

## IL-17B siRNA (m): sc-39652

### 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-1 $\alpha$ , IL-1 $\beta$ , 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.
5. Li, H., et al. 2000. Cloning and characterization of IL-17B and IL-17C, two new members of the IL-17 cytokine family. *Proc. Natl. Acad. Sci. USA* 97: 773-778.

### CHROMOSOMAL LOCATION

Genetic locus: IL17b (mouse) mapping to 18 E1.

### PRODUCT

IL-17B siRNA (m) 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see IL-17B shRNA Plasmid (m): sc-39652-SH and IL-17B shRNA (m) Lentiviral Particles: sc-39652-V as alternate gene silencing products.

For independent verification of IL-17B (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-39652A, sc-39652B and sc-39652C.

### RESEARCH USE

For research use only, not for use in diagnostic procedures.

### PROTOCOLS

See our web site at [www.scbt.com](http://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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

### APPLICATIONS

IL-17B siRNA (m) is recommended for the inhibition of IL-17B expression in mouse 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  $\mu$ M in 66  $\mu$ l. 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-17B gene expression knockdown using RT-PCR Primer: IL-17B (m)-PR: sc-39652-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.