

Technical Data Sheet

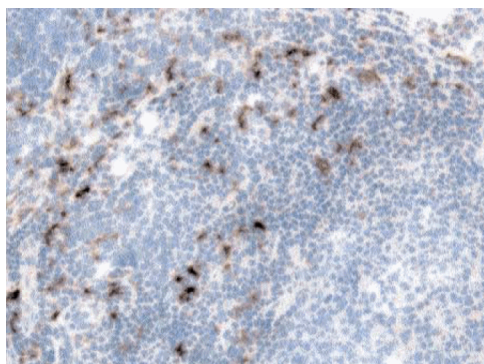
Purified Mouse Anti-Human CD209

Product Information

Material Number:	551249
Alternate Name:	DC-SIGN
Size:	1.0 ml
Concentration:	31.25 µg/ml
Clone:	DCN46
Immunogen:	Human Monocyte Derived DC Cells
Isotype:	Mouse IgG2b, κ
Reactivity:	QC Testing: Human
Storage Buffer:	Aqueous buffered solution containing BSA, goat serum, and ≤0.09% sodium azide.

Description

The DCN46 antibody specifically binds to 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.



Immunohistochemistry of dendritic cells stained for CD209 (DC-SIGN). An acetone-fixed frozen section from human tonsil was stained with the Purified Mouse Anti-Human CD209 antibody. Dendritic cells expressing CD209 (DC-SIGN) can be identified by the intense brown labeling of their cell membranes (magnification 40X).

Preparation and Storage

Store undiluted at 4°C.

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

Application Notes

Application

Flow cytometry	Routinely Tested
Immunohistochemistry-frozen	Tested During Development
Immunohistochemistry-paraffin	Not Recommended

Recommended Assay Procedure:

Immunohistochemistry: This antibody is recommended to test for immunohistochemical staining on acetone-fixed frozen sections from either human spleen or tonsil and reported to detect dendritic cells. **IHC of formalin-fixed paraffin embedded sections is not recommended.** For optimal indirect immunohistochemical staining, the DCN46 antibody should be titrated (1:10 to 1:50 dilution) and visualized via a three-step staining procedure in combination with biotinylated polyclonal anti-mouse Ig (Cat. No. 550337) as the secondary antibody and Streptavidin-HRP (Cat. No. 550946) together with the DAB detection system (Cat. No. 550880). More conveniently, the anti-mouse Ig HRP detection kit (Cat. No. 551011) can be used which contains the biotinylated secondary antibody, antibody diluent, streptavidin-HRP and a DAB substrate for use in the staining procedure.

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Suggested Companion Products

Catalog Number	Name	Size	Clone
550337	Biotin Goat Anti-Mouse Ig (Multiple Adsorption)	1.0 ml	Polyclonal
550946	Streptavidin HRP	50 ml	(none)
550880	DAB Substrate Kit	500 tests	(none)
551011	Anti-Mouse Ig HRP Detection Kit	200 tests	(none)
559148	Antibody Diluent for IHC	125 ml	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
3. 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.
4. An isotype control should be used at the same concentration as the antibody of interest.
5. This antibody has been developed for the immunohistochemistry application. However, a routine immunohistochemistry test is not performed on every lot. Researchers are encouraged to titrate the reagent for optimal performance.
6. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
7. Sodium azide is a reversible inhibitor of oxidative metabolism; therefore, antibody preparations containing this preservative agent must not be used in cell cultures nor injected into animals. Sodium azide may be removed by washing stained cells or plate-bound antibody or dialyzing soluble antibody in sodium azide-free buffer. Since endotoxin may also affect the results of functional studies, we recommend the NA/LE (No Azide/Low Endotoxin) antibody format, if available, for in vitro and in vivo use.

References

- Geijtenbeek TBH, 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(5):587-597. (Biology)
- Geijtenbeek TBH, 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):575-585. (Biology)
- 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)

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