

Mouse anti-DC-SIGN/CD209, clone DCN47.5 (Monoclonal)

Clone no. DCN47.5

MONOSAN

Product name	Mouse anti-DC-SIGN/CD209, clone DCN47.5 (Monoclonal)
Host	Mouse
Applications	FC, FUNC
Species reactivity	human
Conjugate	-
Immunogen	Unknown or proprietary to MONOSAN and/or its suppliers
Isotype	IgG1
Clonality	Monoclonal
Clone number	DCN47.5
Size	1 ml
Concentration	100 ug/ ml
Format	-
Storage buffer	PBS with 0.1% BSA and 0.02% sodium azide
Storage until expiry date	2-8°C

FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES

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Additional info

The monoclonal antibody DCN47.5 reacts with the C-type lectin, DC-SIGN (CD209), exclusively expressed on human dendritic cells (DC). DC are specialized antigen presenting cells and bridge the innate and the adaptive immune system. They provide high levels of costimulation necessary for activation of both naïve and antigen-experienced T-cells. Immature DC are capable to migrate to inflammatory sites, capture antigen and process it internally to form MHC-peptide complexes. Following antigen uptake, DC undergo maturation and migrate to lymphoid organs where they can present MHC-peptide complexes to resting T-cells and drive T-cell proliferation. During differentiation and maturation of DC, several phenotypic surface markers are expressed: CD1a, CD4, CD11, CD40, CD86, and HLA-DR. Immature DC predominantly express CCR5 which enables DC to migrate to inflammatory sites, whereas mature DC express high levels of CXCR4, a receptor that facilitates migration to lymphoid organs.

DC also express DC-specific, ICAM-3 grabbing, nonintegrin (DC-SIGN), a 44 kDa C-type lectin that binds to the HIV-1 envelope glycoprotein gp120, ICAM-3 on T-cells and ICAM-2 on endothelial cells. HIV virions are able to infect cells expressing CD4 and the chemokine co-receptors CCR5 or CXCR4 and can attach to DC-SIGN to extend virion lifespan. Therefore, DC are candidates for HIV-1 infection. DC-SIGN-ICAM-3 binding is integrin-independent but calcium-dependent and antibodies reactive against DC-SIGN can be used to study DC-SIGN-ICAM3 binding.

The monoclonal antibody DCN47.5 specifically reacts with the C-type lectin DC-SIGN (CD209) expressed on human dendritic cells and inhibits binding of DC-SIGN to ICAM-2 on endothelial cells.

References

1. Leeuwenberg; JFM et al. J Immunol 1994; 152: 4036
2. Leeuwenberg, JFM et al J Immunol 1994, 152: 5070
3. Marchetti; L et al. J Biol Chem 2004; 279: 32869
4. -
5. -

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