

DESCRIPTION

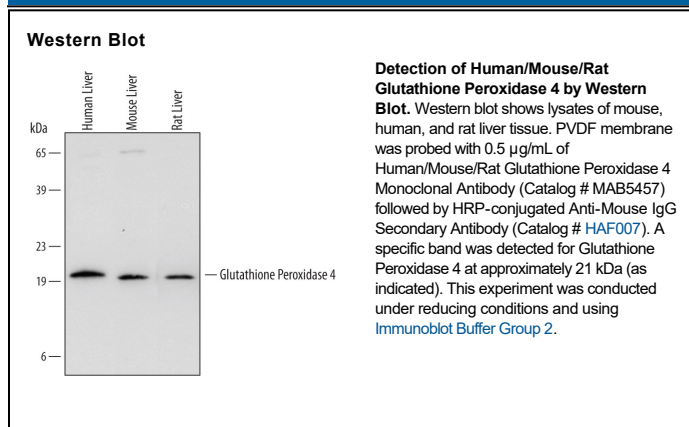
Species Reactivity	Human/Mouse/Rat
Specificity	Detects endogenous human, mouse and rat GPX4 in Western blots.
Source	Monoclonal Mouse IgG _{2B} Clone # 565320
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human Glutathione Peroxidase 4 Gly74-Phe168 Accession # P36969
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.

	Recommended Concentration	Sample
Western Blot	0.5 µg/mL	See Below

DATA



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. <ul style="list-style-type: none"> ● 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 4 (GPX4; also known as PHGPx) is a monomeric, 21 kDa member of the glutathione peroxidase family of proteins. It is widely expressed and serves to both protect cell membranes from phospholipid and cholesterol hydroperoxidases, and form an inactive enzyme structural component of the sperm mitochondrial capsule. Human GPX4 is 197 amino acids (aa) in length and contains a mitochondrial targeting sequence (aa 1-27) and an enzymatically active selenocysteine at Sec73. During sperm maturation, the targeting sequence is cleaved, and GPX4 may form inactive covalently-linked oligomers. There are multiple splice variants. One is ubiquitously expressed, cytoplasmic, and shows an alternate start site at Met28. A second is 226 aa in length, nuclear, and shows an Arg-rich 65 aa substitution for aa 1-28. Over amino acids 74-168, human GPX4 shares 93% aa identity with mouse GPX4.