BACKGROUND

CL-P1 (collectin placenta protein 1), also known as COLEC12 (collectin sub-family 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. Additionally, 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


CHROMOSOMAL LOCATION

Genetic locus: COLEC12 (human) mapping to 18p11.32.

PRODUCT

CL-P1 shRNA (h) Lentiviral Particles is a pool of concentrated, transduction-ready viral particles containing 3 target-specific constructs that encode 19-25 nt (plus hairpin) shRNA designed to knock down gene expression. Each vial contains 200 µl frozen stock containing 1.0 x 10⁶ infectious units of virus (IFU) in Dulbecco’s Modified Eagle’s Medium with 25 mM HEPES pH 7.3. Suitable for 10-20 transductions. Also see CL-P1 siRNA (h): sc-72913 and CL-P1 shRNA Plasmid (h): sc-72913-SH as alternate gene silencing products.

APPLICATIONS

CL-P1 shRNA (h) Lentiviral Particles is recommended for the inhibition of CL-P1 expression in human cells.

SUPPORT REAGENTS

Control shRNA Lentiviral Particles: sc-108080. Available as 200 μl frozen viral stock containing 1.0 x 10⁶ infectious units of virus (IFU); contains an shRNA construct encoding a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor CL-P1 gene expression knockdown using RT-PCR Primer: CL-P1 (h)-PR: sc-72913-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

BIOSAFETY

Lentiviral particles can be employed in standard Biosafety Level 2 tissue culture facilities (and should be treated with the same level of caution as with any other potentially infectious reagent). Lentiviral particles are replication-incompetent and are designed to self-inactivate after transduction and integration of shRNA constructs into genomic DNA of target cells.

STORAGE

Store lentiviral particles at -80º C. Stable for at least one year from the date of shipment. Once thawed, particles can be stored at 4º C for up to one week. Avoid repeated freeze thaw cycles.

RESEARCH USE

The purchase of this product conveys to the buyer the nontransferable right to use the purchased amount of the product and all replicates and derivatives for research purposes conducted by the buyer in his laboratory only (whether the buyer is an academic or for-profit entity). The buyer cannot sell or otherwise transfer (a) this product (b) its components or (c) materials made using this product or its components to a third party, or otherwise use this product or its components or materials made using this product or its components for Commercial Purposes.

PROTOCOLS

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