

DESCRIPTION

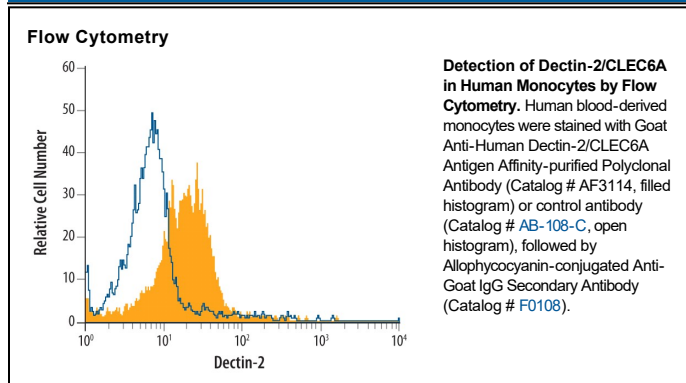
Species Reactivity	Human
Specificity	Detects human Dectin-2/CLEC6A in direct ELISAs and Western blots. In direct ELISAs and Western blots, approximately 5% cross-reactivity with recombinant mouse Dectin-2 α is observed and less than 1% cross-reactivity with recombinant human Dectin-1/CLEC7A is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Dectin-2/CLEC6A Thr46-Leu209 Accession # Q6EIG7
Formulation	Lyophilized from a 0.2 μ m filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μ m filtered solution in PBS.

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
Western Blot	0.1 μ g/mL	Recombinant Human Dectin-2/CLEC6A (Catalog # 3114-DC)
Flow Cytometry	2.5 μ g/10 ⁶ cells	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

DATA



PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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 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 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:

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