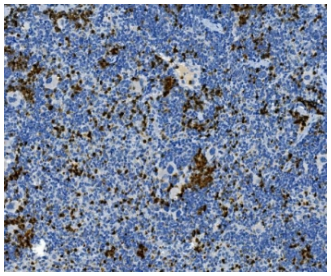
Myeloperoxidase Antibody for IF / MPO Immunofluorescence Antibody (R30233)

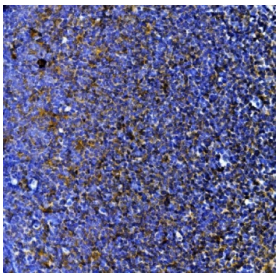
Catalog No.	Formulation	Size
R30233	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

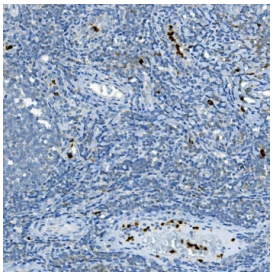
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2.5% BSA and 0.025% sodium azide/thimerosal
UniProt	P05164
Localization	Nuclear and cytoplasmic
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 2-5ug/ml Flow cytometry: 1-3ug/million cells Immunofluorescence: 5ug/ml
Limitations	This Myeloperoxidase antibody is available for research use only.



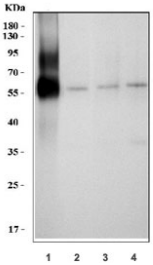
Myeloperoxidase Antibody Mouse Spleen IHC. Immunohistochemistry staining of FFPE mouse spleen tissue with Myeloperoxidase antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



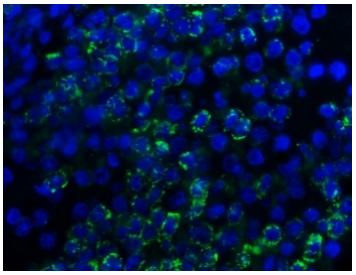
Myeloperoxidase Antibody Rat Lymph Tissue IHC. Immunohistochemistry staining of FFPE rat lymph tissue with Myeloperoxidase antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



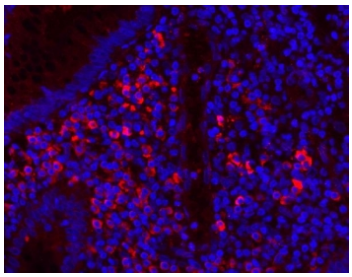
Myeloperoxidase Antibody Tonsil Tissue IHC. Immunohistochemistry staining of FFPE human tonsil tissue with Myeloperoxidase antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



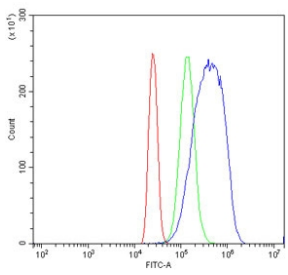
Western blot testing of 1) human HL60, 2) rat thymus, 3) mouse spleen and 4) mouse thymus tissue with Myeloperoxidase antibody. Expected molecular weight: 59-64 kDa (alpha chain, may be observed at higher molecular weights due to glycosylation), 150+ kDa (glycosylated mature form).



Myeloperoxidase Antibody for IF / MPO Immunofluorescence Antibody. Immunofluorescence analysis of Myeloperoxidase / MPO in FFPE human spleen tissue using Myeloperoxidase Antibody for IF. Bright granular cytoplasmic fluorescence (green) highlights MPO-positive myeloid cells within the splenic tissue, while nuclei are counterstained with DAPI (blue). Heat-induced epitope retrieval was performed by steaming sections in pH8 EDTA buffer for 20 minutes prior to staining.



Myeloperoxidase Antibody Appendicitis IF. Immunofluorescent staining of FFPE human appendicitis tissue with Myeloperoxidase antibody (red) and DAPI nuclear stain (blue). HIER: steam section in pH8 EDTA buffer for 20 min.



Flow cytometry testing of human HL60 cells with Myeloperoxidase antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= Myeloperoxidase antibody.

Description

Myeloperoxidase (MPO) is a heme-containing peroxidase enzyme encoded by the MPO gene and is a major component of azurophilic granules in neutrophils and other myeloid lineage cells. This enzyme plays a central role in innate immune defense by catalyzing the formation of reactive oxidant species such as hypochlorous acid from hydrogen peroxide and chloride ions. MPO is primarily localized within the cytoplasmic granules of neutrophils and is released during degranulation at sites of infection or inflammation. Because of its strong and characteristic cellular localization, MPO has become an important biomarker for identifying neutrophils and studying inflammatory responses in tissues. The Myeloperoxidase Antibody for IF enables researchers to visualize MPO-positive immune cells through fluorescence microscopy, providing clear detection of neutrophil-rich inflammatory environments.

Myeloperoxidase Antibody for IF is designed for immunofluorescence microscopy applications where visualization of MPO-positive cells and subcellular structures is required. In immunofluorescence experiments, MPO staining typically appears as strong granular cytoplasmic fluorescence corresponding to the azurophilic granules of neutrophils and related myeloid cells. This distinct punctate fluorescence pattern makes MPO particularly well suited for fluorescence-based detection and imaging of immune cell populations in tissue sections and cultured cells. High signal intensity from MPO-containing granules allows clear visualization of labeled cells using fluorescence microscopy, making this antibody useful for cellular imaging studies focused on inflammatory cell infiltration and immune system dynamics.

Immunofluorescence analysis using a Myeloperoxidase Antibody for IF enables researchers to examine the spatial distribution of neutrophils within tissues, visualize inflammatory infiltrates, and study immune cell recruitment during infection, injury, or tumor progression. Fluorescent labeling allows MPO-positive cells to be easily distinguished from surrounding tissue structures, which is especially valuable in complex tissues containing multiple immune and stromal cell populations. The antibody can be combined with fluorescent nuclear dyes or membrane markers to provide additional cellular context during imaging experiments.

Fluorescence-based detection also allows Myeloperoxidase Antibody for IF to be incorporated into multiplex immunofluorescence experiments. In these studies, MPO-positive neutrophils can be analyzed simultaneously with markers of epithelial cells, endothelial cells, or other immune populations to better understand inflammatory signaling pathways and tissue remodeling processes. Because MPO generates bright granular fluorescence signals within neutrophil cytoplasm, immunofluorescence imaging provides strong contrast between MPO-positive immune cells and surrounding tissue architecture. As a result, the Myeloperoxidase Antibody for IF serves as a valuable tool for fluorescence microscopy studies investigating innate immune biology, inflammatory disease mechanisms, and immune cell distribution in normal and pathological tissues.

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

Titration of the Myeloperoxidase Antibody for IF may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

An amino acid sequence from the C-terminus of the human protein (KNNIFMSNSYPRDFV) was used as the immunogen for this Myeloperoxidase antibody.

Storage

The lyophilized Myeloperoxidase antibody can be stored at 4oC. After reconstitution, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

MPO antibody, Myeloperoxidase antibody, Peroxidase MPO antibody, Myeloperoxidase enzyme antibody

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