

## DESCRIPTION

|                           |                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Human                                                                                                                                                                                                                                                                       |
| <b>Specificity</b>        | Detects human Siglec-11 in direct ELISAs and Western blots. In direct ELISA and Western blots, approximately 20% cross-reactivity with recombinant human (rh) Siglec-10 is observed and less than 5% cross-reactivity with rhSiglec-2, -3, -5, -6, -7, -9                   |
| <b>Source</b>             | Polyclonal Goat IgG                                                                                                                                                                                                                                                         |
| <b>Purification</b>       | Antigen Affinity-purified                                                                                                                                                                                                                                                   |
| <b>Immunogen</b>          | Chinese hamster ovary cell line CHO-derived recombinant human Siglec-11<br>Asn17-His543 (Glu84Ala, Lys145Gln)<br>Accession # Q96RL6                                                                                                                                         |
| <b>Conjugate</b>          | Alexa Fluor 488<br>Excitation Wavelength: 488 nm<br>Emission Wavelength: 515-545 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.

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

## PREPARATION AND STORAGE

|                                |                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | 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-set domain which mediates sialic acid binding, followed by a varying numbers of Ig-like C2-set domains. Siglecs-3 and 5-13 constitute the CD33/Siglec-3 related group, which are defined by their sequence homology and differential expression in the hematopoietic system (1-3). Mature human Siglec-11 consists of a 534 amino acid (aa) extracellular domain (ECD), a 23 aa transmembrane segment, and a 114 aa cytoplasmic domain. The ECD contains one Ig-like V-set domain, and three Ig-like C2-set domains. The cytoplasmic domain contains two immunoreceptor tyrosine-based inhibitory motifs (ITIMs) (4). A splice variant of Siglec-11 has a deletion of nearly 100 aa in the extracellular juxtamembrane region. Among siglecs, the ECD of Siglec-11 is most closely related to that of Siglec-10 (82% aa sequence identity). The cytoplasmic domains of these proteins are only 20% identical. Siglec-11 is closely related to the pseudogenes Siglec-14 and Siglec-16 (4, 5). Human Siglec-11 shares 90%-96% aa sequence identity with Siglec-11 from great apes. Rodent orthologs of Siglec-11 have not been identified. In human, Siglec-11 is expressed in tissue macrophages, brain microglia, and inflammatory site monocytes (4). Strong microglial expression is specific to humans, as it is less prominent or absent in chimpanzees and orangutans (5). Siglec-11 forms 180 kDa disulfide-linked dimers. It shows a strong binding preference for sialic acid in α2-8 linkage which is unusual for siglecs (4). A conserved arginine in the Ig-like V-set domain only partially contributes to Siglec-11 ligand recognition, in contrast to its being required in other siglecs (4). Tyrosine phosphorylation of the cytoplasmic region of Siglec-11 promotes association with the phosphatases SHP-1 and SHP-2 (4).

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