

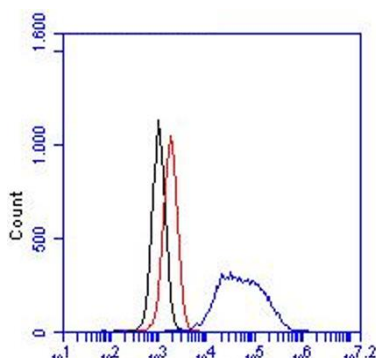
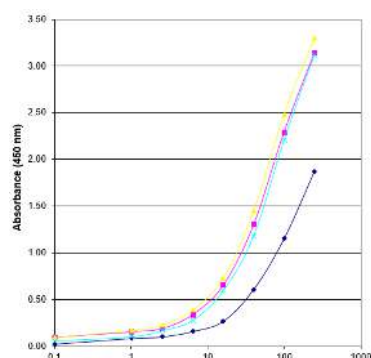
## CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

<b>Product name</b>	MPO, Mouse, clone 8F4, biotinylated	<b>Expiry date</b>	-
<b>Catalog number</b>	HM1051BT-50UG	<b>Amount</b>	50 µg
<b>Lot number</b>	-	<b>Concentration</b>	100 µg/ml
<b>Volume</b>	0.5 ml	<b>Conjugate</b>	Biotin
<b>Formulation</b>	0.2 µm filtered in PBS+0.1%BSA+0.02%NaN3	<b>Purification</b>	Protein G
<b>Host Species</b>	Mouse IgG1		
<b>Endotoxin</b>	N.A.		
<b>Storage</b>	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 suggests 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.

<b>Immunogen</b>	Purified mouse MPO from WEHI-3 cells
<b>Aliases</b>	Myeloperoxidase
<b>Gene</b>	Gene name: Mpo
<b>Cross reactivity</b>	Rat MPO: yes
<b>References</b>	<ol style="list-style-type: none"><li>1. Huugen, D et al; Aggravation of anti-myeloperoxidase antibody-induced glomerulonephritis by bacterial lipopolysaccharide: role of tumor necrosis factor-alpha. <i>Am J Pathol</i> 2005, <i>167</i>: 47</li><li>2. Wang, D et al; C/EBPalpha directs monocytic commitment of primary myeloid progenitors. <i>Blood</i> 2006, <i>108</i>:1223</li><li>3. 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>: 1743</li><li>4. 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>: 84</li><li>5. 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>: 1153</li><li>6. 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>: e15565</li><li>7. 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):3576</li><li>8. Yamada, M et al. Interferon-gamma Production by Neutrophils during Bacterial Pneumonia in Mice. <i>Am J Respir Crit Care Med</i> 2011, <i>183</i>:1391</li></ol>
<b>Storage&amp;stability</b>	Product should be stored at 4°C. Under recommended storage conditions, product is stable for at least one year.
<b>Precautions</b>	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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We hereby certify that the above-stated information is correct and that this product has been successfully tested by the Quality Control Department. This product was released for sale according to the existing specifications. This document has been produced electronically and is valid without a signature.

Approved by Manager of QC  
Brenda Teunissen

Date  
12/11/2019

Do you have any questions or comments regarding this product? Please contact us via [support@hycultbiotech.com](mailto:support@hycultbiotech.com).