

#### DESCRIPTION

|                                                                                                                                                                                                         |                                                                                                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b>                                                                                                                                                                               | Human                                                                                          |
| <b>Specificity</b>                                                                                                                                                                                      | Detects endogenous human Peroxiredoxin 1 in Western blots.                                     |
| <b>Source</b>                                                                                                                                                                                           | Monoclonal Mouse IgG <sub>1</sub> Clone # 477609                                               |
| <b>Purification</b>                                                                                                                                                                                     | Protein A or G purified from hybridoma culture supernatant                                     |
| <b>Immunogen</b>                                                                                                                                                                                        | <i>E. coli</i> -derived recombinant human Peroxiredoxin 1<br>Met1-Lys199<br>Accession # Q06830 |
| <b>Conjugate</b>                                                                                                                                                                                        | Alexa Fluor 647<br>Excitation Wavelength: 650 nm<br>Emission Wavelength: 668 nm                |
| <b>Formulation</b>                                                                                                                                                                                      | 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.

|                            |                                                                        |
|----------------------------|------------------------------------------------------------------------|
| <b>Knockout Validated</b>  | Optimal dilution of this antibody should be experimentally determined. |
| <b>Western Blot</b>        | Optimal dilution of this antibody should be experimentally determined. |
| <b>Immunocytochemistry</b> | Optimal dilution of this antibody should be experimentally determined. |
| <b>Immunoprecipitation</b> | Optimal dilution of this antibody should be experimentally determined. |

#### PREPARATION AND STORAGE

|                                |                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied                          |

#### BACKGROUND

Human Peroxiredoxin1 (Prx-1, also known as 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. In its inactive state, Prx-1 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 antioxidation, 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 is 96% aa identical to mouse Prx-1.

#### PRODUCT SPECIFIC NOTICES

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