

Siglec-5/14 (P-18): sc-47416

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

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2. 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.
3. 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.
4. 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.
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CHROMOSOMAL LOCATION

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

SOURCE

Siglec-5/14 (P-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of Siglec-5 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-47416 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Siglec-5/14 (P-18) is recommended for detection of Siglec-5 and Siglec-14 of human origin by Western Blotting (starting dilution 1:200, 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).

Siglec-5/14 (P-18) is also recommended for detection of Siglec-5 and Siglec-14 in additional species, including bovine.

Molecular Weight of Siglec-5 dimer: 140 kDa.

Molecular Weight of Siglec-5 monomer: 70 kDa.

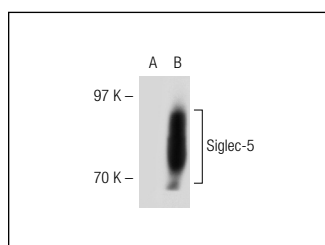
Molecular Weight of Siglec-14: 44-60 kDa.

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

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Siglec-5/14 (P-18): sc-47416. 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.

RESEARCH USE

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

PROTOCOLS

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