

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse MBL-2 in direct ELISAs and Western blots. In Western blots, no cross-reactivity with recombinant human MBL is observed.
Source	Monoclonal Rat IgG _{2A} Clone # 272801
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse MBL-2 Glu19-Asp244 Accession # P41317
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 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

Mannan binding lectin (MBL) belongs to the collectin family of innate immune defense proteins, which binds to an array of carbohydrate patterns on pathogen surfaces (1, 2). Collectin family members share common structural features: a cysteine rich amino-terminal domain, a collagen-like region, an α -helical coiled-coil neck domain and a carboxy terminal C-type (Ca^{++} -dependent) lectin or carbohydrate recognition domain (CRD). MBL homotrimerizes to form a structural unit joined by N-terminal disulfide bridges. These homotrimers further associates into oligomeric structures of up to 6 units. Whereas two forms of MBL proteins (MBL-1, also known as S-MBP or MBL-A and MBL-2, also known as L-MBP or MBL-C) exist in rodents and other animals, only one functional MBL protein is present in humans. Mouse MBL-2 shares approximately 52% and 60% aa sequence identity with mouse MBL-1 and human MBL, respectively. In mouse, MBL-1 and MBL-2 are the only collectins that can activate complement via the lectin complement pathway (1, 2). Serum oligomeric MBL associates with MBL-associated serine protease (MASP) proenzymes. The MBL-MASP proenzyme complex preferentially interact with sugar patterns containing mannose, glucose, L-fucose, or N-acetyl-glucosamine present at a terminal nonreducing position on the cell surface of various pathogens and certain tumor cells. This interaction induces pro-enzyme activation and the triggering of the complement cascade, resulting in opsonization and pathogen removal via humoral and cellular immune responses. MBL does not recognize self-components or glycoproteins from other higher animals due to the presence of terminal sialic acid or galactose that interrupts the repeating carbohydrate structures (3). A number of membrane receptors for MBL, including C1q phagocytic receptor (C1qRp), calreticulin (also known as C1qR), and CR1 (CD35), have been described. Interactions with these receptors may also be important in stimulating phagocytosis (1, 2). Mouse MBL-1 and MBL-2 are produced primarily in the liver and are secreted into the blood stream. In addition, mouse MBL-1 is also expressed in lung, kidney, and testis while MBL-2 is expressed in kidney, thymus, and small intestine (1, 4, 5).

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.