


## Product datasheet

### Anti-CD68 antibody [KP1] ab955

Recombinant

★★★★★ [47 Abreviews](#) [527 References](#) [7 Images](#)

#### Overview

<b>Product name</b>	Anti-CD68 antibody [KP1]
<b>Description</b>	Mouse monoclonal [KP1] to CD68
<b>Host species</b>	Mouse
<b>Tested applications</b>	<b>Suitable for:</b> ICC/IF, WB, IHC-P, Mass Cytometry
<b>Species reactivity</b>	<b>Reacts with:</b> Human <b>Predicted to work with:</b> Mouse, Rat, Rabbit 
<b>Immunogen</b>	Tissue, cells or virus. This information is proprietary to Abcam and/or its suppliers.
<b>Positive control</b>	IHC-P: human tonsil and liver tissues; ICC/IF: THP-1 cells; WB: Human spleen lysate, THP-1 whole cell lysate IMC: Human tonsil tissue
<b>General notes</b>	<p>Anti CD68 antibody (ab955) is recommended for IHC on human samples but is not recommended for mouse &amp; rat samples.</p> <p>This product has switched from a hybridoma to recombinant production method on 21st September 2020. The concentration listed relates to the purified version, please contact Scientific Support for unpurified concentration.</p> <p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> <li>- High batch-to-batch consistency and reproducibility</li> <li>- Improved sensitivity and specificity</li> <li>- Long-term security of supply</li> <li>- Animal-free production</li> </ul> <p>For more information <a href="#">see here</a>.</p>

#### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
<b>Storage buffer</b>	Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
<b>Purity</b>	Protein A purified

<b>Clonality</b>	Monoclonal
<b>Clone number</b>	KP1
<b>Myeloma</b>	unknown
<b>Isotype</b>	IgG1
<b>Light chain type</b>	kappa

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab955 in the following tested applications.

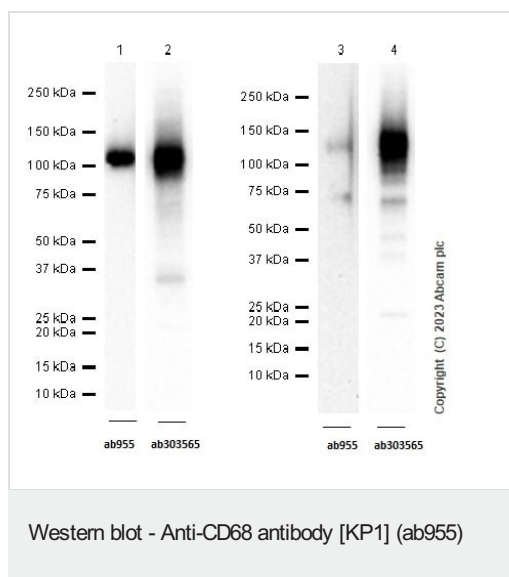
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ICC/IF	★★★★★ (5)	1/50.
WB	★★★★☆ (1)	1/1000. Predicted molecular weight: 37 kDa.
IHC-P	★★★★★ (30)	1/3000. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.
Mass Cytometry		Use at an assay dependent concentration.

## Target

<b>Function</b>	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.
<b>Tissue specificity</b>	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.
<b>Sequence similarities</b>	Belongs to the LAMP family.
<b>Post-translational modifications</b>	N- and O-glycosylated.
<b>Cellular localization</b>	Cell membrane and Endosome membrane. Lysosome membrane.

## Images



**Lanes 1 & 3 :** Anti-CD68 antibody [KP1] (ab955) at 1/1000 dilution

**Lanes 2 & 4 :** Anti-CD68 antibody [RM1031] (**ab303565**) at 1/1000 dilution

**Lanes 1-2 :** Human spleen tissue lysate

**Lanes 3-4 :** THP-1 (Human monocytic leukemia monocyte) whole cell lysate

Lysates/proteins at 20 µg per lane.

### Secondary

**All lanes :** Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000 dilution

**Predicted band size:** 37 kDa

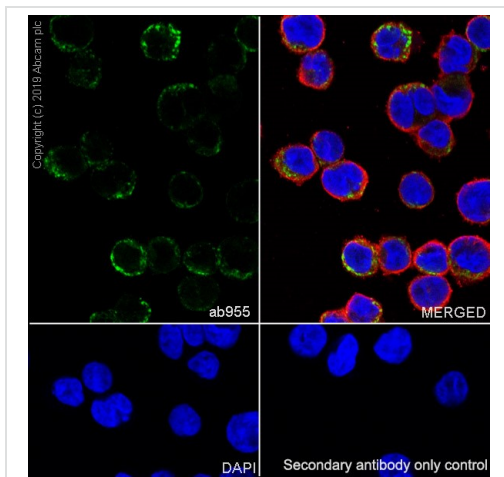
**Observed band size:** 110 kDa

Blocking and diluting buffer and concentration: 5% NFDM /TBST

Exposure time: Lane1: 60 seconds; Lane2: 5 seconds; Lane3: 180 seconds; Lane4: 7 seconds

**ab303565** works better than ab955 in western blot testing.

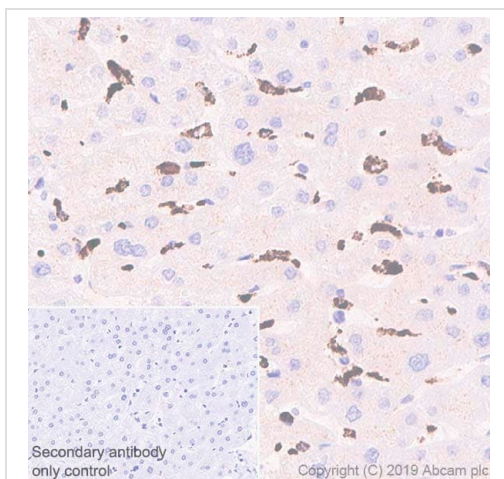
We suggest optimizing experimental protocols (increasing lysate amount, using lower dilution or higher sensitivity ECL substrate) to improve results when using ab955 in western blot.



Immunocytochemistry/ Immunofluorescence - Anti-CD68 antibody [KP1] (ab955)

Immunocytochemistry analysis of THP-1 (human monocytic leukemia monocyte) labelling CD68 with ab955 at 1/50 dilution. Cells were fixed with 100% methanol. Goat Anti-mouse IgG H&L (Alexa Fluor® 488) ([ab150113](#)) at 1/1000 was used as the secondary antibody (green). Cells were counterstained with Anti-Tubulin antibody (rabbit mAb), [ab179504](#) - AlexaFluor®594 Goat anti- Rabbit secondary, [ab150080](#) at 1/500 dilution (red). Nuclear DNA was labelled with DAPI (blue).

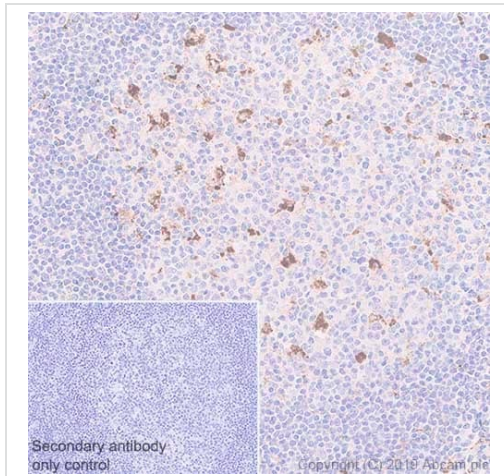
Confocal image showing cytoplasmic staining in THP-1 cells



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD68 antibody [KP1] (ab955)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human liver tissue labelling CD68 with ab955 at 1/3000 dilution. Heat mediated antigen retrieval was performed using Tris/EDTA buffer pH 9. [ab93684](#) a Goat Anti-mouse IgG H&L (HRP) was used as the secondary antibody. Negative control using PBS instead of primary antibody. Counterstained with hematoxylin.

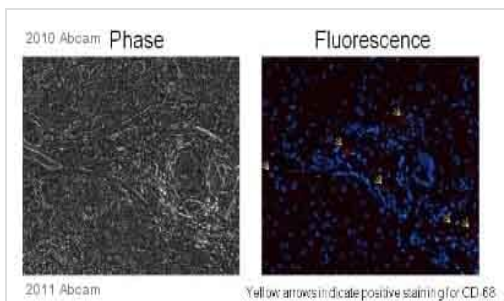
Cytoplasmic staining on Kupffer cells of human liver (PMID: 12118106).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD68 antibody [KP1] (ab955)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human tonsil tissue labelling CD68 with ab955 at 1/3000 dilution. Heat mediated antigen retrieval was performed using Tris/EDTA buffer pH 9. [ab93684](#) a Goat Anti-mouse IgG H&L (HRP) was used as the secondary antibody. Negative control using PBS instead of primary antibody. Counterstained with hematoxylin.

Cytoplasmic staining on macrophages of human tonsil (PMID: 19543531).



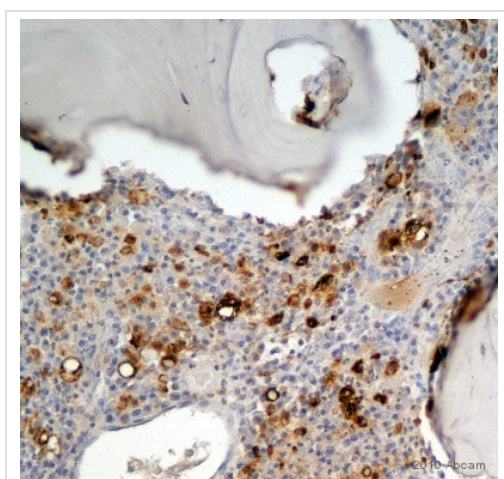
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD68 antibody [KP1] (ab955)

Image courtesy of an anonymous Abreview.

ab955 staining CD68 in human liver tissue by

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections).

Tissue was fixed with paraformaldehyde. Samples were then blocked with 10% serum for 3 hours at 22°C followed by incubation with the primary antibody at a 1/100 dilution for 16 hours at 4°C. An Alexa-Fluor® 568 conjugated goat anti-mouse polyclonal was used as secondary antibody at a 1/400 dilution.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD68 antibody [KP1] (ab955)

This image is courtesy of an anonymous Abreview

ab955 staining CD68 in human ulcerated oral (Mucosa/Bone) tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections).

Tissue was fixed with paraformaldehyde, permeabilized with 0.1% Triton-X 100 in PBS and blocked with 2.5% serum for 90 minutes at 25°C; antigen retrieval was by heat mediation in citrate buffer (pH 6). Samples were incubated with primary antibody (1/500 in 1% serum in PBS +0.01% Triton-X 100) for 16 hours at 4°C. A commercial IHC kit and DAB was used to visualize the staining.

### Why choose a recombinant antibody?



**Research with confidence**  
Consistent and reproducible results



**Long-term and scalable supply**  
Recombinant technology



**Success from the first experiment**  
Confirmed specificity



**Ethical standards compliant**  
Animal-free production

Anti-CD68 antibody [KP1] (ab955)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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