SANTA CRUZ BIOTECHNOLOGY, INC.

VCC-1 siRNA (h): sc-97107

BACKGROUND

VCC-1 (VEGF co-regulated chemokine 1), also known as Dcip1, DMC (dendritic cell and monocyte chemokine-like protein) or CXCL17 (C-X-C motif chemokine 17), is a 119 amino acid secreted protein that plays a role in angiogenesis. A member of the intercrine α (chemokine CxC) family, VCC-1 is expressed in skeletal muscle, trachea, lung, intestine and stomach, and is upregulated in duodenal mucosa of patients with acute cholera, as well as breast tumors. VCC-1 is considered a housekeeping chemokine for the movement of immature dendritic cells and non activated blood monocytes into tissues, and is though to be involved in the innate immune response. The gene encoding VCC-1 maps to human chromosome 19q13.2 and mouse chromosome 7 A3.

REFERENCES

1. Zhang, Z. and Henzel, W.J. 2004. Signal peptide prediction based on analysis of experimentally verified cleavage sites. Protein Sci. 13: 2819-2824.
2. Weinstein, E.J., Head, R., Griggs, D.W., Sun, D., Evans, R.J., Swearingen, M.L., Westlin, M.M. and Mazzarella, R. 2006. VCC-1, a novel chemokine, promotes tumor growth. Biochem. Biophys. Res. Commun. 350: 74-81.
3. Zlotnik, A., Yoshie, O. and Nomiyama, H. 2006. The chemokine and chemokine receptor superfamilies and their molecular evolution. Genome Biol. 7: 243.
4. Pisabarro, M.T., Leung, B., Kwong, M., Corpuz, R., Frantz, G.D., Chiang, N., Vandlen, R., Diehl, L.J., Skelton, N., Kim, H.S., Eaton, D. and Schmidt, K.N. 2006. Cutting edge: novel human dendritic cell- and monocyte-attracting chemokine-like protein identified by fold recognition methods. J. Immunol. 176: 2069-2073.
5. Flach, C.F., Qadri, F., Bhuiyan, T.R., Alam, N.H., Jennische, E., Lönnroth, I. and Holmgren, J. 2007. Broad up-regulation of innate defense factors during acute cholera. Infect. Immun. 75: 2343-2350.
6. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 611387. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: CXCL17 (human) mapping to 19q13.2.

PRODUCT

VCC-1 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 VCC-1 shRNA Plasmid (h): sc-97107-SH and VCC-1 shRNA (h) Lentiviral Particles: sc-97107-V as alternate gene silencing products.

For independent verification of VCC-1 (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-97107A, sc-97107B and sc-97107C.

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

VCC-1 siRNA (h) is recommended for the inhibition of VCC-1 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

VCC-1 (B-3): sc-398842 is recommended as a control antibody for monitoring of VCC-1 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 VCC-1 gene expression knockdown using RT-PCR Primer: VCC-1 (h)-PR: sc-97107-PR (20 µl, 533 bp). 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.