

Siglec-5/14 (E-1): sc-374585

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 α 2, 3-linked and α 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). Siglec-14 is predominantly expressed in hematopoietic tissues but is also found in lung and testis.

REFERENCES

1. Connolly, N.P., et al. 2002. Human Siglec-5: tissue distribution, novel isoforms and domain specificities for sialic acid-dependent ligand interactions. *Br. J. Haematol.* 119: 221-238.
2. Erickson-Miller, C.L., et al. 2003. Characterization of Siglec-5 (CD170) expression and functional activity of anti-Siglec-5 antibodies on human phagocytes. *Exp. Hematol.* 31: 382-388.
3. Virgo, P., et al. 2003. Identification of the CD33-related Siglec receptor, Siglec-5 (CD170), as a useful marker in both normal myelo-poiesis and acute myeloid leukaemias. *Br. J. Haematol.* 123: 420-430.
4. Avril, T., et al. 2005. Siglec-5 (CD170) can mediate inhibitory signaling in the absence of immunoreceptor tyrosine-based inhibitory motif phosphorylation. *J. Biol. Chem.* 280: 19843-19851.
5. Rapoport, E.M., et al. 2005. Sialoside-binding macrophage lectins in phagocytosis of apoptotic bodies. *Biochemistry* 70: 330-338.

CHROMOSOMAL LOCATION

Genetic locus: SIGLEC5 (human) mapping to 19q13.41, SIGLEC14 (human) mapping to 19q13.43.

SOURCE

Siglec-5/14 (E-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 135-173 within an extracellular domain of Siglec-5 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₃ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-374585 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATION

Siglec-5/14 (E-1) is recommended for detection of Siglec-5 and Siglec-14 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of Siglec-5 dimer: 140 kDa.

Molecular Weight of Siglec-5 monomer: 70 kDa.

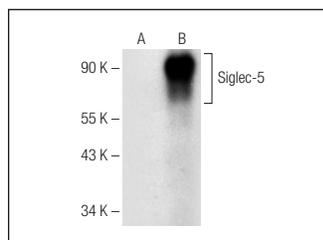
Molecular Weight of Siglec-14: 44-60 kDa.

Positive Controls: Siglec-5 (h): 293T Lysate: sc-114461.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Siglec-5/14 (E-1): sc-374585. Western blot analysis of Siglec-5 expression in non-transfected: sc-117752 (A) and human Siglec-5 transfected: sc-114461 (B) 293T whole cell lysates.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

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