

Siglec-7 (F-2): sc-398181

BACKGROUND

Two families of mammalian lectin-like adhesion molecules, the selectins and the sialoadhesins, bind glycoconjugate ligands in a sialic acid-dependent manner. 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, which is highly expressed in monocytes and resident blood cells but not in parenchymatous cells, mediates inhibition of natural killer cell cytotoxicity. Due to alternative splicing events, two isoforms exist for Siglec-12, namely SLG-L (the long isoform) and SLG-S (the shorter isoform). These isoforms are differentially expressed with the longer isoform predominantly found in small intestine, spleen and bone marrow, and the shorter isoform predominantly found in small intestine, spleen and adrenal gland.

REFERENCES

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2. Brinkman-Van der Linden, E.C., et al. 2000. Loss of N-glycolylneuraminic acid in human evolution. Implications for sialic acid recognition by Siglecs. *J. Biol. Chem.* 275: 8633-8640.
3. Schadee-Eestermans, I.L., et al. 2000. Ultrastructural localisation of sialoadhesin (Siglec-1) on macrophages in rodent lymphoid tissues. *Immunobiology* 202: 309-325.
4. Avril, T., et al. 2004. The membrane-proximal 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.
5. Lock, K., et al. 2004. Expression of CD33-related Siglecs on human mononuclear phagocytes, monocyte-derived dendritic cells and plasmacytoid dendritic cells. *Immunobiology* 209: 199-207.
6. Ikehara, Y., et al. 2004. Negative regulation of T cell receptor signaling by Siglec-7 (p70/AIRM) and Siglec-9. *J. Biol. Chem.* 279: 43117-43125.
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CHROMOSOMAL LOCATION

Genetic locus: SIGLEC7 (human) mapping to 19q13.41.

SOURCE

Siglec-7 (F-2) is a mouse monoclonal antibody raised against amino acids 407-454 mapping near the C-terminus of Siglec-7 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Siglec-7 (F-2) is recommended for detection of Siglec-7 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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); not recommended for detection of mouse or rat (no corresponding homolog of Siglec-7).

Suitable for use as control antibody for Siglec-7 siRNA (h): sc-106757, Siglec-7 shRNA Plasmid (h): sc-106757-SH and Siglec-7 shRNA (h) Lentiviral Particles: sc-106757-V.

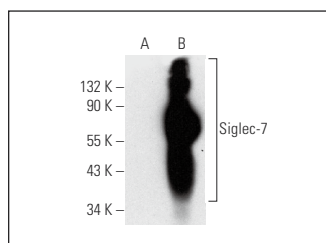
Molecular Weight of Siglec-7: 70 kDa.

Positive Controls: Siglec-7 (h): 293T Lysate: sc-114791.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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-7 (F-2): sc-398181. Western blot analysis of Siglec-7 expression in non-transfected: sc-117752 (A) and human Siglec-7 transfected: sc-114791 (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.