

DESCRIPTION

Species Reactivity	Human/Mouse/Rat
Specificity	Detects human, mouse and rat Peroxiredoxin 5 in Western blots.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant mouse Peroxiredoxin 5 Met1-Leu210 Accession # P99029
Conjugate	Alexa Fluor 532 Excitation Wavelength: 534 nm Emission Wavelength: 553 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.
Immunocytochemistry	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

Peroxiredoxin 5 (Prx-5; also known as AOEB166 and thioredoxin reductase) is a 22 kDa, widely expressed mitochondrial antioxidant enzyme that belongs to the *atypical* 2-Cys class of the TSA/ahpC family of peroxiredoxins. The mouse precursor molecule is 210 amino acids (aa) in length and contains an N-terminal 48 aa mitochondrial targeting (signal) sequence and a 162 aa mature enzyme that shows an NES between aa 54-63, and a peroxisome targeting motif at aa 208-210. There are two catalytic cysteines, one at Cys96, and another at Cys200 of the precursor. Prx-5 is a monomer that is found in mitochondria, cytosol, nucleus and peroxisomes. It is known to reduce H₂O₂ and alkyl hydroperoxides. Two potential splice forms are reported. One is 17 kDa in size and shows an alternative start site at Met49, while a second shows a 19 aa substitution for aa 83-102. Mouse Prx-5 is 78% and 90% aa identical to human and rat Prx-5, respectively.

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