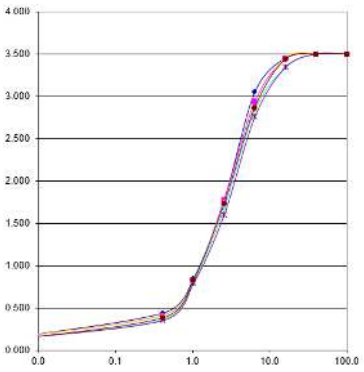
CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name	MBL, Human, clone 3E7, FITC conjugated		
Catalog number	HM2061F-100UG		
Lot number	-	**Expiry date**	-
Volume	1 ml	**Amount**	100 µg
Formulation	0.2 µm filtered in PBS+1%BSA+0.02%NaN3	**Concentration**	100 µg/ml
Host Species	Mouse IgG1	**Conjugate**	FITC
Endotoxin	N.A.	**Purification**	Protein G
Storage	4°C		

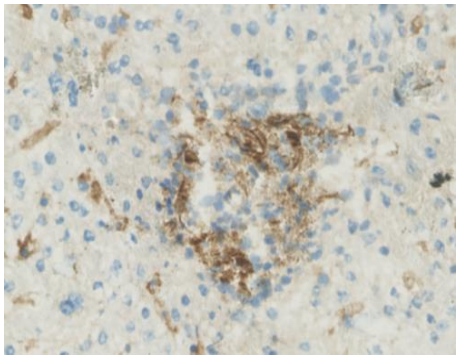
Application notes

	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

1. Matsushita, M et al; Human mannose-binding protein is identical to a component of Ra-reactive factor. Biochem Biophys Res Commun 1992, *183*: 645
2. Hisano, S et al; Mesangial IgA2 deposits and lectin pathway-mediated complement activation in IgA glomerulonephritis. Am J Kidney Dis 2001, *38*: 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. Am J Pathol 2004, *165*: 1677
4. Nauta, A et al; Mannose-binding lectin engagement with late apoptotic and necrotic cells. Eur J Immunol 2003, *33* : 2853
5. Nauta, A et al ; Opsonization with C1q and Mannose-binding lectin targets apoptotic cells to dendritic cells. J Immunol 2004, *173*: 3044
6. Imai, N et al; Immunohistochemical evidence of activated lectin pathway in kidney allografts with peritubular capillary C4d deposition, Nephrol. Dial. Transplant. 2006 *21*: 2589-2595.
7. Pol, P et al; Mannan-Binding Lectin Mediates Renal Ischemia/Reperfusion Injury Independent of Complement Activation; American Journal of Transplantation 2012; *12*: 877
8. Shushimita, S et al; Mannan-Binding Lectin Is Involved in the Protection against Renal Ischemia/Reperfusion Injury by Dietary Restriction. PLoSONE 2015, *10:* e0137795
9. Poppelaars, F et al; Strong predictive value of mannose-binding lectin levels for cardiovascular risk of hemodialysis patients. J Transl Med 2016, *14*:236

Storage&stability Product should be stored at 4°C. Under recommended storage conditions, product is stable for at least one year.

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