

## DESCRIPTION

|                           |                                                                                                                                                                                                                                                                                                                                  |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Human                                                                                                                                                                                                                                                                                                                            |
| <b>Specificity</b>        | Detects human Siglec-11 in direct ELISAs. In direct ELISAs, no cross-reactivity with Siglec-16 is observed.                                                                                                                                                                                                                      |
| <b>Source</b>             | Monoclonal Mouse IgG <sub>2A</sub> Clone # 705904                                                                                                                                                                                                                                                                                |
| <b>Purification</b>       | Protein A or G purified from hybridoma culture supernatant                                                                                                                                                                                                                                                                       |
| <b>Immunogen</b>          | Human Siglec-11 synthetic peptide<br>PPARLSWTRWGQTVGPSQPSDPGVLELPIC<br>Accession # Q96RL6                                                                                                                                                                                                                                        |
| <b>Conjugate</b>          | Alexa Fluor 700<br>Excitation Wavelength: 675-700 nm<br>Emission Wavelength: 723 nm                                                                                                                                                                                                                                              |
| <b>Formulation</b>        | Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details.<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>Recommended Concentration</b> | <b>Sample</b>                                                            |
|-----------------------|----------------------------------|--------------------------------------------------------------------------|
| <b>Flow Cytometry</b> | 0.25-1 µg/10 <sup>6</sup> cells  | HEK293 human embryonic kidney cell line transfected with human Siglec-11 |

## 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> | <b>Protect from light. Do not freeze.</b><br>● 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).

## References:

1. Varki, A. and T. Angata (2006) *Glycobiology* **16**:1R.
2. Crocker, P.R. (2005) *Curr. Opin. Pharmacol.* **5**:431.
3. Crocker, P.R. (2002) *Curr. Opin. Struct. Biol.* **12**:609.
4. Angata, T. *et al.* (2002) *J. Biol. Chem.* **277**:24466.
5. Hayakawa, T. *et al.* (2005) *Science* **309**:1693.

## PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc., and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.