Mannose-Binding Lectin

National Cancer Institute

Source

National Cancer Institute. Mannose-Binding Lectin. NCI Thesaurus. Code C1151.

A recombinant protein similar or identical to human mannan-binding lectin (MBL) with opsonin activity. MBL, a soluble pattern recognition receptor (PRR) collectin in the C-type lectin superfamily, is a plasma protein that plays an important role in innate immunity; MBL contains a carbohydrate recognition domain at one end and a collagen-like stalk domain at the other. Upon MBL binding to mannose residues on mannose-containing polysaccharides (mannans) on the surfaces of microorganisms, activation of the complement system results in the deposition of complement components (opsonization) and the clearance of the opsonized microorganisms by phagocytic cells. MBL is part of the mannan-binding lectin pathway (also known as the Ali/Krueger pathway), which has similarities to the classical complement pathway in that activation of C4 and C2 produce activated complement proteins further down the complement cascade. However, unlike the classical complement pathway, activation of this pathway is not antibody dependent.