

DC-SIGN Antibody

DC-SIGN (CT): Dendritic cell-specific ICAM-3-grabbing nonintegrin 1

CATALOG NO.: 2347

BACKGROUND:

Dendritic cells (DCs) that control immune responses were recently found to capture and transport HIV from the mucosal area to remote lymph nodes (1), where DCs hand over HIV to CD4⁺ T lymphocytes. DCs also amplify the amount of virus and extend the duration of viral infectivity. Multiple strains of HIV-1, HIV-2 and SIV bind to DCs via DC-SIGN (2). ICAM-3 is the natural ligand for DC-SIGN (3). A DC-SIGN homologue (termed DC-SIGNR, L-SIGN, and DC-SIGN2) was identified recently (4-8). DC-SIGN forms a novel gene family with DC-SIGNR and many alternatively spliced isoforms of DC-SIGN and DC-SIGNR (8). The expression of DC-SIGN was found in mucosal tissues including placenta, small intestine, and rectum.

SOURCE:

Rabbit polyclonal DC-SIGN antibody was raised against a synthetic peptide corresponding to amino acids near the center of human DC-SIGN (1) (GenBank Accession No. Q9NNX6).

APPLICATION:

DC-SIGN antibody can be used for detection of DC-SIGN by Western blot at 1 to 2 µg/ml. (Optimal dilution should be determined by user.) Human placenta lysate can be used as a positive control. A band at approximately 44 kDa can be detected. **For research use only.**

STORAGE:

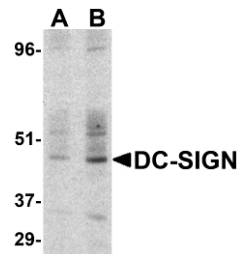
DC-SIGN antibody is supplied as immunoaffinity purified IgG, in PBS containing 0.02% sodium azide. Store at 4°C, stable for one year.

RELATED PRODUCTS:

Blocking peptide, Catalog No. **2347P**.

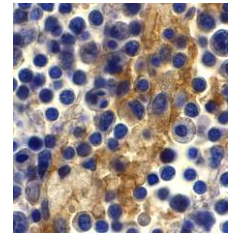
Human Small Intestine Lysate, Catalog No. **1308**.

DC-SIGN Antibody (ED), Catalog No. **2349**.



Western blot detection of DC-SIGN in human small intestine at (A) 1 and (B) 2 µg/ml.

Immunohistochemistry of DC-SIGN in human lymph node tissue with DC-SIGN antibody at 10 µg/ml.



REFERENCES:

1. Geijtenbeek TB, Kwon DS, Torensma R, et al. DC-SIGN, a dendritic cell-specific HIV-1-binding protein that enhances trans-infection of T cells. *Cell*. 2000;100:587-97.
2. Pohlmann S, Baribaud F, Lee B, et al. RW. DC-SIGN interactions with human immunodeficiency virus type 1 and 2 and simian immunodeficiency virus. *J Virol*. 2001;75(10):4664-72.
3. Geijtenbeek TB, Torensma R, van Vliet SJ, et al. Identification of DC-SIGN, a novel dendritic cell-specific ICAM-3 receptor that supports primary immune responses. *Cell*. 2000;100(5):575-85.
4. Soilleux EJ, Barten R, Trowsdale J. DC-SIGN; a related gene, DC-SIGNR; and CD23 form a cluster on 19p13. *J Immunol*. 2000;165(6):2937-42.
5. Pohlmann S, Soilleux EJ, Baribaud F, et al. DC-SIGNR, a DC-SIGN homologue expressed in endothelial cells, binds to human and simian immunodeficiency viruses and activates infection in trans. *Proc Natl Acad Sci USA*. 2001;98(5):2670-2675.
6. Bashirova AA, Geijtenbeek TB, van Duijnhoven GC, et al. A dendritic cell-specific intercellular adhesion molecule 3-grabbing nonintegrin (DC-SIGN)-related protein is highly expressed on human liver sinusoidal endothelial cells and promotes HIV-1 infection. *J Exp Med*. 2001;193(6):671-8.
7. Mitchell DA, Fadden AJ, Drickamer K. A novel mechanism of carbohydrate recognition by the C-type lectins DC-SIGN and DC-SIGNR: Subunit organisation and binding to multivalent ligands. *J Biol Chem*. 2001 *in press*
8. Mummidi S, Catano G, Lam L, et al. Extensive repertoire of membrane-bound and soluble DC-SIGN1 and DC-SIGN2 isoforms: Inter-individual variation in expression of DC-SIGN transcripts. *J Biol Chem*. 2001 *in press* (RD1005)