

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human MMR/CD206 in direct ELISAs and Western blots. In direct ELISAs, no cross-reactivity with recombinant mouse (rm) MMR or recombinant human Mrc2 is observed. In Western blots, approximately 25% cross-reactivity with rmMMR is observed.
Source	Monoclonal Mouse IgG _{2B} Clone # 685645
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human MMR/CD206 Leu19-Lys1383 (Thr399Ala) & (Leu407Phe), Accession # P22897
Conjugate	Alexa Fluor 532 Excitation Wavelength: 534 nm Emission Wavelength: 553 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.
Immunohistochemistry	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 human Macrophage Mannose Receptor (MMR), also known as CD206 and MRC1 (mannose receptor C, type 1), is a 190 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 human MMR protein is synthesized as a 1456 amino acid (aa) precursor that contains an 18 aa signal sequence, a 1371 aa extracellular region, a 21 aa transmembrane segment and a 46 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, 4). Human and mouse MMR extracellular regions share 82% aa identity. 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 (5). 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 (6). 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 is recycled to the cell surface (3, 7). 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).

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.