

# GPx-8 (C-20): sc-242958

## 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 8 GPx homologs (GPx-1-8). GPx-8 (glutathione peroxidase 8), also known as GSHPx-8, is a 209 amino acid single-pass membrane protein. The gene encoding GPx-8 maps to human chromosome 5q11.2 and mouse chromosome 13 D2.2.

## REFERENCES

1. Chu, F.F., et al. 1997. Expression and chromosomal mapping of mouse Gpx2 gene encoding the gastrointestinal form of glutathione peroxidase, GPX-GI. *Biomed. Environ. Sci* 10: 156-162.
2. Hall, L., et al. 1998. The majority of human glutathione peroxidase type 5 (GPX5) transcripts are incorrectly spliced: implications for the role of GPX5 in the male reproductive tract. *Biochem. J.* 333: 5-9.
3. Bilodeau, J.F., et al. 1999. Increased resistance of GPx-1 transgenic mice to tumor promoter-induced loss of glutathione peroxidase activity in skin. *Int. J. Cancer* 80: 863-867.
4. Mork, H., et al. 2000. Inverse mRNA expression of the selenocysteine-containing proteins GI-GPx and SeP in colorectal adenomas compared with adjacent normal mucosa. *Nutr. Cancer* 37: 108-116.
5. Crack, P.J., et al. 2001. Increased infarct size and exacerbated apoptosis in the glutathione peroxidase-1 (Gpx-1) knockout mouse brain in response to ischemia/reperfusion injury. *J. Neurochem.* 78: 1389-1399.
6. Nasr, M.A., et al. 2004. GPx-1 modulates Akt and P70S6K phosphorylation and Gadd45 levels in MCF-7 cells. *Free Radic. Biol. Med.* 37: 187-195.
7. Hussain, S.P., et al. 2004. p53-induced up-regulation of MnSOD and GPx but not catalase increases oxidative stress and apoptosis. *Cancer Res.* 64: 2350-2356.

## CHROMOSOMAL LOCATION

Genetic locus: GPX8 (human) mapping to 5q11.2; Gpx8 (mouse) mapping to 13 D2.2.

## SOURCE

GPx-8 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of GPx-8 of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-242958 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

GPx-8 (C-20) is recommended for detection of GPx-8 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other GPx family members.

GPx-8 (C-20) is also recommended for detection of GPx-8 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for GPx-8 siRNA (h): sc-91950, GPx-8 siRNA (m): sc-108669, GPx-8 shRNA Plasmid (h): sc-91950-SH, GPx-8 shRNA Plasmid (m): sc-108669-SH, GPx-8 shRNA (h) Lentiviral Particles: sc-91950-V and GPx-8 shRNA (m) Lentiviral Particles: sc-108669-V.

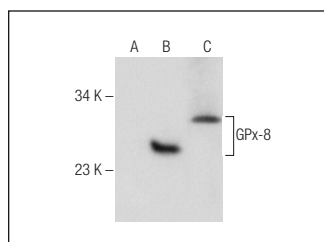
Molecular Weight of GPx-8: 24 kDa.

Positive Controls: GPx-8 (m): 293T Lysate: sc-117896 or human kidney tissue extract.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



GPx-8 (C-20): sc-242958. Western blot analysis of GPx-8 expression in non-transfected: sc-117752 (A) and mouse GPx-8 transfected: sc-117896 (B) 293T whole cell lysates and human kidney tissue extract (C).

## STORAGE

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

## RESEARCH USE

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