

#### DESCRIPTION

<b>Species Reactivity</b>	Mouse
<b>Specificity</b>	Detects mouse Siglec-2/CD22 in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant human Siglec-2, -3, -5, -6, -7, -9, -10, -11, or recombinant mouse Siglec-F is observed.
<b>Source</b>	Monoclonal Rat IgG <sub>2A</sub> Clone # 308501
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant mouse Siglec-2/CD22
<b>Conjugate</b>	Alexa Fluor 350 Excitation Wavelength: 346 nm Emission Wavelength: 442 nm
<b>Formulation</b>	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details.  *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.

	Recommended Concentration	Sample
<b>Flow Cytometry</b>	0.25-1 µg/10 <sup>6</sup> cells	Mouse splenocytes

#### 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> <ul style="list-style-type: none"> <li>12 months from date of receipt, 2 to 8 °C as supplied.</li> </ul>

#### BACKGROUND

Siglecs (sialic acid binding Ig-like lectins) are I-type (Ig-type) lectins belonging to the Ig superfamily. They are characterized by an N-terminal Ig-like V-type domain which mediates sialic acid binding, followed by varying numbers of Ig-like C2-type domains (1, 2). Eleven human Siglecs have been cloned and characterized. Among these are sialoadhesin/CD169/Siglec-1, CD22/Siglec-2 and CD33/Siglec-3. To date, no Siglec has been shown to recognize any cell surface ligand other than sialic acid, suggesting that interactions with glycans containing this carbohydrate are important in mediating the biological functions of Siglecs. The cDNA of mouse Siglec-2 (also known as B-cell antigen CD22), encodes an 862 amino acid (aa) protein that contains a 21 aa signal peptide, a 681 aa extracellular region, a 19 aa transmembrane region and a 141 aa cytoplasmic tail (3, 4). The extracellular region contains one N-terminal V-type Ig-like domain followed by six Ig-like C2-type domains. The cytoplasmic domain has 3 immunoreceptor tyrosine-based inhibition motifs (ITIMs). Two splice forms exist, both showing deletions in the V-type Ig domain of 30 aa and 60 aa each. There are also two alleles in mouse that account for a difference of 10 aa in the extracellular region. The extracellular region of mouse Siglec-2 is 60% aa identity to human extracellular Siglec-2. Expression of mouse Siglec-2/CD22 generates a 140 kDa integral membrane glycoprotein that is limited to the B cell compartment of lymphoid tissues. Its expression is upregulated by LPS activation (5, 6). Siglec-2/CD22 is an adhesion molecule that preferentially binds α2,6- linked sialic acid on the same (cis) or adjacent (trans) cells. Interaction of CD22 with trans ligands on opposing cells was found to be favored over the binding of ligands *in cis* (7).

#### References:

1. Nitschke, L. *et al.* (2001) Scand. J. Immunol. **53**:227.
2. Crocker, P.R. and A. Varki (2001) Immunology **103**:137.
3. Law, C-L. *et al.* (1993) J. Immunol. **151**:175.
4. Wienands, Y.J. *et al.* (1999) J. Biol. Chem. **274**:18769.
5. Wilson, G.L. *et al.* (1991) J. Exp. Med. **173**:137.
6. Torres, P.M. (1992) J. Immunol. **149**:2641.
7. Collins, B.E. *et al.* (2004) Proc. Natl. Acad. Sci. **101**:6104.

#### 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.