# SANTA CRUZ BIOTECHNOLOGY, INC.

# Siglec-11 (P-14): sc-131072



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, recognize sialylated ligands and play a key role in mediating sialic-acid dependent binding to cells. Siglec-11 (sialic acid binding lg-like Lectin 11) is a 686 amino acid single-pass type I membrane protein that contains one lg-like V-type domain and three lg-like C<sub>2</sub>-type domains. Expressed by macrophages and present in various tissues, Siglec-11 functions as an adhesion molecule that preferentially binds to  $\alpha$ -2,8-linked sialic acid and mediated sialic acid binding to cells. Siglec-11 exists as multiple alternatively spliced isoforms and is subject to post-translational phosphorylation on tyrosine residues.

### REFERENCES

- Angata, T., Kerr, S.C., Greaves, D.R., Varki, N.M., Crocker, P.R. and Varki, A. 2002. Cloning and characterization of human Siglec-11. A recently evolved signaling that can interact with SHP-1 and SHP-2 and is expressed by tissue macrophages, including brain microglia. J. Biol. Chem. 277: 24466-24474.
- 2. Hayakawa, T., Angata, T., Lewis, A.L., Mikkelsen, T.S., Varki, N.M. and Varki, A. 2005. A human-specific gene in microglia. Science 309: 1693.
- 3. Online Mendelian Inheritance in Man, OMIM™. 2005. Johns Hopkins University, Baltimore, MD. MIM Number: 607157. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- 4. von Gunten, S. and Bochner, B.S. 2008. Basic and clinical immunology of siglecs. Ann. N.Y. Acad. Sci. 1143: 61-82.
- Crocker, P.R. and Redelinghuys, P. 2008. Siglecs as positive and negative regulators of the immune system. Biochem. Soc. Trans. 36 (Pt 6): 1467-1471.
- Cao, H., Lakner, U., de Bono, B., Traherne, J.A., Trowsdale, J. and Barrow, A.D. 2008. Siglec-16 encodes a DAP12-associated receptor expressed in macrophages that evolved from its inhibitory counterpart Siglec-11 and has functional and non-functional alleles in humans. Eur. J. Immunol. 38: 2303-2315.
- 7. Angata, T. 2008. Functions and molecular evolution of siglecs, a family of sialic acid receptor proteins. Tanpakushitsu Kakusan Koso 53: 733-738.
- Kannagi, R., Ohmori, K. and Kimura, N. 2008. Anti-oligosaccharide antibodies as tools for studying sulfated sialoglycoconjugate ligands for siglecs and selectins. Glycoconj. J. E-published.

## CHROMOSOMAL LOCATION

Genetic locus: SIGLEC11 (human) mapping to 19q13.33.

#### **STORAGE**

Store at 4° C, \*\*D0 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 or our catalog for detailed protocols and support products.

## SOURCE

Siglec-11 (P-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a cytoplasmic domain of Siglec-11 of human origin.

# PRODUCT

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

Blocking peptide available for competition studies, sc-131072 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

#### **APPLICATIONS**

Siglec-11 (P-14) is recommended for detection of Siglec-11 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-11 siRNA (h): sc-97277, Siglec-11 shRNA Plasmid (h): sc-97277-SH and Siglec-11 shRNA (h) Lentiviral Particles: sc-97277-V.

Molecular Weight of Siglec-11: 100 kDa.

### **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) Immunofluo-rescence: use donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

#### **RESEARCH USE**

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