

# Anti-GPX4 Antibody

## ER1803-15



<b>Product Type:</b>	Rabbit polyclonal IgG, primary antibodies
<b>Species reactivity:</b>	Human, Mouse, Rat
<b>Applications:</b>	WB, IF-Cell, IHC-P, FC
<b>Molecular Wt:</b>	Predicted band size: 22 kDa

**Description:** Essential antioxidant peroxidase that directly reduces phospholipid hydroperoxide even if they are incorporated in membranes and lipoproteins . Can also reduce fatty acid hydroperoxide, cholesterol hydroperoxide and thymine hydroperoxide . Plays a key role in protecting cells from oxidative damage by preventing membrane lipid peroxidation. Required to prevent cells from ferroptosis, a non-apoptotic cell death resulting from an iron-dependent accumulation of lipid reactive oxygen species . The presence of selenocysteine (Sec) versus Cys at the active site is essential for life: it provides resistance to overoxidation and prevents cells against ferroptosis . The presence of Sec at the active site is also essential for the survival of a specific type of parvalbumin-positive interneurons, thereby preventing against fatal epileptic seizures . May be required to protect cells from the toxicity of ingested lipid hydroperoxides . Required for normal sperm development and male fertility. Essential for maturation and survival of photoreceptor cells. Plays a role in a primary T-cell response to viral and parasitic infection by protecting T-cells from ferroptosis and by supporting T-cell expansion.

**Immunogen:** Recombinant protein within Human GPX4 aa 1-197 / 197.

**Positive control:** Rat testis tissue lysate, HepG2, LOVO, MCF-7, mouse testis tissue.

**Subcellular location:** Cytoplasm. Mitochondrion.

**Database links:** SwissProt: P36969 Human | O70325 Mouse | P36970 Rat

**Recommended Dilutions:**

<b>WB</b>	1:500-1:1,000
<b>IF-Cell</b>	1:50-1:100
<b>IHC-P</b>	1:50 -1:600
<b>FC</b>	1:50-1:100

**Storage Buffer:** 1\*PBS (pH7.4), 0.2% BSA, 50% Glycerol. Preservative: 0.05% Sodium Azide.

**Storage Instruction:** Store at +4°C after thawing. Aliquot store at -20°C . Avoid repeated freeze / thaw cycles.

**Purity:** Immunogen affinity purified.

Hangzhou Huan Biotechnology Co., Ltd.

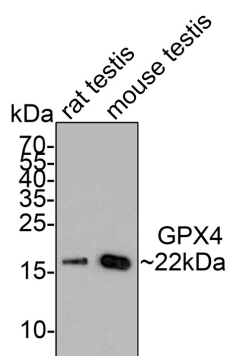
Orders:0086-571-88062880

Technical:0086-571-89986345

Service mail:support@huabio.cn

 华安生物  
HUABIO  
www.huabio.cn

## Images



**Fig1:** Western blot analysis of GPX4 on different lysates with Rabbit anti-GPX4 antibody (ER1803-15) at 1/1,000 dilution.

Lane 1: Rat testis tissue lysate (20 µg/Lane)

Lane 2: Mouse testis tissue lysate (20 µg/Lane)

Predicted band size: 22 kDa

Observed band size: 22 kDa

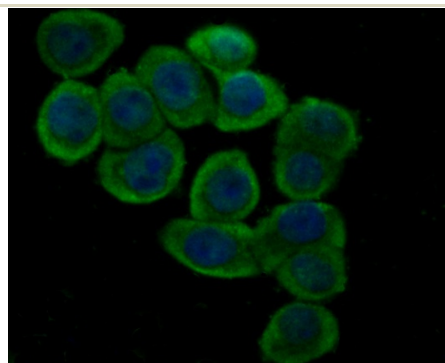
Exposure time: 2 minutes;

15% SDS-PAGE gel.

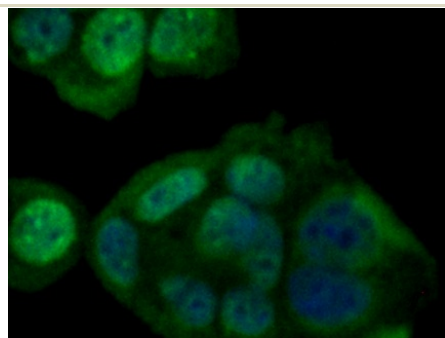
Proteins were transferred to a PVDF membrane and blocked with 5% NFDN/TBST for 1 hour at room temperature. The primary antibody (ER1803-15) at 1/1,000 dilution was used in 5% NFDN/TBST at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:300,000 dilution was used for 1 hour at room temperature.



**Fig2:** ICC staining GPX4 in HepG2 cells (green). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.



**Fig3:** ICC staining GPX4 in LOVO cells (green). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.



**Fig4:** ICC staining GPX4 in MCF-7 cells (green). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.

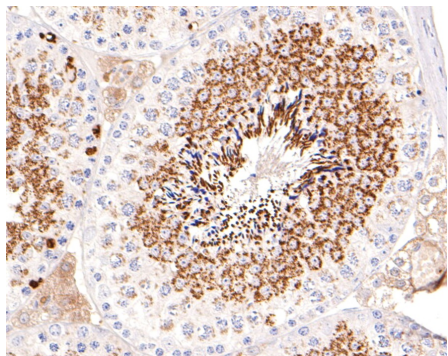
Hangzhou Huaan Biotechnology Co., Ltd.

Orders:0086-571-88062880

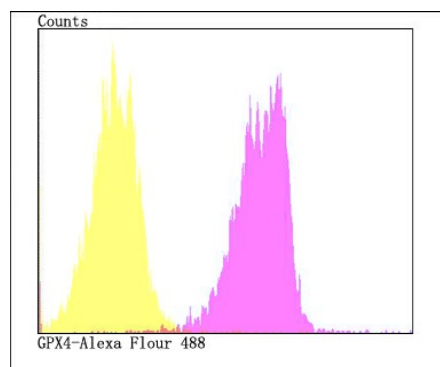
Technical:0086-571-89986345

Service mail:support@huabio.cn

华安生物  
HUABIO  
www.huabio.cn



**Fig5:** Immunohistochemical analysis of paraffin-embedded mouse testis tissue using anti- GPX4 antibody. Counter stained with hematoxylin.



**Fig6:** Flow cytometric analysis of HepG2 cells with GPX4 antibody at 1/100 dilution (fuchsia) compared with an unlabelled control (cells without incubation with primary antibody; yellow). Alexa Fluor 488-conjugated goat anti-rabbit IgG was used as the secondary antibody.

**Note:** All products are “FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE”.

### Background References

1. Yang W S et al. Regulation of ferroptotic cancer cell death by GPX4. Cell 156:317-331(2014).
2. Scheerer P. Structural basis for catalytic activity and enzyme polymerization of phospholipid hydroperoxide glutathione peroxidase-4 (GPx4). Biochemistry 46:9041-9049(2007).

Hangzhou Huan Biotechnology Co., Ltd.

Orders:0086-571-88062880

Technical:0086-571-89986345

Service mail:support@huabio.cn

华安生物  
HUABIO  
www.huabio.cn