Human Siglec-3/CD33 Alexa Fluor® 750-conjugated Antibody

Recombinant Monoclonal Human V_HH domain Clone # L008.2.14N

Catalog Number: LFAB10733S

100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Siglec-3/CD33 in direct ELISAs.
Source	Recombinant Monoclonal Human V_HH domain Clone # L008.2.14N
Purification	His-tag purified from cell culture supernatant
Immunogen	Mouse myeloma cell line CHO-derived human Siglec-3/CD33 Val18-His259 Accession # AAA51948
Conjugate	Alexa Fluor 750 Excitation Wavelength: 749 nm Emission Wavelength: 775 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and 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.*

Flow Cytometry	Titration recommended for optimal concentration with starting range of 0.1-1 µg/1 million cells. Sample used for this experiment was HEK293 Human Cell Line Transfected with Human Siglec-3/CD33 and eGFP.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	BulkLotPrefix assignment required for Storage Info

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. They are sialoadhesin/CD169/Siglec-1, CD22/Siglec-2, CD33/Siglec-3, Myelin-Associated Glycoprotein (MAG/Siglec-4a) and Siglecs 5 to 11 (1-3). To date, no Siglec has been shown to recognized any cell surface ligand other than sialic acids, suggesting that interactions with glycans containing this carbohydrate are important in mediating the biological functions of Siglecs. Siglecs 5 to 11 share a high degree of sequence similarity with CD33/Siglec-3 both in their extracellular and intracellular regions. They are collectively referred to as CD33-related Siglecs. One remarkable feature of the CD33-related Siglecs is their differential expression pattern within the hematopoietic system (1, 2). This fact, together with the presence of two conserved immunoreceptor tyrosine-based inhibition motifs (ITIMs) in their cytoplasma tails, suggests that CD33related Siglecs are involved in the regulation of cellular activation within the immune system. Human Siglec-3 is alternatively known as myeloid cell surface antigen CD33 and GP67. Human Siglec-3 cDNA encodes a 364 amino acid (aa) polypeptide with a hydrophobic signal peptide, an N-terminal Ig-like V-type domain, one Ig-like C2-type domains, a transmembrane region and a cytoplasmic tail (1, 4). Siglec-3 expression is restricted to cells of myelomonocytic lineage (2). It binds sialic acid preferring α2,3-linkage over α2,6-linkage (5). Studies indicated that Siglec-3 recruits SHP-1 and SHP-2 to its ITIMs (6, 7). When co-cross-linking with FcγR1, Siglec3- inhibits tyrosine phosphorylation and calcium mobilization, suggesting Siglec-3 can mediate inhibitory signals (7).

References:

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3. Angata, T. *et al.* (2002) J. Biol. Chem. **277**:24466.
4. Simmons, D. and B. Seed (1988) J. Immunol. **141**:2797.
5. Freeman, S.D. *et al.* (1995) Blood **85**:2002.
6. Taylor, V.C. *et al.* (1999) J. Biol. Chem. **274**:11505.
7. Ulyanova, T. *et al.* (1999) Eur. J. Immunol. **29**:3440.

PRODUCT SPECIFIC NOTICES

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