**Anti-mDectin-1-IgG**

Neutralizing monoclonal antibody against mouse Dectin-1

Catalog # mabg-mdect

For research use only, not for diagnostic or therapeutic use

Version # 16C04-MM

**PRODUCT INFORMATION**

**Content**
100 µg purified anti-mDectin-1-IgG, provided azide-free and lyophilized

**Clone:** R1-8g7

**Isotype:** Rat IgG2a

**Formulation:** 0.2 µm filtered solution in 68 mM phosphate buffer with 91 mM glycine, 5% w/v saccharose and stabilizing agents

**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 -20ºC. Product is stable for 6 months.
- Reconstituted antibody is stable 1 month when stored at 4ºC and 6 months when aliquoted and stored at -20ºC. Avoid repeated freeze-thaw cycles.

**Quality control**
- The absence of bacterial contamination (e.g. endotoxins and peptidoglycans) is controlled using HEK-Blue™ TLR2 and HEK-Blue™ TLR4 cells.
- The antibody is validated for neutralization and flow cytometry using HEK-Blue™ Dectin cells.

**BACKGROUND**

Dectin-1 is a member of the C-type lectin receptor (CLR) family and plays an important role in antifungal innate immunity. In humans and mice, Dectin-1 is alternatively spliced into two major isoforms, a full-length A isoform and a ‘stalkless’ B isoform. Dectin-1 is expressed on phagocytic cells, including macrophages and neutrophils. Dectin-1 is a specific receptor for β-glucans. β-Glucans are glucose polymers found in the cell walls of fungi, including the yeasts Saccharomyces cerevisiae and Candida albicans. Upon binding to its ligand, Dectin-1 triggers phagocytosis and signaling through the kinase Syk and the adaptors CARD9-Bcl10-Malt1 leading to the production of reactive oxygen species (ROS), the activation of NF-κB and the subsequent production of pro-inflammatory cytokines. Dectin-1 signaling has been shown to collaborate with Toll-like receptor 2 (TLR2) signaling to enhance the responses triggered by each receptor.


**DESCRIPTION**

Anti-mDectin-1-IgG is a monoclonal rat IgG2a antibody against mouse Dectin-1 (mDectin-1). It recognizes both mDectin-1 isoforms A and B. This antibody was screened for flow cytometry and neutralization activity. Anti-mDectin-1-IgG is produced in hybridomas and purified by affinity chromatography with protein G/agarose.

**APPLICATION**

Anti-mDectin-1-IgG is a neutralizing antibody, it blocks mDectin-1-induced cellular activation. This antibody is also intended for use in flow cytometry. It can also be used for immunohistochemistry.

**Applications tested**

1. Anti-mDectin-1-IgG has been tested in neutralizing experiments performed in HEK293 cells that were transfected with the mDectin-1 gene and other genes from the Dectin-1 signaling pathway. These cells also stably express a secreted embryonic alkaline phosphatase (SEAP) reporter gene. Transfected cells were incubated with 100 ng-10 µg/ml anti-mDectin-1-IgG for 1 hour prior to the addition of the Dectin-1 ligand HKCA (10³ cells/ml).

Following an overnight incubation, neutralization of Dectin-1 signaling by anti-mDectin-1-IgG was determined by assessing SEAP production using QUANTI-Blue™, a SEAP detection medium. QUANTI-Blue™ turns blue following Dectin-1 stimulation but remains pink if neutralization occurs.

2. For flow cytometry, anti-mDectin-IgG has been tested at 500-2000 ng/10⁶ cells with PE goat anti-rat IgG2a secondary antibody for indirect immunofluorescence staining.

**RELATED PRODUCTS**

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<th>Product</th>
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