

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse MMR in direct ELISAs and Western blots. Shows 100% cross-reactivity with recombinant human MMR.
Source	Monoclonal Rat IgG _{2A} Clone # 310301
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse MMR Leu19-Ala1388 Accession # NP_032651
Conjugate	Alexa Fluor 350 Excitation Wavelength: 346 nm Emission Wavelength: 442 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *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.

Western Blot Optimal dilution of this antibody should be experimentally determined.

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 mouse Macrophage Mannose Receptor (MMR), also known as CD206 and MRC1 (mannose receptor C, type 1), is a 175 kDa scavenger receptor that is expressed on tissue macrophages, myeloid dendritic cells, and liver and lymphatic endothelial cells (1). It belongs to a family of receptors sharing similar protein structure that also includes DEC205, phospholipase A2 receptor, and Endo180 (2, 3). The mouse MMR protein is synthesized as a 1456 amino acid (aa) precursor that contains a 19 aa signal sequence, a 1369 aa extracellular region, a 21 aa transmembrane segment and a 47 aa cytoplasmic domain (4). Its extracellular region is composed of an N-terminal cysteine-rich domain, followed by a single fibronectin type II repeat, and eight C-type lectin carbohydrate recognition domains (CRD) (3-5). Mouse to human, the extracellular region is 82% aa identical. The cysteine-rich domain mediates recognition of sulfated N-acetylgalactosamine, which occurs on some extracellular matrix proteins and is the terminal sugar of the unusual oligosaccharides present on pituitary hormones such as lutropin and thyrotropin (6). Several of the CRDs participate in the Ca²⁺-dependent recognition of carbohydrates showing a preference for branched sugars with terminal mannose, fucose or N-acetylglucosamine (7). The cytoplasmic domain of MMR includes a tyrosine-based motif for internalization in clathrin-coated vesicles. Once internalized, ligands are released following acidification of phagosomes or endosomes, and the receptor recycles to the cell surface (3, 8). MMR mediates phagocytosis upon binding to target structures that occur on a variety of pathogenic microorganisms including Gram-negative and Gram-positive bacteria, yeasts, parasites, and mycobacteria. MMR also functions to maintain homeostasis through the endocytosis of potentially harmful glycoproteins associated with inflammation (2, 3).

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