



20150122ML

# Anti-Mouse Dectin-1 (#9A44)

**FOR RESEARCH ONLY! NOT FOR HUMAN USE!**

<b>Cat.-no.:</b>	<b>103-M370</b>
Size:	100 µg
Lot. No.:	According to product label

**Preparation:** This antibody was produced from a hybridoma (mouse myeloma fused with spleen cells from a rat) immunized with mouse recombinant protein of Dectin-1.

## Target Background

<b>Synonyms (Target):</b>	Clec7a; BGR; beta-GR; Clec7f2
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Dectin1, also known as CLEC7A and the  $\beta$ -glucan receptor, is a 43 kDa type II transmembrane C-type lectin that functions in the innate immune response to fungal pathogens. Although Dectin1 resembles other CLEC molecules structurally, it binds ligands in a calcium-independent manner. Mature mouse Dectin1 is a 244 amino acid (aa) glycoprotein that consists of a short ITAM-containing cytoplasmic tail, a transmembrane segment, and a stalk and carbohydrate recognition domain (CRD) in the extracellular domain. The CRD of mouse Dectin1 shares 61%, 60%, and 87% aa sequence identity with that of bovine, human, and rat Dectin1, respectively. It shares 25% 34% aa sequence identity with the CRD of other subgroup members CLEC1, CLEC2, CLEC9A, CLEC12B, LOX1, and MICL. Mouse Dectin1 is alternately spliced, generating a variant that lacks the stalk region. Mouse Dectin1 is expressed on monocytes, macrophages, and neutrophils, and on some populations of dendritic cells and T cells. It is upregulated on macrophages by GM-CSF, IL4, or IL13 and downregulated by dexamethasone, IL10, or LPS. The CRD selectively binds  $\beta$ glucan polymers, a major component of yeast and mycobacterial cell walls. Yeast  $\beta$ glucan is accessible to Dectin1 only at sites of cell budding, and Dectin1 does not recognize the filamentous form of yeast. Dectin1 mediates the phagocytosis of zymosan particles and intact yeast. It colocalizes with TLR2 in the presence of zymosan, and the two receptors cooperate in ligand recognition and the propagation of proinflammatory signaling. Dectin1 interaction with the tetraspanin CD37 increases its stability on the cell membrane and inhibits ligand-induced signaling. Genetic knockout of Dectin1 in mice increases their susceptibility to pathogenic infection.

## Database References Target

<b>Protein RefSeq:</b>	NP_064392.2
<b>Uniprot ID:</b>	Q6QLQ4
<b>mRNA RefSeq:</b>	NM_020008.2

## Product Specifications

<b>Host</b>	Rat
<b>Reactivity against</b>	Mouse
<b>Clonality</b>	Monoclonal Antibody
<b>Clone</b>	(#9A44)
<b>Isotype</b>	IgG2b
<b>Purification</b>	Protein G/A chromatography
<b>Antigen</b>	Mouse recombinant protein Dectin-1
<b>Formulation</b>	lyophilized
<b>Reconstitution buffer</b>	PBS (sterile)

**Reconstitution:** Reconstitute the antibody with 200 µl sterile PBS and the final concentration is 500 µg/ml.

**Stability:** Lyophilized samples are stable for 2 years from date of receipt when stored at -70°C. Reconstituted antibody can be aliquoted and stored frozen at < -20°C for at least for six months without detectable loss of activity.

**Remarks:** This antibody detects specifically mouse Dectin-1 with Western Blot.

**AVOID REPEATED FREEZE AND THAW CYCLES!**

## Applications

The antibody can be used within the following applications:

WB

**Recommended usage:**

Western Blot: 1:500 - 1:2000

**NOTE: OPTIMAL DILUTIONS SHOULD BE DETERMINED BY EACH LABORATORY FOR EACH APPLICATION!**