

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
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
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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.

Western Blot Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

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 antioxidation, 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.

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