

Podocalyxin-like 1 (T-19): sc-10506

BACKGROUND

Sialomucins are a family of cell adhesion molecules that mediate the interaction between leukocytes and endothelial cells during the inflammatory process. Podocalyxin-like protein 1 (PCLP1), a member of the sialomucin family, is a transmembrane glycoprotein and is structurally related to the L-Selectin ligand, CD34. PCLP1 encodes a 21 amino acid N-terminal signal peptide and a 26 amino acid transmembrane region. The extracellular domain contains sites for N- and O-linked glycosylation, and the intracellular domain has several potential phosphorylated sites. PCLP1 is expressed on podocyte foot processes, where it maintains the glomerular filtration barrier. It is also expressed in endothelial cells as well as hemangioblasts, a precursor of hematopoietic stem cells (HSC). Subsequently, PCLP1 is thought to be an appropriate marker for hemangioblast detection.

REFERENCES

1. Lasky, L.A. 1994. Sialomucin ligands for selectins: a new family of cell adhesion molecules. Princess Takamatsu Symp. 24: 81-90.
2. Kershaw, D.B., et al. 1995. Molecular cloning, expression, and characterization of Podocalyxin-like protein 1 from rabbit as a transmembrane protein of glomerular podocytes and vascular endothelium. J. Biol. Chem. 270: 29439-29446.
3. Yang, D.H., et al. 1996. Glomerular epithelial protein 1 and Podocalyxin-like protein 1 in inflammatory glomerular disease (crescentic nephritis) in rabbit and man. Lab. Invest. 74: 571-584.
4. Sassetti, C., et al. 1998. Identification of Podocalyxin-like protein as a high endothelial venule ligand for L-Selectin: parallels to CD34. J. Exp. Med. 187: 1965-1975.
5. Hara, T., et al. 1999. Identification of Podocalyxin-like 1 as a novel cell surface marker for hemangioblasts in the murine aorta-gonad-mesonephros region. Immunity 11: 567-578.
6. Sassetti, C., et al. 2000. Identification of endoglycan, a member of the CD34/Podocalyxin family of sialomucins. J. Biol. Chem. 275: 9001-9010.

CHROMOSOMAL LOCATION

Genetic locus: Podxl (mouse) mapping to 6 A3.3.

SOURCE

Podocalyxin-like 1 (T-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Podocalyxin-like 1 of mouse origin.

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.

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-10506 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Podocalyxin-like 1 (T-19) is recommended for detection of Podocalyxin-like 1 of mouse and rat 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).

Suitable for use as control antibody for Podocalyxin-like 1 siRNA (m): sc-44765, Podocalyxin-like 1 shRNA Plasmid (m): sc-44765-SH and Podocalyxin-like 1 shRNA (m) Lentiviral Particles: sc-44765-V.

Molecular Weight of Podocalyxin-like 1: 165 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™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ 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™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Vaughan, M.R., et al. 2005. ATRA induces podocyte differentiation and alters nephrin and Podocin expression in vitro and in vivo. Kidney Int. 68: 133-144.
2. Ndisang, J.F. and Tiwari, S. 2014. Mechanisms by which heme oxygenase rescue renal dysfunction in obesity. Redox Biol. 2C: 1029-1037.

PROTOCOLS

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