Human Peroxiredoxin 3 Antibody

Monoclonal Mouse IgG_1 Clone # 774406

Catalog Number: MAB7504

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Peroxiredoxin 3 in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human Peroxiredoxin 1, 2, 4, or recombinant mouse Peroxiredoxin 3 is observed.
Source	Monoclonal Mouse IgG_1 Clone # 774406
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant human Peroxiredoxin 3 Met1-Gln256 Accession # P30048
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 either lyophilized or as a 0.2 μm filtered solution in PBS.

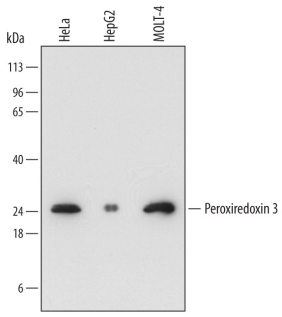
APPLICATIONS

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	0.2 µg/mL	See Below
Immunocytochemistry	8-25 µg/mL	See Below

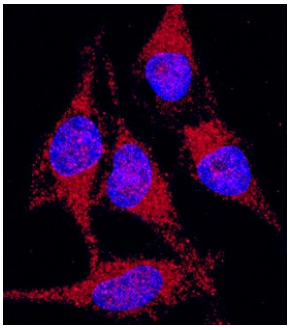
DATA

Western Blot



Detection of Human Peroxiredoxin 3 by Western Blot. Western blot shows lysates of HeLa human cervical epithelial carcinoma cell line, HepG2 human hepatocellular carcinoma cell line, and MOLT-4 human acute lymphoblastic leukemia cell line. PVDF membrane was probed with 0.2 µg/mL of Mouse Anti-Human Peroxiredoxin 3 Monoclonal Antibody (Catalog # MAB7504) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for Peroxiredoxin 3 at approximately 25 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunocytochemistry



Peroxiredoxin 3 in HeLa Human Cell Line. Peroxiredoxin 3 was detected in immersion fixed HeLa human cervical epithelial carcinoma cell line using Mouse Anti-Human Peroxiredoxin 3 Monoclonal Antibody (Catalog # MAB7504) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
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 3 (Prx-3/III; also AOP-1, MER5 and thioredoxin-dependent peroxidase reductase) is a ubiquitous, 22-28 kDa mitochondrial antioxidant enzyme that belongs to the 2-Cys class of the TSA/ahpC family of peroxiredoxins. Prx-3 is known to act as either a homodimer, or a decamer, and scavenge reactive oxygen species generated by oxidative stress. The mouse Prx-3 precursor molecule is 257 amino acids (aa) in length. It contains a cleavable N-terminal 63 aa mitochondrial targeting sequence, plus a 194 aa mature enzyme that shows a thioredoxin domain between aa 64-222. There are two catalytic cysteines, one at Cys109 and another at Cys230 of the precursor. Prx-3 undergoes a phosphorylation at Thr147 that reduces its activity. One potential splice form shows a deletion of Arg149, Lys150 and Arg185. Full-length mouse Prx-3 is 86% and 95% aa identical to human and rat Prx-3, respectively.

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