Mouse MMR/CD206
Alexa Fluor® 647-conjugated Antibody

Monoclonal Rat IgG_1 Clone # 857615

Catalog Number: FAB25351R

100 µg

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
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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	0.25-1 µg/10^6 cells	J774A.1 mouse reticulum cell sarcoma macrophage cell line

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Protect from light. Do not freeze.** ● 12 months from date of receipt, 2 to 8 °C as supplied.

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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