

DESCRIPTION

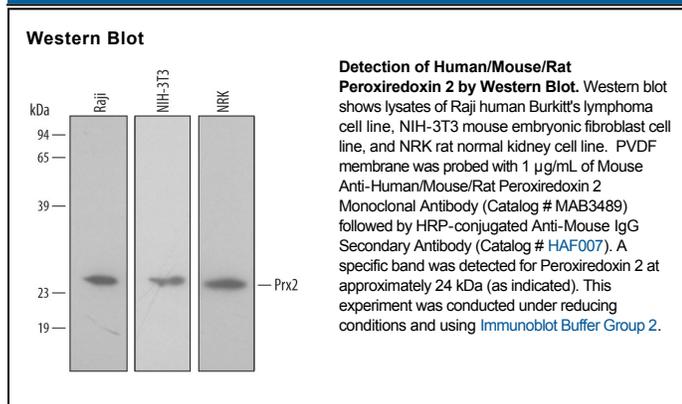
Species Reactivity	Human/Mouse/Rat
Specificity	Detects human, mouse, and rat Peroxiredoxin 2 in Western blots. In Western blots, approximately 25%-40% cross-reactivity with recombinant human (rh) Peroxiredoxin 1 and 4 is observed, and less than 10% cross-reactivity with rhPeroxiredoxin 3, 5, and 6 is observed. In direct ELISAs, approximately 15%-25% cross-reactivity with rhPeroxiredoxin 1 and 4 is observed, and less than 5% cross-reactivity with rhPeroxiredoxin 3, 5, or 6 is observed.
Source	Monoclonal Mouse IgG _{2A} Clone # 477719
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human Peroxiredoxin 2 Met1-Asn198 Accession # P32119
Formulation	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
Western Blot	1 µg/mL	See Below

DATA



PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	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
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Human peroxiredoxin-2 (Prx-2 or PRDX2; also Thioredoxin Peroxidase 1) is a 22 kDa antioxidant enzyme that belongs to the *typical 2-Cys* class of the THP/ahpC family of proteins. The precursor molecule is 198 amino acids (aa) in length, and has two catalytic cysteines, one at Cys50 and a second at Cys171. Prx-2 is an obligate homodimer. Inactive, it is apparently noncovalently associated. Upon peroxide binding to Cys50 of subunit 1, the Cys171 of subunit 2 interacts with Cys50 of subunit 1 to complete the autoxidation, generating a disulfide bond between Cys50 and Cys171. Subsequent reduction restores the subunits to the basal state. There are two additional isoforms. Isoform-b shows a deletion of aa 36-86, while isoform c shows a substitution of 56 aa after residue 86. Human Prx-2 is 93% aa identical to mouse and rat Prx-2.