Human/Mouse/Rat Peroxiredoxin 5 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF5724

DESCRIPTION

Species Reactivity	Human/Mouse/Rat
Specificity	Detects endogenous human, mouse and rat Peroxiredoxin 5 in Western blots.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant mouse Peroxiredoxin 5 Met1-Leu210 Accession # P99029
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.

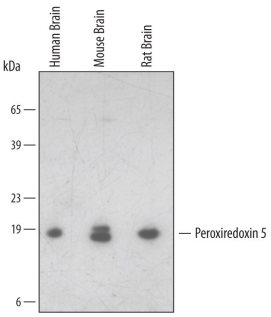
APPLICATIONS

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

Western Blot



Detection of Human/Mouse/Rat Peroxiredoxin 5 by Western Blot. Western blot shows lysates of human, mouse, and rat brain tissue. PVDF membrane was probed with 1 µg/mL of Human/Mouse/Rat Peroxiredoxin 5 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5724) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). A specific band was detected for Peroxiredoxin 5 at approximately 17 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 2.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 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.** ● 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

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 H_2O_2 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.