SANTA CRUZ BIOTECHNOLOGY, INC.

IL-17C siRNA (h): sc-39653

BACKGROUND

Cytokines are small, soluble proteins with pleiotropic effects on a variety of cell types. Cytokines have a regulatory function over the immune system and mediate aspects of inflammatory response. They exert their biological effects through the binding of membrane-bound receptors which, in turn, initiate signal transduction cascades and elicit physiological changes in their target cell. Interleukin-17 (IL-17) and its cognate receptor, IL-17R, are an example of such a cytokine receptor pair. IL-17B and IL-17C are two related family members that bind and activate different cell surface receptors, other than the IL-17 receptor. IL-17B and IL-17C also differ from IL-17 in their patterns of expression and biological activities. IL-17B is expressed in normal human adult pancreas, small intestine, and stomach, whereas IL-17 C is only expressed in adult prostate and fetal kidney.

REFERENCES

1. Arend, W.P., et al. 1994. Binding of IL-1α, IL-1β, and IL-1 receptor antagonist by soluble IL-1 receptors and levels of soluble IL-1 receptors in synovial fluids. J. Immunol. 153: 4766-4774.
2. Okamura, H., et al. 1995. Cloning of a new cytokine that induces IFN production by T cells. Nature 378: 88-91.
3. Cohen, M.C., et al. 1996. Cytokine function: a study in biologic diversity. Am. J. Clin. Pathol. 105: 589-598.
4. Ihle, J.N. 1996. Janus kinases in cytokine signalling. Philos. Trans. R. Soc. Lond., B, Biol. Sci. 351: 159-166.

CHROMOSOMAL LOCATION

Genetic locus: IL17C (human) mapping to 16q24.3.

PRODUCT

IL-17C siRNA (h) is a pool of 2 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-17C shRNA Plasmid (h): sc-39653-SH and IL-17C shRNA (h) Lentiviral Particles: sc-39653-V as alternate gene silencing products.

For independent verification of IL-17C (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-39653A and sc-39653B.

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.

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APPLICATIONS

IL-17C siRNA (h) is recommended for the inhibition of IL-17C 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-17C gene expression knockdown using RT-PCR Primer: IL-17C (h)-PR: sc-39653-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Pfeifer, P., et al. 2013. IL-17C is a mediator of respiratory epithelial innate immune response. Am. J. Respir. Cell Mol. Biol. 48: 415-421.
2. Kusagaya, H., et al. 2014. Toll-like receptor-mediated airway IL-17C enhances epithelial host defense in an autocrine/paracrine manner. Am. J. Respir. Cell Mol. Biol. 50: 30-39.

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.