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GPx-4 (h2): 293T Lysate: sc-115819

BACKGROUND

GPx-4, also known as phospholipid hydroperoxide glutathione peroxidase (PHGPx), is the only known antioxidant enzyme that reduces phospholipid hydroperoxides within membranes and lipoproteins, thus inhibiting lipid peroxidation. A number of pathophysiological states rely on peroxidation of lipids, suggesting that GPx-4 plays a crucial role in antioxidative defense. GPx-4 is expressed at low levels in a wide variety of organs with two distinct forms: L-GPx-4, which localizes in the mitochondria, and S-GPx-4, the cytosolic form. In some tissues, GPx-4 is more highly expressed, suggesting that GPx-4 is involved in more specific functions. For example, regulation of the enzyme in testicular tissue implies a necessary role for GPx-4 in sperm maturation. The gene encoding GPx-4 presents a number of different protein-binding domains, allowing regulation of expression to be influenced by Sp1, NF-Y and ApoER2, as well as other proteins. Therefore, complex interactions between a variety of proteins and the GPx-4 gene, in addition to interplay with fatty acids, cytokines and antioxidants, ultimately dictate the functional significance of GPx-4.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: GPX4 (human) mapping to 19p13.3.

PRODUCT

GPx-4 (h2): 293T Lysate represents a lysate of human GPx-4 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

GPx-4 (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive GPx-4 antibodies. Recommended use: 10-20 µl per lane.

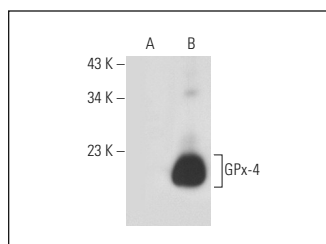
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

GPx-4 (E-12): sc-166570 is recommended as a positive control antibody for Western Blot analysis of enhanced human GPx-4 expression in GPx-4 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



GPx-4 (E-12): sc-166570. Western blot analysis of GPx-4 expression in non-transfected: sc-117752 (A) and human GPx-4 transfected: sc-115819 (B) 293T whole cell lysates.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.