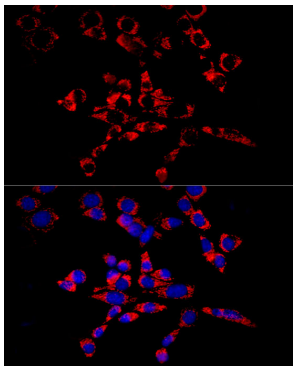


Western blot analysis of various lysates using GPX4 Rabbit pAb (A1933) at 1:3000 dilution.
Secondary antibody: HRP-conjugated Goat anti-Rabbit IgG (H+L) (AS014) at 1:10000 dilution.
Lysates / proteins: 25 µg per lane.
Blocking buffer: 3 % nonfat dry milk in TBST.
Detection: ECL Basic Kit (RM00020).
Exposure time: 0.2s.

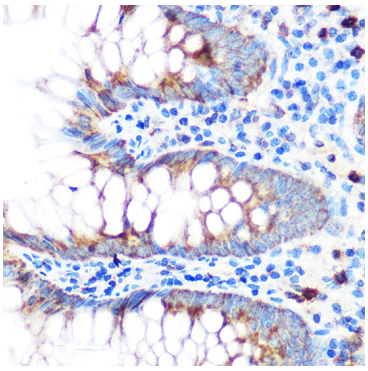
Validation Data



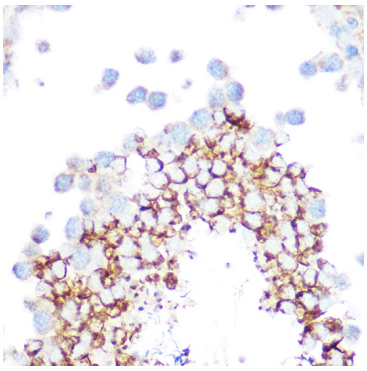
Western blot analysis of various lysates using GPX4 Rabbit pAb (A1933) at 1:3000 dilution.
Secondary antibody: HRP-conjugated Goat anti-Rabbit IgG (H+L) (AS014) at 1:10000 dilution.
Lysates / proteins: 25 µg per lane.
Blocking buffer: 3 % nonfat dry milk in TBST.
Detection: ECL Basic Kit (RM00020).
Exposure time: 10s.



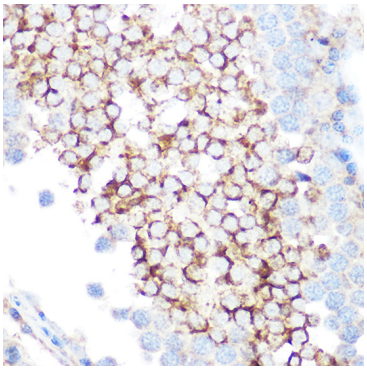
Immunofluorescence analysis of NIH/3T3 cells using GPX4 Rabbit pAb (A1933) at dilution of 1:100 (40x lens). Secondary antibody: Cy3-conjugated Goat anti-Rabbit IgG (H+L) (AS007) at 1:500 dilution. Blue: DAPI for nuclear staining.



Immunohistochemistry analysis of paraffin-embedded Human appendix tissue using GPX4 Rabbit pAb (A1933) at a dilution of 1:100 (40x 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 (A1933) at a dilution of 1:100 (40x 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 (A1933) at a dilution of 1:100 (40x lens). Microwave antigen retrieval was performed with 0.01 M Tris-EDTA repair solution (pH 9.0) prior to IHC staining.