



FabGennix Inc.
INTERNATIONAL

New Item
New Item

Customer Service: 1-800 786 1236
Technical Service: 214 387 8105
Fax: 214 387 0870
Info@fabgennix.com
www.fabgennix.com

Antibodies to cardiovascular, inflammation and macrophage markers

Anti-Human Myeloperoxidase antibodies (MPO-101AP and MPO-112AP)

Myeloperoxidase (MPO) is a functionally important component of the normal human neutrophil azurophil granule of polymorphonuclear leukocytes, 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 ulomatosi (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 vasculitides e.g. periarteriitis nodosa, microscopic polyarteriitis and pulmonary eosinophilic grander consideration as one of the most promising cardiac markers.

Human myeloperoxidase, a 745 aa 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, esinophil 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).

FabGennix International Inc. has produced affinity purified antibodies to Myeloperoxidase protein. These antibodies are generated in rabbit using synthetic peptides corresponding to MPO proteins. The Myeloperoxidase antibodies are then affinity purified using immobilized antigenic affinity chromatography. Limited quantities of blocking antigenic peptides are also available (please inquire). FabGennix, Inc., will also provide Western blot positive controls for most of these antibodies in ready-to-use buffer for easy identification of respective proteins. FabGennix International Inc. will label MPO antibodies to fluorophores or to alkaline-phosphatase or horseradish peroxidase for a nominal price. FabGennix International Inc., has produced many diagnostic antibodies, for a complete listing please visit www.FabGennix.com.

Catalog #	Host Species	Nature	Cross reactivity	Quantity	Price
MPO-101AP	Rabbit	Affinity purified Myeloperoxidase antibodies	H	100 ug	205
MPO-112AP	Rabbit	Affinity purified Myeloperoxidase antibodies	H, M, R	100 ug	225
P-MPO100	n/a	Antigenic blocking peptide for MPO_101AP	n/a	250 ug	115
P-MPO110	n/a	Antigenic blocking peptide for MPO-112AP	n/a	5 appl	185
PC-MPO	n/a	Western blot positive control(Human)	n/a		

R = rat; M = mouse; H = human; C = chicken; monk = monkey ; * not all variants are labeled equally

Immunogen: Synthetic peptides (aa; 113-133 for MPO-101AP and aa; 604-632). Peptides were post-translationally modified to achieve the desired antigenicity.

Concentration: MPO-101AP = 0.75-1.2 mg/ml and MPO-112AP 0.88-1.03mg/ml in antibody stabilization buffer

Applications: Antibody MPO-101AP and MPO-112AP are ideal for WB, IMM and IHC applications. The dilutions for this antibody is for reference only, investigators are expected to determine the optimal conditions for a specific assay. Other applications have not been tested. Suggested Dilutions: WB: > 1:500; IMM & i.p pull-down assays: 1 > 1:200.

Protocols: Standard protocol for various applications (Western blot; immunoprecipitation and immunohistochemistry) of this antibody can be obtained upon request from the Technical services, important information on this antibody is in the product specification sheet, however, FabGennix Inc. strongly recommends investigators to optimize conditions for use of this antibody in their laboratories.

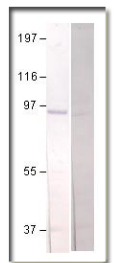
References:

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 MPO-101AP and MPO-112AP, please enquire about bulk material discounts.

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

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Western Blot of MPO-101AP and MPO-112AP with PC-MPO sample. Antibody dilution 1:500 in dilution buffer. Approximate MW of MPO is 90 kDa.

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5850 Town and Country Blvd. Suite 301. Frisco, TX 75034

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