# Overview

<table>
<thead>
<tr>
<th>Product name</th>
<th>Anti-Myeloperoxidase antibody [EPR20257]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Rabbit monoclonal [EPR20257] to Myeloperoxidase</td>
</tr>
<tr>
<td>Host species</td>
<td>Rabbit</td>
</tr>
<tr>
<td>Specificity</td>
<td>This antibody is specific to Myeloperoxidase heavy chain.</td>
</tr>
<tr>
<td>Tested applications</td>
<td>Suitable for: WB, IHC-P, ICC/IF, Flow Cyt</td>
</tr>
<tr>
<td>Species reactivity</td>
<td>Reacts with: Mouse, Rat, Human</td>
</tr>
<tr>
<td>Immunogen</td>
<td>Recombinant fragment within Human Myeloperoxidase aa 250-600. The exact sequence is proprietary. Database link: P05164</td>
</tr>
</tbody>
</table>

**Positive control**

- WB: Human fetal spleen lysate; Rat and mouse spleen lysates; HL-60 whole cell lysate. IHC-P: Human spleen and stomach cancer tissues; Mouse and rat spleen tissues. ICC/IF: HL-60 cells. Flow Cyt: Mouse PBMC and HL-60 cells.

**General notes**

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

This product is a recombinant rabbit monoclonal antibody.

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**Properties**

<table>
<thead>
<tr>
<th>Form</th>
<th>Liquid</th>
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<tbody>
<tr>
<td>Storage buffer</td>
<td>Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol, 0.05% BSA</td>
</tr>
<tr>
<td>Purity</td>
<td>Protein A purified</td>
</tr>
<tr>
<td>Clonality</td>
<td>Monoclonal</td>
</tr>
<tr>
<td>Clone number</td>
<td>EPR20257</td>
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<tr>
<td>Isotype</td>
<td>IgG</td>
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</table>
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.

Involvement in disease

Defects in MPO are the cause of myeloperoxidase deficiency (MPD) [MIM:254600]. MPD is an autosomal recessive defect that results in disseminated candidiasis.

Sequence similarities

Belongs to the peroxidase family. XPO subfamily.

Cellular localization

Lysosome.

Images

Immunohistochemical analysis of paraffin-embedded human spleen tissue labeling Myeloperoxidase with ab208670 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

Cytoplasmic staining on neutrophils of human spleen is observed [PMID: 19566938].

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>WB</td>
<td>1/1000. Detects a band of approximately 89, 59 kDa (predicted molecular weight: 83 kDa).</td>
<td></td>
</tr>
<tr>
<td>IHC-P</td>
<td>1/1000. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.</td>
<td></td>
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<tr>
<td>ICC/IF</td>
<td>1/100.</td>
<td></td>
</tr>
<tr>
<td>Flow Cyt</td>
<td>1/500.</td>
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</tbody>
</table>

Target

Application | Abreviews | Notes |
<table>
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<tr>
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<tbody>
<tr>
<td>WB</td>
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<td>IHC-P</td>
<td></td>
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</tr>
<tr>
<td>ICC/IF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flow Cyt</td>
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</tbody>
</table>
All lanes: Anti-Myeloperoxidase antibody [EPR20257] (ab208670) at 1/1000 dilution

Lane 1: Human fetal spleen lysate
Lane 2: Rat spleen lysate
Lane 3: HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate

Lysates/proteins at 20 µg per lane.

Secondary
All lanes: Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Predicted band size: 83 kDa
Observed band size: 59 kDa

why is the actual band size different from the predicted?

Exposure time: 10 seconds

Blocking/Dilution buffer: 5% NFDM/TBST.

The molecular weight observed is consistent with what has been described in the literature. PMID: 3029127 PMID: 2154223.

Negative control: HeLa PMID 12040446.

Immunofluorescent analysis of 100% methanol-fixed HL-60 (Human promyelocytic leukemia cell line) and HeLa (Human epithelial cell line from cervix adenocarcinoma) cells labeling Myeloperoxidase with ab208670 at 1/100 dilution, followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green).

Confocal image showing cytoplasmic staining on HL-60 cell line.

Negative control: HeLa (PMID: 12040446).

The nuclear counterstain is DAPI (blue).

Tubulin is detected with ab195889 (Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594)) at 1/200 dilution (red).

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat anti-rabbit IgG (Alexa Fluor®
Immunohistochemical analysis of paraffin-embedded human stomach cancer tissue labeling Myeloperoxidase with ab208670 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

Cytoplasmic staining on neutrophils of human stomach cancer is observed [PMID: 19566938].

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

Flow cytometric analysis of 4% paraformaldehyde-fixed HeLa cells (left panel) and HL-60 cells (right panel) labeling Myeloperoxidase with ab208670 at 1/500 dilution, compared with a Rabbit IgG, monoclonal [EPR25A] - Isotype Control (ab172730); black and unlabelled control (cells without incubation with primary and secondary antibodies; blue). Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) at 1/2000 dilution was used as the secondary antibody.

Negative control: HeLa (PMID: 12040446).

Anti-Myeloperoxidase antibody [EPR20257] (ab208670) at 1/5000 dilution + Mouse spleen lysate at 20 µg

Secondary

Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Predicted band size: 83 kDa

Observed band size: 59 kDa why is the actual band size different from the predicted?

Exposure time: 10 seconds

Blocking/Dilution buffer: 5% NFDM/TBST.
The molecular weight observed is consistent with what has been described in the literature. PMID: 3029127 PMID: 2154223.

Anti-Myeloperoxidase antibody [EPR20257] (ab208670) at 1/20000 dilution + HL-60 (Human promyelocytic leukemia cell line) whole cell lysate at 10 μg

**Secondary**
Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

**Predicted band size:** 83 kDa

**Observed band size:** 39, 59, 89 kDa

*why is the actual band size different from the predicted?*

**Exposure time:** 1 second

Blocking/Dilution buffer: 5% NFDM/TBST.

The molecular weight observed is consistent with what has been described in the literature. PMID: 2154223 PMID: 8384653.

Immunohistochemical analysis of paraffin-embedded mouse spleen tissue labeling Myeloperoxidase with ab208670 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

Cytoplasmic staining on neutrophils of mouse spleen is observed [PMID: 19566938].

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.
Immunohistochemical analysis of paraffin-embedded rat spleen tissue labeling Myeloperoxidase with ab208670 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

Cytoplasmic staining on neutrophils of rat spleen is observed [PMID: 19566938].

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

Flow cytometric analysis of 4% paraformaldehyde-fixed Mouse PBMC cells labeling Myeloperoxidase with ab208670 at 1/500 dilution (right), compared with a rabbit monoclonal IgG isotype control (ab172730; left). Goat anti rabbit IgG (Alexa Fluor® 488) at 1/2000 dilution was used as the secondary antibody.

Mouse peripheral blood mononuclear cells stained intracellularly with ab208670 (Right) and isotype control (Left). Only monocytes and granulocytes (larger SSC population) result in positive signal while the lymphocyte population remains unchanged.

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