Mouse MMR/CD206 Antibody

Monoclonal Rat IgG_1 Clone # 857615

Catalog Number: MAB25351

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse MMR in direct ELISAs.
Source	Monoclonal Rat IgG_1 Clone # 857615
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse MMR Leu19-Ala1388 Accession # Q61830
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

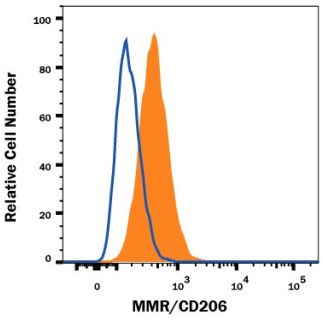
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Flow Cytometry	0.25 µg/10^6 cells	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

DATA

Flow Cytometry



Detection of MMR/CD206 in J774A.1 Mouse Cell Line by Flow Cytometry. J774A.1 mouse reticulum cell sarcoma macrophage cell line was stained with Rat Anti-Mouse MMR/CD206 Monoclonal Antibody (Catalog # MAB25351, filled histogram) or isotype control antibody (Catalog # MAB005, open histogram), followed by Phycoerythrin-conjugated Anti-Rat IgG Secondary Antibody (Catalog # F0105B).

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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BACKGROUND

The MMR (macrophage mannose receptor) is also called MR due to its presence on cells other than macrophages, and is designated CD206, Mrc1 (mannose receptor C type 1), or CLEC13D (C-type lectin domain family 13, member D) (1-4). CD206 is a 175 kDa endocytic receptor that is expressed on M2 alternatively activated tissue macrophages including tumor-associated macrophages (TAMs), inflammatory dendritic cells in selected lymphoid organs, and liver, splenic, lymphatic, and dermal microvascular endothelial cells (1, 2, 5-8). The 1456 amino acid (aa) mouse CD206 precursor contains a signal sequence (19 aa), an extracellular domain (ECD) containing an N-terminal cysteine-rich domain, a fibronectin type II repeat, eight C-type lectin domains (CTLDs), and several N-glycosylation sites (1369 aa), a transmembrane segment and a short (47 aa) cytoplasmic domain (2-4). Metalloproteinases can mediate the shedding of the soluble ECD (2). The mouse CD206 ECD shares 96% aa sequence identity with rat MR, and 83-84% with human, equine, porcine and canine CD206. The cysteine-rich domain recognizes some pituitary hormones such as LH (luteinizing hormone/lutropin) and TSH (thyroid stimulating hormone/thyrotropin), chondroitin sulfates, and sulfated N-acetylgalactosamines including sulfo-Lewis^a and -Lewis^x (1, 7, 9). The FNII domain mediates $Ca2^+$-independent binding of collagens (2, 10). The CTLDs participate in $Ca2^+$-dependent recognition of branched sugars with terminal mannose, fucose or N-acetylglucosamine that occur on many pathogenic microorganisms (7, 11). CD206 internalizes ligands in clathrin-coated vesicles, sorts them to phagosomes or early endosomes, and recycles to the cell surface (1, 6, 7). CD206 also promotes clearance of glycoproteins that promote allergy or ongoing inflammation, such as lysosomal hydrolases and myeloperoxidases (1, 2, 5-7). It is involved in T cell polarization and production of pro- and anti-inflammatory cytokines (1, 2). It facilitates peptide presentation on MHC II, and cross-presentation on MHC I which is important for tumor immunogenicity (1, 2, 12). This function may be blocked by engagement of CD206 on TAMs by tumor mucins (8).

References:

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