Siglec-8 (C-17): sc-47418



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. The common sialic acids of mammalian cells are N-acetylneuraminic acid (Neu5Ac) and N glycolylneuraminic acid (Neu5Gc). Siglec-1 mediates local cell-cell interactions in lymphoid tissues and can be detected at contact points of macrophages with other macrophages, sinus-lining cells and reticulum cells. Siglec-7, highly expressed in monocytes and resident blood cells but not in parenchymatous cells, mediates inhibition of natural killer cell cytotoxicity. Siglec-9 is closely homologous to Siglec-7 and the gene encoding it is located on chromosome 19q13.3-13. It is highly expressed in peripheral blood leukocytes (not eosinophils), liver, bone marrow, placenta and spleen. Siglec-8, a Type I membrane protein, is selectively expressed on human eosinophils, basophils and mast cells, where it regulates their function and survival.

REFERENCES

- Brinkman-Van der Linden, E.C., Sjoberg, E.R., Juneja, L.R., Crocker, P.R., Varki, N. and Varki, A. 2000. Loss of N-glycolylneuraminic acid in human evolution. Implications for sialic acid recognition by siglecs. J. Biol. Chem. 275: 8633-8640.
- Brinkman-Van der Linden, E.C. and Varki, A. 2000. New aspects of siglec binding specificities, including the significance of fucosylation and of the sialyl-Tn epitope. Sialic acid-binding immunoglobulin superfamily lectins. J. Biol. Chem. 275: 8625-8632.
- 3. Schadee-Eestermans, I.L., Hoefsmit, E.C., van de Ende, M., Crocker, P.R., van den Berg, T.K. and Dijkstra, C.D. 2000. Ultrastructural localisation of sialoadhesin (siglec-1) on macrophages in rodent lymphoid tissues. Immunobiology 202: 309-325.
- Avril, T., Floyd, H., Lopez, F., Vivier, E. and Crocker, P.R. 2004. The membraneproximal immunoreceptor tyrosine-based inhibitory motif is critical for the inhibitory signaling mediated by Siglecs-7 and -9, CD33-related Siglecs expressed on human monocytes and NK cells. J. Immunol. 173: 6841-6849.
- Lock, K., Zhang, J., Lu, J., Lee, S.H. and Crocker, P.R. 2004. Expression of CD33-related siglecs on human mononuclear phagocytes, monocyte-derived dendritic cells and plasmacytoid dendritic cells. Immunobiology. 209: 199-207.
- Ikehara, Y., Ikehara, S.K. and Paulson, J.C. 2004. Negative regulation of T cell receptor signaling by Siglec-7 (p70/AIRM) and Siglec-9. J. Biol. Chem. 279: 43117-43125.
- 7. Miyazaki, K., Ohmori, K., Izawa, M., Koike, T., Kumamoto, K., Furukawa, K., Ando, T., Kiso, M., Yamaji, T., Hashimoto, Y., Suzuki, A., Yoshida, A., Takeuchi, M. and Kannagi, R. 2004. Loss of disialyl Lewis(a), the ligand for lymphocyte inhibitory receptor sialic acid-binding immunoglobulin-like lectin-7 (Siglec-7) associated with increased sialyl Lewis(a) expression on human colon cancers. Cancer Res. 64: 4498-4505.

CHROMOSOMAL LOCATION

Genetic locus: SIGLEC8 (human) mapping to 19q13.33-q13.41; (mouse) mapping to .

SOURCE

Siglec-8 (C-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Siglec-8 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-47418 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Siglec-8 (C-17) is recommended for detection of Siglec-8 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Siglec-8 siRNA (h): sc-61551.

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) 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.

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.

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