# Siglec-5 (EE18W): sc-74285



The Power to Question

## **BACKGROUND**

Two families of mammalian lectin-like adhesion molecules bind glycoconjugate ligands in a sialic acid-dependent manner: the selectins and the sialoadhesins. The sialic acid-binding immunoglobulin superfamily lectins, designated siglecs or sialoadhesins, are immunoglobulin superfamily members recognizing sialylated ligands. Siglec-5 binds equally to  $\alpha$ 2,3-linked and  $\alpha$ 2,6-linked sialic acid. There exist four isoforms of hSiglec-5 possessing three (hSiglec-5-3L and -3C) or four (hSiglec-5-4L and -4S) extracellular domains linked to long (hSiglec-5-3L and -4L) or short (hSiglec-5-4S) cytoplasmic tails or existing as a soluble isoform (hSiglec-5-3C). Siglec-5 is expressed by monocytes and neutrophils, but is absent from leukemic cell lines representing early stages of myelomonocytic differentiation. Siglec-5 may play a role in the diagnosis and monitoring of acute myeloid leukemia (AML).

# **REFERENCES**

- Connolly, N.P., Jones, M. and Watt, S.M. 2002. Human Siglec-5: tissue distribution, novel isoforms and domain specificities for sialic aciddependent ligand interactions. Br. J. Haematol. 119: 221-238.
- Erickson-Miller, C.L., Freeman, S.D., Hopson, C.B., D'Alessio, K.J., Fischer, E.I., Kikly, K.K., Abrahamson, J.A., Holmes, S.D. and King, A.G. 2003. Characterization of Siglec-5 (CD170) expression and functional activity of anti-Siglec-5 antibodies on human phagocytes. Exp. Hematol. 31: 382-388.
- Virgo, P., Denning-Kendall, P.A., Erickson-Miller, C.L., Singha, S., Evely, R., Hows, J.M. and Freeman, S.D. 2003. Identification of the CD33-related Siglec receptor, Siglec-5 (CD170), as a useful marker in both normal myelopoiesis and acute myeloid leukaemias. Br. J. Haematol. 123: 420-430.
- Avril, T., Freeman, S.D., Attrill, H., Clarke, R.G. and Crocker, P.R. 2005. Siglec-5 (CD170) can mediate inhibitory signaling in the absence of immunoreceptor tyrosine-based inhibitory motif phosphorylation. J. Biol. Chem. 280: 19843-19851.
- Rapoport, E.M., Sapot'ko, Y.B., Pazynina, G.V. Bojenko, V.K. and Bovin, N.V. 2005. Sialoside-binding macrophage lectins in phagocytosis of apoptotic bodies. Biochemistry 70: 330-338.

#### CHROMOSOMAL LOCATION

Genetic locus: SIGLEC5 (human) mapping to 19q13.41.

## **SOURCE**

Siglec-5 (EE18W) is a mouse monoclonal antibody raised against an extracellular domain of Siglec-5 of human origin.

## **PRODUCT**

Each vial contains 100  $\mu g~lgG_{2b}$  in 1.0 ml of PBS with < 0.1% sodium azide and protein stabilizer.

## **PROTOCOLS**

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

#### **APPLICATIONS**

Siglec-5 (EE18W) is recommended for detection of Siglec-5 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500); non cross-reactive with BLCAM, CD33, Siglec-7 or Siglec-9.

Suitable for use as control antibody for Siglec-5 siRNA (h): sc-61549, Siglec-5 shRNA Plasmid (h): sc-61549-SH and Siglec-5 shRNA (h) Lentiviral Particles: sc-61549-V.

Molecular Weight of Siglec-5 monomer: 70 kDa.

Molecular Weight of Siglec-5 dimer: 140 kDa.

Positive Controls: AML-193 whole cell lysate: sc-364182 or HL-60 whole cell lysate: sc-2209.

## **RECOMMENDED SECONDARY REAGENTS**

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz™: sc-2050 or ABC: sc-2017 mouse IgG Staining Systems.

#### **STORAGE**

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

## **RESEARCH USE**

For research use only, not for use in diagnostic procedures.

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3801 Fax 831.457.3801 Europe +00800 4573 8000 49 6221 4503 0 www.scbt.com