

PRODUCT SPECIFICATION

Anti-Mannan-binding lectin (human, MBL)

Mouse monoclonal antibody, biotinylated

Subclass: IgG1/k

PRODUCT NO.

HYB 131-01 B

PRESENTATION

Preparation: Biotinylated

Content: 50 µL, 1 mg/mL +/- 15%. See Certificate of Analysis for details.

Solvent: 0.01 M phosphate buffer, pH 7.4, with 0.14 M NaCl and 15 mM sodium azide

Storage: 4-8°C without exposure to light. No precautions necessary during handling.

ANTIGEN

Mannan-binding lectin (MBL), also called mannanose-binding lectin or protein, belongs to the C-type family of collectins, showing calcium-dependent binding to certain sugars (1). It consists of oligomers of triple-chain subunits and its binding and complement activating activities depend on its normal oligomerization. On binding to mannan-like microbial surface carbohydrates, MBL activates the complement system by means of its own lectin pathway, dependent on the MBL-associated serine proteases (MASPs). Because of the presence of different structural and promoter alleles in the population, 12% or more of the population have low concentrations (<50ng/mL) of normally oligomerized, functional MBL in plasma or serum (2).

IMMUNOGEN

MBL purified from human donor plasma and adsorbed onto aluminum hydroxide

SPECIFICITY

HYB 131-01 is specific for MBL from human serum or plasma.

EPI TOPE SPECIFICITY

The epitope is on the head-neck region of the MBL protein chain. Prior binding of the antibody is thought to block binding to carbohydrate. The epitope differs from that of HYB 131-10 and HYB 131-11.

REACTIVITY

HYB 131-01 is selective for normally oligomerized MBL when used as detection antibody in sandwich ELISA with HYB 131-01 coat.

In Western blotting, HYB 131-01 reacts with human MBL in both its oligomerized state and as single protein chain of 26 kDa. A dilution guideline of 1/1000 has proved successful (4).

HYB 131-01 is also well suited for immunohistochemistry on human tissue samples, frozen or paraffin embedded, from liver and brain.

CULTURE MEDIUM

RPMI 1640 with 10% fetal calf serum

FUSION PARTNER

X63-Ag8.653

IMMUNIZATION

Female CF1 x BALB/c mice immunized by intraperitoneal injection

APPLICATION

Method	Usability	References
ELISA	Yes	
Immunoblotting	Not determined	
Immunohistochemistry	Not determined	

REFERENCES

1. Kawasaki N, Kawasaki T, Yamashina I (1983) Isolation and characterization of a mannan-binding protein from human serum. *J Biochem (Tokyo)* 94:937-947.
2. 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.
3. Garred P, Madsen HO, Kurtzhals JA, Lamm LU, Thiel S, Hey AS, Svejgaard A (1992) Diallelic polymorphism may explain variations of the blood concentration of mannan-binding protein in Eskimos, but not in black Africans. *Eur J Immunogenet* 19:403-412.
4. Garred P, Larsen F, Madsen HO, Koch C (2003) Mannose-binding lectin deficiency - revisited. *Mol Immunol* 40:73-84.
5. Holmskov UL (2000) Collectins and collectin receptors in innate immunity. *APMIS Suppl* 100:1-59.
6. www.proteinatlas.org

CONDITIONS

All products are supplied on the understanding that they are for in vitro use only. The information and product are offered without guarantee as the ultimate conditions of use are beyond our control. The animals from which this product was derived have not been exposed to or inoculated with any livestock or poultry disease agents exotic to the United States or Western Europe, and did not originate from facilities where work with exotic disease agents affecting livestock or avian species is carried out.