Human Siglec-10 Antibody

Monoclonal Mouse IgG_1 Clone # 265821

Catalog Number: MAB21301

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Siglec-10 in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human Siglec-2, -3, -5, -6, -7, -9, -11 or recombinant mouse Siglec-F is observed.
Source	Monoclonal Mouse IgG_1 Clone # 265821
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Siglec-10 Met17-Thr546 Accession # Q96LC7
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

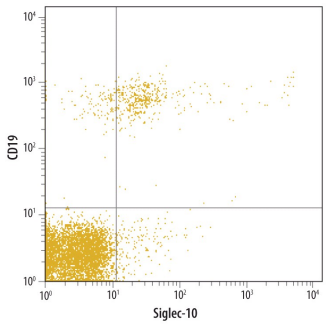
APPLICATIONS

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.*

	Recommended Concentration	Sample
Flow Cytometry	2.5 µg/10^6 cells	See Below

DATA

Flow Cytometry



Detection of Siglec-10 in Human CD19+ B Cells by Flow Cytometry. Human blood-derived lymphocytes were stained with Mouse Anti-Human Siglec-10 Monoclonal Antibody (Catalog # MAB21301) followed by Allophycocyanin-conjugated Anti-Mouse IgG $F(ab')_2$ Secondary Antibody (Catalog # F0101B) and Human CD19 Phycoerythrin-conjugated Monoclonal Antibody (Catalog # FAB4867P). Quadrant markers were set based on control antibody staining (Catalog # MAB002).

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month from date of receipt, 2 to 8 °C, reconstituted. ● 6 months from date of receipt, -20 to -70 °C, reconstituted.

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BACKGROUND

Siglecs (sialic acid binding Ig-like lectins) are I-type lectins that belong to the immunoglobulin superfamily. They are characterized by an N-terminal Ig-like V-type domain which mediates sialic acid binding, followed by a varying number of Ig-like C2-type domains. Siglecs 5-11 constitute the CD33/Siglec-3 related group, and are differentially expressed in the hematopoietic system (1-3). Siglec-G is the apparent ortholog of human Siglec-10 (4). The human Siglec-10 cDNA encodes a 697 amino acid (aa) precursor that includes a 16 aa signal sequence, a 534 aa extracellular domain (ECD), a 21 aa transmembrane segment, and a 126 aa cytoplasmic domain. The ECD contains one Ig-like V-type domain and four Ig-like C2-type domains, while the cytoplasmic domain contains two immunoreceptor tyrosine-based inhibitory motifs (ITIM) (5-8). Five splice variants of human Siglec-10 differ in their deletions within the ECD. A potentially secreted sixth variant contains the Ig-like V-type domain followed by a 45 aa substitution (5-7, 9). Within the ECD, human Siglec-10 is most closely related to Siglec-5 (42% aa sequence identity). It shares 63% aa sequence identity with mouse Siglec-G. Siglec-10 is expressed on eosinophils, neutrophils, monocytes, and B cells (5, 8) with some splice variants predominating in particular cell types and tissue locations (6, 7, 9). It is up-regulated on eosinophils in mouse models of allergic respiratory inflammation (10). Siglec-10 binds sialated proteins and lipids in α2,3 or α2,6 linkage and shows a preference for GT1b gangliosides (7, 11). This binding can be modulated by *cis* interactions of Siglec-10 with sialated molecules expressed on the same cell (7). When tyrosine phosphorylated, the cytoplasmic ITIMs interact with phosphatases SHP-1 and SHP-2 to propagate inhibitory signals (5, 9).

References:

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