SANTA CRUZ BIOTECHNOLOGY, INC.

lymphotactin siRNA (m): sc-39358

BACKGROUND

Lymphotactin is a chemokine-like molecule produced selectively, if not exclusively, by activated $CD8^+$ T cells. Lymphotactin is a C-type member of the chemokine superfamily, but retains only the 2nd and 4th of the four cysteine residues conserved in other chemokines. In normal tissues, lymphotactin is expressed at high levels in spleen, thymus, small intestine, and peripheral blood leukocytes, as well as at low levels in lung, prostate, and ovary. Lymphotactin is chemotactic for $CD4^+$ and $CD8^+$ T cells but not for monocytes, and induces a rise in intracellular calcium in peripheral blood lymphocytes. The specific receptor for lymphotactin is XCR1, a member of the G protein-coupled receptor family. The gene which encodes lymphotactin maps to human chromosome 1q24.2.

REFERENCES

1. Muller, S., Dorner, B., Korthauer, U., Mages, H.W., D'Apuzzo, M., Senger, G. and Kroczek, R.A. 1995. Cloning of ATAC, an activation-induced, chemokine-related molecule exclusively expressed in $CD8^+$ T lymphocytes. Eur. J. Immunol. 25: 1744-1748.
2. Yoshida, T., Imai, T., Takagi, S., Nishimura, M., Ishikawa, I., Yaoi, T. and Yoshie, O. 1996. Structure and expression of two highly related genes encoding SCM-1/human lymphotactin. FEBS Lett. 395: 82-88.
3. Yoshida, T., Imai, T., Kakizaki, M., Nishimura, M., Takagi, S. and Yoshie, O. 1998. Identification of single C motif-1/lymphotactin receptor XCR1. J. Biol. Chem. 273: 16551-16554.
4. Yoshida, T., Izawa, D., Nakayama, T., Nakahara, K., Kakizaki, M., Imai, T., Suzuki, R., Miyasaka, M. and Yoshie, O. 1999. Molecular cloning of mXCR1, the murine SCM-1/lymphotactin receptor. FEBS Lett. 458: 37-40.
5. LocusLink Report (LocusID: 600250). http://www.ncbi.nlm.nih.gov/LocusLink/

CHROMOSOMAL LOCATION

Genetic locus: Xcl1 (mouse) mapping to 1 H2.2.

PRODUCT

lymphotactin 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see lymphotactin shRNA Plasmid (m): sc-39358-SH and lymphotactin shRNA (m) Lentiviral Particles: sc-39358-V as alternate gene silencing products.

For independent verification of lymphotactin (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-39358A, sc-39358B and sc-39358C.

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.

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

lymphotactin siRNA (m) is recommended for the inhibition of lymphotactin 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 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

lymphotactin (E-12): sc-514972 is recommended as a control antibody for monitoring of lymphotactin 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 lymphotactin gene expression knockdown using RT-PCR Primer: lymphotactin (m)-PR: sc-39358-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.