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PODXL Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1556a

Product Information

Application	WB, IHC, FC, E
Primary Accession	O00592
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	5F5
Isotype	IgG1
Calculated MW	58635
Description	This gene encodes a member of the sialomucin protein family. The encoded protein was originally identified as an important component of glomerular podocytes. Podocytes are highly differentiated epithelial cells with interdigitating foot processes covering the outer aspect of the glomerular basement membrane. Other biological activities of the encoded protein include: binding in a membrane protein complex with Na+/H+ exchanger regulatory factor to intracellular cytoskeletal elements, playing a role in hematopoetic cell differentiation, and being expressed in vascular endothelium cells and binding to L-selectin. (provided by RefSeq)Tissue specificity: Glomerular epithelium cell (podocyte)
Immunogen	Purified recombinant fragment of human PODXL expressed in E. Coli.
Formulation	Ascitic fluid containing 0.03% sodium azide.

Additional Information

Gene ID	5420
Other Names	Podocalyxin, GCTM-2 antigen, Gp200, Podocalyxin-like protein 1, PC, PCLP-1, PODXL, PCLP, PCLP1
Dilution	WB~~1/500 - 1/2000 IHC~~1/500 - 1/2000 FC~~1/200 - 1/400 E~~1/10000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	PODXL Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PODXL
Synonyms	PCLP, PCLP1
Function	Involved in the regulation of both adhesion and cell morphology and cancer progression. Functions as an anti-adhesive molecule that maintains an open filtration pathway between neighboring foot processes in the podocyte by charge repulsion. Acts as a pro- adhesive molecule, enhancing the adherence of cells to immobilized ligands, increasing the rate of migration and cell-cell contacts in an integrin-dependent manner. Induces the formation of apical actin- dependent microvilli. Involved in the formation of a preapical plasma membrane subdomain to set up initial epithelial polarization and the apical lumen formation during renal tubulogenesis. Plays a role in cancer development and aggressiveness by inducing cell migration and invasion through its interaction with the actin-binding protein EZR. Affects EZR-dependent signaling events, leading to increased activities of the MAPK and PI3K pathways in cancer cells.
Cellular Location	Apical cell membrane. Cell projection, lamellipodium. Cell projection, filopodium. Cell projection, ruffle Cell projection, microvillus. Membrane raft. Membrane; Single-pass type I membrane protein. Note=In single attached epithelial cells is restricted to a preapical pole on the free plasma membrane whereas other apical and basolateral proteins are not yet polarized Colocalizes with NHERF2 at the apical plasma membrane during epithelial polarization. Colocalizes with NHERF1 at the trans-Golgi network (transiently) and at the apical plasma membrane. Its association with the membrane raft is transient. Colocalizes with actin filaments, EZR and NHERF1 in a punctate pattern at the apical cell surface where microvilli form. Colocalizes with EZR and NHERF2 at the apical cell membrane of glomerular epithelium cells (By similarity). Forms granular, punctuated pattern, forming patches, preferentially adopting a polar distribution, located on the migrating poles of the cell or forming clusters along the terminal ends of filipodia establishing contact with the endothelial cells. Colocalizes with the submembrane actin of lamellipodia, particularly associated with ruffles Colocalizes with vinculin at protrusions of cells. Colocalizes with ITGB1. Colocalizes with PARD3, PRKCI, EXOC5, OCLN, RAB11A and RAB8A in apical membrane initiation sites (AMIS) during the generation of apical surface and luminogenesis (By similarity).
Tissue Location	Glomerular epithelium cell (podocyte).

References

1. Blood. 2009 Jan 22;113(4):816-26. 2. Am J Physiol Cell Physiol. 2009 Mar;296(3):C505-13.

Images

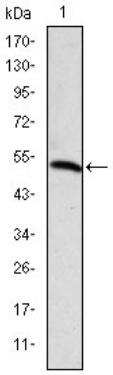


Figure 1: Western blot analysis using PODXL mAb against human PODXL (AA: 109-324) recombinant protein. (Expected MW is 47.3 kDa)

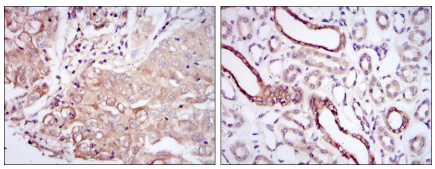


Figure 2: Immunohistochemical analysis of paraffin-embedded lung cancer tissues (left) and kidney tissues (right) using PODXL mouse mAb with DAB staining.

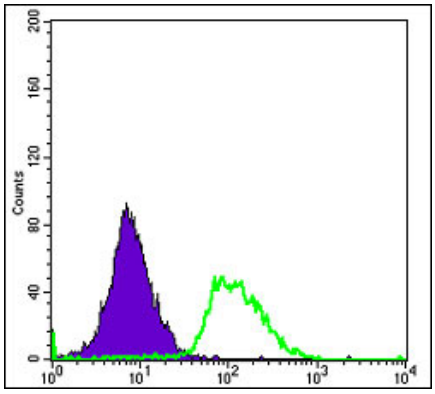


Figure 3: Flow cytometric analysis of Hela cells using PODXL mouse mAb (green) and negative control (purple).

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