Revision 8

Store at -20C

#14569

Myeloperoxidase (E1E7I) XP® Rabbit mAb

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IHC-P, IF-IC, FC-FP	H	Endogenous	60, 80-90	Rabbit IgG	#P05164	4353

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunohistochemistry (Paraffin)	1:500 - 1:2000
Immunofluorescence (Immunocytochemistry)	1:50 - 1:100
Flow Cytometry (Fixed/Permeabilized)	1:50 - 1:200

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. *Do not aliquot the antibody.*

For a carrier free (BSA and azide free) version of this product see product #88757.

Specificity/Sensitivity

Myeloperoxidase (E1E7I) XP® Rabbit mAb recognizes endogenous levels of total myeloperoxidase protein. This antibody recognizes the full-length and heavy chain subunits of human myeloperoxidase protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro734 of human myeloperoxidase protein.

Background

Myeloperoxidase (MPO) is a peroxidase enzyme that is part of the host defense system of polymorphonuclear leukocytes (reviewed in 1). The gene for MPO was cloned independently from several laboratories (2-5). A decrease in MPO expression was noticed upon differentiation of HL-60 cells (5). MPO catalyzes the reaction of hydrogen peroxide and chloride (or other halides) to produce hypochlorous acid and other potent antimicrobial oxidants. Knockout mice of MPO are impaired in clearing select microbial infections (6). Processing of mature MPO from an initial 80-90 kDa translation product involves insertion of a heme moiety, glycosylation, and proteolytic cleavage. The mature protein is a tetramer of two heavy chains (60 kDa) and two light chains (12 kDa). It is abundantly expressed in neutrophils and monocytes and secreted during their activation. Heightened MPO levels have been associated with tissue damage and a number of pathological conditions (1).

Background References

1. Klebanoff, S.J. (2005) *J Leukoc Biol* 77, 598-625.
2. Chang, K.S. et al. (1986) *Blood* 68, 1411-4.
3. Yamada, M. et al. (1987) *Arch Biochem Biophys* 255, 147-55.
4. Morishita, K. et al. (1987) *J Biol Chem* 262, 3844-51.
5. Weil, S.C. et al. (1987) *Proc Natl Acad Sci USA* 84, 2057-61.
6. Aratani, Y. et al. (2002) *J Infect Dis* 185, 1833-7.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IHC-P:** Immunohistochemistry (Paraffin) **IF-IC:** Immunofluorescence (Immunocytochemistry) **FC-FP:** Flow Cytometry (Fixed/Permeabilized)

Cross-Reactivity Key

H: Human

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