

DESCRIPTION

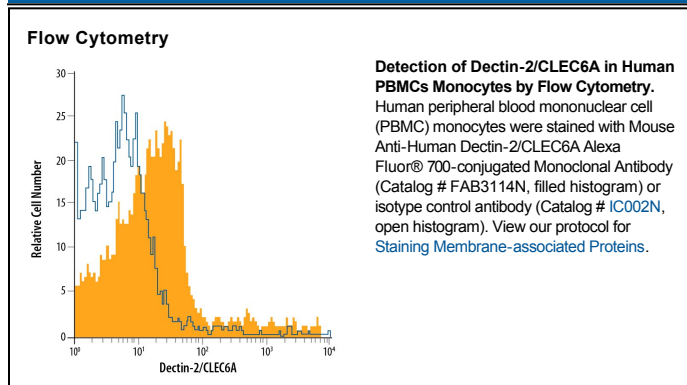
Species Reactivity	Human
Specificity	Detects human Dectin-2/CLEC6A in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant mouse Dectin-2α, recombinant human (rh) CLEC9A, rhCLEC4D, or rhDLEC is observed.
Source	Monoclonal Mouse IgG ₁ Clone # 545943
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Dectin-2/CLEC6A Thr46-Leu209 Accession # Q6EIG7
Conjugate	Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 nm
Formulation	Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *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	5 μL/10 ⁶ cells	See Below

DATA



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 Man₉GlcNAc₂ configuration (7). It mediates the recognition of a variety of microorganisms, particularly the filamentous forms of yeast and fungus (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 NF κ B, 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:

1. Kanazawa, N. (2007) *J. Dermatol. Sci.* **45**:77.
2. Kanazawa, N. *et al.* (2004) *Immunobiology* **209**:179.
3. Flornes, L.M. *et al.* (2004) *Immunogenetics* **56**:506.
4. Kanazawa, N. *et al.* (2004) *J. Invest. Dermatol.* **122**:1522.
5. Gavino, A.C. *et al.* (2005) *Exp. Dermatol.* **14**:281.
6. Taylor, P.R. *et al.* (2005) *Eur. J. Immunol.* **35**:2163.
7. McGreal, E.P. *et al.* (2006) *Glycobiology* **16**:422.
8. Sato, K. *et al.* (2006) *J. Biol. Chem.* **281**:38854.
9. Bonkobara, M. *et al.* (2005) *Photochem. Photobiol.* **81**:944.
10. Aragane, Y. *et al.* (2003) *J. Immunol.* **171**:3801.

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