

## DESCRIPTION

|                           |                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Mouse                                                                                                                                                                                                                                                                       |
| <b>Specificity</b>        | 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.                                                                                       |
| <b>Source</b>             | Monoclonal Rat IgG <sub>1</sub> Clone # 217611                                                                                                                                                                                                                              |
| <b>Purification</b>       | Protein A or G purified from hybridoma culture supernatant                                                                                                                                                                                                                  |
| <b>Immunogen</b>          | Mouse myeloma cell line NS0-derived recombinant mouse Dectin-2/CLEC6A<br>Phe43-Leu209<br>Accession # Q9JKF4                                                                                                                                                                 |
| <b>Conjugate</b>          | Alexa Fluor 647<br>Excitation Wavelength: 650 nm<br>Emission Wavelength: 668 nm                                                                                                                                                                                             |
| <b>Formulation</b>        | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<br><br>*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  $\alpha$  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 ( $\beta$  isoform) or a portion of the CRD ( $\gamma$  isoform) (4). The full length Dectin-2 ( $\alpha$  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 $\alpha$ GlcNAc<sub>2</sub> 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  $\gamma$  subunit in macrophages (8). Ligation of Dectin-2 induces tyrosine phosphorylation of the  $\gamma$  subunit, activation of NF $\kappa$ B, and enhanced release of TNF- $\alpha$  and IL-1 $\alpha$  (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<sup>+</sup>CD25<sup>+</sup> regulatory T cells which then induce dendritic cells to release IL-4, IL-10, and TGF- $\beta$  (9). Within the ECD, mouse Dectin-2 shares 71% aa sequence identity with human and bovine Dectin-2.

## PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc., and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.