

Siglec-15 (P-16): sc-85151

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-15 (sialic acid binding Ig-like lectin 15), also known as CD33L3, is a 328 amino acid single-pass type I membrane protein that contains one Ig-like C₂-type domain and one Ig-like V-type domain. Expressed in dendritic and macrophage cells, Sinlec-15 interacts with DAP10 and DAP12 and binds to sialylated glycoproteins. The gene encoding Siglec-15 maps to human chromosome 18, which houses over 300 protein-coding genes and contains nearly 76 million bases.

REFERENCES

1. Crocker, P.R. 2002. Siglecs: sialic-acid-binding immunoglobulin-like lectins in cell-cell interactions and signalling. *Curr. Opin. Struct. Biol.* 12: 609-615.
2. Crocker, P.R. 2005. Siglecs in innate immunity. *Curr. Opin. Pharmacol.* 5: 431-437.
3. Angata, T. 2006. Molecular diversity and evolution of the Siglec family of cell-surface lectins. *Mol. Divers.* 10: 555-566.
4. Angata, T., Tabuchi, Y., Nakamura, K. and Nakamura, M. 2007. Siglec-15: an immune system Siglec conserved throughout vertebrate evolution. *Glycobiology* 17: 838-846.
5. Crocker, P.R., Paulson, J.C. and Varki, A. 2007. Siglecs and their roles in the immune system. *Nat. Rev. Immunol.* 7: 255-266.
6. von Gunten, S. and Bochner, B.S. 2008. Basic and clinical immunology of Siglecs. *Ann. N.Y. Acad. Sci.* 1143: 61-82.
7. Crocker, P.R. and Redelinghuys, P. 2008. Siglecs as positive and negative regulators of the immune system. *Biochem. Soc. Trans.* 36: 1467-1471.

CHROMOSOMAL LOCATION

Genetic locus: SIGLEC15 (human) mapping to 18q12.3; Siglec15 (mouse) mapping to 18 E3.

SOURCE

Siglec-15 (P-16) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of Siglec-15 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-85151 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

Siglec-15 (P-16) is recommended for detection of Siglec-15 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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); non cross-reactive with other Siglec family members.

Siglec-15 (P-16) is also recommended for detection of Siglec-15 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for Siglec-15 siRNA (h): sc-76497, Siglec-15 siRNA (m): sc-153461, Siglec-15 shRNA Plasmid (h): sc-76497-SH, Siglec-15 shRNA Plasmid (m): sc-153461-SH, Siglec-15 shRNA (h) Lentiviral Particles: sc-76497-V and Siglec-15 shRNA (m) Lentiviral Particles: sc-153461-V.

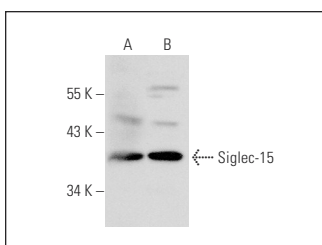
Molecular Weight of Siglec-15: 36 kDa.

Positive Controls: mouse spleen extract: sc-2391 or SP2/0 whole cell lysate: sc-364795.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Siglec-15 (P-16): sc-85151. Western blot analysis of Siglec-15 expression in mouse spleen tissue extract (A) and SP2/0 whole cell lysate (B).

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.