# **Technical Data Sheet**

# PerCP-Cy<sup>™</sup>5.5 Mouse Anti-Human CD209

#### **Product Information**

Material Number:	561766
Alternate Name:	DC-SIGN
Size:	25 tests
Vol. per Test:	20 µl
Clone:	DCN46
Immunogen:	Human Monocyte Derived DC Cells
Isotype:	Mouse IgG2b, κ
Reactivity:	QC Testing: Human
Storage Buffer:	Aqueous buffered solution containing BSA and ≤0.09% sodium azide.

#### Description

The DCN46 antibody reacts with dendritic cell-specific ICAM-3 grabbing nonintegrin (DC-SIGN or CD209), a type-II membrane protein of approximately 44 kDa with a mannose-binding C-type lectin domain. It is highly expressed on dendritic cells in mucosal tissues. Its sequence is identical to the HIV-1 envelope gp120-binding C-type lectin, and reports suggest that DC-SIGN binds to HIV-1 gp120 and effectively transmits infectious HIV-1 to resting T lymphocytes expressing CD4 and chemokine receptors. The C-type lectin domain of DC-SIGN is also capable of binding other pathogenic viruses, bacteria, and parasites. Reports also suggest that DC-SIGN enables the highly efficient migration of dendritic cells from blood into the tissues. It can interact with ICAM-2, which has a similar sequence as ICAM-3, and is abundantly expressed on vascular and lymphoid endothelium. Thus, DC-SIGN mediates dendritic cells rolling and transendothelial migration, and its interaction with ICAM-2 is essential to specific migratory functions of dendritic cells.



Expression of CD209 on peripheral blood monocyte-derived dendritic cells. Adherent peripheral blood mononuclear cells were cultured for 7 days with the recombinant human cvtokines. GM-CSF (Cat. No. 550068) and IL-4 (Cat. No. 554605). Then the cultured dendritic cells were stained with either PerCP-Cy5.5 Mouse IgG2b, κ isotype control mAb 27-35 (Cat. No. 558304, thin histogram) or PerCP-Cy™5.5 Mouse Anti-Human CD209 (bold histogram). Flow cytometry was performed on a BD FACSCalibur™ flow cytometry system

# Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

The antibody was conjugated with PerCP-Cy5.5 under optimum conditions, and unconjugated antibody and free PerCP-Cy5.5 were removed. Storage of PerCP-Cy5.5 conjugates in unoptimized diluent is not recommended and may result in loss of signal intensity.

### **Application Notes**

Application								
Flow cytor	netry				Routinely Tested			
Suggeste	d Compani	on Product	ts					
Catalog Number		Name			Size	Clone		
558304		PerCP-Cy <sup>™</sup> 5.5 Mouse IgG2b, κ Isotype Control			100 tests	27-35		
554656		Stain Buffer (FBS)			500 ml	(none)		
BD Bioscie	ences							
bdbiosciences.	com							
United States 877.232.8995	<b>Canada</b> 888.268.5430	Europe 32.53.720.550	<b>Japan</b> 0120.8555.90	Asia Pacific 65.6861.0633	Latin America/Caribbean 0800.771.7157			' <b>D</b> L
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# **Product Notices**

- 1. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
- 2. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1 × 10<sup>6</sup> cells in a 100-μl experimental sample (a test).
- 3. Cy is a trademark of Amersham Biosciences Limited. This conjugated product is sold under license to the following patents: US Patent Nos. 5,486,616; 5,569,587; 5,569,766; 5,627,027.
- 4. PerCP-Cy5.5–labelled antibodies can be used with FITC- and R-PE–labelled reagents in single-laser flow cytometers with no significant spectral overlap of PerCP-Cy5.5, FITC, and R-PE fluorescence.
- 5. PerCP-Cy5.5 is optimized for use with a single argon ion laser emitting 488-nm light. Because of the broad absorption spectrum of the tandem fluorochrome, extra care must be taken when using dual-laser cytometers, which may directly excite both PerCP and Cy5.5™. We recommend the use of cross-beam compensation during data acquisition or software compensation during data analysis.
- 6. This product is subject to proprietary rights of Amersham Biosciences Corp. and Carnegie Mellon University and made and sold under license from Amersham Biosciences Corp. This product is licensed for sale only for research. It is not licensed for any other use. If you require a commercial license to use this product and do not have one return this material, unopened to BD Biosciences, 10975 Torreyana Rd, San Diego, CA 92121 and any money paid for the material will be refunded.
- 7. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
- 8. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
- 9. Please observe the following precautions: Absorption of visible light can significantly alter the energy transfer occurring in any tandem fluorochrome conjugate; therefore, we recommend that special precautions be taken (such as wrapping vials, tubes, or racks in aluminum foil) to prevent exposure of conjugated reagents, including cells stained with those reagents, to room illumination.
- 10. For fluorochrome spectra and suitable instrument settings, please refer to our Fluorochrome Web Page at www.bdbiosciences.com/colors.
- 11. An isotype control should be used at the same concentration as the antibody of interest.

#### References

Appelmelk BJ, van Die I, van Vliet SJ, et al. Carbohydrate profiling identifies new pathogens that interact with dendritic cell-specific ICAM-3-grabbing nonintegrin on dendritic cells. J Immunol. 2003; 170(4):1635-1639. (Biology)

Gruber A, Chalmers AS, Popov S, Ruprecht RM. Functional aspects of binding of monoclonal antibody DCN46 to DC-SIGN on dendritic cells. *Immunol Lett.* 2002; 84(2):103-108. (Clone-specific)

Sallusto F, Cella M, Danieli C, Lanzavecchia A. Dendritic cells use macropinocytosis and the mannose receptor to concentrate macromolecules in the major histocompatibility complex class II compartment: downregulation by cytokines and bacterial products. *J Exp Med.* 1995; 182(2):389-400. (Immunogen) Steinman RM. DC-SIGN: a guide to some mysteries to dendritic cells. *Cell.* 2000; 100(5):491-494. (Biology)

Steinman RM, Granelli-Piperno A, Pope M, et al. The interaction of immunodeficiency viruses with dendritic cells. Curr Top Microbiol Immunol. 2003; 276:1-30. (Biology)