

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Dectin-2/CLEC6A in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant human (rh) Dectin-1 or rhDLEC is observed.
Source	Monoclonal Rat IgG ₁ Clone # 217611
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Dectin-2/CLEC6A Phe43-Leu209 Accession # Q9JKF4
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

Western Blot Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Dectin-2, also known as CLEC6A α isoform, CLECSF10, and NKCL, belongs to the C-type lectin family of transmembrane immune regulatory glycoproteins. Dectin-2, CLEC4A/DCIR, CLEC4B/DCAR, CLEC4C/DLEC, CLEC4D/MCL, and CLEC4E/mincle constitute a subgroup of these molecules that exhibit approximately 40% amino acid (aa) sequence identity in their extracellular domains (ECD) and have a conserved cysteine spacing in their carbohydrate recognition domains (CRD) (1, 2). Mature mouse Dectin-2 consists of a short cytoplasmic tail, a transmembrane segment, and an ECD with a stalk region and one CRD (3, 4). Alternate splicing leads to partial deletion of the transmembrane segment and stalk (β isoform) or a portion of the CRD (γ isoform) (4). The full length Dectin-2 (α isoform) is a 27 kDa molecule that is primarily expressed on the surface of tissue macrophages and their precursors (3 - 6). The CRD of Dectin-2 contains an EPN motif which is characteristic of calcium-dependent mannose-binding lectins. Dectin-2 selectively interacts with high mannose structures in the Man α GlcNAc₂ configuration (7). It mediates the recognition of a variety of microorganisms, particularly the filamentous forms of yeast and fungi (7, 8). The short cytoplasmic tail does not contain signaling motifs but mediates association with the ITAM-containing Fc receptor γ subunit in macrophages (8). Ligation of Dectin-2 induces tyrosine phosphorylation of the γ subunit, activation of NF κ B, and enhanced release of TNF- α and IL-1 α (8). Macrophage Dectin-2 is upregulated *in vivo* by inflammatory stimuli and UV-B irradiation (6). It mediates the breaking of UV-induced tolerance by interacting with CD4⁺CD25⁺ regulatory T cells which then induce dendritic cells to release IL-4, IL-10, and TGF- β (9). Within the ECD, mouse Dectin-2 shares 71% aa sequence identity with human and bovine Dectin-2.

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