

# DC-SIGN (R-17): sc-32021

## BACKGROUND

Dendritic cells (DCs) are antigen-presenting immune system cells that are present on peripheral mucosal tissues and migrate to lymphoid tissues. DC-SIGN (DC-specific ICAM-3 grabbing nonintegrin) is a type II membrane protein that is exclusively expressed by DCs. DC-SIGN, also designated CD209, binds to ICAM-3 to mediate the initial interaction between DCs and resting T cells through the immunological synapse. The DCs that are present in the initial sites of HIV-1 infection capture HIV-1 through DC-SIGN, which then facilitates the migration of DCs to areas of T cell-rich secondary lymphoid organs, where it promotes efficient trans HIV-1 infection of those T cells. DC-SIGN functions to transport HIV-1 from exposed mucosal surfaces to a lymphoid compartment.

## REFERENCES

1. Curtis, B.M., Scharnowske, S. and Watson A.J. 1992. Sequence and expression of a membrane-associated C-type lectin that exhibits its CD2-independent binding of human immuno-deficiency virus envelope glycoprotein gp120. *Proc. Natl. Acad. Sci. USA* 89: 8356-8360.
2. Steinman, R.M. 2000. DC-SIGN: A guide to some mysteries of dendritic cells. *Cell* 100: 491-494.
3. Geijtenbeek, T.B., Torensma, R., van Vliet, S.J., van Duijnhoven, G.C., Adema, G., van Kooyk, Y. and Figdor C.G. 2000. Identification of DC-SIGN, a novel dendritic cell-specific ICAM-3 receptor that supports primary immune responses. *Cell* 100: 575-585.
4. Geijtenbeek, T.B., Kwon, D.S., Torensma, R., van Vliet, S.J., van Duijnhoven, G.C., Middel, J., Cornelissen, I.L., Nottet, H.S., KewalRamani, V.N, Littman D.R., Figdor, C.G. and van Kooyk, Y. 2000. DC-SIGN, a dendritic cell-specific HIV-1-binding protein that enhances *trans*-infection of T cells. *Cell* 100: 587-597.
5. Cohen, J. 2000. Novel protein delivers HIV to target cells. *Science* 287: 1567-1568.
6. Steinberg, D. 2000. Receptor boosts HIV infection. *Scientist* 14: 12.

## CHROMOSOMAL LOCATION

Genetic locus: CD209 (human) mapping to 19p13.2.

## SOURCE

DC-SIGN (R-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal cytoplasmic domain of DC-SIGN of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-32021 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## APPLICATIONS

DC-SIGN (R-17) is recommended for detection of DC-SIGN of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for DC-SIGN siRNA (h): sc-43719, DC-SIGN shRNA Plasmid (h): sc-43719-SH and DC-SIGN shRNA (h) Lentiviral Particles: sc-43719-V.

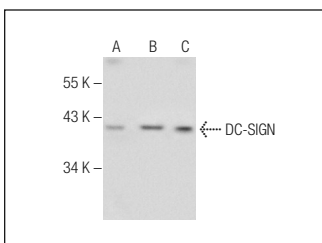
Molecular Weight of DC-SIGN: 44 kDa.

Positive Controls: THP-1 cell lysate: sc-2238, HuT 78 whole cell lysate: sc-2208 or CCRF-CEM cell lysate: sc-2225.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



DC-SIGN (R-17): sc-32021. Western blot analysis of DC-SIGN expression in THP-1 (A), HuT 78 (B) and CCRF-CEM (C) whole cell lysates.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

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Try **DC-SIGN (DC28): sc-65740**, our highly recommended monoclonal alternative to DC-SIGN (R-17).