

# Datasheet: MCA2155T BATCH NUMBER 159744

Description:	MOUSE ANTI HUMAN CD206		
Specificity:	CD206		
Other names:	MANNOSE RECEPTOR C TYPE 1		
Format:	Purified		
<b>Product Type:</b>	Monoclonal Antibody		
Clone:	15-2		
Isotype:	IgG1		
Quantity:	25 μg		

# **Product Details**

## **Applications**

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit <a href="www.bio-rad-antibodies.com/protocols">www.bio-rad-antibodies.com/protocols</a>.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	•			
Immunohistology - Frozen	•			
Immunohistology - Paraffin				
ELISA				
Immunoprecipitation				
Western Blotting (1)	•			
Immunofluorescence	•			

Where this antibody has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. It is recommended that the user titrates the antibody for use in their own system using appropriate negative/positive controls.

(1)Clone 15-2 recognises a protein of approximately 175kDa under non-reducing

conditions.

Target Species	Human
Product Form	Purified IgG - liquid
Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	<0.1% Sodium Azide (NaN <sub>3</sub> )

Approx. Protein Concentrations

IgG concentration 0.5 mg/ml

Immunogen

Purified human mannose receptor.

## External Database Links

**UniProt**:

P22897 Related reagents

**Entrez Gene:** 

4360 MRC1 Related reagents

**Synonyms** 

CLEC13D

**RRID** 

AB\_2144910

#### **Fusion Partners**

Spleen cells from immunised Balb/c mice where fused with cells of the SP2/0 Ag.14 mouse myeloma cell line.

## **Specificity**

Mouse anti Human CD206 monoclonal antibody, clone 15-2 recognizes human macrophage mannose receptor 1, also known as CD206 or C-type lectin domain family 13 member D-like. CD206 is a ~175 kDa single pass type I transmembrane glycoprotein belonging to the group of pattern recognition receptors (Paveley et al. 2011). CD206 has multiple carbohydrate recognition motifs and acts as a receptor for bacteria, fungi and other pathogens (Ezekowitz et al. 1990). CD206 is predominantly expressed in tissue macrophages and dendritic cells (Engering et al. 1997) and can also be found in a subpopulation of endothelial cells (Pack et al. 2007) and sperm cells (Cardona-Maya et al. 2006). CD206 can also be detected in a soluble form in human plasma and is elevated in patients with acute sepsis (Rødgaard-Hansen et al. 2013).

Mouse anti CD206, clone 15-2 has been used extensively to monitor mannose receptor modulation in macrophages treated with a wide range of cytokines and growth factors (Chang et al. 2004) and to indicate CD206 as a marker for alternative activation of macrophages (Joerink et al. 2011).

## **Flow Cytometry**

Use 10ul of the suggested working dilution to label 10<sup>6</sup> cells in 100ul.

#### References

- 1. Barrett-Bergshoeff, M. *et al.* (1997) Monoclonal antibodies against the human mannose receptor that inhibit the binding of tissue-type plasminogen activator. <u>Thromb Haemost.</u> 77: 718-24.
- 2. Koning, N. *et al.* (2009) Distribution of the immune inhibitory molecules CD200 and CD200R in the normal central nervous system and multiple sclerosis lesions suggests neuron-glia and glia-glia interactions. <u>J Neuropathol Exp Neurol</u>. 68: 159-67.
- 3. Emara, M. *et al.* (2011) Recognition of the major cat allergen Fel d 1 through the cysteine-rich domain of the mannose receptor determines its allergenicity. <u>J Biol Chem.</u> 286:13033-40.
- 4. Chang, S.K. *et al.* (2008) B lymphocyte stimulator regulates adaptive immune responses by directly promoting dendritic cell maturation. <u>J Immunol</u>. 180: 7394-403.

- 5. MacKinnon, A.C. *et al.* (2008) Regulation of alternative macrophage activation by galectin-3. J Immunol. 180: 2650-8.
- 6. Lai, W.K. *et al.* (2006) Expression of DC-SIGN and DC-SIGNR on human sinusoidal endothelium: a role for capturing hepatitis C virus particles. Am J Pathol. 169: 200-8.
- 7. Ueno, N. *et al.* (2009) Differences in human macrophage receptor usage, lysosomal fusion kinetics and survival between logarithmic and metacyclic *Leishmania infantum chagasi* promastigotes. Cell Microbiol. 11: 1827-41.
- 8. Kato, M. *et al.* (2000) Expression of multilectin receptors and comparative FITC-dextran uptake by human dendritic cells. <u>Int Immunol. 12:1511-9.</u>
- 9. Chang, Y.C. *et al.* (2004) Modulation of macrophage differentiation and activation by decoy receptor 3. J Leukoc Biol. 75: 486-94.
- 10. Yamamoto, H. *et al.* (2011) Sphingosylphosphorylcholine and lysosulfatide have inverse regulatory functions in monocytic cell differentiation into macrophages. <u>Arch Biochem Biophys. 506: 83-91.</u>
- 11. He, L.Z. *et al.* (2007) Antigenic targeting of the human mannose receptor induces tumor immunity. J Immunol. 178: 6259-67.
- 12. Sturge, J. *et al.* (2007) Mannose receptor regulation of macrophage cell migration. <u>J Leukoc Biol. 82: 585-93.</u>
- 13. Torrelles, J.B. *et al.* (2006) Fine discrimination in the recognition of individual species of phosphatidyl-myo-inositol mannosides from *Mycobacterium tuberculosis* by C-type lectin pattern recognition receptors. <u>J Immunol. 177 (3): 1805-16.</u>
- 14. Larsson, K. *et al.* (2015) COX/mPGES-1/PGE2 pathway depicts an inflammatory-dependent high-risk neuroblastoma subset. Proc Natl Acad Sci U S A. 112 (26): 8070-5.
- 15. Stankevich, K.S. *et al.* (2015) Surface modification of biomaterials based on high-molecular polylactic acid and their effect on inflammatory reactions of primary human monocyte-derived macrophages: perspective for personalized therapy. <u>Mater Sci Eng C Mater Biol Appl. 51: 117-26.</u>
- 16. Yamane, K. & Leung, K.P. (2016) Rabbit M1 and M2 macrophages can be induced by human recombinant GM-CSF and M-CSF. FEBS Open Bio. 6 (9): 945-53.
- 17. Karna, S.L. *et al.* (2016) RNA-Seq Transcriptomic Responses of Full-Thickness Dermal Excision Wounds to *Pseudomonas aeruginosa* Acute and Biofilm Infection. <u>PLoS One.</u> 11 (10): e0165312.
- 18. Özçelik H *et al.* (2015) Harnessing the multifunctionality in nature: a bioactive agent release system with self-antimicrobial and immunomodulatory properties. <u>Adv Healthc Mater. 4 (13): 2026-36.</u>
- 19. Argueta-Donohué J *et al.* (2016) Differential phagocytosis of *Leishmania mexicana* promastigotes and amastigotes by monocyte-derived dendritic cells. <u>Microbiol Immunol.</u> 60 (6): 369-81.

## Storage

This product is shipped at ambient temperature. It is recommended to aliquot and store at -20°C on receipt. When thawed, aliquot the sample as needed. Keep aliquots at 2-8°C for short term use (up to 4 weeks) and store the remaining aliquots at -20°C.

Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended.

## Guarantee

12 months from date of despatch

Health And Safety Information

Material Safety Datasheet documentation #10040 available at:

https://www.bio-rad-antibodies.com/SDS/MCA2155T

10040

Regulatory

For research purposes only

# **Related Products**

## **Recommended Secondary Antibodies**

Rabbit Anti Mouse IgG (STAR12...) RPE

Goat Anti Mouse IgG IgA IgM (STAR87...) HRP

Goat Anti Mouse IgG (STAR76...) RPE

Rabbit Anti Mouse IgG (STAR13...) HRP

Goat Anti Mouse IgG (STAR70...) FITC

Goat Anti Mouse IgG (H/L) (STAR117...) Alk. Phos., DyLight®488, DyLight®550,

DyLight®650, DyLight®680, DyLight®800,

FITC, HRP

Rabbit Anti Mouse IgG (STAR9...) FITC

Goat Anti Mouse IgG (STAR77...) HRP

Goat Anti Mouse IgG (Fc) (STAR120...) FITC, HRP

## **Recommended Negative Controls**

### MOUSE IgG1 NEGATIVE CONTROL (MCA928)

 North & South
 Tel: +1 800 265 7376
 Worldwide
 Tel: +44 (0)1865 852 700
 Europe
 Tel: +49 (0) 89 8090 95 21

 America
 Fax: +1 919 878 3751
 Fax: +44 (0)1865 852 739
 Fax: +49 (0) 89 8090 95 50

To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets

'M389388:210806'

#### Printed on 19 Jan 2024

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