Human Siglec-7/CD328 Alexa Fluor® 488-conjugated Antibody

Monoclonal Mouse IgG_1 Clone # 194211

Catalog Number: FAB11381G
100 TESTS, 25 TESTS

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Siglec-7 in ELISAs. In direct ELISAs, no cross-reactivity with recombinant human Siglec-6, -8, -9 or recombinant Siglec-E is observed.
Source	Monoclonal Mouse IgG_1 Clone # 194211
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Siglec-7 Gln19-Gly357 (predicted) Accession # Q9Y286
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Formulation	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.

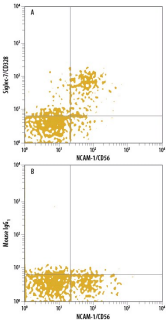
APPLICATIONS

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.*

	Recommended Concentration	Sample
Flow Cytometry	5 µL/10^6 cells	See Below

DATA

Flow Cytometry



Detection of Siglec-7/CD328 in Human Blood Lymphocytes by Flow Cytometry. Human peripheral blood lymphocytes were stained with Mouse Anti-Human NCAM-1/CD56 APC-conjugated Monoclonal Antibody (Catalog # FAB2408A) and either (A) Mouse Anti-Human Siglec-7/CD328 Alexa Fluor® 488-conjugated Monoclonal Antibody (Catalog # FAB11381G) or (B) Mouse IgG_1 Alexa Fluor 488 Isotype Control (Catalog # IC002G). View our protocol for Staining Membrane-associated Proteins.

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 Siglecs 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-7, also known as adhesion inhibitory receptor module-1 (AIRM-1) and designated CD328, encodes a 467 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). Siglec-7 exists as a monomer on the cell surface and is expressed on natural killer cells, CD8+ T cells and monocytes (3, 5). It binds equally well to both α2,3- and α2,6-linked sialic acid (5). The gene encoding Siglec-7 was mapped to chromosome 19q13.3.

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. Nicoll, G. *et al.* (1999) J. Biol. Chem. **274**:34089.

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