abcam

ab81719

Anti-PLVAP/PV-1 antibody [174/2]

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	Preservative: 0.02% Sodium azide Constituents: PBS, 0.1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	174/2
Purification technique	Affinity purification Protein G
Concentration	0.1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	ab81719 is 0.2µM filtered.

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	1/50
Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

ICC/IF

Tested

Species	Human
Dilution info	1/50
Notes	-

Target data

See full target information PLVAP

Function	Endothelial cell-specific membrane protein involved in the formation of the diaphragms that bridge endothelial fenestrae. It is also required for the formation of stomata of caveolae and transendothelial channels. Functions in microvascular permeability, endothelial fenestrae contributing to the passage of water and solutes and regulating transcellular versus paracellular flow in different organs. Plays a specific role in embryonic development.

Storage

Shipped at conditions	Blue Ice
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

Supplementary info

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

Activity summary	PLVAP also known as PV-1 is a transmembrane protein that plays a significant role in organizing the stomatal and fenestral diaphragms of endothelial cells. It weighs approximately 60 kDa. This protein is mainly expressed in fenestrated capillaries and sinusoidal endothelium where it forms diaphragms and contributes to the permeability and ultrastructure of capillary beds. PLVAP's role in endothelial cells highlights its importance in maintaining vascular permeability and cellular structures.

Biological function summary	The functions of PLVAP are significant in maintaining an organized structure within endothelial cells. It forms part of the complex structure that comprises the diaphragms of endothelial fenestrae transendothelial channels and caveolae. These structures are necessary for regulating fluid exchange and molecular transport between blood and tissue. The presence of PLVAP at these sites signals its role in modulating vascular barrier functions essential for efficient blood-tissue communication.
Pathways	Researchers have identified PLVAP's involvement in important vascular and endothelial pathways. It plays a critical part in the VEGF signaling pathway which regulates vascular permeability and endothelial cell behavior. PLVAP is closely associated with other proteins like VE-cadherin and claudin-5 that ensure cohesion and permeability in endothelial cells. In pathways regulating vascular permeability PLVAP's presence helps mediate fluid exchange and maintain tissue homeostasis.
Associated diseases and disorders	PLVAP associates with conditions involving vascular dysregulation. Hypo- or hyper-expression of PLVAP can relate to the pathogenesis of cancer and inflammatory diseases. In cancer changes in PLVAP expression might contribute to altered tumor vasculature and metastasis often in association with proteins like VEGF and VEGFR-2. Furthermore inflammatory diseases such as atherosclerosis see changes in the protein expression levels that might disrupt vascular integrity linking them with proteins involved in inflammatory responses like ICAM-1 and VCAM-1.

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

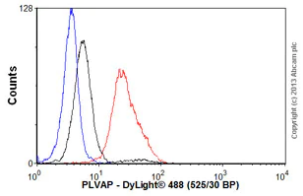
We do not recommend this combination. It is not covered by our product promise.

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.

Full details and terms and conditions can be found here:
Terms & Conditions.

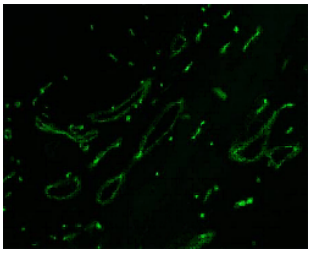
2 product images



Flow Cytometry - Anti-PLVAP/PV-1 antibody [174/2] (ab81719)

PLVAP/PV-1 Flow Cytometry staining using mouse Anti-PLVAP/PV-1 antibody

Overlay histogram showing HL60 cells stained with ab81719 (red line). The cells were fixed with 4% paraformaldehyde (10 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab81719, 1µg/1x10^6 cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (ab91353, 2µg/1x10^6 cells) used under the same conditions. Unlabelled sample (blue line). Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter. This antibody gave a positive signal in HL60 cells fixed with 80% methanol (5 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.



Immunocytochemistry/ Immunofluorescence - Anti-PLVAP/PV-1 antibody [174/2] (ab81719)

PLVAP/PV-1 Immunocytochemistry/ Immunofluorescence staining using mouse Anti-PLVAP/PV-1 antibody

ab81719 at 1/50 dilution staining PLVAP/PV-1 in human tonsil by Immunofluorescence.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.