SANTA CRUZ BIOTECHNOLOGY, INC.

MBL-C (3B6): sc-80595

BACKGROUND

Mannose-binding lectin protein C (MBL-C), also known as mannose-binding protein C; mannose-binding lectin 2, soluble (opsonic defect); mannan-binding lectin; mannan-binding protein; and soluble mannose-binding lectin, initiates the lectin branch of the innate immune response by binding to the surface of potentially pathogenic microorganisms and initiating complement fixation through an N-terminal collagen-like domain. MBL-C is a key component in immune response due to its ability to directly trigger neutralization of invading microorganisms by an Ab-independent mechanism. It binds to sugars on the surface of bacterial, fungal and parasitic cells through C-terminal, Ca^{2+}-dependent carbohydrate-recognition domains. Mutations of human MBL are associated with immunodeficiency resulting from a reduction in the ability of the mutant MBL to initiate complement fixation. In human, two types of MBL-associated serine proteases (MASP-1 and MASP-2) and a truncated form of MASP-2, designated small MBL-associated protein (sMAP) or MAp19, complex with MBL to activate the lectin pathway of the complement system. Activated MASPs subsequently cleave and activate downstream components of the complement pathway.

REFERENCES

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2. Matsushita, M., Thiel, S., Jensenius, J.C., Terai, I. and Fujita, T. 2000. Proteolytic activities of two types of mannose-binding lectin-associated serine protease. J. Immunol. 165: 2637-2642.
3. Chen, C.B. and Wallis, R. 2001. Stoichiometry of complexes between mannose-binding protein and its associated serine proteases: Defining functional units for complement activation. J. Biol. Chem. 276: 25894-25902.
4. Endo, M., Ohi, H., Satomura, A., Hidaka, M., Ohsawa, I., Fujita, T., Kanmatsuse, K., Matsushita, M. and Fujita, T. 2001. Regulation of *in situ* complement activation via the lectin pathway in patients with IgA nephropathy. Clin. Nephrol. 55: 185-191.
5. Thielens, N.M., Cseh, S., Thiel, S., Vorup-Jensen, T., Rossi, V., Jensenius, J.C. and Arlaud, G.J. 2001. Interaction properties of human mannan-binding lectin (MBL)-associated serine proteases-1 and -2, MBL-associated protein 19, and MBL. J. Immunol. 166: 5068-5077.

CHROMOSOMAL LOCATION

Genetic locus: MBL2 (human) mapping to 10q11.2-q21.

SOURCE

MBL-C (3B6) is a mouse monoclonal antibody raised against full length MBL of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

MBL-C (3B6) is recommended for detection of MBL-C from serum or plasma of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for MBL-C siRNA (h): sc-35869, MBL-C shRNA Plasmid (h): sc-35869-SH and MBL-C shRNA (h) Lentiviral Particles: sc-35869-V.

Molecular Weight of MBL-C subunit: 32 kDa.

Molecular Weight of MBL-C trimer: 96 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or DU 145 cell lysate: sc-2268.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.