SANTA CRUZ BIOTECHNOLOGY, INC.

MASP-2 (H-60): sc-50420

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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. Activated MASPs subsequently cleave and activate downstream components of the complement pathway. MASP-3 is an alternatively spliced product from the MASP-1 gene and may function to inhibit MASP-2 by competing for MBL binding and inhibiting the activation of MBL-associated MASP-2.

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., et al. 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: MASP2 (human) mapping to 1p36.22.

SOURCE

MASP-2 (H-60) is a rabbit polyclonal antibody raised against amino acids 284-343 mapping within an internal region of MASP-2 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-2 (H-60) is recommended for detection of MASP-2 A chain of 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).

Suitable for use as control antibody for MASP-2 siRNA (h): sc-42903, MASP-2 shRNA Plasmid (h): sc-42903-SH and MASP-2 shRNA (h) Lentiviral Particles: sc-42903-V.

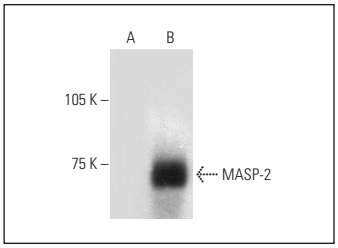
Molecular Weight of MASP-2: 76 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, HEK293T whole cell lysate: sc-45137 or MIA PaCa-2 cell lysate: sc-2285.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



MASP-2 (H-60): sc-50420. Western blot analysis of MASP-2 expression in non-transfected (**A**) and human MASP2 transfected (**B**) HEK293T whole cell lysates.

RESEARCH USE

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