**Product datasheet**

**Anti-Monoamine Oxidase A/MAO-A antibody [EPR7101] ab126751**

**Overview**

<table>
<thead>
<tr>
<th><strong>Product name</strong></th>
<th>Anti-Monoamine Oxidase A/MAO-A antibody [EPR7101]</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
<td>Rabbit monoclonal [EPR7101] to Monoamine Oxidase A/MAO-A</td>
</tr>
<tr>
<td><strong>Host species</strong></td>
<td>Rabbit</td>
</tr>
<tr>
<td><strong>Tested applications</strong></td>
<td><strong>Suitable for:</strong> WB, IHC-P, ICC/IF, Flow Cyt</td>
</tr>
<tr>
<td><strong>Species reactivity</strong></td>
<td><strong>Reacts with:</strong> Mouse, Rat, Human</td>
</tr>
<tr>
<td><strong>Immunogen</strong></td>
<td>Synthetic peptide within Human Monoamine Oxidase A/MAO-A aa 450-550. The exact sequence is proprietary. (Peptide available as ab196045)</td>
</tr>
</tbody>
</table>

**Positive control**


**General notes**

Previously labelled as Monoamine Oxidase A.

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 production

For more information see here.

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

We are constantly working hard to ensure we provide our customers with best in class antibodies. As a result of this work we are pleased to now offer this antibody in purified format. We are in the process of updating our datasheets. The purified format is designated 'PUR' on our product labels. If you have any questions regarding this update, please contact our Scientific Support team.

**Properties**

| **Form** | Liquid |

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2 Abreviews  
16 References  
13 Images
**Storage instructions**


**Dissociation constant (K_D)**

\[
K_D = 5.10 \times 10^{-11} \text{ M}
\]

**Storage buffer**

pH: 7.20
Preservative: 0.01% Sodium azide
Constituents: 59% PBS, 40% Glycerol, 0.05% BSA

**Purity**

Protein A purified

**Clonality**

Monoclonal

**Clone number**

EPR7101

**Isotype**

IgG

**Applications**

Our Abpromise guarantee covers the use of **ab126751** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>WB</td>
<td>⭐⭐⭐⭐</td>
<td>1/1000 - 1/10000. Predicted molecular weight: 60 kDa.</td>
</tr>
<tr>
<td>IHC-P</td>
<td></td>
<td>1/400. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol. See IHC antigen retrieval protocols. For unpurified use at 1/50 - 1/100.</td>
</tr>
<tr>
<td>ICC/IF</td>
<td></td>
<td>1/50 - 1/100.</td>
</tr>
<tr>
<td>Flow Cyt</td>
<td></td>
<td>Use at an assay dependent concentration.</td>
</tr>
</tbody>
</table>

**Target**

**Function**

Catalyzes the oxidative deamination of biogenic and xenobiotic amines and has important functions in the metabolism of neuroactive and vasoactive amines in the central nervous system and peripheral tissues. MAOA preferentially oxidizes biogenic amines such as 5-hydroxytryptamine (5-HT), norepinephrine and epinephrine.

**Tissue specificity**

Heart, liver, duodenum, blood vessels and kidney.

**Involvement in disease**

Defects in MAOA are the cause of Brunner syndrome (BRUNS) [MIM:300615]. Brunner syndrome is a form of X-linked non-dysmorphic mild mental retardation. Male patients are affected by a syndrome of borderline mental retardation and exhibit abnormal behavior, including disturbed regulation of impulsive aggression. Obligate female carriers have normal intelligence and behavior.
Sequence similarities
Belongs to the flavin monoamine oxidase family.

Cellular localization
Mitochondrion outer membrane.

Immunocytochemistry/ Immunofluorescence analysis of HepG2 (Human hepatocellular carcinoma epithelial cell) cells labeling Monoamine Oxidase A/MAO-A with Purified ab126751 at 1:100 dilution (1.5 µg/ml). Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Cells were counterstained with Ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1:200 (2.5 µg/ml). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1:1000 (2 µg/ml) dilution. DAPI (blue) was used as nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of rat liver tissue sections labeling Monoamine Oxidase A/MAO-A with Purified ab126751 at 1:400 dilution (0.38 µg/ml). Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0). Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) was used for detection. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of mouse liver tissue sections labeling Monoamine Oxidase A/MAO-A with Purified ab126751 at 1:400 dilution (0.38 µg/ml). Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0). Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) was used for detection. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human hepatocellular carcinoma tissue sections labeling Monoamine Oxidase A/MAO-A with Purified ab126751 at 1:400 dilution (0.38 µg/ml). Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0). Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) was used for detection. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.
All lanes: Anti-Monoamine Oxidase A/MAO-A antibody [EPR7101] (ab126751) at 1/1000 dilution

Lane 1: Wild-type HAP1 whole cell lysate
Lane 2: MAOA (Monoamine Oxidase A) knockout HAP1 whole cell lysate

Lysates/proteins at 20 µg per lane.

Predicted band size: 60 kDa

Lanes 1 - 2: Merged signal (red and green). Green - ab126751 observed at 60 kDa. Red - loading control, ab8245, observed at 0 kDa.

ab126751 was shown to recognize Monoamine Oxidase A in wild-type HAP1 cells as signal was lost at the expected MW in MAOA (Monoamine Oxidase A) knockout cells. Additional cross-reactive bands were observed in the wild-type and knockout cells. Wild-type and MAOA (Monoamine Oxidase A) knockout samples were subjected to SDS-PAGE. Ab126751 and ab8245 (Mouse anti-GAPDH loading control) were incubated overnight at 4°C at 1/1000 dilution and 1/20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed ab216773 and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed ab216776 secondary antibodies at 1/20000 dilution for 1 hour at room temperature before imaging.
Western blot - Anti-Monoamine Oxidase A/MAO-A antibody [EPR7101] (ab126751) at 1/10000 dilution (Purified) + Mouse brain lysates at 15 µg

**Secondary**

Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

**Predicted band size:** 60 kDa  
**Observed band size:** 60 kDa

All lanes: Anti-Monoamine Oxidase A/MAO-A antibody [EPR7101] (ab126751) at 1/1000 dilution (Purified)

**Lane 1:** HepG2 (Human hepatocellular carcinoma epithelial cell) whole cell lysates  
**Lane 2:** Rat brain lysates

Lysates/proteins at 15 µg per lane.

**Secondary**

**All lanes:** Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

**Predicted band size:** 60 kDa  
**Observed band size:** 60 kDa
Anti-Monoamine Oxidase A/MAO-A antibody [EPR7101] (ab126751) at 1/2000 dilution (unpurified) + Mouse brain cortex tissue lysate - whole at 20 µg

**Secondary**

HRP-conjugated Goat anti-rabbit IgG polyclonal at 1/2000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

**Predicted band size:** 60 kDa

**Observed band size:** 60 kDa

**Exposure time:** 1 minute

ab126751 (unpurified), at 1/50 dilution, staining Monoamine Oxidase A/MAO-A in paraffin embedded Human colon tissue by Immunohistochemistry.

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
ab126751 (purified) staining Monoamine Oxidase A/MAO-A in the human cell line HepG2 (human hepatocellular carcinoma) by flow cytometry. Cells were fixed with 4% paraformaldehyde and the sample was incubated with the primary antibody at a dilution of 1/20. A goat anti rabbit IgG (Alexa Fluor® 488) at a dilution of 1/2000 was used as the secondary antibody.

Isotype control: Rabbit monoclonal IgG (Black)

Unlabelled control: Cell without incubation with primary antibody and secondary antibody (Blue)

All lanes: Anti-Monoamine Oxidase A/MAO-A antibody [EPR7101] (ab126751) at 1/1000 dilution (unpurified)

Lane 1: HepG2 lysate
Lane 2: NCI-H460 lysate
Lane 3: Fetal liver lysate

Lysates/proteins at 10 µg per lane.

Secondary

All lanes: HRP labelled goat anti-rabbit at 1/2000 dilution

Predicted band size: 60 kDa

ab126751 (unpurified), at 1/50 dilution, staining Monoamine Oxidase A/MAO-A in paraffin embedded Human kidney tissue by Immunohistochemistry.

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
Other - Anti-Monoamine Oxidase A/MAO-A antibody
[EPR7101] (ab126751)

Equilibrium disassociation constant (K_D)
Learn more about K_D
Click here to learn more about K_D

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