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Code No.KT013

For research use only

Anti Human Macrophage Surface Antigen Monoclonal Antibody (Clone No. AM-3K)

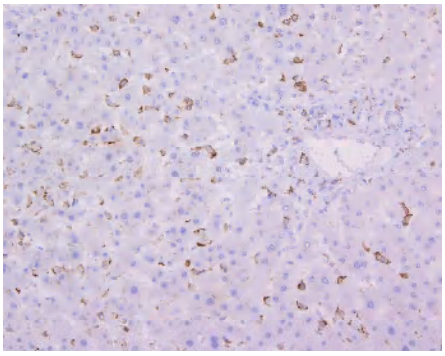
This anti-macrophage monoclonal antibody, AM-3K, was produced by using human alveolar macrophages as immunogen. AM-3K reacts intensely with most of macrophages in lymphoreticular organs and in many other organs and tissues. AM-3K also reacts with the macrophages in many pathological conditions. However, this antibody does not react with dendritic cell population, such as epidermal Langerhans cells, interdigitating cells in the paracortex of lymph nodes, nor follicular dendritic cells. Lymphocytes, granulocytes and freshly isolated blood monocytes are also negative. Reaction products for AM-3K were found on the cytoplasmic membrane of macrophages by immunoelectron microscopy.

In both cryostat sections and formalin-fixed paraffin sections, this antibody recognizes the antigen presenting on the cell surface membrane of tissue macrophages, but not monocytes or dendritic cells.

The molecular weights of the antigen recognized by AM-3K are 120 and 70 kDa.

Package Size	50 μg (200 μL / vial)
Format	Mouse monoclonal antibody 0.25mg/mL
Buffer	Block Ace as a stabilizer, containing 0.1% Proclin as a bacteriostat
Storage	Store below –20℃ Once thawed, store at 4℃. Repeated freeze-thaw cycles should be avoided
Clone No.	AM-3K
Subclass	IgG1
Purification method	The splenic lymphocytes from BALB/c mouse, immunized with human alveolar macrophages, were fused to myeloma NS-1 cells. The screening of the hybridoma cells was performed on cryostat sections of human lung. The cell line (AM-3K) with positive reaction was grown in ascitic fluid of BALB/c mouse, from which the antibody was purified by Protein G affinity chromatography.

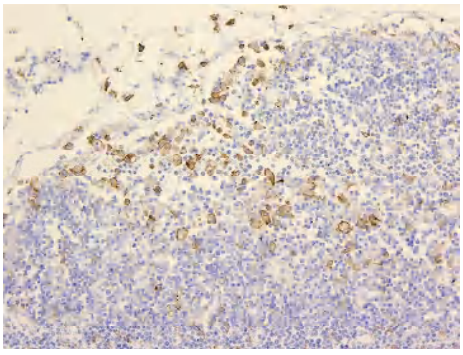
Working dilution for immunohistochemistry: 10 μg/mL, on frozen sections and paraffin sections.
Antigen retrieval (microwave 10min, 0.01M citrate buffer, pH2.0) recommended.



Human liver (paraffin section):

Kupffer cells are positively stained

Takeya M.,
Second Department of Pathology, Kumamoto University School of Medicine, Kumamoto, Japan



Human lymph node (paraffin section):.

Macrophages in marginal sinus are positively stained.

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Second Department of Pathology, Kumamoto University School of Medicine, Kumamoto, Japan

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【Specificity】

Organ	reaction	
	positive	negative
Thymus	Macrophages in cortex Macrophages in medulla	
Spleen	Red pulp macrophages White pulp marginal zone macrophages	IDCs in PALS
Lymph nodes	TB macrophages in follicles Sinus macrophages	IDCs in paracortical areas
Lungs	Alveolar macrophages	
Liver	Kupffer cells	
Skin	Dermal macrophages	Langerhans cells
Brain	Microglial cells	
Others		Renal tubules Blood monocytes

PALS=periarteriolar lymphatic sheath; TB=tingible body;
IDCs=interdigitating cells

【Interspecies reactivity】

Positive: Human, Monkey, Horse, Bovine, Pig, Goat, Dog, Cat, Rabbit, Guinea pig .

【References】

1 Zeng L., Takeya M., and Takahashi K. (1996) AM-3K, A novel monoclonal antibody specific for tissue macrophages and its applications to pathological investigation. *Journal of Pathology 178* : 207-214

2 Yamate J., Yoshida H., Tsukamoto Y., Ide M., Kuwamura M., Ohashi F., Miyamoto T., Kotani T., Sakuma S., Takeya M. (2000) Distribution of cells immunopositive for AM-3K, a novel monoclonal antibody recognizing human macrophages, in normal and diseased tissues of dogs, cats, horses, cattle, pigs and rabbits. *Vet Pathol* 37(2): 168-176

3 Zeng L., Takeya M., Ling X., Nagasaki A., Takahashi K. (1996) Interspecies reactivities of anti-human macropharge monoclonal antibodies to various animal species. *J Histochem Cytochem* 44(8): 845-853

4 Frangogiannis NG., Burns AR., Micheal LH., Entman ML. (1999) Histochemical and morphological characteristics of canine cardiac mast cells. *Histochem J* 31(4):221-229

Supplier

SCETI K.K.

3-6-7 Kasumigaseki, Chiyoda-ku, Tokyo 100-0013, JAPAN

Tel +81(3) 5510-2347 Fax +81(3) 5510-0133

URL: http://www.sceti.jp/export/ e-mail: exp-pet@sceti.co.jp