



## IL-25 siRNA (m): sc-39666

### BACKGROUND

The interleukins are a broad family of well characterized cytokines, primarily of hematopoietic cell origin. 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. IL-25 (also called SF20/IL-25) is a secreted bone marrow stroma-derived growth factor cytokine that is derived from Th2 T-cells. IL-25 belongs to the IL-17 cytokine family and is capable of amplifying allergic type inflammatory responses by its actions on other cell types. IL-25 binds to mouse thymic shared antigen-1 and supports lymphoid cell proliferation. Infusion of mice with IL-25 induces IL-4, IL-5 and IL-13 gene expression. IL-25 induced mice also develop epithelial cell hyperplasia, increased mucus secretion and airway hyperreactivity, suggesting that IL-25 may be an important mediator of allergic disease via production of IL-4, IL-5, IL-13 and eotaxin.

### REFERENCES

1. Okamura, H., et al. 1995. Cloning of a new cytokine that induces IFN- $\gamma$  production by T cells. *Nature* 378: 88-91.
2. Cohen, M.C. and Cohen, S. 1996. Cytokine function: a study in biologic diversity. *Am. J. Clin. Pathol.* 105: 589-598.
3. Tulin, E.E., et al. 2001. SF20/IL-25, a novel bone marrow stroma-derived growth factor that binds to mouse thymic shared antigen-1 and supports lymphoid cell proliferation. *J. Immunol.* 167: 6338-6347.
4. Fort, M.M., et al. 2001. IL-25 induces IL-4, IL-5, and IL-13 and Th2-associated pathologies *in vivo*. *Immunity* 15: 985-995.
5. Hurst, S.D., et al. 2002. New IL-17 family members promote Th1 or Th2 responses in the lung: *in vivo* function of the novel cytokine IL-25. *J. Immunol.* 169: 443-453.

### CHROMOSOMAL LOCATION

Genetic locus: D17Wsu104e (mouse) mapping to 17 D.

### PRODUCT

IL-25 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-25 shRNA Plasmid (m): sc-39666-SH and IL-25 shRNA (m) Lentiviral Particles: sc-39666-V as alternate gene silencing products.

For independent verification of IL-25 (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-39666A, sc-39666B and sc-39666C.

### 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-25 siRNA (m) is recommended for the inhibition of IL-25 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-25 gene expression knockdown using RT-PCR Primer: IL-25 (m)-PR: sc-39666-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.