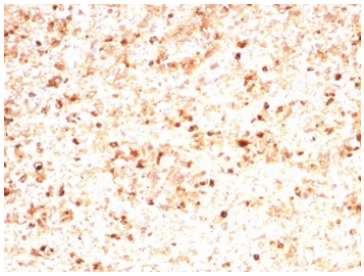
MPO Antibody Mouse Monoclonal rMPO/8694 / Myeloperoxidase Antibody [clone rMPO/8694] (V4516)

Catalog No.	Formulation	Size
V4516-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V4516-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V4516SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

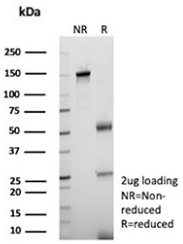
Recombinant | MOUSE MONOCLONAL

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Recombinant Mouse Monoclonal
Isotype	Mouse IgG1, kappa
Clone Name	rMPO/8694
Purity	Protein A/G affinity
UniProt	P05164
Localization	Cytoplasm
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT
Limitations	This MPO antibody is available for research use only.



MPO Antibody Mouse Monoclonal rMPO/8694 / Myeloperoxidase Antibody. Immunohistochemistry analysis of MPO Antibody Mouse Monoclonal rMPO/8694 in FFPE human spleen tissue. Brown chromogenic staining identifies cytoplasmic Myeloperoxidase / MPO-positive myeloid cells distributed throughout the splenic tissue. Heat-induced epitope retrieval was performed by boiling tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 minutes followed by cooling prior to staining.



SDS-PAGE analysis of purified, BSA-free MPO Antibody Mouse Monoclonal rMPO/8694 as confirmation of integrity and purity.

Description

Myeloperoxidase (MPO) is a heme-containing peroxidase enzyme encoded by the MPO gene and is highly abundant in the azurophilic granules of neutrophils. MPO is a key component of the innate immune system and participates in antimicrobial defense by generating reactive oxidant species during the respiratory burst of activated phagocytes. MPO Antibody Mouse Monoclonal rMPO/8694 recognizes Myeloperoxidase / MPO and supports detection of this enzyme in studies focused on neutrophil biology, inflammation, and myeloid lineage cell function. The enzyme catalyzes the conversion of hydrogen peroxide and chloride ions into hypochlorous acid, a potent oxidant that contributes to microbial killing within phagosomes.

Myeloperoxidase antibody, also referred to as MPO antibody or myeloid peroxidase antibody in the literature, detects a granule-associated enzyme that is strongly expressed in neutrophils and present in monocytes and early myeloid precursors. Because MPO expression is highly characteristic of granulocytic lineage cells, the protein is widely used as a marker for identifying neutrophils and analyzing inflammatory infiltrates in biological samples. MPO Antibody Mouse Monoclonal rMPO/8694 enables detection of MPO-positive cells in studies examining immune cell recruitment, infection responses, and inflammatory signaling pathways.

Within neutrophils, MPO is stored in cytoplasmic azurophilic granules and released during activation and degranulation. In addition to antimicrobial activity, MPO-derived oxidants influence inflammatory signaling and oxidative modification of proteins, lipids, and nucleic acids. These reactions contribute to immune regulation but may also play roles in tissue injury during chronic inflammatory conditions. Because of these functions, MPO has been widely studied in research areas including cardiovascular disease, autoimmune disorders, infection biology, and tumor-associated inflammation.

Detection of Myeloperoxidase using MPO Antibody Mouse Monoclonal rMPO/8694 allows researchers to identify granulocytic cells and evaluate neutrophil involvement in immune responses. Analysis of MPO expression can provide insight into inflammatory cell recruitment, granulocyte activation, and oxidative immune mechanisms in both normal physiology and disease. This mouse monoclonal antibody provides a useful reagent for research investigating innate immune biology, inflammatory disease mechanisms, and myeloid cell activity.

Application Notes

Optimal dilution of the MPO Antibody Mouse Monoclonal rMPO/8694 should be determined by the researcher.

Immunogen

A recombinant partial protein sequence (within amino acids 150-250) from the human protein was used as the immunogen for the MPO antibody.

Storage

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

Alternate Names

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