SANTA CRUZ BIOTECHNOLOGY, INC.

Siglec-7 (A-7): sc-398919

SANTA CRUZ BIOTECHNOLOGY

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. 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

1. 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.
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.

CHROMOSOMAL LOCATION

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

SOURCE

Siglec-7 (A-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 387-409 within a C-terminal cytoplasmic domain of Siglec-7 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Siglec-7 (A-7) is available conjugated to agarose (sc-398919 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-398919 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398919 PE), fluorescein (sc-398919 FITC), Alexa Fluor® 488 (sc-398919 AF488), Alexa Fluor® 546 (sc-398919 AF546), Alexa Fluor® 594 (sc-398919 AF594) or Alexa Fluor® 647 (sc-398919 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398919 AF680) or Alexa Fluor® 790 (sc-398919 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398919 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Siglec-7 (A-7) 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.

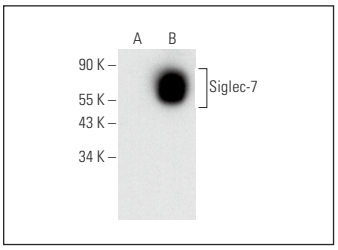
Molecular Weight of Siglec-7: 70 kDa.

Positive Controls: human spleen extract: sc-363779 or Siglec-7 (h): 293T Lysate: sc-114791.

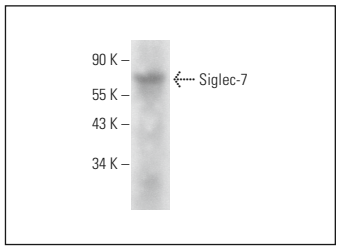
RECOMMENDED SUPPORT REAGENTS

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 (A-7): sc-398919. 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.



Siglec-7 (A-7): sc-398919. Western blot analysis of Siglec-7 expression in human spleen tissue extract.

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 for detailed protocols and support products.