

## Monoclonal Antibody to CD206 / MRC1 - PE

<b>Alternate names:</b>	C-type lectin domain family 13 member D, C-type lectin domain family 13 member D-like, CLEC13D, CLEC13DL, MRC1L1, Macrophage mannose receptor 1, Macrophage mannose receptor 1-like protein 1
<b>Catalog No.:</b>	SM1857R
<b>Quantity:</b>	100 Tests
<b>Background:</b>	CD206, also known as macrophage mannose receptor type C (MMR or MRC1), is a type I membrane receptor protein. CD206 is a phagocytic and endocytic receptor that can recognize carbohydrate ligands in target molecules. The extracellular portion of the protein includes eight C-type carbohydrate recognition domains (CRD) which are clustered together to achieve higher affinity binding to saccharides. CD206 is found on macrophages and on endothelial cells of the liver and is the only known example of a C-type lectin that contains multiple C-type CRDs. CD206 mediates the endocytosis of glycoproteins by macrophages and binds high-mannose structures on the surface of potentially pathogenic viruses, fungi and bacteria enabling them to be neutralized by phagocytic engulfment. During inflammation, CD206 is crucial for rapid clearance of several mannose-bearing serum glycoproteins but does not regulate the initiation of inflammation. CD206 is primarily expressed in mature tissue macrophages and immature Dendritic cells, as well as hepatic and lymphatic endothelial cells, retinal pigmented epithelium (RPE) and mesangial cells.
<b>Uniprot ID:</b>	<a href="#">Q61830</a>
<b>NCBI:</b>	<a href="#">NP_032651.2</a>
<b>GeneID:</b>	<a href="#">17533</a>
<b>Host / Isotype:</b>	Rat / IgG2a
<b>Clone:</b>	MR5D3
<b>Immunogen:</b>	Chimaeric CRD4-7-Fc protein. Spleen cells from immunised Fischer rats were fused with cells of the Y3 myeloma cell line.
<b>Format:</b>	<b>State:</b> Lyophilized purified IgG fraction <b>Purification:</b> Affinity Chromatography on Protein G <b>Buffer System:</b> PBS, pH 7.4 <b>Preservatives:</b> 0.09% Sodium Azide <b>Stabilizers:</b> 1% BSA, 5% Sucrose <b>Label:</b> PE – R. Phycoerythrin (RPE) <b>Reconstitution:</b> Restore with 1 ml distilled water.
<b>Applications:</b>	<b>Flow Cytometry:</b> Use 10 µl of neat CD206 antibody to label 10 <sup>6</sup> cells in 100 µl. CD206 is expressed weakly at the cell surface. Staining may be increased following membrane permeabilisation.

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Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

**Specificity:** This antibody recognises the mannose receptor, a 175kD type 1 membrane protein that is also known as CD206.  
Clone MR5D3 has been reported to be non-inhibitory for the binding of the mannose receptor to carbohydrate ligands.

**Species Reactivity:** **Tested:** Mouse.

**Storage:** Store the antibody undiluted at 2-8°C.

**DO NOT FREEZE!**

This product is photosensitive and should be protected from light.

Shelf life: one year from date of despatch.

**General References:**

1. Martinez-Pomares, L. et al. (2003) Analysis of mannose receptor regulation by IL-4, IL-10 and proteolytic processing using novel monoclonal antibodies. *J. Leuk. Biol.* 73: 604-613.
2. Zamze, S. et al. (2002) Recognition of bacterial capsular polysaccharides and lipopolysaccharides by the macrophage mannose receptor. *J. Biol. Chem.* 277: 41613-41623.
3. Hassan, M.F. et al. (2006) The *Schistosoma mansoni* hepatic egg granuloma provides a favorable microenvironment for sustained growth of *Leishmania donovani*. *Am J Pathol.* 169: 943-53.
4. Hardison, S.E. et al. (2010) Interleukin-17 Is Not Required for Classical Macrophage Activation in a Pulmonary Mouse Model of *Cryptococcus neoformans* Infection. *Infect Immun.* 78: 5341-51.
5. Geier, H. et al. (2011) Phagocytic receptors dictate phagosomal escape and intracellular proliferation of *Francisella tularensis*. *Infect Immun.* Mar 21. [Epub ahead of print]
6. Bacci, M. et al. (2009) Macrophages are alternatively activated in patients with endometriosis and required for growth and vascularization of lesions in a mouse model of disease. 175: 547-56.
7. Chavele, K.M. et al. (2010) Mannose receptor interacts with Fc receptors and is critical for the development of crescentic glomerulonephritis in mice. *J Clin Invest.* 120: 1469-78.
8. deSchoolmeester, M.L. et al. (2009) The mannose receptor binds *Trichuris muris* excretory/secretory proteins but is not essential for protective immunity. *Immunology.* 126: 246-55.
9. Devey, L. et al. (2009) Tissue-resident macrophages protect the liver from ischemia reperfusion injury via a heme oxygenase-1-dependent mechanism. *Mol Ther.* 17: 65-72.
10. Dewals, B.G. et al. (2010) IL-4Ralpha-independent expression of mannose receptor and Ym1 by macrophages depends on their IL-10 responsiveness. *PLoS Negl Trop Dis.* 4(5):e689.
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12. Hawkes, C.A. et al. (2009) Selective targeting of perivascular macrophages for clearance of beta-amyloid in cerebral amyloid angiopathy. *Proc Natl Acad Sci U S A.* 106: 1261-6.
13. Zehner, M. et al. (2011) Mannose receptor polyubiquitination regulates endosomal recruitment of p97 and cytosolic antigen translocation for cross-presentation. *Proc Natl Acad Sci U S A.* 108: 9933-8.
14. Famulski, K.S. et al. (2010) Alternative macrophage activation-associated transcripts in T-cell-mediated rejection of mouse kidney allografts. *Am J Transplant.* 2010 Mar;10(3): 490-7.

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