

## CD206 Monoclonal Antibody (MR5D3), Biotin

Catalog Number **MA5-16869**

Product data sheet

Details		Species Reactivity	
Size	100 µg	Species reactivity	Mouse
Host/Isotope	Rat / IgG2a	Published species	Mouse
Class	Monoclonal	Tested Applications	
Type	Antibody	Flow Cytometry (Flow)	Neat-1:10
Clone	MR5D3	Immunohistochemistry (Frozen) (IHC (F))	Assay-dependent
Immunogen	Chimaeric CRD4-7-Fc protein.	Published Applications	
Conjugate	Biotin	Immunohistochemistry (IHC)	See 1 publications below
Form	Liquid	* Suggested working dilutions are given as a guide only. It is recommended that the user titrate the product for use in their own experiment using appropriate negative and positive controls.	
Concentration	0.1 mg/mL		
Purification	Protein G		
Storage buffer	PBS with 1% BSA		
Contains	0.09% sodium azide		
Storage Conditions	Store at 4°C short term. For long term storage, store at -20°C, avoiding freeze/thaw cycles.		

### Product specific information

CD206 is expressed weakly at the cell surface. Staining may be increased following membrane permeabilization. For FACS analysis, use 10 µL of the suggested working dilution to label 1x10<sup>6</sup> cells in 100 µL. Rat anti mouse CD206 antibody, clone MR5D3 recognizes the mouse mannose receptor, a approximately 175 kDa type 1 membrane glycoprotein that is also known as CD206.

### Background/Target Information

CD206 (MSR, Mannose receptor, MRC1) is a 175 kDa transmembrane protein belonging to the group of pattern recognition receptors. CD206 is predominantly expressed in tissue macrophages, dendritic cells, a subpopulation of endothelial cells and sperm cells. CD206 is thought to play a role in the innate and adaptive immune response. CD206 is also expressed on microglia and mato cells of the brain but not astrocytes or neurons. CD206 also mediate the recognition and uptake of a variety of macromolecules, including modified lipoproteins, advanced glycation end (AGEs) products and amyloid b-protein (Abeta). While the normal role of CD206 is associated with cell adhesion and host defense mechanisms, it also has been implicated in the development of atherosclerosis and Amyloid beta deposition in Alzheimer's disease (AD). CD206's gene encodes the class A macrophage scavenger receptors, which include three different types (1, 2, 3) generated by alternative splicing. The isoforms type 1 and type 2 are functional receptors and are able to mediate the endocytosis of modified low density lipoproteins (LDLs). The isoform type 3 does not internalize modified LDL (acetyl-LDL) despite having the domain shown to mediate this function in the types 1 and 2 isoforms. CD206 has an altered intracellular processing and is trapped within the endoplasmic reticulum, making it unable to perform endocytosis. The isoform type 3 can inhibit the function of isoforms type 1 and type 2 when co-expressed, indicating a dominant negative effect and suggesting a mechanism for regulation of scavenger receptor activity in macrophages. Other diseases associated with CD206 dysfunction include leprosy and Gaucher's Disease.

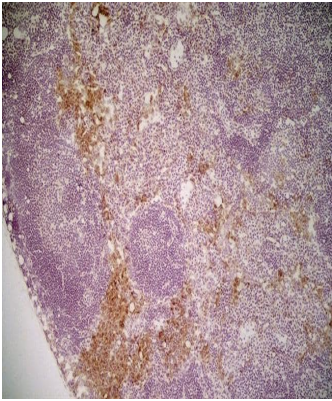
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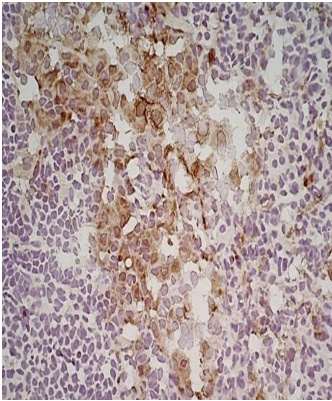
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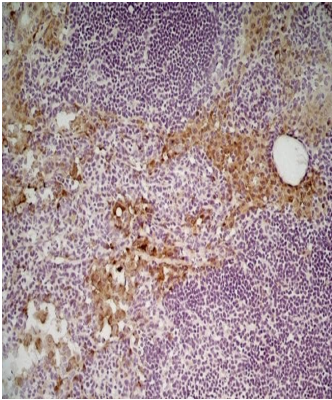
Product Images For CD206 Monoclonal Antibody (MR5D3), Biotin



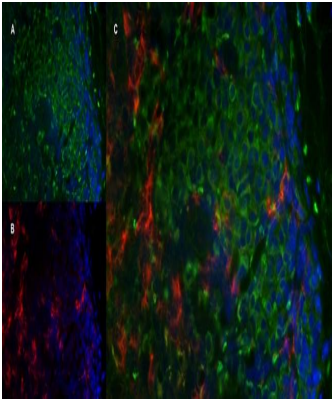
**CD206 Antibody (MA5-16869) in IHC (F)**  
Immunohistochemistry was performed on mouse lymph node cryosection. Samples were probed with a Monoclonal Mannose Receptor/CD206 anditbody (Product # MA5-16869) and stained with Immunoperoxidase, followed by horseradish peroxidase conjugated Goat anti Rat IgG antibody.



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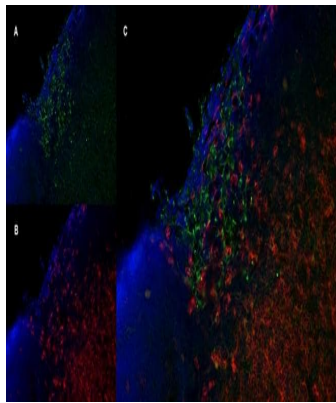


**CD206 Antibody (MA5-16869) in IHC (F)**  
Immunofluorescence staining of mouse lymph node cryosection with a (A: Green) Monoclonal Mannose Receptor /CD206 antibody (Product # MA5-16869) and (B: Red) Rat anti Mouse CD8 antibody. (C) merged image with nuclei counterstained blue using DAPI. Low power.

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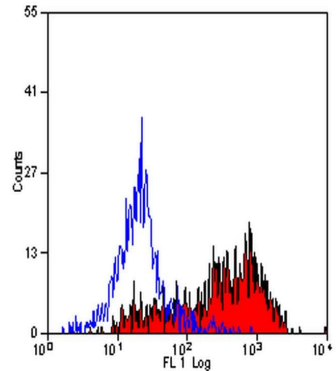
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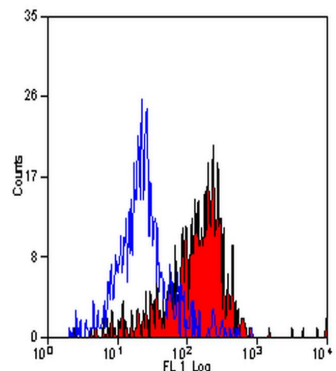
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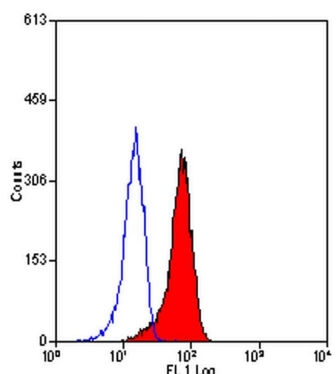
### CD206 Antibody (MA5-16869) in Flow

Flow cytometry analysis of Mannose Receptor / CD206 in mouse peritoneal macrophage cells. Cells were probed with probed with a Monoclonal Mannose Receptor / CD206 (Product # MA5-16869).



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### CD206 Antibody (MA5-16869) in Flow

Flow cytometry analysis of Mannose Receptor / CD206 in J774 cells. Cells were permeabilized with Leucoperm, then probed with a Monoclonal Mannose Receptor / CD206 (Product # MA5-16869).

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PubMed References For CD206 Monoclonal Antibody (MR5D3), Biotin

1 Immunohistochemistry References

Species / Dilution	Summary
Mouse / 1:100	<p>MA5-16869 was used in Immunohistochemistry to suggest that d-mannose, an over-the-counter supplement with a high safety profile, may be a low-cost treatment option for neuroinflammatory diseases such as multiple sclerosis.</p> <p>Proceedings of the National Academy of Sciences of the United States of America ( 2021; 118: ) <b>"d-mannose suppresses oxidative response and blocks phagocytosis in experimental neuroinflammation."</b> Author(s):Wang J,Jalali Motlagh N,Wang C,Wojtkiewicz GR,Schmidt S,Chau C,Narsimhan R,Kullenberg EG,Zhu C, Linnoila J,Yao Z,Chen JW PubMed Article URL:<a href="http://dx.doi.org/10.1073/pnas.2107663118">http://dx.doi.org/10.1073/pnas.2107663118</a></p>

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