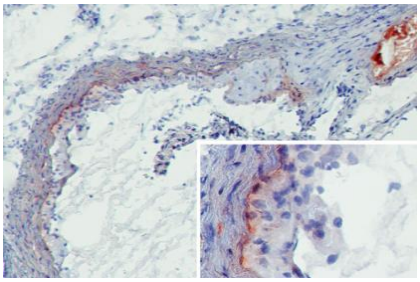
CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name	MBL-A, Mouse, clone 8G6		
Catalog number	HM1035-100UG		
Lot number	-	**Expiry date**	-
Volume	1 ml	**Amount**	100 µg
Formulation	0.2 µm filtered in PBS+0.1%BSA+0.02%NaN3	**Concentration**	100 µg/ml
Host Species	Rat IgG2a	**Conjugate**	None
Endotoxin	N.A.	**Purification**	Protein G
Storage	4°C		

Application notes

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #	2,6		3,4			2		1
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



MBL-A (8G6) deposition in developing murine atherosclerotic lesions. Staining of frozen tissue sections with antibody 8G6 (Cat. # HM1035). Anti-mouse MBL-A at 2µg/ml (2h, RT). MBL-A was detected on the intima to media border as well as throughout the media (insert). Furthermore, extensive MBL-A deposition was seen at sites of necrosis (upper right corner).

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.

- W: A non-reduced sample treatment was used. The band sizes are 191, 263 and 316 kDa (Ref.1).
- IHC-F: Tissue sections were fixed in 4% PBS-buffered formaldehyde and pretreated with 2% hydrogen peroxide in methanol for 20 minutes at 4ºC to quench endogenous peroxidases. Primary antibody 8G6, 2µg/ml. As negative control rat IgG2a was used (Ref.2).

General Information

Description

Mannose Binding Lectin (MBL), also called mannosebinding protein (MBP), is a calcium dependent oligomeric protein that belongs to the collectin family of proteins. It contains a collagen-like domain and a carbohydrate recognition domain enabling MBL to recognize carbohydrates (such as mannose and N-acetylglucosamine) on pathogens. MBL is able to activate the complement pathway independent of the classical and alternative complement activation pathways, by using attached mannose binding lectin-associated serine proteases (MASP-2) in an antibody- and C1q-independent manner. MASP-2 permits cleavage of C4 and C2 to form a C3 convertase. Once it has bound, MBL exhibits complement-dependent antibacterial activities such as microbial opsonization and/or microbial lysis via membrane attack complexes and therefore plays an important role in innate immunity. In human, MBL is encoded by a single gene, whereas in mice there are two homologous proteins, termed MBL-A and MBL-C. The MBL-A concentration in serum is about 6-fold lower compared to that of MBL-C. MBL-A, but not MBL-C, was found to be an acute phase protein in casein and LPS-injection models. Moreover, it has been shown that MBL-A deficient mice have aberrant antigen-specific IgM responses and suffer from increased susceptibility to infection . Note that the monoclonal antibody 8G6 is a calcium-dependent antibody.

Immunogen	Purified mouse MBL-A
Aliases	Mannose binding protein A, MBP-A, Ra-reactive factor polysaccharide-binding component p28B, RaRF p28B, MBL-1
References	1. Liu, H et al; Characterization and Quantification of Mouse Mannan-Binding Lectins (MBL-A and MBL-C) and Study of Acute Phase Responses. Scand J Immunol 2001, *53*: 489 2. Windbichler, M et al; Investigations on the Involvement of the Lectin Pathway of Complement Activation in Anaphylaxis. Allergy and Immunol 2006, *141*: 11 3. Held, K et al; Increased susceptibility of complement factor B/C2 double knockout mice and mannan-binding lectin knockout mice to systemic infection with candida albicans. Mol Immunol 2008, *45*: 3934 4. Petry, F et al. Binding and activation of human and mouse complement by Cryptospridium parvum (Apicomplexa) and susceptibility of C1q- and MBL-deficient mice to infection. Mol Immunol 2008, *45*:3392 5. Abe, Y et al. Contribution of complement component C3 and complement receptor type 3 to carbohydrate-dependent uptake of oligomannose-coated liposomes by peritoneal macrophages. J. Bioch 2008, *144*:563 6. Matthijsen, R et al; Macrophage-Specific Expression of Mannose-Binding Lectin Controls Atherosclerosis in Low-Density Lipoprotein Receptor Deficient Mice. Circulation 2009, *119*:2188
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.

We hereby certify that the above-stated information is correct and that this product has been successfully tested by the Quality Control Department. This product was released for sale according to the existing specifications. This document has been produced electronically and is valid without a signature.

Approved by Manager of QC	Date
Brenda Teunissen	12/11/2019

Do you have any questions or comments regarding this product? Please contact us via support@hycultbiotech.com.