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Rabbit Polyclonal Anti-Myeloperoxidase antibody

Catalog Number: MPO-141AP

Lot Number:

General Information

Product	Myeloperoxidase Antibody Multi-epitope
Accession #	Uniprot: P05164 GenBank: AAB25582.1
Verified Applications	CM, ELISA, ICC, IF, IHC, IP, WB
Species Cross Reactivity	Human, Mouse, Rat
Host	Rabbit
Immunogen	Multi-epitope antibody containing a mixture of synthetic peptides taken within amino acid region 290-340 and 600-650 of human Myeloperoxidase protein.
Alternative Nomenclature	84 kDa myeloperoxidase antibody, 89 kDa myeloperoxidase antibody, EC 1.11.1.7 antibody, EC1.11.2.2 antibody, MPO antibody, Myeloperoxidase heavy chain antibody, Myeloperoxidase light chain antibody, PERM_HUMAN antibody

Physical Properties

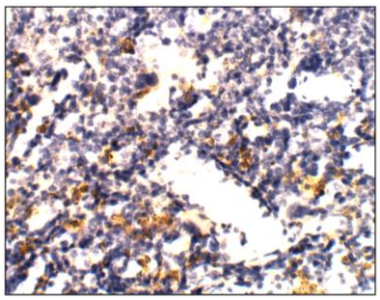
Quantity	100 µg
Volume	200 µl
Form	Affinity Purified Immunoglobulins
Determinant	Multi-epitope
Immunoglobulin & Concentration	0.75-1.2 mg/ml IgG in antibody stabilization buffer
Storage	Store at -20ºC for long term storage.

Recommended Dilutions

DOT Blot	1:10,000
ELISA	1:10,000
Immunocytochemistry	1:200
Immunofluorescence	1:200
Immunohistochemistry	1:200
Immunoprecipitation	1:200
Western Blot	1:500

Related Products	Catalog #
FITC-Conjugated	MPO.141-FITC
BIOTIN-Conjugated	MPO.141-BIOTIN
Antigenic Blocking Peptide	P-MPO.141
Western Blot Positive Control	PC-MPO
N-epitope	MPO-101AP
Mid-Region	MPO-112AP
C-epitope	MPO-121AP
Extreme C-epitope	MPO-131AP

Application Verification:



Mouse Spleen-Myeloperoxidase
Primary antibody: MPO-141AP; 1:50 dilution in IHC blocking buffer. DAB (brown) substrate. Hematoxylin QS (blue) counterstain.

Dilutions are for reference only. Applications not listed above are not necessarily precluded from working with this antibody. Investigators intending to use an application that has not been verified can request a complimentary sample.

Overview:

Myeloperoxidase (MPO) is a functionally important component of the normal human neutrophil azurophil granule of polymorphonuclear leukocyte's host defense system. MPO is a hemoprotein that is abundantly expressed in neutrophils and secreted during their activation. The inflammatory component of allergic reactions can be measured by eosinophil cationic protein (ECP, specific for eosinophils) and myeloperoxidase (MPO, specific for neutrophils) measurement (1). Neutrophils, especially in acute infection or the myeloid leukemias, may shed platelet-sized particles that can readily be distinguished from true platelets because they contain neutrophil myeloperoxidase, an enzyme that is not inhibited by glutaraldehyde. Traditionally Myeloperoxidase was considered as a serological marker for granulomatosis (Churg-Strauss syndrome), the main target of anti-neutrophil cytoplasm antibodies (ANCA), Low to moderate anti-Myeloperoxidase autoantibody levels are also reported in rheumatoid arthritis. Recently it was shown that MPO participates in the initiation and progression of cardiovascular disease. It possesses potent pro-inflammatory properties and may contribute directly to tissue injury. Now Myeloperoxidase is uncertain systemic vasculitis e.g. periarteritis nodosa, microscopic polyarteritis and pulmonary eosinophilic grander consideration as one of the most promising cardiac markers. Human myeloperoxidase, a 745 amino acid protein, is produced by a gene composed of 12 exons and 11 introns. The sequence was found to contain an open reading frame, 2,235 nucleotides coding for a protein of 745 amino acids with a calculated Mr of 83,868. The heavy chain of myeloperoxidase, consisting of 467 amino acids, was located on the COOH terminus half of the protein. Native Myeloperoxidase is represented as a covalently bound tetrameric complex of two glycosylated alpha chains (MW 59 - 64 kDa) and two unglycosylated beta chains (MW 14 kDa) with total MW 150 kDa and theoretical pI 9.2, each of which is associated with a heme-like prosthetic group. The heme environment, defined by X-ray crystallographic analyses of MPO appears to be highly conserved in four mammalian peroxidases (lactoperoxidase, thyroid, eosinophil and Myeloperoxidase). MPO when heated under non-reducing, denaturing conditions, MPO is cleaved to produced 22 and a 38kDa proteins, these two species are produced via a novel autolytic cleavage at Meth409 and Pro410 (2).

References:

1. Linder A, Venge P, Deuschl H.Allergy. Eosinophil cationic protein and myeloperoxidase in nasal secretion as markers of inflammation in allergic rhinitis. 1987 Nov;42(8):583-90.
2. Taylor KL, Pohl J, Kinkade JM Jr. Unique autolytic cleavage of human myeloperoxidase. Implications for the involvement of active site MET409. J Biol Chem. 1992 Dec 15;267(35):25282-8.

* For users who may require large amounts of the products listed above, please inquire about bulk material discounts.
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