

Human Siglec-5/CD170 Antibody

Monoclonal Mouse IgG_{2B} Clone # 194117 Catalog Number: MAB1072

DESCRIPTION	
Species Reactivity	Human
Specificity	Detects human Siglec-5/CD170 in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant human Siglec-2, -3, -7, -9, or -14 is observed.
Source	Monoclonal Mouse IgG _{2B} Clone # 194117
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Siglec-5/CD170 Lys18-Thr434 Accession # O15389
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

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	
Western Blot	1 µg/mL	Recombinant Human Siglec-5 Fc Chimera (Catalog # 1072-SL)	
Immunohistochemistry	8-25 μg/mL	Immersion fixed paraffin-embedded sections of human spleen	

DATA



Detection of Siglec-5/CD170 in Human Spleen. Siglec-5/CD170 was detected in immersion fixed paraffin-embedded sections of human spleen using Mouse Anti-Human Siglec-5/CD170 Monoclonal Antibody (Catalog # MAB1072) at 5 µg/ml for 1 hour at room temperature followed by incubation with the HRPconjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007) or the Anti-Mouse IgG VisUCyte ™ HRP Polymer Antibody (Catalog # VC001). Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using VisUCyte Antigen Retrieval Reagent-Basic (Catalog # VCTS021). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to the cell membrane. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS. For liquid material, refer to CoA for concentration.	
Shipping	Lyophilized product is shipped at ambient temperature. Liquid small pack size (-SP) is shipped with polar packs. Upon receipt, store immediately at the temperature recommended below.	
Stability & Storage	 Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 °C as supplied. 1 month, 2 to 8 °C under sterile conditions after reconstitution. 6 months, -20 to -70 °C under sterile conditions after reconstitution. 	

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BACKGROUND

Siglecs (1) (sialic acid binding Ig-like lectins) are I-type (Ig-type) lectins (2) belonging to the Ig superfamily. They are characterized by an N-terminal Ig-like V-type domain which mediates sialic acid binding (3), followed by varying numbers of Ig-like C2-type domains (1, 4). Eleven human Siglecs have been cloned and characterized (1, 4). They are sialoadhesin/CD169/Siglec-1, CD22/Siglec-2, CD33/Siglec-3, Myelin-Associated Glycoprotein (MAG/Siglec-4a) and the Siglec-5 to 11 (4, 5, 7). 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. Siglec-5 to 11 share a high degree of sequence similarity with CD33/Siglec-3 both in their extracellular 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 (4, 5). This fact, together with the presence of two conserved immunoreceptor tyrosine-based inhibition motifs (ITIMs) in their cytoplasma tails, suggests that CD33-related Siglecs are involved in the regulation of cellular activation within the immune system. Human Siglec-5 cDNA encodes a 551 amino acid (aa) polypeptide with a hydrophobic signal peptide, an N-terminal Ig-like V-type domain, three Ig-like C2-type domains, a transmembrane region and a cytoplasma tail (6). Siglec-5 exists as a disulfide-linked homodimer on the cell surface and is expressed on monocytes, neutrophils and B cells (4, 5, 6). It binds equally well to both α2,3- and α2,6-linked sialic acid (6).

References:

- 1. Crocker, P.R. et al. (1998) Glycobiology 8:v.
- 2. Powell, L.D. et al. (1995) J. Biol. Chem. 270:14243.
- 3. May, A.R. et al. (1998) Mol. Cell 1998. 1:719.
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- 6. Cornish, A.L. et al. (1998) Blood 92:2123.
- 7. Angata, T. et al. (2002) J. Biol Chem. 277:24466.