

**Mouse Anti-GPX4/MCSP [LHM2]: MC0576, MC0576RTU7**

**Intended Use:** For Research Use Only

**Description:** 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 (GPX1-8). GPX1, GPX2 and GPX3 exist as homotetramers. GPX4 has a high tendency to form high molecular weight oligomers. GPX1 plays an important role in the antioxidant defense of the vascular wall and neural cells in response to oxidative stress. GPX2 is the major isoform in the lungs and its basal or inducible expression is dependent on Nrf2. GPX3 is under regulation by hypoxic stress and the expression and deficiency of GPX3 is associated with cardiovascular disease and stroke. GPX5 is selenium-independent; it is bound to the acrosome of sperm, where it may protect sperm from premature acrosome reaction in the epididymis.

**Specifications:**

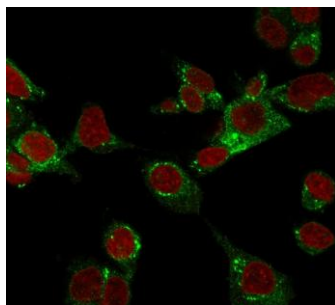
Clone: LHM2  
Source: Mouse  
Isotype: IgG1k  
Reactivity: Human, mouse, rat  
Immunogen: 375P cells crude extract  
Localization: Cytoplasm, mitochondrion  
Formulation: Purified antibody in PBS pH7.4, containing BSA and  $\leq 0.09\%$  sodium azide (NaN<sub>3</sub>)  
Storage: Store at 2°- 8°C  
Applications: IHC, Flow Cyt., IF  
Package:

Description	Catalog No.	Size
GPX4/MCSP Concentrated	MC0576	1 ml
GPX4/MCSP Prediluted	MC0576RTU7	7 ml

**IHC Procedure\*:**

Positive Control Tissue: Brain or malignant melanoma, MCF7 or HepG2 cells  
Concentrated Dilution: 50-200  
Pretreatment: Tris EDTA pH9.0, 15 minutes Pressure Cooker or 30-60 minutes water bath at 95°-99°C  
Incubation Time and Temp: 30-60 min @ RT  
Detection: Refer to the detection system manual

\* Result should be confirmed by an established diagnostic procedure.



Confocal immunofluorescence image of HepG2 cells stained with anti-GPX4

**References**

1. Ferroptosis in Intrahepatic Cholangiocarcinoma: IDH1105GGT Single Nucleotide Polymorphism Is Associated With Its Activation and Better Prognosis. Sarcognato, S. et al. Front Med. 2022.
2. Unraveling the Effects of Carotenoids Accumulation in Human Papillary Thyroid Carcinoma. di Masi, A. et al. 2022.

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