BACKGROUND

Mannose (or mannan)-binding lectin (MBL), also known as serum mannose-binding protein (MBP), 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 is a key component in immune response in that it can directly trigger neutralization of invading microorganisms by an Ab-independent mechanism. 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, three types of MBL-associated serine proteases, MASP-1, MASP-2 and MASP-3, and a truncated form of MASP-2 (small MBL-associated protein; sMAP or Map19) complex with MBL to activate the lectin pathway of the complement system. MASP-3 is an alternatively spliced product from the MASP-1 gene. The heavy/A chains are identical between MASP-1 and MASP-3 but the light/B chains are entirely different. Activated MASPs subsequently cleave and activate downstream components of the complement pathway.

REFERENCES


CHROMOSOMAL LOCATION

Genetic locus: MASP1 (human) mapping to 3q27.3; Masp1 (mouse) mapping to 16 B1.

SOURCE

MASP-1/3 (F-12) is a mouse monoclonal antibody raised against amino acids 171-430 mapping within an internal region of MASP-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG2a kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

MASP-1/3 (F-12) is recommended for detection of MASP-1/3 heavy chain of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50:1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30:1:3000).


Molecular Weight of MASP-1/3 proenzym: 90 kDa.
Molecular Weight of MASP-1/3 heavy chain: 65 kDa.
Molecular Weight of MASP-1/3 light chain: 36 kDa.
Positive Controls: rat testis extract: sc-2400, rat liver extract: sc-2395 or mouse liver extract: sc-2256.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:

DATA

MASP-1/3 (F-12): sc-166815. Western blot analysis of full-length human recombinant MASP-1.

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.