SANTA CRUZ BIOTECHNOLOGY, INC.

CLEC-2D siRNA (h): sc-95672

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-2D (C-type lectin domain family 2, member D), also known as CLAX, LLT1 or OCIL, is a 191 amino acid single-pass type II membrane protein that contains one C-type lectin domain and localizes to the cell membrane. Expressed in spleen, thymus, lymph node and osteoblasts, CLEC-2D functions as a receptor for CD161, specifically protecting cells against natural killer (NK) cell-induced lysis and inhibiting osteoclast formation, as well as bone resorption. Additionally, CLEC-2D induces IFN-γ release in NK cells, thereby regulating IFN-γ activity. CLEC-2D is upregulated in osteogenic sarcoma cells, suggesting a role in tumorigenesis. Four isoforms of CLEC-2D exist due to alternative splicing events.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: CLEC2D (human) mapping to 12p13.31.

PRODUCT

CLEC-2D siRNA (h) is a pool of 3 target-specific 19-25 nt siRNAs 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-2D shRNA Plasmid (h): sc-95672-SH and CLEC-2D shRNA (h) Lentiviral Particles: sc-95672-V as alternate gene silencing products.

For independent verification of CLEC-2D (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-95672A, sc-95672B and sc-95672C.

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-2D siRNA (h) is recommended for the inhibition of CLEC-2D 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-2D gene expression knockdown using RT-PCR Primer: CLEC-2D (h)-PR: sc-95672-PR (20 µl). 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.