

Mouse anti-Human CD169 Monoclonal Antibody | anti-CD169 antibody

Mouse Anti Human CD169: RPE

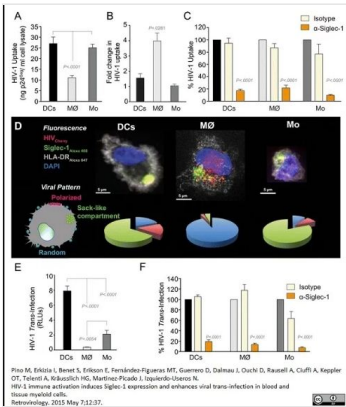
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA12265	Mouse	Human	Flow Cytometry, Functional Assay

PRODUCT SYNONYMS

CD169; Monoclonal Antibody; Mouse Anti Human CD169: RPE; CD169 antibody; 7-239; anti-CD169 antibody

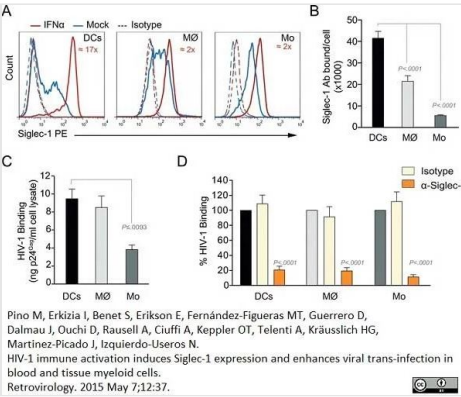
PRODUCT SPECIFICATIONS

Host	Mouse
Reactivity	Human
Clonality	Monoclonal
Isotype	IgG1
Clone Number	7-239
Purity/Purification	>95% by SDS PAGE Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant.
Form/Format	Purified IgG conjugated to R. Phycoerythrin (RPE) - Liquid
Sequence Length	1649
Applicable Applications for anti-CD169 antibody	FCM/FACS (Flow Cytometry)
Application Notes	FC/FACS: Max. Dilution: Neat Use 10ul of the undiluted reagent to label 1x10 ⁶ cells in 100ul
Immunogen	Human rhinovirus 14-infected monocyte-derived dendritic cells
Preservative Stabilizers	<0.1% Sodium Azide (NaN ₃) 0.2% Bovine Serum Albumin
Buffer Solution	Phosphate Buffered Saline
Preparation and Storage	Store at 4 degree C. DO NOT FREEZE. This product should be stored undiluted. This product is photosensitive and should be protected from light.



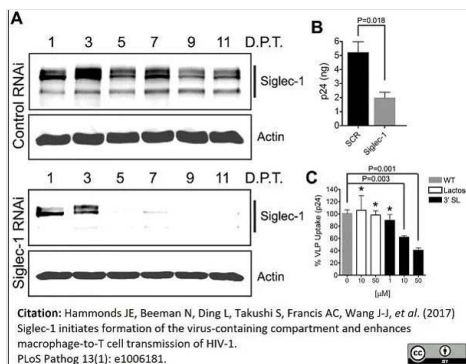
Application Data

PE conjugated Mouse anti Human CD169 antibody, clone 7-239 used to block CD169 function on myeloid cells. Image caption: Siglec-1 mediates HIV-1 uptake into a storage compartment and enhances HIV-1 trans-infection specially in IFNγ-treated monocytes and DCs. A. Uptake of HIV-1NL4-3 by different myeloid cells exposed to IFNγ. Cells were cultured with HIV-1 to measure p24Gag by ELISA. Mean values and SEM from four experiments include cells from 12 donors. B. Fold change in HIV-1NL4-3 uptake of cells treated with bafilomycin A1 compared to untreated cells. Mean values and SEM include cells from three donors. C. Relative uptake of HIV-1NL4-3 by IFNγ-treated myeloid cells pre-incubated with the indicated mAbs. Values are normalized to the level of HIV-1 uptake by mock-treated cells (set at 100%). Mean values and SEM from two experiments include cells from six donors. D. Confocal microscopy analysis of different IFNγ-treated myeloid cells pulsed with HIV-1Cherry and stained for Siglec-1 (Alexa 488), HLA-DR (Alexa 647) and DAPI. (Top) Representative viral pattern for each kind of myeloid cell analyzed, showing maximum fluorescence intensity of four channels. (Bottom) Percentage of myeloid cells with distinct viral patterns: random distribution, polarized accumulation, and sac-like compartment formation, as illustrated in the left drawing. Mean values of 50 cells from two different donors are shown. E. HIV-1 transmission from IFNγ-treated myeloid cells to a luciferase reporter CD4+ cell line. HIV-1 infection was determined by induced luciferase activity in relative light units (RLUs). Mean values and SEM from four experiments include cells from 12 donors. F. Relative HIV-1 transmission from IFNγ-treated myeloid cells pre-incubated with the indicated mAbs. Values are normalized to the level of HIV-1 trans-infected by mock-treated cells. Mean values and SEM from two experiments include cells from six donors. Statistical differences were assessed with a paired t test in A and E, and with a one sample t-test in B, C and F. From: Pino M, Erkizia I, Benet S, Erikson E, Fernández-Figueras MT, Guerrero D, Dalmau J, Ouchi D, Rausell A, Ciuffi A, Keppler OT, Telenti A, Kräusslich HG, Martínez-Picado J, Izquierdo-Useros N. HIV-1 immune activation induces Siglec-1 expression and enhances viral trans-infection in blood and tissue myeloid cells. *Retrovirology*. 2015 May 7;12:37.



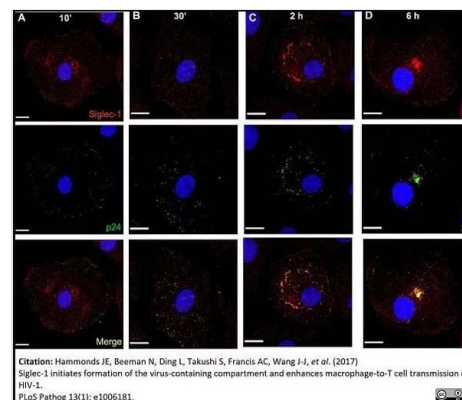
Application Data

PE conjugated Mouse anti CD169 antibody, clone 7-239 used for the evaluation of CD169 expression on myeloid cell populations by flow cytometry. Mouse anti Human CD169 antibody, clone 7-239 used to block CD169 function on myeloid cells. Image caption: Siglec-1 mediates HIV-1 capture by IFNγ-treated myeloid cells. A. Representative profiles of Siglec-1 staining in distinct myeloid cells cultured with or without 1000 U/ml of IFNγ and assessed by FACS. Staining of matched-isotype control is also shown. The mean fold increase in fluorescence after IFNγ treatment of cells derived from three donors is shown in red numbers. B. Mean number of Siglec-1 antibody binding sites per cell displayed by different myeloid cells exposed to 1000 U/ml of IFNγ for 48 h and assessed by quantitative FACS analysis. Data show mean values and SEM from four experiments including cells from 12 donors. C. Comparative binding of HIV-1NL4-3 to different myeloid cells ly exposed to 1000 U/ml of IFNγ for 48 h. Cells were cultured with HIV-1NL4-3 for 4 h at 4°C, washed and lysed to measure p24Gag by ELISA. Data show mean values and SEM from two experiments including cells from six donors. D. Relative binding of HIV-1NL4-3 by different IFNγ-treated myeloid cells that had been pre-incubated with 10 ug/ml of the indicated mAbs before HIV-1 exposure for 4 h at 4°C as described in C. To compare the effect of the mAbs in different myeloid cells, values were normalized to the level of HIV-1 binding by mock-treated cells (set to 100%). Data show mean values and SEM from two experiments including cells from six donors. Statistical differences were assessed with a paired t test in B and C, and with a one sample t-test in D. From: Pino M, Erkizia I, Benet S, Erikson E, Fernández-Figueras MT, Guerrero D, Dalmau J, Ouchi D, Rausell A, Ciuffi A, Keppler OT, Telenti A, Kräusslich HG, Martínez-Picado J, Izquierdo-Useros N. HIV-1 immune activation induces Siglec-1 expression and enhances viral trans-infection in blood and tissue myeloid cells. *Retrovirology*. 2015 May 7;12:37. This image is from an open access article distributed under the terms of the Creative Commons Attribution License.



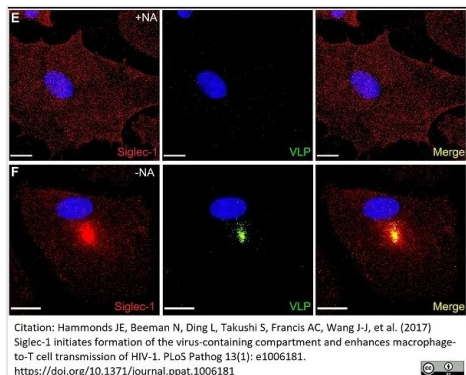
Application Data

Mouse anti Human CD169 antibody, clone 7-239 used for the evaluation of CD169 expression by monocyte-derived macrophages by western blotting. Image caption: Siglec-1 RNAi interference and competitive inhibition by a GM3 glycan mimetic inhibits HIV-1 VLP internalization by MDMs. (A) MDMs were transfected with 60 nM control or Siglec-1 siRNA on day 8 after plating. Cell lysates were harvested and analyzed by Western blotting for Siglec-1 and actin expression. (B) MDMs were transfected with either control or Siglec-1 siRNA and 5 days later incubated with 400 ng of HIV-1 Gag-EGFP VLPs for 2 hr. Cells were washed and cell lysate p24 concentration determined by ELISA. (C) MDMs were pre-treated at RT with lactose or 3'-sialyllactose for 1 hour. Subsequently, MDMs were incubated with 400 ng of HIV-1 Gag-EGFP VLPs in the presence of compound for an additional hour. MDMs were then washed, cell lysates harvested and cell-associated p24 measured by ELISA. Error bars represent standard deviation; asterisks depict significant differences as measured by unpaired t-test. From: Hammonds JE, Beeman N, Ding L, Takushi S, Francis AC, Wang J-J, et al. (2017) Siglec-1 initiates formation of the virus-containing compartment and enhances macrophage-to-T cell transmission of HIV-1. PLoS Pathog 13(1): e1006181. This image is from an open access article distributed under the terms of the Creative Commons Attribution License.



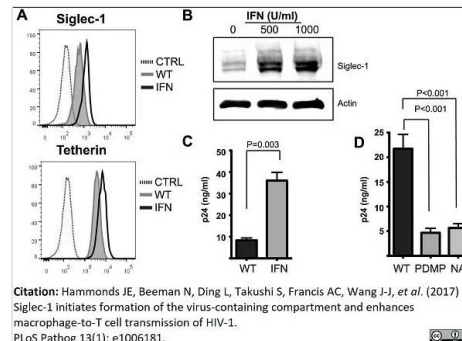
Application Data

Mouse anti Human CD169 antibody, clone 7-239 used for the evaluation of CD169 expression by monocyte-derived macrophages by immunofluorescence. Image caption: Time course of HIV-1 Gag-EGFP internalization within MDMs and colocalization with Siglec-1. (A-D) 400 ng of sucrose-purified HIV-1 Gag-EGFP VLPs were added to MDM cultures and allowed to attach and be internalized from 10' to 6 hours. At the indicated times, MDMs were washed, fixed in 4% PFA and immunostained with Siglec-1 (red, mAb clone 7-239) and DAPI co-stained. Shown are cells representative of the populations examined at each timepoint. Size bars = 10 μm. From: Hammonds JE, Beeman N, Ding L, Takushi S, Francis AC, Wang J-J, et al. (2017) Siglec-1 initiates formation of the virus-containing compartment and enhances macrophage-to-T cell transmission of HIV-1. PLoS Pathog 13(1): e1006181. This image is from an open access article distributed under the terms of the Creative Commons Attribution License.



Application Data

Mouse anti Human CD169 antibody, clone 7-239 used for the evaluation of CD169 expression by monocyte-derived macrophages following exposure to ? interferon immunofluorescence. Image caption: Siglec-1 expression by MDMs is enhanced via IFN exposure and leads to VLP internalization. (E) Sucrose purified, HIV-1 Gag-EGFP VLPs treated with neuraminidase (NA) or untreated (F) were added to mature GM-CSF derived MDM cultures on day 8 for 6 hours. Cells were then washed, fixed, immunostained for Siglec-1 (red) and DAPI co-stained. Size bar = 21 μm for (E) and 15 μm for (F). From: Hammonds JE, Beeman N, Ding L, Takushi S, Francis AC, Wang J-J, et al. (2017) Siglec-1 initiates formation of the virus-containing compartment and enhances macrophage-to-T cell transmission of HIV-1. PLoS Pathog 13(1): e1006181. This image is from an open access article distributed under the terms of the Creative Commons Attribution License.



Application Data

Mouse anti Human CD169 antibody, clone 7-239 used for the evaluation of CD169 expression by monocyte-derived macrophages following exposure to ? interferon using flow cytometry and western blotting. Image caption: Siglec-1 expression by MDMs is enhanced via IFN exposure and leads to VLP internalization. (A) Representative Siglec-1 and tetherin surface expression of GM-CSF matured MDMs together with 24 h IFN alpha stimulation (1000 U/ml). (B) Western blot of Siglec-1 and actin upon incubation with increasing amounts of IFN alpha in GM-CSF derived MDMs. (C) Enhanced capture of HIV-1 Gag-EGFP VLPs by MDMs stimulated with 1000 U/ml IFN alpha as measured by p24 ELISA. (D) MDMs were incubated with 400 ng of sucrose-purified HIV-1 Gag-EGFP VLPs either treated with 1.0 U/ml neuraminidase, untreated or from 293T cultured in the presence of 10 μM PDMP. Cell-associated HIV-1 p24 was quantified by ELISA. From: Hammonds JE, Beeman N, Ding L, Takushi S, Francis AC, Wang J-J, et al. (2017) Siglec-1 initiates formation of the virus-containing compartment and enhances macrophage-to-T cell transmission of HIV-1. PLoS Pathog 13(1): e1006181. This image is from an open access article distributed under the terms of the Creative Commons Attribution License.

ADDITIONAL INFORMATION

Related Product Information for anti-CD169 antibody	Mouse anti Human CD169 clone 7-239, recognizes CD169 also known as Siglec-1 or Sialoadhesin, is a member of the Siglec family of proteins. It is expressed by subpopulations of macrophages and dendritic cells. Some subpopulations of macrophages express CD169 at a low level, but this expression can be upregulated upon induction by IFN-alpha (O'Neill et al. 2013). CD169+ cells are largely found in the lymph nodes, spleen, but are also present in smaller amounts in intestinal tracts, liver and bone marrow (Hartnell et al. 2001). The most characterized functions of CD169 are its roles in cell-cell interactions and phagocytosis of sialylated pathogens. CD169 has an approximate molecular weight of 185 kDa and recognizes sialic acid-containing sugar chains. Structurally, it contains an extracellular domain containing 17 immunoglobulin-like domains and one v-set domain via which it binds its' ligands. It also contains 16 C2-set domains which extend the binding site away from the surface of the cell. This extension helps bind granulocytes, B cells, erythrocytes and a subset of CD8 T cells (Eakin et al. 2016). Increased expression of CD169 has been found to be associated with various conditions, including atherosclerosis, type I diabetes, chronic rejection and systemic sclerosis (Bornhöfft et al. 2018). Mouse anti Human CD169 clone 7-239 has been used in flow cytometry experiments to measure cell surface expression of CD169 upon cell stimulation with IFN-alpha (OhAinle et al. 2018).
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NCBI AND UNIPROT INFORMATION

NCBI GI #	119630923
NCBI GeneID	6614
UniProt Accession #	Q9BZZ2
NCBI Official Full Name	sialic acid binding Ig-like lectin 1, sialoadhesin, isoform CRA_b, partial
NCBI Official Synonym Full Names	sialic acid binding Ig like lectin 1
NCBI Official Symbol	SIGLEC1
NCBI Official Synonym Symbols	SN; CD169; SIGLEC-1
NCBI Protein Information	sialoadhesin
UniProt Protein Name	Sialoadhesin
UniProt Gene Name	SIGLEC1
UniProt Synonym Gene Names	SN; Siglec-1
UniProt Entry Name	SN_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.