

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

<b>PRODUCT NO.</b>	<b>SER 101</b>
<b>PRESENTATION</b>	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
<b>PREPARATION</b>	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.
<b>BACKGROUND</b>	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).
<b>VALUE</b>	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

<b>REFERENCES</b>	<ol style="list-style-type: none"> <li>Kawasaki N, Kawasaki T, Yamashina I (1983) Isolation and characterization of a mannan-binding protein from human serum. J Biochem (Tokyo) 94:937-947.</li> <li>Turner MW (1998) Mannose-binding lectin (MBL) in health and disease. Immunobiology 199:327-339.</li> <li>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.</li> <li>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.</li> </ol>
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### Specific references (SER 101)

5. Fortpiet J, Vertommen D, Schaftingen EV (2010) Binding of Mannose-binding lectin to fructosamines: a potential link between hyperglycaemia and complement activation in diabetes. Diabetes Metab Res Rev. 26:254-260.

### CONDITIONS

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