SANTA CRUZ BIOTECHNOLOGY, INC.

MASP-1/3 (H-260): sc-48749

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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

1. Heise, C., et al. 2000. Impaired secretion of rat mannose-binding protein resulting from mutations in the collagen-like domain. J. Immunol. 165: 1403-1409.
2. Matsushita, M., et al. 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., et al. 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., et al. 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: MASP1 (human) mapping to 3q27.3; Masp1 (mouse) mapping to 16 B1.

SOURCE

MASP-1/3 (H-260) is a rabbit polyclonal antibody raised against amino acids 171-430 mapping within an internal region of MASP-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

MASP-1/3 (H-260) is recommended for detection of MASP-1/3 heavy chain of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

MASP-1/3 (H-260) is also recommended for detection of MASP-1/3 heavy chain in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for MASP-1/3 siRNA (h): sc-45349, MASP-1/3 siRNA (m): sc-45350, MASP-1/3 shRNA Plasmid (h): sc-45349-SH, MASP-1/3 shRNA Plasmid (m): sc-45350-SH, MASP-1/3 shRNA (h) Lentiviral Particles: sc-45349-V and MASP-1/3 shRNA (m) Lentiviral Particles: sc-45350-V.

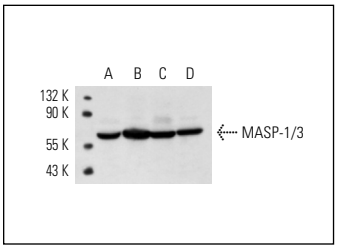
Molecular Weight of MASP-1/3 proenzyme: 90 kDa.

Molecular Weight of MASP-1/3 heavy chain: 65 kDa.

Molecular Weight of MASP-1/3 light chain: 36 kDa.

Positive Controls: mouse liver extract: sc-2256, rat testis extract: sc-2400 or rat liver extract: sc-2395.

DATA



MASP-1/3 (H-260): sc-48749. Western blot analysis of MASP-1/3 expression in rat testis (**A**), mouse uterus (**B**), rat liver (**C**) and mouse liver (**D**) tissue extracts.

RESEARCH USE

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

PROTOCOLS

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