

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human MBL in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant mouse MBL-2 is observed.
Source	Monoclonal Mouse IgG _{2A} Clone # 285623
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human MBL Glu21-Ile248 Accession # AAH96182
Conjugate	Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 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.

Blockade of Receptor-ligand Interaction 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

Human mannose/mannan-binding lectin (MBL; gene name MBL2; also called MBP-C) is a 25 kDa member of the collectin family of pattern-recognition molecules (1-3). It is a secreted glycoprotein that is synthesized as a 248 amino acid (aa) precursor that contains a 20 aa signal sequence, a 21 aa cysteine-rich region (with three cysteines) a 58 aa collagen-like segment and a 111 aa C-type lectin domain that binds to neutral bacterial carbohydrates (3, 4). The molecule is O-glycosylated and contains multiple hydroxylated prolines and lysines (3, 5). Functionally, the molecule operates as a multimer/oligomer. The basic structural unit is a homotrimer. The homotrimer is created by the formation of interchain disulfide bonds among the cysteine-rich regions, plus a helical interaction of the collagen-like domains of each participating polypeptide (5). Mutations in the collagen region are known to interfere with proper trimer and subsequent oligomer formation (6). Once formed, the trimer, as a unit, oligomerizes with other trimers to form high molecular weight complexes. Although the exact nature of these complexes are unclear, it would appear that a three trimer complex (230 kDa) and a four trimer complex (305 kDa) constitute much of the circulating MBL (7). It is within the context of these oligomers that MBL performs its functions. After secretion by hepatocytes, oligomerized MBL will both associate with serine proteases (MASP-1, 2 & 3) and bind to bacterial carbohydrates. If the MBL complex is small, opsonization of bacteria occurs. If the complex is large, the MASPs are engaged and a complement attack complex is generated, destroying bound bacteria (3, 7, 8). Human MBL shares 63%, 61% and 65% aa identity with mouse, porcine and bovine MBL, respectively.

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.