

Siglec-15 siRNA (m): sc-153461

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

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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.
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CHROMOSOMAL LOCATION

Genetic locus: Siglec15 (mouse) mapping to 18 E3.

PRODUCT

Siglec-15 siRNA (m) is a target-specific 19-25 nt siRNA designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Siglec-15 shRNA Plasmid (m): sc-153461-SH and Siglec-15 shRNA (m) Lentiviral Particles: sc-153461-V as alternate gene silencing products.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

Siglec-15 siRNA (m) is recommended for the inhibition of Siglec-15 expression in mouse cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 μ M in 66 μ l. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Siglec-15 gene expression knockdown using RT-PCR Primer: Siglec-15 (m)-PR: sc-153461-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

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.