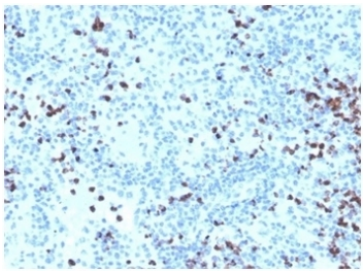
MPO Antibody / Myeloperoxidase (V9351)

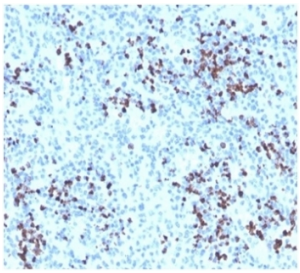
Catalog No.	Formulation	Size
V9351-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V9351-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V9351SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

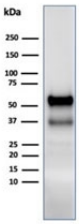
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG, kappa
Purity	Protein A/G affinity
UniProt	P05164
Localization	Cytoplasmic
Applications	Western blot: 2-4ug/ml Immunohistochemistry (FFPE): 1-2ug/ml
Limitations	This Myeloperoxidase antibody is available for research use only.



IHC staining of FFPE human spleen tissue with Myeloperoxidase antibody. HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.



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Western blot testing of human spleen lysate using 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).

Description

MPO Antibody detects he heme protein myeloperoxidase, a major component of azurophilic granules of neutrophils and polymorphonuclear leukocytes. Optimal oxygen-dependent microbiocidal activity depends on MPO as the critical enzyme for the generation of hypochlorous acid and other toxic oxygen products. The MPO precursor is synthesized during the promyelocytic stage of myeloid differentiation and is subsequently processed and transported intracellularly to the lysosomes. The precursor undergoes co-translational N-linked glycosylation to produce a glycoprotein. Glucosidases in the endoplasmic reticulum (ER) or early cis-Golgi convert the pro-MPO to a form which is sorted into a pre-lysosomal compartment, which undergoes final proteolytic maturation to native MPO, a pair of heavy-light protomers. In normal neutrophils, MPO is expressed as a dimer. Calreticulin, a calcium-binding protein residing in the ER, interacts specifically with fully glycosylated apopro-MPO. iMPO mRNA is abundant in human promyelocytic HL-60 and mouse myeloid leukemia NFS-60cells. MPO is expressed at high levels in circulating neutrophils and monocytes but is not detectable in microglia, brain-specific macrophages or normal brain tissue. MPO, which has a molecular weight of approximately 140 kD, is homodimer that can be split into two halves that still have enzymatic activity. These hemi-MPO monomers consist of a 59-kD alpha chain and a 13.5-kD beta chain.

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

Optimal dilution of the Myeloperoxidase antibody should be determined by the researcher.

Immunogen

A portion of amino acids 150-250 of human Myeloperoxidase protein was used as the immunogen for the Myeloperoxidase antibody.

Storage

Aliquot the Myeloperoxidase antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

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