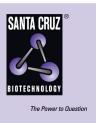
SANTA CRUZ BIOTECHNOLOGY, INC.

MASP-1/3 (N-20): sc-17902



BACKGROUND

Mannose (or mannan)-binding lectin (MBL), also known as serum mannosebinding 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

- 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.
- Matsushita, M., et al. 2000. Proteolytic activities of two types of mannosebinding lectin-associated serine protease. J. Immunol. 165: 2637-2642.
- 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.
- 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.
- 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.
- Dahl, M.R., et al. 2001. MASP-3 and its association with distinct complexes of the mannan-binding lectin complement activation pathway. Immunity 15: 127-135.

CHROMOSOMAL LOCATION

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

SOURCE

MASP-1/3 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of MASP-1 of human origin.

STORAGE

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

PRODUCT

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

Blocking peptide available for competition studies, sc-17902 P, (100 μg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MASP-1/3 (N-20) 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), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:300).

MASP-1/3 (N-20) is also recommended for detection of MASP-1/3 heavy chain in additional species, including equine, canine, bovine, porcine and avian.

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

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluo-rescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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

MONOS Satisfation Guaranteed

Try **MASP-1/3 (F-12): sc-166815** or **MASP-1/3 (G-7): sc-166816**, our highly recommended monoclonal alternatives to MASP-1/3 (N-20).