SANTA CRUZ BIOTECHNOLOGY, INC.

# PV1 siRNA (h): sc-61421

## BACKGROUND

Plasmslemma vesicle protein 1, also referred to as PV1 or PLVAP, is an endothelial-specific integral membrane glycoprotein that resides in the stomatal diaphragms of caveolae, transendothelial channels, vesiculo-vacuolar organelles and the diaphragms of endothelial fenestrae. PV1 forms homodimers in each stomatal and fenestral diaphragm and functions as a key component in their biogenesis. PV1 is a useful tool in the identification of endothelial structures in normal tissues and pathological conditions, such as thrombosis and arteriosclerosis. It can also be helpful in studies of the vascularisation of tumors.

## REFERENCES


1. Schlingemann, R.O., et al. 1985. Monoclonal antibody PAL-E specific for endothelium. Lab. Invest. 52: 71-76.
2. Velury, V., et al. 1994. Axial correlates of PV1 in left atrial enlargement and relation to intraatrial block. Am. J. Cardiol. 73: 998-999.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607647. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Stan, R.V. 2004. Multiple PV1 dimers reside in the same stomatal or fenestral diaphragm. Am. J. Physiol. Heart Circ. Physiol. 286: 1347-1353.
5. Stan, R.V., et al. 2004. PV1 is a key structural component for the formation of the stomatal and fenestral diaphragms. Mol. Biol. Cell 15: 3615-3630.
6. Niemela, H., et al. 2005. Molecular identification of PAL-E, a widely used endothelial-cell marker. Blood 106: 3405-3409.
7. Strickland, L.A., et al. 2005. Plasmalemmal vesicle-associated protein (PLVAP) is expressed by tumour endothelium and is upregulated by vascular endothelial growth factor-A (VEGF). J. Pathol. 206: 466-475.


## CHROMOSOMAL LOCATION

Genetic locus: PLVAP (human) mapping to 19p13.11.

## PRODUCT

PV1 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 PV1 shRNA Plasmid (h): sc-61421-SH and PV1 shRNA (h) Lentiviral Particles: sc-61421-V as alternate gene silencing products.

For independent verification of PV1 (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-61421A, sc-61421B and sc-61421C.

## 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

PV1 siRNA (h) is recommended for the inhibition of PV1 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

PV1 (PAL-E): sc-52355 is recommended as a control antibody for monitoring of PV1 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).

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor PV1 gene expression knockdown using RT-PCR Primer: PV1 (h)-PR: sc-61421-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.