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PODXL Antibody (C-term) (Ascites)

Mouse Monoclonal Antibody (Mab)
Catalog # AM2150a

Product Information

Application	IF, WB, E
Primary Accession	O00592
Other Accession	NP_005388.2
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Clone Names	632CT5.11.4
Calculated MW	58635
Antigen Region	410-439

Additional Information

Gene ID	5420
Other Names	Podocalyxin, GCTM-2 antigen, Gp200, Podocalyxin-like protein 1, PC, PCLP-1, PODXL, PCLP, PCLP1
Target/Specificity	This PODXL antibody is generated from mice immunized with a KLH conjugated synthetic peptide between 410-439 amino acids from the C-terminal region of human PODXL.
Dilution	IF~~1:100 WB~~1:500~16000 E~~Use at an assay dependent concentration.
Format	Mouse monoclonal antibody supplied in crude ascites with 0.09% (W/V) sodium azide.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	PODXL Antibody (C-term) (Ascites) 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).

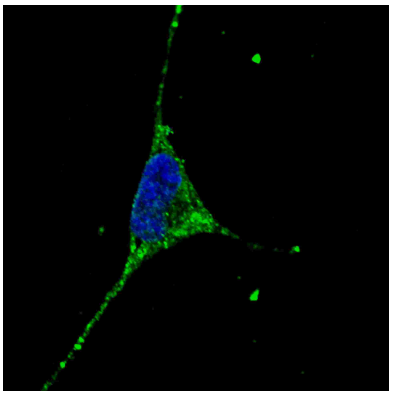
Background

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.

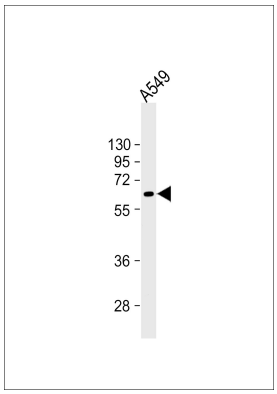
References

References for protein:
1.Schopperle, W.M., et al. Biochem. Biophys. Res. Commun. 398(3):372-376(2010)
2.Hsu, Y.H., et al. Am. J. Pathol. 176(6):3050-3061(2010)
3.Johnatty, S.E., et al. PLoS Genet. 6 (7), E1001016 (2010)
4.Drossopoulou, G.I., et al. Am. J. Physiol. Renal Physiol. 297 (3), F594-F603 (2009)
5.Thomas, S.N., et al. Am. J. Physiol., Cell Physiol. 296 (3), C505-C513 (2009)
References for SY5Y (SH-SY5Y; ATCC#CRL-2266): 1. Ross RA, et al. Coordinate morphological and biochemical interconversion of human neuroblastoma cells. J. Natl. Cancer Inst. 71: 741-749, 1983. [PubMed: 6137586]; 2. Biedler JL, et al. Multiple neurotransmitter synthesis by human neuroblastoma cell lines and clones. Cancer Res. 38: 3751-3757, 1978. [PubMed: 29704].

Images



Fluorescent confocal image of SY5Y cells stained with PODXL (C-term) antibody. SY5Y cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.2%, 30 min). Cells were then incubated with AM2150a PODXL (C-term) primary antibody (1:100, 2 h at room temperature). For secondary antibody, Alexa Fluor® 488 conjugated donkey anti-mouse antibody (green) was used (1:1000, 1h). Nuclei were counterstained with Hoechst 33342 (blue) (10 µg/ml, 5 min).



Anti-PODXL Antibody (C-term) (Ascites) at 1:16000 dilution + A549 whole cell lysate Secondary Goat Anti-mouse IgG, (H+L),Peroxidase conjugated at 1/10000 dilution. Predicted band size : 58635 Da Blocking/Dilution buffer: 5% NFDM/TBST.

Citations

- High Podocalyxin levels promote cell viability partially through up-regulation of Annexin A2.