**Anti-hDectin-1-IgG**

Neutralizing monoclonal antibody against human Dectin-1

Catalog # mabg-hdect

For research use only, not for diagnostic or therapeutic use

Version # 15B24-MM

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**PRODUCT INFORMATION**

**Content**

100 µg purified anti-hDectin-1-IgG, provided azide-free and lyophilized

**Clone:** 22H8

**Isotype:** Mouse IgG1

**Formulation:** 0.2 mM 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 -20°C. Lyophilized product is stable for at least 1 year when properly stored.
- Reconstituted antibody is stable 1 month when stored at 4°C and 1 year when aliquoted and stored at -20°C. Avoid repeated freeze-thaw cycles.

**Quality control**

- The absence of bacterial contamination (e.g. lipoproteins and peptidoglycans) has been confirmed using HEK-Blue™ TLR2 and HEK-Blue™ TLR4 cells.
- The antibody has been validated for neutralization and flow cytometry using HEK-Blue™ Dectin-1 cells.

**BACKGROUND**

Dectin-1 is a member of the C-type lectin receptor (CLR) family and plays an important role in antifungal innate immunity. Dectin-1 is expressed on phagocytic cells, including macrophages and neutrophils. The human Dectin-1 receptor is expressed as two predominant isoforms A and B. 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 the CARD9-Bcl10-Malt1 signaling 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-hDectin-1-IgG is a monoclonal mouse IgG1 antibody against human Dectin-1 (hDectin-1). Anti-hDectin-1-IgG recognizes both hDectin-1 isoforms A and B. This antibody was screened for flow cytometry and neutralization activity. Anti-hDectin-1-IgG is produced in hybridomas and purified by affinity chromatography with protein G/agarose.

**APPLICATION**

Anti-hDectin-1-IgG is a neutralizing antibody, it blocks hDectin-1-induced cellular activation. Anti-hDectin-IgG can also be used for flow cytometry.

**Applications tested**

1. Anti-hDectin-1-IgG has been tested in neutralizing experiments performed in HEK293 cells that were transfected with the hDectin-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-hDectin-1-IgG for 1 hour prior to the addition of the Dectin-1 ligand HKCA (10^6 cells/ml). Following an overnight incubation, neutralization of Dectin-1 signaling by anti-hDectin-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-hDectin-IgG has been tested at 500 - 2000 ng/10^6 cells with PE goat anti-mouse IgG1 secondary antibody for indirect immunofluorescence staining.

**RELATED PRODUCTS**

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<tr>
<th>Product</th>
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<td>pUNO1-hDectin1a</td>
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<td><strong>Dectin-1 Agonists</strong></td>
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<td>HKSC (Heat killed S. cerevisiae)</td>
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<td>Zymosan Depleted</td>
<td>thr1-dzn</td>
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