

Mouse Anti-Glutathione Peroxidase 1/2 (GPX1/2) [B6]: MC0454, MC0454RTU7

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:

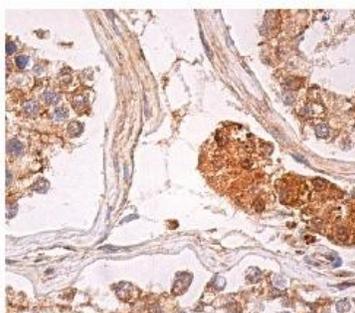
Clone: MD210
 Source: Mouse
 Isotype: IgG1k
 Reactivity: Human, mouse, rat
 Immunogen: Human GPX1/2 C-terminus aa 50-201
 Localization: Cytoplasm
 Formulation: Antibody in PBS pH7.4, containing BSA and $\leq 0.09\%$ sodium azide (NaN₃)
 Storage: Store at 2°- 8°C
 Applications: IHC, ELISA, IF, IP, WB
 Package:

Description	Catalog No.	Size
Glutathione Peroxidase 1/2 (GPX1/2) Concentrated	MC0454	1 ml
Glutathione Peroxidase 1/2 (GPX1/2) Prediluted	MC0454RTU7	7 ml

IHC Procedure*:

Positive Control Tissue: Breast carcinoma, testis
 Concentrated Dilution: 50-200
 Pretreatment: Tris EDTA pH9.0, 15 minutes using Pressure Cooker, or 30-60 minutes using water bath at 95°-99°C
 Incubation Time and Temp: 30-60 minutes @ RT
 Detection: Refer to the detection system manual

* Result should be confirmed by an established diagnostic procedure.



FFPE human testis stained with anti-GPX1/2 using DAB

References:

1. Hypoxic Culture Maintains Cell Growth of the Primary Human Valve Interstitial Cells with Stemness. Kaho Kanno, et al. Int J Mol Sci. Sep 29;22(19):10534. doi: 10.3390/ijms221910534, 2021.
2. Enhanced targeting of mitochondrial peroxide defense by the combined use of thiosemicarbazones and inhibitors of thioredoxin reductase. Charles R Myers. Free Radic Biol Med. Feb;91:81-92, 2016.

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Rev. A

Orders: customercare@medaysis.com Support: techsupport@medaysis.com Tel: 510-509-3153 www.medaysis.com

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