abcam

ab252131

Alexa Fluor® 647 Anti-Myeloperoxidase antibody [EPR17996]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Conjugation	Alexa Fluor® 647
Excitation/Emission	Ex: 650nm, Em: 665nm
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 30% Glycerol (glycerin, glycerine), 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR17996
Purification technique	Affinity purification Protein A
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Mouse
Dilution info	1/100
Notes	-

Species	Human
Dilution info	1/100
Notes	-

Expected

Species	Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt (Intra)

Expected

Species	Human, Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information MPO

Function	Part of the host defense system of polymorphonuclear leukocytes. It is responsible for microbicidal activity against a wide range of organisms. In the stimulated PMN, MPO catalyzes the production of hypohalous acids, primarily hypochlorous acid in physiologic situations, and other toxic intermediates that greatly enhance PMN microbicidal activity (PubMed:9922160). Mediates the proteolytic cleavage of alpha-1-microglobulin to form t-alpha-1-microglobulin, which potently inhibits oxidation of low-density lipoprotein particles and limits vascular damage (PubMed:25698971).

Storage

Shipped at conditions	Blue Ice

Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle, Store in the dark

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

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Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Myeloperoxidase also called MPO is an enzyme that plays a critical role in the body's immune response. This protein has a mass of approximately 150 kDa and exists as a dimer composed of heavy and light polypeptide chains.

	Myeloperoxidase is prominently expressed in neutrophils and monocytes which are types of white blood cells important for combating infections. The enzyme catalyzes the production of hypochlorous acid and other reactive substances by utilizing hydrogen peroxide and chloride ions. These reactive substances help in neutralizing pathogens during the immune response.
Biological function summary	The generation of reactive oxygen species by myeloperoxidase is essential for microbicidal activity. Myeloperoxidase functions as part of the antimicrobial system in the phagosome which is the intracellular compartment where pathogens are degraded. This enzyme works in conjunction with other components of the immune system such as NADPH oxidase. By generating hypochlorous acid MPO contributes to the oxidative burst a rapid release of reactive oxygen species during the response to pathogens.
Pathways	Myeloperoxidase integrates into the immune defense and inflammatory pathways. In particular it is associated with the neutrophil degranulation pathway where it releases its enzymatic contents to fight off microbes. MPO also interacts with proteins involved in oxidative stress processes such as superoxide dismutase which moderates levels of reactive oxygen species in cells. These interactions ensure balance in the immune response preventing excessive tissue damage during inflammation.
Associated diseases and disorders	Dysregulated MPO activity can contribute to the development of diseases. For instance myeloperoxidase is linked with atherosclerosis a cardiovascular condition where inflammation and oxidative stress lead to plaque formation in the arteries. It also associates with vasculitis an autoimmune disorder causing inflammation of blood vessels. Both disorders can relate to the inflammatory pathways that involve MPO and proteins like C-reactive protein which serves as a marker of inflammation. Understanding MPO's role in these conditions is important for effective therapeutic interventions.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

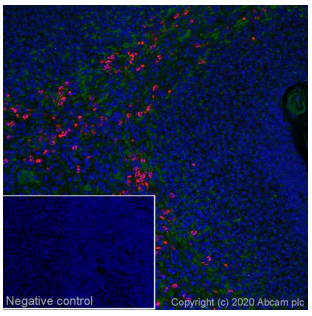
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

2 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Alexa Fluor® 647 Anti-Myeloperoxidase antibody [EPR17996] (ab252131)

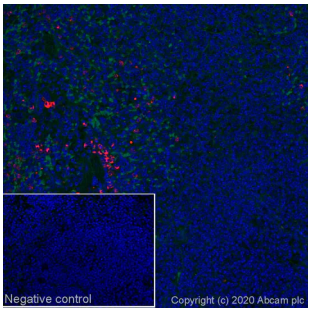
Myeloperoxidase Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Myeloperoxidase antibody

IHC image of Myeloperoxidase staining in a section of formalin-fixed paraffin-embedded normal human spleen*.
The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6) in a Biocare Medical NxGen pressure cooker using retrieval settings of 110°C for 20 minutes. Non-specific protein-protein interactions were then blocked in TBS containing 0.025% (v/v) Triton X-100, 0.3M (w/v) glycine and 1% (w/v) BSA for 1h at room temperature. The section was then incubated overnight at +4°C in TBS containing 0.025% (v/v) Triton X-100 and 1% (w/v) BSA with ab252131 at 1/100 dilution (shown in red). Nuclear DNA was labelled with DAPI (shown in blue). The section was then mounted using Fluoromount®.

Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

For other IHC staining systems (automated and non-automated), customers should optimize variable parameters such as antigen retrieval conditions, antibody concentrations and incubation times.

*Tissue obtained from the Human Research Tissue Bank, supported by the NIHR Cambridge Biomedical Research Centre.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Alexa Fluor® 647 Anti-Myeloperoxidase antibody [EPR17996] (ab252131)

Myeloperoxidase Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Myeloperoxidase antibody

IHC image of Myeloperoxidase staining in a section of formalin-fixed paraffin-embedded normal mouse spleen*.
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*Tissue obtained from .

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.