



MBL-A (C-13): sc-103617

BACKGROUND

MBL-A, also known as Mbl1 (mannose-binding lectin (protein A) 1) or RaRF p28B, is a 239 amino acid mouse protein that is localized predominately to the Golgi apparatus and the rough endoplasmic reticulum and contains one collagen-like domain and one C-type lectin domain. Existing in an oligomeric complex composed of six homotrimers, MBL-A functions to bind N-acetylglucosamine and mannose in a Ca²⁺-dependent manner and, via this interaction, is able to activate the classical complement pathway, thereby providing host defense against invasive pathogens. Due to its involvement in the innate immune system, MBL-A is involved in the pathogenesis of a variety of afflictions, including diabetes, acute septic peritonitis, asthma, cancer and bacterial and viral infections.

REFERENCES

- White, R.A., Dowler, L.L., Adkison, L.R., Ezekowitz, R.A. and Sastry, K.N. 1994. The murine mannose-binding protein genes (Mbl 1 and Mbl 2) localize to chromosomes 14 and 19. *Mamm. Genome* 5: 807-809.
- Turner, M.W. 1996. Mannose-binding lectin: the pluripotent molecule of the innate immune system. *Immunol. Today* 17: 532-540.
- Takahashi, K., Gordon, J., Liu, H., Sastry, K.N., Epstein, J.E., Motwani, M., Laursen, I., Thiel, S., Jensenius, J.C., Carroll, M. and Ezekowitz, R.A. 2002. Lack of mannose-binding lectin-A enhances survival in a mouse model of acute septic peritonitis. *Microbes Infect.* 4: 773-784.
- Walsh, M.C., Bourcier, T., Takahashi, K., Shi, L., Busche, M.N., Rother, R.P., Solomon, S.D., Ezekowitz, R.A. and Stahl, G.L. 2005. Mannose-binding lectin is a regulator of inflammation that accompanies myocardial ischemia and reperfusion injury. *J. Immunol.* 175: 541-546.
- Green, R.S., Stone, E.L., Tenno, M., Lehtonen, E., Farquhar, M.G. and Marth, J.D. 2007. Mammalian N-glycan branching protects against innate immune self-recognition and inflammation in autoimmune disease pathogenesis. *Immunity* 27: 308-320.
- Carter, T., Sumiya, M., Reilly, K., Ahmed, R., Sobieszczuk, P., Summerfield, J.A. and Lawrence, R.A. 2007. Mannose-binding lectin A-deficient mice have abrogated antigen-specific IgM responses and increased susceptibility to a nematode infection. *J. Immunol.* 178: 5116-5123.
- Busche, M.N., Walsh, M.C., McMullen, M.E., Guikema, B.J. and Stahl, G.L. 2008. Mannose-binding lectin plays a critical role in myocardial ischaemia and reperfusion injury in a mouse model of diabetes. *Diabetologia* 51: 1544-1551.
- Yager, P.H., You, Z., Qin, T., Kim, H.H., Takahashi, K., Ezekowitz, A.B., Stahl, G.L., Carroll, M.C. and Whalen, M.J. 2008. Mannose binding lectin gene deficiency increases susceptibility to traumatic brain injury in mice. *J. Cereb. Blood Flow Metab.* 28: 1030-1039.
- Ip, W.K., Takahashi, K., Moore, K.J., Stuart, L.M. and Ezekowitz, R.A. 2008. Mannose-binding lectin enhances toll-like receptors 2 and 6 signaling from the phagosome. *J. Exp. Med.* 205: 169-181.

CHROMOSOMAL LOCATION

Genetic locus: Mbl1 (mouse) mapping to 14 B.

SOURCE

MBL-A (C-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of MBL-A of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-103617 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MBL-A (C-13) is recommended for detection of MBL-A of mouse and rat 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 1:30-1:3000).

Suitable for use as control antibody for MBL-A siRNA (m): sc-106208, MBL-A shRNA Plasmid (m): sc-106208-SH and MBL-A shRNA (m) Lentiviral Particles: sc-106208-V.

Molecular Weight of MBL-A: 25 kDa.

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) Immunofluorescence: 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.

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 or our catalog for detailed protocols and support products.