

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Dectin-2/CLEC6A in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant mouse Dectin-2α, recombinant human (rh) CLEC9A, rhCLEC4D, or rhDLEC is observed.
Source	Monoclonal Mouse IgG ₁ Clone # 545943
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Dectin-2/CLEC6A Thr46-Leu209 Accession # Q6EIG7
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and 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.

	Recommended Concentration	Sample
Flow Cytometry	0.25-1 µg/10 ⁶ cells	Human blood-derived monocytes

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, CLECSF10, and NKCL, belongs to the C-type lectin family of transmembrane immune regulatory glycoproteins. Dectin-2, plus CLEC4A-E constitute a subgroup of 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 human Dectin-2 is a type II transmembrane protein with a short cytoplasmic tail, a transmembrane segment, and a 168 aa ECD with a stalk region and one CRD (3, 4). Within the ECD, human Dectin-2 shares 71% and 75% aa sequence identity with bovine and mouse Dectin-2, respectively. An alternately spliced β isoform has a deletion of portions of the transmembrane and cytoplasmic regions (5). Full length Dectin-2 is a 27 kDa molecule that is expressed on monocytes, tissue macrophages, and activated CD4⁺ T cells (4-6). 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 Man₅GlcNAc₂ 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 on macrophages (8). Ligation of Dectin-2 induces tyrosine phosphorylation of the γ subunit, activation of NFκB, and enhanced release of TNF-α and IL-1ra (8). Macrophage Dectin-2 is up-regulated *in vivo* by inflammatory stimuli and UV-B irradiation (5, 6, 9). Dectin-2 is known to participate in UV-induced immunosuppression by interacting with CD4⁺CD25⁺ regulatory T cells, which then induce dendritic cells to release IL-4, IL-10, and TGF-β (10).

References:

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Human Dectin-2/CLEC6A Alexa Fluor® 647-conjugated Antibody

Monoclonal Mouse IgG₁ Clone # 545943

Catalog Number: FAB3114R

100 µg

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