

## Rabbit Polyclonal Anti-Myeloperoxidase antibody

Catalog Number: MPO-131AP

Lot Number:

### General Information

<b>Product</b>	Myeloperoxidase Antibody C-terminus
<b>Accession #</b>	Uniprot: P05164 GenBank: AAB25582.1
<b>Verified Applications</b>	CM, ELISA, ICC, IF, IHC, IP, WB
<b>Species Cross Reactivity</b>	Human, Mouse, Rat
<b>Host</b>	Rabbit
<b>Immunogen</b>	Synthetic peptide taken within amino acid region 700-745 human Myeloperoxidase protein
<b>Alternative Nomenclature</b>	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

<b>Quantity</b>	100 µg
<b>Volume</b>	200 µl
<b>Form</b>	Affinity Purified Immunoglobulins
<b>Determinant</b>	Extreme C-epitope
<b>Immunoglobulin &amp; Concentration</b>	0.75-1.2 mg/ml IgG in antibody stabilization buffer
<b>Storage</b>	Store at -20°C for long term storage.

### Recommended Dilutions

<b>DOT Blot</b>	1:10,000
<b>ELISA</b>	1:10,000
<b>Immunocytochemistry</b>	1:200
<b>Immunofluorescence</b>	1:200
<b>Immunohistochemistry</b>	1:200
<b>Immunoprecipitation</b>	1:200
<b>Western Blot</b>	1:500

## Related Products

## Catalog #

<b>FITC-Conjugated</b>	MPO.131-FITC
<b>BIOTIN-Conjugated</b>	MPO.131-BIOTIN
<b>Antigenic Blocking Peptide</b>	P-MPO.131
<b>Western Blot Positive Control</b>	PC-MPO
<b>N-epitope</b>	MPO-101AP
<b>Mid-Region</b>	MPO-112AP
<b>C-epitope</b>	MPO-121AP
<b>Mixed-epitope</b>	MPO-141AP

## 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. periarthritis 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.

This Product is for Research Use Only and is NOT intended for use in humans or clinical diagnosis