HycultBiotech

CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name	DC-SIGN, Human, clone DCN47.5, FITC conjugated		
Catalog number	HM2209F-100UG		
Lot number	-	**Expiry date**	-
Volume	1 ml	**Amount**	100 µg
Formulation	0.2 µm filtered in PBS+1%BSA+0.02%NaN3	**Concentration**	100 µg/ml
Host Species	Mouse IgG1	**Conjugate**	FITC
Endotoxin	N.A.	**Purification**	Protein G
Storage	4°C		

Application notes

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #				1,2	3			
Yes				●	●			
No								
N.D.	●	●	●			●	●	●

N.D.= Not Determined; IHC = Immuno histochemistry; F = Frozen sections; P = Paraffin sections; IF = Immuno Fluorescence; FC = Flow Cytometry; FS = Functional Studies; IA = Immuno Assays; IP = Immuno Precipitation; W = Western blot

Dilutions to be used depend on detection system applied. It is recommended that users test the reagent and determine their own optimal dilutions. The typical starting working dilution is 1:50.

- Positive control: human lymphnodes or PHA activated T cells.

General Information

Description

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.

Immunogen

Human monocyte-derived dendritic cells.

Aliases

CD209 antigen, C-type lectin domain family 4 member L, Dendritic cell-specific ICAM-3-grabbing non-integrin 1.

Gene

CD209

References

1. Leeuwenberg, JFM et al; Slow release of soluble TNF-Receptors by monocytes in vitro. J Immunol 1994, *152*: 4036
2. Leeuwenberg, JFM et al; Lipopolysaccharide LPS-mediated soluble TNF-Receptor release and TNF-Receptor expression by monocytes; role of CD14, LPS binding protein and bactericidal/permeability-increasing protein. J Immnol 1994, *152*: 5070
3. Marchetti, L et al; Tumor necrosis factor (TNF)-mediated neuroprotection against glutamate-induced excitotoxicity is enhanced by N-methyl-D-aspartate receptor activation. Essential role of a TNF receptor 2-mediated phosphatidylinositol 3-kinase-dependent NF-kappa B pathway. J Biol Chem 2004, *279*: 32869

Storage&stability

Product should be stored at 4°C. Under recommended storage conditions, product is stable for at least one year.

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We hereby certify that the above-stated information is correct and that this product has been successfully tested by the Quality Control Department. This product was released for sale according to the existing specifications. This document has been produced electronically and is valid without a signature.

Approved by Manager of QC	Date
Brenda Teunissen	03/12/2019

Do you have any questions or comments regarding this product? Please contact us via support@hycultbiotech.com.