

**Anti-Mannan-binding lectin (human, MBL)  
 Mouse monoclonal antibody**

Subclass: IgG1/k

PRODUCT NO.

**HYB 131-01**

Clone:3B6

PRESENTATION

Preparation: Protein-A/G purified

Content: Available in 200 µL and 1 mL size. 1 mg/mL +/- 15%. See Certificate of Analysis for details.

Solvent: 0.01 M phosphate buffer, pH 7.4, containing 0.5 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	3
Immunoblotting	Yes	4
Immunohistochemistry	Yes	5,6

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

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