



20150217ML

Anti-Human MBL (#4J25)

**FOR RESEARCH ONLY! NOT FOR HUMAN USE!**

Cat.-no.:	101-M562
Size:	100 µg
Lot. No.:	According to product label

Preparation: This antibody was produced from a hybridoma (mouse myeloma fused with spleen cells from a mouse) immunized with human recombinant protein of MBL.

Target Background

Synonyms (Target):	MBL2; MBL; MBP; MBP1; MBL2D; MBP-C; COLEC1; HSMBPC
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Human mannose/mannan-binding lectin (MBL; also MBPC) is a 25 kDa member of the collectin family of pattern-recognition molecules. 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. The molecule is O-glycosylated and contains multiple hydroxylated prolines and lysines. 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. Mutations in the collagen region are known to interfere with proper trimer and subsequent oligomer formation. Once formed, the trimer, as a unit, oligomerizes with other trimers to form high molecular weight complexes. Although the exact nature of these complexes is unclear, it would appear that a three trimer complex (230 kDa) and a four trimer complex (305 kDa) constitute much of the circulating MBL. 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 (MASP1, 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. Human MBL is 63%, 61% and 65% aa identical to mouse, porcine and bovine MBL, respectively.

Database References Target

Protein RefSeq:	NP_000233.1
Uniprot ID:	P11226
mRNA RefSeq:	NM_000242.2

Product Specifications

Host	Mouse
Reactivity against	Human
Clonality	Monoclonal Antibody
Clone	(#4J25)
Isotype	IgG2
Purification	Protein G chromatography
Antigen	human recombinant protein of MBL
Formulation	lyophilized
Reconstitution buffer	PBS (sterile)

Reconstitution: Reconstitute the antibody with 200 µl sterile PBS and the final concentration is 500 µg/ml.

Stability: Lyophilized samples are stable for 2 years from date of receipt when stored at -70°C. Reconstituted antibody can be aliquoted and stored frozen at < -20 °C for at least for six months without detectable loss of activity.

Remarks: This antibody was selected for its ability to detect human MBL.

**AVOID REPEATED FREEZE AND THAW CYCLES!**

Applications

The antibody can be used within the following applications:

WB, N

Recommended usage:

WB: Use at 1:500-1000

Neutralization of ligand/receptor interaction: Yes

NOTE: OPTIMAL DILUTIONS SHOULD BE DETERMINED BY EACH LABORATORY FOR EACH APPLICATION!



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