Human/Mouse/Rat Glutathione Peroxidase 4/GPX4 Alexa Fluor® 532-conjugated Antibody

Monoclonal Mouse IgG_{2B} Clone # 565320

Catalog Number: FAB5457X

100 µg

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	*E. coli*-derived recombinant human Glutathione Peroxidase 4 Gly74-Phe168 Accession # P36969
Conjugate	Alexa Fluor 532 Excitation Wavelength: 534 nm Emission Wavelength: 553 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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.*

Western Blot	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

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.

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