abcam

ab208254

Alexa Fluor® 488 Anti-PODXL antibody [EPR9518]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Conjugation	Alexa Fluor® 488
Excitation/Emission	Ex: 495nm, Em: 519nm
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 30% Glycerol (glycerin, glycerine), 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR9518
Purification technique	Affinity purification Protein A
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Human

Dilution info	1/100
Notes	This product gave a positive signal in HeLa cells fixed with 100% methanol (5 min)

Flow Cyt (Intra)

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-P

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information PODXL

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.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks

Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle, Store in the dark

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

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Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	PODXL also known as podocalyxin-like protein is a type I transmembrane glycoprotein possessing a mass of approximately 165 kDa. This protein is a member of the CD34 family and exhibits expression primarily on the apical surface of podocytes in the kidney most hematopoietic stem cells and certain cancer cell types. In its mechanical role PODXL mainly functions in cell adhesion and the maintenance of cell shape through its cytoplasmic domain that connects with the

	cytoskeleton. The sialylated and sulfated glycosaminoglycan chains on the extracellular domain contribute to its charge and barrier functions.
Biological function summary	The primary function of podocalyxin-like protein revolves around maintaining the filtration barrier in the kidney by repelling negatively charged molecules. It forms part of the slit diaphragm complex along with proteins like nephrin which provides the structural support necessary for its function. PODXL also plays roles in the development of the vascular system and hematopoietic cell lineage contributing to cellular processes like migration and proliferation. Its interaction with the actin cytoskeleton ensures proper localization and function within these biological contexts.
Pathways	There are important connections between podocalyxin-like protein and the Ras signaling pathway involved in cell growth and adhesion processes. It can also engage in integrin-mediated cell adhesion pathways facilitating processes such as cell signaling and migration. Through these pathways it associates with proteins like ezrin which links it to the cytoskeleton and contributes to its role in cell morphology and motility.
Associated diseases and disorders	Altered PODXL expression shows relevance in aggressive forms of cancer including renal cell carcinoma and breast cancer. The protein associates with different markers of poor prognosis making it of interest in cancer research. Furthermore in kidney diseases such as focal segmental glomerulosclerosis abnormal PODXL expression affects the slit diaphragm's function leading to proteinuria. Its interaction with nephrin can highlight disrupted cellular architecture typical of these disease states.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

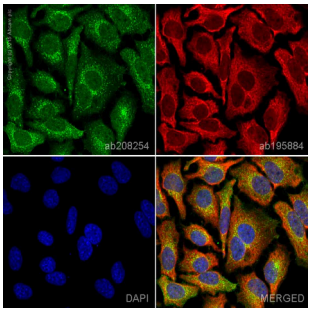
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

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1 product image



Immunocytochemistry/ Immunofluorescence - Alexa Fluor® 488 Anti-PODXL antibody [EPR9518] (ab208254)

PODXL Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-PODXL antibody

ab208254 staining PODXL in HeLa cells. The cells were fixed with 100% methanol (5 min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated overnight at +4°C with ab208254 at a 1/100 dilution (shown in green) and ab195884, Rat monoclonal to alpha Tubulin (Alexa Fluor® 647), at a 1/250 dilution (shown in red). Nuclear DNA was labelled with DAPI (shown in blue).
Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

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