

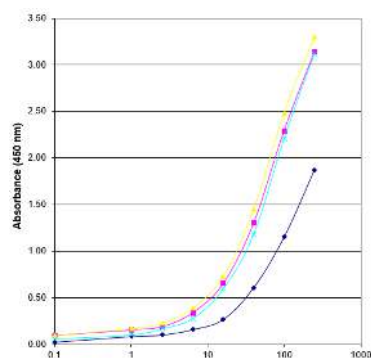
CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name	MPO, Mouse, clone 8F4	Expiry date	-
Catalog number	HM1051-20UG		
Lot number	-	Amount	20 µg
Volume	200 µl	Concentration	100 µg/ml
Formulation	0.2 µm filtered in PBS+0.1%BSA+0.02%NaN ₃	Conjugate	None
Host Species	Mouse IgG1	Purification	Protein G
Endotoxin	N.A.		
Storage	4°C		

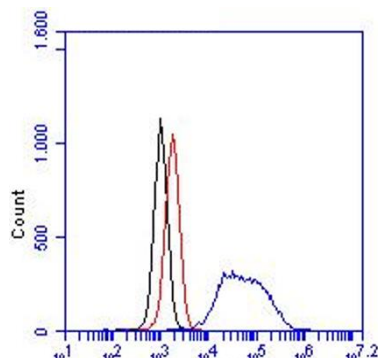
Application notes

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #	3,4		8	2,5,6,7		1,3		
Yes	•		•	•		•		
No		•					•	
N.D.					•		•	•

N.D.= Not Determined; IHC = Immuno histochemistry; F = Frozen sections; P = Paraffin sections; IF = Immuno Fluorescence; FC = Flow Cytometry; FS = Functional Studies; IA = Immuno Assays; IP = Immuno Precipitation; W = Western blot



IA: HM1051 was used as a capture antibody. The experiment performed was a specificity experiment with different concentrations of HM1051.



FC: detection of MPO in Wehi3BD+ cells. Red, black and blue line represent the isotype control, cells only and HM1051 with a concentration of 10 µg/ml, respectively.

Dilutions to be used depend on detection system applied. It is recommended that users test the reagent and determine their own optimal dilutions. The typical starting working dilution is 1:50.

- IA: the antibody can be used as capture and detection antibody.
- FC: Cells are fixed with 4% paraformaldehyde and permeabilized with 0.1% saponin.
- Positive control: Neutrophils isolated from digested infarcts; Negative control: lymphocytes isolated from digested infarcts.

General Information

Description

The monoclonal antibody 8F4 recognizes mouse myeloperoxidase (MPO). MPO is a glycoprotein produced as a single precursor, which is subsequently cleaved into an alpha and beta chain. In human the biologically active MPO is a 150kDa tetramer composed of 2 glycosylated alpha chains of 59-64 kDa and 2 beta chains of 14 kDa. MPO is stored in azurophilic granules of polymorphonuclear leukocytes and is rapidly released into the phagosome and extracellular space during inflammatory conditions. The enzyme catalyzes the conversion of chloride and hydrogen peroxide to hypochlorite, a potent oxidant, which functions in host defense against microorganisms. Involvement of MPO has been described in several human diseases, such as cardiovascular disease, airway inflammation, lung cancer, Alzheimer's disease and multiple sclerosis. A positive correlation between elevated MPO levels in serum and cardiovascular disease suggest an interesting role for MPO as a diagnostic marker, making it possible to identify patients at risk for future cardiac events. Furthermore, there are some autoimmune diseases, in which MPO is targeted by antineutrophil cytoplasm antibodies. Studies with MPO-knockout mice have shown an increased susceptibility to pneumonia following intratracheal infections. Moreover, MPO deficient mice are more susceptible to experimental autoimmune encephalitis, a T cell-dependent neuronal disease, and have an increased expression of arteriosclerotic plaques compared to wild-type mice.

The anti-mouse MPO monoclonal antibody 8F4 recognizes natural MPO in biological solutions by ELISA, in frozen tissue sections fixed with acetone and in flow cytometry using a cell permeabilization method.

Immunogen	Purified mouse MPO from WEHI-3 cells
Aliases	Myeloperoxidase
Gene	Gene name: Mpo
Cross reactivity	Rat MPO: yes
References	<ol style="list-style-type: none">1. Huugen, D et al; Aggravation of anti-myeloperoxidase antibody-induced glomerulonephritis by bacterial lipopolysaccharide: role of tumor necrosis factor-α. <i>Am J Pathol</i> 2005, <i>167</i>: 472. Wang, D et al; C/EBPα directs monocytic commitment of primary myeloid progenitors. <i>Blood</i> 2006, <i>108</i>:12233. Matthijsen, M et al; Myeloperoxidase is critically involved in the induction of organ damage after renal ischemia reperfusion. <i>Am J Pathol</i> 2007, <i>171</i>: 17434. Leeuwen van, M et al; Accumulation of myeloperoxidase-positive neutrophils in atherosclerotic lesions in LDLR -/- mice. <i>Arterioscler Thromb Vasc Biol</i> 2008, <i>28</i>: 845. Nahrendorf, M et al; An activatable MR imaging agent reports myeloperoxidase activity in healing infarcts and detects the anti-inflammatory effects of atorvastatin on ischemia-reperfusion injury non-invasively. <i>Circulation</i> 2008, <i>117</i>: 11536. Jiang, D et al. Regulation of Granulocyte and Macrophage Populations of Murine Bone Marrow Cells by G-CSF and CD137 Protein. <i>PLoS ONE</i> 2010, <i>5</i>: e155657. Romero, C.D et al. The Toll-Like Receptor 4 Agonist Monophosphoryl Lipid A Augments Innate Host Resistance to Systemic Bacterial Infection. <i>Infect. Immun.</i> 2011, <i>79</i>(9):35768. Yamada, M et al. Interferon-γ Production by Neutrophils during Bacterial Pneumonia in Mice. <i>Am J Respir Crit Care Med</i> 2011, <i>183</i>:1391
Storage&stability	Product should be stored at 4°C. Under recommended storage conditions, product is stable for at least one year.
Precautions	For research use only. Not for use in or on humans or animals or for diagnostics. It is the responsibility of the user to comply with all local/state and federal rules in the use of this product. Hycult Biotech is not responsible for any patent infringements that might result from the use or derivation of this product.

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Approved by Manager of QC
Brenda Teunissen

Date
28/10/2020

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