Product datasheet

Anti-CD68 antibody ab125212

Overview

Product name       Anti-CD68 antibody
Description       Rabbit polyclonal to CD68
Host species      Rabbit
Tested applications  Suitable for: WB, IHC-P, IHC-Fr, IHC-FoFr
Species reactivity  Reacts with: Mouse, Rat
Immunogen       Synthetic peptide corresponding to Mouse CD68 aa 312-326 (internal sequence). Different from
                 the related rat sequence by one amino acid.
                 Sequence: AFCITRRQSTYQPL
Database link   P31996

Positive control  WB: Rat and mouse spleen tissue lysate. RAW 264.7 cell lysate. IHC-P: Mouse spleen and skin
tissue, rat liver tissue. IHC-Fr: Rat liver tissue.

General notes   View a monoclonal antibody available to this target, ab31630.

Properties

Form       Liquid
Storage instructions  Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid repeated freeze / thaw cycles.
Storage buffer  Preservative: 0.025% Sodium azide
                  Constituents: 0.45% Sodium chloride, 0.1% Dibasic monohydrogen sodium phosphate, 5.61%
                  Trehalose
Purity       Immunogen affinity purified
Clonality    Polyclonal
Isotype      IgG

Applications

Our Abpromise guarantee covers the use of ab125212 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>Use a concentration of 0.1 - 0.5 µg/ml. Predicted molecular weight: 35 kDa. The detection limit for ab125212 is approximately 0.1ng/lane under non-reducing and reducing conditions.</td>
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<tr>
<td>IHC-P</td>
<td></td>
<td>Use a concentration of 0.5 - 1 µg/ml. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.</td>
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<tr>
<td>IHC-Fr</td>
<td></td>
<td>Use a concentration of 0.5 - 1 µg/ml.</td>
</tr>
<tr>
<td>IHC-FoFr</td>
<td></td>
<td>Use at an assay dependent concentration.</td>
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</table>

**Target**

**Function**

Could play a role in phagocytic activities of tissue macrophages, both in intracellular lysosomal metabolism and extracellular cell-cell and cell-pathogen interactions. Binds to tissue- and organ-specific lectins or selectins, allowing homing of macrophage subsets to particular sites. Rapid recirculation of CD68 from endosomes and lysosomes to the plasma membrane may allow macrophages to crawl over selectin-bearing substrates or other cells.

**Tissue specificity**

Highly expressed by blood monocytes and tissue macrophages. Also expressed in lymphocytes, fibroblasts and endothelial cells. Expressed in many tumor cell lines which could allow them to attach to selectins on vascular endothelium, facilitating their dissemination to secondary sites.

**Sequence similarities**

Belongs to the LAMP family.

**Post-translational modifications**

N- and O-glycosylated.

**Cellular localization**


**Images**

Paraffin-embedded rat liver tissue stained for CD68 using ab125212 at 1 µg/ml in immunohistochemical analysis.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD68 antibody (ab125212)
Immunohistochemistry (PFA perfusion fixed frozen sections) - Anti-CD68 antibody (ab125212)

This image is courtesy of an anonymous Abreview.

Immunohistochemical analysis of murine spleen tissue, staining CD68 with ab125212.

Tissue was fixed with paraformaldehyde, permeabilized with 0.25% Triton X-100 and blocked with 5% serum for 30 minutes at 25°C. Samples were incubated with primary antibody (1/400 in 5% goat serum) for 18 hours at 4°C. An AlexaFluor®488-conjugated goat anti-rabbit polyclonal IgG (1/400) was used as the secondary antibody.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD68 antibody (ab125212)

CD68 was detected in paraffin-embedded section of mouse liver tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1μg/mL ab125212 overnight at 4°C. Cy3 Conjugated Goat Anti-Rabbit IgG was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

Western blot - Anti-CD68 antibody (ab125212)

All lanes: Anti-CD68 antibody (ab125212)

Lane 1: Rat spleen tissue lysate
Lane 2: Mouse spleen tissue lysate
Lane 3: RAW246.7 cell lysate

Predicted band size: 35 kDa
Additional bands at: 90-100 kDa (possible glycosylated form)

Western blot analysis of rat and mouse tissue lysates, labelling CD68 with ab125212.
Paraffin-embedded mouse spleen tissue stained for CD68 using ab125212 at 1 μg/ml in immunohistochemical analysis.

Immunohistochemistry analysis of paraffin-embedded rat liver tissue labeling CD68 with ab125212. Heat mediated antigen retrieval was performed in citrate buffer (pH 6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with rabbit anti-CD68 Antibody overnight at 4°C. Cy3 Conjugated Goat Anti-Rabbit IgG was used as secondary antibody at 1/100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

Immunohistochemistry of microglial marker

Cortical staining for the microglial marker, CD68 increased as a function of age in rTg4510 animals, but remained unchanged in tTA animals. Scale bar, 200 μm, inset scale bar, 50 μm.

(After Figure 10 A of Wes et al)
Frozen sectioned rat liver tissue stained for CD68 using ab125212 at 1 μg/ml in immunohistochemical analysis.

ab125212 staining CD68 in Mouse skin tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 10% serum for 30 minutes at 24°C; antigen retrieval was by heat mediation in a citrate buffer. Samples were incubated with primary antibody (1/2000 in 10% goat serum) for 16 hours at 4°C. A Biotin-conjugated goat anti-rabbit IgG polyclonal (1/500) was used as the secondary antibody.

ab125212 staining CD68 in Mouse spleen tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with paraformaldehyde and blocked with 5% serum for 30 minutes at 20°C; antigen retrieval was by heat mediation in a citrate buffer. Samples were incubated with primary antibody (1/100 in PBS + 2% BSA + 10% FCS) for 45 minutes at 20°C. A HRP-conjugated goat anti-rabbit IgG polyclonal (1/200) was used as the secondary antibody.
Immunohistochemical analysis of murine spleen tissue, staining CD68 with ab125212.

Tissue was fixed with paraformaldehyde and blocked with 5% serum for 1 hour at room temperature; antigen retrieval was by heat mediation in citrate buffer (pH 6). Samples were incubated with primary antibody (undiluted) for 16 hours at 4°C. An undiluted HRP-conjugated horse anti-rat polyclonal IgG was used as the secondary antibody.

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