

CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name	MPO cocktail, Mouse, mAb 6D1/6G4					
Catalog number	HM1157					
Lot number	xxxxXxxxx-X	Expiry date	MMM YYYY (kortste houdbaarheid mAb)			
Purification	Protein G	Storage	4°C			
Product name	MPO, Mouse, mAb 6G4					
Catalog number	HM1157X					
Lot number	xxxxXXxxx-X	Expiry date MMM YYYY				
Volume	100 μΙ	Amount	500 µg			
Formulation	0.2 μm filtered in PBS	Concentration	5 mg/ml			
Host Species	Mouse IgG2a	Endotoxin	<24 EU/mg			
Product name	MPO, Mouse, mAb 6D1					
Catalog number	HM1157Y					
Lot number	xxxxXxxxx-X	Expiry date	MMM YYYY			
Volume	100 μΙ	Amount	500 µg			
Formulation	0.2 μm filtered in PBS	Concentration	5 mg/ml			
Host Species	Mouse IgG2b	Endotoxin	<24 EU/mg			

General Information

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #	2	2	2		1,2			
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





FS: Quantification of pulmonary hemorrhages under the influence of anti-MPO cocktail (HM1157).

IHC-P: Mouse Lung tissue treated with anti-MPO cocktail (HM1157).

For optimal results, HM1157X and HM1157Y should be used in combination. The recommended mixing ratio is 1:1. The cocktail should be prepared fresh, as the stability of the antibody mixture has not been tested.



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The dilutions to be used from the cocktail 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. For functional studies, in vitro dilutions have to be optimized in user's experimental setting.

- FS: Pulmonary hemorrhages were quantified by measuring hemoglobin levels in Bronchoalveolar lavage fluid (BALF) utilizing spectrometry. (Ref 2.)
- IHC-P: 1 µm thick microtome sections of paraffin-embedded lung tissue stained with Hematoxylin and Eosin. (Ref. 2)

Description	The monoclonal antibody is specifically engineered to identify mouse myeloperoxidase (MPO), a critical enzyme in the body's immune response system. MPO, a glycoprotein, originates as a single precursor before being cleaved into alpha and beta chains. In humans, the active form of MPO constitutes a 150 kDa tetramer, incorporating two glycosylated alpha chains weighing between 59-64 kDa and two 14 kDa beta chains. Predominantly stored in the azurophilic granules of polymorphonuclear leukocytes, MPO is released into the phagosome and the extracellular space under inflammatory conditions, catalyzing the transformation of chloride and hydrogen peroxide into hypochlorite. This potent oxidant plays a pivotal role in the body's defense against microbial invaders. Research underscores MPO's involvement in numerous human conditions, including cardiovascular diseases, airway inflammation, lung cancer, Alzheimer's disease, and multiple sclerosis. Elevated serum levels of MPO have been positively linked to cardiovascular disease, positioning MPO as a potential diagnostic marker for identifying patients at elevated risk of cardiac incidents. Additionally, MPO is a target of antineutrophil cytoplasm antibodies in certain autoimmune diseases. Experiments involving MPO-knockout mice have demonstrated their heightened vulnerability to pneumonia following intratracheal infections and an increased propensity for arteriosclerotic plaque development compared to their wild-type counterparts. These mice also show increased susceptibility to experimental autoimmune encephalitis, a T cell-mediated neurological disorder.					
Immunogen	Purified mouse MPO from WEHI-3 cells					
Aliases	Myeoloperoxidase, mKIAA4033					
Gene	Gene name: myeloperoxidase Entrez Gene ID: <u>17523</u> Uniprot: <u>P11247</u>					
Cross reactivity	-					
References	 Fayçal, C. A. et al, 'An adapted passive model of anti-MPO dependent crescentic glomerulonephritis reveals matrix dysregulation and is amenable to modulation by CXCR4 inhibition,' Matrix Biology, 2022 106, 12-33 PMID: <u>35032611</u>, DOI: <u>10.1016/j.matbio.2022.01.001</u> Kessler, N. et al, 'Monocyte-derived macrophages aggravate pulmonary vasculitis via cGAS/STING/IFN- mediated nucleic acid sensing', J. Exp. Med,. 2022, 219:10, 1-19 PMID: <u>35997679</u>, DOI: <u>10.1084/jem.20220759</u> 					
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.					

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

Date

Do you have any questions or comments regarding this product? Please contact us via support@hycultbiotech.com.