

Human Siglec-1/CD169 Alexa Fluor® 647-conjugated Antibody

Monoclonal Mouse IgG₁ Clone # 908102

Catalog Number: FAB5197R

100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Siglec-1/CD169 in direct ELISAs.
Source	Monoclonal Mouse IgG ₁ Clone # 908102
Purification	Protein A or G purified from cell culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Siglec-1/CD169 Ser20-Gln1641 Accession # Q9BZZ2
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

	Recommended Concentration	Sample
Flow Cytometry	0.25-1 µg/10 ⁶ cells	Human peripheral blood mononuclear cells (PBMCs) treated with Recombinant Human IFN-α (Catalog # 11100-1)

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. ● 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

Siglecs are sialic acid specific I-type lectins that belong to the immunoglobulin superfamily. Structurally, they are transmembrane proteins with an N-terminal Ig-like V-set domain followed by varying numbers of Ig-like C2-set domains (1, 2). Human Siglec-1, also known as sialoadhesin and CD169, is a 175-185 kDa glycoprotein. It contains a 1622 amino acid (aa) extracellular domain (ECD) with one Ig-like V-set domain and 16 Ig-like C2-set domains, a 21 aa transmembrane segment, and a 44 aa cytoplasmic domain (3). Within the ECD, human Siglec-1 shares approximately 70% aa sequence identity with mouse and rat Siglec-1. Alternate splicing generates a potentially soluble form of the ECD, and a second isoform with a substituted cytoplasmic domain. Siglec-1 expression is restricted to lymph node and splenic macrophages, plus some tissue macrophages (3). The adhesive function of Siglec-1 is supported by the N-terminal Ig-like domain which shows a selectivity for α2,3-linked sialic acid residues (3-5). Siglec-1 binds a number of sialylated molecules including the mannose receptor, MGL1, MUC1, PSGL-1, and different glycoforms of CD43 (6-9). Its binding capacity can be masked by endogenous sialylated molecules (10, 11). The sialylated and sulfated N-linked carbohydrates that modify Siglec-1 itself are required for ligand binding (6, 7). Siglec-1 is expressed on dendritic cells following rhinovirus exposure, and these DC promote T cell anergy (12). It is also induced on circulating monocytes during systemic sclerosis and HIV-1 infection (13-15). Siglec-1 can trap HIV-1 particles for *trans* infection of permissive cells (14).

References:

- Varki, A. and T. Angata (2006) *Glycobiology* **16**:1R.
- Crocker, P.R. *et al.* (2007) *Nat. Rev. Immunol.* **7**:255.
- Hartnell, A. *et al.* (2001) *Blood* **97**:288.
- Nath, D. *et al.* (1995) *J. Biol. Chem.* **270**:26184.
- Crocker, P.R. *et al.* (1991) *EMBO J.* **10**:1661.
- Martinez-Pomares, L. *et al.* (1999) *J. Biol. Chem.* **274**:35211.
- Kumamoto, Y. *et al.* (2004) *J. Biol. Chem.* **279**:49274.
- Nath, D. *et al.* (1999) *Immunology* **98**:213.
- van den Berg, T.K. *et al.* (2001) *J. Immunol.* **166**:3637.
- Nakamura, K. *et al.* (2002) *Glycobiology* **12**:209.
- Barnes, Y.C. *et al.* (1999) *Blood* **93**:1245.
- Kirchberger, S. *et al.* (2005) *J. Immunol.* **175**:1145.
- York, M.R. *et al.* (2007) *Arthritis Rheum.* **56**:1010.
- Rempel, H. *et al.* (2008) *PLoS ONE* **3**:e1967.
- van der Kuyl, A.C. *et al.* (2007) *PLoS ONE* **2**:e257.

Human Siglec-1/CD169 Alexa Fluor® 647-conjugated Antibody

Monoclonal Mouse IgG₁ Clone # 908102

Catalog Number: FAB5197R

100 µg

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.