Human Siglec-9
Alexa Fluor® 647-conjugated Antibody

Monoclonal Mouse IgG_{2A} Clone # 191240

Catalog Number: FAB1139R

100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Siglec-9 in direct ELISAs and Western blots. In direct ELISAs, less than 10% cross-reactivity with recombinant mouse Siglec-E is observed and less than 1% cross-reactivity with recombinant human (rh) Siglec-3, rhSiglec-5, rhSiglec-6, rhSiglec-7, rhSiglec-8 or rhSiglec-10 is observed. In Western blots, approximately 100% cross-reactivity with recombinant mouse Siglec-E is observed under non-reduced conditions.
Source	Monoclonal Mouse IgG_{2A} Clone # 191240
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Siglec-9 Gln18-Gly348 (predicted) Accession # Q9Y336
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 granulocytes

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(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 recognized 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-likeV-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:

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2. Crocker, P.R. and A. Varki (2001) Trends Immunol. **22**:337.
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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.

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