

## DESCRIPTION

|                           |                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Human                                                                                                                                                                                                                                                                       |
| <b>Specificity</b>        | Detects human Siglec-10 in direct ELISAs and Western blots. In direct ELISAs, 100% cross-reactivity with recombinant human (rh) Siglec-11 is observed. In Western blots (reducing conditions), approximately 25% with rhSiglec-11 is observed. In dir                       |
| <b>Source</b>             | Monoclonal Mouse IgG <sub>2B</sub> Clone # 265817                                                                                                                                                                                                                           |
| <b>Purification</b>       | Protein A or G purified from hybridoma culture supernatant                                                                                                                                                                                                                  |
| <b>Immunogen</b>          | Mouse myeloma cell line NS0-derived recombinant human Siglec-10<br>Met17-Thr546<br>Accession # Q96LC7                                                                                                                                                                       |
| <b>Conjugate</b>          | Alexa Fluor 532<br>Excitation Wavelength: 534 nm<br>Emission Wavelength: 553 nm                                                                                                                                                                                             |
| <b>Formulation</b>        | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<br><br>*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.

**Western Blot** 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).

## PRODUCT SPECIFIC NOTICES

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