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Monoclonal Antibody to CD169 / SIGLEC1 - FITC

Alternate names: Sialic acid-binding Ig-like lectin 1, Sialoadhesin, Siglec-1

Catalog No.: SM066F

Quantity: 0.1 mg

Concentration: 0.1 mg/ml

Background: Two families of mammalian lectin like adhesion molecules have been shown to bind glycoconjugate ligands in a sialic acid dependent manner: the selectins and the sialoadhesins. The sialoadhesin family has 4 members: CD22, a B cell specific marker; myelin associated glycoprotein (MAG), which is expressed on oligodendrocytes and Schwann cells; CD33, a myeloid differentiation antigen; and sialoadhesin, which is expressed only by a subpopulation of tissue macrophages. Involved in cell-cell interactions, sialoadhesin is structurally related to the 3 other listed members of the sialoadhesin family. CD169 is a sialic acid binding site of sialoadhesin. CD169 is a macrophage receptor expressed on stromal macrophages in many tissues, particularly found in lymph nodes, bone marrow and spleen.

Uniprot ID: Q62230

NCBI: NP_035556.3

GeneID: 20612

Host / Isotype: Rat / IgG2a

Clone: MOMA-1

Immunogen: Stromal (reticular) elements from spleen.

Format:
State: Liquid purified IgG fraction
Purification: Affinity Chromatography on Protein G
Buffer System: PBS, pH7.4 containing 0.09% Sodium Azide as preservative and 1% BSA as stabilizer
Label: FITC – Fluorescein Isothiocyanate Isomer 1

Applications:
Immunofluorescence.
Flow Cytometry: Use 10 µl of neat antibody to label 10e6 cells in 100 µl.
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity:

This antibody is specific for CD169, also known as Sialoadhesin.
It reacts with a subpopulation of mature resident tissue macrophages. No reactivity is seen with dendritic cells, peritoneal resident macrophages, peritoneal exudate cells or blood cells. Distinct macrophage subpopulations of lymphoid organs express the antigen. In the spleen, they are localised at the marginal sinus forming a ring around the periarteriolar lymphocyte sheath and follicular areas at the inner side of marginal zones.
In lymph nodes, they are localised in the sinusoids and medullary cords but not within follicular areas or paracortex. In Peyers patches they are localised in the interfollicular areas at the serosal side. Kupffer cells in the liver can be clearly stained by MOMA-1 although antigen expression is weaker than that seen in splenic macrophages.
No MOMA-1 positive macrophages were found in the thymus. Reactivity was also negative in following organs tested so far (kidney, brain, skin).
In non-lymphoid organs, the antigen is only found on a macrophage subpopulation in the lamina propria of the villi of the small intestine.
Species: Mouse. Does not react with Human and Rat.
Other species not tested.

Storage:

Store the antibody undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer.
This product is photosensitive and should be protected from light.
Avoid repeated freezing and thawing.
Shelf life: one year from despatch.

General References:

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8. Girkontaite, J. et al. (2004) The sphingosine-1-phosphate (S1P) lysophospholipid receptor S1P3 regulates MAdCAM-1+ endothelial cells in splenic marginal sinus organization. J. Exp. Med. 200 : 1491-1501.
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11. Bhattacharyya, S. et al. (2011) NFATc1 affects mouse splenic B cell function by controlling the calcineurin-NFAT signaling network. J Exp Med. Apr 4. [Epub ahead of print]
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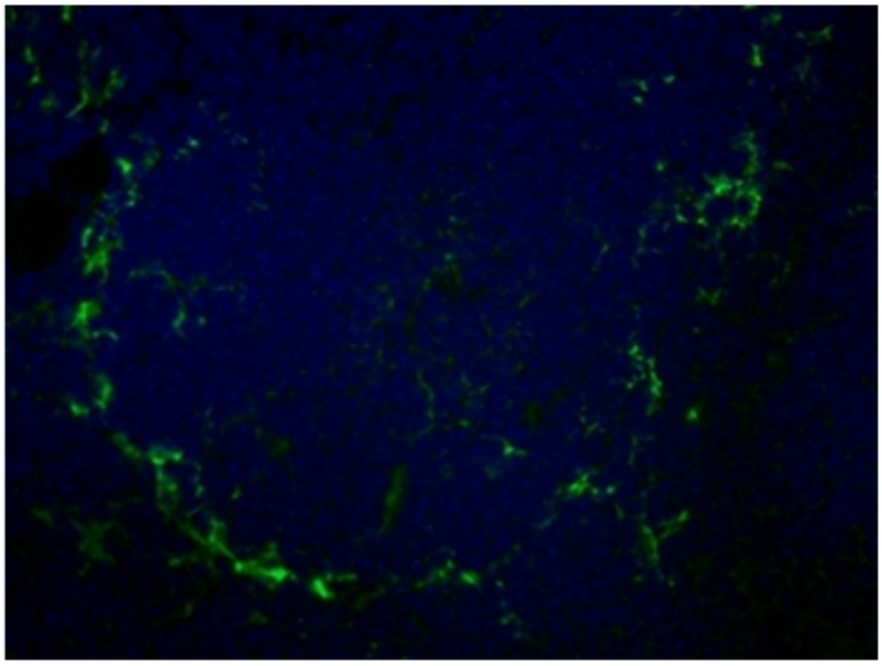
14. Mattsson, J. et al. (2011) Complement activation and complement receptors on follicular dendritic cells are critical for the function of a targeted adjuvant. J Immunol. 187: 3641-52.
15. Whipple, E. C. et al. (2004) Analyses of the In Vivo Trafficking of Stoichiometric Doses of an Anti-Complement Receptor 1/2 Monoclonal Antibody Infused Intravenously in Mice. J. Immunol.173: 2297-2306.

Pictures:



SM066F CD169 antibody staining of Mouse spleen.