

MAB-hMR

Neutralizing IgG monoclonal antibody to human mannose receptor

Catalog # mab-hmr

For research use only, not for diagnostic or therapeutic use

Version 12J16-MM

PRODUCT INFORMATION

Content

100 µg purified MAb-hMR, provided azide-free and lyophilized

Clone: 15-2

Isotype: Mouse IgG1

Formulation: 0.2 µm filtered antibody solution in PBS, containing 0.1% bovine serum albumin

Antibody resuspension

Add 1 ml of sterile water to obtain a concentration of 0.1 mg/ml.

Storage

- Product is shipped at room temperature. Store lyophilized antibody at -20°C. Product is stable for 1 year.

- Reconstituted antibody is stable 1 month when stored at 4°C and 6 months when aliquoted and stored at -20°C. Avoid repeated freeze-thaw cycles.

DESCRIPTION

MAB-hMR is a monoclonal antibody specific for human mannose receptor (CD206). MAB-hMR has been selected for its ability to efficiently neutralize the biological activity of the human mannose receptor.

BACKGROUND

The mannose receptor (MR), also known as CD206, is a type I transmembrane protein and a member of the C-type lectin family. MR is primarily present on the surface of macrophages and dendritic cells and plays a role in both innate and adaptive immunity. MR binds high-mannose structures on a wide range of gram positive and gram negative bacteria, yeasts, parasites and mycobacteria.

MR was identified as one of the first fungal pattern recognition receptor (PPR) inducing NF-κB activation and the production of cytokines, such as IL-8 and IL-6¹. In adaptive immunity, it has been shown that MR is important in antigen uptake by dendritic cells which essential for the induction of antigen-specific T-cell responses².

APPLICATIONS

- MAB-hMR is a neutralizing antibody, it blocks human mannose receptor-induced cellular activation. MAB-MR prevented binding of tissue-type plasminogen activator (t-PA) to the immobilized human MR³. The exact concentration of antibody required to neutralize human mannose receptor activity is dependent on the agonist, cell type and growth conditions.

- MAB-hMR can be used for flow cytometry. For flow cytometry, MAB-hMR has been tested at 500 - 2000 ng/10⁶ cells with PE goat anti-mouse kappa light chain secondary antibody for indirect immunofluorescence staining.

Note: We recommend to test the intracellular and cell surface expression of hMR.

- MAB-hMR can be used for Western blotting. MAB-hMR recognized the 175 kDa mannose receptor in a crude sample extracts³.

REFERENCES

1. Willment JA. & Brown GD., 2007. Dectin-1 mediates the biological effects of beta-glucans. *J Exp Med.* 197: 1119- 24. **2. Autenrieth SE. & Autenrieth IB., 2009.** Variable antigen uptake due to different expression of the macrophage mannose receptor by dendritic cells in various inbred mouse strains. *Immunology.* 127(4):523-9. **3 Barrett-Bergshoeff M. et al., 1997.** Monoclonal antibodies against the human mannose receptor that inhibit the binding of tissue-type plasminogen activator. *Thromb Haemost.* 77(4):718-24.

TECHNICAL SUPPORT

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