SANTA CRUZ BIOTECHNOLOGY, INC.

IL-17RD siRNA (h): sc-78429

BACKGROUND

The interleukins (ILs) are a broad family of well characterized cytokines, primarily of hematopoietic cell origin, and are secreted by immune cells (mainly macrophages, B-cells or T-cells) that regulate a wide range of immune system functions. IL-17 and IL-17R are a cytokine receptor pair and, as such, are involved in initiating signal transduction cascades and in mediating aspects of inflammatory responses. IL-17RD (IL 17 receptor D) is also known as Sef homolog, hSef or SEF and is a 739 amino acid protein that is expressed in a variety of tissues, including ovary, breast, kidney, heart, skeletal muscle, colon, prostate and thyroid gland. IL-17RD is localized to the cytoplasm, as well as to both the Golgi apparatus membrane and to the cellular membrane as a single-pass membrane protein. IL-17RD modulates the signaling of FGFs (fibroblast growth factors) which are important for cellular proliferation, migration, differentiation and cellular survival. IL-17RD can form homomeric complexes and is thought to mediate the signaling of IL-17 by forming a heteromeric complex with IL-17R. IL-17R family members create different receptor complexes allowing interactions between different ligands. IL-17RD mRNA is detected in psoriatic skin lesions in lower concentrations than in nonlesional psoriatic skin. IL-17RD is thought to act as a tumor suppressor in humans because it is downregulated in a variety of cancers affecting epithelial cells of breast, prostate, thyroid gland and ovary.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: IL17RD (human) mapping to 3p14.3.

PRODUCT

IL-17RD 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 IL-17RD shRNA Plasmid (h): sc-78429-SH and IL-17RD shRNA (h) Lentiviral Particles: sc-78429-V as alternate gene silencing products.

For independent verification of IL-17RD (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-78429A, sc-78429B and sc-78429C.

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

IL-17RD siRNA (h) is recommended for the inhibition of IL-17RD 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 IL-17RD gene expression knockdown using RT-PCR Primer: IL-17RD (h)-PR: sc-78429-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.