PE/Dazzle™ 594 anti-mouse CD206 (MMR) Antibody

Catalog# / Size	141731 / 25 µg 141732 / 100 µg
Clone	C068C2
Regulatory Status	RUO
Other Names	MMR (macrophage mannose receptor), MR (mannose receptor), MRC1
Isotype	Rat IgG2a, κ
Description	CD206, also known as mannose receptor (MR), is a 175 kD type I membrane protein. It is a pattern recognition receptor (PRR) belonging to the C-type lectin superfamily. MR is expressed on macrophages, dendritic cells, Langerhans cells, and hepatic or lymphatic endothelial cells. MR recognizes a range of microbial carbohydrates bearing mannose, fucose, or N-acetyl glucosamine through its C-type lectin-like carbohydrate recognition domains, sulfated carbohydrate antigens through its cysteine-rich domain, and collagens through its fibronectin type II domain. MR mediates endocytosis and phagocytosis as well as activation of macrophages and antigen presentation. It plays an important role in host defense and provides a link between innate and adaptive immunity. Recently, MR on lymphatic endothelial cells was found to be involved in leukocyte trafficking and a contributor to the metastatic behavior of cancer cells. It suggests that MR may be a potential target in controlling inflammation and cancer metastasis by targeting the lymphatic vasculature.

Product Details

Verified Reactivity	Mouse
Antibody Type	Monoclonal
Host Species	Rat
Immunogen	Recombinant mouse CD206 (MMR)
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography and conjugated with PE/Dazzle™ 594 under optimal conditions.
Concentration	0.2 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. **Do not freeze.**
Application	ICFC - Quality tested FC - Verified
Recommended Usage	Each lot of this antibody is quality control tested by intracellular immunofluorescent staining with flow cytometric analysis. For flow cytometric staining, the suggested use of this reagent is ≤0.5 µg per million cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for each application. * PE/Dazzle™ 594 has a maximum excitation of 566 nm and a maximum emission of 610 nm.
Excitation Laser	Blue Laser (488 nm) Green Laser (532 nm)/Yellow-Green Laser (561 nm)
Application Notes	Clone C068C2 recognizes a region similar to clone MR5D3, based on the ability of the clones to block each other. Additional reported applications (for the relevant formats) include: spatial biology (IBEX)[4,5].
Application References **(PubMed link indicates BioLegend citation)**	1. Keller J, *et al.* 2012. *Biochem Biophys Res Commun.* 417:217. PubMed 2. Ito H, *et al.* 2012. *J Am Soc Nephrol.* 23:1797. PubMed 3. Yang X, *et al.* 2015. *PNAS.* 112:2900. PubMed 4. Radtke AJ, *et al.* 2020. *Proc Natl Acad Sci U S A.* 117:33455-65. (SB) PubMed

5. Radtke AJ, *et al.* 2022. *Nat Protoc.* 17:378-401. (SB) PubMed

Product Citations

1. Groza D, *et al.* 2018. Oncoimmunology. 7:e1424676. PubMed
2. Zhang F, *et al.* 2019. Nat Commun. 10:3974. PubMed
3. Wang B, *et al.* 2022. Nat Commun. 13:3821. PubMed
4. Paterson N, *et al.* 2022. Elife. 11:. PubMed
5. Kim S, *et al.* 2022. Redox Biol. 54:102347. PubMed
6. Dangaj D, *et al.* 2019. Cancer Cell. 35:885. PubMed
7. Cunha LD *et al.* 2018. Cell. 175(2):429-441 . PubMed
8. Ahrends T, *et al.* 2022. STAR Protoc. 3:101157. PubMed
9. Silva HM, *et al.* 2019. J Exp Med. 216:786. PubMed
10. Zhang L, *et al.* 2021. Mol Ther. 29:744. PubMed

RRID

AB_2565931 (BioLegend Cat. No. 141731)
AB_2565932 (BioLegend Cat. No. 141732)

Antigen Details

Structure	Type I transmembrane protein, 175 kD, C-type lectin superfamily
Distribution	Macrophages, dendritic cells, Langerhans cells, liver endothelial cells
Function	Pathogen recognition, endocytosis and phagocytosis, antigen presentation
Ligand/Receptor	Antigen containing mannose, fucose, or an N-acetyl glucosamine
Cell Type	Dendritic cells, Endothelial cells, Langerhans cells, Macrophages
Biology Area	Cell Biology, Immunology, Innate Immunity, Signal Transduction
Molecular Family	CD Molecules

Antigen References

1. Wileman TE, *et al.* 1986. *P. Natl. Acad. Sci. USA* 83:2501.
2. Apostolopoulos V, *et al.* 2001. *Curr. Mol. Med.* 1:469.
3. Burgdorf S, *et al.* 2006. *J. Immunol.* 176:6770.
4. McKenzie EJ, *et al.* 2007. *J. Immunol.* 178:4975.

Gene ID 17533

Related Protocols

Surface and Intracellular Cytokine Staining for Flow Cytometry - Video

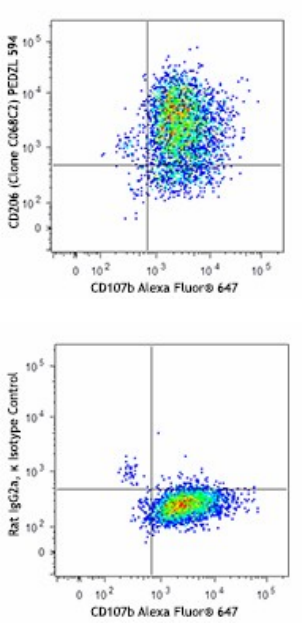
Cell Surface Flow Cytometry Staining Protocol

Intracellular Flow Cytometry Staining Protocol

Other Formats

Biotin anti-mouse CD206 (MMR), Purified anti-mouse CD206 (MMR), FITC anti-mouse CD206 (MMR), PE anti-mouse CD206 (MMR), APC anti-mouse CD206 (MMR), Alexa Fluor® 488 anti-mouse CD206 (MMR), Alexa Fluor® 647 anti-mouse CD206 (MMR), PerCP/Cyanine5.5 anti-mouse CD206 (MMR), PE/Cyanine7 anti-mouse CD206 (MMR), Brilliant Violet 421™ anti-mouse CD206 (MMR), Brilliant Violet 605™ anti-mouse CD206 (MMR), Brilliant Violet 650™ anti-mouse CD206 (MMR), Alexa Fluor® 594 anti-mouse CD206 (MMR), Brilliant Violet 711™ anti-mouse CD206 (MMR), Brilliant Violet 785™ anti-mouse CD206 (MMR), PE/Dazzle™ 594 anti-mouse CD206 (MMR), Alexa Fluor® 700 anti-mouse CD206 (MMR), Spark YG™ 570 anti-mouse CD206 (MMR), PE/Cyanine5 anti-mouse CD206 (MMR), PE/Fire™ 700 anti-mouse CD206 (MMR)

Product Data



Thioglycollate-elicited Balb/c peritoneal macrophages were fixed, permeabilized, then intracellularly stained with CD107b Alexa Fluor® 647 and CD206 (clone C068C2) PE/Dazzle™ 594 (top image) or rat IgG2a, κ PE/Dazzle™ 594 isotype control (bottom image).

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