CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name	MPO cocktail, Mouse, mAb 6D1/6G4		
Catalog number	HM1157		
Lot number	-	**Expiry date**	-
Purification	Protein G	**Storage**	4°C

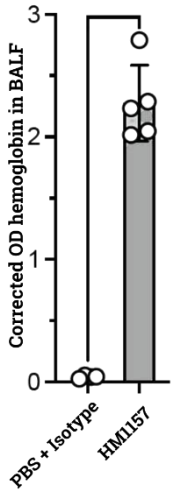
Product name	MPO, Mouse, mAb 6G4		
Catalog number	HM1157X		
Lot number	-	**Expiry date**	-
Volume	100 µl	**Amount**	500 µg
Formulation	0.2 µm filtered in PBS	**Concentration**	5 mg/ml
Host Species	Mouse IgG2a	**Endotoxin**	<24 EU/mg

Product name	MPO, Mouse, mAb 6D1		
Catalog number	HM1157Y		
Lot number	-	**Expiry date**	-
Volume	100 µl	**Amount**	500 µg
Formulation	0.2 µm filtered in PBS	**Concentration**	5 mg/ml
Host Species	Mouse IgG2b	**Endotoxin**	<24 EU/mg

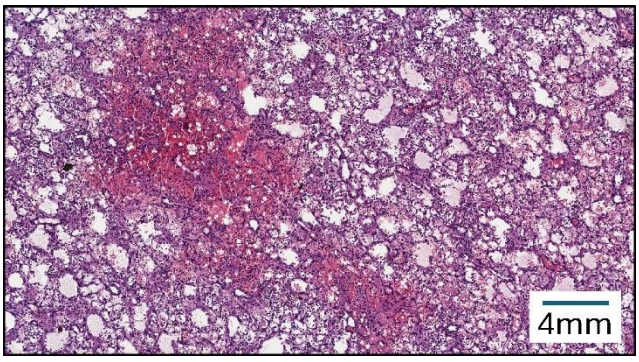
General Information

	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.

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: 17523 Uniprot: P11247

Cross reactivity -

References

1. 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: 35032611, DOI: 10.1016/j.matbio.2022.01.001
2. 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: 35997679, DOI: 10.1084/jem.20220759

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.

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Date

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