

# CD68 Monoclonal Antibody (KP1), eBioscience™

Product Details	
Size	100 µg
Species Reactivity	Human
Published Species	Human, Mouse
Host/Isotype	Mouse / IgG1, kappa
Class	Monoclonal
Type	Antibody
Clone	KP1
Conjugate	Unconjugated
Form	Liquid
Concentration	0.5 mg/mL
Purification	Affinity chromatography
Storage buffer	PBS, pH 7.2
Contains	0.09% sodium azide
Storage conditions	4° C
RRID	AB_11151139

Applications	Tested Dilution	Publications
Western Blot (WB)	Assay-Dependent	-
Immunohistochemistry (IHC)	-	8 Publications
Immunohistochemistry (Paraffin) (IHC (P))	1 µg/mL	2 Publications
Immunohistochemistry (PFA fixed) (IHC (PFA))	-	1 Publication
Immunohistochemistry (Frozen) (IHC (F))	1 µg/mL	1 Publication
Immunocytochemistry (ICC/IF)	5 µg/ml	3 Publications
Flow Cytometry (Flow)	Assay-Dependent	4 Publications
Immunoprecipitation (IP)	Assay-Dependent	-

## Product Specific Information

Description: The KP1 antibody reacts with human CD68 which belongs to the sialomucin family and is closely related to the family of lysosomal-associated membrane proteins (lamps) and scavenger receptor. CD68 is predominantly an intracellular protein, found mainly in the late endosomal compartment but can be detected in smaller amounts on the surface of mainly myeloid-derived cells; monocytes and macrophages, dendritic cells (and in some langerhan cells), neutrophils, basophils, mast cells, myeloid progenitor cells, and a subset of CD34+ hematopoietic bone marrow progenitor cells. The function has not been fully elucidated but based on homology and structure, CD68 may play a role in antigen processing or presentation and protection of the lysosomal membrane from hydrolytic enzymes. Reports have also shown expression in activated T cells, and about 40% of peripheral blood B-lymphocytes and 50% of all B-ALL. The KP1 antibody has also been reported to stain fibroblasts which may be due to a conserved epitope rather than fibroblasts expressing CD68.

Applications Reported: This KP1 antibody has been reported for use in flow cytometric analysis, immunoprecipitation, western

blotting, immunohistochemical staining of frozen tissue sections, and immunohistochemical staining of formalin-fixed paraffin embedded tissue sections.

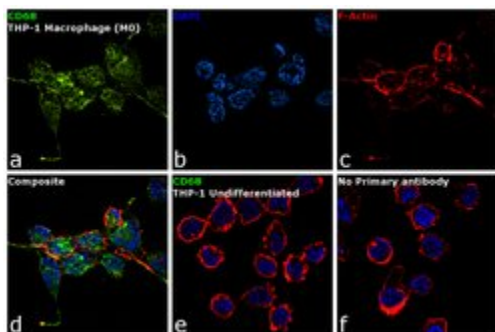
Applications Tested: This KP1 antibody has been tested by immunohistochemistry with both low and high pH antigen retrieval on FFPE tissue. Either antigen retrieval method can be used. This antibody can be used at less than or equal to 1 µg/mL. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

Purity: Greater than 90%, as determined by SDS-PAGE.

Aggregation: Less than 10%, as determined by HPLC.

Filtration: 0.2 µm post-manufacturing filtered.

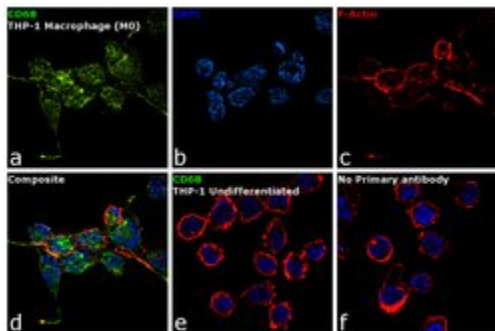
## Advanced Verification Data



### CD68 Antibody (14-0688-82)

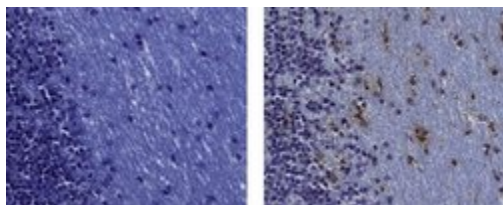
Altered expression of target protein upon cell treatment demonstrates antibody specificity. Immunofluorescence analysis of CD68 using Anti-CD68 Mouse Monoclonal Antibody (KP1) (Product # 14-0688-80) shows increased expression of proteins in THP-1 cell line upon differentiation into Macrophage (M0 phase). Cell treatment validation info.

## Product Images For CD68 Monoclonal Antibody (KP1), eBioscience™



### CD68 Antibody (14-0688-82) in ICC/IF

Immunofluorescence analysis of CD68 was performed using 70% confluent log phase THP-1 cells differentiated into Macrophage (M0 phase). The cells were fixed with 4% paraformaldehyde for 10 minutes, permeabilized with 0.1% Triton™ X-100 for 15 minutes, and blocked with 1% BSA for 1 hour at room temperature. The cells were labeled with CD68 Mouse Monoclonal Antibody (KP1) (Product # 14-0688-80) at 5 µg/mL in 0.1% BSA, incubated at 4 degree Celsius overnight and then labeled with Goat anti-Mouse IgG (H+L) Superclonal™ Secondary Antibody, Alexa Fluor® 488 conjugate (Product # A28175) at a dilution of 1:2000 for 45 minutes at room temperature (Panel a: green). Nuclei (Panel b: blue) were stained with ProLong™ Diamond Antifade Mountant with DAPI (Product # P36962). F-actin (Panel c: red) was stained with Rhodamine Phalloidin (Product # R415, 1:300). Panel d represents the merged image showing membrane localization. Panel e shows untreated cells with no signal. Panel f represents control cells with no primary antibody to assess background. The images were captured at 60X magnification.



### CD68 Antibody (14-0688-82) in IHC (P)

Immunohistochemistry on formalin-fixed paraffin embedded human cerebellar white matter, using 1 µg/mL of Mouse IgG1 Isotype Control (left) or 1 µg/mL of Anti-Human CD68 Purified (right) followed by biotinylated Anti-Mouse IgG, and DAB visualization. Nuclei are counterstained with hematoxylin.

## 19 References

## Immunohistochemistry (8)

## Scientific reports

**Sialic acid-binding immunoglobulin-like lectin-15 expression on peritumoral macrophages is a favorable prognostic factor for primary central nervous system lymphoma patients.**

"Published figure using CD68 monoclonal antibody (Product # 14-0688-82) in Immunocytochemistry"

Authors: Fudaba H, Momii Y, Hirakawa T, Onishi K, Asou D, Matsushita W, Kawasaki Y, Sugita K, Fujiki M

**Species**

Human  
Not Applicable

**Dilution**

1:500  
Not Cited

**Year**

2021

## Research square

**Modeling COVID-19 with Human Pluripotent Stem Cell-Derived Cells Reveals Synergistic Effects of Anti-inflammatory Macrophages with ACE2 Inhibition Against SARS-CoV-2.**

"14-0688 was used in Flow cytometry/Cell sorting to model the host-pathogen interaction and immune response of SARS-CoV-2 infection using a lung and macrophage co-culture system by directed differentiation of human pluripotent stem cells (hPSCs)."

Authors: Duan F, Guo L, Yang L, Han Y, Thakur A, Nilsson-Payant BE, Wang P, Zhang Z, Ma CY, Zhou X, Han T, Zhang T, Wang X, Xu D, Duan X, Xiang J, Tse HF, Liao C, Luo W, Huang FP, Chen YW, Evans T, Schwartz RE, tenOever B, Ho DD, Chen S, Lian Q, Chen HJ

**Species**

Human  
Not Applicable

**Dilution**

Not Cited  
Not Cited

**Year**

2020

View more IHC references on thermofisher.com

## Immunohistochemistry (Paraffin) (2)

## Cell reports

**Interplay between Liver X Receptor and Hypoxia Inducible Factor 1 Potentiates Interleukin-1 Production in Human Macrophages.**

"14-0688-82 was used in Immunohistochemistry (Paraffin) to investigate the role of the LXR cholesterol sensors in inflammatory process."

Authors: Ménégaut L, Thomas C, Jalil A, Julla JB, Magnani C, Ceroi A, Basmaciyan L, Dumont A, Le Goff W, Mathew MJ, Rébé C, Dérangère V, Laubriet A, Crespy V, Pais de Barros JP, Steinmetz E, Venteclef N, Saas P, Lagrost L, Masson D

**Species**

Human

**Dilution**

1:200

**Year**

2020

## Arteriosclerosis, thrombosis, and vascular biology

**Protective Aptitude of Annexin A1 in Arterial Neointima Formation in Atherosclerosis-Prone Mice-Brief Report.**

"14068882 was used in immunohistochemistry - paraffin section to examine the role of the proresolving protein annexin A1 in healing after wire injury"

Authors: de Jong RJ, Paulin N, Lemnitzer P, Viola JR, Winter C, Ferraro B, Grommes J, Weber C, Reutelingsperger C, Drechsler M, Soehnlein O

**Species**

Human

**Dilution**

1:100

**Year**

2017

## More applications with references on thermofisher.com

IHC (PFA) (1)

IHC (F) (1)

ICC/IF (3)

Flow (4)

For Research Use Only. Not for use in diagnostic procedures. Not for resale without express authorization. Products are warranted to operate or perform substantially in conformance with published Product specifications in effect at the time of sale, as set forth in the Production documentation, specifications and/or accompanying package inserts ("Documentation"). No claim of suitability for use in applications regulated by FDA is made. The warranty provided herein is valid only when used by properly trained individuals. Unless otherwise stated in the Documentation, this warranty is limited to one year from date of shipment when the Product is subjected to normal, proper and intended usage. This warranty does not extend to anyone other than the Buyer. Any model or sample furnished to Buyer is merely illustrative of the general type and quality of goods and does not represent that any Product will conform to such model or sample. NO OTHER WARRANTIES, EXPRESS OR IMPLIED, ARE GRANTED INCLUDING WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR NON-INFRINGEMENT. BUYER'S EXCLUSIVE REMEDY FOR NON-CONFORMING PRODUCTS DURING THE WARRANTY PERIOD IS LIMITED TO REPAIR, REPLACEMENT OF OR REFUND FOR THE NON-CONFORMING PRODUCT(S) AT SELLER'S SOLE OPTION. THERE IS NO OBLIGATION TO REPAIR, REPLACE OR REFUND FOR PRODUCTS AS THE RESULT OF (I) ACCIDENT, DISASTER OR EVENT OF FORCE MAJEURE, (II) MISUSE, FAULT OR NEGLIGENCE OF OR BY BUYER, (III) USE OF THE PRODUCTS IN A MANNER FOR WHICH THEY WERE NOT DESIGNED, OR (IV) IMPROPER STORAGE AND HANDLING OF THE PRODUCTS. Unless otherwise expressly stated on the Product or in the documentation accompanying the Product, the Product is intended for research only and is not to be used for any other purpose, including without limitation, unauthorized commercial uses, in vitro diagnostic uses, ex vivo or in vivo therapeutic uses, or any type of consumption by or application to human or animals.