Product datasheet

Anti-Ceruloplasmin antibody ab48614

Overview

Product name: Anti-Ceruloplasmin antibody
Description: Rabbit polyclonal to Ceruloplasmin
Host species: Rabbit
Tested applications: Suitable for: IHC-P, IHC-FoFr, IP, RIA, WB, ELISA, ICC/IF
Species reactivity: Reacts with: Mouse, Human
Immunogen: Human ceruloplasmin purified from human plasma

Properties

Form: Liquid
Storage instructions: Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer: Preservative: 0.01% Thimerosal (merthiolate)
Constituents: 50% Glycerol, PBS, pH 7.5
Purity: Protein G purified
Clonality: Polyclonal
Isotype: IgG

Applications

Our Abpromise guarantee covers the use of ab48614 in the following tested applications.
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

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<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
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<tbody>
<tr>
<td>IHC-P</td>
<td></td>
<td>Use a concentration of 2 µg/ml. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.</td>
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<tr>
<td>IHC-FoFr</td>
<td>⭐⭐⭐⭐⭐</td>
<td>Use at an assay dependent concentration.</td>
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<tr>
<td>IP</td>
<td></td>
<td>Use at an assay dependent concentration.</td>
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<tr>
<td>RIA</td>
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<td>Use at an assay dependent concentration.</td>
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Ceruloplasmin is a blue, copper-binding (6-7 atoms per molecule) glycoprotein. It has ferroxidase activity oxidizing Fe(2+) to Fe(3+) without releasing radical oxygen species. It is involved in iron transport across the cell membrane.

**Tissue specificity**

Expressed by the liver and secreted in plasma.

**Involvement in disease**

Defects in CP are the cause of aceruloplasminemia (ACERULOP) [MIM:604290]. It is an autosomal recessive disorder of iron metabolism characterized by iron accumulation in the brain as well as visceral organs. Clinical features consist of the triad of retinal degeneration, diabetes mellitus and neurological disturbances.

Note=Ceruloplasmin levels are decreased in Wilson disease, in which copper cannot be incorporated into ceruloplasmin in liver because of defects in the copper-transporting ATPase 2.

**Sequence similarities**

Belongs to the multicopper oxidase family.

Contains 3 F5/8 type A domains.

Contains 6 plastocyanin-like domains.

**Cellular localization**

Secreted.

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<tr>
<td>WB</td>
<td>Use at an assay dependent concentration. Predicted molecular weight: 122 kDa.</td>
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<tr>
<td>ELISA</td>
<td>Use at an assay dependent concentration.</td>
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<tr>
<td>ICC/IF</td>
<td>Use at an assay dependent concentration.</td>
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**Images**

Ab48614 staining human tonsil. Staining is localized to the cytoplasm.

Left panel: with primary antibody at 2 ng/ml. Right panel: isotype control.

Sections were stained using an automated system (Dako PT Link), at room temperature. Sections were rehydrated and antigen retrieved with the Dako 3-in-1 antigen retrieval buffer, EDTA pH 9.0. Slides were peroxidase blocked in 3% H2O2 in methanol for 10 minutes. They were then blocked with Dako Protein block for 10 minutes (containing casein 0.25% in PBS) then incubated with primary antibody for 20 minutes and detected with Dako Envision Flex amplification kit for 30 minutes. Colorimetric detection was completed with diaminobenzidine for 5 minutes. Slides were counterstained with Haematoxylin and coverslipped under DePeX.

Please note that for manual staining we recommend to optimize the primary antibody concentration and incubation time (overnight incubation), and amplification may be required.
Anti-Ceruloplasmin antibody (ab48614) at 1 µg/ml + Human Plasma Total Protein Lysate at 10 µg

**Secondary**
Goat Anti-Rabbit IgG H&L (HRP) preadsorbed (ab97080) at 1/5000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

**Predicted band size:** 122 kDa

**Observed band size:** 122 + 148 kDa

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

**Additional bands at:** 34 kDa, 76 kDa. We are unsure as to the identity of these extra bands.

**Exposure time:** 30 seconds

Ceruloplasmin contains a number of potential glycosylation sites (SwissProt) which may explain its migration at a higher molecular weight than predicted (148 kDa).

**IHC-FoFr image of ceruloplasmin staining on mouse duodenal sections using ab48614.** These sections were incubated in triton X (0.3% in 0.1% PBS) to permeabilise the cells and in 10% serum for 1h to block non-specific protein-protein interactions. The sections were then incubated with the antibody ab48614(1:200) overnight at +4°C. Specific protein binding was visualised using an Alexa 488 conjugated donkey secondary antibody (green staining). Alexa 568 conjugated secondary was used to visualise ab55027 binding to ferritin (red staining).

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