**DESCRIPTION**

**Species Reactivity**  
Human/Mouse/Rat

**Specificity**  
Detects endogenous human, mouse and rat GPX2 in Western blots.

**Source**  
Monoclonal Mouse IgG

**Purification**  
Protein A or G purified from hybridoma culture supernatant

**Immunogen**  
E. coli-derived recombinant human Glutathione Peroxidase 2  
Gly41-Ile190  
Accession # P18283

**Formulation**  
Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.  
*Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

**APPLICATIONS**

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

<table>
<thead>
<tr>
<th>Recommended Concentration</th>
<th>Sample</th>
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<tr>
<td>Western Blot</td>
<td>1 μg/mL</td>
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**DATA**

**Western Blot**

Detection of Human/Mouse/Rat Glutathione Peroxidase 2 by Western Blot. Western blot shows lysates of HepG2 human hepatocellular carcinoma cell line, human liver tissue, Hepa 1-6 mouse hepatoma cell line, and rat liver tissue. PVDF membrane was probed with 1 μg/mL of Human/Mouse/Rat Glutathione Peroxidase 2 Monoclonal Antibody (Catalog # MAB5470) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). A specific band was detected for Glutathione Peroxidase 2 at approximately 22 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 2.

**PREPARATION AND STORAGE**

**Reconstitution**  
Reconstitute at 0.5 mg/mL in sterile PBS.

**Shipping**  
The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.  
*Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C.

**Stability & Storage**  
Use a manual defrost freezer and avoid repeated freeze-thaw cycles.  
- 12 months from date of receipt, -20 to -70 °C as supplied.  
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.  
- 6 months, -20 to -70 °C under sterile conditions after reconstitution.

**BACKGROUND**

Glutathione Peroxidase 2 (GPX2), also known as Gastrointestinal Glutathione Peroxidase, is a member of the glutathione peroxidase antioxidant enzyme family. These proteins protect cell surfaces, extracellular fluid components, and enzymes from oxidative stress by reducing hydrogen peroxide, lipid peroxides, and organic hydroperoxide using reduced glutathione. GPX2 is a cytoplasmic homotetramer of 22 kDa subunits, each containing a selenocysteine residue at the active site. GPX2 is primarily expressed in the liver and intestinal epithelial cells where it participates in the detoxification of dietary organic hydroperoxides. It is upregulated in a variety of carcinomas and functions as an anti-inflammatory and anti-apoptotic molecule. Over amino acids 41-190, human GPX2 shares 94% aa sequence identity with mouse and rat GPX2.