SANTA CRUZ BIOTECHNOLOGY, INC.

CD300LF siRNA (h): sc-94217

BACKGROUND

CD300LF (CD300 molecule-like family member f), also known as NKIR (NK inhibitory receptor), IREM1 (immune receptor expressed on myeloid cells 1), CLM1 (CMRF35-like molecule 1) or IgSF13 (immunoglobulin superfamily member 13), is a 290 amino acid single-pass type I membrane protein that functions as an inhibitory receptor for myeloid cells and mast cells. As a member of the CD300 family, CD300LF contains one Ig-like V-type (immunoglobulin-like) domain and recruits SHP or SHIP to mediate negative regulatory signals. CD300LF inhibits osteoclast formation and is highly expressed in lung, spleen, peripheral blood leukocytes and monocytes. CD300LF exists as six alternatively spliced isoforms that are encoded by a gene located on human chromosome 17q25.1.

REFERENCES

1. Chung, D.H., et al. 2003. CMRF-35-like molecule-1, a novel mouse myeloid receptor, can inhibit osteoclast formation. J. Immunol. 171: 6541-6548.
2. Sui, L., et al. 2004. IgSF13, a novel human inhibitory receptor of the immunoglobulin superfamily, is preferentially expressed in dendritic cells and monocytes. Biochem. Biophys. Res. Commun. 319: 920-928.
3. Alvarez-Errico, D., et al. 2004. IREM-1 is a novel inhibitory receptor expressed by myeloid cells. Eur. J. Immunol. 34: 3690-3701.
4. Poole, A.W. and Jones, M.L. 2005. A SHPing tale: perspectives on the regulation of SHP-1 and SHP-2 tyrosine phosphatases by the C-terminal tail. Cell. Signal. 17: 1323-1332.
5. Online Mendelian Inheritance in Man, OMIM™. 2005. Johns Hopkins University, Baltimore, MD. MIM Number: 609807. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
6. Alvarez-Errico, D., et al. 2007. The IREM-1 (CD300f) inhibitory receptor associates with the p85α subunit of phosphoinositide 3-kinase. J. Immunol. 178: 808-816.

CHROMOSOMAL LOCATION

Genetic locus: CD300LF (human) mapping to 17q25.1.

PRODUCT

CD300LF 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 CD300LF shRNA Plasmid (h): sc-94217-SH and CD300LF shRNA (h) Lentiviral Particles: sc-94217-V as alternate gene silencing products.

For independent verification of CD300LF (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-94217A, sc-94217B and sc-94217C.

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

CD300LF siRNA (h) is recommended for the inhibition of CD300LF 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor CD300LF gene expression knockdown using RT-PCR Primer: CD300LF (h)-PR: sc-94217-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.