Code No. KT118

For research use only

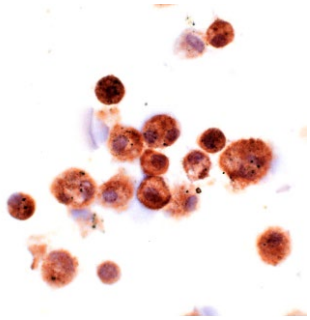
Anti Human Macrophage Scavenger Receptor A (MSR- A:CD204) Monoclonal Antibody (Clone No. SRA-C6)

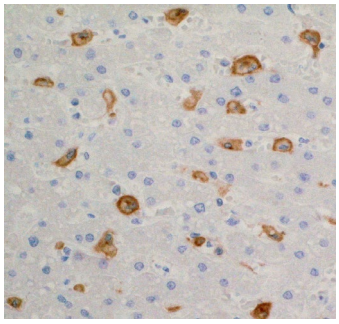
Class A macrophage scavenger receptor (MSR-A: CD204) was identified in the search for the receptor molecules that are implicated in the pathological deposition of cholesterol during atherogenesis through receptor-mediated uptake of modified low density lipoprotein (LDL). MSR-A possesses a wide range of ligand-binding specificities and recognize a variety of molecules such as modified LDL including acetylated LDL, oxidized LDL, advanced glycation end products (AGEs), polyribonucleotides such as poly G and poly I and bacterial surface lipids including lipopolysaccharide and lipoteicoic acid.

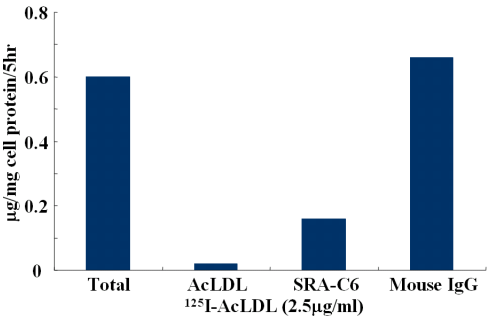
This antidody was produced from the mouse immunized with recombinant protein of human type I MSR-A ,and has been proved to be useful for the western blotting and immunohistochemistry. This antibody also inhibits the endocytic degradation of acetylated LDL and oxidized LDL by high glucose-treated human monocyte-derived macrophages and has anti MSR-A neutralizing activity.

This antibody is useful tools for the study of MSR-A in atherogenesis and various other pathological conditions.

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.
Clone No.	SRA-C6
Subclass	IgG1
Purification method	The spleen cells obtained from MSR-A deficient mouse, immunized with recombinant protein corresponding to amino acid 131-451 of human type I MSR-A, were fused with mouse NS-1 myeloma cells. The hybridoma cell line with positive reaction was grown on non-serum medium, from which the antibody was purified by Protein G affinity chromatography.
Working dilution for	immunohistochemistry: 5.0 μ g/ml, western blotting : 1.0 μ g/ml, Neutralization: Depends on the experimental design(Application Reference:1)







Left:. Human alveolar macrophages(Cytospin preparation): Most macrophages are positive.

Center: Human liver (paraffin section): Kupffer cells are positive

Right: Neutralizing activity of SRA-C6 (20 μ g/ml): Inhibitory effect of anti-human SR-A antibody on the degradation of ^{125}I-AcLDL by human monocyte-derived macrophages(day7)

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Trans Genic Inc.

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Anti Human Macrophage Scavenger Receptor A (MSR- A:CD204) Monoclonal Antibody (Clone No. SRA-C6)

【Specificity】

Organ	Reaction		Organ	Reaction	
	Positive	Negative		Positive	Negative
Heart	Intramuscular M ϕ (+-)		Trachea	Mucosal M ϕ (+-)	
Lung	Alveolar M ϕ (+) M ϕ in alveolar septa (+-)		Esophagus	Interstitial M ϕ (+-)	
Liver	Kupffer cells (+) M ϕ in portal triads(+)		Stomach	M ϕ in lamina propria(+) M ϕ in striated muscle(+-)	
Kidney	Interstitial M ϕ (+)		Small and large intestines	M ϕ in lamina propria(+) M ϕ in striated muscle(+-)	
Spleen	Red pulp M ϕ (+)	Interdigitating cells	Skin	Dermal M ϕ (+)	Langerhans cells
Thymus	Interlobular M ϕ (+)		Brain (cerebrum and cerebellum)	Perivascular M ϕ (Mato cells) (+)	
Lymph nodes	Sinus M ϕ (+)	Tingible body M ϕ Interdigitating cells	Testes	Interstitial M ϕ (+)	
Pancreas	Interlobular M ϕ (+)		Uterus	Interstitial M ϕ (+)	
Salivary gland	Interlobular M ϕ (+)		Ovaries	Interstitial M ϕ (+)	
Thyroid	Interfollicluar M ϕ (+-)		Placenta	Hofbauer cells (+)	
Parathyroid	Interlobular M ϕ (+-)		Bone marrow	M ϕ (+)	Myeloid precursor cells
Adrenals	Interstitial M ϕ (+)		Blood monocyte	3 days in culture (+)	Freshly isolated
Urinary bladder	Interstitial M ϕ (+-)				
Prostate	Interstitial M ϕ (+-)				

M ϕ : macrophage 、(+): most cells were positive; (+-): about 10-50% of cells were positive

【Application Reference】

1. Fukuhara-Takaki K., Sakai M., Sakamoto Y., Takeya M., Horiuchi S.: Expression of class A scavenger receptor is enhanced by high glucose in vitro and under diabetic conditions in vivo: one mechanism for an increased rate of atherosclerosis in diabetes.: J Biol Chem. 280(5): 3355-3364, 2005
2. Tomokiyo R., Jinnouchi K., Honda M., Wada Y., Hanada N., Hiraoka T., Suzuki H., Kodama T., Takahashi K., Takeya M.: Production, characterization, and interspecies reactivities of monoclonal antibodies against human class A macrophage scavenger receptors: Atherosclerosis, 161:123-132, 2002

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