

## DESCRIPTION

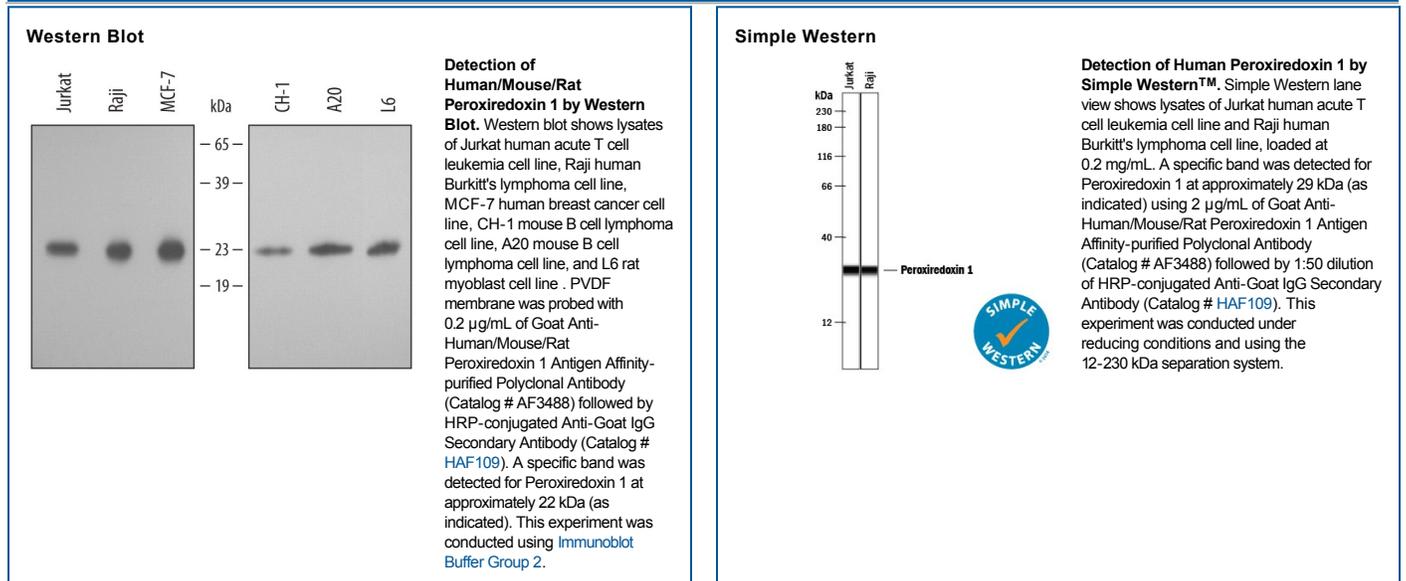
<b>Species Reactivity</b>	Human/Mouse/Rat
<b>Specificity</b>	Detects human, mouse and rat Peroxiredoxin 1 in Western blots. In Western blots, no cross-reactivity with recombinant human Peroxiredoxin 2, 3, 5, or 6 is observed.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human Peroxiredoxin 1 Met1-Lys199 Accession # Q06830
<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>	0.2 µg/mL	See Below
<b>Simple Western</b>	2 µg/mL	See Below

## DATA



## 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

Human Peroxiredoxin 1 (Prx-1 or PRDX1; also Thioredoxin Peroxidase 2) is a 22 kDa antioxidant enzyme that belongs to the *typical* 2-Cys class of the THP/ahpC family of proteins. The molecule is 199 amino acids (aa) in length, and has two catalytic cysteines, one at Cys52, and a second at Cys173. Prx-1 is an obligate homodimer. Inactive, it is apparently noncovalently associated. Upon peroxide binding to Cys52 of subunit 1, the Cys173 of subunit 2 interacts with Cys52 of subunit 1 to complete the autoxidation, generating a disulfide bond between Cys52 and Cys173. Subsequent reduction restores the subunits to the basal state. There are apparently two additional isoforms. One shows a premature truncation after aa 171, while the second shows a deletion of aa 21 - 121. Human Prx-1 shows 96% and 98% amino acid identity to mouse and rat Prx-1, respectively.