

#13193 Store at -20°C

DC-SIGN (D7F5C) XP[®] Rabbit mAb



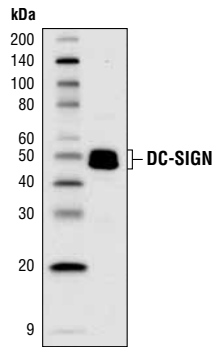
Orders ■ 877-616-CELL (2355)
orders@cellsignal.com
Support ■ 877-678-TECH (8324)
info@cellsignal.com
Web ■ www.cellsignal.com

rev. 07/23/14

For Research Use Only. Not For Use In Diagnostic Procedures.

Applications W, IP, IF-IC, F Endogenous	Species Cross-Reactivity* H	Molecular Wt. 45-55 kDa	Isotype Rabbit IgG**
---	--------------------------------	----------------------------	-------------------------

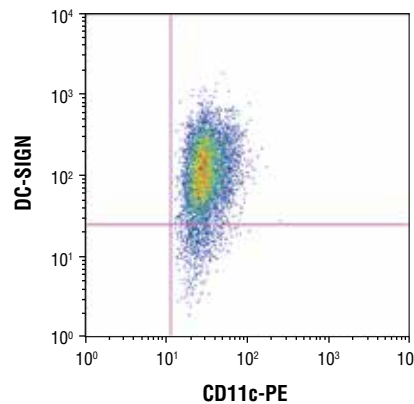
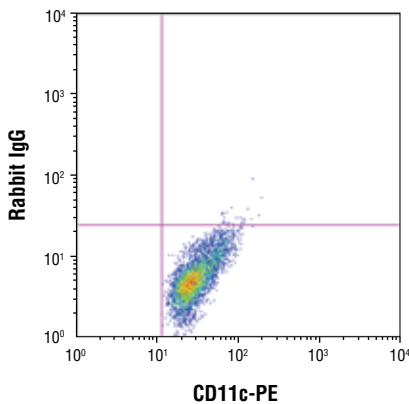
Background: DC-SIGN (CD209, CLEC4L) is a C-type lectin receptor expressed by dendritic cells (DCs) (1,2). The DC-SIGN transcript can undergo several splicing events to generate at least thirteen different transmembrane and soluble isoforms (3). DC-SIGN responds to a broad range of pathogens due to its 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).



Western blot analysis of extracts from human monocyte-derived dendritic cells using DC-SIGN (D7F5C) XP[®] Rabbit mAb.

Specificity/Sensitivity: DC-SIGN (D7F5C) XP[®] Rabbit mAb 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.



Flow cytometric analysis of human monocyte-derived dendritic cells stained with anti-human CD11c PE and either Rabbit (DA1E) mAb IgG XP[®] Isotype Control #3900 (left) or DC-SIGN (D7F5C) XP[®] Rabbit mAb (right). Anti-rabbit IgG (H+L), F(ab')₂ Fragment (Alexa Fluor[®] 647 Conjugate) #4414 was used as a secondary antibody.

Entrez Gene ID #30835
UniProt ID #Q9NNX6

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

***Species cross-reactivity is determined by western blot.**

****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:

Western blotting	1:1000
Immunoprecipitation	1:100
Immunofluorescence (IF-IC)	1:400
Flow Cytometry	1:100

For product specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

Background References:

- (1) Geijtenbeek, T.B. et al. (2000) *Cell* 100, 575-85.
- (2) Geijtenbeek, T.B. et al. (2000) *Cell* 100, 587-97.
- (3) Mummidi, S. et al. (2001) *J Biol Chem* 276, 33196-212.
- (4) Kwon, D.S. et al. (2002) *Immunity* 16, 135-44.
- (5) Geijtenbeek, T.B. et al. (2000) *Nat Immunol* 1, 353-7.
- (6) Gringhuis, S.I. et al. (2007) *Immunity* 26, 605-16.
- (7) Gringhuis, S.I. et al. (2010) *Nat Immunol* 11, 419-26.
- (8) Bashirova, A.A. et al. (2001) *J Exp Med* 193, 671-8.
- (9) Mitchell, D.A. et al. (2001) *J Biol Chem* 276, 28939-45.
- (10) Pöhlmann, S. et al. (2001) *Proc Natl Acad Sci USA* 98, 2670-5.
- (11) Powlesland, A.S. et al. (2006) *J Biol Chem* 281, 20440-9.

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween[®] 20 at 4°C with gentle shaking, overnight.

DRAQ5[®] is a registered trademark of Biostatus Limited.

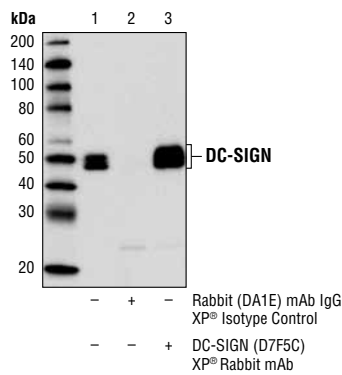
DyLight[™] is a trademark of Thermo Fisher Scientific Inc. and its subsidiaries.

Alexa Fluor[®] is a registered trademark of Molecular Probes, Inc.

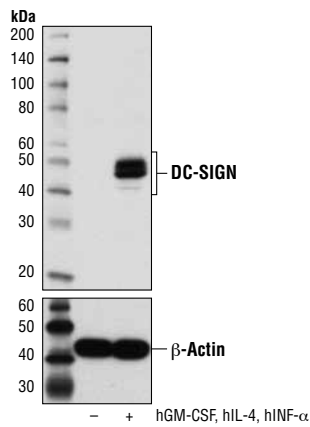
Tween[®] is a registered trademark of ICI Americas, Inc.

© 2013 Cell Signaling Technology, Inc. XP[®] and Cell Signaling Technology[®] are trademarks of Cell Signaling Technology, Inc.

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine
Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.

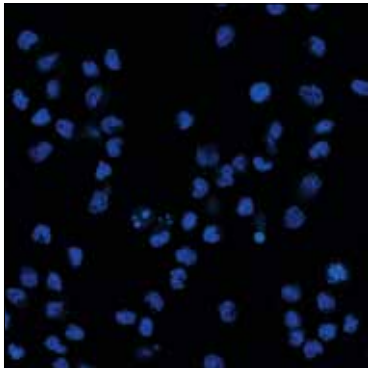


Immunoprecipitation of DC-SIGN from MUTZ-3 cell extracts differentiated into interstitial dendritic cells with Human Granulocyte Macrophage Colony Stimulating Factor (hGM-CSF) #8922 (100 ng/ml), Human Interleukin-4 (hIL-4) #8919 (100 ng/ml), and Human Tumor Necrosis Factor- α (hTNF- α) #8902 (2.5 ng/ml) for 7 d, using Rabbit (DA1E) mAb IgG XP® Isotype Control #3900 (lane 2) or DC-SIGN (D7F5C) XP® Rabbit mAb (lane 3). Lane 1 is 10% input. Western blot analysis was performed using DC-SIGN (D7F5C) XP® Rabbit mAb.

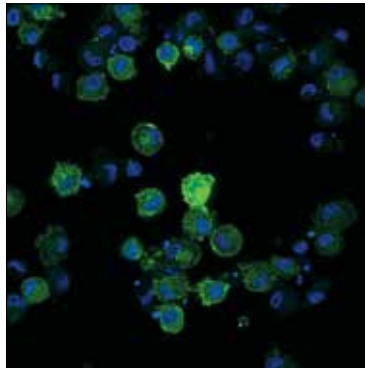


Western blot analysis of extracts from MUTZ-3 cells, undifferentiated (-) or differentiated (+) into interstitial dendritic cells with Human Granulocyte Macrophage Colony Stimulating Factor (hGM-CSF) #8922 (100 ng/ml), Human Interleukin-4 (hIL-4) #8919 (100 ng/ml), and Human Tumor Necrosis Factor- α (hTNF- α) #8902 (2.5 ng/ml) for 7 d, using DC-SIGN (D7F5C) XP® (upper) or β -Actin (D6A8) Rabbit mAb #8457 (lower).

undifferentiated



differentiated



Confocal immunofluorescent analysis of MUTZ-3 cells, undifferentiated (negative, left) or differentiated (positive, right) into interstitial dendritic cells with Human Granulocyte Macrophage Colony Stimulating Factor (hGM-CSF) #8922 (100 ng/ml), Human Interleukin-4 (hIL-4) #8919 (100 ng/ml), and Human Tumor Necrosis Factor- α (hTNF- α) #8902 (2.5 ng/ml) for 7 d (right), using DC-SIGN (D7F5C) XP® Rabbit mAb (green). Actin filaments were labeled with DyLight™ 554 Phalloidin #13054 (red). Blue pseudocolor = DRAQ5® #4084 (fluorescent DNA dye).