

## DESCRIPTION

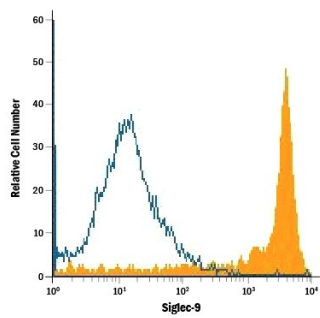
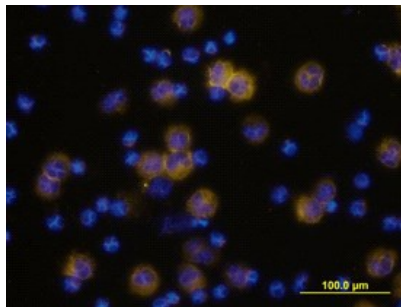
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human Siglec-9 in direct ELISAs and Western blots. In direct ELISAs, less than 0.2% cross-reactivity with recombinant human (rh) Siglec-2, rhSiglec-3, rhSiglec-5, rhSiglec-7, and rhSiglec-10 is observed. In Western blots, approximately 25% cross-reactivity with rhSiglec-7 is observed, approximately 5% cross-reactivity with rhSiglec-3 and rhSiglec-5 is observed, and less than 1% cross-reactivity with rhSiglec-2 is observed.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human Siglec-9 Gln18-Gly348 Accession # Q9Y336
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

## 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>Western Blot</b>	0.1 µg/mL	Recombinant Human Siglec-9 Fc Chimera (Catalog # 1139-SL)
<b>Flow Cytometry</b>	0.25 µg/10 <sup>6</sup> cells	See Below
<b>Immunocytochemistry</b>	5-15 µg/mL	See Below
<b>Human Siglec-9 Sandwich Immunoassay</b>		<b>Reagent</b>
<b>ELISA Capture</b>	2-8 µg/mL	Human Siglec-9 Antibody (Catalog # MAB1139)
<b>ELISA Detection Standard</b>	0.1-0.4 µg/mL	Human Siglec-9 Biotinylated Antibody (Catalog # BAF1139) Recombinant Human Siglec-9 Fc Chimera (Catalog # 1139-SL)

## DATA

<p><b>Flow Cytometry</b></p>  <p><b>Detection of Siglec-9 in Human Monocytes by Flow Cytometry.</b> Human peripheral blood monocytes were stained with Goat Anti-Human Siglec-9 Biotinylated Antigen Affinity-purified Polyclonal Antibody (Catalog # BAF1139, filled histogram) or isotype control antibody (Catalog # BAF108, open histogram), followed by Streptavidin-Phycoerythrin (Catalog # F0040).</p>	<p><b>Immunocytochemistry</b></p>  <p><b>Siglec-9 in Human PBMCs.</b> Siglec-9 was detected in immersion fixed human peripheral blood mononuclear cells (PBMCs) using Goat Anti-Human Siglec-9 Biotinylated Antigen Affinity-purified Polyclonal Antibody (Catalog # BAF1139) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Streptavidin (yellow; Catalog # NL999) and counterstained with DAPI (blue). View our protocol for <a href="#">Fluorescent ICC Staining of Non-adherent Cells</a>.</p>
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## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.2 mg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## BACKGROUND

Siglecs(1) (sialic acid binding Ig-like lectins) are I-type (Ig-type) lectins belonging to the Ig superfamily. They are characterized by an N-terminal Ig-like V-type domain which mediates sialic acid binding, followed by varying numbers of Ig-like C2-type domains (1, 2). Eleven human Siglecs have been cloned and characterized. They are sialoadhesin/CD169/Siglec-1, CD22/Siglec-2, CD33/Siglec-3, Myelin-Associated Glycoprotein (MAG/Siglec-4a) and Siglec-5 to -11 (1-4). To date, no Siglec has been shown to recognize any cell surface ligand other than sialic acids, suggesting that interactions with glycans containing this carbohydrate are important in mediating the biological functions of Siglecs. Siglecs 5 to 11 share a high degree of sequence similarity with CD33/Siglec-3 both in their extracellular and intracellular regions. They are collectively referred to as CD33-related Siglecs. One remarkable feature of the CD33-related Siglecs is their differential expression pattern within the hematopoietic system (2, 3). This fact, together with the presence of two conserved immunoreceptor tyrosine-based inhibition motifs (ITIMs) in their cytoplasmic tails, suggests that CD33-related Siglecs are involved in the regulation of cellular activation within the immune system.

The cDNA of human Siglec-9 encodes a 463 amino acid (aa) polypeptide with a hydrophobic signal peptide, an N-terminal Ig-like V-type domain, two Ig-like C2-type domains, a transmembrane region and a cytoplasmic tail (5, 6). In peripheral blood leukocytes, Siglec-9 is expressed on neutrophils, monocytes, a fraction of NK cells, B cells, and a minor subset of CD8+ T cells (5). It binds equally well to both 2,3- and 2,6-linked sialic acid (5, 6). Siglec-9 is closely related to Siglec-7, and they share ~80% amino acid sequence identity. The gene encoding siglec-9 was mapped to chromosome 19q13.4.

## References:

1. Crocker, P.R. *et al.* (1998) *Glycobiology* **8**:v.
2. Crocker, P.R. and A. Varki (2001) *Trends Immunol.* **22**:337.
3. Crocker, P.R. and A. Varki (2001) *Immunology* **103**:137.
4. Angata, T. *et al.* (2002) *J. Biol. Chem.* **277**:24466.
5. Zhang, J.Q. *et al.* (2000) *J. Biol. Chem.* **275**:22121.
6. Angata, T. *et al.* (2000) *J. Biol. Chem.* **275**:22127.