

**DESCRIPTION**

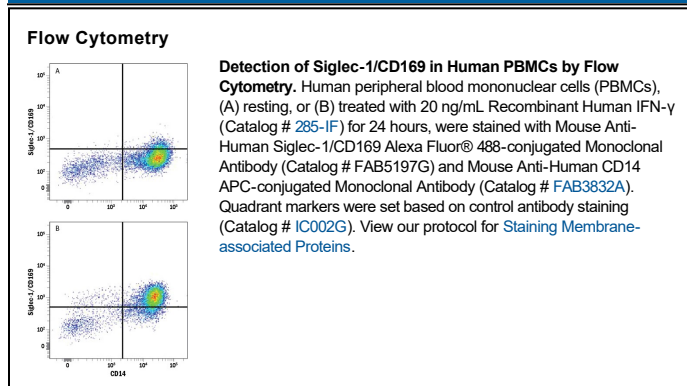
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human Siglec-1/CD169 in direct ELISAs.
<b>Source</b>	Recombinant Monoclonal Mouse IgG <sub>1</sub> Clone # 908102
<b>Purification</b>	Protein A or G purified from cell culture supernatant
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human Siglec-1/CD169 Ser20-Gln1641 Accession # Q9BZZ2
<b>Conjugate</b>	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
<b>Formulation</b>	Supplied 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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Flow Cytometry</b>	5 µL/10 <sup>6</sup> cells	See Below

**DATA**



**PREPARATION AND STORAGE**

<b>Shipping</b>	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<b>Protect from light. Do not freeze.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, 2 to 8 °C as supplied.</li> </ul>

## 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 47 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, while a second isoform shows a substituted cytoplasmic domain. Siglec-1 expression occurs on monocytes, dendritic cells, and macrophages of various organs and tissues, including liver, spleen, lung, and gut. The adhesive function of Siglec-1 is supported by the N-terminal Ig-like domain which shows a selectivity for  $\alpha$ 2,3-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:

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