GPx-1/2 (B-6): sc-133160

**BACKGROUND**

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, GPX-2 and GPX-3 exist as homotramers. Gpx-4 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. GPX-2 is the major isomer in the lungs and its basal or inducible expression is dependent on Nrf2. GPX-3 is under regulation by hypoxic stress and the expression and deficiency of GPX-3 is associated with cardiovascular disease and stroke. GPX-5 is selenium-independent; it is bound to the acrosome of sperm, where it may protect sperm from premature acrosome reaction in the epididymis.

**CHROMOSOMAL LOCATION**

Genetic locus: GPX1 (human) mapping to 3p21.3, GPX2 (human) mapping to 14q23.3; Gpx1 (mouse) mapping to 9 F2, Gpx2 (mouse) mapping to 12 C3.

**SOURCE**

GPx-1/2 (B-6) is a mouse monoclonal antibody raised against amino acids 50-201 mapping at the C-terminus of GPX-1 of human origin.

**PRODUCT**

Each vial contains 200 µg IgG1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

GPx-1/2 (B-6) is available conjugated to agarose (sc-133160 AG), 500 µg/ml, for IP; to HRP (sc-133160 HRP), 200 µg/ml, for chemiluminescence; to NBT (sc-133160 NBT), 100 µg/ml, for WB; to biotin (sc-133160 Biotin), 50 µg/ml, for WB, IHC, and ELSA; to Alexa Fluor® 488 (sc-133160 AF488), Alexa Fluor® 546 (sc-133160 AF546), Alexa Fluor® 594 (sc-133160 AF594) or Alexa Fluor® 647 (sc-133160 AF647), 200 µg/ml, for WB (RGB), IF, IHC, and FCM; and to either Alexa Fluor® 680 (sc-133160 AF680) or Alexa Fluor® 790 (sc-133160 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF, and FCM.

**APPLICATIONS**

GPx-1/2 (B-6) is recommended for detection of GPx-1 and GPx-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation (1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELSA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of GPx-1 monomer: 23 kDa.

Molecular Weight of GPx-1 homotramer: 92 kDa.

Molecular Weight of GPx-2 monomer: 23 kDa.

Molecular Weight of GPx-5: 26 kDa.

**DATA**

**STORAGE**

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

For research use only, not for use in diagnostic procedures.

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