

## ▶ ILT-5 siRNA (h): sc-60844

### BACKGROUND

Leukocyte immunoglobulin-like receptors (LIRs) are members of the immunoglobulin superfamily of glycoproteins and are predominantly expressed by monocytes, B cells, dendritic cells, natural killer (NK) cells, peripheral blood leukocytes and tissues such as placenta, lung and liver. These receptors all contain a cytoplasmic immunoreceptor tyrosine-based inhibitory motif (ITIM), have an inhibitory function and are type I membrane proteins. When they bind to MHC (or other ligands) and ITIM is tyrosine phosphorylated, protein-tyrosine phosphatases are recruited and an inhibitory signal cascade triggered. ILT-5 (also designated CD85A or LIR 3) acts as a receptor for class I MHC antigens and contains three copies of the ITIM motif.

### REFERENCES

1. Colonna, M., et al. 1997. A common inhibitory receptor for major histocompatibility complex class I molecules on human lymphoid and myelomonocytic cells. *J. Exp. Med.* 186: 1809-1818.
2. Arm, J.P., et al. 1997. Molecular identification of a novel family of human Ig superfamily members that possess immunoreceptor tyrosine-based inhibition motifs and homology to the mouse gp49B1 inhibitory receptor. *J. Immunol.* 159: 2342-2349.
3. Borges, L., et al. 1997. A family of human lymphoid and myeloid Ig-like receptors, some of which bind to MHC class I molecules. *J. Immunol.* 159: 5192-5196.
4. Wende, H., et al. 2000. Extensive gene duplications and a large inversion characterize the human leukocyte receptor cluster. *Immunogenetics* 51: 703-713.
5. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 604820. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Tedla, N., et al. 2003. Activation of human eosinophils through leukocyte immunoglobulin-like receptor 7. *Proc. Natl. Acad. Sci. USA* 100: 1174-1179.
7. Sloane, D.E., et al. 2004. Leukocyte immunoglobulin-like receptors: novel innate receptors for human basophil activation and inhibition. *Blood* 104: 2832-2839.

### CHROMOSOMAL LOCATION

Genetic locus: LILRB3 (human) mapping to 19q13.42.

### PRODUCT

ILT-5 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see ILT-5 shRNA Plasmid (h): sc-60844-SH and ILT-5 shRNA (h) Lentiviral Particles: sc-60844-V as alternate gene silencing products.

For independent verification of ILT-5 (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-60844A and sc-60844B.

### 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

ILT-5 siRNA (h) is recommended for the inhibition of ILT-5 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  $\mu$ 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.

### GENE EXPRESSION MONITORING

ILT-4/5 (F-7): sc-390287 is recommended as a control antibody for monitoring of ILT-5 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

### RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor ILT-5 gene expression knockdown using RT-PCR Primer: ILT-5 (h)-PR: sc-60844-PR (20  $\mu$ l). 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](http://www.scbt.com) for detailed protocols and support products.