SANTA CRUZ BIOTECHNOLOGY, INC.

CL-P1 siRNA (m): sc-142359

BACKGROUND

CL-P1 (collectin placenta protein 1), also known as COLEC12 (collectin subfamily member 12), NSR2, SRCL or SCARA4, is a 742 amino acid single-pass type II membrane protein that contains one C-type lectin domain and three collagen-like domains. Expressed in kidney, brain, thymus and colon, as well as in perivascular macrophages, CL-P1 is a scavenger receptor that exhibits a variety of functions related with host defense, including promoting the binding and phagocytosis of Gram-positive and Gram-negative bacteria. Ad-ditionally, CL-P1 mediates the recognition and degradation of damaged or apoptotic cells and can bind to carbohydrate antigens, thereby facilitating their removal from the host. CL-P1 is thought to play a role in the clearance of β-Amyloid plaques from the neural tissue of people affected with Alzheimer's disease (AD), suggesting that CL-P1 may be involved in reducing the progression of AD.

REFERENCES

1. Nakamura, K., et al. 2001. Molecular cloning and functional characterization of a human scavenger receptor with C-type lectin (SRCL), a novel member of a scavenger receptor family. Biochem. Biophys. Res. Commun. 280: 1028-1035.
2. Ohtani, K., et al. 2001. The membrane-type collectin CL-P1 is a scavenger receptor on vascular endothelial cells. J. Biol. Chem. 276: 44222-44228.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607621. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Yoshida, T., et al. 2003. SRCL/CL-P1 recognizes GalNAc and a carcinoma-associated antigen, Tn antigen. J. Biochem. 133: 271-277.
5. Ohmori, H., et al. 2003. Haplotype analysis of the human collectin placenta 1 (hCL-P1) gene. J. Hum. Genet. 48: 82-85.
6. Coombs, P.J., et al. 2005. Selective binding of the scavenger receptor C-type lectin to Lewisx trisaccharide and related glycan ligands. J. Biol. Chem. 280: 22993-22999.

CHROMOSOMAL LOCATION

Genetic locus: Colec12 (mouse) mapping to 18 A1.

PRODUCT

CL-P1 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. Suit-able for 50-100 transfections. Also see CL-P1 shRNA Plasmid (m): sc-142359-SH and CL-P1 shRNA (m) Lentiviral Particles: sc-142359-V as alternate gene silencing products.

For independent verification of CL-P1 (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-142359A, sc-142359B and sc-142359C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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

CL-P1 siRNA (m) is recommended for the inhibition of CL-P1 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor CL-P1 gene expression knockdown using RT-PCR Primer: CL-P1 (m)-PR: sc-142359-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.