SANTA CRUZ BIOTECHNOLOGY, INC.

KLRF1 siRNA (h): sc-72386

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The Power to Question

BACKGROUND

KLRF1 (Killer cell lectin-like receptor subfamily F member 1), also known as CLEC5C or activating coreceptor NKp80, is a member of the MHC class I-specific KLR family of type II transmembrane glycoproteins. It contains a single extracellular C-type lectin-like domain, two tyrosine-based motifs in the cytoplasmic domain and, unlike its family members, KLRF1 does not contain any charged transmembrane residues. KLRF1 exists as a homodimer and its expression is restricted to mature leukocytes, Natural Killer (NK) cells and Natural Killer T (NKT) cells. It functions in stimulating NK cell cytotoxicity, the release of proinflammatory cytokines and it induces calcium influx. KLRF1 interacts with the AICL (activation induced C-type lectin) ligand. This interaction plays a role in the activation of crosstalk between NK cells and myeloid cells and may contribute to the initiation and maintenance of immune responses.

REFERENCES

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7. Mavilio, D., et al. 2005. Identification of NKG2A and NKp80 as specific Natural Killer cell markers in rhesus and pigtailed monkeys. Blood 106: 1718-1725.
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CHROMOSOMAL LOCATION

Genetic locus: KLRF1 (human) mapping to 12p13.31.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

PRODUCT

KLRF1 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 KLRF1 shRNA Plasmid (h): sc-72386-SH and KLRF1 shRNA (h) Lentiviral Particles: sc-72386-V as alternate gene silencing products.

For independent verification of KLRF1 (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-72386A, sc-72386B and sc-72386C.

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

KLRF1 siRNA (h) is recommended for the inhibition of KLRF1 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 KLRF1 gene expression knockdown using RT-PCR Primer: KLRF1 (h)-PR: sc-72386-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.