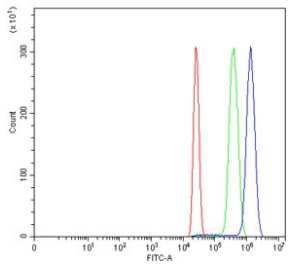
MPO Antibody for FACS / Myeloperoxidase Flow Cytometry Antibody (R31487)

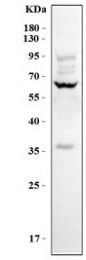
Catalog No.	Formulation	Size
R31487	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

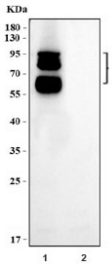
Availability	1-3 business days
Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2% Trehalose
Gene ID	4353
Localization	Nuclear and cytoplasmic
Applications	Western blot: 0.5-1ug/ml Flow cytometry: 1-3ug/million cells Immunohistochemistry (FFPE): 2-5ug/ml Immunofluorescence: 5ug/ml
Limitations	This MPO antibody is available for research use only.



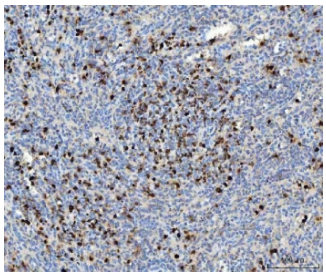
MPO Antibody for FACS / Myeloperoxidase Flow Cytometry Antibody. Flow cytometry analysis of human HL60 cells using MPO Antibody for FACS at 1 ug per million cells following blocking with goat serum. A clear rightward fluorescence shift (blue) relative to the isotype control (green) and unstained cells (red) demonstrates specific detection of Myeloperoxidase / MPO-positive cells by flow cytometry.



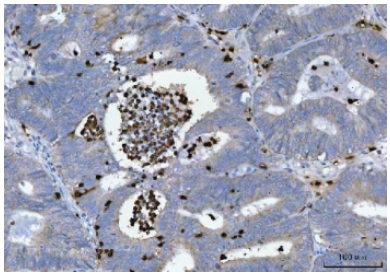
Myeloperoxidase Antibody HL60 WB. Western blot analysis of human HL60 cell lysate using Myeloperoxidase Antibody demonstrates a prominent immunoreactive band at approximately 60-65 kDa, consistent with the expected molecular weight of the myeloperoxidase (MPO) heavy chain. Myeloperoxidase is a heme-containing peroxidase enzyme highly expressed in neutrophils and other myeloid lineage cells, where it contributes to antimicrobial defense through generation of reactive oxidant species. The observed molecular weight is consistent with the mature glycosylated form of MPO, which commonly migrates above its calculated molecular mass due to extensive post-translational glycosylation. Detection in HL60 cells is consistent with the myeloid origin of this cell line and the established expression pattern of MPO during granulocytic differentiation. Expected molecular weight: 59-64 kDa for the alpha/heavy chain, with mature glycosylated forms and precursor species potentially observed at higher molecular weights.



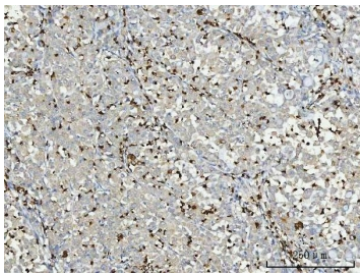
Myeloperoxidase Antibody HL60 vs A431 WB. Western blot analysis of human HL60 and A431 cell lysates using Myeloperoxidase Antibody demonstrates strong immunoreactive bands in HL60 cells at approximately 60-65 kDa and 80-90 kDa, while no significant signal is detected in A431 cells. The lower band is consistent with the expected molecular weight of the mature myeloperoxidase (MPO) heavy chain, whereas the higher molecular weight species likely represents glycosylated precursor or processing intermediates of the enzyme. Myeloperoxidase is a heme-containing peroxidase highly expressed in neutrophils and myeloid lineage cells, making its detection in HL60 promyelocytic leukemia cells consistent with the known biology of this model system. The absence of detectable signal in A431 epidermoid carcinoma cells supports the lineage-restricted expression pattern of MPO and further demonstrates antibody specificity. Expected molecular weight: 59-64 kDa for the MPO heavy chain, with higher molecular weight glycosylated and precursor forms commonly observed.



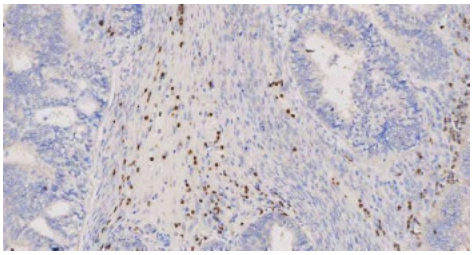
Myeloperoxidase (MPO) Antibody Human Spleen IHC. Immunohistochemistry staining of FFPE human spleen tissue using MPO Antibody demonstrates distinct granular cytoplasmic HRP-DAB brown staining within scattered myeloid lineage cells distributed throughout the splenic tissue. The staining pattern is consistent with expression of Myeloperoxidase (MPO), a heme-containing lysosomal enzyme abundantly expressed in neutrophils, granulocytic precursors, and other cells of myeloid origin. MPO functions in innate immune defense by catalyzing the formation of reactive oxidant species within phagolysosomes during antimicrobial responses. The observed distribution of positively stained cells is consistent with the known localization of MPO-expressing leukocytes within splenic immune compartments and supports the utility of MPO as a marker of myeloid differentiation and granulocytic lineage identification. HIER: boil tissue sections in pH 8 EDTA buffer for 20 minutes and allow to cool before testing.



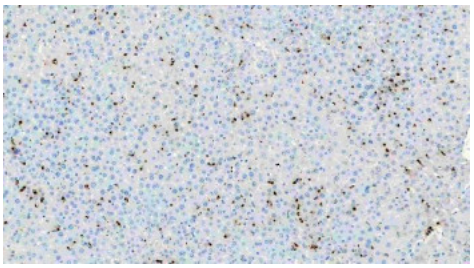
Myeloperoxidase (MPO) Antibody Endometrial Adenocarcinoma IHC. Immunohistochemistry staining of FFPE human endometrial adenocarcinoma tissue using MPO Antibody demonstrates strong granular cytoplasmic HRP-DAB brown staining in infiltrating myeloid cells located within glandular lumina and throughout the tumor-associated stromal compartment. The staining pattern is consistent with expression of Myeloperoxidase (MPO), a heme-containing peroxidase abundantly expressed in neutrophils, granulocytes, and other cells of myeloid lineage. MPO-positive inflammatory cells are readily distinguished from the surrounding neoplastic epithelial cells, highlighting the presence of tumor-associated myeloid infiltrates within the endometrial carcinoma microenvironment. The observed staining is consistent with the established use of MPO as a marker of granulocytic differentiation and myeloid cell identification in both normal and neoplastic tissues. HIER: boil tissue sections in pH 8 EDTA buffer for 20 minutes and allow to cool before testing.



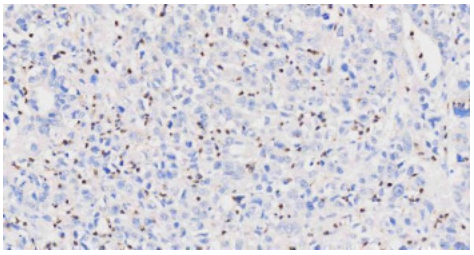
Myeloperoxidase (MPO) Antibody Lung Adenocarcinoma IHC. Immunohistochemistry staining of FFPE human lung adenocarcinoma tissue using MPO Antibody demonstrates scattered granular cytoplasmic HRP-DAB brown staining in infiltrating myeloid cells distributed throughout the tumor parenchyma and stromal compartments. The staining pattern is consistent with expression of Myeloperoxidase (MPO), a heme-containing lysosomal enzyme characteristically expressed in neutrophils, granulocytic precursors, and other cells of myeloid lineage. MPO-positive inflammatory cells are readily identified against a background of predominantly negative neoplastic epithelial cells, highlighting the presence of tumor-associated myeloid infiltrates within the lung adenocarcinoma microenvironment. The observed staining is consistent with the established use of MPO as a marker of granulocytic differentiation and innate immune cell infiltration in normal and malignant tissues. HIER: boil tissue sections in pH 8 EDTA buffer for 20 minutes and allow to cool before testing.



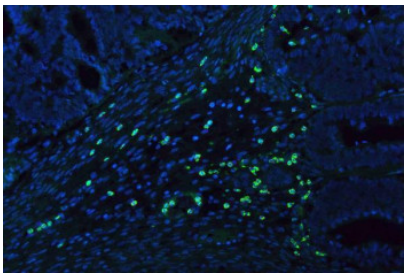
Myeloperoxidase (MPO) Antibody Endometrial Cancer IHC. Immunohistochemistry staining of FFPE human endometrial cancer tissue using MPO Antibody demonstrates scattered granular cytoplasmic HRP-DAB brown staining within infiltrating inflammatory cells located throughout the tumor-associated stromal compartment. The staining pattern is consistent with expression of Myeloperoxidase (MPO), a heme-containing peroxidase enzyme abundantly expressed in neutrophils, granulocytes, and other myeloid lineage cells involved in innate immune responses. MPO-positive inflammatory cells are readily distinguished from the surrounding neoplastic epithelial elements, highlighting the presence of tumor-associated myeloid infiltrates within the endometrial carcinoma microenvironment. The observed staining is consistent with the established use of MPO as a marker of granulocytic differentiation and myeloid cell identification in both normal and malignant tissues. HIER: heat-mediated antigen retrieval in pH 8.0 EDTA buffer prior to overnight primary antibody incubation and HRP-DAB chromogenic detection.



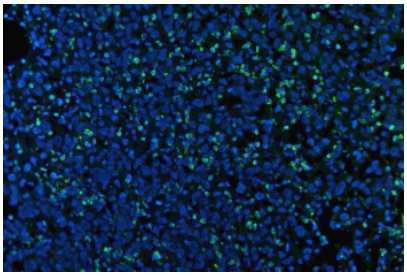
Myeloperoxidase (MPO) Antibody Mouse Liver IHC. Immunohistochemistry staining of FFPE mouse liver tissue using MPO Antibody demonstrates scattered granular cytoplasmic HRP-DAB brown staining within infiltrating myeloid cells distributed throughout the hepatic parenchyma. The staining pattern is consistent with expression of Myeloperoxidase (MPO), a heme-containing lysosomal enzyme characteristically expressed by neutrophils, granulocytes, and other cells of myeloid lineage. MPO-positive cells are observed against a largely negative hepatocellular background, highlighting resident or infiltrating inflammatory populations within the liver tissue. The observed distribution is consistent with the established use of MPO as a marker of granulocytic differentiation, innate immune responses, and myeloid cell identification in normal and inflamed tissues. HIER: heat-mediated antigen retrieval in pH 8.0 EDTA buffer prior to overnight primary antibody incubation and HRP-DAB chromogenic detection.



Myeloperoxidase (MPO) Antibody Stomach Cancer IHC. Immunohistochemistry staining of FFPE human stomach cancer tissue using MPO Antibody demonstrates scattered granular cytoplasmic HRP-DAB brown staining within infiltrating inflammatory cells distributed throughout the tumor microenvironment. The staining pattern is consistent with expression of Myeloperoxidase (MPO), a heme-containing peroxidase enzyme highly expressed in neutrophils, granulocytes, and other myeloid lineage cells. MPO-positive inflammatory cells are readily identifiable against a background of predominantly negative gastric carcinoma cells, highlighting the presence of tumor-associated myeloid infiltrates within the neoplastic tissue. The observed staining is consistent with the established use of MPO as a marker of granulocytic differentiation, innate immune activity, and myeloid cell identification in both normal and malignant tissues. HIER: heat-mediated antigen retrieval in pH 8.0 EDTA buffer prior to overnight primary antibody incubation and HRP-DAB chromogenic detection.



Myeloperoxidase (MPO) Antibody Endometrial Cancer IF. Immunofluorescent staining of FFPE human endometrial cancer tissue using MPO Antibody demonstrates distinct green fluorescence within scattered infiltrating myeloid cells distributed throughout the tumor-associated stromal compartment. The staining pattern is consistent with expression of Myeloperoxidase (MPO), a heme-containing peroxidase enzyme abundantly expressed in neutrophils, granulocytes, and other myeloid lineage cells involved in innate immune responses. MPO-positive cells are readily distinguished from the surrounding tumor tissue, highlighting inflammatory cell infiltration within the endometrial carcinoma microenvironment. Nuclei are counterstained with DAPI (blue). Heat-mediated antigen retrieval was performed in pH 8.0 EDTA buffer prior to overnight primary antibody incubation and fluorescent secondary antibody detection.



Myeloperoxidase (MPO) Antibody Stomach Cancer IF. Immunofluorescent staining of FFPE human stomach cancer tissue using MPO Antibody demonstrates distinct green fluorescence within scattered infiltrating inflammatory cells distributed throughout the tumor microenvironment. The staining pattern is consistent with expression of Myeloperoxidase (MPO), a heme-containing lysosomal peroxidase highly expressed in neutrophils, granulocytes, and other myeloid lineage cells involved in innate immune defense. MPO-positive cells are readily identifiable against a background of predominantly negative gastric carcinoma cells, highlighting tumor-associated myeloid infiltrates within the neoplastic tissue. The observed staining is consistent with the established use of MPO as a marker of granulocytic differentiation and inflammatory cell identification in cancer tissues. Nuclei are counterstained with DAPI (blue). Heat-mediated antigen retrieval was performed in pH 8.0 EDTA buffer prior to overnight primary antibody incubation and fluorescent secondary antibody detection.

Description

Myeloperoxidase (MPO) is a heme-containing peroxidase enzyme encoded by the MPO gene and is highly expressed in neutrophils and other cells of the myeloid lineage. MPO is stored within azurophilic granules and plays a key role in innate immune defense by generating reactive oxidant species that contribute to microbial killing. Because of its strong and selective expression in neutrophils and related myeloid cells, MPO has become a widely used marker for identifying granulocytic populations in immunology and hematology research. MPO Antibody for FACS enables sensitive detection of Myeloperoxidase / MPO in single-cell suspensions using flow cytometry, supporting quantitative analysis of immune cell populations in complex biological samples.

Flow cytometry analysis using an MPO Antibody for FACS allows researchers to detect intracellular MPO expression following cell fixation and permeabilization. This approach enables accurate identification of neutrophils, myeloid progenitors, and other MPO-positive leukocytes in peripheral blood, bone marrow, or tissue-derived cell preparations. Because flow cytometry evaluates thousands of individual cells per second, MPO detection by FACS provides rapid and quantitative assessment of myeloid lineage distribution and immune cell composition within heterogeneous samples.

MPO Antibody for FACS is particularly useful for immunophenotyping studies in which myeloid cells must be distinguished from lymphoid populations. When used in multicolor flow cytometry panels, MPO staining can be combined with cell surface markers such as CD45, CD11b, CD15, or other lineage markers to characterize immune cell subsets with high precision. This capability enables detailed analysis of granulocyte differentiation, inflammatory responses, and immune cell recruitment in experimental models or clinical research samples.

Flow cytometry detection of MPO also supports investigation of hematologic diseases, inflammatory disorders, and tumor-associated immune responses. Quantifying MPO-positive cells can help evaluate neutrophil infiltration, bone marrow myelopoiesis, and immune activation states in a wide variety of experimental contexts. Because FACS-based detection provides both quantitative measurements and population-level resolution, MPO Antibody for FACS is a valuable reagent for high-throughput immune profiling and single-cell analysis of myeloid lineage cells.

Explore our Myeloperoxidase Antibody / Neutrophil Marker Antibody page for additional validation data and applications involving neutrophil identification, myeloid lineage analysis, and innate immune cell detection.

Application Notes

The stated application concentrations are suggested starting points. Titration of the MPO Antibody for FACS may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

Human partial recombinant protein (AA 406-745) was used as the immunogen for this MPO antibody.

Storage

After reconstitution, the MPO antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

MPO antibody, Myeloperoxidase antibody, Myeloid peroxidase antibody, Neutrophil myeloperoxidase antibody

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