SCETI

Code No.KT117

For research use only

Anti Human Macrophage (CD68) Monoclonal Antibody (Clone No. PM-1K)

Macrophages are present in nearly all tissues and organs of the body. They are differentiated from monocytes derived from the bone marrow. Macrophages and monocytes are phagocytes, acting in both innate immunity and cell-mediated immunity of vertebrate animals. Their function is to phagocytize cellular debris and pathogens, and to stimulate lymphocytes and other immune cells to respond to the pathogen.

Macrophages are able to be identified immnohistochemically by virtue of the presence of monocyte/macrophage-associated antigens such as CD68. Antibodies recognizing CD68 have been used as some of the best reagents to detect macrophages in tissues.

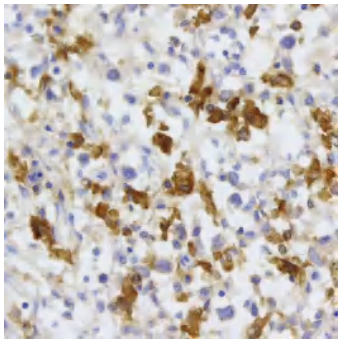
CD68 is a 110-kD transmembrane glycoprotein that is highly expressed by human monocytes and tissue macrophages. It is a member of the lysosomal/endosomal-associated membrane glycoprotein (LAMP) family.

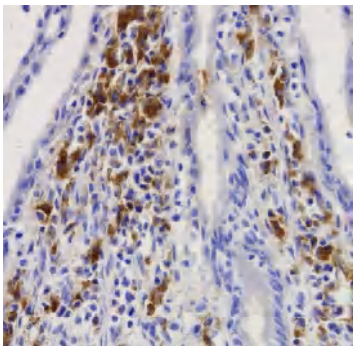
This antibody recognizes CD68 antigen. The molecular size of the antigen identified by this antibody was 110 kDa. Immunopecipitated antigen by this antibody was also recognized by the other CD68 antibodies such as KP-1 and PG-M1.

In immunohistochemical assays, this antibody recognizes freshly isolated human blood monocytes and tissue macrophages. This antibody also recognizes macrophages obtained from guinea pigs, pigs, bovine species, and monkeys. Since this antibody strongly labels guinea pig macrophages, this antibody will be suitable to examine such macrophages in experimental guinea pig models.

This antibody will be very useful to research of CD68, macrophage, allergic diseases and delayed hypersensitivity.

Package Size	50 μ g (200 μ L/ vial)
Format	Mouse monoclonal antibody 0.25mg/mL
Buffer	PBS [containing 2% Block Ace as a stabilizer, 0.1%Proclin as a bacteriostat]
Storage	Store below -20℃ Once thawed, store at 4℃. Repeated freeze-thaw cycles should be avoided.
Subclass	IgG2b,κ
Purification method	The splenic lymphocytes from BALB/c mouse, immunized with human peritoneal cells from patients with endometriosis incubated for 24 hours, were fused with mouse NS-1 myeloma cells. The hybridoma cell line with positive reaction was grown in ascitic fluid of BALB/c mouse, from which the antibody was purified by Protein G affinity chromatography.
Working dilution for	immunohistochemistry: 10 μ g/mL





Left; Human spleen (frozen section): Red pulp macrophages are positive.

Right; Small Intestine of Guinea Pig (paraffin section): Macrophages in lamina propria are positive.

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【Distribution of positive reactivities of PM-1K with human monocyte/macropahes】

Tissues	Cells	Tissues	Cells
Heart	Intramuscular M ϕ	Lymph nodes	M ϕ in follicles M ϕ in paracortical areas
Lung	Alveolar M ϕ	Pancreas, Salivary, Thyroid, Adrenals, Urinary bladder, Prostate, Trachea	Interstitial M ϕ Stomach, Small and Large intestines M ϕ in lamia propria
Liver	Kupffer cells M ϕ in portal triads	Skin	Dermal M ϕ Langerhans cells
Kidney	Interstitial M ϕ Uriniferous tubule cells	Blood monocytes	Freshly isolated monocytes
Spleen	Red pulp M ϕ White pulp M ϕ	Blood neutrophils	Freshly isolated neutrophils
Thymus	M ϕ in cortex M ϕ in medulla	Myeloid cell lines	THP-1 MonoMac6

M ϕ : macrophage

【Reference】*Application Reference

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2. Suenaga Y, Katabuchi H, Fukumatsu Y, Okamura H. Distribution and cytological properties of macrophages in human Fallopian tubes. *Acta Anat (Basel)*, 163:10-19, 1998
3. Imamura T, Iyama K, Takeya M, Kambara T, Nakamura S. Role of macrophage tissue factor in the development of the delayed hypersensitivity reaction in monkey skin. *Cell Immunol*, 152:614-622, 1993
4. Okamoto M, Yamamoto T, Matsubara S, Kukita I, Takeya M, Miyauchi Y, Kambara T. Factor XIII-dependent generation of 5th complement component(C5)-derived monocyte chemotactic factor coinciding with plasma clotting. *Biochem Biophys Acta*, 1138:53-61, 1992

Supplier

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