

#### DESCRIPTION

|                           |                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Human/Mouse/Rat                                                                                                                                                                                                                                                             |
| <b>Specificity</b>        | 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              |
| <b>Source</b>             | Monoclonal Mouse IgG <sub>2A</sub> Clone # 477719                                                                                                                                                                                                                           |
| <b>Purification</b>       | Protein A or G purified from hybridoma culture supernatant                                                                                                                                                                                                                  |
| <b>Immunogen</b>          | <i>E. coli</i> -derived recombinant human Peroxiredoxin 2<br>Met1-Asn198<br>Accession # P32119                                                                                                                                                                              |
| <b>Conjugate</b>          | Alexa Fluor 488<br>Excitation Wavelength: 488 nm<br>Emission Wavelength: 515-545 nm                                                                                                                                                                                         |
| <b>Formulation</b>        | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<br><br>*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.

#### PRODUCT SPECIFIC NOTICES

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