

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Siglec-10 in direct ELISAs and Western blots. In direct ELISAs and Western blots, approximately 5% cross-reactivity with recombinant human (rh) Siglec-5 is observed and less than 1% cross-reactivity with rhSiglec-2.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Siglec-10 Met17-Thr546 Accession # Q96LC7
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *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.

CyTOF-ready	Optimal dilution of this antibody should be experimentally determined.
Western Blot	Optimal dilution of this antibody should be experimentally determined.
Blockade of Receptor-ligand Interaction	Optimal dilution of this antibody should be experimentally determined.
Flow Cytometry	Optimal dilution of this antibody should be experimentally determined.

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 (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).

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