Human MBL Alexa Fluor® 405-conjugated Antibody

Monoclonal Mouse IgG_1 Clone # 285602

Catalog Number: FAB2307V

100 µg

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_1 Clone # 285602
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 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 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

Human mannose/mannan-binding lectin (MBL; also 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 bacreria 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 is 63%, 61% and 65% aa identical to mouse, porcine and bovine MBL, respectively.

PRODUCT SPECIFIC NOTICES

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