Rabbit antibody to human Myeloperoxidase (MPO): IgG

Catalogue No.:	R-133-250
Description:	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. MPO is an important marker for myeloid cells, from the promyelocyte stage and to the mature forms. CATALYTIC ACTIVITY: Donor + H2O2 = oxidized donor + 2 H2O. CATALYTIC ACTIVITY: Cl- + H2O2 = HOCl + 2 H2O. COFACTOR: Binds 1 calcium ion per heterodimer. COFACTOR: Binds 1 heme B (iron-protoporphyrin IX) group covalently per heterodimer. SUBUNIT: Tetramer of two light chains and two heavy chains. SUBCELLULAR LOCATION: Lysosome. ALTERNATIVE PRODUCTS: 3 named isoforms produced by alternative splicing. DISEASE: Defects in MPO are the cause of myeloperoxidase deficiency (MPD). MPD is an autosomal recessive defect that results in disseminated candidiasis. SIMILARITY: Belongs to the peroxidase family. XPO subfamily. Microglia and astrocytes are known to express MPO as well.
Batch No.:	See product label
Unit size:	250 ug
Antigen:	Myeloperoxidase isolated from human polymorphonuclear leucocytes
Other Names:	MPO
Accession:	MPO_HUMAN
Produced in:	Rabbit
Purity:	IgG
Applications:	IHC, WB. A dilution of 1:500-1:1000 is recommended. This antiserum works superbly for staining of paraffin-embedded tissue sections fixed in formalin, frozen sections and cell cytospins. Biosensis recommends optimal dilutions/concentrations should be determined by the end user.
Specificity:	This antiserum reacts with human myeloperoxidase.
Cross-reactivity:	Human
Form:	Lyophilised
Reconstitution:	Reconstitute in 250 uL of sterile water. Centrifuge to remove any insoluble material.
Storage:	After reconstitution keep aliquots at -20C for a higher stability, and at 2-8C with an appropriate antibacterial agent. Avoid repetitive freeze/thaw cycles. Glycerol (1:1) may be added for an additional stability.
References:	1. Arber D.A. et al. Am J Clin Pathol. 2001; 116:25-33 2. Kimura S et al. Proteins 1988;3:113-20. 3. Weil S.C. et al. Science 1988;240:790-2. 4. Lanza F. J Mol Med 1998;76:676-81. 5. Pinkus G.S. Mod Pathol 1991;4:733-41. 6. Gray E. et al. Brain Pathol. 2008 Jan;18(1):86-95.

FOR RESEARCH USE ONLY

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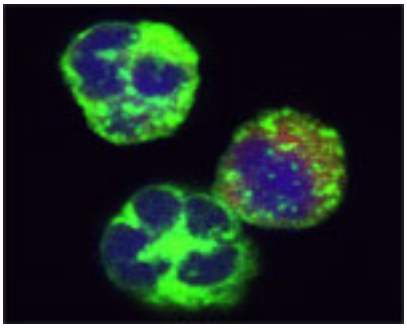
7. Maki R.A. et al. J Biol Chem. 2009 Jan 30;284(5):3158-69.



Staining of Myeloperoxidase (MPO) in acetone fixed human neutrophils. Cytospin slides of human neutrophils isolated from peripheral blood were fixed by immersion in cold acetone for 90 seconds and blocked with 10% FCS prior to incubation with Rabbit antibody to human Myeloperoxidase (MPO): IgG (R-133-250). The antibody was diluted to 1:1000 and incubated at room temperature for 1h and visualized with FITC-labeled secondary antibody.

Observation

A characteristic granular patterns of staining of cells are observed using this antibody restricted to the cytoplasm. Intense labeling of myeloid cells at all stages of maturation can also be observed. Cells of monocytic derivation reveal variable reactivity and are typically weakly positive or nonreactive. Erythroid precursors, megakaryocytes, lymphoid cells, plasma cells, dendritic reticulum cells, mast cells and blood vessels are negative. Occasional histiocytes are labelled, some possibly because of phagocytosed material.

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