



Product Type:	Recombinant Chimeric Antibody, primary antibodies
Species reactivity:	Human
Applications:	IF-Tissue, IHC-P
Molecular Wt:	Predicted band size: 37 kDa
Clone number:	PDM0-13

Description: CD68 (Cluster of Differentiation 68) is a protein highly expressed by cells in the monocyte lineage (e.g., monocytic phagocytes, osteoclasts), by circulating macrophages, and by tissue macrophages (e.g., Kupffer cells, microglia). Human CD68 is a transmembrane glycoprotein, heavily glycosylated in its extracellular domain, with a molecular weight of 110 kD. Its primary sequence consists of 354 amino acids with predicted molecular weight of 37.4 kD if it were not glycosylated. Immunohistochemistry can be used to identify the presence of CD68, which is found in the cytoplasmic granules of a range of different blood cells and myocytes. It is particularly useful as a marker for the various cells of the macrophage lineage, including monocytes, histiocytes, giant cells, Kupffer cells, and osteoclasts. This allows it to be used to distinguish diseases of otherwise similar appearance, such as the monocyte/macrophage and lymphoid forms of leukaemia (the latter being CD68 negative). Its presence in macrophages also makes it useful in diagnosing conditions related to proliferation or abnormality of these cells, such as malignant histiocytosis, histiocytic lymphoma, and Gaucher's disease.

Immunogen: Recombinant protein within Human CD68 aa 1-354.

Positive control: Human liver tissue, human spleen tissue.

Subcellular location: Cell membrane. Endosome membrane, Lysosome membrane.

Database links: SwissProt: P34810 Human

Recommended Dilutions:

IF-Tissue	1:200-1:500
IHC-P	1:500

Storage Buffer: PBS (pH7.4).

Storage Instruction: Store at +4°C after thawing. Aliquot store at -20°C. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

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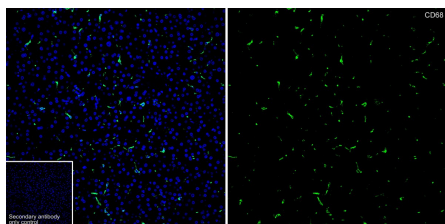
Orders: 0086-571-88062880

Technical: 0086-571-89986345

Service mail: support@huabio.cn

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Images

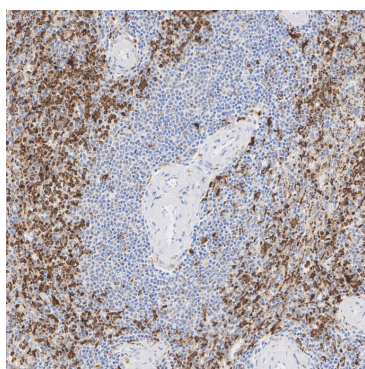
**Fig1:** Application: IF-Tissue

Species: Human

Site: liver

Sample: Paraffin-embedded section

Antibody concentration: 1/200

**Fig2:** Immunohistochemical analysis of paraffin-embedded human spleen tissue with Rat anti-CD68 antibody (HA610347) at 1/500 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (HA610347) at 1/500 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Wang L. et. al. Specific clinical and immune features of CD68 in glioma via 1,024 samples. Cancer Manag Res. 2018 Nov 27;10:6409-6419.
2. Minami K. et. al. Prognostic significance of CD68, CD163 and Folate receptor- β positive macrophages in hepatocellular carcinoma. Exp Ther Med. 2018 May;15(5):4465-4476.

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Applications: WB=Western blot IHC-P=Immunohistochemistry (paraffin) IF-Cell=Immunofluorescence (Cell) IF-Tissue=Immunofluorescence (Tissue) FC=Flow cytometry IP=Immunoprecipitation