

[KD Validated] GPX4 Rabbit mAb

Catalog No.: A25009 **Recombinant**

Basic Information

Observed MW

20kDa

Calculated MW

22kDa

Category

Primary antibody

Applications

ELISA, WB, IF/ICC

Cross-Reactivity

Human, Mouse, Rat

CloneNo number

ARC65274

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**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 human GPX4(NP_002076.2).

Synonyms

MCSP; SMDS; GPx-4; PHGPx; snGPx; GSHPx-4; snPHGPx; [KD Validated] GPX4

Contact

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Product Information

Source

Rabbit

Isotype

IgG

Purification

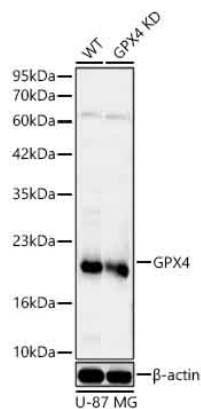
Affinity purification

Storage

Store at -20°C. Avoid freeze / thaw cycles.

Buffer: PBS with 0.05% proclin300, 0.05% BSA, 50% glycerol, pH7.3.

Validation Data



Western blot analysis of lysates from wild type (WT) and GPX4 knockdown (KD) U-87 MG cells using [KD Validated] GPX4 Rabbit mAb (A25009) at 1:4000 dilution.

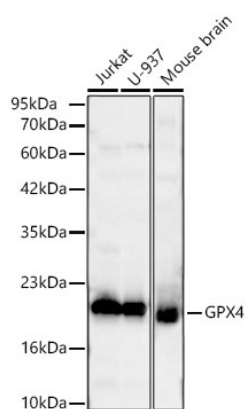
Secondary antibody: HRP Goat Anti-Rabbit IgG (H+L) (AS014) at 1:10000 dilution.

Lysates/proteins: 25ug per lane.

Blocking buffer: 3% nonfat dry milk in TBST.

Detection: ECL Basic Kit (RM00020).

Exposure time: 15s.



Western blot analysis of various lysates using [KD Validated] GPX4 Rabbit mAb (A25009) at 1:4000 dilution.

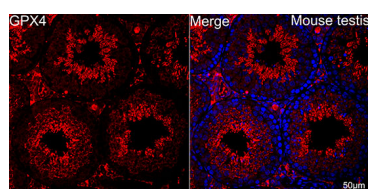
Secondary antibody: HRP Goat Anti-Rabbit IgG (H+L) (AS014) at 1:10000 dilution.

Lysates/proteins: 25ug per lane.

Blocking buffer: 3% nonfat dry milk in TBST.

Detection: ECL Basic Kit (RM00020).

Exposure time: 15s.



Confocal imaging of paraffin-embedded mouse testis using [KD Validated] GPX4 Rabbit mAb (A25009, dilution 1:200) followed by a further incubation with Cy3 Goat Anti-Rabbit IgG (H+L) (AS007, dilution 1:500) (Red). DAPI was used for nuclear staining (Blue). Objective: 40x. Perform high pressure antigen retrieval with 0.01 M citrate buffer (pH 6.0) prior to IF staining.