

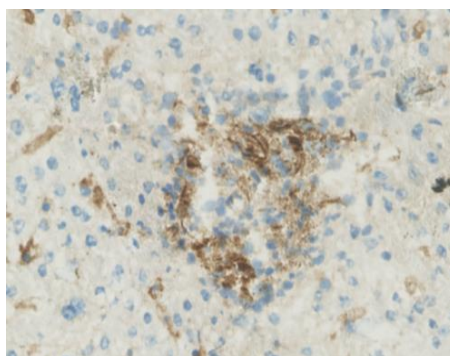
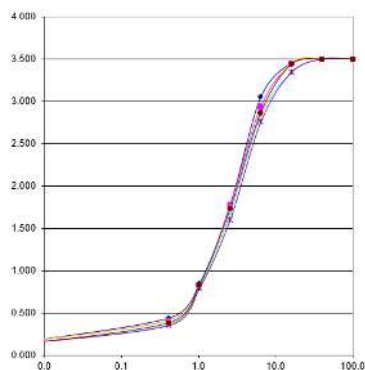
CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name	MBL, Human, clone 3E7		
Catalog number	HM2061-500UG		
Lot number	-	Expiry date	-
Volume	-	Amount	500 µg
Formulation	0.2 µm filtered in PBS	Concentration	>0.5 mg/ml
Host Species	Mouse IgG1	Conjugate	None
Endotoxin	N.A.	Purification	Protein G
Storage	4°C		

Application notes

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #	2,3,7			4,5,7	1	8,9		
Yes	•			•	•	•		
No		•						•
N.D.			•				•	

N.D.= Not Determined; IHC = Immuno histochemistry; F = Frozen sections; P = Paraffin sections; IF = Immuno Fluorescence; FC = Flow Cytometry; FS = Functional Studies; IA = Immuno Assays; IP = Immuno Precipitation; W = Western blot



IA: Biotinylated antibody 3E7 used as a detector in different concentrations to detect human MBL in immune assay.

IHC-F: Frozen section of human liver tissue. HM2061 was used in a concentration of 1:25.

Dilutions to be used depend on detection system applied. It is recommended that users test the reagent and determine their own optimal dilutions. The typical starting working dilution is 1:50. For functional studies, in vitro dilutions have to be optimized in user's experimental setting.

- FC: cells were incubated with 1.0 µg/ml MBL in PBS containing 1%BSA (w/v), 0.01% NaN₃ (w/v) and 10 mM CaCl₂ for 30 min at 0°C. The cells were washed with the same buffer, and incubated with antibody clone 3E7, 6.5 µg/ml. After 30 min at 0°C, cells were washed and incubated with phycoerythrin (PE)-conjugated goat F(ab')₂ anti-mouse Ig (Ref.3).
- IHC-F: Tissue sections embedded in ornithine carbamoyltransferase compound were frozen in acetone dry ice and immersed in Tris-buffered saline (TBS) three times for 5 minutes. Treatment in 0.5% hydrogen peroxide in methanol solution has been done to quench endogenous peroxidase activity (Ref.2).
- FS: Pretreatment of sheep erythrocytes with antibody 3E7 suppressed hemolysis in a dose dependent manner (Ref.1).
- Negative control: Nonimmune normal serum or TBS.

General Information

Description

Mannose Binding Lectin (MBL) also called mannose- or mannan-binding protein (MBP) is a member of the group of collectins. MBL is an oligomeric lectin that recognizes carbohydrates as mannose and N-acetylglucosamine on pathogens. MBL contains a cysteine rich, a collagen like and a carbohydrate recognition domain. It forms a complex with C1r/C1s like serine proteases designated MASPs that proteolytically cleave C4, C2 and C3. MBL is able to activate the complement pathway independent of the classical and alternative complement activation pathways. The MBL-MASP pathway (better known as the lectin pathway) is antibody and C1q-independent. MBL exhibits complement-dependent antibacterial activity and acts directly as an opsonic and therefore plays an important role in innate immunity. MBL is synthesized by hepatocytes and has been isolated from the liver or serum of various vertebrate species.

Immunogen	Serum isolated human RaRF
Aliases	Mannan Binding Lectin, mannose- or mannan-binding protein, MBP
References	<ol style="list-style-type: none"> 1. Matsushita, M et al; Human mannose-binding protein is identical to a component of Ra-reactive factor. <i>Biochem Biophys Res Commun</i> 1992, <i>183</i>: 645 2. Hisano, S et al; Mesangial IgA2 deposits and lectin pathway-mediated complement activation in IgA glomerulonephritis. <i>Am J Kidney Dis</i> 2001, <i>38</i>: 1082 3. Vries de, B et al; The mannose-binding lectin-pathway is involved in complement activation in the course of renal ischemia-reperfusion injury. <i>Am J Pathol</i> 2004, <i>165</i>: 1677 4. Nauta, A et al; Mannose-binding lectin engagement with late apoptotic and necrotic cells. <i>Eur J Immunol</i> 2003, <i>33</i> : 2853 5. Nauta, A et al ; Opsonization with C1q and Mannose-binding lectin targets apoptotic cells to dendritic cells. <i>J Immunol</i> 2004, <i>173</i>: 3044 6. Imai, N et al; Immunohistochemical evidence of activated lectin pathway in kidney allografts with peritubular capillary C4d deposition, <i>Nephrol. Dial. Transplant.</i> 2006 <i>21</i>: 2589-2595. 7. Pol, P et al; Mannan-Binding Lectin Mediates Renal Ischemia/Reperfusion Injury Independent of Complement Activation; <i>American Journal of Transplantation</i> 2012; <i>12</i>: 877 8. Shushimita, S et al; Mannan-Binding Lectin Is Involved in the Protection against Renal Ischemia/Reperfusion Injury by Dietary Restriction. <i>PLoS ONE</i> 2015, <i>10</i>: e0137795 9. Poppelaars, F et al; Strong predictive value of mannose-binding lectin levels for cardiovascular risk of hemodialysis patients. <i>J Transl Med</i> 2016, <i>14</i>:236
Storage&stability	Product should be stored at 4°C. Under recommended storage conditions, product is stable for at least one year.
Precautions	For research use only. Not for use in or on humans or animals or for diagnostics. It is the responsibility of the user to comply with all local/state and federal rules in the use of this product. Hycult Biotech is not responsible for any patent infringements that might result from the use or derivation of this product.

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Approved by Manager of QC
Brenda Teunissen

Date
05/11/2019

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