

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 IgG _{2A} Clone # DC28
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human DC-SIGN Extracellular domain
Conjugate	Alexa Fluor 750 Excitation Wavelength: 749 nm Emission Wavelength: 775 nm
Formulation	Supplied 0.2 mg/mL 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	0.25-1 µg/10 ⁶ cells	Human DC-SIGN transfected 3T3 mouse embryonic fibroblast cell line

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. <ul style="list-style-type: none"> ● 12 months from date of receipt, 2 to 8 °C as supplied.

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 transinfection 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 encoded 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:

1. Geijtenbeek, T.B.H. *et al.* (2000) *Cell* **100**:575.
2. Geijtenbeek, T.B.H. *et al.* (2000) *Cell* **100**:587.
3. Yokoyama-Kobayashi, M.T. *et al.* (1999) *Gene* **228**:161.
4. Soilleux, E.J. *et al.* (2000) *J. Immunol.* **165**:2937.
5. Bashirova, A.A. *et al.* (2001) *J. Exp. Med.* **193**:671.
6. Mummid, S. *et al.* (2001) *J. Biol. Chem.*, 2001 May 3 [epub ahead of print].
7. Pohlman, S. *et al.* (2001) *Proc. Natl. Acad. Sci. USA* **98**:2670.
8. Geijtenbeek, T.B.H. *et al.* (2000) *Nature Immunol.* **1**:353.
9. Wu, L. *et al.* (2002) *J. Virol.* **76**:5905.
10. Baribaud, F. *et al.* (2002) *J. Virol.* **76**:9135.

Human DC-SIGN+DC-SIGNR Alexa Fluor® 750-conjugated Antibody

Monoclonal Mouse IgG_{2A} Clone # DC28

Catalog Number: FAB16211S
100 µg

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.