PRODUCT SPECIFICATION

STATENS SERUM INSTITUT

HYB 131-11 Anti-MBL (human)

Mouse monoclonal antibody

OVERVIEW	Article No.	100886 (0.2 mL), 100887 (1.0 mL)
	Product Name	HYB 131-11 Anti-MBL (human)
	Clone ID	11C9
	Subclass	IgG1 / Kappa
	Specificity	HYB 131-11 Anti-MBL (human) is specific for MBL from human serum or plasma.
	Species Reactivity	Human
	Epitope Specificity	The epitope specificity differs from that of HYB 131-01 and HYB 131-10.
	Immunogen	MBL purified from human donor plasma.
	Fusion Partner	X63-Ag8.653.
	Culture Medium	Dulbecco's modified Eagle's medium with 10 % fetal calf serum

TESTED APPLICATION	Method	Usability	References
	Enzyme linked immunosorbent assay (ELISA)	Yes	In house analysis, 1
	Immunoprecipitation	Yes	2
	Western Blot (WB)	Yes	In house analysis

PRODUCT SPECIFIC INFORMATION	In ELISA HYB 131-11 reacts strongly with MBL coated directly onto the well. HYB 131-11 is selective for oligomerized MBL in sandwich ELISA, when used as both catching and detection antibody (1). Poorly oligomerized forms of MBL can also be detected, when using HYB 131-11 as catching antibody and HYB 131-01B as detection antibody, and total immunoreactive MBL can be detected, when using HYB 131-10 as catching antibody and HYB 131-11B as detection antibody. In Western blotting, HYB 131-11 reacts with human MBL both in its polymeric conformation and as a single subunit of app. 26 kDa. HYB 131-11 can be used for immunoprecipitation (2).

PROPERTIES	Conjugation:	Unconjugated
	Form	Liquid
	Preparation:	Protein A
	Concentration:	1 mg/mL ± 10%, based on A_{280}. See Certificate of Analysis for details.
	Solvent:	PBS, pH 7.2 – 7.4
	Storage information:	Store at ≤ - 18 ºC.

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TARGET	Mannan-binding lectin (MBL), also called mannose-binding lectin or protein, is a C-type lectin and an important component in innate immunity. MBL is an oligomer i.e. forming dimers to hexamers of homotrimeric subunits of approximately 26 kDa polypeptides. This oligomerisation is essential for functional activity (3). MBL forms a non-covalent complex with specific MBL-associated serine proteases (MASPs), termed MASP-1, -2, and -3. Upon binding to the surface of a pathogen, MASP-activation is initiated with subsequent complement activation and clearance through lysis or phagocytosis (4). MBL-deficiency is the most common immune defect resulting in susceptibility to severe infections in early childhood, or if immuno-suppressed (5). MBL-deficiency has also been associated with several clinical disorders, e.g. autoimmune diseases, endocarditis, and septicaemia (5, 6). Normal levels of oligomeric MBL in serum are 1 – 5 µg/mL whereas MBL-deficient serum levels are < 100 ng/mL, when estimated by a standard ELISA for MBL quantification (3). Due to the presence of different structural and promotor alleles 12 % or more of the Caucasian population have low concentrations (< 50 ng/mL) of normally oligomerized, functional MBL in plasma or serum (7).
REFERENCES	1) Garred P, Larsen F, Madsen HO, Koch C (2003) Mannose-binding lectin deficiency – revised Mol Immunol. 40(2-4):73-84. 2) Skjoedt M-O Hummelshoj T, Palarasah Y, Honore C et al. (2010) A novel mannose-binding lectin/ficolin-associated protein is highly expressed in heart and skeletal muscle tissues and inhibits complement activation. J Biol Chem 285(11):8234-43. 3) Laursen I, Hojrup P, Houen G, Christiansen M. (2008) Characterization of the 1st SSI purified MBL standard. Clin Chim Acta, 395(1-2), 159-161. 4) Dommett RM, Klein N, Turner MW. (2006) Mannose-binding lectin in innate immunity: past, present and future. Tissue Antigens, 68(3):193-209. 5) Kilpatrick DC. (2002) Mannan-binding lectin: clinical significance and applications. Biochim Biophys Acta, 1572(2-3): 401-413. 6) Tran CT, Kjeldsen K, Haunsø S, Høiby N et al. (2007) Mannan-binding lectin is a determinant of survival in infective endocarditis. Clin Exp Immunol, 148(1): 101-105. 7) Steffensen R, Thiel S, Varming K, Jersild C, Jensenius JC (2000) Detection of structural gene mutations and promoter polymorphisms in the mannan-binding lectin (MBL) gene by polymerase chain reaction with sequence-specific primers. J Immunol Methods 241:33-42.

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Conditions

For research use only. Not for use in diagnostic procedures. Not for therapeutic use or applications.

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