SANTA CRUZ BIOTECHNOLOGY, INC.

ILT-8 siRNA (h): sc-105571

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The Power to Question

BACKGROUND

Leukocyte immunoglobulin-like receptors (ILTs, also known as 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. There are several members of the ILT family, including ILT-1, ILT-2, ILT-3, ILT-4, ILT-5, ILT-6, ILT-7, ILT-8, ILT-11, LIR-6 and LIR-8. These ILT proteins are divided into two subfamiles, namely subfamily A (ILT-1, ILT-6, ILT-7, ILT-8, ILT-11 and LIR-6) and subfamily B (ILT-2, ILT-3, ILT-4, ILT-5 and LIR-8), the former of which function as stimulating receptors and the latter of which function as inhibitory receptors. ILT-8 (immunoglobulin-like transcript 8), also known as LILRA6, ILT5, LILRB3 or LILRB6, is a 481 amino acid single-pass type I membrane protein that belongs to the leukocyte receptor cluster (LRC) present on human chromosome 19q13.4. ILT-8 contains two Ig-like C2-type (immunoglobulin-like) domains and exists as two alternatively spliced isoforms.

REFERENCES

1. Samaridis, J. and Colonna, M. 1997. Cloning of novel immunoglobulin superfamily receptors expressed on human myeloid and lymphoid cells: structural evidence for new stimulatory and inhibitory pathways. Eur. J. Immunol. 27: 660-665.
2. Cosman, D., et al. 1997. A novel immunoglobulin superfamily receptor for cellular and viral MHC class I molecules. Immunity 7: 273-282.
3. 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.
4. Andre, P., et al. 2001. New nomenclature for MHC receptors. Nat. Immunol. 2: 661.
5. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 604811. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
6. Foster, C.E., et al. 2003. Crystal structure of the human natural killer (NK) cell activating receptor NKp46 reveals structural relationship to other leukocyte receptor complex immunoreceptors. J. Biol. Chem. 278: 46081-46086.

CHROMOSOMAL LOCATION

Genetic locus: LILRA6 (human) mapping to 19q13.42.

PRODUCT

ILT-8 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 ILT-8 shRNA Plasmid (h): sc-105571-SH and ILT-8 shRNA (h) Lentiviral Particles: sc-105571-V as alternate gene silencing products.

For independent verification of ILT-8 (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-105571A, sc-105571B and sc-105571C.

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

ILT-8 siRNA (h) is recommended for the inhibition of ILT-8 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.

GENE EXPRESSION MONITORING

ILT (H-5): sc-515288 is recommended as a control antibody for monitoring of ILT-8 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-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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-8 gene expression knockdown using RT-PCR Primer: ILT-8 (h)-PR: sc-105571-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.