

PRX VI (h2): 293T Lysate: sc-116442

BACKGROUND

The peroxiredoxin (PRX) family comprises six antioxidant proteins, PRX I, II, III, IV, V and VI, which protect cells from reactive oxygen species (ROS) by preventing the metal-catalyzed oxidation of enzymes. The PRX proteins primarily utilize thioredoxin as the electron donor for antioxidation, although they are fairly promiscuous with regard to the hydroperoxide substrate. In addition to protection from ROS, peroxiredoxins are also involved in cell proliferation, differentiation and gene expression. PRX I, II, IV and VI show diffuse cytoplasmic localization, while PRX III and V exhibit distinct mitochondrial localization. The human PRX I gene encodes a protein that is expressed in several tissues, including liver, kidney, testis, lung and nervous system. PRX II is expressed in testis, while PRX III shows expression in lung. PRX I, II and III are overexpressed in breast cancer and may be involved in its development or progression. Upregulated protein levels of PRX I and II in Alzheimer's disease (AD) and Down syndrome (DS) indicate the involvement of PRX I and II in their pathogenesis. The human PRX IV gene is abundantly expressed in many tissues. PRX IV exists as a precursor protein, which is only detected in testis, and a processed secreted form. PRX V also exists as two forms, designated long and short. Like PRX IV, the long form of PRX V is highly expressed in testis. The short form of PRX V is more widely expressed, with high expression in liver, kidney, heart and lung. PRX VI, α 1-Cys peroxiredoxin (also known as antioxidant protein 2 or AOP2), is highly expressed in most tissues, particularly in epithelial cells. Localized to the cell cytosol, PRX VI functions independently of other peroxiredoxins and antioxidant proteins, specializing in antioxidant defense, lung phospholipid metabolism and protection of keratinocytes from cell death induced by reactive oxygen species.

REFERENCES

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4. Noh, D.Y., et al. 2001. Overexpression of peroxiredoxin in human breast cancer. *Anticancer Res.* 21: 2085-2090.
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CHROMOSOMAL LOCATION

Genetic locus: PRDX6 (human) mapping to 1q25.1.

PRODUCT

PRX VI (h2): 293T Lysate represents a lysate of human PRX VI transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

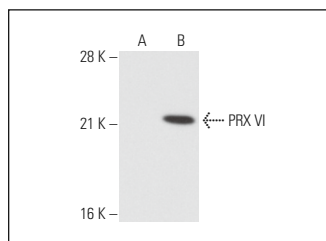
APPLICATIONS

PRX VI (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive PRX VI antibodies. Recommended use: 10-20 μ l per lane.

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

PRX VI (1A11): sc-59671 is recommended as a positive control antibody for Western Blot analysis of enhanced human PRX VI expression in PRX VI transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

DATA



PRX VI (1A11): sc-59671. Western blot analysis of PRX VI expression in non-transfected: sc-117752 (A) and human PRX VI transfected: sc-116442 (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.