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PRDX6 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2927c

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	P30041
Other Accession	O35244, Q2PFL9, O77834, NP_004896
Reactivity	Human
Predicted	Bovine, Monkey, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB20893
Calculated MW	25035
Antigen Region	103-132

Additional Information

Gene ID	9588
Other Names	Peroxiredoxin-6, 1-Cys peroxiredoxin, 1-Cys PRX, 24 kDa protein, Acidic calcium-independent phospholipase A2, aiPLA2, 311-, Antioxidant protein 2, Liver 2D page spot 40, Non-selenium glutathione peroxidase, NSGPx, Red blood cells page spot 12, PRDX6, AOP2, KIAA0106
Target/Specificity	This PRDX6 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 103-132 amino acids from the Central region of human PRDX6.
Dilution	WB~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	PRDX6 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PRDX6

Synonyms	AOP2, KIAA0106
Function	Thiol-specific peroxidase that catalyzes the reduction of hydrogen peroxide and organic hydroperoxides to water and alcohols, respectively (PubMed:10893423, PubMed:9497358). Can reduce H(2)O(2) and short chain organic, fatty acid, and phospholipid hydroperoxides (PubMed:10893423). Also has phospholipase activity, can therefore either reduce the oxidized sn-2 fatty acyl group of phospholipids (peroxidase activity) or hydrolyze the sn-2 ester bond of phospholipids (phospholipase activity) (PubMed:10893423, PubMed:26830860). These activities are dependent on binding to phospholipids at acidic pH and to oxidized phospholipds at cytosolic pH (PubMed:10893423). Plays a role in cell protection against oxidative stress by detoxifying peroxides and in phospholipid homeostasis (PubMed:10893423). Exhibits acyl-CoA-dependent lysophospholipid acyltransferase which mediates the conversion of lysophosphatidylcholine (1-acyl-sn-glycero-3-phosphocholine or LPC) into phosphatidylcholine (1,2-diacyl-sn-glycero-3-phosphocholine or PC) (PubMed:26830860). Shows a clear preference for LPC as the lysophospholipid and for palmitoyl CoA as the fatty acyl substrate (PubMed:26830860).
Cellular Location	Cytoplasm. Lysosome {ECO:0000250|UniProtKB:O35244}. Note=Also found in lung secretory organelles (lamellar bodies). {ECO:0000250|UniProtKB:O35244}

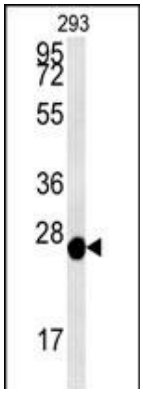
Background

PRDX6 is a member of the thiol-specific antioxidant protein family. This protein is a bifunctional enzyme with two distinct active sites. It is involved in redox regulation of the cell; it can reduce H(2)O(2) and short chain organic, fatty acid, and phospholipid hydroperoxides. It may play a role in the regulation of phospholipid turnover as well as in protection against oxidative injury.

References

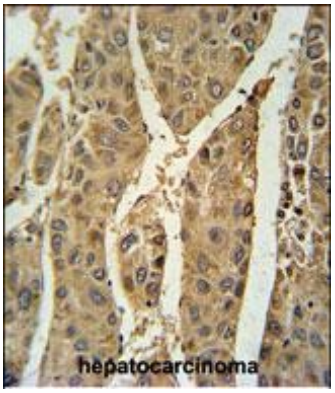
Davila, S., et al. Genes Immun. (2010) In press :
Kubo, E., et al. Am. J. Physiol., Cell Physiol. 298 (2), C342-C354 (2010) :
Sorokina, E.M., et al. Am. J. Physiol. Lung Cell Mol. Physiol. 297 (5), L871-L880 (2009)

Images

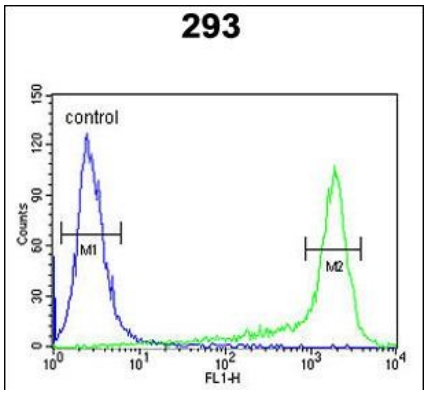


PRDX6 Antibody (Center) (Cat.#AP2927c) western blot analysis in 293 cell line lysates (35ug/lane).This demonstrates the PRDX6 antibody detected the PRDX6 protein (arrow).

PRDX6 Antibody (Center) (Cat. #AP2927c) immunohistochemistry analysis in formalin fixed and paraffin embedded human hepatocarcinoma followed by peroxidase conjugation of the secondary antibody and



DAB staining. This data demonstrates the use of the PRDX6 Antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.



PRDX6 Antibody (Center) (Cat. #AP2927c) flow cytometric analysis of 293 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.