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DC-SIGN (D7F5C) XP[®] Rabbit mAb (PE Conjugate)

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: FC-L	Reactivity: H	Sensitivity: Endogenous	Source/Isotype: Rabbit IgG	UniProt ID: #Q9NNX6	Entrez-Gene Id: 30835
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Product Usage Information

Application

Flow Cytometry (Live)

Dilution

1:50

Storage

Supplied in PBS (pH 7.2), less than 0.1% sodium azide and 2 mg/ml BSA. Store at 4°C. Do not aliquot the antibodies. Protect from light. Do not freeze.

Specificity/Sensitivity

DC-SIGN (D7F5C) XP[®] Rabbit mAb (PE Conjugate) recognizes endogenous levels of total DC-SIGN protein. This antibody does not cross-react with DC-SIGNR.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human DC-SIGN protein.

Description

This Cell Signaling Technology antibody is conjugated to phycoerythrin (PE) and tested in-house for direct flow cytometry analysis in human cells. This antibody is expected to exhibit the same species cross-reactivity as the unconjugated DC-SIGN (D7F5C) XP[®] Rabbit mAb #13193.

Background

DC-SIGN (CD209, CLEC4L) is a C-type lectin receptor expressed by dendritic cells (DCs) (1,2). The DC-SIGN transcript can undergo several splicing events to generate at least thirteen different transmembrane and soluble isoforms (3). DC-SIGN responds to a broad range of pathogens due to its ability to recognize both mannose and fructose carbohydrates, and is well studied for its role in HIV infection. Recognition of the HIV envelope glycoprotein gp120 by DC-SIGN leads to internalization of HIV by DCs and facilitates transmission of the virus to CD4⁺ T cells (2,4). DC-SIGN also mediates adhesion to T cells through interaction with ICAM-3, as well as transmigration across the endothelium by binding to ICAM-2 (1,5). The DC-SIGN receptor can modulate TLR signaling by activating the kinase Raf-1 (6,7). The closely related molecule DC-SIGNR (L-SIGN, CLEC4M) is 77% homologous to DC-SIGN and likely arose through a gene duplication event (8). Like DC-SIGN, DC-SIGNR binds mannose carbohydrates on the surface of pathogens (8,9). However, the expression patterns of the two receptors differ, as DC-SIGNR expression is restricted to endothelial cells of the liver, lymph node, and placenta (10). Murine cells contain a set of related molecules, SIGNR1-SIGNR8 (11). Based on sequence analysis, there is no clear murine ortholog to human DC-SIGN, however SIGNR3 is the most functionally similar due to its ability to recognize both mannose and fructose structures (11).

Background References

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- Powlesland, A.S. et al. (2006) *J Biol Chem* 281, 20440-9.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Applications Key

FC-L: Flow Cytometry (Live)

Cross-Reactivity Key

H: Human

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