**DESCRIPTION**

**Species Reactivity**: Human

**Specificity**: Detects human DC-SIGN in direct ELISAs and Western blots. Was reported to cross-react with human DC-SIGNR as well as DC-SIGN from Pigtailed Macaque and Rhesus Macaque (10).

**Source**: Monoclonal Mouse IgG2A Clone # DC28

**Purification**: Protein A or G purified from hybridoma culture supernatant

**Immunogen**: E. coli-derived recombinant human DC-SIGN

**Extracellular domain**

**Endotoxin Level**: <0.10 EU per 1 µg of the antibody by the LAL method.

**Formulation**: Lyophilized from a 0.2 µg/mL 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 µg/mL 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.

<table>
<thead>
<tr>
<th>Recommended Concentration</th>
<th>Sample</th>
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<tbody>
<tr>
<td>Western Blot</td>
<td>1 µg/mL</td>
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<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Flow Cytometry</td>
<td>2.5 µg/10^6 cells</td>
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<tr>
<td>CyTOF-ready</td>
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<tr>
<td>Adhesion Blockade</td>
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</tbody>
</table>

**PREPARATION AND STORAGE**

**Reconstitution**: Reconstitute at 0.5 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.

- 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**

DC-SIGN (Dendritic Cell-Specific ICAM-3 Grabbing Non-Integrin) has been shown to play an important role in regulating dendritic cell (DC) and T cell interactions, including antigen presentation to T cells and enhancement of transfection of CD4+ T cells by HIV-1 (1, 2). Efforts to identify additional type II membrane proteins resulted in the isolation of a molecule related in sequence to DC-SIGN known as DC-SIGNR (DC-SIGN Related) (3, 4). DC-SIGNR shares 73 - 80% amino acid homology with DC-SIGN and is located on human chromosome 19p13.3. Its structure is similar to DC-SIGN and therefore binds mannose residues in a calcium dependent fashion, including ICAM-3 and HIV-1 gp120 (5). DC-SIGNR, also known as L-SIGN (Liver/Lymph node-Specific ICAM-3-Grabbing Non-integrin) and DC-SIGNR, is polymorphic since allelic variations of the exon 4 coding sequence have been isolated (5). This is further supported by a study demonstrating the ability to isolate a large repertoire of DC-SIGNR transcripts largely the result of alternative splicing of the 7 coding exons (6). L-SIGN/DC-SIGNR is primarily transcribed in the liver and lymph nodes but not in monocyte derived DC (5). Expression of L-SIGN/DC-SIGNR is restricted to endothelial cells derived from liver sinusoids, lymph nodes sinuses and capillaries (7) although variable expression in placenta and some monocytic cell lines has also been reported, including both membrane and soluble isoforms of the protein (6). Expression of DC-SIGN is induced during the in-vitro generation of DC from either monocytes or bone marrow progenitors, with maximal surface expression at day 7 of culture (1). Immature DC in the skin and mature DC in the tonsil have been demonstrated to express DC-SIGN (8). Analysis of various tissues and cell lines suggests that DC-SIGN expression is restricted to DC (1) although a more recent report finds evidence of expression in placenta, resting monocytes and monocytic cell lines (6). This discrepancy may be partially related to the multiple isoforms of DC-SIGN transcripts, including both membrane and soluble forms, as well as exon splice variants reported in the latter study (6). A detailed description of the additional properties of this monoclonal antibody may be found in references 9 and 10.

**References:**