**Anti-mDectin-1-IgG**

Neutralizing and detection monoclonal antibody against murine Dectin-1

Catalog code: mabg-mdect-2

https://www.invivogen.com/anti-mdectin1

For research use only, not for diagnostic or therapeutic use

Version 23L11-MM

**PRODUCT INFORMATION**

Contents: 2 x 100 µg of purified anti-mDectin-1-IgG, provided azide-free and lyophilized

Target: Murine Dectin-1 (mDectin-1)

Specificity: No cross-reactivity with human Dectin-1

Clone: R1-8g7

Isotype: Rat IgG2a

Light chain type: Kappa

Formulation: 0.2 µm filtered solution in a sodium phosphate buffer with glycerine, saccharose, and stabilizing agents

Applications: Neutralization; Flow cytometry; Immunohistochemistry

Antibody resuspension (0.1 mg/ml)

Add 1 ml of sterile water per 100 µg vial.

Storage and stability

- Product is shipped at room temperature. Upon receipt, store lyophilized antibody at -20 °C.
- Reconstituted antibody is stable for 1 month at 4 °C and for 1 year at -20 °C. Avoid repeated freeze-thaw cycles.

Quality control

- This product has been validated for neutralization using cellular assays.
- Binding of Anti-mDectin-1-IgG to mDectin-1 on cells has been validated using flow cytometry.
- The absence of bacterial contamination (e.g. lipoproteins and endotoxins) has been confirmed using HEK-Blue™ TLR2 and HEK-Blue™ TLR4 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, it is alternatively spliced into two major isoforms, a full-length A isoform and a ‘stalkless’ B isoform. It 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 wall 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), activation of NF-κB and subsequent production of pro-inflammatory cytokines. Notably, Dectin-1 signaling has been shown to collaborate with Toll-like receptor 2 signaling to enhance the responses triggered by each receptor.

**DESCRIPTION**

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

**APPLICATIONS**

Anti-mDectin-1-IgG can be used for neutralization and flow cytometry. Use of this antibody for immunohistochemistry has been reported.

**Neutralization**

The concentration of antibody required to neutralize mDectin-1 activity is dependent on the Dectin-1 ligand, cell type and growth conditions. InvivoGen has determined the neutralization dose for this antibody using RAW-Blue™ cells. These cells express mDectin-1 and an NF-κB-inducible SEAP (secreted embryonic alkaline phosphatase) reporter gene.

**Procedure for neutralization using RAW-Blue™ cells**

1. Add 100 µl of growth medium per well of a 96-well plate.
2. Add 50 µl of Anti-mDectin-1-IgG or control antibody (100 ng-10 µg/ml final concentration) per well.

**Quality control**

- We recommend using Rat IgG2a Control (which targets E. coli β-galactosidase) as a negative control.
- Incubate for 1 hour at 37 °C.
- Add 100 µl of cell suspension (~100,000 cells) per well.
- Incubate for 18-24 hours at 37 °C.
- Add 50 µl of a Dectin-1 ligand such as HKCA (10 ng/ml) to each well.

**Flow cytometry**

This antibody was used at 500-2000 ng/10³ cells with a goat anti-rat IgG2a-FITC goat secondary antibody for indirect immunofluorescence staining of HEK-Blue™ mDectin-1b cells.

**RELATED PRODUCTS**

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<tr>
<th>Product</th>
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<td>HEK-Blue™ mDectin-1b Cells</td>
<td>Reporter cells</td>
<td>hkb-mdect1b</td>
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<tr>
<td>HKCA</td>
<td>Heat-killed C. albicans</td>
<td>tlr-hkca</td>
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<td>Rat IgG2a Control</td>
<td>Isotype control antibody</td>
<td>mabg2a-ctrlt</td>
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<tr>
<td>QUANTI-Blue™ Solution</td>
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<td>rep-qbs</td>
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<tr>
<td>RAW-Blue™ Cells</td>
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**TECHNICAL SUPPORT**

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