

Podocalyxin-like 1 (B-11): sc-393716

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. Podocalyxin-like protein 1 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. Podocalyxin-like protein 1 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, Podocalyxin-like protein 1 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 (human) mapping to 7q32.3.

SOURCE

Podocalyxin-like 1 (B-11) is a mouse monoclonal antibody raised against amino acids 23-322 mapping within an N-terminal extracellular domain of Podocalyxin-like 1 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

Podocalyxin-like 1 (B-11) is recommended for detection of Podocalyxin-like 1 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 (h): sc-44029, Podocalyxin-like 1 shRNA Plasmid (h): sc-44029-SH and Podocalyxin-like 1 shRNA (h) Lentiviral Particles: sc-44029-V.

Molecular Weight of Podocalyxin-like 1: 165 kDa.

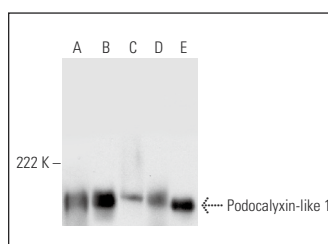
Positive Controls: MIA PaCa-2 cell lysate: sc-2285, Raji whole cell lysate: sc-364236 or ECV304 cell lysate: sc-2269.

RECOMMENDED SUPPORT REAGENTS

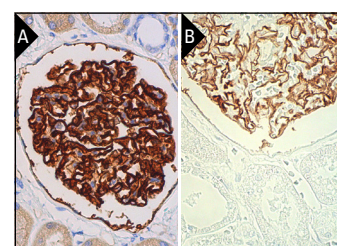
To ensure optimal results, the following support reagents are recommended:

- 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-2003 (0.5 ml agarose/2.0 ml).
- 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).
- 3) 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.
- 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Podocalyxin-like 1 (B-11): sc-393716. Western blot analysis of Podocalyxin-like 1 expression in MIA PaCa-2 (A), Raji (B), H9 (C), ECV304 (D) and HeLa (E) whole cell lysates.



Podocalyxin-like 1 (B-11): sc-393716. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing membrane and cytoplasmic staining of cells in glomeruli and faint cytoplasmic staining of cells in tubules (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing membrane staining of glomerular cells. Blocked with 0.25X UltraCruz® Blocking Reagent: sc-516214. Detected with m-IgG Fc BP-B: sc-533652 and ImmunoCruz® ABC Kit: sc-516216 (B).



See **Podocalyxin-like 1 (3D3): sc-23904** for Podocalyxin-like 1 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.