Human Myeloperoxidase/MPO Antibody

Monoclonal Mouse IgG_{2B} Clone # 392105

Catalog Number: MAB3174

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Myeloperoxidase/MPO in Western blots. No cross-reactivity with recombinant human Eosinophil Peroxidase is observed.
Source	Monoclonal Mouse IgG_{2B} Clone # 392105
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant human Myeloperoxidase/MPO Val279-Ser745 Accession # P05164
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.

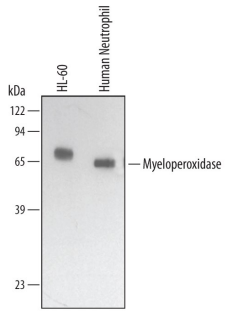
APPLICATIONS

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	1 µg/mL	See Below
Immunocytochemistry	8-25 µg/mL	See Below
Immunohistochemistry	8-25 µg/mL	See Below

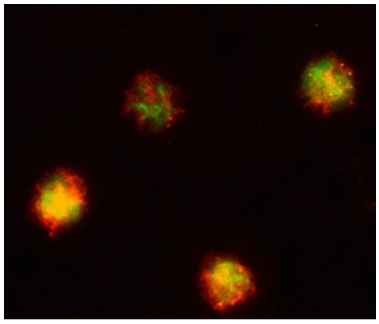
DATA

Western Blot



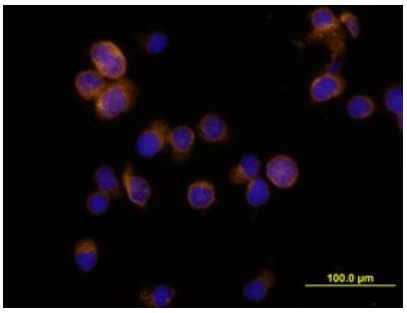
Detection of Human Myeloperoxidase/MPO by Western Blot. Western blot shows lysates of HL-60 human acute promyelocytic leukemia cell line and human neutrophil. PVDF membrane was probed with 1 µg/mL of Mouse Anti-Human Myeloperoxidase/MPO Monoclonal Antibody (Catalog # MAB3174) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # Catalog # HAF007). A specific band was detected for Myeloperoxidase/MPO at approximately 65 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 2.

Immunocytochemistry



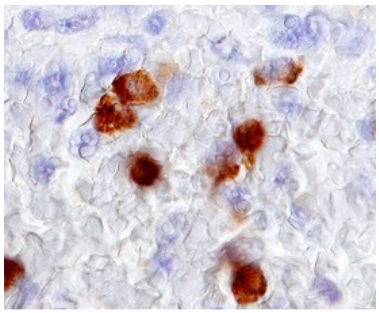
Myeloperoxidase/MPO in MOLT-4 Human Cell Line. Myeloperoxidase/MPO was detected in immersion fixed MOLT-4 human acute lymphoblastic leukemia cell line using 8 µg/mL Mouse Anti-Human Myeloperoxidase/MPO Monoclonal Antibody (Catalog # MAB3174) for 3 hours at room temperature. Cells were stained (red) and counter-stained (green). View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

Immunocytochemistry



Myeloperoxidase/MPO in HL-60 Human Cell Line. Myeloperoxidase/MPO was detected in immersion fixed HL-60 human acute promyelocytic leukemia cell line using Mouse Anti-Human Myeloperoxidase/MPO Monoclonal Antibody (Catalog # MAB3174) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (yellow; Catalog # Catalog # NL007) and counterstained with DAPI (blue). View our protocol for Fluorescent ICC Staining of Non-adherent Cells.

Immunohistochemistry



Myeloperoxidase/MPO in Human Spleen. Myeloperoxidase/MPO was detected in immersion fixed paraffin-embedded sections of human spleen using 15 µg/mL Mouse Anti-Human Myeloperoxidase/MPO Monoclonal Antibody (Catalog # MAB3174) overnight at 4 °C. Before incubation with the primary antibody tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # Catalog # CTS013). Tissue was stained with the Anti-Mouse HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # Catalog # CTS002) and counterstained with hematoxylin (blue). View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

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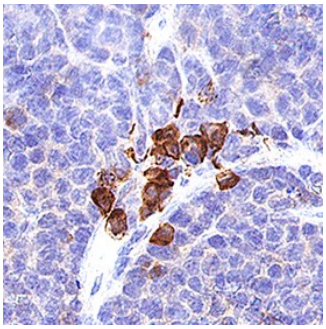
Immunohistochemistry



Myeloperoxidase/MPO in Mouse Spleen. Myeloperoxidase/MPO was detected in immersion fixed paraffin-embedded sections of mouse spleen using Mouse Anti-Human Myeloperoxidase/MPO Monoclonal Antibody (Catalog # MAB3174) at 10 µg/mL for 1 hour at room temperature followed by incubation with the Anti-Mouse IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC001). Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to cytoplasm in lymphocytes. Staining was performed using our protocol for IHC Staining with VisUCyte HRP Polymer Detection Reagents.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 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

Myeloperoxidase (MPO) is a hemeprotein that belongs to the XPO subfamily of the heme peroxidase superfamily. MPO is synthesized as a preproprotein that undergoes proteolytic processing to generate a disulfide-linked heterodimer of the N-terminal β-subunit (12 kDa) and C-terminal α subunit (60 kDa). Active MPO is a tetramer of two β-subunits and two α-subunits that are also disulfide-linked through the two α-subunits. MPO is stored in granules and is an abundant protein in neutrophils and monocytes. MPO is released upon activation to catalyze the formation of powerful oxidants such as hypochlorous acid, which kills microbes. Unprocessed pro-MPO can also be released. Human and mouse MPO share 87% amino acid sequence identity.

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