

## DESCRIPTION

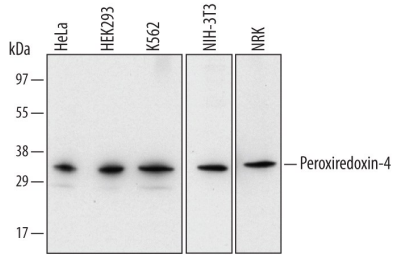
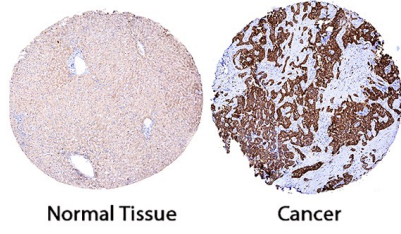
<b>Species Reactivity</b>	Human/Mouse/Rat
<b>Specificity</b>	Detects human, mouse and rat Peroxiredoxin 4 in Western blots.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human Peroxiredoxin 4 Met1-Asn271 Accession # Q13162
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

## APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
<b>Western Blot</b>	1 µg/mL	See Below
<b>Immunohistochemistry</b>	0.3-15 µg/mL	See Below

## DATA

<p><b>Western Blot</b></p>  <p><b>Detection of Human/Mouse/Rat Peroxiredoxin 4 by Western Blot.</b> Western blot shows lysates of HeLa human cervical epithelial carcinoma cell line, HEK293 human embryonic kidney cell line, K562 human chronic myelogenous leukemia cell line, NIH-3T3 mouse embryonic fibroblast cell line, and NRK rat normal kidney cell line. PVDF membrane was probed with 1 µg/mL of Goat Anti-Human/Mouse/Rat Peroxiredoxin 4 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5460) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). A specific band was detected for Peroxiredoxin 4 at approximately 32 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 2.</p>	<p><b>Immunohistochemistry</b></p>  <p><b>Peroxiredoxin 4 in Human Liver Cancer Tissue.</b> Peroxiredoxin 4 was detected in immersion fixed paraffin-embedded sections of human liver cancer tissue using Goat Anti-Human/Mouse/Rat Peroxiredoxin 4 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5460) at 0.3 µg/mL for 1 hour at room temperature followed by incubation with the Anti-Goat IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC004). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to cancer cells. View our protocol for IHC Staining with VisUCyte HRP Polymer Detection Reagents.</p>
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## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.2 mg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## BACKGROUND

Peroxiredoxin 4 (Prx-IV; also known as PRDX4 and thioredoxin peroxidase AOE372) is a 30-32 kDa, widely expressed cytoplasmic antioxidant enzyme that belongs to the *typical* 2-Cys class of the TSA/ahpC family of peroxiredoxins. It exists as either a homodimer, or heterodimer with PRDX1. PRDX4 reportedly counteracts p53-mediated generation of ROS, and regulates NFκB via IκB-α. Human PRDX4 is 271 amino acids (aa) in length and contains an N-terminal poly-Leu region (aa 20-30) and a 159 thioredoxin domain (aa 79-237). There is one catalytic cysteine at Cys124. Over amino acids 1-271, human PRDX4 shares 89% aa identity with mouse and rat PRDX4.