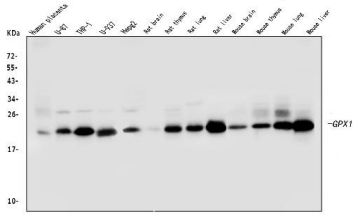
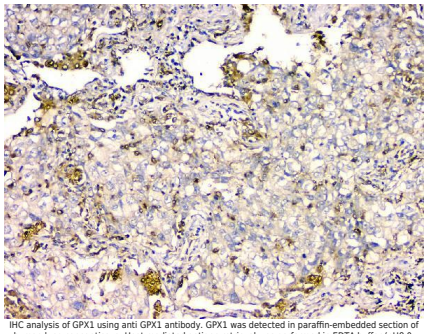
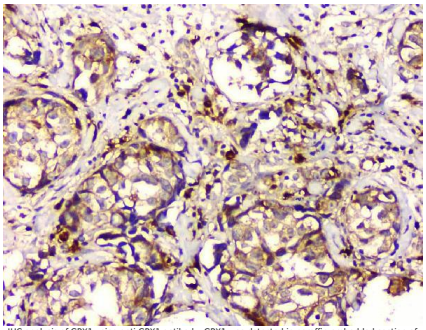
Product name:	GPX1
Cat number:	MAB-94602
Size:	100µg
Clone:	8B10
Concentration:	1mg/ml
Host:	Ms
Isotype:	IgG
Immunogen:	A synthetic peptide corresponding to a sequence in the middle region of human GPX1 (116-146aa EVNGAGAHPLFAFLREALPAPSDDATALMTD), different from the related mouse sequence by six amino acids and from the related rat sequence by five amino acids.
Reactivity:	Hu, Ms, Rt
Applications:	Western blot: 0.2-1ug/ml Immunohistochemistry(Paraffin-embedded Section): 1-2ug/ml Flow Cytometry: 1-3ug/1x106 cells
Purification:	Aff. Pur.
Form:	Liquid
Buffer:	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Storage:	At -20°C for one year. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for a longer time. Avoid repeated freezing and thawing.
Background:	Glutathione peroxidase 1, also known as, GPX-1 is an enzyme that in humans is encoded by the GPX1 gene. It is mapped to 3p21.31. This gene encodes a member of the glutathione peroxidase family, consisting of eight known glutathione peroxidases (Gpx1-8) in humans. Glutathione peroxidase functions in the detoxification of hydrogen peroxide, and is one of the most important antioxidant enzymes in humans. It has been reported that the protein encoded by this gene protects from CD95-induced apoptosis in cultured breast cancer cells and inhibits 5-lipoxygenase in blood cells, and its overexpression delays endothelial cell growth and increases resistance to toxic challenges. GPX1 is one of only a 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.



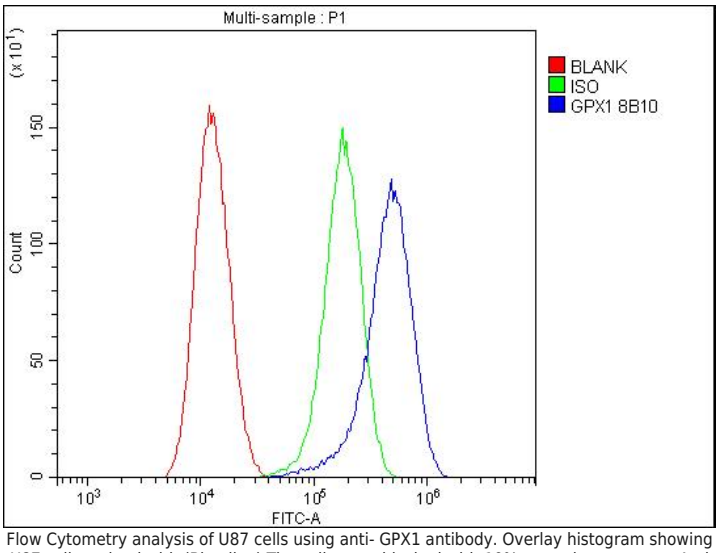
Western blot analysis of GPX1 using anti-GPX1 Antibody. Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: human placenta tissue lysates, Lane 2: human U-87 whole cell lysates, Lane 3: human THP-1 whole cell lysates, Lane 4: human U-937 whole cell lysates, Lane 5: human HepG2 whole cell lysates, Lane 6: rat brain tissue lysates, Lane 7: rat thymus tissue lysates, Lane 8: rat lung tissue lysates, Lane 9: rat liver tissue lysates, Lane 10: mouse brain tissue lysates, Lane 11: mouse thymus tissue lysates, Lane 12: mouse lung tissue lysates, Lane 13: mouse liver tissue lysates. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with mouse anti-GPX1 antigen affinity purified monoclonal antibody at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-mouse IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for GPX1 at approximately 22KD. The expected band size for GPX1 is at 22KD.



IHC analysis of GPX1 using anti GPX1 antibody. GPX1 was detected in paraffin-embedded section of human lung cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml mouse anti- GPX1 Antibody overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.



IHC analysis of GPX1 using anti GPX1 antibody. GPX1 was detected in paraffin-embedded section of human mammary cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml mouse anti-GPX1 Antibody overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.



Flow Cytometry analysis of U87 cells using anti- GPX1 antibody. Overlay histogram showing U87 cells stained with (Blue line).The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-GPX1 Antibody 1ug/1x106 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (5-10ug/1x106 cells) was used as secondary antibody for 30minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1ug/1x106) used under the same conditions. Unlabelled sample (Red line) was also used as a control.