SANTA CRUZ BIOTECHNOLOGY, INC.

CLEC-18 siRNA (h): sc-93037

BACKGROUND

The C-type lectin/C-type lectin-like domain (CTL/CTLD) superfamily consists of a variety of proteins that share a common protein fold and have diverse functions, including cell-cell signaling, cell adhesion, glycoprotein turnover and immune responses. CLEC-18 (C-type lectin domain family 18) exists as three nearly identical forms, designated CLEC-18A, CLEC-18B and CLEC-18C, or mannose receptor-like protein 1, 2 and 3, respectively. Both CLEC-18A and CLEC-18C contain 446 amino acids, whereas CLEC-18B contains 455 amino acids; all three forms are secreted proteins that contain one C-type lectin domain, a SCP domain and a single EGF-like domain. All three CLEC-18 proteins exist as two alternatively spliced isoforms that are encoded by genes that map to human chromosome 16q22.1.

REFERENCES

1. Drickamer, K. 1999. C-type lectin-like domains. Curr. Opin. Struct. Biol. 9: 585-590.
2. Arce, I., et al. 2001. Molecular and genomic characterization of human DLEC, a novel member of the C-type lectin receptor gene family preferentially expressed on monocyte-derived dendritic cells. Eur. J. Immunol. 31: 2733-2740.
3. East, L., et al. 2002. The mannose receptor family. Biochim. Biophys. Acta 1572: 364-386.
4. Ebner, S., et al. 2003. Evolutionary analysis reveals collective properties and specificity in the C-type lectin and lectin-like domain superfamily. Proteins 53: 44-55.
5. McMahon, S.A., et al. 2005. The C-type lectin fold as an evolutionary solution for massive sequence variation. Nat. Struct. Mol. Biol. 12: 886-892.
6. Gijzen, K., et al. 2006. C-type lectins on dendritic cells and their interaction with pathogen-derived and endogenous glycoconjugates. Curr. Protein Pept. Sci. 7: 283-294.

CHROMOSOMAL LOCATION

Genetic locus: CLEC18A/CLEC18C (human) mapping to 16q22.1, CLEC18B (human) mapping to 16q23.1.

PRODUCT

CLEC-18 siRNA (h) 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see CLEC-18 shRNA Plasmid (h): sc-93037-SH and CLEC-18 shRNA (h) Lentiviral Particles: sc-93037-V as alternate gene silencing products.

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.

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 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

CLEC-18 siRNA (h) is recommended for the inhibition of CLEC-18 expression in human 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 µM in 66 µl. 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 CLEC-18 gene expression knockdown using RT-PCR Primer: CLEC-18 (h)-PR: sc-93037-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.