

## PV1 (D-14): sc-50168

### BACKGROUND

Plasmalemma 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

- Schlingemann, R.O., Dingjan, G.M., Emeis, J.J., Blok, J., Warnaar, S.O. and Ruiter, D.J. 1985. Monoclonal antibody PAL-E specific for endothelium. *Lab. Invest.* 52: 71-76.
- Velury, V. and Spodick, D.H. 1994. Axial correlates of PV1 in left atrial enlargement and relation to intraatrial block. *Am. J. Cardiol.* 73: 998-999.
- Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607647. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Stan, R.V. 2004. Multiple PV1 dimers reside in the same stomatal or fenestral diaphragm. *Am. J. Physiol. Heart Circ. Physiol.* 286: 1347-1353.
- Stan, R.V., Tkachenko, E. and Niesman, I.R. 2004. PV1 is a key structural component for the formation of the stomatal and fenestral diaphragms. *Mol. Biol. Cell* 15: 3615-3630.
- Niemela, H., Elima, K., Henttinen, T., Irjala, H., Salmi, M. and Jalkanen, S. 2005. Molecular identification of PAL-E, a widely used endothelial-cell marker. *Blood* 106: 3405-3409.
- Strickland, L.A., Jubb, A.M., Hongo, J.A., Zhong, F., Burwick, J., Fu, L., Frantz, G.D. and Koeppen, H. 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; Plvap (mouse) mapping to 8 B3.3.

### SOURCE

PV1 (D-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of PV1 of human origin.

### PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-50168 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

PV1 (D-14) is recommended for detection of PV1 (Plasmalemma vesicle protein 1) of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

PV1 (D-14) is also recommended for detection of PV1 (Plasmalemma vesicle protein 1) in additional species, including canine and bovine.

Suitable for use as control antibody for PV1 siRNA (h): sc-61421, PV1 siRNA (m): sc-61422, PV1 shRNA Plasmid (h): sc-61421-SH, PV1 shRNA Plasmid (m): sc-61422-SH, PV1 shRNA (h) Lentiviral Particles: sc-61421-V and PV1 shRNA (m) Lentiviral Particles: sc-61422-V.

Molecular Weight of PV1: 50 kDa.

### RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz<sup>™</sup> Mounting Medium: sc-24941.

### STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

### RESEARCH USE

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

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



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Try **PV1 (PAL-E): sc-52355**, our highly recommended monoclonal alternative to PV1 (D-14).