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Anti-MYELOPEROXIDASE (Human White Blood Cell) (RABBIT) Antibody

Myeloperoxidase Antibody
Catalog # ASR3813

Specification

Anti-MYELOPEROXIDASE (Human White Blood Cell) (RABBIT) Antibody - Product Information

Host	**Rabbit**
Conjugate	**Unconjugated**
Target Species	**Human**
Reactivity	**Human**
Clonality	**Polyclonal**
Application	**WB, E, IP, I, LCI**
Application Note	**Anti-myeloperoxidase antibody has been tested in western blotting. This antibody is suitable for ELISA and immunoprecipitation. The antibody detects a multiple bands corresponding to 53 kDa and 15 kDa polypeptides and chain combination (68 kDa and 106 kDa). Although not tested, this antibody is likely functional in immunohistochemistry and other immunological methods. Anti-Human Myeloperoxidase may react with MPO from other sources. Anti-Human Myeloperoxidase detects neutrophilic granulocytes and monocytes in blood and precursors of granulocytes in the bone marrow. This antibody may also detect myeloid leukemias of the bone marrow as well as other sites.**
Physical State	**Lyophilized**
Buffer	**0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2**
Immunogen	**Myeloperoxidase [Human Leukocytes]**
Reconstitution Volume	**2.0 mL**
Reconstitution Buffer	**Restore with deionized water (or equivalent)**
Preservative	**0.01% (w/v) Sodium Azide**

Anti-MYELOPEROXIDASE (Human White Blood Cell) (RABBIT) Antibody - Additional Information

Gene ID 4353

Other Names
4353

Purity
This product was prepared from monospecific antiserum by a delipidation and defibrination. Assay

by immunoelectrophoresis resulted in a single precipitin arc against anti-rabbit serum, purified and partially purified Myeloperoxidase [Human Leukocytes]. Cross reactivity against Myeloperoxidase from other tissues and species may occur but have not been specifically determined.

Storage Condition
Store vial at 4° C prior to restoration. For extended storage aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

Precautions Note
This product is for research use only and is not intended for therapeutic or diagnostic applications.

Anti-MYELOPEROXIDASE (Human White Blood Cell) (RABBIT) Antibody - Protein Information

Name MPO (HGNC:7218)

Function
Part of the host defense system of polymorphonuclear leukocytes. It is responsible for microbicidal activity against a wide range of organisms. In the stimulated PMN, MPO catalyzes the production of hypohalous acids, primarily hypochlorous acid in physiologic situations, and other toxic intermediates that greatly enhance PMN microbicidal activity (PubMed:9922160). Mediates the proteolytic cleavage of alpha-1-microglobulin to form t-alpha-1-microglobulin, which potently inhibits oxidation of low-density lipoprotein particles and limits vascular damage (PubMed:25698971).

Cellular Location
Lysosome.

Anti-MYELOPEROXIDASE (Human White Blood Cell) (RABBIT) Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-MYELOPEROXIDASE (Human White Blood Cell) (RABBIT) Antibody - Images

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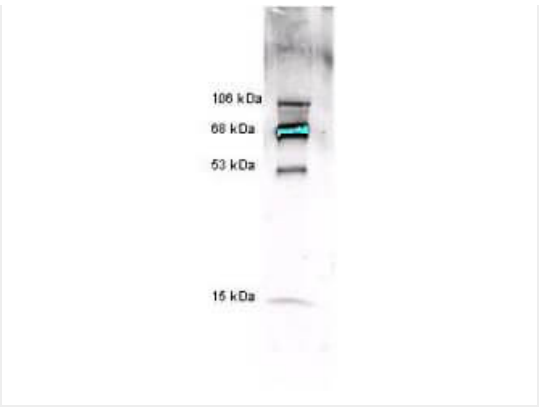

Anti-Myeloperoxidase [Human Leukocytes] detects multiple MPO subunits and chain combinations by western blot. Polyclonal rabbit-anti-Myeloperoxidase was used at a 1:5000 dilution to detect 1.0 ug of human myeloperoxidase. This antibody detects a multiple bands corresponding to 53 kDa and 15 kDa polypeptides and chain combinations forming 68 kDa and 106 kDa proteins. The staining of the 68 kDa band is so intense that is over saturates the signal detection. A 4-20% gradient gel was used to separate the protein by SDS-PAGE. The protein was transferred to nitrocellulose using standard methods. After blocking the membrane was probed with the primary antibody for 2 h at room temperature followed by washes and reaction with a 1:5,000 dilution of IRDye™800 conjugated Gt-a-Rabbit IgG [H&L] (code 611-132-122) for 30 min at room temperature. LICOR's Odyssey® Infrared Imaging System was used to scan and process the image. Other detection systems will yield similar results.

Anti-MYELOPEROXIDASE (Human White Blood Cell) (RABBIT) Antibody - Background

Human myeloperoxidase (MPO) is a dimeric protein composed of two heavy subunits (53 kDa) and two light subunits (15 kDa). Each MPO molecule contains two prosthetic porphyrins which play an important role in the catalytic cycle. Molecular weights for MPO isoforms from pools of normal human samples range from 114,000 to 140,000 daltons reflecting a heterogeneous mixture of isoforms when assayed under non-reducing conditions of SDS-PAGE. Often MPO from a single donor will yield a homogenous preparation reflecting a single isoform. The carbohydrate component of MPO, consisting of mannose, glucose and N-acetylglucosamine residues is 2.5%. MPO is inhibited by azide and other compounds. MPO is stored in primary granules of neutrophils and serves as a bactericidal agent in that MPO catalyzes the production of hypochlorous acid (HOCl), a powerful oxidant. HOCl is derived from chloride ion (Cl-) and hydrogen peroxide (H2O2). In a number of inflammatory situations, MPO is released into the extracellular matrix where its measurement can be used as an indication of neutrophil activation.