

Datasheet for 100-4181

Myeloperoxidase Antibody

Overview

Description:	Anti-MYELOPEROXIDASE (Human White Blood Cell) (RABBIT) Antibody - 100-4181
Item No.:	100-4181
Size:	2 mL
Applications:	WB
Reactivity:	Human
Host Species:	Rabbit

Product Details

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.

Synonyms:	rabbit anti-Myeloperoxidase Antibody, Myeloperoxidase, MPO
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	Antiserum

Target Details

Gene Name:	MPO
Reactivity:	Human

Immunogen Type:	Native Protein
Immunogen:	Myeloperoxidase [Human Leukocytes]
Purity/Specificity:	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.
Relevant Links:	• UniProtKB - P05164 • NCBI - P05164.1 • GeneID - 4353

Application Details

Tested Applications:	WB
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.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:200,000
IP:	1:100
WB:	1:5,000

Formulation

Physical State:	Lyophilized
Concentration:	75 mg/mL by Refractometry
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None
Reconstitution Volume:	2.0 mL

Reconstitution Buffer: Restore with deionized water (or equivalent)

Shipping & Handling

Shipping Condition: Ambient

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.

Expiration: Expiration date is one (1) year from date of receipt.

Images



Western Blot

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 it 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.

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.