Mannan-binding lectin standard serum (human)
Normal Human Serum

PRODUCT NO. **SER 101**

PRESENTATION

Preparation:	Freeze-dried, undiluted pooled human serum
Content:	Mannan-binding lectin (MBL), 1000 arbitrary units (AU) per mL, equal to 3200 ng/mL oligomer MBL
Storage:	At -20°C
Stability:	2 years

PREPARATION

All individual sera and the serum pool were tested negative for HBsAg and for antibodies against HIV-1, HIV-2 and HCV. Blood from 30 healthy donors was collected in flasks without anticoagulant and allowed to clot. Serum was collected after centrifugation and pooled in a 10-liter flask. After mixing, 1-ml aliquots of the serum were pipetted into 2-ml vials. Each vial was assigned an MBL content of 1000 AU. The material was freeze-dried and the vials closed under vacuum.

BACKGROUND

Human MBL is an opsonin, which activates the complement system on binding to microbial polysaccharides. Plasma concentrations of normally oligomerized MBL range from 0 to 7000 ng/mL and may be below 50 ng/mL in up to 12% of healthy Caucasian blood donors. Low plasma concentrations may be associated with an inherited opsonin defect (1, 2, 3).

VALUE

Across 3 lots of the MBL Oligomer ELISA Kit (Cat. No. KIT 029); SER 101 was assayed in 3 ASSIGNMENT dilutions, each applied in duplicate. Total CV was 10% and recovery was 103%.

MBL Conc. (ng/mL)	Inter assay CV	Dilution factor	Conc x dil (ng/mL)	Recovery	n total
15.9	10%	200	3180	99%	10
8.1		400	3223	101%	10
4.4		800	3497	109%	10

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. Turner MW (1998) Mannose-binding lectin (MBL) in health and disease. Immunobiology 199:327-339.
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. Minchinton RM, Dean MM, Clark TR, Heatley S, Mullighan CG (2002) Analysis of the Relationship Between Mannose- Binding Lectin (MBL) Genotype, MBL Levels and Function in an Australian Blood Donor Population. Scand J Immunol 56:630-641.

Specific references (SER 101)

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CONDITIONS